

FPA-3000i5+

Fine Pattern Aligner

ACCEPTANCE DATA

For: Alcatel Microelectronics
Belgium.

Product Name	FPA-3000i5+
Serial No.	1042754
Order No.	269401
Inspection Date	29 th June 2001

Canon

Inspected by: Matt Fordham, Canon AED

Canon Europa NV,
Paisley Grove,
Chilwell Meadows Business Park,
Beeston,
Nottingham, NG9 6DJ.



Canon Europa NV, Semiconductor Equipment Technical Service Division,
Paisley Grove, Chilwell Meadows Business Park, Beeston, Nottingham NG9 6DJ
Telephone: (44) 0115-972 1606; Facsimile: (44) 0115-972 9617/(44) 0115-946 4446

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Confirmation of Acceptance for Warranty Purposes.

Purchase Company: Alcatel Microelectronics - Belgium.

Order Date: 23rd October 2000.

Purchase Order Number: 269401.

Machine Type: FPA 3000i5+.

Serial Number: 104 2754.

Delivery Date: 3rd May 2001.

Completion Date: 29th June 2001.

.....
We / I hereby confirm Acceptance for warranty purposes only of the above-mentioned machine for and on behalf of the above named company.

J CHAN VERHAMMEN


Signature.

SUPPORT SUPERVISOR
LITMO
Title.

20-6-2001
Date.

Name.

At Company: Alcatel Microelectronics - Belgium.

Dealt with by Canon Europa Engineer.


Signature.

MATT FERDHAM

Name.

20TH JUNE 2001

Date.



Acceptance Results for FPA-3000i5+

Alcatel Microelectronics.

Serial No. 1042754
Alcatel ID : Stepper 9

UNIT	ITEM	SPEC	RESULT	JUDGE
1. ILLUMINATOR	Intensity (Normal Illumination)	> 10000W /m2	11362 W/m2	Ok
	Intensity (Off-Axis Illumination - SIAII)	>5500W /m2	7965 W/m2	Ok
	Uniformity (Normal Illumination)	<+/-1.0%	0.352%	Ok
	Uniformity (Off-Axis Illumination - SIAII)	<+/-1.3%	0.373%	Ok
	Dose Control Accuracy	<1.0%	0.40%	Ok
2. AUTO FOCUS SYSTEM	Masking Blade Accuracy	<+/-100um	-80um	Ok
	Focus stability over 28 days	<0.30um range		
	Focus Repeatability	<0.10um 3 sig	0.030um	Ok
	Die by Die levelling Repeatability	<7.0ppm 3 sig	3.8ppm	Ok
	Global Levelling	<7.0ppm 3 sig	1.8ppm	Ok
3. AUTO ALIGNMENT SYSTEM	Reticle Rotation Accuracy	<+/-0.010um ave	0.004um	Ok
	Reticle Rotation Repeatability	<0.020um range	0.013um	Ok
	AA Accuracy Mode 1 (Single Machine)	<0.040um M +3sig	0.037um	Ok
	AA Accuracy Mode 4 (Single Machine)	<0.040um M +3sig	0.038um	Ok
	AA Accuracy Mode 1 (Machine to Machine)	<0.090um M +3sig	0.076um	Ok
4. XY STAGE PERFORMANCE	AA Accuracy Mode 4 (Machine to Machine)	<0.090um M +3sig	0.077um	Ok
	Scaling (Reference Wafer)	<0.50ppm	0.11ppm	Ok
	Orthogonality (Reference Wafer)	<0.50ppm	0.33ppm	Ok
	Stepping Accuracy	<0.030um. 3 sig	0.025um	Ok
	Mechanical Prealignment Accuracy	X,Y <30um 3s	2.95um	Ok
5. PREALIGNMENT				
	HeNe Model, Step 32 shots	D/D ON = 120wph	145.6	Ok
6. THROUGHPUT	Expo 0.90 secs, Sub 0 Main 4.	D/D OFF = 120wph	146.1	Ok
	Wafer Feeding : 500 wafers cycled (AGA)	500 wafers no assist.	500	Ok
7. RELIABILITY	75 times reticle handling	No failures	75	Ok
	Focus Offset shift (NA=0.63/Sig=0.65)	<0.25um	0.10um	Ok
8. STABILITY DURING EXPOSURE	Focus Offset shift (NA=0.52/Sig=0.60)	<0.25um	0.10um	Ok
	Focus Offset shift (NA=0.55/Sig=0.50)	<0.25um	0.10um	Ok
	Focus Offset shift (NA=0.52/Sig=0.70)	<0.25um	0.20um	Ok

UNIT	ITEM	SPEC	RESULT	JUDGE
9. LENS PERFORMANCE	Resolution (Normal Illumination)	<0.35um	<0.35um	Ok
	CD Depth of Focus (Normal)			
	0.35um Lines & Spaces	>1.20um	1.50um	Ok
	CD Depth of Focus (Off Axis - SIA II)			
	0.32um Lines & Spaces	>0.80um	1.66um	Ok
	CD Depth of Focus (Special Mode 1)			
	0.50um Lines & Spaces	>1.20um	1.93um	Ok
	T/B Depth of Focus (Normal)			
	0.35um Lines & Spaces	>0.60um	0.68um	Ok
	T/B Depth of Focus (Off Axis - SIA II)			
	0.32um Lines & Spaces	>0.80um	1.00um	Ok
	T/B Depth of Focus (Special Mode 1)			
	0.50um Lines & Spaces	>1.20um	1.30um	Ok
	Proximity Effect (0.35um Lines & Spaces)	<0.050um	0.033um	Ok
	Proximity Effect (0.50um Lines & Spaces)	<0.050um	0.035um	Ok
	CD Linearity 0.35um Lines & Spaces	<10% range	7.12%	Ok
	CD Linearity 0.32um Lines & Spaces	<10% range	5.13%	Ok
	CD Linearity 0.50um Lines & Spaces	<10% range	4.49%	Ok
	CD Uniformity 0.35um Lines & Spaces	<0.035um	0.026um	Ok
	Image Field Deviation (Normal)	<0.35um	0.18um	Ok
	Astigmatism (Normal)	<0.20um	0.03um	Ok
	Linewidth Repeatability - 0.35um Field	0.35 +/-0.020um	0.3649um	Ok
	Linewidth Repeatability - 0.50um Field	0.50 +/-0.025um	0.5181um	Ok
	Linewidth Repeatability - 0.35um Wafer	0.35 +/-0.020um	0.3418um	Ok
	Linewidth Repeatability - 0.50um Wafer	0.50 +/-0.025um	0.5105um	Ok
	Distortion (Norm II Ex Mag - Quartz Wafer)	<+/- 0.035um	-0.023um	Ok
	Distortion (Norm II Ex Mag - Si Ref Wafer)	<+/- 0.035um	-0.029um	Ok

Canon.

Intensity and Uniformity Data Sheet.

X Area20.0mm

Y Area22.6mm

X Step1.00mm

Y Step1.13mm

Intensity11362

Uniform0.352

W/m2%

Machine3000i5+

Ser No.104 2754

Date22/05/01

Cust IDStepper 9

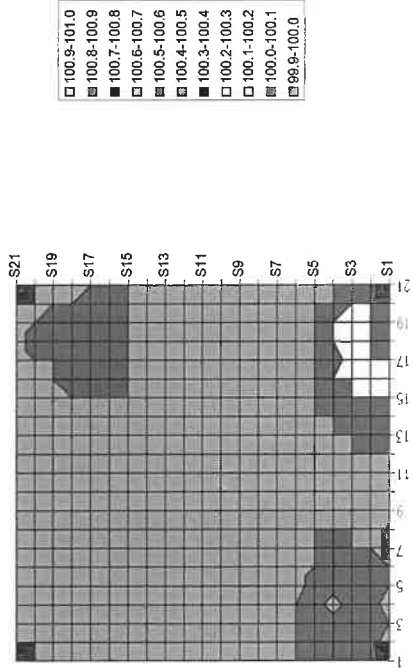
IL ModeStandard

CustAlcatel/Melec

Lamp Hr195

	-10.0	-9.0	-8.0	-7.0	-6.0	-5.0	-4.0	-3.0	-2.0	-1.0	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
11.3		99.9	100.0	99.9	100.0	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.0	100.0	
10.2	100.0	100.1	100.1	100.1	100.1	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.2	100.1	100.1	100.1	100.1	100.0
9.0	100.0	100.1	100.1	100.1	100.1	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.2	100.2	100.2	100.1	100.0
7.9	100.0	100.1	100.1	99.9	100.1	100.1	100.1	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.0	100.1	100.1	100.0	100.0
6.8	100.1	100.1	100.1	100.1	100.1	100.0	100.0	100.0	100.0	99.9	99.9	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9
5.7	100.0	100.0	100.0	100.0	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	100.0	100.0	100.0	99.9	99.9	100.0	99.8
4.5	100.0	100.0	100.0	99.8	99.8	99.8	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	100.0	99.9	99.9	99.9	99.9
3.4	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.8	99.8
2.3	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.8	99.8
1.1	99.8	99.9	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.9	99.8	99.8	99.9	99.9	99.5	99.9	99.8	99.9
0.0	99.8	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.9	100.0	99.9
-1.1	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	100.0	99.8
-2.3	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.9	100.0	100.0	100.0	99.9	100.0	100.0	100.0
-3.4	99.8	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.9	100.0	99.9	100.0	100.0	100.0	100.0
-4.5	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0
-5.7	99.9	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.9	100.1	100.1	100.1	100.1	100.1	100.1	100.0
-6.8	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.9	100.0	100.1	100.0	100.1	100.1	100.1	100.0
-7.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.9	99.8	99.9	100.0	100.1	100.1	100.0	100.1	100.0	99.9
-9.0	99.8	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	100.0	100.0	100.0	100.1	100.0	99.9
-10.2	99.7	99.8	99.8	99.8	99.7	99.8	99.8	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	100.0	100.1	100.0	99.9	99.8
-11.3		99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.7	99.7	99.7	99.7	99.8	99.8	99.9	99.9	99.8	99.9	99.8	

IUC Map Initial Data.



Canon.

Intensity and Uniformity Data Sheet.

X Area20.0mm

Y Area22.6mm

X Step94mm

Y Step94mm

Intensity5308

Uniform0.492

W/m2

%

Machine3000i5+

Ser No.104 2754

Date22/05/01

Cust IDStepper 9

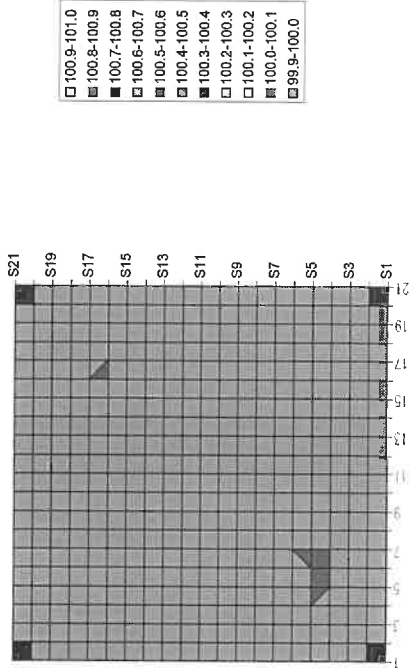
IL ModeSIA

CustAlcatel/Melec

Lamp Hr195

	-10.0	-9.0	-8.0	-7.0	-6.0	-5.0	-4.0	-3.0	-2.0	-1.0	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
11.3		99.2	99.4	99.5	99.6	99.6	99.7	99.7	99.7	99.7	99.7	99.6	99.7	99.6	99.6	99.4	99.4	99.4	99.2	99.0	
10.2	99.2	99.6	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.8	99.8	99.9	99.7	99.7	99.6	99.5	99.4	99.2
9.0	99.4	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.7	99.7	99.5
7.9	99.6	99.8	99.9	99.9	100.0	100.0	100.0	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	99.9	99.9	99.9	99.8	99.6
6.8	99.7	99.9	99.9	100.0	100.0	100.0	100.0	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.6
5.7	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	99.9	99.9	99.8	99.8	99.6
4.5	99.8	99.8	99.8	99.8	99.7	99.8	99.8	99.8	99.8	99.8	99.7	99.7	99.7	99.7	99.7	99.7	99.8	99.8	99.8	99.8	99.6
3.4	99.7	99.8	99.8	99.9	99.8	99.8	99.8	99.7	99.7	99.6	99.6	99.6	99.7	99.7	99.7	99.8	99.8	99.8	99.8	99.8	99.7
2.3	99.8	99.8	99.8	99.9	99.8	99.8	99.8	99.7	99.7	99.6	99.6	99.6	99.7	99.7	99.7	99.8	99.8	99.8	99.8	99.7	99.7
1.1	99.7	99.8	99.8	99.9	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.6	99.6	99.7	99.7	99.7	99.7	99.6	99.6	99.7	99.6
0.0	99.7	99.8	99.8	99.9	99.8	99.7	99.7	99.7	99.8	99.8	99.8	99.9	99.8	99.7	99.7	99.7	99.7	99.6	99.6	99.8	99.7
-1.1	99.7	99.7	99.8	99.8	99.9	99.8	99.8	99.7	99.9	99.9	99.9	99.9	99.8	99.7	99.7	99.7	99.7	99.8	99.8	99.8	99.8
-2.3	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.8	99.7	99.9	99.8	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7
-3.4	99.7	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.9	99.8	99.8	99.8	99.8	99.7
-4.5	99.7	99.8	99.9	99.9	99.9	99.9	100.0	99.9	99.9	99.9	99.9	99.7	99.8	99.8	99.9	99.8	99.8	99.8	99.8	99.8	99.7
-5.7	99.6	99.8	99.9	99.9	100.0	99.9	100.0	99.9	100.0	99.9	99.9	99.8	99.9	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.7
-6.8	99.5	99.7	99.8	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	100.0	99.9	99.9	99.8	99.7
-7.9	99.5	99.7	99.8	99.9	99.9	100.0	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.6
-9.0	99.3	99.5	99.7	99.8	99.8	99.9	99.9	99.9	99.9	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.7	99.5
-10.2	99.1	99.3	99.5	99.6	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.7	99.7	99.7	99.7	99.6	99.5	99.3	99.0
-11.3		99.0	99.1	99.3	99.5	99.5	99.5	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.5	99.5	99.4	99.3	99.1	98.9	

IUC Map Initial Data.



Canon.

Intensity and Uniformity Data Sheet.

X Area20.0mm

Y Area22.6mm

X Step1.00mm

Y Step1.13mm

Intensity7965

Uniform0.373

W/m2

%

Machine3000i5+

Ser No.104 2754

Date22/05/01

Cust IDStepper 9

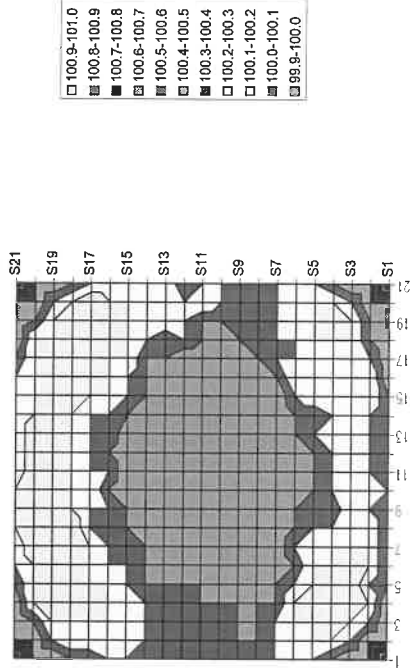
IL ModeSIA2

CustAlcatel/Mitec

Lamp Hr195

	-10.0	-9.0	-8.0	-7.0	-6.0	-5.0	-4.0	-3.0	-2.0	-1.0	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
11.3		99.5	99.8	99.9	100.0	100.0	100.0	100.0	100.0	100.1	100.0	100.0	100.0	100.0	100.0	99.9	99.9	99.8	99.7	99.4	10.0
10.2	99.6	99.9	100.1	100.2	100.1	100.2	100.2	100.2	100.1	100.2	100.1	100.1	100.1	100.1	100.2	100.2	100.1	100.0	100.0	99.8	99.5
9.0	99.8	100.1	100.2	100.3	100.3	100.3	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.1	99.9
7.9	100.0	100.2	100.3	100.2	100.3	100.2	100.2	100.1	100.0	100.1	100.1	100.1	100.2	100.1	100.1	100.2	100.2	100.2	100.3	100.2	100.0
6.8	100.1	100.2	100.2	100.3	100.2	100.2	100.2	100.1	100.1	100.0	100.0	100.0	100.1	100.0	100.2	100.1	100.1	100.2	100.2	100.2	100.1
5.7	100.1	100.2	100.2	100.2	100.1	100.0	100.1	100.0	100.0	99.9	100.0	99.9	100.0	100.0	100.1	100.2	100.1	100.1	100.2	100.2	100.1
4.5	100.1	100.1	100.1	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.7	99.8	99.8	99.9	100.0	100.1	100.1	100.1	100.1
3.4	100.0	100.0	100.0	100.0	99.9	99.9	99.8	99.7	99.7	99.6	99.6	99.6	99.7	99.8	99.8	99.9	100.0	100.1	100.1	100.1	100.0
2.3	100.1	100.0	100.0	100.0	99.9	99.8	99.7	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.7	99.8	99.9	100.0	100.1	100.1	100.0
1.1	100.0	100.1	100.1	100.0	100.0	99.9	99.7	99.6	99.6	99.6	99.6	99.6	99.6	99.7	99.7	99.8	99.9	100.0	100.1	100.1	100.0
0.0	100.0	100.0	100.0	100.0	100.0	99.8	99.7	99.7	99.7	99.9	100.0	99.9	99.9	99.7	99.7	99.8	99.9	100.0	100.0	100.1	100.1
-1.1	100.0	100.1	100.0	100.1	100.0	99.9	99.8	99.7	99.7	99.9	100.0	99.9	99.9	99.7	99.8	99.8	99.9	100.0	100.0	100.2	100.1
-2.3	100.0	100.1	100.0	100.1	100.0	100.0	99.9	99.8	99.7	99.8	99.9	99.8	99.7	99.8	99.8	99.9	99.9	100.1	100.1	100.1	100.0
-3.4	100.0	100.1	100.1	100.1	100.0	100.0	100.0	99.9	99.8	99.8	99.8	99.8	99.7	99.9	99.9	100.0	100.0	100.0	100.2	100.2	100.2
-4.5	100.1	100.2	100.2	100.2	100.1	100.1	100.1	100.0	100.0	99.9	100.1	100.0	100.1	100.1	100.1	100.0	100.0	100.1	100.2	100.2	100.1
-5.7	100.1	100.1	100.2	100.2	100.2	100.1	100.1	100.0	100.1	100.0	100.1	100.0	100.1	100.1	100.1	100.1	100.2	100.2	100.2	100.2	100.1
-6.8	100.0	100.2	100.2	100.3	100.2	100.2	100.2	100.1	100.1	100.2	100.1	100.1	100.1	100.1	100.2	100.2	100.2	100.3	100.3	100.3	100.1
-7.9	100.0	100.2	100.2	100.3	100.2	100.3	100.3	100.3	100.2	100.2	100.1	100.1	100.1	100.1	100.2	100.3	100.3	100.3	100.3	100.3	100.1
-9.0	99.8	100.1	100.2	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.2	100.3	100.3	100.3	100.3	100.3	100.3	100.2	100.0
-10.2	99.5	99.9	100.0	100.2	100.2	100.2	100.3	100.3	100.3	100.2	100.3	100.3	100.3	100.3	100.2	100.2	100.2	100.2	100.2	100.1	99.8
-11.3		99.5	99.7	99.9	100.0	100.1	100.1	100.2	100.2	100.2	100.1	100.1	100.1	100.1	100.1	100.1	100.0	99.8	99.7	99.5	

IUC Map Intial Data.



Canon.

Intensity and Uniformity Data Sheet.

X Area20.0mm

Y Area22.6mm

X Step1.00mm

Y Step1.13mm

Intensity65i5

Uniform0.622

W/m2

%

Machine3000i5+

Ser No.104 2754

Date22/05/01

Cust IDStepper 9

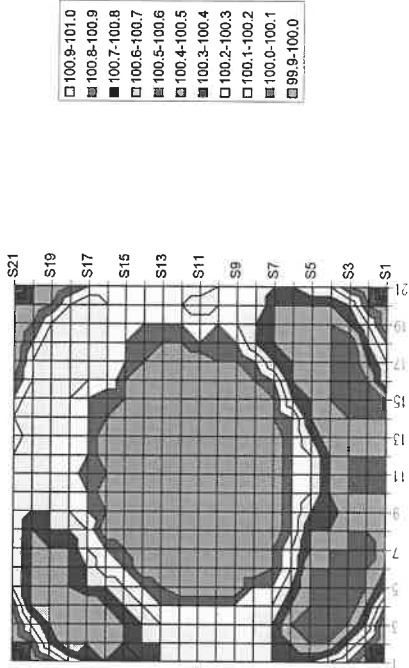
IL ModeSIB

CustAlcatel Melec

Lamp Hr195

	-10.0	-9.0	-8.0	-7.0	-6.0	-5.0	-4.0	-3.0	-2.0	-1.0	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
11.3	99.7	100.1	100.3	100.4	100.5	100.6	100.6	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.2	100.2	100.1	99.9	99.5	
10.2	100.1	100.3	100.5	100.6	100.6	100.6	100.5	100.5	100.5	100.5	100.6	100.5	100.5	100.5	100.6	100.5	100.4	100.3	100.2	100.0	99.6
9.0	100.1	100.3	100.5	100.6	100.6	100.6	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.6	100.6	100.6	100.6	100.4	100.3	100.0
7.9	100.2	100.5	100.6	100.6	100.6	100.5	100.5	100.4	100.3	100.4	100.5	100.4	100.5	100.4	100.5	100.5	100.5	100.5	100.5	100.4	100.2
6.8	100.3	100.5	100.6	100.5	100.5	100.5	100.4	100.4	100.3	100.2	100.2	100.2	100.3	100.4	100.4	100.4	100.4	100.4	100.5	100.4	100.2
5.7	100.3	100.4	100.5	100.4	100.3	100.2	100.2	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.3	100.4	100.4	100.4	100.4	100.4	100.2
4.5	100.3	100.3	100.3	100.2	100.1	100.0	100.0	99.9	99.9	99.8	99.8	99.8	99.9	99.8	99.9	100.0	100.1	100.3	100.4	100.4	100.3
3.4	100.2	100.2	100.2	100.2	100.1	99.9	99.8	99.7	99.7	99.7	99.8	99.8	99.7	99.7	99.8	99.9	100.0	100.1	100.3	100.2	100.2
2.3	100.3	100.2	100.2	100.1	99.9	99.8	99.7	99.6	99.4	99.4	99.4	99.4	99.5	99.5	99.7	99.8	99.9	100.0	100.1	100.2	100.1
1.1	100.2	100.3	100.2	100.1	99.9	99.7	99.6	99.4	99.4	99.4	99.4	99.4	99.5	99.5	99.6	99.8	99.9	100.0	100.1	100.2	100.2
-1.1	100.3	100.2	100.2	100.1	99.9	99.8	99.6	99.4	99.4	99.4	99.4	99.4	99.5	99.5	99.6	99.8	99.9	100.0	100.1	100.3	100.1
-2.3	100.3	100.3	100.3	100.2	100.1	99.9	99.7	99.6	99.4	99.4	99.4	99.4	99.5	99.5	99.7	99.8	99.9	100.0	100.1	100.2	100.1
-3.4	100.4	100.3	100.3	100.2	100.1	99.9	99.7	99.6	99.4	99.4	99.4	99.4	99.5	99.5	99.7	99.8	99.9	100.0	100.1	100.2	100.2
-4.5	100.3	100.4	100.4	100.3	100.2	100.1	100.0	99.9	99.8	99.8	99.8	99.8	99.9	99.9	100.0	100.0	100.1	100.1	100.2	100.2	100.2
-5.7	100.4	100.4	100.4	100.4	100.3	100.1	100.1	99.9	99.8	99.8	99.8	99.9	99.9	100.0	100.0	100.2	100.2	100.2	100.2	100.2	100.2
-6.8	100.3	100.4	100.4	100.5	100.3	100.3	100.2	100.2	100.1	100.1	100.0	100.1	100.1	100.1	100.1	100.2	100.2	100.2	100.2	100.2	100.1
-7.9	100.2	100.5	100.5	100.5	100.4	100.4	100.4	100.3	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.3	100.3	100.3	100.3	100.2	100.0
-9.0	100.0	100.3	100.3	100.4	100.4	100.4	100.4	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.2	99.7
-10.2	99.7	100.0	100.2	100.4	100.4	100.4	100.4	100.4	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.2	100.2	100.1	100.0	99.7	99.4
-11.3		99.6	99.8	100.0	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.1	100.2	100.1	100.0	99.9	99.7	99.6	99.3	99.1

IUC Map Initial Data.





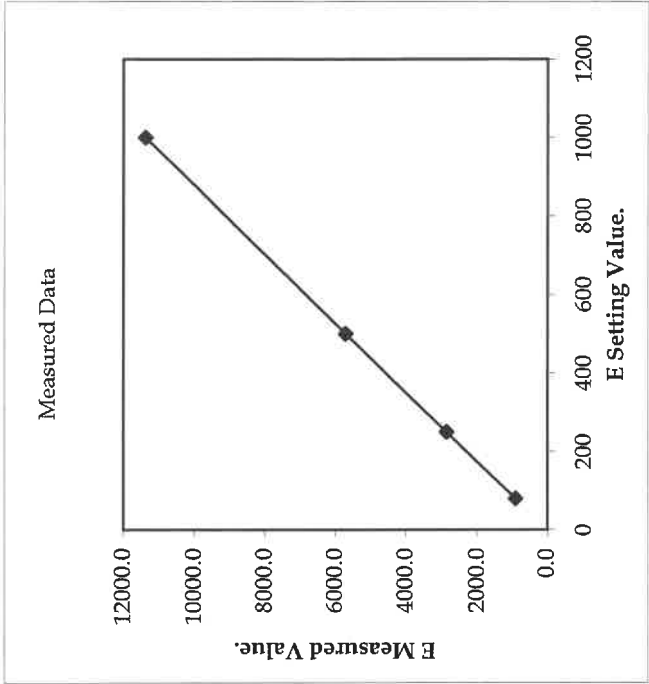
Dose Control Accuracy.

Machine Number : 104 2754
Machine ID : Stepper 9
Customer : Alcatel Mietec.
Date : 22nd May 2001.

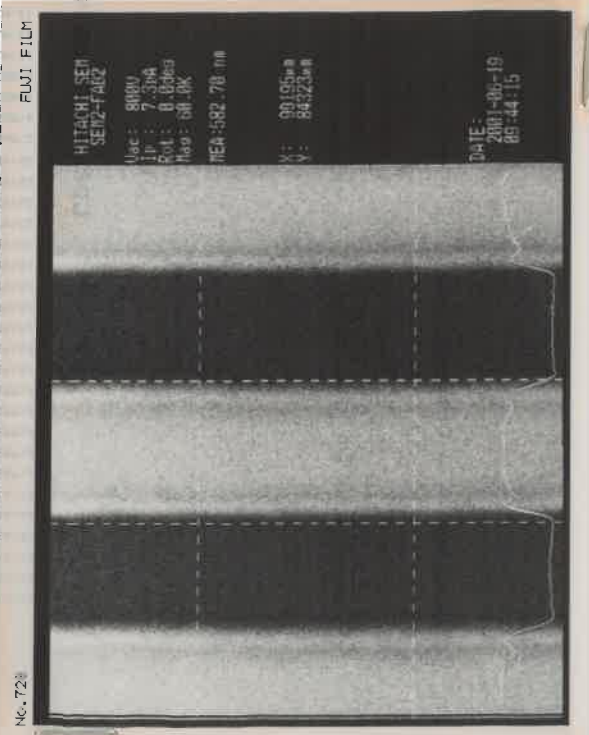
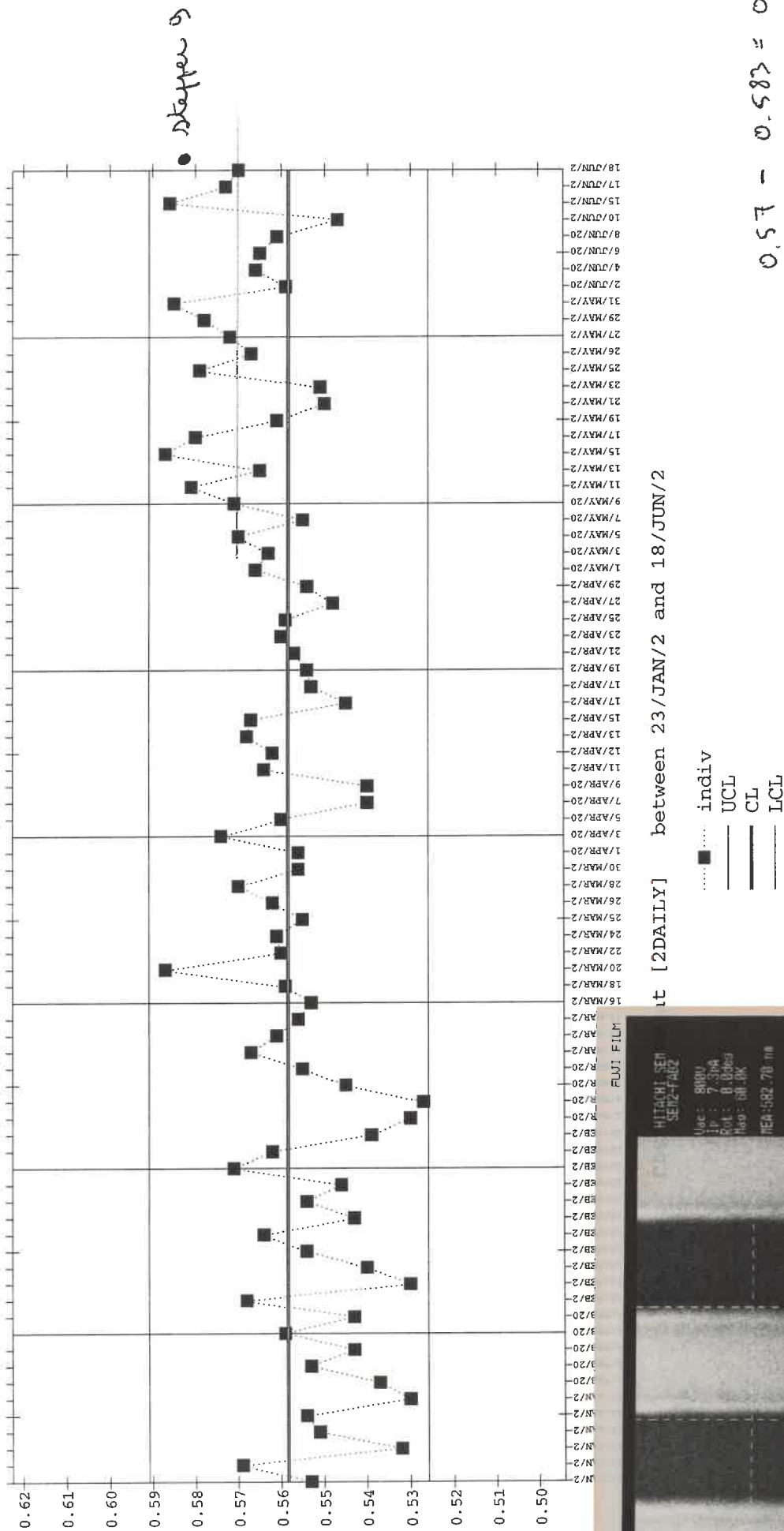
Lamp Intensity	11362	W/m2
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Time (ms)	80	250	500	1000
Set Value	909.0	2840.5	5681.0	11362.0
E _{max}	914.0	2854.5	5709.0	11399.5
E _{min}	909.0	2850.0	5694.5	11363.5
E _{mean}	911.7	2852.3	5701.4	11380.1
Repeatability	0.27	0.08	0.13	0.16
Set Error	0.30	0.42	0.36	0.16

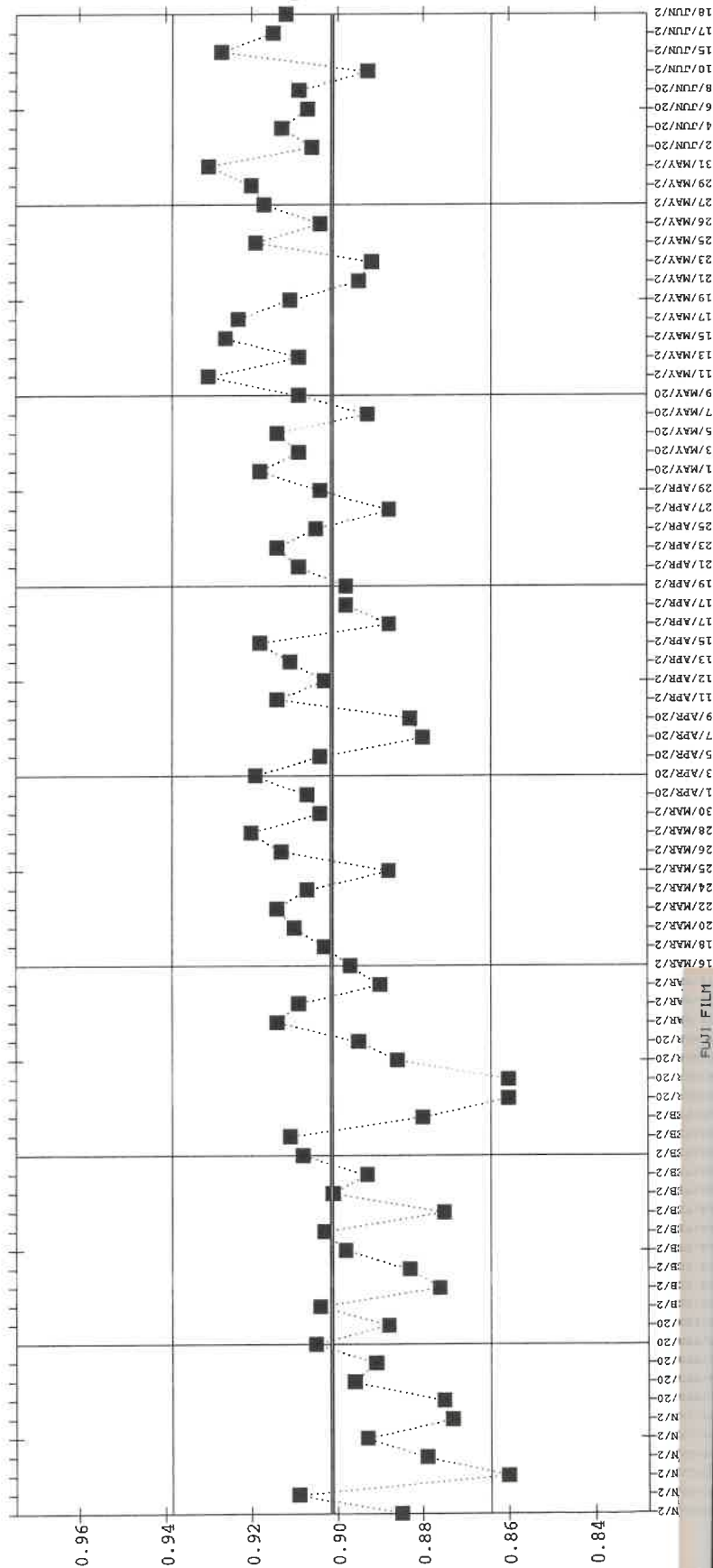
Linearity	0.13	Spec +/-0.5 %
Overall Accuracy	0.40	Spec +/-1.0 %



CDSEM0.5LINE at [2DAILY] between 23/JAN/2 and 18/JUN/2
 << Individuals (IE) trend plot >>



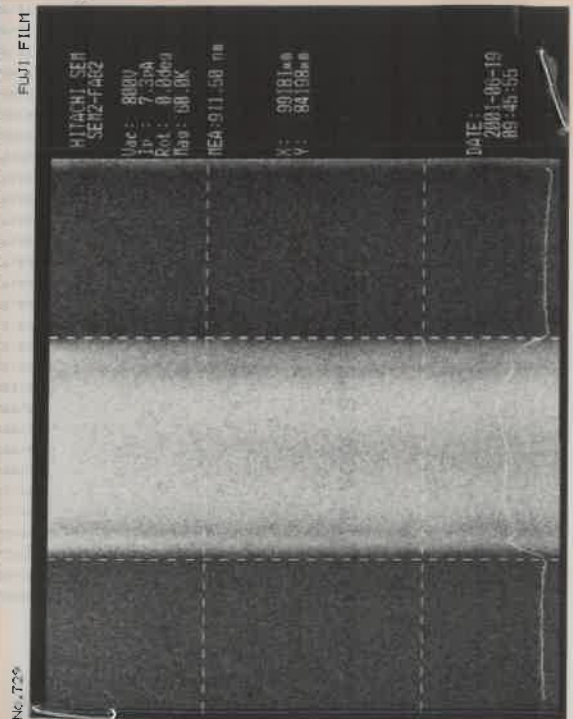
CDSEM0.8LINE at [2DAILY] between 23/JAN/2 and 18/JUN/2
<< Individuals (IE) trend plot >>



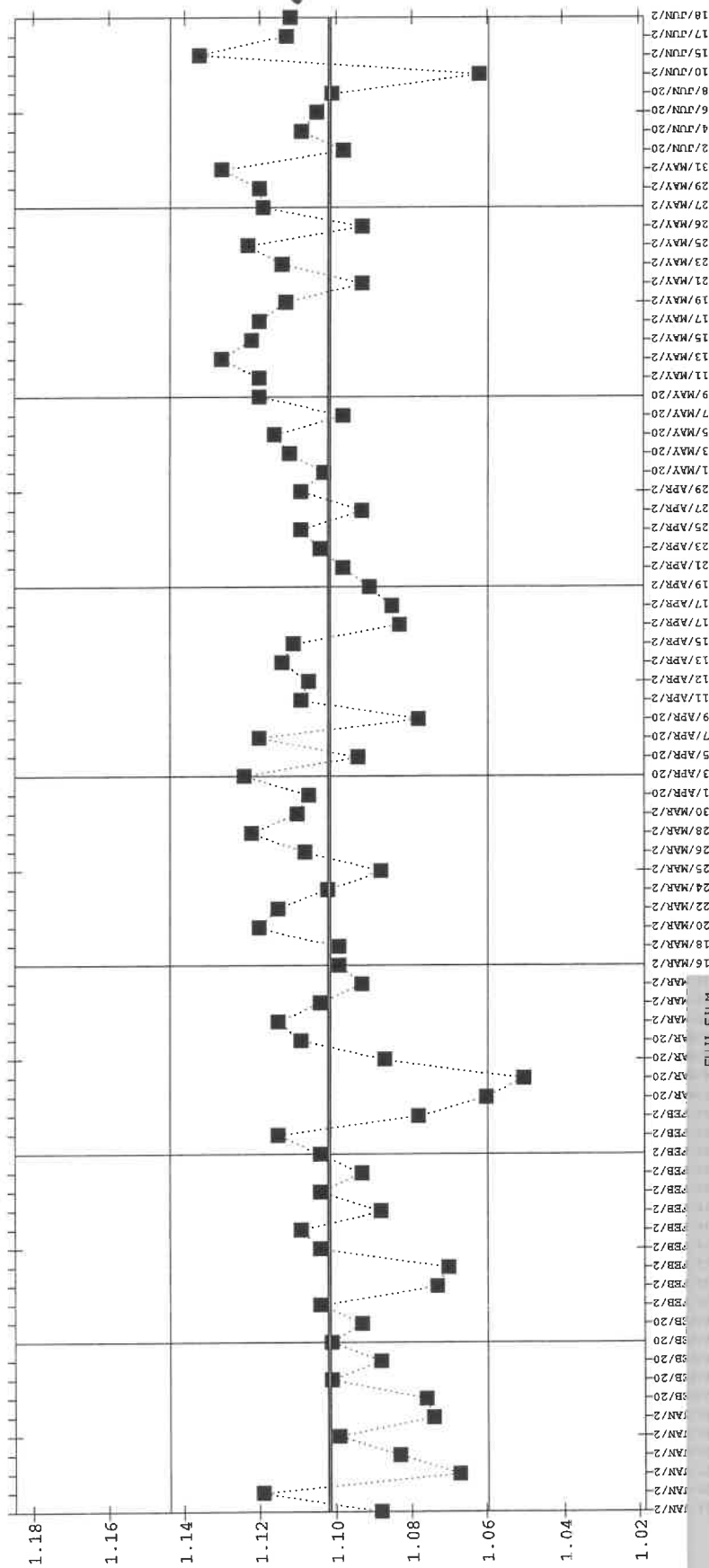
t [2DAILY] between 23/JAN/2 and 18/JUN/2

..... indiv
 ——— UCL
 ——— CL
 ——— LCL

0.901-0.912=-0.011



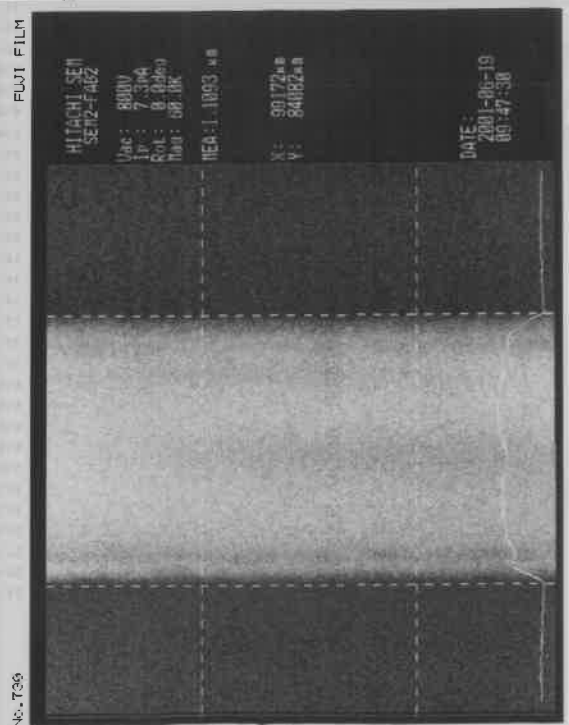
CDSEM1.0LINE at [2DAILY] between 23/JAN/2 and 18/JUN/2
<< Individuals (IE) trend plot >>



at [2DAILY] between 23/JAN/2 and 18/JUN/2

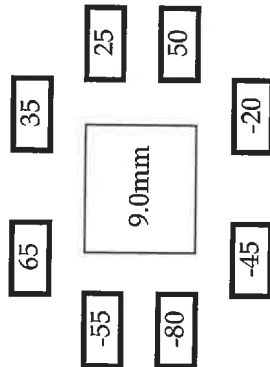
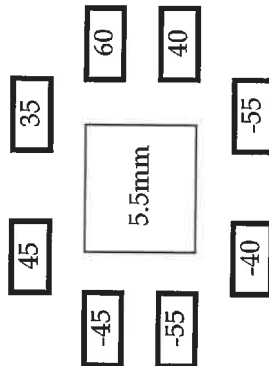
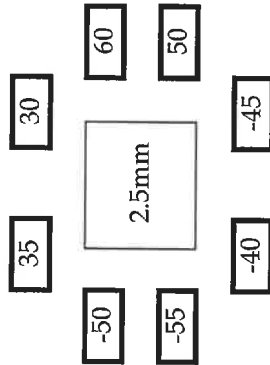
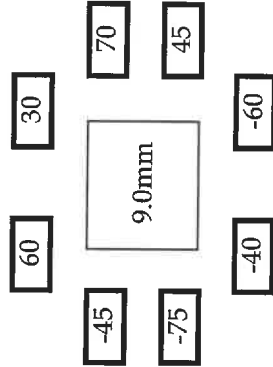
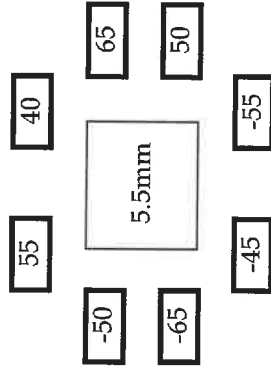
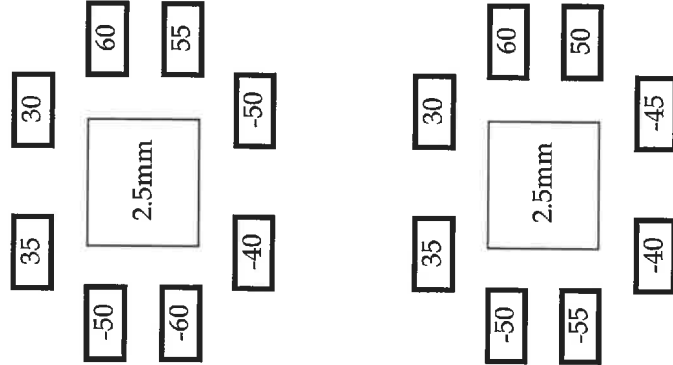
indiv
UCL
CL
LCL

$1.101 - 1.109 = 0.008$



Canon

Masking Blade Accuracy



Rotation **341** ppm

Vertical		Horizontal			
		Bottom	Top	T/B	Angle
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.3287	0.0525	0.16	82.8	16.0
0.80	0.3514	0.1214	0.35	84.0	34.5
0.70	0.3448	0.1377	0.40	84.6	39.9
0.60	0.3466	0.1410	0.40	84.6	40.4
0.50	0.3444	0.1640	0.48	85.3	47.6
0.40	0.3514	0.1640	0.47	85.1	46.5
0.30	0.3534	0.1644	0.47	85.1	46.5
0.20	0.3534	0.1644	0.47	85.1	46.5
0.10	0.3452	0.1344	0.39	84.5	38.9
0.00	0.3476	0.1118	0.32	83.9	32.2
-0.10	0.3614	0.0918	0.25	83.0	25.4
-0.20	0.3644	0.0638	0.19	82.3	18.9
-0.30	0.3720				
-0.40	0.3860				
-0.50	0.3870				
-0.60	0.3824				
-0.70	0.3801				
-0.80	0.3611				
-0.90	0.3563				
-1.00					
-1.10					
-1.20					
-1.30					
Mean	0.3546				Mean 0.3583

Vertical		Horizontal			
		Bottom	Top	T/B	Angle
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.3101	0.0837	0.270	84.1	27.0
0.80	0.3263	0.1115	0.342	84.4	34.2
0.70	0.3281	0.1281	0.385	84.7	38.5
0.60	0.3352	0.1477	0.441	85.1	44.1
0.50	0.3384	0.1644	0.486	85.5	48.6
0.40	0.3419	0.1511	0.441	85.0	44.1
0.30	0.3421	0.1511	0.441	85.0	44.1
0.20	0.3402	0.1577	0.448	84.9	44.8
0.10	0.3521	0.1454	0.411	84.6	41.1
0.00	0.3514	0.1454	0.411	84.6	41.1
-0.10	0.3514	0.1454	0.411	84.6	41.1
-0.20	0.3563	0.0625	0.175	82.4	17.5
-0.30	0.359				
-0.40	0.3629				
-0.50	0.3621				
-0.60	0.3614				
-0.70	0.356				
-0.80	0.3537				
-0.90	0.3464				
-1.00					
-1.10					
-1.20					
-1.30					
Mean	0.3466				Mean 0.3476

Vertical		Horizontal			
		Bottom	Top	T/B	Angle
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.3481	0.0559	0.161	82.4	16.1
0.80	0.3414	0.1118	0.327	84.0	32.7
0.70	0.349	0.1161	0.338	84.0	33.8
0.60	0.3537	0.1577	0.446	84.9	44.6
0.50	0.3574	0.1498	0.419	84.6	41.9
0.40	0.3559	0.1673	0.470	85.1	47.0
0.30	0.3504	0.1544	0.441	84.9	44.1
0.20	0.3501	0.1607	0.446	84.8	44.6
0.10	0.3535	0.1414	0.400	84.5	40.0
0.00	0.3528	0.1148	0.316	83.5	31.6
-0.10	0.3635	0.0925	0.172	82.2	17.2
-0.20	0.368				
-0.30	0.3681				
-0.40	0.3697				
-0.50	0.372				
-0.60	0.369				
-0.70	0.3684				
-0.80	0.3614				
-0.90	0.3582				
-1.00					
-1.10					
-1.20					
-1.30					
Mean	0.3595				Mean 0.3611

Vertical		Horizontal			
UC	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
1.00					
0.90	0.2948	0.0692	0.235	84.1	23.5
0.80	0.3121	0.1181	0.378	84.9	37.8
0.70	0.3168	0.1281	0.402	85.0	40.2
0.60	0.3234	0.1471	0.452	85.2	45.2
0.50	0.3254	0.1471	0.452	85.2	45.2
0.40	0.3318	0.1467	0.442	85.2	44.2
0.30	0.3348	0.1541	0.460	85.3	46.0
0.20	0.3419	0.1511	0.442	85.0	44.2
0.10	0.3515	0.1314	0.374	84.3	37.4
0.00	0.3495	0.1248	0.356	84.2	35.6
-0.10	0.3524	0.0613	0.174	82.4	17.4
-0.20	0.3559				
-0.30	0.3579				
-0.40	0.3614				
-0.50	0.3541				
-0.60	0.3531				
-0.70	0.3508				
-0.80	0.3465				
-0.90	0.3341				
-1.00					
-1.10					
-1.20					
-1.30					
Mean	0.3403				0.3379

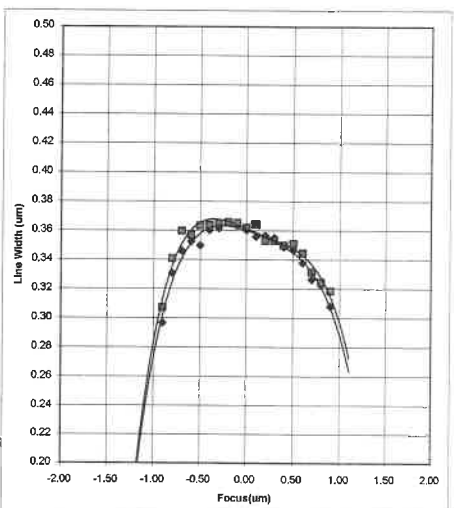
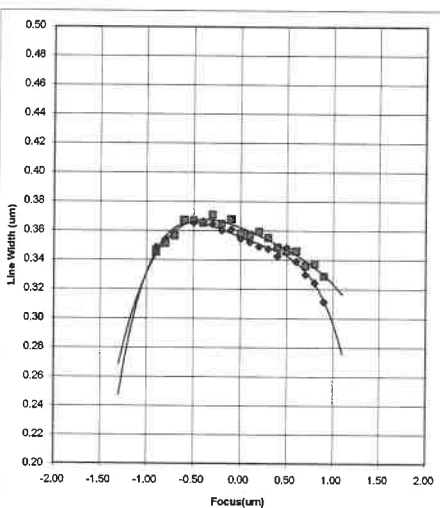
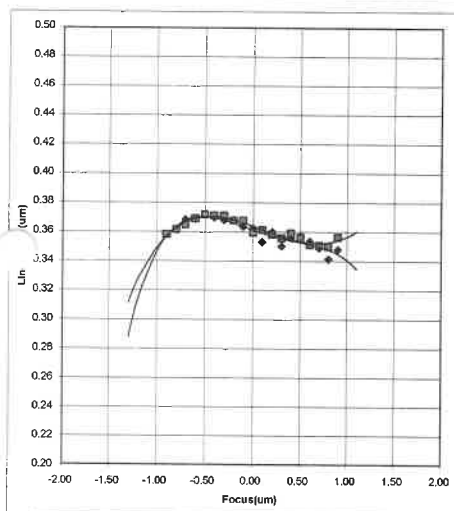
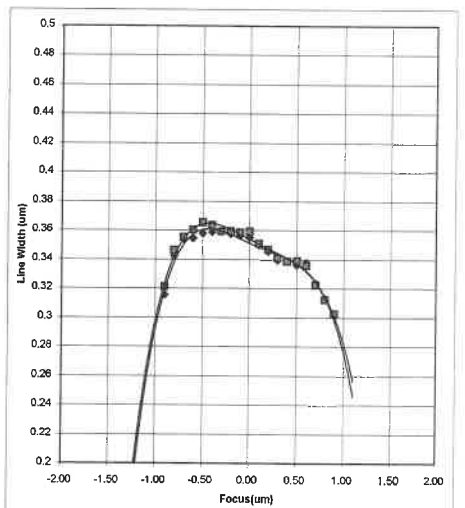
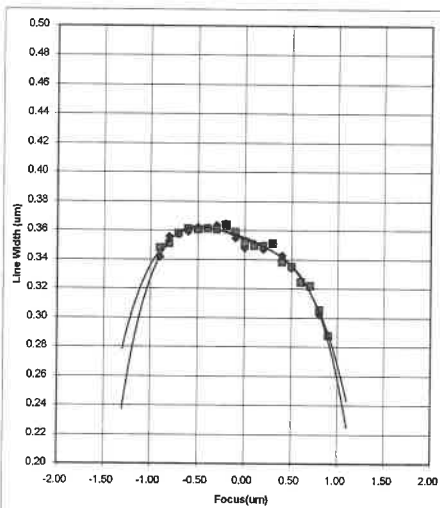
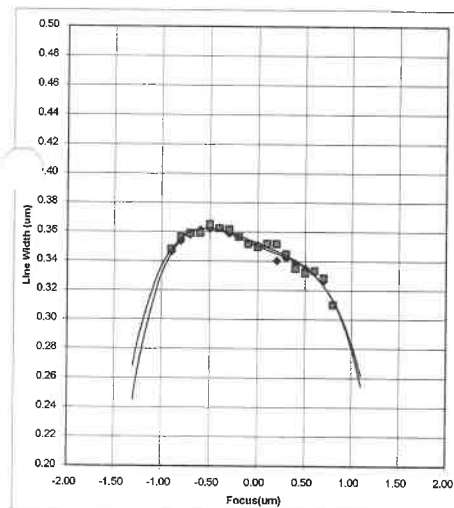
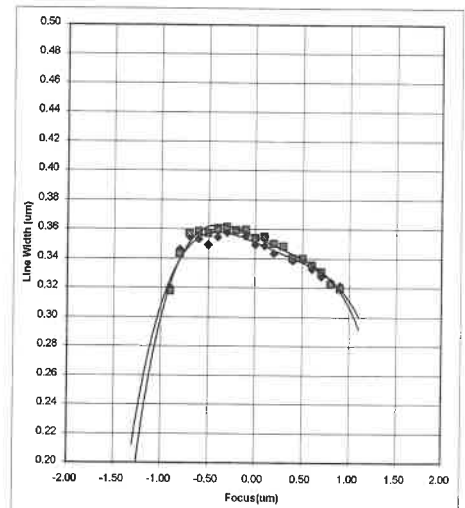
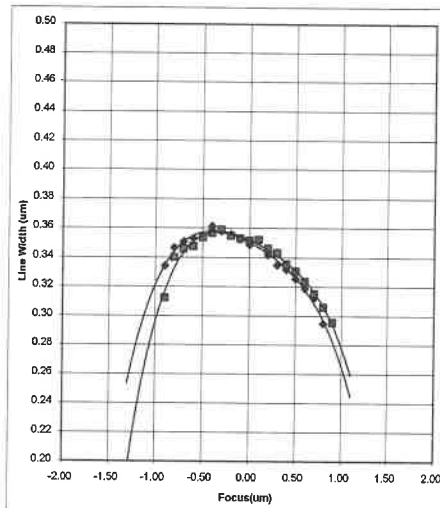
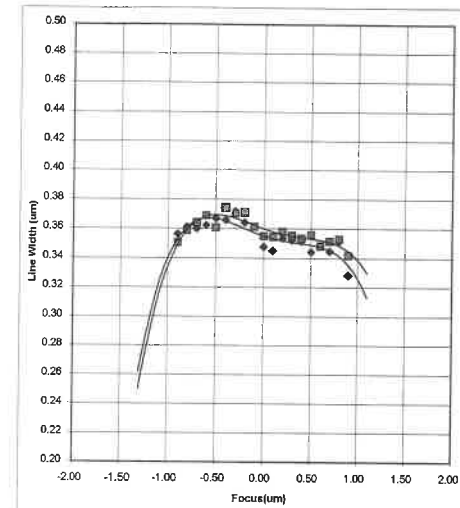
Vertical		Horizontal				
		Bottom	Top	T/B	Angle	T/B %
1.10						
1.00						
0.90						
0.80	0.3022	0.0755	0.250	84.1	25.0	
0.70	0.3218	0.1151	0.358	84.6	35.8	0.0888
0.60	0.3254	0.1171	0.360	84.6	36.0	0.1198
0.50	0.3341	0.1640	0.491	85.6	49.1	0.1387
0.40	0.3429	0.1511	0.441	85.0	44.1	0.1514
0.30	0.3515	0.1611	0.458	85.5	45.8	0.1544
0.20	0.3471	0.1581	0.455	85.1	45.5	0.1674
0.10	0.3569	0.1314	0.374	84.3	37.4	0.1644
0.00	0.3478	0.1025	0.295	83.9	29.5	0.1314
-0.10	0.3548	0.0722	0.203	82.6	20.3	0.0978
-0.20	0.3648					0.0745
-0.30	0.3637					0.3638
-0.40	0.3618					0.3607
-0.50	0.3622					0.3614
-0.60	0.3592					0.3607
-0.70	0.3572					0.3581
-0.80	0.3558					0.3581
-0.90	0.3417					0.3511
-1.00						0.3461
-1.10						
-1.20						
-1.30						
Mean	0.3469				Mean	0.3441

Vertical		Horizontal				
		Bottom	Top	T/B	Angle	T/B
UL	Bottom	Top	T/B	Angle <td>T/B</td> <th>%</th>	T/B	%
1.10	1.10					
0.90	0.3115	0.0592	0.190	83.4	19.0	0.3288
0.80	0.3245	0.1214	0.374	84.7	37.4	0.3379
0.70	0.3301	0.1281	0.388	84.7	38.8	0.3353
0.60	0.3391	0.1454	0.429	84.9	42.9	0.3461
0.50	0.3486	0.1677	0.481	85.3	48.1	0.3462
0.40	0.3425	0.1611	0.470	85.3	47.0	0.3488
0.30	0.3477	0.1644	0.473	85.2	47.3	0.3563
0.20	0.3492	0.1517	0.434	84.8	43.4	0.3553
0.10	0.3523	0.1478	0.420	84.7	42.0	0.3568
0.00	0.3547	0.1114	0.314	83.7	31.4	0.3581
-0.10	0.361	0.0755	0.209	82.6	20.9	0.3687
-0.20	0.3602					0.3641
-0.30	0.3647					0.371
-0.40	0.3664					0.3654
-0.50	0.3656					0.367
-0.60	0.3668					0.3674
-0.70	0.358					0.3565
-0.80	0.3543					0.3515
-0.90	0.3487					0.3462
-1.00						0.196
-1.10						82.3
-1.20						19.6
-1.30						
Mean	0.3498				Mean	0.3542

Vertical		Horizontal			
		Bottom	Top	T/B	Angle T/B %
UR	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.3215	0.1028	0.320	84.3	32.0
0.80	0.3242	0.1148	0.354	84.5	35.4
0.70	0.3278	0.1341	0.409	84.9	40.9
0.60	0.3328	0.1444	0.434	85.1	43.4
0.50	0.3392	0.1458	0.430	85.0	43.0
0.40	0.3465	0.1674	0.494	85.5	49.4
0.30	0.3483	0.1676	0.481	85.3	48.1
0.20	0.3435	0.1544	0.449	85.1	44.9
0.10	0.3488	0.1084	0.311	83.7	31.1
0.00	0.3495	0.0755	0.216	82.9	21.6
-0.10	0.3551				
-0.20	0.3590				
-0.30	0.3577				
-0.40	0.3546				
-0.50	0.3497				
-0.60	0.3533				
-0.70	0.3552				
-0.80	0.3462				
-0.90	0.3201				
-1.00					
-1.10					
-1.20					
-1.30					
Mean	0.3434				Mean 0.3459

Vertical		Horizontal							
CH	Bottom	Top	T/B	Angle	T/B	Angle	T/B	Angle	
1.10	1.10								
1.00	1.00								
0.90	0.90								
0.80	0.3129	0.1051	0.336	84.6	33.6	0.3122	0.1181	83.8	21.6
0.70	0.3235	0.1381	0.427	85.2	42.7	0.3371	0.1371	84.2	21.9
0.60	0.338	0.1544	0.457	85.2	45.7	0.357	0.1607	84.7	24.1
0.50	0.3362	0.1644	0.489	85.5	48.9	0.339	0.1706	85.3	26.6
0.40	0.3362	0.1644	0.489	85.4	48.5	0.3387	0.164	84.8	26.4
0.30	0.3395	0.1611	0.475	85.3	47.5	0.341	0.1707	85.1	26.1
0.20	0.3455	0.1577	0.436	85.1	43.6	0.3467	0.168	84.9	28.5
0.10	0.3498	0.1248	0.357	84.1	35.7	0.357	0.133	83.8	28.4
0.00	0.355	0.0885	0.249	83.1	24.9	0.3504		0.210	21.0
-0.10	0.3562	0.0755	0.212	82.7	21.2	0.3587	0.0755	0.210	21.0
-0.20	0.3576					0.3597			
-0.30	0.3593					0.3593			
-0.40	0.3588					0.3587			
-0.50	0.3578					0.3553			
-0.60	0.3546					0.3504			
-0.70	0.3539					0.3554			
-0.80	0.3422					0.3463			
-0.90	0.3156					0.3211			
-1.00									
-1.10									
-1.20									
-1.30									
Mean	0.3442					Mean	0.3441		

Vertical		Horizontal			
		Bottom	Top	T/B	Angle T/B %
DIR	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.3082	0.1284	0.417	85.3	41.7
0.80	0.3228	0.1254	0.388	84.8	38.8
0.70	0.3265	0.1447	0.443	85.3	44.3
0.60	0.3380	0.1544	0.457	85.2	45.7
0.50	0.3468	0.1577	0.455	85.1	45.5
0.40	0.3468	0.1554	0.446	85.0	44.6
0.30	0.3551	0.1510	0.425	84.7	42.5
0.20	0.3565	0.1411	0.356	84.4	35.6
0.10	0.3559	0.1085	0.305	83.6	30.5
0.00	0.3602	0.1031	0.286	83.3	28.6
-0.10	0.3633	0.1308	0.360	83.9	36.0
-0.20	0.3660				0.3654
-0.30	0.3614				0.3651
-0.40	0.3603				0.364
-0.50	0.3496				0.3633
-0.60	0.3525				0.357
-0.70	0.3258				0.3597
-0.80	0.3307				0.3408
-0.90	0.2866				0.3072
-1.00					
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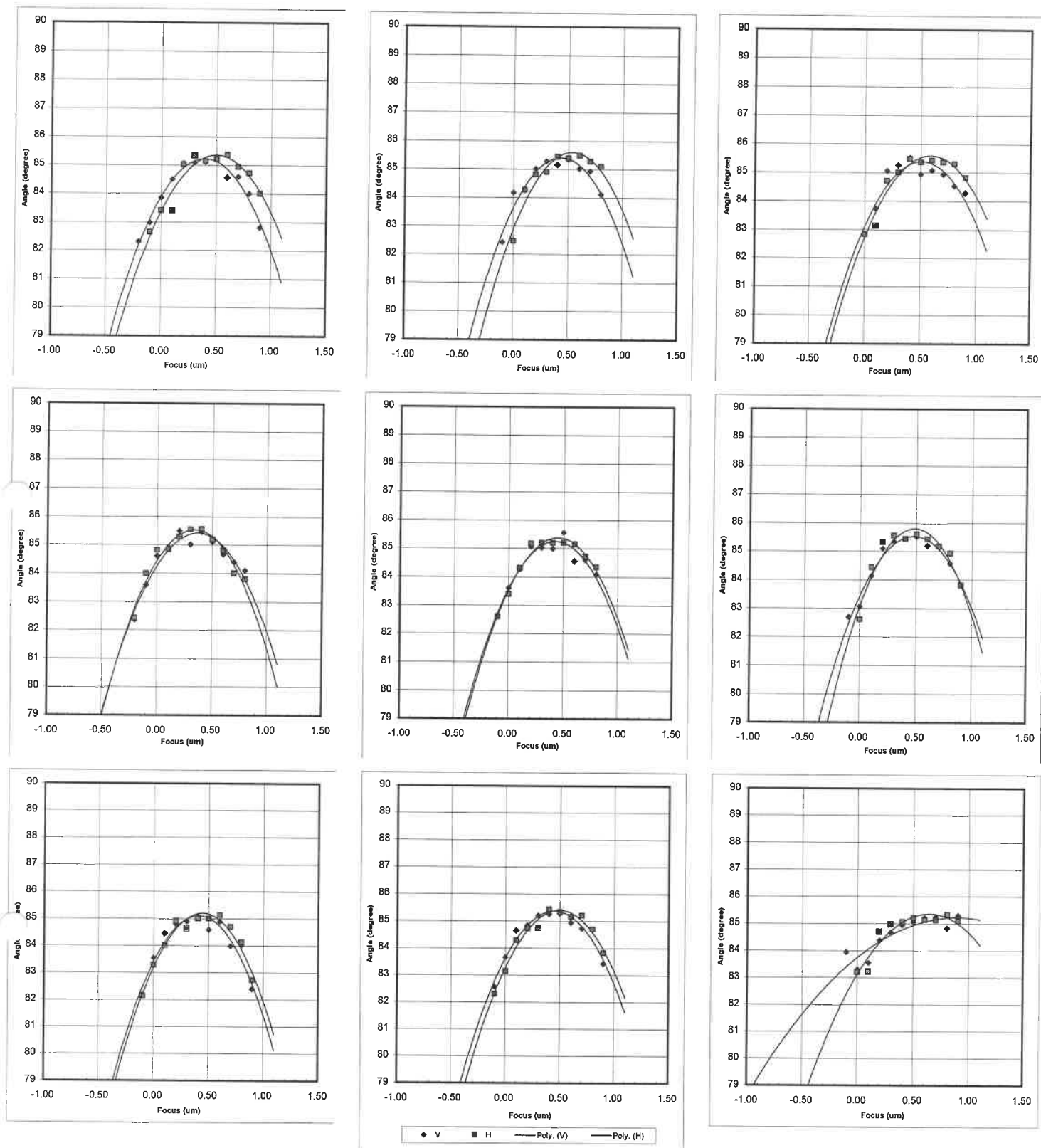
◆ V ■ H — Poly. (H) — Poly. (V)

Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	Standard
Resist	PFI-38A	Exposure	2420 j/m2	Serial No.	104 2754	Sigma	0.65	Line width	0.35 um

Canon

CD Performance - 9 Fields

Alcatel 104 2754 i5+ (Stepper 9)



Rt	1.095 uml	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	Standard
Resist	PFL38A	Exposure	2420 j/m2	Serial No.	104 2754	Sigma	0.65	Line width	0.35 um

Canon

Profile Performance - 9 Fields

Alcatel 104 2754 i5+ (Stepper 9)

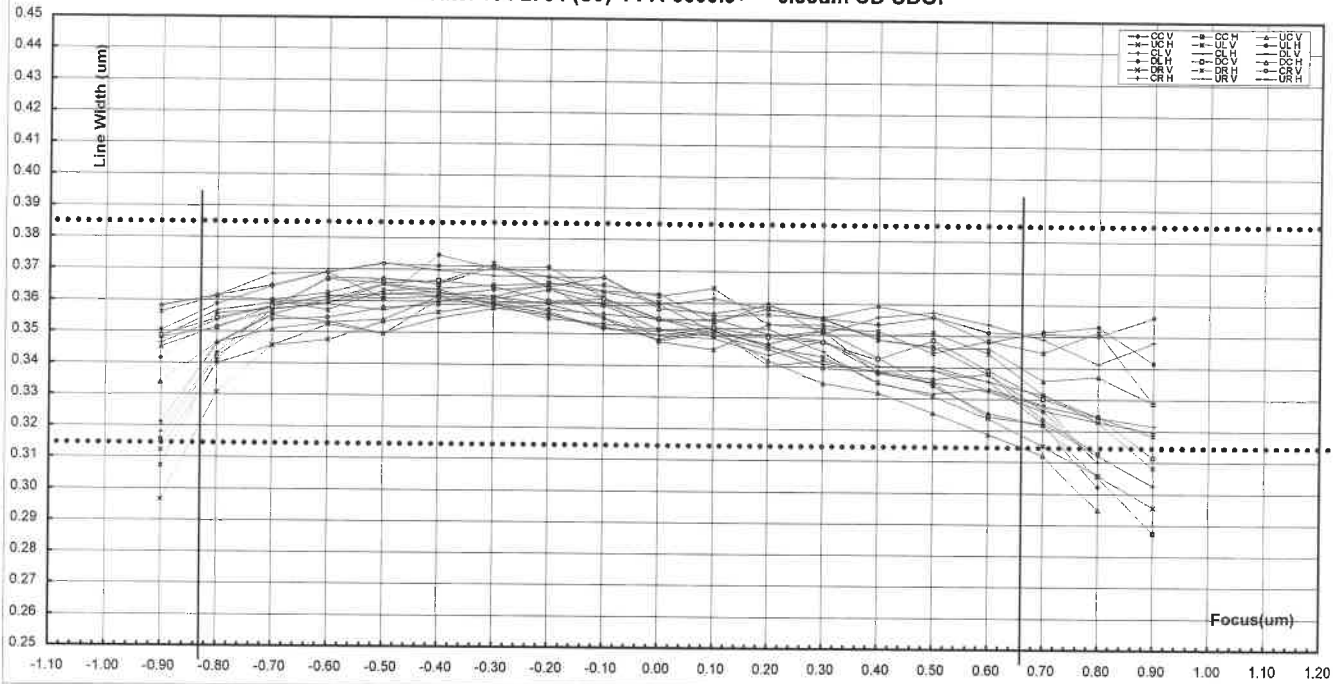


DOF performance

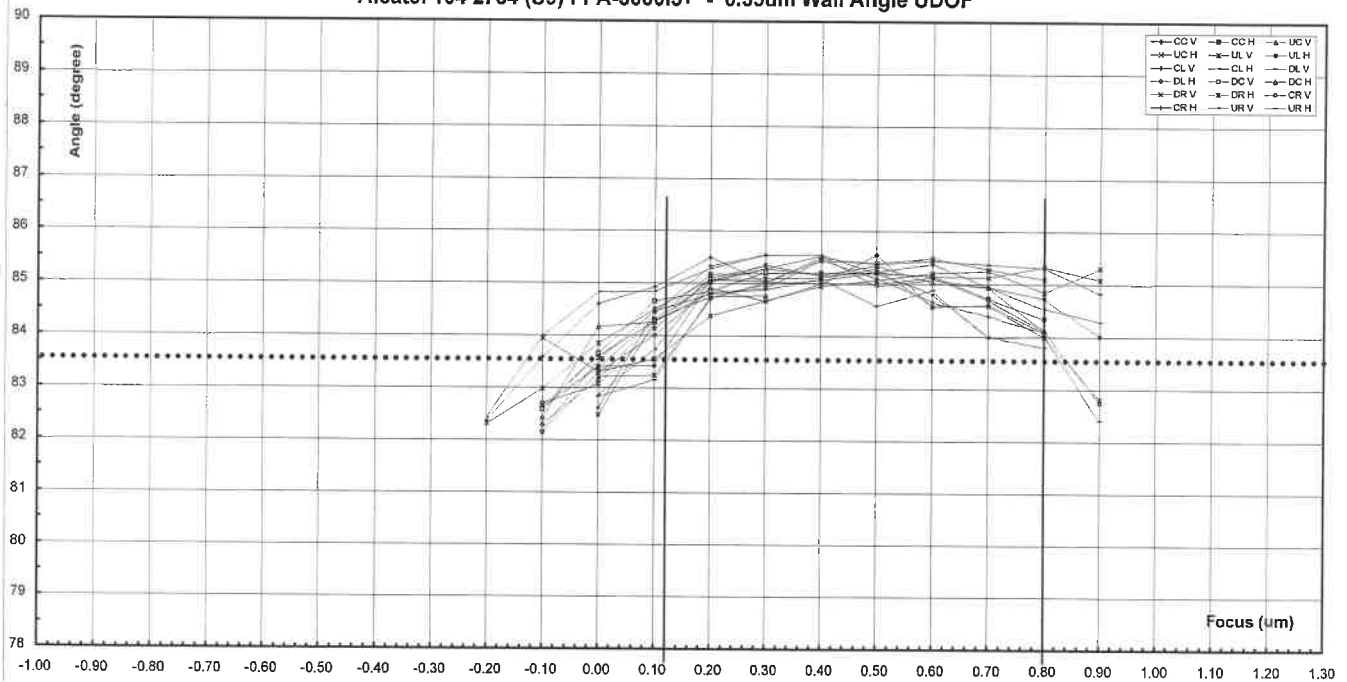
Alcatel 104 2754 i5+ (Stepper 9)

Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	Standard
Resist	PFI-38A	Exposure	2420 j/m2	Serial No.	104 2754	Sigma	0.95	Line width	0.35 um

Alcatel 104 2754 (S9) FPA-3000i5+ - 0.35um CD UDOF



Alcatel 104 2754 (S9) FPA-3000i5+ - 0.35um Wall Angle UDOF

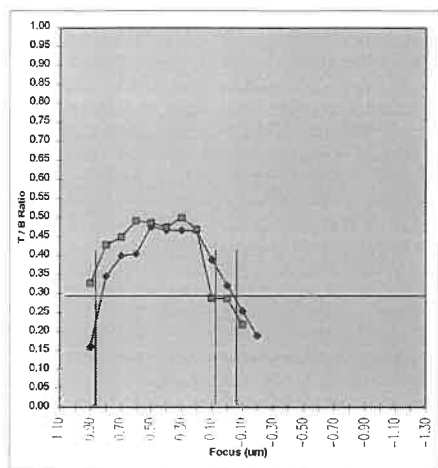


CD Depth of Focus @ 0.35um

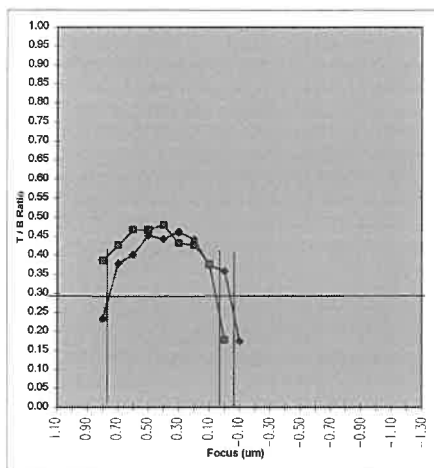
1.50 um

Wall Angle Depth of Focus for 0.35um @ 83.6 deg

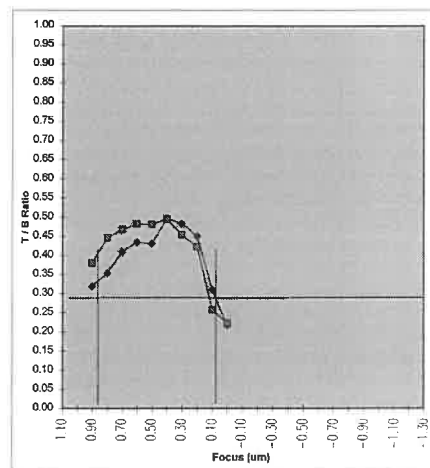
0.68 um



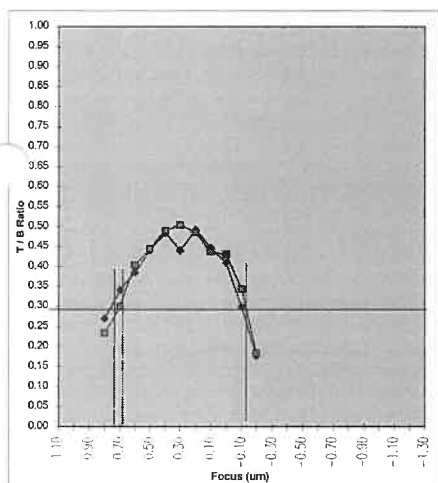
	L	R	BF	
V	0.900	-0.040	0.430	Blue
H	0.900	0.100	0.500	Pink



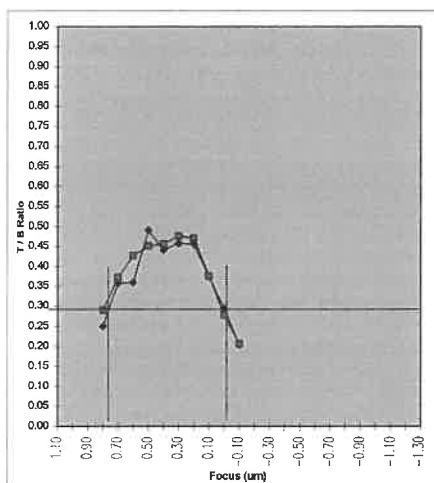
	L	R	BF	
V	0.800	-0.020	0.390	Blue
H	0.800	0.060	0.430	Pink



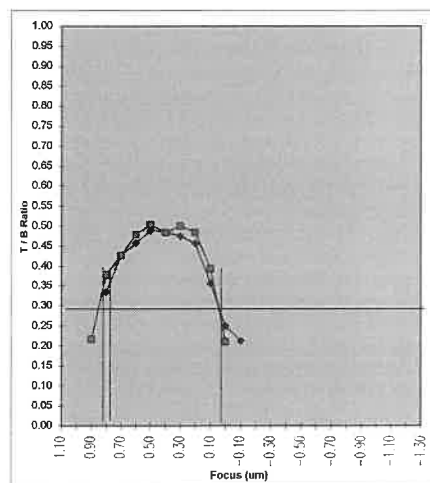
	L	R	BF	
V	0.900	0.100	0.500	Blue
H	0.800	0.100	0.500	Pink



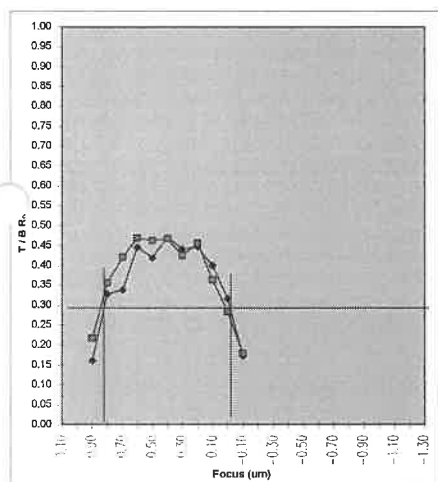
	L	R	BF	
V	0.780	-0.100	0.340	Blue
H	0.720	-0.100	0.310	Pink



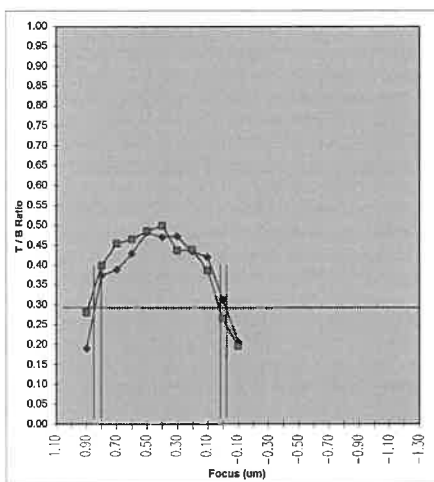
	L	R	BF	
V	0.800	0.000	0.400	Blue
H	0.800	0.000	0.400	Pink



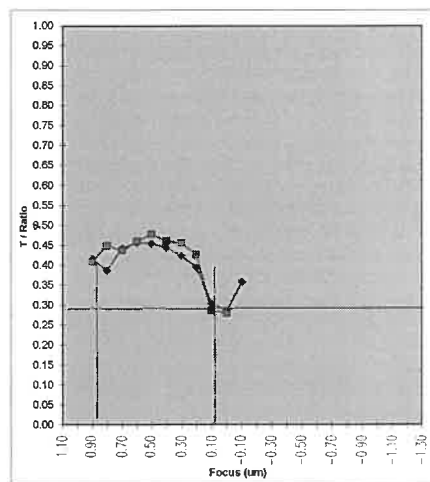
	L	R	BF	
V	0.800	0.050	0.425	Blue
H	0.850	0.050	0.450	Pink



	L	R	BF	
V	0.850	0.000	0.425	Blue
H	0.850	0.000	0.425	Pink



	L	R	BF	
V	0.850	-0.010	0.420	Blue
H	0.880	0.040	0.460	Pink



	L	R	BF	
V	0.900	0.100	0.500	Blue
H	0.900	0.100	0.500	Pink

Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	Standard
Resist	PFI-38A	Exposure	2420 j/m2	Serial No.	104 2754	Sigma	0.65	Line width	0.35 um

Canon

Image Surface Width - 9 Fields

(T/B vs Focus)

Alcatel 104 2754 i5+ (Stepper 9)



Lens Performance Data

Alcatel 104 2754 i5+ (Stepper 9)

Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	Standard
Resist	PFI-38A	Exposure	2420 j/m2	Serial No.	104 2754	Sigma	0.55	Line width	## um

From SEM measurement data :

Best Focus			
Vertical	0.430	0.390	0.500
	0.340	0.400	0.425
	0.425	0.420	0.500
Horizontal	0.500	0.430	0.500
	0.310	0.400	0.450
	0.425	0.460	0.500
Ave X	-10	0	10
	0.465	0.410	0.500
	0.325	0.400	0.438
Ave Y	-10	0	10
	0.425	0.440	0.500
	0.405	0.417	0.479

	X	Y
-10	0.405	0.455
0	0.417	0.388
10	0.479	0.458
Tilt V	-3.71	-0.17 ppm
		3.71 ppm

HV Diff	-0.070	-0.040	0.000
	0.030	0.000	-0.025
	0.000	-0.040	0.000
			0.030 um

Focus	Centre	0.400 um
	Average	0.434 um

Compensation Amount for Tilt

	-10	0	10
10	0.035	-0.002	-0.039
0	0.037	0.000	-0.037
-10	0.039	0.002	-0.035

After compensation

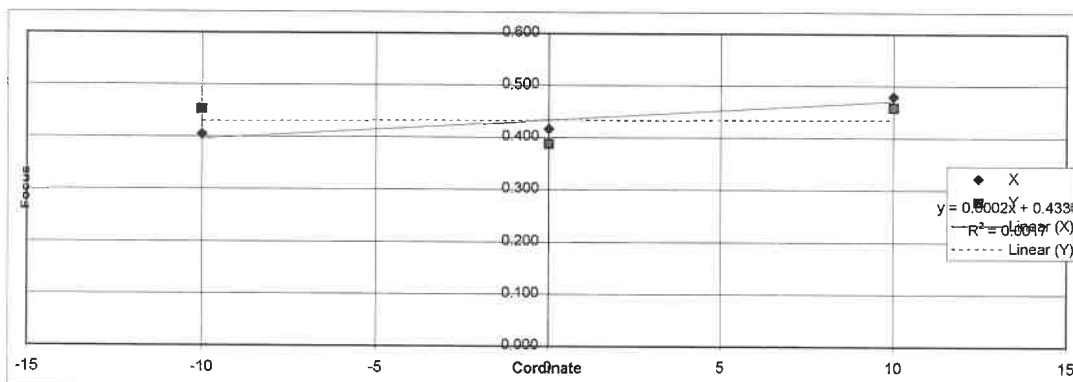
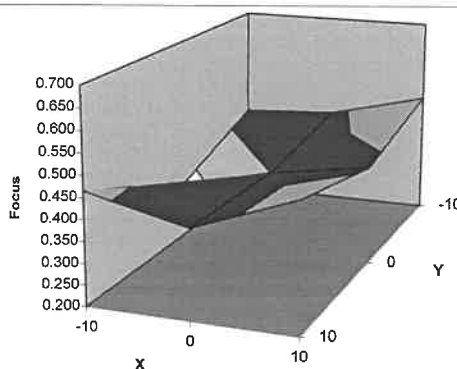
0.500	0.408	0.461	0.457
0.362	0.400	0.400	0.457
0.464	0.442	0.465	0.457
0.442		0.442	

4 corners focus only

0.500	0.461
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0.464	0.465
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Field Curvature - Tilt comp.	0.14 um
Field Curvature - Tilt Incl.	0.18 um
4 Corner Range	0.04 um
Image Surface Width (Centre - Max of 4 corners)	-0.10 um
4 Corner Mean minus Centre	0.07 um
Astigmatism	0.03 um





CD Uniformity Alcatel 104 2754 i5+ (Stepper 9)
(Linewidth Repeatability within a Field)

Focus	V	Angle	H	Angle
0.1	0.3444	85.3	0.3559	85.2
BF	0.3514	85.1	0.3535	85.1
-0.1	0.3521	85.1	0.3554	85.4
Average	0.3493	85.2	0.3549	85.2

Focus	V	Angle	H	Angle
0.1	0.3254	85.3	0.3308	85.4
BF	0.3318	85.2	0.3352	85.4
-0.1	0.3348	85.3	0.3431	84.9
Average	0.3307	85.3	0.3364	85.2

Focus	V	Angle	H	Angle
0.1	0.3392	85.0	0.3402	85.4
BF	0.3386	85.5	0.3402	85.5
-0.1	0.3483	85.3	0.3483	85.0
Average	0.3420	85.3	0.3429	85.3

Focus	V	Angle	H	Angle
0.1	0.3352	85.1	0.3317	85.2
BF	0.3384	85.5	0.3347	85.6
-0.1	0.3419	85.0	0.3448	85.5
Average	0.3385	85.2	0.3371	85.4

Focus	V	Angle	H	Angle
0.1	0.3341	85.6	0.3351	85.2
BF	0.3429	85.0	0.3381	85.2
-0.1	0.3515	85.0	0.3514	85.2
Average	0.3428	85.2	0.3415	85.2

Focus	V	Angle	H	Angle
0.1	0.3362	85.5	0.3390	85.6
BF	0.3386	85.4	0.3387	85.4
-0.1	0.3395	85.3	0.3410	85.6
Average	0.3381	85.4	0.3396	85.5

Focus	V	Angle	H	Angle
0.1	0.3574	84.6	0.3561	85.0
BF	0.3559	85.1	0.3592	85.0
-0.1	0.3504	84.9	0.3557	84.7
Average	0.3546	84.8	0.3570	84.9

Focus	V	Angle	H	Angle
0.1	0.3486	85.3	0.3462	85.4
BF	0.3425	85.3	0.3488	85.4
-0.1	0.3477	85.2	0.3553	84.8
Average	0.3463	85.3	0.3501	85.2

Focus	V	Angle	H	Angle
0.1	0.3466	85.1	0.3509	85.2
BF	0.3488	85.0	0.3500	85.1
-0.1	0.3551	84.7	0.3533	85.0
Average	0.3502	84.9	0.3514	85.1

BF used

0.40

um

Total Range (H&V, 9 points)

0.0263

um

Minimum Wall Angle

84.8

deg



CD Linearity

UL	Nom. CD		V Meas	H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges		
	CD	CD								Min	Max	Max
0.35	0.3520	0.3536	0.35	0.35	0.002	0.004	0.004	0.57%	1.03%	0.315	0.315	0.385
0.40	0.3994	0.3994	0.40	-0.001	-0.001	-0.001	-0.15%	-0.15%	-0.15%	0.360	0.440	0.440
0.45	0.4522	0.4502	0.45	0.002	0.000	0.000	0.49%	0.04%	0.40%	0.405	0.495	0.495
0.50	0.4981	0.5023	0.50	-0.002	0.002	-0.38%	0.46%	0.46%	0.46%	0.450	0.560	0.560
0.55	0.5507	0.5560	0.55	0.001	0.005	0.13%	0.91%	0.91%	0.91%	0.495	0.605	0.605
0.60	0.5994	0.6029	0.60	-0.001	0.003	-0.10%	0.48%	0.48%	0.48%	0.540	0.660	0.660
0.65	0.6569	0.6552	0.65	0.007	0.005	1.06%	0.80%	0.80%	0.80%	0.585	0.715	0.715
0.70	0.7170	0.7079	0.70	0.011	0.008	1.51%	1.13%	1.13%	1.13%	0.630	0.770	0.770
0.75	0.7543	0.7602	0.75	0.004	0.010	0.57%	1.36%	1.36%	1.36%	0.675	0.825	0.825
0.80	0.8075	0.8128	0.80	0.007	0.013	0.94%	1.60%	1.60%	1.60%	0.720	0.880	0.880
0.90	0.9153	0.9207	0.90	0.015	0.021	1.70%	2.30%	2.30%	2.30%	0.810	0.990	0.990
1.00	1.0254	1.0365	1.00	0.025	0.037	2.54%	3.66%	3.66%	3.66%	0.900	1.100	1.100

CL

Nom. CD	V		H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges		
	Meas	CD							Min	Max	Max
0.35	0.3520	0.3520	0.35	0.002	0.002	0.002	0.57%	0.57%	0.315	0.315	0.385
0.40	0.3952	0.4053	0.40	-0.005	0.005	-1.20%	1.33%	1.33%	0.360	0.440	0.440
0.45	0.4490	0.4468	0.45	-0.001	-0.003	-0.22%	-0.71%	-0.71%	0.405	0.495	0.495
0.50	0.5113	0.5056	0.50	0.011	0.006	2.26%	1.12%	1.12%	0.450	0.550	0.550
0.55	0.5520	0.5529	0.55	0.002	0.003	0.36%	0.53%	0.53%	0.495	0.605	0.605
0.60	0.6098	0.6067	0.60	0.010	0.007	1.63%	1.12%	1.12%	0.540	0.660	0.660
0.65	0.6599	0.6637	0.65	0.010	0.014	1.52%	2.11%	2.11%	0.585	0.715	0.715
0.70	0.7068	0.7132	0.70	0.007	0.013	0.97%	1.89%	1.89%	0.630	0.770	0.770
0.75	0.7660	0.7649	0.75	0.016	0.015	2.13%	1.99%	1.99%	0.675	0.825	0.825
0.80	0.8177	0.8258	0.80	0.018	0.026	2.21%	3.22%	3.22%	0.720	0.880	0.880
0.90	0.9254	0.9387	0.90	0.025	0.039	2.82%	4.30%	4.30%	0.810	0.990	0.990
1.00	1.0347	1.0370	1.00	0.035	0.037	3.47%	3.70%	3.70%	0.900	1.100	1.100

DL

Nom. CD	V		H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges		
	Meas	CD							Min	Max	Max
0.35	0.3548	0.3526	0.35	0.005	0.003	1.37%	0.74%	0.74%	0.315	0.395	0.395
0.40	0.3957	0.3966	0.40	-0.004	-0.003	-1.08%	-0.85%	-0.85%	0.360	0.440	0.440
0.45	0.4490	0.4508	0.45	-0.001	0.001	-0.22%	0.18%	0.18%	0.405	0.495	0.495
0.50	0.5070	0.5060	0.50	0.007	0.006	1.40%	1.20%	1.20%	0.450	0.550	0.550
0.55	0.5545	0.5587	0.55	0.004	0.009	0.82%	1.58%	1.58%	0.495	0.605	0.605
0.60	0.6169	0.6137	0.60	0.017	0.014	2.82%	2.28%	2.28%	0.540	0.660	0.660
0.65	0.6659	0.6653	0.65	0.016	0.015	2.45%	2.36%	2.36%	0.585	0.715	0.715
0.70	0.7170	0.7240	0.70	0.017	0.024	2.43%	3.43%	3.43%	0.630	0.770	0.770
0.75	0.7575	0.8034	0.75	0.048	0.053	6.33%	7.12%	7.12%	0.675	0.825	0.825
0.80	0.8551	0.8500	0.80	0.055	0.030	6.89%	3.75%	3.75%	0.720	0.880	0.880
0.90	0.9356	0.9355	0.90	0.036	0.036	3.96%	3.94%	3.94%	0.810	0.990	0.990
1.00	1.0413	1.0584	1.00	0.041	0.058	4.13%	5.84%	5.84%	0.900	1.100	1.100

Maximum Range of CD from Nominal
Maximum % Deviation of CD from Nominal
Minimum % Deviation of CD from Nominal

um

0.053
7.12%
-2.43%

FPA-3000i5+

UC	Nom. CD		V Meas	H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges		
	CD	CD								Min	Max	Max
0.35	0.3445	0.3541	0.35	-0.006	0.004	-1.57%	1.17%	1.17%	0.315	0.385	0.385	0.385
0.40	0.3903	0.4010	0.40	-0.010	0.001	-2.43%	0.25%	0.25%	0.360	0.440	0.440	0.440
0.45	0.4414	0.4494	0.45	-0.009	-0.001	-1.91%	-0.13%	-0.13%	0.405	0.495	0.495	0.495
0.50	0.4952	0.5128	0.50	-0.005	0.013	-0.96%	2.56%	2.56%	0.450	0.550	0.550	0.550
0.55	0.5496	0.5521	0.55	0.000	0.002	-0.07%	0.38%	0.38%	0.495	0.605	0.605	0.605
0.60	0.6087	0.6140	0.60	0.009	0.014	1.45%	2.33%	2.33%	0.540	0.660	0.660	0.660
0.65	0.6517	0.6561	0.65	0.002	0.006	0.26%	0.94%	0.94%	0.585	0.715	0.715	0.715
0.70	0.7090	0.7132	0.70	0.009	0.013	1.29%	1.89%	1.89%	0.630	0.770	0.770	0.770
0.75	0.7635	0.7659	0.75	0.014	0.016	1.80%	2.12%	2.12%	0.675	0.825	0.825	0.825
0.80	0.8122	0.8234	0.80	0.012	0.023	1.53%	2.93%	2.93%	0.720	0.880	0.880	0.880
0.90	0.9144	0.9253	0.90	0.014	0.025	1.80%	2.81%	2.81%	0.810	0.990	0.990	0.990
1.00	1.0240	1.0350	1.00	0.024	0.035	2.40%	3.50%	3.50%	0.900	1.100	1.100	1.100

CC

Nom. CD	V		H Meas	Nom. CD	V CD Range	H CD Range	V % CD		H % CD		10% CD Ranges	
	Meas	CD					Diff	Range	Diff	Range	Min	Max
0.35	0.3541	0.3499	0.35	0.004	0.000	1.2%	-0.03%	0.315	0.385			
0.40	0.3941	0.4026	0.40	-0.006	0.003	-1.5%	0.65%	0.360	0.440			
0.45	0.4548	0.4527	0.45	0.005	0.003	1.1%	0.60%	0.405	0.495			
0.50	0.5033	0.5010	0.50	0.003	0.001	0.7%	0.20%	0.450	0.550			
0.55	0.5521	0.5507	0.55	0.002	0.001	0.4%	0.13%	0.495	0.605			
0.60	0.6016	0.6062	0.60	0.002	0.006	0.3%	1.03%	0.540	0.660			
0.65	0.6515	0.6557	0.65	0.001	0.006	0.2%	0.88%	0.585	0.715			
0.70	0.7084	0.7074	0.70	0.008	0.007	1.2%	1.06%	0.630	0.770			
0.75	0.7597	0.7548	0.75	0.010	0.005	1.3%	0.84%	0.675	0.825			
0.80	0.8076	0.8182	0.80	0.008	0.018	0.9%	2.28%	0.720	0.880			
0.90	0.9088	0.9100	0.90	0.009	0.010	1.0%	1.11%	0.810	0.990			
1.00	1.0201	1.0365	1.00	0.020	0.037	2.0%	3.65%	0.900	1.100			

DC

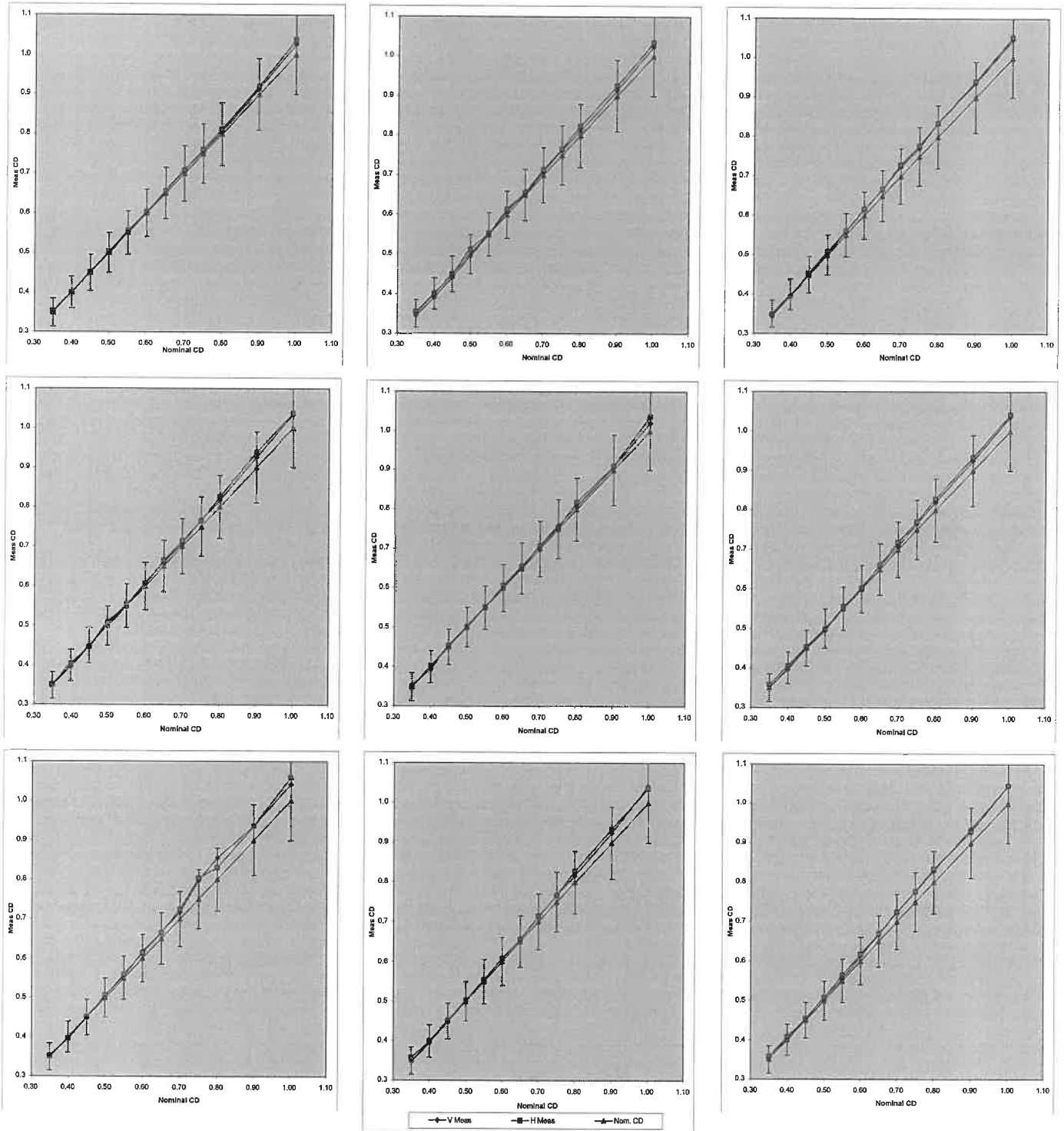
Nom. CD	V		H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges		
	Min	Max							Min	Max	Max
0.35	0.3487	0.3592	0.35	-0.001	0.009	-0.37%	2.63%	2.63%	0.315	0.395	0.395
0.40	0.3955	0.3999	0.40	-0.005	0.000	-1.13%	-0.03%	-0.03%	0.360	0.440	0.440
0.45	0.4474	0.4510	0.45	-0.003	0.001	-0.58%	0.22%	0.22%	0.405	0.495	0.495
0.50	0.5010	0.5033	0.50	0.001	0.003	0.20%	0.66%	0.66%	0.450	0.550	0.550
0.55	0.5513	0.5545	0.55	0.001	0.004	0.24%	0.82%	0.82%	0.495	0.605	0.605
0.60	0.6092	0.6073	0.60	0.009	0.007	1.53%	1.22%	1.22%	0.540	0.660	0.660
0.65	0.6552	0.6557	0.65	0.005	0.006	0.80%	0.88%	0.88%	0.585	0.715	0.715
0.70	0.7128	0.7139	0.70	0.013	0.014	1.83%	1.99%	1.99%	0.630	0.770	0.770
0.75	0.7661	0.7660	0.75	0.016	0.016	2.15%	2.13%	2.13%	0.675	0.825	0.825
0.80	0.8183	0.8295	0.80	0.018	0.030	2.29%	3.69%	3.69%	0.720	0.880	0.880
0.90	0.9248	0.9345	0.90	0.025	0.035	2.76%	3.93%	3.93%	0.810	0.990	0.990
1.00	1.0413	1.0359	1.00	0.041	0.036	4.13%	3.59%	3.59%	0.900	1.100	1.100

UR

Nom. CD	V		H Meas	Nom. CD	V CD Range	H CD Range	V % CD		H % CD		10% CD Ranges	
	Meas	CD					Diff	Range	Diff	Range	Min	Max
0.35	0.3433	0.3480	0.35	-0.007	-0.002	-1.91%	-0.57%	-0.57%	0.315	0.385		
0.40	0.3967	0.3946	0.40	-0.003	-0.003	-0.83%	-1.35%	-1.35%	0.360	0.440		
0.45	0.4495	0.4537	0.45	-0.004	-0.004	-0.11%	-0.32%	-0.32%	0.405	0.495		
0.50	0.5036	0.5091	0.50	0.004	0.009	0.72%	1.82%	1.82%	0.450	0.550		
0.55	0.5592	0.5603	0.55	0.009	0.010	1.67%	1.87%	1.87%	0.495	0.605		
0.60	0.6157	0.6167	0.60	0.016	0.017	2.62%	2.78%	2.78%	0.540	0.660		
0.65	0.6847	0.6863	0.65	0.015	0.016	2.28%	2.51%	2.51%	0.585	0.715		
0.70	0.7244	0.7287	0.70	0.024	0.029	3.49%	4.10%	4.10%	0.630	0.770		
0.75	0.7718	0.7772	0.75	0.022	0.027	2.91%	3.63%	3.63%	0.675	0.825		
0.80	0.8352	0.8347	0.80	0.035	0.035	4.40%	4.34%	4.34%	0.720	0.880		
0.90	0.9350	0.9407	0.90	0.038	0.041	4.00%	4.52%	4.52%	0.810	0.990		
1.00	1.0464	1.0522	1.00	0.046	0.052	4.64%	5.22%	5.22%	0.900	1.100		

Canon

CD Linearity - 9 Fields



Canon

Dense/Isolated Bias

Machine No:
Machine ID:
Customer:
Date:

104 2754
Stepper 9
Alcatel Mietec
1st June 2001.

Reticle used:
Resist:
Resist thickness:
Exposure Dose:

Canon 700
PFI-38A
1.095
2420J/m2

Feature type:
NA:
Sigma:
Best Focus Position:

0.35um Dense & Iso
0.63
0.65
0.0 um

Site	Vertical		Horizontal	
	Dense	Iso.	Dense	Iso.
1	0.3564	0.3633	0.3506	0.3772
2	0.3462	0.3692	0.3594	0.3737
3	0.3501	0.3821	0.3559	0.3768
4	0.3505	0.3745	0.3420	0.3737
5	0.3496	0.3776	0.3488	0.3770
6	0.3549	0.3740	0.3493	0.3781
7	0.3556	0.3782	0.3584	0.3824
8	0.3505	0.3709	0.3559	0.3821
9	0.3461	0.3792	0.3568	0.3732
			Bias (V)	Bias (H)
			0.0069	0.0266
			0.0230	0.0143
			0.0320	0.0209
			0.0240	0.0317
			0.0280	0.0282
			0.0191	0.0288
			0.0226	0.0240
			0.0204	0.0262
			0.0331	0.0164

Spec < 0.05um

Max. =	0.033	um
Min. =	0.007	um

Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.379	0.178	0.47	84.8	47.0
0.80	0.348	0.209	0.60	86.4	60.1
0.70	0.341	0.197	0.58	86.2	57.8
0.60	0.338	0.221	0.65	86.9	65.4
0.50	0.335	0.224	0.67	87.1	66.9
0.40	0.325	0.232	0.71	87.6	71.4
0.30	0.325	0.233	0.72	87.6	71.7
0.20	0.322	0.234	0.73	87.7	72.7
0.10	0.316	0.226	0.72	87.6	71.5
0.00	0.319	0.225	0.71	87.5	70.5
-0.10	0.322	0.225	0.71	87.5	69.9
-0.20	0.325	0.226	0.72	87.6	72.7
-0.30	0.325	0.130	0.40	84.9	40.0
-0.40	0.322				
-0.50	0.322				
-0.60	0.328				
-0.70	0.324				
-0.80	0.328				
-0.90	0.339				
-1.00	0.351				
-1.10	0.357				
-1.20					
-1.30					
Mean	0.3329				

Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.325	0.182	0.560	86.3	56.0
0.80	0.325	0.195	0.600	86.6	60.0
0.70	0.322	0.214	0.655	87.2	65.5
0.60	0.325	0.218	0.674	87.2	67.4
0.50	0.325	0.227	0.698	87.4	69.8
0.40	0.322	0.232	0.720	87.6	72.0
0.30	0.325	0.239	0.735	87.8	73.5
0.20	0.322	0.233	0.724	87.7	72.4
0.10	0.322	0.231	0.717	87.6	71.7
0.00	0.322	0.233	0.724	87.7	72.4
-0.10	0.325	0.235	0.723	87.6	72.3
-0.20	0.319	0.221	0.693	87.4	69.3
-0.30	0.325	0.194	0.597	86.6	59.7
-0.40	0.322	0.166	0.609	86.7	60.9
-0.50	0.322	0.159	0.494	85.7	49.4
-0.60	0.325				
-0.70	0.322				
-0.80	0.319				
-0.90	0.322				
-1.00	0.322				
-1.10	0.297				
-1.20					
-1.30					
Mean	0.3217				

Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.332	0.203	0.61	86.6	61.1
0.80	0.328	0.219	0.67	87.2	66.8
0.70	0.322	0.225	0.70	87.5	69.9
0.60	0.328	0.231	0.70	87.5	70.4
0.50	0.328	0.233	0.71	87.5	71.0
0.40	0.325	0.236	0.73	87.7	72.6
0.30	0.322	0.234	0.73	87.7	72.7
0.20	0.322	0.236	0.73	87.8	73.3
0.10	0.325	0.228	0.70	87.5	70.2
0.00	0.328	0.223	0.69	87.3	69.0
-0.10	0.332	0.221	0.67	87.1	66.6
-0.20	0.318	0.202	0.64	87.0	63.5
-0.30	0.325	0.117	0.36	84.6	36.0
-0.40	0.325				
-0.50	0.328				
-0.60	0.332				
-0.70	0.330				
-0.80	0.332				
-0.90	0.338				
-1.00	0.360				
-1.10	0.376				
-1.20					
-1.30					
Mean	0.3312				

Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.309	0.175	0.57	86.5	56.6
0.80	0.319	0.203	0.64	87.0	64.2
0.70	0.316	0.202	0.64	87.0	64.2
0.60	0.322	0.214	0.66	87.2	66.5
0.50	0.319	0.222	0.70	87.5	69.6
0.40	0.316	0.223	0.71	87.6	70.6
0.30	0.316	0.220	0.70	87.5	69.6
0.20	0.319	0.217	0.68	87.3	68.0
0.10	0.312	0.213	0.66	87.4	66.3
0.00	0.322	0.224	0.70	87.4	69.6
-0.10	0.319	0.217	0.68	87.3	68.0
-0.20	0.319	0.200	0.63	86.9	62.7
-0.30	0.316	0.103	0.33	84.4	32.6
-0.40	0.316				
-0.50	0.316				
-0.60	0.316				
-0.70	0.316				
-0.80	0.309				
-0.90	0.309				
-1.00	0.303				
-1.10	0.301				
-1.20					
-1.30					
Mean	0.3148				

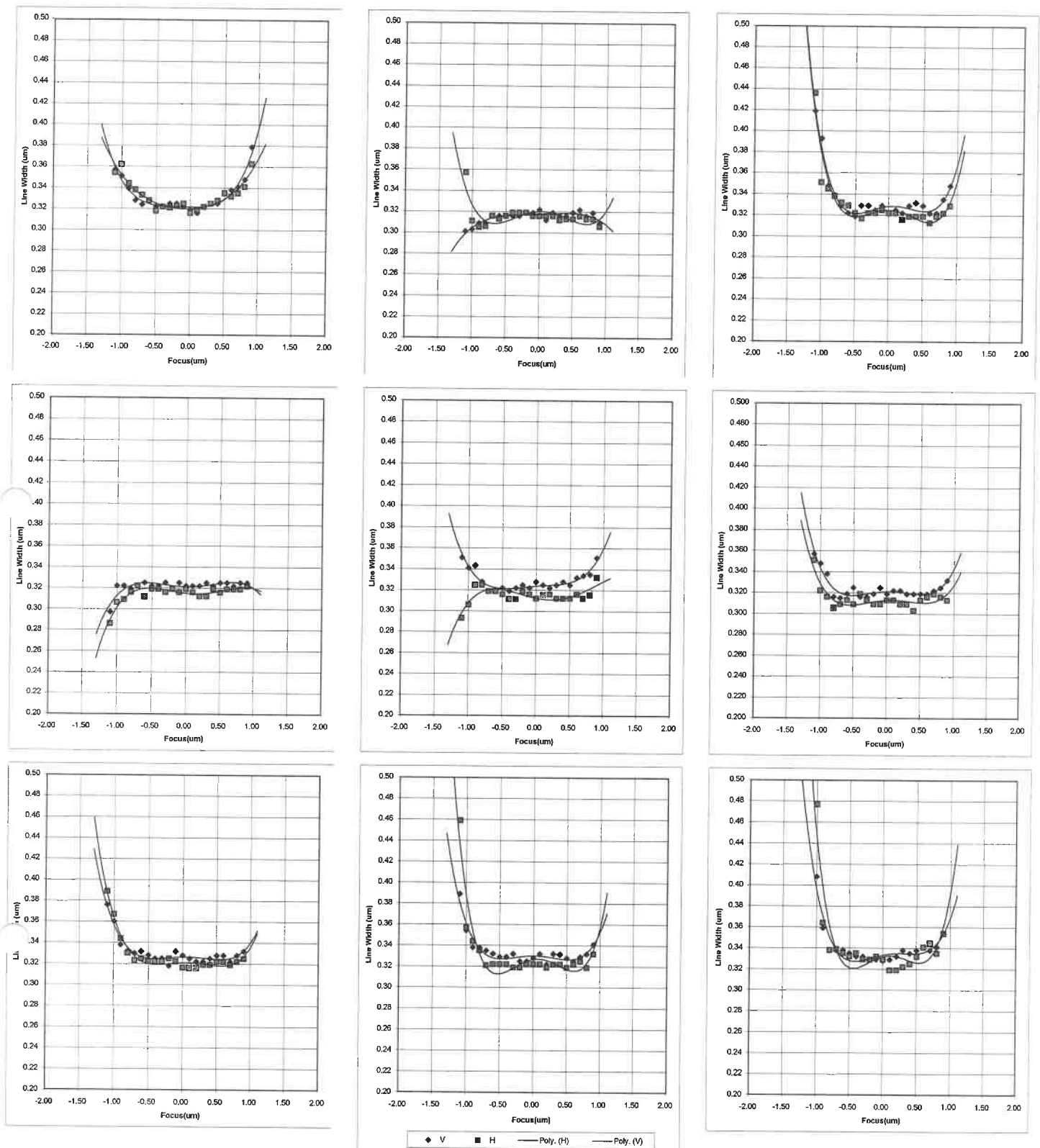
Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.351	0.188	0.54	85.7	53.6
0.80	0.335	0.215	0.64	86.9	64.2
0.70	0.334	0.201	0.60	86.5	60.2
0.60	0.332	0.214	0.64	86.9	64.5
0.50	0.335	0.229	0.71	87.5	70.5
0.40	0.328	0.236	0.72	87.6	72.0
0.30	0.325	0.238	0.72	87.4	69.5
0.20	0.322	0.233	0.72	87.7	72.4
0.10	0.325	0.229	0.70	87.5	70.5
0.00	0.322	0.230	0.69	86.8	69.1
-0.10	0.322	0.220	0.68	87.3	68.3
-0.20	0.325	0.210	0.65	87.0	64.9
-0.30	0.322	0.162	0.39	85.8	50.3
-0.40	0.319	0.118	0.37	84.3	37.0
-0.50	0.322				
-0.60	0.319				
-0.70	0.319				
-0.80	0.328				
-0.90	0.344				
-1.00	0.341				
-1.10	0.351				
-1.20					
-1.30					
Mean	0.3284				

Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.341	0.215	0.63	86.7	63.0
0.80	0.332	0.232	0.70	87.4	69.9
0.70	0.329	0.235	0.71	87.5	71.4
0.60	0.325	0.236	0.73	87.7	72.6
0.50	0.328	0.244	0.74	87.8	74.4
0.40	0.332	0.244	0.73	87.7	73.5
0.30	0.332	0.242	0.73	87.6	72.9
0.20	0.332	0.248	0.77	88.1	77.0
0.10	0.332	0.237	0.71	87.5	71.4
0.00	0.328	0.237	0.72	87.6	72.3
-0.10	0.325	0.231	0.71	87.5	71.1
-0.20	0.325	0.172	0.53	86.0	52.9
-0.30	0.329	0.201	0.61	86.6	60.5
-0.40	0.329	0.128	0.39	84.8	38.9
-0.50	0.329				
-0.60	0.332				
-0.70	0.330				
-0.80	0.338				
-0.90	0.338				
-1.00	0.354				
-1.10	0.389				
-1.20					
-1.30					
Mean	0.3346				

Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.348	0.198	0.57	86.1	56.9
0.80	0.335	0.215	0.64	86.9	64.2
0.70	0.332	0.208	0.65	87.0	64.6
0.60	0.332	0.220	0.68	87.3	68.3
0.50	0.339	0.226	0.69	87.3	68.7
0.40	0.332	0.231	0.70	87.4	69.3
0.30	0.329	0.228	0.69	87.4	69.3
0.20	0.322	0.214	0.66	87.2	66.5
0.10	0.325	0.219	0.67	87.2	67.4
0.00	0.322	0.211	0.66	87.1	65.5
-0.10	0.329	0.212	0.64	86.9	64.4
-0.20	0.325	0.169	0.52	85.9	52.0
-0.30	0.329	0.145	0.44	85.2	44.1
-0.40	0.329				
-0.50	0.319				
-0.60	0.322				
-0.70	0.329				
-0.80	0.339				
-0.90	0.348				
-1.00	0.393				
-1.10	0.419				
-1.20					
-1.30					
Mean	0.3365				

Vertical		Horizontal			
		Top	T/B	Angle	T/B %
UL	Bottom	Top	T/B	Angle	T/B %
1.10	1.10				
0.90	0.332	0.190	0.57	86.3	57.2
0.80	0.325	0.210	0.65	87.0	64.6
0.70	0.322	0.222	0.69	87.4	69.9
0.60	0.319	0.220	0.69	87.4	69.0
0.50	0.319	0.225	0.71	87.5	70.5
0.40	0.319	0.228	0.71	87.6	71.5
0.30	0.329	0.226	0.70	87.5	69.9
0.20	0.322	0.230	0.71	87.6	71.4
0.10	0.322	0.230	0.69	87.4	69.3
0.00	0.325	0.213	0.66	87.1	65.5
-0.10	0.325	0.219	0.55	86.2	54.9
-0.20	0.316	0.120	0.38	84.9	38.0
-0.30	0.316				
-0.40	0.325				
-0.50	0.319				
-0.60	0.319				
-0.70	0.316				
-0.80	0.316				
-0.90	0.338				
-1.00	0.348				
-1.10	0.357				
-1.20					
-1.30					
Mean	0.3244				

		Vertical		Horizontal						
		mean 0.3244		Mean 0.3143						
UL	Bottom	Top	T/B	Angle	T/B %	Bottom	Top	T/B	Angle	T/B %
1.10										
1.00	0.50	0.354	0.217	0.61	86.4	61.3	0.354	0.217	0.61	86.4
0.90	0.40	0.341	0.225	0.66	87.0	66.0	0.335	0.225	0.67	87.1
0.80	0.310	0.338	0.227	0.67	87.1	67.2	0.345	0.226	0.66	86.9
0.70	0.340	0.341	0.230	0.67	87.1	67.4	0.341	0.230	0.67	87.1
0.60	0.338	0.240	0.71	87.4	71.0	0.332	0.220	0.67	87.1	66.9
0.50	0.335	0.242	0.72	87.6	72.2	0.325	0.228	0.70	87.5	70.2
0.40	0.335	0.244	0.72	87.6	72.2	0.322	0.220	0.68	87.3	68.3
0.30	0.338	0.244	0.81	86.7	61.4	0.319	0.215	0.67	87.3	67.4
0.20	0.332	0.204	0.61	86.8	62.6	0.319	0.208	0.65	87.1	65.2
0.10	0.329	0.206	0.328	0.217	0.60	87.1	0.329	0.201	0.62	86.7
-0.10	0.329	0.196	0.328	0.196	0.60	86.6	0.332	0.124	0.62	86.7
-0.20	0.329	0.111	0.34	84.3	33.7	0.329	0.121	0.36	84.5	36.4
-0.30	0.332					0.329				
-0.40	0.332					0.335				
-0.50	0.335					0.332				
-0.60	0.338					0.335				
-0.70	0.338					0.339				
-0.80	0.338					0.338				
-0.90	0.359					0.364				
-1.00	0.408					0.477				
-1.10										
-1.20										
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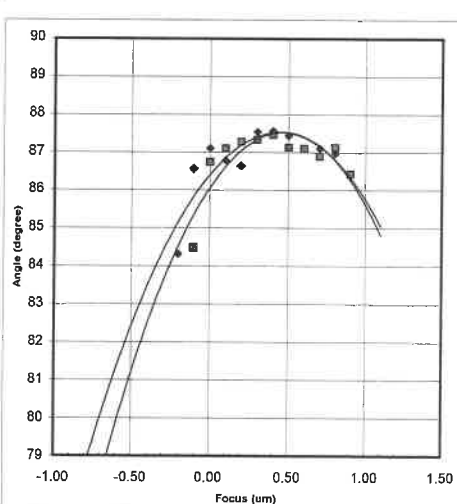
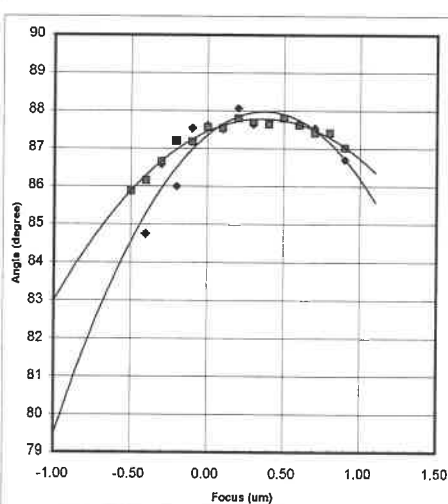
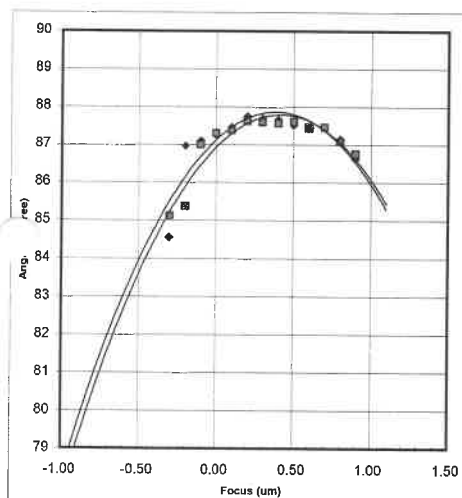
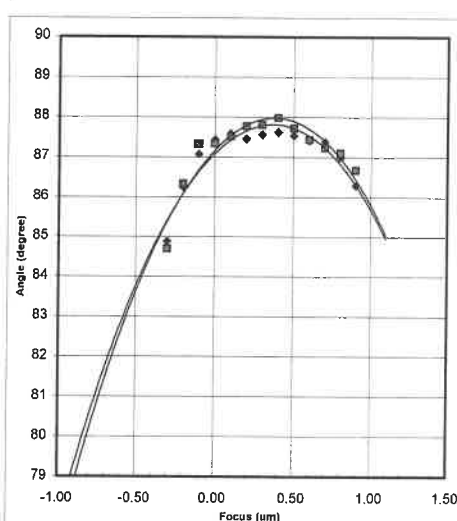
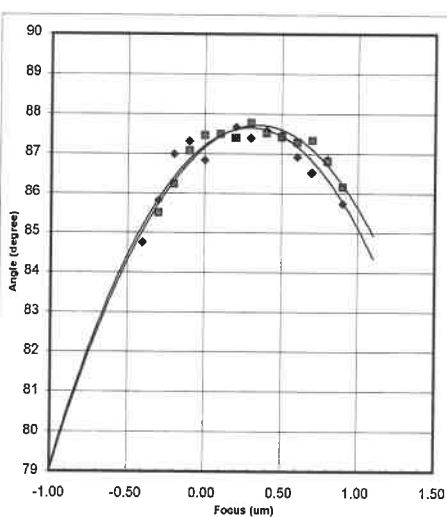
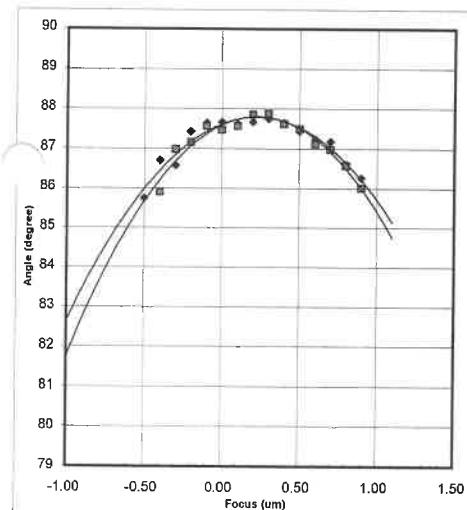
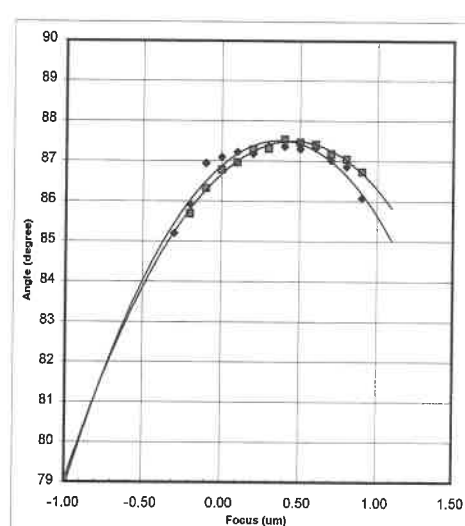
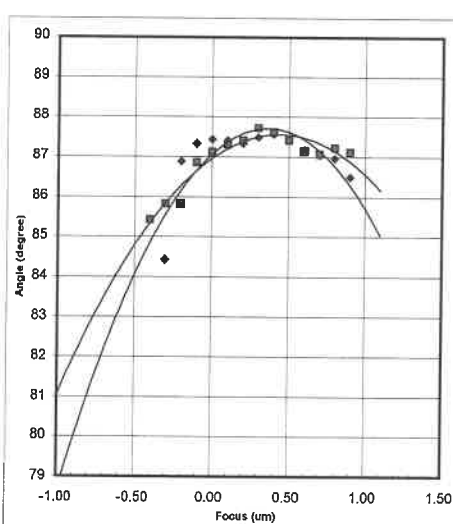
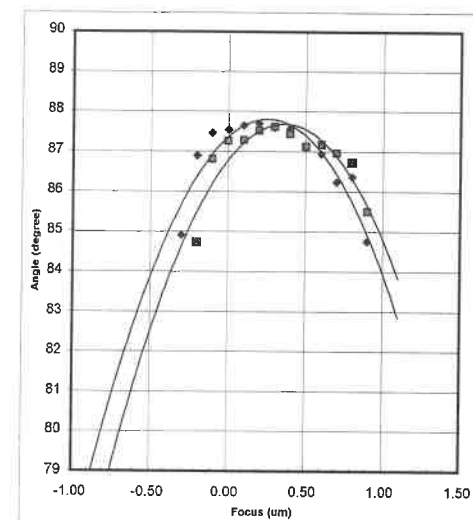


Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	SIA II
Resist	PFI-38A	Exposure	2210 j/m2	Serial No.	104 2754	Sigma	0.65	Line width	0.32 um

Canon

CD Performance - 9 Fields

Alcatel 104 2754 i5+ (Stepper 9)



Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	SIA II
Resist	PFL38A	Exposure	2210 J/m ²	Serial No.	104 2754	Sigma	0.65	Line width	0.32 um

Canon

Profile Performance - 9 Fields

Alcatel 104 2754 i5+ (Stepper 9)

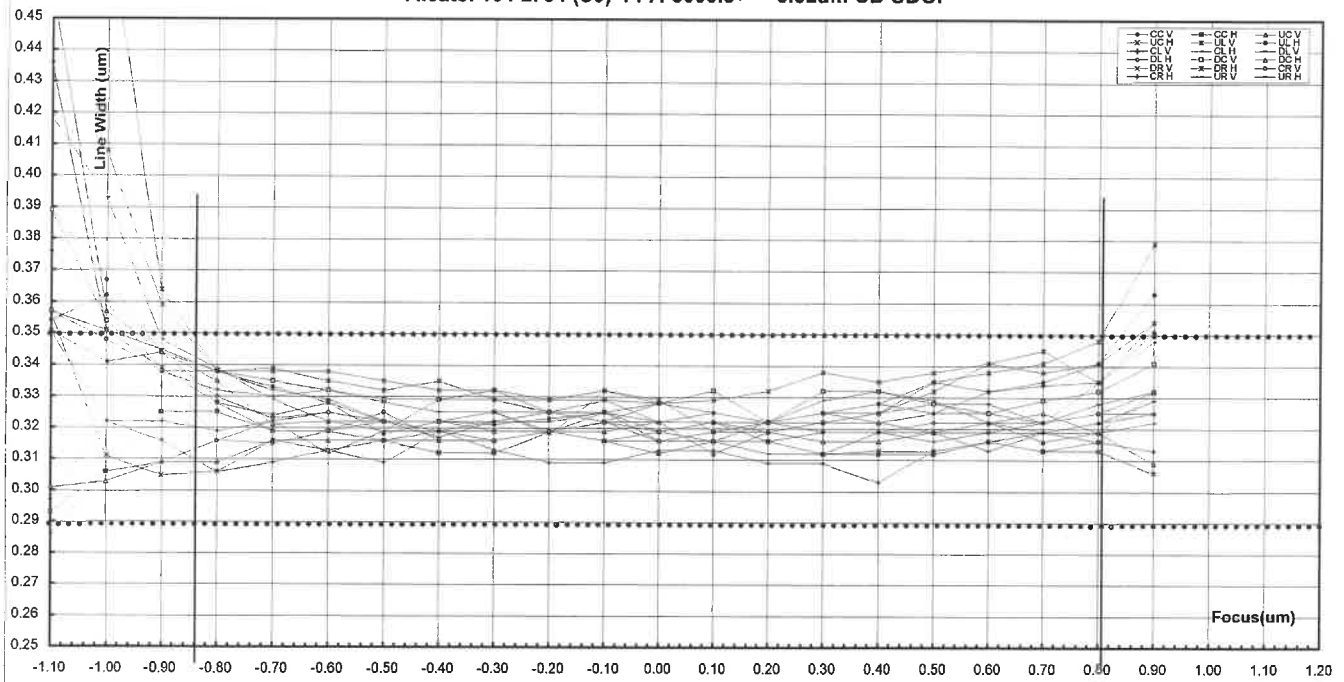


DOF performance

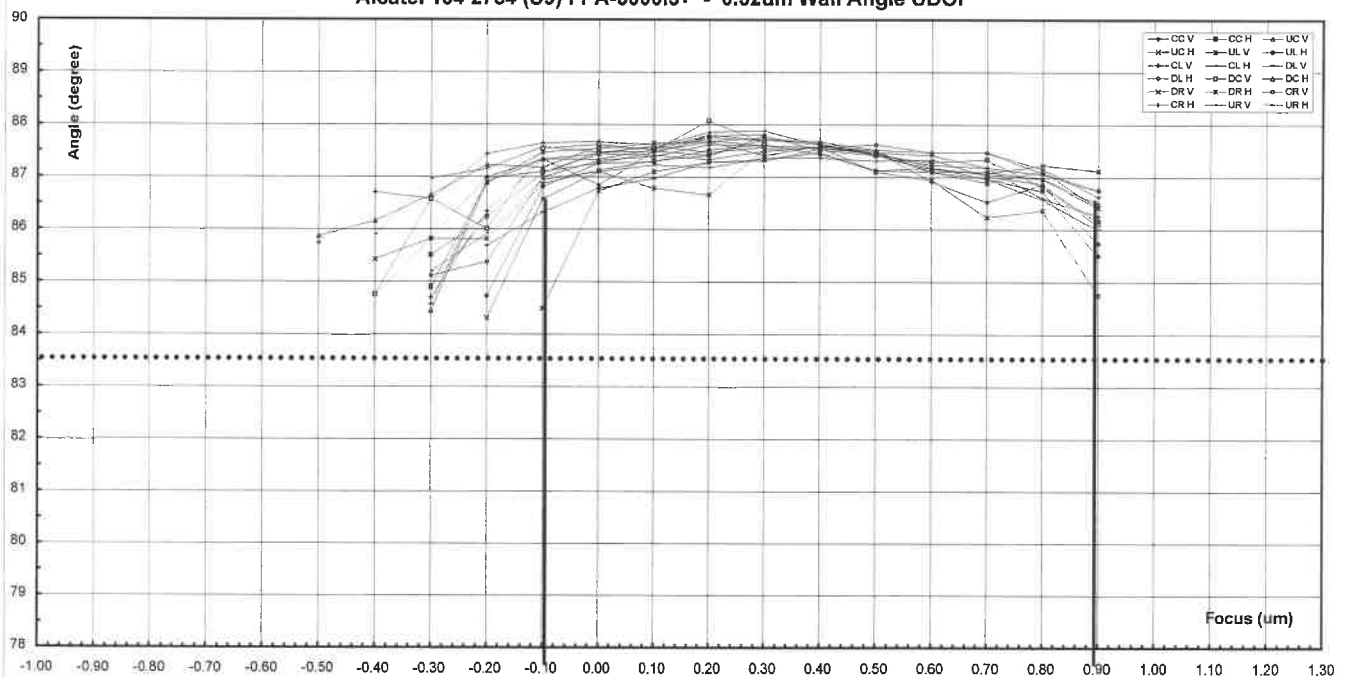
Alcatel 104 2754 i5+ (Stepper 9)

Rt	1.095	umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	SIA II	
Resist	PFI-38A		Exposure	2210	j/m2	Serial No.	104 2754	Sigma	0.65	Line width	0.32 um

Alcatel 104 2754 (S9) FPA-3000i5+ - 0.32um CD UDOF



Alcatel 104 2754 (S9) FPA-3000i5+ - 0.32um Wall Angle UDOF

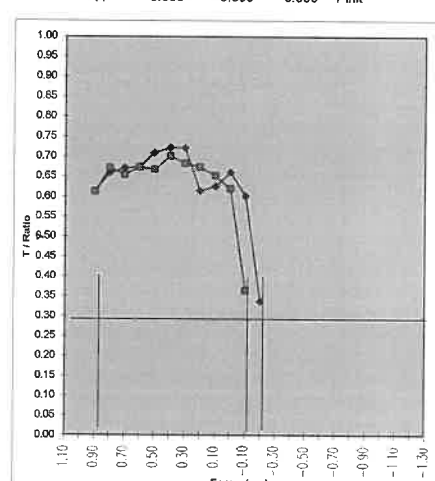
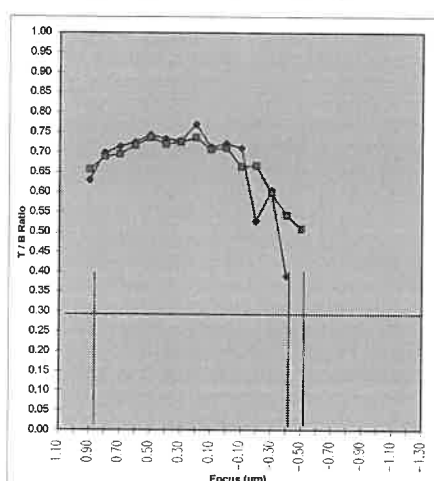
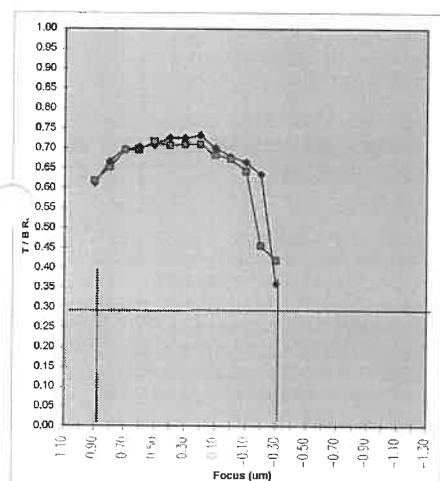
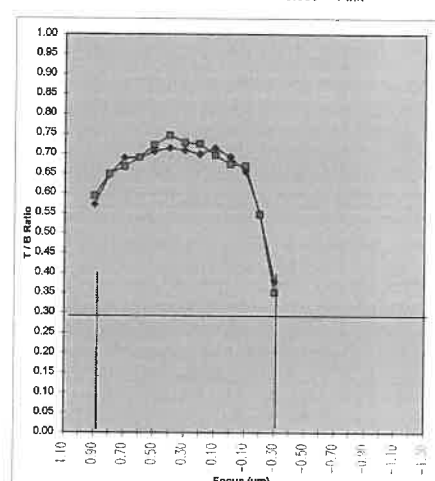
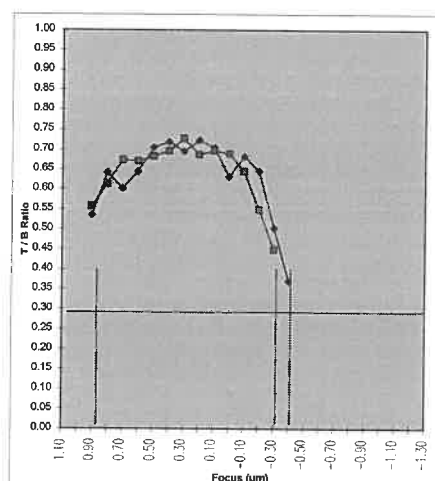
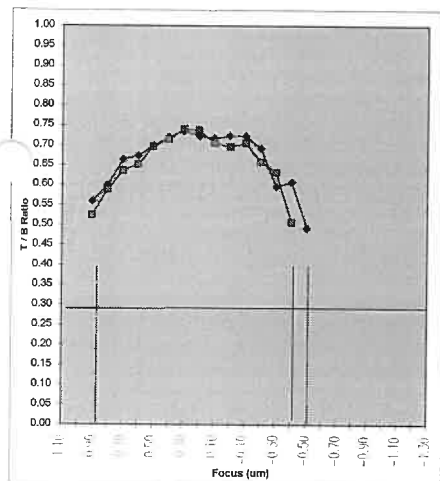
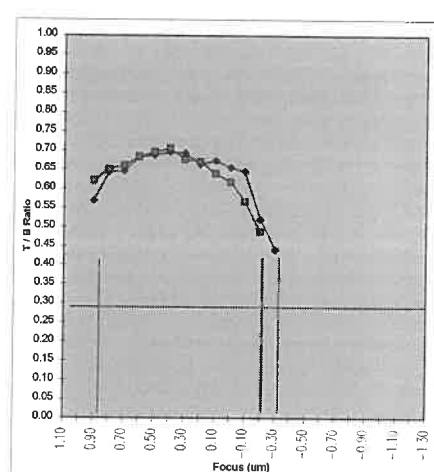
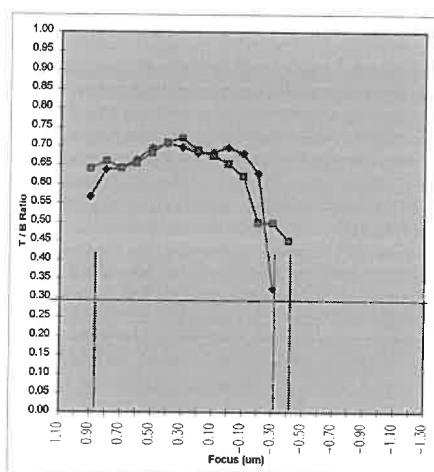
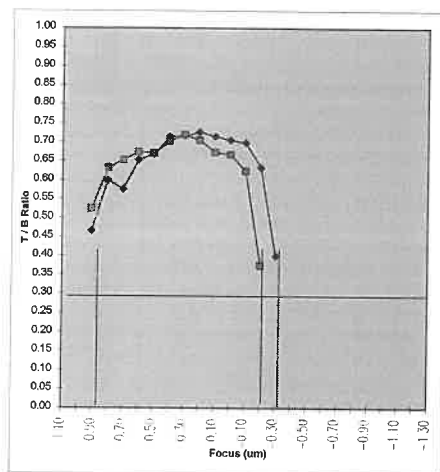


CD Depth of Focus @ 0.32um

1.66 um

Wall Angle Depth of Focus for 0.32um @ 83.6 deg

1.00 um



Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	SIA II
Resist	PFI-38A	Exposure	2210 j/m2	Serial No.	104 2754	Sigma	0.65	Line width	0.32 um

Canon

Image Surface Width - 9 Fields

(T/B vs Focus)

Alcatel 104 2754 i5+ (Stepper 9)

Canon**Lens Performance Data****Alcatel 104 2754 i5+ (Stepper 9)**

Rt	1.095 umt	Reticle	C700	Machine Type	3000i5+	NA	0.63	Illumination	SIA II
Resist	PFI-38A	Exposure	2210 J/m2	Serial No.	104 2754	Sigma	0.65	Line width	## um

From SEM measurement data :

Best Focus			
Vertical	0.300	0.300	0.300
	0.200	0.250	0.300
	0.300	0.250	0.350
Horizontal	0.350	0.250	0.350
	0.250	0.300	0.300
	0.300	0.200	0.400
Ave X	-10	0	10
	0.325	0.275	0.325
	0.225	0.275	0.300
Ave Y	-10	0	10
	0.300	0.225	0.375
	0.283	0.258	0.333

	X	Y
-10	0.283	0.300
0	0.258	0.267
10	0.333	0.308
Tilt V	-2.50	-0.42 ppm
		2.53 ppm

HV Diff	-0.050	0.050	-0.050
	-0.050	-0.050	0.000
	0.000	0.050	-0.050
			0.050 um

Focus	Centre	0.275 um
	Average	0.292 um

Compensation Amount for Tilt

	-10	0	10
10	0.021	-0.004	-0.029
0	0.025	0.000	-0.025
-10	0.029	0.004	-0.021

After compensation

0.346	0.271	0.296	0.304
0.250	0.275	0.275	
0.329	0.229	0.354	0.304
0.308		0.308	

4 corners focus only

0.346	0.296
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0.329	0.354
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Field Curvature - Tilt comp. 0.13 um

Field Curvature - Tilt Incl. 0.15 um

4 Corner Range 0.06 um

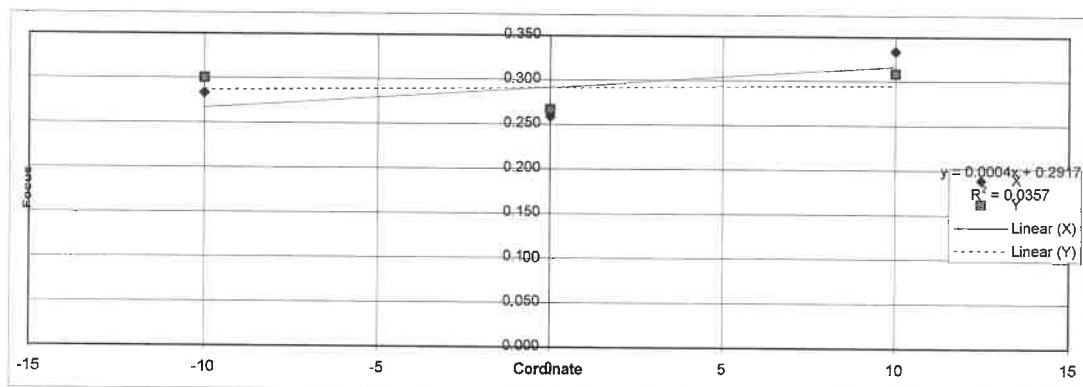
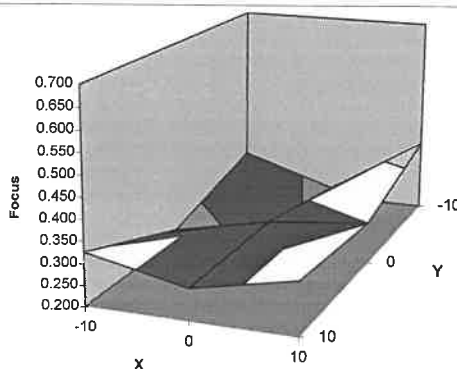
Image Surface Width -0.08 um

(Centre - Max of 4 corners)

4 Corner Mean 0.06 um

minus Centre

Astigmatism 0.05 um





CD Uniformity

Alcatel 104 2754 i5+ (Stepper 9)

(Linewidth Repeatability within a Field)

Focus	V	Angle	H	Angle
0.1	0.3350	87.1	0.3350	87.1
BF	0.3250	87.6	0.3280	87.4
-0.1	0.3250	87.6	0.3250	87.6
Average	0.3283	87.4	0.3293	87.4

Focus	V	Angle	H	Angle
0.1	0.3190	87.5	0.3130	87.4
BF	0.3160	87.6	0.3130	87.6
-0.1	0.3160	87.5	0.3120	87.7
Average	0.3170	87.5	0.3127	87.6

Focus	V	Angle	H	Angle
0.1	0.3290	87.3	0.3190	87.5
BF	0.3320	87.4	0.3190	87.5
-0.1	0.3290	87.4	0.3190	87.3
Average	0.3300	87.3	0.3190	87.4

Focus	V	Angle	H	Angle
0.1	0.3250	87.4	0.3160	87.5
BF	0.3220	87.6	0.3190	87.6
-0.1	0.3250	87.8	0.3120	87.9
Average	0.3240	87.6	0.3157	87.7

Focus	V	Angle	H	Angle
0.1	0.3250	87.5	0.3120	87.4
BF	0.3280	87.6	0.3120	87.5
-0.1	0.3250	87.4	0.3120	87.8
Average	0.3260	87.5	0.3120	87.6

Focus	V	Angle	H	Angle
0.1	0.3190	87.5	0.3130	87.7
BF	0.3190	87.6	0.3030	88.0
-0.1	0.3190	87.6	0.3090	87.8
Average	0.3190	87.6	0.3083	87.8

Focus	V	Angle	H	Angle
0.1	0.3280	87.5	0.3220	87.6
BF	0.3250	87.7	0.3190	87.6
-0.1	0.3220	87.7	0.3190	87.6
Average	0.3250	87.6	0.3200	87.6

Focus	V	Angle	H	Angle
0.1	0.3280	87.8	0.3190	87.8
BF	0.3320	87.7	0.3220	87.6
-0.1	0.3320	87.6	0.3220	87.7
Average	0.3307	87.7	0.3210	87.7

Focus	V	Angle	H	Angle
0.1	0.3380	87.4	0.3320	87.1
BF	0.3350	87.6	0.3250	87.5
-0.1	0.3380	87.5	0.3220	87.3
Average	0.3370	87.5	0.3263	87.3

BF used 0.40

Total Range (H&V, 9 points)

0.0287

um

Minimum Wall Angle

87.3

deg



CD Linearity

UL

Nom. CD	V Meas	H Meas	Nom. CD	V CD Range	H CD Range	V % CD		H % CD		10% CD Ranges	
						Diff	Min	Diff	Min	Max	
0.32	0.3242	0.3296	0.32	0.004	0.010	1.31%	3.00%	0.288	0.352		
0.40	0.4006	0.4025	0.40	0.001	0.003	0.15%	0.63%	0.360	0.440		
0.45	0.4491	0.4524	0.45	-0.001	0.002	-0.20%	0.53%	0.405	0.495		
0.50	0.5129	0.5139	0.50	0.013	0.014	2.58%	2.78%	0.450	0.550		
0.55	0.5639	0.5650	0.55	0.014	0.015	2.53%	2.73%	0.495	0.605		
0.60	0.6151	0.6252	0.60	0.015	0.025	2.52%	4.20%	0.540	0.660		
0.65	0.6646	0.6662	0.65	0.015	0.016	2.25%	2.49%	0.585	0.715		
0.70	0.7174	0.7232	0.70	0.017	0.023	2.49%	3.31%	0.630	0.770		
0.75	0.7706	0.7712	0.75	0.021	0.021	2.75%	2.83%	0.675	0.825		
0.80	0.8287	0.8240	0.80	0.029	0.024	3.59%	3.00%	0.720	0.880		
0.90	0.9360	0.9390	0.90	0.036	0.039	4.00%	4.33%	0.810	0.990		
1.00	1.0433	1.0515	1.00	0.043	0.052	4.33%	5.15%	0.900	1.100		

CL

Nom. CD	V Meas	H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges	
								Min	Max
0.32	0.3285	0.3242	0.32	0.009	0.004	2.66%	1.31%	0.288	0.352
0.40	0.4061	0.4073	0.40	0.006	0.007	1.53%	1.82%	0.360	0.440
0.45	0.4537	0.4595	0.45	0.004	0.010	0.82%	2.11%	0.405	0.495
0.50	0.5028	0.5089	0.50	0.003	0.009	0.56%	1.78%	0.450	0.550
0.55	0.5552	0.5586	0.55	0.005	0.009	0.95%	1.56%	0.495	0.605
0.60	0.6044	0.6104	0.60	0.004	0.010	0.73%	1.73%	0.540	0.660
0.65	0.6574	0.6592	0.65	0.007	0.009	1.14%	1.42%	0.585	0.715
0.70	0.7102	0.7210	0.70	0.010	0.021	1.46%	3.00%	0.630	0.770
0.75	0.7626	0.7742	0.75	0.013	0.024	1.68%	3.23%	0.675	0.825
0.80	0.8195	0.8274	0.80	0.020	0.027	2.44%	3.42%	0.720	0.880
0.90	0.9234	0.9353	0.90	0.023	0.035	2.60%	3.92%	0.810	0.990
1.00	1.0304	1.0457	1.00	0.030	0.046	3.04%	4.57%	0.900	1.100

DL

Nom. CD	V	H	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges	
								Min	Max
0.32	0.3281	0.3292	0.32	0.008	0.009	2.53%	2.88%	0.288	0.352
0.40	0.4028	0.4039	0.40	0.003	0.004	0.70%	0.97%	0.360	0.440
0.45	0.4551	0.4586	0.45	0.005	0.009	1.13%	1.91%	0.405	0.495
0.50	0.5088	0.5086	0.50	0.009	0.009	1.76%	1.72%	0.450	0.550
0.55	0.5571	0.5627	0.55	0.007	0.013	1.29%	2.31%	0.495	0.605
0.60	0.6195	0.6115	0.60	0.020	0.012	3.25%	1.92%	0.540	0.660
0.65	0.6628	0.6649	0.65	0.013	0.015	1.97%	2.29%	0.585	0.715
0.70	0.7114	0.7259	0.70	0.011	0.026	1.63%	3.70%	0.630	0.770
0.75	0.7644	0.7650	0.75	0.014	0.015	1.92%	2.00%	0.675	0.825
0.80	0.8166	0.8239	0.80	0.017	0.024	2.07%	2.99%	0.720	0.880
0.90	0.9248	0.9313	0.90	0.025	0.031	2.76%	3.48%	0.810	0.990
1.00	1.0317	1.0410	1.00	0.032	0.041	3.17%	4.10%	0.900	1.100

Maximum Range of CD from Nominal
Maximum % Deviation of CD from Nominal
Minimum % Deviation of CD from Nominal

0.030
5.31%
-1.60%

um

FPA-3000I5+

UC

Nom. CD	V Meas	H Meas	Nom. CD	V CD Range	H CD Range	V % CD		H % CD		10% CD Ranges	
						Diff	Range	Diff	Range	Min	Max
0.32	0.3259	0.3312	0.32	0.006	0.011	1.84%	0.008	3.50%	0.007	0.288	0.352
0.40	0.4047	0.4079	0.40	0.005	0.008	1.17%	0.008	1.97%	0.007	0.360	0.440
0.45	0.4575	0.4565	0.45	0.008	0.007	1.67%	0.007	1.44%	0.007	0.405	0.495
0.50	0.5080	0.5063	0.50	0.008	0.006	1.60%	0.006	1.26%	0.006	0.450	0.550
0.55	0.5530	0.5608	0.55	0.003	0.011	0.55%	0.011	1.96%	0.011	0.495	0.605
0.60	0.6063	0.6182	0.60	0.006	0.018	1.05%	0.018	3.03%	0.018	0.540	0.660
0.65	0.6589	0.6663	0.65	0.009	0.016	1.37%	0.016	2.51%	0.016	0.585	0.715
0.70	0.7164	0.7249	0.70	0.016	0.025	2.34%	0.025	3.56%	0.025	0.630	0.770
0.75	0.7601	0.7723	0.75	0.010	0.022	1.35%	0.022	2.97%	0.022	0.675	0.825
0.80	0.8270	0.8257	0.80	0.027	0.026	3.37%	0.026	3.21%	0.026	0.720	0.880
0.90	0.9231	0.9311	0.90	0.023	0.031	2.57%	0.031	3.46%	0.031	0.810	0.990
1.00	1.0411	1.0427	1.00	0.041	0.043	4.11%	0.043	4.27%	0.043	0.900	1.100

CC

Nom.	V	H	Nom.	V CD	H CD	V % CD	H % CD	10% CD Ranges	
CD	Meas	Meas	CD	Range	Diff	Diff	Diff	Min	Max
0.32	0.3270	0.3299	0.32	0.007	0.010	2.2%	3.09%	0.288	0.352
0.40	0.4092	0.4052	0.40	0.009	0.005	2.3%	1.30%	0.360	0.440
0.45	0.4596	0.4591	0.45	0.010	0.009	2.1%	2.02%	0.405	0.495
0.50	0.5117	0.5161	0.50	0.012	0.016	2.3%	3.22%	0.450	0.550
0.55	0.5598	0.5598	0.55	0.010	0.010	1.8%	1.78%	0.495	0.605
0.60	0.6122	0.6178	0.60	0.012	0.018	2.0%	2.97%	0.540	0.660
0.65	0.6653	0.6723	0.65	0.015	0.022	2.4%	3.43%	0.585	0.715
0.70	0.7133	0.7245	0.70	0.013	0.025	1.9%	3.50%	0.630	0.770
0.75	0.7720	0.7714	0.75	0.022	0.021	2.9%	2.85%	0.675	0.825
0.80	0.8258	0.8311	0.80	0.026	0.031	3.2%	3.89%	0.720	0.880
0.90	0.9355	0.9259	0.90	0.036	0.026	3.9%	2.88%	0.810	0.990
1.00	1.0492	1.0464	1.00	0.049	0.046	4.9%	4.64%	0.900	1.100

DC

Nom. CD	V	H	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges	
								Min	Max
0.32	0.3254	0.3221	0.32	0.005	0.002	1.69%	0.66%	0.288	0.352
0.40	0.4130	0.4099	0.40	0.013	0.010	3.25%	2.47%	0.360	0.440
0.45	0.4606	0.4674	0.45	0.011	0.017	2.36%	3.87%	0.405	0.495
0.50	0.5089	0.5154	0.50	0.009	0.015	1.78%	3.08%	0.450	0.550
0.55	0.5612	0.5645	0.55	0.011	0.015	2.04%	2.64%	0.495	0.605
0.60	0.6097	0.6177	0.60	0.010	0.018	1.62%	2.95%	0.540	0.660
0.65	0.6672	0.6716	0.65	0.017	0.022	2.65%	3.32%	0.585	0.715
0.70	0.7200	0.7203	0.70	0.020	0.023	2.86%	3.53%	0.630	0.770
0.75	0.7696	0.7765	0.75	0.020	0.027	2.61%	3.53%	0.675	0.825
0.80	0.8229	0.8298	0.80	0.023	0.030	2.86%	3.73%	0.720	0.880
0.90	0.9285	0.9348	0.90	0.029	0.035	3.17%	3.87%	0.810	0.990
1.00	1.0460	1.0526	1.00	0.046	0.053	4.60%	5.26%	0.900	1.100

UR

Nom. CD	V Meas	H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges
0.32	0.3218	0.3323	0.32	0.002	0.012	0.56%	3.84%	0.288 0.352
0.40	0.4026	0.4088	0.40	0.003	0.009	0.65%	2.20%	0.360 0.440
0.45	0.4559	0.4581	0.45	0.006	0.008	1.31%	1.80%	0.405 0.495
0.50	0.5054	0.5148	0.50	0.005	0.015	1.08%	2.36%	0.450 0.550
0.55	0.5598	0.5646	0.55	0.010	0.015	1.78%	2.65%	0.495 0.605
0.60	0.6118	0.6125	0.60	0.012	0.013	1.97%	2.08%	0.540 0.660
0.65	0.6599	0.6653	0.65	0.010	0.015	1.52%	2.35%	0.585 0.715
0.70	0.7176	0.7229	0.70	0.018	0.023	2.51%	3.27%	0.630 0.770
0.75	0.7666	0.7724	0.75	0.017	0.022	2.21%	2.99%	0.675 0.825
0.80	0.8238	0.8299	0.80	0.024	0.030	2.97%	3.74%	0.720 0.880
0.90	0.9308	0.9345	0.90	0.031	0.035	3.42%	3.83%	0.810 0.990
1.00	1.0380	1.0453	1.00	0.038	0.045	3.80%	4.53%	0.900 1.100

CR

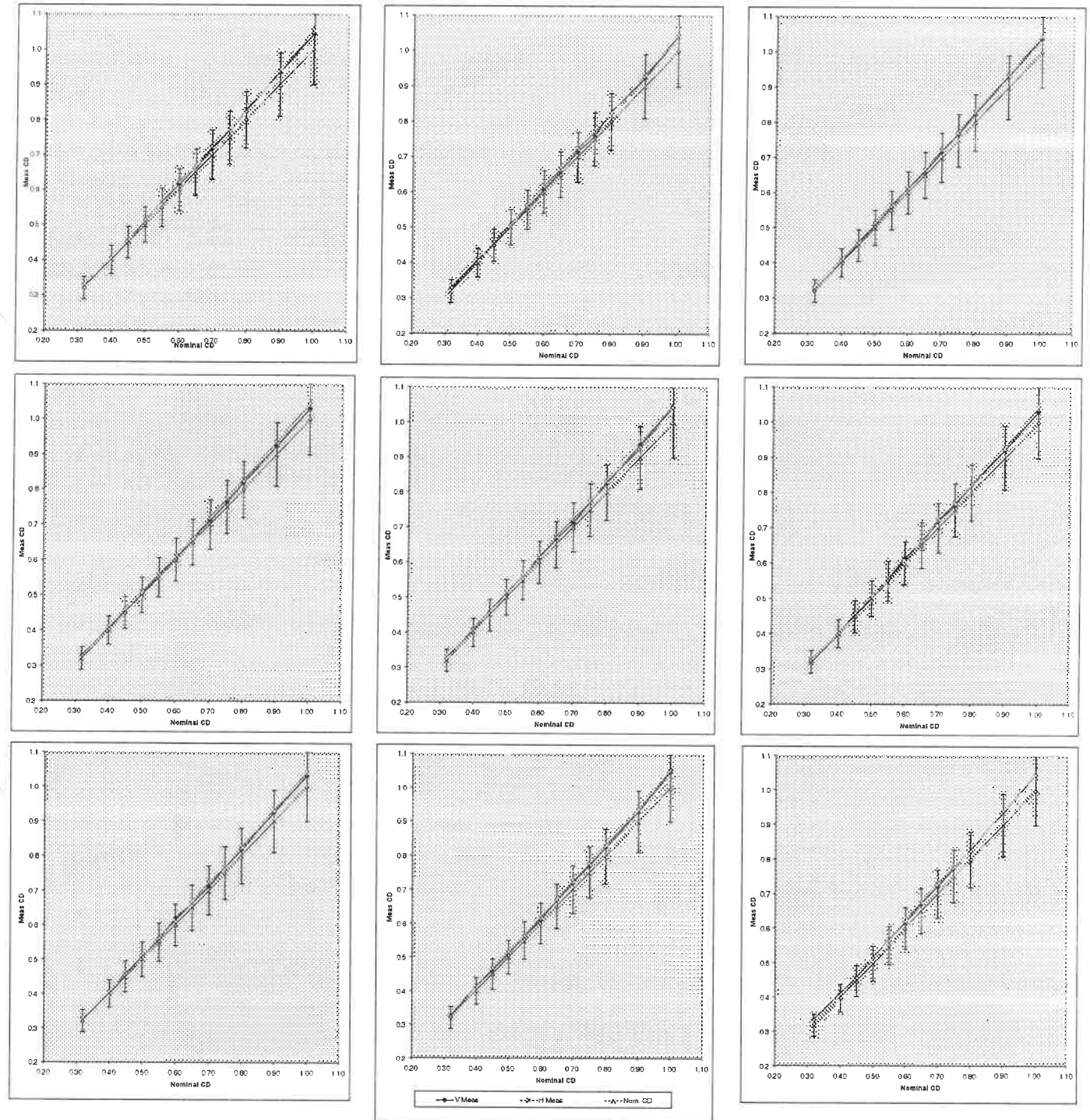
Nom. CD	V	H	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges	
								Min	Max
0.32	0.3184	0.3280	0.32	-0.002	0.008	-0.50%	2.50%	0.288	0.352
0.40	0.3966	0.3936	0.40	-0.003	0.006	-0.85%	-1.60%	0.360	0.440
0.45	0.4552	0.4584	0.45	0.005	0.008	1.16%	1.87%	0.405	0.495
0.50	0.5021	0.4982	0.50	0.002	0.002	0.42%	-0.36%	0.450	0.550
0.55	0.5548	0.5549	0.55	0.005	0.005	0.87%	0.89%	0.495	0.605
0.60	0.6140	0.6043	0.60	0.014	0.004	2.33%	0.72%	0.540	0.660
0.65	0.6576	0.6614	0.65	0.008	0.011	1.17%	1.75%	0.585	0.715
0.70	0.7188	0.7237	0.70	0.019	0.024	2.69%	3.39%	0.630	0.770
0.75	0.7637	0.7699	0.75	0.014	0.020	1.83%	2.65%	0.675	0.825
0.80	0.8217	0.8224	0.80	0.022	0.022	2.71%	2.80%	0.720	0.880
0.90	0.9227	0.9277	0.90	0.023	0.028	2.52%	3.06%	0.810	0.990
1.00	1.0304	1.0414	1.00	0.030	0.041	3.04%	4.14%	0.900	1.100

DR

Nom. CD	V Meas	H Meas	Nom. CD	V CD Range	H CD Range	V % CD Diff	H % CD Diff	10% CD Ranges	
								Min	Max
0.32	0.3370	0.3333	0.32	0.017	0.013	5.31%	4.16%	0.288	0.352
0.40	0.4138	0.4108	0.40	0.014	0.011	3.45%	2.70%	0.360	0.440
0.45	0.4590	0.4547	0.45	0.009	0.005	2.00%	1.04%	0.405	0.495
0.50	0.5192	0.5176	0.50	0.019	0.018	3.84%	3.52%	0.450	0.550
0.55	0.5675	0.5644	0.55	0.018	0.014	3.18%	2.62%	0.495	0.605
0.60	0.6164	0.6205	0.60	0.016	0.023	2.73%	3.75%	0.540	0.660
0.65	0.6700	0.6756	0.65	0.020	0.026	3.08%	3.94%	0.585	0.715
0.70	0.7217	0.7290	0.70	0.022	0.029	3.10%	4.14%	0.630	0.770
0.75	0.7717	0.7760	0.75	0.022	0.026	2.89%	3.47%	0.675	0.825
0.80	0.8276	0.8244	0.80	0.028	0.024	3.45%	3.05%	0.720	0.880
0.90	0.9341	0.9353	0.90	0.034	0.035	3.79%	3.92%	0.810	0.990
1.00	1.0455	1.0467	1.00	0.046	0.047	4.55%	4.67%	0.900	1.100

Canon

CD Linearity - 9 Fields



Depth of Focus Performance

		Vertical					Horizontal				
UL	Bottom	Top	T/B	Angle	T/B %	Bottom	Top	T/B	Angle	T/B %	
1.10	0.449	0.287	0.64	86.1	63.9	0.440	0.296	0.67	86.5	67.3	
1.00	0.463	0.315	0.68	86.4	68.0	0.460	0.319	0.69	86.6	69.3	
0.90	0.476	0.326	0.68	86.4	68.5	0.472	0.325	0.69	86.5	68.9	
0.80	0.479	0.322	0.67	86.2	67.2	0.472	0.327	0.69	86.5	69.3	
0.70	0.476	0.341	0.72	86.7	71.6	0.479	0.335	0.71	86.5	69.5	
0.60	0.482	0.340	0.71	86.6	70.5	0.479	0.338	0.71	86.6	70.6	
0.50	0.488	0.339	0.69	86.4	69.5	0.479	0.339	0.71	86.6	70.8	
0.40	0.495	0.343	0.69	86.3	69.3	0.482	0.339	0.70	86.5	70.3	
0.30	0.498	0.332	0.67	86.1	67.1	0.492	0.327	0.66	86.0	66.5	
0.20	0.495	0.316	0.63	85.1	63.2	0.492	0.316	0.64	85.8	64.2	
0.10	0.495	0.313	0.63	85.1	63.2	0.492	0.288	0.59	85.1	58.5	
0.00	0.508	0.301	0.59	85.0	59.3	0.495	0.291	0.59	85.1	58.8	
-0.10	0.508	0.285	0.52	84.1	52.3	0.498	0.248	0.50	84.0	54.0	
-0.20	0.492	0.210	0.43	83.2	43.2	0.482	0.169	0.34	82.2	34.3	
-0.30	0.508	0.179	0.35	82.1	35.2	0.501	0.191	0.38	82.5	38.1	
-0.40	0.508					0.498					
-0.50	0.501					0.492					
-0.60	0.497					0.494					
-0.70	0.507					0.494					
-0.80	0.491					0.488					
-0.90	0.495					0.482					
-1.00	0.479					0.473					
-1.10	0.466					0.466					
-1.20	0.450					0.457					
-1.30	0.484					0.546					
Mean	0.4876					Mean	0.4847				

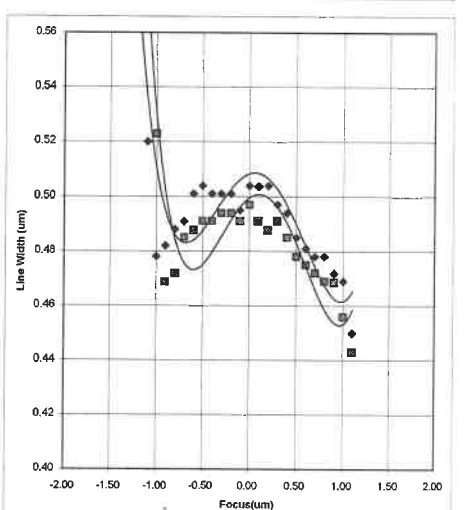
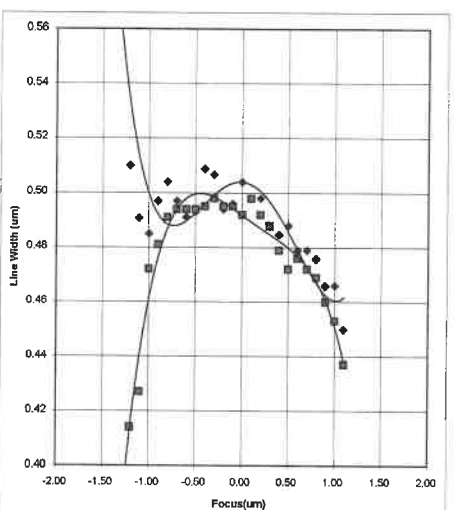
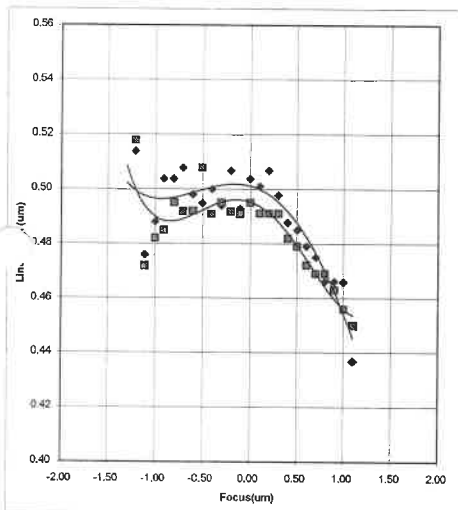
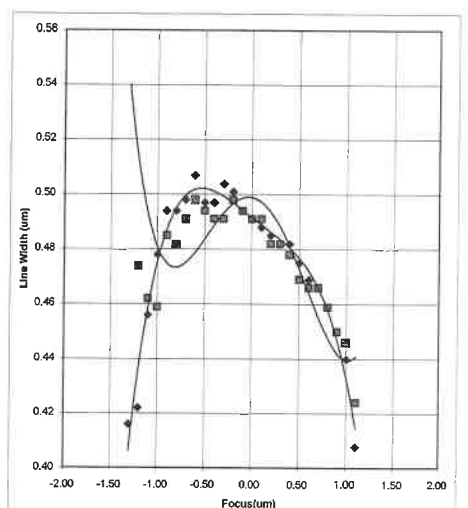
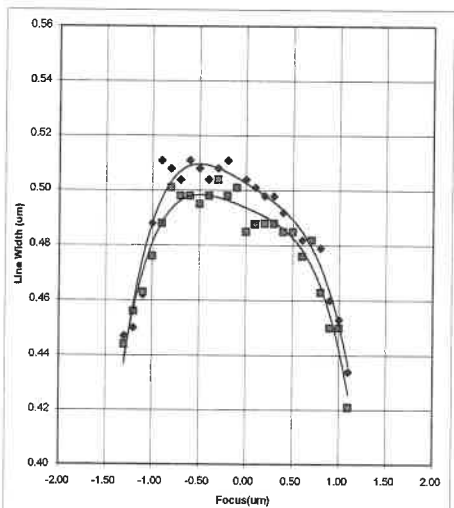
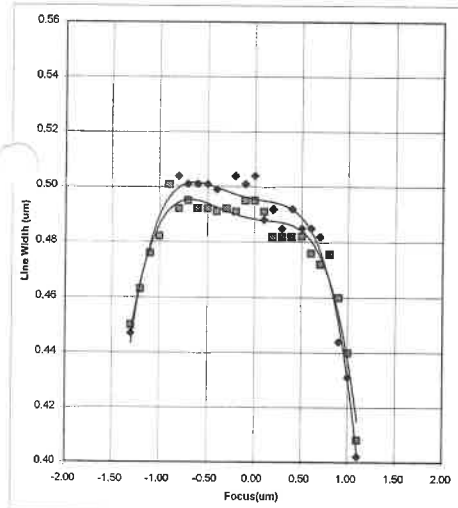
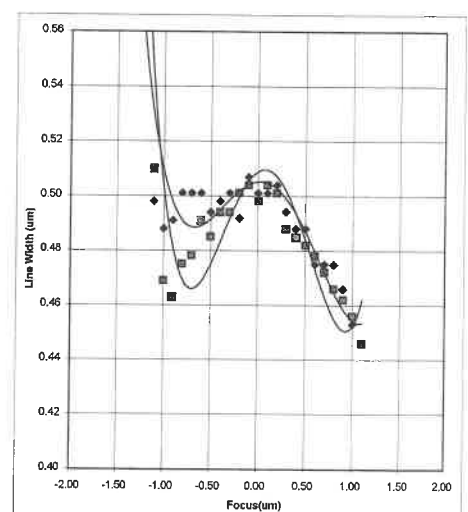
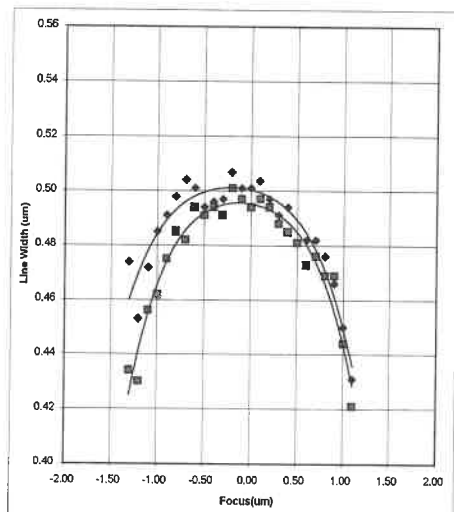
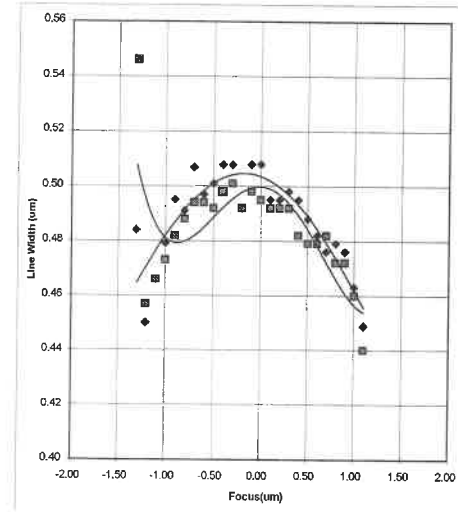
		Vertical					Horizontal				
CL	Bottom	Top	T/B	Angle	T/B %	Bottom	Top	T/B	Angle	T/B %	
1.10	0.402	0.210	0.522	85.4	52.2	0.408	0.254	0.623	86.3	62.3	
1.00	0.431	0.262	0.608	85.9	60.8	0.440	0.266	0.673	86.5	67.3	
0.90	0.444	0.270	0.603	85.8	60.8	0.460	0.311	0.676	86.4	67.6	
0.80	0.476	0.299	0.628	85.7	62.8	0.472	0.325	0.683	86.4	68.3	
0.70	0.482	0.327	0.678	86.3	67.8	0.472	0.338	0.716	86.8	71.6	
0.60	0.485	0.333	0.687	86.3	68.7	0.476	0.349	0.733	86.9	73.3	
0.50	0.485	0.334	0.689	86.4	68.9	0.482	0.342	0.710	86.6	71.0	
0.40	0.492	0.338	0.687	86.3	68.7	0.482	0.348	0.722	86.8	72.2	
0.30	0.485	0.334	0.689	86.4	68.9	0.482	0.348	0.722	86.8	72.2	
0.20	0.492	0.334	0.679	86.2	67.9	0.492	0.339	0.703	86.5	70.3	
0.10	0.488	0.332	0.680	86.2	68.0	0.491	0.332	0.676	86.2	67.6	
0.00	0.504	0.326	0.647	85.7	64.7	0.495	0.329	0.665	86.0	66.5	
-0.10	0.501	0.316	0.631	85.5	63.1	0.495	0.305	0.616	85.4	61.6	
-0.20	0.504	0.293	0.583	84.9	58.3	0.491	0.280	0.570	84.9	57.0	
-0.30	0.492	0.262	0.533	84.5	53.3	0.492	0.201	0.409	83.0	40.9	
-0.40	0.499	0.191	0.383	82.6	38.3						
-0.50	0.501					0.492					
-0.60	0.501					0.492					
-0.70	0.501					0.495					
-0.80	0.504					0.492					
-0.90	0.501					0.501					
-1.00	0.482					0.482					
-1.10	0.476					0.476					
-1.20	0.463					0.463					
-1.30	0.447					0.450					
Mean	0.4815					Mean	0.4783				

UL		Vertical		Horizontal					Vertical		Horizontal	
		Bottom	Top	T/B	Angle	T/B %	Bottom	Top	T/B	Angle	T/B %	
1.10	1.10	0.437	0.282	0.65	86.3	64.5	0.450	0.304	0.68	86.5	67.6	
1.00	1.00	0.466	0.306	0.66	86.1	65.7	0.456	0.317	0.70	86.6	69.5	
0.90	0.90	0.466	0.322	0.69	86.5	69.1	0.463	0.329	0.71	86.8	71.1	
0.80	0.80	0.466	0.335	0.72	86.8	71.9	0.469	0.324	0.69	86.5	69.1	
0.70	0.70	0.475	0.344	0.72	86.8	72.4	0.469	0.344	0.73	87.0	73.3	
0.60	0.60	0.479	0.340	0.71	86.6	71.0	0.472	0.338	0.72	86.8	71.6	
0.50	0.50	0.485	0.332	0.68	86.3	68.5	0.479	0.345	0.72	86.8	72.0	
0.40	0.40	0.468	0.347	0.71	86.6	71.1	0.482	0.341	0.71	86.6	70.7	
0.30	0.30	0.498	0.345	0.69	85.3	69.3	0.491	0.338	0.69	86.3	68.8	
0.20	0.20	0.507	0.337	0.66	85.3	66.5	0.491	0.323	0.66	85.9	65.8	
0.10	0.10	0.501	0.313	0.62	85.5	62.5	0.491	0.295	0.60	85.3	60.1	
0.00	0.00	0.504	0.297	0.59	85.0	59.9	0.495	0.280	0.57	84.8	56.6	
-0.10	-0.10	0.493	0.280	0.57	84.9	56.8	0.491	0.249	0.51	84.2	50.7	
-0.20	-0.20	0.507	0.242	0.48	83.6	47.7	0.492	0.143	0.29	81.6	29.1	
-0.30	-0.30	0.494	0.198	0.40	82.9	40.1	0.495					
-0.40	-0.40	0.500					0.491					
-0.50	-0.50	0.485					0.508					
-0.60	-0.60	0.498					0.492					
-0.70	-0.70	0.508					0.492					
-0.80	-0.80	0.504					0.495					
-0.90	-0.90	0.504					0.485					
-1.00	-1.00	0.488					0.482					
-1.10	-1.10	0.476					0.472					
-1.20	-1.20	0.514					0.518					
Mean	Mean	0.4697					0.4842					

Alcatel 104 27_ i5+ (Stepper 9)

		Vertical					Horizontal				
UC	Bottom	Top	T/B	Angle	T/B %	Bottom	Top	T/B	Angle	T/B %	
1.10	0.431	0.273	0.83	86.2	63.3	0.421	0.260	0.67	86.8	66.5	
1.00	0.450	0.303	0.87	86.5	67.3	0.444	0.302	0.68	86.6	68.0	
0.90	0.466	0.309	0.86	86.2	66.3	0.469	0.306	0.65	86.1	65.2	
0.80	0.478	0.335	0.70	86.6	70.4	0.489	0.319	0.68	86.4	68.0	
0.70	0.482	0.333	0.69	86.4	69.1	0.476	0.330	0.69	86.5	69.3	
0.60	0.482	0.339	0.70	86.5	70.3	0.473	0.332	0.70	86.6	70.2	
0.50	0.481	0.352	0.73	86.9	73.2	0.481	0.340	0.71	86.6	70.7	
0.40	0.494	0.349	0.71	86.5	70.6	0.485	0.329	0.68	86.2	67.8	
0.30	0.491	0.347	0.71	86.5	70.7	0.483	0.332	0.68	86.2	68.0	
0.20	0.497	0.334	0.67	86.1	67.2	0.494	0.315	0.64	85.7	63.8	
0.10	0.504	0.322	0.64	85.6	63.9	0.497	0.303	0.61	85.3	61.0	
0.00	0.501	0.331	0.66	86.8	66.1	0.494	0.281	0.57	84.9	56.9	
-0.10	0.501	0.285	0.57	84.8	56.9	0.497	0.220	0.44	83.3	44.3	
-0.20	0.507	0.242	0.48	83.6	47.7	0.501	0.183	0.38	82.5	37.5	
-0.30	0.497	0.185	0.37	82.5	37.2	0.491	0.175	0.36	82.4	35.6	
-0.40	0.496					0.494					
-0.50	0.494					0.491					
-0.60	0.501					0.494					
-0.70	0.504					0.492					
-0.80	0.498					0.485					
-0.90	0.491					0.475					
-1.00	0.485					0.462					
-1.10	0.472					0.456					
-1.20	0.453					0.430					
-1.30	0.474					0.434					
Mean	0.4851					Mean	0.4753				

		Vertical				Horizontal				
UL	Bottom	Top	T/B	Angle	T/B %	Bottom	Top	T/B	Angle	T/B %
1.10	0.434	0.284	0.65	86.4	65.4	0.421	0.265	0.68	86.7	67.7
1.00	0.453	0.304	0.67	86.4	67.1	0.450	0.302	0.67	86.4	67.1
0.90	0.460	0.309	0.67	86.4	67.2	0.450	0.319	0.71	86.8	70.9
0.80	0.479	0.336	0.70	86.5	70.3	0.463	0.331	0.71	86.8	71.5
0.70	0.482	0.348	0.72	86.8	72.2	0.482	0.340	0.71	86.6	70.5
0.60	0.482	0.346	0.72	86.7	71.8	0.476	0.352	0.74	87.0	73.9
0.50	0.485	0.349	0.72	86.7	72.0	0.485	0.347	0.72	86.7	71.5
0.40	0.492	0.348	0.71	86.5	70.7	0.485	0.345	0.71	86.6	71.1
0.30	0.498	0.353	0.71	86.5	70.9	0.488	0.348	0.71	86.6	71.3
0.20	0.498	0.354	0.71	86.5	71.1	0.488	0.341	0.70	86.5	69.9
0.10	0.501	0.335	0.67	86.0	66.9	0.485	0.322	0.66	86.0	66.0
0.00	0.504	0.322	0.64	85.8	63.9	0.485	0.311	0.64	85.8	64.1
-0.10	0.501	0.280	0.56	84.7	55.9	0.501	0.242	0.48	83.8	48.3
-0.20	0.511	0.214	0.42	82.9	41.9	0.498	0.210	0.42	83.1	42.2
-0.30	0.508					0.504				
-0.40	0.504					0.498				
-0.50	0.508					0.495				
-0.60	0.511					0.498				
-0.70	0.504					0.496				
-0.80	0.508					0.501				
-0.90	0.511					0.483				
-1.00	0.485					0.476				
-1.10	0.462					0.463				
-1.20	0.450					0.456				
-1.30	0.447					0.444				
Mean					Mean					
						0.4762				



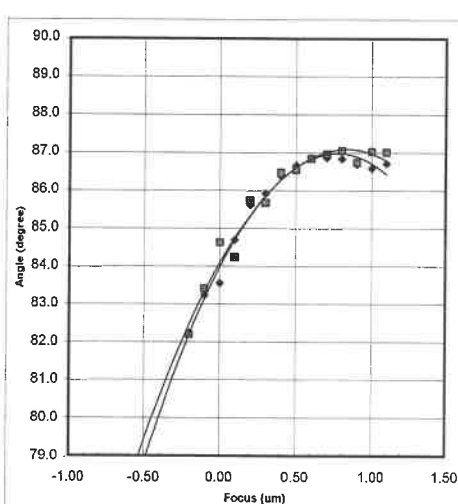
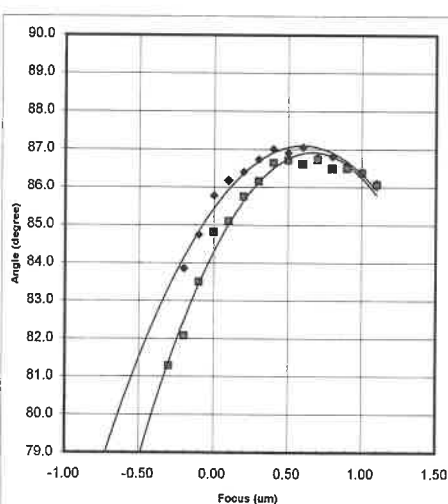
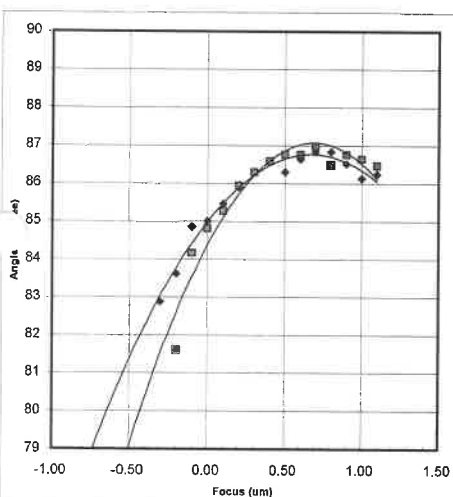
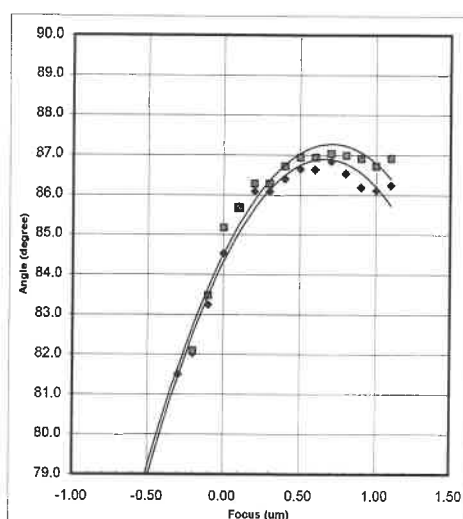
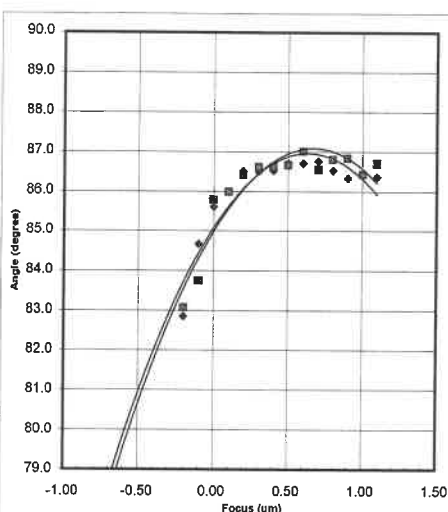
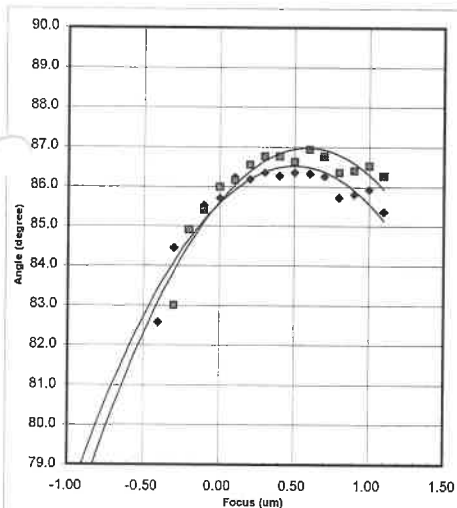
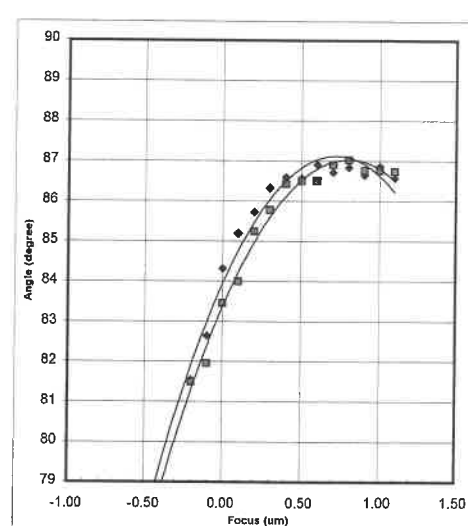
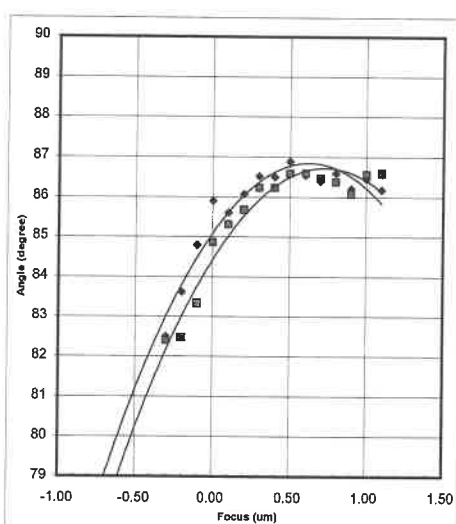
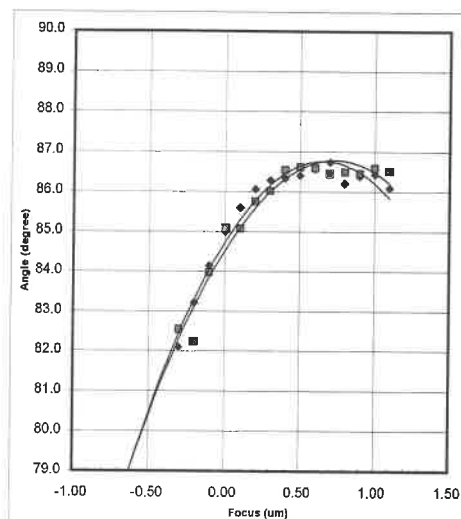
◆ V ■ H — Poly. (H) — Poly. (V)

Rt	1.185 umt	Reticle	C700	Machine Type	3000i5+	NA	0.52	Illumination	Special Mode 1
Resist	R-IX500EL	Exposure	2800 j/m2	Serial No.	104 2754	Sigma	0.60	Line width	0.50 um

Canon

CD Performance - 9 Fields

Alcatel 104 2754 i5+ (Stepper 9)



Rt	1.185 umt	Reticle	C700	Machine Type	3000i5+	NA	0.52	Illumination	Special Mode 1
Resist	R-IX500EL	Exposure	2800 J/m2	Serial No.	104 2754	Sigma	0.80	Line width	0.50 um

Canon

Profile Performance - 9 Fields

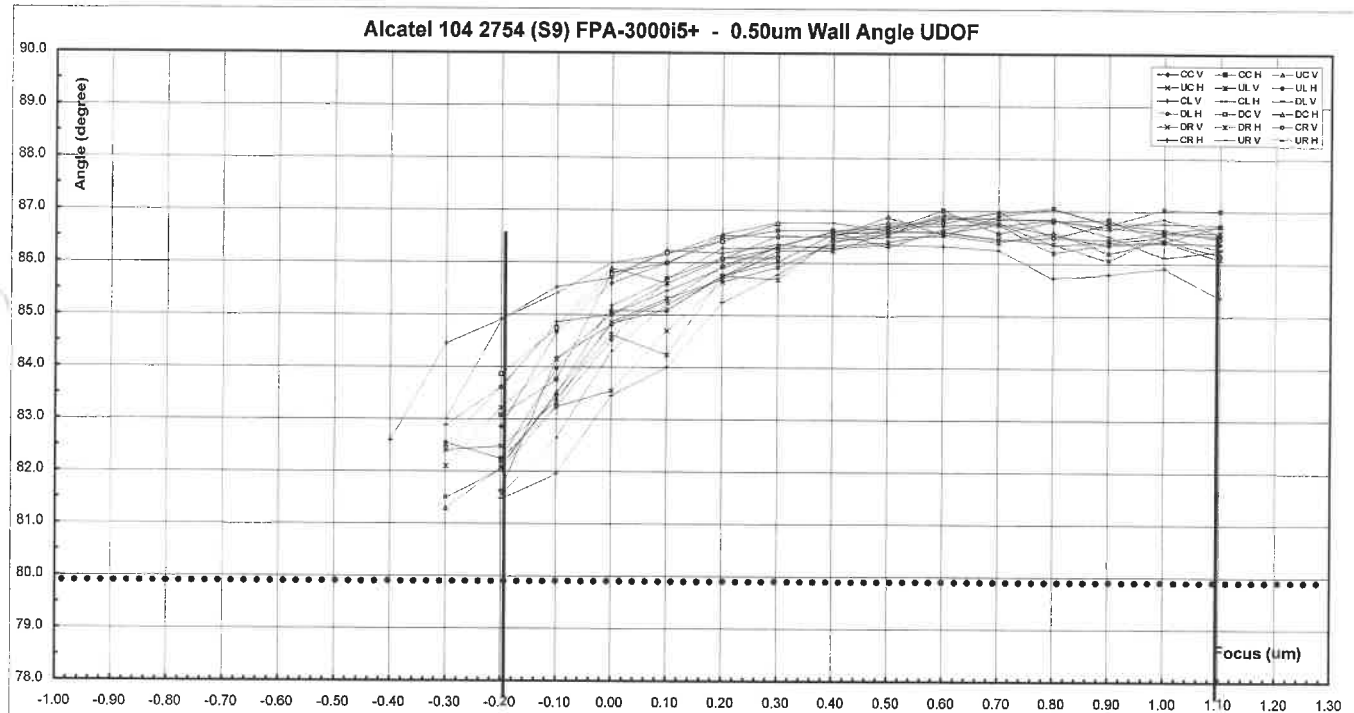
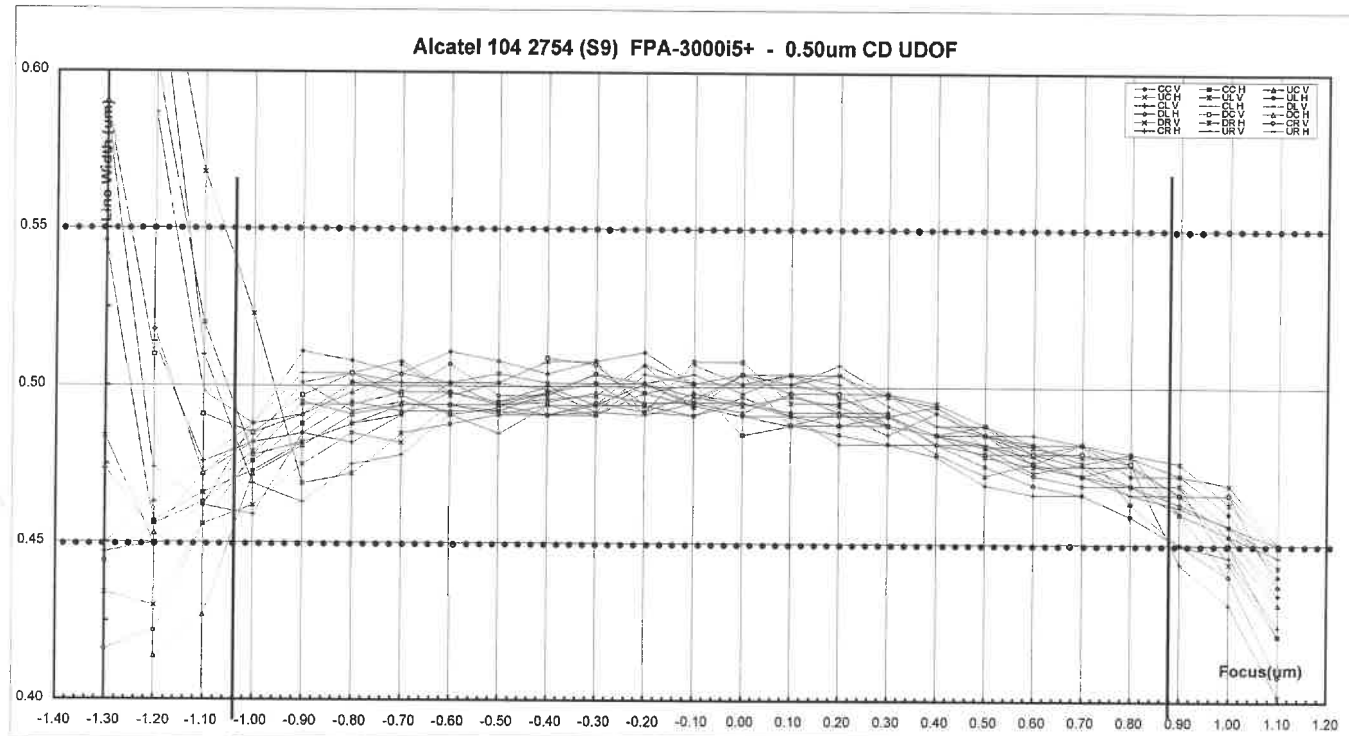
Alcatel 104 2754 i5+ (Stepper 9)



DOF performance

Alcatel 104 2754 i5+ (Stepper 9)

Rt	1.185 umt	Reticle	C700	Machine Type	3000i5+	NA	0.52	Illumination	Special Mode 1
Resist	SR-IX500EL	Exposure	2800 j/m2	Serial No.	104 2754	Sigma	0.60	Line width	0.50 um

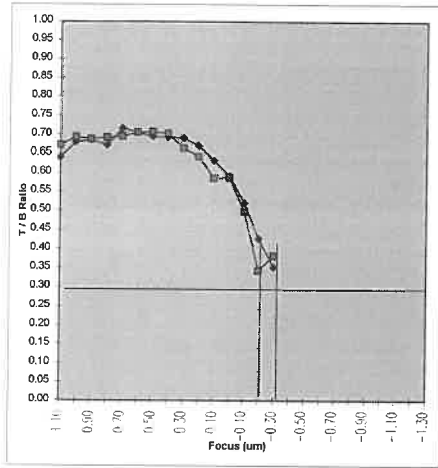


CD Depth of Focus @ 0.50um

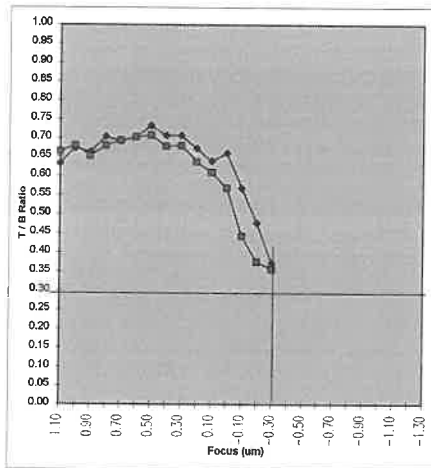
1.93 um

Wall Angle Depth of Focus for 0.50um @ 80.0 deg

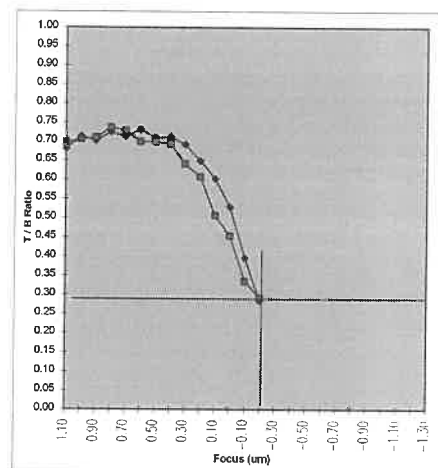
1.30 um



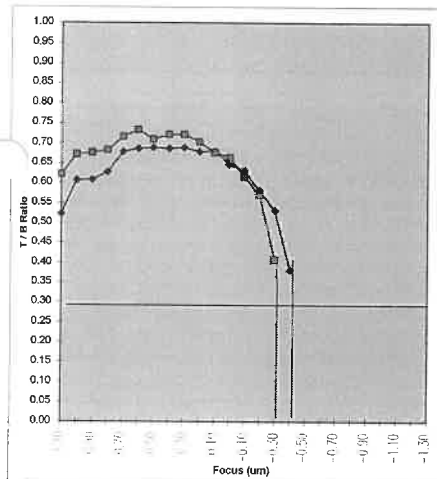
	L	R	BF	
V	1.100	-0.300	0.400	Blue
H	1.100	-0.200	0.450	Pink



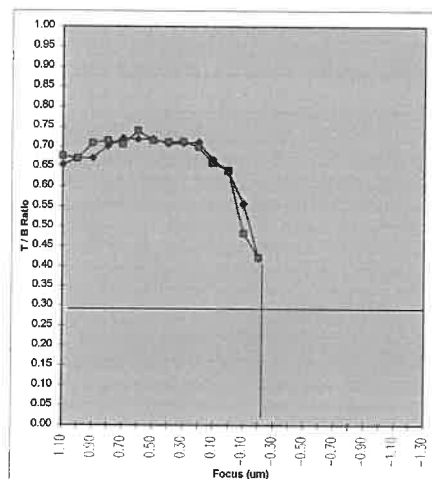
	L	R	BF	
V	1.100	-0.300	0.400	Blue
H	1.100	-0.300	0.400	Pink



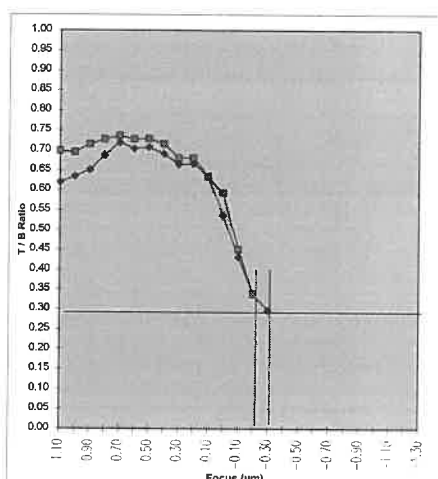
	L	R	BF	
V	1.100	-0.200	0.450	Blue
H	1.100	-0.200	0.450	Pink



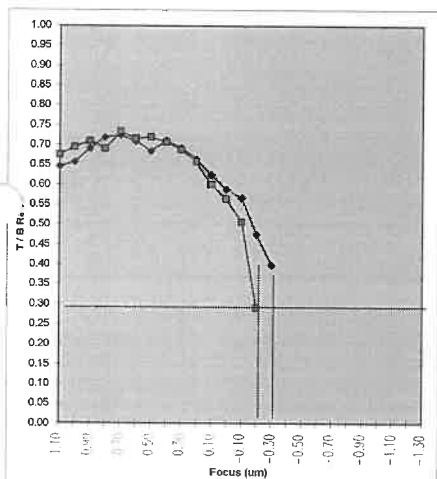
	L	R	BF	
V	1.100	-0.400	0.350	Blue
H	1.100	-0.300	0.400	Pink



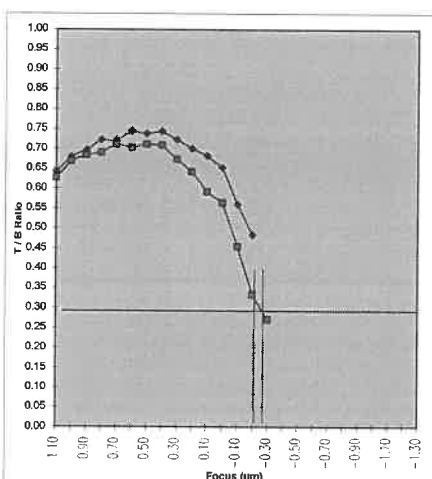
	L	R	BF	
V	1.100	-0.200	0.450	Blue
H	1.100	-0.200	0.450	Pink



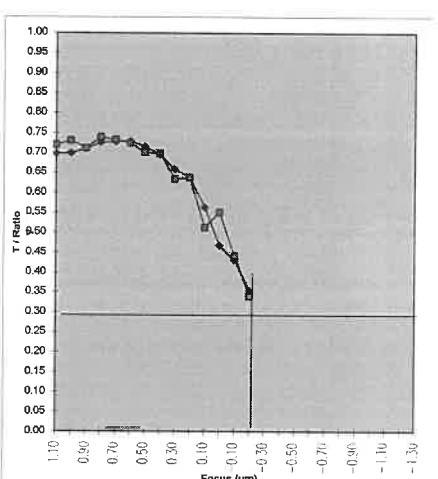
	L	R	BF	
V	1.100	-0.300	0.400	Blue
H	1.100	-0.200	0.450	Pink



	L	R	BF	
V	1.100	-0.300	0.400	Blue
H	1.100	-0.200	0.450	Pink



	L	R	BF	
V	1.100	-0.200	0.450	Blue
H	1.100	-0.250	0.425	Pink



	L	R	BF	
V	1.100	-0.200	0.450	Blue
H	1.100	-0.200	0.450	Pink

Rt	1.185 umt	Reticle	C700	Machine Type	3000i5+	NA	0.52	Illumination	Special Mode 1
Resist	R-1X500EL	Exposure	2800 j/m2	Serial No.	104 2754	Sigma	0.60	Line width	0.50 um

Canon

Image Surface Width - 9 Fields

(T / B vs Focus)

Alcatel 104 2754 i5+ (Stepper 9)

Canon**Lens Performance Data****Alcatel 104 2754 i5+ (Stepper 9)**

Rt	1.185 umt	Reticle	C700	Machine Type	3000i5+	NA	0.52	Illumination	Special Mode 1
Resist	R-IX500EL	Exposure	2800 j/m2	Serial No.	104 2754	Sigma	0.60	Line width	## um

From SEM measurement data :

Best Focus

Vertical	0.400	0.400	0.450
	0.350	0.450	0.400
	0.400	0.450	0.450

Compensation Amount for Tilt

	-10	0	10
10	0.023	0.006	-0.010
0	0.017	0.000	-0.017
-10	0.010	-0.006	-0.023

Horizontal	0.450	0.400	0.450
	0.400	0.450	0.450
	0.450	0.425	0.450

After compensation

	0.448	0.406	0.440	0.431
	0.392	0.450	0.408	
	0.435	0.431	0.427	0.431
	0.425		0.425	

	-10	0	10	Ave Y
10	0.425	0.400	0.450	0.425
0	0.375	0.450	0.425	0.417
-10	0.425	0.438	0.450	0.438
Ave X	0.408	0.429	0.442	

4 corners focus only

0.448	0.440
-------	-------

	X	Y
-10	0.408	0.438
0	0.429	0.417
10	0.442	0.425
Tilt V	-1.67	0.62 ppm
		1.78 ppm

HV Diff	-0.050	0.000	0.000
	-0.050	0.000	-0.050
	-0.050	0.025	0.000
			0.025 um

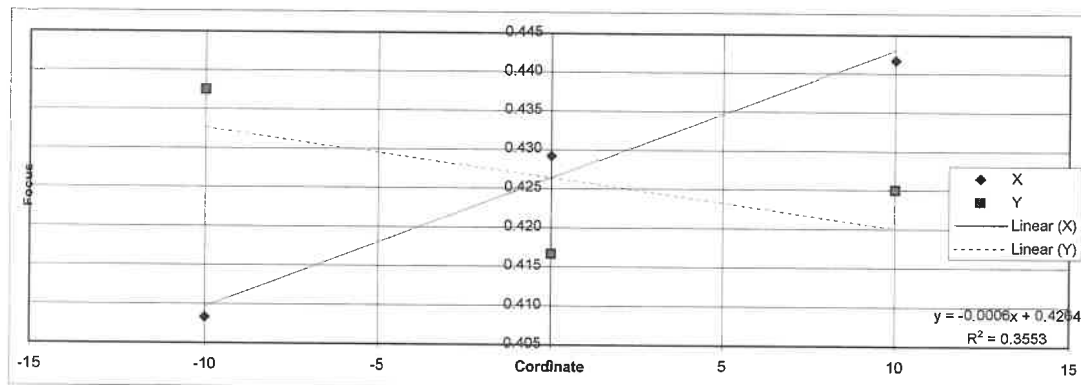
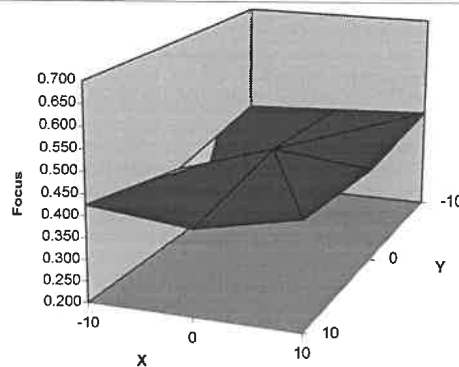
Focus	Centre	0.450 um
	Average	0.426 um

Field Curvature - Tilt comp. 0.06 um**Field Curvature - Tilt Incl.** 0.08 um**4 Corner Range** 0.02 um**Image Surface Width** 0.00 um

(Centre - Max of 4 corners)

4 Corner Mean -0.01 um

minus Centre

Astigmatism 0.03 um



CD Uniformity

Alcatel 104 2754 i5+ (Stepper 9)

(Linewidth Repeatability within a Field)

Focus	V	Angle	H	Angle
0.1	0.4880	86.4	0.4790	86.6
BF	0.4950	86.3	0.4820	86.5
-0.1	0.4980	86.3	0.4920	86.0
Average	0.4937	86.3	0.4843	86.4

Focus	V	Angle	H	Angle
0.1	0.4810	86.9	0.4810	86.6
BF	0.4940	86.5	0.4850	86.2
-0.1	0.4910	86.5	0.4880	86.2
Average	0.4887	86.6	0.4847	86.4

Focus	V	Angle	H	Angle
0.1	0.4880	86.6	0.4820	86.5
BF	0.4880	86.6	0.4850	86.4
-0.1	0.4940	86.3	0.4880	85.8
Average	0.4900	86.5	0.4850	86.2

Focus	V	Angle	H	Angle
0.1	0.4850	86.4	0.4820	86.6
BF	0.4920	86.3	0.4820	86.8
-0.1	0.4850	86.4	0.4820	86.8
Average	0.4873	86.3	0.4820	86.7

Focus	V	Angle	H	Angle
0.1	0.4850	86.7	0.4850	86.7
BF	0.4920	86.5	0.4850	86.6
-0.1	0.4980	86.5	0.4880	86.6
Average	0.4917	86.6	0.4860	86.6

Focus	V	Angle	H	Angle
0.1	0.4750	86.6	0.4690	86.9
BF	0.4820	86.4	0.4780	86.7
-0.1	0.4820	86.1	0.4820	86.3
Average	0.4797	86.4	0.4763	86.6

Focus	V	Angle	H	Angle
0.1	0.4850	86.3	0.4790	86.8
BF	0.4880	86.6	0.4820	86.6
-0.1	0.4980	86.3	0.4910	86.3
Average	0.4903	86.4	0.4840	86.6

Focus	V	Angle	H	Angle
0.1	0.4880	86.9	0.4720	86.7
BF	0.4850	87.0	0.4790	86.6
-0.1	0.4880	86.7	0.4880	86.2
Average	0.4870	86.9	0.4797	86.5

Focus	V	Angle	H	Angle
0.1	0.4850	86.7	0.4780	86.5
BF	0.4940	86.4	0.4850	86.5
-0.1	0.4970	85.9	0.4910	85.7
Average	0.4920	86.3	0.4847	86.2

BF used

0.40

Total Range (H&V, 9 points)

0.0173

um

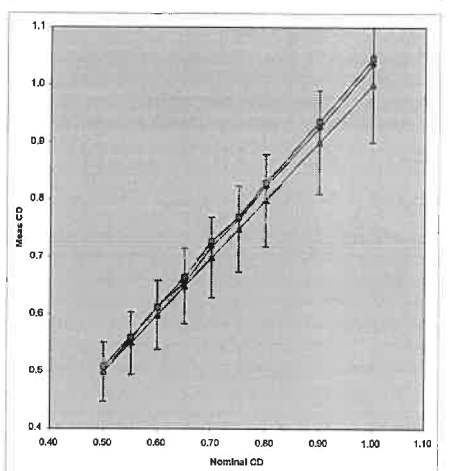
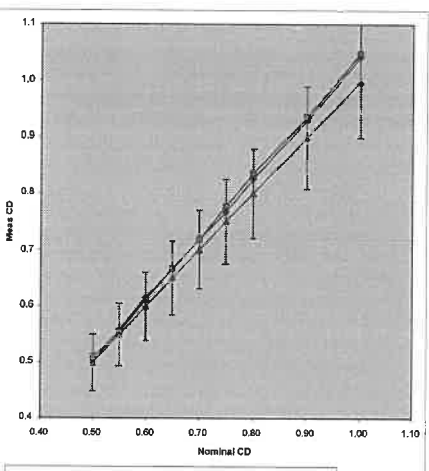
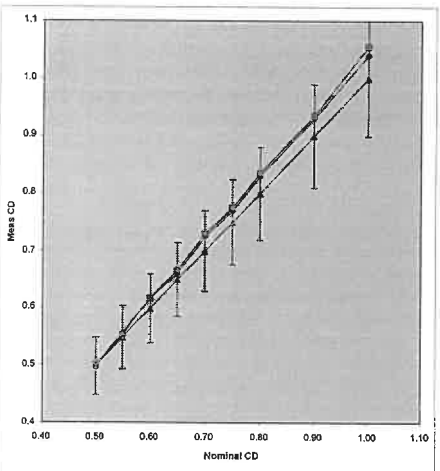
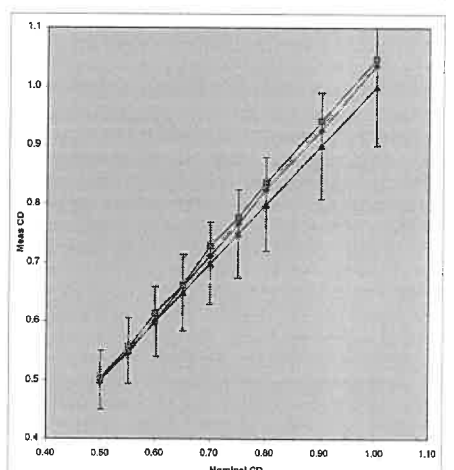
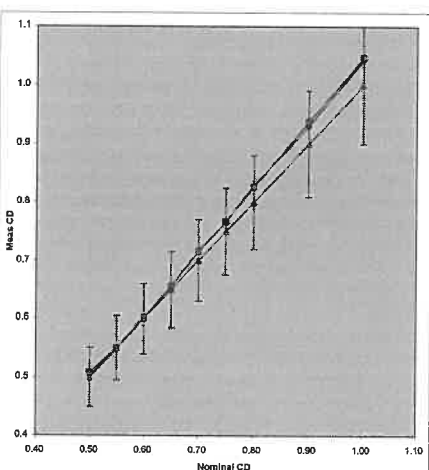
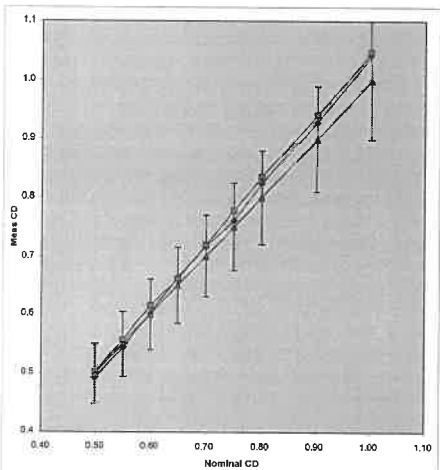
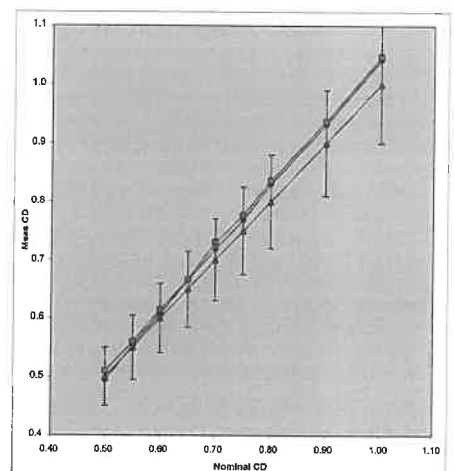
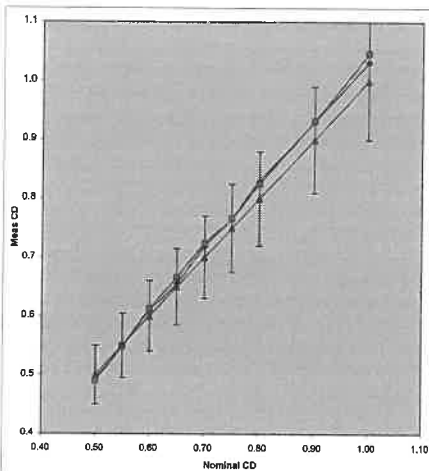
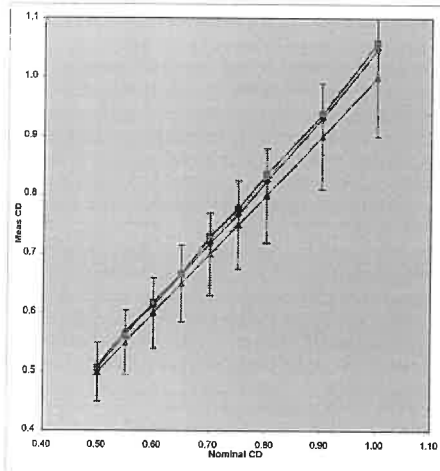
Minimum Wall Angle

86.2

deg

Canon

CD Linearity - 9 Fields



—●— V-Meas —■— H-Meas —▲— Nom. CD

Canon

Dense/Isolated Bias

Machine No:
Machine ID:
Customer:
Date:

104 2754
Stepper 9
Alcatel Mietec
5th June 2001.

Reticle used:
Resist:
Resist thickness:
Exposure Dose:

Canon 700
JSR IX500EL
1.185
2800 J/m²

Feature type:
NA:
Sigma:
Best Focus Position:

0.50um Dense & Iso
0.52
0.6
0.0 um

Site	Vertical		Horizontal	
	Dense	Iso.	Dense	Iso.
1	0.5020	0.5280	0.4950	0.5180
2	0.5060	0.5300	0.4920	0.5120
3	0.5090	0.5340	0.5020	0.5300
4	0.5080	0.5330	0.5040	0.5370
5	0.5120	0.5470	0.4980	0.5230
6	0.5160	0.5410	0.4980	0.5270
7	0.5170	0.5370	0.5020	0.5340
8	0.5060	0.5340	0.4950	0.5200
9	0.5090	0.5320	0.5060	0.5370
			0.0230	0.0310

Spec < 0.05um

Max. =	0.035	um
Min. =	0.020	um

Canon.

Linewidth Repeatability Within a Field - 9 Point Data for 0.35um:

Machine No:	104 2754	Reticle Used:	Canon 700	Feature Size:	0.35 um
Machine ID:	Stepper 9	Resist:	PFI-38A	NA:	0.63
Customer:	Alcatel Mietec	Resist Thickness:	1.095	Sigma:	0.65
Date:	6th June 2001.	Exposure Dose:	2300J/m2	Best Focus Position:	0.45 um

Wafer Bottom

Wafer Middle

Wafer Top

Vertical			Horizontal			Vertical			Horizontal			Vertical			Horizontal		
Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle
DL	0.3549	0.1970	85.9	0.2006	85.9	0.3538	0.2003	86.0	0.3550	0.2006	86.0	0.3567	0.2069	86.1	0.3640	0.1973	85.6
DC	0.3467	0.2003	86.2	0.1940	85.9	0.3547	0.2036	86.1	0.3567	0.1960	85.8	0.3550	0.2040	86.1	0.3649	0.2104	86.0
DR	0.3467	0.1870	85.8	0.1969	85.9	0.3545	0.1807	85.5	0.3569	0.1970	85.8	0.3546	0.1939	85.8	0.3633	0.1972	85.7
CR	0.3551	0.1937	85.8	0.1933	85.8	0.3474	0.1868	85.8	0.3488	0.1873	85.8	0.3480	0.1969	86.1	0.3492	0.1907	85.9
CC	0.3515	0.1940	85.9	0.1937	85.9	0.3481	0.1907	85.9	0.3511	0.1903	85.8	0.3510	0.1873	85.7	0.3513	0.1936	85.9
CL	0.3525	0.1904	85.8	0.1940	85.6	0.3539	0.1840	85.9	0.3483	0.1806	85.6	0.3520	0.1840	85.6	0.3516	0.1969	86.0
UL	0.3418	0.1807	85.8	0.1970	86.2	0.3419	0.1841	85.8	0.3519	0.1841	85.6	0.3542	0.1806	85.5	0.3531	0.1840	85.6
UC	0.3447	0.1840	85.8	0.1936	86.0	0.3454	0.1903	86.0	0.3485	0.1970	86.0	0.3474	0.1836	85.7	0.3495	0.1969	86.0
UR	0.3467	0.1907	85.9	0.1873	85.7	0.3524	0.1873	85.7	0.3478	0.1872	85.8	0.3505	0.1937	85.9	0.3514	0.2003	86.1

Measurement Summary.

Minimum CD	0.3418	um
Maximum CD	0.3649	um
Minimum Wall Angle	85.5	deg.
Maximum Wall Angle	86.2	deg.

Measured Fields:

[illegible]

Canon.

Linewidth Repeatability Within a Field - 9 Point Data for 0.50um.

Machine No:	104 2754	Reticle Used:	Canon 700	Feature Size:	0.50 um
Machine ID:	Stepper 9	Resist:	JSR IX500EL	NA:	0.52
Customer:	Alcatel Mietec	Resist Thickness:	1.185	Sigma:	0.6
Date:	6th June 2001.	Exposure Dose:	2800J/m2	Best Focus Position:	0.30 um

Wafer Bottom

Wafer Middle

Wafer Top

	Vertical			Horizontal			Vertical			Horizontal			Vertical			Horizontal		
	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle
DL	0.4985	0.3304	85.9	0.5090	0.3343	85.8	0.5120	0.3339	85.7	0.5164	0.3228	85.3	0.5048	0.3381	86.0	0.5180	0.3453	85.8
DC	0.5050	0.3381	86.0	0.5059	0.3229	85.6	0.5048	0.3490	86.2	0.5024	0.3377	86.0	0.5086	0.3416	86.0	0.5039	0.3344	85.9
DR	0.5057	0.3228	85.6	0.5097	0.3229	85.5	0.5110	0.3340	85.7	0.5128	0.3306	85.6	0.5093	0.3343	85.8	0.5142	0.3339	85.6
CR	0.4938	0.3267	86.0	0.5009	0.3191	85.6	0.4938	0.3382	86.2	0.5012	0.3378	86.1	0.4995	0.3268	85.8	0.5098	0.3459	86.0
CC	0.4956	0.3454	86.4	0.4963	0.3377	86.2	0.4995	0.3454	86.3	0.4999	0.3306	85.9	0.5053	0.3417	86.1	0.5096	0.3230	85.5
CL	0.4946	0.3306	86.0	0.5040	0.3493	86.3	0.5082	0.3343	85.8	0.4997	0.3453	86.3	0.5031	0.3378	86.0	0.5181	0.3454	85.8
UL	0.4973	0.3153	85.6	0.5046	0.3390	86.0	0.5005	0.3195	85.6	0.5136	0.3381	85.8	0.5050	0.3268	85.7	0.5128	0.3306	85.6
UC	0.4986	0.3419	86.2	0.4927	0.3381	86.3	0.5023	0.3419	86.1	0.5050	0.3305	85.8	0.5002	0.3416	86.2	0.5038	0.3344	85.9
UR	0.4981	0.3343	86.1	0.5001	0.3301	85.9	0.5048	0.3230	85.6	0.5140	0.3192	85.3	0.5062	0.3305	85.8	0.5036	0.3191	85.5

Measurement Summary.

Minimum CD	0.4927	um
Maximum CD	0.5181	um
Minimum Wall Angle	85.3	deg.
Maximum Wall Angle	86.4	deg.

Measured Fields.

Canon.

Linewidth Repeatability Within a Wafer - Centre Point Data for 0.35um.

Machine No:
Machine ID:
Customer:
Date:

104 2754
Stepper 9
Alcatel Mietec
6th June 2001.

Reticle Used:
Resist:
Resist Thickness:
Exposure Dose:

Canon 700
PFI-38A
1.095
2300J/m2

Feature Size:
NA:
Sigma:
Best Focus Position:

0.35 um
0.63
0.65
0.45 um

Shot No	Vertical			Horizontal		
	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle
1	0.3444	0.2030	86.3	0.3473	0.2027	86.2
2	0.3449	0.1954	86.1	0.3529	0.2026	86.1
3	0.3519	0.1952	85.9	0.3562	0.1993	85.9
4	0.3479	0.1950	86.0	0.3485	0.2065	86.3
5	0.3461	0.1917	86.0	0.3481	0.2027	86.2
6	0.3452	0.1912	86.0	0.3477	0.1917	85.9
7	0.3487	0.1951	86.0	0.3538	0.1989	86.0
8	0.3491	0.1993	86.1	0.3492	0.2027	86.2
9	0.3426	0.1954	86.2	0.3418	0.1916	86.1
10	0.3466	0.1875	85.8	0.3492	0.1989	86.1

Measurement Summary.

Minimum CD	0.3418	um
Maximum CD	0.3562	um
Minimum Wall Angle	85.8	deg.
Maximum Wall Angle	86.3	deg.

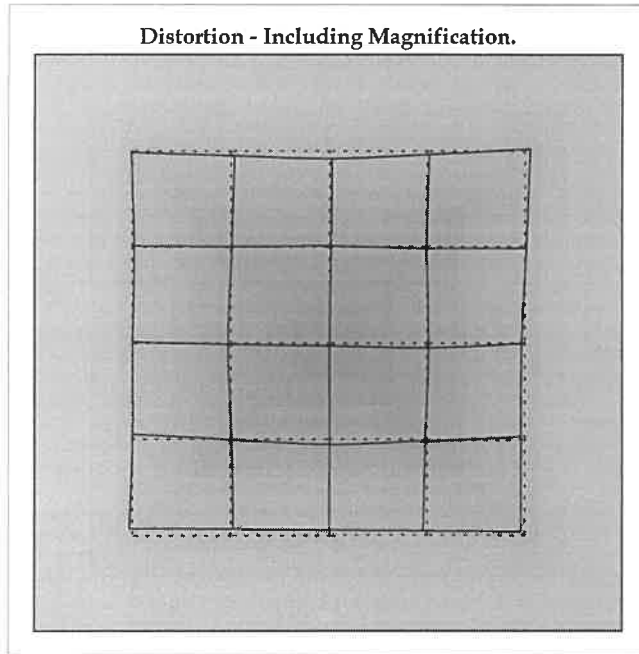
Measurement Order and Location.

			1		
	2	3	4	5	
	9	8	7	6	
			10		

Linewidth Repeatability Within a Wafer - Centre Point Data for 0.50um.

Shot No	Vertical			Horizontal		
	Bottom	Top	Wall Angle	Bottom	Top	Wall Angle
1	0.5034	0.3306	85.8	0.5027	0.3452	86.2
2	0.5032	0.3415	86.1	0.5066	0.3415	86.0
3	0.5105	0.3453	86.0	0.5042	0.3567	86.4
4	0.5019	0.3531	86.4	0.5070	0.3378	85.9
5	0.5105	0.3415	85.9	0.4941	0.3521	86.6
6	0.4980	0.3382	86.1	0.4972	0.3530	86.5
7	0.5044	0.3455	86.2	0.5052	0.3458	86.2
8	0.4994	0.3419	86.2	0.4991	0.3493	86.4
9	0.5021	0.3420	86.1	0.4988	0.3381	86.1
10	0.5002	0.3529	86.4	0.5005	0.3451	86.3

[illegible]

Distortion - Standard Illumination.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.004	0.011	0.006	0.005	0.017
0.005	0.004	0.005	-0.001	0.005
0.001	-0.008	-0.001	0.004	-0.010
0.001	0.003	0.000	-0.006	-0.012
-0.008	0.008	-0.001	-0.012	-0.012

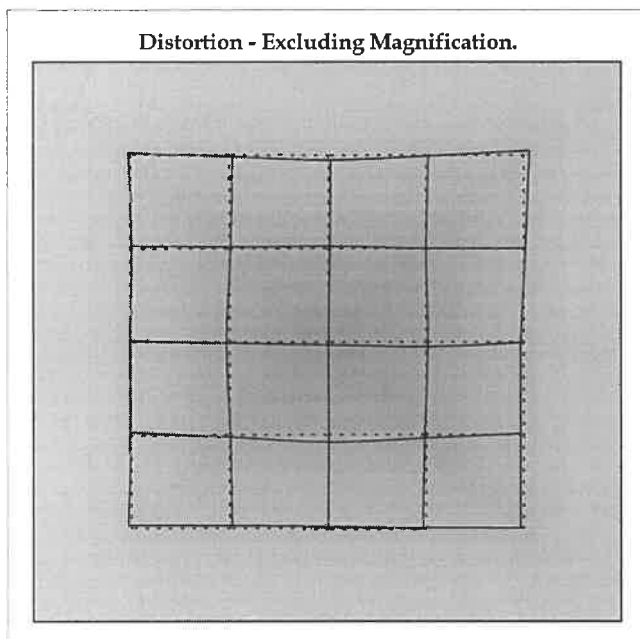
Y Data.

-0.004	-0.015	-0.025	-0.012	0.006
0.003	0.001	0.003	-0.005	-0.004
0.004	-0.003	-0.009	-0.015	-0.002
0.015	-0.001	-0.017	-0.005	0.009
0.019	0.018	0.016	0.012	0.010

Dx Max	0.017	Dy Max	0.019	um.
Dx Min	-0.012	Dy Min	-0.025	um.

Magnification	-0.630	ppm
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Required Offset	0.630	ppm
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Distortion - Excluding Magnification.*X Data*

-0.006	0.010	0.006	0.006	0.018
0.003	0.003	0.005	-0.001	0.006
0.000	-0.009	-0.001	0.005	-0.009
-0.001	0.002	0.000	-0.005	-0.010
-0.010	0.007	-0.001	-0.011	-0.010

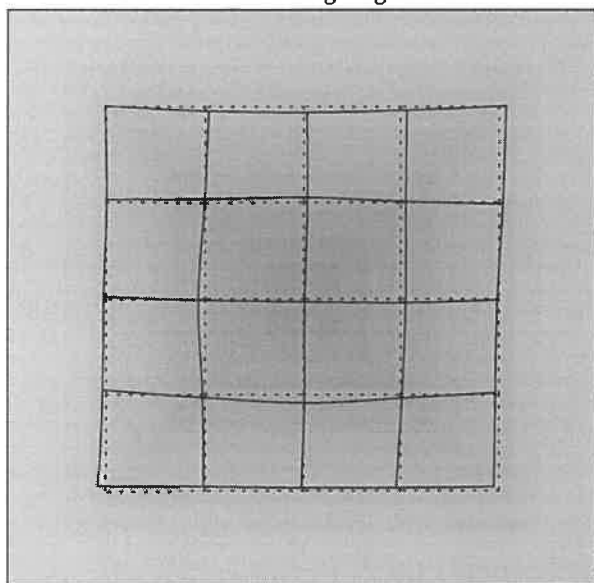
Y Data

0.006	-0.005	-0.015	-0.002	0.016
0.008	0.006	0.008	0.000	0.001
0.004	-0.003	-0.009	-0.015	-0.002
0.010	-0.006	-0.023	-0.010	0.004
0.009	0.008	0.005	0.002	0.000

Dx Max	0.018	Dy Max	0.016	um.
Dx Min	-0.011	Dy Min	-0.023	um.

Distortion - SIA Illumination.Field Size mmStep Size mm**Distortion - Including Magnification.**

Distortion - Including Magnification.



X Data.

-0.004	0.011	0.012	0.018	0.022
0.002	-0.001	0.012	0.015	0.012
-0.008	-0.020	0.004	0.015	-0.005
-0.010	-0.008	0.002	0.003	-0.011
-0.023	-0.004	-0.006	-0.015	-0.015

Y Data.

0.001	-0.014	-0.019	-0.012	0.002
0.009	0.012	0.016	0.003	-0.004
0.007	-0.004	-0.010	-0.012	-0.004
0.014	-0.009	-0.026	-0.011	0.005
0.016	0.012	0.009	0.008	0.011

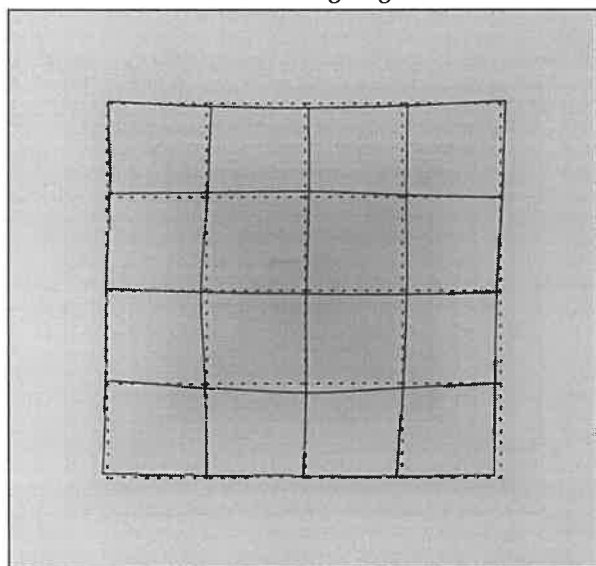
Dx Max	0.022	Dy Max	0.016	um.
Dx Min	-0.023	Dy Min	-0.026	um.

Magnification	0.036	ppm
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Required Offset	-0.036	ppm
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Distortion - Excluding Magnification.

Distortion - Excluding Magnification.



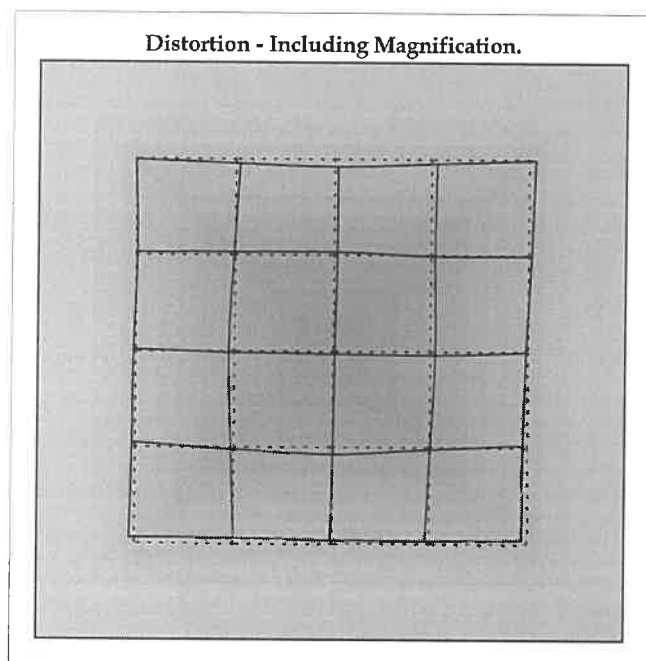
X Data

0.002	0.014	0.012	0.015	0.015
0.008	0.002	0.012	0.012	0.006
-0.002	-0.017	0.004	0.012	-0.011
-0.004	-0.005	0.002	0.000	-0.017
-0.016	-0.001	-0.006	-0.018	-0.021

Y Data

0.007	-0.009	-0.014	-0.006	0.007
0.012	0.015	0.019	0.005	-0.002
0.007	-0.004	-0.010	-0.012	-0.004
0.011	-0.012	-0.029	-0.014	0.002
0.011	0.007	0.003	0.003	0.006

Dx Max	0.015	Dy Max	0.019	um.
Dx Min	-0.021	Dy Min	-0.029	um.

Distortion - SIAII Illumination.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.002	0.013	0.010	0.016	0.020
0.004	-0.002	0.010	0.012	0.010
-0.006	-0.017	0.005	0.015	-0.006
-0.009	-0.008	0.001	0.001	-0.013
-0.016	0.001	-0.006	-0.013	-0.019

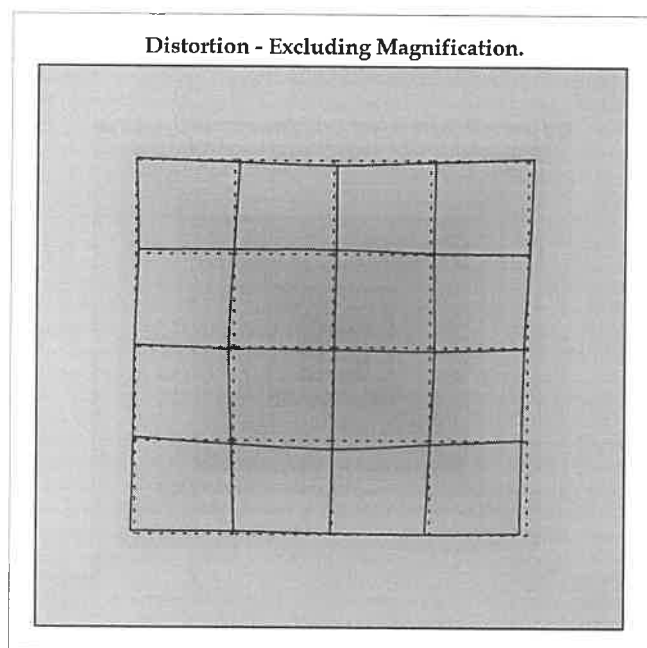
Y Data.

-0.003	-0.015	-0.024	-0.013	-0.002
0.009	0.010	0.010	-0.002	-0.001
0.006	-0.004	-0.008	-0.012	-0.002
0.014	-0.007	-0.022	-0.007	0.007
0.018	0.018	0.011	0.008	0.012

Dx Max	0.020	Dy Max	0.018	um.
Dx Min	-0.019	Dy Min	-0.024	um.

Magnification	-0.248	ppm
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Required Offset	0.248	ppm
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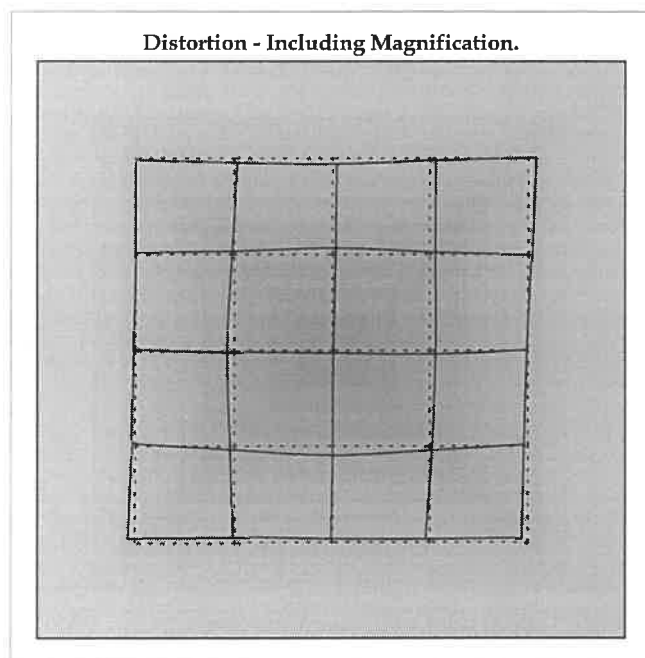
Distortion - Excluding Magnification.*X Data*

0.001	0.015	0.010	0.015	0.016
0.008	-0.001	0.010	0.011	0.006
-0.003	-0.016	0.005	0.014	-0.010
-0.006	-0.006	0.001	-0.001	-0.017
-0.013	0.003	-0.006	-0.015	-0.022

Y Data

0.006	-0.006	-0.016	-0.005	0.006
0.013	0.014	0.015	0.002	0.003
0.006	-0.004	-0.008	-0.012	-0.002
0.010	-0.011	-0.026	-0.012	0.003
0.010	0.009	0.003	0.000	0.004

Dx Max	0.016	Dy Max	0.015	um.
Dx Min	-0.022	Dy Min	-0.026	um.

Distortion - SIB Illumination.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

0.001	0.009	0.014	0.017	0.024
0.001	-0.005	0.011	0.017	0.012
-0.006	-0.022	0.002	0.018	-0.003
-0.010	-0.012	0.001	0.005	-0.012
-0.021	-0.004	-0.004	-0.013	-0.018

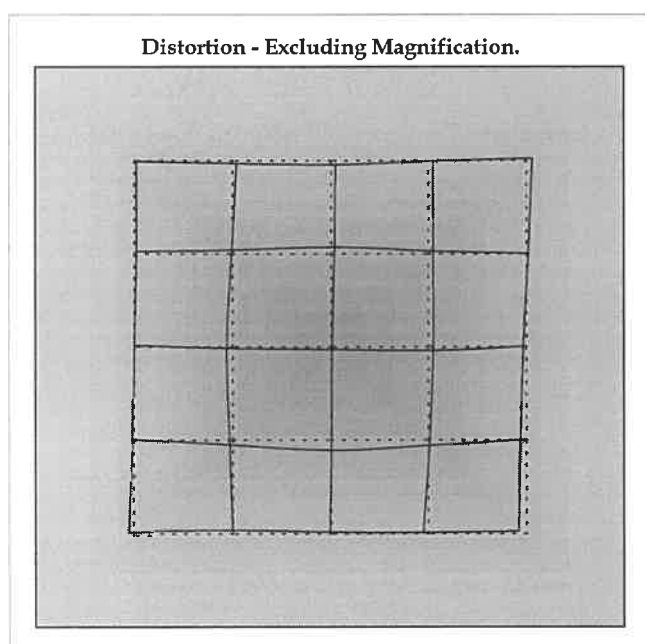
Y Data.

-0.007	-0.015	-0.019	-0.007	0.002
0.006	0.010	0.020	0.007	-0.001
0.005	-0.004	-0.008	-0.012	0.002
0.007	-0.012	-0.029	-0.013	0.004
0.014	0.016	0.011	0.010	0.013

Dx Max	0.024	Dy Max	0.020	um.
Dx Min	-0.022	Dy Min	-0.029	um.

Magnification	0.037	ppm
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Required Offset	-0.037	ppm
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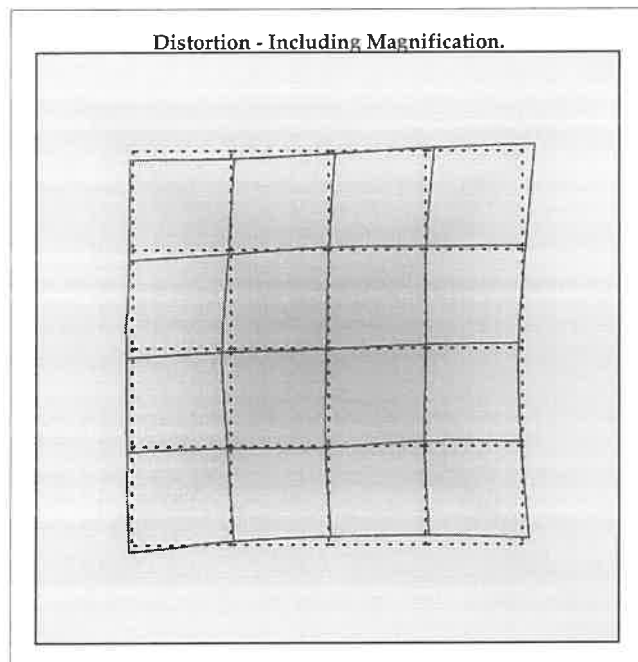
Distortion - Excluding Magnification.*X Data*

0.007	0.012	0.014	0.014	0.018
0.007	-0.002	0.011	0.014	0.006
0.000	-0.019	0.002	0.014	-0.009
-0.004	-0.009	0.001	0.002	-0.018
-0.015	-0.001	-0.004	-0.016	-0.024

Y Data

-0.001	-0.009	-0.013	-0.001	0.007
0.008	0.013	0.023	0.009	0.002
0.005	-0.004	-0.008	-0.012	0.002
0.005	-0.015	-0.032	-0.016	0.001
0.009	0.011	0.005	0.004	0.008

Dx Max	0.018	Dy Max	0.023	um.
Dx Min	-0.024	Dy Min	-0.032	um.

Distortion - Matched Reference Wafer - Standard II.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.009	0.009	0.018	0.028	0.037
-0.012	-0.008	0.001	0.002	0.010
-0.020	-0.028	-0.008	0.002	-0.012
-0.018	-0.011	-0.010	-0.004	-0.005
-0.009	0.008	0.006	0.011	0.021

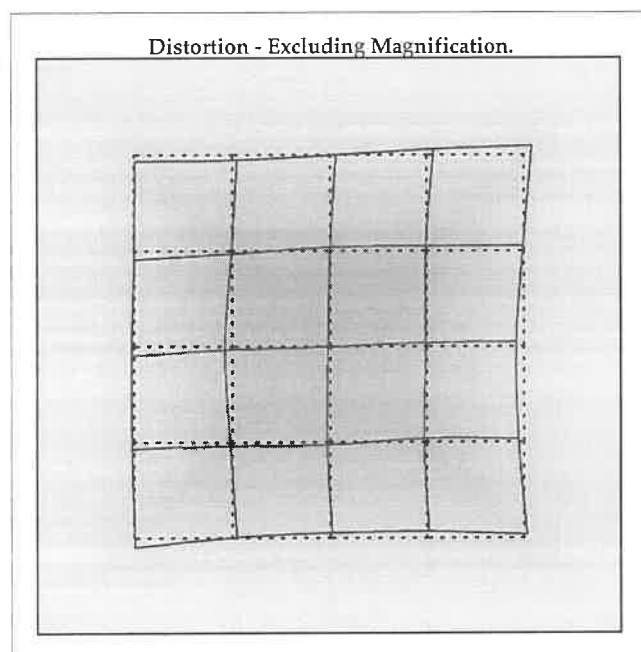
Y Data.

-0.028	-0.024	-0.009	0.009	0.020
-0.032	-0.013	0.008	0.011	0.011
-0.029	-0.012	-0.002	0.012	0.015
-0.018	-0.006	-0.004	0.016	0.014
-0.021	0.011	0.024	0.028	0.020

Dx Max	0.037	Dy Max	0.028	um.
Dx Min	-0.028	Dy Min	-0.032	um.

Magnification	0.210	ppm
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Required Offset	-0.210	ppm
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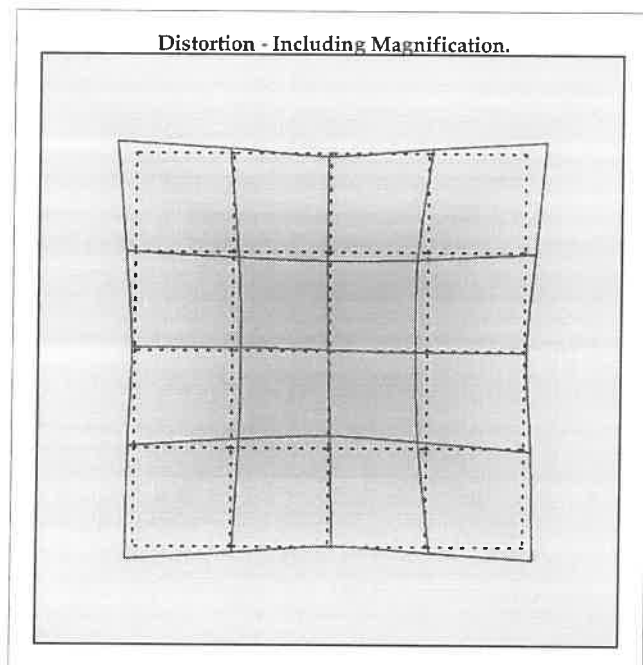
Distortion - Excluding Magnification.*X Data*

0.004	0.015	0.018	0.021	0.025
0.000	-0.002	0.001	-0.004	-0.003
-0.008	-0.022	-0.008	-0.004	-0.024
-0.005	-0.005	-0.010	-0.010	-0.017
0.003	0.014	0.006	0.005	0.009

Y Data

-0.020	-0.016	0.000	0.018	0.028
-0.028	-0.009	0.012	0.015	0.016
-0.029	-0.012	-0.002	0.012	0.015
-0.022	-0.010	-0.008	0.011	0.010
-0.029	0.003	0.016	0.020	0.012

Dx Max	0.025	Dy Max	0.028	um.
Dx Min	-0.024	Dy Min	-0.029	um.

Distortion Stepper 1 to Stepper 9.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.058	-0.012	-0.008	0.013	0.064
-0.028	0.018	-0.008	-0.032	0.032
-0.009	0.026	-0.004	-0.036	0.006
-0.020	0.022	0.004	-0.026	0.021
-0.025	0.004	0.013	0.013	0.030

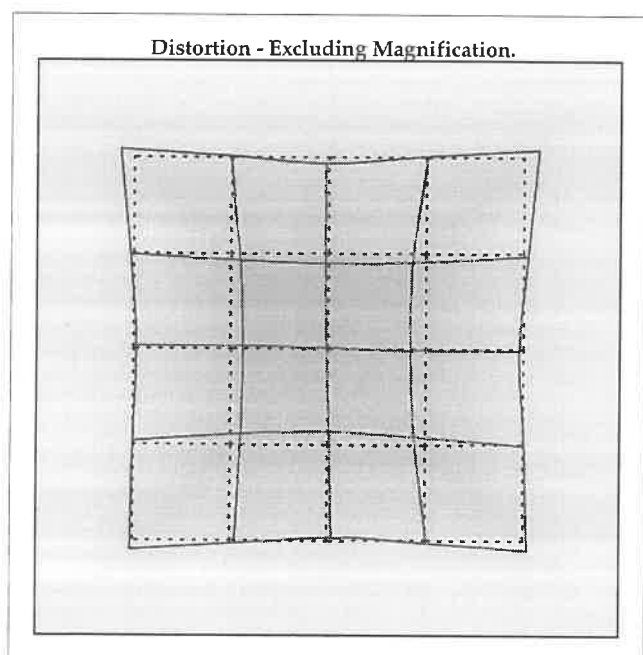
Y Data.

0.034	0.014	-0.009	0.013	0.034
0.002	-0.017	-0.027	-0.023	-0.004
0.009	0.009	0.003	-0.004	-0.004
0.007	0.028	0.037	0.021	-0.009
-0.038	-0.018	0.000	-0.019	-0.039

Dx Max	0.064	Dy Max	0.037	um.
Dx Min	-0.058	Dy Min	-0.039	um.

Magnification	1.499	ppm
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Required Offset	-1.499	ppm
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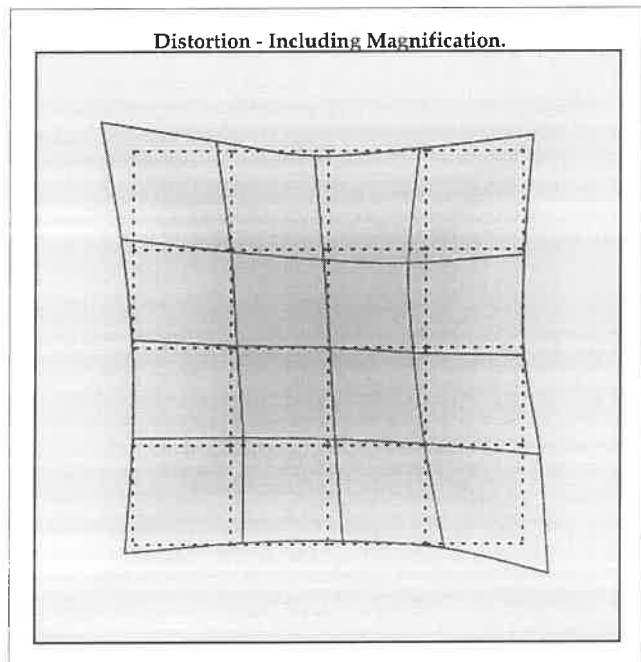
Distortion - Excluding Magnification.*X Data*

-0.040	-0.003	-0.008	0.004	0.046
-0.010	0.027	-0.008	-0.041	0.014
0.009	0.036	-0.004	-0.045	-0.013
-0.001	0.031	0.004	-0.035	0.003
-0.006	0.013	0.013	0.003	0.011

Y Data

0.025	0.004	-0.019	0.003	0.024
-0.003	-0.022	-0.032	-0.028	-0.009
0.009	0.009	0.003	-0.004	-0.004
0.012	0.033	0.042	0.025	-0.004
-0.028	-0.008	0.010	-0.009	-0.029

Dx Max	0.046	Dy Max	0.042	um.
Dx Min	-0.045	Dy Min	-0.032	um.

Distortion - Stepper 3 to Stepper 9.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.098	-0.047	-0.044	-0.020	0.030
-0.037	-0.002	-0.015	-0.055	0.003
-0.004	0.017	0.005	-0.038	0.003
-0.001	0.037	0.022	-0.003	0.052
-0.023	0.036	0.046	0.058	0.078

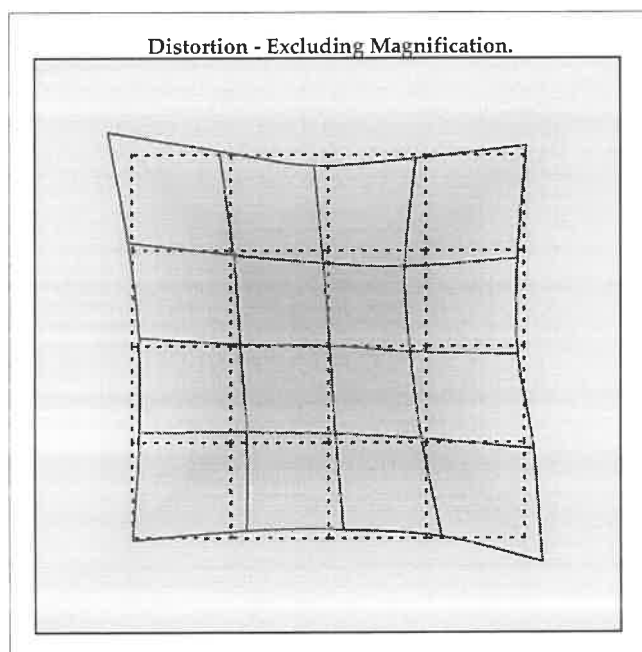
Y Data.

0.087	0.029	-0.015	0.006	0.046
0.033	-0.006	-0.031	-0.042	-0.017
0.025	0.005	0.000	-0.017	-0.026
0.022	0.023	0.019	0.003	-0.029
-0.026	0.004	0.009	-0.013	-0.090

Dx Max	0.078	Dy Max	0.087	um.
Dx Min	-0.098	Dy Min	-0.090	um.

Magnification	2.117	ppm
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Required Offset	-2.117	ppm
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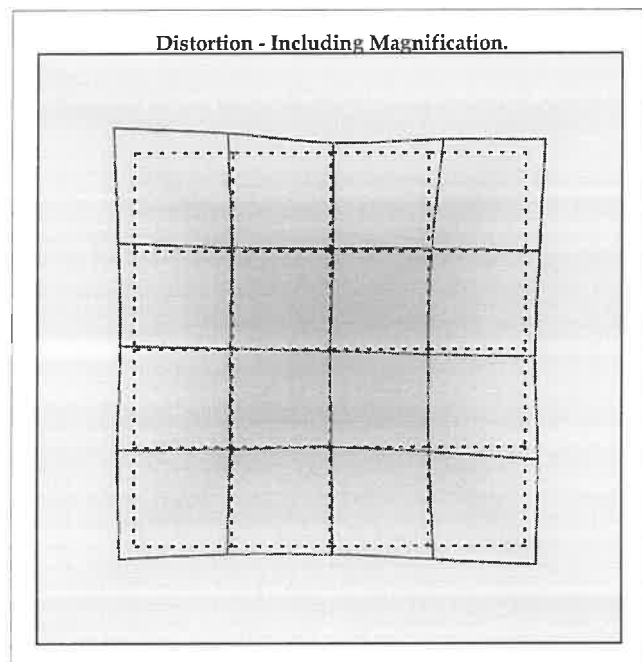
Distortion - Excluding Magnification.*X Data*

-0.076	-0.036	-0.044	-0.031	0.007
-0.015	0.009	-0.015	-0.066	-0.020
0.019	0.029	0.005	-0.049	-0.019
0.022	0.048	0.022	-0.014	0.030
-0.001	0.047	0.046	0.047	0.056

Y Data

0.070	0.012	-0.033	-0.011	0.029
0.024	-0.015	-0.040	-0.051	-0.026
0.025	0.005	0.000	-0.017	-0.026
0.031	0.032	0.027	0.012	-0.020
-0.009	0.022	0.026	0.005	-0.073

Dx Max	0.056	Dy Max	0.070	um.
Dx Min	-0.076	Dy Min	-0.073	um.

Distortion - Stepper 4 to Stepper 9.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.066	-0.017	0.006	0.045	0.060
-0.049	-0.002	0.007	0.010	0.043
-0.044	-0.007	0.000	0.000	0.030
-0.051	-0.006	0.004	0.003	0.039
-0.045	-0.016	0.007	0.017	0.033

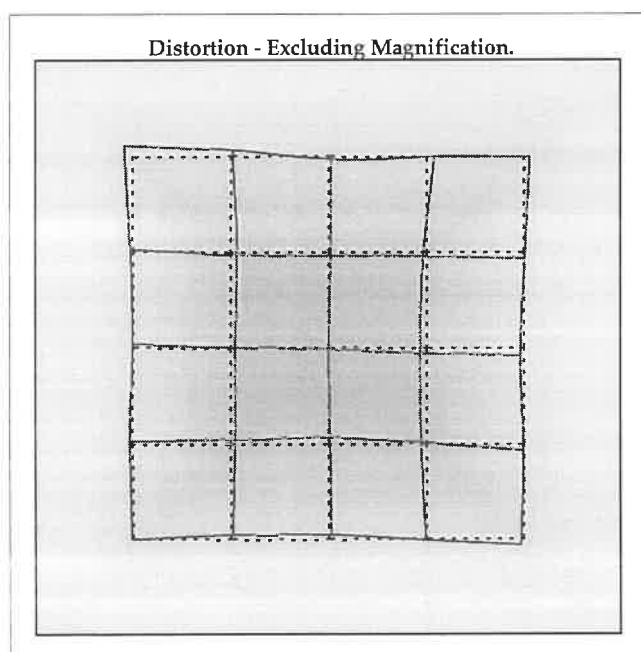
Y Data.

0.075	0.058	0.030	0.040	0.039
0.026	0.010	0.008	0.006	-0.001
0.010	0.002	-0.005	-0.017	-0.024
-0.008	-0.006	0.001	-0.015	-0.039
-0.040	-0.026	-0.026	-0.042	-0.057

Dx Max	0.060	Dy Max	0.075	um.
Dx Min	-0.066	Dy Min	-0.057	um.

Magnification	4.282	ppm
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Required Offset	-4.282	ppm
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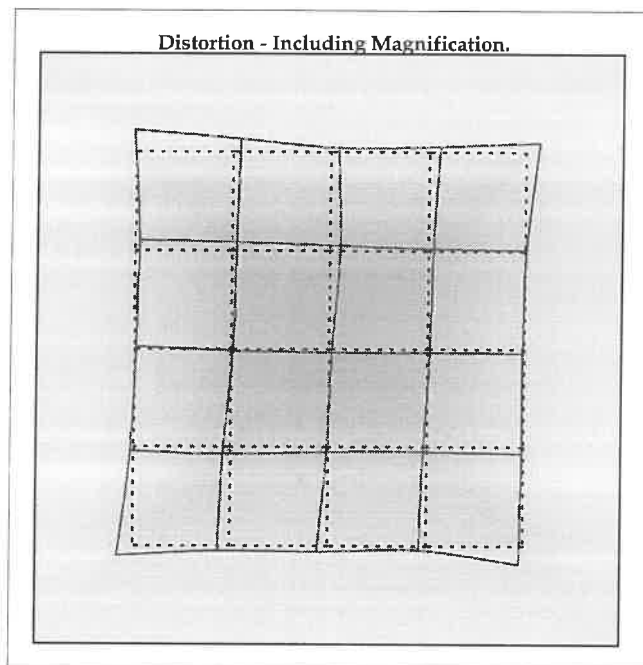
Distortion - Excluding Magnification.*X Data*

-0.024	0.004	0.006	0.024	0.018
-0.008	0.019	0.007	-0.011	0.002
-0.002	0.014	0.000	-0.021	-0.012
-0.009	0.014	0.004	-0.017	-0.002
-0.003	0.005	0.007	-0.004	-0.009

Y Data

0.036	0.019	-0.009	0.001	0.000
0.006	-0.009	-0.011	-0.014	-0.021
0.010	0.002	-0.005	-0.017	-0.024
0.012	0.014	0.021	0.004	-0.019
-0.001	0.013	0.013	-0.002	-0.018

Dx Max	0.024	Dy Max	0.036	um.
Dx Min	-0.024	Dy Min	-0.024	um.

Distortion - Stepper 5 to Stepper 9.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.004	0.022	0.024	0.035	0.042
0.011	0.014	0.031	0.015	0.004
0.004	0.004	0.008	0.008	-0.005
-0.011	-0.024	-0.005	-0.011	-0.006
-0.051	-0.039	-0.032	-0.023	-0.012

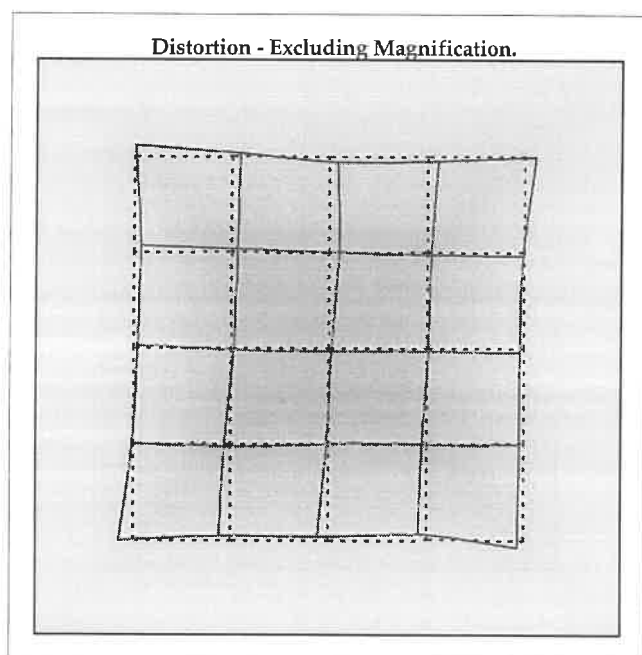
Y Data.

0.067	0.040	0.012	0.016	0.030
0.034	0.025	0.016	0.007	0.003
0.008	-0.005	-0.011	-0.011	-0.013
-0.013	-0.023	-0.015	-0.015	-0.019
-0.030	-0.016	-0.018	-0.013	-0.056

Dx Max	0.042	Dy Max	0.067	um.
Dx Min	-0.051	Dy Min	-0.056	um.

Magnification	2.023	ppm
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Required Offset	-2.023	ppm
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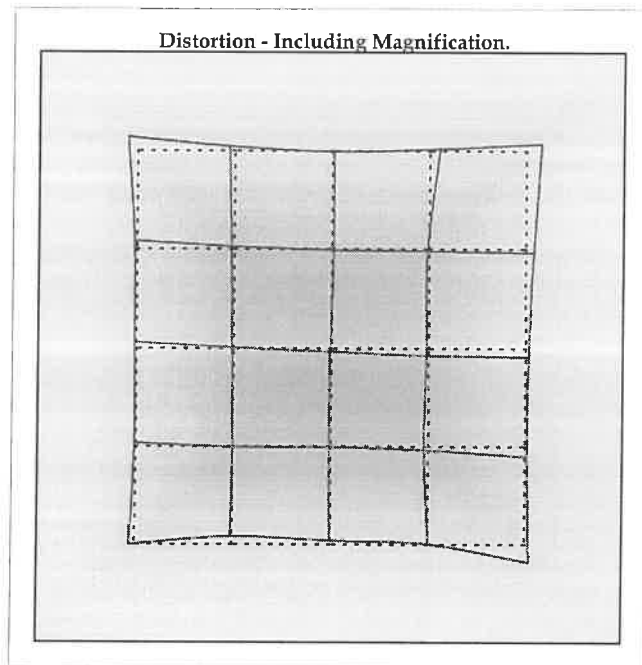
Distortion - Excluding Magnification.*X Data*

0.004	0.026	0.024	0.031	0.035
0.019	0.018	0.031	0.012	-0.004
0.012	0.008	0.008	0.004	-0.013
-0.004	-0.020	-0.005	-0.015	-0.014
-0.043	-0.035	-0.032	-0.027	-0.019

Y Data

0.036	0.010	-0.019	-0.015	-0.001
0.018	0.010	0.000	-0.008	-0.012
0.008	-0.005	-0.011	-0.011	-0.013
0.003	-0.007	0.000	0.000	-0.004
0.001	0.015	0.012	0.017	-0.025

Dx Max	0.035	Dy Max	0.036	um.
Dx Min	-0.043	Dy Min	-0.025	um.

Distortion - Stepper 8 to Stepper 9.Field Size mmStep Size mm**Distortion - Including Magnification.***X Data.*

-0.029	-0.017	0.004	0.032	0.046
-0.008	-0.010	0.005	-0.006	0.024
-0.005	-0.005	-0.004	-0.008	0.008
-0.005	0.000	-0.006	-0.013	0.005
-0.016	-0.005	-0.002	0.002	0.013

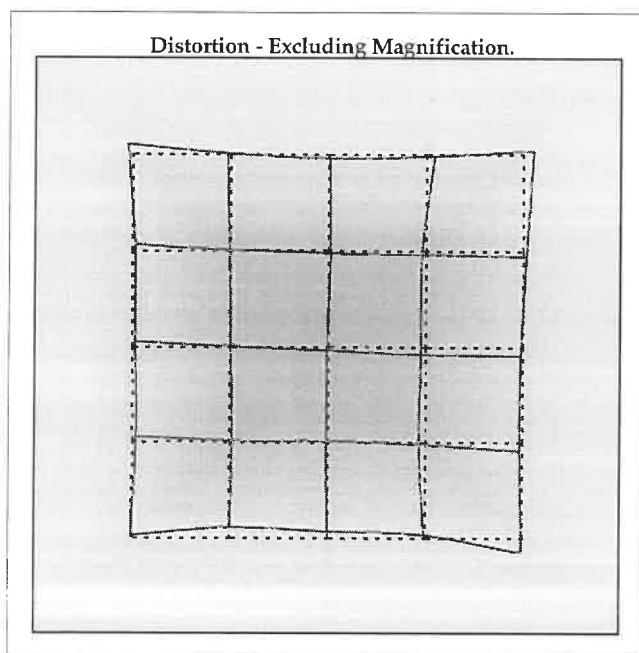
Y Data.

0.042	0.014	-0.002	0.005	0.021
0.026	0.008	-0.003	-0.006	-0.011
0.018	0.002	-0.011	-0.022	-0.026
0.011	-0.001	-0.002	-0.011	-0.031
-0.001	0.025	0.012	0.000	-0.055

Dx Max	0.046	Dy Max	0.042	um.
Dx Min	-0.029	Dy Min	-0.055	um.

Magnification	1.288	ppm
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Required Offset	-1.288	ppm
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Distortion - Excluding Magnification.*X Data*

-0.015	-0.009	0.004	0.024	0.032
0.007	-0.003	0.005	-0.013	0.009
0.009	0.002	-0.004	-0.015	-0.006
0.010	0.007	-0.006	-0.021	-0.009
-0.002	0.002	-0.002	-0.005	-0.002

Y Data

0.032	0.004	-0.012	-0.005	0.012
0.021	0.003	-0.008	-0.011	-0.016
0.018	0.002	-0.011	-0.022	-0.026
0.016	0.004	0.003	-0.006	-0.026
0.009	0.034	0.021	0.010	-0.045

Dx Max	0.032	Dy Max	0.034	um.
Dx Min	-0.021	Dy Min	-0.045	um.

Canon FPA3000i5+**Acceptance.****Date:** 16.May.01**Engineer:** C. Perry**Machine No.:** 104 2754**User ID:** Stepper 9**Item:** *Global Leveling Stability.*

X	Y	mean X	mean Y
50 ppm	50 ppm	-0.65	-0.225
50 ppm	0 ppm	-0.15	0.5
50 ppm	-50 ppm	0.375	0.425
-50 ppm	50 ppm	-0.9	0.3
-50 ppm	0 ppm	-0.4	0.675
-50 ppm	-50 ppm	0.6	0.65
0 ppm	50 ppm	0.05	0.525
0 ppm	-50 ppm	0.55	0.175
50 ppm	50 ppm	-0.275	-0.225
50 ppm	0 ppm	-0.2	-0.475
50 ppm	-50 ppm	1.05	-0.825
-50 ppm	50 ppm	0.25	0.475
-50 ppm	0 ppm	0.75	-0.175
-50 ppm	-50 ppm	0.1	0.075
0 ppm	50 ppm	0.05	-0.225
0 ppm	-50 ppm	1.375	0.7

3SIGMA**X** 1.8**Y** 1.4**Spec : < 7.0ppm.**

Canon 0**Acceptance.***Item: Global Tilt Accuracy**Date:* 17.May.01*Engineer:* C. Perry*Machine No.:* 104 2753*User ID:* Stepper 9

Data #	X(ppm)	Y(ppm)
1	0.575	-0.125
2	0.525	0.2
3	-0.25	0.075
4	0.7	0.075
5	0.075	0.2
6	0.425	-0.2
7	0.5	0.025
8	0.25	0.325
9	1.125	-0.5
10	0.375	-0.5
11	0.05	-0.5
12	0.325	-0.325
13	0.2	0.55
14	0.3	0.25
15	0.625	0.025
16	-0.075	-0.05
17	-0.125	0.6
18	0.475	0.175
19	0.7	0.125
20	1.05	0
21	0.375	0
22	0.375	0.075
23	1.025	0.05
24	0.4	-0.325
25	0.375	-0.1
Max.	1.125	0.6
Min.	-0.25	-0.5
Mean	0.415	0.005
Count	25	25
Range	1.375	1.1
3-S	1.014	0.85

3SIGMA**X: 1.0****Y: 0.9****Spec : < 7.0ppm.**

Canon.	Focus Stability.	Customer	Alcatel Mietec
		Date	23 - 05 - 01
		Machine	FPA 3000i5+
		Serial Number	104 2754
		Reticle	365-01
		Wafer	Super Flat

Data #	Foc(um)	Tilt (ppm)		Measure (um)				
	Z	X	Y	CH-1 (M)	CH-2 (M)	CH-3 (M)	CH-4 (M)	CH-5 (M)
1	0.019	-1.66	0.15	0.04	0.00	0.02	0.03	0.01
2	0.043	-2.41	2.40	0.09	0.04	0.04	0.04	0.02
3	0.017	-1.71	-0.39	0.04	0.00	-0.00	0.03	0.02
4	0.029	-1.54	1.89	0.06	0.03	0.02	0.03	0.01
5	0.020	-1.23	1.00	0.05	0.01	0.00	0.01	0.02
6	0.010	-2.45	0.86	0.04	0.00	0.00	0.02	-0.01
7	0.031	-2.73	2.79	0.07	0.03	0.03	0.03	-0.00
8	0.041	-1.66	-0.85	0.05	0.02	0.04	0.06	0.04
9	0.027	-1.08	1.29	0.05	0.02	0.03	0.02	0.02
10	0.033	-2.02	1.71	0.07	0.03	0.02	0.04	0.01
11	0.026	-2.69	1.97	0.07	0.02	0.02	0.03	0.00
12	0.028	-2.01	2.14	0.06	0.03	0.02	0.03	-0.00
13	0.015	-2.31	0.37	0.05	-0.01	0.01	0.02	0.01
14	0.029	-2.13	-0.03	0.05	0.01	0.01	0.04	0.03
15	0.026	-3.39	1.93	0.07	0.02	0.01	0.04	-0.01
16	0.019	-1.96	0.29	0.04	0.02	-0.00	0.04	0.00
17	-0.007	-2.90	-1.27	0.02	-0.04	-0.03	0.02	-0.00
18	0.024	-3.00	0.76	0.06	0.01	0.01	0.04	0.00
19	0.019	-1.33	1.68	0.05	0.02	0.01	0.01	0.01
20	0.019	-2.17	0.58	0.05	0.01	0.00	0.03	0.01
21	0.032	-2.84	1.47	0.06	0.02	0.03	0.04	0.00
22	0.020	-1.84	0.40	0.04	0.01	0.02	0.03	0.01
23	0.021	-3.00	-0.88	0.04	-0.00	0.01	0.05	0.01
24	0.012	-4.48	-1.91	0.04	-0.03	0.01	0.06	0.00
25	0.023	-1.12	-0.17	0.03	0.01	0.02	0.03	0.02
Min.	-0.007	-4.48	-1.91	0.02	-0.04	-0.03	0.01	-0.01
Max.	0.043	-1.08	2.79	0.09	0.04	0.04	0.06	0.04
Mean	0.023	-2.23	0.73	0.05	0.01	0.01	0.03	0.01
Count	25	25	25	25	25	25	25	25
Range	0.050	3.41	4.69	0.07	0.08	0.07	0.04	0.05
3-S	0.030	2.330	3.582	0.044	0.056	0.043	0.035	0.033

Specification : Focus < 0.10um.

Result :

	Focus	X Tilt	Y Tilt
3 Sigma	0.030 um	2.330 ppm	3.582 ppm

	Focus Drive Repeatability Wafer 1.	Customer	Alcatel Mietec
		Date	23 - 05 - 01
		Machine	FPA 3000i5+
		Serial Number	104 2754
		Reticle	365 - 01
		Wafer	Super Flat

i4hp_user[23] DacqHelp2

```

*****
*   DacqHelp ver 2.00      94/12/24   programed by YANAI      *
*****
FOCUS =  0.016  TiltX =    0.5  TiltY =    2.2
FOCUS = -0.010  TiltX =   -1.2  TiltY =   -0.9
FOCUS = -0.024  TiltX =    2.2  TiltY =    1.1
FOCUS = -0.011  TiltX =    0.3  TiltY =    0.2
FOCUS =  0.005  TiltX =   -0.4  TiltY =   -0.7
FOCUS = -0.005  TiltX =   -0.1  TiltY =    0.2
FOCUS =  0.022  TiltX =    0.3  TiltY =   -0.1
FOCUS = -0.021  TiltX =    0.2  TiltY =   -1.2
FOCUS = -0.017  TiltX =   -2.0  TiltY =    0.3
FOCUS = -0.004  TiltX =   -0.7  TiltY =    0.2
FOCUS = -0.009  TiltX =    0.1  TiltY =    0.6
FOCUS = -0.001  TiltX =    1.1  TiltY =    0.4
FOCUS =  0.002  TiltX =    1.0  TiltY =    2.6
FOCUS = -0.004  TiltX =    0.1  TiltY =    1.2
FOCUS = -0.011  TiltX =    1.0  TiltY =    1.0
FOCUS =  0.001  TiltX =    1.4  TiltY =    0.7
FOCUS =  0.017  TiltX =    0.5  TiltY =    1.0
FOCUS =  0.023  TiltX =   -0.3  TiltY =   -0.4
FOCUS =  0.025  TiltX =   -1.3  TiltY =   -0.7
FOCUS =  0.015  TiltX =    1.8  TiltY =   -0.5
FOCUS =  0.003  TiltX =   -0.3  TiltY =   -1.4
FOCUS = -0.017  TiltX =   -0.6  TiltY =   -0.1
FOCUS = -0.026  TiltX =   -0.5  TiltY =   -0.4
FOCUS =  0.011  TiltX =   -1.2  TiltY =   -0.5
FOCUS =  0.021  TiltX =    1.7  TiltY =   -0.3
FOCUS = -0.016  TiltX =    0.9  TiltY =   -0.6
FOCUS = -0.029  TiltX =   -0.4  TiltY =   -0.2
FOCUS = -0.023  TiltX =   -0.6  TiltY =   -0.1
FOCUS = -0.031  TiltX =    0.3  TiltY =   -0.9
FOCUS = -0.045  TiltX =    0.5  TiltY =   -1.0
FOCUS =  0.004  TiltX =   -2.1  TiltY =   -0.2
FOCUS =  0.016  TiltX =   -0.1  TiltY =    0.0
FOCUS = -0.009  TiltX =   -1.2  TiltY =    0.0
FOCUS = -0.007  TiltX =    0.2  TiltY =   -0.9
FOCUS = -0.036  TiltX =    0.6  TiltY =   -0.3
FOCUS =  0.000  TiltX =   -0.6  TiltY =   -2.0
FOCUS = -0.009  TiltX =    0.2  TiltY =   -1.1
Sample count = 37
AVERAGE: Focus = -0.005      TiltX =    0.0      TiltY =   -0.1
3-SIGMA: Focus =  0.053      TiltX =    3.0      TiltY =    2.8
i4hp_user[24]

```

Specification : Focus < 0.10um and Tilt < 7.0ppm for 3 Sigma.

Result :

	Focus	X Tilt	Y Tilt
3 Sigma	0.053 um	3.0 ppm	2.8 ppm

Canon.	Focus Drive Repeatability Wafer 2.	Customer	Alcatel Mietec
		Date	23 - 05 - 01
		Machine	FPA 3000i5+
		Serial Number	104 2754
		Reticle	365 - 01
		Wafer	Super Flat

i4hp_user[23] DacqHelp2

```

*****
*   DacqHelp ver 2.00      94/12/24   programed by YANAI   *
*****
FOCUS =  0.000  TiltX =  -0.4  TiltY =  -1.0
FOCUS = -0.020  TiltX =   1.4  TiltY =  -0.6
FOCUS = -0.003  TiltX =   1.2  TiltY =  -0.8
FOCUS = -0.014  TiltX =   1.3  TiltY =  -1.6
FOCUS =  0.015  TiltX =  -1.2  TiltY =  -1.2
FOCUS =  0.014  TiltX =   0.5  TiltY =  -0.9
FOCUS =  0.001  TiltX =  -0.4  TiltY =  -0.1
FOCUS =  0.002  TiltX =  -0.3  TiltY =  -1.7
FOCUS =  0.002  TiltX =   0.9  TiltY =   0.1
FOCUS = -0.011  TiltX =   0.2  TiltY =  -0.3
FOCUS = -0.021  TiltX =   1.5  TiltY =   1.0
FOCUS = -0.021  TiltX =   0.3  TiltY =   0.9
FOCUS = -0.022  TiltX =  -0.9  TiltY =   0.4
FOCUS = -0.017  TiltX =   2.5  TiltY =  -1.2
FOCUS = -0.036  TiltX =   1.0  TiltY =  -1.5
FOCUS = -0.009  TiltX =  -0.1  TiltY =  -1.4
FOCUS =  0.026  TiltX =   0.5  TiltY =   1.6
FOCUS =  0.000  TiltX =  -1.8  TiltY =  -1.1
FOCUS =  0.001  TiltX =  -0.8  TiltY =  -0.7
FOCUS =  0.008  TiltX =  -0.4  TiltY =  -3.2
FOCUS = -0.006  TiltX =  -0.4  TiltY =  -0.5
FOCUS = -0.008  TiltX =  -0.1  TiltY =  -1.0
FOCUS = -0.022  TiltX =  -0.6  TiltY =  -1.3
FOCUS = -0.012  TiltX =   1.9  TiltY =   1.8
FOCUS =  0.025  TiltX =   0.7  TiltY =   0.3
FOCUS =  0.004  TiltX =   1.4  TiltY =   1.5
FOCUS = -0.018  TiltX =   1.2  TiltY =  -1.1
FOCUS = -0.004  TiltX =   0.1  TiltY =   0.0
FOCUS = -0.030  TiltX =   1.1  TiltY =   1.1
FOCUS = -0.015  TiltX =  -1.4  TiltY =  -1.0
FOCUS =  0.005  TiltX =  -0.5  TiltY =  -0.8
FOCUS =  0.010  TiltX =  -0.1  TiltY =   1.0
FOCUS = -0.002  TiltX =  -0.3  TiltY =   1.9
FOCUS = -0.004  TiltX =   0.6  TiltY =   0.1
FOCUS = -0.006  TiltX =  -0.7  TiltY =  -2.0
FOCUS =  0.020  TiltX =  -0.8  TiltY =  -0.7
FOCUS =  0.008  TiltX =  -1.1  TiltY =  -1.8
Sample count =  37
AVERAGE: Focus = -0.004      TiltX =   0.2      TiltY =  -0.4
3-SIGMA: Focus =  0.044      TiltX =   3.0      TiltY =   3.5
i4hp_user[23]

```

Specification : Focus < 0.10um and Tilt < 7.0ppm for 3 Sigma.

Result :

	Focus	X Tilt	Y Tilt
3 Sigma	0.044 um	3.0 ppm	3.5 ppm

	Focus Drive Repeatability Wafer 3.	Customer	Alcatel Mietec
		Date	23 - 05 - 01
		Machine	FPA 3000i5+
		Serial Number	104 2754
		Reticle	365 - 01
		Wafer	Super Flat

i4hp_user[23] DacqHelp2

```

*****
*   DacqHelp ver 2.00      94/12/24   programed by YANAI   *
*****
FOCUS = -0.001  TiltX =    0.5  TiltY =    3.2
FOCUS = -0.020  TiltX =    1.3  TiltY =    0.1
FOCUS = -0.020  TiltX =    0.3  TiltY =   -0.2
FOCUS = -0.042  TiltX =   -1.4  TiltY =   -1.5
FOCUS =  0.030  TiltX =    1.5  TiltY =    0.1
FOCUS =  0.000  TiltX =   -2.0  TiltY =   -1.8
FOCUS =  0.012  TiltX =    0.5  TiltY =   -0.1
FOCUS = -0.029  TiltX =   -0.6  TiltY =    0.8
FOCUS =  0.016  TiltX =   -2.5  TiltY =   -0.5
FOCUS = -0.015  TiltX =   -0.2  TiltY =    0.3
FOCUS =  0.012  TiltX =   -0.1  TiltY =    2.4
FOCUS = -0.039  TiltX =    0.9  TiltY =    0.4
FOCUS =  0.001  TiltX =   -1.9  TiltY =    2.0
FOCUS = -0.026  TiltX =   -0.7  TiltY =    0.0
FOCUS =  0.005  TiltX =   -0.6  TiltY =    3.1
FOCUS = -0.031  TiltX =    0.3  TiltY =   -0.3
FOCUS =  0.018  TiltX =    1.1  TiltY =    0.8
FOCUS =  0.011  TiltX =   -0.6  TiltY =    0.6
FOCUS = -0.003  TiltX =   -1.2  TiltY =   -0.2
FOCUS =  0.036  TiltX =    0.2  TiltY =    0.3
FOCUS = -0.007  TiltX =   -0.1  TiltY =   -1.6
FOCUS = -0.012  TiltX =   -1.6  TiltY =   -2.4
FOCUS =  0.001  TiltX =    0.3  TiltY =    0.0
FOCUS =  0.011  TiltX =    0.7  TiltY =    0.2
FOCUS = -0.009  TiltX =   -0.2  TiltY =    0.3
FOCUS = -0.022  TiltX =   -0.5  TiltY =   -0.9
FOCUS =  0.009  TiltX =    0.1  TiltY =    0.3
FOCUS = -0.007  TiltX =    0.4  TiltY =   -1.6
FOCUS =  0.002  TiltX =    0.1  TiltY =   -1.2
FOCUS =  0.010  TiltX =    0.7  TiltY =   -0.1
FOCUS = -0.009  TiltX =   -0.2  TiltY =   -0.6
FOCUS =  0.000  TiltX =   -0.3  TiltY =    0.4
FOCUS = -0.024  TiltX =    0.3  TiltY =   -0.5
FOCUS = -0.008  TiltX =    0.5  TiltY =    1.5
FOCUS = -0.041  TiltX =    0.1  TiltY =   -1.0
FOCUS = -0.028  TiltX =    0.0  TiltY =   -0.8
FOCUS =  0.000  TiltX =   -0.1  TiltY =   -1.5
Sample count =  37
AVERAGE: Focus = -0.006      TiltX =   -0.1      TiltY =    0.0
3-SIGMA: Focus =  0.057      TiltX =    2.7      TiltY =    3.8
i4hp_user[22]

```

Specification : Focus < 0.10um and Tilt < 7.0ppm for 3 Sigma.

Result :

	Focus	X Tilt	Y Tilt
3 Sigma	0.057 um	2.7 ppm	3.8 ppm

Canon,**Reticle Rotation Accuracy - 5 Wafer Test.**

IVS Data File : Device-CANON Level-PREACCEP Job Plan-RETROTAT Lot #-ST9RETROTX5

Wafer 1.

	1	2	3	4	5	Average
1	0.003	0.007	0.008	0.007	0.027	0.011
2	0.006	0.010	0.003	0.008	0.012	0.008
3	0.002	0.007	0.006	0.003	0.010	0.006
4	0.004	0.007	0.014	0.013	0.009	0.009
5	0.008	0.002	0.007	0.010	0.010	0.007
	Y					0.008

Wafer Summary

Y Max	0.027
Y Min	0.002
Accuracy	0.004
Repeatability	0.013

Wafer 2.

	1	2	3	4	5	Average
1	0.002	0.002	-0.001	-0.002	0.020	0.004
2	0.001	-0.004	0.000	0.007	0.002	0.001
3	0.007	0.000	0.004	0.007	0.009	0.005
4	0.009	-0.003	0.003	0.004	0.002	0.003
5	-0.001	0.008	0.004	0.002	0.002	0.003
	Y					0.003

Wafer Summary

Y Max	0.020
Y Min	-0.004
Accuracy	0.002
Repeatability	0.012

Wafer 3.

	1	2	3	4	5	Average
1	0.002	0.008	-0.001	0.002	0.007	0.004
2	0.003	0.003	-0.002	0.003	0.006	0.002
3	-0.002	0.006	0.002	0.012	-0.003	0.003
4	0.002	-0.003	-0.008	0.001	0.005	-0.001
5	0.001	0.002	0.002	0.002	0.006	0.003
	Y					0.002

Wafer Summary

Y Max	0.012
Y Min	-0.008
Accuracy	0.001
Repeatability	0.010

Wafer 4.

	1	2	3	4	5	Average
1	0.006	0.008	0.009	0.001	0.005	0.006
2	0.017	0.002	0.007	0.007	0.006	0.008
3	0.012	0.005	0.008	0.009	0.006	0.008
4	0.003	0.002	0.008	0.000	0.003	0.003
5	0.003	0.003	0.011	0.004	0.006	0.005
	Y					0.006

Wafer Summary

Y Max	0.017
Y Min	0.000
Accuracy	0.003
Repeatability	0.008

Wafer 5.

	1	2	3	4	5	Average
1	0.009	0.009	0.007	0.008	0.007	0.008
2	0.010	0.005	0.006	0.011	0.006	0.007
3	0.007	0.003	0.008	0.013	0.007	0.007
4	0.015	0.009	0.003	0.013	0.010	0.010
5	0.003	0.010	0.015	0.005	0.013	0.009
	Y					0.008

Wafer Summary

Y Max	0.015
Y Min	0.003
Accuracy	0.004
Repeatability	0.006

Auto Alignment Accuracy - Single Machine Mode 1 - Day 1.

Device-CANON Level-AGA Job Plan-RESIST Lot #MODE1DAY1

Wafer Four.

XL	XR	YL	YR	(XL+YR)/2
0.004	0.030	-0.020	-0.020	0.017
0.004	0.024	-0.016	-0.009	0.014
0.006	0.024	-0.014	-0.007	0.015
0.006	0.020	-0.012	-0.011	0.013
0.000	0.007	-0.019	-0.017	0.004
0.002	0.017	-0.020	-0.021	0.010
0.001	0.017	-0.012	-0.020	0.005
-0.004	0.013	-0.021	-0.018	0.005
0.003	0.019	-0.014	-0.006	0.011
0.002	0.018	-0.009	-0.002	0.010
0.002	0.018	-0.003	-0.004	0.010
-0.001	0.005	-0.001	0.001	0.002
-0.004	0.017	-0.011	-0.010	0.006
-0.006	0.011	-0.012	-0.007	0.003
-0.008	0.010	-0.012	-0.003	0.001
-0.011	0.002	-0.009	-0.015	-0.005
-0.008	0.006	-0.003	-0.001	-0.001
-0.009	0.011	-0.007	0.003	0.001
-0.003	0.007	-0.007	0.003	0.002
-0.001	0.017	0.000	0.001	0.008
-0.002	0.012	-0.008	-0.011	0.007
-0.002	0.025	-0.002	-0.003	0.011
0.000	0.009	0.004	0.005	0.005
0.000	0.016	0.001	-0.003	0.008
-0.005	0.009	0.000	-0.004	0.002
-0.018	0.000	0.003	0.002	-0.006
-0.013	0.007	-0.002	0.002	-0.009
-0.017	-0.002	-0.002	0.002	-0.008
-0.019	0.000	0.002	0.008	-0.010
-0.014	-0.006	-0.001	-0.001	-0.010
-0.014	0.000	-0.002	0.002	-0.007

Mean	Y _L	Y _R	(Y _L +Y _R)/2
3 Sigma	-0.007	-0.005	0.003
	0.023	0.025	0.023

Canon.

Auto Alignment Accuracy - Single Machine Mode 1 - Day 2.

IVS Data File : Device-CANON Level-AGA Job Plan-RESIST Lot #4MODE1DAY2

Wafer One.

Meas No	XL	XR	YL	YR	(XL+XR)/2
1	0.001	0.013	-0.014	-0.005	0.007
2	0.007	0.008	-0.015	-0.017	0.008
3	0.002	0.014	-0.015	-0.005	0.008
4	-0.005	0.005	-0.015	-0.003	0.000
5	-0.003	0.008	-0.001	0.006	0.002
6	-0.004	0.005	-0.007	-0.009	0.000
7	-0.001	0.012	-0.012	-0.005	0.006
8	0.003	0.018	-0.015	-0.013	0.010
9	-0.001	0.013	-0.009	-0.009	0.006
10	-0.002	0.011	-0.008	-0.002	0.005
11	-0.005	-0.001	-0.008	0.003	-0.003
12	0.000	0.009	-0.012	-0.009	0.004
13	0.003	0.006	-0.003	-0.006	0.004
14	0.001	0.009	-0.006	-0.003	0.005
15	-0.004	0.007	-0.005	-0.006	0.002
16	0.000	0.009	0.003	-0.002	0.004
17	-0.001	0.013	-0.002	-0.010	0.006
18	-0.003	0.013	0.000	0.003	0.005
19	-0.003	0.007	-0.002	-0.003	0.002
20	-0.002	0.008	0.000	0.006	0.003
21	-0.007	0.016	-0.008	-0.003	0.004
22	-0.007	0.002	-0.004	-0.008	-0.003
23	-0.009	0.005	-0.008	-0.001	-0.002
24	0.002	0.017	-0.001	0.000	0.009
25	-0.005	0.004	-0.006	0.002	-0.001
26	-0.006	0.006	0.012	0.008	0.000
27	-0.015	0.000	0.001	0.002	-0.007
28	-0.004	0.010	-0.001	0.008	0.003
29	-0.012	0.005	0.001	0.002	-0.004
30	-0.014	0.001	0.001	-0.002	-0.006
31	-0.009	-0.004	-0.009	-0.005	-0.006
32	-0.011	-0.005	-0.004	0.004	-0.008

Mean	YL	YR	(XL+XR)/2
3 Sigma	-0.005	-0.003	0.002
Mean + 3 Sigma	0.019	0.018	0.015
	0.024	0.021	0.017

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2
-0.002	0.008	-0.021	-0.011	0.003
-0.013	0.011	-0.027	-0.010	-0.001
-0.006	0.006	-0.014	-0.011	0.000
-0.002	0.008	-0.017	-0.007	0.003
-0.009	0.008	-0.010	-0.009	-0.001
-0.011	0.011	-0.007	-0.005	0.000
-0.004	0.008	0.001	-0.008	0.002
-0.010	0.004	-0.013	-0.005	-0.003
-0.003	0.014	-0.012	-0.006	0.006
0.001	0.010	-0.016	-0.009	0.006
-0.001	0.003	-0.012	-0.003	0.001
-0.008	0.005	-0.010	0.003	-0.002
-0.006	0.010	-0.011	0.000	0.002
-0.009	0.003	-0.010	-0.003	-0.003
-0.005	0.011	-0.010	-0.002	0.003
-0.016	0.003	-0.014	-0.004	-0.006
-0.003	0.010	-0.002	-0.002	0.004
-0.001	0.010	-0.005	0.001	0.004
0.002	0.016	-0.003	0.019	0.009
-0.001	0.016	0.003	0.004	0.007
-0.009	0.006	-0.005	0.006	-0.002
0.004	0.013	-0.007	0.003	0.008
-0.001	0.015	-0.005	0.000	0.007
0.002	0.012	0.002	0.012	0.007
-0.001	0.007	-0.002	0.000	0.003
-0.009	-0.002	0.000	0.012	0.003
-0.009	-0.002	0.005	0.008	-0.006
-0.008	0.006	0.000	0.011	-0.001
-0.003	0.002	0.003	0.018	-0.001
-0.008	0.009	0.000	0.005	0.001
-0.013	0.010	0.002	0.006	-0.001
-0.002	0.009	0.003	0.010	0.004

Mean	YL	YR	(XL+XR)/2
3 Sigma	-0.007	0.001	0.002
Mean + 3 Sigma	0.024	0.025	0.012
	0.031	0.026	0.013

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2
-0.001	0.010	0.002	-0.012	0.005
0.006	0.017	-0.011	-0.009	0.012
0.002	0.020	-0.014	-0.006	0.011
-0.001	0.013	-0.009	0.001	0.006
0.003	0.017	-0.003	-0.009	0.010
0.005	0.019	-0.006	-0.006	0.012
0.005	0.011	-0.013	-0.010	0.008
-0.002	0.010	-0.011	-0.008	0.004
0.005	0.012	-0.009	-0.003	0.008
-0.002	0.012	-0.005	-0.004	0.005
0.001	0.010	-0.005	-0.004	0.006
0.002	0.002	-0.002	-0.001	0.002
-0.001	0.003	-0.009	0.002	0.001
-0.008	0.010	-0.005	-0.003	0.001
0.001	0.012	0.002	0.002	0.006
-0.001	0.013	-0.004	-0.003	0.006
-0.006	0.008	0.000	0.002	0.002
-0.004	0.010	-0.004	0.005	0.003
0.000	0.001	-0.007	0.000	0.000
-0.003	0.003	-0.001	-0.006	0.000
0.002	0.009	-0.008	-0.006	0.006
-0.004	0.007	-0.004	-0.002	0.001
-0.011	0.008	-0.003	0.000	-0.002
-0.008	0.005	0.005	0.006	-0.002
-0.007	0.009	-0.003	0.002	0.001
-0.008	0.010	-0.003	0.005	0.001
-0.011	-0.004	0.010	0.002	-0.007
-0.010	0.008	-0.001	0.001	-0.001
-0.007	0.001	0.014	0.017	-0.003
-0.017	-0.003	0.008	0.010	-0.010
-0.012	-0.003	0.006	0.008	-0.007
-0.014	-0.003	-0.001	0.005	-0.009

Mean	YL	YR	(XL+XR)/2
3 Sigma	-0.003	-0.001	0.002
Mean + 3 Sigma	0.019	0.019	0.017
	0.022	0.020	0.019

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2
0.005	0.032	-0.022	-0.010	0.019
0.006	0.030	-0.014	-0.005	0.018
0.003	0.029	-0.012	-0.007	0.016
0.003	0.026	-0.011	-0.008	0.014
-0.005	0.008	-0.008	-0.018	0.002
-0.001	0.023	-0.011	-0.013	0.011
-0.005	0.022	-0.010	-0.009	0.007
-0.002	0.026	-0.017	-0.008	0.014
-0.001	0.018	-0.024	-0.014	0.008
0.008	0.023	-0.014	-0.008	0.015
0.002	0.028	-0.010	-0.006	0.015
-0.006	0.029	-0.006	0.001	0.012
-0.003	0.020	-0.009	-0.008	0.008
-0.009	0.013	-0.005	-0.003	0.002
-0.019	0.000	-0.008	-0.005	-0.010
-0.025	-0.001	0.005	0.011	-0.013
-0.014	0.002	0.006	0.000	-0.006
-0.007	0.009	0.004	0.001	0.001
-0.006	0.015	0.015	0.007	0.004
-0.001	0.009	0.002	-0.003	0.004
0.008	0.021	-0.004	0.003	0.015
0.006	0.028	0.012	0.017	0.017
-0.011	0.005	0.011	0.016	-0.003
-0.009	0.012	0.000	0.006	0.001
-0.015	0.000	-0.001	0.009	-0.008
-0.020	-0.001	0.002	0.012	-0.011
-0.019	-0.007	0.006	0.012	-0.013
-0.026	-0.006	0.022	0.016	-0.017
-0.024	0.004	0.012	0.011	-0.010
-0.021	0.010	0.013	0.016	-0.006
-0.009	0.005	0.014	0.014	-0.001

Mean	YL	YR	(XL+XR)/2
3 Sigma	-0.002	0.001	0.004
Mean + 3 Sigma	0.035	0.031	0.032
	0.037	0.032	0.036

Canon.

Auto Alignment Accuracy - Single Machine Mode 1 - Day 3.

IVS Data File : Device-CANON Level-AGA Job Plan-RESIST Lot #MODE1DAY3

Wafer One.

Wafer Two.

Wafer Three.

Wafer Four.

Wafer Five.

Mass No	XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
1	0.001	0.013	-0.021	-0.019	0.007	0.007
2	0.010	0.016	-0.027	-0.018	0.013	0.006
3	0.011	0.016	-0.021	-0.017	0.013	0.013
4	0.007	0.011	-0.020	-0.019	0.009	0.009
5	0.010	0.014	-0.023	-0.016	0.012	0.012
6	0.001	0.012	-0.025	-0.018	0.006	0.006
7	0.009	0.012	-0.017	-0.020	0.011	0.007
8	0.004	0.010	-0.018	-0.014	0.008	0.007
9	0.002	0.014	-0.018	-0.014	0.008	0.004
10	0.002	0.005	-0.006	-0.005	0.004	0.004
11	0.000	0.008	-0.010	-0.004	0.004	0.004
12	0.001	0.008	-0.008	-0.013	0.005	0.005
13	0.004	0.008	-0.016	-0.011	0.006	0.006
14	0.007	0.009	-0.015	-0.011	0.008	0.008
15	0.002	0.003	-0.016	-0.021	0.002	0.002
16	0.005	0.014	-0.018	-0.017	0.009	0.009
17	0.006	0.013	-0.007	-0.008	0.010	0.010
18	-0.003	-0.004	-0.015	-0.012	-0.003	-0.003
19	-0.002	0.003	-0.004	-0.011	0.000	0.000
20	-0.001	0.000	-0.012	0.000	-0.001	-0.001
21	0.005	0.002	-0.003	-0.009	0.003	0.003
22	0.000	0.007	-0.002	-0.006	0.003	0.003
23	-0.006	0.001	0.002	0.008	-0.002	0.002
24	0.002	0.001	-0.004	-0.001	0.001	0.001
25	-0.005	-0.004	-0.004	-0.001	-0.005	-0.005
26	-0.002	0.008	0.001	-0.001	0.003	0.003
27	-0.003	-0.002	-0.007	-0.011	-0.002	-0.002
28	-0.012	0.013	-0.012	-0.019	0.001	0.001
29	-0.001	0.006	0.003	0.005	0.003	0.003
30	-0.012	0.005	-0.006	0.008	-0.003	-0.003
31	-0.007	-0.001	-0.005	0.004	-0.004	-0.004
32	-0.007	-0.006	-0.006	0.000	-0.007	-0.007

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
-0.011	-0.011	-0.009	-0.009	0.004	0.004
0.025	0.025	0.027	0.016	0.021	0.021
0.036	0.036	0.036	0.020	0.020	0.020

Mean
3 Sigma
Mean + 3 Sigma

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.009	0.013	-0.021	-0.020	0.011	0.011
0.008	0.004	-0.022	-0.016	0.006	0.006
0.008	0.004	-0.021	-0.019	0.006	0.006
0.009	0.007	-0.025	-0.016	0.008	0.008
0.012	0.018	-0.021	-0.020	0.015	0.015
0.008	0.011	-0.024	-0.022	0.009	0.009
0.017	0.011	-0.014	-0.017	0.014	0.014
0.012	0.010	-0.014	-0.016	0.011	0.011
0.008	0.023	-0.011	-0.013	0.016	0.016
-0.003	0.001	-0.011	-0.013	-0.001	-0.001
0.006	-0.002	-0.005	-0.002	0.002	0.002
0.009	0.008	-0.005	-0.004	0.008	0.008
0.010	0.014	-0.006	0.008	0.012	0.012
0.009	0.004	-0.008	-0.006	0.006	0.006
0.001	0.001	-0.006	-0.008	0.001	0.001
0.000	0.012	-0.016	-0.019	0.006	0.006
0.007	0.001	-0.014	-0.009	0.004	0.004
0.003	0.007	-0.014	-0.002	0.005	0.005
0.010	0.006	-0.012	-0.004	0.005	0.005
0.010	0.006	-0.004	0.004	0.008	0.008
0.002	0.007	0.000	0.003	0.005	0.005
0.005	0.001	-0.005	0.002	0.003	0.003
-0.006	0.003	0.004	0.012	-0.002	-0.002
0.004	-0.001	0.008	0.010	0.002	0.002
-0.001	-0.007	0.005	0.005	-0.004	-0.004
-0.006	-0.005	0.003	-0.001	-0.005	-0.005
-0.002	0.007	-0.007	-0.008	0.002	0.002
0.002	0.007	-0.009	-0.018	0.004	0.004
-0.003	0.006	0.006	-0.005	0.000	0.000
0.001	0.003	0.001	0.008	0.002	0.002
-0.005	-0.004	-0.002	0.003	-0.004	-0.004
-0.004	0.001	-0.006	0.009	-0.001	-0.001

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.013	0.014	-0.010	-0.008	0.013	0.013
0.013	0.018	-0.010	-0.001	0.017	0.017
0.015	0.015	-0.013	-0.009	0.015	0.015
0.017	0.025	-0.010	-0.003	0.021	0.021
0.014	0.020	-0.008	-0.010	0.017	0.017
0.020	0.014	-0.007	-0.008	0.017	0.017
0.017	0.015	-0.014	-0.012	0.016	0.016
0.014	0.015	-0.012	-0.009	0.015	0.015
0.010	0.009	-0.014	-0.004	0.010	0.010
0.006	0.010	-0.009	-0.004	0.008	0.008
0.007	0.018	-0.005	-0.001	0.013	0.013
0.003	0.010	-0.011	-0.003	0.007	0.007
0.008	-0.001	-0.005	-0.003	0.004	0.004
0.014	0.004	-0.009	-0.001	0.010	0.010
0.013	0.019	-0.002	-0.003	0.016	0.016
0.005	0.013	-0.006	-0.005	0.009	0.009
0.011	0.015	-0.013	-0.003	0.013	0.013
0.009	0.003	-0.014	-0.008	0.006	0.006
0.005	0.010	-0.015	-0.012	0.005	0.005
0.001	0.011	-0.007	-0.003	0.008	0.008
-0.003	0.001	-0.013	-0.007	-0.001	-0.001
0.006	0.005	-0.004	-0.004	0.006	0.006
0.005	-0.002	-0.003	0.001	0.002	0.002
0.005	0.018	-0.002	0.003	0.011	0.011
0.003	0.000	-0.008	-0.004	0.002	0.002
0.006	0.010	-0.009	-0.012	0.008	0.008
0.001	0.008	-0.002	-0.004	0.004	0.004
-0.002	0.005	-0.006	0.000	0.001	0.001
0.001	-0.005	-0.011	0.005	-0.002	-0.002
-0.001	0.004	-0.010	-0.009	0.002	0.002

Mean
3 Sigma
Mean + 3 Sigma

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.009	0.018	-0.009	-0.009	0.013	0.013
0.008	0.014	-0.012	-0.014	0.011	0.011
0.004	0.004	-0.014	-0.013	0.004	0.004
-0.002	0.010	-0.019	-0.010	0.004	0.004
0.006	0.011	-0.016	-0.015	0.008	0.008
0.000	0.006	-0.020	-0.018	0.003	0.003
0.005	0.016	-0.017	-0.013	0.010	0.010
0.011	0.015	-0.009	-0.008	0.013	0.013
0.012	0.019	-0.005	-0.007	0.015	0.015
0.004	0.013	-0.008	-0.005	0.009	0.009
0.005	0.010	-0.004	-0.003	0.008	0.008
0.008	0.002	-0.001	0.003	0.005	0.005
0.000	0.003	-0.008	-0.003	0.002	0.002
-0.002	0.007	-0.015	-0.013	0.003	0.003
0.006	0.001	-0.022	-0.023	0.001	0.001
0.001	0.004	-0.008	-0.011	0.002	0.002
0.002	0.005	-0.006	0.001	0.003	0.003
0.013	0.013	-0.001	0.006	0.013	0.013
0.006	0.005	0.010	-0.001	0.006	0.006
0.008	0.008	-0.002	-0.001	0.008	0.008
-0.010	-0.002	0.001	0.002	-0.006	-0.006
0.001	0.006	0.002	0.013	0.003	0.003
0.000	0.004	0.009	0.004	0.002	0.002
-0.007	0.007	0.002	0.006	0.001	0.001
0.000	0.003	-0.009	0.006	0.001	0.001
-0.006	0.008	-0.009	-0.008	0.001	0.001
0.001	-0.003	0.003	0.001	-0.001	-0.001
-0.002	-0.004	0.000	0.001	-0.003	-0.003
-0.005	-0.004	0.003	0.007	-0.004	-0.004
-0.009	0.003	-0.005	-0.003	-0.003	-0.003

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.013	0.014	-0.010	-0.008	0.013	0.013
0.013	0.018	-0.010	-0.001	0.017	0.017
0.015	0.015	-0.013	-0.009	0.015	0.015
0.017	0.025	-0.010	-0.003	0.021	0.021
0.014	0.020	-0.008	-0.010	0.017	0.017
0.020	0.014	-0.007	-0.008	0.017	0.017
0.017	0.015	-0.014	-0.012	0.016	0.016
0.014	0.015	-0.012	-0.009	0.015	0.015
0.010	0.009	-0.014	-0.004	0.010	0.010
0.006	0.010	-0.009	-0.004	0.008	0.008
0.007	0.018	-0.005	-0.001	0.013	0.013
0.003	0.010	-0.011	-0.003	0.007	0.007
0.008	-0.001	-0.005	-0.003	0.004	0.004
0.014	0.004	-0.009	-0.001	0.010	0.010
0.013	0.019	-0.002	-0.003	0.016	0.016
0.005	0.013	-0.006	-0.005	0.009	0.009
0.011	0.015	-0.013	-0.003	0.013	0.013
0.009	0.003	-0.014	-0.008	0.006	0.006
0.005	0.010	-0.015	-0.012	0.005	0.005
0.001	0.011	-0.007	-0.003	0.008	0.008
-0.003	0.001	-0.013	-0.007	-0.001	-0.001
0.006	0.005	-0.004	-0.004	0.006	0.006
0.005	-0.002	-0.003	0.001	0.002	0.002
0.005	0.018	-0.002	0.003	0.011	0.011
0.003	0.000	-0.008	-0.004	0.002	0.002
0.006	0.010	-0.009	-0.012	0.008	0.008
0.001	0.008	-0.002	-0.004	0.004	0.004
-0.002	0.005	-0.006	0.000	0.001	0.001
0.001	-0.005	-0.011	0.005	-0.002	-0.002
-0.001	0.004	-0.010	-0.009	0.002	0.002

Mean
3 Sigma
Mean + 3 Sigma

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.009	0.018	-0.009	-0.009	0.013	0.013
0.008	0.014	-0.012	-0.014	0.011	0.011
0.004	0.004	-0.014	-0.013	0.004	0.004
-0.002	0.010	-0.019	-0.010	0.004	0.004
0.006	0.011	-0.016	-0.015	0.008	0.008
0.000	0.006	-0.020	-0.018	0.003	0.003
0.005	0.016	-0.017	-0.013	0.010	0.010
0.011	0.015	-0.009	-0.008	0.013	0.013
0.012	0.019	-0.005	-0.007	0.015	0.015
0.004	0.013	-0.008	-0.005	0.009	0.009
0.005	0.010	-0.004	-0.003	0.008	0.008
0.008	0.002	-0.001	0.003	0.005	0.005
0.000	0.003	-0.008	-0.003	0.002	0.002
-0.002	0.007	-0.015	-0.013	0.003	0.003
0.000	0.001	-0.022	-0.023	0.001	0.001
0.001	0.004	-0.003	-0.011	0.002	0.002
0.006	0.007	-0.012	-0.004	0.007	0.007
0.002	0.005	-0.006	0.001	0.003	0.003
0.013	0.013	-0.001	0.006	0.013	0.013
0.006	0.005	0.010	-0.001	0.006	0.006
0.008	0.008	-0.002	-0.001	0.008	0.008
-0.010	-0.002	0.001	0.002	-0.006	-0.006
0.001	0.006	0.002	0.013	0.003	0.003
0.000	0.004	0.009	0.004	0.002	0.002
-0.007	0.007	0.002	0.006	0.000	0.000
0.000	0.003	-0.008	0.006	0.001	0.001
-0.006	0.008	-0.009	-0.006	0.001	0.001
0.001	-0.003	0.003	0.001	-0.001	-0.001
-0.002	-0.004	0.000	0.001	-0.003	-0.003
-0.005	-0.004	0.003	0.007	-0.004	-0.004

Canon.

Auto Alignment Accuracy - Single Machine Mode 4 - Day 1.

Device-CANON Level-AGA Job Plan-RESIST Lot #MODE4DAY1

IVS Data File :

Wafer One.

Meas No	XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
1	0.018	0.010	-0.006	-0.006	0.014	0.004
2	0.017	0.015	-0.017	-0.017	0.016	0.016
3	0.011	0.008	-0.017	-0.003	0.009	0.008
4	0.008	0.005	-0.016	0.007	0.006	0.006
5	0.015	0.023	0.002	0.017	0.019	0.019
6	0.007	-0.001	0.002	0.002	0.003	0.003
7	0.006	0.001	-0.006	-0.009	0.003	0.003
8	0.013	0.009	-0.007	-0.011	0.011	0.011
9	0.010	0.015	-0.002	0.000	0.012	0.012
10	0.007	0.015	-0.003	-0.003	0.011	0.011
11	-0.002	-0.001	0.000	0.006	-0.002	0.006
12	0.010	0.003	-0.002	0.002	0.006	0.006
13	0.001	-0.001	-0.004	0.000	0.000	0.000
14	0.008	-0.001	-0.006	0.002	0.004	0.004
15	0.001	0.000	-0.004	0.005	0.001	0.001
16	-0.002	0.006	-0.005	0.006	0.002	0.002
17	0.008	0.012	0.011	0.012	0.010	0.010
18	0.007	-0.003	0.003	0.006	0.002	0.002
19	0.007	-0.003	0.004	0.011	0.002	0.002
20	0.006	0.001	0.005	0.015	0.003	0.003
21	0.003	0.001	0.003	0.009	0.003	0.003
22	-0.003	0.002	-0.007	0.002	0.000	0.000
23	-0.015	-0.005	-0.011	-0.001	-0.010	-0.010
24	0.001	0.003	-0.002	0.013	0.002	0.002
25	-0.001	0.004	0.008	0.008	0.002	0.002
26	0.007	-0.003	0.011	0.008	0.002	0.002
27	0.010	0.006	0.009	0.018	0.008	0.008
28	0.009	0.019	0.012	-0.001	0.014	0.014
29	0.008	0.010	-0.006	-0.001	0.009	0.009
30	0.001	0.003	-0.003	0.001	0.002	0.002
31	-0.002	0.001	-0.004	0.002	0.000	0.000
32	-0.007	0.000	-0.011	0.001	-0.003	-0.003

Mean	YR	(XL+XR)/2
-0.002	0.003	0.005
3 Sigma	0.023	0.023
Mean + 3 Sigma	0.027	0.024

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.015	0.019	-0.004	-0.004	0.017	0.017
0.004	0.015	-0.013	-0.009	0.010	0.010
0.002	0.008	-0.011	-0.003	0.005	0.005
-0.002	0.005	-0.018	-0.007	0.002	0.002
-0.002	-0.001	-0.008	-0.005	0.000	0.000
-0.007	0.002	-0.005	-0.009	-0.003	-0.003
0.002	0.009	-0.007	-0.007	0.006	0.006
0.007	0.012	0.000	-0.009	0.009	0.009
0.006	0.019	-0.008	-0.004	0.013	0.013
0.005	0.013	-0.007	-0.006	0.008	0.008
0.005	0.011	0.009	0.012	0.008	0.008
0.001	0.010	-0.004	0.004	0.006	0.006
0.005	0.006	-0.004	0.002	0.005	0.005
0.000	0.007	-0.006	-0.007	0.004	0.004
-0.007	0.006	-0.005	-0.006	0.000	0.000
-0.012	-0.003	-0.011	-0.010	-0.007	-0.007
-0.012	-0.003	0.002	-0.002	-0.008	-0.008
-0.008	-0.003	-0.004	0.001	-0.001	-0.001
-0.006	0.003	-0.004	0.001	0.000	0.000
0.000	0.000	0.003	0.000	0.000	0.000
-0.001	0.006	0.006	0.013	0.002	0.002
0.008	0.012	0.000	0.019	0.010	0.010
-0.003	0.003	-0.001	0.012	0.000	0.000
-0.001	0.001	0.002	0.003	0.001	0.001
-0.014	-0.002	-0.001	0.003	-0.003	-0.003
-0.018	-0.002	0.004	0.010	-0.010	-0.010
-0.013	-0.004	-0.003	0.000	-0.009	-0.009
-0.014	-0.010	0.002	0.004	-0.012	-0.012
-0.010	-0.002	-0.006	0.003	-0.008	-0.008
-0.005	-0.007	-0.003	-0.001	-0.006	-0.006
-0.006	-0.001	-0.002	0.011	-0.003	-0.003

Mean	YR	(XL+XR)/2
-0.003	0.000	0.001
3 Sigma	0.017	0.023
Mean + 3 Sigma	0.020	0.023

Wafer Three.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.008	0.013	-0.008	-0.007	0.010	0.010
0.007	0.016	-0.012	-0.015	0.011	0.011
0.010	0.012	-0.015	-0.016	0.014	0.014
0.013	0.014	-0.013	-0.016	0.014	0.014
0.010	0.020	-0.013	-0.009	0.015	0.015
0.014	0.016	-0.009	-0.011	0.015	0.015
0.009	0.011	-0.010	-0.011	0.010	0.010
0.013	0.011	-0.006	0.002	0.012	0.012
0.004	0.013	-0.003	-0.005	0.008	0.008
-0.006	0.006	0.003	0.004	0.002	0.002
-0.003	0.006	0.001	0.006	0.002	0.002
0.000	0.001	0.002	-0.002	0.000	0.000
0.006	0.006	-0.006	-0.007	0.007	0.007
0.006	0.006	-0.006	-0.009	0.006	0.006
0.011	0.018	-0.002	-0.002	0.014	0.014
0.010	0.010	-0.015	-0.015	0.010	0.010
0.011	0.017	-0.003	-0.006	0.014	0.014
0.013	0.012	-0.004	-0.007	0.012	0.012
0.002	0.005	0.001	0.000	0.002	0.002
0.002	0.006	0.003	-0.002	0.004	0.004
0.001	0.000	0.008	0.008	0.001	0.001
-0.003	0.003	0.008	0.020	0.000	0.000
-0.002	0.004	0.014	0.005	0.001	0.001
0.002	0.007	0.012	0.020	0.005	0.005
0.004	0.009	0.020	0.005	0.006	0.006
0.004	0.008	0.008	0.005	0.006	0.006
0.004	0.012	0.002	-0.005	0.006	0.006
0.006	0.005	0.000	0.001	0.006	0.006
0.000	0.008	0.004	0.005	0.004	0.004
-0.004	0.001	0.005	0.010	-0.001	-0.001
-0.010	-0.001	0.004	0.008	-0.008	-0.008

Mean	YR	(XL+XR)/2
-0.001	-0.002	0.007
3 Sigma	0.026	0.028
Mean + 3 Sigma	0.027	0.030

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.005	0.009	-0.016	-0.014	0.007	0.007
0.007	0.017	-0.017	-0.006	0.012	0.012
0.006	0.011	-0.008	-0.004	0.008	0.008
0.003	0.012	-0.017	-0.005	0.008	0.008
0.007	0.013	-0.005	-0.002	0.010	0.010
0.003	0.011	-0.003	-0.006	0.007	0.007
0.007	0.020	-0.008	-0.003	0.013	0.013
0.014	0.015	0.001	-0.003	0.014	0.014
0.006	0.020	-0.006	-0.003	0.013	0.013
-0.001	0.014	-0.004	0.003	0.007	0.007
0.011	0.009	0.021	0.003	0.010	0.010
0.013	0.014	-0.004	0.003	0.013	0.013
0.005	0.011	0.000	0.002	0.008	0.008
-0.001	0.010	0.002	0.010	0.005	0.005
0.002	0.008	0.003	0.005	0.005	0.005
-0.002	0.006	-0.004	0.003	0.002	0.002
0.001	0.003	0.002	0.007	0.002	0.002
-0.005	0.004	-0.004	0.005	-0.001	-0.001
0.004	0.010	0.001	0.003	0.007	0.007
-0.002	0.007	0.000	0.004	0.003	0.003
0.011	0.006	0.005	0.005	0.006	0.006
0.009	0.017	-0.002	0.005	0.013	0.013
0.006	0.012	0.009	0.012	0.009	0.009
0.004	0.002	0.007	0.012	0.003	0.003
0.001	0.008	0.005	0.012	0.004	0.004
-0.004	0.003	0.010	0.004	-0.001	-0.001
-0.009	0.001	0.011	0.006	-0.004	-0.004
-0.003	0.006	-0.004	0.004	0.001	0.001
0.001	0.005	0.008	0.014	0.003	0.003
-0.003	0.003	0.004	0.011	0.000	0.000
0.002	0.005	0.006	0.009	0.004	0.004
-0.001	0.001	0.006	0.012	0.000	0.000

Mean	YR	(XL+XR)/2
-0.001	0.003	0.006
3 Sigma	0.025	0.020
Mean + 3 Sigma	0.023	0.020

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.002	0.006	-0.021	-0.024	0.004	0.004
-0.001	0.004	-0.019	-0.017	0.002	0.002
-0.012	-0.001	-0.018	-0.017	-0.006	-0.006
-0.010	-0.007	-0.017	-0.011	-0.008	-0.008
-0.009	0.000	-0.018	-0.015	-0.005	-0.005
-0.007	-0.003	-0.018	-0.018	-0.005	-0.005
-0.002	0.000	-0.016	-0.018	-0.001	-0.001
-0.002	0.003	-0.018	-0.015	0.000	0.000
-0.005	0.003	0.012	-0.010	-0.001	-0.001
0.003	0.005	-0.007	-0.012	0.004	0.004
0.003	0.003	-0.007	-0.006	0.003	0.003
0.004	0.006	-0.007	-0.004	0.005	0.005
-0.006	-0.003	-0.015	-0.009	-0.005	-0.005
-0.007	-0.001	-0.018	-0.015	-0.004	-0.004
-0.019	-0.013	-0.012	-0.012	-0.016	-0.016
-0.015	-0.009	-0.019	-0.011	-0.012	-0.012
-0.015	-0.014	-0.011	-0.009	-0.015	-0.015
-0.019	-0.012	-0.015	-0.010	-0.016	-0.016
-0.013	-0.005	-0.007	-0.007	-0.009	-0.009
-0.005	0.001	-0.012	-0.001	-0.002	-0.002
0.002	-0.004	-0.010	-0.009	-0.001	-0.001
0.000	0.007	0.011	-0.004	0.003	0.003
0.000	0.010	-0.001	0.003	0.005	0.005
-0.002	-0.004	-0.002	-0.002	-0.003	-0.003
-0.008	-0.008	-0.009	-0.007	-0.008	-0.008
-0.016	-0.012	-0.008	-0.003	-0.014	-0.014
-0.017	-0.005	-0.001	-0.005	-0.011	-0.011
-0.016	-0.009	-0.012	-0.005	-0.013	-0.013
-0.010	0.000	-0.002	0.001	-0.005	-0.005
-0.012	-0.010	-0.010	-0.007	-0.011	-0.011
-0.008	-0.007	-0.006	-0.003	-0.008	-0.008
-0.008	0.000	-0.010	-0.002	-0.004	-0.004

Mean	YR	(XL+XR)/2
-0.011	-0.009	-0.005
3 Sigma	0.021	0.019
Mean + 3 Sigma	0.032	0.024

Canon.

Auto Alignment Accuracy - Single Machine Mode 4 - Day 2.

IVS Data File : Device-CANON Level-AGA Job Plan-RESIST Lot #MODE4DAY2

Wafer One.

Meas No	XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
1	0.007	0.025	-0.019	-0.016	0.016	0.016
2	-0.005	0.029	-0.020	-0.009	0.012	0.012
3	-0.002	0.021	-0.009	-0.004	0.009	0.009
4	0.003	0.026	-0.016	-0.013	0.015	0.015
5	0.000	0.022	-0.011	-0.015	0.011	0.011
6	-0.007	0.019	-0.016	-0.015	0.006	0.006
7	-0.012	0.022	-0.024	-0.024	0.005	0.005
8	-0.003	0.031	-0.016	-0.020	0.014	0.014
9	-0.005	0.027	-0.010	-0.001	0.011	0.011
10	0.001	0.027	-0.012	-0.002	0.015	0.015
11	-0.003	0.033	-0.014	-0.007	0.010	0.010
12	-0.004	0.024	-0.014	-0.007	0.010	0.010
13	-0.007	0.017	-0.010	-0.010	0.005	0.005
14	-0.010	0.015	-0.009	-0.006	0.002	0.002
15	-0.008	0.020	-0.006	-0.002	0.006	0.006
16	-0.015	0.014	-0.007	-0.003	0.000	0.000
17	-0.007	0.028	-0.004	0.001	0.011	0.011
18	-0.004	0.021	-0.011	0.000	0.009	0.009
19	-0.003	0.024	-0.013	0.001	0.011	0.011
20	-0.013	0.015	-0.004	-0.001	0.001	0.001
21	0.000	0.022	-0.005	0.002	0.011	0.011
22	-0.002	0.015	-0.004	0.001	0.007	0.007
23	-0.008	0.021	0.001	-0.003	0.007	0.007
24	-0.005	0.028	-0.003	0.007	0.012	0.012
25	-0.012	0.013	-0.004	0.000	0.000	0.000
26	-0.014	0.020	-0.006	-0.006	0.003	0.003
27	-0.009	0.018	-0.004	0.007	0.004	0.004
28	-0.010	0.015	-0.002	0.003	0.003	0.003
29	-0.012	0.017	0.001	0.013	0.002	0.002
30	-0.014	0.009	-0.004	-0.001	-0.002	-0.002
31	-0.013	0.003	-0.004	0.006	-0.006	-0.006
32	-0.008	0.018	-0.007	0.004	0.004	0.005

Mean	-0.008	-0.004
3 Sigma	0.019	0.025
Mean + 3 Sigma	0.027	0.028

YL	YR	(XL+XR)/2
-0.008	-0.004	0.007
0.019	0.025	0.016
0.027	0.028	0.023

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.005	0.025	-0.009	-0.013	0.015	0.015
0.006	0.022	-0.012	-0.014	0.014	0.014
-0.002	0.017	-0.018	-0.012	0.007	0.007
0.008	0.015	-0.016	-0.014	0.011	0.011
0.005	0.026	-0.010	-0.013	0.015	0.015
0.001	0.011	-0.015	-0.015	0.006	0.006
0.008	0.023	-0.022	-0.023	0.016	0.016
0.002	0.027	-0.005	-0.006	0.014	0.014
0.006	0.022	-0.007	-0.012	0.014	0.014
0.007	0.020	-0.004	-0.009	0.014	0.014
-0.004	0.010	-0.007	-0.005	0.003	0.003
0.004	0.014	0.001	-0.001	0.009	0.009
0.000	0.028	-0.011	-0.003	0.014	0.014
-0.001	0.013	-0.005	-0.003	0.006	0.006
-0.003	0.018	-0.004	-0.008	0.008	0.008
-0.002	0.016	-0.012	0.001	0.007	0.007
0.001	0.012	0.005	0.001	0.006	0.006
-0.004	0.010	-0.004	0.006	0.003	0.003
0.000	0.008	0.000	0.004	0.004	0.004
0.005	0.012	-0.001	0.001	0.008	0.008
0.001	0.028	0.001	0.001	0.015	0.015
-0.002	0.015	-0.007	-0.004	0.007	0.007
-0.003	0.014	-0.002	0.005	0.005	0.005
0.005	0.009	0.003	0.001	0.007	0.007
-0.003	0.015	-0.003	-0.002	0.006	0.006
-0.002	0.013	0.001	0.003	0.005	0.005
0.000	0.022	-0.004	-0.002	0.008	0.008
0.000	0.022	-0.004	-0.003	0.011	0.011
-0.001	0.004	0.001	0.001	0.002	0.002
-0.005	0.009	-0.002	-0.009	0.002	0.002
-0.012	0.006	0.003	0.006	-0.003	-0.003
-0.002	0.006	0.000	0.002	0.002	0.002

Mean	-0.005	-0.004
3 Sigma	0.019	0.022
Mean + 3 Sigma	0.025	0.026

YL	YR	(XL+XR)/2
-0.005	-0.004	0.008
0.019	0.022	0.015
0.025	0.026	0.023

Wafer Three.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.008	0.025	-0.005	-0.002	0.016	0.016
0.003	0.024	-0.006	-0.005	0.013	0.013
0.004	0.018	-0.011	0.000	0.011	0.011
-0.001	0.013	-0.013	-0.007	0.006	0.006
0.004	0.016	-0.005	-0.006	0.010	0.010
0.008	0.024	-0.009	-0.008	0.016	0.016
0.007	0.020	-0.009	-0.005	0.014	0.014
0.006	0.023	0.001	0.001	0.014	0.014
0.006	0.025	0.003	0.010	0.017	0.017
0.004	0.022	0.007	0.010	0.013	0.013
0.010	0.029	0.012	0.009	0.020	0.020
0.008	0.027	0.011	0.007	0.017	0.017
0.015	0.017	0.003	0.001	0.016	0.016
0.006	0.018	-0.003	-0.005	0.012	0.012
-0.001	0.013	-0.004	-0.002	0.006	0.006
-0.002	0.013	-0.010	-0.005	0.005	0.005
0.000	0.017	0.003	0.005	0.008	0.008
0.004	0.015	0.009	-0.005	0.009	0.009
0.005	0.024	0.002	0.001	0.015	0.015
0.003	0.011	0.011	0.018	0.017	0.017
0.008	0.025	0.012	0.022	0.016	0.016
-0.002	0.020	0.012	0.016	0.009	0.009
0.000	0.005	0.008	0.006	0.002	0.002
0.000	0.021	0.002	0.014	0.011	0.011
0.003	0.018	0.014	0.017	0.010	0.010
-0.013	0.011	0.004	0.004	-0.001	-0.001
-0.006	0.006	0.015	0.013	0.000	0.000
-0.002	0.004	0.004	-0.007	0.001	0.001
-0.001	0.012	0.004	0.008	0.006	0.006
-0.004	0.007	0.005	0.004	0.001	0.001
-0.004	0.006	0.004	0.009	0.001	0.001
0.000	0.009	0.004	0.014	0.004	0.004

Mean	0.002	0.004
3 Sigma	0.024	0.026
Mean + 3 Sigma	0.026	0.030

YL	YR	(XL+XR)/2
0.002	0.004	0.010
0.024	0.026	0.017
0.026	0.030	0.027

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.003	0.011	-0.014	-0.012	0.007	0.007
-0.003	0.014	-0.008	-0.010	0.005	0.005
-0.005	0.017	-0.015	-0.013	0.006	0.006
-0.006	0.010	-0.015	-0.013	0.002	0.002
0.002	0.018	-0.012	-0.013	0.010	0.010
0.003	0.018	-0.013	-0.014	0.011	0.011
0.003	0.028	-0.004	-0.018	0.015	0.015
0.002	0.018	-0.013	-0.012	0.010	0.010
0.011	0.024	-0.005	-0.007	0.017	0.017
0.002	0.019	-0.004	-0.001	0.011	0.011
0.000	0.031	-0.003	0.000	0.015	0.015
0.006	0.027	-0.001	0.007	0.017	0.017
-0.002	0.018	0.000	0.002	0.008	0.008
0.001	0.018	-0.007	-0.006	0.009	0.009
-0.003	0.014	-0.014	-0.010	0.005	0.005
-0.004	0.015	-0.014	-0.010	0.005	0.005
-0.003	0.011	-0.006	-0.004	0.004	0.004
0.004	0.025	-0.006	-0.006	0.015	0.015
0.002	0.013	0.000	-0.005	0.007	0.007
0.003	0.015	-0.002	-0.008	0.009	0.009
0.006	0.021	0.011	-0.002	0.014	0.014
0.011	0.023	0.008	0.015	0.017	0.017
0.007	0.026	0.008	0.003	0.016	0.016
0.006	0.024	0.013	0.014	0.015	0.015
0.000	0.025	0.004	0.012	0.013	0.013
-0.003	0.024	0.010	0.007	0.011	0.011
-0.010	0.015	0.012	0.012	0.003	0.003
-0.005	0.017	-0.006	-0.004	0.006	0.006
-0.005	0.015	0.009	0.011	0.005	0.005
-0.003	0.012	0.000	0.006	0.005	0.005
-0.005	0.009	0.004	0.008	0.002	0.002
0.004	0.019	0.009	0.015	0.011	0.011

Mean	0.003	0.006
3 Sigma	0.026	0.029
Mean + 3 Sigma	0.029	0.031

YL	YR	(XL+XR)/2
-0.002	-0.002	0.010
0.026	0.029	0.014
0.029	0.031	0.024

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2	(YL+YR)/2
0.004	0.023	-0.018	-0.018	0.013	0.013
0.007	0.026	-0.011	-0.007	0.016	0.016
0.003	0.022	-0.017	-0.011	0.012	0.012
0.005	0.023	-0.016	-0.010	0.014	0.014
0.002	0.016	-0.015	-0.014	0.009	0.009
-0.001	0.021	-0.015	-0.016	0.010	0.010
0.004	0.025	-0.013	-0.003	0.015	0.015
-0.005	0.023	-0.003	-0.014	0.009	0.009
0.002	0.028	-0.003	0.010	0.015	0.015
-0.001	0.021	-0.007	0.001	0.010	0.010
0.006	0.024	0.000	0.004	0.015	0.015
0.005	0.015	0.001	0.006	0.010	0.010
-0.002	0.017	-0.010	0.003	0.008	0.008
-0.004	0.012	-0.006	-0.001	0.004	0.004
-0.004	0.010	-0.010	-0.008	0.003	0.003
-0.010	0.009	-0.012	-0.010	0.000	0.000
-0.010	0.011	-0.007	-0.002	0.001	0.001
-0.009	0.019	-0.006	-0.001	0.005	0.005
-0.005	0.007	0.002	0.000	0.001	0.001
-0.008	0.016	0.002	0.004	0.004	0.004
-0.011	0.017	0.007	0.020	0.003	0.003
0.004	0.025	0.003	0.009	0.014	0.014
-0.002	0.012	0.012	0.013	0.005	0.005
0.003	0.014	0.005	0.002	0.008	0.008
-0.010	0.011	0.013	0.007	0.000	0.000
-0.007	0.010	0.011	0.012	0.001	0.001
-0.012	0.010	-0.003	0.011	-0.001	-0.001
-0.021	-0.001	-0.004	-0.009	-0.011	-0.011
-0.004	0.019	0.012	0.013	0.007	0.007
-0.005	0.012	0.005	0.004	0.003	0.003
-0.005	0.007	0.007	0.007	0.002	0.001
-0.007	0.004	0.012	0.019	0.002	0.002

Canon.

Auto Alignment Accuracy - Single Machine Mode 4 - Day 3.

IVS Data File : Device=CANON Level=AGA Job Plan=RESIST Lot #=MODE4DAY3

Wafer One.

Meas No	XL	XR	YL	YR	(XL+XR)/2
1	-0.004	0.004	-0.017	-0.023	0.000
2	0.000	0.004	-0.026	-0.027	0.002
3	0.001	0.005	-0.026	-0.019	0.003
4	-0.001	0.006	-0.020	-0.016	0.002
5	-0.007	0.004	-0.022	-0.016	-0.002
6	-0.004	-0.006	-0.027	-0.021	-0.005
7	-0.003	0.001	-0.023	-0.020	-0.001
8	-0.006	0.002	-0.016	-0.016	-0.002
9	-0.009	0.004	-0.015	-0.015	-0.002
10	-0.006	-0.002	-0.008	-0.011	-0.004
11	-0.003	-0.003	-0.008	-0.004	-0.003
12	-0.003	0.001	-0.009	-0.014	-0.001
13	-0.008	0.004	-0.011	-0.012	-0.002
14	-0.009	-0.005	-0.018	-0.017	-0.007
15	-0.011	-0.003	-0.013	-0.014	-0.007
16	-0.013	-0.012	-0.015	-0.009	-0.012
17	-0.016	-0.009	-0.009	-0.009	-0.013
18	-0.007	-0.006	-0.007	-0.005	-0.007
19	-0.009	-0.003	-0.012	-0.004	-0.006
20	-0.013	-0.003	-0.003	0.006	-0.008
21	-0.011	-0.003	-0.003	-0.003	-0.007
22	-0.010	-0.005	0.001	0.009	-0.008
23	-0.015	-0.008	0.001	0.007	-0.012
24	-0.013	-0.008	0.001	0.005	-0.011
25	-0.012	-0.012	-0.001	0.001	-0.012
26	-0.011	-0.008	-0.002	0.002	-0.010
27	-0.019	-0.007	-0.003	0.004	-0.013
28	-0.018	-0.009	0.009	0.003	-0.014
29	-0.020	-0.016	0.000	-0.003	-0.018
30	-0.024	-0.016	-0.003	0.006	-0.020
31	-0.021	-0.017	0.002	0.007	-0.019
32	-0.017	-0.015	0.002	0.005	-0.016

Mean	-0.009
3 Sigma	0.029
Mean + 3 Sigma	0.038

YL	YR	(XL+XR)/2
-0.011	-0.009	-0.007
0.021	0.019	0.019
0.032	0.028	0.026

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2
0.002	0.006	-0.021	-0.024	0.004
-0.001	0.004	-0.019	-0.017	0.002
-0.012	-0.001	-0.018	-0.017	-0.006
-0.009	-0.007	-0.017	-0.011	-0.008
-0.009	0.000	-0.019	-0.015	-0.005
-0.007	-0.003	-0.018	-0.018	-0.005
-0.002	0.000	-0.016	-0.018	0.001
-0.002	0.003	-0.018	-0.015	0.000
-0.005	0.003	-0.012	-0.010	-0.001
0.003	0.005	-0.007	-0.012	0.004
0.003	0.003	-0.008	-0.006	0.003
0.004	0.006	-0.007	-0.004	0.005
-0.006	-0.003	-0.015	-0.009	-0.005
-0.007	-0.001	-0.018	-0.015	-0.004
-0.019	-0.013	-0.012	-0.012	-0.016
-0.016	-0.009	-0.019	-0.011	-0.012
-0.015	-0.014	-0.011	-0.009	-0.015
-0.019	-0.012	-0.015	-0.010	-0.016
-0.013	-0.005	-0.007	-0.007	-0.009
-0.005	0.001	-0.012	-0.001	-0.002
0.002	-0.004	-0.010	-0.009	-0.001
0.000	0.007	0.011	-0.004	0.003
0.000	0.010	-0.001	0.003	0.005
-0.002	-0.004	-0.002	-0.002	-0.003
-0.008	-0.008	-0.009	-0.007	-0.008
-0.016	-0.012	-0.008	-0.003	-0.014
-0.017	-0.005	-0.001	-0.005	-0.011
-0.016	-0.009	-0.012	-0.014	-0.013
-0.010	0.000	-0.002	0.001	-0.005
-0.012	-0.010	-0.010	-0.007	-0.011
-0.008	-0.007	-0.006	-0.003	-0.008

Mean	-0.011
3 Sigma	0.021
Mean + 3 Sigma	0.032

YL	YR	(XL+XR)/2
-0.011	-0.009	-0.005
0.021	0.019	0.019
0.032	0.028	0.024

Wafer Three.

XL	XR	YL	YR	(XL+XR)/2
-0.006	0.000	-0.009	-0.010	-0.003
-0.004	0.000	-0.018	-0.015	-0.002
-0.005	-0.001	-0.019	-0.018	-0.003
-0.008	-0.001	-0.023	-0.003	-0.005
-0.010	0.003	-0.015	-0.014	-0.004
-0.008	-0.004	-0.015	-0.015	-0.008
-0.005	-0.008	-0.013	-0.023	-0.006
-0.008	-0.001	-0.016	-0.012	-0.004
-0.009	0.000	-0.004	-0.001	-0.004
-0.004	0.003	-0.004	-0.011	-0.001
-0.004	-0.003	-0.001	0.005	-0.003
-0.003	-0.008	-0.006	-0.007	-0.005
-0.002	-0.007	-0.012	-0.005	-0.004
-0.006	-0.005	-0.008	-0.011	-0.006
-0.010	-0.006	-0.010	-0.008	-0.008
-0.007	-0.005	-0.016	-0.015	-0.006
-0.008	-0.010	-0.009	-0.007	-0.008
-0.007	-0.005	-0.009	-0.005	-0.006
-0.008	-0.009	-0.010	-0.005	-0.009
-0.008	-0.002	-0.002	-0.002	-0.005
-0.008	-0.006	-0.009	-0.004	-0.007
-0.005	-0.003	-0.014	-0.007	-0.004
-0.007	-0.007	-0.001	-0.004	-0.007
-0.002	-0.008	-0.001	-0.006	-0.005
-0.006	-0.010	-0.006	-0.003	-0.008
-0.006	-0.010	-0.006	-0.003	-0.008
-0.017	-0.013	-0.006	-0.006	-0.015
-0.014	-0.007	-0.008	-0.005	-0.011
0.003	0.003	-0.007	-0.009	0.003
-0.013	-0.014	-0.010	-0.003	-0.014
-0.017	-0.005	-0.012	-0.004	-0.011
-0.008	-0.007	-0.012	-0.004	-0.011
-0.008	-0.005	-0.012	-0.006	-0.006

Mean	-0.010
3 Sigma	0.016
Mean + 3 Sigma	0.026

YL	YR	(XL+XR)/2
-0.010	-0.008	-0.006
0.016	0.017	0.011
0.026	0.025	0.017

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2
0.002	0.007	-0.011	-0.010	0.005
-0.002	0.006	-0.017	-0.012	0.003
-0.003	0.006	-0.022	-0.014	0.002
0.000	0.005	-0.016	-0.007	0.002
-0.004	0.001	-0.011	-0.013	-0.002
-0.008	-0.003	-0.013	-0.015	-0.005
0.003	0.002	-0.016	-0.010	-0.001
-0.005	0.006	-0.004	0.003	0.000
-0.002	0.002	-0.006	-0.003	0.000
-0.004	-0.006	-0.006	-0.002	-0.005
-0.003	-0.002	-0.010	-0.010	-0.003
-0.004	-0.001	-0.009	-0.011	-0.002
-0.007	0.000	-0.008	-0.011	-0.003
-0.014	-0.002	-0.007	-0.008	-0.008
-0.015	-0.014	-0.013	-0.011	-0.015
-0.015	-0.019	-0.003	-0.009	-0.017
-0.011	-0.008	-0.003	0.001	-0.010
-0.011	-0.003	-0.010	-0.003	-0.007
-0.008	-0.008	0.000	-0.001	-0.008
-0.004	0.000	-0.010	-0.004	-0.002
-0.007	-0.001	-0.005	0.000	-0.004
-0.010	-0.002	0.003	-0.002	-0.006
-0.007	-0.005	0.006	0.001	-0.006
-0.008	-0.004	0.001	0.001	-0.006
-0.017	-0.017	-0.007	-0.005	-0.017
-0.023	-0.016	0.000	-0.002	-0.019
-0.018	-0.015	-0.006	-0.014	-0.016
-0.009	-0.006	0.003	-0.002	-0.008
-0.010	-0.009	0.007	-0.005	-0.009
-0.019	-0.013	0.002	0.006	-0.016
-0.010	-0.005	0.004	0.005	-0.007

Mean	-0.006
3 Sigma	0.020
Mean + 3 Sigma	0.026

YL	YR	(XL+XR)/2
-0.006	-0.006	-0.006
0.020	0.018	0.019
0.026	0.023	0.025

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2
-0.009	-0.002	-0.021	-0.011	-0.006
-0.007	0.002	-0.021	-0.016	-0.003
-0.009	-0.011	-0.021	-0.017	-0.010
-0.016	-0.012	-0.029	-0.015	-0.014
-0.016	-0.010	-0.021	-0.001	-0.013
-0.017	-0.007	-0.019	-0.013	-0.012
-0.007	-0.003	-0.019	-0.017	-0.006
-0.012	0.002	-0.006	0.002	-0.005
-0.004	0.000	-0.007	-0.003	-0.002
-0.007	-0.001	-0.008	0.003	-0.004
-0.008	-0.004	-0.006	-0.005	-0.006
-0.012	-0.007	-0.009	-0.010	-0.009
-0.015	-0.004	-0.017	-0.017	-0.010
-0.014	-0.008	-0.014	-0.010	-0.011
-0.027	-0.013	-0.020	-0.020	-0.020
-0.016	-0.006	-0.014	-0.011	-0.011
-0.021	-0.017	-0.011	-0.004	-0.019
-0.016	-0.005	-0.012	-0.006	-0.011
-0.012	-0.006	-0.006	-0.008	-0.009
-0.009	-0.004	-0.007	-0.001	-0.007
-0.012	-0.009	-0.003	0.002	-0.008
-0.013	-0.014	-0.005	0.002	-0.010
-0.019	-0.007	-0.002	-0.002	-0.013
-0.016	-0.019	-0.003	-0.003	-0.018
-0.022	-0.016	-0.011	-0.011	-0.019
-0.029	-0.013	-0.013	-0.007	-0.021
-0.018	-0.009	-0.006	0.001	-0.014
-0.017	-0.012	-0.002	-0.001	-0.014
-0.015	-0.013	0.001	0.011	-0.014
-0.015	-0.008	-0.002	0.005	-0.012

Mean	-0.011
3 Sigma	0.023
Mean + 3 Sigma	0.034

YL	YR	(XL+XR)/2
-0.011	-0.006	-0.011
0.023	0.023	0.015
0.034	0.029	0.026

Canon.

Auto Alignment Accuracy - Machine to Machine (S19 - St5) Mode 1 - Day 1.

I/S Data File : Device=CANON Level=AGA Job Plan=RESIST Lot#S9SSM1DAY1

Water One.

Meas No	XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
1	0.037	-0.005	-0.019	-0.061	0.016	-0.081
2	0.032	0.014	-0.025	-0.069	0.023	-0.059
3	0.038	0.000	-0.040	-0.049	0.019	-0.074
4	0.031	-0.003	-0.025	-0.051	0.014	-0.073
5	0.045	-0.021	-0.002	-0.026	0.012	-0.043
6	0.026	-0.013	-0.013	-0.034	0.006	-0.044
7	0.028	0.002	-0.016	-0.034	0.015	-0.034
8	0.042	0.005	-0.012	-0.051	0.023	-0.051
9	0.043	-0.002	-0.016	-0.048	0.020	-0.052
10	0.018	-0.004	0.010	-0.038	0.007	-0.038
11	0.061	-0.002	0.028	-0.024	0.029	-0.029
12	0.038	0.003	0.005	-0.026	0.020	-0.026
13	0.035	0.006	0.003	-0.025	0.021	-0.025
14	0.027	-0.006	-0.007	-0.039	0.010	-0.039
15	0.019	-0.022	-0.005	-0.028	-0.001	-0.028
16	0.019	-0.022	-0.002	-0.031	-0.001	-0.031
17	0.014	-0.027	-0.006	-0.037	-0.007	-0.037
18	0.029	-0.007	0.001	-0.036	0.011	-0.036
19	0.020	0.001	-0.005	-0.035	0.010	-0.035
20	0.038	0.002	-0.004	-0.029	0.020	-0.029
21	0.038	0.005	-0.008	-0.028	0.021	-0.028
22	0.041	-0.008	0.001	-0.022	0.017	-0.022
23	0.031	-0.012	0.017	-0.017	0.010	-0.017
24	0.031	-0.005	0.009	-0.019	0.013	-0.019
25	0.018	-0.014	0.006	-0.021	0.002	-0.021
26	0.024	-0.019	0.007	-0.024	0.002	-0.024
27	0.028	-0.013	-0.003	-0.025	0.008	-0.025
28	0.018	-0.032	0.012	-0.021	-0.007	-0.021
29	0.005	-0.027	0.010	-0.009	-0.011	-0.009
30	0.014	-0.032	0.003	-0.024	-0.019	-0.024
31	0.011	-0.021	0.007	-0.030	-0.005	-0.030
32	0.031	-0.016	0.011	-0.017	0.008	-0.017

Mean	YL	YR	[YL+YR]/2
3 Sigma	-0.002	-0.032	0.010
Mean + 3 Sigma	0.041	0.040	0.044
Mean + 3 Sigma	0.043	0.072	0.044

Water Two.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.042	-0.021	0.000	-0.042	0.010	-0.042
0.040	-0.016	-0.011	-0.049	0.012	-0.049
0.038	-0.018	-0.024	-0.056	0.010	-0.056
0.027	-0.007	-0.027	-0.036	0.010	-0.036
0.021	-0.018	-0.013	-0.008	0.002	-0.008
0.043	-0.023	-0.012	-0.039	0.010	-0.039
0.051	-0.016	-0.004	-0.033	0.018	-0.033
0.035	-0.005	0.002	-0.031	0.015	-0.031
0.038	-0.018	-0.006	-0.032	0.006	-0.032
0.030	-0.021	0.010	-0.024	0.004	-0.024
0.040	-0.016	0.004	-0.021	0.012	-0.021
0.040	-0.003	0.011	-0.012	0.018	-0.012
0.054	-0.011	0.010	-0.022	0.011	-0.022
0.037	-0.014	0.021	-0.017	0.012	-0.017
0.028	-0.024	0.004	-0.027	0.002	-0.027
0.029	-0.021	0.013	-0.024	0.004	-0.024
0.033	-0.019	0.005	-0.040	0.007	-0.040
0.033	-0.013	-0.006	-0.018	0.010	-0.018
0.028	-0.018	0.005	-0.031	0.005	-0.031
0.038	-0.008	-0.010	-0.016	0.015	-0.016
0.026	-0.017	0.003	-0.031	0.005	-0.031
0.041	-0.024	0.027	-0.029	0.009	-0.029
0.019	-0.024	0.025	-0.010	-0.002	-0.010
0.034	-0.020	0.011	-0.017	0.007	-0.017
0.026	-0.028	0.016	-0.017	-0.001	-0.017
0.026	-0.018	0.006	-0.038	0.004	-0.038
0.013	-0.031	0.000	-0.029	-0.002	-0.029
0.013	-0.024	-0.017	-0.029	-0.006	-0.029
0.017	-0.019	0.006	-0.024	-0.001	-0.024
0.020	-0.030	0.012	-0.028	-0.005	-0.028
0.030	-0.023	0.007	-0.007	0.003	-0.007
0.013	-0.026	0.006	-0.017	-0.007	-0.017

Mean	YL	YR	[YL+YR]/2
3 Sigma	0.002	-0.027	0.006
Mean + 3 Sigma	0.038	0.035	0.020
Mean + 3 Sigma	0.040	0.061	0.026

Water Three.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.036	0.001	-0.008	-0.040	0.018	-0.040
0.047	-0.005	-0.007	-0.042	0.019	-0.042
0.021	-0.015	-0.014	-0.042	0.003	-0.042
0.026	-0.024	-0.005	-0.040	0.001	-0.040
0.028	-0.031	-0.005	-0.023	-0.001	-0.023
0.027	-0.030	-0.010	-0.023	-0.002	-0.023
0.034	-0.027	-0.002	-0.032	0.003	-0.032
0.030	-0.012	0.004	-0.035	0.009	-0.035
0.033	-0.009	-0.005	-0.022	0.012	-0.022
0.033	-0.013	0.026	-0.016	0.006	-0.016
0.046	-0.001	0.009	-0.013	0.023	-0.013
0.032	-0.016	0.005	-0.029	0.008	-0.029
0.020	-0.011	0.007	-0.022	0.004	-0.022
0.027	-0.021	-0.007	-0.030	0.003	-0.030
0.021	-0.020	-0.001	-0.032	0.001	-0.032
0.016	-0.024	-0.001	-0.025	-0.004	-0.025
0.031	-0.029	0.004	-0.029	0.001	-0.029
0.043	-0.012	-0.006	-0.024	0.015	-0.024
0.030	-0.012	-0.003	-0.022	0.009	-0.022
0.027	-0.014	0.003	-0.024	0.006	-0.024
0.031	-0.014	0.008	-0.016	0.009	-0.016
0.027	-0.019	0.015	-0.014	0.004	-0.014
0.031	-0.012	0.010	-0.015	0.010	-0.015
0.032	-0.013	0.007	-0.014	0.010	-0.014
0.021	-0.024	0.005	-0.012	-0.001	-0.012
0.023	-0.027	0.010	-0.017	-0.002	-0.017
0.029	-0.029	0.007	-0.011	0.000	-0.011
0.018	-0.022	-0.006	-0.032	-0.002	-0.032
0.017	-0.032	0.007	-0.036	-0.008	-0.036
0.012	-0.028	0.006	-0.014	-0.008	-0.014
0.011	-0.020	0.009	-0.021	-0.004	-0.021
0.023	-0.032	0.004	-0.023	-0.004	-0.023

Mean	YL	YR	[YL+YR]/2
3 Sigma	0.002	-0.024	0.004
Mean + 3 Sigma	0.027	0.027	0.027
Mean + 3 Sigma	0.029	0.052	0.027

Water Four.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.056	0.003	0.005	-0.043	0.029	-0.043
0.047	0.005	-0.027	-0.045	0.026	-0.045
0.042	-0.008	-0.026	-0.055	0.017	-0.055
0.027	-0.016	-0.033	-0.050	0.006	-0.050
0.036	-0.020	-0.019	-0.041	0.008	-0.041
0.043	0.003	-0.021	-0.045	0.023	-0.045
0.038	-0.012	-0.013	-0.035	0.013	-0.035
0.034	-0.001	-0.008	-0.042	0.017	-0.042
0.045	-0.011	0.003	-0.028	0.017	-0.028
0.035	-0.011	0.006	-0.013	0.012	-0.013
0.043	0.011	0.013	-0.014	0.027	-0.014
0.053	0.001	0.005	-0.017	0.027	-0.017
0.045	0.002	0.007	-0.025	0.023	-0.025
0.033	-0.009	0.002	-0.023	0.012	-0.023
0.024	-0.022	-0.006	-0.038	0.001	-0.038
0.018	-0.019	-0.013	-0.035	-0.001	-0.035
0.019	-0.028	-0.011	-0.036	-0.005	-0.036
0.037	-0.013	-0.002	-0.031	0.012	-0.031
0.021	-0.007	-0.002	-0.037	0.007	-0.037
0.039	-0.009	0.013	-0.020	0.015	-0.020
0.040	0.005	0.004	-0.027	0.023	-0.027
0.049	-0.004	0.023	-0.010	0.023	-0.010
0.035	-0.011	0.021	-0.012	0.012	-0.012
0.035	0.004	0.008	-0.011	0.019	-0.011
0.033	-0.018	0.009	-0.019	0.007	-0.019
0.020	-0.014	0.009	-0.025	0.003	-0.025
0.023	-0.033	0.000	-0.030	-0.005	-0.030
0.013	-0.031	-0.025	-0.035	-0.009	-0.035
0.014	-0.020	0.011	-0.018	-0.003	-0.018
0.009	-0.017	0.006	-0.019	-0.004	-0.019
0.014	-0.034	0.008	-0.019	-0.010	-0.019
0.021	-0.020	0.016	-0.021	0.001	-0.021

Mean	YL	YR	[YL+YR]/2
3 Sigma	-0.001	-0.029	0.011
Mean + 3 Sigma	0.044	0.036	0.035
Mean + 3 Sigma	0.045	0.065	0.045

Water Five.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.047	0.005	0.018	-0.032	0.027	-0.032
0.040	-0.003	0.002	-0.035	0.018	-0.035
0.042	-0.008	0.012	-0.048	0.017	-0.048
0.019	-0.020	-0.028	-0.052	0.000	-0.052
0.028	-0.019	0.001	-0.033	0.005	-0.033
0.033	-0.006	-0.027	-0.022	0.013	-0.022
0.033	-0.004	-0.014	-0.033	0.015	-0.033
0.063	0.008	0.007	-0.037	0.035	-0.037
0.045	0.015	0.003	-0.032	0.030	-0.032
0.034	-0.009	0.027	-0.011	0.012	-0.011
0.060	0.010	0.031	-0.008	0.035	-0.008
0.059	-0.012	0.019	-0.021	0.023	-0.021
0.036	-0.002	0.015	-0.035	0.017	-0.035
0.024	-0.016	-0.012	-0.012	0.004	-0.012
0.027	-0.010	0.033	-0.033	0.008	-0.033
0.023	-0.037	-0.014	-0.047	-0.007	-0.047
0.043	-0.008	-0.014	-0.036	0.017	-0.036
0.038	0.002	-0.002	-0.037	0.020	-0.037
0.035	-0.002	-0.012	-0.039	0.016	-0.039
0.032	0.006	0.001	-0.025	0.019	-0.025
0.037	-0.010	0.018	-0.029	0.014	-0.029
0.047	0.016	0.030	-0.006	0.031	-0.006
0.035	0.006	0.037	0.008	0.021	0.008
0.046	-0.001	0.022	-0.012	0.023	-0.012
0.042	-0.010	0.016	-0.019	0.016	-0.019
0.032	0.002	0.014	-0.031	0.017	-0.031
0.043	-0.021	0.006	-0.031	0.011	-0.031
0.038	-0.026	-0.012	-0.038	0.001	-0.038
0.018	-0.028	-0.006	-0.026	-0.005	-0.026
0.025	-0.032	0.014	-0.031	-0.003	-0.031
0.035	-0.018	0.014	-0.018	0.009	-0.018
0.034	-0.001	0.023	-0.017	0.017	-0.017

Mean	YL	YR	[YL+YR]/2
3 Sigma	0.006	-0.028	0.015
Mean + 3 Sigma	0.054	0.040	0.033
Mean + 3 Sigma	0.060	0.068	0.048

Canon.

Auto Alignment Accuracy - Machine to Machine (S19 - S15) Mode 1 - Day 2.

IVS Data File : Device-CANON Level-AGA Job Plan-RESIST Lot #S9S5M1DAY2

Wafer One.

Meas No	XL	XR	YL	YR	(XL+XR)/2
1	0.046	-0.004	-0.020	-0.032	0.021
2	0.026	-0.009	-0.026	-0.050	0.009
3	0.010	-0.033	-0.036	-0.066	-0.012
4	-0.007	-0.039	-0.027	-0.057	-0.023
5	0.002	-0.039	-0.020	-0.048	-0.018
6	0.006	-0.028	-0.027	-0.035	-0.010
7	-0.004	-0.032	-0.038	-0.053	-0.018
8	0.002	-0.015	-0.012	-0.002	-0.006
9	0.028	-0.016	-0.008	-0.045	0.006
10	0.017	-0.003	0.000	-0.027	0.007
11	0.043	0.019	0.003	-0.022	0.031
12	0.024	0.007	-0.002	-0.031	0.015
13	0.025	0.000	-0.009	-0.040	0.013
14	0.014	-0.014	-0.010	-0.032	0.000
15	-0.003	-0.030	-0.017	-0.041	-0.016
16	-0.016	-0.068	-0.020	-0.035	-0.037
17	-0.004	-0.033	-0.016	-0.049	-0.018
18	0.011	-0.040	-0.022	-0.040	-0.014
19	0.008	-0.020	-0.013	-0.042	-0.006
20	0.021	-0.012	-0.011	-0.036	0.005
21	0.017	-0.004	-0.002	-0.019	0.007
22	0.040	-0.003	0.009	-0.026	0.019
23	0.038	0.006	0.009	-0.014	0.022
24	0.030	-0.005	0.003	-0.022	0.013
25	0.031	-0.028	0.001	-0.029	0.001
26	-0.001	-0.032	-0.010	-0.036	-0.017
27	-0.007	-0.037	-0.008	-0.040	-0.022
28	-0.011	-0.058	-0.023	-0.028	-0.034
29	-0.025	-0.043	0.001	-0.022	-0.034
30	-0.010	-0.037	-0.004	-0.027	-0.023
31	-0.001	-0.035	-0.007	-0.036	-0.018
32	0.006	-0.008	0.000	-0.033	0.000

YL	YR	(XL+XR)/2
Mean	-0.011	-0.037
3 Sigma	0.037	0.038
Mean + 3 Sigma	0.046	0.075

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2
0.025	-0.028	0.008	-0.017	-0.001
0.018	-0.029	0.008	-0.045	-0.006
0.017	-0.033	-0.019	-0.040	-0.008
0.007	-0.023	-0.018	-0.048	-0.006
0.016	-0.027	-0.001	-0.028	-0.005
0.018	-0.032	-0.014	-0.026	-0.007
0.002	-0.024	-0.005	-0.042	-0.011
0.021	-0.020	0.001	-0.034	-0.012
0.013	-0.035	0.030	0.001	0.001
0.023	-0.011	0.038	-0.019	0.006
0.017	-0.016	0.008	-0.013	0.001
0.012	-0.017	0.010	-0.033	-0.003
0.017	-0.036	-0.009	-0.019	-0.010
-0.002	-0.032	-0.003	-0.042	-0.017
0.001	-0.035	-0.016	-0.038	-0.017
0.029	-0.029	-0.012	-0.041	0.000
0.010	-0.012	-0.006	-0.029	-0.001
0.015	-0.024	-0.008	-0.028	-0.005
0.011	-0.026	0.014	-0.031	-0.002
0.022	-0.026	0.014	-0.042	-0.007
0.011	-0.026	0.014	-0.031	-0.002
0.027	-0.022	0.001	-0.007	0.002
0.011	-0.017	0.018	-0.009	-0.003
0.022	-0.029	0.009	-0.015	-0.004
0.024	-0.018	0.008	-0.019	0.003
0.017	-0.019	-0.001	-0.022	-0.001
0.009	-0.038	-0.011	-0.032	-0.001
0.003	-0.033	-0.022	-0.042	-0.015
-0.007	-0.031	-0.012	-0.029	-0.019
-0.006	-0.035	-0.004	-0.031	-0.021
0.011	-0.028	-0.003	-0.028	-0.008
0.003	-0.020	-0.007	-0.017	-0.009

YL	YR	(XL+XR)/2
Mean	0.000	-0.029
3 Sigma	0.042	0.037
Mean + 3 Sigma	0.042	0.066

Wafer Three.

XL	XR	YL	YR	(XL+XR)/2
0.038	-0.004	-0.015	-0.042	0.017
0.026	-0.016	-0.028	-0.056	0.005
0.005	-0.037	-0.028	-0.063	-0.016
0.004	-0.030	-0.041	-0.056	-0.013
0.017	-0.028	-0.012	-0.041	-0.006
0.012	-0.033	-0.016	-0.035	-0.010
0.012	-0.033	-0.016	-0.041	-0.010
0.026	-0.019	-0.014	-0.045	0.004
0.024	-0.020	-0.015	-0.042	0.002
0.025	-0.018	0.003	-0.032	0.004
0.039	-0.016	0.007	-0.021	0.012
0.023	-0.017	0.009	-0.024	0.003
0.012	-0.023	-0.008	-0.037	-0.005
0.018	-0.019	-0.008	-0.032	-0.001
0.007	-0.039	-0.017	-0.048	-0.024
0.003	-0.051	-0.023	-0.038	-0.024
0.000	-0.044	-0.027	-0.048	-0.022
0.014	-0.028	-0.019	-0.051	-0.007
0.016	-0.023	-0.015	-0.045	-0.006
0.014	-0.031	-0.006	-0.042	-0.003
0.014	-0.030	0.000	-0.026	-0.006
0.022	-0.018	0.019	-0.009	0.001
0.020	-0.029	0.004	-0.023	-0.005
0.004	-0.032	-0.005	-0.022	-0.014
-0.006	-0.043	-0.008	-0.033	-0.025
-0.002	-0.043	-0.008	-0.031	-0.023
-0.007	-0.049	-0.018	-0.039	-0.028
-0.019	-0.044	0.004	-0.015	-0.031
-0.013	-0.047	0.000	-0.028	-0.030
0.001	-0.042	0.007	-0.018	-0.021
0.002	-0.033	0.011	-0.011	-0.015

YL	YR	(XL+XR)/2
Mean	-0.008	-0.036
3 Sigma	0.040	0.040
Mean + 3 Sigma	0.050	0.075

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2
0.019	-0.015	0.006	-0.039	0.002
0.018	-0.020	-0.016	-0.044	-0.001
0.013	-0.021	-0.020	-0.046	-0.004
0.003	-0.026	-0.021	-0.045	-0.012
0.011	-0.027	-0.016	-0.031	-0.008
0.008	-0.035	-0.018	-0.040	-0.013
0.022	-0.026	-0.015	-0.043	-0.002
0.024	-0.011	-0.003	-0.041	0.007
0.023	-0.017	-0.008	-0.037	0.003
0.012	-0.022	0.005	-0.027	-0.005
0.035	-0.002	0.009	-0.013	0.017
0.015	-0.028	-0.004	-0.034	-0.006
0.008	-0.028	-0.003	-0.026	-0.010
-0.003	-0.023	-0.001	-0.032	-0.013
-0.021	-0.046	-0.007	-0.036	-0.023
0.006	-0.044	-0.017	-0.041	-0.028
0.007	-0.025	-0.023	-0.035	-0.019
0.013	-0.028	-0.019	-0.049	-0.008
-0.002	-0.017	0.000	-0.006	-0.009
-0.005	-0.027	-0.001	-0.028	-0.016
0.021	-0.026	0.011	-0.018	-0.003
0.012	-0.026	0.004	-0.017	-0.007
0.010	-0.005	0.002	-0.022	0.003
0.015	-0.031	0.011	-0.020	-0.008
0.001	-0.033	0.001	-0.034	-0.016
0.000	-0.049	-0.005	-0.034	-0.025
-0.009	-0.053	-0.012	-0.030	-0.031
-0.028	-0.050	-0.004	-0.027	-0.039
-0.020	-0.049	0.007	-0.034	-0.034
-0.003	-0.053	0.008	-0.021	-0.028
-0.008	-0.036	0.013	-0.021	-0.023

YL	YR	(XL+XR)/2
Mean	-0.004	-0.032
3 Sigma	0.032	0.032
Mean + 3 Sigma	0.036	0.064

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2
0.033	-0.010	-0.024	-0.064	0.012
0.028	-0.026	-0.039	-0.065	0.001
0.013	-0.035	-0.030	-0.069	-0.011
0.002	-0.030	-0.043	-0.061	-0.014
0.007	-0.013	-0.016	-0.034	-0.003
0.011	-0.023	-0.027	-0.037	-0.006
0.019	-0.018	-0.004	-0.039	0.001
0.002	-0.019	-0.016	-0.030	-0.006
0.009	-0.028	-0.009	-0.045	-0.010
0.004	-0.028	-0.004	-0.032	-0.012
0.026	-0.018	0.006	-0.024	0.004
0.013	-0.010	0.000	-0.025	-0.003
0.013	-0.025	-0.002	-0.035	-0.006
0.010	-0.035	-0.018	-0.046	-0.013
-0.004	-0.043	-0.021	-0.039	-0.023
0.014	-0.017	-0.005	-0.040	-0.001
0.007	-0.030	-0.013	-0.032	-0.011
-0.003	-0.021	-0.024	-0.045	-0.012
0.006	-0.035	-0.014	-0.052	-0.015
-0.006	-0.021	-0.006	-0.030	-0.013
-0.001	-0.033	0.000	-0.027	-0.017
0.006	-0.025	0.007	-0.017	-0.009
-0.006	-0.029	0.003	-0.011	-0.018
0.017	-0.038	0.001	-0.024	-0.011
-0.003	-0.045	0.006	-0.032	-0.024
-0.008	-0.029	-0.008	-0.037	-0.018
0.007	-0.046	-0.012	-0.043	-0.019
-0.010	-0.041	-0.009	-0.027	-0.025
-0.006	-0.054	0.005	-0.039	-0.030
0.005	-0.026	-0.005	-0.033	-0.010
-0.005	-0.036	0.010	-0.017	-0.020

YL	YR	(XL+XR)/2
Mean	-0.010	-0.037
3 Sigma	0.040	0.039
Mean + 3 Sigma	0.050	0.076

Canon.

Auto Alignment Accuracy - Machine to Machine (S19 - S15) Mode 1 - Day 3.

INS Data File : Device-CANON Level-AGA Job Plan-RESIST Lot #-S9S5M/DAY3

Wafer One.

Meas No.	XL	XR	YL	YR	(XL+XR)/2
1	0.020	-0.008	-0.014	-0.049	0.006
2	0.021	-0.027	-0.020	-0.046	-0.003
3	-0.006	-0.021	-0.018	-0.044	-0.014
4	0.002	-0.017	-0.034	-0.058	-0.007
5	-0.003	-0.026	-0.030	-0.041	-0.015
6	0.020	-0.029	-0.027	-0.046	-0.005
7	-0.005	-0.014	-0.027	-0.035	-0.009
8	0.011	-0.023	-0.021	-0.049	-0.006
9	0.021	-0.014	-0.013	-0.043	0.003
10	0.007	-0.014	-0.003	-0.024	-0.003
11	0.008	-0.023	-0.007	-0.037	-0.008
12	0.001	-0.017	-0.006	-0.028	-0.008
13	0.002	-0.014	-0.002	-0.039	-0.006
14	0.012	-0.025	-0.034	-0.044	-0.007
15	-0.017	-0.034	-0.020	-0.043	-0.025
16	-0.019	-0.037	-0.016	-0.028	-0.028
17	0.006	-0.032	-0.020	-0.043	-0.013
18	-0.006	-0.016	-0.023	-0.043	-0.011
19	-0.011	-0.024	-0.014	-0.049	-0.018
20	-0.004	-0.033	-0.013	-0.039	-0.019
21	-0.001	-0.036	-0.001	-0.037	-0.018
22	-0.003	-0.034	-0.006	-0.022	-0.019
23	0.002	-0.035	-0.003	-0.029	-0.017
24	-0.007	-0.033	-0.005	-0.031	-0.020
25	-0.013	-0.036	-0.011	-0.031	-0.025
26	-0.015	-0.040	-0.009	-0.027	-0.028
27	-0.031	-0.046	-0.004	-0.039	-0.033
28	-0.025	-0.050	-0.024	-0.041	-0.038
29	-0.028	-0.064	-0.010	-0.030	-0.046
30	-0.039	-0.035	-0.008	-0.037	-0.047
31	-0.009	-0.059	-0.004	-0.040	-0.034
32	-0.015	-0.035	-0.016	-0.034	-0.025

Mean	-0.015
3 Sigma	0.028
Mean + 3 Sigma	0.043

Mean	-0.039
3 Sigma	0.027
Mean + 3 Sigma	0.039

Mean	-0.039
3 Sigma	0.027
Mean + 3 Sigma	0.039

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2
0.034	0.004	-0.007	-0.035	0.019
0.016	-0.023	-0.012	-0.047	-0.004
0.006	-0.020	-0.028	-0.045	-0.007
0.000	-0.027	-0.024	-0.047	-0.014
0.012	-0.041	-0.026	-0.042	-0.015
0.005	-0.018	-0.022	-0.043	-0.006
0.018	-0.023	-0.017	-0.047	-0.002
0.029	-0.014	-0.023	-0.043	0.007
0.028	0.008	-0.021	-0.052	0.017
0.023	-0.008	0.017	-0.030	0.008
0.032	0.002	0.004	-0.026	0.013
0.032	-0.018	-0.008	-0.029	0.007
0.005	-0.016	0.002	-0.029	-0.006
-0.004	-0.022	-0.002	-0.041	-0.013
-0.007	-0.031	-0.014	-0.041	-0.019
-0.006	-0.033	-0.022	-0.051	-0.019
-0.001	-0.029	-0.013	-0.032	-0.015
-0.002	-0.035	-0.012	-0.030	-0.018
0.012	-0.037	-0.023	-0.037	-0.013
0.006	-0.030	-0.007	-0.041	-0.012
0.022	-0.013	-0.008	-0.029	0.004
0.039	-0.013	0.001	-0.023	0.013
0.022	-0.030	0.006	-0.023	-0.004
0.010	-0.018	0.006	-0.020	-0.004
0.003	-0.026	0.001	-0.018	-0.011
0.008	-0.030	-0.003	-0.035	-0.011
-0.014	-0.042	-0.009	-0.029	-0.028
-0.003	-0.041	-0.004	-0.038	-0.022
0.001	-0.044	0.009	-0.020	-0.021
-0.016	-0.047	-0.005	-0.028	-0.031
-0.003	-0.041	-0.003	-0.028	-0.022
-0.003	-0.038	-0.002	-0.026	-0.021

Mean	-0.008
3 Sigma	0.034
Mean + 3 Sigma	0.043

Mean	-0.035
3 Sigma	0.029
Mean + 3 Sigma	0.047

Wafer Three.

XL	XR	YL	YR	(XL+XR)/2
0.021	-0.011	-0.011	-0.051	0.006
0.025	0.002	-0.018	-0.060	0.014
0.021	-0.017	-0.043	-0.053	0.002
-0.001	-0.011	-0.048	-0.063	-0.002
-0.001	-0.021	-0.033	-0.040	-0.011
0.002	-0.028	-0.038	-0.039	-0.013
0.013	-0.022	-0.023	-0.055	-0.005
0.005	-0.012	-0.022	-0.051	-0.003
0.020	-0.025	-0.016	-0.045	-0.003
0.002	-0.012	-0.011	-0.035	-0.006
0.032	-0.001	-0.001	-0.028	0.016
0.022	-0.016	-0.009	-0.032	0.003
-0.004	-0.017	-0.015	-0.036	-0.010
0.012	-0.024	-0.009	-0.035	-0.006
-0.006	-0.040	-0.020	-0.041	-0.023
-0.006	-0.043	-0.021	-0.038	-0.025
0.000	-0.031	-0.020	-0.037	-0.015
0.005	-0.027	-0.019	-0.039	-0.011
-0.004	-0.018	-0.014	-0.043	-0.011
0.003	-0.027	-0.014	-0.035	-0.012
0.023	-0.022	-0.004	-0.036	-0.007
0.001	-0.028	-0.006	-0.042	0.001
0.009	-0.030	0.002	-0.034	-0.010
-0.008	-0.032	-0.005	-0.025	-0.020
-0.011	-0.040	-0.007	-0.029	-0.026
-0.015	-0.041	-0.008	-0.032	-0.028
-0.023	-0.041	-0.018	-0.034	-0.032
-0.026	-0.045	-0.006	-0.033	-0.035
-0.020	-0.051	-0.012	-0.031	-0.038
-0.013	-0.054	-0.014	-0.041	-0.034
-0.012	-0.043	-0.002	-0.024	-0.027

Mean	-0.015
3 Sigma	0.034
Mean + 3 Sigma	0.049

Mean	-0.039
3 Sigma	0.030
Mean + 3 Sigma	0.069

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2
0.026	-0.007	-0.013	-0.043	0.009
0.009	-0.012	-0.023	-0.065	-0.001
0.000	-0.035	-0.030	-0.051	-0.017
-0.006	-0.013	-0.023	-0.068	-0.010
-0.001	-0.009	-0.018	-0.036	-0.005
0.001	-0.033	-0.020	-0.050	-0.016
0.010	-0.017	-0.026	-0.042	-0.004
0.012	-0.018	-0.007	-0.046	-0.008
0.001	-0.018	-0.007	-0.045	-0.008
-0.001	-0.020	0.013	-0.027	-0.011
0.012	-0.013	-0.007	-0.023	0.000
0.006	-0.015	0.001	-0.039	-0.005
0.004	-0.014	-0.007	-0.041	-0.005
-0.001	-0.024	-0.017	-0.036	-0.012
-0.004	-0.027	-0.017	-0.033	-0.016
-0.007	-0.048	-0.019	-0.045	-0.028
-0.002	-0.039	-0.023	-0.036	-0.020
0.007	-0.038	-0.026	-0.044	-0.015
-0.007	-0.031	-0.020	-0.055	-0.019
0.001	-0.018	-0.020	-0.040	-0.008
0.009	-0.018	-0.003	-0.030	-0.005
0.010	-0.025	0.009	-0.025	-0.008
0.008	-0.026	-0.015	-0.026	-0.009
-0.006	-0.039	-0.011	-0.025	-0.023
-0.011	-0.037	-0.002	-0.038	-0.024
-0.004	-0.037	-0.006	-0.038	-0.021
-0.024	-0.043	-0.025	-0.039	-0.033
-0.027	-0.049	-0.011	-0.036	-0.038
-0.023	-0.051	-0.001	-0.037	-0.037
-0.015	-0.042	-0.003	-0.026	-0.028
-0.004	-0.034	0.008	-0.025	-0.019

Mean	-0.012
3 Sigma	0.034
Mean + 3 Sigma	0.046

Mean	-0.039
3 Sigma	0.036
Mean + 3 Sigma	0.075

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2
0.015	-0.017	-0.016	-0.043	-0.001
0.013	-0.019	-0.019	-0.054	-0.003
0.013	-0.021	-0.027	-0.047	-0.004
-0.003	-0.027	-0.030	-0.043	-0.015
0.006	-0.025	-0.010	-0.038	-0.009
-0.006	-0.036	-0.030	-0.031	-0.022
0.003	-0.023	-0.016	-0.046	-0.010
0.008	-0.024	-0.011	-0.036	-0.008
0.003	-0.026	-0.004	-0.042	-0.011
0.016	-0.027	0.003	-0.016	-0.005
0.007	-0.019	0.015	-0.014	-0.006
0.017	-0.021	-0.006	-0.032	-0.002
-0.005	-0.016	-0.001	-0.025	-0.011
0.013	-0.016	-0.007	-0.026	-0.002
0.001	-0.024	-0.010	-0.040	-0.012
-0.003	-0.023	-0.021	-0.031	-0.018
0.003	-0.023	-0.018	-0.036	-0.010
0.006	-0.027	-0.015	-0.039	-0.010
0.001	-0.017	-0.021	-0.044	-0.008
0.003	-0.015	-0.015	-0.044	-0.006
-0.006	-0.033	-0.001	-0.037	-0.020
0.000	-0.020	0.004	-0.011	-0.010
-0.007	-0.028	0.015	-0.015	-0.017
-0.005	-0.014	0.007	-0.019	-0.009
-0.006	-0.035	0.000	-0.024	-0.021
0.003	-0.023	0.001	-0.029	-0.010
-0.003	-0.041	-0.003	-0.031	-0.022
-0.018	-0.030	-0.017	-0.031	-0.024
-0.005	-0.041	-0.003	-0.031	-0.023
-0.011	-0.037	0.002	-0.028	-0.024
-0.005	-0.027	0.003	-0.024	-0.016

Mean	-0.008
3 Sigma	0.036
Mean + 3 Sigma	0.043

Mean	-0.032
3 Sigma	0.031
Mean + 3 Sigma	0.063

Canon.

Auto Alignment Accuracy - Machine to Machine (S19 - S15) Mode 4 - Day 1.

IVS Data File : Device-CANON Level-AGA Job Plan-RESIST Lot # S9S5M4DAY1

Wafer One.

Meas No	XL	XR	YL	YR	(XL+XR)/2	(XL+XR)/2
1	0.053	0.013	-0.005	-0.037	0.033	0.033
2	0.043	0.019	-0.012	-0.054	0.031	0.031
3	0.044	-0.001	-0.019	-0.048	0.021	0.021
4	0.021	-0.005	-0.027	-0.050	0.008	0.008
5	0.029	0.001	-0.010	-0.030	0.015	0.015
6	0.023	-0.008	-0.013	-0.032	0.007	0.007
7	0.032	-0.008	0.002	-0.036	0.013	0.013
8	0.032	0.009	0.009	-0.020	0.020	0.020
9	0.052	0.005	0.008	-0.022	0.029	0.029
10	0.050	0.015	0.020	-0.009	0.033	0.033
11	0.052	0.018	0.020	-0.003	0.035	0.035
12	0.048	0.010	0.014	-0.012	0.029	0.029
13	0.040	0.009	0.028	-0.022	0.024	0.024
14	0.030	0.006	0.000	-0.027	0.018	0.018
15	0.034	-0.002	0.005	-0.025	0.016	0.016
16	0.004	-0.028	0.001	-0.029	-0.012	-0.012
17	0.022	-0.013	0.004	-0.028	0.005	0.005
18	0.026	-0.001	0.001	-0.016	0.012	0.012
19	0.023	-0.002	-0.003	-0.031	0.011	0.011
20	0.040	0.001	0.004	-0.025	0.020	0.020
21	0.034	0.000	0.016	-0.014	0.017	0.017
22	0.048	0.004	0.031	-0.003	0.026	0.026
23	0.036	0.011	0.040	0.020	0.023	0.023
24	0.043	0.010	0.026	-0.007	0.026	0.026
25	0.032	-0.008	0.022	0.001	0.012	0.012
26	0.022	-0.006	0.022	-0.022	0.008	0.008
27	0.016	-0.020	0.010	-0.019	-0.002	-0.002
28	0.011	-0.017	0.015	-0.013	-0.003	-0.003
29	0.010	-0.018	0.027	0.008	-0.004	-0.004
30	0.019	-0.023	0.027	-0.013	-0.002	-0.002
31	0.019	-0.017	0.038	-0.004	0.001	0.001
32	0.025	-0.010	0.041	0.016	0.016	0.016

Mean	0.011
3 Sigma	0.052
Mean + 3 Sigma	0.062

YL	YR	(XL+XR)/2
0.011	-0.019	0.015
0.052	0.062	0.037
0.062	0.071	0.052

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2	(XL+XR)/2
0.048	0.015	0.004	-0.023	0.031	0.031
0.054	0.022	0.005	-0.035	0.038	0.038
0.050	0.003	-0.012	-0.027	0.026	0.026
0.032	0.006	-0.009	-0.032	0.019	0.019
0.024	0.000	0.012	-0.020	0.012	0.012
0.034	-0.019	-0.008	-0.014	0.007	0.007
0.037	-0.002	0.004	-0.034	0.017	0.017
0.042	0.008	0.008	-0.020	0.024	0.024
0.051	0.018	0.008	-0.019	0.034	0.034
0.037	0.002	0.043	-0.001	0.019	0.019
0.051	0.018	0.005	-0.009	0.034	0.034
0.057	0.023	0.015	-0.004	0.040	0.040
0.053	0.024	0.022	-0.012	0.039	0.039
0.041	0.015	0.021	-0.012	0.028	0.028
0.048	0.007	0.016	-0.019	0.027	0.027
0.029	-0.011	0.004	-0.008	0.009	0.009
0.033	-0.008	0.007	-0.019	0.012	0.012
0.035	0.015	0.003	-0.011	0.025	0.025
0.022	0.001	0.005	-0.029	0.012	0.012
0.046	0.016	0.009	-0.029	0.031	0.031
0.061	0.016	0.016	-0.013	0.038	0.038
0.051	0.027	0.015	0.015	0.039	0.039
0.043	0.007	0.029	-0.004	0.025	0.025
0.041	-0.002	0.016	-0.015	0.019	0.019
0.033	-0.006	0.019	-0.009	0.014	0.014
0.026	-0.014	0.021	-0.021	0.006	0.006
0.011	-0.014	0.006	-0.016	-0.002	-0.002
0.014	-0.018	-0.003	-0.014	-0.002	-0.002
0.014	-0.021	0.026	-0.009	-0.003	-0.003
0.021	-0.014	0.013	-0.001	0.004	0.004
0.033	0.001	0.019	-0.008	0.017	0.017
0.022	0.001	0.025	-0.003	0.012	0.012

Mean	0.013
3 Sigma	0.042
Mean + 3 Sigma	0.055

YL	YR	(XL+XR)/2
0.013	-0.015	0.020
0.042	0.033	0.039
0.055	0.048	0.059

Wafer Three.

XL	XR	YL	YR	(XL+XR)/2	(XL+XR)/2
0.055	0.021	0.012	-0.028	0.038	0.038
0.044	0.010	0.008	-0.029	0.027	0.027
0.037	0.000	-0.004	-0.042	0.018	0.018
0.033	-0.005	-0.016	-0.050	0.014	0.014
0.017	-0.008	0.001	-0.018	0.004	0.004
0.051	-0.018	0.003	-0.027	0.016	0.016
0.035	0.011	0.003	-0.025	0.023	0.023
0.045	0.002	0.010	-0.025	0.024	0.024
0.037	0.022	-0.010	-0.025	0.030	0.030
0.048	0.018	0.026	-0.020	0.033	0.033
0.041	0.030	0.027	0.007	0.036	0.036
0.048	0.012	0.025	-0.009	0.030	0.030
0.037	0.025	0.019	-0.003	0.031	0.031
0.035	0.010	0.023	-0.006	0.023	0.023
0.022	-0.011	0.016	-0.026	0.006	0.006
0.023	-0.014	-0.005	-0.027	0.004	0.004
0.026	-0.001	0.008	-0.019	0.012	0.012
0.028	0.012	0.005	-0.007	0.020	0.020
0.016	0.000	0.022	-0.039	0.008	0.008
0.039	-0.002	0.009	0.001	0.019	0.019
0.037	0.021	0.021	-0.017	0.028	0.028
0.054	0.018	0.029	0.003	0.036	0.036
0.053	0.013	0.042	0.016	0.033	0.033
0.040	0.021	0.040	0.004	0.030	0.030
0.040	0.004	0.031	0.015	0.022	0.022
0.036	-0.002	0.021	-0.003	0.017	0.017
0.031	-0.009	0.023	-0.019	0.011	0.011
0.023	-0.011	0.001	-0.018	0.006	0.006
0.015	-0.014	0.022	0.002	0.001	0.001
0.028	-0.007	0.037	-0.007	0.009	0.009
0.032	-0.013	0.037	0.014	0.009	0.009
0.038	0.015	0.031	0.003	0.027	0.027

Mean	0.016
3 Sigma	0.045
Mean + 3 Sigma	0.061

YL	YR	(XL+XR)/2
0.016	-0.013	0.020
0.045	0.051	0.032
0.061	0.064	0.053

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2	(XL+XR)/2
0.041	0.014	0.025	-0.026	0.027	0.027
0.042	0.005	0.002	-0.037	0.024	0.024
0.041	-0.010	-0.006	-0.042	0.015	0.015
0.013	-0.016	-0.022	-0.038	-0.001	-0.001
0.013	-0.002	0.009	-0.012	0.005	0.005
0.033	-0.010	0.003	-0.017	0.012	0.012
0.023	0.006	0.010	-0.020	0.016	0.016
0.042	0.010	0.013	-0.020	0.026	0.026
0.045	0.009	0.012	-0.013	0.027	0.027
0.038	0.010	0.020	-0.013	0.023	0.023
0.060	0.028	0.023	0.001	0.044	0.044
0.054	0.026	0.031	0.004	0.040	0.040
0.042	0.015	0.030	-0.015	0.028	0.028
0.049	0.006	0.006	-0.011	0.027	0.027
0.026	-0.009	0.013	-0.015	0.009	0.009
0.010	-0.019	0.004	-0.006	-0.004	-0.004
0.036	-0.009	0.008	-0.018	0.013	0.013
0.024	0.011	-0.002	-0.011	0.018	0.018
0.024	-0.006	-0.003	-0.023	0.009	0.009
0.034	0.004	0.004	-0.033	0.019	0.019
0.054	0.023	0.009	-0.024	0.038	0.038
0.046	0.012	0.027	-0.017	0.029	0.029
0.043	0.004	0.019	-0.020	0.023	0.023
0.053	0.005	0.018	-0.010	0.029	0.029
0.026	-0.001	0.015	-0.003	0.013	0.013
0.029	-0.009	0.020	-0.016	0.010	0.010
0.020	-0.016	0.014	-0.018	0.002	0.002
0.008	-0.013	-0.002	-0.021	-0.002	-0.002
0.032	0.000	0.019	-0.012	0.016	0.016
0.018	-0.008	0.017	-0.013	0.006	0.006
0.028	-0.003	0.014	-0.014	0.013	0.013
0.030	-0.003	0.025	-0.007	0.014	0.014

Mean	0.012
3 Sigma	0.035
Mean + 3 Sigma	0.046

YL	YR	(XL+XR)/2
0.012	-0.017	0.018
0.035	0.031	0.036
0.046	0.048	0.054

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2	(XL+XR)/2
0.042	0.015	0.016	-0.010	0.029	0.029
0.038	0.008	0.015	-0.017	0.023	0.023
0.024	0.009	0.006	-0.023	0.016	0.016
0.032	-0.007	0.001	-0.010	0.013	0.013
0.030	-0.015	0.017	-0.008	0.008	0.008
0.031	-0.006	0.014	-0.016	0.012	0.012
0.018	-0.007	0.020	0.001	0.005	0.005
0.034	-0.008	0.013	-0.001	0.013	0.013
0.039	0.014	0.015	-0.009	0.027	0.027
0.037	0.009	0.025	0.006	0.023	0.023
0.056	0.018	0.028	-0.006	0.037	0.037
0.052	0.017	0.032	0.011	0.034	0.034
0.036	0.025	0.041	-0.004	0.031	0.031
0.038	-0.002	0.025	-0.008	0.018	0.018
0.012	-0.026	0.019	-0.013	-0.007	-0.007
0.014	-0.027	0.009	-0.011	-0.006	-0.006
0.033	-0.008	0.026	-0.009	0.012	0.012
0.040	0.010	0.015	0.003	0.025	0.025
0.030	0.011	0.012	-0.012	0.021	0.021
0.027	0.002	0.001	-0.016	0.015	0.015
0.042	0.028	0.024	-0.018	0.035	0.035
0.046	0.002	0.022	0.000	0.024	0.024
0.054	0.016	0.030	-0.003	0.035	0.035
0.046	0.003	0.019	-0.010	0.024	0.024
0.023	0.009	0.022	0.005	0.016	0.016
0.025	-0.008	0.018	-0.016	0.009	0.009
0.008	-0.016	0.019	-0.011	-0.004	-0.004
0.030	-0.017	0.032	-0.006	0.001	0.001
0.021	-0.014	0.018	-0.011	0.004	0.004
0.026	-0.011	0.034	-0.011	0.008	0.008
0.024	-0.013	0.024	-0.003	0.006	0.006
0.032	0.012	0.025	-0.005	0.022	0.022

Canon.

Auto Alignment Accuracy - Machine to Machine (S19 - St5) Mode 4 - Day 2.

I/S Data File : Device-CANON Level-AGA Job Plan-RESIST Lot #-S9S5M4DAY2

Wafer One.

Meas No	XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
1	0.012	-0.015	-0.009	-0.054	-0.001	-0.001
2	0.014	-0.012	-0.028	-0.046	0.001	0.001
3	0.009	-0.028	-0.025	-0.036	-0.010	-0.010
4	0.005	-0.027	-0.017	-0.036	-0.011	-0.011
5	0.007	-0.026	-0.014	-0.036	-0.010	-0.010
6	0.002	-0.036	-0.009	-0.026	-0.012	-0.012
7	0.000	-0.022	-0.008	-0.035	-0.011	-0.011
8	0.011	-0.009	0.003	-0.047	0.001	0.001
9	0.021	-0.015	-0.001	-0.021	0.003	0.003
10	0.000	-0.019	0.006	-0.017	-0.010	-0.010
11	0.019	-0.004	0.005	-0.022	0.008	0.008
12	0.029	-0.012	-0.003	-0.015	0.008	0.008
13	0.008	-0.023	0.008	-0.012	-0.008	-0.008
14	0.005	-0.002	-0.002	-0.024	0.002	0.002
15	0.009	-0.021	-0.007	-0.015	-0.006	-0.006
16	0.005	-0.024	-0.002	-0.013	-0.009	-0.009
17	0.012	-0.022	-0.002	-0.023	-0.005	-0.005
18	0.016	-0.015	-0.006	-0.025	0.001	0.001
19	0.005	-0.008	0.005	-0.027	-0.002	-0.002
20	0.014	-0.010	-0.008	-0.038	0.002	0.002
21	0.018	-0.004	0.010	-0.028	0.007	0.007
22	0.014	-0.005	0.016	-0.010	0.004	0.004
23	0.032	-0.006	0.017	-0.018	0.013	0.013
24	0.028	-0.008	0.012	-0.018	0.010	0.010
25	0.017	-0.008	-0.001	-0.022	0.004	0.004
26	0.017	-0.023	0.003	-0.029	-0.003	-0.003
27	-0.007	-0.009	0.005	-0.028	-0.008	-0.008
28	0.015	-0.015	-0.005	-0.013	0.000	0.000
29	0.006	-0.008	0.016	-0.026	-0.001	-0.001
30	0.001	-0.032	0.002	-0.008	-0.016	-0.016
31	0.013	-0.014	0.011	-0.018	-0.001	-0.001
32	0.016	-0.006	0.017	-0.011	0.005	0.005

Mean	YL	YR	[XL+XR]/2
3 Sigma	0.000	-0.024	-0.002
	0.034	0.034	0.022
Mean + 3 Sigma	0.034	0.058	0.023

Wafer Two.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.038	-0.004	-0.001	-0.050	0.017	0.017
0.029	-0.007	-0.026	-0.049	0.011	0.011
0.014	-0.024	-0.017	-0.029	-0.005	-0.005
-0.007	-0.026	-0.018	-0.034	-0.010	-0.010
-0.004	-0.012	-0.008	-0.011	-0.008	-0.008
0.020	-0.030	-0.008	-0.020	-0.005	-0.005
0.015	-0.018	-0.007	-0.021	-0.001	-0.001
0.028	-0.009	-0.002	-0.040	0.009	0.009
0.031	0.002	-0.007	-0.031	0.017	0.017
0.026	-0.012	0.001	-0.035	0.007	0.007
0.035	0.003	0.012	-0.023	0.019	0.019
0.032	-0.005	0.006	-0.014	0.013	0.013
0.014	0.018	0.003	-0.032	0.016	0.016
0.022	-0.022	-0.004	-0.023	0.000	0.000
0.007	-0.034	0.005	-0.024	-0.014	-0.014
-0.002	-0.031	-0.007	-0.027	-0.016	-0.016
0.004	-0.022	0.009	0.002	-0.009	-0.009
0.010	-0.005	0.002	-0.013	0.002	0.002
0.015	-0.013	0.008	-0.022	0.001	0.001
0.020	0.001	-0.002	-0.015	0.010	0.010
0.028	0.000	0.001	-0.030	0.014	0.014
0.029	-0.001	0.008	-0.024	0.014	0.014
0.014	-0.011	0.006	-0.013	0.002	0.002
0.031	-0.012	0.007	-0.011	0.009	0.009
0.006	-0.028	0.007	-0.010	-0.011	-0.011
0.006	-0.018	0.009	-0.027	-0.006	-0.006
0.005	-0.040	-0.004	-0.029	-0.017	-0.017
-0.005	-0.034	-0.006	-0.015	-0.019	-0.019
-0.002	-0.037	0.002	-0.008	-0.020	-0.020
0.001	-0.031	0.010	-0.018	-0.015	-0.015
0.005	-0.015	0.009	-0.016	-0.005	-0.005

Mean	YL	YR	[XL+XR]/2
3 Sigma	-0.001	-0.023	0.000
	0.027	0.035	0.036
Mean + 3 Sigma	0.027	0.057	0.036

Wafer Three.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.020	-0.013	-0.003	-0.037	0.004	0.004
0.007	-0.011	-0.009	-0.052	-0.002	-0.002
0.025	-0.022	-0.023	-0.038	0.001	0.001
-0.010	-0.016	-0.024	-0.059	-0.014	-0.014
0.008	-0.012	-0.002	-0.018	-0.002	-0.002
0.001	-0.034	-0.016	-0.033	-0.017	-0.017
0.020	-0.028	0.008	-0.037	-0.004	-0.004
0.033	-0.017	-0.008	-0.034	0.009	0.009
0.018	-0.007	0.004	-0.029	0.005	0.005
0.015	-0.030	0.016	-0.014	-0.007	-0.007
0.022	-0.015	0.031	-0.005	0.004	0.004
0.020	-0.006	0.006	-0.019	0.007	0.007
0.009	-0.010	-0.001	-0.017	0.000	0.000
0.010	-0.010	0.005	-0.019	0.000	0.000
0.011	-0.018	0.001	-0.030	-0.004	-0.004
-0.001	-0.040	-0.001	-0.019	-0.025	-0.025
-0.001	-0.012	0.006	-0.025	-0.006	-0.006
0.022	-0.030	-0.006	-0.021	-0.004	-0.004
0.015	-0.005	-0.013	-0.026	0.005	0.005
0.013	-0.022	0.005	-0.035	-0.005	-0.005
0.017	-0.021	0.008	-0.007	-0.002	-0.002
0.028	-0.010	0.019	-0.013	0.009	0.009
0.012	-0.016	0.022	-0.002	-0.002	-0.002
0.005	-0.025	0.022	-0.019	-0.010	-0.010
0.004	-0.030	0.001	-0.011	-0.013	-0.013
0.001	-0.020	0.015	-0.019	-0.010	-0.010
-0.018	-0.037	0.007	-0.028	-0.028	-0.028
-0.010	-0.030	-0.007	-0.012	-0.020	-0.020
-0.010	-0.038	0.015	-0.009	-0.024	-0.024
-0.014	-0.040	0.008	-0.009	-0.027	-0.027
-0.005	-0.037	0.018	-0.019	-0.021	-0.021
0.001	-0.029	0.021	0.001	-0.014	-0.014

Mean	YL	YR	[XL+XR]/2
3 Sigma	0.004	-0.022	-0.007
	0.039	0.041	0.032
Mean + 3 Sigma	0.043	0.063	0.039

Wafer Four.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.021	-0.012	0.000	-0.034	0.004	0.004
0.023	-0.017	-0.014	-0.051	0.003	0.003
0.004	-0.017	-0.021	-0.055	-0.006	-0.006
0.009	-0.031	-0.038	-0.055	-0.011	-0.011
0.024	-0.009	-0.010	-0.043	0.008	0.008
0.009	-0.027	-0.017	-0.039	-0.009	-0.009
0.022	-0.016	-0.001	-0.030	0.003	0.003
0.011	-0.019	0.000	-0.031	-0.004	-0.004
0.025	-0.010	0.013	-0.024	0.008	0.008
0.007	-0.026	0.029	-0.006	-0.010	-0.010
0.021	-0.012	0.043	0.011	0.004	0.004
0.018	-0.013	0.026	-0.001	0.003	0.003
0.013	-0.010	0.019	-0.019	0.002	0.002
0.017	-0.010	0.003	-0.025	0.004	0.004
0.019	-0.022	-0.001	-0.035	-0.002	-0.002
0.002	-0.029	-0.013	-0.039	-0.014	-0.014
0.016	-0.028	-0.015	-0.035	-0.006	-0.006
0.035	-0.006	-0.002	-0.030	0.015	0.015
0.002	-0.001	-0.002	-0.025	0.001	0.001
0.008	-0.014	0.011	-0.025	-0.003	-0.003
0.004	-0.012	0.024	-0.014	-0.004	-0.004
0.018	-0.025	0.047	0.004	-0.003	-0.003
0.016	-0.032	0.047	0.014	-0.008	-0.008
0.001	-0.025	0.026	-0.003	-0.012	-0.012
0.006	-0.021	0.021	-0.006	-0.008	-0.008
0.009	-0.030	0.020	-0.021	-0.011	-0.011
-0.003	-0.032	0.007	-0.021	-0.012	-0.012
-0.003	-0.021	0.007	-0.021	-0.012	-0.012
0.000	-0.018	0.000	-0.039	-0.009	-0.009
-0.001	-0.031	0.008	-0.024	-0.016	-0.016
0.001	-0.034	0.021	-0.025	-0.016	-0.016
0.002	-0.025	0.023	-0.011	-0.011	-0.011
0.002	-0.034	0.028	0.000	-0.016	-0.016

Mean	YL	YR	[XL+XR]/2
3 Sigma	0.009	-0.023	-0.004
	0.061	0.054	0.024
Mean + 3 Sigma	0.069	0.077	0.028

Wafer Five.

XL	XR	YL	YR	[XL+XR]/2	[YL+YR]/2
0.034	-0.003	0.003	-0.030	0.016	0.016
0.021	-0.002	-0.004	-0.052	0.010	0.010
0.032	-0.016	-0.037	-0.043	0.008	0.008
0.009	-0.016	-0.021	-0.041	-0.003	-0.003
0.002	-0.018	-0.016	-0.021	-0.008	-0.008
0.021	-0.032	-0.016	-0.056	-0.005	-0.005
0.005	-0.023	0.006	-0.037	-0.009	-0.009
0.021	-0.018	0.007	-0.033	0.002	0.002
0.023	-0.004	-0.003	-0.024	0.009	0.009
0.025	-0.018	0.012	-0.017	0.003	0.003
0.038	-0.012	0.010	-0.017	0.013	0.013
0.022	0.000	0.001	-0.017	0.011	0.011
0.010	-0.016	0.004	-0.022	-0.003	-0.003
0.018	-0.013	-0.007	-0.037	0.002	0.002
0.014	-0.030	-0.010	-0.038	-0.008	-0.008
-0.008	-0.033	-0.011	-0.022	-0.021	-0.021
-0.016	-0.029	-0.009	-0.025	-0.022	-0.022
-0.001	-0.033	-0.011	-0.029	-0.017	-0.017
0.001	-0.031	-0.006	-0.038	-0.015	-0.015
0.003	-0.017	-0.005	-0.039	-0.007	-0.007
-0.005	-0.021	-0.001	-0.028	-0.013	-0.013
0.007	-0.019	0.010	-0.013	0.006	0.006
0.006	-0.023	0.017	-0.024	-0.008	-0.008
0.000	-0.025	0.000	-0.021	-0.012	-0.012
-0.003	-0.031	-0.003	-0.014	-0.017	-0.017
-0.012	-0.032	0.006	-0.019	-0.022	-0.022
0.006	-0.044	0.000	-0.034	-0.019	-0.019
-0.018	-0.051	-0.006	-0.031	-0.035	-0.035
-0.019	-0.053	-0.005	-0.019	-0.036	-0.036
-0.020	-0.042	0.006	-0.027	-0.031	-0.031
-0.007	-0.046	0.003	-0.027	-0.026	-0.026
-0.013	-0.042	0.007	-0.025	-0.028	-0.028

Mean	YL	YR	[XL+XR]/2
3 Sigma	-0.003	-0.028	-0.009
	0.033	0.028	0.042
Mean + 3 Sigma	0.035	0.056	0.052

Canon.

Auto Alignment Accuracy - Machine to Machine (S19 - S15) Mode 4 - Day 3.

I/S Data File : Device-CANON Level-AGA Job Plan-RESIST Lot#-S9S5M4DAY3

Wafer One.

Meas No	XL	XR	YL	YR	(XL+XR)/2
1	0.034	0.005	-0.012	-0.034	0.020
2	0.032	-0.017	-0.004	-0.044	0.008
3	0.024	-0.017	-0.016	-0.038	0.004
4	0.007	-0.022	-0.006	-0.028	-0.007
5	0.002	-0.023	0.012	0.000	-0.011
6	0.016	-0.029	-0.005	-0.017	-0.007
7	0.017	-0.007	-0.001	-0.026	0.005
8	0.024	-0.016	-0.009	-0.029	0.004
9	0.029	0.000	-0.009	-0.041	0.015
10	0.018	-0.019	-0.002	-0.025	-0.001
11	0.031	-0.001	0.012	-0.010	0.015
12	0.020	-0.007	0.013	-0.016	0.007
13	0.018	-0.012	0.010	-0.025	0.003
14	0.002	-0.020	-0.004	-0.007	-0.009
15	-0.013	-0.034	0.013	-0.021	-0.023
16	-0.006	-0.040	0.013	-0.007	-0.023
17	-0.006	-0.043	0.001	-0.012	-0.025
18	-0.001	-0.035	0.007	-0.022	-0.018
19	-0.001	-0.023	-0.017	-0.018	-0.012
20	0.005	-0.032	-0.005	-0.045	-0.013
21	0.019	-0.024	0.011	-0.017	-0.002
22	0.017	-0.021	-0.001	-0.002	-0.002
23	0.011	-0.017	0.015	-0.011	-0.003
24	0.015	-0.023	0.007	-0.024	-0.004
25	-0.005	-0.030	-0.004	-0.017	-0.017
26	-0.009	-0.030	0.005	-0.031	-0.020
27	-0.009	-0.041	-0.010	-0.021	-0.025
28	-0.032	-0.054	0.003	-0.013	-0.043
29	-0.034	-0.054	0.024	-0.002	-0.044
30	-0.020	-0.052	0.024	-0.010	-0.036
31	-0.020	-0.048	0.014	-0.014	-0.034
32	-0.004	-0.043	0.020	-0.008	-0.024

Mean	0.003
3 Sigma	0.034
Mean + 3 Sigma	0.037

YL	YR	(XL+XR)/2
-0.003	-0.020	-0.010
0.034	0.036	0.050
0.037	0.056	0.060

Wafer Two.

XL	XR	YL	YR	(XL+XR)/2
0.026	-0.011	0.014	-0.028	0.008
0.018	-0.018	-0.005	-0.048	0.000
0.001	-0.019	-0.023	-0.048	-0.009
0.006	-0.024	-0.016	-0.040	-0.007
0.009	-0.024	-0.013	-0.031	-0.008
0.029	-0.026	-0.009	-0.031	0.002
0.028	-0.008	0.007	-0.027	0.010
0.026	-0.013	-0.001	-0.039	0.006
0.034	-0.011	0.008	-0.026	0.012
0.032	-0.007	0.033	-0.008	0.013
0.042	0.008	0.037	0.004	0.025
0.040	-0.003	0.030	-0.013	0.018
0.022	-0.004	0.008	-0.014	0.009
0.029	-0.001	0.019	-0.017	0.014
0.007	-0.017	0.005	-0.026	-0.005
0.002	-0.026	-0.004	-0.032	-0.012
0.013	-0.012	-0.002	-0.018	0.001
0.023	-0.009	-0.002	-0.026	0.007
0.032	-0.010	0.018	-0.029	0.011
0.029	0.003	-0.005	-0.024	0.016
0.017	0.002	0.019	-0.023	0.009
0.016	-0.009	0.042	-0.006	0.003
0.016	0.003	0.031	0.000	0.009
0.038	-0.018	0.028	-0.012	0.010
0.007	-0.016	0.006	-0.008	-0.005
0.012	-0.026	0.011	-0.017	-0.007
-0.011	-0.041	-0.012	-0.035	-0.015
-0.005	-0.039	0.007	-0.028	-0.023
0.007	-0.036	0.009	-0.025	-0.015
0.009	-0.031	0.024	-0.009	-0.011
-0.003	-0.010	0.026	-0.011	-0.006

Mean	0.009
3 Sigma	0.050
Mean + 3 Sigma	0.059

YL	YR	(XL+XR)/2
0.009	-0.023	0.001
0.050	0.039	0.056
0.059	0.062	0.037

Wafer Three.

XL	XR	YL	YR	(XL+XR)/2
0.037	0.001	-0.005	-0.042	0.019
0.033	-0.004	-0.017	-0.058	0.014
0.013	-0.031	-0.033	-0.058	-0.008
0.007	-0.047	-0.035	-0.053	-0.020
0.004	-0.028	-0.017	-0.036	-0.012
0.010	-0.030	-0.012	-0.034	-0.010
0.015	-0.024	-0.010	-0.038	-0.005
0.020	-0.033	-0.002	-0.032	0.009
0.029	0.000	0.017	-0.016	0.015
0.046	0.001	0.027	0.000	0.024
0.025	0.008	0.022	-0.012	0.017
0.021	-0.007	0.022	-0.027	0.007
0.023	-0.016	0.004	-0.028	0.004
-0.002	-0.039	-0.008	-0.039	-0.021
-0.012	-0.042	-0.027	-0.042	-0.027
0.010	-0.036	-0.004	-0.035	-0.013
0.000	-0.026	-0.005	-0.028	-0.013
0.026	-0.012	-0.011	-0.025	0.007
0.022	-0.006	-0.002	-0.038	0.008
0.027	-0.005	0.024	-0.024	0.011
0.023	-0.004	0.037	-0.001	0.010
0.026	-0.003	0.040	0.023	0.012
0.024	-0.001	0.038	-0.012	0.012
0.017	-0.016	0.009	-0.006	0.001
0.004	-0.026	0.016	-0.024	-0.011
-0.014	-0.030	0.008	-0.031	-0.022
-0.010	-0.042	-0.012	-0.013	-0.023
-0.002	-0.043	0.019	-0.003	-0.039
-0.001	-0.024	0.024	-0.008	-0.006
-0.001	-0.024	0.008	-0.007	-0.012
0.016	-0.028	0.044	-0.014	-0.006

Mean	0.005
3 Sigma	0.063
Mean + 3 Sigma	0.068

YL	YR	(XL+XR)/2
0.005	-0.025	-0.002
0.063	0.052	0.045
0.068	0.077	0.046

Wafer Four.

XL	XR	YL	YR	(XL+XR)/2
0.036	-0.014	-0.023	-0.033	0.011
0.010	-0.011	-0.006	-0.046	0.000
0.004	-0.021	-0.027	-0.063	-0.008
0.004	-0.035	-0.042	-0.060	-0.015
0.001	-0.027	-0.005	-0.024	-0.013
0.011	-0.042	-0.020	-0.031	-0.016
0.010	-0.010	-0.008	-0.040	0.000
0.020	0.003	0.003	-0.025	0.012
0.039	0.006	-0.017	-0.026	0.022
0.023	-0.006	-0.012	-0.035	0.009
0.024	0.016	0.011	-0.023	0.020
0.024	-0.012	-0.002	-0.035	0.006
0.011	-0.005	-0.005	-0.014	0.003
0.012	-0.017	0.007	-0.017	-0.003
-0.001	-0.034	0.007	-0.035	-0.018
-0.005	-0.033	-0.020	-0.023	-0.019
0.004	-0.020	-0.002	-0.018	-0.008
0.015	-0.025	-0.010	-0.024	-0.005
0.016	-0.020	0.004	-0.030	-0.002
0.025	-0.004	-0.004	-0.015	0.011
0.017	-0.008	0.007	-0.032	0.005
0.026	-0.019	0.015	-0.010	0.003
0.027	0.004	0.026	-0.011	0.015
0.031	-0.022	0.013	-0.005	0.004
0.008	-0.021	0.012	-0.005	-0.002
-0.002	-0.043	0.015	-0.028	-0.022
-0.009	-0.035	0.009	-0.014	-0.022
-0.008	-0.035	0.010	-0.027	-0.021
-0.025	-0.053	0.019	-0.003	-0.039
-0.001	-0.031	0.016	-0.013	-0.016
0.006	-0.031	0.013	-0.013	-0.012
0.006	-0.032	0.026	-0.015	-0.012

Mean	0.000
3 Sigma	0.047
Mean + 3 Sigma	0.048

YL	YR	(XL+XR)/2
0.000	-0.025	-0.004
0.047	0.043	0.042
0.048	0.068	0.047

Wafer Five.

XL	XR	YL	YR	(XL+XR)/2
0.034	-0.016	0.001	-0.048	0.009
0.016	-0.013	-0.022	-0.040	0.002
0.003	0.001	-0.023	-0.050	0.002
0.006	-0.028	-0.036	-0.053	-0.011
0.009	-0.038	-0.032	-0.037	-0.014
0.009	-0.031	-0.029	-0.031	-0.011
0.024	-0.014	-0.015	-0.042	0.005
0.025	-0.007	-0.009	-0.036	0.009
0.027	0.001	-0.007	-0.031	0.014
0.013	-0.029	0.013	-0.035	-0.008
0.026	-0.004	0.014	-0.002	0.011
0.007	-0.014	0.016	-0.016	-0.004
0.012	-0.012	0.011	-0.034	0.000
0.010	-0.017	0.018	-0.037	-0.004
0.007	-0.025	-0.005	-0.037	-0.009
0.001	-0.036	-0.021	-0.043	-0.017
0.006	-0.035	-0.011	-0.033	-0.014
0.014	-0.014	-0.018	-0.042	0.000
0.001	-0.018	-0.007	-0.043	-0.009
0.010	-0.017	-0.003	-0.034	-0.004
0.006	-0.021	0.007	-0.026	-0.007
0.024	-0.016	0.015	-0.018	0.004
0.016	-0.027	0.027	-0.023	-0.005
0.005	-0.013	0.002	-0.009	-0.004
0.018	-0.030	0.012	-0.018	-0.006
0.001	-0.034	0.007	-0.027	-0.016
0.001	-0.032	-0.004	-0.030	-0.016
-0.016	-0.043	-0.020	-0.026	-0.030
-0.008	-0.029	0.011	-0.017	-0.019
0.010	-0.035	0.015	-0.018	-0.013
-0.002	-0.020	0.007	-0.017	-0.011
0.005	-0.019	0.024	-0.008	-0.007

Mean	-0.002
3 Sigma	0.049
Mean + 3 Sigma	0.051

YL	YR	(XL+XR)/2
-0.002	-0.030	-0.006
0.049	0.038	0.029
0.051	0.068	0.035

Canon.

XY Stage Stepping Accuracy

IVS Data : Device-CANON Level-STARTUP Job Plan-NSTEPX Lot #-ST9X3

Data for Wafer 1.

X Data

Y Data

0.040	0.032	0.031	0.029	0.027	0.037	0.037	0.035
0.002	0.036	0.037	0.035	0.005	0.002	0.002	0.016
0.037	-0.002	0.006	0.004	0.016	0.031	0.028	0.029
-0.001	0.028	0.032	0.034	0.034	0.012	0.008	0.006
0.032	0.000	0.037	0.033	0.004	0.031	0.028	0.034
0.002	0.031	0.006	0.039	0.008	0.001	-0.003	0.012
0.037	0.028	0.032	0.041	0.029	0.034	0.037	0.035
-0.001	0.000	-0.003	0.003	0.002	0.003	0.001	0.005
0.032	0.031	0.038	0.040	0.039	0.038	0.034	0.038
0.002	0.004	-0.004	0.008	0.003	0.001	-0.002	0.003
0.037	0.033	0.034	0.036	0.042	0.039	0.037	0.040
0.008	0.011	-0.002	0.004	0.002	0.013	0.002	0.005
0.037	0.050	0.042	0.044	0.037	0.042	0.048	0.034
0.005	0.006	0.005	0.005	0.005	0.007	0.006	0.002
0.042	0.036	0.044	0.036	0.044	0.039	0.036	0.037
0.008	0.008	0.004	0.008	0.004	0.001	0.004	0.002
0.044	0.044	0.048	0.039	0.044	0.048	0.038	0.038
0.009	0.007	0.010	0.001	0.007	0.010	0.010	-0.002
							0.035
							0.005

X of X 3-Sigma 14.0 nm.

Y of X 3-Sigma 13.4 nm.

Specification <0.030um for 3-Sigma.



XY Stage Stepping Accuracy

IVS Data : Device-CANON Level-STARTUP Job Plan-NSTEPX Lot # ST9X3

Data for Wafer 2.

X Data
Y Data

0.026	0.029	0.031	0.034	0.029	0.008	0.024	0.004	0.024	0.004	0.015	0.026
0.002	0.007	0.003	0.003	0.027	0.001	0.019	0.007	0.027	0.008	0.001	0.007
0.029	0.030	0.001	0.007	0.025	0.006	0.024	0.000	0.024	0.008	0.021	0.022
0.005	0.033	0.030	0.030	0.022	0.005	0.023	0.004	0.025	0.008	0.024	0.025
0.026	-0.005	0.006	0.006	0.024	0.007	0.026	-0.001	0.021	0.006	0.032	0.034
0.009	0.032	0.024	0.002	0.035	0.002	0.043	0.002	0.035	0.002	0.028	0.022
0.031	0.005	0.002	0.041	0.039	0.005	0.035	0.005	0.035	0.015	0.008	0.004
0.004	0.032	0.006	0.031	0.005	0.003	0.037	0.005	0.033	0.000	0.030	0.033
			0.003	0.000	0.033	0.035	0.006	0.033	0.000	0.007	0.006
				0.009	0.009	0.006	0.012	0.012	0.017	0.042	0.043
										0.017	0.009

X of X 3-Sigma 17.0 nm.

Y of X 3-Sigma 12.3 nm.

Specification <0.030um for 3-Sigma.



XY Stage Stepping Accuracy

IVS Data : Device-CANON Level-STARTUP Job Plan-NSTEPX Lot #-ST9X3

Data for Wafer 3.

X Data		Y Data	
0.014	0.020	0.018	0.013
0.002	0.022	0.003	-0.002
0.018	0.015	0.016	0.010
-0.001	0.007	0.002	0.014
0.018	0.026	0.015	0.011
-0.001	0.001	0.010	0.007
0.020	0.023	0.012	0.016
0.013	0.008	0.005	0.009
-0.003	0.023	0.012	0.013
0.013	0.005	0.004	0.017
0.010	0.022	0.017	0.026
0.029	0.008	0.027	0.021
0.001	0.023	0.010	0.019
	0.022	0.023	0.020
	0.008	0.006	0.001
	0.023	0.024	0.028
	0.004	0.007	-0.001
	0.008	0.025	0.027
	0.014	0.007	0.004
	0.011	0.026	-0.003
	0.010	0.029	0.010

X of X 3-Sigma 17.3 mm.

Y of X 3-Sigma 12.6 mm.

Specification <0.030um for 3-Sigma.



XY Stage Stepping Accuracy

IVS Data : Device-CANON Level-STARTUP Job Plan-NSTEPY Lot #-ST9Y3

Data for Wafer 1.

X Data		Y Data	
0.019	0.013	0.007	0.009
0.015	0.008	0.000	0.005
0.002	0.003	0.004	0.004
0.013	0.011	0.012	0.010
0.018	0.010	0.008	0.008
0.014	0.006	0.005	0.006
0.003	0.006	0.001	0.001
0.019	0.008	0.007	0.003
	0.018	0.013	0.009
	0.008	0.006	0.008
	0.008	0.003	0.004
	0.002	0.001	0.009
	0.005	0.003	0.007
	0.010	0.012	0.009
	0.016	0.018	0.021
	0.004	0.006	0.005
	0.019	0.016	0.016
		0.020	0.027

Y of Y 3-Sigma 17.6 nm.

X of Y 3-Sigma 23.0 nm.

Specification <0.030um for 3-Sigma.

Canon.

XY Stage Stepping Accuracy

IVS Data : Device-CANON Level-STARTUP Job Plan-NSTEPY Lot #-ST9Y3

Data for Wafer 2.

X Data

Y Data

0.009	0.016	0.012	0.014	0.005	0.017	0.011	0.010	0.008	0.008	-0.003
0.001	0.007	0.004	0.001	0.004	0.004	0.001	0.006	-0.002	0.004	0.008
0.004	-0.002	0.001	-0.008	0.000	-0.005	-0.003	-0.004	-0.006	-0.004	-0.004
0.008	-0.001	0.000	0.003	-0.001	0.001	-0.002	0.002	-0.003	-0.004	-0.002
0.017	0.007	0.007	0.013	0.013	0.010	0.005	0.009	0.009	0.000	-0.003
0.003	0.010	0.009	0.005	0.009	0.007	0.004	0.006	0.006	0.005	0.011
0.005	0.002	-0.003	-0.004	-0.005	-0.006	-0.010	-0.005	-0.011	-0.003	-0.007
0.017	-0.002	0.000	0.004	0.004	0.011	0.012	0.008	0.002	0.003	0.005
	0.010	0.010	0.014	0.012	0.008	0.004	0.007	0.010	-0.002	
	0.006	0.013	0.014	0.020	0.011	0.011	0.011	0.011	0.020	
	-0.001	-0.001	-0.005	-0.011	-0.004	-0.008	-0.007	-0.011		
	0.010		0.008	0.000	0.002	0.004	0.010	0.012		
			0.007	0.010	0.007	0.002	-0.001			
			0.014	0.024	0.014	0.027	0.020			

Y of Y 3-Sigma 20.8 nm.

X of Y 3-Sigma 23.7 nm.

Specification <0.030um for 3-Sigma.



XY Stage Stepping Accuracy

IVS Data : Device-CANON Level-STARTUP Job Plan-NSTEPLY Lot #-ST9Y3

Data for Wafer 3.

X Data	0.017	0.006	0.007	0.014	0.007	0.013	0.007	0.008	0.002	-0.008
Y Data	-0.012	-0.008	-0.008	-0.008	-0.010	-0.008	-0.011	-0.005	-0.008	0.001
	-0.002	0.001	0.001	0.000	-0.003	-0.002	-0.006	-0.005	-0.010	0.002
	0.006	-0.009	-0.005	-0.008	-0.010	-0.010	-0.005	-0.007	-0.009	-0.003
	0.020	0.014	0.015	0.014	0.015	0.011	0.009	0.006	0.012	-0.006
	-0.009	0.002	-0.002	0.003	0.002	-0.002	-0.004	0.001	-0.002	0.000
	0.005	0.000	-0.004	-0.011	-0.006	-0.009	-0.013	-0.008	-0.013	-0.009
	-0.001	-0.007	-0.011	-0.004	-0.005	-0.016	-0.010	-0.007	-0.006	-0.009
		0.007	0.012	0.011	0.007	0.007	0.004	0.007	0.001	-0.003
		-0.002	0.008	0.009	0.009	0.006	0.006	0.002	0.005	0.008
			0.003	-0.007	-0.001	-0.002	-0.004	-0.010	0.001	
			0.008	0.000	0.001	0.006	0.002	0.003	0.001	
				0.011	0.015	0.008	0.003	-0.003		
				0.007	0.015	0.013	0.011	0.015		

Y of Y 3-Sigma 25.0 nm.

X of Y 3-Sigma 25.9 nm.

Specification <0.030um for 3-Sigma.

Canon.	Mechanical PA Accuracy.	Customer	Alcatel Mietec
		Date	24 - 05 - 01
		Machine	FPA 3000i5+
		Serial Number	104 2756
		Reticle	365-01
		Wafer	Resist Pattern.

i4hp_user[39] MpaHelp

=====xl=====

Sample count = 25
 AVERAGE = 842.320
 3-SIGMA = 954.132

=====xr=====

Sample count = 25
 AVERAGE = 1545.880
 3-SIGMA = 1062.073

=====yl=====

Sample count = 25
 AVERAGE = 2737.560
 3-SIGMA = 2945.830

=====yr=====

Sample count = 25
 AVERAGE = 773.880
 3-SIGMA = 1043.398

=====END=====

i4hp_user[40]

Specification : < 30.0um for 3 Sigma.

Result :

	XL	YL	XR	YR
3 Sigma	0.95um	2.95um	1.06um	1.04um

May 25 09:41 2001

Sequence: Idle: Start Awaiting		OFFLIN		WARNING	
Inline:		Wafer:		500	
Warning:		1000-0-40-0 Main seq./ System/ EDC START		Open Frame Command: OFF	
DECORATION		Job Name		Page No.: 1/6	
Reticle ID		/CANONinstallation/ThroughputS0M4.job		Job Name	
Number of Wafer		1		Sequence Mode	
Sequence Mode		AGA		Focus Offset	
Focus Offset		0.00 um		Alignment Mode	
Alignment Mode		1[HeNe/Normal]		Exposure Dose	
Exposure Dose		2300.0 J/m2		Job Name	

Expo GOOD		AGA GOOD		Row : 0007		START TIME 00:00	
Expo FAIL		AGA FAIL		Column: 0002		END TIME 00:00	
Skip shot		AGA Warning		Number: 00		COMMAND RMS	
Dummy shot						COMMAND CL	
						COMMAND b1c	
						COMMAND tupa	
						COMMAND	

orientation flat = 47.50+-2.50 mm		orientation flat angle = 0.00 degree	
diameter = 150.00+-2.50 mm		column	
1 2 3 4 5 6 7		1 2 3 4 5 6 7	
1		2	
2		3	
3		4	
4		5	
5		6	
6		7	
7		8	

Expo GOOD		AGA GOOD		Row : 0007		START TIME 00:00	
Expo FAIL		AGA FAIL		Column: 0002		END TIME 00:00	
Skip shot		AGA Warning		Number: 00		COMMAND RMS	
Dummy shot						COMMAND CL	
						COMMAND b1c	
						COMMAND tupa	
						COMMAND	

START		RETICLE ALIGN		Joystick RA		TOOLS		COM-MAND		EXIT	
--------------	--	----------------------	--	--------------------	--	--------------	--	-----------------	--	-------------	--

	Throughput.	Customer	Alcatel Mietec
		Date	06 - 06 - 01
		Machine	FPA 3000i5+
		Serial Number	104 2754
		Reticle	365-04
		Wafer	Resist Wafer

```

tpd
Date           : Jun 8, '01 10:49:35
Machine        : FPA-3000 i5 Stepper_9
Job Name       : /Canon_AED/throughput.job
Tilt Compensation Mode : Die by Die
TVPA Measurement on Chuck : Bypass
Auto Focus Mode : Smoothing AF
Hot Line Interface(HLIF) : Enable
Loop Mode      : Open Loop
Performance    : Normal

```

```

wno - unload_wafer load_wafer tv_pre_align   aga      index [ms]   throughput[WPH]
1,      3381,      33792,      2777,      44114,      96412,
2,      3384,      5084,      1166,      3876,      24777,      145.3
3,      3379,      5070,      1160,      3835,      24630,      146.2
4,      3384,      5080,      1165,      3821,      24670,      145.9
5,      3399,      5168,      1162,      3854,      24798,      145.2

```

<SUMMARY>

```

      unload_wafer load_wafer tv_pre_align   aga      index [ms]   throughput[WPH]
ave.      3386,      5100,      1163,      3846,      24718,      145.6

```

```

wno 1st-step  step ##### ##### SF_posi SF_focus expo  shot [ms]
2,  563 , 228.2,  0.0,  0.0,  315.5,  16.5, 113.4, 341.6
3,  564 , 226.0,  0.0,  0.0,  312.8,  12.5, 112.9, 339.0
4,  562 , 226.2,  0.0,  0.0,  313.9,  11.0, 113.8, 340.1
5,  564 , 226.7,  0.0,  0.0,  313.9,  14.0, 113.2, 339.9
ave. 563.2, 226.8,  0.0,  0.0,  314.0,  13.5, 113.3, 340.2

```

i4>

```

tpd
Date           : Jun 8, '01 10:57:00
Machine        : FPA-3000 i5 Stepper_9
Job Name       : /Canon_AED/throughput.job
Tilt Compensation Mode : Bypass
TVPA Measurement on Chuck : Bypass
Auto Focus Mode : Smoothing AF
Hot Line Interface(HLIF) : Enable
Loop Mode      : Open Loop
Performance    : Normal

```

```

wno - unload_wafer load_wafer tv_pre_align   aga      index [ms]   throughput[WPH]
1,      3382,      33735,      2603,      41960,      93300,
2,      3383,      5061,      1171,      3877,      24631,      146.2
3,      3397,      5057,      1166,      3883,      24642,      146.1
4,      3380,      5084,      1175,      3850,      24636,      146.1
5,      3398,      5152,      1157,      3823,      24662,      146.0

```

<SUMMARY>

```

      unload_wafer load_wafer tv_pre_align   aga      index [ms]   throughput[WPH]
ave.      3389,      5088,      1167,      3858,      24642,      146.1

```

```

wno 1st-step  step ##### ##### SF_posi SF_focus expo  shot [ms]
2,  563 , 223.8,  0.0,  0.0,  310.9,  11.0, 113.7, 337.5
3,  563 , 224.0,  0.0,  0.0,  311.4,  11.0, 113.5, 337.5
4,  564 , 224.4,  0.0,  0.0,  311.5,  12.0, 113.3, 337.7
5,  563 , 224.0,  0.0,  0.0,  311.4,  11.6, 113.2, 337.3
ave. 563.2, 224.0,  0.0,  0.0,  311.3,  11.4, 113.4, 337.5

```

i4>

Specification : >120 WPH for 6" wafers 32 shots, Expo 0.90secs, Sub 0 Main 4 AGA Alignment..

Result :

	Die x Die Tilt On	Die x Die Tilt Off
WPH	145.6	146.1

Canon.**Multiple Illumination Mode Lens Heating Testing.****Lens Heating Test One - Wafer 1.**

NA	Sigma	Illumination	Mode No
0.63	0.65	Standard	NA

Data from fh01.mdat or eh01.mdat

Original Focus (Model 1) Coefficient - Machine (IC1)
Original Focus (Model 2) Coefficient - Machine (IC2)

4.396
2.434

Initial	(Sample 1)
Model 1 Offset	Model 2 Offset
-0.1	-0.3

Measured Wafer Focus.

	Initial	Heated	Cooled	Range
Focus um	0.0	-0.1	0.0	0.1
Focus nm	0.0	-100.0	0.0	100.0

Heated	(Sample 2)
Model 1 Offset	Model 2 Offset
-1152.1	-825.1

New Focus (Model 1) Coefficient - Machine (IC1)
New Focus (Model 2) Coefficient - Machine (IC2)

4.618
2.557

Cooled	(Sample 3)
Model 1 Offset	Model 2 Offset
-131.3	0.0

Lens Heating Adjustment	Test Completed
-------------------------	----------------

Lens Heating Test Two - Wafer 2.

NA	Sigma	Illumination	Mode No
0.52	0.60	Special	1

Data from fh01.mdat or eh01.mdat

Original Focus (Model 1) Coefficient - Machine (IC1)
Original Focus (Model 2) Coefficient - Machine (IC2)

4.548
3.299

Initial	(Sample 1)
Model 1 Offset	Model 2 Offset
0.0	0.0

Measured Wafer Focus.

	Initial	Heated	Cooled	Range
Focus um	0.1	0.2	0.1	0.1
Focus nm	100	200	100	100

Heated	(Sample 2)
Model 1 Offset	Model 2 Offset
-1792.0	-1694.1

New Focus (Model 1) Coefficient - Machine (IC1)
New Focus (Model 2) Coefficient - Machine (IC2)

4.418
3.204

Cooled	(Sample 3)
Model 1 Offset	Model 2 Offset
-204.3	0.0

Lens Heating Adjustment	Test Completed
-------------------------	----------------

Lens Heating Test Three - Wafer 3.

NA	Sigma	Illumination	Mode No
0.55	0.50	Special	2

Data from fh01.mdat or eh01.mdat

Original Focus (Model 1) Coefficient - Machine (IC1)
Original Focus (Model 2) Coefficient - Machine (IC2)

4.715
4.618

Initial	(Sample 1)
Model 1 Offset	Model 2 Offset
-201.5	-1.7

Measured Wafer Focus.

	Initial	Heated	Cooled	Range
Focus um	0.2	0.3	0.2	0.1
Focus nm	200	300	200	100

Heated	(Sample 2)
Model 1 Offset	Model 2 Offset
-1892.1	-2360.6

New Focus (Model 1) Coefficient - Machine (IC1)
New Focus (Model 2) Coefficient - Machine (IC2)

4.604
4.509

Cooled	(Sample 3)
Model 1 Offset	Model 2 Offset
-215.6	0.0

Lens Heating Adjustment	Test Completed
-------------------------	----------------

Lens Heating Test Four - Wafer 4.

NA	Sigma	Illumination	Mode No
0.52	0.70	Special	4

Data from fh01.mdat or eh01.mdat

Original Focus (Model 1) Coefficient - Machine (IC1)
Original Focus (Model 2) Coefficient - Machine (IC2)

4.495
2.672

Initial	(Sample 1)
Model 1 Offset	Model 2 Offset
-212.6	-2.3

Measured Wafer Focus.

	Initial	Heated	Cooled	Range
Focus um	0.2	0	0.1	0.2
Focus nm	200	0	100	200

Heated	(Sample 2)
Model 1 Offset	Model 2 Offset
-1625.3	-1229.0

New Focus (Model 1) Coefficient - Machine (IC1)
New Focus (Model 2) Coefficient - Machine (IC2)

4.810
2.859

Cooled	(Sample 3)
Model 1 Offset	Model 2 Offset
-185.3	0.0

Lens Heating Adjustment	Test Completed
-------------------------	----------------



Coma Adjustment Calculation.

Machine No :	104 2754	Reticle Used :	325	Feature Size :	0.35	um
Machine ID :	Stepper 9	Resist :	Olin	Feature Type :	Line & Space.	
Customer :	Alcatel Mitelec	Resist Thickness :	0.860	um	NA :	0.65
Date :	22nd May 2001.	Exposure Dose :	2500	J/m2	Sigma :	0.63
		Best Focus :	0.1	um	Focus Measured :	-0.3

Site Layout		
3	2	9
4	1	8
5	6	7

Site Layout

3	2	9
4	1	8
5	6	7

Site	Horizontal.						Vertical.									
	Botm. CD	Left	Right	X Left	X Right	Left	Right	Ang. Diff	Botm. CD	Left	Right	X Left	X Right	Left	Right	Ang. Diff
1	0.351	0.154	0.131	0.154	0.131	79.88	81.36	1.49	0.350	0.140	0.142	0.140	0.142	80.75	80.62	0.13
2	0.348	0.096	0.092	0.097	0.093	83.59	83.86	0.26	0.350	0.127	0.136	0.127	0.136	81.60	81.01	0.59
3	0.331	0.166	0.121	0.176	0.128	78.46	81.54	3.07	0.337	0.118	0.157	0.123	0.163	81.89	79.26	2.63
4	0.359	0.118	0.114	0.115	0.111	82.38	82.64	0.26	0.349	0.119	0.127	0.119	0.127	82.10	81.58	0.52
5	0.359	0.114	0.127	0.111	0.124	82.64	81.81	0.83	0.352	0.123	0.136	0.122	0.135	81.91	81.06	0.84
6	0.354	0.162	0.127	0.160	0.126	79.45	81.69	2.24	0.357	0.127	0.140	0.125	0.137	81.76	80.93	0.83
7	0.350	0.105	0.122	0.105	0.122	83.04	81.93	1.11	0.333	0.140	0.131	0.147	0.138	80.29	80.90	0.61
8	0.368	0.122	0.123	0.116	0.117	82.32	82.25	0.06	0.353	0.118	0.145	0.117	0.144	82.25	80.51	1.74
9	0.333	0.166	0.118	0.174	0.124	78.53	81.79	3.26	0.345	0.154	0.136	0.156	0.138	79.70	80.89	1.18

Maximum Coma Angle Error Horizontal	3.26	Degrees
Maximum Coma Angle Error Vertical	2.63	Degrees

Centre to Four Corners Horizontal	1.95	Degrees
Centre to Four Corners Vertical	1.08	Degrees

Specification : Centre and Four Corners <2.0 Degrees, Angle for All sites <3.5 Degrees.

Calculation of Coma Vector Angle and Magnitude For Calculation Software (Setch-Kun).

λ	0.045
Angle	95.0

Centre Vertical (Shift of Horizontal Line)	-1.49	< 2 degs	OK
Centre Horizontal (Shift of Vertical Line)	0.13	< 2 degs	OK
Angle	-5.0	Degrees	

