TECHNICAL SPEC FOR Stepper

System Model:
Canon FPA 3000 i5 SN 1042754

Tool has been shut down by Litho tech.
Electricity, cooling water, Vacuum and CCA are closed.
Cables between Main unit and power box are still connected, locking kit and demounting for transport to be provided by buyer.

Wafer size: 6 inch

Wafer type: Jeida flat

Chuck type: 6 inch pin chuck

Reticle changer type: Canon standard

Inline right or left: left

Particle checker (PPC): No

Touch panel type: Canon standard

Options:

Reticle size: 5 inch

Reticle alignment: see specs below

Wafer alignment: see specs below

Auto focus:see specs below

Auto feeder: Yes

Wafer tilt:

Wafer feeder: Yes

Track interface: Yes, tool was used inline, interface is track part

Laser: Hene

Lens data: see below

Stage and U-lens at shutdown
Intensity: 750 mW/cm2
Uniformity: 2.5%

Stage vibration data:

Used for 0.35micron line and space? Y

Chuck maintenance tool: No

Reticle bar code reader: Yes

Cassette bar code reader: No

SW Version:

OS:

Vintage: 2001

Missing/defective parts: none

Machine : Canon I3000 I5+			Ser no : 1042754			Stepper 9	
		Spec	Unit	Measurement	Margin (%)	Result
1. Illuminator							
Intensity							
Standard	>	10000	W/m2	11362	14	ok
Sia2	>	5500	W/m2	7965	45	ok
Uniformity							
Standard	<	1	%	0.352	65	ok
Sia2	<	1.3	%	0.373	71	ok
Dose control accuracy							
Linearity	<	0.5	%	0.13	74	ok
Accuracy	<	1	%	0.4	60	ok
Dose control Repeatability							
0.35 um	>	1	Cp	28 day test		
0.5 um	>	1.3	Cp	28 day test		
Dose Matching							
0.5 um	<	0.015	um	0.013	13	ok
0.8 um	<	0.015	um	0.011	27	ok
1 um	<	0.015	um	0.008	47	ok
Masking blade accuracy							
2,5 mm	<	100	um	60	40	ok
5,5 mm	<	100	um	65	35	ok
9 mm	<	100	um	80	20	ok
Reticle change time							
	<	60	s	40	33	ok

2. Exposure performance							
At 0.32 um							
	CD depth of focus	>	0.8	um	1.66	108	ok
	Wall angle depth of focus	>	0.8	um	1	25	ok
	Linearity to 0,32 um	<	10	%	5.31	47	ok
	Iso/Dense bias	<	0.05	um	0.033	34	ok
At 0.35 um							
	CD depth of focus	>	1.2	um	1.5	25	ok
	Wall angle depth of focus	>	0.6	um	0.68	13	ok
	Linearity to 0,35 um	<	10	%	7.12	29	ok
	Iso/Dense bias	<	0.05	um	0.033	34	ok
At 0.50 um							
	CD depth of focus	>	1.2	um	1.93	61	ok
	Wall angle depth of focus	>	1.2	um	1.3	8	ok
	Linearity to 0,32 um	<	10	%	4.49	55	ok
	Iso/Dense bias	<	0.05	um	0.035	30	ok
Linewidth repeatability wihin field							
	At 0,35 um		0,35 +/- 0,02	um	0.3649	63	ok
	At 0,5 um		0,5 +/- 0,025	um	0.5181	64	ok
Linewidth repeatability wihin wafer							
	At 0,35 um		0,35 +/- 0,02	um	0.3418		ok
	At 0,5 um		0,5 +/- 0,025	um	0.5105		ok
Distortion							
	dX standard illumination	<	0.035	um	0.017	51	ok
	dY standard illumination	<	0.035	um	0.025	29	ok
	dX SIA illumination	<	0.035	um	0.023	34	ok
	dY SIA illumination	<	0.035	um	0.026	26	ok
	dX SIA2 illumination	<	0.035	um	0.02	43	ok
	dY SIA2 illumination	<	0.035	um	0.024	31	ok
	dX SIB illumination	<	0.035	um	0.024	31	ok
	dY SIB illumination	<	0.035	um	0.029	17	ok

3. Auto Focus Accuracy							
Stability over 28 days							
		<	0.3	um	28 days		
Global levelling stability							
	X	<	7	ppm	1.8	74	ok
	Y	<	7	ppm	1.4	80	ok
Global tilt accuracy							
	X	<	7	ppm	1	86	ok
	Y	<	7	ppm	0.9	87	ok
Die by Die levelling stability							
		<	0.1	um	0.03	70	ok
Die by Die levelling repeatability							
	X	<	7	ppm	3	57	ok
	Y	<	7	ppm	3.8	46	ok
4. Auto alignment accuracy							
Reticle rotation accuracy							
	accuracy	<	10	nm	4	60	ok
	repeatability	<	20	nm	13	35	ok
Auto alignment accuracy (single eq)							
	Mode 1	<	40	nm	37	8	ok
	Mode 4	<	40	nm	38	5	ok
Auto alignment accuracy (M to M)							
	Mode 1	<	90	nm	76	16	ok
	Mode 4	<	90	nm	77	14	ok
5. XY stage							
stepping accuracy Nstep X							
	X	<	30	nm	17.3	42	ok
	Y	<	30	nm	12.6	58	ok
stepping accuracy Nstep Y							
	X	<	30	nm	25	17	ok
	Y	<	30	nm	25.9	14	ok
6. Prealignment accuracy							
mechanical prealignment accuracy							
	XL	<	30	um	0.95	97	ok
	YL	<	30	um	2.95	90	ok
	XR	<	30	um	1.06	96	ok
	YR	<	30	um	1.04	97	ok