

Sector Survey Before Bonding

Survey Dim Name	X axis	Survey Dim Name	Y Axis (outer bushing = 0)	Survey Dim Name	Dia	Description	Comments
	0.00	F	-668.60			Strongback Bottom Edge	
	0.00	G	-642.11			Tooling Ball Bushing, Bottom	inner tooling ball
			-688.85	H	0.5003 ±0.0002	Tooling Ball Bushing Diameter, Inner	
I	12.70	J	-620.52			Optical target bushing, Bottom	small bushing on the back of the strongback
K	-98.93	L	-223.90			Optical target bushing, L	small bushing on the back of the strongback
M	98.93	N	-223.90			Optical target bushing, R	small bushing on the back of the strongback
	0.00		0.00			Tooling Ball Bushing, Top	outer tooling ball, <u>fixed ball on CMM fixture</u>
			-688.85	P	0.5003 ±0.0002	Tooling Ball Bushing Diameter, Outer	
	0.00	Q	26.67			Strongback Top Edge	

Pad Plane Survey (after trimming): To be done on every sector

Survey Dim Name	X axis	Survey Dim Name	Y Axis (outer bushing = 0)	Survey Dim Name	Description	Comments
R	0.00	S	-647.40		Secondary Fiducial	
	-129.79	T	-643.65		Comb Alignment fiducial mark, L	
	129.79	U	-643.65		Comb Alignment fiducial mark, R	
	-218.50	V	-311.65		Comb Alignment fiducial mark, L	at Row 21
	218.50	W	-311.65		Comb Alignment fiducial mark, R	at Row 21
X	0.00	Y	-8.20		Primary Fiducial	
	-302.67	Z	8.35		Comb Alignment fiducial mark, L	
	302.67	AA	8.35		Comb Alignment fiducial mark, R	
AB	0.00	AC	17.20		Alternate Primary Fiducial	
	0.00	AD	26.67		Strongback Top Edge	

Gated Grid Solder Dot Survey: To be done on every sector

Survey Dim Name	X axis	Survey Dim Name	Y Axis (outer bushing = 0)	Survey Dim Name	Description	Comments
AE	138.35	AF	-657.65		GG solder dot (bottom of board)	
AG	138.89	AH	-655.65		GG solder dot	
AI	139.43	AJ	-653.65		GG solder dot	
AH	142.11	AI	-643.65		GG solder dot	
AJ	231.07	AK	-311.65		GG solder dot	
AL	316.81	AM	8.35		GG solder dot	
AN	309.18	AO	18.35		GG solder dot	
AP	320.02	AQ	20.35		GG solder dot	
AR	320.56	AS	22.35		GG solder dot (top of board)	

Pad Survey: To be done on all sectors

To be achieved by finding the line defined by the edge of each pad, the line at the top and the line at the bottom of each pad, and then calculating the intersection at the lower left corner and upper right corner of the pad. Intersection points listed, below.

Survey Dim Name	X axis	Survey Dim Name	Y Axis (outer bushing = 0)	Survey Dim Name	Description	Comments
AT	-129.75	AU	-621.40		Lower Left Corner of Pad 2	Pad Row 2
AV	-124.75	AW	-621.40		Lower Left Corner of Pad 3	Pad Row 2
AX	120.25	AY	-621.40		Lower Left Corner of Pad 52	Pad Row 2
AZ	125.25	BA	-621.40		Lower Left Corner of Pad 53	Pad Row 2
BB	-125.25	BC	-605.90		Upper Right Corner of Pad 2	Pad Row 2
BD	-120.25	BE	-605.90		Upper Right Corner of Pad 3	Pad Row 2
BF	124.75	BG	-605.90		Upper Right Corner of Pad 52	Pad Row 2
BH	129.75	BI	-605.90		Upper Right Corner of Pad 53	Pad Row 2
BJ	-134.75	BK	-605.40		Lower Left Corner of Pad 2	Pad Row 3
BL	-129.75	BM	-605.40		Lower Left Corner of Pad 3	Pad Row 3
BN	125.25	BO	-605.40		Lower Left Corner of Pad 54	Pad Row 3
BP	130.25	BQ	-605.40		Lower Left Corner of Pad 55	Pad Row 3
BR	-130.25	BS	-589.90		Upper Right Corner of Pad 2	Pad Row 3
BT	-125.25	BU	-589.90		Upper Right Corner of Pad 3	Pad Row 3
BV	129.75	BW	-589.90		Upper Right Corner of Pad 54	Pad Row 3
BY	134.75	BZ	-589.90		Upper Right Corner of Pad 55	Pad Row 3
CA	-209.75	CB	-333.40		Lower Left Corner of Pad 2	Pad Row 20
CC	-204.75	CD	-333.40		Lower Left Corner of Pad 3	Pad Row 20
CE	-4.75	CF	-333.40		Lower Left Corner of Pad 43	Pad Row 20
CG	0.25	CH	-333.40		Lower Left Corner of Pad 44	Pad Row 20
CI	200.25	CJ	-333.40		Lower Left Corner of Pad 84	Pad Row 20
CK	205.25	CL	-333.40		Lower Left Corner of Pad 85	Pad Row 20
CM	-205.25	CN	-317.90		Upper Right Corner of Pad 2	Pad Row 20
CO	-200.25	CP	-317.90		Upper Right Corner of Pad 3	Pad Row 20
CQ	-0.25	CR	-317.90		Upper Right Corner of Pad 43	Pad Row 20
CS	4.75	CT	-317.90		Upper Right Corner of Pad 44	Pad Row 20
CU	204.75	CV	-317.90		Upper Right Corner of Pad 84	Pad Row 20
CW	209.75	CX	-317.90		Upper Right Corner of Pad 85	Pad Row 20
CY	-209.75	CZ	-317.40		Lower Left Corner of Pad 2	Pad Row 21
DA	-204.75	DB	-317.40		Lower Left Corner of Pad 3	Pad Row 21
DC	-4.75	DD	-317.40		Lower Left Corner of Pad 43	Pad Row 21
DE	0.25	DF	-317.40		Lower Left Corner of Pad 44	Pad Row 21
DG	200.25	DH	-317.40		Lower Left Corner of Pad 84	Pad Row 21
DI	205.25	DI	-317.40		Lower Left Corner of Pad 85	Pad Row 21
DK	-205.25	DL	-301.90		Upper Right Corner of Pad 2	Pad Row 21
DM	-200.25	DN	-301.90		Upper Right Corner of Pad 3	Pad Row 21
DO	-0.25	DP	-301.90		Upper Right Corner of Pad 43	Pad Row 21
DQ	4.75	DR	-301.90		Upper Right Corner of Pad 44	Pad Row 21
DS	204.75	DT	-301.90		Upper Right Corner of Pad 84	Pad Row 21
DU	209.75	DV	-301.90		Upper Right Corner of Pad 85	Pad Row 21
DW	-284.75	DX	-45.40		Lower Left Corner of Pad 2	Pad Row 38
DY	-279.75	DZ	-45.40		Lower Left Corner of Pad 3	Pad Row 38
EA	275.25	EB	-45.40		Lower Left Corner of Pad 114	Pad Row 38
EC	280.25	ED	-45.40		Lower Left Corner of Pad 115	Pad Row 38
EF	-280.25	EG	-29.90		Upper Right Corner of Pad 2	Pad Row 38
EH	-275.25	EI	-29.90		Upper Right Corner of Pad 3	Pad Row 38
EJ	279.75	EK	-29.90		Upper Right Corner of Pad 114	Pad Row 38

EL	284.75	EM	-29.90			Upper Right Corner of Pad 115	Pad Row 38
EN	-289.75	EO	-29.40			Lower Left Corner of Pad 2	Pad Row 39
EP	-284.75	EQ	-29.40			Lower Left Corner of Pad 3	Pad Row 39
ER	280.25	ES	-29.40			Lower Left Corner of Pad 116	Pad Row 39
ET	285.25	EU	-29.40			Lower Left Corner of Pad 117	Pad Row 39
EV	-285.25	EW	-13.90			Upper Right Corner of Pad 2	Pad Row 39
EX	-280.25	EY	-13.90			Upper Right Corner of Pad 3	Pad Row 39
EZ	284.75	FA	-13.90			Upper Right Corner of Pad 116	Pad Row 39
FB	289.75	FC	-13.90			Upper Right Corner of Pad 117	Pad Row 39

Centerline of the Pad Plane and Pad Corners

Survey Dim Name	X axis	Survey Dim Name	Y Axis (outer bushing = 0)	Survey Dim Name		Description	Comments
FD	0.00	FE	-637.40			Inside Middle of Pads	Form by the following method - Line fit to inside edges of Row 1, Pads 25-28 - Mid line between line fit to Row 1 Pad 26, Row 2 Pad 27 and line fit to Row 1 Pad 27, Row 2 Pad 28 - Intersection of mid Line and line fit to inside edges
FF	0.00	FG	2.10			Outside Middle of Pads	Form by the following method - Line fit to outside edges of Row 40, Pads 59-62 - Mid line between line fit to Row 39 Pad 59, Row 40 Pad 60 and line fit to Row 39 Pad 60, Row 40 Pad 61 - Intersection of mid Line and line fit to outside edges
FH	-9.75	FI	-637.40			Lower Left Corner of Pad 25	Pad Row 1
FJ	-5.25	FK	-621.90			Upper Right Corner of Pad 25	Pad Row 1
FL	-4.75	FM	-637.40			Lower Left Corner of Pad 26	Pad Row 1
FN	-0.25	FO	-621.90			Upper Right Corner of Pad 26	Pad Row 1
FP	0.25	FQ	-637.40			Lower Left Corner of Pad 27	Pad Row 1
FR	4.75	FS	-621.90			Upper Right Corner of Pad 27	Pad Row 1
FT	5.25	FU	-637.40			Lower Left Corner of Pad 28	Pad Row 1
FV	9.75	FW	-621.90			Upper Right Corner of Pad 28	Pad Row 1
FX	-4.75	FY	-621.40			Lower Left Corner of Pad 27	Pad Row 2
FZ	-0.25	GA	-605.90			Upper Right Corner of Pad 27	Pad Row 2
GB	0.25	GC	-621.40			Lower Left Corner of Pad 28	Pad Row 2
GD	4.75	GE	-605.90			Upper Right Corner of Pad 28	Pad Row 2
GF	-9.75	GG	-29.40			Lower Left Corner of Pad 59	Pad Row 39
GH	-5.25	GI	-13.90			Upper Right Corner of Pad 59	Pad Row 39
GJ	-4.75	GK	-29.40			Lower Left Corner of Pad 60	Pad Row 39
GL	-0.25	GM	-13.90			Upper Right Corner of Pad 60	Pad Row 39
GN	-9.75	GO	-13.40			Lower Left Corner of Pad 59	Pad Row 40
GP	-5.25	GQ	2.10			Upper Right Corner of Pad 59	Pad Row 40
GR	-4.75	GS	-13.40			Lower Left Corner of Pad 60	Pad Row 40
GT	-0.25	GU	2.10			Upper Right Corner of Pad 60	Pad Row 40
GV	0.25	GW	-13.40			Lower Left Corner of Pad 61	Pad Row 40
GX	4.75	GY	2.10			Upper Right Corner of Pad 61	Pad Row 40
GZ	5.25	HA	-13.40			Lower Left Corner of Pad 62	Pad Row 40
HB	9.75	HC	2.10			Upper Right Corner of Pad 62	Pad Row 40
HD	-0.25	HE	-77.90			Lower Left Corner of Pad 30	Pad Row 5
HF	-4.75	HG	-93.40			Upper Right Corner of Pad 30	Pad Row 5
HH	-0.25	HI	-557.90			Lower Left Corner of Pad 55	Pad Row 35
HJ	-4.75	HK	-573.40			Upper Right Corner of Pad 55	Pad Row 35

Features Inspected After Pad Plane Bonding and Before Trimming (get trimmed off)

Survey Dim Name	X axis	Survey Dim Name	Y Axis (outer bushing = 0)	Survey Dim Name		Description	Comments
HL	0.00	HM	-679.65			Bond Fixture Hole, Bottom	
HN	-129.97	HO	-674.95			Bottom Optical Target, L	
HP	129.97	HQ	-674.95			Bottom Optical Target, R	
HR	-229.41	HS	-303.87			Center Optical Target, L	
HT	229.41	HU	-303.87			Center Optical Target, R	
HV	-319.68	HW	33.02			Top Optical Target, L	
HX	319.68	HY	33.02			Top Optical Target, R	
HZ	0.00	IA	37.35			Bond Fixture Hole, Top	