

**SPECIALIST DETECTORS FOR NUCLEAR PHYSICS**

SILICON DETECTOR TYPE: DOUBLE SIDED DC MICROSTRIP DETECTOR

TECHNOLOGY: 3 & 4 INCH SILICON

DESIGN: Ion implanted totally depleted double sided DC nominal structure. Detector thickness range is from 65 µm to 1500 µm subject to design selected.

EXPERIMENT	LEAR CERN	NASA	NASA	ARGONNE	INDIANA	NASUDA
DESIGN	<b>BB1</b>	<b>BB2</b>	<b>BB4</b>	<b>BB5</b>	<b>BB7</b>	<b>BB8</b>
ACTIVE	16 cm <sup>2</sup>	5.67 cm <sup>2</sup>	33 cm <sup>2</sup>	10.24 cm <sup>2</sup>	40.90 cm <sup>2</sup>	4.0 cm <sup>2</sup>
ACTIVE DIMENSIONS	40 x 40 mm <sup>2</sup>	24 x 24 mm <sup>2</sup>	65 mm ●	32 x 32 mm <sup>2</sup>	~64 x 64 mm <sup>2</sup>	20 x 20 mm
N <sup>o</sup> CHANNELS	80 (40/side)	48 (24/side)	128 (64/side)	160 (80/side)	64 (32/side)	32 (16/side)
ELEMENT PITCH	1000 µm	1000 µm	1000 µm	400 µm	2000 µm	1250 µm
READOUT	100 %	100 %	100 %	100 %	100 %	100 %
SPACE QUALIFIED	NO	YES	YES	NO	NO	YES

PART DESIGNATION: Add thickness after design identification e.g. BB7 - 1500  
 THICKNESS: 65 µm 140 µm 300 µm 500 µm 1000 µm 1500 µm  
 FULL DEPLETION (FD): 30 V 30 V 30 V 75 V 200 V 350 V  
 OPERATING PLATEAU: FD to FD + 30 V  
 ELEMENT CAPACITANCE: 20 pF typical  
 ELEMENT LEAKAGE CURRENT: 50 nA typically, 200 nA maximum  
 TOTAL LEAKAGE CURRENT: 1 µA typically, 3 µA maximum  
 TOTAL ALPHA RESOLUTION: 55 KeV typically (Am241)  
 DAISY CHAINING: YES  
 METALLISING: 3000 Å  
 METALLISING TOLERANCE: ±1000 Å  
 OXIDE WIDTH: Subject to detector thickness selected  
 OTHER DESIGNS: UHV versions with interstrip resistors  
 Ceramic with silicon leading edge of 500 µm

QUALITY ASSURANCE :ISO9001

