

SPECIALIST DETECTORS FOR NUCLEAR PHYSICS

SILICON DETECTOR TYPE: DOUBLE SIDED AC DETECTOR

TECHNOLOGY: 4 INCH SILICON

DESIGN: Double sided AC coupled orthogonal R θ and RZ readout with poly silicon bias resistors.

EXPERIEMNT: BABAR

PART DESIGNATION:	BBBI	II	III	IV	V	VI
ACTIVE DIMENSIONS R θ (mm):	41	49	71	53	53	53
ACTIVE DIMENSIONS RZ (mm):	42	45	44	68	54	68
STRIP PITCH R θ (μ m):	50	55	55	50	50	50 – 41
STRIP PITCH RZ (μ m):	50	50	50	105	100	100
N ^o of STRIP R θ	799	874	1275	1023	1023	1023
N ^o of STRIP RZ	821	881	859	631	525	667

THICKNESS: 300 μ m

THICKNESS TOLERANCE: \pm 15 μ m

THICKNESS UNIFORMITY: \pm 5 μ m

FULL DEPLETION (FD): 20 V

OPERATING VOLTAGE: FD to 3 x FD

COUPLING CAPACITANCE: 200 pF

BIAS RESISTOR: 5 M Ω

ELEMENT LEAKAGE CURRENT: 1 nA

TOTAL CURRENT: 3 μ A maximum

GUARD RING: 10 nA

METALLISATION: 0.8 μ m

METALLISATION TOLERANCE: \pm 0.1 μ m

PACKAGE: Chip only

RADIATION HARDNESS: 1 M Rad

GRADES:

GRADE A+	Experimental 99 % minimum/side
GRADE A	Experimental 97 % minimum/side
GRADE B+	Study 90 % minimum/side
GRADE B	Trial 80 % minimum/side
GRADE C	Mechanical – Non operational

QUALITY ASSURANCE :ISO9001

