

SPECIALIST DETECTORS FOR NUCLEAR PHYSICS

SILICON DETECTOR TYPE: SINGLE SIDED COURSE MICROSTRIP DETECTOR
 TECHNOLOGY: 3 INCH SILICON
 DESIGN: Ion implanted totally depleted DC coupled microstrip design with strip pitch 100 – 650 μm and 16 to 64 channels. The device features ultra low dark currents and excellent radiation hardness. The standard course pitch microstrips have been used extensively in major physics experiments.

DESIGN	EE1	EE2	EE3	EE4
EXPERIMENT	FRASCATI	ALEPH	UA2	LHC
ACTIVE AREA	12.5 cm ²	10 cm ²	5.2 cm ²	5.7 cm ²
ACTIVE DIMENSION	62.4 x 2 mm ²	50 x 20 mm ²	16 x 32 mm ²	23.9 x 23.9 mm ²
N ^o CHANNELS	96	40	16	64
ELEMENT LENGTH	20 mm	50 mm	32 mm	24mm
ELEMENT PITCH	650 μm	500 μm	100 μm	375 μm

THICKNESS: 70, 140, 300, 500 and 1000 μm
 THICKNESS TOLERANCE: $\pm 50 \mu\text{m}$
 THICKNESS UNIFORMITY: $\pm 5 \mu\text{m}$

FULL DEPLETION (FD): 30 V typical, 60 V max
 OPERATING VOLTAGE: FD to 2 x FD
 ELEMENT CAPACITANCE: 80 pF/cm 40 pF/cm 25 pF/cm
 ELEMENT LEAKAGE
 CURRENT: 1 nA typically, 15 nA maximum
 TOTAL LEAKAGE CURRENT: 200 nA typically, 300 nA maximum

METALLISING: 3000 Å
 METALLISING TOLERANCE: $\pm 1000 \text{ Å}$
 OXIDE EDGE WIDTH: 500 μm

RADIATION HARDNESS: Neutrons $\Delta I_R = \alpha \theta V$
 $\alpha = 3.7 \times 10^{-17} \text{ A/cm}$ typically
 $\theta = \text{Fluence}$
 $V = \text{Volume}$

CHIP ONLY PROBE TESTING: Yes
 PACKAGED: EE1 and EE2 only
 PACKAGE: PCB
 MINIMUM ACCEPTANCE LEVEL: 100 %

ADDITIONAL OPTIONS: Silox scratch proof coating

QUALITY ASSURANCE :ISO9001

