

SPECIALIST DETECTORS FOR NUCLEAR PHYSICS

SILICON DETECTOR TYPE:	QUADRANT DETECTOR
DESIGN	Totally depleted ion implanted structures with multi-guard rings for over voltage operation.
PART DESIGNATION:	MSQ25-65, MSQ25-140, MSQ25-300, MSQ25-500, AND MSQ25-1000
TECHNOLOGY:	4 INCH SILICON
N ^o of ELEMENTS:	4
N ^o of OUTPUTS:	5
ELEMENT ACTIVE AREA:	2500 mm ²
TOTAL QUADRANT SECTOR AREA:	24.975 x 24.975 mm ²
QUADRANT SECTOR SEPARATION:	50 μm
CHIP DIMENSIONS:	52.02 x 52.02 mm ² 53.02 x 53.02 mm ² 57.02 x 57.02 mm ²
THICKNESS:	65 μm, 140 μm, 300 μm, 500 μm and 1000 μm
FULL DEPLETION OPERATION VOLTAGE:	10 – 250 V Subject to thickness
RISE TIME:	50 ns maximum
INTER QUADRANT:	
RESISTANCE:	1 MΩ
RESOLUTION (Am 241):	Junction 55 KeV typical, 75 KeV maximum FWHM Ohmic 75 KeV typical, 100 KeV maximum FWHM
QUADRANT SECTOR NOISE:	15 KeV FWHM (1 μs TC)
ELEMENT (μs T.C):	20 KeV
METALLISATION:	Aluminum 3000Å
CONTACTS:	Metallisation on the active area element 100 % metallisation on back
MINIMUM ACCEPTANCE	100 % elements operational

PCB STANDARD:

Material – FR4

Thickness -1.6, 2.4 or 3.2 mm

Dimensions -70 x 70 mm²

Mountings - 4 holes 2.5 mm at corners

Aperture - 50 x 50 mm²

Connectors -Cambion 460-1521-02-03-00

Connections - 4 to active area, 2 to ground

PCB CUSTOM:

1. Material – FR4

Thickness - 2.4 mm

Dimensions – 59.0x 59.0 mm²

Aperture - 50 x 50 mm²

Connectors–Cambion 460-2599-04-03-00

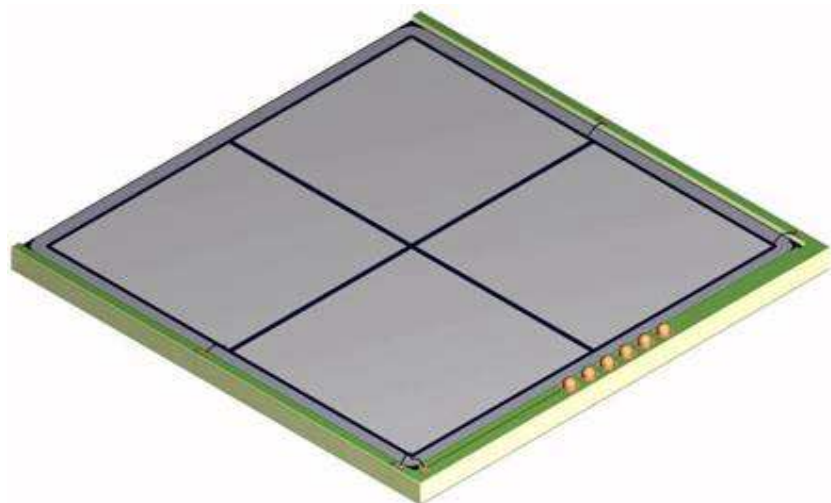
2. Material – FR4

Thickness – 1.6, 2.4 or 3.2 mm

Dimensions – 55.4 x 55.4 mm²

Connectors–Cambion 450-3703-01-03-00

Aperture - 50 x 50 mm²



MSQ25-1000 with PCB custom package 2

EXPERIMENT: CERN ISOLDE

QUALITY ASSURANCE :ISO9001

