DESIGN MSX SERIES

CUSTOM SILICON PAD DETECTORS

SILICON DETECTOR TYPE: SINGLE AREA

DESIGN: Totally depleted ion implanted structures.
Micron Semiconductor's ultra low leakage currents and thin entrance window couples with fast response from total depletion with over voltage capability permits a wide range of applications for these single area detectors. For example, High Energy Physics, Fission Fragments Detection, Room Temperature X-ray Detection, Gamma Transient Detection, Heavy Ion Physics and Nuclear Structure Physics.

SINGLE SIDED MSX SERIES: Extensive range of single area detectors.

DESIGN	ACTIVE AREA DIMENSION (mm)	CHIP DIMENSIONS (mm)	WINDOW	GUARD RING DESIGN	WAFER TECHNOLOGY (inch)	PACKAGE
MSX00	4.25 x 1.75	6.25 x 3.75	Standard	Multi	4	Chip Only
MSX004	2.0 x 2.0	4.0 x 4.0	Standard	Single & Multi	6	Chip Only
MSX014	7.0 x 2.0	9.0 x 4.0	Standard	Multi	6	Chip Only
MSX7*	2.646 x 2.646	4.646 x 4.646	Standard & Thin	Multi	4 & 6	Chip Only
MSX029	1.7 x 1.7	3.7 x 3.7	Thin	Multi	4	Chip Only
MSX031*	3.162 x 3.162	6.162 x 6.162	Standard & Thin	Multi	4	Chip Only
MSX4x4*	4.0 x 4.0	6.0 x 6.0	Standard & Thin	Multi	4	Chip Only
MSX02	5.25 x 2.75	6.05 x 3.3	Standard	Single		T05
MSX03*	10.0 x 10.0 17.0 x 17.0	~13 x 13 ~21.0 x 21.0	Standard & Thin	Multi	4 & 6	PCB
MSX04	20.0 x 20.0	22.95 x 22.95	Standard	Single	4	PCB
MSX05	5.0 x 5.0	7.0 x 7.0	Standard	Multi	6	Chip Only
MSX07	7.0 x 3.0	7.74 x 3.74	Standard	Single	3	Chip Only
MSX072	9.0 x 8.0	11.0 x 10.0	Standard	Multi	6	Chip Only
MSX09	30.0 x 30.0	~33.0 x 33.0	Standard	Single & Multi	4	PCB
MSX25	50.0 x 50.0	50.4 x 50.4	Standard	Single	3	PCB
MSX35	50.0 x 70.0	52 x 72	Standard	Multi	4	PCB
MSX100	100.0 x 100.0	102.0 x 102.0	Standard	Multi	6	PCB

*Available as optical or nuclear devices

DESIGNATION EXAMPLE: MSX003-300

SILICON THICKNESS
3 INCH WAFERS: 20 µm
4 INCH WAFERS: 65, 140, 250, 300, 500 and 1000 µm
6 INCH WAFERS: 200, 300 and 400 µm

RADIATION HARDNESS: Survival to 10^{14} Neutrons, 10^{15} Protons

CAPACITANCE: Subject to depletion depth e.g. 40 pF/cm for 300 µm

LEAKAGE CURRENT: 1 nA/cm to 8 nA/cm subject to active area and depletion depth.

WINDOW: Thin 0.1 µm Standard 0.5 µm

OPERATING TEMPERATURE RANGE: -65°C to +125°C

ENVIRONMENTAL TESTING OPTIONS: Space qualified, military, industrial, research, physics project

QUALITY ASSURANCE :ISO9001