

SPECIALIST DETECTORS FOR NUCLEAR PHYSICS

SILICON DETECTOR TYPE:	MICROSTRIP DETECTOR				
DESIGN:	Totally depleted ion implanted structure with over voltage operation. Includes guard-rings for high voltage operating plateau. This design is similar to Design I with 7 channels instead of 28.				
PART DESIGNATION:	DESIGNJ-140, DESIGNJ-500-GR and DESIGNJ-1000-GR				
TECHNOLOGY:	4 INCH SILICON				
N ^o of ELEMENTS:	28				
N ^o of OUTPUTS:	30				
TOTAL ACTIVE AREA:	60 x 40 mm ²				
PITCH:	2.14 mm				
SECTOR SEPARATION:	100 μm				
THICKNESS:	65 μm	140 μm	300 μm	500 μm	1000 μm
FULL DEPLETION OPERATION VOLTAGE:	30 V	30 V	30 V	80 V	200 V
LEAKAGE CURRENT (FD):	10 nA/strip typically, 100 nA/strip maximum				
INTERSTRIP RESISTANCE:	100 MΩ typical, 10 MΩ minimum				
TOTAL RESOLUTION (Am 241):	55 KeV typical, 159 KeV maximum FWHM subject to thickness/capacitance				
QUADRANT SECTOR NOISE:	15 KeV FWHM (1 μs TC)				
RADIATION HARDNESS:	1 nA/cm/100 Rads (Grays) Protons				
DETECTOR ASSEMBLY PACKAGE:	One edge PCB (G10) support with three leading edge silicon sides				
CONNECTIONS:	30 vertical pins (mating sockets for PCB insets available on request)				
GUARD RING DESIGN:	Includes Guard Ring for higher voltage plateau				
ACCEPTANCE LEVEL:	100 % operational on all channels				
USER OF THIS DESIGN:	INDIANA UNIVERSITY				

QUALITY ASSURANCE :ISO9001

