

SDIP Detectors

1. Type List and Main Characteristics

Parameter / Model	SDIP-80	SDIP-200Q	SDIP-200C	SDIP-450	SDIP-600	SDIP-900	SDIP-1200	SDIP-2000
Chip geometry	octagon	quadratic	quadratic	octagon	octagon	octagon	octagon	octagon
Junction geometry	circular	quadratic	circular	circular	circular	circular	circular	circular
Junction area (mm ²)	80	193	204	452	685	1005	1320	2150
Depletion depth	min. 220 μm (@ 35 V)							
Bias (typical)	20 - 50 V; reference: 35 V							
Capacitance	< 50 pF/cm ² (@ 35 V)							
Reverse current	< 50 nA/cm ² (@ 35 V)							
Detectors for high-resolution spectroscopy: Series A								
Window thickness	< 100 nm Si equivalent							
Alpha resolution (keV) ¹⁾	15	20	20	25	30	35	40	50
Electronic noise (keV) ²⁾	8	12	12	18	22	25	30	40
Detectors for standard spectroscopy and particle counting: Series E								
Window thickness	< 600 nm Si equivalent ³⁾							
Alpha resolution (keV) ¹⁾	20	30	30	40	45	55	65	100
Electronic noise (keV) ²⁾	10	20	20	30	35	40	50	70
Beta threshold (keV)	30	60	60	90	105	120	150	210

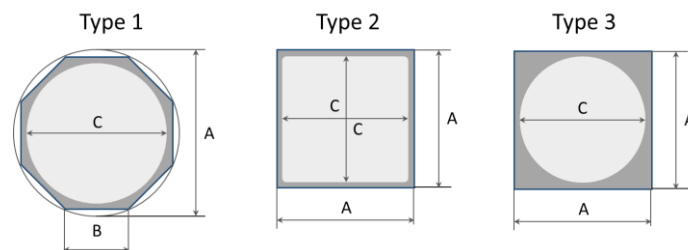
1) FWHM, using spectroscopic alpha source E » 5.5 MeV, vacuum conditions, normal incidence, spectroscopic electronics

2) FWHM pulser peak, using state-of-the-art charge-sensitive preamplifier with resolution < 3 keV (@ 0 pF) and < 12 keV (@ 1000 pF)

3) Detectors with light-tight contact which can be used under moderate light conditions

2. Chip and Detector Geometries

Model	SDIP-80	SDIP-200Q	SDIP-200C	SDIP-450	SDIP-600	SDIP-900	SDIP-1200	SDIP-2000
Type	1	2	3	1	1	1	1	1
A (mm)	13,00	15,10	18,00	28,10	34,20	40,90	47,60	58,60
B (mm)	4,98	\	\	10,75	13,09	15,66	18,23	22,43
C (mm)	10,29	14,00	16,20	24,00	29,60	35,80	41,10	52,40



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