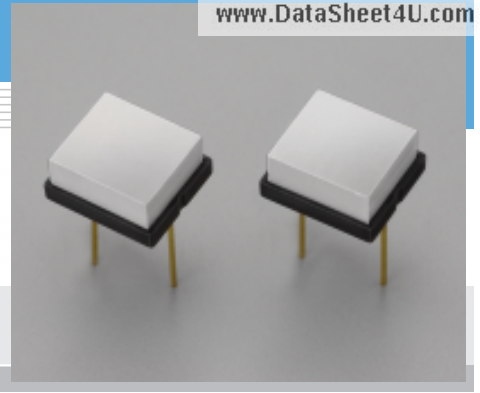


Si photodiode

S8559

Detector for X-ray monitor



Features

- Si photodiode coupled to low cost CsI scintillator
- Ideal for detection of X-ray energy below 100 keV

Applications

- X-ray detection
- X-ray monitors

■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	VR Max.	5	V
Operating temperature	Topr	-10 to +60	°C
Storage temperature	Tstg	-20 to +70	°C

■ Electrical and optical characteristics (without scintillator, Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	190 to 1000	-	nm
Peak sensitivity wavelength	λ_p			720	-	nm
Photo sensitivity	S	$\lambda=500$ nm	-	0.26	-	A/W
Dark current	ID	VR=10 mV	-	2	50	pA
Terminal capacitance	Ct	VR=0 V, f=10 kHz	-	950	-	pF

■ X-ray sensitivity (reference value, tube current: 1.0 mA, aluminum filter: t=6 mm, distance=830 nm)

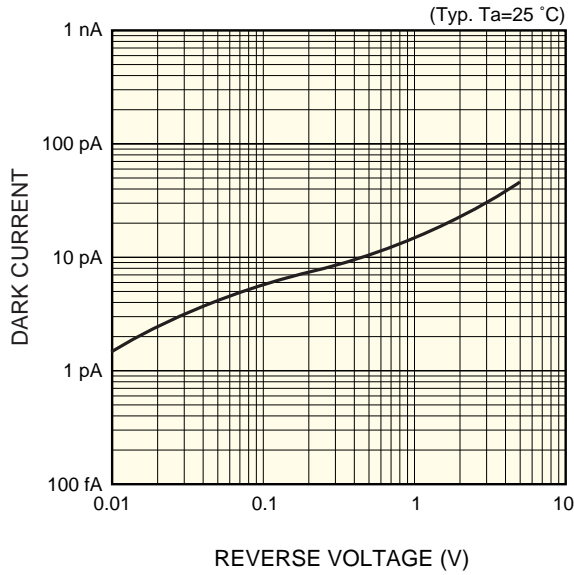
X-ray tube voltage	Typ.	Unit
120 kV	52	nA

Note) Depends on equipment and measurement conditions.

Handling precautions

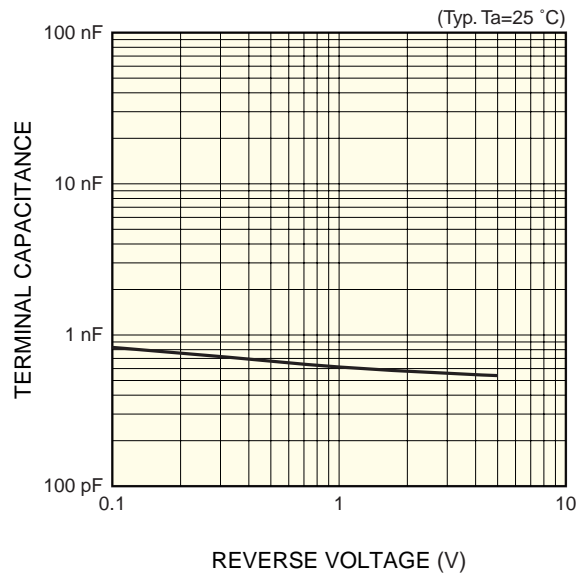
Avoid storing or using S8559 at high humidity because CsI scintillator has deliquescence.

■ Dark current vs. reverse voltage



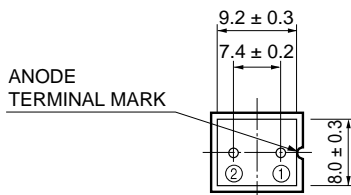
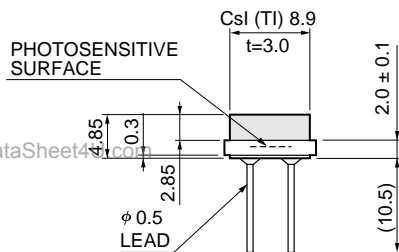
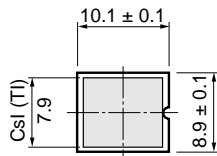
KSPDB0152EA

■ Terminal capacitance vs. reverse voltage



KSPDB0153EA

■ Dimensional outline (unit: mm)



KSPDA0145EA

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