

Si photodiode S2281 series

Si photodiode with BNC connector



S2281 series is Si photodiodes sealed in a metal package with a BNC connector. This configuration allows easy connection to Hamamatsu C2719 photosensor amplifier (S2281-01 cannot be connected). Two different spectral response characteristics are provided and the large active area makes S2281 series well suited for optical power meters. A variant type S7160 with a visual compensation filter is also available. Hamamatsu also provides E2573 BNC-BNC coaxial cable (length: 1 m) as an option.

Features

- Metal package with BNC connector
- High sensitivity
- High reliability

Applications

- Analytical instruments
- Optical measurement equipment

General ratings

Parameter	S2281	S2281-01	S2281-04	Unit
Active area size	φ11.3	φ11.3	φ7.98	mm
Active area	100	100	50	mm ²
Package	Metal package with BNC connector			-
Window material	Quartz glass			-

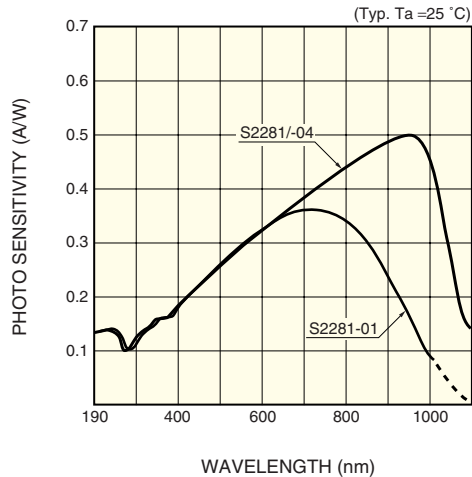
Absolute maximum ratings

Parameter	Symbol	S2281	S2281-01	S2281-04	Unit
Reverse voltage	V _R Max.	5			V
Operating temperature	T _{opr}	-10 to +60			°C
Storage temperature	T _{stg}	-20 to +70			°C

Electrical and optical characteristics (T_a=25 °C, unless otherwise noted)

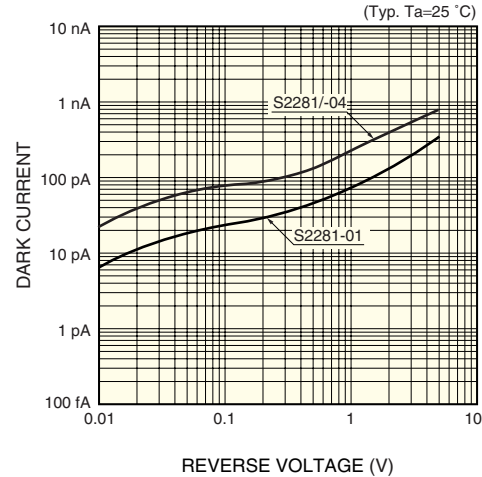
Parameter	Symbol	Condition	S2281			S2281-01			S2281-04			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ		-	190 to 1100	-	-	190 to 1000	-	-	190 to 1100	-	nm
Peak sensitivity wavelength	λ _p		-	960	-	-	720	-	-	960	-	nm
Photo sensitivity	S	λ=200 nm	0.10	0.12	-	0.10	0.12	-	0.10	0.12	-	A/W
		λ=λ _p	-	0.5	-	-	0.36	-	-	0.5	-	
Short circuit current	I _{sc}	100 I _x	64	80	-	32	40	-	32	40	-	μA
Dark current	I _D	V _R =10 mV	-	50	500	-	6	300	-	50	500	pA
Shunt resistance	R _{sh}	V _R =10 mV	20	200	-	30	1700	-	20	200	-	MΩ
Rise time	t _r	V _R =0 V R _L =1 kΩ	-	3	-	-	7	-	-	3	-	μs
Terminal capacitance	C _t	V _R =0 V f=10 kHz	-	1300	-	-	3200	-	-	1300	-	pF
Noise equivalent power	NEP		-	2.0×10 ⁻¹⁴	-	-	8.6×10 ⁻¹⁵	-	-	1.8×10 ⁻¹⁴	-	W/Hz ^{1/2}

■ Spectral response



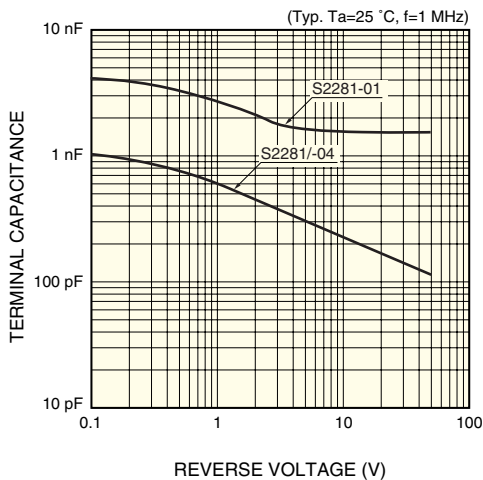
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■ Dark current vs. reverse voltage



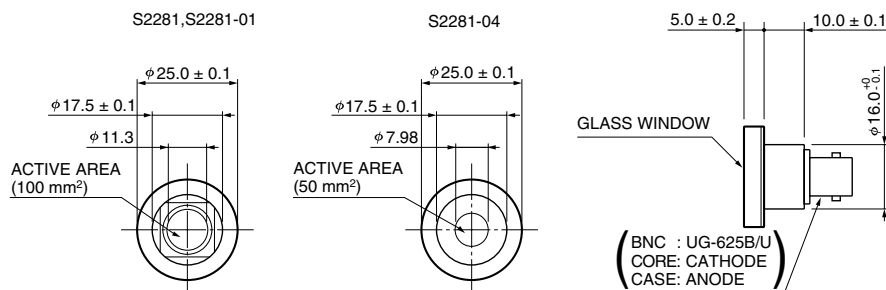
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■ Terminal capacitance vs. reverse voltage



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■ Dimensional outlines (unit: mm)



KSPDA0080EA

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