

Si photodiode



S2551

For visible to infrared precision photometry

S2551 is a Si photodiode having a long active area of 1.2×29.1 mm, designed for visible to infrared precision photometry.

Features

- Long, narrow active area: 1.2×29.1 mm
- High sensitivity
- Low capacitance

Applications

- Analytical instruments
- Optical measurement equipment

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	30	V
Operating temperature	T_{opr}	-20 to +60	°C
Storage temperature	T_{stg}	-20 to +80	°C

Note: Absolute maximum ratings are the values that must not be exceeded at any time. If even one of the absolute maximum ratings is exceeded even for a moment, the product quality may be impaired. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics ($T_a=25$ °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	340 to 1060	-	nm
Peak sensitivity wavelength	λ_p		-	920	-	nm
Photo sensitivity	S	$\lambda=\lambda_p$	-	0.57	-	A/W
		$\lambda=663$ nm	-	0.37	-	A/W
Short circuit current	I_{sc}	100 lx	24	30	-	μA
Dark current	I_D	$V_R=10$ mV	-	-	1	nA
Temperature coefficient of I_D	T_{CID}		-	1.15	-	times/°C
Rise time	t_r	$V_R=0$ V, $R_L=1$ k Ω	-	1.4	-	μs
Terminal capacitance	C_t	$V_R=0$ V, $f=10$ kHz	-	350	-	pF
Shunt resistance	R_{sh}	$V_R=10$ mV	0.01	0.03	-	G Ω
Noise equivalent power	NEP	$V_R=0$ V, $\lambda=\lambda_p$	-	3.9×10^{-14}	-	W/Hz ^{1/2}

Spectral response

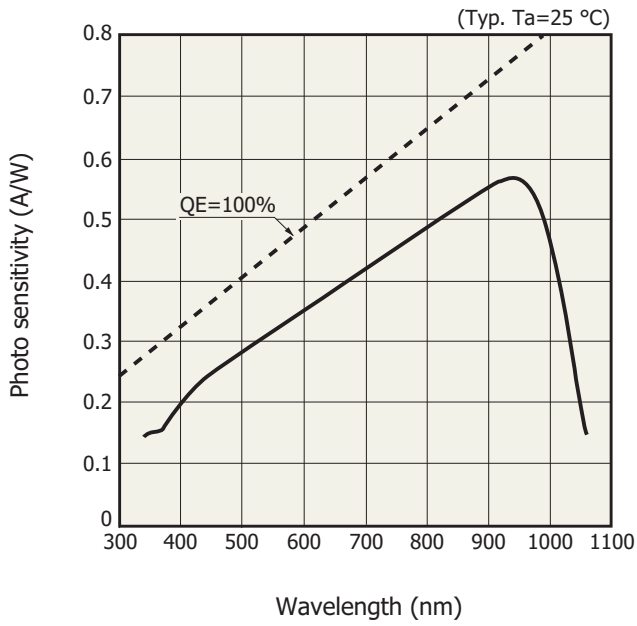
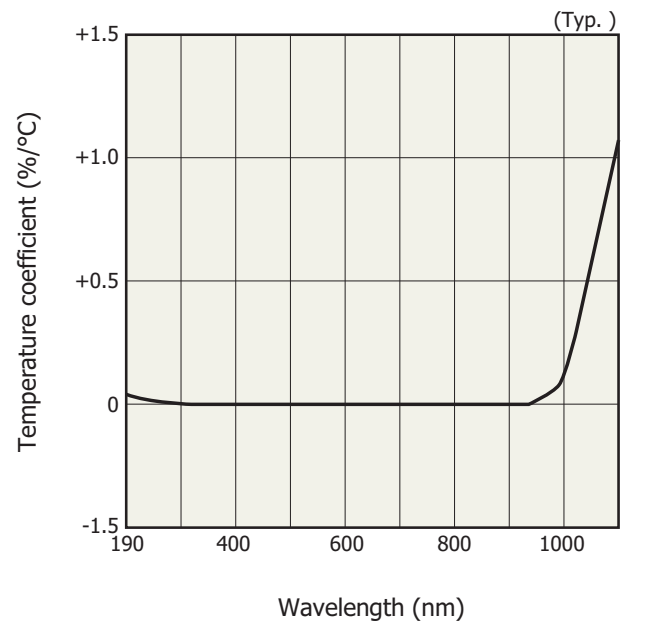
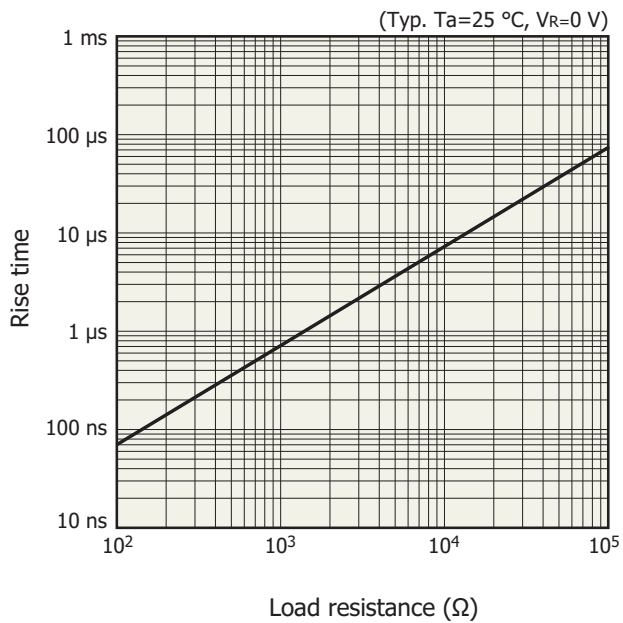


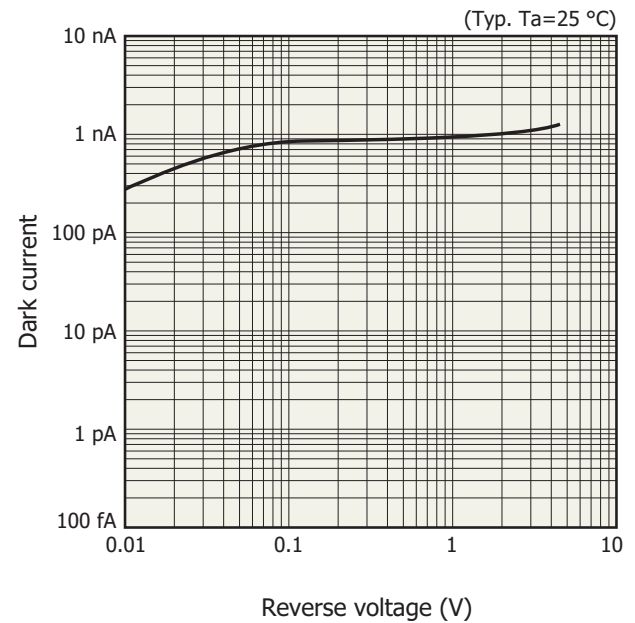
Photo sensitivity temperature characteristic



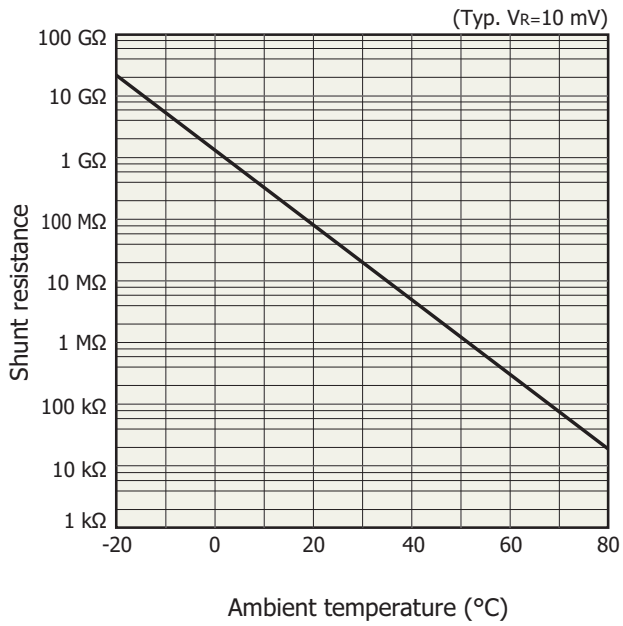
Rise time vs. load resistance



Dark current vs. reverse voltage

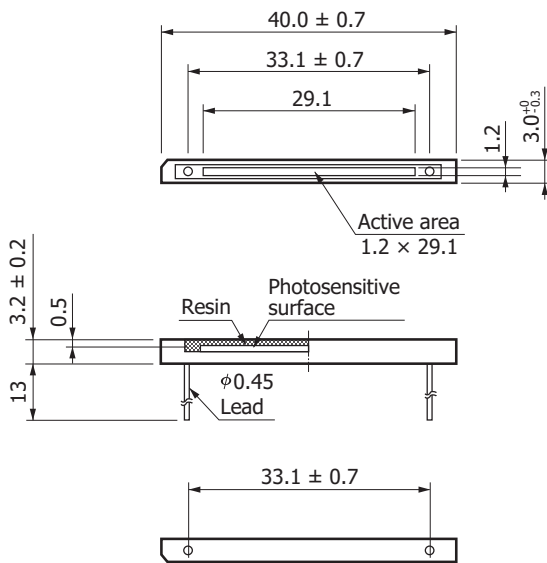


Shunt resistance vs. ambient temperature



KSPDB0176EB

Dimensional outline (unit: mm)



The resin potting may extend a maximum of 0.1 mm beyond the upper surface of the package.

KSPDA0116EB

Information described in this material is current as of February 2019.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

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