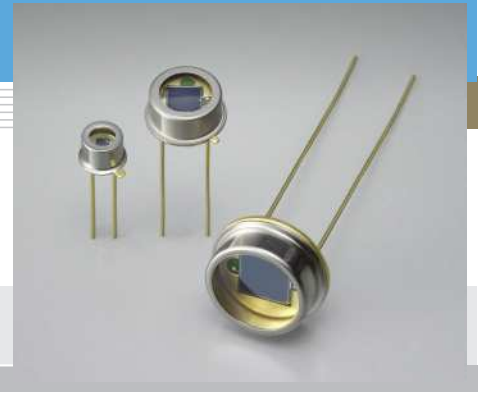


Si photodiode S1226 series

For UV to visible, precision photometry; suppressed IR sensitivity



Features

- High UV sensitivity: QE 75 % ($\lambda=200$ nm)
- Suppressed IR sensitivity
- Low dark current
- High reliability

Applications

- Analytical equipment
- Optical measurement equipment, etc.

■ General ratings / absolute maximum ratings

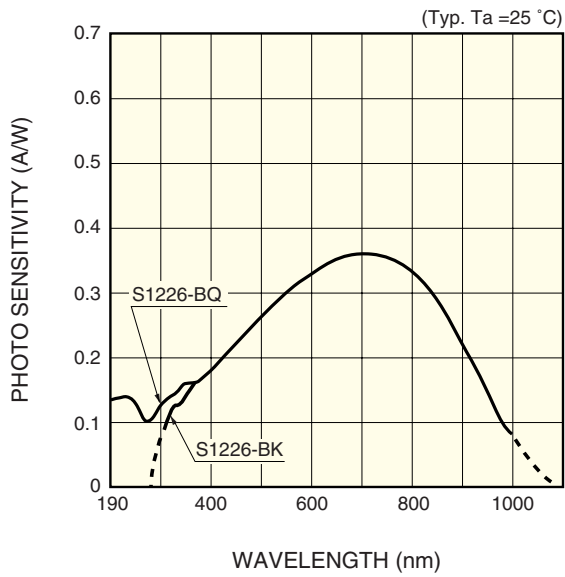
| Type No. | Dimensional outline/ Window material * | Package (mm) | Active area size (mm) | Effective active area (mm ²) | Absolute maximum ratings | | | | |
|------------|-------------------------------------------|-----------------|--------------------------|---------------------------------------------|-----------------------------------|---------------------------------------|-------------------------------------|-------------|-------------|
| | | | | | Reverse voltage VR Max. (V) | Operating temperature Topr (°C) | Storage temperature Tstg (°C) | | |
| S1226-18BQ | ①/Q | TO-18 | 1.1 × 1.1 | 1.2 | 5 | -20 to +60 | -55 to +80 | | |
| S1226-18BK | ①/K | | | | | -40 to +100 | -55 to +125 | | |
| S1226-5BQ | ②/Q | TO-5 | 2.4 × 2.4 | 5.7 | | -20 to +60 | -55 to +80 | | |
| S1226-5BK | ②/K | | | | | -40 to +100 | -55 to +125 | | |
| S1226-44BQ | ②/Q | | | | | 3.6 × 3.6 | 13 | -20 to +60 | -55 to +80 |
| S1226-44BK | ②/K | | | | | | | -40 to +100 | -55 to +125 |
| S1226-8BQ | ③/Q | TO-8 | 5.8 × 5.8 | 33 | | -20 to +60 | -55 to +80 | | |
| S1226-8BK | ③/K | | | | | -40 to +100 | -55 to +125 | | |

■ Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

| Type No. | Spectral response range λ (nm) | Peak sensitivity wavelength λ_p (nm) | Photo sensitivity S (A/W) | | | Short circuit current Isc 100 lx | | Dark current Id VR=10 mV Max. (pA) | Temp. coefficient of Id TCID (times °C) | Rise time tr VR=0 V RL=1 kΩ (μs) | Terminal capacitance Ct VR=0 V f=10 kHz (pF) | Shunt resistance Rsh VR=10 mV | | NEP (W/Hz ^{1/2}) | | | | | | | | | | | |
|------------|----------------------------------------------|----------------------------------------------------|---------------------------|--------|------|-------------------------------------|--------------|---------------------------------------------|-----------------------------------------------|-------------------------------------------|-------------------------------------------------------|----------------------------------|--------------|-------------------------------|-------------------------|------|------|-----|-----|----|-----|-----|-----|----|-------------------------|
| | | | λ_p | 200 nm | | He-Ne laser 633 nm | Min. (μA) | | | | | Typ. (μA) | Min. (GΩ) | | Typ. (GΩ) | | | | | | | | | | |
| | | | | Min. | Typ. | | | | | | | | | | | | | | | | | | | | |
| S1226-18BQ | 190 to 1000 | 720 | 0.36 | 0.10 | 0.12 | 0.34 | 0.5 | 0.66 | 2 | 1.12 | 0.15 | 35 | 5 | 50 | 1.6 × 10 ⁻¹⁵ | | | | | | | | | | |
| S1226-18BK | 320 to 1000 | | | | | | | | | | | | | | | - | - | | | | | | | | |
| S1226-5BQ | 190 to 1000 | | | | | | | | | | | | | | | 0.10 | 0.12 | 2.2 | 2.9 | 5 | 0.5 | 160 | 2 | 20 | 2.5 × 10 ⁻¹⁵ |
| S1226-5BK | 320 to 1000 | | | | | | | | | | | | | | | - | - | 4.4 | 5.9 | 10 | 1 | 380 | 1 | 10 | 3.6 × 10 ⁻¹⁵ |
| S1226-44BQ | 190 to 1000 | | | | | | | | | | | | | | | 0.10 | 0.12 | 12 | 16 | 20 | 2 | 950 | 0.5 | 5 | 5.0 × 10 ⁻¹⁵ |
| S1226-44BK | 320 to 1000 | | | | | | | | | | | | | | | - | - | - | - | - | - | - | - | - | - |
| S1226-8BQ | 190 to 1000 | | | | | | | | | | | | | | | 0.10 | 0.12 | - | - | - | - | - | - | - | - |
| S1226-8BK | 320 to 1000 | | | | | | | | | | | | | | | - | - | - | - | - | - | - | - | - | - |

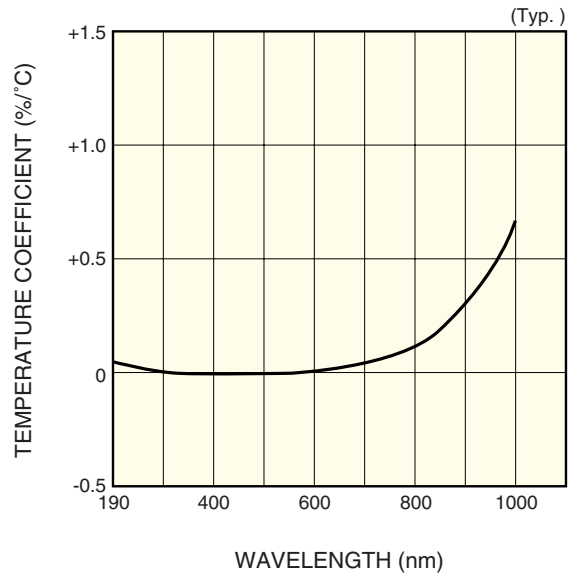
* Window material, K: borosilicate glass, Q: quartz glass

■ Spectral response



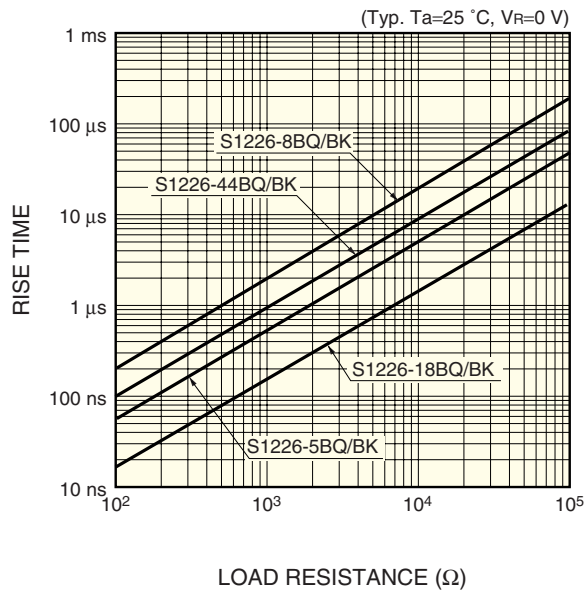
KSPDB0106EA

■ Photo sensitivity temperature characteristic



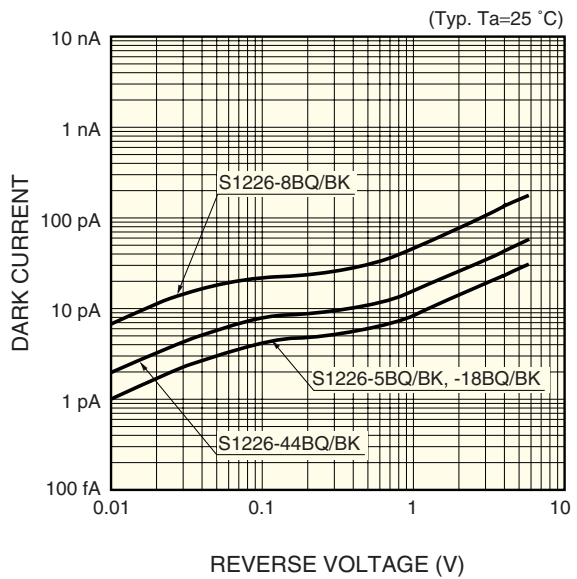
KSPDB0030EA

■ Rise time vs. load resistance



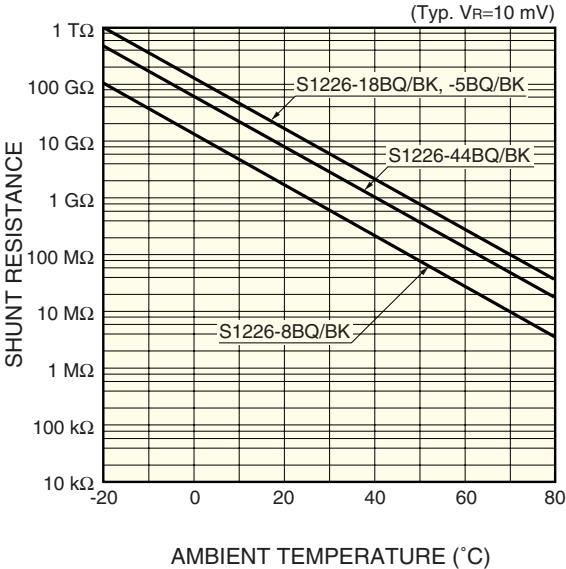
KSPDB0107EA

■ Dark current vs. reverse voltage



KSPDB0108EA

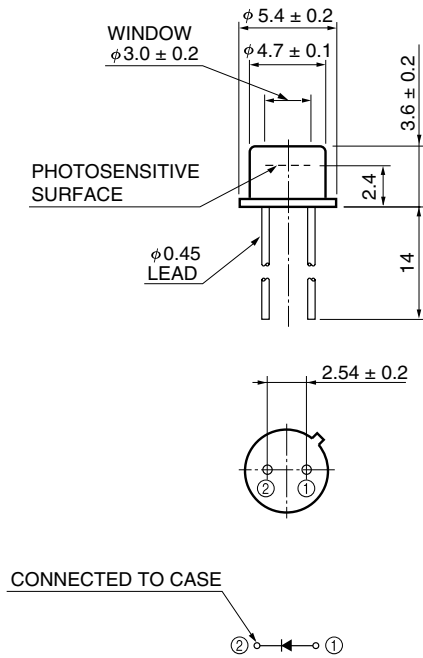
■ Shunt resistance vs. ambient temperature



KSPDB0109EA

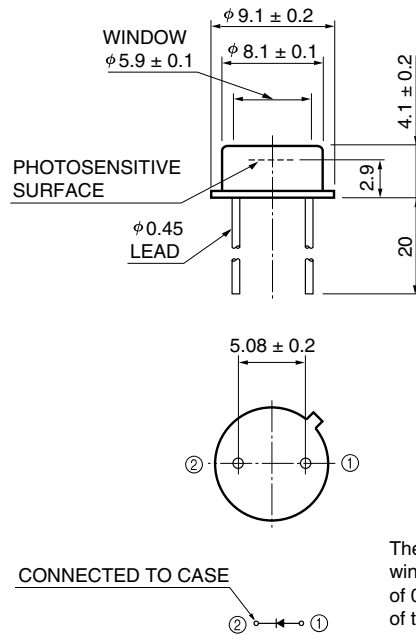
Dimensional outlines (unit: mm)

① S1226-18BQ/-18BK



KSPDA0113EB

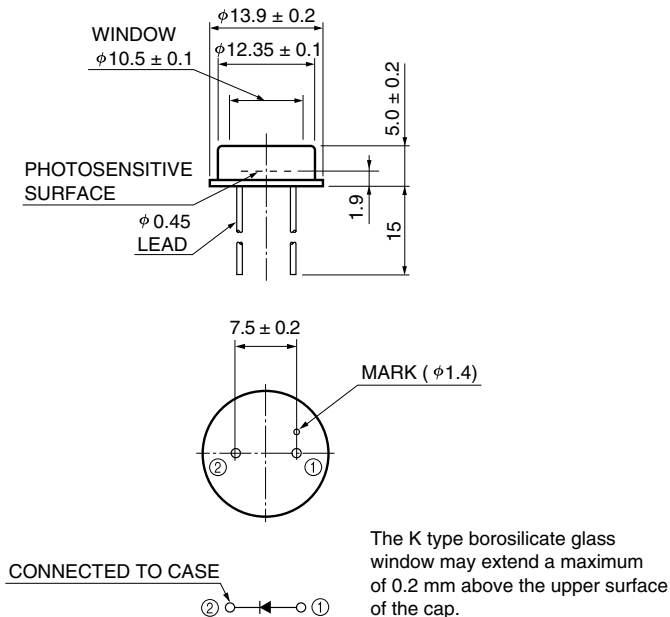
② S1226-5BQ/K, S1226-44BQ/K



KSPDA0114EA

The K type borosilicate glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

③ S1226-8BQ/-8BK



The K type borosilicate glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

KSPDA0115EA

HAMAMATSU

Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2002 Hamamatsu Photonics K.K.

HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Hamamatsu City, 435-8558 Japan, Telephone: (81) 053-434-3311, Fax: (81) 053-434-5184, <http://www.hamamatsu.com>

U.S.A.: Hamamatsu Corporation, 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218

France: Hamamatsu Photonics France S.A.R.L.: 8, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: 33-(1) 69 53 71 00, Fax: 33-(1) 69 53 71 10

United Kingdom: Hamamatsu Photonics UK Limited, 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44) 1707-294888, Fax: (44) 1707-325777

North Europe: Hamamatsu Photonics Norden AB, Smidsvågen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741

Cat. No. KSPD1034E03
Oct. 2002 DN