

# Sidelooker Pin Photodiode

## QSE773

### Description

The QSE773 is a plastic silicon pin photodiode in a sidelooker package.

### Features

- Daylight Filter
- Sidelooker Package
- Pin Photodiode
- Wide Reception Angle, 120°
- Chip Size = 0.107 sq. Inches (2.71 sq. mm)
- This is a Pb-Free Device

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
T <sub>OPR</sub>	Operating Temperature	-40 to +85	°C
T <sub>STG</sub>	Storage Temperature	-40 to +85	°C
T <sub>SOL-I</sub>	Soldering Temperature (Iron) (Note 2), (Note 3), (Note 4), (Note 5)	240 for 5 s	°C
T <sub>SOL-F</sub>	Soldering Temperature (Flow) (Note 2), (Note 3), (Note 5)	260 for 10 s	°C
V <sub>R</sub>	Reverse Voltage	32	V
P <sub>D</sub>	Power Dissipation (Note 1)	150	mW

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. Derate power dissipation linearly 2.50 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or Isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron tip 1/16" (1.6 mm) from housing.
5. As long as leads are not under any stress or spring tension.

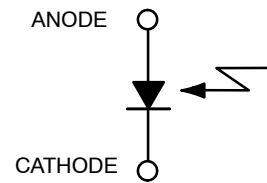
### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V <sub>R</sub>	Reverse Voltage	I <sub>R</sub> = 0.1 mA, E <sub>e</sub> = 0 mW/cm <sup>2</sup>	32	–	–	V
I <sub>R(D)</sub>	Dark Reverse Current	V <sub>R</sub> = 10 V, E <sub>e</sub> = 0 mW/cm <sup>2</sup>	–	–	30	nA
λ <sub>PK</sub>	Peak Sensitivity	V <sub>R</sub> = 5 V	–	940	–	nm
Θ	Reception Angle at 1/2 Power		–	±60	–	°
I <sub>PH</sub>	Photo Current (Note 6)	E <sub>e</sub> = 1.0 mW/cm <sup>2</sup> , V <sub>R</sub> = 5 V	30	–	–	μA
I <sub>SC</sub>	Short Circuit Current (Note 6)	E <sub>e</sub> = 1.0 mW/cm <sup>2</sup>	–	18	–	μA
C	Capacitance	V <sub>R</sub> = 3 V	–	25	–	pF
t <sub>r</sub>	Rise Time	V <sub>R</sub> = 5 V, R <sub>L</sub> = 1 kΩ	–	50	–	ns
t <sub>f</sub>	Fall Time	V <sub>R</sub> = 5 V, R <sub>L</sub> = 1 kΩ	–	50	–	ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

6. Light source is an GaAs LED which has a peak emission wavelength of 940 nm.
7. All measurements made under pulse conditions.

### SCHEMATIC



SIDELOOKER DETECTOR  
CASE 100CK

### ORDERING INFORMATION

Device	Package	Shipping
QSE773	SIDELOOKER DETECTOR (Pb-Free)	1000 / Bulk Bag

TYPICAL PERFORMANCE CURVES

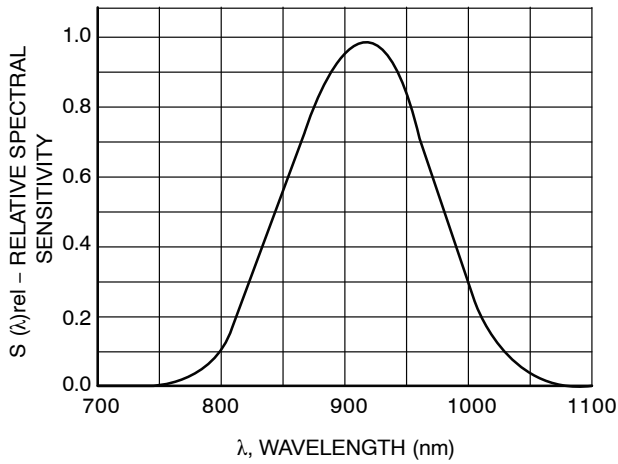


Figure 1. Relative Spectral Sensitivity vs. Wavelength

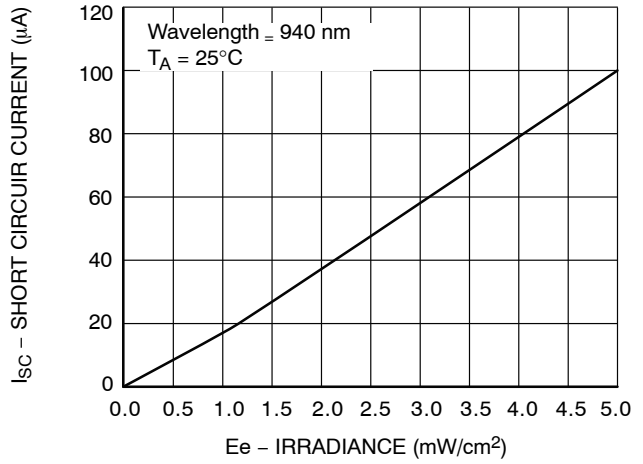


Figure 2. Short Circuit Current vs. Irradiance

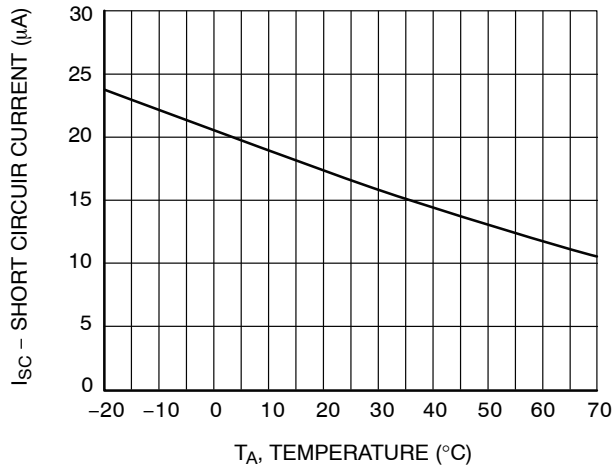


Figure 3. Short Circuit Current vs. Temperature

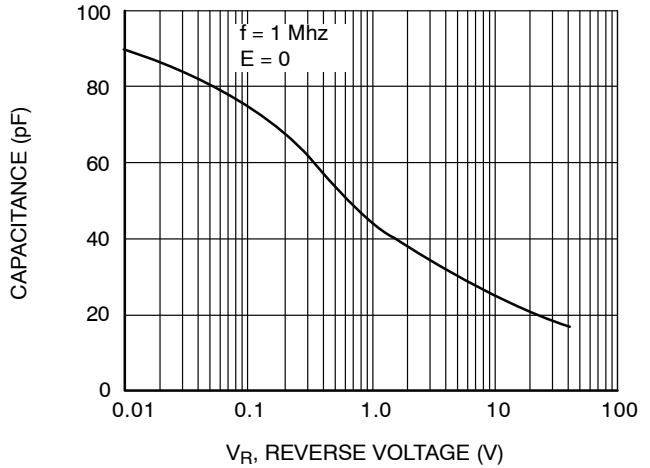


Figure 4. Capacitance vs. Reverse Voltage

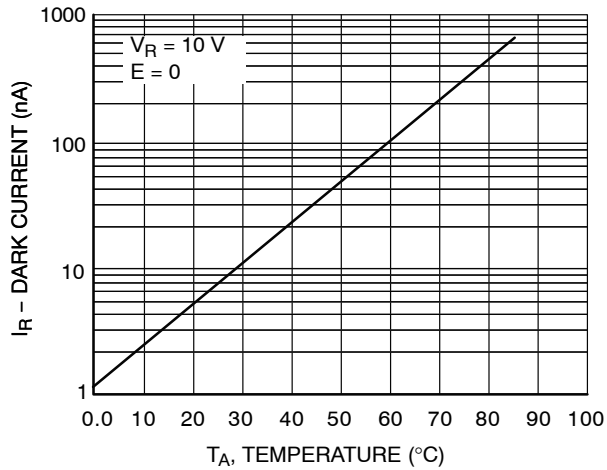


Figure 5. Dark Current vs. Temperature

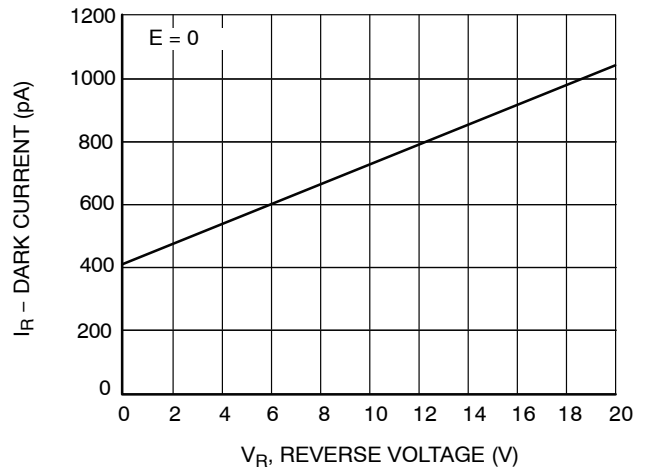
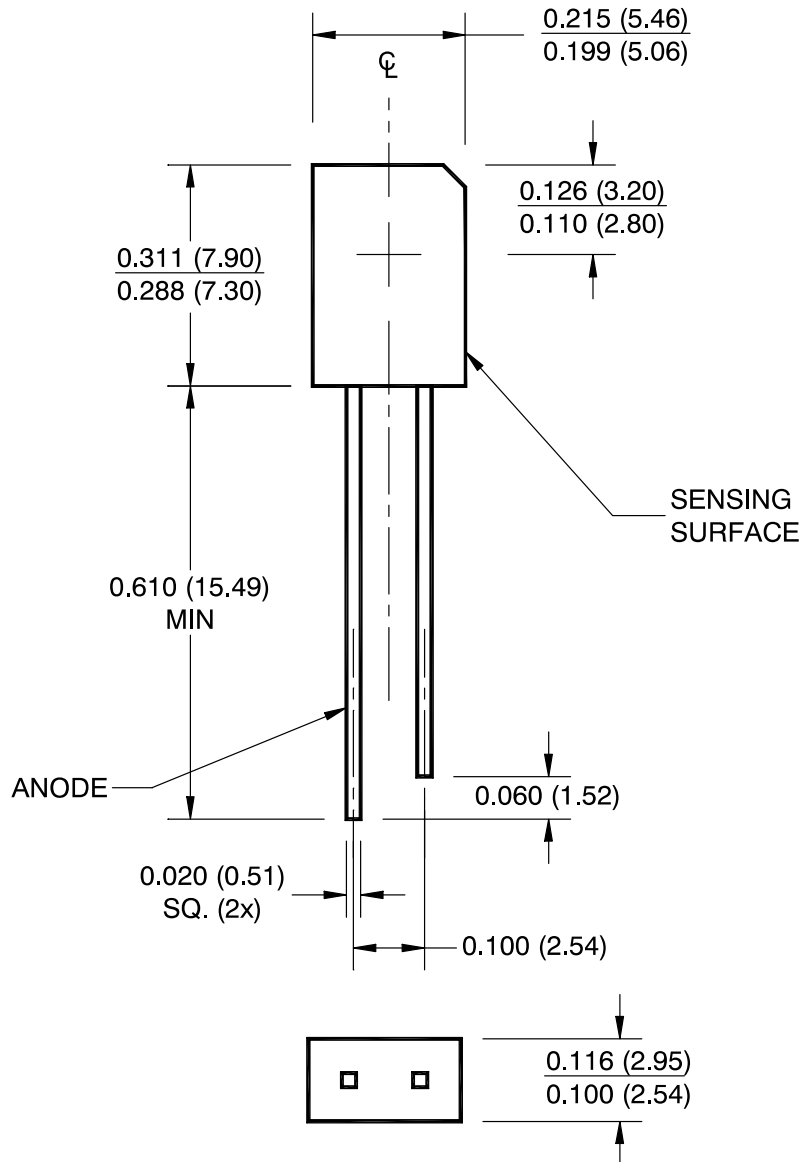


Figure 6. Dark Current vs. Reverse Voltage

**SIDELOOKER DETECTOR**  
CASE 100CK  
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**Notes:**

1. Dimensions for all drawings are in inches (mm).
2. Tolerance of  $\pm 0.010$  (0.25) on all non-nominal dimensions unless otherwise specified.

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