

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_A = 25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|--------------------|--|--------------|------|
| T _{OPR} | Operating Temperature | -40 to +85 | °C |
| T _{STG} | Storage Temperature | -40 to +85 | °C |
| T _{SOL-I} | Soldering Temperature (Iron) (Note 2), (Note 3), (Note 4), (Note 5) | 240 for 5 s | °C |
| T _{SOL-F} | Soldering Temperature (Flow) (Note 2), (Note 3), (Note 5) | 260 for 10 s | °C |
| V _R | Reverse Voltage | 32 | V |
| P _D | 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.

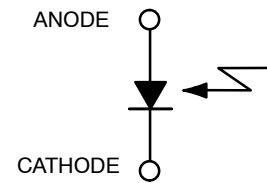
ELECTRICAL CHARACTERISTICS (T_A = 25°C)

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Unit |
|-------------------|--------------------------------|--|-----|-----|-----|------|
| V _R | Reverse Voltage | I _R = 0.1 mA, E _e = 0 mW/cm ² | 32 | - | - | V |
| I _{R(D)} | Dark Reverse Current | V _R = 10 V, E _e = 0mW/cm ² | - | - | 30 | nA |
| λ _{PK} | Peak Sensitivity | V _R = 5 V | - | 940 | - | nm |
| Θ | Reception Angle at 1/2 Power | | - | ±60 | - | ° |
| I _{PH} | Photo Current (Note 6) | E _e = 1.0 mW/cm ² , V _R = 5 V | 30 | - | - | μA |
| I _{SC} | Short Circuit Current (Note 6) | E _e = 1.0 mW/cm ² | - | 18 | - | μA |
| C | Capacitance | V _R = 3 V | - | 25 | - | pF |
| t _r | Rise Time | V _R = 5 V, R _L = 1 kΩ | - | 50 | - | ns |
| t _f | Fall Time | V _R = 5 V, R _L = 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

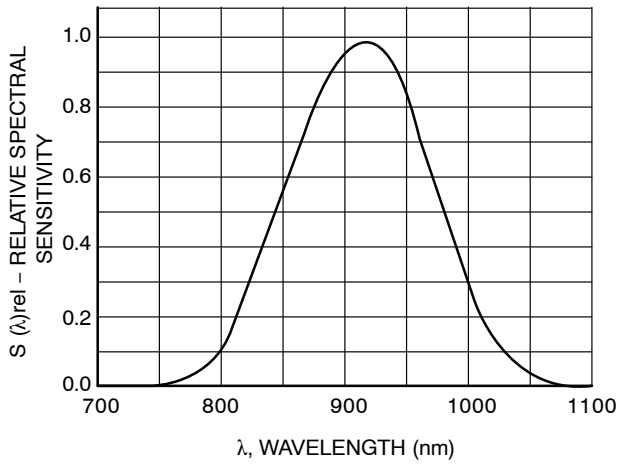


Figure 1. Relative Spectral Sensitivity vs. Wavelength

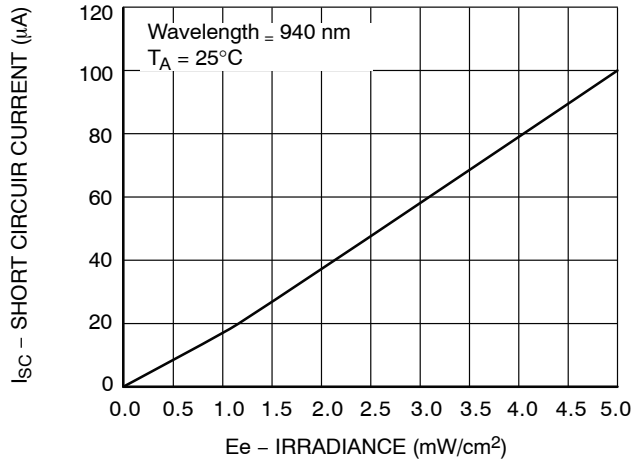


Figure 2. Short Circuit Current vs. Irradiance

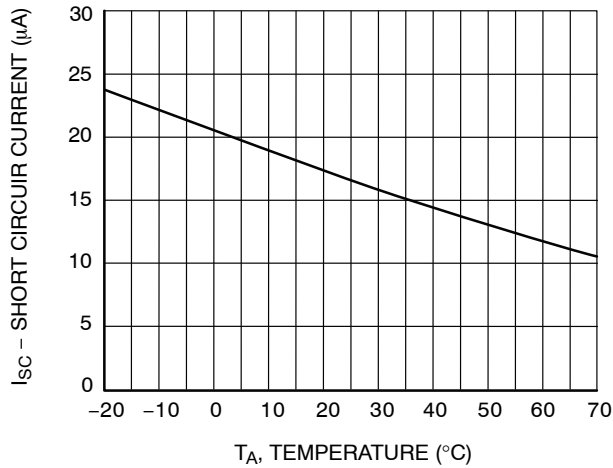


Figure 3. Short Circuit Current vs. Temperature

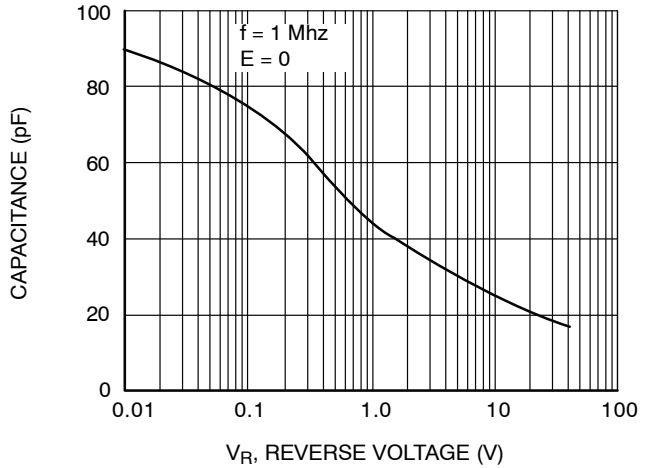


Figure 4. Capacitance vs. Reverse Voltage

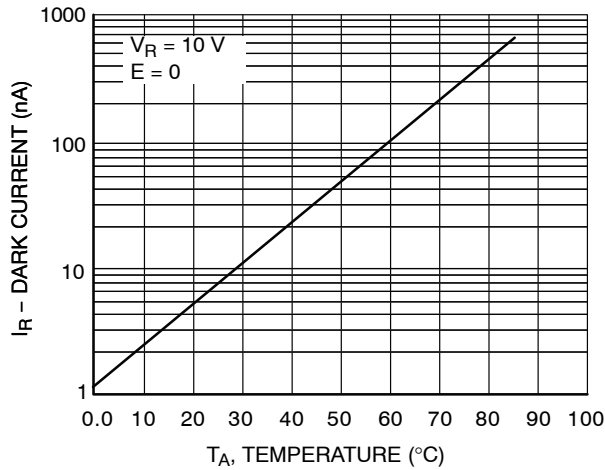


Figure 5. Dark Current vs. Temperature

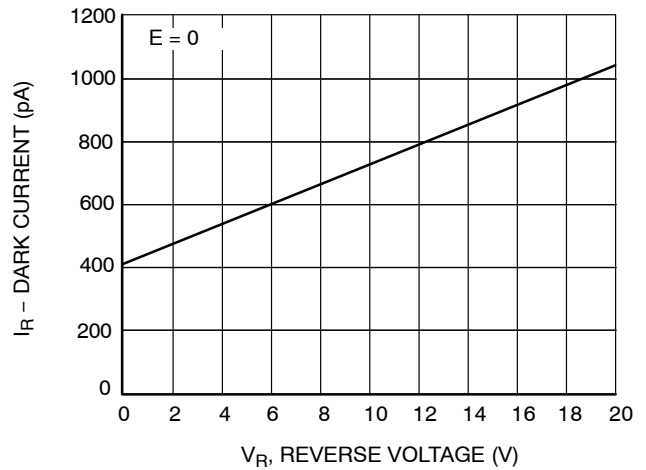
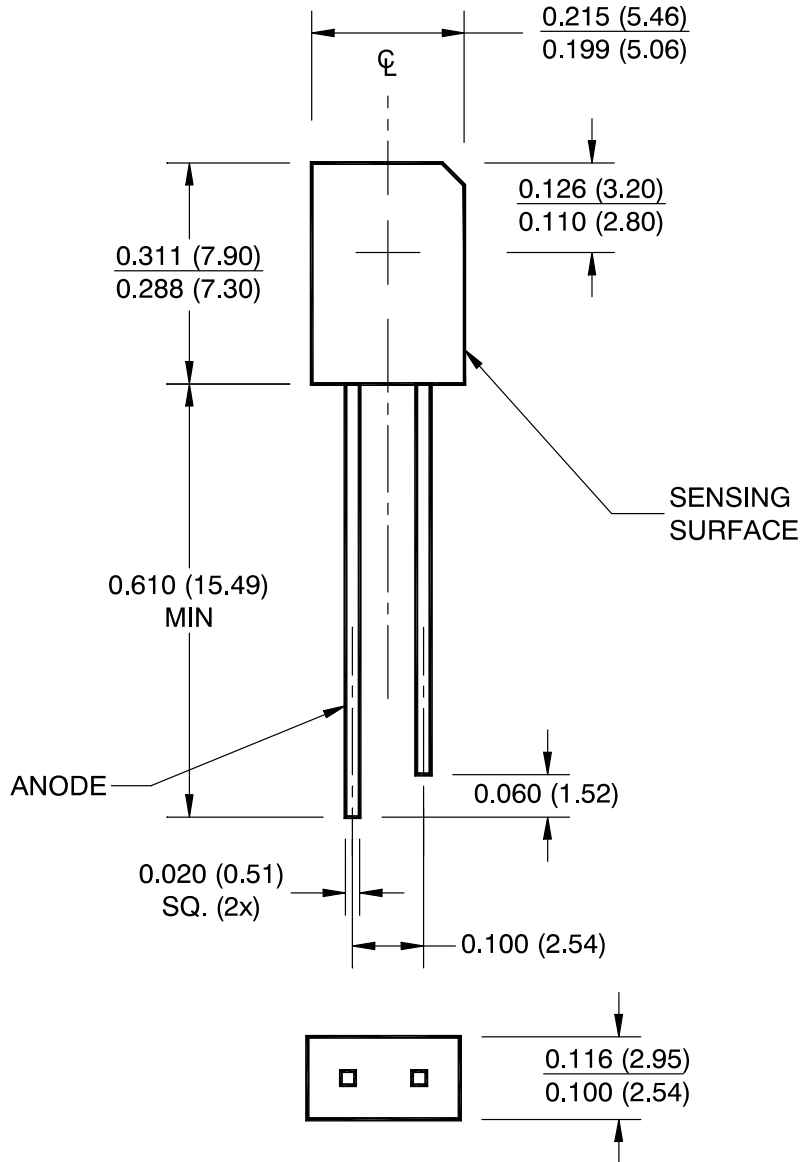


Figure 6. Dark Current vs. Reverse Voltage

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CASE 100CK
ISSUE 0


DATE 30 NOV 2016



Notes:

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

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|-------------------------|----------------------------|---|
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