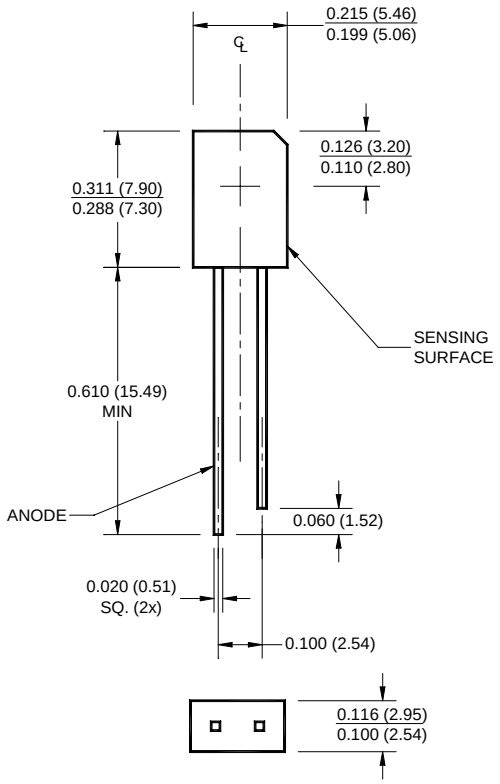
FAIRCHILD
SEMICONDUCTOR™

QSE773
PLASTIC SILICON PIN PHOTODIODE

PACKAGE DIMENSIONS

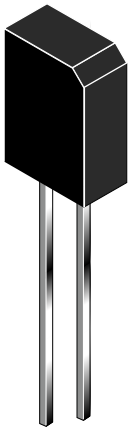


NOTES:

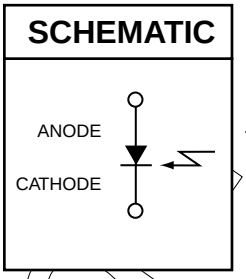
1. Dimensions for all drawings are in inches (mm).
2. Tolerance of ± .010 (.25) on all non-nominal dimensions unless otherwise specified.

FEATURES

- Daylight Filter
- Sidelooker Package
- Pin Photodiode
- Wide Reception Angle, 120°
- Chip Size = $.107^2$ inches (2.71^2 mm)



SCHEMATIC



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 1/16" (1.6mm) minimum from housing.
5. As long as leads are not under any stress or spring tension.
6. Light source is an GaAs LED which has a peak emission wavelength of 940 nm.
7. All measuements made under pulse conditions.

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to +85	°C
Storage Temperature	T_{STG}	-40 to +85	°C
Soldering Temperature (Iron)(2,3,4,5)	T_{SOL-I}	240 for 5 sec	°C
Soldering Temperature (Flow)(2,3,5)	T_{SOL-F}	260 for 10 sec	°C
Reverse Voltage	V_R	32	V
Power Dissipation(1)	P_D	150	mW

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Reverse Voltage	I_R = 0.1 mA	V_R	32		—	V
Dark Reverse Current	V_R = 10 V	$I_{R(D)}$	—		30	nA
Peak Sensitivity	V_R = 5 V	λ_{PK}		920		nm
Reception Angle @ 1/2 Power		Θ		+/-60		Degrees
Photo Current	E_e = 1.0 mW/cm^2, V_{CE} = 5 V(6)	I_{PH}	30		—	µA
Capacitance	V_R = 3 V	C		20		pF
Rise Time	V_R = 5 V, R_L = 1 K	t_r		50		ns
Fall Time	V_R = 5 V, R_L = 1 K	t_f		50		ns

TYPICAL PERFORMANCE CURVES

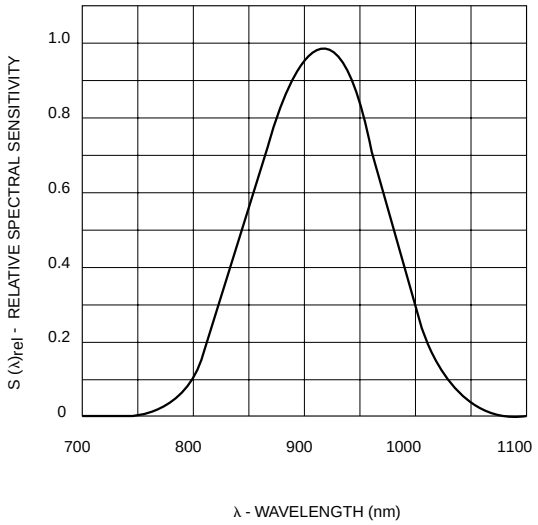


Fig. 1 Relative Spectral Sensitivity vs. Wavelength

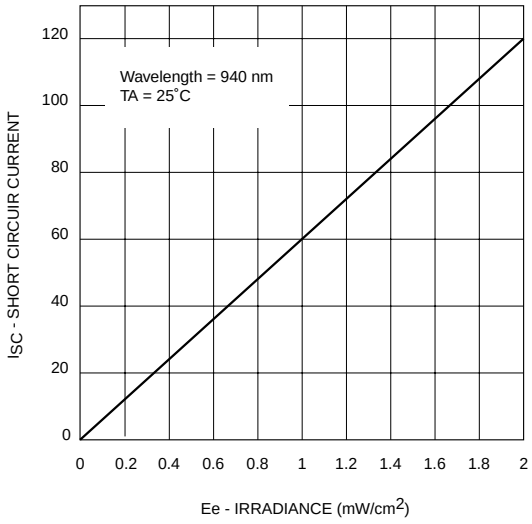


Fig. 2 Short Circuit Current vs. Irradiance

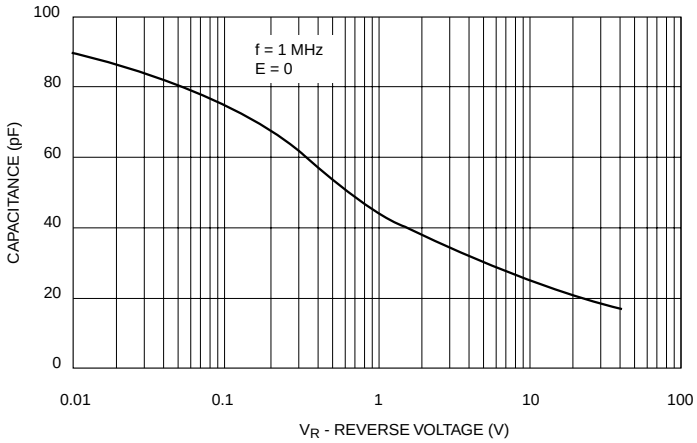


Fig. 3 Capacitance vs. Reverse Voltage

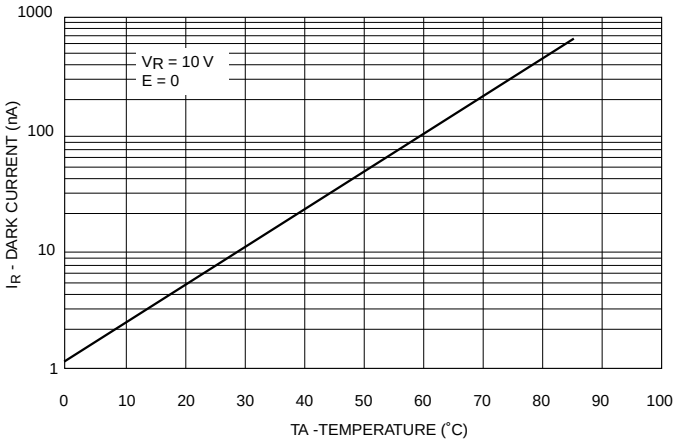


Fig. 4 Dark Current vs. Temperature

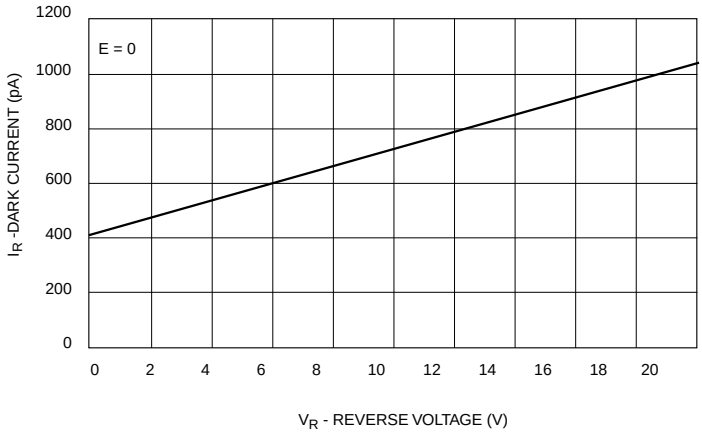


Fig. 5 Dark Current vs. Reverse Voltage

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.