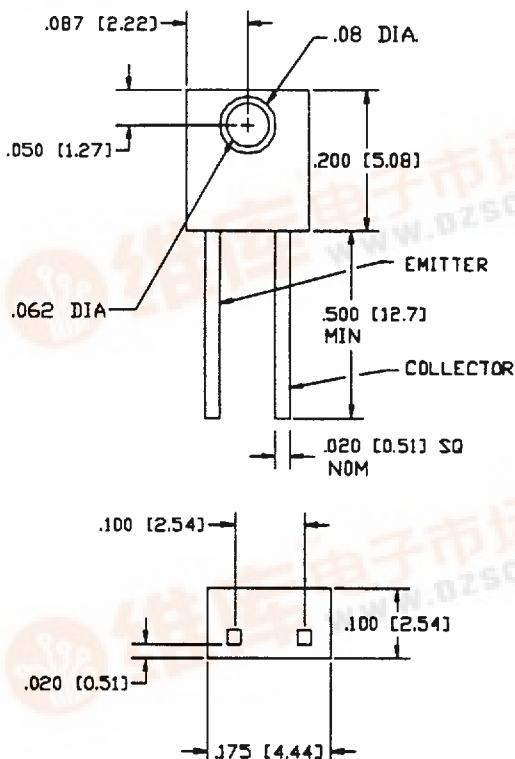




Sidelooker Phototransistor

QSE112/113/114

PACKAGE DIMENSIONS



NOTES:
1. DIMENSIONS ARE IN INCHES [MM].
2. TOLERANCE IS $\pm .010$ [25]
UNLESS OTHERWISE SPECIFIED.

DESCRIPTION

The QSE11X family is a silicon phototransistor encapsulated in a wide angle, infrared transparent, dark blue, plastic sidelooker shell package.

FEATURES

- Tight production distribution with 3:1 min/max ratio.
- Steel lead frames for improved reliability in solder mounting.
- Good optical-to-mechanical alignment.
- Plastic package is infrared transparent and tinted to attenuate visible light.
- Mechanically and spectrally matched to the QEE113 and QEE123 LEDs.
- Dark blue shell body allows easy recognition from LED.

QSE112/113/114



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ABSOLUTE MAXIMUM RATINGS (TA = 25°C Unless Otherwise Specified)

Storage Temperature	- 40°C to + 100°C
Operating Temperature	- 40°C to + 100°C
Soldering:	
Lead Temperature (Iron)	240°C for 5 sec. (2,3,4,5)
Lead Temperature (Flow)	260°C for 10 sec. (2,3,5)
Collector-Emitter Breakdown Voltage	30 Volts
Emitter-Collector Breakdown Voltage	5.0 Volts
Power Dissipation	100 mW ⁽¹⁾

ELECTRICAL CHARACTERISTICS (TA = 25°C Unless Otherwise Specified) (All measurements made under pulse conditions.)

Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Collector-Emitter Breakdown	BV _{CEO}	30		---	V	I _C = 1 mA
Emitter-Collector Breakdown	BV _{ECO}	5.0		---	V	I _E = 100 μA
Collector-Emitter Leakage	I _{CEO}	---		100	nA	V _{CE} = 10 V
Reception Angle at 1/2 Sensitivity	φ	---	±8	---	Degrees	E _e = 0.5 mW/cm ² , V _{CE} = 5V
On-State Collector Current QSE112	I _{C(ON)}	.32		.96	mA	E _e = 0.5 mW/cm ² , V _{CE} = 5V ⁽⁶⁾
On-State Collector Current QSE113	I _{C(ON)}	.64		1.92	mA	E _e = 0.5 mW/cm ² , V _{CE} = 5V ⁽⁶⁾
On-State Collector Current QSE114	I _{C(ON)}	1.28		3.84	mA	E _e = 0.5 mW/cm ² , V _{CE} = 5V ⁽⁶⁾
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	---		0.4	V	I _C = 0.4 mA, E _e = 0.5 mW/cm ²
Rise Time	t _r	---	8.0	---	μS	I _C = .15 mA, V _{CC} = 5 V, R _L = 100Ω
Fall Time	t _f	---	8.0	---	μS	I _C = .15 mA, V _{CC} = 5 V, R _L = 100Ω

Notes:

1. Derate power dissipation linearly 1.33 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) minimum from housing.
5. As long as leads are not under any stress or spring tension.
6. Light source is a GaAlAs LED emitting light at a peak wavelength of 880 nm.