



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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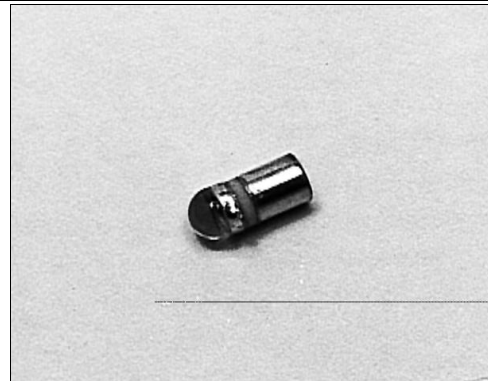


SD2440

Silicon Phototransistor

FEATURES

- Miniature, hermetically sealed, pill style, metal can package
- 48° acceptance angle
- Wide operating temperature range (-55°C to +125°C)
- Ideal for direct mounting to printed circuit boards
- Wide sensitivity ranges
- Mechanically and spectrally matched to SE2460 and SE2470 infrared emitting diodes



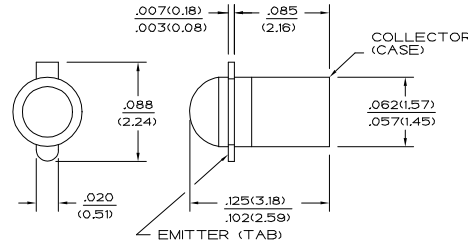
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DESCRIPTION

The SD2440 is an NPN silicon phototransistor mounted in a hermetically sealed glass lensed metal can package. This package directly mounts in a double sided PC board.

OUTLINE DIMENSIONS in inches (mm)

Tolerance 3 plc decimals ±0.005(0.12)
2 plc decimals ±0.020(0.51)



DIM_013.cdr

SD2440

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ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Light Current SD2440-001 SD2440-002 SD2440-003 SD2440-004	I_L	0.5 2.0 4.0 7.0			mA	$V_{CE}=5\text{ V}$ $H=20\text{ mW/cm}^2$ (1)
Collector Dark Current	I_{CEO}			100	nA	$V_{CE}=10\text{ V}$, $H=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	$I_C=100\text{ }\mu\text{A}$
Emitter-Collector Breakdown Voltage	$V_{(BR)ECO}$	5.0			V	$I_E=100\text{ }\mu\text{A}$
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$			0.4	V	$I_C=I_L/8$ $H=20\text{ mW/cm}^2$
Angular Response (2)	\emptyset		48		degr.	$I_F=\text{Constant}$
Rise And Fall Time	t_r, t_f		15		μs	$V_{CC}=5\text{ V}$, $I_L=1\text{ mA}$ $R_L=1000\text{ }\Omega$

Notes

- The radiation source is a tungsten lamp operating at a color temperature of 2870°K.
- Angular response is defined as the total included angle between the half sensitivity points.

ABSOLUTE MAXIMUM RATINGS

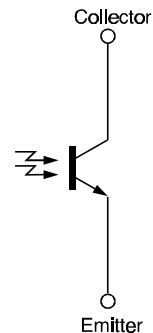
(25°C Free-Air Temperature unless otherwise noted)

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Power Dissipation	125 mW (1)
Operating Temperature Range	-55°C to 125°C
Storage Temperature Range	-65°C to 150°C
Soldering Temperature (10 sec)	260°C

Notes

- Derate linearly from 25°C free-air temperature at the rate of 1.19 mW/°C.

SCHEMATIC



Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

Honeywell

SD2440

Silicon Phototransistor

SWITCHING TIME TEST CIRCUIT

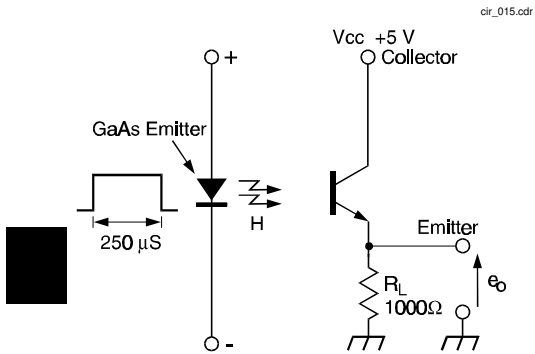


Fig. 1 Responsivity vs Angular Displacement

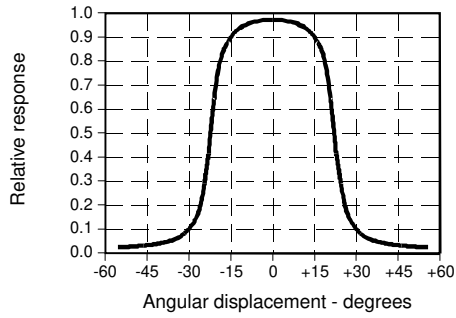
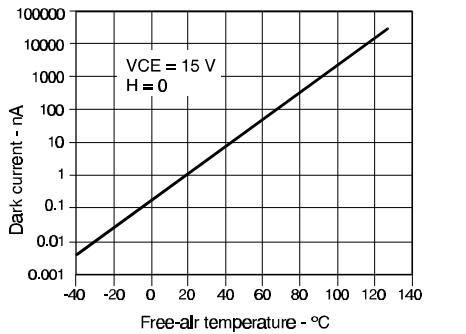


Fig. 3 Dark Current vs Temperature



SWITCHING WAVEFORM

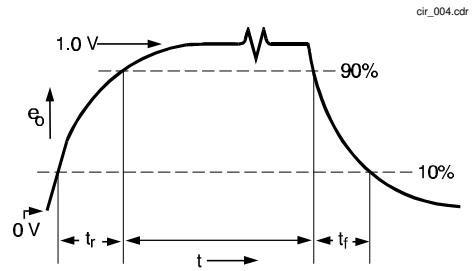


Fig. 2 Collector Current vs Ambient Temperature

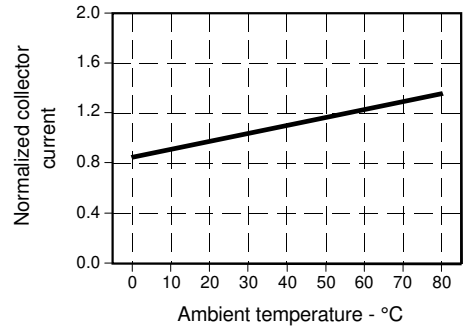
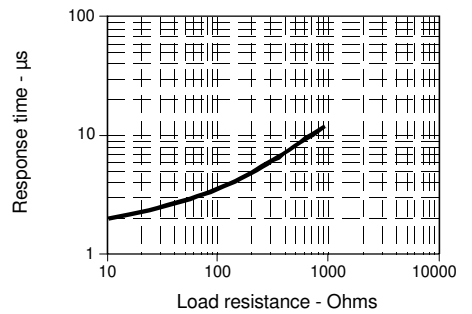


Fig. 4 Non-Saturated Switching Time vs Load Resistance



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Fig. 5 Spectral Responsivity

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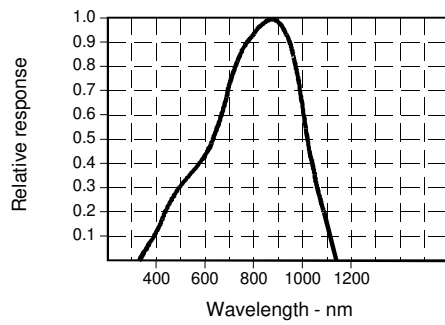
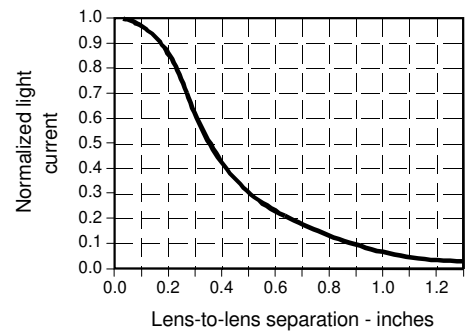


Fig. 6 Coupling Characteristics with SE2460

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All Performance Curves Show Typical Values