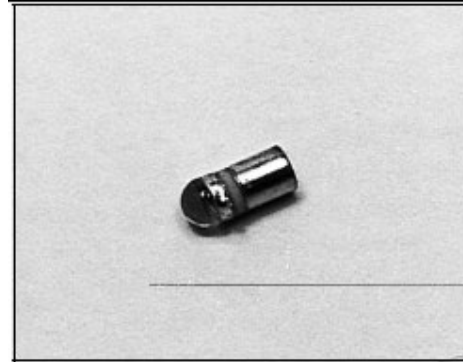


SD2440

silicon phototransistor

characteristic :

- Miniature, sealed, projectile type, metal shell enclosures
- 48° Angle of reception
- Wide operating temperature range (-55°C to +125°C)
- It can be perfectly installed directly on the printed circuit board
- Wide sensitivity range
- Mechanical and spectral matching can be achieved with SE 2460 and SE2470 infrared emitting diodes.



INFRA-1.TIF

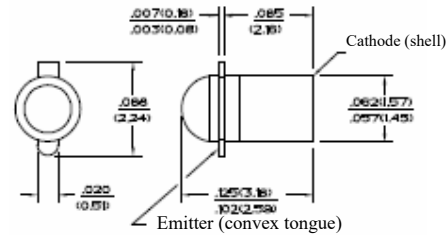
description :

The SE2470 is a NPN silicon phototransistor housed in a coaxial metal shell with a sealed glass lens. The package can be mounted directly on a double-sided PC board.

Dimensions: inches (mm)

tolerance: 3 plc decimals ± 0.005 (0.12)

2 plc decimals ± 0.020 (0.51)



DIM_013.cdr

Electrical characteristics (25°C unless otherwise stated)

parameter	symbol	Minimum value	Standard value	Maximum value	unit	test condition
Photoelectric current SD2440-001 SD2440-002 SD2440-003 SD2440-004	I_L	0.5 2.0 4.0 7.0			mA	$V_{CE}=5V$ $H=20 \text{ mW/cm}^2$ ⁽¹⁾
Collecting electrode dark current	I_{CEO}			100	nA	$V_{CE}=10V, H=0$
Electrode-emitter breakdown voltage	$V_{(BR)CEO}$	30			V	$I_C=100\mu A$
Emitter-collector breakdown voltage	$V_{(BR)ECO}$	5.0			V	$I_E=100\mu A$
Electrode collector-emitter saturation voltage	$V_{CE(SAT)}$			0.4	V	$I_C=I_L/B$ $H=20 \text{ mW/cm}^2$
Angle response	Φ		48		° (linear measure)	$I_F = \text{constant}$
Time of rise and fall	t_r, t_f		15		μs	$V_{CC}=5V, I_L=1 \text{ mA}$ $R_L=1000 \text{ k}\Omega$

pour :

- The radiation source is a tungsten lamp operating at a color temperature of 2870°K.
- The definition of angular response refers to the total angles included between the semi-sensitivity points.

Absolute maximum rating

(Applied atmospheric temperature is 25°C unless otherwise stated) collector-emitter voltage

30V

Emitter-collector voltage

5V

power consumption

75 mW⁽¹⁾

Working temperature range

-55°C to 125°C

Storage temperature range

-65°C to 150

Welding temperature (10 seconds)

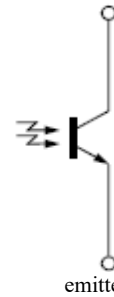
°C 260°C

pour :

- From atmospheric temperature of 25°C it decreases linearly at a rate of 1.19 mW/°C.

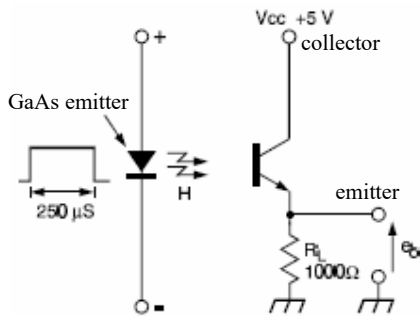
diagrammatic sketch

collector



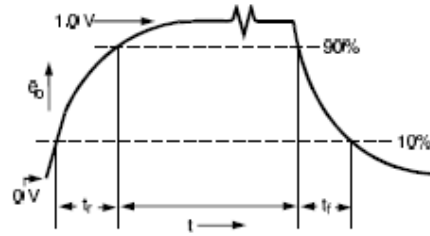
emitter

Switch time test circuit



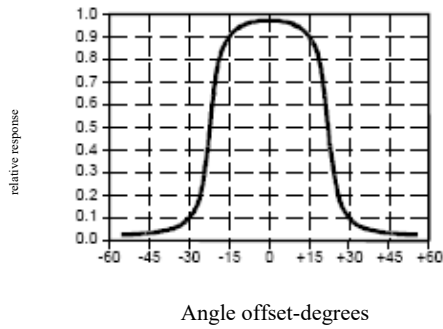
cir_015.cdr

Switching waveform



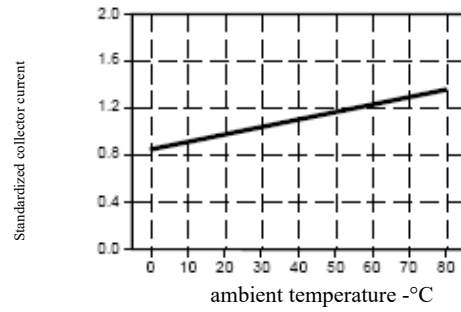
cir_004.cdr

Figure 1 Response to Angle of Bias



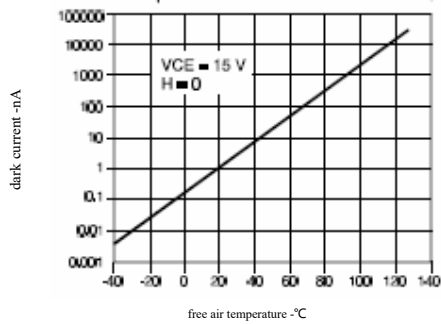
gra_037.ds4

Figure 2. Relationship Between Collector Current and Ambient Temperature



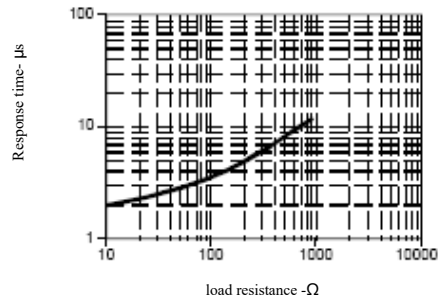
gra_039.ds4

Figure 3. Relationship Between Dark Current and Temperature



gra_303.cdr

Figure 4. Relationship Between Unsaturated Conversion Time and Load Resistance



gra_041.ds4

Figure 5. Spectral Responsivity

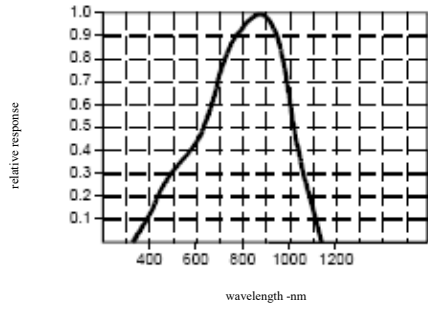
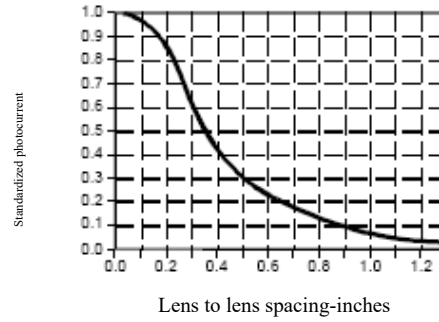


Figure 6. coupling characteristics of SE2460 gra_036.ds4

gra_015.ds4



All performance curves are expressed as standard values

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