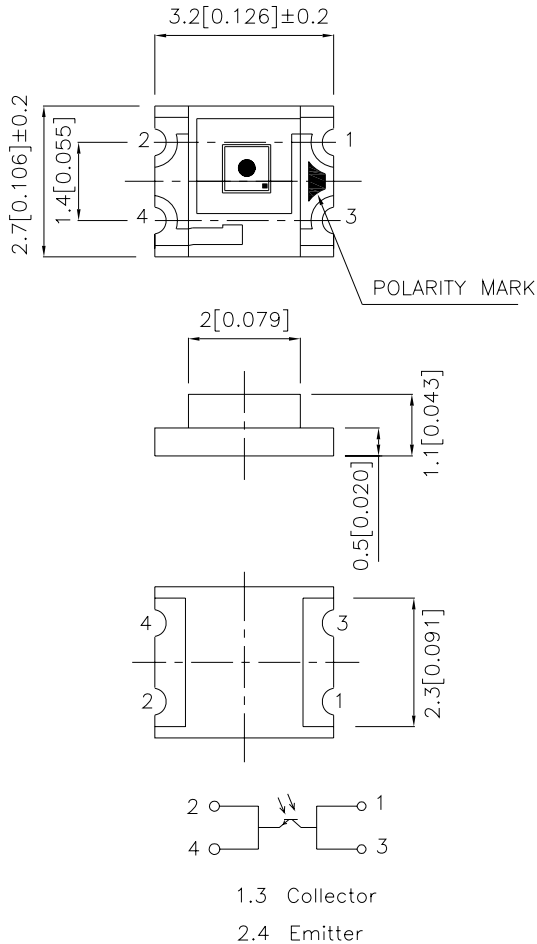


PRELIMINARY SPEC

Part Number: KPS-3227SP1C

Package Dimensions



UNIT : MM[INCH]

TOLERANCE :±0.1[0.004] UNLESS OTHERWISE NOTED.

Description

The KPS-3227SP1C is a NPN silicon phototransistor, It is low-cost ambient light photo sensor in lowest cost miniature chip LED lead-free surface mount package. and the device is sensitive to the visible spectrum.

Features

- *Lead-free package.
- *Component in accordance with RoHS.
- *Adapted to human eye responsive.
- *Wide angle of half sensitivity.

Applications

- Detection of ambient light to control display backling in:
- *mobile phones
 - *PDAs
 - *note books
 - *Video cameras

*Absolute Maximum Ratings(Ta=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector Emitter Voltage	V _{CEO}	6	V
Emitter-Collector Voltage	V _{ECO}	1.5	V
Collector Current	I _C	20	mA
Total Power Dissipation	P _{tot}	100	mW
Operating Temperature	T _{opr}	-40 to +85	°C
Storage Temperature	T _{sto}	-40 to +85	°C
Soldering Temperature	T _{sd}	260	°C

***Electrical and Optical Characteristics (Ta=25°C, unless otherwise specified)**

Parameter	Symbol	Value		Unit	Conditions
		TYP.	Max.		
Collector Emitter Breakdown Voltage	Vceo	60	-	V	Iceo=100μA
Collector Emitter Breakdown Voltage	Veco	4	-	V	Ieco=100μA
Collector dark current	ID	10	-	nA	VCE=5V Lux=0
Angle of half sensitivity	2θ1/2	120	-	°	-
Collector light Current	ILIG1	20	-	μA	Ev=20 Lux ^[1]
	ILIG2	100	-	μA	Ev=100 Lux ^[1]
Wavelength of peak sensitivity	λP	580	-	nm	-
Collector Emitter Saturation Voltage	VCE sat	0.4	-	V	IC=10 mA, IB=1mA

Note:

1. Illuminance by CIE standard light source (incandescet lamp).

Fig.1 Collector light Current vs. illuminance

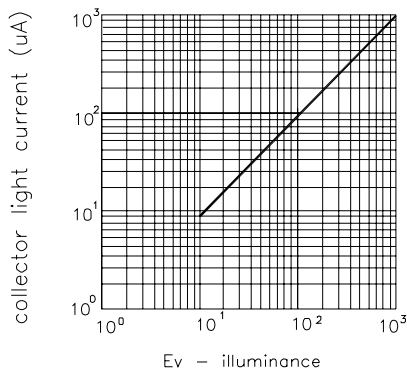


Fig.2 Relative Spectral Responsivity vs. Wavelength

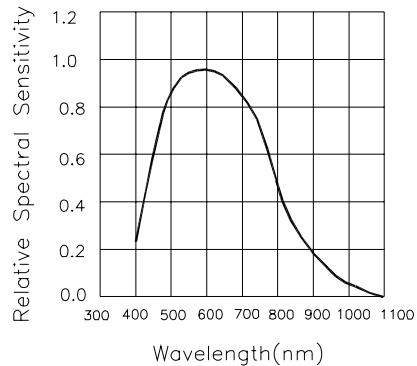


Fig.3 Relative radiant sensitivity vs. Angular displacement

