

T-1 PACKAGE

NPN PHOTOTRANSISTOR

MID-33422

Description

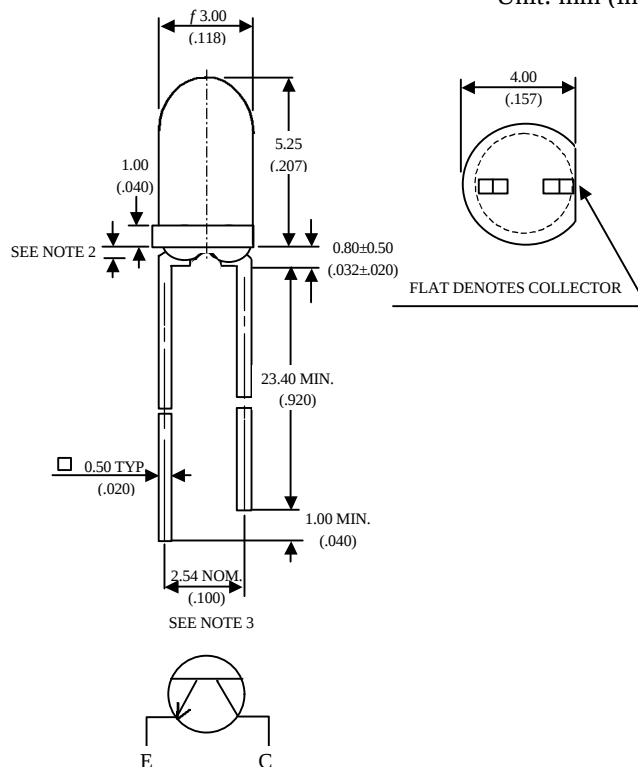
The MID-33422 is a NPN silicon phototransistor mounted in a lensed, water clear plastic package and suitable for the variety wavelength.

Features

- Wide range of collector current
- Lensed for high sensitivity
- Low cost plastic package
- Suitable for the variety wavelength
- Acceptance view angle : 30°

Package Dimensions

Unit: mm (inches)



Notes :

1. Tolerance is ± 0.25 mm (.010") unless otherwise noted .
2. Protruded resin under flange is 0.5 mm (.019") max
3. Lead spacing is measured where the leads emerge from the package.

Absolute Maximum Ratings

@ $T_A=25^\circ\text{C}$

Parameter	Maximum Rating	Unit
Power Dissipation	100	mW
Collector-Emitter Voltage	30	V
Emitter-Collector Voltage	5	V
Operating Temperature Range	-55°C to $+100^\circ\text{C}$	
Storage Temperature Range	-55°C to $+100^\circ\text{C}$	
Lead Soldering Temperature	260°C for 5 seconds	

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Optical-Electrical Characteristics

@ $T_A=25^{\circ}\text{C}$

Parameter	Test Conditions	Symbol	Min.	Typ .	Max.	Unit
Collector-Emitter Breakdown Voltage	$I_C=0.1\text{mA}$ $E_e=0$	$V_{(BR)CEO}$	30			V
Emitter-Collector Breakdown Voltage	$I_e=0.1\text{mA}$ $E_e=0$	$V_{(BR)ECO}$	5			V
Collector-Emitter Saturation Voltage	$I_C=0.5\text{mA}$ $E_e=0.1\text{mW/cm}^2$	$V_{CE(SAT)}$			0.4	V
Rise Time	$V_{CC}=5\text{V}$, $R_L=1\text{K}\Omega$	T_r		15		μS
Fall Time	$I_C=1\text{mA}$	T_f		15		
Collector Dark Current	$V_{CE}=10\text{V}$ $E_e=0$	I_{CEO}			100	nA
On State Collector Current	$V_{CE}=5\text{V}$ $E_e=0.1\text{mW/cm}^2$	$I_{C(ON)}$		2.4		mA

Typical Optical-Electrical Characteristic Curves

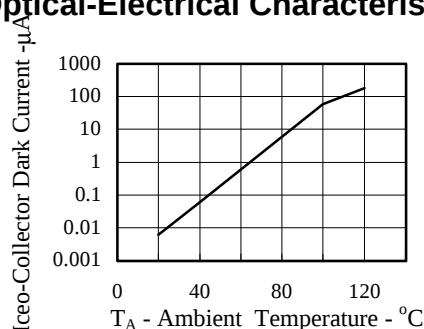


FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

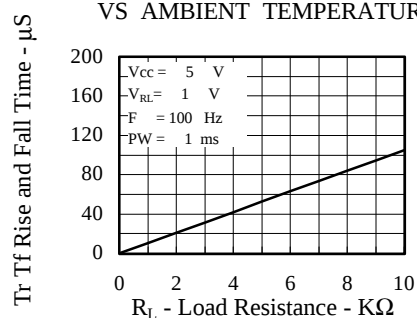


FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE

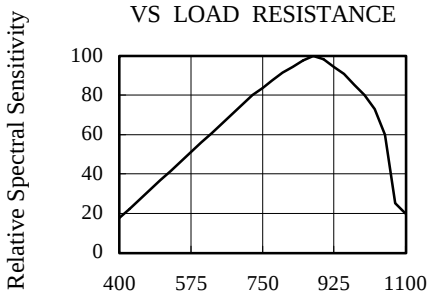


FIG.5 RELATIVE SPECTRAL SENSITIVITY $S_{REL}=f(\lambda)$

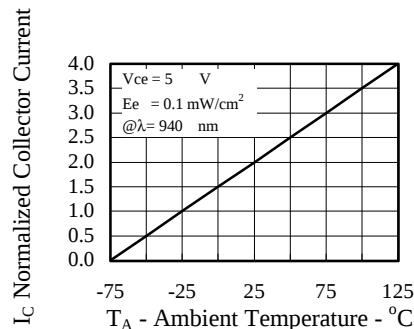


FIG.2 NORMALIZED COLLECTOR CURRENT

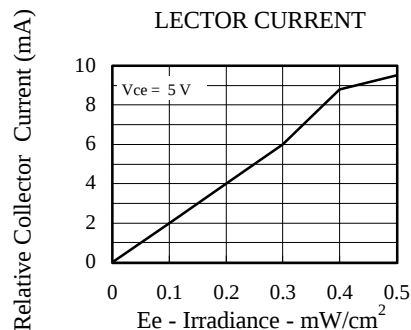


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE

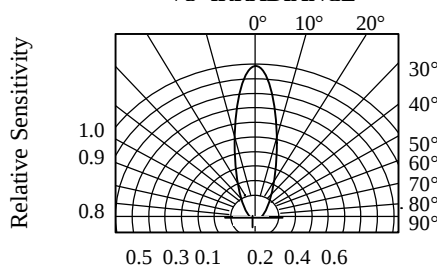


FIG.6 SENSITIVITY DIAGRAM