

TO-46 PACKAGE NPN PHOTOTRANSISTOR

MID-40H22

Description

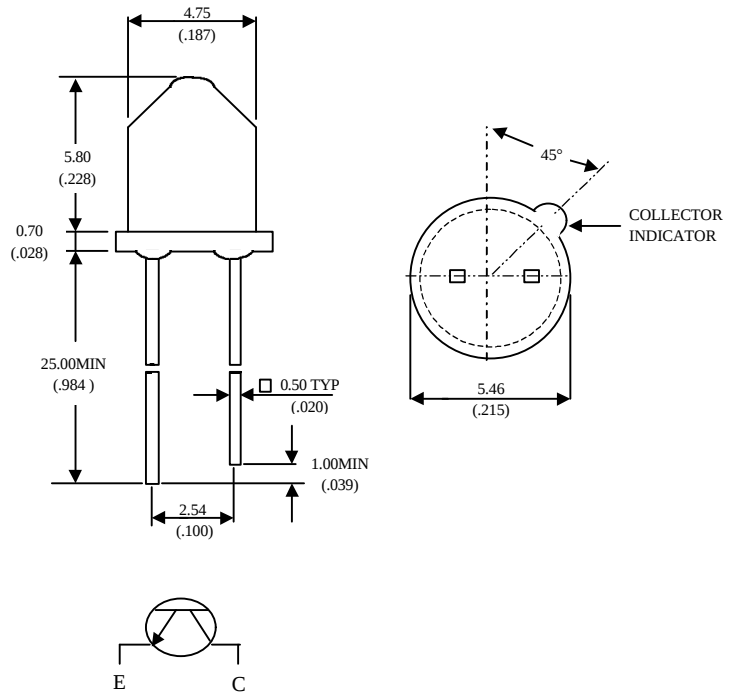
The MID-40H22 is a NPN silicon phototransistor mounted in a lensed, special dark plastic package.

Features

- Wide range of collector current
- Lensed for high sensitivity
- Low cost plastic package
- Acceptance angle 25°
- Good spectral matching IRED (λ_p 880/850 nm) type

Package Dimensions

Unit :mm(inches)



Notes :

1. Tolerance is $\pm 010''$ unless otherwise noted .
2. Protruded resin under flange is .031" 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.
Collector-Emitter Breakdown Voltage	$I_C=0.1\text{mA}$ $E_e=0$	$V_{(BR)CEO}$	30		
Emitter-Collector Breakdown Voltage	$I_e=0.1\text{mA}$ $E_e=0$	$V_{(BR)ECO}$	5		
Collector-Emitter Saturation Voltage	$I_C=0.5\text{mA}$ $E_e=0.1\text{mW/cm}^2$	$V_{CE(SAT)}$			0.4
Rise Time	$V_{CC}=5\text{V}$, $R_L=1\text{K}\Omega$	T_r		15	
Fall Time	$I_C=1\text{mA}$	T_f		15	
Collector Dark Current	$V_{CE}=10\text{V}$ $E_e=0$	I_{CEO}			100
On State Collector Current	$V_{CE}=5\text{V}$, $\lambda=850\text{nm}$ $E_e=0.1\text{mW/cm}^2$	$I_{C(ON)}$		1	

Typical Optical-Electrical Characteristic Curves

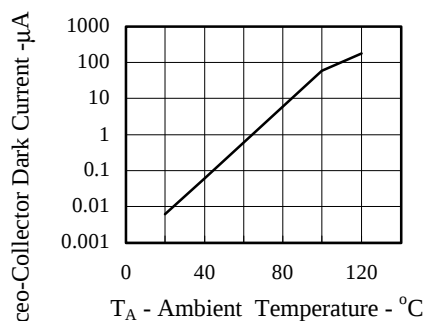


FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

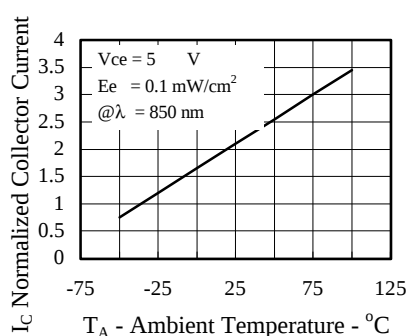


FIG.2 NORMALIZED COLLECTOR CURRENT VS AMBIENT TEMPERATURE

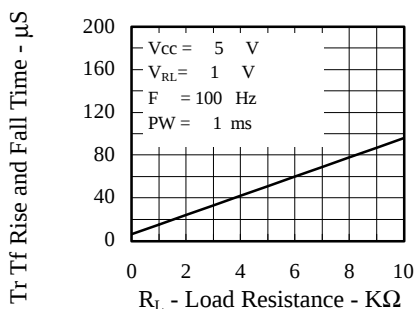


FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE

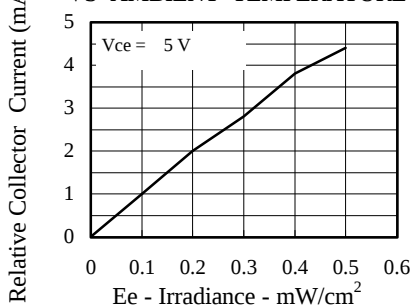


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE

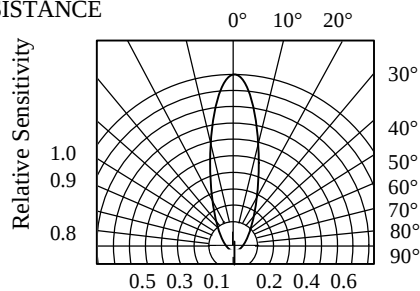


FIG.5 SENSITIVITY DIAGRAM