TP805

OPTO INTERRUPTER

Features

▪Non-contact switching.
▪For direct PC board or dual-in-line socket mounting.
▪Fast switching speed.

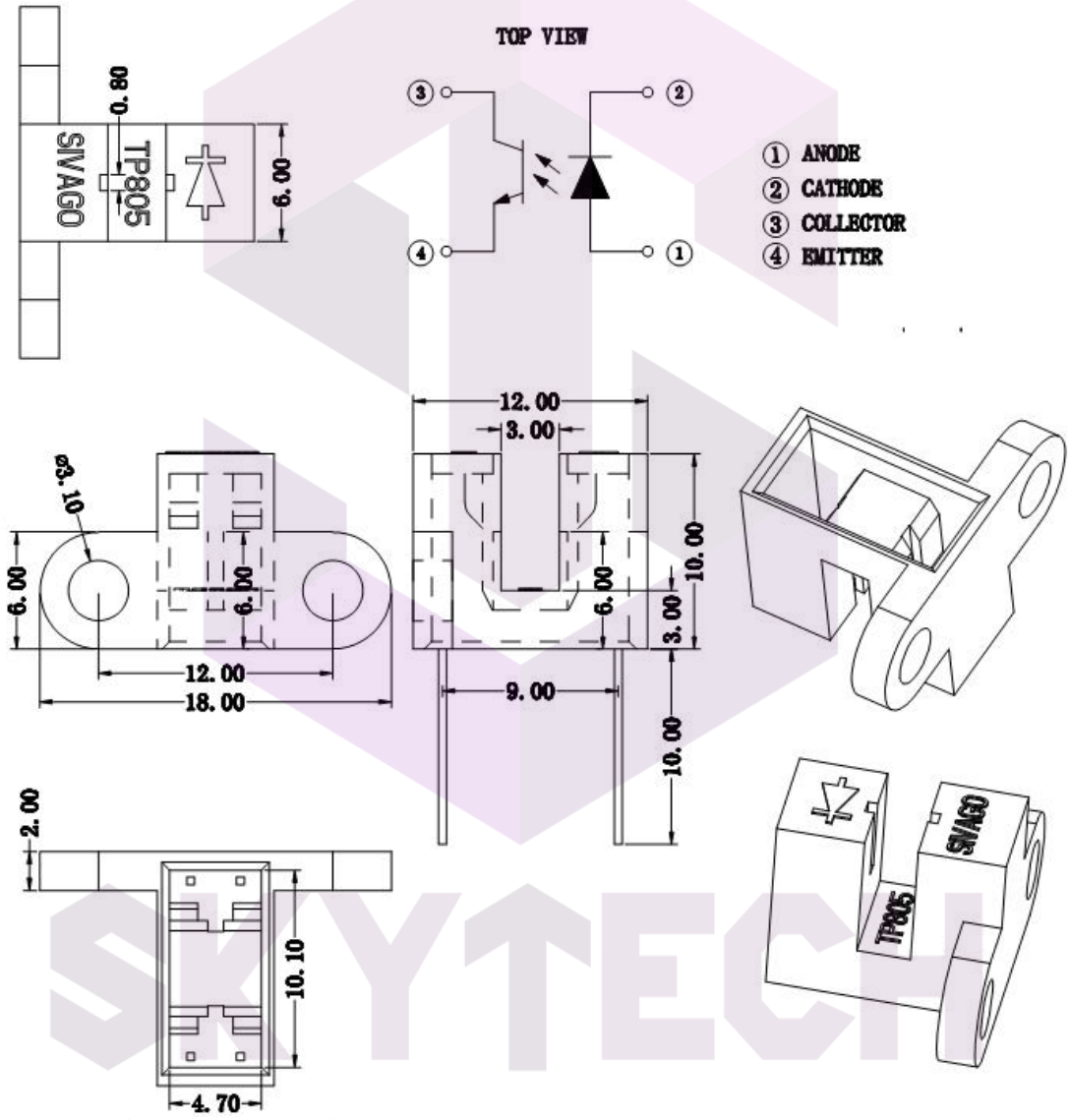
Application

▪Scanner
▪Printer
▪FAX machine
▪Counter

Description

The TP805 series consist of Gallium Arsenide infrared emitting diode and a NPN sillicon phototransistor mounted in a black plastic housing. Phototransistor switching takes place whenever an opaque object passes through the slot. These series are designed for direct soldering into PC board or mounting in standard dual-in-line socket.

PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm(.010") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.

ABSOLUTE MAXIMUM RATINGS AT TA=25℃

PARAMETER	MAXIMUM RATING	UNIT
IR Diode Continuous Forward Current	50	mA
IR Diode Reverse Voltage	5	V
Transistor Collector Currant	20	mA
Transistor Power Dissipation	100	mW
IR Diode Peak Power Currant (Pulse Wide = 1μS, 300 pps)	3	A
Diode Power Dissipation	175	mW
Phototransistor Collector-Emitter Voltage	30	V
Phototransistor Emitter-Collector Voltage	5	V
Operating Temperature Range	-40℃ to + 85℃	
Storage Temperature Range	-50℃ to + 100℃	

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25℃

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
INPUT LED						
Forward Voltage	VF		1.2	1.35	V	IF = 20mA
Reverse Current	IR			100	μA	VR=5V
OUTPUT PHOTOTRANSISTOR						
Collector-Emitter Breakdown Voltage	V(BR)CEO	30			V	IC=1mA
Emitter-Collector Breakdown Voltage	V(BR)CEO	5			V	IE=0.1mA
Collector-Emitter Dark Current	ICEO			100	nA	VCE=10V
COUPLER						
Collector-Emitter Saturation Voltage	VCE(SAT)			0.4	V	IC=0.2mA IF=20mA
Current Transfer Ratio	Ic(on)	0.8			mA	VCE=5V IF=20mA

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25℃ Ambient Temperature Unless Otherwise Noted)

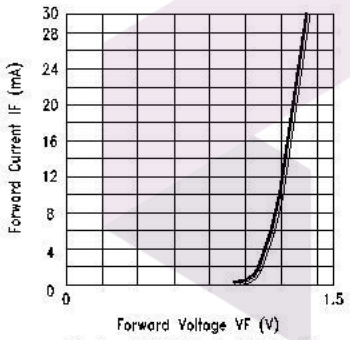


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

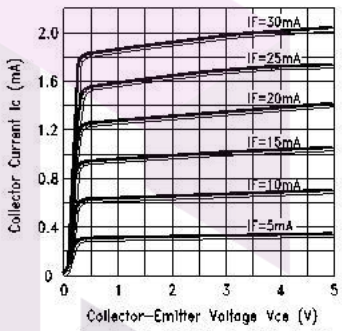


Fig.2 COLLECTOR CURRENT VS. COLLECTOR VOLTAGE

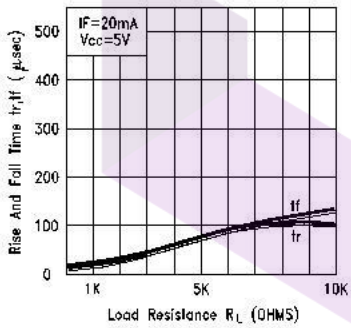


Fig.3 RISE AND FALL TIME VS. LOAD RESISTANCE

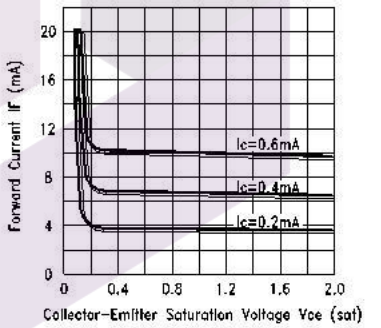


Fig.4 FORWARD CURRENT VS. Collector-Emitter Saturation Voltage

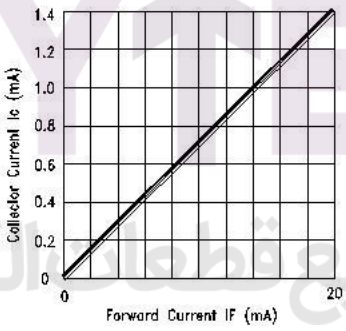


Fig.5 COLLECTOR CURRENT V.S FORWARD CURRENT

Notes

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