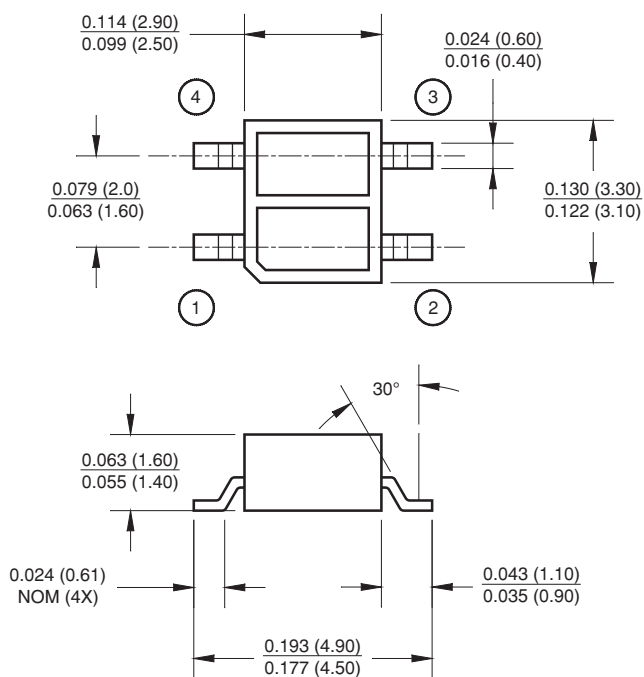




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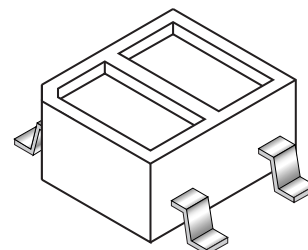
PACKAGE DIMENSIONS



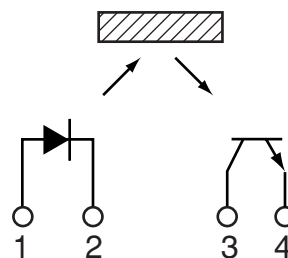
PIN 1 ANODE PIN 3 COLLECTOR
PIN 2 CATHODE PIN 4 EMITTER

NOTES:

1. Dimensions for all drawings are in inches (millimeters).
2. Tolerance of $\pm .010$ (.25) on all non-nominal dimensions



SCHEMATIC



FEATURES

- Phototransistor output
- Tape and reel packaging
- No contact surface sensing
- Miniature package
- Lead form style: Gull Wing

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Units
Operating Temperature	T_{OPR}	-25 to +85	$^\circ\text{C}$
Storage Temperature	T_{STG}	-30 to +100	$^\circ\text{C}$
Soldering Temperature (Iron) ^(2,3,4)	T_{SOL-I}	240 for 5 sec	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}	260 for 10 sec	$^\circ\text{C}$
EMITTER			
Continuous Forward Current	I_F	50	mA
Reverse Voltage	V_R	5	V
Peak Forward Current ⁽⁵⁾	I_{FP}	1	mA
Power Dissipation ⁽¹⁾	P_D	75	mW
SENSOR			
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	5	V
Collector Current	I_C	20	mA
Power Dissipation ⁽¹⁾	P_D	50	mW

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
INPUT DIODE						
Forward Voltage	$I_F = 20\text{ mA}$	V_F	—	1.2	1.6	V
Reverse Leakage Current	$V_R = 5\text{ V}$	I_R	—	—	10	μA
Peak Emission Wavelength	$I_F = 20\text{ mA}$	λ_{PE}	—	940	—	nm
OUTPUT TRANSISTOR						
Collector-Emitter Dark Current	$V_{CE} = 20\text{ V}, I_F = 0\text{ mA}$	I_D	—	—	100	nA
COUPLED						
On-State Collector Current	$I_F = 20\text{ mA}, V_{CE} = 5\text{ V}$	$I_{C(ON)}$	0.15	0.40	—	mA
Saturation Voltage		$V_{CE(SAT)}$	—	—	0.3	V
Rise Time	$V_{CC} = 5\text{ V}, I_{C(ON)} = 100\text{ }\mu\text{A}, R_L = 1\text{ K}\Omega$	t_r	—	20	—	μs
Fall Time		t_f	—	20	—	

NOTES:

1. Derate power dissipation linearly 1.33 mW/ $^\circ\text{C}$ above 25°C .
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron 1/16" (1.6mm) from housing.
5. Pulse conditions: $t_p = 100\text{ }\mu\text{s}$; $T = 10\text{ ms}$.

TYPICAL PERFORMANCE CURVES

Fig. 1 Normalized Collector Current vs. Distance between device and reflector

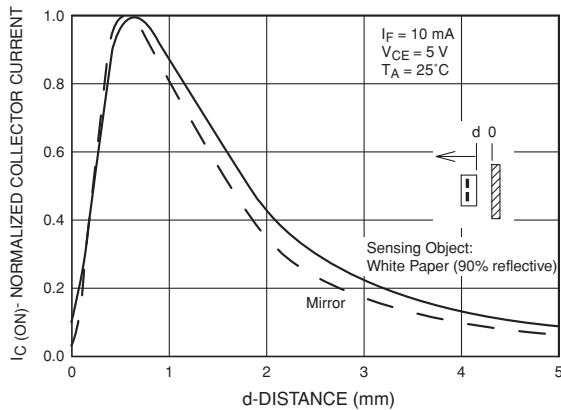


Fig. 2 Collector Current vs. Forward Current

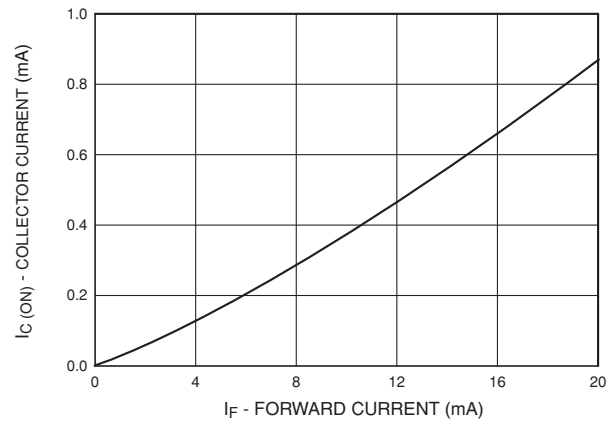


Fig. 3 Collector Current vs. Collector to Emitter Voltage

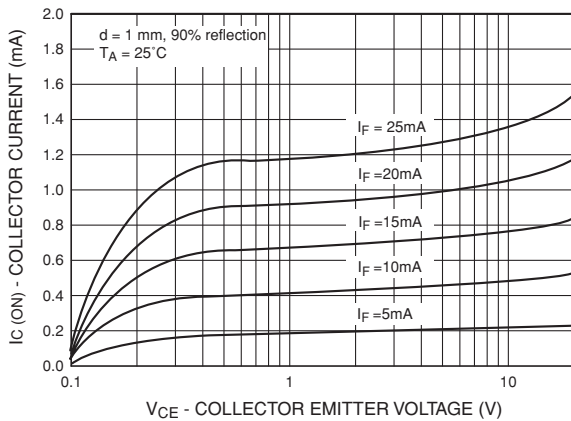


Fig. 4 Collector Emitter Dark Current (Normalized) vs. Ambient Temperature

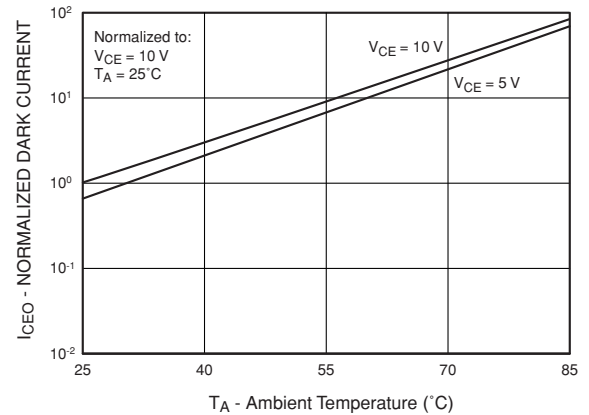


Fig. 5 Forward Current vs. Forward Voltage

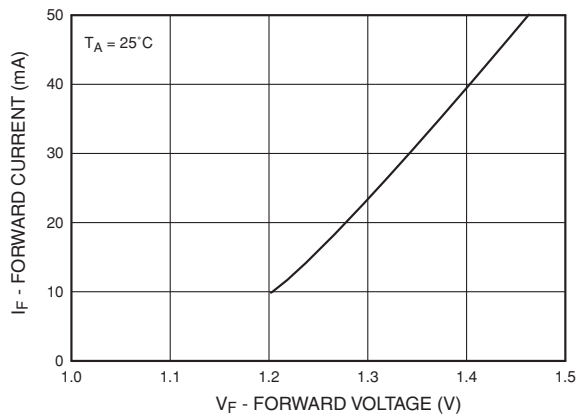


Fig. 6 Rise and Fall Time vs. Load Resistance

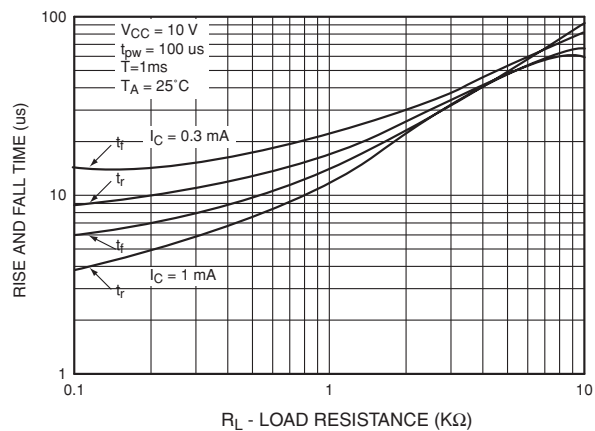
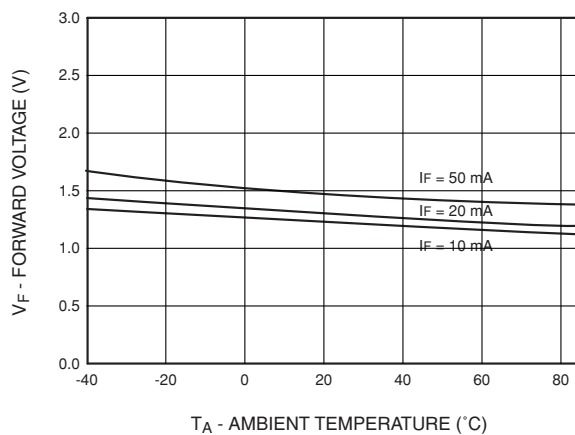


Fig. 7 Forward Voltage vs. Ambient Temperature



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