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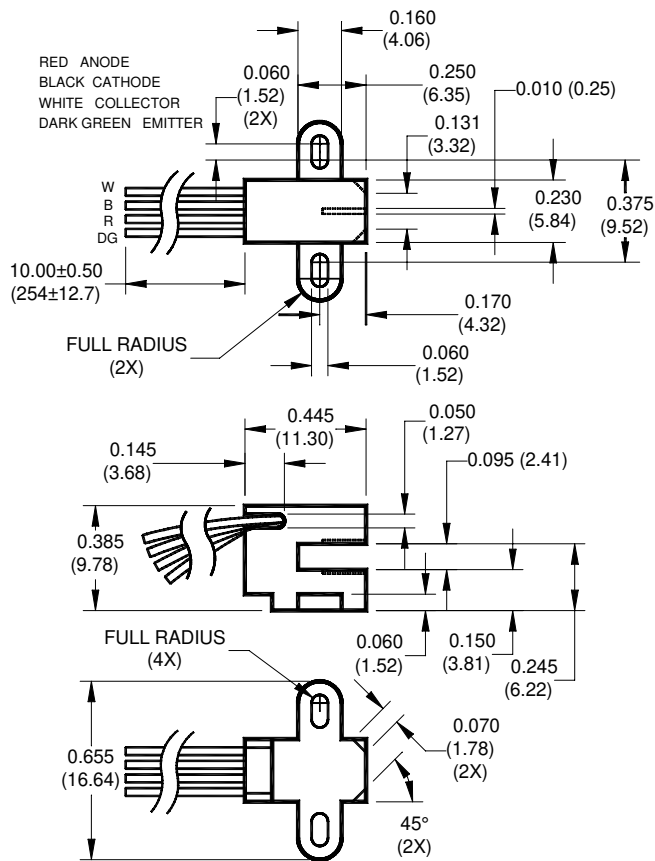


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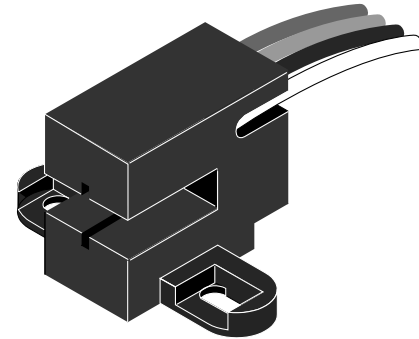
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PACKAGE DIMENSIONS

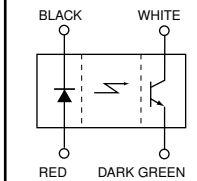


NOTES:

1. Dimensions are in inches (mm)
2. Tolerance of $\pm .010$ (.25) on all non nominal dimensions unless otherwise specified.
3. Wire gauge: 28 AWG



SCHEMATIC



FEATURES

- No contact switching
- 2.41 mm wide slot
- Slot horizontal to mounting surface
- Mounting tabs
- Transistor Output
- Wire leads for remote connection 10" (254mm)
- Opaque black plastic housing
- 0.010 (0.25) aperture width

NOTES (Applies to Max Ratings and Characteristics Tables.)

1. Derate power dissipation linearly 1.67 mW/°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) minimum from housing.

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

Parameter	Symbol	Rating	Units
Operating Temperature	T_{OPR}	-40 to +85	°C
Storage Temperature	T_{STG}	-40 to +85	°C
Lead Soldering Temperature (Iron) ^(2,3,4)	T_{SOL-I}	240 for 5 sec	°C
EMITTER			
Continuous Forward Current	I_F	50	mA
Reverse Voltage	V_R	5	V
Power Dissipation ⁽¹⁾	P_D	100	mW
SENSOR			
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	4.5	V
Power Dissipation ⁽¹⁾	P_D	100	mW

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)						
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
EMITTER						
Forward Voltage	$I_F = 20\text{ mA}$	V_F	—	—	1.7	V
Reverse Current	$V_R = 5\text{ V}$	I_R	—	—	100	μA
Peak Emission Wavelength	$I_F = 20\text{ mA}$	λ_{PE}	—	940	—	nm
SENSOR						
Collector-Emitter Breakdown	$I_C = 1\text{ mA}$	BV_{CEO}	30	—	—	V
Emitter-Collector Breakdown	$I_E = 0.1\text{ mA}$	BV_{ECO}	5	—	—	V
Dark Current	$V_{CE} = 10\text{ V}, I_F = 0\text{ mA}$	I_D	—	—	100	nA
COUPLED						
Collector Current	$I_F = 20\text{ mA}, V_{CE} = 10\text{ V}$	$I_{C(ON)}$	0.5	—	—	mA
Collector Emitter Saturation Voltage	$I_F = 20\text{ mA}, I_C = 0.4\text{ mA}$	$V_{CE(SAT)}$	—	—	0.4	V
Rise Time	$V_{CE} = 5\text{ V}, R_L = 100\ \Omega$	t_r	—	8	—	μs
Fall Time	$I_{C(ON)} = 5\text{ mA}$	t_f	—	50	—	μs

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Voltage vs. Ambient Temperature

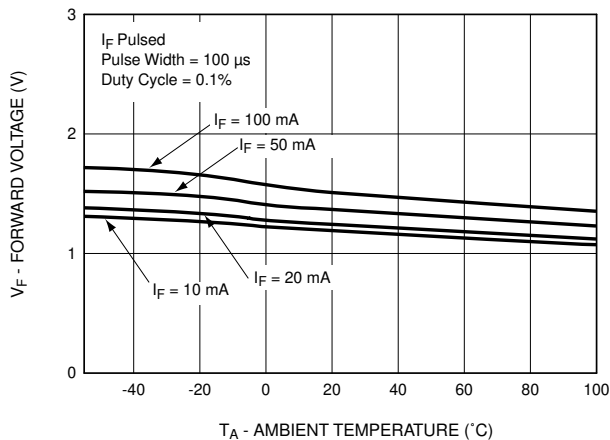


Fig. 2 Forward Current Vs. Forward Voltage

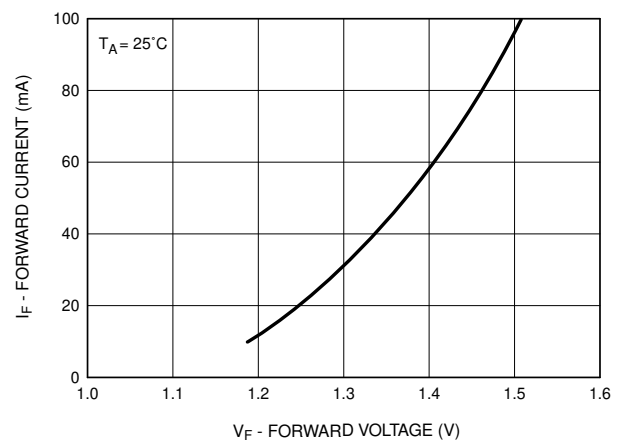


Fig. 3 Collector Emitter Dark Current (Normalized) vs. Ambient Temperature

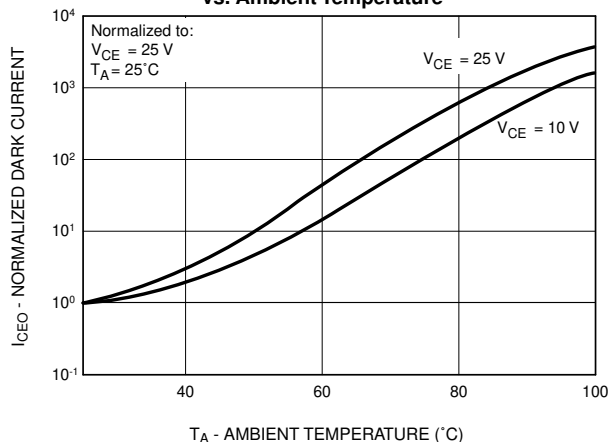
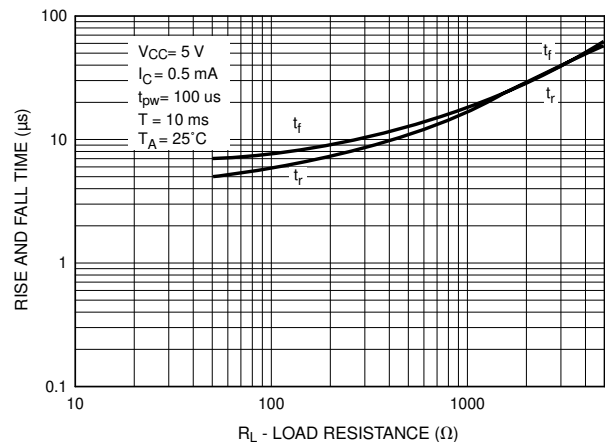


Fig. 4 Rise and Fall Time vs. Load Resistance



**Fig. 5 Normalized Collector Current
vs. Forward Current**

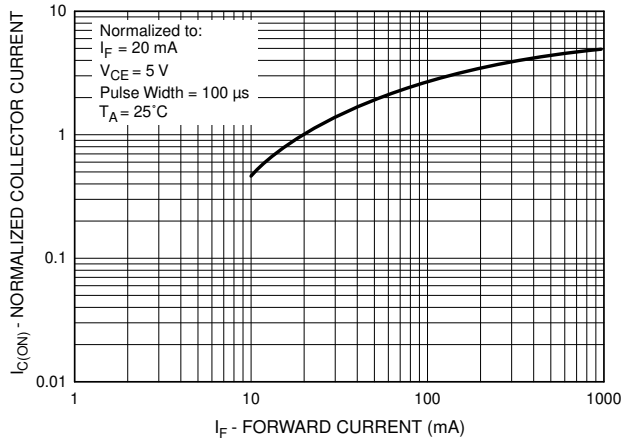


Fig. 6 Collector Current vs. Collector to Emitter Voltage

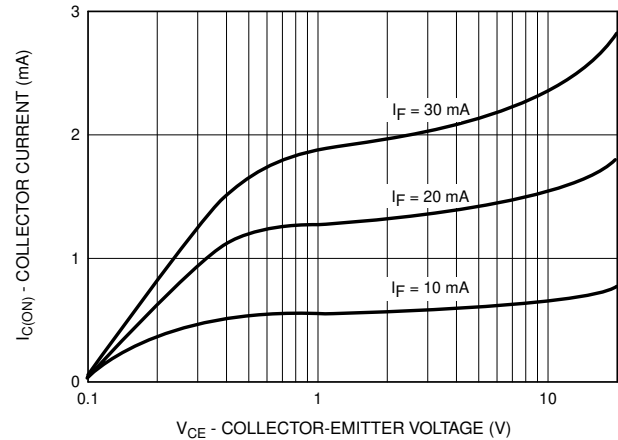


Fig. 7 Normalized Collector Current vs. Ambient Temperature

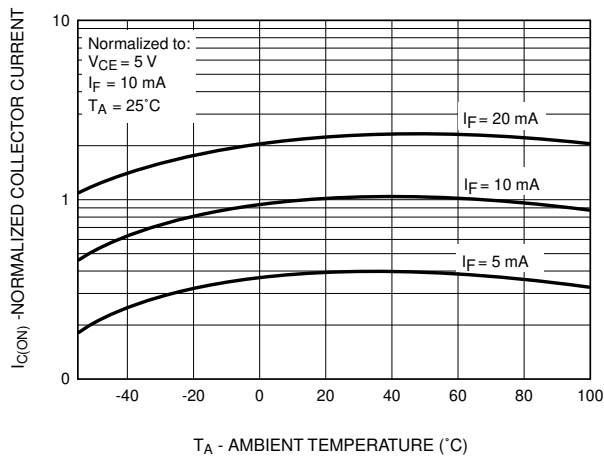
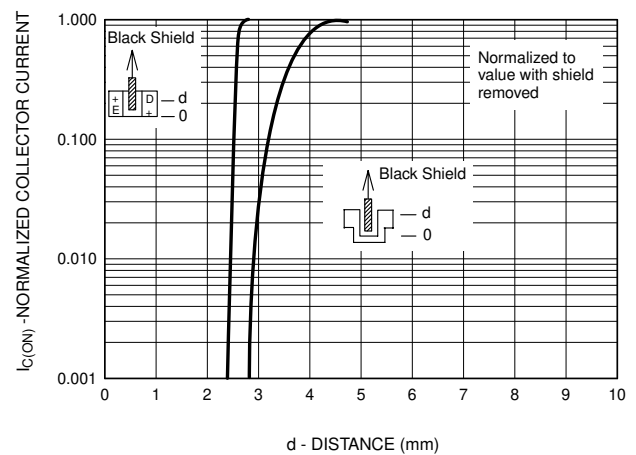
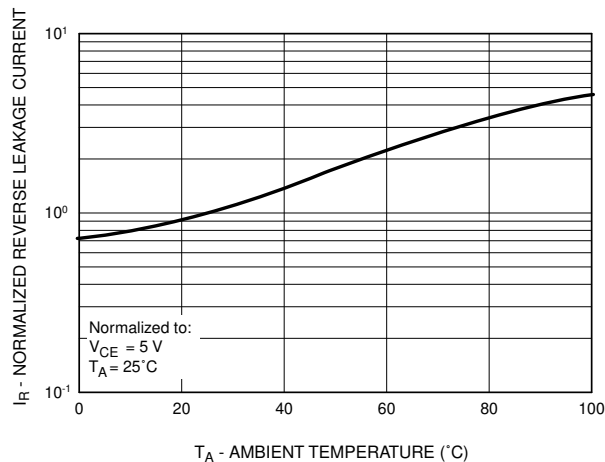


Fig. 8 Normalized Collector Current vs. Shield Distance



**Fig. 9 Normalized Reverse Leakage Current
vs. Ambient Temperature**



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