

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°C)						
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
EMITTER						
Forward Voltage	I _F = 20 mA	V _F	—	—	1.7	V
Reverse Current	V _R = 5 V	I _R	—	—	100	μA
Peak Emission Wavelength	I _F = 20 mA	λ _{PE}	—	940	—	nm
SENSOR						
Collector-Emitter Breakdown	I _C = 1 mA	BV _{CEO}	30	—	—	V
Emitter-Collector Breakdown	I _E = 0.1 mA	BV _{ECO}	5	—	—	V
Dark Current	V _{CE} = 10 V, I _F = 0 mA	I _D	—	—	100	nA
COUPLED						
Collector Current	I _F = 20 mA, V _{CE} = 10 V	I _{C(ON)}	0.5	—	—	mA
Collector Emitter Saturation Voltage	I _F = 20 mA, I _C = 0.4 mA	V _{CE(SAT)}	—	—	0.4	V
Rise Time	V _{CE} = 5 V, R _L = 100 Ω	t _r	—	8	—	μs
Fall Time	I _{C(ON)} = 5 mA	t _f	—	50	—	μs

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Voltage vs. Ambient Temperature

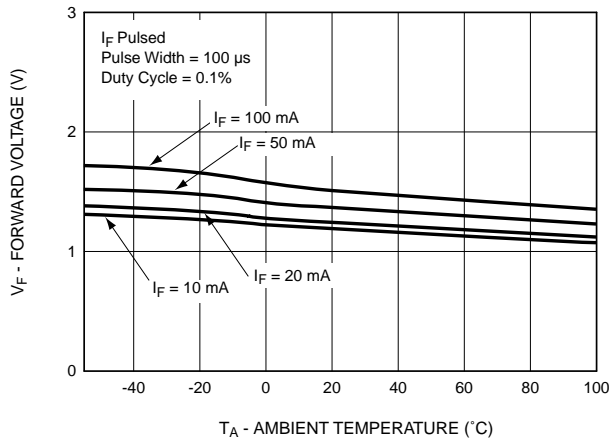


Fig. 2 Forward Current Vs. Forward Voltage

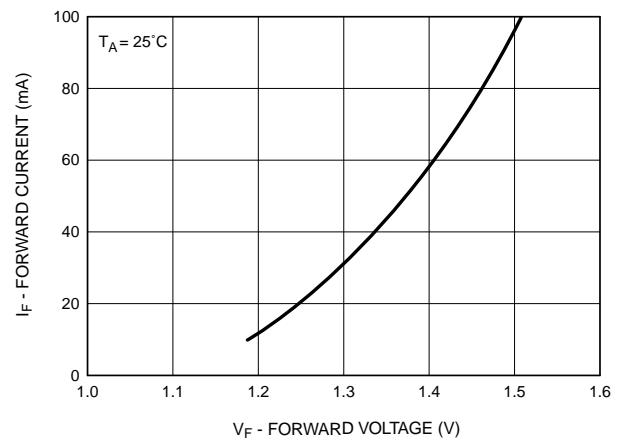


Fig. 3 Collector Emitter Dark Current (Normalized) vs. Ambient Temperature

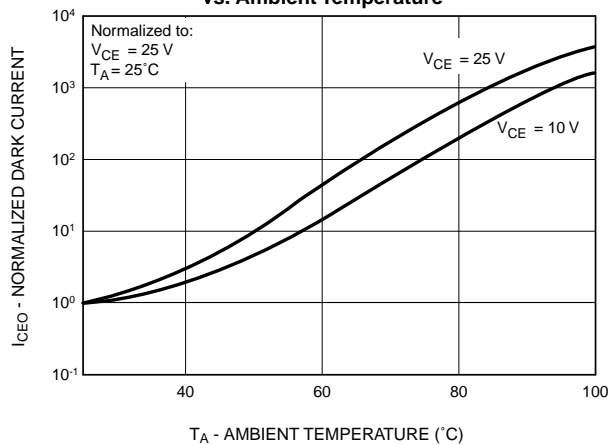


Fig. 4 Rise and Fall Time vs. Load Resistance

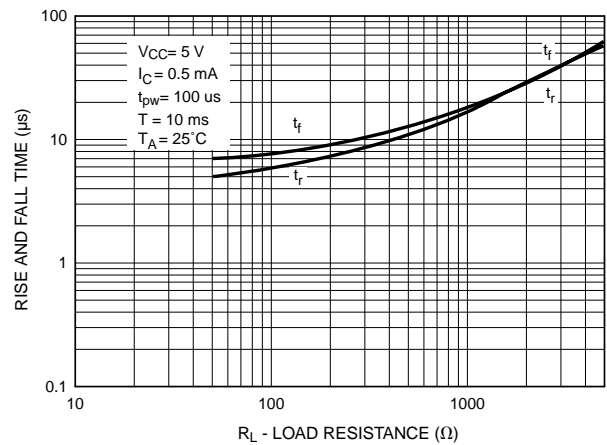


Fig. 5 Normalized Collector Current vs. Forward Current

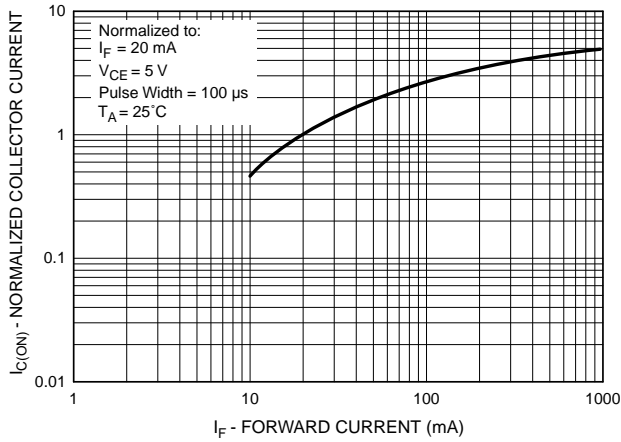


Fig. 6 Collector Current vs. Collector to Emitter Voltage

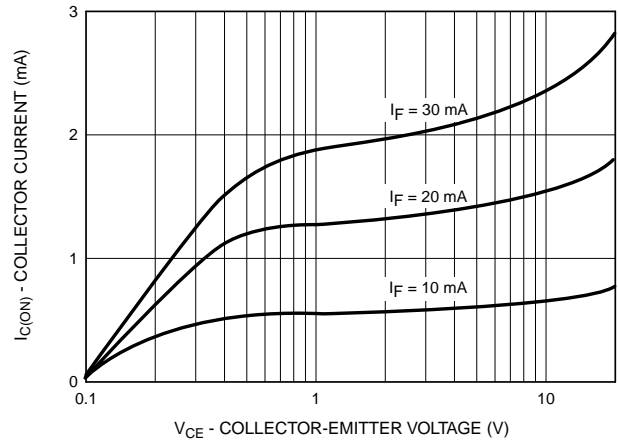


Fig. 7 Normalized Collector Current vs. Ambient Temperature

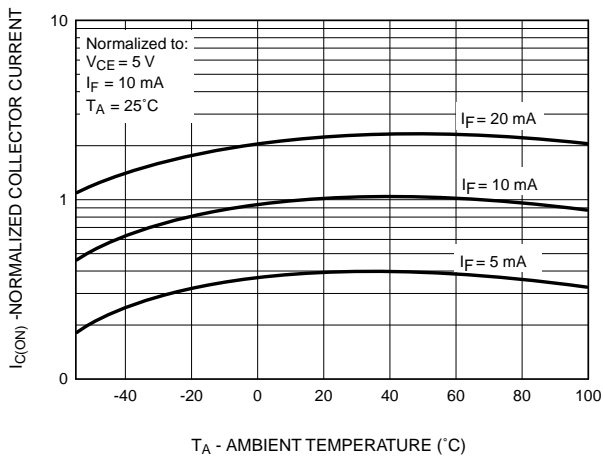


Fig. 8 Normalized Collector Current vs. Shield Distance

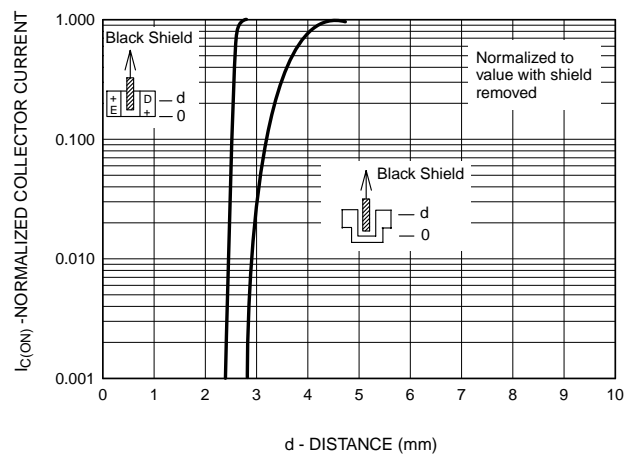
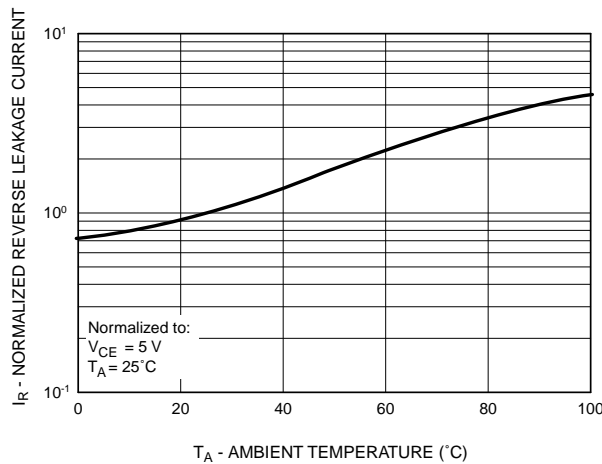


Fig. 9 Normalized Reverse Leakage Current vs. Ambient Temperature



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