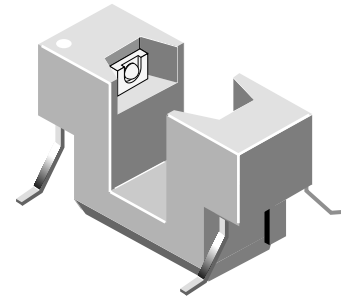
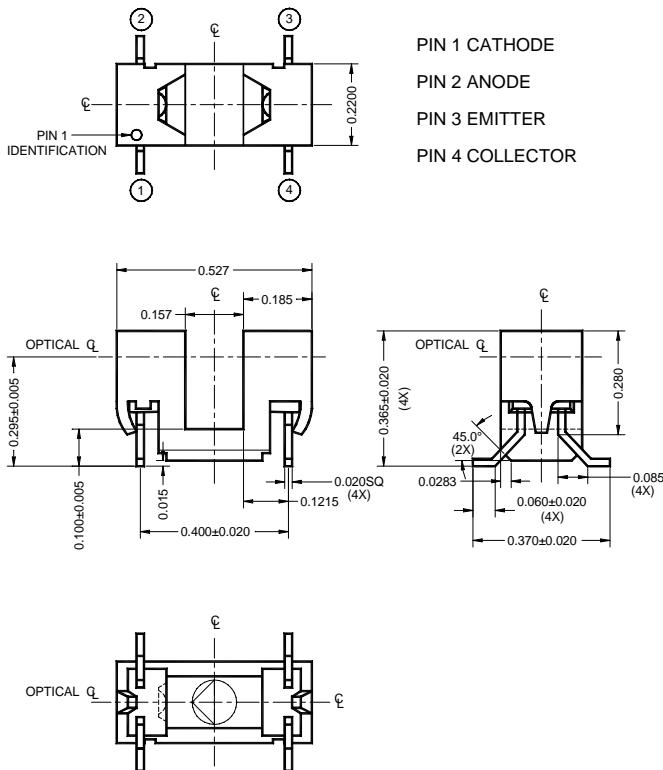
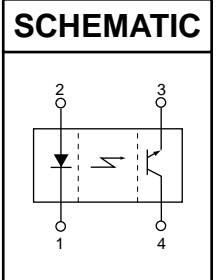


PACKAGE DIMENSIONS



FEATURES

- No contact switching
- 4 mm wide slot
- Leads formed for surface mounting
- Housing material resistant to high temperatures
- Daylight filter on sensor
- Transistor Output
- Tape & Reel Option: .TR (See Tape & Reel Dimensions)



NOTES:

1. Dimensions for all drawings are in inches.
2. Tolerance of $\pm .010$ on all non-nominal dimensions unless otherwise specified.
3. All leads are coplanar within $.006''$.
4. Housing material is electrically conductive.

NOTES (Applies to Max Ratings and Characteristics Tables.)

1. Derate power dissipation linearly $1.67 \text{ mW}/^\circ\text{C}$ above 25°C .
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.

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

Parameter	Symbol	Rating	Units
Operating Temperature	T_{OPR}	-40 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}		
Preheating Stage for 60 sec		183	$^\circ\text{C}$
Reflow Stage for 5 sec		230	$^\circ\text{C}$
Rate of Temperature Rise		3 to 10	$^\circ\text{C}/\text{S}$
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	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} = 5 V	I _{C(ON)}	2.0	—	—	mA
Collector Emitter Saturation Voltage	I _F = 20 mA, I _C = 0.5 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 = 5 mA	t _f	—	50	—	μs

Fig. 1 Forward Voltage vs. Ambient Temperature

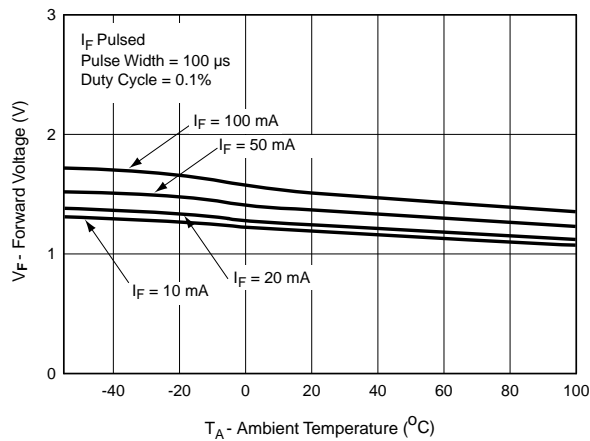


Fig. 2 Forward Current vs. Forward Voltage

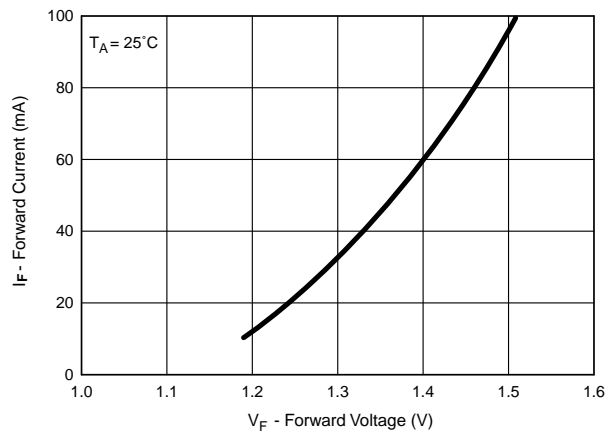


Fig. 3 Collector Emitter Dark Current (Normalized) vs. Ambient Temperature

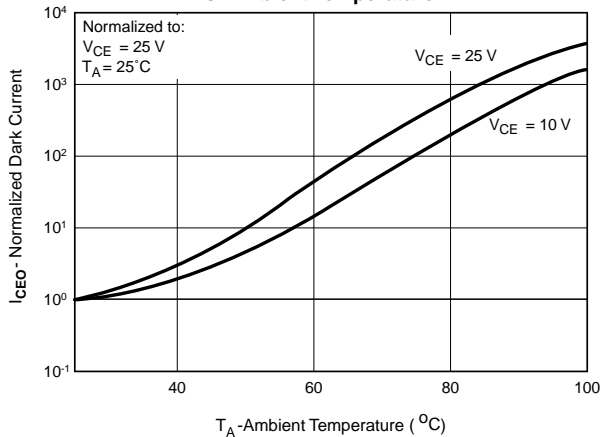


Fig. 4 Rise and Fall Time vs. Load Resistance

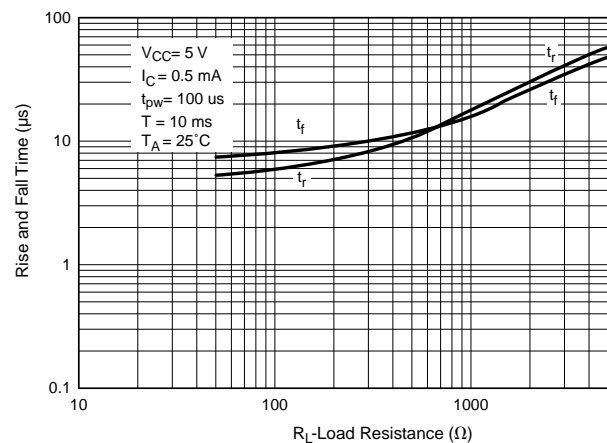


Fig. 5 Collector Current vs. Forward Current

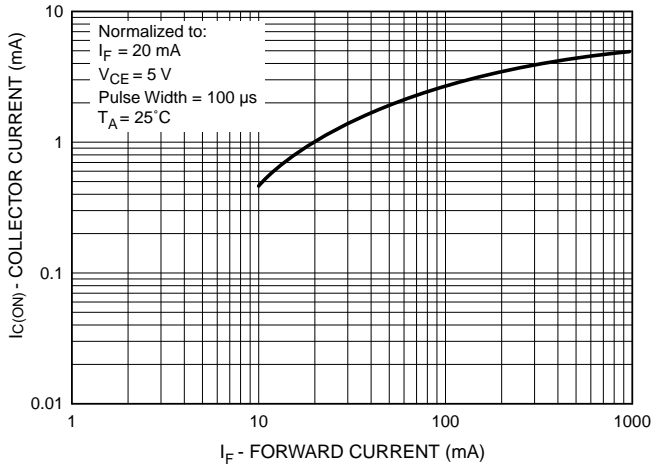


Fig. 6 Collector Current vs. Collector Emitter Voltage

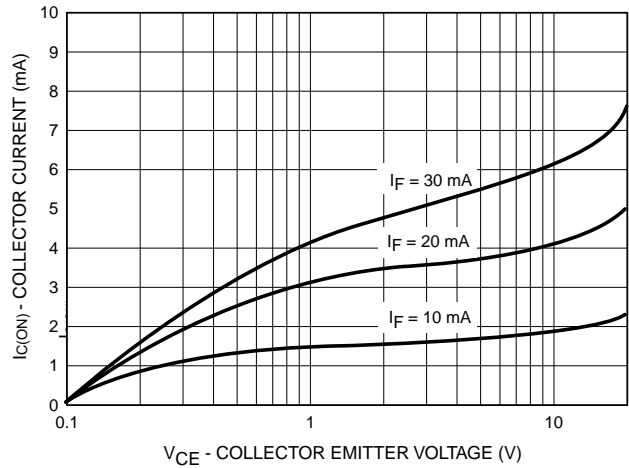


Fig. 7 Collector Current vs. Ambient Temperature

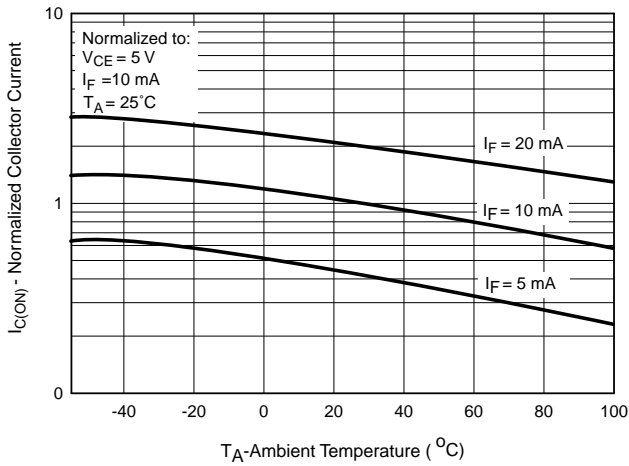


Fig. 8 Collector Current vs. Shield Distance

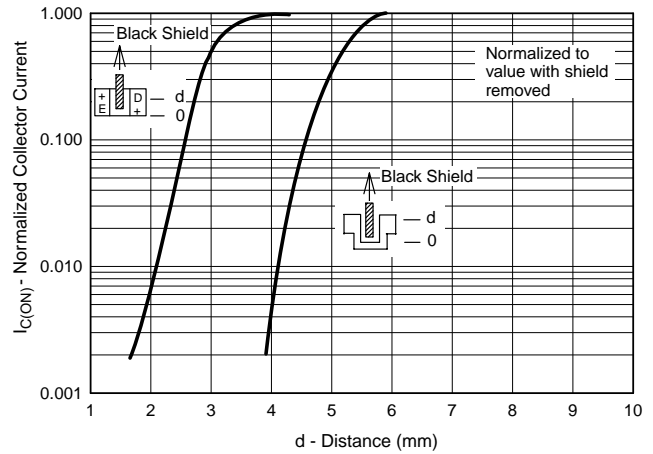
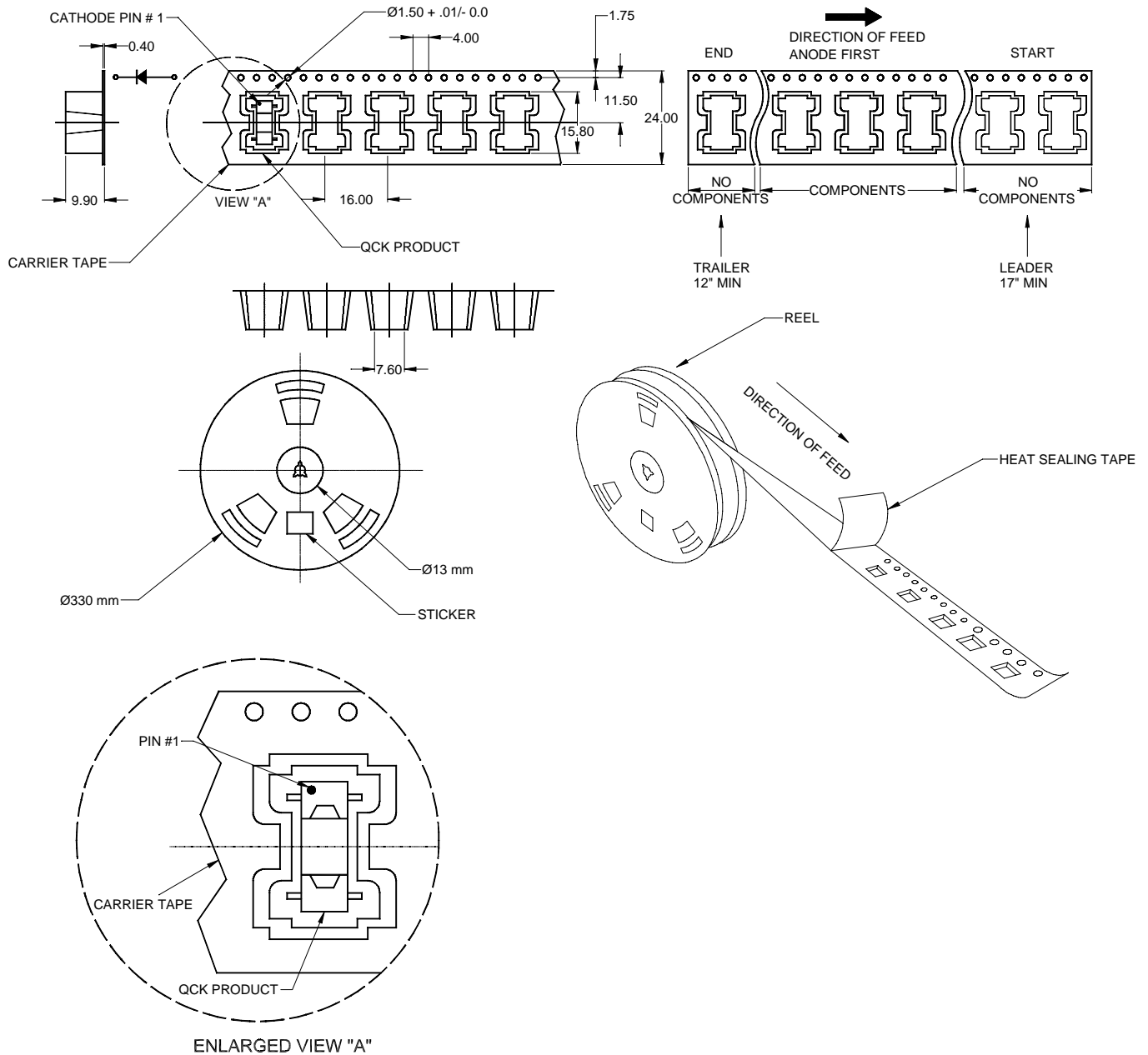


Fig. 9 Power Dissipation vs. Ambient Temperature (TBD)

TAPE & REEL DIMENSIONS



NOTES:

1. QUANTITY PER REEL: 300 UNITS.
2. CARRIER TAPE MATERIAL: HIGH IMPACT POLYSTERINE (CONDUCTIVE BLACK).
3. REEL MATERIAL: HIGH IMPACT STYRENIC ALLOY.
4. TAPE PLACED ON TOP OF UNIT TO AID PICK AND PLACE MACHINE.
5. ALL DIMENSIONS ARE IN MILLIMETERS (UNLESS OTHERWISE SPECIFIED).

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.