Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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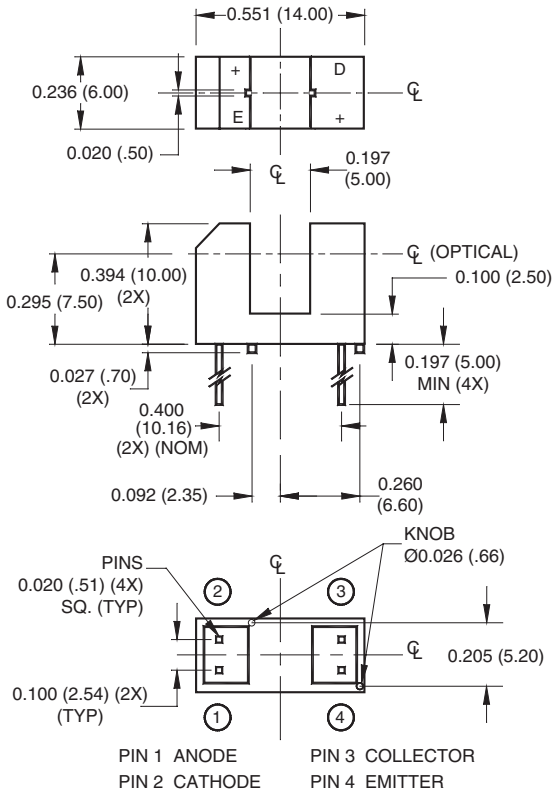
FAIRCHILD
SEMICONDUCTOR®

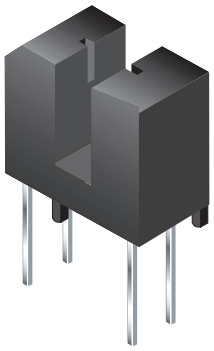
PHOTOTRANSISTOR OPTICAL INTERRUPTER SWITCH

QVE00832

PACKAGE DIMENSIONS



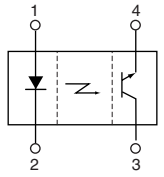
NOTES:
1. Dimensions for all drawings are in inches (millimeters).
2. Tolerance of ± .010 (.25) on all non-nominal dimensions unless otherwise specified.



FEATURES

- No contact switching
- 5mm wide slot
- 0.5 mm aperture width
- Opaque black plastic housing
- Locating knobs on housing base for accurate mounting
- Transistor Output

SCHEMATIC



NOTES

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 tip 1/16" (1.6mm) from housing.

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Units
Operating Temperature	TOPR	-55 to +100	°C
Storage Temperature	TSTG	-55 to +100	°C
Soldering Temperature (Iron)(2,3,4)	TSOL-I	240 for 5 sec	°C
Soldering Temperature (Flow)(2,3)	TSOL-F	260 for 10 sec	°C
EMITTER			
Continuous Forward Current	IF	60	mA
Reverse Voltage	VR	6	V
Power Dissipation(1)	PD	150	mW
SENSOR			
Collector-Emitter Voltage	VCEO	30	V
Emitter-Collector Voltage	VECO	4.5	V
Collector Current	IC	20	mA
Power Dissipation(1)	PD	150	mW

PHOTOTRANSISTOR OPTICAL INTERRUPTER SWITCH

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ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
EMITTER						
Forward Voltage	I_F = 20 mA	V_F	—	1.2	1.5	V
Reverse Current	V_R = 4 V	I_R	—	—	10	μA
Peak Emission Wavelength	I_F = 20 mA	λ_{PE}	—	940	—	nm
SENSOR						
Dark Current	V_{CE} = 10 V, I_F = 0 mA	I_D	—	—	200	nA
COUPLED						
Collector Current	I_F = 20 mA, V_{CE} = 10 V	$I_{C(ON)}$	0.5	—	14	mA
Collector Emitter Saturation Voltage	I_F = 20 mA, I_C = 0.1 mA	$V_{CE\ (SAT)}$	—	—	0.4	V
Rise Time	V_{CC} = 5 V, R_L = 100 Ω	t_r	—	4	—	μs
Fall Time	I_C = 5 mA	t_f	—	4	—	μs

TYPICAL PERFORMANCE CURVES

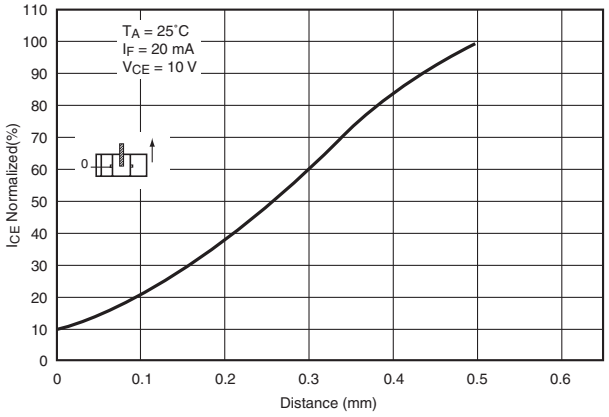

Fig. 1 Collector Current vs. Shield distance

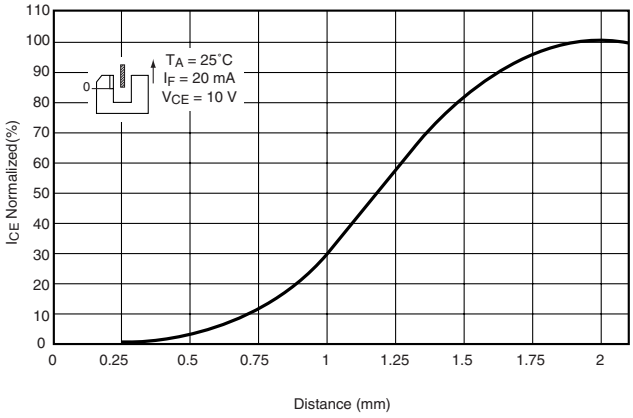

Fig. 2 Collector Current vs. Shield distance

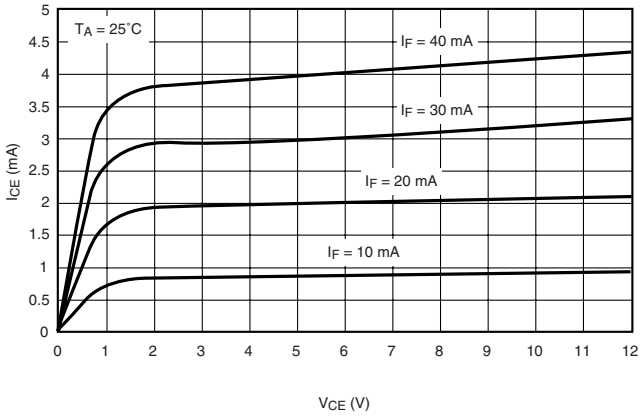

Fig. 3 Collector-Emitter Voltage vs. Collector Current

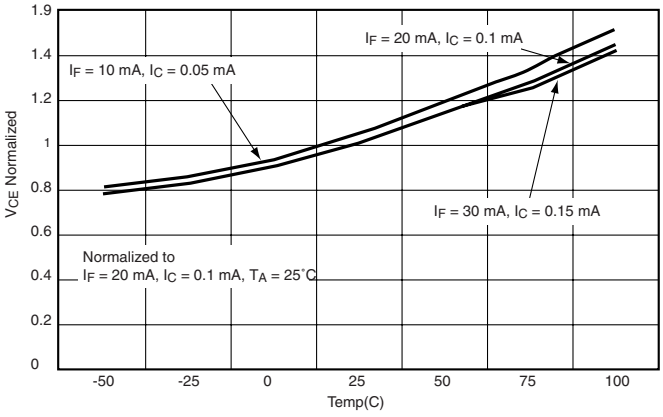

Fig. 4 Collector-Emitter Voltage vs. Temperature

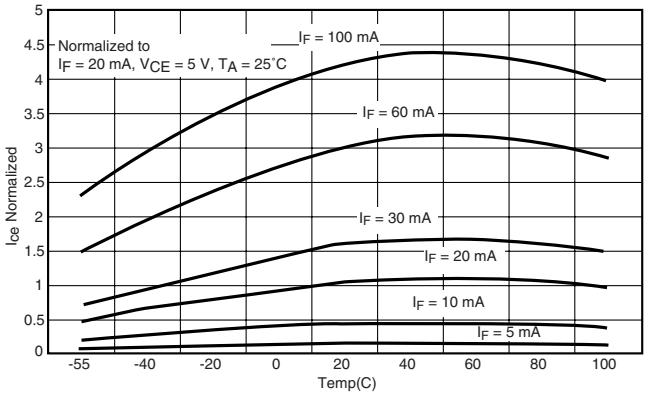

Fig. 5 Collector Current vs. Temperature

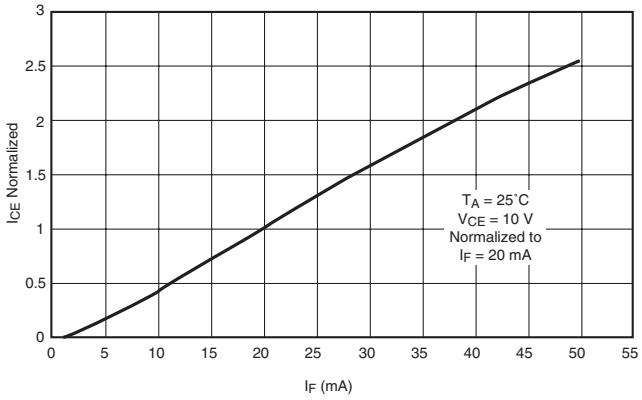

Fig. 6 Collector Current vs. Forward Current

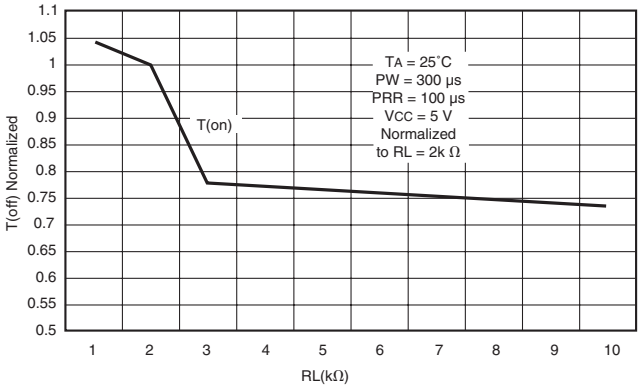

Fig. 7 Rise Time vs. Load Resistance

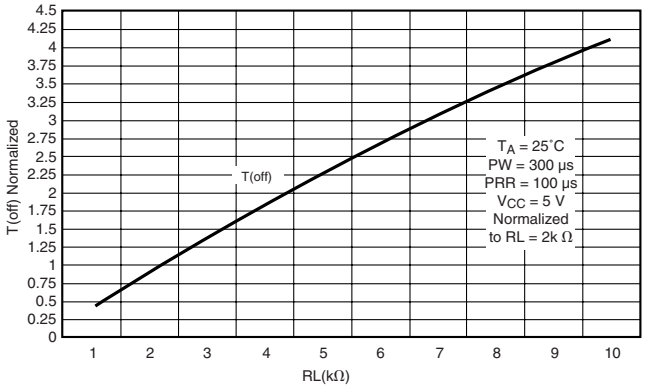

Fig. 8 Fall Time vs. Load Resistance

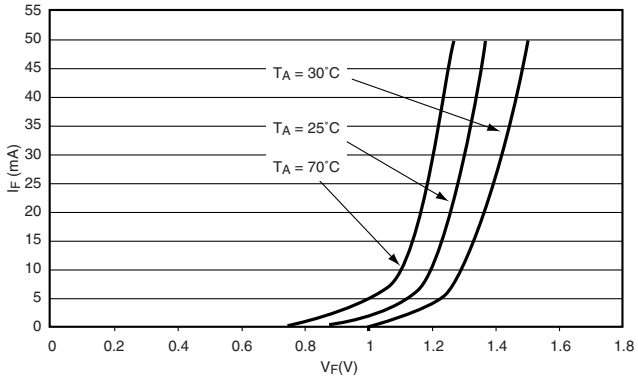

Fig. 9 Forward Voltage vs. Forward Current

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