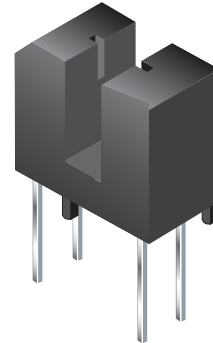
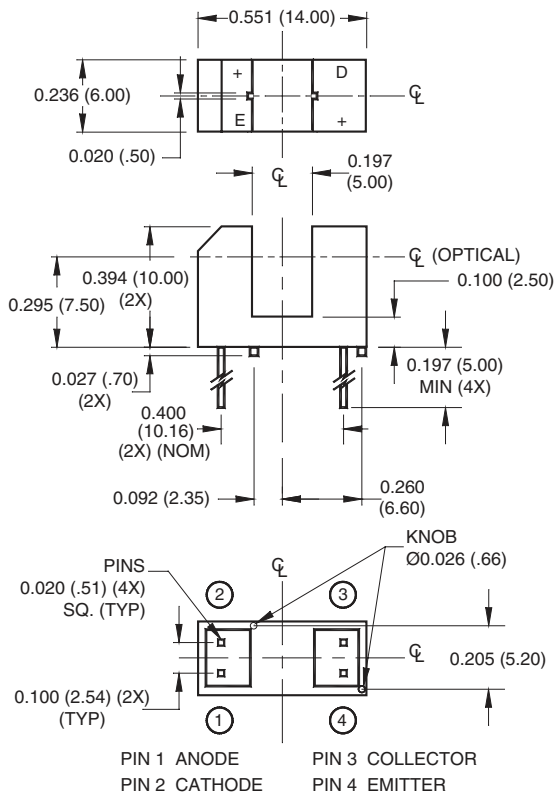


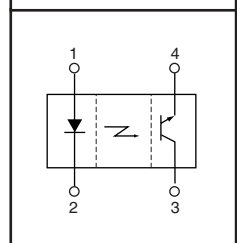
PACKAGE DIMENSIONS



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

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 ($T_A = 25^\circ\text{C}$ 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

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

TYPICAL PERFORMANCE CURVES

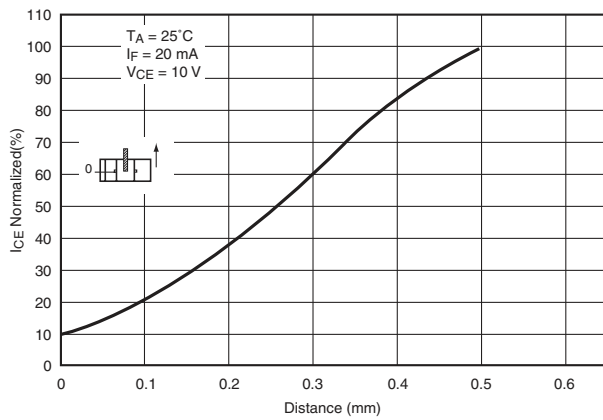


Fig. 1 Collector Current vs. Shield distance

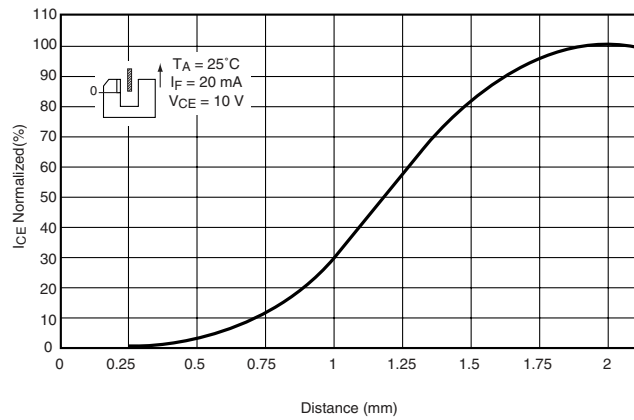


Fig. 2 Collector Current vs. Shield distance

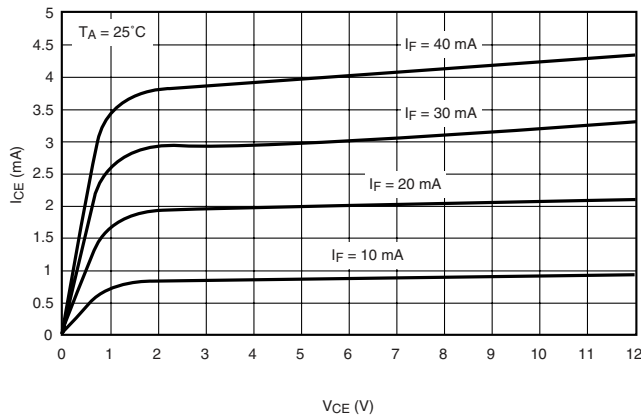


Fig. 3 Collector-Emitter Voltage vs. Collector Current

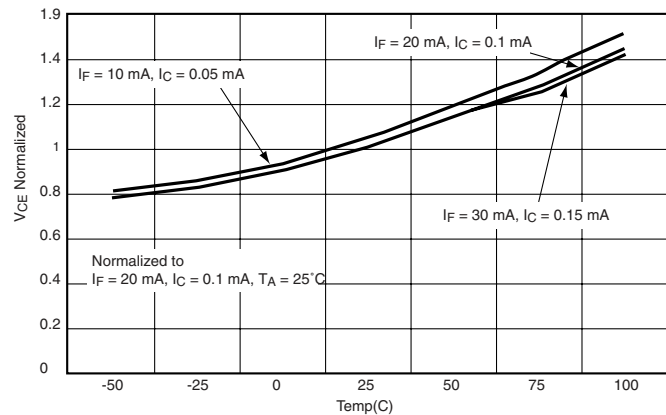


Fig. 4 Collector-Emitter Voltage vs. Temperature

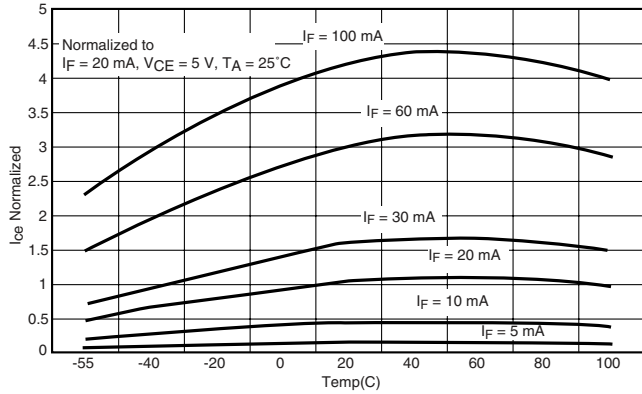


Fig. 5 Collector Current vs. Temperature

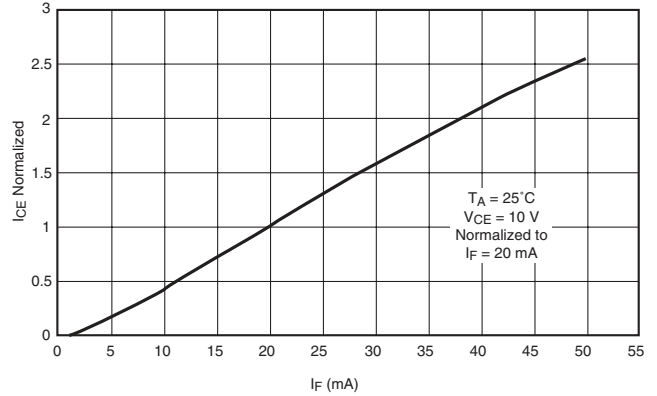


Fig. 6 Collector Current vs. Forward Current

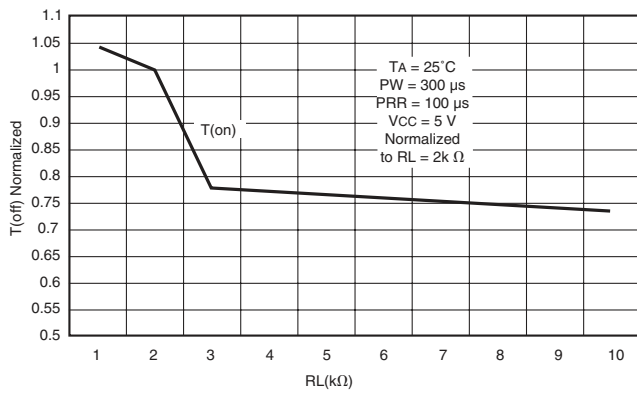


Fig. 7 Rise Time vs. Load Resistance

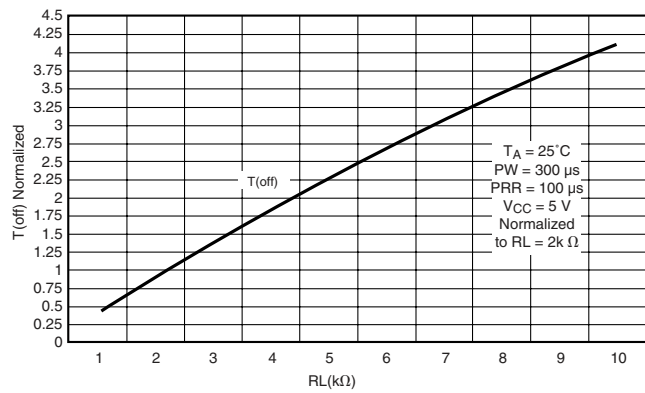


Fig. 8 Fall Time vs. Load Resistance

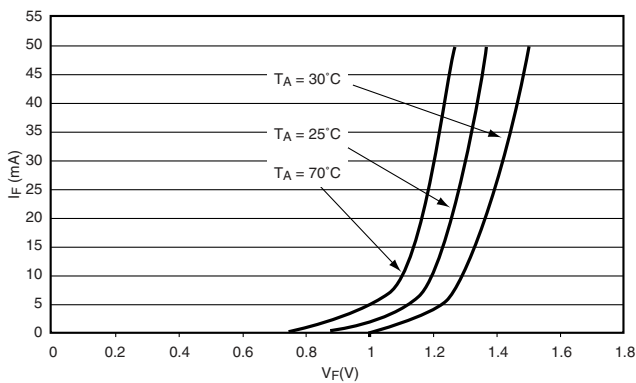


Fig. 9 Forward Voltage vs. Forward Current

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

-
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.