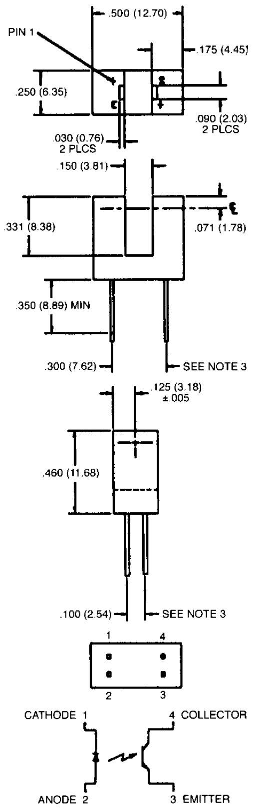
FAIRCHILD
SEMICONDUCTOR™

SLOTTED OPTICAL SWITCH

QVE11233

PACKAGE DIMENSIONS



ST2176

NOTES:
1. DIMENSIONS ARE IN INCHES (mm).
2. TOLERANCE IS ±.010 (.25)
UNLESS OTHERWISE SPECIFIED.
3. THIS DIMENSION IS CONTROLLED
AT THE HOUSING SURFACE.

DESCRIPTION

The QVE11233 is designed to allow the user maximum flexibility in applications. Each switch consists of an infrared emitting diode facing an NPN phototransistor across a .150″ (3.81 mm) gap.

FEATURES

- Lead spacing .300″.
- Gap width of .150″.
- Printed circuit board mounting.
- 2 mm aperture width.

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ABSOLUTE MAXIMUM RATINGS (T_A = 25°C Unless Otherwise Specified)

Storage Temperature	−40°C to + 85°C
Operating Temperature	−40°C to + 85°C
Soldering:	
Lead Temperature (Iron)	240°C for 5 sec. (2,3,4)
Lead Temperature (Flow)	260°C for 10 sec. (2,3)
INPUT DIODE	
Continuous Forward Current	50 mA
Reverse Voltage	5.0 Volts
Power Dissipation	100 mW(1)
OUTPUT TRANSISTOR	
Collector-Emitter Voltage	30.0 Volts
Emitter-Collector Voltage	5.0 Volts
Power Dissipation	100 mW(1)

ELECTRICAL CHARACTERISTICS (T_A = 25°C Unless Otherwise Specified)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
INPUT DIODE						
Forward voltage	V_F	—		1.70	V	I_F = 20 mA
Reverse Leakage Current	I_R	—		100	μA	V_R = 2.0 V
OUTPUT TRANSISTOR						
Emitter-Collector Breakdown	BV_{ECO}	5		—	V	I_E = 100 μA, Ee = 0
Collector-Emitter Breakdown	BV_{CEO}	30		—	V	I_C = 1.0 mA, Ee = 0
Collector-Emitter Leakage	I_{CEO}	—		100	nA	V_{CE} = 10.0 V, Ee = 0
COUPLED						
On-State Collector Current	$I_{C(ON)}$	0.50		—	mA	I_F = 20 mA, V_{CE} = 5 V
Saturation Voltage	$V_{CE(SAT)}$	—		0.40	V	I_F= 20 mA, I_C = 0.25 mA

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″ (1.6 mm) from housing.*

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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.

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