

# ISTS105A



# ISOCOM

COMPONENTS

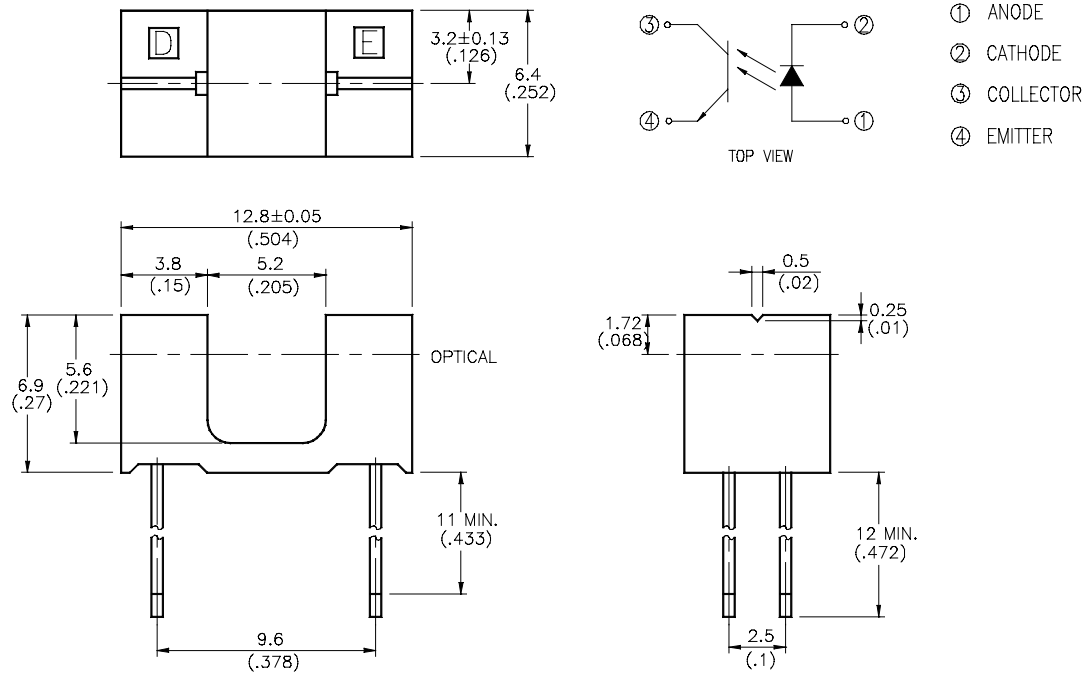
## SINGLE CHANNEL SLOTTED INTERRUPTER SWITCH WITH TRANSISTOR SENSORS



### FEATURES

- \* NON-CONTACT SWITCHING.
- \* FOR DIRECT PC BOARD OR DUAL-IN-LINE SOCKET MOUNTING.
- \* FAST SWITCHING SPEED.

### PACKAGE DIMENSIONS



### NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25$ mm(.010") unless otherwise noted.
3. Specifications are subject to change without notice.

### ISOCOM COMPONENTS LTD

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### ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	MAXIMUM RATING	UNIT
INPUT LED		
Power Dissipation	75	mW
Peak Forward Current ( 300 pps , 10 $\mu$ S pulse)	1	A
Continuous Forward Current	50	mA
Reverse Voltage	5	V
OUTPUT PHOTOTRANSISTOR		
Power Dissipation	100	mW
Collector-Emitter Voltage	30	V
Emitter-Collector Voltage	5	V
Collector Current	20	mA
Operating Temperature Range	-25°C to + 85°C	
Storage Temperature Range	-40°C to + 100°C	
Lead Soldering Temperature [ 1.6mm (.063") Form Case ]	260°C for 5 Seconds	

## ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
INPUT LED						
Forward Voltage	V <sub>F</sub>		1.2	1.6	V	I <sub>F</sub> = 20mA
Reverse Current	I <sub>R</sub>			100	μ A	V <sub>R</sub> =5V
OUTPUT PHOTOTRANSISTOR						
Collector-Emitter Breakdown Voltage	V(BR) <sub>CEO</sub>	30			V	I <sub>C</sub> =1mA
Emitter-Collector Breakdown Voltage	V(BR) <sub>ECO</sub>	5			V	I <sub>E</sub> =100 μ A
Collector-Emitter Dark Current	I <sub>CEO</sub>			100	nA	V <sub>CE</sub> =10V
COUPLER						
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>			0.4	V	I <sub>C</sub> =0.25mA I <sub>F</sub> =20mA
On State Collector Current	I <sub>c(ON)</sub>	0.5			mA	V <sub>CE</sub> =5V I <sub>F</sub> =20mA

# TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

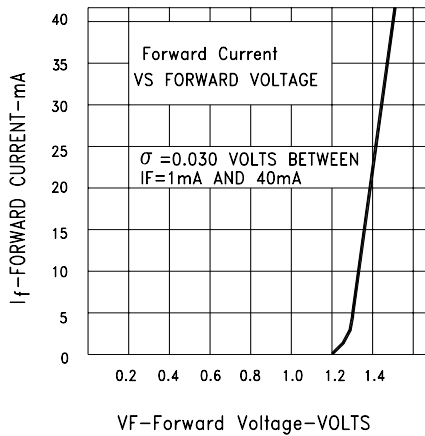


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

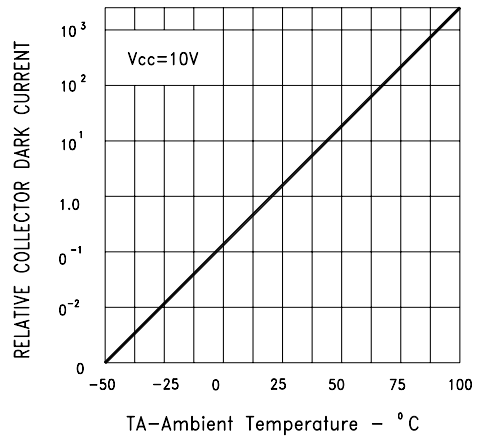


Fig.2 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

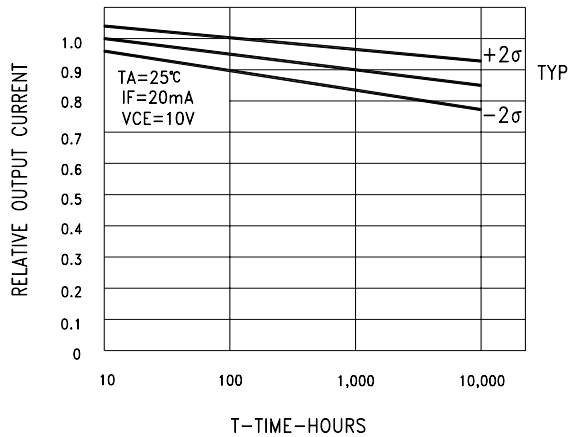


Fig.3 RELATIVE OUTPUT CURRENT VS TIME

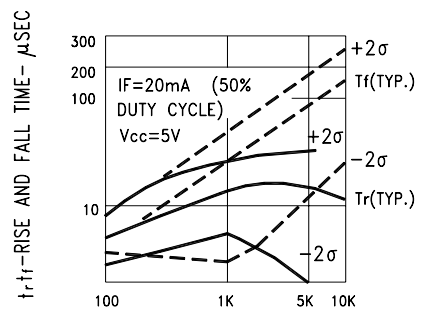


FIG.D RL.-LOAD RESISTANCE-OHMS

Fig.4 RISE AND FALL TIME VS LOAD RESISTANCE