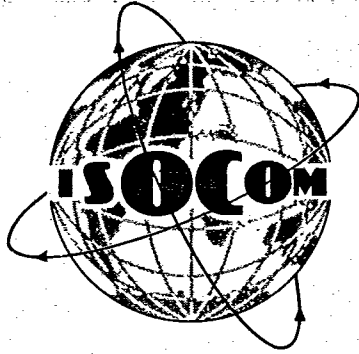
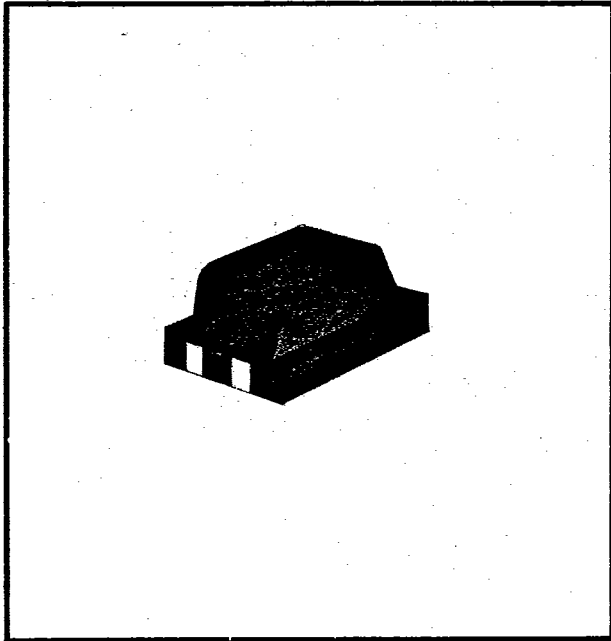


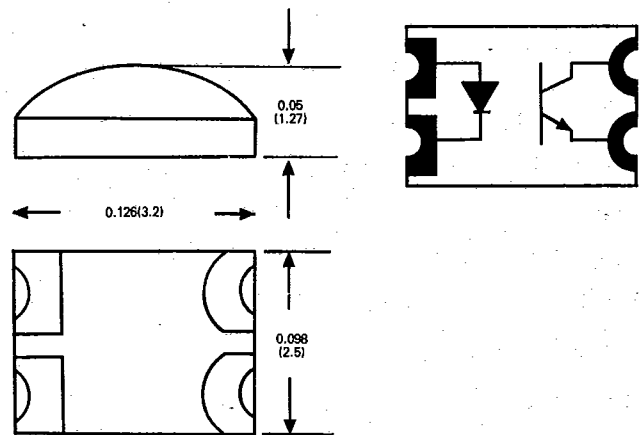


ISH710 ISH711

Optically Coupled Isolators for Hybrid Applications



PACKAGE DIMENSIONS IN INCHES (MM)



FEATURES

- Surface Mounting Device
- Ceramic Substrate
- For Automatic Mounting
- Suitable for Soldering
- 2500 V Isolation

DESCRIPTION

The ISH710 and ISH711 are optically coupled isolators consisting of a Gallium Arsenide infrared emitting diode and a NPN silicon phototransistor mounted on a 0.126×0.098 inch ceramic substrate specifically designed for Hybrid applications.

All electrical parameters are 100% tested. Specifications are guaranteed to a cumulative 0.65% AQL.

ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise noted)

Storage Temperature.....	-55°C to + 125°C
Operating Temperature	-55°C to + 100°C
Input-to-Output Isolation voltage	2500V

Input Diode

Forward D.C. Current.....	40 mA
Reverse D.C. Voltage.....	5 V
Peak forward current (1 μ s p.w. 300 pps).....	500 mA
Power Dissipation (derate linearly 0.86 mW/°C above 25°C)	60 mW

Output Transistor

Collector-emitter voltage BV_{CEO}	30 V
Emitter-collector voltage BV_{ECO}	5 V
Power Dissipation (derate linearly 0.93 mW/°C above 25°C)	70 mW

ISOCOM INC., 274 E.HAMILTON AVENUE, SUITE F, CAMPBELL, CALIFORNIA 95008 U.S.A.

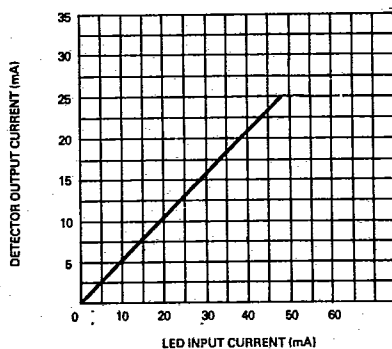
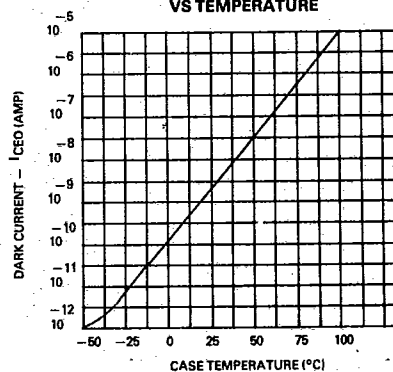
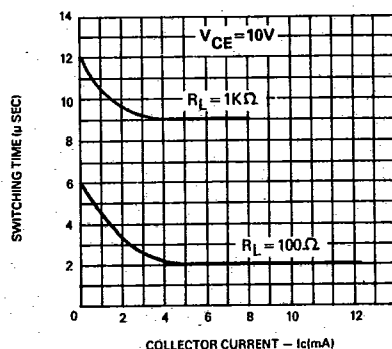
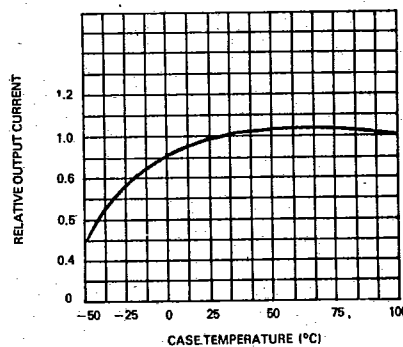
Phone: (408) 370-2212 Telex: 595933

ISOCOM LIMITED, PROSPECT WAY, PARK VIEW INDUSTRIAL ESTATE, BRENDA ROAD, HARTLEPOOL, CLEVELAND, ENGLAND

Telephone: (0429) 221431 Telex: 58470 ISOCOM G

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

	Parameter	Min.	Typ	Max.	Units	Test Condition
Input	Forward Voltage (V_F)			1.5	Volt	$I_F = 10 \text{ mA}$
	Reverse Breakdown Voltage (V_R)	5.0			Volt	$I_R = 10 \mu\text{A}$
Output	Collector-emitter Voltage (BV_{CEO})	30			Volt	$I_C = 1 \text{ mA}$
	Emitter-collector Voltage (BV_{ECO})	7			Volt	$I_E = 100 \mu\text{A}$
	Collector-emitter Dark Current (I_{CEO})			100	nA	$V_{CE} = 10 \text{ V}$
Coupled	DC Current Transfer Ratio I_C/I_F ISH710	20			%	$I_F = 10 \text{ mA}, V_{CE} = 10 \text{ V}$
	ISH711	50			%	
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			0.4	Volt	$I_F = 10 \text{ mA}, I_C = 2 \text{ mA}$
	Capacitance Input to Output (C_{IO})		0.6		pF	$f = 1 \text{ MHz (Note 1)}$
	Output Rise Time (T_R)		2.0		μS	$V_{CC} = 10 \text{ V}, I_C = 2 \text{ mA}$
	Output Fall Time (T_F)		2.0		μS	$R_L = 100 \Omega$
	Input-to-Output Isolation Voltage	2500			Volt	(Note 1)

FIG 1:
TRANSFER
CHARACTERISTICSFIG 2:
DARK CURRENT
VS TEMPERATUREFIG 3:
SWITCHING TIME
VS COLLECTOR CURRENTFIG 4:
RELATIVE OUTPUT
VS TEMPERATURE

Note 1. Measured with input leads shorted together and output leads shorted together