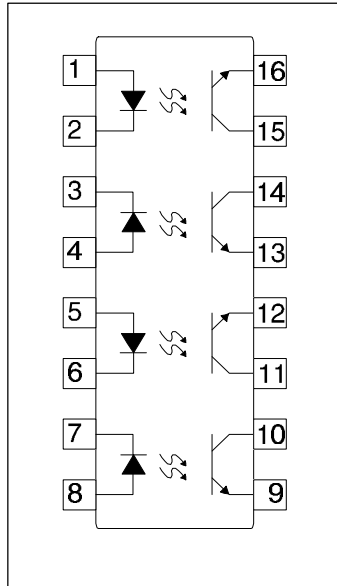
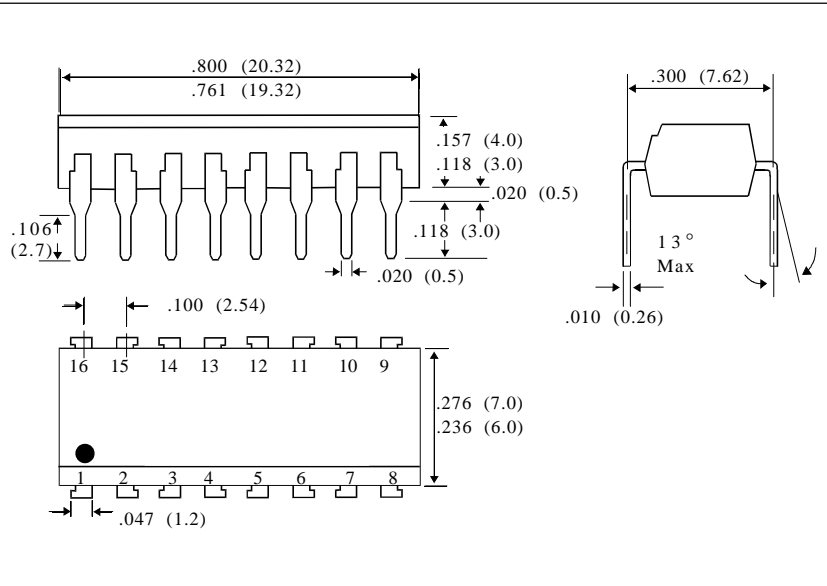


OPTICALLY COUPLED ISOLATOR TRANSISTOR OUTPUT

SCHEMATIC



PACKAGE DIMENSIONS INCHES (MM)



DESCRIPTION

The IS849 is an optically coupled isolator consisting of Gallium Arsenide infrared emitting diodes and NPN silicon phototransistors mounted in a standard 16-pin dual-in-line package with four channels per unit.

FEATURES

- Also available in single, dual package

ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise noted)

Storage Temperature	-25°C to +100°C
Operating Temperature	-40°C to +125°C
Lead Soldering Temperature (2mm from case for 10 seconds)	260°C
Input-to-Output Isolation Voltage	5000V _{RMS}

INPUT DIODE

Forward D.C. Current	50mA
Reverse D.C. Voltage	6V
Peak Forward Current (p.w. ≤ 100μs, duty ratio 0.001)	1A
Power Dissipation (derate linearly 1.33mW/°C above 25°C)	70mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO}	35V
Power Dissipation (derate linearly 1.50mW/°C above 25°C)	150mW

PACKAGE

Total Power Dissipation	170mW
-------------------------	-------

ISOCOM COMPONENTS LTD

Unit 25B, Park View Road West,
Park View Industrial Estate, Brenda Road
Hartlepool, Cleveland, TS25 1YD
Tel: (0429) 863609 Fax :(0429) 863581

ISOCOM INC

720 E., Park Boulevard, Suite 102,
Plano, TX 75074 USA
Tel: (214) 423-5521
Fax: (214) 422-4549

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.4	Volt	$I_F = 20 \text{ mA}$
	Reverse Current (I_R)			10	μA	$V_R = 4\text{V}$
Output	Collector-emitter Voltage (BV_{CEO})	35			Volt	$I_C = 1\text{mA}$
	Emitter-collector Voltage (BV_{ECO})	7	9		Volt	$I_E = 0.1 \text{ mA}$
	Collector-emitter Dark Current (I_{CEO})			100	nA	$V_{CE} = 20 \text{ V}$
Coupled	DC Current Transfer Ratio (CTR)	50		400	%	$I_F = 5\text{mA}, V_{CE} = 5\text{V}$
	Collector-emitter Saturation Voltage $V_{CE}(\text{Sat})$			0.2	Volt	$I_F = 20 \text{ mA}, I_C = 1 \text{ mA}$
	Floating Capacitance (C_F)		0.6	1	pf	$V = 0, f = 1 \text{ Mhz}$
	Input-to-Output Isolation Resistance R_{iso}	5×10^{10}	10^{11}		Ω	$V_{IO} = 500\text{V}$ (see note 1)
	Inout to Output Isolation Voltage	5000			V_{RMS}	(note 1)
	Response Time Rise(t_r)			15	μS	$I_C = 2\text{mA}, V_{CE} = 2\text{V}$
	Response Time Fall (t_f)			15	μS	$R_L = 100\Omega$

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

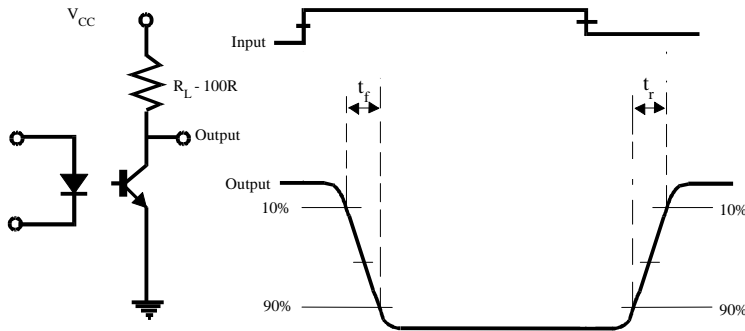


FIG 1