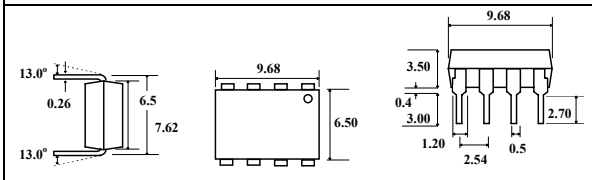
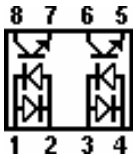
IS824-1
TRANSISTOR
AC INPUT
OPTOCOUPLERS

ISOCOM LTD

PACKAGES	CIRCUIT
	

DESCRIPTION

The IS824-1 is a dual channel device. Each channel consisting of a bi-directional input opto-isolator consists of two Gallium Aresenide infrared emitting diodes connected in inverse parallel coupled to a silicon NPN phototransistor in a 8 pin package.

Isocom Ltd supplies a multitude of plastic optocouplers for all applications varying from standard transistor optos through to Darlington and Schmitt Trigger devices. It's massive family of optos vary in speed allowing maximum opportunity to engineers worldwide.

All devices are performance guaranteed between -20ºC and +80ºC and have completed rigorous testing. The Company's customers can be assured of our commitment to stringent quality, reliability and inspection standards, as demonstrated by our existing approvals. Other customer specific options can also be offered.

FEATURES

- 5000V Isolation
- AC or Polarity Insensitive Inputs
- Compact Dual-in-line Package
- Built-in Reverse polarity Input Protection
- Current Transfer Ratio (Min 20% at I_F= ±1mA, V_{CE}= 5V)
- UL Recognised, file No E64380

For sales enquiries, or further information, please contact our sales office at :
Isocom Ltd, Hutton Close, Crowther Industrial Estate, District 3, Washington, NE38 0AH
Tel: +44 0191 4166 546 Fax: +44 0191 4155 055 Email Isocom@isocomoptocouplers.com
Or go to the Isocom Website @ : Http://www.isocomoptocouplers.com

ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-55°C to +125°C
Operating Temperature	-30°C to +100°C
Lead Soldering Temperature	260°C 1.6mm from case for 10S
Input-to-Output Isolation Voltage	5000VDC

Input Diode

Forward DC Current	±50mA	
Peak forward Current	±1.0A	
Power Dissipation	70mW	

Output Transistor

Collector-Emitter Voltage	35V	BV_{CEO}
Emitter-Collector voltage	6V	BV_{ECO}
Collector-Current	50mA	I_C
CollectorPower Dissipation	150mW	P_C

Package

Total Power Dissipation	200mW	P_{tot}

ELECTRICAL CHARACTERISTICS

T_A = 25°C U.O.S. (each channel where appropriate).

Input Diode Electrical Characteristics

Parameter	Symbol	Test Conditions	Device	Min	Typ	Max	Units
Forward Voltage	V_F	I_F = ±20mA			1.2	1.4	V
Peak Forward Voltage	V_{FM}	I_{FM}= ±0.5A				3.0	V
Terminal Capacitance	C_t	V= 0, f= 1Khz			50	250	pF
Output Detector Electrical Characteristics							
Collector-emitter Dark Current	I_{CEO}	V_{CE}= 20V, I_F= 0				10^{-7}	A
Coupled Electrical Characteristics							
Current Transfer ratio	CTR	I_F=±1mA, V_{CE}= 5V		20		300	%
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_F=±20mA, I_C= 1mA			0.1	0.2	V
Isolation Resistance	R_{ISO}	DC= 500V, 40 to 60% RH		$5*10^{10}$	10^{11}		Ω
Floating Capacitance	C_f	V= 0, f= 1Mhz			0.6	1.0	pF
Cut-off Frequency	f_c	V_{CE}= 5V, I_C= 2mA, R_L= 100Ω		15	80		Khz
Responce time (Rise)	t_r	V_{CC}= 2V, I_C= 2mA, R_L= 100Ω			4	18	µS
Responce time (Fall)	t_f				3	18	µS
Isolation Voltage	V_{ISO}			5000			V

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