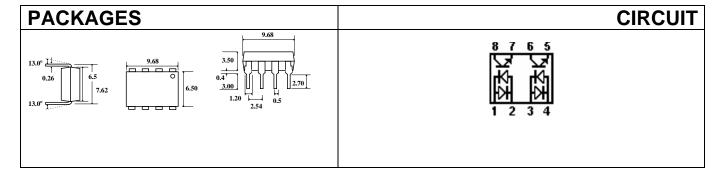
IS824-1 TRANSISTOR AC INPUT OPTOCOUPLERS





DESCRIPTION

The IS824-1 is a dual channel device. Each channel consisting of a bi-directional input opto-isolator consists of two Gallium Arsenide infrared emitting diodes connected in inverse parallel coupled to a silicon NPN phototransistor in an 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. Its massive family of optos vary in speed allowing maximum opportunity to engineers worldwide.

All devices are performance guaranteed between - 20°C and +80°C 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

	alation
□ 5000V Iso	ланон

☐ AC or Polarity Insensitive Inputs

☐ Compact Dual-in-line Package

☐ Built-in Reverse polarity Input Protection

Current Transfer Ratio (Min 20% at $I_F = \pm 1$ mA, $V_{CE} = 5V$)

☐ UL Recognised, file No E64380

Isocom Ltd reserves the right to change the details on this specification without notice. Please consult Isocom Ltd prior to use. Isocom Ltd cannot accept liability for any errors or omissions.

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 <u>Isocom@isocomoptocouplers.com</u>

Or go to the Isocom Website @: Http://www.isocom.uk.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}
Collector Power 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	Тур	Max	Units
Forward Voltage	V_F	$I_F = \pm 20 \text{mA}$			1.2	1.4	V
Peak Forward Voltage	V_{FM}	$I_{FM} = \pm 0.5A$				3.0	V
Terminal Capacitance	C _t	V= 0, f= 1Khz			50	250	pF
Output Detector Electrical Characteristics							
Collector-emitter Dark	I _{CEO}	$V_{CE} = 20V, I_{F} = 0$				10-7	A
Current							
Coupled Electrical Charact	Coupled Electrical Characteristics						
Current Transfer ratio	CTR	$I_F=\pm 1$ mA, $V_{CE}=5$ V		20		300	%
Collector-Emitter saturation	V _{CE(sat)}	$I_F=\pm 20$ mA, $I_C=1$ mA			0.1	0.2	V
voltage							
Isolation Resistance	R _{ISO}	DC= 500V, 40 to 60% RH		5*10 ¹⁰	10 ¹¹		Ω
Floating Capacitance	$C_{\rm f}$	V= 0, f= 1Mhz			0.6	1.0	pF
Cut-off Frequency	f_c	$V_{CE} = 5V, I_{C} = 2mA, R_{L} = 100\Omega$		15	80		Khz
Response time (Rise)	$t_{\rm r}$	$V_{CC} = 2V, I_{C} = 2mA, R_{L} = 100\Omega$			4	18	μS
Response time (Fall)	$t_{\rm f}$				3	18	μS
Isolation Voltage	V_{ISO}			5000			V

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