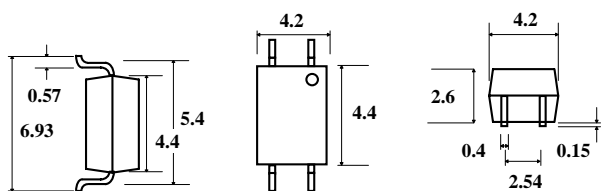



IS354 TRANSISTOR AC INPUT OPTOCOUPERS

ISOCOM[®] LTD

PACKAGES	CIRCUIT
	

DESCRIPTION

The IS354 is 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 a 4 pin mini flat 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 -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

- 3750V Isolation
- AC or Polarity Insensitive Inputs
- Fast Switching Speed
- Built-in Reverse polarity Input Protection

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 Isocom@isocomptocouplers.com

Or go to the Isocom Website @: [Http://www.isocom.uk.com](http://www.isocom.uk.com)

ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-40°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	3750VDC

Input Diode

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

Output Transistor

Collector-Emitter Voltage	60V	BV_{CEO}
Emitter-Collector voltage	5V	BV_{ECO}
Collector-Current	50mA	I_C
Collector Power Dissipation	150mW	P_C

Package

Total Power Dissipation	170mW	P_{tot}
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ELECTRICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$ U.O.S. (each channel where appropriate).

Input Diode Electrical Characteristics

Parameter	Symbol	Test Conditions	Device	Min	Typ	Max	Units
Forward Voltage	V_F	$I_F = \pm 20\text{mA}$			1.2	1.4	V

Output Detector Electrical Characteristics

Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 1\text{mA}$		30	-	-	V
Terminal Capacitance	C_t	$V = 0, f = 1\text{KHz}$			30	250	pF
Collector-emitter Dark Current	I_{CEO}	$V_{CE} = 20\text{V}, I_F = 0$				0.1	μA
Collector-Emitter breakdown Voltage	BV_{CEO}	$I_C = 0.1\text{mA}, I_F = 0$		60			V
Emitter-Collector breakdown Voltage	BV_{ECO}	$I_E = 100\mu\text{A}, I_F = 0$		5			V

Coupled Electrical Characteristics

Current Transfer ratio	CTR	$I_F = \pm 1\text{mA}, V_{CE} = 5\text{V}$		20		400	%
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_F = \pm 20\text{mA}, I_C = 1\text{mA}$			0.1	0.3	V
Isolation Resistance	R_{ISO}	DC = 500V, 40 to 60% RH		$5 \cdot 10^{10}$	$5 \cdot 10^{11}$		Ω
Floating Capacitance	C_f	$V = 0, f = 1\text{Mhz}$			0.6	1.0	pF
Response time (Rise)	t_r	$V_{CC} = 2\text{V}, I_C = 2\text{mA}, R_L = 100\Omega$			4	18	μS
Response time (Fall)	t_f				3	18	μS
Input-to-Output Isolation				3750			V

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