

IS827/ ISP827 TRANSISTOR OPTOCOUPERS

ISOCOM_{LTD}

PACKAGES	CIRCUIT

DESCRIPTION

The IS827 is a 2 channel optically coupled isolator. Each channel consists of a Gallium Arsenide infrared emitting diode and a NPN silicon phototransistor mounted in a standard 8 pin dual-in-line 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

- ? 7500V Isolation
- ? High Current transfer ratio
- ? Low cost dual-in-line package

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 :

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

ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-55°C to +150°C
Operating Temperature	-55°C to +100°C
Lead Soldering Temperature	260°C 1.6mm from case for 10S
Input-to-Output Isolation Voltage	≧2500V

Input Diode

Forward DC Current	60mA	
Reverse DC Voltage	6V	
Peak forward Current	1.0A	PW. ? 100μS duty ratio 0.001
Power Dissipation	100mW	Derate linearly above 25°C at 1.33mW/°C.

Output Transistor

Collector-Emitter Voltage	30V	BV _{CEO}
Emitter-collector voltage	7V	BV _{ECO}
Power Dissipation	150mW	Derate linearly above 25°C at 2.0mW/°C

Package

Total Power Dissipation	400mW	Derate linearly above 25°C at 5.33mW/°C
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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 = 60mA				1.5	V
Reverse Current	I _R	V _R = 3.0V				10	μA

Output Detector Electrical Characteristics

Collector-emitter Voltage	BV _{CEO}	I _C = 0.5mA		35			V
Emitter-collector Voltage	BV _{ECO}	I _E = 0.1mA		7	8		V
Collector-emitter Dark Current	I _{CEO}	V _{CE} = 48V				100	nA

Coupled Electrical Characteristics

DC Current Transfer Ratio	CTR	I _F = 10mA, V _{CE} = 10V		50		600	%
Collector-Emitter Saturation Voltage	V _{CE(Sat)}	I _F = 8mA, I _C = 2.4mA				0.2	V
Floating Capacitance	C _F	V = 0, f = 1Mhz			0.6	1.0	pF
Input-to-Output Isolation Resistance	R _{ISO}	V _{IO} = 500V		5*10 ¹¹			?

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