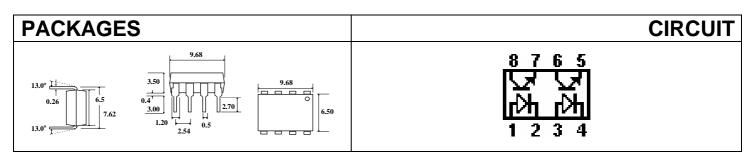
# IS827/ ISP827 TRANSISTOR OPTOCOUPLERS





### 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

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# **ABSOLUTE MAXIMUM RATINGS**

Storage Temperature	-55°C to +150°C	-55°C to +150°C				
Operating Temperature	-55°C to +100°C					
Lead Soldering Temperature	260°C 1.6mm fr	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 <sub>CEO</sub>				
Emitter-collector voltage	7V	BV <sub>ECO</sub>				
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				

## **ELECTRICAL CHARACTERISTICS**

#### $T_{\rm A}$ = 25°C U.O.S. (each channel where appropriate).

Parameter	Symbol	Test Conditions	Device	Min	Тур	Max	Units
Forward Voltage	V <sub>F</sub>	$I_F = 60 \text{mA}$				1.5	V
Reverse Current	I <sub>R</sub>	$V_{R} = 3.0V$				10	?A
<b>Output Detector Electrical</b>	Characteri	stics					
Collector-emitter Voltage	BV <sub>CEO</sub>	$I_C = 0.5 \text{mA}$		35			V
Emitter-collector Voltage	BV <sub>ECO</sub>	$I_E = 0.1 \text{mA}$		7	8		V
Collector-emitter Dark	I <sub>CEO</sub>	$V_{CE} = 48V$				100	nA
Current							
<b>Coupled Electrical Charact</b>	teristics						
DC Current Transfer Ratio	CTR	$I_F = 10mA, V_{CE} = 10V$		50		600	%
Collector-Emitter	V <sub>CE(Sat)</sub>	$I_{F}=8mA, I_{C}=2.4mA$				0.2	V
Saturation Voltage							
Floating Capacitance	C <sub>F</sub>	V=0, f=1Mhz			0.6	1.0	pF
Input-to-Output Isolation	R <sub>ISO</sub>	V <sub>IO</sub> = 500V		5*10 <sup>11</sup>			?
Resistance							

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