

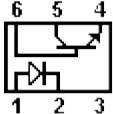
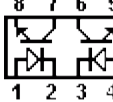
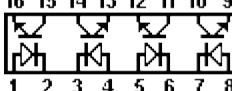
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IS1, IS5, ISD1, ISD5, ISQ1, ISQ5 OPTICALLY COUPLED ISOLATORS

Circuit

	IS1, IS5	Similar Optocouplers
	ISD1, ISD5	Similar Optocouplers
	ISQ1, ISQ5	Similar Optocouplers

Features

- 2500 V Isolation.
- High Current Transfer Ratio.
- Low Cost Dual-In-Line Package.

Description

The IS5, ISD5 and ISQ5 is each an optically coupled isolator. Each channel consists of a Gallium Arsenide infrared emitting diode and an NPN silicon phototransistor mounted in a standard dual-in-line package. Surface Mount Option Available.
 All electrical parameters are 100% tested by manufacturing. Specifications are guaranteed to a cumulative 0.65% AQL.

Absolute Maximum Ratings (Ta=25°C)

Storage Temperature:	-55°C to +150°C
Operating Temperature:	-55°C to +100°C
Lead Soldering:	260°C for 10s, 1.6mm from case
Input-to-Output Isolation Voltage:	±2500Vdc (note 1)

Input Diode

Forward DC Current:	60mA
Reverse DC Voltage:	3V
Peak Forward Current:	1A (pw.=100µs, duty ratio 0.001)
Power Dissipation:	100mW
Derate Linearly:	1.33mW/°C above 25°C

Output Transistor

Collector-Emitter Voltage:	30V
Emitter-Collector Voltage:	7V
Power Dissipation:	150mW
Derate Linearly:	2.00mW/°C above 25°C

Package

Total Power Dissipation:	500mW (ISQ1,5) 400mW (ISD1,5) 200mW (IS1,5)
Derate Linearly:	6.67mW/°C above 25°C

Electro-optical Characteristics (Ta=25°C)

INPUT	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _F	Forward Current	I _F =60mA		(IS*5: 1.3)	1.5	V
I _R	Reverse Current	V _R =3V			10	µA
OUTPUT						
BV _{CEO}	Collector-Emitter Voltage	I _C =1mA	30	50		V
BV _{ECO}	Emitter-Collector Voltage	I _E =0.1mA	7	8		V
I _{CEO}	Collector-Emitter Dark Current	V _{CE} =10V			50	nA
COUPLED						
I _C /I _F	DC Current Transfer Ratio	I _F =10mA, V _{CE} =10V				
		IS1, ISD1, ISQ1	20	50		%
		IS5, ISD5, ISQ5	50	80		%
V _{CE(SAT)}	Collector-Emitter Saturation Voltage	I _F =16mA, I _C =1.6mA		0.2	0.5	V
C _F	Floating Capacitance	V=0, f=1MHz		0.6	1	pF
	Input-Output Isolation Resistance	V _{IO} =500V (note 1)	500			Gohm

Notes

1. Measured with input leads shorted together and output leads shorted together.

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