Order code	Manufacturer code	Description
58-0150	ISQ-74	QUAD OPTOISOLATOR ISQ74

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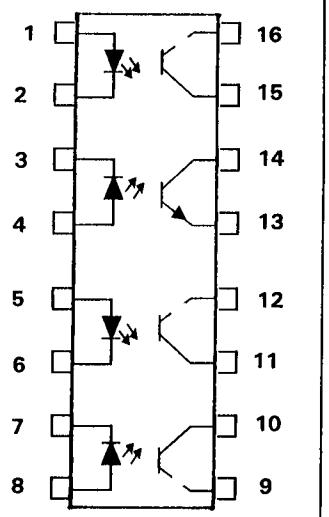
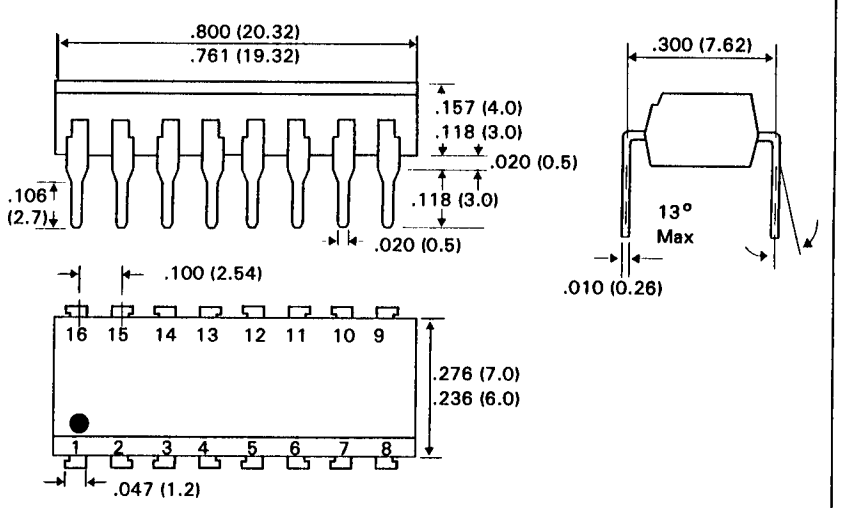
SCHEMATIC



PACKAGE DIMENSIONS INCHES (MM)



DESCRIPTION

The ISQ74 is an optically coupled isolator consisting of Gallium Arsenide infrared emitting diodes and NPN silicon phototransistors mounted in a standard 16-pin dual-in-line package with four channels per unit.

FEATURES

- Also available in single, dual package

ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise noted)

Storage Temperature	-55°C to +125°C
Operating Temperature	-55°C to +100°C
Lead Soldering Temperature (2mm from case for 10 seconds)	260°C
Input-to-Output Isolation Voltage	7500VpK

INPUT DIODE

Forward D.C. Current	60mA
Reverse D.C. Voltage	3V
Peak Forward Current (p.w. ≤ 100μs, duty ratio 0.001)	1A
Power Dissipation (derate linearly 1.33mW/°C above 25°C)	100mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO}	30V
Power Dissipation (derate linearly 2.00mW/°C above 25°C)	150mW

PACKAGE

Total Power Dissipation (derate linearly 5.33mW/°C above 25°C)	400mW

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.3	1.5	Volt	I_F = 60 mA
	Reverse Current (I_R)			10	μA	V_R = 3V
Output						
	Collector-emitter Voltage (BV_{CEO})	30	50		Volt	I_C = 1mA
	Emitter-collector Voltage (BV_{ECO})	7	9		Volt	I_E = 0.1 mA
	Collector-emitter Dark Current (I_{CEO})			50	nA	V_{CE} = 10 V
Coupled	DC Current Transfer Ratio (CTR)	12.5			%	I_F = 16mA, V_{CE} = 5V
	Collector-emitter Saturation Voltage V_{CE} (Sat)		0.3	0.5	Volt	I_F = 16 mA, I_C = 2 mA
	Floating Capacitance (C_F)		0.5	10	pf	V = 0, f = 1 Mhz
	Input-to-Output Isolation Resistance Riso	10^{12}	10^{13}		ohm	V_{IO} = 500V (see note 1)
	Inout to Output Isolation Voltage	7500			Vpk	(note 1)
	Output Turn - on Time (t_{on})		3.0		μS	I_C = 2mA, V_{CC} = 10V R_L = 100R
	Output Turn - off Time (t_{off})		2.5		μS	Fig 1

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

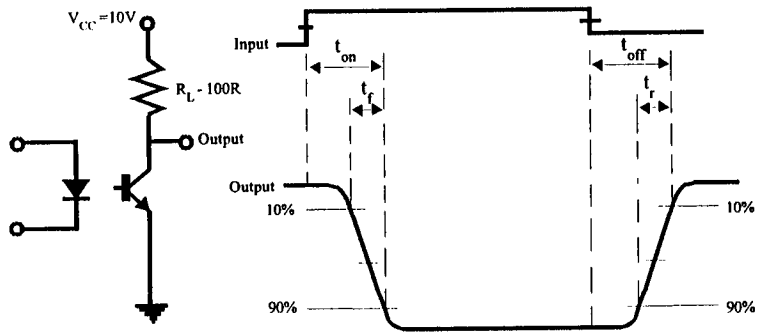


FIG 1