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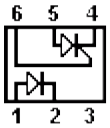
H11C4-H11C6
OPTICALLY COUPLED SCR ISOLATOR

Circuit



Features

Photo-SCR Output
1060-1500 V Isolation
400 Vpeak Forward Voltage
Low Cost Dual-In-Line Package

Description

The H11C4-H11C6 are optically-coupled isolators consisting of a Gallium Arsenide infrared emitting diode and light activated silicon controlled rectifier (SCR) mounted in a standard 6-pin dual-in-line package.
Surface Mount Option Available.
All electrical parameters are 100% tested. 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, Steady State:	±1060 Vdc (H11C5-C6) ±1500 Vdc (H11C4)

Input Diode

Forward DC Current:	60mA
Reverse DC Voltage:	5V
Peak Forward Current):	3A (1µs p.w. 300pps
Power Dissipation:	100mW
Derate Linearly:	1.33mW/°C above 25°C

Output Photo SCR

Peak Forward Voltage:	400V
RMS Forward Current:	300mA
Forward Current (Peak):	10A (100µs 1% duty cycle)
Surge Current:	5A (10ms)
Reverse Gate Voltage:	6V

Package

Power Dissipation:	400mW
Derate Linearly:	5.3mW/°C above 25°C

Electro-optical Characteristics: (Ta=25°C)

INPUT	**PARAMETER**	**CONDITIONS**	**VALUE**	
V_F	Forward Voltage	I_F=10mA	1.5 V	Max
I_R	Reverse Current	V_R=3.0V	10 µA	Max
V_R	Reverse Breakdown Voltage	I_R=10µA	6.0 V	Min
OUTPUT	**PARAMETER**	**CONDITIONS**	**VALUE**	
V_{DM}	Peak Off-State Voltage	R_{GK}=10kohm, T_A=100°C	400 V	Min
V_{RM}	Peak Reverse Voltage		400 V	Min
V_{TM}	On-State Voltage	I_{TM}=0.3mA	1.3 V	Max
I_{DM}	Off-State Current	V_{DM}=400V, T_A=100°C	150 µA	Max
I_{RM}	Reverse Current	V_{RM}=400V, T_A=100°C	150 µA	Max
	Capacitance (Anode-Gate)	V=0,f=1MHz	24 pF	Typ
	Capacitance (Gate-Cathode)		360 pF	Typ
COUPLED	**PARAMETER**	**CONDITIONS**	**VALUE**	
	Input Current to Trigger			

I_{FT}	H11C4, H11C5	V_{AK}=50V, R_{GK}=10kohm	20 mA	Max
	H11C6		30 mA	Max
	H11C4, H11C5	V_{AK}=100V, R_{GK}=27kohm	11 mA	Max
	H11C6		14 mA	Max
R_{IO}	Isolation Resistance	V_{IO}=500V, (note 1)	100 Gohm	Min
	Input to Output Capacitance	V_{IO}=0, f=1MHz	2 pF	Max
	dV/dt Input to Output	Figure 1	500 V/µs	Min
	Input-to-Output Isolation Voltage			
	H11C4	(Note 1)	1500 Vrms	Min
	H11C5,H11C6		1060 Vrms	Min

Notes

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

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