

Photon Coupled Isolator Ga As Infrared Emitting Diode & Light Activated SCR

Description

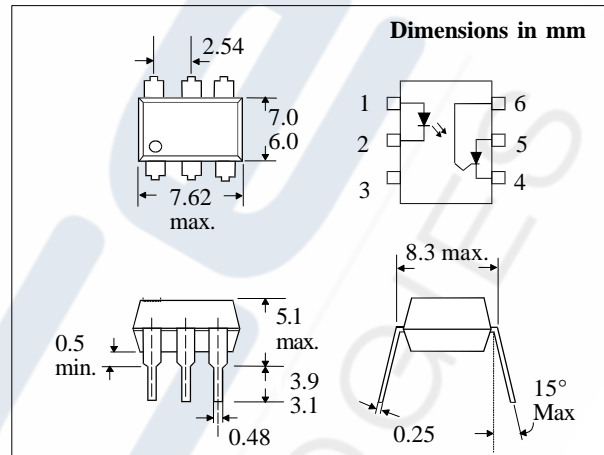
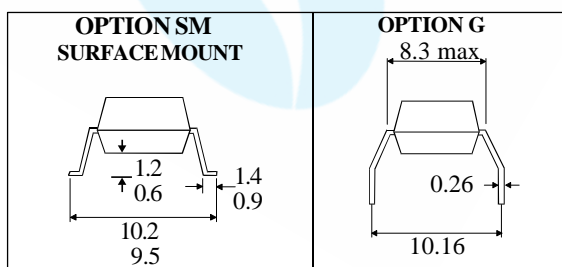
The FT24, FT241 are optically coupled isolators consisting of infrared light emitting diode and a light activated silicon controlled rectifier in a standard 6pin dual in line plastic package.

Features

- Options :-
10mm lead spread – add G after part no. Surface mount - add SM after part no. Tape & reel – add SMT & R after part no.
- High Isolation Voltage (5.3kV_{RMS}, 7.5kV_{PK})
- High Surge Anode Current (5.0 A)
- High Blocking Voltage (200V*1 , 400V*1)
- Low Turn on Current (5mA typical)
- All electrical parameters 100% tested
- Custom electrical selections available

Applications

- 10A, T²L compatible, Solid State Relay
- 25W Logic Indicator Lamp Driver
- 400V symmetrical transistor coupler



Absolute Maximum Ratings

(25°C unless otherwise specified)

Storage Temperature.....-55°C to +150°C
Operating Temperature.....-55°C to +100°C
Lead Soldering Temperature
(1/16 inch (1.6mm) from case for 10 secs)
260°C

Input Diode

Forward Current.....60mA
Forward Current (Peak)
(1µs pulse, 300pps).....3A
Reverse Voltage.....6V
Power Dissipation.....100mW

Detector

Peak Forward Voltage
FT24.....200V*1
FT241.....400V*1
Peak Reverse Gate Voltage 6V
RMS On-state Current.....300mA
Peak On-state Current
(100µs, 1% duty cycle).....10A
Surge Current (10ms).....5A
Power Dissipation.....300mW

*1 IMPORTANT: A resistor must be connected between gate and cathode (pins 4 & 6) to prevent false firing ($R_{GK} < 56k\Omega$)

Electrical Characteristics (T_A = 25°C Unless otherwise specified)

Parameter		Min	Typ	Max	Units	Test Condition
Input	Forward Voltage (V _F)		1.2	1.5	V	I _F = 20 mA
	Reverse Voltage (V _R)	3			V	I _R = 10 μA
Output (Note 2)	Peak Off-State Voltage (V _{DM})					
	FT24	200			V	R _{GK} = 10kΩ, I _D = 150μA, T _A = 100°C
	FT241	400			V	R _{GK} = 10kΩ, I _D = 150μA, T _A = 100°C
	Peak Reverse Voltage (V _{RM})					
	FT24	200			V	I _D = 150μA, T _A = 100°C
	FT241	400			V	I _D = 150μA, T _A = 100°C
	On-State Voltage (V _{TM})		1.1	1.3	V	I _{TM} = 100mA
	Off-State Current (I _{DM})					
	FT24			2	μA	R _{GK} = 27kΩ, I _F = 0 V _{DM} = 200V
	FT241			2	μA	R _{GK} = 27kΩ, I _F = 0 V _{DM} = 400V
	Reverse Current (I _R)					
	FT24			2	μA	I _F = 0, V _{DM} = 200V
	FT241			2	μA	I _F = 0, V _{DM} = 400V
Holding Current (I _H)		10		500	μA	R _{GK} = 27kΩ, V _{FX} = 50V
Coupled	Input Current to Trigger (I _{FT}) (Note 2)	0.5		14	mA	V _{AK} = 100V, R _{GK} = 27kΩ
	Turn on Time (t _{on})			50	μs	R _{GK} = 10kΩ, I _F = 30mA V _{AK} = 50V, R _L = 200Ω
	Coupled dv/dt, Input to Output (dv/dt)	500			V/μs	
	Input to Output Isolation Voltage V _{iso}	5300			V _{RMS}	See note 1
		7500			V _{PK}	See note 1
Input-output Isolation Resistance R _{iso}	10 ¹¹			Ω	V _{io} = 500V (note 1)	
Input-Output Capacitance C _f			2	pF	V = 0, f = 1MHz	

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

Note 2: Special Selections are available on request. Please consult the factory.



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