ISOCOM COMPONENTS

MOC3040, MOC3041, MOC3042, MOC3043
MOC3040X, MOC3041X, MOC3042X, MOC3043X

ROHS COMPLIANT

OPTICALLY COUPLED BILATERAL SWITCH LIGHT ACTIVATED ZERO VOLTAGE CROSSING TRIAC

APPROVALS

- UL recognised, File No. E91231
  Package Code " GG " or " TT "

'X' SPECIFICATION APPROVALS

- VDE 0884 in 3 available lead form : -
  - STD
 - G form
  - SMD approved to CECC 00802

DESCRIPTION

The MOC304_ Series are optically coupled isolators consisting of a Gallium Arsenide infrared emitting diode coupled with a monolithic silicon detector performing the functions of a zero crossing bilateral triac mounted in a standard 6 pin dual-in-line 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 ($5.3kV_{RMS}$, $7.5kV_{PK}$)
- Zero Voltage Crossing
- 400V Peak Blocking Voltage
- All electrical parameters 100% tested
- Custom electrical selections available

APPLICATIONS

- CRTs
- Power Triac Driver
- Motors
- Consumer appliances
- Printers

Dimensions in mm

OPTION SM
SURFACE MOUNT

0.6
0.1
1.25
0.75
10.46
9.86

OPTION G

7.62

0.26
10.16
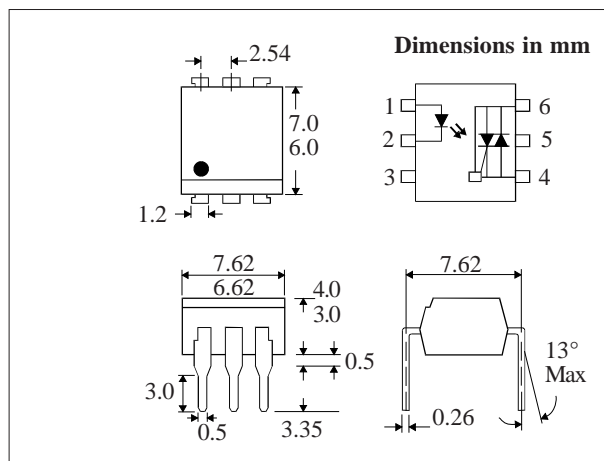
ABSOLUTE MAXIMUM RATINGS
(25 °C unless otherwise noted)

Storage Temperature	$-55^0C - +150^0C$
Operating Temperature	$-40^0C - +100^0C$
Lead Soldering Temperature	260^0C
(1.6mm from case for 10 seconds)	

INPUT DIODE

Forward Current	50mA
Reverse Voltage	6V
Power Dissipation	120mW
(derate linearly 1.41mW/^{0}C above 25^0C)	

OUTPUT PHOTO TRIAC

Off-State Output Terminal Voltage	400V
Peak Repetitive Surge Current	
(PW=100μs, 120pps)	1A
Power Dissipation	150mW
(derate linearly 1.76mW/^{0}C above 25^0C)	

POWER DISSIPATION

Total Power Dissipation	250mW
(derate linearly 2.94mW/^{0}C above 25^0C)	
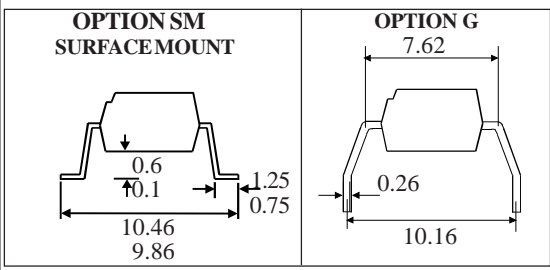
ELECTRICAL CHARACTERISTICS (T_A = 25°C Unless otherwise noted)

	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.4	V	$I_F = 20mA$
	Reverse Current (I_R)			10	µA	$V_R = 6V$
Output	Peak Off-state Current (I_{DRM})			500	nA	$V_{DRM} = 400V$ (note 1)
	Peak Blocking Voltage (V_{DRM})	400			V	$I_{DRM} = 500nA$
	On-state Voltage (V_{TM})			3.0	V	$I_{TM} = 100mA$ (peak)
	Critical rate of rise of off-state Voltage (dv/dt)	600	1500		V/µs	
Coupled	Input Current to Trigger (I_{FT})(note 2)					$V_{TM} = 3V$ (note 2)
	MOC3040			30	mA	
	MOC3041			15	mA	
	MOC3042			10	mA	
	MOC3043			5	mA	
	Holding Current , either direction (I_H)		400		µA	
	Input to Output Isolation Voltage V_{ISO}	5300			V_{RMS}	See note 3
		7500			V_{PK}	See note 3
Zero Crossing Charact--eristic	Inhibit Voltage (V_{IH})			20	V	I_F= Rated I_{FT} MT1-MT2 Voltage above which device will not trigger
	Leakage in Inhibited State (I_S)			500	µA	I_F= Rated I_{FT} V_{DRM} = Rated V_{DRM} Off-state

Note 1. Test voltage must be applied within dv/dt rating.
Note 2. Guaranteed to trigger at an I_F value less than or equal to max. I_{FT} , recommended I_F lies between Rated I_{FT} and absolute max. I_F.
Note 3. Measured with input leads shorted together and output leads shorted together.

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