

**MOC3060, MOC3061, MOC3062, MOC3063
MOC3060X, MOC3061X, MOC3062X, MOC3063X**



**OPTICALLY COUPLED BILATERAL
SWITCH LIGHT ACTIVATED ZERO
VOLTAGE CROSSING TRIAC**

'X' SPECIFICATION APPROVALS

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

DESCRIPTION

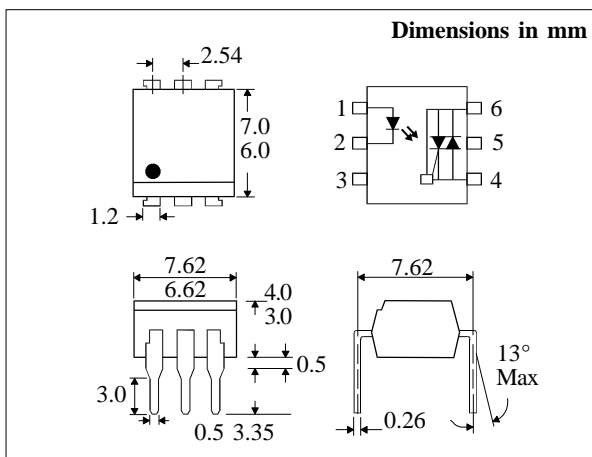
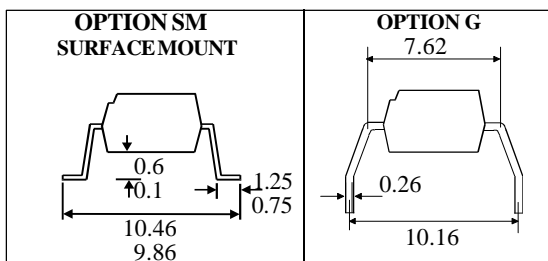
The MOC306_ Series are optically coupled isolators consisting of a Gallium Arsenide infrared emitting diode coupled with a monolithic silicon detector performing the functions of a zero crossing bilateral triac mounted in a standard 6 pin dual-in-line package.

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}
- Zero Voltage Crossing
- 600V Peak Blocking Voltage
- All electrical parameters 100% tested
- Custom electrical selections available

APPLICATIONS

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



**ABSOLUTE MAXIMUM RATINGS
(25 °C unless otherwise noted)**

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

INPUT DIODE

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

OUTPUT PHOTO TRIAC

Off-State Output Terminal Voltage	600V
Forward Current (Peak)	1A
Power Dissipation	150mW (derate linearly 1.76mW/°C above 25°C)

POWER DISSIPATION

Total Power Dissipation	250mW (derate linearly 2.94mW/°C above 25°C)
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ISOCOM COMPONENTS LTD
Unit 25B, Park View Road West,
Park View Industrial Estate, Brenda Road
Hartlepool, TS25 1YD England Tel: (01429)863609
Fax: (01429) 863581 e-mail sales@isocom.co.uk
http://www.isocom.com

ISOCOM INC
1024 S. Greenville Ave, Suite 240,
Allen, TX 75002 USA
Tel: (214)495-0755 Fax: (214)495-0901
e-mail info@isocom.com
http://www.isocom.com

ELECTRICAL CHARACTERISTICS (T_A = 25°C Unless otherwise noted)

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V _F) Reverse Current (I _R)		1.2 0.05	1.4 10	V μA	I _F = 20mA V _R = 6V
Output	Peak Off-state Current (I _{DRM}) Peak Blocking Voltage (V _{DRM}) On-state Voltage (V _{TM}) Critical rate of rise of off-state Voltage (dv/dt)	600		500 3.0	nA V V	V _{DRM} = 600V (note 1) I _{DRM} = 500nA I _{TM} = 100mA (peak)
Coupled	Input Current to Trigger (I _{FT})(note 2) MOC3060 MOC3061 MOC3062 MOC3063 Holding Current , either direction (I _H) Input to Output Isolation Voltage V _{ISO}		400	30 15 10 5	mA mA mA mA μA V _{RMS}	V _{TM} = 3V (note 2) See note 3
Zero Crossing Charact- -eristic	Inhibit Voltage (V _{IH}) Leakage in Inhibited State (I _S)			20 500	V μA	I _F = Rated I _{FT} MT1-MT2 Voltage above which device will not trigger I _F = Rated I _{FT} V _{DRM} = 600V 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.

CHARACTERISTIC CURVES

Fig.1 Forward Current vs. Ambient Temperature

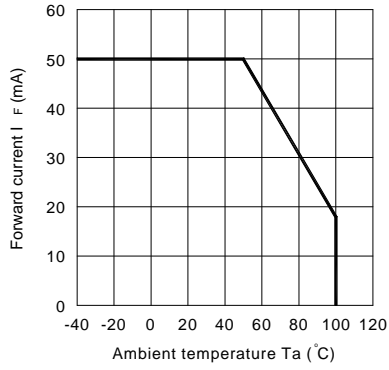


Fig.2 On-state Current vs. Ambient Temperature

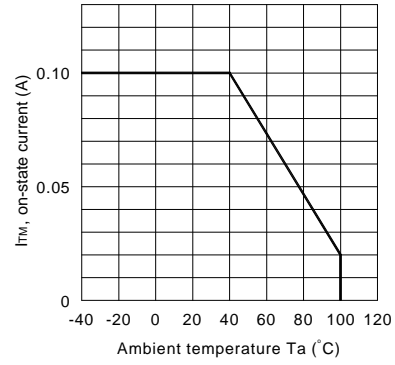


Fig.3 Minimum Trigger Current vs. Ambient Temperature

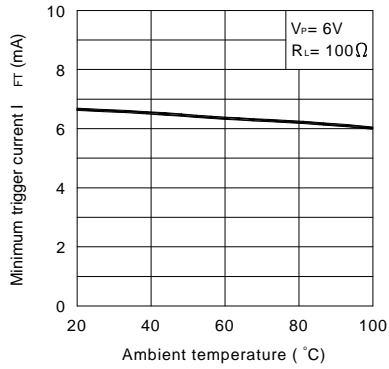


Fig.4 Forward Current vs. Forward Voltage

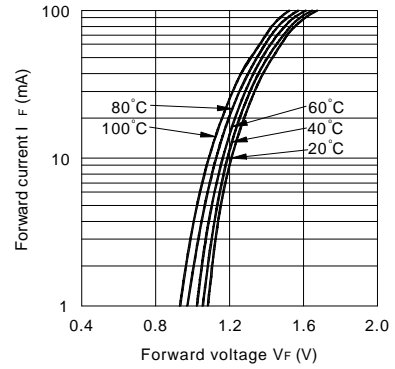


Fig.5 On-state Voltage vs. Ambient Temperature

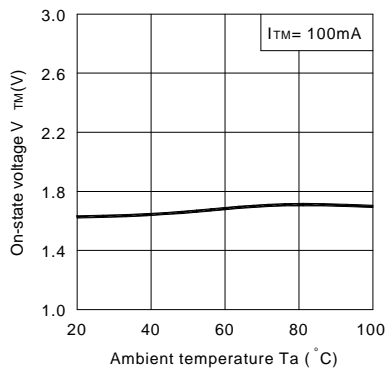
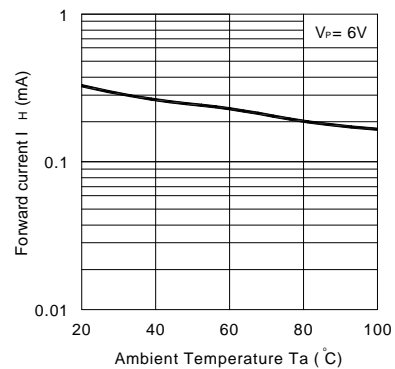


Fig.6 Holding Current vs. Ambient Temperature



CHARACTERISTIC CURVES

Fig.7 Turn-on Time vs. Forward Current

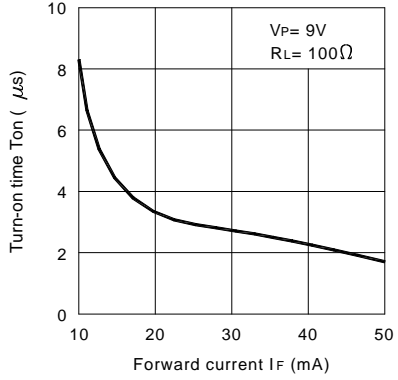


Fig.8 Repetitive Peak Off-state Current vs. Temperature

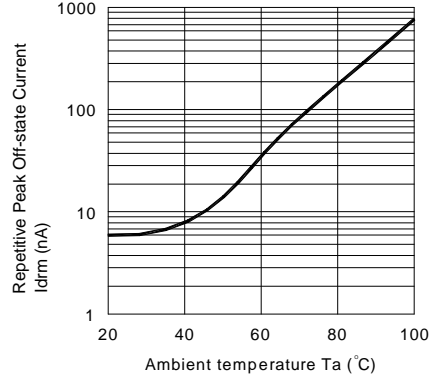
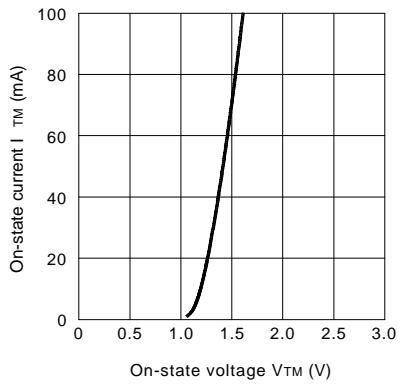


Fig.9 On-state Current vs. On-state Voltage



Static dv/dt Test Circuit

