

MOC3080, MOC3081, MOC3082, MOC3083  
MOC3080X, MOC3081X, MOC3082X, MOC3083X



**ISOCOM**  
**COMPONENTS**

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



**"X" SPECIFICATION APPROVAL**

- VDE 0884 in 3 available lead forms :-
  - STD
  - G Form (10.16 pitch)
  - SMD approved to CECC000802

**DESCRIPTION**

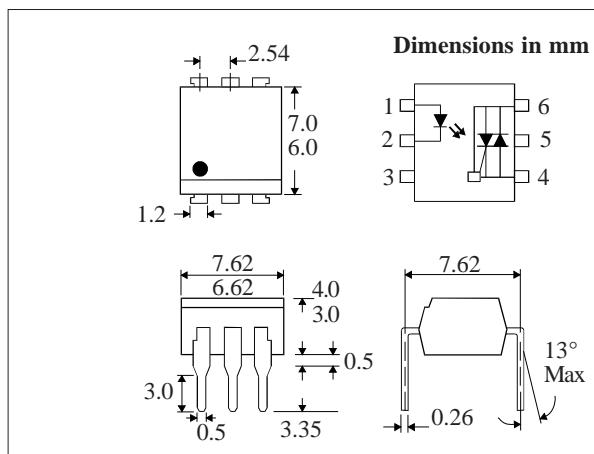
The MOC308\_ Series are optically coupled isolators consisting of a Gallium Arsenide infrared emitting diode coupled with a monolithic silicon detector performing the functions of a zero crossing bilateral triac mounted in a standard 6 pin dual-in-line package.

**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<sub>RMS</sub>
- Zero Voltage Crossing
- 800V 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)**

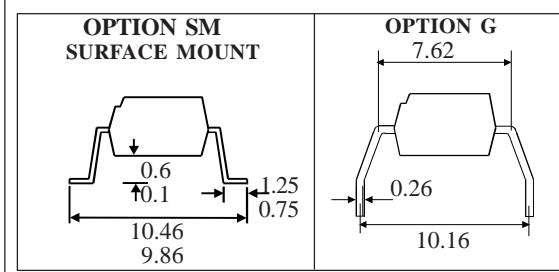
Storage Temperature	-55°C - +125°C
Operating Temperature	-30°C - +100°C
Lead Soldering Temperature	260°C (1.6mm from case for 10 seconds)

**INPUT DIODE**

Forward Current	50mA
Reverse Voltage	6V

**OUTPUT PHOTOTRIAC**

RMS on-state current	0.1A
Peak one cycle surge current (50Hz sine wave)	1.2A
Peak Off-State Voltage	800V



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**ELECTRICAL CHARACTERISTICS (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )**

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage ( $V_F$ ) Reverse Current ( $I_R$ )		1.2	1.4 10	V $\mu\text{A}$	$I_F = 20\text{mA}$ $V_R = 6\text{V}$
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 ( $\text{dv}/\text{dt}$ )	800		500 3.0	nA V V	$V_{DRM} = 800\text{V}$ (note 1) $I_{DRM} = 500\text{nA}$ $I_{TM} = 100\text{mA}$ (peak)
Coupled	Input Current to Trigger ( $I_{FT}$ )(note 2) MOC3080 MOC3081 MOC3082 MOC3083  Holding Current , either direction ( $I_H$ ) Input to Output Isolation Voltage $V_{ISO}$			30 15 10 5	mA mA mA mA  $\mu\text{A}$ $V_{RMS}$	$V_{TM} = 3\text{V}$ ( note 2 )  See note 3
Zero Crossing Charact- eristic	Inhibit Voltage ( $V_{IH}$ )			20	V	$I_F = \text{Rated } I_{FT}$ MT1-MT2 Voltage above which device will not trigger

Note 1. 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 2. Measured with input leads shorted together and output leads shorted together.

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