

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

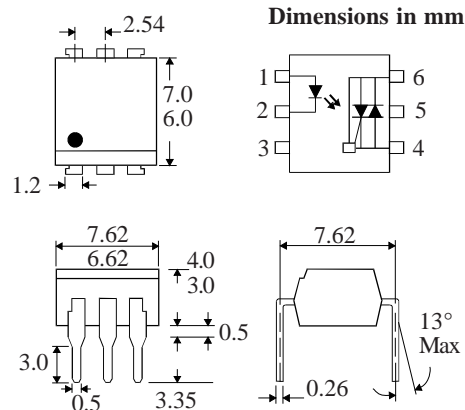
The MOC308\_ Series are optically coupled isolators consisting of a Gallium Arsenide infrared emitting diode coupled with a monolithic silicon detector performing the functions of a zero crossing bilateral triac mounted in a standard 6 pin dual-in-line package.

### 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)

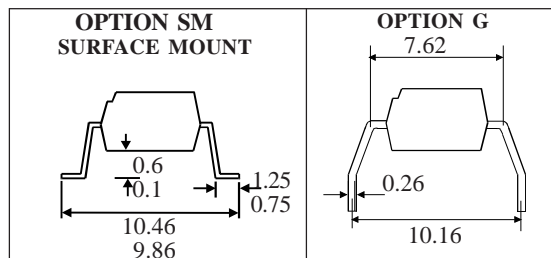
Storage Temperature \_\_\_\_\_ -55°C - +125°C  
Operating Temperature \_\_\_\_\_ -30°C - +100°C  
Lead Soldering Temperature \_\_\_\_\_ 260°C  
(1.6mm from case for 10 seconds)

### 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 ( $I_{\text{DRM}}$ ) Peak Blocking Voltage ( $V_{\text{DRM}}$ ) On-state Voltage ( $V_{\text{TM}}$ )  Critical rate of rise of off-state Voltage ( $dv/dt$ )	800		500  3.0	nA V V  $\text{V}/\mu\text{s}$	$V_{\text{DRM}} = 800\text{V}$ (note 1) $I_{\text{DRM}} = 500\text{nA}$ $I_{\text{TM}} = 100\text{mA}$ ( peak )
Coupled	Input Current to Trigger ( $I_{\text{FT}}$ )(note 2 ) MOC3080 MOC3081 MOC3082 MOC3083  Holding Current , either direction ( $I_H$ ) Input to Output Isolation Voltage $V_{\text{ISO}}$			30 15 10 5	mA mA mA mA  $\mu\text{A}$ $V_{\text{RMS}}$	$V_{\text{TM}} = 3\text{V}$ ( note 2 )      See note 3
Zero Crossing Charact- -eristic	Inhibit Voltage ( $V_{\text{IH}}$ )			20	V	$I_F = \text{Rated } I_{\text{FT}}$ 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.  $I_{\text{FT}}$ , recommended  $I_F$  lies between Rated  $I_{\text{FT}}$  and absolute max.  $I_F$ .

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