



6-Pin DIP Zero-Cross Optoisolators Triac Driver Output (600 Volts Peak)

The MOC3061, MOC3062 and MOC3063 devices consist of gallium arsenide infrared emitting diodes optically coupled to monolithic silicon detectors performing the functions of Zero Voltage Crossing bilateral triac drivers.

They are designed for use with a triac in the interface of logic systems to equipment powered from 115/240 Vac lines, such as solid–state relays, industrial controls, motors, solenoids and consumer appliances, etc.

- Simplifies Logic Control of 115/240 Vac Power
- Zero Voltage Crossing
- dv/dt of 1500 V/μs Typical, 600 V/μs Guaranteed
- To order devices that are tested and marked per VDE 0884 requirements, the suffix "V" must be included at end of part number. VDE 0884 is a test option.

Recommended for 115/240 Vac(rms) Applications:

- Solenoid/Valve Controls
- Lighting Controls
- Static Power Switches
- AC Motor Drives

- Temperature ControlsE.M. Contactors
- AC Motor Starters
- Ad Motor Clartoro
- Solid State Relays

Output	MOC3
•	[IFT = 5 m/



MOC3061

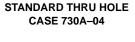
[IFT = 15 mA Max]

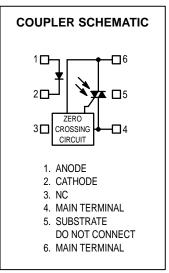
MOC3062

[IFT = 10 mA Max]

A Max]







MAXIMUM RATINGS

Rating	Symbol	Value	Unit
INFRARED EMITTING DIODE			
Reverse Voltage	VR	6	Volts
Forward Current — Continuous	١ _F	60	mA
Total Power Dissipation @ T _A = 25°C Negligible Power in Output Driver Derate above 25°C	PD	120 1.41	mW mW/°C
L OUTPUT DRIVER			
Off-State Output Terminal Voltage	V _{DRM}	600	Volts
Peak Repetitive Surge Current (PW = 100 μs, 120 pps)	ITSM	1	A
Total Power Dissipation @ T _A = 25°C Derate above 25°C	PD	150 1.76	mW mW/°C

TOTAL DEVICE

Isolation Surge Voltage(1) (Peak ac Voltage, 60 Hz, 1 Second Duration)	VISO	7500	Vac(pk)
Total Power Dissipation @ T _A = 25°C Derate above 25°C	PD	250 2.94	m₩ m₩/°C
Junction Temperature Range	ТJ	-40 to +100	°C
Ambient Operating Temperature Range ⁽²⁾	TA	-40 to +85	°C
Storage Temperature Range ⁽²⁾	T _{stg}	-40 to +150	°C
Soldering Temperature (10 s)	ТL	260	°C

 Isolation surge voltage, V_{ISO}, is an internal device dielectric breakdown rating. For this test, Pins 1 and 2 are common, and Pins 4, 5 and 6 are common.

2. Refer to Quality and Reliability Section in Opto Data Book for information on test conditions.

Preferred devices are Motorola recommended choices for future use and best overall value.

GlobalOptoisolator is a trademark of Motorola, Inc.

(Replaces MOC3060/D)



MOC3061 MOC3062 MOC3063

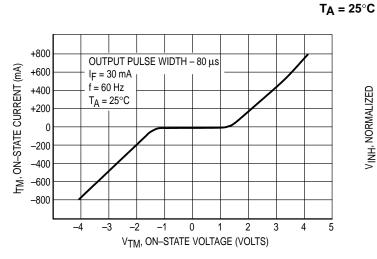
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

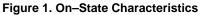
Characteristic	Symbol	Min	Тур	Max	Unit
NPUT LED			•	•	
Reverse Leakage Current (V _R = 6 V)	I _R	-	0.05	100	μΑ
Forward Voltage (I _F = 30 mA)	VF	-	1.3	1.5	Volts
DUTPUT DETECTOR (I _F = 0)					
Leakage with LED Off, Either Direction (Rated V _{DRM} ⁽¹⁾)	IDRM1	-	60	500	nA
Critical Rate of Rise of Off–State Voltage ⁽³⁾	dv/dt	600	1500	—	V/µs
COUPLED					
LED Trigger Current, Current Required to Latch Output (Main Terminal Voltage = 3 V ⁽²⁾) MOC3061 MOC3062 MOC3063	IFT	 		15 10 5	mA
Peak On–State Voltage, Either Direction ($I_{TM} = 100 \text{ mA}, I_F = \text{Rated } I_{FT}$)	VTM	-	1.8	3	Volts
Holding Current, Either Direction	ΙΗ	_	250	—	μA
Inhibit Voltage (MT1–MT2 Voltage above which device will not trigger.) (I_F = Rated I_{FT})	VINH	-	5	20	Volts
Leakage in Inhibited State (I _F = Rated I _{FT} , Rated V _{DRM} , Off State)	IDRM2	-	—	500	μΑ
Isolation Voltage (f = 60 Hz, t = 1 sec)	VISO	7500	—	— —	Vac(pk)

1. Test voltage must be applied within dv/dt rating.

2. All devices are guaranteed to trigger at an I_F value less than or equal to max I_{FT}. Therefore, recommended operating I_F lies between max I_{FT} (15 mA for MOC3061, 10 mA for MOC3062, 5 mA for MOC3063) and absolute max I_F (60 mA).

3. This is static dv/dt. See Figure 7 for test circuit. Commutating dv/dt is a function of the load-driving thyristor(s) only.





TYPICAL CHARACTERISTICS

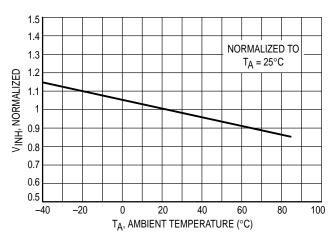


Figure 2. Inhibit Voltage versus Temperature