



MOTOROLA
Semiconductors

Boîte postale 1029 - 31023 Toulouse CEDEX - FRANCE

**ZERO VOLTAGE CROSSING
OPTICALLY ISOLATED TRIAC DRIVER**

This device consists of a gallium arsenide infrared emitting diode optically coupled to a monolithic silicon detector performing the function of a Zero Voltage Crossing bilateral triac driver.

They are designed for use with a triac in the interface of logic systems to equipment powered from 220 Vac lines, such as solid-state relays, industrial controls, motors, solenoids and consumer appliances, etc.

- Simplifies Logic Control of 220 Vac Power
- Zero Voltage Crossing
- High Breakdown Voltage: $V_{DRM} = 400\text{ V Min}$
- High Isolation Voltage: $V_{ISO} = 7500\text{ V Min}$
- Small, Economical, 6-Pin DIP Package
- Same Pin Configuration as MOC3020/3021
- UL Recognized, File No. E54915
- dv/dt of $100\text{ V}/\mu\text{s Typ}$

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
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INFRARED EMITTING DIODE MAXIMUM RATINGS

Reverse Voltage	V_R	6.0	Volts
Forward Current - Continuous	I_F	50	mA
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Negligible Power in Output Driver Derate above 25°C	P_D	120	mW
		1.33	$\text{mW}/^\circ\text{C}$

OUTPUT DRIVER MAXIMUM RATINGS

Off-State Output Terminal Voltage	V_{DRM}	400	Volts
On-State RMS Current $T_A = 25^\circ\text{C}$ (Full Cycle, 50 to 60 Hz) $T_A = 70^\circ\text{C}$	$I_T(\text{RMS})$	100 50	mA
Peak Nonrepetitive Surge Current (PW = 10 ms)	I_{TSM}	1.2	A
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300 4.0	mW $\text{mW}/^\circ\text{C}$

TOTAL DEVICE MAXIMUM RATINGS

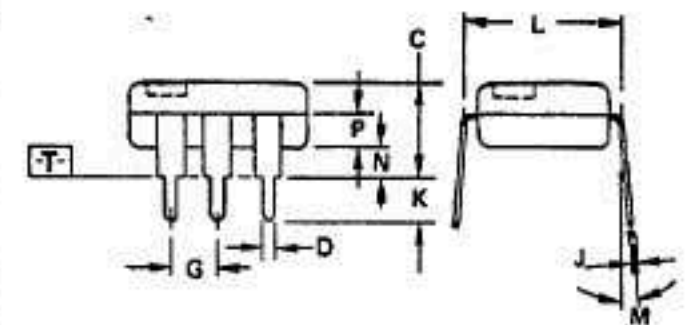
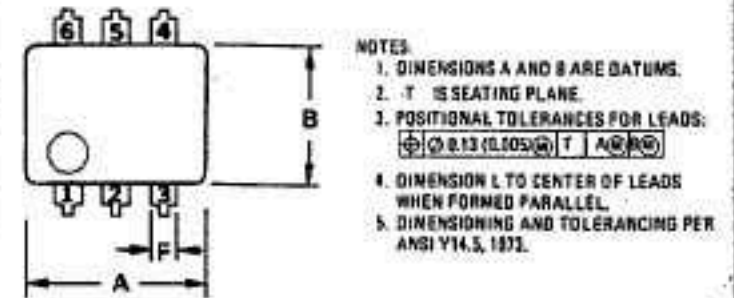
Isolation Surge Voltage (1) (Peak ac Voltage, 60 Hz, 5 Second Duration)	V_{ISO}	7500	Vac
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	330 4.4	mW $\text{mW}/^\circ\text{C}$
Junction Temperature Range	T_J	-40 to +100	$^\circ\text{C}$
Ambient Operating Temperature Range	T_A	-40 to +70	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40 to +150	$^\circ\text{C}$
Soldering Temperature (10 s)	-	260	$^\circ\text{C}$

(1) Isolation surge voltage, V_{ISO} , is an internal device dielectric breakdown rating.

**MOC3040
MOC3041**

**OPTO
COUPLER / ISOLATOR
ZERO CROSSING
TRIAC DRIVER**

400 VOLTS



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.13	8.89	0.320	0.350
B	6.10	6.60	0.240	0.260
C	2.92	5.08	0.115	0.200
D	0.41	0.51	0.016	0.020
F	1.02	1.78	0.040	0.070
G	2.54 BSC		0.100 BSC	
J	0.20	0.30	0.008	0.012
K	2.54	3.81	0.100	0.150
L	7.62 BSC		0.300 BSC	
M	0°	15°	0°	15°
N	0.38	2.54	0.015	0.100
P	1.27	2.03	0.050	0.080

STYLE 6:
PIN 1. ANODE
2. CATHODE
3. NC
4. MAIN TERMINAL
5. SUBSTRATE
6. MAIN TERMINAL

CASE 730A-01

COUPLER SCHEMATIC

