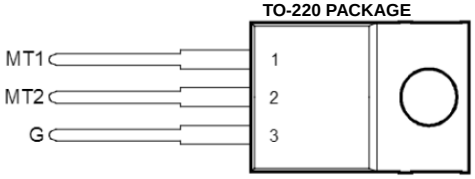
- **Sensitive Gate Triacs**
- **4 A RMS**
- **400 V to 800 V Off-State Voltage**

TO-220 PACKAGE



Pin 2 is in electrical contact with the mounting base.

Absolute maximum ratings over operating case temperature (unless otherwise noted)

RATING		SYMBOL	VALUE	UNIT
Repetitive peak off-state voltage (see Note 1)	TIC206D TIC206M TIC206S TIC206N	V_{DRM}	400 600 700 800	V
Full-cycle RMS on-state current at (or below)85˚C case temperature (see Note 2)		$I_{T(RMS)}$	4	A
Peak on-state surge current full-sine-wave (see Note 3)		I_{TSM}	25	A
Peak on-state surge current half-sine-wave (see Note 4)		I_{TSM}	30	A
Peak gate current		I_{GM}	±0.2	A
Peak gate power dissipation at (or below) 85˚Ccase temperature (pulse width ≤200∝S)		P_{GM}	1.3	W
Operating case temperature range		T_C	-40 to +110	˚C
Storage temperature range		T_{stg}	-40 to +125	˚C

NOTES: 1. These values apply bidirectionally for any value of resistance between the gate and Main Terminal 1.

2. This value applies for 50-Hz full-sine-wave operation with resistive load. Above 85˚C derate linearly to 110˚C case temperature at the rate of 160 mA/˚C.

3. The value applies for one 50-Hz full-sine-wave when the device is operating at (or below) the rated value of on-state current. Surge may be repeated after the device has returned to original thermal equilibrium. During the surge, gate control may be lost.

4. This value applies for one 50-Hz half-sine-wave when the device is operating at (or below) the rated value of on-state current. Surge may be repeated after the device has returned to original thermal equilibrium. During the surge, gate control may be lost.

Electrical characteristics at 25˚C case temperature (unless otherwise noted)

PARAMETER		TEST CONDITIONS		MIN	TYP	MAX	UNIT
I_{DRM}	Repetitive peak Off-state current	V_D = rated V_{DRM}	I_G = 0			±1	mA
I_{GTM}	Peak gate trigger current	V_{supply} = +12 V†	R_L = 10 Ω		0.5	5	mA
		V_{supply} = +12 V†	R_L = 10 Ω		-1.5	-5	
		V_{supply} = -12 V†	R_L = 10 Ω		-2	-5	
		V_{supply} = -12 V†	R_L = 10 Ω		3.6	10	
V_{GTM}	Peak gate trigger voltage	V_{supply} = +12 V†	R_L = 10 Ω		0.7	2	V
		V_{supply} = +12 V†	R_L = 10 Ω		-0.7	-2	
		V_{supply} = -12 V†	R_L = 10 Ω		-0.8	-2	
		V_{supply} = -12 V†	R_L = 10 Ω		0.8	2	

†All voltages are with respect to Main Terminal 1.

electrical characteristics at 25°C case temperature (unless otherwise noted)(continued)

PARAMETER		TEST CONDITIONS			MIN	TYP	MAX	UNIT
V_{TM}	Peak on-state voltage	I_{TM} = ±4.2 A	I_G = 50 mA	(see Note 6)		±1.3	± 2.2	V
I_H	Holding current	V_{supply} = +12 V†	I_G = 0	INIT' I_{TM} = 100 mA		2	15	mA
		V_{supply} = -12 V†	I_G = 0	INIT' I_{TM} = 100 mA		-4	-15	
I_L	Latching current	V_{supply} = +12 V†	(see Note 7)				30	mA
		V_{supply} = -12 V†					-30	

†All voltages are with respect to Main Terminal 1.

NOTES: 6. This parameter must be measured using pulse techniques, t_p = ≤1 ms, duty cycle ≤2 %. Voltage-sensing contacts separate from the current carrying contacts are located within 3.2 mm from the device body.

7. The triacs are triggered by a 15-V (open circuit amplitude) pulse supplied by a generator with the following characteristics. R_G=100 Ω, $t_{p(g)}$=20 μS, t_r=≤ 15 ns, f=1 kHZ.