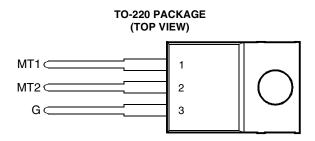
- Sensitive Gate Triacs
- 2.5 A RMS
- Glass Passivated Wafer
- 400 V to 700 V Off-State Voltage
- Max I_{GT} of 5 mA (Quadrant 1)



Pin 2 is in electrical contact with the mounting base.

MDC2ACA

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

RATING			VALUE	UNIT
	TIC201D		400	
Repetitive peak off-state voltage (see Note 1)	TIC201M	V_{DRM}	600	V
	TIC201S		700	
Full-cycle RMS on-state current at (or below) 85°C case temperature (see Note 2)			2.5	Α
Peak on-state surge current full-sine-wave at (or below) 25°C case temperature (see Note 3)			12	Α
Peak gate current			±0.2	Α
Peak gate power dissipation at (or below) 85°C case temperature (pulse width ≤ 200 μs)			1.3	W
Average gate power dissipation at (or below) 85°C case temperature (see Note 4)			0.3	W
Operating case temperature range			-40 to +110	°C
Storage temperature range			-40 to +125	°C
Lead temperature 1.6 mm from case for 10 seconds			230	°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 100 mA/°C.
 - 3. This 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 a maximum averaging time of 20 ms.

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	T _C = 110°C			±1	mA
I _{GT}	Gate trigger current	$V_{\text{supply}} = +12 \text{ V}\dagger$ $V_{\text{supply}} = +12 \text{ V}\dagger$ $V_{\text{supply}} = -12 \text{ V}\dagger$ $V_{\text{supply}} = -12 \text{ V}\dagger$	$R_{L} = 10 \Omega$ $R_{L} = 10 \Omega$ $R_{L} = 10 \Omega$ $R_{L} = 10 \Omega$	$t_{p(g)} > 20 \mu s$ $t_{p(g)} > 20 \mu s$ $t_{p(g)} > 20 \mu s$ $t_{p(g)} > 20 \mu s$			5 -8 -10 25	mA

[†] All voltages are with respect to Main Terminal 1.

PRODUCT INFORMATION



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

PARAMETER TEST CONDITIONS			MIN	TYP	MAX	UNIT		
		V _{supply} = +12 V†	$R_L = 10 \Omega$	t _{p(g)} > 20 μs		0.7	2.5	
V _{GT}	Gate trigger	$V_{\text{supply}} = +12 \text{ V}^{\dagger}$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \ \mu s$		-0.7	-2.5	v
VGT	voltage	$V_{\text{supply}} = -12 \text{ V}\dagger$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \ \mu s$		-0.7	-2.5	v
		$V_{\text{supply}} = -12 \text{ V}\dagger$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$		0.7		
V _T	On-state voltage	I _T = ±3.5 A	I _G = 50 mA	(see Note 5)			±1.9	V
1	Holding current	$V_{\text{supply}} = +12 \text{ V}\dagger$	I _G = 0	Init' I _{TM} = 100 mA			30	mA
lн		$V_{\text{supply}} = -12 \text{ V}\dagger$	$I_G = 0$	Init' $I_{TM} = -100 \text{ mA}$			-30	
l ₁	Latching current	$V_{\text{supply}} = +12 \text{ V}^{\dagger}$	(see Note 6)				40	mA
'L		$V_{\text{supply}} = -12 \text{ V}^{\dagger}$	(300 14010 0)				-40	1117 \
dv/dt	Critical rate of rise of	V _{DRM} = Rated V _{DRM}	I _G = 0	T _C = 110°C		±20		V/µs
uv/ut	off-state voltage			10 - 110 0		±20		ν/μδ
dv/dt _(c)	Critical rise of	V _{DRM} = Rated V _{DRM}	I _{TRM} = ±3.5 A	T _C = 85°C	±1	±4		V/µs
	commutation voltage					±4		ν/μδ

[†] All voltages are with respect to Main Terminal 1.

thermal characteristics

PARAMETER			TYP	MAX	UNIT
$R_{\theta J}$	UC Junction to case thermal resistance			10	°C/W
$R_{\theta J}$	Junction to free air thermal resistance			62.5	°C/W

NOTES: 5. This parameter must be measured using pulse techniques, $t_p = \le 1$ ms, duty cycle ≤ 2 %. Voltage-sensing contacts separate from the current carrying contacts are located within 3.2 mm from the device body.

^{6.} The triacs are triggered by a 15-V (open circuit amplitude) pulse supplied by a generator with the following characteristics: $R_G = 100 \ \Omega$, $t_{p(g)} = 20 \ \mu s$, $t_r = \le 15 \ ns$, $f = 1 \ kHz$.