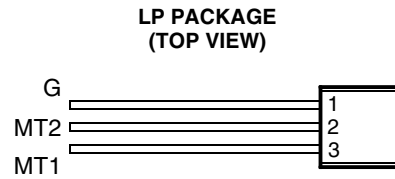
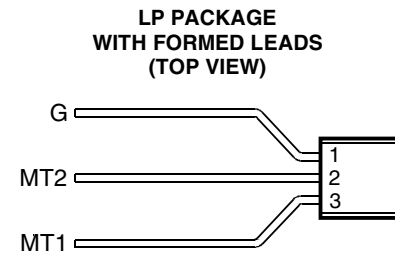


- 1.5 A RMS
- Glass Passivated Wafer
- 400 V to 600 V Off-State Voltage
- Max I_{GT} of 10 mA
- Package Options

PACKAGE	PACKING	PART # SUFFIX
LP	Bulk	(None)
LP with fomed leads	Tape and Reel	R



MDC2AA



MDC2AB

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

RATING		SYMBOL	VALUE	UNIT
Repetitive peak off-state voltage (see Note 1)	TICP206D	V_{DRM}	400	V
	TICP206M		600	
Full-cycle RMS on-state current at (or below) 85°C case temperature (see Note 2)		$I_{T(RMS)}$	1.5	A
Peak on-state surge current full-sine-wave at (or below) 25°C case temperature (see Note 3)		I_{TSM}	10	A
Peak on-state surge current half-sine-wave at (or below) 25°C case temperature (see Note 4)		I_{TSM}	12	A
Peak gate current		I_{GM}	±0.2	A
Average gate power dissipation at (or below) 85°C case temperature (see Note 5)		$P_{G(AV)}$	0.3	W
Operating case temperature range		T_C	-40 to +110	°C
Storage temperature range		T_{stg}	-40 to +125	°C
Lead temperature 1.6 mm from case for 10 seconds		T_L	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 60 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 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.
 5. 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	$V_D = \text{rated } V_{DRM}$	$I_G = 0$				±20	μA
I_{GT}	Gate trigger current	$V_{supply} = +12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			8	mA
		$V_{supply} = +12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			-8	
		$V_{supply} = -12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			-8	
		$V_{supply} = -12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			10	
V_{GT}	Gate trigger voltage	$V_{supply} = +12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			2.5	V
		$V_{supply} = +12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			-2.5	
		$V_{supply} = -12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			-2.5	
		$V_{supply} = -12 V†$	$R_L = 10 \Omega$	$t_{p(g)} > 20 \mu s$			2.5	

† All voltages are with respect to Main Terminal 1.

PRODUCT INFORMATION

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

PARAMETER	TEST CONDITIONS			MIN	TYP	MAX	UNIT
V_T On-state voltage	$I_T = \pm 1 \text{ A}$	$I_G = 50 \text{ mA}$	(see Note 6)			± 2.2	V
I_H Holding current	$V_{\text{supply}} = +12 \text{ V} \dagger$	$I_G = 0$	Init' $I_{TM} = 100 \text{ mA}$			30	mA
	$V_{\text{supply}} = -12 \text{ V} \dagger$	$I_G = 0$	Init' $I_{TM} = -100 \text{ mA}$			-30	
I_L Latching current	$V_{\text{supply}} = +12 \text{ V} \dagger$	(see Note 7)				40	mA
	$V_{\text{supply}} = -12 \text{ V} \dagger$					-40	

† All voltages are with respect to Main Terminal 1.

NOTES: 6. This parameter must be measured using pulse techniques, $t_p = \leq 1 \text{ ms}$, duty cycle $\leq 2 \%$. 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: $R_G = 100 \Omega$, $t_{p(g)} = 20 \mu\text{s}$, $t_r = \leq 15 \text{ ns}$, $f = 1 \text{ kHz}$.

TYPICAL CHARACTERISTICS

GATE TRIGGER CURRENT
vs
TEMPERATURE

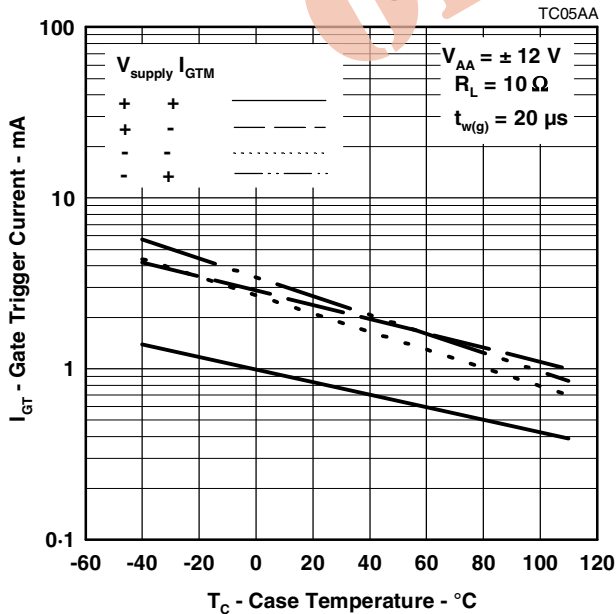


Figure 1.

GATE TRIGGER VOLTAGE
vs
TEMPERATURE

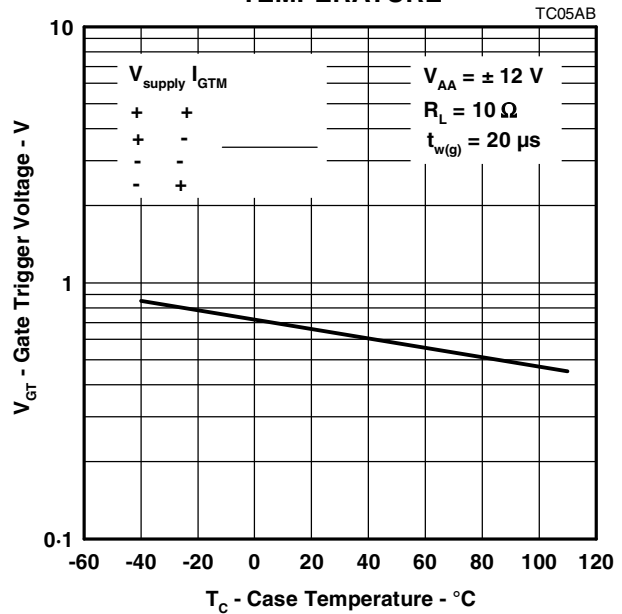
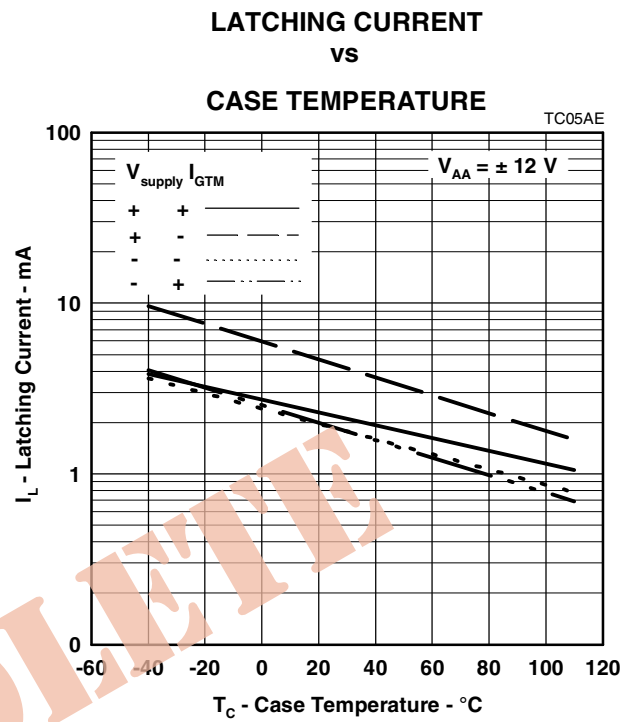
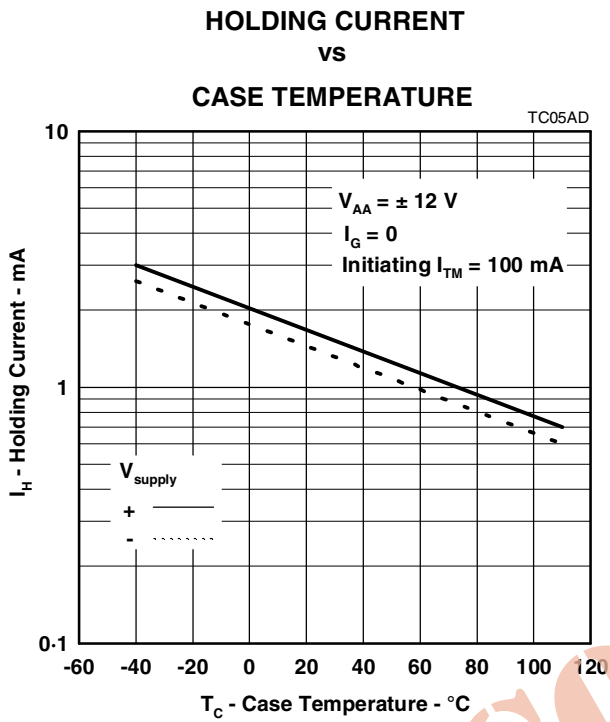


Figure 2.

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TYPICAL CHARACTERISTICS



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