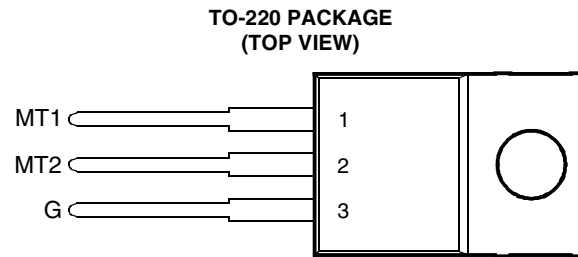


- Sensitive Gate Triacs
- 4 A RMS
- Glass Passivated Wafer
- 400 V to 700 V Off-State Voltage
- Max I_{GT} of 5 mA (Quadrants 1 - 3)



Pin 2 is in electrical contact with the mounting base.

MDC2ACA

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

PARAMETER	MIN	TYP	MAX	UNIT
Peak gate power dissipation			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 160 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.

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
I_{DRM} Repetitive peak off-state current	$V_D = \text{rated } V_{DRM}$ $I_G = 0$ $T_C = 110^\circ\text{C}$			±1	mA
I_{GT} Gate trigger current	$V_{supply} = +12\text{ V}\dagger$ $R_L = 10\ \Omega$ $t_{p(g)} > 20\ \mu\text{s}$		0.9	5	mA
	$V_{supply} = +12\text{ V}\dagger$ $R_L = 10\ \Omega$ $t_{p(g)} > 20\ \mu\text{s}$		-2.2	-5	
	$V_{supply} = -12\text{ V}\dagger$ $R_L = 10\ \Omega$ $t_{p(g)} > 20\ \mu\text{s}$		-1.8	-5	
	$V_{supply} = -12\text{ V}\dagger$ $R_L = 10\ \Omega$ $t_{p(g)} > 20\ \mu\text{s}$		2.4	10	

† 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 _{GT}	Gate trigger voltage	V _{supply} = +12 V†	R _L = 10 Ω	t _{p(g)} > 20 μs		0.7	2	V
		V _{supply} = +12 V†	R _L = 10 Ω	t _{p(g)} > 20 μs		-0.7	-2	
		V _{supply} = -12 V†	R _L = 10 Ω	t _{p(g)} > 20 μs		-0.7	-2	
		V _{supply} = -12 V†	R _L = 10 Ω	t _{p(g)} > 20 μs		0.7	2	
V _T	On-state voltage	I _T = ±4.2 A	I _G = 50 mA	(see Note 5)		±1.4	±2.2	V
I _H	Holding current	V _{supply} = +12 V†	I _G = 0	Init' I _{TM} = 100 mA		1.5	15	mA
		V _{supply} = -12 V†	I _G = 0	Init' I _{TM} = -100 mA		-1.3	-15	
I _L	Latching current	V _{supply} = +12 V†	(see Note 6)				30	mA
		V _{supply} = -12 V†					-30	
dv/dt	Critical rate of rise of off-state voltage	V _{DRM} = Rated V _{DRM}	I _G = 0	T _C = 110°C		±20		V/μs
dv/dt _(c)	Critical rise of commutation voltage	V _{DRM} = Rated V _{DRM}	I _{TRM} = ±4.2 A	T _C = 85°C	±1	±3		V/μs

† All voltages are with respect to Main Terminal 1.

NOTES: 5. 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.

6. 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.

thermal characteristics

PARAMETER		MIN	TYP	MAX	UNIT
R _{θJC}	Junction to case thermal resistance			7.8	°C/W
R _{θJA}	Junction to free air thermal resistance			62.5	°C/W

PRODUCT INFORMATION

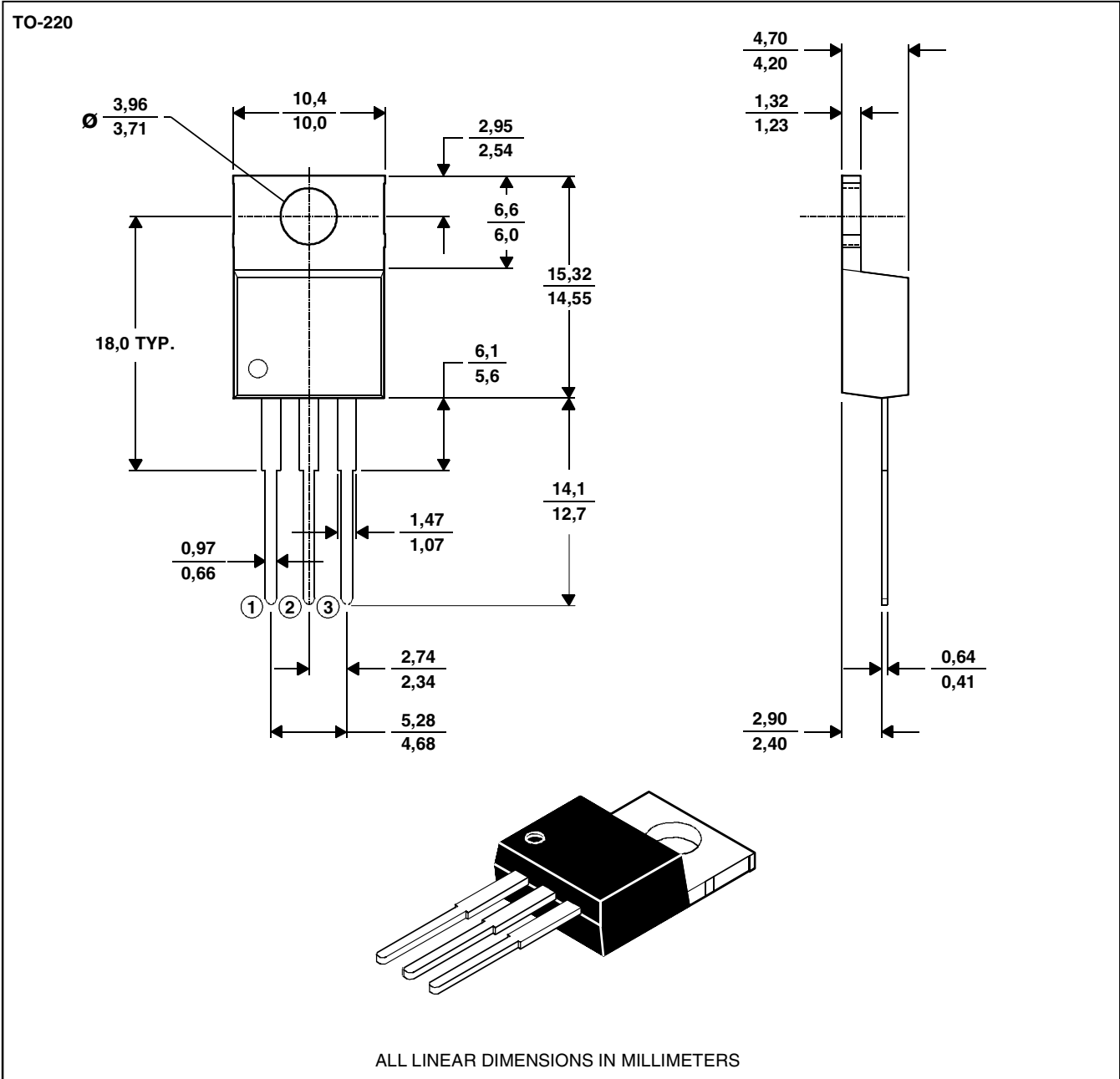
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MECHANICAL DATA

TO-220

3-pin plastic flange-mount package

This single-in-line package consists of a circuit mounted on a lead frame and encapsulated within a plastic compound. The compound will withstand soldering temperature with no deformation, and circuit performance characteristics will remain stable when operated in high humidity conditions. Leads require no additional cleaning or processing when used in soldered assembly.



NOTE A: The centre pin is in electrical contact with the mounting tab.

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