ELECTRONICS, INC.
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NTE5650 thru NTE5653
TRIAC – 100V_{RM}, 2.5A

Description:

The NTE5650 through NTE5653 sensitive gate TRIACs are designed to be driven directly with IC and MOS devices. These devices features a void–free glass passivated chip and are hermetically sealed in TO–5 outline cans.

The NTE5650 through NTE5653 are bi–directional triode thyristors and may be switched from off–state to conduction for either polarity of applied voltage with positive or negative gate–trigger current and are designed for control applications in lighting, heating, cooling and static switching relays.

Absolute Maximum Ratings:

Repetitive Peak Off–State Voltage (T_J = +90°C, Gate Open, Note 1), V_{DROM}
- NTE5650 . . . . . 100V
- NTE5651 . . . . . 200V
- NTE5652 . . . . . 400V
- NTE5653 . . . . . 600V

RMS On–State Current (T_C = +75°C and Conduction Angle of 360°), $I_{T(RMS)}$ 3A
Peak Surge (Non–Repetitive) On–State Current (One–Cycleat 50Hz or 60Hz), I_{TSM} 30A
Peak Gate–Trigger Current (3µsec, Max.), I_{GTM} 1A
Peak Gate–Power Dissipation ($I_{GT} \le I_{GTM}$ for 3µsec. Max.), P_{GM} 20W
Average Gate–Power Dissipation, $P_{G(AV)}$ 0.2W
Operating Temperature Range (T_C), T_{opr} . . . . . –40° to +90°C
Storage Temperature Range, T_{stg} . . . . . –40° to +150°C
Typical Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 4°C/W

Note 1. All values apply in either direction.

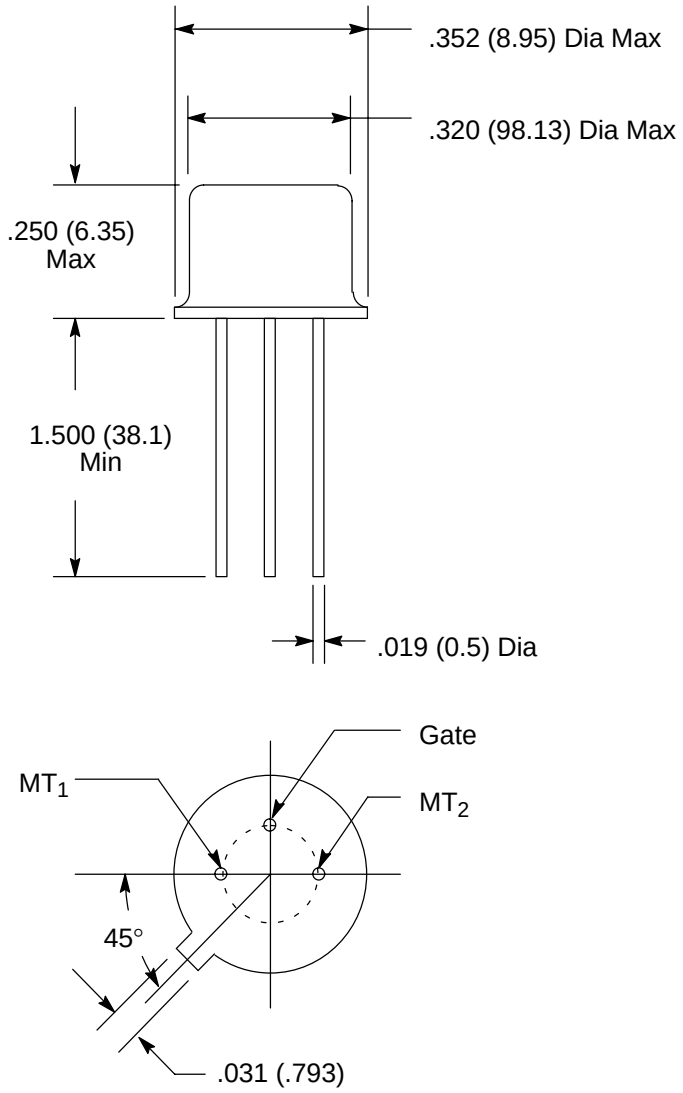
Electrical Characteristics: (At Maximum Ratings & Specified Case Temperature)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off–State Current	I_{DROM}	T_J = +90°C, V_{DROM} = Max Rating, Gate Open, Note 1	–	–	0.75	mA
Maximum On–State Voltage	V_{TM}	T_C = +25°C, i_T = 5A (Peak), Note 1	–	–	1.85	V
DC Holding Current	I_{HO}	T_C = +25°C, Gate Open	–	–	5	mA
Critical Rate–of–Rise of Off–State Voltage	Critical dv/dt	T_C = +90°C, $v_D = V_{DROM}$, Gate Open, Note 1	–	3	–	V/µs
DC Gate–Trigger Current MT_2 (+) Gate (+), MT_2 (–) Gate (–)	I_{GT}	T_C = + 25°C, v_D = 6V, R_L = 39Ω	–	–	3	mA
MT_2 (+) Gate (–), MT_2 (–) Gate (+)						

Note 1. All values apply in either direction.

Electrical Characteristics (Cont'd): (At Maximum Ratings & Specified Case Temperature)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Gate Trigger Voltage	V_{GT}	T_C = +25°C, v_D = 6V, R_L = 39Ω	–	–	2.2	V
Gate–Controlled Turn–On Time	t_{gt}	T_C = +25°C, $v_D = V_{DROM}$, I_{GT} = 80mA, t_r = 0.1µs, i_T = 10A (Peak)	–	2.2	–	µs
Fusing Current (For TRIAC Protection)	I^2t	T = 1.25 to 10ms	–	–	3	A^2s



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