ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE5655 thru NTE5657
TRIAC – 800mA
Sensitive Gate

Description:

The NTE5655 through NTE5657 are 800mA sensitive gate TRIACs in a TO92 type package designed to be driven directly with IC and MOS devices. These TRIACs feature void–free glass passivated chips.

These NTE devices 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. They are designed for control applications in lighting, heating, cooling and static switching relays.

Absolute Maximum Ratings:

Repetitive Peak Off–State Voltage (Gate Open, T_J = +100°C), V_{DRM}
- NTE5655 . . . . . 200V
- NTE5656 . . . . . 400V
- NTE5657 . . . . . 600V

RMS On–State Current (T_C = +75°C, Conduction Angle of 360°C), I_{TRMS} 800mA

Peak Surge (Non–Repetitive) On–State Current (One Cycle, 50Hz or 60Hz), I_{TSM} 8A

Peak Gate–Trigger Current (3µs Max), I_{GTM} 500mA

Peak Gate–Power Dissipation ($I_{GT} \le I_{GTM}$ for 3µs Max), P_{GM} 20W

Average Gate–Power Dissipation, $P_{G(AV)}$ 200mW

Operating Temperature Range, T_J . . . . . –40° to +100°C

Storage Temperature Range, T_{stg} . . . . . –40° to +150°C

Typical Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 75°C/W

Electrical Characteristics: (T_C = +25°C, Maximum Ratings unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off–State Current	I_{DRM}	V_{DRM} = Max Rating, Gate Open, T_J = +100°C	–	0.75	–	mA
Max. On–State Voltage	V_{TM}	i_T = 800mA (Peak)	–	–	1.9	V
DC Holding Current	I_H	Gate Open	–	–	15	mA
Critical Rate–of–Rise of Off–State Voltage	Critical dv/dt	$V_D = V_{DRM}$, Gate Open, T_C = +100°C	–	10	–	V/µs

Electrical Characteristics (Cont'd): (T_C = +25°C, Maximum Ratings unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Gate Trigger Current T_2 (+) Gate (+), T_2 (–) Gate (–) T_2 (+) Gate (–), T_2 (–) Gate (+)	I_{GT}	V_D = 6V, R_L = 100Ω	–	–	5	mA
DC Gate Trigger Voltage	V_{GT}	V_D = 6V, R_L = 100Ω	–	–	2.2	V
Gate–Controlled Turn–On Time	t_{gt}	V_D = V_{DRM}, I_{GT} = 80mA, t_r = 0.1µs, i_T = 10A (Peak)	–	2.2	–	µs