

NTE5629 TRIAC – 400V_{RM}, 4Amp

Description:

The NTE5629 TRIAC is a bi-directional triode thyristor in a TO202 type case. This device may be switched from off-state to conduction for either polarity of applied voltage with positive or negative gate-trigger current. The NTE5629 can be driven directly with IC and MOS devices and is designed for control applications in lighting, heating, cooling, and static switching relays.

Absolute Maximum Ratings:

Repetitive Peak Off-State Voltage (Gate Open, T _J = +110°C, Note 1), V _{DRM}	400V
RMS On-State Current (T _C = +80°C, Conduction Angle = 360°), I _{T(RMS)}	4A
Non-Repetitive Peak Surge On-State Current (One-Cycle, at 50Hz or 60Hz), I _{TSM}	40A
Peak Gate-Trigger Current (for 3μs Max), I _{GTM}	1.2A
Peak Gate-Power Dissipation (I _{GT} ≤ I _{GTM}), P _{GM}	15W
Average Gate-Power Dissipation, P _{G(AV)}	3W
Operating Temperature Range, T _{opr}	-40° to +110°C
Storage Temperature Range, T _{stg}	-40° to +150°C
Thermal Resistance, Junction-to-Case, R _{thJC}	4°C/W Typ

Electrical Characteristics: (At Specified Case Temperature)

Peak Off-State Current (Gate Open, T _C = +110°C, V _{DRM} = 400V, Note 1), I _{DRM}	0.5mA Max
Maximum On-State Voltage (T _C = +25°C, I _T = 4A, Note 1), V _{TM}	1.6V Max
DC Holding Current (Gate Open, T _C = +25°C, Note 1), I _{Hold}	5mA Max
Critical Rate-of-Rise of Off-State Voltage, Critical dv/dt (V _D = 400V, Gate Open, T _C = +110°C, Note 1)	10V/μs
Critical rate-of-Rise of commutation Voltage, Commutating dv/dt (V _D = 400V, I _T = 4A, Gate Unenergized, T _C = +80°C, Note 1)	1V/μs
DC Gate-Trigger Current (V _D = 12VDC, R _L = 60Ω, T _C = +25°C), I _{GT}	3mA Max
(T ₂₊ Gate +, T ₂₋ Gate -) Quads I and III	
(T ₂₊ Gate -, T ₂₋ Gate +) Quads II and IV	
DC Gate-Trigger Voltage (V _D = 12VDC, R _L = 60Ω, T _C = +25°C), V _{GT}	2V Max
Gate-Controlled Turn-On Time, T _{gt} (V _D = 400V, I _{GT} = 80mA, t _R = 0.1μs, I _T = 6A (Peak), T _C = +25°C)	3μs

Note 1. All values apply in either direction.

