

NTE5426 Silicon Controlled Rectifier (SCR) Sensitive Gate

Description:

The NTE5426 is silicon controlled rectifier (SCR) in an isolated tab TO220 type package. This device may be switched from off-state to conduction by a current pulse applied to the gate terminal and is designed for control applications in lighting, heating, cooling, and static switching relays.

Absolute Maximum Ratings:

Repetitive Peak Off-State Voltage (Gate Open, $T_C = +110^\circ\text{C}$), V_{DRM} 400V
 Repetitive Peak Reverse Voltage (Gate Open, $T_C = +110^\circ\text{C}$), V_{RRM} 400V
 RMS On-State Current ($T_C = +80^\circ\text{C}$, 180° Conduction Angle), $I_{T(RMS)}$ 10A
 Peak Surge (Non-Repetitive) On-State Current (One Cycle, 50 or 60Hz), I_{TSM} 80A
 Peak Gate-Trigger Current ($3\mu\text{s}$ max), I_{GTM} 1A
 Peak Gate-Power Dissipation ($I_{GT} = I_{GTM}$), P_{GM} 16W
 Average Gate Power Dissipation, $P_{G(AV)}$ 500mW
 Operating Temperature Range, T_{opr} -40° to $+100^\circ\text{C}$
 Storage Temperature Range, T_{stg} -40° to $+150^\circ\text{C}$
 Typical Thermal Resistance, Junction-to-Case, R_{thJC} 3.0°C/W

Electrical Characteristics: ($T_C = +25^\circ\text{C}$ and "Maximum Ratings" unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off-State Current	I_{DRM} , I_{RRM}	Rated V_{DRM} or V_{RRM} , $T_C = +110^\circ\text{C}$, $RG - K = 1k\Omega$	-	-	0.1	mA
Maximum On-State Voltage	V_{TM}	$I_T = \text{Rated Amps}$	-	-	2.0	V
Gate Trigger Current, Continuous DC	I_{GT}	Anode Voltage = 12V, $R_L = 60\Omega$	-	-	200	μA
Gate Trigger Voltage, Continuous DC	V_{GT}	Anode Voltage = 12V, $R_L = 60\Omega$	-	-	0.8	V
DC Holding Current	I_H	Gate Open, $RG - K = 1k\Omega$	-	-	3.0	mA
Turn-On Time	t_{gt}	$(t_d + t_r)$ $I_{GT} = 150\text{mA}$	-	-	2.5	μs
Critical Rate of Rise of Off-State Voltage	critical dv/dt	Gate Open, $T_C = +110^\circ\text{C}$, $RG - K = 1k\Omega$	-	8	-	V/ μs

