

NTE5541 thru NTE5548

Silicon Controlled Rectifier (SCR)

35 Amp

Description:

The NTE5541 thru NTE5548 are silicon controlled rectifiers (SCR) packaged in a TO48 type case designed for industrial and consumer applications such as power supplies; battery chargers; temperature, motor, light and welder controls.

Absolute Maximum Ratings:

Repetitive Peak Off-State Voltage ($T_J = +100^\circ\text{C}$) V_{DRM}

NTE5541	50V
NTE5542	100V
NTE5543	200V
NTE5544	300V
NTE5545	400V
NTE5546	500V
NTE5547	600V
NTE5548	800V

Repetitive Peak Reverse Voltage ($T_J = +100^\circ\text{C}$) V_{RRM}

NTE5541	50V
NTE5542	100V
NTE5543	200V
NTE5544	300V
NTE5545	400V
NTE5546	500V
NTE5547	600V
NTE5548	800V

RMS On-State Current ($T_C = +75^\circ\text{C}$), $I_{(RMS)}$ 35A

Peak Surge (Non-Repetitive) On-State Current (One Cycle at 50Hz or 60Hz), I_{TSM} 300A

Peak Gate-Trigger Current ($3\mu\text{s Max}$), I_{GTM} 20A

Peak Gate-Power Dissipation ($I_{GT} \leq I_{GTM}$ for $3\mu\text{s Max}$), P_{GM} 20W

Average Gate Power Dissipation, $P_{G(AV)}$ 500mW

Operating Temperature Range, T_{oper} -40° to $+150^\circ\text{C}$

Storage Temperature Range, T_{stg} -40° to $+150^\circ\text{C}$

Typical Thermal Resistance, Junction-to-Case, R_{thJC} 1.4°C/W

Electrical Characteristics: (At “Maximum Ratings” and Specified Case Temperatures)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off-State Current	I_{DRM}, I_{RRM}	V_{DRM} & V_{RRM} = Max Rating, $T_J = +100^{\circ}C$, Gate Open	–	–	2.0	mA
Maximum On-State Voltage (Peak)	I_{HO}	$T_C = +25^{\circ}C$	–	–	50	mA
DC Gate Trigger Current	I_{GT}	Anode Voltage = 12V, $R_L = 30\Omega$, $T_C = +25^{\circ}C$	–	–	30	mA
DC Gate Trigger Voltage	V_{GT}	Anode Voltage = 12V, $R_L = 30\Omega$, $T_C = +25^{\circ}C$	–	–	2.0	V
Gate Controlled Turn-On Time	t_{gt}	$I_{GT} = 150mA$	–	2.5	–	μs
Critical Rate of Rise of Off-State Voltage	dv/dt (Critical)	Gate Open, $T_C = +100^{\circ}C$	–	100	–	V/ μs

