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NTE5541 thru NTE5548 Silicon Controlled Rectifier (SCR) 35 Amp, TO48

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, $T_J = +100^{\circ}\text{C}$, Gate Open	-	-	2.0	mA
Maximum On-State Voltage (Peak)	I_{HO}	$T_C = +25^{\circ}\text{C}$	-	-	50	mA
DC Gate Trigger Current	I_{GT}	Anode Voltage = 12V, $R_L = 30\Omega$, $T_C = +25^{\circ}\text{C}$	-	-	30	mA
DC Gate Trigger Voltage	V_{GT}	Anode Voltage = 12V, $R_L = 30\Omega$, $T_C = +25^{\circ}\text{C}$	-	-	2.0	V
Gate Controlled Turn-On Time	t_{gt}	$I_{GT} = 150\text{mA}$	-	2.5	-	μs
Critical Rate of Rise of Off-State Voltage	dv/dt (Critical)	Gate Open, $T_C = +100^{\circ}\text{C}$	-	100	-	$\text{V}/\mu\text{s}$

