

## NTE5417 thru NTE5419 Silicon Controlled Rectifier (SCR) 10 Amp

### **Absolute Maximum Ratings:**

Repetitive Peak Reverse Voltage ( $T_C = +110^\circ\text{C}$ ), $V_{RRM}$	
NTE5417 .....	200V
NTE5418 .....	400V
NTE5419 .....	600V
Repetitive Peak Off-State Voltage ( $T_C = +110^\circ\text{C}$ ), $V_{DRM}$	
NTE5417 .....	200V
NTE5418 .....	400V
NTE5419 .....	600V
RMS On-State Current ( $T_C = +80^\circ\text{C}$ , Conduction Angle of $180^\circ$ ), $I_{T(RMS)}$ .....	
10A	
Peak Surge (Non-Repetitive) On-State Current (One Cycle at 50 or 60Hz), $I_{TSM}$ .....	
100A	
Peak Gate-Trigger Current ( $3\mu\text{s}$ Max), $I_{GTM}$ .....	
1A	
Peak Gate-Power Dissipation ( $I_{GT} \leq I_{GTM}$ ), $P_{GM}$ .....	
16W	
Average Gate Power Dissipation, $P_{G(AV)}$ .....	
500mW	
Operating Temperature Range, $T_{opr}$ .....	
$-40^\circ$ to $+110^\circ\text{C}$	
Storage Temperature Range, $T_{stg}$ .....	
$-40^\circ$ to $+150^\circ\text{C}$	
Typical Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	
2.5°C/W	

### **Electrical Characteristics:** ( $T_C = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off-State Current	$I_{RRM}$	$V_{RRM} = \text{Max}, V_{DRM} = \text{Max},$ $T_C = +110^\circ\text{C}$	–	–	0.5	mA
	$I_{DRM}$		–	–	0.5	mA
Maximum Peak On-State Voltage	$V_{TM}$	$I_T = 10\text{A}$	–	–	1.8	V
DC Holding Current	$I_{HOLD}$	Gate Open	–	–	30	mA
DC Gate-Trigger Current	$I_{GT}$	$V_D = 6\text{VDC}, R_L = 60\Omega$	–	–	25	mA
DC Gate-Trigger Voltage	$V_{GT}$	$V_D = 6\text{VDC}, R_L = 60\Omega$	–	–	1.5	V
Gate Controlled Turn-On Time	$t_{gt}$	$I_{GT} = 100\text{mA}$	–	2.5	–	$\mu\text{s}$
Critical Rate of Off-State Voltage	$dv/dt$ (critical)	Gate Open, $T_C = +100^\circ\text{C}$	–	200	–	V/ $\mu\text{s}$

