



ELECTRONICS, INC.  
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## NTE5427 thru NTE5429 Silicon Controlled Rectifier (SCR) 7 Amp, TO5

### **Absolute Maximum Ratings:**

Repetitive Peak Reverse Voltage ( $T_C = +110^\circ\text{C}$ ), $V_{RRM}$	
NTE5427 .....	200V
NTE5428 .....	400V
NTE5429 .....	600V
Repetitive Peak Off-State Voltage ( $T_C = +110^\circ\text{C}$ ), $V_{DRM}$	
NTE5427 .....	200V
NTE5428 .....	400V
NTE5429 .....	600V
RMS On-State Current ( $T_C = +80^\circ\text{C}$ , Conduction Angle of $180^\circ$ ), $I_{T(RMS)}$	7A
Peak Surge (Non-Repetitive) On-State Current (One Cycle at 50 or 60Hz), $I_{TSM}$	80A
Peak Gate-Trigger Current ( $3\mu\text{s Max}$ ), $I_{GTM}$	1A
Peak Gate-Power Dissipation ( $I_{GT} \leq I_{GTM}$ ), $P_{GM}$	20W
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, $R_{thJC}$	$2.5^\circ\text{C/W}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off-State Current	$I_{RRM}$	$V_{RRM} = \text{Max}, V_{DRM} = \text{Max},$ $T_C = +110^\circ\text{C}, R_{GK} = 1\text{k}\Omega$	-	-	1	mA
	$I_{DRM}$		-	-	1	mA
Maximum On-State Voltage	$V_{TM}$	$I_T = 7\text{A}$	-	-	2	V
DC Holding Current	$I_{HOLD}$		-	-	50	mA
DC Gate-Trigger Current	$I_{GT}$	$V_D = 6\text{VDC}, R_L = 100\Omega$	-	-	25	mA
DC Gate-Trigger Voltage	$V_{GT}$	$V_D = 6\text{VDC}, R_L = 100\Omega$	-	-	1.5	V
Gate Controlled Turn-On Time	$t_{gt}$	$I_G \times 3_{GT}$	-	2	-	$\mu\text{s}$
$I^2t$ for Fusing Reference	$I^2t$	For SCR Protection	-	-	2.6	$\text{A}^2\text{sec}$
Critical Rate of Off-State Voltage	$dv/dt$ (critical)	Gate Open, $T_C = +100^\circ\text{C}$	-	100	-	$\text{V}/\mu\text{s}$

