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## NTE56014 TRIAC, 25 Amp TO3 Isolated Flange

**Absolute Maximum Ratings and Electrical Characteristics:**

Peak Repetitive Off-State Voltage, (Gate Open,  $T_J = +110^{\circ}\text{C}$ , Note 1),  $V_{\text{DRM}}$  ..... 400V  
 RMS On-State Current ( $T_C = +80^{\circ}\text{C}$ , Conduction Angle of 360°),  $I_T(\text{rms})$  ..... 25A  
 Peak Surge (Non-Repetitive) On-State Current (One Cycle, 50Hz or 60Hz),  $I_{\text{TSM}}$  ..... 250A  
 Peak Gate Trigger Current (3 $\mu\text{s}$  Max),  $I_{\text{GTM}}$  ..... 4A  
 Peak Gate Power Dissipation ( $I_{\text{GT}} \leq I_{\text{GTM}}$ ),  $P_{\text{GM}}$  ..... 40W  
 Average Gate Power Dissipation,  $P_{\text{G(AV)}}$  ..... 0.8W  
 Operating Junction Temperature Range,  $T_J$  .....  $-40^{\circ}$  to  $+110^{\circ}\text{C}$   
 Storage Temperature Range,  $T_{\text{stg}}$  .....  $-40^{\circ}$  to  $+150^{\circ}\text{C}$   
 Typical Thermal Resistance, Junction-to-Case,  $R_{\text{thJC}}$  .....  $1.3^{\circ}\text{C/W}$

Note 1. All values apply in either direction.

**Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Off-State Current	$I_{\text{DRM}}$	$V_{\text{DRM}} = 400\text{V}$ , $T_C = +110^{\circ}\text{C}$ , Gate Open, Note 1	-	-	1	mA
Maximum On-State Voltage	$V_{\text{TM}}$	$I_T = 25\text{A}$ , $T_C = +25^{\circ}\text{C}$ , Note 1	-	-	1.8	V
DC Holding Current	$I_{\text{HO}}$	$T_C = +25^{\circ}\text{C}$ , Gate Open, Note 1	-	-	80	mA
Critical Rate-of-Rise of Off-State Voltage	Critical dv/dt	$V_D = 400\text{V}$ , $T_C = +110^{\circ}\text{C}$ , Gate Open, Note 1	-	200	-	V/ $\mu\text{s}$
Critical Rate-of-Rise of Commutating Voltage	Commutating dv/dt	$V_D = 400\text{V}$ , $I_T = 25\text{A}$ , $T_C = +80^{\circ}\text{C}$ , Gate Unenergized, Note 1	-	5	-	V/ $\mu\text{s}$
DC Gate Trigger Current MT2 (+) G (+), MT2 (-) G (-)	$I_{\text{GT}}$	$V_D = 12\text{V}$ , $R_L = 60\Omega$ , $T_C = +25^{\circ}\text{C}$	-	-	100	mA
MT2 (+) G (-), MT2 (-) G (+)			-	-	150	mA
DC Gate Trigger Voltage	$V_{\text{GT}}$	$V_D = 12\text{V}$ , $R_L = 30\Omega$ , $T_C = +25^{\circ}\text{C}$	-	-	2.5	V
Gate Controlled Turn-On Time	$t_{\text{gt}}$	$V_D = 400\text{V}$ , $I_{\text{GT}} = 200\text{mA}$ , $t_r = 0.1\mu\text{s}$ , $I_T = 10\text{A Peak}$ , $T_C = +25^{\circ}\text{C}$	-	3	-	$\mu\text{s}$

Note 1. All values apply in either direction.

