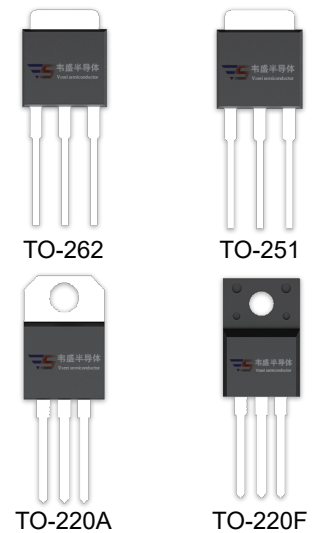


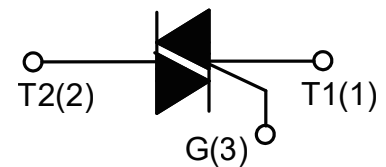
DESCRIPTION:

With high ability to withstand the shock loading of large current, T405-600T series triacs provide high dv/dt rate with strong resistance to electromagnetic interface. With high commutation performances, 3 quadrants products especially recommended for use on inductive load.



MAIN FEATURES

Symbol	Value	Unit
V_{DRM}/V_{RRM}	600/800	V
$I_{T(RMS)}$	4	A



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit	
Storage junction temperature range	T_{stg}	-40 - 150	°C	
Operating junction temperature range	T_j	-40 - 125	°C	
Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$)	V_{DRM}	600/800	V	
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	600/800	V	
RMS on-state current	$I_{T(RMS)}$	TO-251/ TO-220A(Ins)/ TO-220F(Ins) ($T_C=100^\circ\text{C}$)	4	A
		TO-220A(Non-Ins)/ TO-262 ($T_C=105^\circ\text{C}$)		
Non repetitive surge peak on-state current (full cycle, $F=50\text{Hz}$)	I_{TSM}	40	A	
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	8	A^2s	

Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	di/dt	50	A/ μ s
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	5	W

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value				Unit
				TW	SW	CW	BW	
I_{GT}	$V_D = 12\text{V}$ $R_L = 33\Omega$	I - II - III	MAX	5	10	35	50	mA
V_{GT}		I - II - III	MAX	1.5				V
V_{GD}	$V_D = V_{DRM}$ $T_j = 125^\circ\text{C}$ $R_L = 3.3\text{K}\Omega$	I - II - III	MIN	0.2				V
I_L	$I_G = 1.2I_{GT}$	I - III	MAX	10	20	50	70	mA
		II		15	35	60	80	
I_H	$I_T = 100\text{mA}$		MAX	10	15	35	60	mA
dV/dt	$V_D = 2/3V_{DRM}$ Gate Open $T_j = 125^\circ\text{C}$		MIN	50	100	400	1000	V/ μ s

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM} = 5.5\text{A}$ $t_p = 380\mu\text{s}$	$T_j = 25^\circ\text{C}$	1.5	V
I_{DRM}	$V_D = V_{DRM}$ $V_R = V_{RRM}$	$T_j = 25^\circ\text{C}$	10	μA
I_{RRM}		$T_j = 125^\circ\text{C}$	0.75	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-251	2.8	$^\circ\text{C}/\text{W}$
		TO-220A(Ins)	3.0	
		TO-262/ TO-220A(Non-Ins)	2.5	
		TO-220F(Ins)	3.3	

FIG.1: Maximum power dissipation versus RMS on-state current

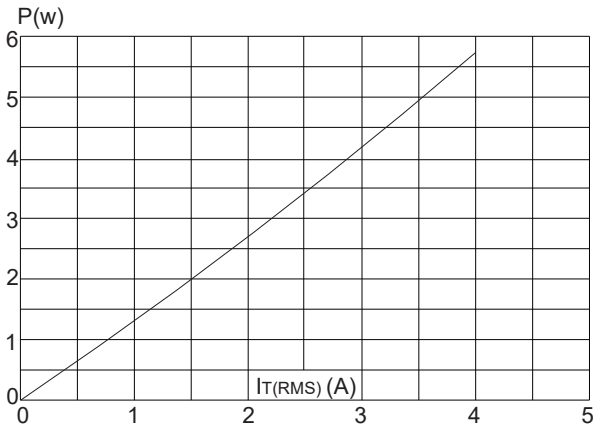


FIG.2: RMS on-state current versus case temperature

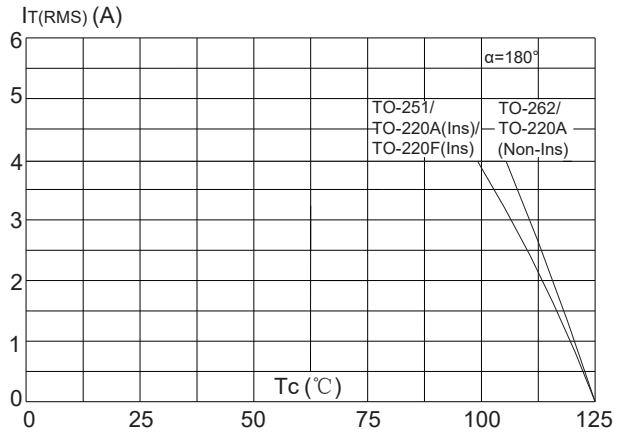


FIG.3: Surge peak on-state current versus number of cycles

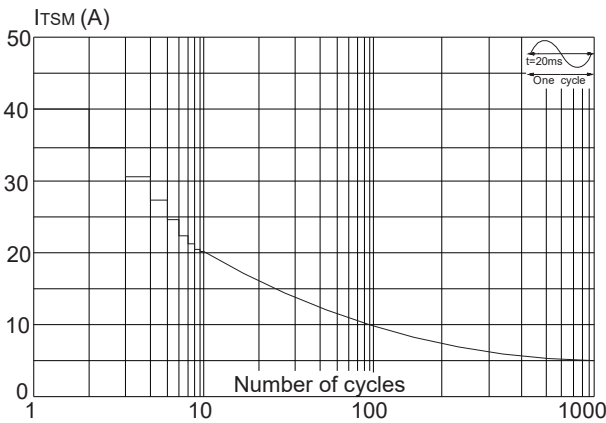


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20ms$ and corresponding value of $I^2 t$ ($di/dt < 50A/\mu s$)

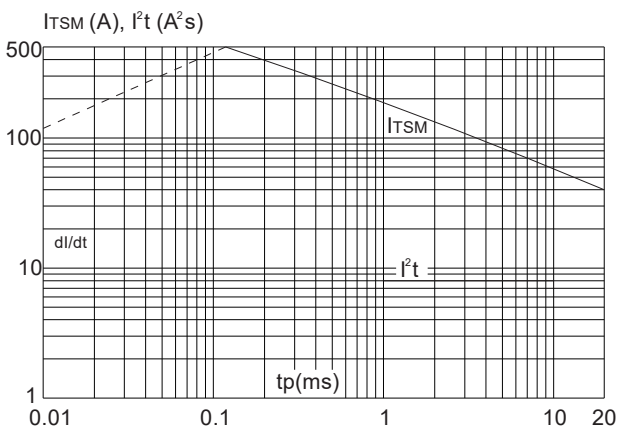


FIG.4: On-state characteristics (maximum values)

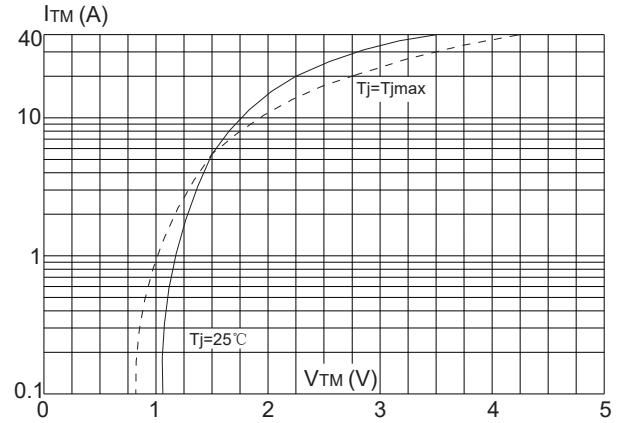


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

