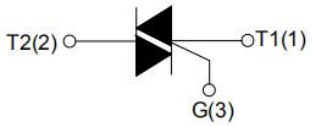
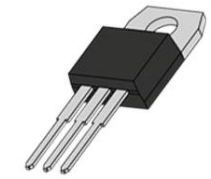
Jiangsu Weida Semiconductor Co., Ltd.
T25**H 25A High Junction Temperature Triacs

DESCRIPTION:

T25**H triacs of high junction temperature with high dv/dt rate with strong resistance to electromagnetic interference provide high ability to withstand the shock loading of large current. They are especially recommended for use on inductive load and high environment temperature condition.





TO-220A（Ins ）

MAIN FEATURES:

symbol	value	unit
$I_{T(RMS)}$	25.0	A
V_{DRM}/V_{RRM}	600/800	V

ABSOLUTE MAXIMUM RATINGS:

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40~150	℃
Operating junction temperature range	T_j	-40~150	℃
Repetitive peak off-state voltage (T_j=25℃)	V_{DRM}	600/800	V
Repetitive peak reverse voltage (T_j=25℃)	V_{RRM}	600/800	V
RMS on-state current	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	250	A
I^2t value for fusing (t_p=10ms)	I^2t	335	A^2s
Critical rate of rise of on-state current (I_G=2×I_{GT})	dI/dt	50	A/μs
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W

Peak gate power	P_{GM}	10	W

ELECTRICAL CHARACTERISTICS (T_j=25℃ unless otherwise specified)

Parameter	Test Condition	Quadrant		Value			Unit
				T2510	T2535	T2550	
I_{GT}	V_D=12V, R_L=33Ω	Ⅰ-Ⅱ-Ⅲ	MAX	10	35	50	mA
V_{GT}				1.5			V
V_{GD}	V_D=V_{DRM}	Ⅰ-Ⅱ-Ⅲ	MIN	0.2			V
I_H	I_T=100mA		MAX	10	45	60	mA
I_L	I_G=1.2I_{GT}	Ⅰ-Ⅲ	MAX	20	50	70	mA
		Ⅱ		35	70	90	
dV/dt	V_D=2/3V_{DRM} T_j=150℃ Gate open		MIN	500	1000	1500	V/μs

STATIC CHARACTERISTICS

Symbol	Test Condition			Value	Unit
V_{TM}	I_{TM}=35A t_p=380μs	T_j=25℃	MAX	1.5	V
I_{DRM} I_{RRM}	V_{DRM}= V_{RRM}	T_j=25℃	MAX	10	μA
		T_j=125℃		3	mA

THERMAL RESISTANCES

Symbol	Test Condition		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220A(Ins)	1.7	℃/W

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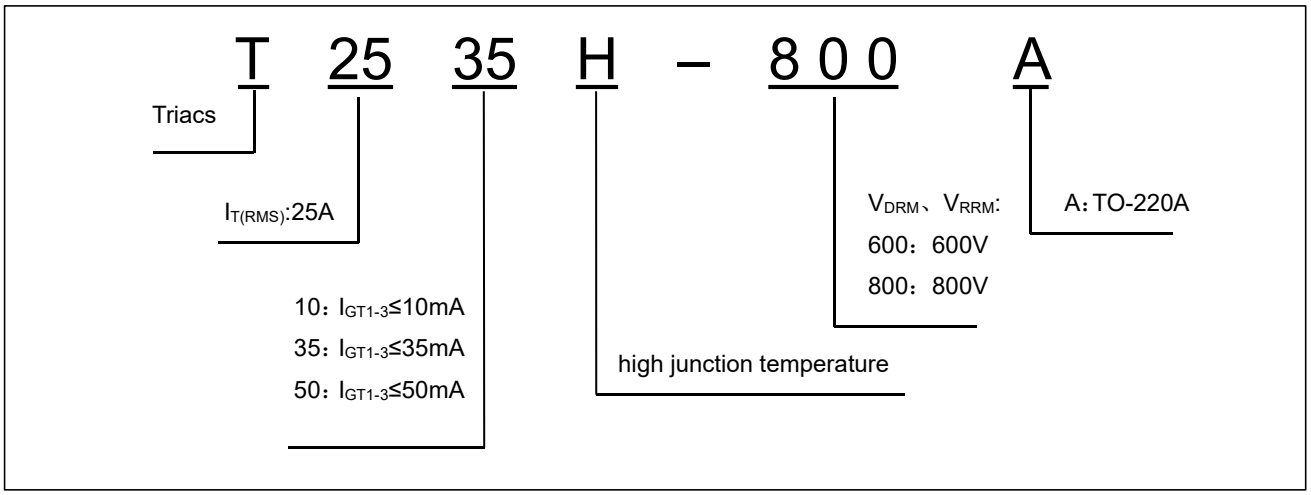
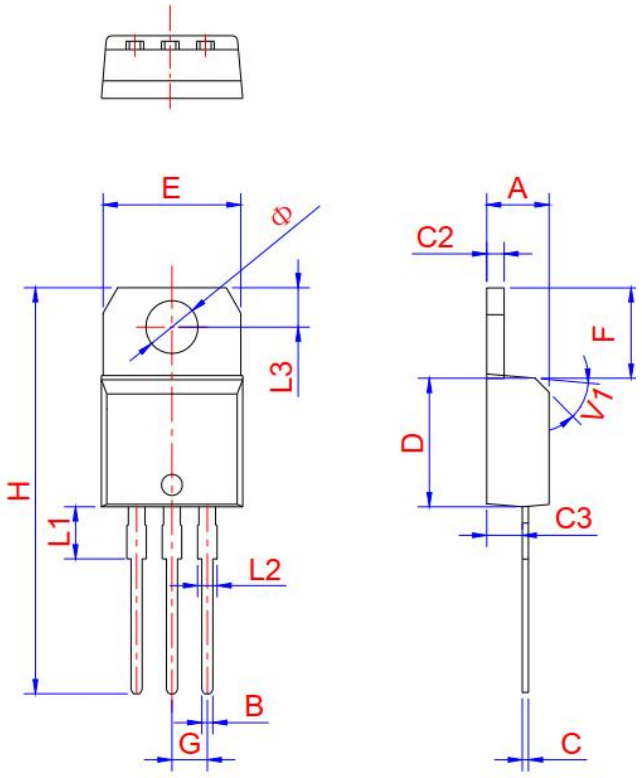
ORDERING INFORMATION



PACKAGE MECHANICAL DATA



TO-220A Ins

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.4	4.47	4.6	0.173	0.176	0.181
B	0.61		0.88	0.024		0.035
C	0.46	0.50	0.7	0.018	0.02	0.028
C2	1.21	1.27	1.32	0.048	0.050	0.052
C3	2.4		2.72	0.094		0.107
D	8.6		9.7	0.339		0.382
E	9.8		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
H	28		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.7	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	
Φ	3.7	3.75	3.8	0.145	0.147	0.149

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

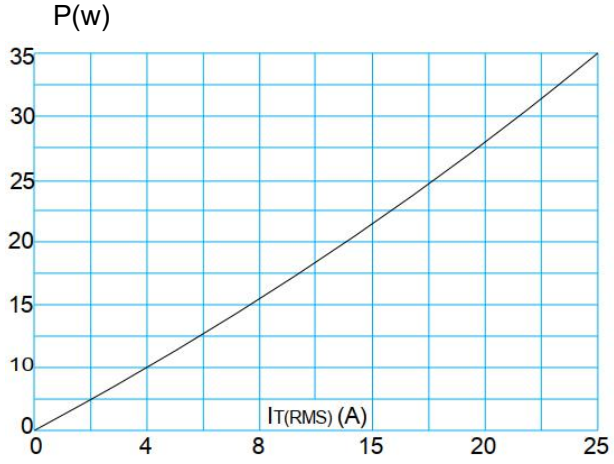


FIG.2: RMS on-state current versus case temperature

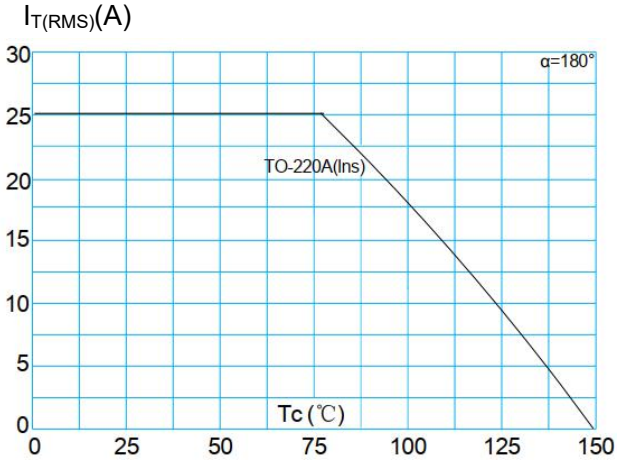


FIG.3: Surge peak on-state current versus number of cycles

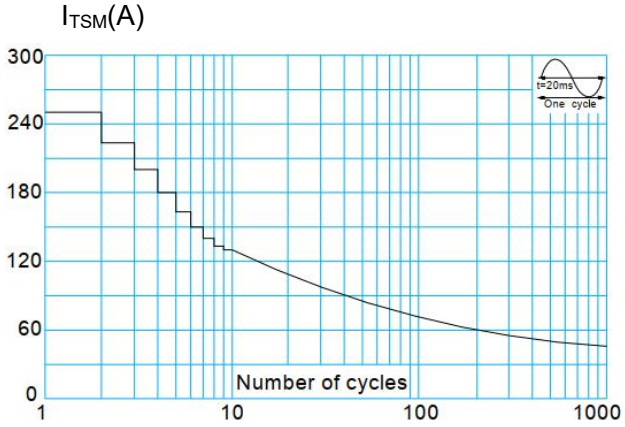


FIG.4: On-state characteristics (maximum values)

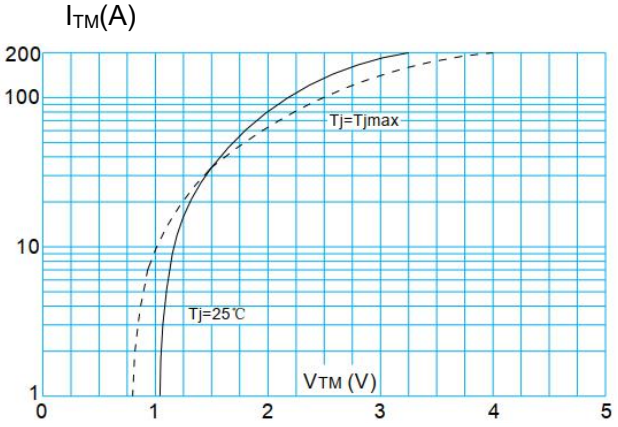


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t (Ⅰ-Ⅱ-Ⅲ:dI/dt < 50A/μs;Ⅳ:dI/dt < 10A/μs)

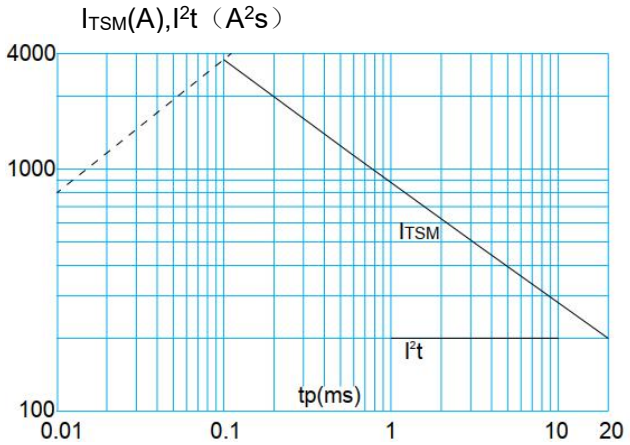


FIG.6: Relative variations of gate trigger current,holding current and latching current versus junction temperature