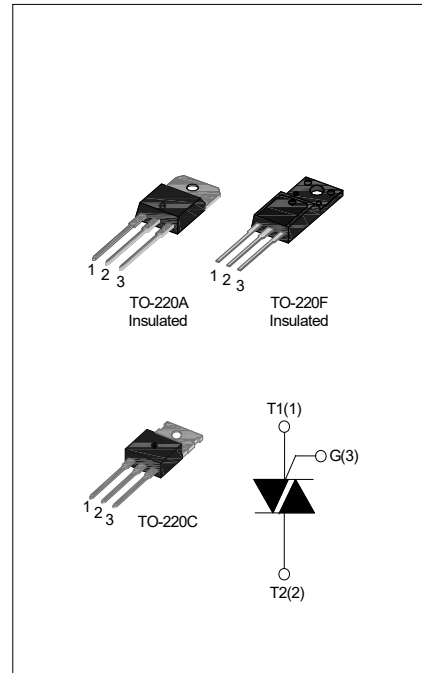




### DESCRIPTION:

With high dv/dt rate and strong resistance to electromagnetic interference, JST23H series triacs of high junction temperature 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.



### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	25	A
$T_{jmax}$	150	°C

### ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		$T_{stg}$	-40 ~ +150	°C
Operating junction temperature range		$T_j$	-40 ~ +150	°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
Non repetitive surge peak Off-state voltage		$V_{DSM}$	$V_{DRM} + 100$	V
Non repetitive peak reverse voltage		$V_{RSM}$	$V_{RRM} + 100$	V
RMS on-state current	TO-220C ( $T_c=117^\circ\text{C}$ )	$I_{T(RMS)}$	25	A
	TO-220A(Ins)/ TO-220F(Ins) ( $T_c=113^\circ\text{C}$ )			
Non repetitive surge peak on-state current (full cycle, F=50Hz)		$I_{TSM}$	250	A
$I^2t$ value for fusing ( $t_p=10\text{ms}$ )		$I^2t$	310	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )		$di/dt$	50	$\text{A}/\mu\text{s}$
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
$I_{GT}$	$V_D=12\text{V } R_L=33\Omega$	I - II -III	MAX	50	mA
$V_{GT}$		I - II -III	MAX	1.3	V
$V_{GD}$	$V_D=V_{DRM} T_j=150^\circ\text{C}$	I - II -III	MIN	0.2	V
$I_L$	$I_G=1.2I_{GT}$	I -III	MAX	70	mA
		II		100	
$I_H$	$I_T=1\text{A}$		MAX	55	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=150^\circ\text{C}$		MIN	1000	V/ $\mu\text{s}$

**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=35\text{A } t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.55	V
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	10	$\mu\text{A}$
$I_{RRM}$		$T_j=150^\circ\text{C}$	5	mA

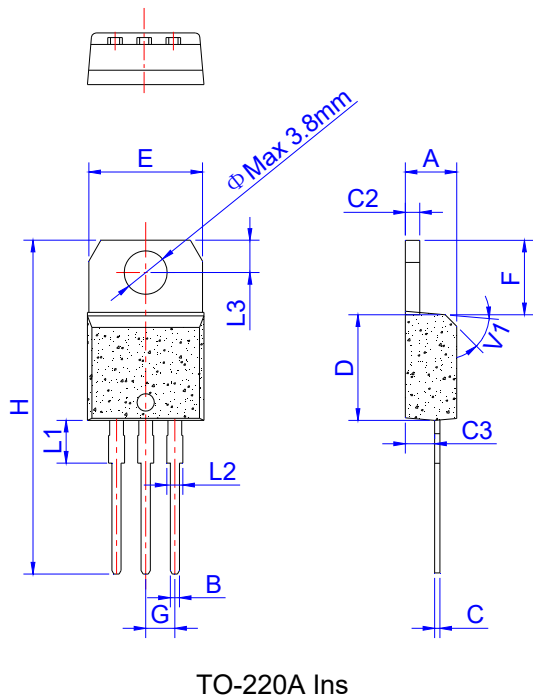
**THERMAL RESISTANCES**

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220A(Ins)	1.7	$^\circ\text{C/W}$
		TO-220F(Ins)	1.9	
		TO-220C	1.1	

ORDERING INFORMATION

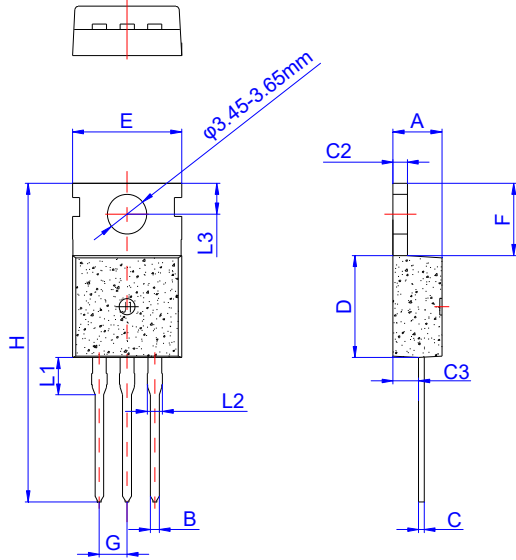
<p>JieJie Microelectronics Co.,Ltd</p>	<p><b>J</b></p>	<p><b>ST</b></p> <p>Triacs</p> <p><math>I_T(RMS):25A</math></p>	<p><b>23</b></p>	<p><b>H</b></p> <p>H:<math>T_j=150^{\circ}C</math></p>	<p><b>-6</b></p> <p>6:<math>V_{DRM} / V_{RRM} \geq 600V</math> 8:<math>V_{DRM} / V_{RRM} \geq 800V</math></p>	<p><b>A</b></p> <p>C:TO-220C A:TO-220A(Ins) E:TO-220F(Ins)</p>
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PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

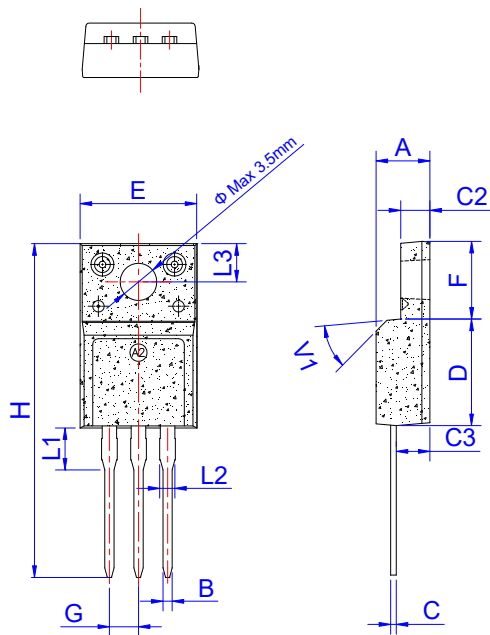
PACKAGE MECHANICAL DATA



TO-220C

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.25		1.35	0.049		0.053
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G	2.40		2.70	0.094		0.106
H	28.0		29.8	1.102		1.173
L1	2.70		3.30	0.106		0.130
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116

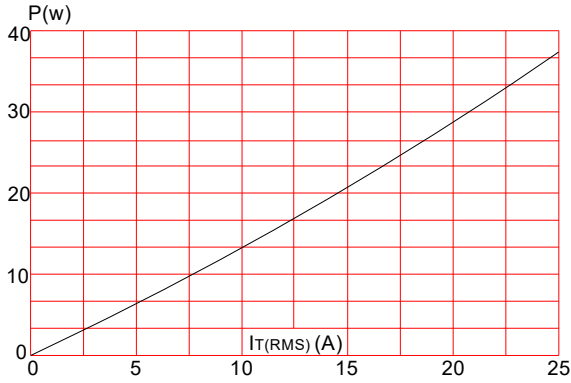
PACKAGE MECHANICAL DATA



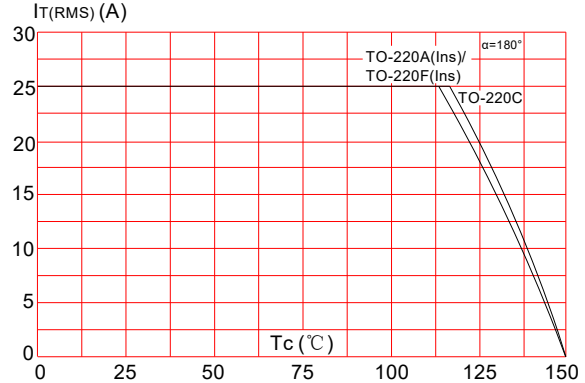
TO-220F Ins

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.63			0.143	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

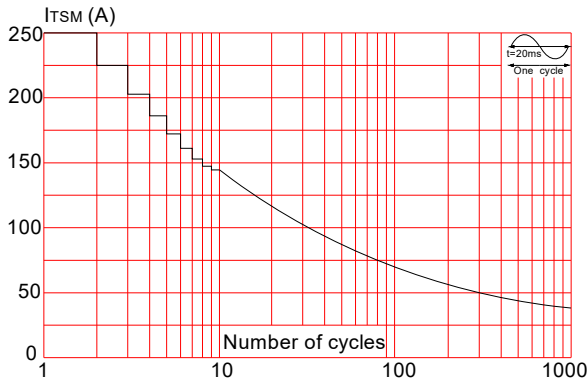
**FIG.1:** Maximum power dissipation versus RMS on-state current



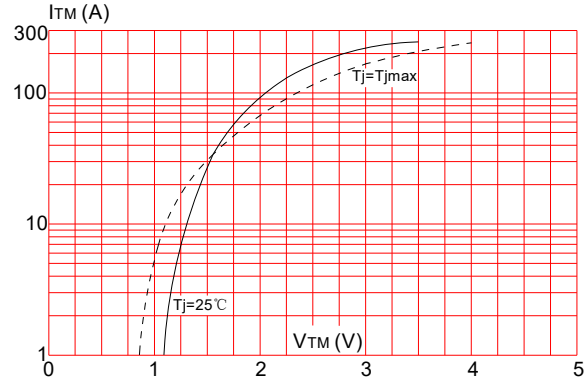
**FIG.2:** RMS on-state current versus case temperature



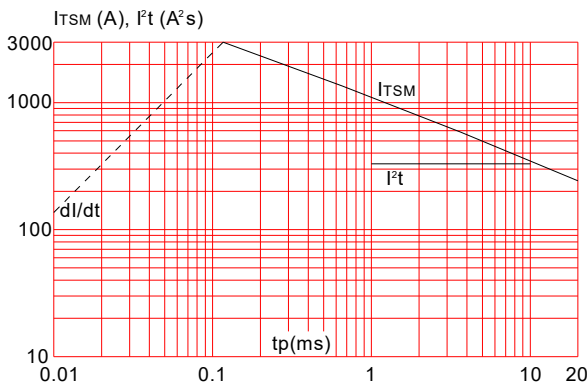
**FIG.3:** Surge peak on-state current versus number of cycles



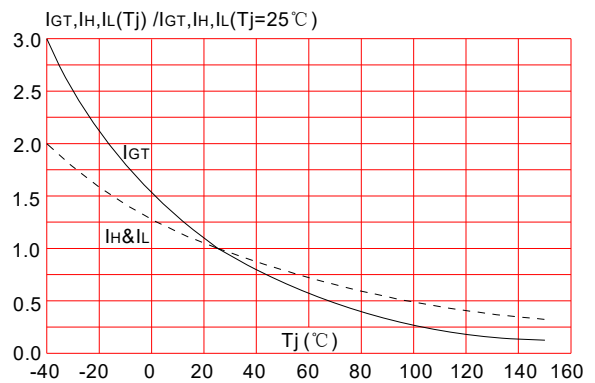
**FIG.4:** On-state characteristics (maximum values)




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



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



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