



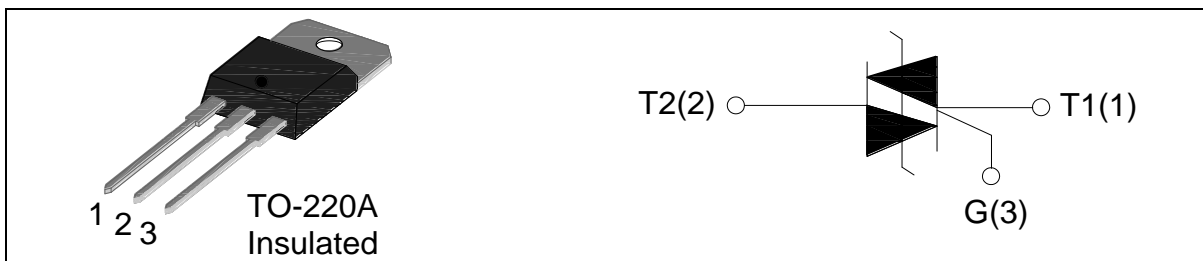
### DESCRIPTION:

JST16i provide high dv/dt rate with strong resistance to electromagnetic interface. They are especially recommended for use on home appliances such as motor control of washing machine

JST16i provide insulation voltage rated at 2500V RMS from all three terminals to external heatsink complying with UL standards (File ref: E252906).

### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	16	A
$I_{GT1-3}$	50	mA
$V_{DRM}/V_{RRM}$	800	V



### 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( $T_j=25^{\circ}C$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage( $T_j=25^{\circ}C$ )	$V_{RRM}$	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-220A Ins ( $T_C=80^{\circ}C$ ) $I_{T(RMS)}$	16	A
Non repetitive surge peak on-state current ( full cycle, F=50Hz)	$I_{TSM}$	160	A
$I^2t$ value for fusing ( $t_p=10ms$ )	$I^2t$	128	$A^2s$
Rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )	$di/dt$	100	$A/\mu s$
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
$V_{GD}$	$V_D=V_{DRM} T_j=125^\circ\text{C}$ $R_L=3.3\text{K}\Omega$	I - II -III	MIN	0.2	V
$I_L$	$I_G=1.2I_{GT}$	I -III	MAX	70	mA
		II		120	
$I_H$	$I_T=100\text{mA}$		MAX	60	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	1500	V/ $\mu\text{s}$

## STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=24\text{A } t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.5	V
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	$\mu\text{A}$
$I_{RRM}$		$T_j=125^\circ\text{C}$	0.5	mA

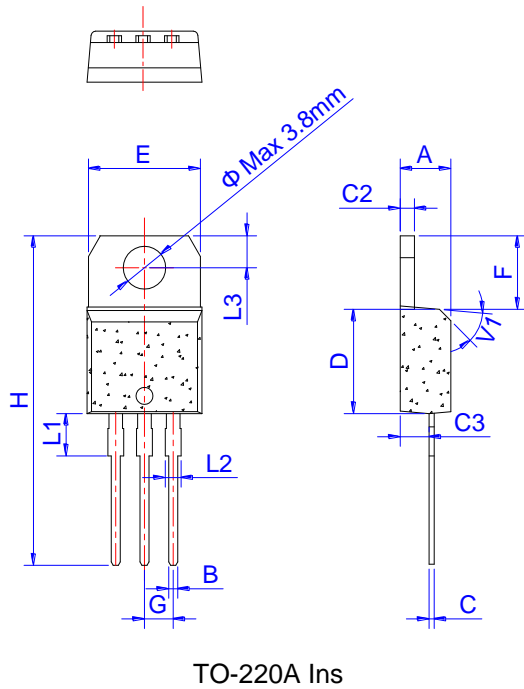
## THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220A Ins	2.9	$^\circ\text{C/W}$

## ORDERING INFORMATION

<b>J</b>	<b>ST</b>	<b>16</b>	<b>i</b>	<b>-800</b>	<b>BW</b>
JieJie Microelectronics Co.,Ltd		Triacs			BW: $I_{GT1-3} \leq 50\text{mA}$
		$I_{T(RMS)}:16\text{A}$	i: TO-220A Ins		800: $V_{DRM} / V_{RRM} \geq 800\text{V}$

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°	

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

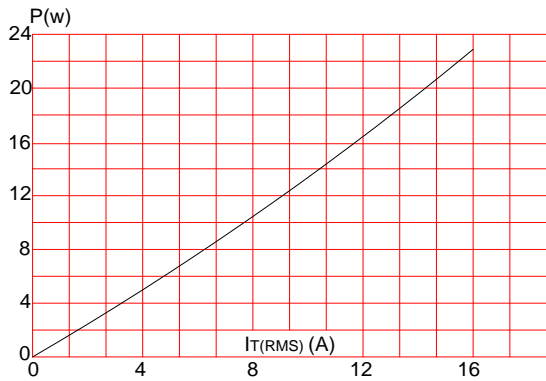


FIG.2: RMS on-state current versus case temperature

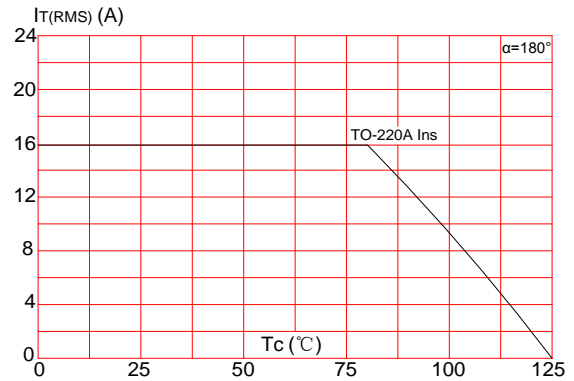


FIG.3: Surge peak on-state current versus number of cycles

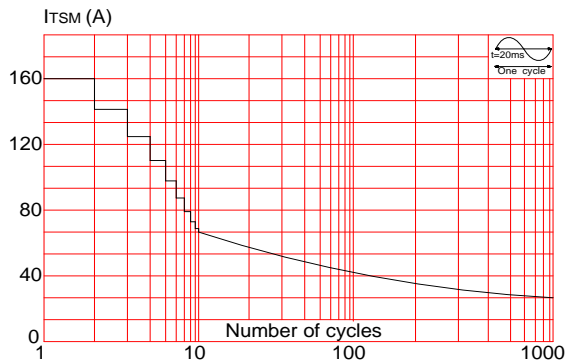
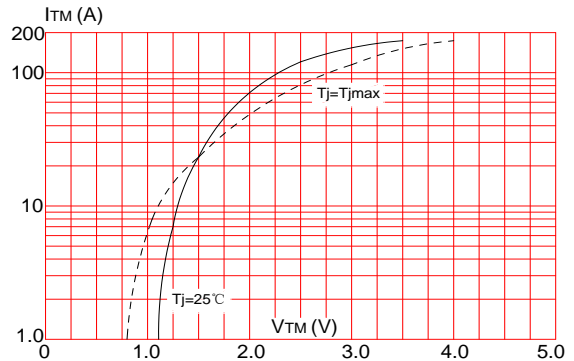
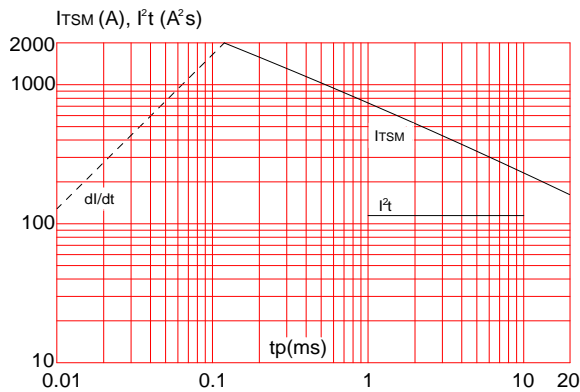


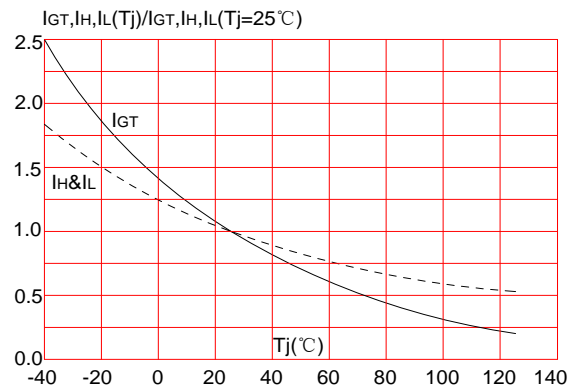
FIG.4: On-state characteristics (maximum values)




**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20\text{ms}$  and corresponding value of  $I^2t$  ( $di/dt < 100\text{A}/\mu\text{s}$ )



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



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