

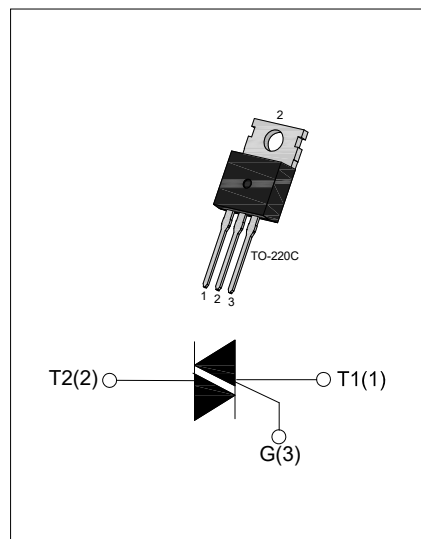


### DESCRIPTION:

JST137C-800FX triacs with low holding and latching current are especially recommended for use on middle and small resistance type power load.complying with UL standards (File ref: E252906).TO-220C package is RoHS compliant (2011/65/EU).

### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	8	A
$V_{DRM}/V_{RRM}$	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( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	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	$I_{T(RMS)}$	8	A
TO-220C ( $T_C=100^\circ\text{C}$ )			
Non repetitive surge peak on-state current (full cycle, $F=50\text{Hz}$ )	$I_{TSM}$	65	A
$I^2t$ value for fusing ( $t_p=10\text{ms}$ )	$I^2t$	21	$\text{A}^2\text{s}$
Peak gate current	$I_{GM}$	4	A
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )	$di/dt$	120	$\text{A}/\mu\text{s}$
Average gate power dissipation	$P_{G(AV)}$	0.5	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
			Min.	Typ.	Max.	
$I_{GT}$	$V_D=12\text{V } R_L=30\Omega$	I - II -III		-	50	mA
$V_{GT}$		ALL	-	-	1.3	V
$V_{GD}$	$V_D=V_{DRM} T_j=125^{\circ}\text{C}$ $R_L=3.3\text{K}\Omega$	ALL	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	I -III	-	-	60	mA
		II	-	-	90	
$I_H$	$I_T=100\text{mA}$		-	-	50	mA
dv/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$		1000	-	-	V/ $\mu\text{s}$

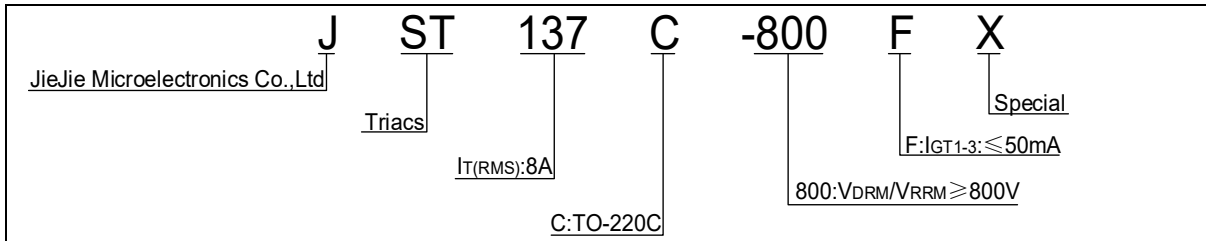
**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=10\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.6	V
$V_{T0}$	Threshold voltage	$T_j=125^{\circ}\text{C}$	0.8	V
$R_d$	Dynamic resistance	$T_j=125^{\circ}\text{C}$	85	m $\Omega$
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	10	$\mu\text{A}$
$I_{RRM}$		$T_j=125^{\circ}\text{C}$	1	mA

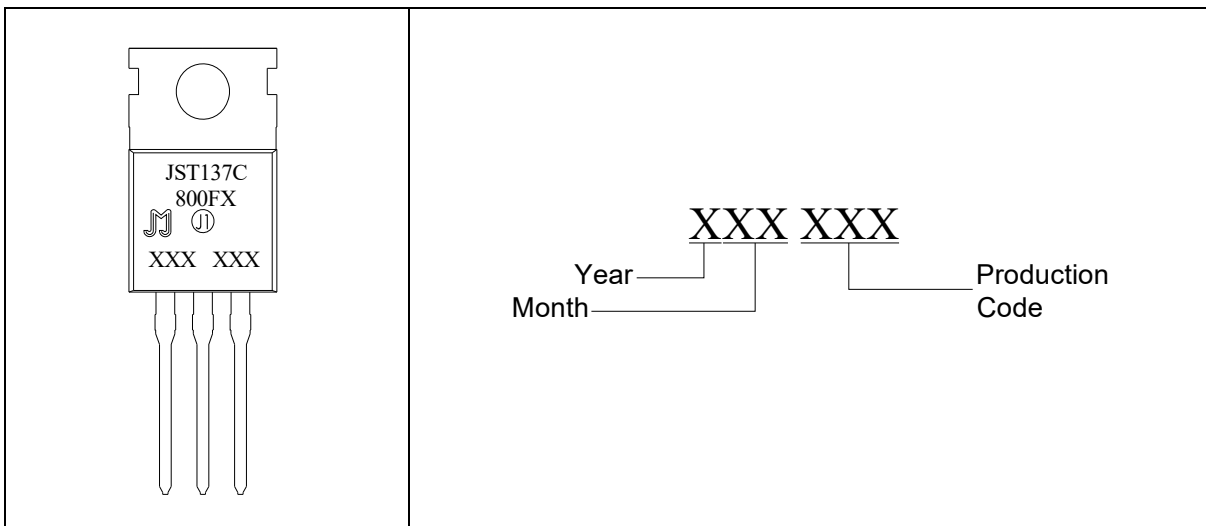
**THERMAL RESISTANCES**

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220C	1.8	$^{\circ}\text{C}/\text{W}$

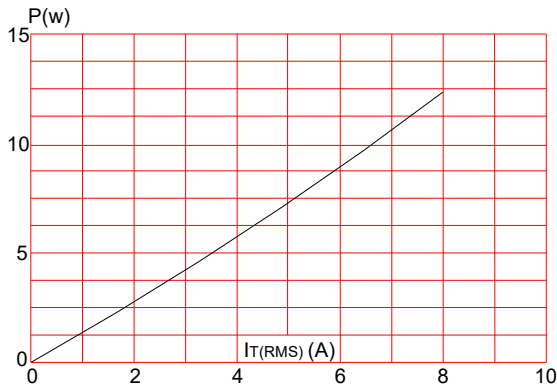
**ORDERING INFORMATION**



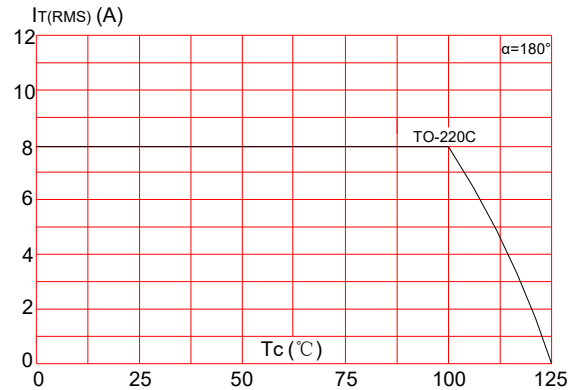
**MARKING**



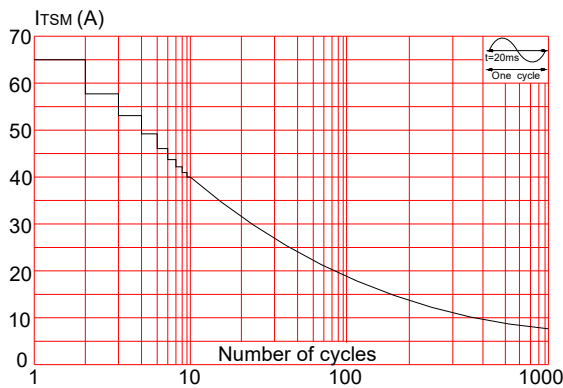
**FIG.1:** Maximum power dissipation versus RMS on-state current



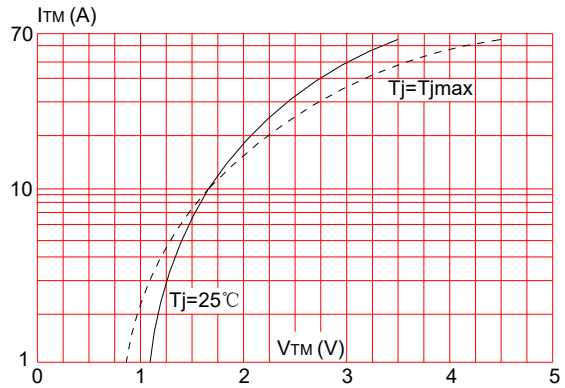
**FIG.2:** RMS on-state current versus case temperature



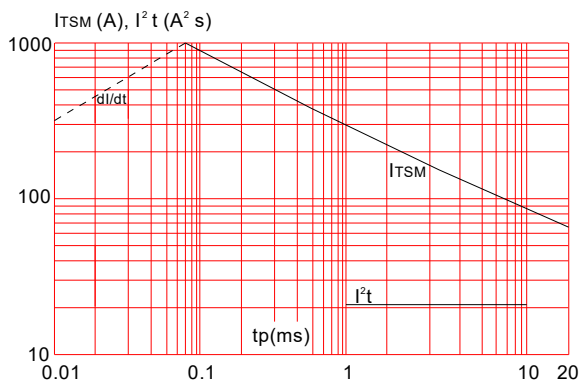
**FIG.3:** Surge peak on-state current versus number of cycles



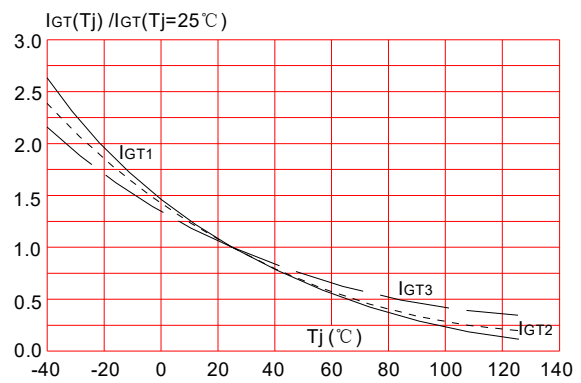
**FIG.4:** On-state characteristics (maximum values)



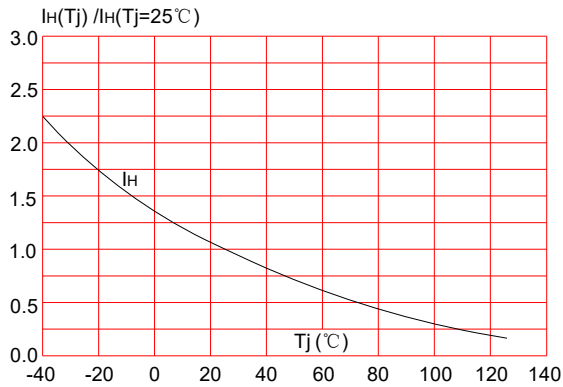
**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20\text{ms}$ , and corresponding value of  $I^2 t$  ( $di/dt < 120\text{A}/\mu\text{s}$ )



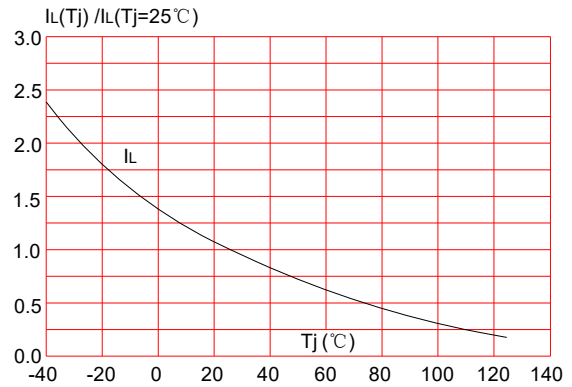
**FIG.6:** Relative variations of gate trigger current versus junction temperature



**FIG.7:** Relative variations of holding current versus junction temperature



**FIG.8:** Relative variations of latching current versus junction temperature



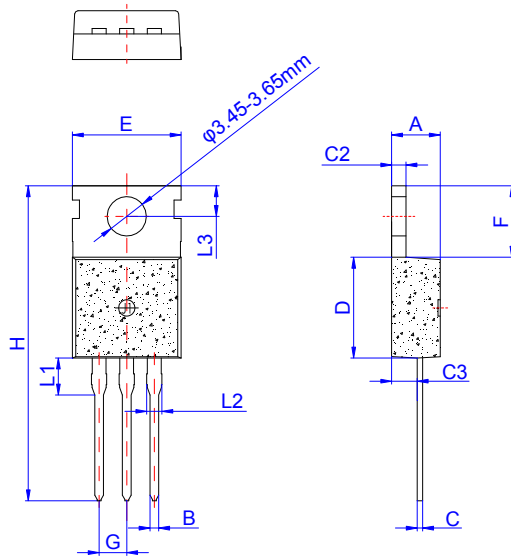
**ORDERING INFORMATION**

Order code	Voltage V <sub>DRM</sub> /V <sub>RRM</sub> (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JST137C-800FX	800	50	TO-220C	50	Tube

**Document Revision History**

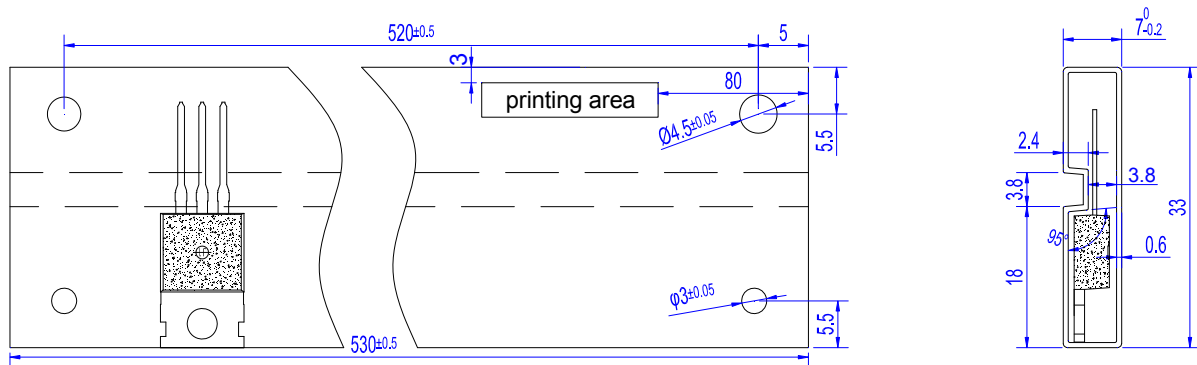
Date	Revision	Changes
Mar 18, 2022	1	Last update

PACKAGE MECHANICAL DATA



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	1.23		1.32	0.048		0.052
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		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116

DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220C	TUBE	50	1,000	5,000



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