

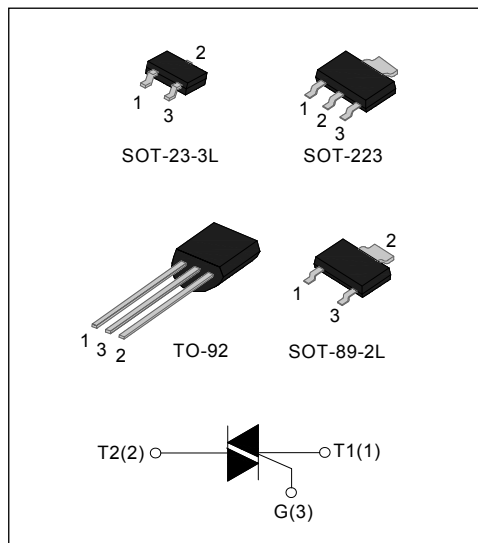


DESCRIPTION:

With low holding and latching current, JST130 series triacs are especially recommended for use on middle and small resistance type power load.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
V_{TM}	1.5	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}	600/700	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)		V_{RRM}	600/700	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-92 ($T_C=50^\circ\text{C}$)	$I_{T(RMS)}$	0.8	A
	SOT-223 ($T_C=65^\circ\text{C}$)			
	SOT-23-3L ($T_C=48^\circ\text{C}$)			
	SOT-89-2L($T_C=60^\circ\text{C}$)			
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I_{TSM}	9	A
I^2t value for fusing ($t_p=10\text{ms}$)		I^2t	0.45	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)	I - II - III	di/dt	50	A/ μs
	IV		20	
Peak gate current		I_{GM}	1	A

Average gate power dissipation	$P_{G(AV)}$	0.1	W
Peak gate power	P_{GM}	1	W

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

Symbol	Test Condition	Quadrant	Value		Unit	
			D	T		
I_{GT}	$V_D=12\text{V}$	I - II - III	MAX	5	5	mA
		IV		10	5	
V_{GT}		ALL	MAX	1.3		V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C}$ $R_L=3.3\text{K}\Omega$	ALL	MIN	0.2		V
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX	10	5	mA
		II		20	15	
I_H	$I_T=100\text{mA}$		MAX	7	5	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	30	10	V/ μs

STATIC CHARACTERISTICS

Symbol	Parameter	Value(MAX)	Unit	
V_{TM}	$I_{TM}=1.1\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.5	V
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	μA
I_{RRM}		$T_j=125^\circ\text{C}$	100	μA

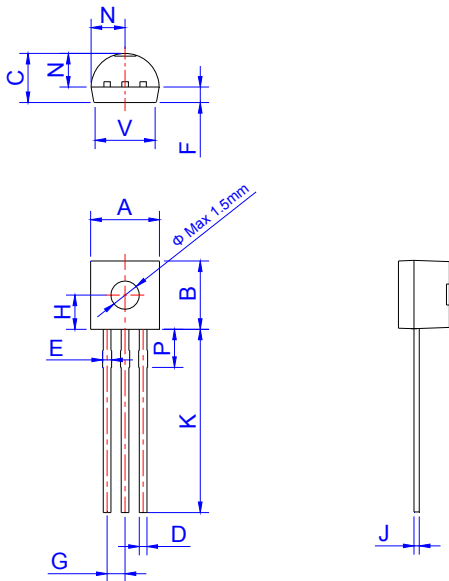
THERMAL RESISTANCES

Symbol	Parameter	Value	Unit	
$R_{th(j-c)}$	junction to case(AC)	TO-92	75	$^\circ\text{C}/\text{W}$
		SOT-223/ SOT23-3L	45	
		SOT-89-2L	60	

ORDERING INFORMATION

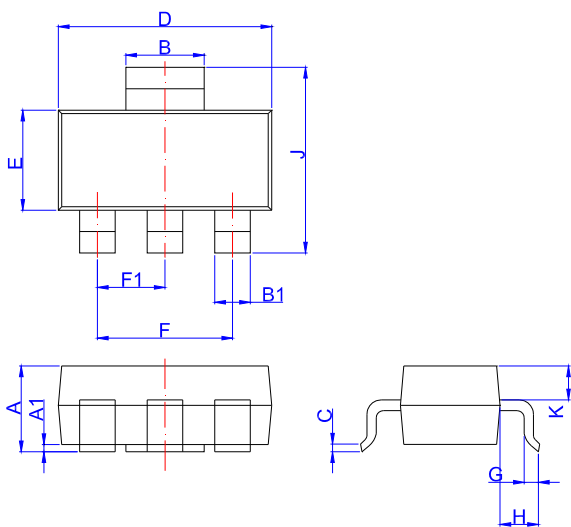
JieJie Microelectronics Co.,Ltd	J	ST	130	U	-600	D
	TRIACs		$I_T(RMS):0.8A$	U:TO-92 V:SOT-223 L:SOT-23-3L N2:SOT-89-2L	600: $V_{DRM}/V_{RRM} \geq 600V$ 700: $V_{DRM}/V_{RRM} \geq 700V$	T: $I_{GT1-4} \leq 5mA$ D: $I_{GT1-3} \leq 5mA$ $I_{GT4} \leq 10mA$

PACKAGE MECHANICAL DATA



TO-92

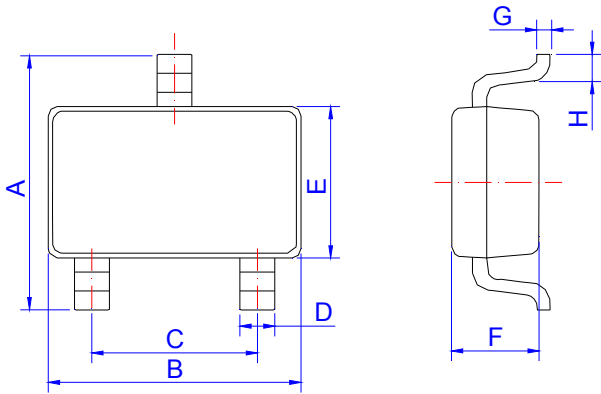
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.60		0.80	0.024		0.031
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169



SOT-223

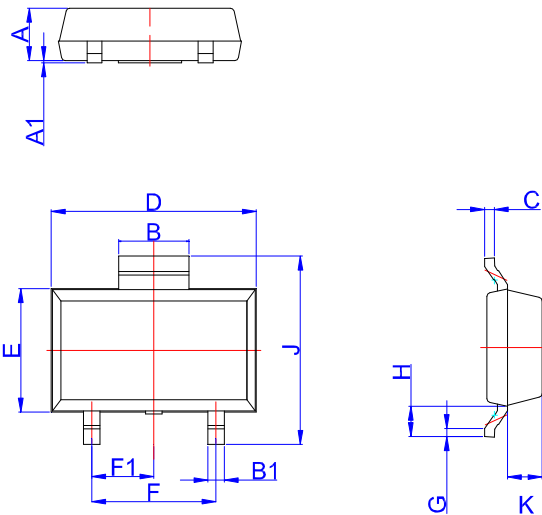
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F		4.6			0.181	
F1		2.3			0.091	
G	0.7	0.9	1.1	0.028	0.035	0.043
H	1.5	1.75	2.0	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K	0.8	0.9	1.0	0.031	0.035	0.039

PACKAGE MECHANICAL DATA



SOT-23-3L

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.65	2.80	2.95	0.104	0.110	0.116
B	2.82	2.92	3.02	0.111	0.115	0.119
C	1.80	1.90	2.00	0.071	0.075	0.079
D	0.30	0.35	0.50	0.012	0.014	0.020
E	1.50	1.60	1.70	0.059	0.063	0.067
F	1.07	1.17	1.27	0.042	0.046	0.050
G	0.05	0.15	0.25	0.002	0.006	0.010
H	0.25	0.40	0.55	0.010	0.016	0.022



SOT-89-2L

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.3	1.4	1.5	0.051	0.055	0.059
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	1.6	1.7	1.8	0.063	0.067	0.071
B1	0.3	0.4	0.5	0.012	0.016	0.020
C	0.22	0.254	0.32	0.009	0.010	0.013
D	4.75	4.95	5.15	0.187	0.195	0.203
E	2.75	2.95	3.15	0.108	0.116	0.124
F		3.0			0.118	
F1		1.5			0.059	
G	0.2	0.3	0.4	0.008	0.012	0.016
H	0.58	0.78	0.98	0.023	0.031	0.039
J	4.3	4.5	4.7	0.169	0.177	0.185
K		0.88			0.035	

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

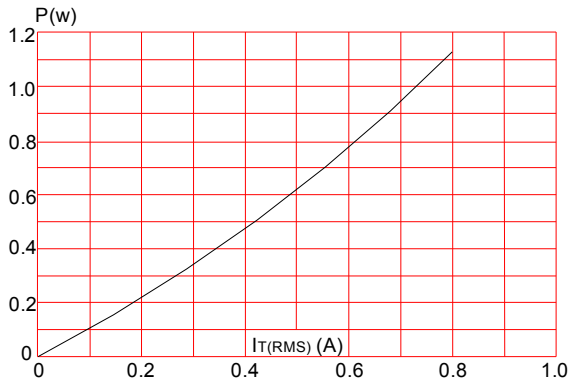


FIG.2: RMS on-state current versus case temperature

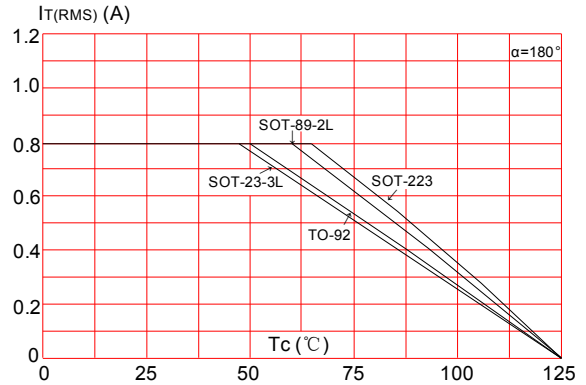


FIG.3: Surge peak on-state current versus number of cycles

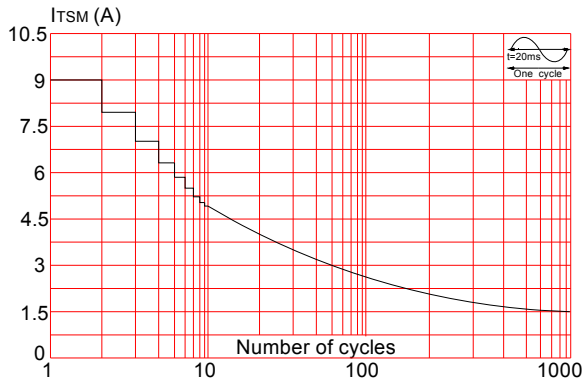


FIG.4: On-state characteristics (maximum values)

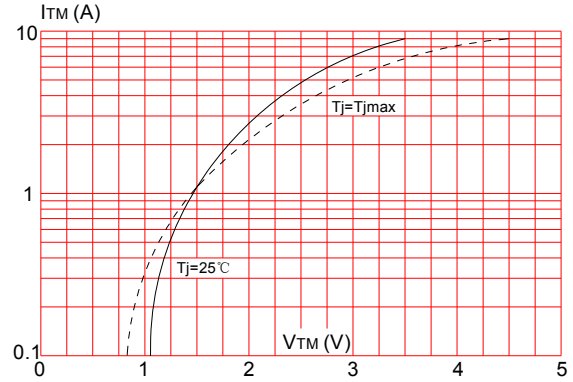


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$ (I - II - III: $di/dt < 50\text{A}/\mu\text{s}$; IV: $di/dt < 20\text{A}/\mu\text{s}$)

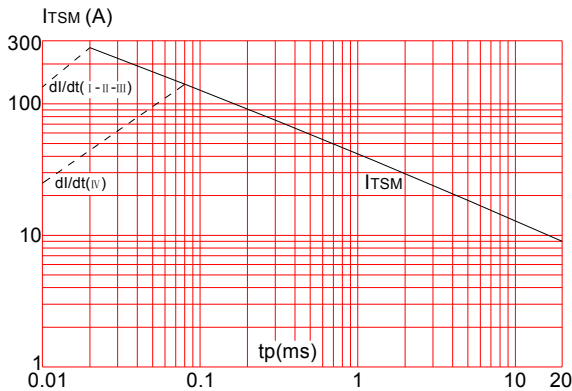
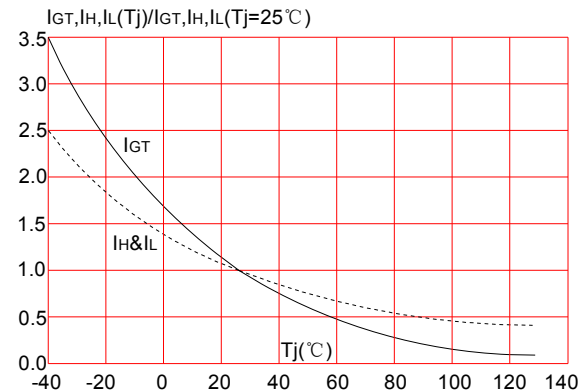



FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



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