

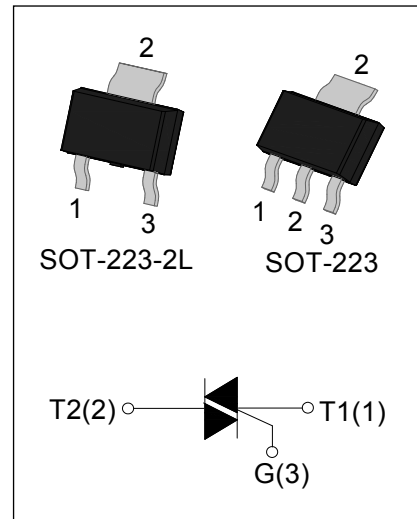


DESCRIPTION:

JST134 series triacs with low holding and latching current are especially recommended for use on middle and small resistance type power load.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
V_{DRM}/V_{RRM}	600/800	V



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40 - 150	$^{\circ}C$
Operating junction temperature range	T_j	-40 - 125	$^{\circ}C$
Repetitive peak off-state voltage($T_j=25^{\circ}C$)	V_{DRM}	600/800	V
Repetitive peak reverse voltage($T_j=25^{\circ}C$)	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	SOT-223/ SOT-223-2L $(T_c=75^{\circ}C)$	$I_{T(RMS)}$	1 A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	20	A
I^2t value for fusing ($t_p = 10ms$)	I^2t	2	A^2s
Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	I - II - III	50	A/ μs
	IV	10	
Peak gate current	I_{GM}	2	A
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
				T	D	E	
I_{GT}	$V_D=12\text{V } R_L=33\Omega$	I - II - III	MAX	5	5	10	mA
		IV		5	10	25	
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	8	10	20	mA
		II		12	15	35	
I_H	$I_T=100\text{mA}$		MAX	5	10	20	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$		MIN	20	50	100	V/ μs
$(dV/dt)_c$	$(dI/dt)_c=1.1\text{A/ms } T_j=125^{\circ}\text{C}$		MIN	0.5	1	5	V/ μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=5\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.7	V
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	5	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$	0.5	mA

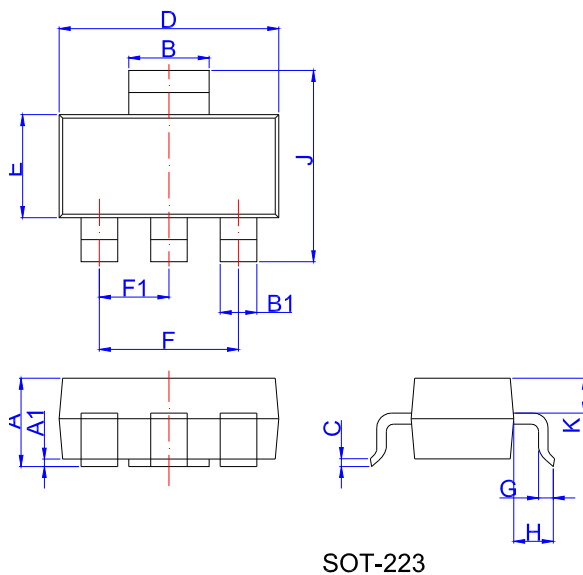
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	SOT-223/ SOT-223-2L	7.5	$^{\circ}\text{C/W}$
$R_{th(j-a)}$	junction to ambient	SOT-223/ SOT-223-2L	60	

ORDERING INFORMATION

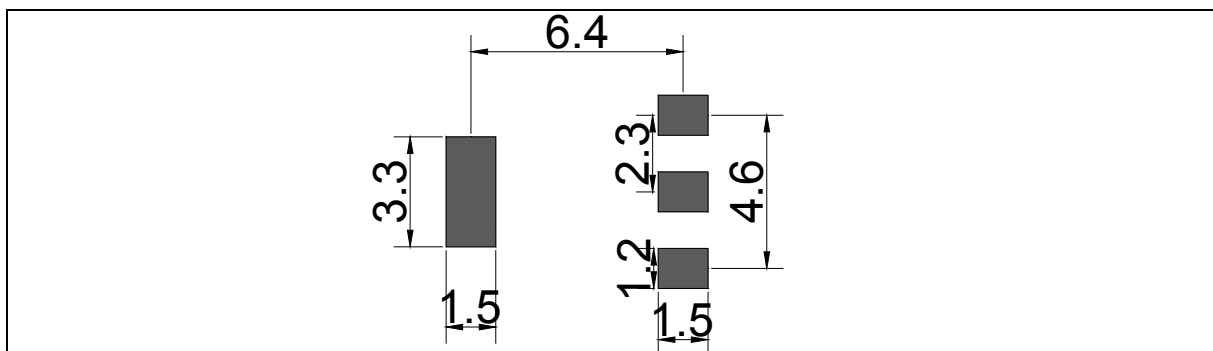
<p>J</p> <p>JieJie Microelectronics Co.,Ltd</p>	<p>ST</p> <p>TRIACs</p>	<p>134</p> <p>$I_{T(RMS)}: 1A$</p>	<p>W</p> <p>V: SOT-223 W: SOT-223-2L</p>	<p>-600</p> <p>600: $V_{DRM}/V_{RRM} \geq 600V$ 800: $V_{DRM}/V_{RRM} \geq 800V$</p>	<p>D</p> <p>T: $I_{GT1-3} \leq 5mA$ $I_{GT4} \leq 5mA$ D: $I_{GT1-3} \leq 5mA$ $I_{GT4} \leq 10mA$ E: $I_{GT1-3} \leq 10mA$ $I_{GT4} \leq 25mA$</p>
---	-------------------------	---	--	--	---

PACKAGE MECHANICAL DATA

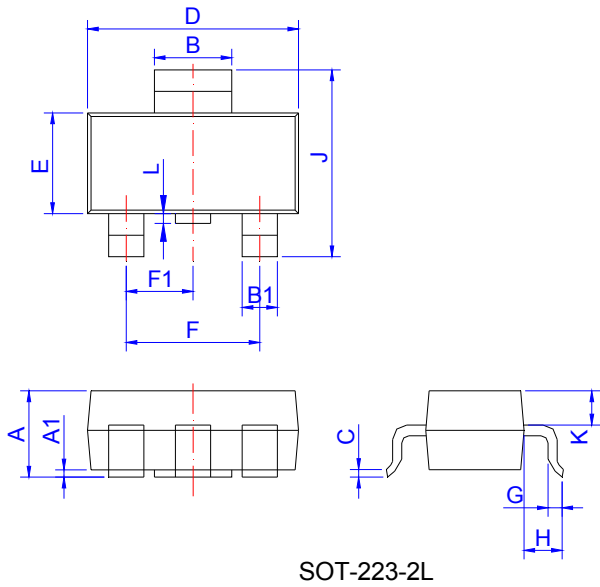


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	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

FOOTPRINT-SOT-223 (dimensions in mm)

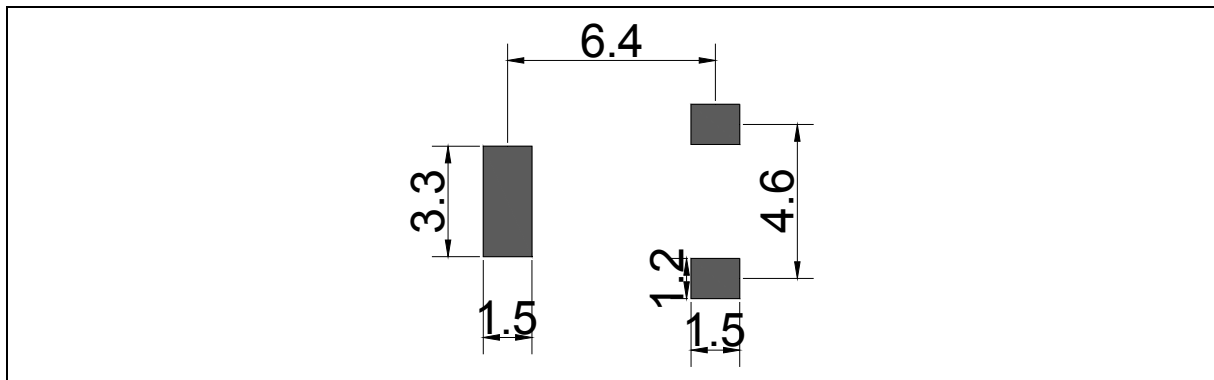


PACKAGE MECHANICAL DATA

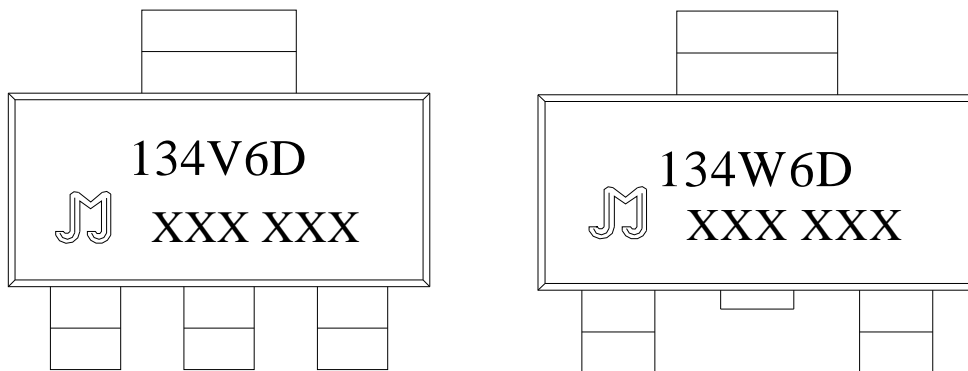


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	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	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K		0.9			0.035	
L	0	0.1	0.2	0	0.004	0.008

FOOTPRINT-SOT-223-2L (dimensions in mm)



MARKING



PACKAGE INFORMATION

PACKAGE	OUTLINE	REEL (PCS)	PER CARTON (PCS)	TAPE & REEL
SOT-223/ SOT-223-2L	TAPING	4,000	40,000	13 inch

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

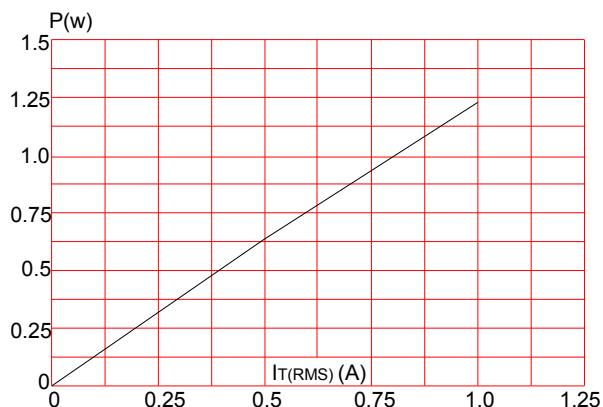


FIG.3: Surge peak on-state current versus number of cycles

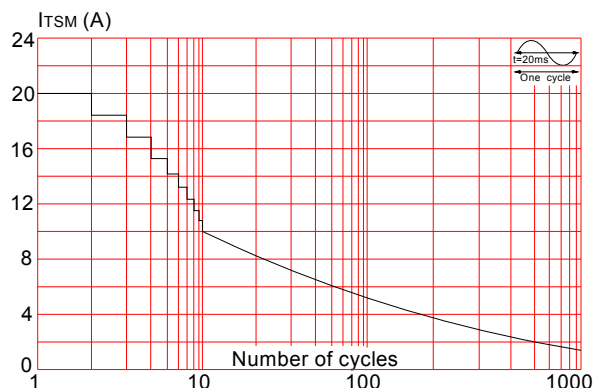


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$ and corresponding value of I^2t (I - II -III: $dI/dt < 50\text{A}/\mu\text{s}$; IV: $dI/dt < 10\text{A}/\mu\text{s}$)

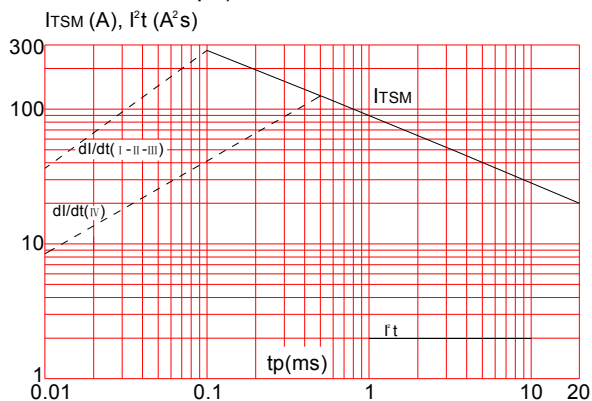


FIG.2: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness: 35 μm) (full cycle)

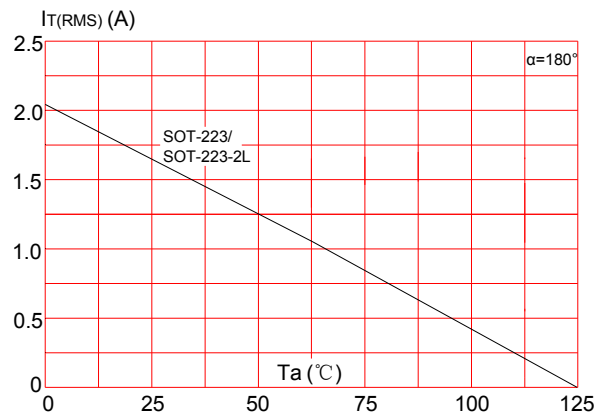


FIG.4: On-state characteristics (maximum values)

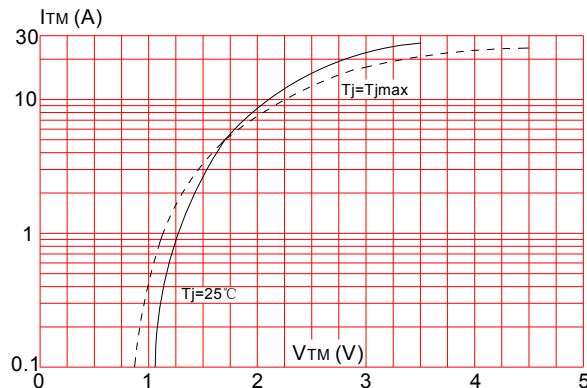


FIG.6: Relative variations of gate trigger current versus junction temperature

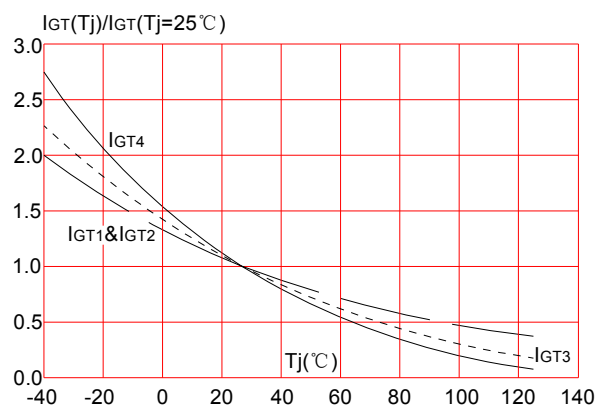


FIG.7: Relative variations of holding current versus junction temperature
 $I_H(T_j)/I_H(T_j=25^\circ\text{C})$

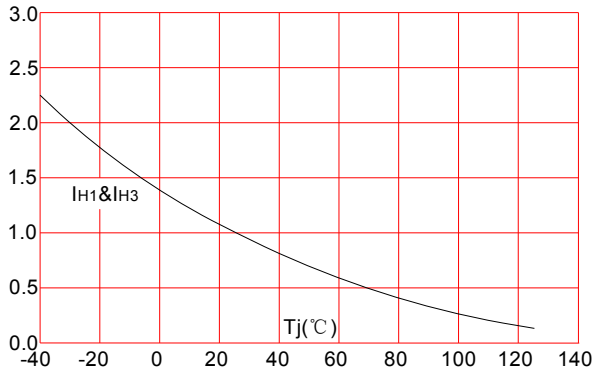
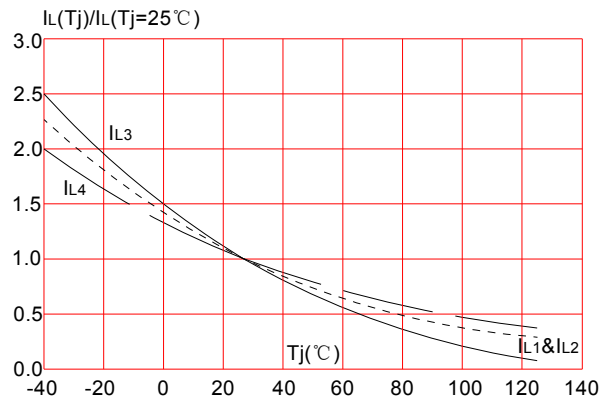
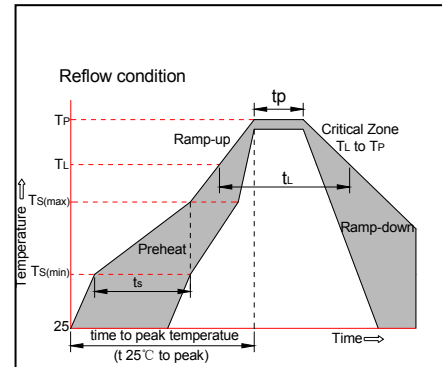


FIG.8: Relative variations of latching current versus junction temperature
 $I_L(T_j)/I_L(T_j=25^\circ\text{C})$



SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L) (Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C




Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it.

Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.

This document is the first version which is made in 22-Oct.-2018. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.

Copyright ©2018 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.
