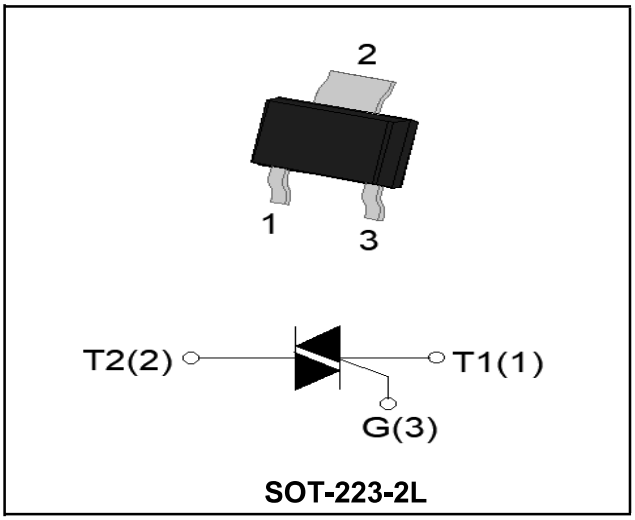
1.0A 4Quadrants TRIACs

Product Summary

Symbol	Value	Unit
$I_{T(AV)}$	1.0	A
V_{DRM} V_{RRM}	600/800	V
V_{TM}	1.55	V



SOT-223-2L

Features

With high ability to withstand the shock loading of large current,With high commutation performances, 4 quadrants products especially recommended for use on inductive load.

Application

Washing machine, vacuums, massager, solid state relay, AC Motor speed regulation and so on.

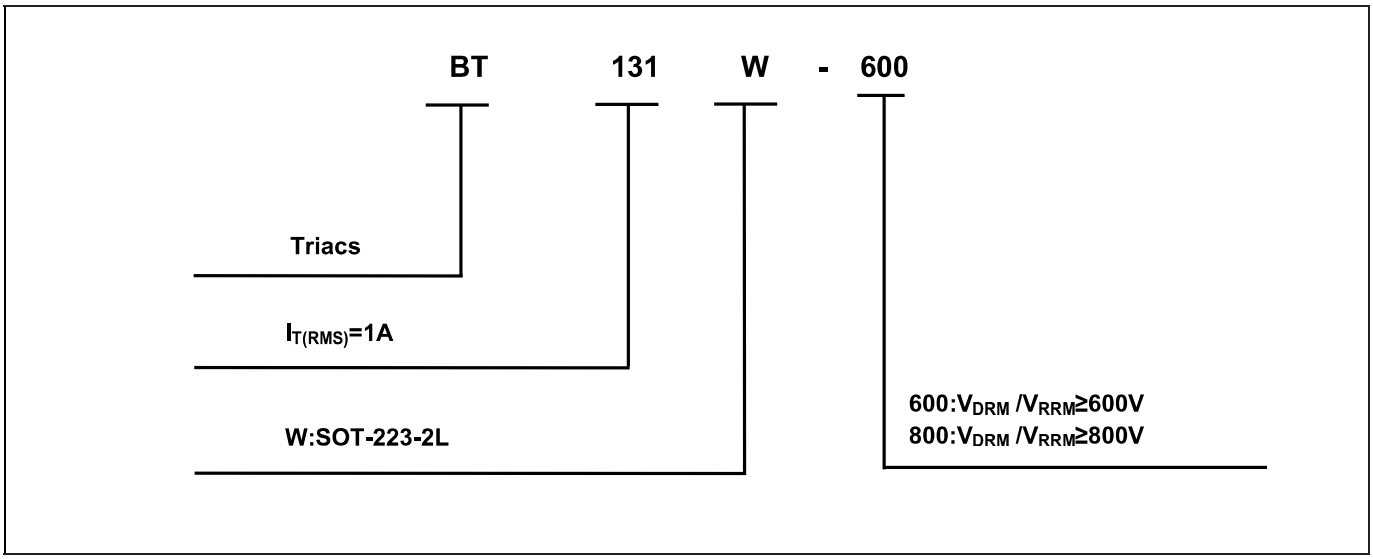
Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
Repetitive peak off-state voltage	V_{DRM}	600/800		V
Repetitive peak reverse voltage	V_{RRM}	600/800		V
RMS on-state current	$I_{T(RMS)}$	1		A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	16		A
I^2t value for fusing (tp=10ms)	I^2t	1.28		A^2s
Critical rate of rise of on-state current (I_G =2 x I_{GT})	dI/dt	I - II - III	50	A
		IV	10	A/ps
Peak gate current	I_{GM}	2		A
Average gate power dissipation	$P_{G(AV)}$	0.5		W
Junction Temperature	T_J	-40~+125		°C
Storage Temperature	T_{STG}	-40 ~+150		°C

Electrical characteristics (T_A=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition		Value		Unit
				Min	Max	
Gate trigger current	I_{GT}	V_D=12V I_T=0.1A Tj=25°C	Ⅰ-Ⅱ-Ⅲ	-	5	mA
			Ⅳ	-	10	
Gate trigger voltage	V_{GT}		Ⅰ-Ⅱ-Ⅲ-Ⅳ	-	1.3	V
Gate non-trigger voltage	V_{GD}	V_D =V_{DRM} Tj=125°C		0.2	-	V
latching current	I_L	V_D =12V I_{GT}=0.1A Tj=25°C	Ⅰ-Ⅲ-Ⅳ	-	10	mA
			Ⅱ	-	15	
Holding current	I_H		Ⅰ-Ⅱ-Ⅲ-Ⅳ	-	5	mA
Critical-rate of rise of commutation voltage	dV_D/dt	V_D=2/3V_{DRM} Gate Open Tj=125°C		50	-	V/us
STATIC CHARACTERISTICS						
Forward "on" voltage	V_{TM}	I_{TM} =1.5A tp=380ps		-	1.55	V
Repetitive Peak Off-State Current	I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	Tj=25°C	-	5	UA
Repetitive Peak Reverse Current	I_{RRM}		Tj=125°C	-	100	UA
THERMAL RESISTANCES						
Thermal resistance	Rth(j-c)	Junction to case(AC)		TYP.	23	°C/W
	Rth(j-a)	Junction to ambient		TYP.	60	°C/W

Ordering Information



Typical Characteristics

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

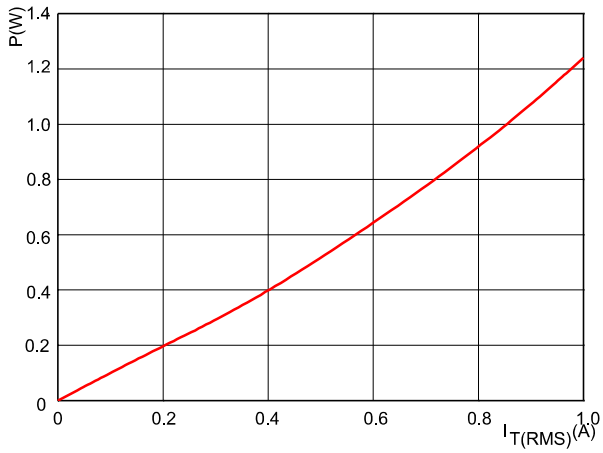


FIG.2: RMS on-state current versus case temperature (full cycle)

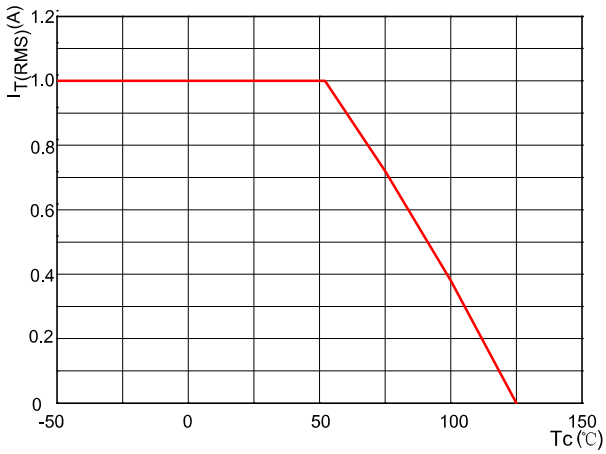


FIG.3: Surge peak on-state current versus number of cycles

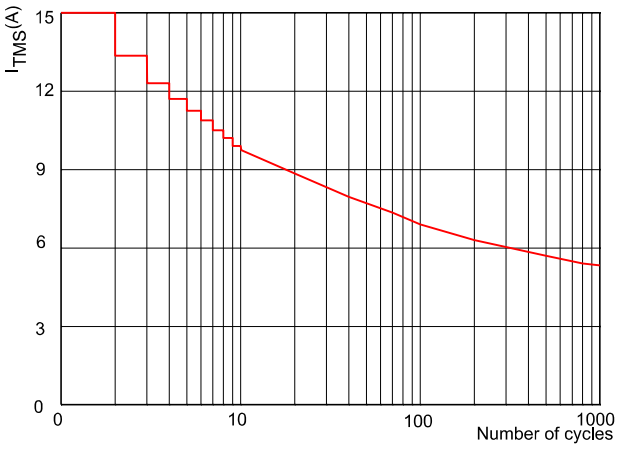


FIG.4: On-state characteristics (maximum values)

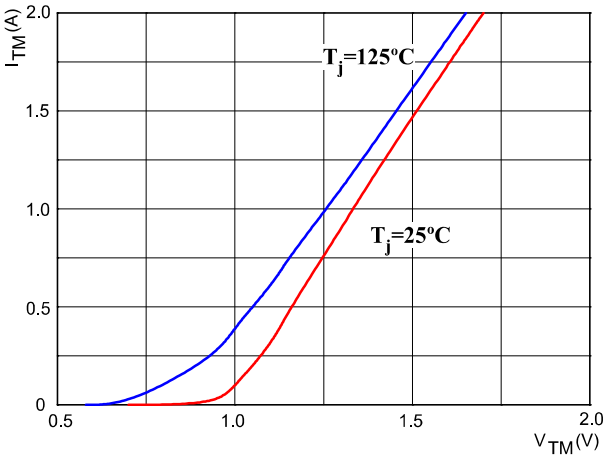


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp < 10ms

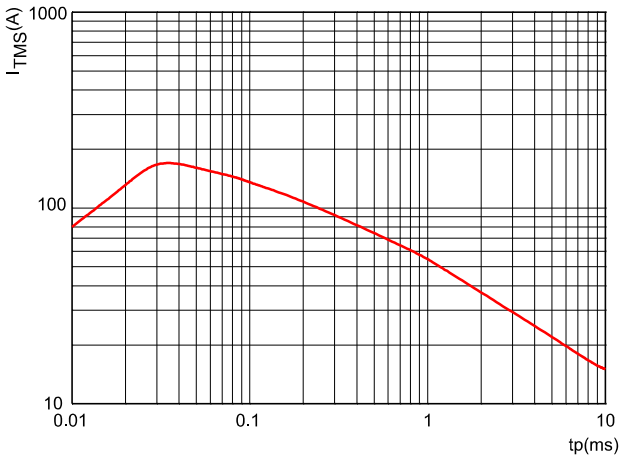
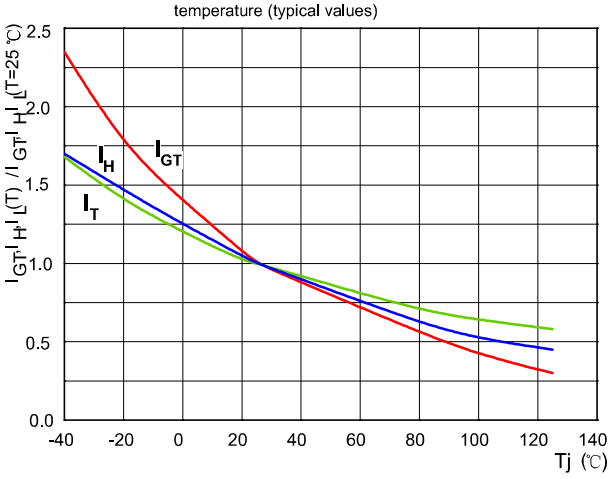


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)

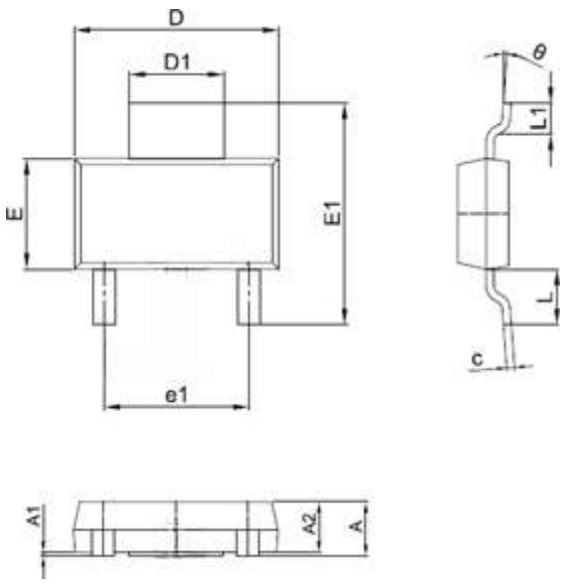


Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT-223-2L	Tape/Reel,7"reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton
	Tape/Reel,13"reel	2500pcs/Reel	5000PCS/Box 30000PCS/Carton

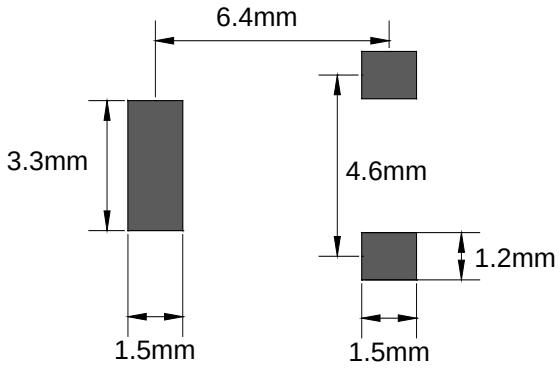
Package Dimensions

SOT-223-2L



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045

The recommended mounting pad size



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