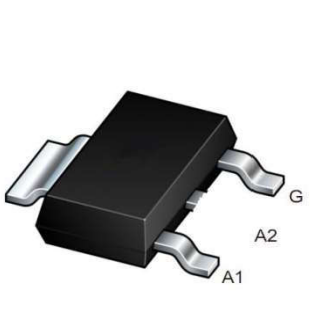
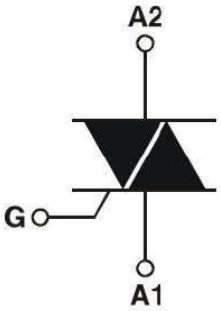
1.0A 4Quadrants TRIACs

Product Summary

Symbol	Value	Unit
$I_{T(AV)}$	1.0	A
V_{DRM} V_{RRM}	800	V
V_{TM}	1.60	V

Circuit diagram





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.

Order Information

Part Number	Package	Marking	Delivery Form	Delivery Quantity
Z0607NT	SOT-223-2L	Z0607NT XXXX	13" T&R	2500PCS/Tape

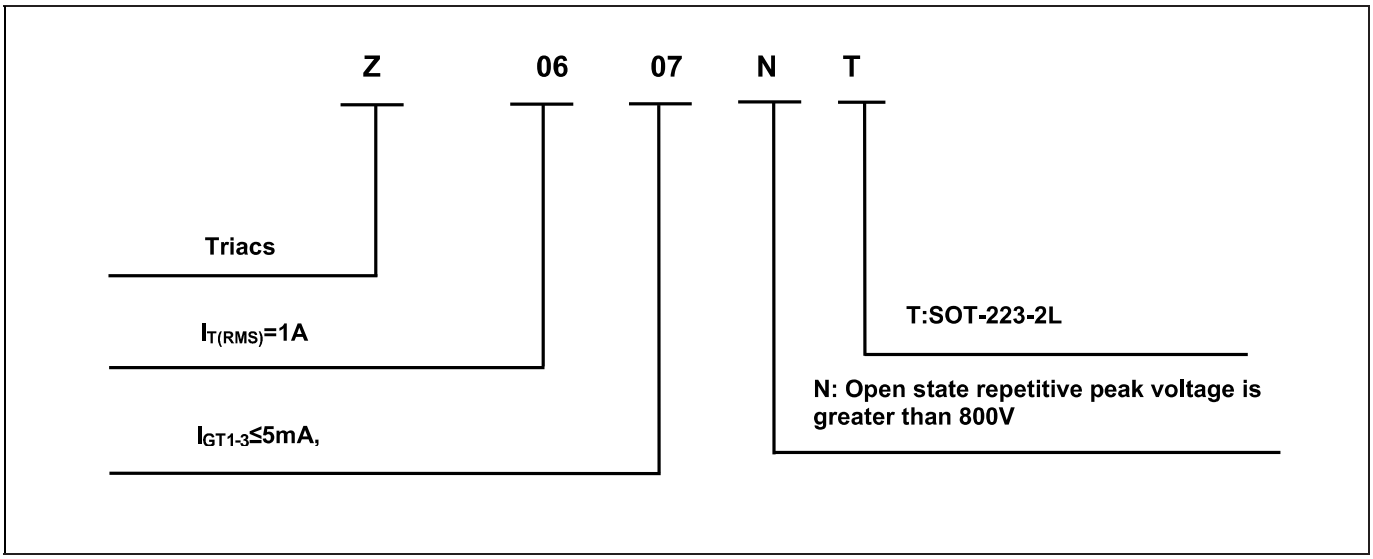
Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
Repetitive peak off-state voltage	V_{DRM}	800		V
Repetitive peak reverse voltage	V_{RRM}	800		V
RMS on-state current	$I_{T(RMS)}$	1		A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	12		A
I^2t value for fusing (tp=10ms)	I^2t	0.72		A^2s
Critical rate of rise of on-state current (I_G =2 x I_{GT})	dI/dt	I - II - III	20	A/us
Peak gate current	I_{GM}	1		A
Gate peak power	P_{GM}	5		W
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
				Z0607NT		
Gate trigger current	I_{GT}	V_D=12V I_T=0.1A Tj=25°C	I - II -III	≤5		mA
			IV	≤7		
Gate trigger voltage	V_{GT}		I - II -III-IV	≤1.2		V
Holding current	I_H	V_D =12V I_{GT}=0.1A Tj=25°C	I - II -III-IV	≤5		mA
latching current	I_L		I - II -IV	≤15		
			II	≤20		mA
Critical-rate of rise of commutation voltage	dV_D/dt	V_D=2/3V_{DRM} Gate Open Tj=125°C		≥25		V/us
STATIC CHARACTERISTICS						
Forward "on" voltage	V_{TM}	I_{TM} =2A tp=380ps		≤1.6		V
Repetitive Peak Off-State Current	I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	Tj=25°C	≤10		uA
Repetitive Peak Reverse Current	I_{RRM}		Tj=125°C	≤0.5		mA
THERMAL RESISTANCES						
Thermal resistance	Rth(j-c)	Junction to case(AC)		SOT-223-2L	25	°C/W

Ordering Information



Typical Characteristics

FIG1 Maximum power dissipation versus RMS on-state current

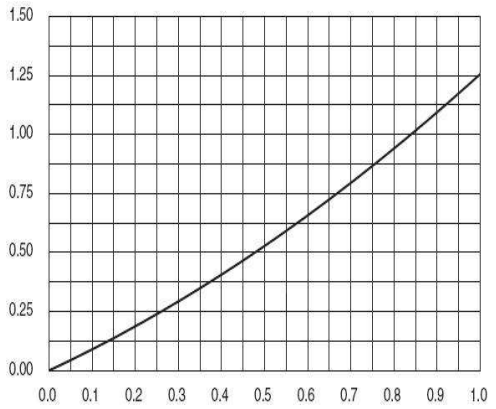


FIG2 RMS on-state current versus case temperature

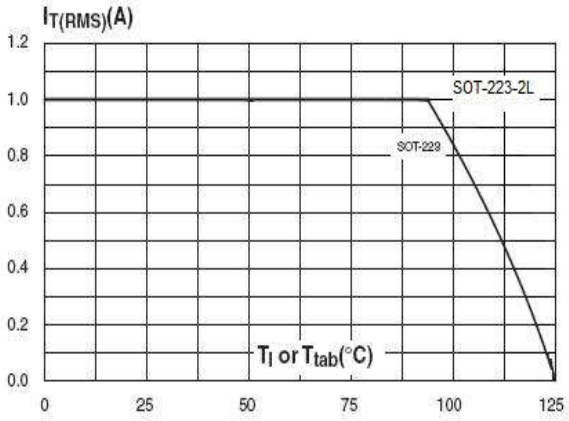


FIG3 Surge peak on-state current versus number of cycles

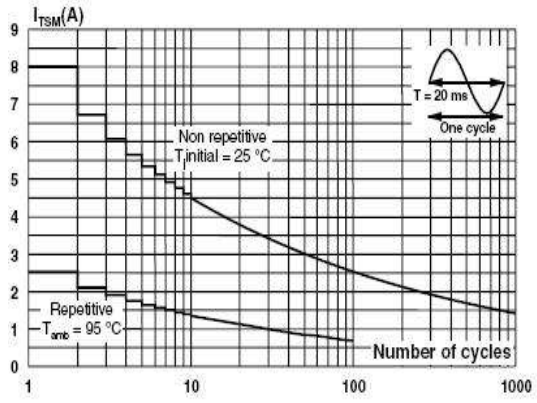


FIG4 On-state characteristics (maximum values)

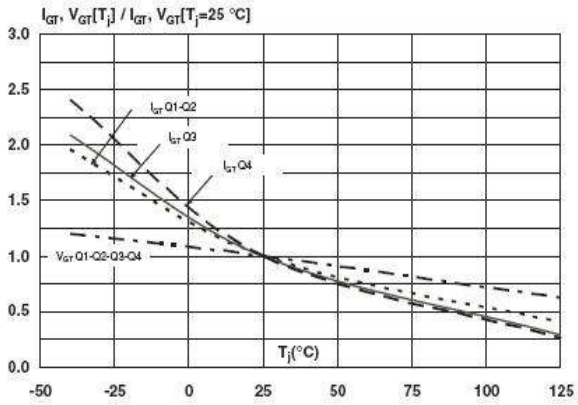


FIG5 Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t (dI/dt < 100A/μs)

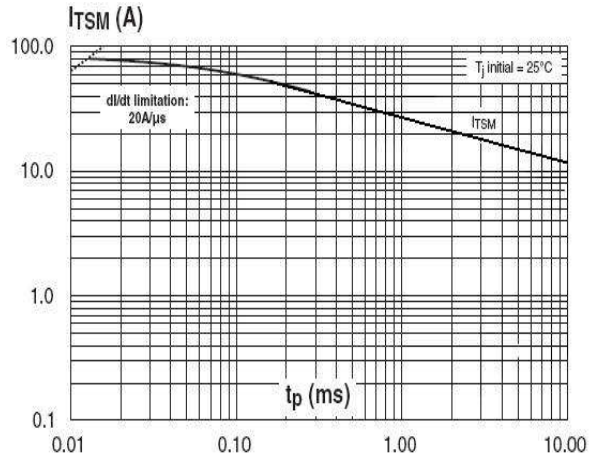
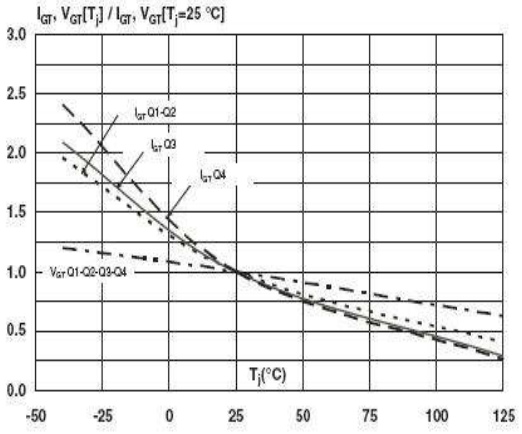
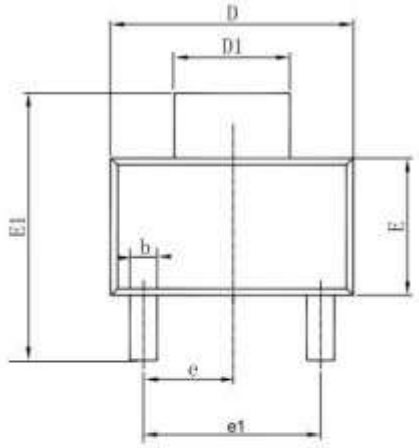


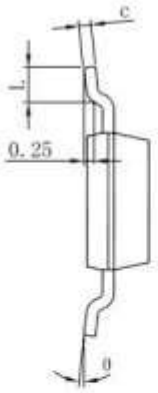
FIG6 Relative variations of gate trigger current, holding current and latching current versus junction temperature



Package Information

SOT-223-2L





Symbol	Dimensions In Millimeters		
	MIN	NOM	MAX
A	/	/	1.80
A1	0.02	/	0.10
A2	1.50	1.60	1.70
b	0.66	0.71	0.84
c	0.23	0.30	0.35
D	6.30	6.50	6.70
D1	2.90	3.00	3.10
E	3.30	3.50	3.70
E1	6.70	7.00	7.30
e		2.30 BASIC	
e1		4.60 BASIC	
L	0.75	/	/
θ	0°	/	10°