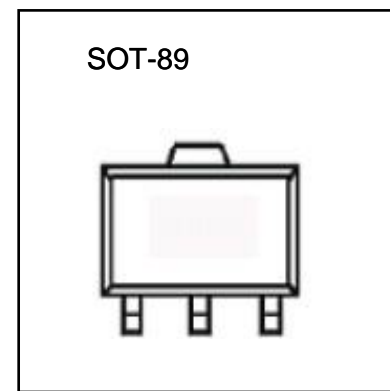
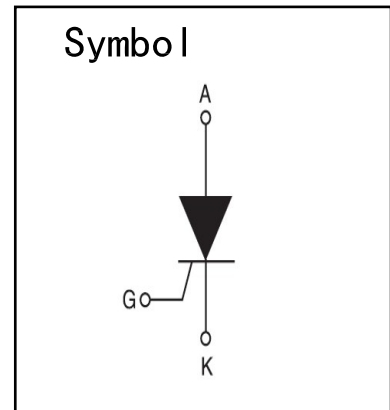


**0.8A SCRs**
**FEATURES**

- ◆ Repetitive Peak Off-State Voltage : 400V
- ◆ Average On-State Current (  $I_{T(AV)} = 0.8 \text{ A}$  )
- ◆ Sensitive Gate Triggering (  $I_{GT} \leq 200\mu\text{A}$  )

**DESCRIPTION**

Highly sensitive triggering levels, the BPX1225 Series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...


**ABSOLUTE MAXIMUM RATINGS**

Parameter		Symbol	Value	Unit
Storage junction temperature range		T <sub>stg</sub>	- 40 to +150	°C
Operating junction temperature range		T <sub>j</sub>	- 40 to +110	°C
Repetitive Peak Off-state Voltage	T <sub>j</sub> =25°C	V <sub>DRM</sub>	400	V
Repetitive Peak Reverse Voltage	T <sub>j</sub> =25°C	V <sub>RRM</sub>	400	V
RMS on-state current (180° conduction angle)	T <sub>c</sub> =77°C	I <sub>T(RMS)</sub>	0.8	A
Average on-state current (180° conduction angle)	T <sub>c</sub> =77°C	I <sub>T(AV)</sub>	0.8	A
Non repetitive surge peak on-state current (T <sub>j</sub> =25°C)	t <sub>p</sub> =10ms	I <sub>TSM</sub>	9	A
	t <sub>p</sub> =8.3ms		10	A
I <sup>2</sup> t Value for fusing	t <sub>p</sub> =10ms	I <sup>2</sup> t	0.415	A <sup>2</sup> s
Peak gate current	t <sub>p</sub> =20μs, T <sub>j</sub> =110°C	I <sub>GM</sub>	0.2	A
Average gate power dissipation	T <sub>j</sub> =110°C	P <sub>G(AV)</sub>	0.1	W

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

Symbol	Test Condition		BPX1225			Unit	
			Min.	Typ.	Max.		
I <sub>GT</sub>	V <sub>D</sub> =6V R <sub>L</sub> =100Ω		-	40	200	μA	
V <sub>GT</sub>			-	0.6	0.8	V	
V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> R <sub>L</sub> =3.3KΩ R <sub>GK</sub> =1KΩ T <sub>j</sub> =110°C		0.2	-	-	V	
I <sub>L</sub>	I <sub>G</sub> =1mA R <sub>GK</sub> =1KΩ		-	-	6	mA	
I <sub>H</sub>	I <sub>T</sub> =50mA R <sub>GK</sub> =1KΩ		-	-	5	mA	
V <sub>TM</sub>	I <sub>T</sub> = 1A t <sub>p</sub> =380uS	T <sub>j</sub> =25 °C	-	1.3	1.7	V	
dV/dt	V <sub>D</sub> =67%V <sub>DRM</sub> R <sub>GK</sub> =1KΩ	T <sub>j</sub> =110 °C	10	-	-	V/μs	
I <sub>DRM</sub>	V <sub>D</sub> = V <sub>DRM</sub> R <sub>GK</sub> =1KΩ		T <sub>j</sub> =25 °C	-	-	5	μA
			T <sub>j</sub> =110 °C	-	-	0.1	mA
I <sub>RRM</sub>	V <sub>R</sub> = V <sub>RRM</sub> R <sub>GK</sub> =1KΩ		T <sub>j</sub> =25 °C	-	-	5	μA
			T <sub>j</sub> =110 °C	-	-	0.1	mA

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

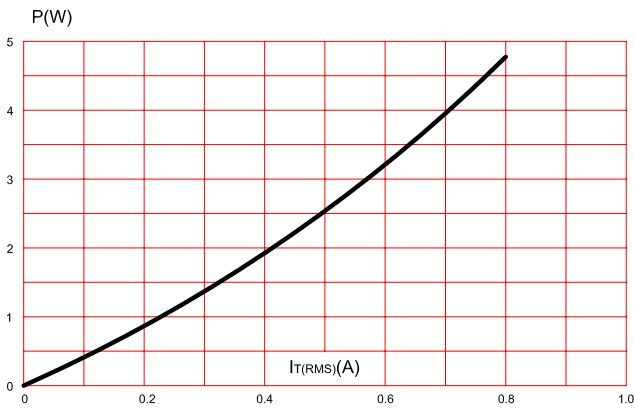


FIG.2: RMS on-state current versus case temperature(full cycle)

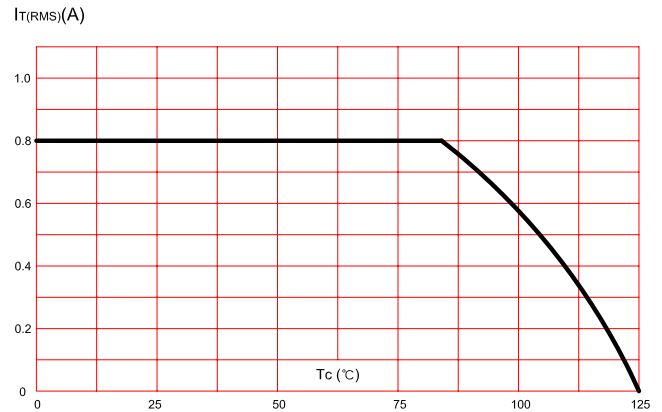


FIG.3: On-state characteristics (maximum values)

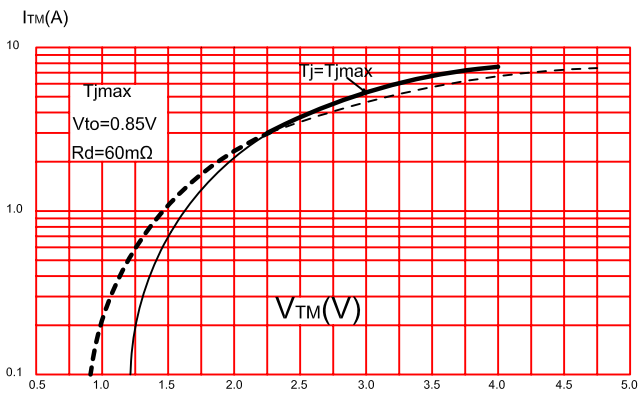


FIG.4: Surge peak on-state current versus number of cycles.

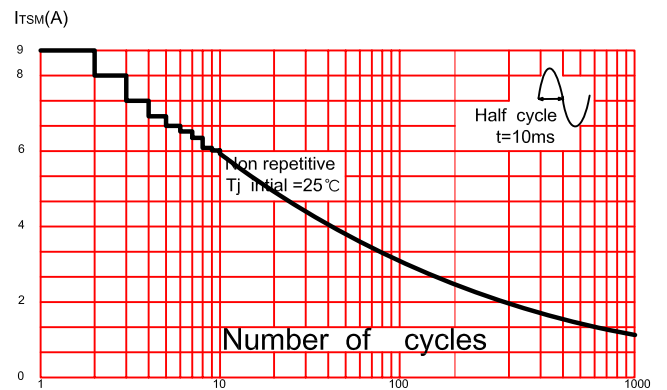


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<10ms.

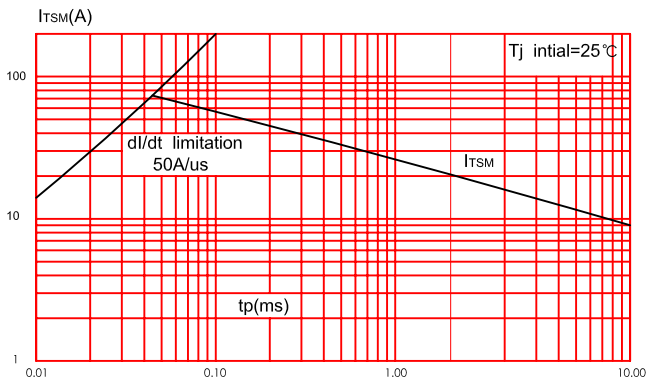
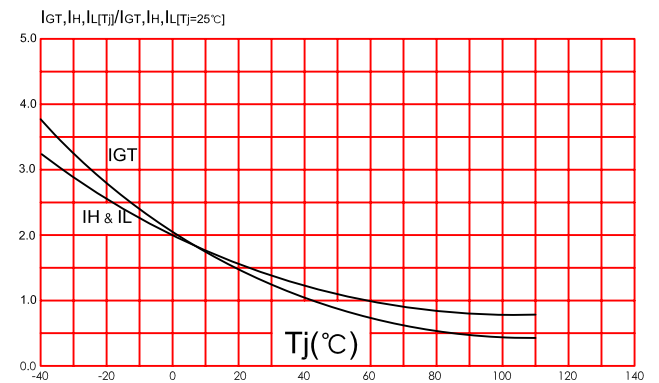
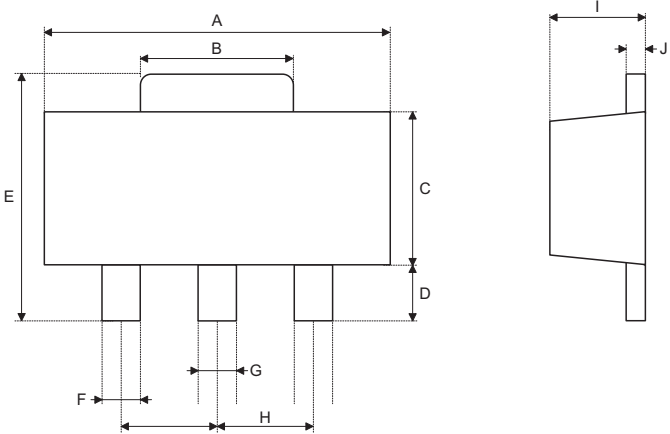


FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature(typical values).



SOT-89 Package Dimension



Symbol	Dimensions in mil		
	Min.	Nom.	Max.
A	173	—	181
B	64	—	72
C	90	—	102
D	35	—	47
E	155	—	167
F	14	—	19
G	17	—	22
H	—	59	—
I	55	—	63
J	14	—	17