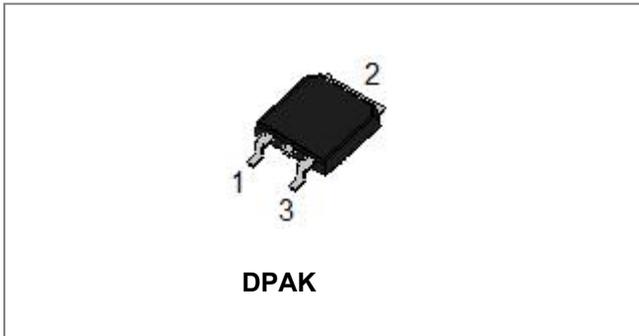
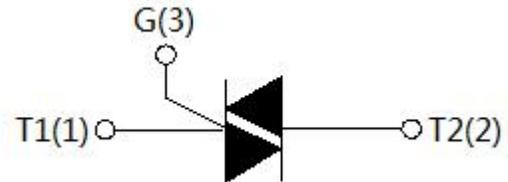


## SST08K-800SW 8A TRIACs



### Circuit Diagram



### Description

With high ability to withstand the shock loading of large current, SST08K-800SW triacs provide high dv/dt rate with strong resistance to electromagnetic interface. With high commutation performances, 3 quadrants products especially recommended for use on inductive load.

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Storage junction temperature range	$T_{stg}$	-	-40 - 150	°C
Operating junction temperature range	$T_j$	-	-40 - 125	°C
Repetitive peak off-state voltage( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	-	800	V
Repetitive peak reverse voltage( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	-	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	$I_{(TRMS)}$	DPAK ( $T_c=107^\circ\text{C}$ )	8	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	$I_{TSM}$	-	80	A
$I^2t$ value for fusing ( $t_p=10\text{ms}$ )	$I^2t$	-	32	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G = 2 \times I_{GT}$ )	di/dt		50	$\text{A}/\mu\text{s}$
Peak gate current	$I_{GM}$	-	4	A
Average gate power dissipation	$P_{GM}$	-	1	W
Peak gate power	$P_{G(AV)}$	-	5	W

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

Symbol	Test Condition	Quadrant		Value	Unit
				SW	
$I_{GT}$	$V_D=12V R_L=33\Omega$	I - II - III	MAX	10	mA
$V_{GT}$		I - II - III	MAX	1.5	V
$V_{GD}$	$V_D=V_{DRM} T_j=125^\circ\text{C}$ $R_L=3.3K\Omega$	I - II - III	MIN	0.2	V
$I_L$	$I_G=1.2I_{GT}$	I - III	MAX	25	mA
		II		35	mA
$I_H$	$I_T=100\text{mA}$		MAX	20	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	200	V/ $\mu\text{A}$

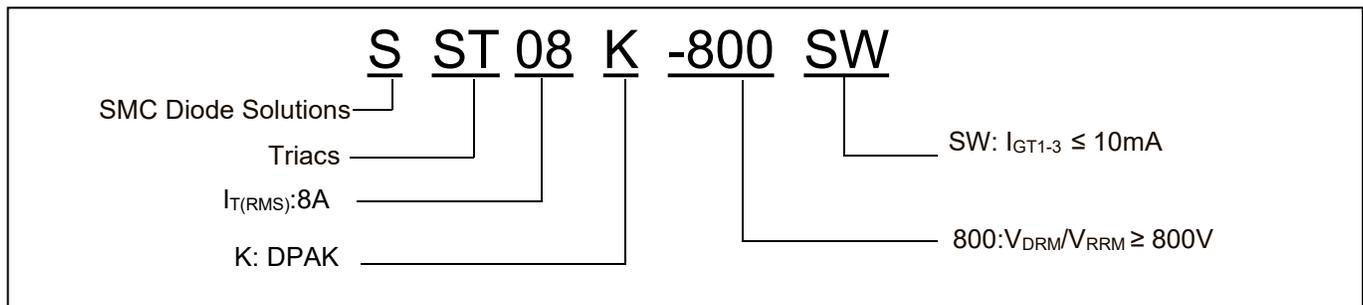
**Static Characteristics**

Symbol	Condition	Max.	Units
$V_{TM}$	$I_T=11A t_p=380\mu\text{s}, T_j=25^\circ\text{C}$	1.5	V
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}, T_j=25^\circ\text{C}$	5	$\mu\text{A}$
$I_{RRM}$	$V_D=V_{DRM} V_R=V_{RRM}, T_j=125^\circ\text{C}$	1	mA

**Thermal Resistances**

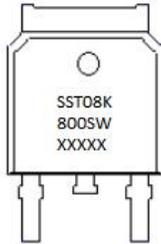
Symbol	Condition	Value	Units
$R_{th(j-c)}$	Junction to case(AC) DPAK	2.1	$^\circ\text{C/W}$

**Ordering Information**



Device	Package	Shipping
SST08K-800SW	DPAK	2500pcs/ Reel

## Marking Diagram

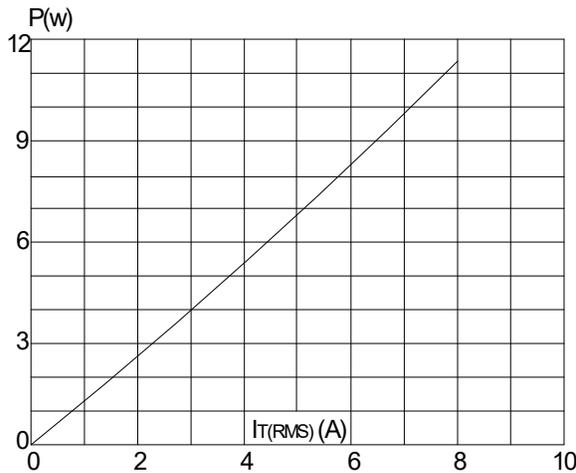


Where XXXXX is YYWWL

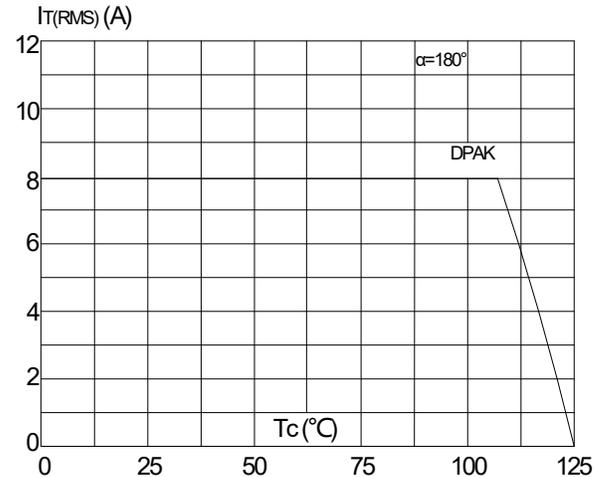
SST08K-800SW = Part name  
YY = Year  
WW = Week  
L = Lot Number

## Ratings and Characteristics Curves

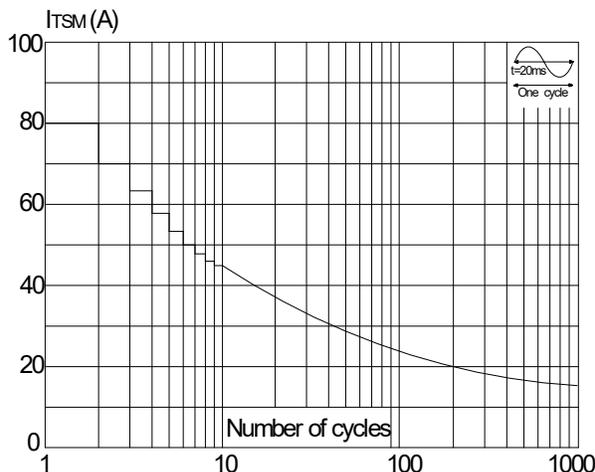
**FIG.1:** Maximum power dissipation versus RMS on-state current



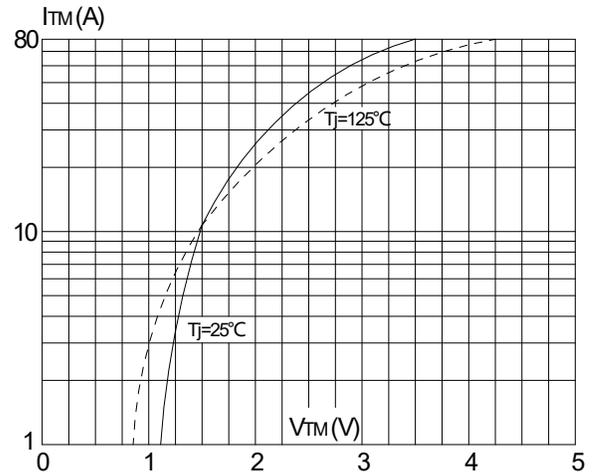
**FIG.2:** RMS on-state current versus case temperature



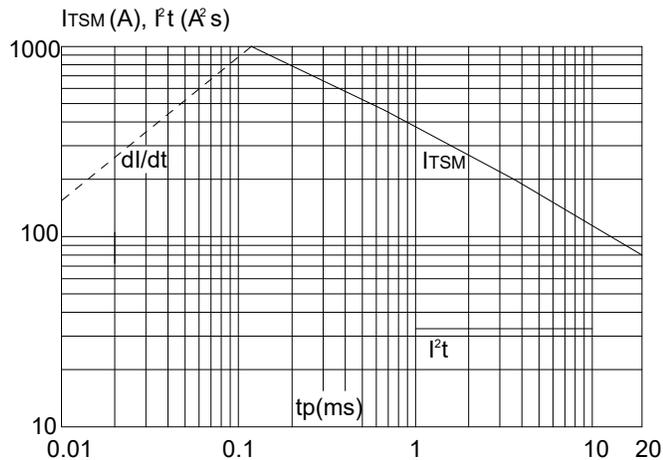
**FIG.3:** Surge peak on-state current versus number of cycles



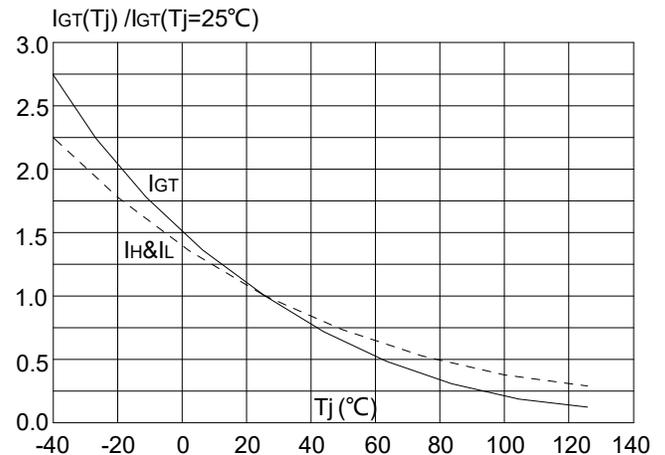
**FIG.4:** On-state characteristics (maximum values)



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



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



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