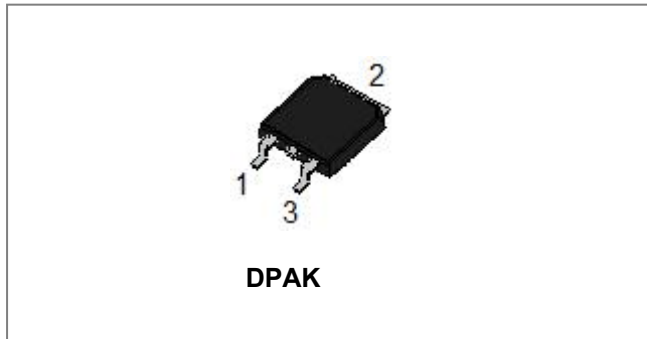
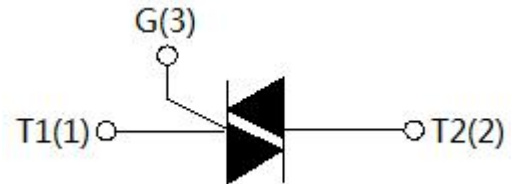


## SST08K-800SW 8A TRIACs



### 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 interference. With high commutation performances, 3 quadrant 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	A <sup>2</sup> s
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )	$di/dt$		50	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/ $\mu\text{A}$

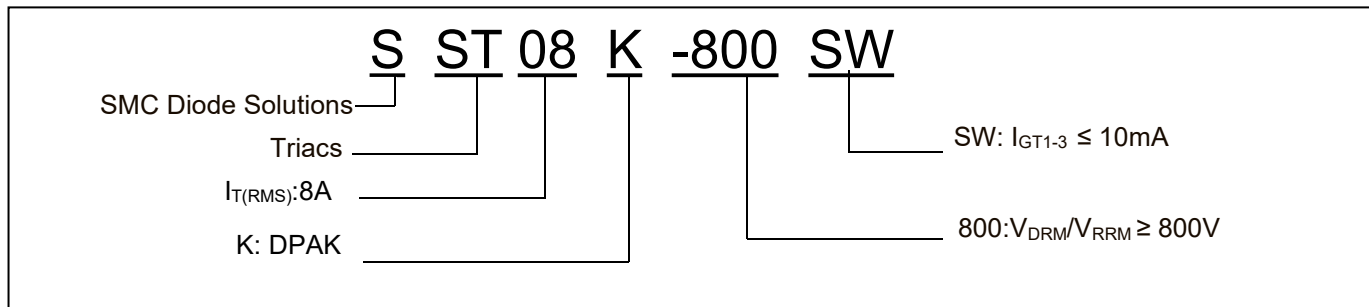
**Static Characteristics**

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**

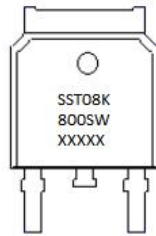
Symbol	Condition	Value	Units
$R_{th(j-c)}$	Junction to case(AC) DPAK	2.1	$^\circ\text{C/W}$

**Ordering Information**



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

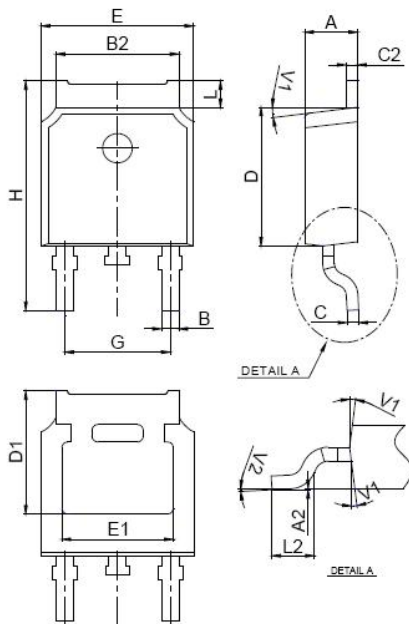
### Marking Diagram



Where XXXXX is YYWWL

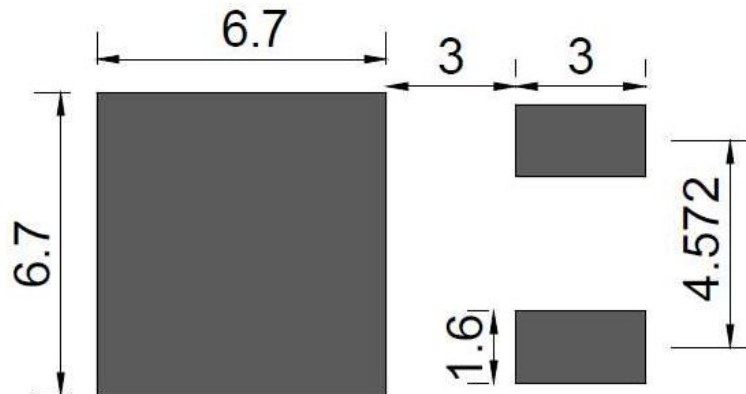
SST08K-800SW = Part name  
YY = Year  
WW = Week  
L = Lot Number

### Mechanical Dimensions DPAK



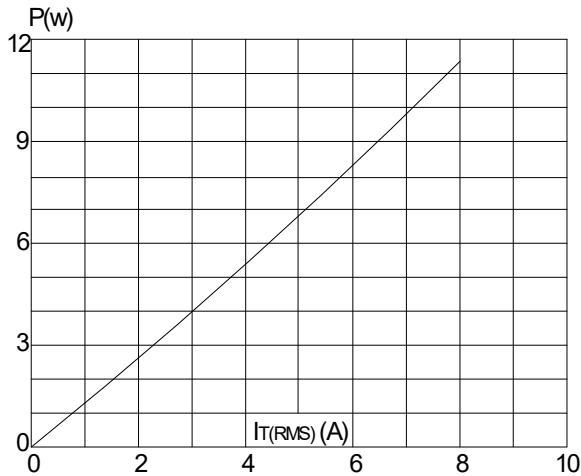
SYMBOL	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.10	0		0.004
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1	5.30REF			0.209REF		
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
H	9.50		10.70	0.374		0.421
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065
V1	7°			7°		
V2	0°		6°	0°		6°

### DPAK Recommended Soldering Pattern (mm)

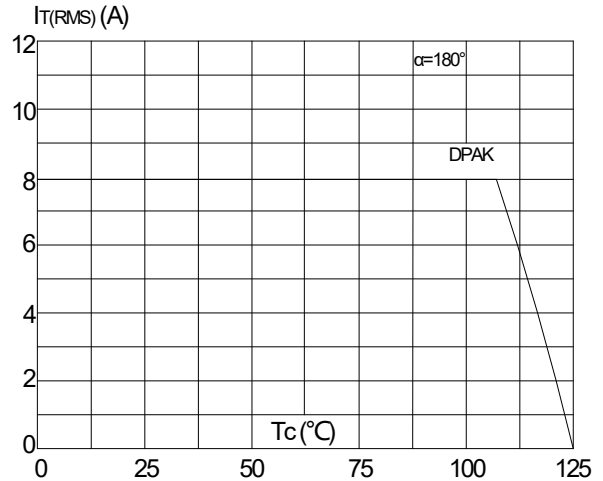


**Ratings and Characteristics Curves**

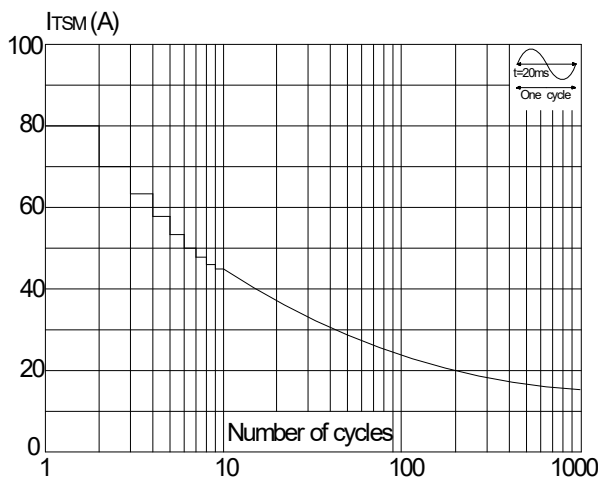
**FIG.1:** Maximum power dissipation versus RMS on-state current



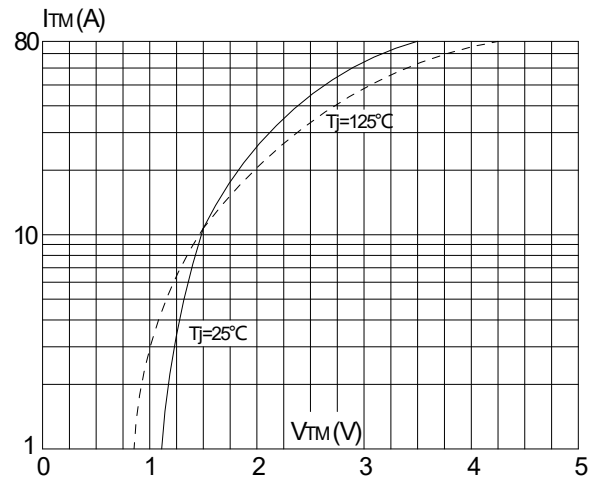
**FIG.2:** RMS on-state current versus case temperature



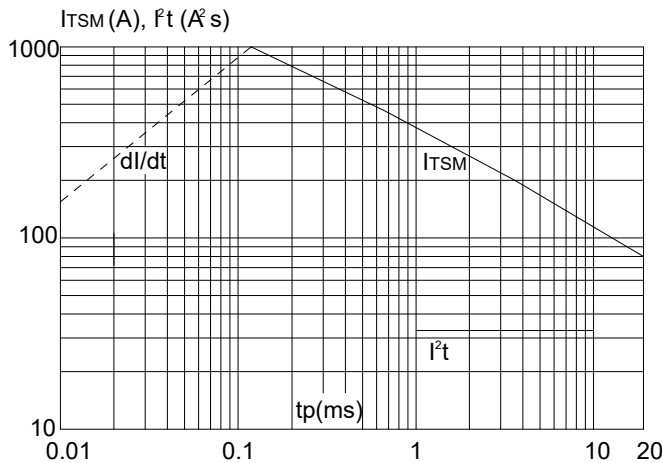
**FIG.3:** Surge peak on-state current versus number of cycles



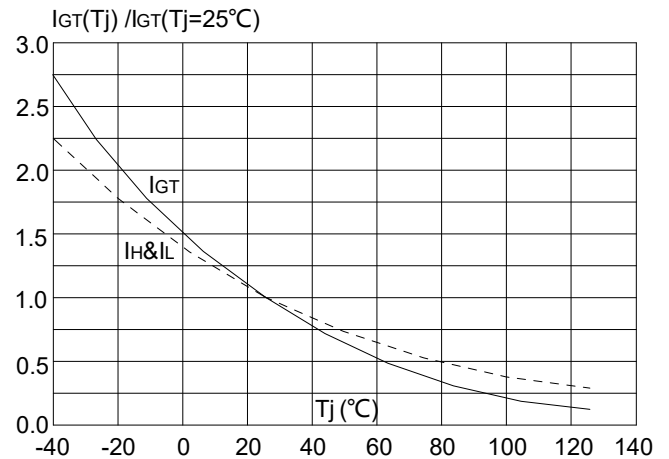
**FIG.4:** On-state characteristics (maximum values)



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



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



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