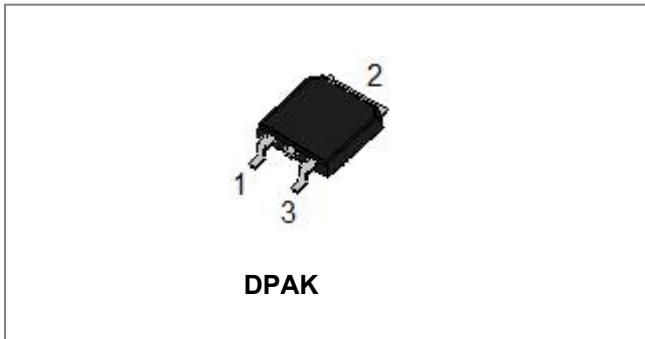
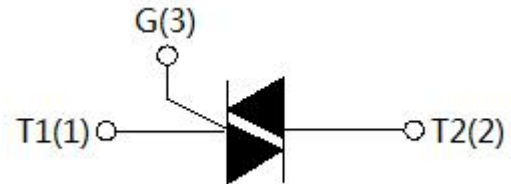


SST04K-800SW 4A TRIACs



Circuit Diagram



Description

With high ability to withstand the shock loading of large current, SST04K-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	$I_{(TRMS)}$	TO-252-4R ($T_c=86^{\circ}\text{C}$)	4	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	-	40	A
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	-	8	A^2s
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°C unless otherwise specified)

Symbol	Test Condition	Quadrant		Value	Unit
				SW	
I _{GT}	V _D = 12V R _L = 33Ω	I - II - III	MAX	10	mA
V _{GT}		I - II - III	MAX	1.5	V
V _{GD}	V _D = V _{DRM} T _j = 125°C R _L = 3.3KΩ	I - II - III	MIN	0.2	V
I _L	I _G = 1.2I _{GT}	I - III	MAX	20	mA
		II		35	mA
I _H	I _T = 100mA		MAX	15	mA
dV/dt	V _D = 2/3V _{DRM} Gate Open T _j = 125°C		MIN	100	V/μA

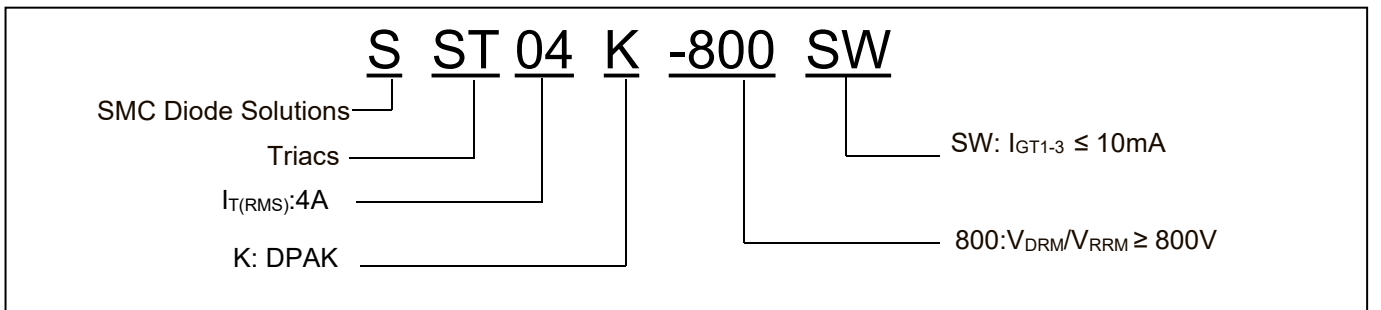
Static Characteristics

Symbol	Condition	Max.	Units
V _{TM}	I _T = 5.5A t _p = 380μs, T _j = 25°C	1.6	V
I _{DRM}	V _D = V _{DRM} V _R = V _R RM, T _j = 25°C	5	μA
I _R RM	V _D = V _{DRM} V _R = V _R RM, T _j = 125°C	0.5	mA

Thermal Resistances

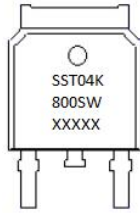
Symbol	Condition	Value	Units
R _{th(j-c)}	Junction to case(AC)	TO-220C	2.5
		DPAK	2.8

Ordering Information



Device	Package	Shipping
SST04K-800SW	DPAK	2500pcs/ Reel

Marking Diagram



Where XXXXX is YYWWL

SST04K-800SW = Part name
YY = Year
WW = Week
L = Lot Number

Ratings and Characteristics Curves

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

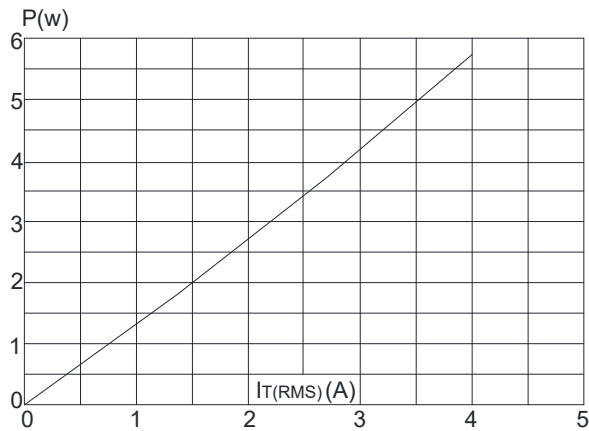


FIG.2: RMS on-state current versus case temperature

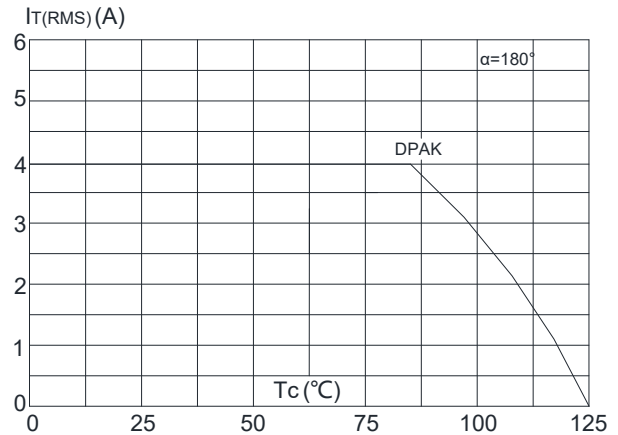


FIG.3: Surge peak on-state current versus number of cycles

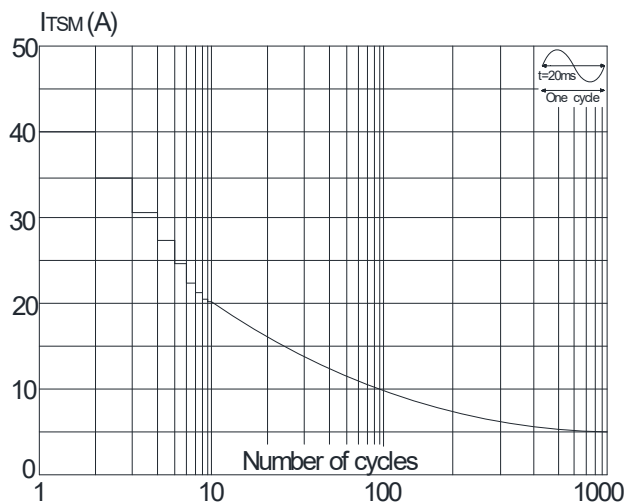


FIG.4: On-state characteristics (maximum values)

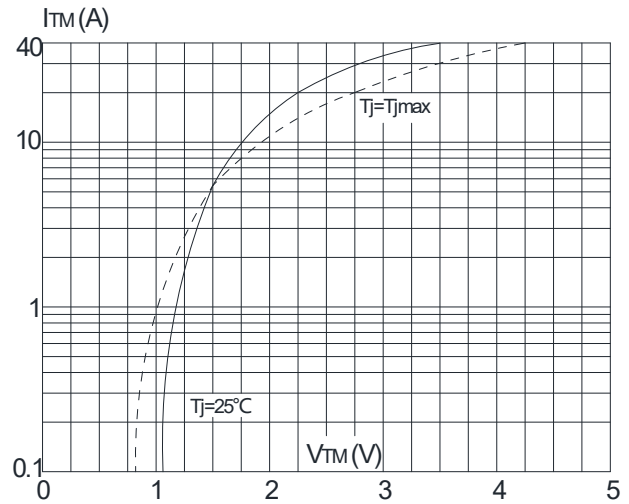


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$ and corresponding value of I^2t ($di/dt < 50\text{A}/\mu\text{s}$)

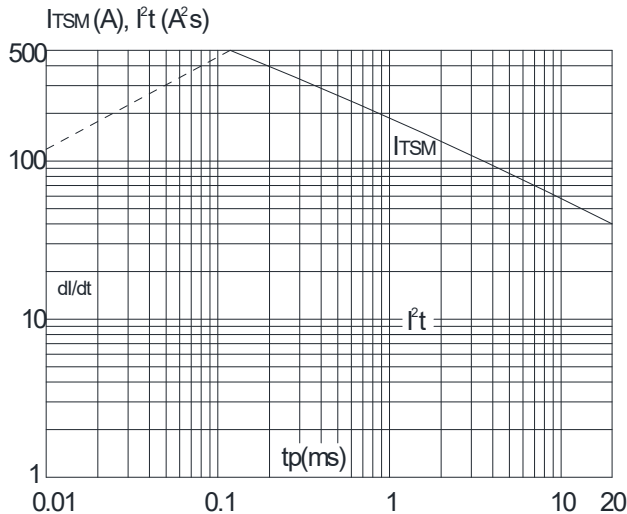
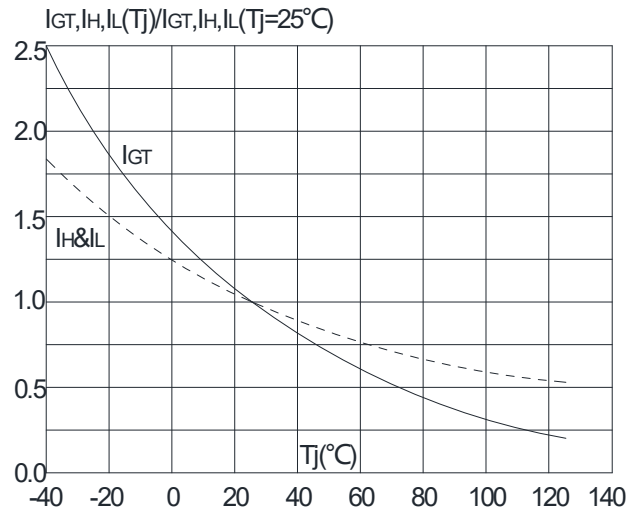


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



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