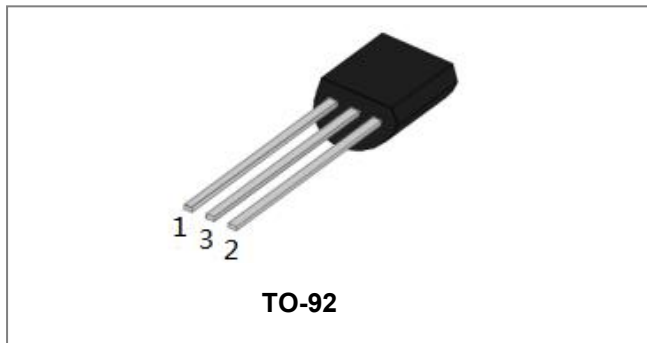
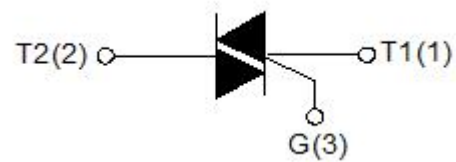


SST130U-600D 0.8A TRIACs



Circuit Diagram



Description

With low holding and latching current, SST130 series triacs are especially recommended for use on middle and small resistance type power 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}	-	600	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	-	600	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-92($T_c=50^\circ\text{C}$)	0.8	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	-	400	A
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	-	880	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)	di/dt	I - II - III	50	A/us
		IV	20	
Peak gate current	I_{GM}	-	1	A
Average gate power dissipation	P_{GM}	-	0.1	W
Peak gate power	$P_{G(AV)}$	-	1	W

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

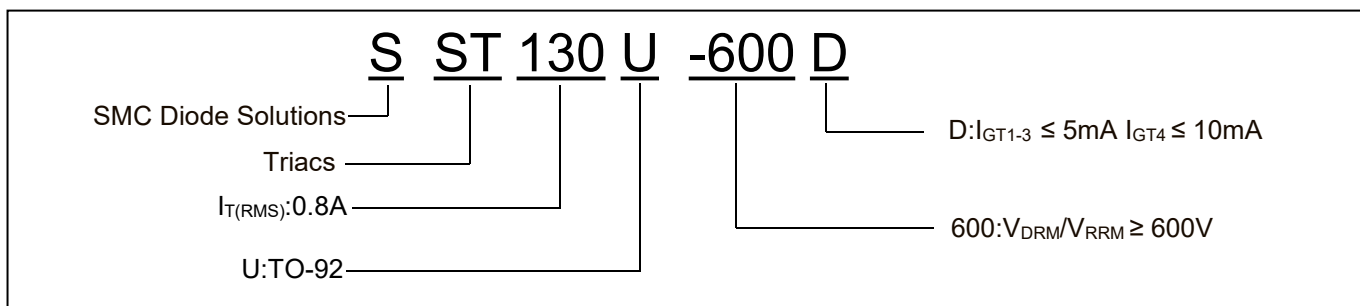
Symbol	Test Condition	Quadrant		Value		Unit
				D	T	
I_{GT}	$V_D=12V$	I - II - III	MAX	5	5	mA
		IV		10	5	
V_{GT}		ALL	MAX	1.3		V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C}$ $R_L=3.3K\Omega$	ALL	MIN	0.2		V
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX	10	5	mA
		II		20	15	
I_H	$I_T=100\text{mA}$		MAX	7	5	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	30	10	V/ μs

Static Characteristics

Symbol	Condition	Max.	Units
V_{TM}	$I_T=1.1A$ $t_p=380\mu\text{s}$, $T_j=25^\circ\text{C}$	1.5	V
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$, $T_j=25^\circ\text{C}$	5	μA
I_{RRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$, $T_j=125^\circ\text{C}$	100	μA

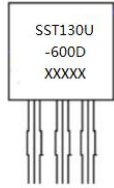
Thermal Resistances

Symbol	Condition	Value	Units
$R_{th(j-c)}$	Junction to case(AC) TO-92	75	$^\circ\text{C/W}$

Ordering Information


Device	Package	Shipping
SST130U-600D	TO-92	1000pcs/ bag

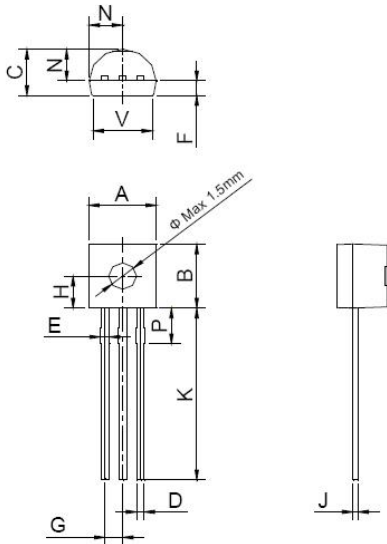
Marking Diagram



Where XXXXX is YYWWL

SST130U-600D = Part name
YY = Year
WW = Week
L = Lot Number

Mechanical Dimensions TO-92



SYMBOL	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45	-	5.20	0.175	-	0.205
B	4.32	-	5.33	0.170	-	0.210
C	3.18	-	4.19	0.125	-	0.165
D	0.407	-	0.533	0.016	-	0.021
E	0.60	-	0.80	0.024	-	0.031
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36	-	0.50	0.014	-	0.020
K	12.70	-	15.0	0.500	-	0.591
N	2.04	-	2.66	0.080	-	0.105
P	1.86	-	2.06	0.073	-	0.081
V	-	-	4.3	-	-	0.169

Ratings and Characteristics Curves

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

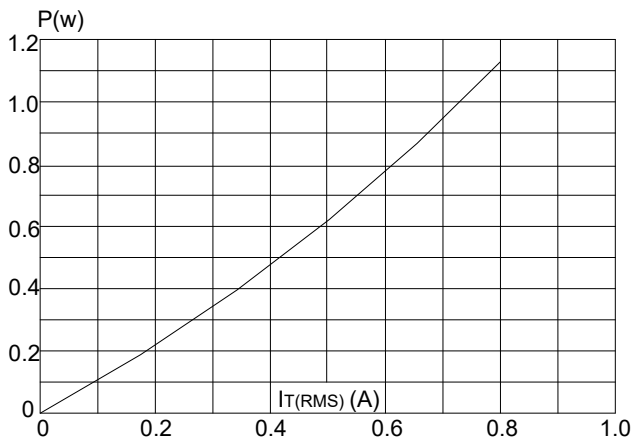


FIG.2: RMS on-state current versus case temperature

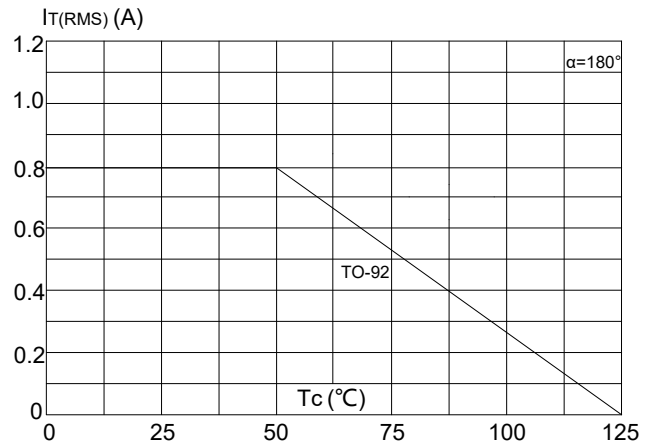


FIG.3: Surge peak on-state current versus number of cycles

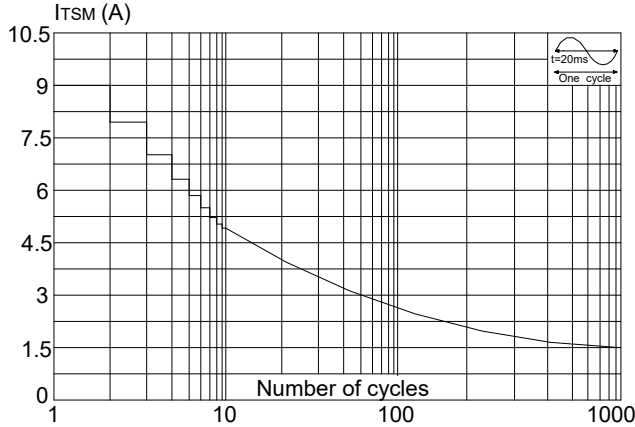


FIG.4: On-state characteristics (maximum values)

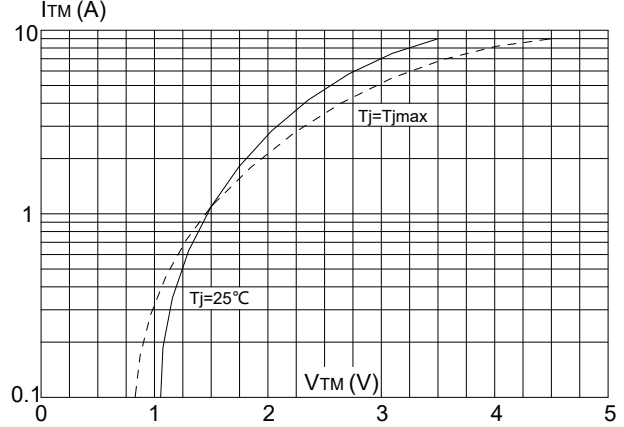


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20ms$ (I - II - III: $di/dt < 50A/\mu s$; IV: $di/dt < 20A/\mu s$)

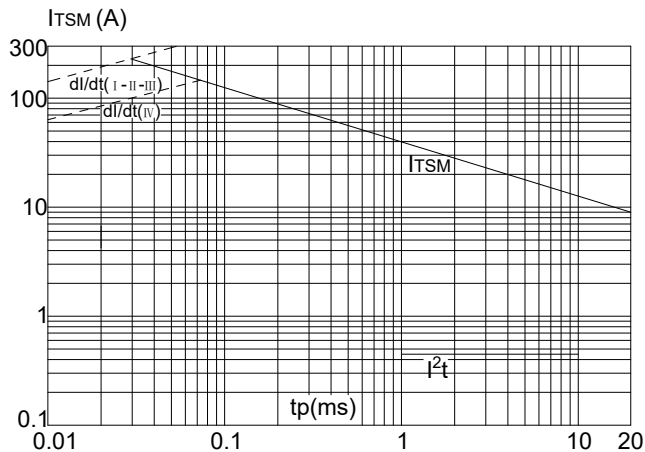
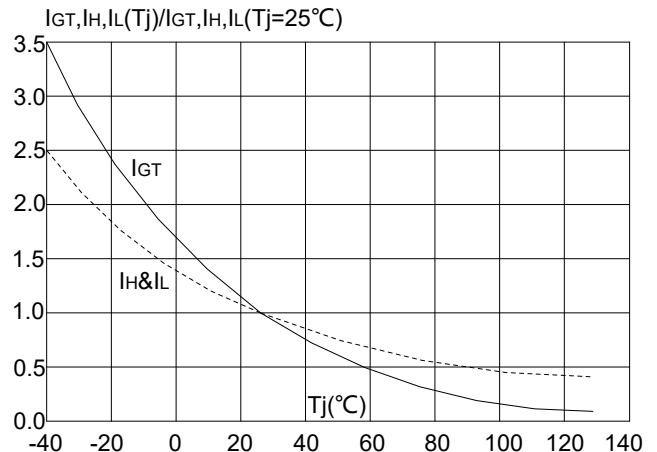


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature





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