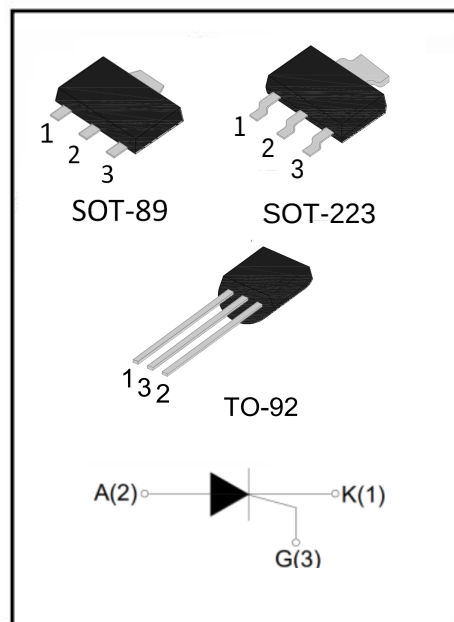


MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
V_{DRM}/V_{RRM}	600	V
IGT	0.2	mA



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40-150	°C
Operating junction temperature range		T_j	-40-110	°C
Repetitive peak off-state voltage		V_{DRM}	600	V
Repetitive peak reverse voltage		V_{RRM}	600	V
RMS on-state current	TO-89 $T_c = 85^\circ\text{C}$ TO-92 $T_c = 60^\circ\text{C}$ SOT-223 $T_c = 75^\circ\text{C}$	$I_{T(RMS)}$	0.8	A
Non repetitive surge peak on-state current (tp=10ms)		I_{TSM}	8	A
I^2t value for fusing (tp=10ms)		I^2t	0.32	A ² s
Critical rate of rise of on-state current		di/dt	50	A/ μs
Peak gate current (tp=20 μs , $T_j=110^\circ\text{C}$)		I_{GM}	0.2	A
Peak gate power (tp=20 μs , $T_j=110^\circ\text{C}$)		P_{GM}	0.5	W
Average gate power dissipation($T_j=110^\circ\text{C}$)		$P_{G(AV)}$	0.1	W

Symbol	Test Condition	Value	Unit
		MAX.	
I_{GT}	$V = 12V$ $R = 33\Omega$	0.2	mA
V_{GT}		0.8	V
V_{GD}	$V_D = V_{DRM}$ $T_j = 110^\circ C$	-	V
I_L	$I_G = 1.2I_{GT}$	6	mA
I_H	$I_T = 0.05mA$	5	mA
dV/dt	$V_D = 2/3V_{DRM}$ $T_j = 110^\circ C$ $RGK = 1K\Omega$	-	V/ μs

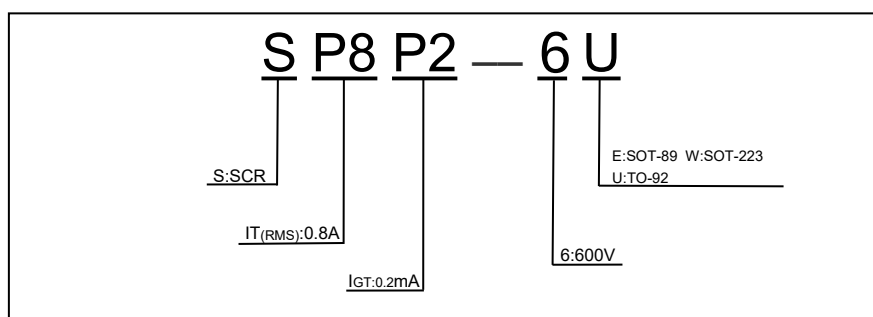
STATIC CHARACTERISTICS

Symbol	Parameter		Value	Unit
V_{TM}	$I_T = 1.1A$, $t_p = 380\mu s$	$T_j = 25^\circ C$	1.5	V
I_{DRM}	$V_D = V_{DRM}$, $V_R = V_{RRM}$	$T_j = 25^\circ C$	5	μA
I_{RRM}		$T_j = 110^\circ C$	100	μA

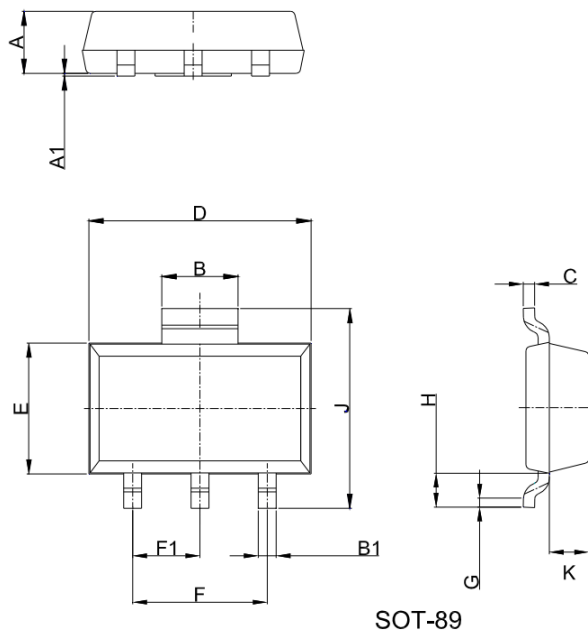
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	Junction to lead (DC)	TO-92	70	$^\circ C/W$
	junction to tab	SOT-89	32	
		SOT-223	26	

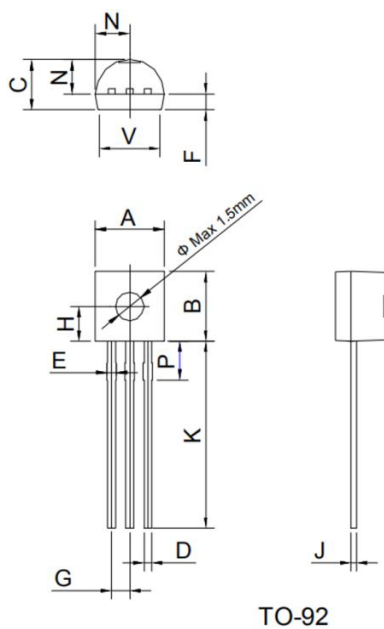
ORDERING INFORMATION



PACKAGE MECHANICAL DATA

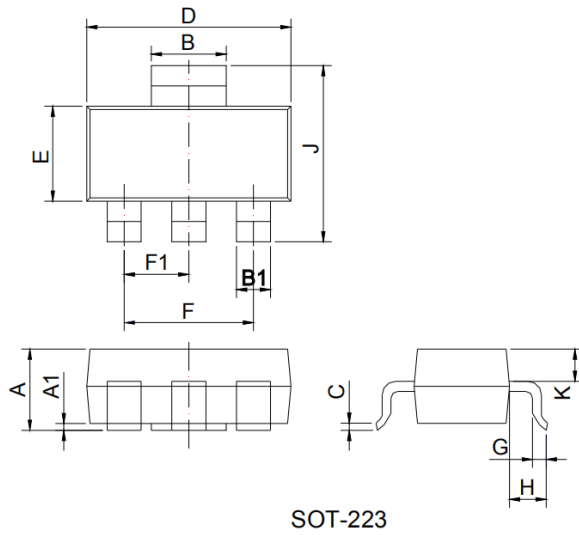


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.3	1.4	1.5	0.051	0.055	0.059
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	1.6	1.7	1.8	0.063	0.067	0.071
B1	0.3	0.4	0.5	0.012	0.016	0.020
C	0.22	0.254	0.32	0.009	0.010	0.013
D	4.75	4.95	5.15	0.187	0.195	0.203
E	2.75	2.95	3.15	0.108	0.116	0.124
F		3.0			0.118	
F1		1.5			0.059	
G	0.2	0.3	0.4	0.008	0.012	0.016
H	0.58	0.78	0.98	0.023	0.031	0.039
J	4.3	4.5	4.7	0.169	0.177	0.185
K		0.88			0.035	



Ref.	Dimensions					
	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	0.254		0.506	0.016		0.021
E	0.30		0.70	0.024		0.031
F	-	1.30	-	-	0.051	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.30		0.50	0.011		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	-		4.50	-		0.169

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F		4.6			0.181	
F1		2.3			0.091	
G	0.7	0.9	1.1	0.028	0.035	0.043
H	1.5	1.75	2	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K		0.9			0.035	

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

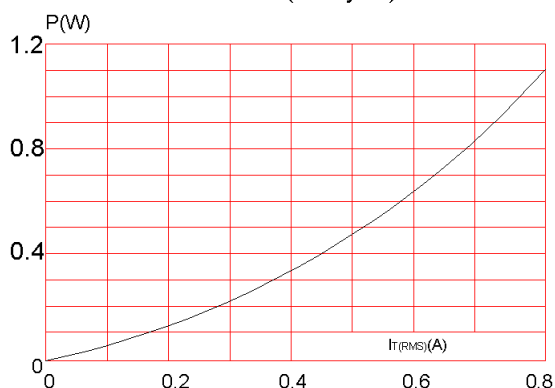


FIG.2:RMS on-state current versus mounting base temperature(full cycle)

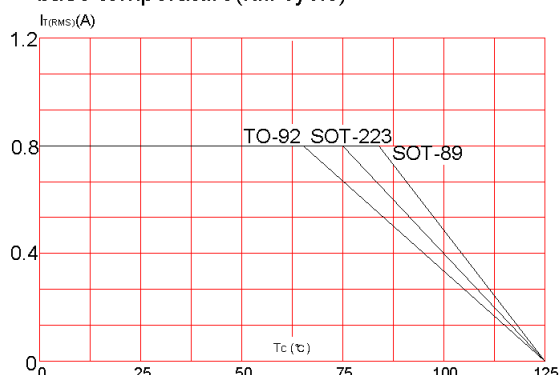


FIG.3:Surge peak on-state current versus number of cycles.

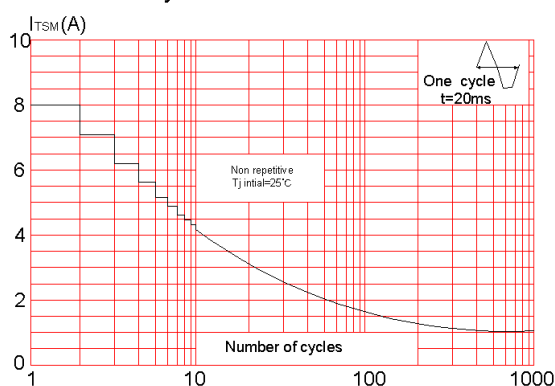


FIG.4:On-state characteristics (maximum values).

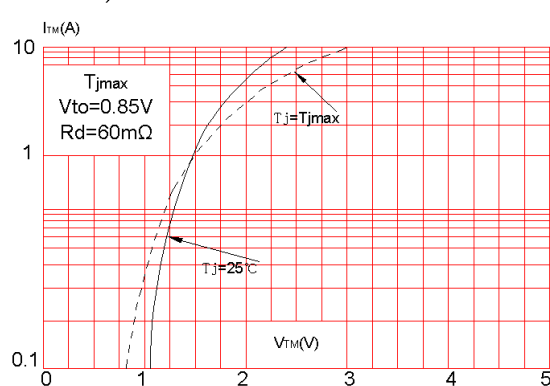


FIG.5:Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$, and corresponding value of I^2t .

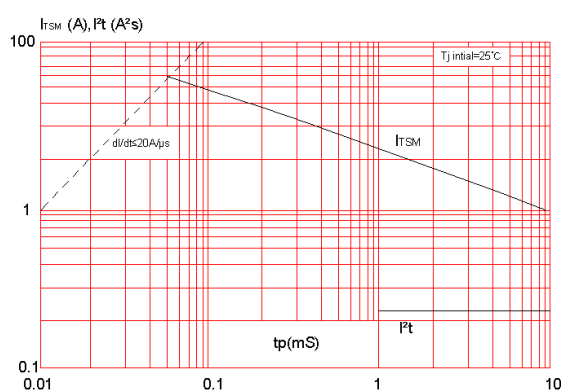


FIG.6:Relative variations of gate trigger current,holding current and latching current versus junction temperature(typical values)

