MCR100-8 1A Sensitive SCR -8

Peak gate power	P_{GM}	2	W
Peak pulse voltage (T_j=25 ; non-repetitive,off-state;FIG.8)	V_{pp}	1	kV

NOTE 1: Operating junction temperature T_j is up to 125 when a resistor ≤1kΩ is connected between Gate and Cathode. Without this resistor, the T_j is up to 110 only.

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33Ω	-	40	200	μA
V_{GT}		-	0.6	0.8	V
V_{GD}	V_D=V_{DRM} T_j=125	0.2	-	-	V
I_L	I_G=1.2 I_{GT}	-	-	5	mA
I_H	I_T=0.05A	-	-	4	mA
dV/dt	V_D=600V T_j=125 R_{GK}=1kΩ	200	-	-	V/μs
	V_D=600V T_j=125 R_{GK}=220Ω	500	-	-	
t_{on}	I_G=10mA I_A=20mA I_R=2mA T_j=25	-	2	-	μs
t_{off}		-	50	-	μs

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_T=2A t_p=380μs	T_j=25	1.4	V
V_{TO}	Threshold voltage	T_j=125	0.8	V
R_D	Dynamic Resistance	T_j=125	0.1	Ω
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=125	0.2	mA

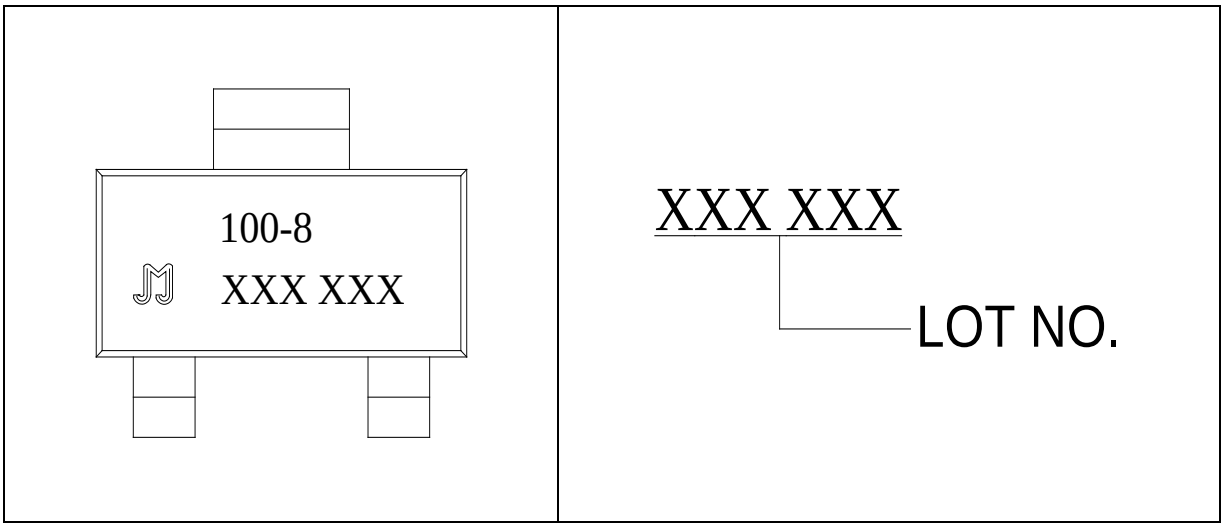


FIG.1: Maximum power dissipation versus RMS on-state current

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

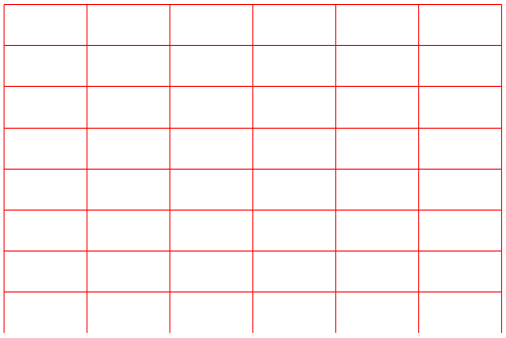


FIG.5: On-state characteristics

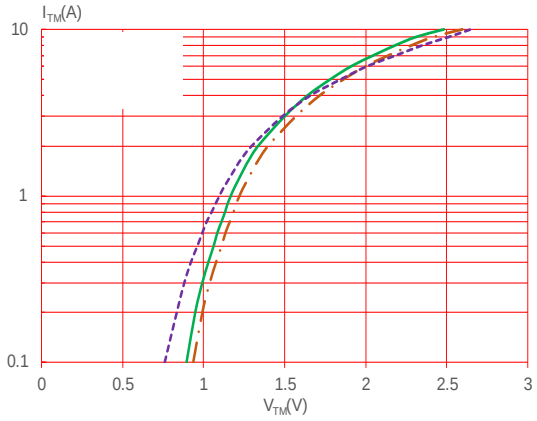
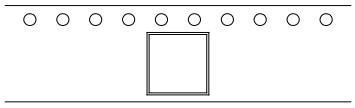


FIG.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<10ms, and corresponding value of I^2t (dI/dt<100A/μs)

FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(μA)	Package	Base qty. (pcs)	Delivery mode
MCR100-8	800	≤200	SOT-223-2L	4,000	Tape & Reel

Document Revision History



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	-		12.30	-		0.482
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.215	0.217	0.219
D0		1.55	1.60		0.061	0.063
D1		-	-			
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.95	2.00	2.05	0.077	0.079	0.081
10P0	39.80	40.00	40.20	1.567	1.575	1.583
A0	6.85	6.95	7.05	0.269	0.273	0.276
B0	7.15	7.25	7.35	0.280	0.284	0.288
K0	1.95	2.05	2.15	0.076	0.080	0.084
T	0.20	0.25	0.30	0.008	0.010	0.012

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