



JIEJIE MICROELECTRONICS CO., LTD.

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 $\leq 1k\Omega$ is connected between Gate and Cathode. Without this resistor, the T_j is up to 110 only.

ELECTRICAL CHARACTERISTICS ($T_j=25$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12V$ $R_L=33\Omega$	-	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	$V_D=600V$ $T_j=125$ $R_{GK}=1k\Omega$	200	-	-	V/ μs
	$V_D=600V$ $T_j=125$ $R_{GK}=220\Omega$	500	-	-	
t_{on}	$I_G=10mA$ $I_A=20mA$ $I_R=2mA$	-	2	-	μs
t_{off}	$T_j=25$	-	50	-	μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_T=2A$ $t_p=380\mu s$	$T_j=25$	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
		$T_j=125$	0.2	mA

MARKING

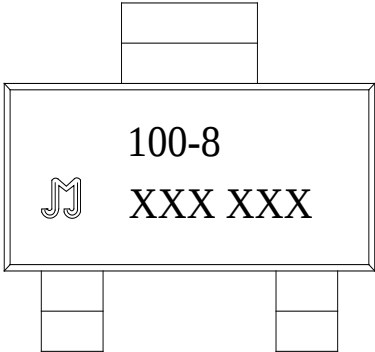
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FIG.1: Maximum power dissipation versus RMS on-state current

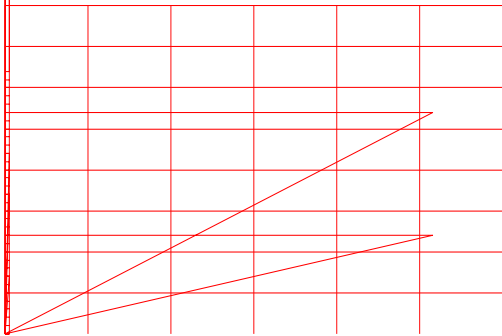


FIG.2: RMS on-state current versus case temperature0020406081121416002040608112P(W)IT (R

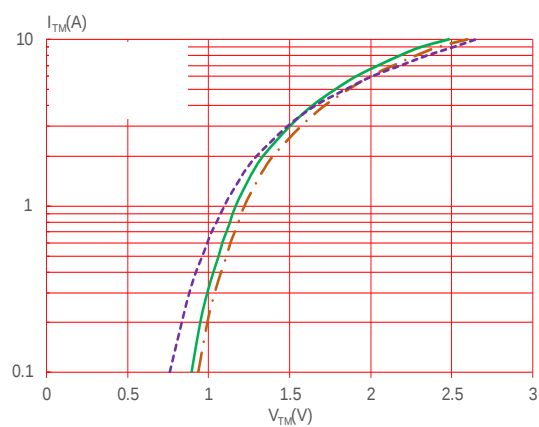
FIG.5: On-state characteristics**FIG.6:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$, and corresponding value of I^2t ($dI/dt < 100A/\mu s$)

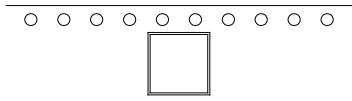
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.

ORDERING INFORMATION

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

Document Revision History

DELIVERY MODE



3
mm

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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