



JIEJIE MICROELECTRONICS CO., LTD.

MCR100-8 1A Sensitive SCR -84

ESdrCR100

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 1k 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}	$V_D=12V R_L=33$	-	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	$V_D=600V T_j=125 R_{GK}=1k$	200	-	-	V/ μs
	$V_D=600V T_j=125 R_{GK}=220$	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	
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	μA
		$T_j=125$	0.2	mA

MARKING

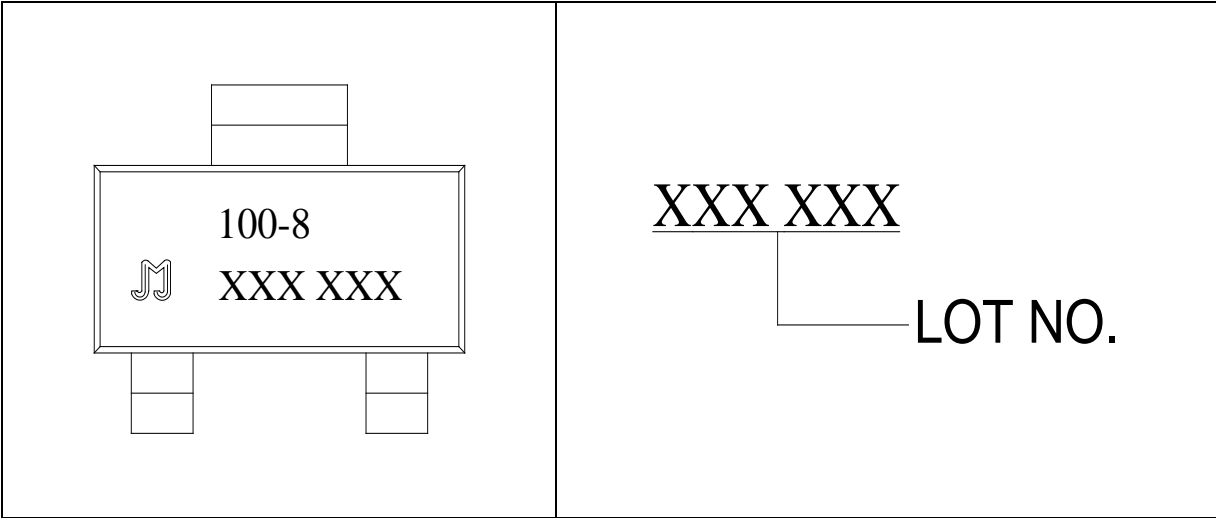


FIG.1: Maximum power dissipation versus RMS on-state current

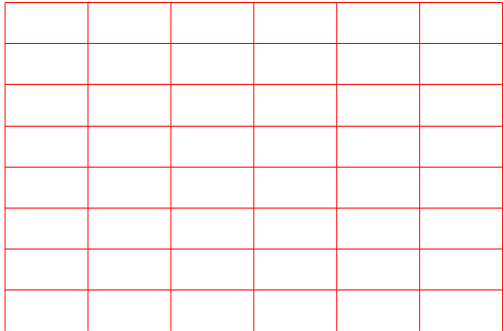


FIG.2: RMS on-state current versus case temperature

FIG.5: On-state characteristics

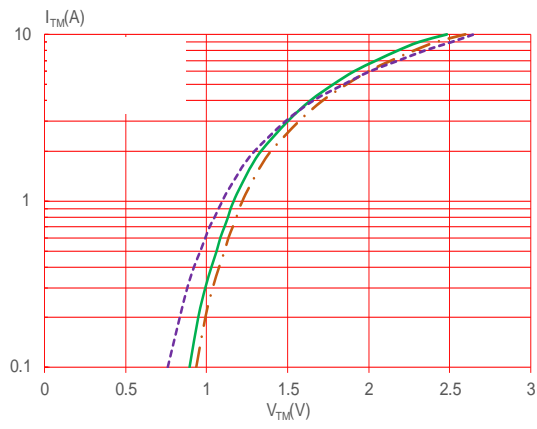


FIG.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t ($dI/dt < 100\text{A}/\mu\text{s}$)

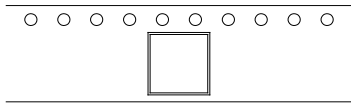
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.

ORDERING INFORMATION

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

Document Revision History

DELIVERY MODE



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

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document supersedes and replaces all information previously