MCR100-8 1A Sensitive SCR

Rev.A.1.1

DESCRIPTION:

The MCR100-8 SCR provides high dV/dt rate with strong resistance to electromagnetic interface. It is especially recommended for use on residual current circuit breaker, straight hair, igniter etc. Package SOT-223 is RoHS compliant.

MAIN F7L7(M)0R.

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	A
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 s
	V_D=600V T_j=125 R_{GK}=	500	-	-	
t_{on}	I_G=10mA I_A=20mA I_R=2mA T_j=25	-	2	-	s
t_{off}		-	50	-	s

MARKING

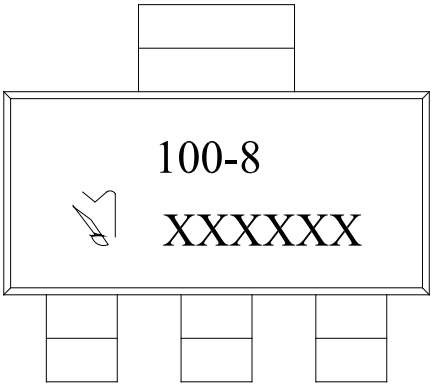


FIG.5: On-state characteristics

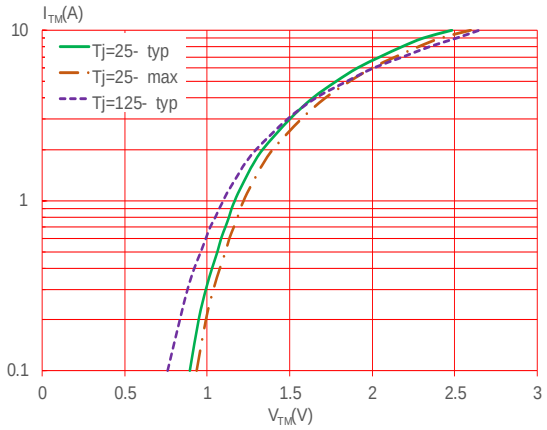


FIG.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width t_p<10ms, and corresponding value of I^2t (dI/dt<10

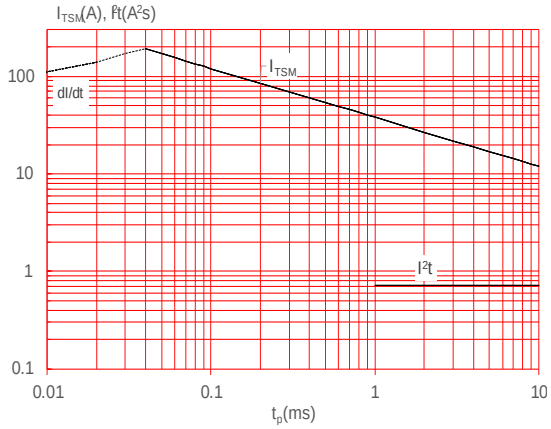


FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

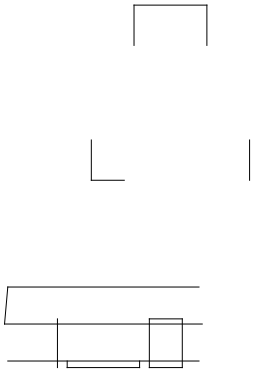
ORDERING INFORMATION

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

Document Revision History

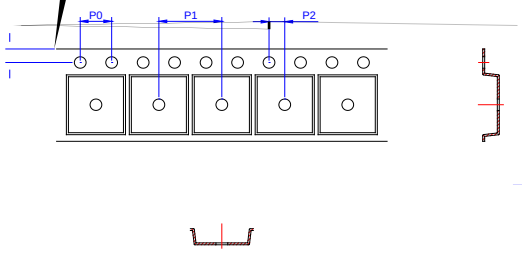
Date	Revision	Changes
May 19, 2023	A.1.0	Last update
Oct.23, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

PACKAGE MECHANICAL DATA 1 1



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		1.50				
		2.90				

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