



MCR100-8 0.8A Sensitive SCR

Rev.A.2.1

^ Z / W d / K E W

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. Complying with UL standards (File ref: E252906). Package TO-92 is RoHS compliant.

D / E & d h Z ^

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A

V_{DRM} / V_{RRM} 800 V M

Average gate power dissipation ($T_j=125^\circ\text{C}$)	$P_{G(AV)}$	0.1	W
Peak gate power	P_{GM}	2	W
Peak pulse voltage ($T_j=25^\circ\text{C}$; non-repetitive, off-state; FIG.7)	V_{pp}	1	kV

NOTE 1: Operating junction temperature T_j is up to 125°C when a resistor $\leq 1\text{k}\Omega$ is connected between Gate and Cathode. Without this resistor, the T_j is up to 110°C only.

> dZ/dt , Z d Z/dt unless otherwise specified •

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	$V_D=12\text{V}$ $R_L=33\Omega$	-	50	200	μA
V_{GT}		-	0.6	0.8	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C}$	0.2	-	-	V
I_L	$I_G=1.2 I_{GT}$	-	-	4	mA
I_H	$I_T=0.05\text{A}$	-	-	3	mA
dV/dt	$V_D=540\text{V}$ $T_j=125^\circ\text{C}$ $R_{GK}=1\text{k}\Omega$	200	-	-	$\text{V}/\mu\text{s}$
	$V_D=540\text{V}$ $T_j=125^\circ\text{C}$ $R_{GK}=220\Omega$	500	-	-	
t_{on}	$I_G=10\text{mA}$ $I_A=20\text{mA}$ $I_R=2\text{mA}$	-	2	-	μs
t_{off}	$T_j=25^\circ\text{C}$	-	50	-	μs

dV/dt , Z d Z/dt ^ dV/dt ^

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	$I_T=1\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.35	V
V_{TO}	Threshold voltage	$T_j=125^\circ\text{C}$	0.93	V
R_D	Dynamic Resistance	$T_j=125^\circ\text{C}$	0.34	Ω
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	2	μA
I_{RRM}		$T_j=125^\circ\text{C}$	0.2	mA

d , $Z_D > Z$ ^ / ^ dE ^

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	63	$^{\circ}\text{C}/\text{W}$
$R_{th(j-a)}$	junction to ambient (DC)	140	$^{\circ}\text{C}/\text{W}$

D Z < / E '

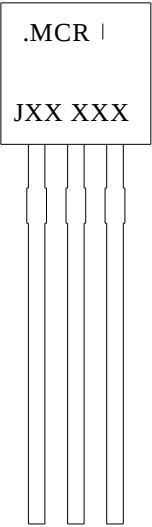


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t ($di/dt < 50\text{A}/\mu\text{s}$)

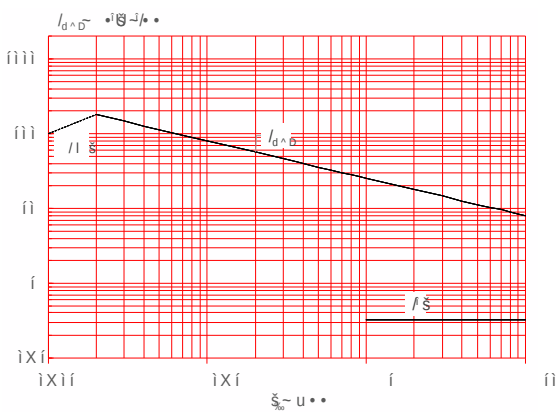


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

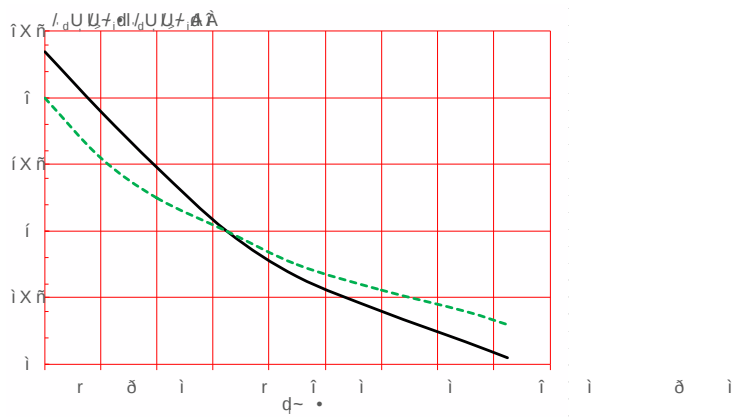


FIG.7 ÖTest circuit for inductive and resistive loads to IEC-61000-4-5 standards.



K Z Z / E ' / E & K Z D d / K E

Order code	Voltage V _{DRM} /V _{RRM} (V)	IGT(▷A)	Package	Base qty. (pcs)	Delivery mode
MCR100-8	800	0.200	TO-92	1,000	Bulk Pack
MCR100-8-TR				2,000	Tape & Reel

Document Revision History

Date	Revision	Changes
Apr.12, 2023	A.1.0	Last update
Mar.28, 2025	A.2.0	Renew PACKAGE MECHANICAL DATA
Sept.28, 2025	A.2.1	Revise PACKAGE MECHANICAL DATA

MCR100-8

> / s Z z D K

PACKAGE	OUTLINE	BAG (PCS)	INNER BOX (PCS)	CARTON BOX (PCS)
TO-92	Bulk Pack	1,000	10,000	50,000

P1	3.55	3.85	4.15
P2	5.95	6.35	6.75
, P	-1.00	0	1.00
F1 ÅF2	2.30	2.50	2.70
F1-F2	-0.10	0	0.10
W	17.50	18.00	19.00
W0	5.50	6.00	6.50
W1	8.50	9.00	9.50
W2			1.00
D0	3.80	4.00	4.20
, H	-1.00	0	1.00
L1	2.50		
H	18.00	19.00	20.00

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 supplied.



is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.
Copyright © 2025 Jiangsu JieJie Microelectronics Co., Ltd. All rights reserved.