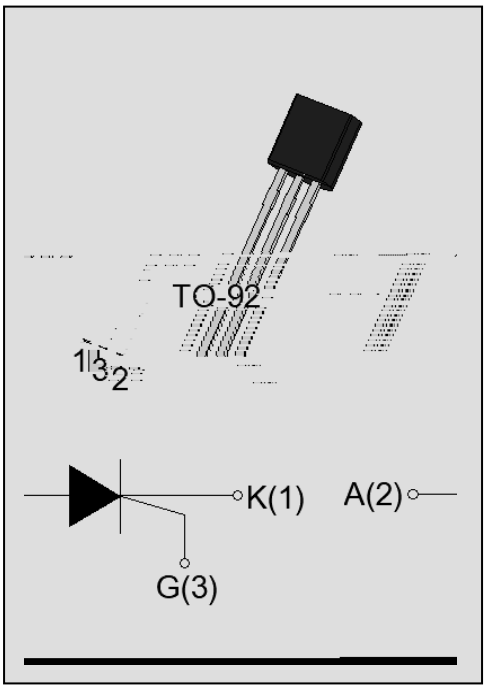
^ Z / W d / K E W

The MCR100-6 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
I_{GT}	≤200	μA

^ K h d D y / D h D Z d / E ' ^

Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-125 [7]	
Repetitive peak off-state voltage (T_j=25)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	800	V
Average on-state current (T_C 060)	$I_{T(AV)}$	0.5	A
RMS on-state current (T_C 060)	$I_{T(RMS)}$	0.8	A
Non repetitive surge peak on-state current (t_p=10ms , T_j=25)	I_{TSM}	8	A
Non repetitive surge peak on-state current (t_p=8.3ms , T_j=25)		9	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	0.32	A^2s
Critical rate of rise of on-state current (I_G=2 hI_{GT} , f=100Hz , T_j=125)	dI/dt	50	A/μs
Peak gate current (t_p=20μs, T_j=125)	I_{GM}	1	A

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

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.

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I_{GT}	V_D=12V R_L=33Ω	-	50	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}	-	-	4	mA
I_H	I_T=0.05A	-	-	3	mA

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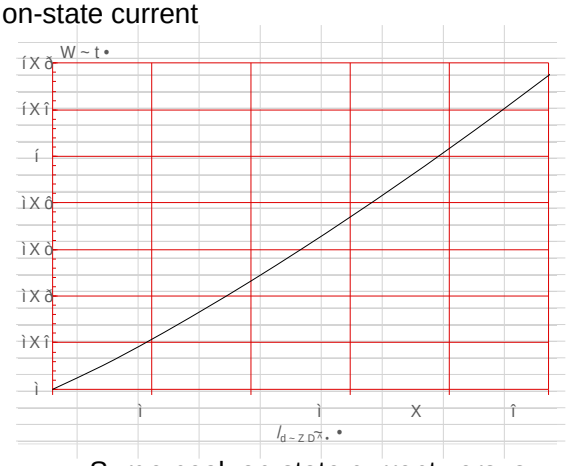
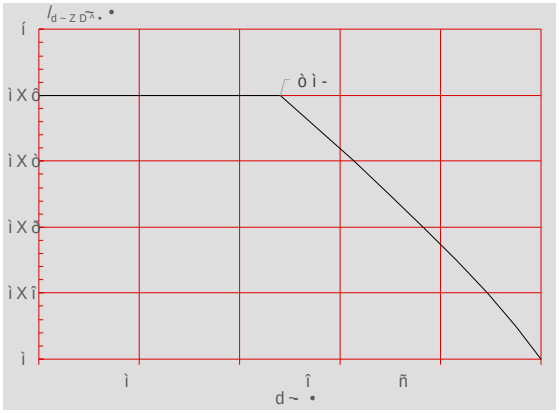
Maximum power dissipation versus RMS on-state current



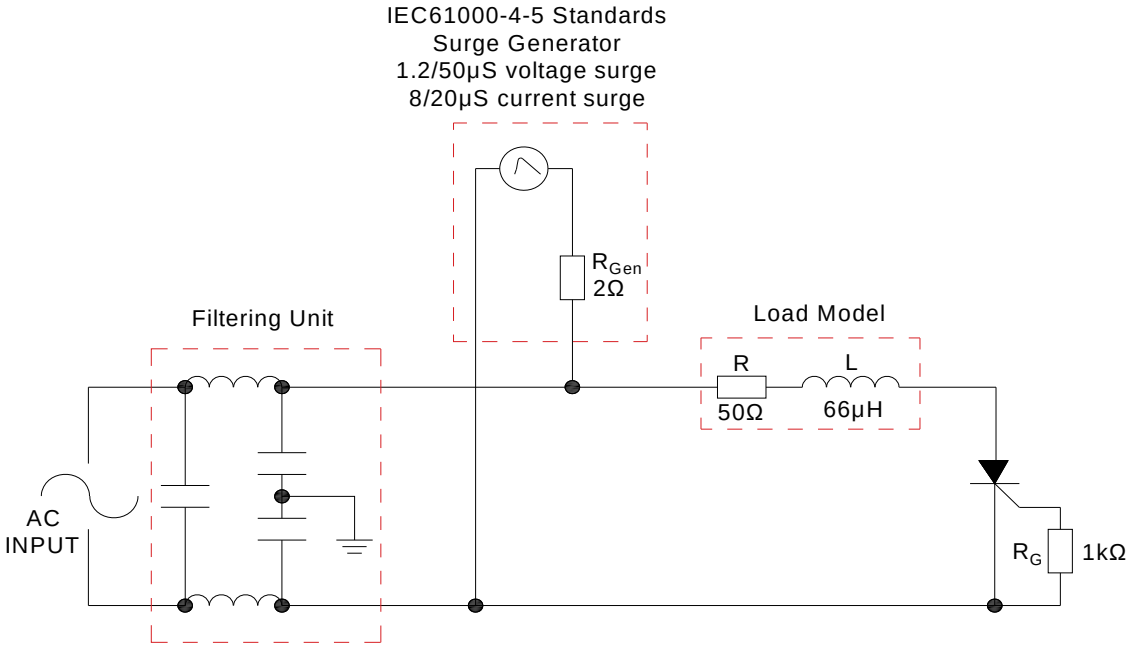
RMS on-state current versus case temperature



Surge peak on-state current versus number of cycles

On-state characteristics

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



> &KZD/E' E ^K> Z/E'

Refer to the application note “Assembly Instructions for Thyristors in Through-hole Package” released by JieJie D] Œ} o šŒ}v] •

Date	Revision	Changes
May.23, 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

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