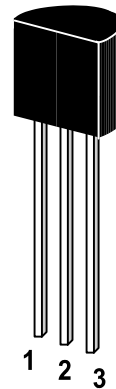
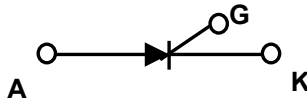


# MCR100-3 ... MCR100-8



1. Cathode 2. Gate 3. Anode

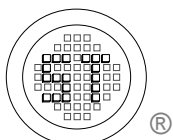
TO-92 Plastic Package  
Weight approx. 0.18g

## MAXIMUM RATINGS ( $T_J=25^\circ\text{C}$ unless otherwise noted.)

Rating	Symbol	Value	Unit
Peak Repetitive Forward and Reverse Blocking Voltage, Note 1 ( $T_J=25$ to $125^\circ\text{C}$ , $R_{GK}=1\text{K}\Omega$ )	MCR100-3 MCR100-4 MCR100-5 MCR100-6 MCR100-7 MCR100-8	$V_{\text{DRM}}$ and $V_{\text{RRM}}$	Volts
Forward Current RMS (All Conduction Angles)	$I_{\text{T(RMS)}}$	0.8	Amps
Peak Forward Surge Current, $T_A=25^\circ\text{C}$ (1/2 Cycle, Sine Wave, 60Hz)	$I_{\text{TSM}}$	10	Amps
Circuit Fusing ( $t=8.3\text{ms}$ )	$I^2t$	0.415	$\text{A}^2\text{s}$
Peak Gate Power - Forward, $T_A=25^\circ\text{C}$	$P_{\text{GM}}$	0.1	Watts
Average Gate Power - Forward, $T_A=25^\circ\text{C}$	$P_{\text{GF(AV)}}$	0.01	Watt
Peak Gate Current - Forward, $T_A=25^\circ\text{C}$ (300 $\mu\text{s}$ , 120PPS)	$I_{\text{GFM}}$	1	Amp
Peak Gate Voltage - Reverse	$V_{\text{GRM}}$	5	Volts
Operating Junction Temperature Range @ Rated $V_{\text{RRM}}$ and $V_{\text{DRM}}$	$T_J$	-40 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-40 to +150	$^\circ\text{C}$

Note 1. Ratings apply for zero or negative gate voltage; however, positive gate voltage shall not be applied concurrent with negative potential on the anode.

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# MCR100-3 ... MCR100-8

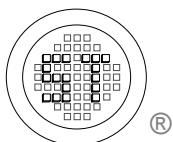
## CHARACTERISTICS (T<sub>c</sub>=25°C, R<sub>GK</sub>=1KΩ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
Peak Forward or Reverse Blocking Current (V <sub>AK</sub> =Rated V <sub>DRM</sub> or V <sub>RRM</sub> )	I <sub>DRM</sub> , I <sub>RRM</sub>	-	10	μA
Forward "On" Voltage (I <sub>TM</sub> =1A Peak @T <sub>A</sub> =25°C)	V <sub>TM</sub>	-	1.7	Volts
Gate Trigger Current(Continuous dc), Note 1 (Anode Voltage=7Vdc, R <sub>L</sub> =100 Ohms)	I <sub>GT</sub>	-	200	μA
Gate Trigger Voltage(Continuous dc) (Anode Voltage=7Vdc, R <sub>L</sub> =100 Ohms) (Anode Voltage=Rated V <sub>DRM</sub> , R <sub>L</sub> =100 Ohms)	V <sub>GT</sub>	-	0.8	Volts
Holding Current (Anode Voltage=7Vdc, initiating current=20mA)	I <sub>H</sub>	-	5	mA

Note 1. R<sub>GK</sub> current is not included in measurement.

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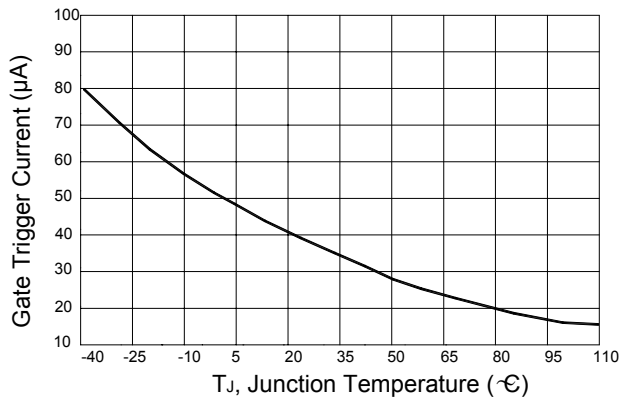


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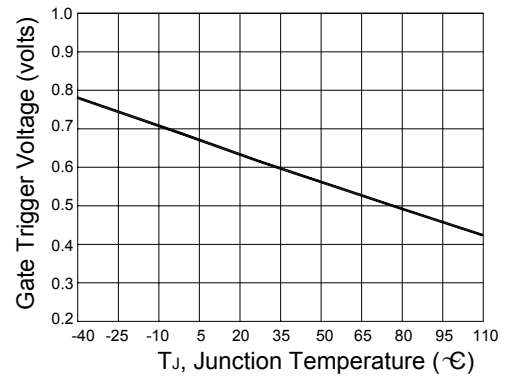


Dated : 06/12/2003

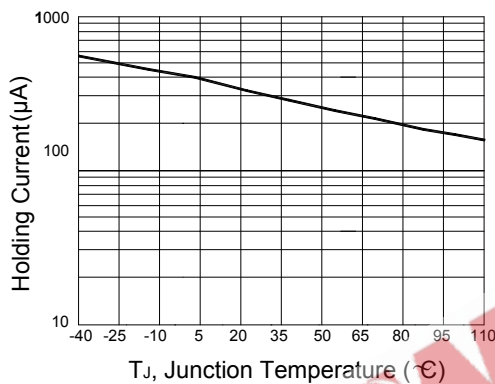
# MCR100-3 ... MCR100-8



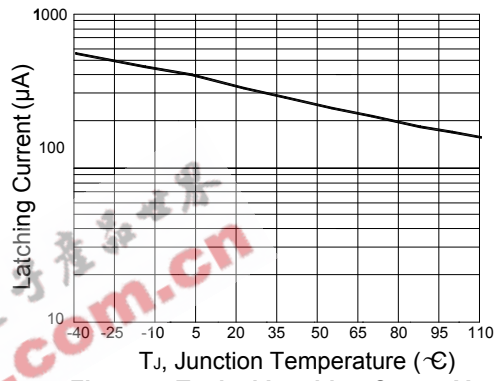
**Figure 1. Typical Gate Trigger Current Versus Junction Temperature**



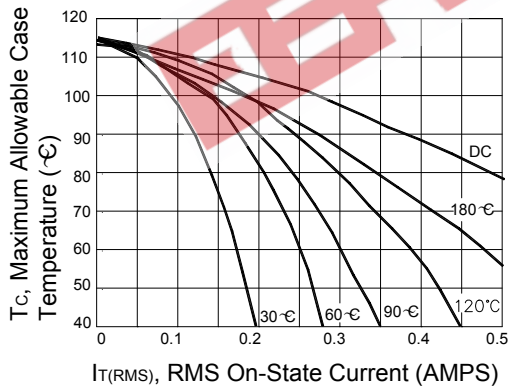
**Figure 2. Typical Gate Trigger Voltage Versus Junction Temperature**



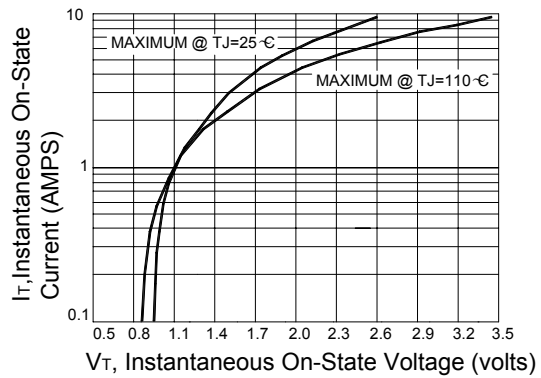
**Figure 3. Typical Holding Current Versus Junction Temperature**



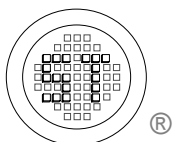
**Figure 4. Typical Latching Current Versus Junction Temperature**



**Figure 5. Typical RMS Current Derating**



**Figure 6. Typical On-State Characteristics**



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