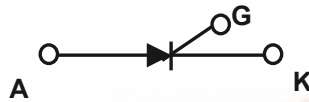


## MCR100-3 ... MCR100-8



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 $125^{\circ}\text{C}$ , $R_{GK}=1\text{K}\Omega$ )	$V_{\text{DRM}}$ and $V_{\text{RRM}}$	100 200 300 400 500 600	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.

GSP FORM A IS AVAILABLE

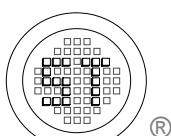
## MCR100-3 ... MCR100-8

### CHARACTERISTICS ( $T_c=25^{\circ}\text{C}$ , $R_{GK}=1\text{K}\Omega$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
Peak Forward or Reverse Blocking Current ( $V_{AK}=\text{Rated } V_{DRM} \text{ or } V_{RRM}$ )	$I_{DRM}, I_{RRM}$	-	10	$\mu\text{A}$
Forward "On" Voltage ( $I_{TM}=1\text{A Peak @ } T_A=25^{\circ}\text{C}$ )	$V_{TM}$	-	1.7	Volts
Gate Trigger Current(Continuous dc), Note 1 (Anode Voltage=7Vdc, $R_L=100 \text{ Ohms}$ )	$I_{GT}$	-	200	$\mu\text{A}$
Gate Trigger Voltage(Continuous dc) (Anode Voltage=7Vdc, $R_L=100 \text{ Ohms}$ ) (Anode Voltage=Rated $V_{DRM}$ , $R_L=100 \text{ Ohms}$ )	$V_{GT}$	-	0.8	Volts
Holding Current (Anode Voltage=7Vdc, initiating current=20mA)	$I_H$	-	5	mA

Note 1.  $R_{GK}$  current is not included in measurement.

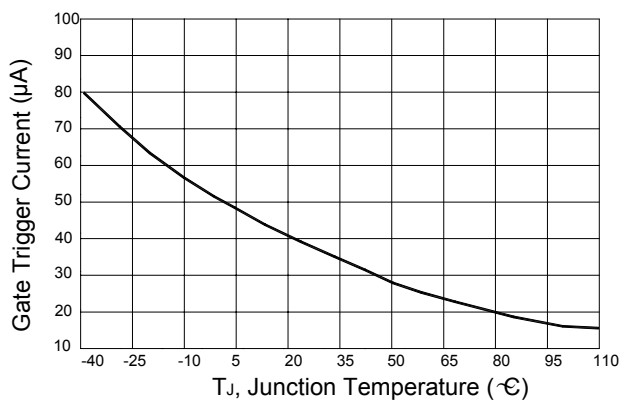
**GSP FORM A IS AVAILABLE**



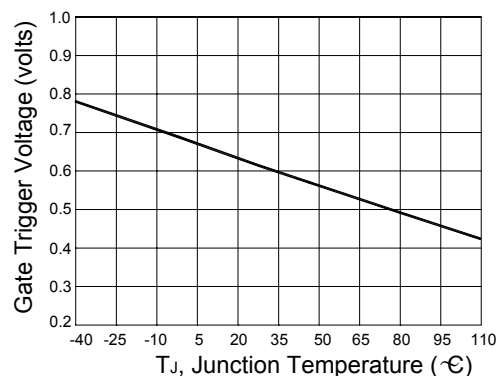
**SEMTECH ELECTRONICS LTD.** ( Wholly owned subsidiary of Honey Technology Ltd.)



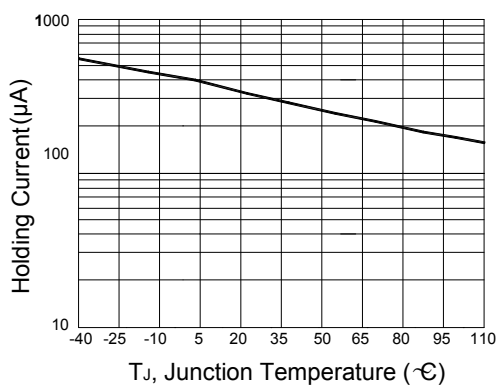
## MCR100-3 ... MCR100-8



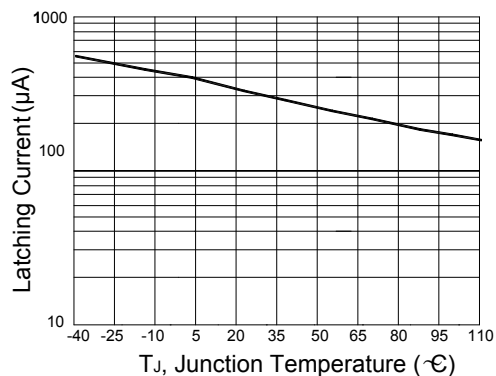
**Figure 1. Typical Gate Trigger Current Versus Junction Temperature**



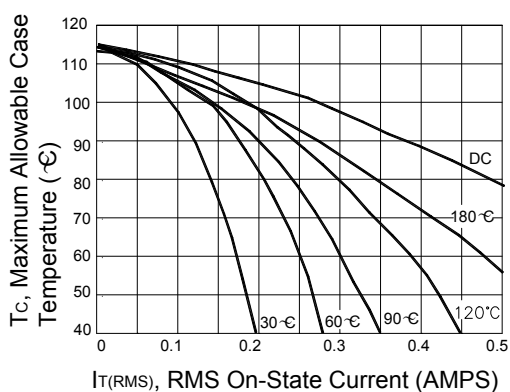
**Figure 2. Typical Gate Trigger Voltage Versus Junction Temperature**



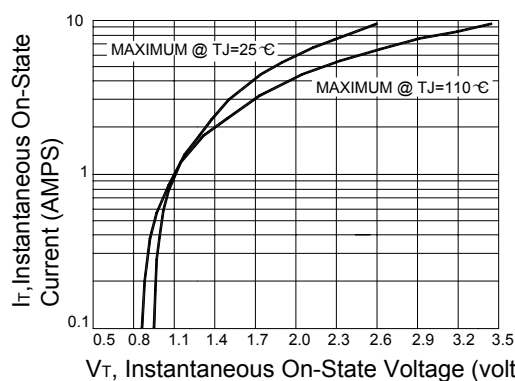
**Figure 3. Typical Holding Current Versus Junction Temperature**



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



**Figure 5. Typical RMS Current Derating**



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

