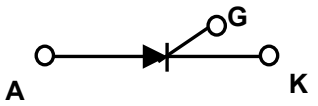
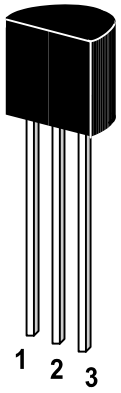
MCR100-3 … MCR100-8





1. Cathode 2. Gate 3. Anode

TO-92 Plastic Package
Weight approx. 0.18g

MAXIMUM RATINGS (T_J=25°C unless otherwise noted.)

Rating		Symbol	Value	Unit
Peak Repetitive Forward and Reverse Blocking Voltage, Note 1 (T_J=25 to 125°C, R_{GK}=1KΩ)	MCR100-3	V_{DRM} and V_{RRM}	100	Volts
	MCR100-4		200	
	MCR100-5		300	
	MCR100-6		400	
	MCR100-7		500	
	MCR100-8		600	
Forward Current RMS (All Conduction Angles)		$I_{T(RMS)}$	0.8	Amps
Peak Forward Surge Current, T_A=25°C (1/2 Cycle, Sine Wave, 60Hz)		I_{TSM}	10	Amps
Circuit Fusing (t=8.3ms)		I^2t	0.415	A^2s
Peak Gate Power - Forward, T_A=25°C		P_{GM}	0.1	Watts
Average Gate Power - Forward, T_A=25°C		$P_{GF(AV)}$	0.01	Watt
Peak Gate Current - Forward, T_A=25°C (300μs,120PPS)		I_{GFM}	1	Amp
Peak Gate Voltage - Reverse		V_{GRM}	5	Volts
Operating Junction Temperature Range @ Rated V_{RRM} and V_{DRM}		T_J	-40 to +125	°C
Storage Temperature Range		T_s	-40 to +150	°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

CHARACTERISTICS (T_C=25°C, R_{GK}=1KΩ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
Peak Forward or Reverse Blocking Current (V_{AK}=Rated V_{DRM} or V_{RRM})	I_{DRM},I_{RRM}	-	10	μA
Forward "On" Voltage (I_{TM}=1A Peak @T_A=25°C)	V_{TM}	-	1.7	Volts
Gate Trigger Current(Continuous dc),Note 1 (Anode Voltage=7Vdc,R_L=100 Ohms)	I_{GT}	-	200	μA
Gate Trigger Voltage(Continuous dc) (Anode Voltage=7Vdc,R_L=100 Ohms) (Anode Voltage=Rated V_{DRM},R_L=100 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

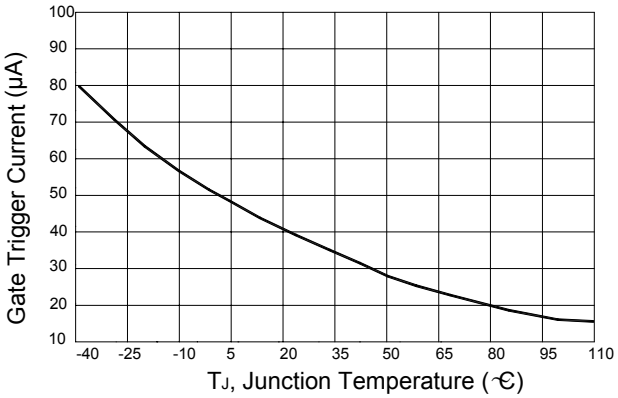


Figure 1. Typical Gate Trigger Curent Versus Junction Temperature

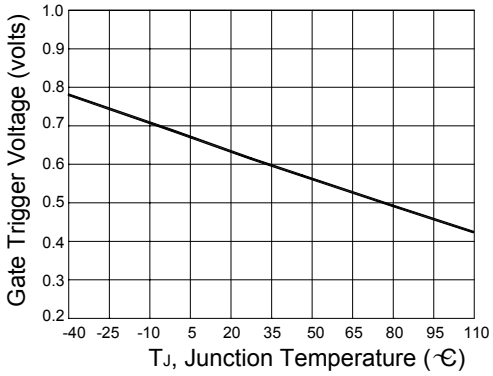


Figure 2. Typical Gate Trigger Voltage Versus Junction Temperature

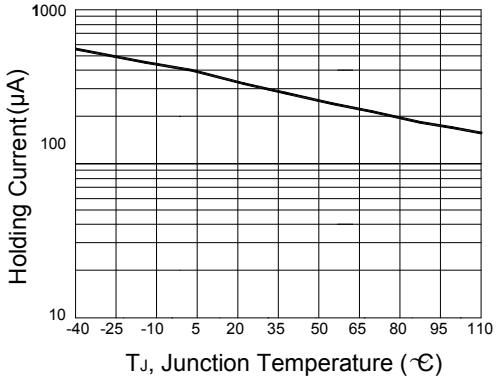


Figure 3. Typical Holding Curent Versus Junction Temperature

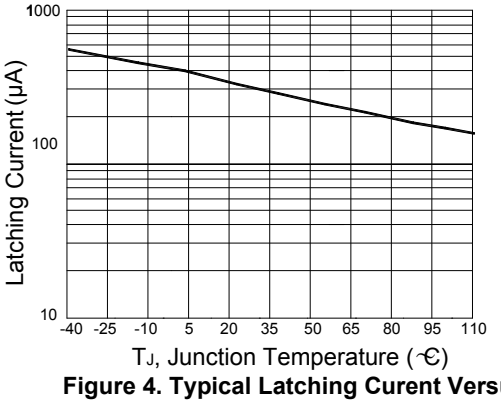


Figure 4. Typical Latching Curent Versus Junction Temperature

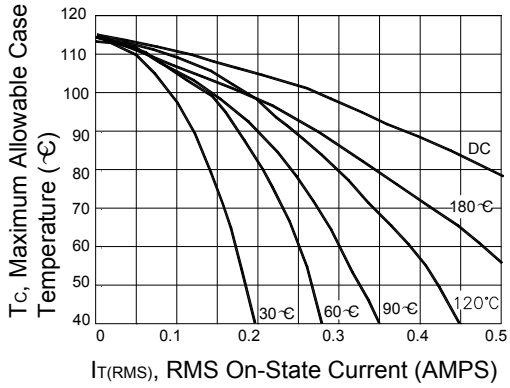


Figure 5. Typical RMS Current Derating

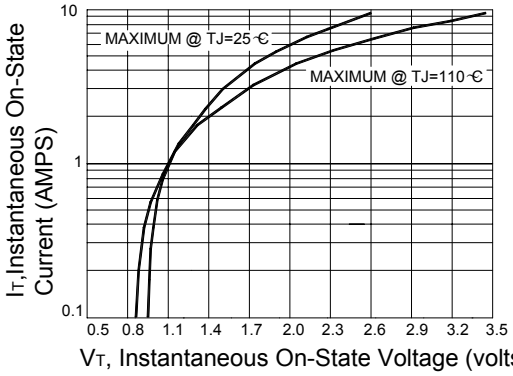


Figure 6. Typical On-State Characteristics