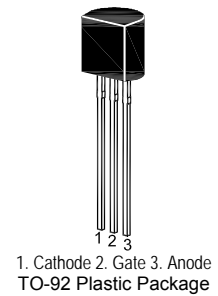
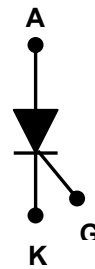


MCR100-3 ... MCR100-8



Absolute Maximum Ratings ($T_J = 25\text{ }^\circ\text{C}$ unless otherwise noted)

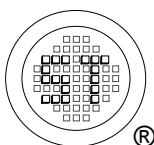
Parameter	Symbol	Value	Unit
Peak Repetitive Forward and Reverse Blocking Voltage ¹⁾ ($T_J = 25$ to $125\text{ }^\circ\text{C}$, $R_{GK} = 1\text{ K}\Omega$)	MCR100-3 MCR100-4 MCR100-5 MCR100-6 MCR100-7 MCR100-8	100 200 300 400 500 600	V
Forward Current RMS (All Conduction Angles)	$I_{T(RMS)}$	0.8	A
Peak Forward Surge Current, $T_A = 25\text{ }^\circ\text{C}$ (1/2 Cycle, Sine Wave, 60 Hz)	I_{TSM}	10	A
Circuit Fusing Considerations ($t = 8.3\text{ ms}$)	I^2t	0.415	A^2s
Forward Peak Gate Power ($T_A = 25\text{ }^\circ\text{C}$, $PW \leq 1\text{ }\mu\text{s}$)	P_{GM}	0.1	W
Forward Average Gate Power ($T_A = 25\text{ }^\circ\text{C}$)	$P_{GF(AV)}$	0.01	W
Forward Peak Gate Current ($T_A = 25\text{ }^\circ\text{C}$, $PW \leq 1\text{ }\mu\text{s}$)	I_{GFM}	1	A
Reverse Peak Gate Voltage ($T_A = 25\text{ }^\circ\text{C}$ $PW \leq 1\text{ }\mu\text{s}$)	V_{GRM}	5	V
Operating Junction Temperature Range at Rated V_{RRM} and V_{DRM}	T_j	- 40 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 40 to + 150	$^\circ\text{C}$

¹⁾ V_{DRM} and V_{RRM} for types can be applied on a continuous basis. Ratings apply for zero or negative gate voltage; however, positive gate voltage shall not be applied concurrent with negative potential on the anode. Blocking voltages shall not be tested with a constant current source such that the voltage ratings of the device are exceeded.

Characteristics at $T_a = 25\text{ }^\circ\text{C}$, $R_{GK} = 1\text{ K}\Omega$ unless otherwise noted.

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

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



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MCR100-3 ... MCR100-8

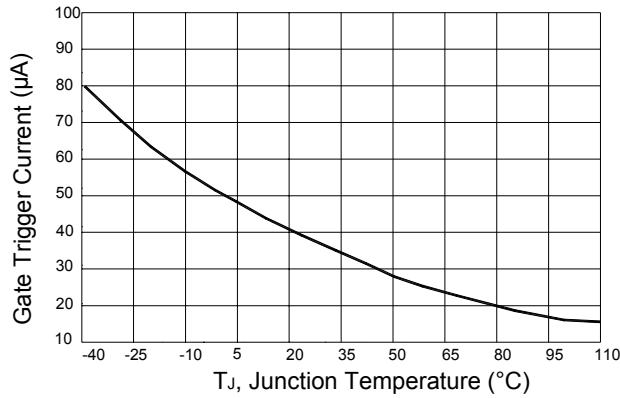


Figure 1. Typical Gate Trigger Current Versus Junction Temperature

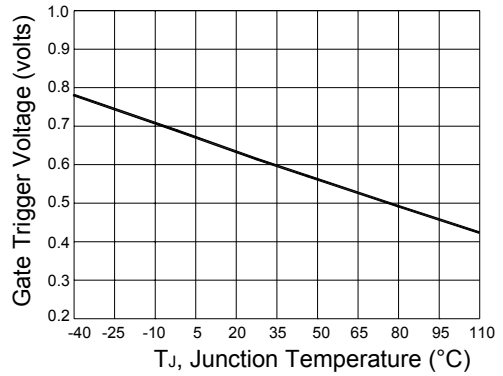


Figure 2. Typical Gate Trigger Voltage Versus Junction Temperature

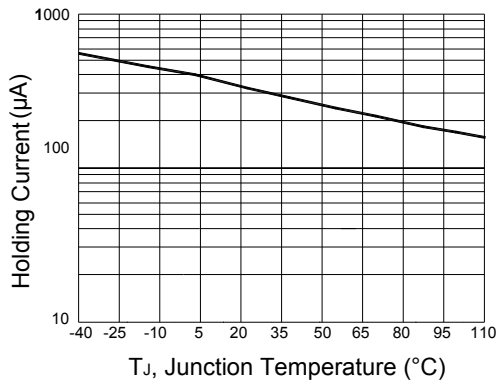


Figure 3. Typical Holding Current Versus Junction Temperature

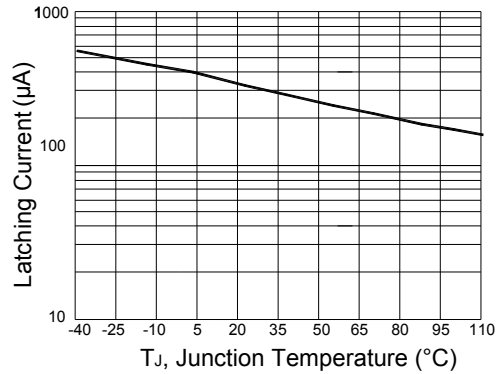


Figure 4. Typical Latching Current Versus Junction Temperature

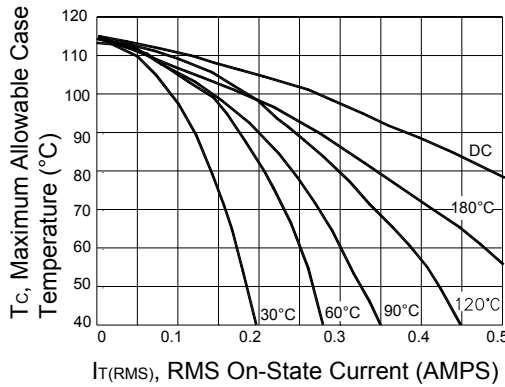


Figure 5. Typical RMS Current Derating

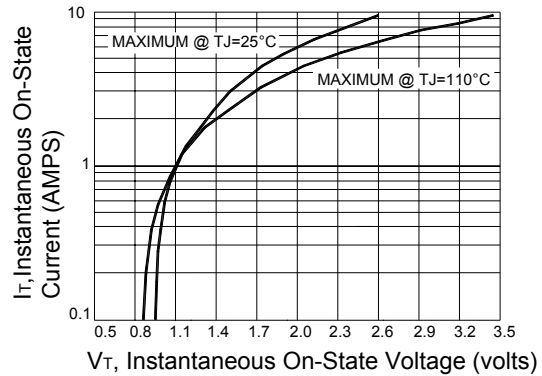
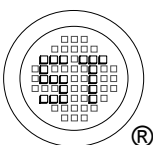


Figure 6. Typical On-State Characteristics



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