Silicon Controlled Rectifiers
Reverse Blocking Triode Thyristors

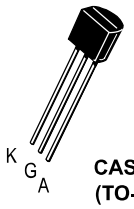
PNPN devices designed for high volume, line-powered consumer applications such as relay and lamp drivers, small motor controls, gate drivers for larger thyristors, and sensing and detection circuits. Supplied in an inexpensive plastic TO-226AA package which is readily adaptable for use in automatic insertion equipment.

- Sensitive Gate Trigger Current — 200 μA Maximum
- Low Reverse and Forward Blocking Current — 100 μA Maximum, T_C = 125°C
- Low Holding Current — 5 mA Maximum
- Glass-Passivated Surface for Reliability and Uniformity

MCR100 Series*

***Motorola preferred devices**

SCRs
0.8 AMPERE RMS
100 thru 600 VOLTS



CASE 29-04
(TO-226AA)
STYLE 10

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

Rating	Symbol	Value	Unit
Peak Repetitive Forward and Reverse Blocking Voltage(1) (T_J = 25 to 125°C, R_{GK} = 1 kΩ) MCR100-3 / MCR100-4 / MCR100-6 / MCR100-8	V_{DRM} and V_{RRM}	100 / 200 / 400 / 600	Volts
Forward Current RMS (See Figures 1 & 2) (All Conduction Angles)	$I_{T(RMS)}$	0.8	Amps
Peak Forward Surge Current, T_A = 25°C (1/2 Cycle, Sine Wave, 60 Hz)	I_{TSM}	10	Amps
Circuit Fusing Considerations (t = 8.3 ms)	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 (300 μs, 120 PPS)	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_{stg}	–40 to +150	°C
Lead Solder Temperature (< 1/16″ from case, 10 s max)	—	+230	°C

1. V_{DRM} and V_{RRM} for all 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 devices are exceeded.

Preferred devices are Motorola recommended choices for future use and best overall value.