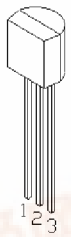
MICRO ELECTRONICS

MCR100-4A
MCR100-6A
MCR100-8A

0.8A SILICON CONTROLLED RECTIFIERS

* Driven directly with IC and MOS device.
* Feature proprietary, void-free glass passiviated chips.
* Available in voltage ratings from 100 to 600 volts (VDRM and VRRM)
* Sensitive gate trigger current.
* Designed for high volume, line-powered control application in relay lamp drivers, small motor controls, gate drivers for large thyristors.

TO-92



Pin 1 : Cathode
Pin 2 : Anode
Pin 3 : Gate

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	DEVICE NUMBERS		UNITS
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage and Tc=125°C	VDRM & VRRM	MCR100-4A MCR100-6A MCR100-8A	200 400 600	V V V
RMS On-State Current at Tc=50°C and Conduction Angle of 180°	IT (RMS)		0.8	A
Peak Surge (Non-Repetitive) On-State Current, One-Cycle, at 50Hz or 60Hz	ITSM		8	A
Peak Gate-Trigger Current for 3μ sec. Max.	IGTM		0.8	A
Peak Gate-Power Dissipaiton at IGT< or = IGTM	PGM		5	W
Average Gate-Power Dissipation	PG(AV)		0.2	W
Peak Off-State Current (1) Tc=25°C VDRM & VRRM = Max. Rating Tc=125°C	IDRM & IRRM		10 200	μA MAX
Maximum On-State Voltage. (Peak) at Tc=25°C and IT= Rated Amps	VTM		1.7	V MAX
DC Holding Current, (1) Tc=25°C	IHO		5	mA MAX
Critical Rate-Of-Rise of Off-State Voltage. (1) Gate Open, Tc=110°C	Critical dv/dt		5	V/μ sec
DC Gate-Trigger Current for Anode Voltage = 7V DC, RL = 100 ohm and at Tc=25°C	IGT		200	μA MAX
Storage Temperature Range	Tstg		-40 to +150	°C
Operating Temperature Range, Tj	Toper		-40 to +110	°C
DC Gate-Trigger Voltage for Anode Voltage = 7V DC RL=100ohm and at Tc=25°C	VGT		0.8	V MAX
Gate-Controlled Turn-on Time tD+tR IGT=10mA and Tc=25°C	Tgt		2.2	μ sec
Thermal Resistance, Junction-to-Case	RθJ-C		75	°C/W TYP

(1) RG-K = 1K ohm

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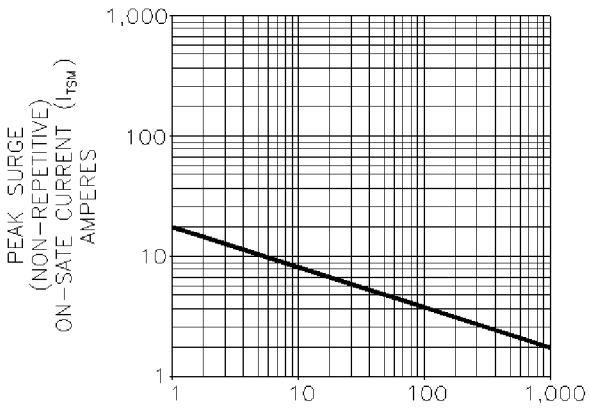
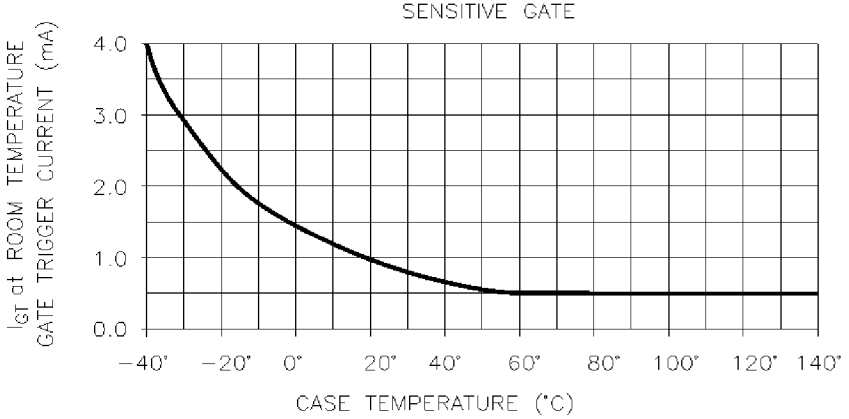
MCR100—4A 6A 8A

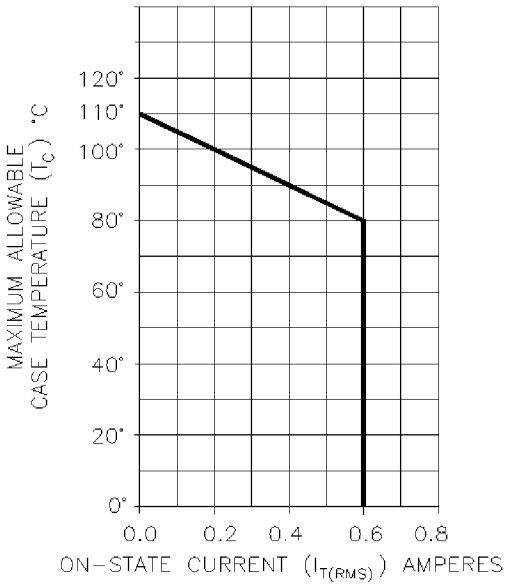
PEAK SURGE ON—STATE CURRENT
VS
SURGE CURRENT DURATION



TYPICAL GATE CURRENT
VS
CASE TEMPERATURE
SENSITIVE GATE



MAXIMUM ALLOWABLE CASE TEMPERATURE
VS
ON—STATE CURRENT



1. MEASURED AT HOTTEST POINT
2. WAVEFORM : SINUSOIDAL,
   50Hz to 60Hz 140°
3. 180° CONDUCTION

MAXIMUM CONDUCTION POWER DISSIPATION
VS
ON—STATE CURRENT