MCR100 Series

Sensitive Gate Silicon Controlled Rectifiers

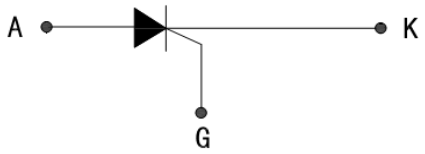
Reverse Blocking Thyristors

MT Semiconductor®

http://www.mtsemi.com

Glassivated PNPN devices designed for high volume consumer applications such as temperature, light, and speed control; process and remote control, and warning systems where reliability of operation is important.

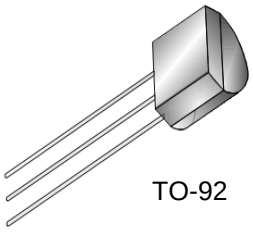
Simplified Schematic



Features

- Glassivated Surface for Reliability and Uniformity
- Power Rated at Economical Prices
- Practical Level Triggering and Holding Characteristics
- Flat, Rugged, Thermopad Construction for Low Thermal Resistance, High Heat Dissipation and Durability
- Sensitive Gate Triggering
- Pb−Free Packages are Available

MARKING DIAGRAM & PIN ASSIGNMENT



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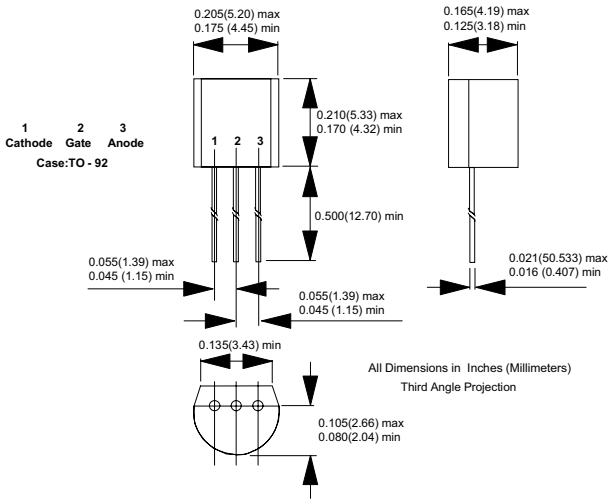
MAXIMUM RATINGS (Tj = 25 °C unless stated otherwise)						
Parameter	Symbol	MCR100-3	MCR100-4	MCR100-6	MCR100-8	Unit
Repetitive Peak Off-State Voltage	V_{RRM}	100	200	400	600	Volt
On-State RMS Current	$I_{T(RMS)}$	0.8 at tc = 85°C				Amp
Peak Non-Repetitive Surge Current	I_{TSM}	10				Amp
I^2T for Fusing 8.3ms	I^2T	0.415				A^2/S
Peak Reverse Gate Voltage	V_{GRM}	5				Volt
Peak Gate Current	I_{GM}	0.1				Amp
Forward Average Gate Power	$P_{G(AV)}$	0.1				Watt
Forward Peak Gate Power	P_{GM}	1.0				Watt
Maximum Storage Temperature Range	$T_{(STG)}$	-40 to +150				°C
Maximum Junction Temperature Range	Tj	-40 to +110				°C

ELECTRICAL CHARACTERISICS at Tj = 25° C Maximum. Unless stated Otherwise						
		Condition	Value			Unit
Parameter	Symbol		Min	Typ	Max	
Peak Forward On-State Voltage	V_{TM}	I_{TM} = 1.0 Amps			1.7	Volt
Repetitive Peak Reverse Current	I_{RRM}	$V_R = V_{RRM}$. t_J=110°C			100	
Gate Trigger Voltage	V_{GT}			0.62	0.80	Volt
Gate Trigger Current	I_{GT}			40	200	µA
Latch Current	I_L			0.60	10.0	mA
Holding Current	I_H			0.50	5.0	mA
Thermal Resistance (Junction to Case)	$R_{TH\ (J-c)}$				75	°C/W
Rate of Rise of Off-State Voltage	dV/dt		20	35		V/µS
Rate of Rise of Off-State Current	dA/dt				50	A/µS

Mechanical Outline



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