

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
<b>Peak off-state and reverse voltage</b>			
MCR201	$V_{DRM}, V_{RRM}$	15	Volts
MCR202		30	
MCR203		60	
MCR204		100	
MCR205		150	
MCR206		200	
<b>RMS on-state current (all conduction angles)</b>	$I_{T(RMS)}$	0.5	Amp
<b>Peak non-repetitive forward surge current</b> (1/2 cycle, sine wave, 60Hz)	$I_{TSM}$	6.0	Amp
<b>Circuit fusing considerations (t = 1.0 to 8.3ms)</b>	$I^2t$	0.15	A <sup>2</sup> s
<b>Peak forward gate power</b>	$P_{GM}$	0.1	Watt
<b>Average forward gate power</b>	$P_{GF(AV)}$	0.01	Watt
<b>Peak forward gate current (300μs, 120PPS)</b>	$I_{GFM}$	1.0	Amp
<b>Peak reverse gate voltage</b>	$V_{GRM}$	4.0	Volts
<b>Operating junction temperature range @ <math>V_{RRM}</math> and <math>V_{DRM}</math></b>	$T_J$	-65 to 125	°C
<b>Storage temperature range</b>	$T_{stg}$	-65 to 150	°C
<b>Thermal resistance, junction to case</b>	$R_{\theta JC}$	150	°C/W
<b>Thermal resistance, junction to ambient</b>	$R_{\theta JA}$	400	°C/W

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Min	Max	Unit
<b>Peak forward blocking current</b> Rated $V_{DRM}$ @ $T_C = 125^\circ\text{C}$	$I_{DRM}$	-	100	μA
<b>Peak reverse blocking current</b> Rated $V_{RRM}$ @ $T_C = 125^\circ\text{C}$	$I_{RRM}$	-	100	μA
<b>Peak on-state voltage</b> $I_{TM} = 1.2\text{A}$ peak, 1ms, duty cycle ≤ 1%	$V_{TM}$	-	1.7	Volts
<b>Gate trigger current (continuous dc)<sup>(1)</sup></b> Anode voltage = 7.0Vdc, $R_L = 100\text{ohms}$	$I_{GT}$	-	200	μA
		-	350	
<b>Gate trigger voltage (continuous dc)</b> Anode voltage = 7.0Vdc, $R_L = 100\text{ohms}$	$V_{GT}$	-	0.8	Volts
		-	1.2	
		0.1	-	
<b>Holding current</b> Anode voltage = 7.0Vdc, initiating current = 20mA)	$I_H$	-	5.0	mA
		-	10	

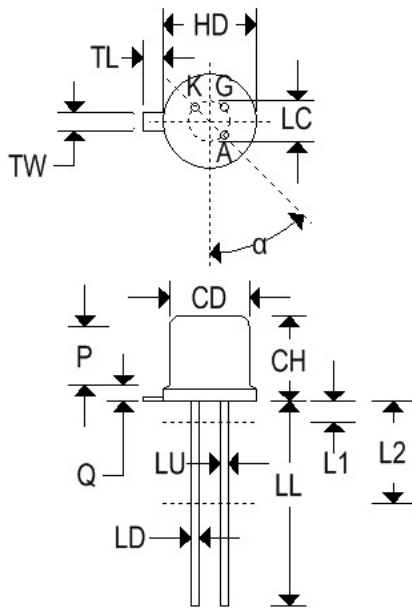
Note 1:  $I_{GK}$  current is not included in measurement.

# MCR201-MCR206

## SILICON CONTROLLED RECTIFIERS

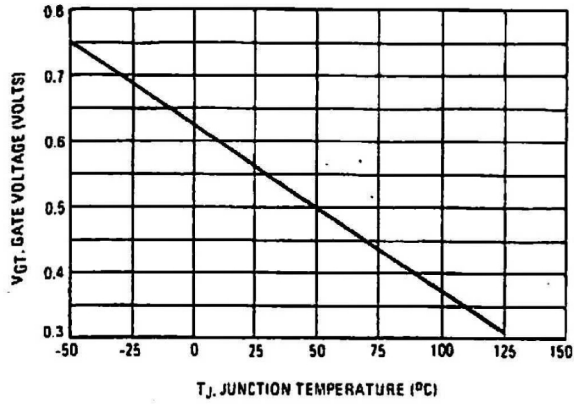
### MECHANICAL CHARACTERISTICS

Case	TO-18
Marking	Alpha-numeric
Pin out	See below

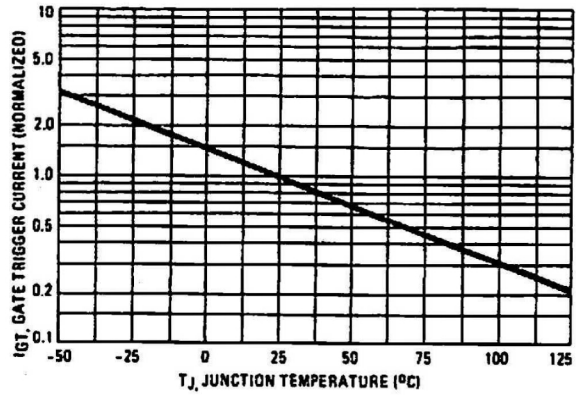


	TO-18			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.209	0.230	5.310	5.840
B	0.178	0.195	4.520	4.950
C	0.170	0.210	4.320	5.330
D	0.016	0.021	0.406	0.533
E	-	0.030	-	0.762
F	0.016	0.019	0.406	0.483
G	0.100 BSC		2.540 BSC	
H	0.036	0.046	0.914	1.170
J	0.028	0.048	0.711	1.220
K	0.500	-	12.700	-
L	0.250	-	6.350	-
M	45°C BSC		45° BSC	
N	0.050 BSC		1.270 BSC	
P	-	0.050	-	1.270

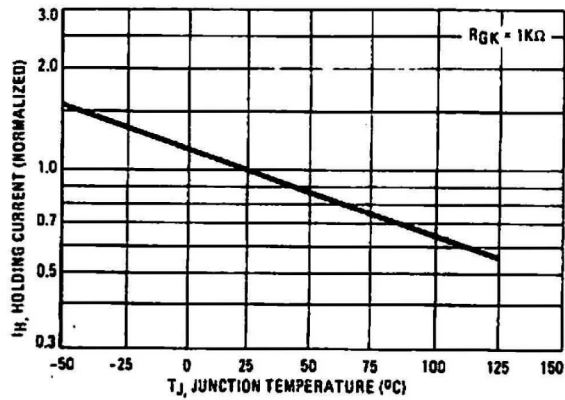
**FIGURE 7 – GATE TRIGGER VOLTAGE**



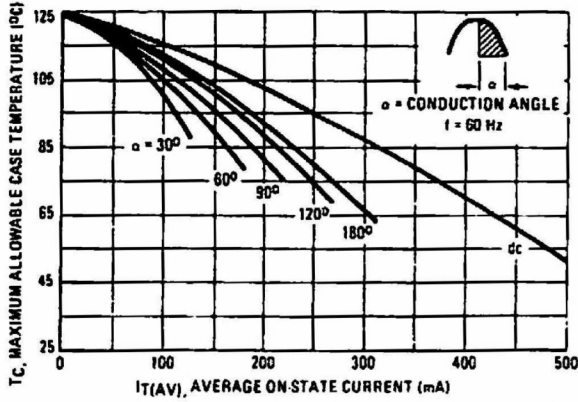
**FIGURE 8 – GATE TRIGGER CURRENT**



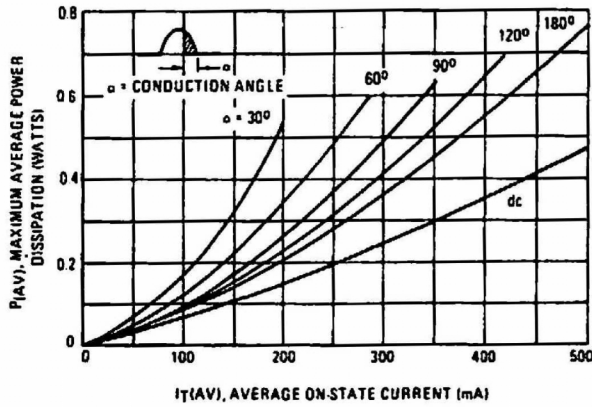
**FIGURE 9 – HOLDING CURRENT**



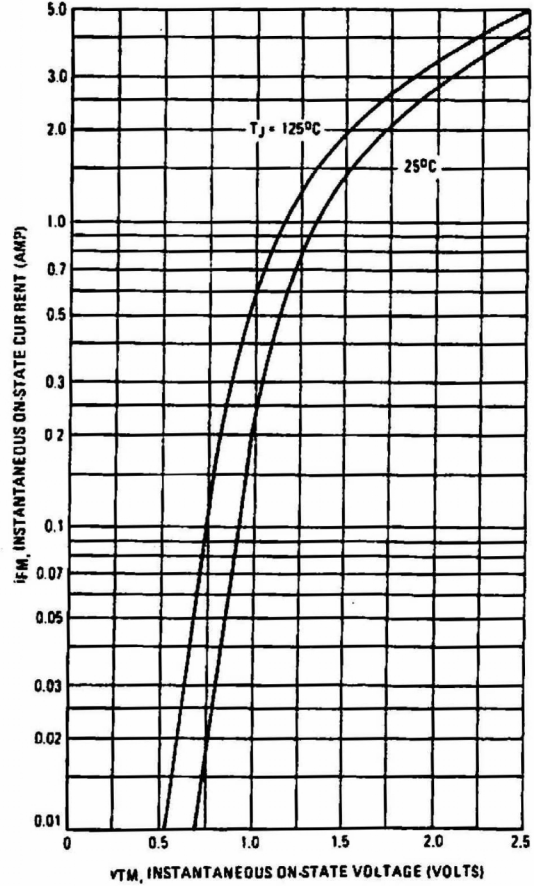
**FIGURE 1 – CURRENT DERATING  
(REFERENCE: CASE TEMPERATURE)**



**FIGURE 2 – POWER DISSIPATION**



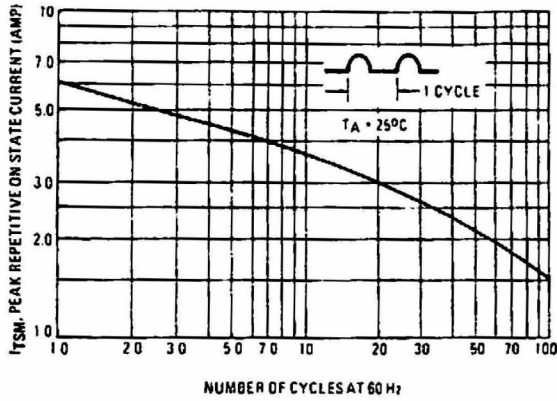
**FIGURE 3 – FORWARD VOLTAGE**



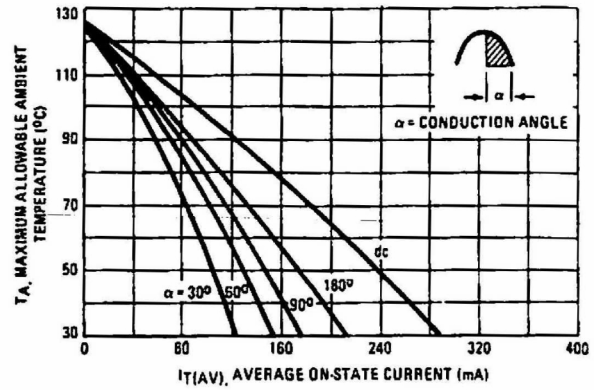
# MCR201-MCR206

## SILICON CONTROLLED RECTIFIERS

**FIGURE 4 – SURGE RATINGS**



**FIGURE 5 – CURRENT DERATING  
(REFERENCE: AMBIENT TEMPERATURE)**



**FIGURE 6 – THERMAL RESPONSE**

