

MCR106-6, MCR106-8

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	3.0	$^{\circ}C/W$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	75	$^{\circ}C/W$
Maximum Lead Temperature for Soldering Purposes 1/8" from Case for 10 Seconds	T_L	260	$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}C$ unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Peak Repetitive Forward or Reverse Blocking Current ($V_{AK} = \text{Rated } V_{DRM} \text{ or } V_{RRM}; R_{GK} = 1 \text{ k}\Omega$)	I_{DRM}, I_{RRM}	-	-	10	μA
$T_J = 25^{\circ}C$		-	-	200	μA
$T_J = 110^{\circ}C$		-	-		

ON CHARACTERISTICS

Peak Forward On-State Voltage (Note 3) ($I_{TM} = 4 \text{ A Peak}$)	V_{TM}	-	-	2.0	V
Gate Trigger Current (Continuous dc) (Note 4) ($V_{AK} = 7 \text{ Vdc}, R_L = 100 \Omega$) ($T_C = -40^{\circ}C$)	I_{GT}	-	-	200	μA
		-	-	500	
Gate Trigger Voltage (Continuous dc) (Note 4) ($V_{AK} = 7 \text{ Vdc}, R_L = 100 \Omega$)	V_{GT}	-	-	1.0	V
Gate Non-Trigger Voltage (Note 4) ($V_{AK} = 12 \text{ Vdc}, R_L = 100 \Omega, T_J = 110^{\circ}C$)	V_{GD}	0.2	-	-	V
Holding Current ($V_{AK} = 7 \text{ Vdc}, \text{Initiating Current} = 200 \text{ mA}, R_{GK} = 1 \text{ k}\Omega$)	I_H	-	-	5.0	mA

DYNAMIC CHARACTERISTICS

Critical Rate-of-Rise of Off-State Voltage ($T_J = 110^{\circ}C, R_{GK} = 1 \text{ k}\Omega$)	dv/dt	-	10	-	V/ μs
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3. Pulse Test: Pulse Width $\leq 1.0 \text{ ms}$, Duty Cycle $\leq 1\%$.

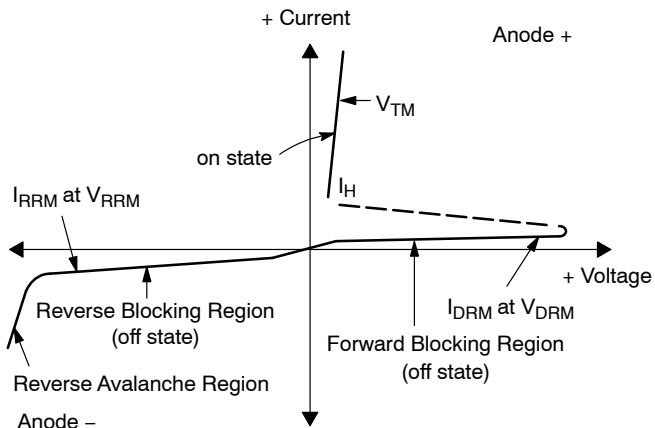
4. R_{GK} current is not included in measurement.

ORDERING INFORMATION

Device	Package	Shipping
MCR106-6	TO-225AA	500 Units / Box
MCR106-6G	TO-225AA (Pb-Free)	500 Units / Box
MCR106-8	TO-225AA	500 Units / Box
MCR106-8G	TO-225AA (Pb-Free)	500 Units / Box

Voltage Current Characteristic of SCR

Symbol	Parameter
V_{DRM}	Peak Repetitive Off State Forward Voltage
I_{DRM}	Peak Forward Blocking Current
V_{RRM}	Peak Repetitive Off State Reverse Voltage
I_{RRM}	Peak Reverse Blocking Current
V_{TM}	Peak On State Voltage
I_H	Holding Current



CURRENT DERATING

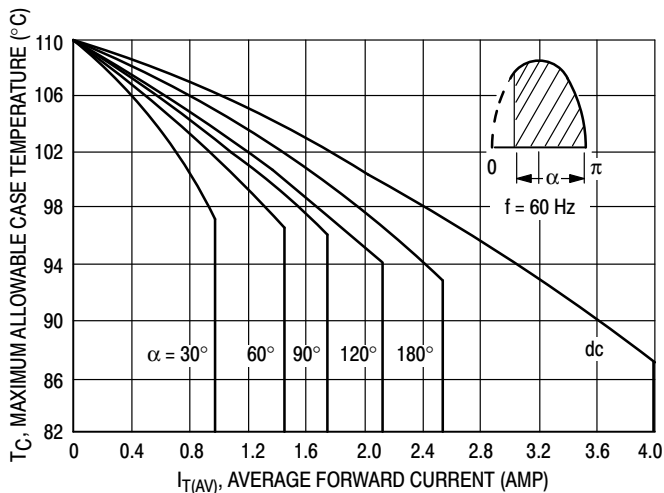


Figure 1. Maximum Case Temperature

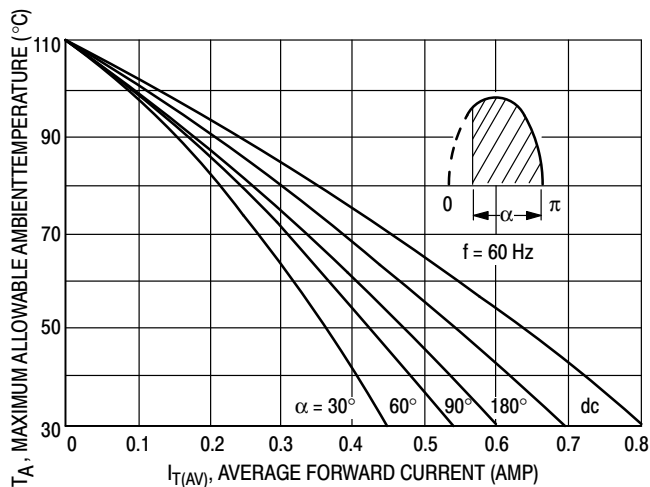
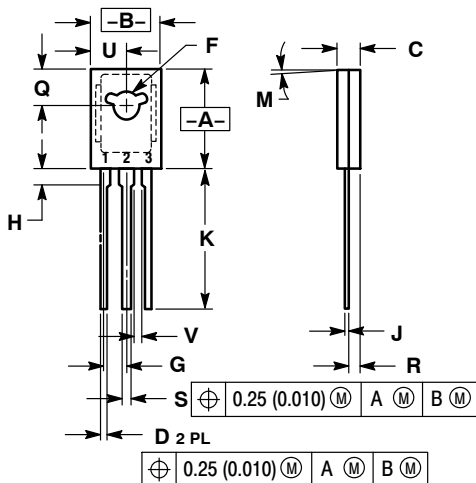


Figure 2. Maximum Ambient Temperature

MCR106-6, MCR106-8

PACKAGE DIMENSIONS

TO-225
CASE 77-09
ISSUE Z



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. 077-01 THRU -08 OBSOLETE, NEW STANDARD 077-09.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.425	0.435	10.80	11.04
B	0.295	0.305	7.50	7.74
C	0.095	0.105	2.42	2.66
D	0.020	0.026	0.51	0.66
F	0.115	0.130	2.93	3.30
G	0.094 BSC		2.39 BSC	
H	0.050	0.095	1.27	2.41
J	0.015	0.025	0.39	0.63
K	0.575	0.655	14.61	16.63
M	5° TYP		5° TYP	
Q	0.148	0.158	3.76	4.01
R	0.045	0.065	1.15	1.65
S	0.025	0.035	0.64	0.88
U	0.145	0.155	3.69	3.93
V	0.040	---	1.02	---

STYLE 2:

1. CATHODE
2. ANODE
3. GATE

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