MCR12LD, MCR12LM, MCR12LN

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction-to-Case Junction-to-Ambient	$\begin{array}{c} R_{\theta JC} \\ R_{\theta JA} \end{array}$	2.2 62.5	°C/W
Maximum Lead Temperature for Soldering Purposes 1/8" from Case for 10 Seconds	ΤL	260	°C

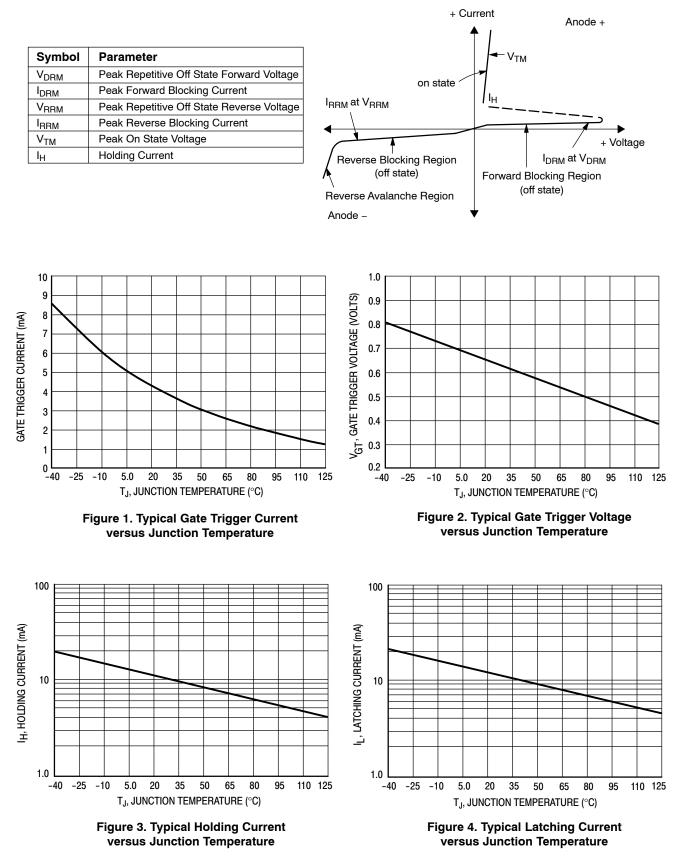
ELECTRICAL CHARACTERISTICS (T_J = 25° C unless otherwise noted)

Characteristic		Symbol	Min	Тур	Max	Unit
OFF CHARACTERISTICS		,		71	I	
Peak Repetitive Forward or Reverse Blocking Current (V _D = Rated V _{DRM} and V _{RRM} ; Gate Open)	$T_J = 25^{\circ}C$ $T_J = 125^{\circ}C$	I _{DRM} , I _{RRM}			0.01 2.0	mA
ON CHARACTERISTICS						
Peak Forward On-State Voltage (Note 2) (I _{TM} = 24 A)		V _{TM}	-	-	2.2	V
Gate Trigger Current (Continuous dc) $(V_D = 12 \text{ V}, \text{ R}_L = 100 \Omega)$		I _{GT}	2.0	4.0	8.0	mA
Holding Current (V _D = 12 V, Gate Open, Initiating Current = 200 mA)		I _H	4.0	10	20	mA
Latch Current (V _D = 12 V, Ig = 20 mA)		١L	6.0	12	30	mA
Gate Trigger Voltage (Continuous dc) $(V_D = 12 \text{ V}, \text{ R}_L = 100 \Omega)$		V _{GT}	0.5	0.65	0.8	V
DYNAMIC CHARACTERISTICS						
Critical Rate of Rise of Off–State Voltage $(V_D = Rated V_{DRM}, Exponential Waveform, Gate Open, T_J = 125^{\circ}$	C)	dv/dt	100	250	-	V/µs
Critical Rate of Rise of On–State Current IPK = 50 A; Pw = 40 μsec; diG/dt = 1 A/μsec, Igt = 50 mA		di/dt	-	-	50	A/μs

2. Indicates Pulse Test: Pulse Width \leq 1.0 ms, Duty Cycle \leq 2%.

MCR12LD, MCR12LM, MCR12LN

Voltage Current Characteristic of SCR



MCR12LD, MCR12LM, MCR12LN

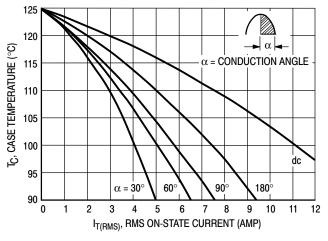


Figure 5. Typical RMS Current Derating

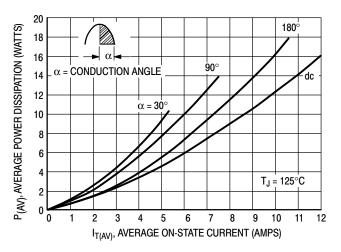


Figure 6. On-State Power Dissipation

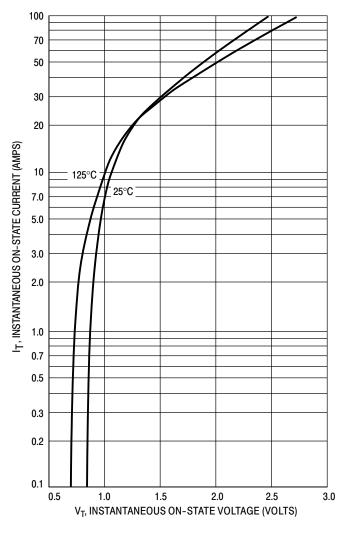


Figure 7. Typical On–State Characteristics

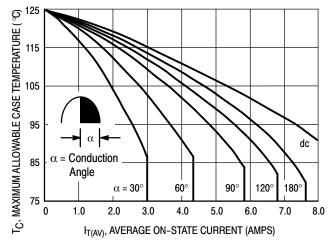
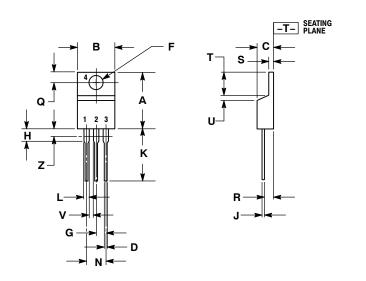


Figure 8. Average Current Derating

PACKAGE DIMENSIONS

TO-220 CASE 221A-09 ISSUE AF



Y14.5M, 1982. Controlling Dimension: Inch. Dimension z Defines a zone where Al Body and Lead Irregularities are Allowed.						
	INCHES		MILLIMETERS			
DIM	MIN	MAX	MAX			
Α	0.570	0.620	14.48	15.75		
В	0.380	0.405	9.66	10.28		
С	0.160	0.190	4.07	4.82		
D	0.025	0.035	0.64	0.88		
F	0.142	0.161	3.61	4.09		
G	0.095	0.105	2.42	2.66		
Н	0.110	0.155	2.80	3.93		
J	0.014	0.025	0.36	0.64		
κ	0.500	0.562	12.70	14.27		
Г	0.045	0.060	1.15	1.52		
N	0.190	0.210	4.83	5.33		
Q	0.100	0.120	2.54	3.04		
R	0.080	0.110	2.04	2.79		
S	0.045	0.055	1.15	1.39		
Т	0.235	0.255	5.97	6.47		
C	0.000	0.050	0.00	1.27		
٧	0.045		1.15			
Ζ		0.080		2.04		

NOTES: 1. DIMENSIONING AND TOLERANCING PER ANSI

Y14.5M, 1982.

2.

STYLE 3: PIN 1. CATHODE 2. ANODE 3. GATE 4. ANODE

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