



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

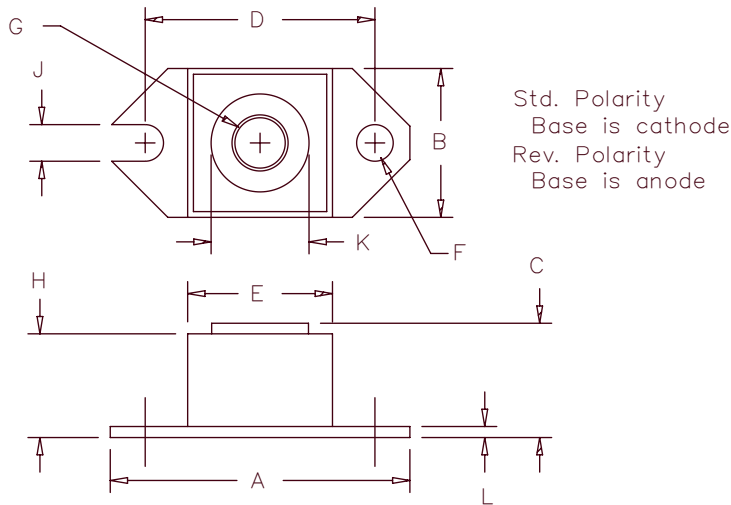
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



120 Amp Schottky Rectifier

HS12380–HS123100



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.52	1.56	38.61	39.62	
B	.725	.775	18.42	19.69	
C	.605	.625	15.37	15.88	
D	1.182	1.192	30.02	30.28	
E	.745	.755	18.92	19.18	Sq.
F	.152	.160	3.86	4.06	Dia.
G		1/4–20	UNC–2B		
H	.525	.580	13.34	14.73	
J	.156	.160	3.96	4.06	
K	.495	.505	12.57	12.83	Dia.
L	.120	.130	3.05	3.30	

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
HS12380*	123NQ080 MBR12080	80V	80V
HS12390*		90V	90V
HS123100*	123NQ100 MBR120100	100V	100V

*Add Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- 120 Amperes/80 to 100 Volts
- 175°C Junction Temperature
- Reverse Energy Tested
- ROHS Compliant

Electrical Characteristics

Average forward current	$I_F(AV)$ 120 Amps	$T_C = 112^\circ\text{C}$, Square wave, $R_{\theta JC} = 0.40^\circ\text{C/W}$
Maximum surge current	I_{FSM} 2000 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Maximum repetitive reverse current	$I_R(OV)$ 2 Amps	$f = 1\text{ KHZ}$, 25°C , 1 μsec square wave
Max peak forward voltage	V_{FM} .76 Volts	$I_{FM} = 120\text{A}; T_J = 125^\circ\text{C}^*$
Max peak forward voltage	V_{FM} 0.91 Volts	$I_{FM} = 120\text{A}; T_J = 25^\circ\text{C}^*$
Max peak reverse current	I_{RM} 75 mA	$V_{RRM}, T_J = 125^\circ\text{C}^*$
Max peak reverse current	I_{RM} 3.0 mA	$V_{RRM}, T_J = 25^\circ\text{C}$
Typical junction capacitance	C_J 3000 pF	$V_R = 5.0\text{V}, T_C = 25^\circ\text{C}$

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-55°C to 175°C
Operating junction temp range	T_J	-55°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	0.40°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.12°C/W Case to sink
Terminal Torque		35–40 inch pounds
Mounting Base Torque		20–25 inch pounds
Weight		1.1 ounces (32 grams) typical

HS12380 – HS123100

Figure 1
Typical Forward Characteristics

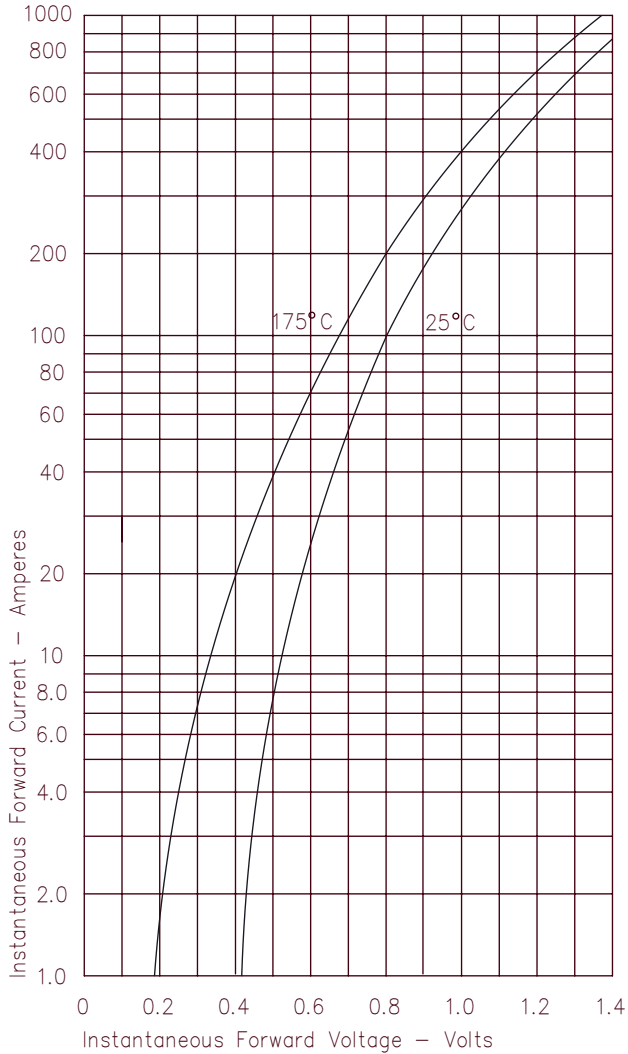


Figure 3
Typical Junction Capacitance

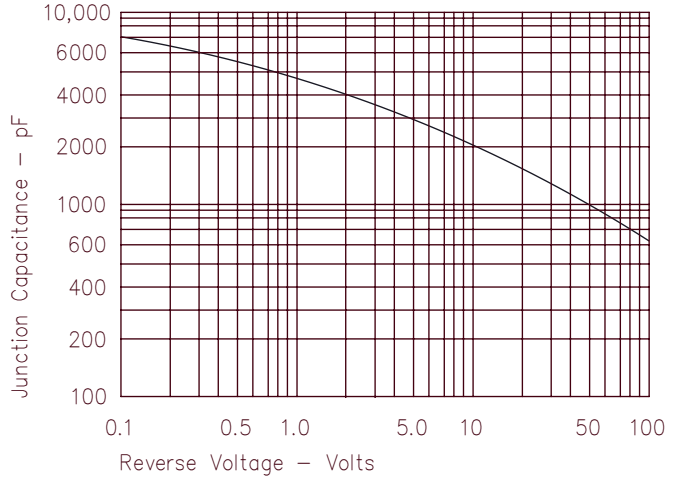


Figure 4
Forward Current Derating

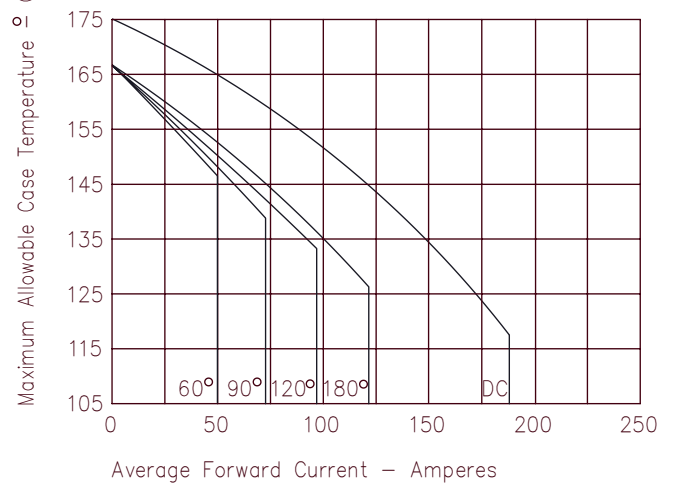


Figure 2
Typical Reverse Characteristics

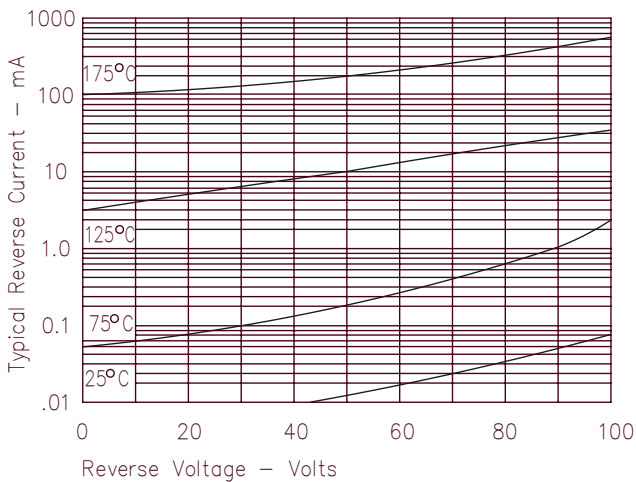
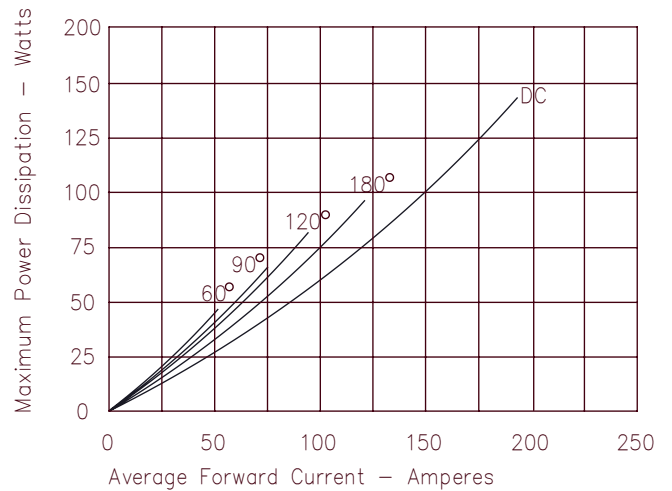


Figure 5
Maximum Forward Power Dissipation



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