



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

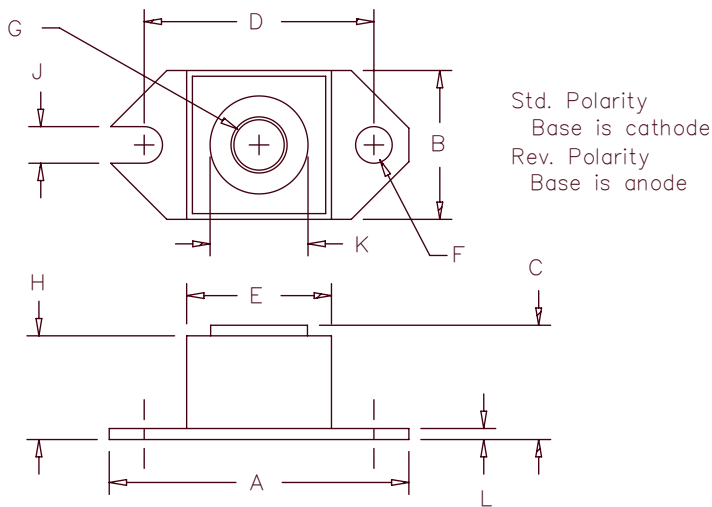
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120 Amp Schottky Rectifier HS12035 – HS12045



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
HS12035*	120NQ035 124NQ035 MBR12035	35V	35V
HS12040*	120NQ040 124NQ040 MBR12040	40V	40V
HS12045*	120NQ045 124NQ045 MBR12045	45V	45V

* Add Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- 120 Amperes/45 Volts
- 150°C Junction Temperature
- Reverse Energy Tested
- VRRM 35 – 45 Volts
- ROHS Compliant

Electrical Characteristics

Average forward current	$I_F(AV)$ 120 Amps	$T_C = 100^\circ C$, Square wave, $R_{\theta JC} = .40^\circ C/W$
Maximum surge current	I_{FSM} 2000 Amps	8.3ms, half sine, $T_J = 125^\circ C$
Maximum repetitive reverse current	$I_R(OV)$ 2 Amps	$f = 1$ KHZ, $25^\circ C$
Max peak forward voltage	V_{FM} 0.49 Volts	$I_{FM} = 120A$: $T_J = 125^\circ C^*$
Max peak forward voltage	V_{FM} 0.55 Volts	$I_{FM} = 120A$: $T_J = 25^\circ C^*$
Max peak reverse current	I_{RM} 2A	V_{RRM} , $T_J = 125^\circ C^*$
Max peak reverse current	I_{RM} 5mA	V_{RRM} , $T_J = 25^\circ C$
Typical junction capacitance	C_J 5500pF	$V_R = 5.0V$, $T_C = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $150^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $150^\circ C$
Max thermal resistance	$R_{\theta JC}$	$0.40^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.12^\circ C/W$ Case to sink
Terminal Torque		35–40 inch pounds
Mounting Base Torque		20–25 inch pounds
Weight		1.1 ounces (32 grams) typical

HS12035 — HS12045

Figure 1
Typical Forward Characteristics

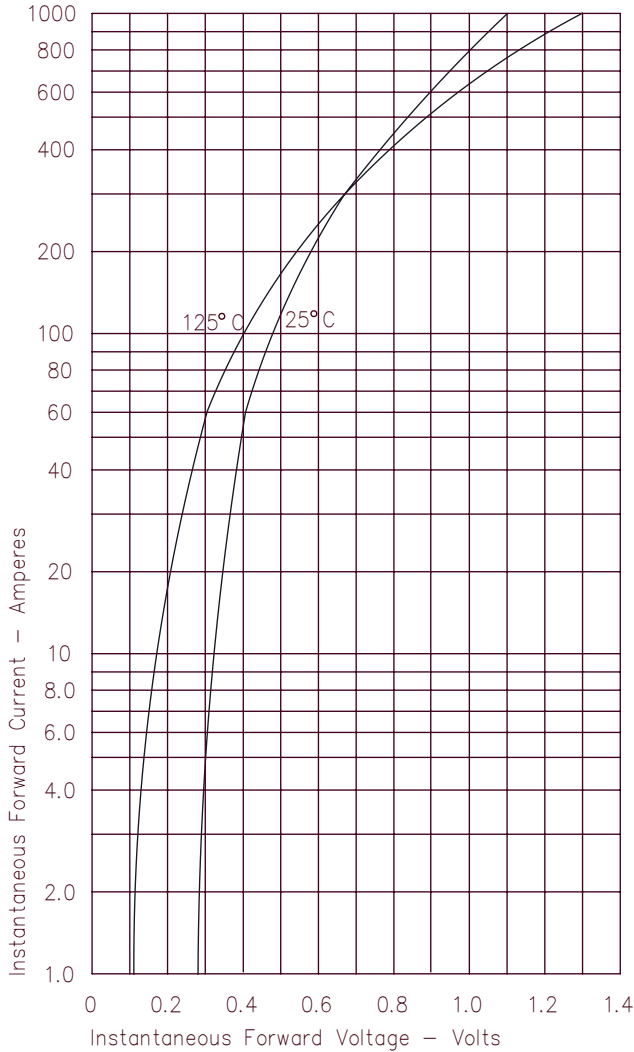


Figure 3
Typical Junction Capacitance

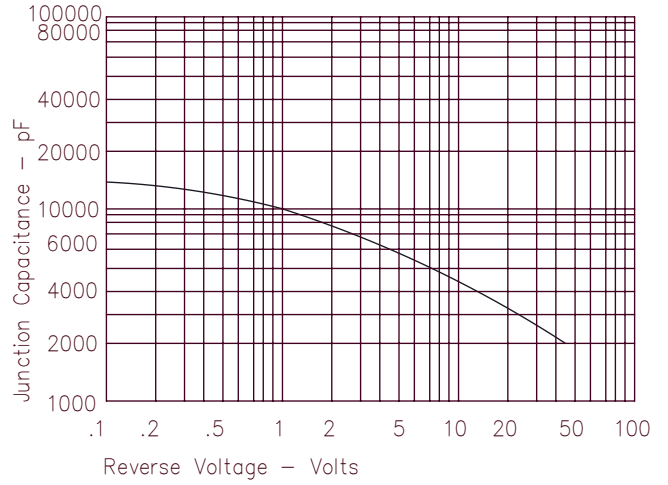


Figure 4
Forward Current Derating

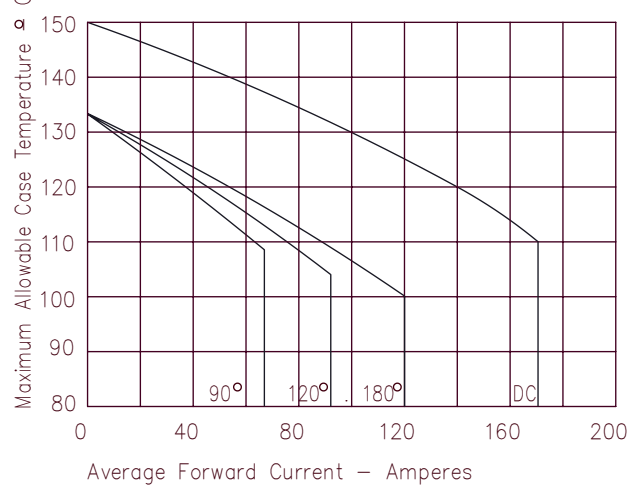


Figure 2
Typical Reverse Characteristics

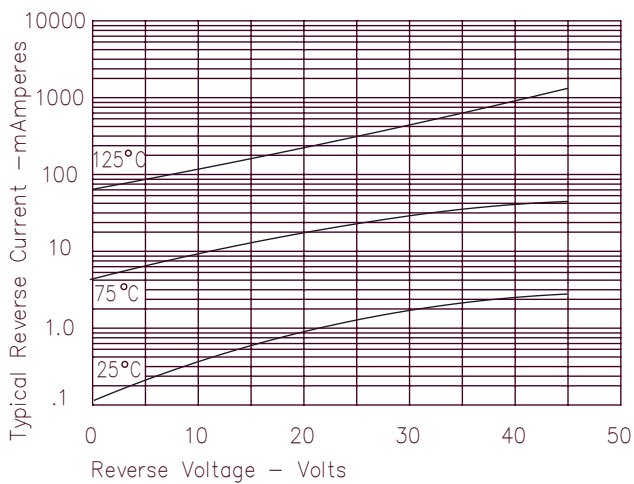
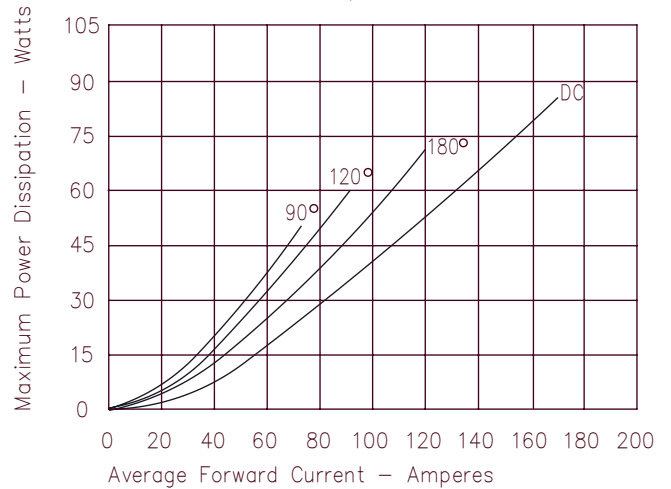


Figure 5
Maximum Forward Power Dissipation



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