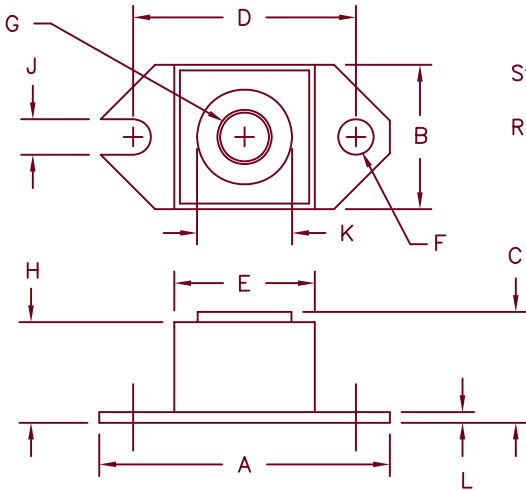


120 Amp Schottky Rectifier HS12230



Std. Polarity
Base is cathode
Rev. Polarity
Base is anode

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	.545	.555	13.84	14.10	
J	.156	.160	3.96	4.06	
K	.495	.505	12.57	12.83	Dia.
L	.120	.130	3.05	3.30	

HALF-PAK

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
HS12230*	122NQ030	30V	30V

*Add Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- 150°C Junction Temperature
- V_{RRM} 30 Volts
- Reverse Energy Tested

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 120 Amps	$T_C = 108^\circ\text{C}$, Square wave, $R_{\theta JC} = 0.4^\circ\text{C/W}$
Maximum surge current	I_{FSM} 2000 Amps	8.3ms, half sine, $T_J = 125^\circ\text{C}$
Maximum repetitive reverse current	$I_{R(OV)}$ 2 Amps	$f = 1 \text{ KHZ}$, $T_J = 25^\circ\text{C}$
Max peak forward voltage	V_{FM} 0.49 Volts	$I_{FM} = 120\text{A}$: $T_J = 125^\circ\text{C}^*$
Max peak forward voltage	V_{FM} 0.55 Volts	$I_{FM} = 120\text{A}$: $T_J = 25^\circ\text{C}^*$
Max peak reverse current	I_{RM} 2.0 Amp	V_{RRM} , $T_J = 125^\circ\text{C}^*$
Max peak reverse current	I_{RM} 5mA	V_{RRM} , $T_J = 25^\circ\text{C}$
Typical junction capacitance	C_J 5500pF	$V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$, $f = 1\text{MHz}$

*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 150°C
Max thermal resistance	$R_{\theta JC}$	0.4°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



8700 East Thomas Road, P.O. Box 1390
Scottsdale, AZ 85252
PH: (480) 941-6300
FAX: (480) 947-1503
www.microsemi.com

05-10-07 Rev. 3

HS12230

Figure 1
Typical Forward Characteristics

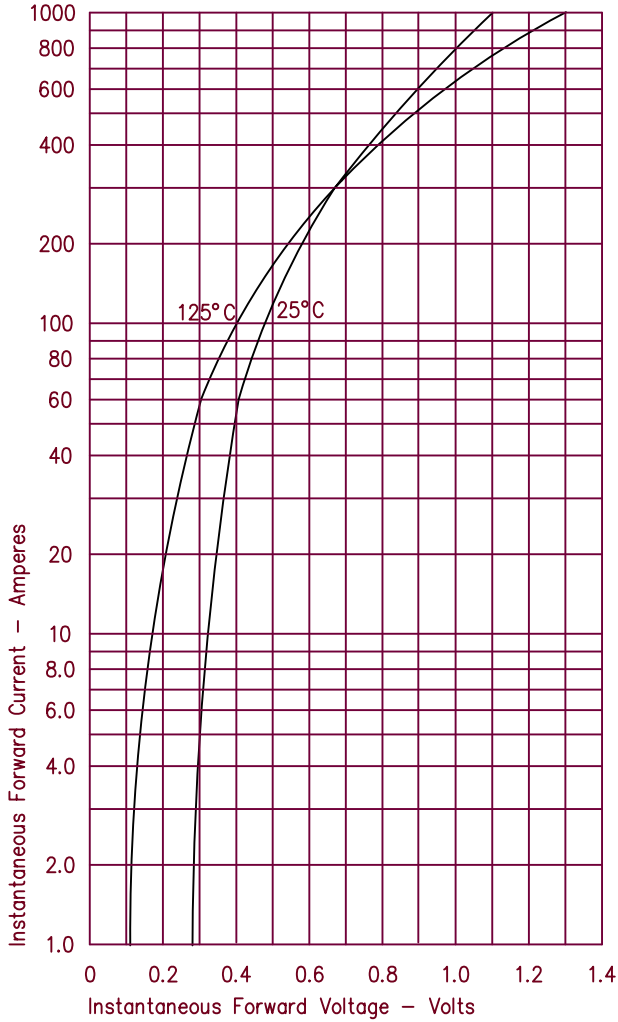


Figure 3
Typical Junction Capacitance

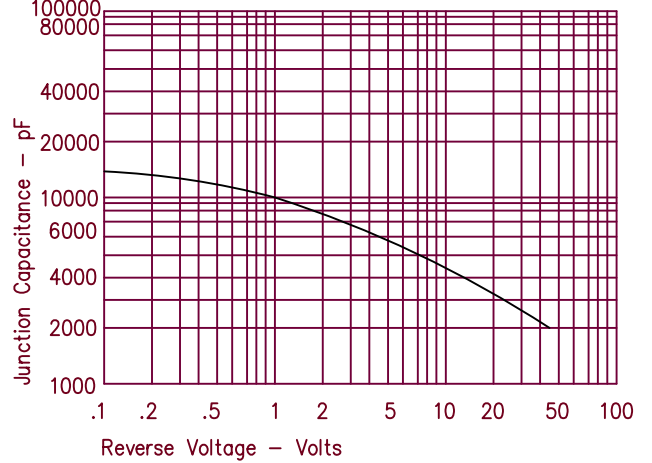


Figure 4
Forward Current Derating

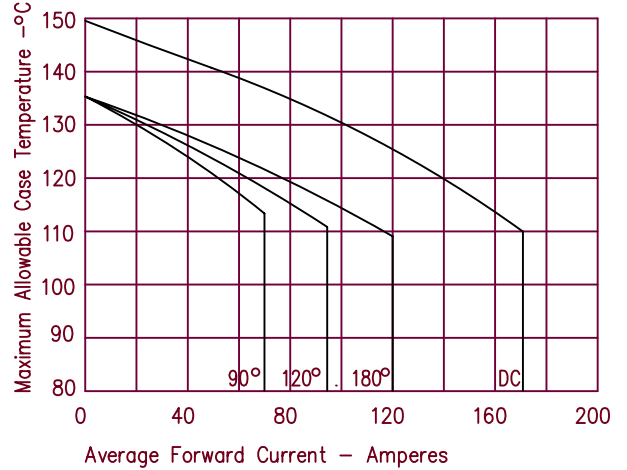


Figure 2
Typical Reverse Characteristics

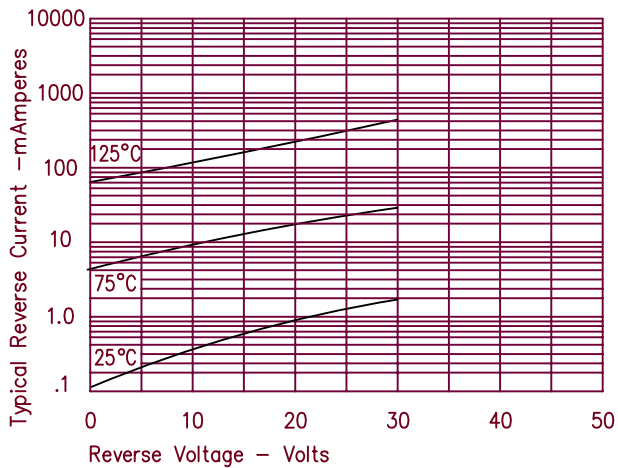


Figure 5
Maximum Forward Power Dissipation

