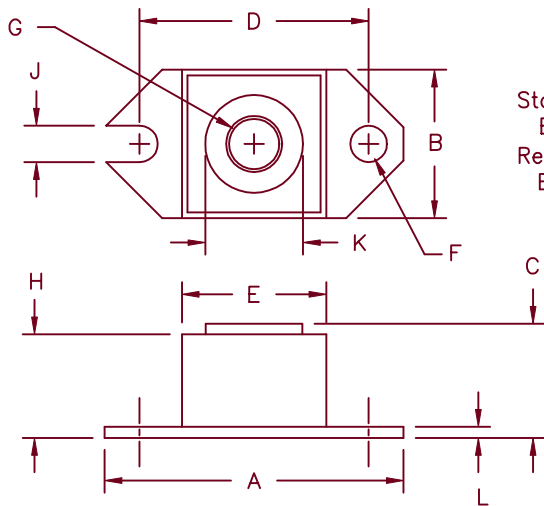


180 Amp Schottky OR'ing Rectifier HS18515



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

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.52	1.56	38.86	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. Dia.
F	.152	.160	3.86	4.06	
G			1/4-20 UNC-2B		
H	.570	.580	14.49	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
HS18515*	185NQ015	15V	15V

*Add Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard ring reverse protection
- Optimized for OR'ing applications
- 125°C Operation ($V_r < 5V$)
- 0.29V $V_f @ 180A, 100^\circ C$

Electrical Characteristics

Average forward current	$I_F(AV)$ 180 Amps	$T_C = 80^\circ C, V_r = 5V$
Average forward current	$I_F(AV)$ 180 Amps	$T_C = 71^\circ C, V_r = 15V$
Maximum surge current	I_{FSM} 2500 Amp	8.3 ms, half sine $T_J = 100^\circ C$
Max repetitive peak reverse current	$I_R(OV)$ 2 Amps	$f = 1\text{ KHz}, 25^\circ C, 1\ \mu\text{sec square wave}$
Max peak forward voltage	V_{FM} 0.36 Volts	$I_{FM} = 180A: T_J = 25^\circ C^*$
Max peak forward voltage	V_{FM} 0.29 Volts	$I_{FM} = 180A: T_J = 100^\circ C^*$
Max peak reverse current	I_{RM} 2700 mA	$V_R = 5.0V, T_J = 100^\circ C^*$
Max peak reverse current	I_{RM} 5000 mA	$V_{RRM}, T_J = 100^\circ C^*$
Max peak reverse current	I_{RM} 50 mA	$V_R = 5.0V, T_J = 25^\circ C$
Max peak reverse current	I_{RM} 100 mA	$V_{RRM}, T_J = 25^\circ C$
Typical junction capacitance	C_J 14300 pF	$V_R = 5.0V, T_J = 25^\circ C$

*Pulse test: Pulse width 300 μsec , 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 $125^\circ C$
Maximum thermal resistance	$R_{\theta JC}$	$0.3^\circ C/W$
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.12^\circ C/W$ Case to sink
Terminal torque		35-40 inch pounds
Mounting torque		20-25 inch pounds
Weight		1.0 ounces (25.3 grams) Typical

HS18515

Figure 1
Typical Forward Characteristics

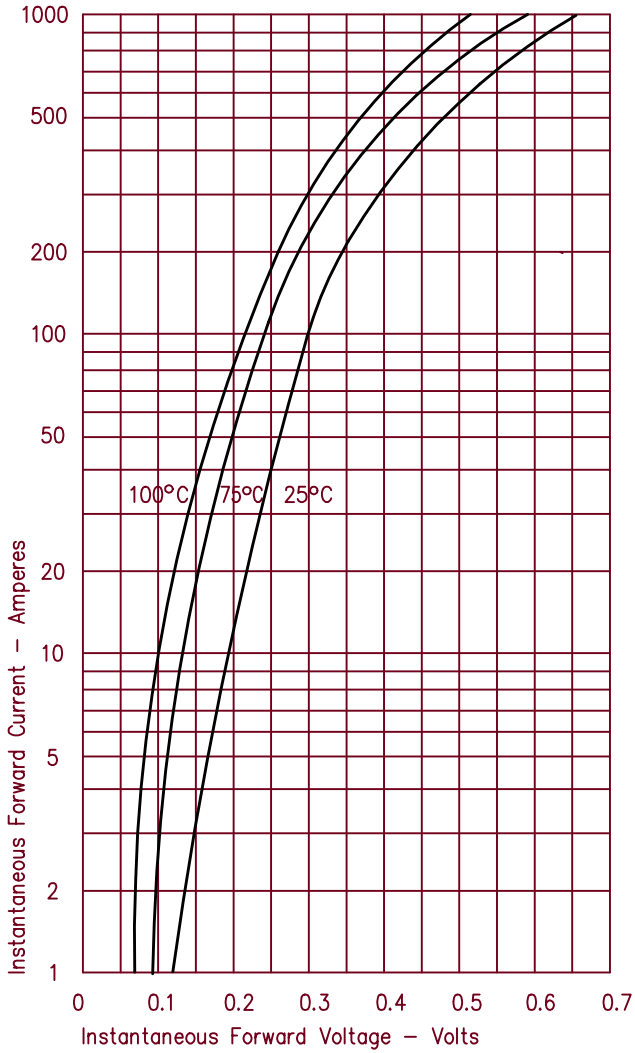


Figure 3
Typical Junction Capacitance

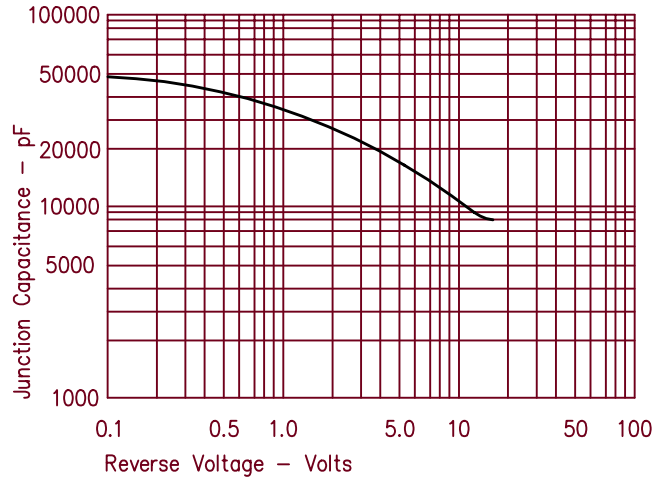


Figure 4
Forward Current Derating

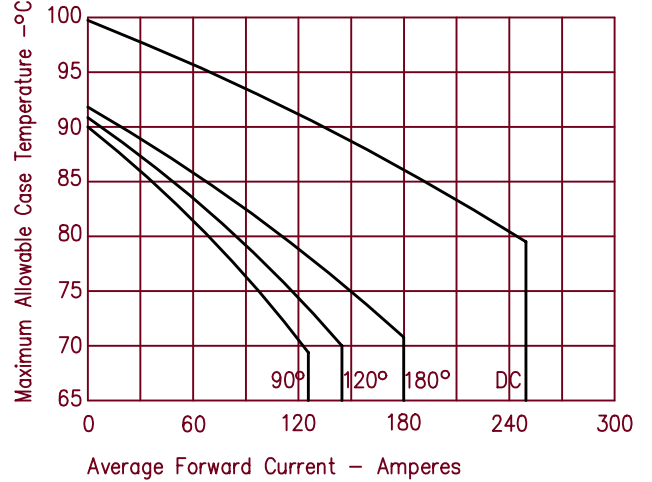


Figure 2
Typical Reverse Characteristics

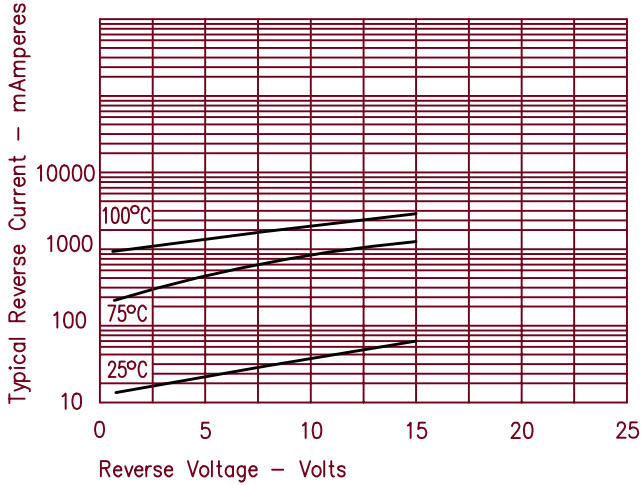


Figure 5
Maximum Forward Power Dissipation

