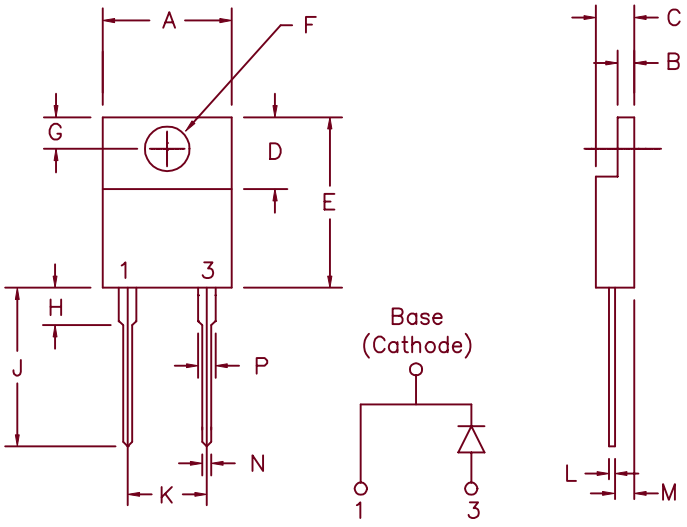
20 Amp Schottky OR'ing Rectifier

MS2015



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.155	3.53	3.94	Dia.
G	.100	.120	2.54	3.05	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.025	0.35	0.63	
M	.080	.115	2.03	2.92	
N	.028	.038	0.71	0.96	
P	.045	.055	1.14	1.40	

Similar to TO-220AC

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
MS2015	19TQ015 20L15T STPS20L15D	15V	15V

- Schottky barrier rectifier
- V_f @ 20A, 125°C = 0.29V
- High surge capacity
- 125°C Junction temperature
- Guard ring reverse protection

Electrical Characteristics

Average Forward Current	$I_{F(AV)}$ 20 Amps	T_C = 105°C
Maximum Surge Current	I_{FSM} 250 Amps	8.3ms, half sine
Max. Repetitive Reverse Current	$I_{R(OV)}$ 2 Amps	f = 1KHZ, 25°C, 1μs square wave
Max. Peak Forward Voltage	V_{FM} .40 Volts	I_{FM} = 20A, T_J = 25°C*
Typ. Peak Forward Voltage	V_{FM} .29 Volts	I_{FM} = 20A, T_J = 125°C*
Max. Peak Reverse Current	I_{RM} 8 mA	V_{RRM}, T_J = 25°C
Typ. Peak Reverse Current	I_{RM} 320 mA	V_{RRM}, T_J = 100°C*
Typ. Peak Reverse Current	I_{RM} 175 mA	V_R = 5.0V, T_J = 100°C*
Typical Junction Capacitance	C_J 1550 pF	V_R = 5.0V, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-55°C to 150°C
Operating junction temp range	T_J	-55°C to 125°C
Max. thermal resistance	$R_{\Theta JC}$	1.5°C/W
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		.08 ounces (2.3 grams) typical

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Figure 1
Typical Forward Characteristics

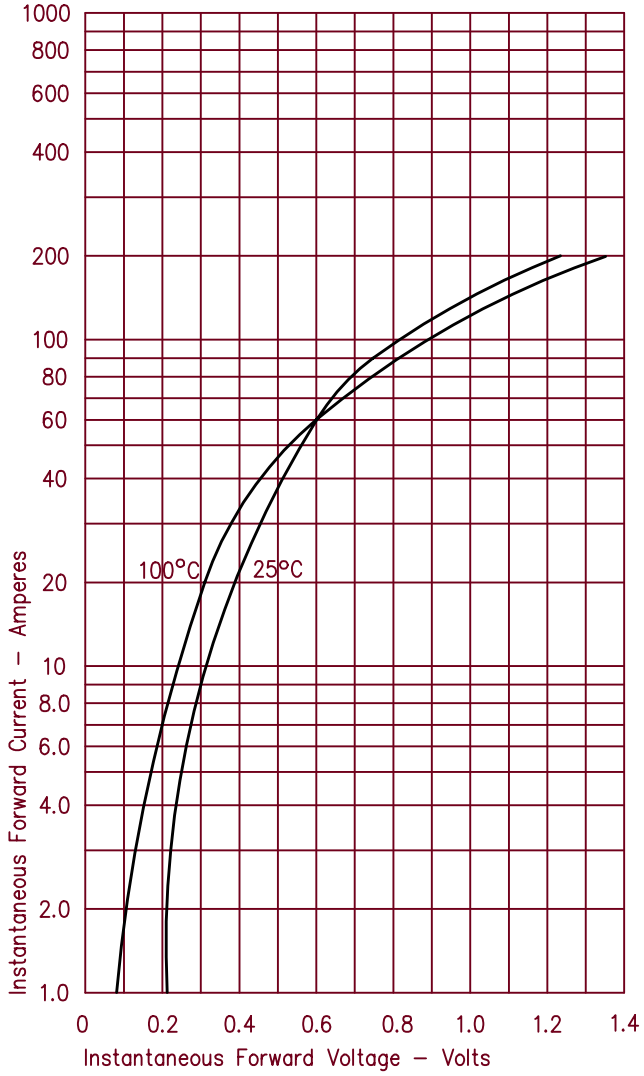

Figure 2
Typical Reverse Characteristics

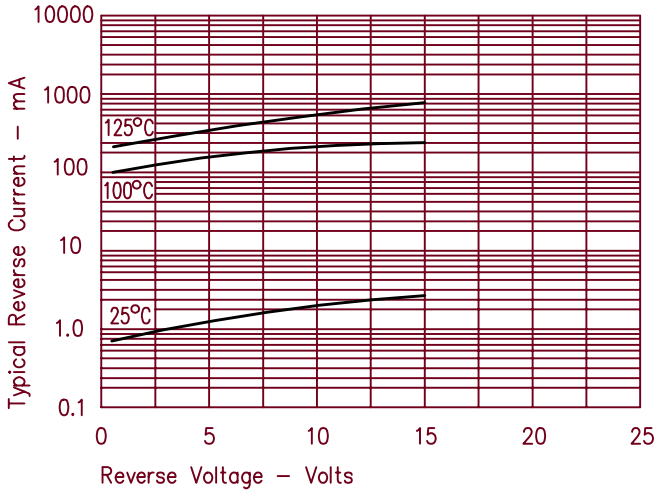

Figure 3
Typical Junction Capacitance

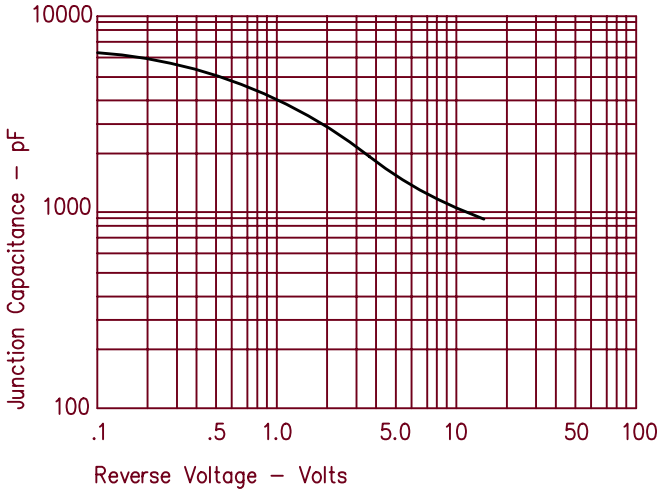

Figure 4
Forward Current Derating

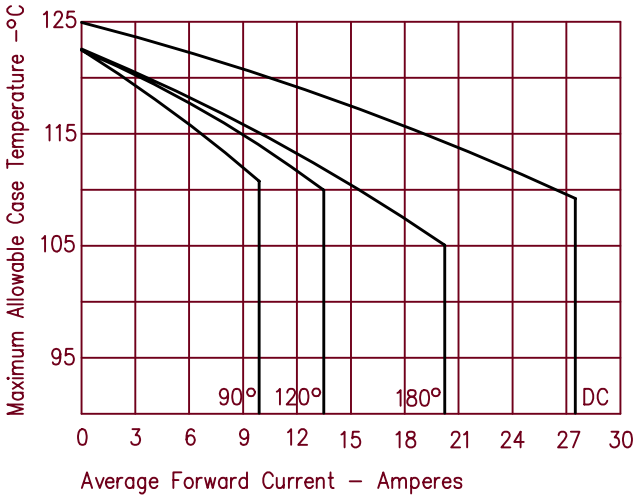

Figure 5
Maximum Forward Power Dissipation