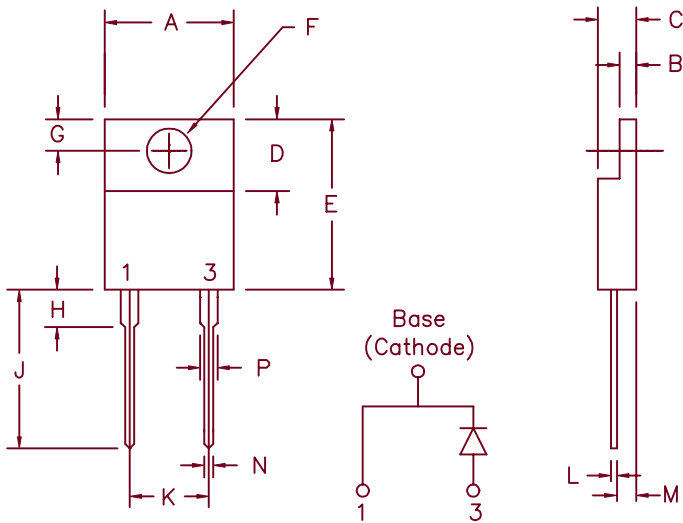


# 20 Amp Schottky OR'ing Rectifier MS2015



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
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
- $V_f @ 20A, 125^\circ C = 0.29V$
- High surge capacity
- $125^\circ C$  Junction temperature
- Guard ring reverse protection

## Electrical Characteristics

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

\*Pulse test: Pulse width 300  $\mu$ sec 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 $125^\circ C$
Max. thermal resistance	$R_{\theta JC}$	$1.5^\circ C/W$
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		.08 ounces (2.3 grams) typical

# MS2015

Figure 1  
Typical Forward Characteristics

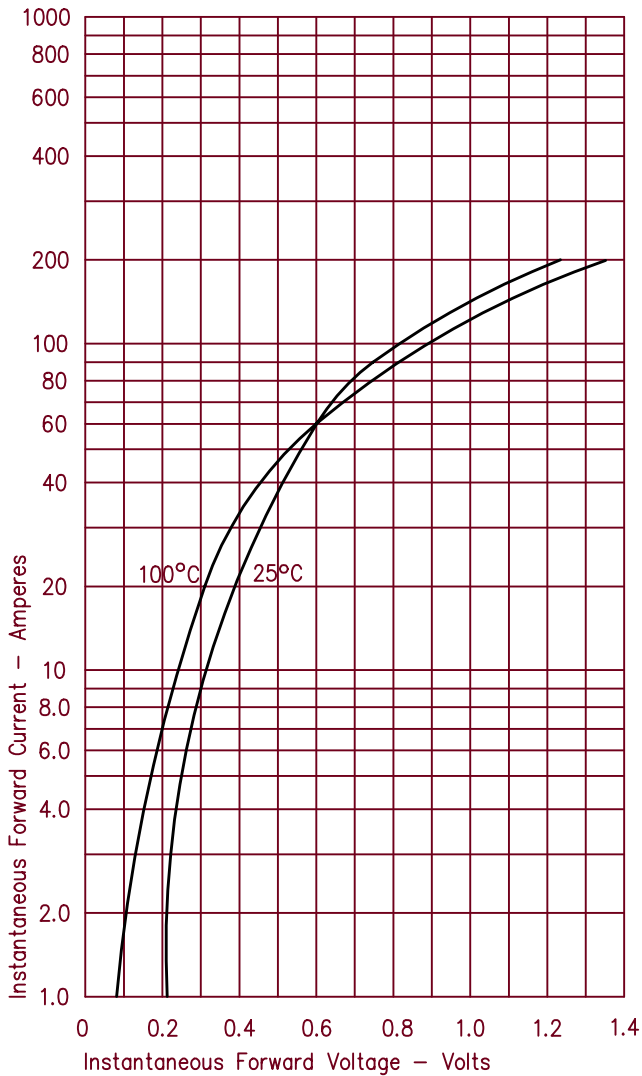


Figure 3  
Typical Junction Capacitance

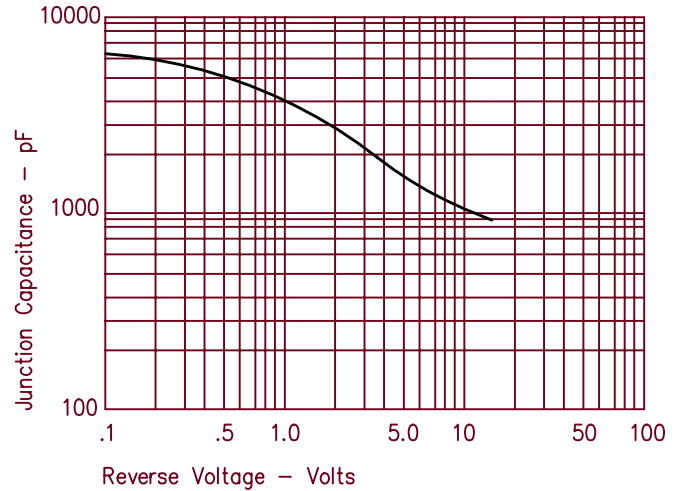


Figure 4  
Forward Current Derating

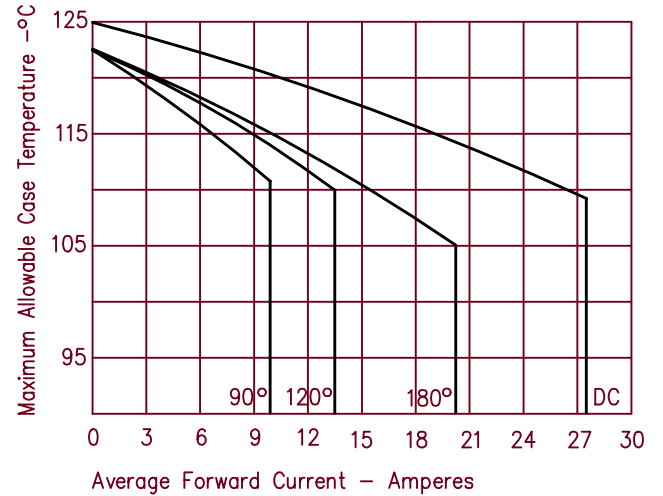


Figure 2  
Typical Reverse Characteristics

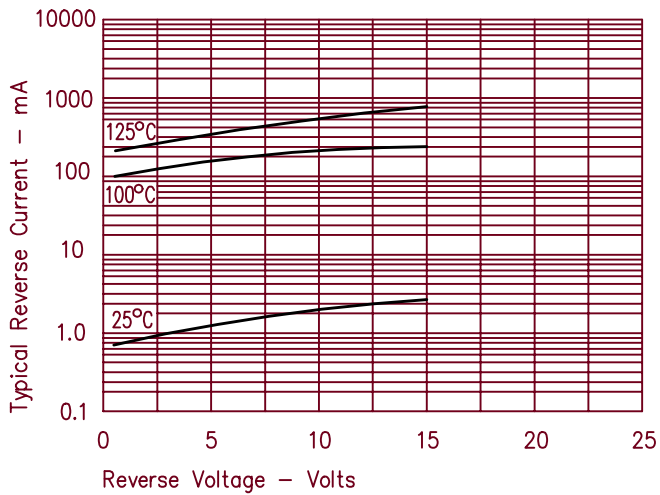


Figure 5  
Maximum Forward Power Dissipation

