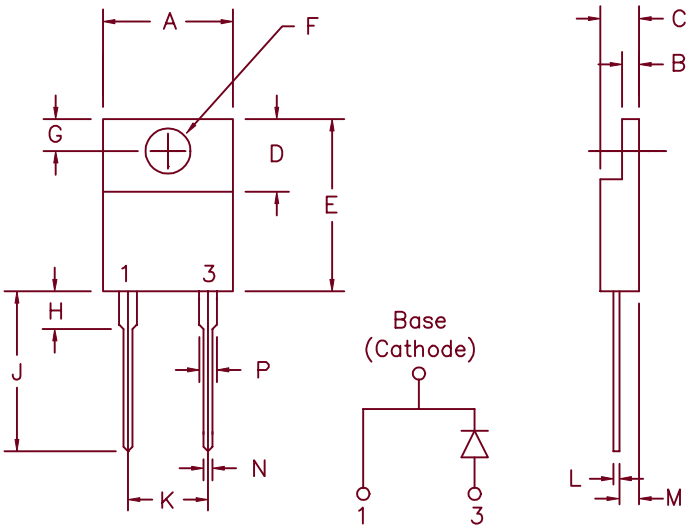
16 Amp Schottky Rectifiers

MS1680 – MS16100



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	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
MS1680	80V	80V
MS1690	90V	90V
MS16100	100V	100V

- Schottky barrier rectifier
- Guard ring protection
- Low power loss, high efficiency
- 175°C Junction Temperature
- Reverse engergy tested
- V_{RRM} 80 to 100 Volts

Electrical Characteristics

Average Forward Current	$I_{F(AV)}$ 16 Amps	T_C = 149°C, Square wave, $R_{\theta JC}$ = 2.0°C/W
Maximum Surge Current	I_{FSM} 250 Amps	8.3ms, half sine, T_J = 175°C
Max. Peak Forward Voltage	V_{FM} 65 Volts	I_{FM} = 16A, T_J = 175°C*
Max. Peak Forward Voltage	V_{FM} .85 Volts	I_{FM} = 16A, T_J = 25°C*
Max. Peak Reverse Current	I_{RM} 15 mA	V_{RRM}, T_J = 125°C*
Max. Peak Reverse Current	I_{RM} 500 µA	V_{RRM}, T_J = 25°C
Typical Junction Capacitance	C_J 570 pF	T_J = 25°C, V_R = 5V

*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 175°C
Max thermal resistance	$R_{\theta JC}$	2.0°C/W junction to case
Mounting torque		8–12 inch pounds (6–32 screw)
Weight		.08 ounces (2.3 grams) typical

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4–4–00 Rev. 1

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Figure 1
Typical Forward Characteristics

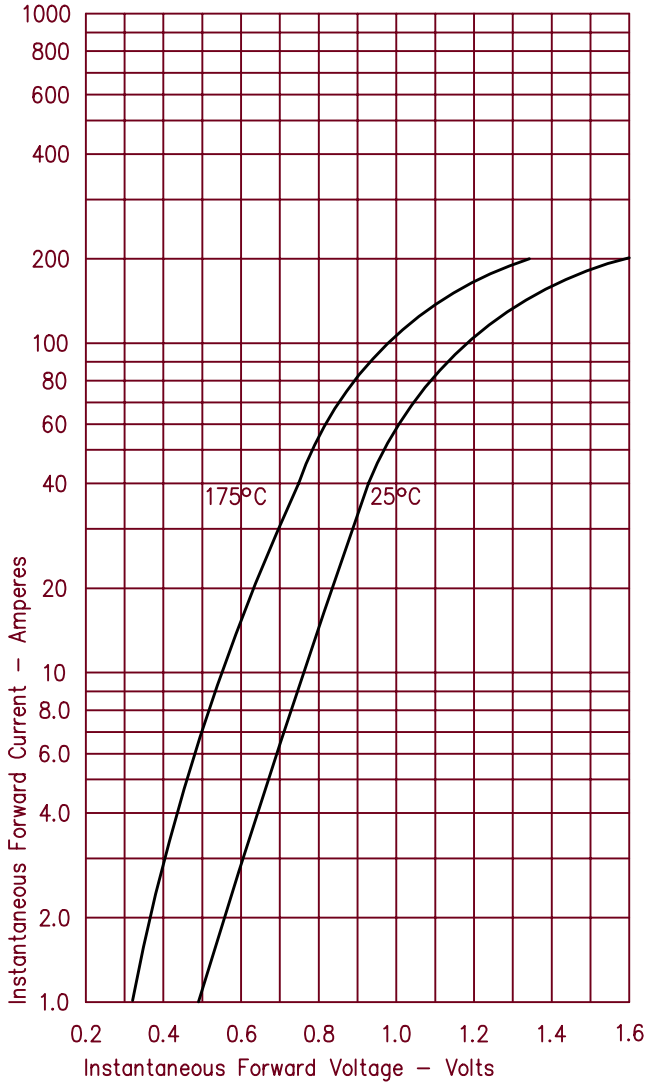

Figure 2
Typical Reverse Characteristics

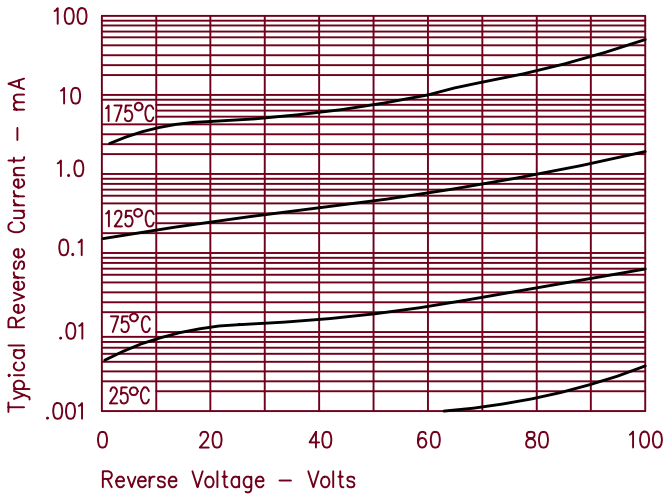

Figure 3
Typical Junction Capacitance

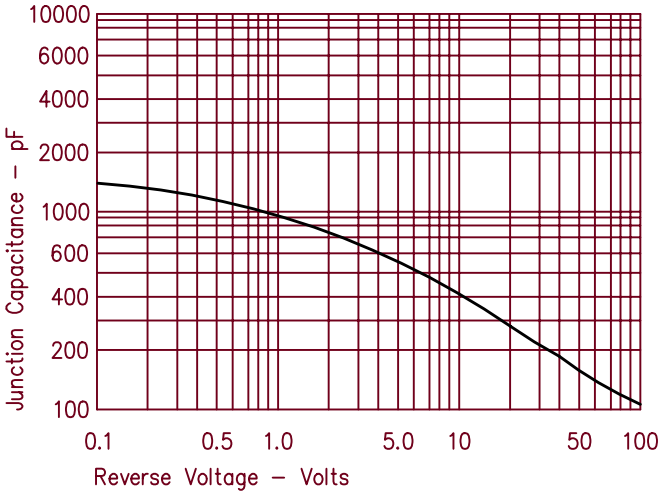

Figure 4
Forward Current Derating

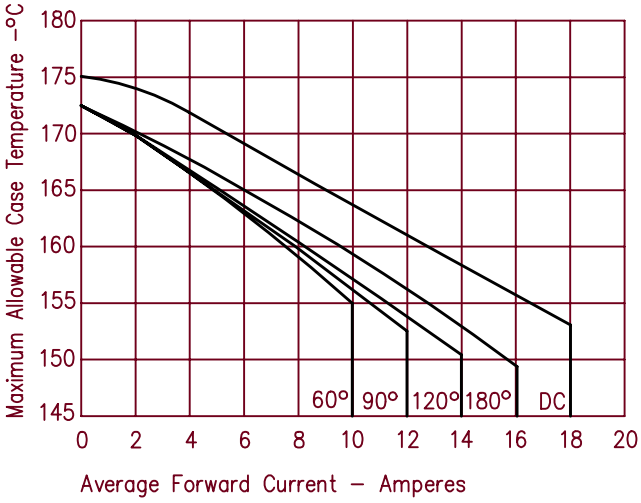

Figure 5
Maximum Forward Power Dissipation