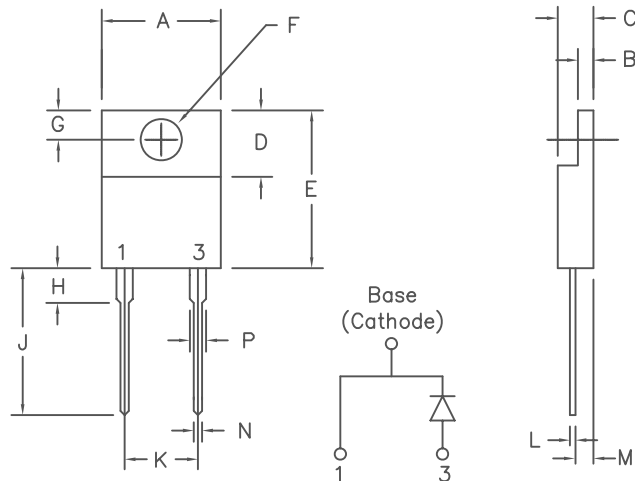


16 Amp Schottky Barrier Rectifiers MS1635 — MS1645



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	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
MS1635	12TQ035 18TQ035 MBR1535, MBR1635	35V	35V
MS1645	12TQ040, 12TQ045 18TQ040, 18TQ045 MBR1540, MBR1545 MBR1640, MBR1645	45V	45V

- Schottky barrier rectifier
- Guard ring reverse protection
- Low power loss, high efficiency
- VRRM 35 to 45 Volts
- Reverse energy tested

Electrical Characteristics

Average Forward Current	$I_F(AV)$ 16 Amps	$T_C = 153^\circ\text{C}$, Square wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$
Maximum Surge Current	I_{FSM} 300 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage	V_{FM} .56 Volts	$I_{FM} = 16\text{A}$, $T_J = 150^\circ\text{C}^*$
Max. Peak Forward Voltage	V_{FM} .67 Volts	$I_{FM} = 16\text{A}$, $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current	I_{RM} 10 mA	V_{RRM} , $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current	I_{RM} 250 μA	V_{RRM} , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance	C_J 850 pF	$V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$

*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
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		.08 ounces (2.3 grams) typical



SCOTTSDALE

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

05-25-07 Rev. 6

MS1635 — MS1645

Figure 1
Typical Forward Characteristics

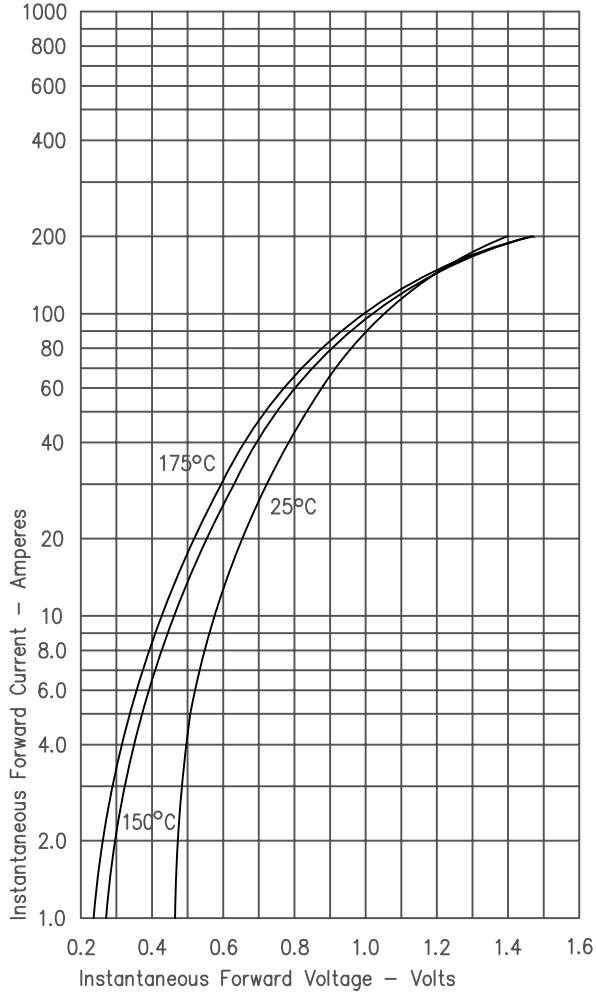


Figure 3
Typical Junction Capacitance

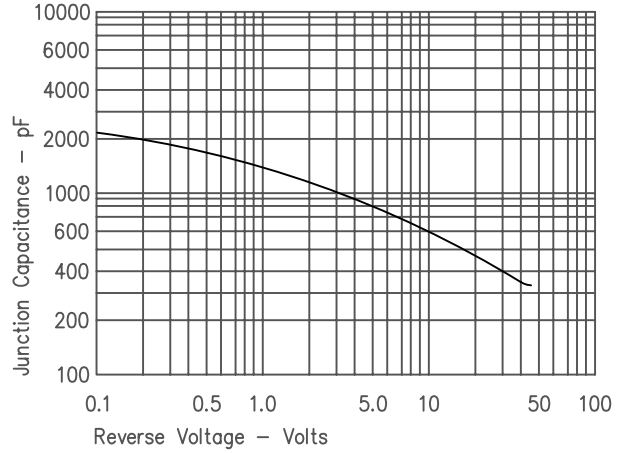


Figure 4
Forward Current Derating

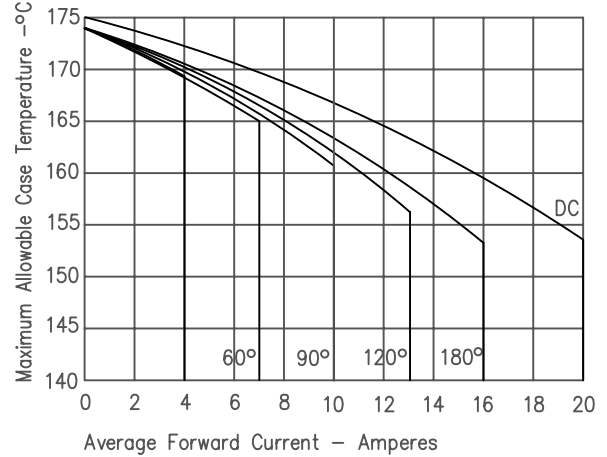


Figure 2
Typical Reverse Characteristics

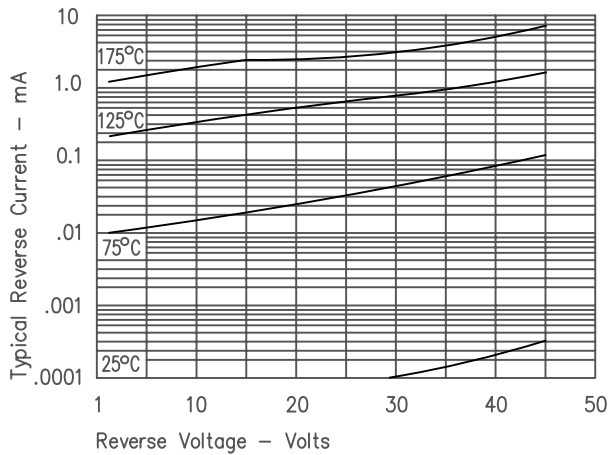


Figure 5
Maximum Forward Power Dissipation

