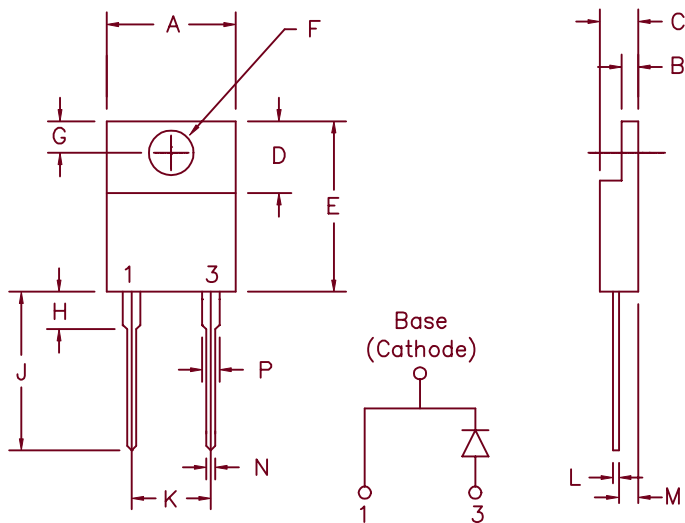


# 16 Amp Schottky Barrier Rectifiers MS1635 — MS1645



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 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$ 850 pF	$V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu\text{sec}$  Duty cycle 2%

## Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Operating junction temp range	$T_J$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Max thermal resistance	$R_{\theta JC}$	$2.0^\circ\text{C/W}$
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		.08 ounces (2.3 grams) typical

# MS1635 — MS1645

Figure 1  
Typical Forward Characteristics

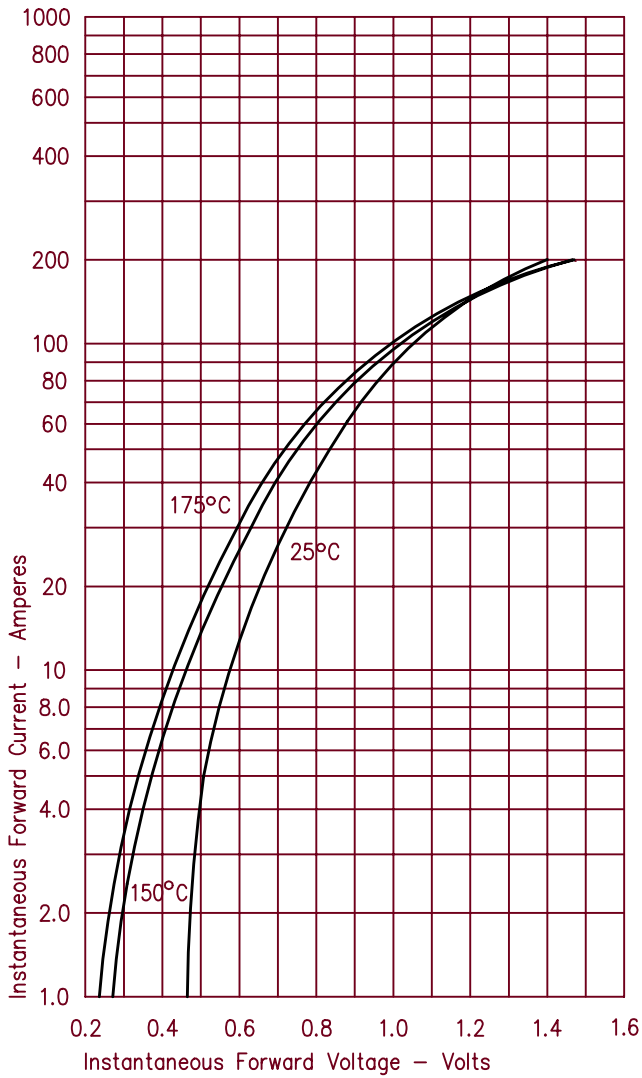


Figure 3  
Typical Junction Capacitance

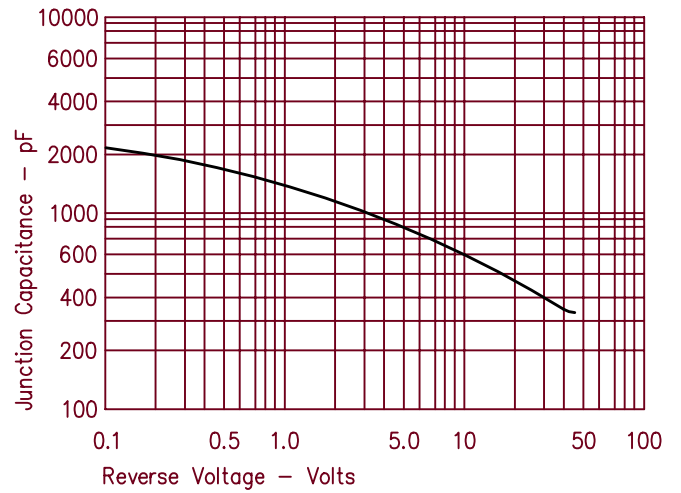


Figure 4  
Forward Current Derating

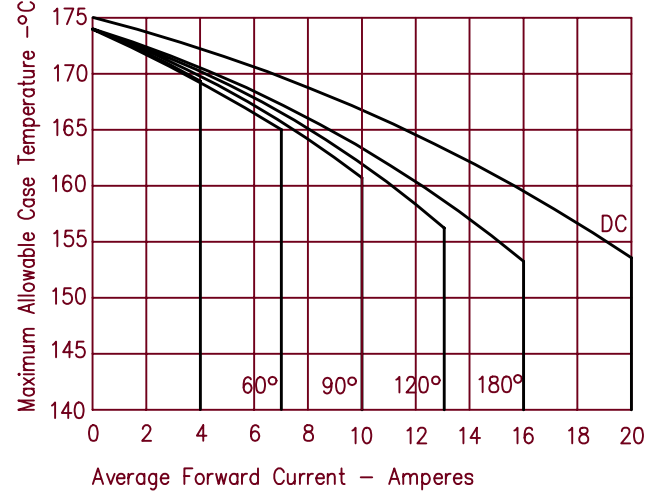


Figure 2  
Typical Reverse Characteristics

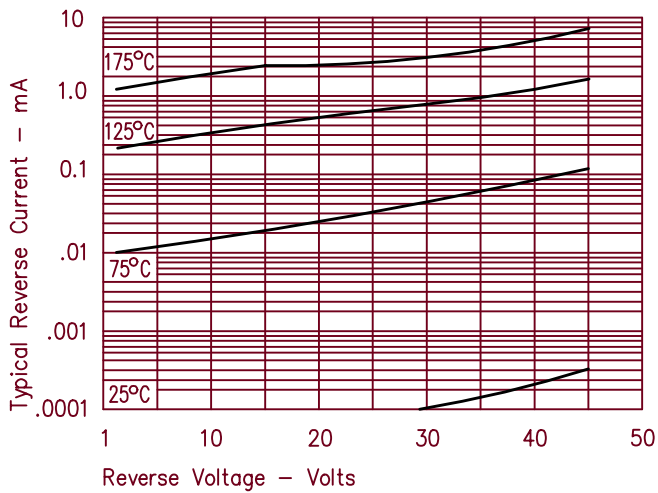


Figure 5  
Maximum Forward Power Dissipation

