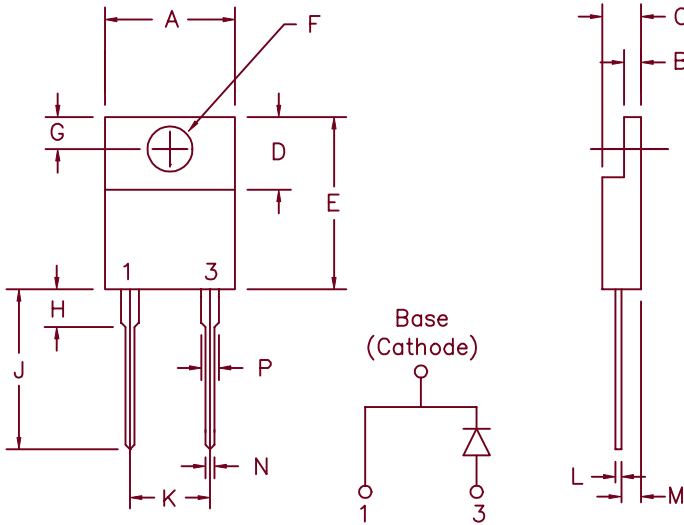


16 Amp Schottky Rectifiers MS1680 — MS16100



| 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

MS1680
MS1690
MS16100

Repetitive Peak
Reverse Voltage

80V
90V
100V

Transient Peak
Reverse Voltage

80V
90V
100V

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

Electrical Characteristics

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

*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 |

MS1680 — MS16100

Figure 1
Typical Forward Characteristics

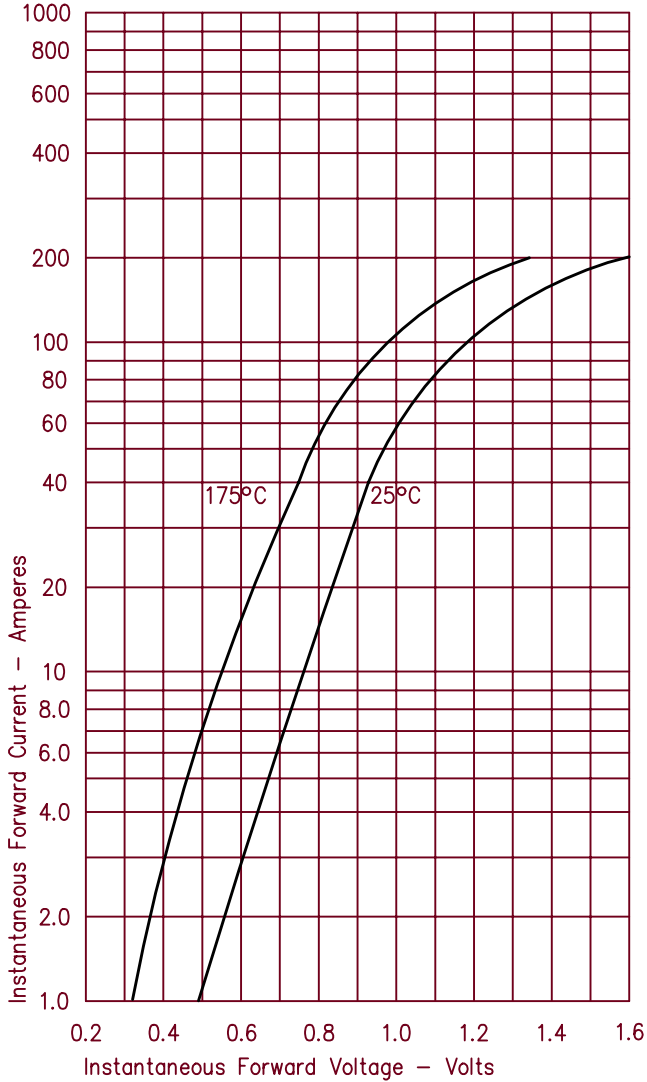


Figure 3
Typical Junction Capacitance

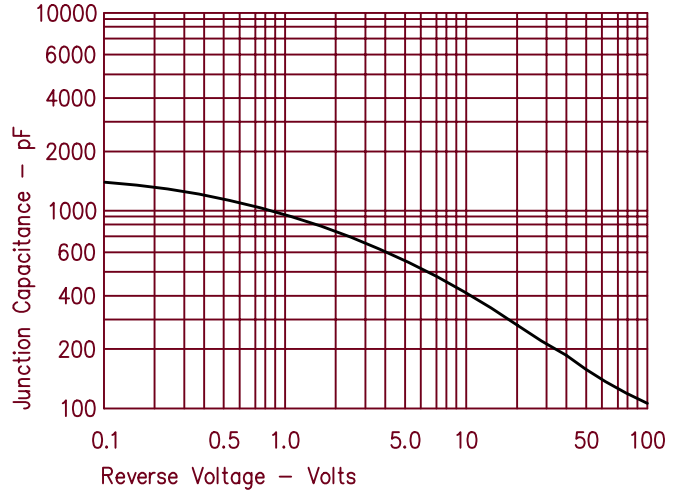


Figure 4
Forward Current Derating

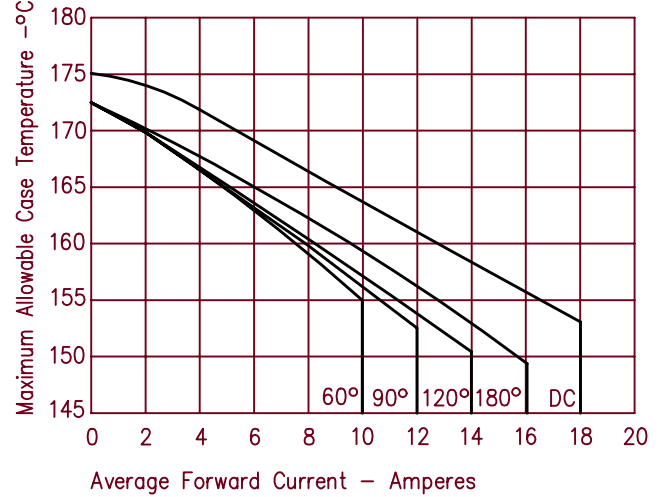


Figure 2
Typical Reverse Characteristics

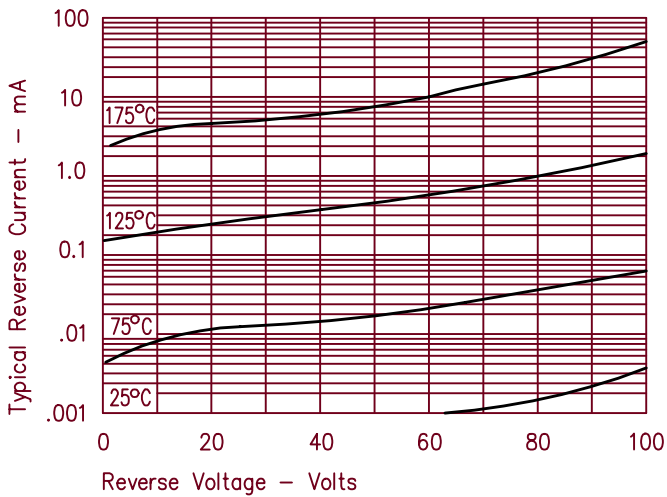
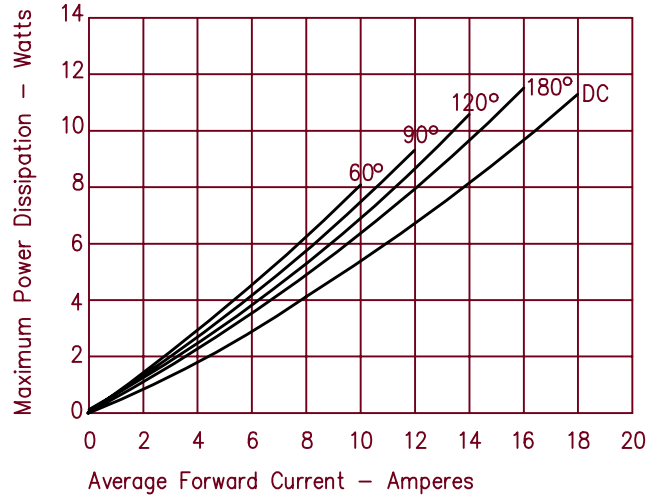


Figure 5
Maximum Forward Power Dissipation



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