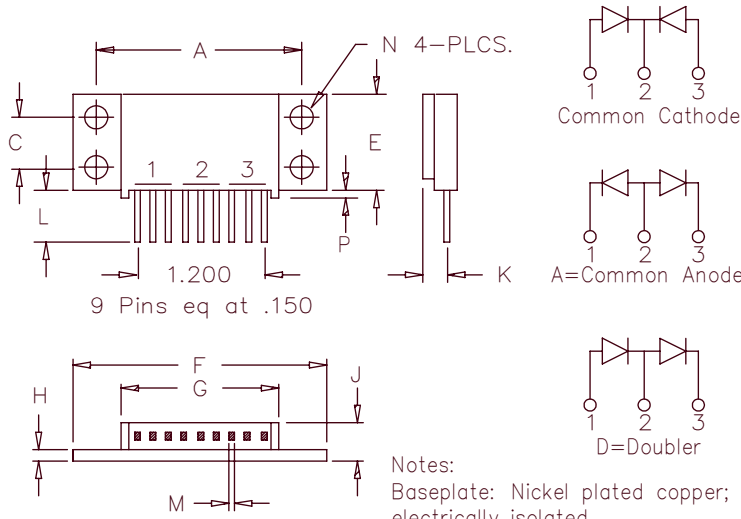


# Schottky Powermod FST19330 — FST19345



Notes:  
Baseplate: Nickel plated copper;  
electrically isolated  
Pins: Nickel plated copper

| Dim. | Inches  |         | Millimeter |         | Notes        |
|------|---------|---------|------------|---------|--------------|
|      | Minimum | Maximum | Minimum    | Maximum |              |
| A    | 1.995   | 2.005   | 50.67      | 50.93   |              |
| C    | 0.495   | 0.506   | 12.57      | 12.83   |              |
| E    | 0.990   | 1.010   | 25.15      | 25.65   |              |
| F    | 2.390   | 2.410   | 60.71      | 61.21   |              |
| G    | 1.490   | 1.510   | 37.85      | 38.35   |              |
| H    | 0.120   | 0.130   | 3.05       | 3.30    |              |
| J    | ---     | 0.400   | ---        | 10.16   |              |
| K    | 0.240   | 0.260   | 6.10       | 6.60to  | Lead $\zeta$ |
| L    | 0.490   | 0.510   | 12.45      | 12.95   |              |
| M    | 0.040   | .050    | 1.02       | 1.27    | Square Dia   |
| N    | 0.175   | 0.195   | 4.45       | 4.95    |              |
| P    | 0.032   | 0.052   | 0.81       | 1.32    |              |

| Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|------------------------------|---------------------------------|
| FST19330*                | 30V                          | 30V                             |
| FST19335*                | 35V                          | 35V                             |
| FST19340*                | 40V                          | 40V                             |
| FST19345*                | 45V                          | 45V                             |

\*Add the Suffix A for Common Anode, D for Doubler

- Guard Ring Protection
- Hot Base
- Schottky Barrier Rectifier
- Low Forward Voltage
- Reverse Energy Tested
- $V_{RRM}$  30 to 45 Volts
- ROHS Compliant

## Electrical Characteristics

|                                      |                     |  |
|--------------------------------------|---------------------|--|
| Average Forward Current per pkg.     | $I_F(AV)$ 300 Amps  | $T_C = 85^\circ C$ , Square wave, $R_{\theta JC} = 0.25^\circ C/W$ |
| Average Forward Current per leg      | $I_F(AV)$ 150 Amps  | $T_C = 85^\circ C$ , Square wave, $R_{\theta JC} = 0.5^\circ C/W$  |
| Maximum Surge Current per leg        | $I_{FSM}$ 1500 Amps | 8.3ms, half sine, $T_J = 150^\circ C$                              |
| Max. Peak Forward Voltage per leg    | $V_{FM}$ 0.40 Volts | $I_{FM} = 100A, T_J = 150^\circ C^*$                               |
| Max. Peak Forward Voltage per leg    | $V_{FM}$ 0.52 Volts | $I_{FM} = 100A, T_J = 25^\circ C^*$                                |
| Max. Peak Reverse Current per leg    | $I_{RM}$ 2A         | $V_{RRM}, T_J = 125^\circ C^*$                                     |
| Max. Peak Reverse Current per leg    | $I_{RM}$ 10 mA      | $V_{RRM}, T_J = 25^\circ C$  |
| Typical Junction Capacitance per leg | $C_j$ 5500 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                   | TSTG            | -55 $^\circ C$ to 150 $^\circ C$   |
| Operating junction temp range        | $T_J$           | -55 $^\circ C$ to 150 $^\circ C$   |
| Max thermal resistance per leg       | $R_{\theta JC}$ | 0.5 $^\circ C/W$ Junction to case  |
| Max thermal resistance per pkg.      | $R_{\theta JC}$ | 0.25 $^\circ C/W$ Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | 0.1 $^\circ C/W$ Case to sink      |
| Mounting Torque                      |                 | 15-20 inch pounds                  |
| Weight                               |                 | 2.3 ounces (58.5 grams) typical    |

# FST19330 – FST19345

Figure 1  
Typical Forward Characteristics – Per Leg

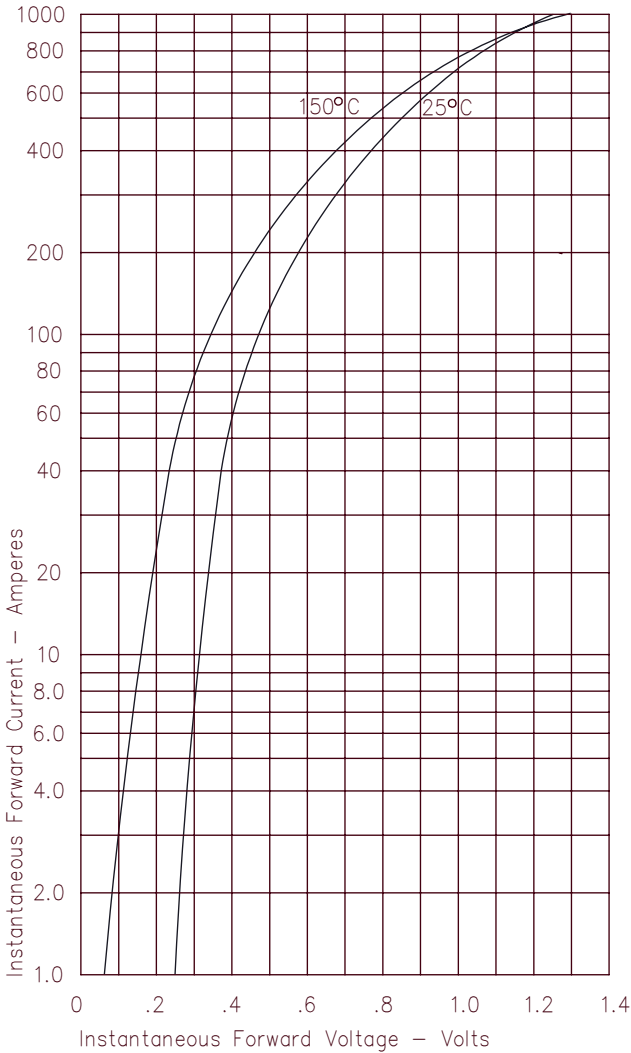


Figure 3  
Typical Junction Capacitance – Per Leg

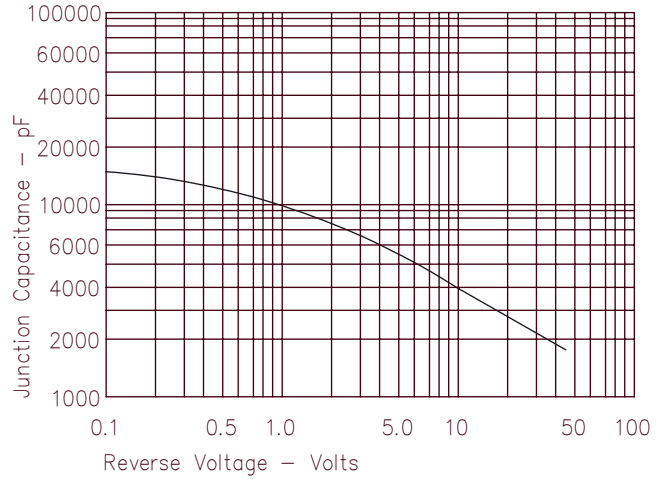


Figure 4  
Forward Current Derating – Per Leg

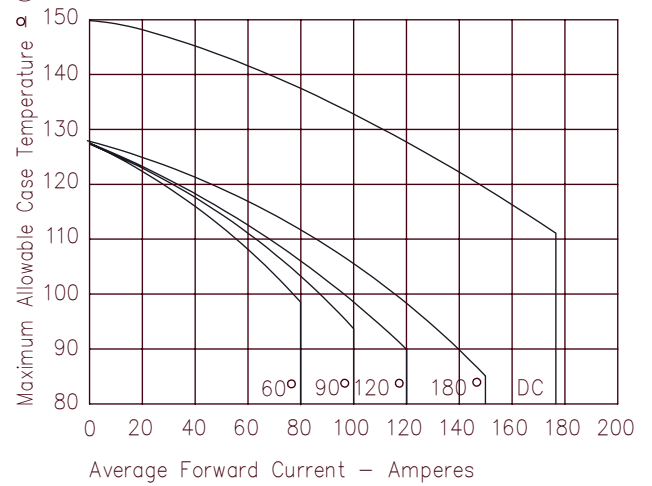


Figure 2  
Typical Reverse Characteristics – Per Leg

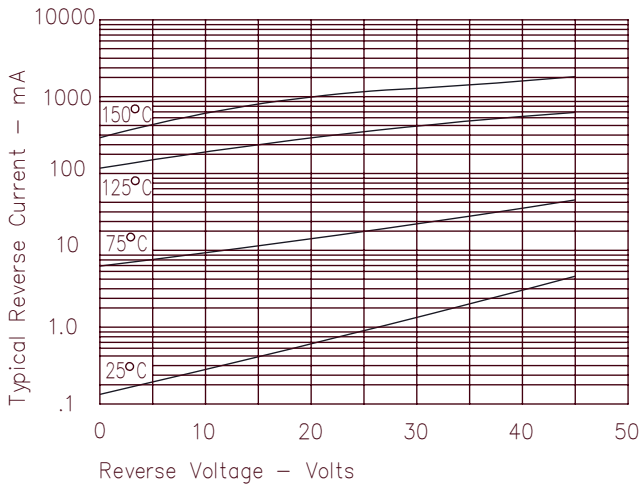


Figure 5  
Maximum Forward Power Dissipation – Per Leg

