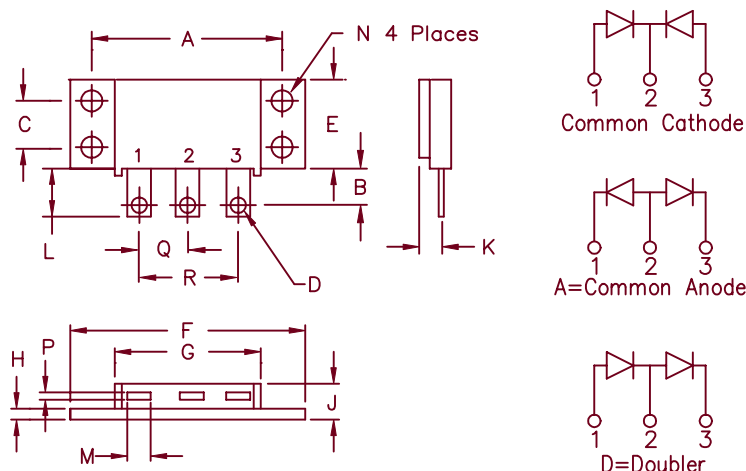


# Schottky Powermod

## FST19235 — FST19245



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

|   | Dim. Inches |       | Millimeters |       | Notes      |
|---|-------------|-------|-------------|-------|------------|
|   | Min.        | Max.  | Min.        | Max.  |            |
| A | 1.995       | 2.005 | 50.67       | 50.93 |            |
| B | 0.300       | 0.325 | 7.62        | 8.26  |            |
| C | 0.495       | 0.505 | 12.57       | 12.83 |            |
| D | 0.182       | 0.192 | 4.62        | 4.88  | Dia.       |
| E | 0.990       | 1.010 | 25.15       | 25.65 |            |
| F | 2.390       | 2.410 | 60.71       | 61.21 |            |
| G | 1.500       | 1.525 | 38.10       | 38.70 |            |
| H | 0.120       | 0.130 | 3.05        | 3.30  |            |
| J | ---         | 0.400 | ---         | 10.16 |            |
| K | 0.240       | 0.260 | 6.10        | 6.60  | to Lead CL |
| L | 0.490       | 0.510 | 12.45       | 12.95 |            |
| M | 0.330       | 0.350 | 8.38        | 6.90  |            |
| N | 0.175       | 0.195 | 4.45        | 4.95  | Dia.       |
| P | 0.035       | 0.045 | 0.89        | 1.14  |            |
| Q | 0.445       | 0.455 | 11.30       | 11.56 |            |
| R | 0.890       | 0.910 | 22.61       | 23.11 |            |

TO-249

| Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|------------------------------|---------------------------------|
| FST19235*                | 35V                          | 35V                             |
| FST19240*                | 40V                          | 40V                             |
| FST19245*                | 45V                          | 45V                             |

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

- Guard Ring Protection
- Electrically Isolated Base
- Schottky Barrier Rectifier
- Low Forward Voltage
- Reverse Energy Tested
- $V_{RRM}$  35 to 45 Volts

### Electrical Characteristics

|                                      |                     |                                                                    |
|--------------------------------------|---------------------|--------------------------------------------------------------------|
| Average Forward Current per pkg.     | $I_F(AV)$ 200 Amps  | $T_C = 86^\circ C$ , Square wave, $R_{\theta JC} = 0.35^\circ C/W$ |
| Average Forward Current per leg      | $I_F(AV)$ 100 Amps  | $T_C = 86^\circ C$ , Square wave, $R_{\theta JC} = 0.7^\circ C/W$  |
| 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                   | $T_{STG}$       | $-55^\circ C$ to $150^\circ C$    |
| Operating junction temp range        | $T_J$           | $-55^\circ C$ to $150^\circ C$    |
| Max thermal resistance per leg       | $R_{\theta JC}$ | $0.7^\circ C/W$ Junction to case  |
| Max thermal resistance per pkg.      | $R_{\theta JC}$ | $0.35^\circ C/W$ Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | $0.1^\circ C/W$ Case to sink      |
| Weight                               |                 | 2.3 ounces (58.5 grams) typical   |
| Mounting Torque                      |                 | 15-20 inch pounds                 |

# FST19235 — FST19245

Figure 1  
Typical Forward Characteristics — Per Leg

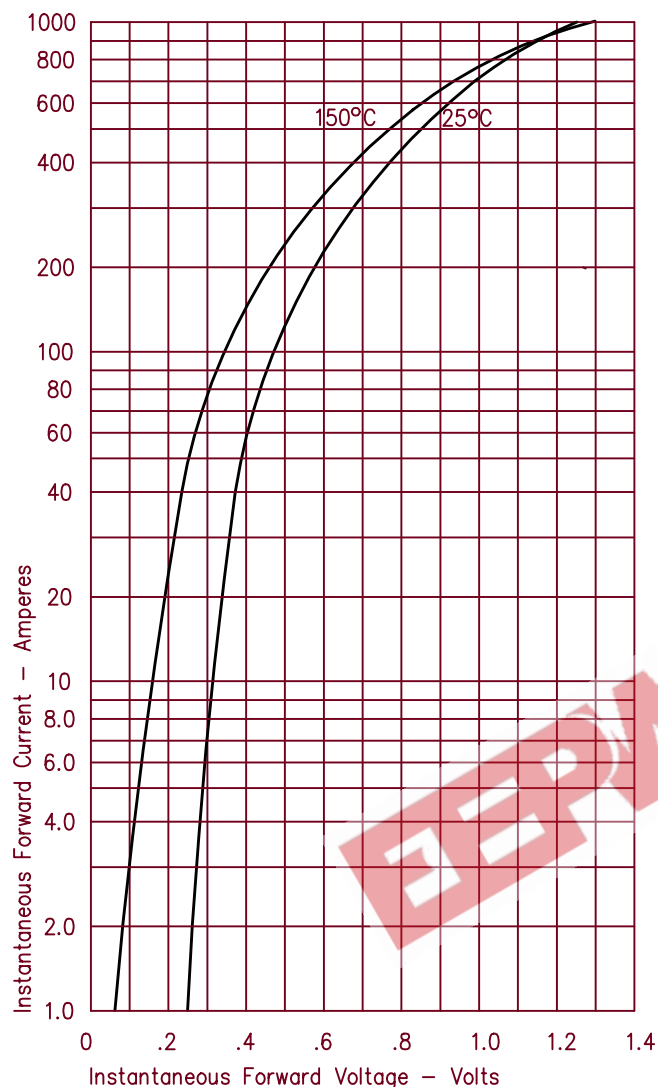


Figure 3  
Typical Junction Capacitance — Per Leg

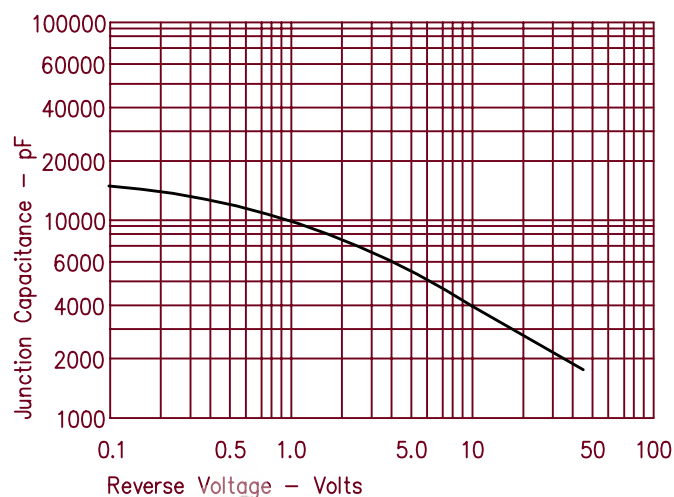


Figure 4  
Forward Current Derating — Per Leg

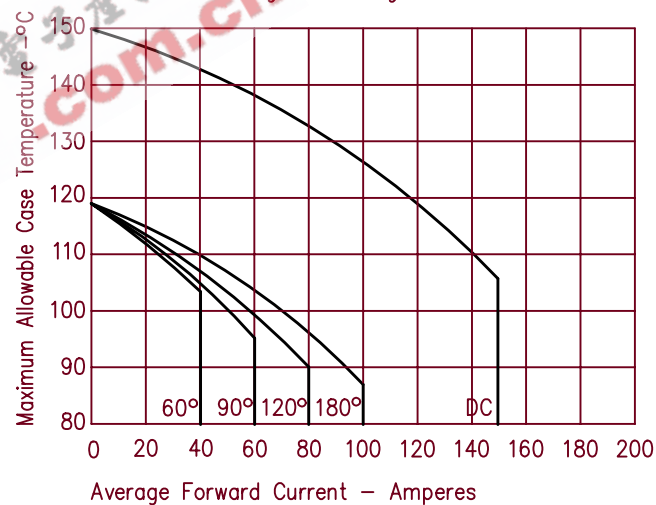


Figure 2  
Typical Reverse Characteristics — Per Leg

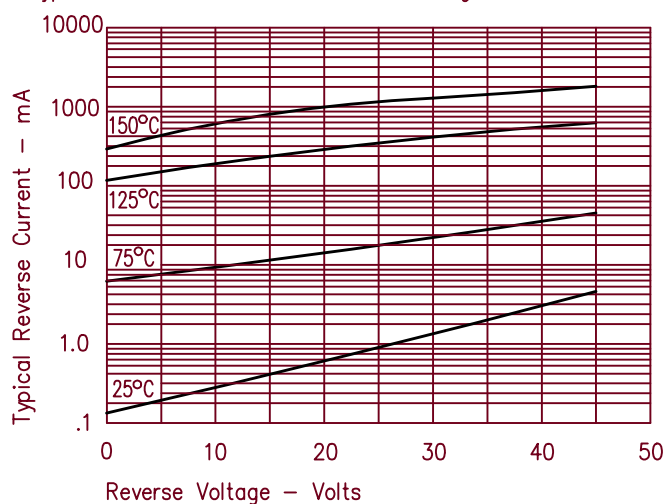


Figure 5  
Maximum Forward Power Dissipation — Per Leg

