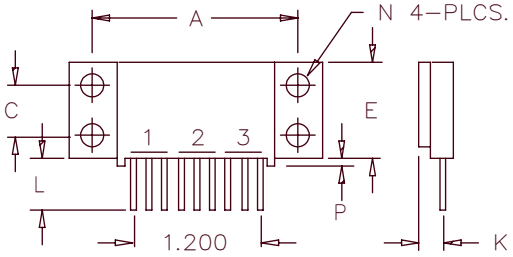
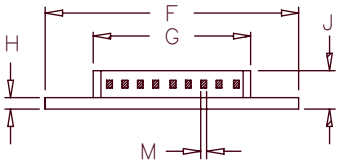
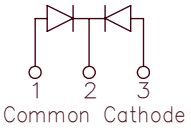
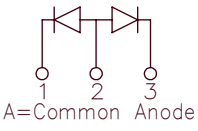
# Schottky Powermod

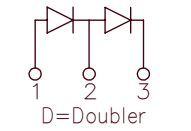
# FST6080 – FST60100




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

| Dim. | Inches | | Millimeter | | |
|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Notes |
| 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 | 6.60 | to Lead ℄ |
| L | 0.490 | 0.510 | 12.45 | 12.95 | |
| M | 0.040 | .050 | 1.02 | 1.27 | Square |
| N | 0.175 | 0.195 | 4.45 | 4.95 | Dia |
| P | 0.032 | 0.052 | 0.81 | 1.32 | |

| Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|---|---|---|
| FST6080* | 80V | 80V |
| FST6090* | 90V | 90V |
| FST60100* | 100V | 100V |

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

- Schottky barrier rectifier
- Guard ring for reverse protection
- $V_{RRM}$ – 80 to 100 Volts
- High surge capacity
- Reverse energy tested
- Electrically isolated baseplate
- ROHS Compliant

## Electrical Characteristics

| | | | |
|---|---|---|---|
| Average forward current per pkg | $I_{F(AV)}$ | 120 Amps | $T_C$ = 130°C, Square wave, $R_{\theta JC}$ = 0.6°C/W |
| Average forward current per leg | $I_{F(AV)}$ | 60 Amps | $T_C$ = 130°C, Square wave, $R_{\theta JC}$ = 1.0°C/W |
| Maximum surge current per leg | $I_{FSM}$ | 1200 Amps | 8.3 ms, half sine $T_J$ = 175°C |
| Max repetitive peak reverse current per leg | $I_{R(OV)}$ | 2 Amps | f = 1 KHz, 25°C, 1μsec Square wave |
| Max peak forward voltage per leg | $V_{FM}$ | .68 Volts | $I_{FM}$ = 60A: $T_J$ = 175°C* |
| Max peak forward voltage per leg | $V_{FM}$ | .86 Volts | $I_{FM}$ = 60A: $T_J$ = 25°C* |
| Max peak reverse current per leg | $I_{RM}$ | 30 mA | $V_{RRM}$, $T_J$ = 125°C* |
| Max peak reverse current per leg | $I_{RM}$ | 2 mA | $V_{RRM}$, $T_J$ = 25°C |
| Typical junction capacitance per leg | $C_J$ | 1500 pF | $V_R$ = 5.0V, $T_J$ = 25°C |

*Pulse test: Pulse width 300μsec, 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 |
| Maximum thermal resistance per leg | $R_{\theta JC}$ | 1.0°C/W Junction to case |
| Maximum thermal resistance per pkg | $R_{\theta JC}$ | 0.6°C/W Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | 0.1°C/W Case to sink |
| Mounting torque | | 15 – 20 inch pounds maximum |
| Weight | | 2.5 ounces (71 grams) typical |

# FST6080 – FST60100

Figure 1
Typical Forward Characteristics –Per Leg

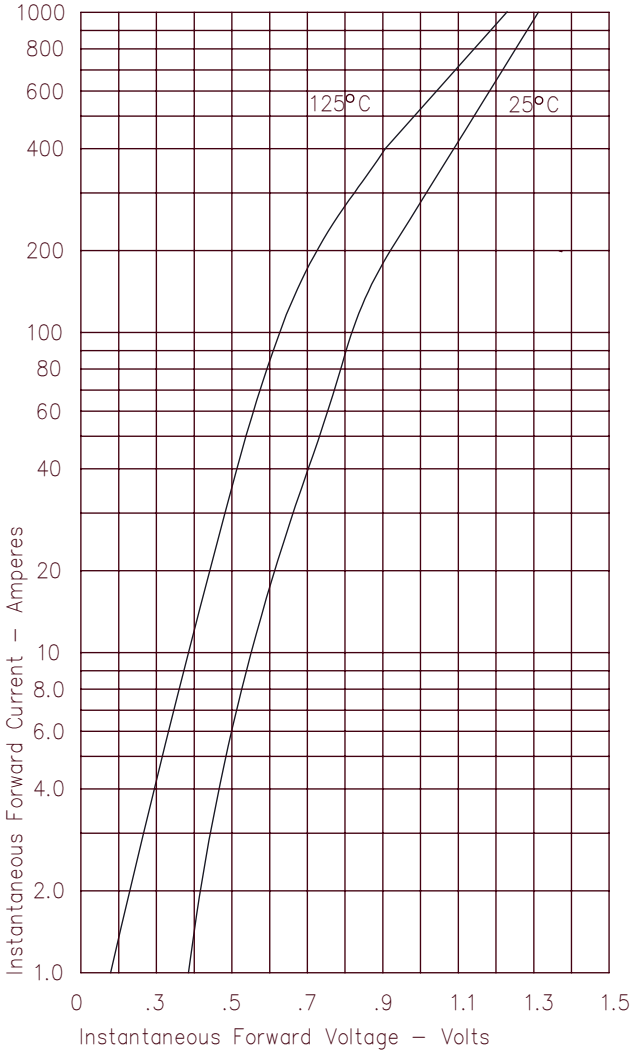



Figure 2
Typical Reverse Characteristics – Per Leg

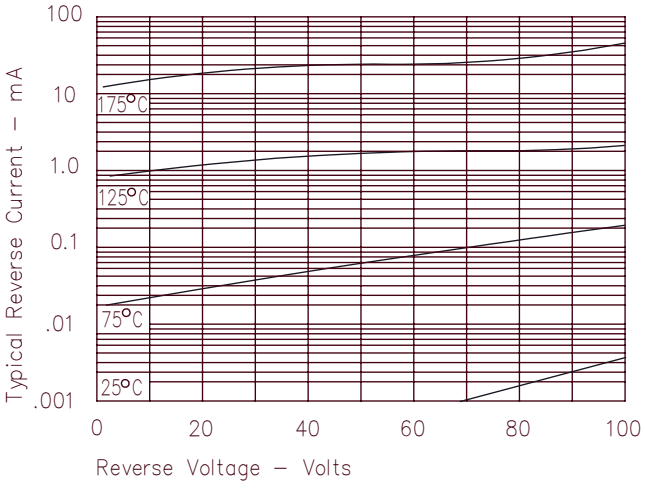



Figure 3
Typical Junction Capacitance – Per Leg

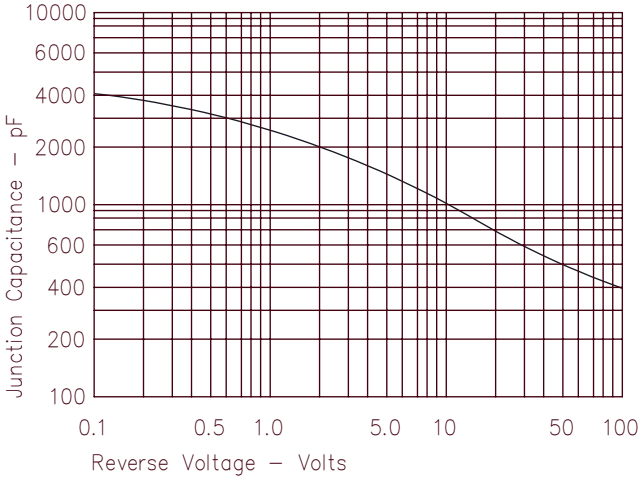



Figure 4
Forward Current Derating – Per Leg

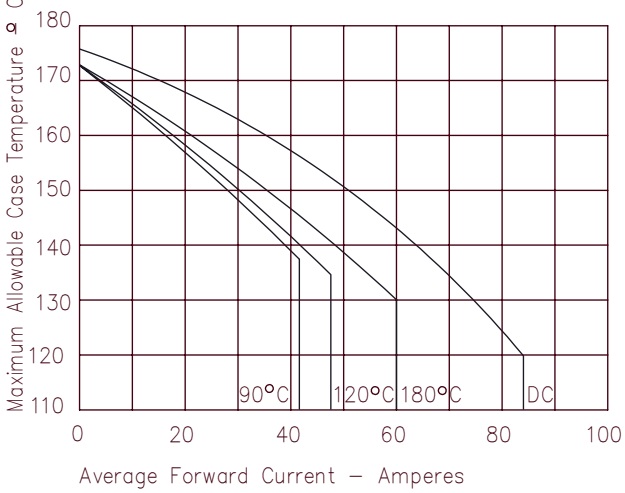



Figure 5
Maximum Forward Power Dissipation – Per Leg