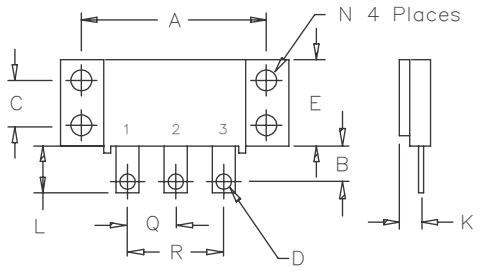
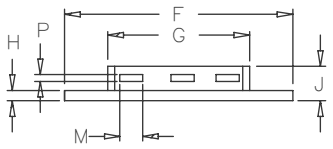
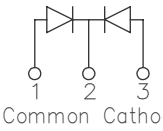
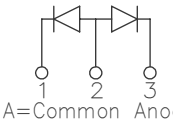
# Schottky PowerMod

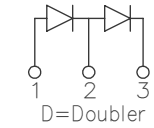
# FST16135 – FST16145




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

| Dim. | Inches | | Millimeters | | |
|---|---|---|---|---|---|
| | Min. | Max. | Min. | Max. | Notes |
| 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 ℄ |
| 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 | Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|---|---|---|---|
| FST16135* | 160CMQ035 | 35V | 35V |
| FST16140* | 160CMQ040 | 40V | 40V |
| FST16145* | 160CMQ045 | 45V | 45V |

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

- Schottky Barrier Rectifier
- Guard Ring for Reverse Protection
- Low Forward Voltage
- $V_{RRM}$ 35 to 45 Volts
- Electrically Isolated base
- Reverse Energy Tested
- Center top
- ROHS Compliant

## Electrical Characteristics

| | | |
|---|---|---|
| Average forward current per pkg | $I_{F(AV)}$ 160 Amps | $T_C$ = 67°C, Square wave, $R_{\theta JC}$ = 0.5°C/W |
| Average forward current per leg | $I_{F(AV)}$ 80 Amps | $T_C$ = 67°C, Square wave, $R_{\theta JC}$ = 1.0°C/W |
| Maximum surge current per leg | $I_{FSM}$ 1000 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 | $V_{FM}$ .61 Volts | $I_{FM}$ = 80A: $T_J$ = 125°C* |
| Max peak forward voltage per leg | $V_{FM}$ .65 Volts | $I_{FM}$ = 80A: $T_J$ = 25°C* |
| Max peak reverse current per leg | $I_{RM}$ 500 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 | $C_J$ 2700 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. | $R_{\theta JC}$ | 0.5°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 |
| Weight | | 2.5 ounces (71 grams) typical |

# FST16135 – FST16145

Figure 1
Typical Forward Characteristics – Per Leg

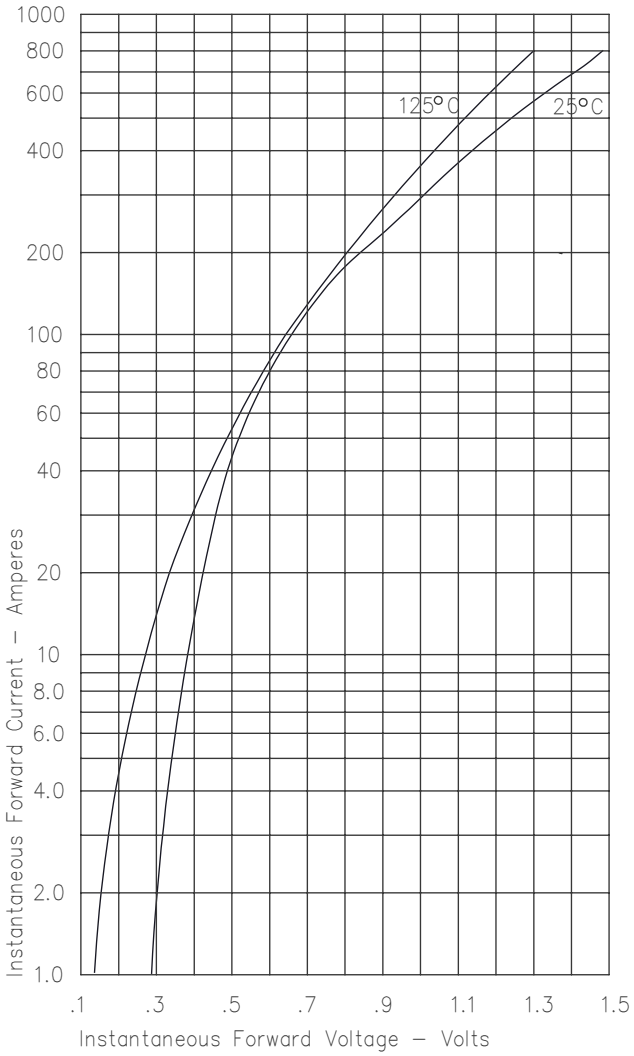



Figure 3
Typical Junction Capacitance – Per Leg

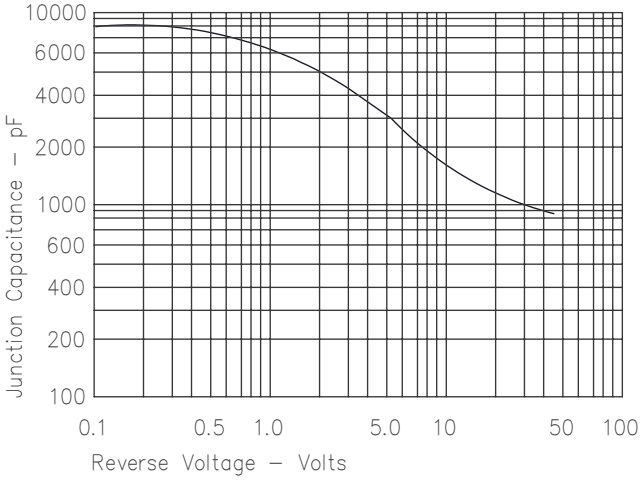



Figure 4
Forward Current Derating – Per Leg

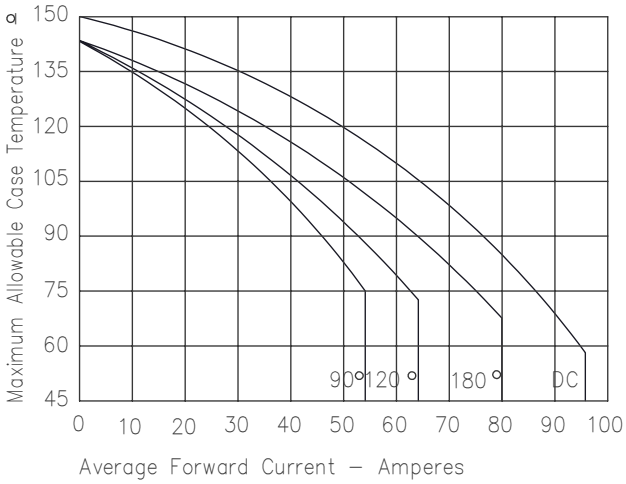



Figure 2
Typical Reverse Characteristics – Per Leg

