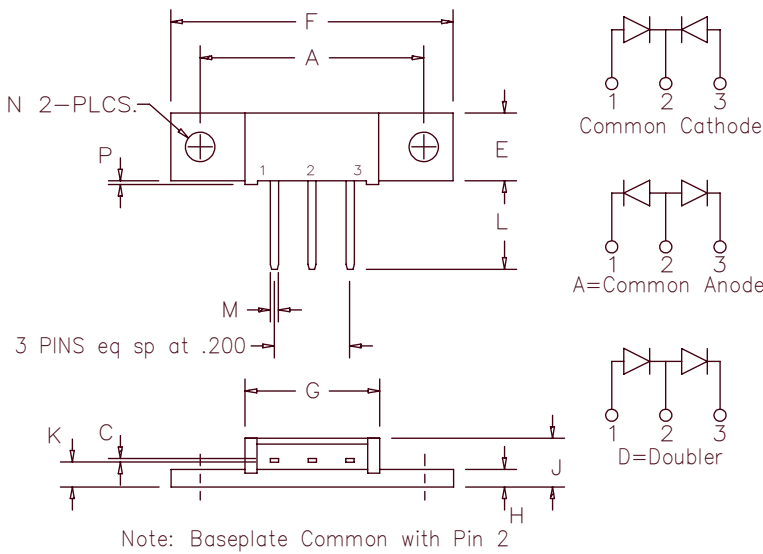


Schottky MiniMod

FST6380 — FST63100



| Dim. | Inches | | Millimeter | | Notes |
|------|---------|---------|------------|---------|-------|
| | Minimum | Maximum | Minimum | Maximum | |
| A | 1.180 | 1.195 | 29.97 | 30.35 | |
| C | .025 | .035 | 0.64 | 0.89 | |
| E | .350 | .370 | 8.89 | 9.40 | |
| F | 1.490 | 1.510 | 37.85 | 38.35 | |
| G | .695 | .715 | 17.65 | 18.16 | |
| H | .088 | .098 | 2.24 | 2.49 | |
| J | .240 | .260 | 6.10 | 6.60 | |
| K | .115 | .135 | 2.92 | 3.43 | |
| L | .460 | .480 | 11.68 | 12.19 | |
| M | .034 | .046 | 0.86 | 1.17 | |
| N | .151 | .161 | 3.84 | 4.09 | Dia. |
| P | .015 | .025 | 0.38 | 0.64 | |

Note: Baseplate Common with Pin 2

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|----------------------|------------------------------|---------------------------------|
| FST6380* | 63CNQ080 | 80V | 80V |
| FST6390* | | 90V | 90V |
| FST63100* | 63CNQ100 | 100V | 100V |

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

- Schottky Barrier Rectifier
- Guard Ring Protection
- 2X30 Amperes avg.
- 175°C Junction Temperature
- Reverse Energy Tested
- V_{RRM} – 80 to 100 Volts
- ROHS Compliant

Electrical Characteristics

| | | |
|---|---------------------|--|
| Average forward current per pkg | $I_{F(AV)}$ 60 Amps | $T_C = 150^\circ\text{C}$, Square wave, $R_{\theta JC} = 0.5^\circ\text{C/W}$ |
| Average forward current per leg | $I_{F(AV)}$ 30 Amps | $T_C = 150^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$ |
| Maximum surge current per leg | I_{FSM} 600 Amps | 8.3 ms, half sine, $T_J = 175^\circ\text{C}$ |
| Max repetitive peak reverse current per leg | $I_{R(OV)}$ 2 Amps | $f = 1 \text{ KHZ}$, 25°C , $1\mu\text{sec}$ square wave |
| Max peak forward voltage per leg | V_{FM} 0.60 Volts | $I_{FM} = 30\text{A}$: $T_J = 175^\circ\text{C}^*$ |
| Max peak forward voltage per leg | V_{FM} 0.82 Volts | $I_{FM} = 30\text{A}$: $T_J = 25^\circ\text{C}^*$ |
| Max peak reverse current per leg | I_{RM} 20 mA | V_{RRM} , $T_J = 125^\circ\text{C}^*$ |
| Max reverse current per leg | I_{RM} 1.5 mA | V_{RRM} , $T_J = 25^\circ\text{C}$ |
| Typical junction capacitance per leg | C_J 1000 pF | $V_R = 5.0\text{V}$, $T_C = 25^\circ\text{C}$ |

*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 per leg | $R_{\theta JC}$ | 1.0°C/W Junction to case |
| Max thermal resistance per pkg | $R_{\theta JC}$ | 0.5°C/W Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | 0.3°C/W Case to sink |
| Mounting Base Torque | | 10 inch pounds maximum |
| Weight | | 0.3 ounce (8.4 grams) typical |

FST6380— FST63100

Figure 1
Typical Forward Characteristics – Per Leg

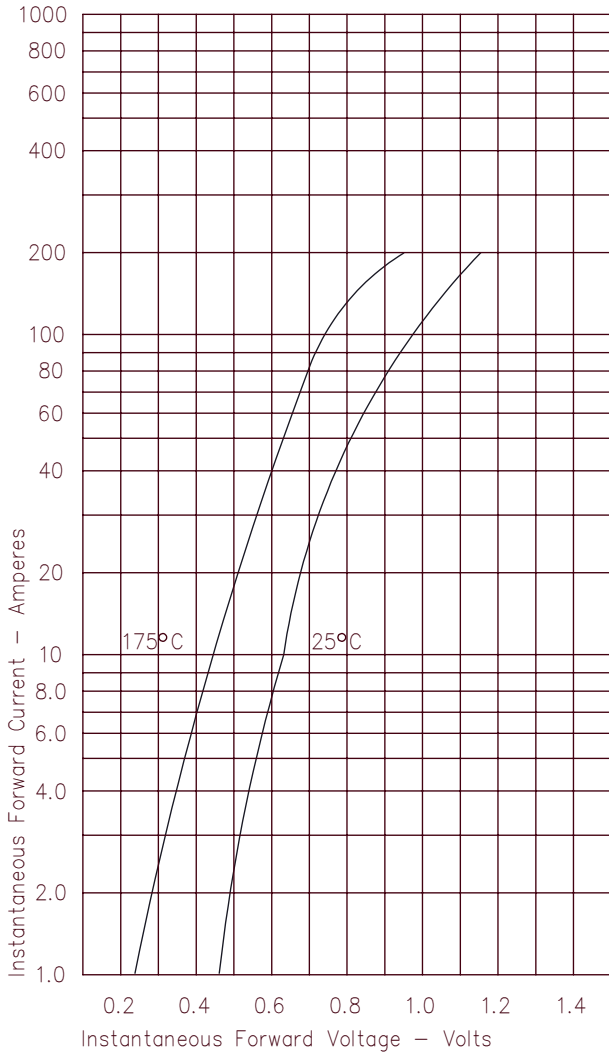


Figure 3
Typical Junction Capacitance – Per Leg

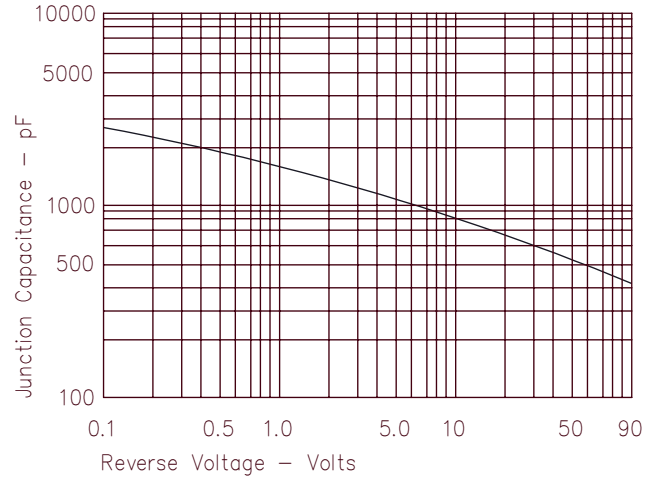


Figure 4
Forward Current Derating – Per Leg

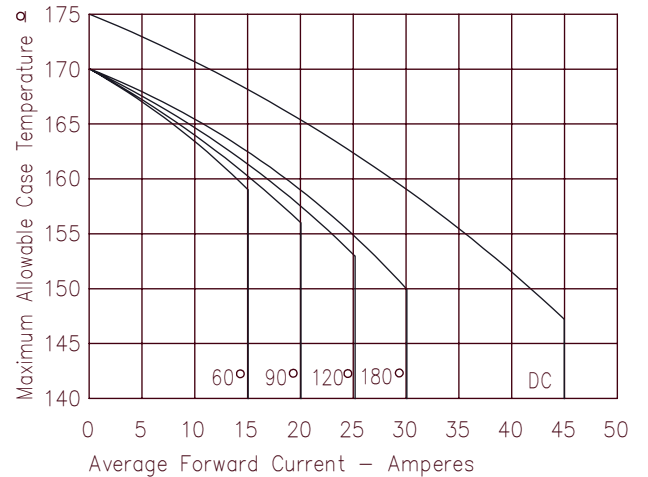


Figure 2
Typical Reverse Characteristics – Per Leg

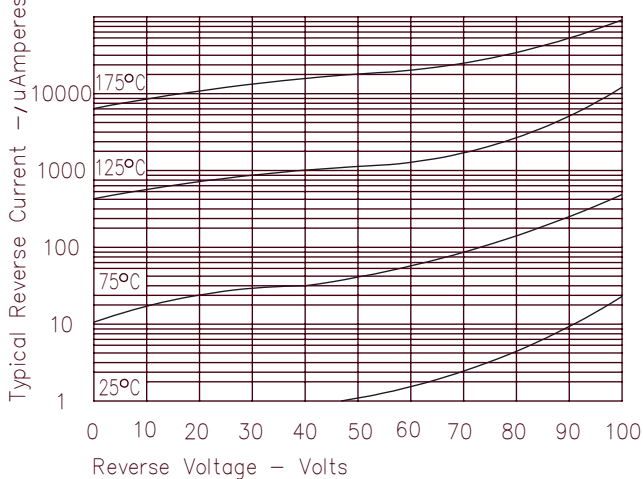


Figure 5
Maximum Forward Power Dissipation – Per Leg

