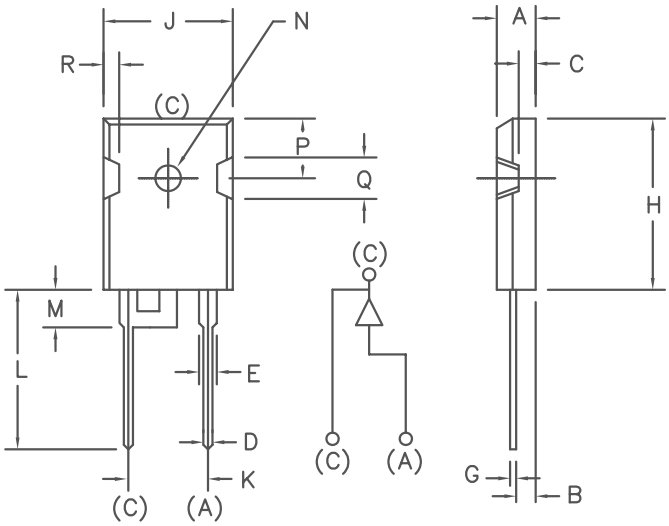
# 40 Amp Schottky Rectifiers
# MS40180–MS40200




| Dim. | Inches | | Millimeter | | |
|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Notes |
| A | .185 | .209 | 4.70 | 5.31 | |
| B | .087 | .102 | 2.21 | 2.59 | |
| C | .059 | .098 | 1.50 | 2.49 | |
| D | .040 | .055 | 1.02 | 1.40 | |
| E | .079 | .094 | 2.01 | 2.39 | |
| F | --- | --- | --- | --- | |
| G | .016 | .031 | .410 | 0.78 | |
| H | .819 | .883 | 20.80 | 22.4 | |
| J | .627 | .650 | 15.93 | 16.5 | |
| K | .430 | --- | 10.92 | --- | |
| L | .790 | .810 | 20.07 | 20.6 | |
| M | .157 | .180 | 3.99 | 4.57 | |
| N | .139 | .144 | 3.53 | 3.66 | Dia. |
| P | .255 | .300 | 6.48 | 7.62 | |
| Q | .170 | .210 | 4.32 | 5.33 | |
| R | .080 | .110 | 2.03 | 2.79 | |

2 PIN T03P

| Microsemi Catalog Number | Industry Part Number | Repetitive Peak Reverse Voltage | Transient Peak Reverse Voltage |
|---|---|---|---|
| MS40180 | | 180V | 180V |
| MS40200 | | 200V | 200V |

- Schottky Barrier Rectifier
- $V_{RRM}$ 180 to 200 volts
- 40 Amperes Avg.
- 175°C junction temperature
- High Surge Capability

## Electrical Characteristics

| | | |
|---|---|---|
| Average forward current | $I_{F(AV)}$ 40 Amps | $T_C$ = 143°C, square wave |
| Maximum surge current | $I_{FSM}$ 400 Amps | 8.3ms, half sine, $T_J$ = 175°C |
| Max. peak forward voltage | $V_{FM}$ .83 Volts | $I_{FM}$ = 40A, $T_J$ = 25°C* |
| Typical peak forward voltage | $V_{FM}$ .67 Volts | $I_{FM}$ = 40A, $T_J$ = 125°C* |
| Typical peak reverse current | $I_{RM}$ 500 uA | $V_{RRM}$, $T_J$ = 125°C* |
| Max. peak reverse current | $I_{RM}$ 100 uA | $V_{RRM}$, $T_J$ = 25°C |
| Typical junction capacitance | $C_J$ 625 pF | $V_R$ = 5.0V, $T_J$ = 25°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 | $R_{\Theta JC}$ | 1.0°C/W Junction to case |
| Max thermal resistance (greased) | $R_{\Theta CS}$ | 0.25°C/W case to sink |
| Mounting Torque | | 8–12 inch pounds (#6 screw) |
| Weight | | .22 ounces (6.36 grams) typical |

COLORADO Microsemi
800 Hoyt Street
Broomfield, CO. 80020
PH: (303) 469-2161
FAX: (303) 466-3775
www.microsemi.com

8-23-05 Rev. 0

# FST40180–FST40200

Figure 1
Typical Forward Characteristics – Per Leg

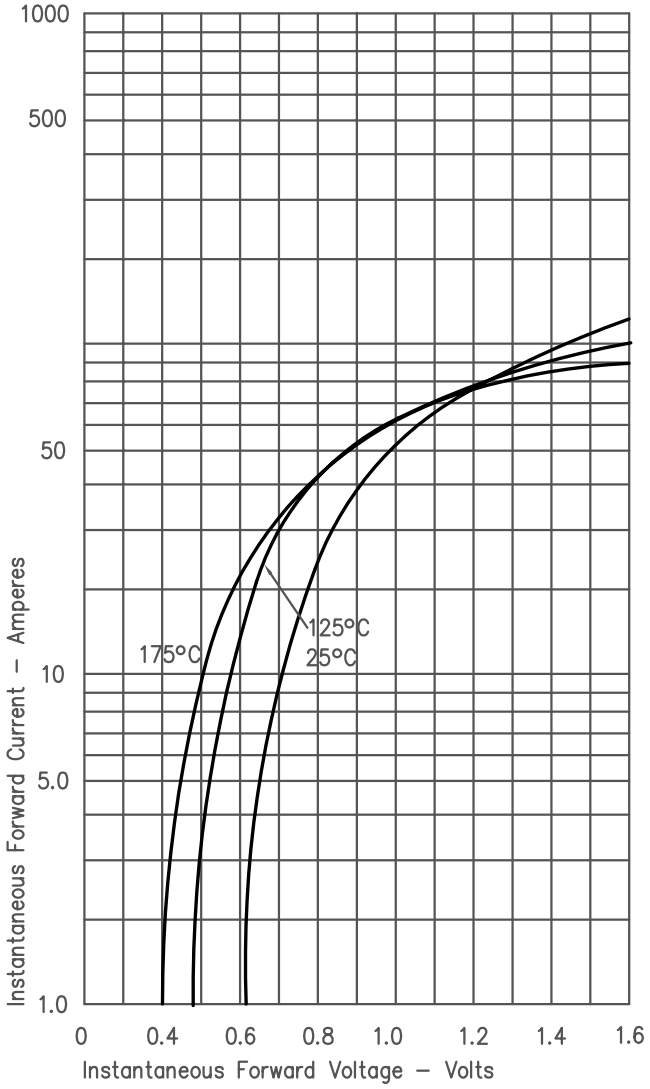



Figure 2
Typical Reverse Characteristics – Per Leg

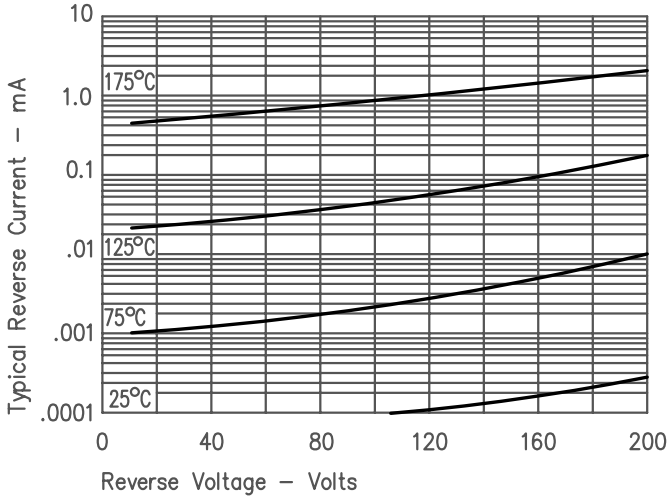



Figure 3
Typical Junction Capacitance – Per Leg

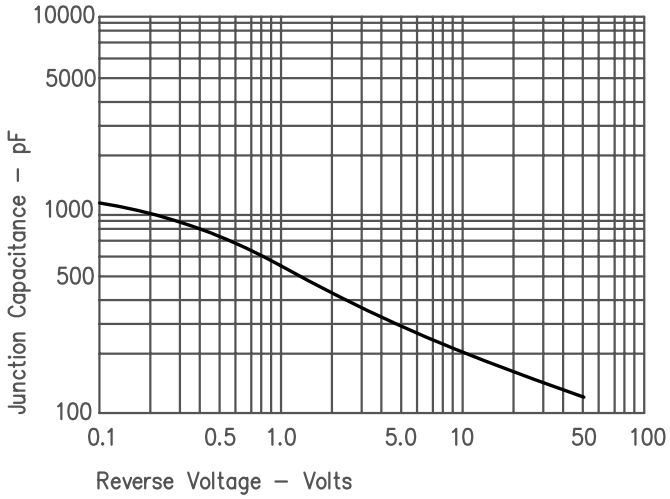



Figure 4
Forward Current Derating – Per Leg

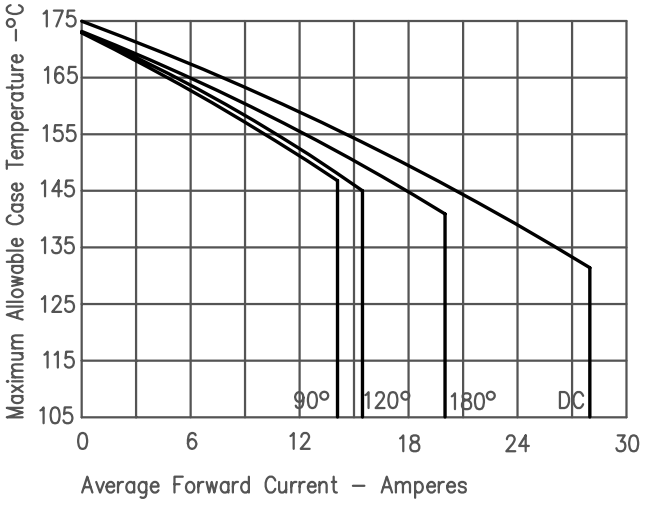



Figure 5
Maximum Forward Power Dissipation – Per Leg