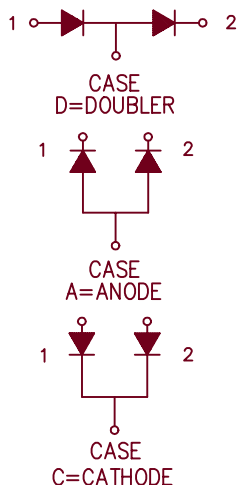
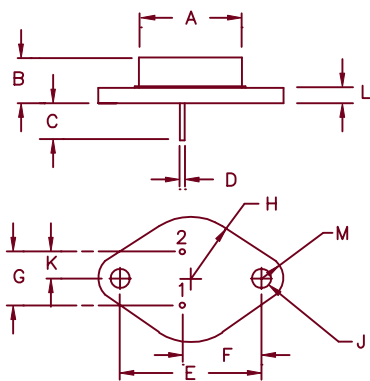


Schottky Rectifier

SBT6040 — SBT6050



| Dim. | Inches | | Millimeter | | Notes |
|------|---------|---------|------------|---------|-------|
| | Minimum | Maximum | Minimum | Maximum | |
| A | — | .875 | — | 22.23 | Dia. |
| B | .250 | .450 | 6.35 | 11.43 | |
| C | .435 | — | 11.05 | — | |
| D | .057 | .065 | 1.45 | 1.65 | Dia. |
| E | 1.177 | 1.197 | 29.90 | 30.40 | |
| F | .655 | .675 | 16.64 | 17.15 | |
| G | .420 | .440 | 10.67 | 11.18 | |
| H | — | .525 | — | 13.34 | Rad. |
| J | .151 | .161 | 3.84 | 4.09 | Dia. |
| K | .205 | .225 | 5.21 | 5.72 | |
| L | — | .135 | — | 3.43 | |
| M | — | .180 | — | 4.57 | Rad. |

TO-204AE (LARGE PIN TO-3)

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|----------------------|------------------------------|---------------------------------|
| SBT6040* | 60CDQ035 | 35V | 35V |
| SBT6045* | 60CDQ040 | 40V | 40V |
| SBT6045* | 60CDQ045 | 45V | 45V |
| SBT6050* | | 50V | 50V |

*Add D, C, or A

- Schottky Barrier Rectifier
- Guard Ring Protection
- 175°C Operation
- VRRM - 40 to 50V
- 60 Amperes
- Reverse Energy Tested

| Electrical Characteristics Per Leg | | |
|--------------------------------------|----------------------------|---|
| Average forward current per leg | I _{F(AV)} 30 Amps | T _C = 147°C, square wave, R _{θJC} = 1.2°C/W |
| Average forward current per leg | I _{F(AV)} 30 Amps | T _C = 130°C, square wave, R _{θJC} = 2.0°C/W |
| Maximum surge current | I _{FSM} 600 Amps | 8.3 ms, half sine T _J = 175°C |
| Max repetitive peak reverse current | I _{R(OV)} 2 Amps | f = 1 KHz, 25°C, 1 μsec square wave |
| Max peak forward voltage | V _{FM} .55 Volts | I _{FM} = 30A: T _J = 175°C* |
| Max peak forward voltage | V _{FM} .68 Volts | I _{FM} = 30A: T _J = 25°C* |
| Max peak reverse current | I _{RM} 15 mA | V _{RRM} , T _J = 125°C* |
| Max peak reverse current | I _{RM} 1.2 mA | V _{RRM} , T _J = 25°C |
| Typical junction capacitance per leg | C _J 1800 pF | V _R = 5.0V, T _J = 25°C |

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

| Thermal and Mechanical Characteristics | | |
|--|------------------|-------------------------------|
| Operating junction temp range | T _{SG} | -65°C to 175°C |
| Storage temp range | T _J | -65°C to 175°C |
| Maximum thermal resistance (standard polarity) | R _{θJC} | 1.2°C/W Junction to case |
| Maximum thermal resistance (reverse polarity) | R _{θJC} | 2.0°C/W Junction to case |
| Typical thermal resistance (greased) | R _{θCS} | 0.5°C/W Case to sink |
| Weight | | 1.0 ounces (28 grams) typical |

7-19-01 Rev. 2

SBT6040 — SBT6050

Figure 1
Typical Forward Characteristics

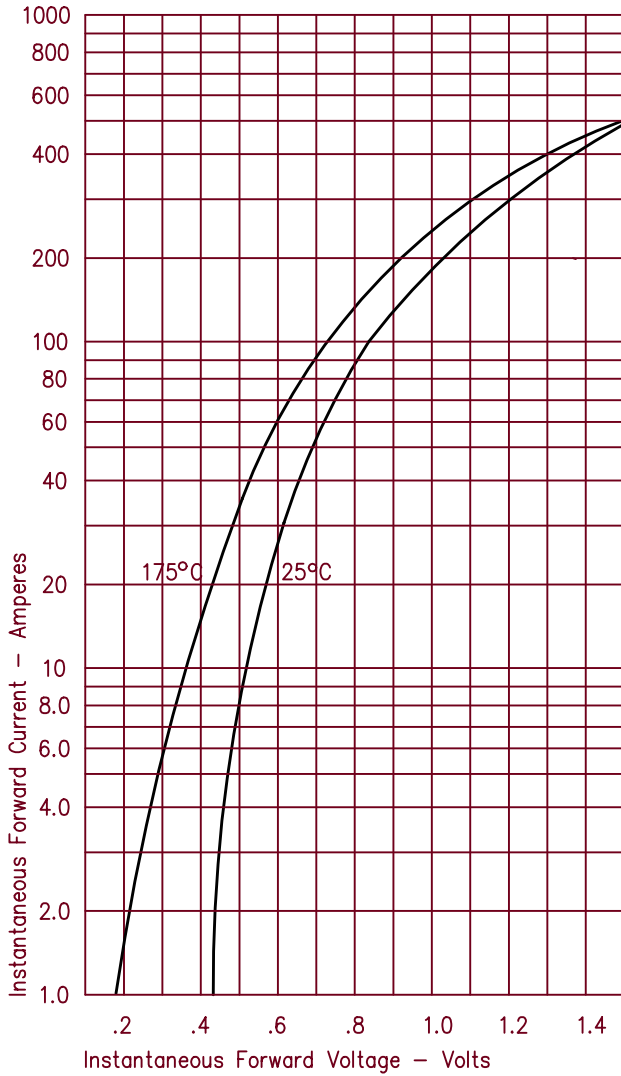


Figure 3
Typical Junction Capacitance

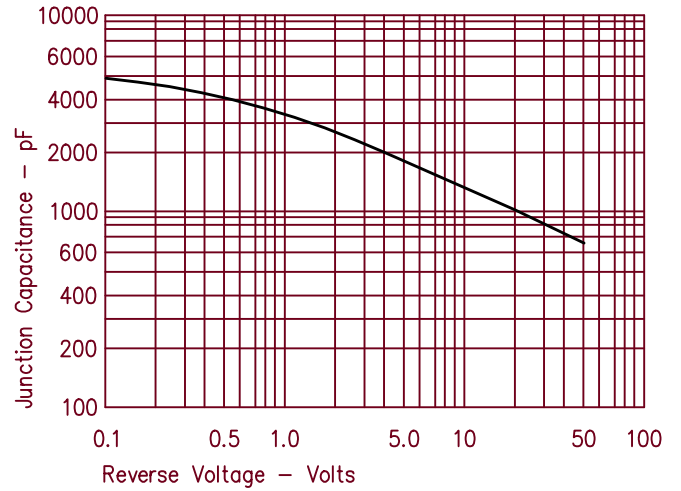


Figure 4
Forward Current Derating - Standard Polarity

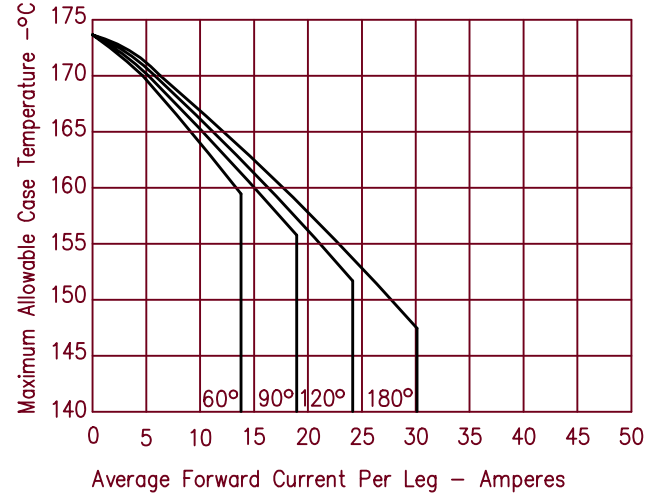


Figure 2
Typical Reverse Characteristics

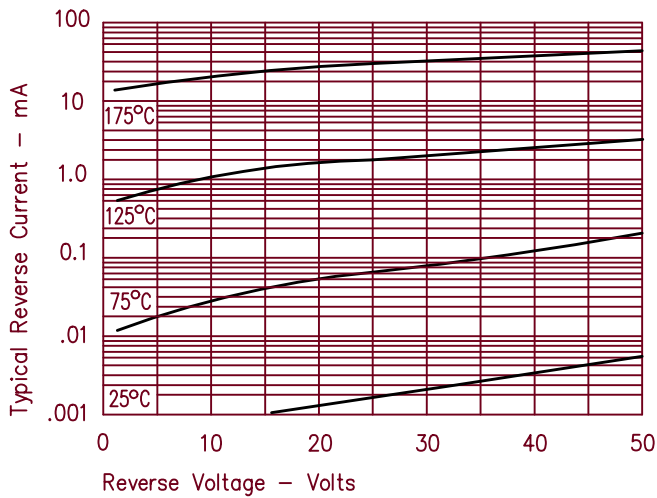


Figure 5
Maximum Forward Power Dissipation - Standard Polarity

