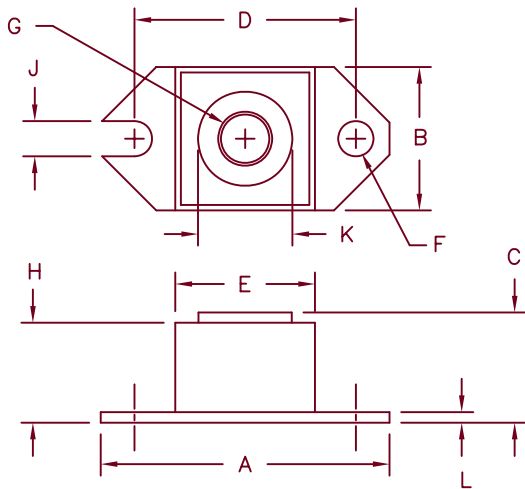


240 Amp Schottky Rectifier HS24035 – HS24045



| Dim. | Inches | | Millimeter | | Notes |
|------|---------|---------|------------|---------|-------|
| | Minimum | Maximum | Minimum | Maximum | |
| A | 1.52 | 1.56 | 38.86 | 39.62 | |
| B | .725 | .775 | 18.42 | 19.69 | |
| C | .605 | .625 | 15.37 | 15.88 | |
| D | 1.182 | 1.192 | 30.02 | 30.28 | |
| E | .745 | .755 | 18.92 | 19.18 | Sq. |
| F | .152 | .160 | 3.86 | 4.06 | Dia. |
| G | | | 1/4-20 | UNC-2B | |
| H | .570 | .580 | 14.49 | 14.73 | |
| J | .156 | .160 | 3.96 | 4.06 | |
| K | .495 | .505 | 12.57 | 12.83 | Dia. |
| L | .120 | .130 | 3.05 | 3.30 | |

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|--|------------------------------|---------------------------------|
| HS24035* | 240NQ035,244NQ035 MBRP20035L,MBRP30035L MBR24035 | 35V | 35V |
| HS24040* | 240NQ040,244NQ040 MBR24040 | 40V | 40V |
| HS24045* | 240NQ045,244NQ045 MBR24045 | 45V | 45V |

*Add suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard ring protection
- Low forward voltage
- VRRM – 35 to 45 volts
- 150°C junction temperature
- Reverse energy tested

Electrical Characteristics

| | | |
|-------------------------------------|---------------------|--|
| Average forward current | $I_F(AV)$ 240 Amps | $T_C = 92^\circ C$, square wave, $R_{\theta JC} = 0.24^\circ C/W$ |
| Maximum surge current | I_{FSM} 3500 Amp | 8.3 ms, half sine $T_J = 150^\circ C$ |
| Max repetitive peak reverse current | $I_R(OV)$ 2 Amps | $f = 1$ KHz, $25^\circ C$, 1 μ sec square wave |
| Max peak forward voltage | V_{FM} 0.49 Volts | $I_{FM} = 240A: T_J = 125^\circ C^*$ |
| Max peak forward voltage | V_{FM} 0.55 Volts | $I_{FM} = 240A: T_J = 25^\circ C^*$ |
| Max peak reverse current | I_{RM} 3.0 A | $V_{RRM}, T_J = 125^\circ C^*$ |
| Max peak reverse current | I_{RM} 12 mA | $V_{RRM}, T_J = 25^\circ C$ |
| Typical junction capacitance | C_J 10500 pF | $V_R = 5.0V, T_J = 25^\circ C$ |

*Pulse test: Pulse width 300 μ sec, Duty cycle 2%

Thermal and Mechanical Characteristics

| | | |
|--------------------------------------|-----------------|---------------------------|
| Storage temp range | TSTG | -55°C to 175°C |
| Operating junction temp range | T_J | -55°C to 150°C |
| Maximum thermal resistance | $R_{\theta JC}$ | 0.24°C/W Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | 0.12°C/W Case to sink |
| Terminal torque | | 35-40 inch pounds |
| Mounting torque | | 20-25 inch pounds |
| Weight | | 1.1 ounces (28 grams) |



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05-11-07 Rev. 4

HS24035 – HS24045

Figure 1
Typical Forward Characteristics

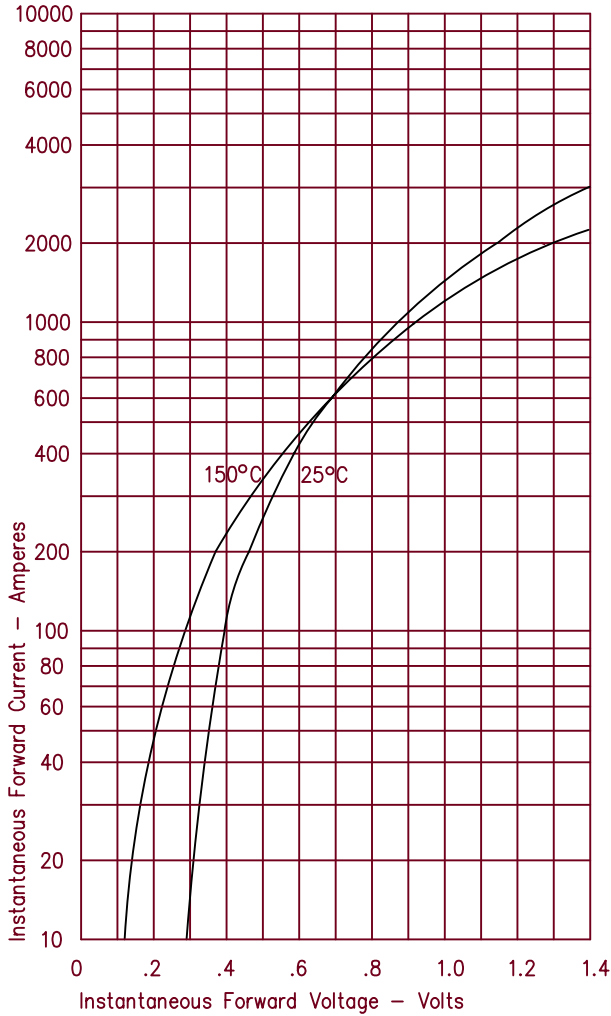


Figure 3
Typical Junction Capacitance

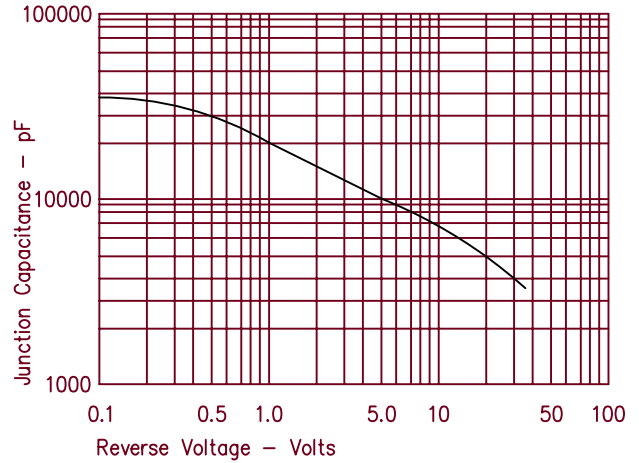


Figure 4
Forward Current Derating

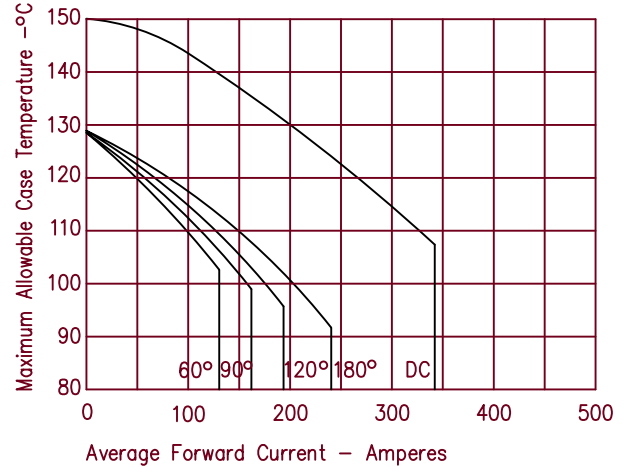


Figure 2
Typical Reverse Characteristics

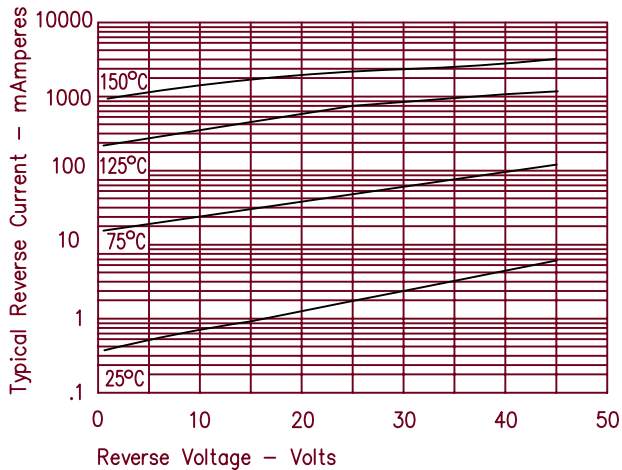


Figure 5
Maximum Forward Power Dissipation

