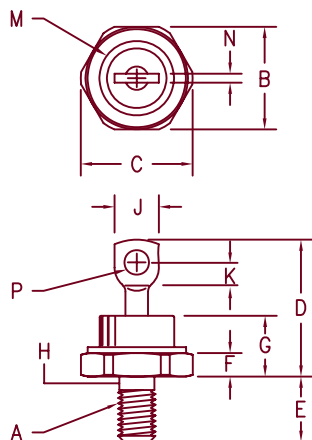


80 Amps Schottky Rectifier SBR8210, SBR8215



- Notes:
1. Full threads within 2 1/2 threads
 2. Standard Polarity: Stud is Cathode
Reverse Polarity: Stud is Anode

| Dim. | Inches | | Millimeter | | Notes |
|------|---------|---------|------------|---------|--------|
| | Minimum | Maximum | Minimum | Maximum | |
| A | ---- | ---- | ---- | ---- | 1/4-28 |
| B | .669 | .688 | 17.00 | 17.47 | |
| C | ---- | .794 | ---- | 20.16 | |
| D | .750 | 1.00 | 19.05 | 25.40 | |
| E | .422 | .453 | 10.72 | 11.50 | |
| F | .115 | .200 | 2.93 | 5.08 | |
| G | ---- | .450 | ---- | 11.43 | |
| H | .220 | .249 | 5.59 | 6.32 | 1 |
| J | ---- | .375 | ---- | 9.52 | |
| K | .156 | ---- | 3.97 | ---- | |
| M | ---- | .510 | ---- | 12.95 | Dia |
| N | ---- | .080 | ---- | 2.03 | |
| P | .140 | .175 | 3.56 | 4.44 | Dia |

DO-203AB (DO-5)

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage | |
|--------------------------|----------------------|------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SBR8210* | | 10V | 10V | <ul style="list-style-type: none"> • Schottky Barrier Rectifier • Low Forward Voltage • Guard Ring Protection • 150°C Junction Temperature • VRRM - 10 to 15 Volts |
| SBR8215* | 95HQ015 | 15V | 15V | |

*Add Suffix R For Reverse Polarity

Electrical Characteristics

| | | |
|-------------------------------------|-----------------------|--------------------------------------------------------------------------------|
| Average forward current, | $I_F(AV) = 80$ Amps | $T_C = 103^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$ |
| Maximum surge current, | $I_{FSM} = 1200$ Amps | 8.3 ms, half sine $T_J = 150^\circ\text{C}$ |
| Max repetitive peak reverse current | $I_R(OV) = 2$ Amps | $f = 1$ KHz, 25°C , 1 μsec Square wave |
| Max peak forward voltage, | $V_{FM} = .38$ Volts | $I_{FM} = 80\text{A}$, $T_J = 150^\circ\text{C}^*$ |
| Max peak forward voltage, | $V_{FM} = .50$ Volts | $I_{FM} = 80\text{A}$, $T_J = 25^\circ\text{C}^*$ |
| Max peak reverse current | $I_{RM} = 1.5$ A | V_{RRM} , $T_J = 125^\circ\text{C}^*$ |
| Max peak reverse current | $I_{RM} = 5.0$ mA | V_{RRM} , $T_J = 25^\circ\text{C}$ |
| Typical junction capacitance | $C_J = 4600$ pF | $V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$ |

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

Thermal and Mechanical Characteristics

| | | |
|--------------------------------------|-----------------|---------------------------------------------|
| Storage temp range | T_{STG} | -65°C to $+175^\circ\text{C}$ |
| Operating junction temp range | T_J | -65°C to $+150^\circ\text{C}$ |
| Max thermal resistance | $R_{\theta JC}$ | 1.0°C/W Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | 0.5°C/W Case to sink |
| Mounting torque | | 25-30 inch pounds |
| Weight | | .54 ounce (15.3 grams) typical |



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05-30-07 Rev. 3

SBR8210, SBR8215

Figure 1
Typical Forward Characteristics

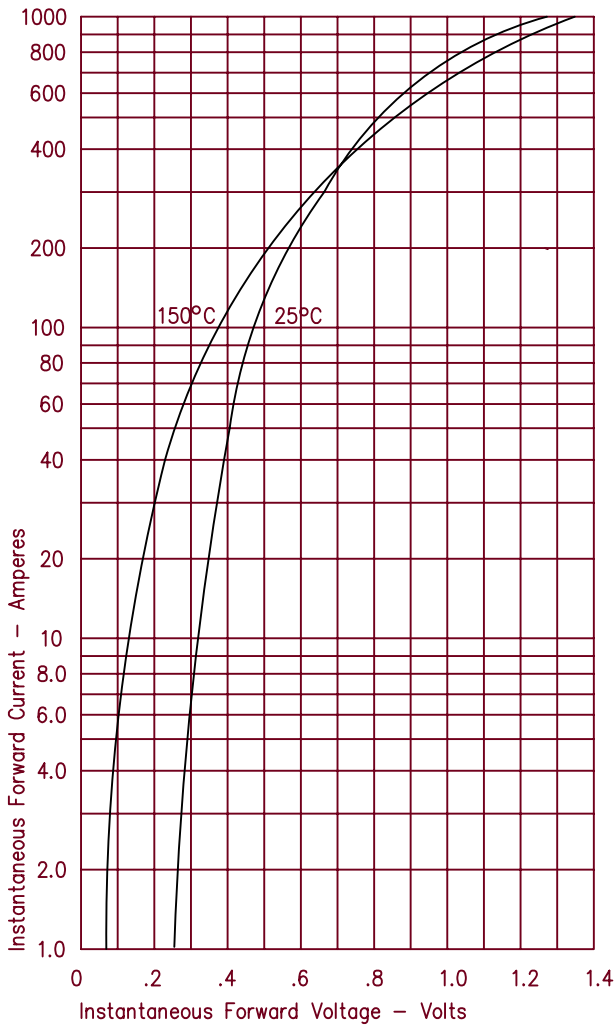


Figure 3
Typical Junction Capacitance

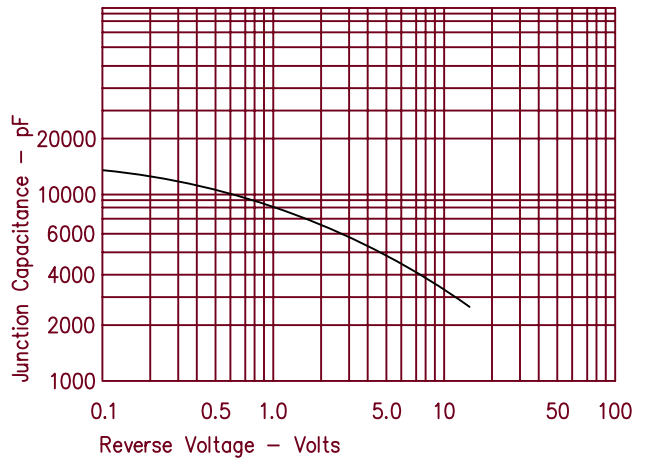


Figure 4
Forward Current Derating

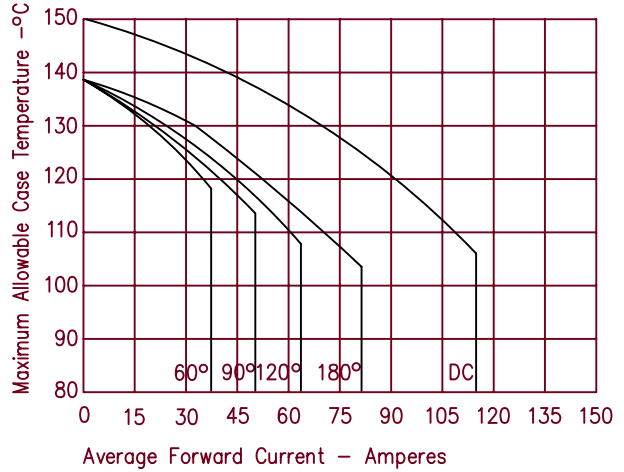


Figure 2
Typical Reverse Characteristics

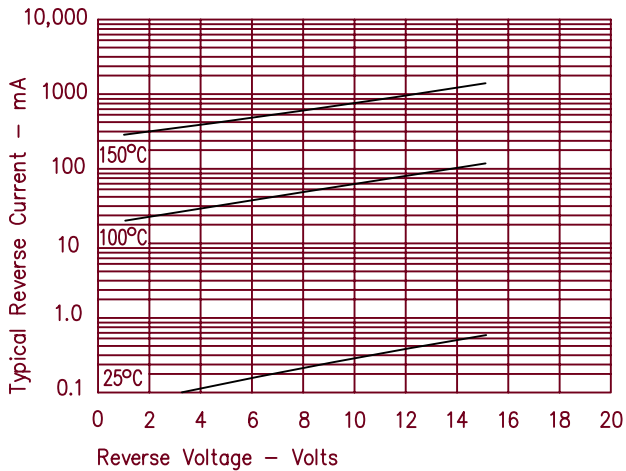


Figure 5
Maximum Forward Power Dissipation

