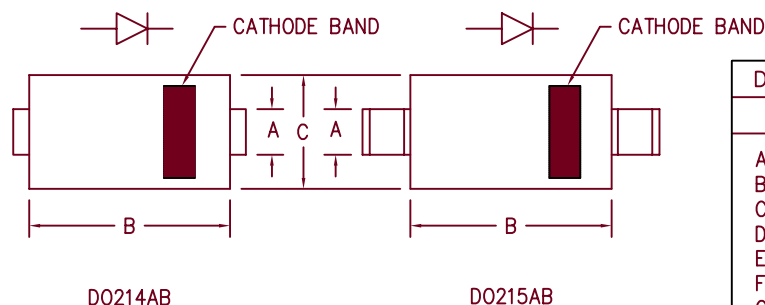


# 5 Amp Schottky Rectifier HSM580 — HSM5100



| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | .117    | .123    | 2.97       | 3.12    |       |
| B    | .260    | .280    | 6.60       | 7.11    |       |
| C    | .220    | .245    | 5.59       | 6.22    |       |
| D    | .307    | .322    | 7.80       | 8.18    |       |
| E    | .075    | .095    | 1.91       | 2.41    |       |
| F    | .380    | .400    | 9.65       | 10.16   |       |
| G    | .025    | .040    | .640       | 1.02    |       |
| H    | .030    | .060    | .760       | 1.52    |       |

| Microsemi<br>Catalog Number | Industry<br>Part Number | Working<br>Peak Reverse<br>Voltage | Repetitive<br>Peak Reverse<br>Voltage |
|-----------------------------|-------------------------|------------------------------------|---------------------------------------|
| HSM580*                     | SK58L                   | 80V                                | 80V                                   |
| HSM590*                     |                         | 90V                                | 90V                                   |
| HSM5100*                    | SK510L                  | 100V                               | 100V                                  |

\* Add Suffix J for J Lead or G for Gull Wing Lead Configuration

- Schottky Barrier Rectifier
- Guard Ring Protection
- High surge capacity
- VRRM 80 to 100 volts
- Surface mount packages

## Electrical Characteristics

|                              |                      |                                                                  |
|------------------------------|----------------------|------------------------------------------------------------------|
| Average forward current      | $I_F(AV)$ 5.0 Amps   | Square wave, $T_L = 95^\circ C$ , $R_{\theta JL} = 22^\circ C/W$ |
| Maximum surge current        | $I_{FSM}$ 200 Amps   | 8.3ms, half sine, $T_J = 175^\circ C$                            |
| Max peak forward voltage     | $V_{FM}$ .60 Volts   | $I_{FM} = 1A; T_J = 25^\circ C$ *                                |
| Max peak forward voltage     | $V_{FM}$ .80 Volts   | $I_{FM} = 5A; T_J = 25^\circ C$ *                                |
| Max peak reverse current     | $I_{RM}$ 250 $\mu A$ | $V_{RRM}, T_J = 25^\circ C$                                      |
| Typical junction capacitance | $C_J$ 280 pF         | $V_R = 5.0V, T_J = 25^\circ C$                                   |

\*Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

## Thermal and Mechanical Characteristics

|                               |                 |                                 |
|-------------------------------|-----------------|---------------------------------|
| Storage temperature range     | $T_{STG}$       | $-55^\circ C$ to $175^\circ C$  |
| Operating junction temp range | $T_J$           | $-55^\circ C$ to $175^\circ C$  |
| Maximum thermal resistance    | $R_{\theta JL}$ | $22^\circ C/W$ Junction to lead |
| Weight                        |                 | .008 ounces (.22 grams) typical |



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05-15-07 Rev. 5

# HSM580 — HSM5100

Figure 1  
Typical Forward Characteristics

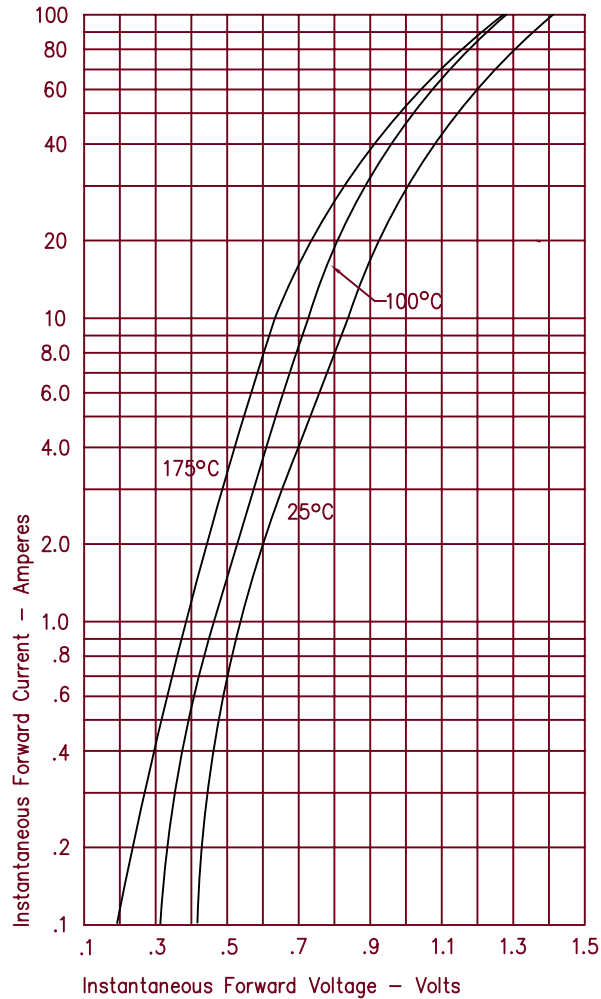


Figure 2  
Typical Reverse Characteristics

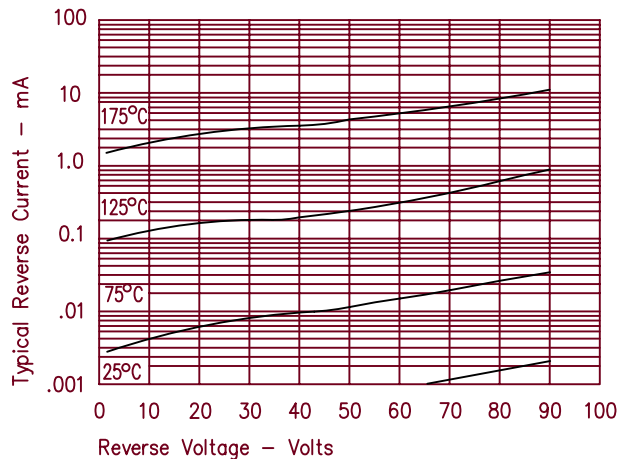


Figure 3  
Typical Junction Capacitance

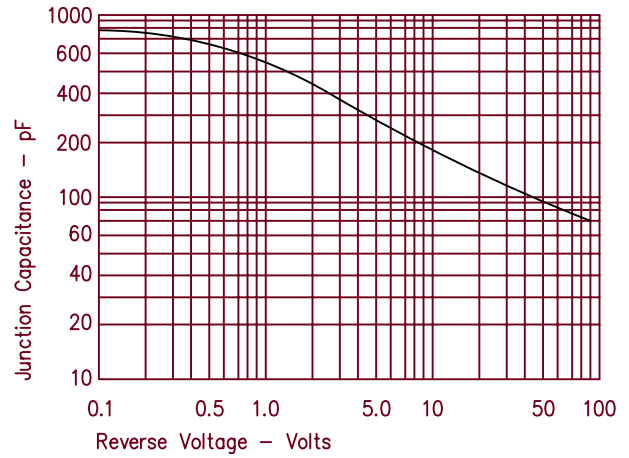


Figure 4  
Forward Current Derating

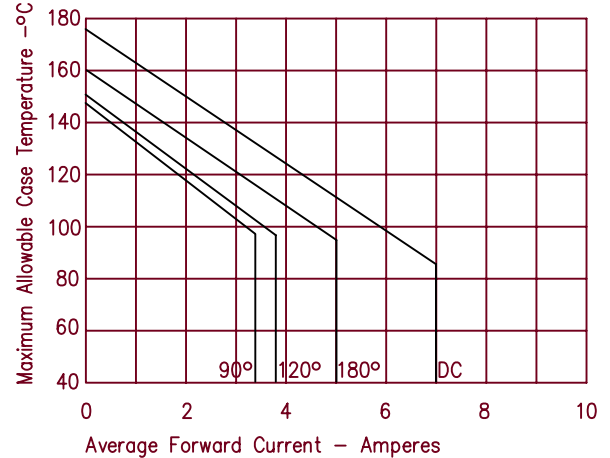


Figure 5  
Maximum Power Dissipation

