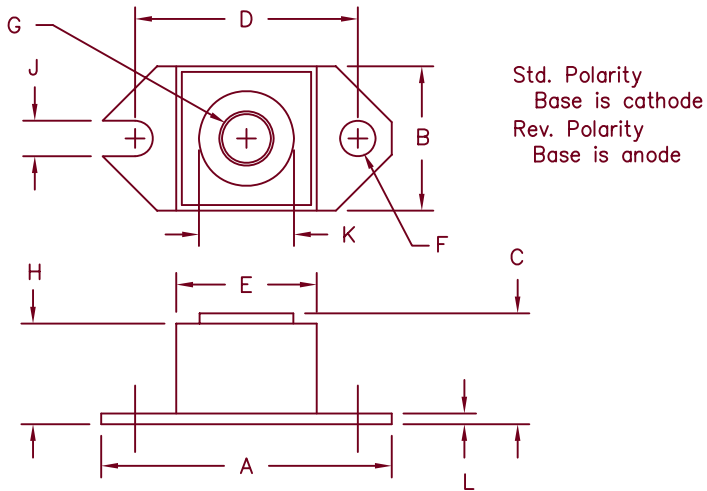


120 Amp Schottky Rectifier HS12230



| Dim. | Inches | | Millimeter | | Notes |
|------|---------|---------|------------|---------|-------|
| | Minimum | Maximum | Minimum | Maximum | |
| A | 1.52 | 1.56 | 38.61 | 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 | .545 | .555 | 13.84 | 14.10 | |
| J | .156 | .160 | 3.96 | 4.06 | |
| K | .495 | .505 | 12.57 | 12.83 | Dia. |
| L | .120 | .130 | 3.05 | 3.30 | |

HALF-PAK

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage | |
|------------------------------------|----------------------|------------------------------|---------------------------------|---|
| HS12230* | 122NQ030 | 30V | 30V | |
| *Add Suffix R for Reverse Polarity | | | | <ul style="list-style-type: none"> • Schottky Barrier Rectifier • Guard Ring Protection • Low Forward Voltage • 150°C Junction Temperature • V_{RRM} 30 Volts • Reverse Energy Tested |

Electrical Characteristics

| | | |
|------------------------------------|-----------------------------|---|
| Average forward current | I _{F(AV)} 120 Amps | T _C = 108°C, Square wave, R _{θJC} = 0.4°C/W |
| Maximum surge current | I _{FSM} 2000 Amps | 8.3ms, half sine, T _J = 125°C |
| Maximum repetitive reverse current | I _{R(OV)} 2 Amps | f = 1 KHZ, 1, T _J = 25°C |
| Max peak forward voltage | V _{FM} 0.49 Volts | I _{FM} = 120A: T _J = 125°C* |
| Max peak forward voltage | V _{FM} 0.55 Volts | I _{FM} = 120A: T _J = 25°C* |
| Max peak reverse current | I _{RM} 2.0 Amp | V _{RRM} , T _J = 125°C* |
| Max peak reverse current | I _{RM} 5mA | V _{RRM} , T _J = 25°C |
| Typical junction capacitance | C _J 5500pF | V _R = 5.0V, T _J = 25°C, f = 1MHz |

*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 150°C |
| Max thermal resistance | R _{θJC} | 0.4°C/W junction to case |
| Typical thermal resistance (greased) | R _{θCS} | 0.12°C/W case to sink |
| Terminal Torque | | 35-40 inch pounds |
| Mounting Base Torque | | 20-25 inch pounds |
| Weight | | 1.1 ounces (32 grams) typical |



SCOTTSDALE

8700 East Thomas Road, P.O. Box 1390
Scottsdale, AZ 85252
PH: (480) 941-6300
FAX: (480) 947-1503
www.microsemi.com

05-10-07 Rev. 3

HS12230

Figure 1
Typical Forward Characteristics

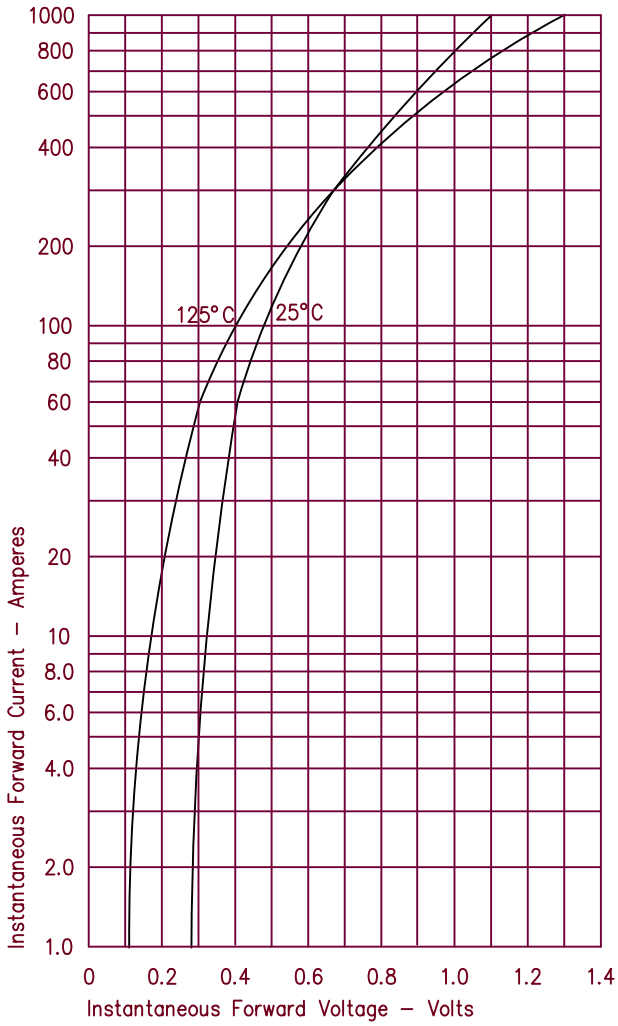


Figure 3
Typical Junction Capacitance

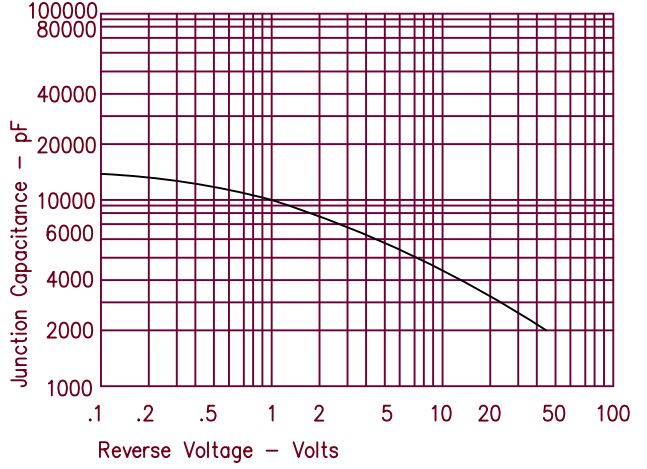


Figure 4
Forward Current Derating

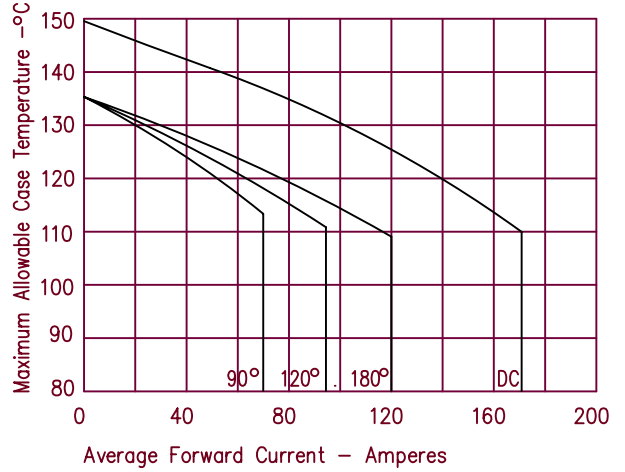


Figure 2
Typical Reverse Characteristics

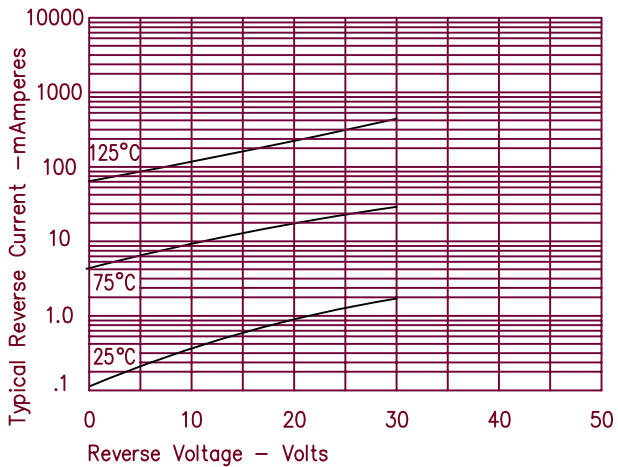


Figure 5
Maximum Forward Power Dissipation

