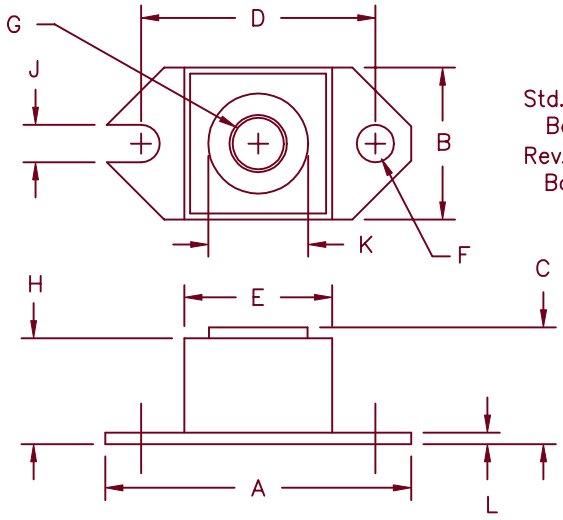
# 240 Amp Schottky Rectifier

# HS24230




Std. Polarity
Base is cathode
Rev. Polarity
Base is anode

| Dim. | Inches | | Millimeter | | |
|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Notes |
| 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 | Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|---|---|---|---|
| HS24230* | 242NQ030 | 30V | 30V |

*Add Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- 240 Amperes/30 Volts
- 150°C Junction Temperature
- Reverse Energy Tested

## Electrical Characteristics

| | | |
|---|---|---|
| Average forward current | $I_{F(AV)}$ 240 Amps | $T_C$ = 84°C, Square wave, $R_{\theta JC}$ = .24°C/W |
| Maximum surge current | $I_{FSM}$ 3500 Amps | 8.3ms, half sine, $T_J$ = 150°C |
| Maximum repetitive reverse current | $I_{R(OV)}$ 2 Amps | f = 1 KHZ, 25°C |
| Max peak forward voltage | $V_{FM}$ 0.49 Volts | $I_{FM}$ = 240A: $T_J$ = 125°C* |
| Max peak forward voltage | $V_{FM}$ 0.55 Volts | $I_{FM}$ = 240A: $T_J$ = 25°C* |
| Max peak reverse current | $I_{RM}$ 3 Amp | $V_{RRM}$, $T_J$ = 125°C* |
| Max peak reverse current | $I_{RM}$ 12mA | $V_{RRM}$, $T_J$ = 25°C |
| Typical junction capacitance | $C_J$ 10500pF | $V_R$ = 5.0V, $T_C$ = 25°C |

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

## Thermal and Mechanical Characteristics

| | | |
|---|---|---|
| Storage temp range | $T_{STG}$ | −55°C to 150°C |
| Operating junction temp range | $T_J$ | −55°C to 150°C |
| Max 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 Base Torque | | 20−25 inch pounds |
| Weight | | 1.1 ounces (32 grams) typical |

COLORADO Microsemi
800 Hoyt Street
Broomfield, CO. 80020
PH: (303) 469-2161
FAX: (303) 466-3775
www.microsemi.com

11-15-01 Rev. 2

# HS24230

Figure 1
Typical Forward Characteristics

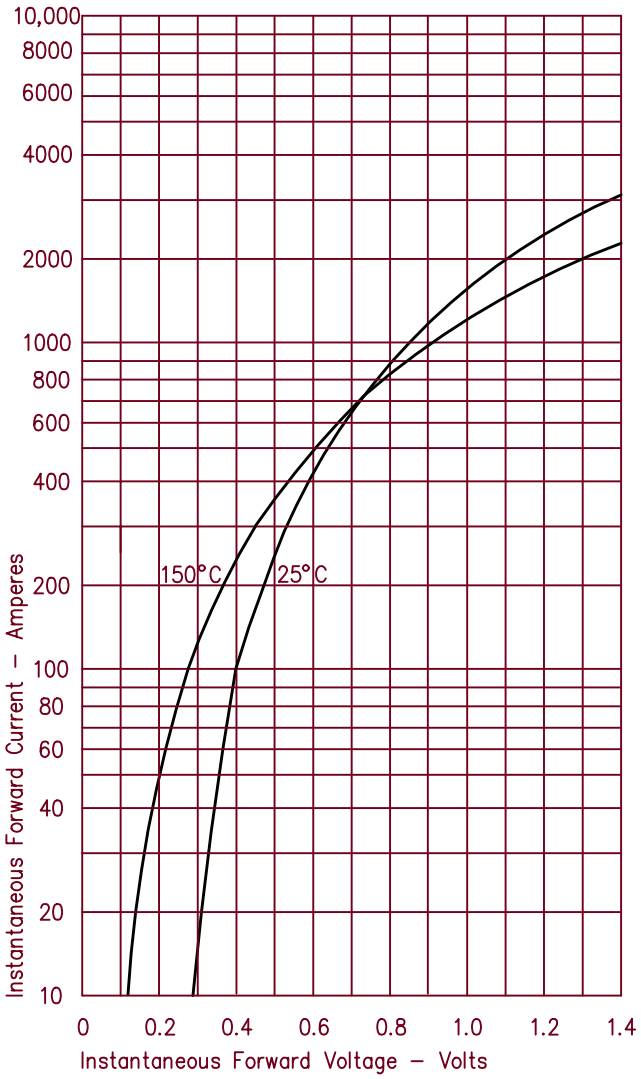



Figure 2
Typical Reverse Characteristics

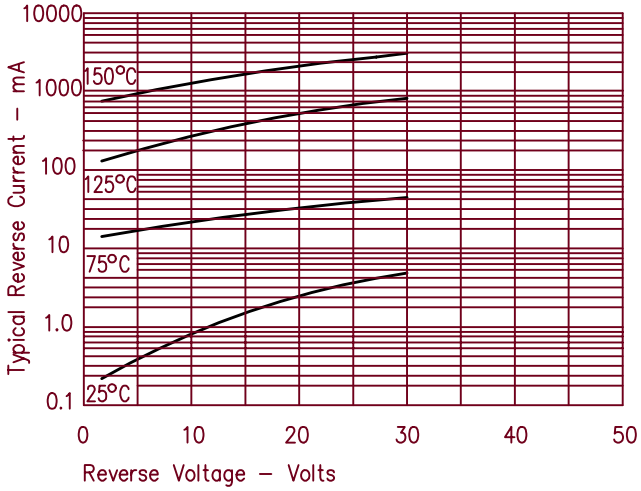



Figure 3
Typical Junction Capacitance

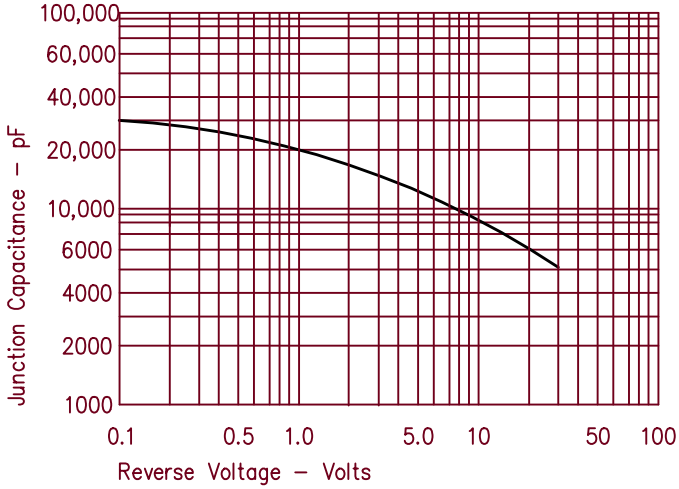



Figure 4
Forward Current Derating

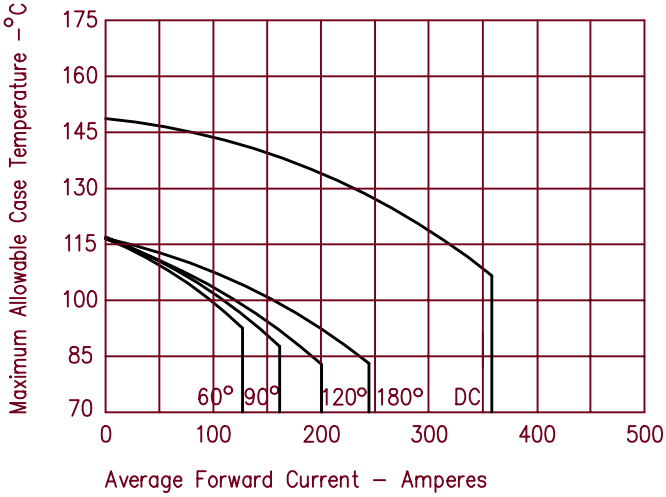



Figure 5
Maximum Forward Power Dissipation