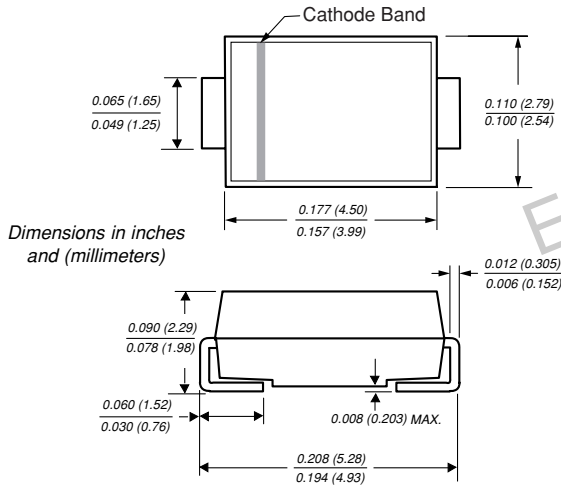




Schottky Barrier Rectifiers

**DO-214AC
(SMA)**

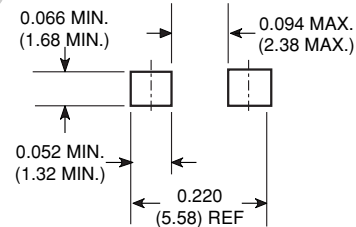
Reverse Voltage 90 to 100V
Forward Current 1.0A



Dimensions in inches and (millimeters)

Extended Voltage Range

Mounting Pad Layout



Mechanical Data

Case: JEDEC DO-214AC molded plastic body
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
High temperature soldering guaranteed: 250°C/10 seconds at terminals
Polarity: Color band denotes cathode end
Weight: 0.002oz., 0.064g

Features

- Low power loss, high efficiency
- Low profile surface mount package
- Built-in strain relief
- Very low switching losses
- Low reverse current
- High surge capability
- Guardring for overvoltage protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

| Parameter | Symbol | BYS12-90 | BYS12-100 | Unit |
|--|-----------------------------------|--|-----------|------|
| Device marking code | | BYS 209 | BYS 210 | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 90 | 100 | V |
| Maximum average forward rectified current | I _{F(AV)} | 1.5 | | A |
| Peak forward surge current single half sine-wave superimposed on rated load at 8.3ms at 10ms | I _{FSM} | 40 30 | | A |
| Maximum Thermal Resistance – Junction Ambient | R _{θJA} | 150 ⁽¹⁾ 125 ⁽²⁾ 100 ⁽³⁾ | | °C/W |
| Voltage rate of change (V _R) | dv/dt | 10,000 | | V/μs |
| Junction and storage temperature range | T _J , T _{STG} | -55 to +150 | | °C |

Electrical Characteristics (T_A = 25°C unless otherwise noted)

| | | | | |
|---|---|----------------|------------|----------|
| Maximum instantaneous forward voltage at: ⁽⁴⁾ | I _F = 1A I _F = 15mA | V _F | 750 360 | mV |
| Maximum DC reverse current at V _{RRM} ⁽⁴⁾ | T _J = 25°C T _J = 100°C | I _R | 100 1 | μA mA |

- Notes:** (1) Mounted on epoxy-glass hard tissue
(2) Mounted on epoxy-glass hard tissue, 50 mm² 35 μm Cu
(3) Mounted on Al-oxide-ceramic (Al₂O₃), 50 mm² 35 μm Cu
(4) Pulse test: 300μs pulse width, 1% duty cycle



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current vs. Forward Voltage

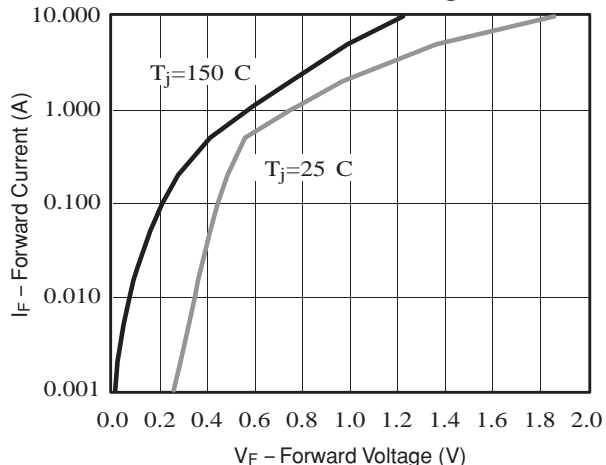


Fig. 4 – Reverse Current vs. Junction Temperature

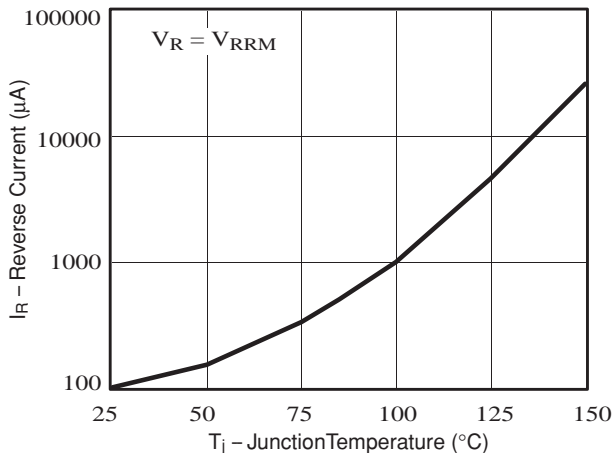


Fig. 2 – Max. Average Forward Current vs. Ambient Temperature

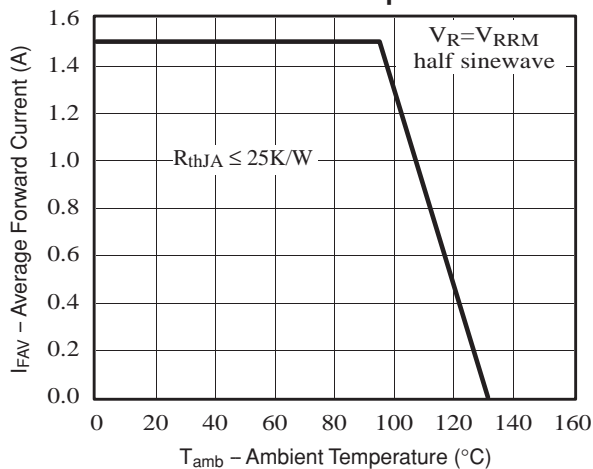


Fig. 5 – Max. Reverse Power Dissipation vs. Junction Temperature

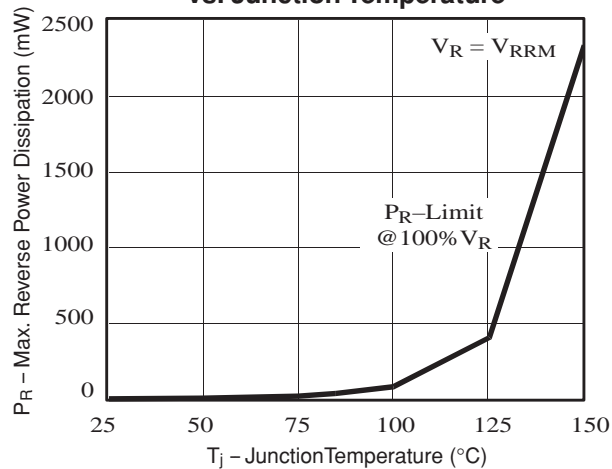


Fig. 3 – Max. Average Forward Current vs. Ambient Temperature

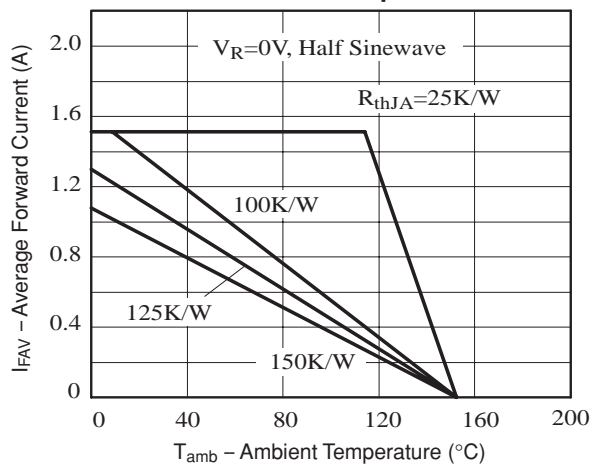


Fig. 6 – Diode Capacitance vs. Reverse Voltage

