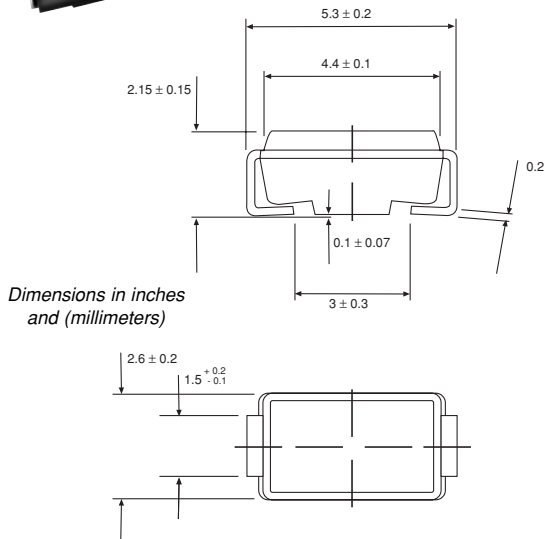




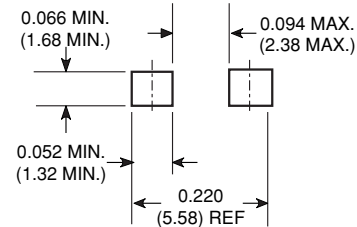
**DO-214AC
(SMA)**

Schottky Barrier Rectifiers

**Reverse Voltage 90
Forward Current 1.0A**



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	Unit
Device marking code		BYS 209	
Maximum repetitive peak reverse voltage	V _{RRM}	90	V
Maximum average forward rectified current	I _{F(AV)}	1.5	A
Peak forward surge current single half sine-wave superimposed on rated load	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

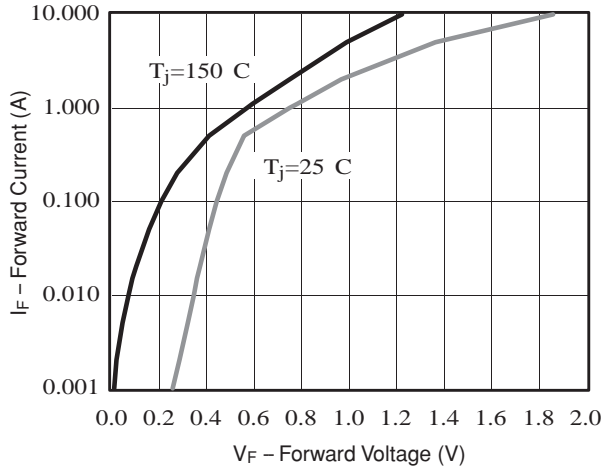


Fig. 4 – Reverse Current vs. Junction Temperature

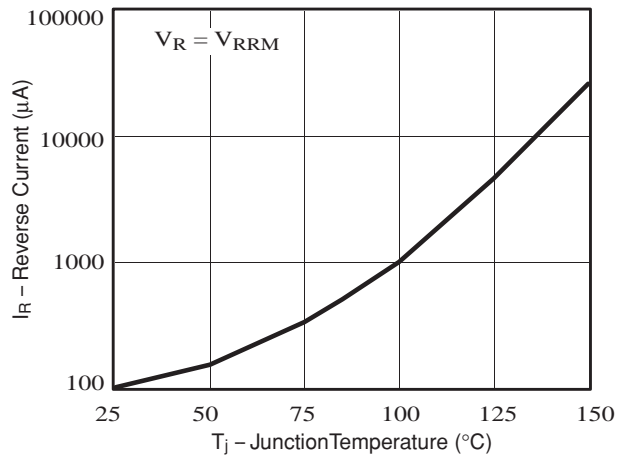


Fig. 2 – Max. Average Forward Current vs. Ambient Temperature

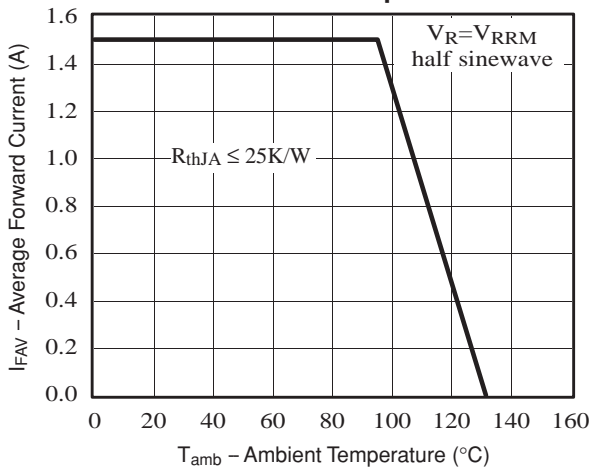


Fig. 5 – Max. Reverse Power Dissipation vs. Junction Temperature

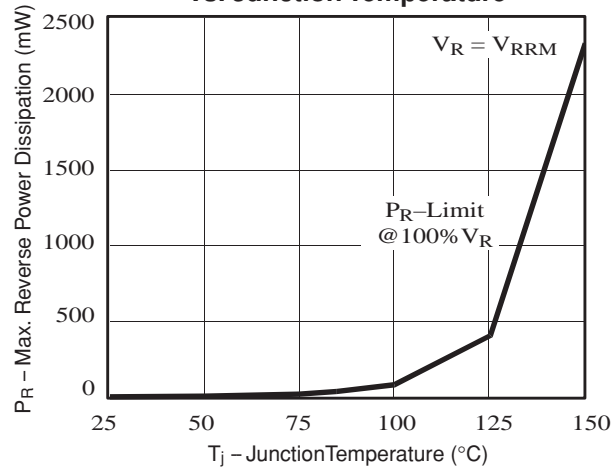


Fig. 3 – Max. Average Forward Current vs. Ambient Temperature

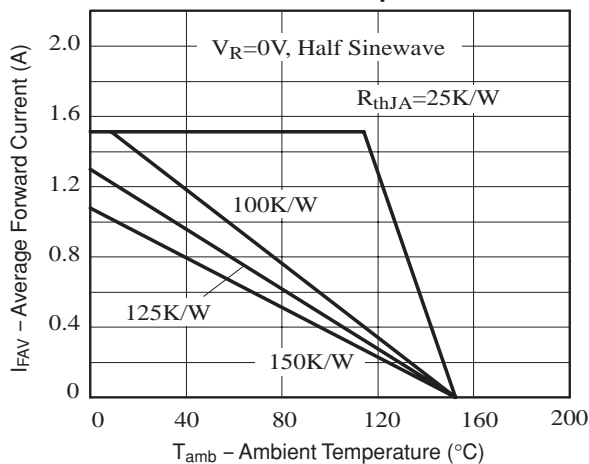
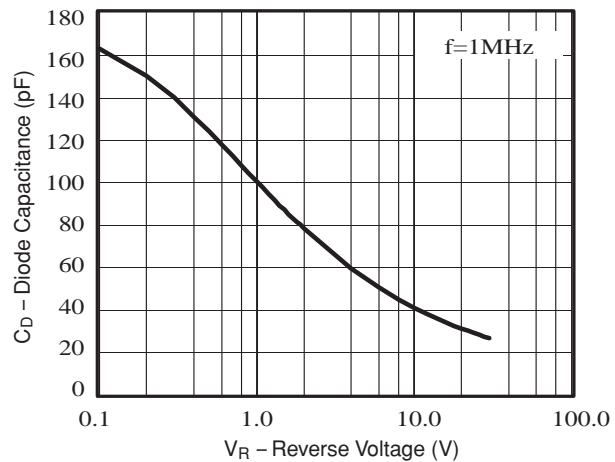


Fig. 6 – Diode Capacitance vs. Reverse Voltage





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