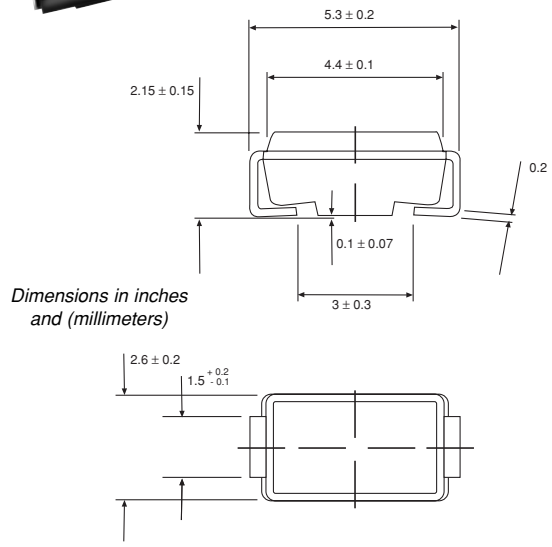
Schottky Barrier Rectifiers

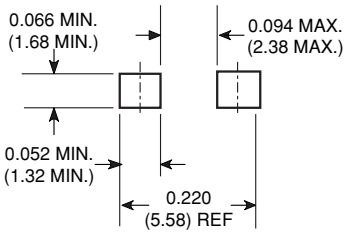
DO-214AC (SMA)

Reverse Voltage 90
Forward Current 1.0A



Dimensions in inches and (millimeters)

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	at 8.3ms at 10ms	I_{FSM}	40 30	A
Maximum Thermal Resistance – Junction Ambient		$R_{\theta JA}$	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 mm^2 35 µm Cu
(3) Mounted on Al-oxide-ceramic (Al_2O_3), 50 mm^2 35 µm Cu
(4) Pulse test: 300µs pulse width, 1% duty cycle

Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 – Forward Current vs. Forward Voltage

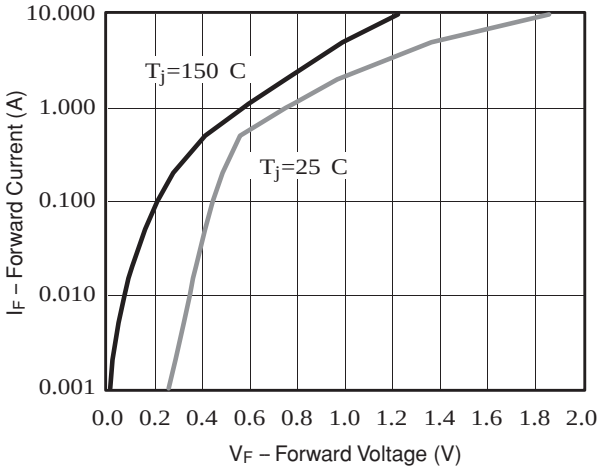


Fig. 2 – Max. Average Forward Current vs. Ambient Temperature

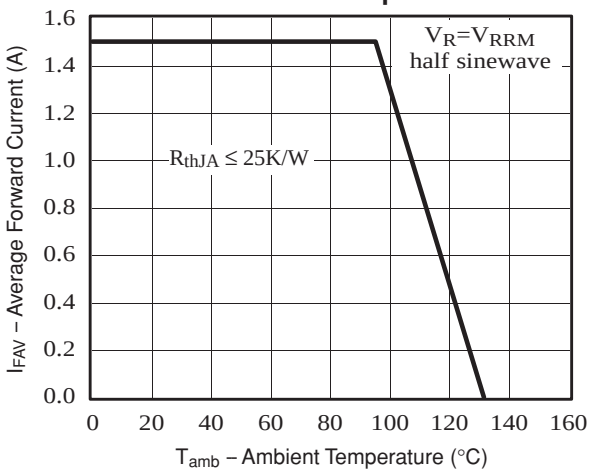


Fig. 3 – Max. Average Forward Current vs. Ambient Temperature

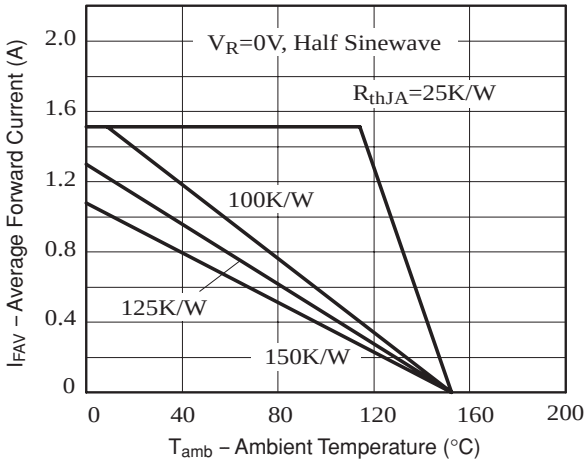


Fig. 4 – Reverse Current vs. Junction Temperature

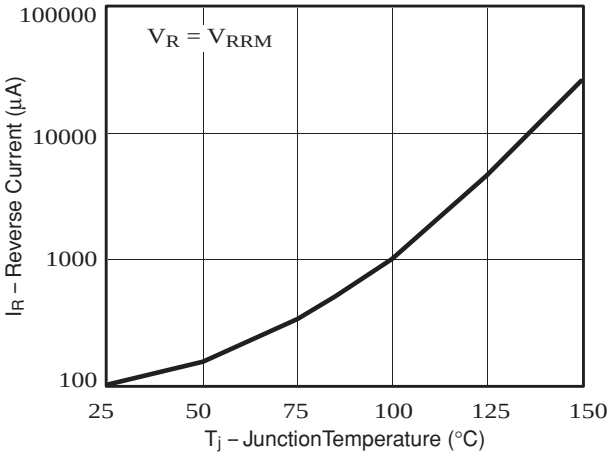


Fig. 5 – Max. Reverse Power Dissipation vs. Junction Temperature

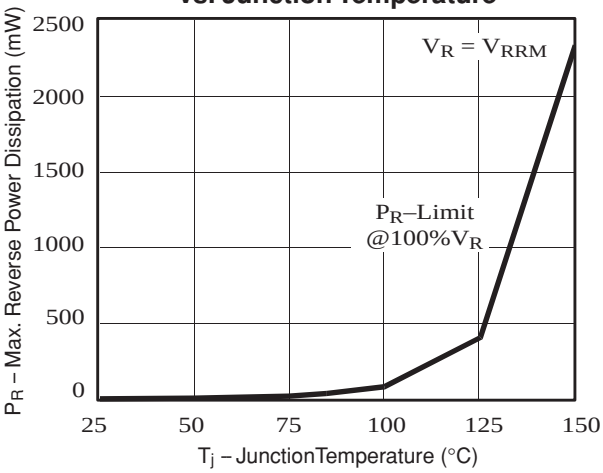
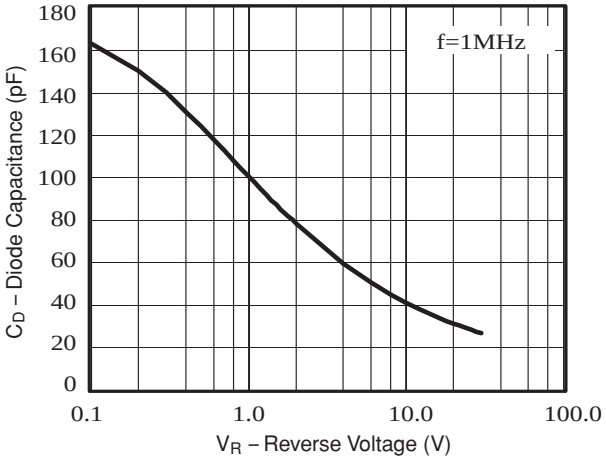


Fig. 6 – Diode Capacitance vs. Reverse Voltage



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