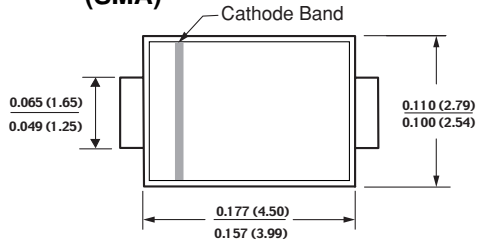




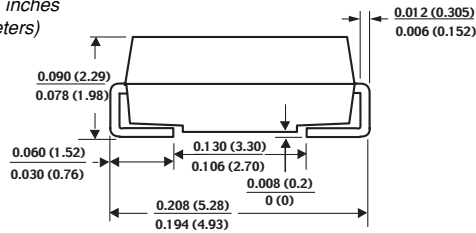
## Schottky Barrier Rectifiers

**DO-214AC  
(SMA)**

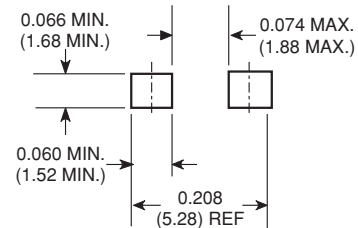
**Reverse Voltage 25 to 45 V**  
**Forward Current 1.5 A**



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<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	BYS10-25	BYS10-35	BYS10-45	Unit
Device marking code		BYS 025	BYS 035	BYS 045	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	25	35	45	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1.5			A
Peak forward surge current single half sine-wave superimposed on rated load	I <sub>FSM</sub>	40 30			A
Maximum Thermal Resistance – Junction Lead	R <sub>θJL</sub>	25			°C/W
Maximum Thermal Resistance – Junction Ambient	R <sub>θJA</sub>	150 <sup>(1)</sup> 125 <sup>(2)</sup> 100 <sup>(3)</sup>			°C/W
Junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150			°C

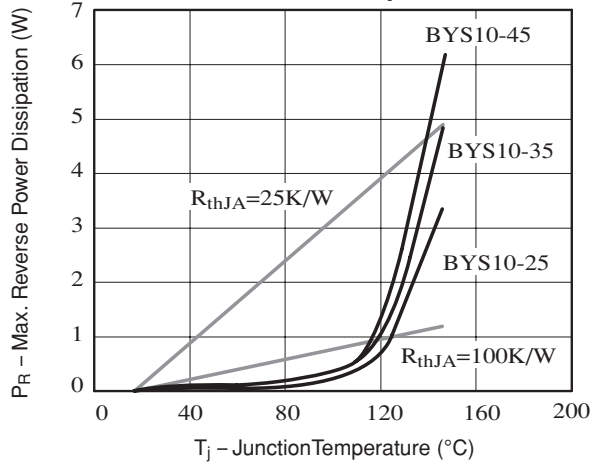
### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Maximum instantaneous forward voltage at 1A <sup>(4)</sup>	V <sub>F</sub>	500			mV
Maximum DC reverse current at V <sub>RRM</sub> <sup>(4)</sup>	I <sub>R</sub>	500 10			μA mA

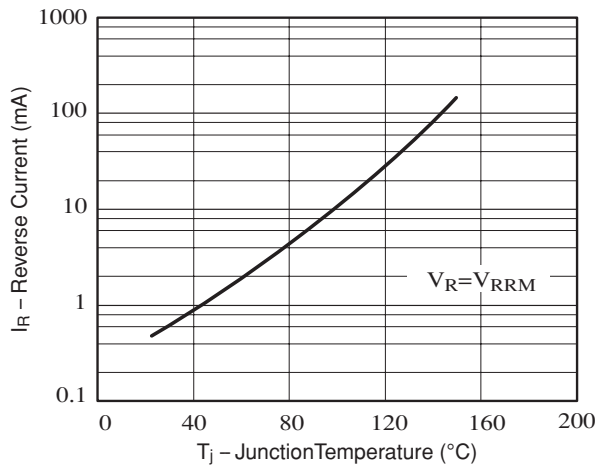
- Notes:** (1) Mounted on epoxy-glass hard tissue  
(2) Mounted on epoxy-glass hard tissue, 50 mm<sup>2</sup> 35 μm Cu  
(3) Mounted on Al-oxide-ceramic (Al<sub>2</sub>O<sub>3</sub>), 50 mm<sup>2</sup> 35 μm Cu  
(4) Pulse test: 300μs pulse width, 1% duty cycle

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

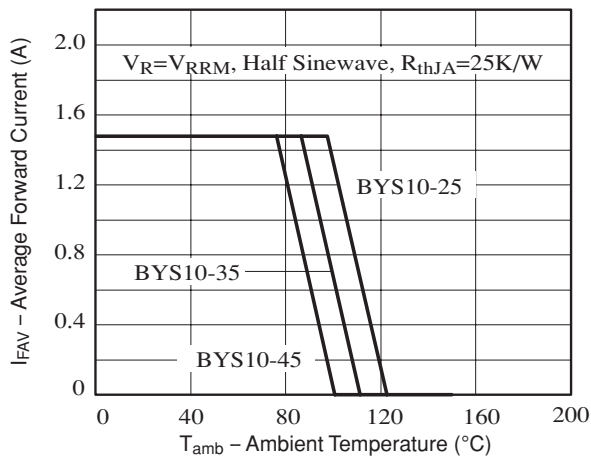
**Fig. 1 – Max. Reverse Power Dissipation vs. Junction Temperature**



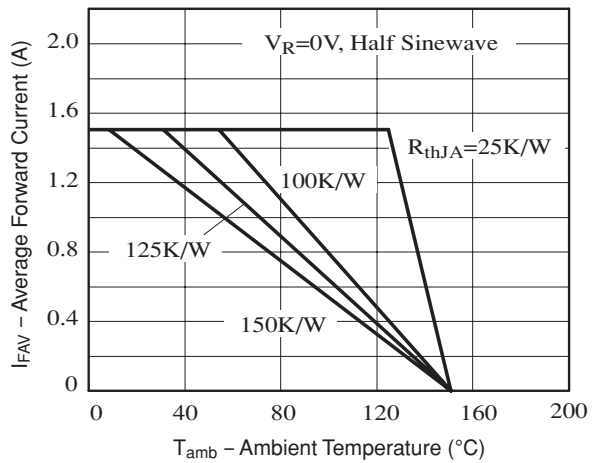
**Fig. 2 – Max. Reverse Current vs. Junction Temperature**



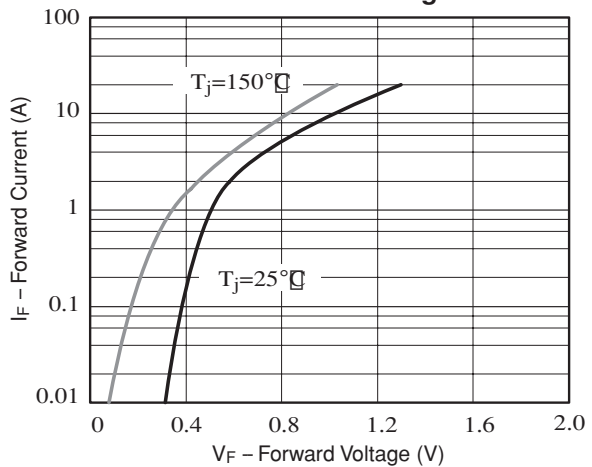
**Fig. 3 – Max. Average Forward Current vs. Ambient Temperature**



**Fig. 4 – Max. Average Forward Current vs. Ambient Temperature**



**Fig. 5 – Max. Forward Current vs. Forward Voltage**



**Fig. 6 – Diode Capacitance vs. Reverse Voltage**

