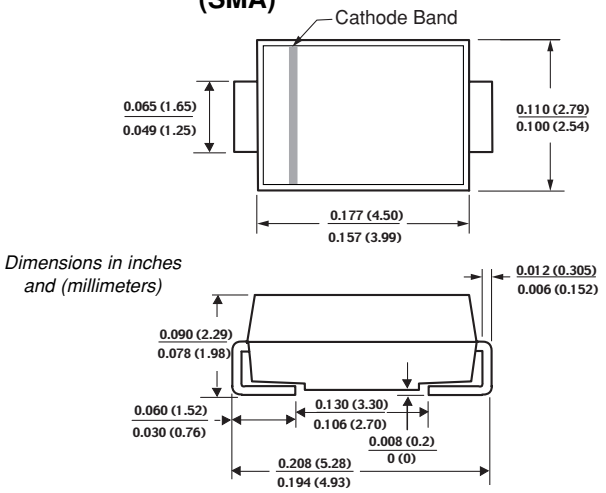
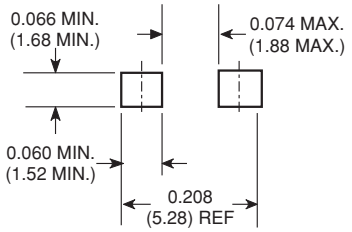
Schottky Barrier Rectifiers

DO-214AC
(SMA)



Reverse Voltage 25 to 45 V
Forward Current 1.5 A

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	BYS10-25	BYS10-35	BYS10-45	Unit
Device marking code		BYS 025	BYS 035	BYS 045	
Maximum repetitive peak reverse voltage	V_{RRM}	25	35	45	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 Lead	$R_{\theta JL}$	25			°C/W
Maximum Thermal Resistance – Junction Ambient	$R_{\theta JA}$	150 (1) 125 (2) 100 (3)			°C/W
Junction and storage temperature range	T_J, T_{STG}	–65 to +150			°C

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

Maximum instantaneous forward voltage at 1A (4)	V_F	500		mV
Maximum DC reverse current at V_{RRM} (4) T_J = 25°C T_J = 100°C	I_R	500 10		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 – Max. Reverse Power Dissipation vs. Junction Temperature

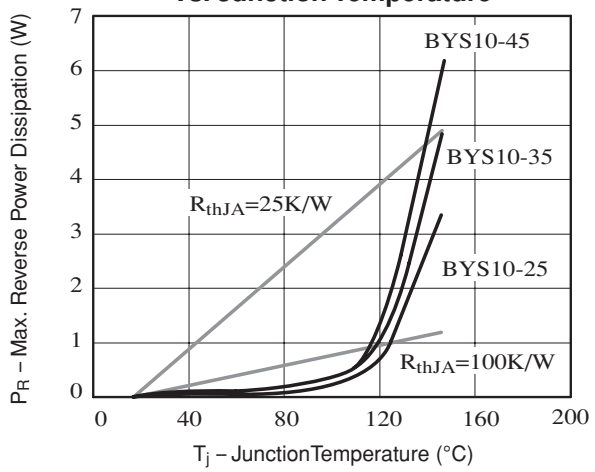


Fig. 2 – Max. Reverse Current vs. Junction Temperature

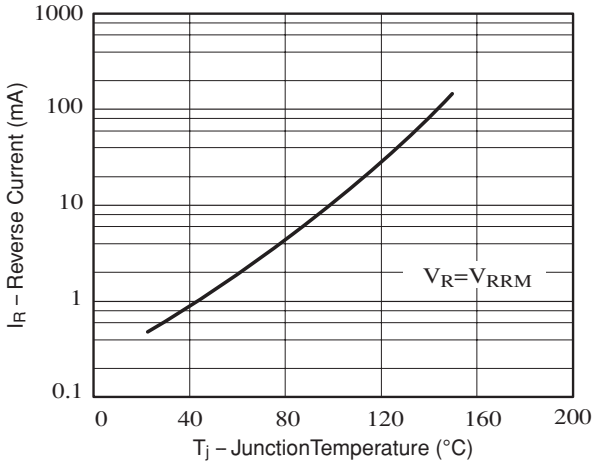


Fig. 3 – Max. Average Forward Current vs. Ambient Temperature

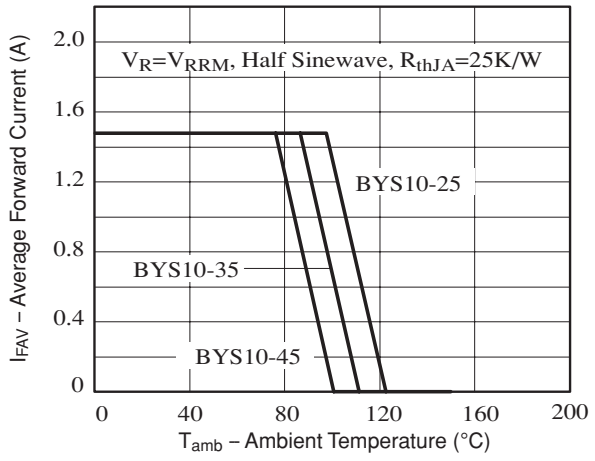


Fig. 4 – Max. Average Forward Current vs. Ambient Temperature

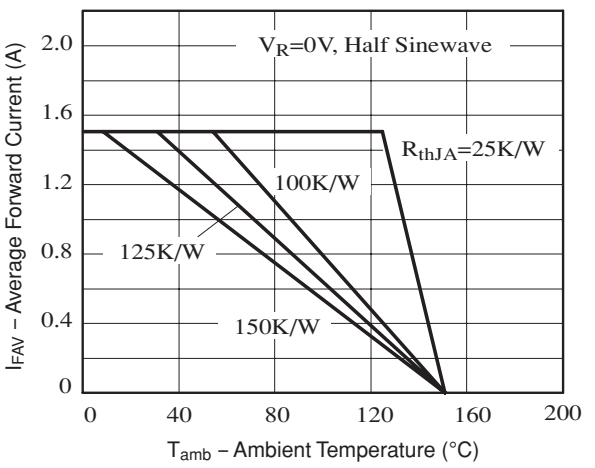


Fig. 5 – Max. Forward Current vs. Forward Voltage

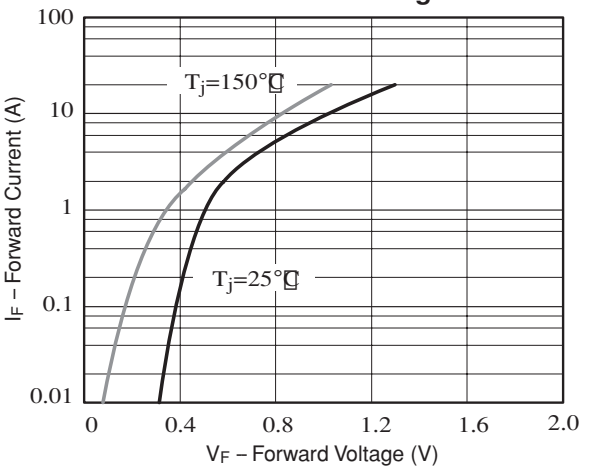


Fig. 6 – Diode Capacitance vs. Reverse Voltage