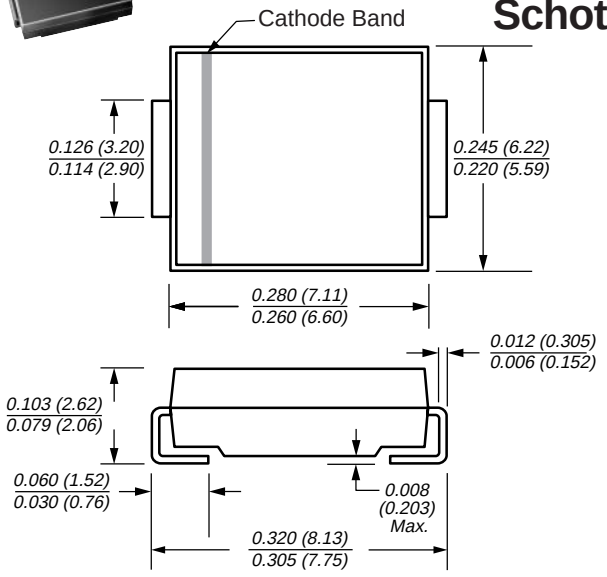
DO-214AB (SMC)

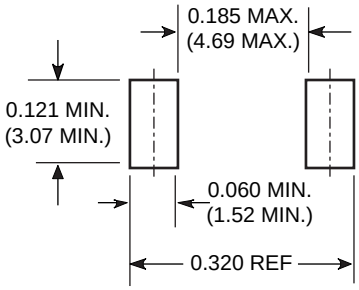
Low V_F Surface Mount Schottky Rectifier

Reverse Voltage 20 to 40V
Forward Current 4.0A



Dimensions in inches and (millimeters)

Mounting Pad Layout
DO-214AB



Mechanical Data

Case: JEDEC DO-214AB molded plastic body
Terminals: solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Weight: 0.007 oz. 0.25 g

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

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

Parameter	Symbols	SL42	SL43	SL44	Units
Device marking code		SL2	SL3	SL4	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum average forward rectified current (2) at T_L (see fig. 1)	$I_{F(AV)}$	4.0 8.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150			A
Typical thermal resistance (2)	$R_{\Theta JA}$ $R_{\Theta JL}$	50 14			°C/W
Operating junction temperature range	T_J	–55 to +125			°C
Storage temperature range	T_{STG}	-55 to 150			°C

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

Maximum instantaneous forward voltage at (1)	I_F=4.0A, T_A=125°C I_F=4.0A, T_A=25°C I_F=8.0A, T_A=125°C I_F=8.0A, T_A=25°C	V_F	0.31 0.42 0.37 0.47	0.35 0.44 0.41 0.50	V
Maximum DC reverse current (NOTE 1) at rated DC blocking voltage	T_A=25°C T_A=100°C	I_R	0.5 35		mA

Notes:
(1) Pulse test: 300µs pulse width, 1% duty cycle,
(2) P.C.B. mounted 0.55 x 0.55" (14 x 14mm) copper pad areas, T_L=90°C
(3) Mounted on Al plate, T_L=60°C

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

Fig. 1 – Forward Current Derating Curve

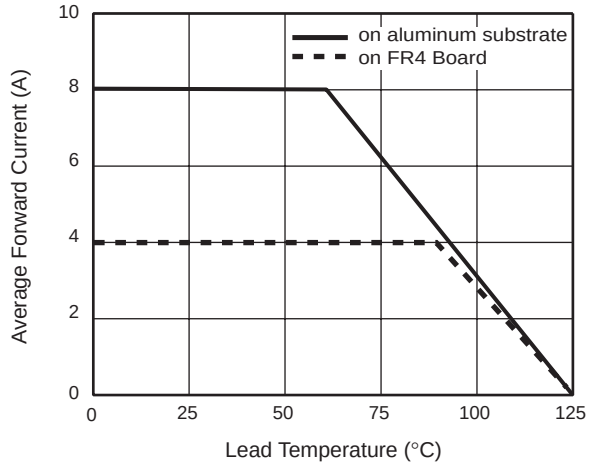


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

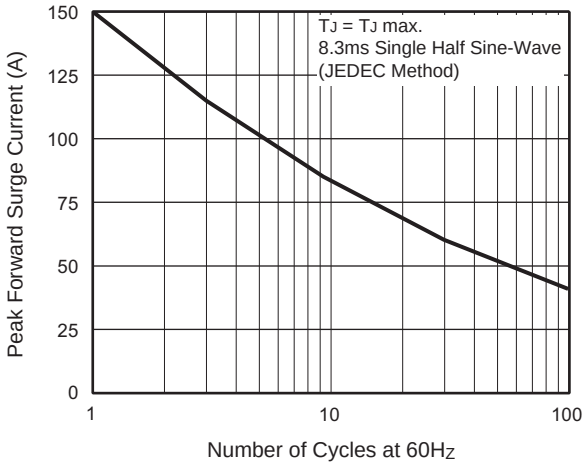


Fig. 3 – Typical Instantaneous Forward Characteristics

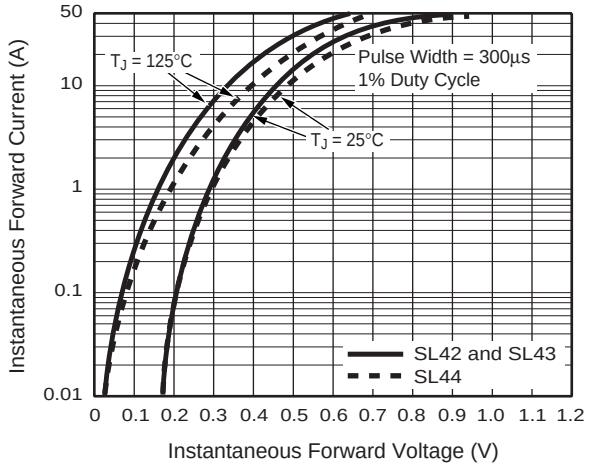


Fig. 4 – Typical Reverse Characteristics

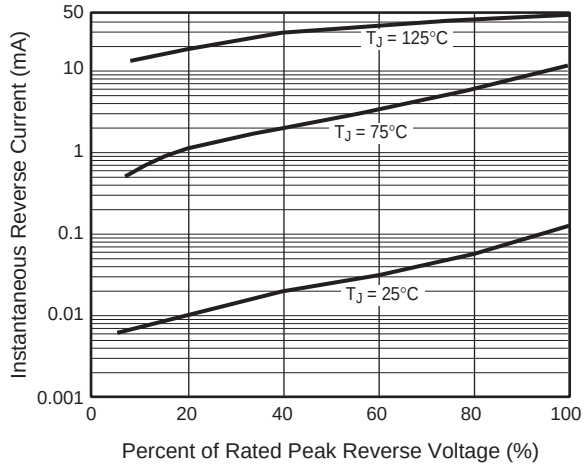


Fig. 5 – Typical Junction Capacitance