Low VF/ESD Leaded Schottky Barrier Rectifiers

COMCHIP
SMD DIODE SPECIALIST

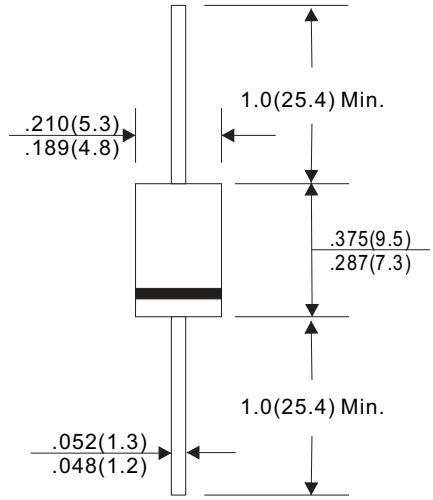
SB520E-G thru SB5100E-G "-G" : RoHS Device

Voltage Range: 20 to 100 V
Current: 5.0 A

FEATURES

- Low drop down voltage
- 5.0A operation at T_A=75°C with no thermal runaway
- For use in low voltage, high frequency invertors free wheeling and polarity protection
- Silicon epitaxial planar chips
- Electrostatic discharge (ESD) test under IEC61000-4-2 standard: >15KV (air) & 8KV (contact)
- Lead-free part, meet RoHS requirements

DO-201AD



Unit :inch(mm)

MECHANICAL DATA

- Case: Molded plastic body DO-201AD
- Epoxy: UL94-V0 rated flame retardant
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.04 ounces, 1.12 grams

MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	Symbols	*520E*	*540E*	*545E*	*550E*	*560E*	*580E*	*5100E*	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	40	45	50	60	80	100	Volts
Maximum RMS Voltage	V_{RMS}	14	28	30	35	42	56	70	Volts
Maximum DC Blocking Voltage	V_{DC}	20	40	45	50	60	80	100	Volts
Maximum Average Forward Rectified Current 0.5" (12.7mm) lead length at T_A=75°C, See Figure 1	I_{AV}	5.0							Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC Method) T_L=110°C	I_{FSM}	150			125				Amps
Maximum Forward Voltage at 5.0A (Note 1)	V_F	0.55			0.70		0.85		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A= 25°C	I_R	0.5							mA
T_A=100°C		50			30				
Typical Junction Capacitance (Note 2)	C_J	500							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	35.0 15.0							°C/W
Operating Junction Temperature Range	T_J	-65 ~ +125			-65 ~ +150				°C
Storage Temperature Range	T_{STG}	-65 ~ +150							°C

Note 1. Pulse test: 300μS pulse width, 1% duty cycle
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts
3. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted 0.500" (12.7mm) lead length with 2.5x2.5" (63.5x63.5mm) copper pad.

RATINGS AND CHARACTERISTIC CURVES SB520E-G thru SB5100E-G

Fig.1 - Forward Current Derating Curve

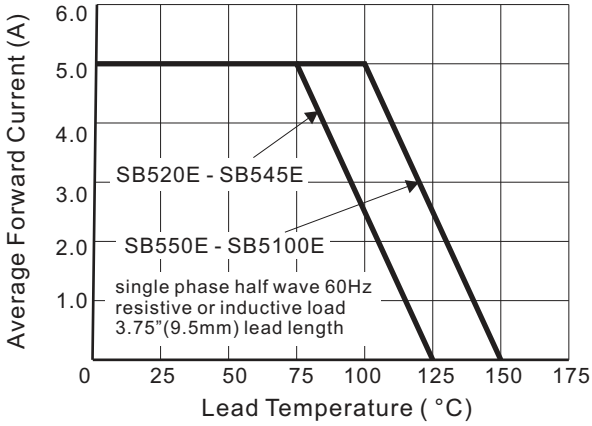


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

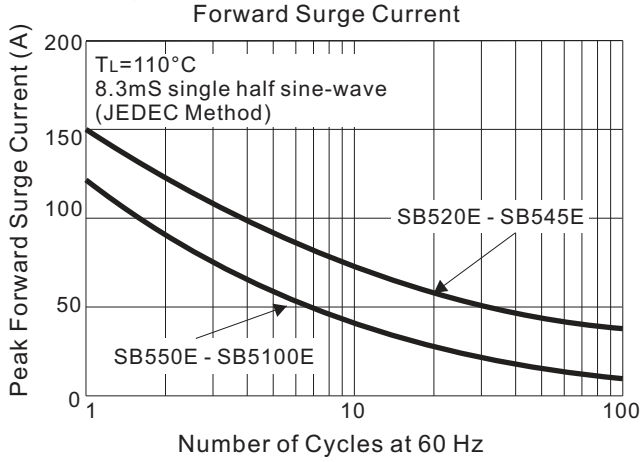


Fig. 3 - Typical Instantaneour Forward Characteristics

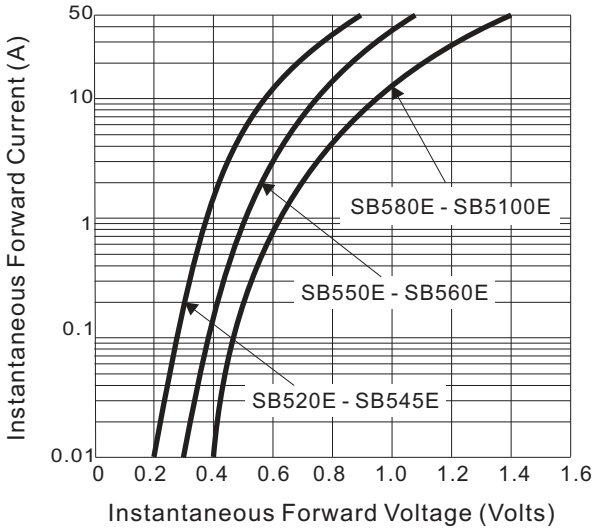


Fig. 4A - Typical Reverse Characteristics

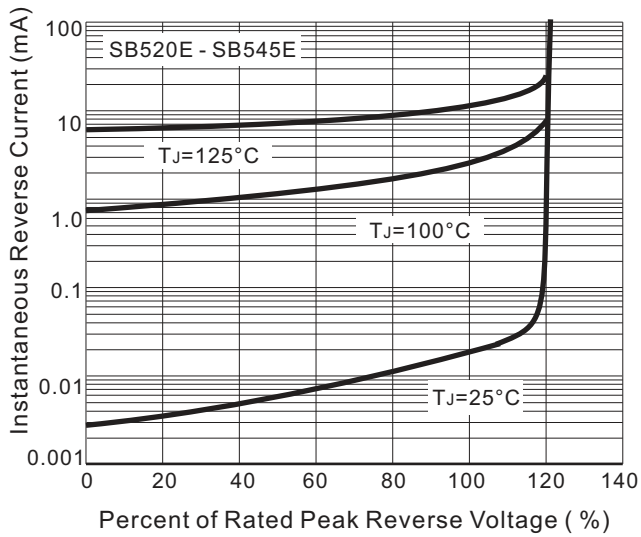


Fig. 5 - Typical Junction Capacitance

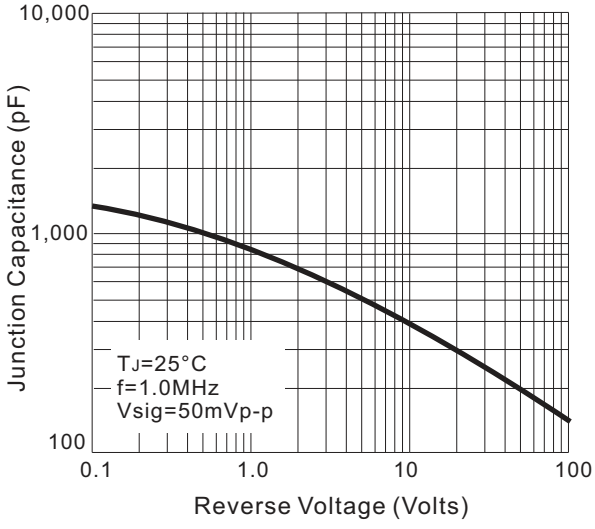


Fig. 4B - Typeical Reverse Characteristic