

SB540 – SB510

5.0 AMPS. Schottky Barrier Rectifiers

DO-201AD

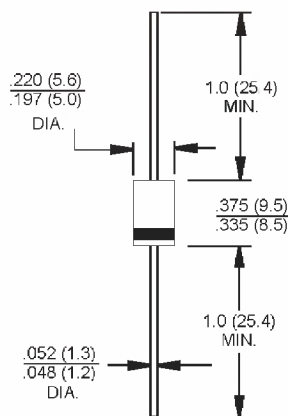


Features

- ✧ Low power loss, high efficiency.
- ✧ High current capability, Low VF.
- ✧ High reliability
- ✧ High surge current capability.
- ✧ Epitaxial construction.
- ✧ Guard-ring for transient protection.
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- ✧ Cases: DO-201AD molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.1 grams



Dimensions in inches and (millimeters)

Marking Diagram



- SB5XX = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%

Type Number	Symbol	SB540	SB560	SB510	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	40	60	100	V
Maximum RMS Voltage	V _{RMS}	28	42	70	V
Maximum DC Blocking Voltage	V _{DC}	40	60	100	V
Maximum Average Forward Rectified Current See Fig. 1	I(AV)	5.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	100			A
Maximum Instantaneous Forward Voltage @5.0A	V _F	0.55	0.70	0.85	V
Maximum D.C. Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =125 °C	I _R	0.5		0.1	mA
		15	10	5.0	mA
Typical Junction Capacitance (Note 2)	C _j	250	210	120	pF
Typical Thermal Resistance (Note 1)	R _{θJA}	35		10	°C/W
	R _{θJC}	2		2	
Operating Junction Temperature Range	T _J	-65 to +150			°C
Storage Temperature Range	T _{STG}	-65 to +150			°C

Notes: 1. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SB540 THRU SB510)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

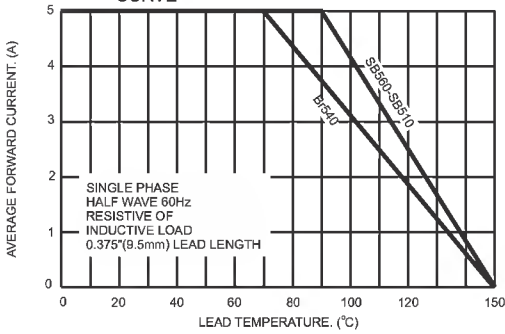


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

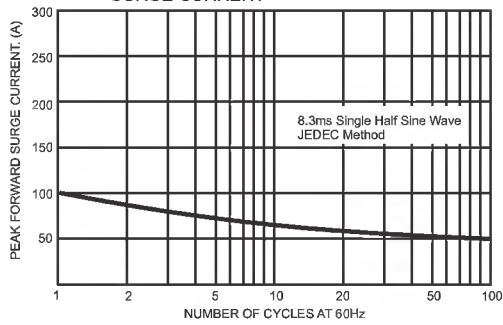


FIG.3- TYPICAL FORWARD CHARACTERISTICS

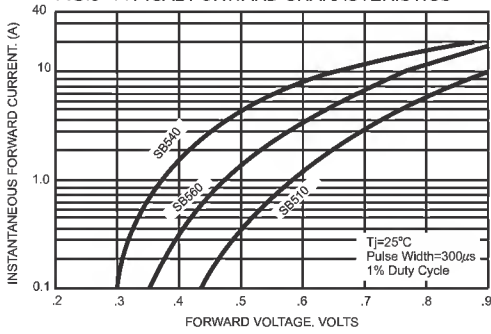


FIG.4- TYPICAL REVERSE CHARACTERISTICS

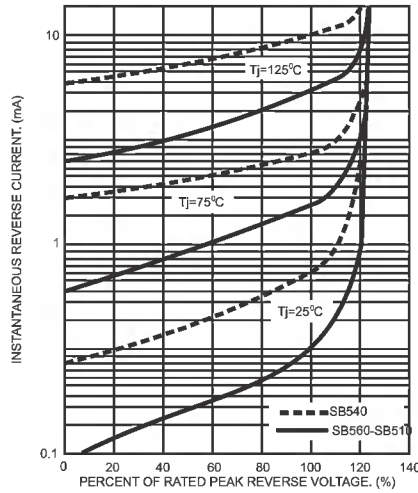


FIG.5- TYPICAL JUNCTION CAPACITANCE

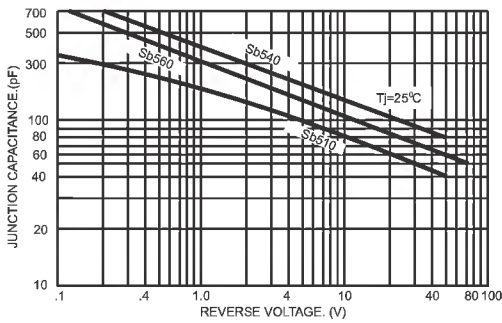


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

