



# SDBS12 THRU SDBS110

## 1.0 AMP. Schottky Barrier Rectifiers



Voltage Range  
20 to 100 Volts  
Current  
1.0 Ampere

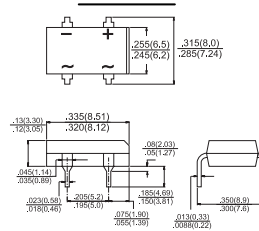
### Features

- ✦ Metal to silicon rectifier, majority carrier conduction
- ✦ Low forward voltage drop
- ✦ Easy pick and place
- ✦ High surge current capability
- ✦ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✦ Epitaxial construction
- ✦ High temperature soldering:  
260°C/ 10 seconds at terminals
- ✦ Small size, single installation lead solderable per MIL-STD-202 Method 208

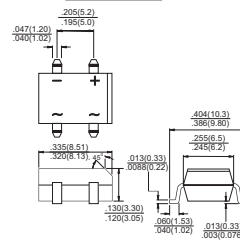
### Mechanical Data

- ✦ Case: Molded plastic
- ✦ Terminals: Solder plated
- ✦ Polarity: Indicated by cathode band

### DB



### DBS



Dimensions in inches and (millimeters)

## 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	SDB 12	SDB 13	SDB 14	SDB 15	SDB 16	SDB 19	SDB 110	Units
		SDBS 12	SDBS 13	SDBS 14	SDBS 15	SDBS 16	SDBS 19	SDBS 110	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	90	100	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	90	100	V
Maximum Average Forward Rectified Current at $T_L$ (See Fig. 1)	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage (Note 1) @ 1.0A	$V_F$	0.5		0.75		0.80		V	
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_R$	0.4					0.05		mA
		10		5.0		0.5			
Typical Junction Capacitance (Note 3)	$C_j$	50							pF
Typical Thermal Resistance ( Note 2 )	$R_{\theta_{JL}}$	28							$^\circ\text{C}/\text{W}$
	$R_{\theta_{JA}}$	88							$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-65 to +125			-65 to +150			$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	-65 to +150							$^\circ\text{C}$

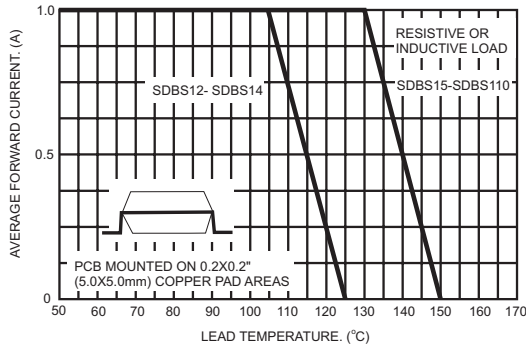
Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle

2. Measured on P.C.Board with 0.5 x 0.5"(12 x 12mm) Copper Pad Areas.

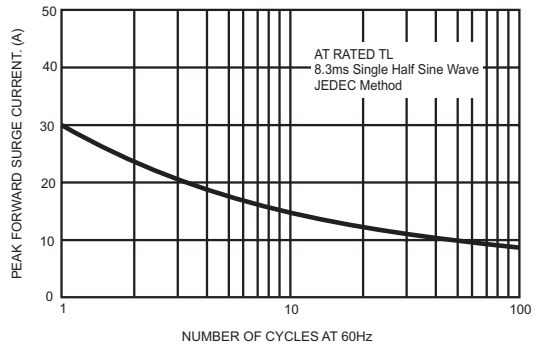
3. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SDBS12 THRU SDBS110)

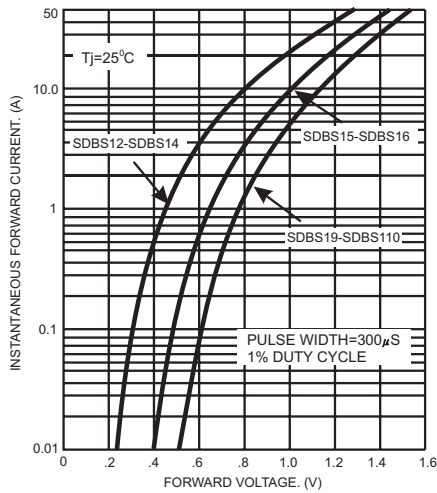
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



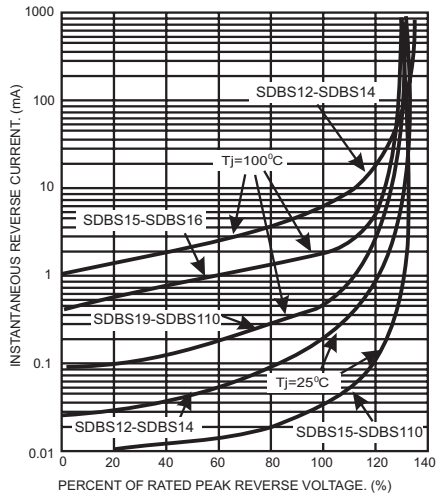
**FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**

