# **DB10XS SERIES**

# SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER

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# **DB101S THRU DB107S**

### SINGLE-PHASE GLASS PASSIVATED SILICON SURFACE MOUNT BRIDGE RECTIFIER



REVERSE VOLTAGE: 50 to 1000 VOLTS FORWARD CURRENT: 1.0 AMPERE

#### **FEATURES**

· Glass passivated chip junction

· Low forward voltage drop

· High surge overload rating of 50 Amperes peak

· Ideal for printed circuit board

 $\cdot$  High temperature soldering guaranteed:

260°C for 10 seconds

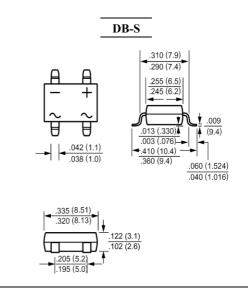
## **MECHANICAL DATA**

Case: Molded plastic, DB-S

Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202,

method 208 guaranteed Mounting position: Any Weight: 0.02ounce, 0.4gram



**Dimensions in inches and (millimeters)** 

# Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	DB101S	DB102S	DB103S	DB104S	DB105S	DB106S	DB107S	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> =40 (Note 2)	I <sub>(AV)</sub>				1.0				Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50							Amp
Maximum Forward Voltage at 1.0A DC and 25	$V_{\mathrm{F}}$	1.1							Volts
Maximum Reverse Current at T <sub>A</sub> =25 at Rated DC Blocking Voltage T <sub>A</sub> =125	$I_R$	5.0 500							uAmp
Typical Junction Capacitance (Note 1)	$C_{\mathbf{J}}$	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40							/W
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	15							/W
Operating and Storage Temperature Range	T <sub>J</sub> , Tstg	-55 to +150							

#### **NOTES:**

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Units mounted on P.C.B. with 0.5 x 0.5" (13 x 13mm) copper pads



## RATINGS AND CHARACTERISTIC CURVES

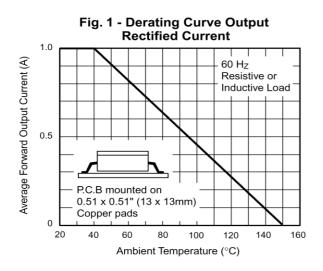


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg 60 Average Forward Output Current (A) T<sub>J</sub> = 150°C 50 Single Sine-Wave (JEDEC Method) 40 30 20 1.0 Cycle 10 0 10 100 Number of Cycles at 60 Hz

Fig. 3 - Typical Forward Characteristics Per Leg 10 Instantaneous Forward Current (A) 0.1 T<sub>J</sub> = 25°C Pulse width = 300μs 1% Duty Cycle 0.01 0.4 0.6 8.0 1.0 1.2 1.4 Instantaneous Forward Voltage (V)

