

# DC COMPONENTS CO., LTD.

## **RECTIFIER SPECIALISTS**

DB101S THRU DB107S

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

### **FEATURES**

- \* Surge overload rating 30 Amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction
- \* Glass passivated junction

### MECHANICAL DATA

\* Case: Molded plastic

\* Epoxy: UL 94V-0 rate flame retardant

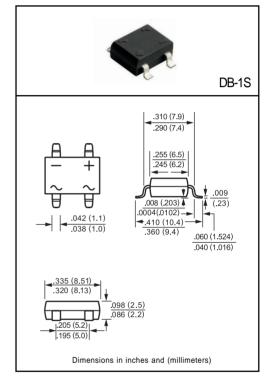
\* Terminals: MIL-STD-202E, Method 208 guaranteed

\* Polarity: Symbols molded or marked on body

\* Mounting position: Any \* Weight: 0.38 gram

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



		SYMBOL	DB101S	DB102S	DB103S	DB104S	DB105S	DB106S	DB107S	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage		VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at TA = 40°C		lo	1.0						Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave		IFSM	30							Amps
superimposed on rated load (JEDEC Method)										
Maximum Forward Voltage Drop per Bridge		VF	1.1							Volts
Element at 1.0A DC										
Maximum DC Reverse Current at rated	@TA = 25°C	IR	10							uAmps
DC Blocking Voltage per element	@Ta = 125°C	T IR	500							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)		l <sup>2</sup> t	10						A <sup>2</sup> Sec	
Typical Junction Capacitance ( Note1)		CJ	25						pF	
Typical Thermal Resistance (Note 2)		RθJA	40						°C/W	
Operating and Storage Temperature Range		TJ,TSTG	-55 to + 150						٥C	

NOTES: 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts

<sup>2.</sup> Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.

### RATING AND CHARACTERISTIC CURVES (DB101S THRU DB107S)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PEAK FORWARD SURGE CURRENT, (A) 8.3ms Single Half Sine-Wave (JEDEC Method) NUMBER OF CYCLES AT 60Hz

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE 1.0 AVERAGE FORWARD CURRENT, (A) .5 Single Phase Half Wave 60Hz Inductive or Resistive Load AMBIENT TEMPERATURE, (°C)

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

10
Pulse Width = 300us
1% Duty Cycle

T<sub>J</sub> = 25°C

0.1

.4
.6
.8
1.0
1.2
1.4

INSTANTANEOUS FORWARD VOLTAGE, (V)

