



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

B40C / RS501  
5000  
THRU  
B380C / RS507  
5000

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 5.0 Amperes

**FEATURES**

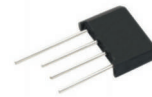
- \* High surge current capability
- \* Ideal for printed circuit board
- \* Low forward voltage

**MECHANICAL DATA**

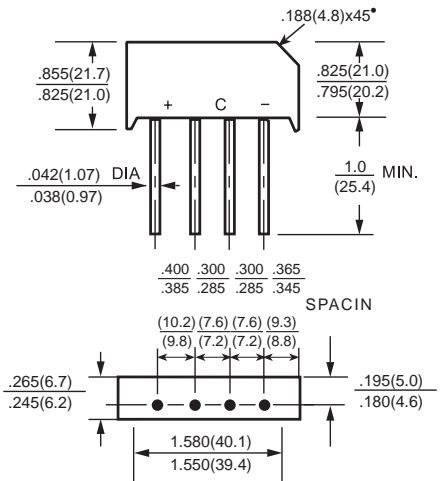
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 25.3 grams

**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%.



RS-5



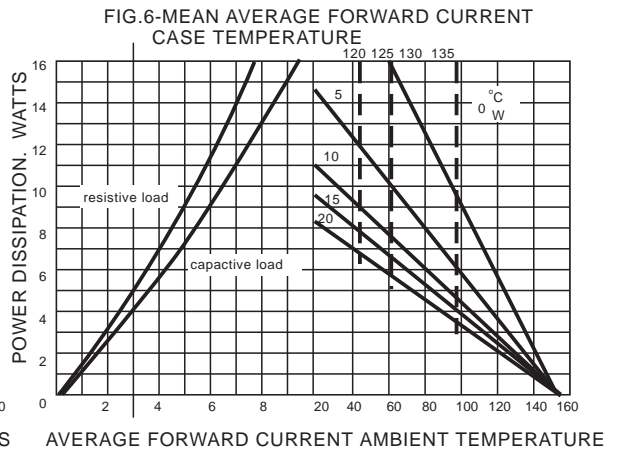
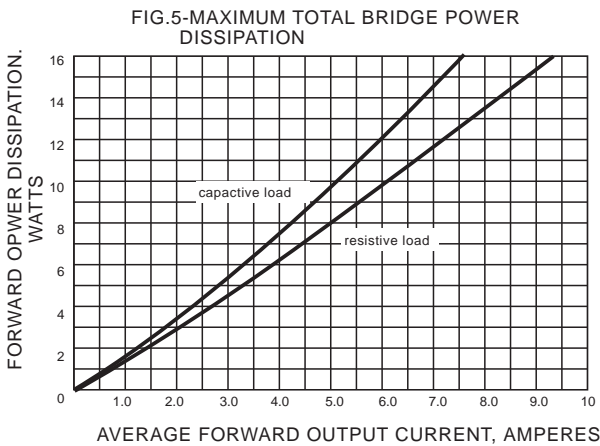
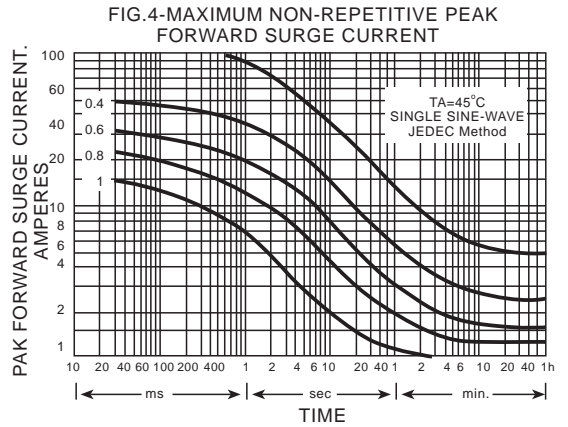
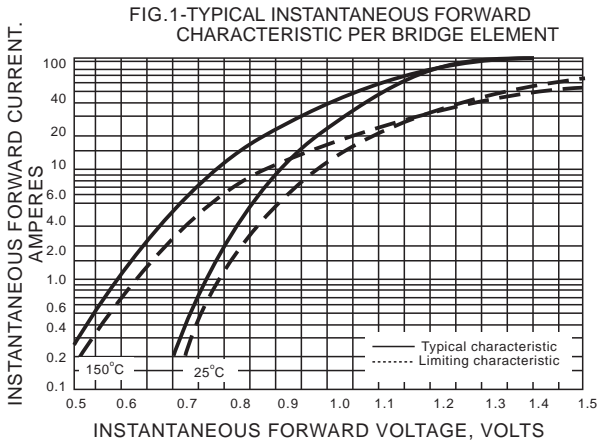
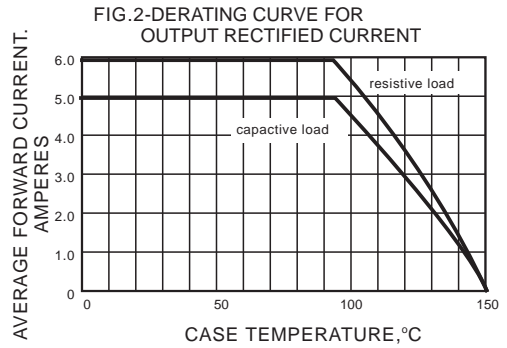
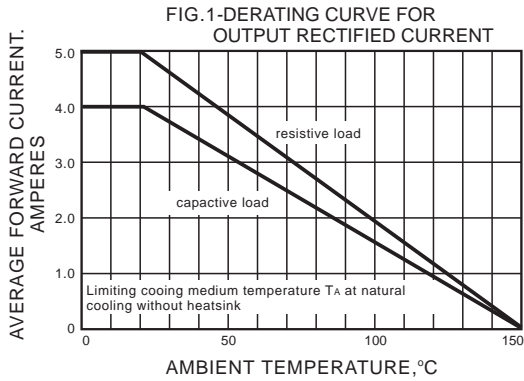
Dimensions in inches and (millimeters)

	SYMBOL	RS501	RS502	RS503	RS504	RS505	RS506	RS507	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input 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 Output Current at T <sub>A</sub> = 50°C	I <sub>O</sub>	5.0							Amps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30							Amps
Maximum Forward Voltage Drop per element at 3.0A DC	V <sub>F</sub>	1.0							Volts
Maximum CD Reverse Current at Rated DC Blocking Voltage per element	@ T <sub>A</sub> = 25°C	10							uAmps
	@ T <sub>A</sub> = 100°C	500							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	312							A <sup>2</sup> Sec
Typical Junction Capacitance ( Note1)	C <sub>J</sub>	15							pF
Typical Thermal Resistance ( Note 2)	R <sub>θJA</sub>	2.0							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to + 125							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150							°C

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

2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.47 x 0.47" (12x12mm) copper pads.

RATING AND CHARACTERISTIC CURVES ( B40C5000 THRU B380C5000 )  
RS501 RS507



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