

# DC COMPONENTS CO., LTD.

### RECTIFIER SPECIALISTS

BR1505L THRU BR1510L

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 15 Amperes

#### **FEATURES**

- \* Plastic case with heatsink for Maximum Heat Dissipation
- \* Diffused Junction
- \* High current capability
- \* Surge overload ratings 300 Amperes
- \* Low forward voltage drop
- \* High Reliability
- \* Designed for saving mounting space

#### MECHANICAL DATA

\* Case: Molded plastic with heatsink

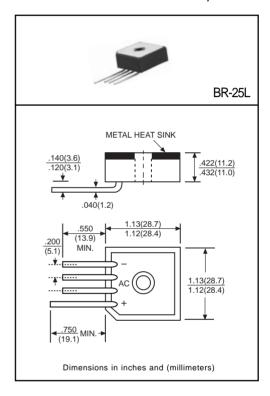
\* Epoxy: UL 94V-0 rate flame retardant

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

\* Polarity: As marked \* Mounting position: Any \* Weight: 30 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%.



		SYMBOL	BR1505L	BR151L	BR152L	BR154L	BR156L	BR158L	BR1510L	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 Rectified Output Current at Tc = 55°C		lo	15							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave		IFSM	300							Amps
superimposed on rated load (JEDEC Method)										
Maximum Forward Voltage Drop per element at 7 .5A DC		VF	1.2						Volts	
Maximum DC Reverse Current at Rated	@Ta = 25°C	IR	10							μAmps
DC Blocking Voltage per element	@Ta = 100°C	] <sup>IR</sup>	1000							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)		l <sup>2</sup> t	374						A <sup>2</sup> Sec	
Typical Junction Capacitance (Note1)		Cı	300						pF	
Typical Thermal Resistance (Note 2)		RθJC	2.0						°C/W	
Operating and Storage Temperature Range		TJ,TSTG	-55 to +150							۰c

NOTES: 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts 2.Thermal Resistance from Junction to Case per leg.

## RATING AND CHARACTERISTIC CURVES (BR1505L THRU BR1510L)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PEAK FORWARD SURGE CURRENT, (A) 400 8.3ms Single Half Sine-Way (JEDEC Mathod) 300 200 100 0 2 5 10 20 50 100 NUMBER OF CYCLES AT 60Hz

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE AVERAGE FORWARD OUTPUT CURRENT, (A) 20 15 10 Single Phase Half Wave 60Hz Inductive or Resistive Load 0 50 100 150 CASE TEMPERATURE, (°C)

100 INSTANTANEOUS FORWARD CURRENT, (A) TJ=25°C 10 Pulse Width=300ms 1% Duty Cycle .1 .6 1.0 1.2 1.3 INSTANTANEOUS FORWARD VOLTAGE, (V)

