

# FBR1500W - FBR1510W

**PRV : 50 - 1000 Volts**  
**I<sub>o</sub> : 15 Amperes**

## FEATURES :

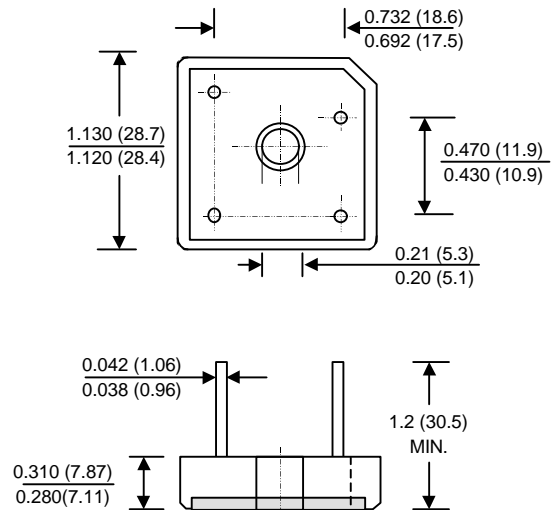
- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* Ideal for printed circuit board
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency
- \* Weight : 15.95 grams

# FAST RECOVERY BRIDGE RECTIFIERS

## BR50W



**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%.

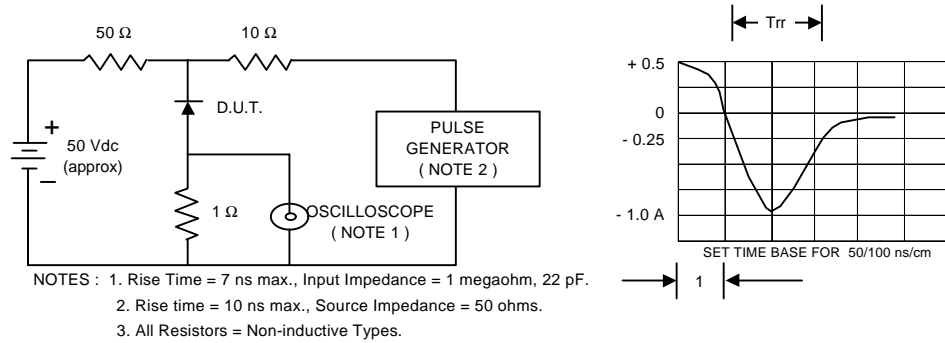
RATING	SYMBOL	FBR 1500W	FBR 1501W	FBR 1502W	FBR 1504W	FBR 1506W	FBR 1508W	FBR 1510W	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Current T <sub>c</sub> = 55 °C	I <sub>F(AV)</sub>	15							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300							A
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t	375							A <sup>2</sup> S
Maximum Forward Voltage drop per Diode at I <sub>F</sub> = 7.5 A	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	I <sub>R</sub>	10							μA
	I <sub>R(H)</sub>	200							μA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	150			250		500		ns
Typical Thermal Resistance per diode (Note 2)	R <sub>θJC</sub>	1.9							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	- 50 to + 150							°C
Storage Temperature Range	T <sub>STG</sub>	- 50 to + 150							°C

### Notes :

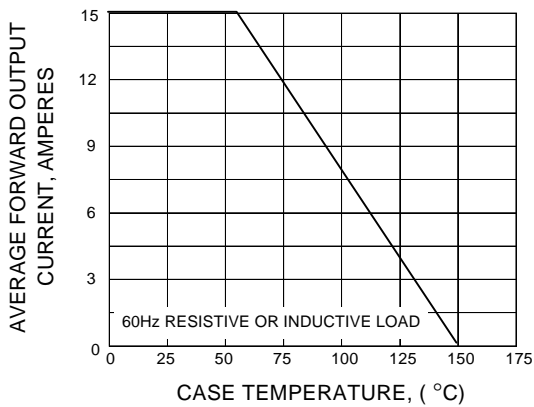
- 1 ) Measured with I<sub>F</sub> = 0.5 Amp., I<sub>R</sub> = 1 Amp., I<sub>rr</sub> = 0.25 Amp.
- 2 ) Thermal Resistance from junction to case with units mounted on a 3.2" x 3.2" x 0.12" THK (8.2cm.x 8.2cm.x 0.3cm.) Al. Plate. heatsink.

## RATING AND CHARACTERISTIC CURVES ( FBR1500W - FBR1510W )

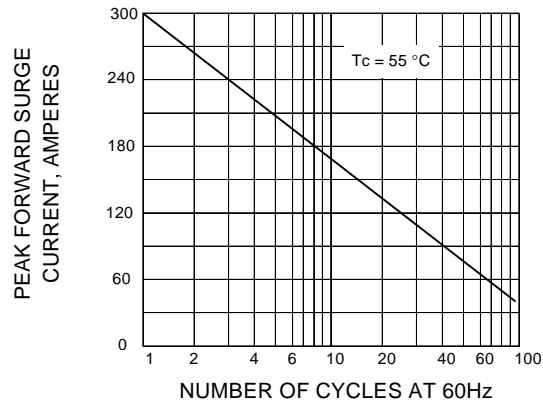
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



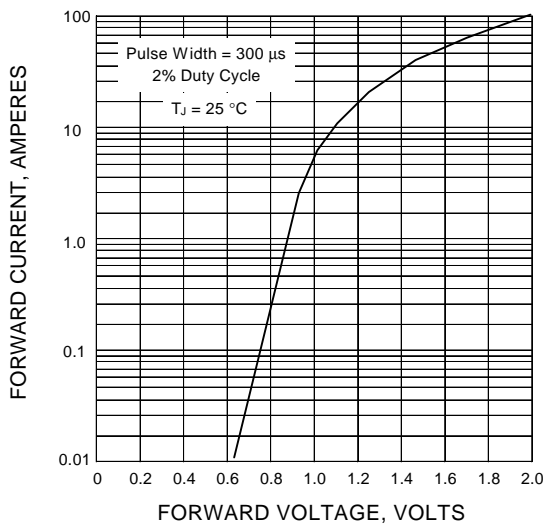
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS PER DIODE**

