

# FBR800 - FBR810

**PRV : 50 - 1000 Volts**  
**Io : 8.0 Amperes**

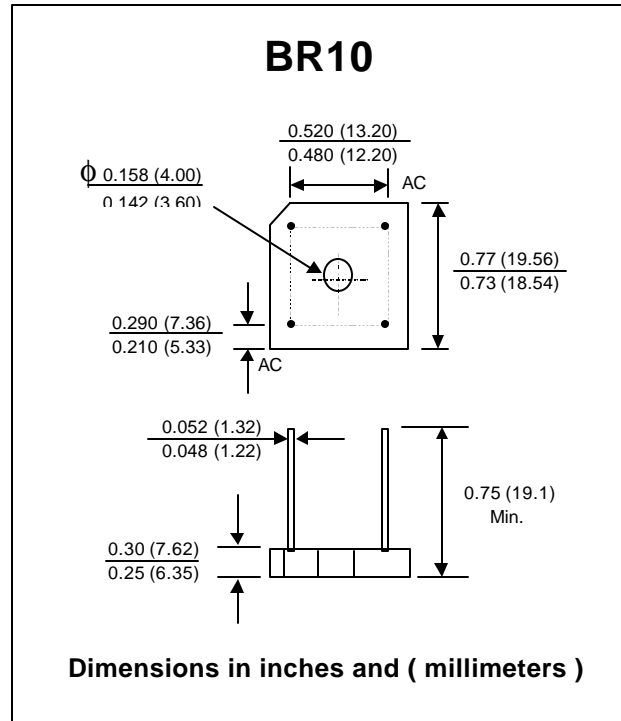
## FEATURES :

- \* 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

## MECHANICAL DATA :

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL - STD 202 , Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 6.1 grams

# FAST RECOVERY BRIDGE RECTIFIERS



## 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 800	FBR 801	FBR 802	FBR 804	FBR 806	FBR 808	FBR 810	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 Current T <sub>c</sub> = 50 °C	I <sub>F(AV)</sub>	8.0							Amps.
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	200							Amps.
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t	160							A <sup>2</sup> S
Maximum Forward Voltage drop per Diode at I <sub>F</sub> = 4.0 Amps.	V <sub>F</sub>	1.3							Volts
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>	2.5							°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 :

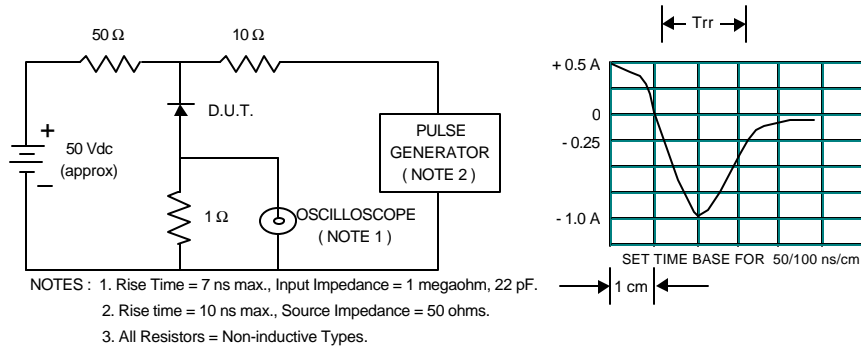
1 ) Measured with I<sub>F</sub> = 0.5 Amp.. I<sub>R</sub> = 1 Amp.. I<sub>rr</sub> = 0.25 Amp.

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.

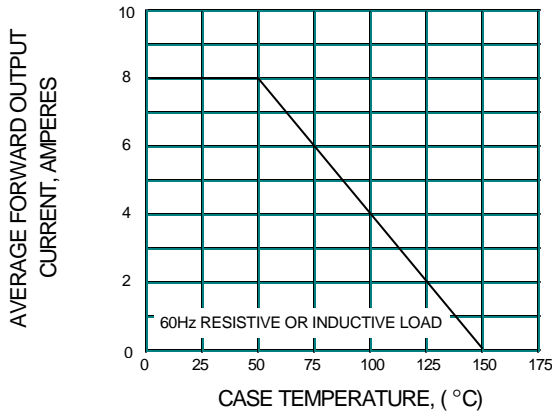
**UPDATE : APRIL 21, 1998**

## RATING AND CHARACTERISTIC CURVES ( FBR800 - FBR810 )

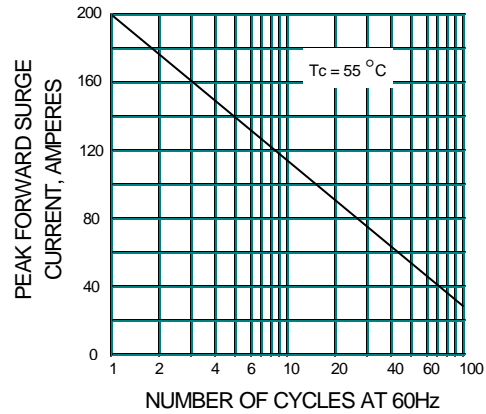
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



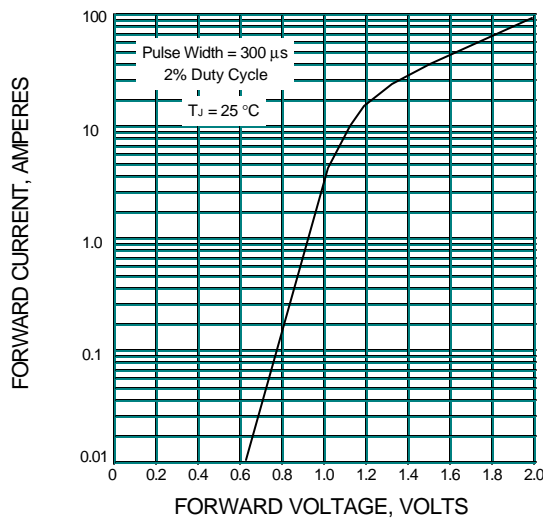
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

