

FBR1000 - FBR1010

FAST RECOVERY BRIDGE RECTIFIERS

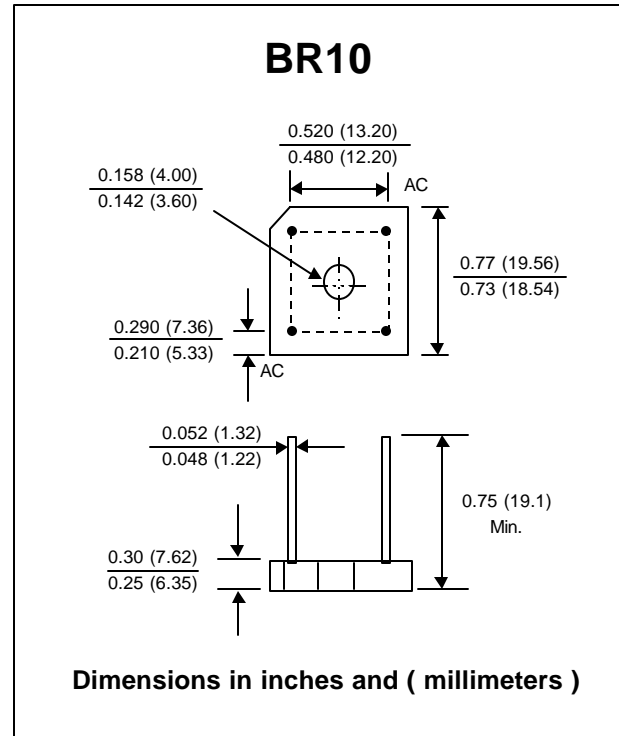
PRV : 50 - 1000 Volts
Io : 10 Amperes

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



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 1000	FBR 1001	FBR 1002	FBR 1004	FBR 1006	FBR 1008	FBR 1010	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Current $T_c = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	10							Amps.
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	250							Amps.
Current Squared Time at $t < 8.3\text{ ms.}$	I^2t	160							A^2S
Maximum Forward Voltage drop per Diode at $I_F = 5.0\text{ Amps.}$	V_F	1.3							Volts
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	I_R	10							μA
	$I_{R(H)}$	200							μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150			250	500		ns	
Typical Thermal Resistance per diode (Note 2)	$R_{\theta JC}$	2.5							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	- 50 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 50 to + 150							$^\circ\text{C}$

Notes : 1) Measured with $I_F = 0.5\text{ Amp.}$, $I_R = 1\text{ Amp.}$, $I_{rr} = 0.25\text{ Amp.}$
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. hea
UPDATE : APRIL 21, 1998

RATING AND CHARACTERISTIC CURVES (FBR1000 - FBR1010)

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

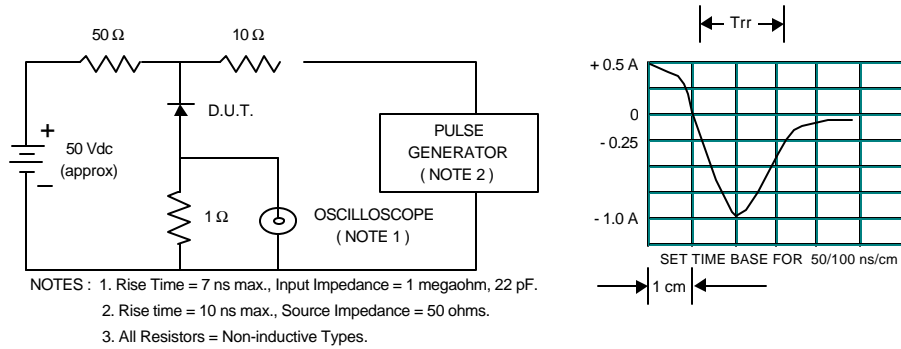


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

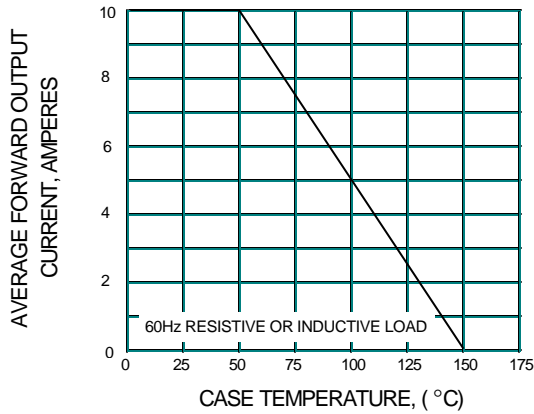


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

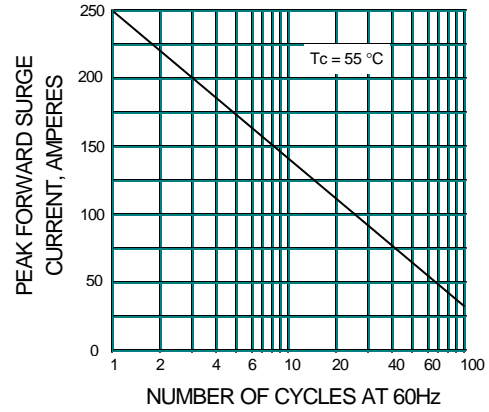


FIG.4 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

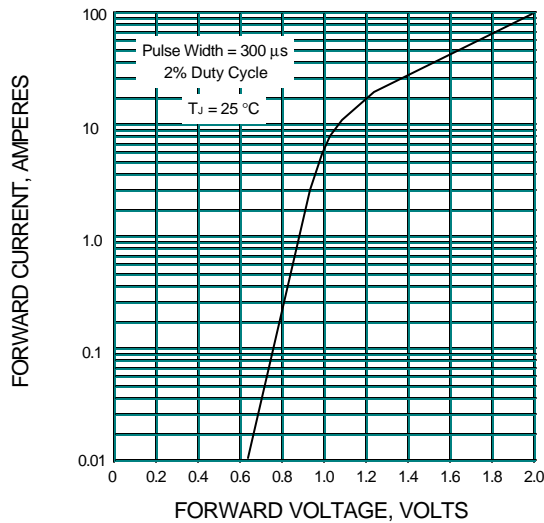


FIG.5 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

