

FBR600 - FBR610

PRV : 50 - 1000 Volts

Io : 6.0 Amperes

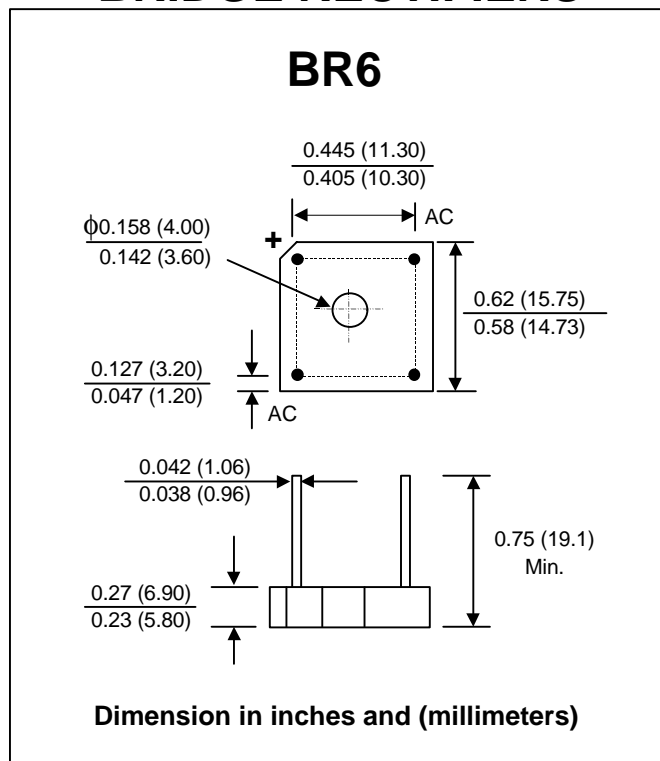
FEATURES :

- * 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
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : Reliable low cost construction utilizing molded plastic technique
- * 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 : Any
- * Weight : 3.6 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%.

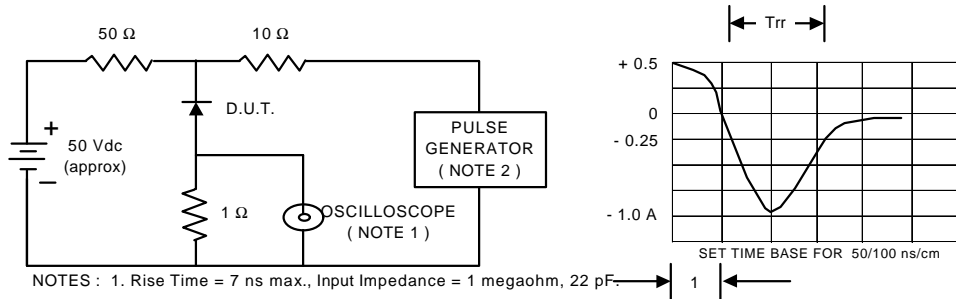
RATING	SYMBOL	FBR 600	FBR 601	FBR 602	FBR 604	FBR 606	FBR 608	FBR 610	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current T _c = 50 °C	I _{F(AV)}	6.0							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I _{FSM}	150							A
Current Squared Time at t < 8.3 ms.	I ² t	64							A ² S
Maximum Forward Voltage drop per Diode at I _F = 3.0 A	V _F	1.3							V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	I _R	10							µA
	I _{R(H)}	1.0							mA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150			250		500		ns
Typical Thermal Resistance per diode (Note 2)	R _{θJC}	8							°C/W
Operating Junction Temperature Range	T _J	- 50 to + 150							°C
Storage Temperature Range	T _{STG}	- 50 to + 150							°C

Notes :

- 1) Measured with I_F = 0.5 Amp., I_R = 1 Amp., I_{rr} = 0.25 Amp.
- 2) Thermal resistance from Junction to Case with units mounted on a 6" x 5.5" x 0.11" (15 x 14 x 0.3 cm) Al. plate.

RATING AND CHARACTERISTIC CURVES (FBR600 - FBR610)

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



- NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.
 3. All Resistors = Non-inductive Types.

FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

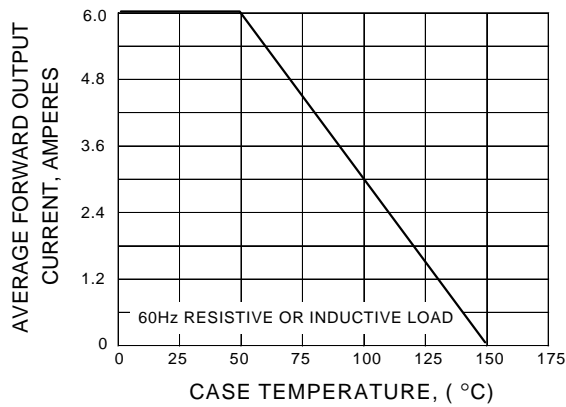


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

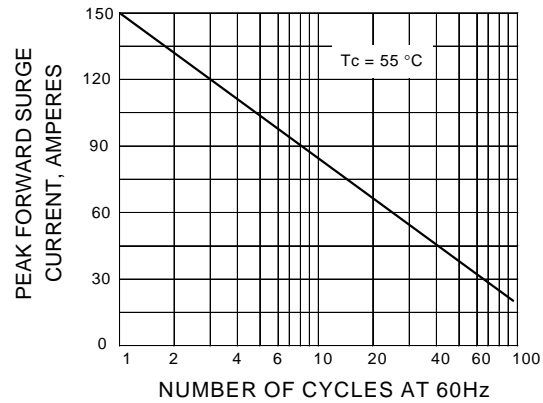


FIG.4 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

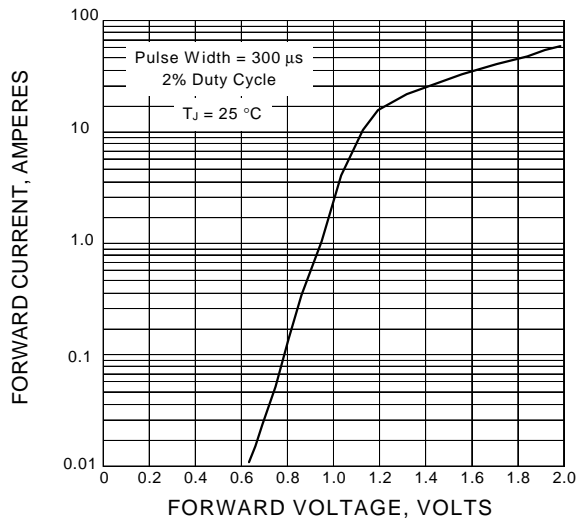


FIG.5 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

