

FBR600 - FBR610

PRV : 50 - 1000 Volts
Io : 6.0 Amperes

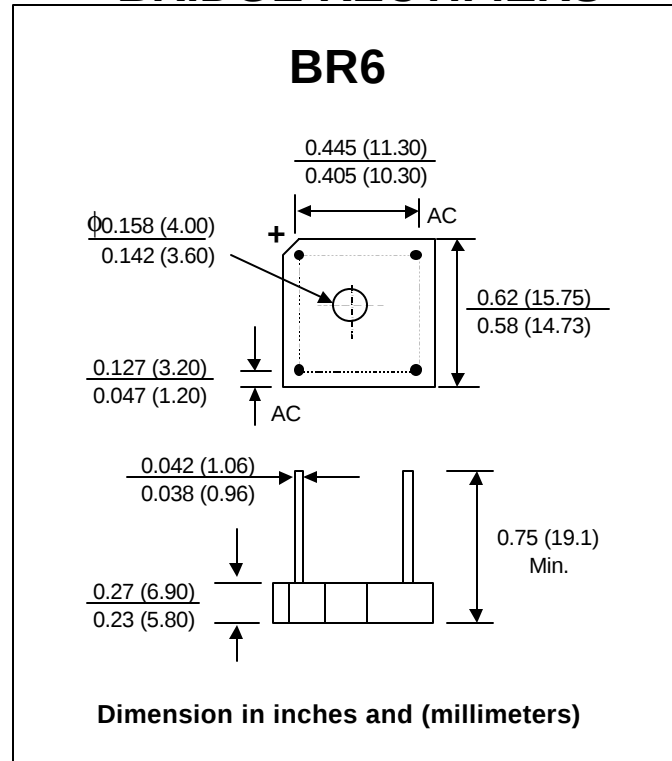
FEATURES :

- * 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

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	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 $T_c = 50^\circ C$	$I_F(AV)$	6.0							Amps.				
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	150							Amps.				
Current Squared Time at $t < 8.3$ ms.	$I^2 t$	64							$A^2 S$				
Maximum Forward Voltage drop per Diode at $I_F = 3.0$ Amps.	V_F	1.3							Volts				
Maximum DC Reverse Current $T_a = 25^\circ C$	I_R	10							μA				
at Rated DC Blocking Voltage $T_a = 100^\circ C$	$I_{R(H)}$	1.0							mA				
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150			250		500		ns				
Typical Thermal Resistance per diode (Note 2)	$R_{\theta JC}$	8							$^{\circ}C/W$				
Operating Junction Temperature Range	T_J	- 50 to + 150							$^{\circ}C$				
Storage Temperature Range	T_{STG}	- 50 to + 150							$^{\circ}C$				

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.

UPDATE : APRIL 21, 1998

RATING AND CHARACTERISTIC CURVES (FBR600 - FBR610)

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

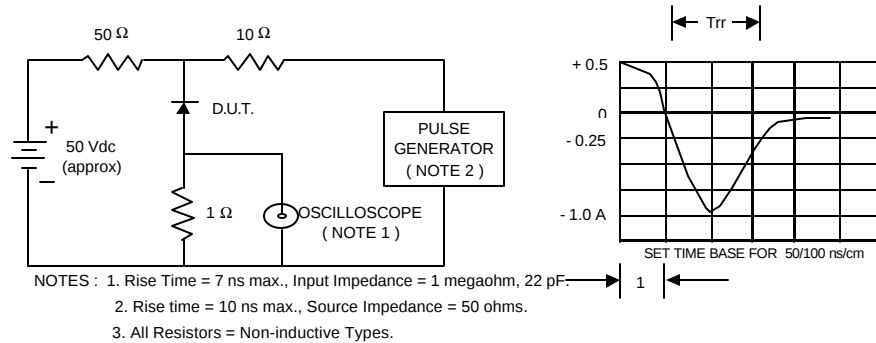


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

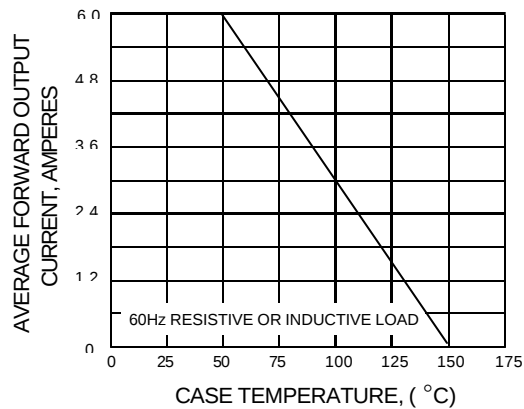


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

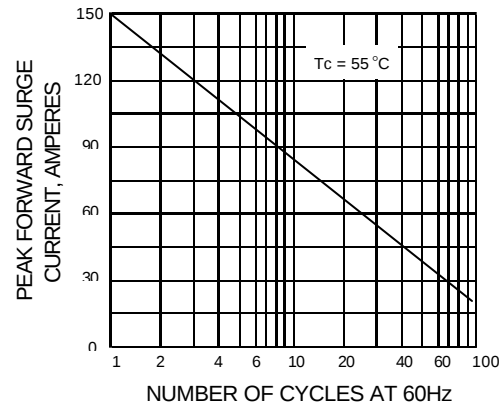


FIG.4 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

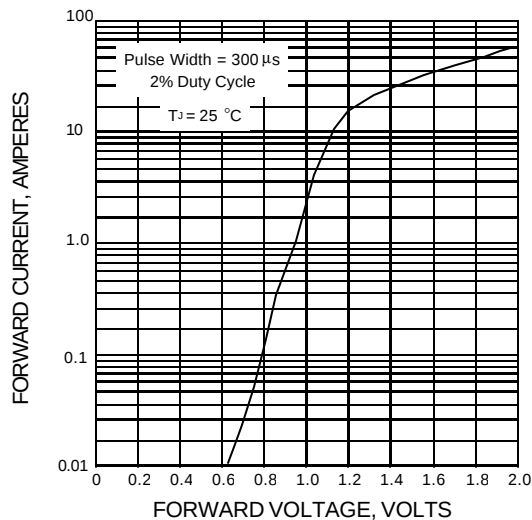


FIG.5 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

