



FBR600 - FBR610

PRV : 50 - 1000 Volts
Io : 6.0 Amperes

FEATURES :

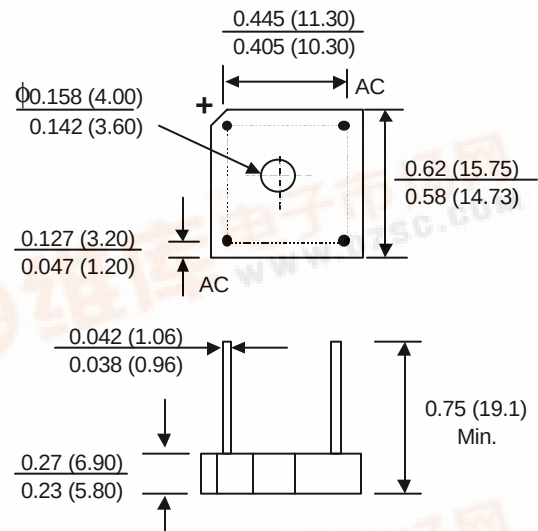
- * High case dielectric strength
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * Ideal for printed circuit board

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

BR6



Dimension 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 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 Tc = 50 °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 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)	RθJC	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 $I_F = 0.5\text{ Amp.}$, $I_R = 1\text{ Amp.}$, $I_{rr} = 0.25\text{ Amp.}$

2) Thermal resistance from Junction to Case with units mounted on a 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

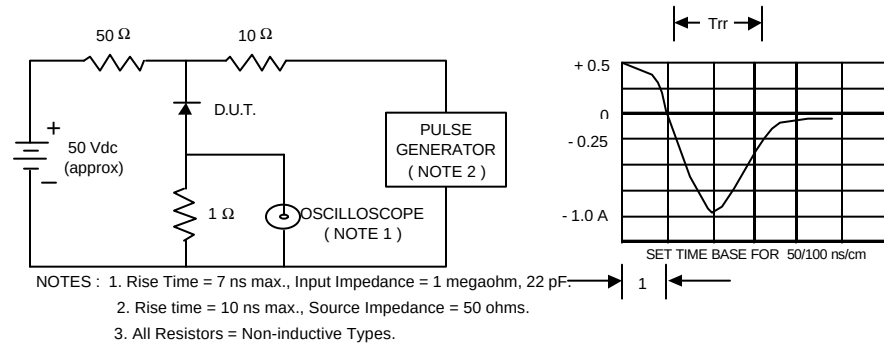


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

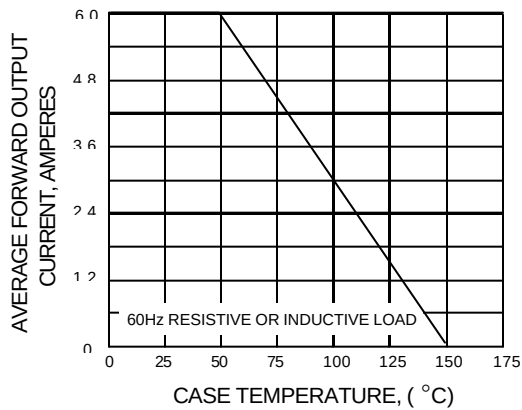


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

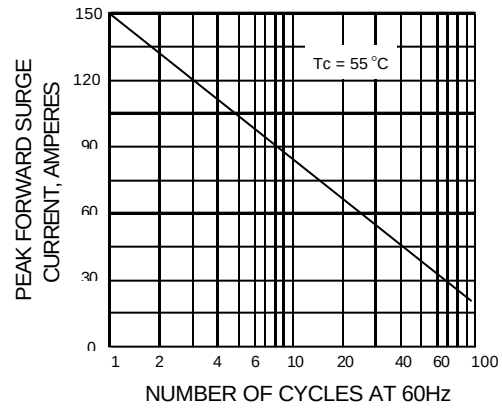


FIG.4 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

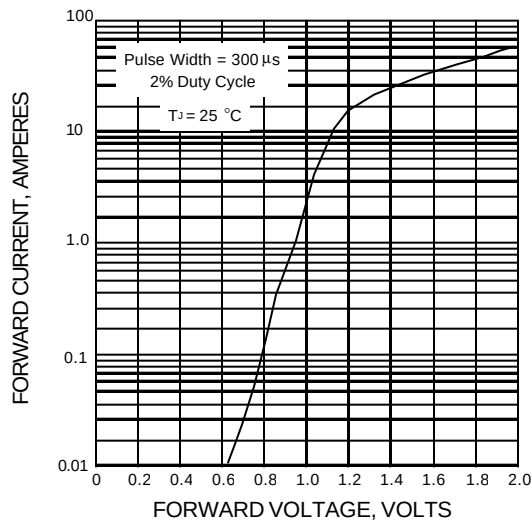


FIG.5 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

