

FBR1500 - FBR1510

PRV : 50 - 1000 Volts
Io : 15 Amperes

FEATURES :

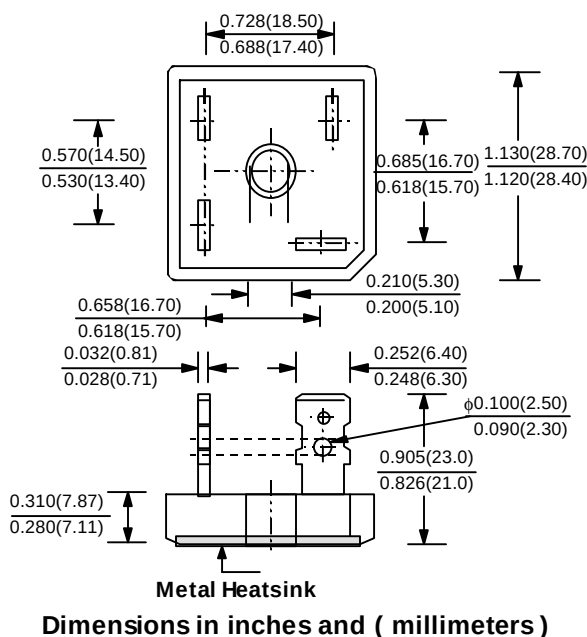
- * High case dielectric strength
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * Ideal for printed circuit board

MECHANICAL DATA :

- * Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- * Epoxy : UL94V-O rate flame retardant
- * Terminals : plated .25" (6.35 mm). Faston
- * Polarity : Polarity symbols marked on case
- * Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency.
- * Weight : 17.1 grams

FAST RECOVERY BRIDGE RECTIFIERS

BR50



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 1500	FBR 1501	FBR 1502	FBR 1504	FBR 1506	FBR 1508	FBR 1510	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 = 55 °C	I _{F(AV)}	15							Amps.
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I _{FSM}	300							Amps.
Current Squared Time at t < 8.3 ms.	I ² t	375							A ² S
Maximum Forward Voltage drop per Diode at I _F = 7.5 Amps.	V _F	1.3							Volts
Maximum DC Reverse Current Ta = 25 °C	I _R	10							μA
at Rated DC Blocking Voltage Ta = 100 °C	I _{R(H)}	200							μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150				250	500		ns
Typical Thermal Resistance per diode (Note 2)	RθJC	1.9							°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 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 (FBR1500 - FBR1510)

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

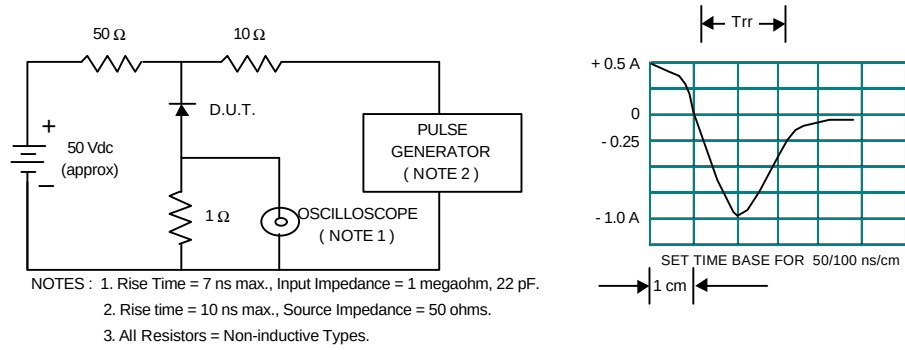


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

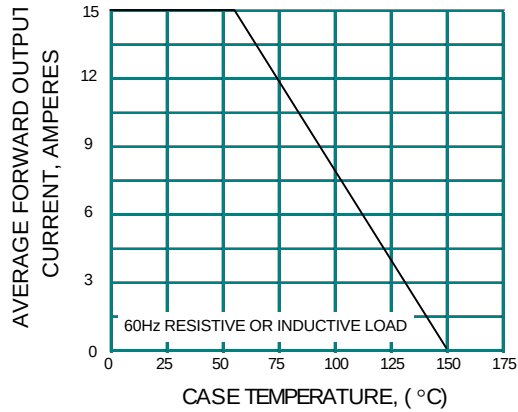


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

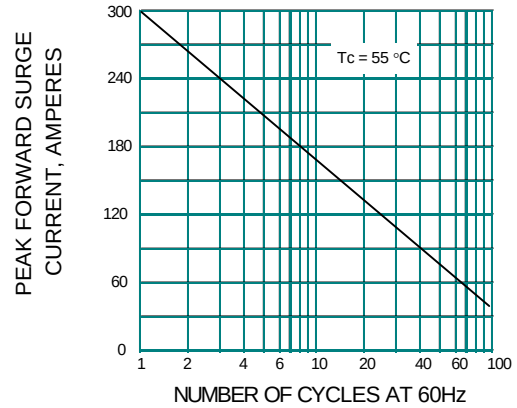


FIG.4 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

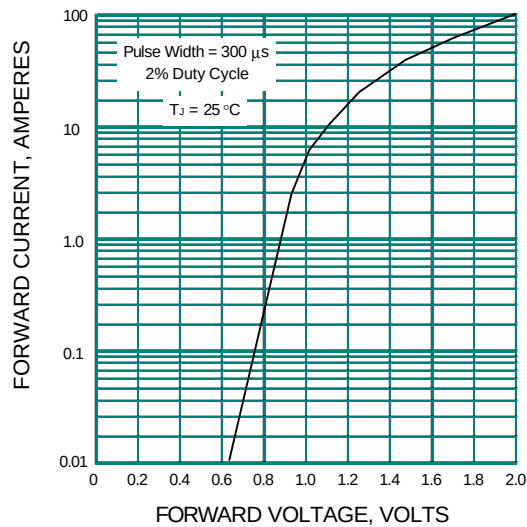


FIG.5 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

