

## SINGLE PHASE FAST RECOVERY BRIDGE RECTIFIER

**FBR2505WN THRU FBR2510WN**

**VOLTAGE RANGE  
CURRENT**

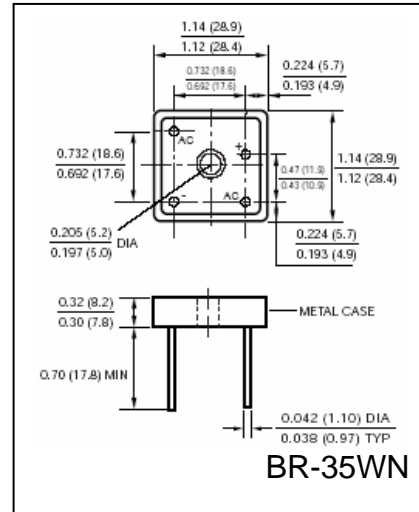
**50 to 1000 Volts  
25.0 Ampere**

### FEATURES

- High speed fast recovery bridge
- High forward surge current capability
- Integrally molded heatsink provides very low Thermal resistance
- High isolation voltage from case to lead
- High temperature soldering guaranteed: 260°C / 10 seconds

### MECHANICAL DATA

- Case: Molded plastic body
- Terminal: Plated lead 0.040" (1.02mm) diameter
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #10 screw, 20 in-lbs Torque max.
- Weight: 0.47 ounce, 13.4 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	FBR 2505WN	FBR 251WN	FBR 252WN	FBR 254WN	FBR 256WN	FBR 258WN	FBR 2510WN	UNIT
Maximum Repetitive 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 Rectified Current, At $T_C = 50^\circ C$ (Note 1 and 2)	$I_{(AV)}$	25							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	300							Amps
Rating for Fusing ( $t < 8.3mS$ )	$I^2t$	373							$A^2s$
Maximum Instantaneous Forward Voltage drop per Bridge element 12.5A	$V_F$	1.2				1.3			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$I_R$	10							$\mu A$
$T_A = 25^\circ C$ $T_A = 100^\circ C$		1.0							mA
Maximum Reverse Recovery Time Test conditions $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$	$t_{rr}$	150				250	500		nS
Isolation Voltage from case to lug	$V_{ISO}$	2500							Volts
Typical Thermal Resistance (Note 1 and 2)	$R_{\theta Jc}$	2.0							$^\circ C/W$
Operating Junction Temperature Range	$T_J$	(-55 to +150)							$^\circ C$
Storage Temperature Range	$T_{STG}$	(-55 to +150)							$^\circ C$

### Notes:

1. Unit mounted on 5" x 6" x 4.9" (12.8cm x 15.2cm x 12.4cm) AL finned plate
2. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

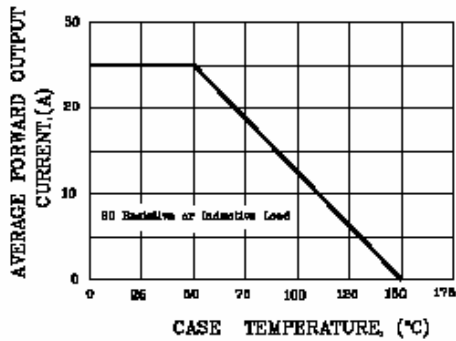


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

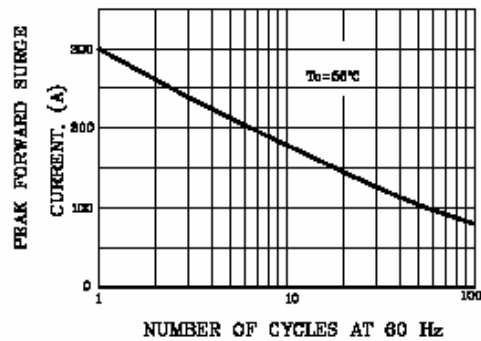


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER DIODE

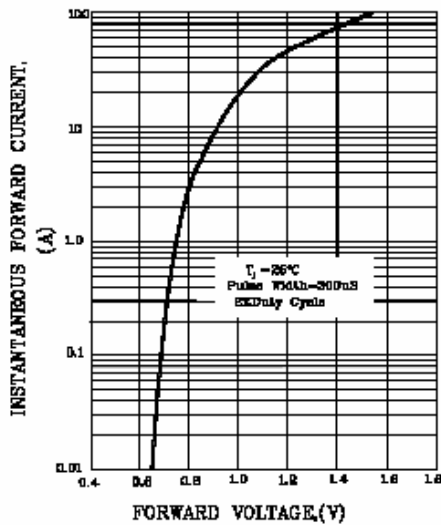


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER DIODE

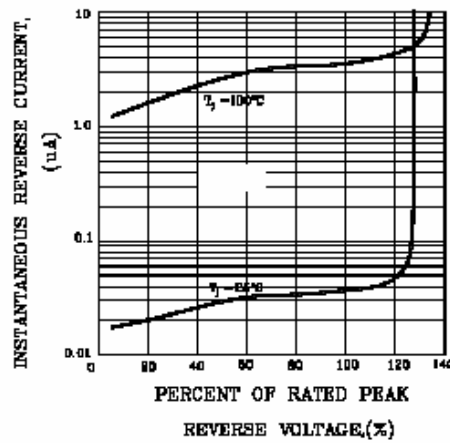
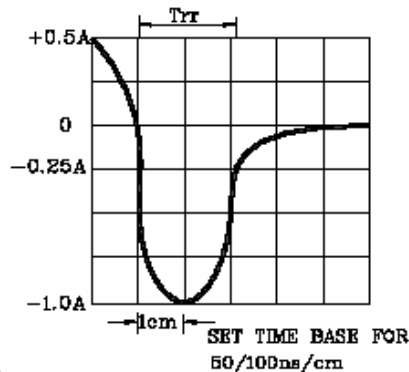
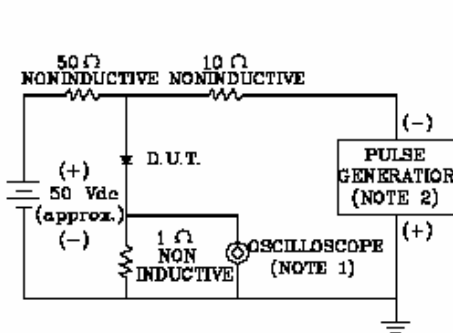


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm 22pF

2. Rise time = 10ns max. Source Impedance = 50 ohms