

## ABFR10

### SINGLE PHASE 1.0A MPS. GLASS PASSIVATED FAST BRIDGE RECTIFIERS

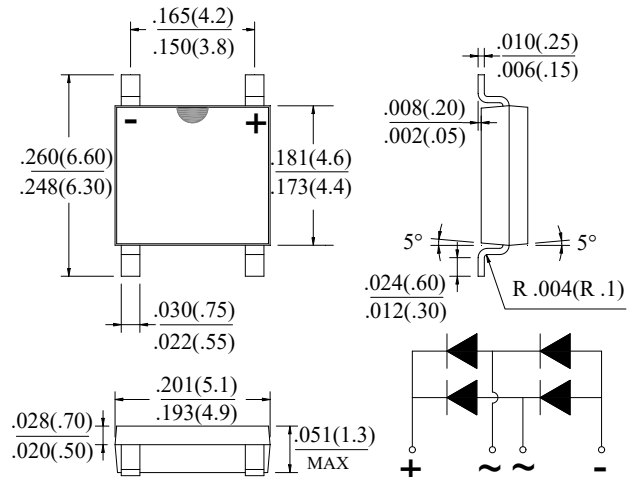
#### FEATURE

- . Glass passivated junction.
- . Ideal for printed circuit board.
- . Reliable low cost construction utilizing molded plastic technique.
- . High surge current capability.
- . High temperature soldering guaranteed: 260°C/10 seconds at terminals.
- . Small size, simple installation.

#### MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL 94V-0 rate flame retardant
- . Lead: MIL-STD- 202E, Method 208 guaranteed
- . Polarity: As marked

#### ABF



Dimensions in inches and (millimeters)

### 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%

Type Number	SYM BOL	ABFR10	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1000	V
Maximum RMS Voltage	$V_{RMS}$	700	V
Maximum DC blocking Voltage	$V_{DC}$	1000	V
Maximum Average Forward rectified Current	$I_{F(AV)}$	1.0	A
Peak Forward Surge Current times at 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	30	A
Maximum Instantaneous Forward Voltage @0.4A DC	$V_F$	1.25	V
@1.0A DC		1.30	
Maximum DC Reverse Current @ $T_J = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_J = 125^\circ\text{C}$	$I_R$	5.0	$\mu\text{A}$
		200.0	
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	500	nS
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	3.735	$\text{A}^2\text{Sec}$
Typical Junction Capacitance Per Leg (Note2)	$C_J$	10	pF
Typical Thermal Resistance (Note3)	$R_{JA}$	65	$^\circ\text{C} / \text{W}$
	$R_{JC}$	22	
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ\text{C}$
Operating Junction Temperature	$T_J$	-55 to +150	$^\circ\text{C}$

#### Note:

1. Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient mounted on P.C.B with 15×15mm copper pads

**RATING AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

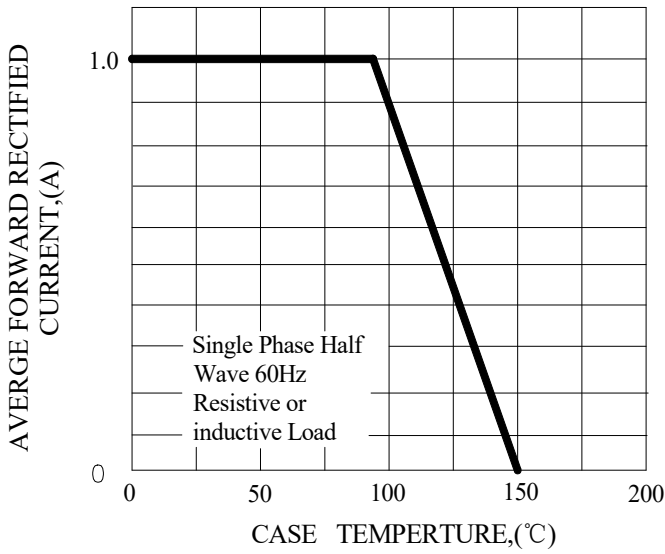


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

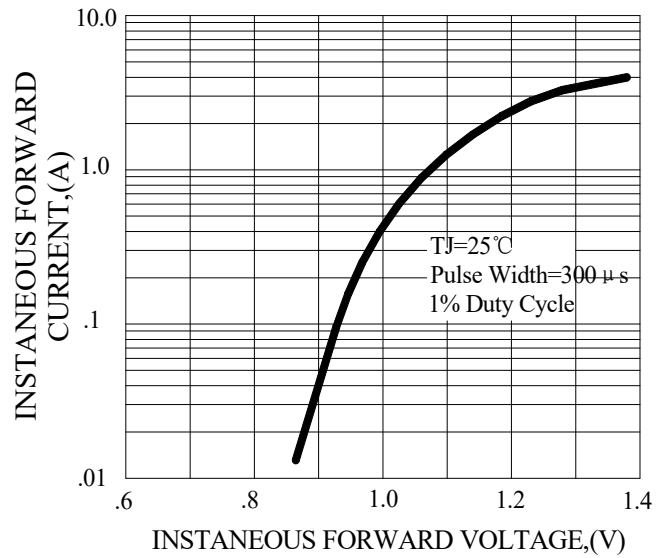


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

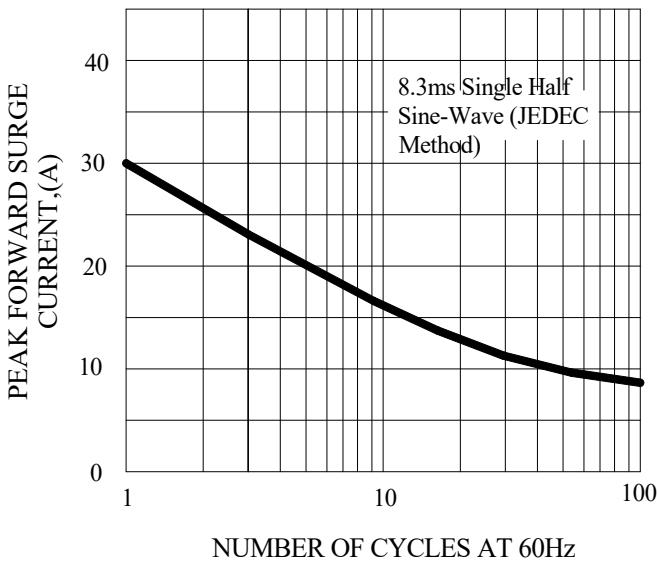


FIG.4-TYPICAL REVERSE CHARACTERISTICS

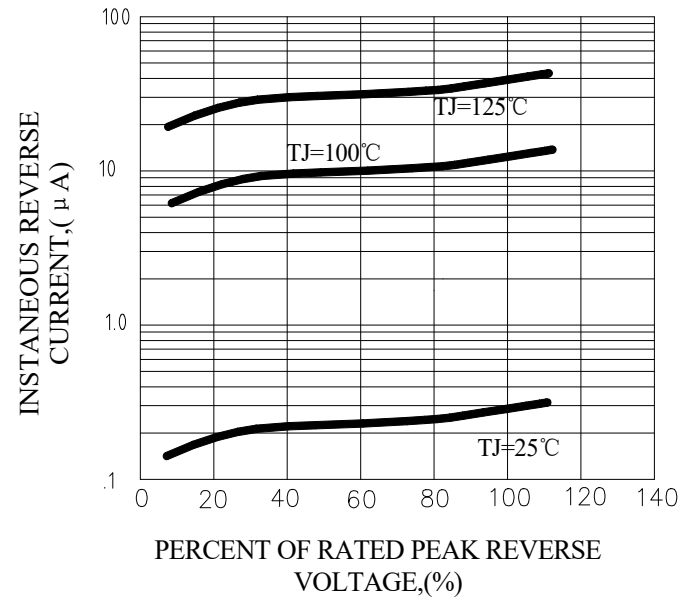
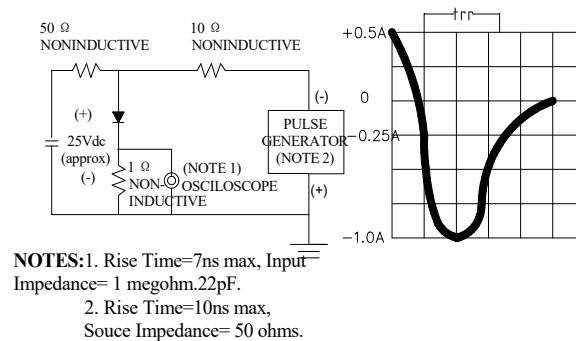
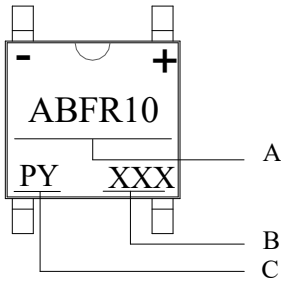


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



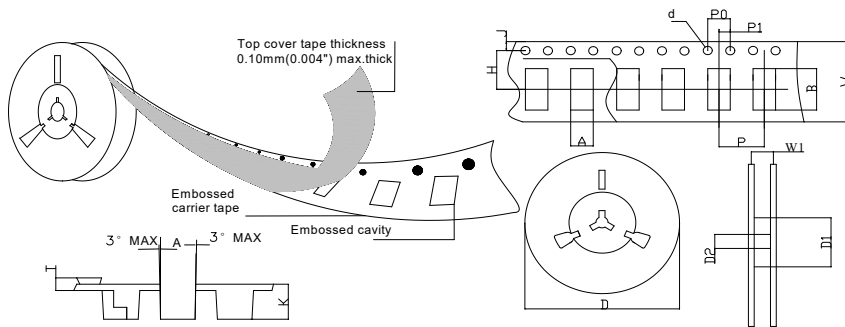
## Marking and packaging illustration

### 1、Marking



SYMBOL	Explanation
A	Product Name
B	Date Code
C	Trademark

### 2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	ABF	ITEM	SYM BOL	ABF
Carrier width	A	5.45(0.215)Max	Carrier depth	K	1.60(0.063)Typ
Carrier length	B	7.0(0.276)Max	Punch hole pitch	P	8.00(0.315)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13.0)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(2.913)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.50(0.217)Typ			