

ABFR210-70

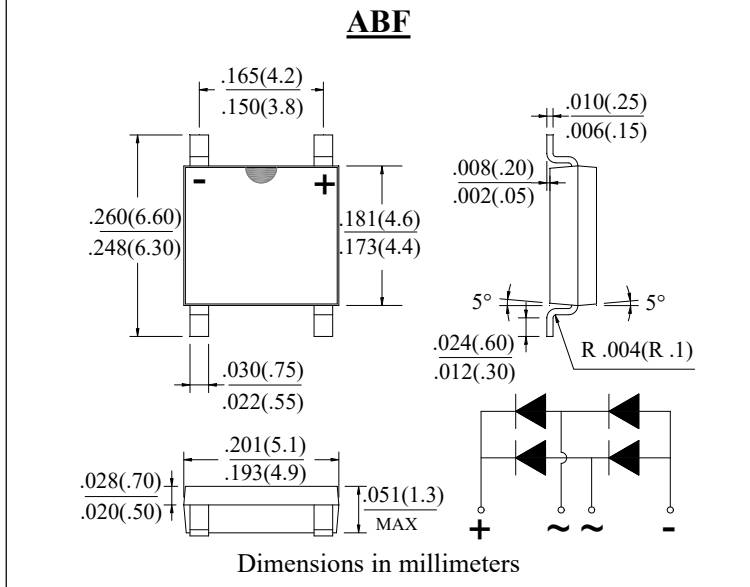
SINGLE PHASE 2.0A MPS. GLASS PASSIVATED FAST BRIDGE RECTIFIERS

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



Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

MAXIMUM RATINGS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	ABFR210-70	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
Average Forward Rectified Current	$I_{F(AV)}$	2	A
Non-repetitive forward surge current, 8.3ms half sine-wave	I_{FSM}	70	A
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	20	A^2Sec
Minimum Reverse Recovery Time (Note 1)	t_{rr}	500	nS
Typical Junction Capacitance (Note 2)	C_J	15	pF
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55 to + 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Units
Instantaneous Forward voltage at 0.8A	V_F	-----	1.0	1.25	V
reverse current at rated DC blocking voltage	I_R	-----	-----	5.0	μA

THERMAL CHARACTERISTICS ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	ABFR210-70	Units
Typical Thermal Resistance (Note 3)	$R_{(JC)}$	25	$^\circ\text{C}/\text{W}$

Note:

1. Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. $T_J=25^\circ\text{C}$, $V_R = 4V_{DC}@1\text{Mhz}$
3. Measured on P.C.Board with $15.0\text{mm} \times 15.0\text{mm} \times 1.6\text{mm}$ Copper Pad Areas

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

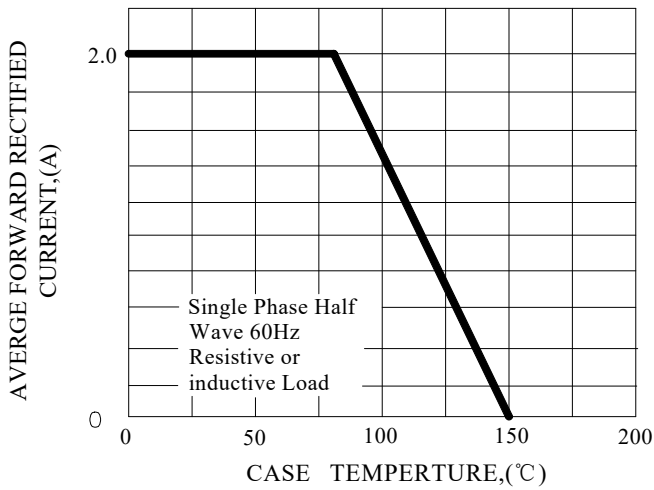


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

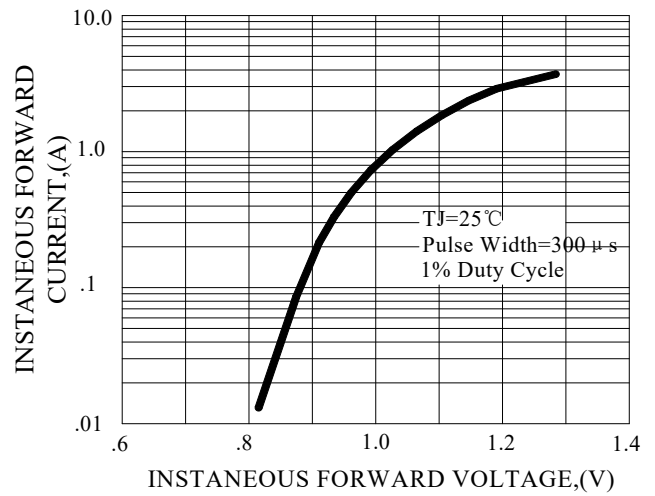


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

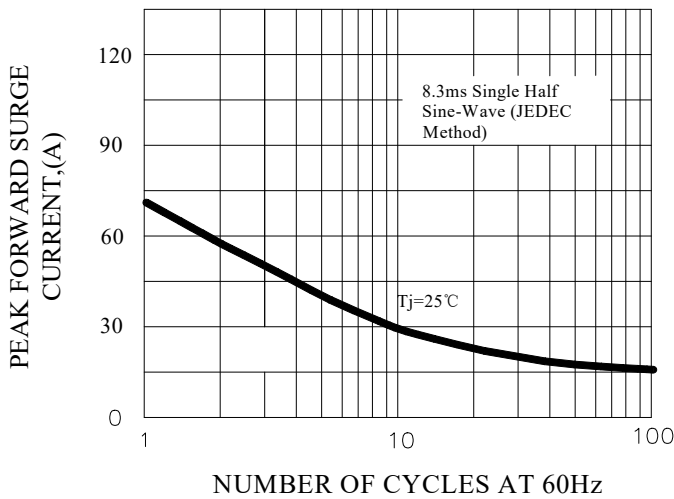


FIG.4-TYPICAL REVERSE CHARACTERISTICS

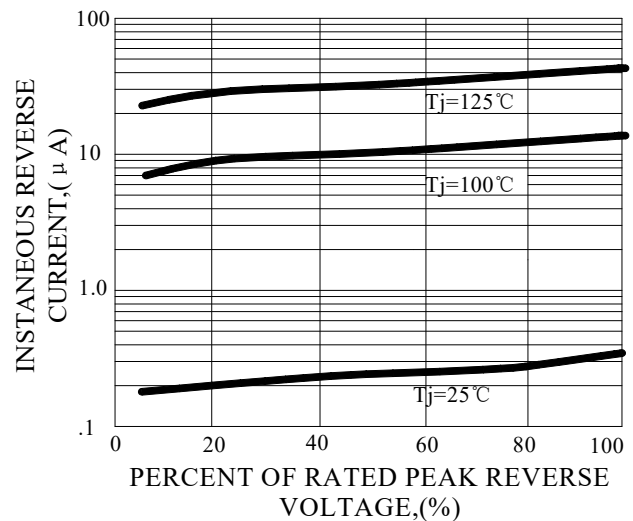
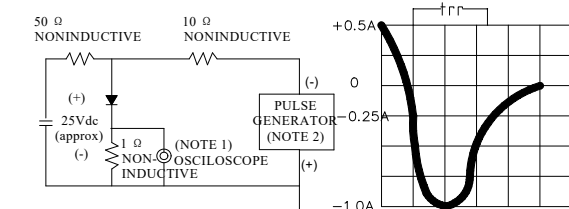
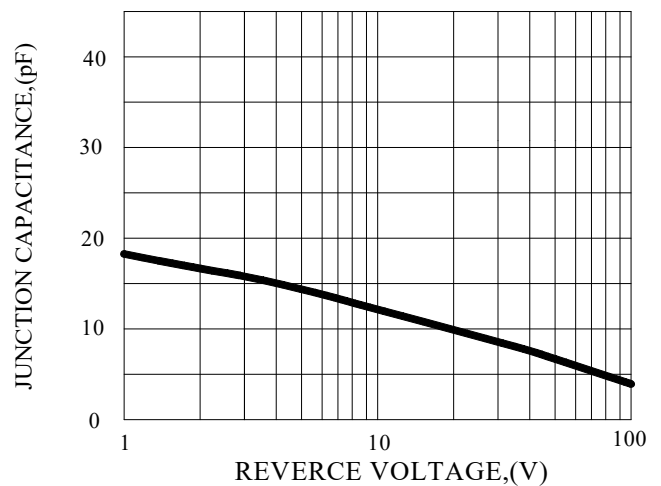


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



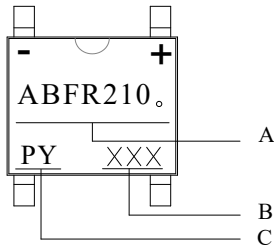
NOTES:1. Rise Time=7ns max, Input Impedance= 1 megohm,22pF.
2. Rise Time=10ns max, Souce Impedance= 50 ohms.

FIG.6-TYPICAL JUNCTION CAPAOTANCE



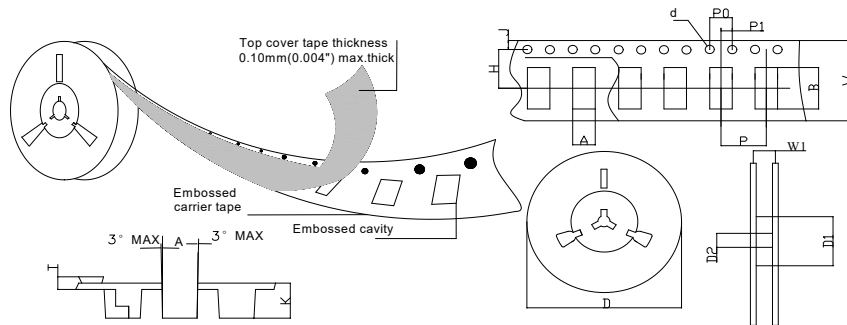
Marking and packaging illustration

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			