TMBFR310

SINGLE PHASE3.0AMPS. GLASS PASSIVATED FAST BRIDGE RECTIFIERS

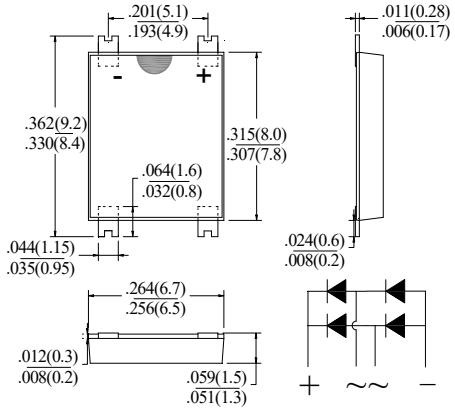
FEATURE

. 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.

MECHANICAL DATA

. Case Material: "Green" Molding compound, UL flammability classification rating 94V-0, "Halogen free"
. Moisture sensitivity level:level 2a,per J-STD-020
. Polarity:Polarity as marked on the body

TMBF



Dimensions in inches and (millimeters)

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

MAXIMUM RATINGS (T_C=25℃ unless otherwise noted)

Parameter	Symbol	TMBFR310	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 at $T_C \leqslant 90°C$	$I_{F(AV)}$	3	A
Peak Forward Surge Current @T_J=25°C 8.3ms single half sine-wave @T_J=125°C	I_{FSM}	90 70	A
Peak Forward Surge Current @T_J=25°C 1.0ms single half sine-wave @T_J=125°C	I_{FSM}	180 140	A
I^2t Rating for Fusing(t < 8.3ms)	I^2t	33.6	A^2Sec
Maximum Reverse Recovery Time (Note 1)	t_{rr}	500	nS
Typical Junction Capacitance (Note 2)	C_J	36	pF
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS (T_C=25℃ unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Units
Instantaneous Forward voltage at 3A @T_J=25°C @T_J=125°C	V_F	----- -----	1.1 0.94	1.3 ------	V
reverse current @T_J=25°C at rated DC blocking voltage @T_J=125°C	I_R	------ ------	------ ------	5.0 500.0	uA

THERMAL CHARACTERISTICS(T_C=25℃ unless otherwise noted)

Parameter	Symbol	TMBFR310	Units
Typical Thermal Resistance (Note 3)	$R_{(JA)}$ $R_{(JC)}$	115 28	℃/W

Note:1.Conditions:I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2.T_J=25℃,V_R = 4V_{DC}@1Mhz
3.Measured on P.C.Board with 50mm*50mm Copper Pad per pin.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

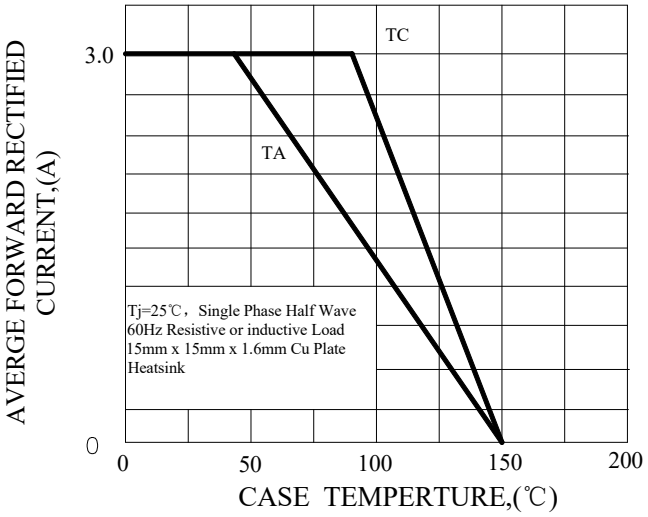


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

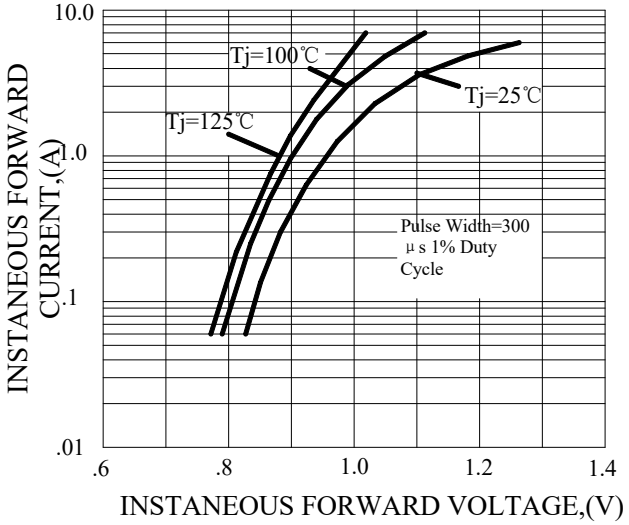


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

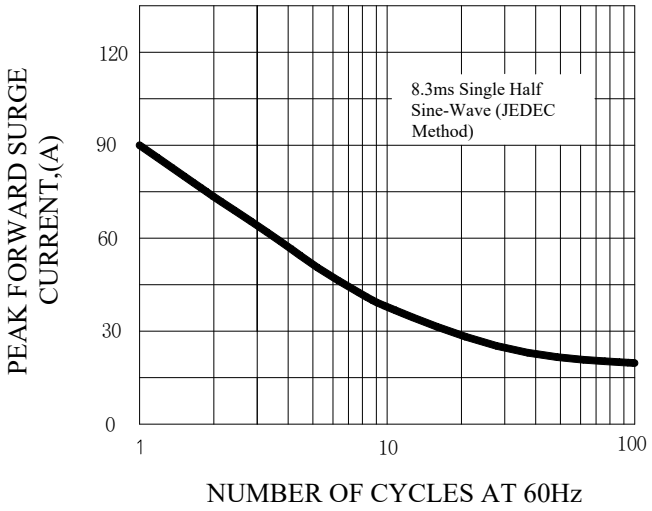


FIG.4-TYPICAL REVERSE CHARACTERISTICS

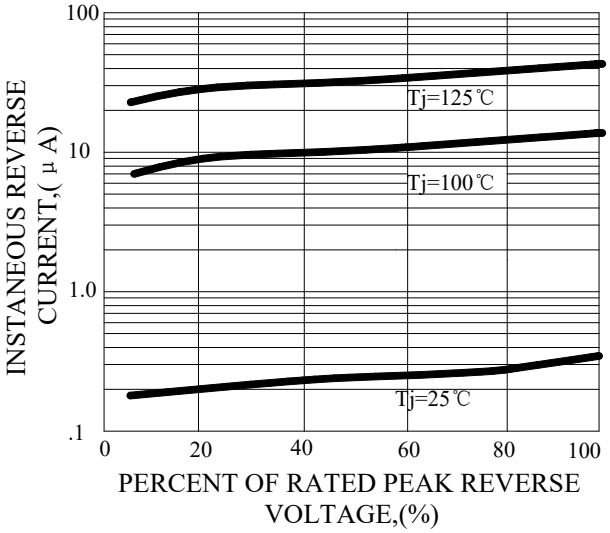
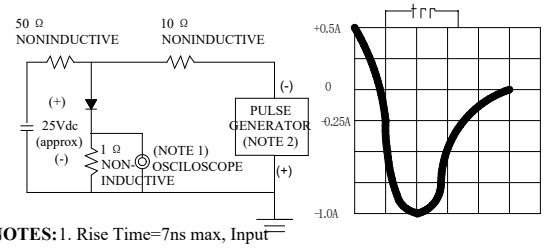
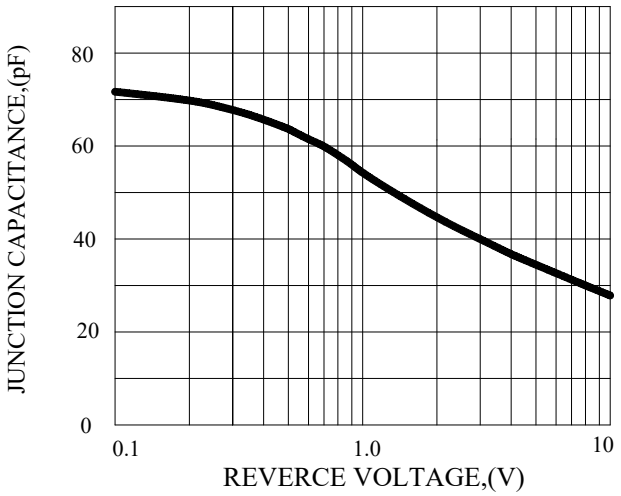


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERSITIC



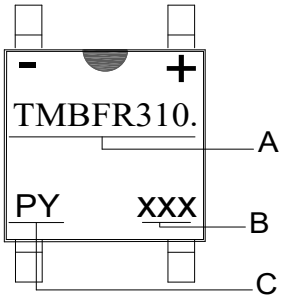
NOTES: 1. Rise Time=7ns max, Input Impedance= 1 megohm.22pF.
2. Rise Time=10ns max,
Souce Impedance= 50 ohms.

TMBFR310-TYPIAL JUNCTION CAPAOTANCE



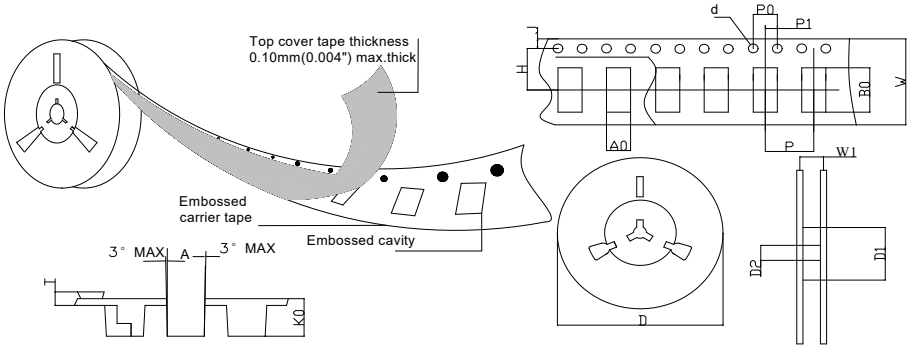
Marking and packaging illustration

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	TMBF	ITEM	SYM BOL	TMBF
Carrier width	A	7.0(0.276)Max	Carrier depth	K	1.70(0.067)Typ
Carrier length	B	9.9(0.390)Max	Punch hole pitch	P	12.00(0.472)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(1.969)Min	Overall tape thickness	T	0.33(0.013)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	16.0(0.630)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	7.50(0.295)Typ			