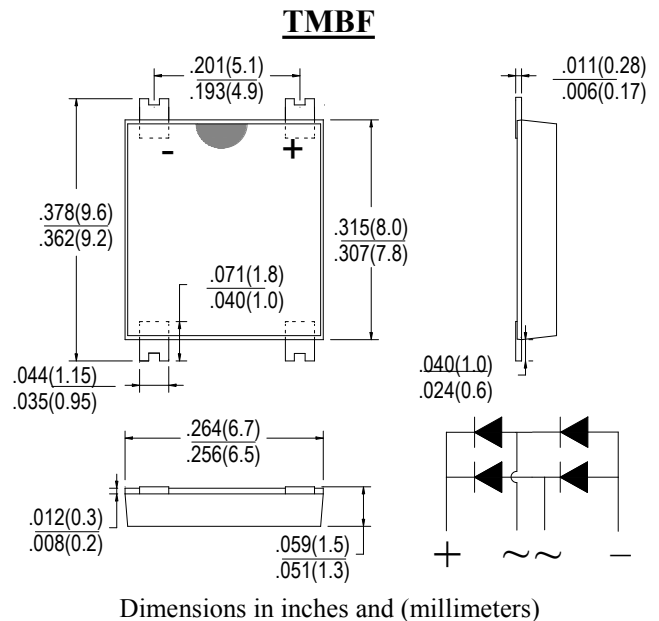


### FEATURE

- . 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
- . Weight: 0.204g (approximately)



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

### MAXIMUM RATINGS (T<sub>C</sub>=25°C unless otherwise noted)

Parameter	SYMBOL	TMBF310	Units
	Marking	TMBF310	
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 <sub>C</sub> ≤ 90°C	$I_{F(AV)}$	3	A
Non-repetitive forward surge current, 8.3ms half sine-wave	$I_{FSM}$	95	A
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	$I^2t$	37.45	A <sup>2</sup> Sec
Minimum Reverse Recovery Time (Note 1)	$t_{rr}$	800	nS
Typical Junction Capacitance (Note 2)	$C_J$	50	pF
Operation Junction and Storage Temperature	$T_J, T_{STG}$	-55 to + 150	°C

### ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise noted)

Parameter	SYMBOL	Min	Typ	Max	Units
Reverse Breakdown Voltage at I <sub>r</sub> =0.01mA	$V_{BR}$	1000	-----	-----	V
Instantaneous Forward voltage at 3A	$V_F$	-----	0.96	1.1	V
reverse current at rated DC blocking voltage	$I_R$	-----	-----	5.0	uA
				100.0	

### THERMAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise noted)

Parameter	SYMBOL	TMBF310	Units
Typical Thermal Resistance (Note 3)	$R_{(JA)}$ $R_{(JC)}$	85 15	°C/W

**Note:** 1. Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc

3. Measured on P.C.Board with 15.0mm\*15.0mm\*1.6mm Copper Pad Areas

### RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

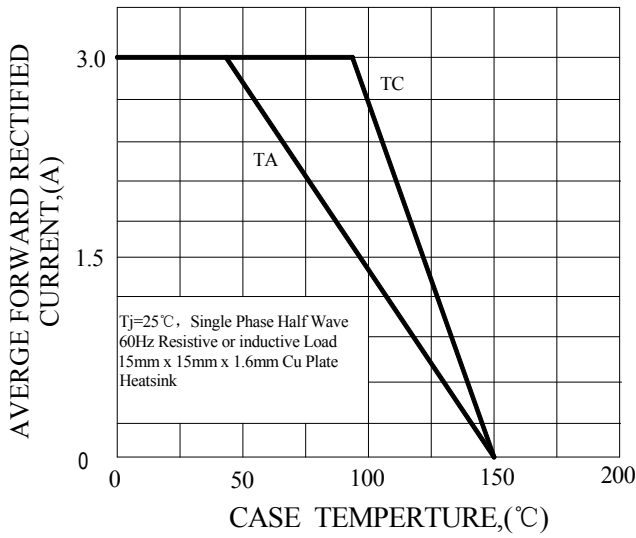


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

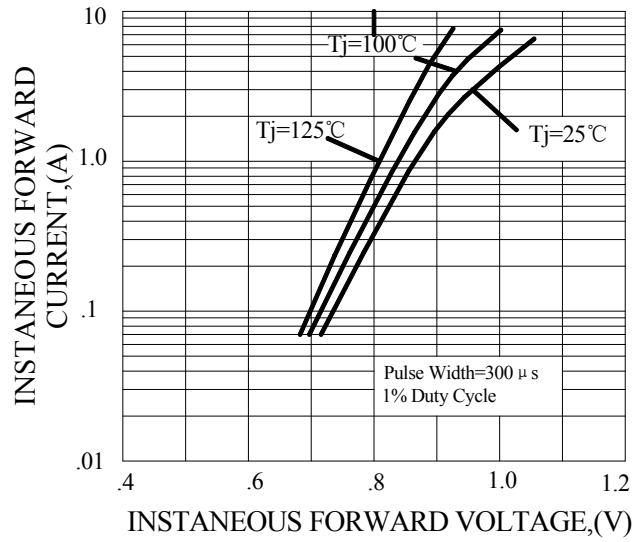


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

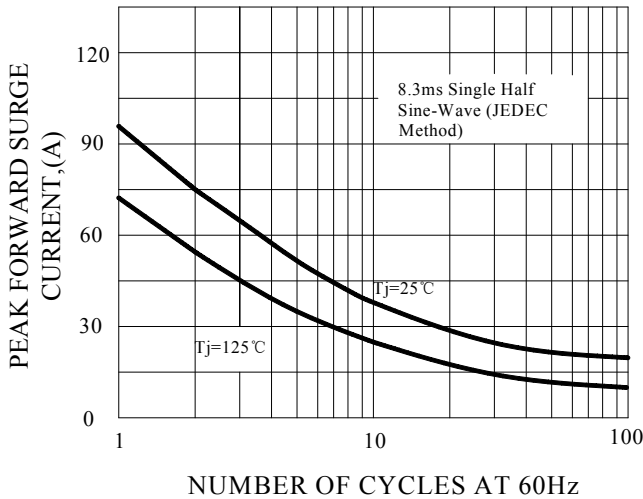


FIG.4-TYPICAL REVERSE CHARACTERISTICS

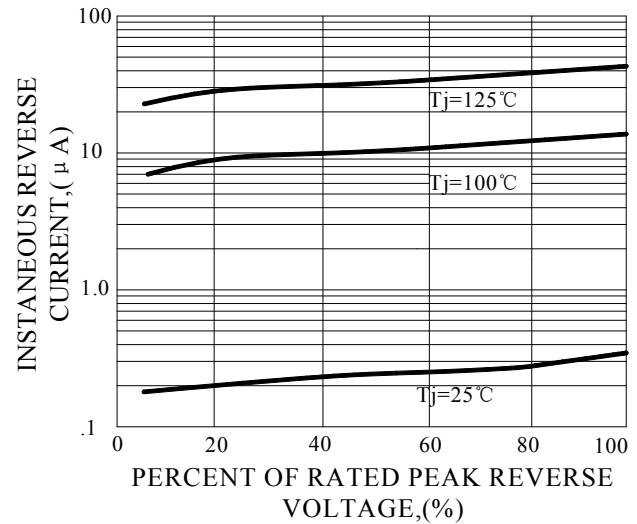


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

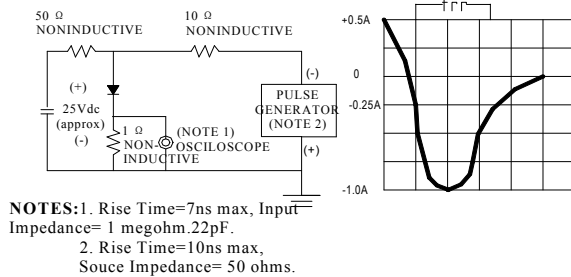


FIG.6-TYPICAL JUNCTION CAPACITANCE

