

TMBF2510

SINGLE PHASE 2.5 AMPS. GLASS PASSIVATED BRIDGE RECTIFIERS

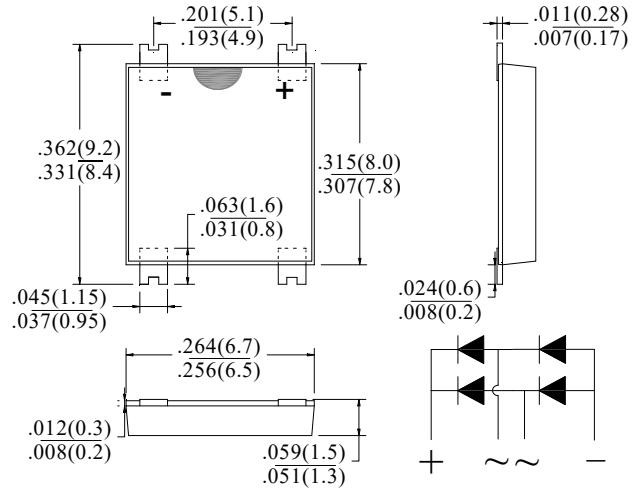
FEATURE

- . 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, “Free halogen”
- . Moisture sensitivity level: level 1, per J-STD-020
- . Polarity: Polarity as marked on the body

TMBF



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	TMBF2510	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	$I_{F(AV)}$	2.5	A
Peak Forward Surge Current 8.3ms single half sine-wave	I_{FSM}	75	A
Peak Forward Surge Current 1.0ms single half sine-wave	I_{FSM}	150	A
Maximum Instantaneous Forward Voltage @ $I_F=1.25A$ DC	V_F	1.0	V
@ $I_F=2.5A$ DC		1.1	
Maximum DC Reverse Current @ $T_J=25^\circ C$	I_R	5.0	μA
at rated DC blocking voltage @ $T_J=125^\circ C$		500.0	
I^2t Rating for Fusing ($t < 8.3ms$)	I^2t	23	A^2Sec
Typical Junction Capacitance Per Leg (Note1)	C_J	25	pF
Typical Thermal Resistance (Note2)	R_{JA}	40	$^\circ C / W$
	R_{JC}	8	
Storage Temperature	T_{STG}	-55 to +150	$^\circ C$
Operating Junction Temperature	T_J	-55 to +150	$^\circ C$

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal resistance from Junction to case, lead and ambient in accordance with JESD-51.
Unit mounted on glass-epoxy substrate with 1oz/ft²-30×30mm copper pad per pin with heat sink.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

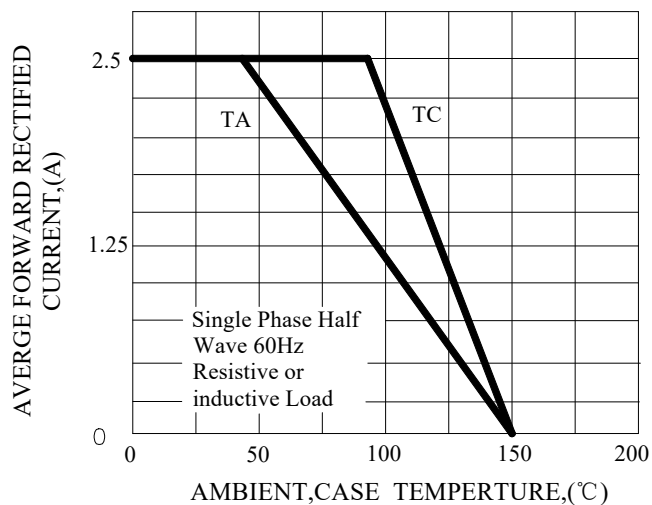


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

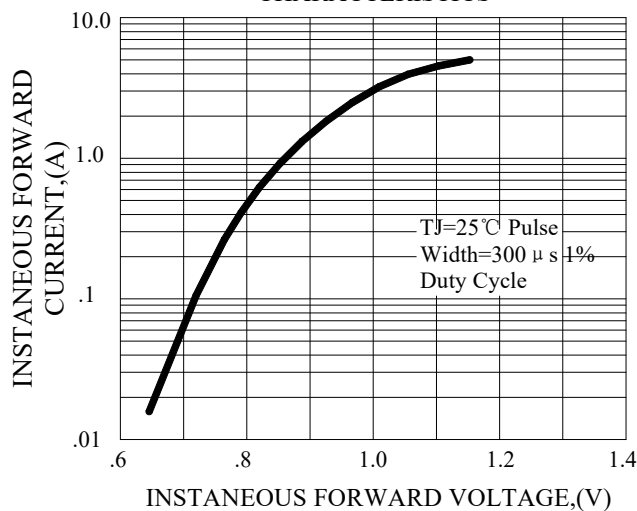


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

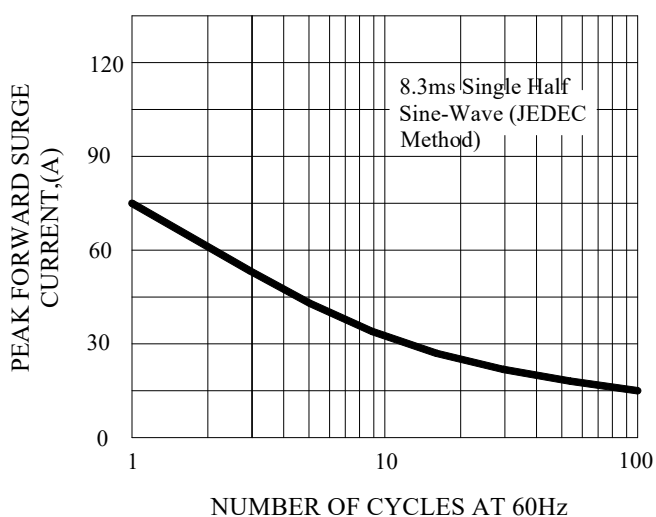


FIG.4-TYPICAL REVERSE CHARACTERISTICS

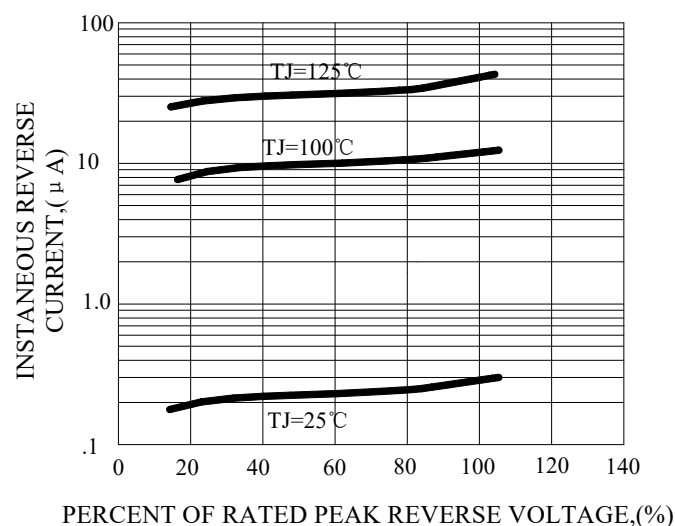
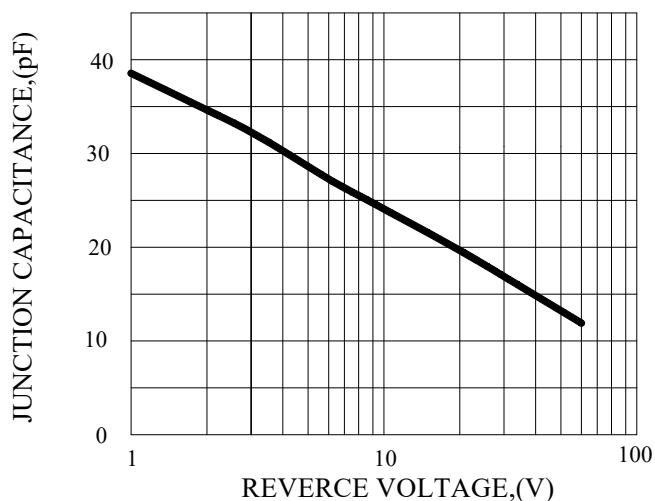
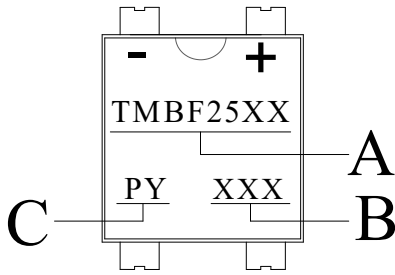


FIG.5-TYPICAL JUNCTION CAPACITANCE



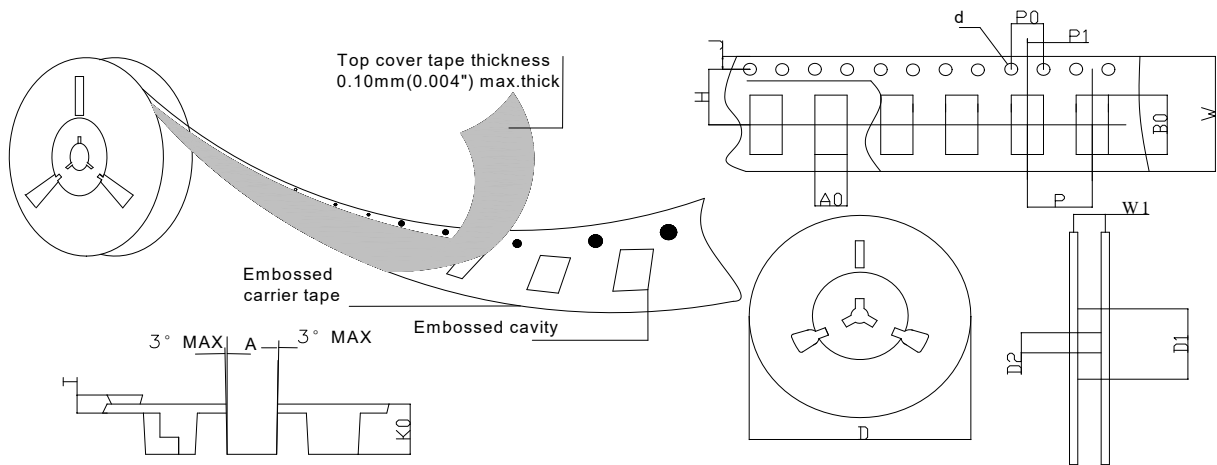
Marking and packaging illustration

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	9.1(0.358)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			