

**CURRENT** 4.0 Ampere  
**VOLTAGE RANG** 200 to 1000 Volts

## TBM402 THRU TBM410

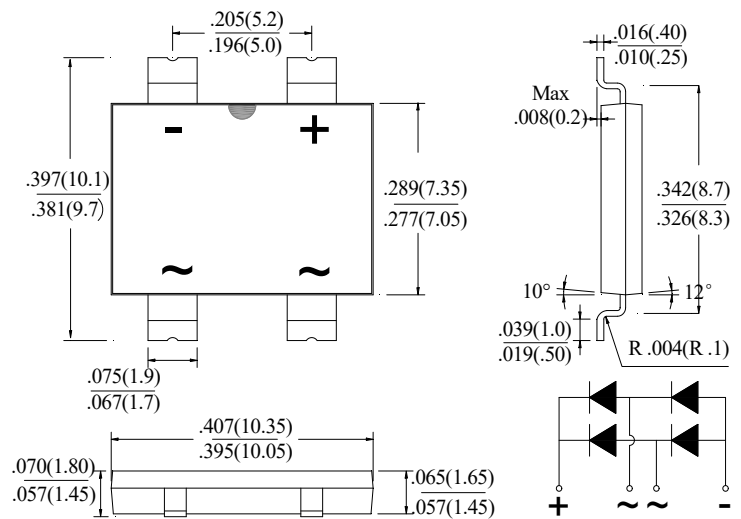
### FEATURE

- Surface mount bridge, small package;
- 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 2a, per J-STD-020
- Polarity: Polarity as marked on the body
- Weight: 0.415g (approximately)

### TBM



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	TBM 402	TBM 404	TBM 406	TBM 408	TBM 410	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	160	320	420	560	700	V
Maximum DC blocking Voltage	$V_{DC}$	200	400	600	800	1000	V
Maximum Average Forward rectified Current	$I_{F(AV)}$	4.0					A
Peak Forward Surge Current @ $T_J=25^\circ\text{C}$ 8.3ms single half sine-wave @ $T_J=125^\circ\text{C}$	$I_{FSM}$	135					A
Peak Forward Surge Current @ $T_J=25^\circ\text{C}$ 1.0ms single half sine-wave @ $T_J=125^\circ\text{C}$		100					
Maximum Instantaneous Forward Voltage @ $I_F=4.0\text{A DC}$ @ $I_F=2.0\text{A DC}$	$V_F$	1.1 1.0					V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at rated DC blocking voltage @ $T_J=125^\circ\text{C}$	$I_R$	5.0 200.0					$\mu\text{A}$
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	75.6					$\text{A}^2\text{Sec}$
Typical Junction Capacitance (Note1)	$C_J$	40					pF
Typical Thermal Resistance (without Heatsink)	$R_{JA}$	$R_{JA}$	$R_{JL}$	$R_{JC}$			$^\circ\text{C} / \text{W}$
Typical Thermal Resistance (Note2)		60	10	8			
Storage Temperature	$T_{STG}$	-55 to +150					$^\circ\text{C}$
Operating Junction Temperature	$T_J$	-55 to +150					$^\circ\text{C}$

#### Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.  
Unit mounted on 15mm x 12mm x 1.6mm AL Pad attached on 40mm x 30mm x 24mm Fin heatsink.

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**Rating and Characteristic Curves** (TA=25°C Unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

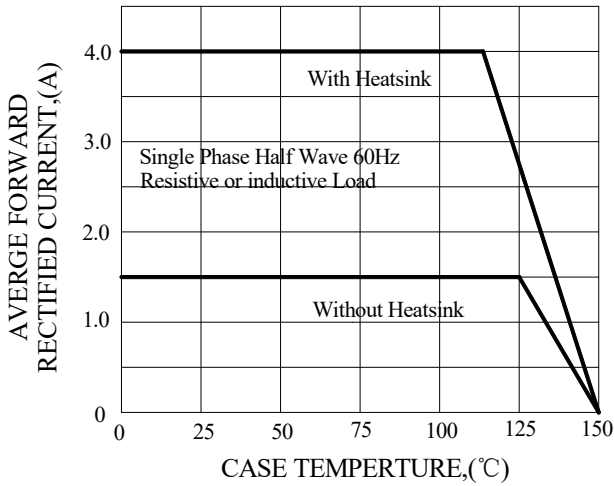


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

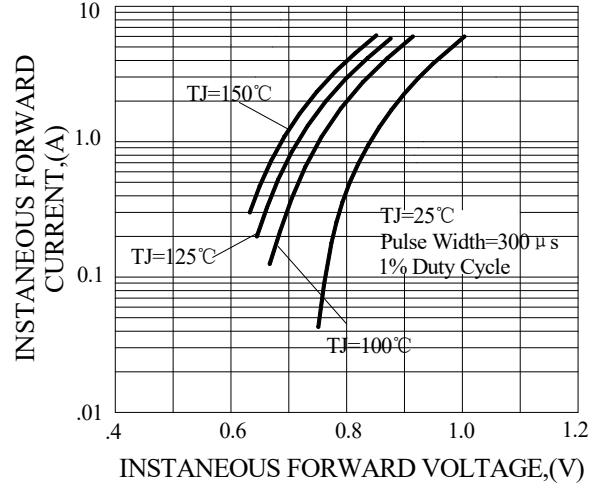


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

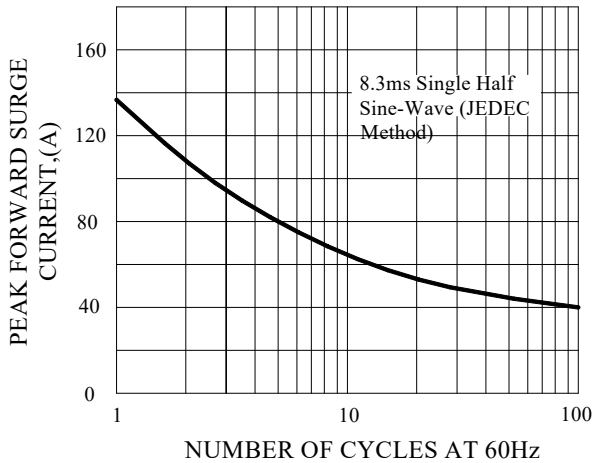


FIG.4-TYPIAL JUNCTION CAPACITANCE

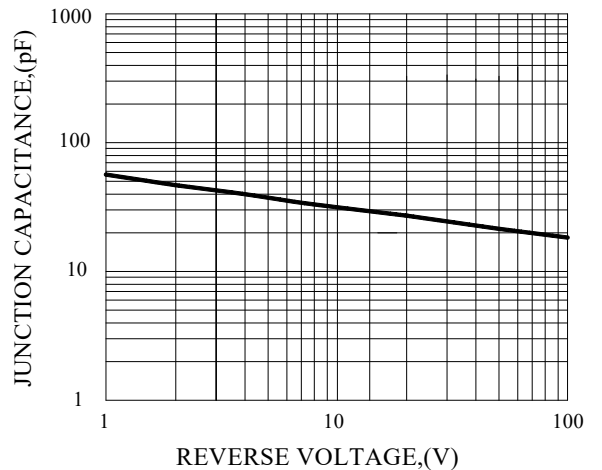
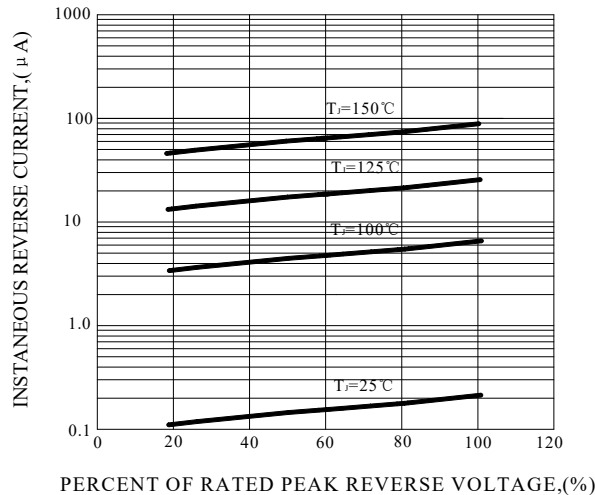


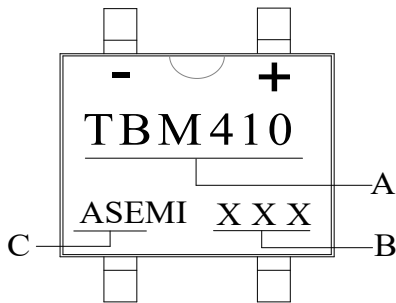
FIG.5-TYPICAL REVERSE CHARACTERISTICS



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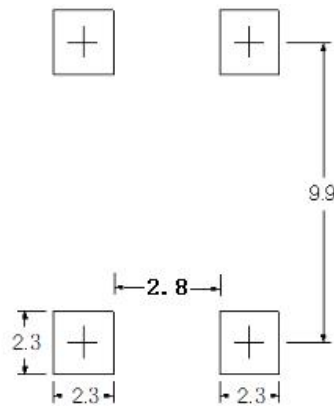
## TBM402 THRU TBM410

### 1、Marking



SYMBOL	Explanation
<b>A</b>	<b>Product Name</b>
<b>B</b>	<b>Date Code</b>
<b>C</b>	<b>Trademark</b>

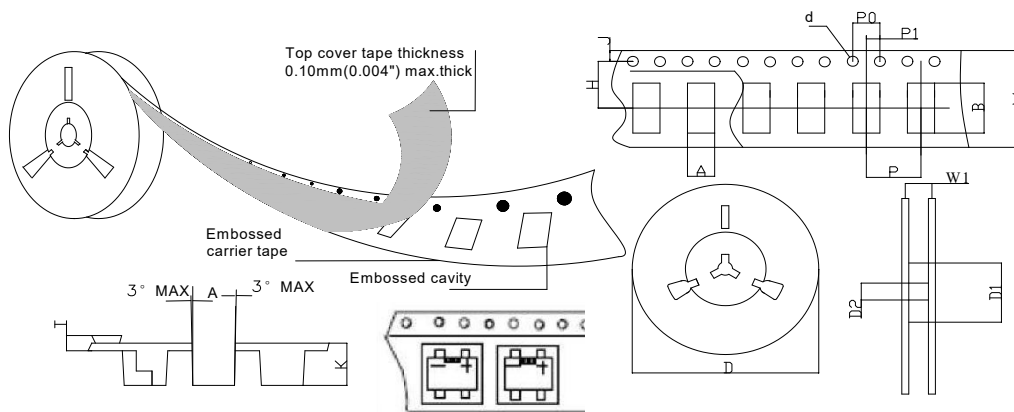
### 2、Suggested Pad Layout (mm)



### 3、MOQ

1500pcs / Tape & Reel

### 4、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	TBM	ITEM	SYM BOL	TBM
Carrier width	A	10.5(0.413)Max	Carrier depth	K	2.25(0.088)Typ
Carrier length	B	11.0(0.433)Max	Punch hole pitch	P	16.00(0.630)Typ
Sprocket hole	d	ø1.6(0.063)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	75.0(2.953)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	24.0(0.945)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	25.5(1.004)Min
Punch hole position	H	11.50(0.452)Typ			