

ABMR510

SINGLE PHASE 5.0AMPS.GLASS PASSIVATED FAST BRIDGE RECTIFIERS

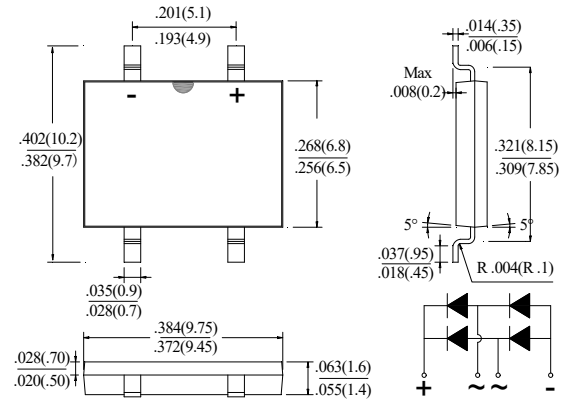
FEATURE

- . Glass passivated chip junctions
- . High case dielectric strength
- . Low Reverse Leakage Current
- . High surge current capability
- . Ideal for Printed Circuit Board Applications
- . High temperature soldering guaranteed:
260°C/10 seconds at terminals.

MECHANICAL DATA

- . Case Material: Molded Plastic.
UL Flammability Classification Rating 94V-0
- . Terminals: Pure tin plated, Lead free.
Leads solderable per MIL-STD-750, Method 2026.
- . Polarity: Molded on Body

ABM



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°C unless otherwise noted)

Parameter	Symbol	ABMR510	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 _A =25°C	$I_{F(AV)}$	5	A
Non-repetitive forward surge current, 8.3ms half sine-wave	I_{FSM}	150	A
I ² t Rating for Fusing (t < 8.3ms)	I^2t	93	A ² Sec
Reverse Surge Current (20ms)	I_{RSM}	10	mA
Operation Junction Temperature and Storage Temperature	$T_J,$ T_{STG}	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Units
Instantaneous Forward voltage at 5A @T _J =25°C	V_F	----	1.1	1.3	V
@T _J =125°C		----	0.98	-----	
reverse current at rated DC blocking voltage @T _J =25°C	I_R	-----	0.2	5.0	uA
@T _J =125°C		-----	60	100.0	
Maximum Reverse Recovery Time (Note 1)	t_{rr}	-----	-----	500	nS
Typical Junction Capacitance (Note 2)	C_J	-----	45	-----	pF

THERMAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

Parameter	Symbol	ABMR510	Units
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	75	°C/W
	$R_{(JC)}$	7.0	

Note: 1. Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

2. T_J=25°C, V_R = 4V_{DC}@1Mhz

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

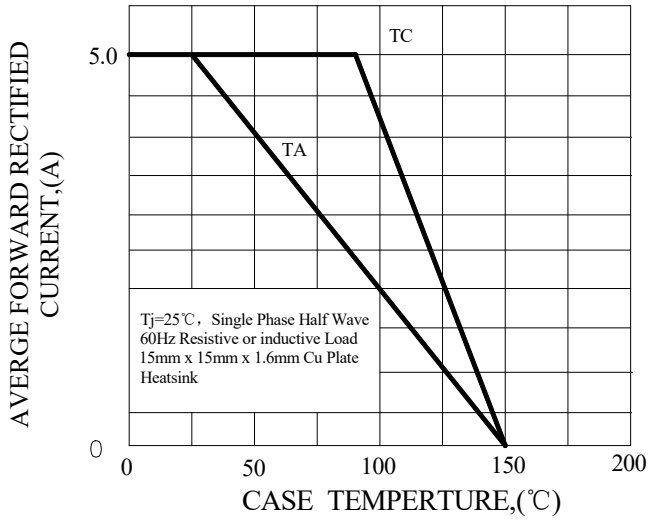


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

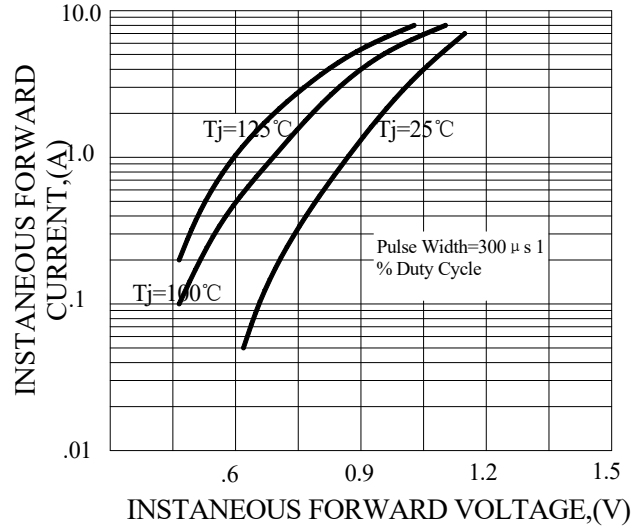


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

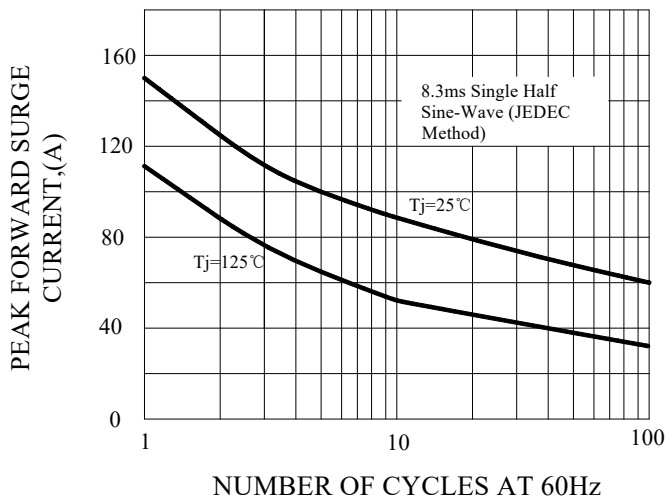


FIG.4-TYPICAL REVERSE CHARACTERISTICS

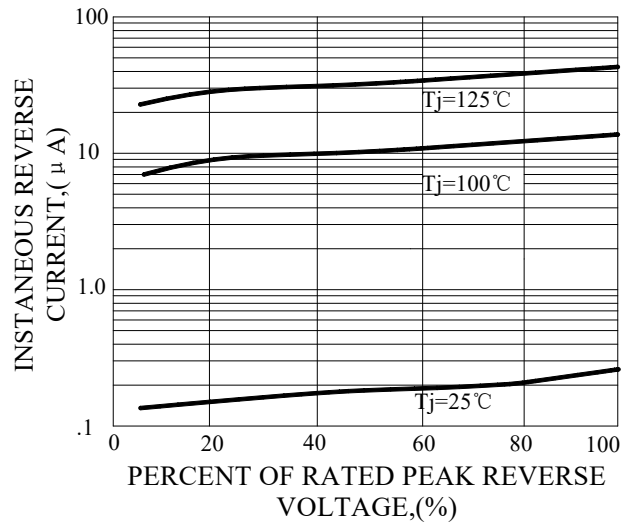


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

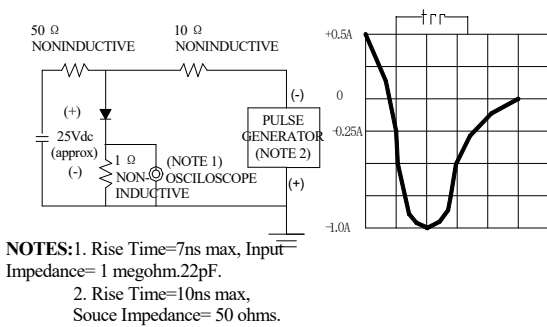
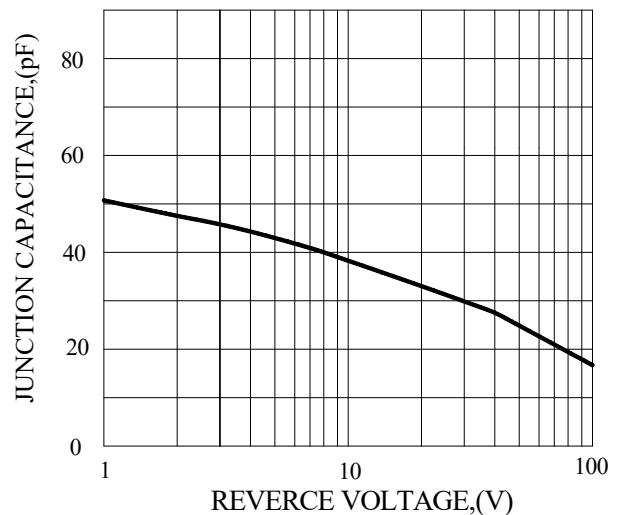
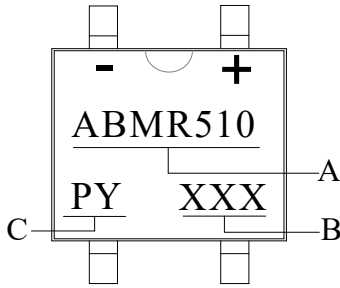


FIG.6-TYPICAL JUNCTION CAPACITANCE



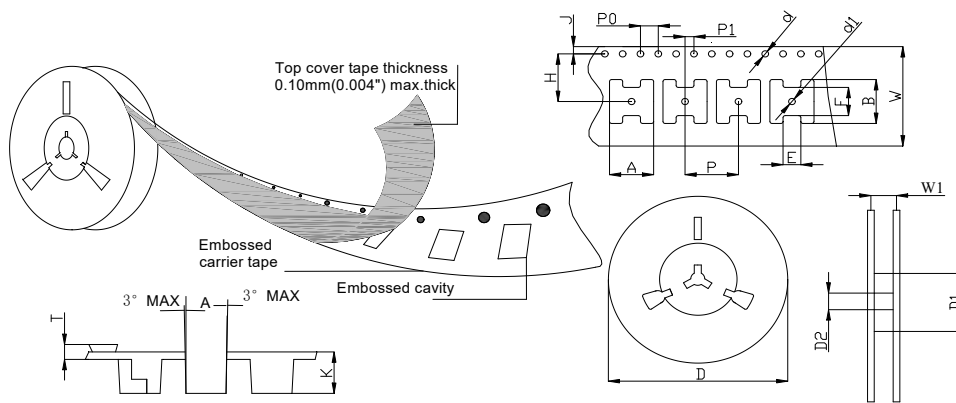
Marking and packaging illustration

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	ABM	ITEM	SYM BOL	ABM
Carrier width	A	10.2(0.402)Max	Sprocket hole position	J	1.75(0.069)Typ
Carrier length	B	10.3(0.406)Max	Punch hole position	H	7.50(0.296)Typ
Sprocket hole	d	ø1.6(0.063)Typ	Carrier depth	K	2.0(0.079)Typ
Ejector hole	d1	ø1.6(0.063)Typ	Punch hole pitch	P	12.00(0.472)Typ
Reel outer diameter	D	330.0(13.0)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel inner diameter	D1	75.0(2.953)Min	Embossment center	P1	2.00(0.079)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Overall tape thickness	T	0.35(0.014)Typ
Reserve pin spacing	E	4.00(0.157)Typ	Tape width	W	24.0(0.945)Typ
Reserve Shell width	F	6.80(0.268)Typ	Reel width	W1	25.5(1.004)Min