SEMICONDUCTOR

MB1S THRU MB10S

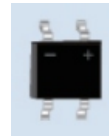
SURFACE MOUNT
GLASS PASSIVATED BRIDGE RECTIFIER

Reverse Voltage: 100 to 1000 Volts
Forward Current: 1.0 Amps

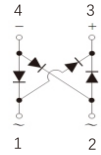
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- Low forward voltage drop,High current capability
- Ideal for printed circuit board
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

MBS



Pin Diagram



Internal Schematic

Marking
JF:Logo
XXXX:Data code
MB10S:Type

MECHANICAL DATA

- Case: MBS molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight: 0.0044ounce, 0.125 gram(approximately)

TYPICAL APPLICATIONS

Used in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, charger, home appliances, office equipment, and telecommunication applications.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25 ℃ambient temperature unless otherwise specified. Single phase ,half wave ,60Hz,resistive or inductive load. For capacitive load,derate current by 20%.)

Parameters		Symbols	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Units
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V_{RMS}	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current		$I_{(AV)}$	1.0						Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	35						Amps
Maximum Instantaneous Forward Voltage at 1.0 A DC		V_F	1.0						Volts
Rating for fusing (t=8.3ms)		I^2t	5.0						A^2S
Maximum DC Reverse Current at rated DC blocking voltage	T_A=25°C	I_R	5						μA
	T_A=125°C		100						
Typical junction capacitance(Note3)		C_J	7.3						PF
Typical thermal resistance		$R_{\theta JA}$ (Note1) $R_{\theta JA}$ (Note2) $R_{\theta JL}$	85 70 20						℃/W
Operating junction and storage temperature range		T_J T_{STG}	-55 to +150						℃

Note: 1.On glass epoxy P.C.B. mounted on 0.05×0.05"(1.3×1.3mm) pads.
2.On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20mm x 20mm) mounted on 0.05" x 0.05" (1.3mm×1.3mm)solder pads
3.Measured at 1MHZ and applied reverse voltage of 4.0 Volts.

FIG.1-TYPRCAL FORWARD CURRENT VS LEAD TEMPERATUE DERATING CURVE

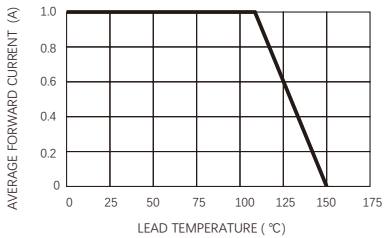


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

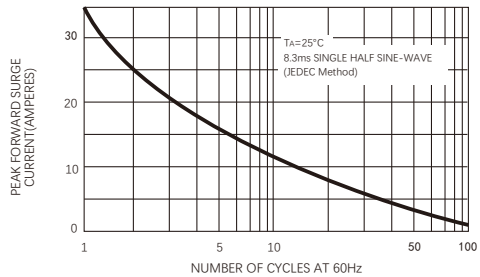


FIG.3-TYPRCAL FORWARD CURRENT VS AMBIENT DERATING CURVE

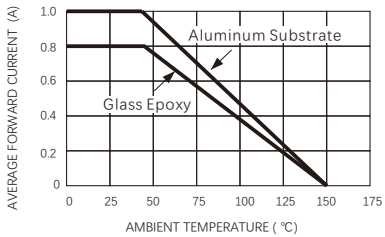


FIG4-TYPICAL FORWARD CHARACTERISTICS

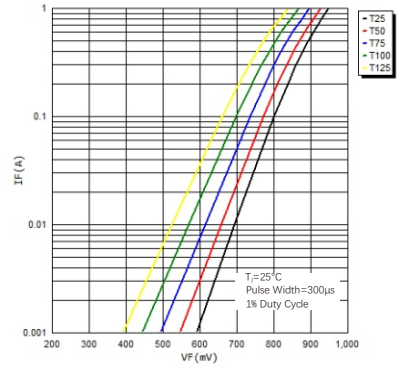


FIG.5-TYPICAL REVERSE CHARACTERISTICS

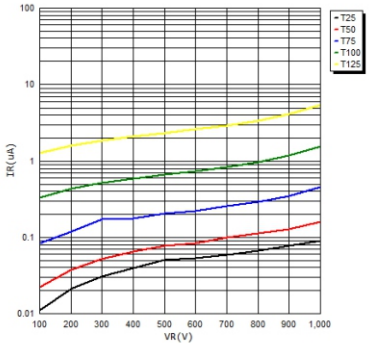
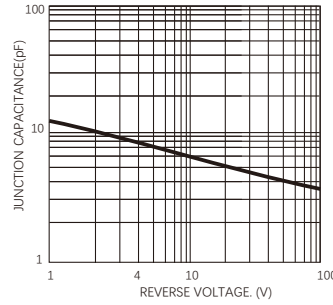


FIG6-TYPICAL JUNCTION CAPACITANCE

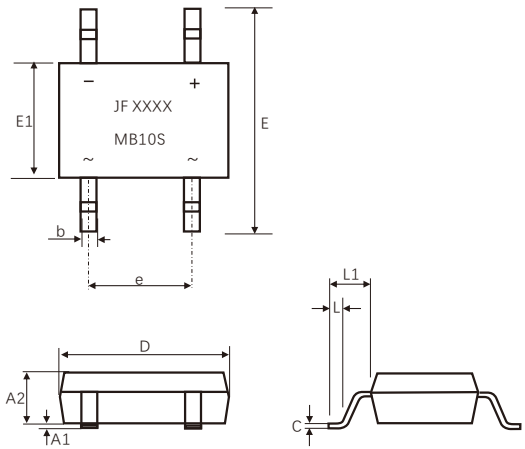


AVAILABALE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L x W x H (mm)	Quantity (Reel/box)	Carton Size L x W x H (mm)	Quantity (Box/carton)	Quantity (Kpcs/carton)
MB1S-MB10S-MBS	T/R	Φ330	3000	330x35x333	2	364×364×360	8	48

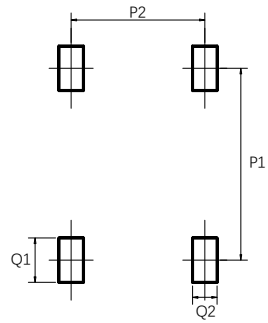
PACKAGE OUTLINE DIMENSIONS

MBS



DIM	Unit(mm)		Unit(inch)	
	Min.	Max.	Min.	Max.
A1	0.05	0.20	0.002	0.008
A2	2.3	2.7	0.090	0.106
b	0.5	0.8	0.019	0.031
c	0.15	0.35	0.006	0.014
D	4.5	4.9	0.177	0.193
E	6.4	7.0	0.252	0.276
E1	3.6	4.1	0.142	0.161
e	2.3	2.7	0.090	0.106
L	0.7	1.1	0.028	0.043
L1	1.3	1.7	0.051	0.067

Suggested PAD Layout



Dim	Min(mm)	Min(inch)
P1	6.00	0.236
P2	2.40	0.094
Q1	1.84	0.072
Q2	1.20	0.047

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