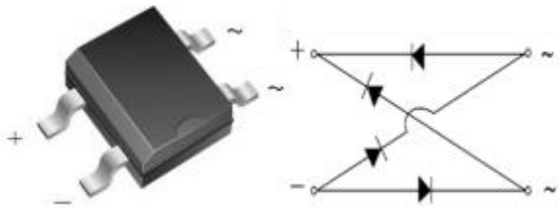
Reverse Voltage 20~100V Output Current 1A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junctions
- Saves space on printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds
- Add suffix "E" for Halogen Free



Typical Applications

- General purpose use in ac-to-dc bridge full wave rectification for TV, Monitor, SMPS, Adapter, Printer, Audio equipment, and Home Applications application

Mechanical Data

- Case: MBS Molded plastic body over passivated junctions
- Terminals: plated leads solderable per MIL-STD-750, Method 2026
- Mounting Position: Any

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	MB12S	MB14S	MB16S	MB18S	MB110S	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	40	60	80	100	V
Maximum Average forward output current	$I_{F(AV)}$	1.0					A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30					A
Rating for fusing (t≤8.3ms)	I^2t	3.75					A^2s
Operating junction and storage temperature range	T_J, T_{STG}	-55 to 150					°C
Typical junction capacitance per at 4.0V, 1.0MHz	Cj	13					pF

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	MB12S	MB14S	MB16S	MB18S	MB110S	Unit
Maximum instantaneous forward voltage	I_F=1A	V_F	0.5		0.7	0.85		Volts
Maximum DC reverse current at rated DC blocking voltage	T_A=25°C	I_R	0.5					mA
	T_A=125°C		20					
Typical thermal resistance(1)		$R_{\theta JA}$	88					°C/W
		$R_{\theta JL}$	28					

Note:1.Thermal resistance form junction to ambient and from junction to lead P.C.B. mounted on 0.2×0.2"(5.0×5.0mm) copper pad areas.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

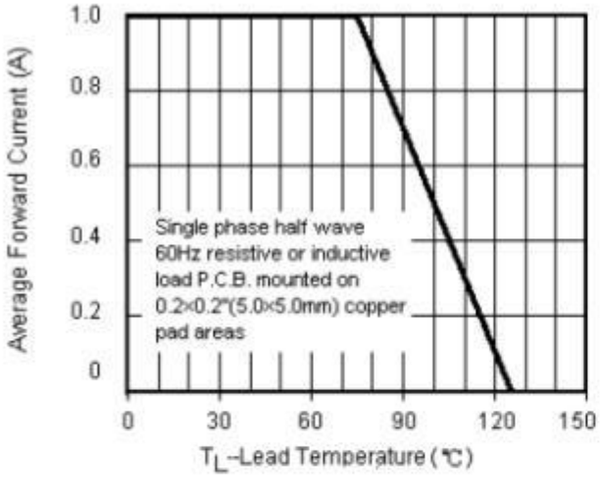


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

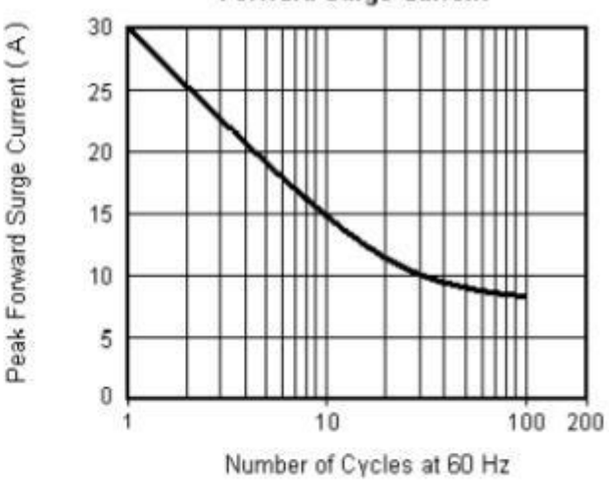


Fig.3 Typical Instantaneous Forward Characteristics

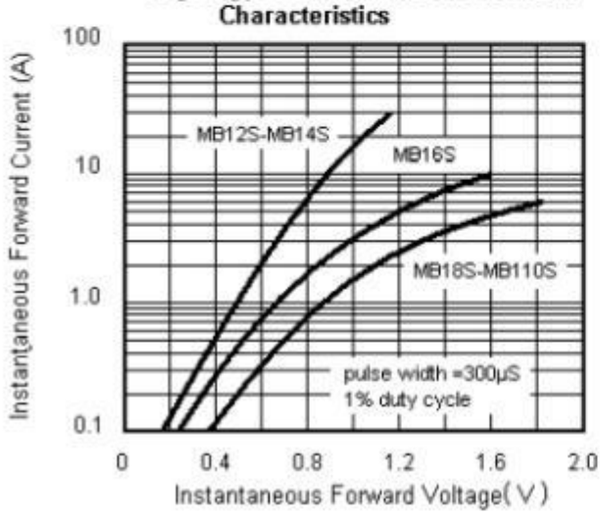
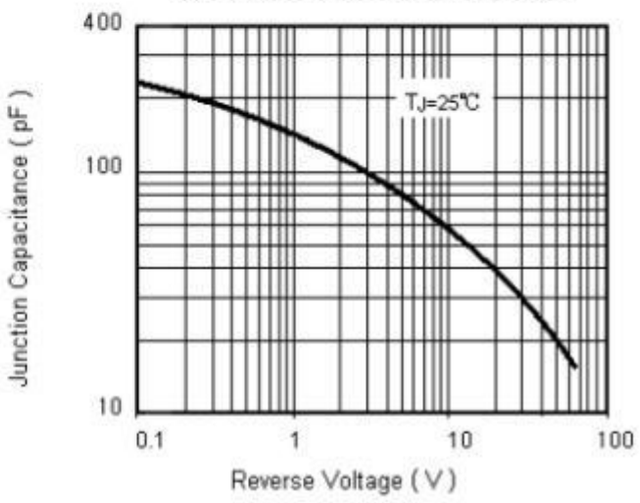


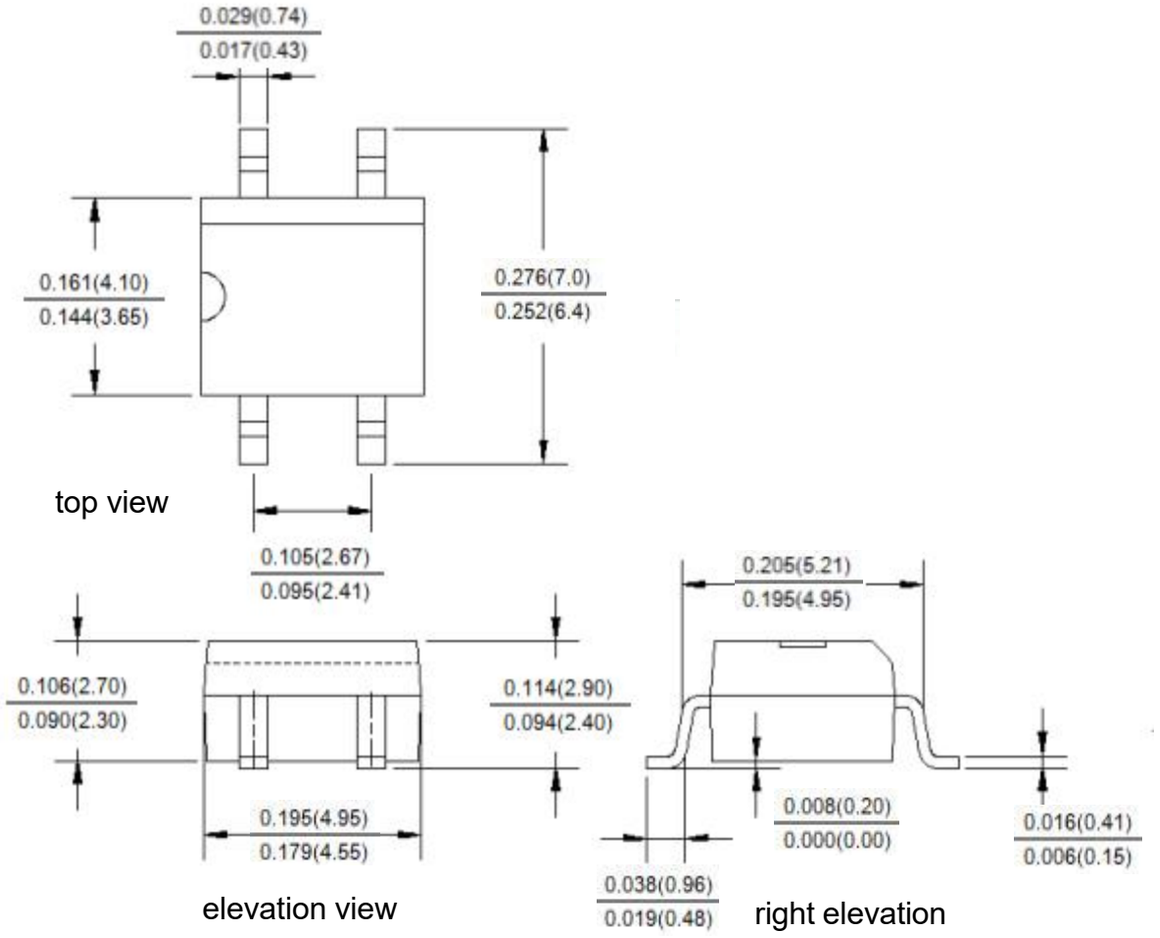
Fig.4 Typical Junction Capacitance



Package Outline Dimensions

Unit:inches(mm)

First angle projection



Revision History

Document Version	Date of release	Discroption of changes
Rev.A	2021/3/1	Released Datasheet
Rev.B	2023/12/8	Modify document format

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