FEATURES

- Schottky technology
- Ideal for printed circuit board
- High surge current capability

MBS

MECHANICAL DATA

- Case: Molded plastic, MBS
- Epoxy: UL 94V-0 rate flame retardant
- Mounting position: as Marking

APPROVALS

RoHS	Compliance with 2011/65/EU

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter		Symbol	MB12S	MB14S	MB16S	MB18S	MB110S	Unit
Marking			MB12S	MB14S	MB16S	MB18S	MB110S	
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	40	60	80	100	V
Maximum Rms Bridge Input Voltage		V_{RMS}	14	28	42	56	70	
Maximum Dc Blocking Voltage		V_{DC}	20	40	60	80	100	
Maximum Average Forward Rectified Output Current		$I_{F(AV)}$	1.0					A
Peak Forward Surge Current Single Sine-wave Superimposed On Rated Load (Jedec Method)		I_{FSM}	30					
Maximum Instantaneous Forward Voltage Drop Per Leg at 1.0A		V_F	0.50	0.55	0.70	0.85		V
Maximum Dc Reverse Current At Rated DC Blocking Voltage Per Element	T_A=25°C	I_R	0.5					mA
	T_A=125°C		20					
Typical thermal resistance (Note 2)		$R_{\theta JL}$	20					°C/W
		$R_{\theta JA}$	70					
Typical Junction Capacitance (Note 1)		C_J	120		80	40		pF
Operating junction temperature range		T_J	-55 to +125			-55 to +150		°C
Storage temperature range		T_{STG}	-55 to +150					°C

NOTES:
1: Measured at 1 MHZ and applied reverse voltage of 4.0 VDC. Note
2: Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

CHARACTERISTIC CURVES

Fig.1 -Forward Current Derating Curve

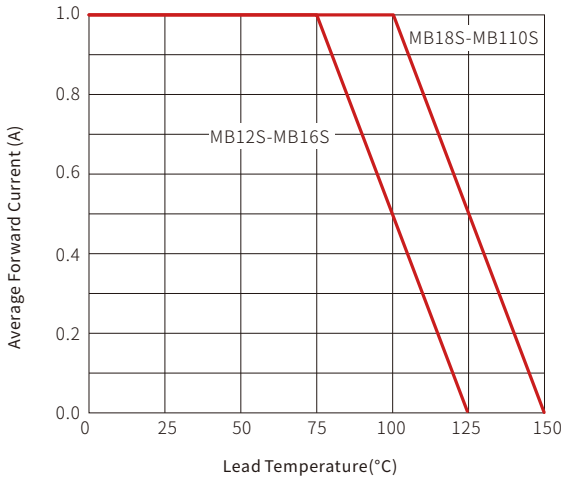


Fig.2 -Maximum Non-repetitive Peak Forward Surge Current

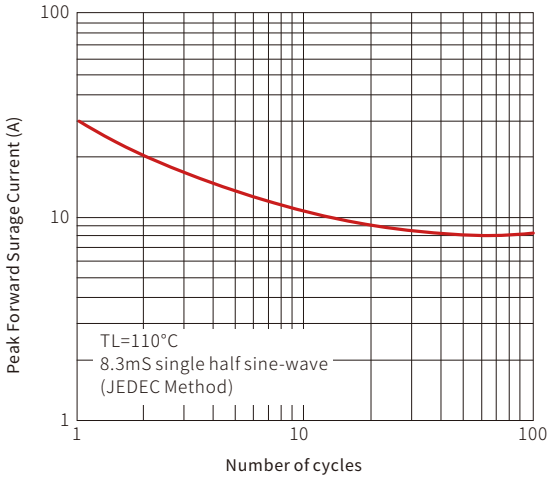


Fig.3 -Typical Instantaneours Forward Characteristics

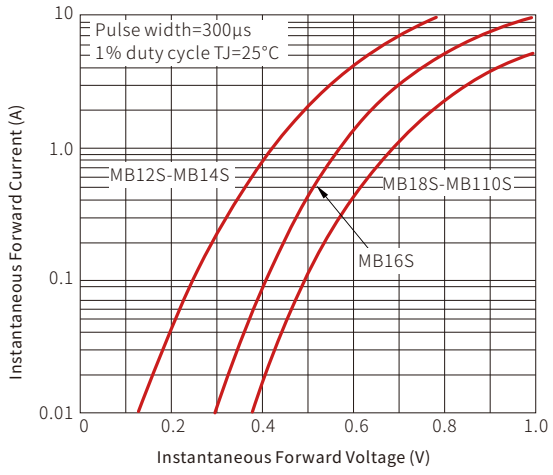


Fig.4A-Typical Reverse Characteristics

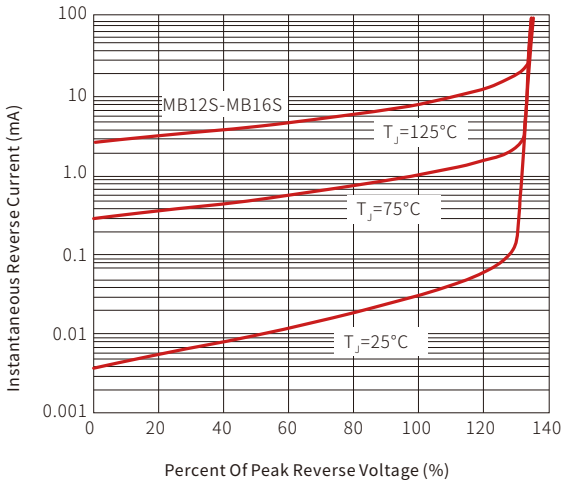


Fig.4B-Typical Reverse Characteristics

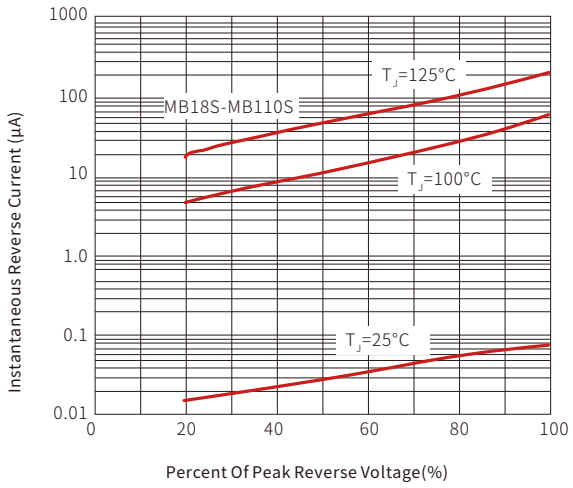
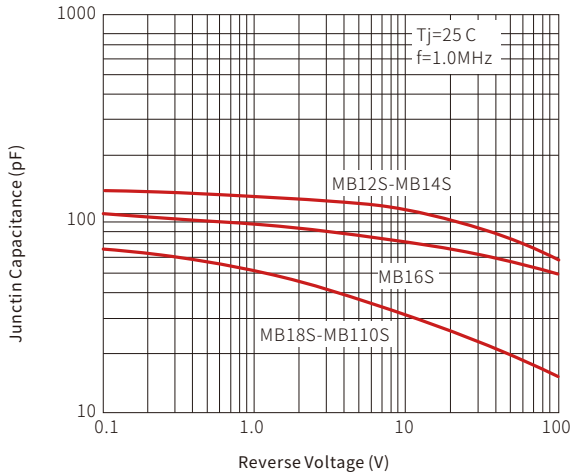
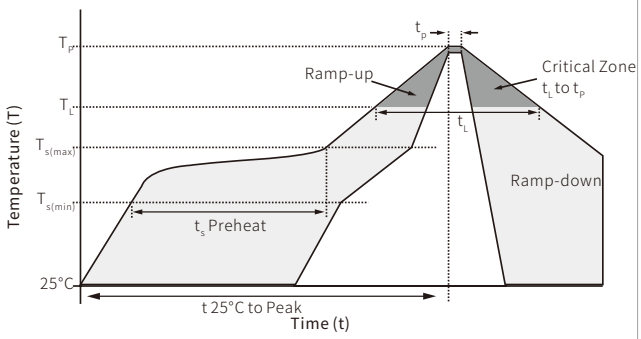


Fig.4 -Typical Reverse Characteristics

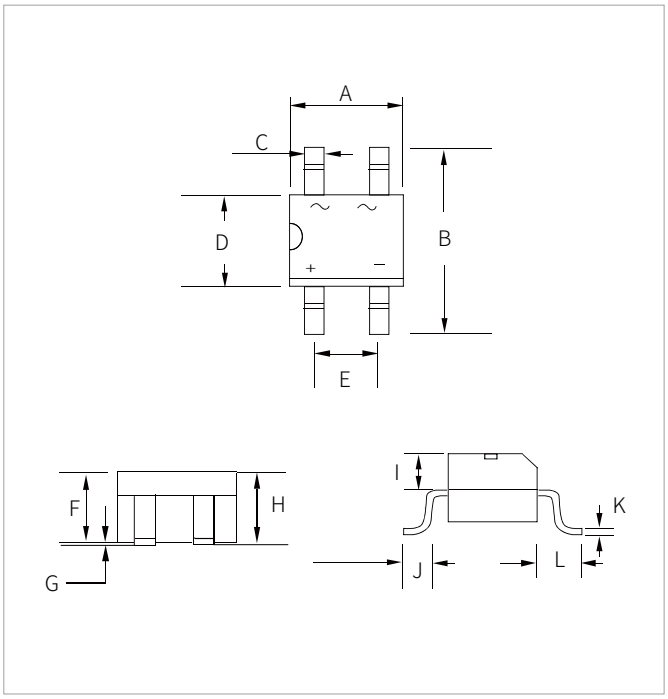


SOLDERING PARAMETERS

Reflow Condition		Lead–free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
	$T_{S(max)}$ to T_L - Ramp-up Rate	3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes max.
Do not exceed		260°C



MBS PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.50	4.90	0.177	0.193
B	7.00Max.		0.276Max.	
C	0.56	0.84	0.022	0.033
D	3.60	4.00	0.142	0.157
E	2.20	2.60	0.087	0.102
F	2.30	2.70	0.090	0.106
G	0.20Max.		0.008Max.	
H	3.0Max.		0.118Max.	
I	0.95	1.53	0.037	0.053
J	0.70	1.10	0.028	0.043
K	0.15	0.35	0.006	0.014
L	1.10	2.12	0.043	0.083

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
MB12S-MB110S	MBS	3000PCS	13”

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