

BRIDGE RECTIFIER

FEATURES

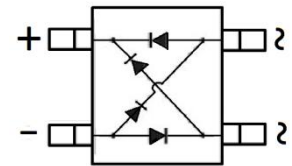
- Low Reverse voltage leakage current
- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High forward surge current capability
- Small Surface Mount device



MB-S

MECHANICAL DATA

- Case: MB-S
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.22 grams (approximate)



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
DC Reverse Voltage	V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Mean rectifying current	I_F	0.5/0.8							A
Non-Repetitive Peak Forward Surge Current @ $t = 8.3 \text{ ms}$	I_{FSM}	30							A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	90							$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	$-55 \sim +150$							$^\circ\text{C}$
Storage Temperature	T_{STG}	$-55 \sim +150$							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Max	Unit	Conditions
Forward voltage	V_F		1.0	V	$I_F = 0.5\text{A}$
Forward voltage	V_F		1.1	V	$I_F = 0.8\text{A}$
Reverse current $T = 25^\circ\text{C}$	I_R		5	μA	$V_R = V_{RRM}$
Reverse current $T = 125^\circ\text{C}$	I_R		40	μA	$V_R = V_{RRM}$
Junction capacitance	C_J		13	pF	$V = 4V_{DC}, f = 1\text{MHz}$

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Typical Characteristics

Fig.1- Output Current Derating Curve

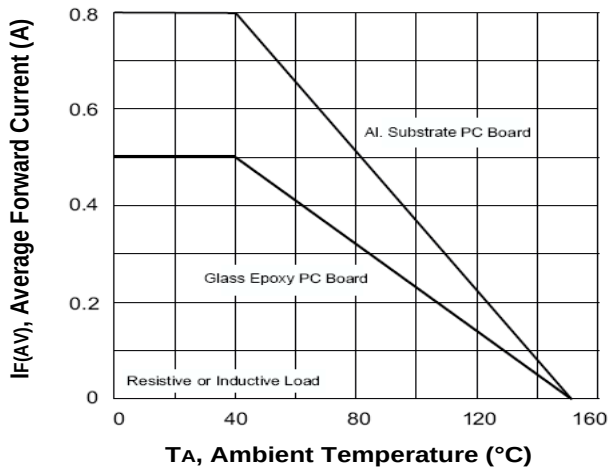


Fig.2-Max. Non-repetitive Peak Forward Surge Current per leg

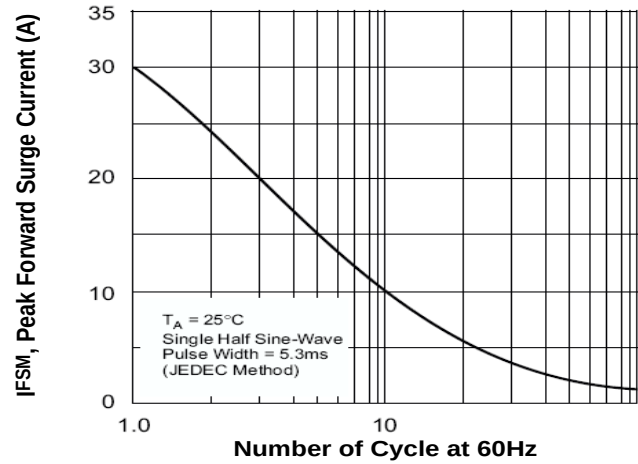


Fig.3-Typical Instantaneous Forward Characteristic per leg

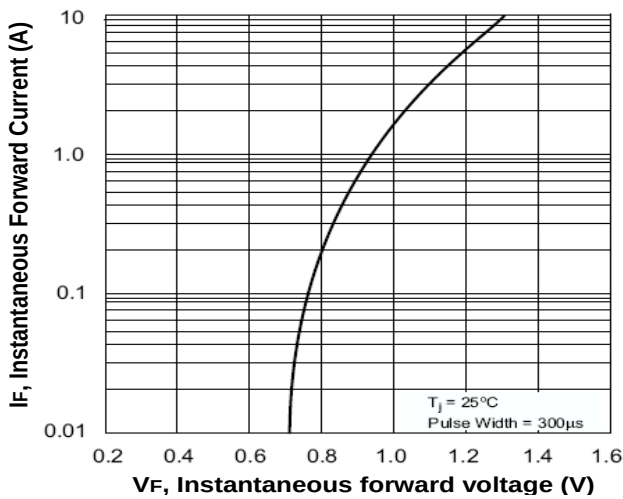


Fig.4-Typical Reverse Characteristics per leg

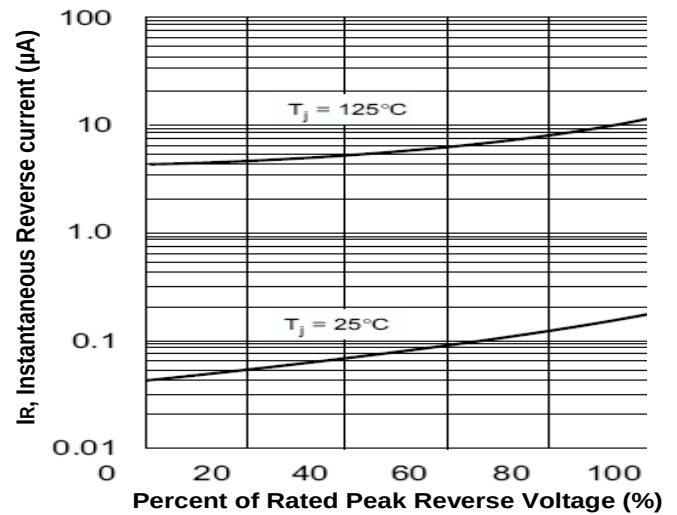
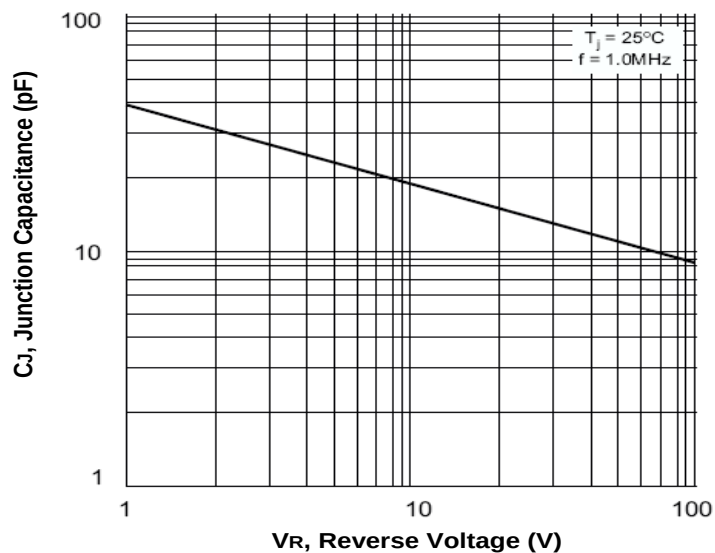
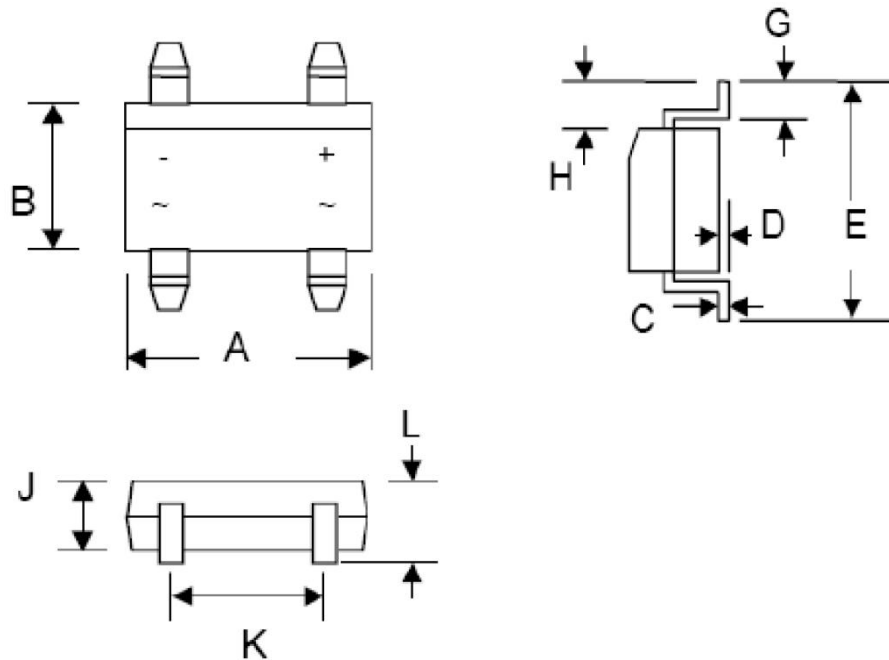


Fig.5-Typical Junction Capacitance



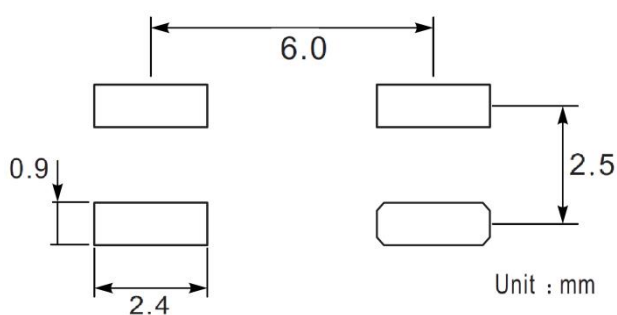
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MB-S Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.50	4.90	0.177	0.193
B	3.80	4.20	0.150	0.165
C	0.15	0.35	0.006	0.014
D	-----	0.20	—	0.008
E	-----	7.00	—	0.276
G	0.70	1.10	0.028	0.043
H	1.30	1.70	0.051	0.067
J	2.30	2.70	0.091	0.106
K	2.30	2.70	0.091	0.106
L	—	3.00	—	0.118

MB-S Suggested Pad Layout



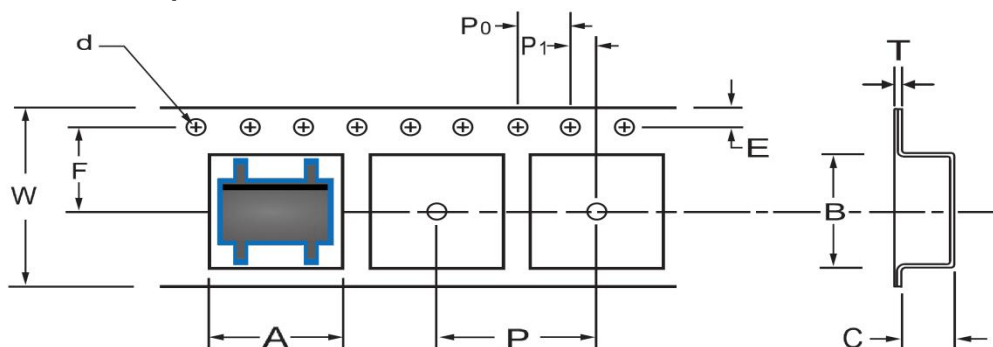
Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

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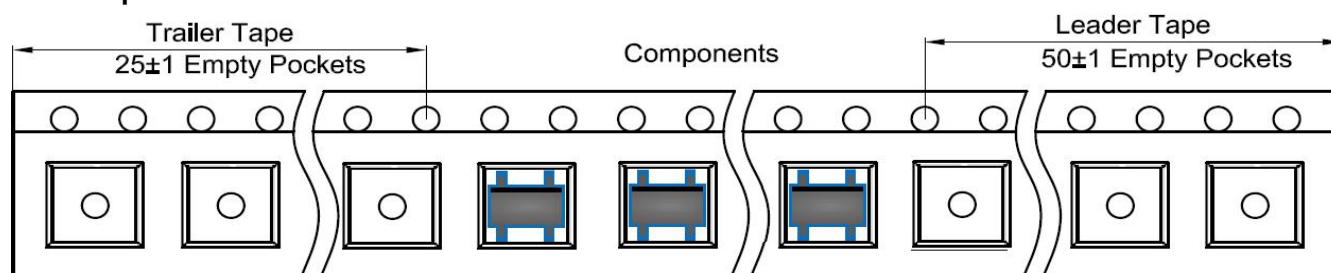
MB-S Tape and Reel

MB-S Embossed Carrier Tape

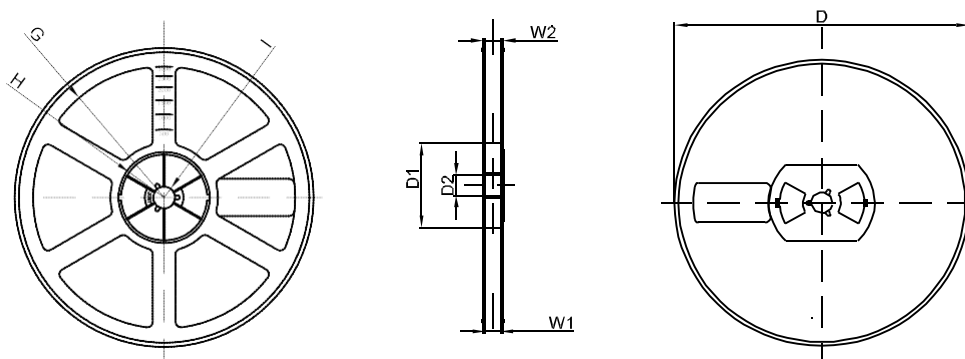


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
MB-S	5.00	7.24	3.33	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

MB-S Tape Leader and Trailer



MB-S Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
13" DIA	Ø330	75.0	13.00	R165	R37.50	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1