

## FEATURES

- | Ideal For Surface Mount Application
- | The Plastic Material Used Carries Underwriters Laboratory Flammability Recognition 94V-0
- | Surge Overload Ratings to 30 Amperes



MBS

## MECHANICAL DATA

- | Case: Molded Plastic
- | Polarity: Marked On Body
- | Mounting Position: Any

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

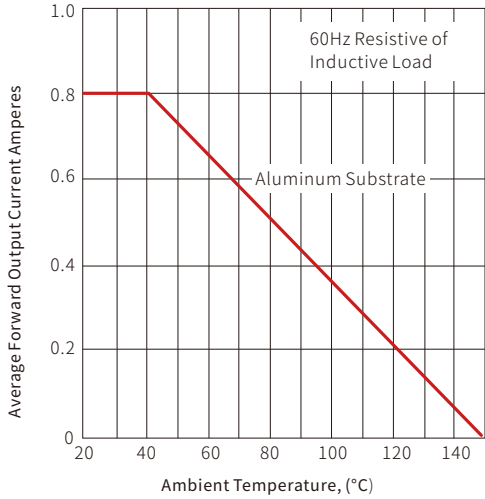
## MAXIMUM RATINGS AND CHARACTERISTICS (T<sub>A</sub>=25°C)

Parameter	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Unit	
Marking		MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S		
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum Rms Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700		
Maximum Dc Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000		
Maximum Average Forward Rectified Output Current at T <sub>a</sub> =40°C	I <sub>F(AV)</sub>	0.8						A		
Peak Forward Surge Current Single Sine-wave Superimposed On Rated Load (Jedec Method)	I <sub>FSM</sub>	30						A		
Maximum Instantaneous Forward Voltage Drop Per Leg at 0.8A	V <sub>F</sub>	1.1						V		
Maximum Dc Reverse Current At Rated DC Blocking Voltage Per Element	I <sub>R</sub>	T <sub>A</sub> =25°C						10		μA
		T <sub>A</sub> =125°C						500		
Typical Thermal Resistance Per Element (1)	R <sub>θJA</sub>	110						°C/W		
Rating For Fusing ( T<8.3ms)	I <sup>2</sup> t	10						A <sup>2</sup> sec		
Typical Junction Capacitance Per Element (2)	C <sub>J</sub>	25.0						pF		
Operating Junction And Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150						°C		

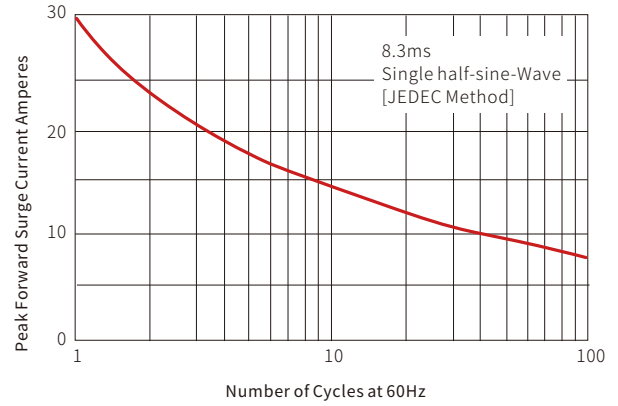
Notes: (1)Thermal Resistance From Junction To Ambient On P.C.Board Mounting.  
 (2)Measured At 2.0MHz and Applied Reverse Voltage Of 4.0 Volts.

# CHARACTERISTIC CURVES

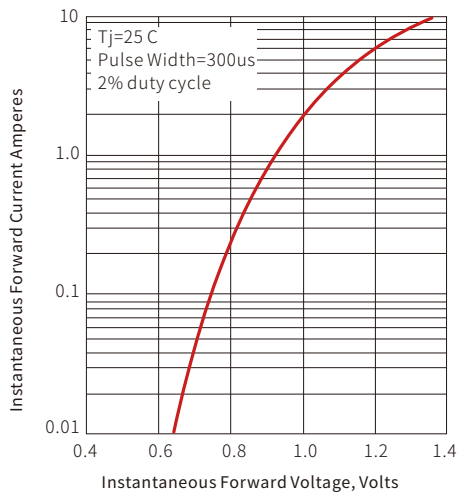
**Fig. 1- Derating Curve for Output Rectified Current**



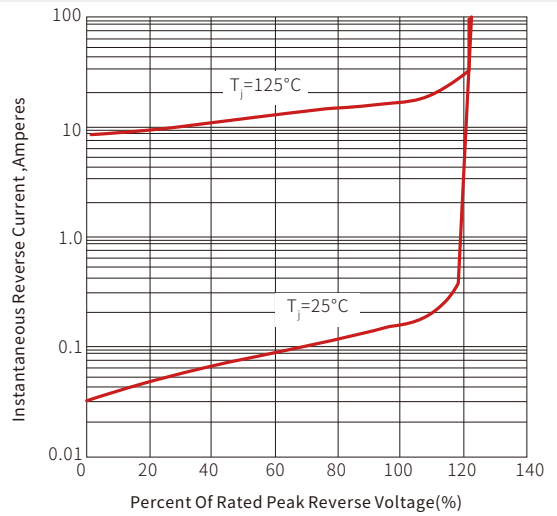
**Fig. 2- Maximum Non-repetitive Peak Forward Surge Current**

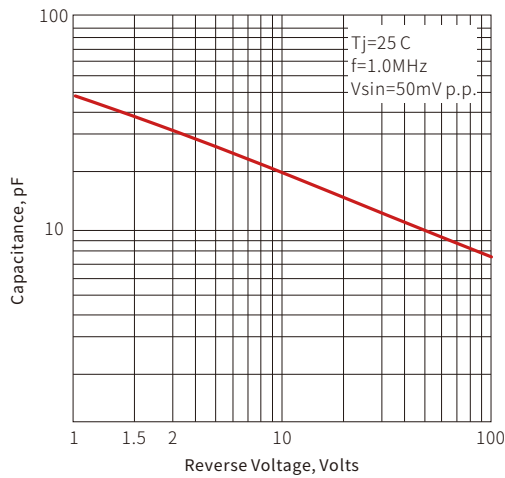


**Fig. 3- Typical Instantaneous Forward Characteristics**



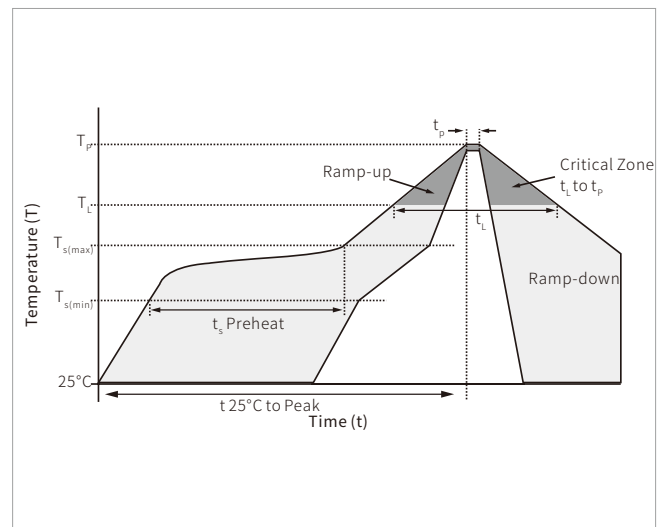
**Fig. 4- Typical Revers Characteristics**



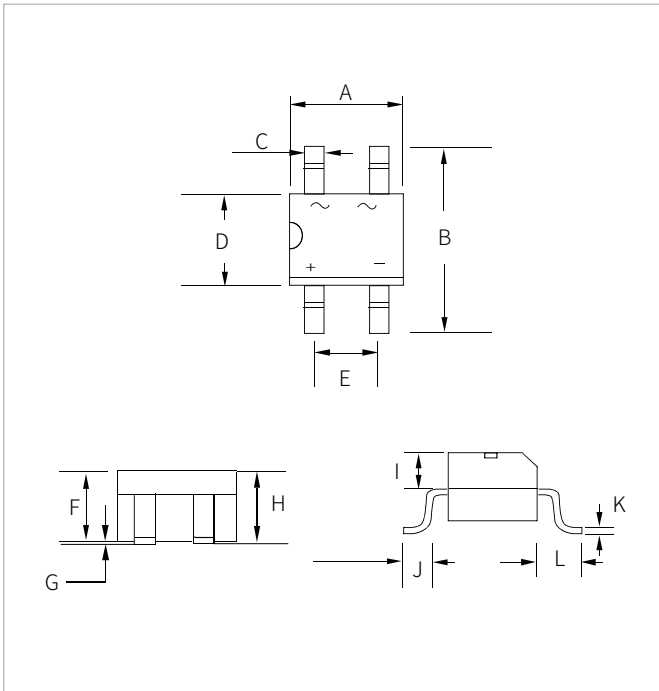
**Fig. 5-Typical Junction Capacitance**


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(\text{min})}$ )	150°C
	Temperature Max ( $T_{s(\text{max})}$ )	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
$T_{s(\text{max})}$ 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
MB05S-MB10S	MBS	3000PCS	11"

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