

# Single-Phase Bridge Rectifier 0.5A SMD MDI Package

B-S Series

MERITEK

## FEATURE

- Operating Temperature: -55 ~ +150°C
- Average Forward Rectified Output Current 0.5A
- Repetitive Reverse Voltage from 50~1000V
- Surge Overload Ratings to 30A
- Surface Mount Package
- Flammability Classification 94V-0
- UL Safety Approved: Certification No: E223027



## MAXIMUM RATINGS AND THERMAL CHARACTERISTICS



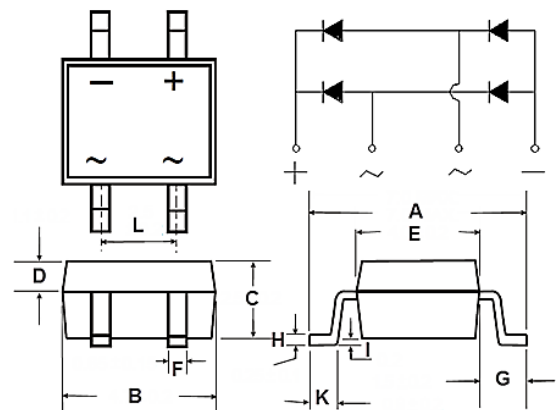
Parameter	Code	B05S	B1S	B2S	B4S	B6S	B8S	B10S	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Output Current	$I_F$	0.5, $T_A=40^\circ\text{C}$							A
	$I_F$	0.8, $T_A=25^\circ\text{C}$							
Peak Forward Surge Current Single Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A
Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	10							$\text{A}^2\text{sec}$
Maximum Instantaneous Forward Voltage Drop per Diode	$V_F$	1.1, $I_F=0.5\text{A}$							V
Maximum DC Reverse Current at Rated DC Blocking Voltage per Element	$I_R$	10, $T_A=25^\circ\text{C}$							$\mu\text{A}$
	$I_R$	500, $T_A=125^\circ\text{C}$							$\mu\text{A}$
Typical Junction Capacitance per Element	$C_j$	25.0							pF
Operating Junction and Storage Temperature	$T_J, T_{STG}$	-55~150							$^\circ\text{C}$
Typical Thermal Resistance per Element	$R_{\theta JA}$	110							$^\circ\text{C/W}$

### Note:

1. Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz. For Capacitive load derate current by 20%.
2. Thermal resistance from Junction to Ambient on P.C. board mounting.
3. R-load on aluminum substrate  $T_A=25^\circ\text{C}$ .
4. Measured at 2.0MHz and applied reverse voltage of 4.0 VDC.

## DIMENSION AND PIN CONFIGURATION

Item	Min. (mm)	Max. (mm)	Item	Min. (mm)	Max. (mm)
A	-	7.0	G	1.3	1.7
B	4.5	4.9	H	0.15	0.35
C	2.3	2.7	I	0.2	
D	0.9	1.3	K	0.7	1.1
E	3.8	4.2	L	2.3	2.7
F	0.50	0.80			



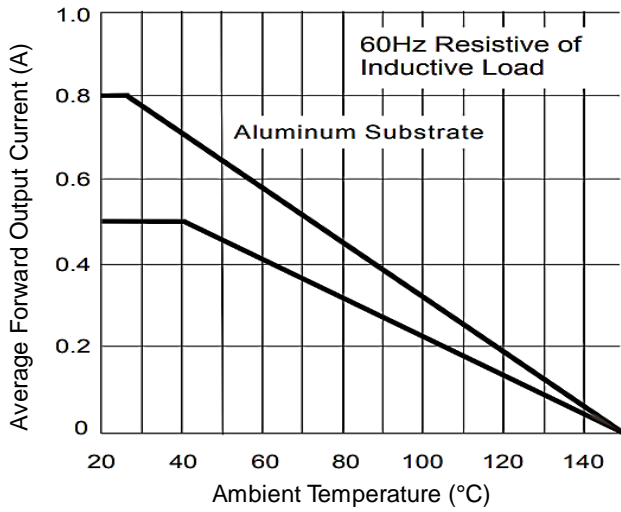
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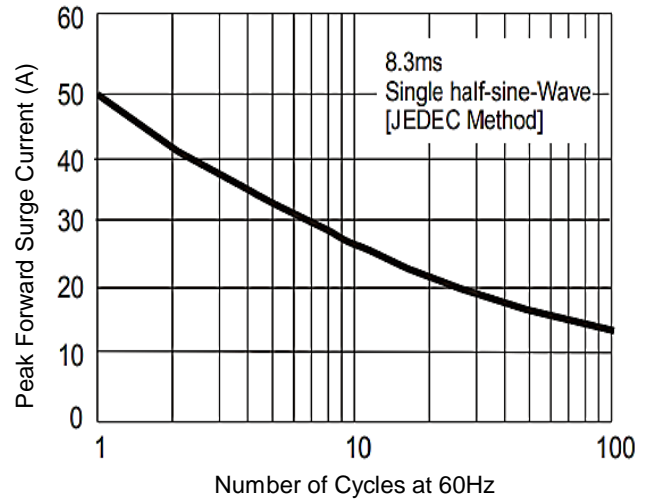
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## RATING AND CHARACTERISTIC CURVES

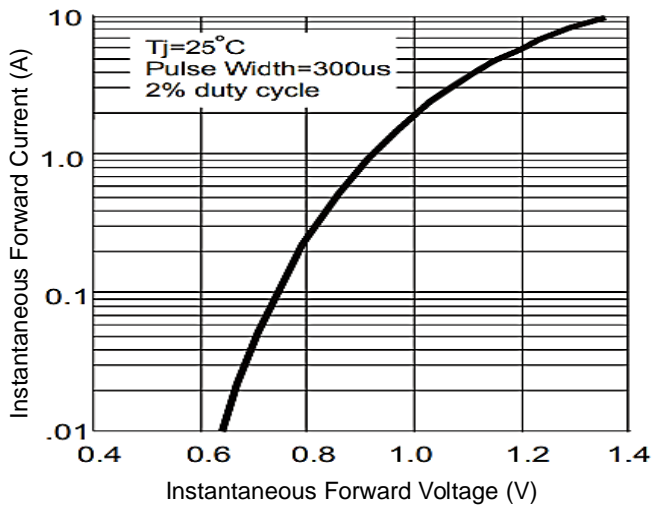
Derating Curve for Output Rectified Current



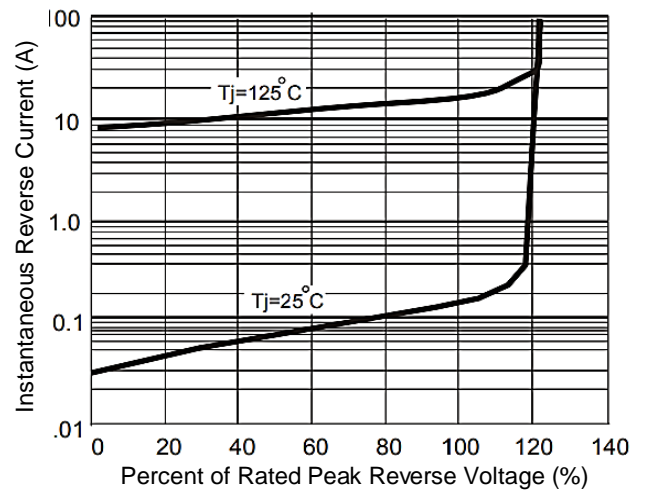
Maximum Non-Repetitive Peak Forward Surge Current



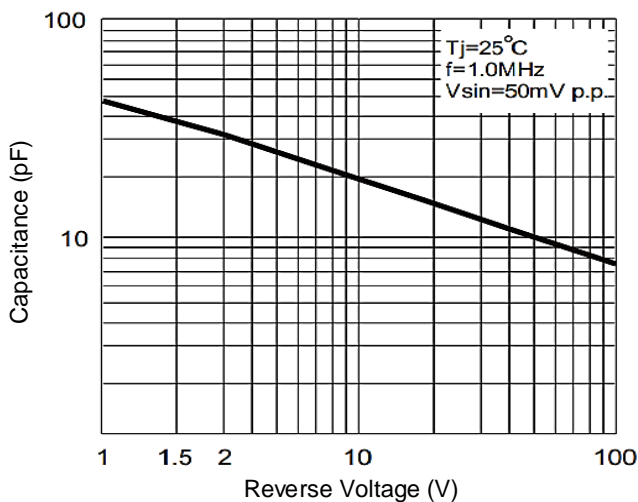
Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



\*Specifications subject to change without notice.