



Surface Mount Surge Suppressors Bridge

FEATURES

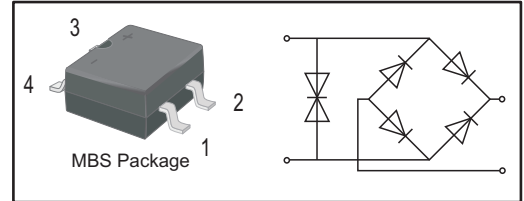
- Green Molding Compound (No Halogen and Antimony)
- Lower clamping voltage
- Glass Passivated Chip Junction
- High Surge Current Capability
- Designed for Surface Mount Application

MECHANICAL DATA

- Case: MBS
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 100mg / 0.0035oz

PINNING

PIN	DESCRIPTION
1	Input Pin (~)
2	Input Pin (~)
3	Output Anode (+)
4	Output Cathode (-)



Maximum Ratings and Thermal Characteristics(TA = 25°C unless otherwise specified)

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter of Bridge Rectifier	Symbols	STB120S	Units
Average Rectified Output Current	I_O	1.0	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30	A
Maximum Forward Voltage at 1.0A	V_F	1.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage (@VR=1000V)	I_R	5 40	μ A
Typical Junction Capacitance (f=1MHz,4V DC)	C_j	6	pF
Typical Thermal Resistance (Note1)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	45 15 25	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

Note: 1. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

Parameter of TVS	Symbol	STB120S	Unit
Maximum allowable continuous AC voltage at 50-60Hz	V_{RMS}	155	V
Breakdown voltage @1mA	V_{BR}	230(MIN)	V
Maximum allowable continuous DC voltage	V_{DC}	220	V
Maximum allowable clamping voltage @8/20us	V_C	350	V
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C



Fig.1 Average Rectified Output Current Derating Curve

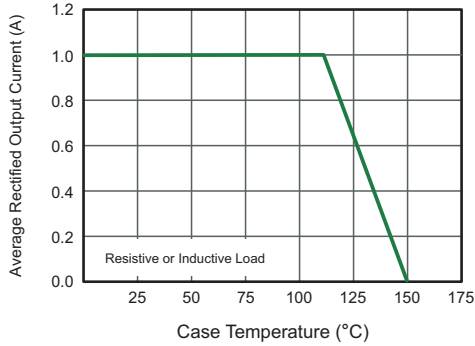


Fig.2 Typical Reverse Characteristics

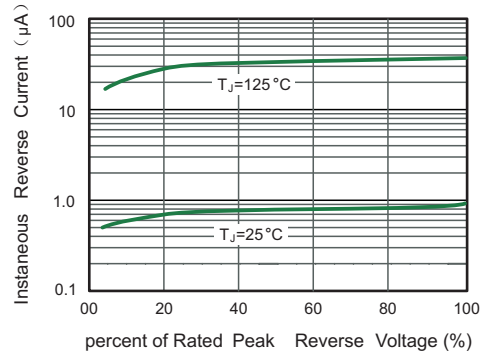


Fig.3 Typical Forward Characteristic

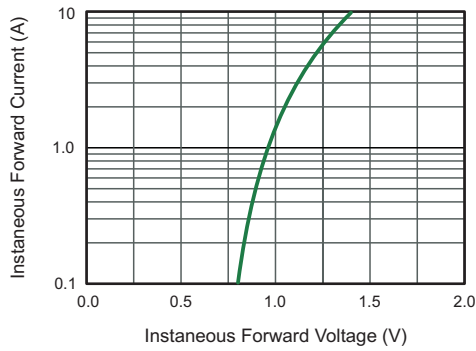


Fig.4 Typical Junction Capacitance

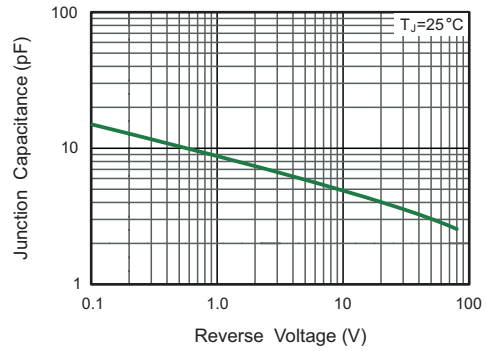


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

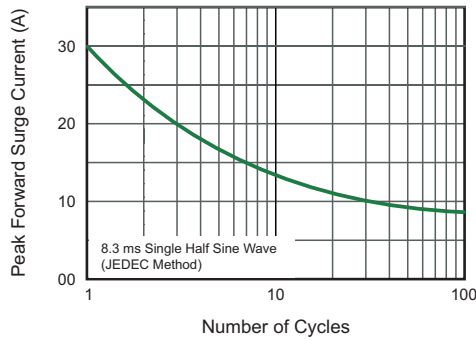


Fig.6 Forward Current Derating Curve

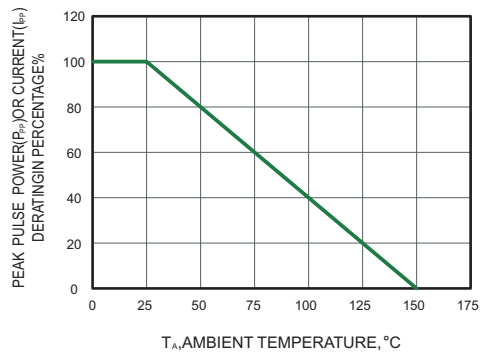
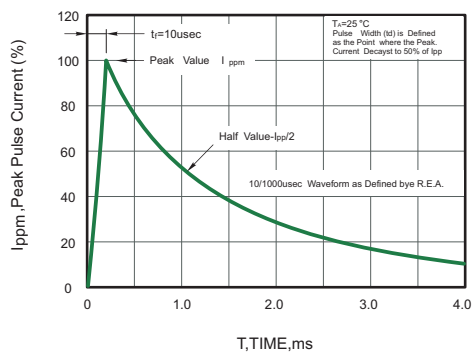


Fig.7 Pulse Waveform

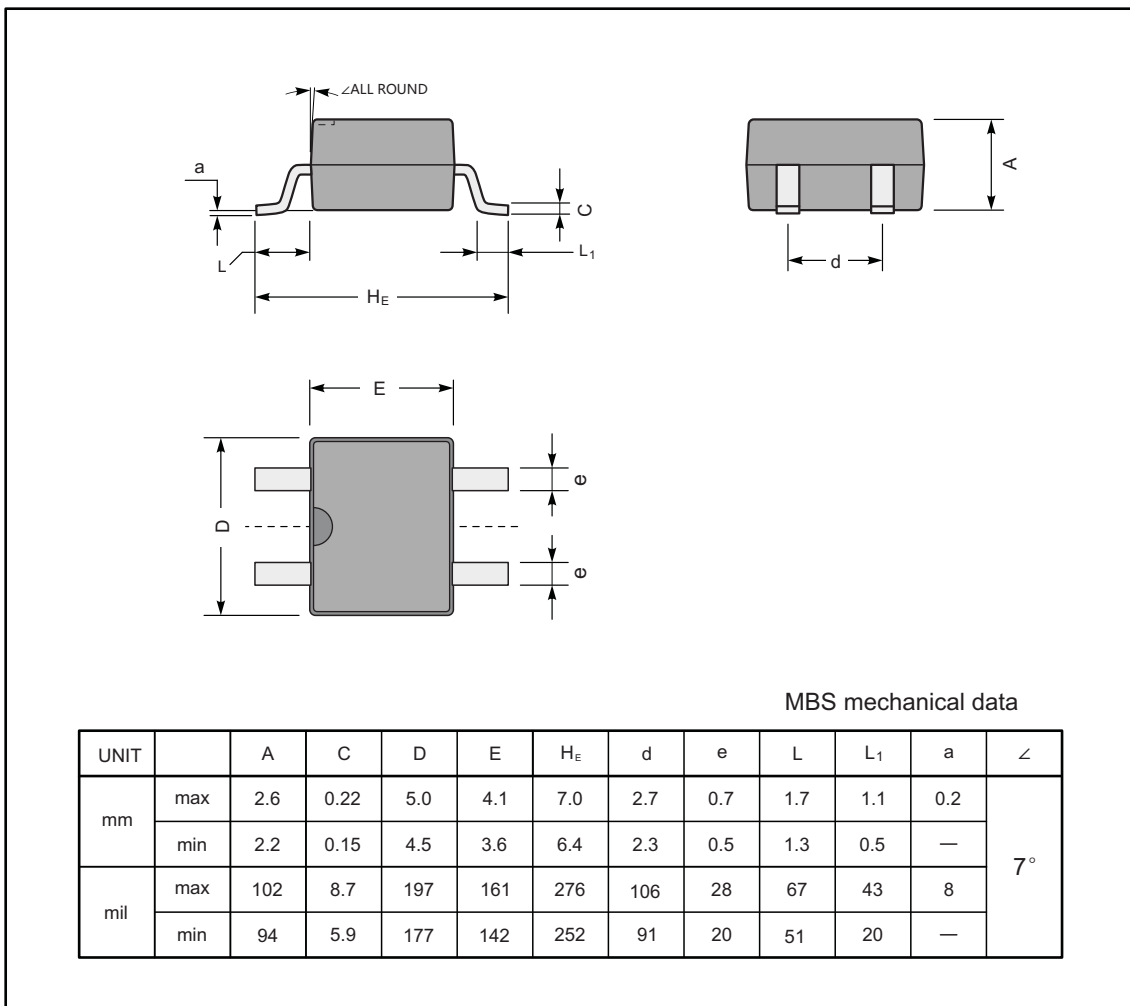




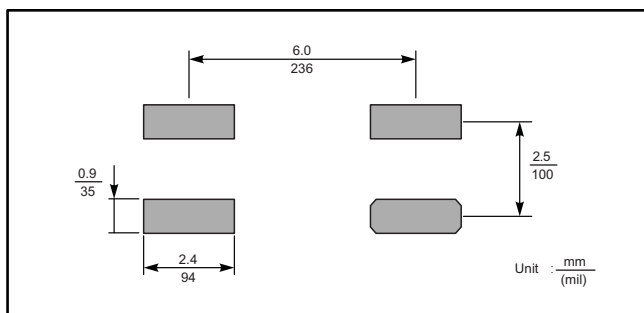
PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

MBS



The recommended mounting pad size



Marking

Type number	Marking code
STB120S	STB120S



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