

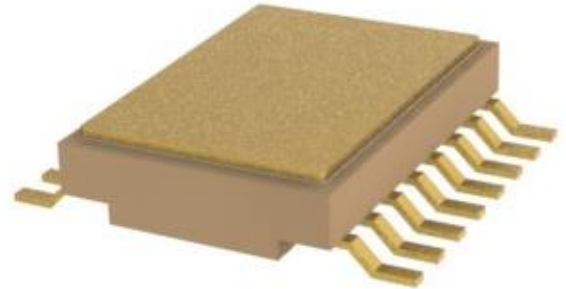
**TECHNICAL DATA**

PART NUMBER: STB1001, STB1002  
DATASHEET 5366, REV. C

**Bidirectional 8 Channel TVS Array – 500W Ultra Low Capacitance**

**Application:**

- Bi-directional ESD protection
- 500W capability for 8/20  $\mu$ s repetitive pulses
- Capacitance below 9 pF – for use in high speed data lines
- 8 channel hybrid saves board space
- 100% electrically tested for clamp performance
- Hermetic surface mountable package
- Add Suffix SS for JANS level Screening



**Protection Level:**

IEC 61000-4-2  
IEC 61000-4-4

**Part Numbers:**

STB1001      12V  
STB1002      24V

**DESCRIPTION: 500W, 4pF Bidirectional 8 channel TVS array**

**MAX. RATINGS**

RATING	Symbol	MIN	TYP	MAX	UNIT
Peak Pulse Power 8/20 $\mu$ s, $T_J = 25^\circ\text{C}$	$P_{PP}$	500	-	-	W
Junction and Storage Temperature	$T_J$ $T_{STG}$	- 55	-	150	$^\circ\text{C}$
Recommended Operating Temperature	$T_A$	-55	-	100	$^\circ\text{C}$
Solder Temperature, 10s	$T_S$	-	-	260	$^\circ\text{C}$
Weight		-	-	1.0	gms

**ELECTRICAL CHARACTERISTICS PER LEG**

All ratings are at  $T_A = 25^\circ\text{C}$  unless otherwise specified.

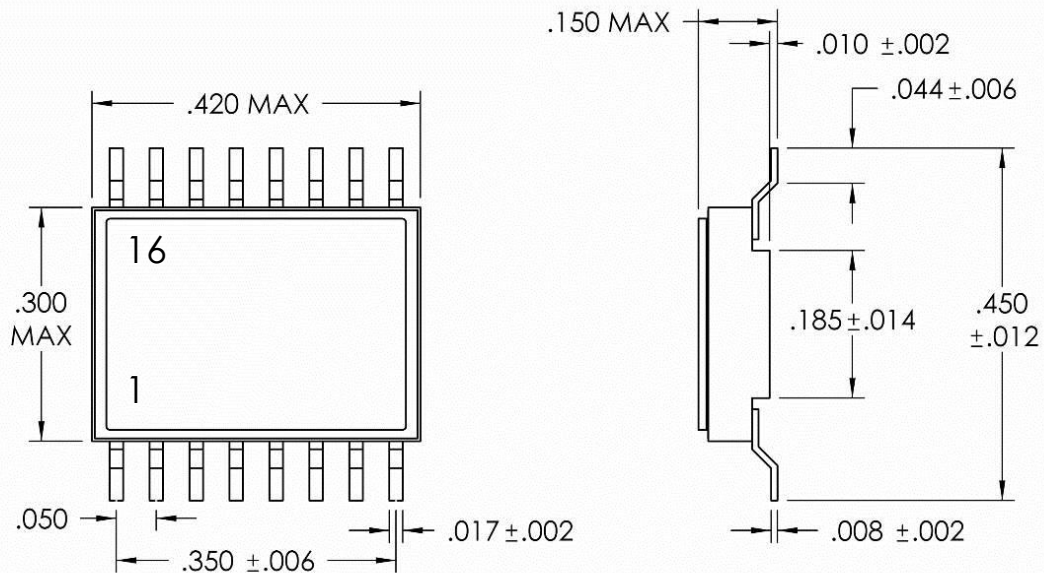
RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Standoff Voltage *	$V_{WM}$				
STB1001		-	-	12.0	V
STB1002		-	-	24.0	V
Breakdown Voltage @ 1mA	$V_{BR}$				
STB1001		13.3	-	-	V
STB1002		26.7	-	-	V
Leakage Current @ $V_{WM}$	$I_R$				
STB1001		-	-	2.0	$\mu\text{A}$
STB1002		-	-	2.0	$\mu\text{A}$

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RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Clamping Voltage @ 1A	$V_{C1}$	-	-	19.0	V
STB1001		-	-	43.0	V
STB1002		-	-		
Clamping Voltage @ 5A	$V_{C2}$	-	-	26.0	V
STB1001		-	-	57.0	V
STB1002		-	-		
Capacitance @ $f = 1\text{MHz}$ , $V_R = 0\text{V}$	$C_J$	-	-	9	pF
STB1001		-	-	9	pF
STB1002		-	-		
Temperature Coefficient of $V_{BR}$ *	$\alpha_{VBR}$	-	-	12	$\text{mV}^\circ\text{C}$
STB1001		-	-	28	$\text{mV}^\circ\text{C}$
STB1002		-	-		

Note: \* - not tested in production, guaranteed by design.

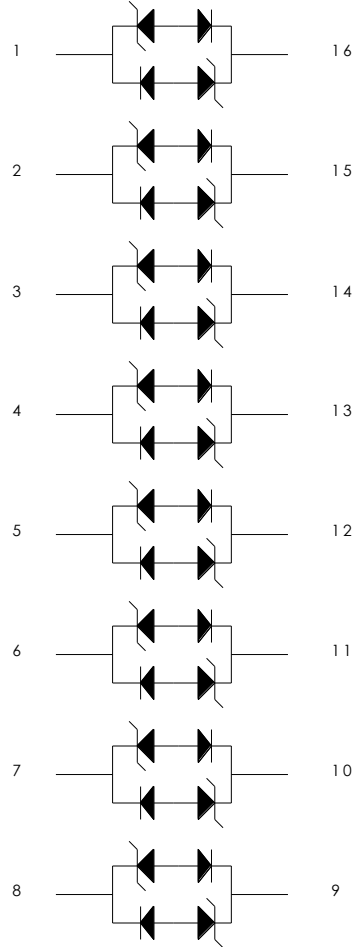
**Mechanical Drawing**



TOLERANCE UNLESS OTHERWISE NOTED = ±.005  
ALL DIMENSIONS PRIOR TO SOLDER DIPPING

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**Schematic**



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