

TECHNICAL DATA  
DATASHEET 6001, Rev. -

## High Power TVS Module (39KW / 1600A) for Lightning Strike Protection in Composite Frame Aircraft

**Application:**

- Lightning strike protection
- Logic Board Protection and Point of Load
- 100% tested to 1600A peak current
- Surface mount or Through Hole versions available
- Bidirectional & Unidirectional versions available
- High power dissipation capability
- Low cost package

**Part Numbers:****Bidirectional version:**

LSP15A-1600-17 - Through Hole Version

LSP15B-1600-17- Surface Mount Version

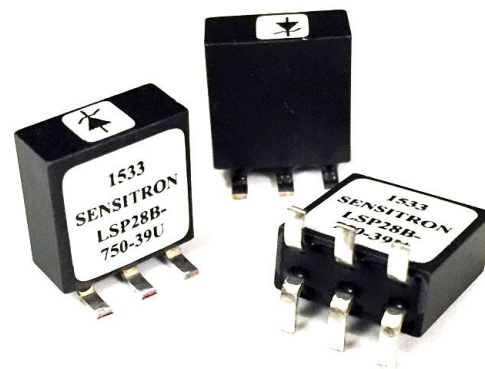
LSP15BL-1600-17 - Surface Mount Version, Low Profile

**Unidirectional version:**

LSP15A-1600-17U- Through Hole Version

LSP15B-1600-17U - Surface Mount Version

LSP15BL-1600-17U - Surface Mount Version, Low Profile

**Protection Level:**

DO-160 Section 22 Waveform 5B Level 5 waveform Compliant

**Electrical Characteristics:** $T_j = 25^{\circ}\text{C}$  unless otherwise specified

PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT
Peak Pulse Power	50/500 $\mu\text{s}$ waveform	$P_{\text{PPM}}$	-	39	-	KW
Peak Pulse Current	50/500 $\mu\text{s}$ waveform	$I_{\text{PPM}}$	1600	-	-	A
Clamp Voltage @ $I_{\text{PPM}}$	50/500 $\mu\text{s}$ waveform	$V_{\text{CL}}$	-	23	24.4	V
Reverse Standoff Voltage		$V_{\text{RWM}}$	15	-	-	V
Reverse Leakage Current @ $V_{\text{RWM}}$		$I_{\text{R}}$	-	-	1	mA
Breakdown Voltage @ $I_{\text{T}} = 5\text{mA}$		$V_{\text{BR}}$	17.6	-	19.0	V
Forward Voltage @ $I_{\text{F}} = 10\text{ A}$ (Unidirectional version only)		$V_{\text{F}}$	-	1.6	1.9	V

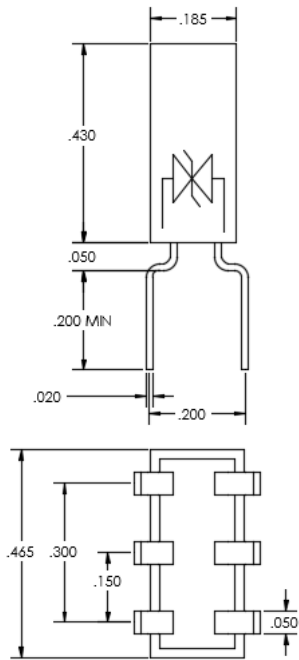
**Package Characteristics**

Recommended Operating Temperature Range	$T_{\text{OP}}$	- 40	-	85	$^{\circ}\text{C}$
Junction Temperature Range	$T_{\text{J}}$	-40	-	150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{\text{S}}$	- 55	-	150	$^{\circ}\text{C}$
Module Weight	M	-	-	6	gms

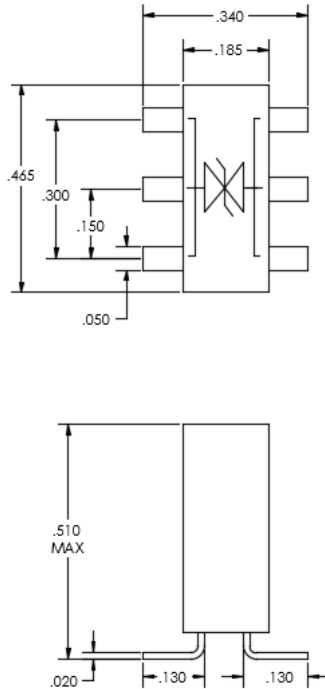
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### Mechanical Drawings

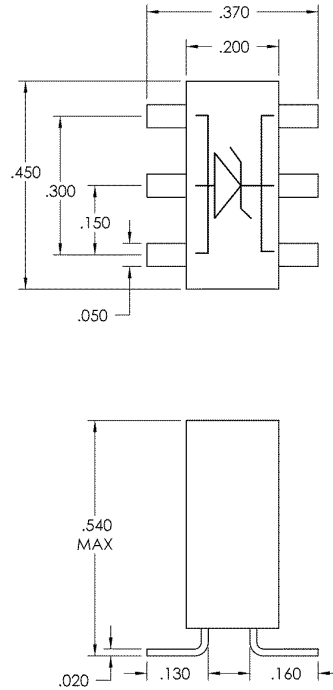
**LSP15A-1600-17**



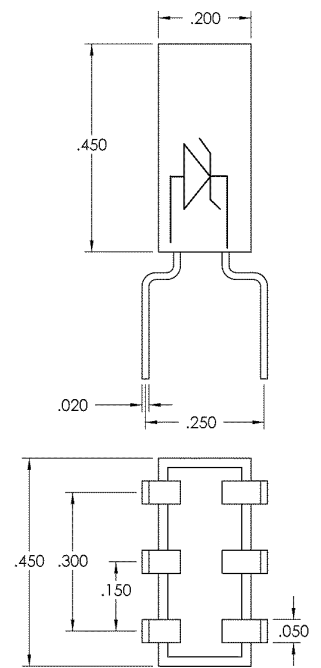
**LSP15B-1600-17**



**LSP15B-1600-17U**



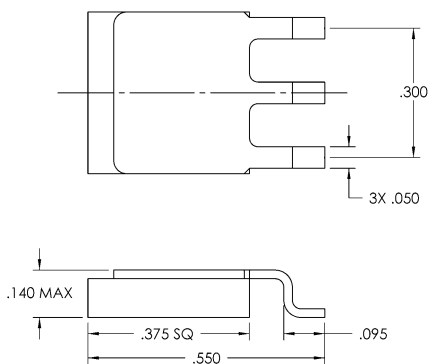
**LSP15A-1600-17U**



TOLERANCE UNLESS OTHERWISE NOTED =  $\pm 0.010$

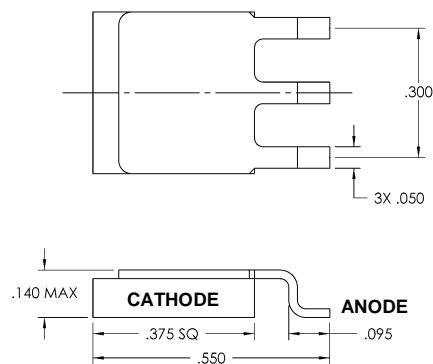
TOLERANCE UNLESS OTHERWISE NOTED =  $\pm 0.010$

**LSP15BL-1600-17**



TOLERANCE =  $\pm 0.010$

**LSP15BL-1600-17U**

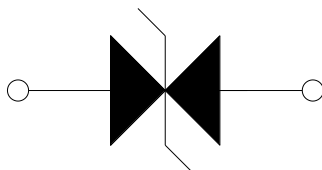


TOLERANCE =  $\pm 0.010$

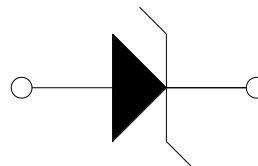
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### **Electrical Schematic**



**LSP15A-1600-17- Through Hole Version**  
**LSP15B-1600-17 - Surface Mount Version**  
**LSP15BL-1600-17 - Surface Mount, Low Profile Version**



**LSP15A-1600-17U - Through Hole Version**  
**LSP15B-1600-17U - Surface Mount Version**  
**LSP15BL-1600-17U - Surface Mount, Low Profile Version**

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