

TECHNICAL DATA
 DATASHEET 5427, Rev. E

High Power TVS Module (37KW / 750A) for Lightning Strike Protection in Composite Frame Aircraft

Application:

- Lightning strike protection
- 28V system bus protection
- 100% tested to 750A peak current
- Surface mount or Through Hole versions available
- Bidirectional & Unidirectional versions available
- High power dissipation capability
- Low cost package

Part Numbers:

Bidirectional version:

LSP28A-750-39 - Through Hole Version

LSP28B-750-39 - Surface Mount Version

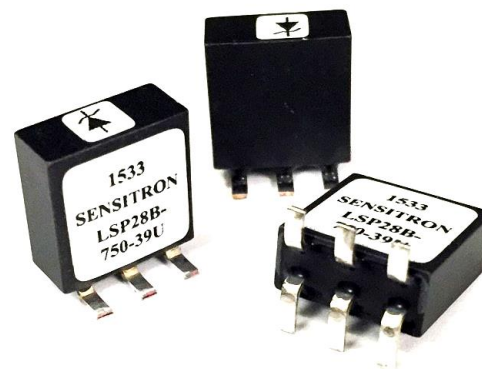
LSP28BL-750-39 - Surface Mount Version, Low Profile

Unidirectional version:

LSP28A-750-39U - Through Hole Version

LSP28B-750-39U - Surface Mount Version

LSP28BL-750-39U - Surface Mount Version, Low Profile



Protection Level:

DO-160 Section 22 Waveform 5 Level 4 waveform Compliant

Electrical Characteristics:

$T_j = 25^{\circ}\text{C}$ unless otherwise specified

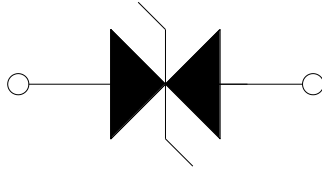
| PARAMETER | | SYMBOL | MIN | TYP | MAX | UNIT |
|--------------------------------------------------------------------|-------------------------------|-----------|-----|-----|-----|---------------|
| Peak Pulse Power | 50/500 μs waveform | P_{PPM} | - | 37 | - | KW |
| Peak Pulse Current | 50/500 μs waveform | I_{PPM} | 750 | - | - | A |
| Clamp Voltage @ I_{PPM} | 50/500 μs waveform | V_{CL} | - | 48 | 51 | V |
| Reverse Standoff Voltage | | V_{RWM} | 33 | - | - | V |
| Reverse Leakage Current @ V_{RWM} | | I_R | - | - | 30 | μA |
| Breakdown Voltage @ $I_T = 5\text{mA}$ | | V_{BR} | 39 | - | 43 | V |
| Forward Voltage @ $I_F = 10\text{A}$ (Unidirectional version only) | | V_F | - | 1.6 | 1.9 | V |

Package Characteristics

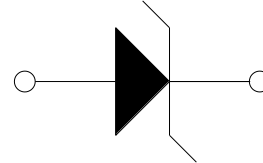
| | | | | | |
|-----------------------------------------|----------|------|---|-----|--------------------|
| Recommended Operating Temperature Range | T_{OP} | - 55 | - | 85 | $^{\circ}\text{C}$ |
| Junction Temperature Range | T_J | - 55 | - | 150 | $^{\circ}\text{C}$ |
| Storage Temperature Range |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

TECHNICAL DATA
DATASHEET 5427, Rev. E

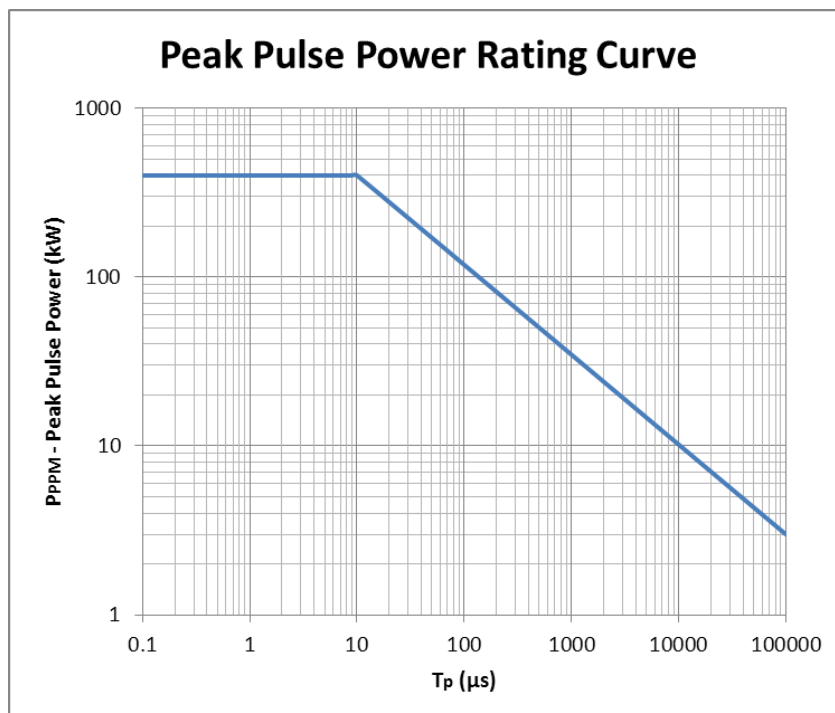
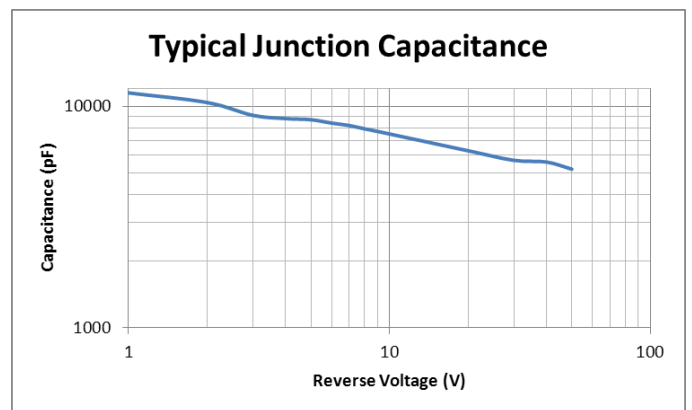
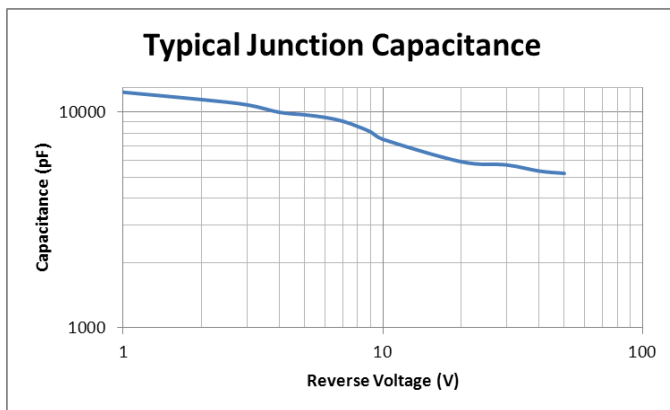
Electrical Schematic



LSP28A-750-39 - Through Hole Version
LSP28B-750-39 - Surface Mount Version
LSP28BL-750-39 - Surface Mount, Low Profile Version



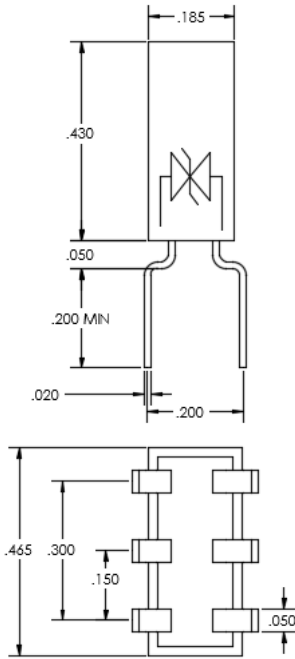
LSP28A-750-39U - Through Hole Version
LSP28B-750-39U - Surface Mount Version
LSP28BL-750-39U - Surface Mount, Low Profile Version



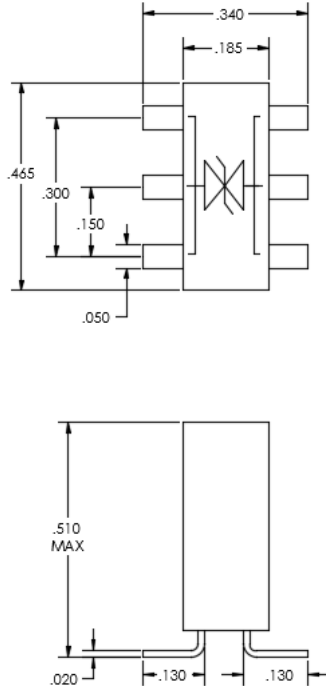
TECHNICAL DATA
DATASHEET 5427, Rev. E

Mechanical Drawings

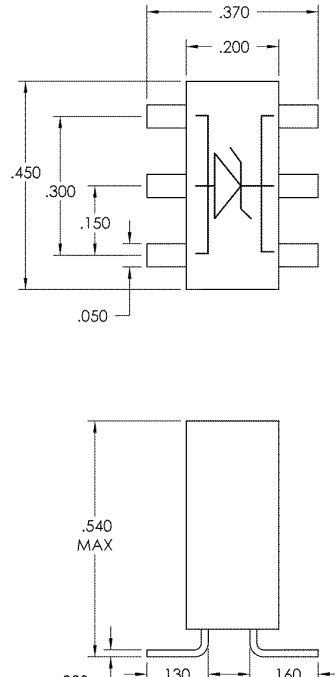
LSP28A-750-39



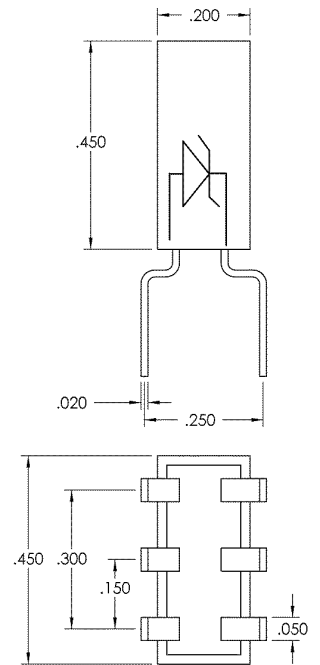
LSP28B-750-39



LSP28B-750-39U



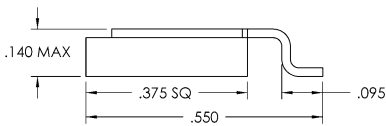
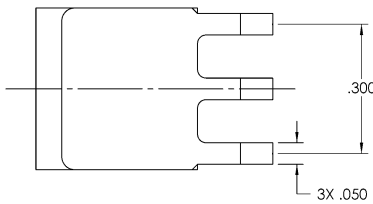
LSP28A-750-39U



TOLERANCE UNLESS OTHERWISE NOTED = ± 0.010

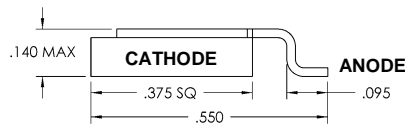
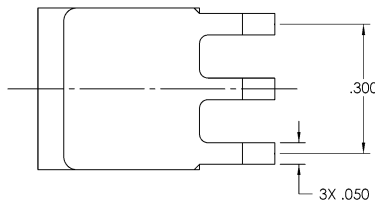
TOLERANCE UNLESS OTHERWISE NOTED = ± 0.010

LSP28BL-750-39



TOLERANCE = ± 0.010

LSP28BL-750-39U



TOLERANCE = ± 0.010

SENSITRON

SEMICONDUCTOR

LSP28A-750-39
LSP28B-750-39
LSP28BL-750-39
LSP28A-750-39U
LSP28B-750-39U
LSP28BL-750-39U

TECHNICAL DATA

DATASHEET 5427, Rev. E

DISCLAIMER:

1- *The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).*

2- *In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.*

3- *In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.*

4- *In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.*

5- *No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.*

6- *The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.*

7- *The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.*