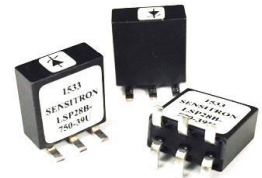


Sensitron Lightning Strike Protection Modules

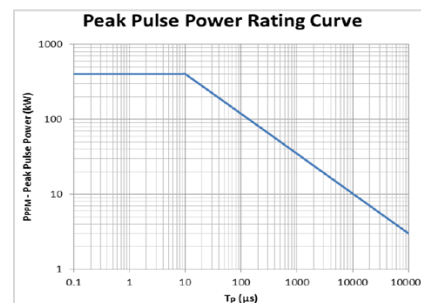
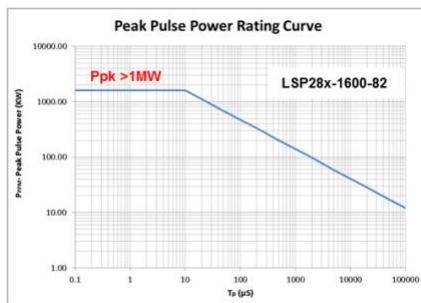
Value engineering has enabled Sensitron to offer a significant price reduction on the LSP family from 25% to 85%, across all order quantities. Supporting design activities within the industry in Lightning Strike Protection Solutions, the LSP Series provides designers with a cost-effective solution. For more information or to request a quote, please visit us at www.sensitron.com/LSP

High Power Lightning Strike Protection (Levels 4 & 5)

- Lightning strike protection for 28V, that handles peak power with margin
- DO-160 Section 22, Level 4 & 5, Waveform 5A & 5B compliant
- 100% tested to 1600A peak current (Level 5), 100% tested to 750A peak current (Level 4)
- Superior clamping performance
- Through hole & SMT available

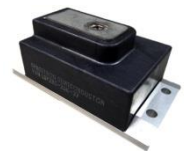


Type	Config	Peak Pwr 50u/500us	Min V _{rwm}	Leakage Max @V _{rwm}	Min V _{br}	I _{ppm}	Max Vclamp @I _{ppm}	100% Tested to DO-160 Req't
LSP28x-1600-41	Bi	100kW	36V	30 uA	41V	1600A	60V	Level 5, Waveform 5B
LSP28x-1600-82	Bi	200kW	72V	30 uA	82V	1600A	120V	Level 5, Waveform 5B
LSP28x-750-39U	Uni	37kW	33V	30 uA	39V	750A	51V	Level 4, Waveform 5B
LSP28x-750-39	Bi	37kW	33V	30 uA	39V	750A	51V	Level 4, Waveform 5B
LSP28C-20K-37	Bi	1.3MW@6.5us	33V	30 uA	36.7V	20,000A	65/60V	Level 5, Waveform 5B
LSP52x-1100-60	Bi	100kW	52V	30 uA	60V	1100A	90V	1100A, Waveform 5B
LSP52x-1600-60	Bi	137kW	52V	30 uA	60V	1600A	90V	Level 5, Waveform 5B



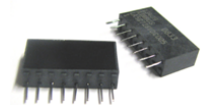
Lightning Strike Protection for High Power Primary LSP Protection Applications, LSP28C-20K-37

- For induced lightning current spec having 1.3MW peak power, 20kA I_{pk}, 6.5us waveform with 2kA tail for another 50us
- Low inductance, low resistance for the lowest clamping voltage
- Lower height threaded insert connection
- Designed to meet RTCA/DO-160G, Section 16, Category B



Lightning Strike Protection for Signal Lines, Low Capacitance

- Non-hermetic single in-line package
- Working voltage up to 46V, clamping voltage up to 90V
- Long and short wave capable
- Low cost standard pitch packaging
- Qualified for several aircrafts, ABD 0007 Compliant
- Custom parts available, including dimensions, special lightning curves, other package designs, etc.



Type	Configuration	Working Volt	Leakage Current @ V _{WM}	Capacitance	Short Wave Current	Long Wave Current	Clamp Volt VCL - both Waves
LSP11B-320	Bi-Directional	11V	10 uA	< 1900 pF	320A	150A	40V
LSP46U-320	Uni-Directional	46V	10 uA	N/A	320A	150A	85V
LSP43B-150	Bi-Directional	43V	10 uA	< 500 pF	150A	N/A	65V
LSP43B-320	Bi-Directional	43V	10 uA	< 500 pF	320A	150A	90V

Lightning Strike Protection Modules

Sensitron Lightning Strike Protection Modules

Positioned as a world leader, Sensitron has over 10 years heritage in manufacturing Lightning Strike Protection Modules. With the evolution of modern day aircraft, Sensitron has expanded their LSP product offering to include higher protection power levels. Critical in design & test to ensure safety in aircraft made wholly or partially with composite frames, higher power levels are where Sensitron has the advantage.

The Sensitron Advantage

- ✓ Proven solutions for tough requirements
- ✓ 100% production test to worst case waveforms, 50us/500us for high power devices
- ✓ Capability to customize package or electrical spec
- ✓ Proven heritage on commercial, military & space programs

DO-160 Transient Pin Injection Test Requirements

Table 22-2 Test Levels for Pin Injection

LEVEL	Waveforms		
	3	4	5A
	Voc/Isc	Voc/Isc	Voc/Isc
1	100/4	50/10	50/50
2	250/10	125/25	125/125
3	600/24	300/60	300/300
4	1500/60	750/150	750/750
5	3200/128	1600/320	1600/1600

Levels 4 & 5 needed for composite frame aircraft

- ❑ Levels 1, 2 & 3 can be handled with low cost TVS
- ❑ Levels 4 & 5 need higher power handling ability

Levels 4 & 5/Waveforms 5A & 5B

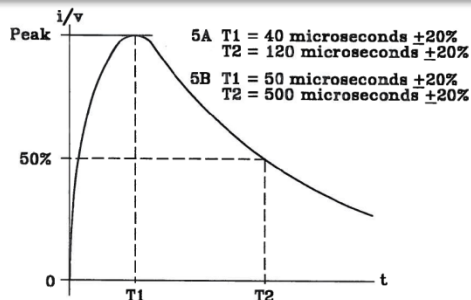


Figure 22-6 Current/Voltage Waveform 5

- ❑ Peak current levels of 320A, 750A, 1600A with up to 500us duration.
- ❑ Peak power reqts for clamping at voltages of 56V and 112V:

DO-160 Level	Peak Current I _{pp}	V _{clamp} = 56V Peak Power	V _{clamp} = 112V Peak Power
Level 4	750A	42kW	84kW
Level 5	1600A	90kW	180kW



About Sensitron:

Sensitron is a leading manufacturer of high reliability power electronic solutions including MIL-PRF-19500 diodes, transient voltage protection components, motor controllers, smart power management and conversion, voltage protection components and RF. Sensitron has over 45 years heritage in serving the complete spectrum of high reliability markets including defense, aerospace, space, and medical. <http://www.sensitron.com>

Lightning Strike Protection Modules