

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

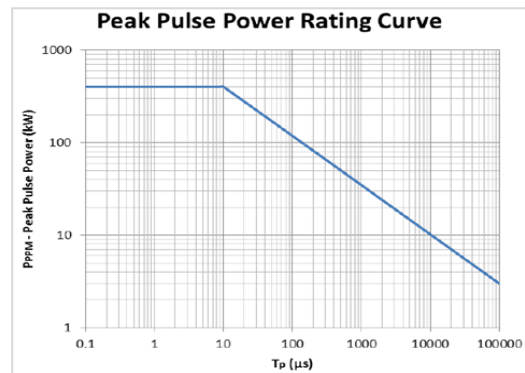
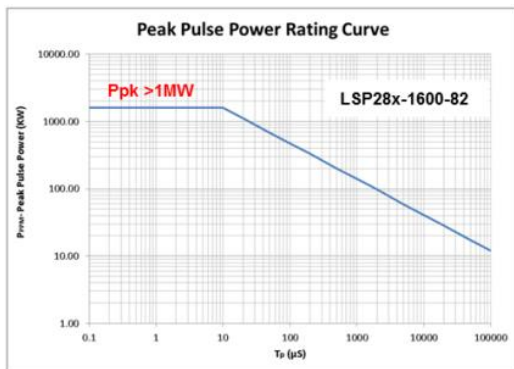
High Power Lightning Strike Protection (Levels 4 & 5)

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



Type	Config	Peak Pwr 50u/500us	V _{rwm} Min	Leakage Max @V _{RWM}	V _{BR} Min	I _{ppm}	V _{CLAMP} @I _{PPM} Max	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
LSP52x-1100-60*	Bi	100kW	52V	30uA	60V	1100A	90V	1100A, Waveform5B
LSP52x-1600-60*	Bi	137kW	52V	30 uA	60V	1600A	90V	Level 5, Waveform 5B
LSP28C-20K-37	Bi	1.3MW/ 6.5us	33V	30 uA	36.7V	20kA	65V/60V	Level 5, Waveform 5B
LSP28x-750-80*	Bi	72kW	66V	60 uA	78V	750A	102V	Level 4 Waveform 5B
LSP28x-750-80U*	Uni	72kW	66V	60 uA	78V	750A	102V	Level 4 Waveform 5B
LSP15x-1600-17*	Bi	39kW	15V	1uA	17.6V	1600A	24.4V	Level 5, Waveform 5B
LSP15x-1600-17U*	Uni	39kW	15V	1uA	17.6V	1600A	24.4V	Level 5, Waveform 5B
LSP28x-750-39*	Bi	37kW	33V	30 uA	39V	750A	51V	Level 4, Waveform 5B
LSP28x-750-39U*	Uni	37kW	33V	30 uA	39V	750A	51V	Level 4, Waveform 5B

* Prefixes are defined as follows: LSPxxA for Thru-hole, LSPxxB for SMT, or LSPxxBL for Bent Lead SMT



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



Sensitron Lightning Strike Protection Modules

Positioned as a world leader, Sensitron has over 15 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

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 5 & 4/Waveforms 5A & 5B

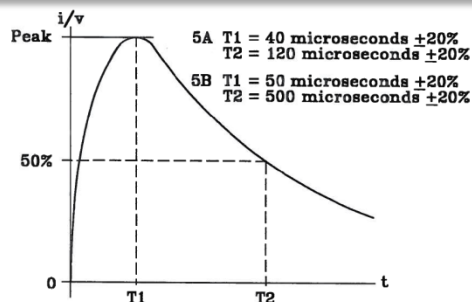


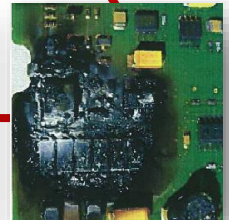
Figure 22-6 Current/Voltage Waveform 5

- ❑ 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



Direct Effect



Indirect Effect

About Sensitron:

Sensitron has over 50 years of heritage as a leading manufacturer of high reliability power electronic component solutions for the Defense, Aerospace, Space, and Medical markets. Our products provide rugged, light-weight, and cost-effective solutions for switching power supplies, AC-DC rectification, primary & secondary power distribution, motion control, transient voltage spike protection, and custom applications. <http://www.sensitron.com>