



NexTek - Protection for the *NexT* Generation™



NexTek offers an extensive line of coaxial RF Surge Protection Devices (SPD's), also known as an RF lightning suppressor or coax arrestor. NexTek's RF SPD's are coaxial devices used to reduce transient surges in radio and antenna lines in communication systems. The SPD's are mounted in-line and require grounding. Designed to pass a desired RF frequency band while blocking or suppressing any over voltages or transients to ground that may damage costly and sensitive radio equipment.

These RF surge devices protect against numerous EMI/ EMC events caused by electromagnetic pulses, (EMP). EMP surges are a result of lightning (LEMP), high-altitude (HEMP) and nuclear (NEMP) EMP events. NexTek SPD's also protect equipment against electrostatic discharge (ESD), Over Voltage and other types of unwanted energy induced upon radio communications systems.

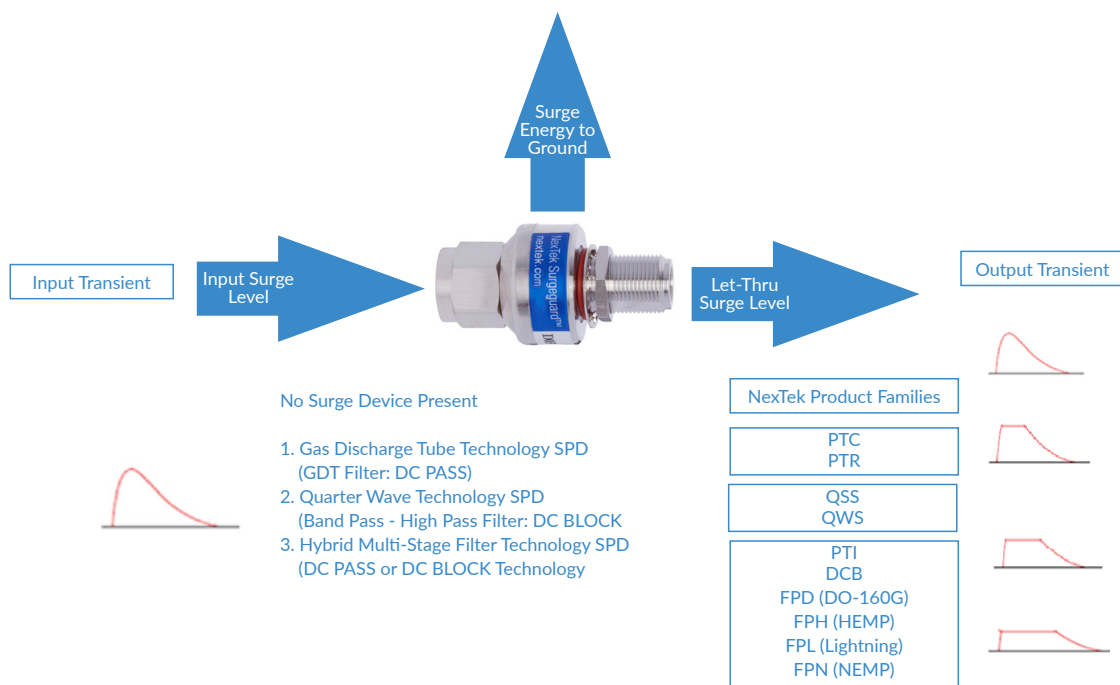
The NexTek portfolio of RF surge protector products incorporates various protection topologies and technologies. Dependent on the application requirements, the SPD technology selection and device possess operational benefits.

Refer to the Figure below for a pictorial overview of the Surge Protection Technology vs. Let-Through or Residual Energy and how that relates to NexTek Product Families and proper product selection.

NexTek's designs can be summarized into the following four categories:

- 1) Gas Discharge Tubes (GDT) - PTC/PTR Series DC Pass
- 2) Quarter-Wave Stub Technology - QSS/QWS Series DC Short
- 3) DC Block, Isolated Pin - PTI/DCB Series
- 4) Fine Hybrid, Multi-Stage Filter - FPL, FPD and FPH Series

NexTek's SPDs operate at industry standard frequencies within the range of DC - 18 GHz (sub-bands vary) and are available with 50Ω and 75Ω RF interfaces such as 4.3-10, 7/16 DIN, F-Type, N-Type, TNC, BNC, SMA, MCX, and MMCX connectors. Coaxial RF lightning surge suppressor interfaces are available in standard male and female genders, and reverse polarity combinations are available depending on the model. Bulkhead mount available on most arrestors; bracket and optional grounding accessories are available, too.



PTC Series 50Ω

The PTC Series are Fixed Gas Discharge Tube (GDT) arrestors. They provide wide-band RF performance and excellent all-around protection from lightning and other transient sources. These SPD's will Pass DC Voltages and Current.



- Broadband design: DC to 12.5 GHz, varying sub bands
- RF connector options: BNC, N, SMA and TNC
- Bi-directional protection
- Protection voltage ranges: 90 to 1000V

Product Examples:

PTCONFONF09E
PTCONSAF09S
PTCONFSAF20G
PTCTNFTNF09S

PTR Series 50Ω

The PTR Series are 50Ω Replaceable Gas Discharge Tube Arrestors. A Replaceable GDT allows for maintainability and prolongs the life of the device. These SPD's will Pass DC Voltages and Current. RF Power rating is defined by the Gas Discharge Tube Operating Voltage.



- Broadband design: DC to 3.2 GHz, varying sub bands
- RF connector options: 7/16, BNC, N, SMA and UHF
- Bi-directional protection
- Protection voltage ranges: 90 to 1000V

Product Examples:

PTR7AF7AF35T1
PTRBNMBNF09S
PTRONFONF09S
PTRTNFTNF09S

PTR Series 75Ω

The PTR Series are 75 Ohm Replaceable GDT's surge arrestor devices having BNC & TNC type connectors. These SPD's will Pass DC Voltages and Currents.



- Broadband design: DC to 750 MHz
- RF connector options: BNC and TNC
- Bi-directional protection
- Protection voltage ranges: 90V

Product Examples:

PTRB7FB7F23S
PTRT7MT7F09S

PTCF Series 75Ω

PTCF Series are 75 Ohm with F-type connectors. A Fixed GDT surge arrestors that provide RF performance and protection from lightning and other transient sources for 75-Ohm communication.



- Broadband design: DC to 3.0 GHz
- RF Connector: Type F (Female to Female)
- Bi-directional protection
- Protection voltage range: 90V

Product Examples:

PTCF-02
PTCF-03

FPD Series

The FPD Series are high-performance COTS lightning protection devices designed to protect Coaxial/RF lines against RTCA DO-160G, Section 22 level requirements. Available in various pass bands, DC Pass/DC Block circuit topologies, ratings, and connector types.



- Operating bands DC to 18 GHz, varying sub bands
- RF connector options: N, SMA and TNC
- Excellent RF performance
- Verified and tested designs

Product Examples:

FPDSFSFHE000-E
FPDNFNHDP05-B
FPDSFSFHG000-F

FPH Series

The FPH Series are coaxial protectors significantly reduce electrical energy from high-speed HEMP or Electro-Static Discharge (ESD) or lightning activity. NexTek has optimized the circuits to provide maximum suppression, while allowing desired operational throughput. These compact protectors are compliant to MIL-STD 188-125 and MIL-STD 461 pulses.



- Operating bands DC to 18 GHz, varying sub bands
- RF connector options: 4.3-10, 7/16, BNC, N, SMA and TNC
- Excellent RF Performance
- Verified and tested design

Product Examples:

FPHNFNJAB0-B
FPHNFSFBQ000-G
FPHTFSFJB0-B

FPL Series

The FPL Series are coaxial protectors featuring a multistage hybrid design which provides a high degree of protection for applications where DC current is required require DC on the coaxial line. They offer an extremely effective surge pulse reduction, which makes them an ideal device to protect the most sensitive electronic devices such as GPS, Mobile communications, telemetry, and other radio applications.



- Various operating bands DC to 3.0 GHz
- RF connector options: N, SMA and TNC
- Multi-strike design
- Excellent RF performance

Product Examples:

FPLNFNFAQ15
FPLNFNFDPO5
FPLTFTFDPO12
FPLNMNFAP06, FPLNFNFAPO6 & FPLNFNMAPO6

PTI-BB50 Series

The PTI-BB50 Series incorporates a blocking capacitor and gas discharge tube (GDT) to provide optimum isolation, DC Block and maximum protection for radio equipment. This product series is ideally suited for radio applications within HF, VHF, and UHF bands. The PTI-BB50 surge protectors are constructed with high quality materials and offers excellent RF performance. These units meet and exceed all applicable industry standards.



- Broadband design 1.5 MHz to 1.0 GHz
- RF connector option: Type N
- Excellent RF performance across entire frequency band
- 50kA capability

Product Examples:

PTI-BB50NFF
PTI-BB50NMP
PTI-BB50NMS

DCB-WFI

The DCB-WFI series are a broadband surge and lightning protection device with a series capacitive circuit providing DC Block in applications where required.



- Broadband design 2.0 to 6.0 GHz
- RF connector option: Type N
- Excellent RF Performance across entire frequency band
- 20kA surge capability

Product Examples:

DCB-WFI-NFF
DCB-WFI-NFM

DCB-COM

The DCB-COM product series incorporates a capacitor circuit making it an excellent DC Block device. This DCB unit offers excellent surge and lightning suppression providing the lowest let through voltage. These DCB models have ruggedized, weatherproof IP67 connector designs thus maintaining excellent electrical and environmental characteristics and can handle multiple strikes.



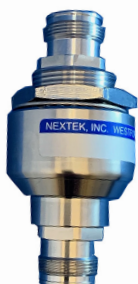
- Broadband design 698 MHz to 2.7 GHz
- RF connector option: Type N
- Excellent RF performance across entire frequency band
- 50kA surge protection

Product Examples:

DCB-COM-NFF
DCB-COM-NFM
DCB-COM-NMF

QSS Series

The QSS Series protectors are designed and built to provide robust protection for any Radio or Coaxial RF transmission application. These DC Shorted Spiral Stub arrestors are high-performance designs, pairing excellent RF performance with industry-leading Surge and Residual performance ratings. Available in various sub bands.



- Broadband design to 6 GHz, varying sub bands
- RF connector options: 4.3-10, N and TNC
- Bi-directional protection
- 45kA to 60kA surge capability (connector dependent)

Product Examples:

QSSNFN0300
QSSNFNMAK00
QSSFTFAU00
QSS4F4FBJ00

QWS Series

The QWS product series are broadband quarter wave stub design with a RF pass band and DC is shorted to ground. QWS Series offers exceptional response and transient handling characteristics in a ruggedized, weatherproof IP68 housing, while also offering a very high strike capability rating and high RF Power.



- Broadband design to 2200 MHz to 18 GHz, varying sub bands
- RF connector options: 4.3-10, N and TNC
- Bi-directional protection
- 45kA to 60kA surge capability (connector dependent)

Product Examples:

QWSNFN0500
QWSNFM0500
QWSNFN0600
QWSNFM0600

PTI and PTC Ultra Compact and Integrated Cable Series

The PTI (GDT and DC Block) and PTC (DC Pass) Compact Series integrates cutting edge transient protection directly into bulkhead-style I/O connector designs. These compact arrestors are ideally suited for handheld or communications equipment that requires an extremely compact, rugged and waterproof surge protection solution. These connectors offer a novel way of adding high-performance Lightning, Static, or High-Speed EMP transient protection to any radio chassis or system to 12.5 GHz, in varying sub bands. Also available with integrated RF cable with various connector options.



- Broadband design DC to 12.5 GHz, varying sub bands
- RF connector option: MMCX, N, SMA and TNC
- Ultra-compact size and weight
- Drop-in replacements to standard adaptors

Product Examples:

PTITNFAF1506
PTITNFAF3508
PTCSAFSAF20G
PTCTNFAF20G

Single Point Grounding Kit

Designed for a flexible installation solution for a single point grounding panel. The assembly offers a white PVC plate with predrilled 16" on center mounting holes which offers the ability to mount several SPD devices on a properly grounded plate. The assembly is supplied with copper strapping, antioxidant paste and copper mounting plates, plus all the necessary installation hardware.

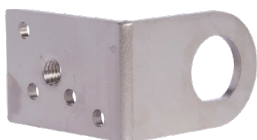


- Lightweight, ease of Installation
- PVC material is Fire retardant, Class A flame spread rated
- PVC will not crack, rot, splinter, or split
- 20-ft of copper strapping and mounting plates included
- Antioxidant Paste: Protect copper strap and plate from corrosion

Product Examples:
CUSPGN

Mounting Bracket and Accessories

A variety of Mounting L-Brackets, Ground Lugs, Ground Wire Accessories and Kits are available for all NexTek coaxial surge protection devices, RF Coaxial Lightning Arrestors and Power/Data Suppressors. These solutions provide a means to ground and mount a single arrestor to a mounting bracket and mechanically affix a cable and cable lug assembly kit or mount direct bulkhead-style; or provide grounding to multiple lightning protectors and applications with a common, single-point ground system by using one of our Mounting Plate Kits along with our bracket and ground lug offerings.



- Easy installation
- Lightweight
- Brackets for all RF Connector types

Product Examples:
750-0632-00
750-0088-01
750-0088-02
782-0009-00

Protection Voltage Testers

Protection Voltage Tester (PVT) can check any surge arrestor device to confirm proper functionality in order to protect critical RF equipment from damage. The testers are supplied with a Type N-Female interface, alligator clip assembly and storage case.



- Compact, lightweight, and rugged design
- Auto shut-off
- Test Surge Protection Devices
- Hand-Held portable and desktop devices
- Ability to test components: diodes, metal oxide varistors [MOV's] and gas discharge tubes [GDTs]

Product Examples:
PVT-HH
PVT-DT

Who we are and what we do

Since 1986, NexTek is recognized as a World-Class leading supplier of innovative, high-quality coaxial RF surge protection devices (SPD's) that protect critical and sensitive electronic equipment from the harmful effects of lightning and other sources of electrical surges. NexTek is a proven supplier with an extensive coaxial product offering covering a vast range from DC to 18 GHz. NexTek designs and manufactures a majority of these products from its Billerica, Massachusetts USA headquarters, approximately 30 minutes from Boston. All NexTek products feature field proven designs and construction. Products come with a Ten (10) year Factory Warranty.

These RF surge protection devices are designed to withstand harsh environmental conditions. With hundreds of thousands of SPD's installed and operational on all seven (7) continents and in many space applications, NexTek has built an exceptional reputation for quality and service. NexTek is continually expanding its product offering, so please visit our website for the latest news and product releases. www.nextek.com

Other Filter and Surge Arrestor Products from NexTek:

- High Current Capacitive (C-Type) Feed-through Filters - HPR Series
- High Current High Reliability 96-Hr Burn in Tested Filters - HPR-E Series
- DC/AC Power Line Surge Suppressors - DCL Series and ACL Series
- Data Line Surge Suppressors - DLP Series
- Failsafe Hi Reliability, Redundant Capacitor Array Filters - FSF Series
- Hi-Current Pi (C-L-C) Feed-through Filters & Arrestors - HCP/HCS Series