



Coaxial Lightning & Surge Protection A Selection Guide

NexTek, Inc.
Westford, MA

- Overview of NexTek's Arrestor Families
 - Fixed GDT Device
 - Replaceable GDT Device
 - Quarter Wavelength Stub Device
 - Fast Response/Multistage Device

- Product Selection Questions
- Chart of all Product Families by Technology
- Chart of all Product Families by Frequency (Pass Band)

- NexTek designs and manufactures a large family of coaxial surge arrestor designs for a variety of applications.
- Standard Units Available with the following features:
 - RF Pass Bands between DC and 18GHz
 - Type N, TNC, SMA, 7/16 DIN, MMCX, BNC, and F Type connectors available
 - GDT, Quarter wavelength stub, multi-stage, and bias-tee technology
 - Fast Response, Ultra-High Surge Current Ratings
 - Protection against Lightning, ESD, EMP, and other Threat Types
- Customized Arrestors – If you do not see something you need....Just Ask! From Mild to Wild!

- **PTC/PTR Series - Gas Discharge Tubes (GDTs)** – The most common coaxial protection technology on the market, useful for any DC-Pass application and available for most any RF Power level.
 - PTC - Fixed GDT Devices: These have a permanent GDT installed at the factory. Most common RF arrestor type sold and used.
 - PTR - Replaceable GDT Devices: These have a replaceable GDT element, for high-exposure areas or to provide guaranteed serviceability over the product's lifetime

Features Include

- DC pass ability
- Wide RF Pass Band
- Multiple Strike Capability



PTC Series



PTR Series

- **QSS/QWS Series** - Quarter Wavelength Stubs – The highest performing single-stage protection technology for coaxial applications where the best protection is required.

Features Include



QSS/QWS Series

- Always-On Protection – Shorted Stub inside means no Response Time (wake-up) delay.
- Robust Protection – Unmatched Surge Ratings and Lifetime – No Active Protection element to wear, age, or fail
- NOTE: Will pass RF Power only – No DC Pass ability

■ Fast Response –

- **FPL Series** – Multistage “Fine” protection for GPS Receivers, providing much better energy reduction than GDT devices for sensitive GPS Receivers. Covers all GPS and other global navigation bands with either N-type or TNC connectors
- **BTL Series** – Multistage Arrestor and DC Bias-Tee device, providing a Bias-Tee for feeding power to Tower Top Equipment and built-in Lightning Protection in a single device, 7/16 DIN connectors
- **PGT Series** – Hybrid Arrestor designed for Telecom applications, DC Pass with high RF Power ratings, 7/16 DIN connectors.
- **FPN Series** – Multistage Arrestors for ESD or HEMP/NEMP protection, not available outside United States, Contact NexTek for more information.



FPL Series

Selection Questions

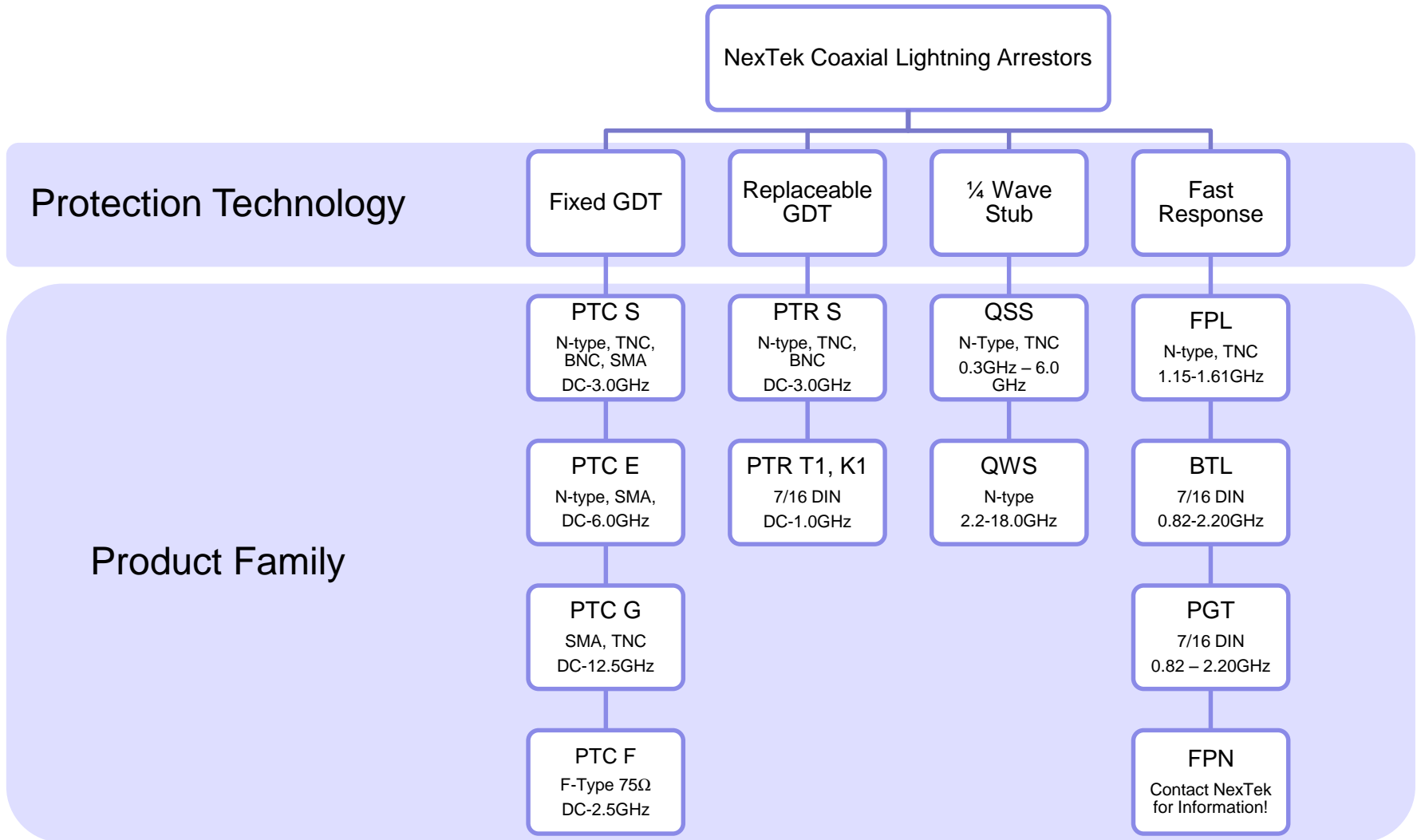
- Do you need to Pass DC Power on the coaxial line?
 - If yes, look into GDT or Fast Response devices
 - If no, move onto next question below

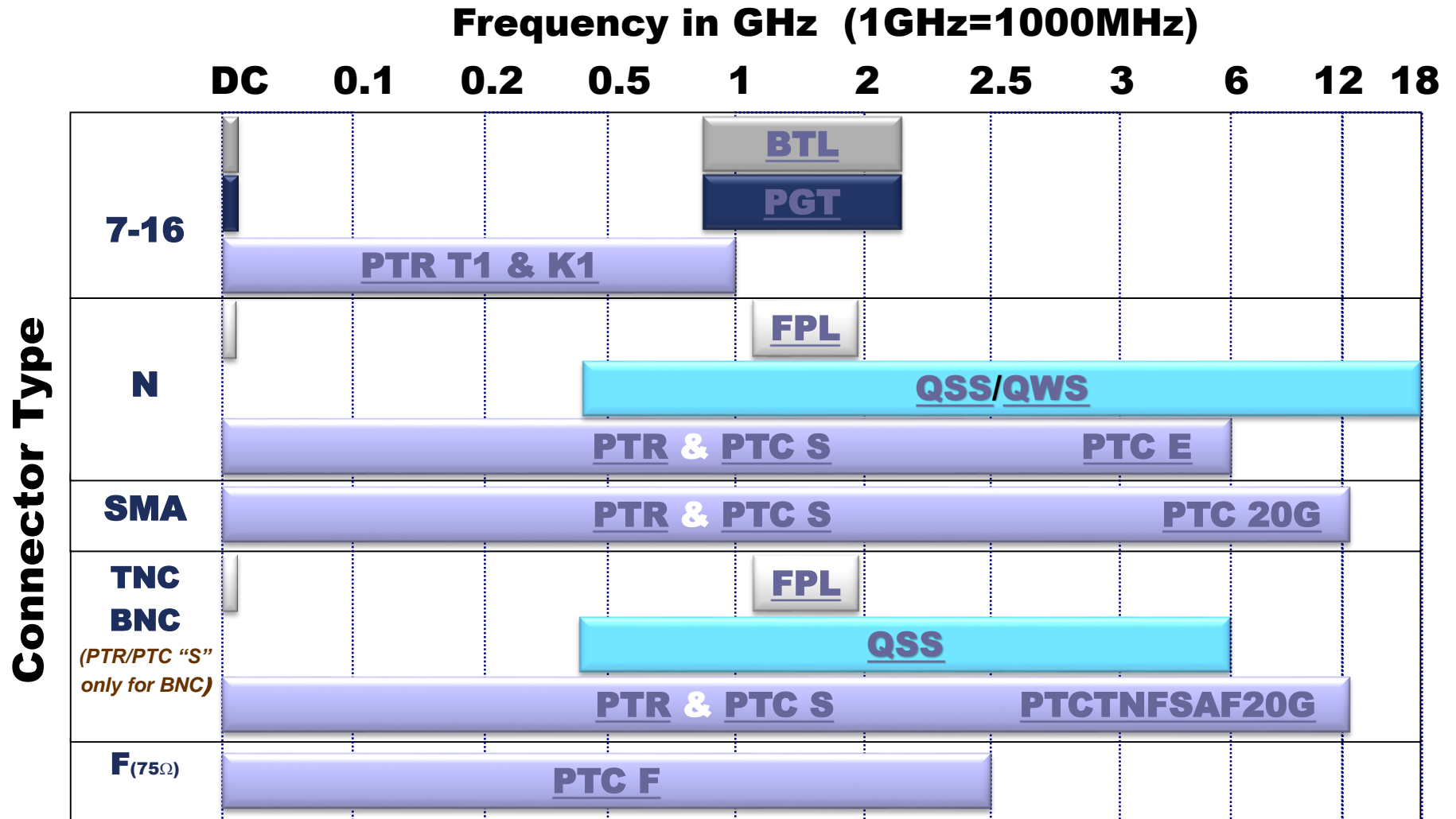
- Is your RF pass band <400MHz?
 - If yes, look into GDT or Fast Response devices
 - If no, look into Quarter Wavelength Stub Devices

- How much RF Power will you need to pass?
 - Cross check this information with the unit or family you have chosen...Adjust the Protection Voltage of GDT or Fast Response solutions accordingly.

- What is your connector preference?
 - NexTek offers units with Type N, TNC, SMA, 7/16 DIN, BNC, F (75Ω), MMCX, and others... If you do not see something you need, please ask us!

- What type of Surge Threat must be protected against?
 - Lightning (LEMP), Static (ESD), or HEMP/NEMP (fast response)?
 - Is there a regulation or industry standard which gives details?





- What is the connector type being used?
- What is the frequency being transmitted?
- Do you need to pass dc current on the center conductor?
- What is the RF Power level of your Transmitter, if there is one?
- What is the threat type [Lightning, ESD, High Speed] and the related transient protection standard (if applicable)?