Coaxial Lightning & Surge Protection
A Selection Guide

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- 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!

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- **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

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

QSS/QWS Series

Features Include

- 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

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- 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

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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

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- 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?

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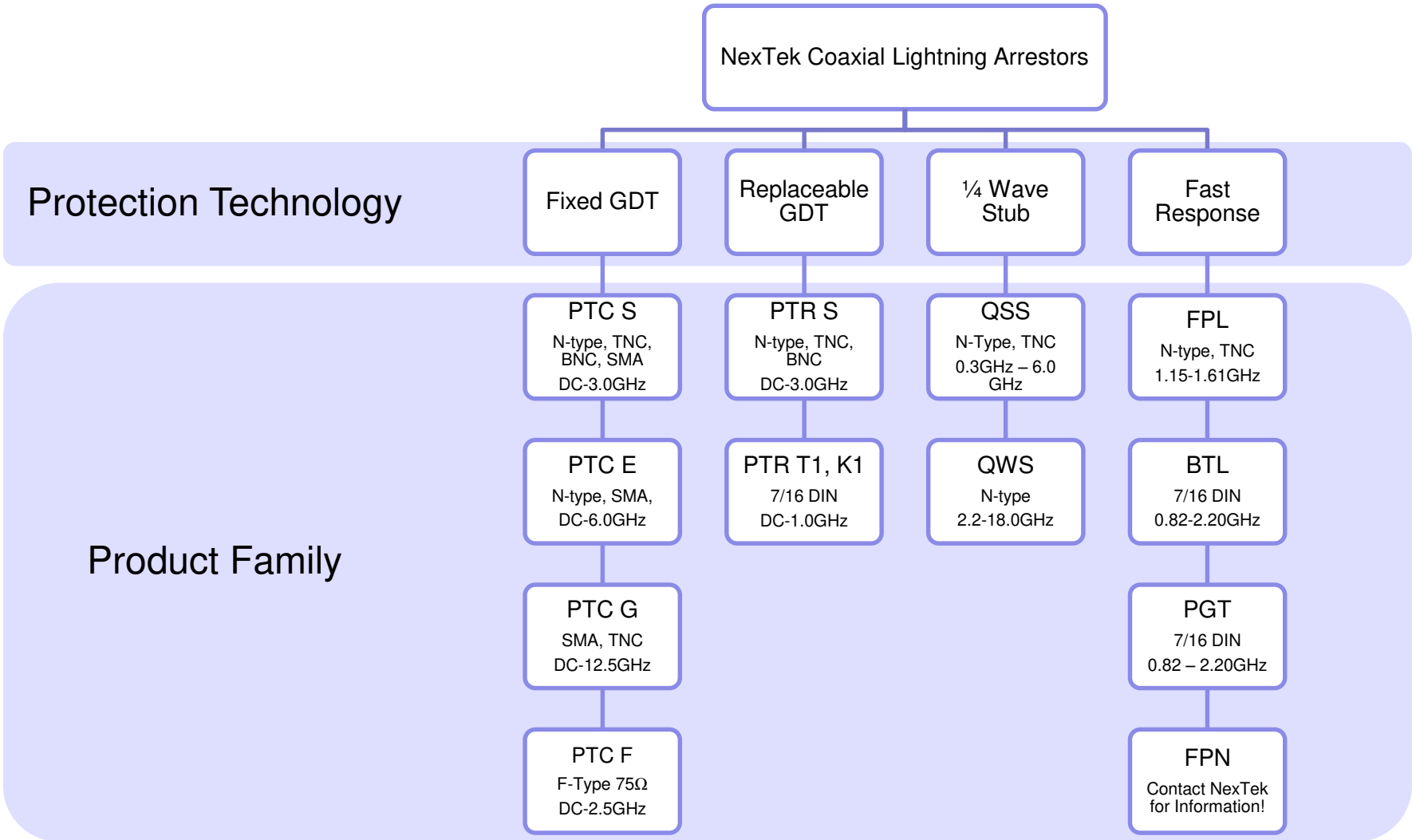
Product Family Chart – By Protection Technology



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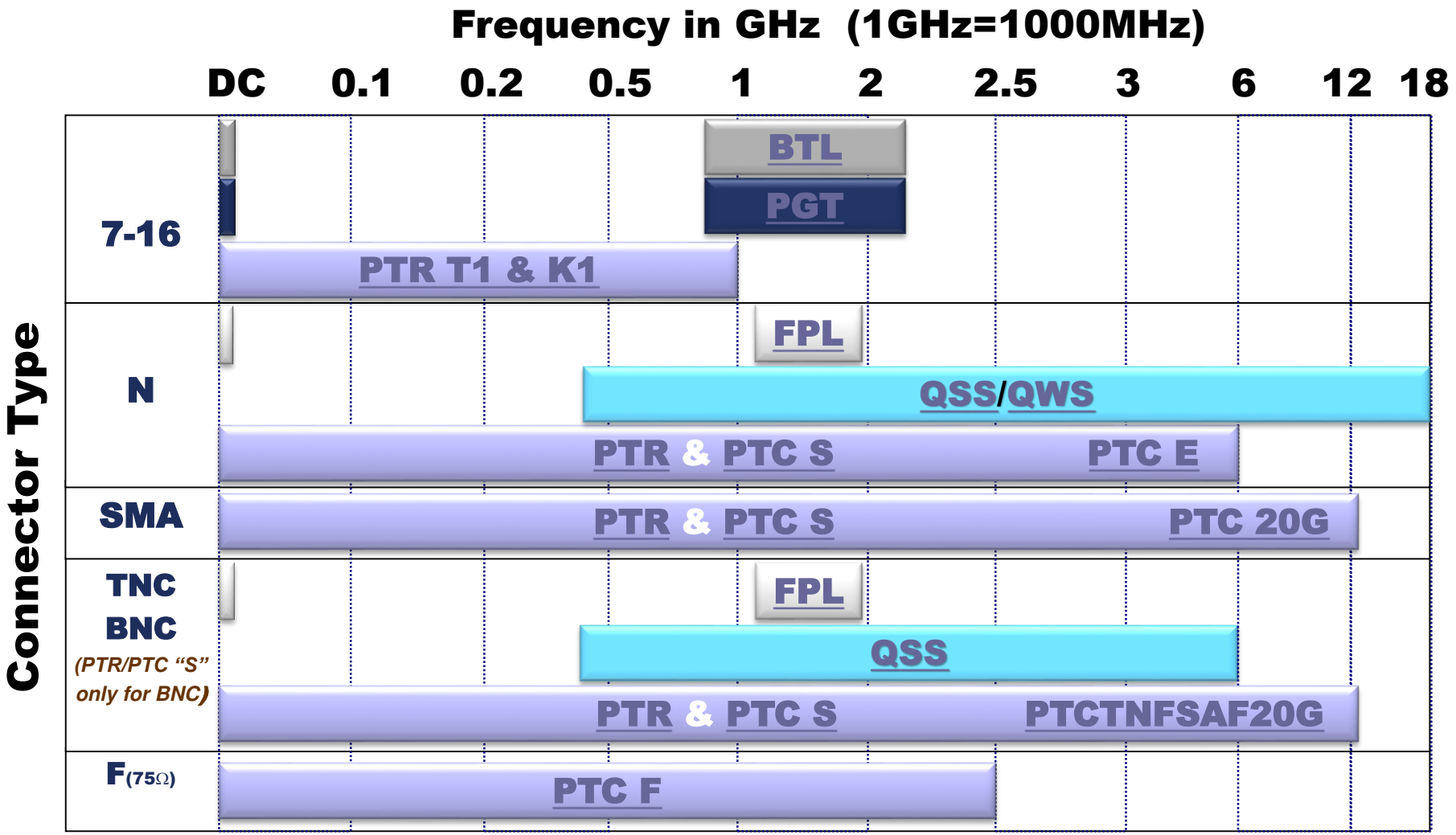

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- What is the connector type being used?
- What is the frequency being transmitted?
- Do you need to pass dc current on the center conductor?
- What is the RF Power level of your Transmitter, if there is one?
- What is the threat type [Lightning, ESD,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

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