

High-power gas capsule protectors

Features

- basic principle: lightning protector with decoupled gas capsule
- narrow-, broad- and multi-band units
- gas capsule protector working independently of transmitted RF power
- AC/DC powering via coax possible
- current handling capability 30 kA once and 20 kA multiple
- lowest available residual pulse voltage and energy compared to other high-power gas capsule protectors
- lowest IM for any gas capsule protector available in the market
- products with integrated high-pass filter and DC injection offering a further reduced residual pulse (series 3410) available
- DC injection port can be added



Gas capsule protectors 3401/3402/3408

Features

- basic principle: lightning protector with gas capsule
- broadband operation
- series 3401: DC to 1 GHz
- series 3402: DC to 2.5 GHz
- series 3406: DC to 5.8 GHz
- series 3408: 25 MHz to 2.5 GHz
- DC/AC powering via coax possible (not 3408)
- current-handling capability 30 kA once and 20 kA multiple
- easy maintenance
- gas capsule has to be selected according to RF power
- products with integrated high-pass filter and DC injection offering a further reduced residual pulse (series 3408) available
- DC injection port can be added



Fine protectors series 3403

Features

- basic principle: lightning protector with gas capsule and secondary protection enhancement circuit
- broadband operation
- essentially increased protection compared to standard gas capsule protectors
- AC/DC powering via coax possible (bypass feature)
- current-handling capability 30 kA once and 20 kA multiple
- residual surge pulse energy reduced by about factor 100 compared to standard gas capsule protectors



...closing the gap

Slim Line Gas Capsule Protectors 3406

Series 3406 Slim Line protectors provide surge protection for any electronic equipment connected to coaxial lines up to 5.8 GHz. The gas capsule protection principle supports the simultaneous transmission of RF, data and DC and are fixed-integrated. The protectors can handle any induced surge signals, but partial lightning current up to the specified current handling capability only. For higher lightning current handling, please refer to our gas capsule protector series 3401 and 3402. Multi-carrier applications with high RF peak power and special passive intermodulation requirements are covered by series 3409.



Features

- surge protection 10 kA once, 5 kA multiple (8/20 μ s test pulse according to IEC 61000-4-5)
- residual pulse energy <450 μ J (4 kV, 1.2/50 μ s; 2 kA, 8/20 μ s test pulse according to IEC 61000-4-5)
- gas capsule static sparkover voltage 150 to 250 V
- frequency range from DC to 5.8 GHz (BNC DC to 4 GHz)
- slim inline design
- characteristic impedance 50 Ohms
- connectorization N, TNC, BNC and SMA
- bulkhead mountable

Applications

Suitable for coaxial links between indoor and outdoor unit of all kind of wireless communications equipment including base stations and subscriber units. Keywords are BWA, WMAN, WLL, ISM, MMDS, LMDS, U-NII, WLAN with Bluetooth or Wi-Fi. Slim Line protectors cover also PP radios with IF frequencies up to 5.8 GHz. Care has to be taken concerning the lightning current load. The risk assessment has to be conform to specifications. The protectors are especially suitable for subscriber units which are generally less exposed.

Quarter-wave protectors series 3400/3407

Features

- basic principle: lightning protector with quarter-wave shorting stub
- narrow-, broad- and multi-band units
- maintenance-free
- highest surge-handling capability:
 - N: 50 kA (8/20 μ s test pulse)
 - 7/16: 100 kA (8/20 μ s test puls)
- lowest residual surge pulse voltage and energy
- best passive intermodulation (PIM) performance
- DC/AC powering via coax not possible
- products with integrated high-pass filter offer even further reduced residual pulse (series 3407)

