

Series 3409

High-Power Gas Capsule Lightning Protectors

Description

SUHNER series 3409 high-power gas capsule protectors are a new generation of ultimate gas capsule protectors – suitable to meet the demanding high RF performance and protection requirements of future mobile communications transceivers with DC powering of outdoor equipment. The customer is freed from any RF power and IM performance considerations.

Thus the protectors are especially suitable for multicarrier systems.

The availability of this kind of gas capsule protectors concerning frequency range is not limited by the capsule (as it is the case with standard gas capsule protectors which are limited to applications below about 2.5 GHz).

In addition, the protection performance is superior to existing standard gas capsule protectors.

Features

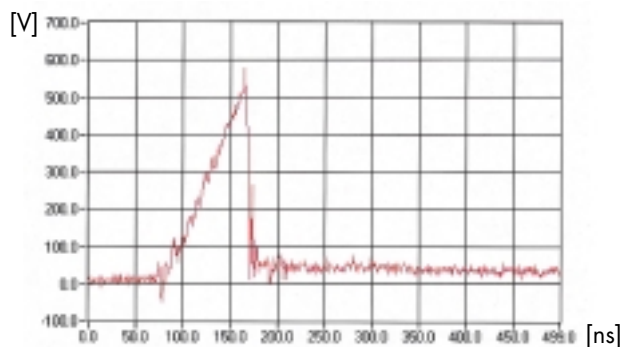
- RF peak power not limited by gas capsule
- Superior RF performance, PIM level lower – 150 dBc available
- Availability for applications from 800 MHz to 18 GHz (N interface)
- Safe extinguishing of capsule after having conducted a surge current to ground
- Up to 99% reduced residual pulse energy
- Waterproof IP 65 min.
- Gas capsule installed (73Z-0-0-548)

Specifications

Electrical data	Requirements
RF:	
Impedance	50 Ω
Frequency range	according to product specification, basic range from 800 MHz to frequency limit of coaxial interface
RL	20 dB min.
IL	0.2 dB max.
PIM	according to product detail specification (specified products –150 dBc max.)
RF power transmission	500 W min., refer to product detail specification
Protection:	
Surge-current-handling capability	30 kA once and 20 kA multiple (8/20 μ s test pulse)
Residual pulse voltage and energy	for typical values refer to the following diagram

Typical residual pulse for series 3409
(test pulse 4 kV/2 kA, 8/20 μ s):

Residual pulse voltage: 580 V
Residual pulse energy: 200 μ J



Mechanical data	Requirements
Coupling nut torque force	according to IEC/MIL
Durability (matings)	500 min.
Bulkhead mounting torque force:	
Mounting hole diameter	20 Nm/14.7 ft-lb
19 mm/ 3/4" max.	35 Nm/25.8 ft-lb
larger than 19 mm	

Environmental data	Requirements/Test conditions
Operation temperature range	- 40 °C...+ 85 °C/ - 40 °F...+ 185 °F
Waterproof degree (IEC 529)	refer to product specification, data refer to the coupled state
Temperature shock	MIL-STD-202, Meth. 107 F, Cond. B, - 65 °C/+ 125 °C
Moisture resistance	MIL-STD-202, Meth. 106 D, 10 cycles
Vibration	MIL-STD-202, Meth. 204, Cond. D, 10-2000 Hz

Material data			
Component part	Standard	Material	Plating
Housings	QQ-B-626	brass	SUCOPLATE®
Male contacts	QQ-B-626	brass	gold or silver plating
Female contacts	QQ-C-530	CuBe2	gold or silver plating
Insulators	ASTM-D-1457	PTFE	
Gaskets	ASTM-E-1418 PS 1	silicone rubber	