

MTL AirGuard RGT range

RF surge protection for coaxial applications

- **Replaceable GDT cartridges**
- **Bi-directional protection**
- **Low intermodulation**
- **DC to 4.0GHz**
- **Weatherproof**
- **Multiple strike capability**



The RGT range of surge protection devices prevents surges and transient overvoltages conducted through coax cables. These surge protectors employ gas tube capsules that are easily replaceable ensuring a lifetime of protection.

When replacing the gas tube, simply unscrew the capsule holder while installed. It is recommended that the capsules be replaced when the site undergoes routine maintenance, assuring you of continued uninterrupted protection of your site.

Typical applications for the RGT range include the protection of radio telemetry systems, mobile communications base stations and where high induced voltages may be present.

Receivers and transmitters are particularly vulnerable to damage from the effects of lightning. Their remote locations (height above ground) and physical construction make them vulnerable to lightning activity. The use of semiconductors and integrated circuits in transmitters and receivers has rendered them particularly prone to damage from these disturbances.

Excellent performance levels are achieved using high energy gas discharge tubes to offer high surge current capability in a rugged, economic, compact enclosure to produce superior surge suppression.

The use of gas tube technology in surge protection applications is a mature and well proven technology. When used in RF coax applications, this technology provides broadband, low cost solutions while still maintaining high surge current capacity.

The AirGuard range provides a wide range of connector types including BNC, TNC, N-type, 7/16, and UHF to suit all application requirements. In addition, bulkhead mounting options are provided where insertion into a panel is preferable. The GT and RGT ranges are available with a wide choice of voltages: 90V, 145V, 230V, 350V, 470V 600V, 800V or 1,000V.

Complete site protection can be achieved by using our wide range of AC and DC power surge protection devices to prevent surges entering equipment via the power supply. The MTL ZoneMaster range of protectors combine a high level of protection and when used in conjunction with the MTL ZoneBarrier data modules, provide the highest level of protection available.

RF Coaxial surge protection

October 2016

SPECIFICATION

All figures typical at 77°F (25°C) unless otherwise stated

Maximum discharge current

30kA (8/20µs)
10kA (10/350µs)

Maximum power rating (VSWR)

1.25:1

Frequency Range

DC to 4.0GHz

Peak Pulse Current (8/20ms)

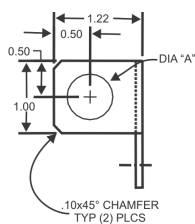
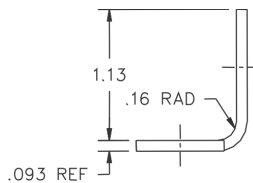
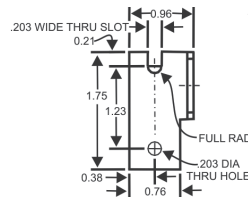
40kA

Impedance

50 or 75Ω
(depending on connector type)

Brackets

N, 7/16, BNC and TNC Connector Brackets



Model	Connectors	Diameter
RF51074	7/16 DIN	1.146" (2.91cm)
RF51075	N	0.630" (1.6cm)
RF51077	BNC/TNC	0.505" (1.28cm)

Specification table

Model	Connectors	Frequency range (GHz)	VSWR	Insertion loss (dB)	Peak pulse current (8µs x 20µs)	Impedance (Ω)
RF51062*	7/16 Bulkhead(f) to 7/16(m)	DC- 4.0	1.25:1	.1	40kA	50
RF51063*	7/16 Bulkhead(f) to 7/16(f)	DC-2.5	1.25:1	.1	40kA	50
RF51064*	N Bulkhead(f) to N(f)	DC-2.5	1.25:1	.1	40kA	50
RF51065*	BNC Bulkhead(f) to BNC(f)	DC-2.5	1.25:1	.1	40kA	50
RF51066*	TNC Bulkhead(f) to TNC(f)	DC-2.5	1.25:1	.2	40kA	50
RF51067*	TNC(m) to TNC(f)	DC-2.5	1.25:1	.2	40kA	50

*Add alpha suffix to identify gas-tube voltage: A = 90V, B = 145V, C = 230V, D = 350V, E = 470V, F = 600V, G = 800V, H = 1,000V

Gas-tube voltage (voltage should be defined by maximum RF power)

Parameter	A							
	A	B	C	D	E	F	G	H
Voltage Code	A	B	C	D	E	F	G	H
Gas- Tube Voltage Rating	90	145	230	350	470	600	800	1000
Maximum RF Watts See notes 1, 2, 3	37	96	241	558	1006	1640	2915	4555
kA Transient Current for 8 x 20µs puls	40	40	40	40	40	40	30	20
V dynamic at 5k/µs	600	600	650	800	1200	1500	1900	2200
Let-through Energy in mJ see notes 1 & 4	0.3	0.3	0.35	0.7	2.2	4.4	9.0	14

- Note 1:** Data given for 50Ω systems. For 75Ω systems multiply by 0.67 for 90W systems multiply by 0.55.
- Note 2:** For combined carrier applications the sum of all peak RF voltages plus any injection voltages should not exceed 60% of the Gas-Tube voltage rating. Peak RF volts = 1.4 x (RF power x Ohms) ^0.5.
- Note 3:** RF power is limited by the connector capability also.
- Note 4:** Let-through Energy based on the 6kV/3kA per ANSI C62.41.

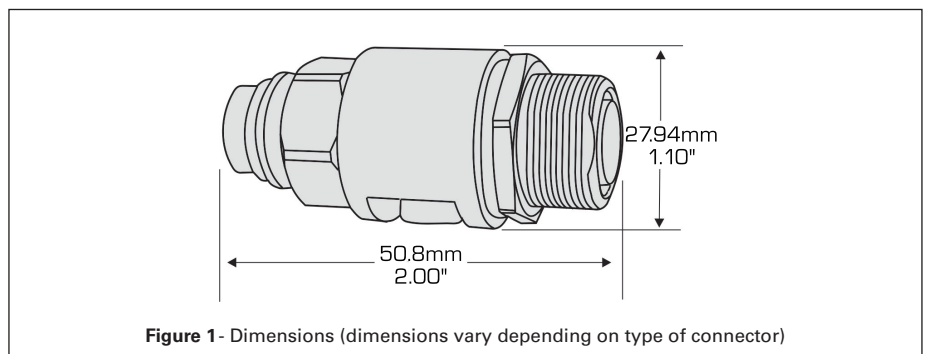


Figure 1 - Dimensions (dimensions vary depending on type of connector)

To order specify -

Order by module, as listed in the specification table.



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