

SITE INSTALLATION MATERIAL



QUARTER WAVE SURGE ARRESTOR



A surge protector is an appliance designed to protect electrical devices from power surges and voltage spikes. Surge protectors attempt to regulate the voltage supplied to an electric device by either blocking or shorting to ground voltage above a safe threshold.

Lightning can generate high power surges to electronic equipment, and extensively damage communications networks. Therefore lightning protectors are needed to protect sensitive equipment from these harmful impulses. Protecting devices should be physically located close to the equipment to be protected: the closer, the better. Common locations in wireless infrastructures are at the top of the mast where the transmission line exits the antenna and at the entrance or inside the cabinet where the transmission line enters the Base Station electronics. Applications that utilize tower mount electronics require additional lightning protectors.

LAMBDA can offer different solutions to prevent communication systems from direct and indirect Lightning Electro Magnetic Pulses (LEMP). LAMBDA lightning protectors are coaxial devices using N or 7/16 interfaces. They can operate at today and future's wireless communication bands (2G, 3G...). Maximum VSWR is less than 1.24 in the working frequency band. They are silver plated.

LAMBDA lightning protectors can be used either for indoor applications or for outdoor applications. They are reversible and can be used in both directions. They have been successfully tested under vibrations, salt spray, thermal shocks. They are all labeled with their part number and their operating frequency band. Regarding environmental matters, packaging is a foam-free unit cardboard box in which the device is captured and protected by a neutral plastic film.

LAMBDA has already designed the next generation of quarter wave protectors: Multiband protectors. The same protector can work within several frequency bands. Our standard multiband protectors can provide the same excellent protection, whether to CDMA, GSM, PCS, DCS or UMTS communication Networks.

Main features: Quarter wave protectors do not require any maintenance, they achieve high passive intermodulation performance (-110dBm/-153dBc) and they only pass the lowest residual voltage. But, disadvantages are that they can not

QUARTER WAVE SURGE ARRESTOR

QUARTER WAVE SURGE ARRESTOR 7-16 DIN / N

806 MHz to 960 MHz and 806 MHz to 2500 MHz; Bulkhead Single Hole

CHARACTERISTICS

Electricals

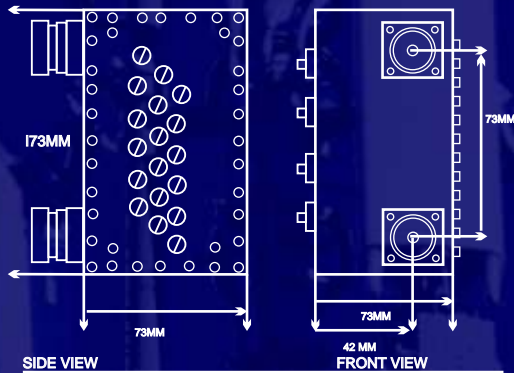
Impedance	50 Ω
Frequency Range	According to Product specification
Minimum Return Loss	25dB
RF Leakage (dB)	100
Surge current capability (kA) (8/20 μ S test)	50pulse)
Insertion Loss (dB)	0.2 dB
Residual voltage	15 Vmax at 2.50 kA

CHARACTERISTICS

Environmental

Body	Brass
Nut	Brass
Gasket	Silicon Rubber or Copper
Insulator	PTFE
PIN	BeCu

BAND PASS FILTER



BPF-LMT-900-05

The BPF-LMT-900-05 is an integrated transmit and receive Band Pass Filter designed for use in the GSM 900 frequency band. Along with the unique characteristics of this filter with high selectivity and small physical size, the attributes provide the cellular operators with a cost-effective solution where filtering is required. The BPF-LMT-900-05 is used to filter unwanted carrier frequencies introduced from closer bands like CDMA 800 etc.

PERFORMANCE CHARACTERISTICS :

A) Rx Channel

1 Pass Band:	890.0 – 915 MHz
Insertion Loss	
2 890 – 892 MHz:	2.0 dB Typ , 3.5 dB Max
3 892 – 895 MHz:	0.7 dB Typ , 1.0 dB Max
4 895 – 915 MHz:	0.6 dB Typ, 1.0 dB Max
Return Loss:	18 dB Min.

B) Tx Channel

1 Pass Band:	935.0 – 960.0 MHz
2 Insertion Loss:	0.4 dB Typ, 0.55 Max
3 Return Loss:	18.0 dB Min.

Rejection

869 – 889 MHz:	30.0 dB Min.
Impedance:	50 ohms
Connectors (I/O):	7/16 DIN (F)

Dimensions: 176 mm X 73 mm X 74 mm.(LBH)

Temperature Range: - 5deg to + 45deg C
Power Handling: 100 Watt Average Single Carriers

800 Watt Peak, : Indoor
Instantaneous Environment

Lightening Protection: DC Ground (Stud) Provided

Finish: Silver Plated Al, Powder Coated / Spray Coated, outer Finish

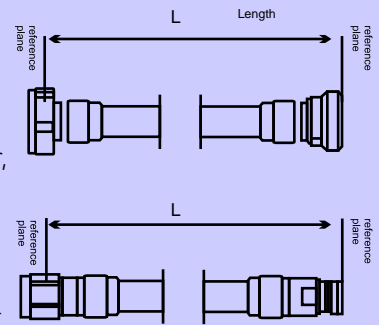
Weight: 2.2 kgs (Approx.)

DIN 7/16(M) - DIN (M)

JUMPER CABLE



The Jumper Cable Assemblies Made at Lambda are under the technical Supervision of Rosenberger Beijing. We At Lambda Import 1/2" Superflex Cables and high quality Connectors from Rosenberger, and connectorize the Jumper Assemblies with special tools to Achieve The Lowest VSWR & Maximum Return Loss .We at Lambda have In-House Testing Facility Such as Network Analyzer E5062A Agilent Make, to ensure testing soon after assembling the jumpers. We also Import directly, Ready Made Jumper Assemblies for some of our customers from Rosenberger, Beijing.



Specification

Connector Type	Solder/ Socket
Connector Interface	7/16 DIN, N type Straight/90 bend
Minimum Return Loss (max. VSWR)	20 (1.22:1)
Frequency Range	806 ~ 2200 Mhz
Operating Temperature Range	-55 ~ +80 deg. C
Bending Moment	2.7 Nm
Crush Resistance	3.4 Kg/mm

Lambda manufactures a range of in building solution products like Power Splitters / Power Tappers / Couplers

POWER SPLITTERS: THE RANGE

1:2, 1:3, 1:4

TAPPERS 3 DB, 6 DB, 7 DB, 10 DB, 15 DB, 13 DB

PRODUCT SPECIFICATIONS:

Product Line	Coaxial Cable Accessories
Product Type	POWER SPLITTERS
PORTS	2 WAY,3 WAY 4 WAY
Connector Interface	7-16 DIN, N - TYPE
Connector A	7-16 DIN Female, N Female
Connector B	7-16 DIN , N (Female)
Coaxial Cable Type	Air Dielectric, Foam Dielectric, Radiating Cable
Minimum Return Loss (max. VSWR), dB (VSWR)	20 (1.22:1)
Frequency Range - MHz	806 - 2200

POWER SPLITTER /POWER DIVIDER



INDOOR ANTENNAS



Indoor Antenna

For eliminating blind zone indoor wireless communication signal coverage systems, Lambda supply a series of indoor antennas, of which, the Omni antenna (ceiling mount type) and Directional panel antenna (wall mount type) listed as follows are the most often used, which suit for GSM, CDMA, PHS, WLAN, and 3G network.

Type	Omni (ceiling mount type)	Directional (wall mount type)
Code	LMT0825-2	LMT 0825-7
1. Frequency Range MHZ	8000-2500	800-2500
2. Gain dBi	2	7
3. Horizontal Beam width	360°	40-95°
4. Verticale Beam width	75°	50-80°
5. Intermodulation Im3	<-107 dBm	<-107dBm
6. Polarization	Vertical	Vertical
7. VSWR	<1.4	<1.4
8. Power W	50 max	150 max
9. Thunder Proof	DC grounding	DC grounding
10. Temperature °C	-40 - +60	-40 - +60
11. Humidity %	20-95	20-95
12. Connection	N (f) 50 Ohm	N (f) 50 Ohm
13. Radome+Radiator Material	ABS+Brass	ABS+Brass
14. Dimension mm	Ø 165 x 110	Ø 165 x 110
15. Weight	250g	500g