Dinesh Micro Waves & Electronics

Telecom Components

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 communication 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. 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.

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

DINESH MICROWAVES AND ELECTRONICS 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 inter modulation performance (-110dBm/-153dBc) and they only pass the lowest residual voltage. But, disadvantages are that they can not pass DC signals and must incorporate a fairly long stub element. Quarter Wave Surge Arrestor 7-16 DIN / N 806 MHz to 960 MHz and 806 MHz to 2500 MHz; Bulkhead Single Hole.

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CHARACTERISTICS

Electrical	Impedance	50 Ù
	Frequency Range	According to product specification
	Minimum Return Loss	24
	RF leakage (dB)	100
	Surge current capability (kA) (8/20 ì S test pulse)	50
	Insertion loss (dB)	0.2 Db
	Residual voltage	15V max at 2.50 kA, 8/20 ì S
Mechanical	Durability (matings)	500
	Recommended coupling nut torque(N.cm)	3500
	Bulkhead mounting torque (N.cm)	3500

Quarter Wave Surge Arrestor 7-16 DIN
806 MHz to 960 MHz and 806 MHz to 2500 MHz; Bulkhead Single Hole

CHARACTERISTICS

Environmental	Temperature range	- 40 ~ + 85°C
	Moisture resistance	IP66
	Thermal shocks	IEC - 55°C/+155°C / 5 cycles
	High temperature test	CECC 1000h/155° C
	Salt spray corrosion	IEC 48h/Na Cl 5%/35° C
	Vibration	CECC 98m/s 2 - 10 Hz at 500 Hz
Materials	Body	Brass
	Nut	Brass
	Gasket	Silicon Rubber or Copper
	Insulator	PTFE

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BAND PASS FILTER

The BAND PASS FILTER is an integrated transmits and receives freequencies, designed for use in GSM 900 frequency bands. Along with the unique characteristics of this filter with high selectivity and small physical size, the attributes provide the cellular operators with the cost effective solution where filtering is required. The BAND PASS FILTER is used to filter unwanted carrier frequencies introduced from closer bands like CDMA 800 etc.

Performance characteristics:

The above plot displays the typical graph for insertion loss & return loss.

A) Rx Channel	
1.) Pass Band: Insertion Loss	890.0 - 915 MHz
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 Ω
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, Instantaneous Environment:	Indoor
Lightening Protection:	DC Ground (Stud) Provided
Finish:	Silver Plated Al, Powder Coated / Spray Coated, outer Finish
Weight:	2.2 kgs (Approx.)

The above plot displays the typical graph for insertion loss & return loss.

The following markers are displayed

MARKER	FREQUENCY	INSERTION LOSS	RETURN LOSS
M1	886.8	39.2 dB	2 dB
M2	889.0	4.0 dB	10dB
M3	890.0	2.3dB	22dB
M4	898.0	1.2dB	25dB
M5	915.0	0.6dB	26dB
M6	935.0	0.4dB	23dB
M7	960.0	0.38dB	29dB

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JUMPER CABLE

2 Mtr. DIN 7/16 (M) - DIN (M) and 1 Mtr. DIN 7/16 (M) - N (M) Super flex Cables and high quality Connectors and connectorize the Jumper Assemblies with special tools to Achieve The Lowest VSWR & Maximum Return Loss .We are providing as per customer requirements and importing products from other countries.

Specifications

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° C
Bending Moment	2.7 Nm
Crush Resistance	935.0
M7	3.4 Kg/mm

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INDOOR ANTENNA

DINESH MICROWAVES AND ELECTRONICS is designed for eliminating blind zone in indoor wireless communication signal coverage system, a series of indoor antennas, of which, the Omni antenna (ceiling mount type) and Directional panel antenna (wall mount type) listed for GSM, CDMA, PHS, WLAN, and 3G network.

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