

# Log Periodic Outdoor Antenna

by WAVEFORM

SKU: ANT660-NF-LOGP11



## Main Features:

- Wideband Log Periodic Antenna
- 50  $\Omega$
- 7-11.5 dBi
- 600-6000 MHz

## Specifications:

### Electrical:

Frequency Range	600-698 MHz	698-960 MHz	1710-6000 MHz
Gain (Peak)	6.0 dBi $\pm$ 1.0 dB	9.5 dBi $\pm$ 0.5 dB	11.0 dBi $\pm$ 0.5 dB
Horizontal Beamwidth	105 deg	95 deg	78 deg
Vertical Beamwidth	87 deg	68 deg	56 deg
VSWR	$\leq$ 2.0	$\leq$ 1.8	$\leq$ 1.5
Front-to-Back Ratio		$>$ 15 dB	
Input Impedance		50 $\Omega$	
Polarization		Vertical	
Power Rating (Peak)		50 W	

### Mechanical:

Type	Directional
Radome Color	White
Radome Material	ABS (UV Stabilized)
Dimensions	440 x 205 x 60 mm
Connector Type	N-Female
Cable Type	RG58
Cable Length	300 mm
Net Weight	1.1 kg
Mounting Type	Pole
Mounting Material	Steel

### Environmental:

Protection Class	IP65
Rated Wind Velocity	120 km/h
Operating Temperature	-40 to +60 deg C
Lightning Protection	DC Ground



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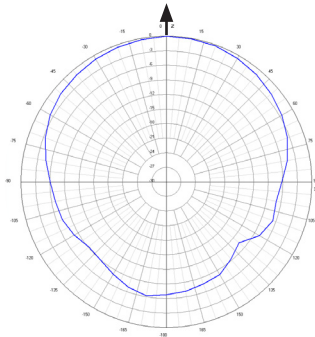
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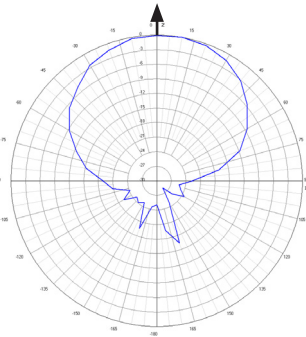
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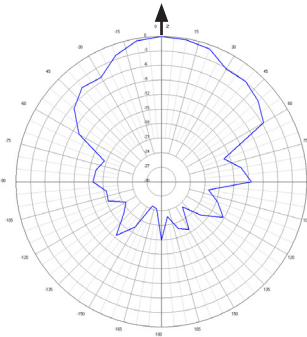
650 MHz



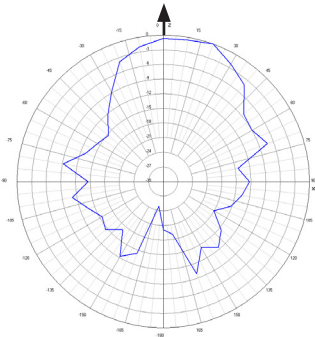
1950 MHz



3800 MHz

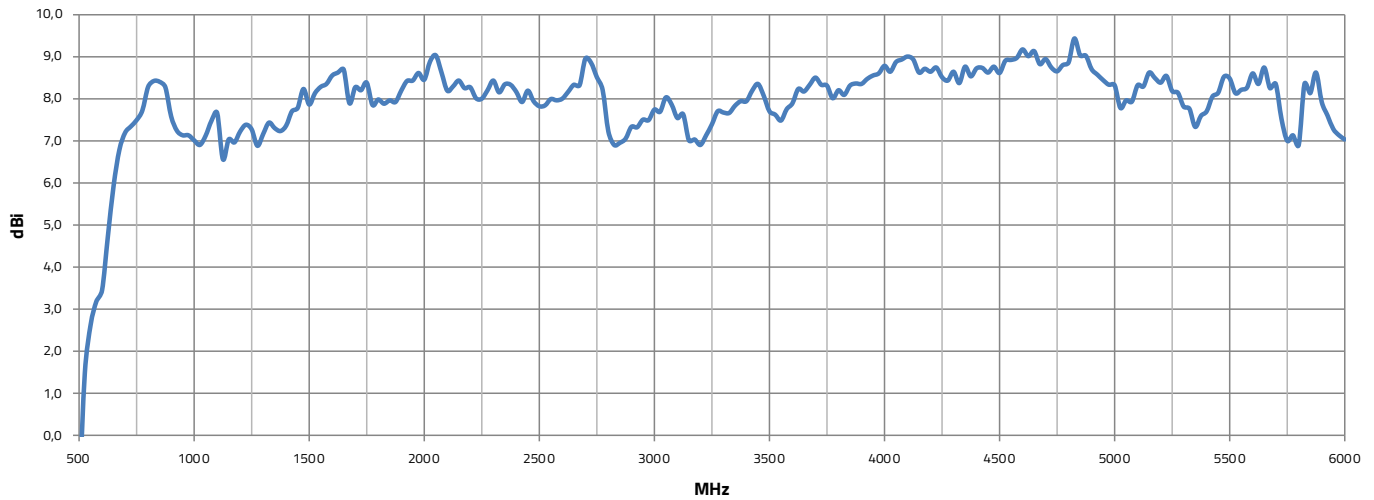


5400 MHz



Vertical Plane  
"Top-down view"

### Antenna Broadside Gain (dBi) by Frequency (MHz)



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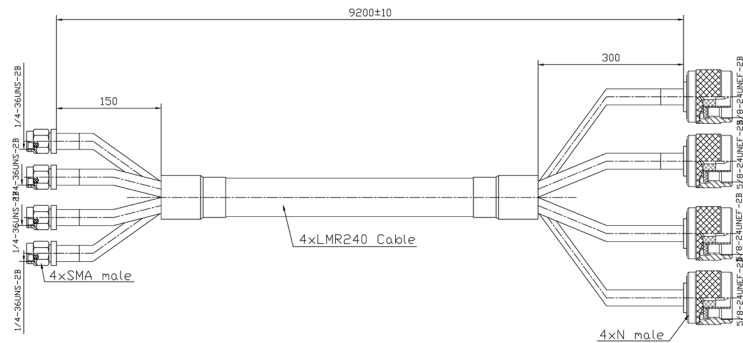
# Quad-RS240 N-Male to SMA-Male Coaxial Cable (30ft)

by WAVEFORM

SKU: RS240-QUAD-NM-SMAM-30

## Main Features:

- N-Male to SMA-Male connectors
- 0-6000 MHz
- 50  $\Omega$
- 17.8 mm (0.7 inch) diameter cable



Section Description	Material	Plating
N Body	Brass	Nickel
SMA Body	Brass	Gold
Inner Conductor	Aluminum	Copper
Dielectric	FPE	
Outer Conductor	Bonded Aluminum Foil	
Overall Braid	Aluminum-Magnesium Wire	
Jacket (Indiv.)	PVC	
Inter-Cable Fill	PP-Polyester	
Jacket (Group)	PVC	

## Specifications:

### Electrical:

Input Impedance	50 $\Omega$
Frequency Range	0 - 6000 MHz
VSWR	$\leq 1.25$
Capacitance	79.4 pF/m
Velocity	84 %
Shielding	> 90 dB
Power Rating (Peak)	5.6 kW
Voltage	1500 V max (Working) 2500 V rms (Withstand)
Contact Resist. (N)	$\leq 1$ m $\Omega$ (Center) $\leq 1$ m $\Omega$ (Outer)
Contact Resist. (SMA)	$\leq 3$ m $\Omega$ (Center) $\leq 2$ m $\Omega$ (Outer)
Insulation Resist.	$\geq 5000$ M $\Omega$

### RF Attenuation (per 30 ft):

600 MHz	1.8 dB
900 MHz	2.3 dB
1800 MHz	3.3 dB
2100 MHz	3.5 dB
2500 MHz	3.9 dB
3000 MHz	4.3 dB
4000 MHz	4.9 dB
5000 MHz	5.6 dB
6000 MHz	6.2 dB

### Environmental:

Burial Rated?	No
UV Rated?	Yes
Operating Temp.	-55 to +155 deg C

### Mechanical:

Jacket Color	Black
Cable Type	RS240 (LMR240)
Cable Diameter (Group)	17.8 mm (0.7 in)
Cable Diameter (Indiv.)	6.1 mm (0.24 in)
Cable Length	9.2 m (30 ft)
Bending Radius	30 mm (1.2 in.)
Connector A Type	N-Male
Connector A Diameter	20.3 mm (0.9 in.)
Connector B Type	SMA-Male
Connector B Diameter	7.9 mm (0.3 in.)
Net Weight	1.82 kg (4.0 lbs)



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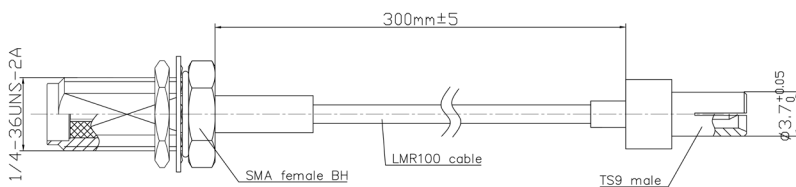
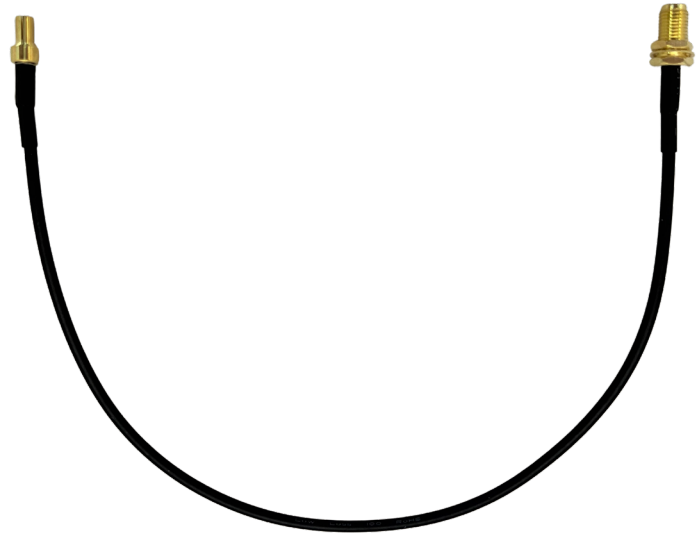
# SMA-Female to TS9-Male Pigtail Adapter

by WAVEFORM

**SKU: PTA-SMAF-TS9M**

## Main Features:

- SMA-Female to TS9-Male connector
- 0-6000 MHz
- 50  $\Omega$
- 2.79 mm diam. cabling



Section Description	Material	Plating
SMA Body	Brass	Gold
TS9 Body	Brass	Gold
Crimping Suite	Brass	Nickel
Inner Conductor	Phosphor Bronze	Gold
Jacket	PE	
Gasket	Silicone Rubber	
Dielectric	PTFE	

## Specifications:

### Electrical:

Input Impedance	50 $\Omega$
Frequency Range	0 - 6000 MHz
VSWR	$\leq 1.25$
Capacitance	101.1 pF/m
Velocity	66 %
Shielding	> 90 dB
Power Rating (Peak)	0.6 kW
Insertion Loss (Typical)	< 0.4 dB @ 6000 MHz

### Mechanical:

Jacket Color	Black
Cable Type	LMR100
Cable Diameter	2.79 mm
Cable Length	30 cm
Bending Radius	6.35 mm
Connector A Type	SMA-Female
Connector A Diameter	7.9 mm
Connector B Type	TS9-Male
Connector B Diameter	3.8 mm
Net Weight	30 g

### Environmental:

Burial Rated?	No
UV Rated?	No
Operating Temperature	-40 to +85 deg C



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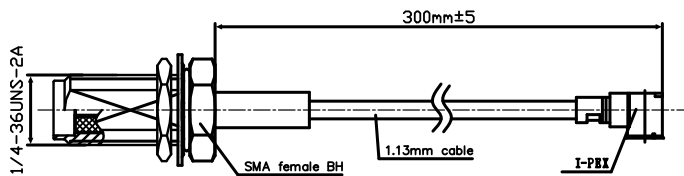
# SMA-Female to U.FL Pigtail Adapter

by WAVEFORM

SKU: PTA-SMAF-UFL-V2

## Main Features:

- SMA-Female to U.FL-Female connector
- 0-6000 MHz
- 50  $\Omega$
- 1.13 mm diam. cabling



Section Description	Material	Plating
SMA Body	Brass	Gold
I-PEX UFL Body	Brass	Gold
Inner Conductor	Steel	Silver & Copper
Dielectric	PTFE	N/A
Outer Conductor	Copper Braid	Silver
Jacket	FEP	Nickel

## Specifications:

### Electrical:

Input Impedance	50 $\Omega$
Frequency Range	0 - 6000 MHz
VSWR	$\leq 1.15$ (Straight) $\leq 1.25$ (Right Angle)
Capacitance	95.6 pF/m
Velocity	70 %
Voltage	335 V max (Working) 1000 V rms (Withstand)
Insertion Loss	$< 0.7$ dB @ 6000 MHz
Contact Resistance	$\leq 3$ m $\Omega$ (Center) $\leq 2$ m $\Omega$ (Outer)
Insulation Resistance	$\geq 5000$ M $\Omega$

### Mechanical:

Jacket Color	Black
Cable Type	1.13mm
Cable Diameter	1.13 mm (0.05 in.)
Cable Length	30 cm (12 in.)
Bending Radius	4 mm (0.15 in.)
Connector A Type	SMA-Female Bulk-head
Connector A Angle	Straight
Connector A Diameter	7.0 mm (0.27 in.)
Connector B Type	U.FL-Female
Connector B Angle	Right-Angle
Connector B Diameter	2.0 mm (0.8 in.)
Net Weight	15 g (0.5 oz)

### Environmental:

Burial Rated?	No
UV Rated?	No
Operating Temp.	-40 to +85 deg C



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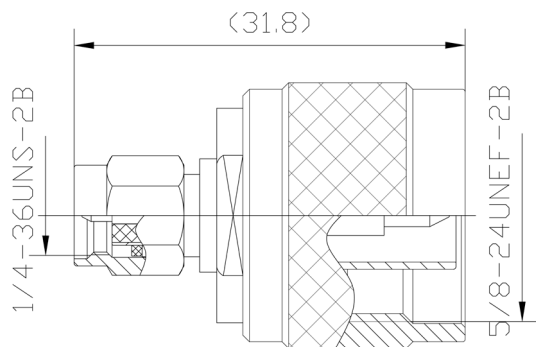
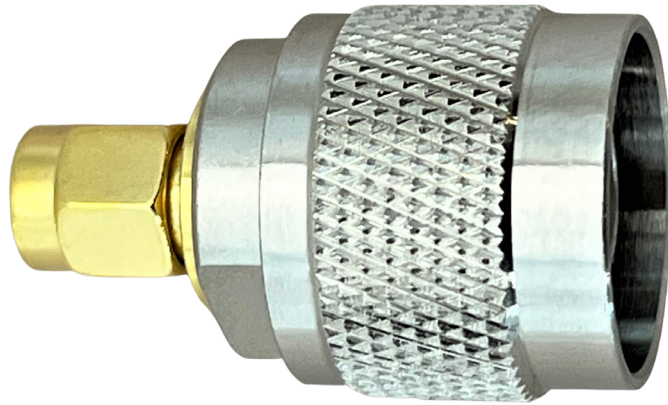
# N-Male to SMA-Male Adapter

by WAVEFORM

SKU: ADT-NM-SMAM

## Main Features:

- N-Male to SMA-Male connector
- 0-6000 MHz
- 50  $\Omega$



Section Description	Material	Plating
N Body	Brass	Nickel
SMA Body	Brass	Gold/Nickel
Inner Conductor	Phosphor Bronze	Gold/Silver
Gasket	Silicone Rubber	
Dielectric	PTFE	

## Specifications:

### Electrical:

Input Impedance	50 $\Omega$
Frequency Range	0 - 6000 MHz
VSWR	$\leq 1.3$
Insertion Loss (Typical)	.15 dB @ 6000 MHz

### Mechanical:

Connector Length	31.8 mm
Connector A Type	N-Male
Connector A Diameter	20.3 mm
Connector B Type	SMA-Male
Connector B Diameter	7.9 mm
Net Weight	45 g

### Environmental:

Burial Rated?	No
UV Rated?	Yes
Operating Temperature	-55 to +150 deg C



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# 50 Ohm Lightning Surge Protector Kit

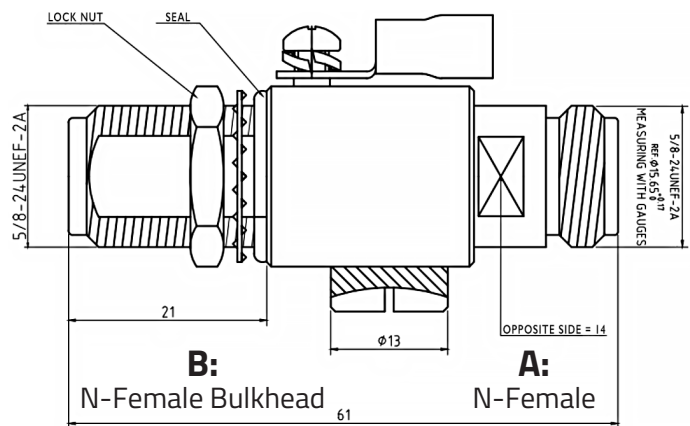
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SKU: WF-LSP-50-KIT



## Main Features:

- N-Female to N-Female Bulkhead Surge Protector
- 0-6000 MHz Frequency Support
- 50  $\Omega$  Impedance
- 5 ft 10 AWG Grounding Wire
- 5 ft RS240 N-Male to N-Male Jumper Cable



## Surge Protector Specifications:

### Electrical:

Frequency Range	0 - 6000 MHz
VSWR (DC)	$\leq 1.25$
Insertion Loss	$\leq 0.25$ dB
Input Impedance	50 $\Omega$
Insulation Resistance	$\geq 5000$ M $\Omega$
Transmission Power	200 W
Gas Tube Breakdown Voltage (DC)	90 V
Withstanding Voltage (50 Hz, at sea level)	$\geq 2500$ V RMS
Working Voltage (50 Hz, at sea level)	$\leq 1000$ V RMS
Maximum Impulse Discharge Current (8/20 $\mu$ s)	20 KA 2000 J
Contact Resistance (Center Contact)	$\leq 0.4$ m $\Omega$
Contact Resistance (Outer Contact)	$\leq 0.2$ m $\Omega$

### Mechanical:

Dimensions	22.7 mm $\varnothing$ x 61.0 mm
Connector A Type	N-Female
Connector B Type	N-Female Bulkhead
Connector Body	Nickel Plated Brass
Body	Nickel Plated Brass
Pin Material	Gold Plated Brass
O-Ring Material	Rubber
Ground Connection	By Feedthrough or Screw Terminal
Net Weight	0.13 kg
NFPA Rated?	No
ROHS Compliant?	Yes

### Environmental:

Protection Class	IP67
Operating Temperature	-55 to +155 deg C



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