

# High-Power LPDA

100 – 500 MHz

Product Code: LPDA-A0054



## SPECIFICATIONS:

Product versions:		
LPDA-A0054	High-power product , 1 kW uses a 7/16 (f) connector	
LPDA-A0054-01	Low-power product, 10 W uses an N-type female	
Electrical:		
Frequency range	100 – 500 MHz	
VSWR	2.5 :1	
Nominal input impedance	50 Ω	
Gain on horizon	7 dBi typical	
Elevation 3 dB beamwidth	60°	
Azimuth 3 dB beamwidth	110°	
Polarisation	Linear, adjustable vertical and horizontal	
MTBF	50,000 hrs	
Feed power handling		
	<b>LPDA-A0054</b>	<b>LPDA-A0054-01</b>
Connectors	7/16 female	N-type (f)
	1 kW	10 W
Mechanical:		
Dimensions (w x l)	1600 mm x 1700 mm	
Material	Aluminium, stainless steel, fibreglass	
Total mass	16 kg	
Mounting	Off – centre on 1.1 m isolation pole (supplied)	
Environmental: designed to meet the following specifications		
Wind survival on mast	160 km/h (calculated)	
Temperature range	- 30 °C (no icing) to + 65 °C	

## PRODUCT FEATURES:

- Low VSWR and high gain over the frequency band
- High feed power handling of 1 kW
- Vertical and horizontal polarisation
- Easy to assemble and disassemble
- Rugged construction

## PRODUCT APPLICATIONS:

- Wideband monitoring
- High-power applications

## PRODUCT DESCRIPTION:

The LPDA-A0054 is a directional log-periodic dipole array that covers the frequency band 100 to 500 MHz at 1 kW of feed power with a typical gain of 7 dBi. Off-centre mounted on a supplied isolation pole.

Polarisation is adjustable between vertical and horizontal via the mounting bracket.

This antenna can be customized for frequencies in a wideband of frequencies with excellent gain, VSWR and higher power handling.

## RELATED PRODUCT:

LPDA-A0030: mounting at the back

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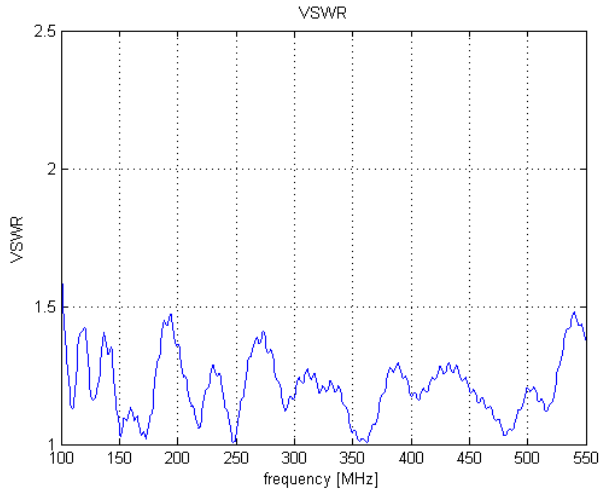
100 – 500 MHz

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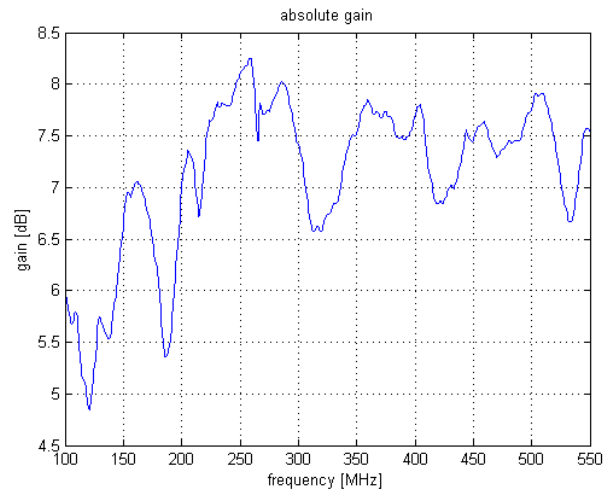
VERSION: 3.8

## VSWR AND GAIN GRAPHS:

### Typical VSWR:

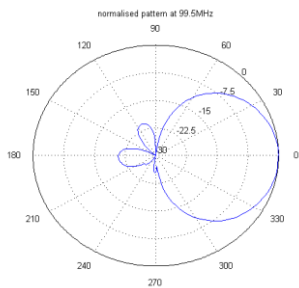


### MEASURED GAIN:

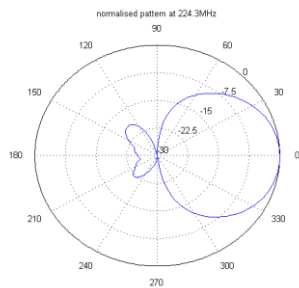


## Normalised radiation patterns:

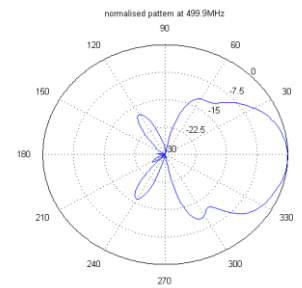
### E-plane:



100 MHz

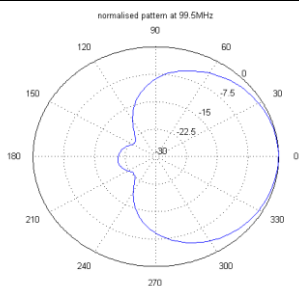


224 MHz

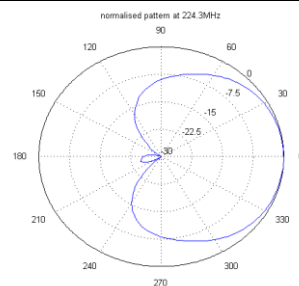


500 MHz

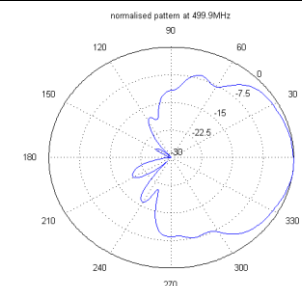
### H-plane:



100 MHz



224 MHz



500 MHz

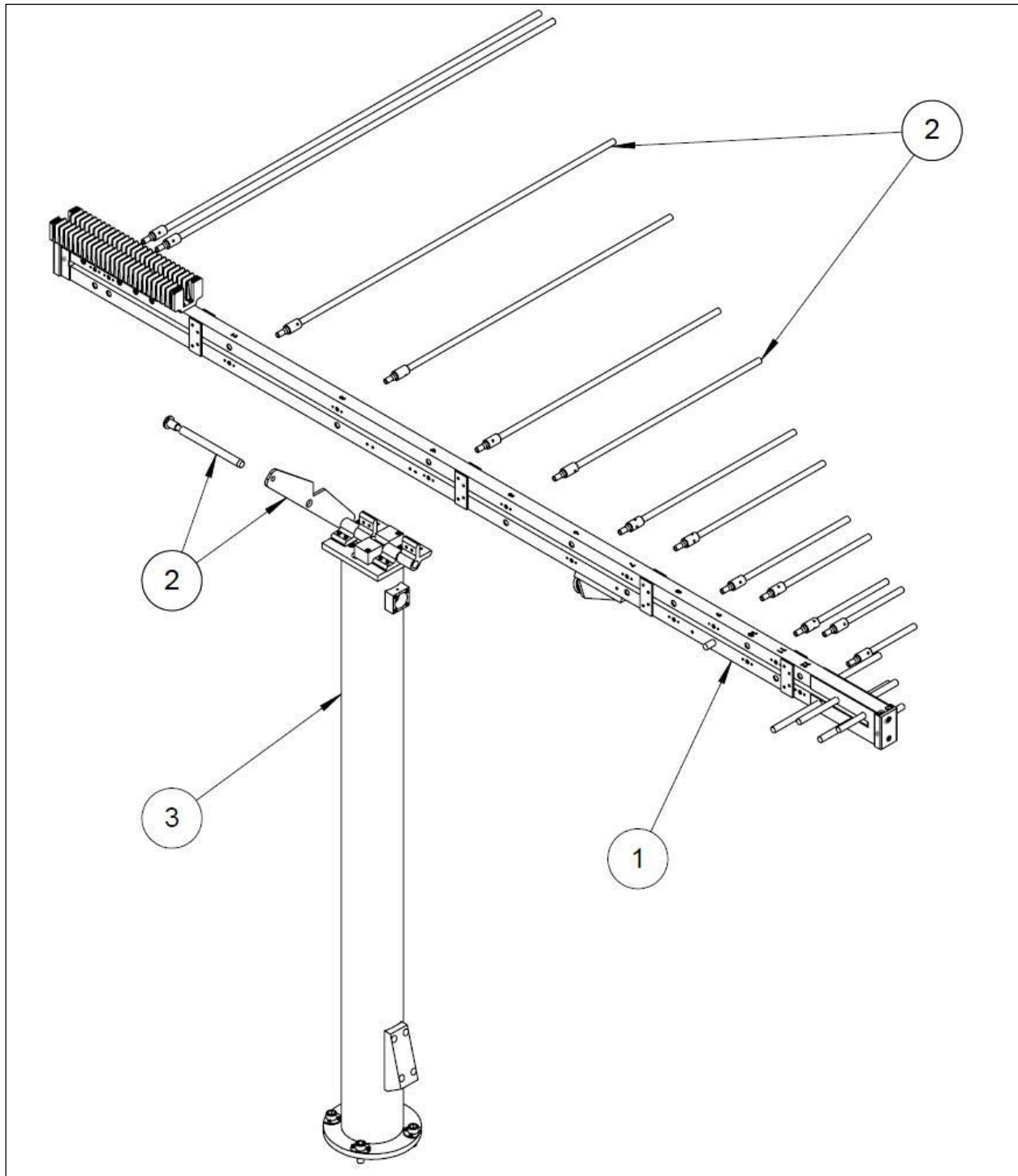
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EXPLODED VIEW OF LPDA-A0054 (only one side elements shown):



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## RE-ORDER PARTS LIST (refer to figure 1):

No	Product order code	Description	Contents
1	MISC-A0062-01	Spare boom section for LPDA-A0054	1 off LPDA-A0054 boom section, 7/16 connector
2	MISC-A0038	Spare element kit for LPDA-A0054	Complete set of elements, 2 of each, 26 total 1 off rotator arm 1 off hinge rod 1 off rotator rope (not shown) 1 off element bag (not shown)
3	MISC-A0062-02	Spare isolator pole for LPDA-A0054	1 off isolator pole 1 off 7/16 (m) RG225 jumper cable (not shown)
4	MISC-A0062-05	Hinge pin for LPDA-A0054	Hinge pin only
5	MISC-A0062-06	Hinge rotator arm for LPDA-A0054	Rotator arm only

### Connectors used for LPDA-A0054:

- Suhner 7/16 (female) 4 hole flange with M3 stud (23\_716-50-0-1)
- Suhner 7/16 (male) crimp for RG214 (11\_716-50-7-2)
- Suhner 7/16 (female) 4 hole flange for RG214 (25\_716-50-7-2)

### Connectors used for LPDA-A0054-01:

- Suhner N-type (female) 4 hole flange for Sucoform 141 (25 N-50-3-9)
- Suhner N-type (male) crimp for RG223 (11 N-50-3-29)
- Suhner N-type (female) 4 hole flange for RG223 (25 N-50-3-7)