

HF DF Antenna

1 – 30 MHz

Product Code: DF-A0048-01

SPECIFICATIONS:

Electrical:	
Frequency range	1 – 30 MHz
Channels	3 (including omni)
DF method	Watson-Watt or 3-channel CDF
RMS accuracy	< 3 ° RMS
Polarisation	Vertical
Omni pattern ripple	< 3 dB RMS
VSWR	< 5:1 (over 90% of the band)
Nominal impedance	50 Ω
Connector	3 x N-type female
Power handling	Receive only
ESD protection	All metal parts are grounded

Mechanical:	
Dimensions deployed	Ø 1560 mm diameter 2675 mm height 7260 mm guy rope distance
Dimension stowed (l x w x h)	1320 x 380 x 300 mm
Total mass	< 16 kg
Mounting	- Quadpod - Guy ropes - Rotator for direction orientation
Colour	Black

Environmental: designed to meet the following specifications	
Temperature range	Designed for storage: -30 °C to +70 °C Designed for operation -30 °C to +55 °C
Weatherproofing	Designed for IP66 rain resistant
Shock and vibration	Designed for MIL-STD 810E 516.4: vibration category 8, shock 40 g
Exposed materials	Painted aluminium and fibreglass

PRODUCT DESCRIPTION:

The DF-A0048-01 is a compact, stationary and transportable HF direction finding antenna designed for DF systems using the Watson-Watt estimation method, as well as 3-channel correlative DF. Included with the antenna is an integrated quad-pod, a carry bag and guy ropes.

The antenna consists of two identical loop antennas arranged in a “crossed-loop” configuration, with a large diameter of 1.6 m to achieve a high sensitivity. The loops make use of Alaris’ innovative and patented cross-polarisation cancelling technology that eliminates disturbances due to cross-polarisation from on-horizon sources. This offers enhanced, reliable accuracy in real-world applications and field trials over traditional crossed-loop designs. In addition to the loops, the DF-A0048-01 provides an omni-directional sense signal that can be used for monitoring and resolving the 180-degree angle of arrival ambiguity that is inherent in crossed-loop type DF antennas.

The antenna is made from lightweight materials and designed to be collapsible for quick, easy and repetitive deployment and stowing in a harsh field environment. The product is unique in that it features a fully integrated quadpod for rapid field deployment but can also be bolted to a plinth for semi-permanent installations. When stowed, the antenna collapses into a very small form factor for easy transportation and storage.



PRODUCT FEATURES:

- Stationary and transportable DF antenna
- High sensitivity
- Covers the whole HF band
- Patented cross-polarisation resistant technology
- Externally noise-limited passive antenna
- Waterproof
- Integrated quadpod for quick deployment
- Low visual profile
- Compact when stowed

APPLICATIONS:

- HF groundwave DF
- HF interferometric SSL DF
- HF monitoring
- Rapidly deployable DF

RELATED PRODUCTS:

- DF-A0016

*CA Application 2,853,219;

*EP Patent 2771943;

*U.S. Patent No. 14/353,382;

*ZA Patent No. 2014/02806

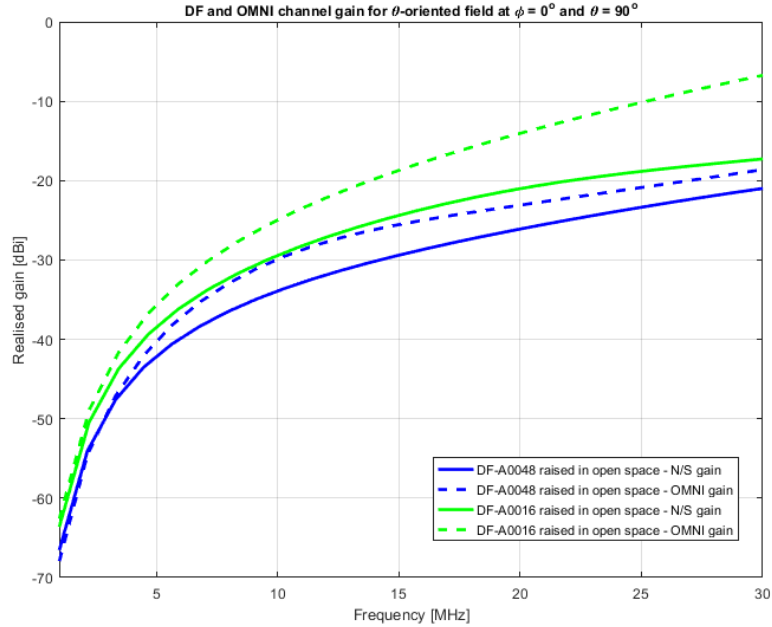
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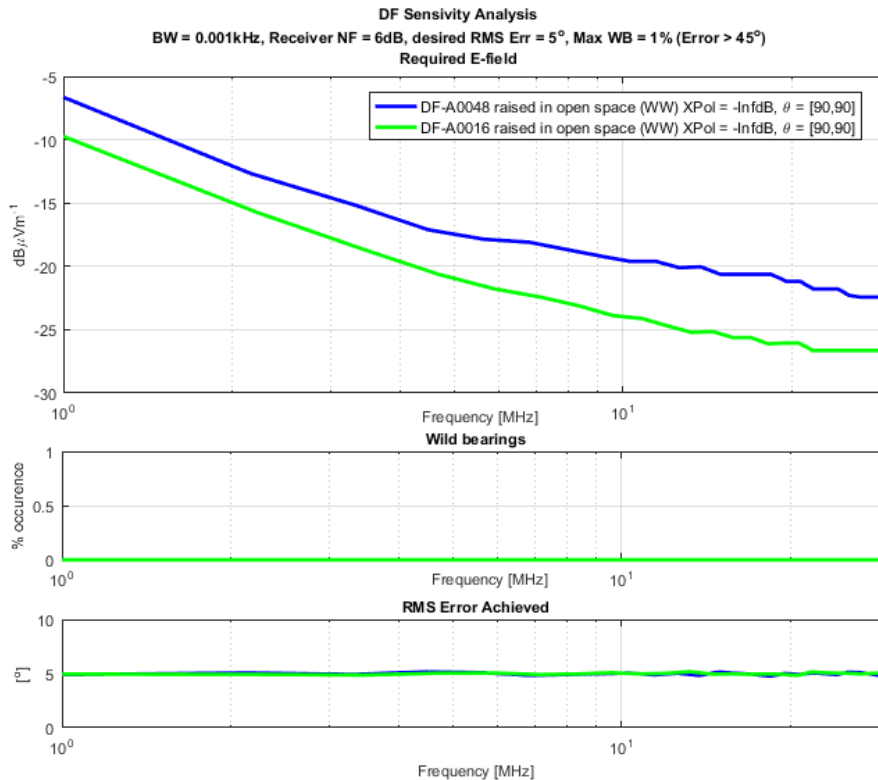
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VERSION: 1.1

Gain:



Sensitivity:



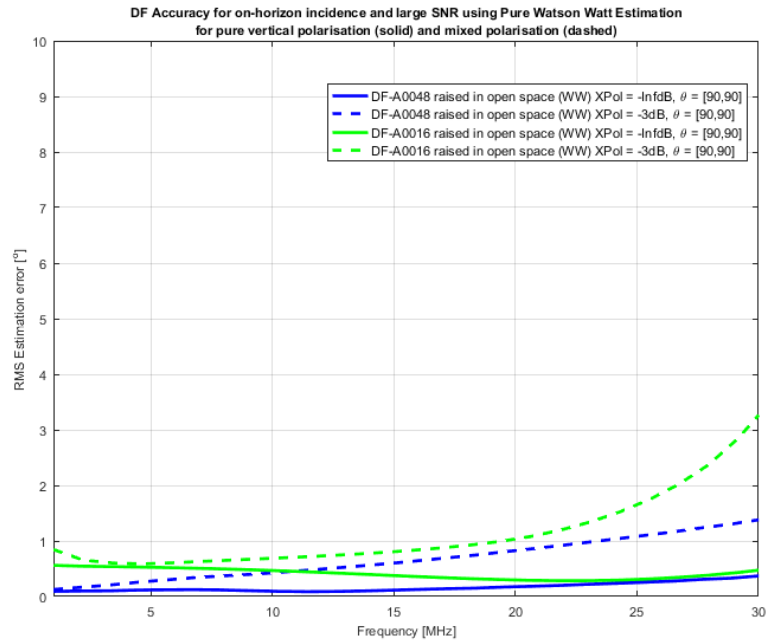
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DF Accuracy:



Outline dimension drawing:

