

Compact Adcock DF Antenna

500 – 2000 MHz

Product Code: DF-A0214

SPECIFICATIONS:



PRODUCT DESCRIPTION:

The DF-A0214 is a single band, compact Adcock DF antenna intended for direction-finding from 500 to 2000 MHz.

The antenna presents patterns suitable for the Watson-Watt estimation method, as well as 3-channel correlative DF (CIDE). The antenna offers an omni-channel output that can also be used for monitoring.

The DF-A0214 combiner board has an integrated noise source for calibration, passive GPS and an electronic compass.

Product Code: DF-A0214		500 – 2000 MHz Adcock DF antenna with combiner board and integrated noise source and GPS
Electrical: DF		
Frequency range	500 – 2000 MHz	
Number of channels	3	
DF method	Watson-Watt or 3-channel CIDE	
RMS accuracy	< 5° (using only pure WW)*	
Polarisation	Vertical	
Omni-output	On channel 1	
Nominal input impedance	50 Ω	
Electrical: Combiner board with integrated noise source (DF-A0124-01)		
Frequency range	500 – 2000 MHz	
Control	- RS 485 serial at 115 kbaud	
Switching time	< 100 µs using serial commands < 4 µs when using dedicated lines	
Integrated compass	Available on RS485 serial. Accuracy 2° RMS	
Stored information	Model no., serial no., user data fields	
RF calibration	Internal noise source	
Power supply	15 ±2 V DC	
Power consumption	< 1 W (noise source and compass off)	
Interfaces:		
Electrical	Connectors recessed into base of antenna	
Antenna outputs	4 x SMA female	
Integrated Passive GPS	1 x SMA female	
Control and power	MIL-DTL-38999 multi-pin connector	
Mechanical	Flange for vehicle or mast-mounting	
Mechanical:		
Dimensions (ø x h)	83 mm x 388 mm (including mounting flange)	
Total mass	< 2 kg	
Environmental: designed to meet the following specifications		
Wind survival	160 km/h (without ice)	
Temperature (operation)	-30 °C to +70 °C	
Vibration and shock	Designed to MIL-STD-810-F for ground vehicles	
Water proofing	IP65 rain proof	

* Improved accuracy is possible using correlative methods

Notes:

1. RMS accuracy is measured over all azimuth.

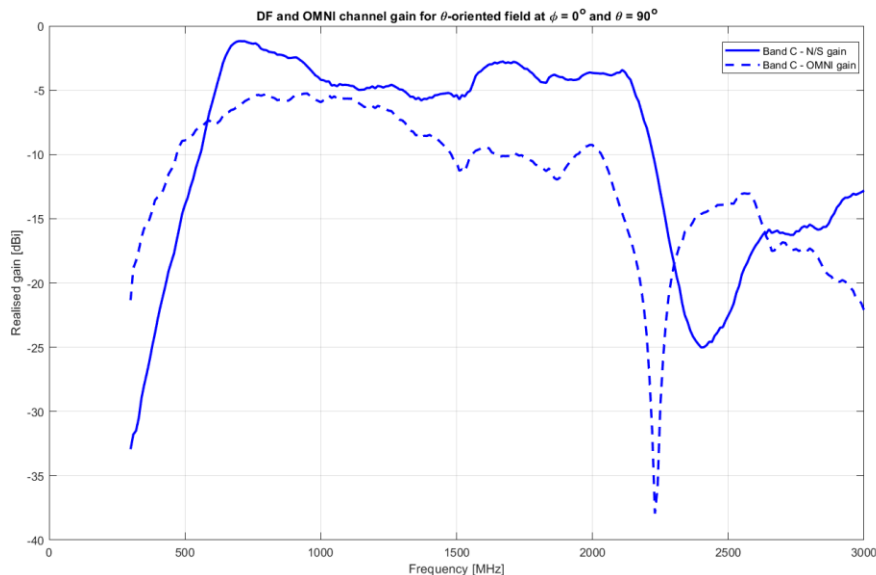
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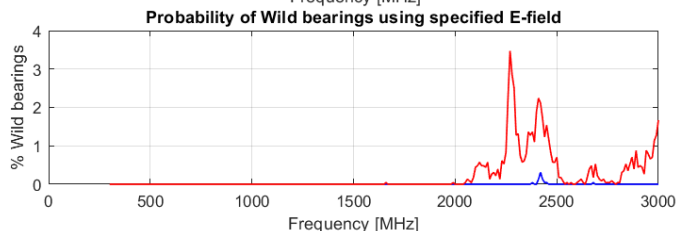
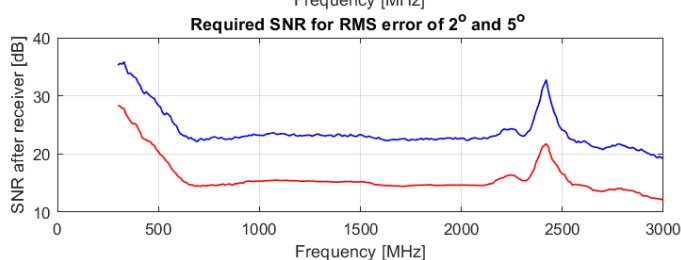
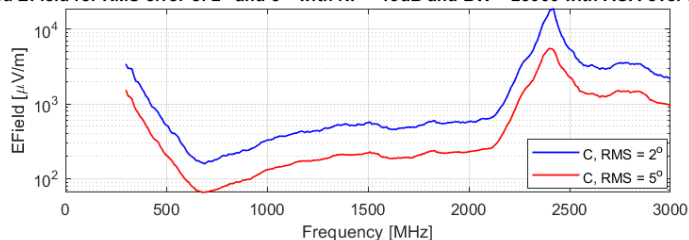
VERSION: 1.2

Antenna Channel Gain:



Sensitivity Graph:*

Required EField for RMS error of 2° and 5° with NF = 13dB and BW = 25000 with AOA over all ϕ at $\theta = 90^\circ$



* DF Sensitivity analysis using 3-Channel Correlative (CIDE) estimation