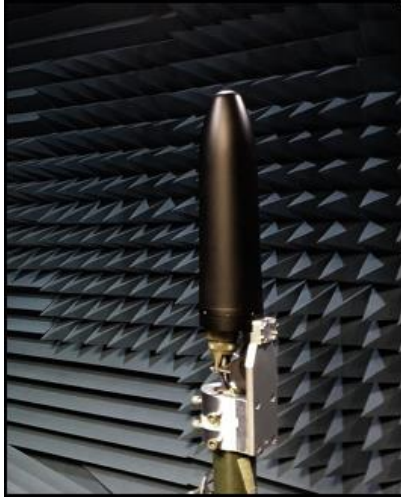


Compact Adcock DF Antenna

20 – 6000 MHz

Product Code: DF-A0257



PRODUCT DESCRIPTION:

The DF-A0257 is a tri band, compact Adcock DF antenna intended for manpack direction-finding on the move from 20 MHz to 6000 MHz. The DF-A0257 can also be used with the DF-A0245 quad pod antenna for better low-end performance.

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

The DF-A0257 has a low noise amplifier on each channel with passive bypass capability, an integrated noise source or optional external signal can be used for downstream RF chain calibration and also includes a navigation and GPS.

*CA Application 2,853,219;

*EP Patent 2771943;

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

*ZA Patent No. 2014/02806

Mechanical:

Dimensions (ø x h)	See outline below
Total mass	< 1.2 kg incl bracket

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-810F for ground vehicles
IP Rating	IP66

SPECIFICATIONS:

Product Code:	DF-A0257	
DF-A0257-02	RS485 communication interface	
DF-A0257-05	USB V2.0 communication interface, 64 MB onboard memory	
DF-A0257-05	USB V2.0 communication interface, integrated inertial navigation system and 64 MB onboard memory	
Electrical: DF		
Frequency range	20 – 6000 MHz	
Frequency bands	Band B: 20 - 500 MHz	
	Band C: 400 - 2000 MHz	
	Band D: 2000 - 6000 MHz	
Number of channels	3	
DF method	Watson-Watt or 3-channel CDF	
RMS accuracy	See graph below	
Polarisation	Vertical	
Omni-output	Yes	
Nominal input impedance	50 Ω	
Electrical:		
	DF-A0257	DF-A0257-02 / -05
Frequency range	20 – 6000 MHz	
RF Amplification Gain	20 ± 2 dB	
Control	RS 485 serial at 115 kbaud	USB V2.0
Switching time	< 100 µs using serial commands < 5 µs when using dedicated lines	< 25 µs
Integrated features:		
Navigation	DF-A0257 / -02 Integrated compass Heading accuracy 2° RMS	DF-A0257-05 Integrated GPS/INS ¹ unit. Heading accuracy 0.3° RMS
GPS Antenna	Active (L1)	
Onboard Storage	DF-A0257 Model no., serial no., user data fields	DF-A0257-02 / -05 64MB flash in addition to Model no., serial no., user data fields
Programming interface	None	to integrated micro controller
RF calibration	RF chain calibration using Integrated noise source or external applied signal	
Power supply	6 - 18 V DC	
Power consumption	< 3W	
Interfaces:		
Connector	MIL-DTL-38999 multi-pin connector	
Antenna outputs	3 x co-axial	
Integrated GPS	1 x co-axial	
Ext cal input	1 x co-axial	
Control and power	4 x digital	
Programming	4 x digital (DF-A0257-02 / -05 only)	
Mechanical	Removable flange for vehicle or mast-mounting Various sockets for tripod / gooseneck (1/4-20 UNC, 3/8-16 UNC, M10-6H, 3x M5-6H)	

Notes:

¹ VN-200 GPS/INS

Related products: DF-A0245, DFS-A0245-02

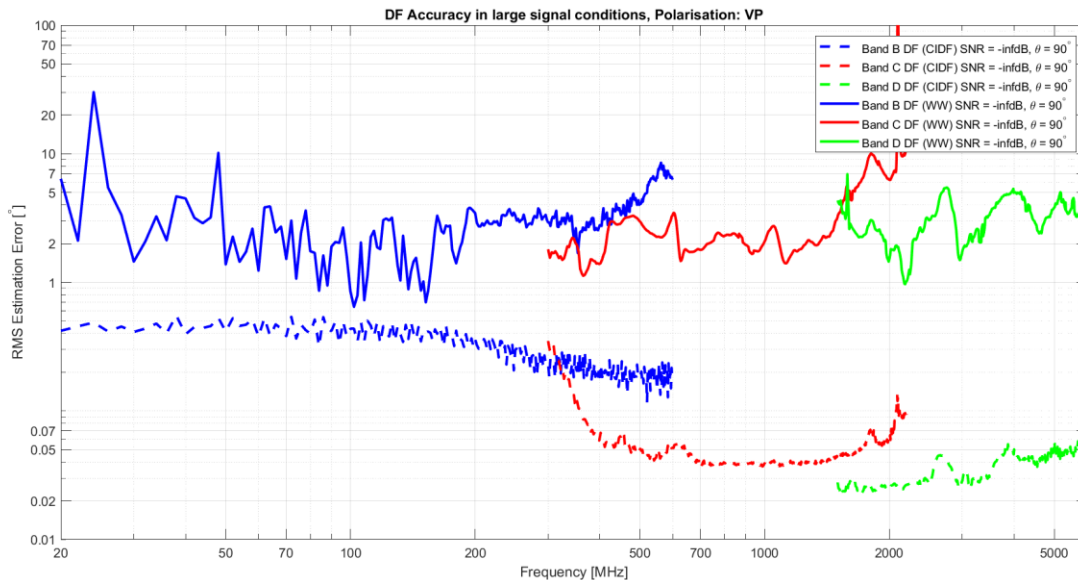
Compact Adcock DF Antenna

20 – 6000 MHz

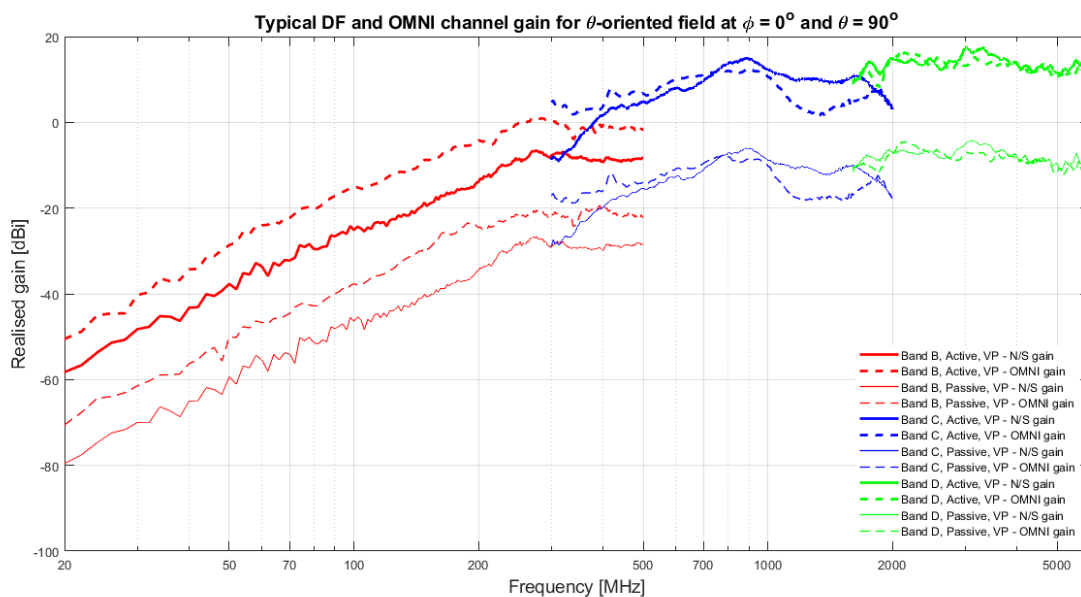
Product Code: DF-A0257

VERSION: 1.3

Accuracy:



Typical Gain Levels:



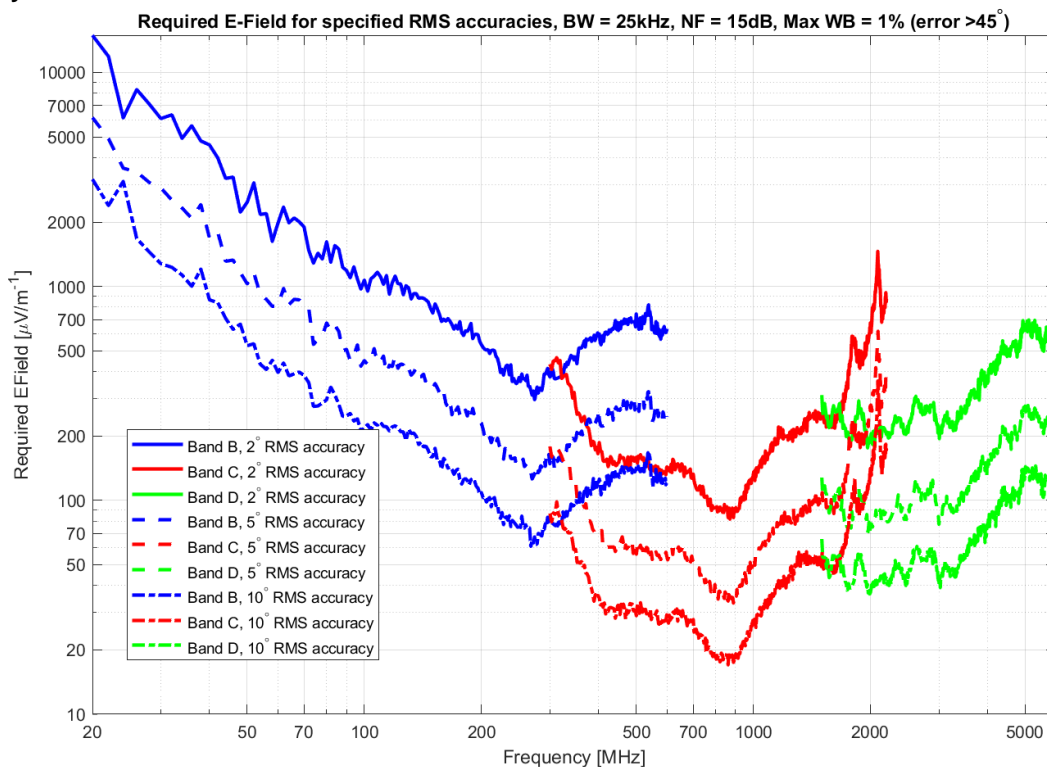
Compact Adcock DF Antenna

20 – 6000 MHz

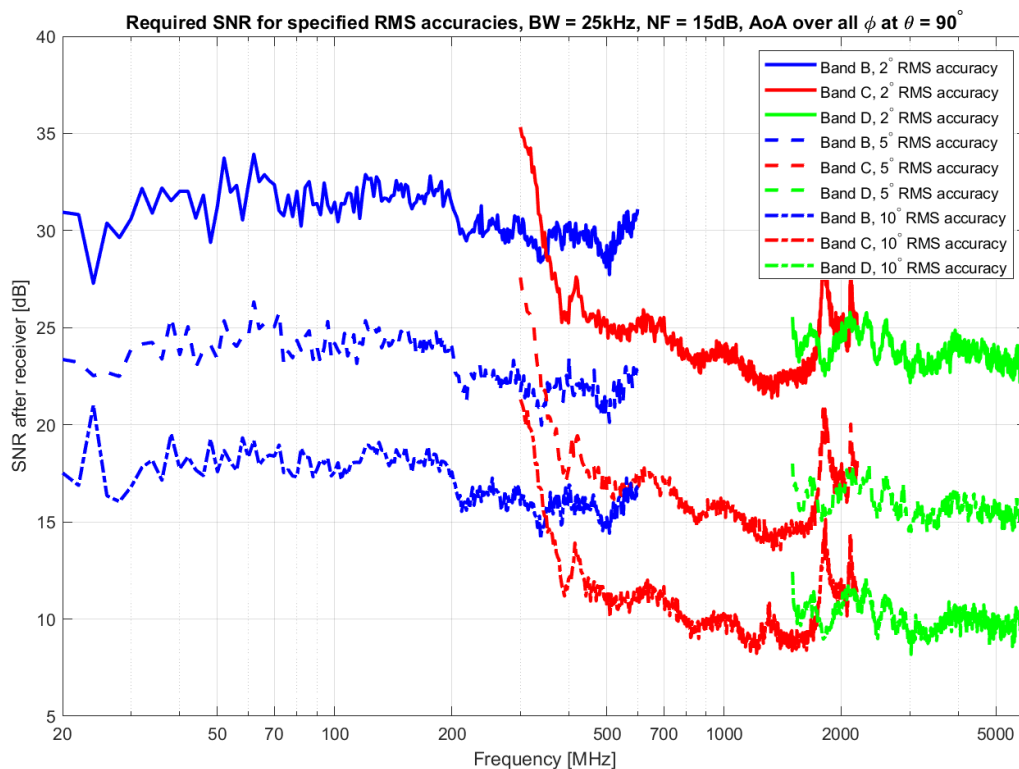
Product Code: DF-A0257

VERSION: 1.3

Sensitivity:



SNR:



Compact Adcock DF Antenna

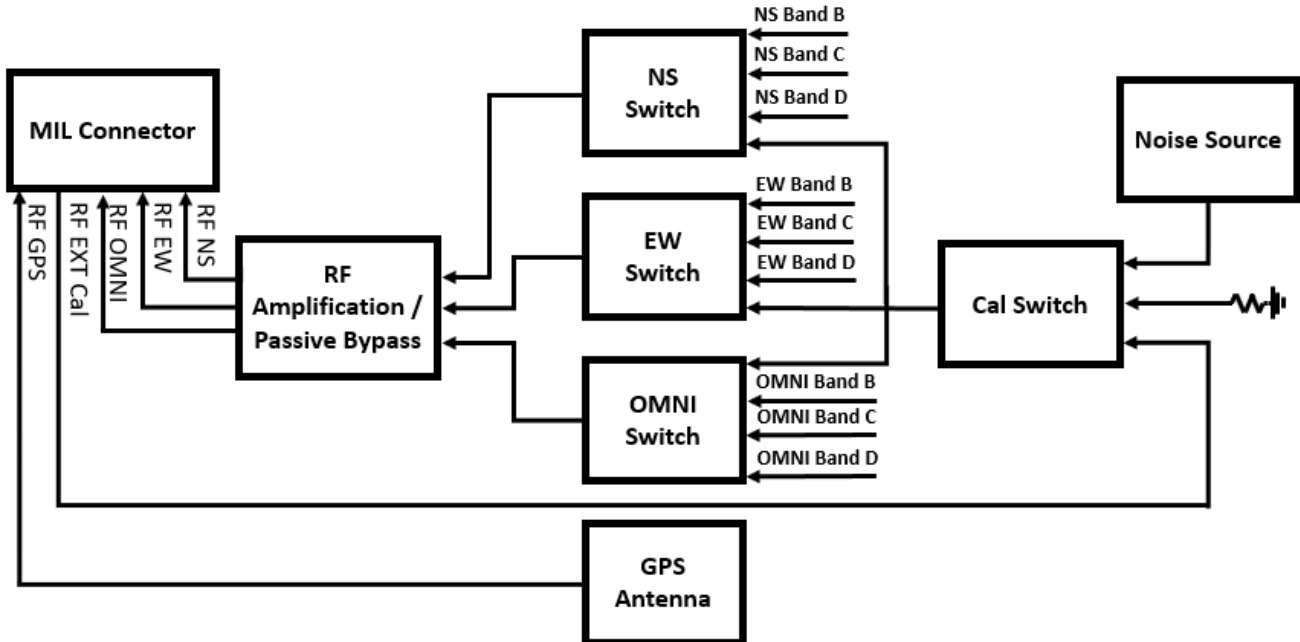
20 – 6000 MHz

Product Code: DF-A0257

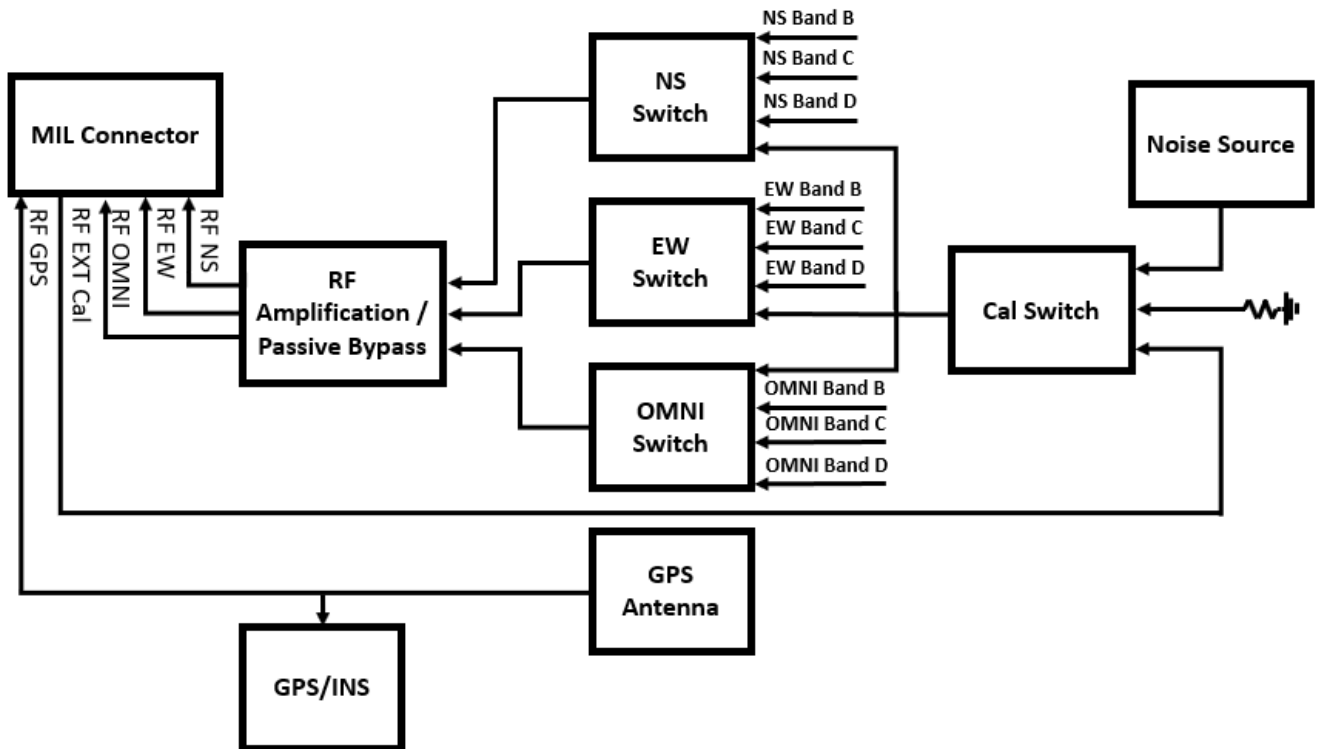
VERSION: 1.3

RF Block Diagram:

DF-A0257 / -02:



DF-A0257-05:



Compact Adcock DF Antenna

20 – 6000 MHz

Product Code: DF-A0257

VERSION: 1.3

Mechanical Outline:

