

dbDIRECT OBDR Broadband Antenna



Open Boundary Double Ridged Broadband Horn Antenna 700 MHz to 18 GHz

The dbDIRECT OBDR Broadband Antenna features an extremely low bandwidth, high gain and a directional radiation pattern. The open boundary allows for a lower frequency of operation and more bandwidth for its size. DVTEST's most broadband and most versatile antenna is highly attractive for use in test and measurement of the vast majority of test and measurement applications including 3G-5G, 5G NR, WiMax, WiFi, Bluetooth, GSM and more. This mid-size antenna design provides excellent matching over an extremely broad frequency range: 700 MHz - 18 GHz.

The antenna is designed to be placed in an RF test enclosure such as any of the DVTEST dbSAFE Series models for OTA testing of DUTs. The antennas can be mounted in fixed positions to facilitate repeatable results. When used in conjunction with a rotary positioning mechanism such as DVTEST positioners, customers can detect the highest point of power sensitivity for enhanced accuracy and repeatability in measurements. In this configuration, both the antennas and DUTs can be positioned in order to facilitate the measurement.



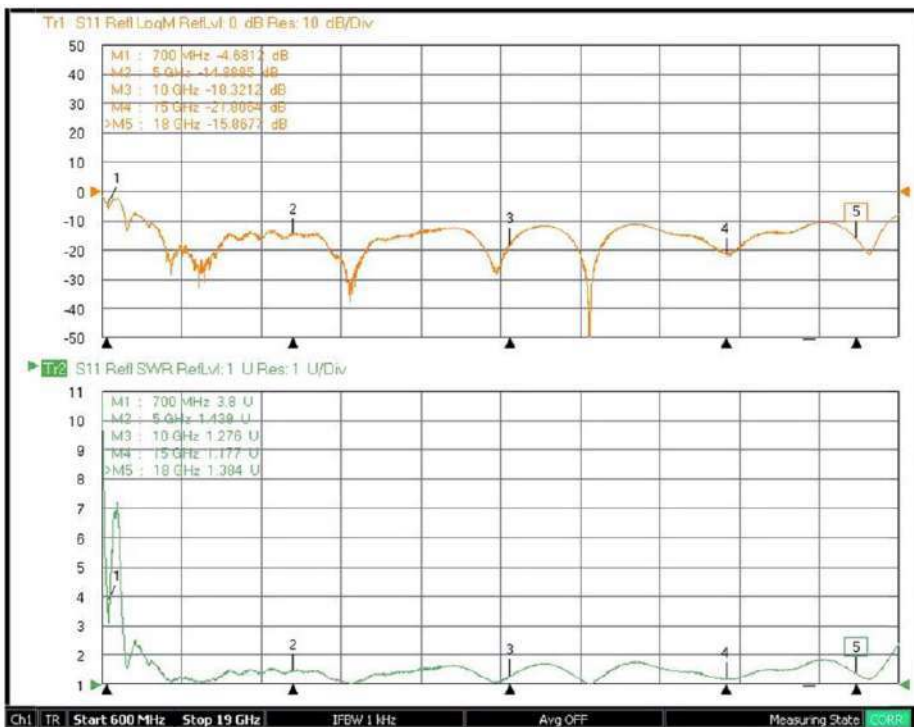
Applications

- RF wireless device testing in anechoic test enclosures/ chambers where directional and high gain link required with DUT
- 3G, 4G, 5G and 5G new radio (5G NR), Carrier aggregation, MIMO
- LTE, LTE-A, WiMAX, WiFi, Bluetooth, GPS, GSM, Z-Wave, LoRa
- Spectrum Analysis in DAS environment, radars, IoT

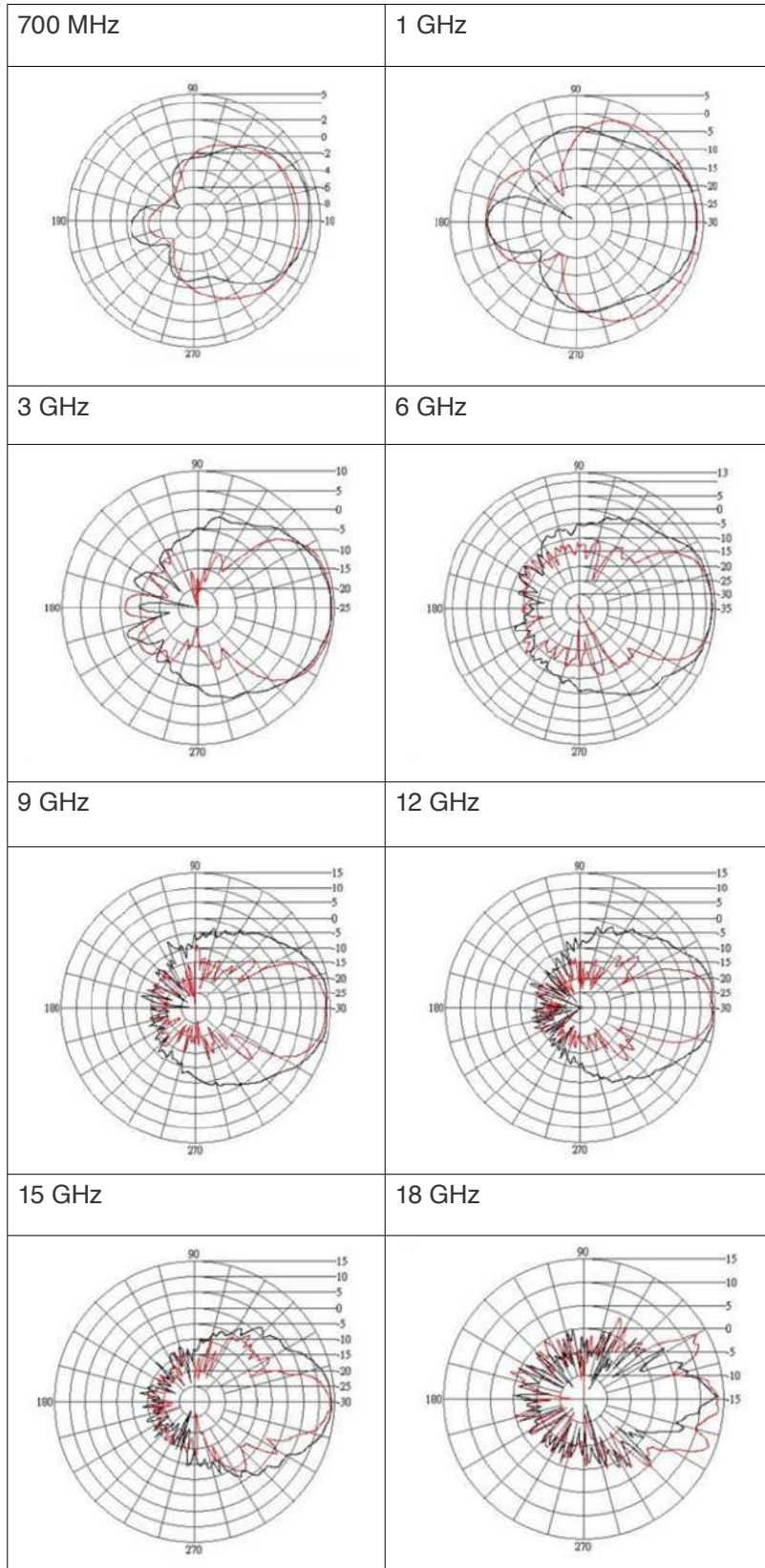
Specifications for dbDIRECT OBDR Broadband Antenna

Frequency Range	700 MHz - 18 GHz
Maximum Input Power	500 W
Maximum Continuous Power	300 W
RF Connector	50Ω N Type, Female
Polarization	Linear
Dimensions WxDxH Inch (mm)	9.45" (240) x 9.88" (251) x 10.75" (173)
Approximate Weight	1400 g
Gain	3 - 17 dBi
Return Loss	S11

Return Loss and VSWR



Antenna Pattern — H-Plane — E-Plane



Antenna Gain

Frequency (MHz)	H-Plane Gain (dBi at 3 m)	E-Plane Gain (dBi at 3 m)
700	2.72	3.52
800	3.18	3.28
900	3.39	3.31
1000	3.19	3.23
2000	7.44	7.92
3000	9.19	9.36
4000	7.63	9.62
5000	10.07	10.18
6000	11.97	11.86
7000	12.86	12.22
8000	12.19	12.37
9000	13.25	13.53
10000	12.59	13.05
11000	13.05	13.65
12000	13.58	14.02
13000	14.21	14
14000	14.02	13.7
15000	13.52	13.99
16000	16.62	16.16
17000	12.17	11.68
18000	13.8	13.78