Near Vertical Direction Finder Calibration System Dual Polarized Antenna Data

1. Antenna Identification

The NVDF Calibration System uses a 360-RMD-824-960-15 dual polarized antenna. This antenna was developed and built by 360 Antenna[1] for this system.

2. Calibration System Antenna Pointing Parameters

The antenna points above the horizon when in normal operation. The following are rules applied during calibration.

1. Bore Sight Pointing Limit: Greater Than or Equal To 25 degrees above the horizon
2. Horizontal: 360 degrees horizontal rotation
3. Maximum range of aircraft from antenna: 30 n mi (55.6 km)

3. Performance Parameters

The following figures are from data related to the deployment and performance of the 360-RMD-824-960-15 dual polarized antenna.

Figure 1
NVDF Calibration System Antenna on Test Mounting Base

[1] 470 Nepperhan Ave.
Yonkers, New York 10701

Figure 2
Typical Deployment of NVDF Calibration System Antennas

Note: The 360-RMD-824-960-15 dual polarized antenna is in the corner nearest the viewer. A tracking antenna for a separate aircraft tracking and antenna pointing system is in the farthest corner.

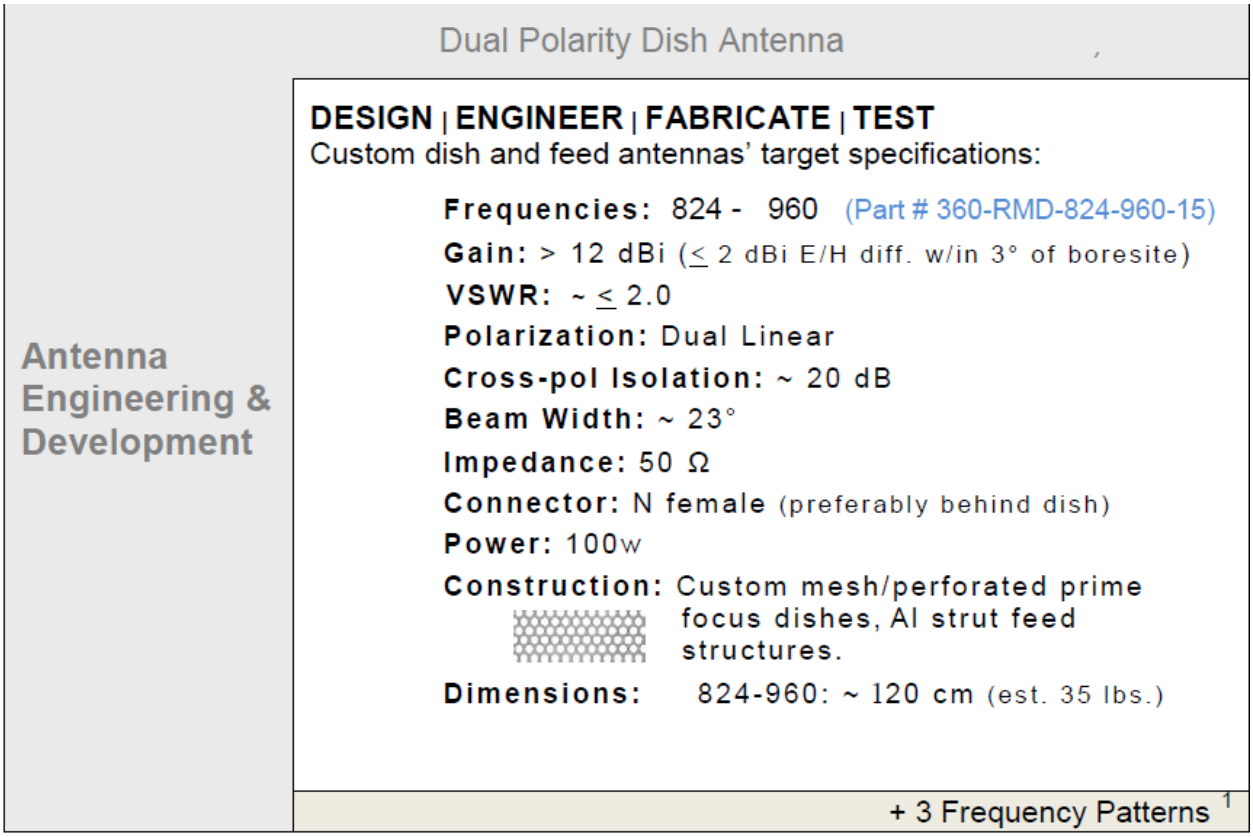
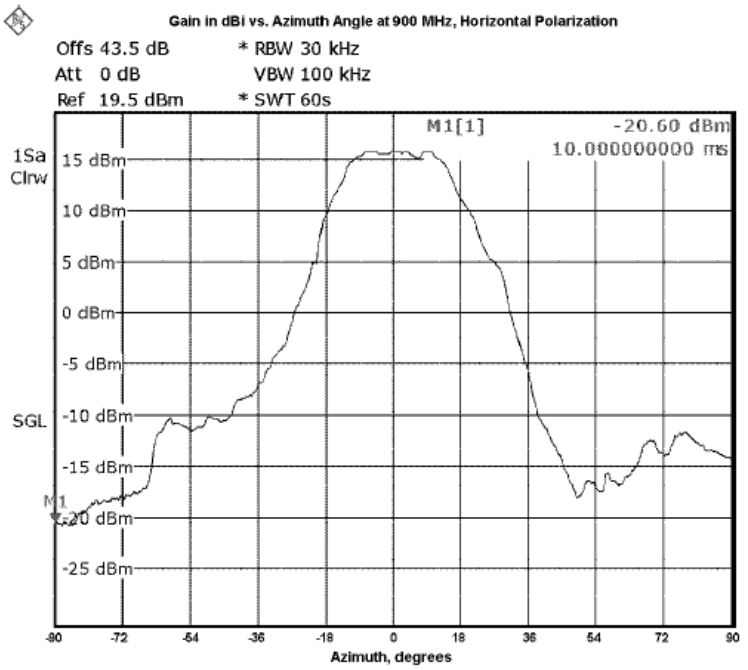


Figure 3
Specified Antenna Parameters

Azimuth in Degrees from Peak Gain Azimuth						
	824 H	824 V	900 H	900 V	960 H	960 V
Total -3dB BW	29.7	28.3	30.6	30.3	24.3	30.0
Peak Gain, dBi	15.4	15.4	15.6	15.8	16.3	16.0

Note: Blue-shaded values read from linear plots.

Figure 4
Measured Antenna 3 dB Beamwidths and Gains Measured by Manufacturer



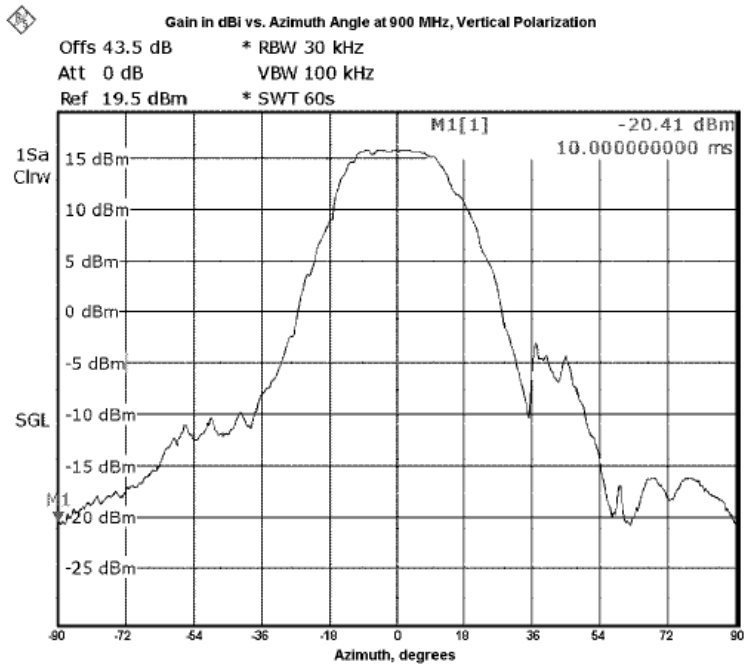


Figure 5
Plots of Antenna Gain at 900 MHz