001-0028

2 dBi Dipole Antenna with RP SMA 863-870 MHz

ELECTRICAL SPECIFICATIONS	
Operating Frequency (MHz)	863-870
VSWR	≤ 2.0:1
Gain (dBi)	2.0
Nominal Impedance (Ohms)	50
Polarization	Linear vertical

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS	
Dimensions – mm (inches)	197.0 x 13.0 (7.76 x 0.51)
Ingress Protection	IP-65
Weight – g (ounces)	27.0 (0.95)
Antenna Color	Black
Operating Temperature – °C (°F)	-20 to +65°C (-4 to +149°F)
Storage Temperature – °C (°F)	-30 to +70°C (-22 to +158°F)

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
001-0028	868 MHz dipole antenna with reverse polarity SMA connector
080-0001	U.FL to SMA bulkhead cable, 1.13 mm diameter, 105.0 mm length

MECHANICAL DRAWING

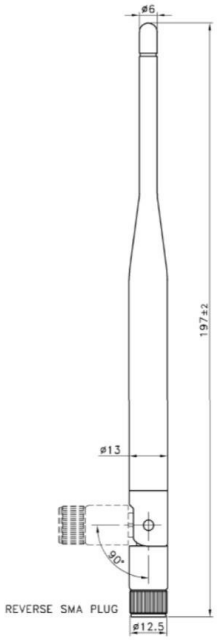

Figure 1: Physical dimensions

TEST SETUP

Antenna measurements such as VSWR were measured with an Agilent E5071C vector network analyzer. Radiation patterns were measured with a CMT planar 804/1 vector network analyzer in a Howland Company 3100 chamber equivalent. Phase center is nine inches above the Phi positioner.

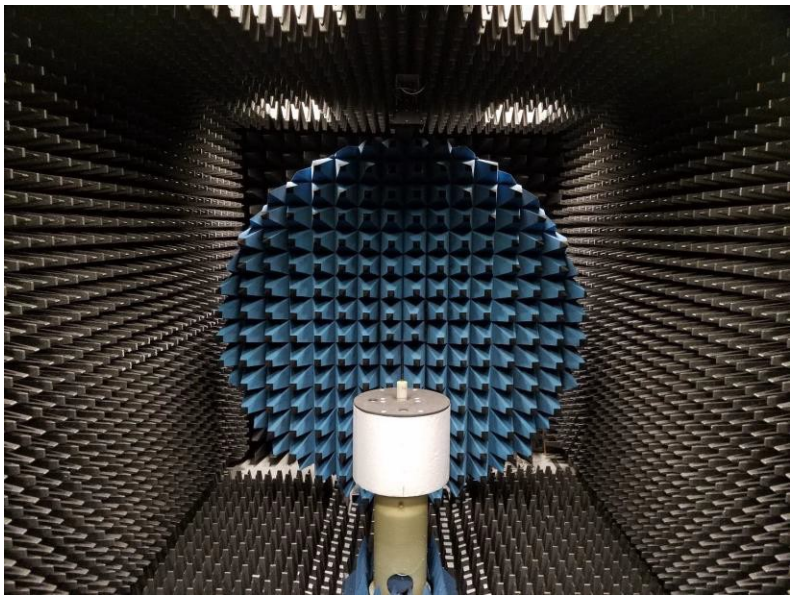

Figure 2: Antenna chamber

TYPICAL ANTENNA REFLECTION PERFORMANCE

Straight Position

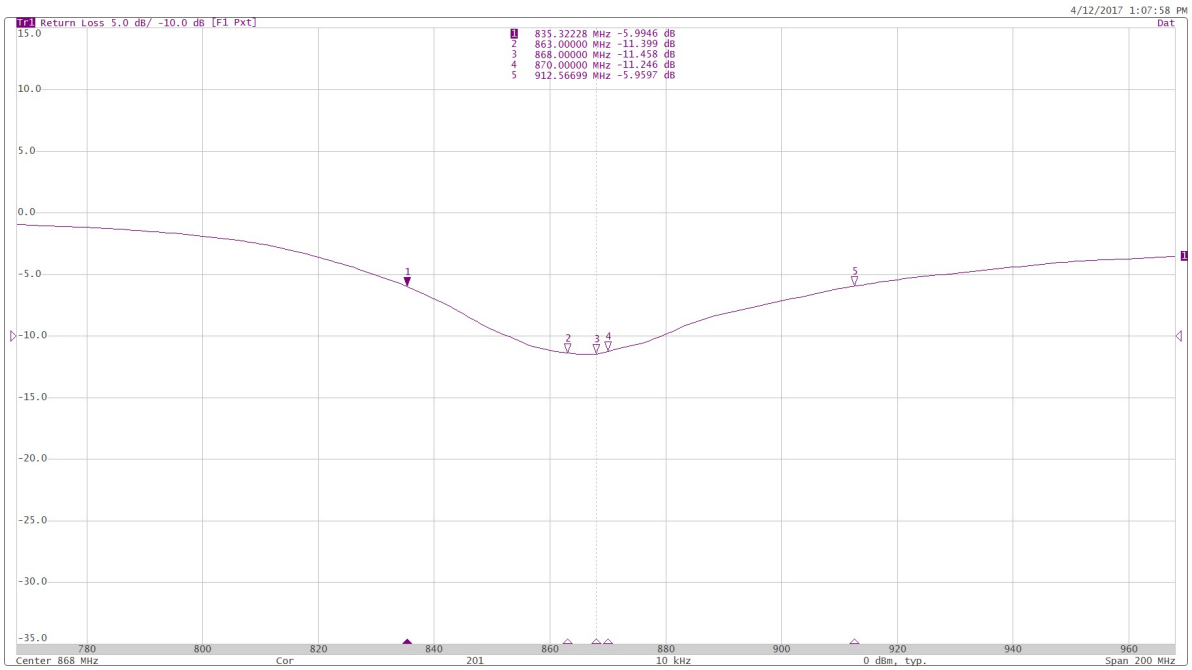

Figure 3: Typical antenna reflection performance

Bent Position

Figure 4: Typical antenna reflection performance

TYPICAL ANTENNA RADITION PERFORMANCE

Antenna Measurement Setup

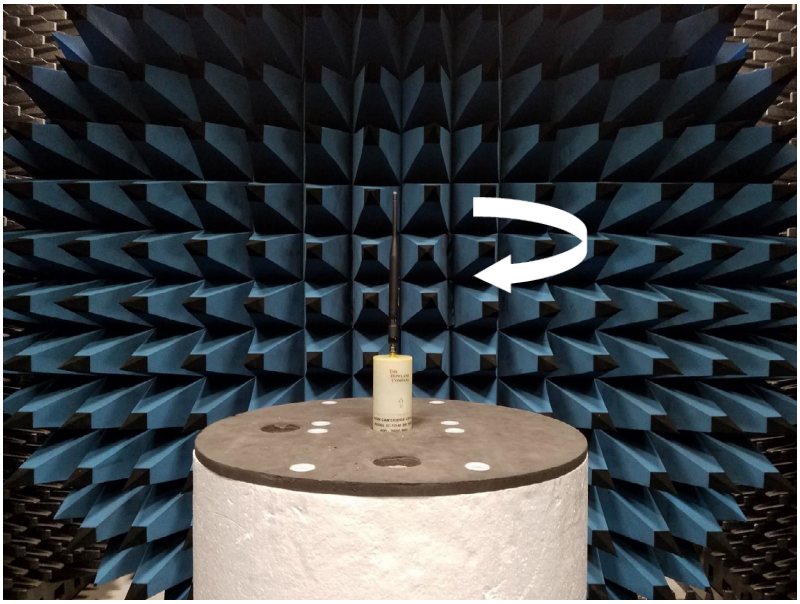

Figure 5: Straight position test setup

Straight Position

Azimuth Conical Cuts at 868 MHz:

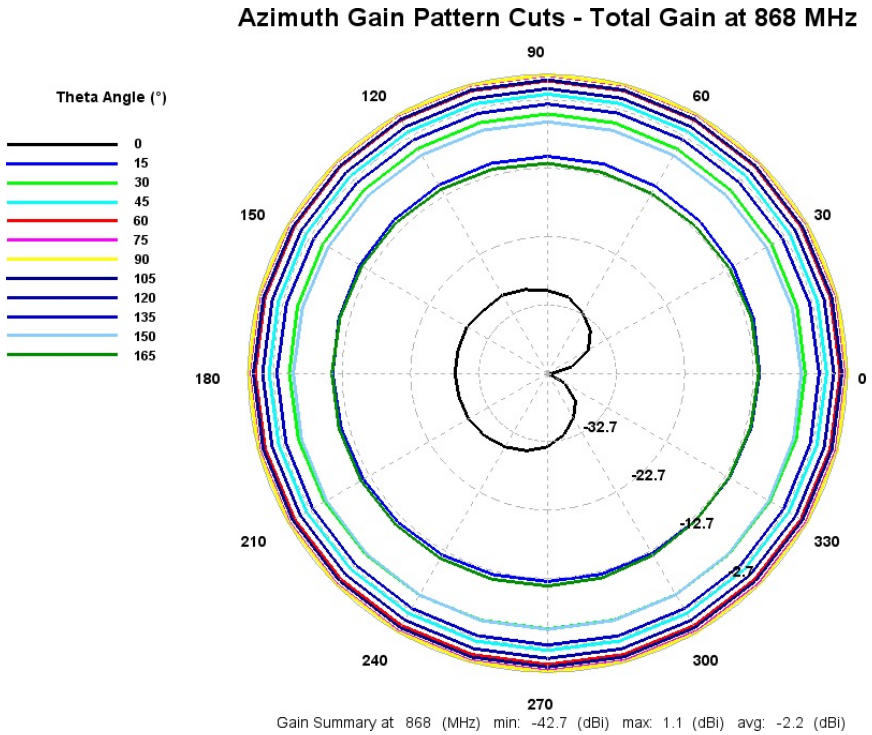

Figure 6: Total gain pattern

3D Plots at 868 MHz:

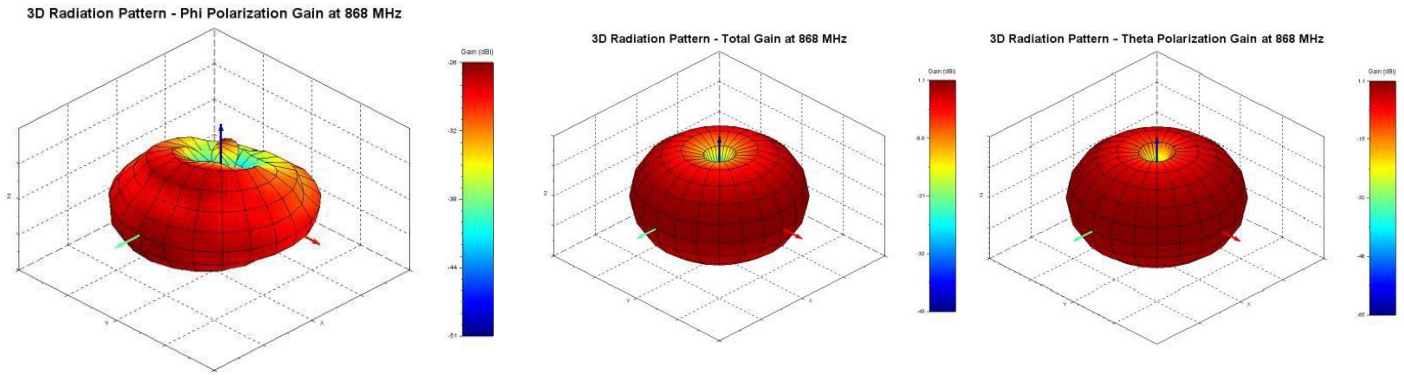

Figure 7: Phi, theta, and total gain plots

ANTENNA MEASUREMENT SETUP

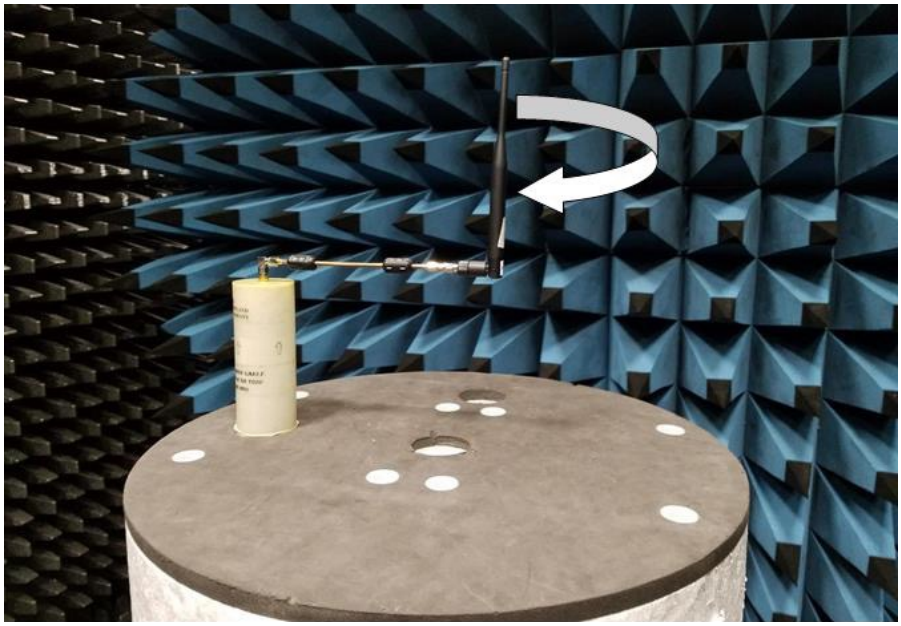

Figure 8: Bent position test setup

Bent Position

Azimuth Conical Cuts at 868 MHz:

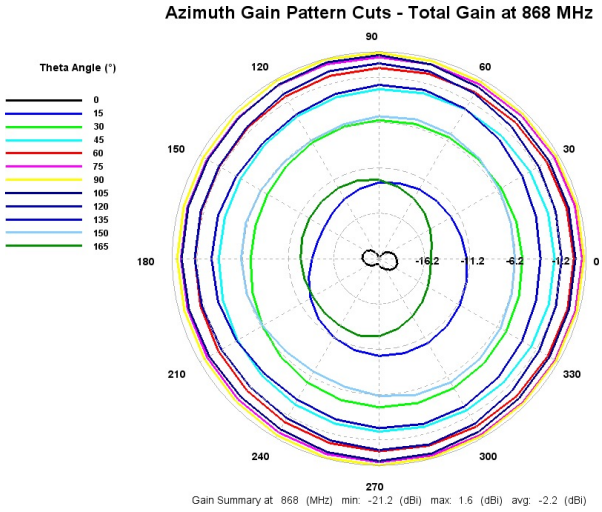

Figure 9: Total gain pattern

3D Plots at 868 MHz:

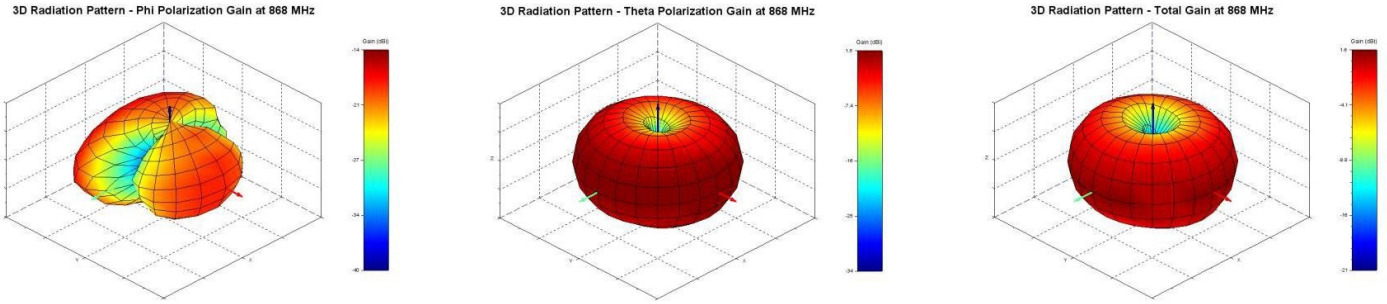

Figure 10: Phi, theta, and total gain plots

08/22 Original

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