

BROADBAND SPIRAL ANTENNA

1 GHz TO 18 GHz

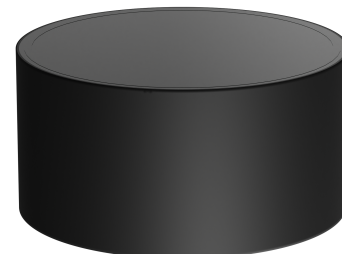
SPIR1000

KEY FEATURES

- Very wide bandwidth from 1 GHz to 18 GHz with a circularly polarized unidirectional radiation pattern
- VSWR typically below 2:1
- Axial ratio typically under 2 dB
- Available in RHCP or LHCP configurations
- Low weight and compact size
- Professionally designed and hand-tested by engineers in the United States

DESIGN SPECIFICATIONS

- Design: Cavity-backed spiral antenna
- Operating Frequency: 1.0 GHz to 18.0 GHz
- Polarization: Right-hand circular or left-hand circular
- Connector: SMA Female
- Construction: Anodized aluminum cavity with PCB spiral
- Mounting: #10-24 screw holes (see diagram on page 6)
- Length: 4.0 in [102 mm]
- Width: 4.0 in [102 mm]
- Height: 2.0 in [51 mm] (not including SMA connector)
- Weight: 6 oz [170 g]



SPIR1000 (Top)



SPIR1000 (Bottom)

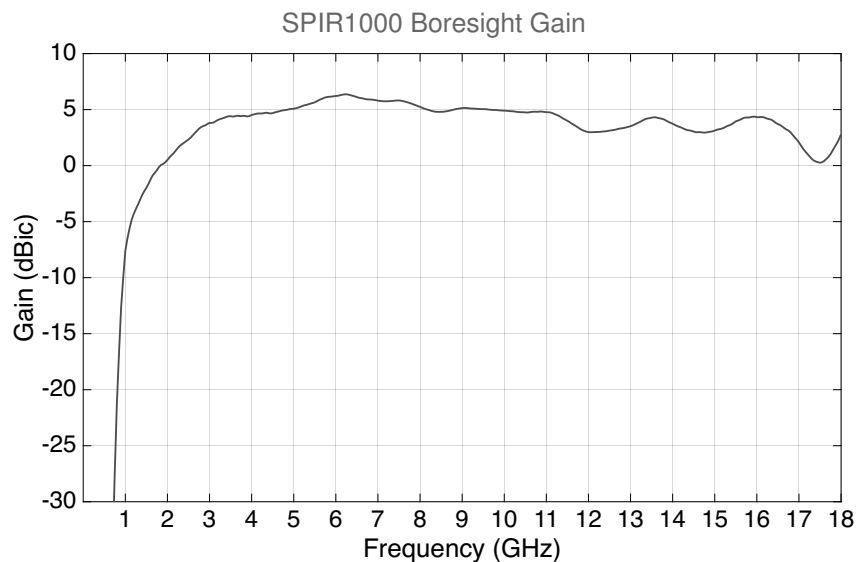
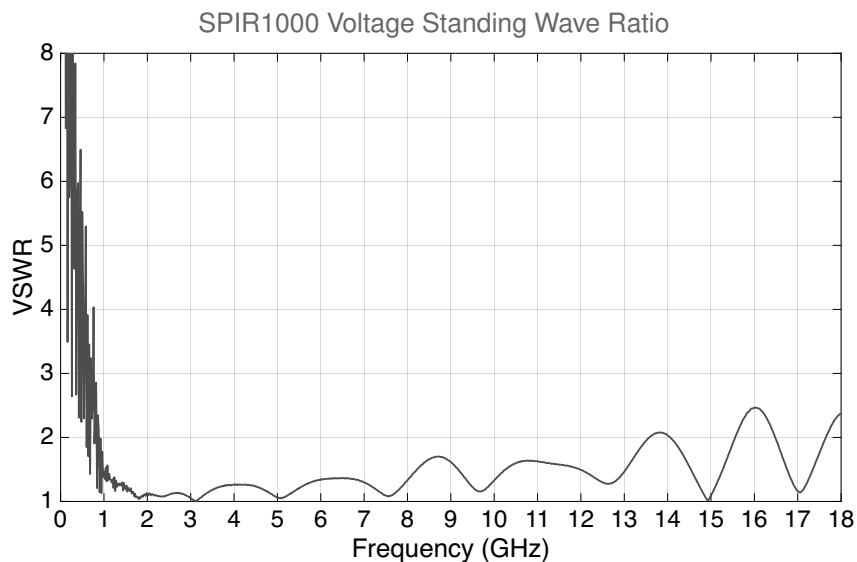
MODELS

SPIR1000-R	RHCP
SPIR1000-L	LHCP

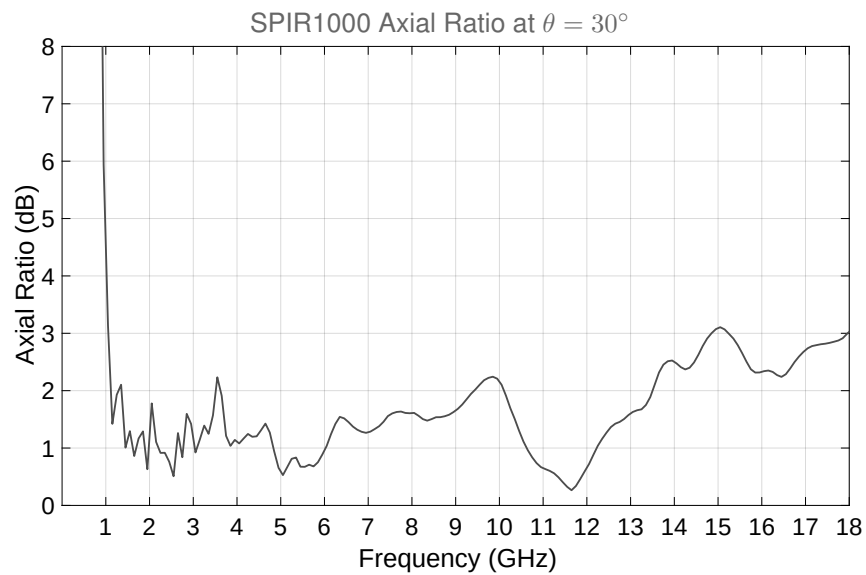
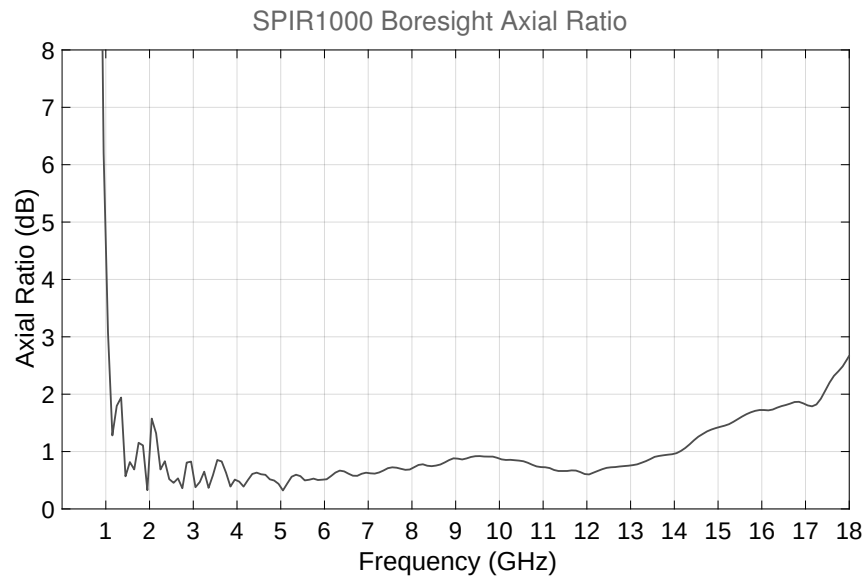
PERFORMANCE SPECIFICATIONS

Parameter	Frequency	Min.	Typ.	Max.	Unit
VSWR	1.0 GHz – 2.0 GHz	–	1.3	2.5	–
	2.0 GHz – 12.0 GHz	–	1.5	2.5	
	12.0 GHz – 18.0 GHz	–	1.8	3.2	
Gain	1.0 GHz – 2.0 GHz	-10.0	-3.0	2.0	dBic
	2.0 GHz – 3.0 GHz	-3.0	1.0	5.5	
	3.0 GHz – 16.0 GHz	0.0	4.5	7.5	
	16.0 GHz – 18.0 GHz	-2.0	2.5	5.5	
Boresight Axial Ratio	1.0 GHz – 2.0 GHz	0.8	2.0	4.0	dB
	2.0 GHz – 16.0 GHz	0.1	1.0	2.8	
	16.0 GHz – 18.0 GHz	0.8	2.1	3.6	
HPBW	1.0 GHz – 18.0 GHz	55	85	130	deg.
Input Power	1.0 GHz – 18.0 GHz	–	–	10	W
Impedance	–	50			Ω
Connector	–	SMA (female)			–

TYPICAL PERFORMANCE

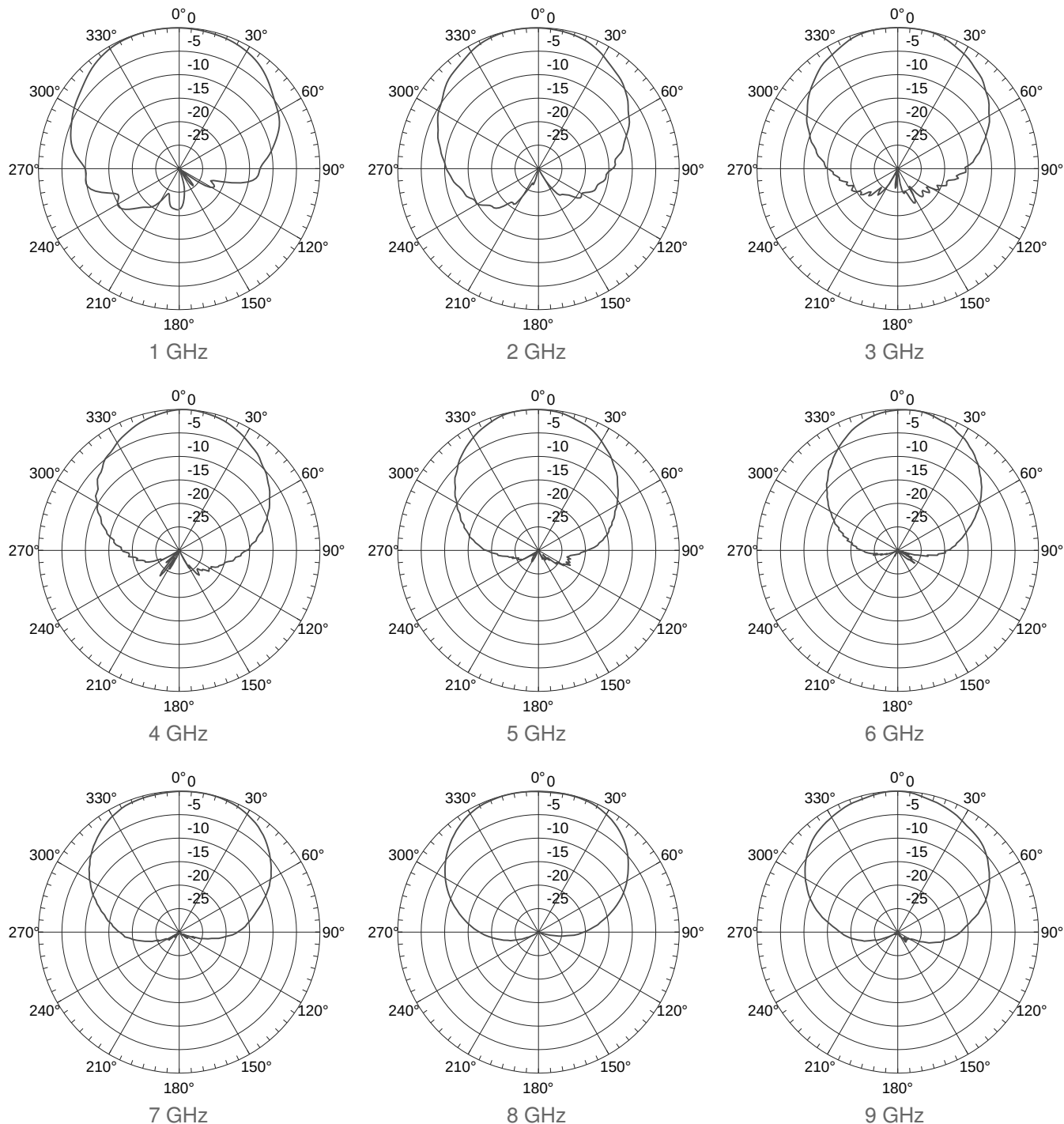


TYPICAL PERFORMANCE (CONT.)



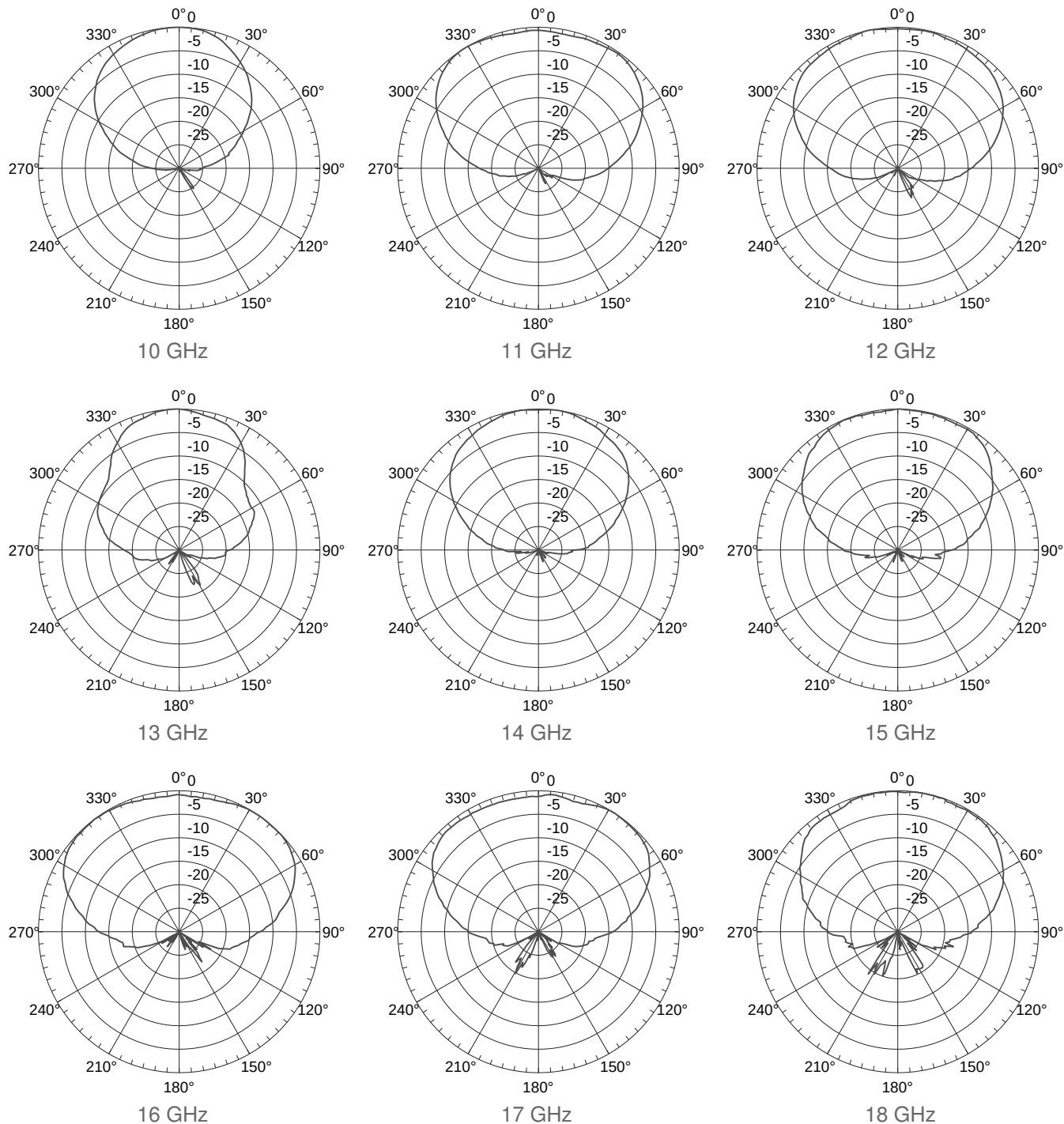
TYPICAL PERFORMANCE (CONT.)

SPIR1000 Normalized Radiation Patterns

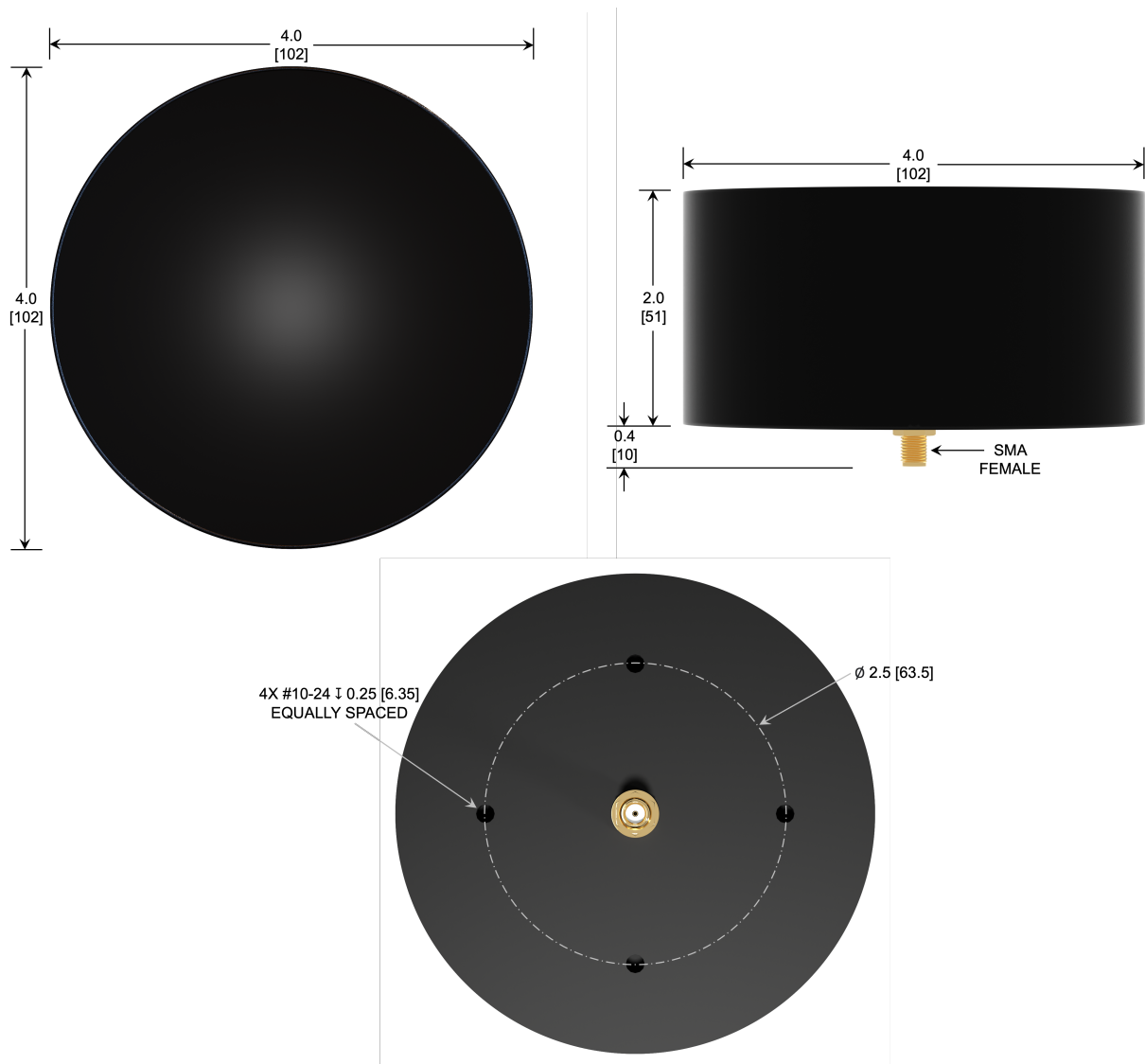


TYPICAL PERFORMANCE (CONT.)

SPIR1000 Normalized Radiation Patterns



CAD DRAWING



NOTES:

1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL
2. DIMENSIONS ARE IN INCHES [mm]
3. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME