

BROADBAND LINEARLY POLARIZED ANTENNA

1 GHz TO 15 GHz

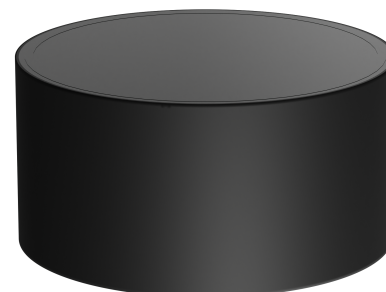
SINU1000-LP

KEY FEATURES

- 1 to 15 GHz continuous operation (15:1 bandwidth) in a single element
- Cavity-backed unidirectional pattern for platform mounting
- Wide-beam coverage – symmetric E- and H-plane beams, $\sim 130^\circ$ –10 dB beamwidth for broad angular field of view
- Linear polarization with well-matched VSWR across the full band
- Ideal for EW, ES/SIGINT, spectrum monitoring, and broadband test

DESIGN SPECIFICATIONS

- Design: Cavity-backed 2-arm sinuous antenna
- Operating Frequency: 1.0 GHz to 15.0 GHz
- Polarization: Linear (horizontal/vertical based on orientation)
- Connector: SMA Female
- Construction: Anodized aluminum cavity with top PCB
- Mounting: #10-24 screw holes (see diagram on page 5)
- Diameter: 4.0 in [102 mm]
- Height: 2.0 in [51 mm] (not including SMA connector)
- Weight: 6.3 oz [180 g]



SINU1000-LP (Top)

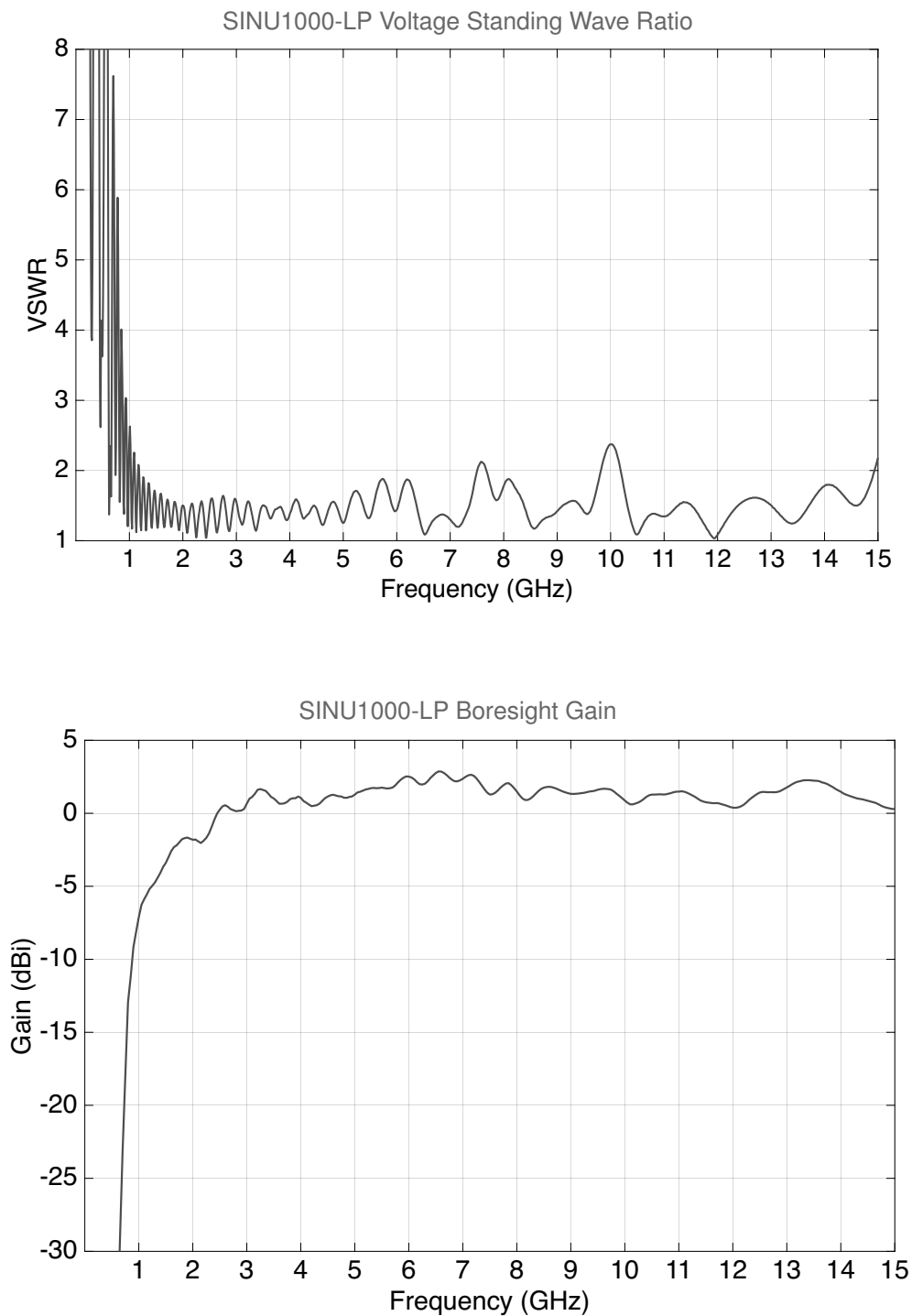


SINU1000-LP (Bottom)

PERFORMANCE SPECIFICATIONS

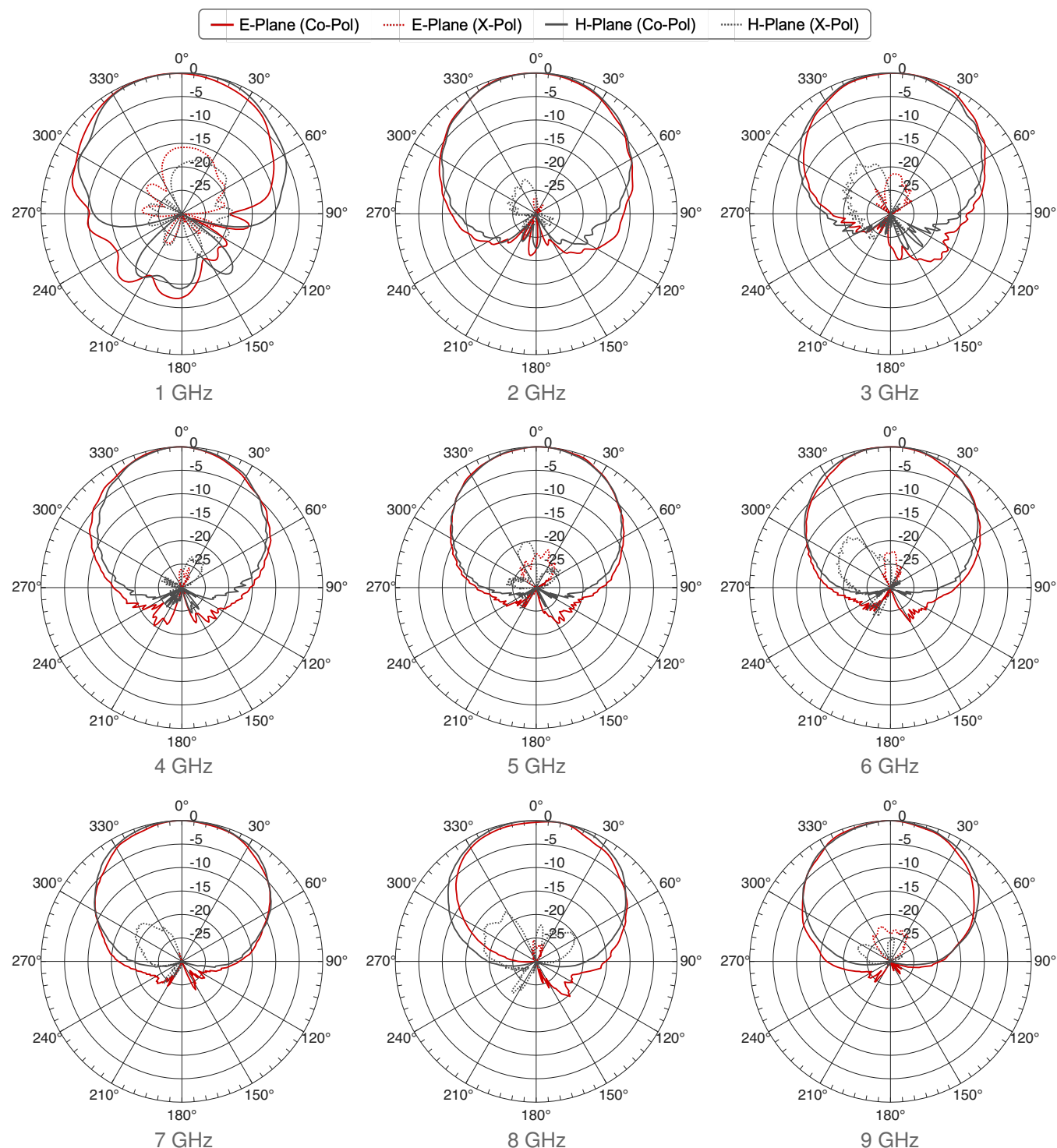
Parameter		Frequency	Min.	Typ.	Max.	Unit
VSWR		1.0 GHz – 2.0 GHz	1.1	1.5	3.1	–
		2.0 GHz – 9.0 GHz	1.05	1.5	2.5	
		9.0 GHz – 15.0 GHz	1.03	1.6	3.0	
Gain (Realized, Boresight)		1.0 GHz – 2.0 GHz	-10.0	-3.5	-0.5	dBi
		2.0 GHz – 4.0 GHz	-3.0	0.0	2.5	
		4.0 GHz – 15.0 GHz	-1.0	1.0	3.5	
HPBW	E-Plane	1.0 GHz – 15.0 GHz	60	75	100	deg.
	H-Plane		60	75	100	
10-dB BW	E-Plane	1.0 GHz – 15.0 GHz	120	130	180	deg.
	H-Plane		120	130	180	
Cross-Polarization (XPD, Boresight)		1.0 GHz – 11.0 GHz	13	22	45	dB
		11.0 GHz – 14.0 GHz	11	16	40	
		14.0 GHz – 15.0 GHz	8	12	20	
Input Power (CW)		1.0 GHz – 15.0 GHz	–	–	10	W
Impedance		–	50			Ω
Connector		–	SMA (female)			–

TYPICAL PERFORMANCE



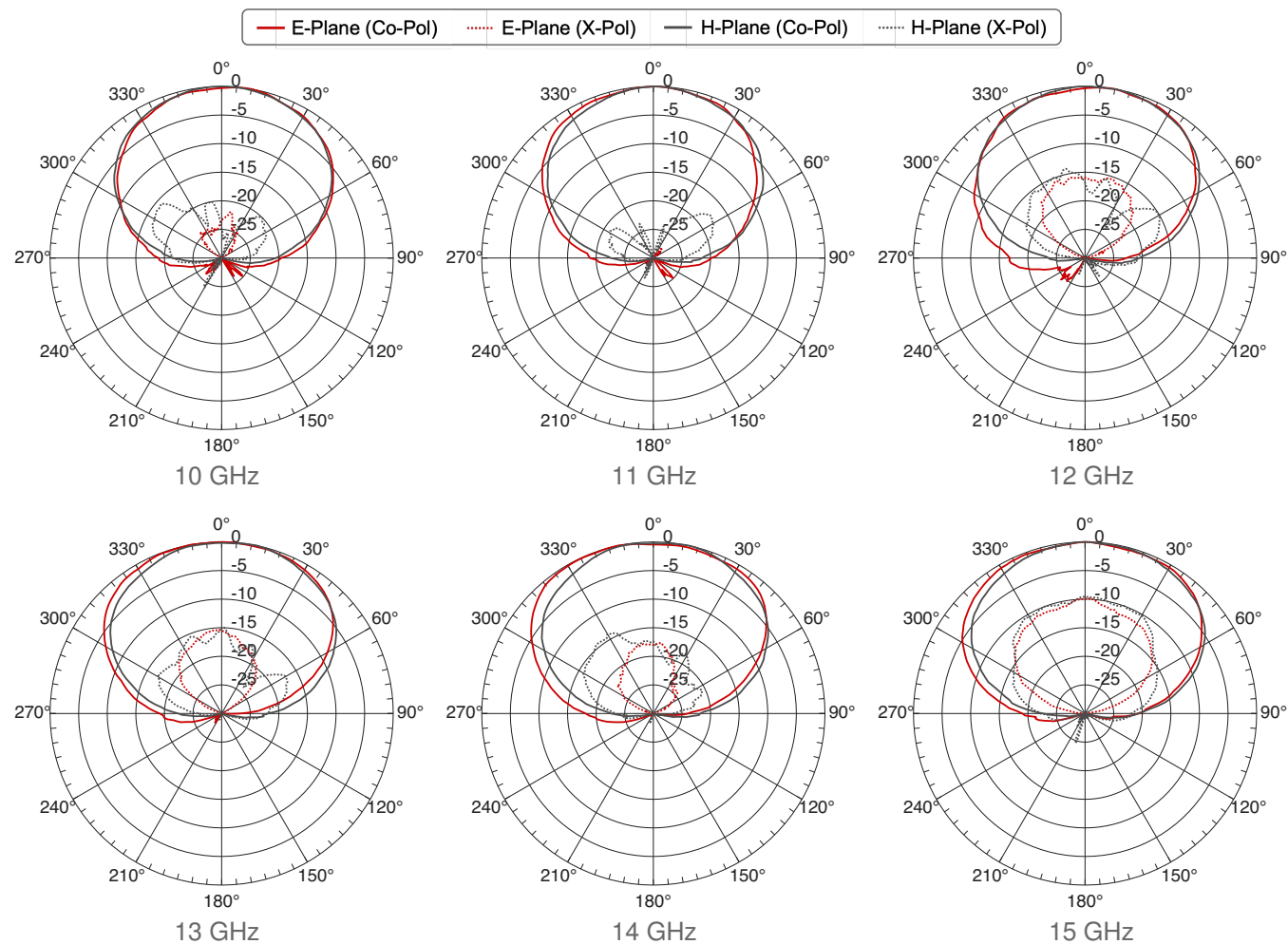
TYPICAL PERFORMANCE (CONT.)

SINU1000-LP Normalized Radiation Patterns

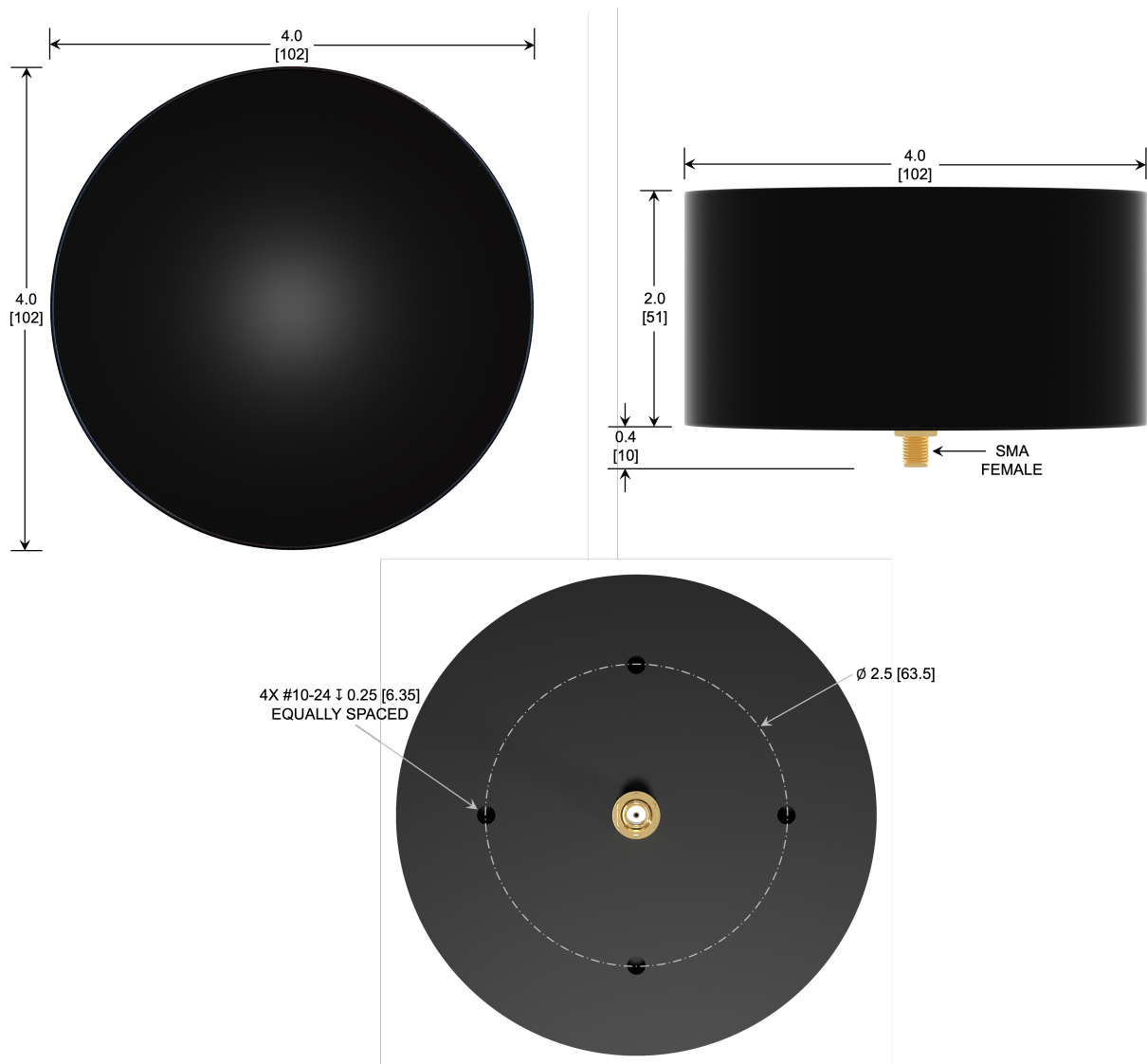


TYPICAL PERFORMANCE (CONT.)

SINU1000-LP Normalized Radiation Patterns (cont.)



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