

BROADBAND SPIRAL ANTENNA

800 MHz TO 18 GHz

SPIR800

KEY FEATURES

- Very wide bandwidth from 800 MHz 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: 800 MHz 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: 5.0 in [102 mm]
- Width: 5.0 in [102 mm]
- Height: 2.5 in [51 mm] (not including SMA connector)
- Weight: 11 oz [312 g]



SPIR800 (Top)



SPIR800 (Bottom)

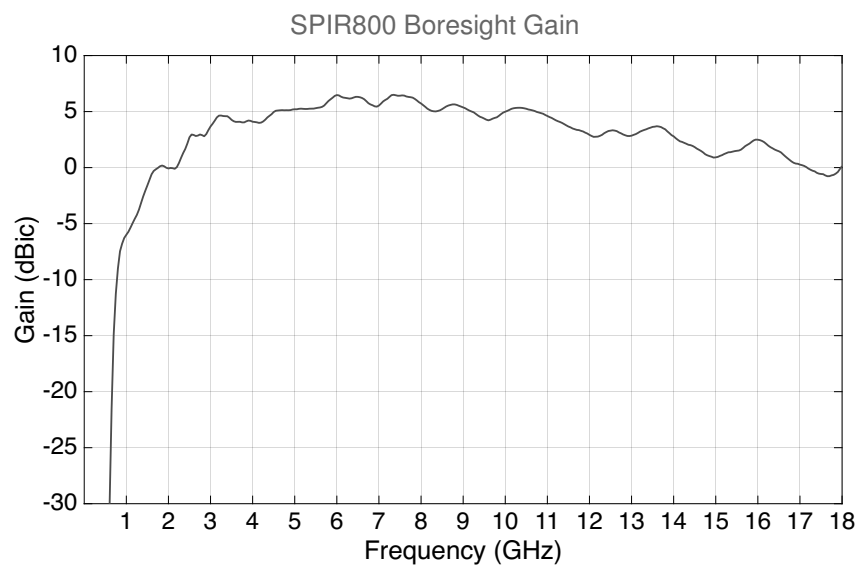
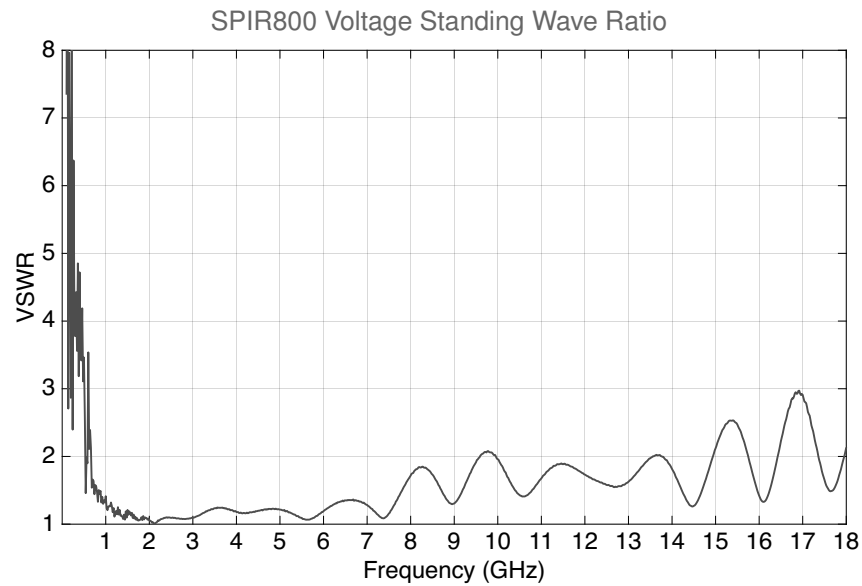
MODELS

SPIR800-R	RHCP
SPIR800-L	LHCP

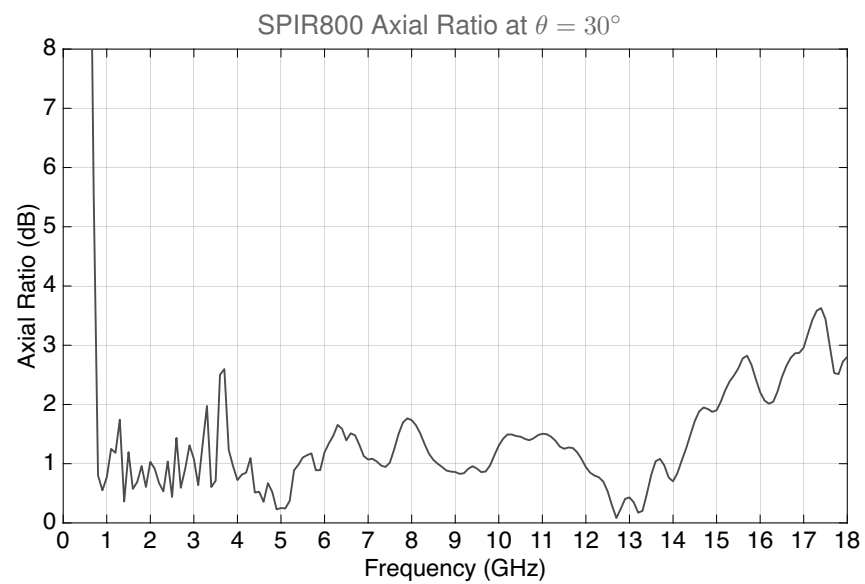
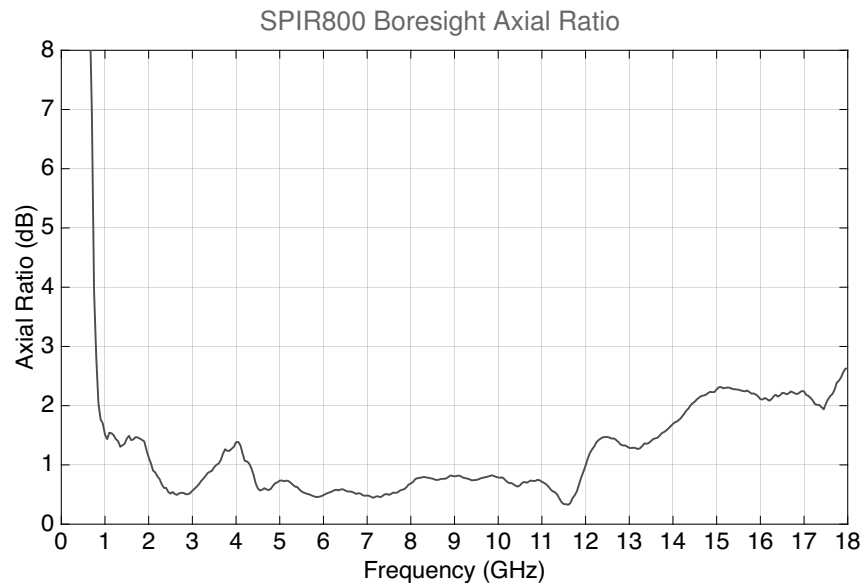
PERFORMANCE SPECIFICATIONS

Parameter	Frequency	Min.	Typ.	Max.	Unit
VSWR	800 MHz – 8.0 GHz	–	1.3	2.5	–
	8.0 GHz – 16.0 GHz	–	1.8	3.0	
	16.0 GHz – 18.0 GHz	–	2.4	3.3	
Gain	800 MHz – 2.0 GHz	-10.0	-4.0	3.0	dBic
	2.0 GHz – 3.0 GHz	-3.0	2.0	6.0	
	3.0 GHz – 16.0 GHz	0.0	3.5	8.0	
	16.0 GHz – 18.0 GHz	-3.0	1.0	5.0	
Boresight Axial Ratio	800 MHz – 2.0 GHz	0.5	1.5	3.5	dB
	2.0 GHz – 12.0 GHz	0.1	1.0	2.5	
	12.0 GHz – 16.0 GHz	0.5	2.0	3.0	
	16.0 GHz – 18.0 GHz	1.2	2.4	3.5	
HPBW	800 MHz – 18.0 GHz	50	90	130	deg.
Input Power	800 MHz – 18.0 GHz	–	–	10	W
Impedance	–	50			Ω
Connector	–	SMA (female)			–

TYPICAL PERFORMANCE

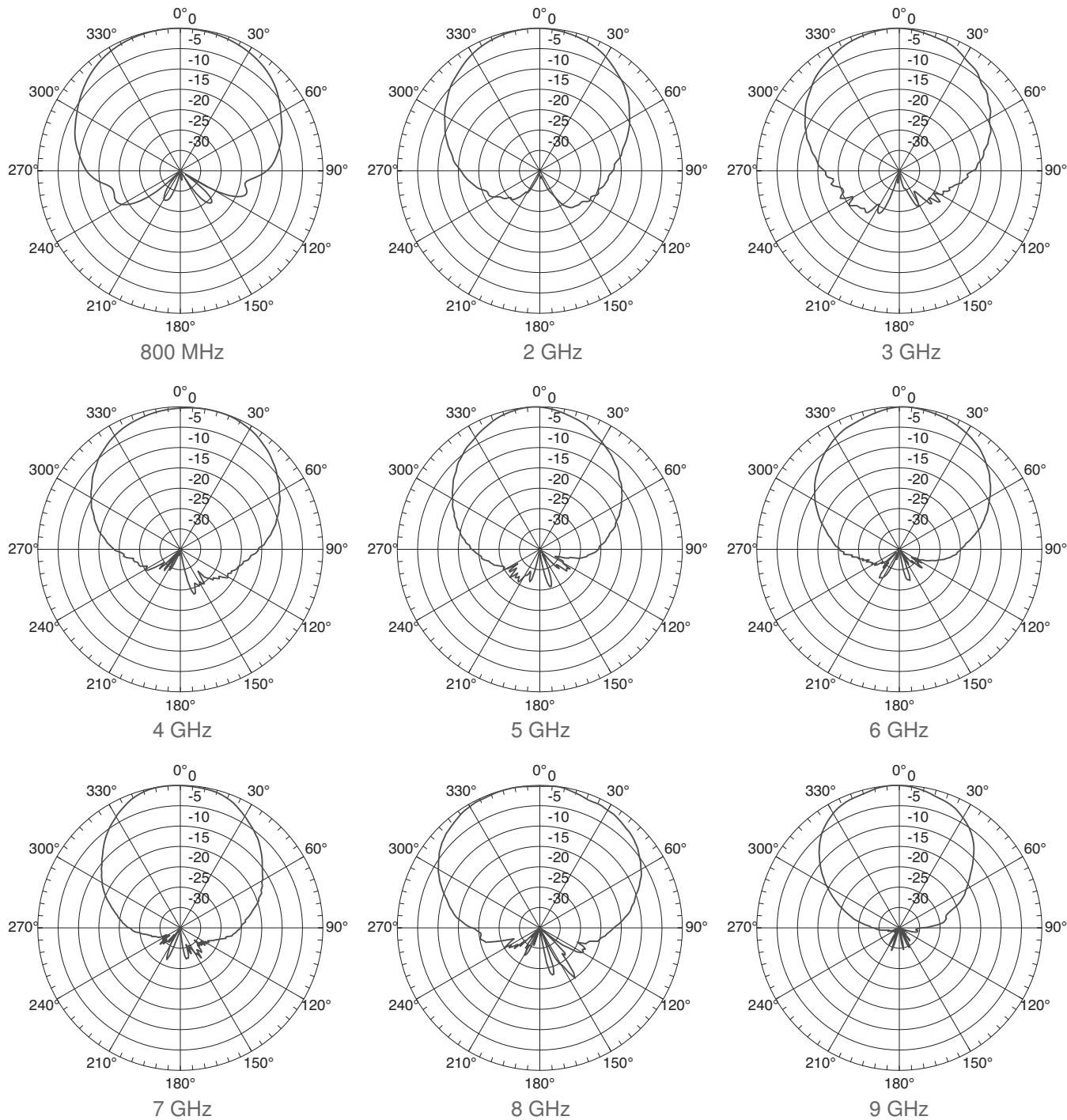


TYPICAL PERFORMANCE (CONT.)



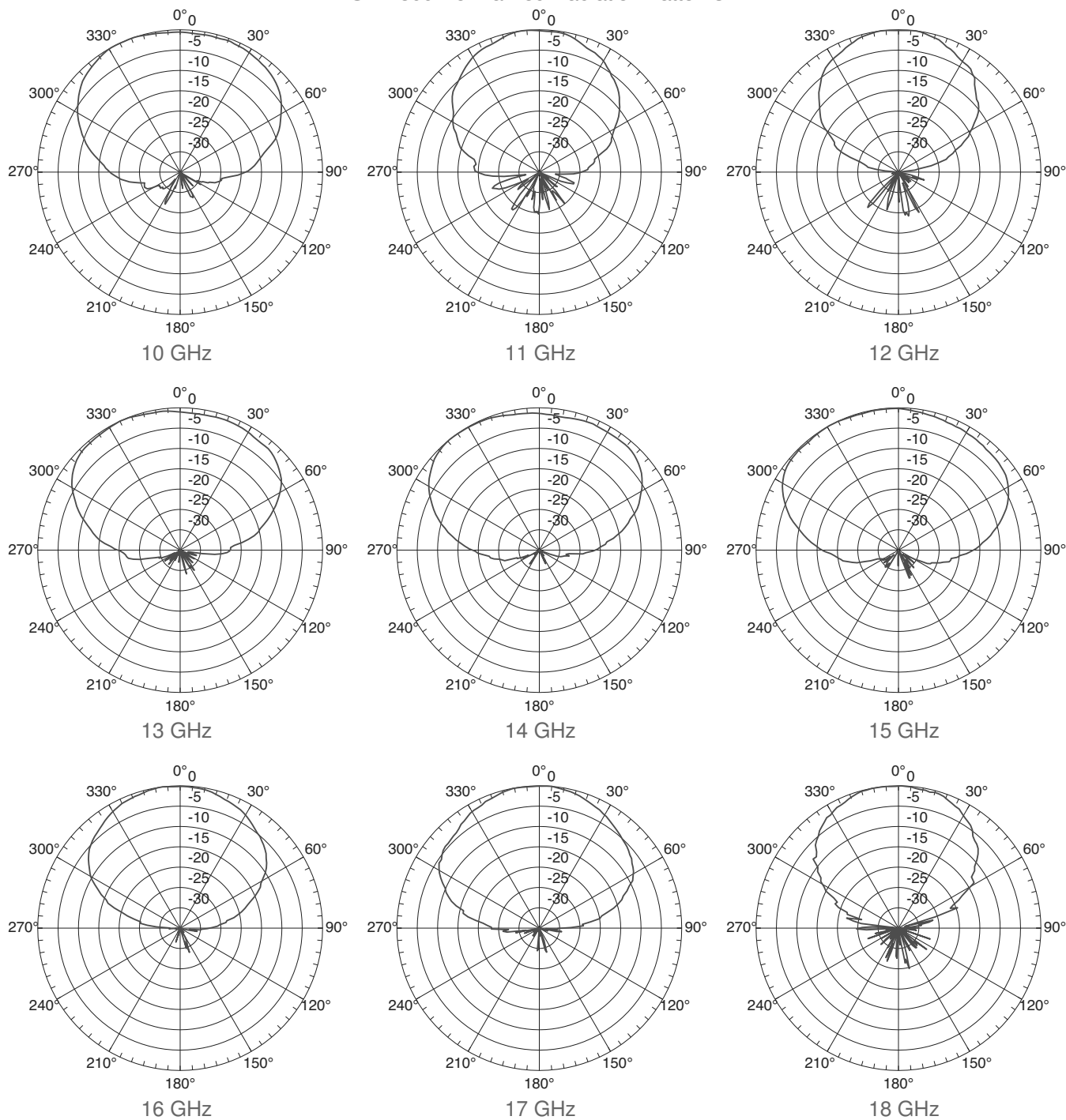
TYPICAL PERFORMANCE (CONT.)

SPIR800 Normalized Radiation Patterns

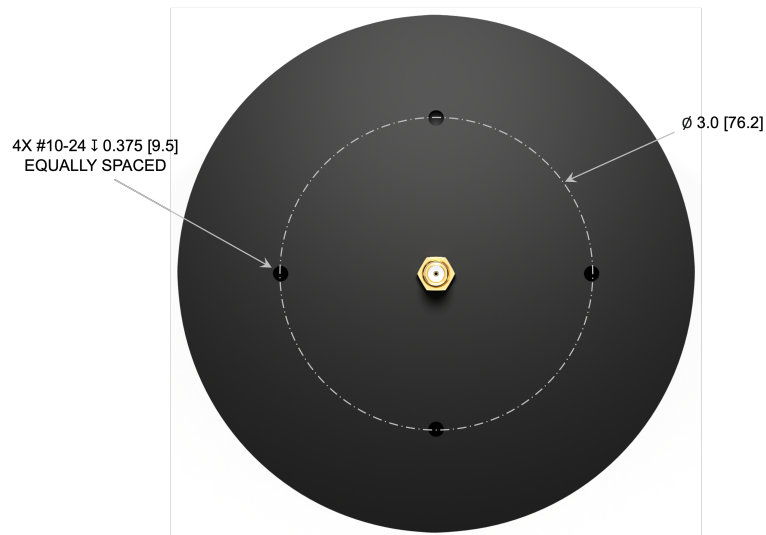
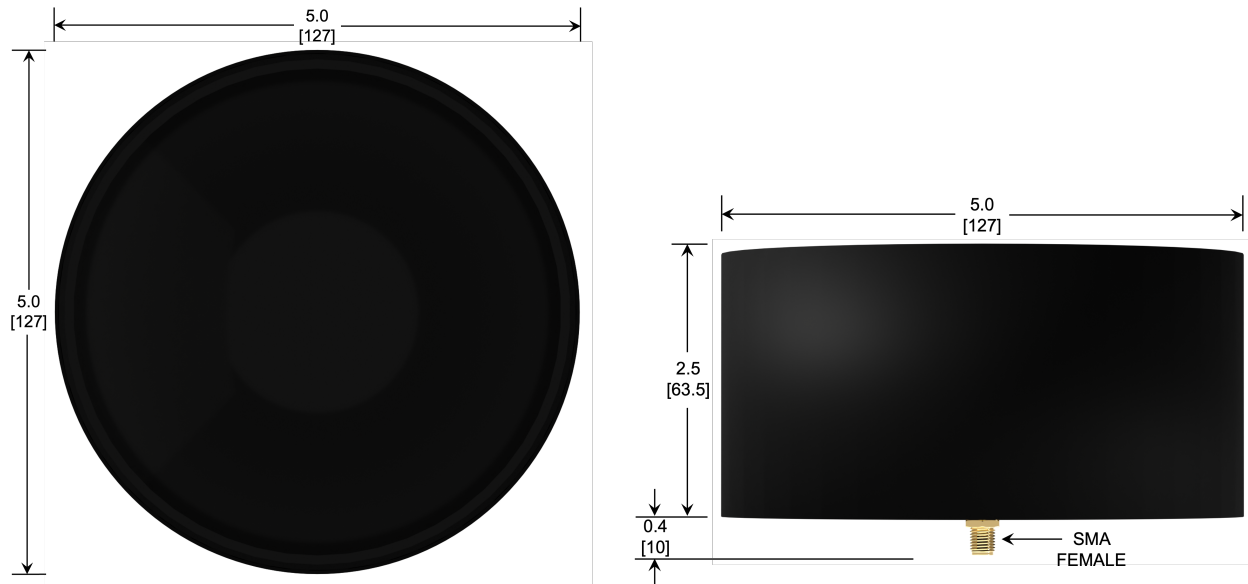


TYPICAL PERFORMANCE (CONT.)

SPIR800 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