SAH-9031441060-094-S1

F-Band Choke Flange Feed Horn Antenna, 90 to 140 GHz, 10 dBi Gain

SAH-9031441060-094-S1 is an F-band choke flange feed horn antenna that operates from 90 to 140 GHz. The antenna offers a nominal gain of 10 dBi, typical half power beamwidth in E and H plane of 60 degrees and typical side lobe levels of -30 dB for both E and H plane. The antenna port is a 0.094” diameter circular waveguide with a UG-387/U-M anti-cocking flange that supports both linear and circular polarized waveforms. A dual polarized configuration with an integrated orthomode transducer is available under the model **SAH-9031441060-094-S1-080-DP**.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	90 GHz		140 GHz
Gain		10 dBi	
3dB Beamwidth, E-Plane@115 GHz		60°	
3dB Beamwidth, H-Plane@115 GHz		60°	
Sidelobe Levels		-30 dB	
Return Loss		20 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	Ø0.094” Circular Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	1.0 Oz
Outline	AH-CF10-094-A

ECCN

EAR99

FEATURES

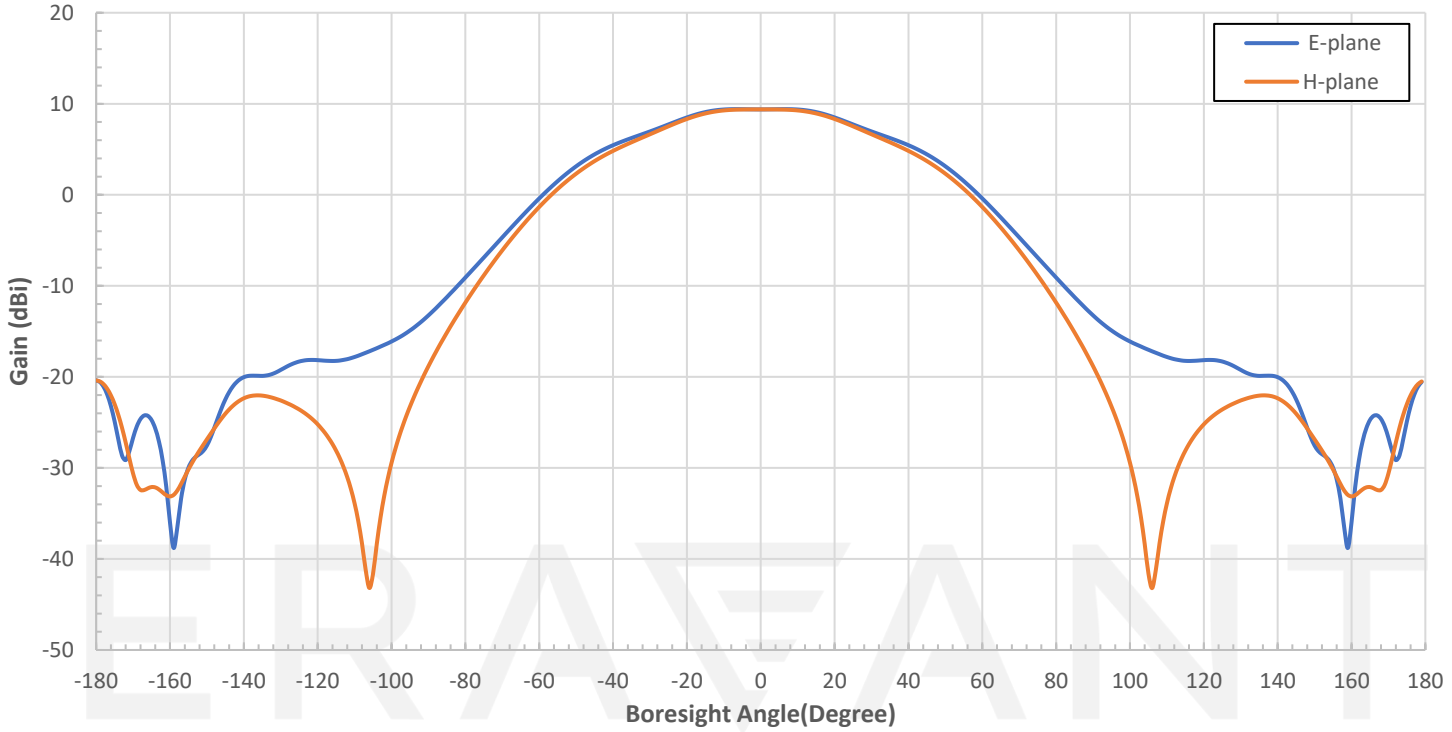
- Full Band Coverage
- Circular waveguide interface
- Low Sidelobe level
- Linear and circular Polarization

APPLICATIONS

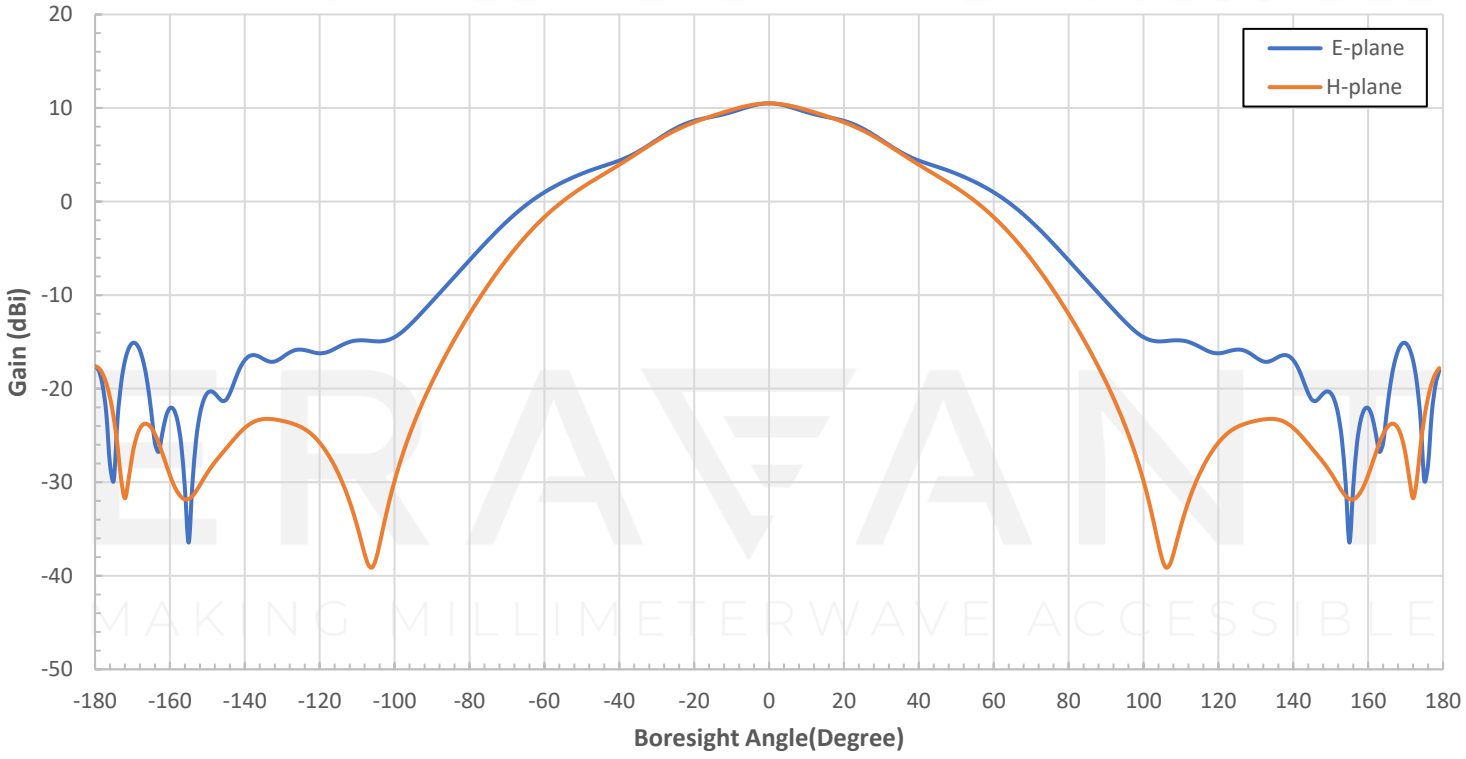
- Feed Horn for Antenna Range Setups
- Rapid System Setups
- Engineering Setups

SUPPLEMENTAL DETAILS

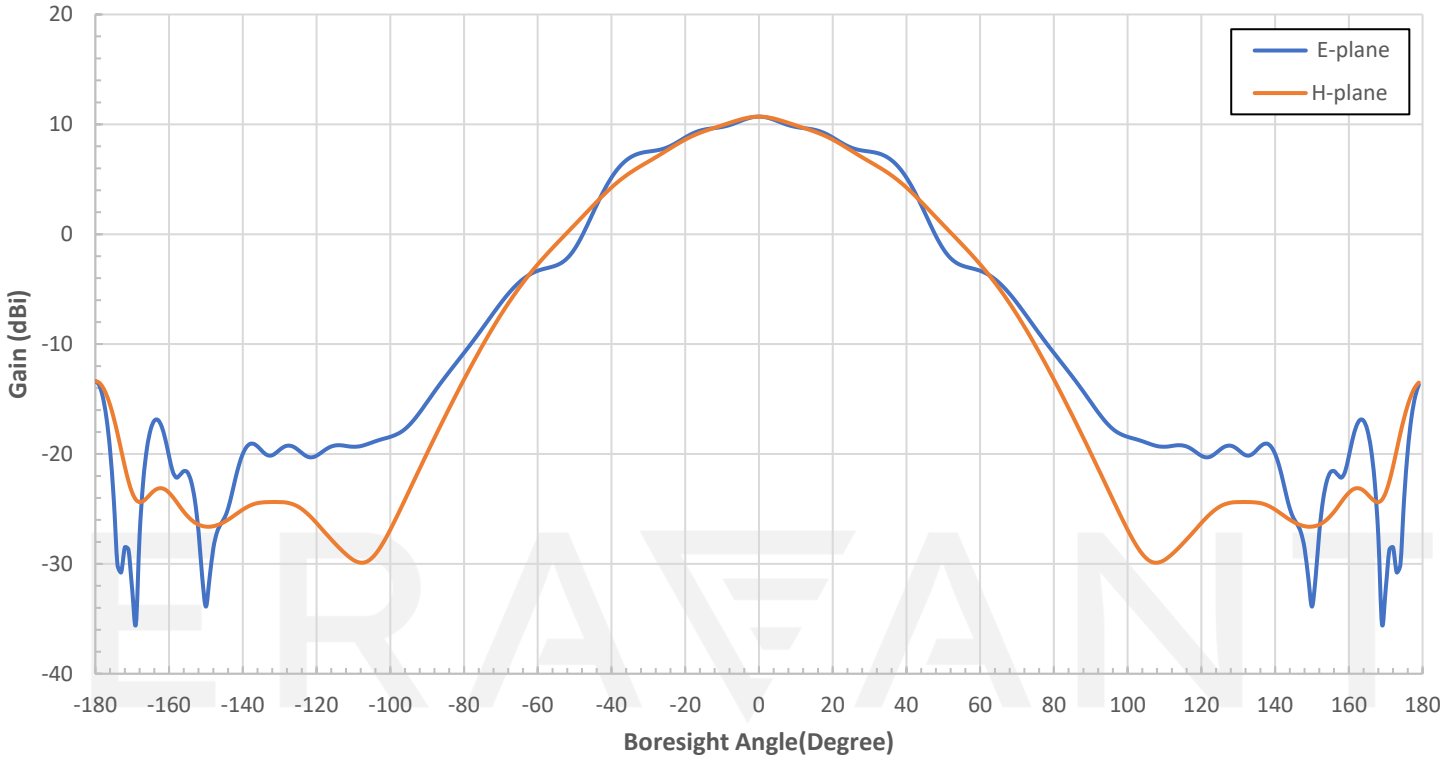
Simulated Pattern @ 90 GHz



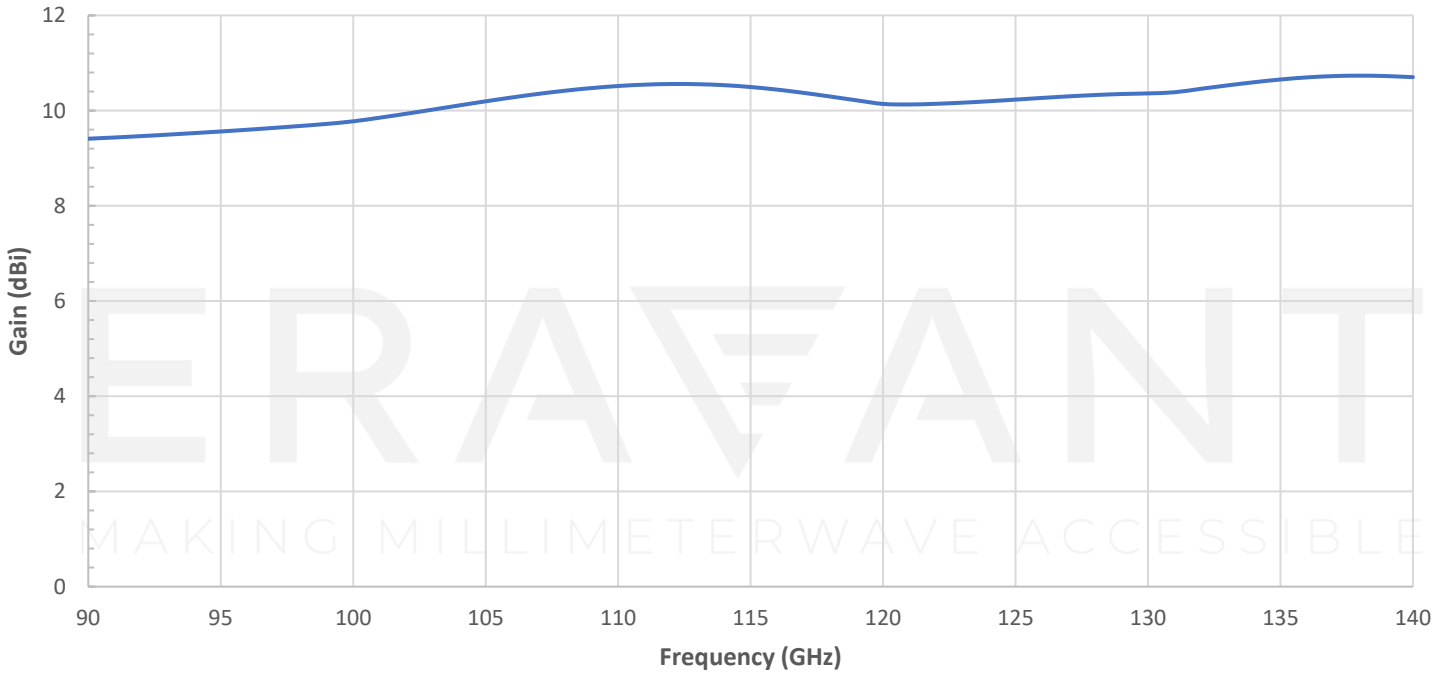
Simulated Pattern @ 115 GHz



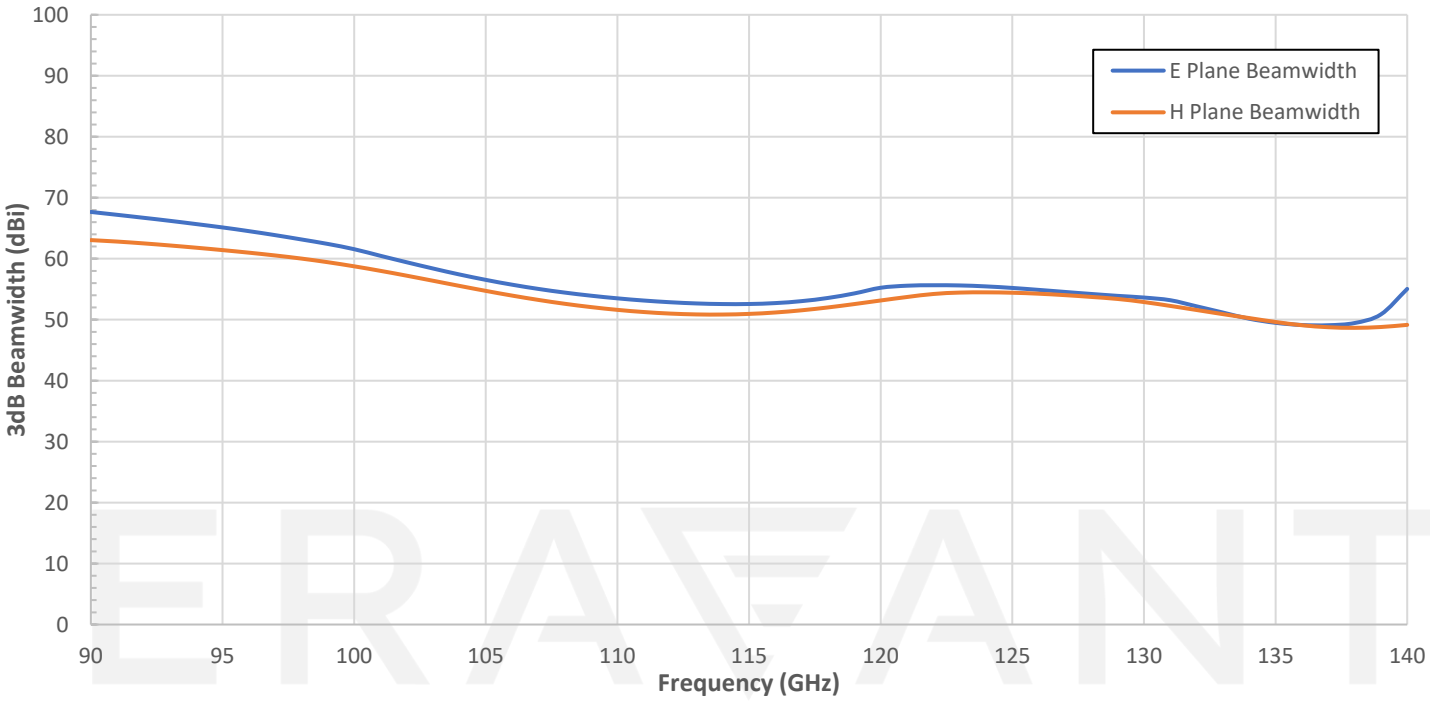
Simulated Pattern @ 140 GHz



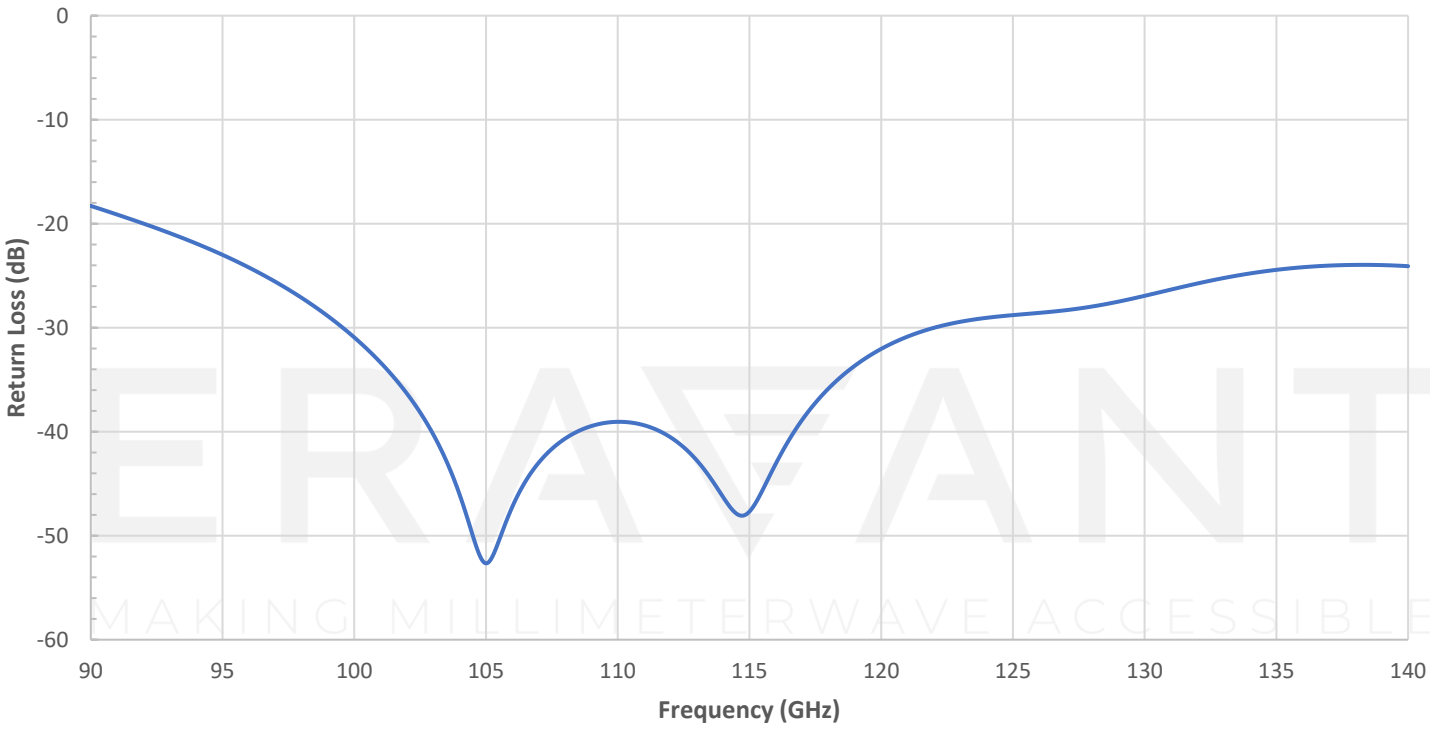
Simulated Gain vs Frequency



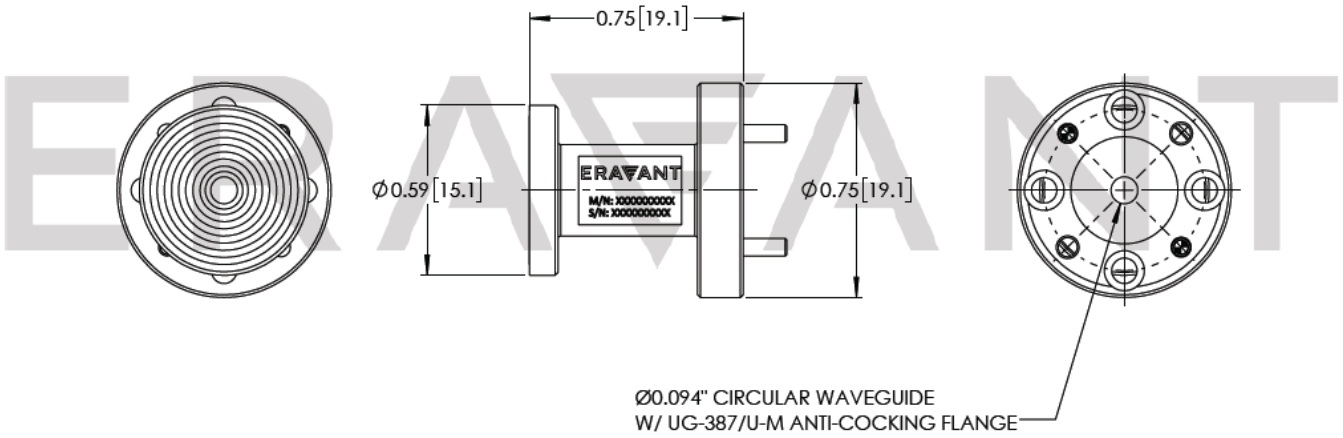
Simulated 3dB Beamwidth vs Frequency



Simulated Return Loss vs Frequency



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the antenna will cause performance degradation and possible device damage.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model SCH-06004-S1 is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.