Candy Bar
5G-NR / GNSS / WiFi 6E/7

CDB94411AM, 617-7125MHz

Features & Applications:

- *9-in-1 combo antenna*
- *4xMiMo 5G-FR1 (4G compatible)*
- *4xMiMo WiFi 6E/7*
- *Active GNSS L1/L2+L5 RHCP Patch antenna*
- *High out of band rejection GNSS filters*
- *Adhesive mount, ideal for plastic and glass surface installation*

ELECTRICAL SPECIFICATIONS						
General Specifications – 5G FR1 / WiFi 6E/7						
Antenna type	**Impedance**	**Polarization**	**Rad. Pattern**	**Power withstanding**		**DC Ground**
Dipole/Monopole[1]	50Ω	Vertical / Linear	Omni	2W		No
5G FR1 Antennas: 617 – 7125MHz						
Port	**Frequency (MHz)**	**617-960**		**1710-2700**		**3300-6000**
Port 5G#1, 2,3,4	**VSWR**	2:1		2:1		2:1
	Return Loss (dB)	<-10		<-10		<-10
	Avg. Peak Gain (dBi)	3.6		3.9		4.7
	Avg. Efficiency (%)	49		56		52
Isolation[2]	**5G Port 1-2-3-4 (dB)**	8		15		15
WiFi 6E/7 Antennas: 2400-2500 /5150-7125MHz						
Port	**Frequency (MHz)**	**2400-2500**			**5150-7125**	
Port WIFI#1,2,3, 4	**VSWR**	2:1			2:1	
	Return Loss (dB)	<-10			<-10	
	Avg. Peak Gain (dBi)	3.4			3.1	
	Avg. Efficiency (%)	51			56	
Isolation[2]	**WIFI Port1-2-3-4 (dB)**	13			25	
GNSS Antenna:1164-1602MHz						
Antenna type	**Nominal Impedance**			**Polarization**		
Stacked active patch antenna	50 Ω			RHCP		
Frequency (MHz)	L1: 1561-1602MHz		L2: 1215-1237MHz		L5: 1164-1189MHz	
Return Loss (dB)	< -10 @L1		< -13@L2		< -15@L5	
LNA Gain Typical (dB)	28dB ± 2 dB					
Noise Figure (dB)	1.7 @1575MHz, 2.2@1227MHz, 2.2 @1164MHz					
Current consumption	<16 mA					
DC voltage in via GNSS RF cable[3]	2.5-18 Vdc					
ESD protected	Yes					

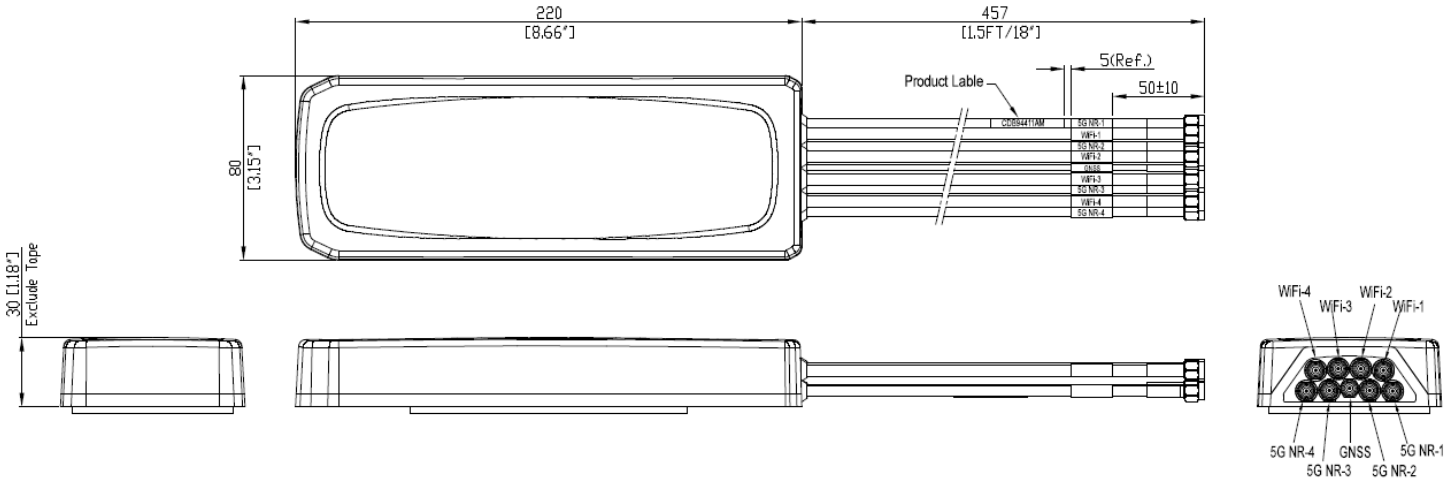
Notes:
1. 5G-FR1: Multiband Dipoles, WiFi 6E/7: Multi-Band Monopoles with built in ground plane
2. Minimum Isolation (dB)
3. LNA internal voltage stabilized by LDO (Low dropout regulator)

MECHANICAL SPECIFICATIONS				
CDB94411AM				
Dimension (L x W x H)	**Weight**	**Color**	**Fixing System**	**Housing Material**
220 x 80 x 30 mm (8.66” x 3.15”x 1.18”)	380 g	Black	Adhesive Mount (3M VHB 4991(Gray))	PC (UV-stabilized)
Wireless Technology	**No. of Port**	**Cable Length**	**Cable Type**	**Connector Type**
5G FR1/LTE	4	1.5FT (457mm)	LMR195	SMA Male
GNSS	1	1.5FT (457mm)	RG174	SMA Male
WiFi 6E/7	4	1.5FT (457mm)	LMR195	SMA Male

ENVIRONMENTAL SPECIFICATIONS			
CDB94411AM			
Storage Temperature	**Operating Temperature**	**Ingress Protection**	**RoHS Compliant**
-40 / +85° C	-40 / +85° C	IP65	Yes

Mechanical Drawing

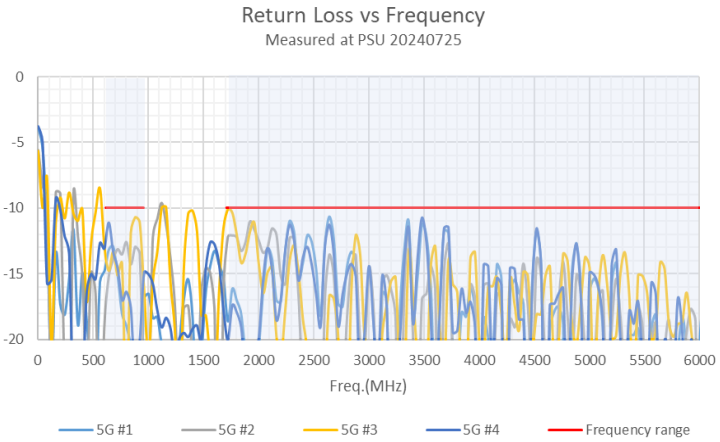
CDB94411AM

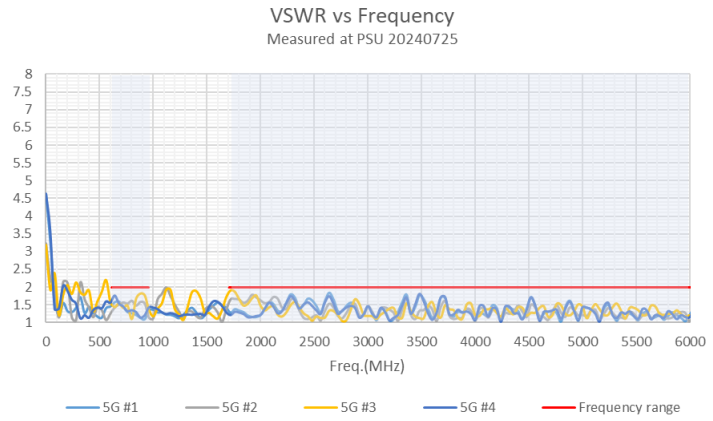


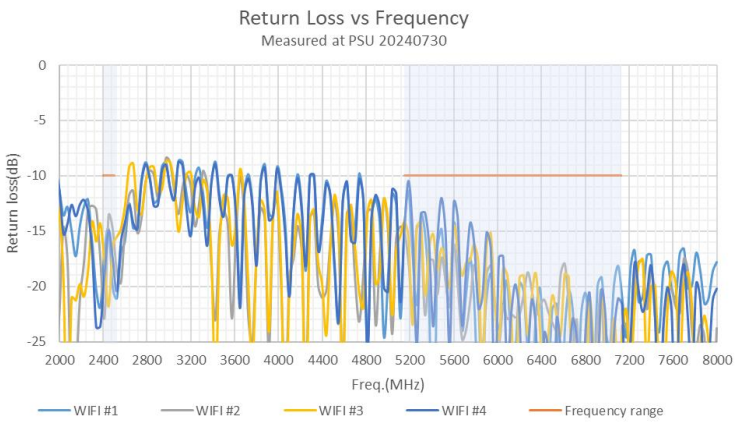
Unit: mm/ inches

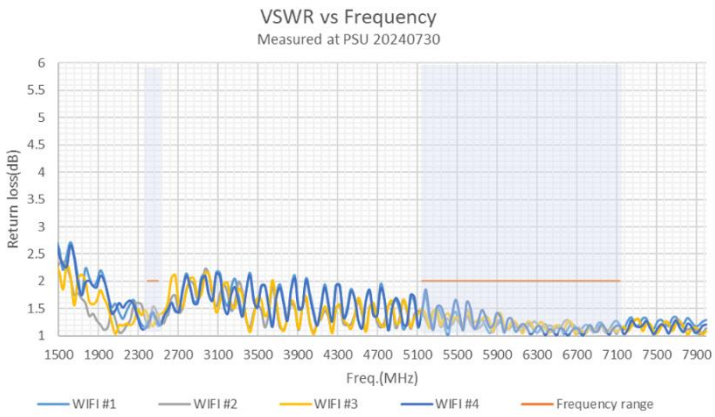
Charts

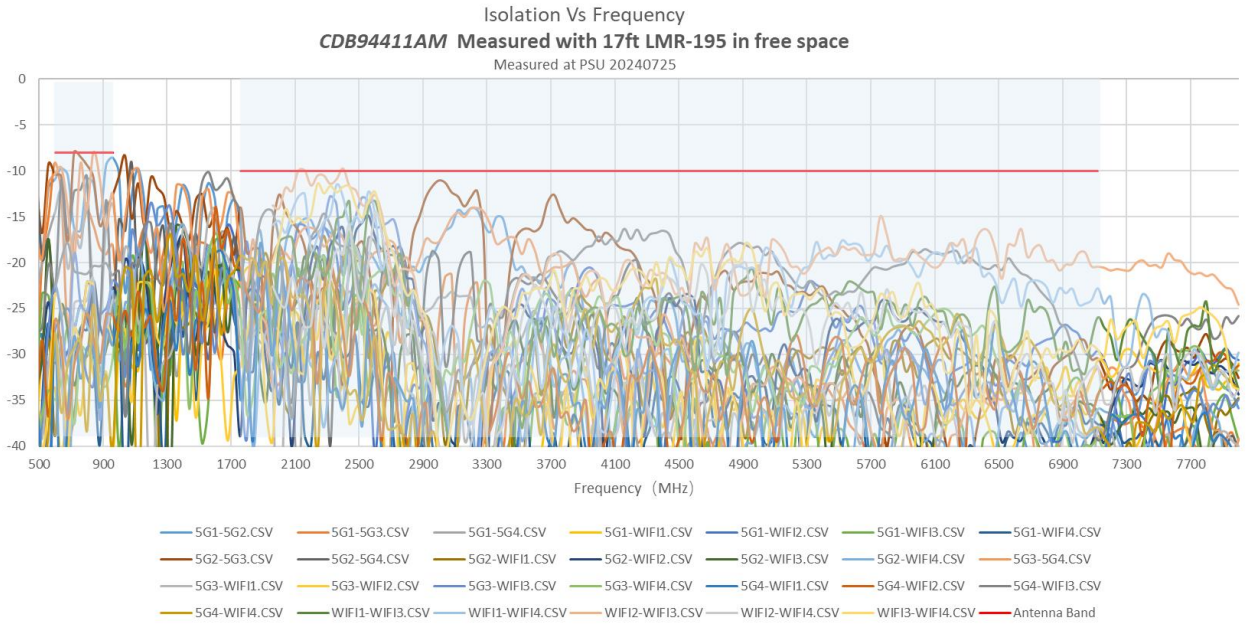
Test data











* Antenna test in free space and 17-ft LMR195 cables

Charts

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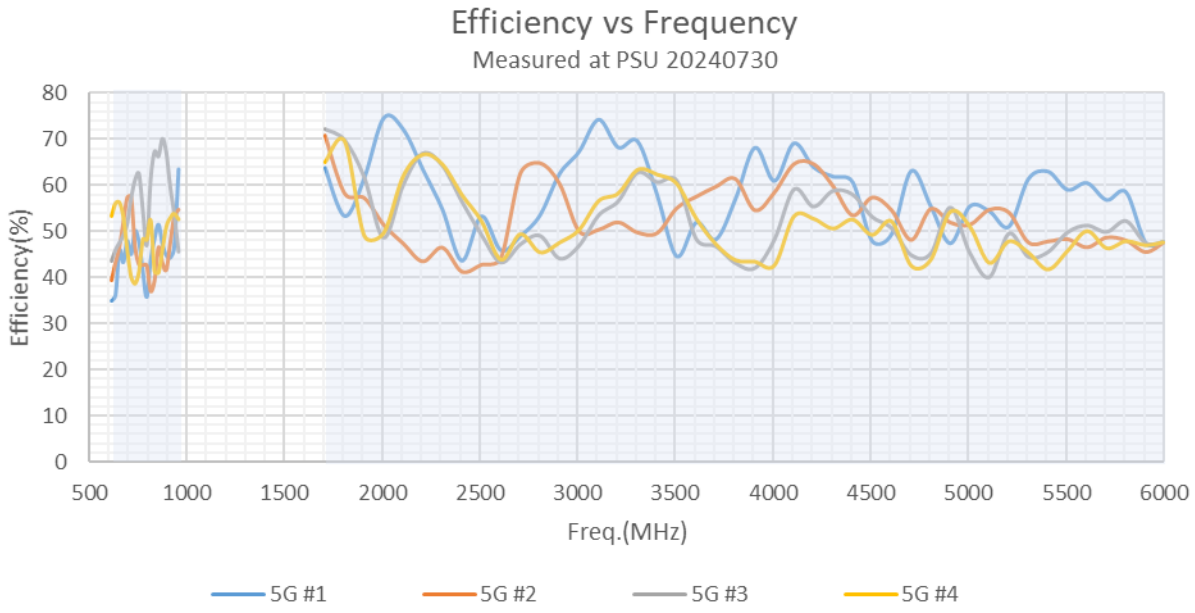

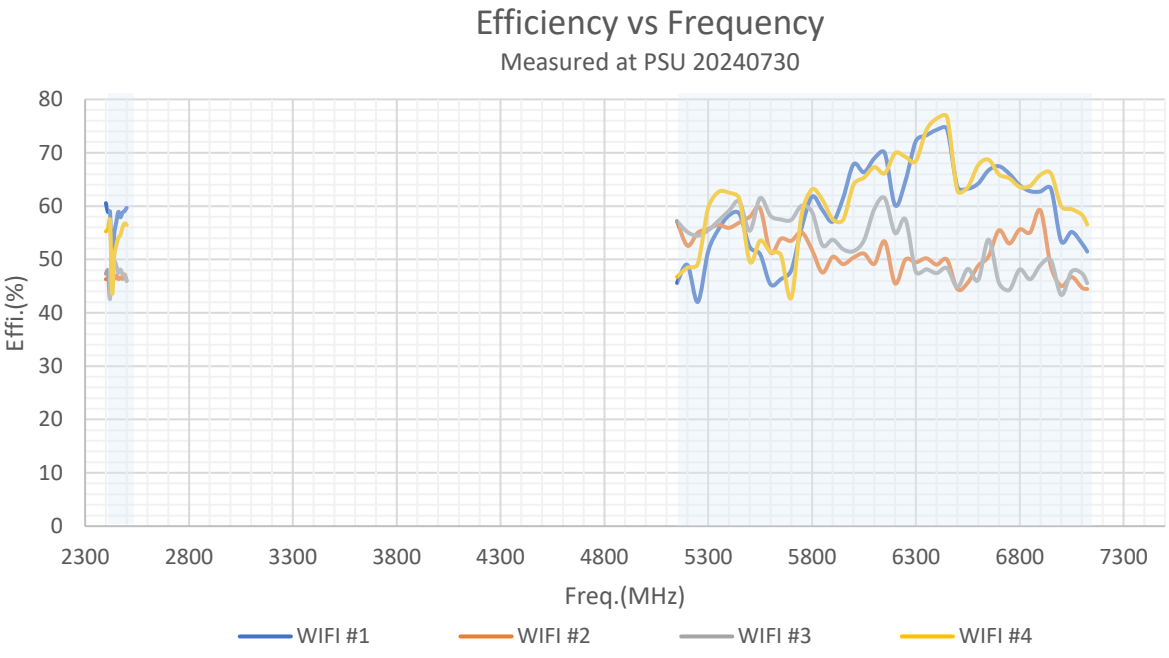

* Antenna test in free space and 1-ft LMR195 cables

Charts

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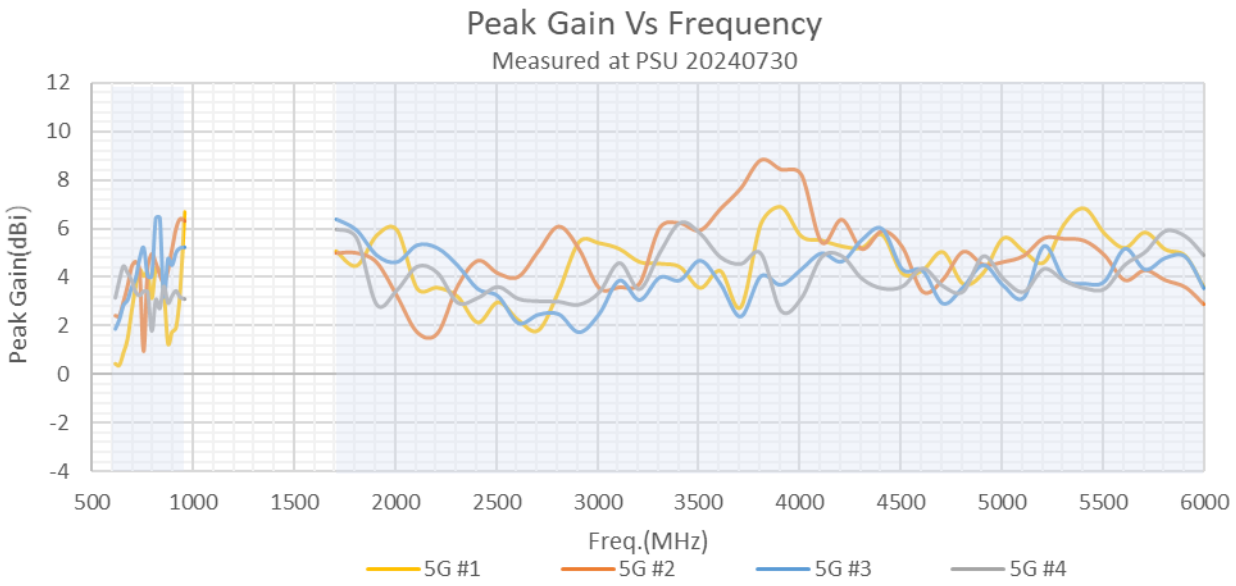
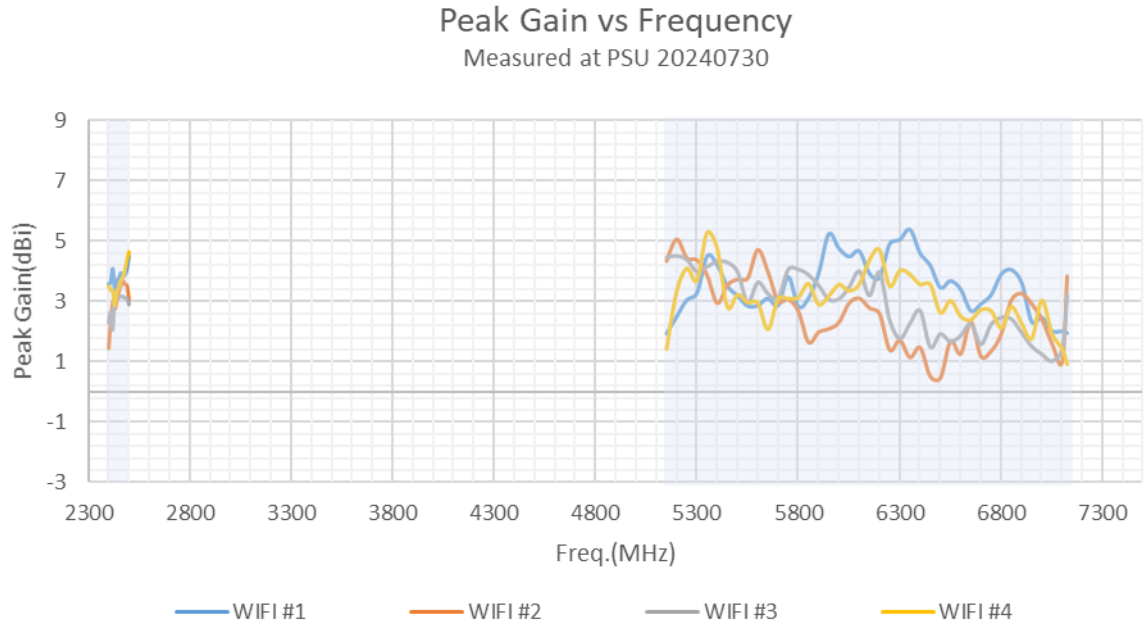


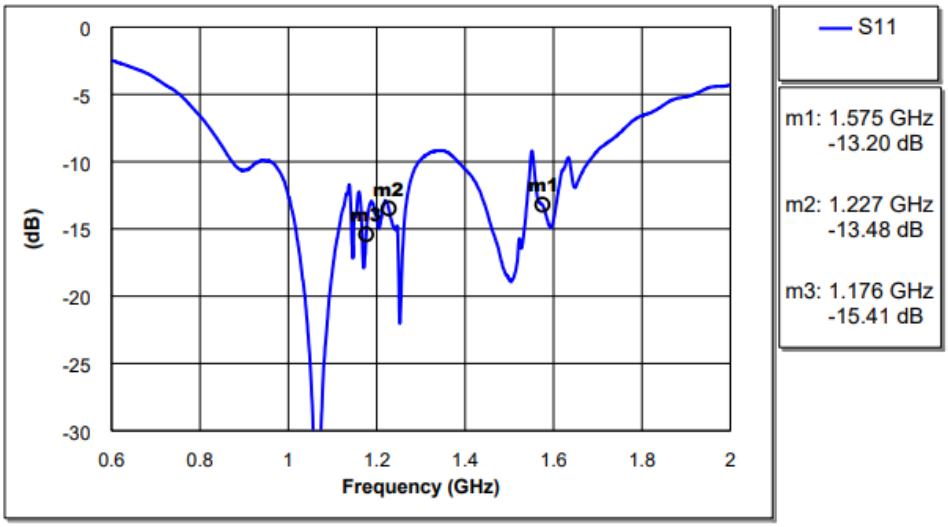


* Antenna test in free space and 1-ft LMR195 cables

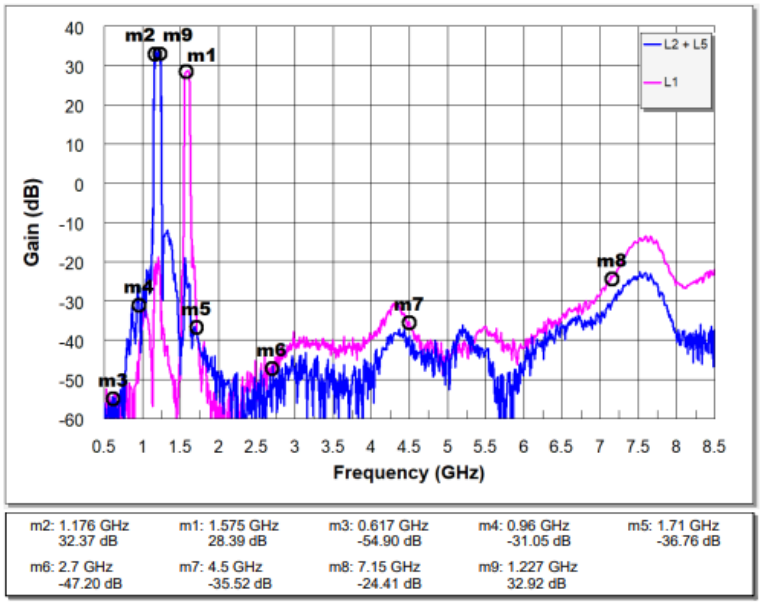
Charts

Test data
GNSS Antenna

Return Loss



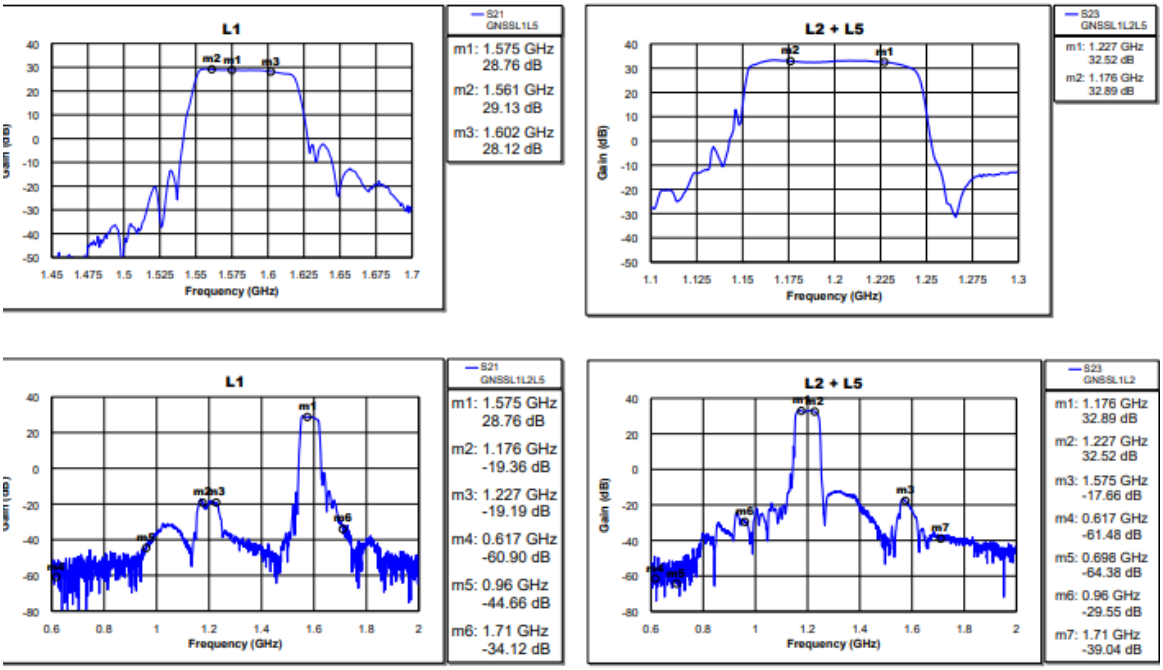
LNA Out of band rejection



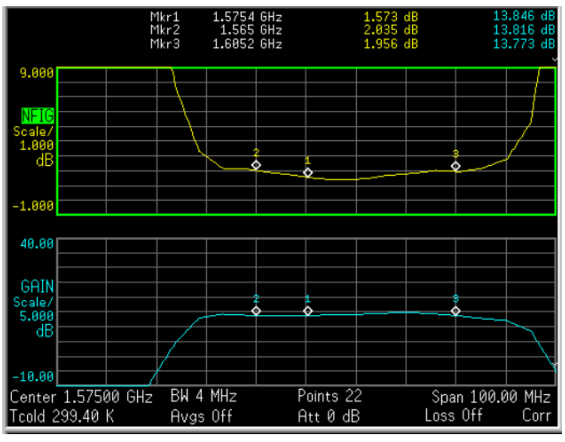
Charts

Test data
GNSS Antenna

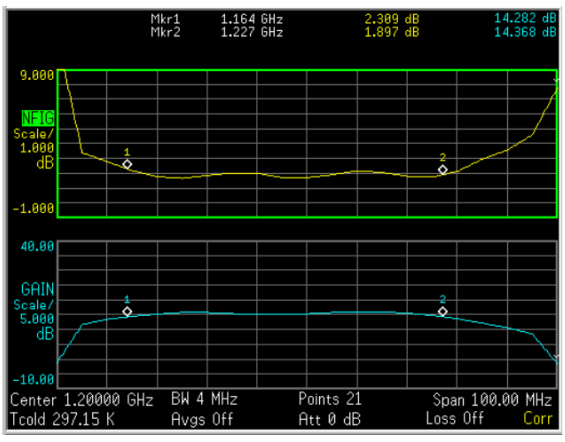
LNA Gain



LNA Noise Figure



L1 Noise Figure

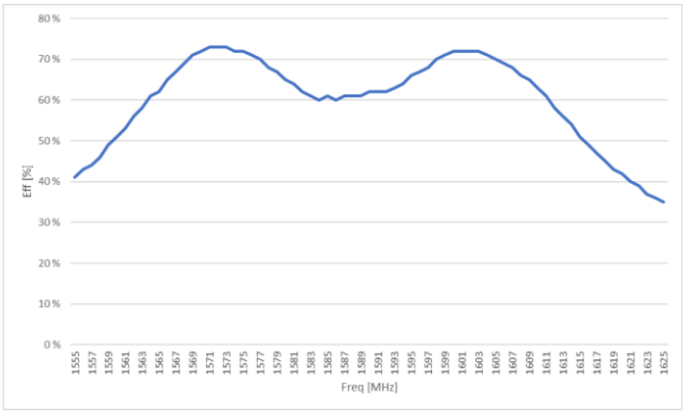


L2 + L5 Noise Figure

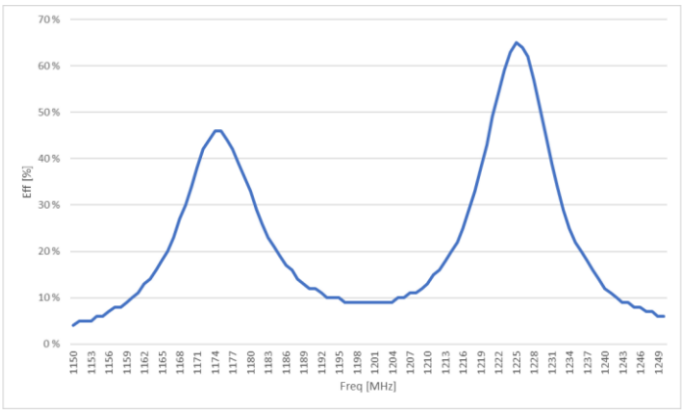
Charts

Test data
GNSS Antenna

Radiating Element Efficiency

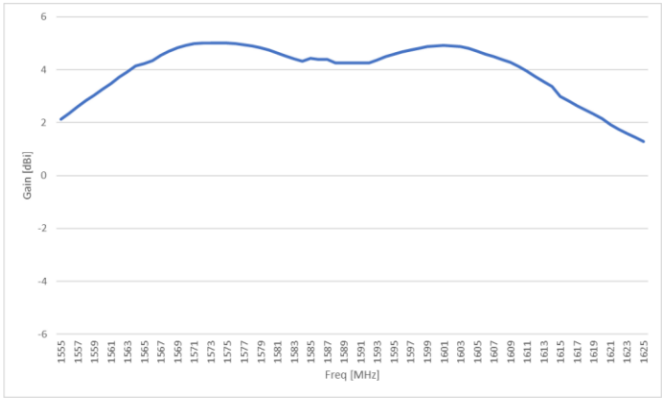


L1 Band

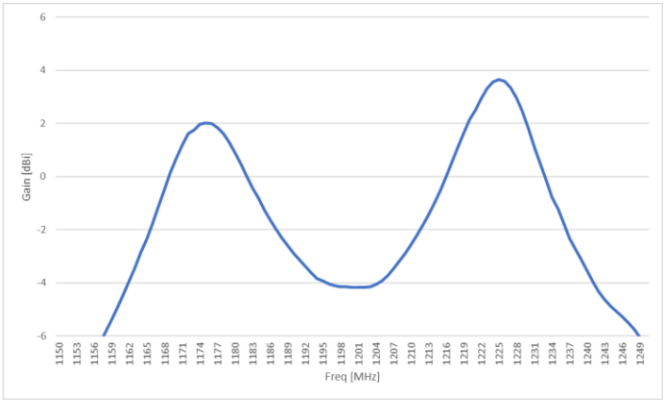


L2 + L5 Band

Radiating Element Peak Gain (Linear)



L1 Band

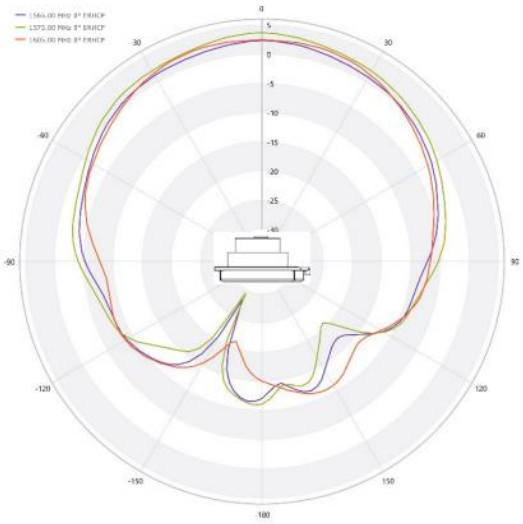


L2 + L5 Band

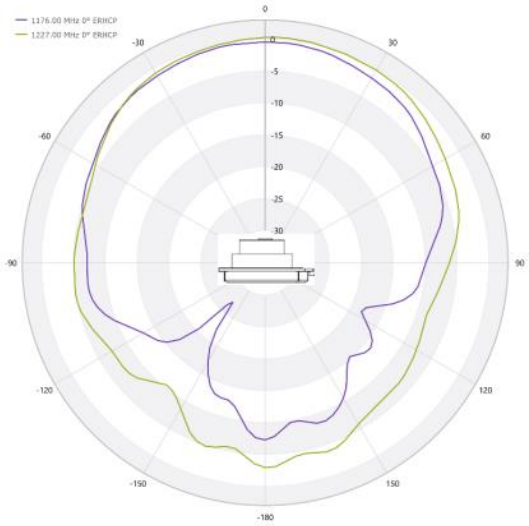
Charts

Test data
GNSS Antenna

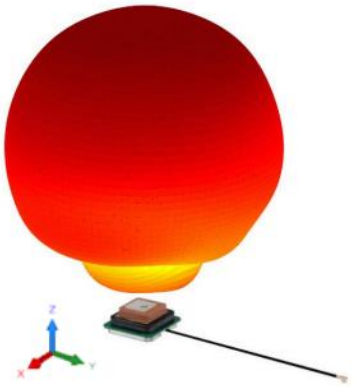
Radiation Patterns RHCP (dBic)



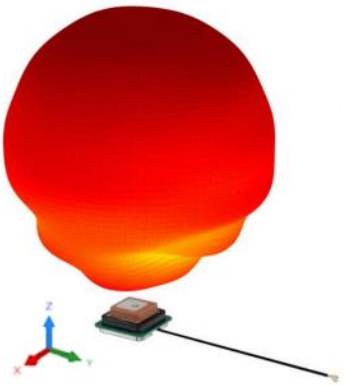
L1 RHCP Pattern



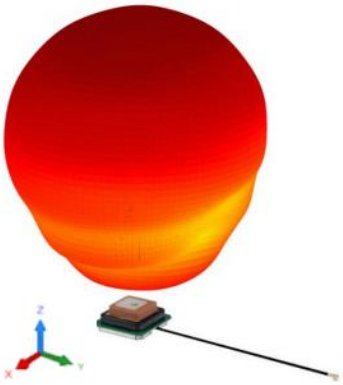
L2 + L5 RHCP Pattern



L1 3D RHCP Pattern
@1575 MHz



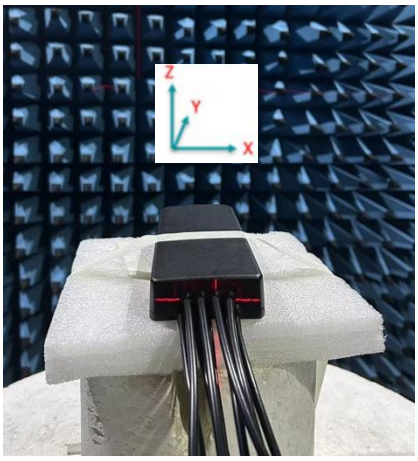
L2 3D RHCP Pattern
@1227 MHz



L5 3D RHCP Pattern
@1176 MHz

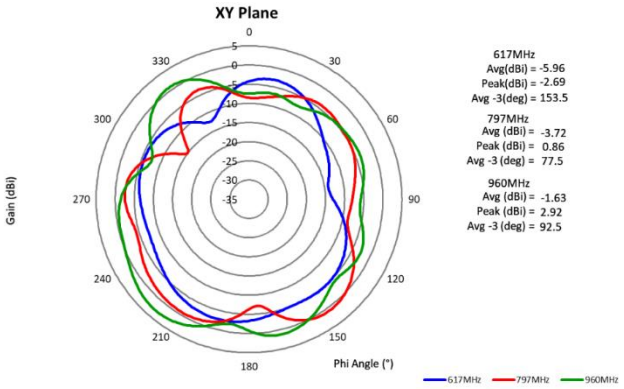
Testing Setup

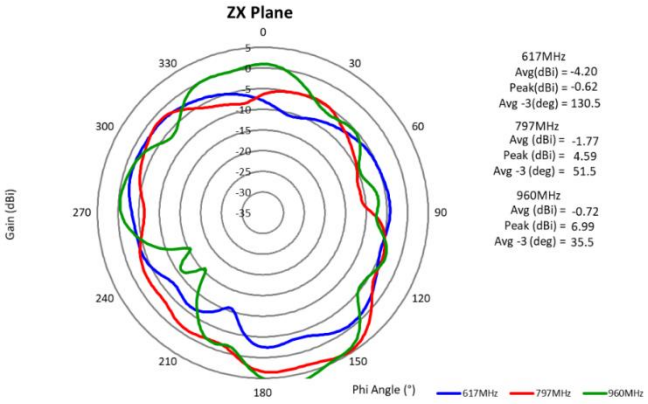
CDB94411AM

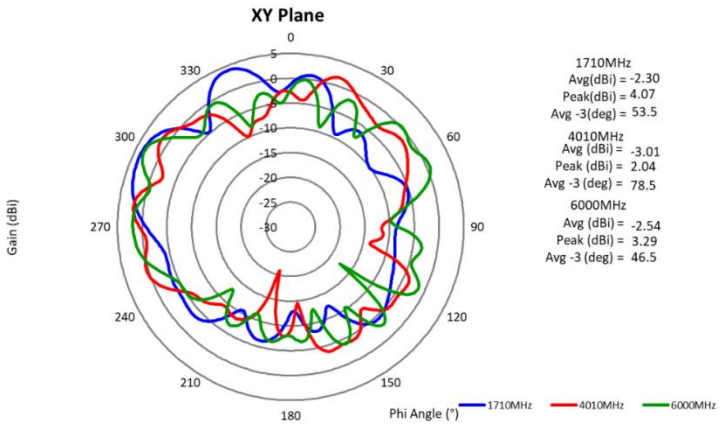


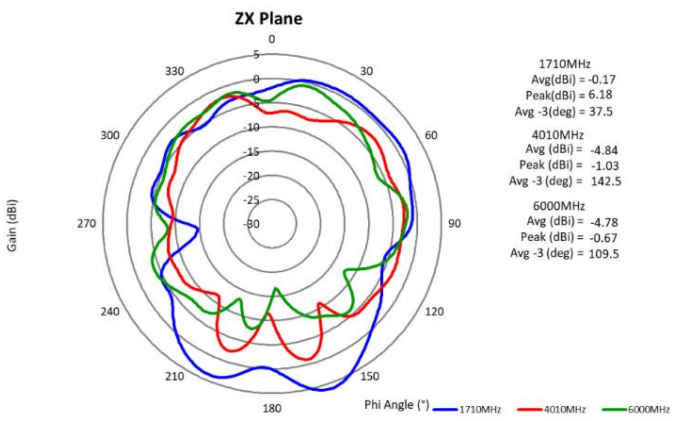
Radiation Pattern

Test data
5G NR-Antenna 1



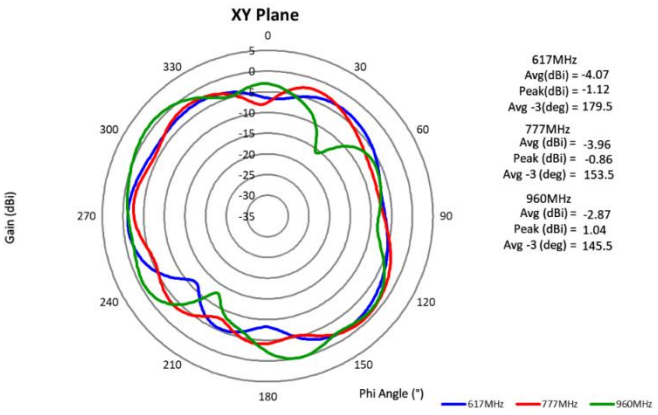


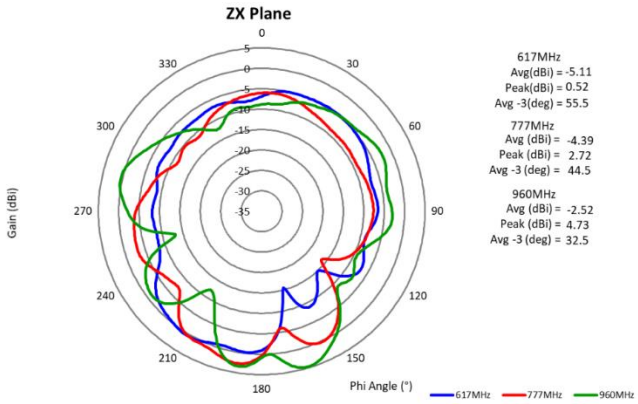


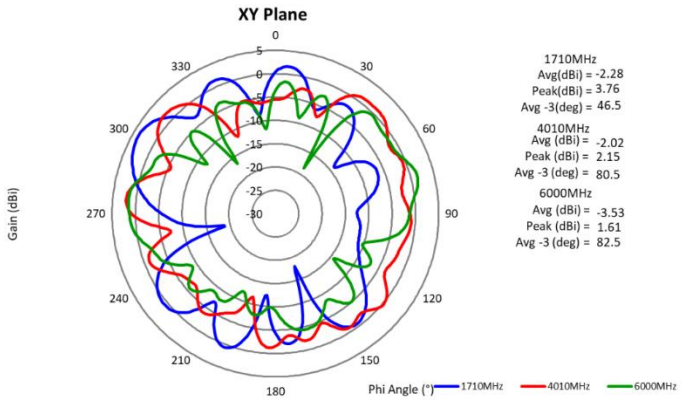


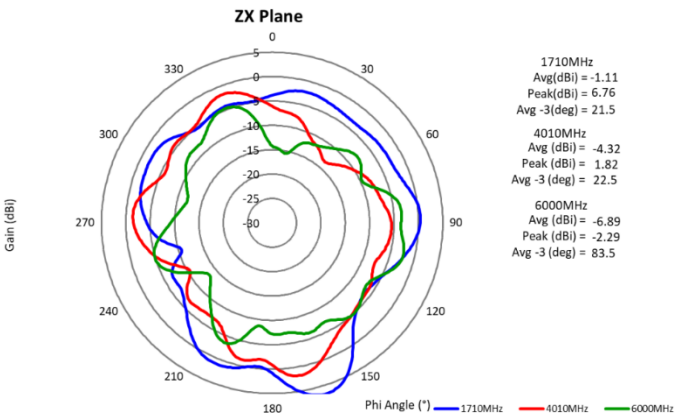
Radiation Pattern

Test data
5G NR-Antenna 2



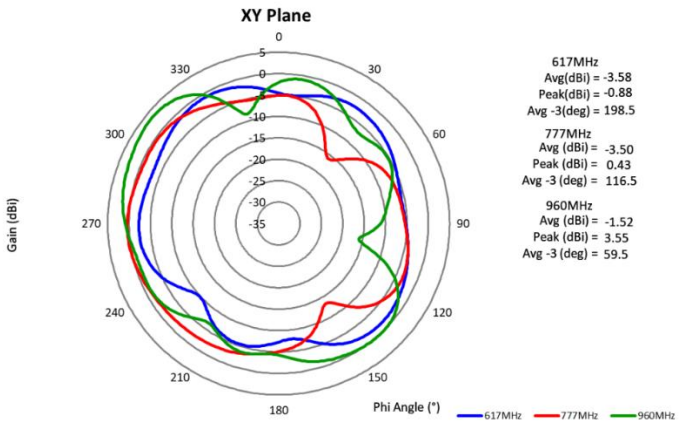


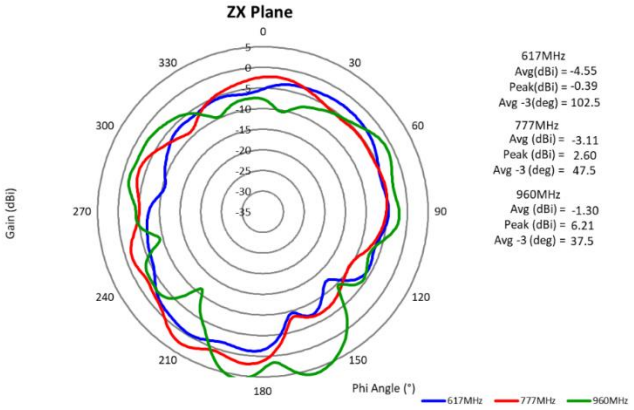


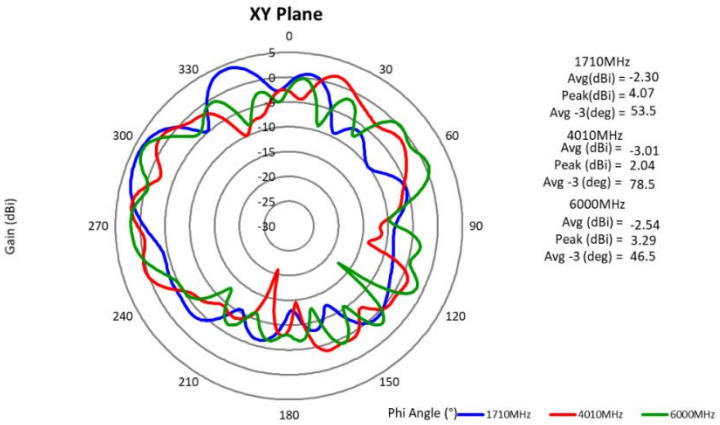


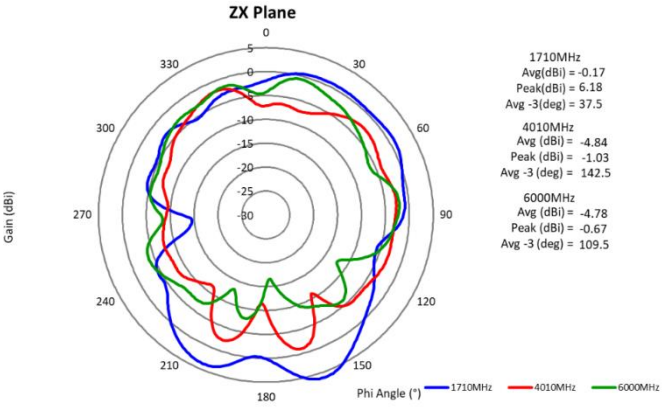
Radiation Pattern

Test data
5G NR-Antenna 3



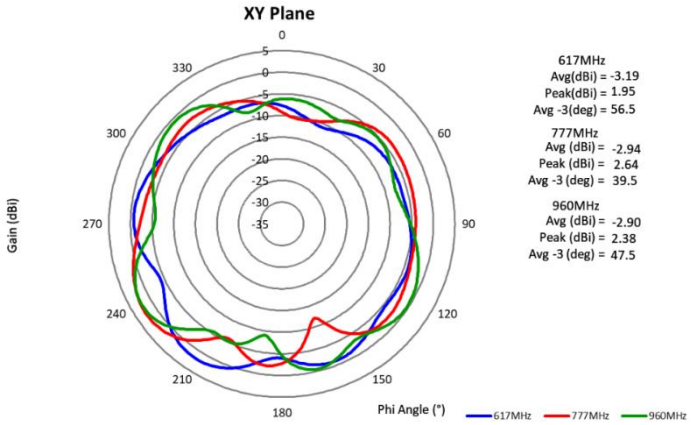


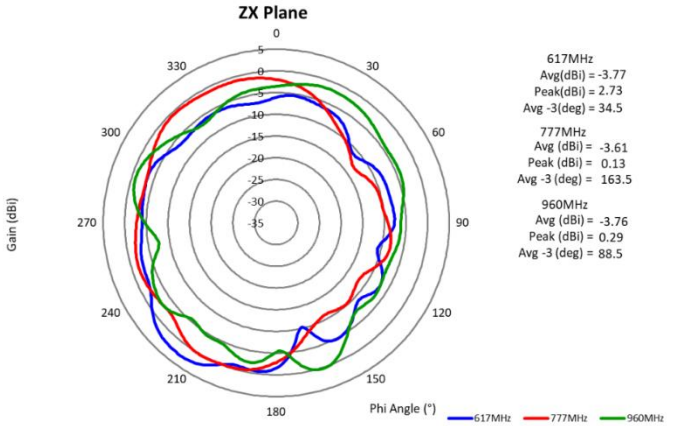


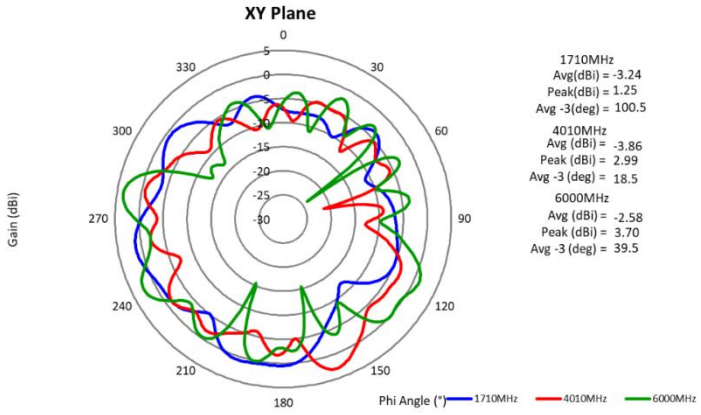


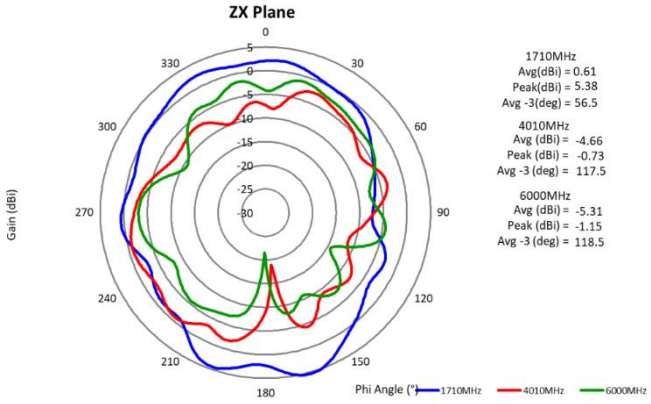
Radiation Pattern

Test data
5G NR-Antenna 4



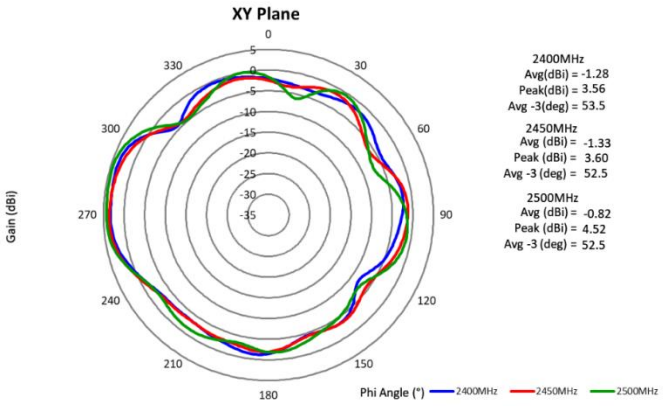


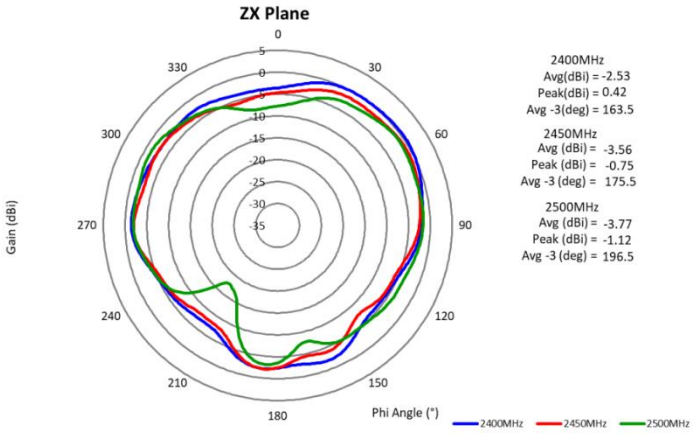


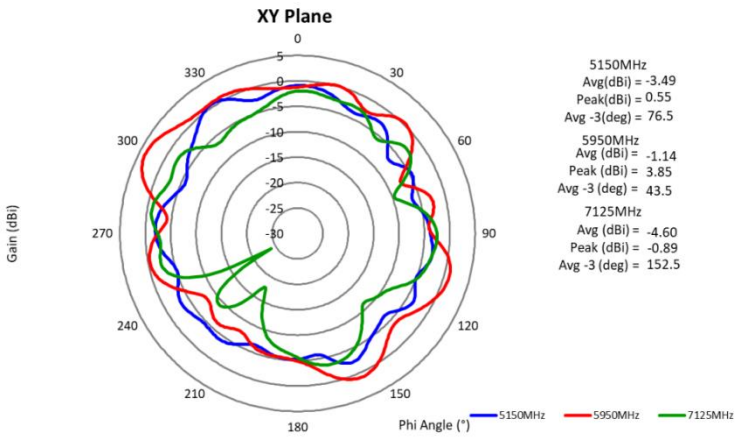


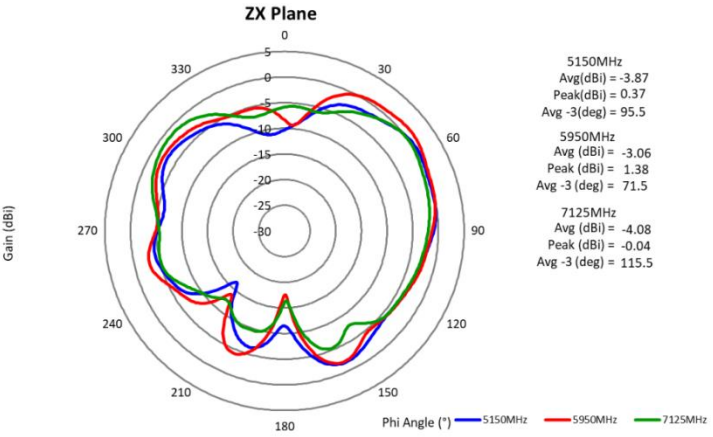
Radiation Pattern

Test data
WiFi-Antenna 1



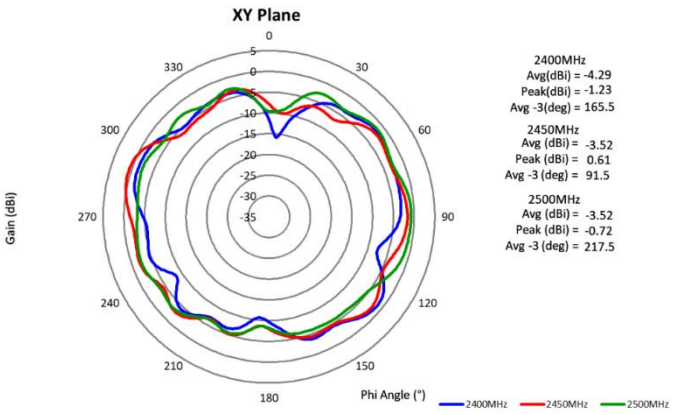


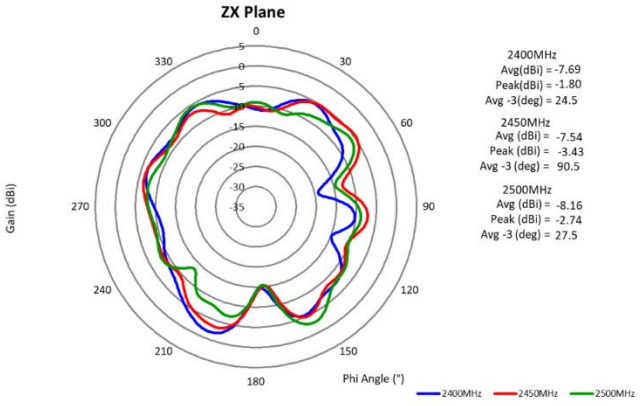


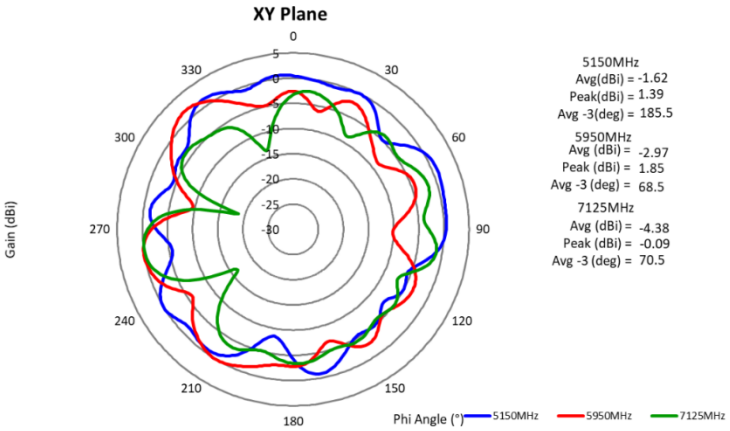


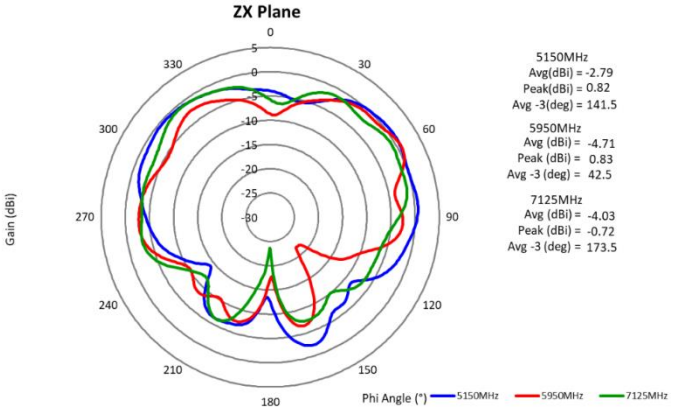
Radiation Pattern

Test data
WiFi-Antenna 2



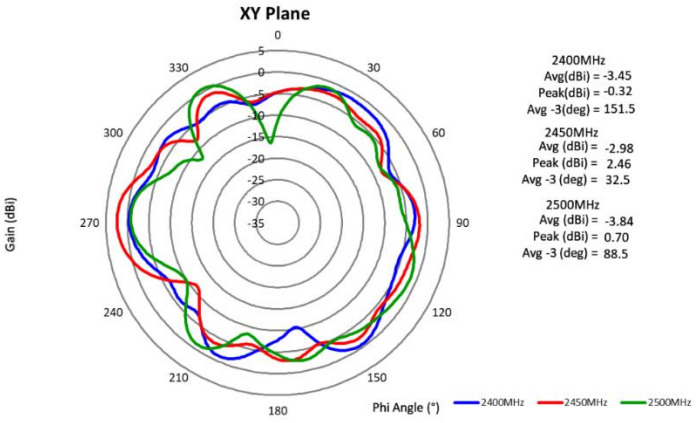


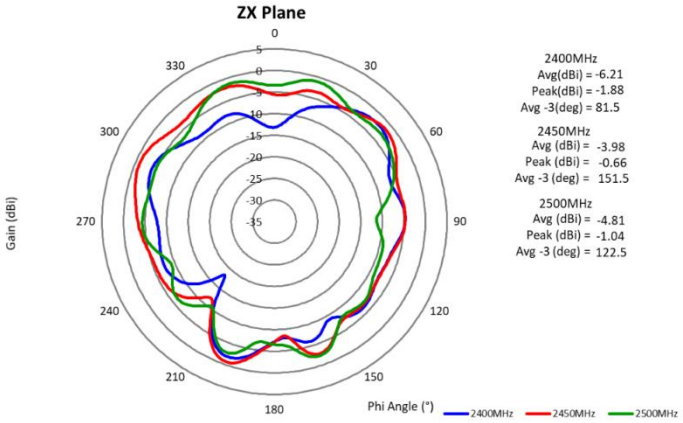


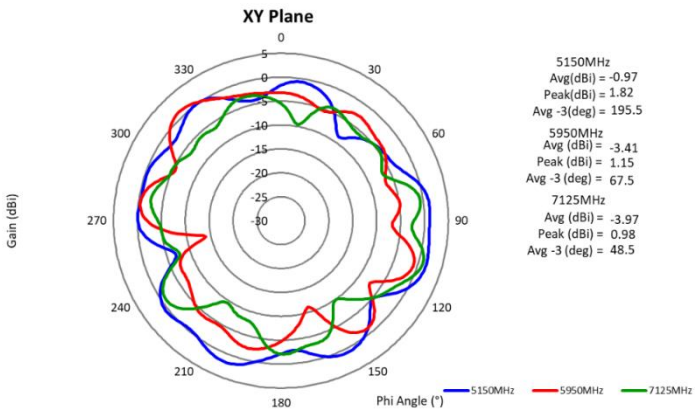


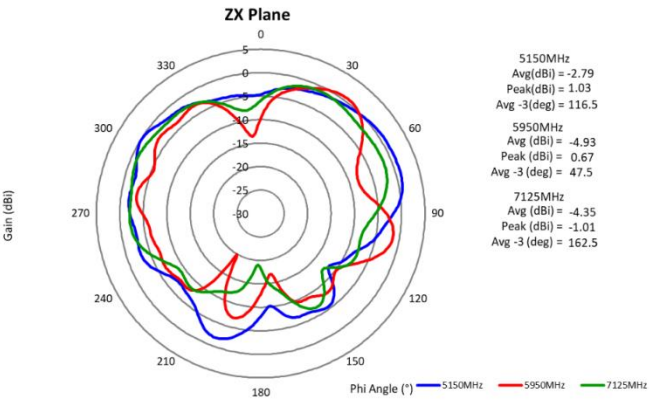
Radiation Pattern

Test data
WiFi-Antenna 3



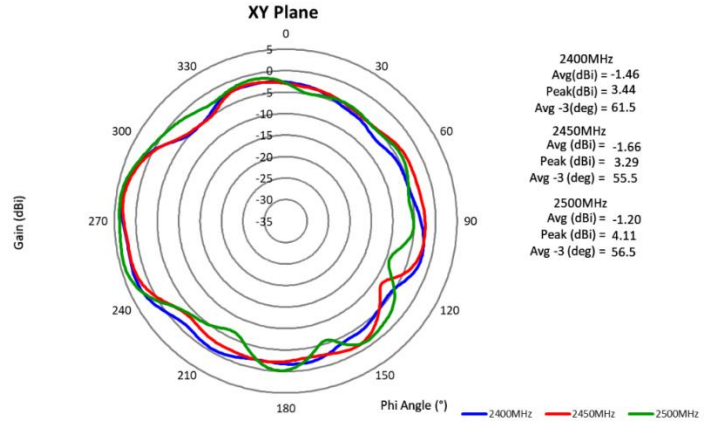


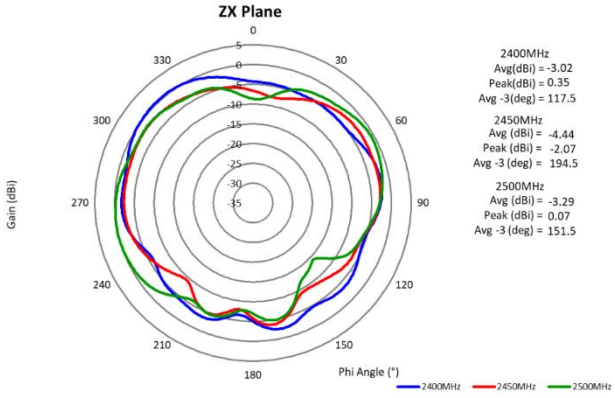


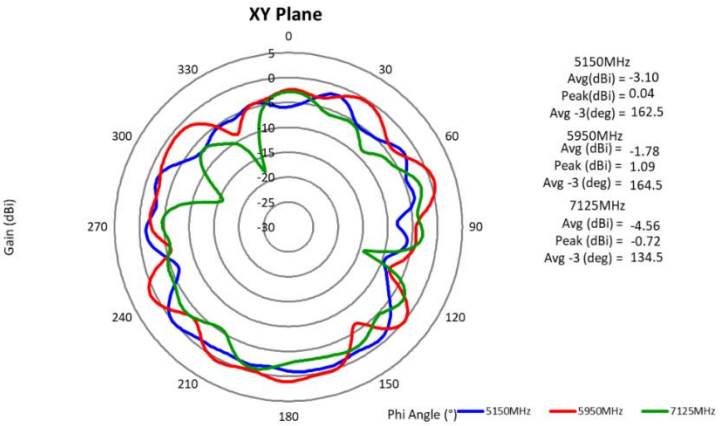


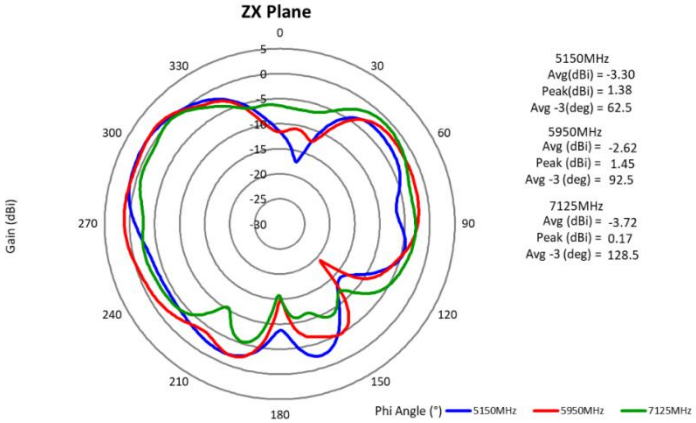
Radiation Pattern

Test data
WiFi-Antenna 4









Packing

CDB94411AM

1.Put one antenna into a big packing bag.	
2. Put the partition board into the outer box, and put 4 products in every grid, 12 sets products per outer box. Outer carton box dimension: 558x383x210mm.	  

For More Information:
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'YAGEO Corporation and its affiliates do not recommend the use of commercial, automotive, and/or COTS grade products for high reliability applications or manned space flight.'