



MEA-3IN1-5G-MM

5G NR MIMO and 2.4/5.0/6.0 GHz ISM Magnetic Mount

Part #: 100-00410-01

Description

The MEA-3IN1-5G-MM Magnet Mount Antenna is a high-performance, low-profile solution designed to maintain constant network connectivity. It covers all 5G NR, ISM, and MIMO standard frequencies, making it ideal for telematics systems, remote surveillance, asset tracking, and various IoT applications.

This antenna excels in challenging installations due to its high performance and low profile. It features an IP67-rated housing for maximum durability and anti-rotation mounting for secure installation. The magnet mount design ensures easy installation. The MEA-3IN1-5G-MM comes with three SMA-Male standard connectors and 3-meter cables, with options for customization including additional connector types, cable lengths, and cable types.

Electrical Specifications

Parameter	Specifications			
Technologies	5G, 4G, 3G and 2G			
Standards	5G NR/4G LTE/FirstNet/CBRS/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G2G			
Frequency (MHz)	617-960	1427-2690	3300-5000	5150-5925
Band (MHz)	600, 700, 850, 900	1500, 1600, 1700, 1800, 1900, 2000, 2100, 2300, 2500, 2600	3300, 3500, 3600, 3700, 4500	5200, 5500, 5800
5G NR Bands	n5, n8, n12, n20, n28, n71, n81, n82, n83,	n1, n2, n3, n7, n25, n34, n38, n39, n40, n41, n50, n51, n66, n70, n74, n75, n76, n80, n84, n86	n77, n78, n79	
4G LTE Bands	B5, B6, B8, B12, B13, B14, B17, B18, B19, B20, B26, B27, B28, B29, B44, B67, B68, B71, B85	B1, B2, B3, B4, B7, B9, B10, B11, B21, B23, B24, B25, B30, B32, B33, B34, B35, B36, B37, B38, B39, B40, B41, B45, B50, B51, B65, B66, B69, B70, B74, B75, B76	B22, B42, B43, B48, B49, B52	B46, B47, B252, B255
3G CELL Bands	B5, B6, B8, B12, B13, B14, B19, B20, B26	B1, B2, B3, B4, B7, B9, B10, B11, B21, B25, B32, B33, B34, B35, B36, B37, B38, B39, B40	B22	
2G CELL Bands	710, 750, 810T, 850, 900P, 900E, 900R	1800DCS, 1900PCS		
CDMA CELL Bands	BC0, BC2, BC3, BC7, BC9, BC10, BC12, BC18, BC19	BC1, BC4, BC6, BC8, BC13, BC14, BC15, BC16, BC20, BC21		



- Cable 1 and 2: Optimized for 5G NR frequencies (617-960 MHz, 1427-2690 MHz, 3300-5000 MHz, and 5150-5925 MHz).
- Cable 3: Suitable for 2.4/5.0/6.0 GHz ISM bands (2410-2490 MHz and 4920-7125 MHz).
- High Gain Performance for Superior signal strength and connectivity.
- Magnetic Mount Design for easy and secure mounting
- Ground Plane Independent
- IP67 and IP69
- Compact size of 89 x 76 x 27 mm.
- Customized Cable and Connector

Applications

- LTE/WIFI
- IOT
- SATCOM
- Massive IOT
- LTE applications



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Cable 1	Parameter	Specifications			
	Frequency (MHz)	617-960	1427-2690	3300-5000	5150-5925
	Return Loss (dB)	~7.0	~11.2	~7.1	~6.4
	VSWR	~3.1:1	~2.1:1	~3.1:1	~3.0:1
	Efficiency (%)	~50.2	~56.3	~30.4	~25.1
	Peak Gain (dBi)	~2.1	~6.3	~3.7	~2.8
	Average Gain (dB)	~3.3	~2.5	~5.8	~6.1
	Impedance (Ohm)	50			
	Polarization	Linear			
	Radiation Pattern	Omni-Directional			
	Max Input Power (W)	35			
	Connector Type	SMA-Male Standard (Other Connectors Available)			
	Cable Length	300 cm Standard (Any Cable Length Available)			
	Cable Type	D302 Standard (Other Cables Available)			

Cable 2	Parameter	Specifications			
	Frequency (MHz)	617-960	1427-2690	3300-5000	5150-5925
	Return Loss (dB)	~7.3	~10.8	~7.6	~8.4
	VSWR	~3.1:1	~2.1:1	~2.9:1	~2.3:1
	Efficiency (%)	~50.9	~58.7	~38.0	~36.7
	Peak Gain (dBi)	~1.6	~6.3	~5.1	~4.4
	Average Gain (dB)	~3.2	~2.3	~4.4	~4.4
	Impedance (Ohm)	50			
	Polarization	Linear			
	Radiation Pattern	Omni-Directional			
	Max Input Power (W)	25			
	Connector Type	SMA-Male Standard (Other Connectors Available)			
	Cable Length	300 cm Standard (Any Cable Length Available)			
	Cable Type	D302 Standard (Other Cables Available)			

Cable 3	Parameter	Specifications		
	Standards	WiFi,6E, BT, ZigBee, ISM, SigFox, LoRa, BLE		
	Band (MHz)	2.4 GHz	5.0 GHz	6.0 GHz
	Frequency (MHz)	2410-2490	4920-5925	5925-7125
	Return Loss (dB)	~18.0	~12.8	~15.6
	VSWR	~1.3:1	~1.7:1	~1.4:1
	Efficiency (%)	~38.4	~25.6	~28.0
	Peak Gain (dBi)	~3.8	~2.8	~2.4
	Average Gain (dB)	~4.2	~6.0	~5.5
	Impedance (Ohm)	50		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max Input Power (W)	25		
	Connector Type	RP-SMA-Male Standard (Other Connectors Available)		
	Cable Length	300 cm Standard (Any Cable Length Available)		
	Cable Type	D100 Standard (Other Cables Available)		



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Antenna Measurement Conditions

Mounted on 30 x 30 Metal Plate

100 cm of Cable D302

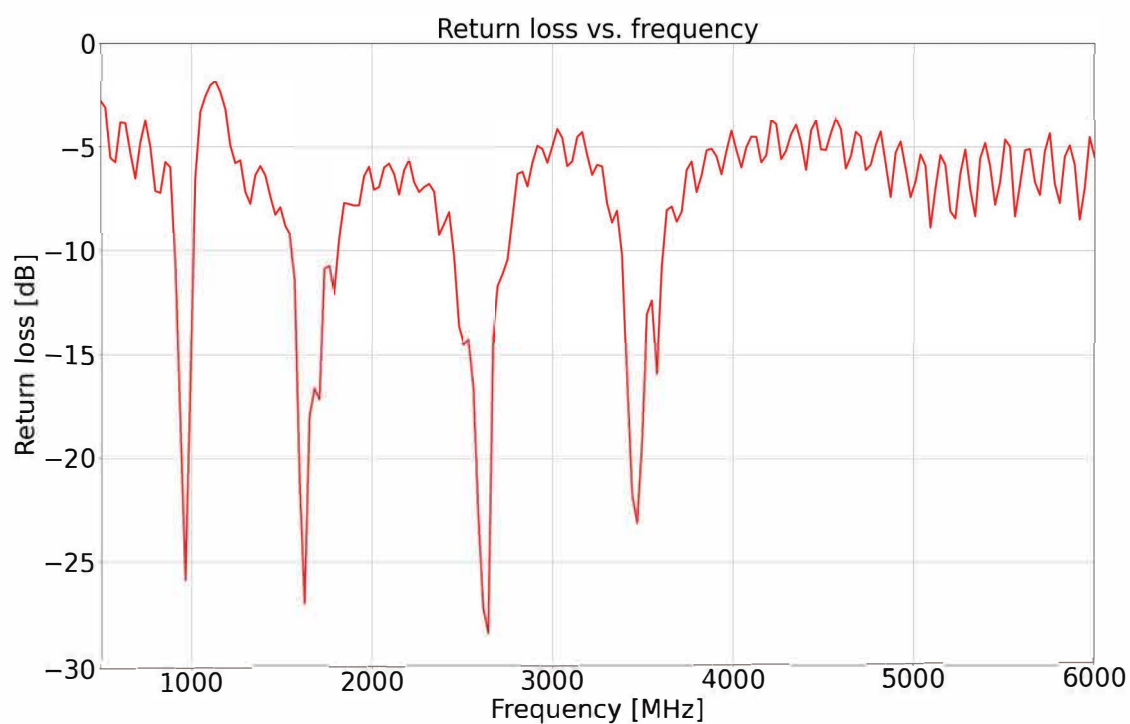
Measured in Certified CTIA 3D Anechoic Chamber

Mechanical Specifications

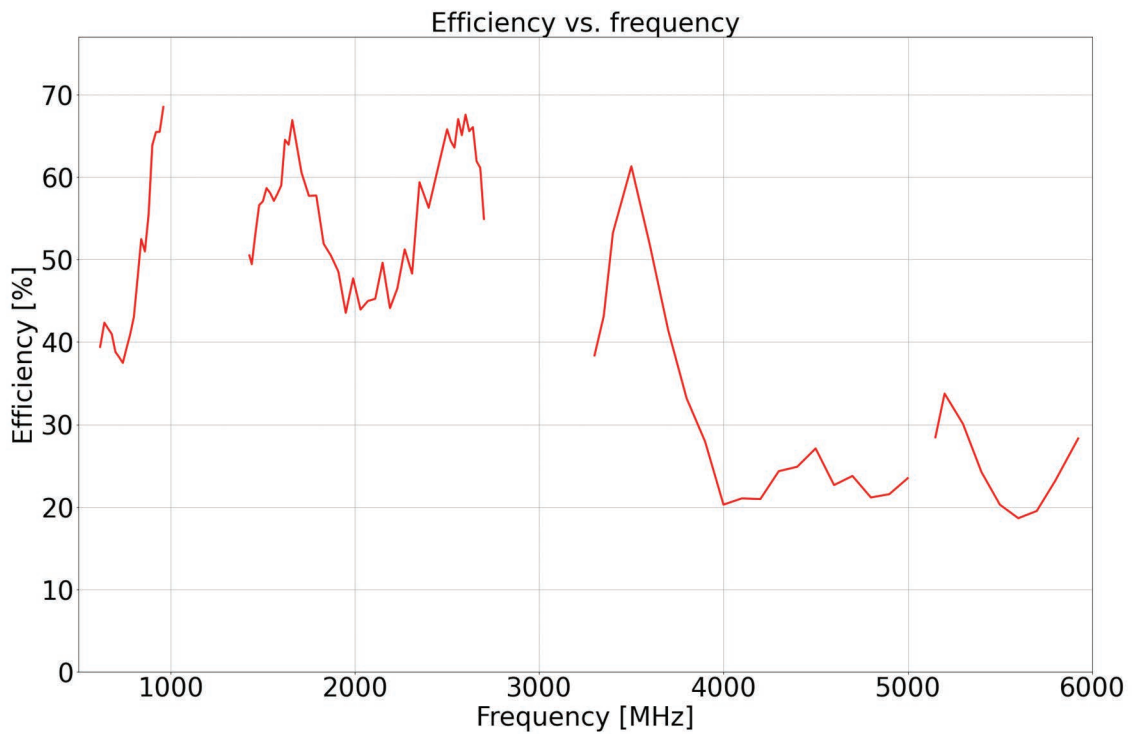
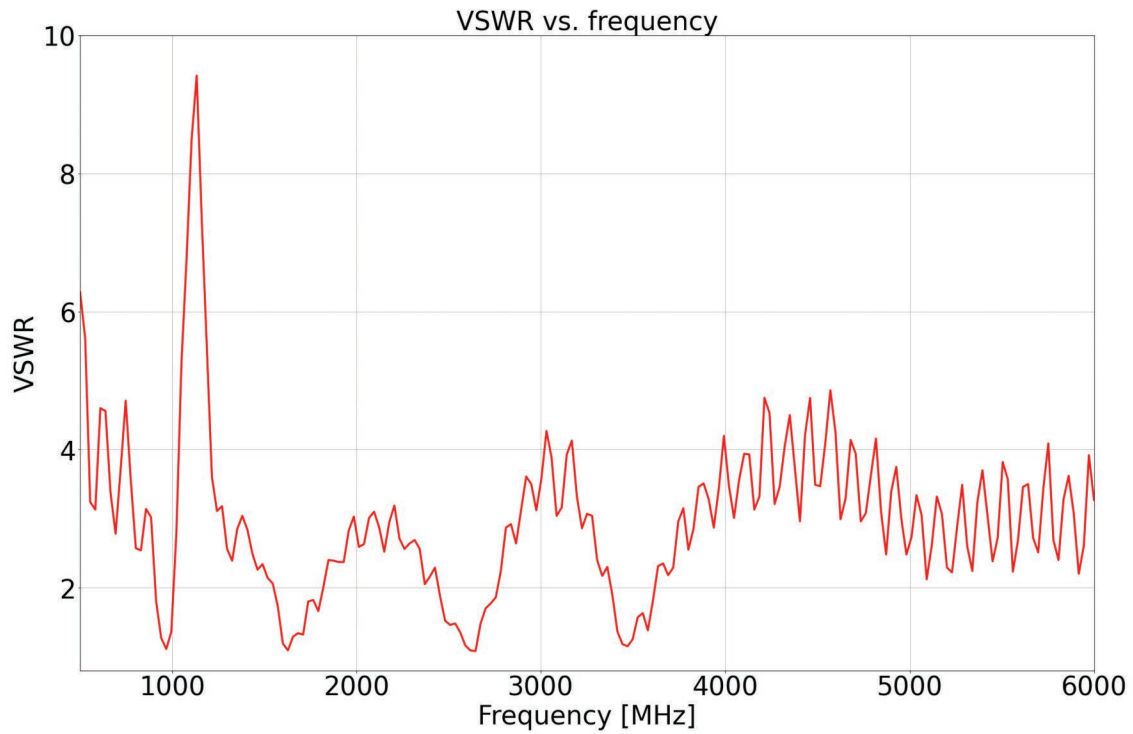
Parameter	Specifications
Mounting Type	Magnetic Mount
Dimensions (mm)	89 × 76 × 27
Radome Type	ASA UV Stable
Radome Color	Black, White
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Ingress Protection	IP67, IP69
Substance Compliance	RoHS

Antenna Parameters

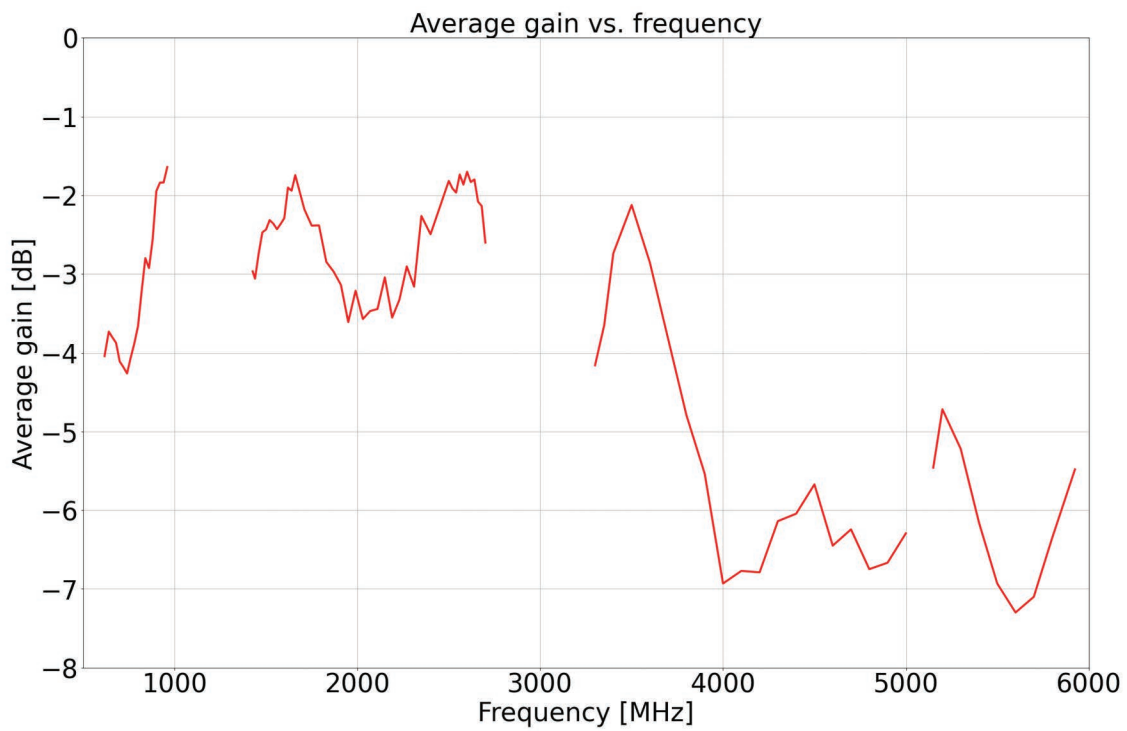
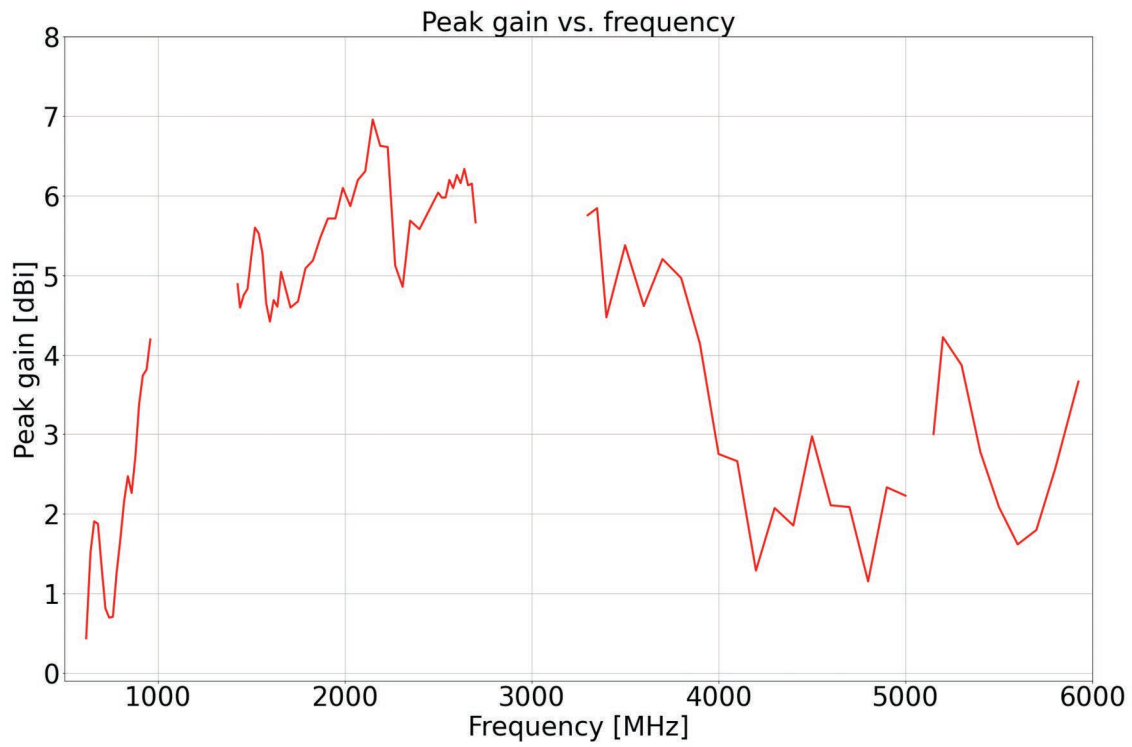
Cable 1: 5GNR-1



Antenna Parameters

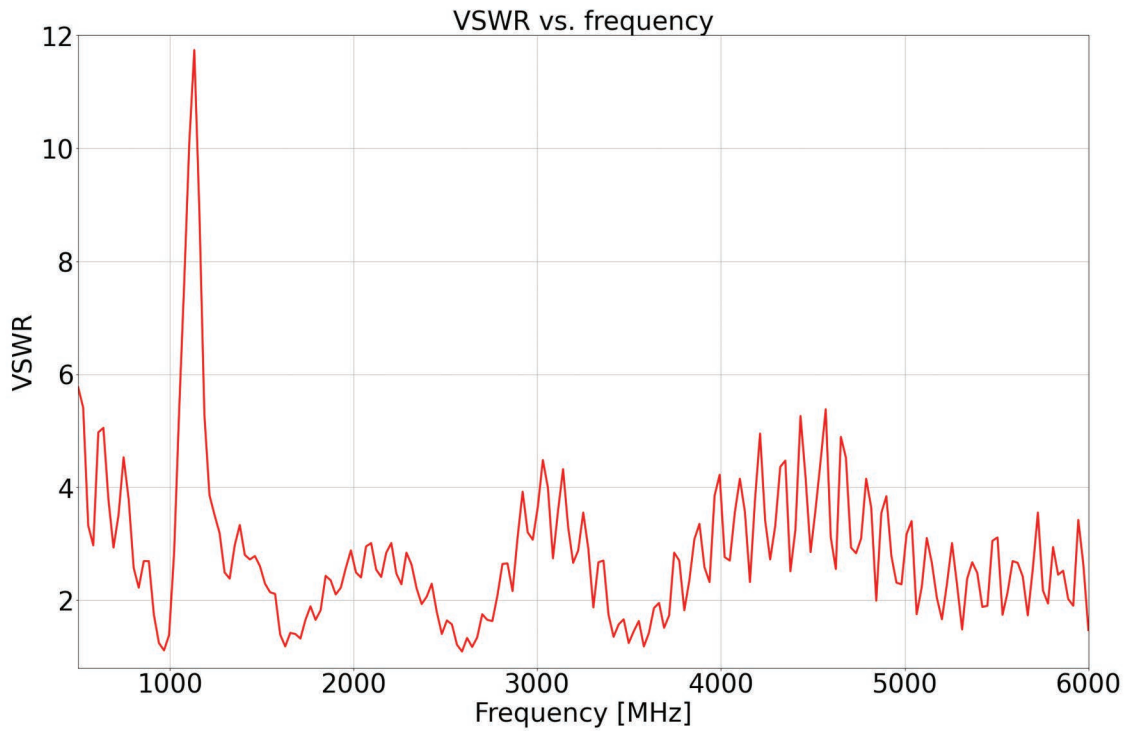
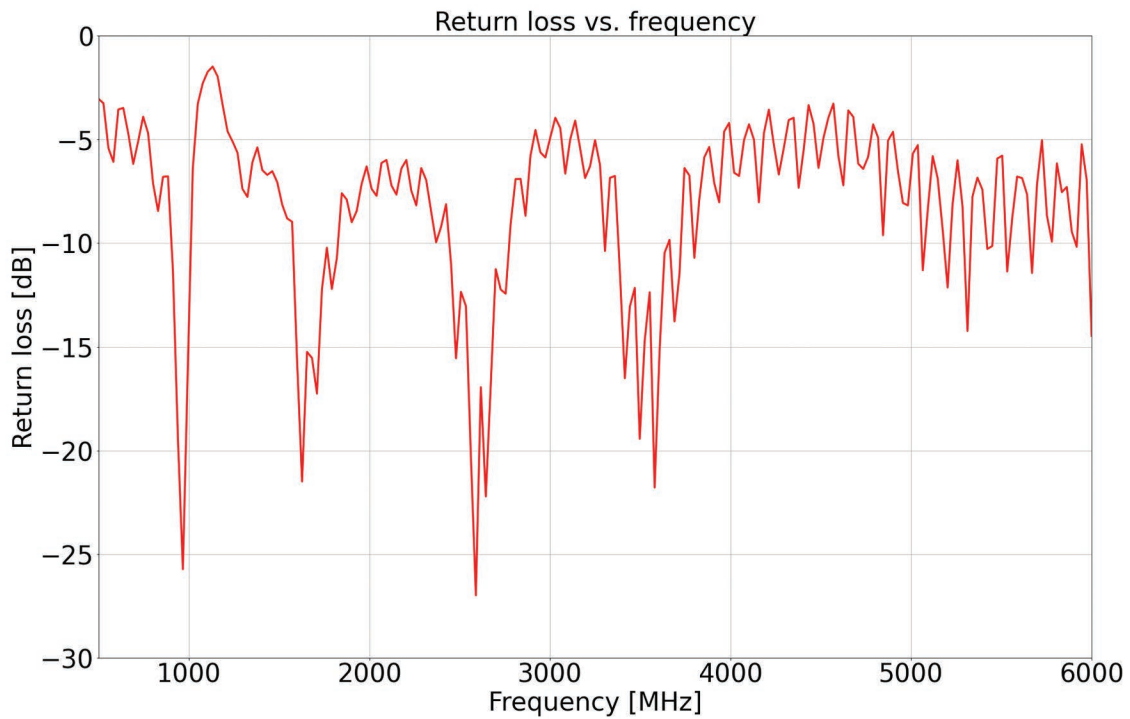


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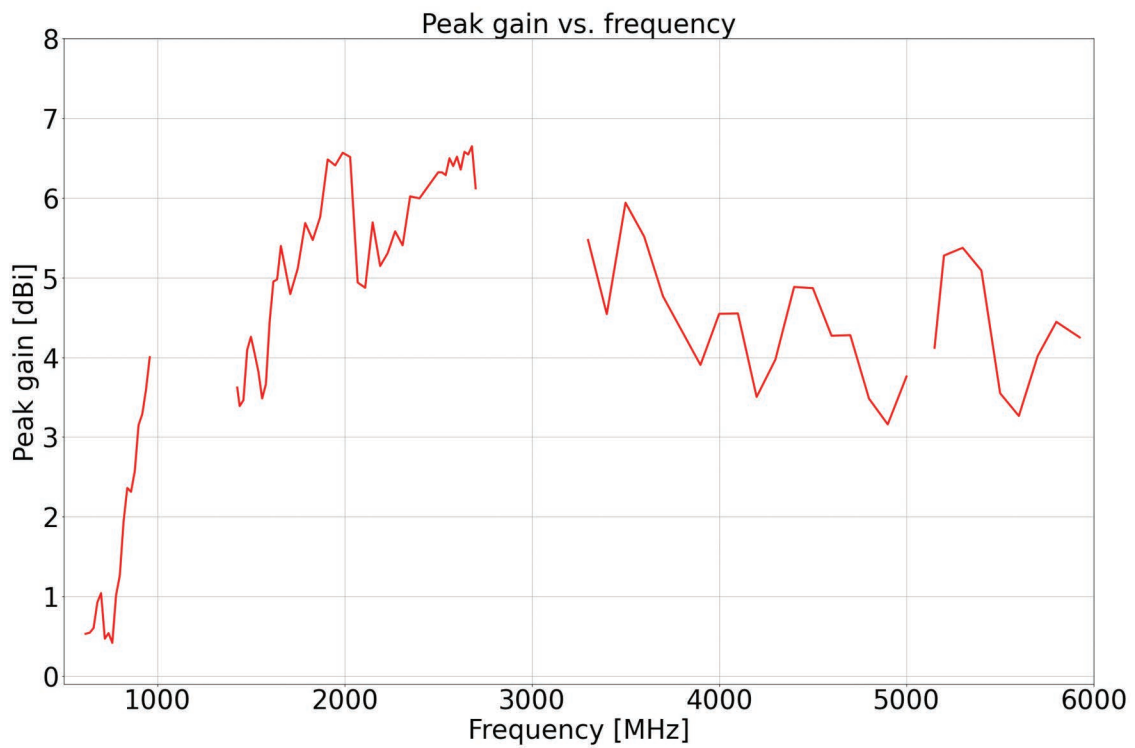
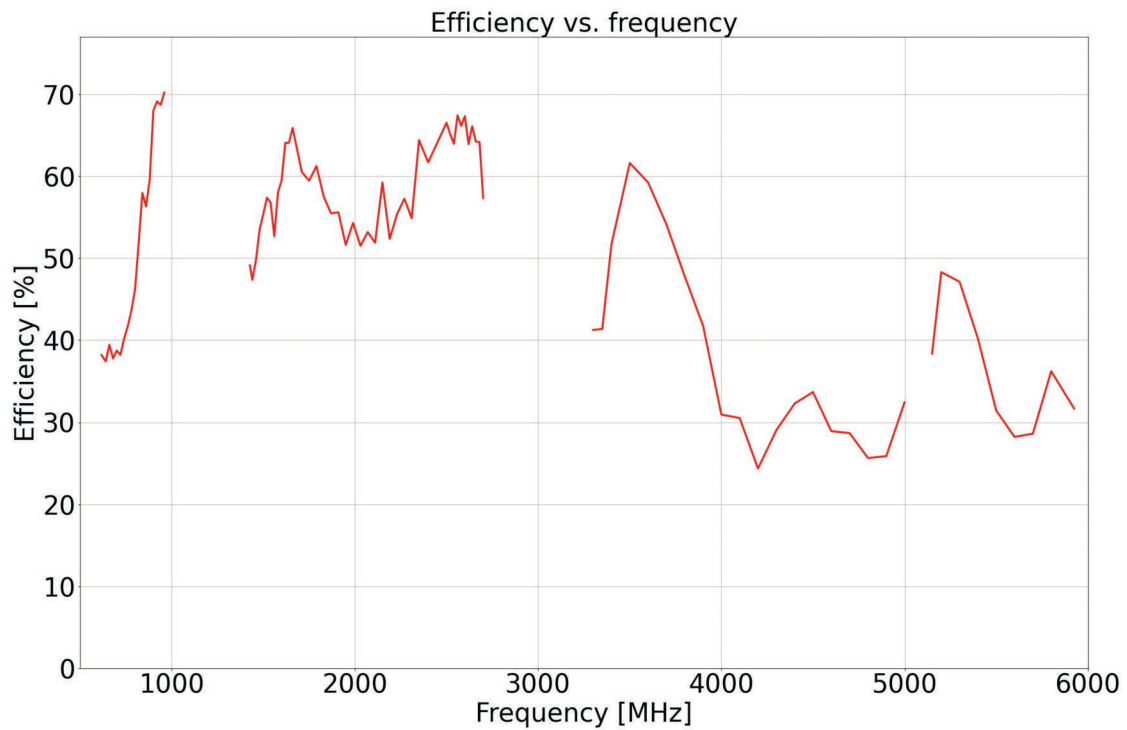


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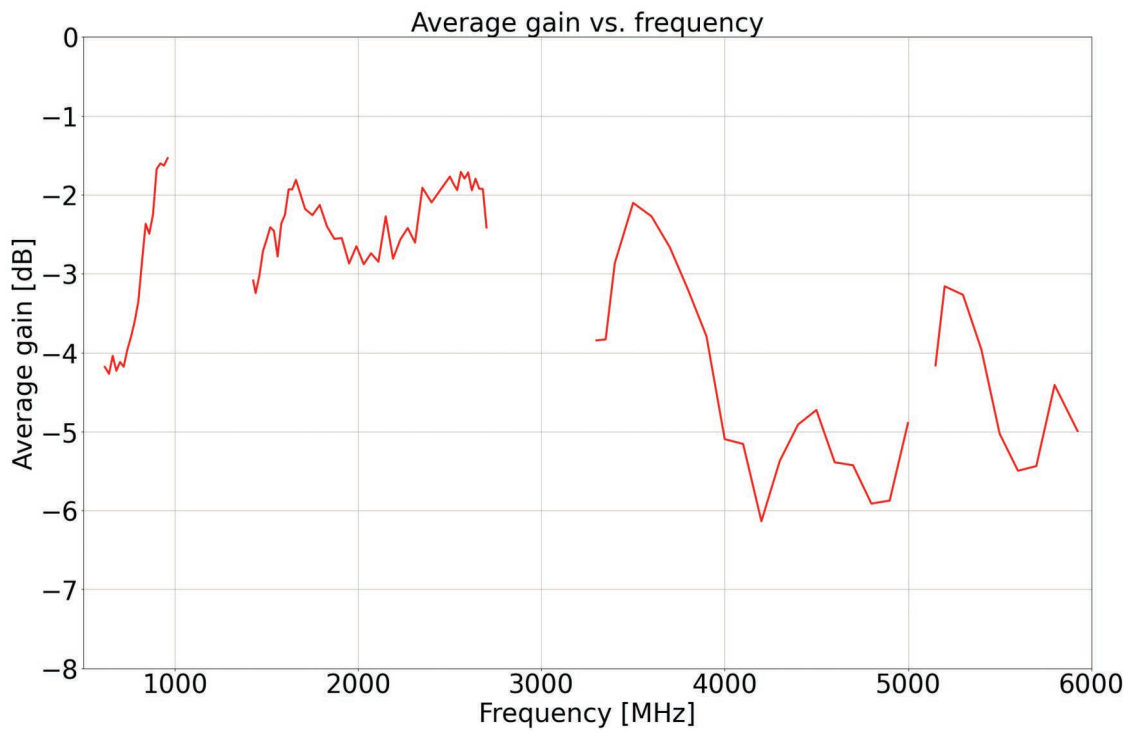
Cable 2: 5GNR-2



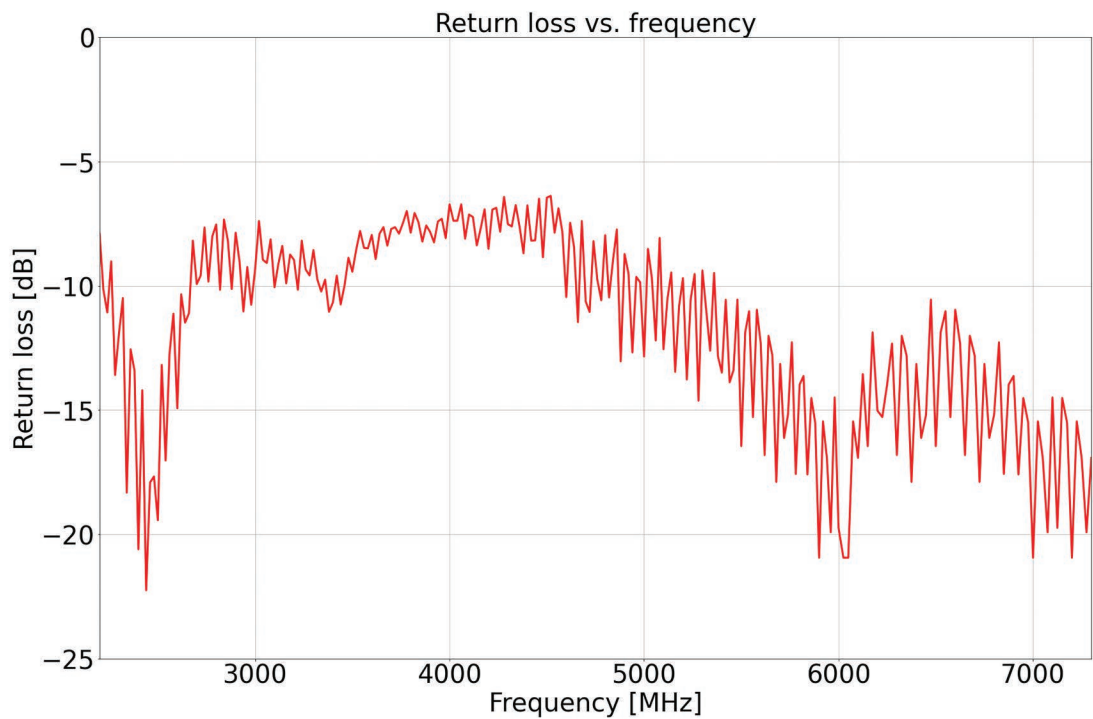
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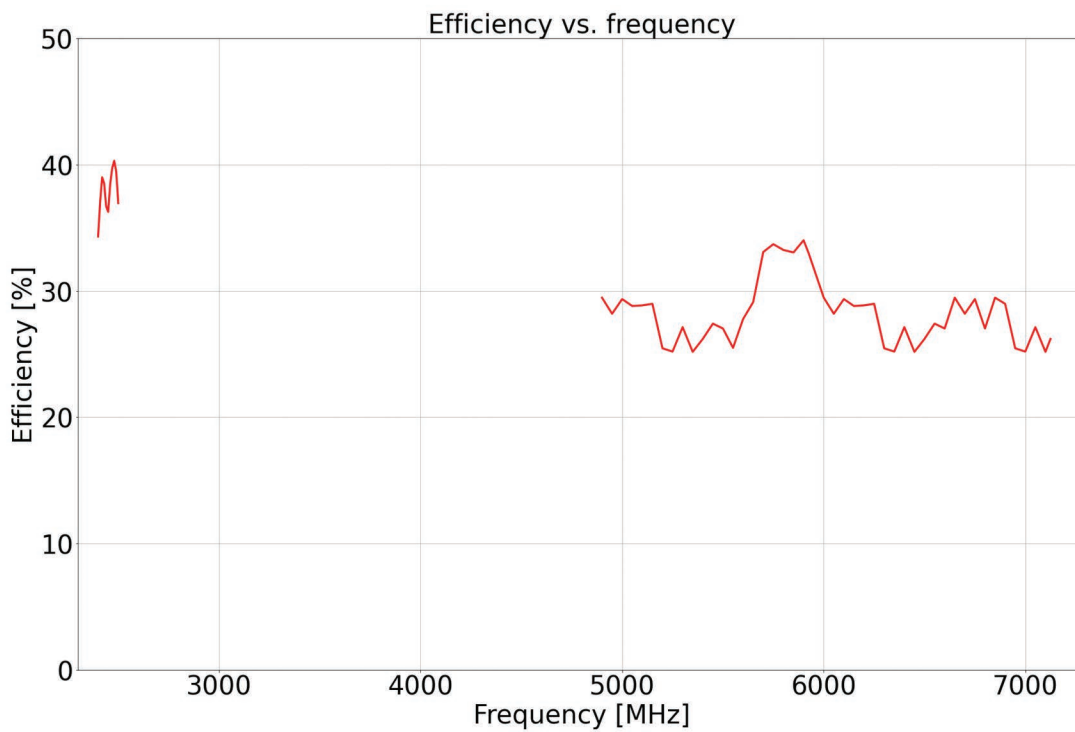
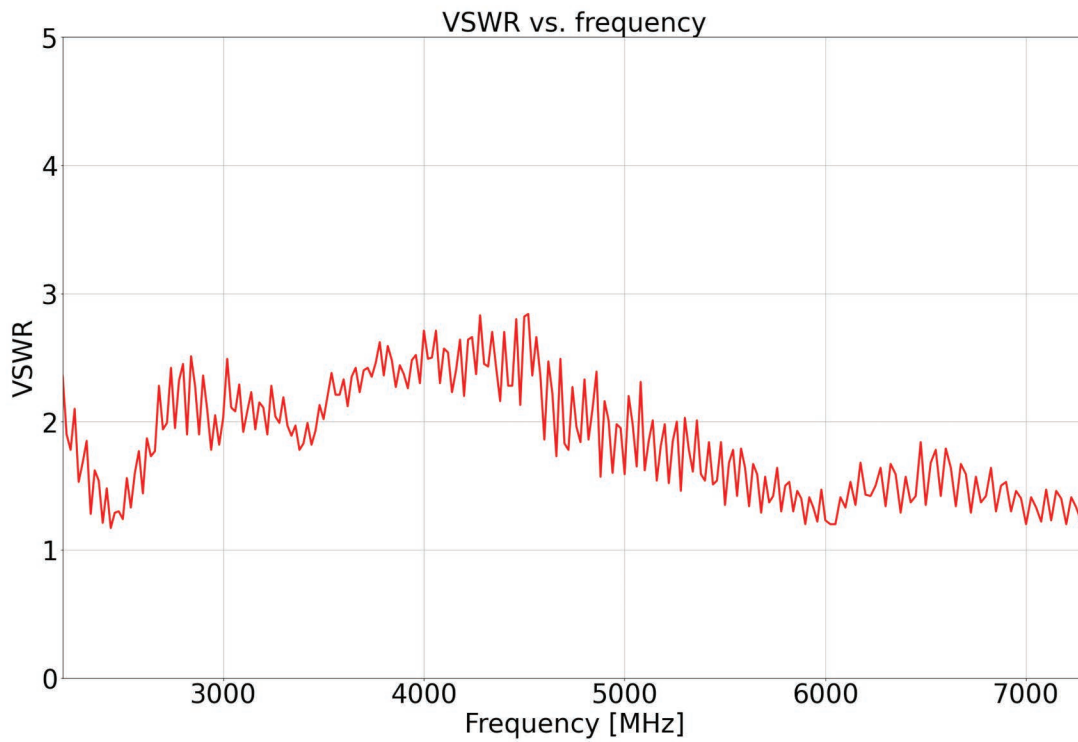
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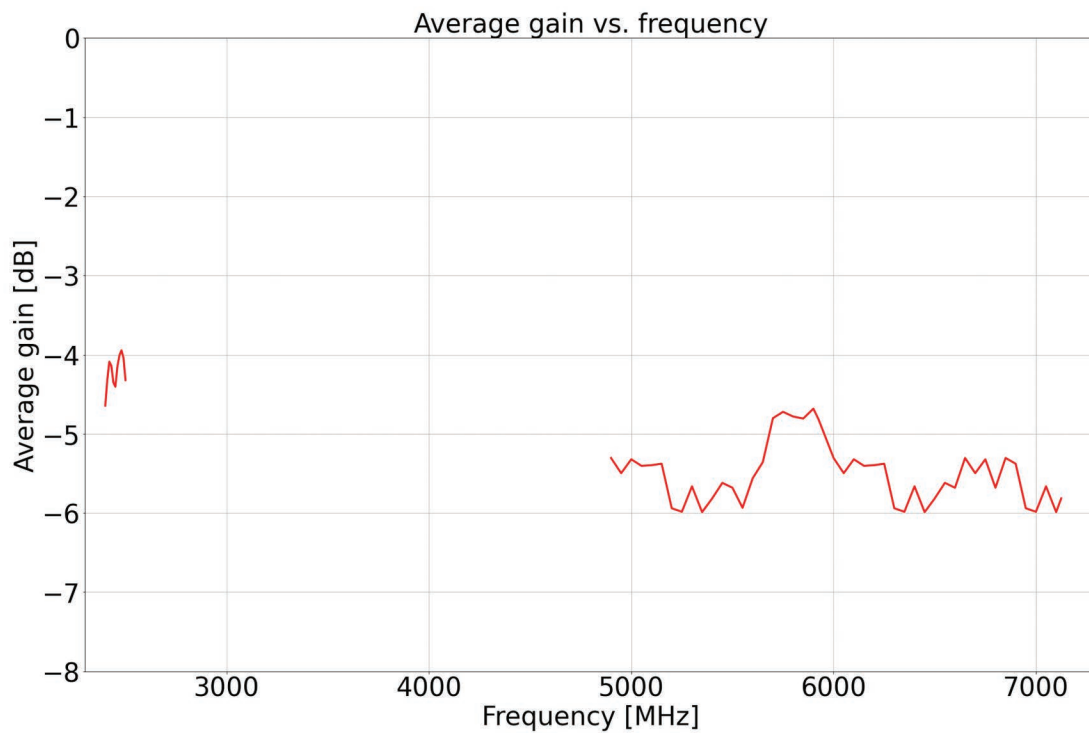
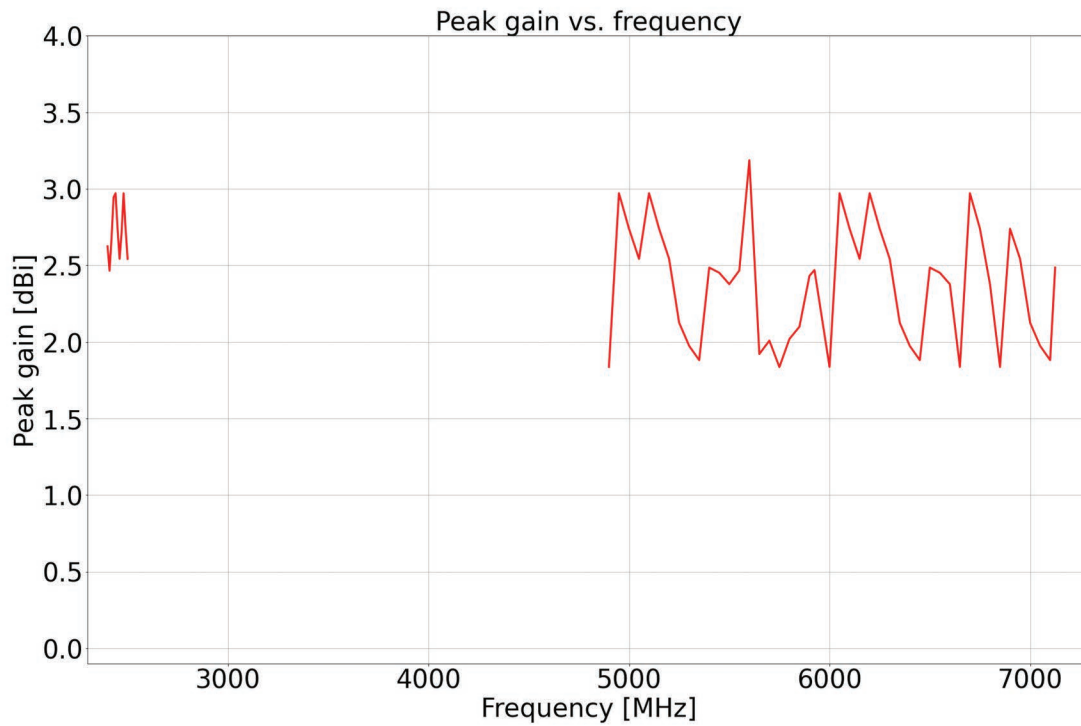
CABLE 3: 2.4/5.0/6.0 GHz



Antenna Parameters

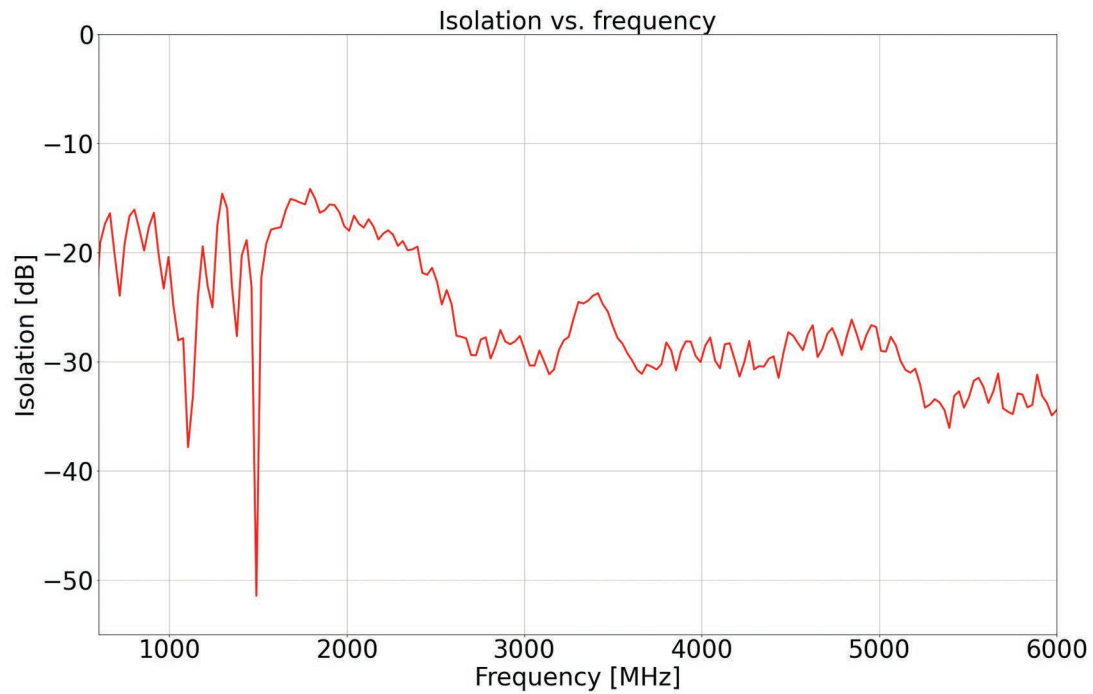


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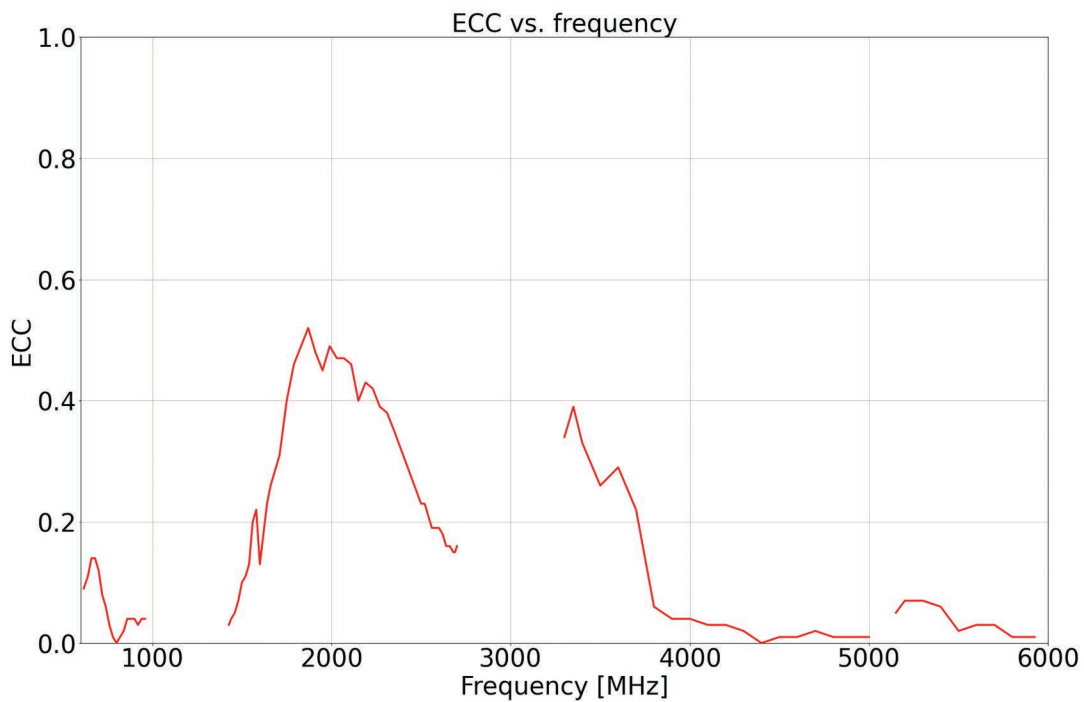


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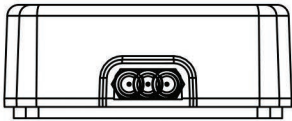
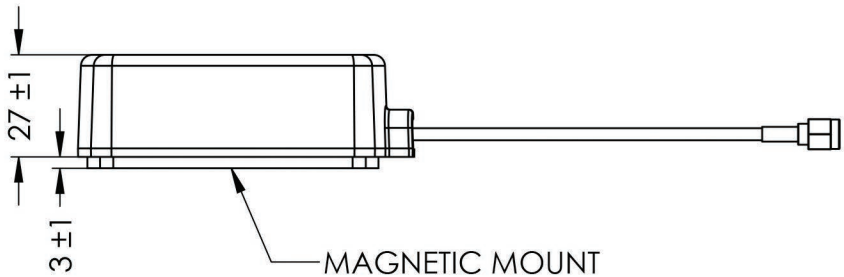
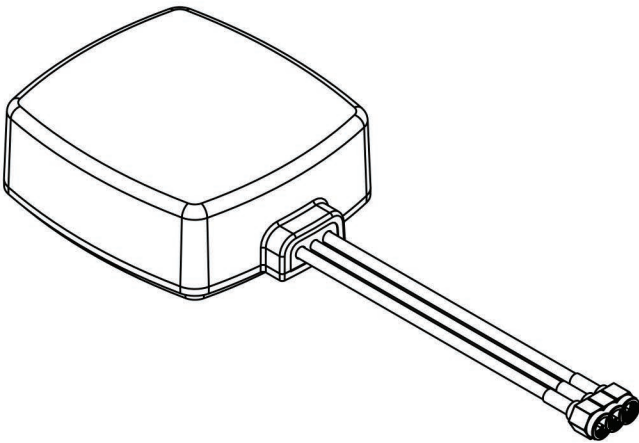
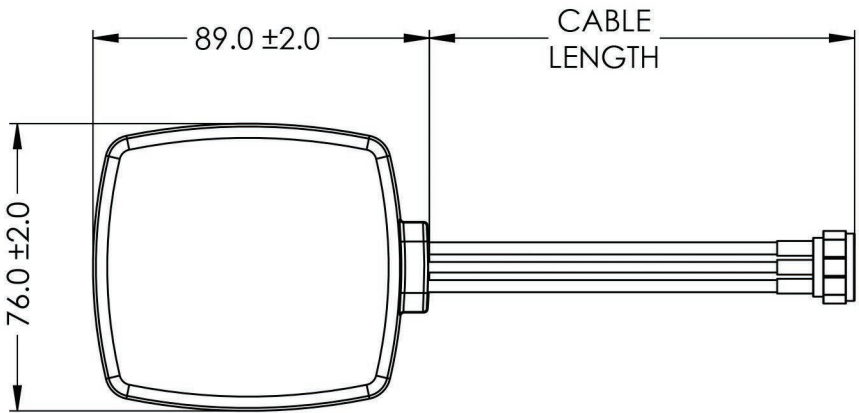
ISOLATION FOR CABLES 1 AND 2



ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2



DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2024-07-19	MP



NOTES:

- FREQUENCY:
 - CABLE 1-2: 5GNR (617-960 MHz, 1427-2690 MHz, 3300-5000 MHz AND 5150-5925 MHz)
 - CABLE 3 : 2.4/5.0/6.0 GHz ISM ANTENNA (2410-2490 MHz, 4920-5925 MHz, 5925-7125 MHz)
- CUSTOMIZABLE CABLE AND CONNECTOR OPTIONS
- MOUNTING TYPE: MAGNETIC MOUNT
- DIMENSIONS ARE AFTER MOUNTING
- MATERIALS:
 - RADOME: ABS UV STABLE
 - RADOME COLOR: BLACK OR WHITE
- OPERATING TEMPERATURE: -40°C ~ +85°C
- STORAGE TEMPERATURE: -40°C ~ +85°C
- CERTIFICATIONS: IP67, IP69

ITEM 100-00410-01 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2024-07-19	MP

100-00410-01 CONFIGURATION TABLE				
DASH NO	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE	RADOME COLOR
-01	CABLE 1-2: D302 CABLE 3 : D302	300CM	SMA MALE RP-SMA MALE	BLACK

UNLESS OTHERWISE SPECIFIED:		NAME		DATE		MAXTENA, INC TITLE: 100-00410-01 MEA-3IN1-5G-MM					
DIMENSIONS ARE IN MM TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± .5° BEND ± ONE PLACE DECIMAL ± 1.0 TWO PLACE DECIMAL ± .50		DRAWN	MP	2024-07-19							
		CHECKED	BO	2024-07-22							
		ENG APPR.	AV	2024-07-22							
		MFG APPR.									
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.			SIZE B DWG. NO. 117-00797-01 CAGE CODE: 5KQH7				REV A		
 THIRD ANGLE PROJECTION		CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.							SCALE: NONE		SHEET 1 OF 1
									DO NOT SCALE DRAWING		

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