



MEA-4in1-GNSS

5G NR MIMO, 2.4/5.0/6.0 GHz ISM and GNSS
Screw Mount Antenna

Part #: 100-00404-01

Description

The MEA-4in1-GNSS Screw Mount Antenna is a high-performance, heavy-duty antenna designed for a wide range of applications, including GNSS, LTE/WiFi, IoT, SATCOM, massive IoT, and LTE systems. This antenna supports 5G NR MIMO, 2.4/5.0/6.0 GHz ISM, and GNSS frequencies, making it ideal for maintaining reliable connectivity in demanding environments.

The MEA-4in1-GNSS features four cables, each optimized for specific frequency ranges (5G NR, ISM bands, and GPS/GLONASS/QZSS/Galileo frequencies)

This screw-mount antenna is ground-plane independent, equipped with anti-rotation mounting, and housed in a durable enclosure that is certified IP67, IP69, and IK09, ensuring long-lasting performance in harsh conditions. With customizable cable lengths and connector types, it offers maximum flexibility for diverse installations.

Compact and robust, with dimensions of Ø 96 x H 90 mm, the MEA-4in1-GNSS is an ideal solution for telematics systems, remote monitoring, and IoT applications.



Electrical Specifications

Parameter	Specifications			
Technologies	5G, 4G, 3G and 2G			
Standards	5G NR/4GLTE/FirstNet/CBRS/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G/2G			
Frequency Range	617-960MHz	1427-2690MHz	3300-5000MHz	5150-5925MHz
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, 12, 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	
4GLTE 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
3GCELL 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	
2GCELL Bands	710, 750, 810T, 850, 900P, 900E, 900R	1800DCS, 1900PCS		
CDMACELL Bands	BC0, BC2, BC3, BC7, BC9, BC10, BC12, BC18, BC19	BC1, BC4, BC6, BC8, BC13, BC14, BC15, BC16, BC20, BC21		

Features:

- **Cable 1 - 2: 5G NR**
 - 617-960 MHz
 - 1427-2690 MHz
 - 3300-5000 MHz
 - 5150-5925 MHz
- **Cable 3: 2.4/5.0/6.0 GHz ISM 5G NR**
 - 2410-2490 MHz
 - 4920-5925 MHz
 - 5915-7125 MHz
- **Cable 4: GPS/GLONASS/QZSS/ Galileo**
 - 1575-1606 MHz
- Easy mounting: Screw Mount
- Heavy Duty antenna
- High Performance antenna
- Ground Plane Independent
- Anti-Rotation Mounting
- Customizable Cable and Connector
- Dimensions: Ø 96 x H 90 mm
- Certificates: IP67, IP69, IK09

Applications

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



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Cable 1

Parameter	Specifications			
Return Loss	~-7.9	~-13.3	~-11.4	~-12.9
VSWR	~2.6:1	~1.7:1	~1.9:1	~1.7:1
Efficiency (%)	~45.0	~56.3	~43.3	~42.4
Peak Gain (dBi)	~1.4	~3.6	~3.3	~3.8
Average Gain (dB)	~-3.6	~-2.5	~-3.7	~-3.7
Impedance (Ohm)	50			
Polarization	Linear			
Radiation Pattern	Omni-Directional			
Max Input Power	35			
Connector Type	SMA-Male Standard (Other Connectors Available)			
Cable Length	300 cm Standard (Any Cable Length Available)			
Cable Type	LL195 Standard (Other Cables Available)			

Cable 2

Parameter	Specifications			
Return Loss	~-7.7	~-12.4	~-11.9	~-11.9
VSWR	~2.7:1	~1.7:1	~2.0:1	~1.8:1
Efficiency (%)	~45.4	~54.8	~43.0	~47.1
Peak Gain (dBi)	~1.5	~3.6	~3.5	~3.8
Average Gain (dB)	~-3.6	~-2.7	~-3.7	~-3.3
Impedance (Ohm)	50			
Polarization	Linear			
Radiation Pattern	Omni-Directional			
Max Input Power	35			
Connector Type	SMA-Male Standard (Other Connectors Available)			
Cable Length	300 cm Standard (Any Cable Length Available)			
Cable Type	LL195 Standard (Other Cables Available)			

Cable 3

Parameter	Specifications		
Standards	WiFi, BT, ZigBee, ISM		
Band (MHz)	2.4 GHz	5.0 GHz	6.0 GHz
Frequency(MHz)	2410-2490	4920-5925	5925-7125
Return Loss	~-10.4	~-13.6	~-11.6
VSWR	~1.9:1	~1.6:1	~1.9:1
Efficiency (%)	~58	~64.0	~65.0
Peak Gain (dBi)	~5.6	~5.5	~3.8
Average Gain (dB)	~-2.3	~-1.9	~-1.8
Impedance (Ohm)	50		
Polarization	Linear		
Radiation Pattern	Omni-Directional		
Max. Input Power (W)	25		
Connector Type	SMA-Male-RP Standard (Other Connectors Available)		
Cable Length	300 cm Standard (Any Cable Length Available)		
Cable Type	LL195 Standard (Other Cables Available)		

Antenna Measurement Conditions:

Mounted on Metal Plate of 30 x 30 cm

100 cm of Cable

Measured in Certified CTIA 3D Anechoic Chamber

Table 4

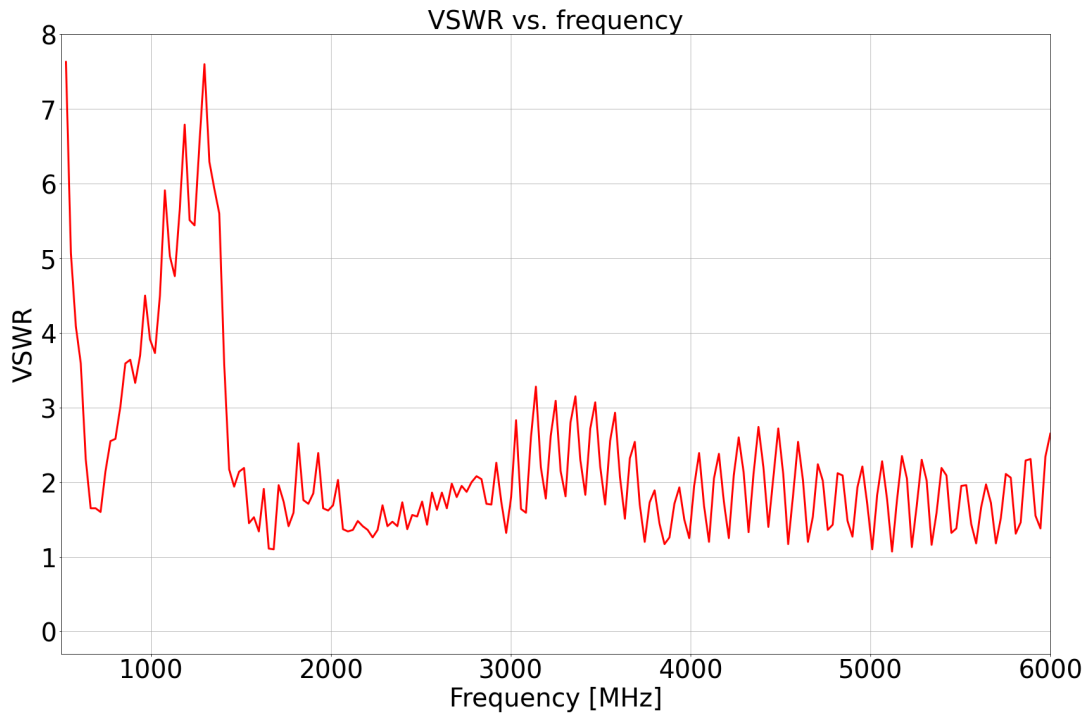
Parameter	Specifications	
Standards	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency Range	1575.42 MHz	1598-1610 MHz
Return Loss (dB)	<=-14	
Patch Size (mm)	25 x 25 x 4	
Impedance (Ohm)	50	
VSWR	<=1.5:1	
Radiation Pattern	Hemispherical	
Polarization	RHCP	
Saw Filter	Post-Filter	
Active Gain (dB)	23 @ 3 V, 24 @ 5 V	
Noise Figure (dB)	1.2	
Voltage (V)	2.7 - 5.5	
Current (mA)	15 - 25	
Power Consumption (mW)	40.5 - 137.5	
Out of Band Rejection (dBc)	~32	
Connector Type	SMA-Male Standard (Other Connectors Available)	
Cable Length	300 cm Standard (Any Cable Length Available)	
Cable Type	LL100 Standard (Other Cables Available)	

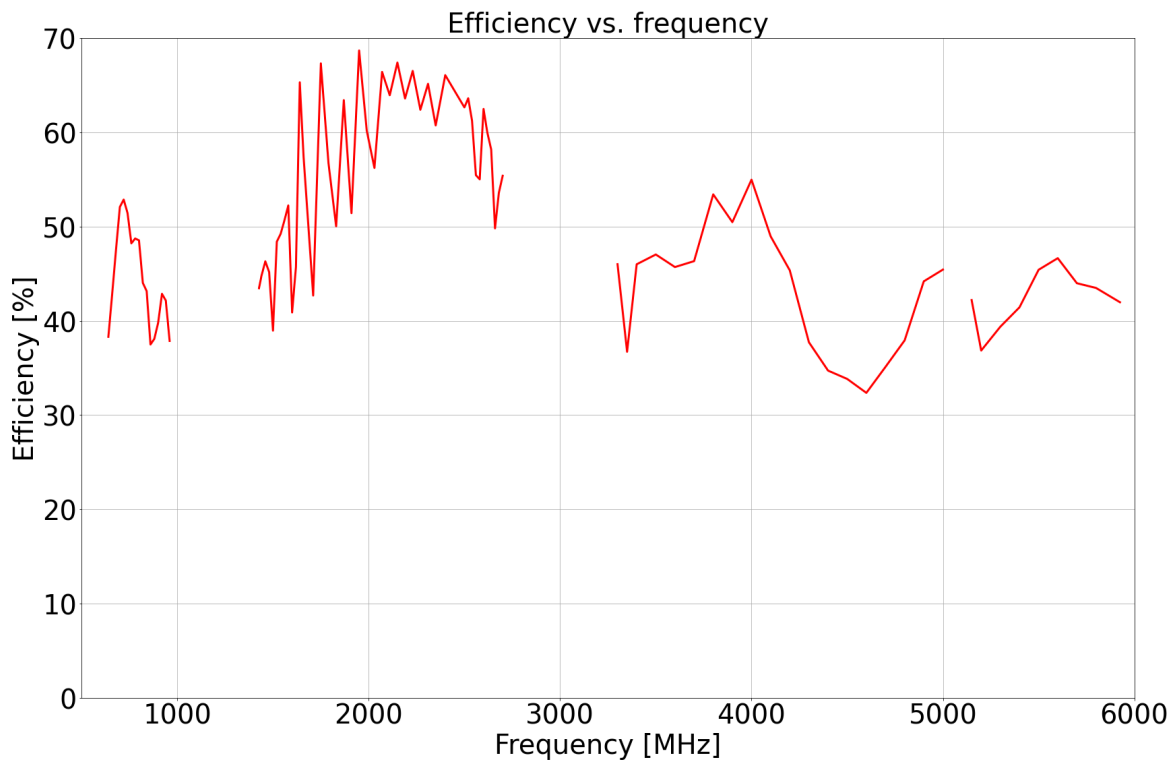
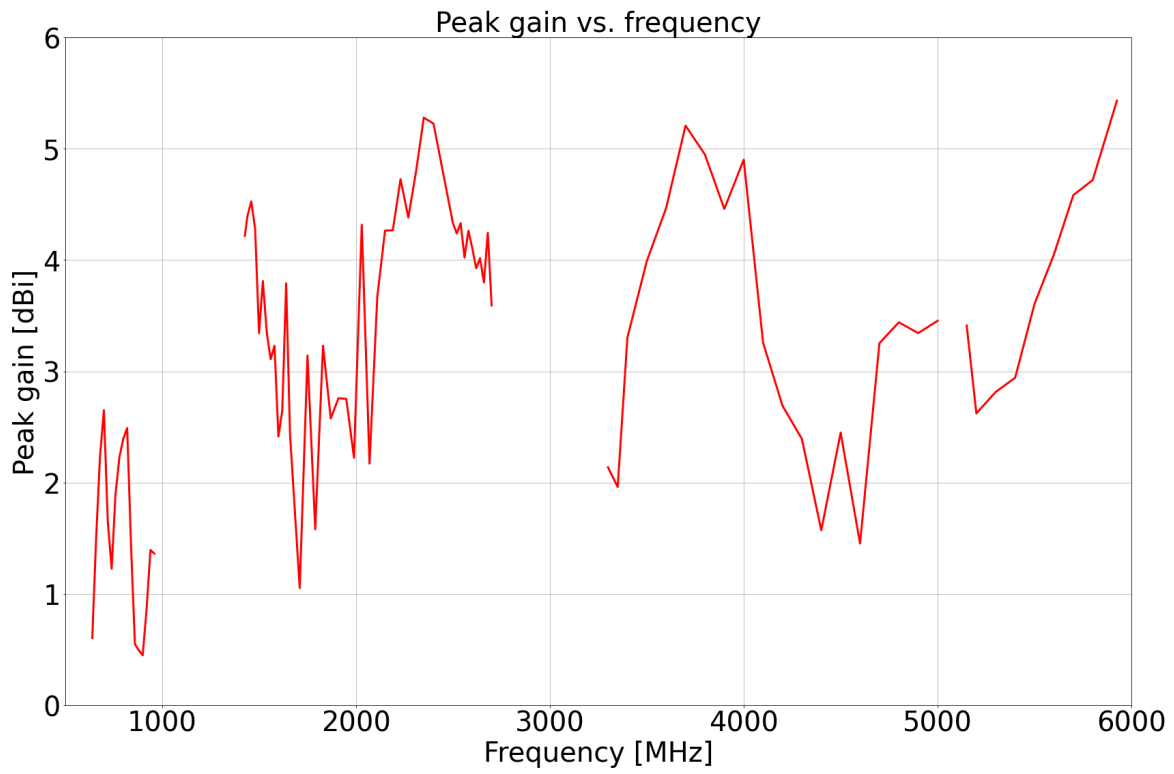
Mechanical Specification

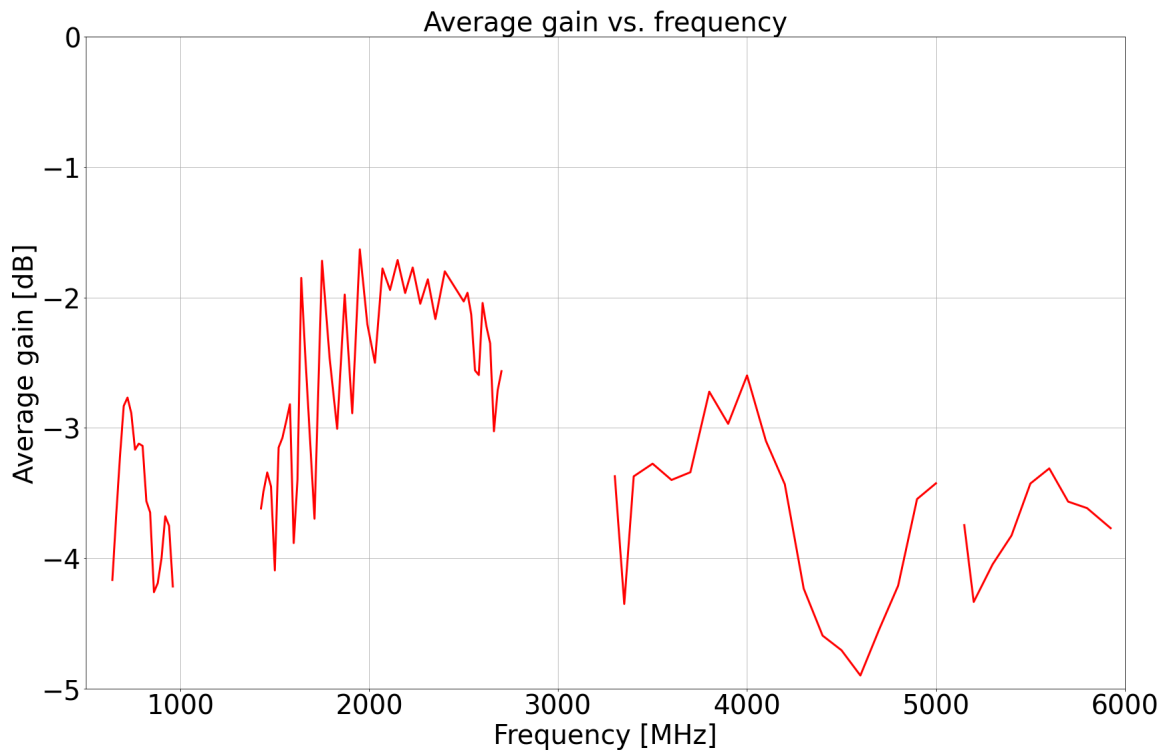
Parameter	Specifications
Mounting Type	Screw Mount
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Dimensions (mm)	Ø 96 x H 90
Radome Type/Color	ASA/Black/White
Substance Compliance	RoHS
Certificates	IP67, IP69, IK09
Antenna Base	ASA
Max. Tighten Torque (Nm)	6 Nm

Antenna Parameters

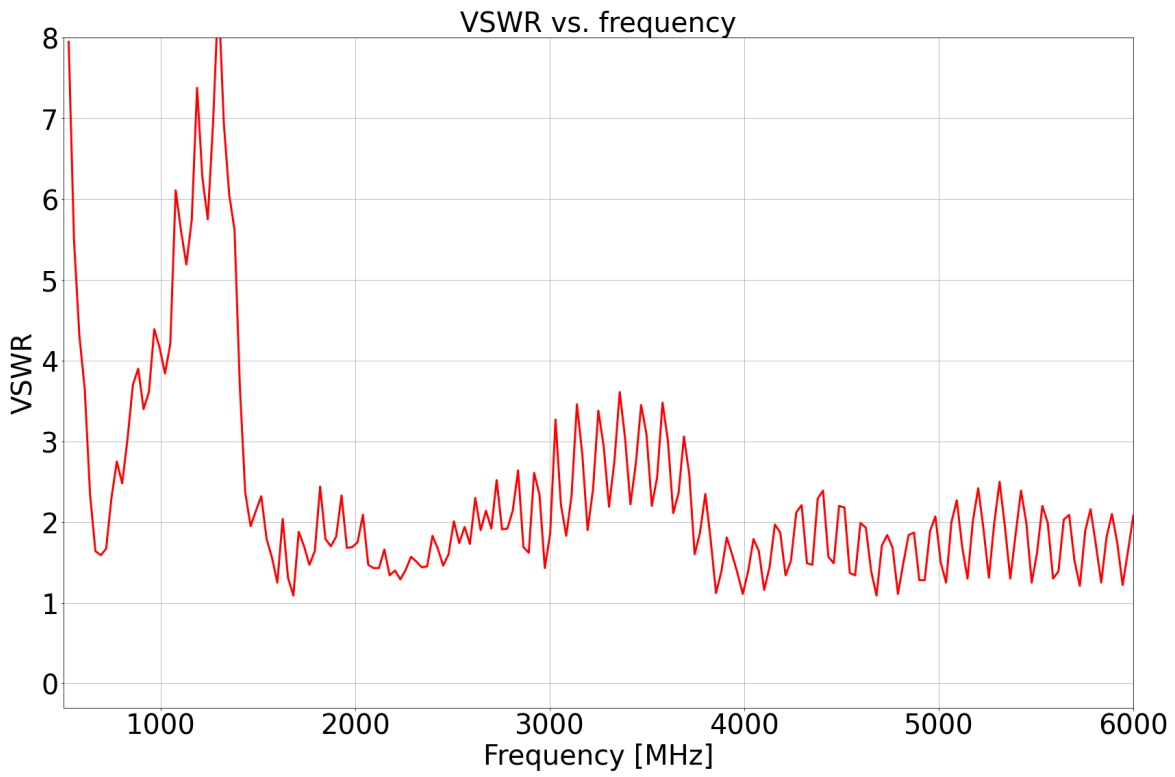
Cable 1

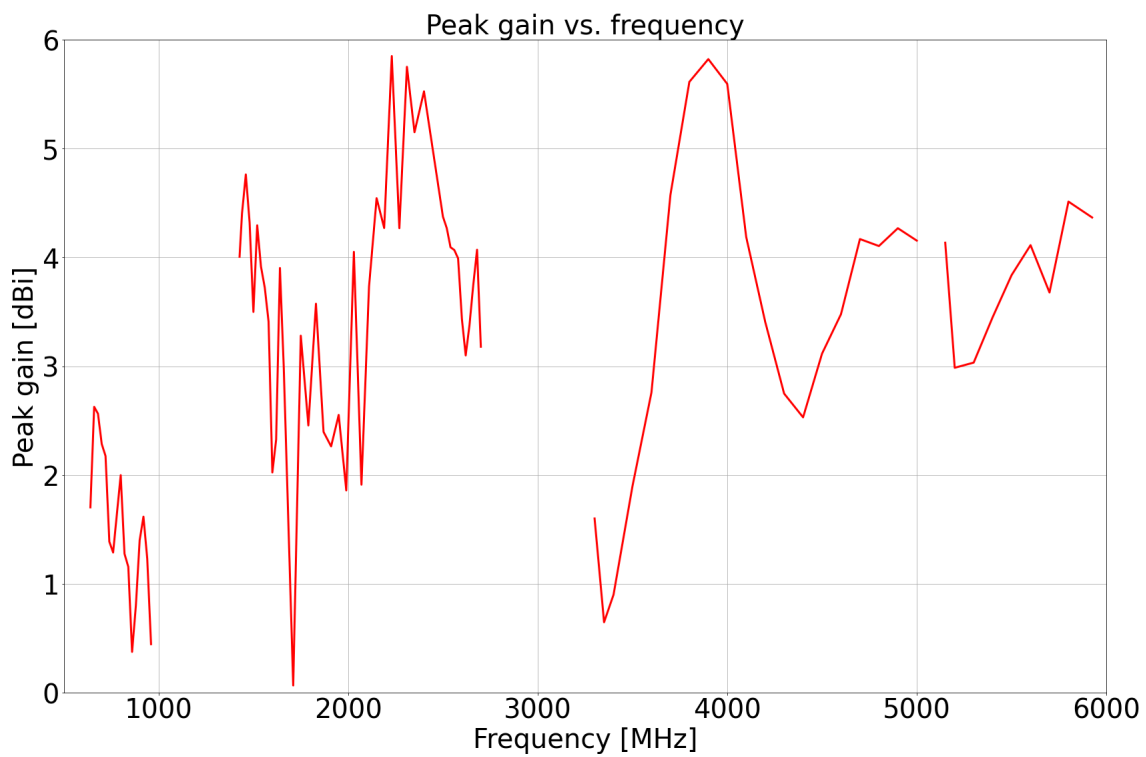
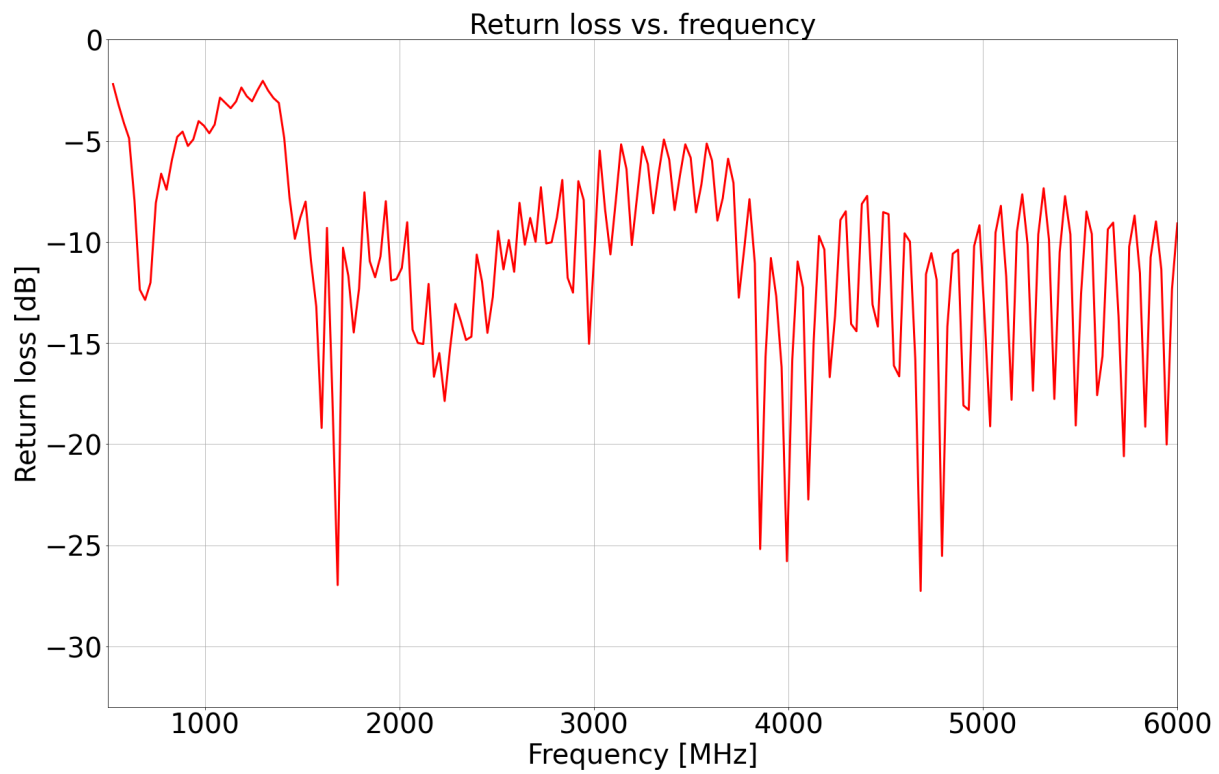


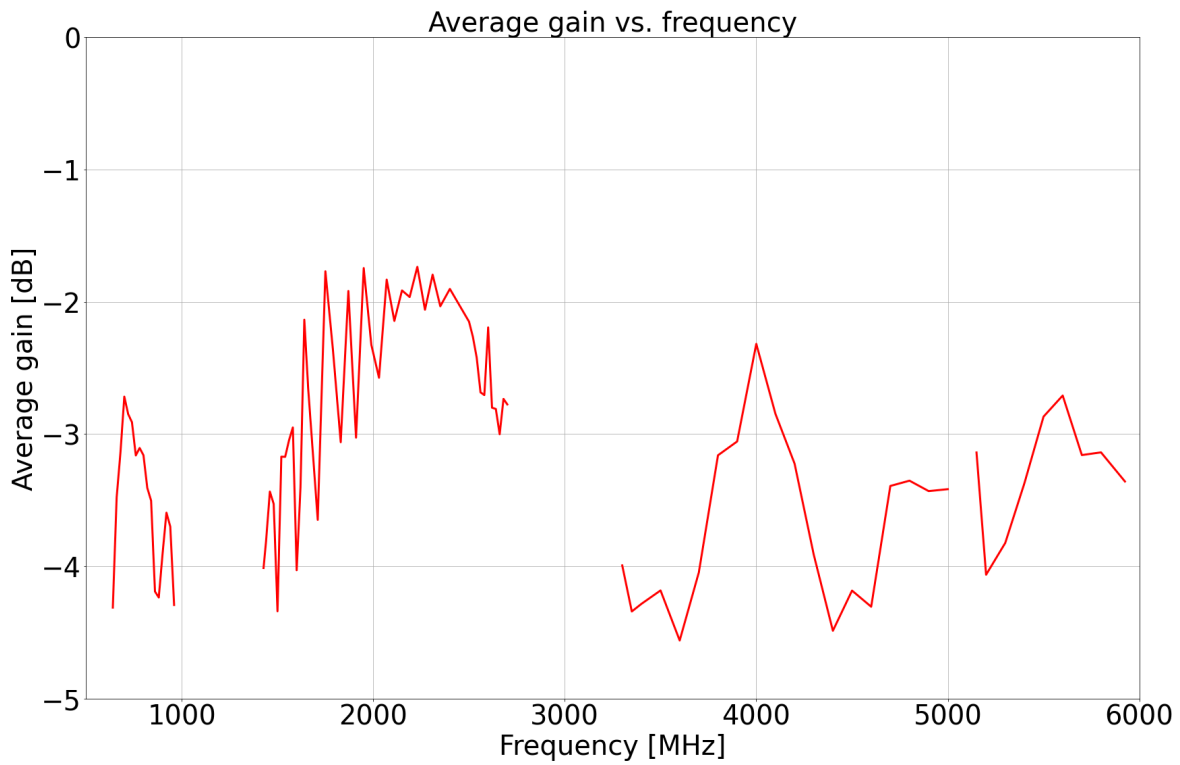
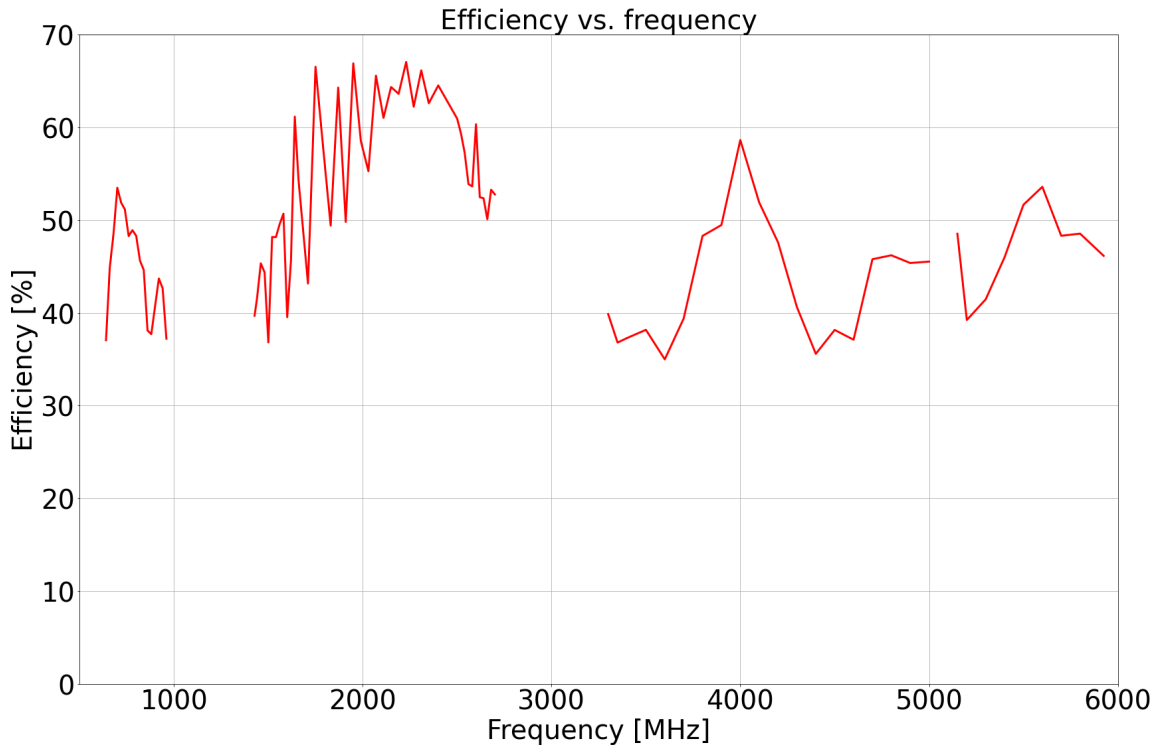




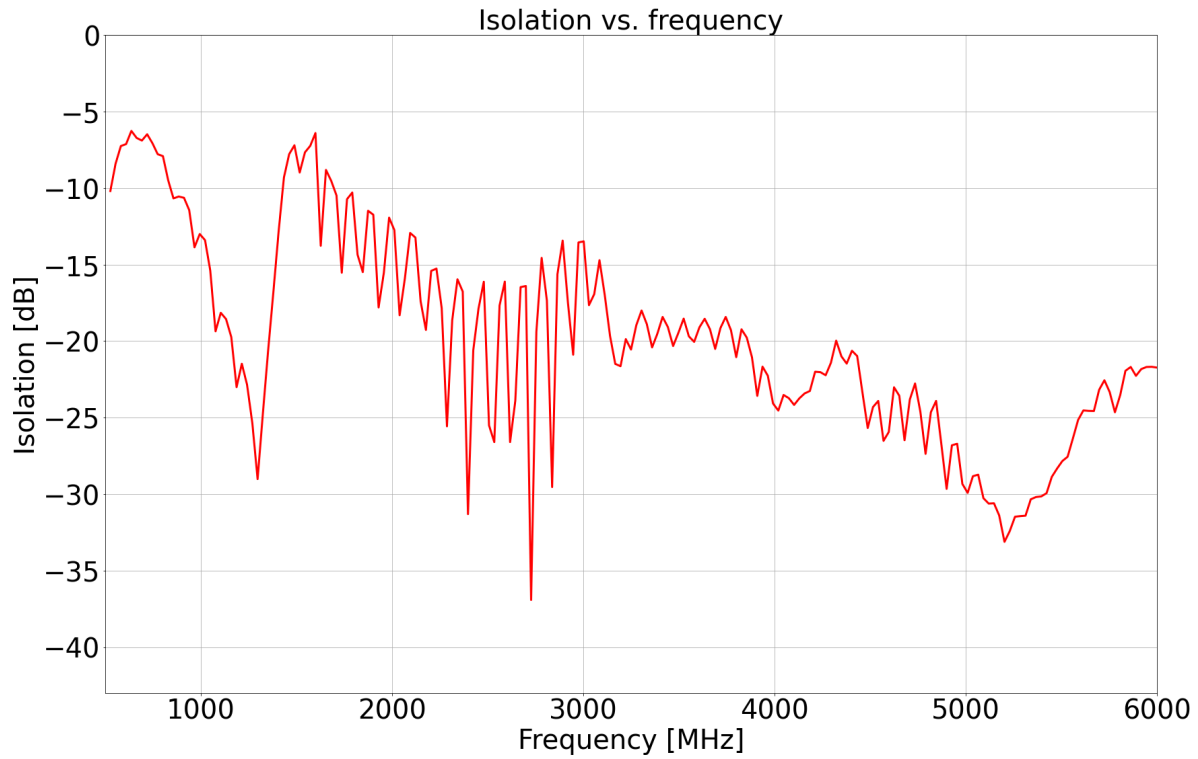
Cable 2



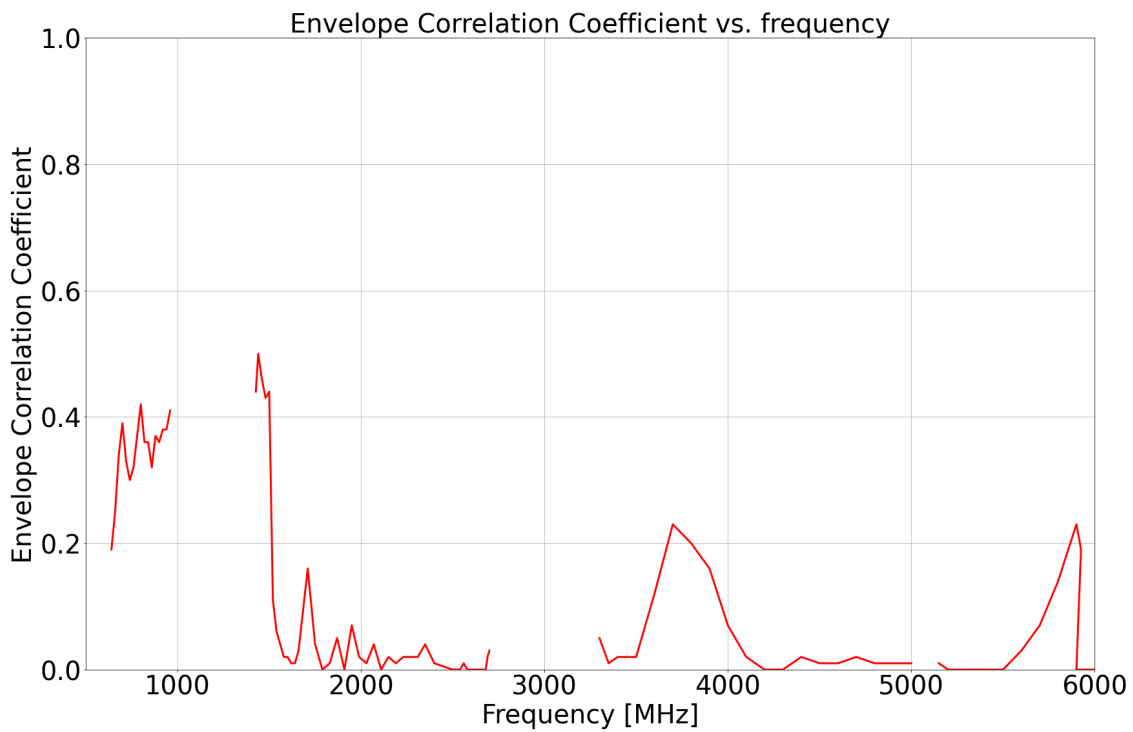




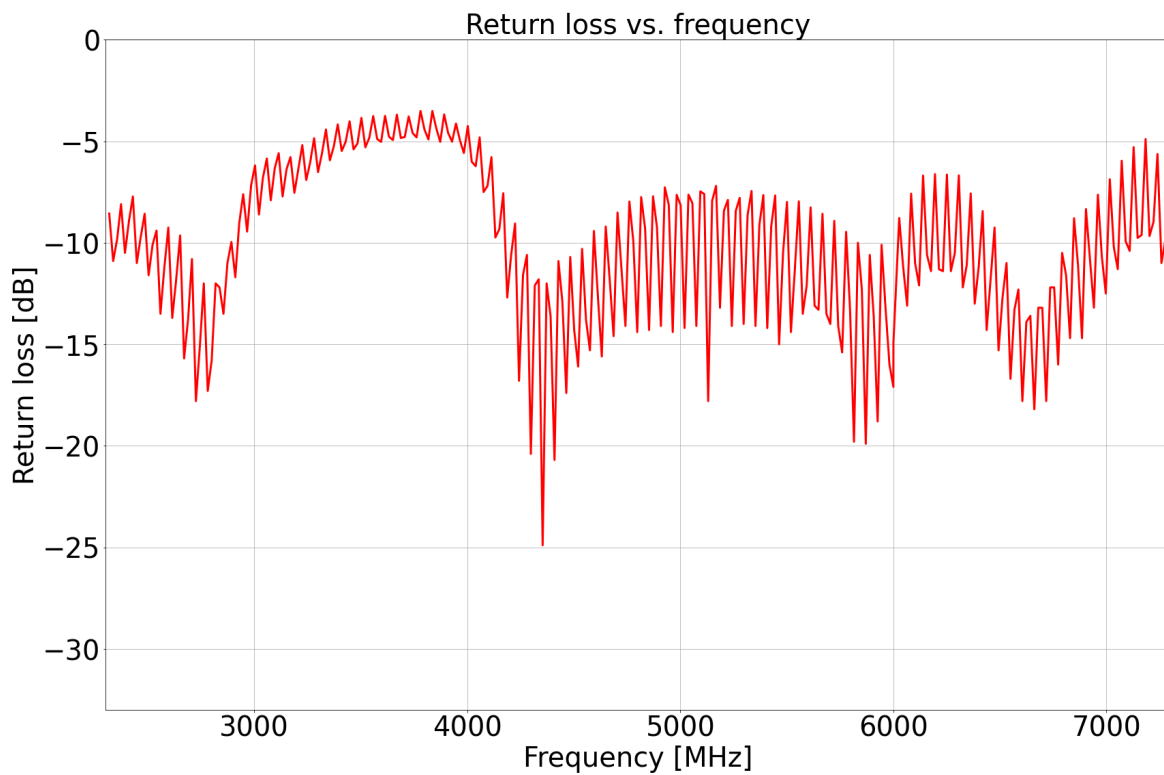
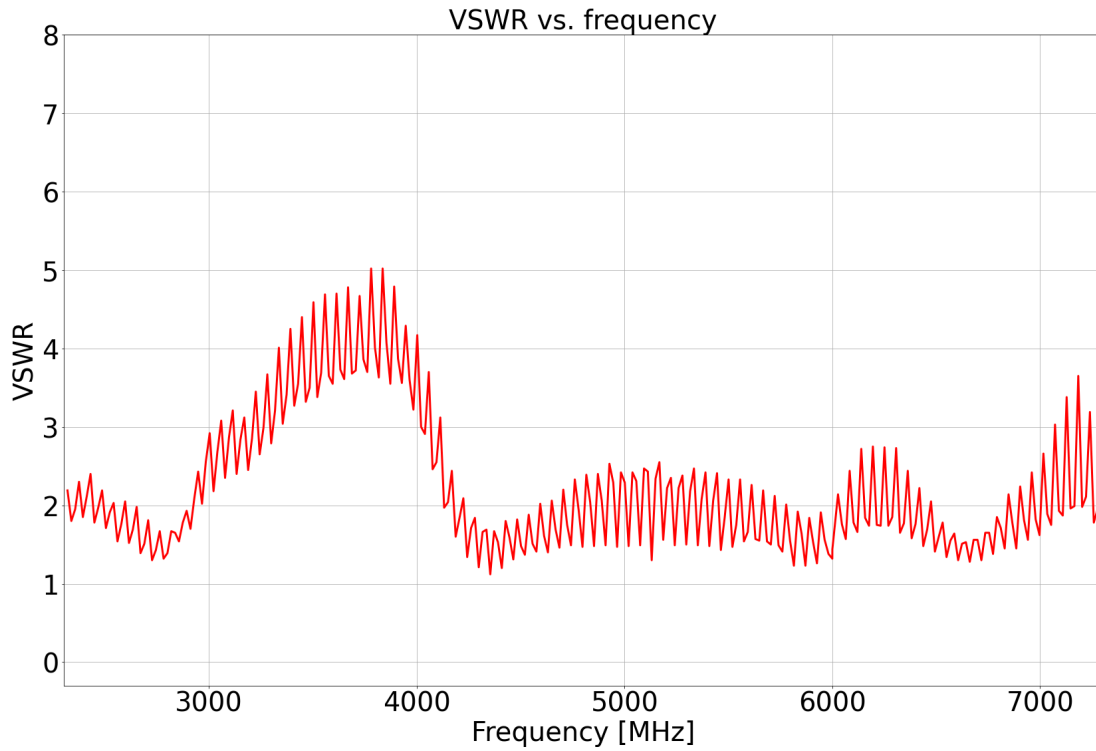
ISOLATION FOR CABLES 1 AND 2

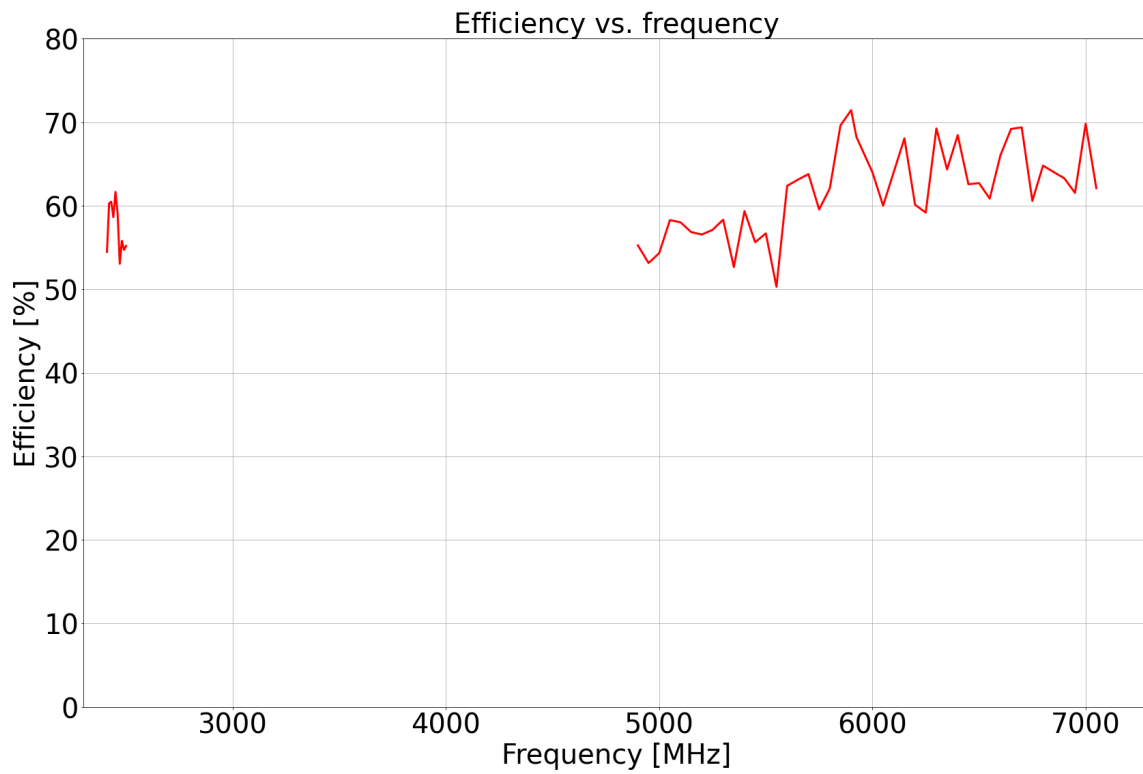
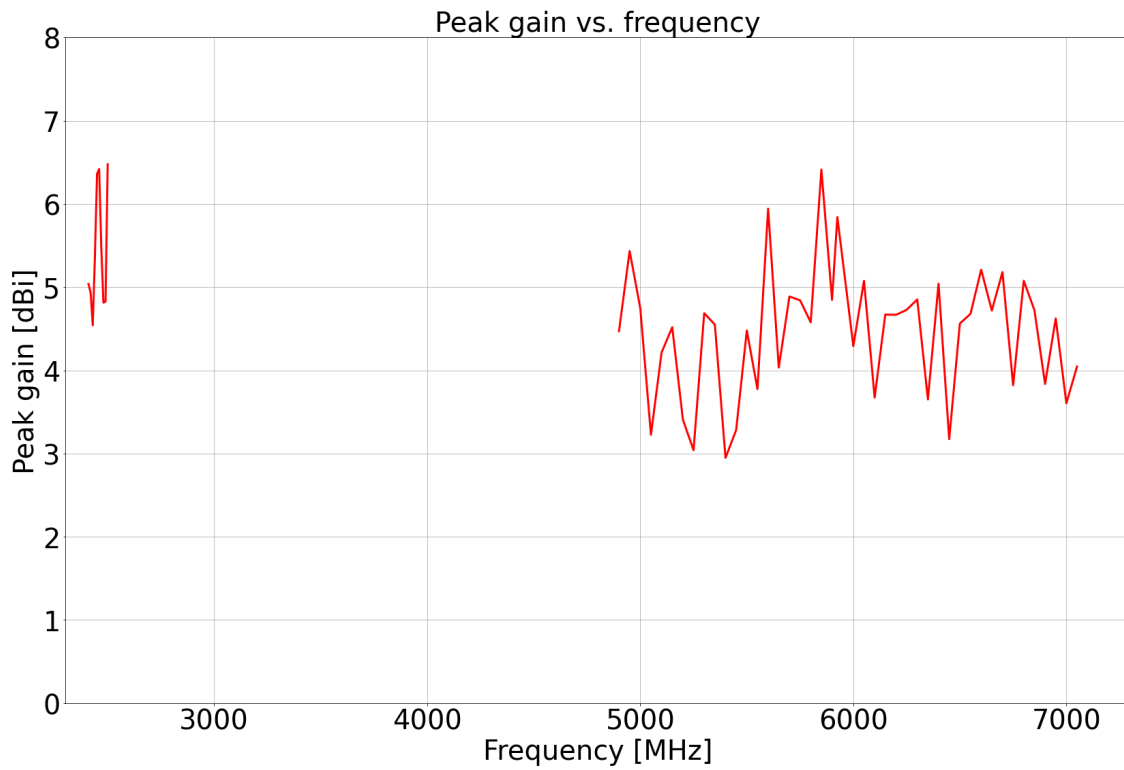


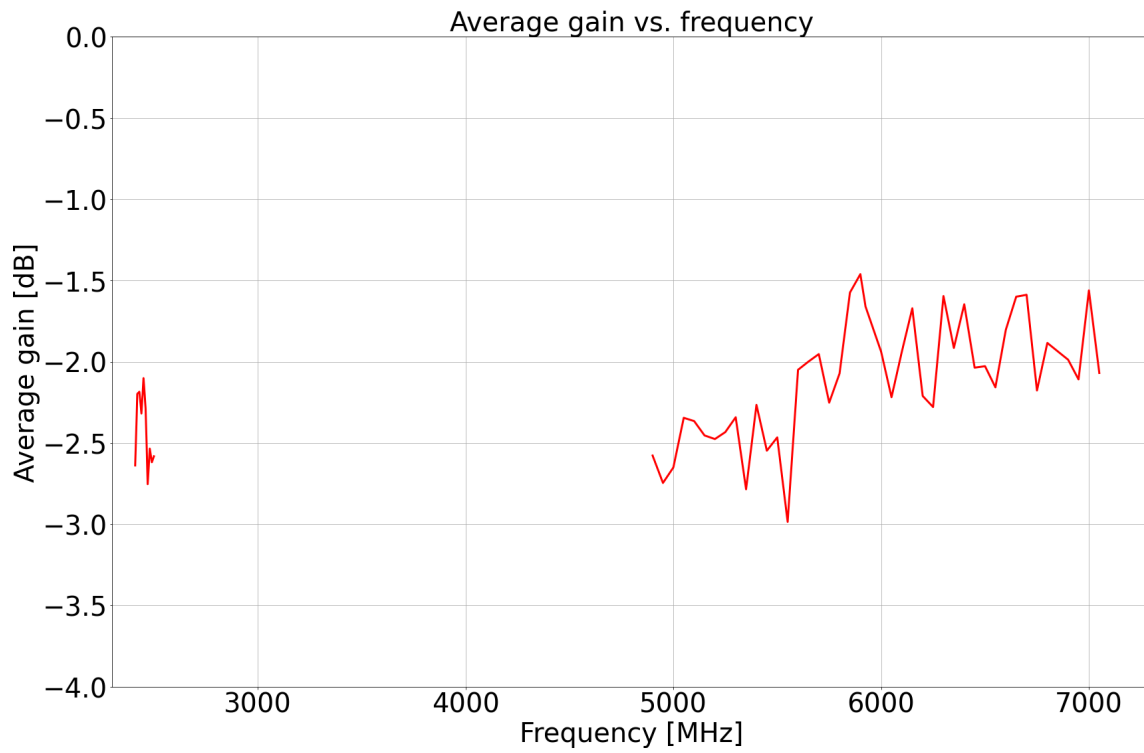
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2



Cable 3: 2.4/5.0/6.0 GHz ISM



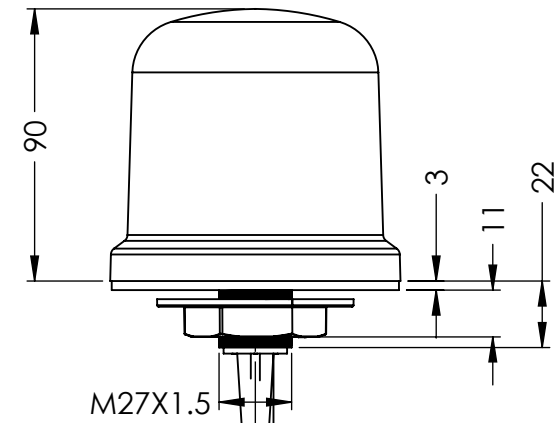
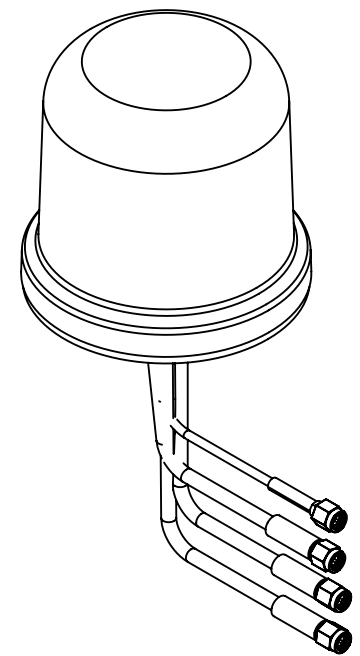
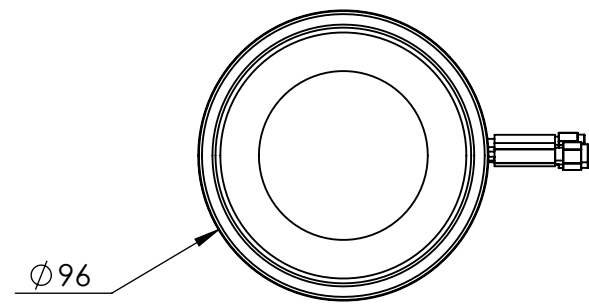




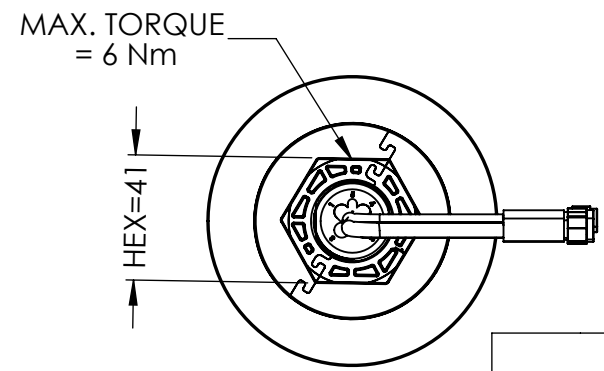
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DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2025-01-27	MP

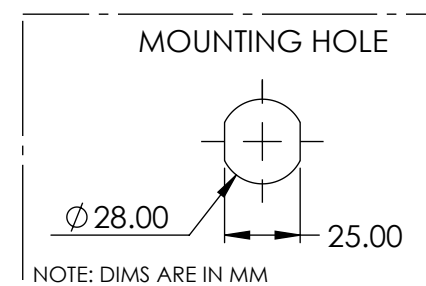


- CABLE 4: GPS/GLONASS
 - CABLE 1: 5GNR
 - CABLE 2: 5GNR
 - CABLE 3: 2.4/5.0/6.0 GHz ISM
- CUSTOMIZABLE CABLE AND CONNECTORS



NOTES:

- FREQUENCY:
 - CABLE 1 : 5GNR (617-960 MHz, 1427-2690 MHz, 3300-5000 MHz, 5150-5925 MHz)
 - CABLE 2 : 5GNR (617-960 MHz, 1427-2690 MHz, 3300-5000 MHz, 5150-5925 MHz)
 - CABLE 3 : 2.4/5.0/6.0 GHz ISM (2410-2490 MHz, 4920-5915 MHz, 5925-7125 MHz)
 - CABLE 4 : GPS/GLONASS (1575.42 MHz, 1598-1610 MHz)
- MOUNTING TYPE: SCREW MOUNT
- DIMENSIONS ARE AFTER MOUNTING
- MATERIALS:
 - RADOME: ASA
 - RADOME COLOR: BLACK
- OPERATING TEMPERATURE: -40°C ~ +85°C
- STORAGE TEMPERATURE: -40°C ~ +85°C
- CERTIFICATIONS: IP67, IP69, IK09



100-00404 CONFIGURATION TABLE

DASH NO	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE
-01	CABLE 1 - 3: LL195 CABLE4: LL100	300 CM	CABLE 1-2: SMA MALE CABLE 3: SMA MALE RP CABLE 4: SMA MALE

ITEM 100-00404 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2025-01-27	MP

UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DIMENSIONS ARE IN MM	DRAWN	MP 2025-01-27
TOLERANCES:	CHECKED	MR 2025-01-28
FRACTIONAL: ±	ENG APPR.	AV 2025-01-28
ANGULAR: MACH ± .5° BEND ±	MFG APPR.	
ONE PLACE DECIMAL ± 1.0	Q.A.	
TWO PLACE DECIMAL ± .50		
INTERPRET GEOMETRIC TOLERANCING PER:		
	CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.	
THIRD ANGLE PROJECTION		
DO NOT SCALE DRAWING		

MAXTENA, INC		
TITLE: 100-00404 MEA-4 IN 1-GNSS		
SIZE B	DWG. NO. 117-00859-01	REV A
CAGE CODE: 5KQH7	SCALE: NONE	SHEET 1 OF 1

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[GPS181804-WY](#) [KHA\(RG1.13\)-TX80B-IPEX](#) [TX5800-JZ-5](#) [KH-137-TX90B-IPEX4](#) [KH-113-TX100B-IPEX4](#)