

2J7703MGFa

2.4/5.0/6.0 GHz ISM MIMO and GNSS Magnetic Mount

Key Features

Cable 1 - 2: 2.4/5.0/6.0 GHz ISM

- 2410-2490 MHz

- 4920-7125 MHz

Cable 3: GPS/GLONASS/QZSS/Galileo

- 1575-1606 MHz

Magnetic Mount

Ground Plane Independent

Customizable Cable and Connector

Dimensions: Ø 54 x 68.2 mm

Certificates: IP67, IP69, IK09



1. Antenna and electrical specifications

Cable 1

Parameters	2.4/5.0/6.0 GHz ISM Antenna		
Standards	WiFi, BT, ZigBee, ISM, Sigfox, LoRa		
Band (MHz)	2.4GHz	5.0 GHz	6.0GHz
Frequency (MHz)	2410-2490	4920-5925	5925-7125
Return Loss (dB)	~-17.5	~-10.9	~-9.1
VSWR	~1.6:1	~2.0:1	~2.1:1
Efficiency (%)	~55.0	~40.1	~30.1
Peak Gain (dBi)	~3.7	~2.6	~1.3
Average Gain (dB)	~-2.7	~-4.2	~-5.3
Impedance (Ohm)	50		
Polarisation	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	LL100 Standard (Other Cables Available)		

Cable 2

Parameters	2.4/5.0/6.0 GHz ISM Antenna		
Standards	WiFi, BT, ZigBee, ISM, Sigfox, LoRa		
Band (MHz)	2.4 GHz	5.0 GHz	6.0 GHz
Frequency (MHz)	2410-2490	4920-5925	5925-7125
Return Loss (dB)	~-14.7	~-11.1	~-8.6
VSWR	~1.7:1	~1.9:1	~2.2:1
Efficiency (%)	~50.0	~37.7	~26.3
Peak Gain (dBi)	~3.7	~2.3	~0.7
Average Gain (dB)	~-3.1	~-4.3	~-5.8
Impedance (Ohm)	50		
Polarisation	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	LL100 Standard (Other Cables Available)		

Antenna Measurement Conditions:

Mounted on 30 x 30 cm Metal Plane

100 cm of Cable LL100

Measured in Certified CTIA 3D Anechoic Chamber

Cable 3

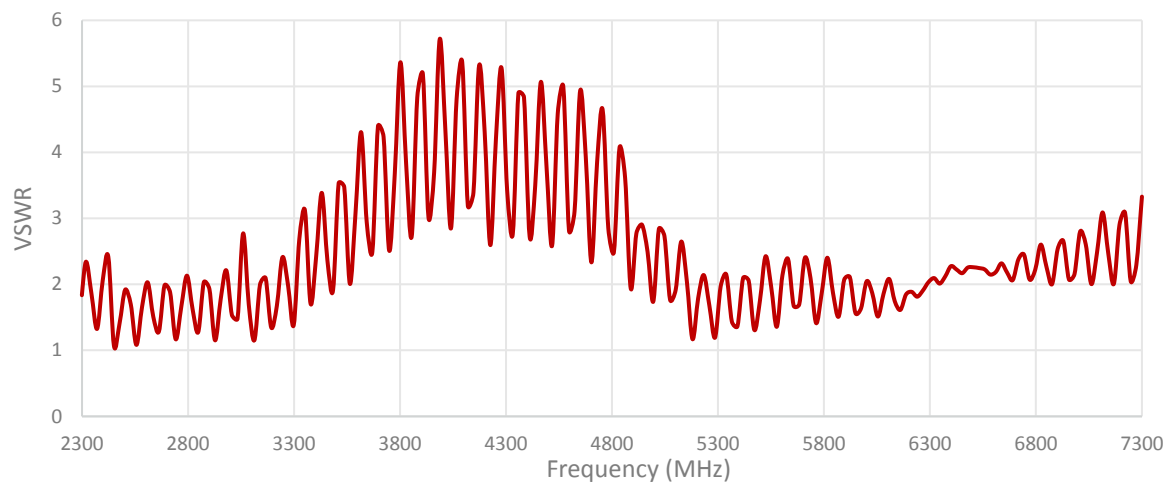
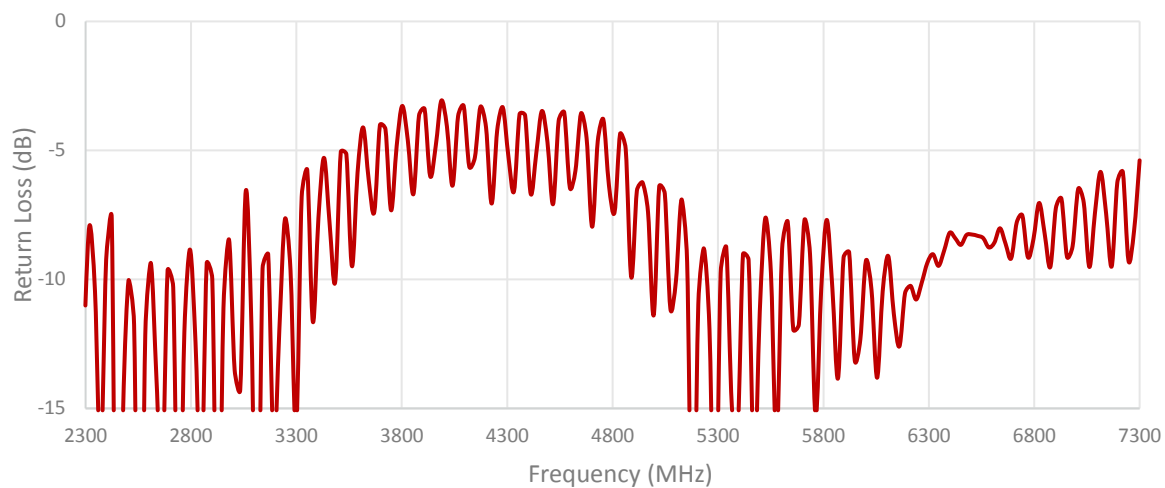
Parameters	GPS/GLONASS Antenna	
Standard	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency(MHz)	1575.42	1598-1606
Patch Size (mm)	25 x 25 x 4	
Return Loss (dB)	<=-15.0 dB	
VSWR	<=1.4:1 dB	
Impedance	50	
Radiation Pattern	Hemispherical	
Polarization	RHCP	
Saw Filter	Pre-filter	
Active Gain (dB)	28 @ 2.7 V	
Noise Figure (dB)	1.5 Typ	
Voltage (V)	1.5 – 3.6	
Current (mA)	9 Typ	
Power Consumption (mW)	24.3 Typ	
ESD Protection (kV)	2kV	
Connector Type	SMA-Male Standard (Other Connectors Available)	
Cable Length	300 cm Standard (Any Cable Length Available)	
Cable Type	LL100 Standard (Other Cables Available)	

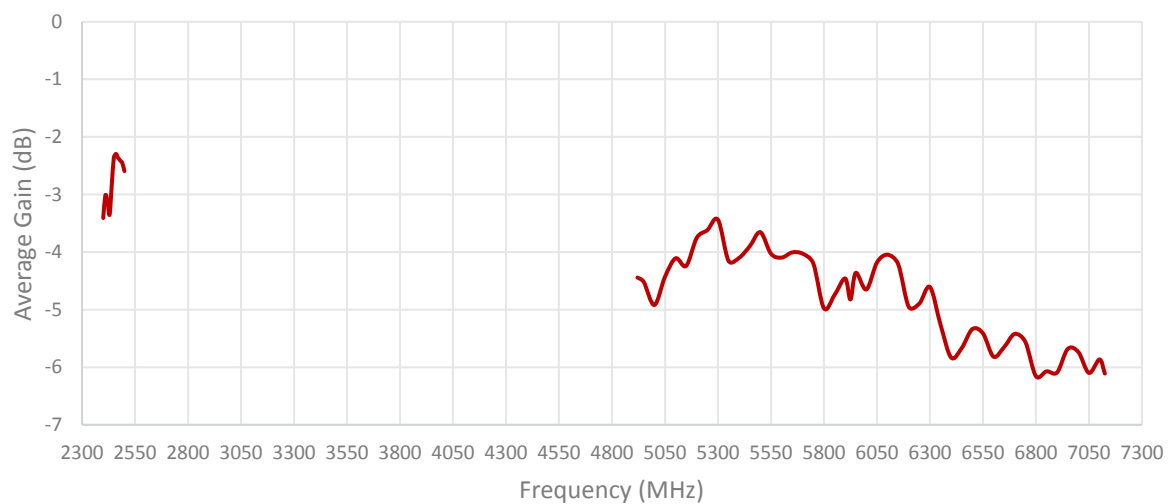
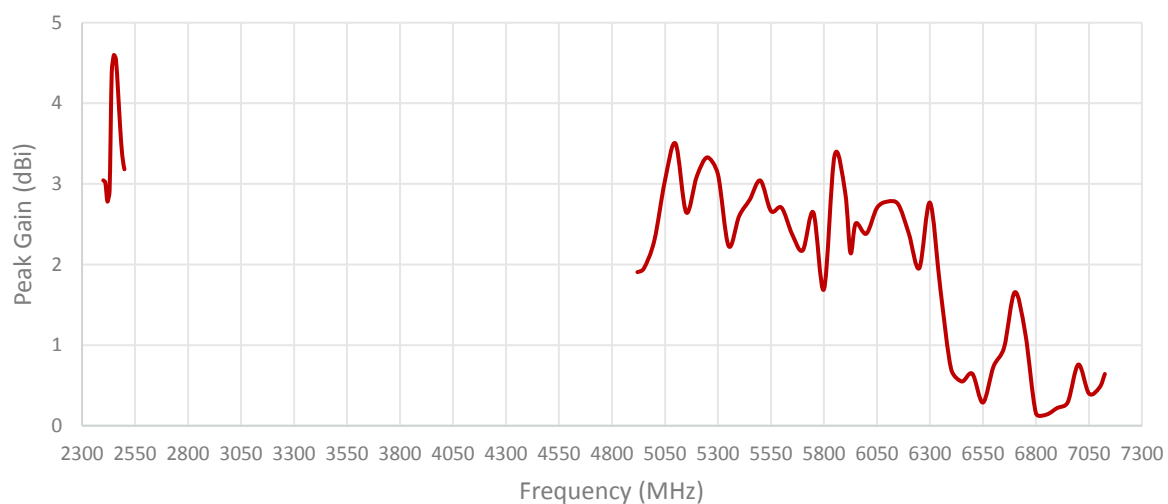
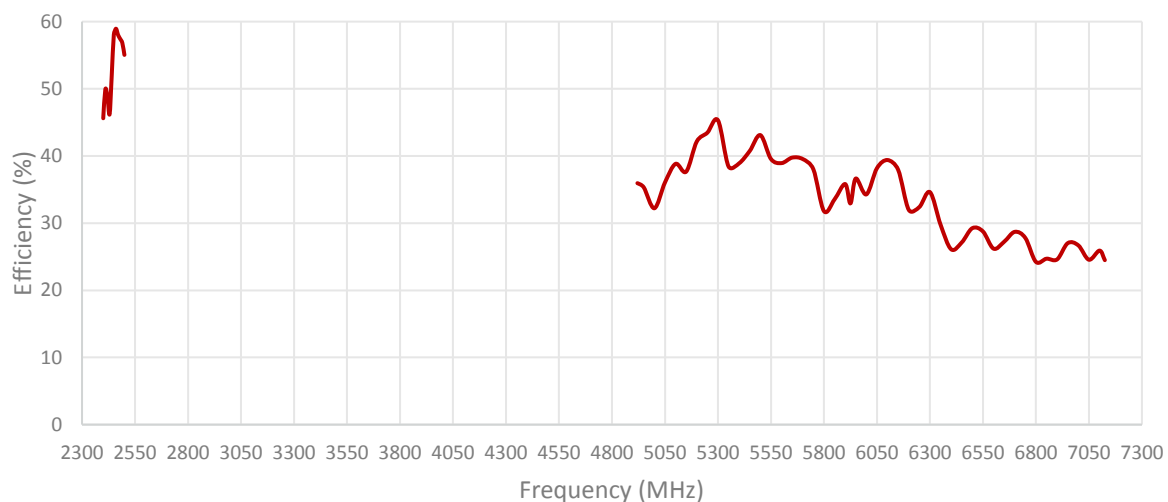
2. Mechanical and environmental specifications

Specifications	2J7703MGFa
Mounting Type	Magnetic Mount
Dimensions (mm)	Ø 54 x 68.2
Radome Type	ASA
Radome Color	Black
Antenna Base	Zamak
Gasket	TPE
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS
Certificates	IP67, IP69, IK09

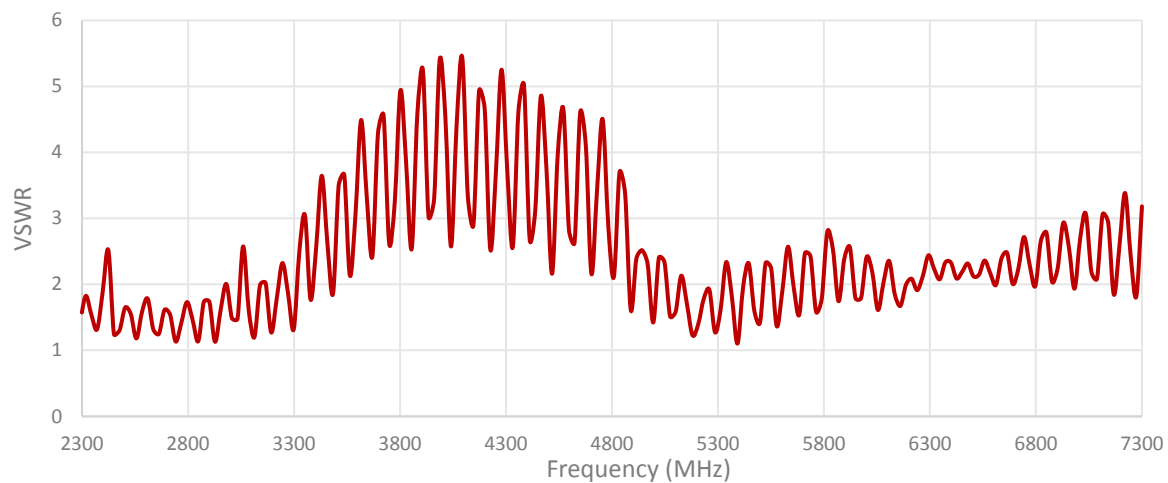
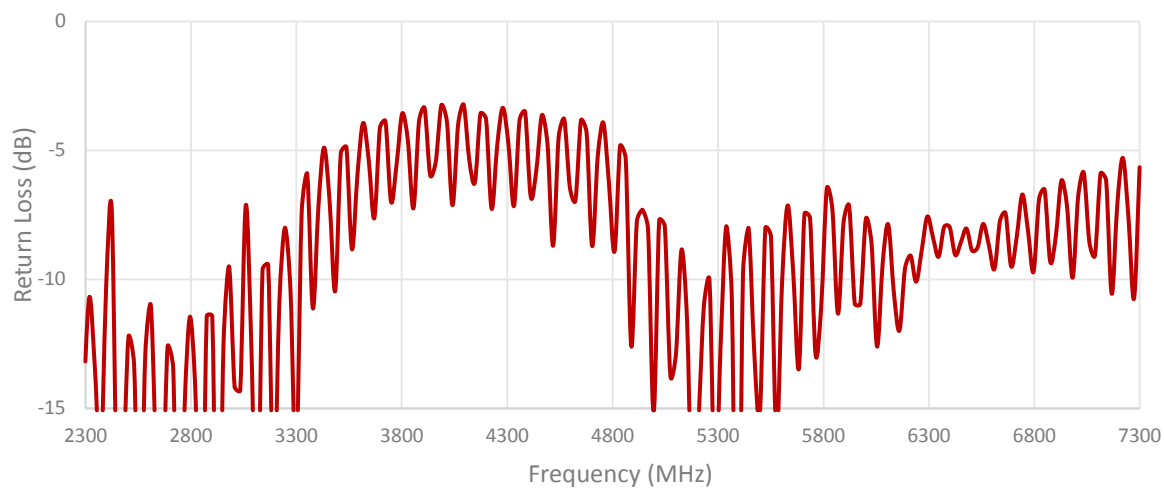
3. Antenna parameters

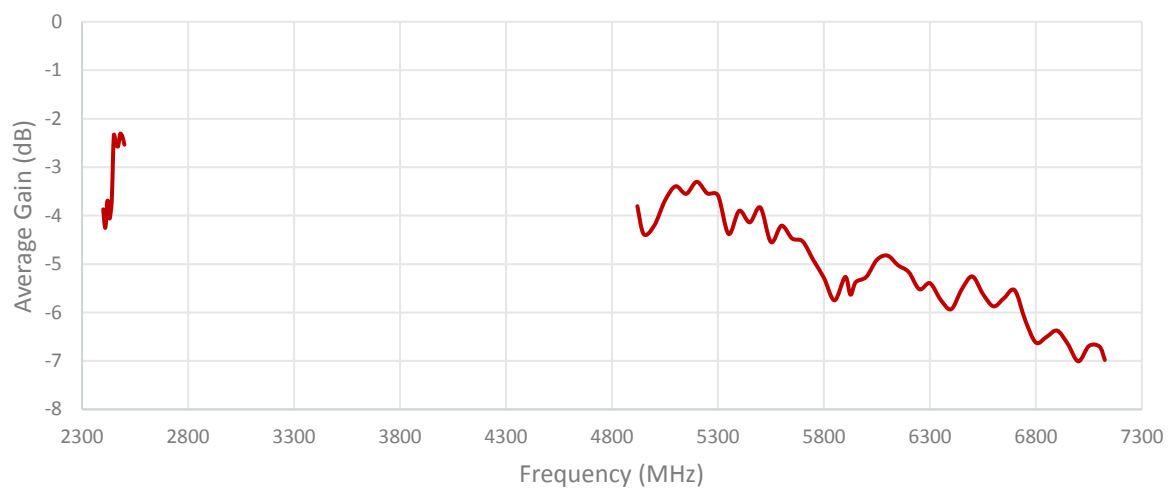
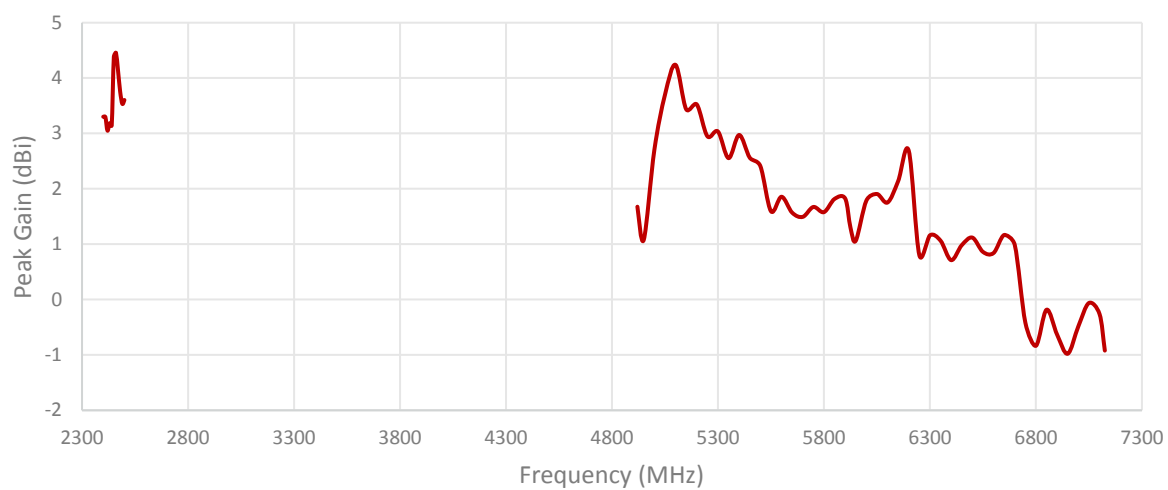
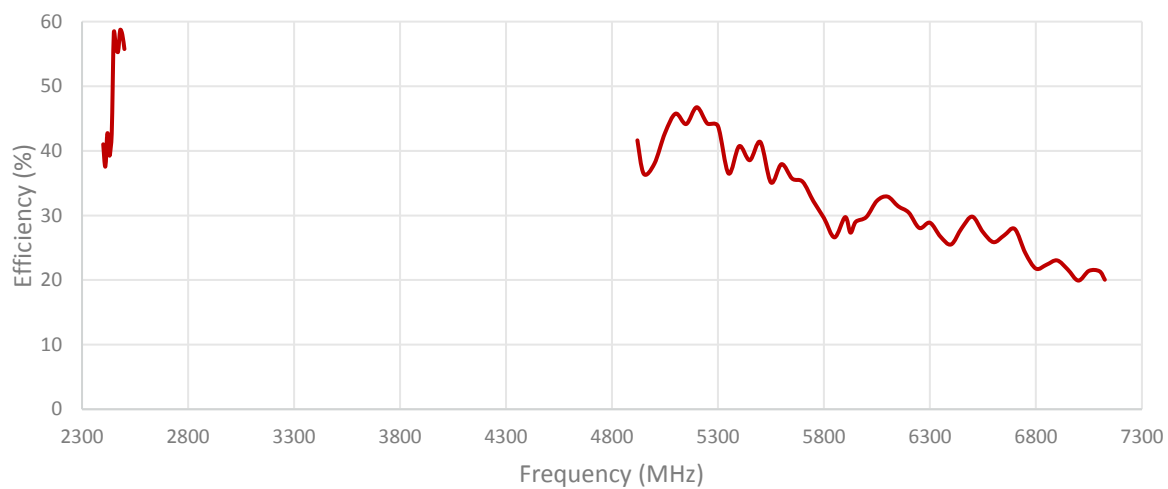
Cable 1: 2.4/5.0/6.0 GHz ISM



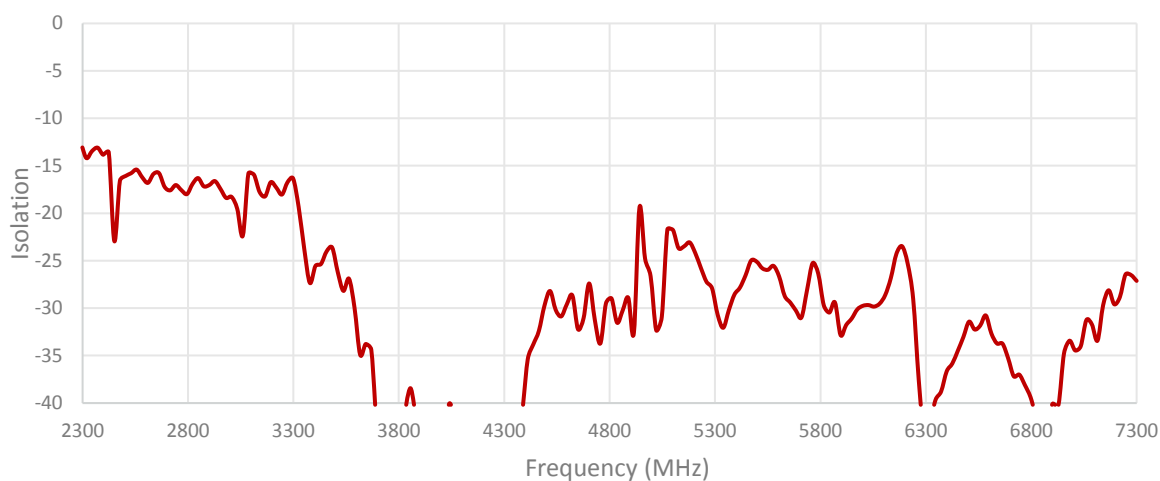


Cable 2: 2.4/5.0/6.0 GHz ISM

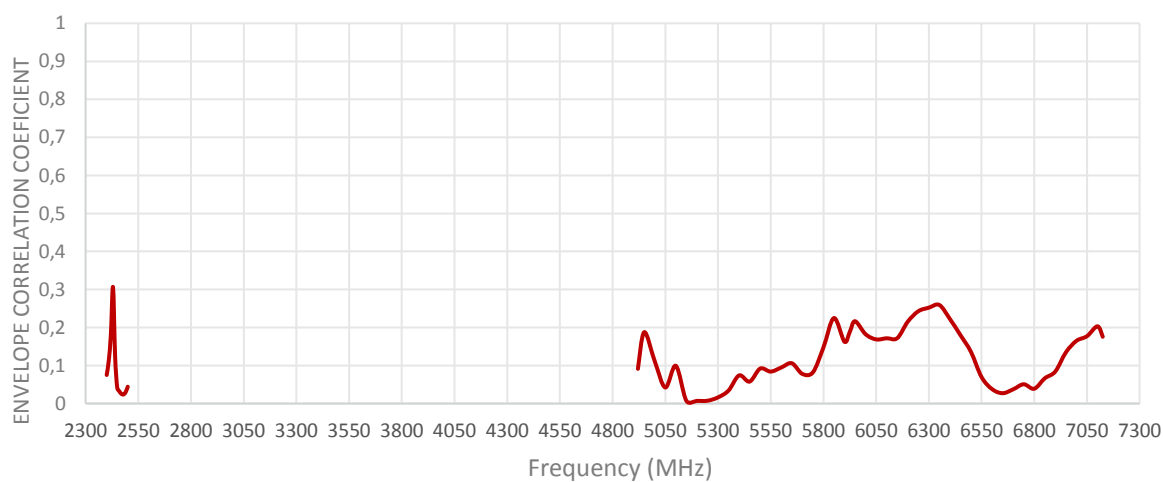


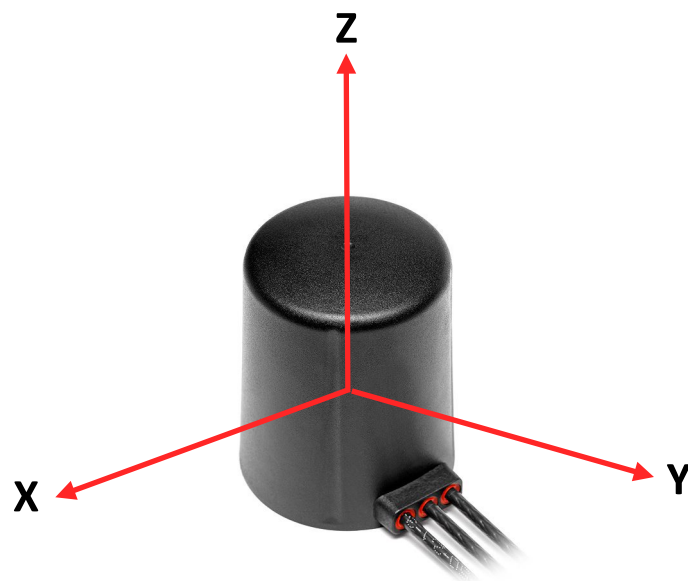


ISOLATION FOR CABLES 1 AND 2



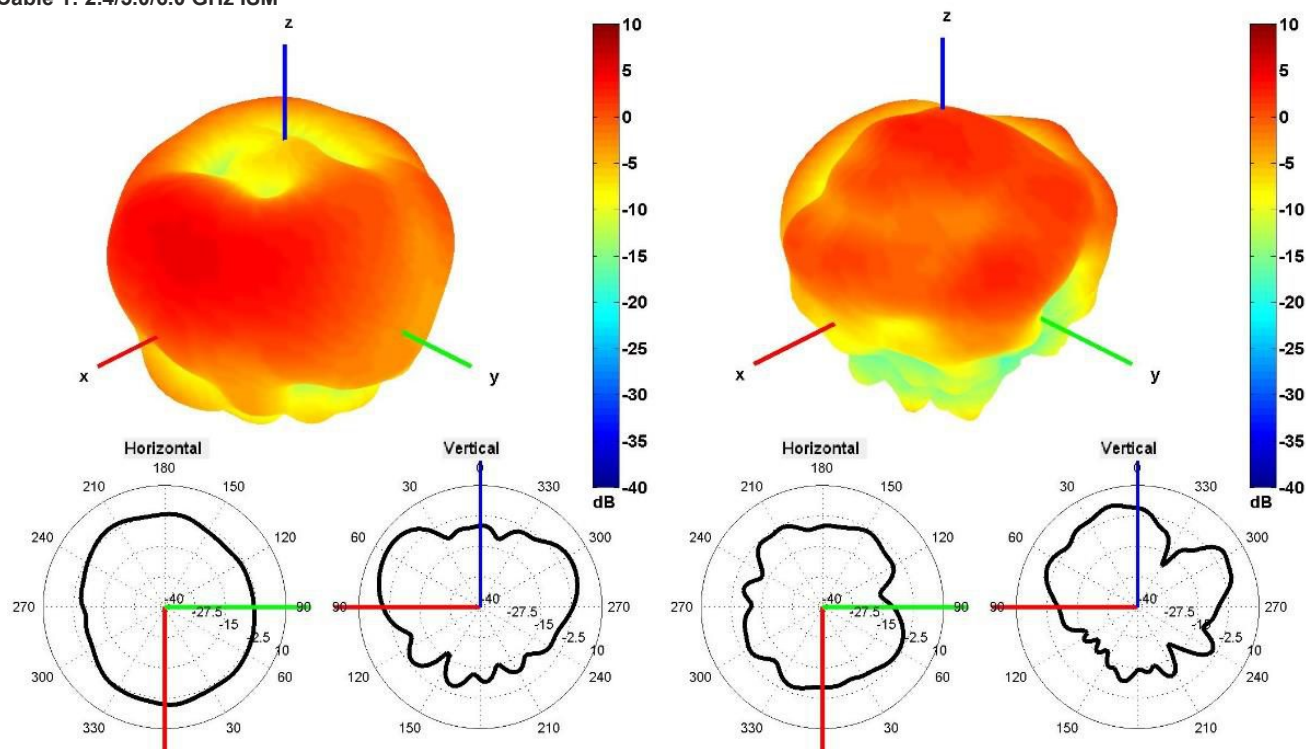
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2



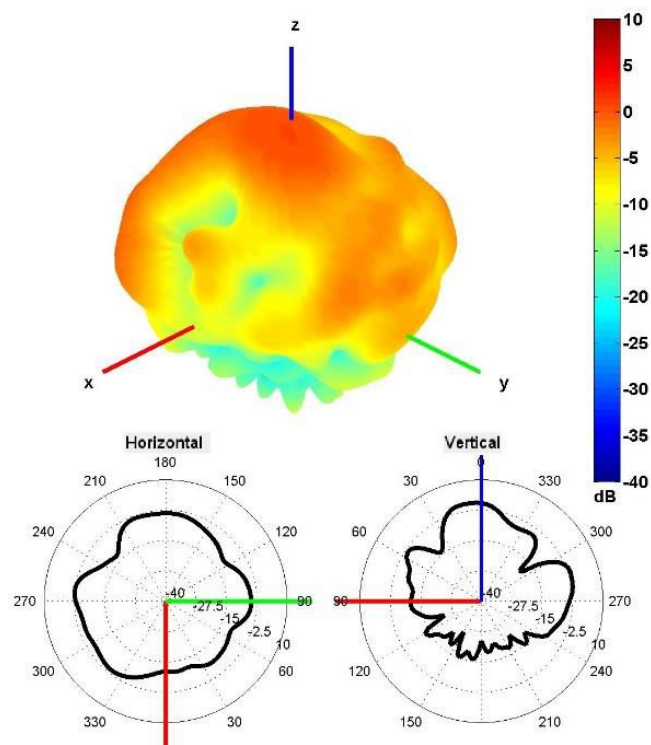


Radiation pattern reference

Cable 1: 2.4/5.0/6.0 GHz ISM

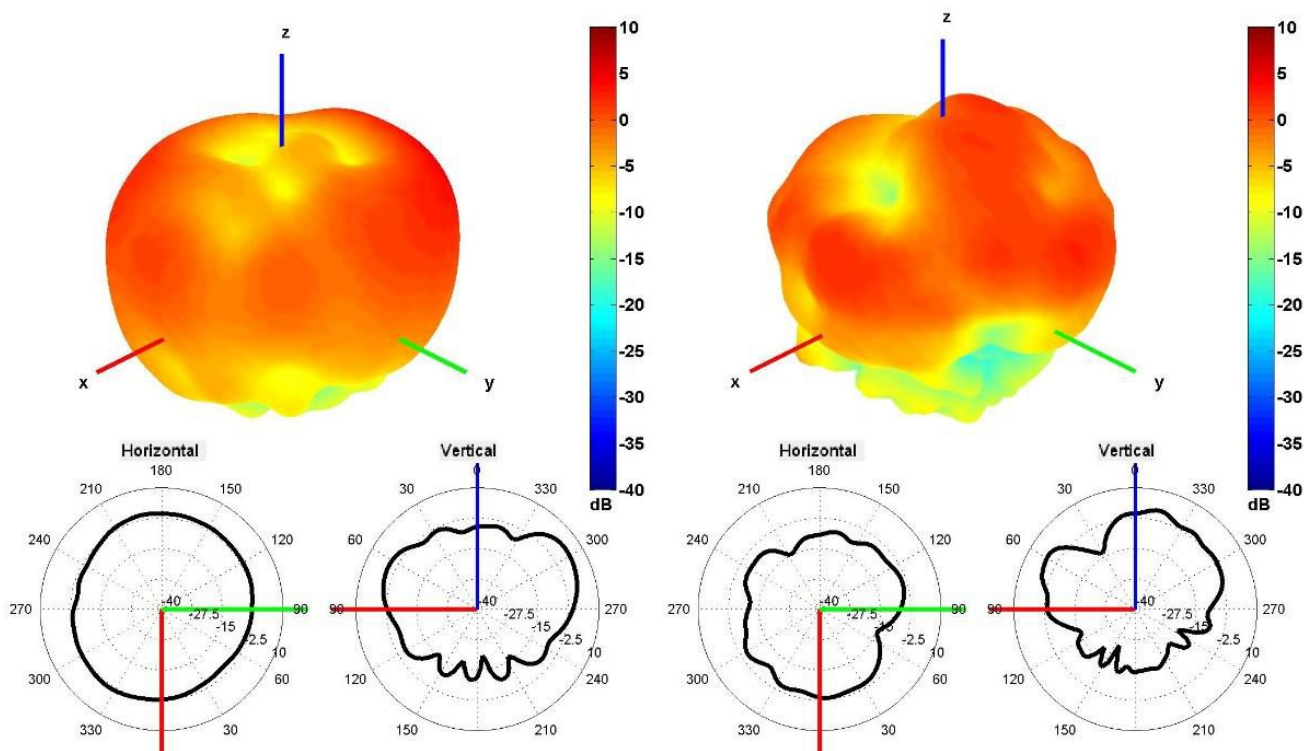


2450 and 5500 MHz Radiation pattern

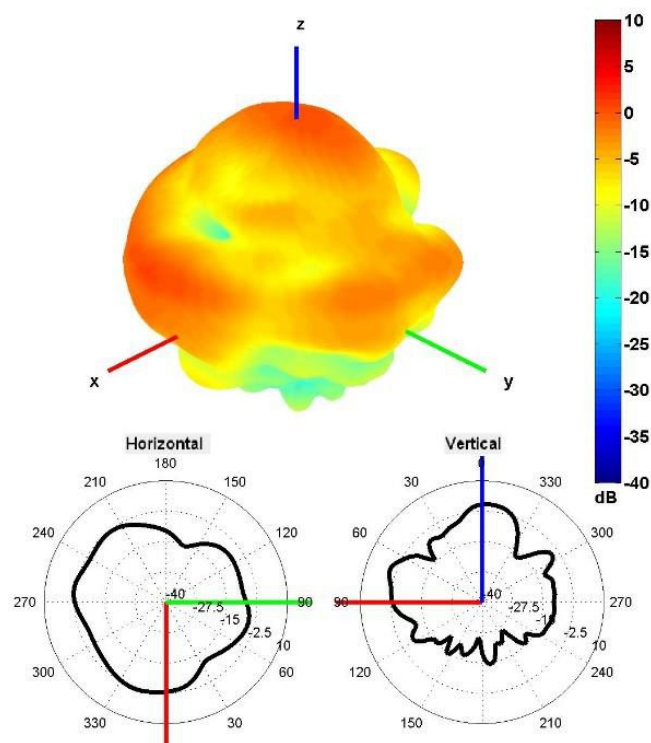


6500 MHz Radiation pattern

Cable 2: 2.4/5.0/6.0 GHz ISM

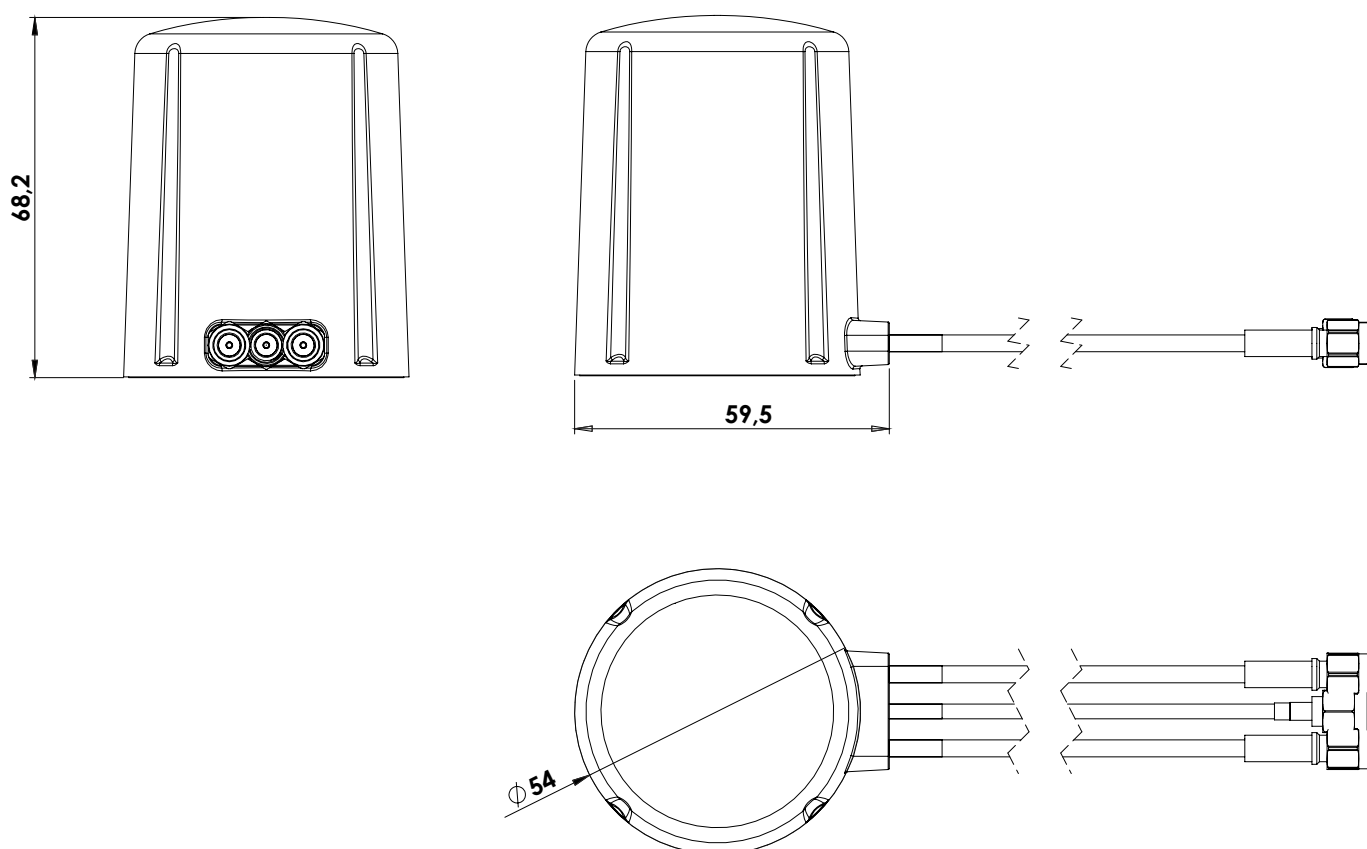


2450 and 5500 MHz Radiation pattern



6500 MHz Radiation pattern

4. Antenna drawings



5. Antenna Images

