antenna conceptor

Product Datasheet

2J6012B-2.4

2.4 GHz and 868 MHz ISM Screw Mount

Key Features

Cable 1: 2.4 GHz ISM
- 2410-2490 MHZ

Cable 2: 868 MHz ISM
- 863-870 MHz

Screw Mount
Ground Plane Independent
Customizable Cable and Connector
Dimensions 80 x 74 x 14.7 mm
Certificates: IP67



Note: 19mm Thread is Default Option. See Drawing for other Thread Options available.

1. Antenna and electrical specifications

Cable 1

Parameters	2.4 GHz ISM Antenna		
Standards	WiFi, BT, ZigBee, ISM		
Band (MHz)	2.4 GHz	2.4 GHz	5.0 GHz
Frequency (MHz)	2410-2490	2410-2490	4920-5925
Return Loss (dB)	~-10.4	~-12.2	~-13.6
VSWR	~1.9:1	~1.8:1	~1.6:1
Efficiency (%)	~58	~30.7	~64
Peak Gain (dBi)	~5.6	~2.0	~5.5
Average Gain (dB)	~-2.3	~-5.3	~-1.9
Impendance (Ohm)	50		
Polarisation	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	LL100 Standard (Other Cables Available)		

Cable 2

Parameters	868 MHz ISM Antenna
Standards	ZigBee, ISM, SIGFOX, LoRa
Band (MHz)	868 MHz
Frequency (MHz)	863-870
Return Loss (dB)	~-14.4
VSWR	~1.5:1
Efficiency (%)	~50.3
Peak Gain (dBi)	~1.8
Average Gain (dB)	~-3.2
Impendance (Ohm)	50
Polarisation	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	LL100 Standard (Other Cables Available)

Antenna Measurement Conditions:

Mounted on 30 x 30 x 0.25 cm Metal Plate

200 cm of Cable LL100

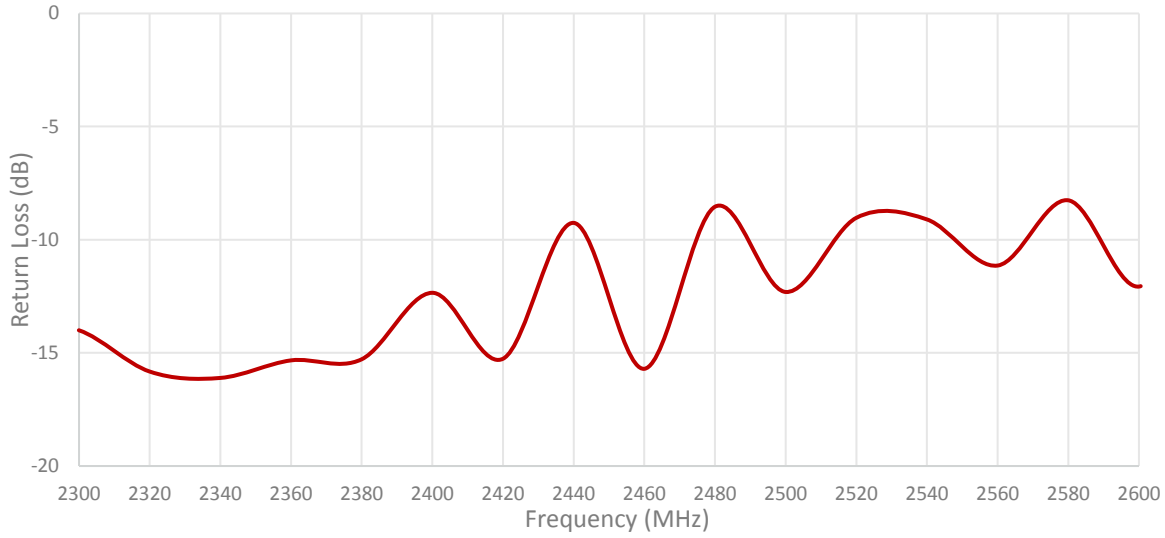
Measured in Certified CTIA 3D Anechoic Chamber

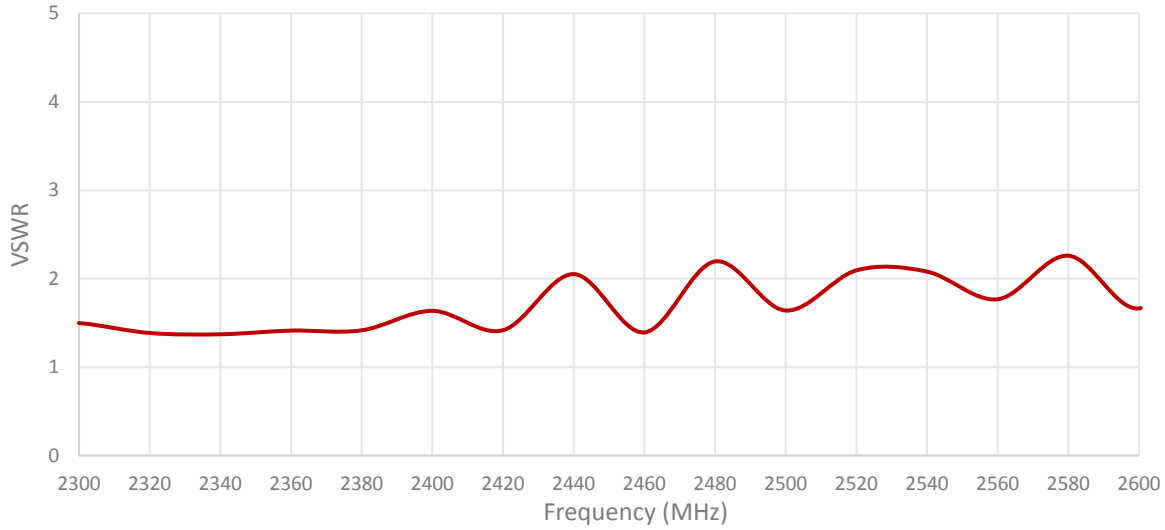
2. Mechanical and environmental specifications

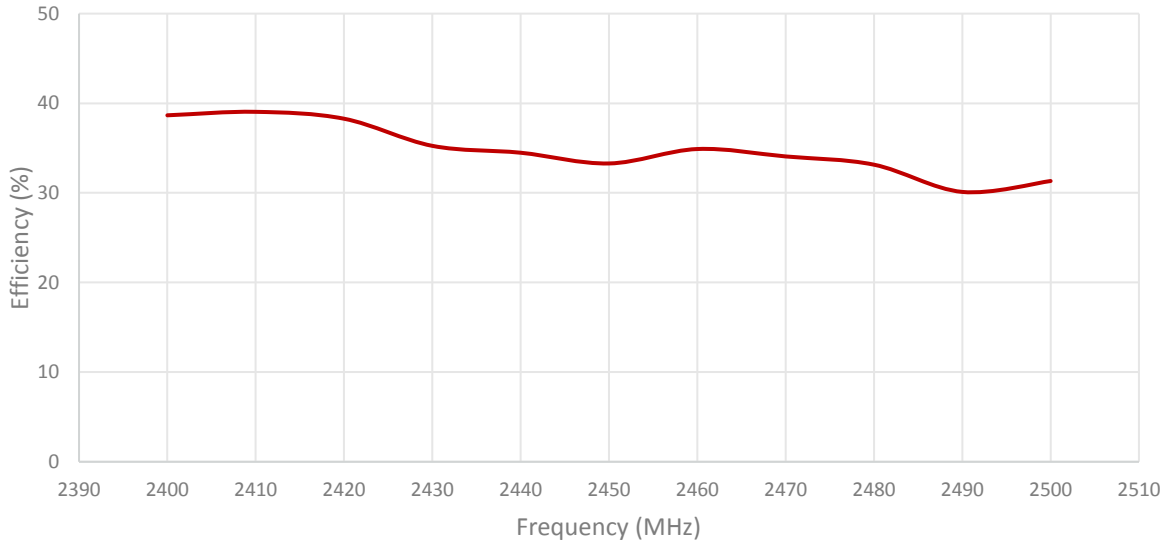
Specifications	2J6012B-2.4
Mounting Type	Screw Mount
Dimensions (mm)	80 x 74 x 14.7
Max. Tighten Torque (Nm)	5 Nm
Radome	ABS
Radome color	Black
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS
Certificates	IP67

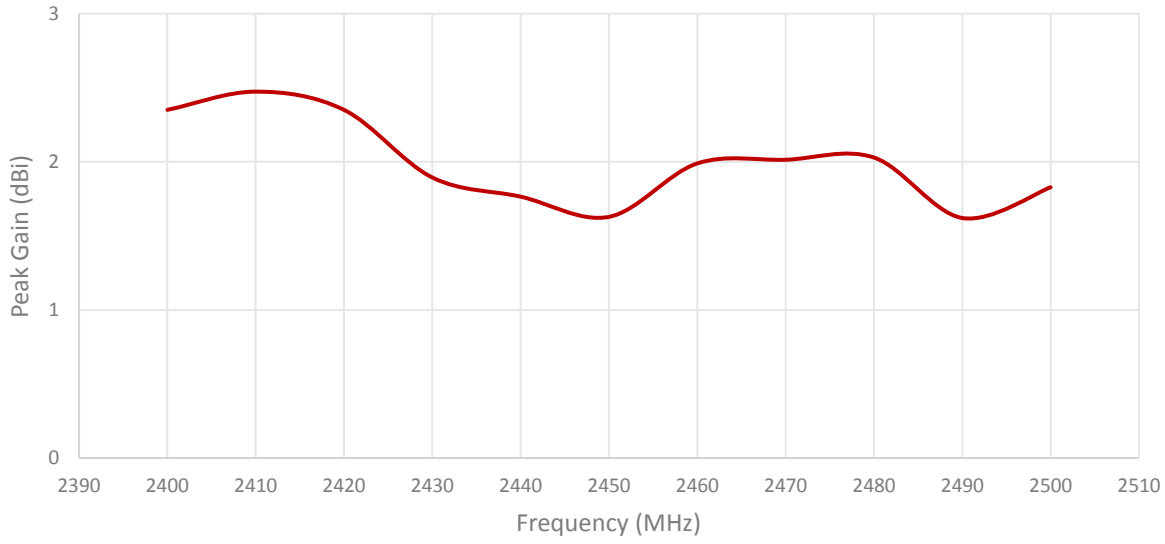
3. Antenna parameters

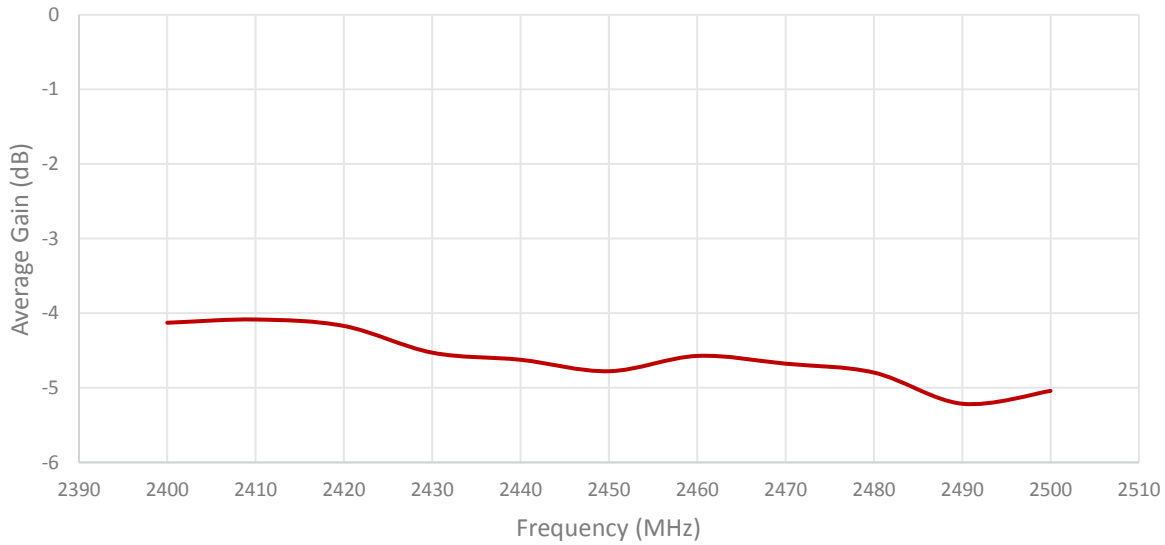
Cable 1: 2.4 GHz ISM



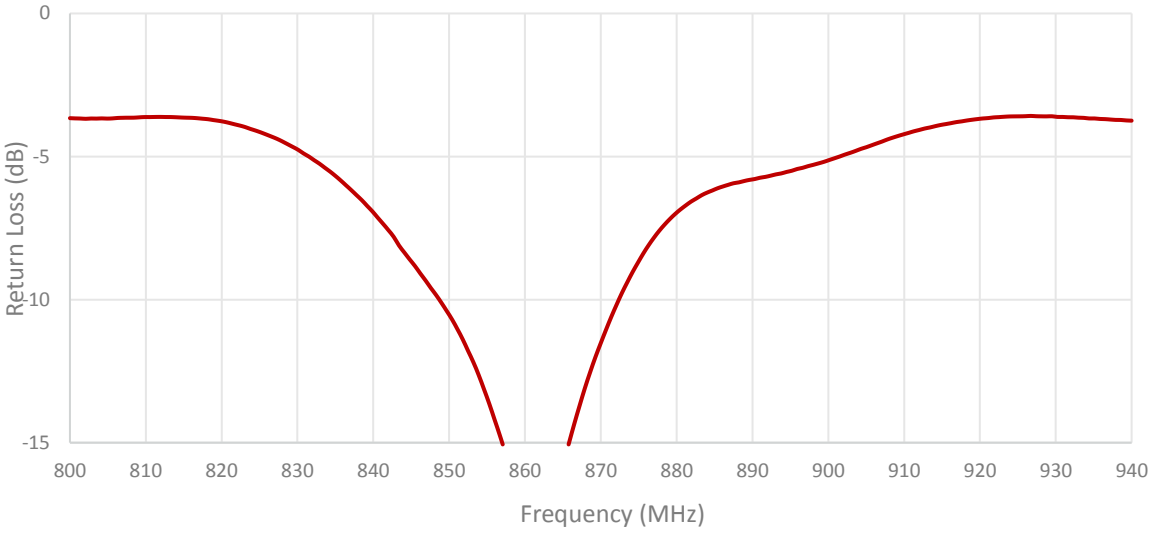


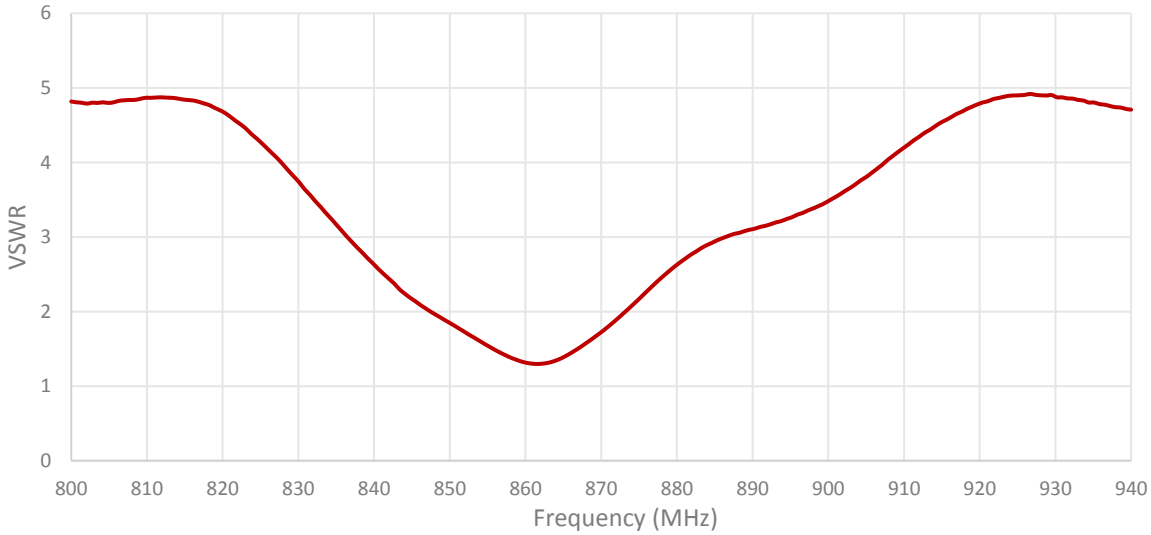

50
40
30
20
10
0
Efficiency (%)
2390
2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500
2510
Frequency (MHz)

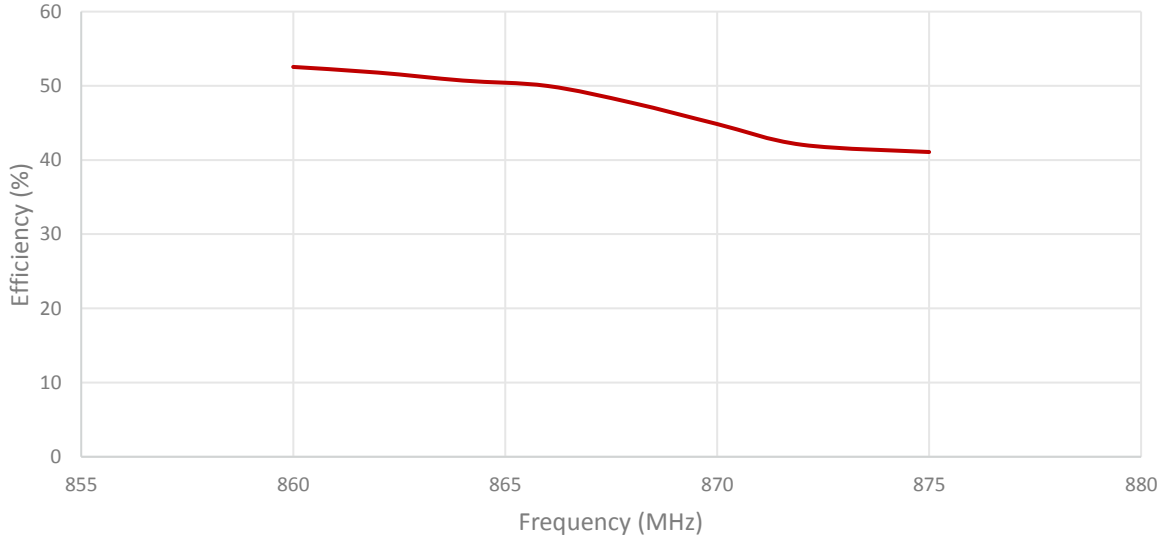

3
2
1
0
Peak Gain (dBi)
2390
2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500
2510
Frequency (MHz)

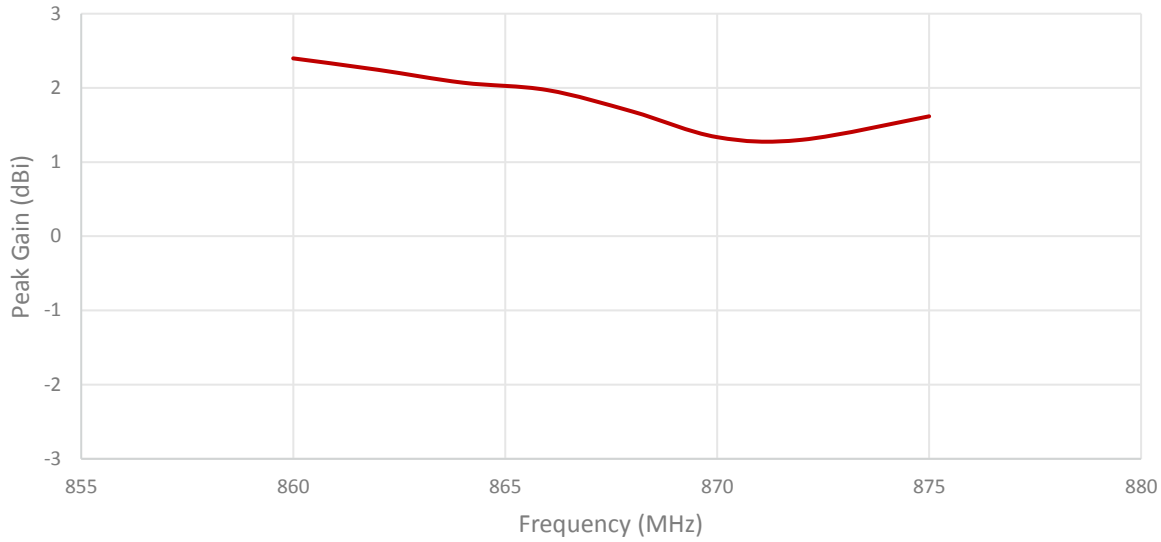

0
-1
-2
-3
-4
-5
-6
Average Gain (dB)
2390
2400
2410
2420
2430
2440
2450
2460
2470
2480
2490
2500
2510
Frequency (MHz)

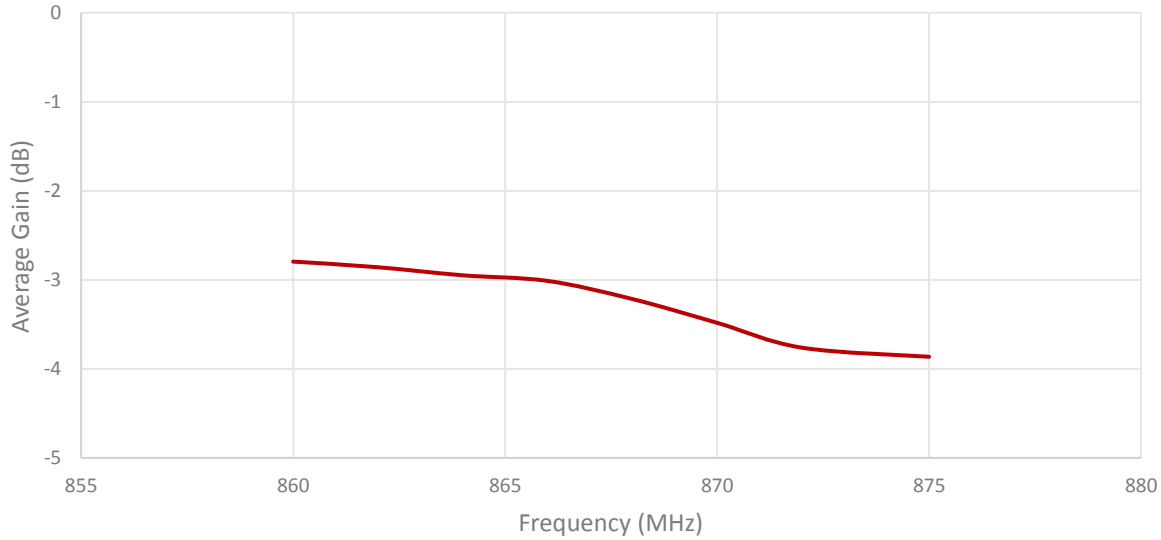
Cable 2: 868 MHz ISM

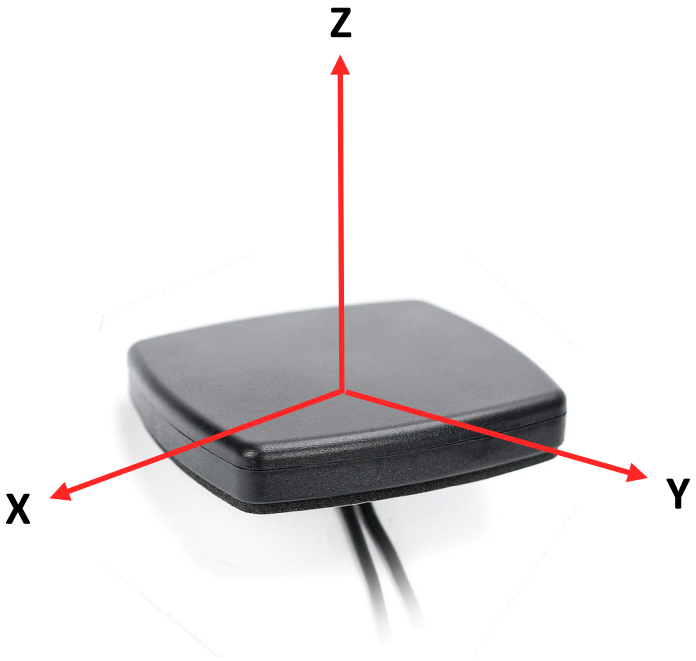





60
50
40
30
20
10
0
Efficiency (%)
855
860
865
870
875
880
Frequency (MHz)

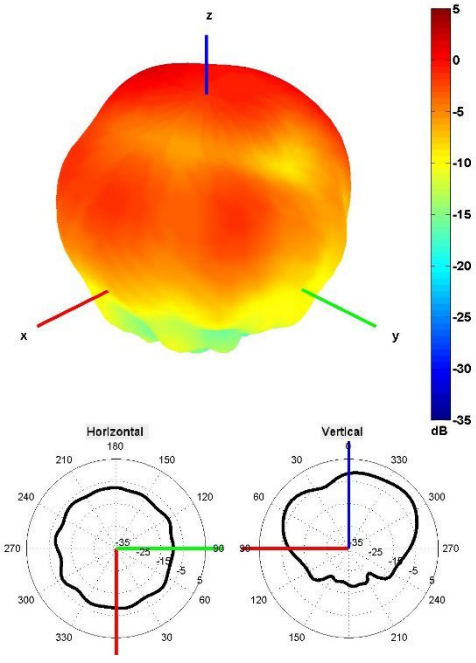

3
2
1
0
-1
-2
-3
Peak Gain (dBi)
855
860
865
870
875
880
Frequency (MHz)


0
-1
-2
-3
-4
-5
Average Gain (dB)
855
860
865
870
875
880
Frequency (MHz)

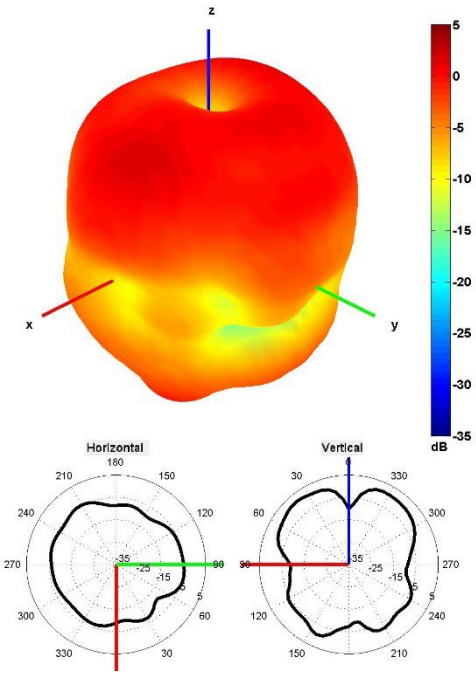


Radiation pattern reference

Cable 1: 2.4 GHz ISM



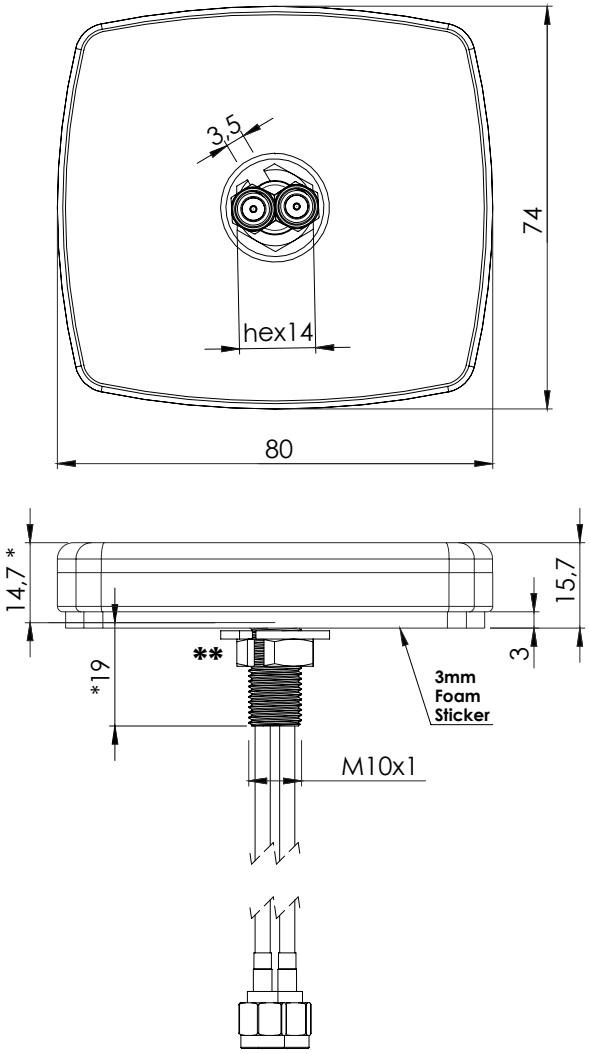
2450 MHz Radiation pattern



868 MHz Radiation pattern

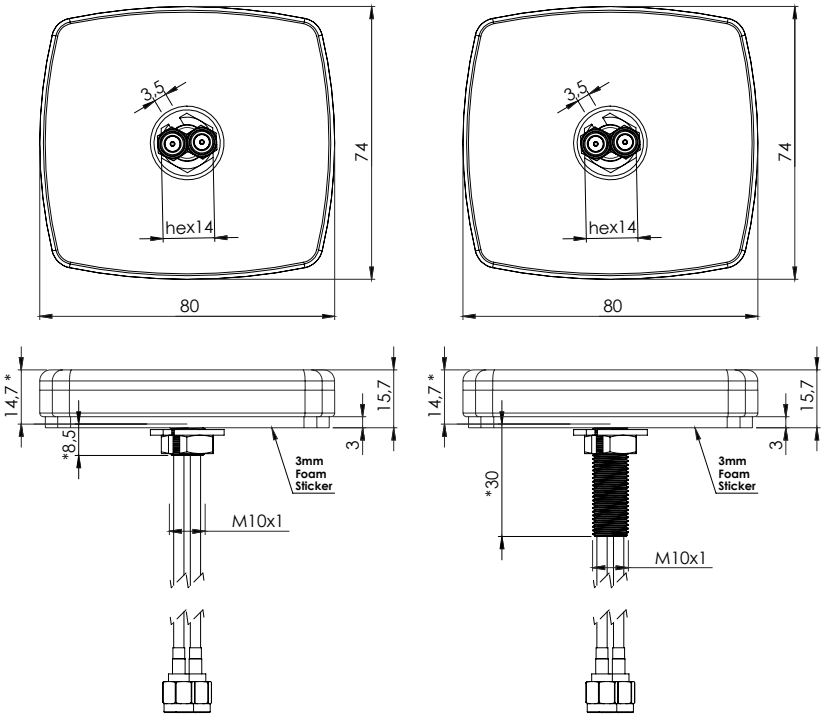
4. Antenna drawings

Default Thread Option



2J6012B-2.4-TH19
19 mm Thread
Default Option

Other Thread Options available



2J6012B-2.4-TH8,5
8,5 mm Thread

2J6012B-2.4-TH30
30 mm Thread

***Dimensions after mounting**
****Max. Torque= 5 Nm**

5. Antenna Images







