4G LTE / NB-IoT FPC Antenna SZK-C-2L18

791-960; 1710-2200; 2300-2400; 2500-2690MHz

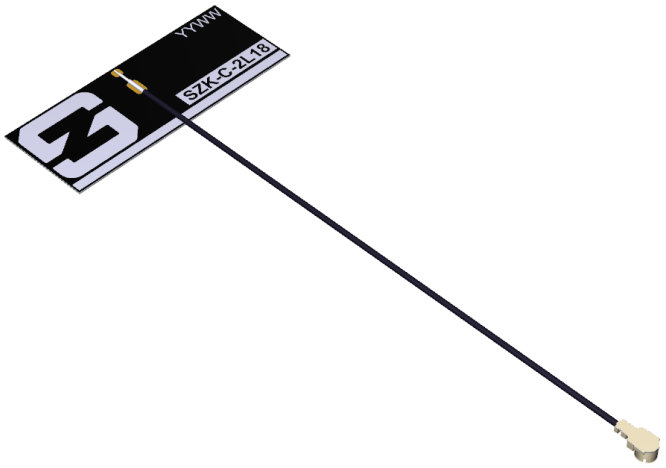
Description

A Flexible antenna for NB-IoT/4G/3G/2G applications. For use internal to a device which requires an integrated antenna solution. High performance with a small form factor for simple integration.

- For NB-IoT and 4G LTE Applications.
- High performance with dual band coverage
- Simple integration, plug and operate the device without designing onboard antenna.
- Small form factor of 38.0 x 15.0 x 0.20 (mm)
- Alternate cable lengths and connectors available upon request, contact sales@synzen.com.tw

Applications

Payment Terminals	M2M Industrial	Smart Meters
Smart Grid	Healthcare	Tracking



General Specifications

Mechanical Specifications

Part Number	SZK-C-2L18
Name	AVIOR
Dimensions	38.0 x 15.0 x 0.20 (mm)
Weight	<0.5g
Antenna Type	FPC Self-Adhesive
Cable Length	100mm
Cable type	Mini Coax ø 1.13mm
Connector	MHFI (U. FL Compatible)
Adhesive backing	3M 468

RF Specifications

4G LTE/NB-IoT Bands	Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBi)	Impedance	Polarization
B5,8,18,19,20,26,27	**791-960**	**>65**	**2.88**	**50Ω**	**Linear**
B1,2,3,4,9,23,35,39,66	**1710-2200**	**>75**	**4.31**		
B40	**2300-2400**	**>70**	**1.95**		
B7,38,41	**2500-2690**	**>75**	**2.01**		

Environmental Specifications

Operational Temperature	-40 to +85 (°C)
Storage Temperature	-10 to +40 (°C)
Relative Humidity	≤75%

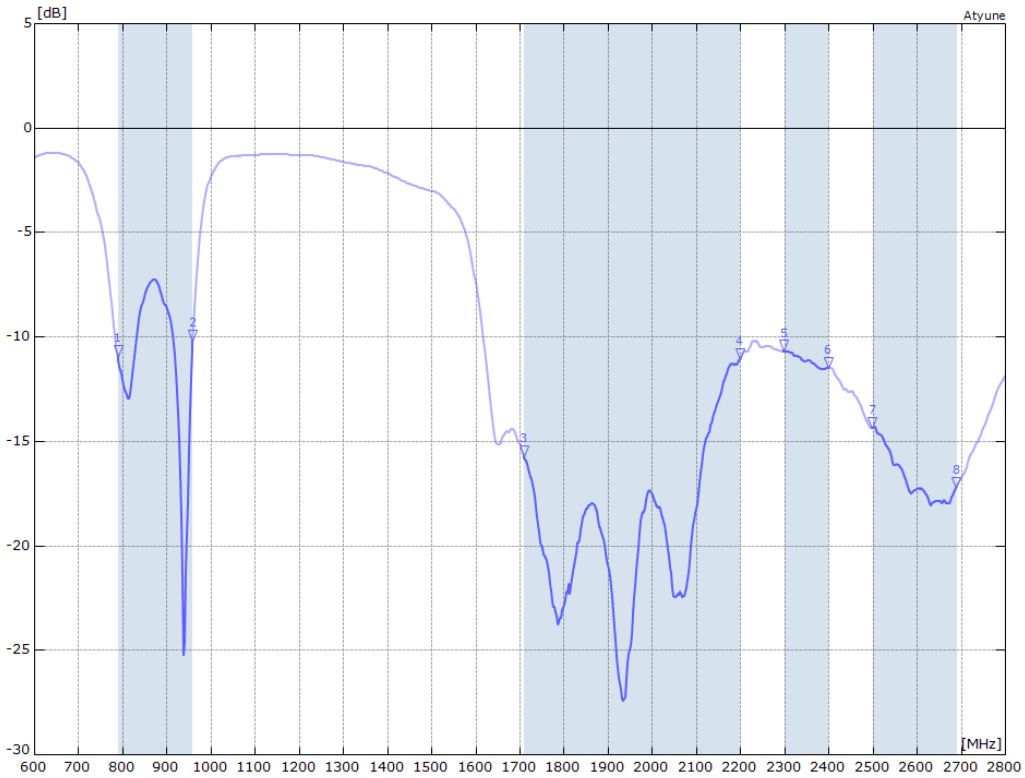
4G LTE Bands

Supported Band List

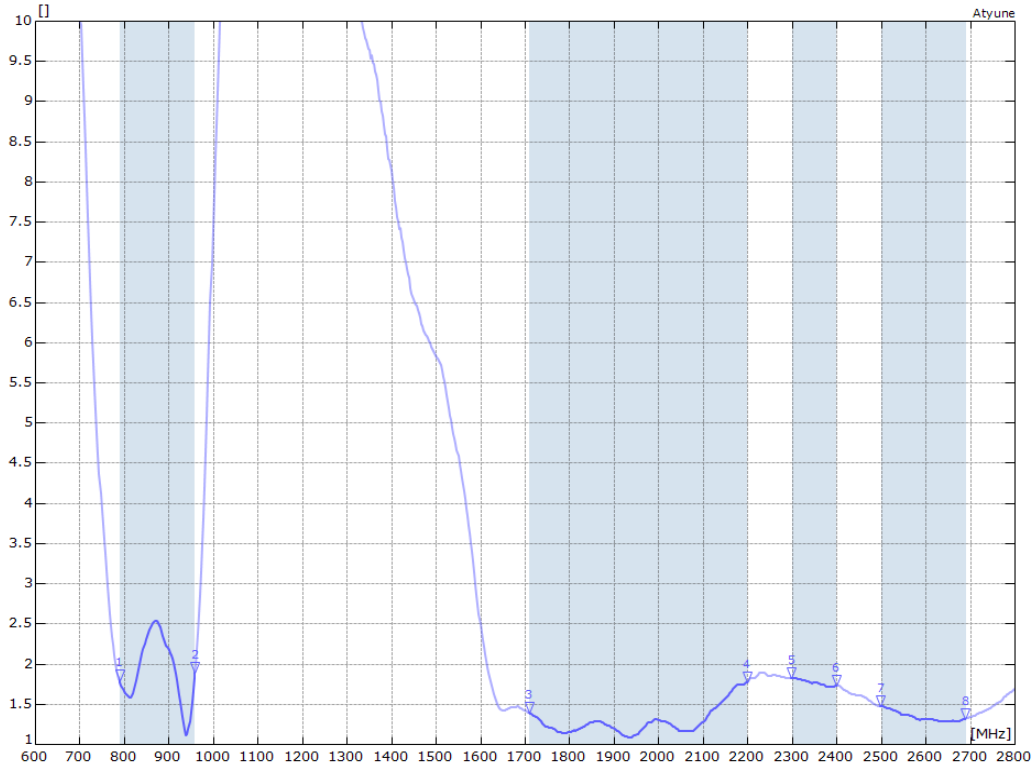
Band	Frequency Band	Uplink(MHz)	Downlink (MHz)	Supported
1	2100	1920-1980	2110-2170	YES
2	1900	1850-1910	1930-1990	YES
3	1800	1710-1785	1805-1880	YES
4	1700	1710-1755	2110-2155	YES
5	850	824-849	869-894	YES
7	2600	2500-2570	2620-2690	YES
8	900	880-915	925-960	YES
9		1749.9-1784.9	1844.9-1879.9	YES
10	1700	1710-1770	2110-2170	YES
11	1500	1427.9-1447.9	1475.9-1495.9	YES
12	700	699-716	729-746	NO
13	700	777-787	746-756	NO
14	700	788-798	758-768	YES
17	700	704-716	734-746	NO
18	850	815-830	860-875	YES
19	850	830-845	875-890	YES
20	800	832-862	791-821	YES
21	1500	1447.9-1462.9	1495.9-1510.9	NO
22	3500	3410-3490	3510-3590	NO
24	1600	1626.5-1660.5	1525-1559	NO
25	1900	1850-1915	1930-1995	YES
26	850	814-849	859-894	YES
27	800	807-824	852-869	YES
28	700	703-748	758-803	NO
29	700	N/A	717-728	NO
30	2300	2305-2315	2350-2360	YES
31		452.5-457.5	462.5-467.5	NO
32	1500	N/A	1452-1496	NO
33	2100	1900-1920		YES
34	2100	2010-2025		YES
35	1900	1850-1910		YES
36	1900	1930-1990		YES
37		1910-1930		YES
38	2600	2570-2620		YES
39	1900	1880-1920		YES
40	2300	2300-2400		YES
41	2500	2496-2690		YES
42	3500	3400-3600		NO
43	3700	3600-3800		NO
44	700	703-803		NO
45	1500	1447-1467		NO
46	5200	5150-5925		No
47	5900	5855-5925		No
48	3600	3550-3700		NO
50	1500	1430-1517		NO
51	1500	1427-1432		NO
65	2100	1920-2010	2110-2200	YES
66	1700	1710-1780	2110-2200	YES
67	700	N/A	738-758	NO
68	700	698-728	753-783	NO
69	2600	N/A	2570-2620	YES
70	2000	1695-1710	1995-2020	YES
71		663-698	617-652	NO
74		1427-1518		NO
77		3300-4200		NO
78		3300-3800		NO
79		4400-5000		NO
85		698-716	728-746	NO

RF Characteristics

S11 Parameter

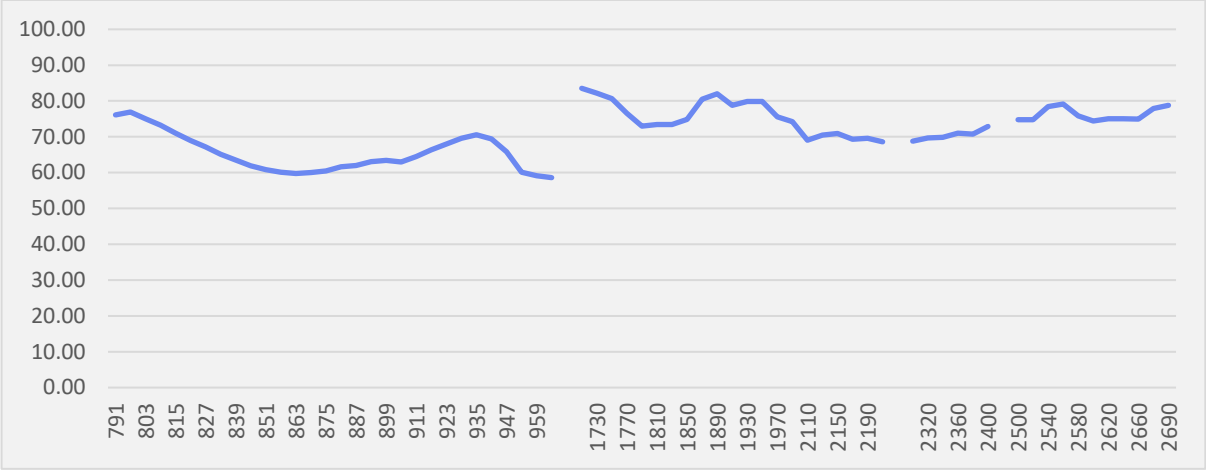


VSWR

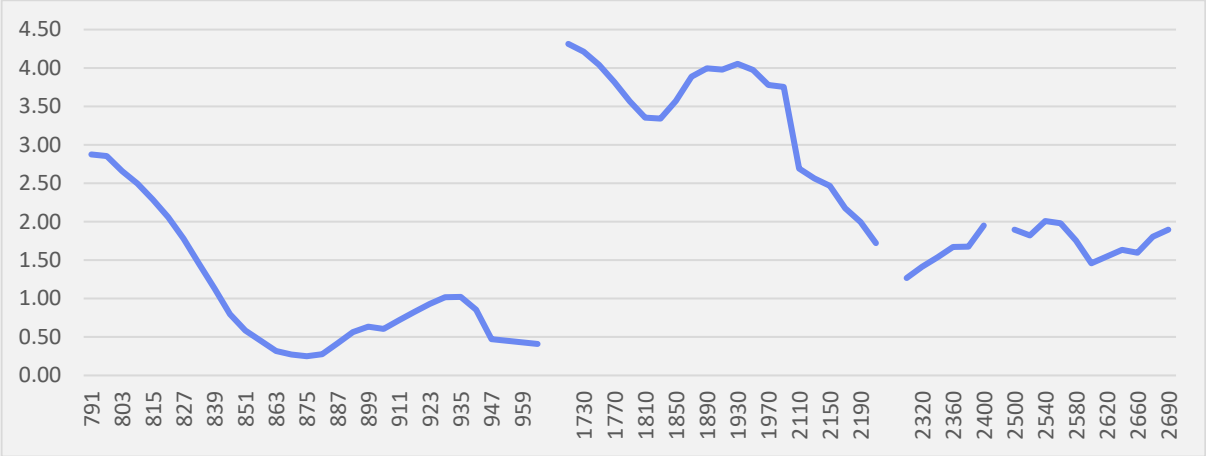


Antenna Performance

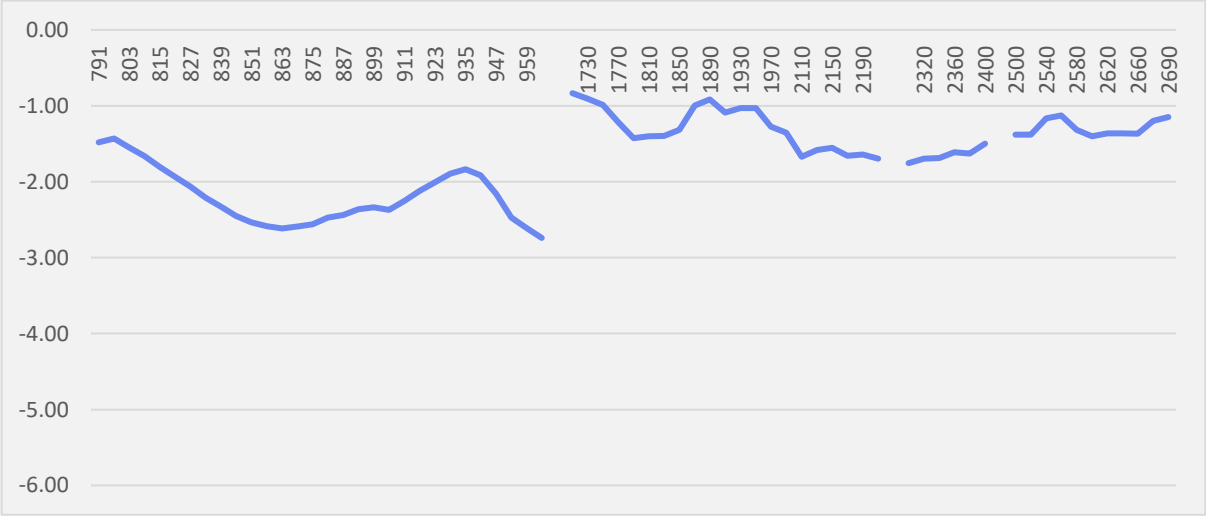
Efficiency



Peak Gain

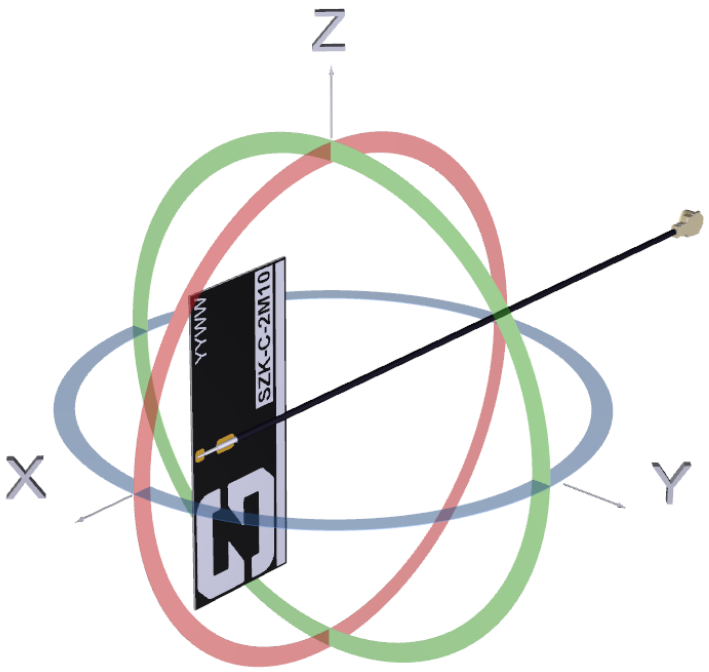


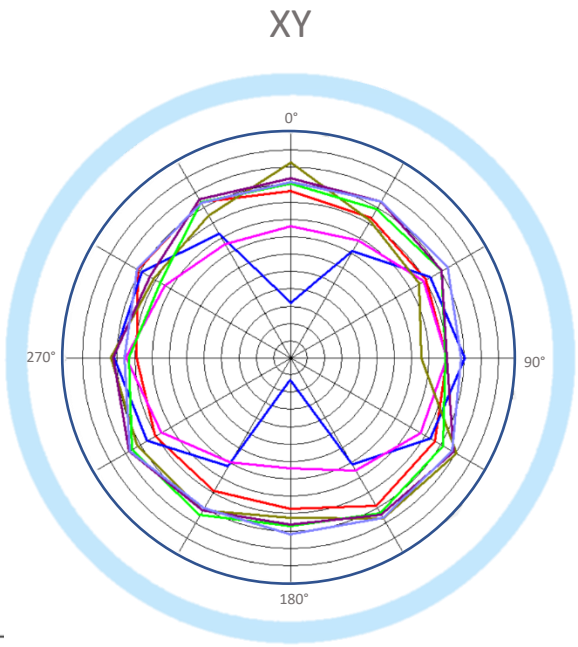
Average Gain



Radiated Performance

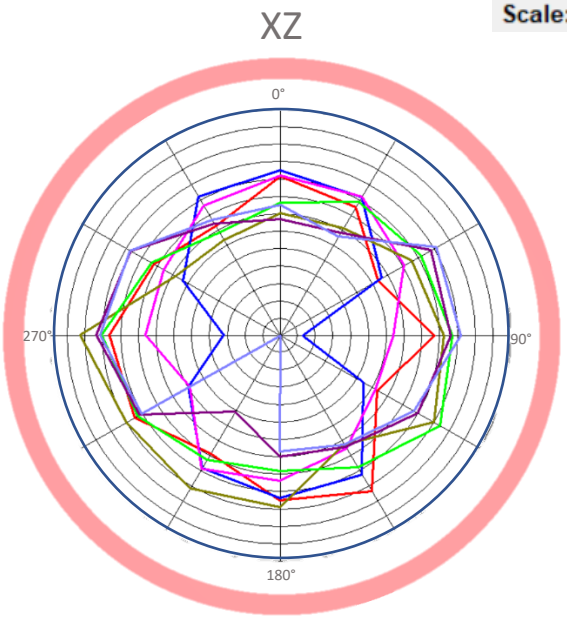
2D Polar Plot 791-2690MHz





Max: 6
Min: -20
Scale: 2/div

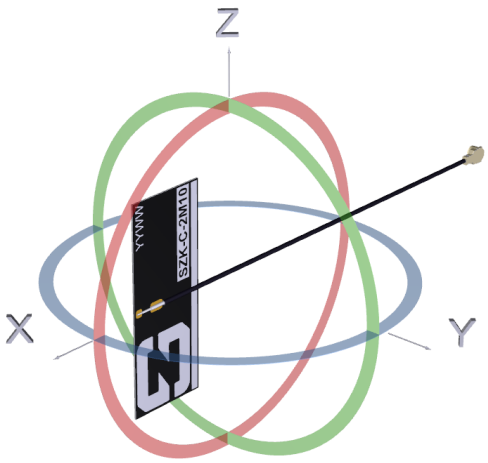
791
881
960
1710
2200
2360
2600

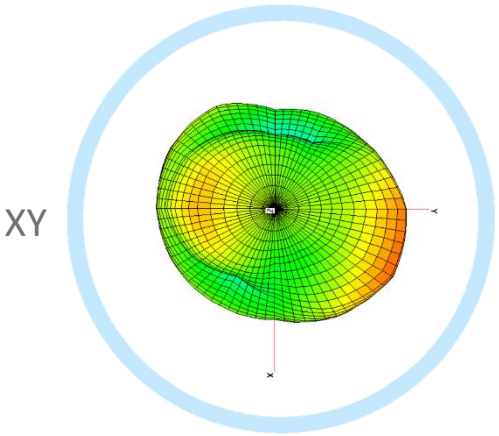


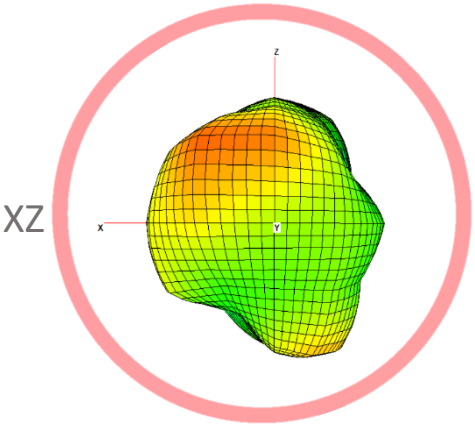
Radiated Performance

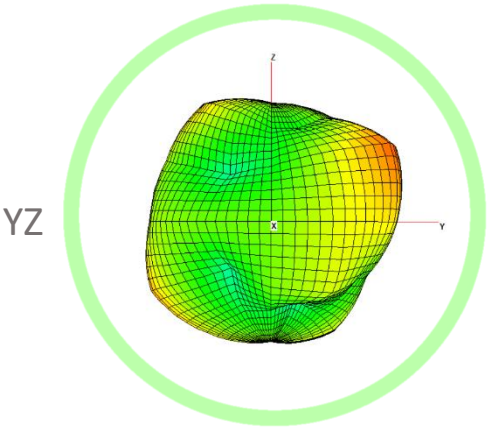
3D Radiation Pattern at 803MHz

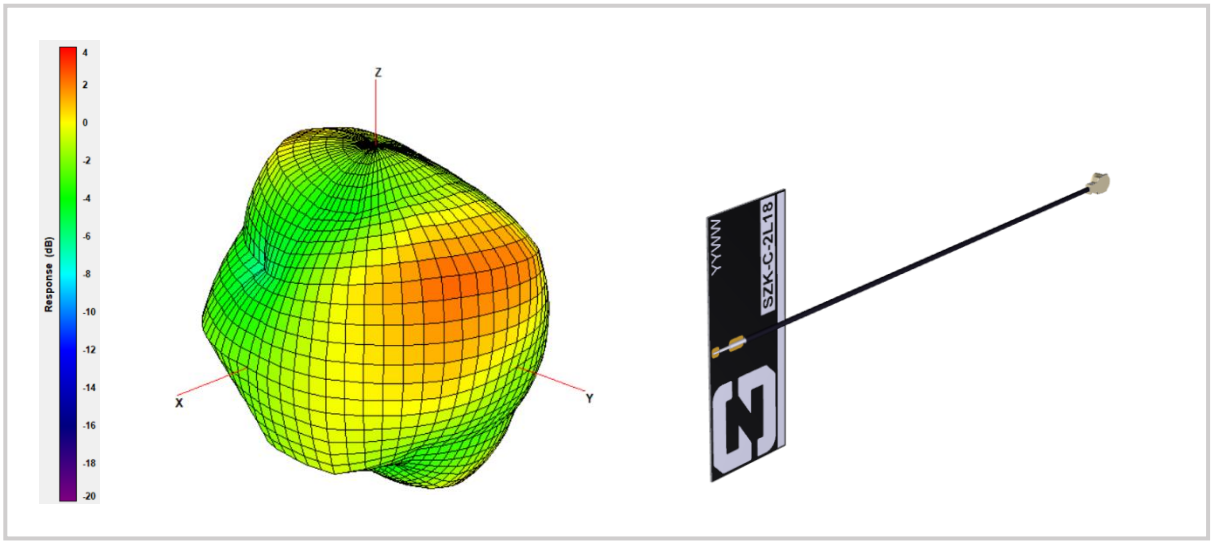
The frequency point shown here is 803MHz.







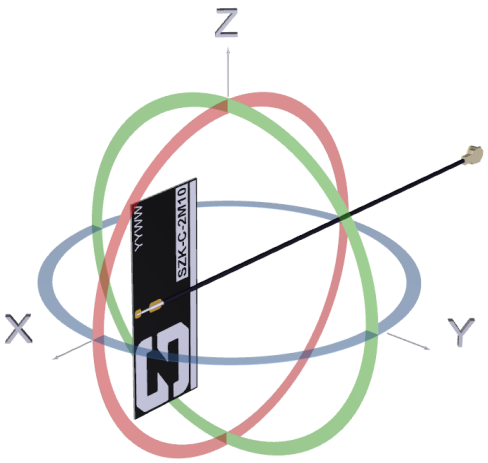


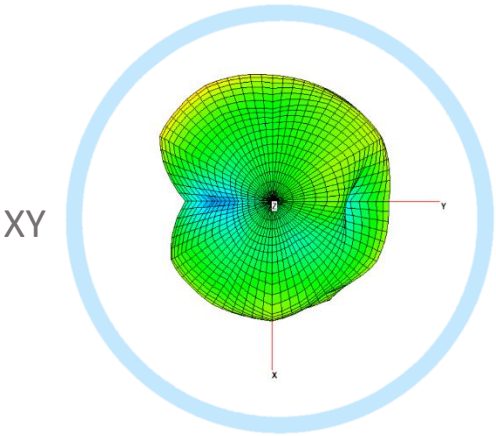


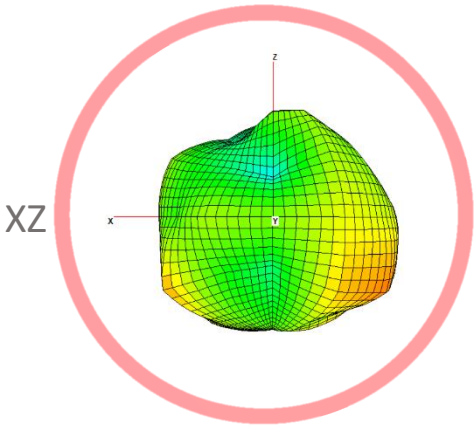
Radiated Performance

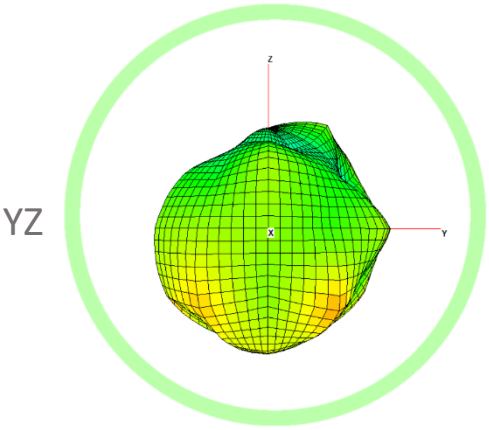
3D Radiation Pattern at 1880MHz

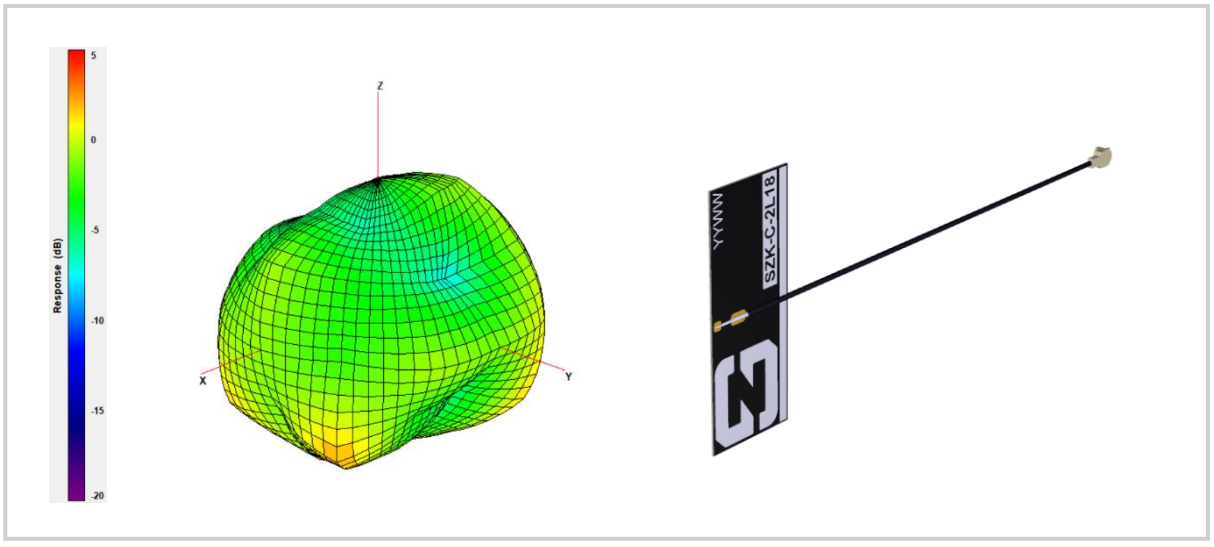
The frequency point shown here is 915MHz.







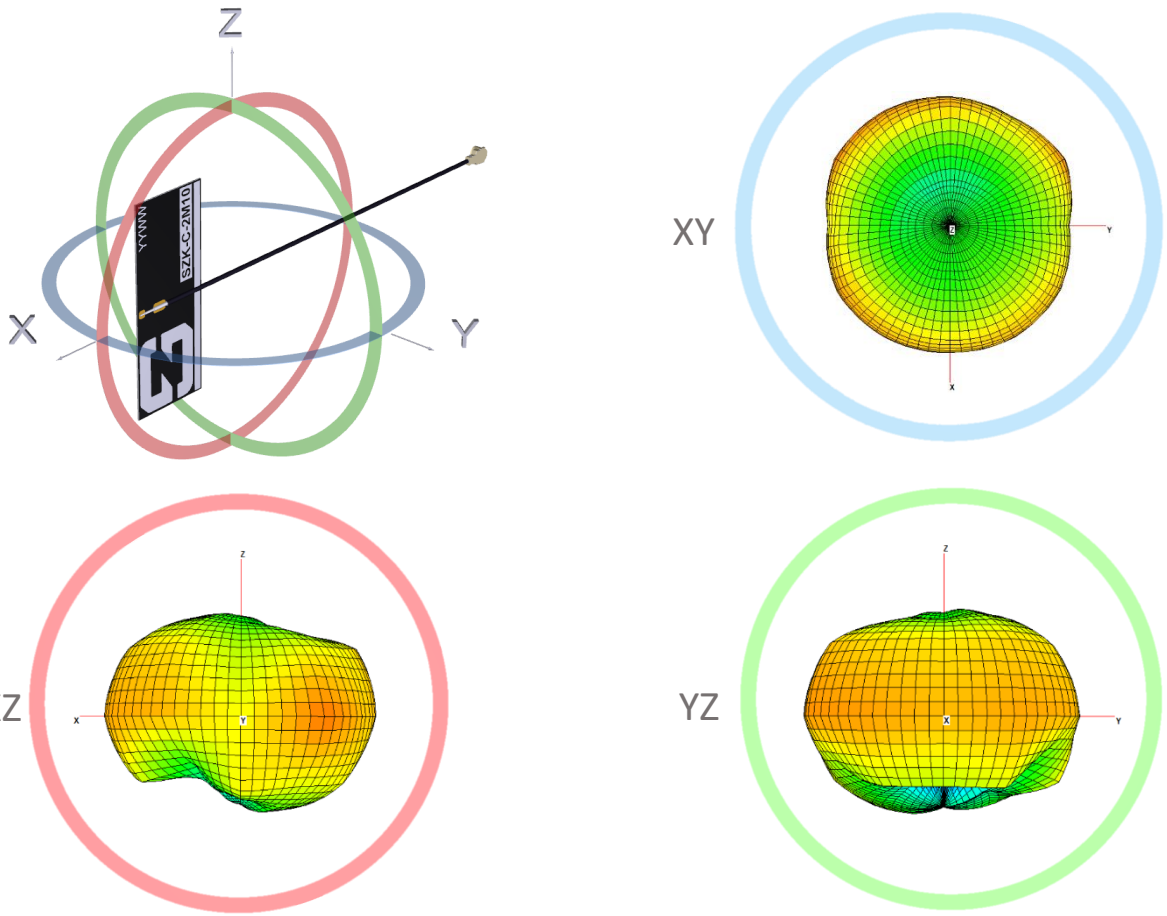


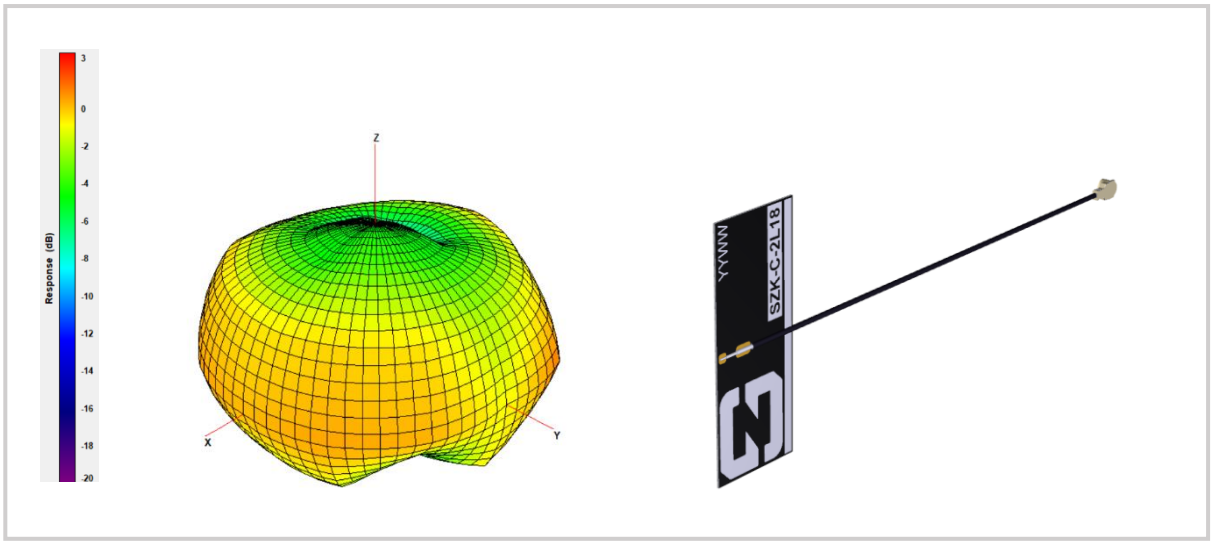


Radiated Performance

3D Radiation Pattern at 2600MHz

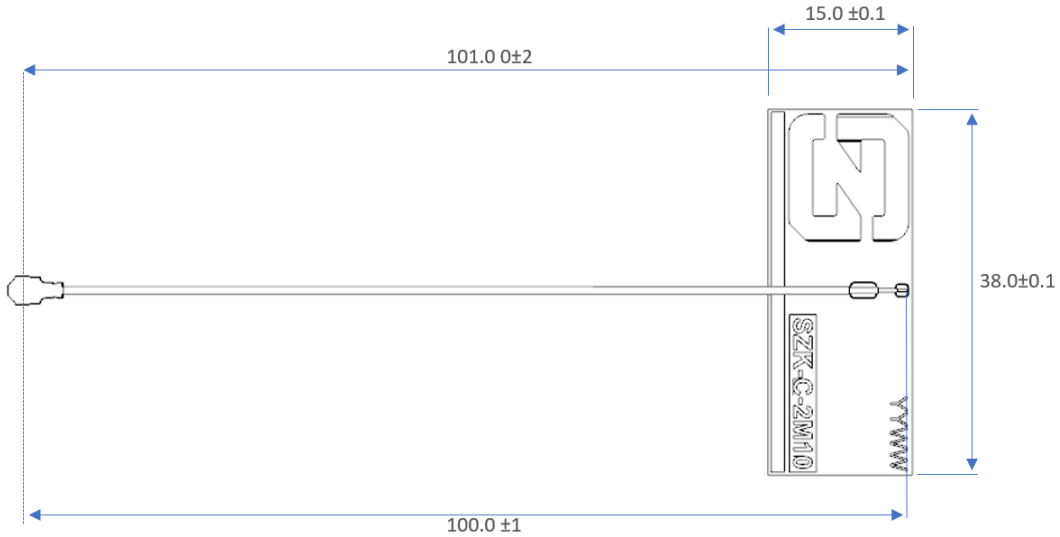
The frequency point shown here is 2600MHz.





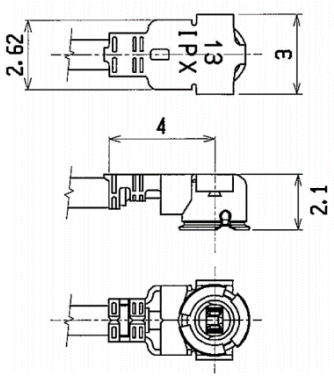
Mechanical

Antenna Mechanical Drawing



All Dimensions in mm

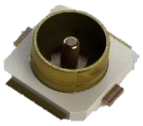
The plug connector on the antenna is an IPEX MHFI.



Suitable PCB mating connector (U.FL) example

Joymax: Model: CT-MPB01X

www.joymax.com.tw



Adhesive Backing

The antenna comes with 3M 468 adhesive baking upon a PI Kapton substrate. An easy peel cut is on the back side for easy cover removal.

Packaging

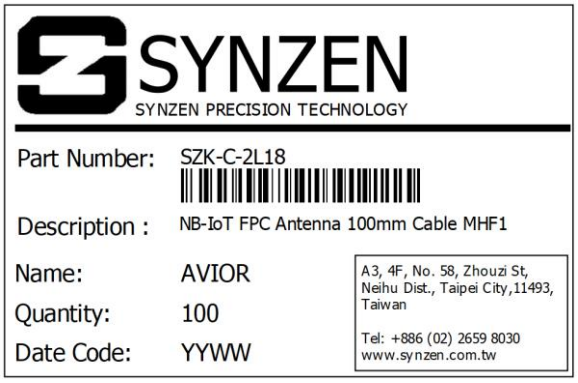
Bag and Packaging Information

Antennas packed in PE bag (20 per bag)

Small bag dimensions: 28.5 x 9.5 (cm)

100pcs per larger PE bag with product label

Bag dimensions = 30 x 19 (cm)



Label

1. 1000pcs per carton
2. Carton dimensions = 33.7 x 32.2 x 10 (cm)

Environmental

Material Regulation

The antenna has been tested to conform to RoHS requirements. A certificate of conformance is available upon request.