



4G LTE/3G/2G Cellular FPC Antenna

SZK-C-0L04

4GLTE: 698 - 960; 1710 - 2200; 2300 - 2400; 2500 - 2690 MHz



Name: LALANDE

Part Number: SZK-C-0L04

Description: 4G LTE FPC with cable and connector IPEX MHF (U.FL)

- Flexible PCB Antenna using 3M 468 adhesive
- Dimensions: 69 x 20 x 0.2 (mm)
- Cable: 150mm length, 1.13mm diameter
- RoHS & Reach Compliant



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Description

A Flexible antenna for 4G LTE applications. For use internal to a device which requires an integrated antenna solution. High performance with a small form factor for simple integration.

- Ultra-small 4G Antenna
- For 4G LTE and cellular applications.
- Simple integration, plug and operate the device without designing onboard antenna.
- Can be tuned for various environments and plastic thickness with additional Pi network, free tuning service available.
- Alternate cable lengths available upon request, contact sales@synzen.com.tw

Applications

Industrial/Scientific/Medical
Smart Grid

M2M Industrial
Remote Monitoring

Smart Meters
Femtocells





General Specifications

Mechanical Specifications

Part Number	SZK-C-0L04
Name	LALANDE
Dimensions	69 x 20 x 0.2 (mm)
Weight	<1g
Antenna Type	FPC + Cable
Cable Length	150mm, Black
Cable Type	Mini Coax \varnothing 1.13mm
Connector	MHFI (U.FL Compatible)
Adhesive backing	3M 468

RF Specifications

Frequency Range (MHz)	698-960	1710-2200	2300-2400	2500-2690
Average Efficiency (Linear)	>60%	>70%	>65%	>65%
Peak Gain (dBi)	2.30	2.60	2.90	3.50
S11 (max) dB	<-6.0	<-11.3	<-11.4	<-13.8
VSWR (max)	2.90:1	1.75:1	1.70:1	1.50:1
Impedance	50 Ω			
Polarization	Linear			
Max Input Power	5W			

Note: All performance stated is measured 2.0mm ABS plastic, RF chokes used to prevent cable radiation.

Environmental Specifications

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



LTE Bands Covered by SZK-C-0L04

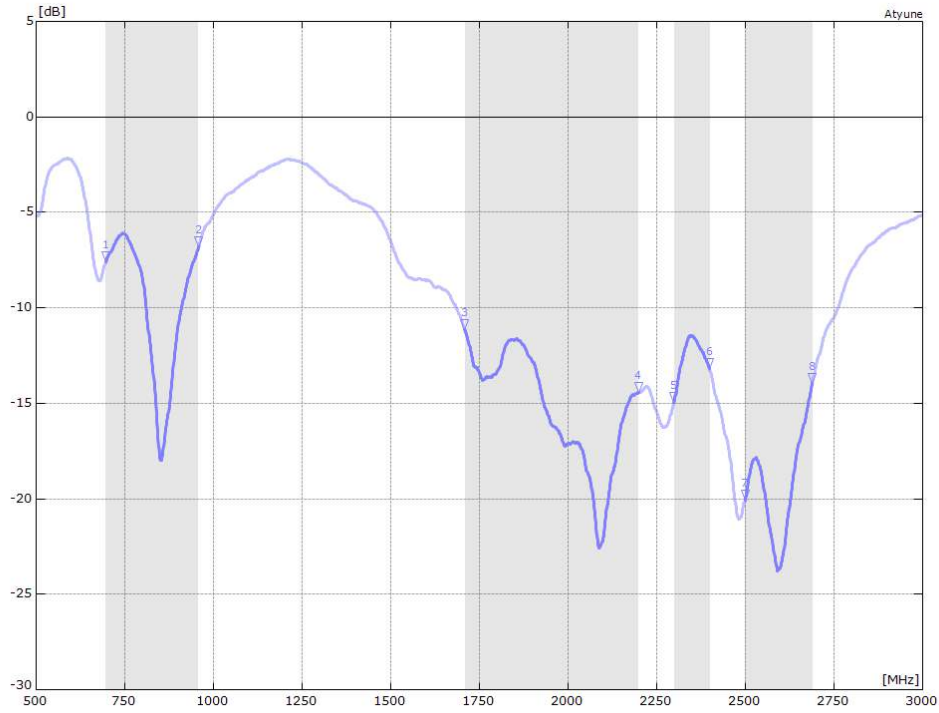
Supported band list

LTE 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
10	1700	1710 – 1770	2110 – 2170	YES
11	1500	1427.9 – 1447.9	1475.9 – 1495.9	NO
12	700	699 – 716	729 – 746	YES
13	700	777 – 787	746 – 756	YES
14	700	788 – 798	758 – 768	YES
17	700	704 – 716	734 – 746	YES
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	YES
29	700	N/A	717 – 728	YES
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		YES
45	1500	1447 – 1467		NO
46	5200	5150 – 5925		NO
47	5900	5855 – 5925		NO
48	3600	3550 – 3700		NO
50	1500	1432 – 1517		NO
51	1500	1427 – 1432		NO
65	2100	1920 – 2010	2110 – 2200	YES
66	1700	1710 – 1780	2110 – 2200[2]	YES
67	700	N/A	738 – 758	YES
68	700	698 – 728	753 – 783	YES
69	2600	N/A	2570 – 2620	YES
70	2000	1695 – 1710	1995 – 2020	NO

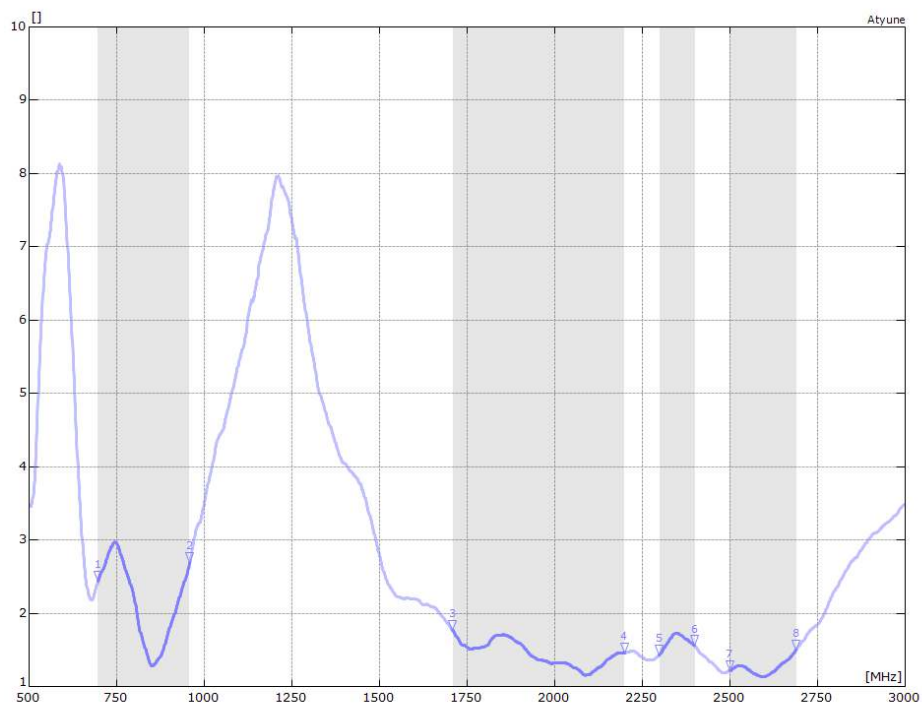


RF Characteristics

S11 Parameter



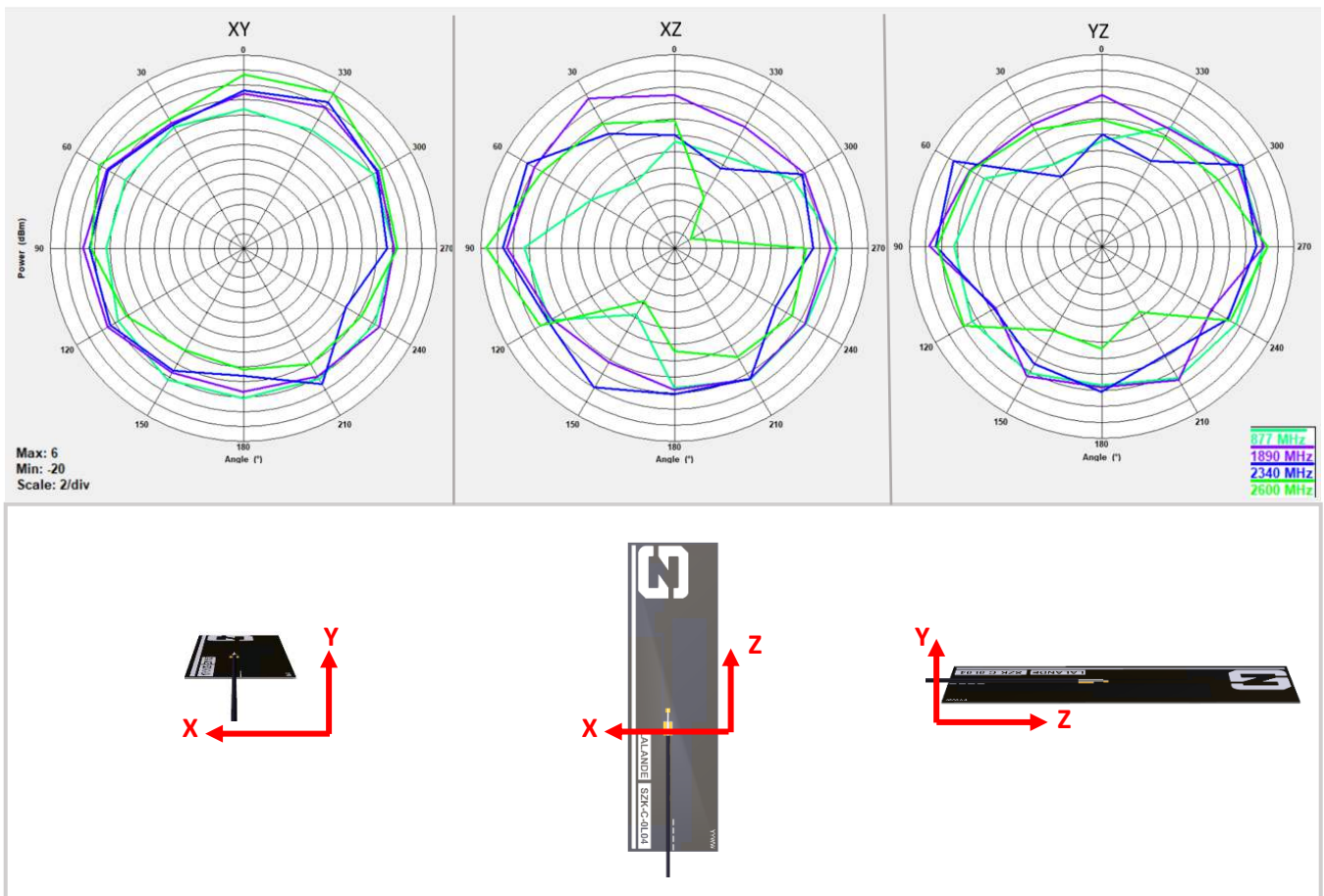
VSWR



Radiated Performance

2D Polar Plot

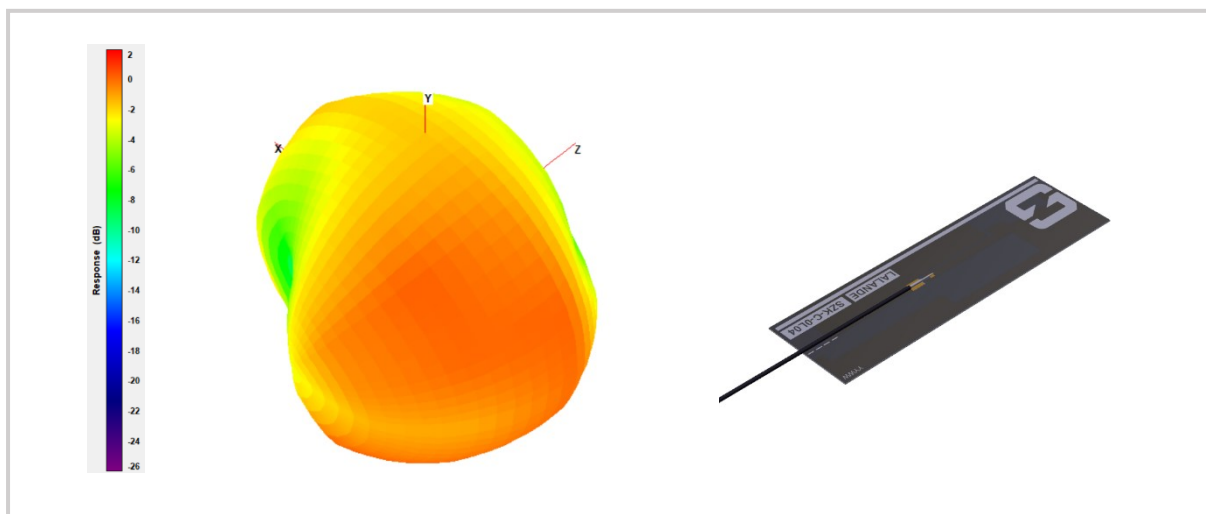
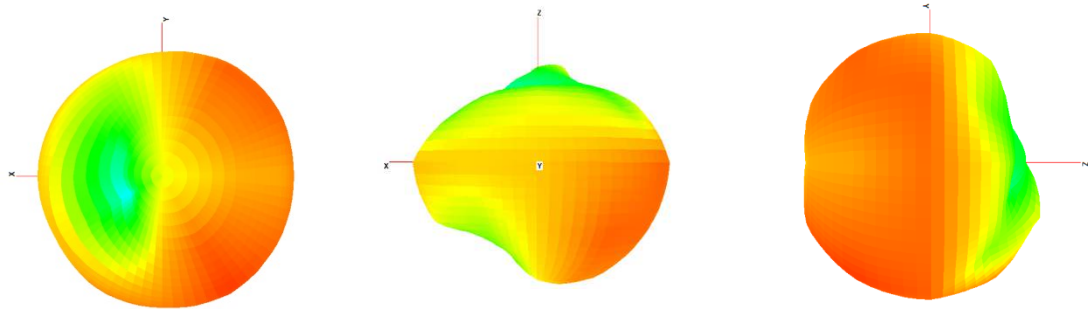
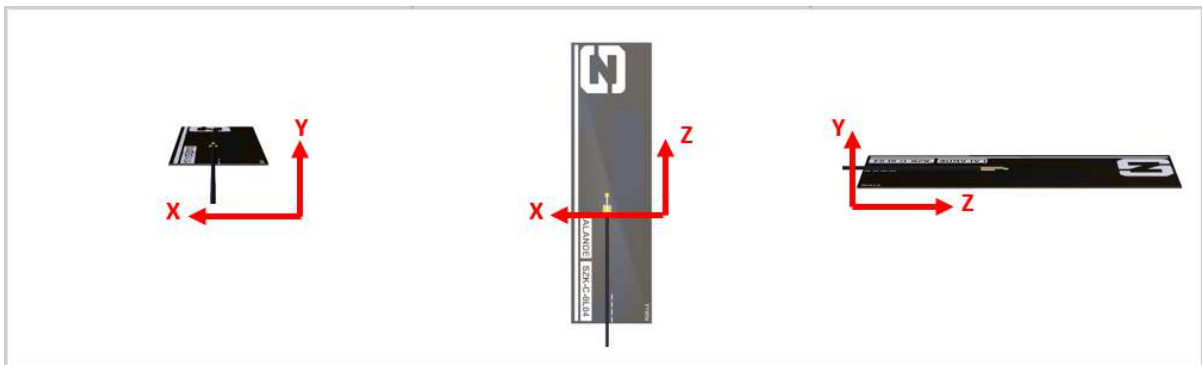
The data shown was measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation.



Radiated Performance

3D Radiation Pattern at 880MHz

The data shown was measured on measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation. The frequency point shown here is 880MHz.

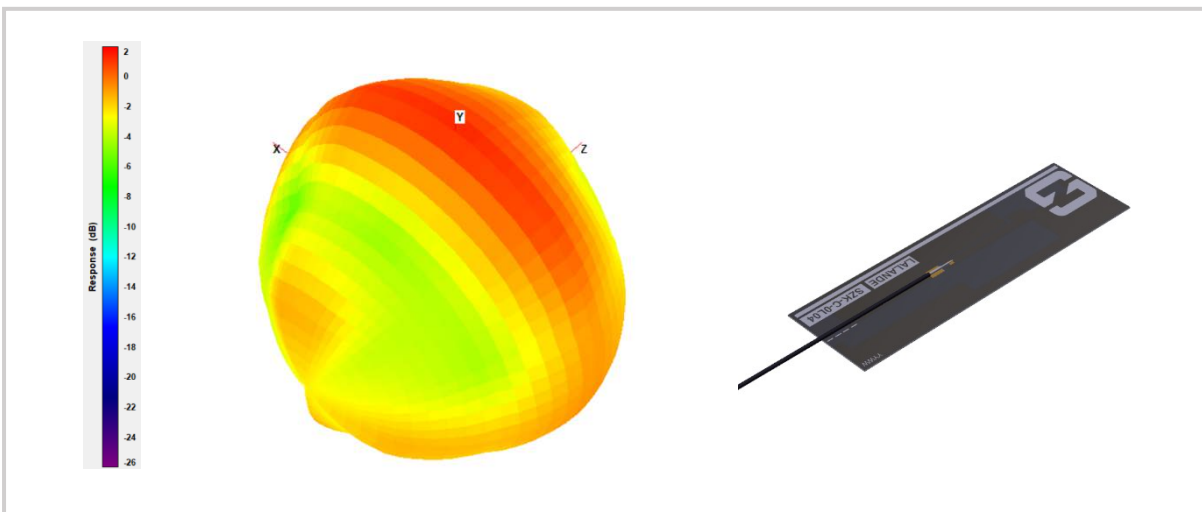
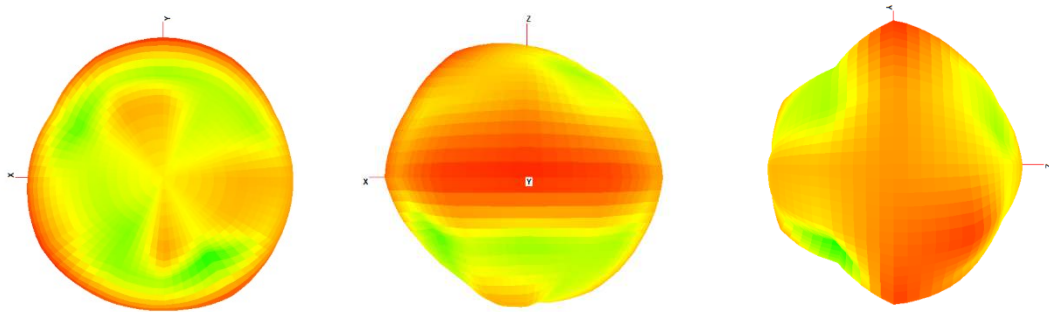
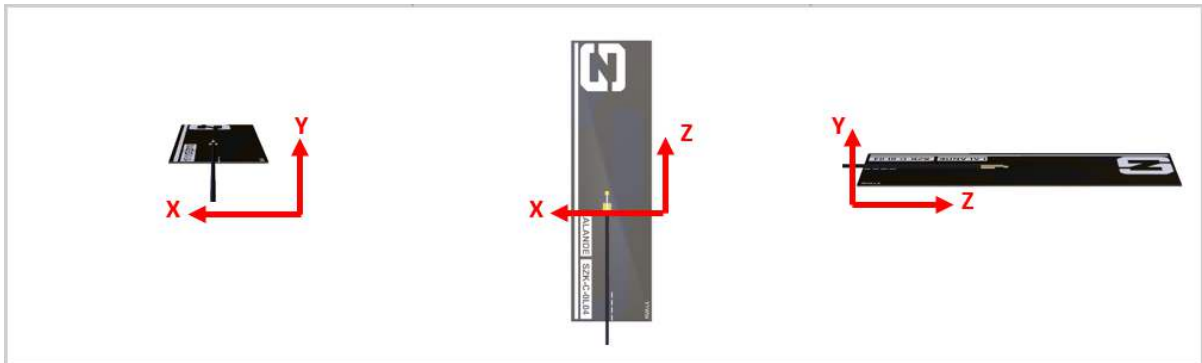




Radiated Performance

3D Radiation Pattern at 1880MHz

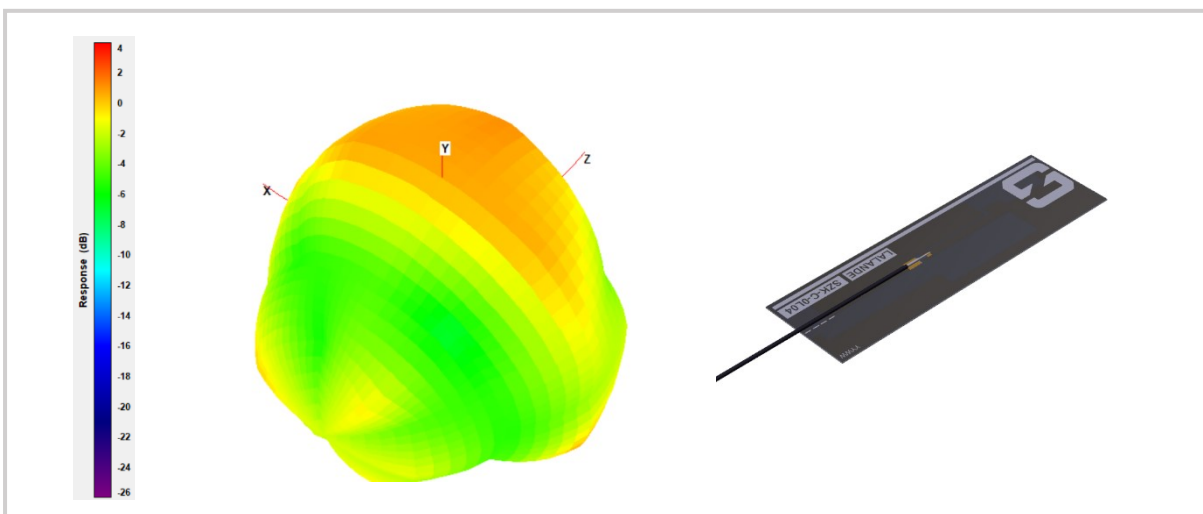
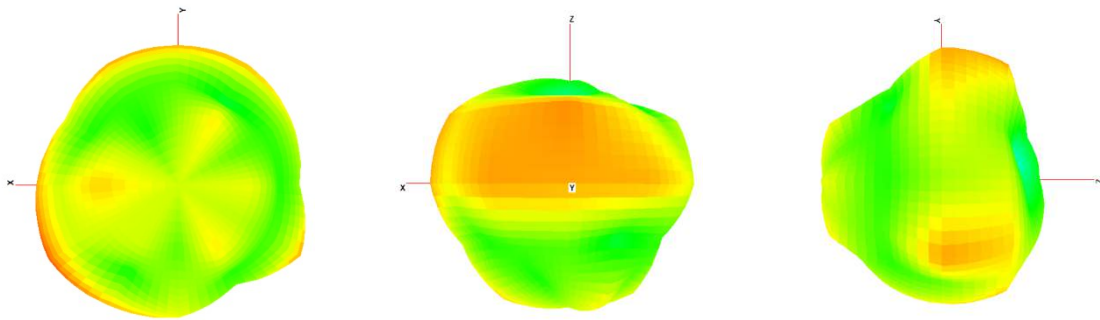
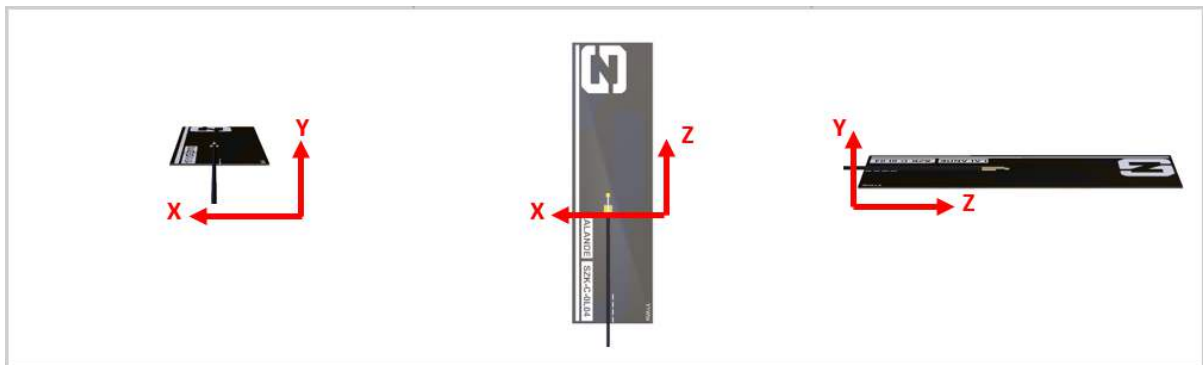
The data shown was measured on measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation. The frequency point shown here is 1880MHz.



Radiated Performance

3D Radiation Pattern at 2350MHz

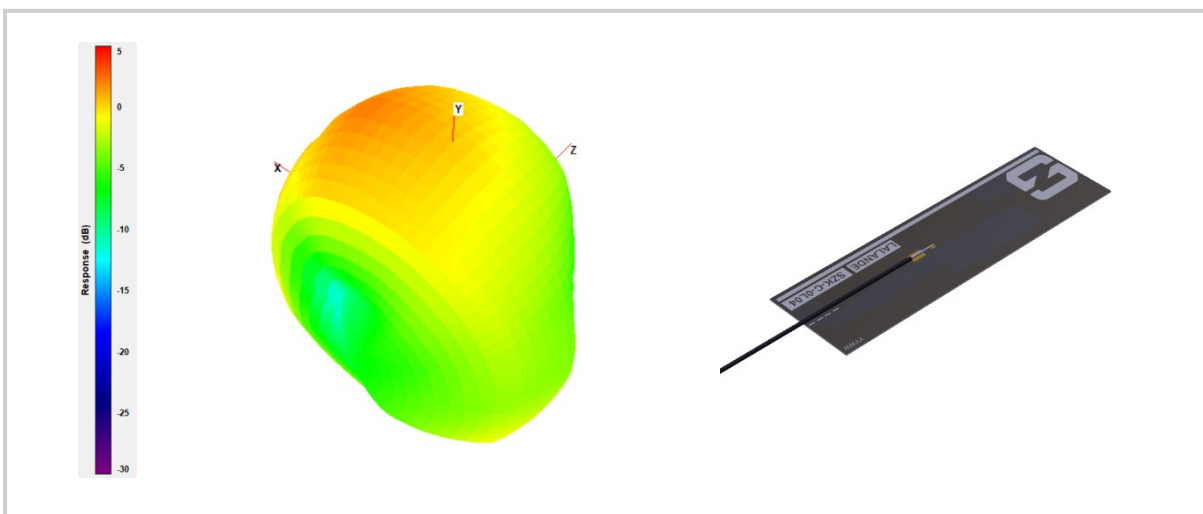
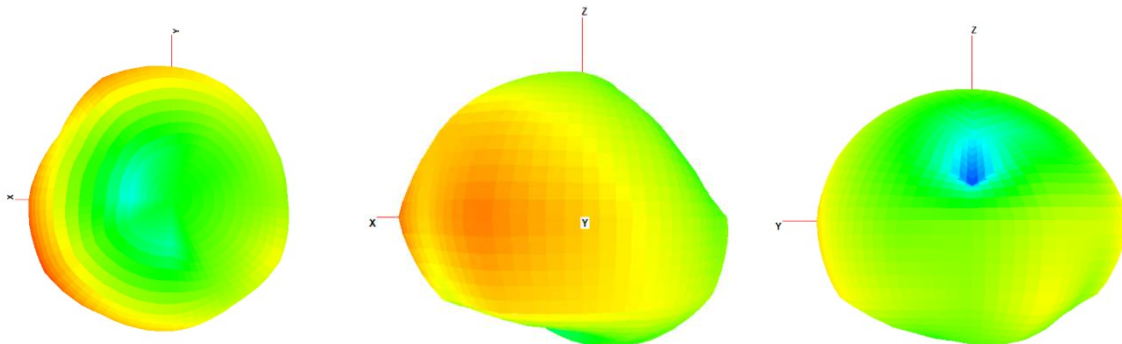
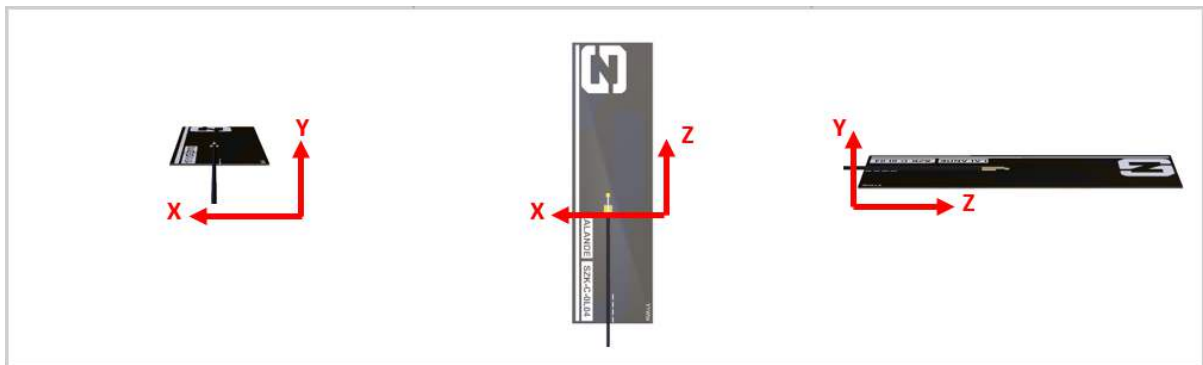
The data shown was measured on measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation. The frequency point shown here is 2350MHz.



Radiated Performance

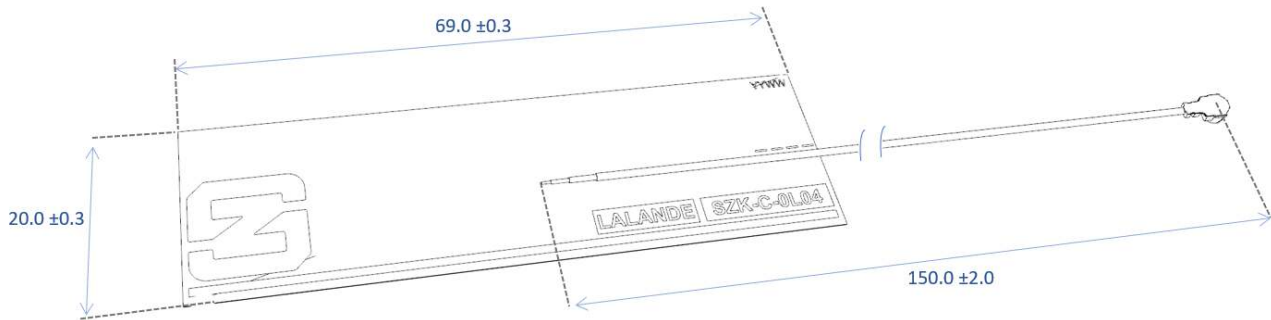
3D Radiation Pattern at 2600MHz

The data shown was measured on measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation. The frequency point shown here is 2600MHz.



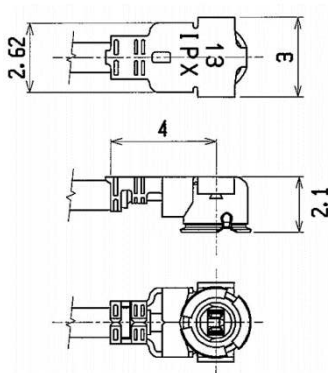
Mechanical

Antenna Mechanical Drawing



All dimensions in mm

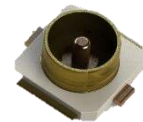
The plug connector on the antenna is an IPEX MHFI.



Suitable PCB mating connector (U.FL) example

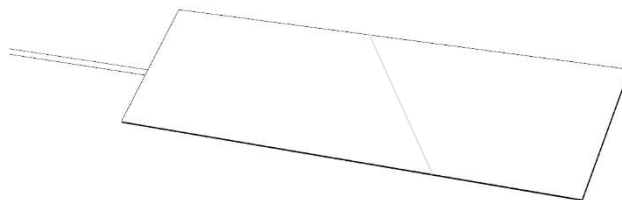
Joymax: Model: CT-MPB01X

www.joymax.com.tw



Adhesive Backing

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



Packaging

Bag and Packaging Information

Antennas Individually packed in PE bag (1 antenna per bag)





100pcs per larger PE bag with product label

Bag dimensions = 180 x 100(mm)



Label

		SYNZEN
		SYNZEN PRECISION TECHNOLOGY
Part Number:	SZK-C-0L04	
		
Description :	4G LTE FPC Antenna	
Name:	LALANDE	<small>A3, 4F, No. 58, Zhouzi St, Neihu Dist., Taipei City, 11493, Taiwan Tel: +886 (02) 2659 8030 www.synzen.com.tw</small>
Quantity:	1000	
Date code:	YYWW	

- 1000pcs per carton
- Carton dimensions = 33.7 x 32.2 x 10 (cm)



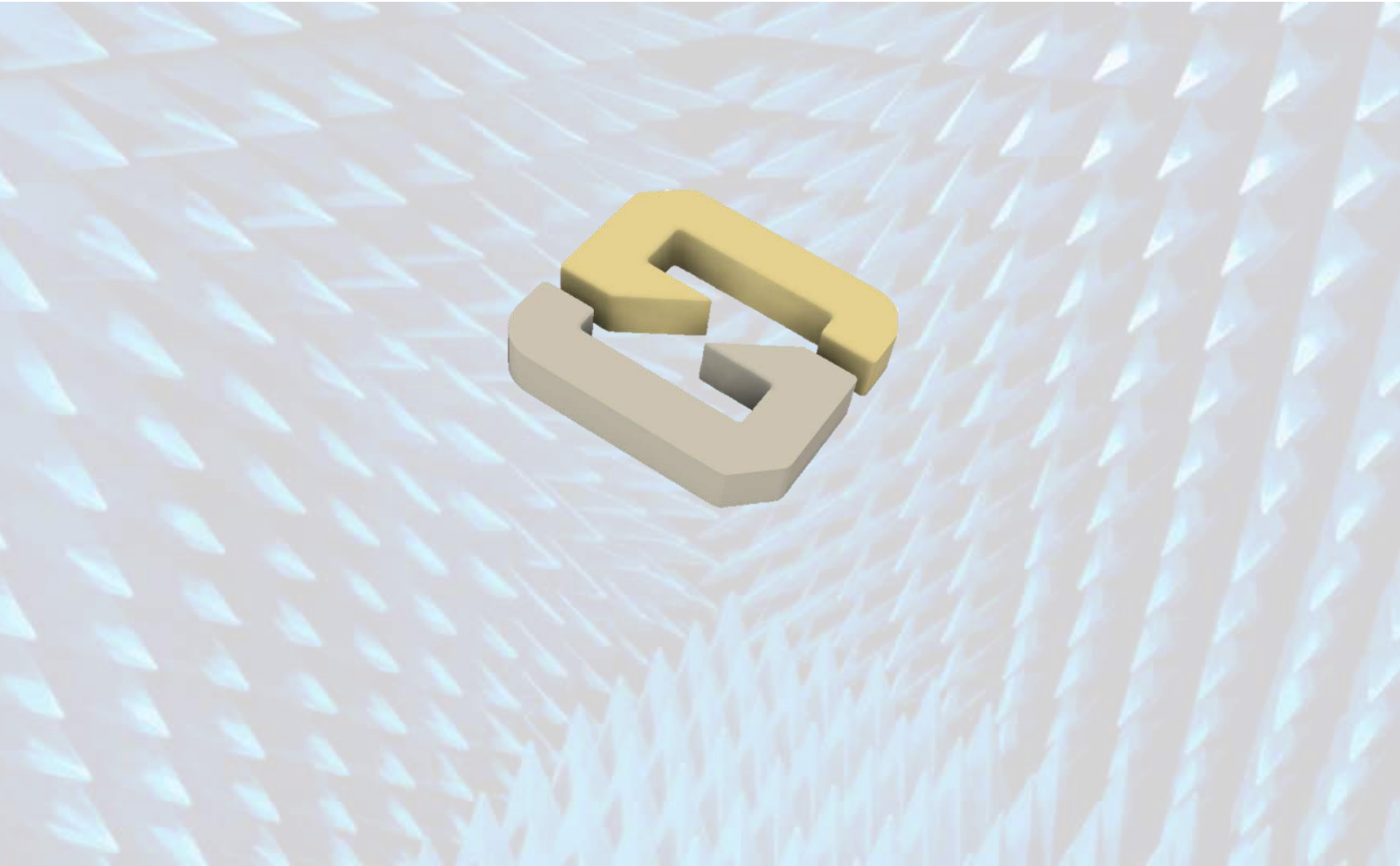
Environmental

Material Regulation

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



Synzen Precision Technology Ltd



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