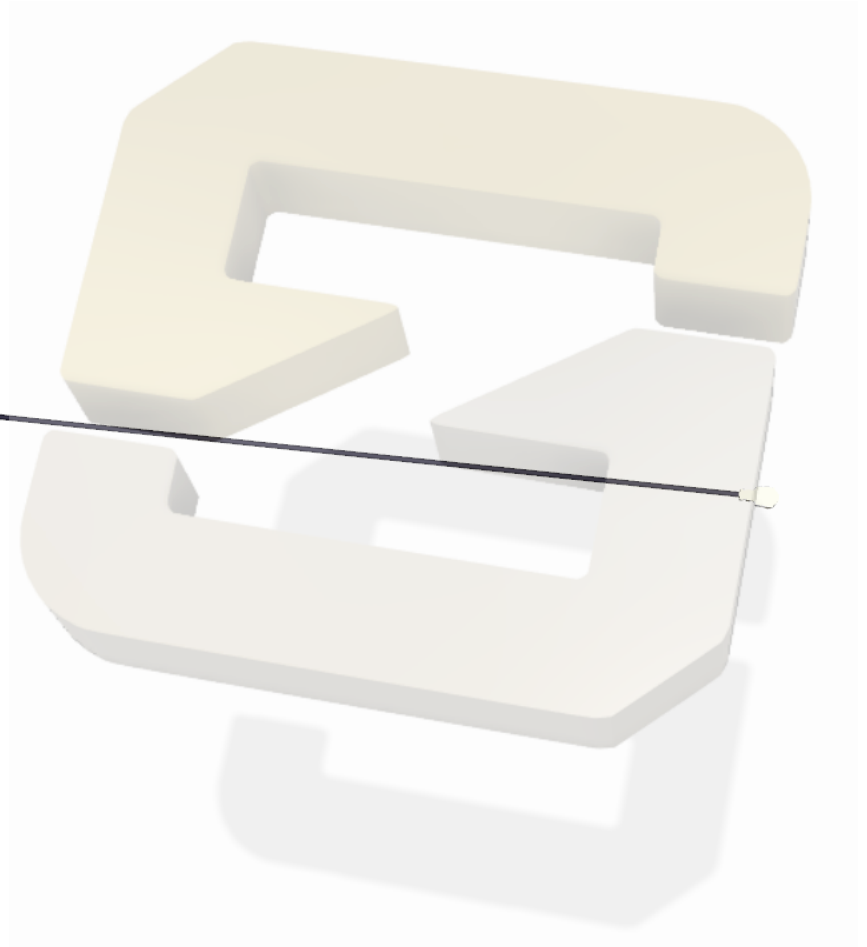
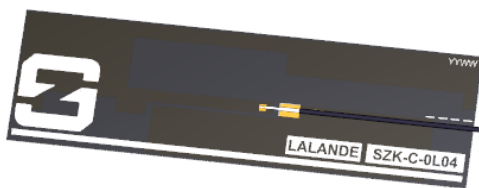




## 4G LTE/3G/2G Cellular FPC Antenna

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



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

## SZK-C-0L04

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

### 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](mailto:sales@synzen.com.tw)

### Applications

Industrial/Scientific/Medical  
Smart Grid

M2M Industrial  
Remote Monitoring

Smart Meters  
Femtocells





## General Specifications

### Mechanical Specifications

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

### RF Specifications

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

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

### Environmental Specifications

<b>Operational Temperature</b>	-40 to +85 (°C)
<b>Storage Temperature</b>	-10 to +40 (°C)
<b>Relative Humidity</b>	$\leq$ 75%



## LTE Bands Covered by SZK-C-0L04

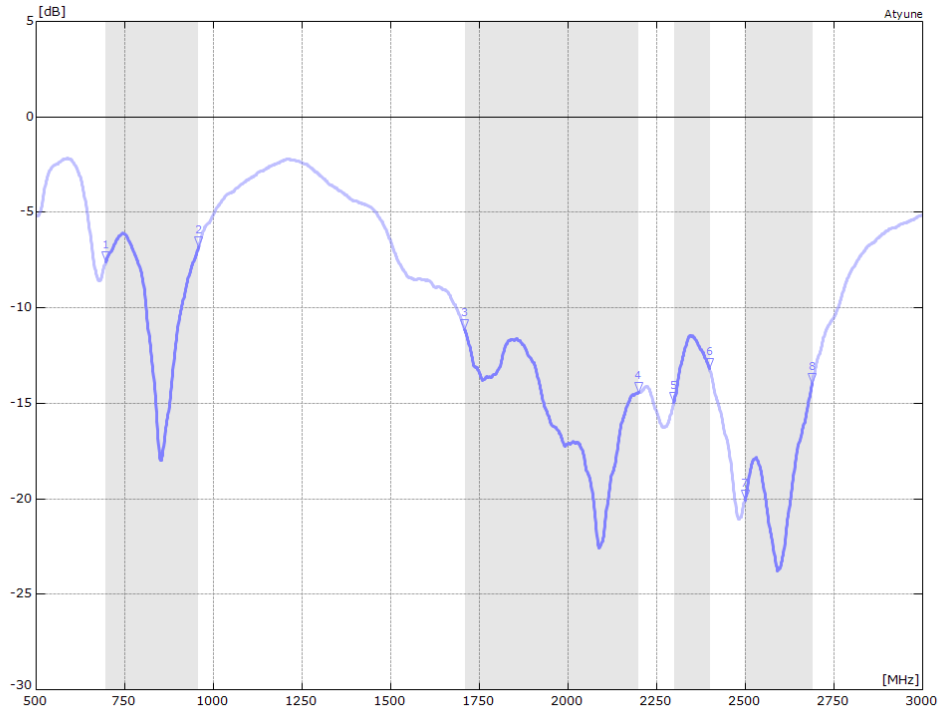
### Supported band list

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

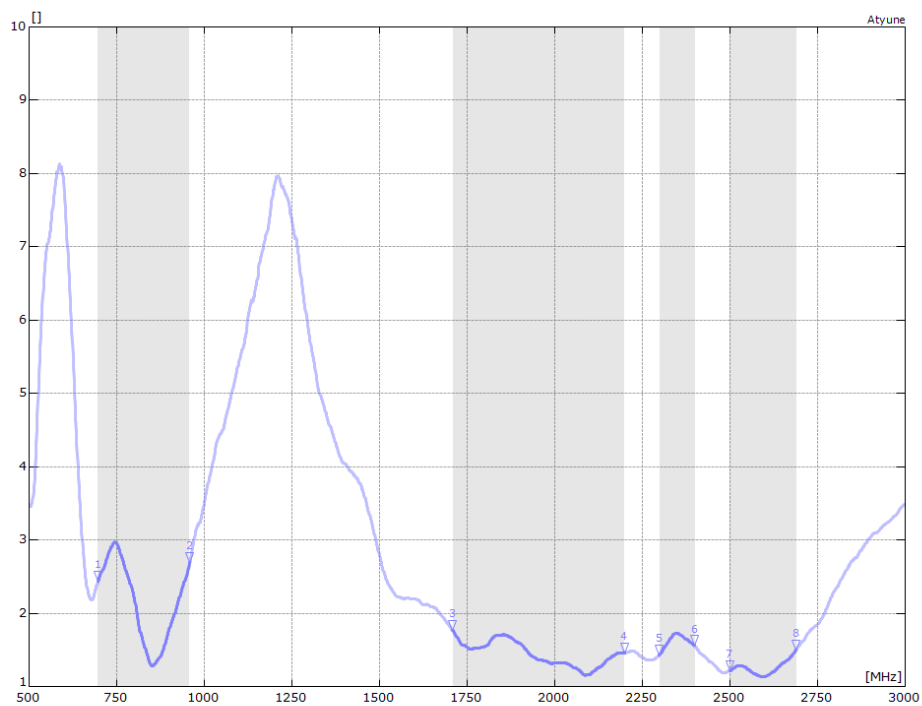


## RF Characteristics

### S11 Parameter



### VSWR

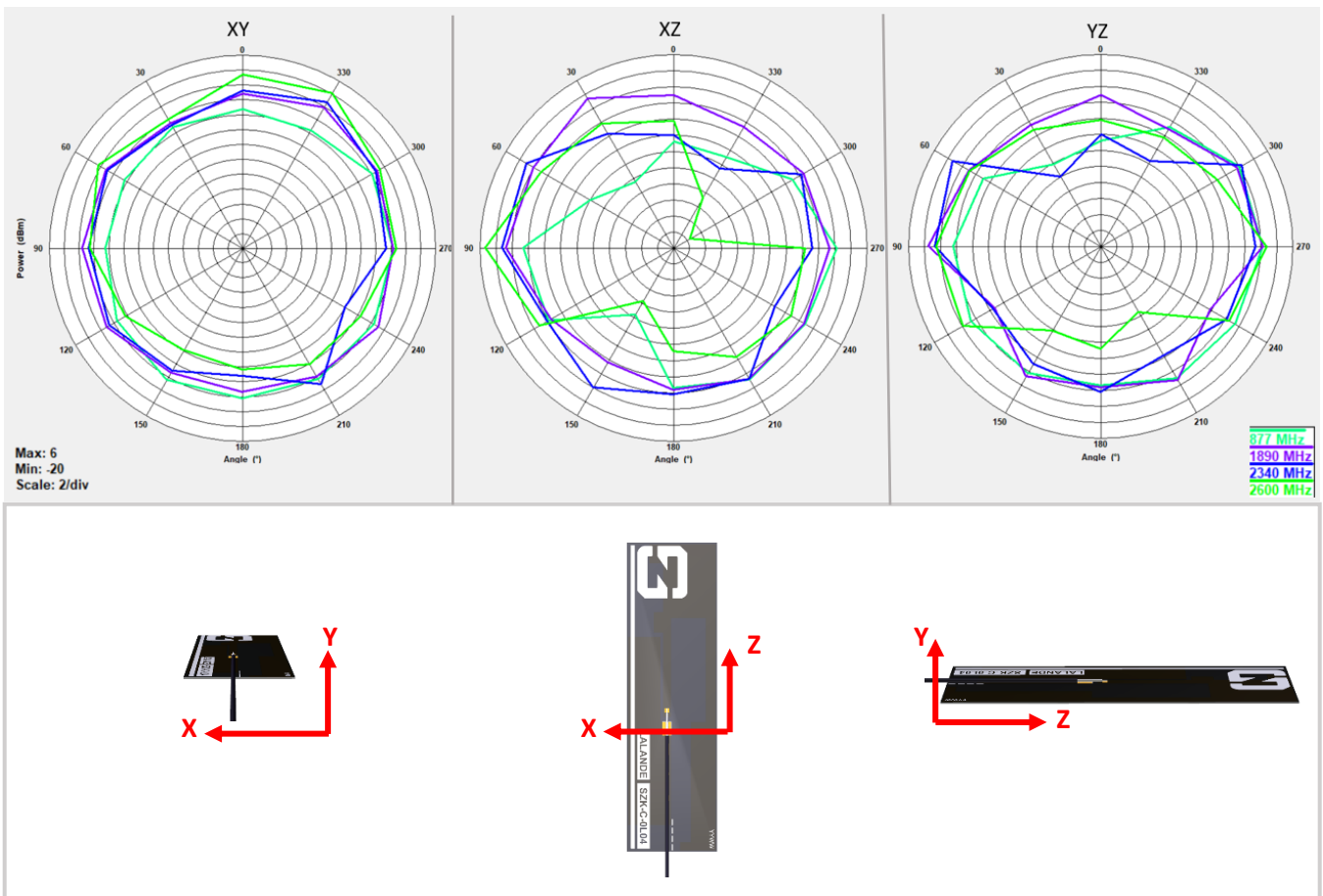




## Radiated Performance

### 2D Polar Plot

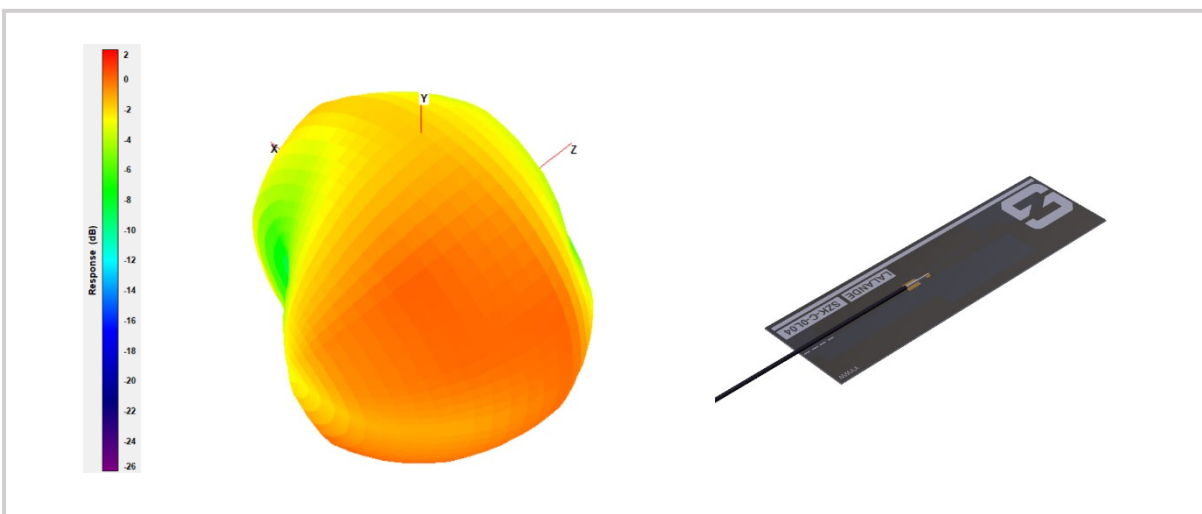
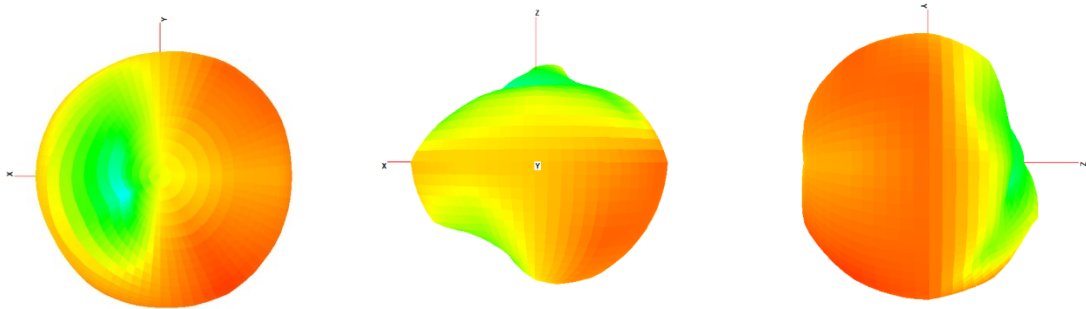
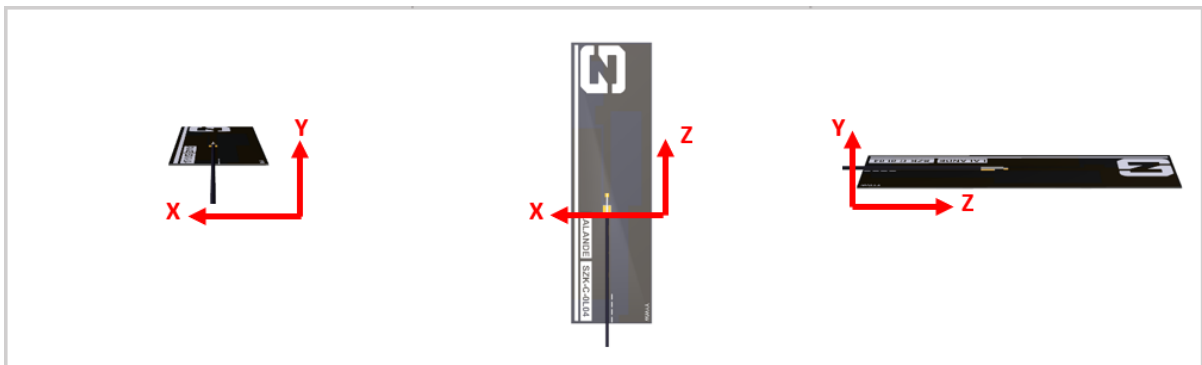
The data shown was measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation.



## Radiated Performance

### 3D Radiation Pattern at 880MHz

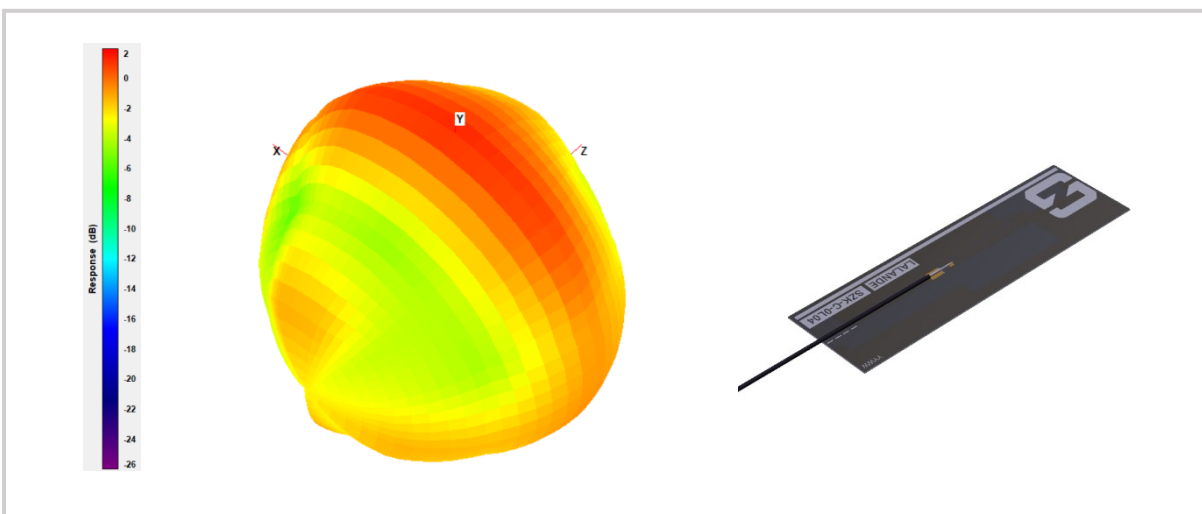
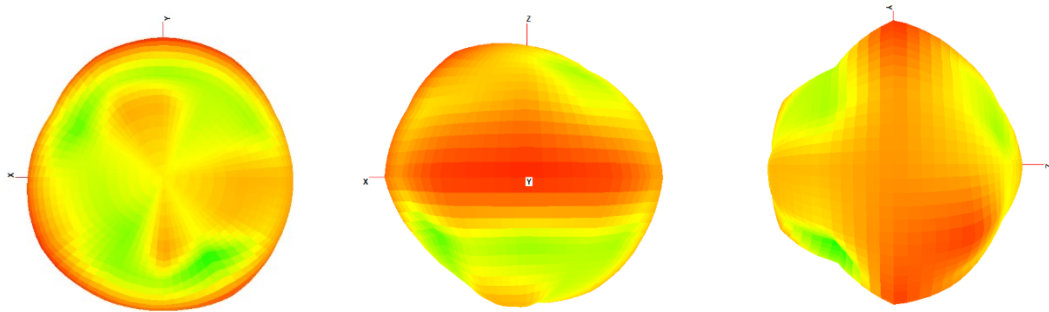
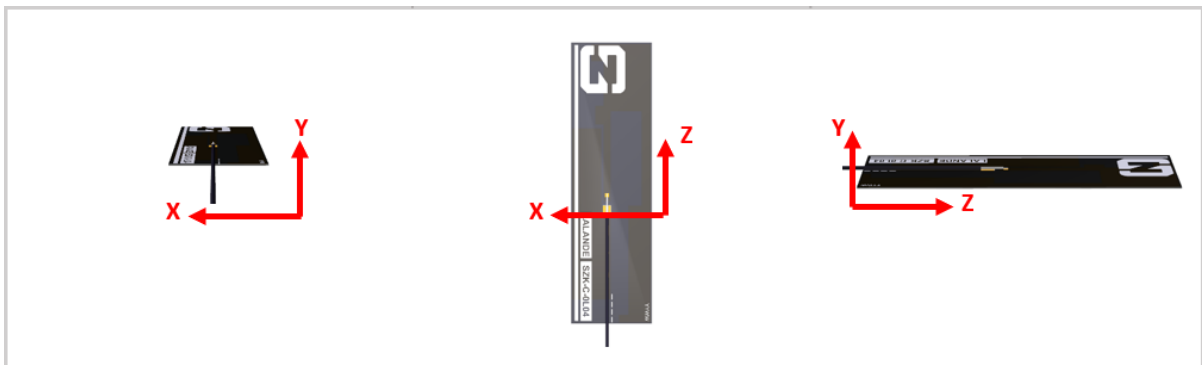
The data shown was measured on measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation. The frequency point shown here is 880MHz.



## 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.

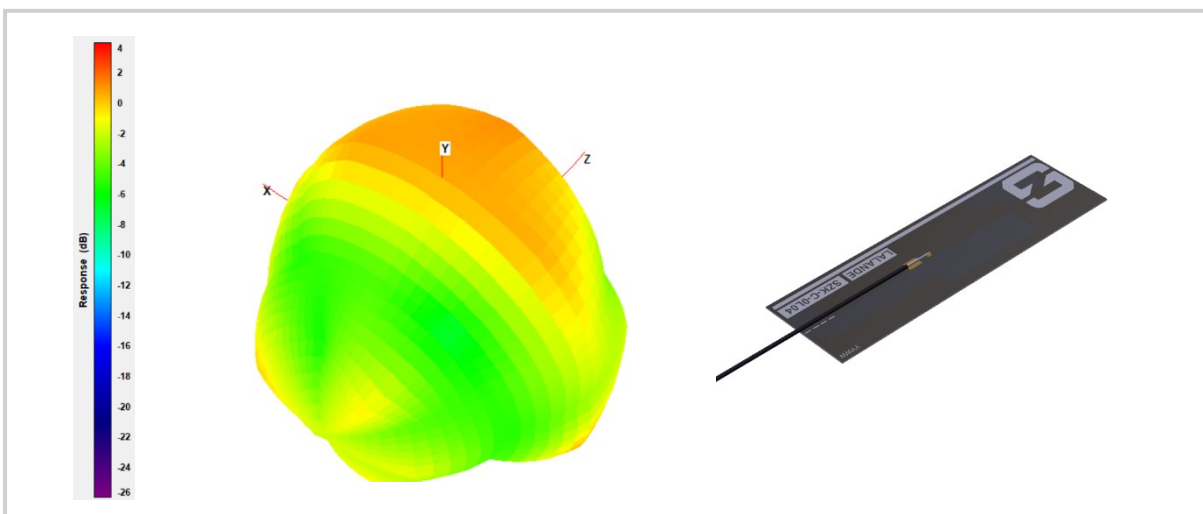
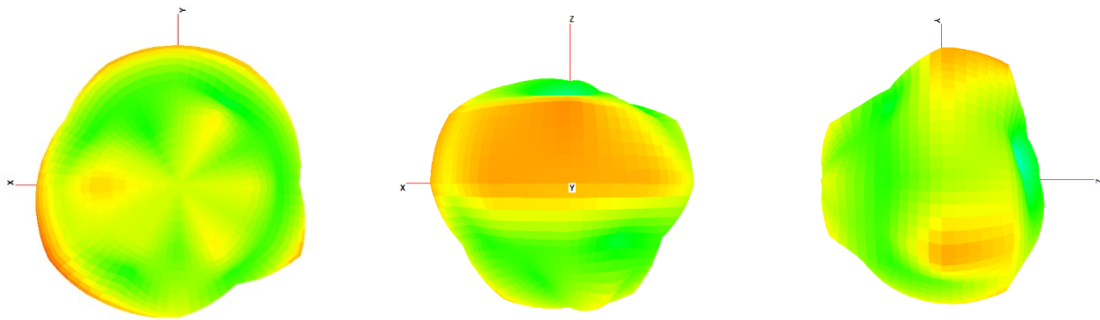
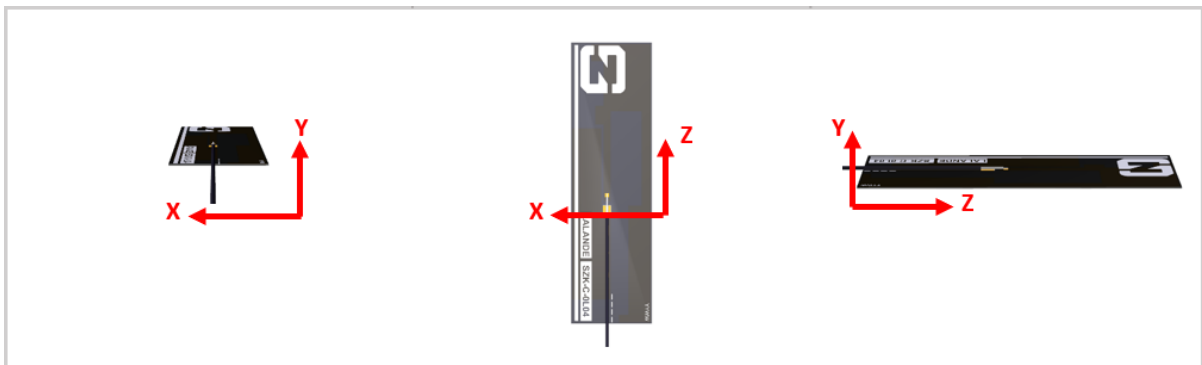




## Radiated Performance

### 3D Radiation Pattern at 2350MHz

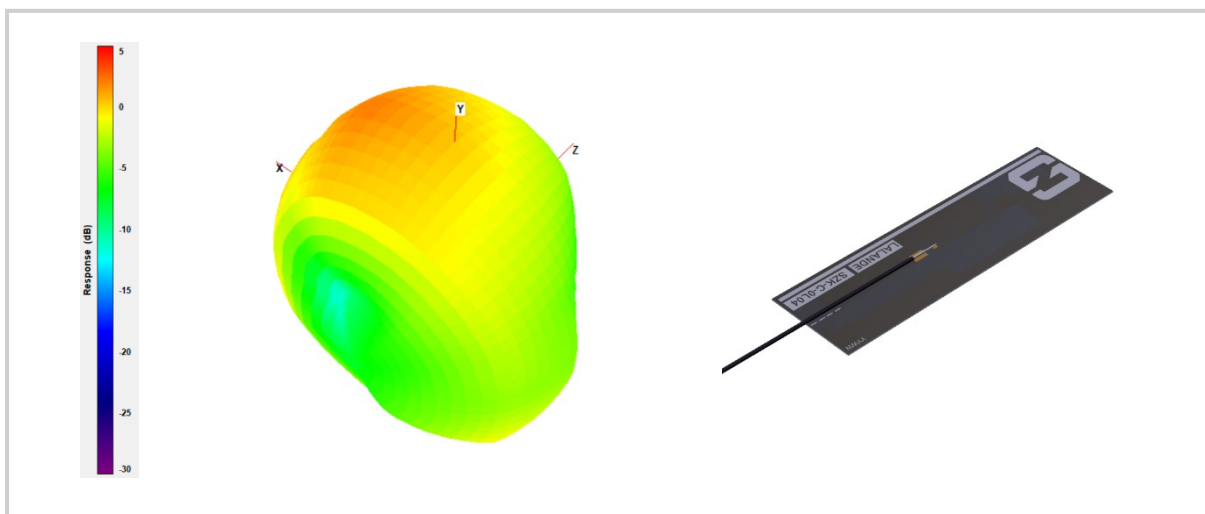
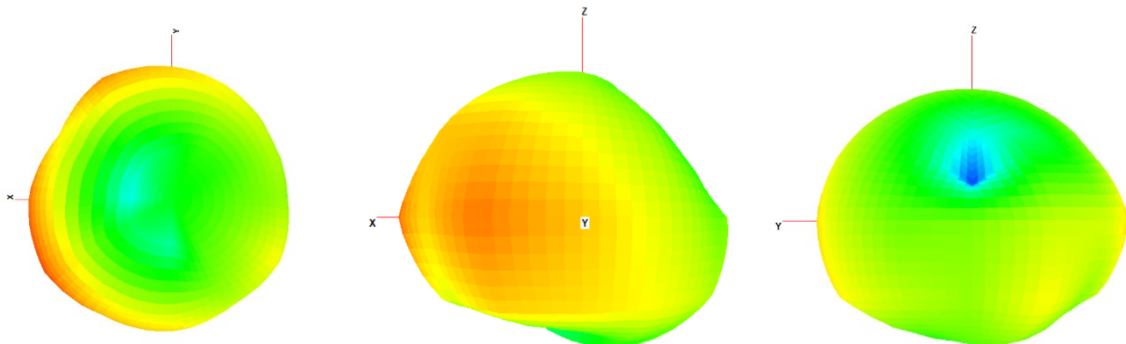
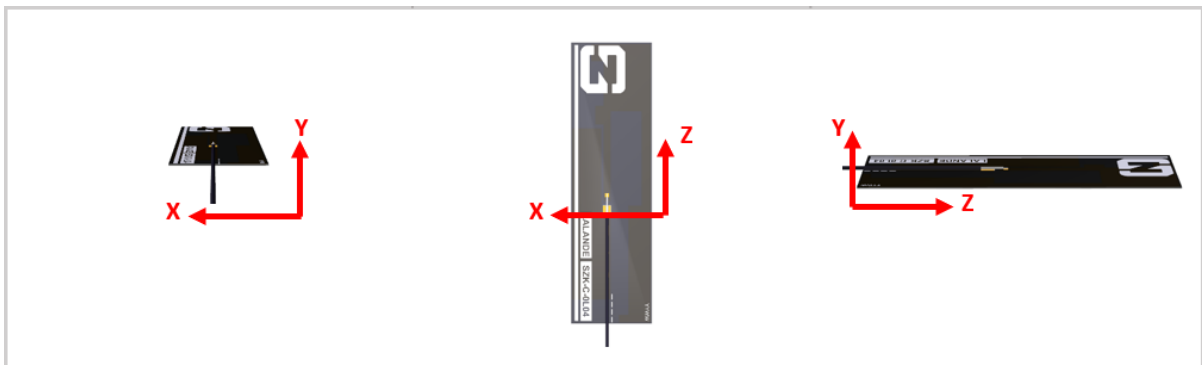
The data shown was measured on measured on 2.0mm ABS plastic, RF chokes used to prevent cable radiation. The frequency point shown here is 2350MHz.



## Radiated Performance

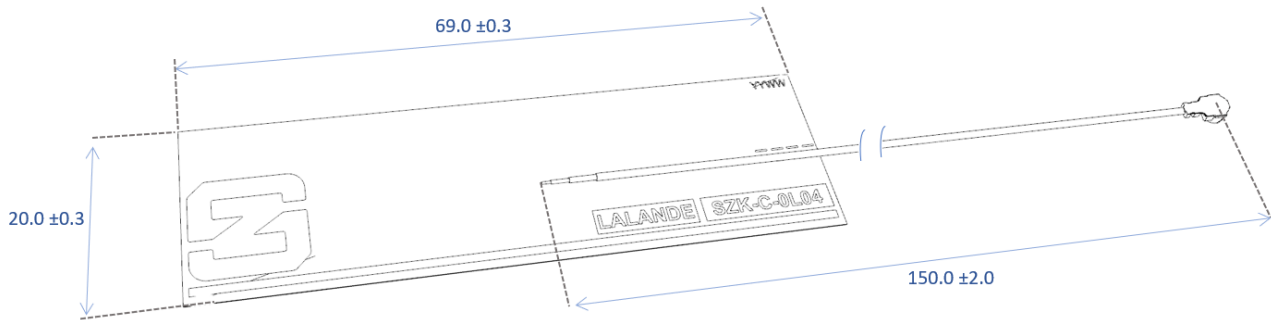
### 3D Radiation Pattern at 2600MHz

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.



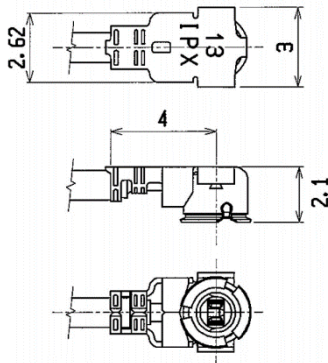
## Mechanical

### Antenna Mechanical Drawing



All dimensions in mm

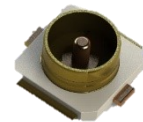
The plug connector on the antenna is an IPEX MHFI.



**Suitable PCB mating connector (U.FL) example**

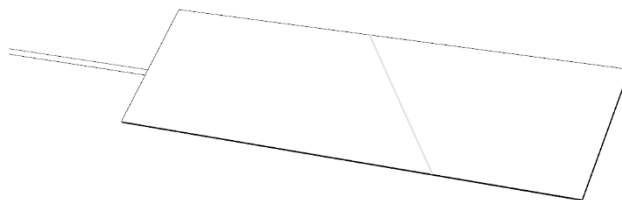
**Joymax:** Model: CT-MPB01X

[www.joymax.com.tw](http://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

		<b>SYNZEN</b>
		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)



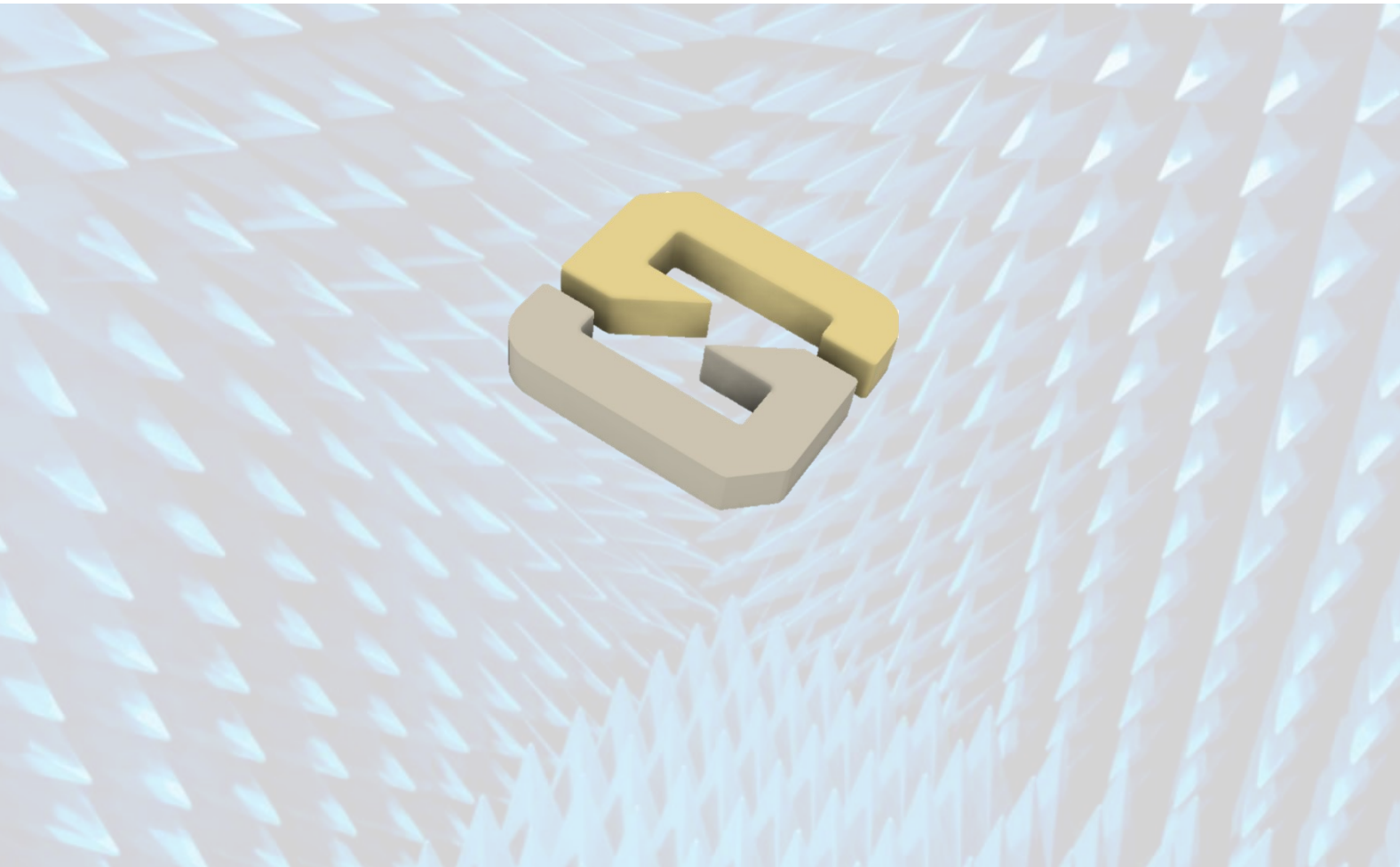
## Environmental

### 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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