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**E.S Antenna Design
& Mobile Phone OTA (CTIA)**

Test Report

design for : The Leader Kids Pro



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1 General

This report is mainly used to describe the antenna design

The Leader Kids Pro

Parameter Description

2 Project Description

Key

The Leader Kids Pro

Phone model: 4G tablet,

Cellular: EGSM900/850/DCS1800/1900 + W2/5/8/+

LTE:B2/B3/B4/B5/B7/B8/B12/B17/B28

Antenna form: Made in the form of a PIFA antenna.

Motherboard model: Inca S863T-T310-V1.0

3 Debug Settings

3.1 Standing wave and echo reflection

(VSWR) (Return Loss)

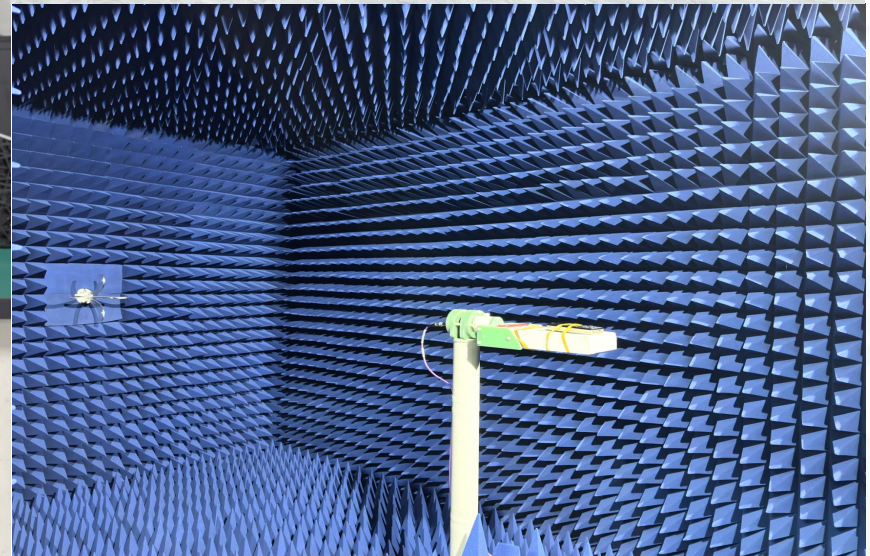
The VSWR is tested using an Agilent E5062B connected to a handset fixture in a free-space state.

3.2 trp/Tis uses 8960 (5515C), 8011 to measure inside the ETS 7m × × dark room

Test Frequency: 600MHz-5.8GHz

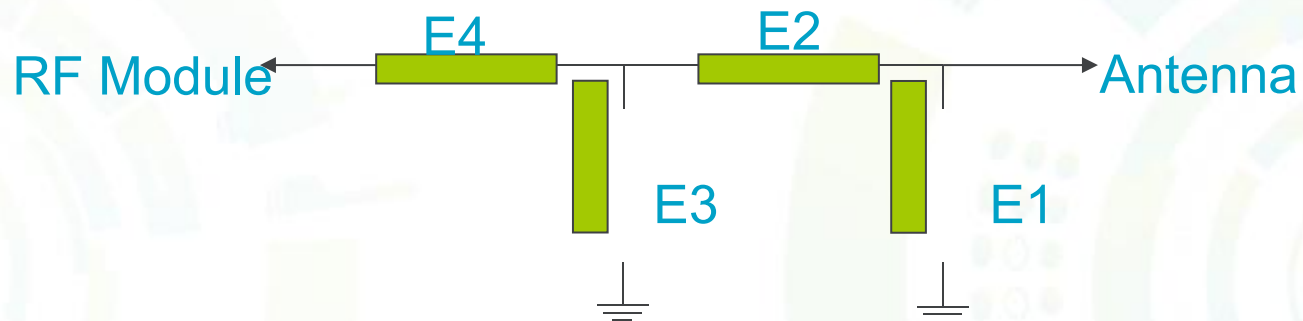


2 , Advanced technology equipment



2026-4-13

Matching Circuit Description



Element	Value	Vender
E1(0201)		
E2(0201)		
E3(0402)		
E4(0402)		

Unmatched



Effective Radiated Power Summation

GSM	EGSM900			DCS1800		
Let	1	62	124	512	698	885
TRP	27.2	27.5	28.3	24.2	24.6	26.3
TIS			-104.4			-106.3

GSM	850			1900		
Let	128	190	251	512	661	810
TRP	26.9	27.4	27.9	25.8	25.6	25.5
TIS			-104.3			-105.6



Effective Radiated Power Summation

WCDMA	2		
Let	L	M	H
TRP	19.7	19.4	19.1
TIS			-105.2

WCDMA	5			8		
Let	L	M	H	L	M	H
TRP	17.2	17.5	17.8	18.2	18.5	18.9
TIS			-102.7			-105.3

LTE	B5		
Let	L	M	H
TRP	18.3	18.5	18.8
TIS			-87.5



LTE	B2			B3		
Let	L	M	H	L	M	H
TRP	19.9	19.5	19.1	18.2	18.6	18.9
TIS			-88.6			-92.4

LTE	B4			B7		
Let	L	M	H	L	M	H
TRP	19.1	19.3	19.5	17.4	16.8	17.0
TIS			-92.1			-90.8

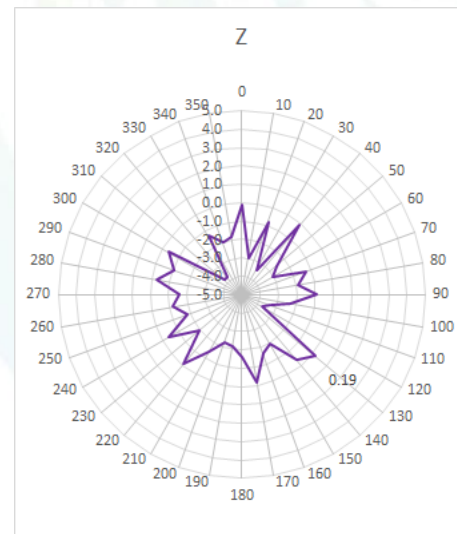
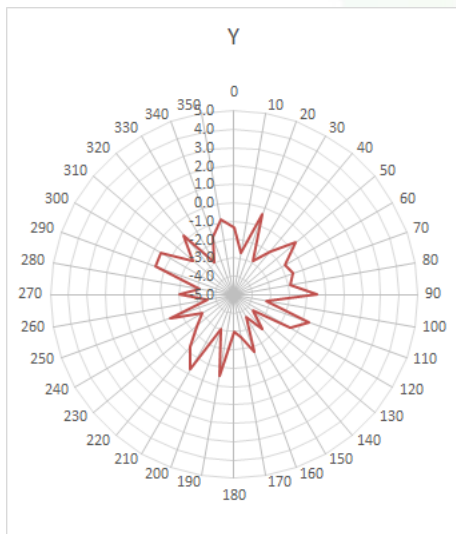
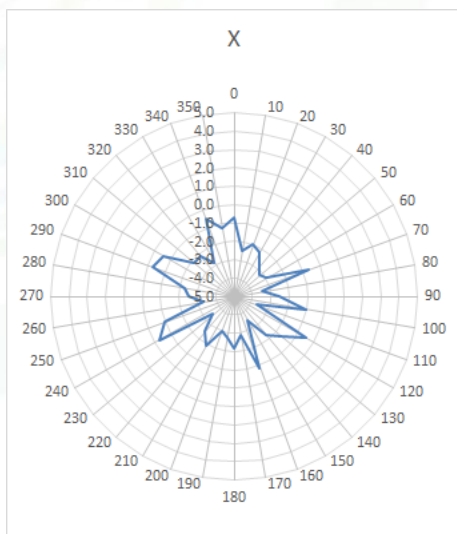
LTE	B8			B12		
Let	L	M	H	L	M	H
TRP	18.9	19.2	18.5	17.2	17.4	17.5
TIS			-91.6			-89.5

LTE	B17			B28		
Let	L	M	H	L	M	H
TRP	17.4	17.5	17.7	18.2	18.5	18.7
TIS			-85.7			-88.8

WiFi:

WIFI	2.4G (802.11b)			5G (802.11a)		
Let	1	6	12	36	48	161
TRP	13.3	13.5	13.2	11.4	11.7	10.8
TIS			-80.6			-77.3
Gain	-1.36dBi	0.23dBi	-0.59dBi	2.61dBi	3.22dBi	1.82dBi

2440MHz

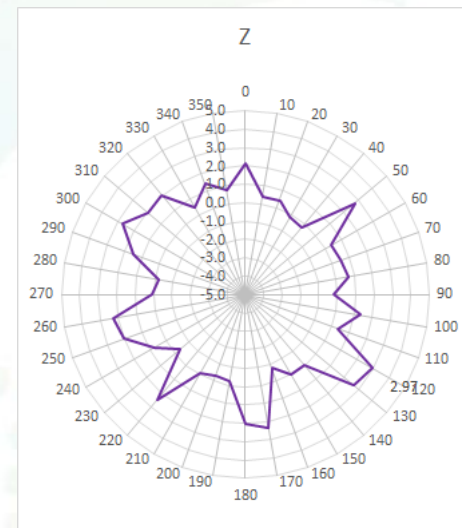
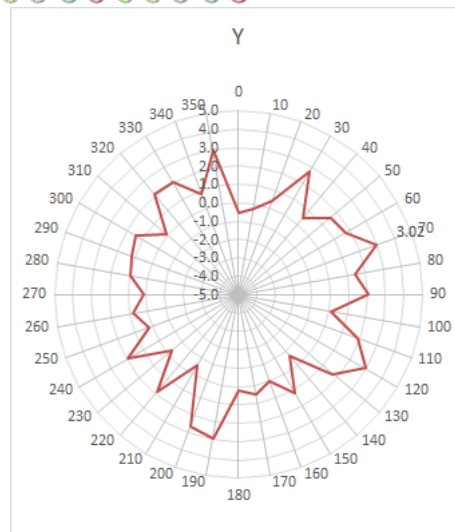
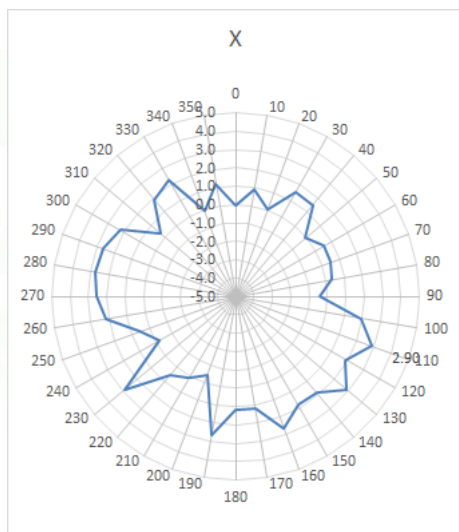




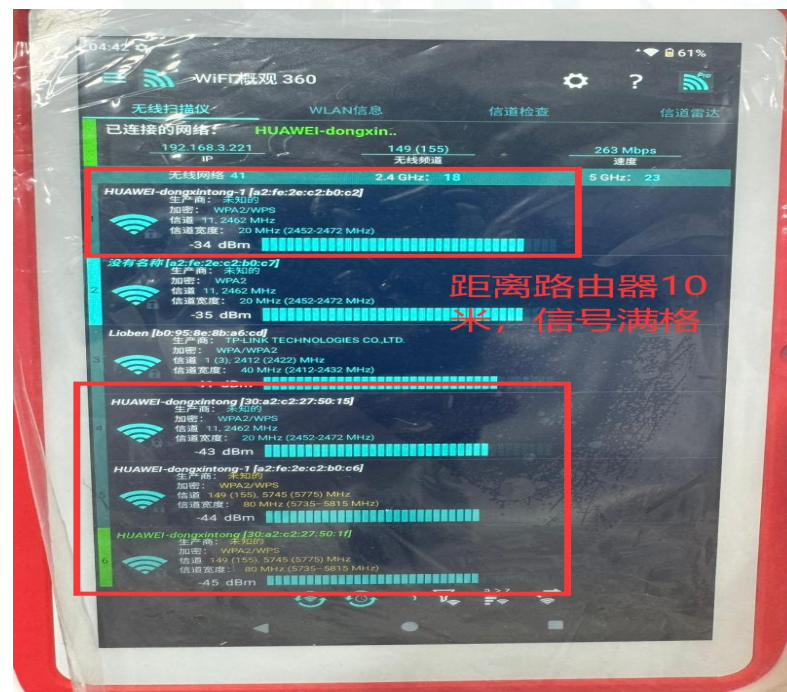
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5240MHZ



GPS/WIFI:



Environmental Handling:



Follow the environment shown in the figure.

Antenna position:



三合一天线贴在后壳上



分级天线



主天线贴导电布
跟屏接地



ShenZhen Eastong Electronic technology Co., LTD



Thank you for your strong support!

Li Kai

RF Engineer at Shenzhen Dongxintong Electronic Technology Co., Ltd

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