品名 ：**WA-F-LTE15-02-003 工规**　　**History List**

版本 REV.	修訂者 EDITOR	修訂頁次 PAGE	修訂內容 ITEMS OF CHANGE	申請日期 DATE	生效日期 VALID DATE	ECN 编号 ECN NO
A0	王婷	ALL	发行正式	2019/05/28		N/A
A1	王婷	Page6	增加实物图	2020/03/27		

WA-F-LTE15-02-003 Specification

1. Explanation of part number :

WA	_	F	_	LTE	_	02	_	003
(1)		(2)		(3)		(4)		(5)

(1) Product Type：Wireless Antenna

(2) Material : FPC+cable

(3) Frequency : 699~960,1428~1690, 1710~2690,3300~5800MHz

(4) Coaxial Cable Type : 02

(5) Suffix : 003

2. Electrical Specification :

2-1. Frequency Band:

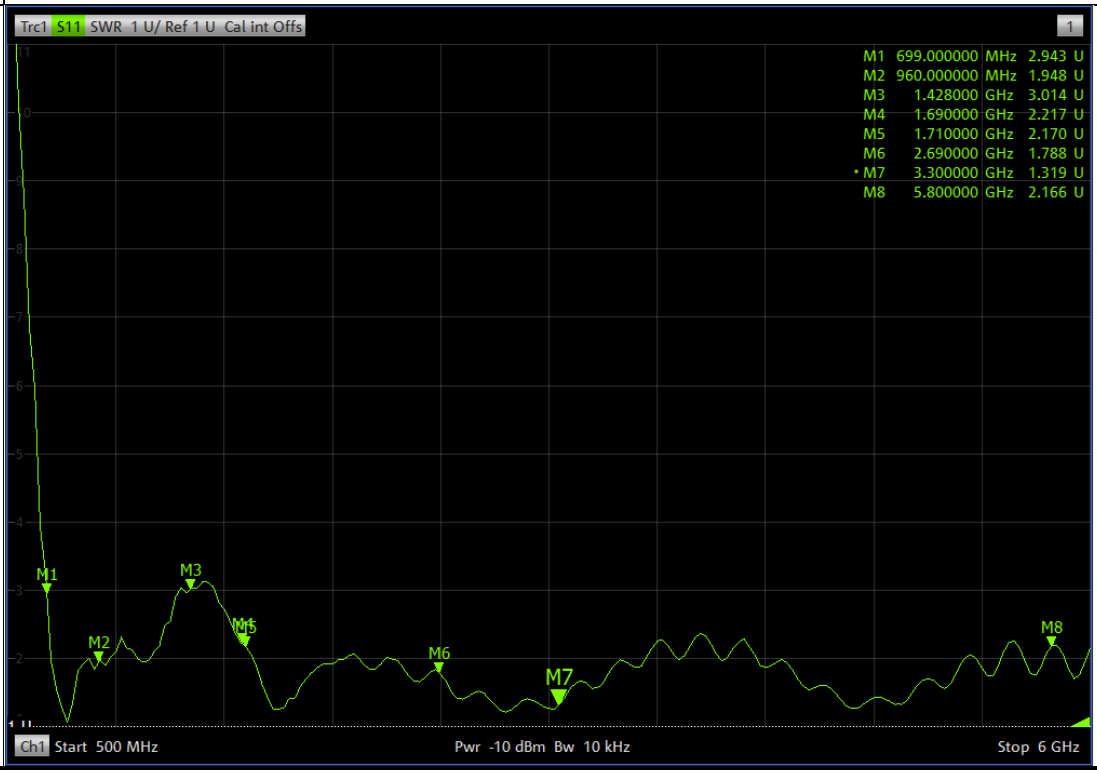
Frequency Band	MHz
Main	699~960,1428~1690,1710~2690,3300~5800MHz

2-2. Impedance

50 ohm nominal

2-3 VSWR:

Frequency Band	699	960	1428	1690	1710	2690	3300	5800
2-3-1. Typical Value:	≦4.0	≦3.0	≦4.0	≦3.5	≦3.5	≦3.0	≦2.5	≦3.5

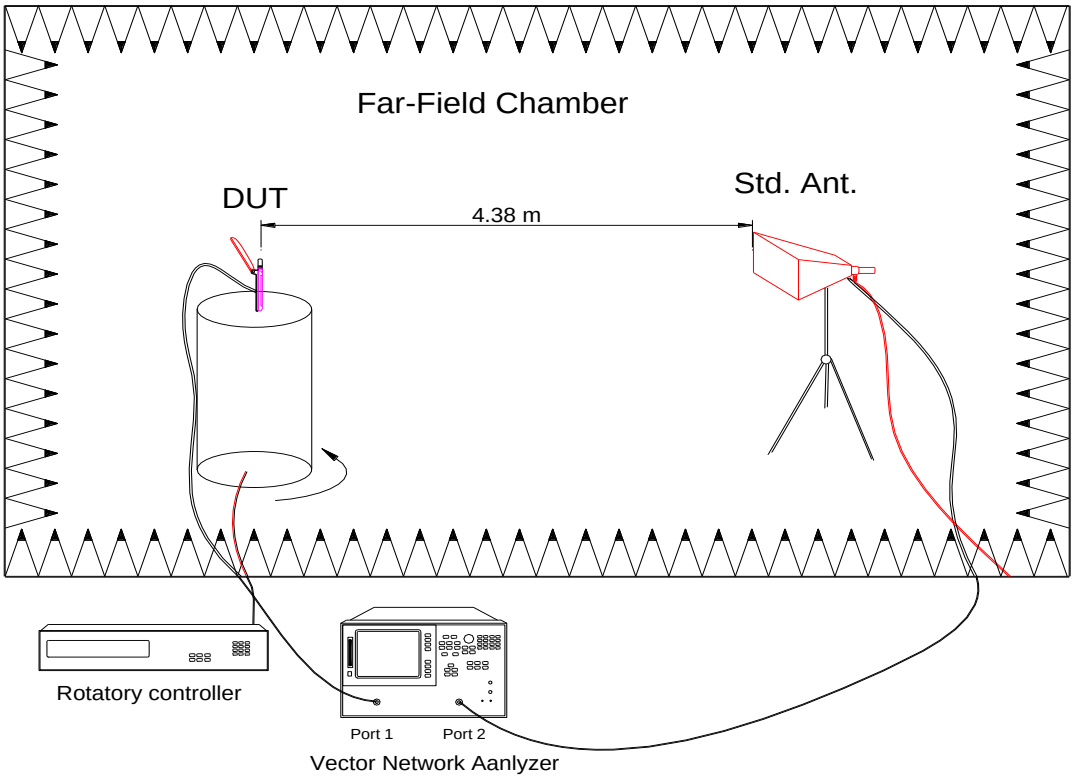
2-3-2Measuring Method	1. A 50Ω coaxial cable is connected to the fpcb antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm.
2-3-3Picture	

2-4. Gain and Efficiency

2-4.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

2-4.2 Chamber definition



1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

2-4.3 Gain and Efficiency

Frequency (MHz)	Gain (dB)	Efficiency (%)		Frequency (MHz)	Gain (dB)	Efficiency (%)
699	-3.09	49.12		815	-0.69	85.32
704	-2.70	53.69		821	-0.76	83.89
707	-2.57	55.32		824	-0.83	82.52
710	-2.49	56.42		832	-0.91	81.12
716	-2.23	59.86		836	-0.95	80.31
729	-1.87	64.94		847	-1.22	75.52
734	-1.77	66.47		849	-1.29	74.28
737	-1.69	67.82		862	-1.34	73.37
740	-1.47	71.27		869	-1.39	72.54
746	-1.26	74.78		880	-1.43	71.91
751	-1.09	77.81		881	-1.45	71.55
756	-0.86	82.03		894	-1.50	70.72
777	-0.71	85.00		897	-1.66	68.30
782	-0.99	79.57		915	-1.65	68.34
787	-0.88	81.62		925	-1.60	69.11
791	-1.13	77.08		942	-1.60	69.16
806	-0.47	89.75		960	-1.48	71.13

Frequency (MHz)	Gain (dB)	Efficiency (%)		Frequency (MHz)	Gain (dB)	Efficiency (%)
1428	-3.66	43.01		1570	-4.02	39.63
1448	-3.60	43.68		1575	-4.09	38.97
1463	-3.51	44.55		1580	-3.90	40.76
1476	-3.47	44.97		1590	-3.69	42.74
1496	-3.45	45.17		1600	-3.58	43.84
1500	-3.56	44.06		1610	-4.16	38.34
1510	-3.74	42.24		1620	-4.32	36.95
1520	-3.85	41.20		1630	-3.68	42.81
1530	-3.91	40.61		1640	-3.61	43.60
1540	-3.95	40.27		1650	-3.73	42.34
1550	-3.74	42.31		1690	-2.77	52.81
1560	-3.86	41.08				

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

Frequency (MHz)	Gain (dB)	Efficiency (%)	Frequency (MHz)	Gain (dB)	Efficiency (%)
1710	-2.10	61.67	2170	-2.54	55.72
1732	-2.26	59.40	2250	-2.68	53.89
1747	-2.16	60.82	2300	-2.36	58.04
1755	-2.22	60.00	2350	-2.79	52.63
1805	-1.97	63.53	2400	-2.92	51.06
1842	-1.78	66.32	2410	-2.91	51.12
1850	-1.77	66.53	2420	-2.78	52.72
1880	-1.59	69.36	2430	-2.74	53.15
1900	-1.55	69.98	2440	-2.72	53.40
1910	-1.62	68.81	2450	-2.68	53.92
1920	-1.73	67.07	2460	-2.68	53.97
1930	-2.06	62.30	2470	-2.72	53.51
1950	-1.98	63.45	2480	-2.73	53.39
1960	-1.94	64.00	2490	-2.63	54.53
1980	-2.09	61.84	2500	-2.61	54.79
1990	-1.81	65.96	2535	-2.74	53.23
2010	-2.21	60.08	2570	-2.25	59.53
2040	-2.37	57.94	2593	-2.05	62.34
2070	-2.70	53.70	2595	-2.07	62.08
2110	-2.71	53.59	2620	-2.07	62.03
2132	-2.50	56.27	2655	-2.35	58.24
2140	-2.55	55.60	2690	-2.54	55.77
2155	-2.70	53.68			

Frequency (MHz)	Gain (dB)	Efficiency (%)	Frequency (MHz)	Gain (dB)	Efficiency (%)
3300	-2.64	54.41	4600	-3.88	40.91
3400	-3.05	49.59	4700	-3.53	44.39
3500	-2.74	53.15	4800	-3.78	41.89
3600	-3.40	45.73	4900	-4.33	36.92
3700	-3.49	44.74	5000	-4.95	32.02
3800	-3.61	43.55	5100	-4.74	33.60
3900	-3.63	43.34	5200	-5.62	27.40
4000	-3.74	42.28	5300	-5.50	28.18
4100	-3.95	40.26	5400	-5.11	30.83
4200	-4.04	39.46	5500	-4.93	32.10
4300	-3.46	45.11	5600	-5.15	30.52
4400	-3.57	43.91	5700	-4.36	36.63
4500	-3.72	42.47	5800	-5.39	28.91

UNLESS OTHER SPECIFIED TOLERANCES ON：
X=± X.X=±0.15 X.XX=±0.15
ANGLES=± HOLEDIA=±

佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

SCALE： UNIT：mm
DRAWN BY：王婷 CHECKED BY： 张涛
DESIGNED BY： 吴振江 APPROVED BY： 徐克文

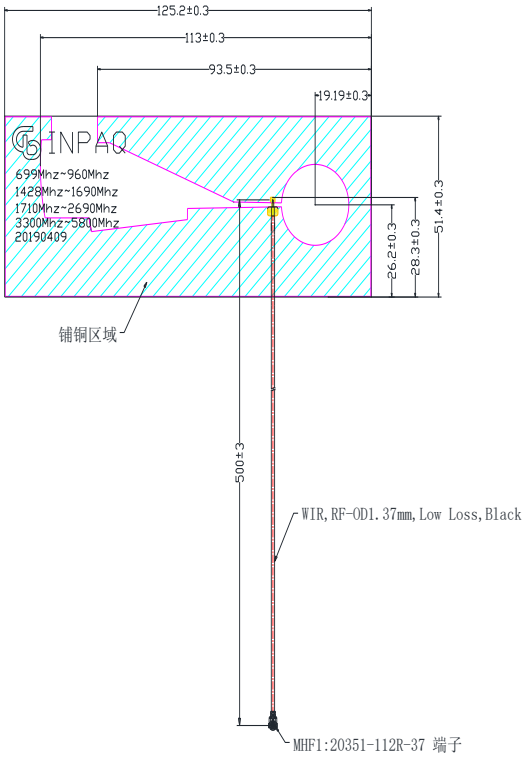
THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE：WA-F-LTE15-02-003 Specification

DOCUMENT NO. ENS000126870

PAGE REV. A1

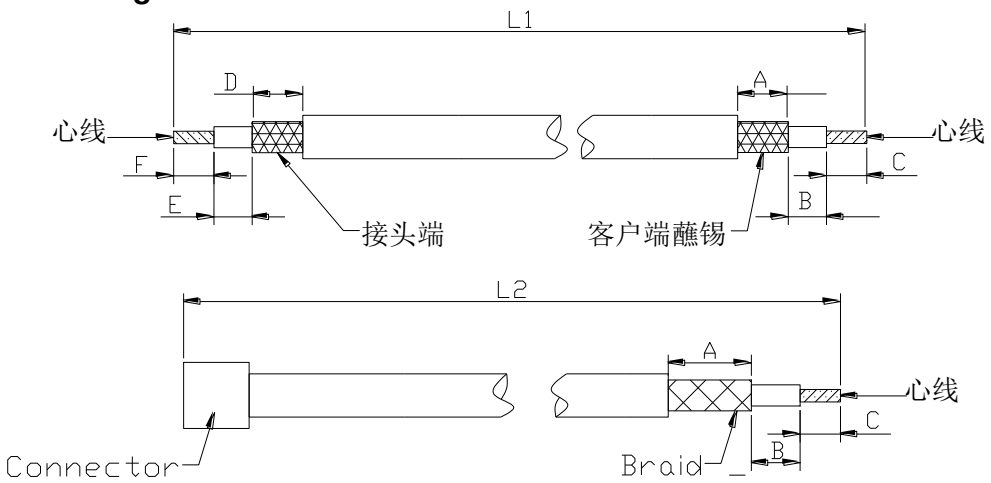
3. Antenna Dimensions:(unit:mm)



UNLESS OTHER SPECIFIED TOLERANCES ON： X＝± X.X＝±0.15 X.XX＝±0.15 ANGLES＝± HOLEDIA＝±		佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.
SCALE：	UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY：王婷	CHECKED BY： 张涛	
DESIGNED BY： 吴振江	APPROVED BY： 徐克文	

TITLE：WA-F-LTE15-02-003 Specification	DOCUMENT NO.	ENS000126870	PAGE REV. A1

Cable Length:



Connector：I-PEX1: 20351-112R-37；Cable：1.37LL（黑色）

L1：500± 3mm

A：3.0± 0.5mm(需沾锡)

B：1.5± 0.5mm

C：1.5± 0.5mm(需沾锡)

D：1.2± 0.1mm

E：1.1± 0.1mm

F：1.16± 0.1mm

4、Manner of Packing

将 1PCS 产品装入 1 个包装袋，一个内箱装 200PCS 产品，一包装外箱装 4 个内箱共计 800PCS 产品。

UNLESS OTHER SPECIFIED TOLERANCES ON： X＝± X.X＝±0.15 X.XX＝±0.15 ANGLES＝± HOLEDIA＝±		佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.
SCALE：	UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY：王婷	CHECKED BY： 张涛	
DESIGNED BY： 吴振江	APPROVED BY： 徐克文	

TITLE：WA-F-LTE15-02-003 Specification	DOCUMENT NO.	ENS000126870	PAGE REV. A1