

## 上海杰盛康通信工程有限公司

Shanghai Jesoncom Communication Engineering Co., Ltd
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# 客户承认书

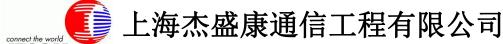
### **SPECIFICATION FOR APPROVAL**

CUSTOMER/PROJE	CT 客户/机型: <sub>,</sub>	C20PRO
CUSTOMER P.N./	客户物料号:_	
PRODUCT NAME./	物料名称:	LTE
MODEL NO./	物料型号:_	5U072A
SPECIFICATION/	物料规格:	

ADD: No.358 Liuyuan RD., Baoshan Urban Industrial District., Shanghai, PR. China.

地址: 上海市宝山城市工业园区柳园路358号2号楼1楼

TEL: +86-21-66276925(26/29/35) - 615



#### 目录 content

目录 content 2-3
1 名词解释/Noun.explanation
2测试设备/Test equipment
3.适用频段 /Working frequency band
4基本测试项目_/Test project
4.1 驻波比图 /VSWR plot
4.2 史密斯阻抗图/Simth plot
4.3 辐射方向图/Radiation.pattern
4.4 增益和效率/Gain & Efficiency
4.5TRP&TIS测试
5测试指标和数据图表 /Antenna parameter
5.1 驻波比 ///SWR
5.1.1 驻波比图_/VSWR_plot
5.1.2 驻波比数据 ./VSWR data
5.2史密斯阻抗圆图 /Simth plot
5.3 辐射方向图 /Radiation pattern
5.3.1H-plane
5.3.2 E-plane
5.4 增益和效率 /UGain & Efficiency 10
6环境处理建议 /Environmental treatment suggestions 10
7 阻抗匹配要求 /Impedance matching
8天线外形图/Antenna plan 1



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8.1 天线尺寸图 / Antenna dimensional drawing	11
8.2 馈线尺寸图_/Coaxical cable length drawing	11
8.3 射频端尺寸图 /Connecter drawing	11

#### 1 名词解释 /Noun explanation

dBi	Decibel relative isotropic antenna					
Tx	Transmit frequency					
Rx	Receive frequency					
TRP	Total Radiated Power					
TIS	TIS Total Isotropic Sensitivity					
VSWR	Voltage Standing Wave Ratio					
GSM	Global Service for Mobile communication					
DCS	Digital Communication System					
CDMA	Code Division Multiple Access					
WCDMA Wideband Code Division Multiple Access						

#### 2 测试设备/Test equipment

矢量网络分析仪/ network analyzer 综合测试仪/ CMW 500 GTS 暗室/ GTS darkroom

#### 3 适用频段/Working frequency band

将适用的频段用其他颜色标出/ The yellow Identification is the using band

制式 / band	上行 / uplink	下行 / uplink
GSM850	824MHz~849MHz	869MHz~894MHz
GSM900	890MHz~915MHz	935MHz~960MHz
DCS1800	1710MHz~1785MHz	1805MHz∼1880MHz
PCS1900	1850MHz~1910MHz	1930MHz~1990MHz
CDMA800	825MHz~835MHz	870MHz~880 MHz
CDMA2000	824MHz ~849MHz	869MHz ~894MHz
WCDMA	824MHz~2170MHz	2110MHz~2170MHz
WIFI (2. 4G)	2400MHz~5850MHz	
<mark>LTE</mark>	660MHz ∼2690MHz	
GPS	1560MHz ∼1590MHz	

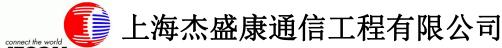
#### 4 基本测试项目/Test project

- 4.1 驻波比图/VSWR plot
- 4.2 史密斯阻抗图/Simth plot
- 4.3 辐射方向图/Radiation pattern
- 4.4 增益和效率/Gain & Efficiency
- **4.5 TRP&TIS**

#### 5 测试指标和数据图表/Antenna parameter

- 5.1 驻波比/VSWR
  - 5.1.1 驻波比图/VSWR plot

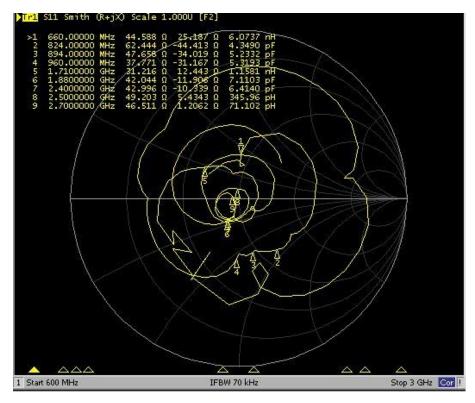


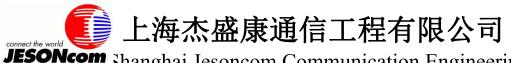


#### 5.1.2 驻波比数据/VSWR data

Freq/MHz	660	824	960	1710	1880	2400	2690
VSWR	1.7	2.3	2.0	1.8	1.7	1.0	1.1

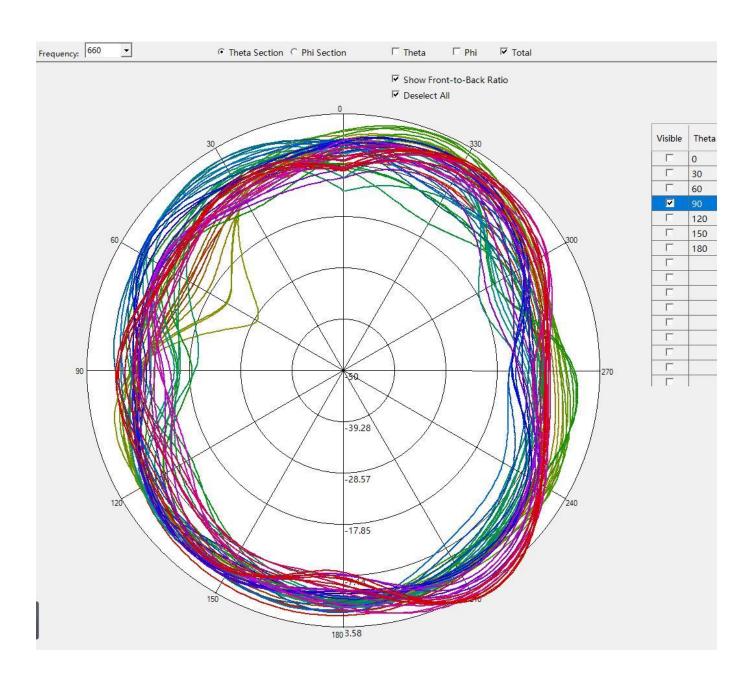
#### 史密斯阻抗圆图/Smith impedance circle diagram





#### 5.2 辐射方向图 /Radiation pattern

#### 5.2.1 H-plane

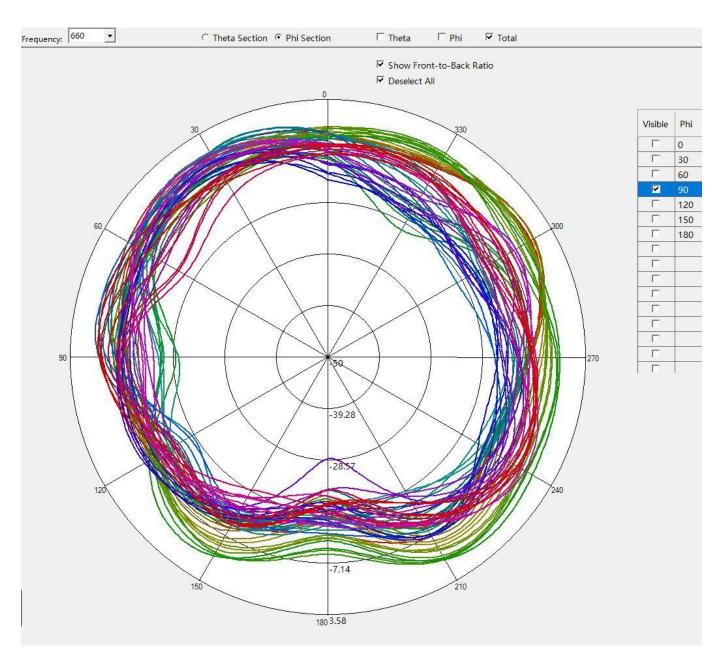


5.2.2 E-plane

**E1** 

Frequency: 660 □ Phi **▼** Total C Theta Section Phi Section ☐ Theta ▼ Show Front-to-Back Ratio ▼ Deselect All Visible 30 60 90 120 150 -39.28 180 3.58

**E2** 



5.4 增益和效率 / UGain & Efficiency



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Freq (MHZ)	Eff(%)	GAIN	Freq (MHZ)	Eff(%)	GAIN	Freq (MHZ)	Eff(%)	GAIN
660	36. 98	0. 96	1710	48. 52	2. 75	2300	68. 48	4. 39
<mark>680</mark>	36. 52	0. 62	1750	46. 23	2. 85	2330	62. 35	4. 09
700	38. 77	0. 60	1790	43. 03	2. 00	2370	62.68	3. 82
720	39. 62	0. 16	1830	41. 59	1. 55	2400	59. 28	3. 64
740	40. 61	0. 18	1870	40. 23	1. 46	2450	59. 97	3. 15
<mark>760</mark>	36. 44	0. 35	1900	43. 28	1.82	2480	60.01	3. 31
<mark>780</mark>	36. 05	-0.34	1930	50. 15	3. 20	2510	59. 74	3. 05
800	39. 78	0. 58	1960	50. 36	4. 37	2540	62. 16	2. 93
820	45. 96	1.81	1990	60. 43	3. 90	2570	56. 72	3. 36
840	47. 41	2. 39	2100	63. 44	3. 48	2600	59. 99	3. 05
860	48. 73	0.88	2130	69. 18	4. 77	2630	55. 90	3. 82
880	57. 27	3. 41	2160	72. 13	5. 14	2660	53. 50	3. 73
900	58. 98	4.00				2690	50. 78	3. 08
920	54. 04	3. 49						
940	47. 75	1. 97						
960	50. 98	1. 52						

### 6 环境处理建议/Environmental treatment suggestions

The environment doesn't need to be treated

7 阻抗匹配要求/Impedance matching

8 天线外形图/Antenna plan



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