



品名：WAG-B1.01.L.0806 工規

History List

[illegible]

WAG-B.01.L.0806 Specification

1. Explanation of part number :

WAG B 01 L 0806
(1) (2) (3) (4) (5)

(1) Product Type : Wireless Antenna

(2) Material : FPC

(3) Frequency : 791-960Mhz, 1805-2170, 2500-2690 Mhz

(4) Coaxial Cable Type : 00

(5) Suffix : 053

2. Electrical Specification :

2-1. Frequency Band:

Frequency Band	MHz
LTE	791-960Mhz, 1805-2170, 2500-2690 Mhz

2-2. Impedance

50 ohm nominal

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=±

HOLEDIA=±

浙江海通通讯电子股份有限公司

SCALE :

UNIT : mm

DRAWN BY : 程国富

CHECKED BY : 于超群

DESIGNED BY : 于超群

APPROVED BY : 夏彪

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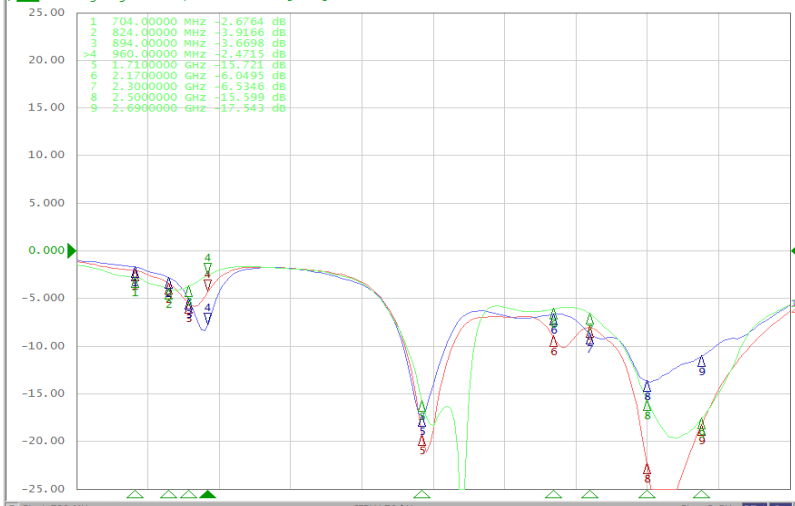
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2-3. VSWR ,Efficiency ,Matching and Active Data :

2-3.1 VSWR:

Frequency Band	700	960	1710	2170	2500	2690																														
2-3-1. Typical Value:	-2.6	-7.1	-21.3	-10	-23.4	-18.7																														
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	ES071C Network Analyzer 1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State Tr1 S11 Log Mag 5.000dB/ Ref 0.000dB [F1 M] Tr2 S11 Log Mag 5.000dB/ Ref 0.000dB [F1 M] Tr3 S11 Log Mag 5.000dB/ Ref 0.000dB [F1 M] <table><tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th></tr><tr><td></td><td>704.000000 MHz</td><td>824.000000 MHz</td><td>894.000000 MHz</td><td>960.000000 MHz</td><td>1.71000000 GHz</td><td>2.17000000 GHz</td><td>2.30000000 GHz</td><td>2.50000000 GHz</td><td>2.69000000 GHz</td></tr><tr><td></td><td>-2.6764 dB</td><td>-3.9166 dB</td><td>-3.6698 dB</td><td>-2.4715 dB</td><td>-15.721 dB</td><td>-6.0495 dB</td><td>-6.5346 dB</td><td>-15.599 dB</td><td>-17.543 dB</td></tr></table> 5 Start 500 MHz IFBW 70 kHz Stop 3 GHz [PExt] [Con] [I]							1	2	3	4	5	6	7	8	9		704.000000 MHz	824.000000 MHz	894.000000 MHz	960.000000 MHz	1.71000000 GHz	2.17000000 GHz	2.30000000 GHz	2.50000000 GHz	2.69000000 GHz		-2.6764 dB	-3.9166 dB	-3.6698 dB	-2.4715 dB	-15.721 dB	-6.0495 dB	-6.5346 dB	-15.599 dB	-17.543 dB
	1	2	3	4	5	6	7	8	9																											
	704.000000 MHz	824.000000 MHz	894.000000 MHz	960.000000 MHz	1.71000000 GHz	2.17000000 GHz	2.30000000 GHz	2.50000000 GHz	2.69000000 GHz																											
	-2.6764 dB	-3.9166 dB	-3.6698 dB	-2.4715 dB	-15.721 dB	-6.0495 dB	-6.5346 dB	-15.599 dB	-17.543 dB																											

2-4. Measure and Chamber

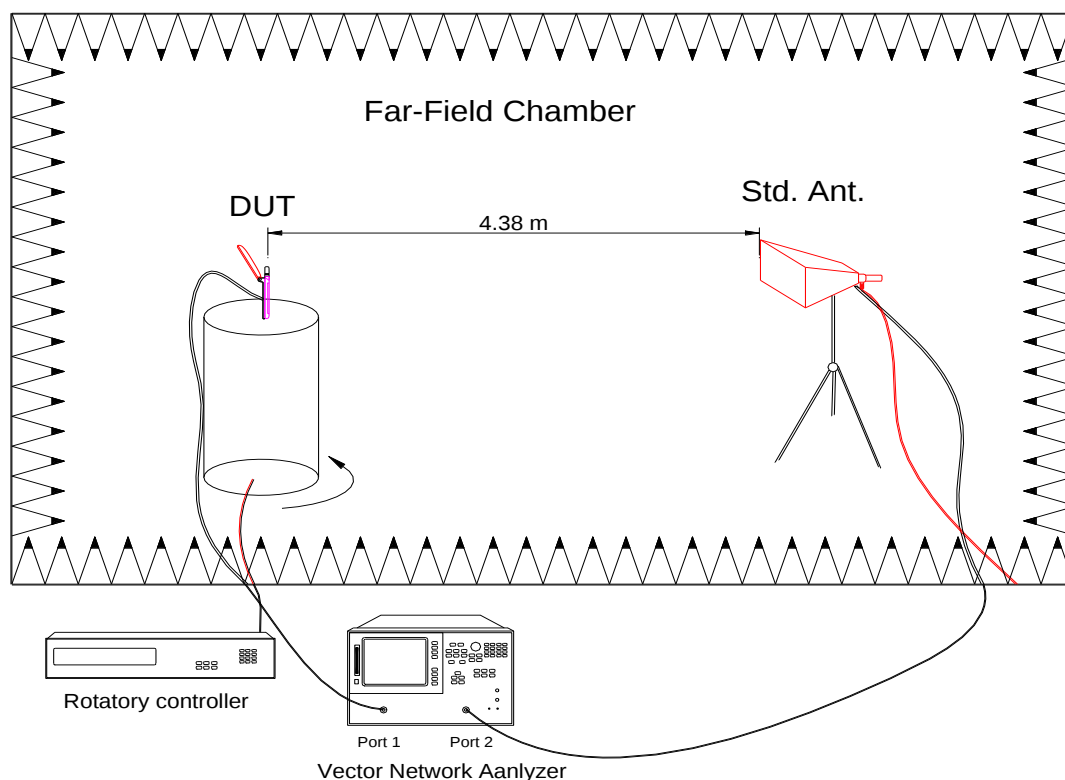
2-4-1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig

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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 quiet 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)

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2-4-3 Antenna OTA

B1	19.25	
	19.01	
	19.2	-94.1
B2	19.1	
	18.93	
	18.41	-94.64
B3	19.71	
	19.65	
	20.27	-94.81
B4	19.51	
	19.49	
	19.58	-94.41
B5	17.53	
	18.62	
	17.53	-92.49
B7	18.73	
	18.93	
	19.27	-95.83
B8	17.81	
	18.29	
	18	-93.97
B12	17.85	
	18.73	
	17.9	-95.39
B13	18.8	
	18.89	
	18.3	-93.99
B17	18.65	
	18.45	
	18.08	-93.33
B26	17.66	
	17.54	
	16.67	-94.75
B28	18.62	
	19.42	
	18.03	-92.99

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B38 (10M)	18.7	
	19.83	
	19.49	-95.59
B40 (10M)	18.47	
	18.97	
	18.16	-91.5

850	25.71	
	26.65	
	27.33	-102.14
900	25.79	
	27.14	
	27.6	-103.49
1800	25.86	
	26.29	
	26.73	-104.43
1900	26.85	
	27.33	
	26.8	-105.62
W1	19.56	
	19.06	
	19.47	-105.89
W2	20.49	
	20.47	
	19.75	-107.47
W4	20.09	
	20.07	
	20.17	-107.34
W5	17.48	
	17.98	
	17.15	-105.48
W8	17.15	
	17.88	
	17.82	-106.93

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2-4-3 Antenna Efficiency

Frequency	Efficiency	Efficiency . dB	Gain . dBi
880000000	10%	-10.17	-6.72
890000000	11%	-9.67	-6.28
900000000	12%	-9.12	-5.66
910000000	14%	-8.58	-4.60
920000000	16%	-8.09	-4.61
930000000	17%	-7.63	-4.96
940000000	19%	-7.25	-4.64
950000000	20%	-6.95	-5.01
960000000	20%	-6.89	-4.75
1710000000	44%	-3.59	0.05
1720000000	44%	-3.57	0.04
1730000000	44%	-3.58	-0.14
1740000000	44%	-3.56	-0.24
1750000000	45%	-3.48	0.10
1760000000	46%	-3.38	0.06
1770000000	46%	-3.33	0.09
1780000000	47%	-3.29	0.10
1790000000	47%	-3.29	0.38
1800000000	46%	-3.40	0.13
1810000000	45%	-3.44	-0.04
1820000000	46%	-3.37	0.05
1830000000	46%	-3.35	0.35
1840000000	46%	-3.36	0.34
1850000000	45%	-3.45	0.35
1860000000	43%	-3.63	0.34
1870000000	42%	-3.80	0.38
1880000000	42%	-3.80	0.35
1890000000	42%	-3.78	0.39
1900000000	42%	-3.72	0.56
1910000000	43%	-3.67	0.54
1920000000	42%	-3.79	0.40
1930000000	40%	-3.94	-0.05
1940000000	40%	-3.97	-0.06
1950000000	40%	-4.00	-0.06

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1960000000	39%	-4.08	-0.08
1970000000	39%	-4.04	-0.15
1980000000	40%	-4.00	-0.12
1990000000	38%	-4.16	-0.09
2000000000	37%	-4.28	-0.08
2010000000	36%	-4.40	-0.06
2020000000	36%	-4.49	-0.18
2030000000	35%	-4.51	-0.13
2040000000	35%	-4.55	-0.15
2050000000	33%	-4.80	-0.19
2060000000	31%	-5.16	-0.34
2070000000	28%	-5.47	-1.01
2080000000	27%	-5.64	-1.00
2090000000	27%	-5.72	-0.74
2100000000	26%	-5.79	-0.46
2110000000	26%	-5.89	-0.43
2120000000	25%	-6.10	-0.80
2130000000	24%	-6.24	-0.77
2140000000	25%	-6.08	-0.68
2150000000	26%	-5.86	-0.89
2160000000	28%	-5.59	-0.47
2170000000	28%	-5.47	-0.11
2180000000	28%	-5.55	-0.26
2190000000	27%	-5.75	-0.67
2200000000	26%	-5.81	-0.97
2300000000	33%	-4.87	-0.24
2310000000	33%	-4.77	-0.25
2320000000	34%	-4.71	-0.23
2330000000	33%	-4.79	-0.25
2340000000	33%	-4.80	-0.26
2350000000	33%	-4.78	-0.48
2360000000	35%	-4.61	-0.53
2370000000	35%	-4.55	-0.56
2380000000	34%	-4.63	-0.46
2390000000	35%	-4.61	-0.24
2400000000	34%	-4.65	-0.41
2500000000	31%	-5.11	-1.28
2510000000	31%	-5.10	-1.65
2520000000	32%	-5.00	-1.61
2530000000	31%	-5.05	-1.56
2540000000	30%	-5.17	-1.65
2550000000	31%	-5.14	-1.40

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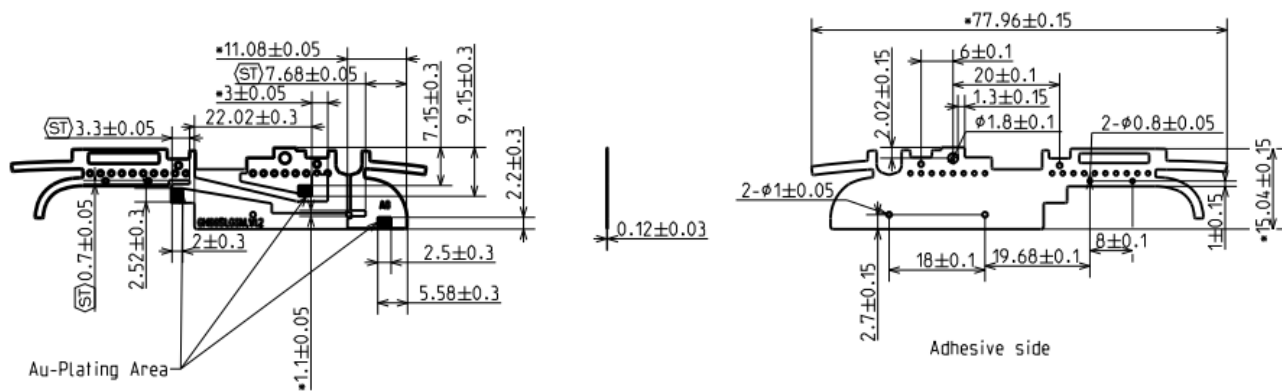
2560000000	30%	-5.22	-1.33
2570000000	31%	-5.15	-1.27
2580000000	30%	-5.18	-1.28
2590000000	30%	-5.19	-1.27
2600000000	30%	-5.16	-1.28
2610000000	31%	-5.09	-1.28
2620000000	32%	-5.00	-1.27
2630000000	31%	-5.02	-1.35
2640000000	32%	-5.01	-1.87
2650000000	32%	-5.01	-1.88
2660000000	30%	-5.22	-1.35
2670000000	29%	-5.34	-1.34
2680000000	29%	-5.36	-1.31
2690000000	29%	-5.38	-1.29

Frequency	Efficiency	Efficiency . dB	Gain . dBi
7900000000	13%	-8.90	-6.21
8000000000	14%	-8.60	-6.04
8100000000	15%	-8.38	-5.60
8200000000	15%	-8.28	-4.80
8300000000	15%	-8.11	-5.16
8400000000	16%	-7.96	-4.70
8500000000	17%	-7.76	-4.88
8600000000	18%	-7.55	-4.71
8700000000	18%	-7.41	-4.73
8800000000	18%	-7.44	-4.70
8900000000	17%	-7.69	-4.73

Frequency	Efficiency	Efficiency . dB	Gain . dBi
7000000000	12%	-9.28	-6.63
7100000000	12%	-9.36	-6.60
7200000000	12%	-9.39	-6.90
7300000000	12%	-9.30	-6.71
7400000000	12%	-9.16	-6.60
7500000000	12%	-9.06	-6.50
7600000000	12%	-9.14	-6.50
7700000000	12%	-9.20	-6.54
7800000000	12%	-9.38	-6.50
7900000000	11%	-9.54	-6.75

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3. Antenna Dimensions:



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