



Amphenol

APPROVAL SHEET

WIFI Antenna

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Project: Z16	Author: Shijie Lin	File Name: XY7697-12-000-R
Date: 2015-12-18		
Revision: A		
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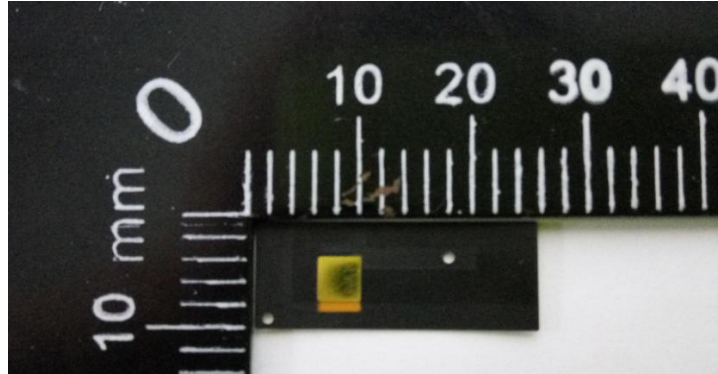
1 Antenna description

This antenna is WIFI internal antenna. The structure of the antenna is FPC.

1.1 Part number

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1.2 Antenna pictures



Picture1. Antenna picture

1.3 Device pictures



Picture2. Device picture

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2 Electrical Performance

2.1 Proposal specification for mass production

Return loss

Frequency(MHz)	2400-2500	5150-5850
Return loss(dB)	≤ -6	≤ -5

2.2 Measurement Set-up

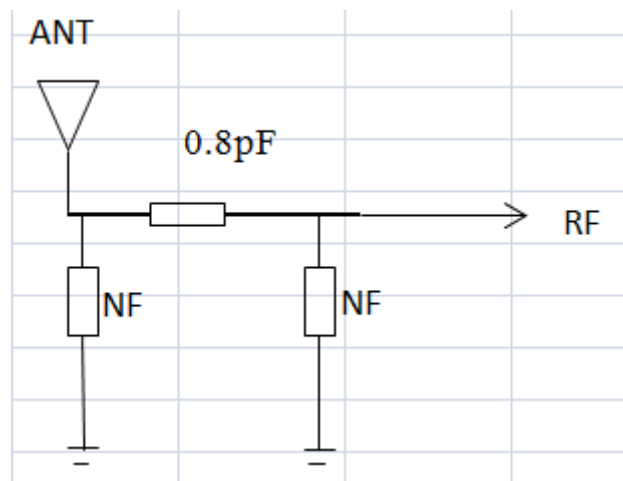
2.2.1 Return loss and VSWR

Return loss measurements (S_{11}) were performed using an Agilent ENA series Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

2.2.2 Efficiency

The efficiency of the antenna was measured in Amphenol's 3D anechoic chamber in Shanghai, China. The chamber is a Satimo system capable of doing tests from 380MHz to 6GHz. Coaxial chokes on the feed cable were used to mitigate surface currents during passive tests. The measurement results are calibrated using dipole standards.

2.2.3 Matching Circuit Description



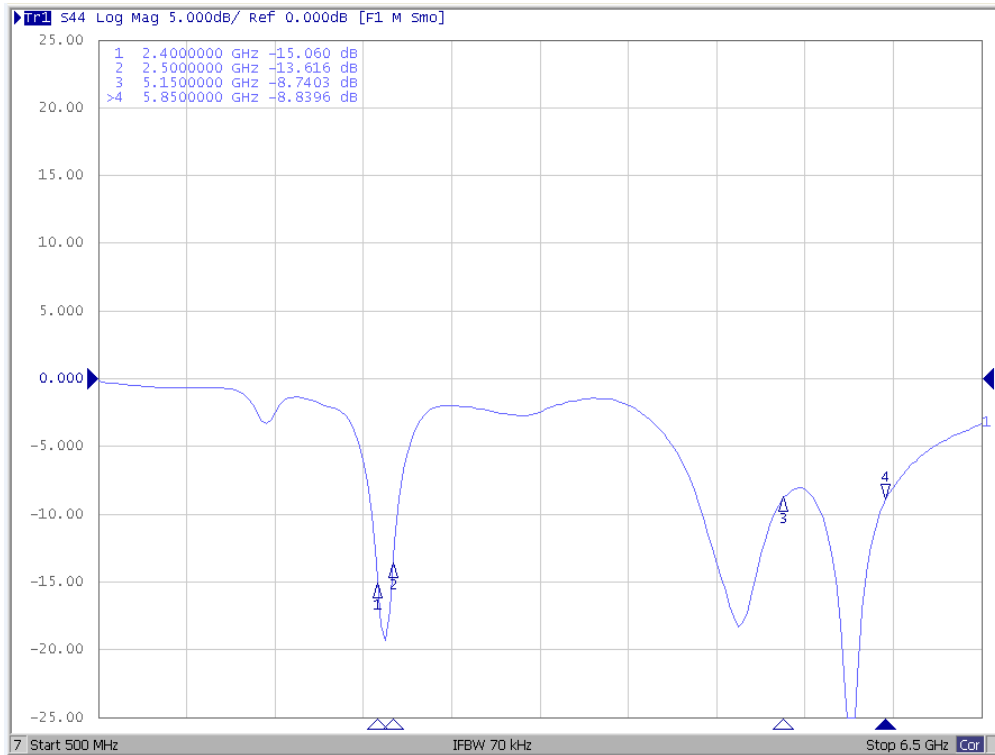
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3 Reference measurement data

3.1 Return loss



Picture3. WLAN main VSWR

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3.2 Efficiency

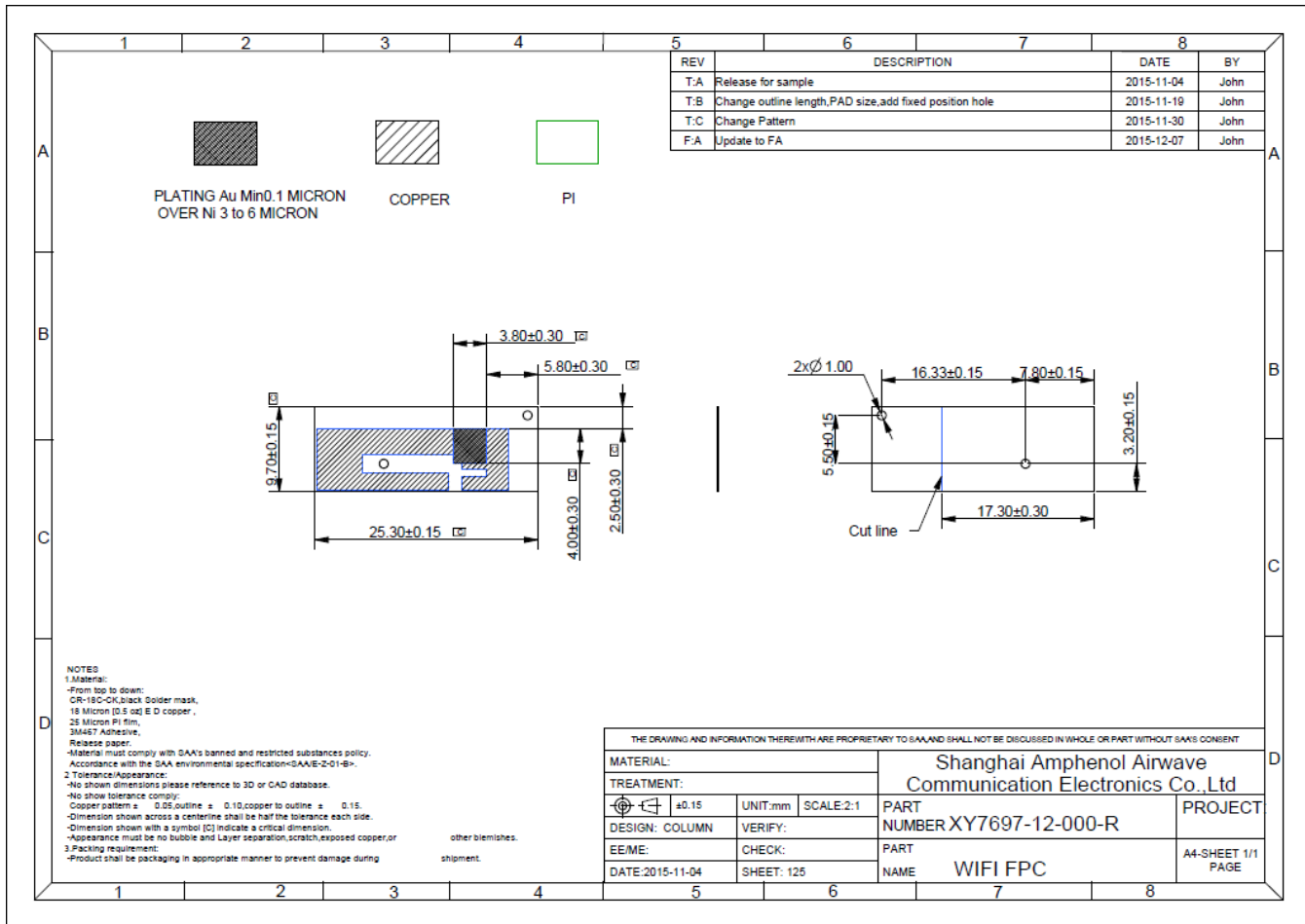
Frequency(MHz)	Efficiency (%)	Efficiency(dB)
2400	44%	-3.54
2420	45%	-3.44
2440	46%	-3.35
2450	48%	-3.22
2460	47%	-3.26
2480	46%	-3.42
2500	43%	-3.66
Average	46%	-3.41
5150	40%	-4.03
5200	41%	-3.88
5250	43%	-3.66
5300	44%	-3.55
5350	48%	-3.23
5400	50%	-3.01
5450	53%	-2.77
5500	55%	-2.58
5550	56%	-2.54
5600	56%	-2.48
5650	56%	-2.50
5700	54%	-2.64
5750	52%	-2.88
5800	48%	-3.22
5850	45%	-3.44
Average	49%	-3.09

Table1 WLAN main Efficiency

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4 Mechanical description

4.1 Drawings



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6 CPK



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CPK Data Sheet

Part Name:	Z16 FPC	Part No.:	XY7697-12-000-R	Mold No.:	N/A	Material Type:	N/A	Rev No.:	FA
<input type="checkbox"/> Customer	<input checked="" type="checkbox"/> Supplier	SAA	Project Name:	Z16	Color:	N/A	Sub. No.	1 of	1

Dim. No.	1	2	3	4	5	6							Remark	
Nominal Dim.	9.70	25.30	3.80	5.80	2.50	4.00								
Tol. Max. (+)	0.15	0.15	0.30	0.30	0.30	0.30								
Tol. Min. (-)	0.15	0.15	0.30	0.30	0.30	0.30								
USL	9.85	25.45	4.10	6.10	2.80	4.30	0.00	0.00	0.00	0.00	0.00	0.00		0.00
LSL	9.55	25.15	3.50	5.50	2.20	3.70	0.00	0.00	0.00	0.00	0.00	0.00		0.00

Sampl.1	9.62	25.26	4.05	5.66	2.45	4.05								
Sampl.2	9.64	25.23	3.95	5.65	2.42	4.02								
Sampl.3	9.65	25.25	3.92	5.72	2.45	4.06								
Sampl.4	9.63	25.27	3.96	5.65	2.46	4.11								
Sampl.5	9.66	25.26	3.98	5.56	2.41	4.05								
Sampl.6	9.65	25.32	3.92	5.68	2.45	4.11								
Sampl.7	9.68	25.31	3.85	5.75	2.46	4.05								
Sampl.8	9.64	25.26	3.88	5.72	2.42	4.12								
Sampl.9	9.65	25.25	3.90	5.75	2.43	4.06								
Sampl.10	9.62	25.26	3.92	5.68	2.45	4.08								
Sampl.11	9.65	25.24	3.91	5.66	2.46	4.09								
Sampl.12	9.72	25.28	3.86	5.75	2.48	4.12								
Sampl.13	9.68	25.25	3.88	5.72	2.51	4.11								
Sampl.14	9.68	25.30	3.91	5.71	2.48	4.08								
Sampl.15	9.66	25.31	3.86	5.73	2.42	4.06								
Sampl.16	9.67	25.32	3.92	5.69	2.46	4.05								
Sampl.17	9.65	25.28	3.86	5.68	2.49	4.08								
Sampl.18	9.66	25.29	3.85	5.72	2.45	4.06								
Sampl.19	9.70	25.25	3.92	5.75	2.42	4.07								
Sampl.20	9.72	25.27	3.85	5.73	2.43	4.08								
Sampl.21	9.68	25.26	3.86	5.68	2.46	4.05								
Sampl.22	9.65	25.31	3.95	5.71	2.46	4.10								
Sampl.23	9.63	25.28	3.92	5.73	2.48	4.03								
Sampl.24	9.65	25.32	3.85	5.68	2.51	4.06								
Sampl.25	9.64	25.28	3.88	5.72	2.45	4.05								
Sampl.26	9.65	25.26	3.86	5.75	2.46	4.10								
Sampl.27	9.67	25.25	3.92	5.71	2.48	4.06								
Sampl.28	9.68	25.26	3.87	5.68	2.49	4.08								
Sampl.29	9.65	25.31	3.92	5.69	2.51	4.03								
Sampl.30	9.66	25.32	3.85	5.75	2.45	4.04								
Sampl.31	9.64	25.29	3.88	5.72	2.47	4.09								
Sampl.32	9.63	25.28	3.86	5.69	2.46	4.05								
Sampl.33	9.68	25.26	3.85	5.68	2.48	4.06								
Sampl.34	9.65	25.28	3.89	5.67	2.45	4.05								
Sampl.35	9.70	25.29	3.91	5.71	2.46	4.07								

Maximum	9.720	25.320	4.050	5.750	2.510	4.120	0.000	0.000	0.000	0.000	0.00	0.00	0.00
Minimum	9.620	25.230	3.850	5.560	2.410	4.020	0.000	0.000	0.000	0.000	0.00	0.00	0.00
Std Dev	0.025	0.026	0.045	0.039	0.026	0.026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Mean	9.660	25.277	3.898	5.701	2.459	4.069	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cp	1.988	1.945	2.236	2.550	3.855	3.806	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cpkl	1.454	1.652	2.964	1.708	3.330	4.687	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cpku	2.523	2.238	1.508	3.393	4.380	2.925	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cpk	1.454	1.652	1.508	1.708	3.330	2.925	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Too Low Within Spec Too High

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