



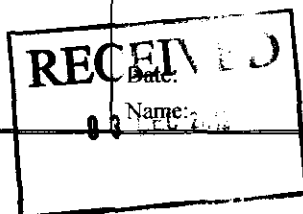
# Sample Approval Record

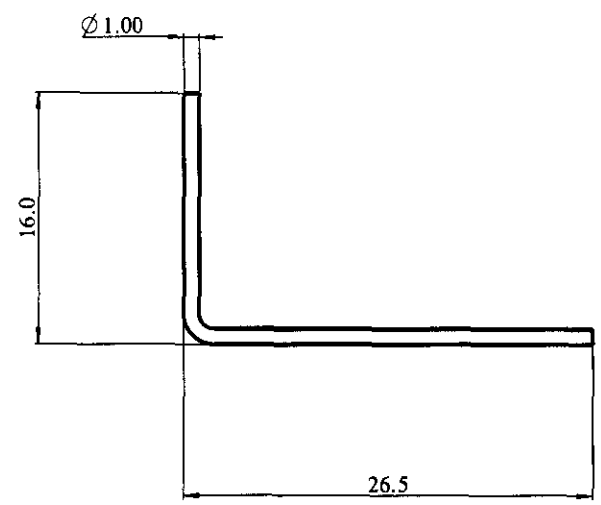
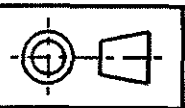
Log. No: 12SAR-HVA- 6275		Rev.: 1	Sheet: 1 of 2																																																													
Computime Description: ANTENNA ROD WIFI TRN8241 ROHS			Computime P/N: 2434TRN824110SK2																																																													
Manufacturer: STEP (SHENZHEN) METAL SPRING CO LTD																																																																
Mfr. P/N: 2434TRN824110SK2																																																																
Design Group: HVA-HVA-ODM																																																																
First Used on Model: TRN8241		Component Weight: NA		UM: PC																																																												
<b>Environmental Requirement /Comment and Remark:</b>																																																																
<input type="checkbox"/> Lead-Free <input type="checkbox"/> EUPPW (Directive 94/62/EC)																																																																
<input checked="" type="checkbox"/> RoHS (Directive 2002/95/EC) <input type="checkbox"/> Battery Directive (Directive 2006/66/EC)																																																																
<input type="checkbox"/> SONY SS-00259: "This parts should not contain any substance which are specified in SS-00259" should be described in the documents that regulate the procedure, standards, guidelines and requirements of the design of raw materials parts, subsidiary materials to be added to products, packaging materials and packaging support materials.																																																																
<input type="checkbox"/> Samsung: Refer to SEC Registration No. 0QA-2049																																																																
<input type="checkbox"/> Green Requirement (specify if check) <input type="checkbox"/> Others (specify if check)																																																																
1, 首次来料由IQA通知需要工程师确认。																																																																
2, ROHS资料参照10MVD00272, 11RPA00031, 13LRR00308.																																																																
<input checked="" type="checkbox"/> <b>Approval Status:</b> (Please check the selected box)																																																																
<input type="checkbox"/> MR - Material Release Qty: / Total MR Qty:																																																																
<input type="checkbox"/> CA - Conditional Approval Qty: / Total CA Qty:																																																																
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<input checked="" type="checkbox"/> <b>Supporting Documents of Lead-Free/RoHS/Green parts:</b>																																																																
(Please circle the selected option number and check the available supporting documents)																																																																
<table border="1"><thead><tr><th></th><th>1</th><th>2</th><th>③</th><th>4</th><th>5</th></tr></thead><tbody><tr><td>Vendor Declaration Use of RoHS Material or Manufacturer Declaration Letter</td><td><input type="checkbox"/></td><td></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Recognized Laboratory Lead-Free/RoHS/Green Report (parts)</td><td><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr><tr><td>Lead-Free/RoHS/Green Manufacturer List</td><td></td><td><input type="checkbox"/></td><td></td><td></td><td></td></tr><tr><td>Lead-Free/RoHS/Green mark on Published specification for particular part/board or Public Material Content Report</td><td></td><td><input type="checkbox"/></td><td></td><td></td><td></td></tr><tr><td>Recognized Laboratory Raw Material Report or Raw Material Mfr. in "Lead-Free/RoHS/Green Manufacturer List"</td><td></td><td></td><td><input checked="" type="checkbox"/></td><td></td><td></td></tr><tr><td>Computime RoHS Process Assessment</td><td></td><td></td><td><input checked="" type="checkbox"/></td><td></td><td></td></tr><tr><td>COMPUTIME Supplier's Qualification Audit Report</td><td></td><td></td><td></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>RoHS Analysis Report</td><td></td><td></td><td></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Customer Agreement</td><td></td><td></td><td></td><td><input type="checkbox"/></td><td></td></tr></tbody></table>						1	2	③	4	5	Vendor Declaration Use of RoHS Material or Manufacturer Declaration Letter	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recognized Laboratory Lead-Free/RoHS/Green Report (parts)	<input type="checkbox"/>					Lead-Free/RoHS/Green Manufacturer List		<input type="checkbox"/>				Lead-Free/RoHS/Green mark on Published specification for particular part/board or Public Material Content Report		<input type="checkbox"/>				Recognized Laboratory Raw Material Report or Raw Material Mfr. in "Lead-Free/RoHS/Green Manufacturer List"			<input checked="" type="checkbox"/>			Computime RoHS Process Assessment			<input checked="" type="checkbox"/>			COMPUTIME Supplier's Qualification Audit Report				<input type="checkbox"/>	<input type="checkbox"/>	RoHS Analysis Report				<input type="checkbox"/>	<input type="checkbox"/>	Customer Agreement				<input type="checkbox"/>	
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<input checked="" type="checkbox"/> Prepared by: Anders Liu Date: Dec. 3, 13 Name: Anders Liu		<input checked="" type="checkbox"/> Reviewed by: Anders Liu Date: Dec. 3, 13 Name: Anders Liu		<input checked="" type="checkbox"/> Approved by:  Date: 2013-12-3 Name: Arion Wong																																																												
		<input type="checkbox"/> Signed by VP/GM:		<input type="checkbox"/> Signed by COO:																																																												

Form No.: F-ENG-1001N

SZDCC-BJ


03 DEC 2013





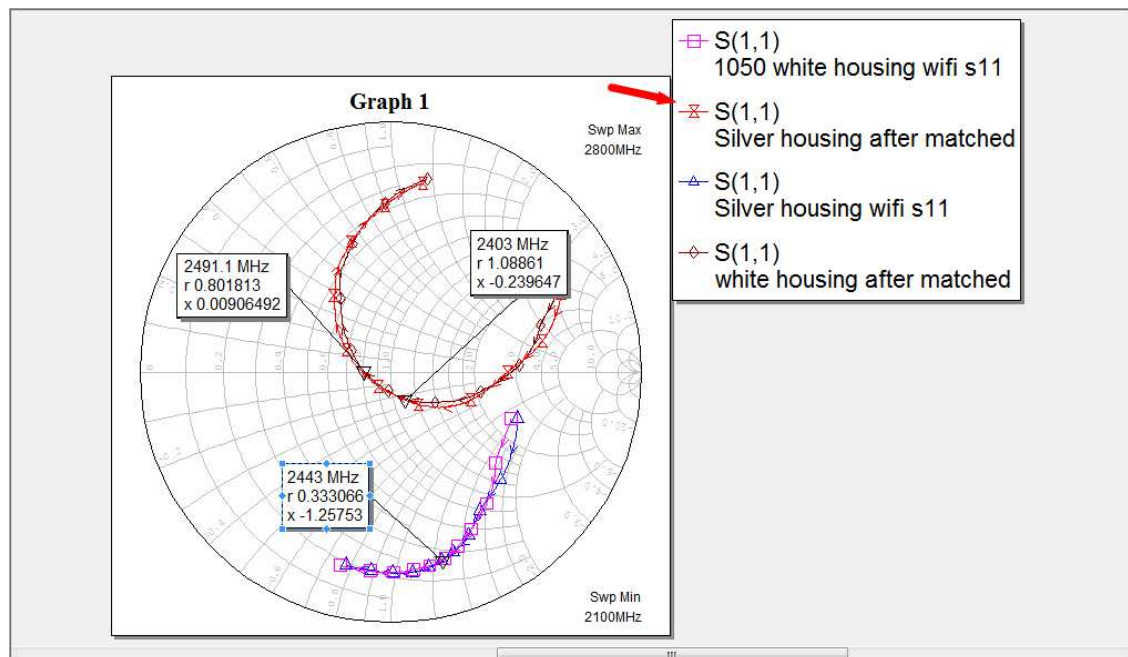
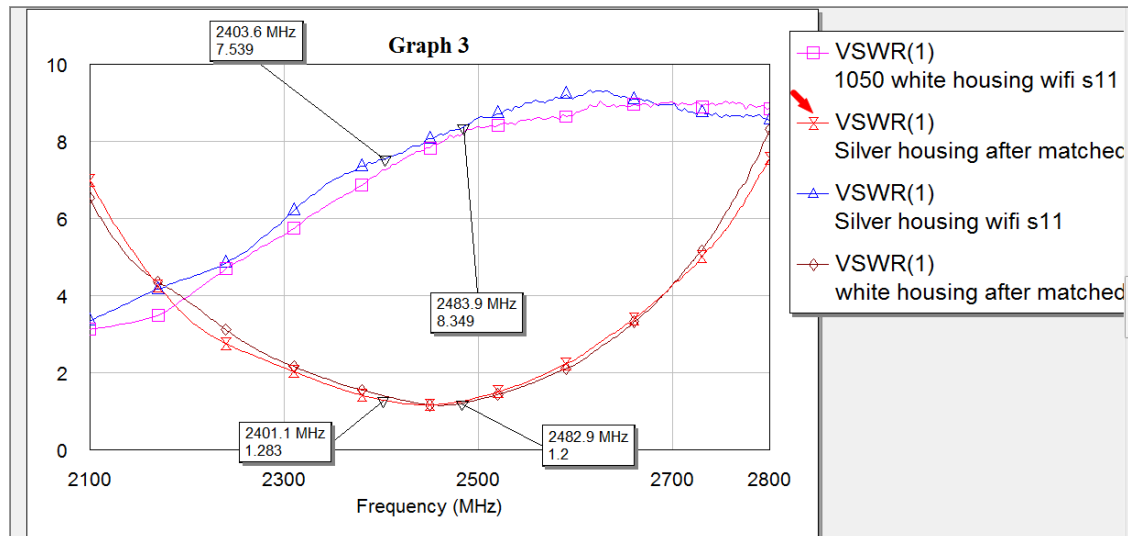
- NOTE:
- 1. Material: rigid copper wire
  - 2. Finish: Ni\_plated.
  - 3. The antenna should be not easy to be bend.
  - 4. Good solderability to PCB end.

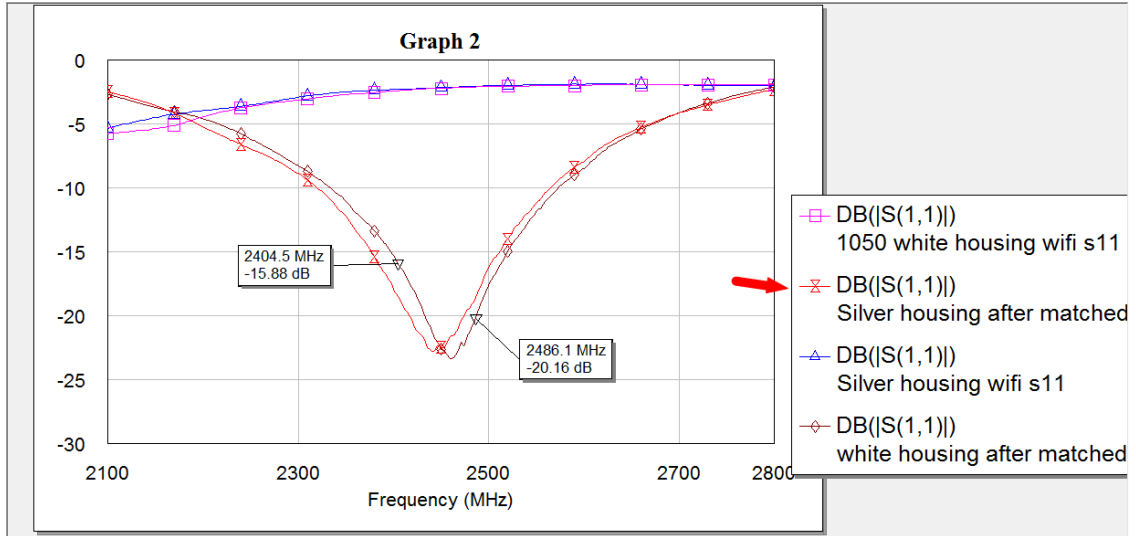
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A	FIRST RELEASE				HITER	May-27-13
REV	DESCRIPTIONS				DWN	DATE
MAT'L		FINISH				
copper		NI_PLATED				
COLOUR		SCALE	UNIT	TITLE		
BY MATERIAL		2:1	MM			
GENERAL TOLERANCE		DWN BY	DATE	ANTENNA		
DECIMALS	TOLERANCE	HITER	May-27-13			
X.X	±0.2	CHKD BY	DATE	PART NO.		
X.XX	±0.10					
X.XXX	±0.05	APPD BY	DATE	TBD		
ANGULAR	±1°					
				REV		
				A2		

# Passive performance test parameters

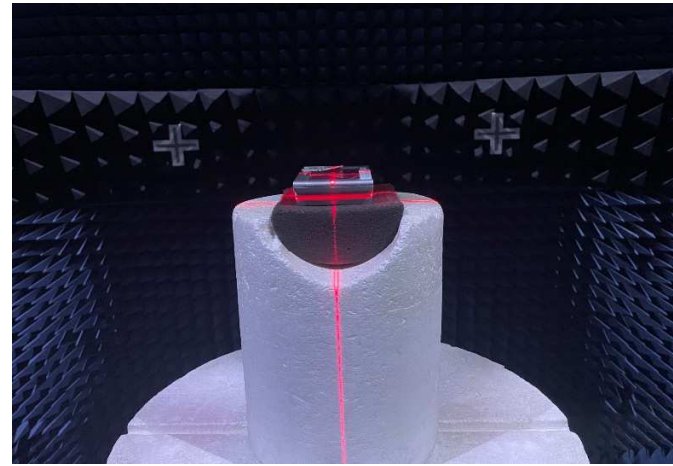
Frequency(MHz)	2401.1		2482.9
VSWR (Silver housing)	1.283		1.2

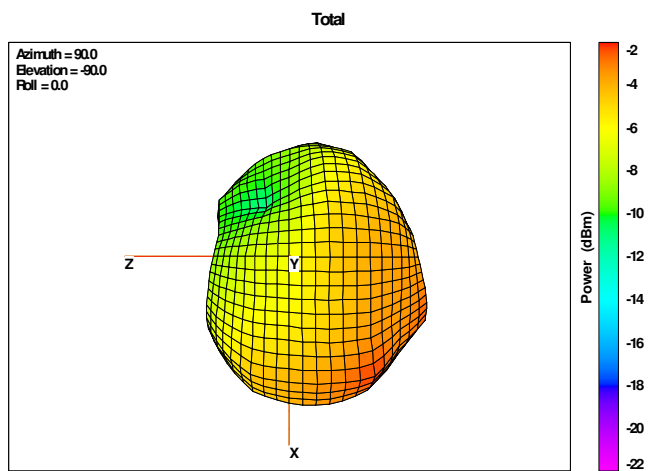
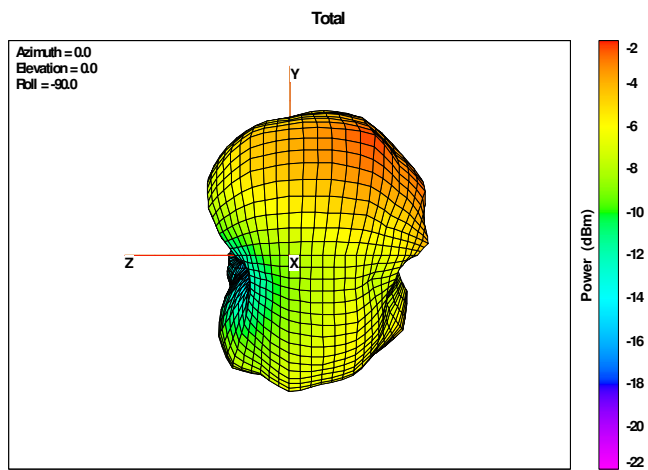
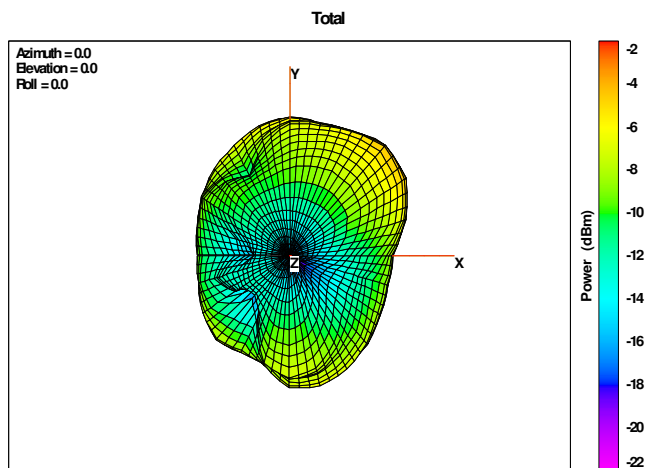


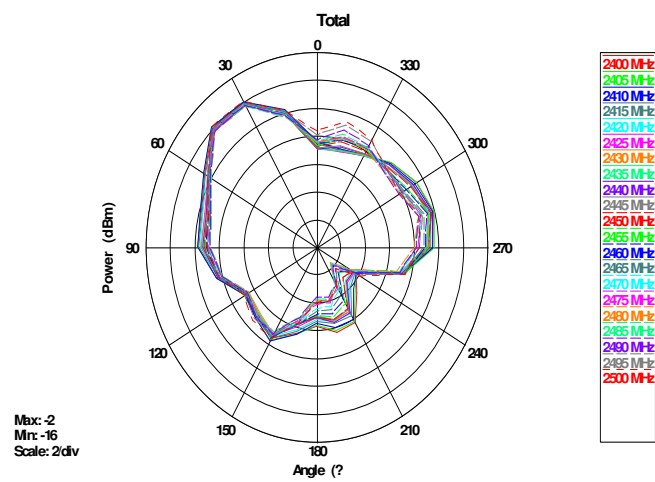


2D、3D Performance figure

Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
2400	-7.45	17.99	-2.02
2405	-7.35	18.40	-1.85
2410	-7.41	18.14	-1.92
2415	-7.48	17.87	-1.95
2420	-7.61	17.34	-2.13
2425	-7.58	17.46	-2.03
2430	-7.61	17.33	-2.01
2435	-7.59	17.43	-1.94
2440	-7.56	17.53	-1.87
2445	-7.60	17.37	-1.88
2450	-7.62	17.30	-1.96
2455	-7.66	17.13	-1.96
2460	-7.67	17.08	-2.06
2465	-7.66	17.15	-1.95
2470	-7.77	16.73	-2.06
2475	-7.77	16.73	-2.05
2480	-7.94	16.07	-2.19
2485	-7.88	16.29	-2.23
2490	-7.83	16.47	-2.04
2495	-7.57	17.51	-2.01
2500	-7.44	18.02	-1.71







Electrical performance test report

Electrical parameters		
Frequency range		2400MHz-2500MHz
input impedance		50Ω
VSWR		<2.0 control sample test pater
Gain	Max	-1.71dBi
Polarization mode		Vertical polarization
Radiation direction		omnidirectional
connection method		Manual solder
The mechanical parameters		
Material		Rigid copper wire
Finish		Ni_plated
Salt spray test		24H
Environmental parameters		
Working temperature		-40~85°C