Kenmore Mouse Sample Test

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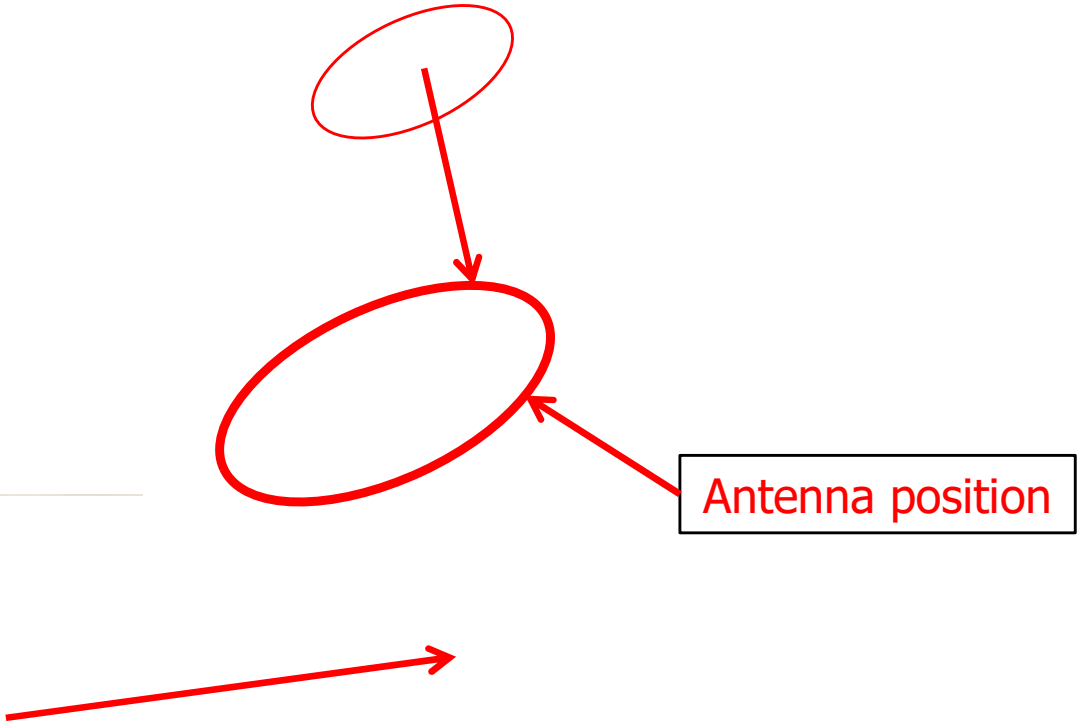
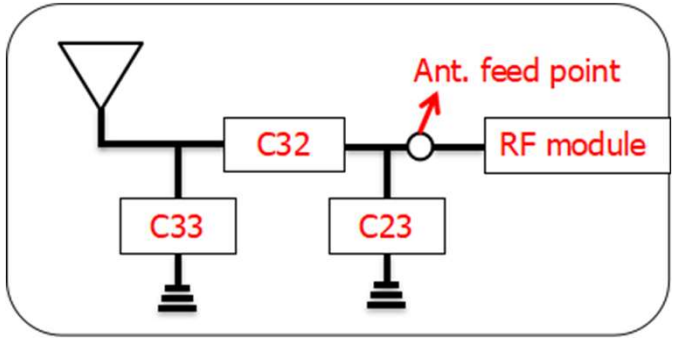
Contents

Antenna Placement-Original





Matching Circuit	
C33	N/A
C32	0 ohm
C23	N/A

Manufacturer :	Bannsan Technology(HuiZhou) CO.LTD.
Address:	Jiutan New Village, Yuanzhou Town, Boluo County, Huizhou City, China
Antenna Type:	Printed Antenna
Model No.:	ANT-IFA3
Frequency Ranger(GHz)	2.402~2.48
Antenna Dimension(mm)	17.22 X 10.27

Testing Setup(S parameter)

1.Equipment Setup

2.Test Procedure

2.1 Set start and stop frequency and Calibrate the NA with 50 ohm calibration kit

2.2 Connect the NA cable to DUT antenna via SMA or I-PAX connector.

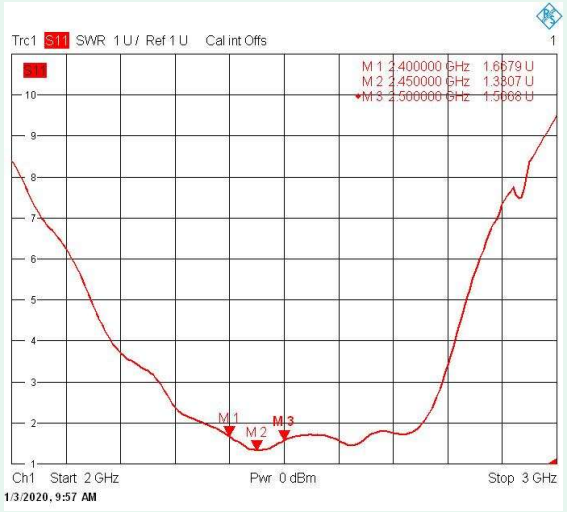
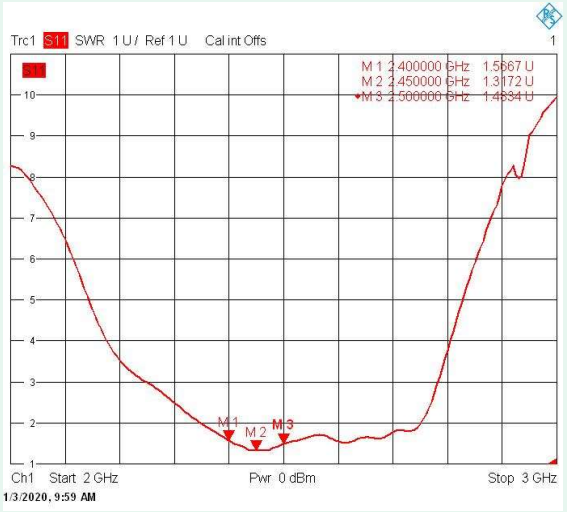
2.3 Measure the DUT antenna performance in the free space and record the s11.

Testing Setup(S parameter)

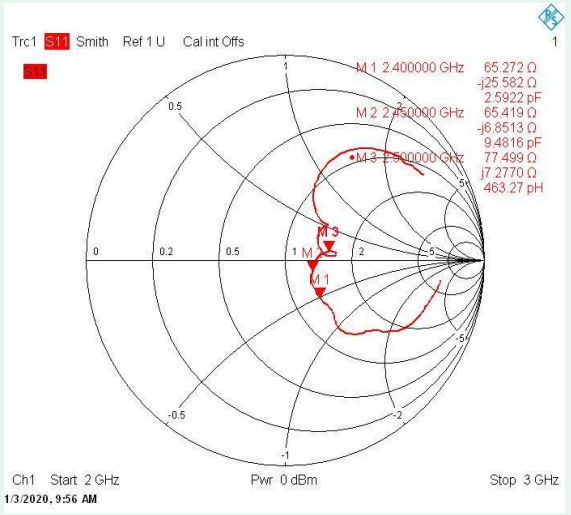
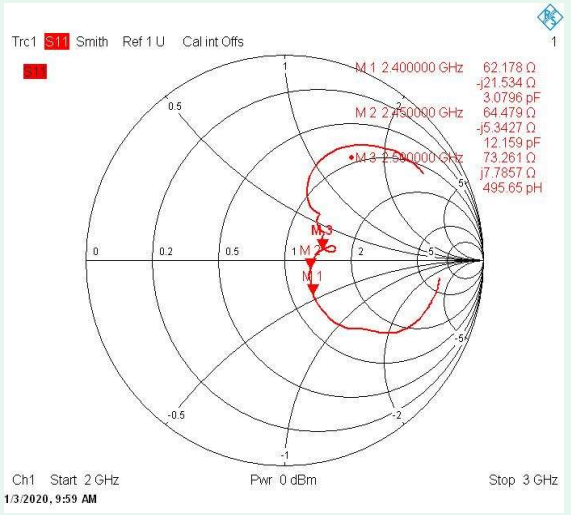
FreeSpace

Whit Phantom Hand

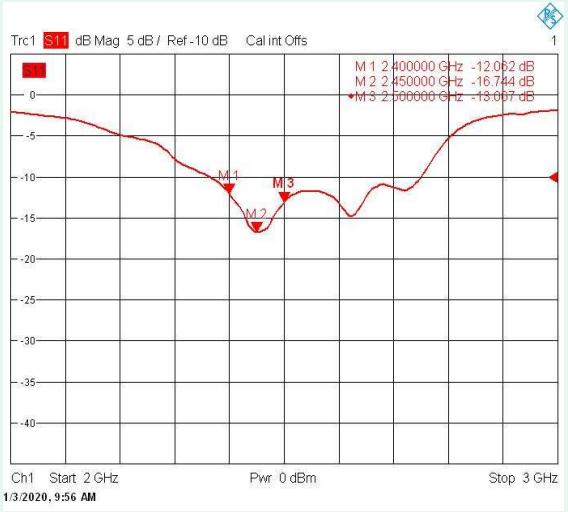
Antenna performance_VSWR

Freespace			With Phantom Hand		
	Frequency	VSWR		Frequency	VSWR
	2400 MHz	1.66		2400 MHz	1.56
	2400 MHz	1.33		2400 MHz	1.31
	2400 MHz	1.56		2400 MHz	1.48

Antenna performance_Smitch Chart

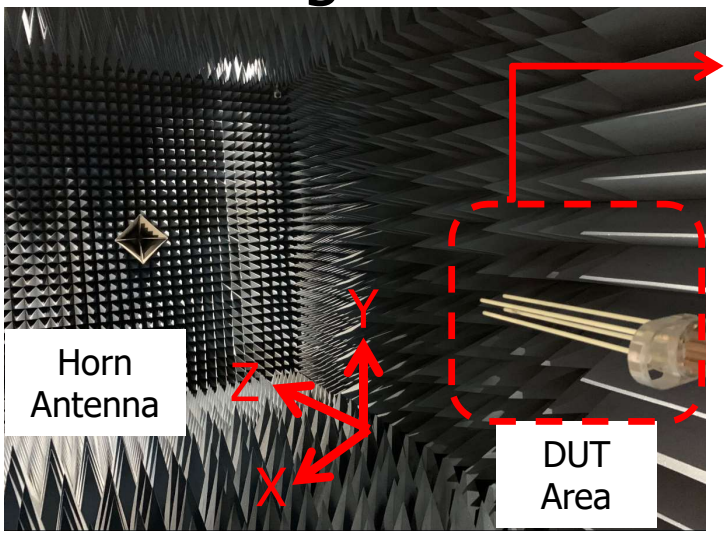
Freespace			With Phantom Hand		
	Frequency	Impedance		Frequency	Impedance
	2400 MHz	65.2-j25.5 Ω		2400 MHz	62.1-j21.5 Ω
	2400 MHz	65.4-j6.85 Ω		2400 MHz	64.4-j5.34 Ω
	2400 MHz	77.4+j7.27 Ω		2400 MHz	73.2+j7.78 Ω

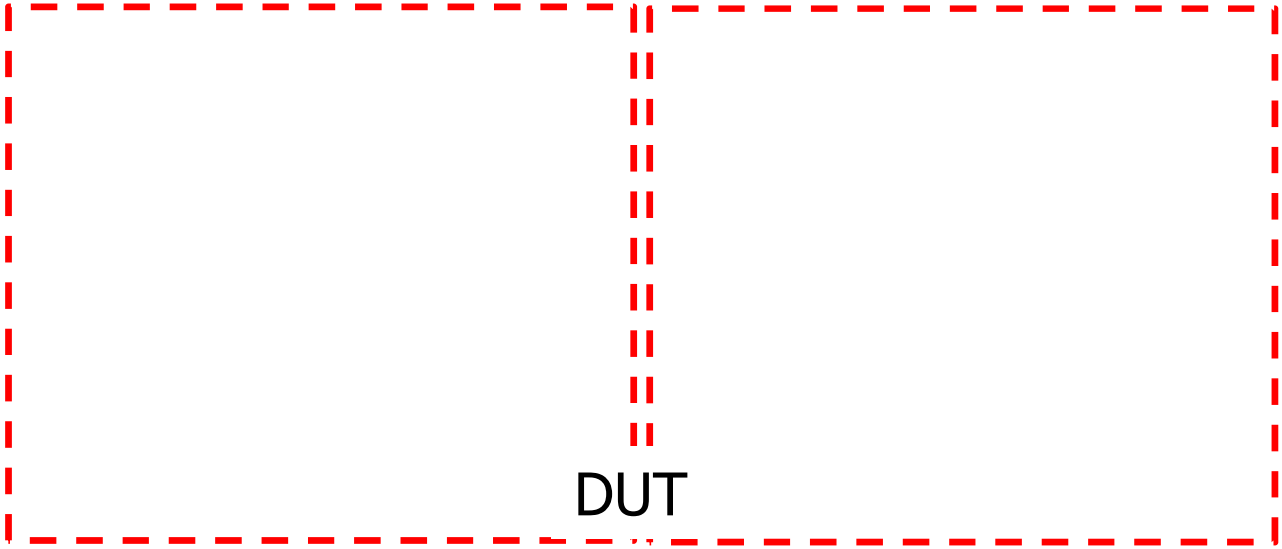
Antenna performance_S11

Freespace			With Phantom Hand		
	Frequency	Return Loss		Frequency	Return Loss
	2400 MHz	-12.06 dB		2400 MHz	-13.14 dB
	2400 MHz	-16.74 dB		2400 MHz	-17.30 dB
	2400 MHz	-13.06 dB		2400 MHz	-14.13 dB

Testing Setup(Passive Testing)

1.Testing Environment





- **Lab standard :** 3D Chamber for CTIA standard
- **Chamber size :** 7.2 * 3.6 * 3.6(meter)
- **Chamber type:** Fully anechoic Chamber
- **Chamber usable frequency range :** 700~6000MHz
- **Measurement instrument :** Network Analyzer
- **Measurement Software :** EMQuest (ETS-Lindgren)
- **DUT :** Kenmore mouse sample

ETS-Lindgren
AMS-8500

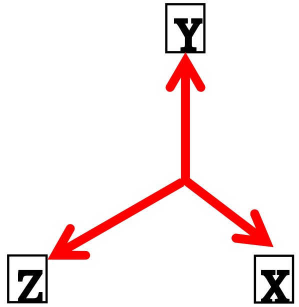
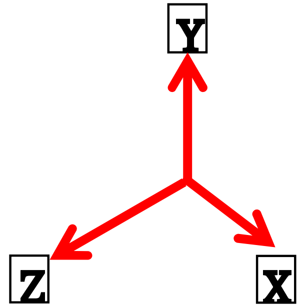
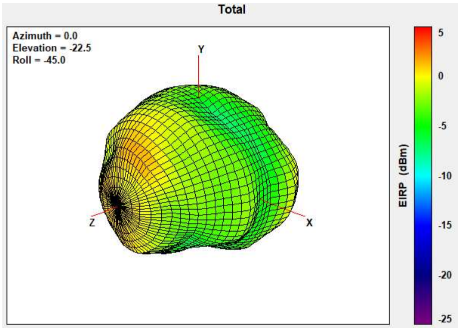
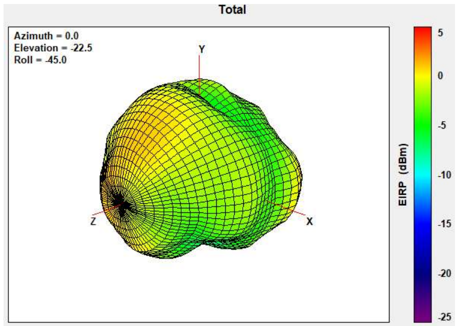
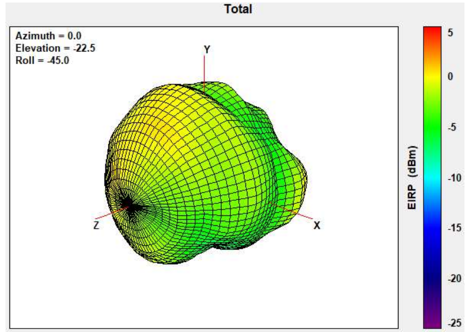
Antenna Gain table_Free Space

	Frequency (MHz)	2400	2402	2441	2450	2480	2500
mouse	Average Gain (dBi)	-2.56	-2.56	-2.39	-2.42	-2.81	-3.06
	Peak Gain (dBi)	2.71	2.71	2.08	1.75	0.74	0.32
	Efficiency(%)	55.46	55.40	57.73	57.29	52.38	49.42
	Average Efficiency (%)	54.06					

Antenna Gain table_Whit Phantom Hand

mouse	Frequency (MHz)	2400	2402	2441	2450	2480	2500
	Average Gain (dBi)	-4.34	-4.35	-4.18	-4.18	-4.64	-4.95
	Peak Gain (dBi)	-0.31	-0.37	-0.48	-0.32	-0.61	-0.96
	Efficiency(%)	36.82	36.72	38.17	38.18	34.39	31.98
	Average Efficiency (%)	35.66					

Antenna 3D Pattern_Free Space

Chamber coordinate			
	2400 MHz	2450 MHz	2500 MHz
1955 mouse			

Antenna 3D Pattern_With Phantom Hand

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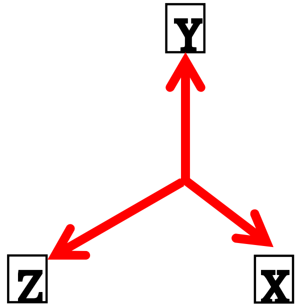
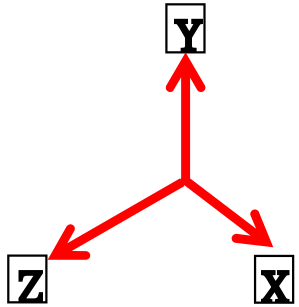
<tr><td>Chamber coordinate</td><td colspan="2"> 
</td><td colspan="2"> 
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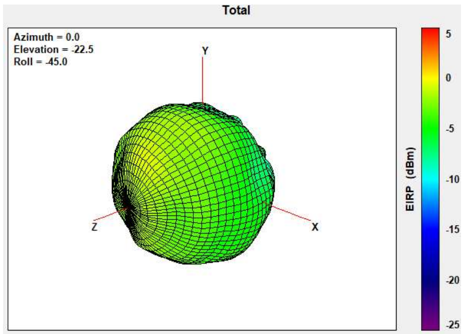
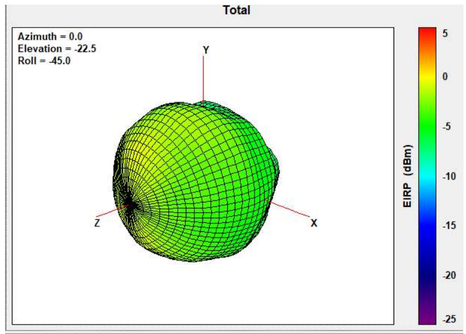
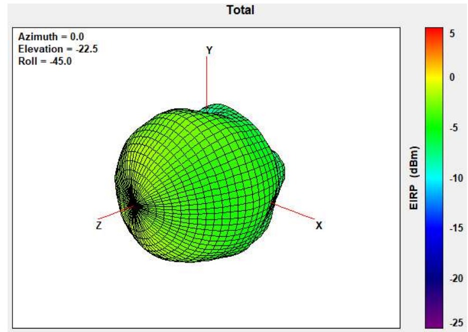
<tr><td></td><td>2400 MHz</td><td colspan="2">2450 MHz</td><td>2500 MHz</td></tr>
<tr><td>mouse</td><td> 
</td><td colspan="2"> 
</td><td> 
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