Wireless LAN Design Department,,
Wistron Corp.

Bluetooth
Antenna test report
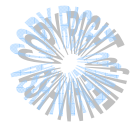
2007/4/13
Kevin Changchien
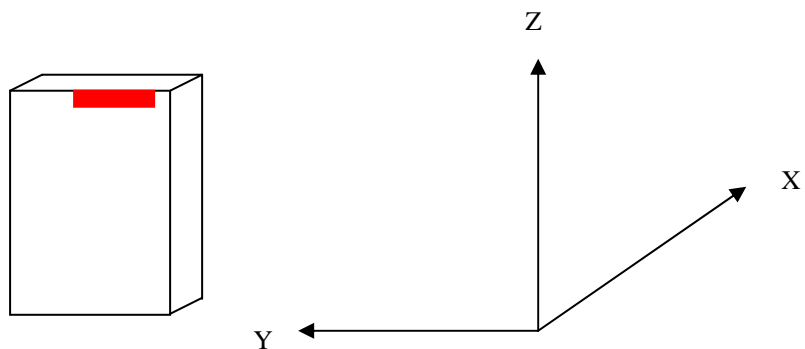
1. **Test purpose:**
   Bluetooth antenna in housing pattern measurement.

2. **Test setting:**

BT antenna Location

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3. **Test item:**
    S11 return loss, SWR, Impedance, Antenna Gain, Radiation Pattern.

3.1 S11 return loss:

Frequency (GHz)	2.4 (Mark 2)	2.441(Mark 1)	2.5(Mark 3)
Return loss (dB)	-15.620	-29.263	-14.107

Table 1
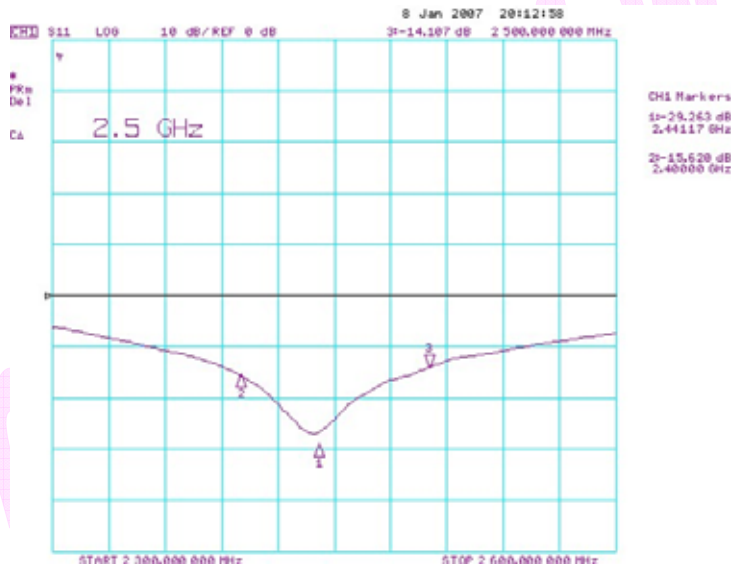
Fig. 2 return loss

3.2 SWR (modify bandwidth in 2.4~2.5)

Frequency (GHz)	2.4 (Mark 2)	2.441(Mark 1)	2.5(Mark 3)
SWR	1.3265	1.0161	1.3663

Table 2

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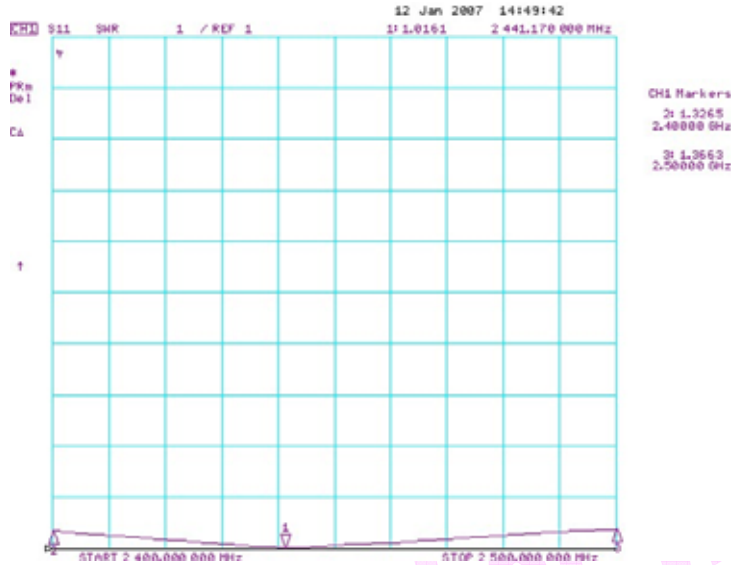
Fig. 3 SWR

3.3 Impedance

Frequency (GHz)	2.4 (Mark 2)	2.45(Mark 1)	2.5(Mark 3)
imprdance	43.209-j13.787	46.539+j2.6484	54.021+j2.6484

Table 3
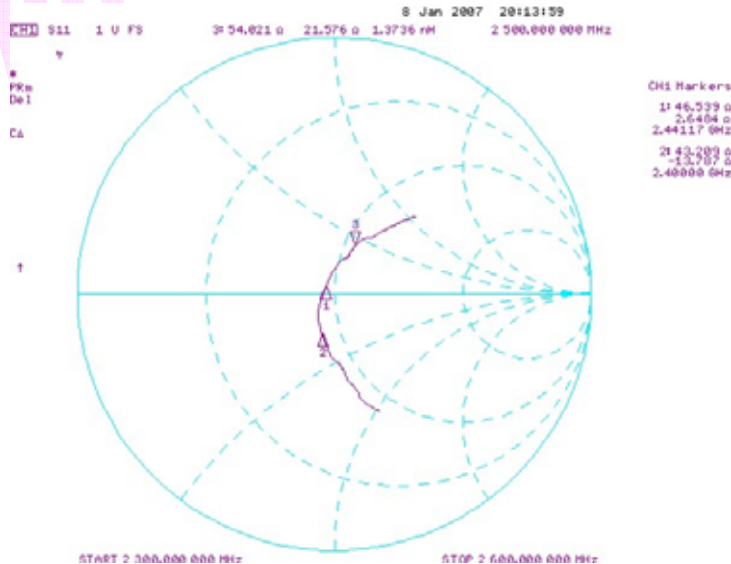
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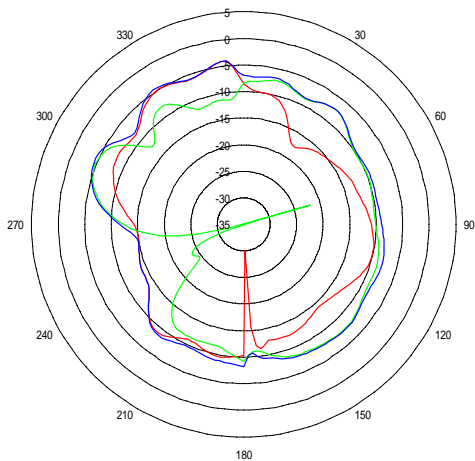
4. Pattern:
4.1 2.4G Hz:

X-Z plane
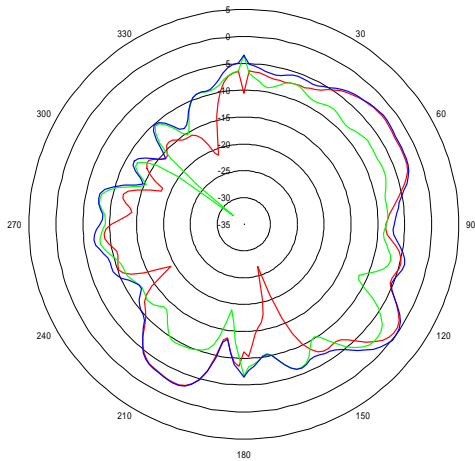
Y-Z plane

Average gain	-5.63 dBi
Peak gain	0.08 dBi
Efficiency	29.77%
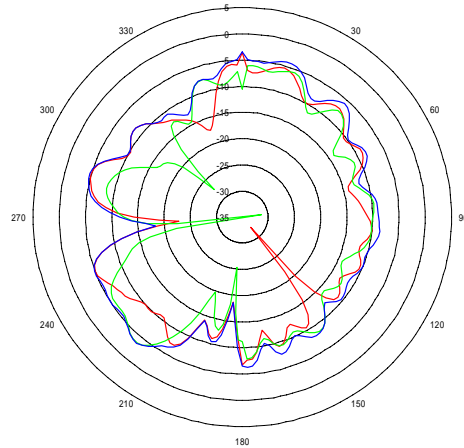
Average gain	-7.7 dBi
Peak gain	-3.49 dBi
Efficiency	29.77%

X-Y plane

Average gain	-7.9 dBi
Peak gain	-4.01 dBi
Efficiency	29.7662.51%

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4.2 2.45G Hz

X-Z plane
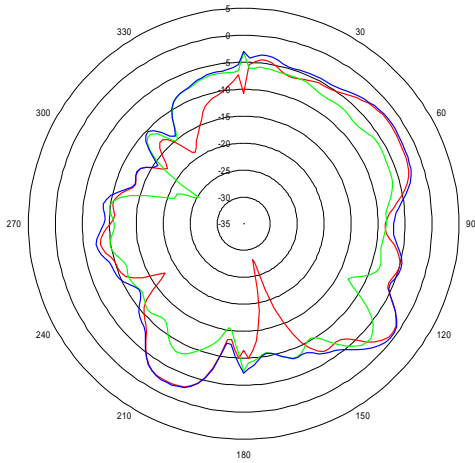
Y-Z plane

Average gain	-5.5 dBi
Peak gain	-0.43 dBi
Efficiency	30.05%
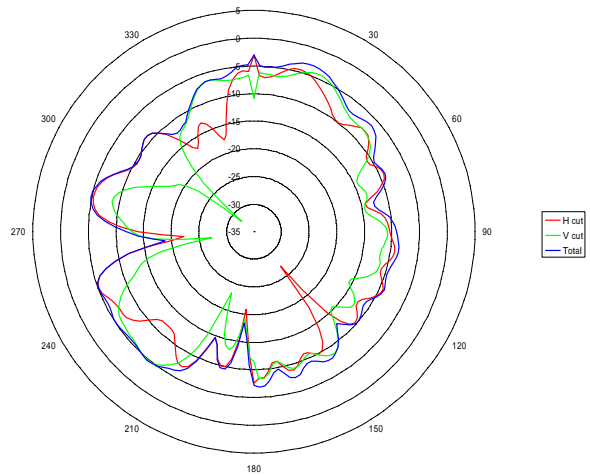
Average gain	-7.48dBi
Peak gain	-3.08 dBi
Efficiency	30.05%

X-Y plane
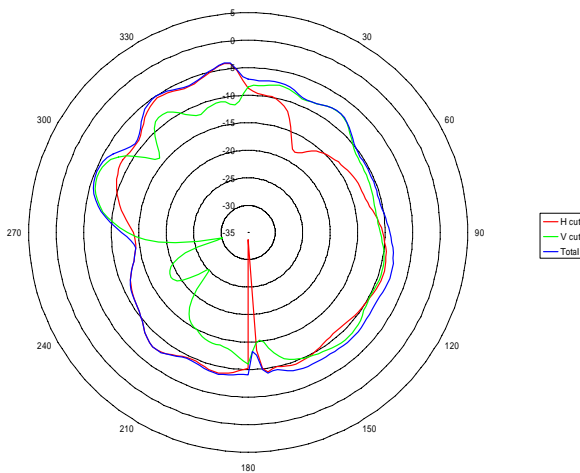
Average gain	-8.1dBi
Peak gain	-3.88 dBi
Efficiency	30.05%

4.3 2.5G Hz
X-Z plane
Y-Z plane
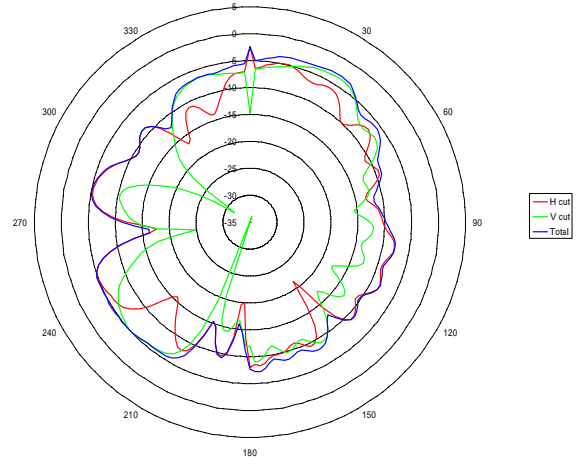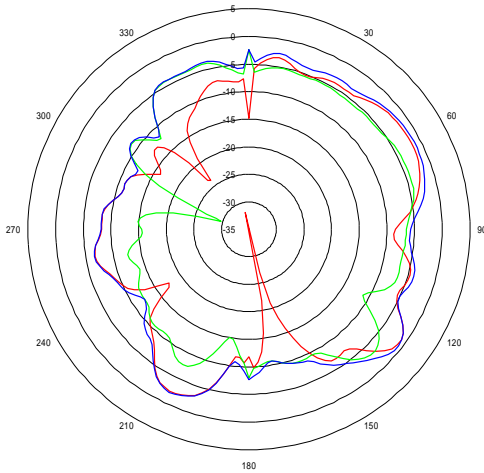
Average gain	-4.79 dBi
Peak gain	-0.62 dBi
Efficiency	34.42%

Average gain	-6.97dBi
Peak gain	-2.4 dBi
Efficiency	34.42%

X-Y plane
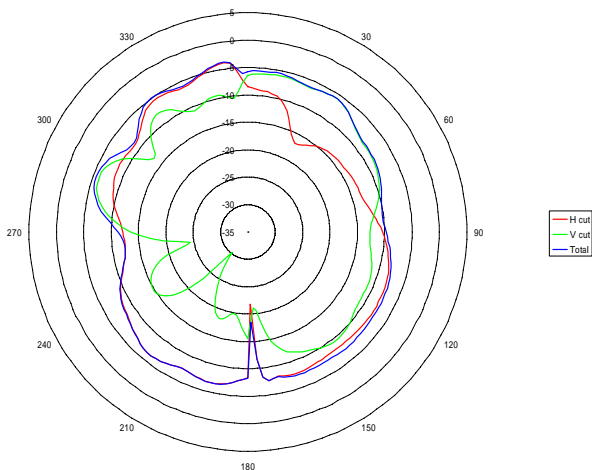
Average gain	-7.19dBi
Peak gain	-3.67 dBi
Efficiency	34.42%