RF Report

Longcheer DWL W660-BT

CONTENT

1. General information

- Bar type phone, BT antenna located at the top.
- Bands: BT
- PIFA antenna

2. Test information

2.1 Matching circuit

Matching circuit of main antenna and BT antenna please refer to the following graphic.
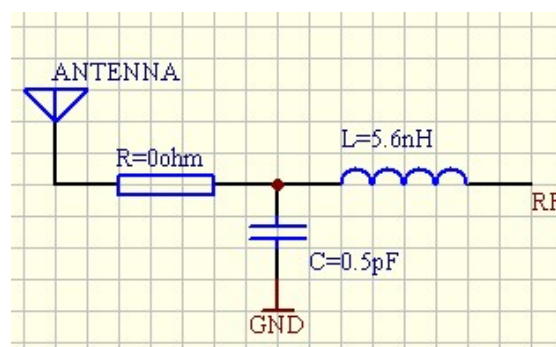
BT antenna

Figure.1 matching circuit

3. Set up

3.1 Return Loss, VSWR

Return Loss, VSWR were performed using Agilent E5071C Network Analyzer and the previously described test fixture. A ferrite-loaded coaxial cable was used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

Figure.2 testing instrument

3.2 Efficiency

The efficiency of the antenna was measured in the Speed Communication Technology

anechoic chamber. The chamber provides less than –40 dB reflectivity from 410 MHz through 6 GHz and 25cm diameter spherical quite zone. The measurement results are calibrated using both dipole and leaky wave horn standards.
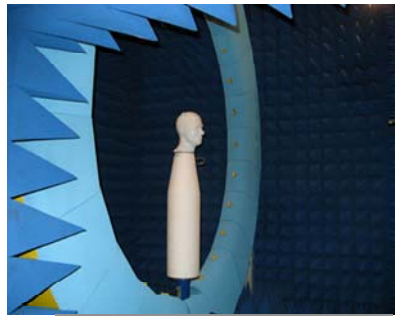

Figure.3 speed chamber system

3.3   TRP Measurement Procedure and Settings

The following procedure shall be applied:
• Establish a call to the mobile, set maximum RF output power.
• Execute a full three dimensional (3D) measurement as described and Using:

Δφ ≤ 22.5°

ΔΘ ≤ 15°

And   at three TX frequencies according to: low, mid and high.

(Note: CTIA asks for: 15° and 15°)

• Measure both vertical and horizontal polarization's.
• Calculate one TRP value for the appropriate band as described in 2.

3.4   TIS Measurement Procedure and Settings

The following procedure shall be applied:
• Establish a call to the mobile, set maximum RF output power.
• Execute a full three dimensional (3D) measurement as described Using:

Δφ ≤ 30°

ΔΘ ≤ 30°

• Measure both vertical and horizontal polarizations.
• An estimation of the additional uncertainty caused by the "pattern is equal" assumption shall be provided
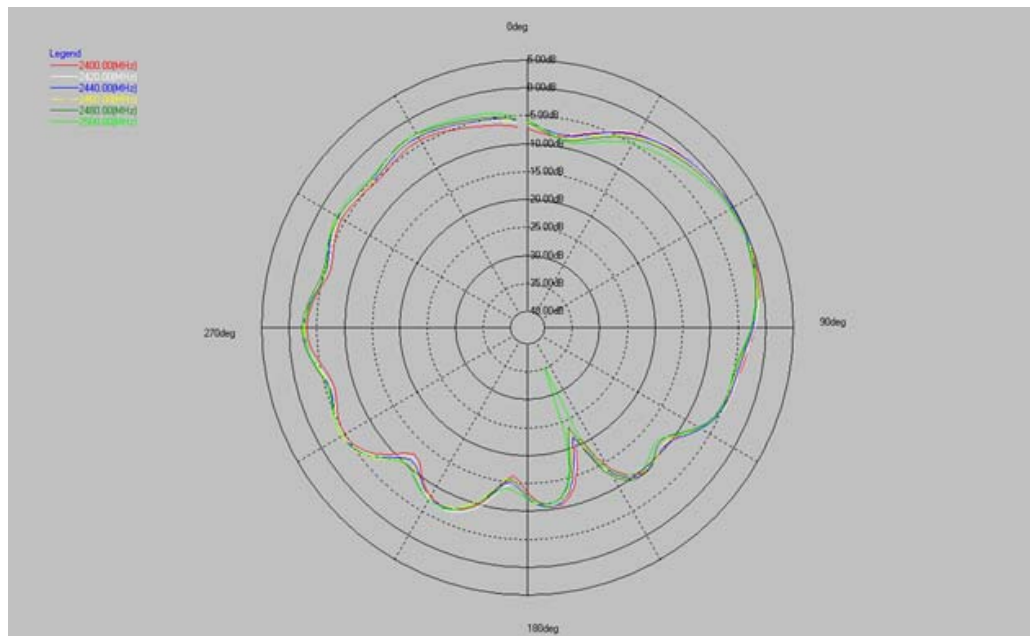
4. Measurement Data

Efficiency & Gain

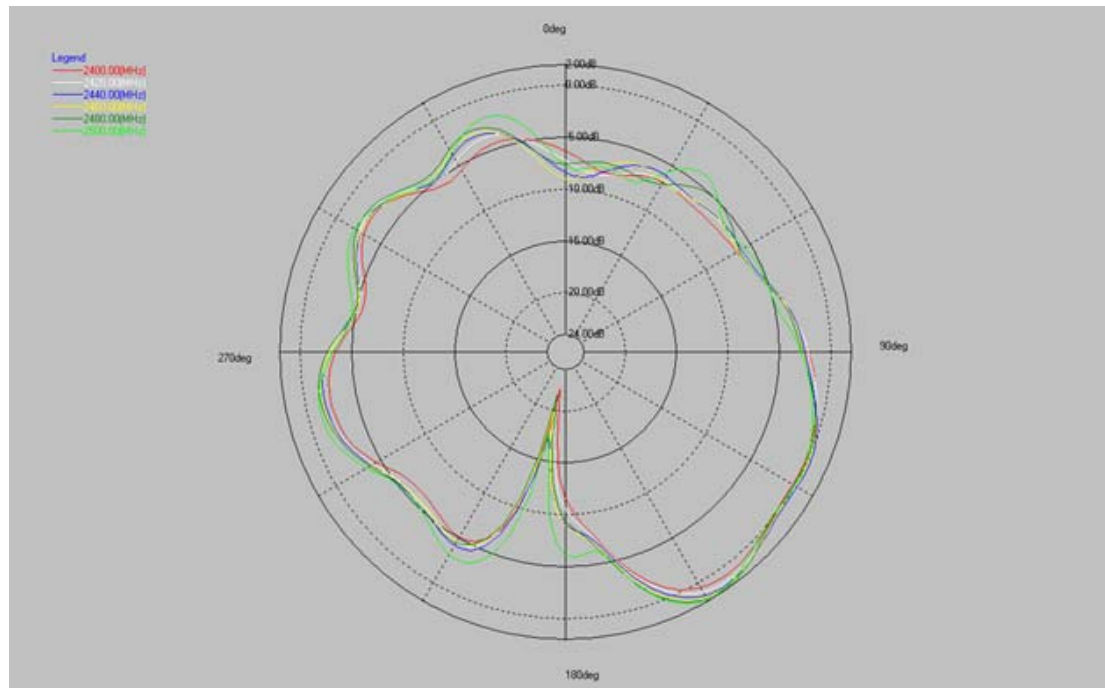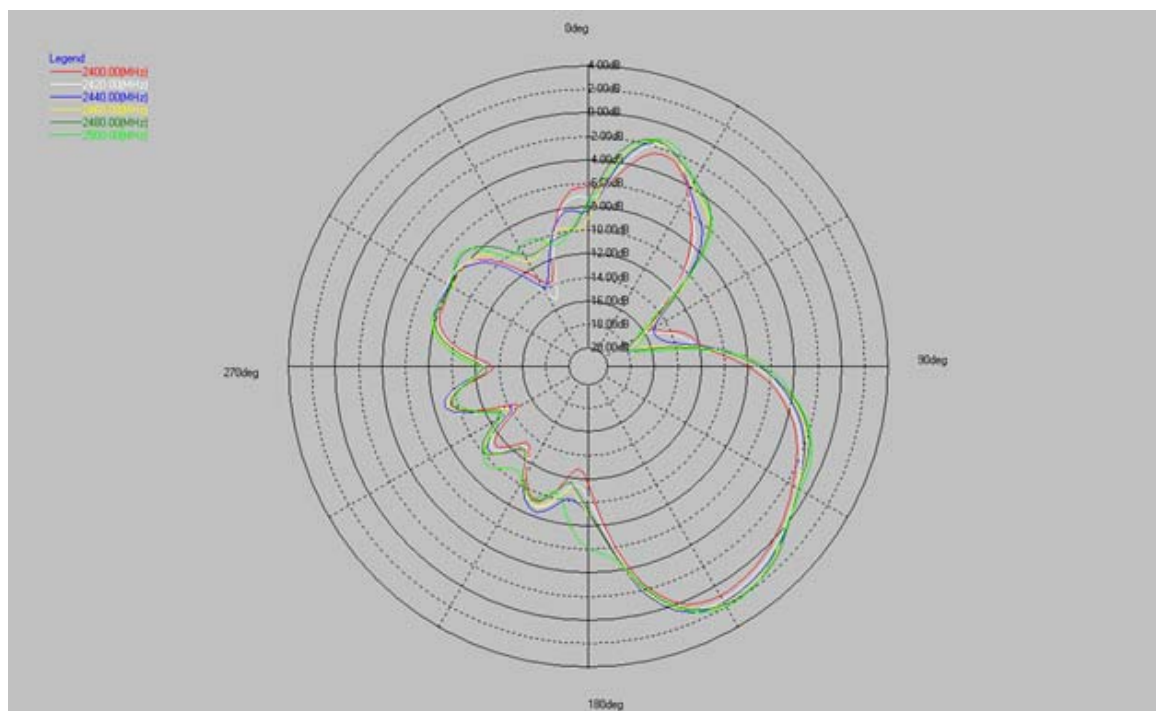| Frequency(Mhz)	2400	2420	2440	2460	2480	2500
Efficiency	31%	32%	33%	33%	35%	33%
Average Gain(dB)	−5.01	−4.97	−4.86	−4.86	−4.56	−4.86
Max Gain(dB)	−1.53	−1.49	−1.47	−1.5	−1.46	−1.48

Return loss
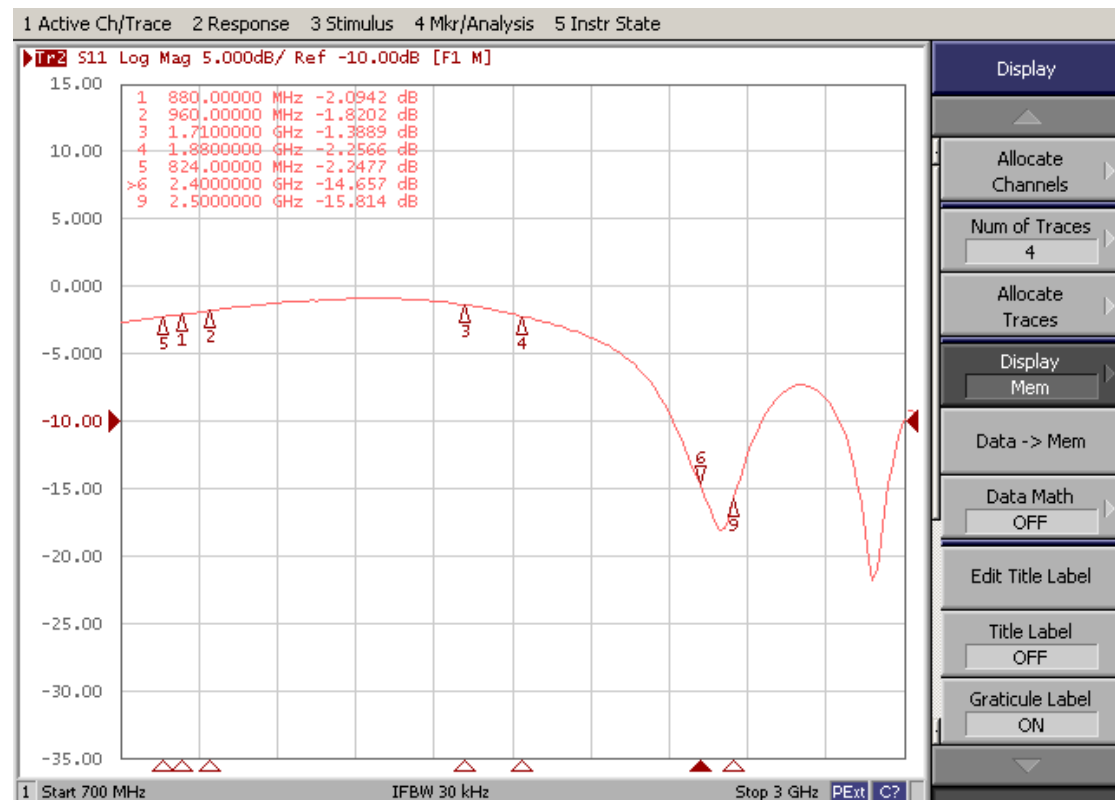
PATTERN

H Plane

E1 Plane

E2 Plane

5. Conclusion and comments

This report summarizes the electrical performance of internal monopole antenna for W660. The antenna was tested using the customer provided phone test fixture. SCT team is looking forward to getting your approval. Thanks for your cooperation.