Antenna Test Report

Inverted F-Trace Antenna

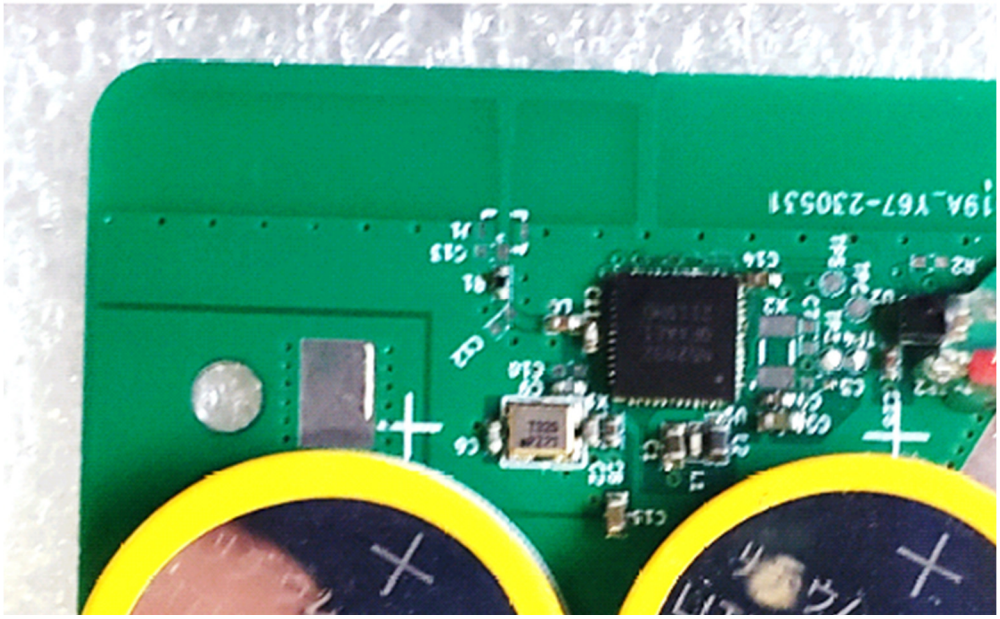

Figure 1. EUT antenna design

Table 1. Measured Field Strength from Test Report

Test: FCC Part 15,247(d), Test Distance= 3 m								
Frequency (MHz)	**Test Data (dBuV)**	**Additional Factor**	**AF+CL-PA (dB/m)**	**Corrected Results (dBuV/m)**	**Limits (dBuV/m)**	**Distance / Polarization**	**Margin (dB)**	**Detector**
Low Channel - PEAK								
2402.00	68.42	0.00	32.35	100.77	--	3.0m./HORZ	--	**PK**
Mid Channel – PEAK								
2442.00	68.30	0.00	32.55	100.85	--	3.0m./VERT	--	**PK**
High Channel– PEAK								
2480.00	66.30	0.00	32.81	99.11	--	3.0m./VERT	--	**PK**

Antenna gain calculated using the following equations to convert the measured field strength value to V/m.

$$\text{dBuV/m to V/m} = 10^{\left(\frac{[\text{dBuV/m}] - 120}{20}\right)}$$

Table 2. Converted Fundamental to V/m

Frequency of Fundamental (MHz)	V/m	
2402	0.109	
2442	0.110	
2480	0.090	

Table 3. Measured Conducted Output Power from Test Report

Frequency of Fundamental (MHz)	Raw Test Data dBm	Converted Data (mW)
2402	0.99	1.26
2442	0.77	1.19
2480	0.66	1.16

Gain numeric = (Meters * V/m)^2/(30*Watts)
Watts = measured conducted output power from Table 3 above.
Gain numeric to Gain dBi = 10^(Gain numeric/10)

Table 4. Antenna Gain

Frequency of Fundamental (MHz)	Gain Numeric	Gain dBi	Peak Antenna Gain dBi
2402	2.828	1.91	2.01
2442	3.050	2.01	
2480	2.094	1.61	