Annex E – FCC §15.209 Band Edges Measurement

Below measurements are in units of dBuV/m at 3meters. These measurements are performed conducted in lieu of radiated as permitted by ANSI C63.10-2013. The formulas presented below were used in making such conversions.

Above 1 GHz:

$$E[dB\mu V/m] = EIRP[dBm] - 20 \log (d[m]) + 104.77$$

where E is field strength and d is distance at which the field strength limit is specified in the applicable requirements.

$$E[dB\mu V/m] = EIRP[dBm] + 95.2$$

for d = 3 m.

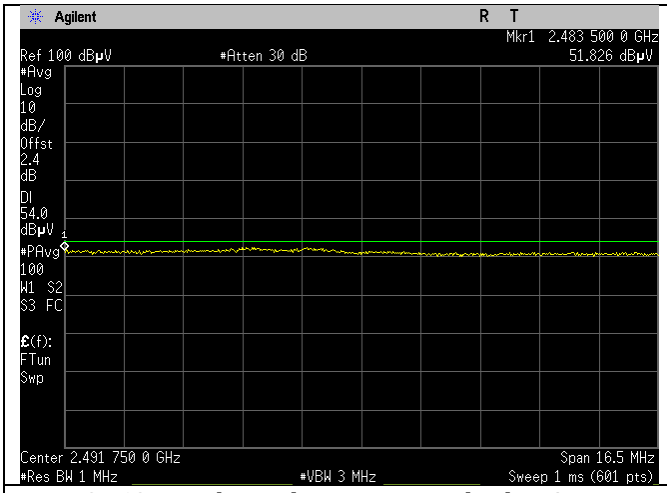
Straight conversion between E[dBuV/m] and EIRP[dBm} = 107, thus offset for dBuV/m at 3meters is

$$E[dB\mu V/m] = EIRP[dBm] – 95.2 + 107 + Antenna\ Gain\ (dBi)$$

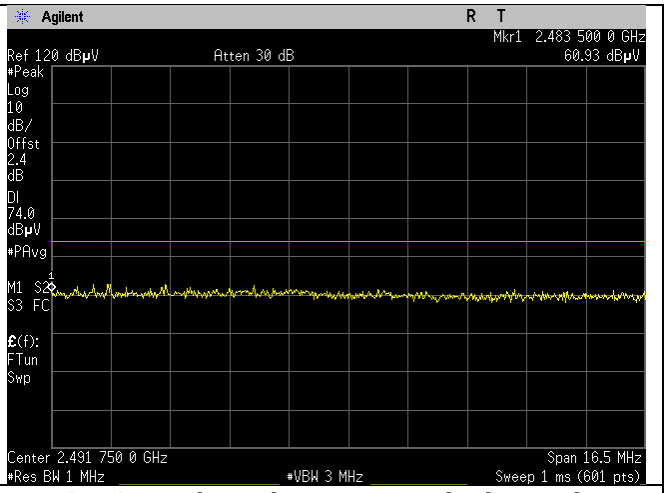
Note: duty cycle correction factor need be added to average measurements

BandEdge	Frequency (GHz)	S.A. Reading (dBµV/m @3m)	Duty Cycle Correction Factor (dB)	Corrected Amplitude (dBµV/m @3m)	Limit (dBµV/m @ 3m)	Margin (dB)
802.11b						
Low	2.3900	51.467	0.269	51.736	54	-2.264
High	2.4835	51.826	0.269	52.095	54	-1.905
802.11g						
Low	2.3900	53.345	0.282	53.627	54	-0.373
High	2.4835	52.371	0.282	52.653	54	-1.347

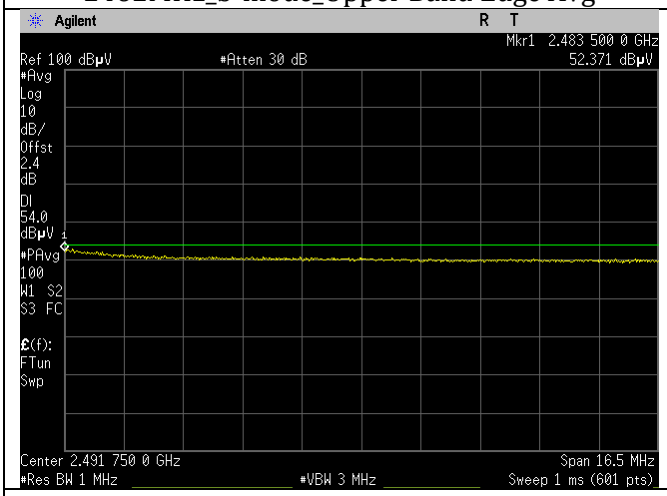
Naming Convention: Frequency(MHz)_mode_measurement(Peak,Avg)



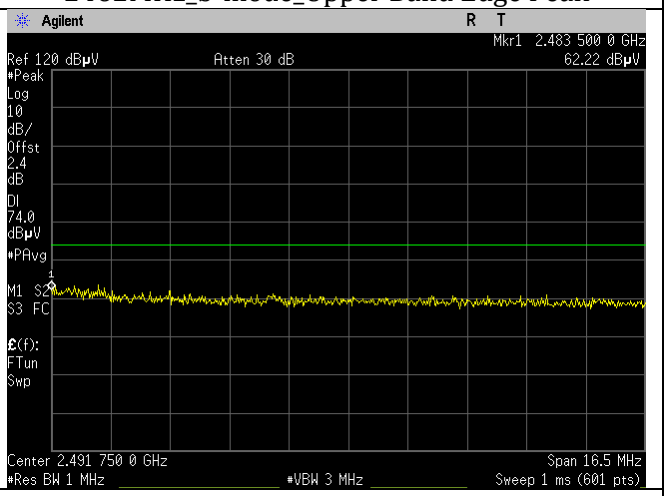
2462MHz_b-mode_Upper Band Edge Avg



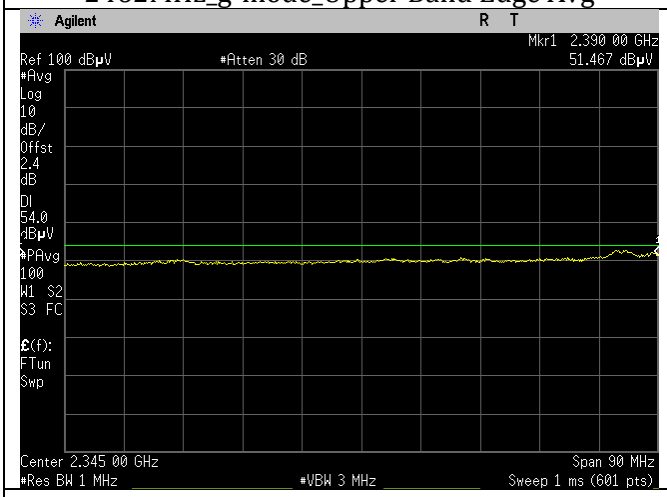
2462MHz_b-mode_Upper Band Edge Peak



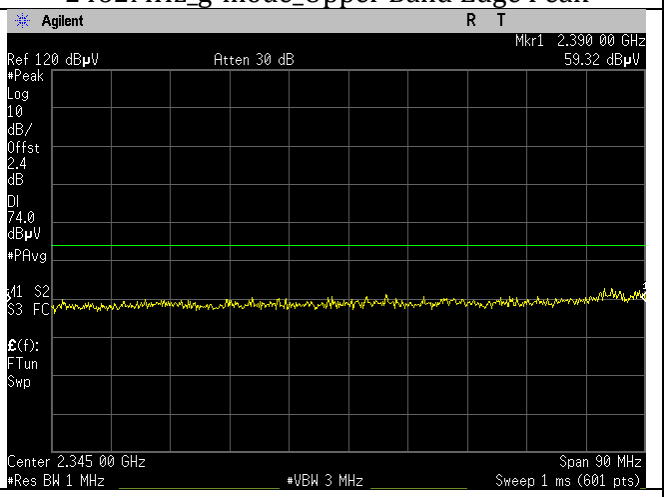
2462MHz_g-mode_Upper Band Edge Avg



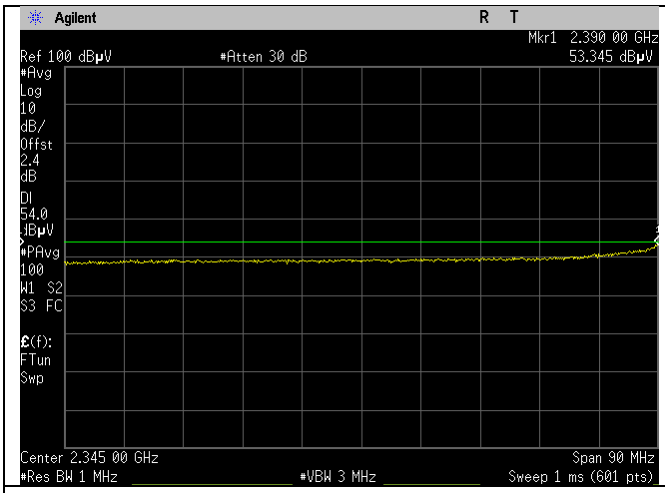
2462MHz_g-mode_Upper Band Edge Peak



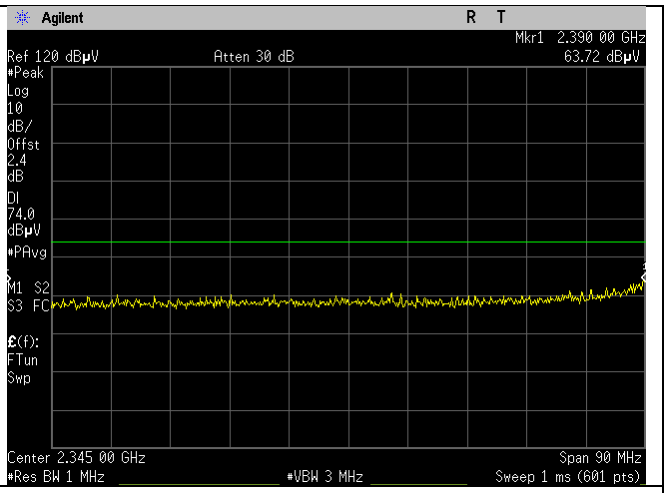
2412MHz_b-mode_Lower Band Edge Avg



2412MHz_b-mode_Lower Band Edge Peak



2412MHz_g-mode_Lower Band Edge Avg



2412MHz_g-mode_Lower Band Edge Peak