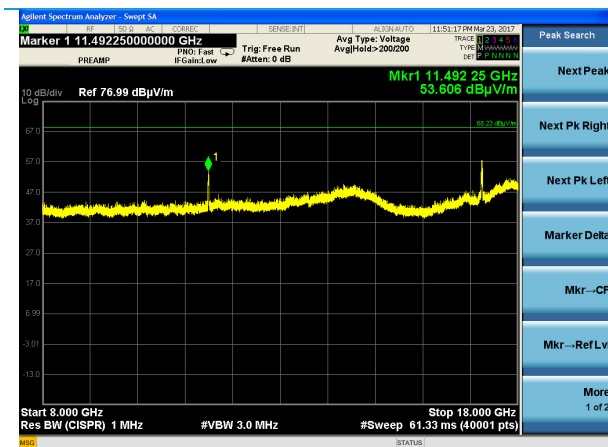
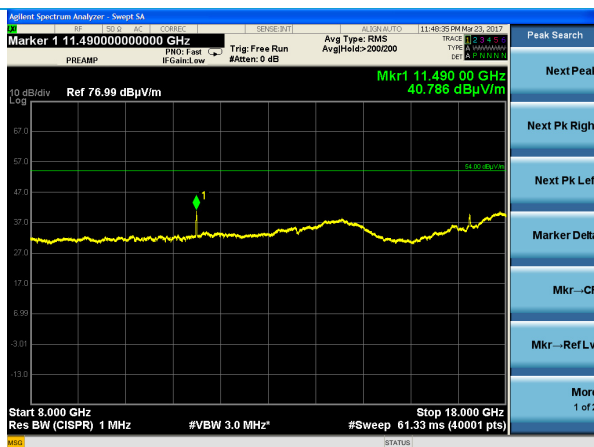


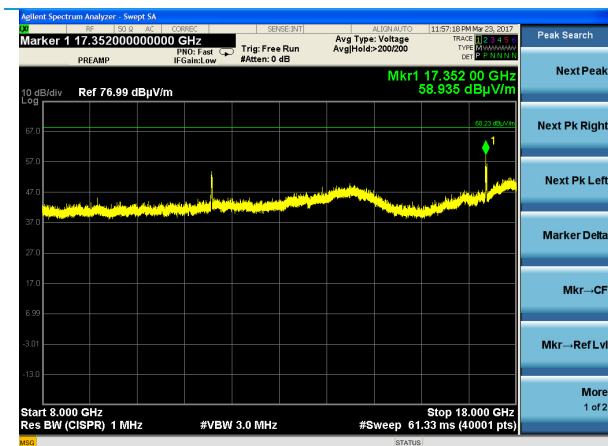
Plots – U-NII-3 Harmonic Emissions



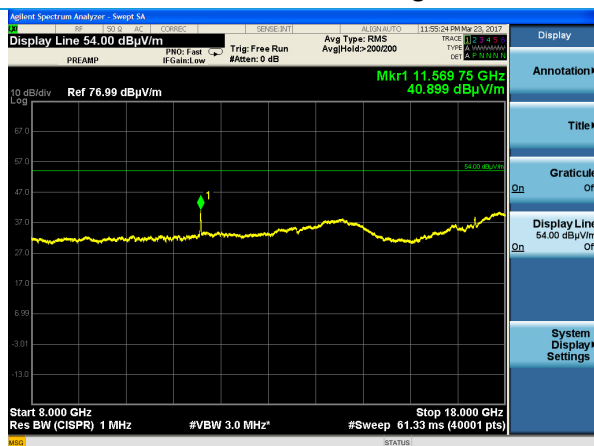
Low Channel – Peak



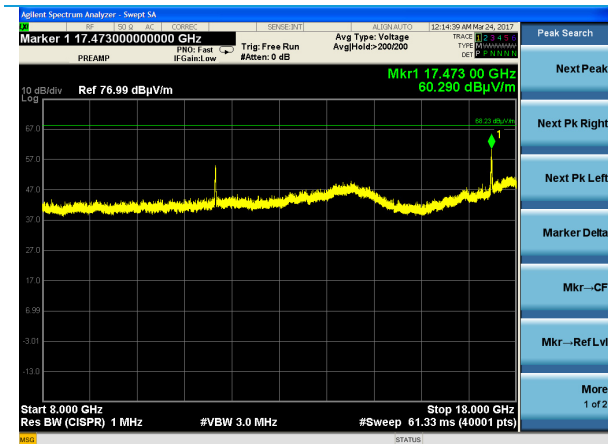
Low Channel - Average



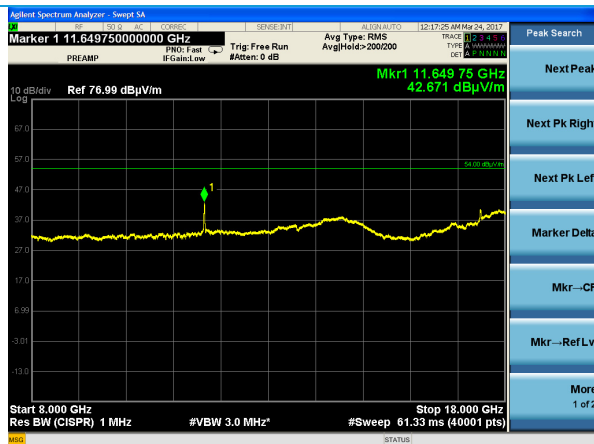
Mid Channel – Peak



Mid Channel - Average



High Channel – Peak



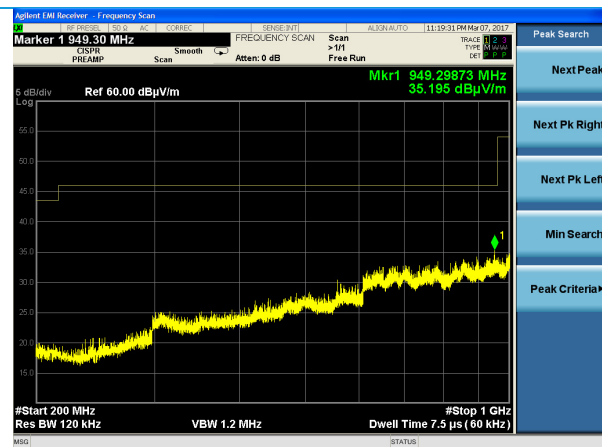
High Channel - Average

Plots – U-NII Spurious Emissions

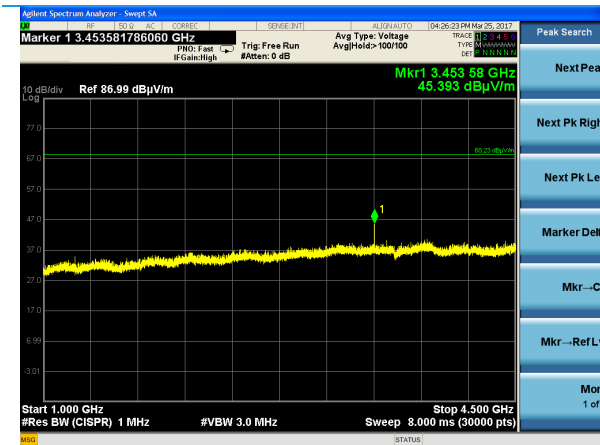
Plots show worst case (highest) emissions in the respective frequency range over all U-NII bands, unless otherwise noted.



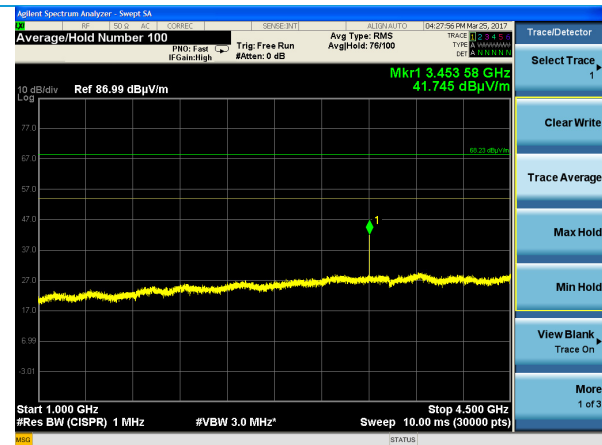
30-200 MHz



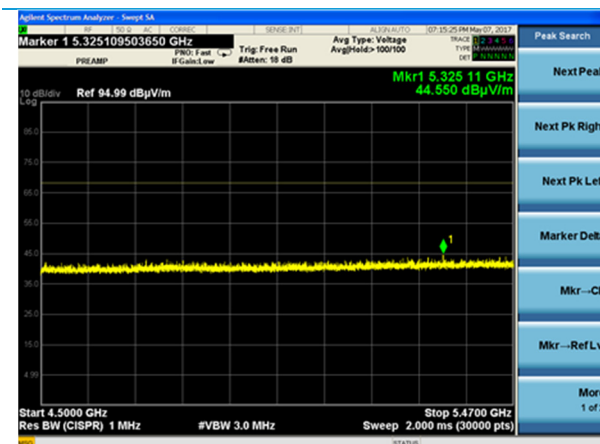
200-1000 MHz



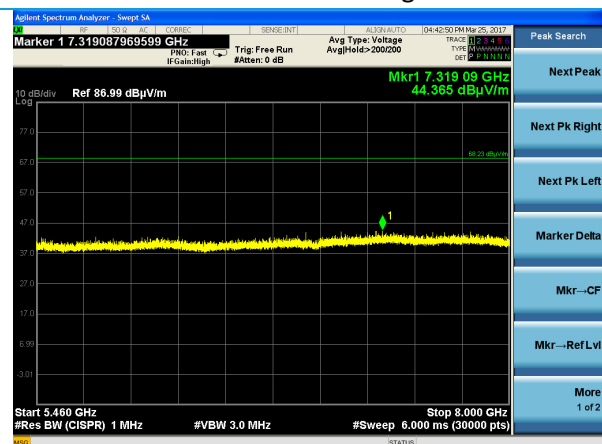
1-4.5 GHz – Peak



1-4.5 GHz – Average



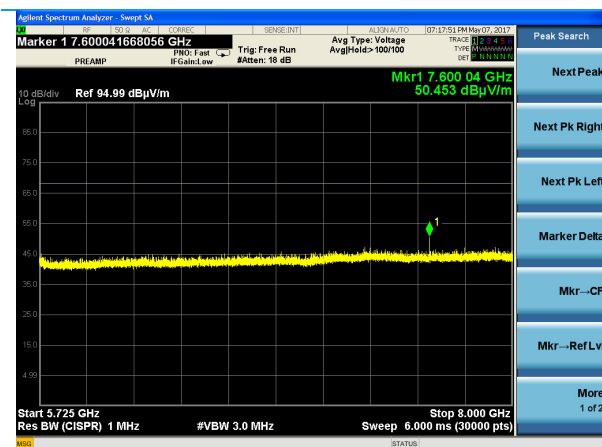
4.5-5.47 GHz – Peak (U-NII-2C/U-NII-3)



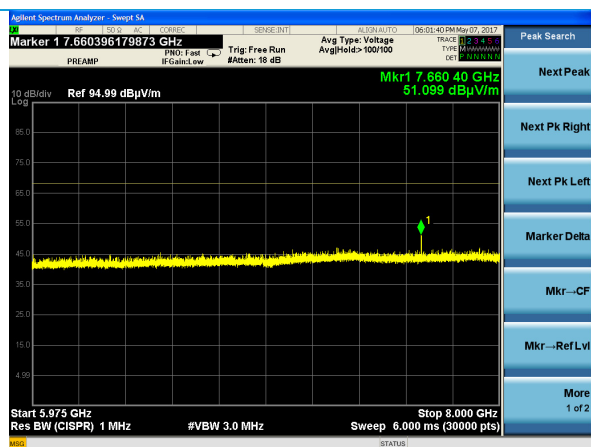
5.46-8 GHz – Peak (U-NII-1/U-NII-2A)

Plots – U-NII Spurious Emissions

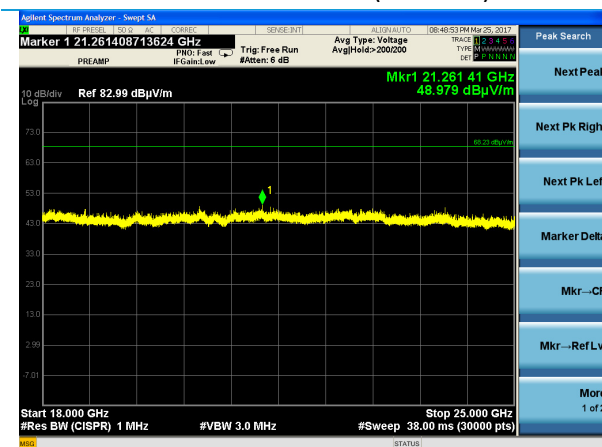
Plots show worst case (highest) emissions in the respective frequency range over all U-NII bands, unless otherwise noted.



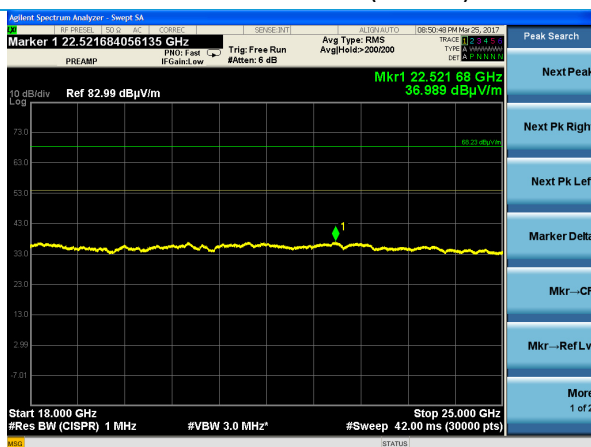
5.725-8 GHz – Peak (U-NII-2C)



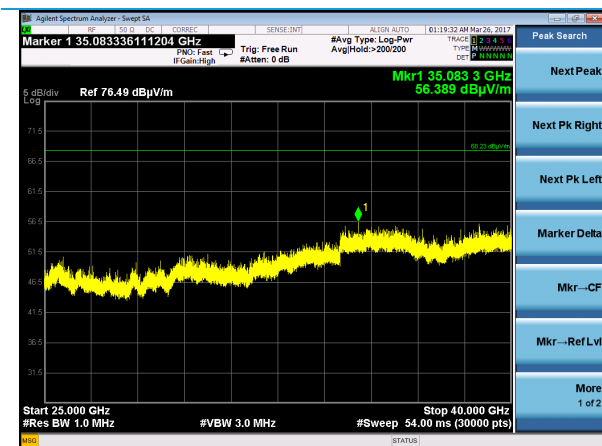
5.975-8 GHz – Peak (U-NII-3)



18-25 GHz – Peak



18-25 GHz – Average



25-40 GHz – Peak



25-40 GHz – Average

5.3 AC Mains Conducted Emissions

A line impedance stabilization network (LISN) or artificial mains network (AMN) allows the emissions of the power supply conductors to be measured while isolating the EUT from the supply mains.

Description of Measurement

The AMN, cable, and other necessary measurement system correction factors are loaded onto the EMI receiver when the measurements are performed. The data is gathered and reported as the corrected values.

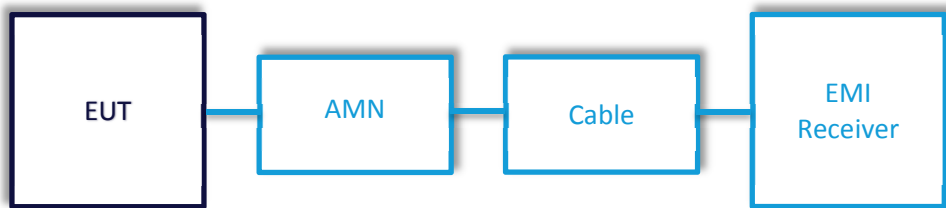
Maximum emissions are determined with a peak max hold trace then measurements at a selection of the highest points are made with quasi-peak and average detectors. Results are recorded and compared to limit for each line. (e.g. line and neutral)

Example Calculations

$$\text{Measurement (dB}\mu\text{V)} + \text{Cable factor (dB)} + \text{Other (dB)} = \text{Corrected Reading (dB}\mu\text{V)}$$

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V)} - \text{Corrected Reading (dB}\mu\text{V)}$$

Block Diagram



5.3.1 AC Mains Conducted Emissions

Operator	Kimberly Bay
QA	Shane Dock
Test Date	April 4, 2017
Location	H+V Ground Plane
Temp. / R.H.	21°C / 43% R.H.
Requirement	FCC 15.407 (b)(6) / RSS-GEN Section 8.8
Method	ANSI C63.10 2013 Section 6.2

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

Test Parameters

Frequency	.150-30 MHz
Settings	RBW = 9 kHz, VBW = 90 kHz
EUT	5745 MHz, 80211a, 6 Mbps, maximum transmission power setting
Notes	No change of emissions between channels/data rates Off-the-shelf adapter used to provide 3.3VDC
Example Calculation	Raw Data + Correction Factor = Reported Data 20.75 dBμV + 0.78 dB = 21.53 dBμV

Instrumentation



Date: 4-Apr-2017

Type Test: Bluetooth Cond AC Emissions

Job #: C-2602

Prepared By: Kim

Customer: LSR

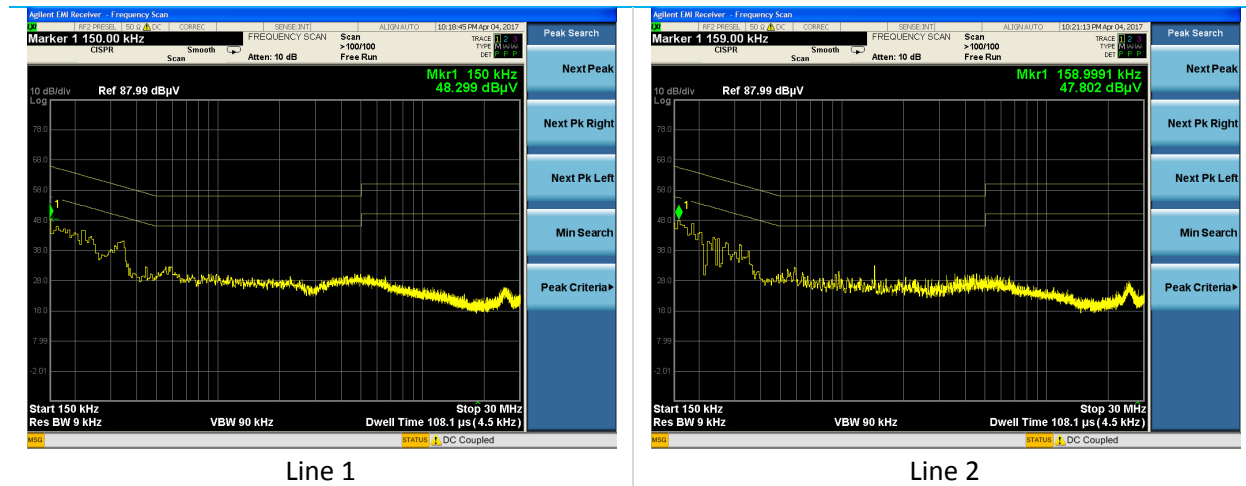
Quote #: 316356

No.	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	EE 960089	USN	COM-POWER	LI-215A	191943	3/13/2017	3/13/2018	Active Calibration
2	EE 960088	MXE Spectrum Analyzer	Agilent	N9038A	MY51210138	3/2/2017	3/2/2018	Active Calibration

Table – Conducted AC Emissions Data

Frequency (MHz)	Line	Quasi-Peak			Average		
		Q-Peak Reading (dBμV)	Q-Peak Limit (dBμV)	Quasi-Peak Margin (dB)	Average Reading (dBμV)	Average Limit (dBμV)	Average Margin (dB)
0.150	1	43.4	66.0	22.6	33.2	56.0	22.8
0.330	1	39.9	59.5	19.6	30.9	49.5	18.6
0.199	1	40.5	63.7	23.1	30.7	53.7	22.9
0.159	2	43.9	65.5	21.6	23.2	55.5	32.3
0.186	2	43.7	64.2	20.5	22.1	54.2	32.1
0.330	2	37.9	59.5	21.5	27.5	49.5	22.0

Plots – Conducted AC Emissions



6 REVISION HISTORY

Version	Date	Notes	Person
V0	5/1/2017	Initial Draft Release	KB
V1	5/9/2017	Final Release for TCB review	KB

END OF REPORT