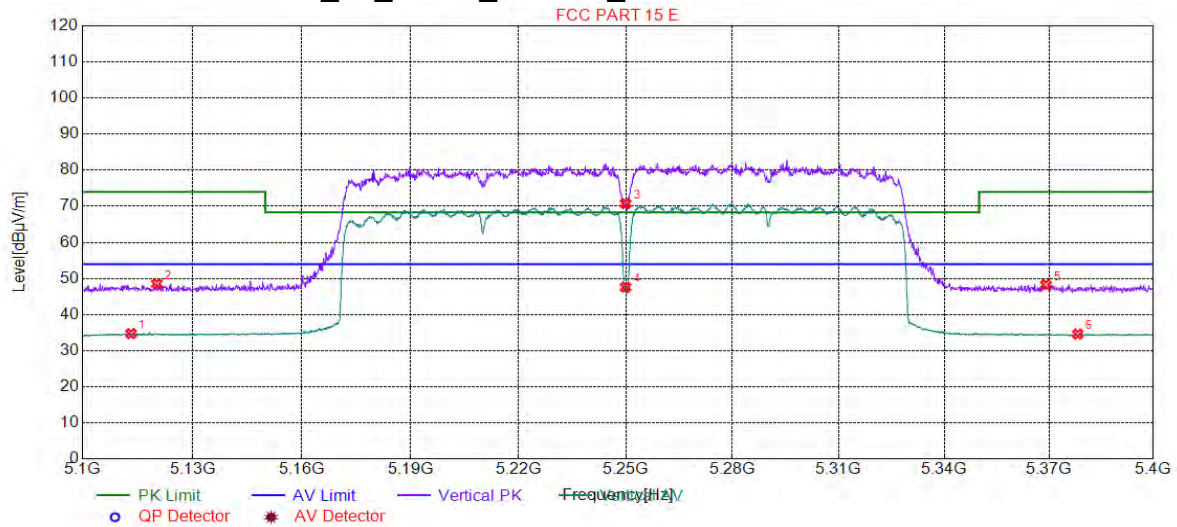


4.3.1.185 11AC160_50_MIMO_ ANT 1_ Vertical

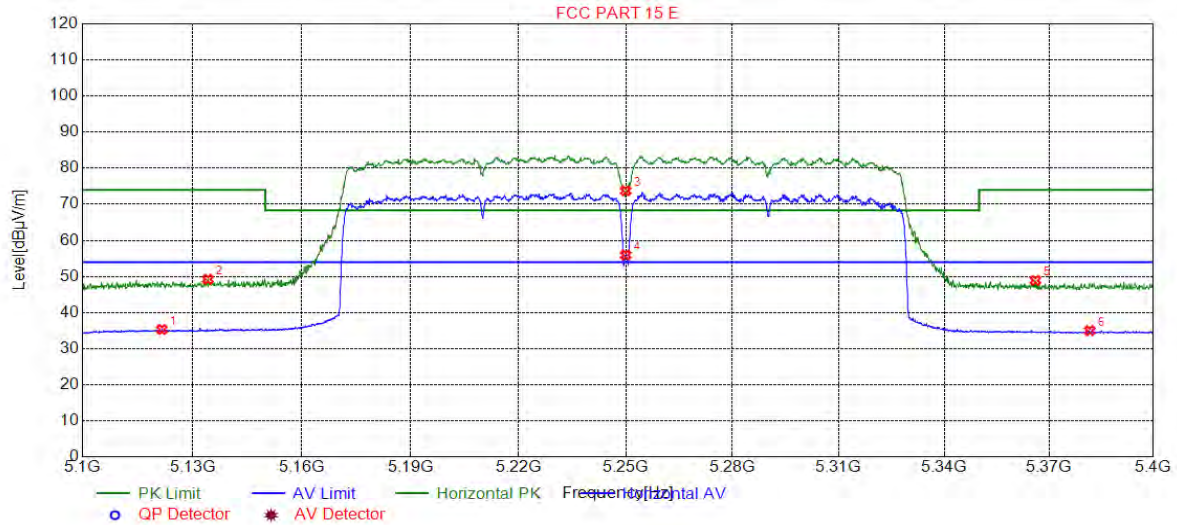


Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	5113.20	34.72	7.49	54.00	19.28	150	305	Vertical
2	5120.26	48.54	7.50	74.00	25.46	150	301	Vertical
3	5250.00	70.75	7.69	68.30	-2.45	150	308	Vertical
4	5250.00	47.60	7.69	54.00	6.40	150	308	Vertical
5	5369.08	48.30	7.88	74.00	25.70	150	320	Vertical
6	5378.23	34.61	7.90	54.00	19.39	150	346	Vertical



4.3.1.186 11AC160_50_MIMO_ANT 1_Horizontal

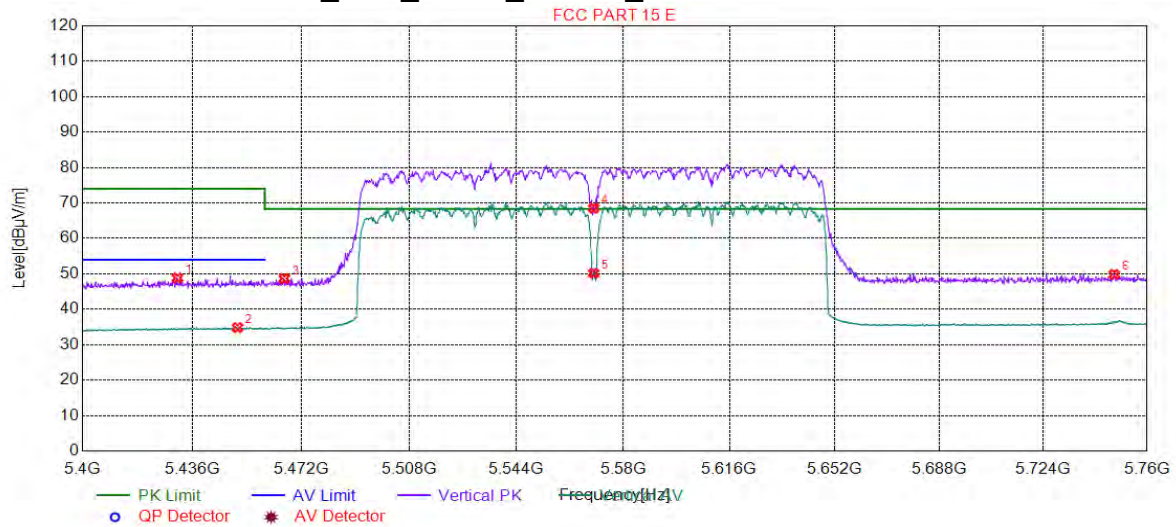


Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	5121.61	35.32	7.51	54.00	18.68	150	242	Horizontal
2	5134.21	49.22	7.53	74.00	24.78	150	70	Horizontal
3	5250.00	73.75	7.69	68.30	-5.45	150	78	Horizontal
4	5250.00	55.94	7.69	54.00	-1.94	150	242	Horizontal
5	5366.08	48.93	7.87	74.00	25.07	150	242	Horizontal
6	5381.69	34.99	7.90	54.00	19.01	150	234	Horizontal



4.3.1.187 11AC160_114_MIMO_ANT 1_Vertical

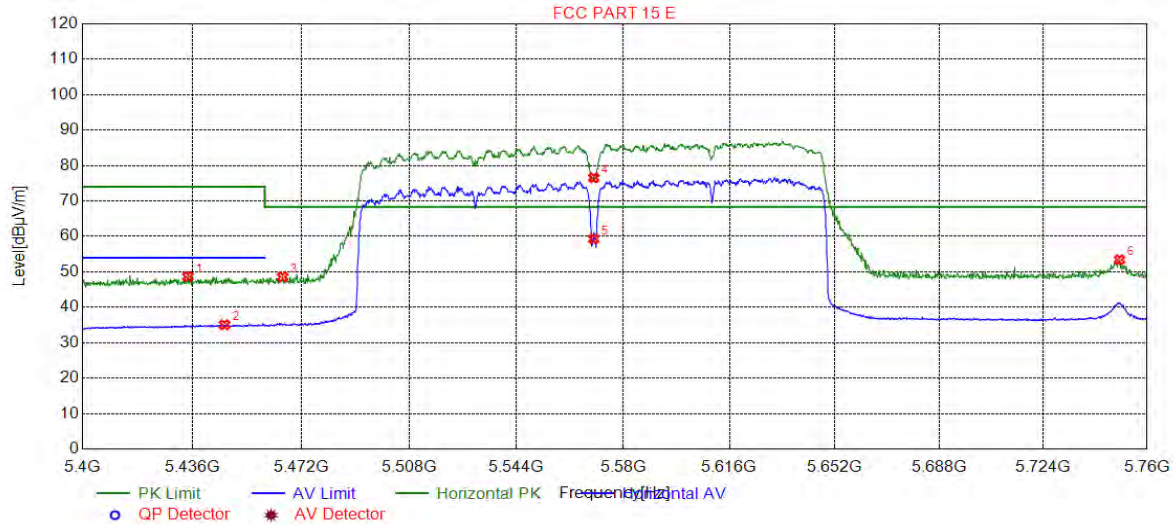


Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	5431.15	48.85	7.99	74.00	25.15	150	168	Vertical
2	5450.96	34.86	8.02	54.00	19.14	150	306	Vertical
3	5466.45	48.71	8.05	68.30	19.59	150	278	Vertical
4	5570.00	68.54	8.28	68.30	-0.24	150	1	Vertical
5	5570.00	50.19	8.28	0.00	-50.19	150	325	Vertical
6	5748.65	49.88	8.62	68.30	18.42	150	59	Vertical



4.3.1.188 11AC160_114_MIMO_ANT 1_Horizontal



Suspected List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	5434.57	48.66	8.00	74.00	25.34	150	181	Horizontal
2	5446.64	35.07	8.01	54.00	18.93	150	205	Horizontal
3	5465.91	48.57	8.05	68.30	19.73	150	233	Horizontal
4	5570.00	76.54	8.28	68.30	-8.24	150	77	Horizontal
5	5570.00	59.32	8.28	0.00	-59.32	150	233	Horizontal
6	5750.45	53.43	8.63	68.30	14.87	150	73	Horizontal

Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

All modes have been tested, but only the worst case data displayed in this report.





5 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radiated Spurious emission test	±4.5dB (30MHz-1GHz)
		±4.8dB (1GHz-25GHz)
2	Conduct emission test	±3.12 dB(9KHz- 30MHz)
3	Temperature test	±1°C
4	Humidity test	±3%
5	DC and low frequency voltages	±0.5%





6 Equipment List

Conducted Emission					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
Shielding Room	ZhongYu Electron	GB-88	SEM001-06	2017/5/10	2020/5/9
LISN	Rohde & Schwarz	ENV216	SEM007-01	2018/9/2	2019/9/2
LISN	ETS-LINDGREN	Feb-16	SEM007-02	2018/4/2	2019/4/1
Measurement Software	AUDIX	e3 V5.4.1221d	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2018/7/12	2019/7/11
8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	EMC0120	2018/2/14	2019/2/13
4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	EMC0121	2018/2/14	2019/2/13
2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	EMC0122	2018/2/14	2019/2/13
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2018/4/2	2019/4/1

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017/8/5	2020/8/4
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2018/7/12	2019/7/11
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2018/9/2	2019/9/2
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017/6/27	2020/6/26
Pre-amplifier (0.1-1.3GHz)	Agilent Technologies	8447D	SEM005-01	2018/4/2	2019/4/1

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
10m Semi-Anechoic Chamber	SAEMC	FSAC1018	SEM001-03	2018/3/31	2021/3/30
EMI Test Receiver (9k-7GHz)	Rohde & Schwarz	ESR	SEM004-03	2018/4/2	2019/4/1
Trilog-Broadband Antenna (25M-2GHz)	Schwarzbeck	VULB9168	SEM003-18	2016/6/29	2019/6/28
Pre-amplifier (9k-1GHz)	Sonoma Instrument Co	310N	SEM005-03	2018/4/13	2019/4/12
Loop Antenna (9kHz-30MHz)	ETS-Lindgren	6502	SEM003-08	2017/8/22	2020/8/21
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM029-01	2018/7/12	2019/7/11





RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018/3/13	2021/3/12
Spectrum Analyzer (20Hz-43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2018/4/2	2019/4/1
BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017/6/27	2020/6/26
Horn Antenna (800MHz-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018/4/13	2021/4/12
Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017/10/17	2020/10/16
Amplifier(0.1-1300MHz)	HP	8447D	SEM005-02	2018/9/2	2019/9/2
Low Noise Amplifier (100MHz-18GHz)	Black Diamond Series	BDLNA-0118-352810	SEM005-05	2018/9/2	2019/9/2
Pre-Amplifier(0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	EMC2063	2018/11/20	2019/11/19
Pre-amplifier(26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2018/4/2	2019/4/1
Band filter	N/A	N/A	N/A	N/A	N/A
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2018/7/12	2019/7/11

7 Photographs - EUT Test Setup Details

Refer to Appendix A - Photographs of EUT Test Setup Details for AR/2019/40003.

The End

