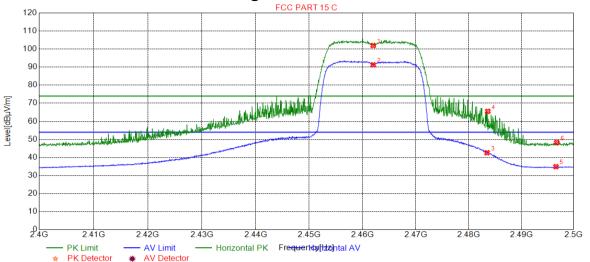


Report No.: HR/2019/4000802

Page: 210 of 217

4.10.1.8 802.11N20_MIMO_ Highest Channel_ Peak_ Horizontal



Suspected List

Susp	ected List								
NO	Freq.	Level	Factor	Limit	Margin	Height	Angle	Dolority	
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dB]	[cm]	[°]	Polarity	
1	2462.00	101.95	1.46	74.00	-27.95	150	49	Horizontal	
2	2462.00	91.26	1.46	54.00	-37.26	150	57	Horizontal	
3	2483.50	42.57	1.52	54.00	11.43	150	49	Horizontal	
4	2483.64	65.53	1.52	74.00	8.47	150	257	Horizontal	
5	2496.59	34.88	1.56	54.00	19.12	150	188	Horizontal	
6	2496.74	48.26	1.56	74.00	25.74	150	188	Horizontal	



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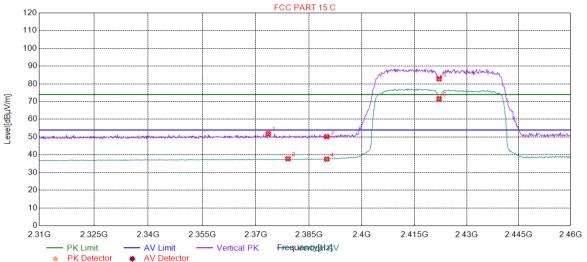
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Report No.: HR/2019/4000802

Page: 211 of 217

4.10.1.9 802.11N40_MIMO_Lowest Channel_ Peak_ Vertical



Suspected List

dopotica List										
Suspected List										
NO.	Freq.	Level	Factor	Limit	Margin	Height	Angle	Dolority		
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dB]	[cm]	[°]	Polarity		
1	2373.51	51.92	1.17	74.00	22.08	150	180	Vertical		
2	2379.06	37.77	1.20	54.00	16.23	150	92	Vertical		
3	2390.00	50.22	1.25	74.00	23.78	150	177	Vertical		
4	2390.00	37.55	1.25	54.00	16.45	150	222	Vertical		
5	2422.00	82.84	1.35	74.00	-8.84	150	243	Vertical		
6	2422.00	71.56	1.35	54.00	-17.56	150	246	Vertical		



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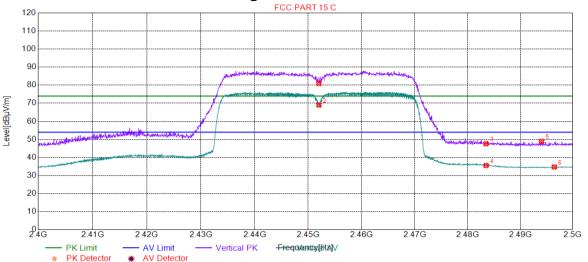
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Report No.: HR/2019/4000802

Page: 212 of 217

4.10.1.10 802.11N40_MIMO_ Highest Channel_ Peak_ Vertical



Suspected List

Suspected List										
NO	Freq.	Level	Factor	Limit	Margin	Height	Angle	Dolovitu		
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dB]	[cm]	[°]	Polarity		
1	2452.00	80.95	1.44	74.00	-6.95	150	245	Vertical		
2	2452.00	69.02	1.44	54.00	-15.02	150	70	Vertical		
3	2483.50	47.59	1.52	74.00	26.41	150	81	Vertical		
4	2483.50	35.53	1.52	54.00	18.47	150	245	Vertical		
5	2494.04	48.93	1.55	74.00	25.07	150	158	Vertical		
6	2496.49	34.72	1.56	54.00	19.28	150	111	Vertical		



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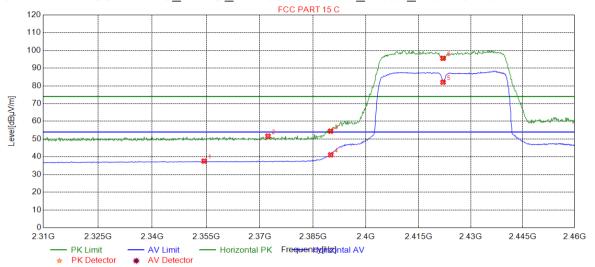
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Report No.: HR/2019/4000802

Page: 213 of 217

4.10.1.11 802.11N40_MIMO_Lowest Channel_ Peak_ Horizontal



Suspected List

Suspected List										
NO	Freq.	Level	Factor	Limit	Margin	Height	Angle	Dolority		
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dB]	[cm]	[°]	Polarity		
1	2354.44	37.56	1.09	54.00	16.44	150	65	Horizontal		
2	2372.31	51.65	1.17	74.00	22.35	150	213	Horizontal		
3	2390.00	54.48	1.25	74.00	19.52	150	29	Horizontal		
4	2390.00	41.12	1.25	54.00	12.88	150	35	Horizontal		
5	2422.00	82.05	1.35	54.00	-28.05	150	240	Horizontal		
6	2422.00	95.56	1.35	74.00	-21.56	150	240	Horizontal		



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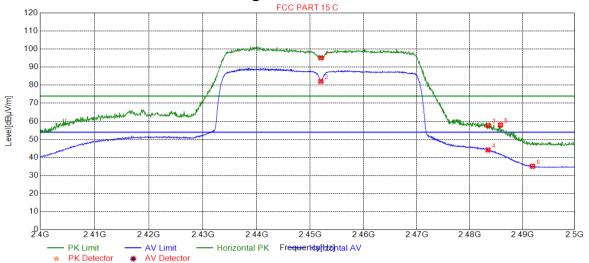
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Report No.: HR/2019/4000802

Page: 214 of 217

4.10.1.12 802.11N40_MIMO_ Highest Channel_ Peak_ Horizontal



Suspected List

dispected List										
Suspected List										
NO.	Freq.	Level	Factor	Limit	Margin	Height	Angle	Dolority		
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dB]	[cm]	[°]	Polarity		
1	2452.00	95.16	1.44	74.00	-21.16	150	40	Horizontal		
2	2452.00	82.13	1.44	54.00	-28.13	150	44	Horizontal		
3	2483.50	57.66	1.52	74.00	16.34	150	36	Horizontal		
4	2483.50	44.13	1.52	54.00	9.87	150	55	Horizontal		
5	2485.84	57.94	1.53	74.00	16.06	150	51	Horizontal		
6	2491.94	35.07	1.55	54.00	18.93	150	44	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.



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Report No.: HR/2019/4000802

Page: 215 of 217

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

No.	Item	Measurement Uncertainty		
1	Total RF power, conducted	±0.75dB		
2	RF power density, conducted	±2.84dB		
3	Spurious emissions, conducted	±0.75dB		
4	Dedicted Spurious emission test	±4.5dB (30MHz-1GHz)		
4	Radiated Spurious emission test	±4.8dB (1GHz-25GHz)		
5	Conduct emission test	±3.12 dB (9KHz- 30MHz)		
6	Temperature test	±1°C		
7	Humidity test	±3%		
8	DC and low frequency voltages	±0.5%		



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Report No.: HR/2019/4000802

Page: 216 of 217

6 Equipment List

Conducted Emission									
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal.Duedate				
rest Equipment	Wandacturer	Woder No.	inventory No.	(yyyy-mm-dd)	(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	2019/3/2	2020/3/1				
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				
2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	EMC0122	2019/2/11	2020/2/10				
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2019/3/2	2020/3/1				

EIVII TEST Receiver	Ronde & Schwarz	ESCI	3E101004-02	2019/3/2	2020/3/1					
RF conducted test										
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal.Duedate					
rest Equipment	Wallulacturei	Wiodel No.	inventory No.	(yyyy-mm-dd)	(yyyy-mm-dd)					
DC Power Supply	Agilent Technologies Inc	66311B	W009-09	2018/9/15	2019/9/15					
Signal Analyzer	Rohde & Schwarz	FSV	W025-05	2019/1/13	2020/1/12					
Coaxial Cable	SGS	N/A	SEM031-01	2018/7/13	2019/7/12					
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A					
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2018/9/2	2019/9/2					
Temperature Chamber	GIANT FORCE	ICT-150-40-CP-AR	W027-03	2018/11/27	2019/11/27					
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2018/9/2	2019/9/2					
	RE	in Chamber								
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal.Due date					
rest Equipment	Wallulacturei	Wiodel No.	inventory No.	(yyyy-mm-dd)	(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	2019/3/2	2020/3/1					

RE in Chamber									
Tost Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal.Due date				
Test Equipment	Wandacturer	Wodel No.	inventory No.	(yyyy-mm-dd)	(yyyy-mm-dd)				
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018/3/13	2021/3/12				
Measurement Software	AUDIX	e3V8.2014-6-27	N/A	N/A	N/A				
Coaxial Cable	SGS	N/A	SEM026-01	2018/7/12	2019/7/11				
EXA Signal Analyzer (10Hz- 26.5GHz)	Agilent Technologies Inc	N9010A	SEM004-09	2019/4/12	2020/4/11				
BiConiLog Antenna (26- 3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017/6/27	2020/6/26				
Horn Antenna (0.8-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018/4/13	2021/4/12				
Pre-amplifier(0.1-1.3GHz)	HP	8447D	SEM005-02	2018/9/2	2019/9/2				
Low Noise Amplifier(100MHz- 18GHz)	Black Diamond Series	BDLNA-0118- 352810	SEM005-05	2018/9/27	2019/9/27				
Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017/10/17	2020/10/16				
Pre-amplifier(18-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2019/3/2	2020/3/1				
Band filter	N/A	N/A	SEM023-01	N/A	N/A				



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Report No.: HR/2019/4000802

Page: 217 of 217

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	2019/3/2	2020/3/1					
Trilog-Broadband Antenna(25M-2GHz)	Schwarzbeck	VULB9168	SEM003-18	2016/6/29	2019/6/28					
Pre-amplifier (9k-1GHz)	Sonoma	310N	SEM005-03	2019/4/12	2020/4/11					
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					

7 Photographs - EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for HR/2019/40008.

The End



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