

Frequency Range : Above 1 GHz

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4824	44.39	2.74	V	47.13	73.98	26.85	PK
4824	33.28	2.74	V	36.02	53.98	17.96	AV
7236	49.86	8.72	V	58.58	73.98	15.40	PK
7236	42.26	8.72	V	50.98	53.98	3.00	AV
4824	44.50	2.74	H	47.24	73.98	26.74	PK
4824	33.32	2.74	H	36.06	53.98	17.92	AV
7236	50.03	8.72	H	58.75	73.98	15.23	PK
7236	42.48	8.72	H	51.20	53.98	2.78	AV

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	Duty Cycle Factor	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4824	45.05	0.00	2.74	V	47.79	73.98	26.19	PK
4824	33.18	0.21	2.74	V	36.13	53.98	17.86	AV
7236	60.55	0.00	8.72	V	69.27	73.98	4.71	PK
7236	36.44	0.21	8.72	V	45.37	53.98	8.62	AV
4824	45.11	0.00	2.74	H	47.85	73.98	26.13	PK
4824	33.26	0.21	2.74	H	36.21	53.98	17.78	AV
7236	60.72	0.00	8.72	H	69.44	73.98	4.54	PK
7236	36.56	0.21	8.72	H	45.49	53.98	8.50	AV

Operation Mode:	802.11n (HT20)
Transfer MCS Index:	0
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	Duty Cycle Factor	AN.+CL- AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4824	45.04	0.00	2.74	V	47.78	73.98	26.20	PK
4824	33.11	0.22	2.74	V	36.07	53.98	17.91	AV
7236	61.05	0.00	8.72	V	69.77	73.98	4.21	PK
7236	35.15	0.22	8.72	V	44.09	53.98	9.89	AV
4824	45.19	0.00	2.74	H	47.93	73.98	26.05	PK
4824	33.19	0.22	2.74	H	36.15	53.98	17.83	AV
7236	61.22	0.00	8.72	H	69.94	73.98	4.04	PK
7236	35.70	0.22	8.72	H	44.64	53.98	9.34	AV

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4874	43.70	2.78	V	46.48	73.98	27.50	PK
4874	32.44	2.78	V	35.22	53.98	18.76	AV
7311	47.26	9.01	V	56.27	73.98	17.71	PK
7311	39.58	9.01	V	48.59	53.98	5.39	AV
4874	43.85	2.78	H	46.63	73.98	27.35	PK
4874	32.56	2.78	H	35.34	53.98	18.64	AV
7311	47.23	9.01	H	56.24	73.98	17.74	PK
7311	39.72	9.01	H	48.73	53.98	5.25	AV

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	Duty Cycle Factor	AN.+CL- AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4874	43.84	0.00	2.78	V	46.62	73.98	27.36	PK
4874	32.48	0.21	2.78	V	35.47	53.98	18.52	AV
7311	55.41	0.00	9.01	V	64.42	73.98	9.56	PK
7311	34.58	0.21	9.01	V	43.80	53.98	10.19	AV
4874	43.88	0.00	2.78	H	46.66	73.98	27.32	PK
4874	32.49	0.21	2.78	H	35.48	53.98	18.51	AV
7311	55.50	0.00	9.01	H	64.51	73.98	9.47	PK
7311	34.91	0.21	9.01	H	44.13	53.98	9.86	AV

Operation Mode:	802.11n (HT20)
Transfer MCS Index:	0
Operating Frequency	2437
Channel No.	06 Ch

Frequenc y [MHz]	Readin g dBuV	Duty Cycle Factor	AN.+CL- AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4874	42.58	0.00	2.78	V	45.36	73.98	28.62	PK
4874	32.44	0.22	2.78	V	35.44	53.98	18.54	AV
7311	55.36	0.00	9.01	V	64.37	73.98	9.61	PK
7311	34.79	0.22	9.01	V	44.02	53.98	9.96	AV
4874	43.79	0.00	2.78	H	46.57	73.98	27.41	PK
4874	32.55	0.22	2.78	H	35.55	53.98	18.43	AV
7311	55.69	0.00	9.01	H	64.70	73.98	9.28	PK
7311	34.80	0.22	9.01	H	44.03	53.98	9.95	AV

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4924	45.18	2.43	V	47.61	73.98	26.37	PK
4924	32.30	2.43	V	34.73	53.98	19.25	AV
7386	44.55	9.44	V	53.99	73.98	19.99	PK
7386	36.69	9.44	V	46.13	53.98	7.85	AV
4924	45.22	2.43	H	47.65	73.98	26.33	PK
4924	32.22	2.43	H	34.65	53.98	19.33	AV
7386	44.80	9.44	H	54.24	73.98	19.74	PK
7386	36.73	9.44	H	46.17	53.98	7.81	AV

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2462
Channel No.	11 Ch

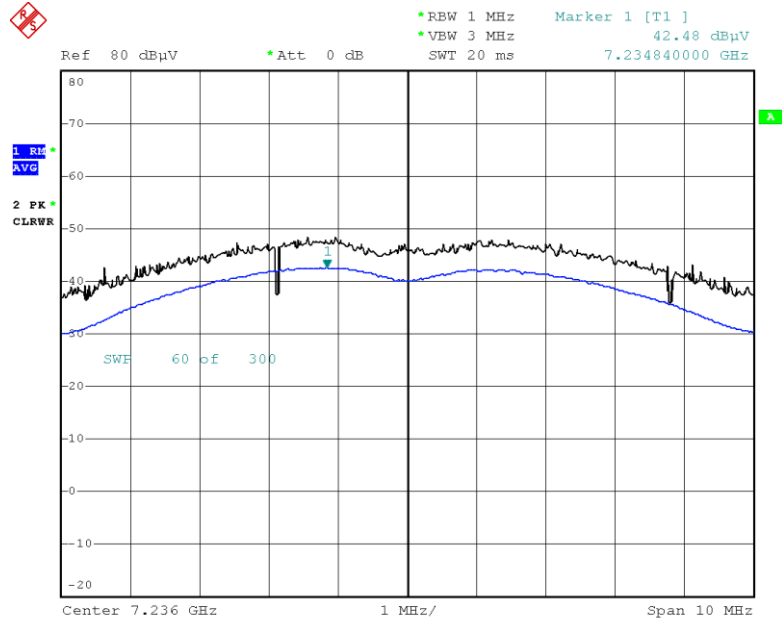
Frequency [MHz]	Reading dBuV	Duty Cycle Factor	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4924	45.08	0.00	2.43	V	47.51	73.98	26.47	PK
4924	32.11	0.21	2.43	V	34.75	53.98	19.24	AV
7386	51.99	0.00	9.44	V	61.43	73.98	12.55	PK
7386	32.47	0.21	9.44	V	42.12	53.98	11.87	AV
4924	45.19	0.00	2.43	H	47.62	73.98	26.36	PK
4924	32.19	0.21	2.43	H	34.83	53.98	19.16	AV
7386	52.11	0.00	9.44	H	61.55	73.98	12.43	PK
7386	32.58	0.21	9.44	H	42.23	53.98	11.76	AV

Operation Mode:	802.11n (HT20)
Transfer MCS Index:	0
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	Duty Cycle Factor	AN.+CL- AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4924	42.84	0.00	2.43	V	45.27	73.98	28.71	PK
4924	32.15	0.22	2.43	V	34.80	53.98	19.18	AV
7386	52.48	0.00	9.44	V	61.92	73.98	12.06	PK
7386	32.79	0.22	9.44	V	42.45	53.98	11.53	AV
4924	45.29	0.00	2.43	H	47.72	73.98	26.26	PK
4924	32.18	0.22	2.43	H	34.83	53.98	19.15	AV
7386	52.59	0.00	9.44	H	62.03	73.98	11.95	PK
7386	32.92	0.22	9.44	H	42.58	53.98	11.40	AV

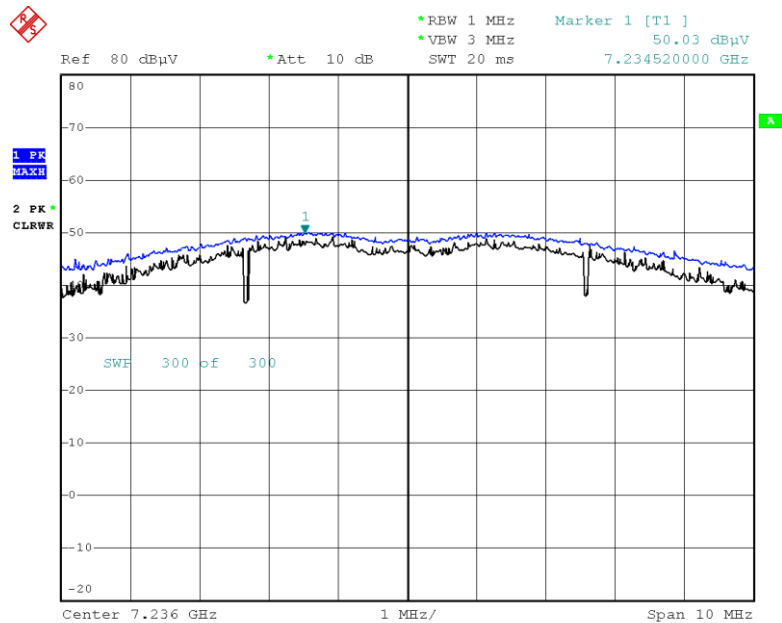
Test Plots (Worst case : X-H)

Radiated Spurious Emissions plot – Average Reading (802.11b, Ch.1 3rd Harmonic)



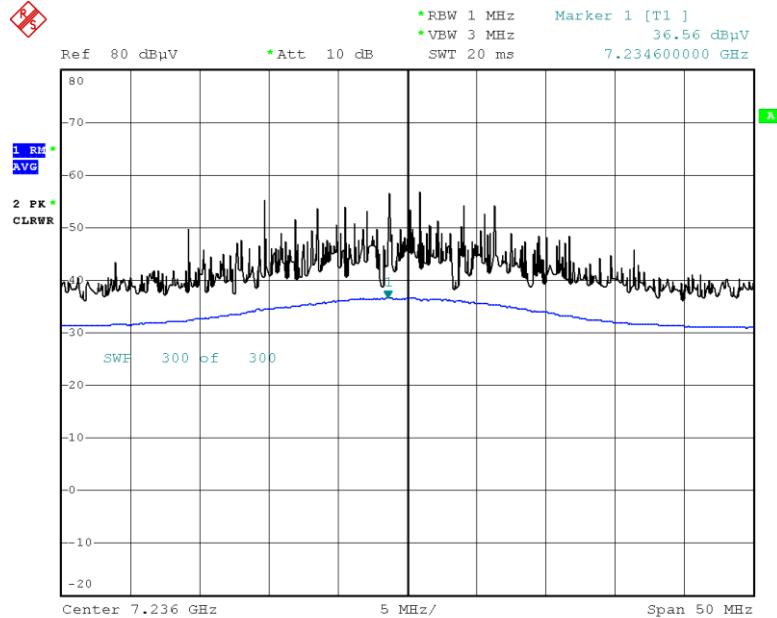
Date: 24.JUN.2019 07:02:38

Radiated Spurious Emissions plot – Peak Reading (802.11b, Ch.1 3rd Harmonic)



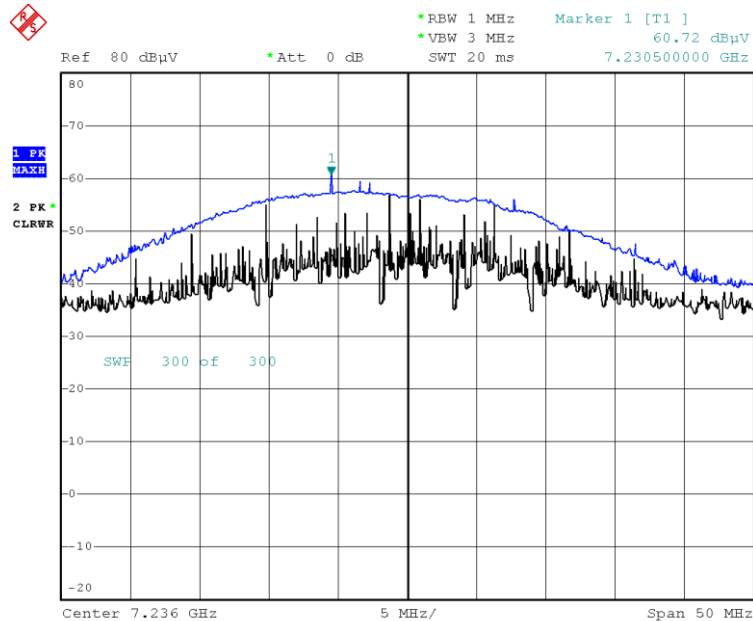
Date: 24.JUN.2019 07:13:49

Radiated Spurious Emissions plot – Average Reading (802.11g, Ch.1 3rd Harmonic)



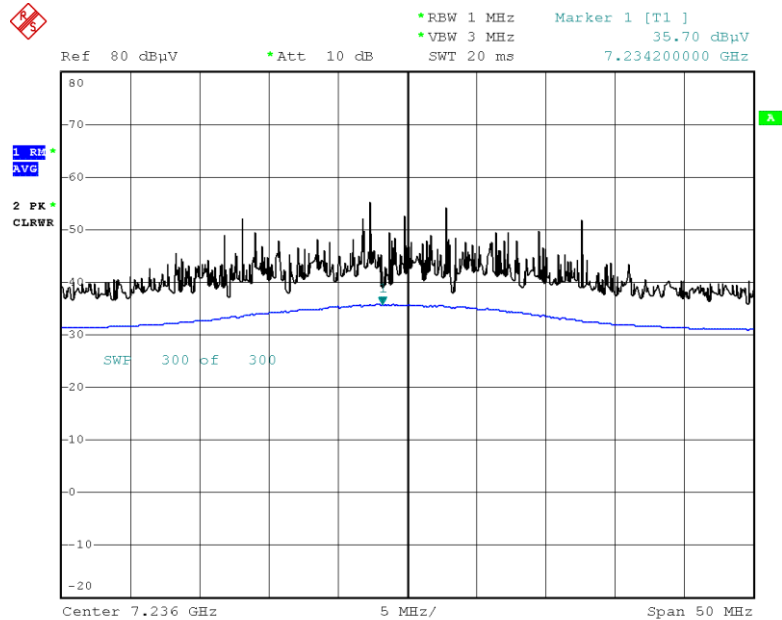
Date: 24.JUN.2019 07:08:54

Radiated Spurious Emissions plot – Peak Reading (802.11g, Ch.1 3rd Harmonic)



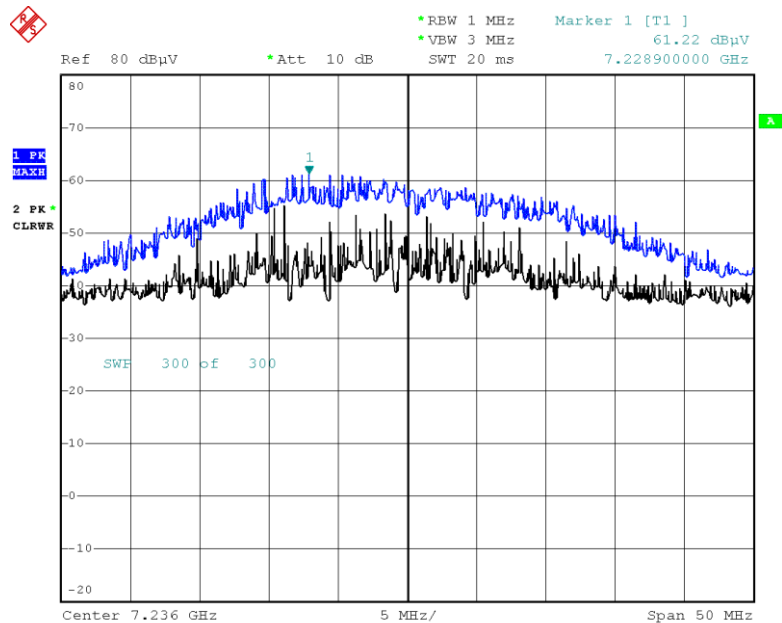
Date: 24.JUN.2019 07:07:25

Radiated Spurious Emissions plot – Average Reading (802.11n(20M), Ch.1 3rd Harmonic)



Date: 24.JUN.2019 07:11:55

Radiated Spurious Emissions plot – Peak Reading (802.11n(20M), Ch.1 3rd Harmonic)



Date: 24.JUN.2019 07:10:36

Note:

Plot of worst case are only reported.

9.7 RADIATED RESTRICTED BAND EDGES

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	※ A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	47.75	0.22	H	47.97	73.98	26.01	PK
2390.0	36.75	0.22	H	36.97	53.98	17.01	AV
2390.0	47.89	0.22	V	48.11	73.98	25.87	PK
2390.0	36.86	0.22	V	37.08	53.98	16.90	AV
2483.5	47.19	0.65	H	47.84	73.98	26.14	PK
2483.5	35.71	0.65	H	36.36	53.98	17.62	AV
2483.5	47.45	0.65	V	48.10	73.98	25.88	PK
2483.5	35.75	0.65	V	36.40	53.98	17.58	AV

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

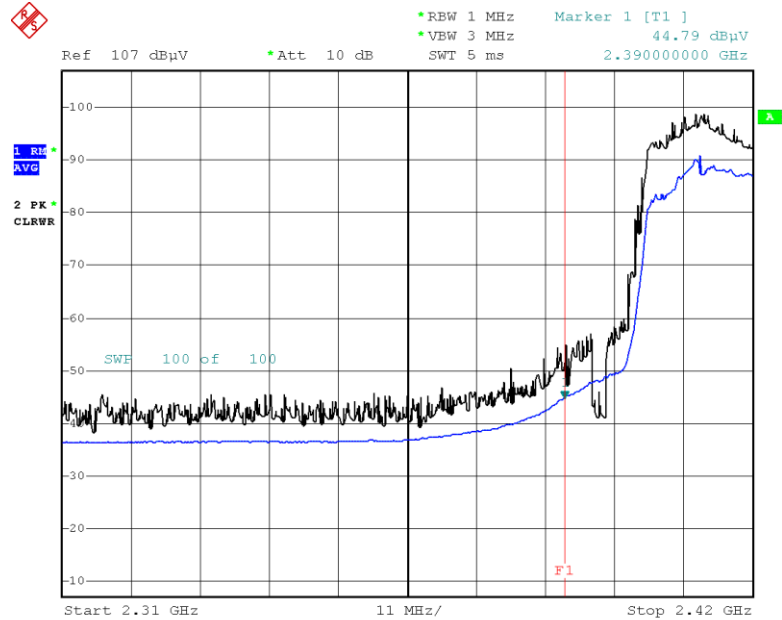
Frequency [MHz]	Reading dBuV	Duty Cycle Factor	※ A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	51.98	0.00	0.22	H	52.20	73.98	21.78	PK
2390.0	39.84	0.21	0.22	H	40.27	53.98	13.72	AV
2390.0	52.80	0.00	0.22	V	53.02	73.98	20.96	PK
2390.0	39.92	0.21	0.22	V	40.35	53.98	13.64	AV
2483.5	47.96	0.00	0.65	H	48.61	73.98	25.37	PK
2483.5	35.96	0.21	0.65	H	36.82	53.98	17.17	AV
2483.5	48.77	0.00	0.65	V	49.42	73.98	24.56	PK
2483.5	36.99	0.21	0.65	V	37.85	53.98	16.14	AV

Operation Mode:	802.11n (HT20)
Transfer MCS Index:	0
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	Duty Cycle Factor	※ A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	58.98	0.00	0.22	H	59.20	73.98	14.78	PK
2390.0	44.58	0.22	0.22	H	45.02	53.98	8.96	AV
2390.0	59.10	0.00	0.22	V	59.32	73.98	14.66	PK
2390.0	44.79	0.22	0.22	V	45.23	53.98	8.75	AV
2483.5	47.18	0.00	0.65	H	47.83	73.98	26.15	PK
2483.5	37.05	0.22	0.65	H	37.92	53.98	16.06	AV
2483.5	47.29	0.00	0.65	V	47.94	73.98	26.04	PK
2483.5	37.11	0.22	0.65	V	37.98	53.98	16.00	AV

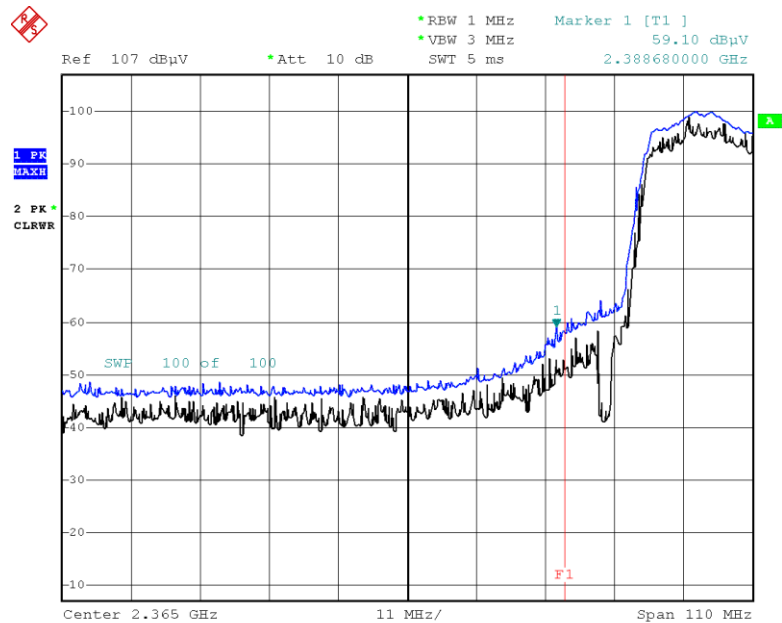
Test Plots (Worst case : X-V)

Radiated Restricted Band Edges plot – Average Reading (802.11n(HT20) Ch.1)



Date: 3.JUL.2019 13:16:37

Radiated Restricted Band Edges plot – Peak Reading (802.11n(HT20) Ch.1)



Date: 3.JUL.2019 13:17:23

Note:

Plot of worst case are only reported.

10. LIST OF TEST EQUIPMENT

Conducted Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	12/12/2018	Annual	102245
Rohde & Schwarz	ESCI / Test Receiver	06/18/2019	Annual	100033
ESPAC	SU-642 /Temperature Chamber	03/12/2019	Annual	0093008124
Agilent	N9020A / Signal Analyzer	05/23/2019	Annual	MY51110085
Agilent	N9030A / Signal Analyzer	11/20/2018	Annual	MY49431210
Agilent	N1911A / Power Meter	04/10/2019	Annual	MY45100523
Agilent	N1921A / Power Sensor	04/10/2019	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/20/2018	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	05/24/2019	Annual	5001
Hewlett Packard	E3632A / DC Power Supply	06/18/2019	Annual	KR75303960
Agilent	8493C / Attenuator(10 dB)	07/10/2018	Annual	07560
Rohde & Schwarz	EMC32 / Software	N/A	N/A	N/A
HCT CO., LTD.	FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	N/A	N/A
Rohde & Schwarz	CBT / Bluetooth Tester	05/16/2019	Annual	100422

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Radiated Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Emco	2090 / Controller	N/A	N/A	060520
Ets	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	08/23/2018	Biennial	1513-175
Schwarzbeck	VULB 9160 / Hybrid Antenna	08/09/2018	Biennial	3368
Schwarzbeck	BBHA 9120D / Horn Antenna	11/21/2017	Biennial	9120D-1191
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	12/04/2017	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 30 GHz) / Spectrum Analyzer	09/19/2018	Annual	836650/016
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/19/2018	Annual	101068-SZ
Wainwright Instruments	WHKX10-2700-3000-18000-40SS / High Pass Filter	01/03/2019	Annual	4
Wainwright Instruments	WHKX8-6090-7000-18000-40SS / High Pass Filter	01/03/2019	Annual	5
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	06/19/2019	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/03/2019	Annual	2
Api tech.	18B-03 / Attenuator (3 dB)	06/04/2019	Annual	2
WEINSCHL	56-10 / Attenuator(10 dB)	10/10/2018	Annual	72316
CERNEX	CBLU1183540B-01/Broadband Bench Top LNA	01/03/2019	Annual	28549
CERNEX	CBL06185030 / Broadband Low Noise Amplifier	01/03/2019	Annual	24615
CERNEX	CBL18265035 / Power Amplifier	01/03/2019	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/18/2019	Annual	25956
TESCOM	TC-3000C / Bluetooth Tester	03/26/2019	Annual	3000C000276

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

11. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-1907-FI007-P