FCC AND IC CERTIFICATION TEST REPORT

FOR

Applicant	:	Mercku Inc.
Address	:	509 Beaver Creek Rd. Waterloo, Ontario, Canada
Equipment under Test	:	M2 Bee MESH Node
Model No.	:	Bee
Trade Mark	:	MERCKU
FCC ID	:	2APR4-BEE
IC	:	23877-BEE
Manufacturer	:	ShenZhen Mcdinet Technology Co., LTD
Address	:	Room 601, Unit A1, Kexing Science Park, No.15 Keyuan Road, Hi-tech Industrial Park, Nanshan, Shenzhen 518057, PRC

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel: +86-0769-89201699, **E-mail:** ddt@dgddt.com, http://www.dgddt.com

REPORT

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TEST REPORT DECLARE

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Test Standard Used: FCC Rules and Regulations Part 15 Subpart E; RSS-247 Issue 2 February 2017.

Test procedure used: ANSI C63.10:2013, 789033 D02 General UNII Test Procedures New Rules v02r01; KDB662911 D01 Multiple Transmitter Output v02r01; RSS-Gen Issue 5, Apr. 2018.

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC&IC standards.

Report No:	DDT-R18062504-1E2		
Date of Receipt:	Jun 26, 2018	**Date of Test:**	Jun 26, 2018 ~ Jul. 05, 2018

Prepared By:

Ella Gong

Ella Gong/Engineer

Approved By:

DONGGUAN DONGDIAN TESTING SERVICE CO., LTD. APPROVED

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision history

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jul. 05, 2018	

1. Summary of test results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	**Standard**	**Results**
6/26db Bandwidth and 99% Bandwidth	FCC 15.407 (e) RSS-247 Clause 6.2	PASS
Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Frequency Stability Measurement	FCC 15.407 (g)	PASS
Emissions in restricted frequency bands	FCC 15.407 (a) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Band Edge Compliance	FCC 15.407 (a) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Power Line Conducted Emission	FCC 15.207 RSS-GEN Clause 8.8	PASS
Antenna requirement	FCC 15.203 RSS-GEN Clause 6.8	PASS
Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.3	N/A
N/A is an abbreviation for Not Applicable.		

2. General test information

2.1. Description of EUT

EUT* Name	:	M2 Bee MESH Node
Model Number	:	Bee
EUT function description	:	Please reference user manual of this device
Power supply	:	110~240V 50/60Hz 0.5A
Radio Technology	:	IEEE802.11n/a/ac
Operation frequency	:	IEEE 802.11a: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11n HT20: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5755MHz-5795MHz IEEE 802.11ac HT20: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11ac HT40: 5190MHz-5230MHz, 5755MHz-5795MHz IEEE 802.11ac HT80: 5210MHz, 5775MHz
Modulation	:	IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	:	IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n HT20: up to 150 Mbps, HT40: up to 300 Mbps IEEE 802.11ac VHT20: up to 150 Mbps, VHT40: up to 300 Mbps VHT80: up to 886.7 Mbps
Antenna Type	:	Integrated antenna 1: 5G band maximum PK gain 1dBi Integrated antenna 2: 5G band maximum PK gain 1dBi The EUT incorporates a MIMO function. Physically, it provides two completed transmitters and receivers(2T2R), two transmit signals are completely uncorrelated, then, Direction gain=G_{ANT}
Sample Type	:	Series production

Note: EUT is the ab. of equipment under test.

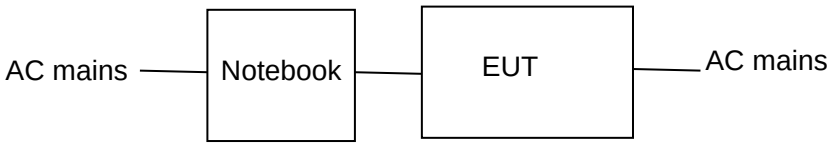
2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Serial No.	Other
N/A	N/A	N/A	N/A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
Notebook	DELL	Latitude D610	FCC DOC	00045-534-136-300

2.4. Block diagram of EUT configuration for test



EUT was connected to Notebook which has a standard LAN PORT connector, and the Notebook will run a special test software “MP_ Test. EXE” provided by manufacturer to control EUT work in Continuous Tx mode (>98% duty cycle), and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information					
Mode	Setting Tx Power (ANT1)	Setting Tx Power (ANT2)	data rate (Mpbs) (see Note)	Channel	Frequency (MHz)
IEEE 802.11a	/	/	6	Low: CH36	5180
	/	/	6	Middle: CH40	5200
	/	/	6	High: CH48	5240
	/	/	6	Low :CH149	5745
	/	/	6	Middle: CH157	5785
	/	/	6	High: CH165	5825
IEEE 802.11n HT20	/	/	MCS 8	Low :CH36	5180
	/	/	MCS 8	Middle: CH40	5200
	/	/	MCS 8	High: CH48	5240
	/	/	MCS 8	Low :CH149	5745
	/	/	MCS 8	Middle: CH157	5785
	/	/	MCS 8	High: CH165	5825
IEEE 802.11n HT40	/	/	MCS 8	Low :CH36	5190
	/	/	MCS 8	High: CH44	5230
	/	/	MCS 8	Low: CH149	5755
	/	/	MCS 8	High: CH157	5795
IEEE 802.11ac VHT20	/	/	NSS1 MCS 8	Low :CH36	5180
	/	/	NSS1 MCS 8	Middle: CH40	5200
	/	/	NSS1 MCS 8	High: CH48	5240
	/	/	NSS1 MCS 8	Low :CH149	5745
	/	/	NSS1 MCS 8	Middle: CH157	5785
	/	/	NSS1 MCS 8	High: CH165	5825
IEEE 802.11ac VHT40	/	/	NSS1 MCS 8	Low :CH36	5190
	/	/	NSS1 MCS 8	High: CH44	5230
	/	/	NSS1 MCS 8	Low: CH149	5755
	/	/	NSS1 MCS 8	High: CH157	5795
IEEE 802.11ac VHT80	/	/	NSS1 MCS 8	CH36	5210
	/	/	NSS1 MCS 8	CH149	5775
Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.					

2.5. Deviations of test standard

No Deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25℃
Humidity range:	40-75%
Pressure range:	86-106kPa

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel: +86-0769-89201699, http://www.dgddt.com, Email: ddt@dgddt.com

CNAS Accreditation No. L6451; A2LA Accreditation No. 3870.01

Designation Number: CN1182; Test Firm Registration Number: 540522

Industry Canada site registration number: 10288A-1

2.8. Measurement uncertainty

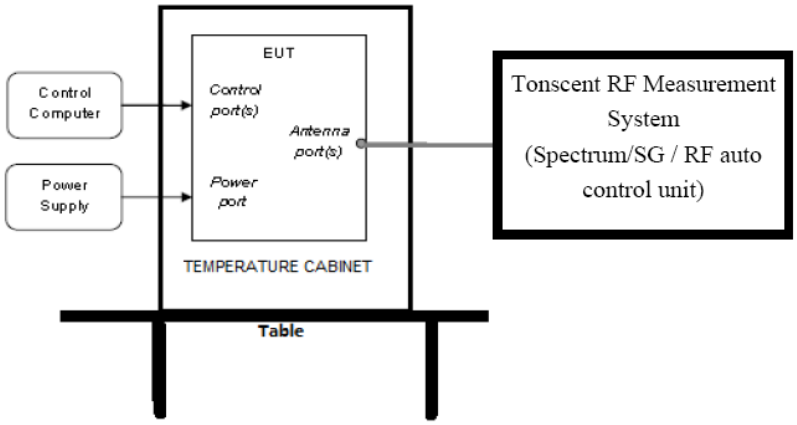
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power(Conducted)(Spectrum analyzer)	0.86dB (10 MHz ≤ f < 3.6GHz);
	1.38dB (3.6GHz ≤ f < 8GHz)
Peak Output Power(Conducted)(Power Sensor)	0.74dB
Power Spectral Density	0.74dB (10 MHz ≤ f < 3.6GHz);
	1.38dB (3.6GHz ≤ f < 8GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86dB (10 MHz ≤ f < 3.6GHz);
	1.40dB (3.6GHz ≤ f < 8GHz)
	1.66dB (8GHz≤ f < 22GHz)
Uncertainty for radio frequency (RBW<20kHz)	3×10^{-8}
Temperature	0.4℃
Humidity	2%
Uncertainty for Radiation Emission test (30MHz-1GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1GHz-40GHz)	4.10dB (1-6GHz)
	4.40dB (6GHz-18GHz)
	3.54dB (18GHz-26GHz)
	4.30dB (26GHz-40GHz)
Uncertainty for Power line conduction emission test	3.32dB (150kHz-30MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
RF Connected Test (Tonscend RF Measurement System)					
Spectrum analyzer	R&S	FSU26	200071	Oct. 23, 2017	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jun. 16, 2018	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jun. 16, 2018	1 Year
Vector Signal Generator	Agilent	E8267D	US49060192	Oct. 23, 2017	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Jun.16, 2018	1 Year
Power Sensor	Agilent	U2021XA	MY55150010	Oct. 21, 2017	1 Year
Power Sensor	Agilent	U2021XA	MY55150011	Oct. 23, 2017	1 Year
DC Power Source	MATRIS	MPS-3005L-3	D813058W	Aug. 18, 2017	1 Year
Attenuator	Mini-Circuits	BW-S10W2	101109	Aug. 18, 2017	1 Year
RF Cable	Micable	C10-01-01-1	100309	Oct. 21, 2017	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150 L	ZX170110-A	Oct. 21, 2017	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
Radiated Emission Test Chamber 1#					
EMI Test Receiver	R&S	ESU8	100316	Oct. 21, 2017	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jun. 16, 2018	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	Nov. 09, 2017	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Oct. 17, 2017	1 Year
Double Ridged Horn Antenna	R&S	HF907	100276	Oct. 17, 2017	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	Nov. 09, 2017	1 Year
Pre-amplifier	A.H.	PAM-0118	360	Oct. 21, 2017	1 Year
Pre-amplifier	TERA-MW	TRLA-0040G 35	101303	Oct. 21, 2017	1 Year
RF Cable	HUBSER	CP-X2+ CP-X1	W11.03+ W12.02	Oct. 21, 2017	1 Year
RF Cable	N/A	SMAJ-SMAJ-1M+ 11M	17070133+17 070131	Nov. 08, 2017	1 Year
MI Cable	HUBSER	C10-01-01-1 M	1091629	Oct. 21, 2017	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Power Line Conducted Emissions Test					
Test Receiver	R&S	ESPI	101761	Oct. 21, 2017	1 Year
LISN 1	R&S	ENV216	101109	Oct. 21, 2017	1 Year
LISN 2	R&S	ESH2-Z5	100309	Oct. 21, 2017	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Oct. 21, 2017	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Oct. 21, 2017	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

4. 26dB Bandwidth, 6dB Bandwidth and 99% Bandwidth

4.1. Block diagram of test setup



4.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Bandwidth	26 dB Bandwidth	5150-5250
	Minimum 500kHz 6dB Bandwidth	5725-5850

4.3. Test Procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6dB Bandwidth: RBW=300kHz For 26dB Bandwidth: approximately 1% of the emission bandwidth.
VBW	For 6dB Bandwidth: VBW=1MHz For 26dB Bandwidth : >3RBW
Trace	Max hold
Sweep	Auto couple

(2) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB or 6dB relative to the maximum level measured in the fundamental emission.

4.4. Test Result

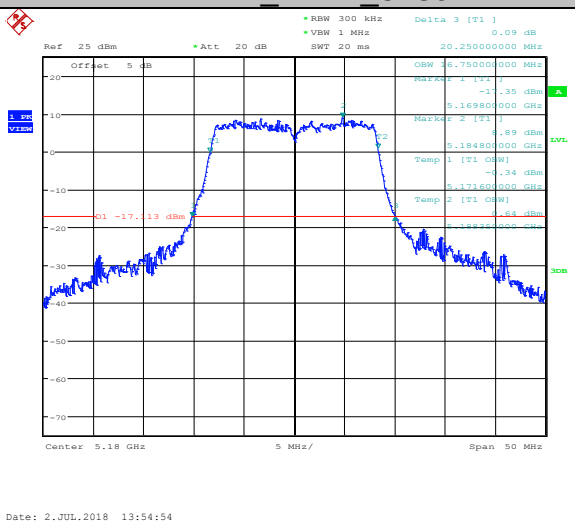
TestMode	Antenna	Channel	99% BW	26dB Bandwidth	Limit	Verdict
11A	ANT1	5180	16.75	20.250	---	PASS
11A	ANT1	5200	16.75	20.350	---	PASS
11A	ANT1	5240	16.70	20.200	---	PASS
11N20	ANT1	5180	17.75	21.150	---	PASS
11N20	ANT2	5180	17.70	20.800	---	PASS
11N20	ANT1	5200	17.75	21.200	---	PASS
11N20	ANT2	5200	17.75	21.000	---	PASS
11N20	ANT1	5240	17.70	21.000	---	PASS
11N20	ANT2	5240	17.65	20.800	---	PASS
11N40	ANT1	5190	36.20	41.400	---	PASS
11N40	ANT2	5190	36.30	41.300	---	PASS
11N40	ANT1	5230	36.20	41.400	---	PASS
11N40	ANT2	5230	36.20	41.300	---	PASS
11AC20	ANT1	5180	17.95	21.200	---	PASS
11AC20	ANT2	5180	18.00	21.150	---	PASS
11AC20	ANT1	5200	17.95	21.350	---	PASS
11AC20	ANT2	5200	17.95	21.200	---	PASS
11AC20	ANT1	5240	17.95	21.300	---	PASS
11AC20	ANT2	5240	17.95	21.250	---	PASS
11AC40	ANT1	5190	36.70	44.700	---	PASS
11AC40	ANT2	5190	36.60	42.100	---	PASS
11AC40	ANT1	5230	36.60	44.500	---	PASS
11AC40	ANT2	5230	36.60	41.900	---	PASS
11AC80	ANT1	5210	75.80	81.800	---	PASS
11AC80	ANT2	5210	75.80	82.400	---	PASS

TestMode	Antenna	Channel	99% BW	6dB Bandwidth	Limit	Verdict
11A	ANT1	5745	16.40	16.450	0.5	PASS
11A	ANT1	5785	16.45	16.100	0.5	PASS
11A	ANT1	5825	16.40	16.000	0.5	PASS
11N20	ANT1	5745	17.55	16.650	0.5	PASS
11N20	ANT2	5745	17.55	16.900	0.5	PASS
11N20	ANT1	5785	17.55	16.150	0.5	PASS
11N20	ANT2	5785	17.55	16.850	0.5	PASS
11N20	ANT1	5825	17.55	16.150	0.5	PASS
11N20	ANT2	5825	17.55	17.300	0.5	PASS
11N40	ANT1	5755	36.20	35.300	0.5	PASS
11N40	ANT2	5755	36.00	35.500	0.5	PASS
11N40	ANT1	5795	36.20	35.900	0.5	PASS
11N40	ANT2	5795	36.10	35.700	0.5	PASS
11AC20	ANT1	5745	17.55	16.850	0.5	PASS
11AC20	ANT2	5745	17.55	16.350	0.5	PASS
11AC20	ANT1	5785	17.55	16.300	0.5	PASS
11AC20	ANT2	5785	17.55	16.850	0.5	PASS
11AC20	ANT1	5825	17.55	16.250	0.5	PASS
11AC20	ANT2	5825	17.55	16.800	0.5	PASS
11AC40	ANT1	5755	36.10	35.900	0.5	PASS

11AC40	ANT2	5755	36.10	36.300	0.5	PASS
11AC40	ANT1	5795	36.20	35.800	0.5	PASS
11AC40	ANT2	5795	36.20	35.900	0.5	PASS
11AC80	ANT1	5775	75.20	74.400	0.5	PASS
11AC80	ANT2	5775	75.20	75.600	0.5	PASS

4.5. Original test data

11A_ANT1_5180



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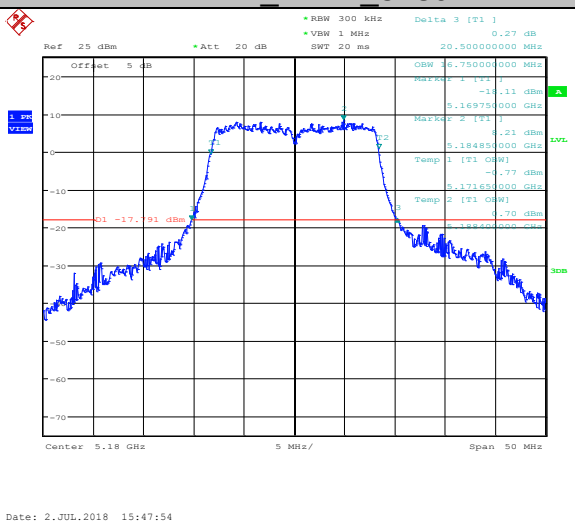

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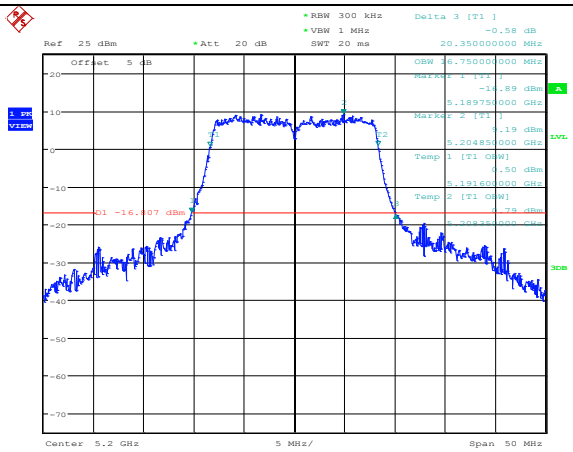

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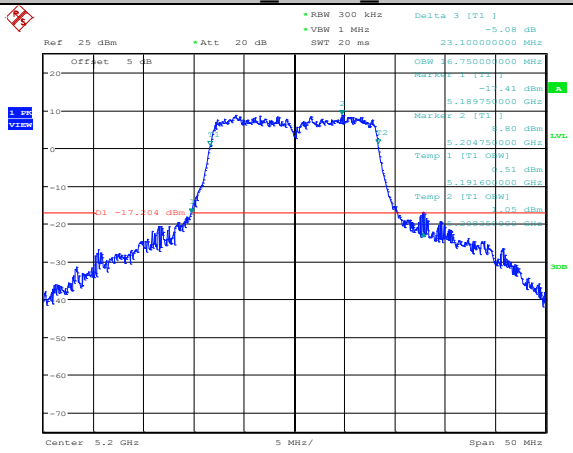

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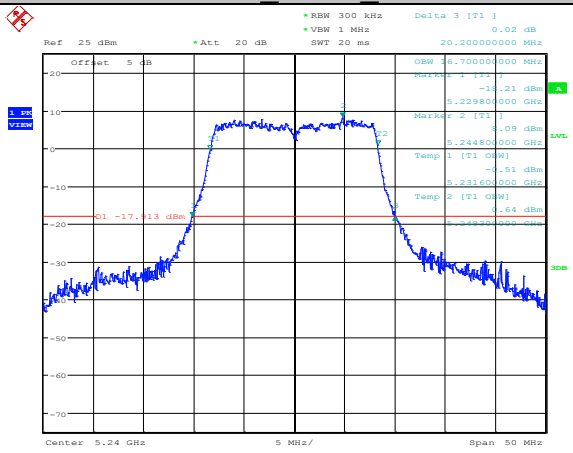

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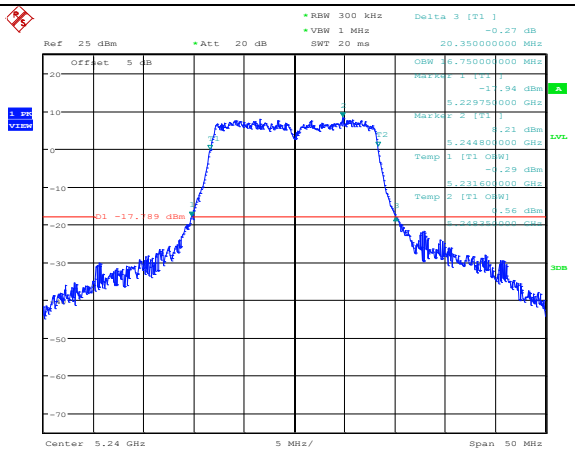

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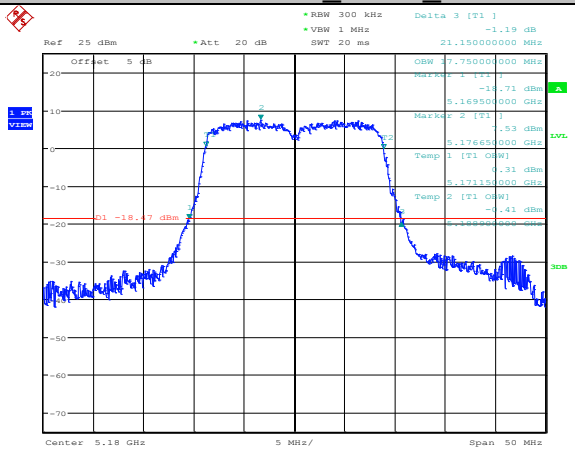

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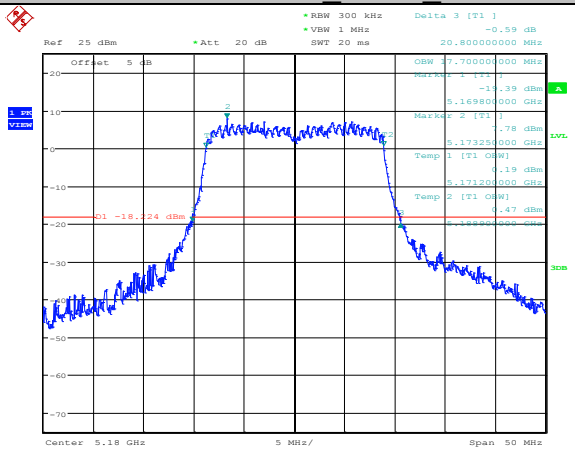

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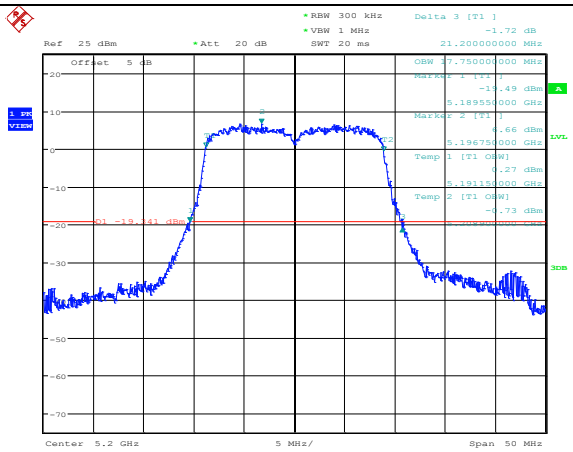

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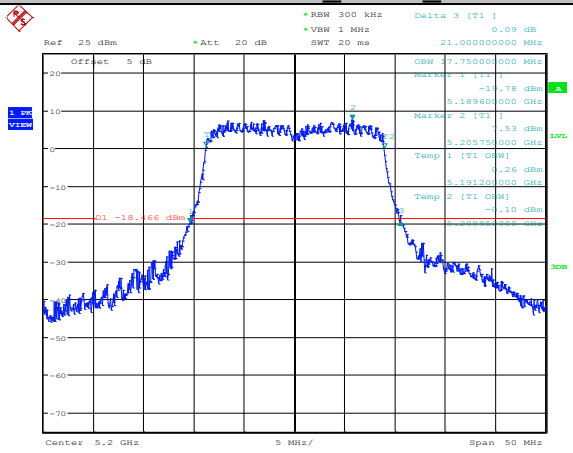

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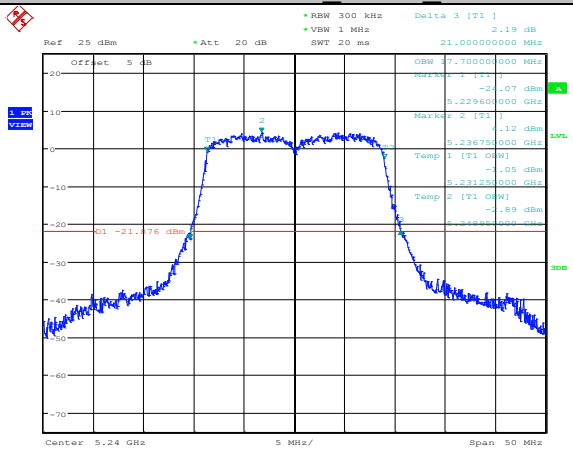

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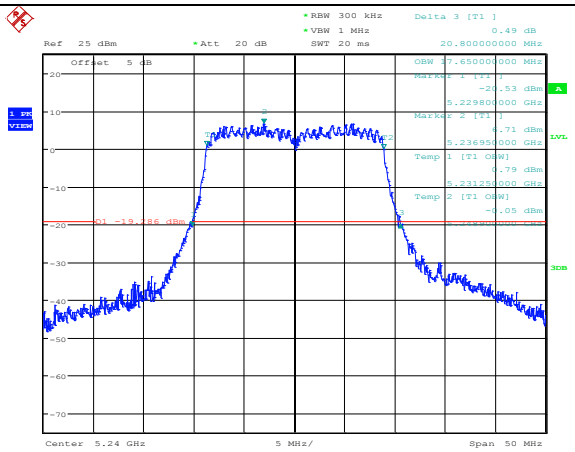

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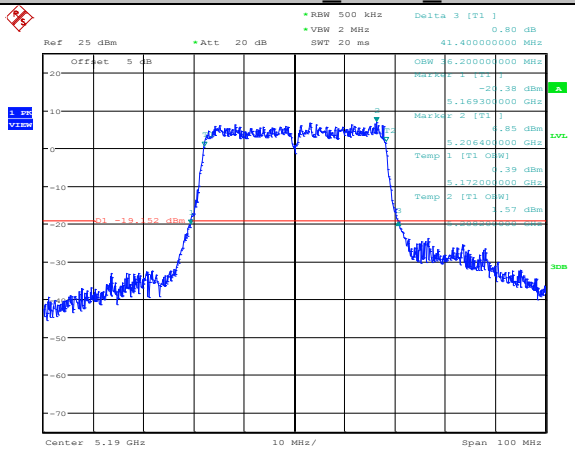

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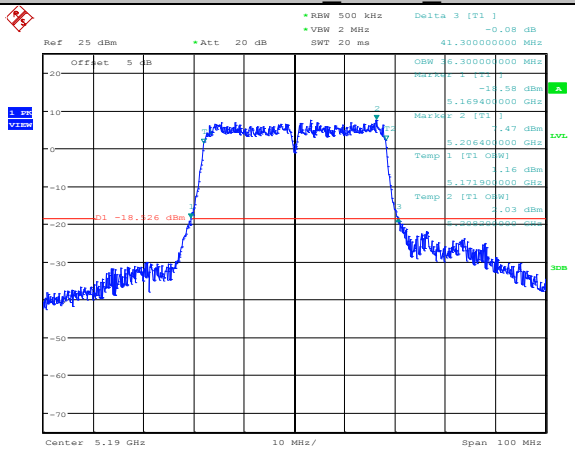

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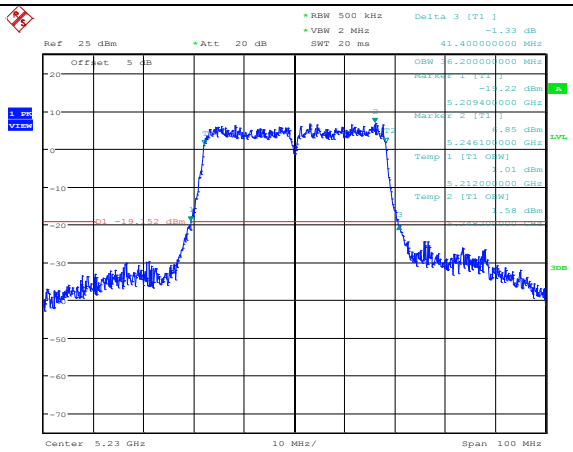

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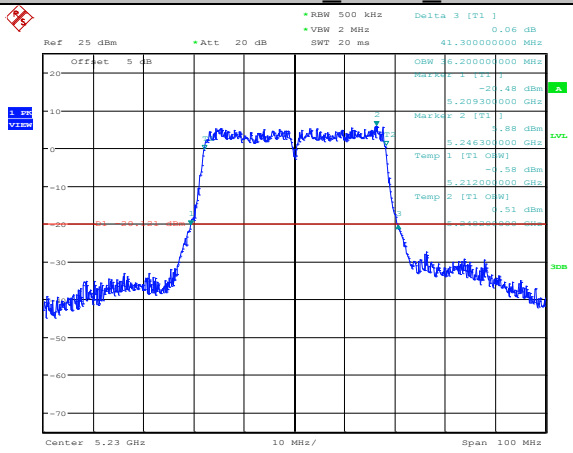

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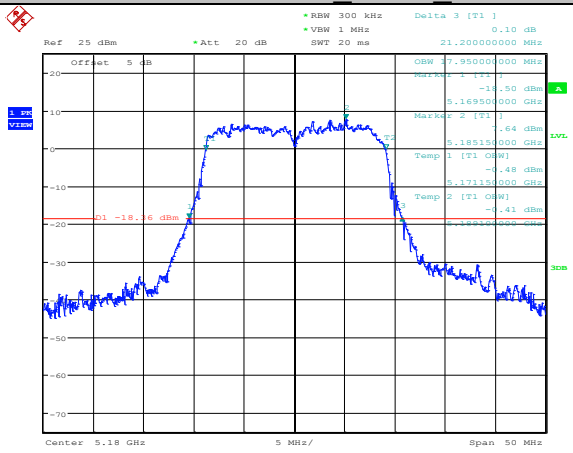
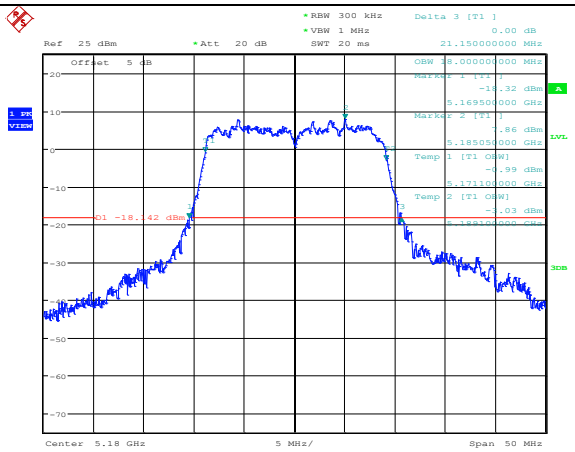
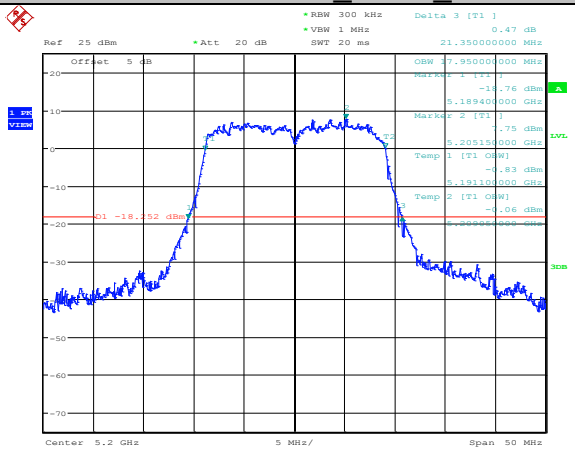


11AC20MIMO_ANT2_5180



11AC20MIMO_ANT1_5200



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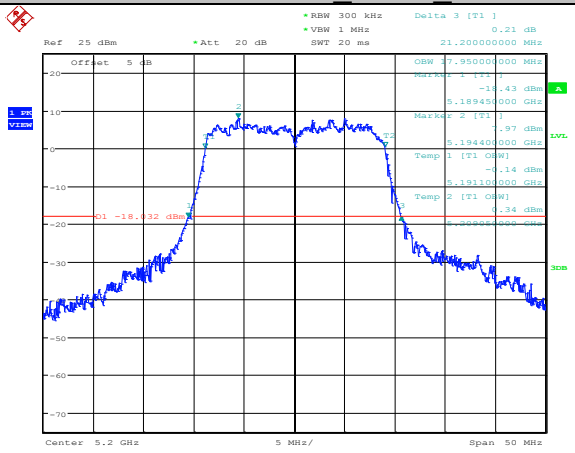
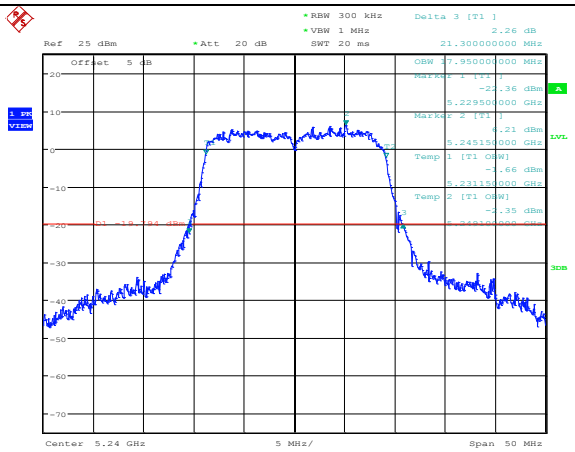
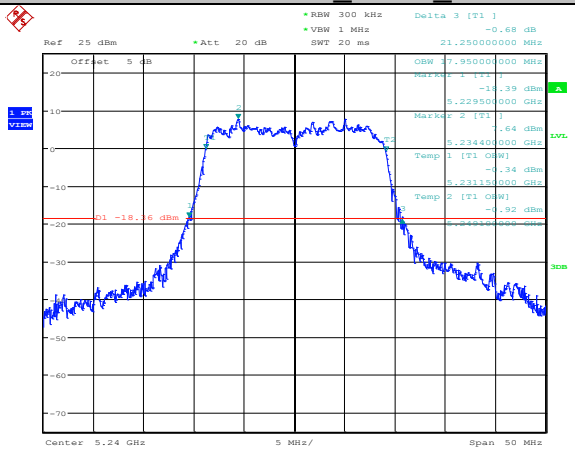


11AC20MIMO_ANT1_5240



11AC20MIMO_ANT2_5240



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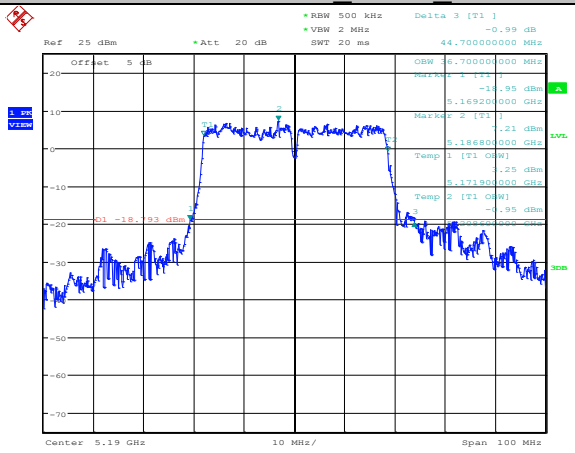

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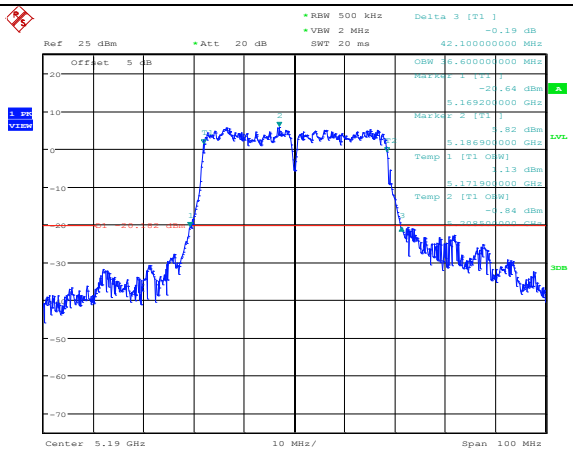

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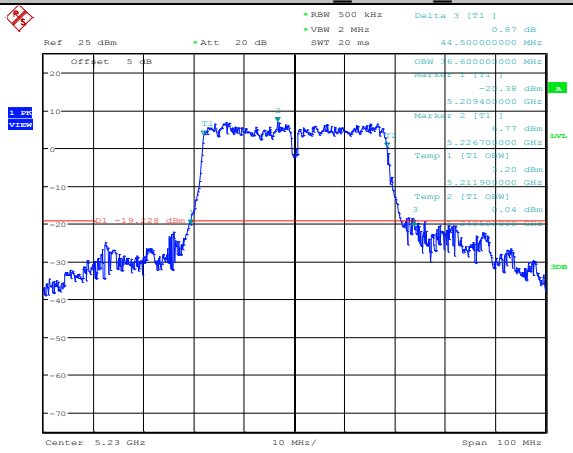
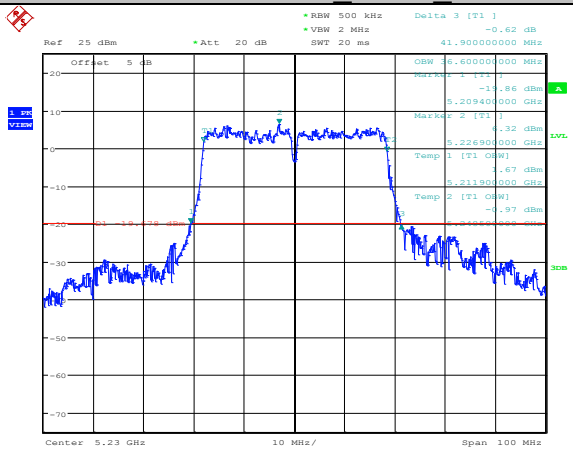
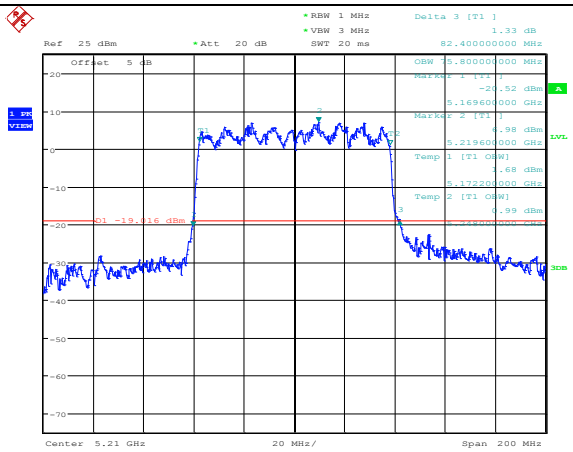


11AC40MIMO_ANT2_5230



11AC80MIMO_ANT2_5210



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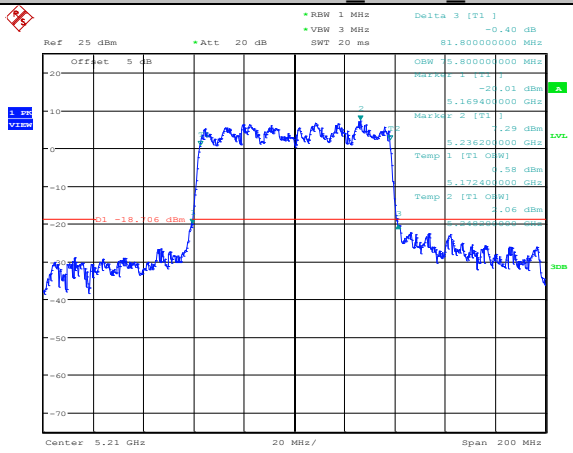
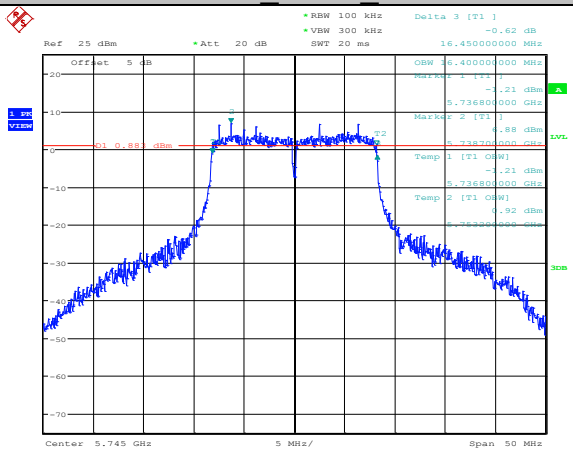


11A_ANT1_5745



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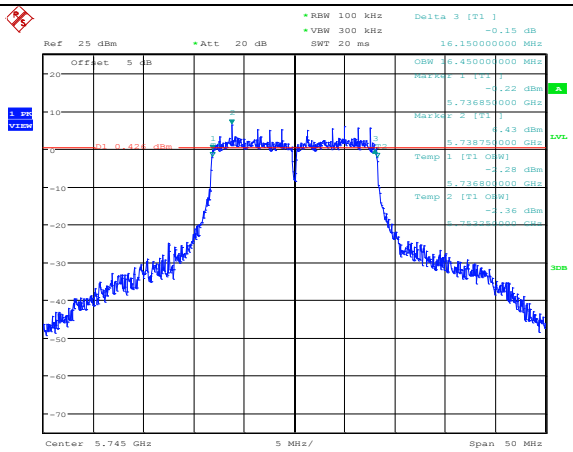
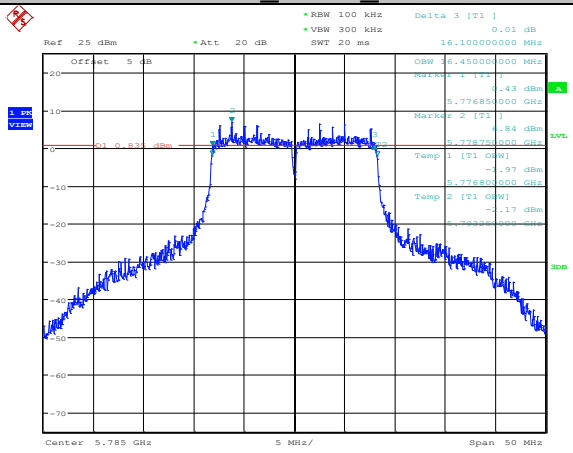
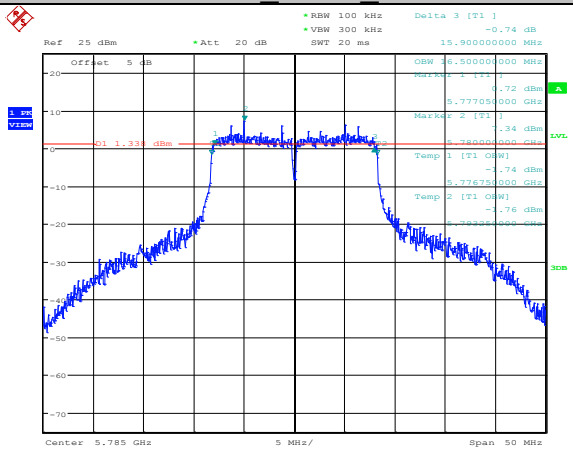


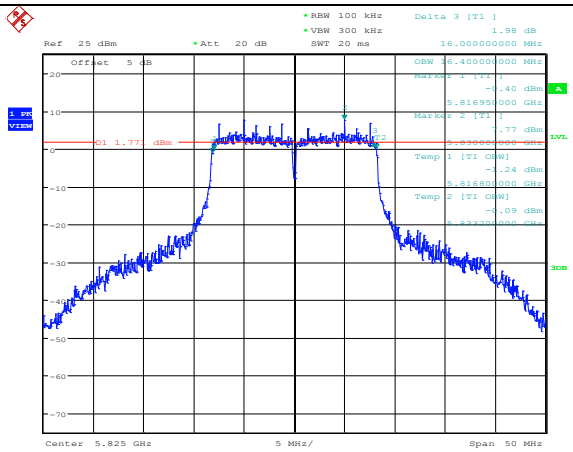
11A_ANT1_5785



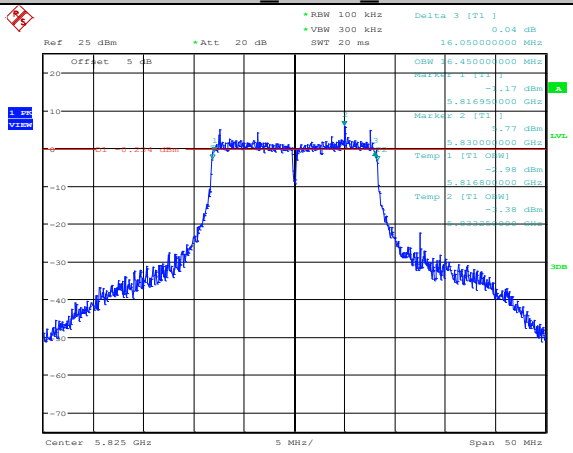
11A_ANT2_5785



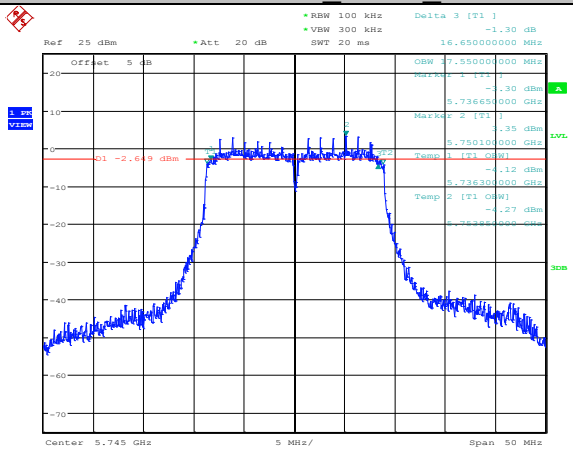
11A_ANT1_5825



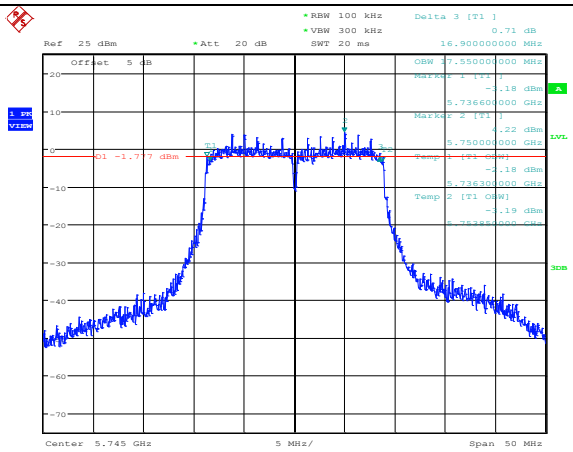
11A_ANT2_5825



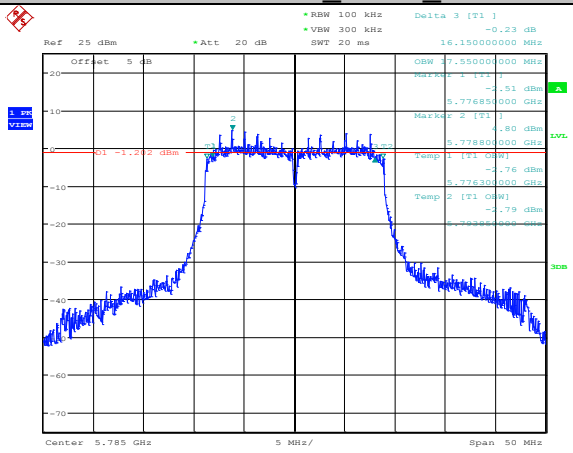
11N20MIMO_ANT1_5745



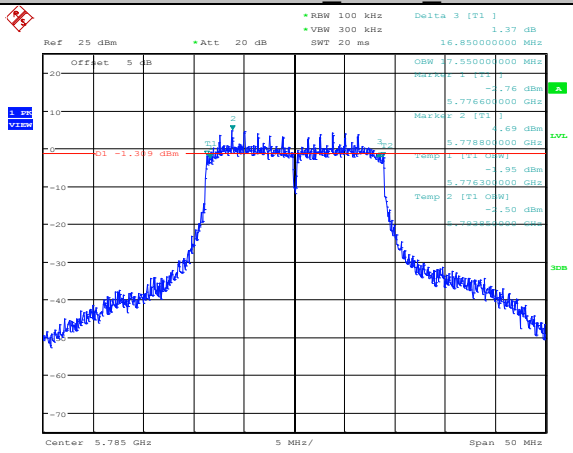
11N20MIMO_ANT2_5745



11N20MIMO_ANT1_5785



11N20MIMO_ANT2_5785



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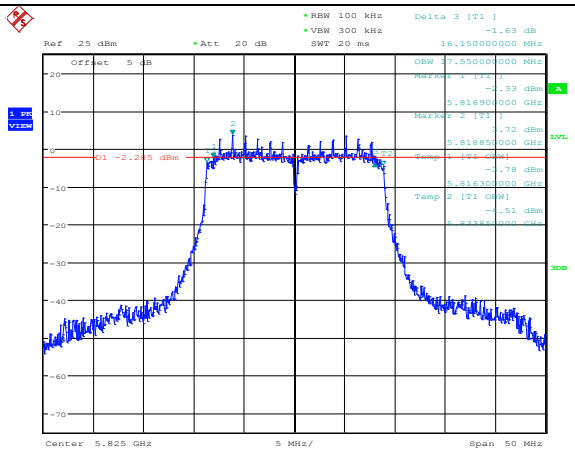
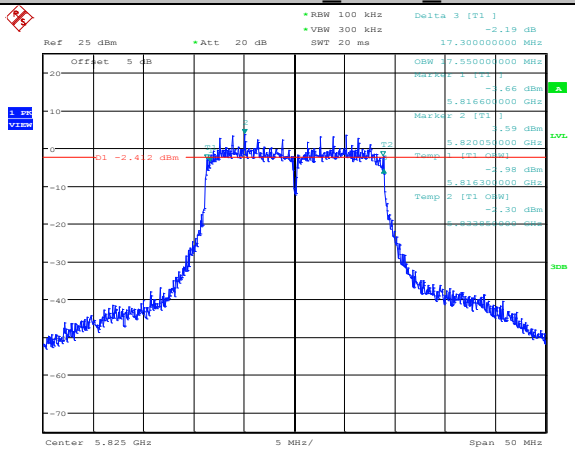
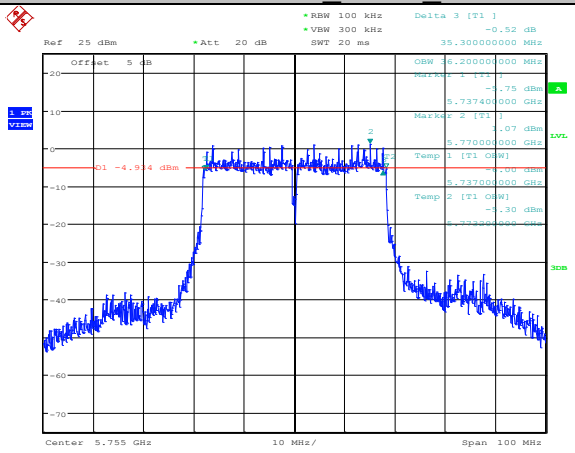


11N20MIMO_ANT2_5825



11N40MIMO_ANT1_5755



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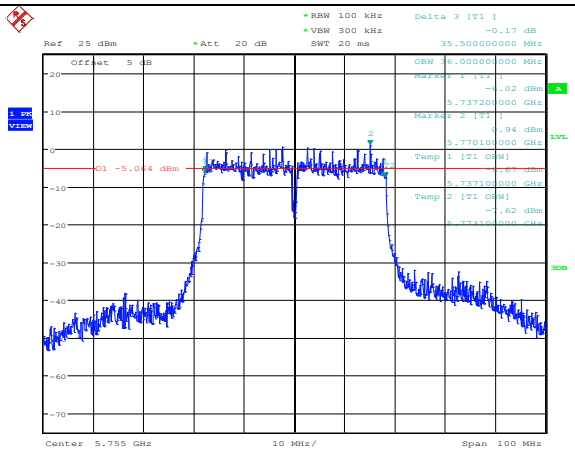

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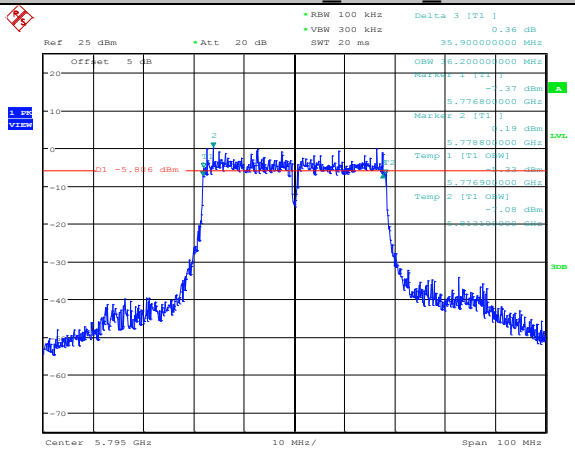

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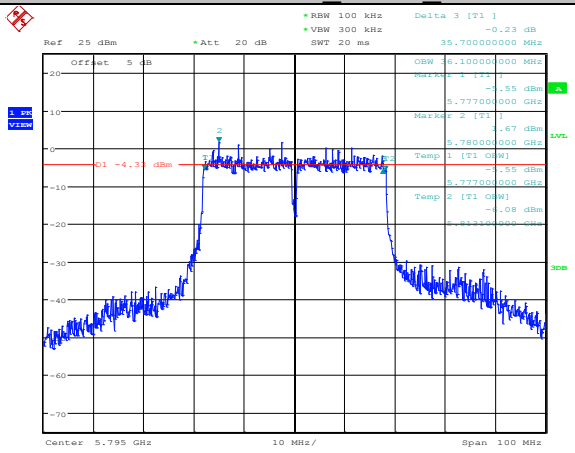

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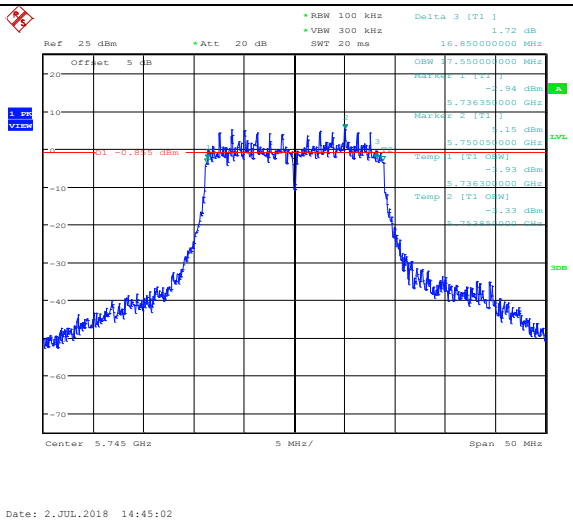
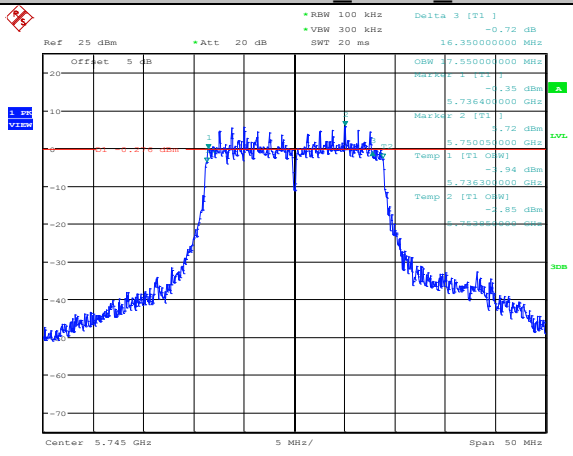


11AC20MIMO_ANT2_5745



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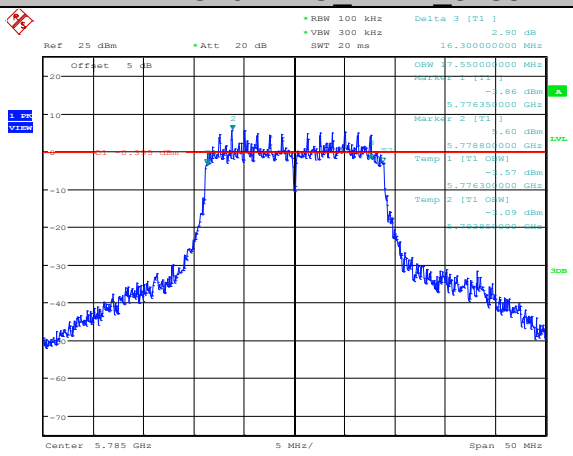

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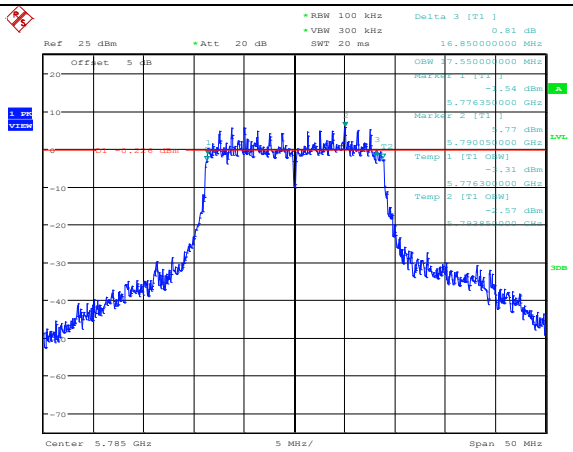

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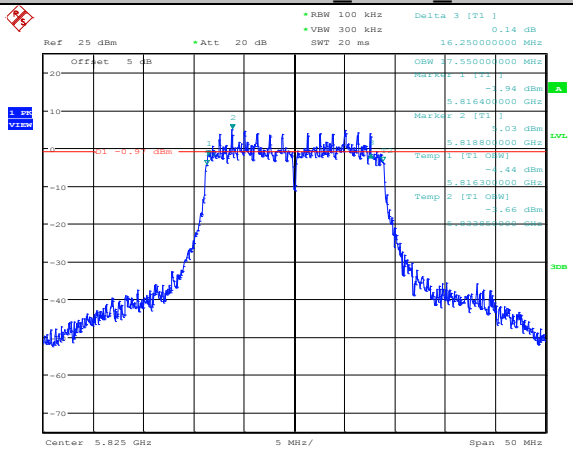
11AC20MIMO_ANT1_5825



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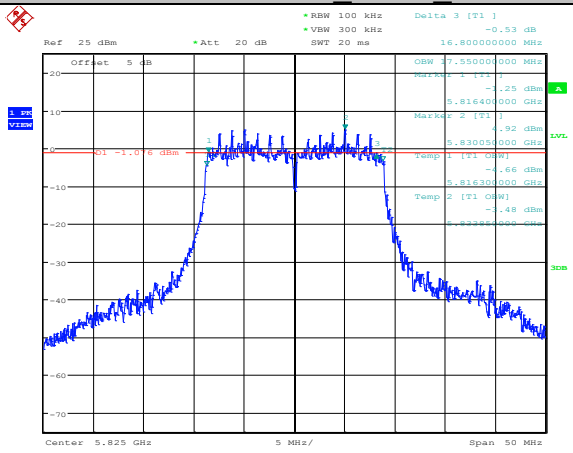
11AC20MIMO_ANT2_5825



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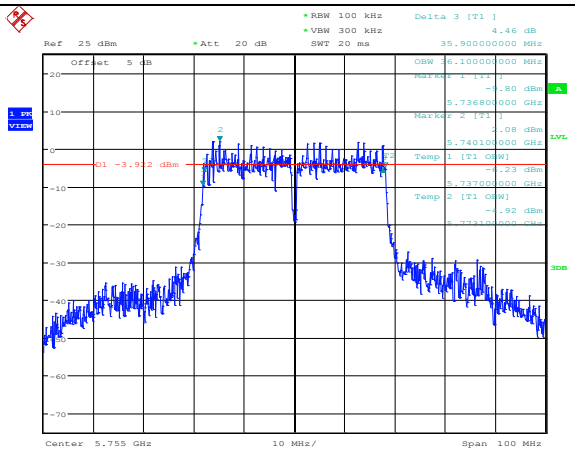
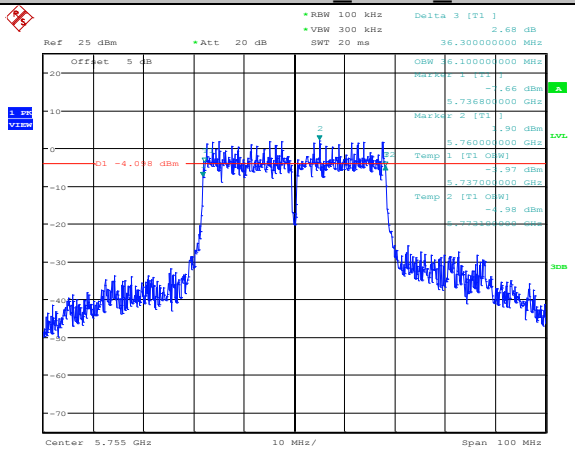


11AC40MIMO_ANT2_5755



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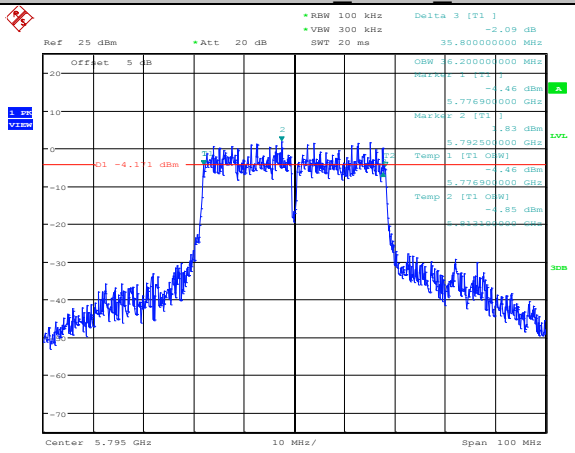
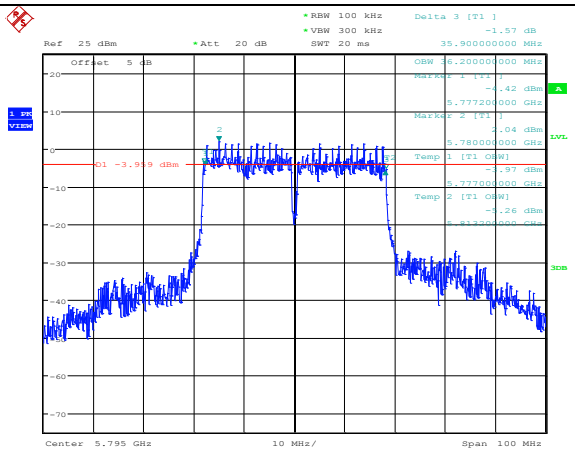


11AC40MIMO_ANT2_5795



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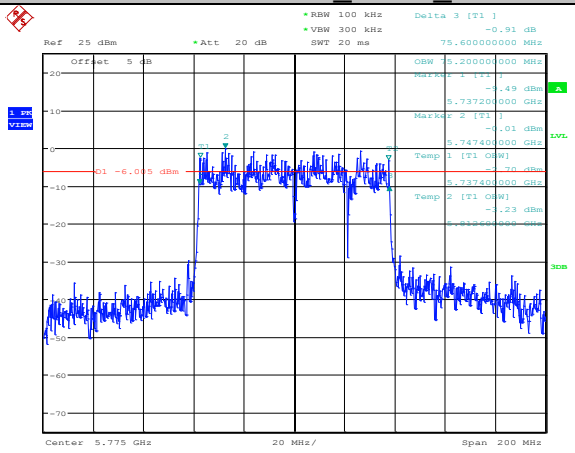
11AC80MIMO_ANT2_5775



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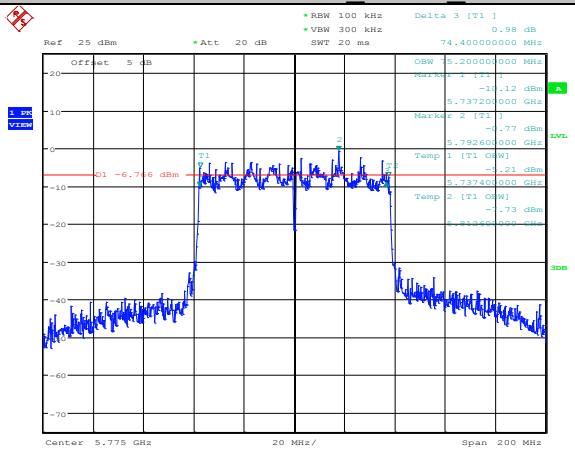
11AC80MMIMO_ANT1_5775



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5. Maximum Output Power

5.1. Block diagram of test setup

Same as section 4.1

5.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	For FCC: shall not exceed 250 mW (23.98dBm)	5150-5250
	For RSS: e.i.r.p. power: not exceed 200 mW(23dBm) or 10 + 10 log10 B	
	1 Watt (30dBm)	5725-5850
Note: For FCC: B=26dB bandwidth, ISED: B=99% bandwidth.		

5.3. Test Procedure

(1) Connect each EUT's antenna output to Spectrum Analyzer by RF cable and attenuator

(2) Add each antenna port's results to get the total output power of EUT.

5.4. Test Result

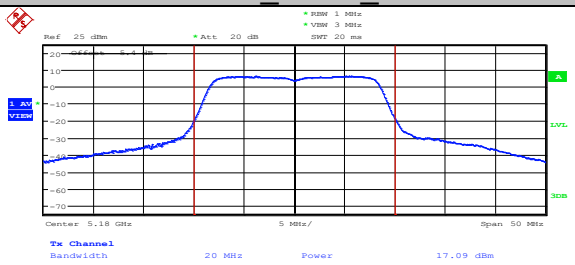
TestMode	Antenna	Channel	Ouput Power [dBm]	EIRP [dBm]	FCC LIMIT	ISED LIMIT (EIRP10 + 10 log10 B)	Verdict
11A	ANT1	5180	17.09	18.09	23.98	22.23	PASS
11A	ANT1	5200	17.16	18.16	23.98	22.23	PASS
11A	ANT1	5240	15.83	16.83	23.98	22.23	PASS
11A	ANT1	5745	18.43	19.43	30.00	30.00	PASS
11A	ANT1	5785	17.91	18.91	30.00	30.00	PASS
11A	ANT1	5825	18.27	19.27	30.00	30.00	PASS
11N20	ANT1	5180	15.40	16.40	23.98	22.47	PASS
11N20	ANT2	5180	14.83	15.83	23.98	22.47	PASS
11N20	ANT1+ ANT2	5180	18.12	19.12	23.98	22.47	PASS
11N20	ANT1	5200	14.91	15.91	23.98	22.47	PASS
11N20	ANT2	5200	14.80	15.80	23.98	22.47	PASS
11N20	ANT1+ ANT2	5200	17.86	18.86	23.98	22.47	PASS
11N20	ANT1	5240	12.87	13.87	23.98	22.47	PASS
11N20	ANT2	5240	14.17	15.17	23.98	22.47	PASS
11N20	ANT1+ ANT2	5240	16.61	17.61	23.98	22.47	PASS
11N20	ANT1	5745	14.93	15.93	30.00	30.00	PASS
11N20	ANT2	5745	14.96	15.96	30.00	30.00	PASS
11N20	ANT1+ ANT2	5745	17.96	18.96	30.00	30.00	PASS

11N20	ANT1	5785	15.22	16.22	30.00	30.00	PASS
11N20	ANT2	5785	15.35	16.35	30.00	30.00	PASS
11N20	ANT1+ ANT2	5785	18.31	19.31	30.00	30.00	PASS
11N20	ANT1	5825	14.31	15.31	30.00	30.00	PASS
11N20	ANT2	5825	14.50	15.50	30.00	30.00	PASS
11N20	ANT1+ ANT2	5825	17.41	18.41	30.00	30.00	PASS
11N40	ANT1	5190	15.42	16.42	23.98	23.00	PASS
11N40	ANT2	5190	16.04	17.04	23.98	23.00	PASS
11N40	ANT1+ ANT2	5190	18.72	19.72	23.98	23.00	PASS
11N40	ANT1	5230	13.28	14.28	23.98	23.00	PASS
11N40	ANT2	5230	14.76	15.76	23.98	23.00	PASS
11N40	ANT1+ ANT2	5230	17.12	18.12	23.98	23.00	PASS
11N40	ANT1	5755	16.09	17.09	30.00	30.00	PASS
11N40	ANT2	5755	15.08	16.08	30.00	30.00	PASS
11N40	ANT1+ ANT2	5755	18.64	19.64	30.00	30.00	PASS
11N40	ANT1	5795	15.12	16.12	30.00	30.00	PASS
11N40	ANT2	5795	16.05	17.05	30.00	30.00	PASS
11N40	ANT1+ ANT2	5795	18.64	19.64	30.00	30.00	PASS
11AC20	ANT1	5180	17.24	18.24	23.98	23.00	PASS
11AC20	ANT2	5180	17.55	18.55	23.98	23.00	PASS
11AC20	ANT1+ ANT2	5180	20.41	21.41	23.98	23.00	PASS
11AC20	ANT1	5200	17.52	18.52	23.98	23.00	PASS
11AC20	ANT2	5200	17.97	18.97	23.98	23.00	PASS
11AC20	ANT1+ ANT2	5200	20.77	21.77	23.98	23.00	PASS
11AC20	ANT1	5240	16.02	17.02	23.98	23.00	PASS
11AC20	ANT2	5240	17.53	18.53	23.98	23.00	PASS
11AC20	ANT1+ ANT2	5240	19.82	20.82	23.98	23.00	PASS
11AC20	ANT1	5745	18.26	19.26	30.00	30.00	PASS
11AC20	ANT2	5745	17.53	18.53	30.00	30.00	PASS
11AC20	ANT1+ ANT2	5745	20.93	21.93	30.00	30.00	PASS
11AC20	ANT1	5785	17.68	18.68	30.00	30.00	PASS
11AC20	ANT2	5785	18.11	19.11	30.00	30.00	PASS
11AC20	ANT1+ ANT2	5785	20.91	21.91	30.00	30.00	PASS
11AC20	ANT1	5825	17.13	18.13	30.00	30.00	PASS
11AC20	ANT2	5825	18.16	19.16	30.00	30.00	PASS
11AC20	ANT1+ ANT2	5825	20.70	21.70	30.00	30.00	PASS
11AC40	ANT1	5190	17.91	18.91	23.98	23.00	PASS
11AC40	ANT2	5190	19.15	20.15	23.98	23.00	PASS
11AC40	ANT1+ ANT2	5190	21.61	22.61	23.98	23.00	PASS
11AC40	ANT1	5230	17.05	18.05	23.98	23.00	PASS
11AC40	ANT2	5230	17.16	18.16	23.98	23.00	PASS
11AC40	ANT1+ ANT2	5230	20.16	21.16	23.98	23.00	PASS
11AC40	ANT1	5755	19.10	20.10	30.00	30.00	PASS
11AC40	ANT2	5755	20.18	21.18	30.00	30.00	PASS
11AC40	ANT1+ ANT2	5755	22.70	23.70	30.00	30.00	PASS
11AC40	ANT1	5795	18.14	19.14	30.00	30.00	PASS
11AC40	ANT2	5795	19.82	20.82	30.00	30.00	PASS
11AC40	ANT1+ ANT2	5795	22.04	23.04	30.00	30.00	PASS
11AC80	ANT1	5210	14.27	15.27	23.98	23.00	PASS
11AC80	ANT2	5210	19.62	20.62	23.98	23.00	PASS
11AC80	ANT1+ ANT2	5210	20.73	21.73	23.98	23.00	PASS

11AC80	ANT1	5775	15.55	16.55	23.98	30.00	PASS
11AC80	ANT2	5775	18.87	19.87	23.98	30.00	PASS
11AC80	ANT1+ ANT2	5775	20.53	21.53	23.98	30.00	PASS

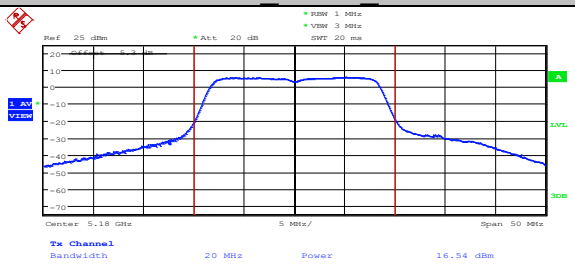
5.5. Original test data

11A_ANT1_5180



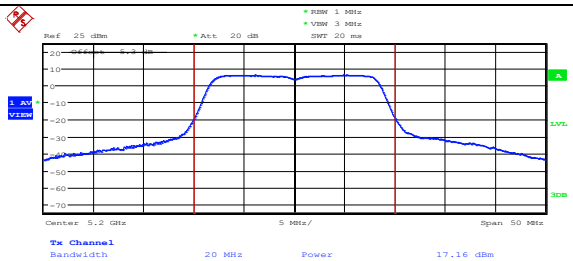
Date: 2.JUL.2018 13:55:13

11A_ANT2_5180



Date: 2.JUL.2018 15:48:13

11A_ANT1_5200



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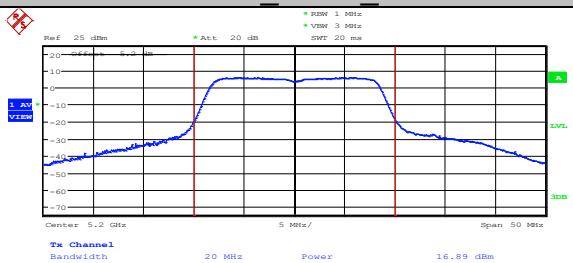
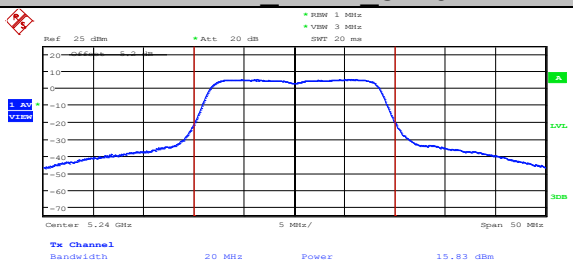


Date: 2.JUL.2018 15:49:15

11A_ANT1_5240



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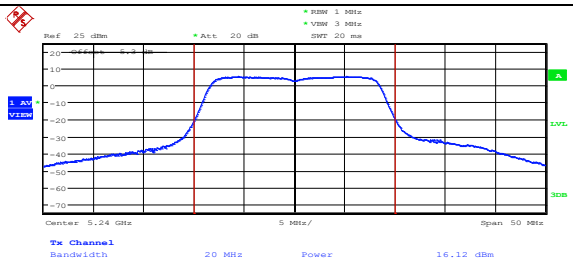
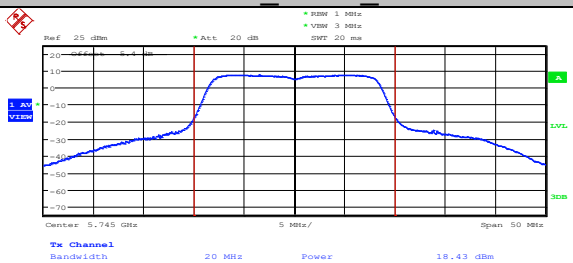


Date: 2.JUL.2018 15:50:16

11A_ANT1_5745



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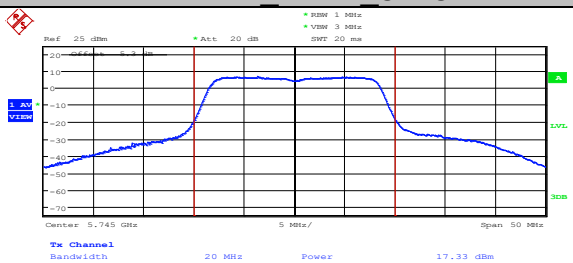
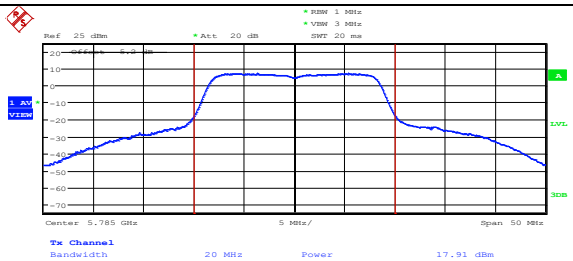


Date: 2.JUL.2018 15:51:24

11A_ANT1_5785



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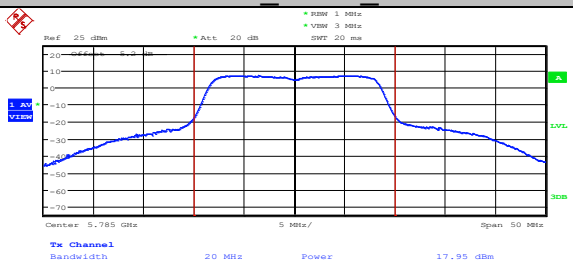

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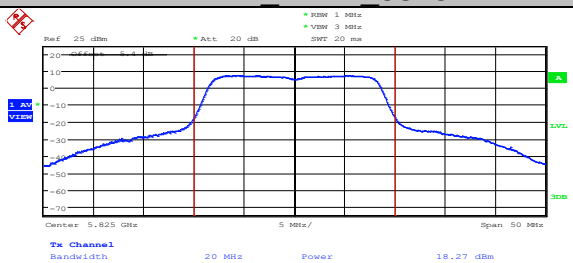
11A_ANT1_5825



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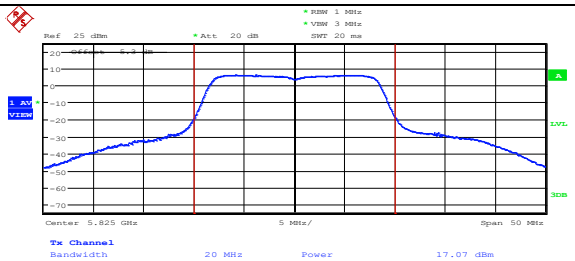

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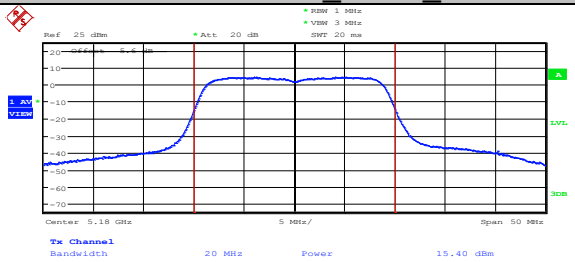
11N20MIMO_ANT1_5180



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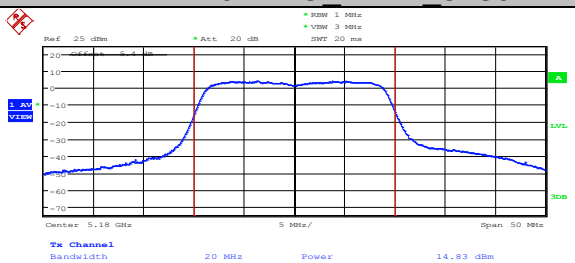

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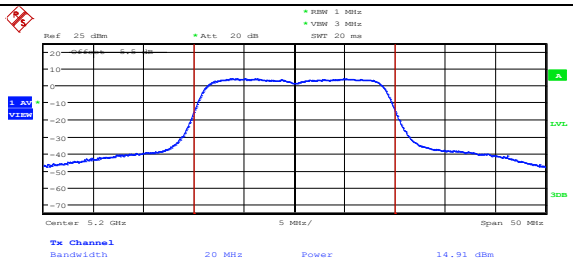

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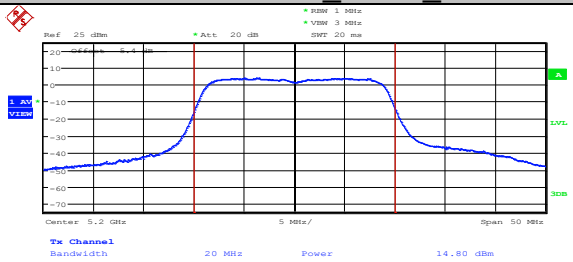

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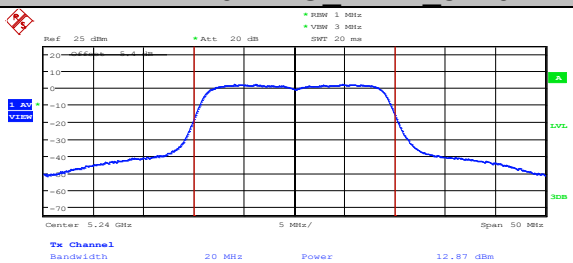
11N20MIMO_ANT1_5240



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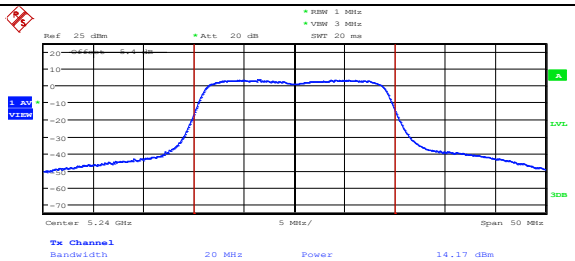
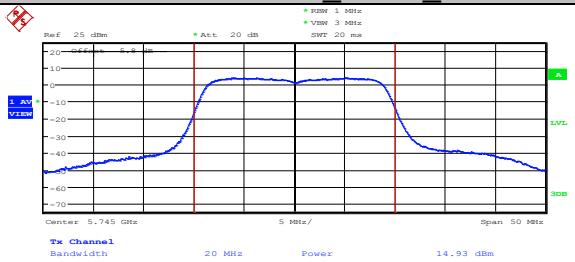


Date: 2.JUL.2018 16:01:16

11N20MIMO_ANT1_5745



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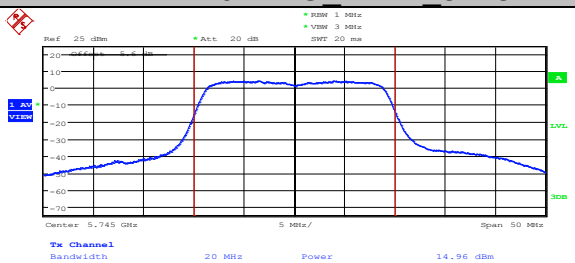
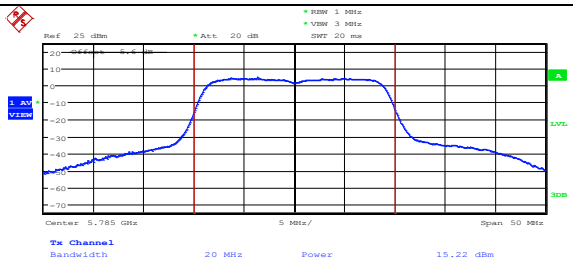


Date: 2.JUL.2018 16:02:30

11N20MIMO_ANT1_5785



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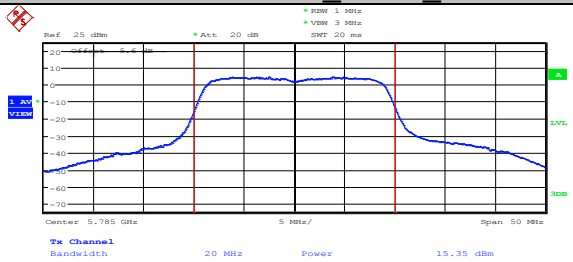

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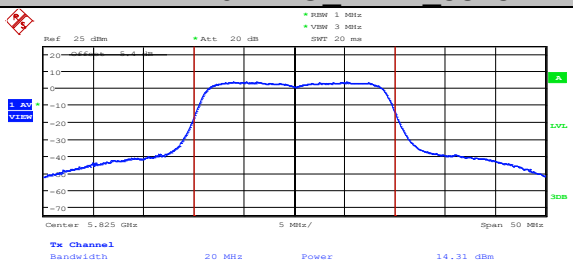
11N20MIMO_ANT1_5825



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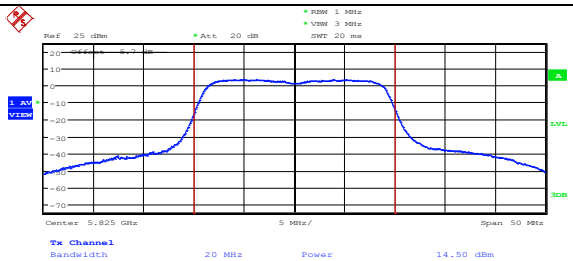

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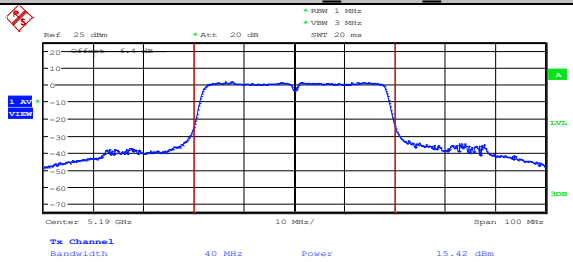
11N40MIMO_ANT1_5190



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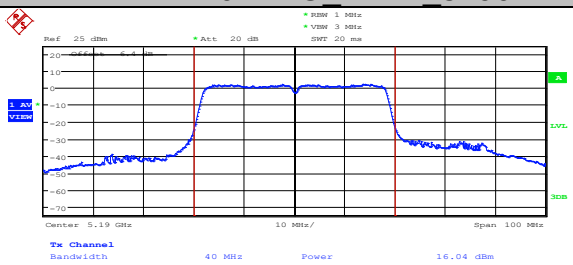
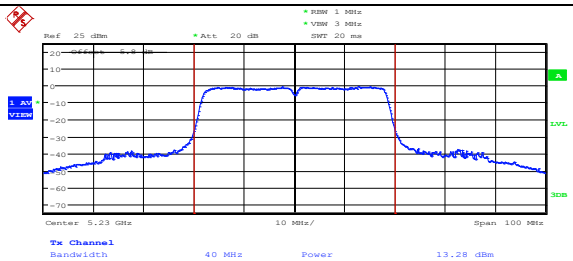


Date: 2.JUL.2018 19:01:04

11N40MIMO_ANT1_5230



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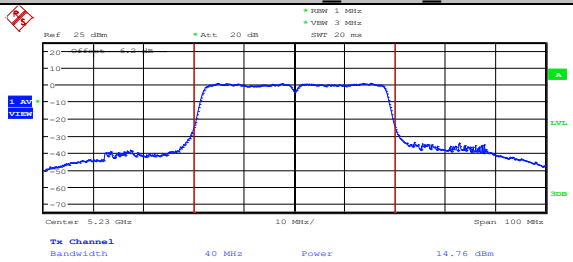

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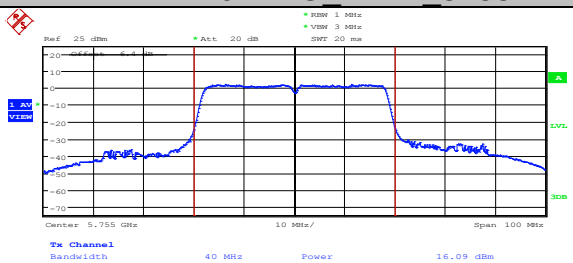
11N40MIMO_ANT1_5755



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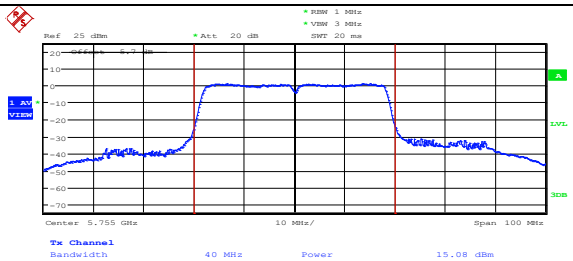

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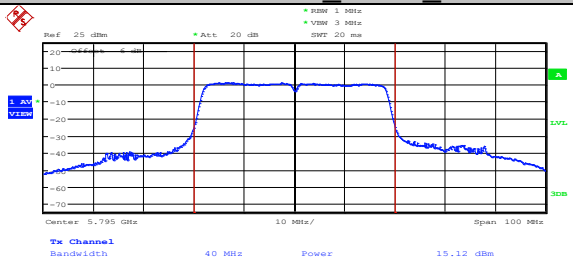
11N40MIMO_ANT1_5795



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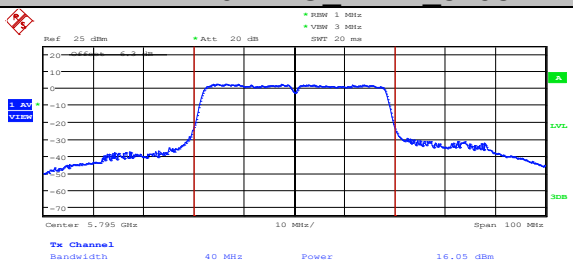

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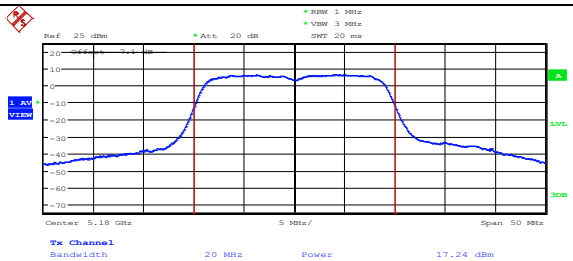
11AC20MIMO_ANT1_5180



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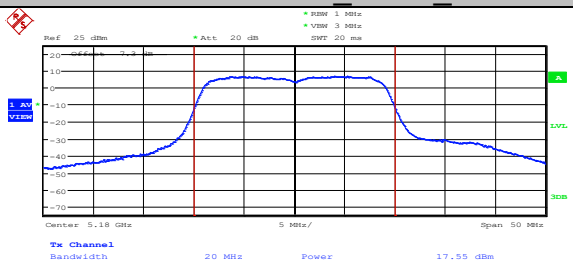

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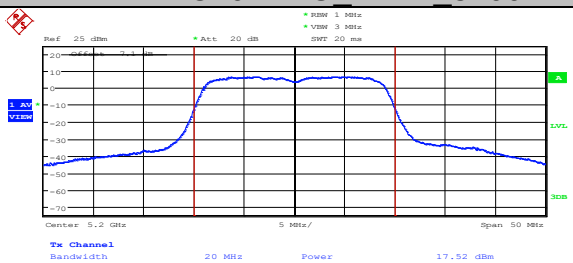

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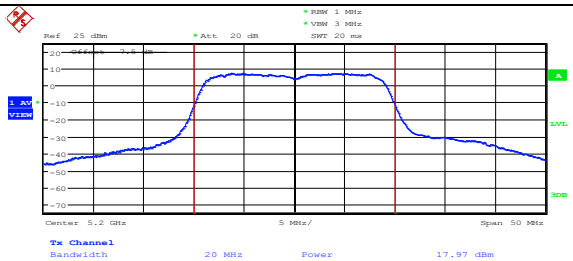

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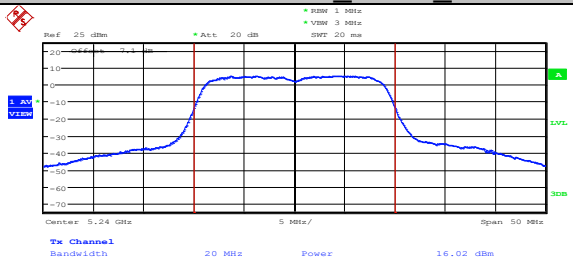

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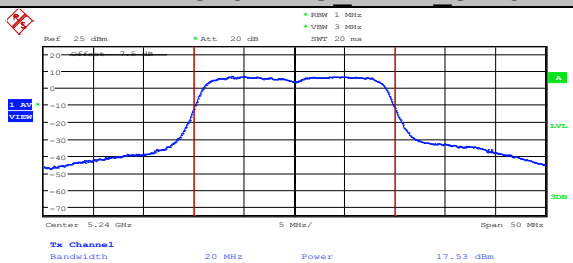

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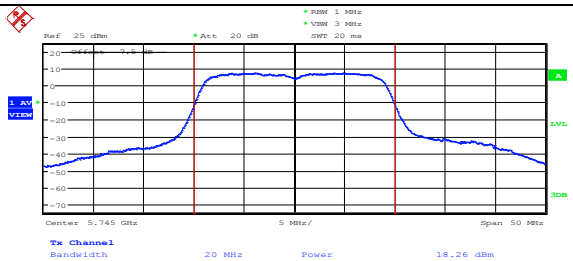

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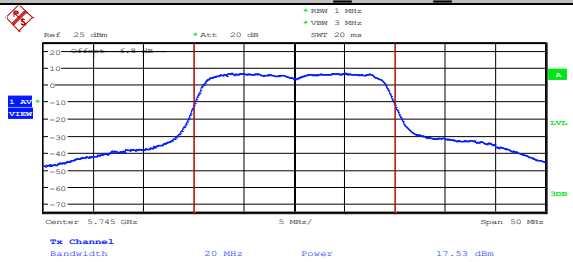

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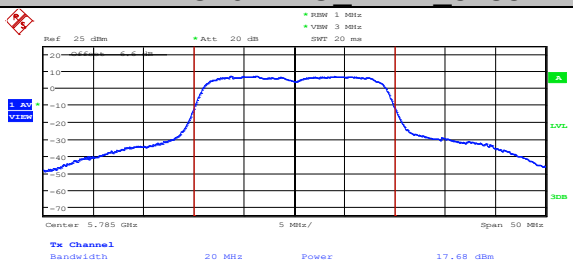

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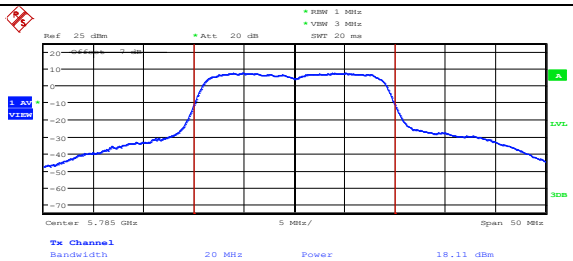

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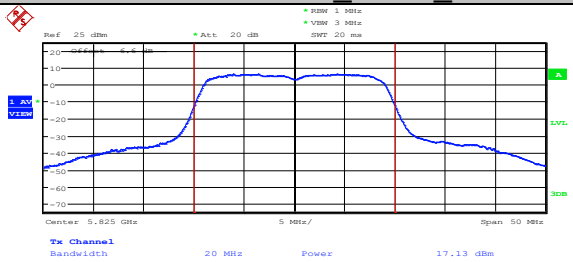

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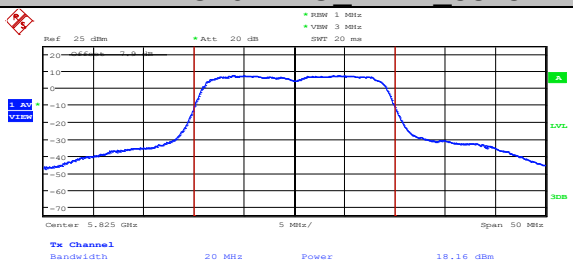

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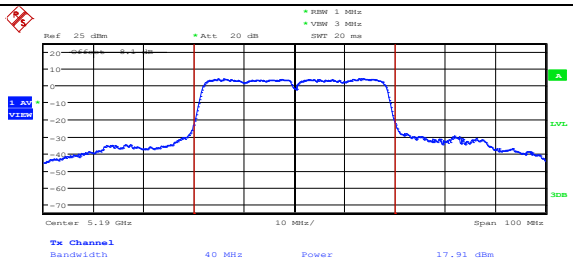
11AC40MIMO_ANT1_5190



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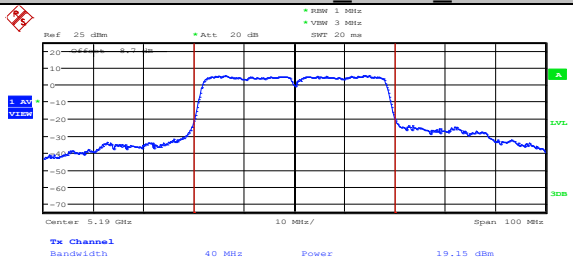

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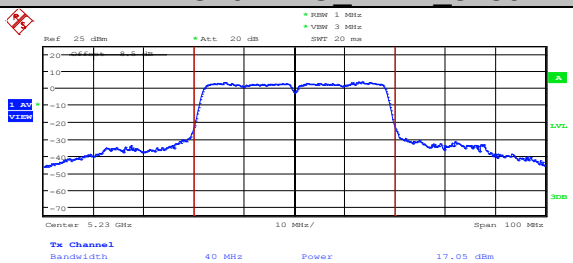
11AC40MIMO_ANT1_5230



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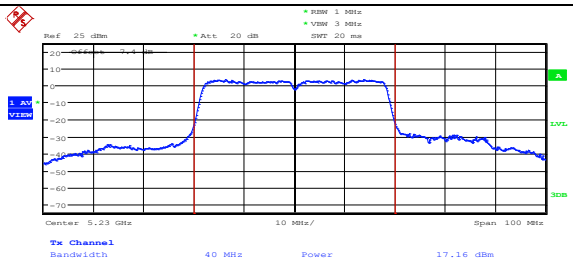

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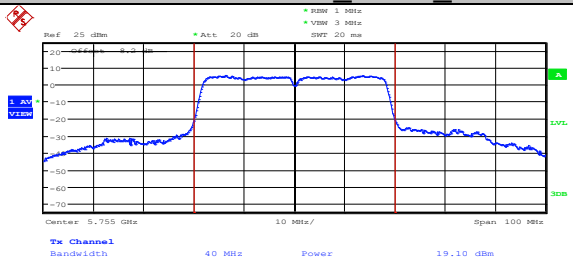

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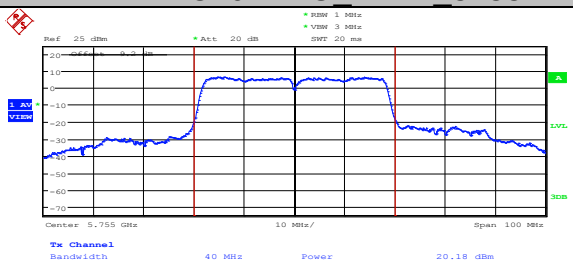

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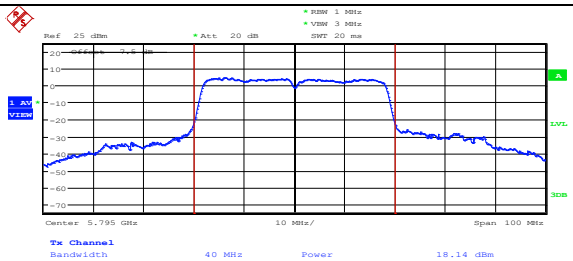

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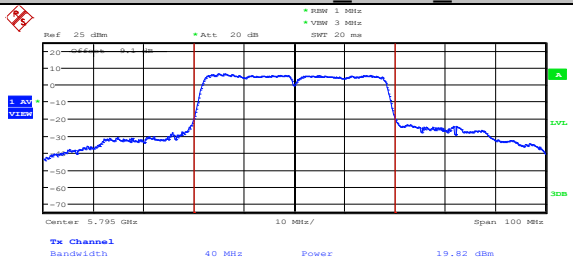
11AC40MIMO_ANT2_5795



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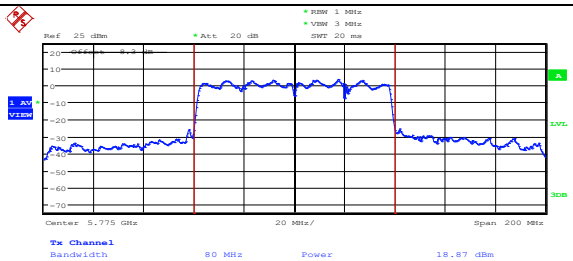
11AC80MIMO_ANT2_5210

Date: 2.JUL.2018 19:19:07

11AC80MIMO_ANT2_5775



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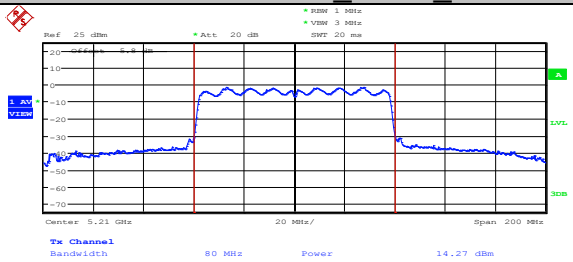
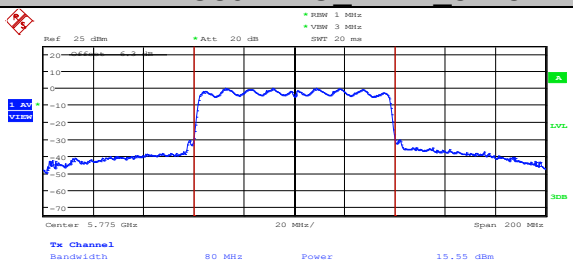
11AC80MIMO_ANT1_5210



Date: 2.JUL.2018 15:43:10

11AC80MIMO_ANT1_5775



Date: 2.JUL.2018 15:45:08

6. Power Spectral Density

6.1. Block diagram of test setup

Same with 4.1

6.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	For FCC: 11dBm/MHz	5150-5250
	For RSS eirp:10dBm/MHz	
	30dBm/500kHz	5725-5850

6.3. Test Procedure

The transmitter output was connected to a spectrum analyzer, use the following settings:
5150MHz~5250MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

5725MHz-5850MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	500kHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

6.4. Test Result

Test Mode	Antenna	Channel	PSD [dBm/MHz]	PSD eirp [dBm/MHz]	FCC Limit [dBm/MHz]	ISED Limit [dBm/MHz]	Verdict
11A	ANT1	5180	6.30	7.30	11.00	10.00	PASS
11A	ANT1	5200	6.64	7.64	11.00	10.00	PASS
11A	ANT1	5240	5.16	6.16	11.00	10.00	PASS
11A	ANT1	5745	5.73	6.73	30.00	30.00	PASS
11A	ANT1	5785	5.62	6.62	30.00	30.00	PASS
11A	ANT1	5825	5.28	6.28	30.00	30.00	PASS
11N20	ANT1	5180	4.21	5.21	11.00	10.00	PASS
11N20	ANT2	5180	3.97	4.97	11.00	10.00	PASS
11N20	ANT1+ANT2	5180	7.10	8.10	11.00	10.00	PASS
11N20	ANT1	5200	4.36	5.36	11.00	10.00	PASS
11N20	ANT2	5200	4.46	5.46	11.00	10.00	PASS
11N20	ANT1+ANT2	5200	7.42	8.42	11.00	10.00	PASS
11N20	ANT1	5240	2.37	3.37	11.00	10.00	PASS
11N20	ANT2	5240	3.82	4.82	11.00	10.00	PASS
11N20	ANT1+ANT2	5240	6.17	7.17	11.00	10.00	PASS
11N20	ANT1	5745	2.02	3.02	30.00	30.00	PASS
11N20	ANT2	5745	2.38	3.38	30.00	30.00	PASS
11N20	ANT1+ANT2	5745	5.21	6.21	30.00	30.00	PASS
11N20	ANT1	5785	2.28	3.28	30.00	30.00	PASS
11N20	ANT2	5785	2.46	3.46	30.00	30.00	PASS
11N20	ANT1+ANT2	5785	5.38	6.38	30.00	30.00	PASS
11N20	ANT1	5825	1.81	2.81	30.00	30.00	PASS
11N20	ANT2	5825	1.66	2.66	30.00	30.00	PASS
11N20	ANT1+ANT2	5825	4.75	5.75	30.00	30.00	PASS
11N40	ANT1	5190	0.82	1.82	11.00	10.00	PASS
11N40	ANT2	5190	1.76	2.76	11.00	10.00	PASS
11N40	ANT1+ANT2	5190	4.33	5.33	11.00	10.00	PASS
11N40	ANT1	5230	-0.67	0.33	11.00	10.00	PASS
11N40	ANT2	5230	0.72	1.72	11.00	10.00	PASS
11N40	ANT1+ANT2	5230	3.09	4.09	11.00	10.00	PASS
11N40	ANT1	5755	-0.69	0.31	30.00	30.00	PASS
11N40	ANT2	5755	-0.51	0.49	30.00	30.00	PASS
11N40	ANT1+ANT2	5755	2.41	3.41	30.00	30.00	PASS
11N40	ANT1	5795	-0.44	0.56	30.00	30.00	PASS
11N40	ANT2	5795	-0.35	0.65	30.00	30.00	PASS
11N40	ANT1+ANT2	5795	2.62	3.62	30.00	30.00	PASS
11AC20	ANT1	5180	5.42	7.42	11.00	10.00	PASS
11AC20	ANT2	5180	6.08	7.88	11.00	10.00	PASS
11AC20	ANT1+ANT2	5180	8.77	9.77	11.00	10.00	PASS
11AC20	ANT1	5200	5.38	7.08	11.00	10.00	PASS
11AC20	ANT2	5200	5.02	7.97	11.00	10.00	PASS
11AC20	ANT1+ANT2	5200	8.22	9.22	11.00	10.00	PASS
11AC20	ANT1	5240	5.84	6.84	11.00	10.00	PASS
11AC20	ANT2	5240	5.79	6.79	11.00	10.00	PASS
11AC20	ANT1+ANT2	5240	8.83	9.83	11.00	10.00	PASS
11AC20	ANT1	5745	6.07	7.07	30.00	30.00	PASS
11AC20	ANT2	5745	6.08	7.08	30.00	30.00	PASS
11AC20	ANT1+ANT2	5745	9.09	10.09	30.00	30.00	PASS

11AC20	ANT1	5785	5.60	6.60	30.00	30.00	PASS
11AC20	ANT2	5785	6.25	7.25	30.00	30.00	PASS
11AC20	ANT1+ANT2	5785	8.95	9.95	30.00	30.00	PASS
11AC20	ANT1	5825	5.74	6.74	30.00	30.00	PASS
11AC20	ANT2	5825	5.58	6.58	30.00	30.00	PASS
11AC20	ANT1+ANT2	5825	8.67	9.67	30.00	30.00	PASS
11AC40	ANT1	5190	4.45	5.45	11.00	10.00	PASS
11AC40	ANT2	5190	5.69	6.69	11.00	10.00	PASS
11AC40	ANT1+ANT2	5190	8.12	9.12	11.00	10.00	PASS
11AC40	ANT1	5230	2.96	3.96	11.00	10.00	PASS
11AC40	ANT2	5230	4.04	5.04	11.00	10.00	PASS
11AC40	ANT1+ANT2	5230	6.54	7.54	11.00	10.00	PASS
11AC40	ANT1	5755	3.91	4.91	30.00	30.00	PASS
11AC40	ANT2	5755	5.34	6.34	30.00	30.00	PASS
11AC40	ANT1+ANT2	5755	7.69	8.69	30.00	30.00	PASS
11AC40	ANT1	5795	3.31	4.31	30.00	30.00	PASS
11AC40	ANT2	5795	3.35	4.35	30.00	30.00	PASS
11AC40	ANT1+ANT2	5795	6.34	7.34	30.00	30.00	PASS
11AC80	ANT1	5210	-1.54	-0.54	11.00	10.00	PASS
11AC80	ANT2	5210	3.73	4.73	11.00	10.00	PASS
11AC80	ANT1+ANT2	5210	4.85	5.85	11.00	10.00	PASS
11AC80	ANT1	5775	-2.15	-1.15	30.00	30.00	PASS
11AC80	ANT2	5775	1.73	2.73	30.00	30.00	PASS
11AC80	ANT1+ANT2	5775	3.22	4.22	30.00	30.00	PASS

6.5. Original test data

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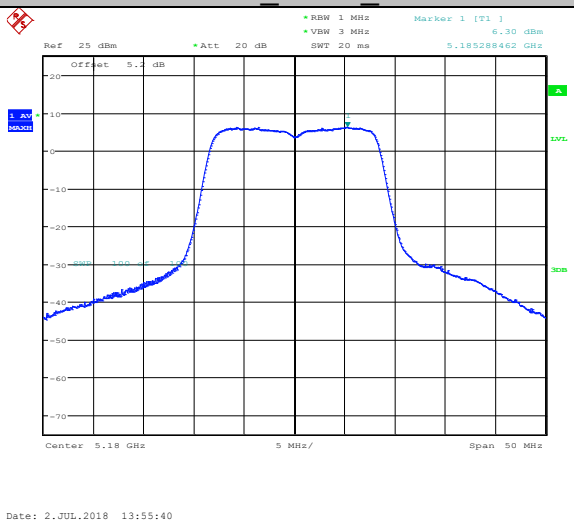
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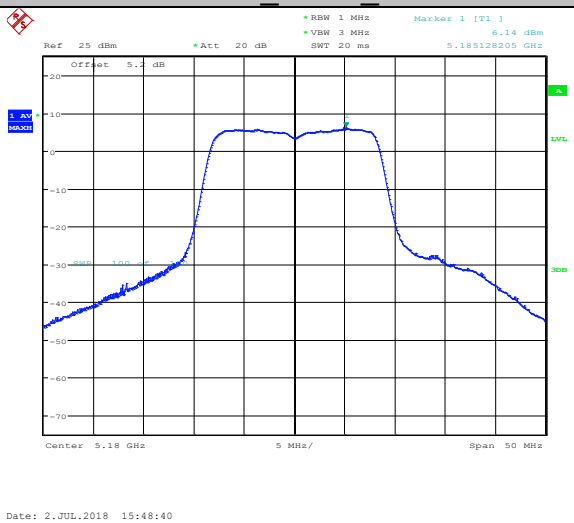
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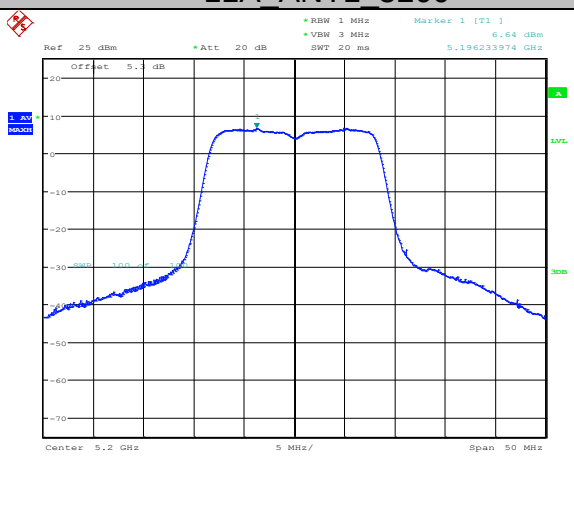
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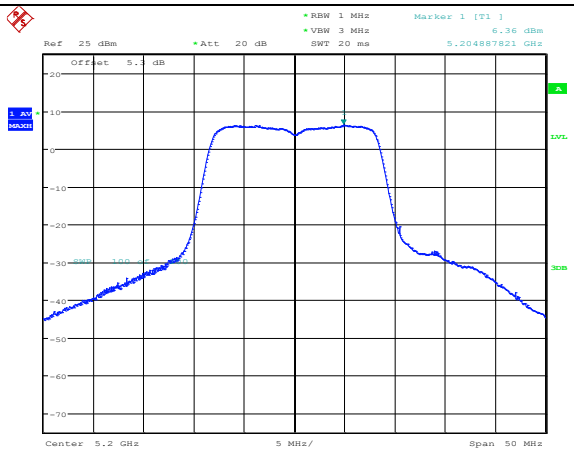

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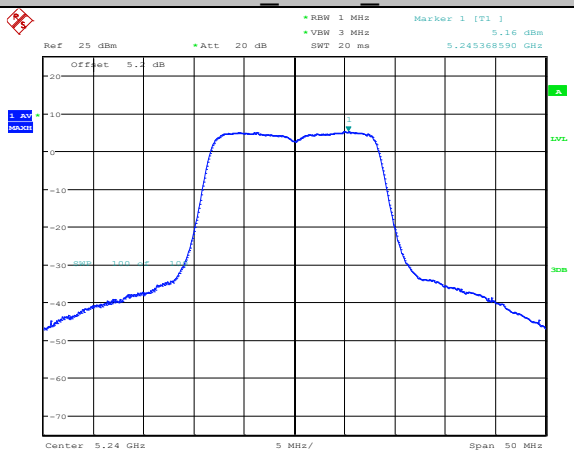

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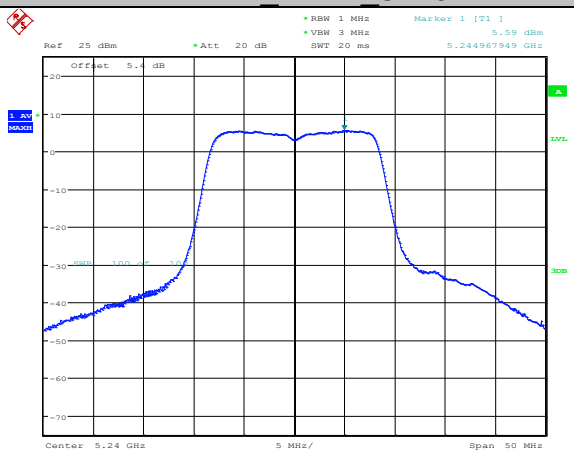

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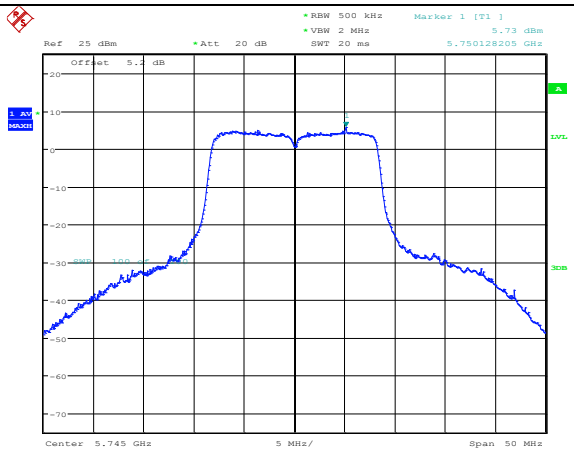

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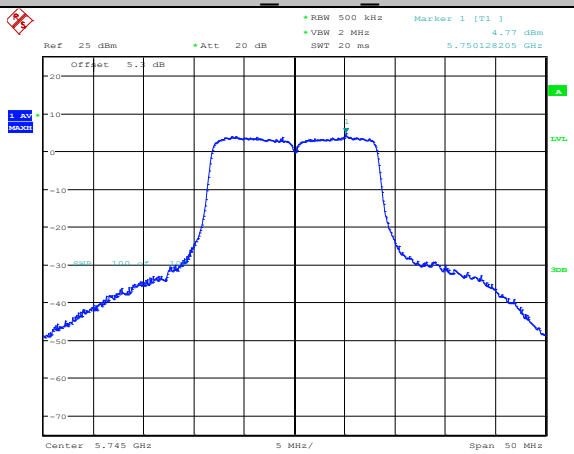

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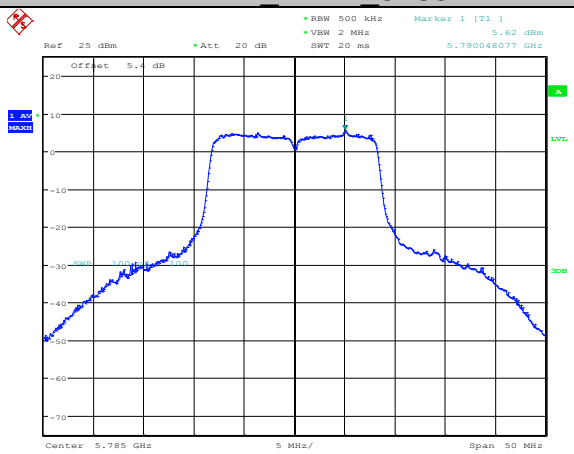

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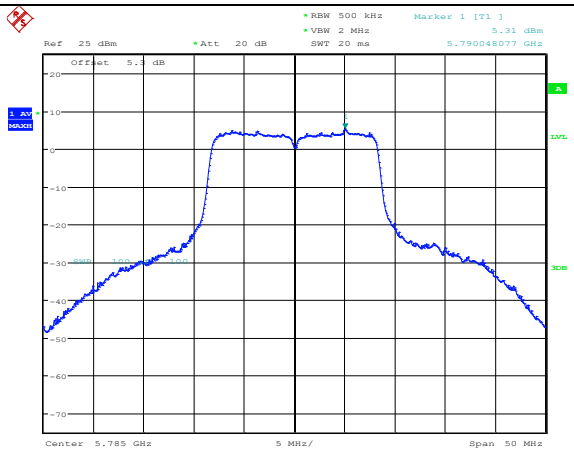

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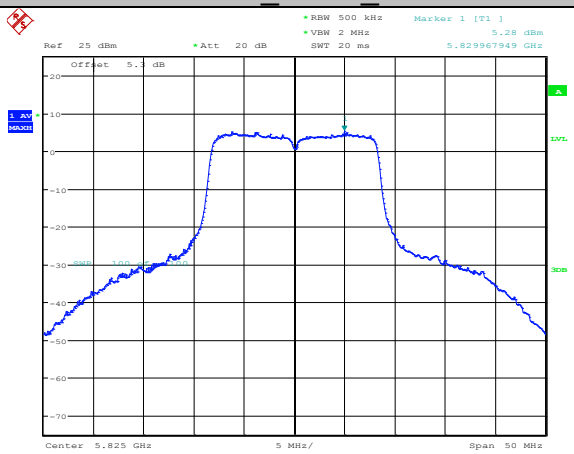

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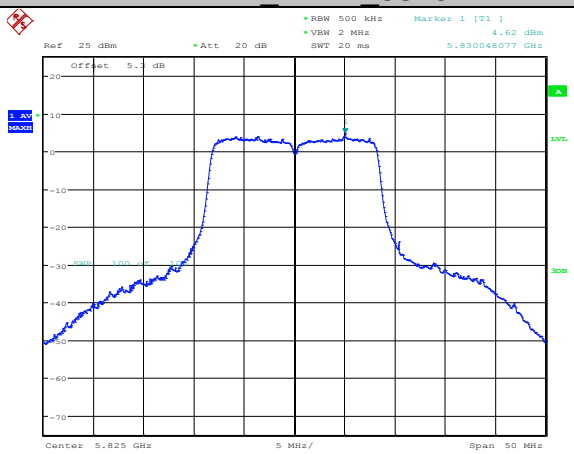

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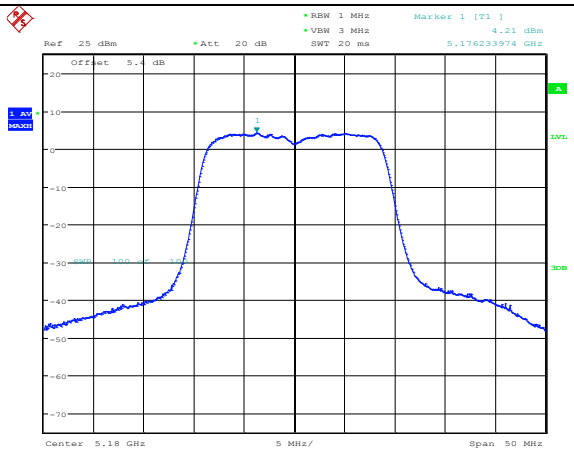

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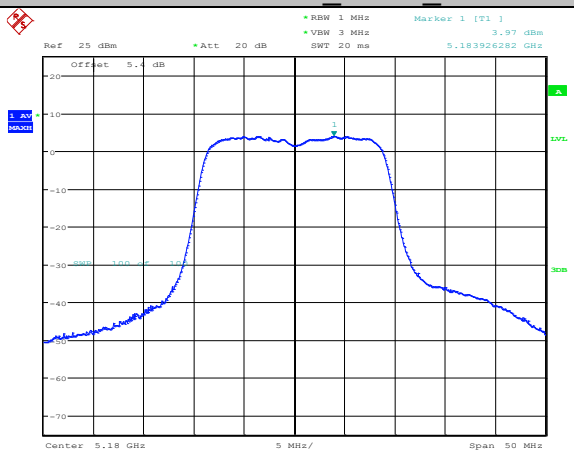

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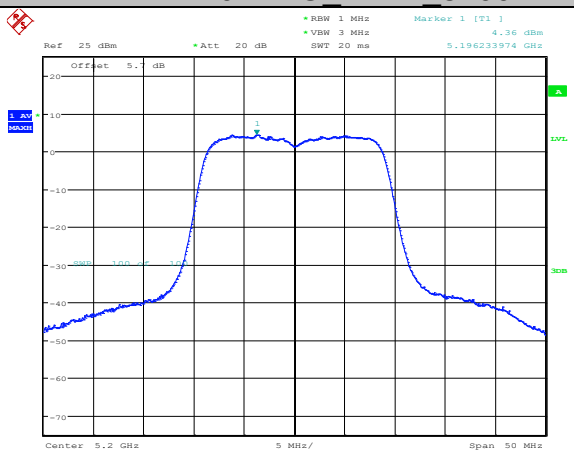

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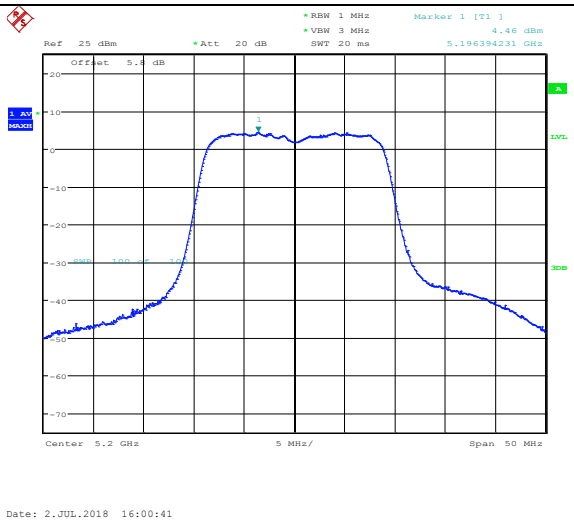

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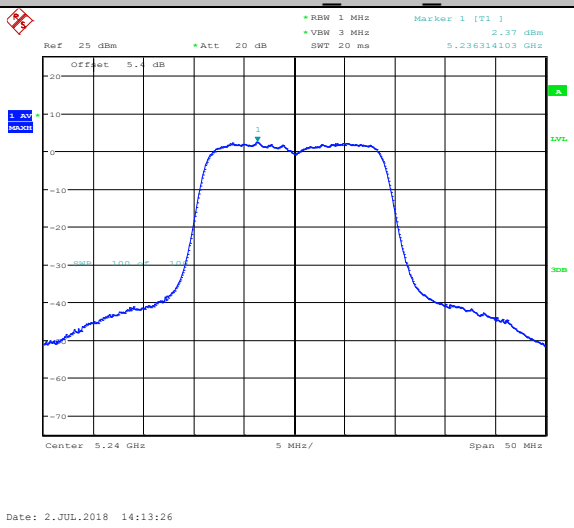

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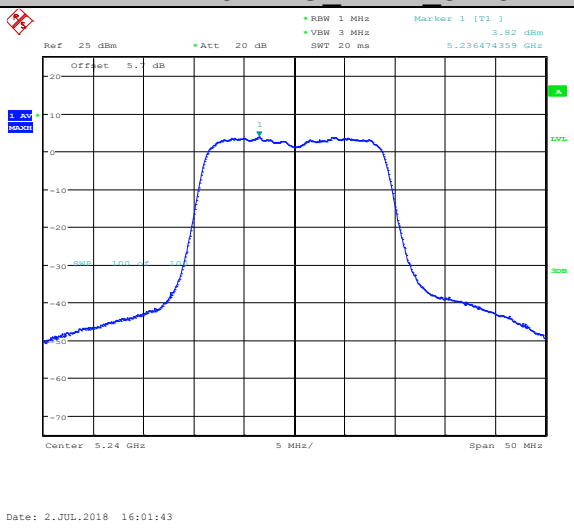

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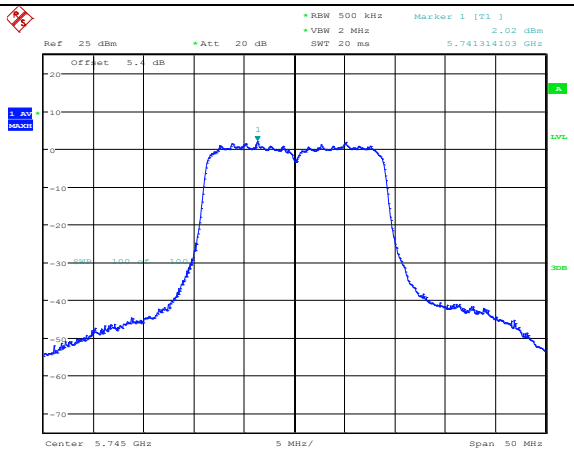

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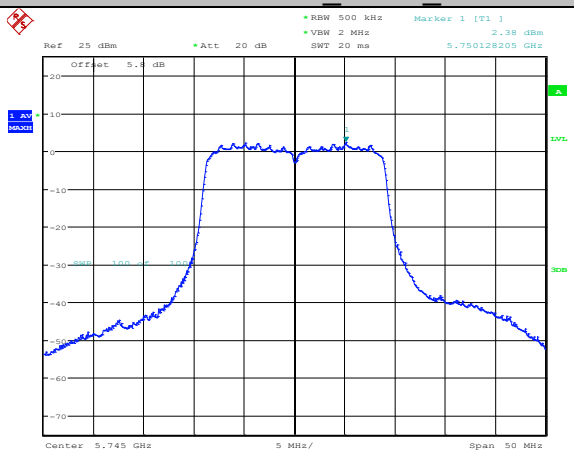

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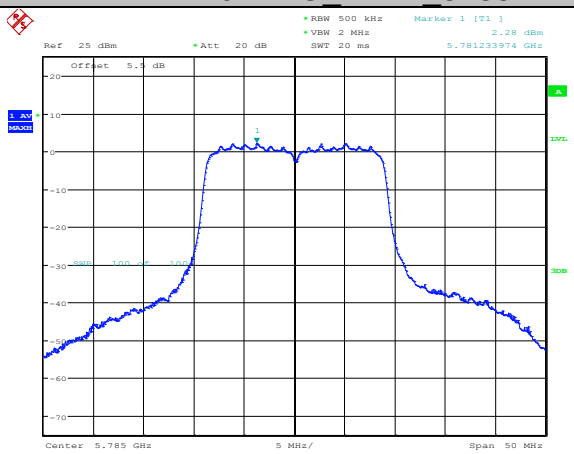

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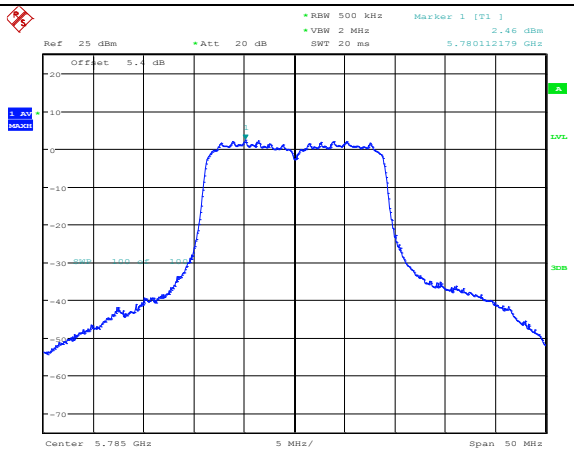

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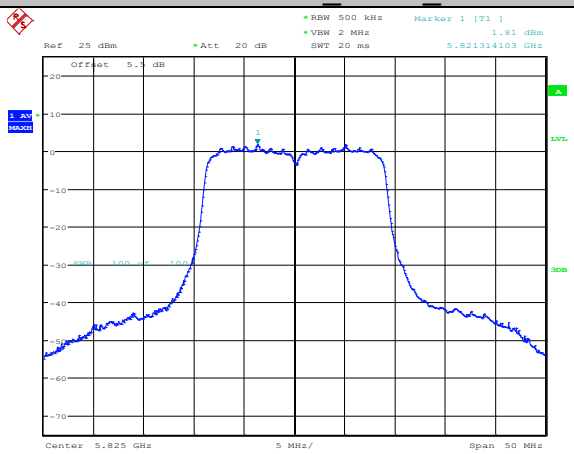

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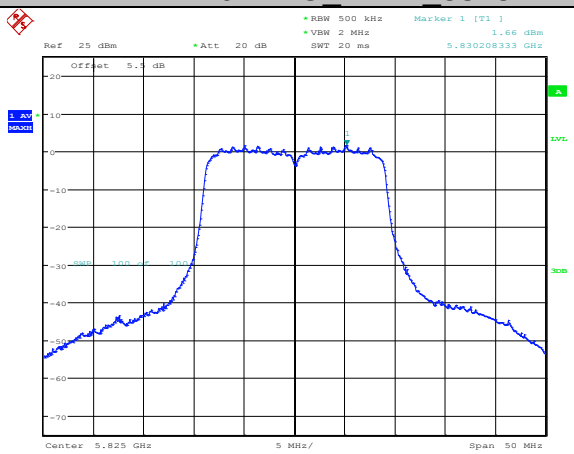

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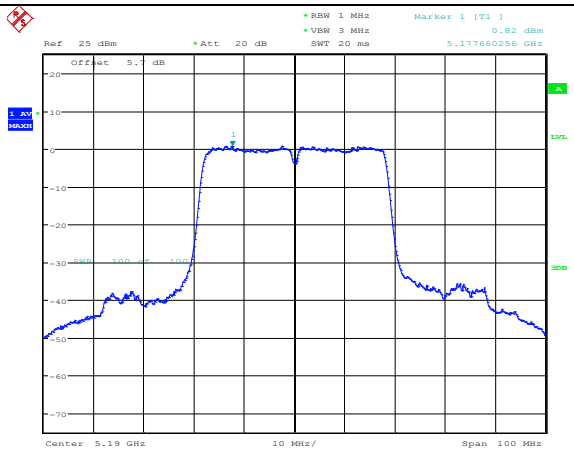

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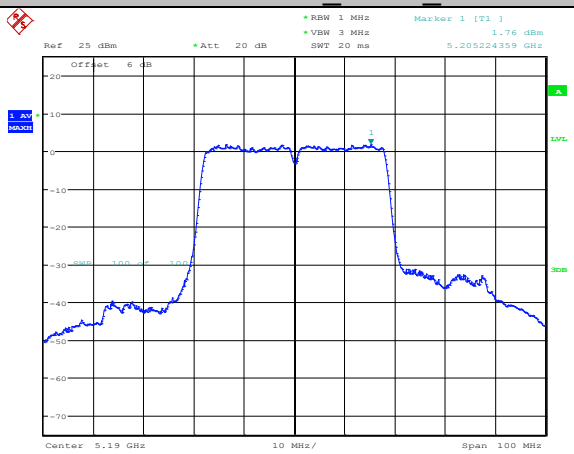

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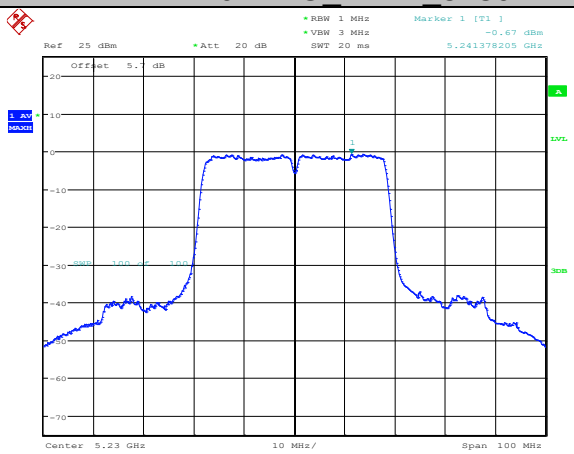

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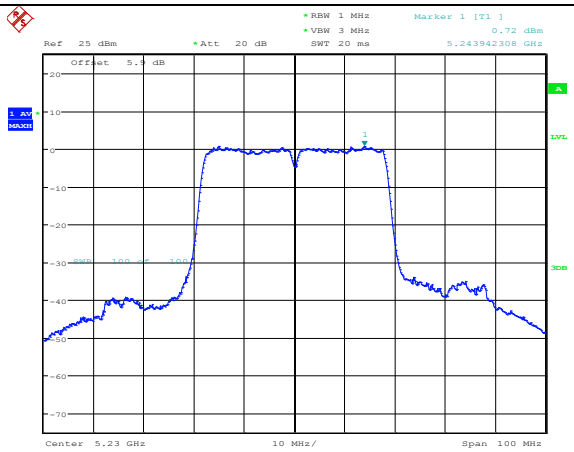

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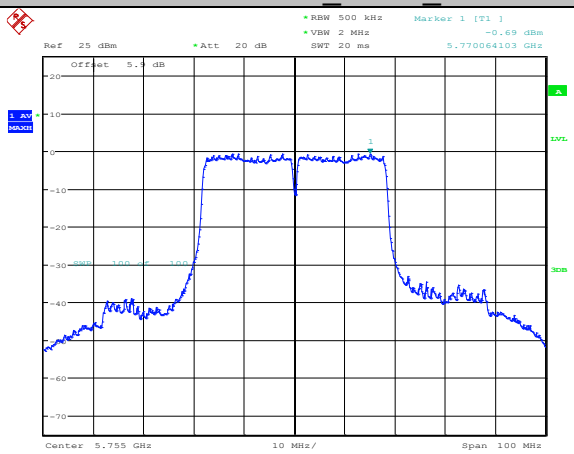

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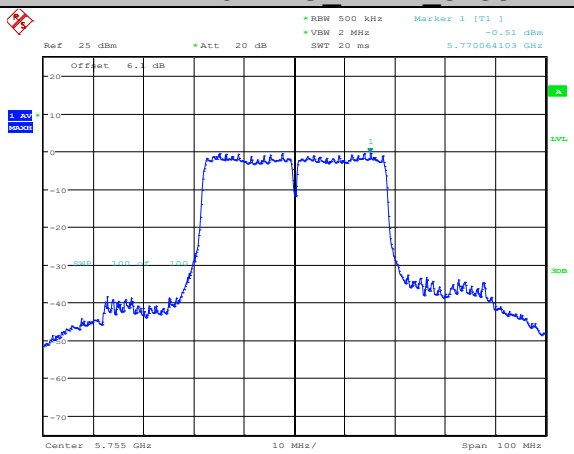

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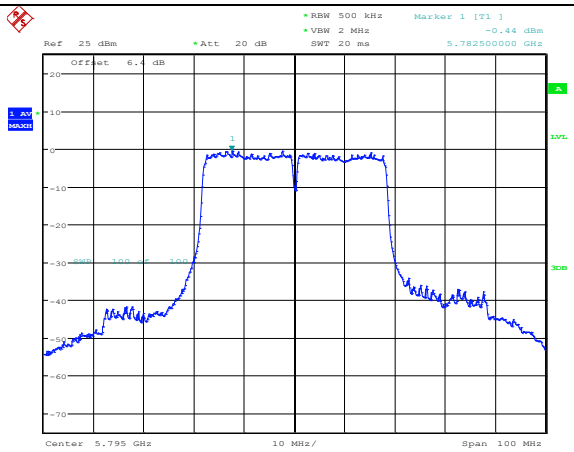

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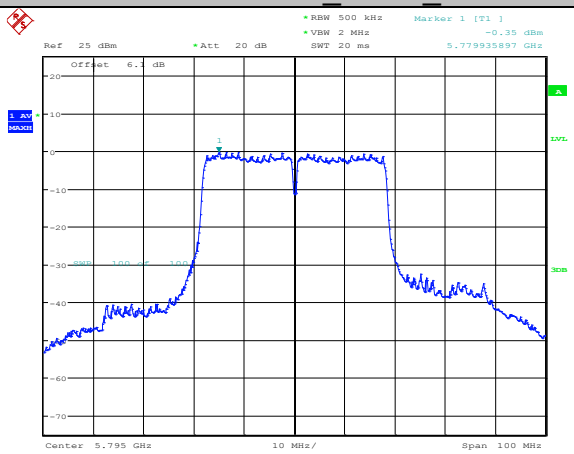

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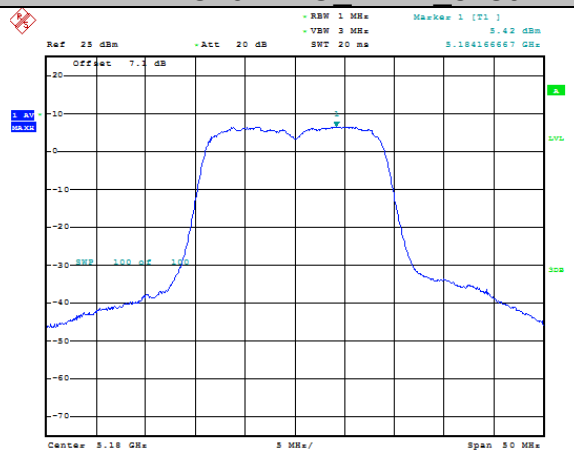

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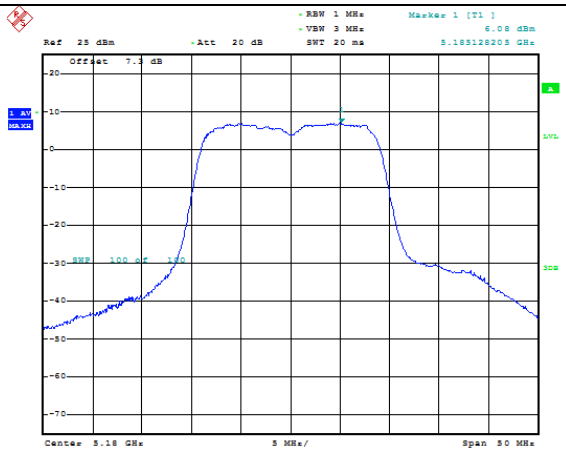

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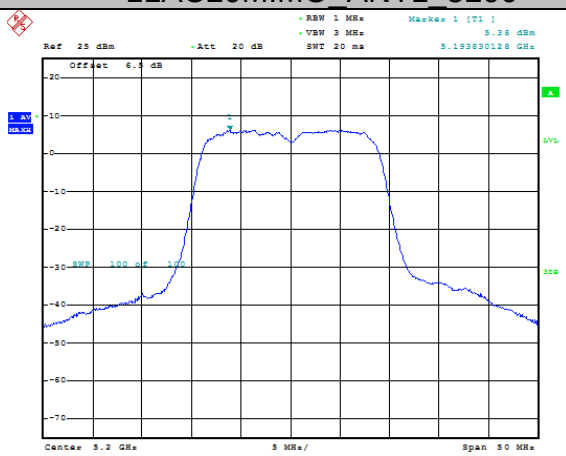

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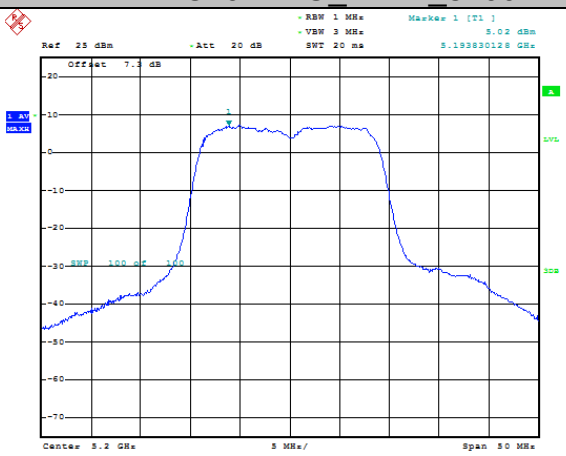

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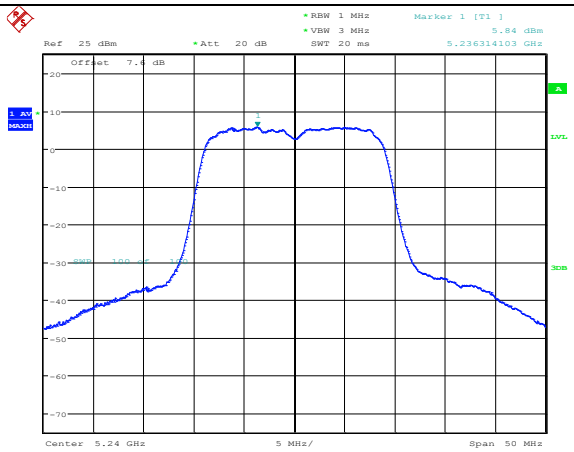

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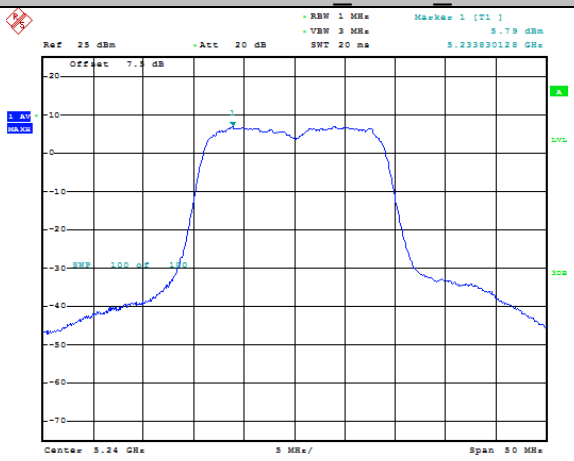

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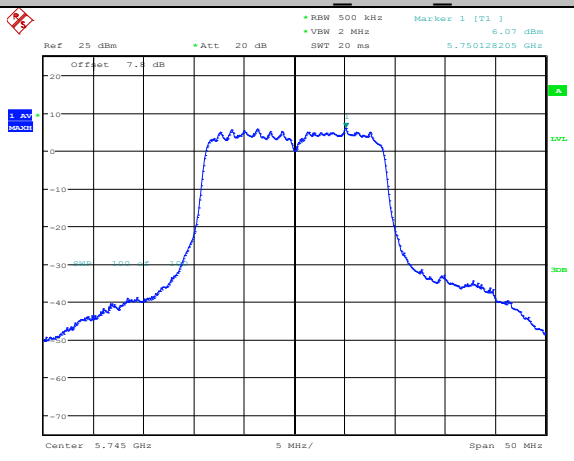

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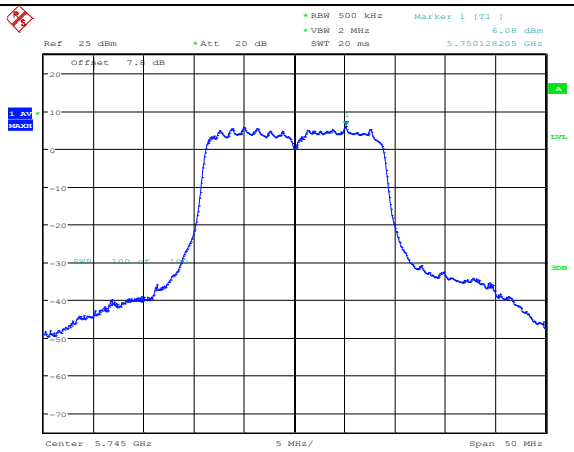

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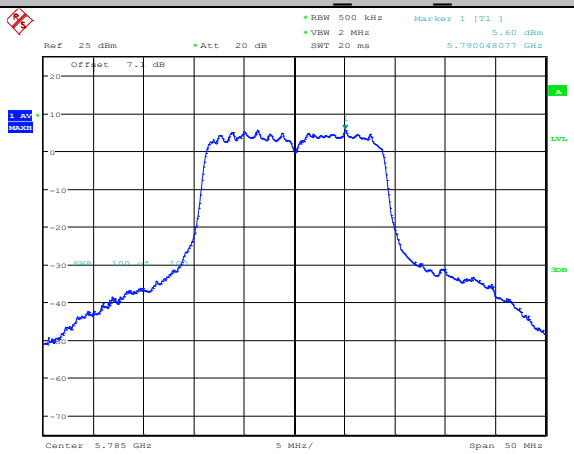

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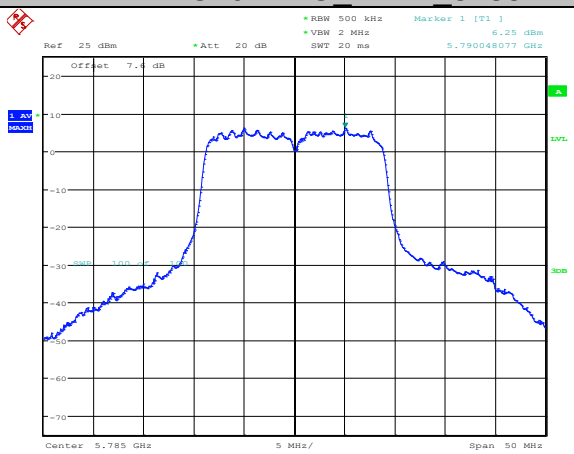

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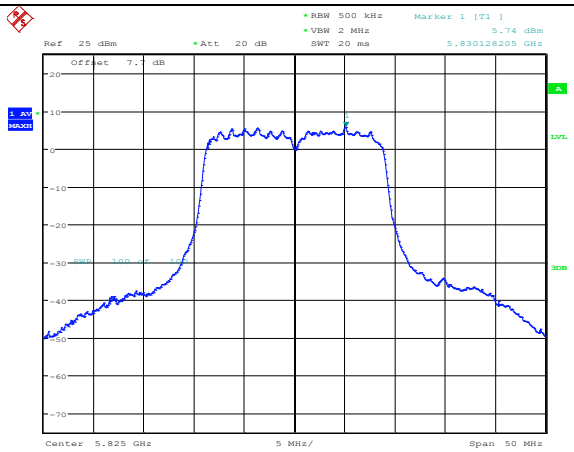

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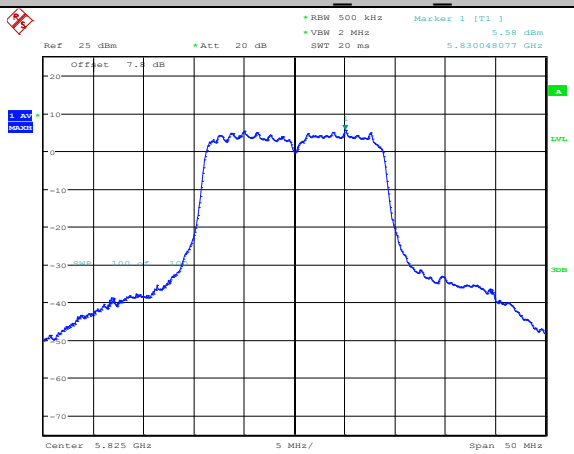

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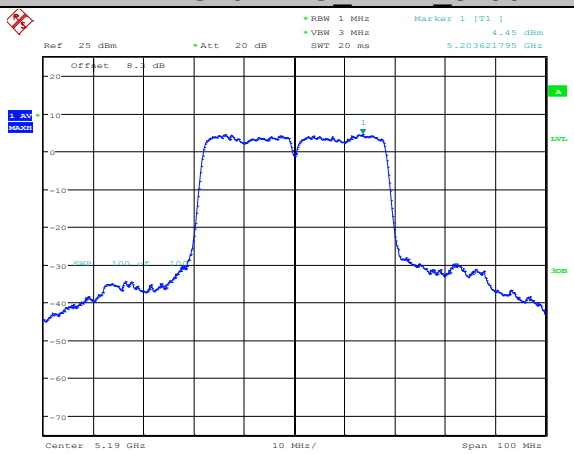

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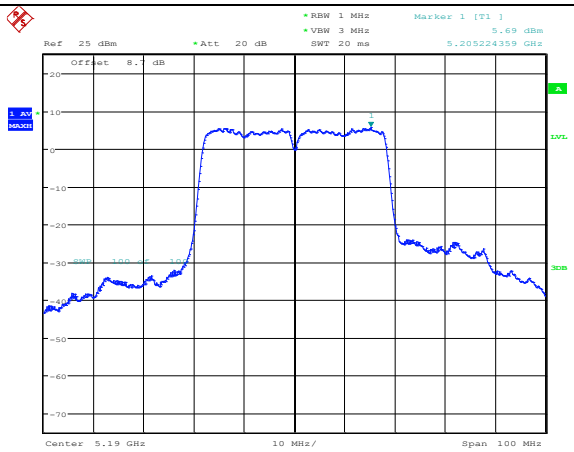

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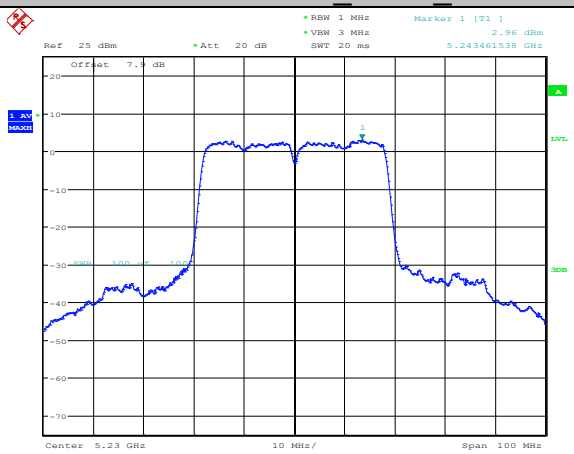

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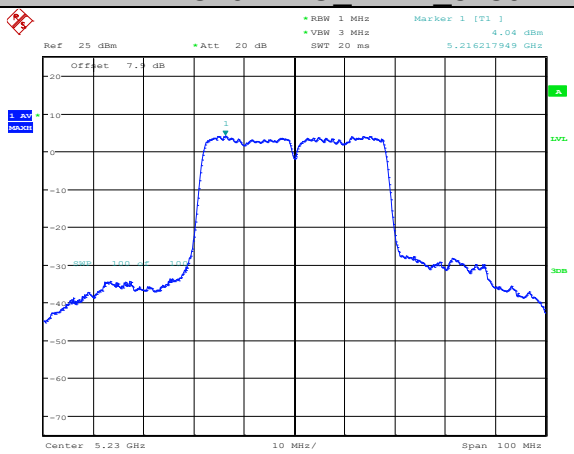

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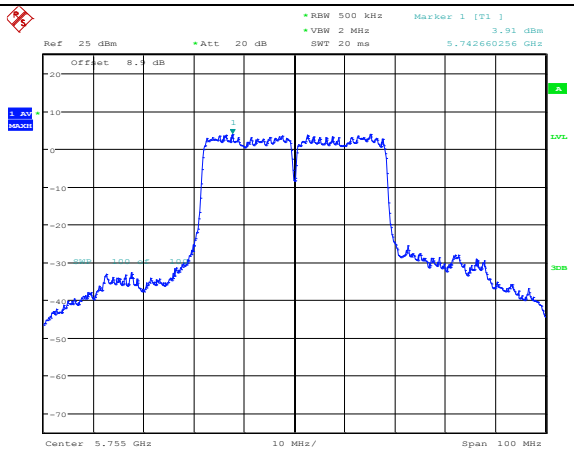

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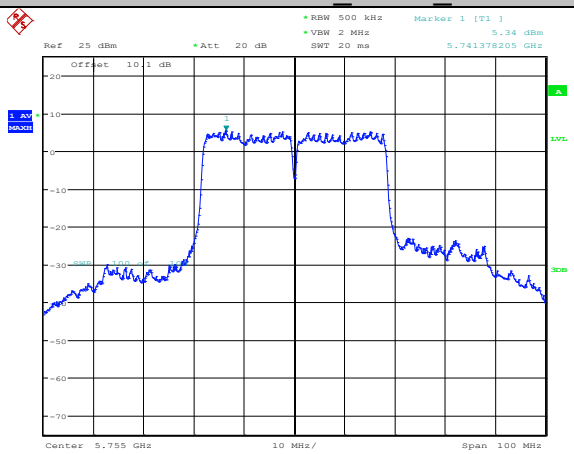

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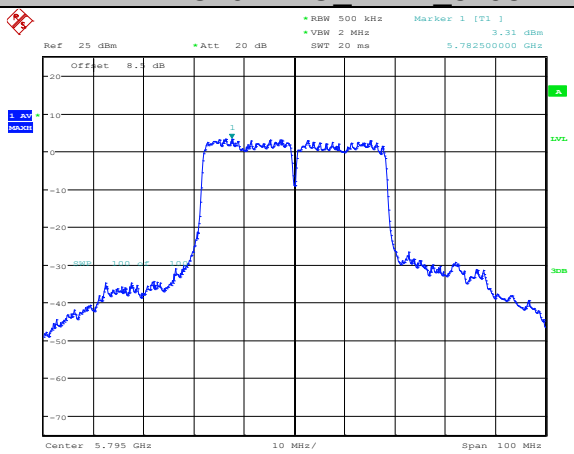

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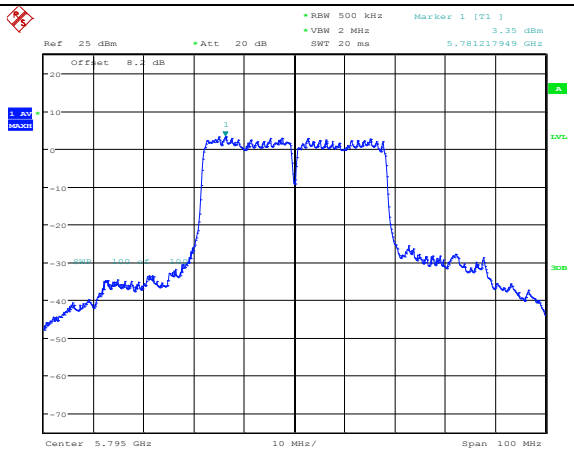

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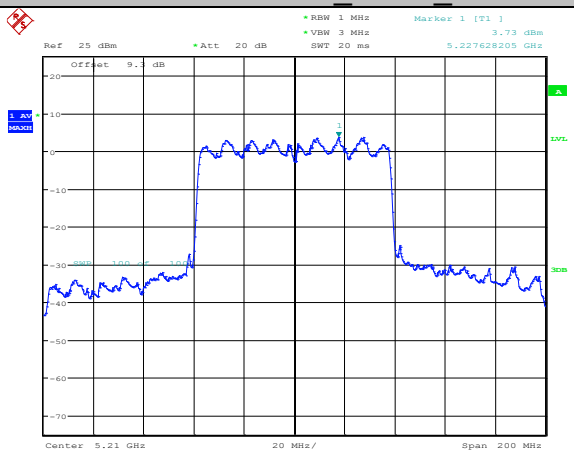

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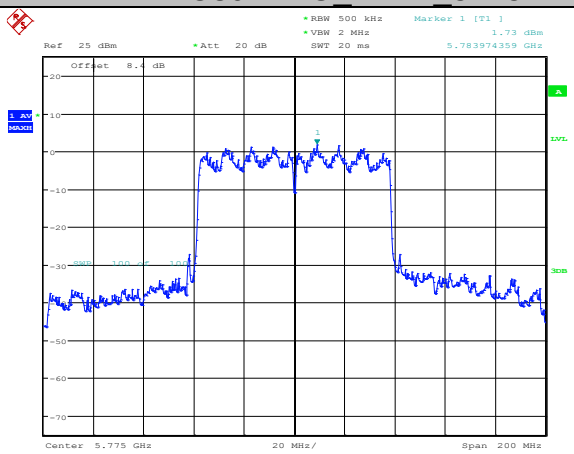

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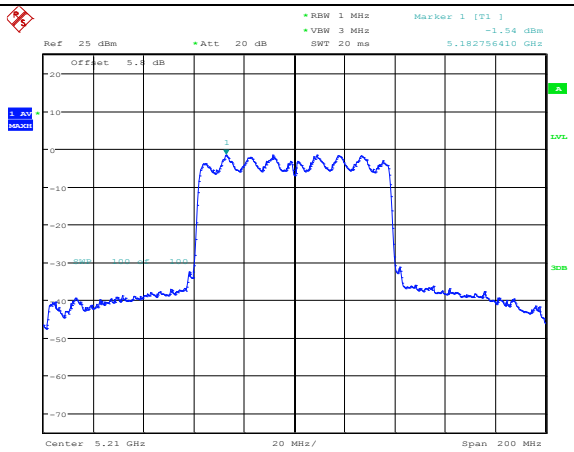

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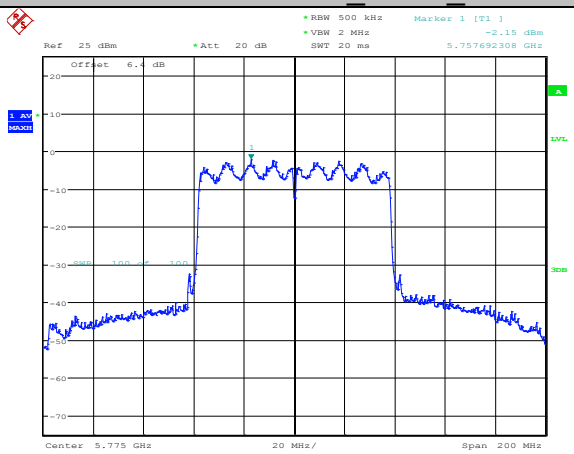


7. Frequency Stability Measurement

7.1. Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

7.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

7.3. Test Procedures

(1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
(2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
(3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

7.4. Test Setup

7.5. Test Result

Voltage vs. Frequency Stability								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	ANT1	5180	NV	NT	-31700	-6.119691	20	PASS
11A	ANT1	5180	LV	NT	-24400	-4.710425	20	PASS
11A	ANT1	5180	HV	NT	-14800	-2.857143	20	PASS
11A	ANT2	5180	NV	NT	-15300	-2.953668	20	PASS
11A	ANT2	5180	LV	NT	-6000	-1.158301	20	PASS
11A	ANT2	5180	HV	NT	-500	-0.096525	20	PASS
11A	ANT1	5190	NV	NT	-14000	-2.697495	20	PASS
11A	ANT1	5190	LV	NT	-7600	-1.464355	20	PASS
11A	ANT1	5190	HV	NT	-200	-0.038536	20	PASS
11A	ANT2	5190	NV	NT	-8500	-1.637765	20	PASS
11A	ANT2	5190	LV	NT	2400	0.462428	20	PASS
11A	ANT2	5190	HV	NT	12100	2.331407	20	PASS
11A	ANT1	5200	NV	NT	27400	5.269231	20	PASS
11A	ANT1	5200	LV	NT	30500	5.865385	20	PASS
11A	ANT1	5200	HV	NT	33500	6.442308	20	PASS

11A	ANT2	5200	NV	NT	17400	3.346154	20	PASS
11A	ANT2	5200	LV	NT	19400	3.730769	20	PASS
11A	ANT2	5200	HV	NT	24700	4.750000	20	PASS
11A	ANT1	5210	NV	NT	-3200	-0.614203	20	PASS
11A	ANT1	5210	LV	NT	3300	0.633397	20	PASS
11A	ANT1	5210	HV	NT	10500	2.015355	20	PASS
11A	ANT2	5210	NV	NT	-7100	-1.362764	20	PASS
11A	ANT2	5210	LV	NT	-1100	-0.211132	20	PASS
11A	ANT2	5210	HV	NT	9700	1.861804	20	PASS
11A	ANT1	5230	NV	NT	19100	3.652008	20	PASS
11A	ANT1	5230	LV	NT	22400	4.282983	20	PASS
11A	ANT1	5230	HV	NT	28000	5.353728	20	PASS
11A	ANT2	5230	NV	NT	-2600	-0.497132	20	PASS
11A	ANT2	5230	LV	NT	2900	0.554493	20	PASS
11A	ANT2	5230	HV	NT	10800	2.065010	20	PASS
11A	ANT1	5240	NV	NT	29200	5.572519	20	PASS
11A	ANT1	5240	LV	NT	33900	6.469466	20	PASS
11A	ANT1	5240	HV	NT	37700	7.194656	20	PASS
11A	ANT2	5240	NV	NT	23400	4.465649	20	PASS
11A	ANT2	5240	LV	NT	26100	4.980916	20	PASS
11A	ANT2	5240	HV	NT	27800	5.305344	20	PASS
11A	ANT1	5745	NV	NT	-1000	-0.174064	20	PASS
11A	ANT1	5745	LV	NT	3200	0.557006	20	PASS
11A	ANT1	5745	HV	NT	7700	1.340296	20	PASS
11A	ANT2	5745	NV	NT	-11100	-1.932115	20	PASS
11A	ANT2	5745	LV	NT	-7800	-1.357702	20	PASS
11A	ANT2	5745	HV	NT	-4300	-0.748477	20	PASS
11A	ANT1	5755	NV	NT	22700	3.944396	20	PASS
11A	ANT1	5755	LV	NT	19600	3.405734	20	PASS
11A	ANT1	5755	HV	NT	19600	3.405734	20	PASS
11A	ANT2	5755	NV	NT	-1900	-0.330148	20	PASS
11A	ANT2	5755	LV	NT	1100	0.191138	20	PASS
11A	ANT2	5755	HV	NT	3700	0.642919	20	PASS
11A	ANT1	5775	NV	NT	31300	5.419913	20	PASS
11A	ANT1	5775	LV	NT	25000	4.329004	20	PASS
11A	ANT1	5775	HV	NT	23900	4.138528	20	PASS
11A	ANT2	5775	NV	NT	7700	1.333333	20	PASS
11A	ANT2	5775	LV	NT	8500	1.471861	20	PASS
11A	ANT2	5775	HV	NT	10500	1.818182	20	PASS
11A	ANT1	5785	NV	NT	-33500	-5.790838	20	PASS
11A	ANT1	5785	LV	NT	-25800	-4.459810	20	PASS
11A	ANT1	5785	HV	NT	-21000	-3.630078	20	PASS
11A	ANT2	5785	NV	NT	-11600	-2.005186	20	PASS
11A	ANT2	5785	LV	NT	-5800	-1.002593	20	PASS
11A	ANT2	5785	HV	NT	-2100	-0.363008	20	PASS
11A	ANT1	5795	NV	NT	-400	-0.069025	20	PASS
11A	ANT1	5795	LV	NT	900	0.155306	20	PASS
11A	ANT1	5795	HV	NT	1600	0.276100	20	PASS
11A	ANT2	5795	NV	NT	-19300	-3.330457	20	PASS
11A	ANT2	5795	LV	NT	-14500	-2.502157	20	PASS
11A	ANT2	5795	HV	NT	-8500	-1.466782	20	PASS

11A	ANT1	5825	NV	NT	-15500	-2.660944	20	PASS
11A	ANT1	5825	LV	NT	-13200	-2.266094	20	PASS
11A	ANT1	5825	HV	NT	-11400	-1.957082	20	PASS
11A	ANT2	5825	NV	NT	2400	0.412017	20	PASS
11A	ANT2	5825	LV	NT	6200	1.064378	20	PASS
11A	ANT2	5825	HV	NT	7200	1.236052	20	PASS

Temperature vs. Frequency Stability								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	ANT1	5180	NV	-30	-4900	-0.945946	20	PASS
11A	ANT1	5180	NV	-20	2500	0.482625	20	PASS
11A	ANT1	5180	NV	-10	8400	1.621622	20	PASS
11A	ANT1	5180	NV	0	15400	2.972973	20	PASS
11A	ANT1	5180	NV	10	21400	4.131274	20	PASS
11A	ANT1	5180	NV	20	25500	4.922780	20	PASS
11A	ANT1	5180	NV	30	28800	5.559846	20	PASS
11A	ANT1	5180	NV	40	32200	6.216216	20	PASS
11A	ANT1	5180	NV	50	35100	6.776062	20	PASS
11A	ANT2	5180	NV	-30	5900	1.138996	20	PASS
11A	ANT2	5180	NV	-20	13100	2.528958	20	PASS
11A	ANT2	5180	NV	-10	15700	3.030888	20	PASS
11A	ANT2	5180	NV	0	18800	3.629344	20	PASS
11A	ANT2	5180	NV	10	22200	4.285714	20	PASS
11A	ANT2	5180	NV	20	24900	4.806950	20	PASS
11A	ANT2	5180	NV	30	26500	5.115830	20	PASS
11A	ANT2	5180	NV	40	29200	5.637066	20	PASS
11A	ANT2	5180	NV	50	30800	5.945946	20	PASS
11A	ANT1	5190	NV	-30	7500	1.445087	20	PASS
11A	ANT1	5190	NV	-20	12900	2.485549	20	PASS
11A	ANT1	5190	NV	-10	17900	3.448940	20	PASS
11A	ANT1	5190	NV	0	20800	4.007707	20	PASS
11A	ANT1	5190	NV	10	23900	4.605010	20	PASS
11A	ANT1	5190	NV	20	27000	5.202312	20	PASS
11A	ANT1	5190	NV	30	29500	5.684008	20	PASS
11A	ANT1	5190	NV	40	31900	6.146435	20	PASS
11A	ANT1	5190	NV	50	34900	6.724470	20	PASS
11A	ANT2	5190	NV	-30	20600	3.969171	20	PASS
11A	ANT2	5190	NV	-20	27700	5.337187	20	PASS
11A	ANT2	5190	NV	-10	34100	6.570328	20	PASS
11A	ANT2	5190	NV	0	40000	7.707129	20	PASS
11A	ANT2	5190	NV	10	41500	7.996146	20	PASS
11A	ANT2	5190	NV	20	45200	8.709056	20	PASS
11A	ANT2	5190	NV	30	46000	8.863198	20	PASS
11A	ANT2	5190	NV	40	48600	9.364162	20	PASS
11A	ANT2	5190	NV	50	49800	9.595376	20	PASS
11A	ANT1	5200	NV	-30	35800	6.884615	20	PASS
11A	ANT1	5200	NV	-20	38200	7.346154	20	PASS
11A	ANT1	5200	NV	-10	41100	7.903846	20	PASS
11A	ANT1	5200	NV	0	43000	8.269231	20	PASS

11A	ANT1	5200	NV	10	43900	8.442308	20	PASS
11A	ANT1	5200	NV	20	45800	8.807692	20	PASS
11A	ANT1	5200	NV	30	34600	6.653846	20	PASS
11A	ANT1	5200	NV	40	36900	7.096154	20	PASS
11A	ANT1	5200	NV	50	43500	8.365385	20	PASS
11A	ANT2	5200	NV	-30	26900	5.173077	20	PASS
11A	ANT2	5200	NV	-20	31100	5.980769	20	PASS
11A	ANT2	5200	NV	-10	32600	6.269231	20	PASS
11A	ANT2	5200	NV	0	34800	6.692308	20	PASS
11A	ANT2	5200	NV	10	36000	6.923077	20	PASS
11A	ANT2	5200	NV	20	37900	7.288462	20	PASS
11A	ANT2	5200	NV	30	38100	7.326923	20	PASS
11A	ANT2	5200	NV	40	39400	7.576923	20	PASS
11A	ANT2	5200	NV	50	39900	7.673077	20	PASS
11A	ANT1	5210	NV	-30	15300	2.93666	20	PASS
11A	ANT1	5210	NV	-20	20100	3.857965	20	PASS
11A	ANT1	5210	NV	-10	24700	4.740883	20	PASS
11A	ANT1	5210	NV	0	27500	5.278311	20	PASS
11A	ANT1	5210	NV	10	31900	6.122841	20	PASS
11A	ANT1	5210	NV	20	33800	6.487524	20	PASS
11A	ANT1	5210	NV	30	38400	7.370441	20	PASS
11A	ANT1	5210	NV	40	39000	7.485605	20	PASS
11A	ANT1	5210	NV	50	41300	7.927063	20	PASS
11A	ANT2	5210	NV	-30	14000	2.687140	20	PASS
11A	ANT2	5210	NV	-20	19900	3.819578	20	PASS
11A	ANT2	5210	NV	-10	25300	4.856046	20	PASS
11A	ANT2	5210	NV	0	26500	5.086372	20	PASS
11A	ANT2	5210	NV	10	28600	5.489443	20	PASS
11A	ANT2	5210	NV	20	30700	5.892514	20	PASS
11A	ANT2	5210	NV	30	33800	6.487524	20	PASS
11A	ANT2	5210	NV	40	35800	6.871401	20	PASS
11A	ANT2	5210	NV	50	36700	7.044146	20	PASS
11A	ANT1	5230	NV	-30	31200	5.965583	20	PASS
11A	ANT1	5230	NV	-20	33300	6.367113	20	PASS
11A	ANT1	5230	NV	-10	36400	6.959847	20	PASS
11A	ANT1	5230	NV	0	39100	7.476099	20	PASS
11A	ANT1	5230	NV	10	40500	7.743786	20	PASS
11A	ANT1	5230	NV	20	41400	7.915870	20	PASS
11A	ANT1	5230	NV	30	43000	8.221797	20	PASS
11A	ANT1	5230	NV	40	44900	8.585086	20	PASS
11A	ANT1	5230	NV	50	46400	8.871893	20	PASS
11A	ANT2	5230	NV	-30	13200	2.523901	20	PASS
11A	ANT2	5230	NV	-20	19200	3.671128	20	PASS
11A	ANT2	5230	NV	-10	23500	4.493308	20	PASS
11A	ANT2	5230	NV	0	27700	5.296367	20	PASS
11A	ANT2	5230	NV	10	30200	5.774379	20	PASS
11A	ANT2	5230	NV	20	32900	6.290631	20	PASS
11A	ANT2	5230	NV	30	34800	6.653920	20	PASS
11A	ANT2	5230	NV	40	37700	7.208413	20	PASS
11A	ANT2	5230	NV	50	38600	7.380497	20	PASS
11A	ANT1	5240	NV	-30	39700	7.576336	20	PASS

11A	ANT1	5240	NV	-20	41400	7.900763	20	PASS
11A	ANT1	5240	NV	-10	43400	8.282443	20	PASS
11A	ANT1	5240	NV	0	43700	8.339695	20	PASS
11A	ANT1	5240	NV	10	44200	8.435115	20	PASS
11A	ANT1	5240	NV	20	44600	8.511450	20	PASS
11A	ANT1	5240	NV	30	46600	8.893130	20	PASS
11A	ANT1	5240	NV	40	47300	9.026718	20	PASS
11A	ANT1	5240	NV	50	47900	9.141221	20	PASS
11A	ANT2	5240	NV	-30	32700	6.240458	20	PASS
11A	ANT2	5240	NV	-20	34900	6.660305	20	PASS
11A	ANT2	5240	NV	-10	34700	6.622137	20	PASS
11A	ANT2	5240	NV	0	36800	7.022901	20	PASS
11A	ANT2	5240	NV	10	38400	7.328244	20	PASS
11A	ANT2	5240	NV	20	38700	7.385496	20	PASS
11A	ANT2	5240	NV	30	39900	7.614504	20	PASS
11A	ANT2	5240	NV	40	41300	7.881679	20	PASS
11A	ANT2	5240	NV	50	43000	8.206107	20	PASS
11A	ANT1	5745	NV	-30	10300	1.792863	20	PASS
11A	ANT1	5745	NV	-20	12100	2.106179	20	PASS
11A	ANT1	5745	NV	-10	12700	2.210618	20	PASS
11A	ANT1	5745	NV	0	13600	2.367276	20	PASS
11A	ANT1	5745	NV	10	12700	2.210618	20	PASS
11A	ANT1	5745	NV	20	13700	2.384682	20	PASS
11A	ANT1	5745	NV	30	13500	2.349869	20	PASS
11A	ANT1	5745	NV	40	12800	2.228024	20	PASS
11A	ANT1	5745	NV	50	12400	2.158399	20	PASS
11A	ANT2	5745	NV	-30	-900	-0.156658	20	PASS
11A	ANT2	5745	NV	-20	200	0.034813	20	PASS
11A	ANT2	5745	NV	-10	1400	0.243690	20	PASS
11A	ANT2	5745	NV	0	2800	0.487380	20	PASS
11A	ANT2	5745	NV	10	3600	0.626632	20	PASS
11A	ANT2	5745	NV	20	4800	0.835509	20	PASS
11A	ANT2	5745	NV	30	4900	0.852916	20	PASS
11A	ANT2	5745	NV	40	6700	1.166232	20	PASS
11A	ANT2	5745	NV	50	7100	1.235857	20	PASS
11A	ANT1	5755	NV	-30	18800	3.266725	20	PASS
11A	ANT1	5755	NV	-20	18700	3.249348	20	PASS
11A	ANT1	5755	NV	-10	16600	2.884448	20	PASS
11A	ANT1	5755	NV	0	15700	2.728063	20	PASS
11A	ANT1	5755	NV	10	15100	2.623805	20	PASS
11A	ANT1	5755	NV	20	14600	2.536924	20	PASS
11A	ANT1	5755	NV	30	14900	2.589053	20	PASS
11A	ANT1	5755	NV	40	13400	2.328410	20	PASS
11A	ANT1	5755	NV	50	13900	2.415291	20	PASS
11A	ANT2	5755	NV	-30	4500	0.781929	20	PASS
11A	ANT2	5755	NV	-20	6000	1.042572	20	PASS
11A	ANT2	5755	NV	-10	7900	1.372719	20	PASS
11A	ANT2	5755	NV	0	8700	1.511729	20	PASS
11A	ANT2	5755	NV	10	9500	1.650738	20	PASS
11A	ANT2	5755	NV	20	9600	1.668115	20	PASS
11A	ANT2	5755	NV	30	9900	1.720243	20	PASS

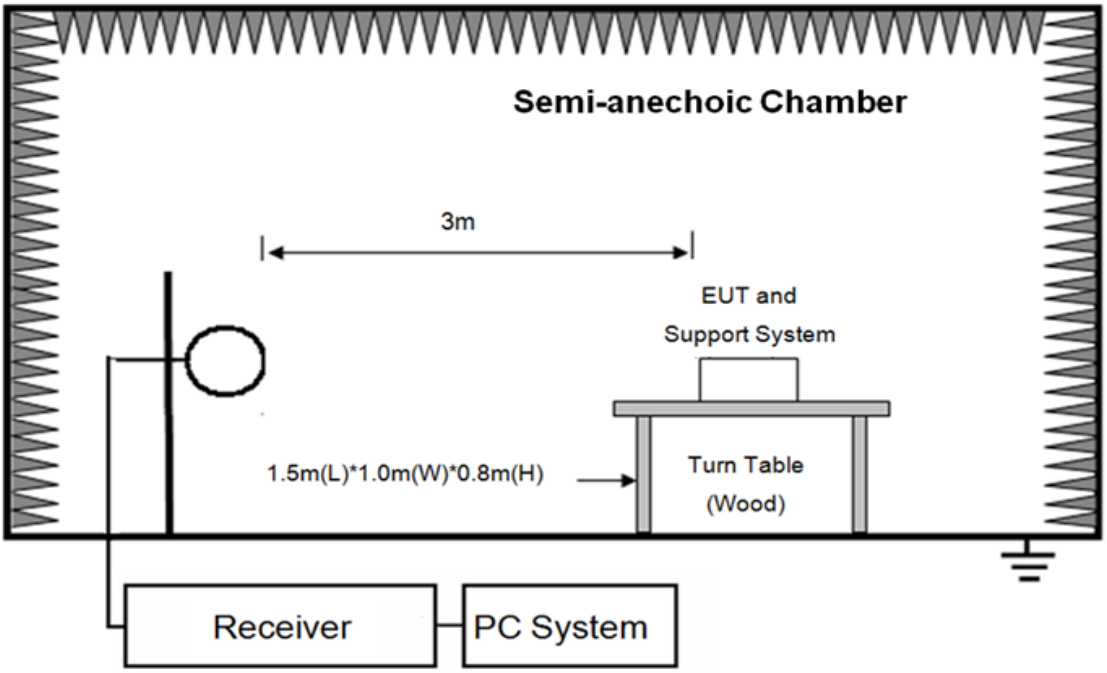
11A	ANT2	5755	NV	40	10900	1.894005	20	PASS
11A	ANT2	5755	NV	50	11700	2.033015	20	PASS
11A	ANT1	5775	NV	-30	21400	3.705628	20	PASS
11A	ANT1	5775	NV	-20	20000	3.463203	20	PASS
11A	ANT1	5775	NV	-10	19500	3.376623	20	PASS
11A	ANT1	5775	NV	0	18500	3.203463	20	PASS
11A	ANT1	5775	NV	10	15400	2.666667	20	PASS
11A	ANT1	5775	NV	20	14500	2.510823	20	PASS
11A	ANT1	5775	NV	30	14900	2.580087	20	PASS
11A	ANT1	5775	NV	40	14400	2.493506	20	PASS
11A	ANT1	5775	NV	50	13600	2.354978	20	PASS
11A	ANT2	5775	NV	-30	13000	2.251082	20	PASS
11A	ANT2	5775	NV	-20	14300	2.476190	20	PASS
11A	ANT2	5775	NV	-10	14000	2.424242	20	PASS
11A	ANT2	5775	NV	0	13300	2.303030	20	PASS
11A	ANT2	5775	NV	10	13200	2.285714	20	PASS
11A	ANT2	5775	NV	20	13300	2.303030	20	PASS
11A	ANT2	5775	NV	30	13300	2.303030	20	PASS
11A	ANT2	5775	NV	40	13600	2.354978	20	PASS
11A	ANT2	5775	NV	50	14400	2.493506	20	PASS
11A	ANT1	5785	NV	-30	-15000	-2.592913	20	PASS
11A	ANT1	5785	NV	-20	-13200	-2.281763	20	PASS
11A	ANT1	5785	NV	-10	-11000	-1.901469	20	PASS
11A	ANT1	5785	NV	0	-8800	-1.521175	20	PASS
11A	ANT1	5785	NV	10	-7000	-1.210026	20	PASS
11A	ANT1	5785	NV	20	-6100	-1.054451	20	PASS
11A	ANT1	5785	NV	30	-5000	-0.864304	20	PASS
11A	ANT1	5785	NV	40	-4200	-0.726016	20	PASS
11A	ANT1	5785	NV	50	-4100	-0.708729	20	PASS
11A	ANT2	5785	NV	-30	1700	0.293863	20	PASS
11A	ANT2	5785	NV	-20	5200	0.898876	20	PASS
11A	ANT2	5785	NV	-10	7200	1.244598	20	PASS
11A	ANT2	5785	NV	0	9900	1.711322	20	PASS
11A	ANT2	5785	NV	10	11400	1.970614	20	PASS
11A	ANT2	5785	NV	20	12700	2.195333	20	PASS
11A	ANT2	5785	NV	30	14200	2.454624	20	PASS
11A	ANT2	5785	NV	40	14700	2.541054	20	PASS
11A	ANT2	5785	NV	50	14300	2.47191	20	PASS
11A	ANT1	5795	NV	-30	3600	0.621225	20	PASS
11A	ANT1	5795	NV	-20	5400	0.931838	20	PASS
11A	ANT1	5795	NV	-10	5300	0.914582	20	PASS
11A	ANT1	5795	NV	0	5200	0.897325	20	PASS
11A	ANT1	5795	NV	10	5500	0.949094	20	PASS
11A	ANT1	5795	NV	20	6300	1.087144	20	PASS
11A	ANT1	5795	NV	30	6900	1.190682	20	PASS
11A	ANT1	5795	NV	40	6400	1.104400	20	PASS
11A	ANT1	5795	NV	50	6800	1.173425	20	PASS
11A	ANT2	5795	NV	-30	-4200	-0.724763	20	PASS
11A	ANT2	5795	NV	-20	-2900	-0.500431	20	PASS
11A	ANT2	5795	NV	-10	-100	-0.017256	20	PASS
11A	ANT2	5795	NV	0	1300	0.224331	20	PASS

11A	ANT2	5795	NV	10	1400	0.241588	20	PASS
11A	ANT2	5795	NV	20	2600	0.448663	20	PASS
11A	ANT2	5795	NV	30	2300	0.396894	20	PASS
11A	ANT2	5795	NV	40	2700	0.465919	20	PASS
11A	ANT2	5795	NV	50	2200	0.379638	20	PASS
11A	ANT1	5825	NV	-30	-8900	-1.527897	20	PASS
11A	ANT1	5825	NV	-20	-7400	-1.270386	20	PASS
11A	ANT1	5825	NV	-10	-6000	-1.030043	20	PASS
11A	ANT1	5825	NV	0	-5800	-0.995708	20	PASS
11A	ANT1	5825	NV	10	-4100	-0.703863	20	PASS
11A	ANT1	5825	NV	20	-3300	-0.566524	20	PASS
11A	ANT1	5825	NV	30	-3100	-0.532189	20	PASS
11A	ANT1	5825	NV	40	-2200	-0.377682	20	PASS
11A	ANT1	5825	NV	50	-2000	-0.343348	20	PASS
11A	ANT2	5825	NV	-30	9100	1.562232	20	PASS
11A	ANT2	5825	NV	-20	11600	1.991416	20	PASS
11A	ANT2	5825	NV	-10	11400	1.957082	20	PASS
11A	ANT2	5825	NV	0	12700	2.180258	20	PASS
11A	ANT2	5825	NV	10	14100	2.420601	20	PASS
11A	ANT2	5825	NV	20	13500	2.317597	20	PASS
11A	ANT2	5825	NV	30	15000	2.575107	20	PASS
11A	ANT2	5825	NV	40	15400	2.643777	20	PASS
11A	ANT2	5825	NV	50	16200	2.781116	20	PASS

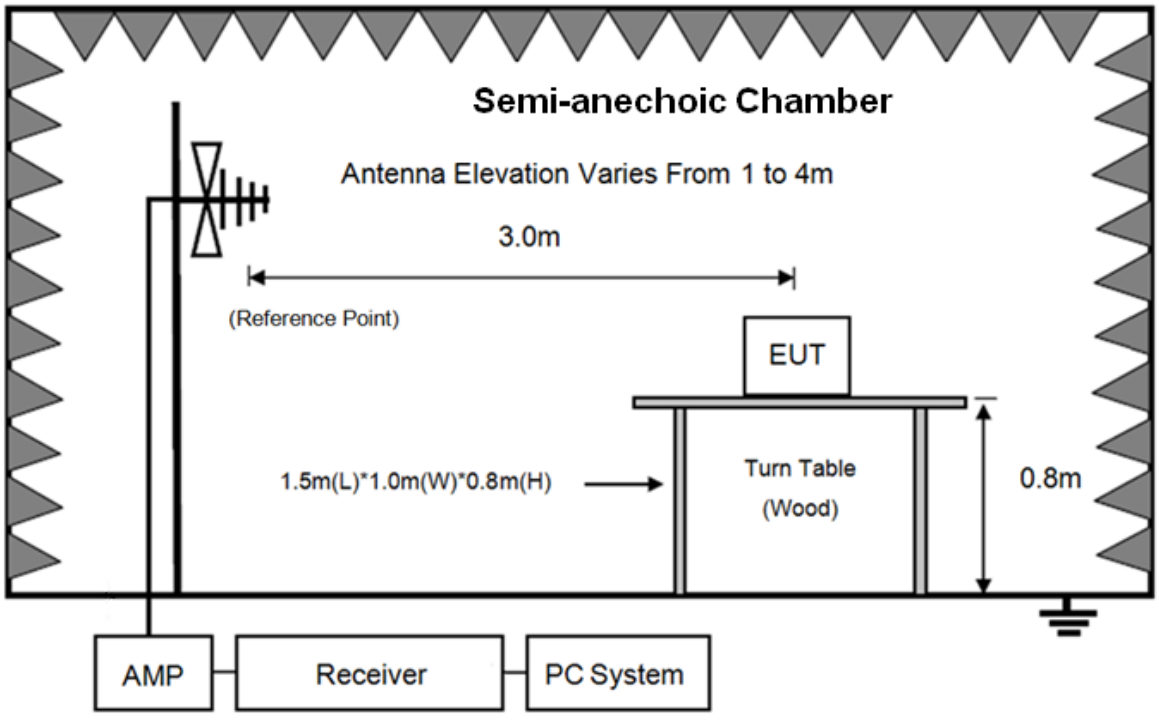
8. Emissions in restricted frequency bands

8.1. Block diagram of test setup

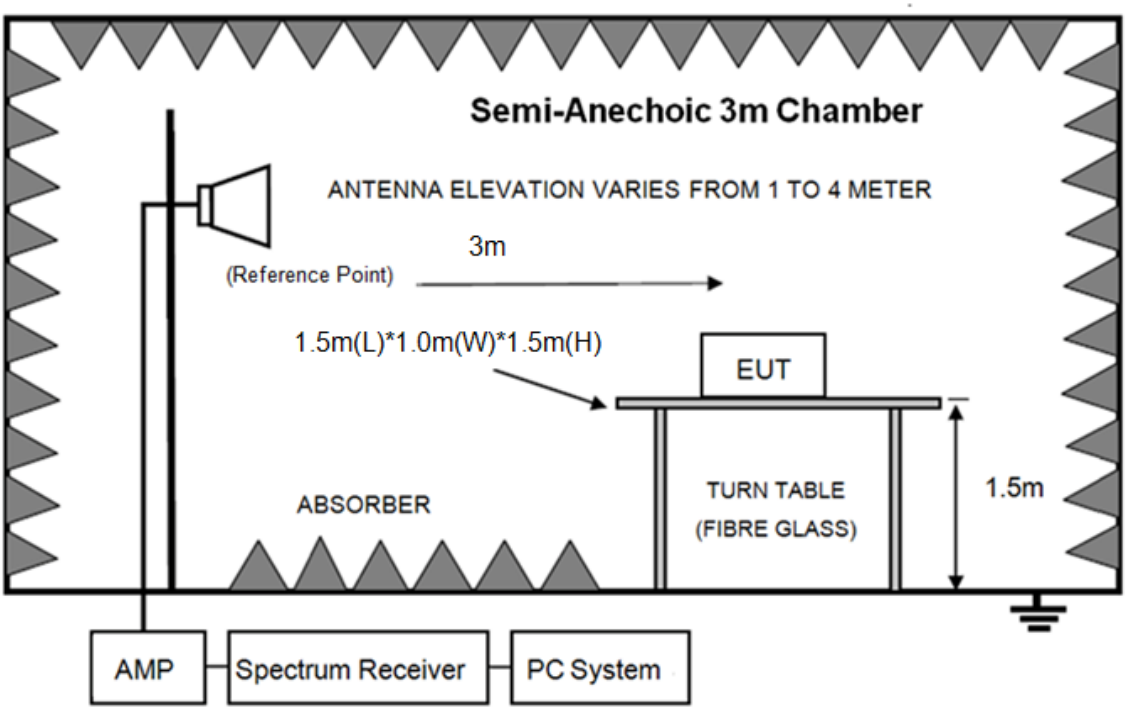
In 3m Anechoic Chamber Test Setup Diagram for 9kHz-30MHz



In 3m Anechoic Chamber Test Setup Diagram for 30MHz-1GHz



In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

8.2. Limit

15.407(b) Undesirable emission limits: Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

(c) The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

FCC 15.205 Restricted frequency band:

MHz	**MHz**	**MHz**	**GHz**
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(^{2})
13.36-13.41			

FCC 15.209 Limit.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000MHz.Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

Limit for this EUT

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209.

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
For transmitters operating in the 5.725-5.85 GHz band:
All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

8.3. Test Procedure

(1) EUT height should be 0.8m for below 1GHz at a semi‐anechoic chamber while EUT height should be 1.5m for above 1GHz at full chamber or semi‐anechoic chamber ground with absorbers

(2) Setup EUT and assistant system according clause 2.3 and 8.2

(3) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test distance
9kHz-30MHz	Active Loop antenna	3m
30MHz-1GHz	Trilog Broadband Antenna	3m
1GHz-18GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3m
18GHz-40GHz	Horn Antenna(18GHz-40GHz)	1m

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the

loop is 1 m above the ground. for measurement above 30MHz, the Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(4) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9kHz to 40GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1m to 4m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9kHz to 40GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9kHz to 30MHz and 18GHz to 40GHz, so below final test was performed with frequency range from 30MHz to 18GHz.

(5) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(6) The emissions from 9kHz to 1GHz were measured based on CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz, for emissions from 9kHz-90kHz,110kHz-490kHz and above 1GHz were measured based on average detector, for emissions above 1GHz, peak emissions also be measured and need comply with Peak limit.

(7) The emissions from 9kHz to 1GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9kHz-150kHz	200Hz
150kHz-30MHz	9kHz
30MHz-1GHz	120kHz

(8) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz ,Peak detector for Peak measure ， RMS detector for AV value

8.4. Test result

PASS. (See below detailed test result)

All the emissions except fundamental emission from 9kHz to 40GHz were comply with 15.209 limit.

Note1: According exploratory test no any obvious emissions were detected from 9kHz to 30MHz and 18GHz to 40GHz, so the final test was performed with frequency range from 30MHz to 18GHz and recorded in below.

Note2: For emissions below 1GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1GHz, the final test was only performed with EUT working in 11a mode.

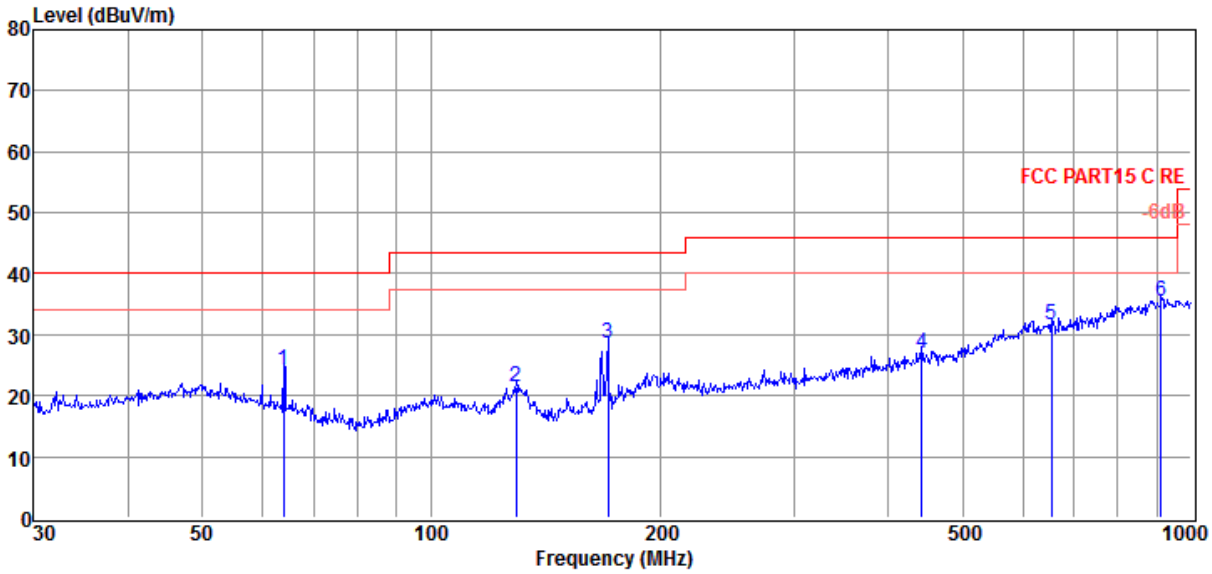
Note3: For emissions above 1GHz, 11a, 11n20, n40, 11ac20, 11ac40,11ac80 mode ANT 1, ANT 2 mode and MIMO mode all have been tested, only 11a ANT 1 mode is the worst case and reported.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC BELOW 1G.EM6		
Test Date	:	2018-07-02	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 VULB 9163 1#/3m/VERTICAL
Memo	:				

Data: 3



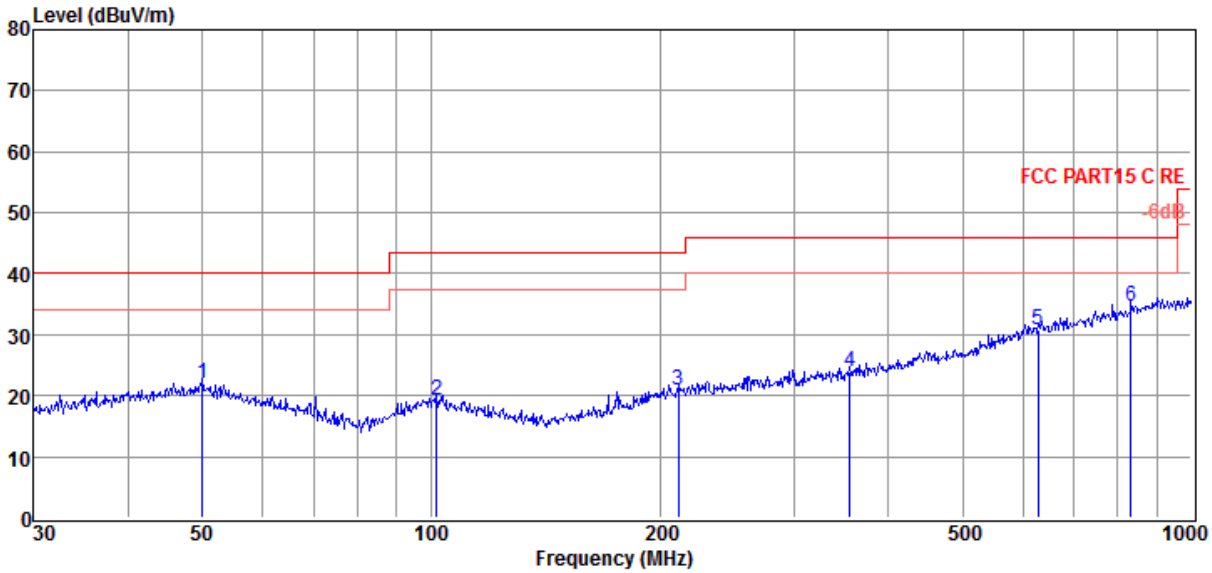
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	63.98	9.69	10.48	4.13	24.30	40.00	-15.70	QP	VERTICAL
2	129.47	8.50	8.31	4.64	21.45	43.50	-22.05	QP	VERTICAL
3	170.79	14.46	9.21	4.88	28.55	43.50	-14.95	QP	VERTICAL
4	441.74	5.09	16.22	5.67	26.98	46.00	-19.02	QP	VERTICAL
5	654.23	5.26	19.57	6.86	31.69	46.00	-14.31	QP	VERTICAL
6	912.86	5.31	22.57	7.64	35.52	46.00	-10.48	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC BELOW 1G.EM6		
Test Date	:	2018-07-02	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 VULB 9163 1#/3m/HORIZONTAL
Memo	:				

Data: 4



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	50.06	4.12	13.79	3.99	21.90	40.00	-18.10	QP	HORIZONTAL
2	101.64	3.40	11.29	4.42	19.11	43.50	-24.39	QP	HORIZONTAL
3	211.53	3.96	11.75	5.09	20.80	43.50	-22.70	QP	HORIZONTAL
4	355.43	3.68	14.42	5.77	23.87	46.00	-22.13	QP	HORIZONTAL
5	629.48	4.53	19.49	6.78	30.80	46.00	-15.20	QP	HORIZONTAL
6	833.32	5.39	21.75	7.41	34.55	46.00	-11.45	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1GHz)

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor(dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
11a CH36									
8004.00	47.72	37.20	43.80	9.23	50.35	68.20	-17.85	Peak	HORIZONTAL
8786.00	47.44	37.41	44.04	10.13	50.94	68.20	-17.26	Peak	HORIZONTAL
9347.00	47.35	37.64	44.20	10.55	51.34	68.20	-16.86	Peak	HORIZONTAL
9891.00	48.43	38.09	44.37	10.83	52.98	68.20	-15.22	Peak	HORIZONTAL
12016.00	46.64	38.90	44.10	10.98	52.42	68.20	-15.78	Peak	HORIZONTAL
12781.00	47.03	39.08	44.30	11.27	53.08	68.20	-15.12	Peak	HORIZONTAL
8225.00	46.54	37.24	43.87	9.49	49.40	68.20	-18.80	Peak	VERTICAL
8854.00	46.08	37.44	44.06	10.20	49.66	68.20	-18.54	Peak	VERTICAL
9432.00	46.49	37.67	44.23	10.59	50.52	68.20	-17.68	Peak	VERTICAL
9976.00	46.32	38.18	44.39	10.88	50.99	68.20	-17.21	Peak	VERTICAL
11982.00	46.15	38.89	44.10	10.97	51.91	68.20	-16.29	Peak	VERTICAL
12968.00	45.83	39.27	44.34	11.34	52.10	68.20	-16.10	Peak	VERTICAL
11a CH40									
7766.00	47.47	37.11	43.73	9.02	49.87	68.20	-18.33	Peak	HORIZONTAL
8667.00	47.26	37.37	44.00	9.99	50.62	68.20	-17.58	Peak	HORIZONTAL
8905.00	48.52	37.46	44.07	10.26	52.17	68.20	-16.03	Peak	HORIZONTAL
11336.00	47.18	38.67	44.20	11.03	52.68	68.20	-15.52	Peak	HORIZONTAL
11846.00	47.66	38.81	44.12	10.98	53.33	68.20	-14.87	Peak	HORIZONTAL
12730.00	46.74	39.03	44.28	11.25	52.74	68.20	-15.46	Peak	HORIZONTAL
8565.00	47.23	37.33	43.97	9.87	50.46	68.20	-17.74	Peak	VERTICAL
9568.00	47.37	37.77	44.27	10.67	51.54	68.20	-16.66	Peak	VERTICAL
10571.00	47.86	38.54	44.31	10.99	53.08	68.20	-15.12	Peak	VERTICAL
11319.00	47.14	38.67	44.20	11.03	52.64	68.20	-15.56	Peak	VERTICAL
12509.00	45.62	38.81	44.23	11.16	51.36	68.20	-16.84	Peak	VERTICAL
13716.00	45.41	39.89	44.53	12.07	52.84	68.20	-15.36	Peak	VERTICAL
11a CH48									
8004.00	46.91	37.20	43.80	9.23	49.54	68.20	-18.66	Peak	HORIZONTAL
8242.00	47.98	37.25	43.87	9.51	50.87	68.20	-17.33	Peak	HORIZONTAL
8786.00	46.76	37.41	44.04	10.13	50.26	68.20	-17.94	Peak	HORIZONTAL
9279.00	47.81	37.61	44.18	10.52	51.76	68.20	-16.44	Peak	HORIZONTAL
11625.00	46.41	38.67	44.16	11.00	51.92	68.20	-16.28	Peak	HORIZONTAL
13240.00	45.50	39.54	44.41	11.59	52.22	68.20	-15.98	Peak	HORIZONTAL
7936.00	46.19	37.17	43.78	9.17	48.75	68.20	-19.45	Peak	VERTICAL
8922.00	47.82	37.47	44.08	10.28	51.49	68.20	-16.71	Peak	VERTICAL
9602.00	46.71	37.80	44.28	10.68	50.91	68.20	-17.29	Peak	VERTICAL
11829.00	46.23	38.80	44.13	10.99	51.89	68.20	-16.31	Peak	VERTICAL
12747.00	46.36	39.05	44.29	11.25	52.37	68.20	-15.83	Peak	VERTICAL
13750.00	45.02	39.90	44.54	12.11	52.49	68.20	-15.71	Peak	VERTICAL
Conclusion: Pass									
Note:1. -27 dBm/MHz Limit=95.2+EIRP[dBm]=95.2-27=68.2 dBμV/m For transmitters operating in the 5150MHz-5250MHz, 5725MHz-5850MHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz									

2. All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209.

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor(dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
11a CH149									
8395.00	47.07	37.28	43.92	9.68	50.11	68.20	-18.09	Peak	HORIZONTAL
9364.00	47.10	37.65	44.21	10.56	51.10	68.20	-17.10	Peak	HORIZONTAL
9806.00	49.43	38.01	44.34	10.79	53.89	68.20	-14.31	Peak	HORIZONTAL
11302.00	48.32	38.68	44.20	11.03	53.83	68.20	-14.37	Peak	HORIZONTAL
11727.00	46.42	38.74	44.14	10.99	52.01	68.20	-16.19	Peak	HORIZONTAL
12679.00	47.38	38.98	44.27	11.23	53.32	68.20	-14.88	Peak	HORIZONTAL
7953.00	46.28	37.18	43.79	9.19	48.86	68.20	-19.34	Peak	VERTICAL
8514.00	47.56	37.31	43.95	9.82	50.74	68.20	-17.46	Peak	VERTICAL
9483.00	48.63	37.69	44.24	10.62	52.70	68.20	-15.50	Peak	VERTICAL
9806.00	48.41	38.01	44.34	10.79	52.87	68.20	-15.33	Peak	VERTICAL
12050.00	44.92	38.89	44.11	10.99	50.69	68.20	-17.51	Peak	VERTICAL
12679.00	47.38	38.98	44.27	11.23	53.32	68.20	-14.88	Peak	VERTICAL
11a CH157									
8259.00	46.16	37.25	43.88	9.53	49.06	68.20	-19.14	Peak	HORIZONTAL
8871.00	46.89	37.45	44.06	10.22	50.50	68.20	-17.70	Peak	HORIZONTAL
9636.00	47.75	37.84	44.29	10.70	52.00	68.20	-16.20	Peak	HORIZONTAL
12084.00	46.32	38.88	44.12	11.00	52.08	68.20	-16.12	Peak	HORIZONTAL
12713.00	46.16	39.01	44.28	11.24	52.13	68.20	-16.07	Peak	HORIZONTAL
13631.00	46.27	39.85	44.51	11.99	53.60	68.20	-14.60	Peak	HORIZONTAL
8225.00	47.84	37.24	43.87	9.49	50.70	68.20	-17.50	Peak	VERTICAL
9228.00	46.73	37.59	44.17	10.49	50.64	68.20	-17.56	Peak	VERTICAL
9551.00	48.26	37.75	44.27	10.66	52.40	68.20	-15.80	Peak	VERTICAL
12084.00	46.32	38.88	44.12	11.00	52.08	68.20	-16.12	Peak	VERTICAL
12577.00	47.13	38.88	44.24	11.19	52.96	68.20	-15.24	Peak	VERTICAL
13104.00	47.29	39.40	44.38	11.46	53.77	68.20	-14.43	Peak	VERTICAL
11a CH165									
7579.00	46.86	37.03	43.67	8.85	49.07	68.20	-19.13	Peak	HORIZONTAL
8242.00	45.94	37.25	43.87	9.51	48.83	68.20	-19.37	Peak	HORIZONTAL
8905.00	46.19	37.46	44.07	10.26	49.84	68.20	-18.36	Peak	HORIZONTAL
9466.00	47.25	37.69	44.24	10.61	51.31	68.20	-16.89	Peak	HORIZONTAL
11829.00	44.76	38.80	44.13	10.99	50.42	68.20	-17.78	Peak	HORIZONTAL
12883.00	45.82	39.18	44.32	11.31	51.99	68.20	-16.21	Peak	HORIZONTAL
7579.00	48.18	37.03	43.67	8.85	50.39	68.20	-17.81	Peak	VERTICAL
8276.00	48.10	37.26	43.88	9.54	51.02	68.20	-17.18	Peak	VERTICAL
8837.00	47.73	37.43	44.05	10.18	51.29	68.20	-16.91	Peak	VERTICAL
9483.00	48.23	37.69	44.24	10.62	52.30	68.20	-15.90	Peak	VERTICAL
12475.00	46.52	38.81	44.22	11.15	52.26	68.20	-15.94	Peak	VERTICAL
13223.00	47.11	39.52	44.41	11.58	53.80	68.20	-14.40	Peak	VERTICAL

Conclusion: Pass

Note: 1. -27 dBm/MHz Limit=95.2+EIRP[dBm]=95.2-27=68.2 dBμV/m
For transmitters operating in the 5150MHz-5250MHz, 5725MHz-5850MHz band: all emissions outside of the

5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. 2. All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209.

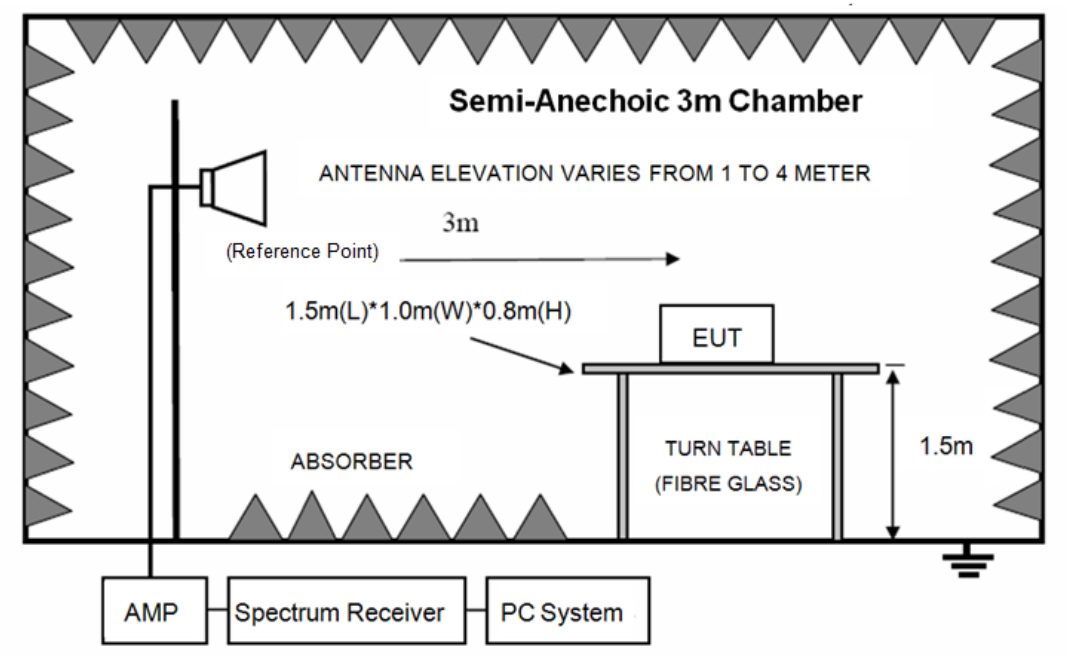
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

9. Band Edge Compliance

9.1. Block diagram of test setup



9.2. Limit

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27dBm/MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

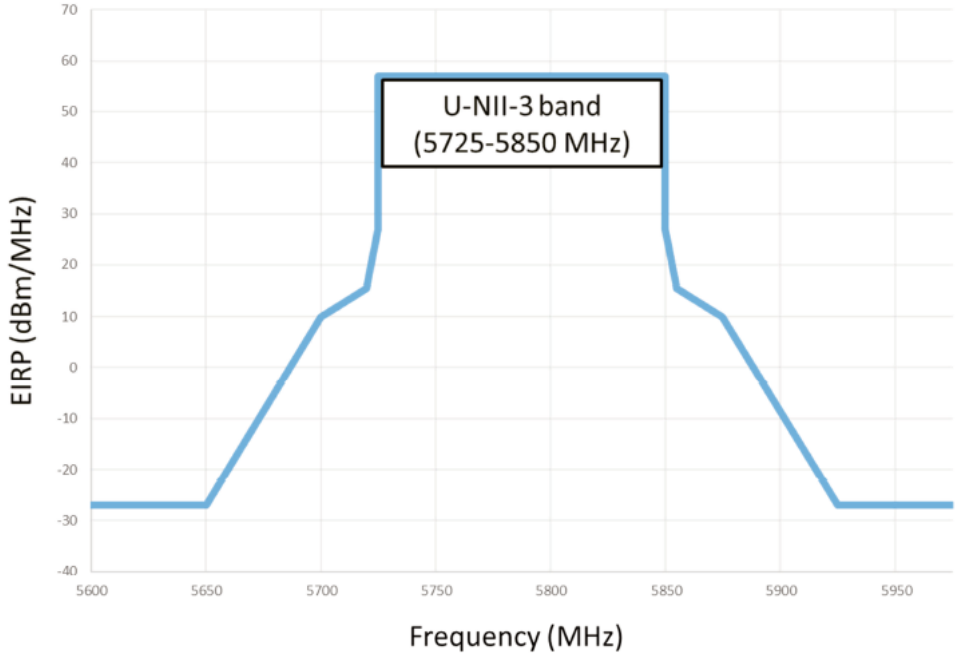


Figure 1. Proposed emission mask

9.3. Test Procedure

Same with clause 8.3 except change investigated frequency range from 5.15-5.25 GHz, 5.725-5.85 GHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

9.4. Test result

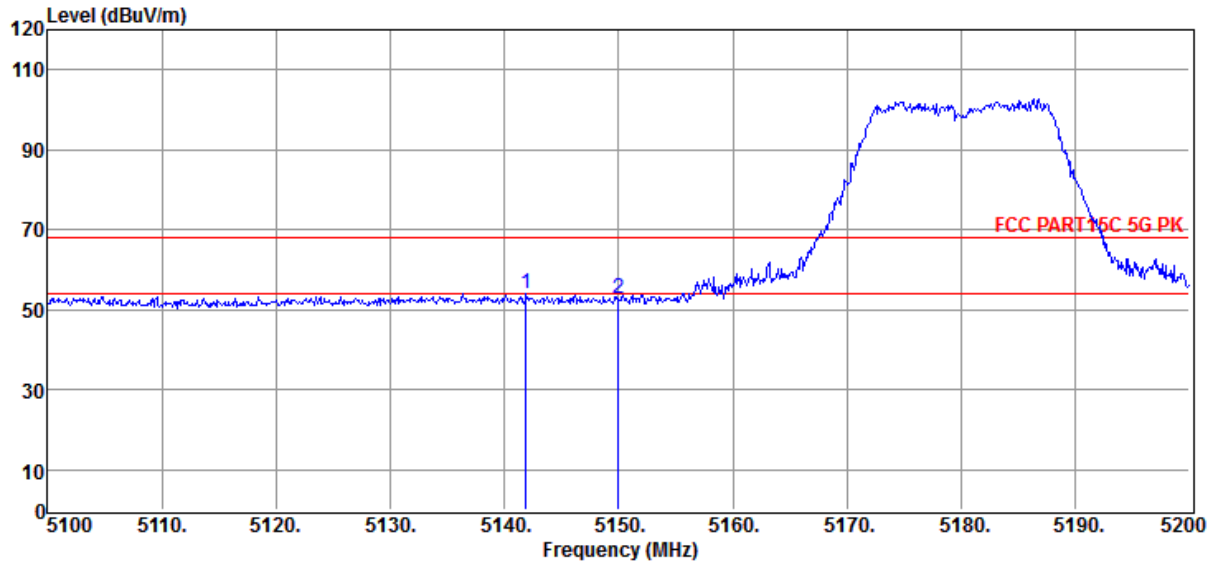
PASS. (See below detailed test result)

Note1: As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit, however, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required the peak emission limit

Note2: 11a ANT 1, 11n, 11ac mode ANT 1, ANT 2 mode and MIMO mode all have been tested, the worst case in this reported.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11A 5180			

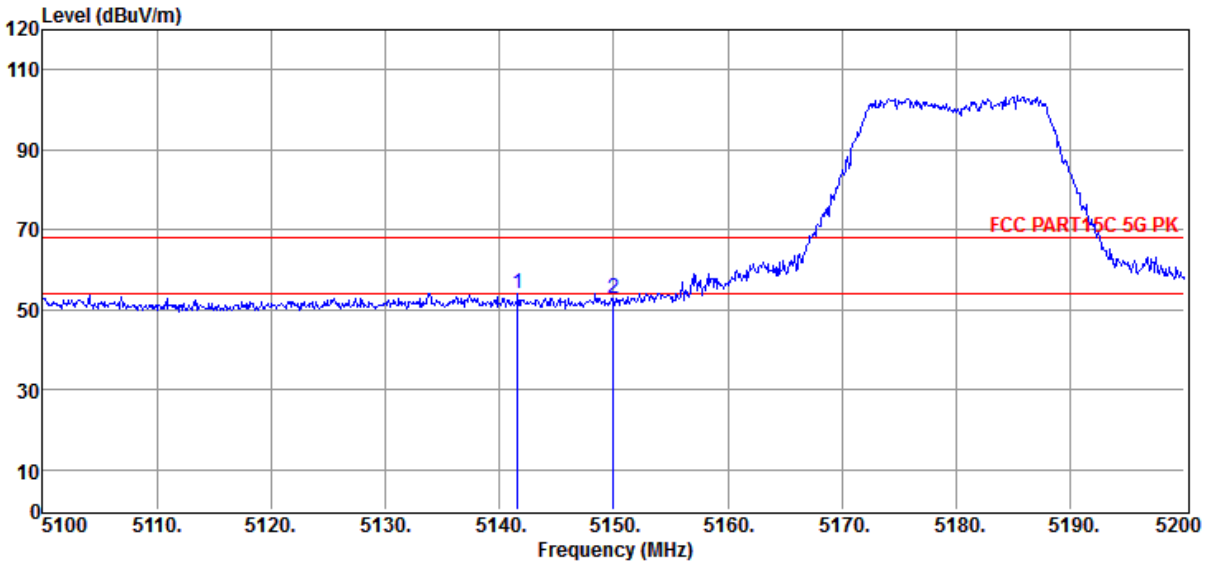


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5141.90	54.96	35.14	43.71	7.67	54.06	68.20	-14.14	Peak	HORIZONTAL
2	5150.00	53.70	35.15	43.71	7.67	52.81	68.20	-15.39	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11A 5180			



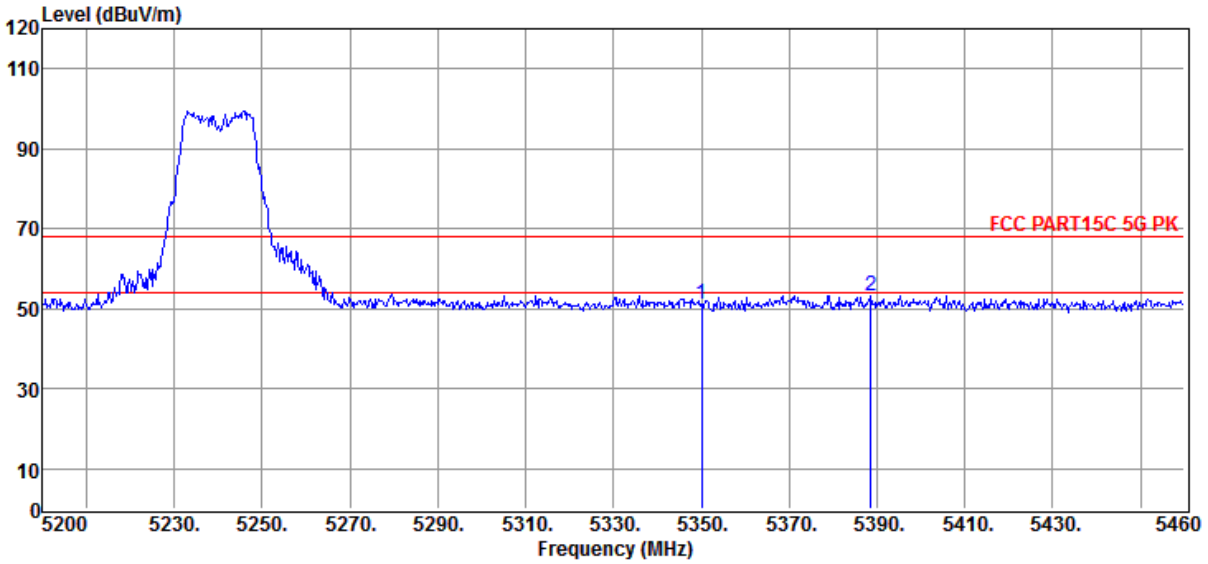
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5141.60	55.10	35.14	43.72	7.67	54.19	68.20	-14.01	Peak	VERTICAL
2	5150.00	53.61	35.15	43.71	7.67	52.72	68.20	-15.48	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11A 5240			

Data: 60



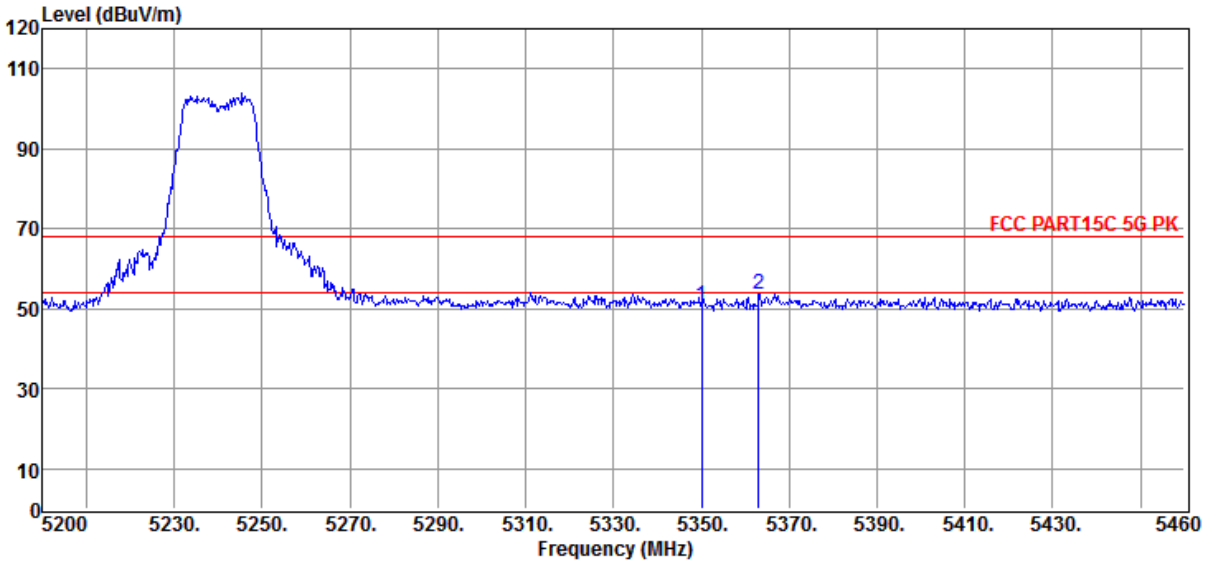
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	51.72	35.35	43.59	7.80	51.28	68.20	-16.92	Peak	VERTICAL
2	5388.50	53.64	35.39	43.57	7.82	53.28	68.20	-14.92	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11A 5240			

Data: 61

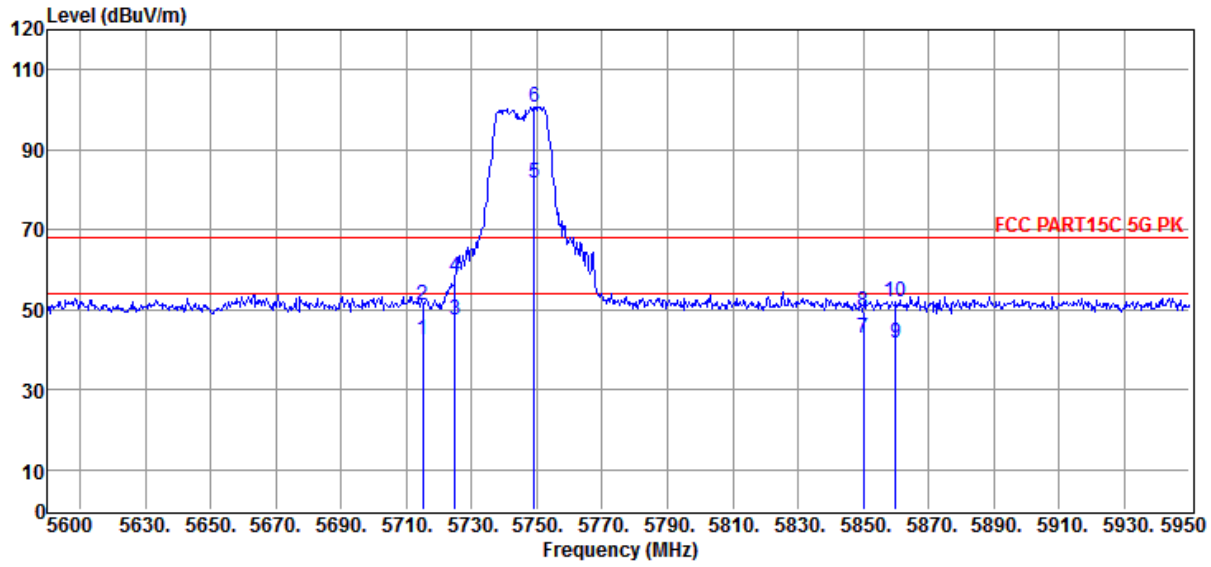


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	51.11	35.35	43.59	7.80	50.67	68.20	-17.53	Peak	HORIZONTAL
2	5363.02	53.85	35.36	43.58	7.81	53.44	68.20	-14.76	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11A 5745			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.33	35.59	43.37	8.03	42.58	109.4	-66.82	Average	HORIZONTAL
2	5715.00	50.70	35.59	43.37	8.03	50.95	109.4	-58.45	Peak	HORIZONTAL
3	5725.00	47.37	35.59	43.37	8.04	47.63	122.2	-74.57	Average	HORIZONTAL
4	5725.00	57.99	35.59	43.37	8.04	58.25	122.2	-63.95	Peak	HORIZONTAL
5	5749.10	81.36	35.60	43.35	8.05	81.66	125.2	-43.54	Average	HORIZONTAL
6	5749.10	100.39	35.60	43.35	8.05	100.69	125.2	-24.51	Peak	HORIZONTAL
7	5850.00	42.36	35.64	43.29	8.12	42.83	122.2	-79.37	Average	HORIZONTAL
8	5850.00	48.97	35.64	43.29	8.12	49.44	122.2	-72.76	Peak	HORIZONTAL
9	5860.00	41.36	35.64	43.28	8.12	41.84	109.4	-67.56	Average	HORIZONTAL
10	5860.00	51.58	35.64	43.28	8.12	52.06	109.4	-16.36	Peak	HORIZONTAL

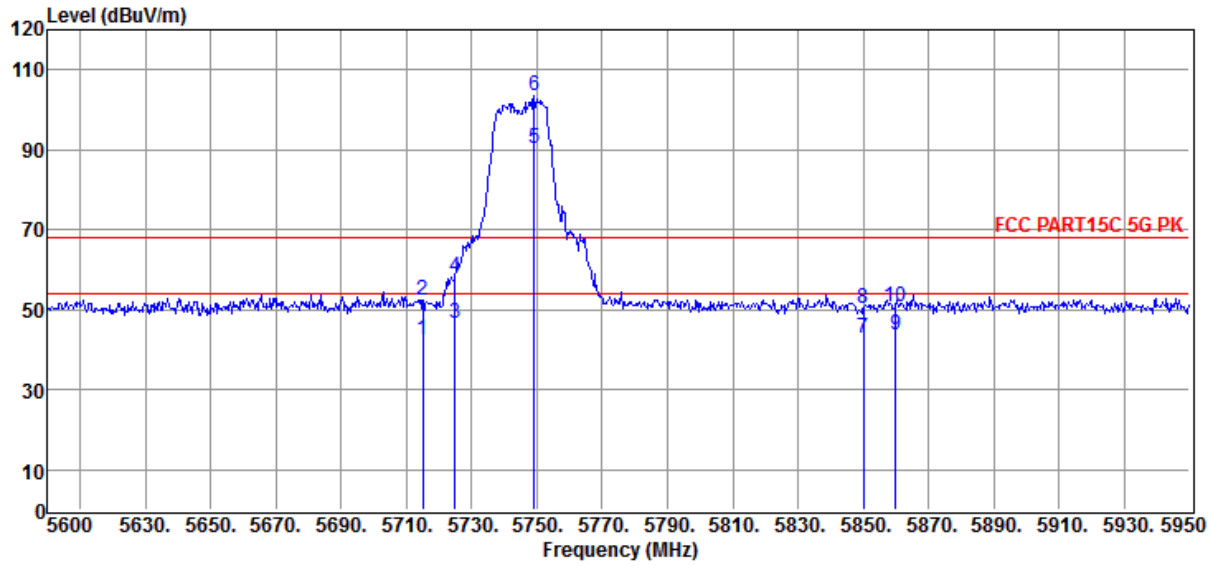
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11A 5745			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	VERTICAL
2	5715.00	52.11	35.59	43.37	8.03	52.36	109.4	-57.04	Peak	VERTICAL
3	5725.00	46.35	35.59	43.37	8.04	46.61	122.2	-75.59	Average	VERTICAL
4	5725.00	57.90	35.59	43.37	8.04	58.16	122.2	-64.04	Peak	VERTICAL
5	5749.10	90.14	35.60	43.35	8.05	90.44	125.2	-34.76	Average	VERTICAL
6	5749.10	103.12	35.60	43.35	8.05	103.42	125.2	-21.78	Peak	VERTICAL
7	5850.00	42.36	35.64	43.29	8.12	42.83	122.2	-79.37	Average	VERTICAL
8	5850.00	49.87	35.64	43.29	8.12	50.34	122.2	-71.86	Peak	VERTICAL
9	5860.00	43.37	35.64	43.28	8.12	43.85	109.4	-65.55	Average	VERTICAL
10	5860.00	50.29	35.64	43.28	8.12	50.77	109.4	-16.36	Peak	VERTICAL

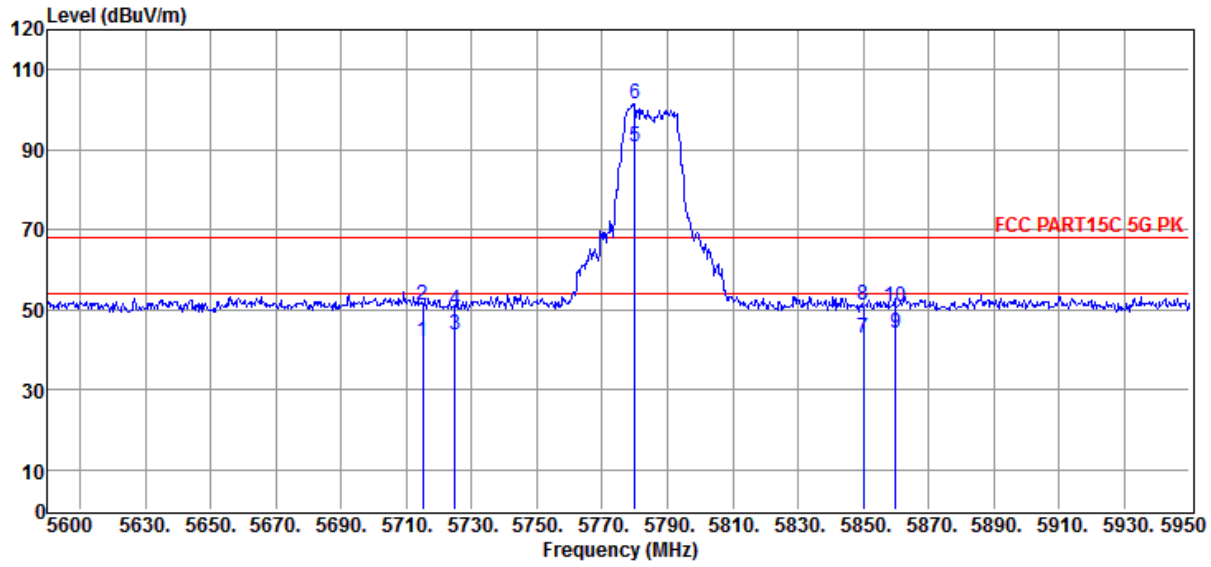
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11A 5785			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715	42	35.59	43.37	8.03	42.25	109.4	-67.15	Average	VERTICAL
2	5715	50.79	35.59	43.37	8.03	51.04	109.4	-58.36	Peak	VERTICAL
3	5725	43.33	35.59	43.37	8.04	43.59	122.2	-78.61	Average	VERTICAL
4	5725	49.6	35.59	43.37	8.04	49.86	122.2	-72.34	Peak	VERTICAL
5	5779.9	90.55	35.61	43.33	8.07	90.9	125.2	-34.30	Average	VERTICAL
6	5779.9	101.03	35.61	43.33	8.07	101.38	125.2	-23.82	Peak	VERTICAL
7	5850	42.36	35.64	43.29	8.12	42.83	122.2	-79.37	Average	VERTICAL
8	5850	50.64	35.64	43.29	8.12	51.11	122.2	-71.09	Peak	VERTICAL
9	5860	43.65	35.64	43.28	8.12	44.13	109.4	-65.27	Average	VERTICAL
10	5860	50.44	35.64	43.28	8.12	50.92	109.4	-16.36	Peak	VERTICAL

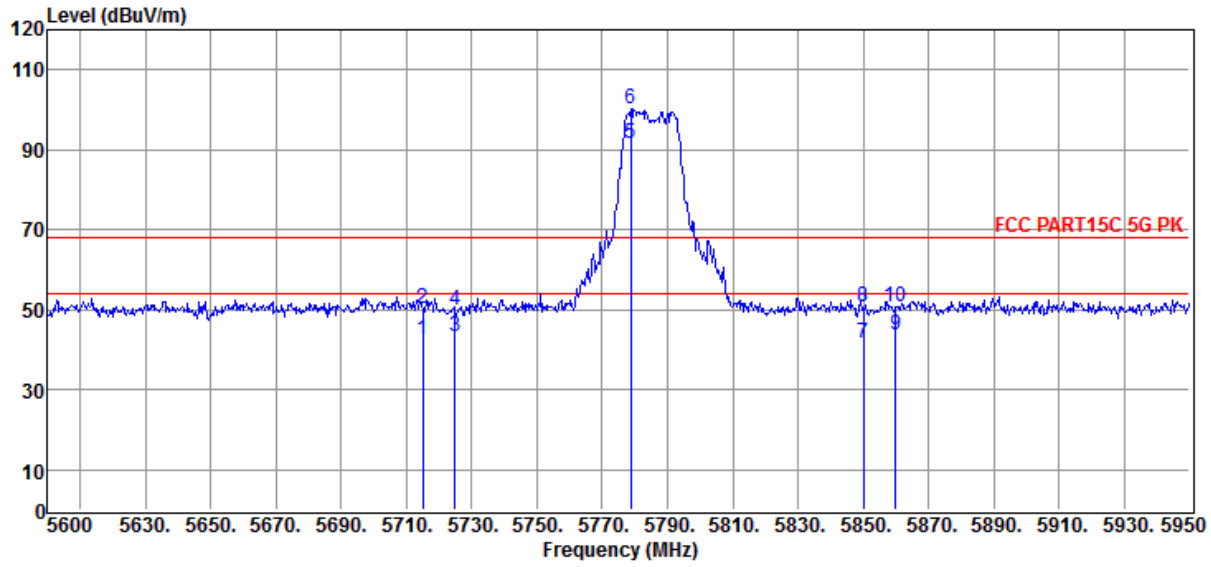
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11A 5785			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	HORIZONTAL
2	5715.00	50.02	35.59	43.37	8.03	50.27	109.4	-59.13	Peak	HORIZONTAL
3	5725.00	43.22	35.59	43.37	8.04	43.48	122.2	-78.72	Average	HORIZONTAL
4	5725.00	49.84	35.59	43.37	8.04	50.10	122.2	-72.10	Peak	HORIZONTAL
5	5778.85	91.23	35.61	43.33	8.07	91.58	125.2	-33.62	Average	HORIZONTAL
6	5778.85	99.82	35.61	43.33	8.07	100.17	125.2	-25.03	Peak	HORIZONTAL
7	5850.00	41.36	35.64	43.29	8.12	41.83	122.2	-80.37	Average	HORIZONTAL
8	5850.00	50.10	35.64	43.29	8.12	50.57	122.2	-71.63	Peak	HORIZONTAL
9	5860.00	43.22	35.64	43.28	8.12	43.70	109.4	-65.70	Average	HORIZONTAL
10	5860.00	50.31	35.64	43.28	8.12	50.79	109.4	-16.36	Peak	HORIZONTAL

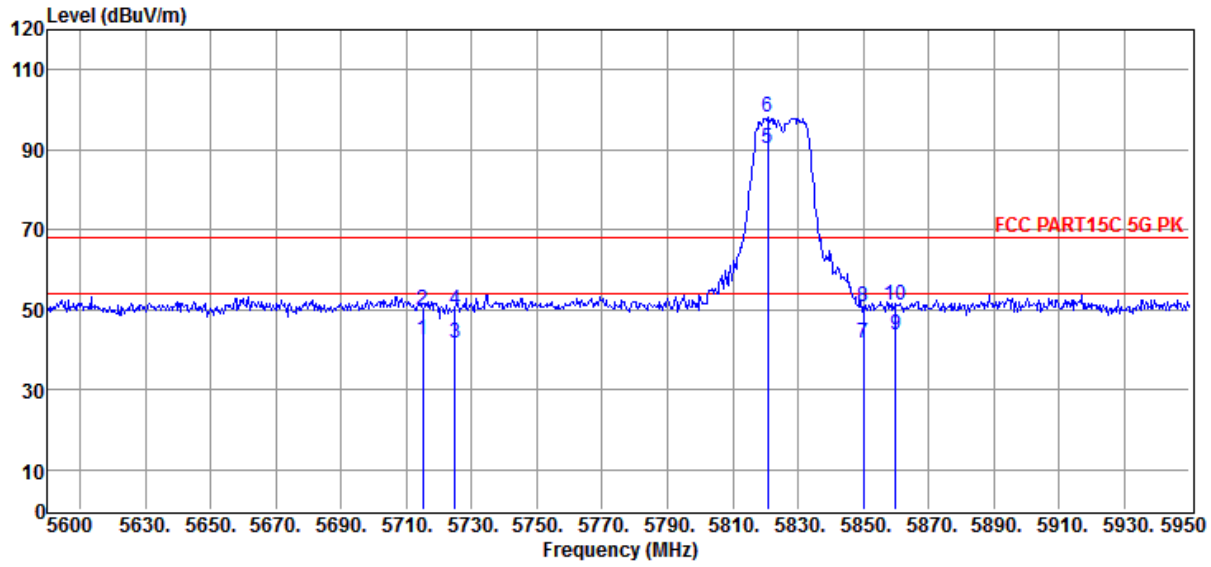
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11A 5825			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	HORIZONTAL
2	5715.00	49.67	35.59	43.37	8.03	49.92	109.4	-59.48	Peak	HORIZONTAL
3	5725.00	41.24	35.59	43.37	8.04	41.50	122.2	-80.70	Average	HORIZONTAL
4	5725.00	49.75	35.59	43.37	8.04	50.01	122.2	-72.19	Peak	HORIZONTAL
5	5820.85	90.00	35.63	43.31	8.10	90.42	125.2	-34.78	Average	HORIZONTAL
6	5820.85	97.53	35.63	43.31	8.10	97.95	125.2	-27.25	Peak	HORIZONTAL
7	5850.00	41.23	35.64	43.29	8.12	41.70	122.2	-80.50	Average	HORIZONTAL
8	5850.00	50.19	35.64	43.29	8.12	50.66	122.2	-71.54	Peak	HORIZONTAL
9	5860.00	43.23	35.64	43.28	8.12	43.71	109.4	-65.69	Average	HORIZONTAL
10	5860.00	50.79	35.64	43.28	8.12	51.27	109.4	-16.36	Peak	HORIZONTAL

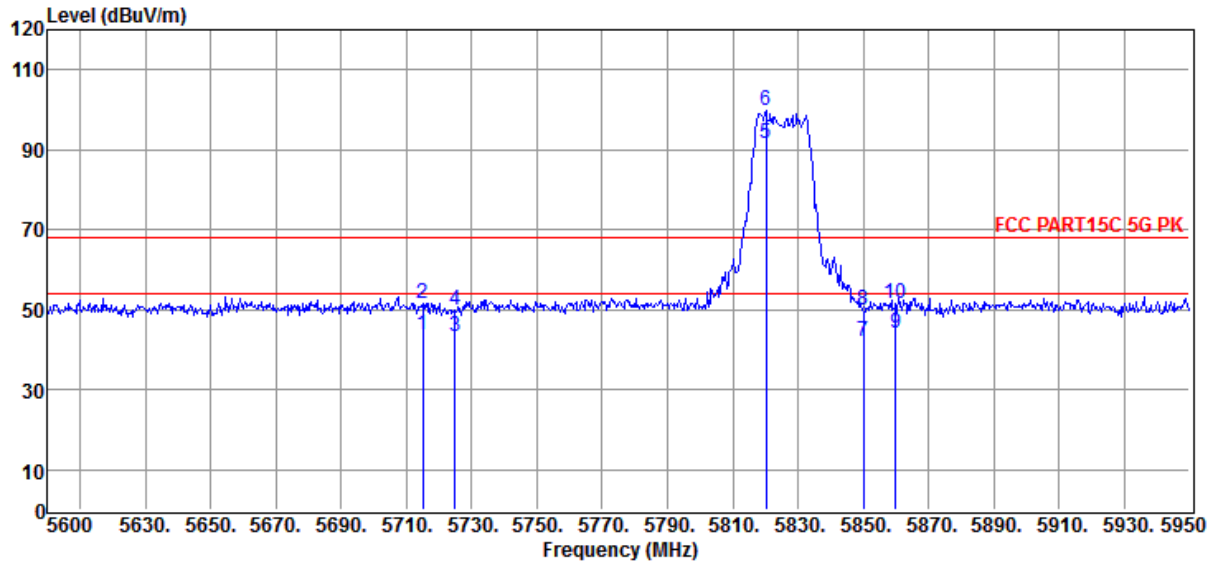
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11A 5825			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	43.52	35.59	43.37	8.03	43.77	109.4	-65.63	Average	VERTICAL
2	5715.00	51.43	35.59	43.37	8.03	51.68	109.4	-57.72	Peak	VERTICAL
3	5725.00	42.96	35.59	43.37	8.04	43.22	122.2	-78.98	Average	VERTICAL
4	5725.00	49.53	35.59	43.37	8.04	49.79	122.2	-72.41	Peak	VERTICAL
5	5820.15	91.23	35.63	43.31	8.10	91.65	125.2	-33.55	Average	VERTICAL
6	5820.15	99.20	35.63	43.31	8.10	99.62	125.2	-25.58	Peak	VERTICAL
7	5850.00	41.65	35.64	43.29	8.12	42.12	122.2	-80.08	Average	VERTICAL
8	5850.00	49.58	35.64	43.29	8.12	50.05	122.2	-72.15	Peak	VERTICAL
9	5860.00	43.52	35.64	43.28	8.12	44.00	109.4	-65.40	Average	VERTICAL
10	5860.00	50.88	35.64	43.28	8.12	51.36	109.4	-16.36	Peak	VERTICAL

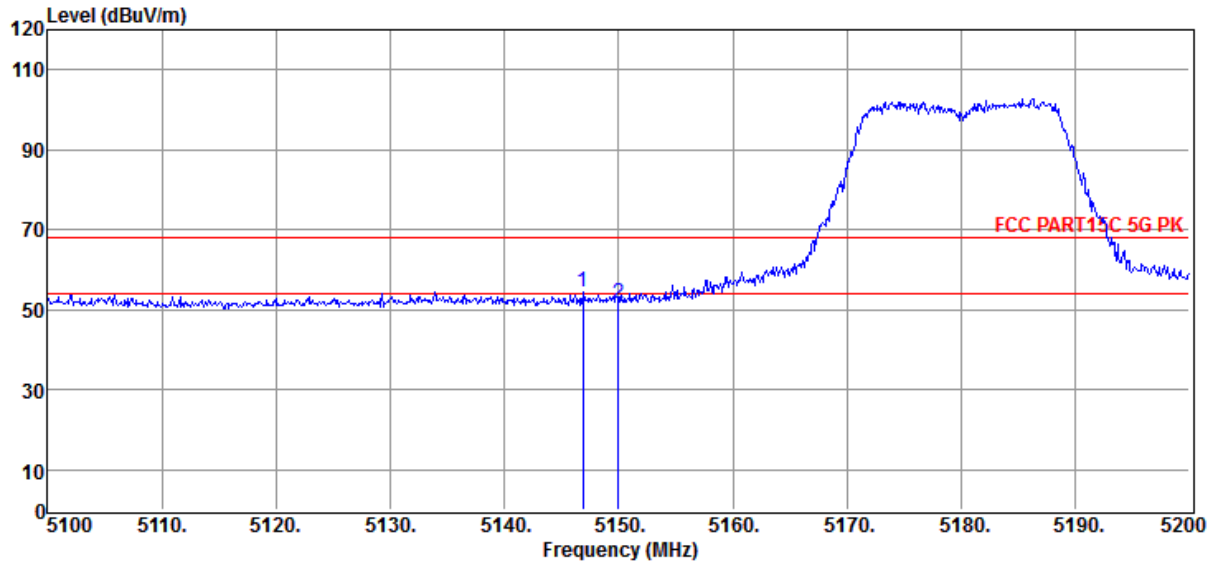
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N20 5180			

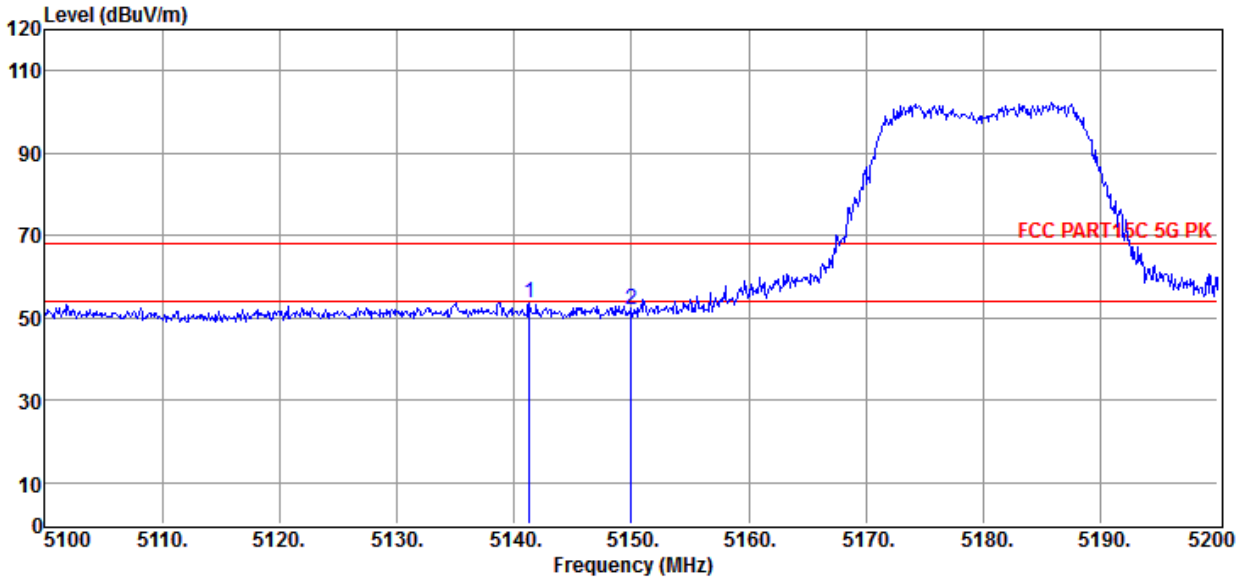


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5146.90	55.39	35.15	43.71	7.67	54.50	68.20	-13.70	Peak	VERTICAL
2	5150.00	52.60	35.15	43.71	7.67	51.71	68.20	-16.49	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Spurious Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI EM6	
Test Date	: 2018-07-04	**Tested By**	: Talent
EUT	: M2 Bee MESH Node	**Model Number**	: Bee
Power Supply	: AC 120V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C,Humi:55%,Press:100.1k Pa	**Antenna/Distance**	: 2017 HF907/3m/HORIZONTAL
Memo	: 11N20 5180		



Item (Mark)	Freq (MHz)	Read Level (dBm)	Antenna Factor (dB/m)	Cable Loss dB	Site Loss Factor dB	Result Level (dBm	Limit Line (dBm)	Over Limit (dB)	Type
1	5141.30	54.53	35.14	7.67	0.00	53.62	68.20	-14.58	EIRP
2	5150.00	52.88	35.15	7.67	0.00	51.99	68.20	-16.21	EIRP

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Site Loss Factor.
2. Below 1 GHz test setup: RBW: 100 kHz, VBW: 300 kHz, Sweep time: auto.
3. Above 1 GHz test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	Test **Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N20 5240			

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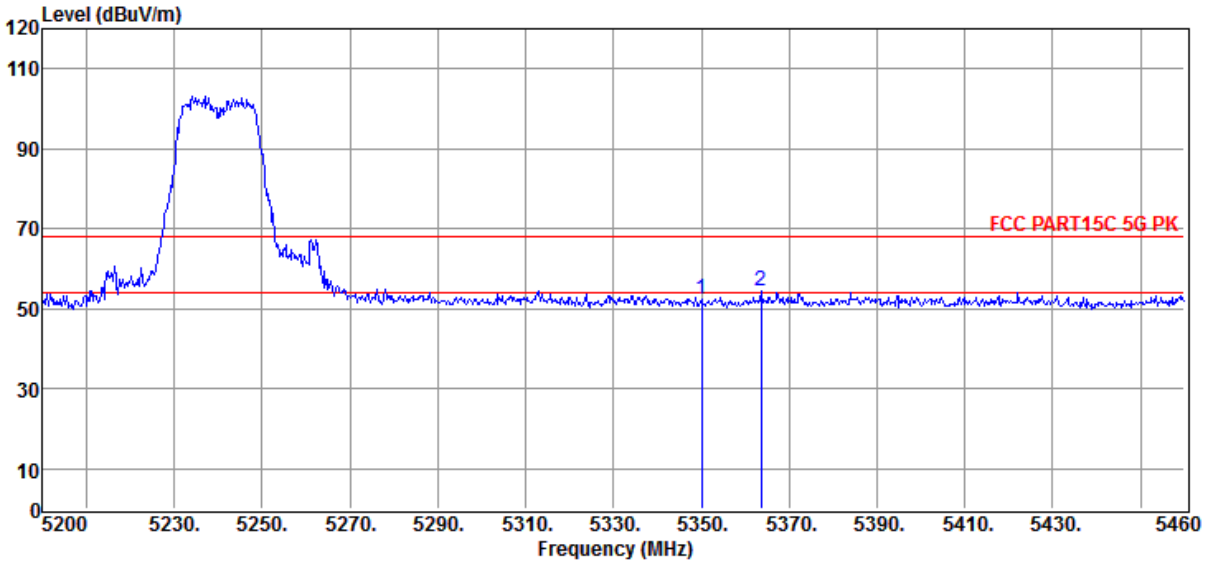


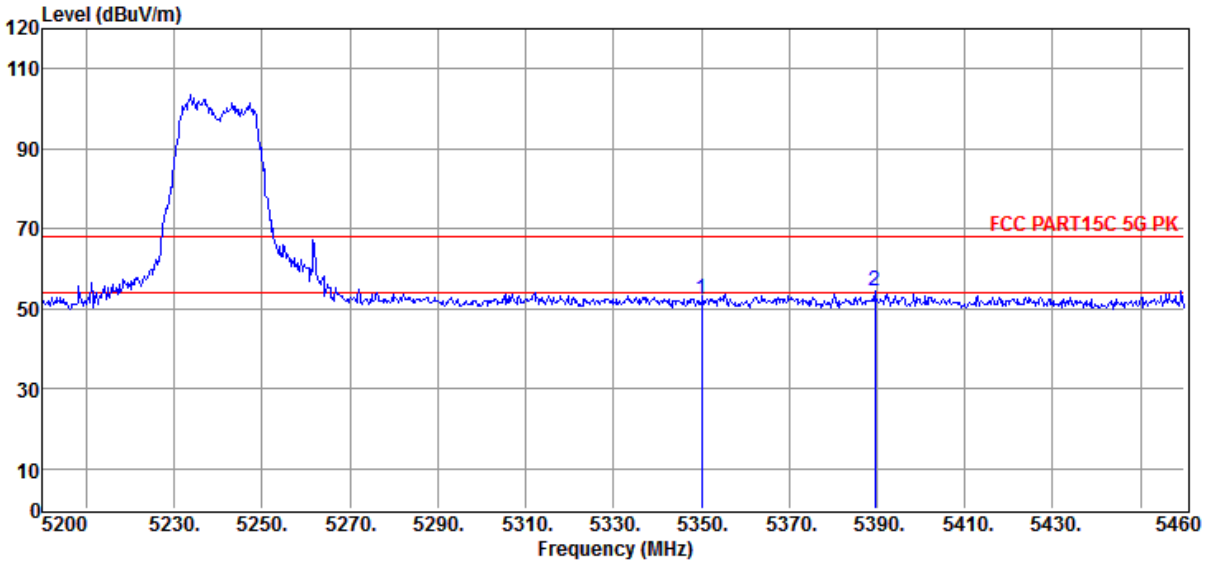
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.02	52.83	35.35	43.59	7.80	52.39	68.20	-15.81	Peak	HORIZONTAL
2	5363.54	54.87	35.36	43.58	7.81	54.46	68.20	-13.74	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N20 5240			

Data: 71

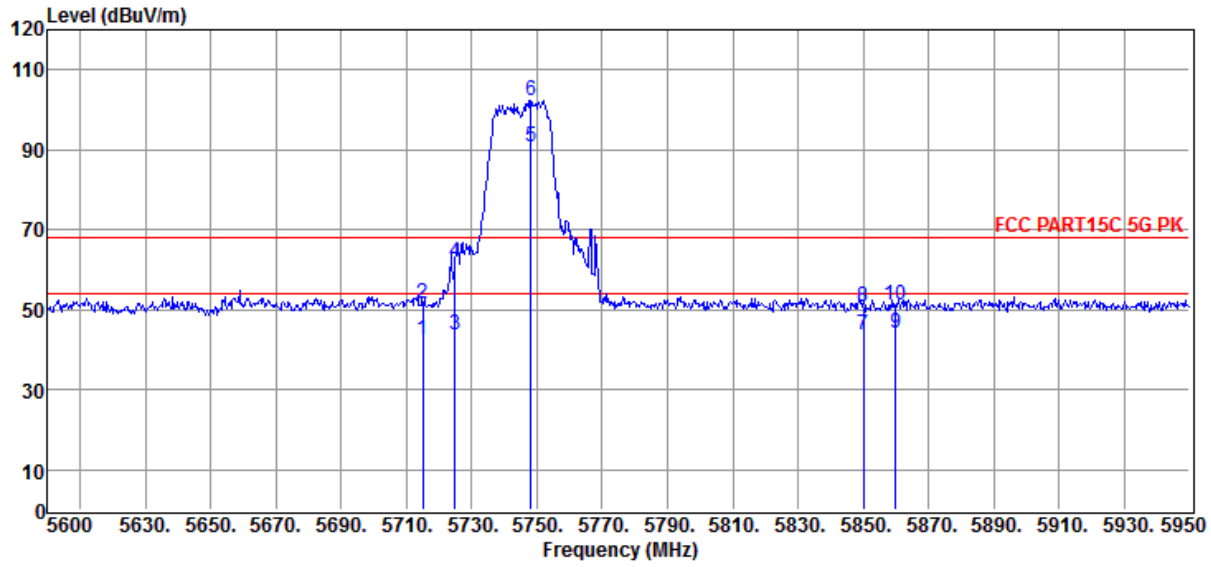


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.02	52.83	35.35	43.59	7.80	52.39	68.20	-15.81	Peak	VERTICAL
2	5389.54	54.58	35.39	43.57	7.83	54.23	68.20	-13.97	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N20 5745			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	VERTICAL
2	5715.00	51.17	35.59	43.37	8.03	51.42	109.4	-57.98	Peak	VERTICAL
3	5725.00	43.33	35.59	43.37	8.04	43.59	122.2	-78.61	Average	VERTICAL
4	5725.00	61.79	35.59	43.37	8.04	62.05	122.2	-60.15	Peak	VERTICAL
5	5748.05	90.47	35.60	43.35	8.05	90.77	125.2	-34.43	Average	VERTICAL
6	5748.05	101.88	35.60	43.35	8.05	102.18	125.2	-23.02	Peak	VERTICAL
7	5850.00	43.25	35.64	43.29	8.12	43.72	122.2	-78.48	Average	VERTICAL
8	5850.00	50.42	35.64	43.29	8.12	50.89	122.2	-71.31	Peak	VERTICAL
9	5860.00	43.51	35.64	43.28	8.12	43.99	109.4	-65.41	Average	VERTICAL
10	5860.00	50.75	35.64	43.28	8.12	51.23	109.4	-16.36	Peak	VERTICAL

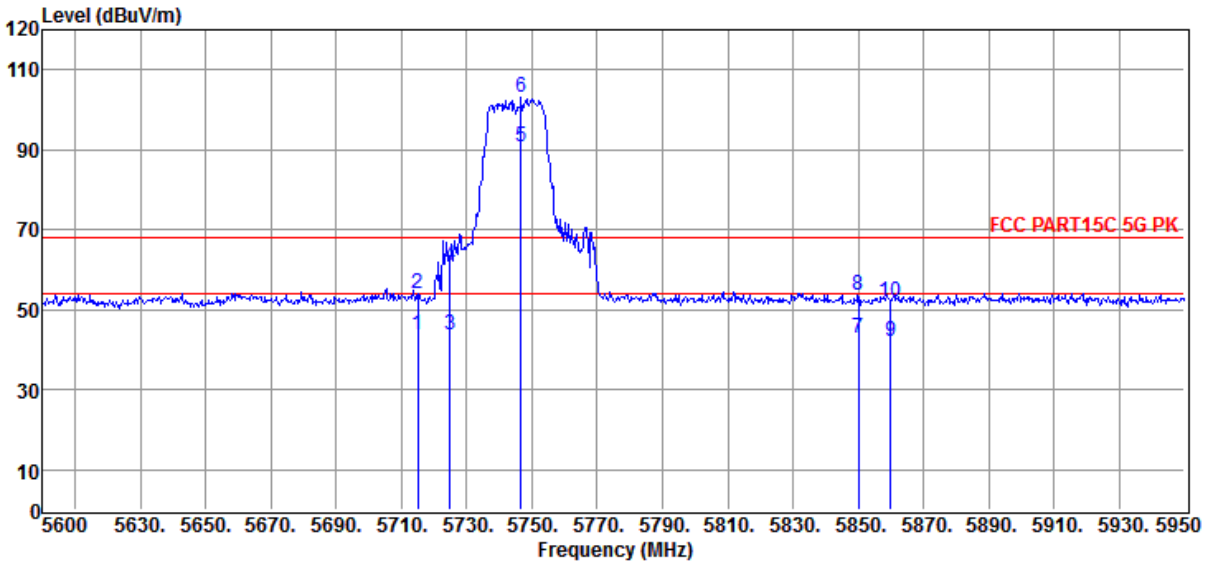
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N20 5745			

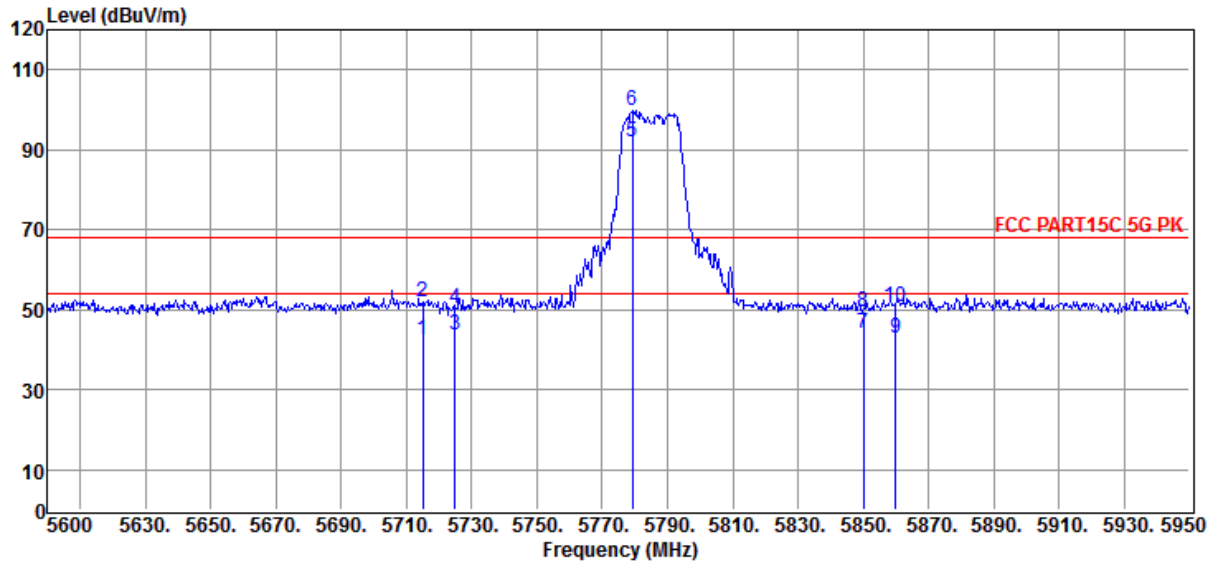


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	43.51	35.59	43.37	8.03	43.76	109.4	-65.64	Average	HORIZONTAL
2	5715.00	53.62	35.59	43.37	8.03	53.87	109.4	-55.53	Peak	HORIZONTAL
3	5725.00	43.53	35.59	43.37	8.04	43.79	122.2	-78.41	Average	HORIZONTAL
4	5725.00	60.86	35.59	43.37	8.04	61.12	122.2	-61.08	Peak	HORIZONTAL
5	5746.65	90.45	35.60	43.35	8.05	90.75	125.2	-34.45	Average	HORIZONTAL
6	5746.65	102.66	35.60	43.35	8.05	102.96	125.2	-22.24	Peak	HORIZONTAL
7	5850.00	42.45	35.64	43.29	8.12	42.92	122.2	-79.28	Average	HORIZONTAL
8	5850.00	53.21	35.64	43.29	8.12	53.68	122.2	-68.52	Peak	HORIZONTAL
9	5860.00	41.53	35.64	43.28	8.12	42.01	109.4	-67.39	Average	HORIZONTAL
10	5860.00	51.48	35.64	43.28	8.12	51.96	109.4	-16.36	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N20 5785			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	HORIZONTAL
2	5715.00	51.67	35.59	43.37	8.03	51.92	109.4	-57.48	Peak	HORIZONTAL
3	5725.00	43.46	35.59	43.37	8.04	43.72	122.2	-78.48	Average	HORIZONTAL
4	5725.00	50.05	35.59	43.37	8.04	50.31	122.2	-71.89	Peak	HORIZONTAL
5	5779.20	91.46	35.61	43.33	8.07	91.81	125.2	-33.39	Average	HORIZONTAL
6	5779.20	99.57	35.61	43.33	8.07	99.92	125.2	-25.28	Peak	HORIZONTAL
7	5850.00	43.54	35.64	43.29	8.12	44.01	122.2	-78.19	Average	HORIZONTAL
8	5850.00	48.83	35.64	43.29	8.12	49.30	122.2	-72.90	Peak	HORIZONTAL
9	5860.00	42.36	35.64	43.28	8.12	42.84	109.4	-66.56	Average	HORIZONTAL
10	5860.00	50.21	35.64	43.28	8.12	50.69	109.4	-16.36	Peak	HORIZONTAL

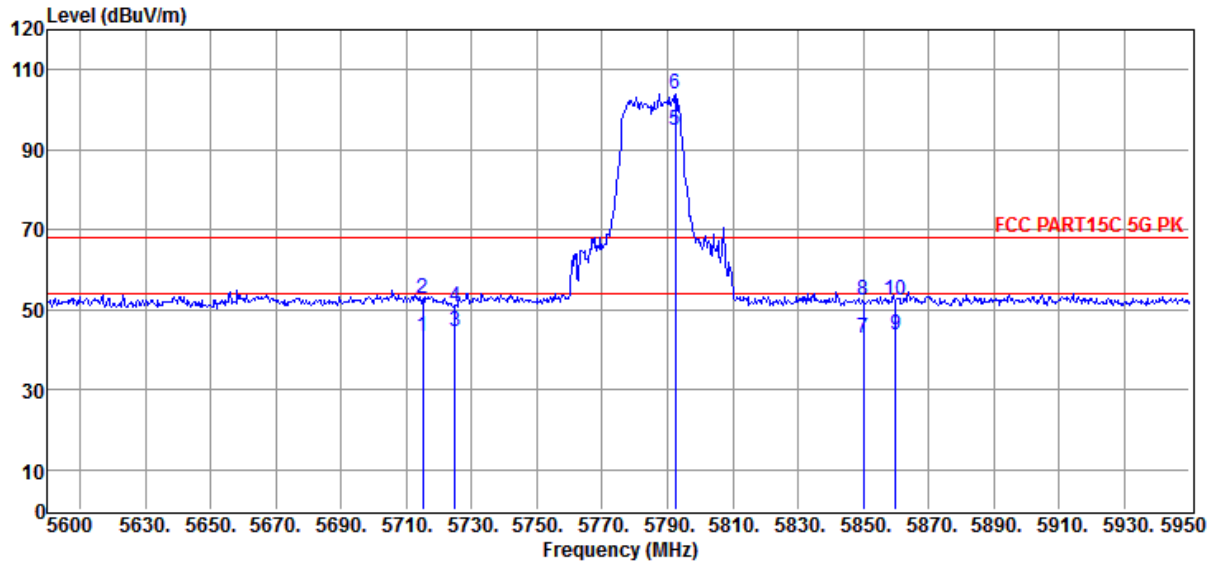
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N20 5785			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	43.24	35.59	43.37	8.03	43.49	109.4	-65.91	Average	VERTICAL
2	5715.00	52.36	35.59	43.37	8.03	52.61	109.4	-56.79	Peak	VERTICAL
3	5725.00	44.33	35.59	43.37	8.04	44.59	122.2	-77.61	Average	VERTICAL
4	5725.00	50.60	35.59	43.37	8.04	50.86	122.2	-71.34	Peak	VERTICAL
5	5792.50	94.32	35.62	43.32	8.08	94.70	125.2	-30.50	Average	VERTICAL
6	5792.50	103.49	35.62	43.32	8.08	103.87	125.2	-21.33	Peak	VERTICAL
7	5850.00	42.36	35.64	43.29	8.12	42.83	122.2	-79.37	Average	VERTICAL
8	5850.00	51.85	35.64	43.29	8.12	52.32	122.2	-69.88	Peak	VERTICAL
9	5860.00	43.26	35.64	43.28	8.12	43.74	109.4	-65.66	Average	VERTICAL
10	5860.00	52.07	35.64	43.28	8.12	52.55	109.4	-16.36	Peak	VERTICAL

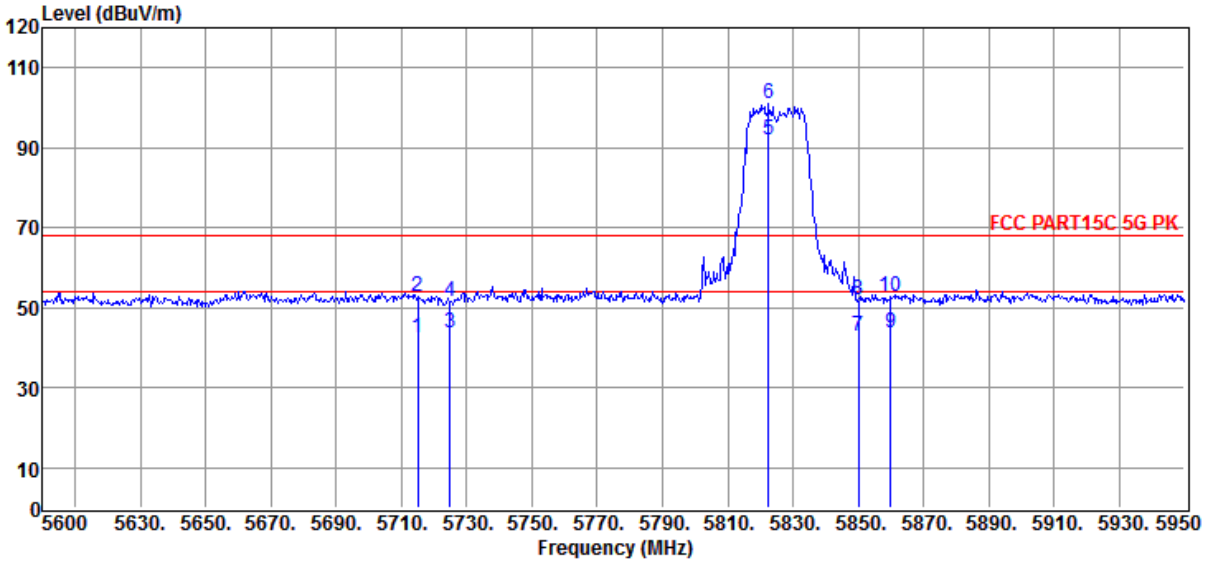
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6	
Test Date	: 2018-07-04	**Tested By**	: Talent
EUT	: M2 Bee MESH Node	**Model Number**	: Bee
Power Supply	: AC 120V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	: 2017 HF907/3m/VERTICAL
Memo	: 11N20 5825		



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	VERTICAL
2	5715.00	52.54	35.59	43.37	8.03	52.79	109.4	-56.61	Peak	VERTICAL
3	5725.00	43.26	35.59	43.37	8.04	43.52	122.2	-78.68	Average	VERTICAL
4	5725.00	51.45	35.59	43.37	8.04	51.71	122.2	-70.49	Peak	VERTICAL
5	5822.60	91.36	35.63	43.31	8.10	91.78	125.2	-33.42	Average	VERTICAL
6	5822.60	100.61	35.63	43.31	8.10	101.03	125.2	-24.17	Peak	VERTICAL
7	5850.00	42.36	35.64	43.29	8.12	42.83	122.2	-79.37	Average	VERTICAL
8	5850.00	51.36	35.64	43.29	8.12	51.83	122.2	-70.37	Peak	VERTICAL
9	5860.00	43.15	35.64	43.28	8.12	43.63	109.4	-65.77	Average	VERTICAL
10	5860.00	52.32	35.64	43.28	8.12	52.80	109.4	-16.36	Peak	VERTICAL

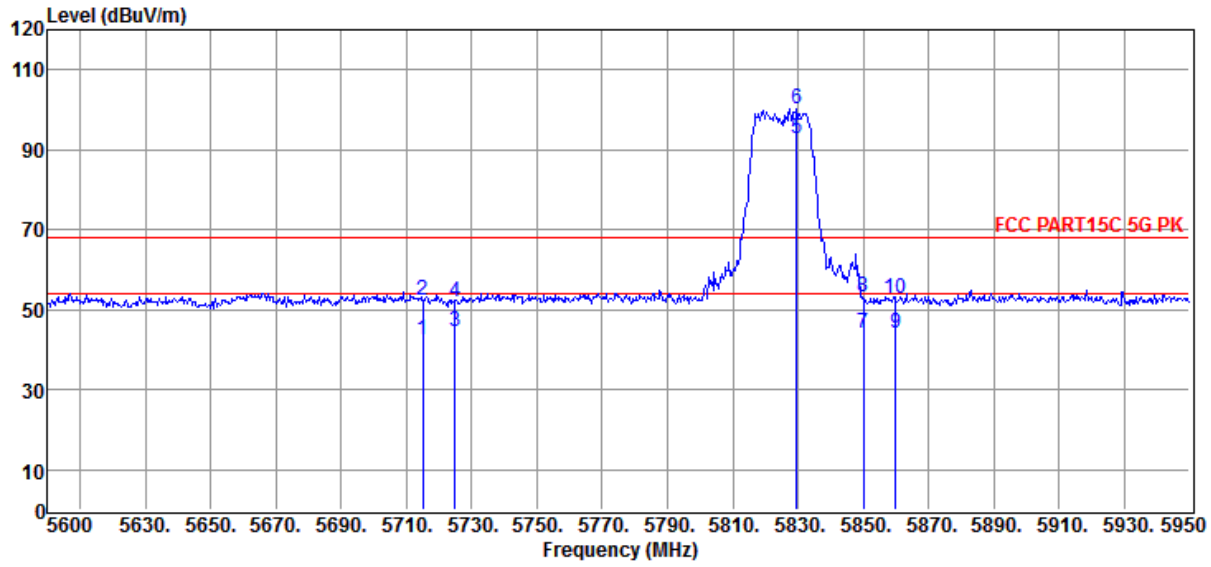
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N20 5825			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	HORIZONTAL
2	5715.00	51.99	35.59	43.37	8.03	52.24	109.4	-57.16	Peak	HORIZONTAL
3	5725.00	44.37	35.59	43.37	8.04	44.63	122.2	-77.57	Average	HORIZONTAL
4	5725.00	51.70	35.59	43.37	8.04	51.96	122.2	-70.24	Peak	HORIZONTAL
5	5829.60	92.35	35.63	43.30	8.10	92.78	125.2	-32.42	Average	HORIZONTAL
6	5829.60	99.77	35.63	43.30	8.10	100.20	125.2	-25.00	Peak	HORIZONTAL
7	5850.00	43.65	35.64	43.29	8.12	44.12	122.2	-78.08	Average	HORIZONTAL
8	5850.00	52.67	35.64	43.29	8.12	53.14	122.2	-69.06	Peak	HORIZONTAL
9	5860.00	43.52	35.64	43.28	8.12	44.00	109.4	-65.40	Average	HORIZONTAL
10	5860.00	52.47	35.64	43.28	8.12	52.95	109.4	-16.36	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

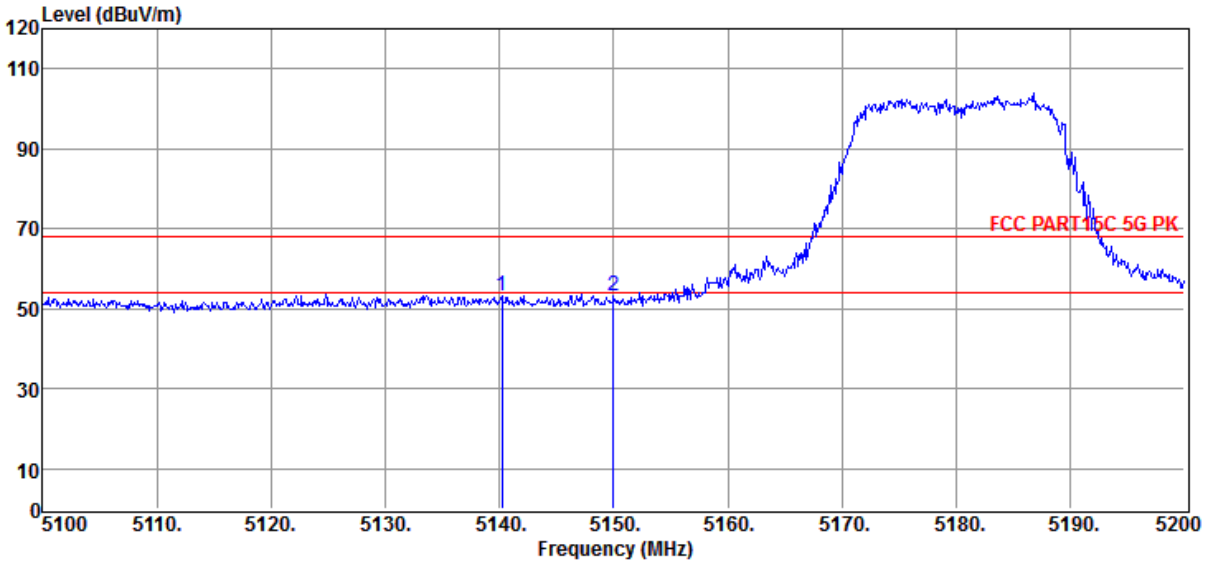
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC20 5180			

Data: 78



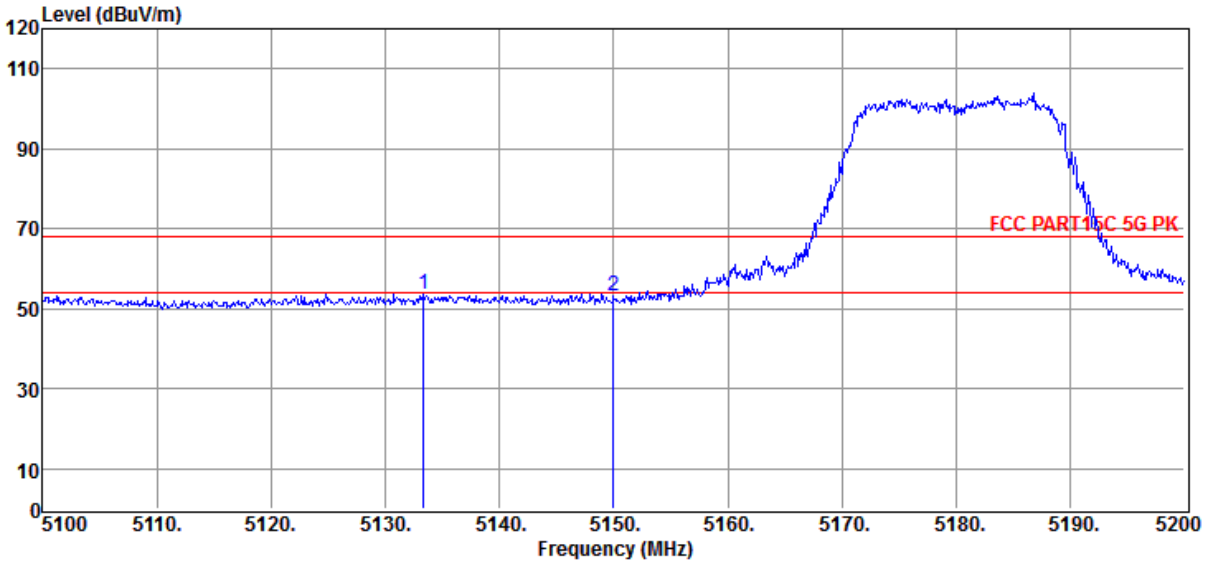
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5140.20	54.23	35.14	43.72	7.67	53.32	68.20	-14.88	Peak	HORIZONTAL
2	5150.00	54.19	35.15	43.71	7.67	53.30	68.20	-14.90	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC20 5180			

Data: 79



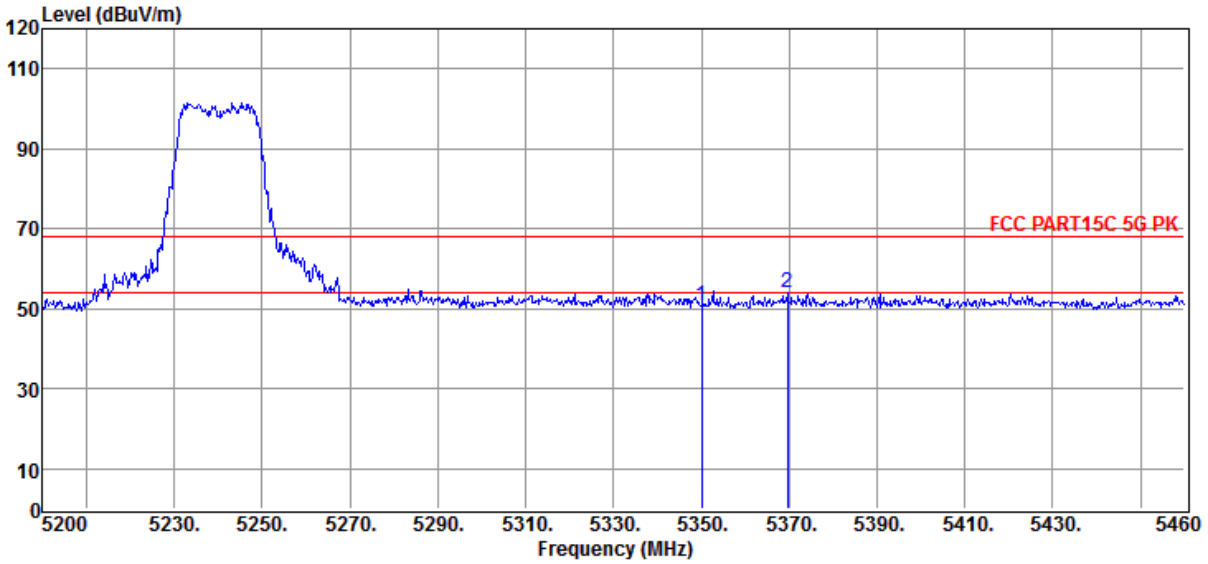
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5133.40	54.46	35.13	43.72	7.66	53.53	68.20	-14.67	Peak	VERTICAL
2	5150.00	54.19	35.15	43.71	7.67	53.30	68.20	-14.90	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC20 5240			

Data: 80



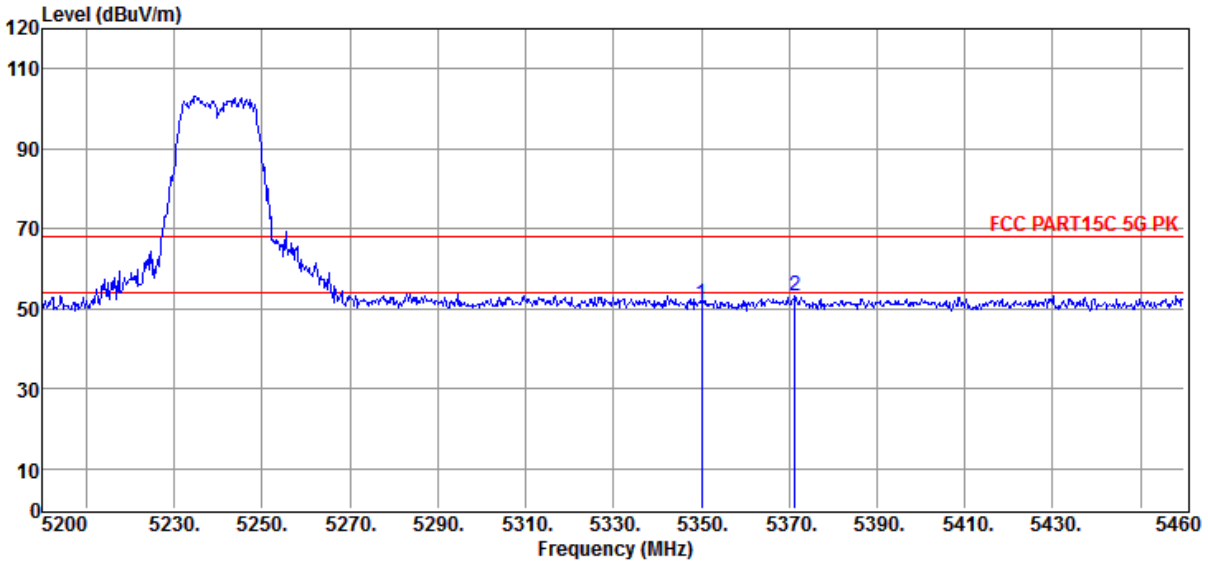
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.02	51.11	35.35	43.59	7.80	50.67	68.20	-17.53	Peak	VERTICAL
2	5369.52	54.46	35.37	43.58	7.81	54.06	68.20	-14.14	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC20 5240			

Data: 81

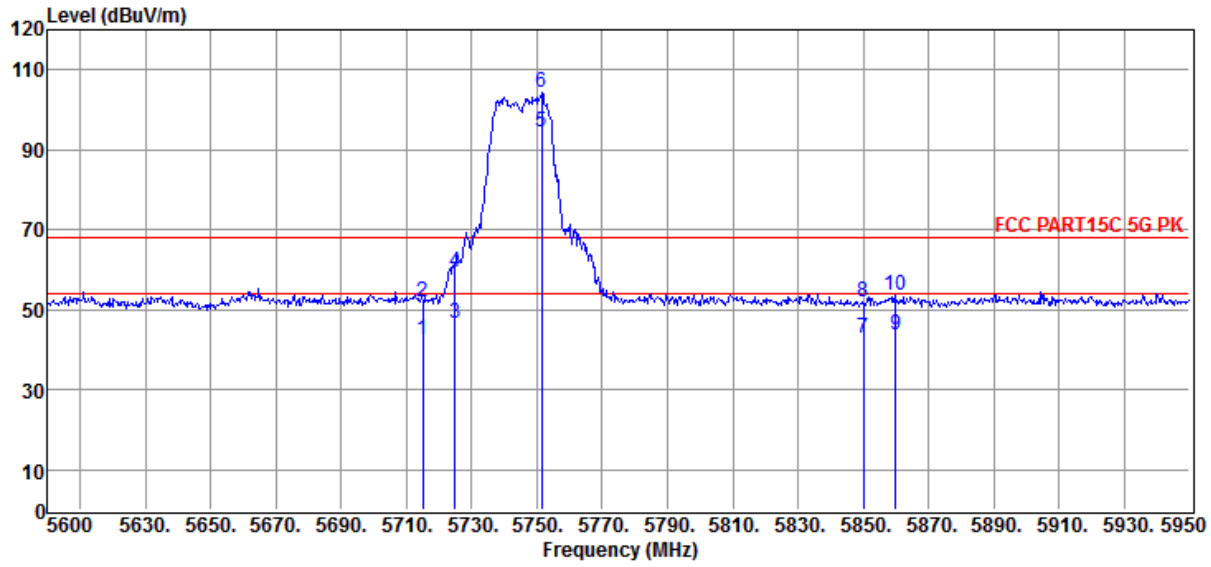


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.02	51.63	35.35	43.59	7.80	51.19	68.20	-17.01	Peak	HORIZONTAL
2	5371.34	53.67	35.37	43.58	7.81	53.27	68.20	-14.93	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC20 5745			

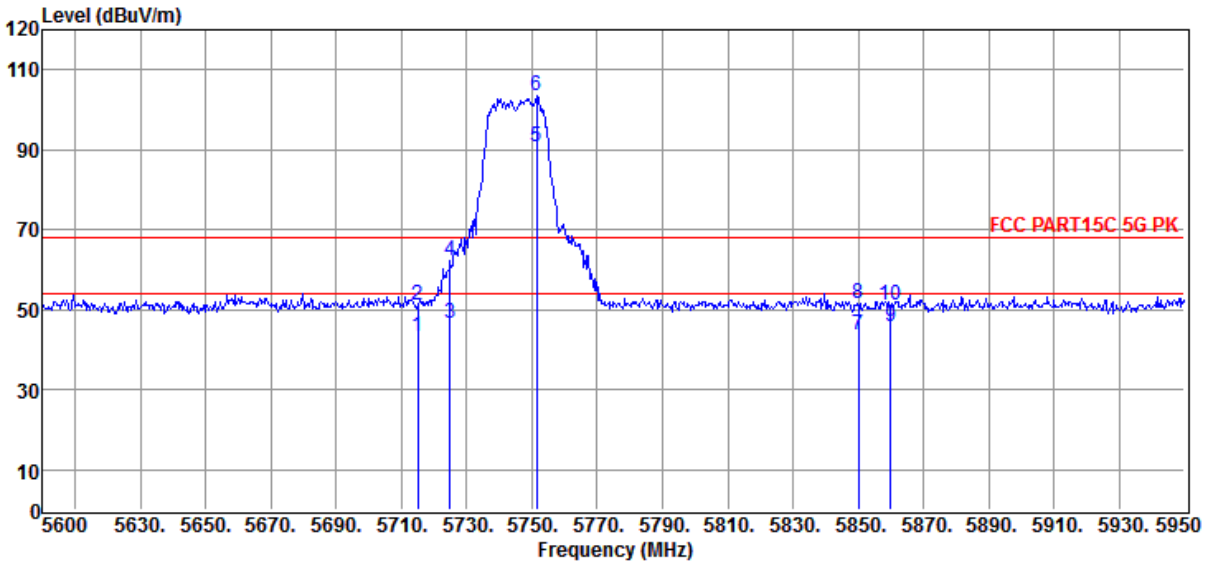


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	HORIZONTAL
2	5715	51.65	35.59	43.37	8.03	51.9	109.4	-57.50	Peak	HORIZONTAL
3	5725	46.37	35.59	43.37	8.04	46.63	122.2	-75.57	Average	HORIZONTAL
4	5725	58.92	35.59	43.37	8.04	59.18	122.2	-63.02	Peak	HORIZONTAL
5	5751.55	94.33	35.6	43.35	8.05	94.63	125.2	-30.57	Average	HORIZONTAL
6	5751.55	104.17	35.6	43.35	8.05	104.47	125.2	-20.73	Peak	HORIZONTAL
7	5850	42.32	35.64	43.29	8.12	42.79	122.2	-79.41	Average	HORIZONTAL
8	5850	51.67	35.64	43.29	8.12	52.14	122.2	-70.06	Peak	HORIZONTAL
9	5860	43.26	35.64	43.28	8.12	43.74	109.4	-65.66	Average	HORIZONTAL
10	5860	53.22	35.64	43.28	8.12	53.7	109.4	-16.36	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC20 5745			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	43.25	35.59	43.37	8.03	43.50	109.4	-65.90	Average	VERTICAL
2	5715.00	50.84	35.59	43.37	8.03	51.09	109.4	-58.31	Peak	VERTICAL
3	5725.00	46.35	35.59	43.37	8.04	46.61	122.2	-75.59	Average	VERTICAL
4	5725.00	61.82	35.59	43.37	8.04	62.08	122.2	-60.12	Peak	VERTICAL
5	5751.55	90.43	35.60	43.35	8.05	90.73	125.2	-34.47	Average	VERTICAL
6	5751.55	103.22	35.60	43.35	8.05	103.52	125.2	-21.68	Peak	VERTICAL
7	5850.00	43.35	35.64	43.29	8.12	43.82	122.2	-78.38	Average	VERTICAL
8	5850.00	50.95	35.64	43.29	8.12	51.42	122.2	-70.78	Peak	VERTICAL
9	5860.00	45.33	35.64	43.28	8.12	45.81	109.4	-63.59	Average	VERTICAL
10	5860.00	50.72	35.64	43.28	8.12	51.20	109.4	-16.36	Peak	VERTICAL

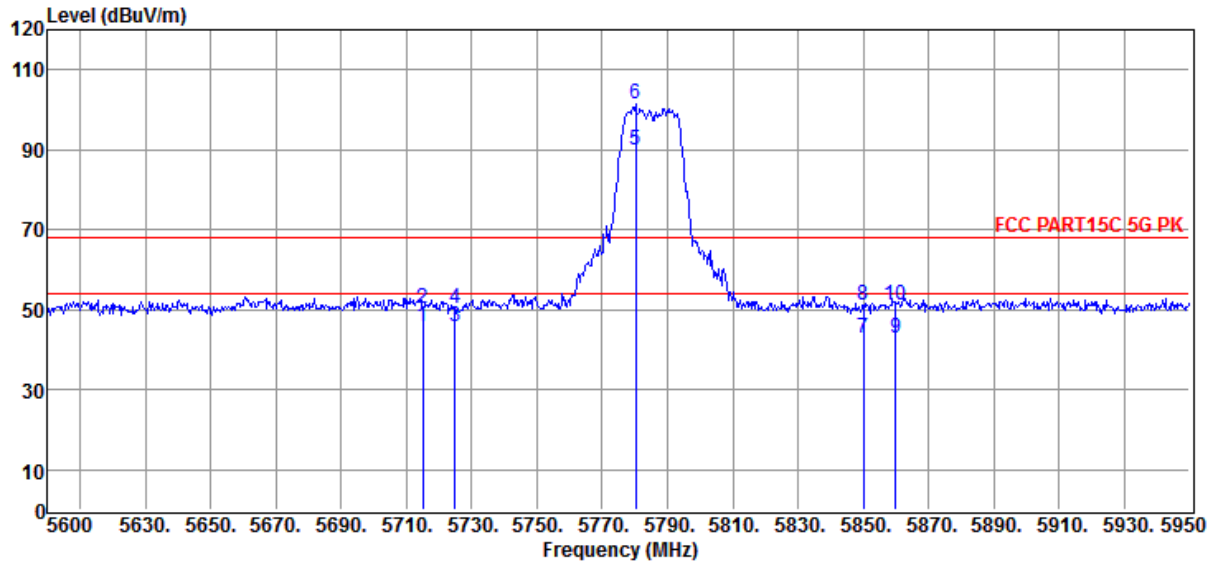
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC20 5785			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	45.36	35.59	43.37	8.03	45.61	109.4	-63.79	Average	VERTICAL
2	5715.00	50.12	35.59	43.37	8.03	50.37	109.4	-59.03	Peak	VERTICAL
3	5725.00	45.33	35.59	43.37	8.04	45.59	122.2	-76.61	Average	VERTICAL
4	5725.00	50.25	35.59	43.37	8.04	50.51	122.2	-71.69	Peak	VERTICAL
5	5780.25	89.37	35.61	43.33	8.07	89.72	125.2	-35.48	Average	VERTICAL
6	5780.25	100.97	35.61	43.33	8.07	101.32	125.2	-23.88	Peak	VERTICAL
7	5850.00	42.32	35.64	43.29	8.12	42.79	122.2	-79.41	Average	VERTICAL
8	5850.00	50.66	35.64	43.29	8.12	51.13	122.2	-71.07	Peak	VERTICAL
9	5860.00	42.33	35.64	43.28	8.12	42.81	109.4	-66.59	Average	VERTICAL
10	5860.00	50.63	35.64	43.28	8.12	51.11	109.4	-16.36	Peak	VERTICAL

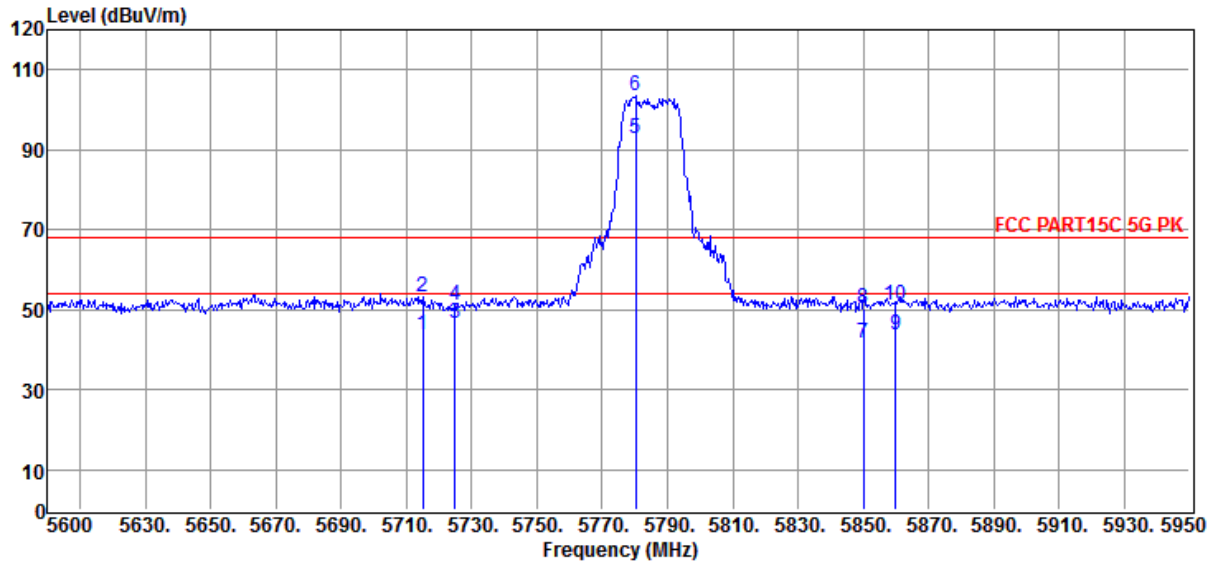
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC20 5785			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	43.52	35.59	43.37	8.03	43.77	109.4	-65.63	Average	HORIZONTAL
2	5715.00	52.75	35.59	43.37	8.03	53.00	109.4	-56.40	Peak	HORIZONTAL
3	5725.00	46.33	35.59	43.37	8.04	46.59	122.2	-75.61	Average	HORIZONTAL
4	5725.00	51.08	35.59	43.37	8.04	51.34	122.2	-70.86	Peak	HORIZONTAL
5	5780.25	92.32	35.61	43.33	8.07	92.67	125.2	-32.53	Average	HORIZONTAL
6	5780.25	103.09	35.61	43.33	8.07	103.44	125.2	-21.76	Peak	HORIZONTAL
7	5850.00	41.32	35.64	43.29	8.12	41.79	122.2	-80.41	Average	HORIZONTAL
8	5850.00	49.87	35.64	43.29	8.12	50.34	122.2	-71.86	Peak	HORIZONTAL
9	5860.00	43.35	35.64	43.28	8.12	43.83	109.4	-65.57	Average	HORIZONTAL
10	5860.00	50.53	35.64	43.28	8.12	51.01	109.4	-16.36	Peak	HORIZONTAL

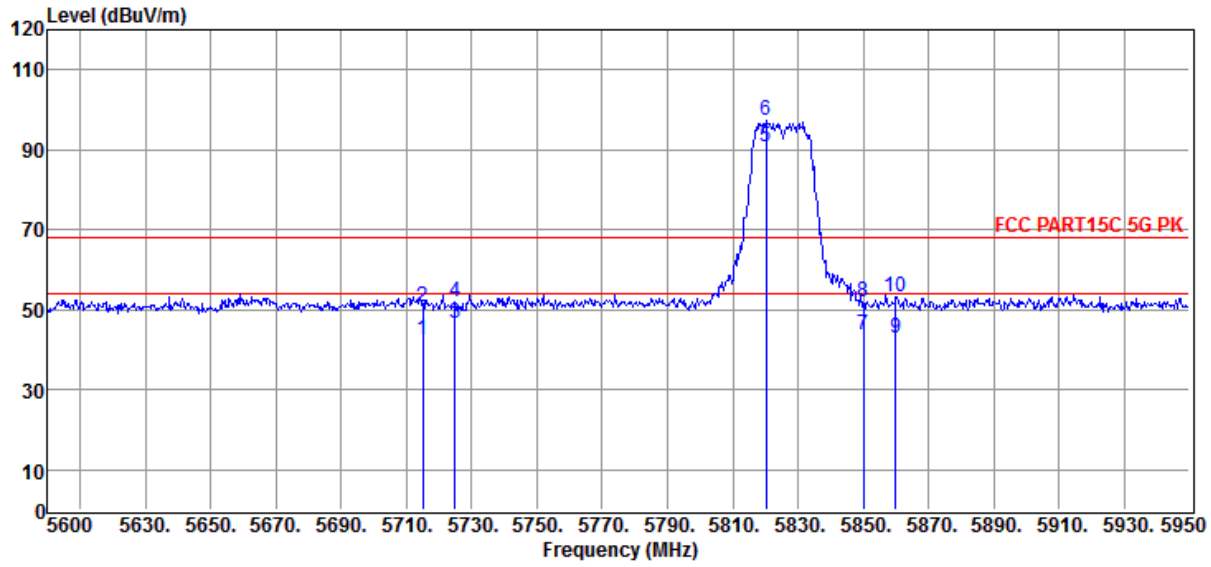
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC20 5825			

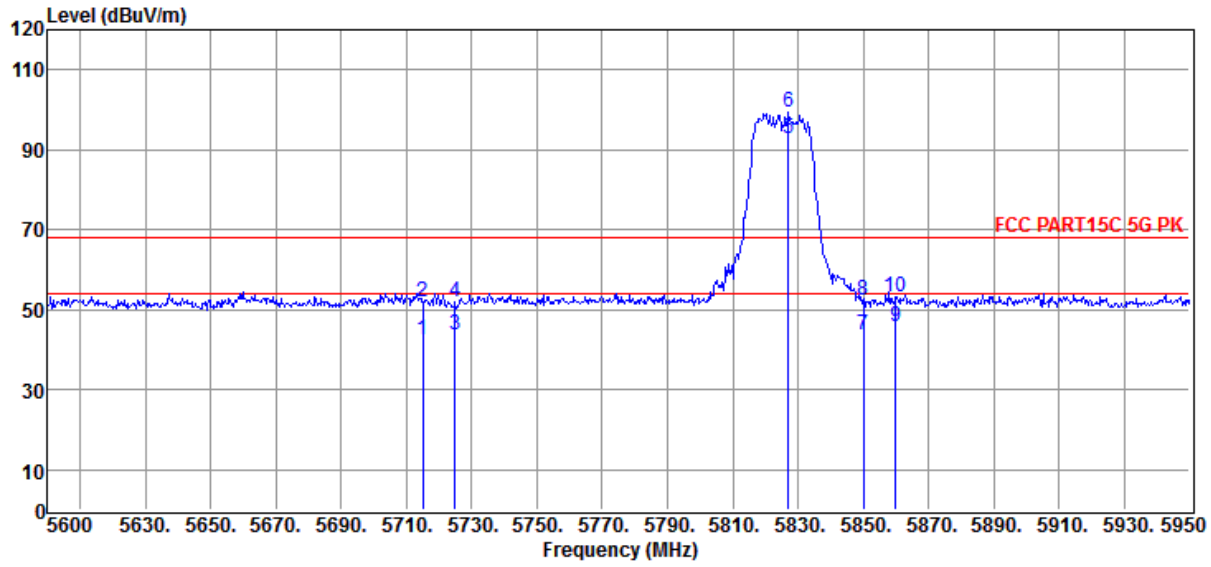


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.36	35.59	43.37	8.03	42.61	109.4	-66.79	Average	HORIZONTAL
2	5715.00	50.45	35.59	43.37	8.03	50.70	109.4	-58.70	Peak	HORIZONTAL
3	5725.00	46.36	35.59	43.37	8.04	46.62	122.2	-75.58	Average	HORIZONTAL
4	5725.00	51.55	35.59	43.37	8.04	51.81	122.2	-70.39	Peak	HORIZONTAL
5	5820.15	90.32	35.63	43.31	8.10	90.74	125.2	-34.46	Average	HORIZONTAL
6	5820.15	96.74	35.63	43.31	8.10	97.16	125.2	-28.04	Peak	HORIZONTAL
7	5850.00	43.32	35.64	43.29	8.12	43.79	122.2	-78.41	Average	HORIZONTAL
8	5850.00	51.52	35.64	43.29	8.12	51.99	122.2	-70.21	Peak	HORIZONTAL
9	5860.00	42.37	35.64	43.28	8.12	42.85	109.4	-66.55	Average	HORIZONTAL
10	5860.00	52.84	35.64	43.28	8.12	53.32	109.4	-16.36	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC20 5825			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	42.32	35.59	43.37	8.03	42.57	109.4	-66.83	Average	VERTICAL
2	5715.00	51.54	35.59	43.37	8.03	51.79	109.4	-57.61	Peak	VERTICAL
3	5725.00	43.37	35.59	43.37	8.04	43.63	122.2	-78.57	Average	VERTICAL
4	5725.00	51.55	35.59	43.37	8.04	51.81	122.2	-70.39	Peak	VERTICAL
5	5827.15	92.32	35.63	43.30	8.10	92.75	125.2	-32.45	Average	VERTICAL
6	5827.15	98.78	35.63	43.30	8.10	99.21	125.2	-25.99	Peak	VERTICAL
7	5850.00	43.25	35.64	43.29	8.12	43.72	122.2	-78.48	Average	VERTICAL
8	5850.00	51.96	35.64	43.29	8.12	52.43	122.2	-69.77	Peak	VERTICAL
9	5860.00	45.33	35.64	43.28	8.12	45.81	109.4	-63.59	Average	VERTICAL
10	5860.00	52.84	35.64	43.28	8.12	53.32	109.4	-16.36	Peak	VERTICAL

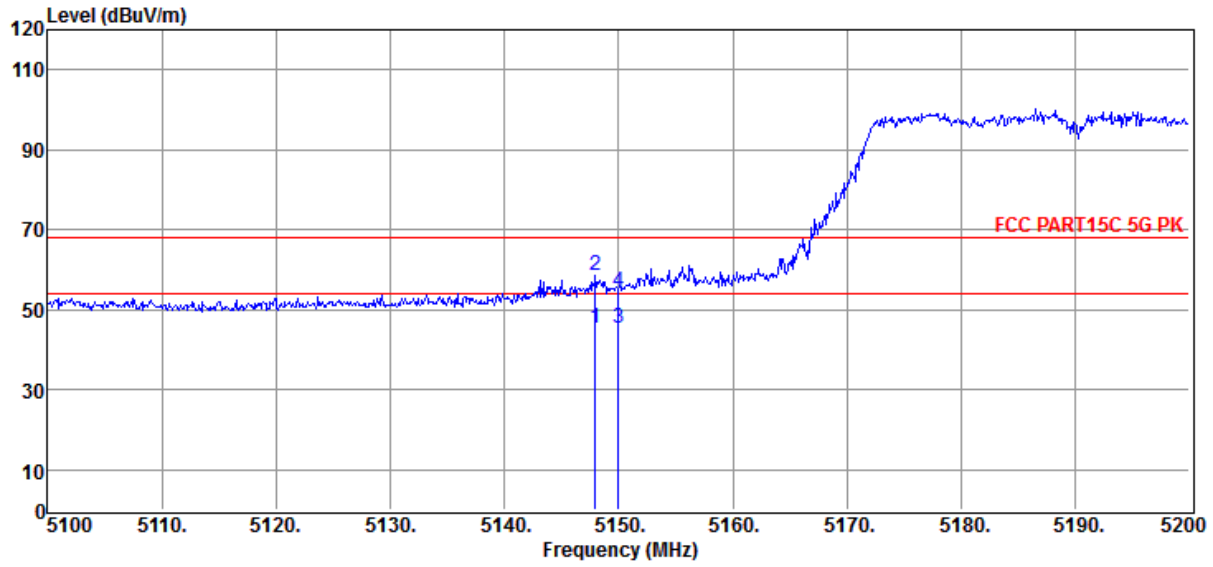
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N40 5190			



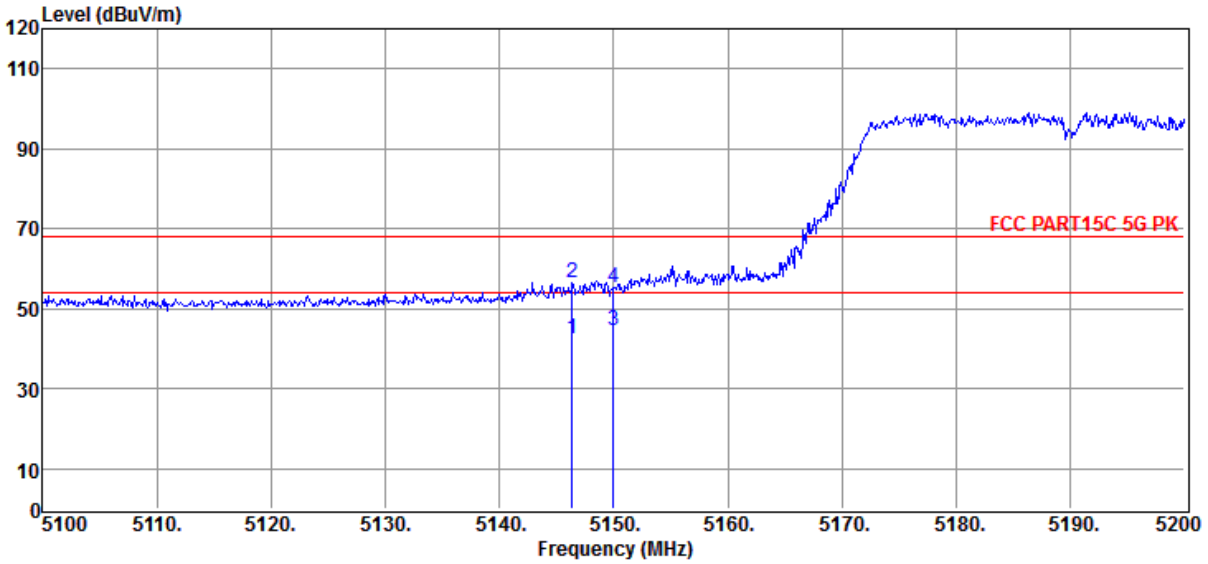
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5148.00	46.33	35.15	43.71	7.67	45.44	54.00	-8.56	Average	VERTICAL
2	5148.00	59.50	35.15	43.71	7.67	58.61	68.20	-9.59	Peak	VERTICAL
3	5150.00	46.36	35.15	43.71	7.67	45.47	54.00	-8.53	Average	VERTICAL
4	5150.00	55.46	35.15	43.71	7.67	54.57	68.20	-13.63	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N40 5190			

Data: 89



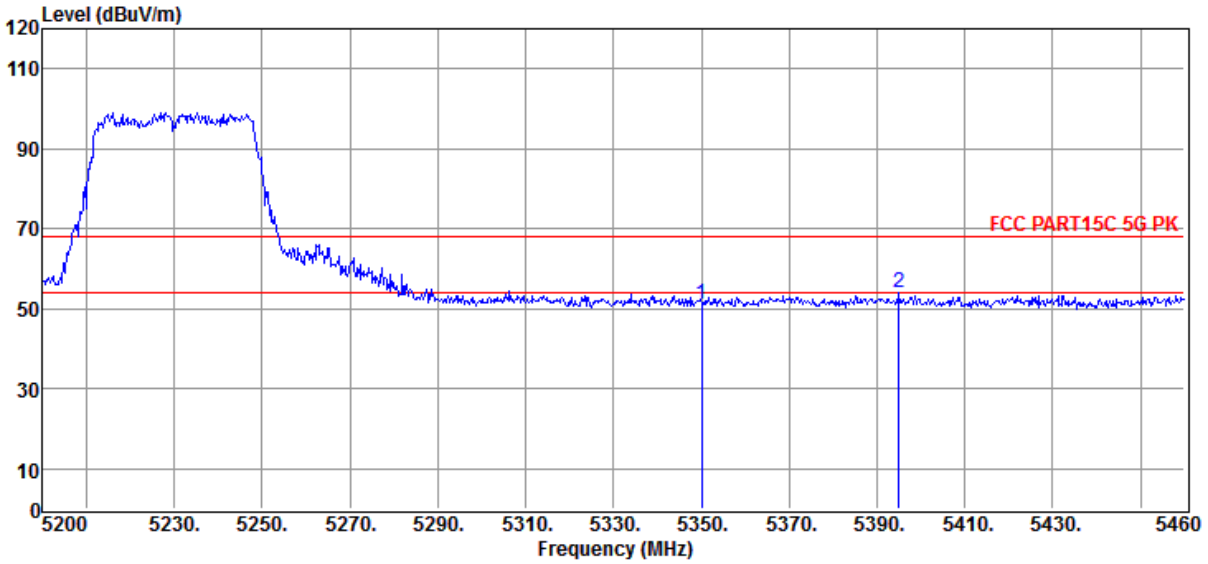
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5146.40	43.21	35.15	43.71	7.67	42.32	54.00	-11.68	Average	HORIZONTAL
2	5146.40	57.47	35.15	43.71	7.67	56.58	68.20	-11.62	Peak	HORIZONTAL
3	5150.00	45.33	35.15	43.71	7.67	44.44	54.00	-9.56	Average	HORIZONTAL
4	5150.00	56.21	35.15	43.71	7.67	55.32	68.20	-12.88	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N40 5230			

Data: 90



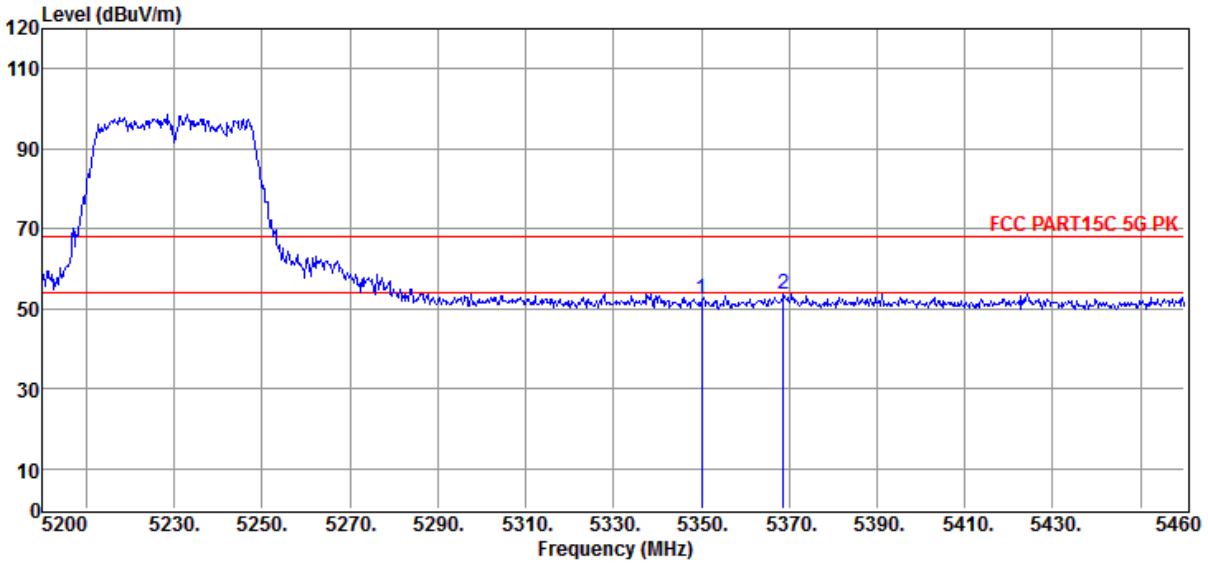
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	51.59	35.35	43.59	7.80	51.15	68.20	-17.05	Peak	HORIZONTAL
2	5395.00	54.25	35.40	43.56	7.83	53.92	68.20	-14.28	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N40 5230			

Data: 91

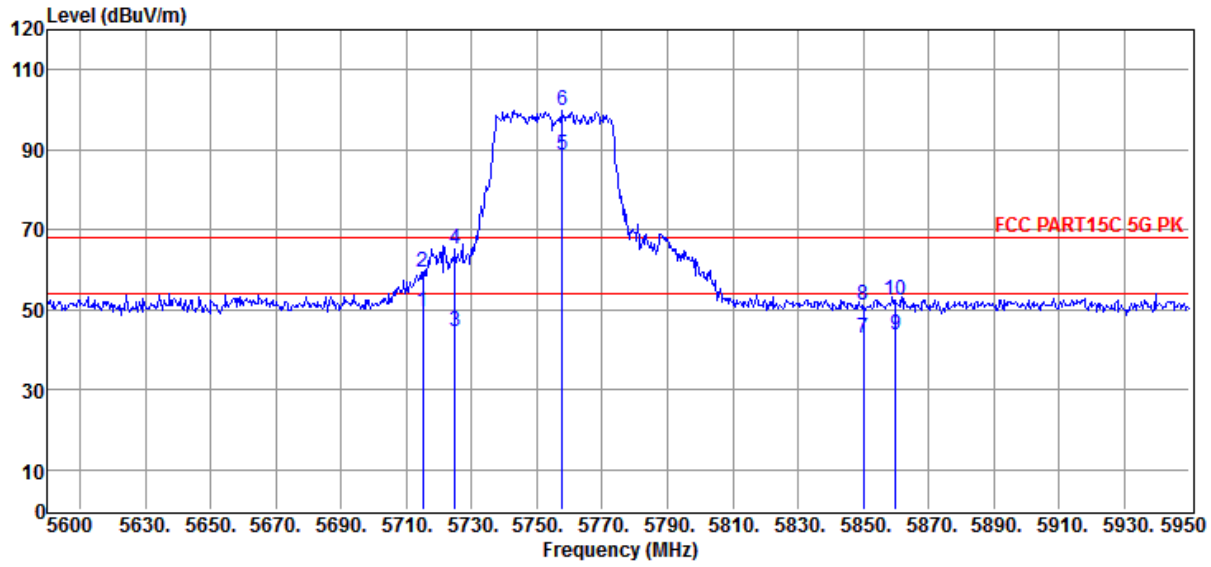


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	52.82	35.35	43.59	7.80	52.38	68.20	-15.82	Peak	VERTICAL
2	5368.74	53.94	35.37	43.58	7.81	53.54	68.20	-14.66	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N40 5755			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	49.36	35.59	43.37	8.03	49.61	109.4	-59.79	Average	HORIZONTAL
2	5715.00	59.22	35.59	43.37	8.03	59.47	109.4	-49.93	Peak	HORIZONTAL
3	5725.00	44.37	35.59	43.37	8.04	44.63	122.2	-77.57	Average	HORIZONTAL
4	5725.00	64.74	35.59	43.37	8.04	65.00	122.2	-57.20	Peak	HORIZONTAL
5	5757.85	88.37	35.60	43.35	8.06	88.68	125.2	-36.52	Average	HORIZONTAL
6	5757.85	99.66	35.60	43.35	8.06	99.97	125.2	-25.23	Peak	HORIZONTAL
7	5850.00	42.35	35.64	43.29	8.12	42.82	122.2	-79.38	Average	HORIZONTAL
8	5850.00	50.75	35.64	43.29	8.12	51.22	122.2	-70.98	Peak	HORIZONTAL
9	5860.00	43.35	35.64	43.28	8.12	43.83	109.4	-65.57	Average	HORIZONTAL
10	5860.00	52.07	35.64	43.28	8.12	52.55	109.4	-16.36	Peak	HORIZONTAL

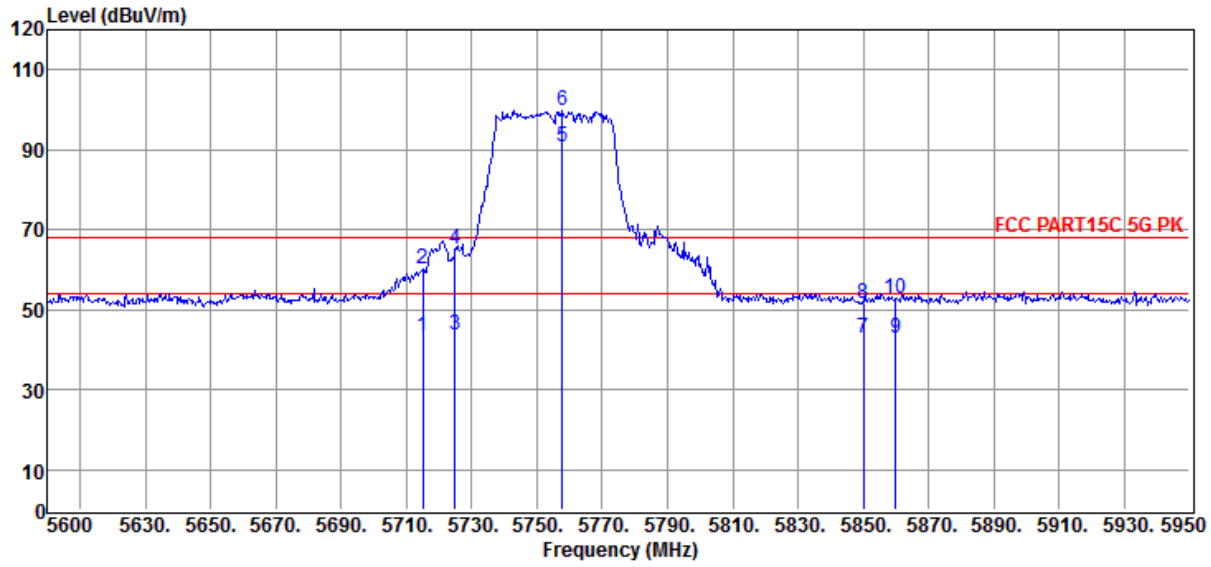
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N40 5755			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	43.13	35.59	43.37	8.03	43.38	109.4	-66.02	Average	VERTICAL
2	5715.00	59.87	35.59	43.37	8.03	60.12	109.4	-49.28	Peak	VERTICAL
3	5725.00	43.33	35.59	43.37	8.04	43.59	122.2	-78.61	Average	VERTICAL
4	5725.00	64.74	35.59	43.37	8.04	65.00	122.2	-57.20	Peak	VERTICAL
5	5757.85	90.33	35.60	43.35	8.06	90.64	125.2	-34.56	Average	VERTICAL
6	5757.85	99.66	35.60	43.35	8.06	99.97	125.2	-25.23	Peak	VERTICAL
7	5850.00	42.32	35.64	43.29	8.12	42.79	122.2	-79.41	Average	VERTICAL
8	5850.00	51.16	35.64	43.29	8.12	51.63	122.2	-70.57	Peak	VERTICAL
9	5860.00	42.37	35.64	43.28	8.12	42.85	109.4	-66.55	Average	VERTICAL
10	5860.00	52.44	35.64	43.28	8.12	52.92	109.4	-16.36	Peak	VERTICAL

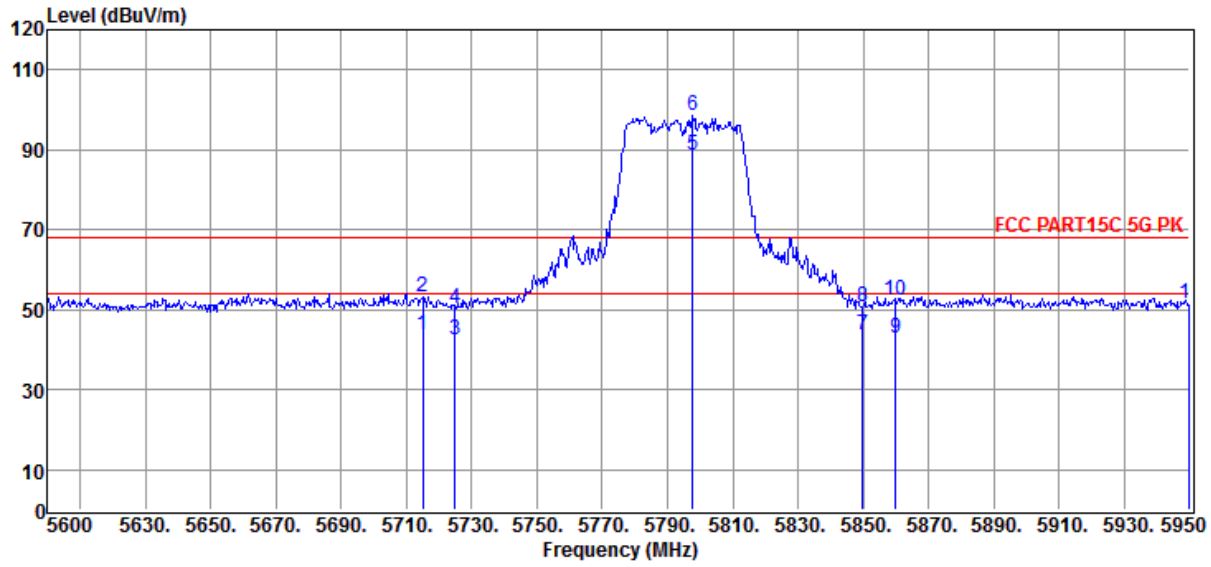
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11N40 5795			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	43.36	35.59	43.37	8.03	43.61	109.4	-65.79	Average	VERTICAL
2	5715.00	53.06	35.59	43.37	8.03	53.31	109.4	-56.09	Peak	VERTICAL
3	5725.00	42.25	35.59	43.37	8.04	42.51	122.2	-79.69	Average	VERTICAL
4	5725.00	50.24	35.59	43.37	8.04	50.50	122.2	-71.70	Peak	VERTICAL
5	5797.75	88.36	35.62	43.32	8.08	88.74	125.2	-36.46	Average	VERTICAL
6	5797.75	98.19	35.62	43.32	8.08	98.57	125.2	-26.63	Peak	VERTICAL
7	5849.90	43.32	35.64	43.29	8.12	43.79	122.2	-78.41	Average	VERTICAL
8	5849.90	50.16	35.64	43.29	8.12	50.63	122.2	-71.57	Peak	VERTICAL
9	5860.00	42.37	35.64	43.28	8.12	42.85	109.4	-66.55	Average	VERTICAL
10	5860.00	51.99	35.64	43.28	8.12	52.47	109.4	-16.36	Peak	VERTICAL

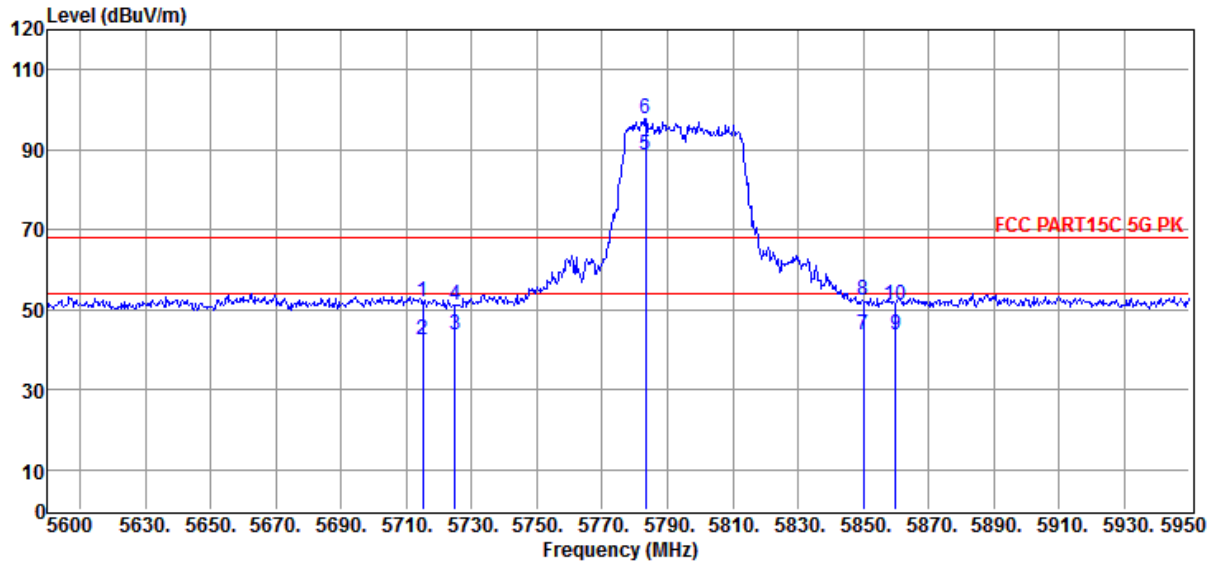
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11N40 5795			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	51.77	35.59	43.37	8.03	52.02	109.4	-57.38	Peak	HORIZONTAL
2	5715.00	42.32	35.59	43.37	8.03	42.57	109.4	-66.83	QP	HORIZONTAL
3	5725.00	43.35	35.59	43.37	8.04	43.61	122.2	-78.59	Average	HORIZONTAL
4	5725.00	50.74	35.59	43.37	8.04	51.00	122.2	-71.20	Peak	HORIZONTAL
5	5783.40	88.37	35.61	43.33	8.07	88.72	125.2	-36.48	Average	HORIZONTAL
6	5783.40	97.57	35.61	43.33	8.07	97.92	125.2	-27.28	Peak	HORIZONTAL
7	5850.00	43.36	35.64	43.29	8.12	43.83	122.2	-78.37	Average	HORIZONTAL
8	5850.00	51.97	35.64	43.29	8.12	52.44	122.2	-69.76	Peak	HORIZONTAL
9	5860.00	43.26	35.64	43.28	8.12	43.74	109.4	-65.66	Average	HORIZONTAL
10	5860.00	50.80	35.64	43.28	8.12	51.28	109.4	-16.36	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

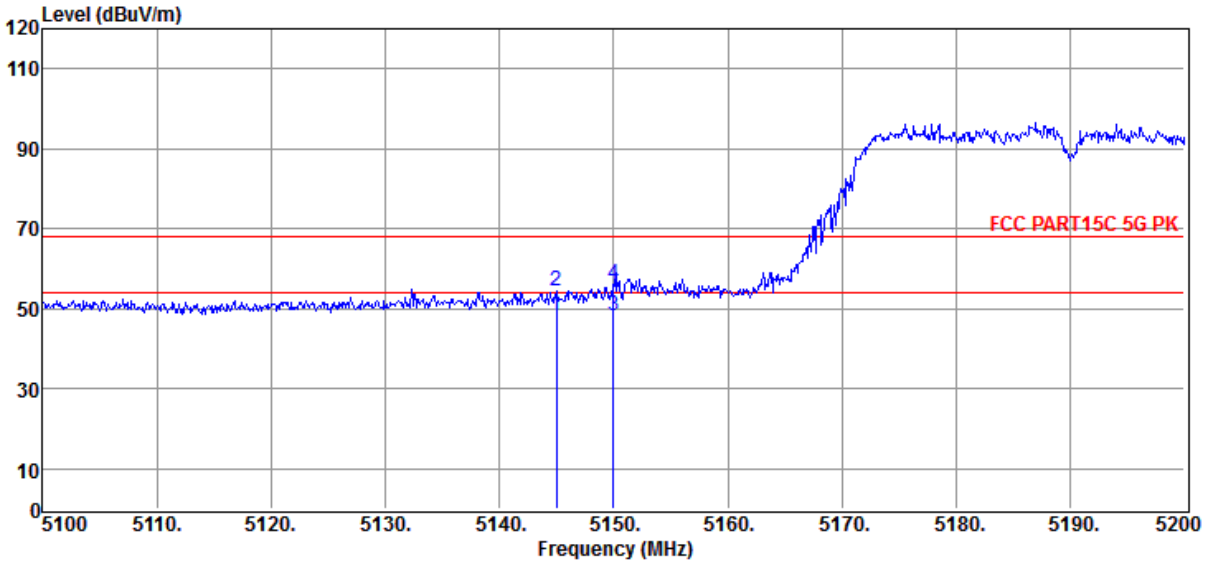
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC40 5190			

Data: 96



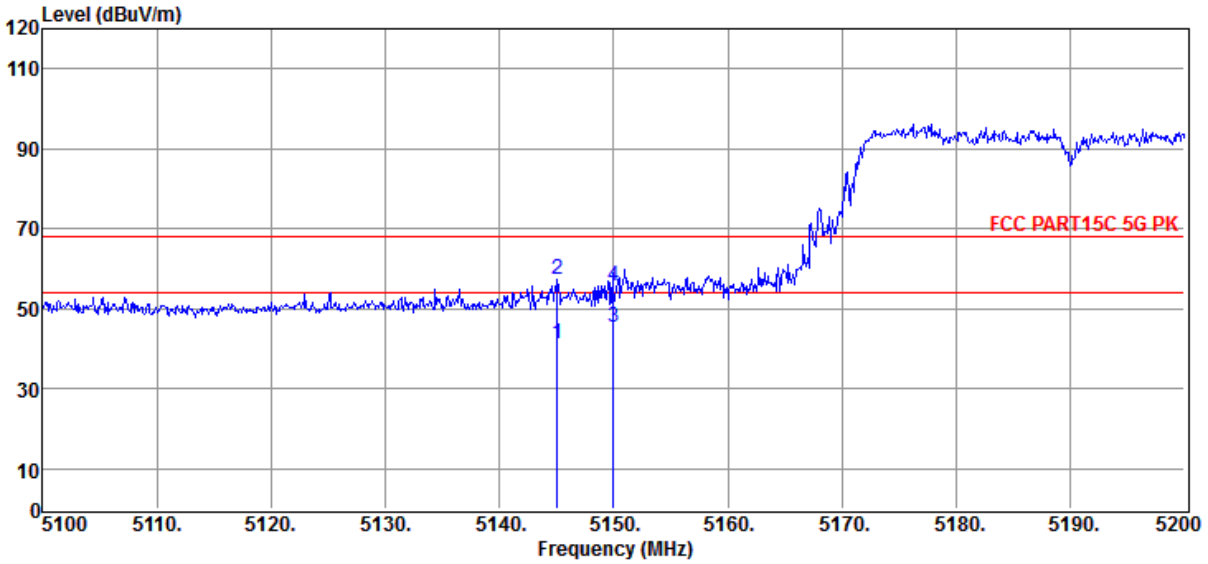
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5145.00	49.31	35.15	43.71	7.67	48.42	54.00	-5.58	Average	VERTICAL
2	5145.00	55.51	35.15	43.71	7.67	54.62	68.20	-13.58	Peak	VERTICAL
3	5150.00	49.33	35.15	43.71	7.67	48.44	54.00	-5.56	Average	VERTICAL
4	5150.00	57.13	35.15	43.71	7.67	56.24	68.20	-11.96	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC40 5190			

Data: 97



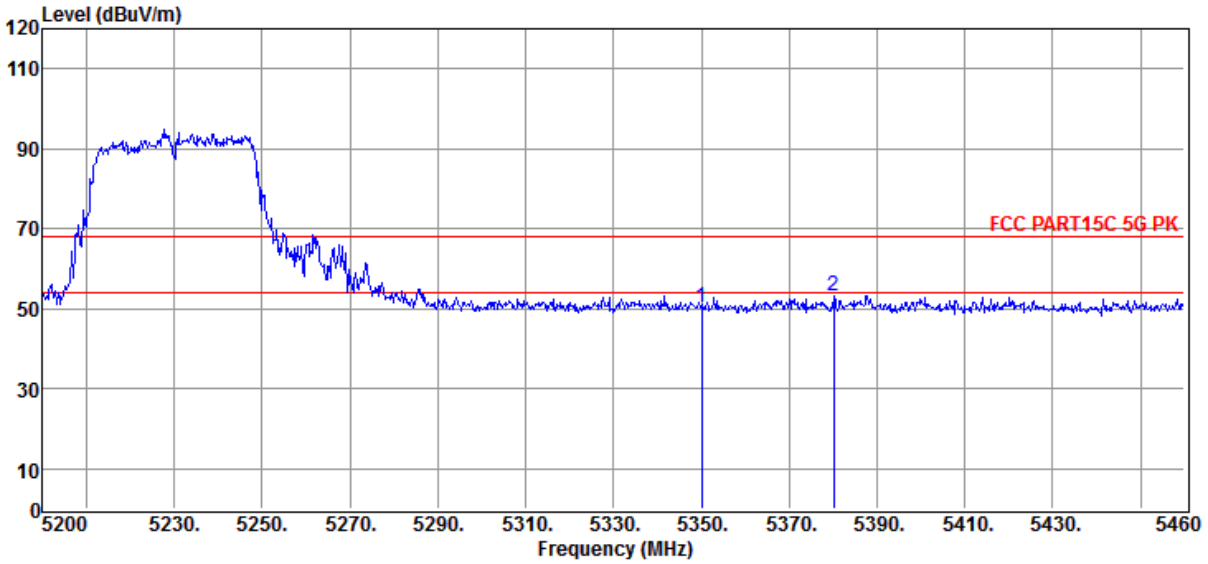
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5145.10	42.32	35.15	43.71	7.67	41.43	54.00	-12.57	Average	HORIZONTAL
2	5145.10	58.12	35.15	43.71	7.67	57.23	68.20	-10.97	Peak	HORIZONTAL
3	5150.00	46.33	35.15	43.71	7.67	45.44	54.00	-8.56	Average	HORIZONTAL
4	5150.00	56.58	35.15	43.71	7.67	55.69	68.20	-12.51	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC40 5230			

Data: 98



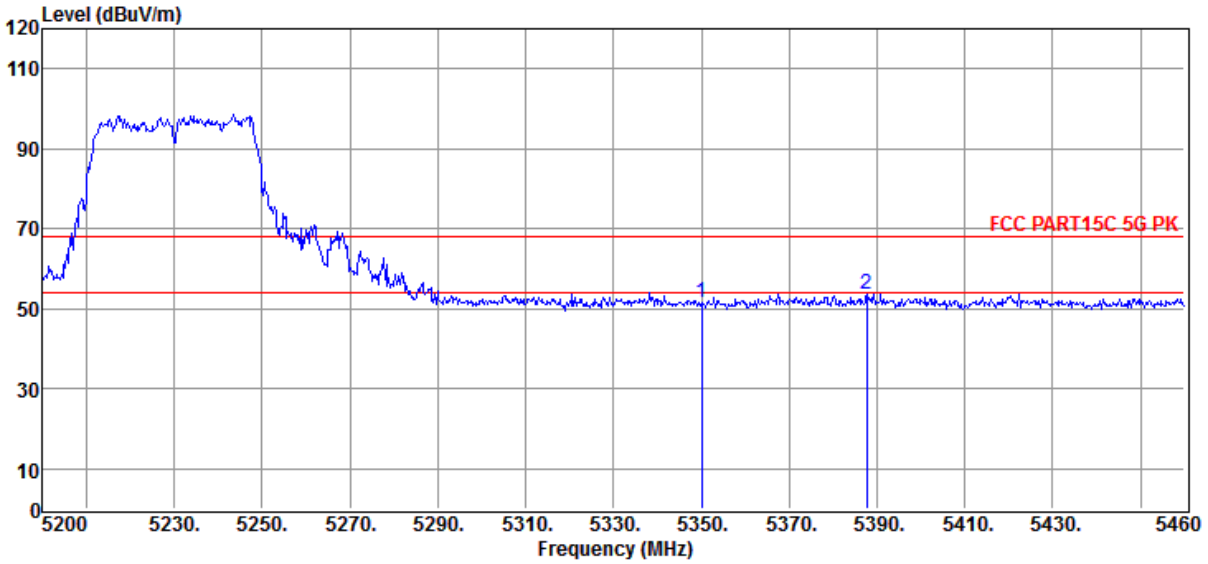
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	50.80	35.35	43.59	7.80	50.36	68.20	-17.84	Peak	HORIZONTAL
2	5380.18	53.40	35.38	43.57	7.82	53.03	68.20	-15.17	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC40 5230			

Data: 99

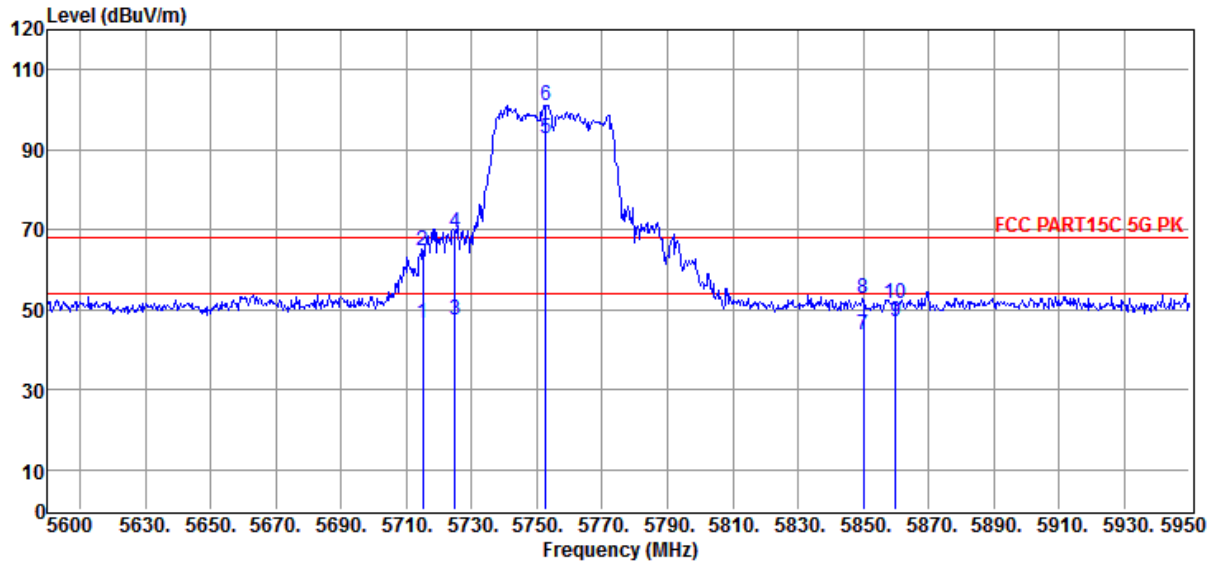


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	51.80	35.35	43.59	7.80	51.36	68.20	-16.84	Peak	VERTICAL
2	5387.72	54.01	35.39	43.57	7.82	53.65	68.20	-14.55	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC40 5755			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	46.35	35.59	43.37	8.03	46.60	109.4	-62.80	Average	VERTICAL
2	5715.00	64.40	35.59	43.37	8.03	64.65	109.4	-44.75	Peak	VERTICAL
3	5725.00	47.35	35.59	43.37	8.04	47.61	122.2	-74.59	Average	VERTICAL
4	5725.00	68.86	35.59	43.37	8.04	69.12	122.2	-53.08	Peak	VERTICAL
5	5752.60	92.36	35.60	43.35	8.05	92.66	125.2	-32.54	Average	VERTICAL
6	5752.60	100.93	35.60	43.35	8.05	101.23	125.2	-23.97	Peak	VERTICAL
7	5850.00	43.35	35.64	43.29	8.12	43.82	122.2	-78.38	Average	VERTICAL
8	5850.00	52.20	35.64	43.29	8.12	52.67	122.2	-69.53	Peak	VERTICAL
9	5860.00	46.35	35.64	43.28	8.12	46.83	109.4	-62.57	Average	VERTICAL
10	5860.00	51.04	35.64	43.28	8.12	51.52	109.4	-16.36	Peak	VERTICAL

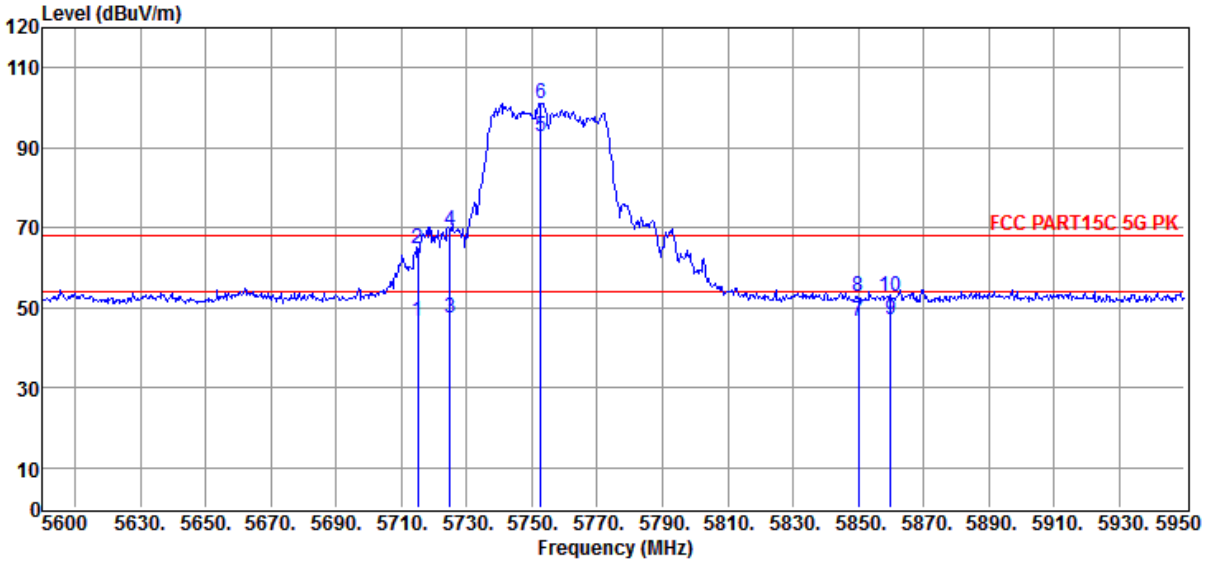
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC40 5755			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	46.32	35.59	43.37	8.03	46.57	109.4	-62.83	Average	HORIZONTAL
2	5715.00	64.40	35.59	43.37	8.03	64.65	109.4	-44.75	Peak	HORIZONTAL
3	5725.00	47.33	35.59	43.37	8.04	47.59	122.2	-74.61	Average	HORIZONTAL
4	5725.00	68.86	35.59	43.37	8.04	69.12	122.2	-53.08	Peak	HORIZONTAL
5	5752.60	92.33	35.60	43.35	8.05	92.63	125.2	-32.57	Average	HORIZONTAL
6	5752.60	100.93	35.60	43.35	8.05	101.23	125.2	-23.97	Peak	HORIZONTAL
7	5850.00	46.32	35.64	43.29	8.12	46.79	122.2	-75.41	Average	HORIZONTAL
8	5850.00	52.20	35.64	43.29	8.12	52.67	122.2	-69.53	Peak	HORIZONTAL
9	5860.00	46.33	35.64	43.28	8.12	46.81	109.4	-62.59	Average	HORIZONTAL
10	5860.00	52.34	35.64	43.28	8.12	52.82	109.4	-16.36	Peak	HORIZONTAL

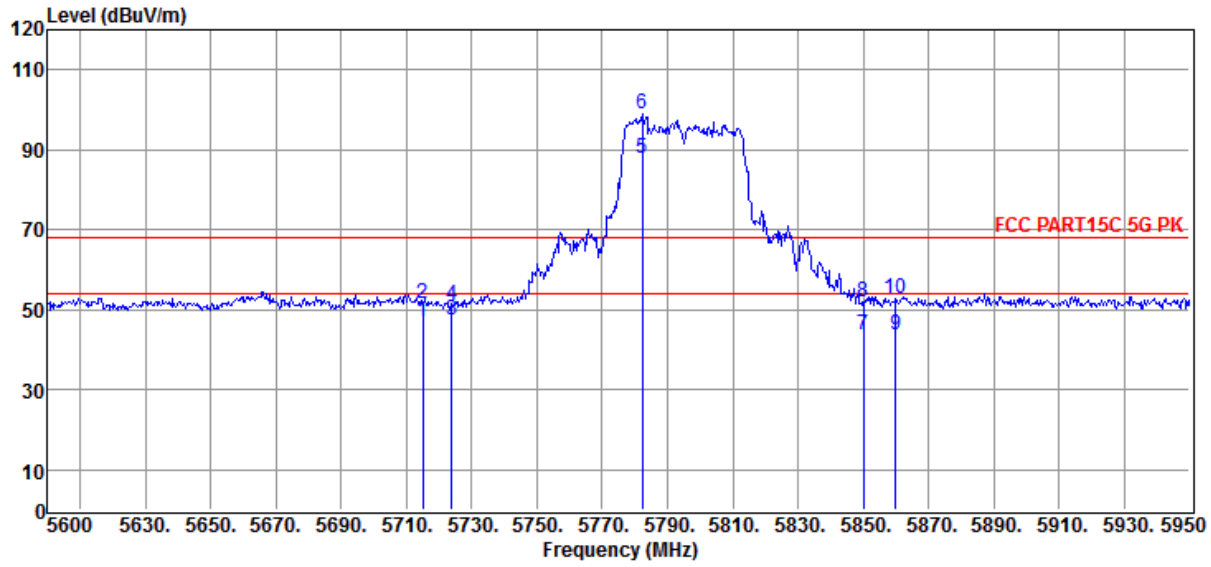
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC40 5795			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	46.75	35.59	43.37	8.03	47.00	109.4	-62.40	Average	HORIZONTAL
2	5715.00	51.25	35.59	43.37	8.03	51.50	109.4	-57.90	Peak	HORIZONTAL
3	5724.00	47.33	35.59	43.37	8.04	47.59	122.2	-74.61	Average	HORIZONTAL
4	5724.00	50.82	35.59	43.37	8.04	51.08	122.2	-71.12	Peak	HORIZONTAL
5	5782.35	87.33	35.61	43.33	8.07	87.68	125.2	-37.52	Average	HORIZONTAL
6	5782.35	98.57	35.61	43.33	8.07	98.92	125.2	-26.28	Peak	HORIZONTAL
7	5850.00	43.35	35.64	43.29	8.12	43.82	122.2	-78.38	Average	HORIZONTAL
8	5850.00	51.69	35.64	43.29	8.12	52.16	122.2	-70.04	Peak	HORIZONTAL
9	5860.00	43.23	35.64	43.28	8.12	43.71	109.4	-65.69	Average	HORIZONTAL
10	5860.00	52.28	35.64	43.28	8.12	52.76	109.4	-16.36	Peak	HORIZONTAL

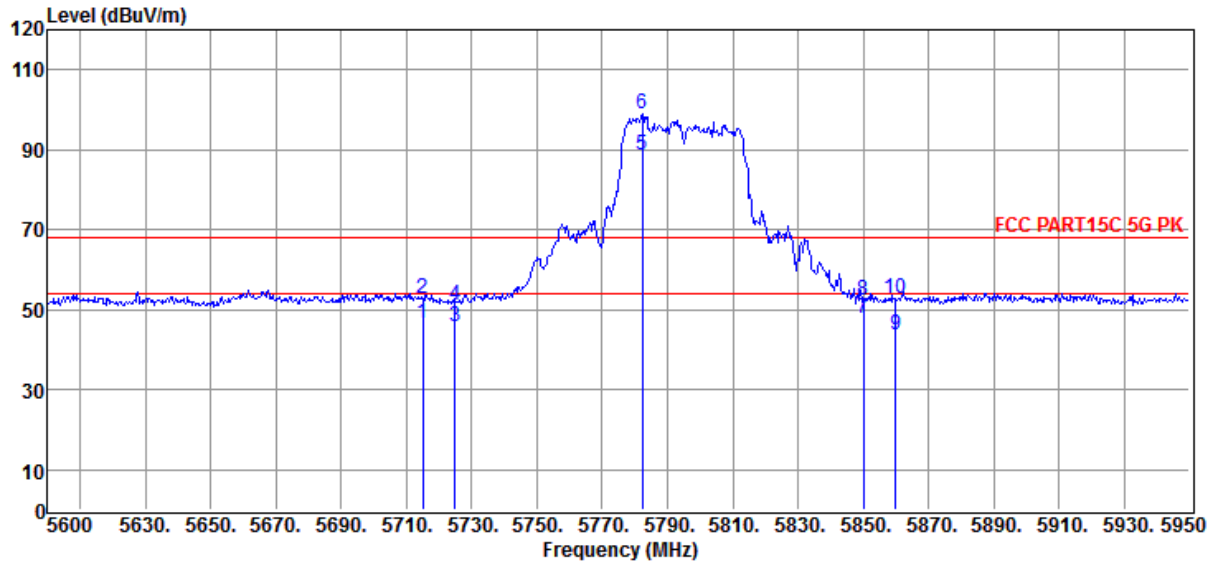
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC40 5795			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	46.32	35.59	43.37	8.03	46.57	109.4	-62.83	Average	VERTICAL
2	5715.00	52.56	35.59	43.37	8.03	52.81	109.4	-56.59	Peak	VERTICAL
3	5725.00	45.33	35.59	43.37	8.04	45.59	122.2	-76.61	Average	VERTICAL
4	5725.00	51.02	35.59	43.37	8.04	51.28	122.2	-70.92	Peak	VERTICAL
5	5782.35	88.33	35.61	43.33	8.07	88.68	125.2	-36.52	Average	VERTICAL
6	5782.35	98.57	35.61	43.33	8.07	98.92	125.2	-26.28	Peak	VERTICAL
7	5850.00	47.32	35.64	43.29	8.12	47.79	122.2	-74.41	Average	VERTICAL
8	5850.00	51.81	35.64	43.29	8.12	52.28	122.2	-69.92	Peak	VERTICAL
9	5860.00	43.37	35.64	43.28	8.12	43.85	109.4	-65.55	Average	VERTICAL
10	5860.00	52.28	35.64	43.28	8.12	52.76	109.4	-16.36	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

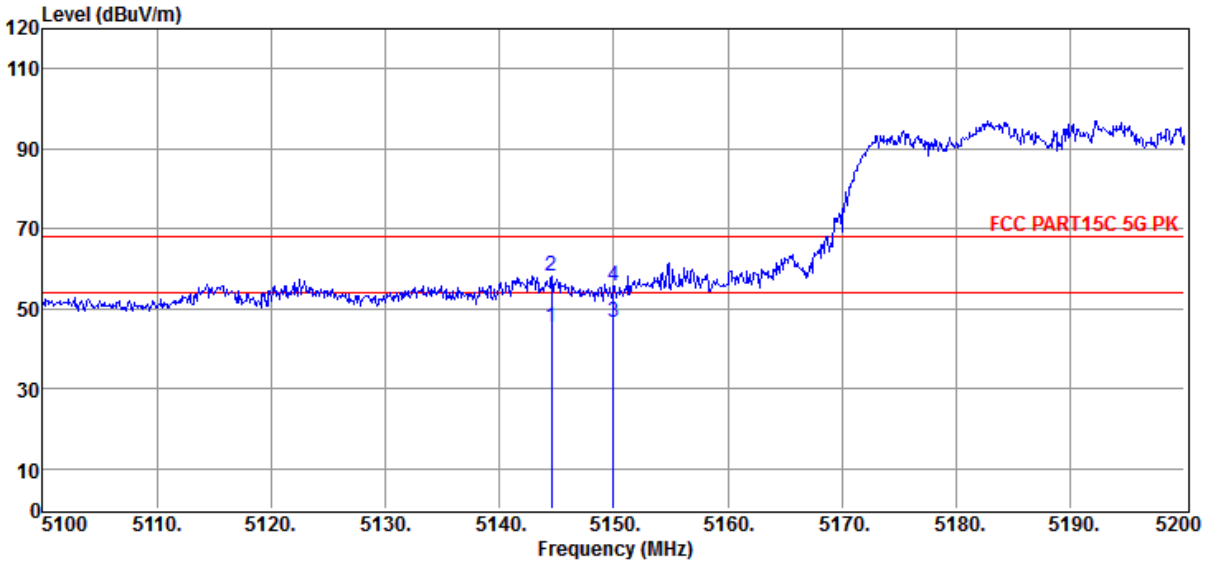
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC80 5210			

Data: 104



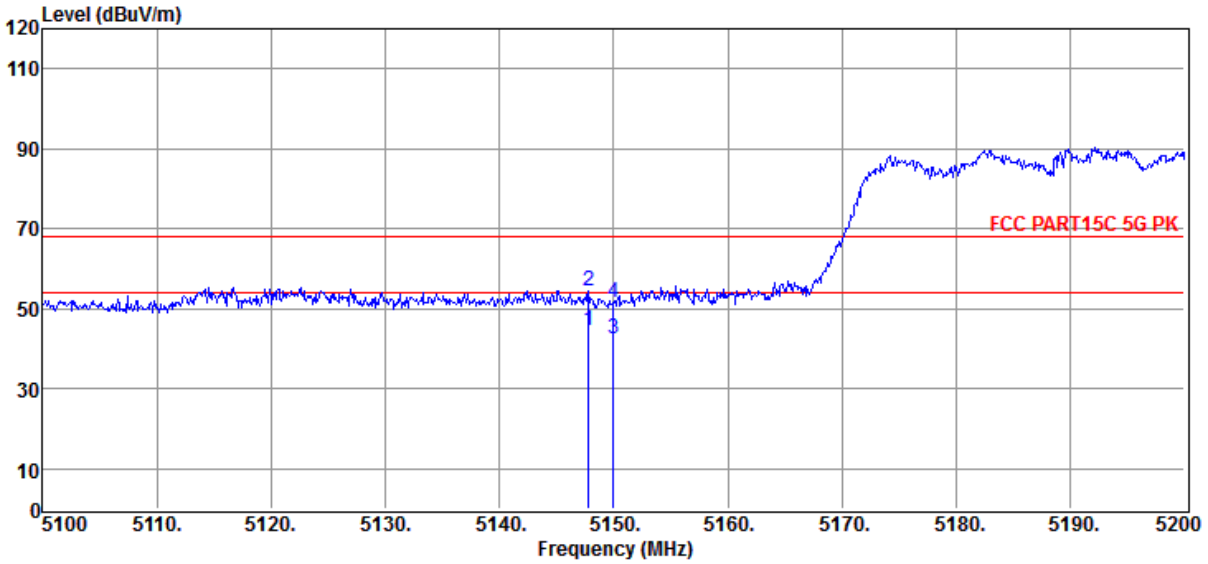
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5144.60	46.33	35.14	43.71	7.67	45.43	54.00	-8.57	Average	VERTICAL
2	5144.60	58.96	35.14	43.71	7.67	58.06	68.20	-10.14	Peak	VERTICAL
3	5150.00	47.33	35.15	43.71	7.67	46.44	54.00	-7.56	Average	VERTICAL
4	5150.00	56.75	35.15	43.71	7.67	55.86	68.20	-12.34	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC80 5210			

Data: 105

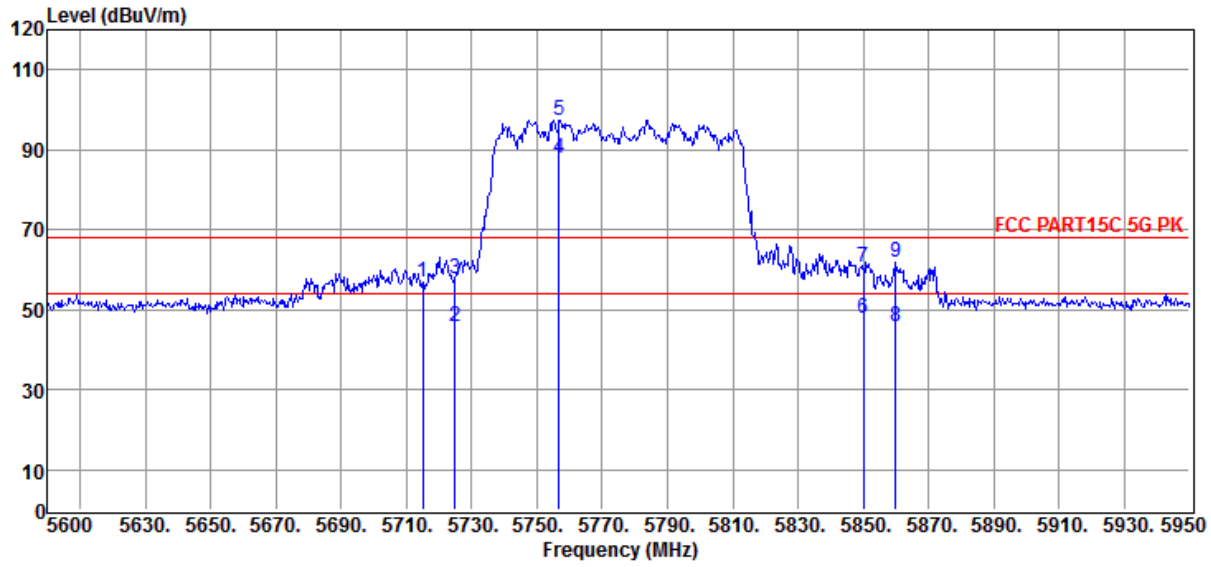


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5147.80	45.32	35.15	43.71	7.67	44.43	54.00	-9.57	Average	HORIZONTAL
2	5147.80	55.43	35.15	43.71	7.67	54.54	68.20	-13.66	Peak	HORIZONTAL
3	5150.00	43.22	35.15	43.71	7.67	42.33	54.00	-11.67	Average	HORIZONTAL
4	5150.00	52.24	35.15	43.71	7.67	51.35	68.20	-16.85	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/HORIZONTAL
Memo	:	11AC80 5775			

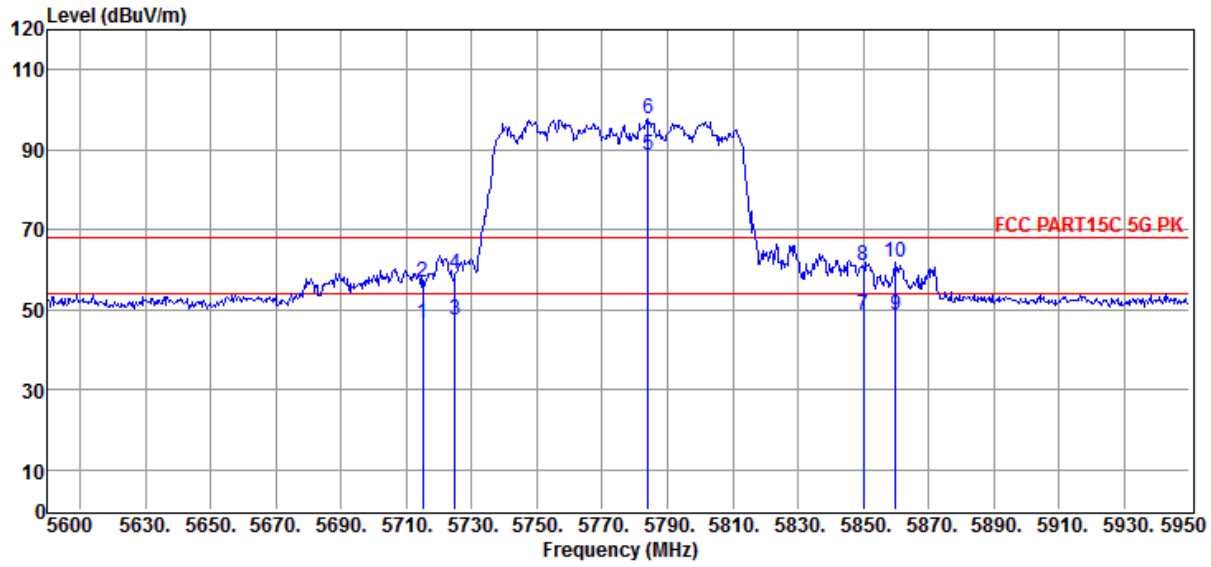


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	56.75	35.59	43.37	8.03	57.00	109.4	-52.40	Peak	HORIZONTAL
2	5725.00	45.33	35.59	43.37	8.04	45.59	109.4	-63.81	Average	HORIZONTAL
3	5725.00	57.36	35.59	43.37	8.04	57.62	122.2	-64.58	Peak	HORIZONTAL
4	5756.80	87.33	35.60	43.35	8.06	87.64	122.2	-34.56	Average	HORIZONTAL
5	5756.80	97.07	35.60	43.35	8.06	97.38	125.2	-27.82	Peak	HORIZONTAL
6	5850.00	47.32	35.64	43.29	8.12	47.79	125.2	-77.41	Average	HORIZONTAL
7	5850.00	60.31	35.64	43.29	8.12	60.78	122.2	-61.42	Peak	HORIZONTAL
8	5860.00	45.33	35.64	43.28	8.12	45.81	122.2	-76.39	Average	HORIZONTAL
9	5860.00	61.46	35.64	43.28	8.12	61.94	109.4	-47.46	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2018 RE1# Report Data\Q18062504-1E\FCC ABOVE 1G 5GWIFI.EM6		
Test Date	:	2018-07-04	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**Antenna/Distance**	:	2017 HF907/3m/VERTICAL
Memo	:	11AC80 5775			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	5715.00	46.32	35.59	43.37	8.03	46.57	109.4	-62.83	Average	VERTICAL
2	5715.00	56.75	35.59	43.37	8.03	57.00	109.4	-52.40	Peak	VERTICAL
3	5725.00	47.33	35.59	43.37	8.04	47.59	122.2	-74.61	Average	VERTICAL
4	5725.00	58.63	35.59	43.37	8.04	58.89	122.2	-63.31	Peak	VERTICAL
5	5784.10	88.33	35.61	43.33	8.07	88.68	125.2	-36.52	Average	VERTICAL
6	5784.10	97.53	35.61	43.33	8.07	97.88	125.2	-27.32	Peak	VERTICAL
7	5850.00	48.32	35.64	43.29	8.12	48.79	122.2	-73.41	Average	VERTICAL
8	5850.00	60.74	35.64	43.29	8.12	61.21	122.2	-60.99	Peak	VERTICAL
9	5860.00	48.33	35.64	43.28	8.12	48.81	109.4	-60.59	Average	VERTICAL
10	5860.00	61.46	35.64	43.28	8.12	61.94	109.4	-16.36	Peak	VERTICAL

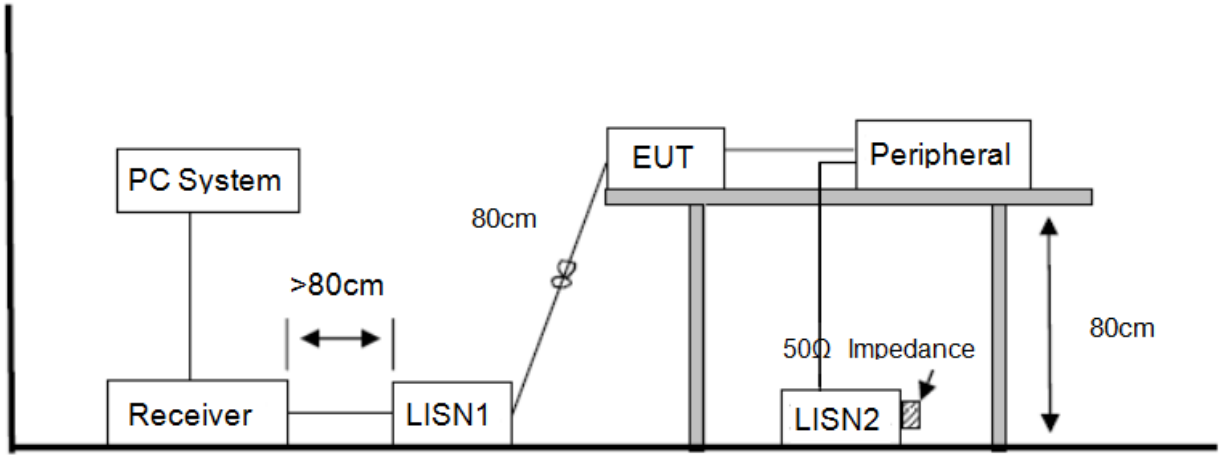
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

10. Power Line Conducted Emission

10.1. Block diagram of test setup



10.2. Power Line Conducted Emission Limits(Class B)

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

10.3. Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.3 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.3 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

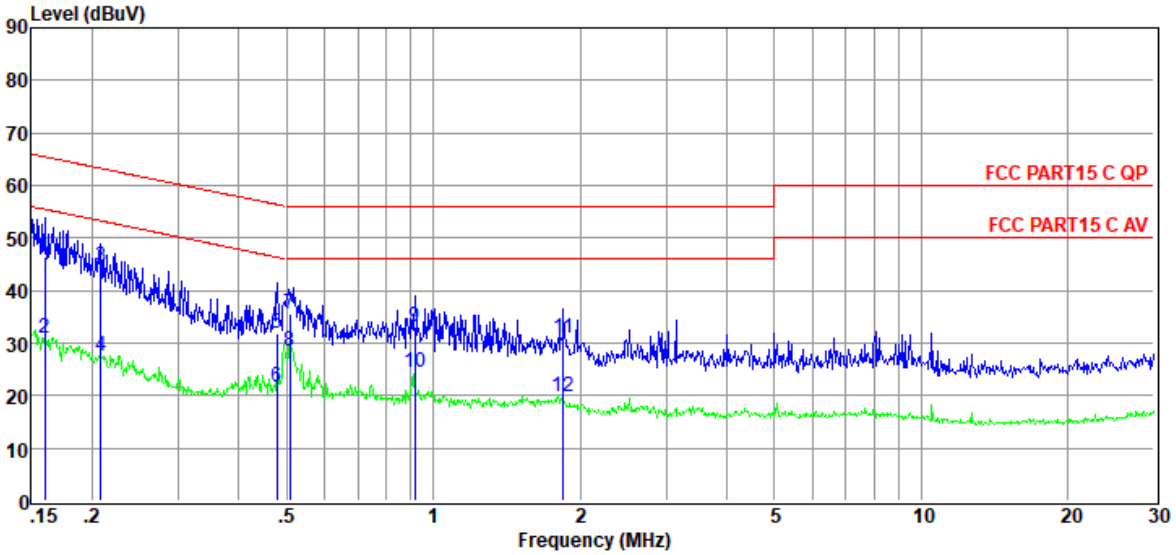
10.4. Test Result

PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.
Note2: "-----" means peak detection; "-----" means average detection
Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/60Hz, recorded worst case.

TR-4-E-010 Conducted Emission Test Result

Test Site	:	DDT 1# Shield Room	D:\2018 CE report data\Q18062504-1E\CE.EM6		
Test Date	:	2018-07-02	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**LISN**	:	2017 ENV216/NEUTRAL
Memo	:				

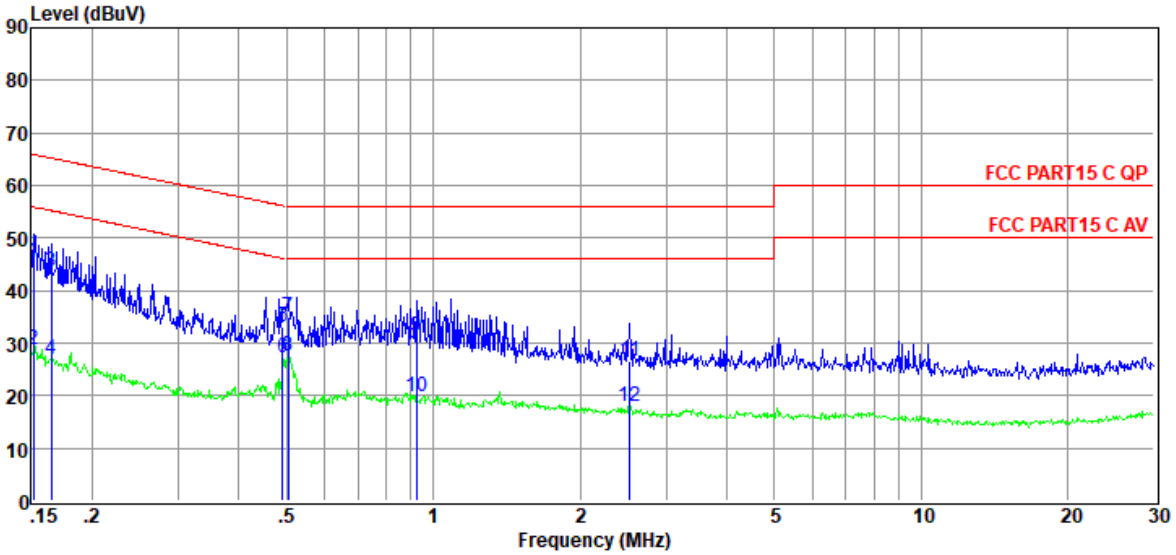


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.16	26.86	9.48	0.04	9.86	46.24	65.47	-19.23	QP	NEUTRAL
2	0.16	11.65	9.48	0.04	9.86	31.03	55.47	-24.44	Average	NEUTRAL
3	0.21	25.27	9.44	0.04	9.86	44.61	63.27	-18.66	QP	NEUTRAL
4	0.21	8.09	9.44	0.04	9.86	27.43	53.27	-25.84	Average	NEUTRAL
5	0.48	12.54	9.35	0.04	9.81	31.74	56.37	-24.63	QP	NEUTRAL
6	0.48	2.40	9.35	0.04	9.81	21.60	46.37	-24.77	Average	NEUTRAL
7	0.51	16.40	9.35	0.04	9.80	35.59	56.00	-20.41	QP	NEUTRAL
8	0.51	9.40	9.35	0.04	9.80	28.59	46.00	-17.41	Average	NEUTRAL
9	0.92	13.79	9.30	0.13	9.86	33.08	56.00	-22.92	QP	NEUTRAL
10	0.92	5.15	9.30	0.13	9.86	24.44	46.00	-21.56	Average	NEUTRAL
11	1.85	11.54	9.28	0.12	9.87	30.81	56.00	-25.19	QP	NEUTRAL
12	1.85	0.44	9.28	0.12	9.87	19.71	46.00	-26.29	Average	NEUTRAL

Note: 1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site	:	DDT 1# Shield Room	D:\2018 CE report data\Q18062504-1E\CE.EM6		
Test Date	:	2018-07-02	**Tested By**	:	Talent
EUT	:	M2 Bee MESH Node	**Model Number**	:	Bee
Power Supply	:	AC 120V/60Hz	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5'C,Humi:55.5%, Press:100.1kPa	**LISN**	:	2017 ENV216/LINE
Memo	:				



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.15	26.11	9.52	0.04	9.86	45.53	65.91	-20.38	QP	LINE
2	0.15	9.30	9.52	0.04	9.86	28.72	55.91	-27.19	Average	LINE
3	0.17	24.17	9.52	0.04	9.86	43.59	65.21	-21.62	QP	LINE
4	0.17	7.53	9.52	0.04	9.86	26.95	55.21	-28.26	Average	LINE
5	0.49	13.72	9.54	0.04	9.80	33.10	56.14	-23.04	QP	LINE
6	0.49	7.99	9.54	0.04	9.80	27.37	46.14	-18.77	Average	LINE
7	0.50	15.55	9.54	0.04	9.80	34.93	56.00	-21.07	QP	LINE
8	0.50	8.10	9.54	0.04	9.80	27.48	46.00	-18.52	Average	LINE
9	0.92	11.60	9.56	0.13	9.86	31.15	56.00	-24.85	QP	LINE
10	0.92	0.23	9.56	0.13	9.86	19.78	46.00	-26.22	Average	LINE
11	2.53	7.12	9.61	0.12	9.87	26.72	56.00	-29.28	QP	LINE
12	2.53	-1.75	9.61	0.12	9.87	17.85	46.00	-28.15	Average	LINE

Note: 1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).

4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

11. Antenna Requirements

11.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. Result

The antennas used for this product are integrated antenna and other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 1dBi.

END OF REPORT