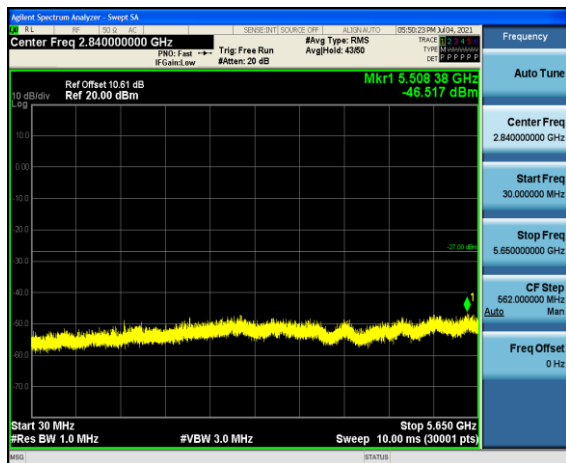


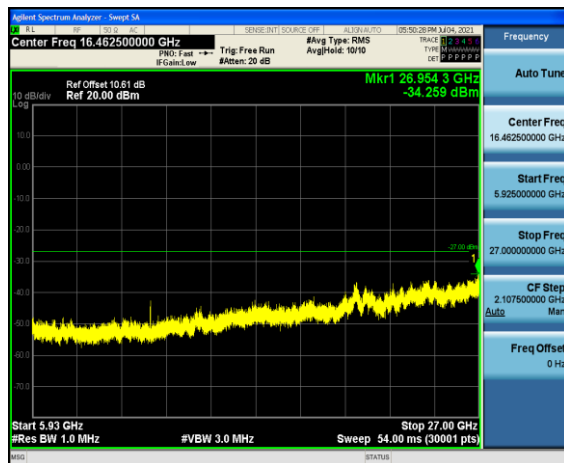
For U-NII-3

11a

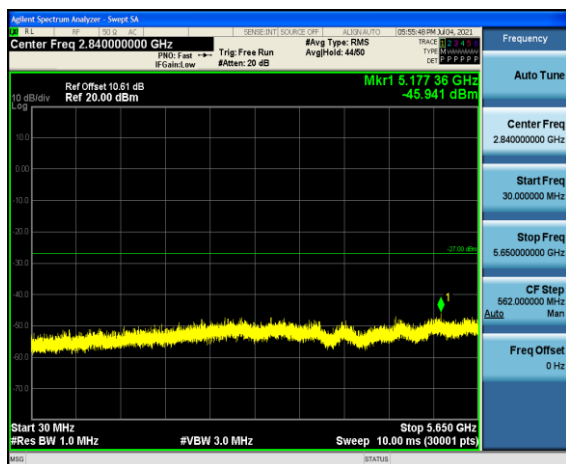
Low channel



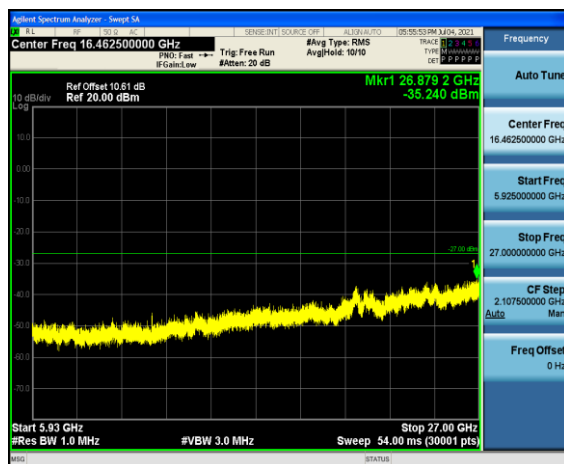
Low channel



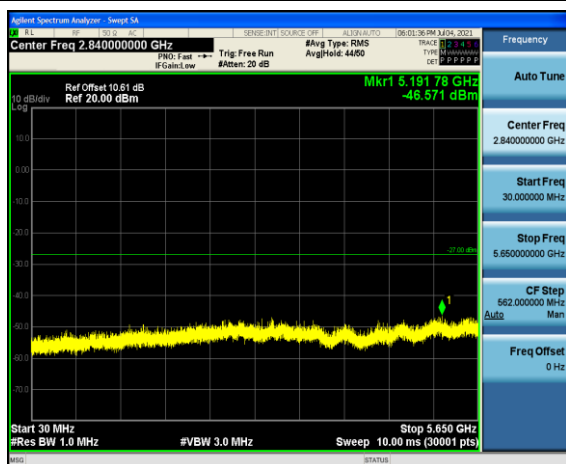
Middle channel



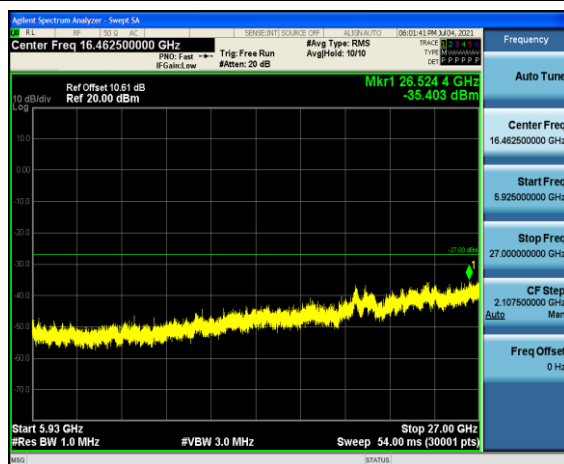
Middle channel



High channel



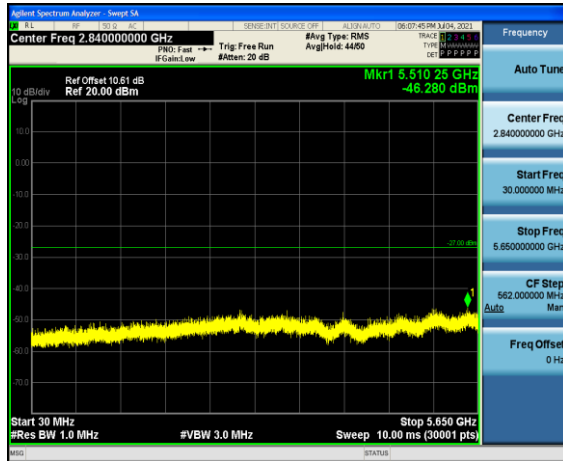
High channel



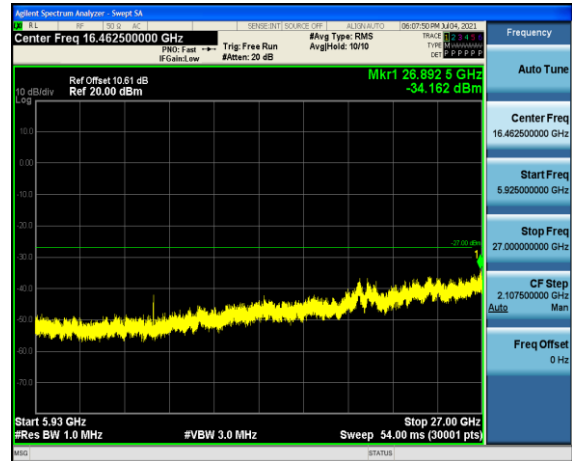


11n20

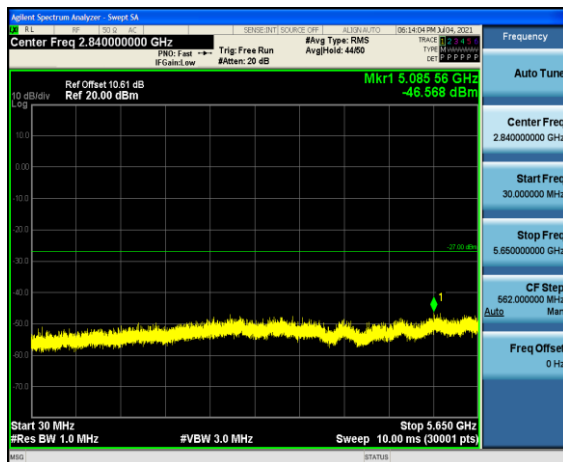
Low channel



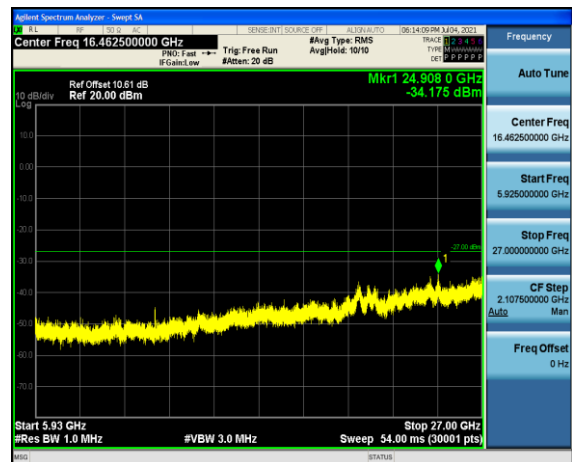
Low channel



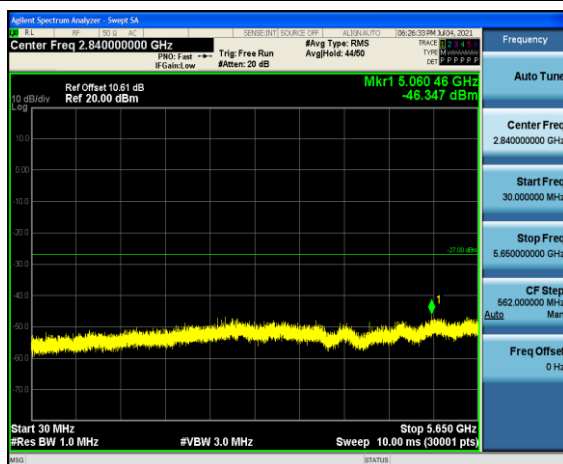
Middle channel



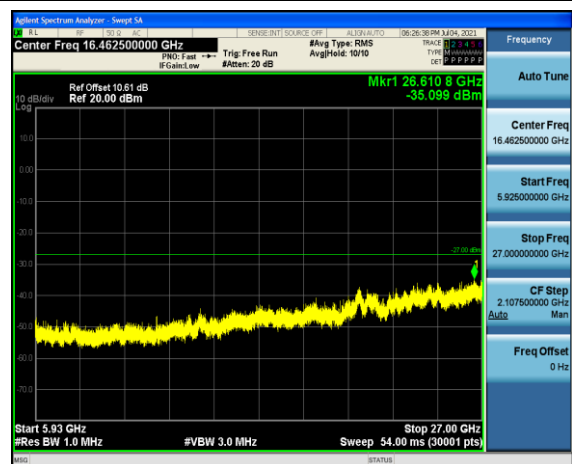
Middle channel



High channel



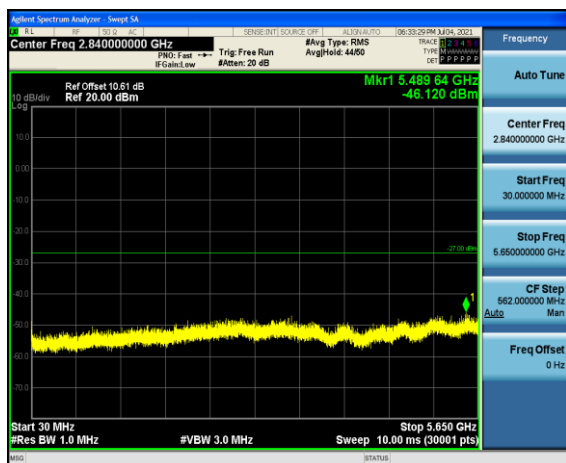
High channel



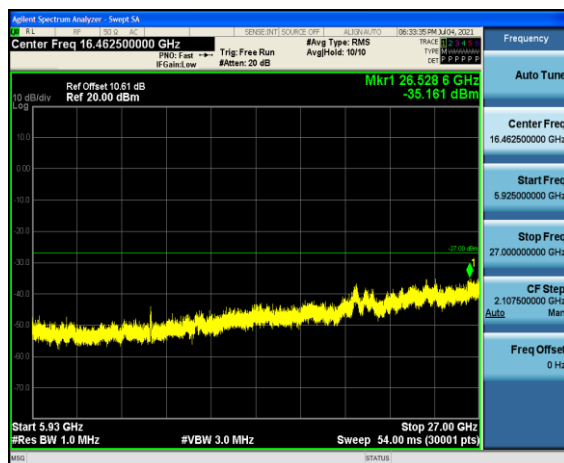


11n40

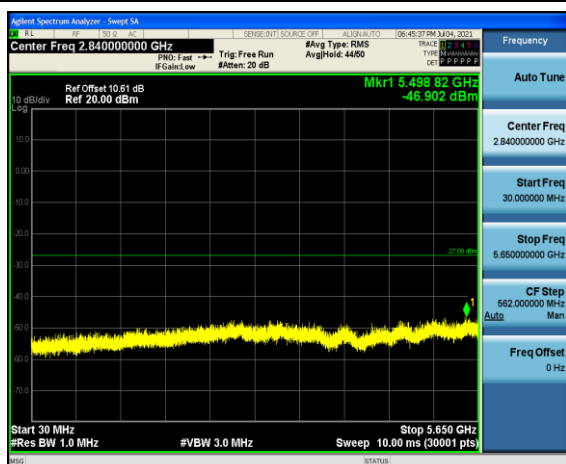
Low channel



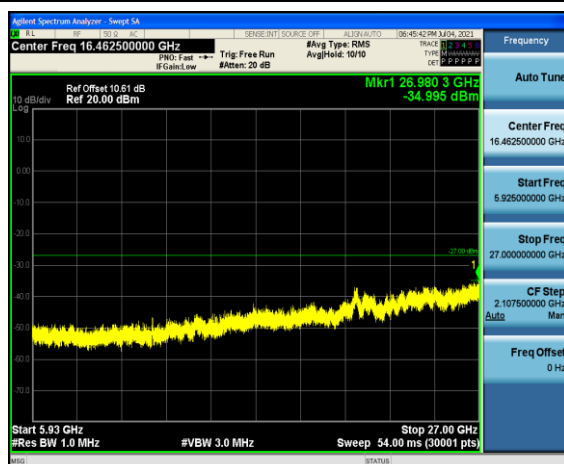
Low channel



High channel



High channel



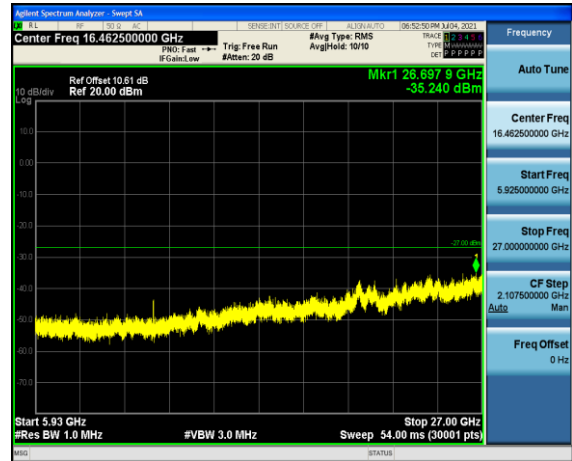


11ac20

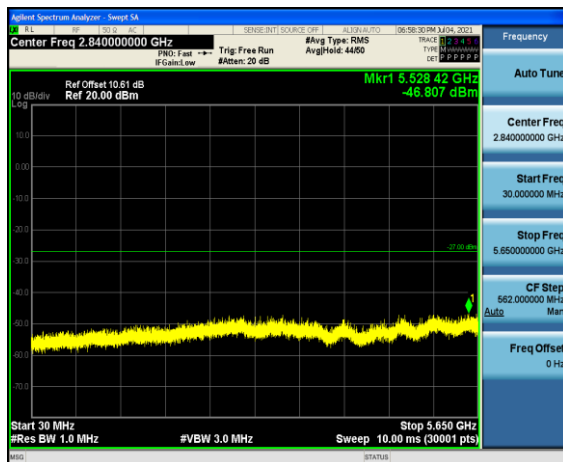
Low channel



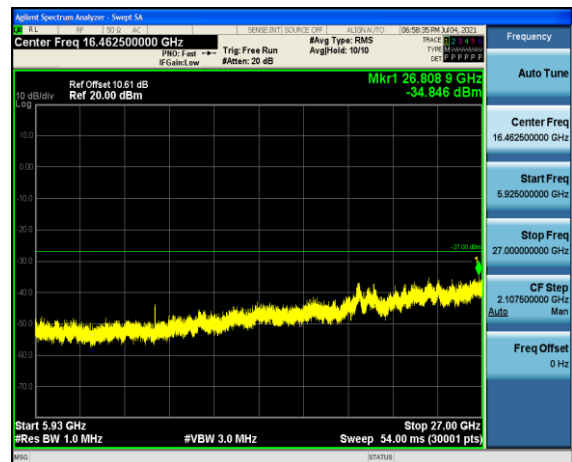
Low channel



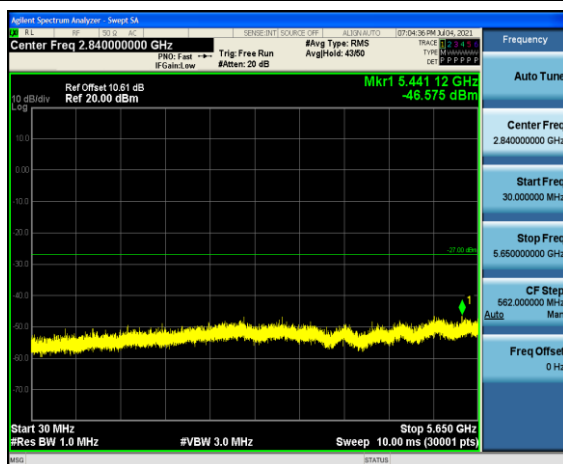
Middle channel



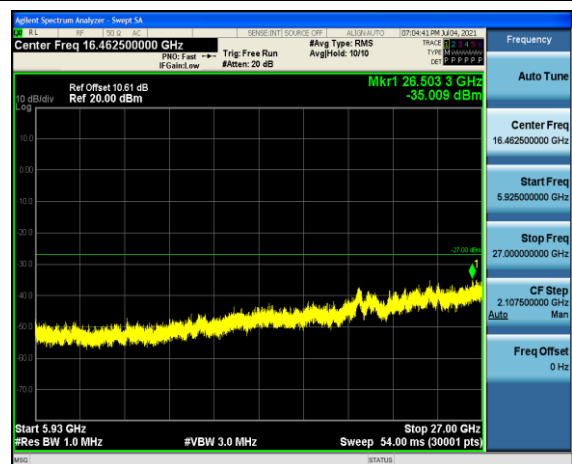
Middle channel



High channel

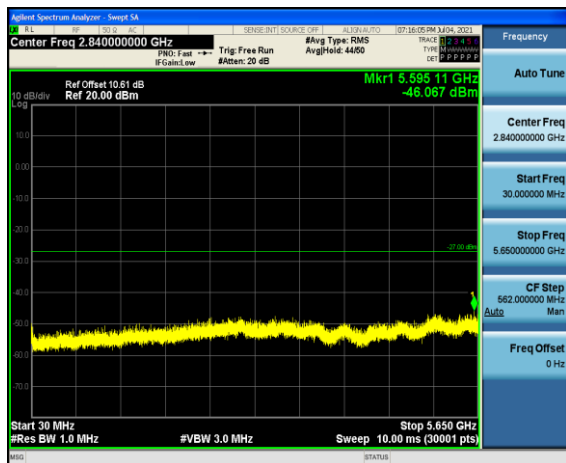


High channel

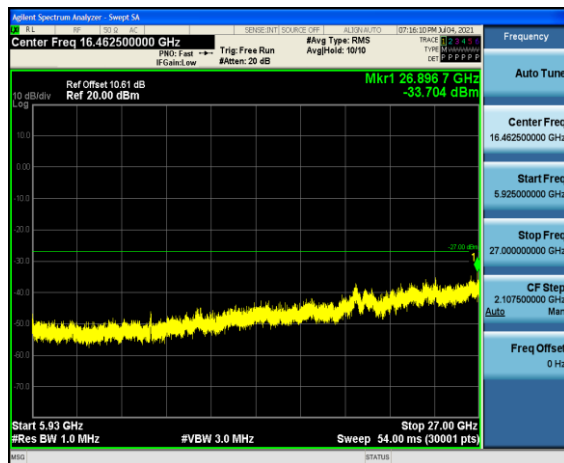


11ac40

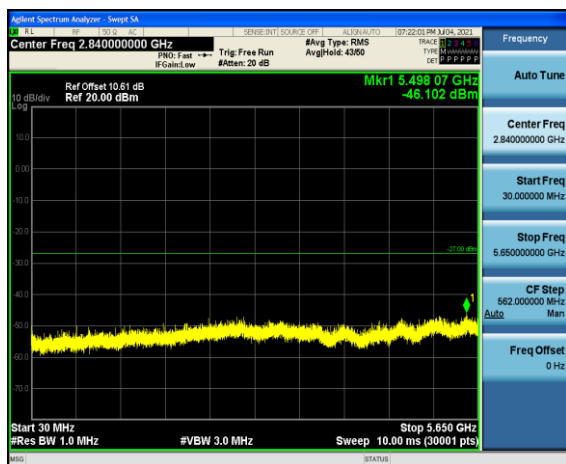
Low channel



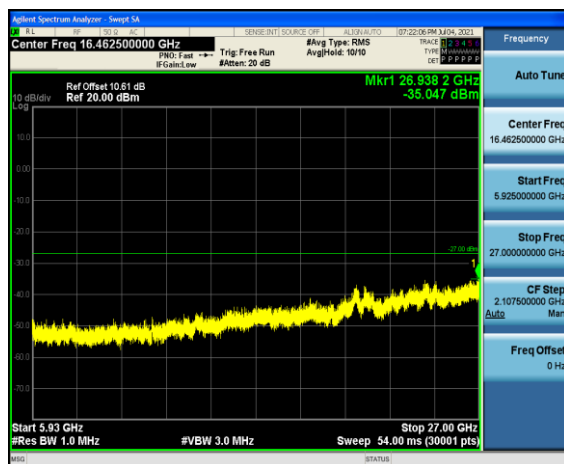
Low channel



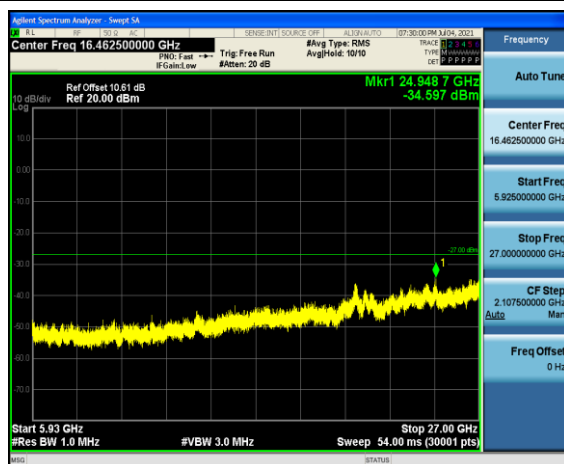
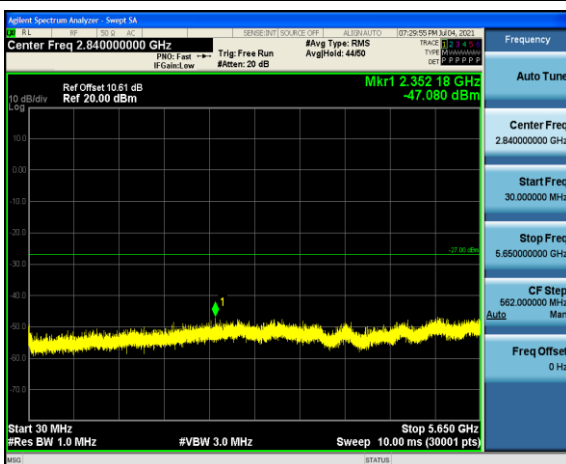
High channel



High channel



11ac80



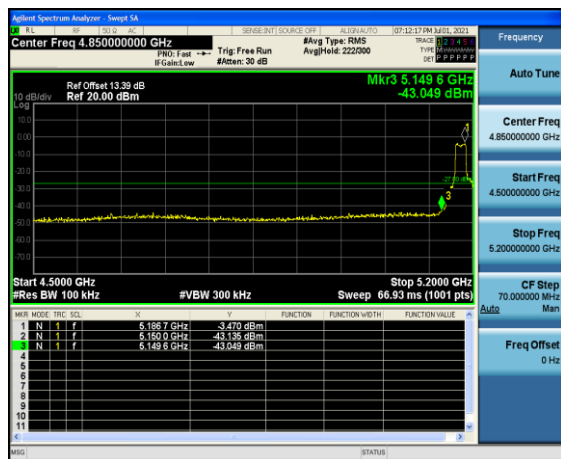
Note: The test result of 27G-40GHz is far below the limit, so it is no need to report.



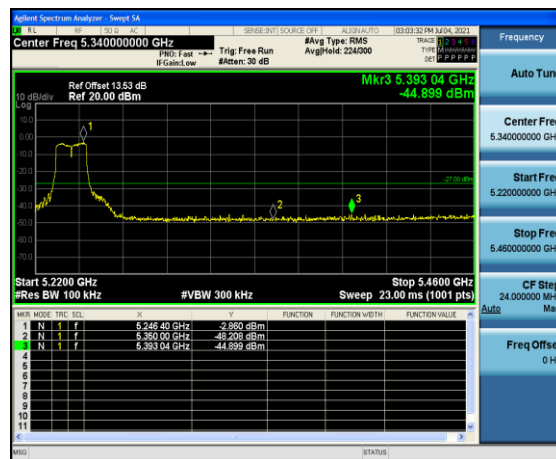
Conduction Band edge For U-NII-1

11a

Band edge-Left



Band edge-Right

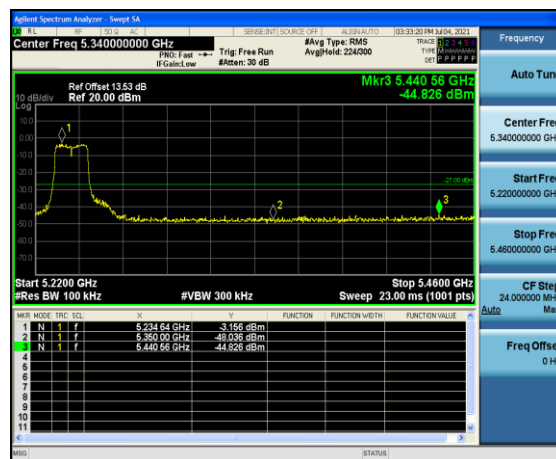


11n20

Band edge-Left

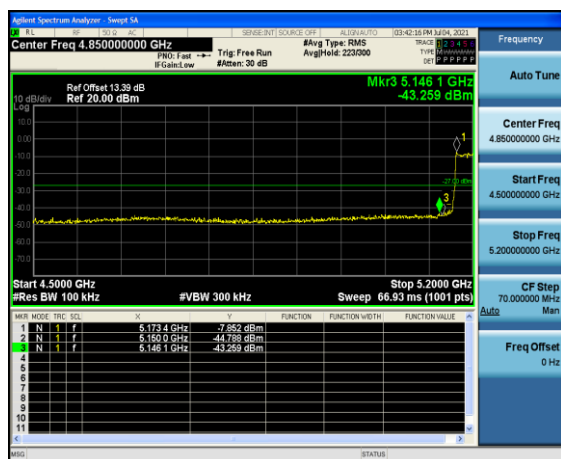


Band edge-Right

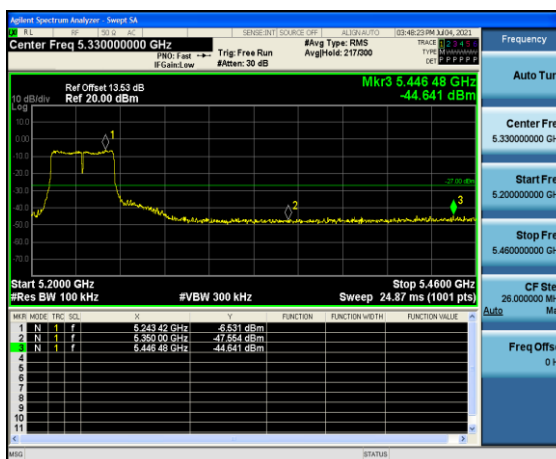


11n40

Band edge-Left

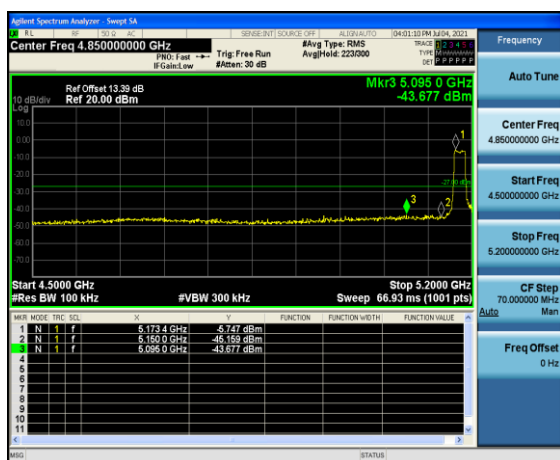


Band edge-Right

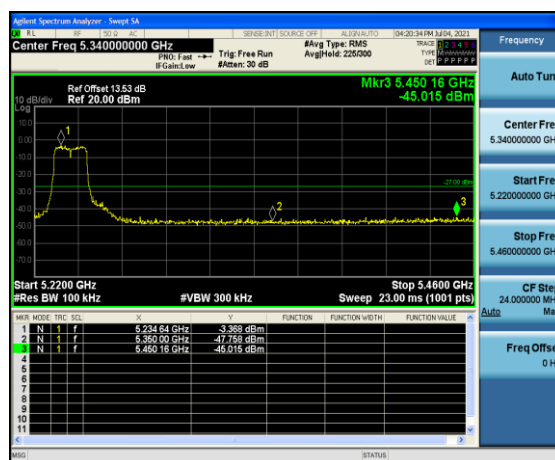


11ac20

Band edge-Left

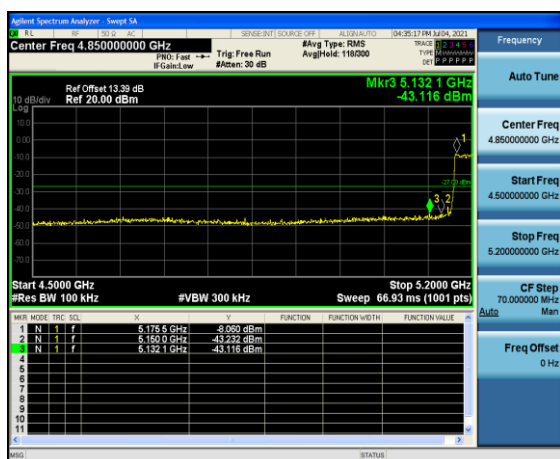


Band edge-Right

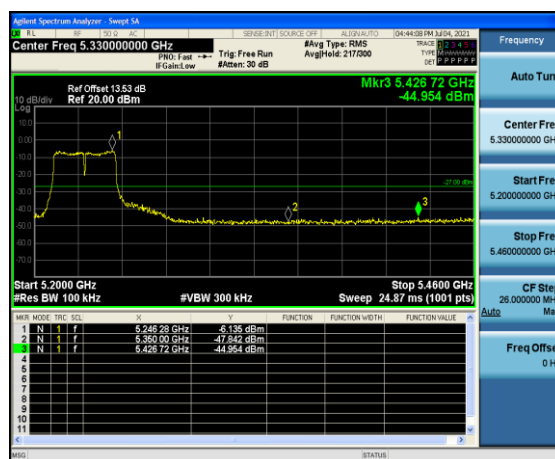


11ac40

Band edge-Left



Band edge-Right

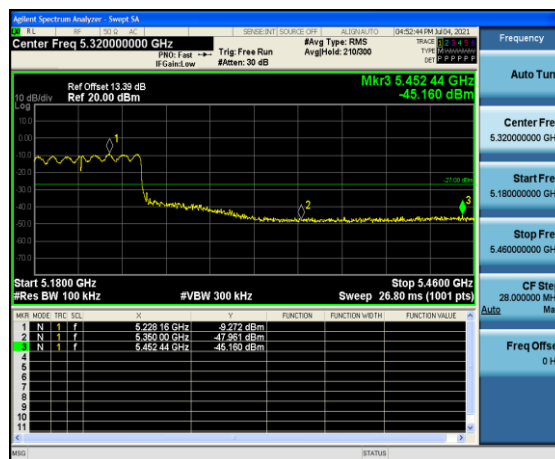


11ac80

Band edge-Left



Band edge-Right





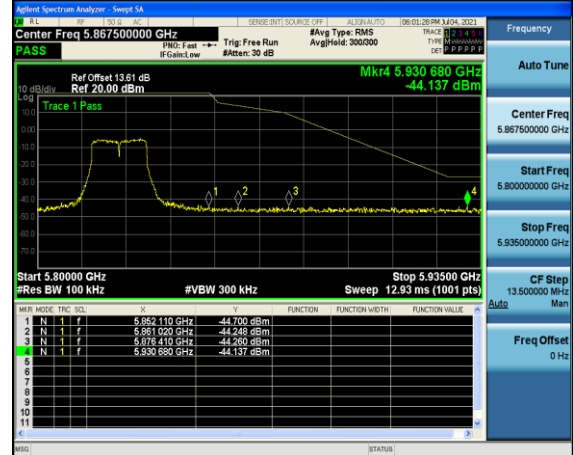
Conduction Band edge For U-NII-3

11a

Band edge-Left

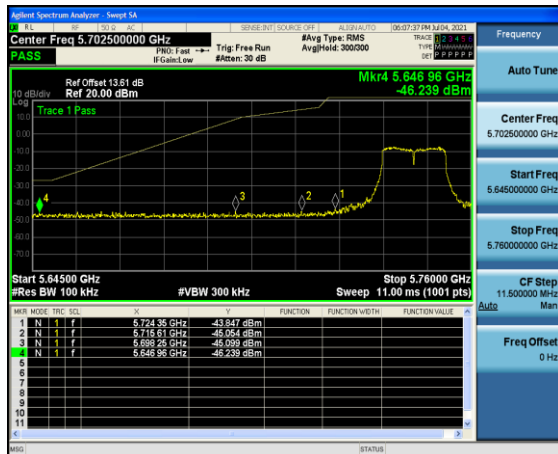


Band edge-Right

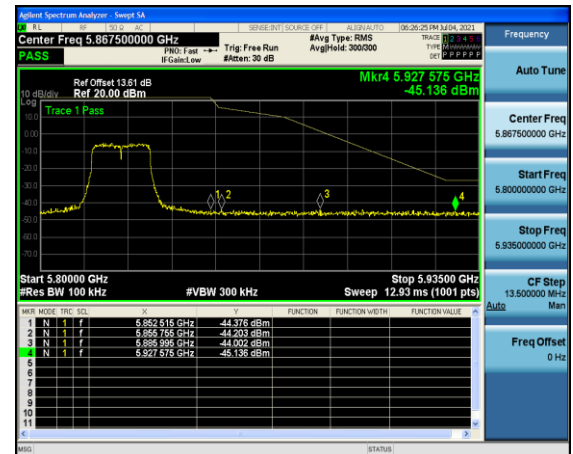


11n20

Band edge-Left

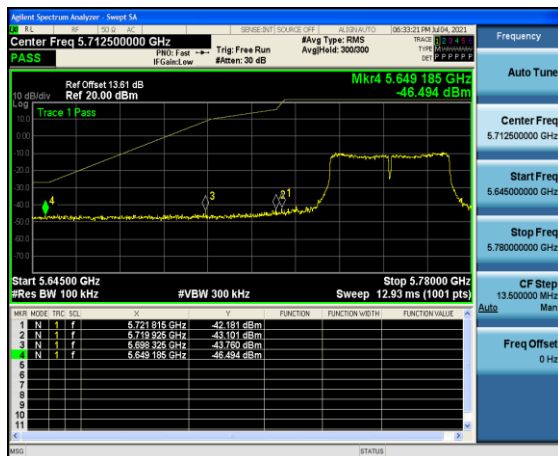


Band edge-Right



11n40

Band edge-Left



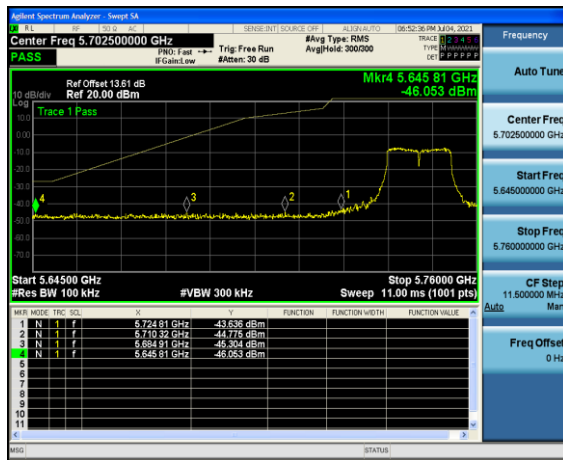
Band edge-Right



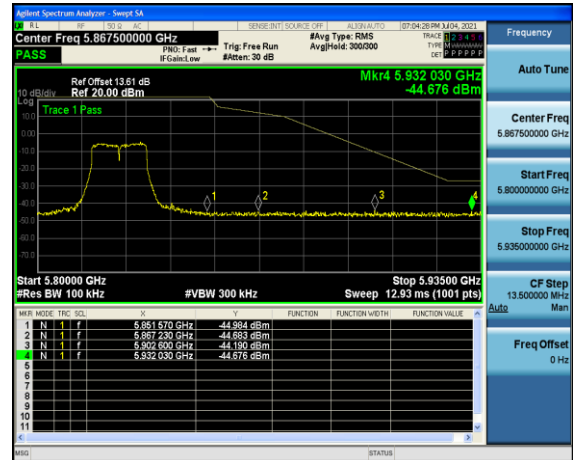


11ac20

Band edge-Left

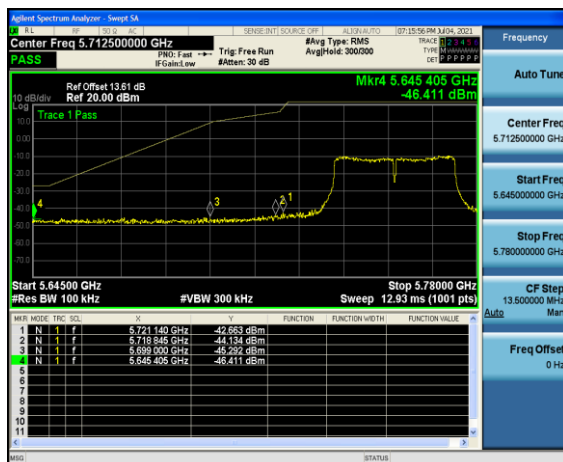


Band edge-Right

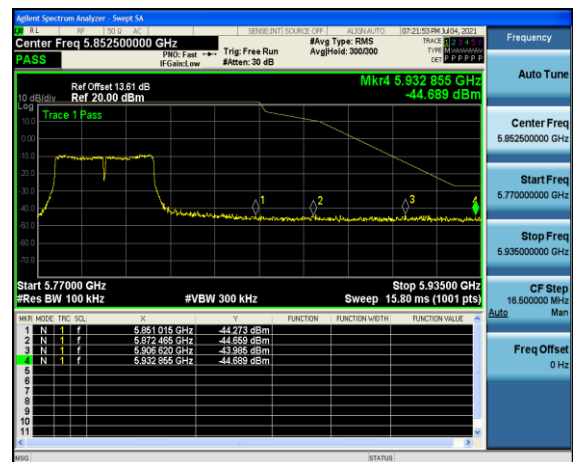


11ac40

Band edge-Left

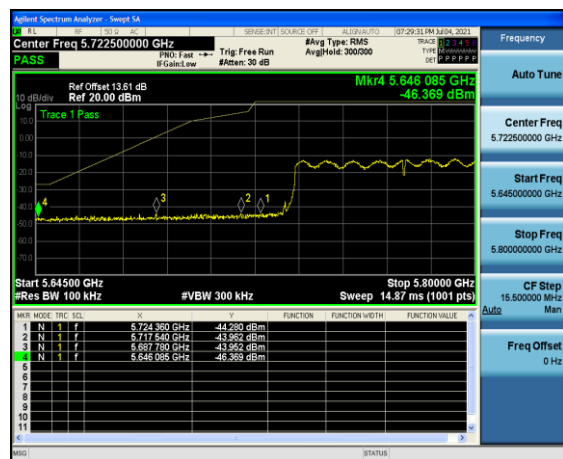


Band edge-Right

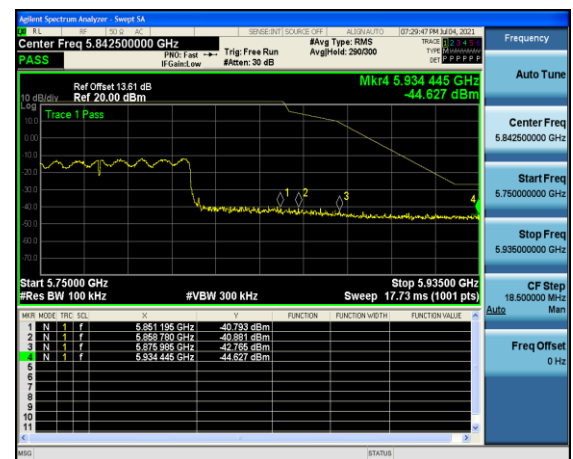


11ac80

Band edge-Left



Band edge-Right



5.7 Radiated spurious emission

5.7.1 Radiated Emission 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.



Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Frequency Range	RBW	VBW	Measurement
30MHz-1GHz	1MHz	3MHz	Peak
Above 1GHz	1MHz	10Hz ^{Note1}	Average
	1MHz	>1/T ^{Note2}	Average
Note1	When duty cycle is no less than 98%		
Note2	When duty cycle is less than 98%		

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

5.7.2 Test procedure

The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

For emission measurements above 1 GHz, the EUT shall be placed at a height of 1.5 m above the floor on a support that is RF transparent for the frequencies of interest. Final measurements for the EUT require a measurement antenna height scan of 1 m to 4 m.

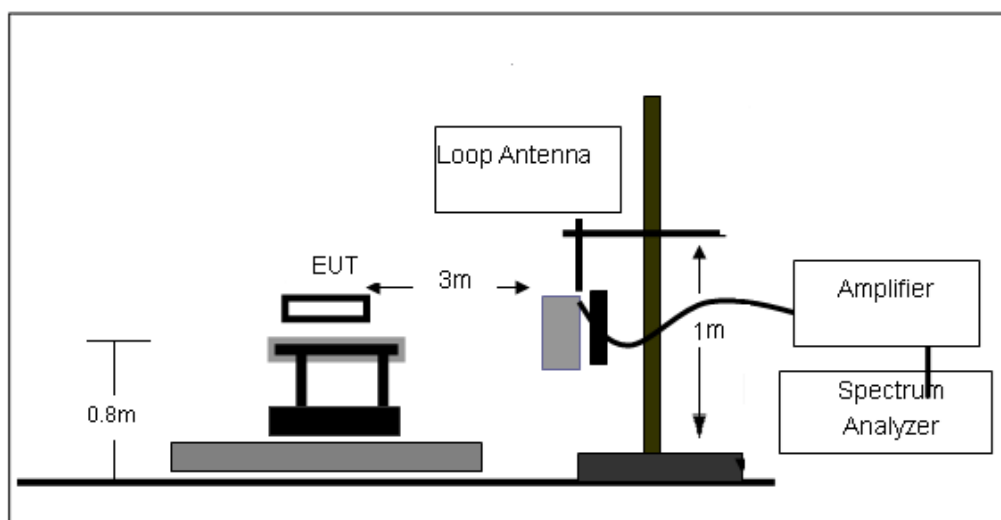
The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. For the actual test configuration, please refer to the related Item –EUT Test Photos.

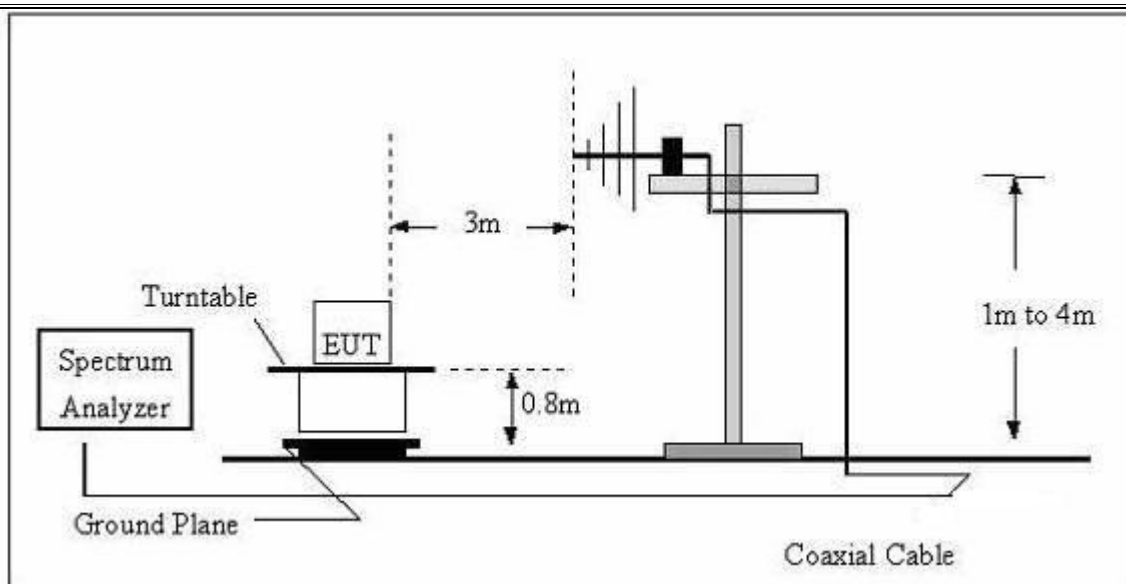
Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.7.3 Test setup

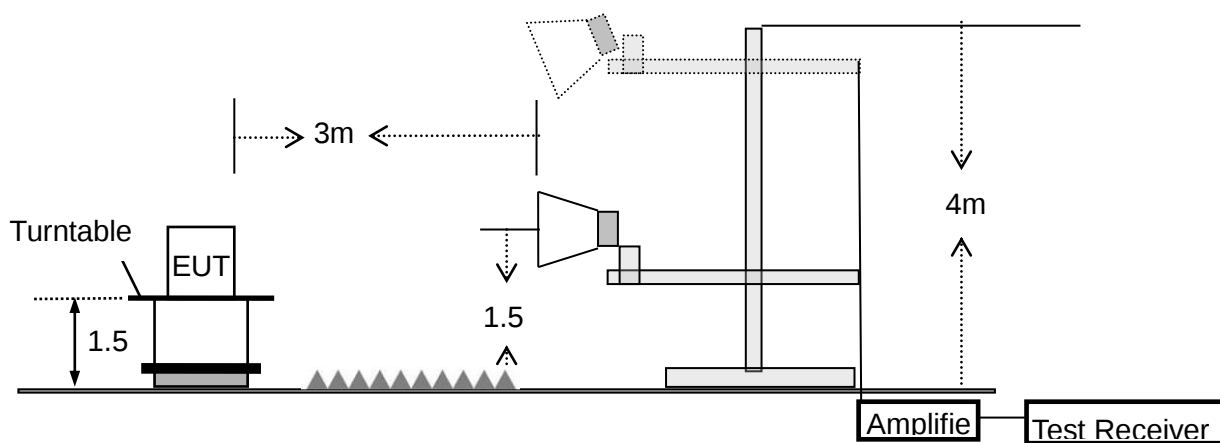
(A) Radiated Emission test-up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz





5.7.4 Test results

EUT:	Model smart box	Model Name:	Y2
Pressure:	1010 hPa	Test Voltage:	DC 5V 0.7A
Test Mode:	TX	Polarization:	--

Below 30MHz

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	Pass
--	--	--	--	Pass

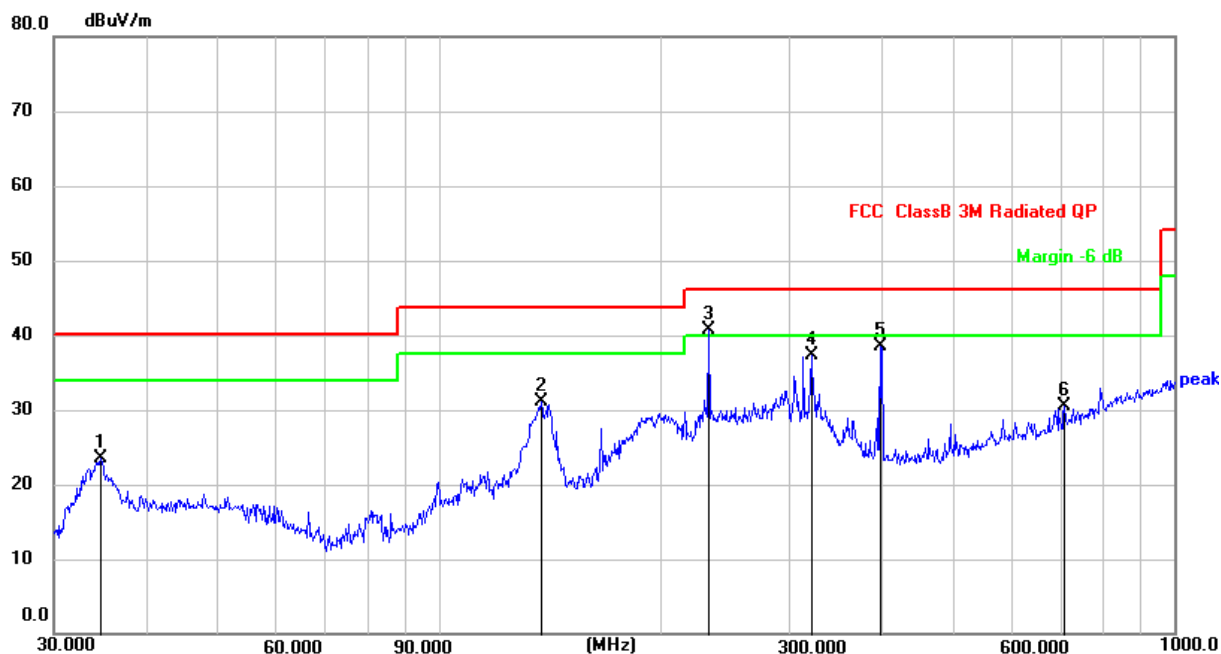
Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})$ (dB); Limit line = specific limits (dBuV) + distance extrapolation factor.



Between 30MHz – 1GHz

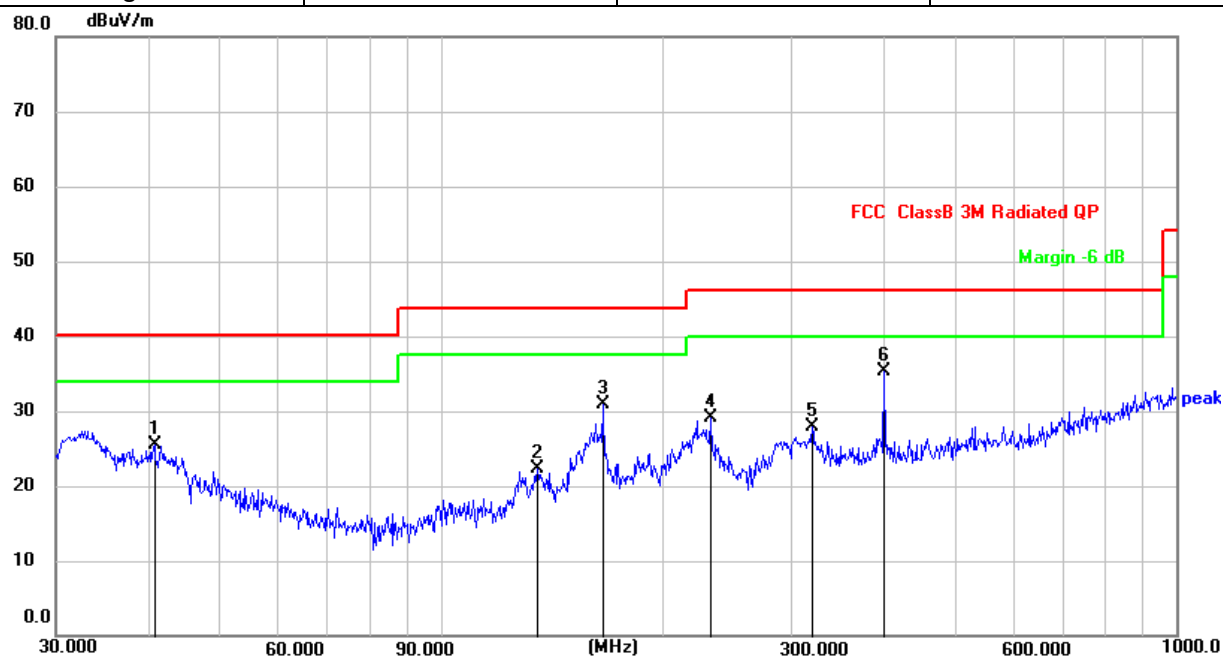
EUT:	Model smart box	Model Name:	Y2
Pressure:	1010 hPa	Phase:	H
Test Voltage:	DC 5V 0.7A	Mode:	TX



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	34.7601	37.57	-13.99	23.58	40.00	-16.42	QP
2	137.9028	46.53	-15.34	31.19	43.50	-12.31	QP
3 *	233.3486	51.30	-10.62	40.68	46.00	-5.32	QP
4	321.0605	45.83	-8.55	37.28	46.00	-8.72	QP
5	399.0300	45.77	-7.33	38.44	46.00	-7.56	QP
6	709.1820	31.96	-1.39	30.57	46.00	-15.43	QP



EUT:	Model smart box	Model Name:	Y2
Pressure:	1010 hPa	Phase:	V
Test Voltage:	DC 5V 0.7A	Mode:	TX



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	40.8445	38.03	-12.58	25.45	40.00	-14.55	QP
2	135.5061	37.55	-15.24	22.31	43.50	-21.19	QP
3	166.0680	45.25	-14.32	30.93	43.50	-12.57	QP
4	233.3486	39.71	-10.62	29.09	46.00	-16.91	QP
5	319.9369	36.38	-8.56	27.82	46.00	-18.18	QP
6 *	400.4318	42.56	-7.30	35.26	46.00	-10.74	QP

Note:

1. Two transmit chains had been tested, the ANT A mode 11a CH40 is the worst mode. Just report the worst data.
2. Emission Level = Meter Reading + Factor, Margin= Emission Level- Limit, Factor = Antenna Factor + Cable Loss – Pre-amplifier.
3. The peak value is less than the AV value, AV value is not required Factor added by measurement software automatically.



1GHz-40GHz:

Note1 : Emission Level = Meter Reading + Factor, Margin= Emission Level- Limit, Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Note2 :The peak value is less than the AV value, AV value is not required Factor added by measurement software automatically.

Note3 :The spurious emission of 25GHz – 40GHz band which the margin is lower more than 20dB,So that it is not reported in this test report.

Note4: The antenna A and antenna B have been tested. The report only shows the worst antenna. The worst case is ANT A.

ANT A

Note: All mode of ANT A had been tested, the mode 11a is the worst mode. Just report the worst data.

For U-NII-1

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
802.11a mode: Low Channel (5180 MHz)-Above 1G									
Vertical	4435.918	55.38	5.94	35.40	44.00	52.72	74.00	-21.28	Pk
Vertical	4435.117	45.10	5.94	35.40	44.00	42.44	54.00	-11.56	AV
Vertical	10371.307	63.62	8.46	39.75	44.50	67.33	74.00	-6.67	Pk
Vertical	10372.150	42.91	8.46	39.75	44.50	46.62	54.00	-7.38	Pk
Vertical	15541.314	55.52	10.12	38.80	44.10	60.34	74.00	-13.66	AV
Horizontal	15541.321	43.19	10.12	38.80	42.70	49.41	54.00	-4.59	Pk
Horizontal	4436.052	59.44	5.94	35.18	44.00	56.56	74.00	-17.44	AV
Horizontal	4434.976	43.17	5.94	35.18	44.00	40.29	54.00	-13.71	Pk
Horizontal	10371.516	60.51	8.46	38.71	44.50	63.18	74.00	-10.82	Pk
Horizontal	10731.656	44.40	8.46	38.71	44.50	47.07	54.00	-6.93	AV
802.11a mode: middle Channel (5200 MHz)-Above 1G									
Vertical	4592.701	58.10	6.48	36.35	44.05	56.88	74.00	-17.12	Pk
Vertical	4592.456	43.22	6.48	36.35	44.05	42.00	54.00	-12.00	AV
Vertical	10401.682	62.23	8.47	37.88	44.51	64.07	74.00	-9.93	Pk
Vertical	10402.522	46.19	8.47	37.88	44.51	48.03	54.00	-5.97	Pk
Vertical	15600.908	56.95	10.12	38.8	44.10	61.77	74.00	-12.23	AV
Horizontal	15601.630	42.19	10.12	38.8	42.70	48.41	54.00	-5.59	Pk
Horizontal	4592.402	58.78	6.48	36.37	44.05	57.58	74.00	-16.42	AV
Horizontal	4593.656	42.00	6.48	36.37	44.05	40.80	54.00	-13.20	Pk
Horizontal	10401.368	61.87	8.47	38.64	44.50	64.48	74.00	-9.52	Pk



Horizontal	10400.716	47.12	8.47	38.64	44.50	49.73	54.00	-4.27	AV
802.11a mode: High Channel (5240 MHz)-Above 1G									
Vertical	4740.499	59.99	7.10	37.24	43.50	60.83	74.00	-13.17	Pk
Vertical	4741.342	47.23	7.10	37.24	43.50	48.07	54.00	-5.93	AV
Vertical	10480.968	60.38	8.46	37.68	44.50	62.02	74.00	-11.98	Pk
Vertical	10482.084	46.35	8.46	37.68	44.50	47.99	54.00	-6.01	Pk
Vertical	15722.298	58.03	10.12	38.8	44.10	62.85	74.00	-11.15	AV
Horizontal	15721.417	42.74	10.12	38.8	42.70	48.96	54.00	-5.04	Pk
Horizontal	4740.814	59.73	7.10	37.24	43.50	60.57	74.00	-13.43	AV
Horizontal	4740.463	43.38	7.10	37.24	43.50	44.22	54.00	-9.78	Pk
Horizontal	10483.183	59.85	8.46	38.57	44.50	62.38	74.00	-11.62	Pk
Horizontal	10481.737	42.28	8.46	38.57	44.50	44.81	54.00	-9.19	AV



For U-NII-3

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
802.11a mode: Low Channel (5745 MHz)-Above 1G									
Vertical	4679.379	58.84	5.94	35.40	44.00	56.18	74.00	-17.82	Pk
Vertical	4681.083	47.58	5.94	35.40	44.00	44.92	54.00	-9.08	AV
Vertical	11490.144	59.84	8.46	39.75	44.50	63.55	74.00	-10.45	Pk
Vertical	11490.333	46.51	8.46	39.75	44.50	50.22	54.00	-3.78	AV
Vertical	17236.645	57.98	10.12	38.80	44.10	62.80	74.00	-11.20	Pk
Vertical	17237.053	41.07	10.12	38.80	42.70	47.29	54.00	-6.71	Pk
Horizontal	4680.187	58.82	5.94	35.18	44.00	55.94	74.00	-18.06	AV
Horizontal	4679.249	44.90	5.94	35.18	44.00	42.02	54.00	-11.98	Pk
Horizontal	11491.250	60.03	8.46	38.71	44.50	62.70	74.00	-11.30	AV
Horizontal	11491.381	44.51	8.46	38.71	44.50	47.18	54.00	-6.82	Pk
802.11a mode: middle Channel (5785 MHz)-Above 1G									
Vertical	4593.907	58.60	6.48	36.35	44.05	57.38	74.00	-16.62	Pk
Vertical	4593.155	44.88	6.48	36.35	44.05	43.66	54.00	-10.34	AV
Vertical	11572.111	61.20	8.47	37.88	44.51	63.04	74.00	-10.96	Pk
Vertical	11571.452	44.73	8.47	37.88	44.51	46.57	54.00	-7.43	AV
Vertical	17355.417	58.24	10.12	38.8	44.10	63.06	74.00	-10.94	Pk
Vertical	17357.327	42.58	10.12	38.8	42.70	48.80	54.00	-5.20	Pk
Horizontal	4593.137	59.63	6.48	36.37	44.05	58.43	74.00	-15.57	AV
Horizontal	4593.835	45.64	6.48	36.37	44.05	44.44	54.00	-9.56	Pk
Horizontal	11571.272	60.19	8.47	38.64	44.50	62.80	74.00	-11.20	AV
Horizontal	11571.332	46.82	8.47	38.64	44.50	49.43	54.00	-4.57	Pk



802.11a mode: High Channel (5825 MHz)-Above 1G									
Vertical	5040.516	60.91	7.10	37.24	43.50	61.75	74.00	-12.25	Pk
Vertical	5039.894	46.85	7.10	37.24	43.50	47.69	54.00	-6.31	AV
Vertical	11650.940	56.16	8.46	37.68	44.50	57.80	74.00	-16.20	Pk
Vertical	11650.157	44.21	8.46	37.68	44.50	45.85	54.00	-8.15	AV
Vertical	17475.863	60.39	10.12	38.8	44.10	65.21	74.00	-8.79	Pk
Vertical	17476.331	40.05	10.12	38.8	42.70	46.27	54.00	-7.73	Pk
Horizontal	5040.907	68.72	7.10	37.24	43.50	69.56	74.00	-4.44	AV
Horizontal	5041.203	44.11	7.10	37.24	43.50	44.95	54.00	-9.05	Pk
Horizontal	11651.516	57.21	8.46	38.57	44.50	59.74	74.00	-14.26	AV
Horizontal	11650.388	45.21	8.46	38.57	44.50	47.74	54.00	-6.26	Pk

Band edge – radiated

Note: Two transmit chains had been tested, the ANT A is the worst mode. Just report the worst data.

For U-NII-1

For 802.11a mode: (CH36 5180MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5150	66.76	8.69	29.4	42.59	62.26	74	-11.74	Pk
Horizontal	5350	62.99	9.37	30.41	43.25	59.52	74	-14.48	Pk
Vertical	5150	68.65	9.21	29.4	42.59	64.67	74	-9.33	Pk
Vertical	5350	60.51	9.12	30.41	43.25	56.79	74	-17.21	Pk
Horizontal	5150	46.35	8.69	29.4	42.59	41.85	54	-12.15	AV
Horizontal	5350	51.38	8.46	30.41	43.25	47.00	54	-7.00	AV
Vertical	5150	49.94	9.21	29.4	42.59	45.96	54	-8.04	AV
Vertical	5350	50.30	9.12	30.41	43.25	46.58	54	-7.42	AV

For 802.11n-(HT20) mode: (CH36 5180MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5150	66.78	8.69	29.4	42.59	62.28	74	-11.72	Pk
Horizontal	5350	67.40	9.37	30.41	43.25	63.93	74	-10.07	Pk
Vertical	5150	65.73	9.21	29.4	42.59	61.75	74	-12.25	Pk
Vertical	5350	68.34	9.12	30.41	43.25	64.62	74	-9.38	Pk
Horizontal	5150	48.60	8.69	29.4	42.59	44.10	54	-9.90	AV
Horizontal	5350	46.43	8.46	30.41	43.25	42.05	54	-11.95	AV
Vertical	5150	49.64	9.21	29.4	42.59	45.66	54	-8.34	AV
Vertical	5350	50.38	9.12	30.41	43.25	46.66	54	-7.34	AV



For 802.11n-(HT40) mode: (CH38 5190MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5150	66.08	8.69	29.4	42.59	61.58	74	-12.42	Pk
Horizontal	5350	60.71	9.37	30.41	43.25	57.24	74	-16.76	Pk
Vertical	5150	64.03	9.21	29.4	42.59	60.05	74	-13.95	Pk
Vertical	5350	59.24	9.12	30.41	43.25	55.52	74	-18.48	Pk
Horizontal	5150	48.25	8.69	29.4	42.59	43.75	54	-10.25	AV
Horizontal	5350	45.67	8.46	30.41	43.25	41.29	54	-12.71	AV
Vertical	5150	49.69	9.21	29.4	42.59	45.71	54	-8.29	AV
Vertical	5350	50.48	9.12	30.41	43.25	46.76	54	-7.24	AV

For 802.11n-(ac20) mode: (CH36 5180MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5150	65.12	8.69	29.4	42.59	60.62	74	-13.38	Pk
Horizontal	5350	67.55	9.37	30.41	43.25	64.08	74	-9.92	Pk
Vertical	5150	66.24	9.21	29.4	42.59	62.26	74	-11.74	Pk
Vertical	5350	67.84	9.12	30.41	43.25	64.12	74	-9.88	Pk
Horizontal	5150	47.25	8.69	29.4	42.59	42.75	54	-11.25	AV
Horizontal	5350	45.70	8.46	30.41	43.25	41.32	54	-12.68	AV
Vertical	5150	50.14	9.21	29.4	42.59	46.16	54	-7.84	AV
Vertical	5350	49.55	9.12	30.41	43.25	45.83	54	-8.17	AV

For 802.11n-(ac40) mode: (CH38 5190MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5150	65.03	8.69	29.4	42.59	60.53	74	-13.47	Pk
Horizontal	5350	66.95	9.37	30.41	43.25	63.48	74	-10.52	Pk
Vertical	5150	66.65	9.21	29.4	42.59	62.67	74	-11.33	Pk
Vertical	5350	67.28	9.12	30.41	43.25	63.56	74	-10.44	Pk
Horizontal	5150	46.47	8.69	29.4	42.59	41.97	54	-12.03	AV
Horizontal	5350	48.50	8.46	30.41	43.25	44.12	54	-9.88	AV
Vertical	5150	49.71	9.21	29.4	42.59	45.73	54	-8.27	AV
Vertical	5350	50.38	9.12	30.41	43.25	46.66	54	-7.34	AV



For 802.11n-(ac80) mode: (CH42 5210MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5150	65.57	8.69	29.4	42.59	61.07	74	-12.93	Pk
Horizontal	5350	66.79	9.37	30.41	43.25	63.32	74	-10.68	Pk
Vertical	5150	66.00	9.21	29.4	42.59	62.02	74	-11.98	Pk
Vertical	5350	67.56	9.12	30.41	43.25	63.84	74	-10.16	Pk
Horizontal	5150	48.43	8.69	29.4	42.59	43.93	54	-10.07	AV
Horizontal	5350	46.18	8.46	30.41	43.25	41.80	54	-12.20	AV
Vertical	5150	50.14	9.21	29.4	42.59	46.16	54	-7.84	AV
Vertical	5350	50.13	9.12	30.41	43.25	46.41	54	-7.59	AV

For U-NII-3

For 802.11a mode: (CH149 5745MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5725	68.21	8.69	29.4	42.59	63.71	74	-10.29	Pk
Horizontal	5850	65.21	9.37	30.41	43.25	61.74	74	-12.26	Pk
Vertical	5725	67.53	9.21	29.4	42.59	63.55	74	-10.45	Pk
Vertical	5850	59.93	9.12	30.41	43.25	56.21	74	-17.79	Pk
Horizontal	5725	47.05	8.69	29.4	42.59	42.55	54	-11.45	AV
Horizontal	5850	51.43	8.46	30.41	43.25	47.05	54	-6.95	AV
Vertical	5725	50.57	9.21	29.4	42.59	46.59	54	-7.41	AV
Vertical	5850	50.75	9.12	30.41	43.25	47.03	54	-6.97	AV

For 802.11n-(HT20) mode: (CH149 5745MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5725	67.11	8.69	29.4	42.59	62.61	74	-11.39	Pk
Horizontal	5850	64.85	9.37	30.41	43.25	61.38	74	-12.62	Pk
Vertical	5725	68.45	9.21	29.4	42.59	64.47	74	-9.53	Pk
Vertical	5850	61.82	9.12	30.41	43.25	58.10	74	-15.90	Pk
Horizontal	5725	46.51	8.69	29.4	42.59	42.01	54	-11.99	AV
Horizontal	5850	49.53	8.46	30.41	43.25	45.15	54	-8.85	AV
Vertical	5725	49.24	9.21	29.4	42.59	45.26	54	-8.74	AV
Vertical	5850	50.16	9.12	30.41	43.25	46.44	54	-7.56	AV



For 802.11n-(HT40) mode: (CH151 5755MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5725	65.50	8.69	29.4	42.59	61.00	74	-13.00	Pk
Horizontal	5850	62.62	9.37	30.41	43.25	59.15	74	-14.85	Pk
Vertical	5725	68.98	9.21	29.4	42.59	65.00	74	-9.00	Pk
Vertical	5850	59.92	9.12	30.41	43.25	56.20	74	-17.80	Pk
Horizontal	5725	48.13	8.69	29.4	42.59	43.63	54	-10.37	AV
Horizontal	5850	50.04	8.46	30.41	43.25	45.66	54	-8.34	AV
Vertical	5725	49.91	9.21	29.4	42.59	45.93	54	-8.07	AV
Vertical	5850	52.52	9.12	30.41	43.25	48.80	54	-5.20	AV

For 802.11n-(ac20) mode: (CH149 5745MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5725	65.46	8.69	29.4	42.59	60.96	74	-13.04	5725
Horizontal	5850	64.83	9.37	30.41	43.25	61.36	74	-12.64	5850
Vertical	5725	68.92	9.21	29.4	42.59	64.94	74	-9.06	5725
Vertical	5850	60.13	9.12	30.41	43.25	56.41	74	-17.59	5850
Horizontal	5725	46.35	8.69	29.4	42.59	41.85	54	-12.15	5725
Horizontal	5850	49.99	8.46	30.41	43.25	45.61	54	-8.39	5850
Vertical	5725	50.52	9.21	29.4	42.59	46.54	54	-7.46	5725
Vertical	5850	50.36	9.12	30.41	43.25	46.64	54	-7.36	5850



For 802.11n-(ac40) mode: (CH151 5755MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5725	68.34	8.69	29.4	42.59	63.84	74	-10.16	Pk
Horizontal	5850	63.41	9.37	30.41	43.25	59.94	74	-14.06	Pk
Vertical	5725	67.43	9.21	29.4	42.59	63.45	74	-10.55	Pk
Vertical	5850	61.26	9.12	30.41	43.25	57.54	74	-16.46	Pk
Horizontal	5725	46.19	8.69	29.4	42.59	41.69	54	-12.31	AV
Horizontal	5850	50.58	8.46	30.41	43.25	46.20	54	-7.80	AV
Vertical	5725	49.32	9.21	29.4	42.59	45.34	54	-8.66	AV
Vertical	5850	51.40	9.12	30.41	43.25	47.68	54	-6.32	AV

For 802.11n-(ac80) mode: (CH155 5775MHz)

Polarization	Frequency	Read Level	Cable loss	Antenna Factor	Preamplifier Factor	Emission Level	Limits	Over Limit	Detector
/	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
Horizontal	5725	66.17	8.69	29.4	42.59	61.67	74	-12.33	Pk
Horizontal	5850	63.64	9.37	30.41	43.25	60.17	74	-13.83	Pk
Vertical	5725	67.80	9.21	29.4	42.59	63.82	74	-10.18	Pk
Vertical	5850	62.38	9.12	30.41	43.25	58.66	74	-15.34	Pk
Horizontal	5725	47.76	8.69	29.4	42.59	43.26	54	-10.74	AV
Horizontal	5850	46.29	8.46	30.41	43.25	41.91	54	-12.09	AV
Vertical	5725	47.45	9.21	29.4	42.59	43.47	54	-10.53	AV
Vertical	5850	45.79	9.12	30.41	43.25	42.07	54	-11.93	AV



5.8 Power spectral density

5.8.1 Limit

For the band 5.15-5.25 GHz

For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.25-5.35 GHz and 5.47-5.725 GHz

The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.8.2 Test procedure

For U-NII-1

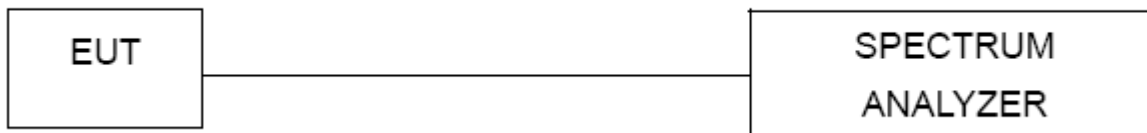
1. Set analyzer center frequency to NII channel center frequency.
2. Set the RBW $\geq 1\text{MHz}$.
3. Set the VBW $\geq 3 \times \text{RBW}$.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level.

For U-NII-3

1. Set analyzer center frequency to NII channel center frequency.
2. Set the RBW $\geq 510\text{kHz}$.
3. Set the VBW $\geq 3 \times \text{RBW}$.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level.



5.8.3 Test setup



5.8.4 Test results

For U-NII-1

Test Channel	Frequency (MHz)	Power density (ANT A)	Power density (ANT B)	Power density (ANT Total)	Limit (dBm)
		dBm/MHz	dBm/MHz	dBm/MHz	dBm/MHz
802.11a mode					
CH36	5180	0.651	-1.651	N/A	11
CH40	5200	-3.408	0.978	N/A	
CH48	5240	2.254	1.094	N/A	
802.11n20 mode					
CH36	5180	0.866	0.144	3.53	11
CH40	5200	1.398	0.862	4.15	
CH48	5240	2.136	1.687	4.93	
802.11ac20 mode					
CH36	5180	0.655	0.859	3.77	11
CH40	5200	1.335	0.906	4.14	
CH48	5240	2.445	0.757	4.69	
802.11n40 mode					
CH38	5190	-1.390	-1.099	1.77	11
CH46	5230	-0.779	-0.042	2.62	
802.11ac40 mode					
CH38	5190	-1.905	-2.217	0.95	11
CH46	5230	-1.115	-5.294	0.29	
802.11ac80 mode					
CH42	5210	-3.570	-3.457	-0.5	11



For U-NII-3

Test Channel	Frequency (MHz)	Power density (ANT A)	Power density (ANT B)	Power density (ANT Total)	Limit (dBm)
		dBm/500kHz	dBm/500kHz	dBm/500kHz	dBm/500kHz
802.11a mode					
CH149	5745	-4.214	-1.586	N/A	30
CH157	5785	-3.345	-0.742	N/A	
CH165	5825	-2.058	-1.061	N/A	
802.11n20 mode					
CH149	5745	-4.124	-1.805	0.20	30
CH157	5785	-3.322	-1.086	0.95	
CH165	5825	-1.780	-0.208	2.09	
802.11ac20 mode					
CH149	5745	-4.211	-1.557	0.33	30
CH157	5785	-3.435	-0.778	1.10	
CH165	5825	-1.912	0.225	2.30	
802.11n40 mode					
CH151	5755	-6.351	-3.945	-1.97	30
CH159	5795	-6.069	-3.868	-1.82	
802.11ac40 mode					
CH151	5755	-6.267	-4.307	-2.17	30
CH159	5795	-5.731	-3.721	-1.60	
802.11ac80 mode					
CH155	5775	-8.333	-5.837	-3.90	30
Note: If the measurement is X dBm/510kHz, thus X dBm/510kHz = (10 ^{X/10})*(500 / 510) mW/500kHz =10*log10{(10 ^{X/10})*(500 / 510) } dBm/500kHz					