

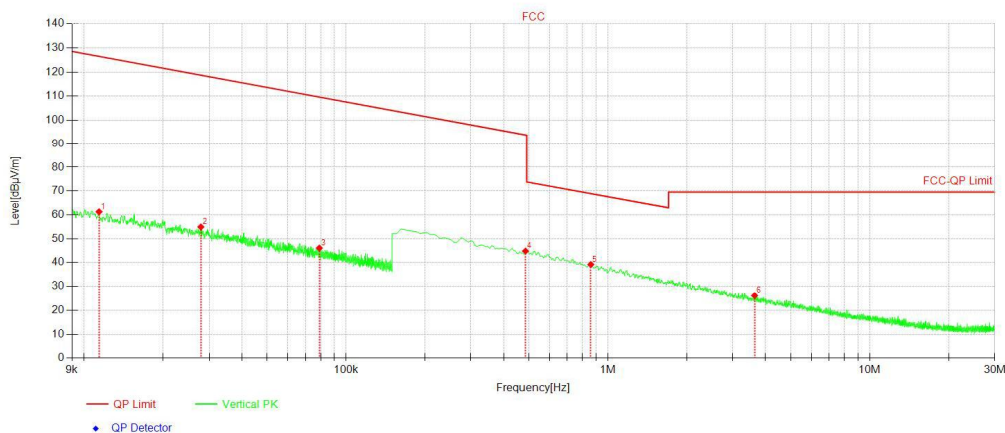


Test Configuration:	Measurements Below 1000MHz • RBW = 120 kHz • VBW = 300 kHz • Detector = Peak • Trace mode = max hold Peak Measurements Above 1000 MHz • RBW = 1 MHz • VBW $\geq$ 3 MHz • Detector = Peak • Sweep time = auto • Trace mode = max hold Average Measurements Above 1000MHz • RBW = 1 MHz • VBW = 10 Hz, when duty cycle is no less than 98 percent. • VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Charge+Transmitting mode.
Final Test Mode:	Pretest the EUT at Transmitting mode. Through Pre-scan, find the DH5 of data type is the worst case of All modulation type.
Instruments Used:	Refer to section 2.9 for details
Test Results:	Pass

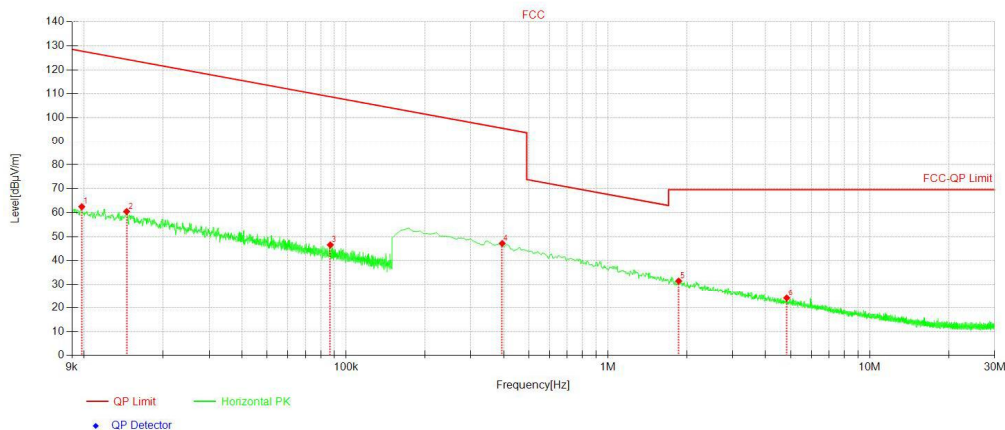


Test data

For 9KHz-30MHz



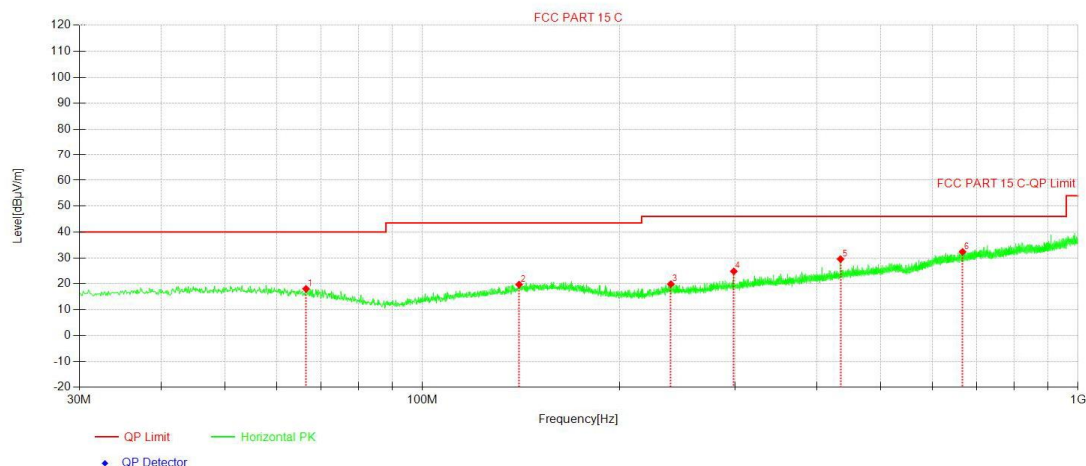
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	0.0114	43.17	18.15	61.32	126.47	65.15	100	357	PK	Vertical
2	0.0279	41.89	13.04	54.93	118.69	63.76	100	183	PK	Vertical
3	0.0791	35.01	11.08	46.09	109.64	63.55	100	77	PK	Vertical
4	0.4844	34.18	10.66	44.84	93.90	49.06	100	304	PK	Vertical
5	0.8606	28.58	10.62	39.20	68.91	29.71	100	185	PK	Vertical
6	3.6312	15.50	10.60	26.10	69.54	43.44	100	90	PK	Vertical



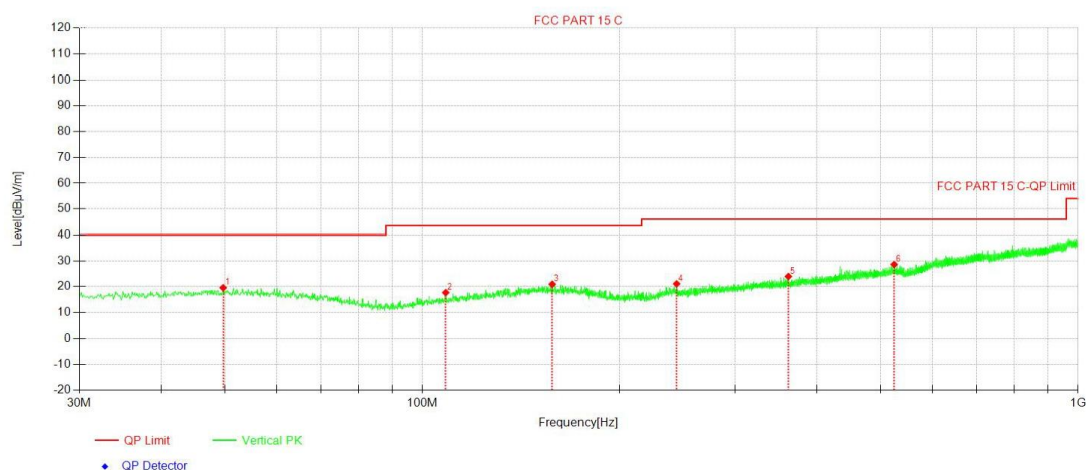
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	0.0098	43.54	18.96	62.50	127.79	65.29	100	76	PK	Horizontal
2	0.0145	43.72	16.77	60.49	124.36	63.87	100	40	PK	Horizontal
3	0.0871	35.54	11.04	46.58	108.80	62.22	100	11	PK	Horizontal
4	0.3948	36.53	10.67	47.20	95.68	48.48	100	174	PK	Horizontal
5	1.8637	20.93	10.61	31.54	69.54	38.00	100	79	PK	Horizontal
6	4.8195	13.37	10.62	23.99	69.54	45.55	100	62	PK	Horizontal



For 30-1000MHz



NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	66.47	27.63	-9.53	18.10	40.00	21.90	100	258	PK	H
2	140.49	28.22	-8.45	19.77	43.50	23.73	100	267	PK	H
3	239.34	29.25	-9.31	19.94	46.00	26.06	100	44	PK	H
4	298.61	31.90	-7.03	24.87	46.00	21.13	100	267	PK	H
5	434.33	32.78	-3.20	29.58	46.00	16.42	100	127	PK	H
6	666.67	30.70	1.68	32.38	46.00	13.62	100	0	PK	H

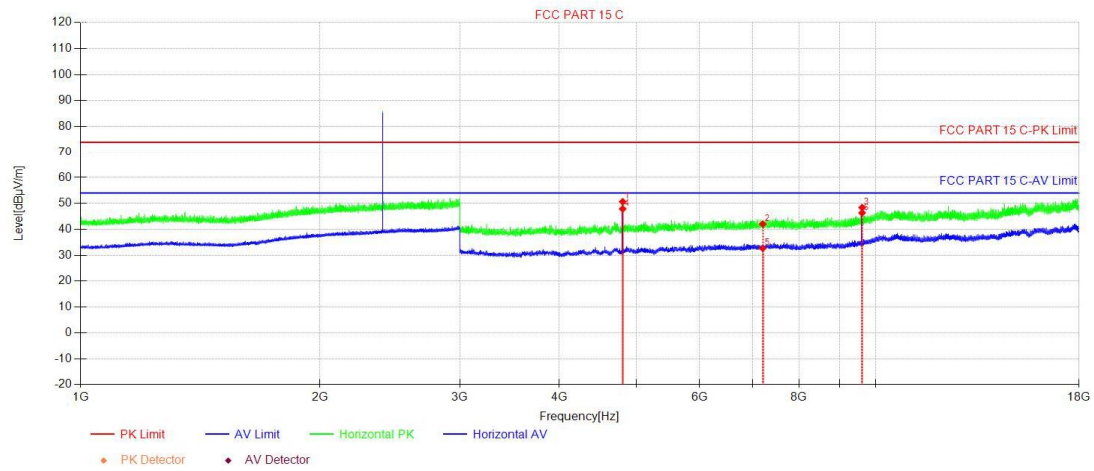


NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	49.69	27.69	-8.06	19.63	40.00	20.37	100	166	PK	V
2	108.57	29.12	-11.39	17.73	43.50	25.77	100	236	PK	V
3	157.76	28.77	-7.79	20.98	43.50	22.52	100	66	PK	V
4	244.29	30.18	-9.04	21.14	46.00	24.86	100	184	PK	V
5	361.67	29.47	-5.48	23.99	46.00	22.01	100	157	PK	V
6	524.36	29.81	-1.15	28.66	46.00	17.34	100	360	PK	V

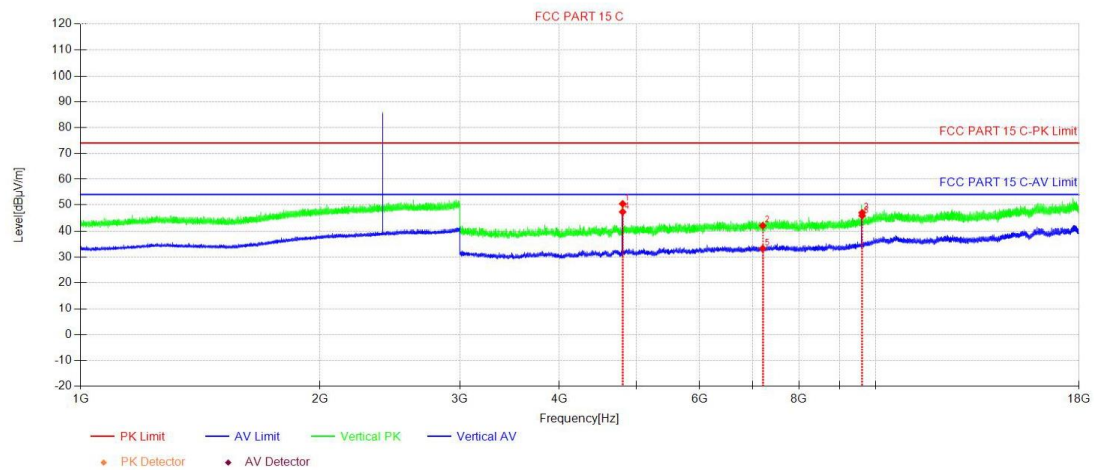


For above 1GHz

DH5 2402MHz



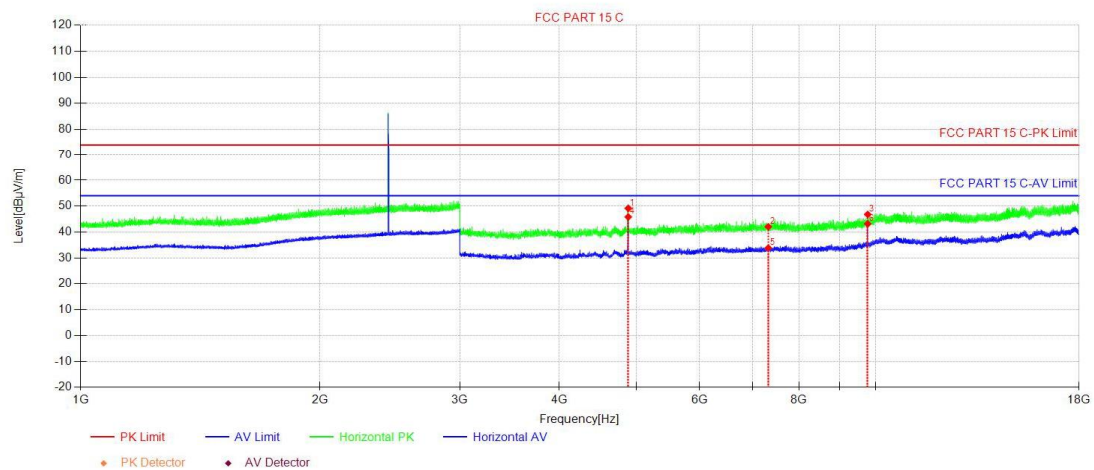
NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	4804.00	55.28	-4.61	50.67	74.00	23.33	150	205	PK	H
2	7206.00	43.83	-1.76	42.07	74.00	31.93	150	205	PK	H
3	9608.00	47.52	0.88	48.40	74.00	25.60	150	322	PK	H
4	4804.00	52.49	-4.61	47.88	54.00	6.12	150	178	AV	H
5	7206.00	34.50	-1.76	32.74	54.00	21.26	150	7	AV	H
6	9608.00	45.47	0.88	46.35	54.00	7.65	150	147	AV	H



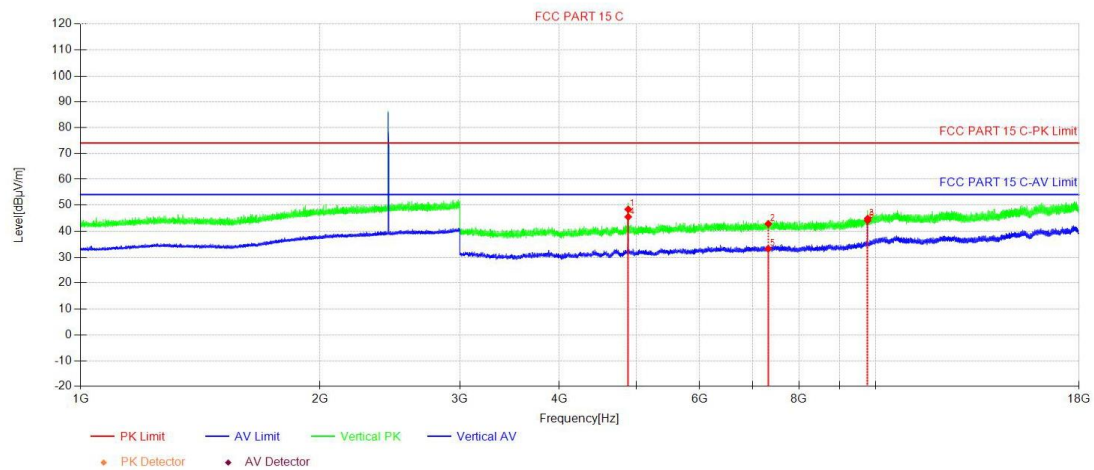
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1	4804.00	55.01	-4.61	50.40	74.00	23.60	150	232	PK	V
2	7206.00	43.69	-1.76	41.93	74.00	32.07	150	171	PK	V
3	9608.00	46.07	0.88	46.95	74.00	27.05	150	171	PK	V
4	4804.00	51.86	-4.61	47.25	54.00	6.75	150	171	AV	V
5	7206.00	35.07	-1.76	33.31	54.00	20.69	150	347	AV	V
6	9608.00	44.87	0.88	45.75	54.00	8.25	150	290	AV	V



DH5 2441MHz



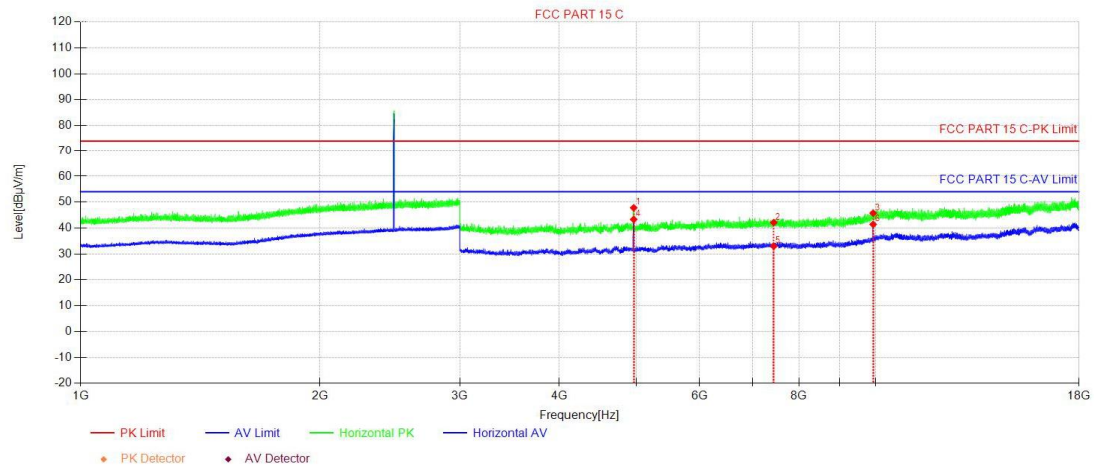
NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	4882.00	53.89	-4.72	49.17	74.00	24.83	150	197	PK	H
2	7323.00	43.54	-1.49	42.05	74.00	31.95	150	4	PK	H
3	9764.00	45.18	1.64	46.82	74.00	27.18	150	168	PK	H
4	4882.00	50.55	-4.72	45.83	54.00	8.17	150	254	AV	H
5	7323.00	35.31	-1.49	33.82	54.00	20.18	150	286	AV	H
6	9764.00	41.51	1.64	43.15	54.00	10.85	150	286	AV	H



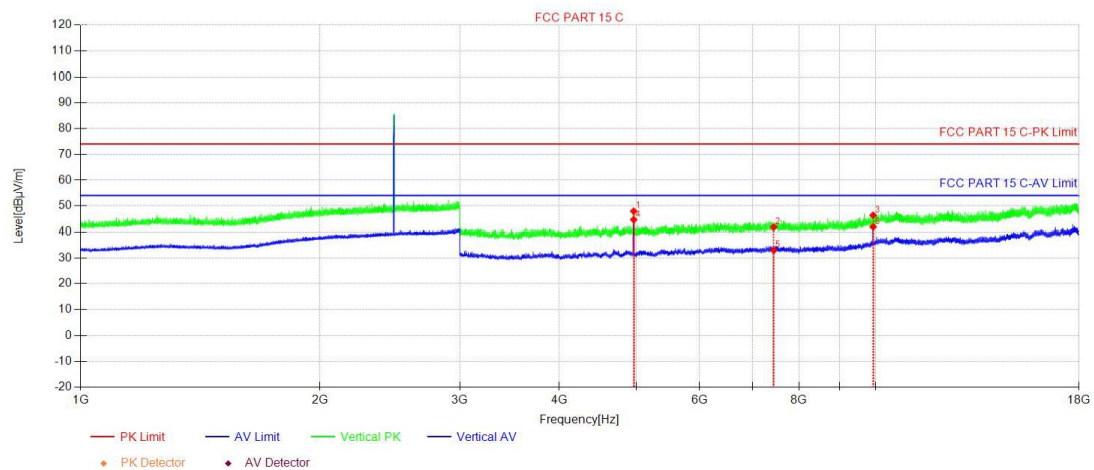
NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	4882.00	53.10	-4.72	48.38	74.00	25.62	150	261	PK	V
2	7323.00	44.34	-1.49	42.85	74.00	31.15	150	290	PK	V
3	9764.00	43.24	1.64	44.88	74.00	29.12	150	174	PK	V
4	4882.00	50.25	-4.72	45.53	54.00	8.47	150	204	AV	V
5	7323.00	34.80	-1.49	33.31	54.00	20.69	150	321	AV	V
6	9764.00	42.44	1.64	44.08	54.00	9.92	150	290	AV	V



DH5 2480MHz



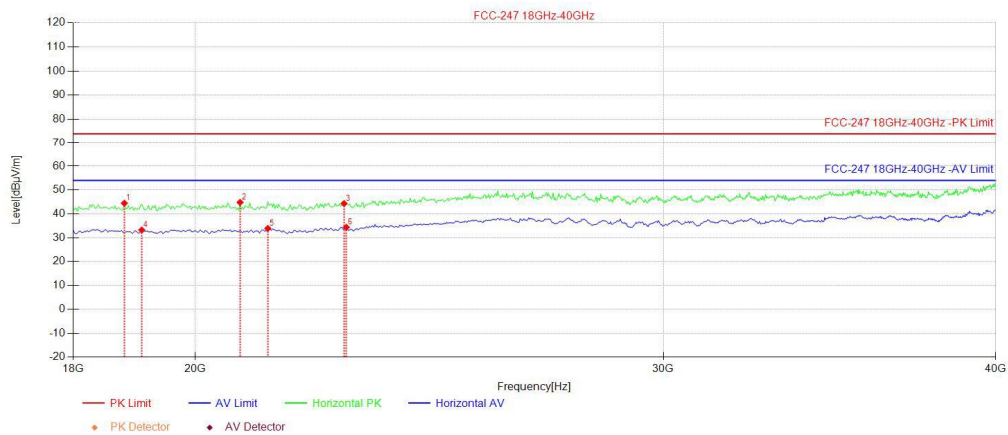
NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	4960.00	52.68	-4.86	47.82	74.00	26.18	150	195	PK	H
2	7440.00	43.47	-1.34	42.13	74.00	31.87	150	51	PK	H
3	9920.00	43.49	2.27	45.76	74.00	28.24	150	6	PK	H
4	4960.00	48.20	-4.86	43.34	54.00	10.66	150	252	AV	H
5	7440.00	34.37	-1.34	33.03	54.00	20.97	150	82	AV	H
6	9920.00	39.14	2.27	41.41	54.00	12.59	150	310	AV	H



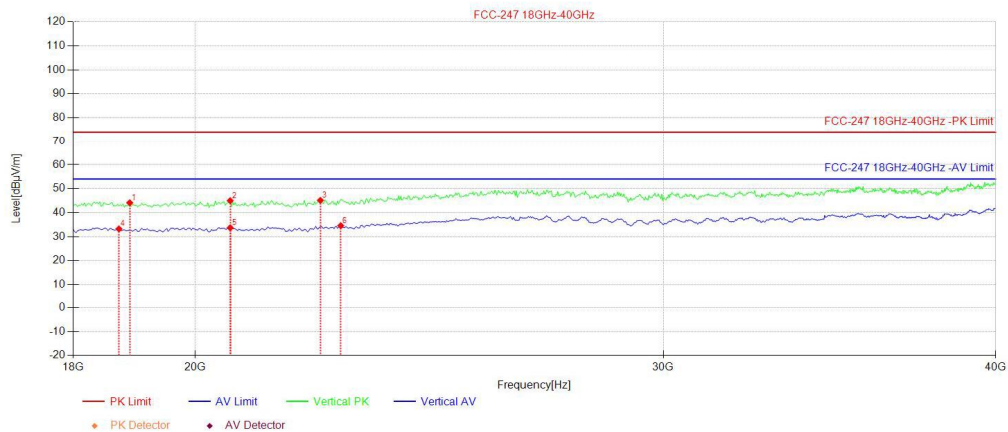
NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	4960.00	52.78	-4.86	47.92	74.00	26.08	150	253	PK	V
2	7440.00	43.11	-1.34	41.77	74.00	32.23	150	339	PK	V
3	9920.00	44.07	2.27	46.34	74.00	27.66	150	169	PK	V
4	4960.00	49.51	-4.86	44.65	54.00	9.35	150	253	AV	V
5	7440.00	34.31	-1.34	32.97	54.00	21.03	150	30	AV	V
6	9920.00	39.59	2.27	41.86	54.00	12.14	150	283	AV	V



DH5 2402MHz 18-25G (Worst Mode)



NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	18814.81	35.18	9.28	44.46	74.00	29.54	100	130	PK	Horizontal
2	20796.79	36.09	8.75	44.84	74.00	29.16	100	20	PK	Horizontal
3	22756.75	35.30	9.03	44.33	74.00	29.67	100	150	PK	Horizontal
4	19101.10	23.60	9.63	33.23	54.00	20.77	100	210	AV	Horizontal
5	21303.30	25.28	8.62	33.90	54.00	20.10	100	120	AV	Horizontal
6	22800.80	25.00	9.38	34.38	54.00	19.62	100	240	AV	Horizontal



NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	18902.90	34.52	9.59	44.11	74.00	29.89	100	172	PK	Vertical
2	20620.62	36.16	8.82	44.98	74.00	29.02	100	139	PK	Vertical
3	22294.29	36.04	9.09	45.13	74.00	28.87	100	353	PK	Vertical
4	18726.72	24.02	9.22	33.24	54.00	20.76	100	73	AV	Vertical
5	20620.62	24.89	8.82	33.71	54.00	20.29	100	40	AV	Vertical
6	22690.69	25.34	9.25	34.59	54.00	19.41	100	107	AV	Vertical



Note:

1. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including Ant.Factor and the Cable Factor etc.), The basic equation is as follows:
$$\text{Result Level} = \text{Reading Level} + \text{Correct Factor (including Ant.Factor, Cable Factor etc.)}$$
2. The amplitude of 9KHz to 30MHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
3. The amplitude of 18GHz to 25GHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be report.
4. All channels had been pre-test, DH5 is the worst case, only the worst case was reported.
5. Emissions exceeding the limit are fundamental signals and are exempted from these requirements.



3.10 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10: 2020 Section 7.8.8 /6.3 / 6.6		
Test Site:	Measurement Distance: 3m or 10m (Semi-Anechoic Chamber)		
Limit:	Frequency	Limit (dBuV/m)	Remark
	30MHz-88MHz	40.0	Quasi-peak
	88MHz-216MHz	43.5	Quasi-peak
	216MHz-960MHz	46.0	Quasi-peak
	960MHz-1GHz	54.0	Quasi-peak
	Above 1GHz	54.0	Average Value
		74.0	Peak Value
Test Setup:			

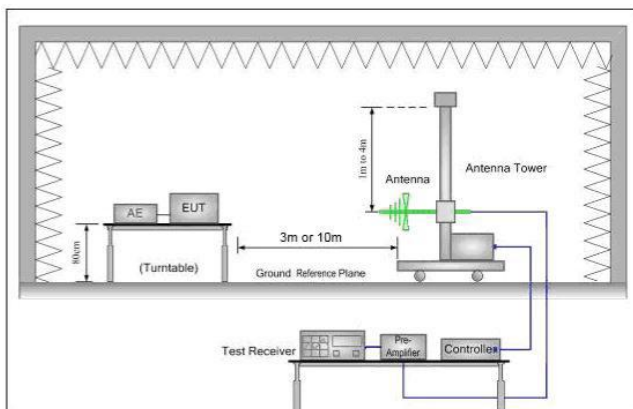


Figure 1. 30MHz to 1GHz

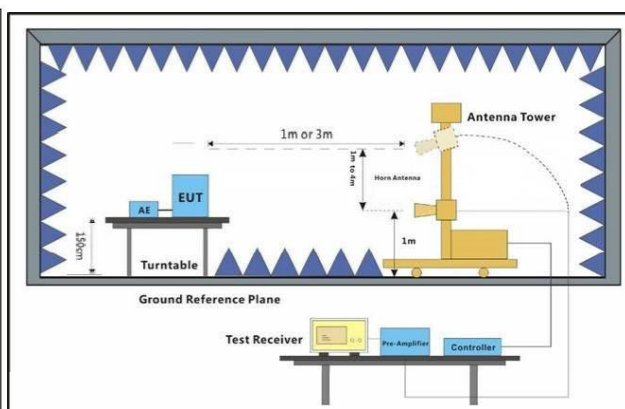


Figure 2. Above 1 GHz

Test Procedure:	- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. - For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel - Test the EUT in the lowest channel , the Highest channel - The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case. - Repeat above procedures until all frequencies measured was complete.
Test Configuration:	Measurements Below 1000MHz

Guangdong DN Testing Co., Ltd.

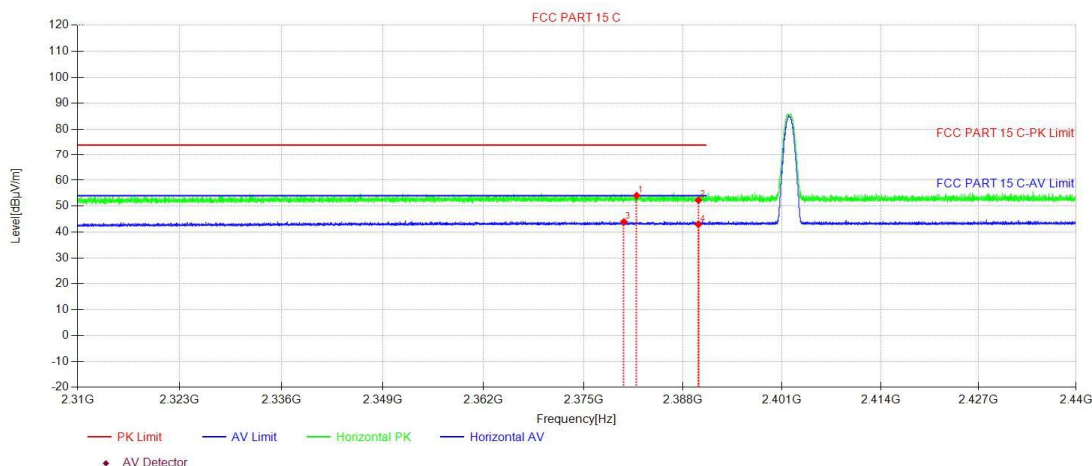


	• RBW = 120 kHz • VBW = 300 kHz • Detector = Peak • Trace mode = max hold Peak Measurements Above 1000 MHz • RBW = 1 MHz • VBW $\geq$ 3 MHz • Detector = Peak • Sweep time = auto • Trace mode = max hold Average Measurements Above 1000MHz • RBW = 1 MHz • VBW = 10 Hz, when duty cycle is no less than 98 percent. • VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Transmitting mode.
Final Test Mode:	Pretest the EUT Transmitting mode. Through Pre-scan, find the DH5 of data type is the worst case of all modulation type. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 2.9 for details
Test Results:	Pass

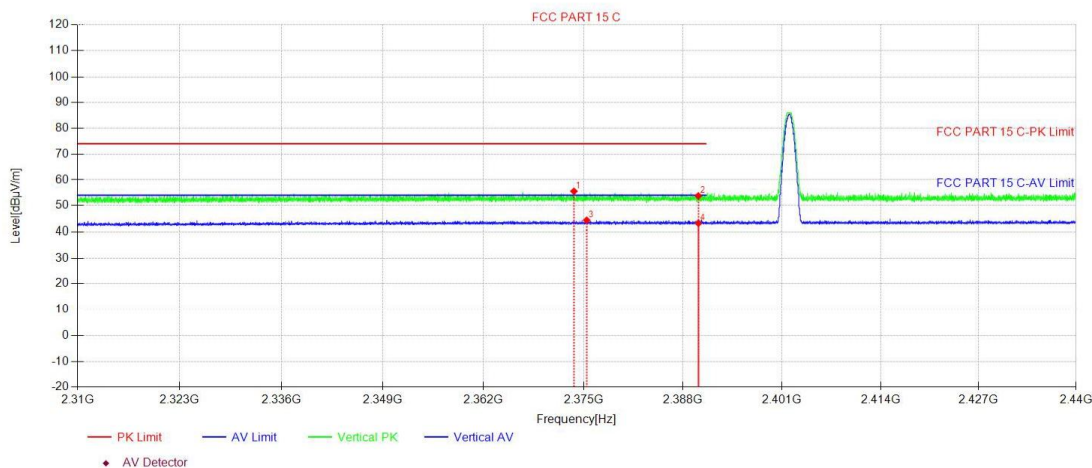


Test Date

DH5 2402MHz



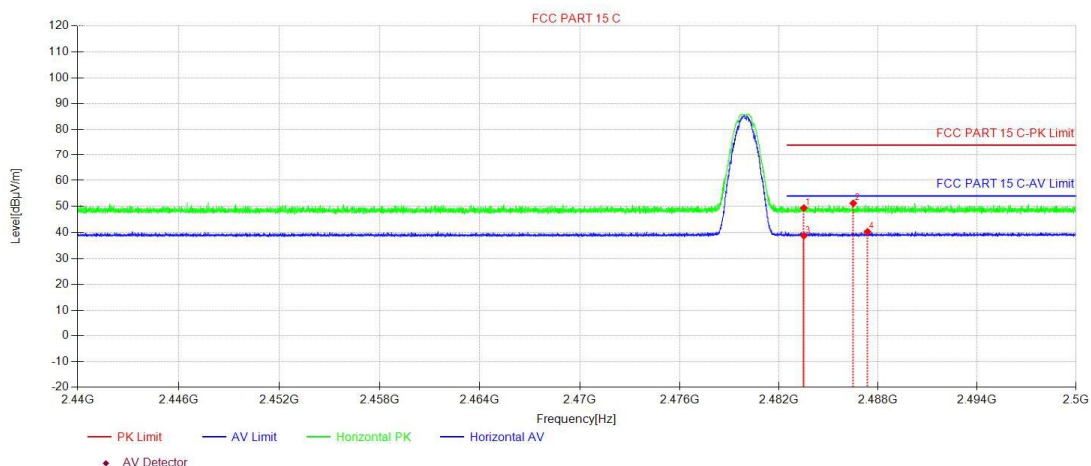
NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	2381.92	54.90	-0.83	54.07	74.00	19.93	150	67	PK	H
2	2389.99	53.07	-0.80	52.27	74.00	21.73	150	292	PK	H
3	2380.25	44.77	-0.83	43.94	54.00	10.06	150	268	AV	H
4	2389.99	43.80	-0.80	43.00	54.00	11.00	150	177	AV	H



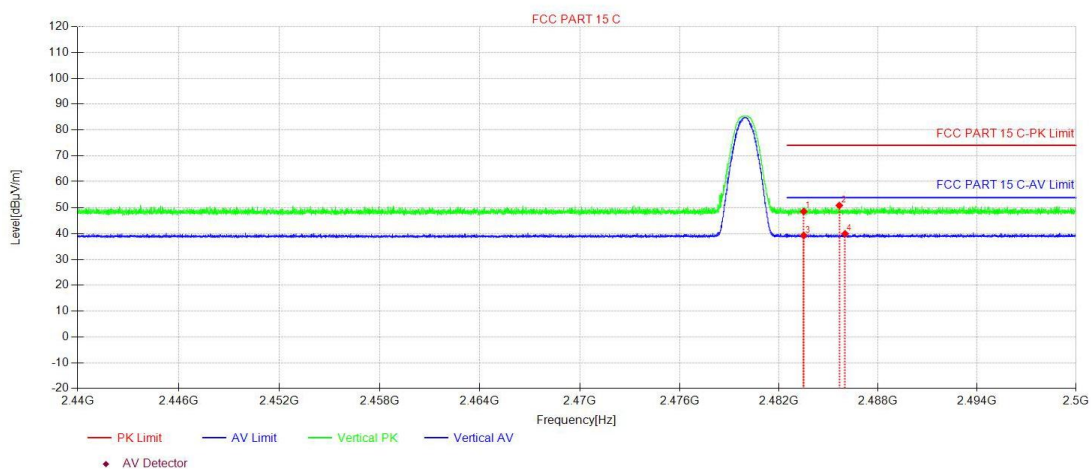
NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	2373.74	56.40	-0.85	55.55	74.00	18.45	150	106	PK	V
2	2389.99	54.56	-0.80	53.76	74.00	20.24	150	85	PK	V
3	2375.40	45.16	-0.85	44.31	54.00	9.69	150	360	AV	V
4	2389.99	43.94	-0.80	43.14	54.00	10.86	150	217	AV	V



DH5 2480MHz



NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	2483.50	49.70	-0.29	49.41	74.00	24.59	150	249	PK	H
2	2486.49	51.48	-0.26	51.22	74.00	22.78	150	180	PK	H
3	2483.50	39.09	-0.29	38.80	54.00	15.20	150	112	AV	H
4	2487.35	40.59	-0.26	40.33	54.00	13.67	150	201	AV	H



NO.	Freq. [MHz]	Reading Level [dBμV]	Correct Factor [dB/m]	Result Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark	Polarity
1	2483.49	48.92	-0.29	48.63	74.00	25.37	150	92	PK	V
2	2485.64	51.25	-0.27	50.98	74.00	23.02	150	46	PK	V
3	2483.49	39.65	-0.29	39.36	54.00	14.64	150	26	AV	V
4	2485.99	40.29	-0.27	40.02	54.00	13.98	150	356	AV	V

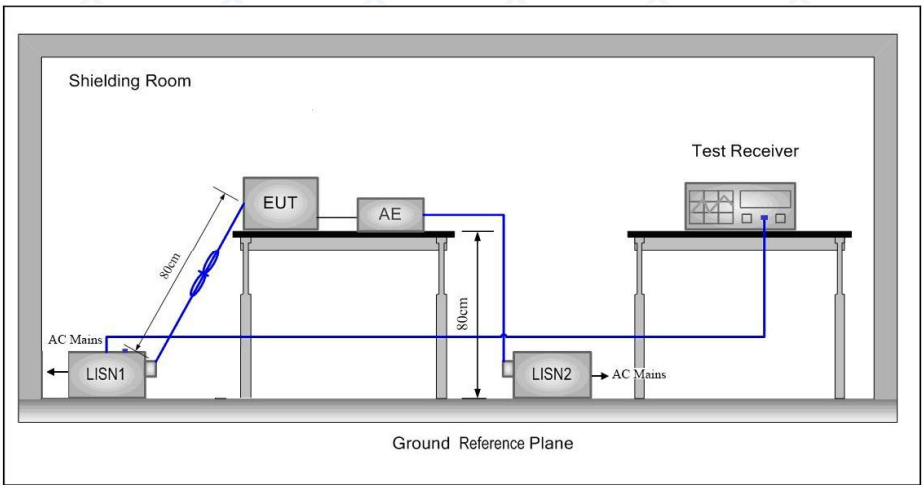
Note:

1. All channels had been pre-test, DH5 is the worst case, only the worst case was reported.
2. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including Ant.Factor and the Cable Factor etc.), The basic equation is as follows:

Result Level= Reading Level + Correct Factor(including Ant.Factor ,Cable Factor etc.)



3.11 AC Power Line Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10: 2020 Section 6.2		
Test Frequency Range:	150kHz to 30MHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2020 on conducted measurement.		
Test Setup:			
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates at lowest, middle and highest channel. Charge + Transmitting mode.		
Final Test Mode:	Through Pre-scan, find the the worst case.		



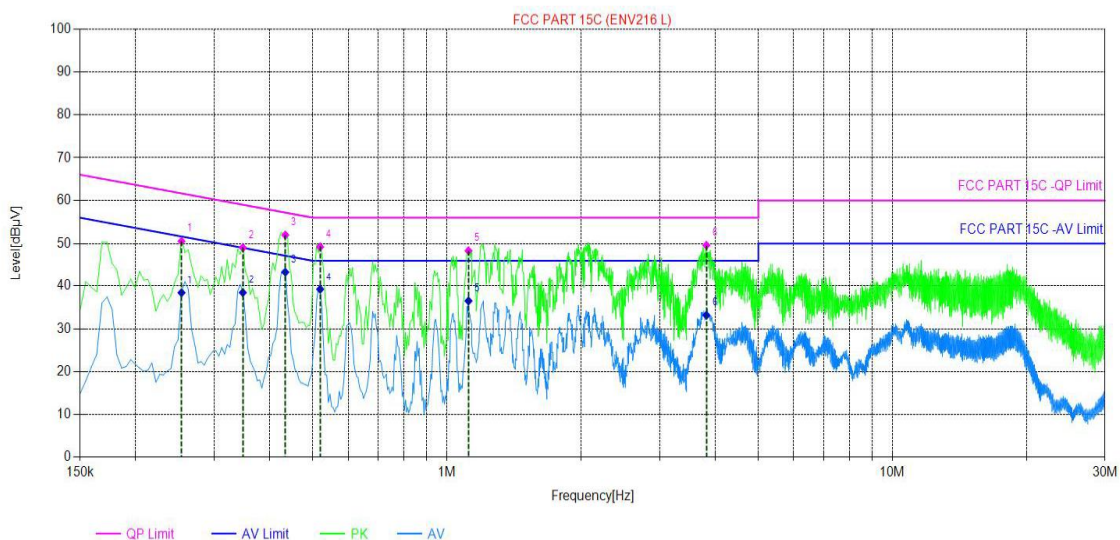
Instruments Used:	Refer to section 2.9 for details
Test Results:	PASS

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live Line:

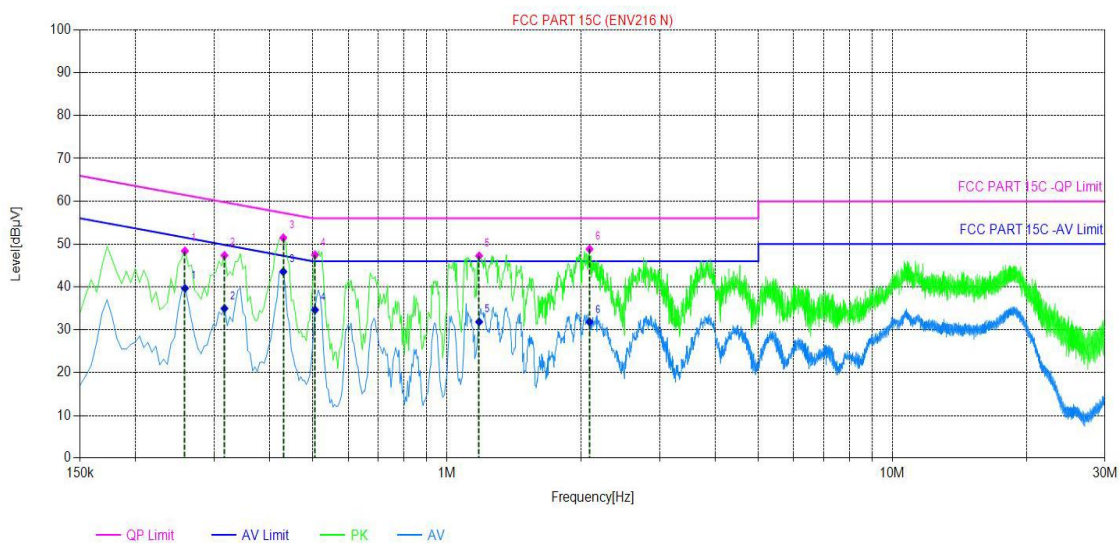


Final Data List

NO.	Freq. [MHz]	QP Reading [dBμV]	AV Reading [dBμV]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.2535	40.63	28.49	9.91	50.54	61.64	11.10	38.40	51.64	13.24	PASS
2	0.348	39.22	28.60	9.83	49.05	59.01	9.96	38.43	49.01	10.58	PASS
3	0.4335	42.18	33.55	9.80	51.98	57.19	5.21	43.35	47.19	3.84	PASS
4	0.519	39.35	29.34	9.87	49.22	56.00	6.78	39.21	46.00	6.79	PASS
5	1.1175	38.61	26.78	9.72	48.33	56.00	7.67	36.50	46.00	9.50	PASS
6	3.822	39.85	23.43	9.75	49.60	56.00	6.40	33.18	46.00	12.82	PASS



Neutral Line:



Final Data List

NO.	Freq. [MHz]	QP Reading [dBμV]	AV Reading [dBμV]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.258	38.51	29.82	9.87	48.38	61.50	13.12	39.69	51.50	11.81	PASS
2	0.3165	37.47	25.06	9.88	47.35	59.80	12.45	34.94	49.80	14.86	PASS
3	0.429	41.60	33.76	9.83	51.43	57.27	5.84	43.59	47.27	3.68	PASS
4	0.5055	37.77	24.89	9.71	47.48	56.00	8.52	34.60	46.00	11.40	PASS
5	1.1805	37.54	22.08	9.70	47.24	56.00	8.76	31.78	46.00	14.22	PASS
6	2.0895	39.05	21.97	9.78	48.83	56.00	7.17	31.75	46.00	14.25	PASS

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including LISN Factor and the Cable Factor etc.), The basic equation is as follows:
Result Level= Reading Level + Correct Factor(including LISN Factor, Cable Factor etc.



4 Appendix

Appendix A: 20dB Emission Bandwidth

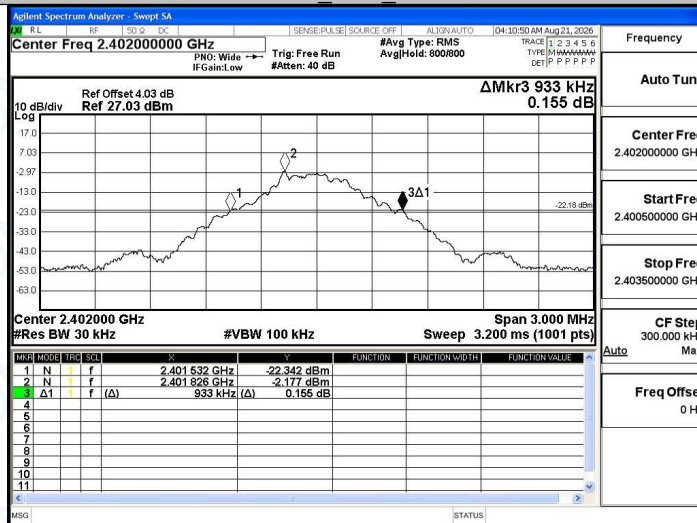
Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.933	2401.532	2402.465	---	---
		2441	0.927	2440.529	2441.456	---	---
		2480	0.933	2479.526	2480.459	---	---
2DH5	Ant1	2402	1.290	2401.352	2402.642	---	---
		2441	1.284	2440.352	2441.636	---	---
		2480	1.332	2479.310	2480.642	---	---
3DH5	Ant1	2402	1.275	2401.337	2402.612	---	---
		2441	1.299	2440.331	2441.630	---	---
		2480	1.269	2479.337	2480.606	---	---

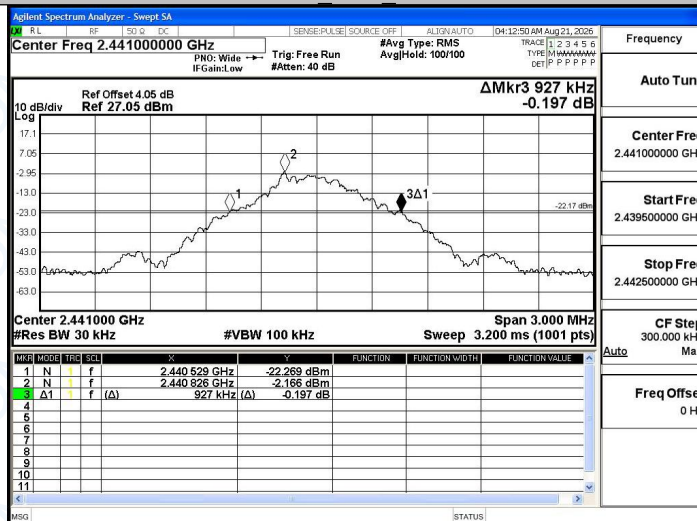


Test Graphs

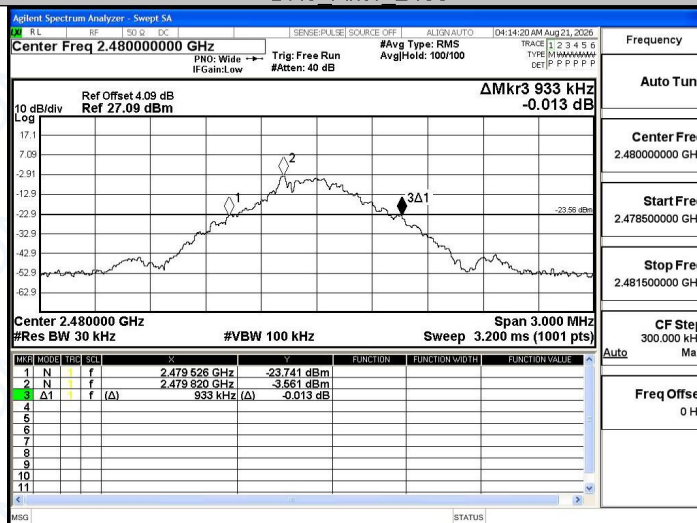
DH5_Ant1_2402



DH5_Ant1_2441

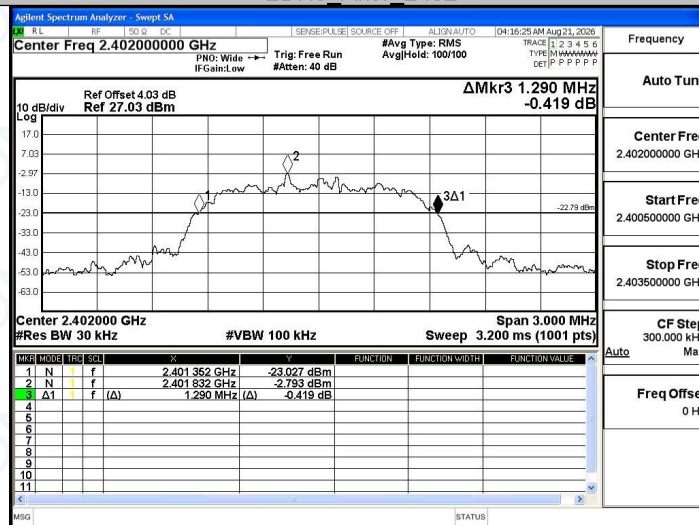


DH5_Ant1_2480

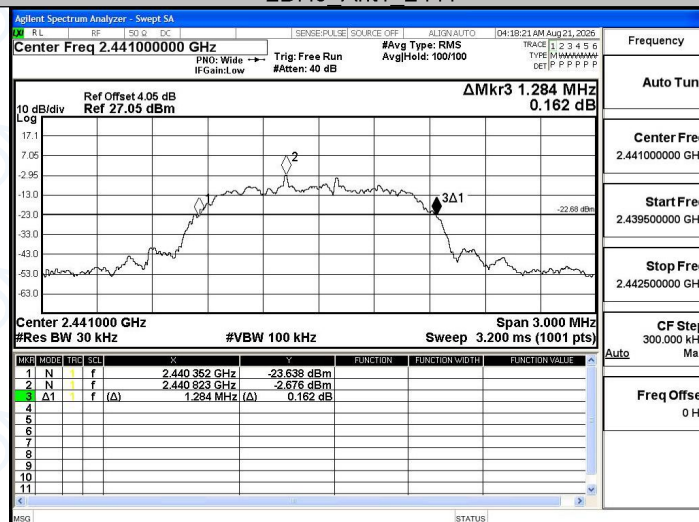




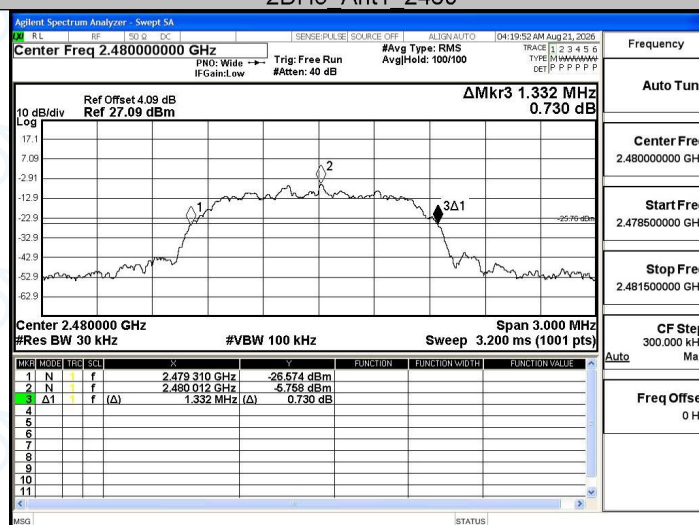
2DH5_Ant1_2402



2DH5_Ant1_2441

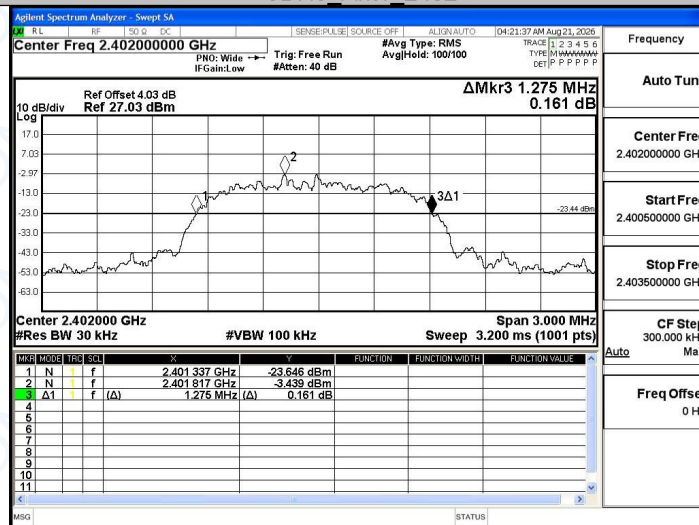


2DH5_Ant1_2480

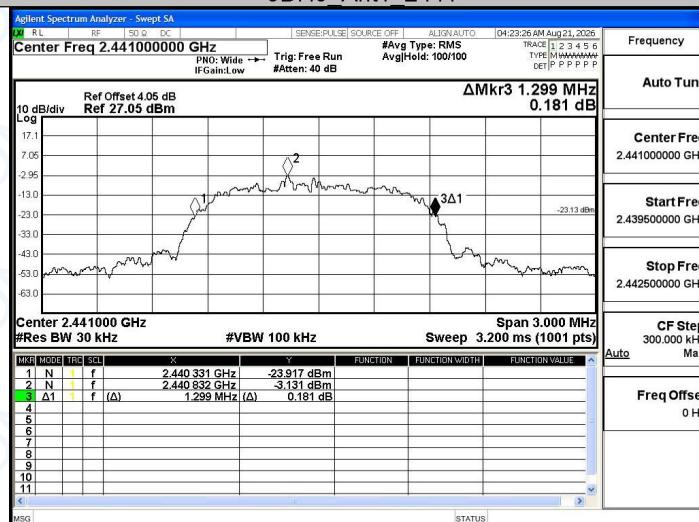




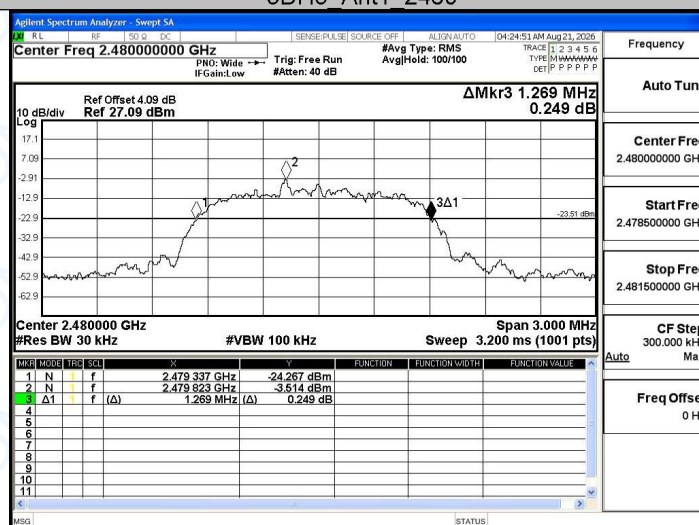
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-2.40	≤20.97	PASS
		2441	-1.84	≤20.97	PASS
		2480	-2.52	≤20.97	PASS
2DH5	Ant1	2402	-0.15	≤20.97	PASS
		2441	0.43	≤20.97	PASS
		2480	-0.37	≤20.97	PASS
3DH5	Ant1	2402	0.40	≤20.97	PASS
		2441	0.96	≤20.97	PASS
		2480	0.23	≤20.97	PASS