

Appendix B for test data:

1. Conducted Peak Output Power

Test Result

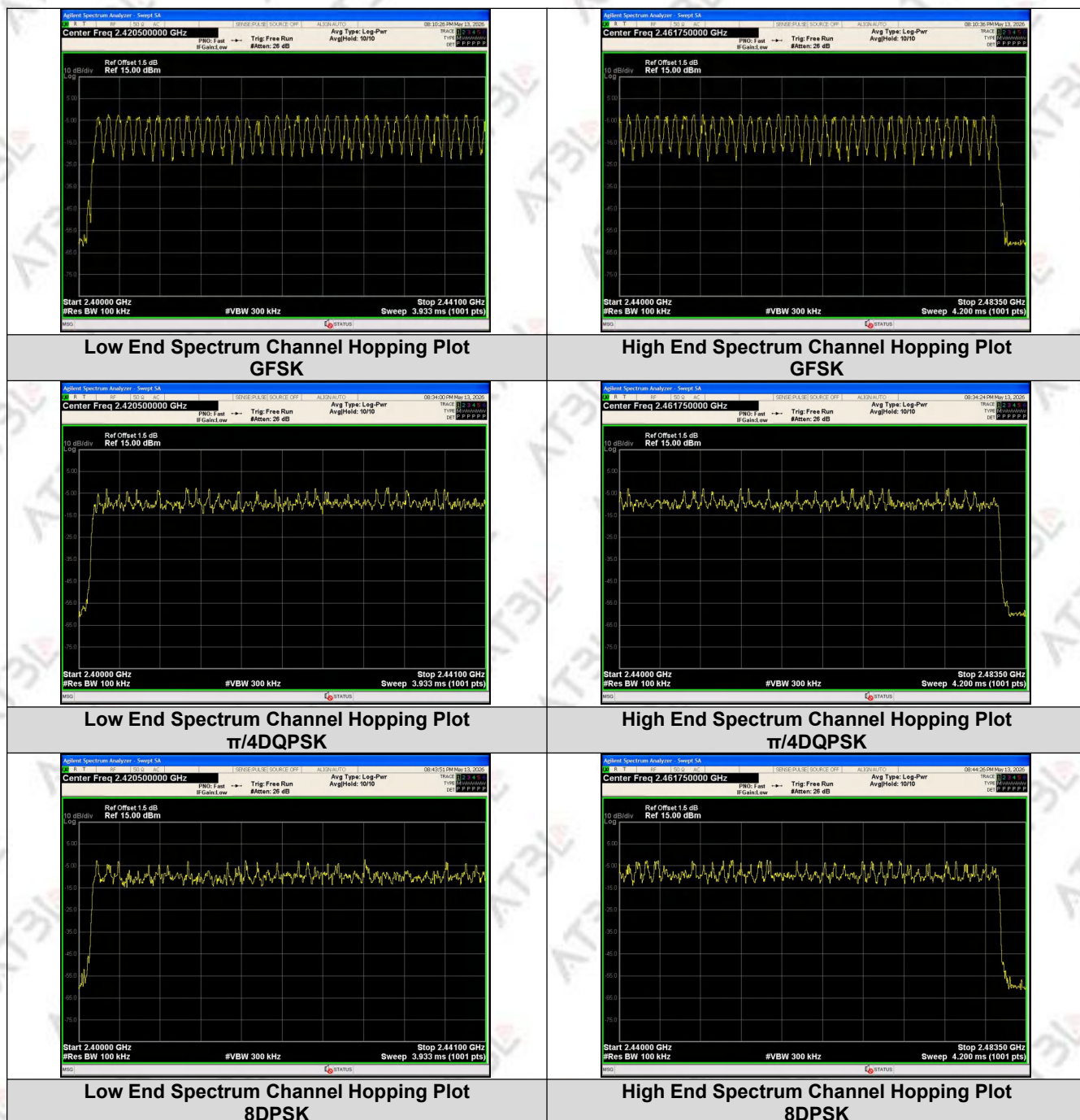
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Limit (dBm)	Result
GFSK	DH5	0	-2.06	≤21	PASS
		39	-1.87		PASS
		78	-2.22		PASS
π/4DQPSK	2-DH5	0	-2.05		PASS
		39	-1.86		PASS
		78	-2.25		PASS
8DPSK	3-DH5	0	-2.06		PASS
		39	-1.90		PASS
		78	-2.28		PASS

2.Number of Hopping Frequencies

Test Result

Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs



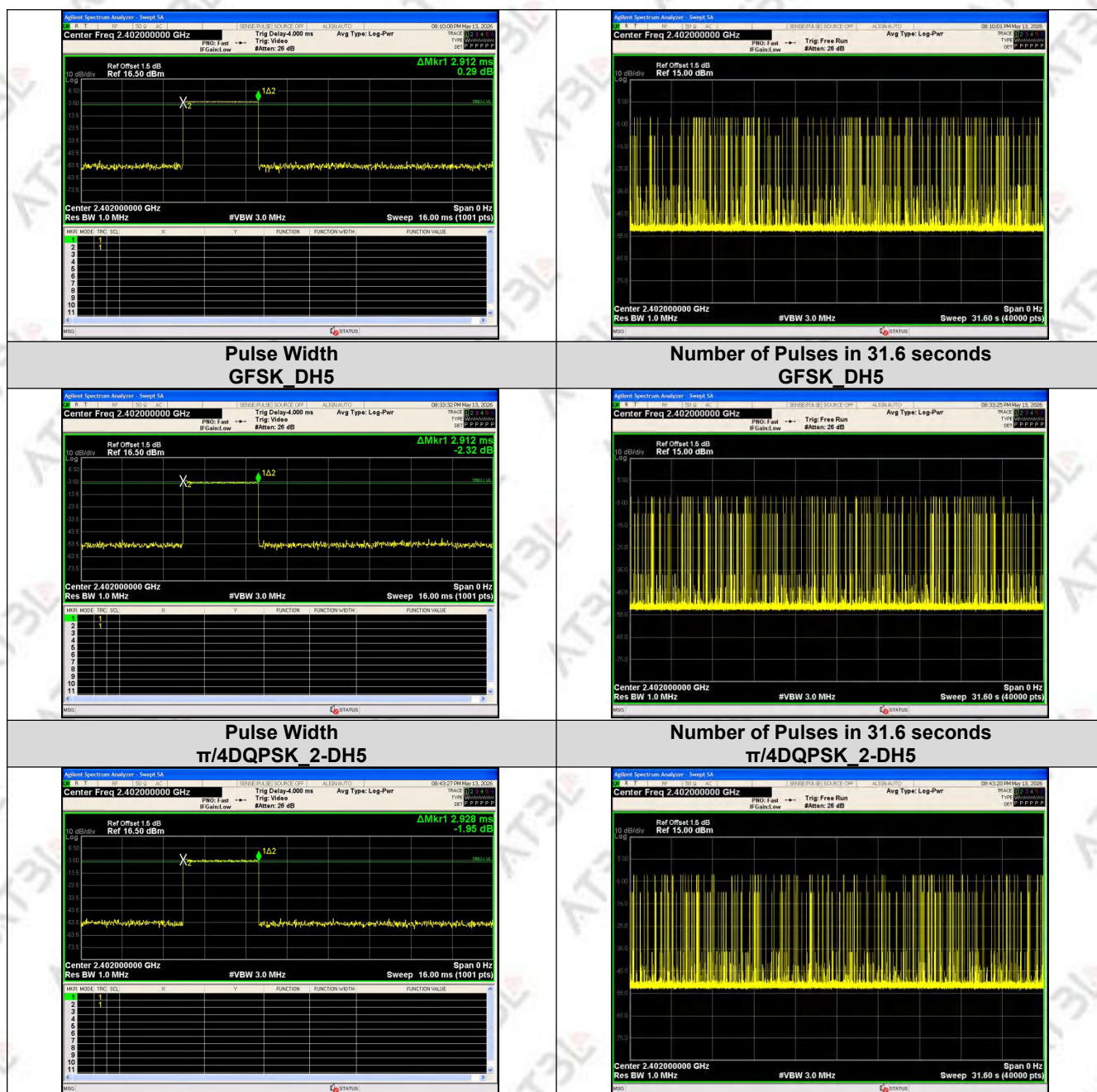
3.Dwell Time

Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	Hopping	2.912	120	349.44	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.912	108	314.5		PASS
8DPSK	3-DH5		2.928	102	298.66		PASS

Note: Dwell time=Pulse time(ms)*Number of Pulses in 31.6 seconds

Test Graphs



Pulse Width 8DPSK_3-DH5	Number of Pulses in 31.6 seconds 8DPSK_3-DH5
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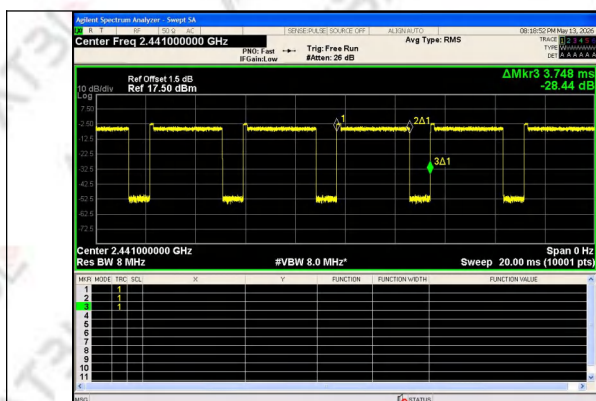
4.Duty Cycle

Test Result

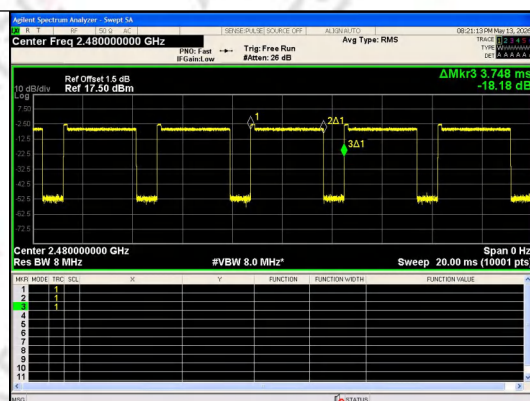
Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)
GFSK	DH5	0	2.910	3.748	77.64	0.7764	1.0991
		39	2.910	3.748	77.64	0.7764	1.0991
		78	2.910	3.748	77.64	0.7764	1.0991
$\pi/4$ DQPSK	2-DH5	0	2.916	3.748	77.80	0.7780	1.0902
		39	2.916	3.748	77.80	0.7780	1.0902
		78	2.916	3.748	77.80	0.7780	1.0902
8DPSK	3-DH5	0	2.916	3.748	77.80	0.7780	1.0902
		39	2.916	3.748	77.80	0.7780	1.0902
		78	2.916	3.748	77.80	0.7780	1.0902

Test Graphs

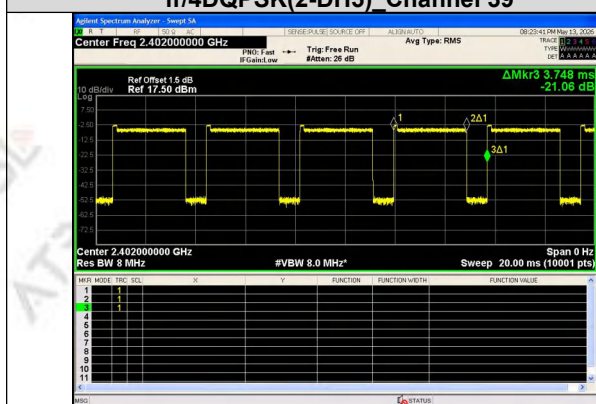




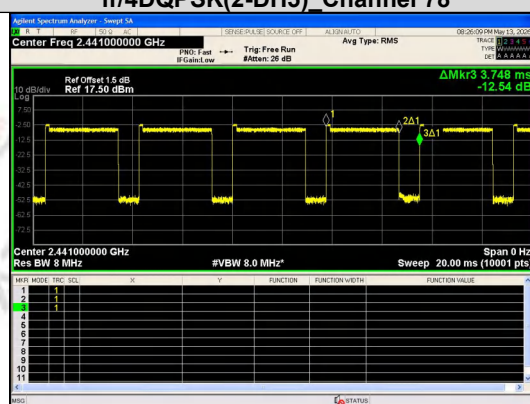
π/4DQPSK(2-DH5)_Channel 39



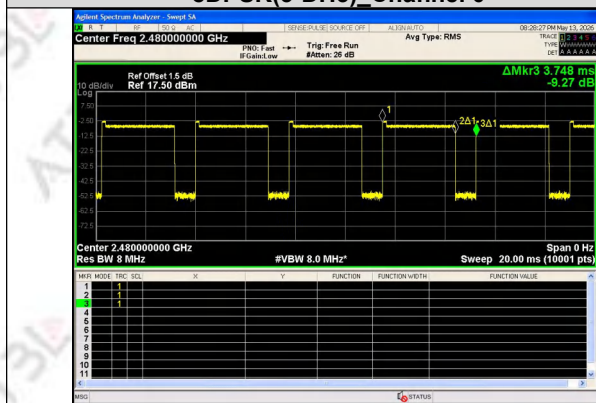
π/4DQPSK(2-DH5)_Channel 78



8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39

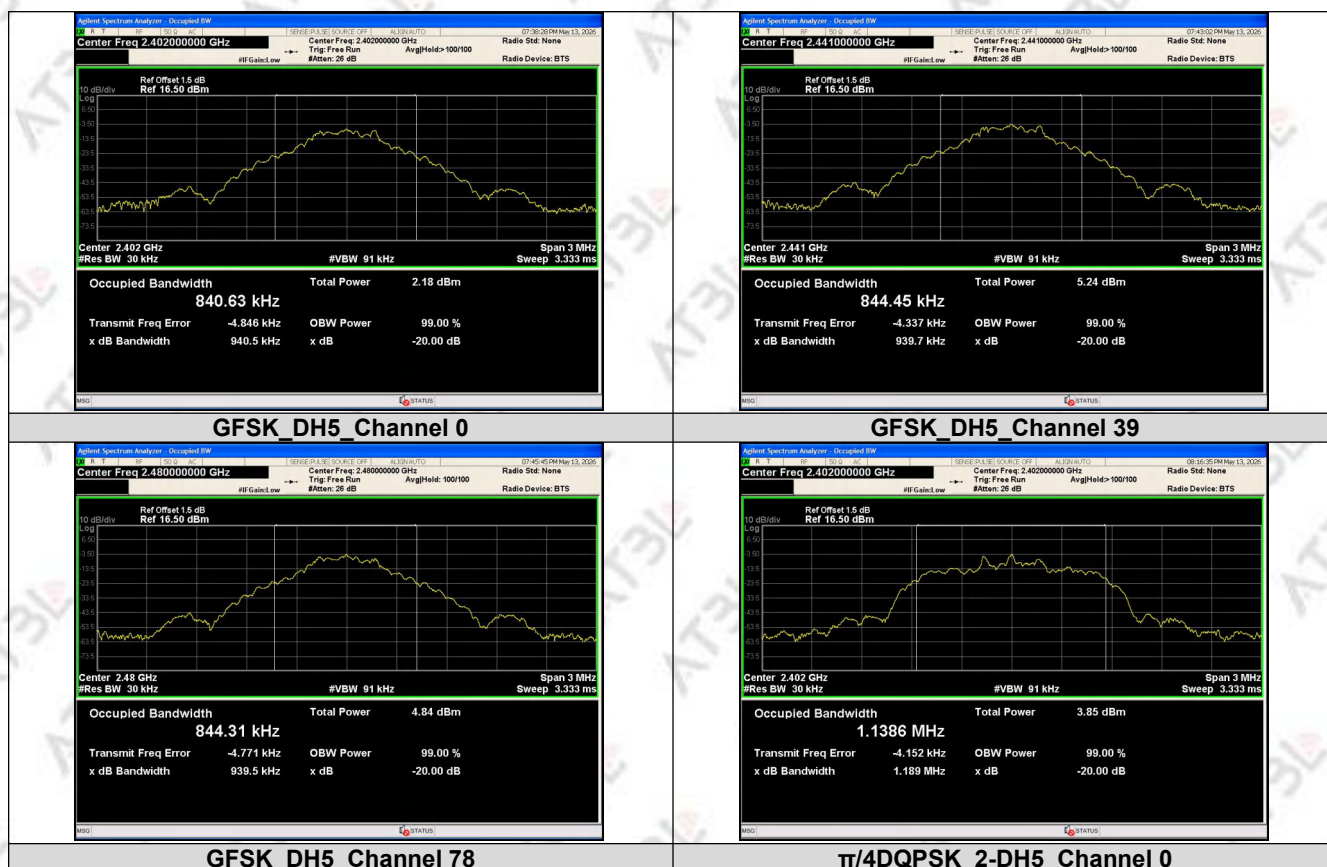


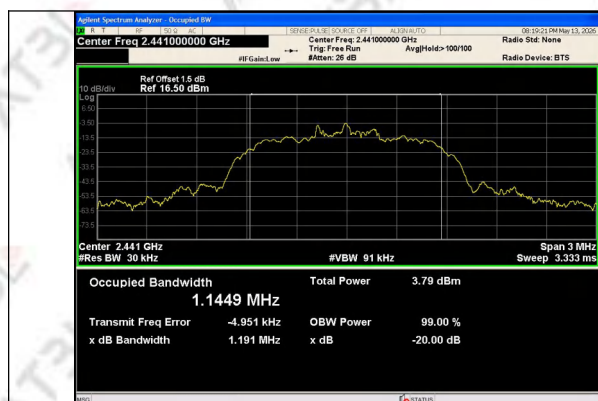
8DPSK(3-DH5)_Channel 78

Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.94
	39	2441 MHz	0.94
	78	2480 MHz	0.94
$\pi/4$ DQPSK	0	2402 MHz	1.19
	39	2441 MHz	1.19
	78	2480 MHz	1.19
8DPSK	0	2402 MHz	1.24
	39	2441 MHz	1.20
	78	2480 MHz	1.24

Test Graphs

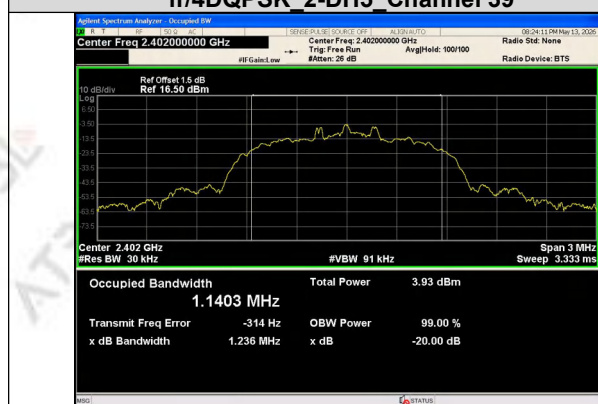




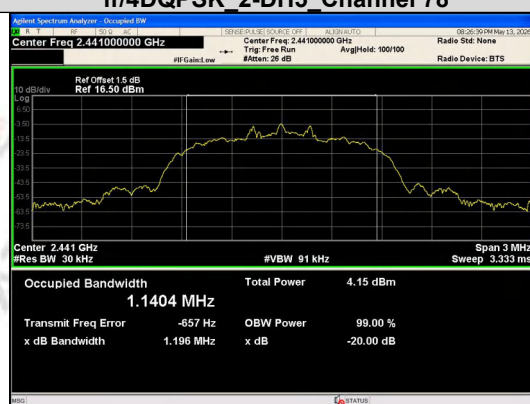
$\pi/4$ DQPSK 2-DH5 Channel 39



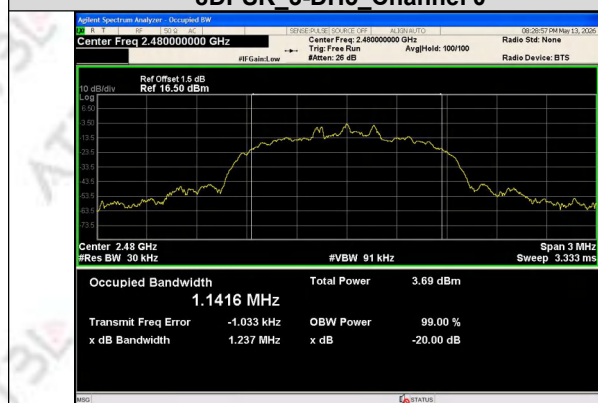
$\pi/4$ DQPSK 2-DH5 Channel 78



8DPSK 3-DH5 Channel 0



8DPSK 3-DH5 Channel 39



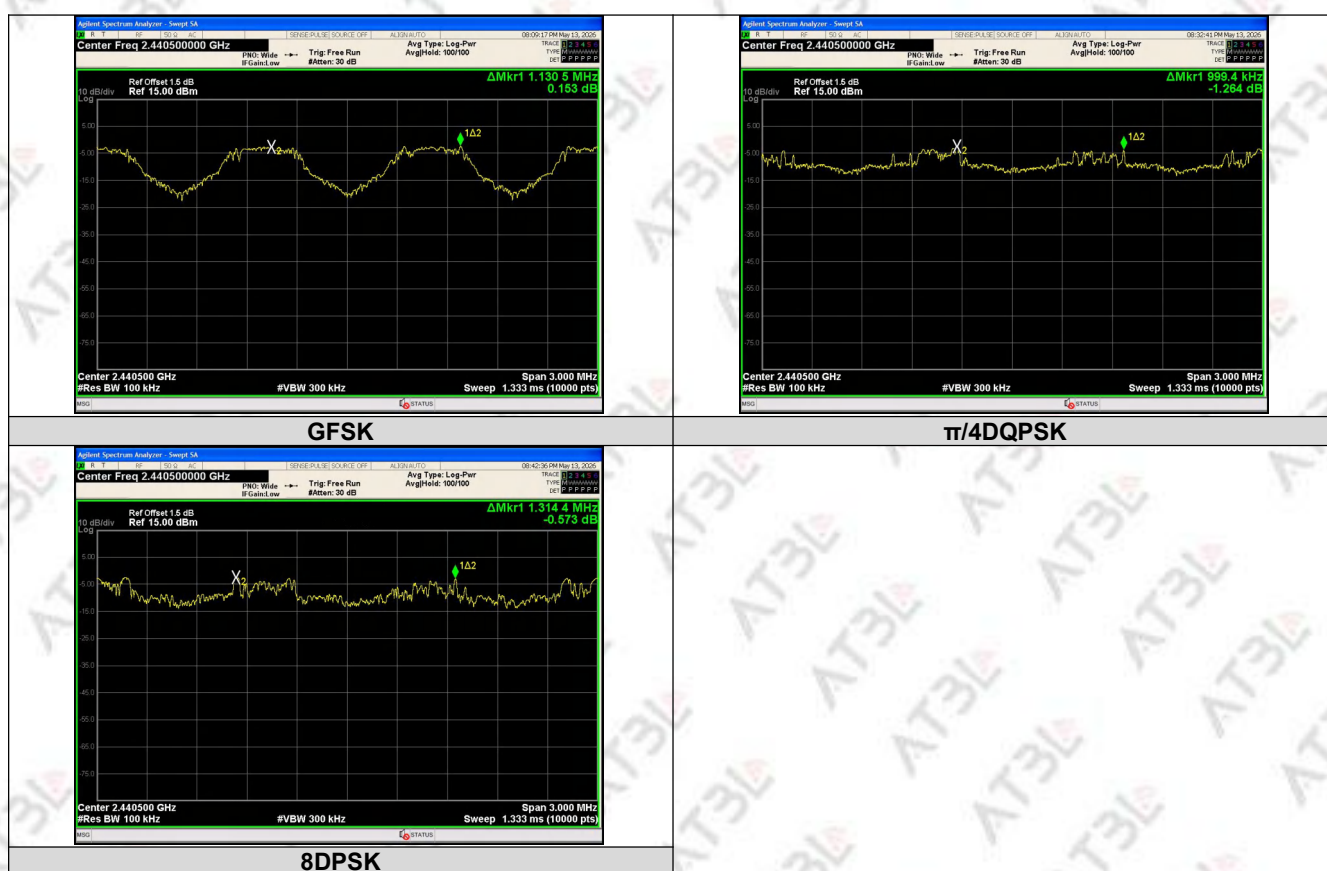
8DPSK 3-DH5 Channel 78

6.Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.0465	2441.177	1.1305	0.63	PASS
$\pi/4$ DQPSK	2-DH5	2440.1665	2441.1659	0.9994	0.79	PASS
8DPSK	3-DH5	2439.8326	2441.147	1.3144	0.80	PASS

Test Graphs



7. Conducted Spurious & Band Edge Emission

Test Result

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-50.881	-25.44	-25.441	PASS
			4804.26	-38.552	-25.44	-13.112	PASS
		39	4882.30	-30.332	-22.35	-7.982	PASS
		78	2483.50	-58.575	-22.71	-35.865	PASS
			4960.33	-31.862	-22.71	-9.152	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-55.613	-22.55	-33.063	PASS
			4804.26	-40.090	-22.55	-17.540	PASS
		39	4881.67	-39.713	-22.37	-17.343	PASS
		78	2483.50	-58.072	-22.74	-35.332	PASS
			4959.70	-39.906	-22.74	-17.166	PASS
8DPSK	3-DH5	0	2400.00	-54.192	-22.62	-31.572	PASS
			4804.26	-32.779	-22.62	-10.159	PASS
		39	4881.67	-38.629	-22.55	-16.079	PASS
		78	2483.50	-59.061	-22.78	-36.281	PASS
			4959.70	-32.621	-22.78	-9.841	PASS

Note: input compensation coefficient (dB)= Cable Loss (dB)

Hopping

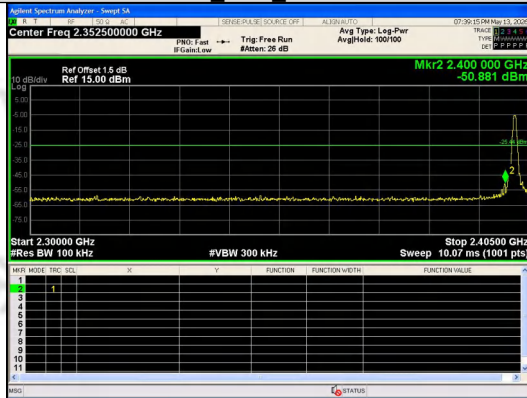
Hopping							
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2400.00	-56.699	-22.5	-34.199	PASS
			2483.50	-59.600	-22.44	-37.160	PASS
π/4DQPSK	2-DH5		2400.00	-55.561	-23.07	-32.491	PASS
			2483.50	-59.607	-22.71	-36.897	PASS
8DPSK	3-DH5		2319.64	-58.467	-22.99	-35.477	PASS
			2400.00	-58.986	-22.99	-35.996	PASS
			2483.50	-58.983	-22.59	-36.393	PASS

Note: input compensation coefficient (dB)= Cable Loss (dB)

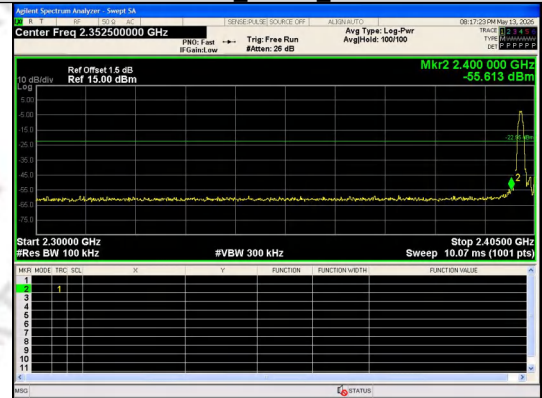
Test Graphs



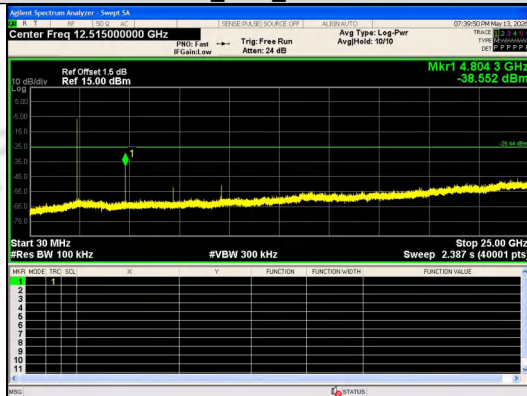
In-Band Reference Level GFSK_DH5_Channel 0



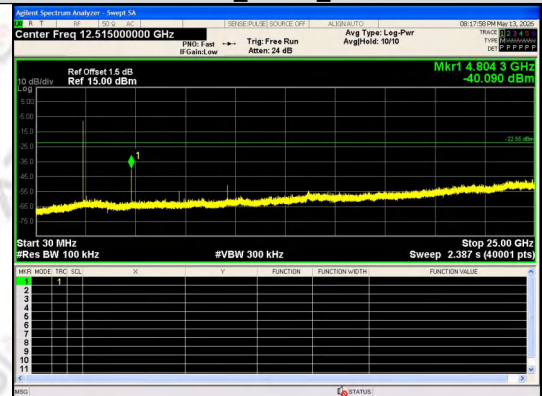
In-Band Reference Level $\pi/4$ DQPSK_2-DH5_Channel 0



Out Of Band Emission GFSK_DH5_Channel 0



Out Of Band Emission $\pi/4$ DQPSK_2-DH5_Channel 0



30.0 MHz - 25000.0 MHz GFSK_DH5_Channel 0



30.0 MHz - 25000.0 MHz $\pi/4$ DQPSK_2-DH5_Channel 0

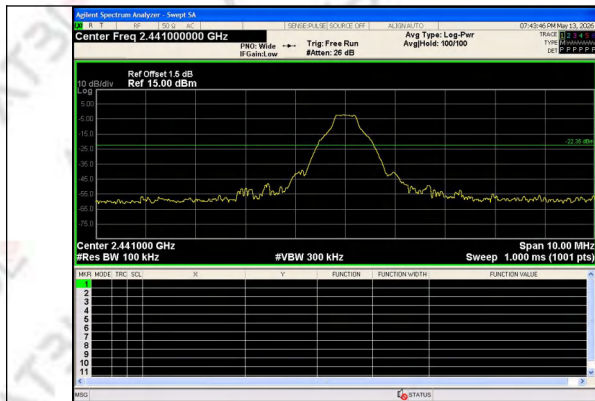


In-Band Reference Level GFSK_DH5_Channel 39

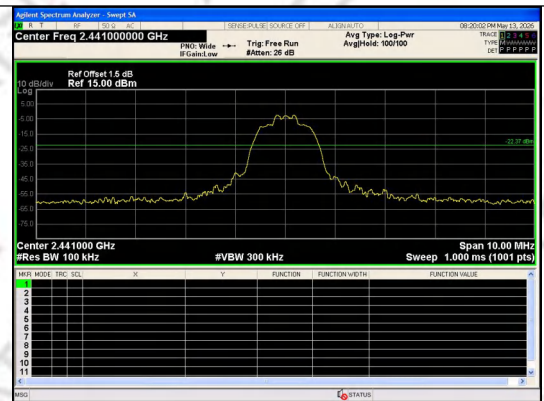


In-Band Reference Level $\pi/4$ DQPSK_2-DH5_Channel 39

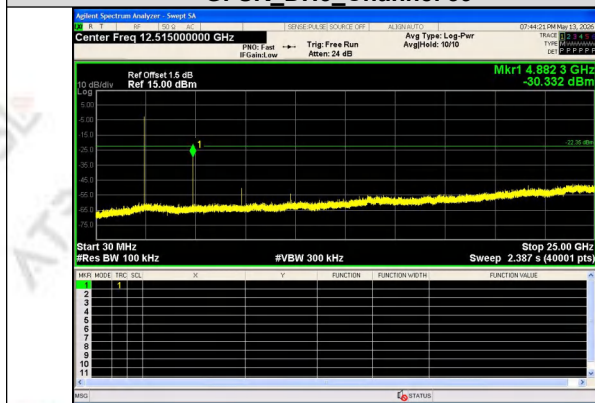




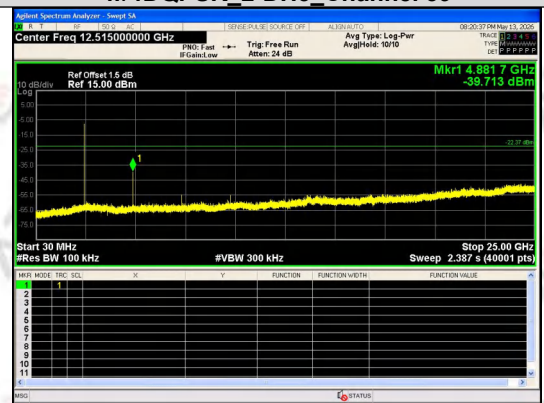
Out Of Band Emission
GFSK_DH5_Channel 39



Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



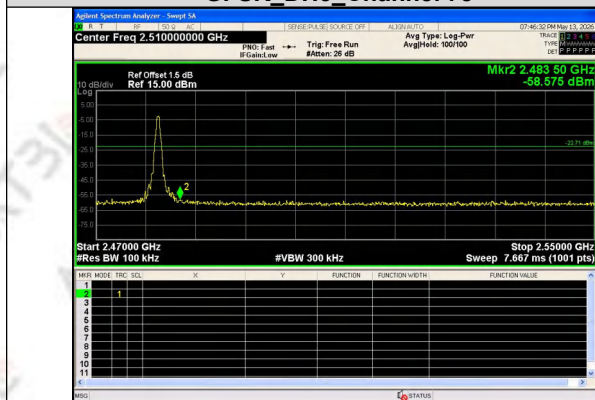
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



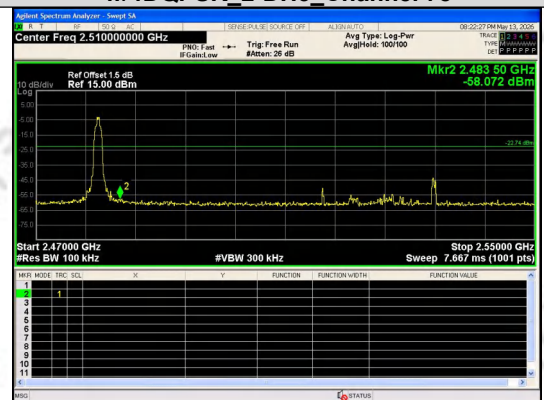
In-Band Reference Level
GFSK_DH5_Channel 78



In-Band Reference Level
 $\pi/4$ DQPSK_2-DH5_Channel 78

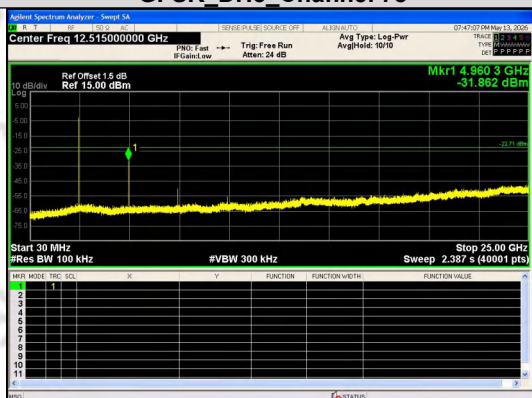


Out Of Band Emission



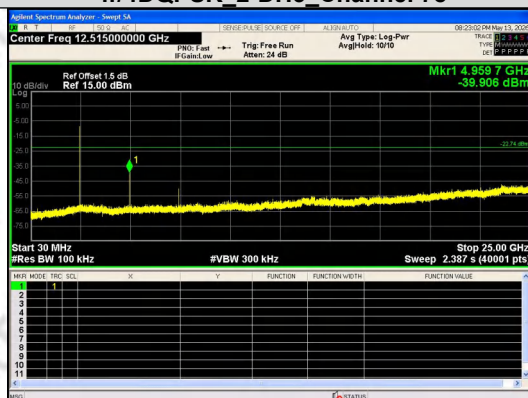
Out Of Band Emission

GFSK_DH5_Channel 78



30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78

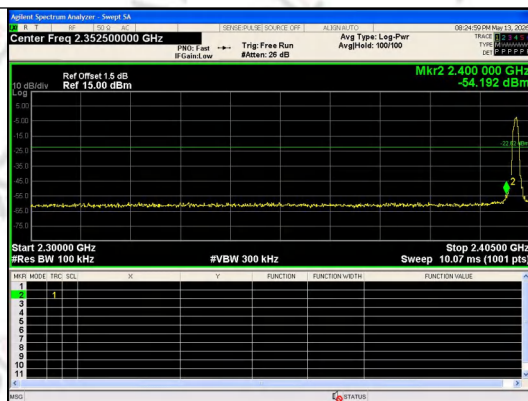
$\pi/4$ DQPSK_2-DH5_Channel 78



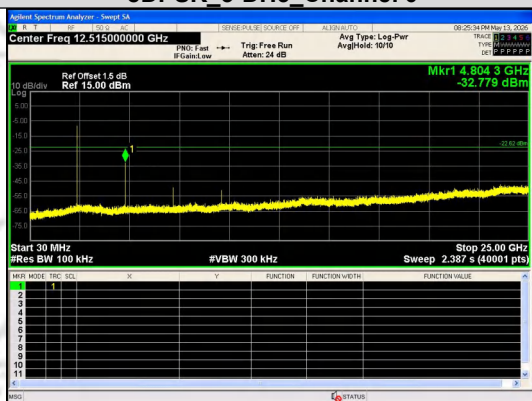
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



In-Band Reference Level
8DPSK_3-DH5_Channel 0



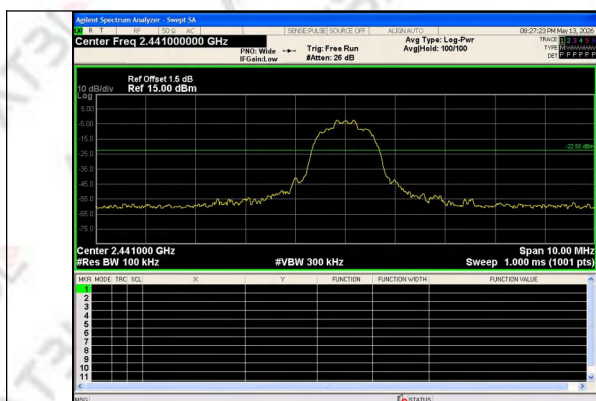
Out Of Band Emission
8DPSK_3-DH5_Channel 0



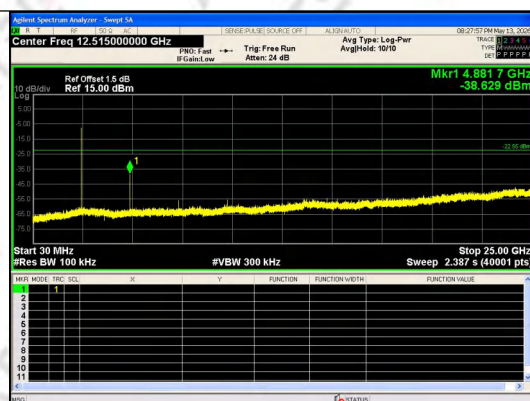
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



In-Band Reference Level
8DPSK_3-DH5_Channel 39



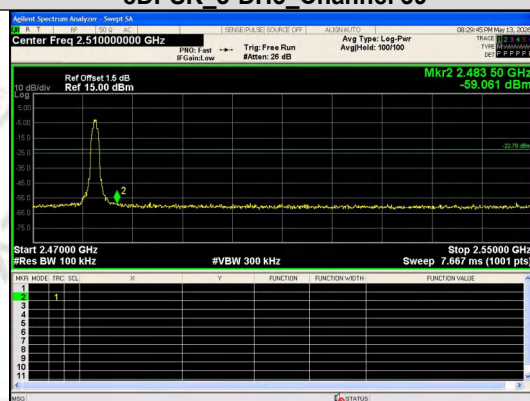
Out Of Band Emission
8DPSK_3-DH5_Channel 39



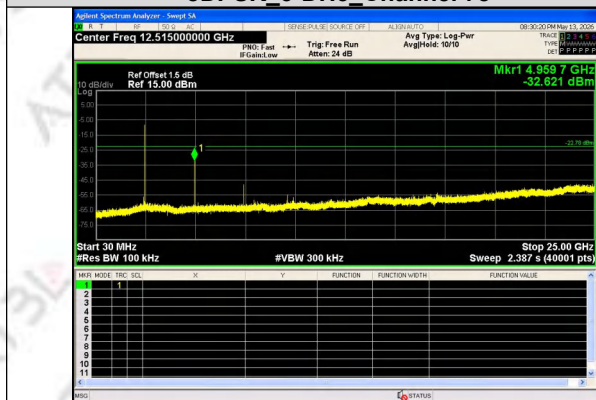
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



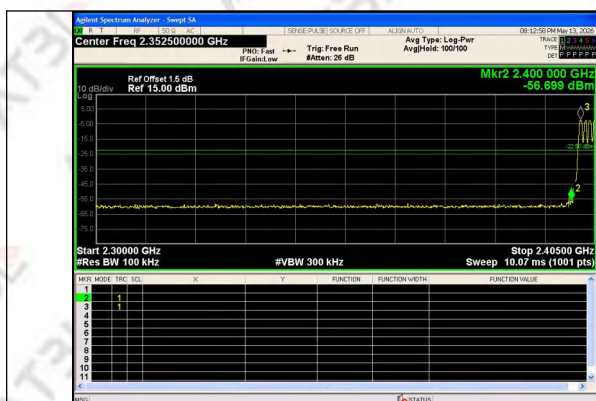
In-Band Reference Level
8DPSK_3-DH5_Channel 78



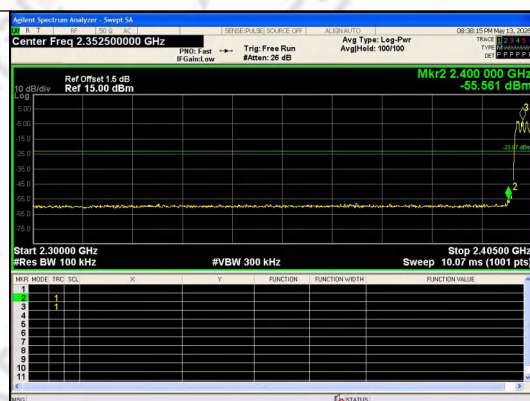
Out Of Band Emission
8DPSK_3-DH5_Channel 78



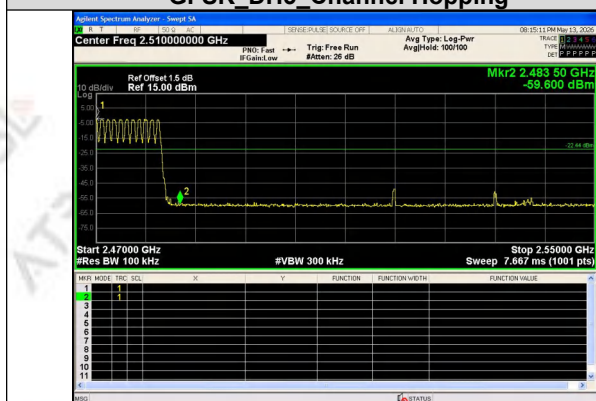
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



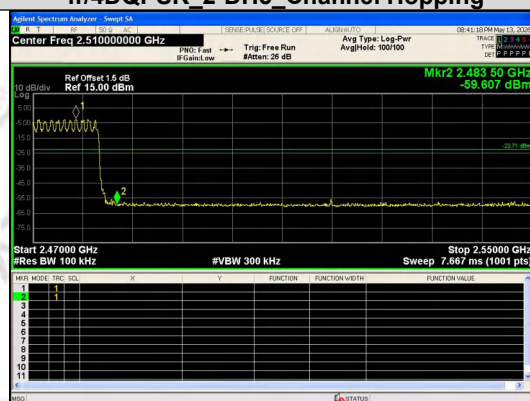
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



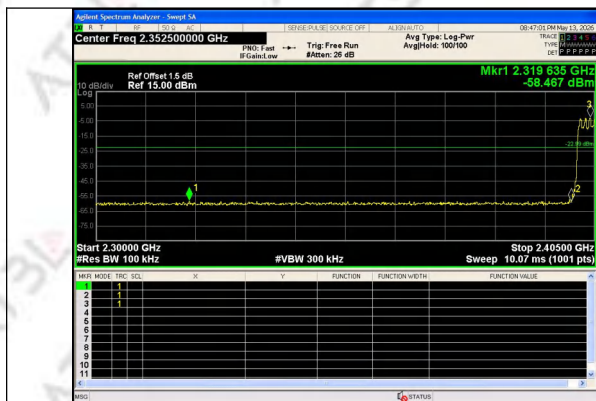
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



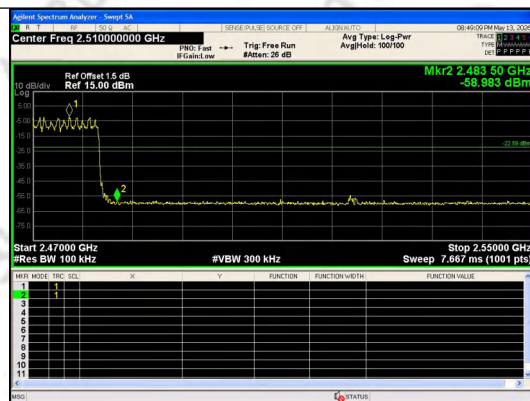
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



Out Of Band Emission(Right)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



Out Of Band Emission(Left)
8DPSK_3-DH5_Channel Hopping



Out Of Band Emission(Right)
8DPSK_3-DH5_Channel Hopping

8.Radiated Spurious Emission and Restricted Band

Test Result

Radiated Spurious Emission:

For 9 kHz ~ 30 MHz

Note:

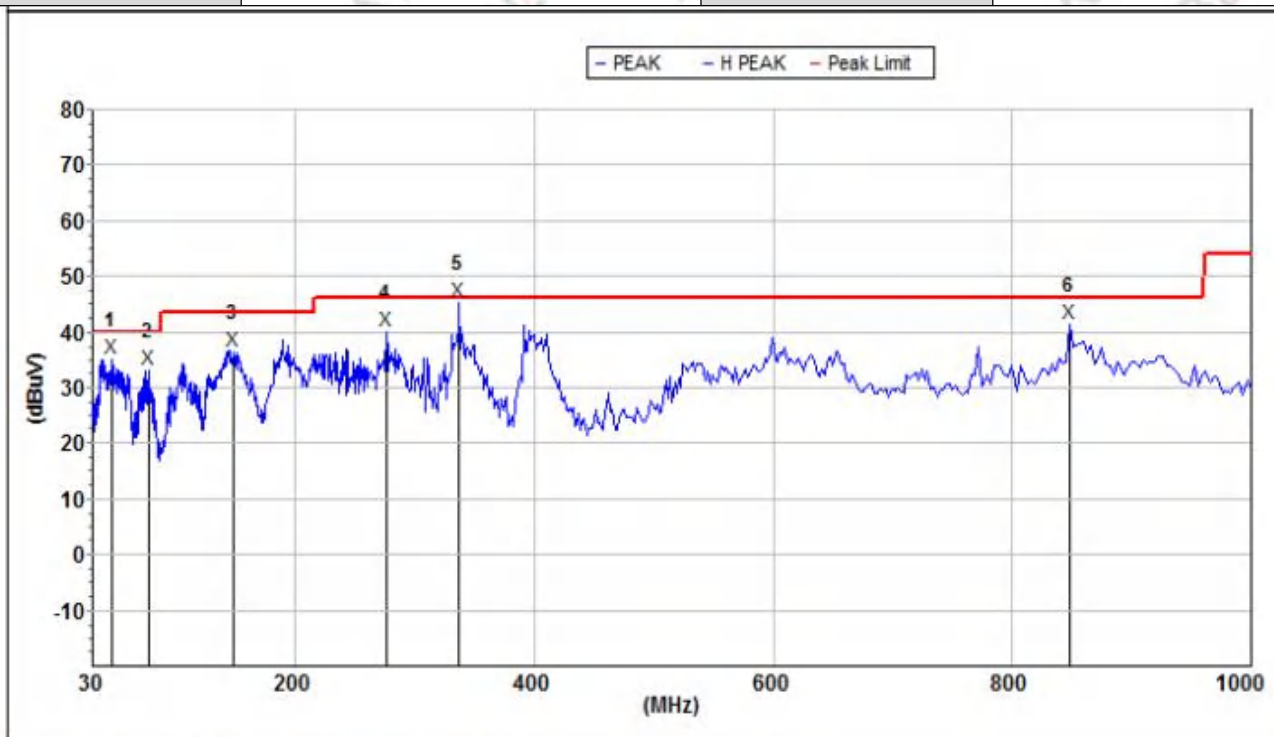
- 1.The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.
- 2.The all data rate modes had been test, but only worse test data was recorded in the test report.

Below 1GHz:

Note:

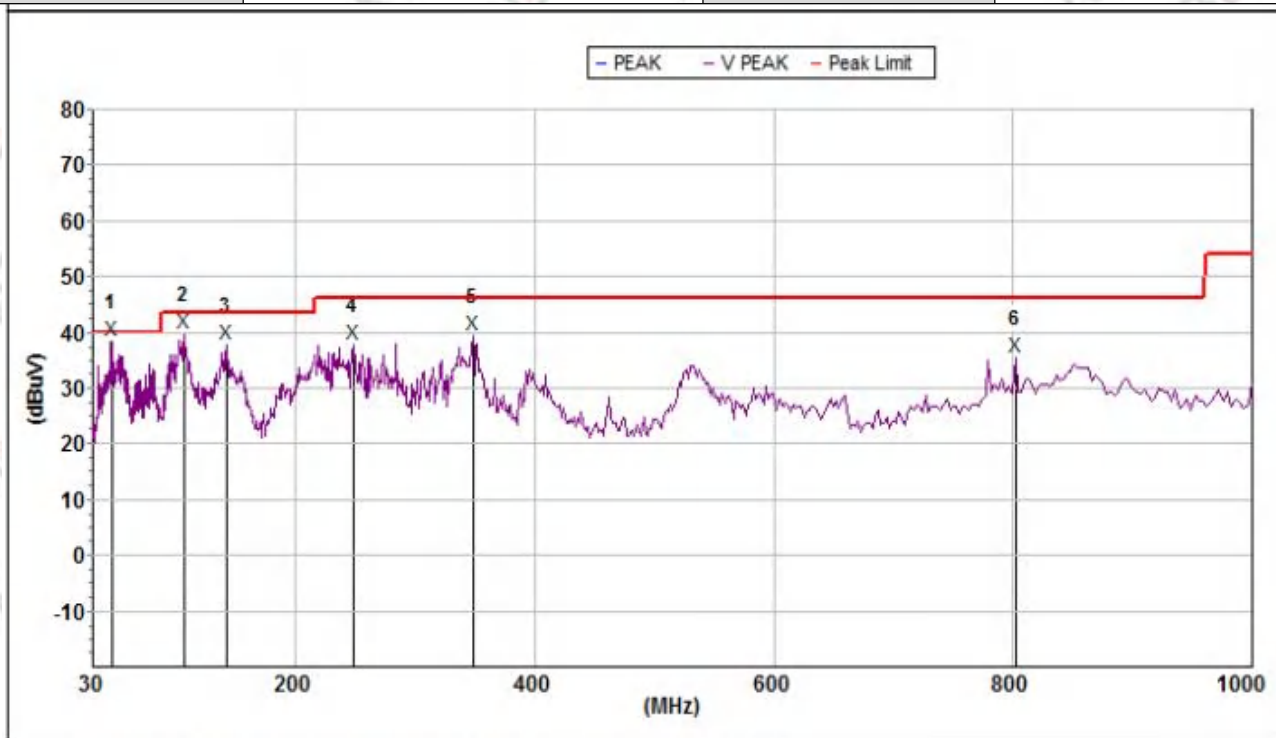
- 1.All modes have been tested, only worst (2DH5-2441MHz)mode was recorded in the test report.
- 2.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
- 3.Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
- 4.The emission levels of other frequencies were less than 20dB margin against the limit.
- 5.Margin value = Emission level-Limit value.

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5_2441MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	46.178	35.1	40.0	4.9	-42.2	H	
2	77.051	33.3	40.0	6.7	-44.2	H	
3	148.441	36.7	43.5	6.8	-34.9	H	
4	276.124	40.2	46.0	5.8	-27.0	H	
5	337.216	45.3	46.0	0.7	-25.5	H	
6	848.056	41.5	46.0	4.5	-18.8	H	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5_2441MHz	Antenna	Vertical



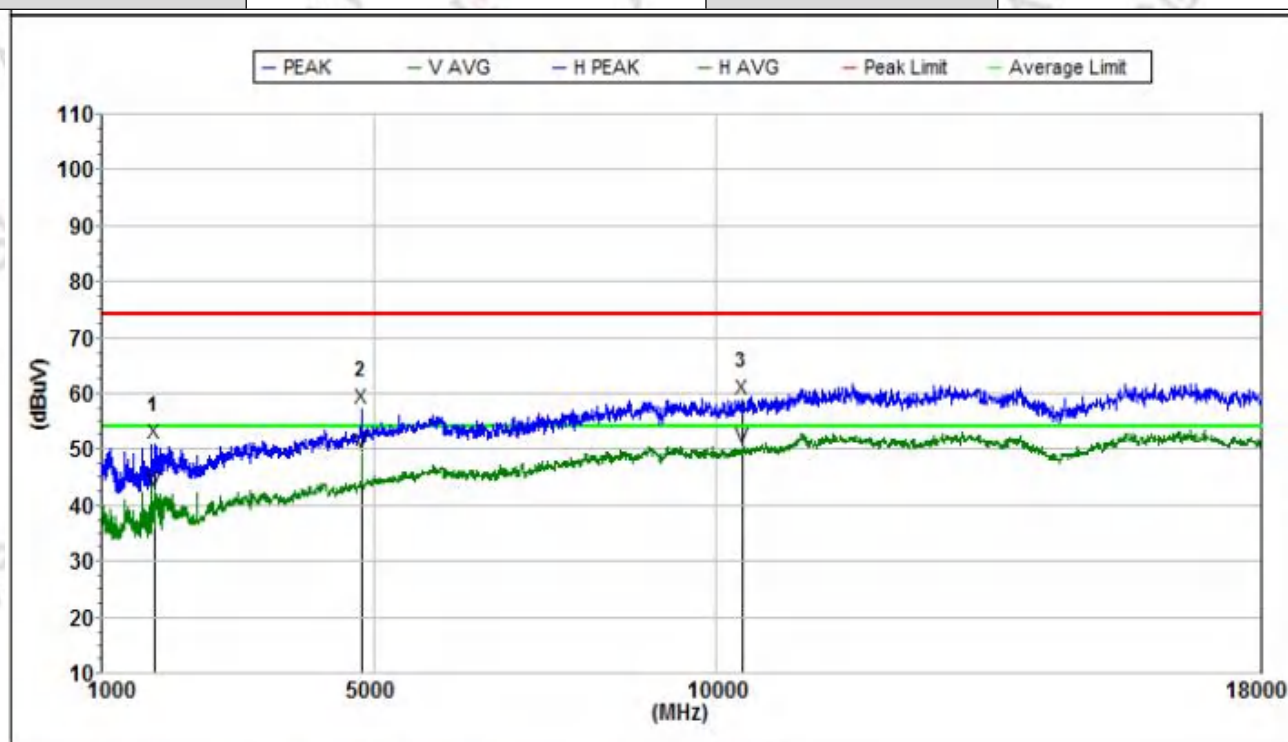
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	45.535	38.4	40.0	1.6	-44.5	V
2	106.759	40.0	43.5	3.5	-34.4	V
3	141.330	37.8	43.5	5.7	-38.9	V
4	248.552	38.0	46.0	8.0	-26.7	V
5	348.027	39.7	46.0	6.3	-25.7	V
6	801.786	35.5	46.0	10.5	-19.0	V

Above 1GHz:

Note:

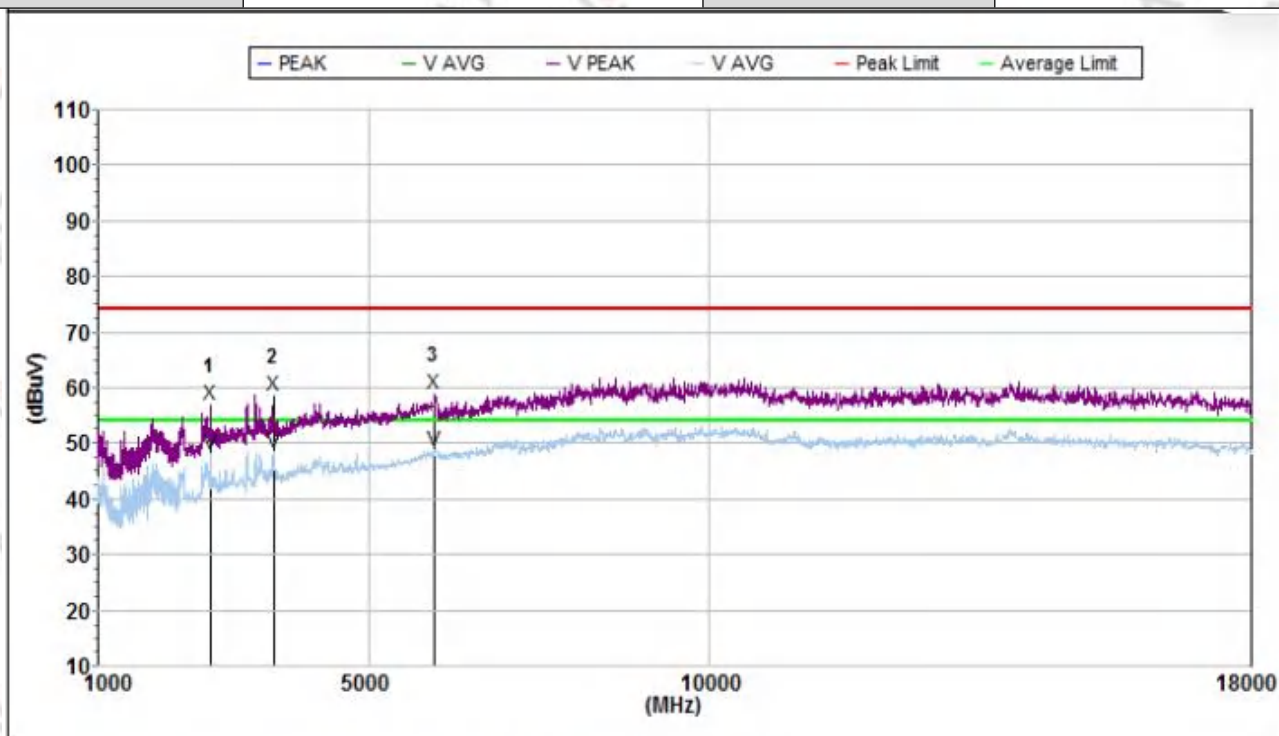
- 1.All modes have been tested, only worst (2DH5)mode was recorded in the test report.
- 2.In frequency ranges 18 ~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.
- 3.We used the filter to test and the main frequency was filtered out.
- 4.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
5. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
6. Margin value = Emission level-Limit value.

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2402MHz	Antenna	Horizontal



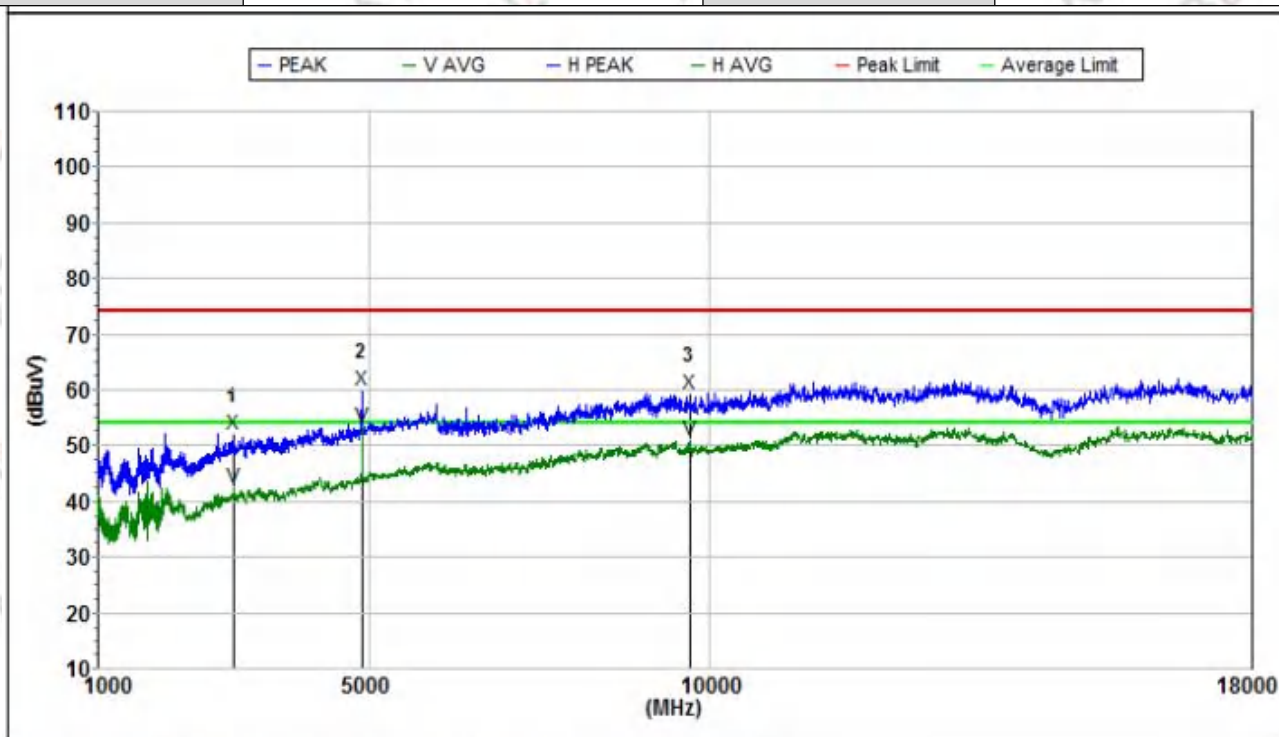
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	1785.000	51.2	74.0	22.8	-15.7	H
2	4807.500	57.4	74.0	16.6	-6.3	H
3	10404.000	58.9	74.0	15.1	0.9	H
Avg						
1	1785.000	42.5	54.0	11.5	-15.7	H
2	4807.500	49.6	54.0	4.4	-6.3	H
3	10404.000	50.5	54.0	3.5	0.9	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2402MHz	Antenna	Vertical



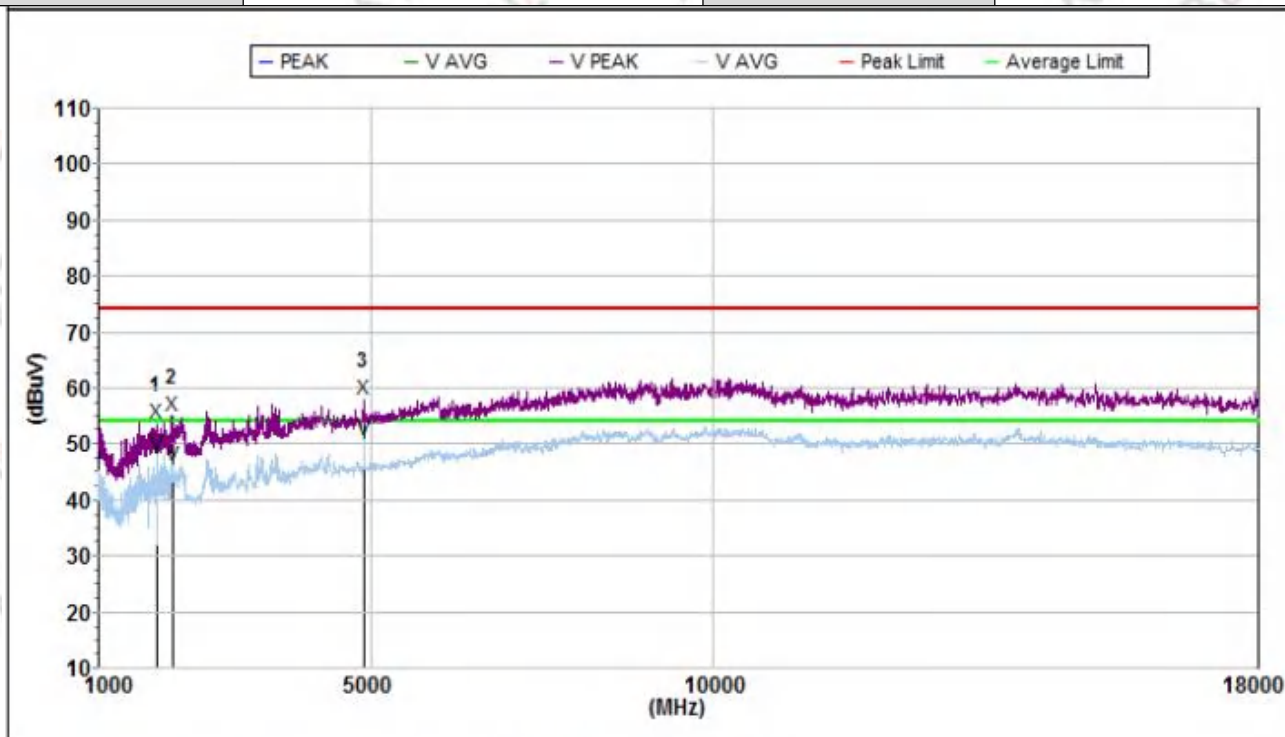
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	2662.500	57.1	74.0	16.9	-10.9	V	
2	3582.500	58.7	74.0	15.3	-8.3	V	
3	5957.500	58.9	74.0	15.1	-1.2	V	
Avg							
1	2662.500	48.1	54.0	5.9	-10.9	V	
2	3582.500	48.4	54.0	5.6	-8.3	V	
3	5957.500	48.8	54.0	5.2	-1.2	V	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2441MHz	Antenna	Horizontal



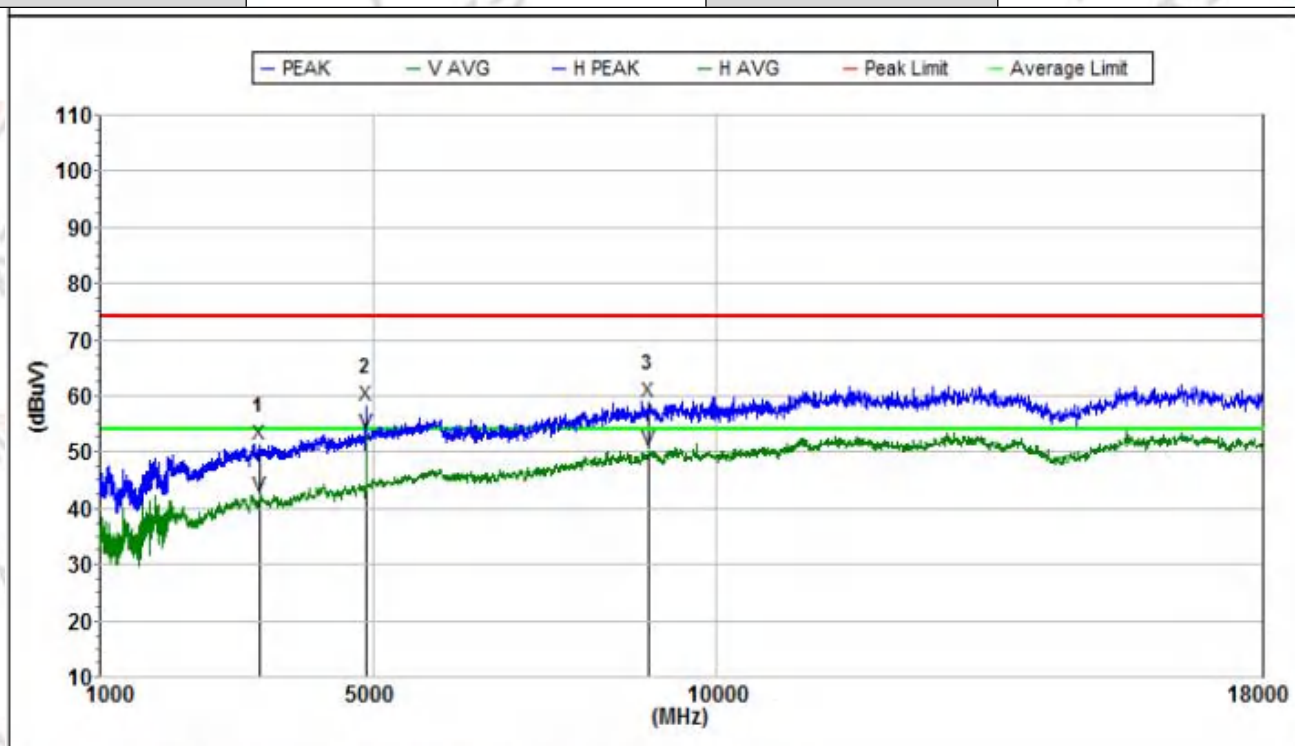
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	3000.000	52.1	74.0	21.9	-11.0	H	
2	4885.000	60.1	74.0	13.9	-6.0	H	
3	9708.000	59.3	74.0	14.7	0.4	H	
Avg							
1	3000.000	42.5	54.0	11.5	-11.0	H	
2	4885.000	53.5	54.0	0.5	-6.0	H	
3	9708.000	51.1	54.0	2.9	0.4	H	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2441MHz	Antenna	Vertical



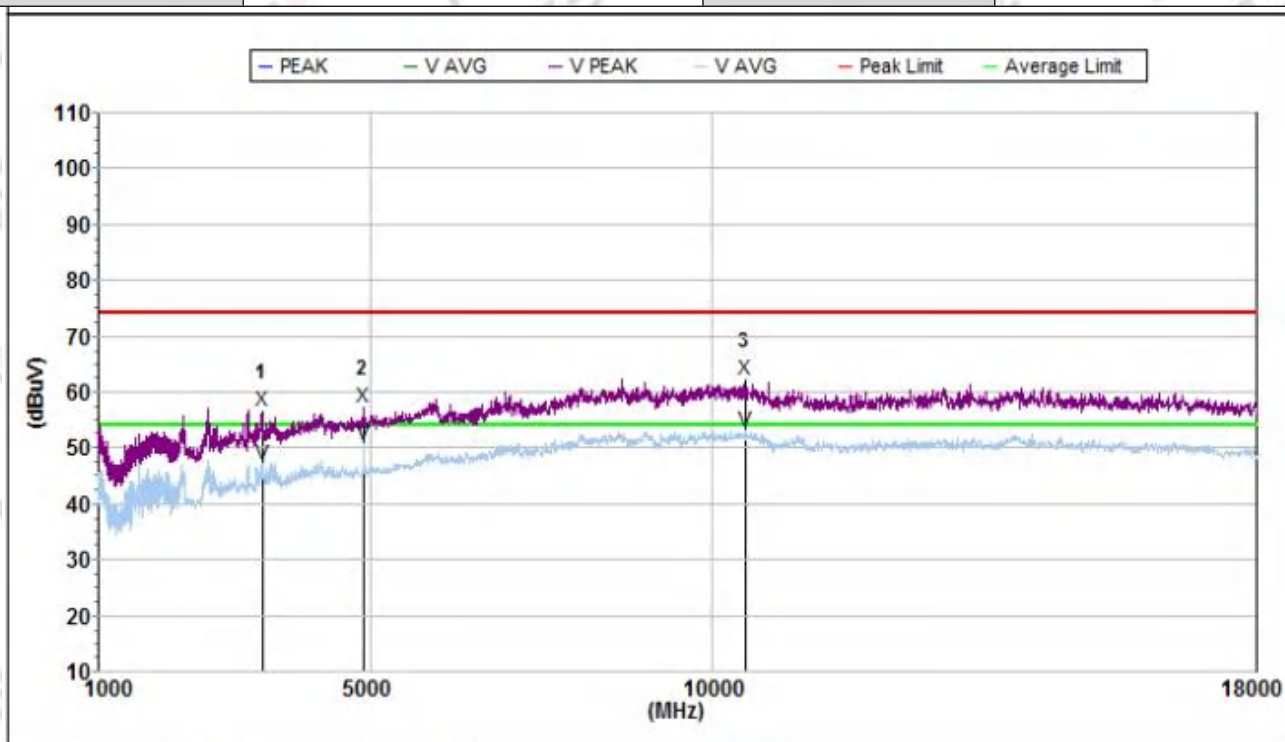
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	1867.500	53.8	74.0	20.2	-11.5	V	
2	2080.000	55.0	74.0	19.0	-10.2	V	
3	4885.000	58.1	74.0	15.9	-4.3	V	
Avg							
1	1867.500	48.1	54.0	5.9	-11.5	V	
2	2080.000	46.3	54.0	7.7	-10.2	V	
3	4885.000	50.7	54.0	3.3	-4.3	V	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2480MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	3332.500	51.3	74.0	22.7	-11.0	H
2	4885.000	58.4	74.0	15.6	-6.0	H
3	9024.000	59.1	74.0	14.9	-0.1	H
Avg						
1	3332.500	42.3	54.0	11.7	-11.0	H
2	4885.000	53.3	54.0	0.7	-6.0	H
3	9024.000	50.5	54.0	3.5	-0.1	H

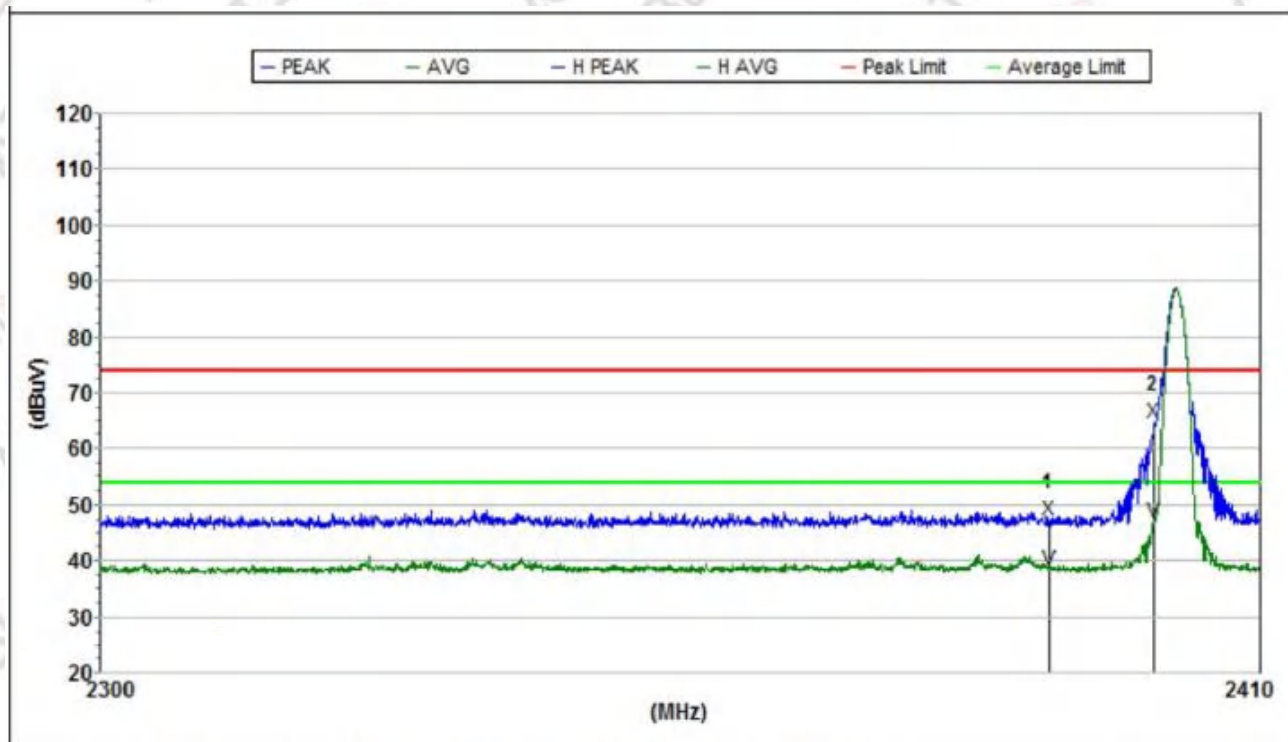
EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2480MHz	Antenna	Vertical



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	3402.500	56.7	74.0	17.3	-9.0	V
2	4885.000	57.4	74.0	16.6	-4.3	V
3	10500.000	62.2	74.0	11.8	3.4	V
Avg						
1	3402.500	47.3	54.0	6.7	-9.0	V
2	4885.000	50.9	54.0	3.1	-4.3	V
3	10500.000	53.2	54.0	0.8	3.4	V

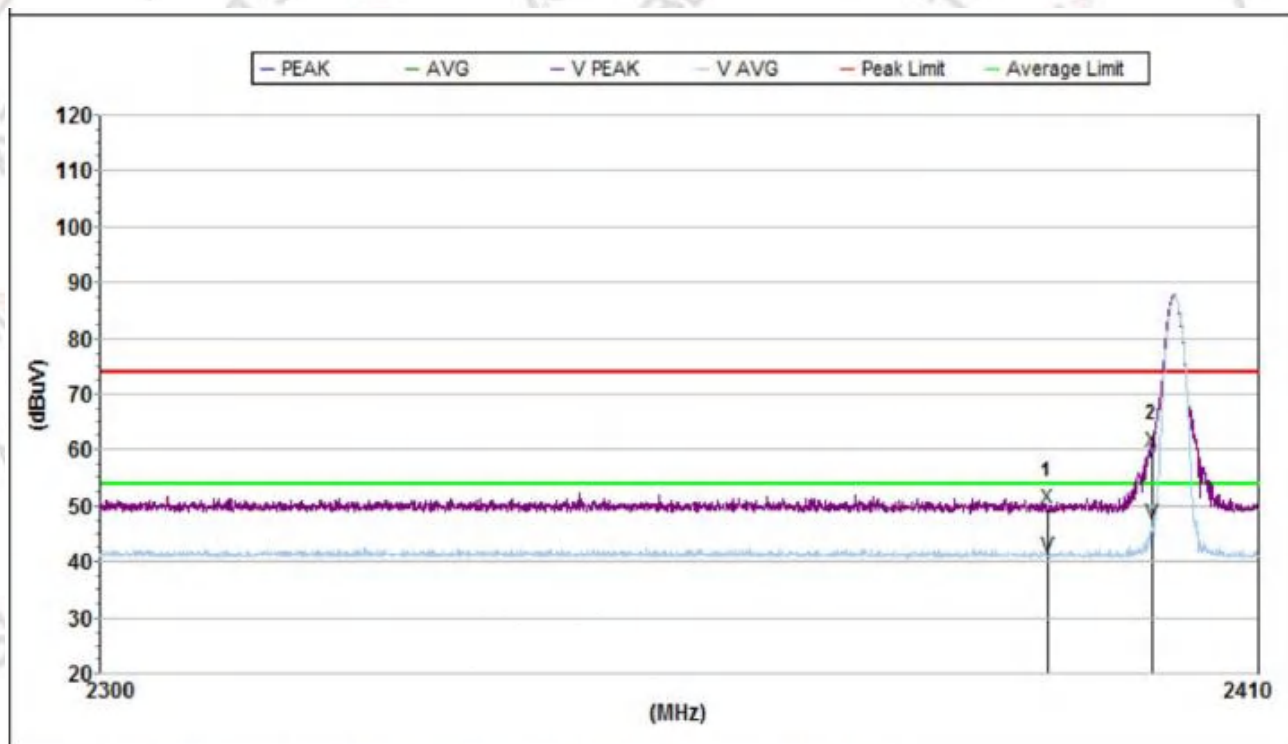
Restricted Band:

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5--2402MHz	Antenna	Horizontal



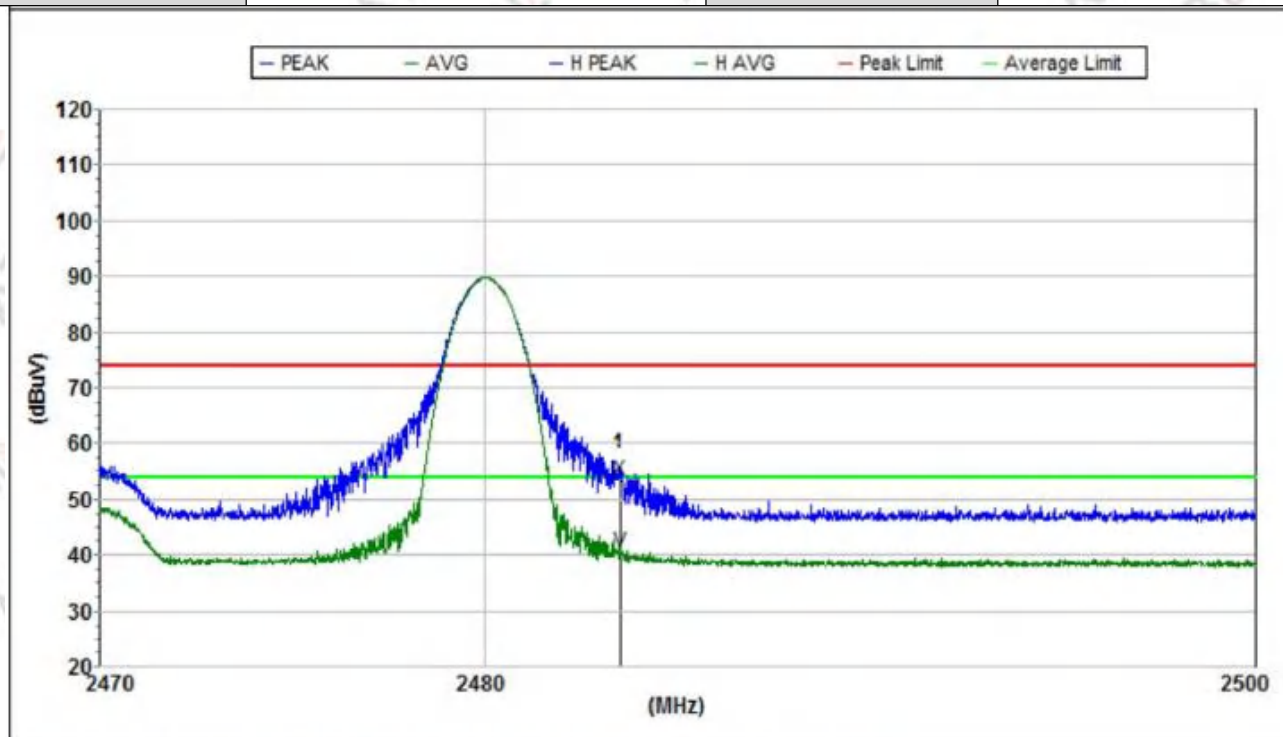
Mk.	Freq. (MHz)	Level(dBuV/ m)	Limit(dBuV/ m)	Margin(dB)	Deg. (deg.)	Hi.(cm)	Ant. F/G. (dB/m)	Pol.
Peak:								
1	2390.000	47.3	74.0	26.7	2.49	150	-14.2	H
2	2400.000	64.6	74.0	9.4	0	150	-14.2	H
Avg								
1	2390.000	38.3	54.0	15.7	2.49	150	-14.2	H
2	2400.000	47.1	54.0	6.9	0	150	-14.2	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2402MHz	Antenna	Vertical



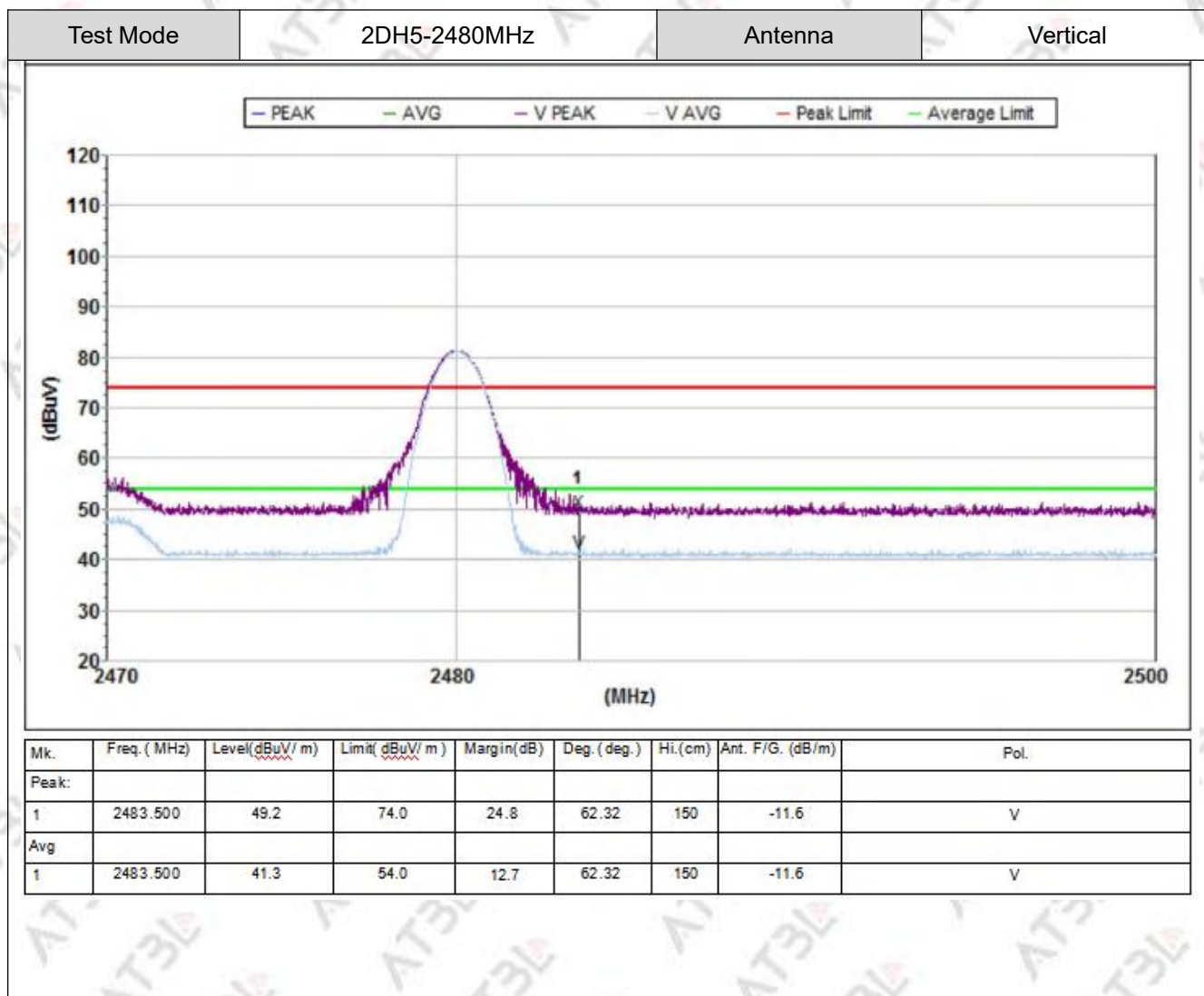
Mk.	Freq. (MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg.(deg.)	Hi.(cm)	Ant. F/G. (dB/m)	Pol.
Peak:								
1	2390.000	49.5	74.0	24.5	79.81	150	-11.3	V
2	2400.000	59.8	74.0	14.2	79.81	150	-11.4	V
Avg								
1	2390.000	41.2	54.0	12.8	79.81	150	-11.3	V
2	2400.000	47.0	54.0	7.0	79.81	150	-11.4	V

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5--2480MHz	Antenna	Horizontal



Mk.	Freq. (MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg. (deg.)	Hi.(cm)	Ant. F/G. (dB/m)	Pol.
Peak:								
1	2483.500	53.4	74.0	20.6	17.52	150	-14.3	H
Avg								
1	2483.500	40.7	54.0	13.3	17.52	150	-14.3	H

EUT	Telephone headset	Model Name	Spark 07
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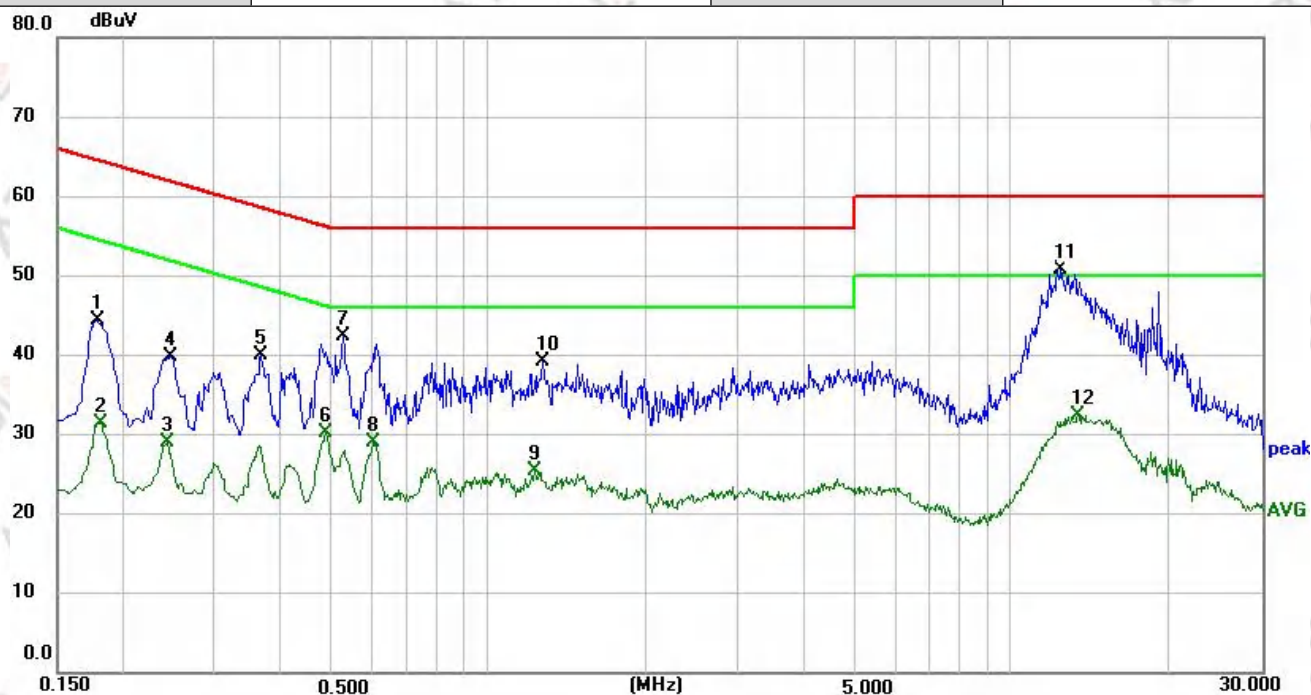
9.AC Power-Line Conducted Emission

Test Result

Note:

- 1.All modes have been tested, only worst mode(2DH5-2441MHz) was recorded in the test report.
- 2.Emission Level = Reading Value + Correction Factor .
3. Correction Factor = Insertion loss + Cable loss.
4. The emission levels of other frequencies were less than 20dB margin against the limit.
5. Margin value = Emission level-Limit value.

EUT	Telephone headset	Model Name	Spark 07
Test Mode	2DH5-2441MHz	Phase	L1



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measure-ment(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1780	24.61	19.73	44.34	64.58	-20.24	peak
2	0.1819	11.61	19.73	31.34	54.40	-23.06	AVG
3	0.2420	9.23	19.73	28.96	52.03	-23.07	AVG
4	0.2460	20.01	19.74	39.75	61.89	-22.14	peak
5	0.3660	20.16	19.82	39.98	58.59	-18.61	peak
6	0.4900	10.37	19.85	30.22	46.17	-15.95	AVG
7	0.5260	22.57	19.86	42.43	56.00	-13.57	peak
8	0.6020	9.08	19.90	28.98	46.00	-17.02	AVG
9	1.2260	5.57	19.85	25.42	46.00	-20.58	AVG
10	1.2740	19.30	19.87	39.17	56.00	-16.83	peak
11 *	12.4180	29.41	21.31	50.72	60.00	-9.28	peak
12	13.4020	10.84	21.58	32.42	50.00	-17.58	AVG

EUT	Telephone headset	Model Name	Spark 07
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