



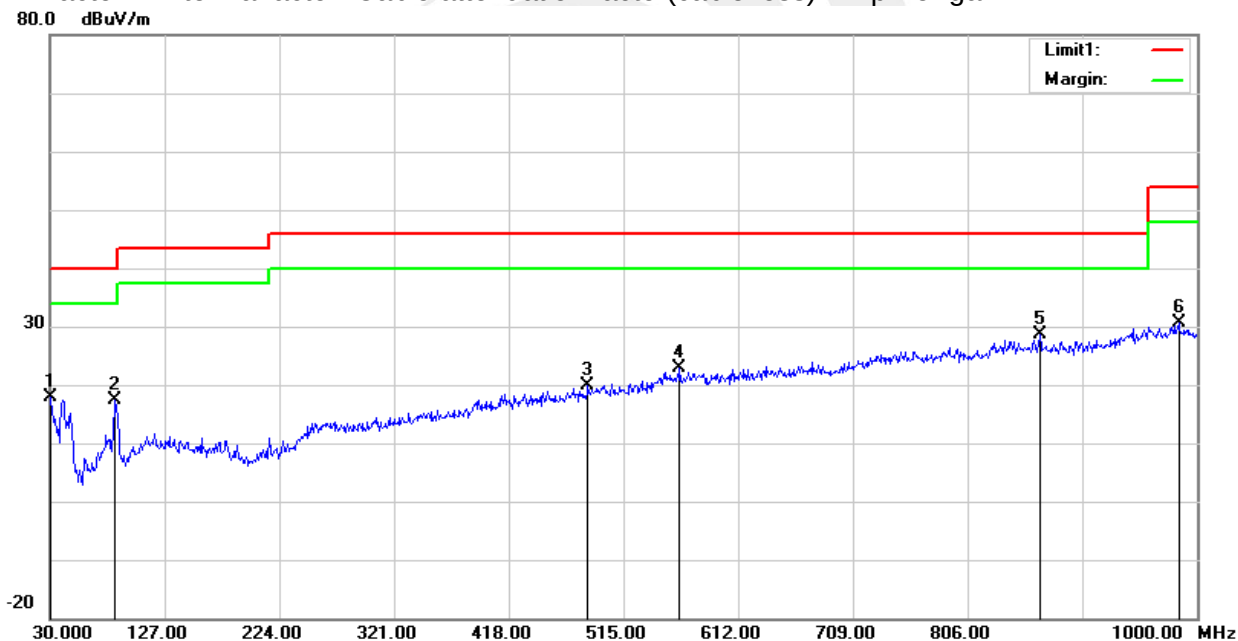
(30MHz - 1000MHz)

Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3.85V	Phase:	Horizontal
Test Mode:	Mode 1/2/3/4/5/6/7/8/9/10/11/12 (Mode 8 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/ m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.9700	31.28	-13.35	17.93	40.00	-22.07	peak
2	85.2900	39.56	-22.13	17.43	40.00	-22.57	peak
3	484.9300	28.25	-8.44	19.81	46.00	-26.19	peak
4	562.5300	28.32	-5.52	22.80	46.00	-23.20	peak
5	867.1100	29.02	-0.50	28.52	46.00	-17.48	peak
6	984.4800	28.24	2.40	30.64	54.00	-23.36	peak

Remark:

1. Margin = Result (Result = Reading + Factor) - Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain



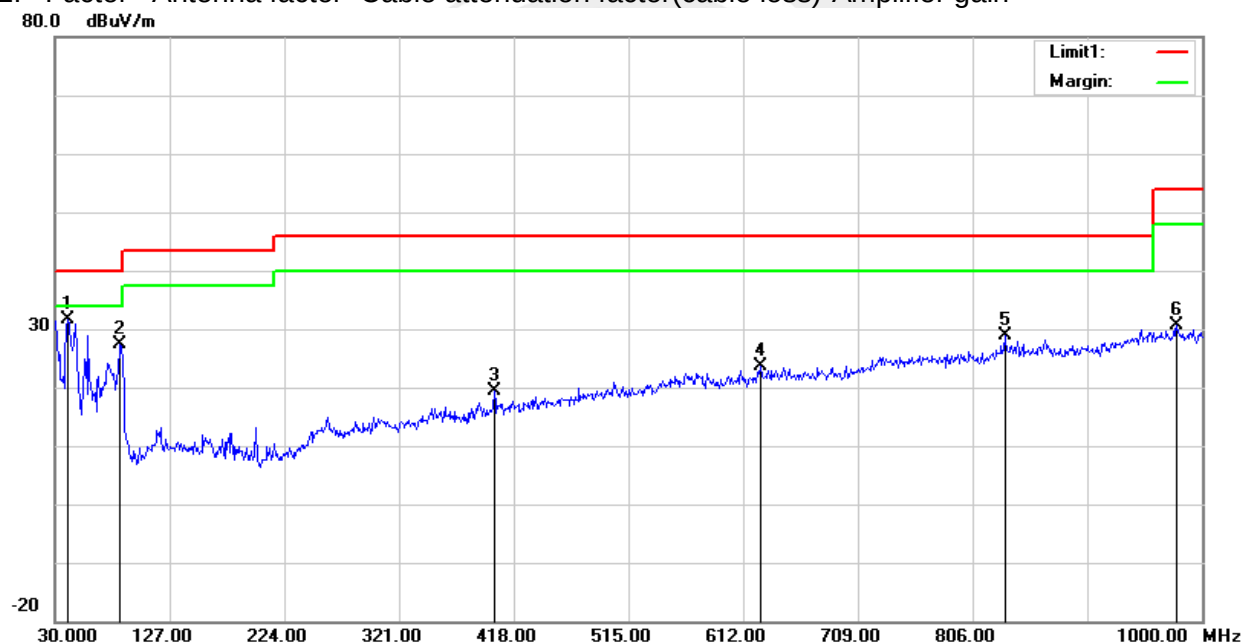


Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3.85V	Phase:	Vertical
Test Mode:	Mode 1/2/3/4/5/6/7/8/9/10/11/12 (Mode 8 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/ m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	40.6700	49.93	-18.40	31.53	40.00	-8.47	peak
2	85.2900	49.62	-22.13	27.49	40.00	-12.51	peak
3	401.5100	30.47	-11.06	19.41	46.00	-26.59	peak
4	626.5500	28.76	-5.19	23.57	46.00	-22.43	peak
5	833.1600	29.43	-0.62	28.81	46.00	-17.19	peak
6	978.6600	28.02	2.58	30.60	54.00	-23.40	peak

Remark:.

1. Margin = Result (Result =Reading + Factor)-Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





(1000MHz-25GHz) Spurious emission Requirements

802.11 n(HT20)

Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBμV)	(dB)	(dB)	(dB/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	Type	
Low Channel (802.11n(HT20)/2412 MHz)										
3264.78	61.39	44.70	6.70	28.20	-9.80	51.59	74.00	-22.41	PK	Vertical
3264.78	50.96	44.70	6.70	28.20	-9.80	41.16	54.00	-12.84	AV	Vertical
3264.59	61.83	44.70	6.70	28.20	-9.80	52.03	74.00	-21.97	PK	Horizontal
3264.59	51.13	44.70	6.70	28.20	-9.80	41.33	54.00	-12.67	AV	Horizontal
4824.33	59.42	44.20	9.04	31.60	-3.56	55.86	74.00	-18.14	PK	Vertical
4824.33	50.24	44.20	9.04	31.60	-3.56	46.68	54.00	-7.32	AV	Vertical
4824.37	58.54	44.20	9.04	31.60	-3.56	54.98	74.00	-19.02	PK	Horizontal
4824.37	49.54	44.20	9.04	31.60	-3.56	45.98	54.00	-8.02	AV	Horizontal
5359.73	48.16	44.20	9.86	32.00	-2.34	45.82	74.00	-28.18	PK	Vertical
5359.73	39.71	44.20	9.86	32.00	-2.34	37.36	54.00	-16.64	AV	Vertical
5359.82	48.02	44.20	9.86	32.00	-2.34	45.68	74.00	-28.32	PK	Horizontal
5359.82	38.81	44.20	9.86	32.00	-2.34	36.47	54.00	-17.53	AV	Horizontal
7235.78	54.97	43.50	11.40	35.50	3.40	58.37	74.00	-15.63	PK	Vertical
7235.78	44.84	43.50	11.40	35.50	3.40	48.24	54.00	-5.76	AV	Vertical
7235.81	54.15	43.50	11.40	35.50	3.40	57.55	74.00	-16.45	PK	Horizontal
7235.81	44.15	43.50	11.40	35.50	3.40	47.55	54.00	-6.45	AV	Horizontal
Middle Channel (802.11n(HT20)/2437 MHz)										
3264.72	61.47	44.70	6.70	28.20	-9.80	51.67	74.00	-22.33	PK	Vertical
3264.72	51.69	44.70	6.70	28.20	-9.80	41.89	54.00	-12.11	AV	Vertical
3264.73	61.68	44.70	6.70	28.20	-9.80	51.88	74.00	-22.12	PK	Horizontal
3264.73	50.78	44.70	6.70	28.20	-9.80	40.98	54.00	-13.02	AV	Horizontal
4874.38	58.81	44.20	9.04	31.60	-3.56	55.25	74.00	-18.75	PK	Vertical
4874.38	49.42	44.20	9.04	31.60	-3.56	45.86	54.00	-8.14	AV	Vertical
4874.45	58.48	44.20	9.04	31.60	-3.56	54.92	74.00	-19.08	PK	Horizontal
4874.45	49.96	44.20	9.04	31.60	-3.56	46.40	54.00	-7.60	AV	Horizontal
5359.85	48.68	44.20	9.86	32.00	-2.34	46.34	74.00	-27.66	PK	Vertical
5359.85	39.91	44.20	9.86	32.00	-2.34	37.57	54.00	-16.43	AV	Vertical
5359.58	48.32	44.20	9.86	32.00	-2.34	45.97	74.00	-28.03	PK	Horizontal
5359.58	39.09	44.20	9.86	32.00	-2.34	36.75	54.00	-17.25	AV	Horizontal
7310.96	54.82	43.50	11.40	35.50	3.40	58.22	74.00	-15.78	PK	Vertical
7310.96	43.79	43.50	11.40	35.50	3.40	47.19	54.00	-6.81	AV	Vertical
7310.72	54.49	43.50	11.40	35.50	3.40	57.89	74.00	-16.11	PK	Horizontal
7310.72	44.65	43.50	11.40	35.50	3.40	48.05	54.00	-5.95	AV	Horizontal



High Channel (802.11n(HT20)/2462 MHz)										
3264.88	61.37	44.70	6.70	28.20	-9.80	51.57	74.00	-22.43	PK	Vertical
3264.88	50.74	44.70	6.70	28.20	-9.80	40.94	54.00	-13.06	AV	Vertical
3264.73	60.77	44.70	6.70	28.20	-9.80	50.97	74.00	-23.03	PK	Horizontal
3264.73	51.20	44.70	6.70	28.20	-9.80	41.40	54.00	-12.60	AV	Horizontal
4924.43	58.77	44.20	9.04	31.60	-3.56	55.21	74.00	-18.79	PK	Vertical
4924.43	49.74	44.20	9.04	31.60	-3.56	46.18	54.00	-7.82	AV	Vertical
4924.48	58.76	44.20	9.04	31.60	-3.56	55.20	74.00	-18.80	PK	Horizontal
4924.48	49.37	44.20	9.04	31.60	-3.56	45.81	54.00	-8.19	AV	Horizontal
5359.78	49.21	44.20	9.86	32.00	-2.34	46.86	74.00	-27.14	PK	Vertical
5359.78	39.91	44.20	9.86	32.00	-2.34	37.56	54.00	-16.44	AV	Vertical
5359.82	47.39	44.20	9.86	32.00	-2.34	45.05	74.00	-28.95	PK	Horizontal
5359.82	39.37	44.20	9.86	32.00	-2.34	37.03	54.00	-16.97	AV	Horizontal
7385.73	54.19	43.50	11.40	35.50	3.40	57.59	74.00	-16.41	PK	Vertical
7385.73	44.97	43.50	11.40	35.50	3.40	48.37	54.00	-5.63	AV	Vertical
7385.75	53.66	43.50	11.40	35.50	3.40	57.06	74.00	-16.94	PK	Horizontal
7385.75	44.65	43.50	11.40	35.50	3.40	48.05	54.00	-5.95	AV	Horizontal

Remark:

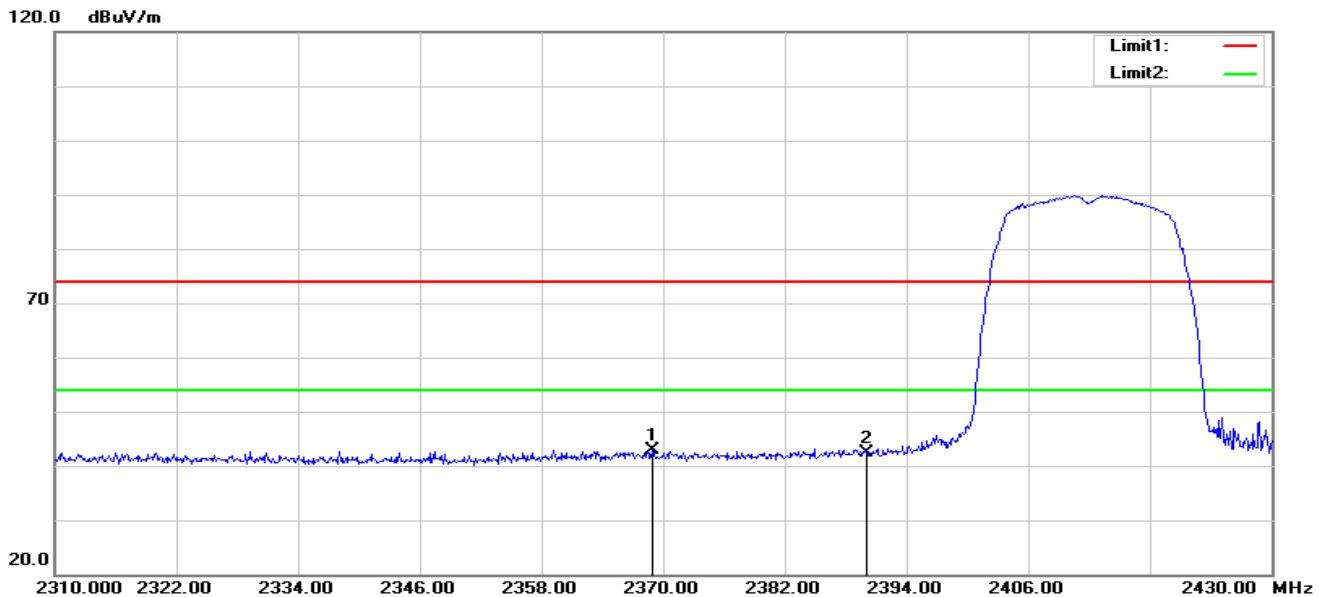
- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Scan with 802.11b, 802.11g, 802.11n (HT-20), 802.11n (HT-40) the worst case is 802.11 n(HT20).
Emission Level = Reading + Factor
Margin = Emission Level-Limit
- The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.



3.2.6 TEST RESULTS(Band edge Requirements)

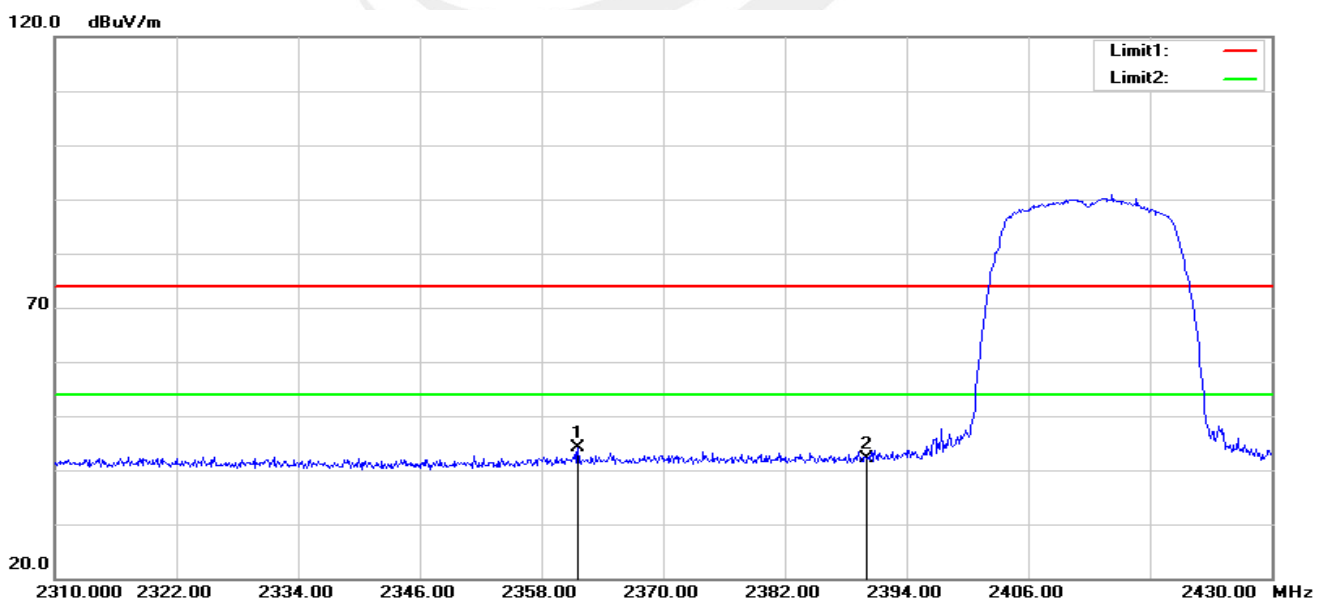
802.11 n(HT20)-Low

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2368.920	38.74	4.02	42.76	74.00	-31.24	peak
2	2390.000	38.15	4.34	42.49	74.00	-31.51	peak

Vertical

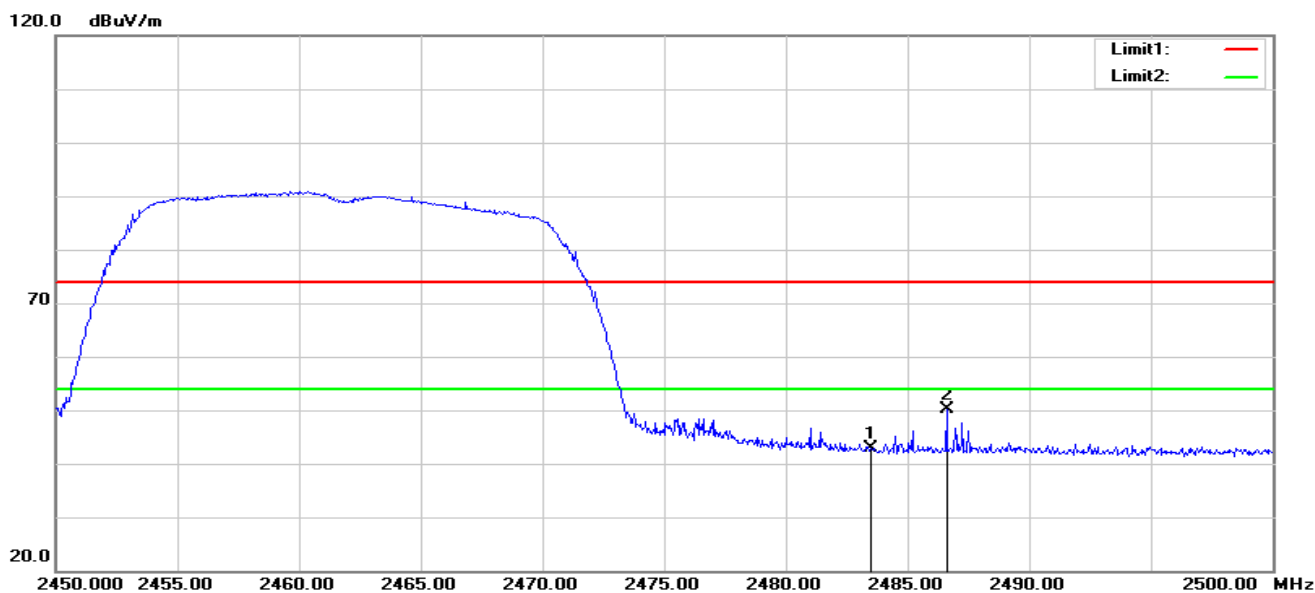


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2361.600	40.33	3.91	44.24	74.00	-29.76	peak
2	2390.000	37.69	4.34	42.03	74.00	-31.97	peak



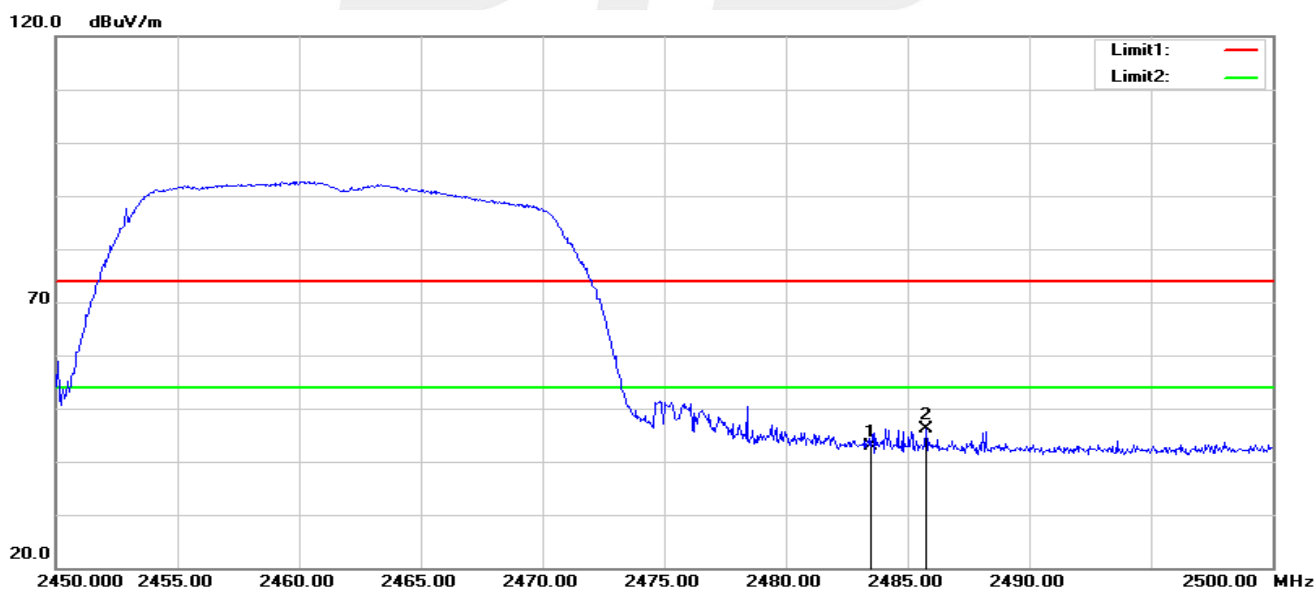
802.11 n(HT20)-High

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	38.31	4.60	42.91	74.00	-31.09	peak
2	2486.600	45.42	4.61	50.03	74.00	-23.97	peak

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	38.34	4.60	42.94	74.00	-31.06	peak
2	2485.750	41.61	4.61	46.22	74.00	-27.78	peak

Note: 802.11b, 802.11g, 802.11n (HT-20), 802.11n (HT-40) mode all have been tested, the worst case is 802.11 n(HT20), only show the worst case.

4. CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 LIMIT

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 2300 to 2432 MHz Upper Band Edge: 2442 to 2500 MHz
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



The EUT which is powered by the Battery, is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

4.5 EUT OPERATION CONDITIONS

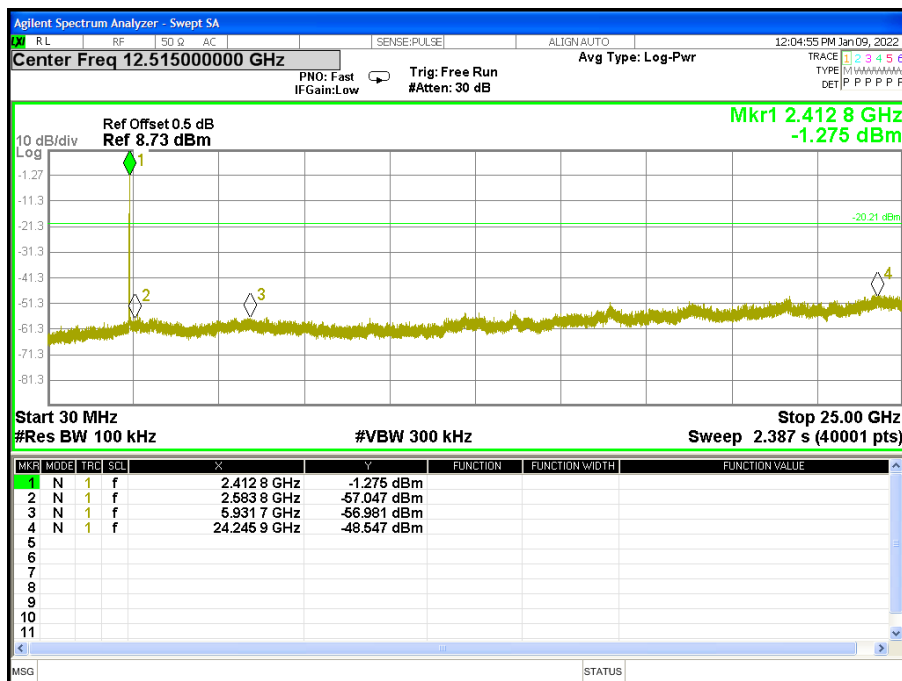
Please refer to section 3.1.4 of this report.



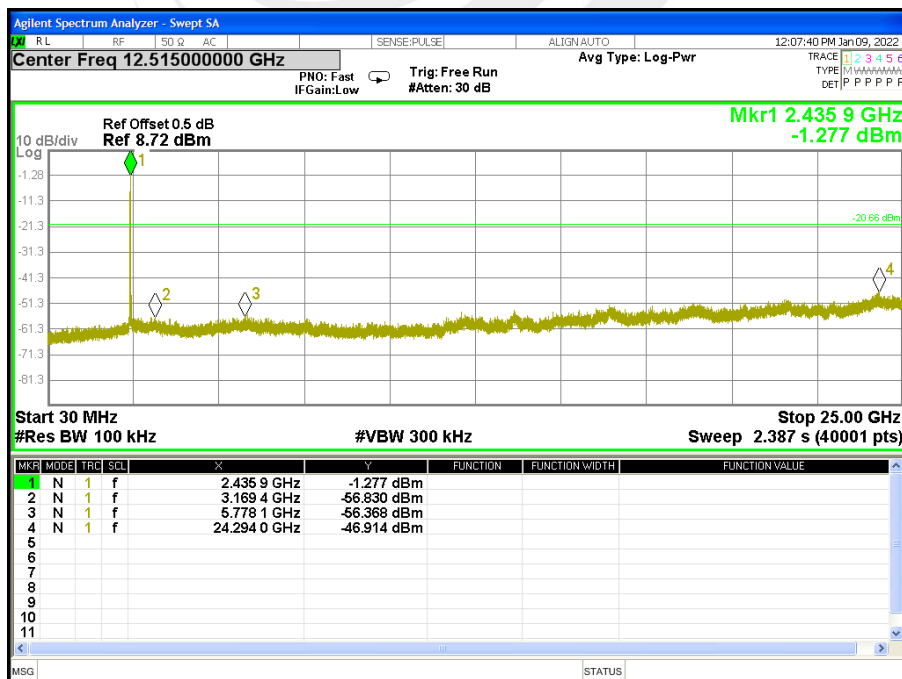
4.6 TEST RESULTS

Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.85V	Test Mode:	TX b Mode /CH01, CH06, CH11

CH 01

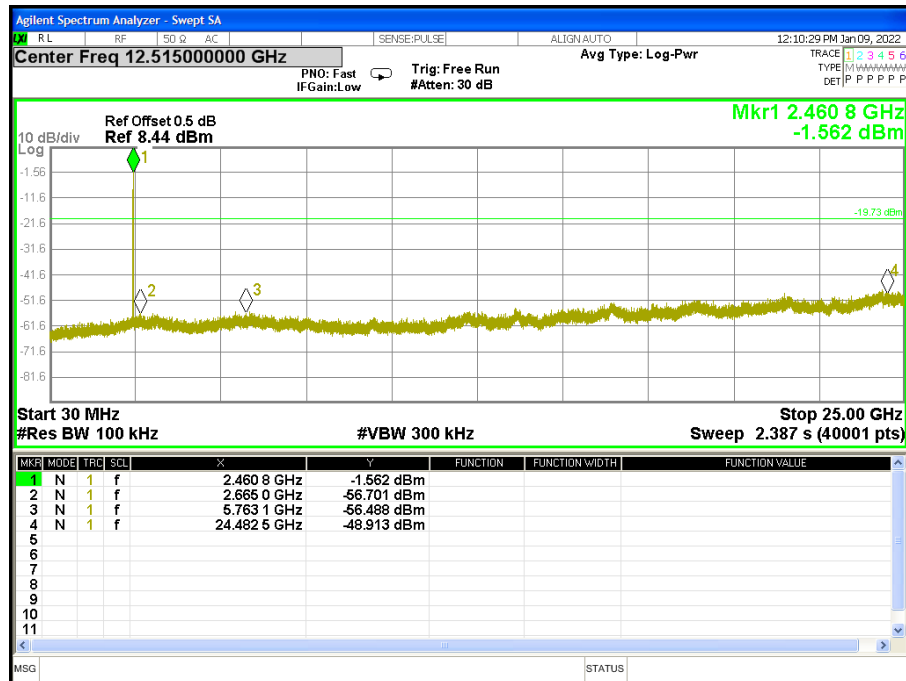


CH 06





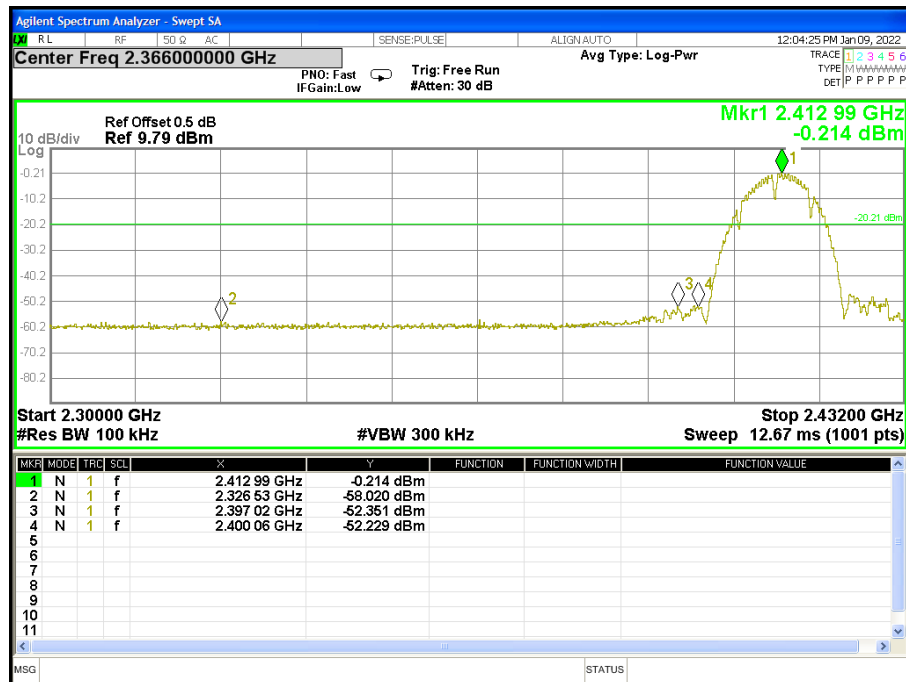
CH 11



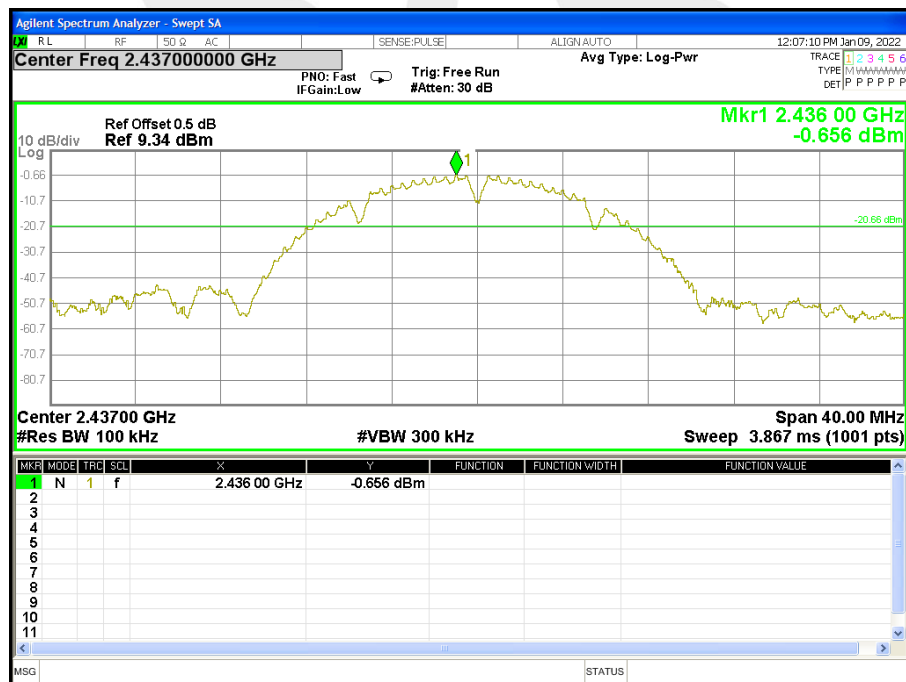


Band edge(it's also the reference level for conducted spurious emission)

CH 01

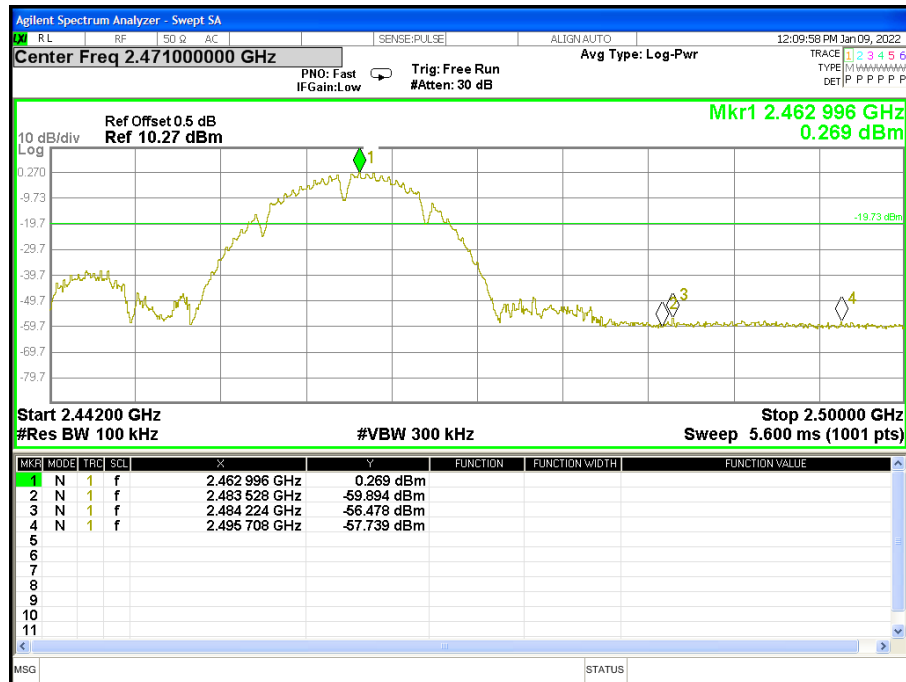


CH 06





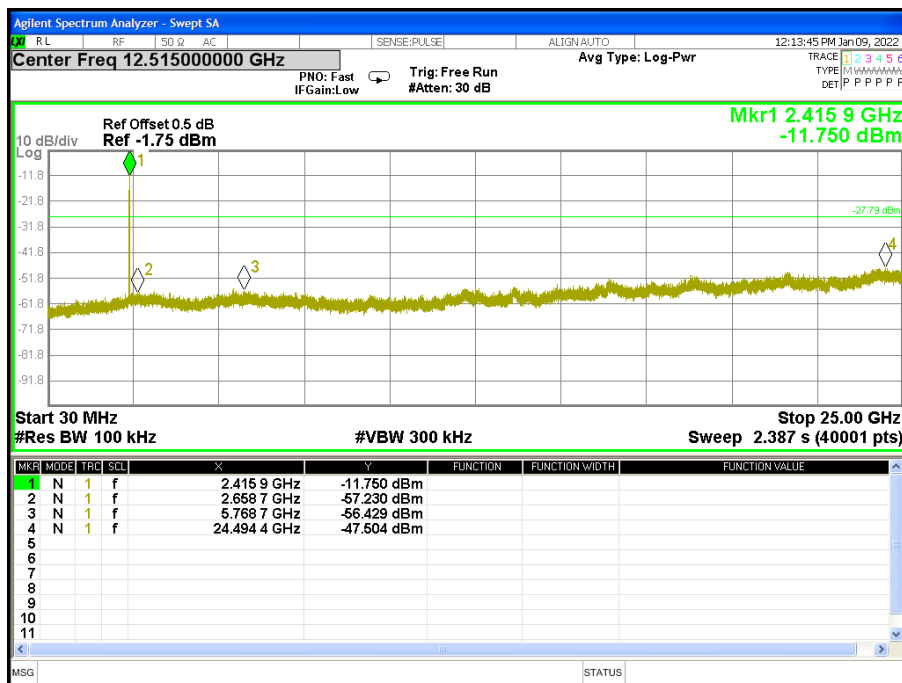
CH 11



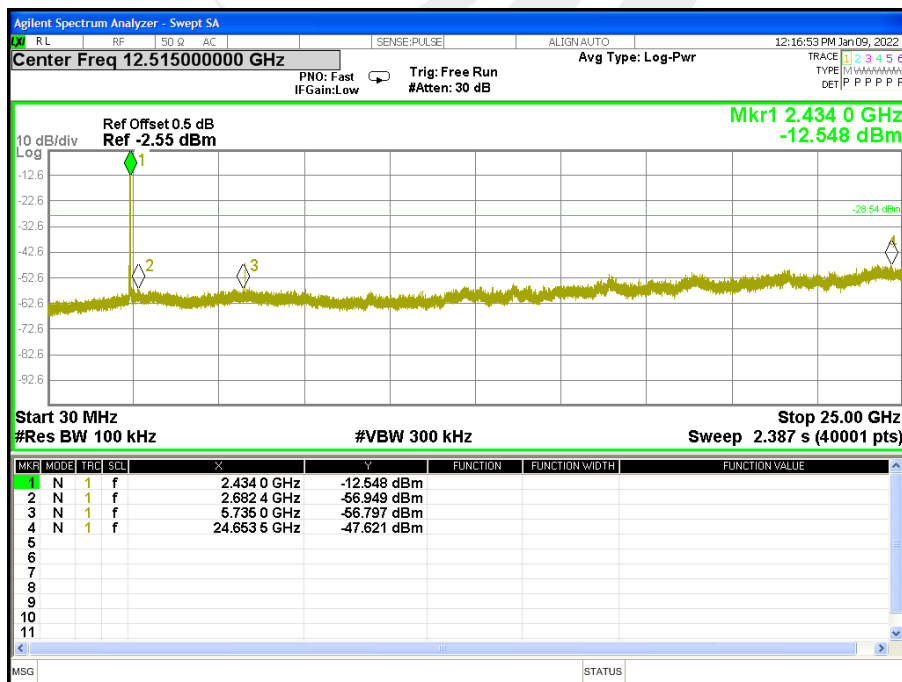


Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.85V	Test Mode:	TX g Mode /CH01, CH06, CH11

CH 01

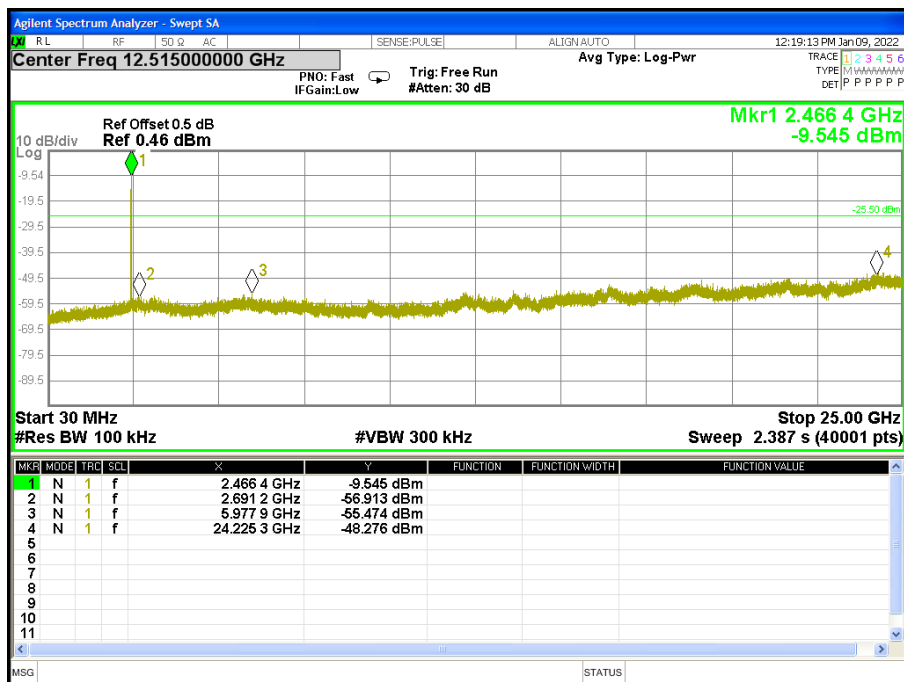


CH06





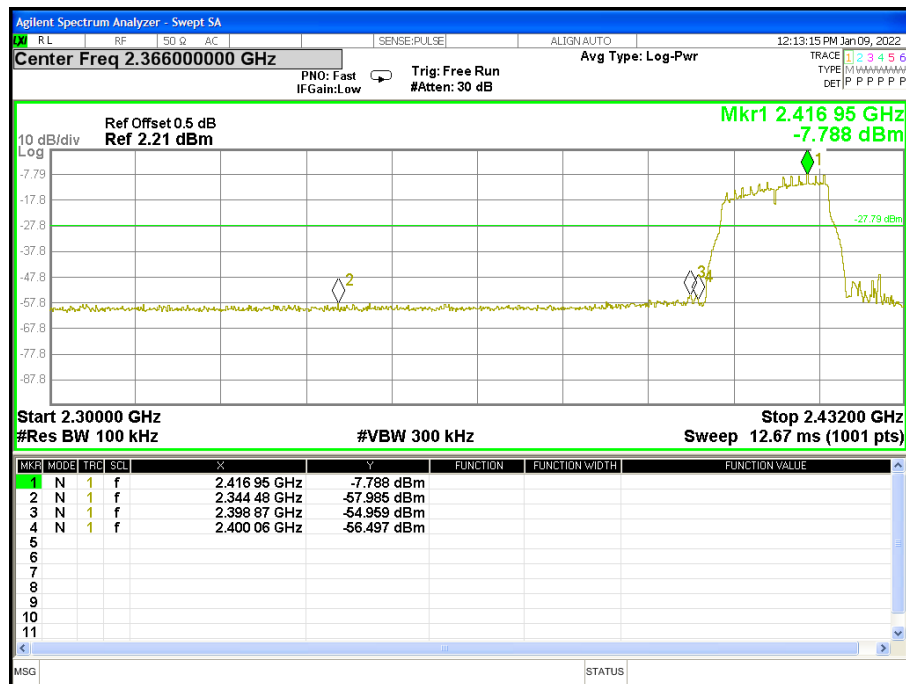
CH 11



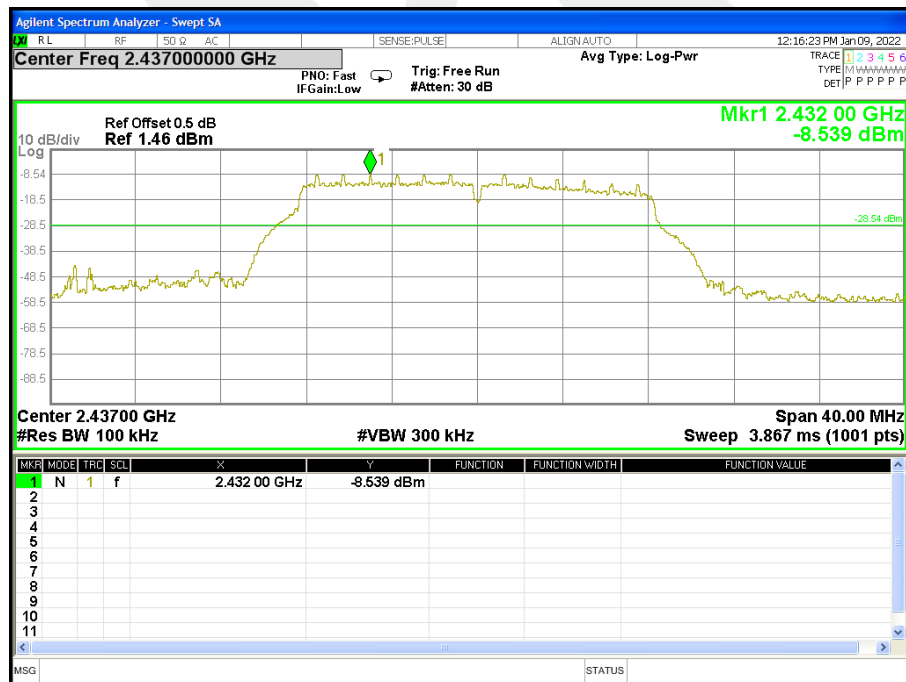


Band edge(it's also the reference level for conducted spurious emission)

CH 01

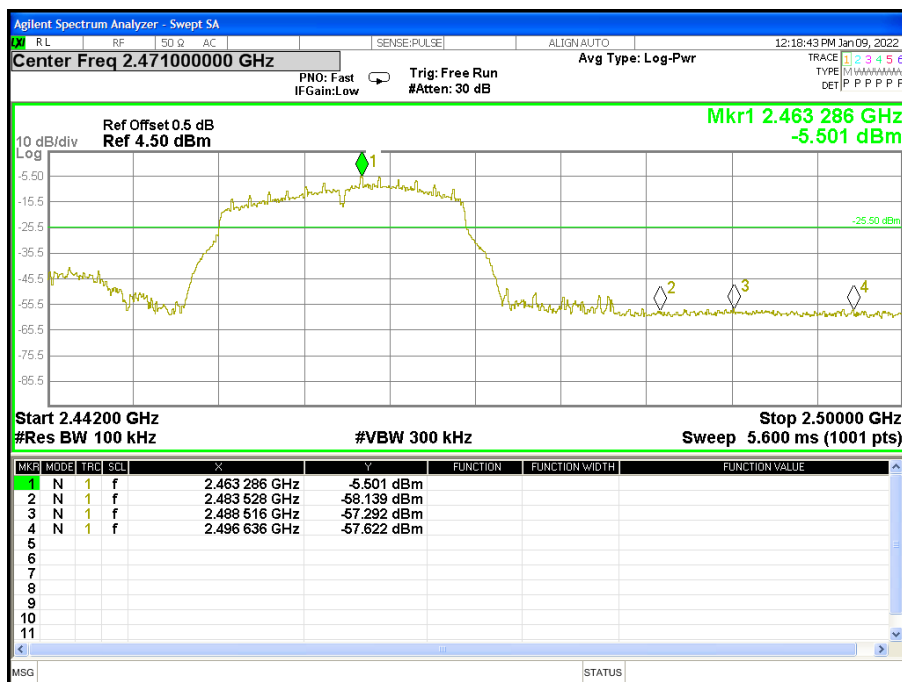


CH06





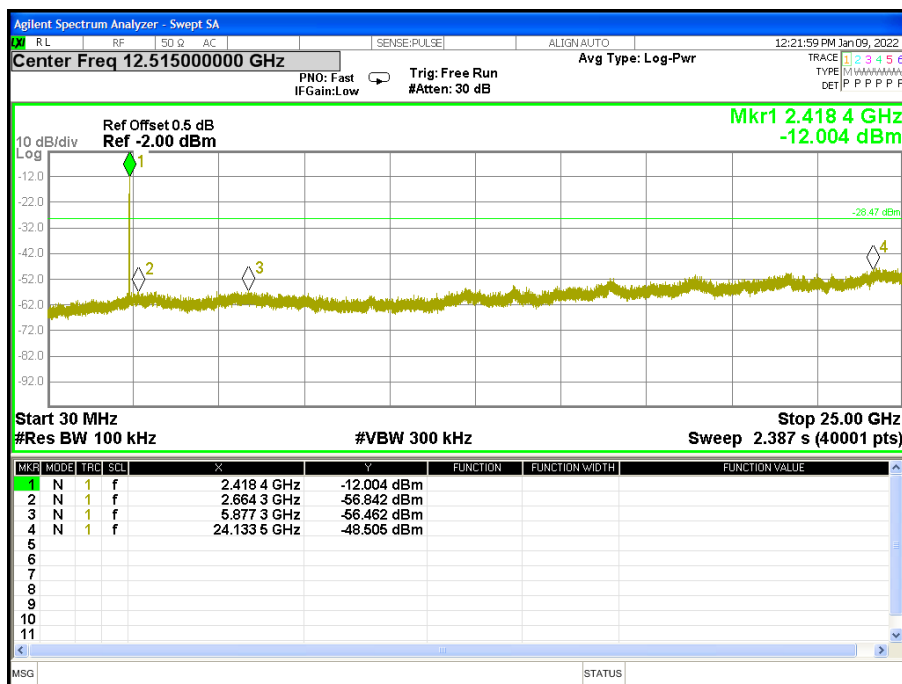
CH11



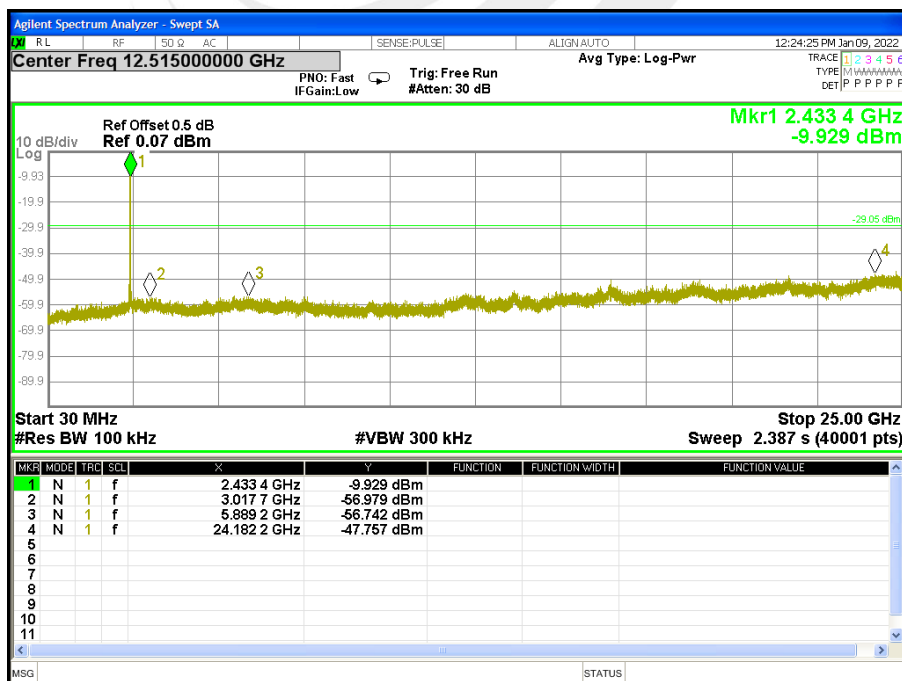


Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.85V	Test Mode:	TX n Mode(20M) /CH01, CH06, CH11

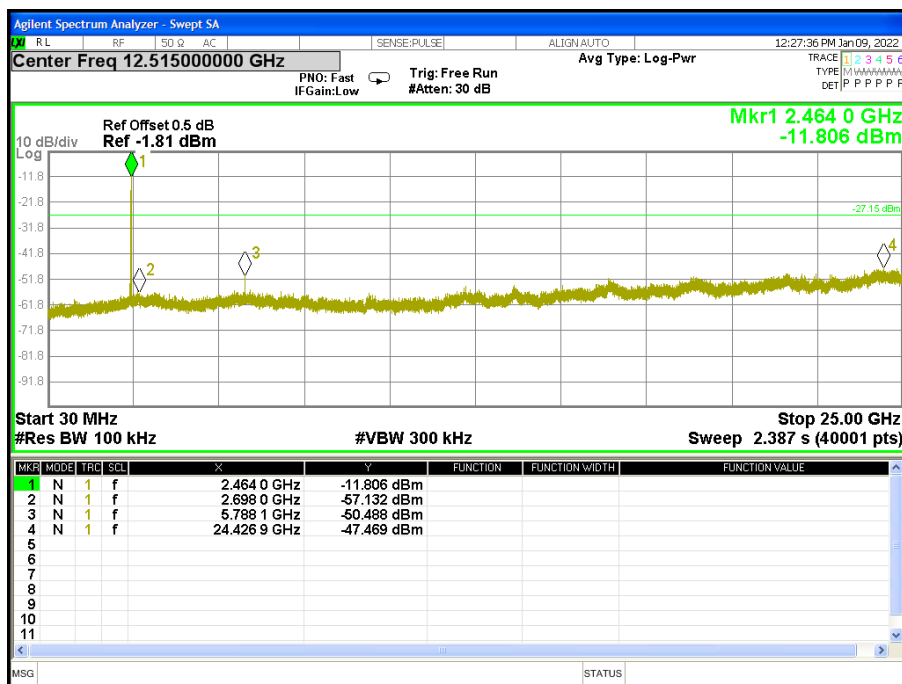
CH 01



CH 06



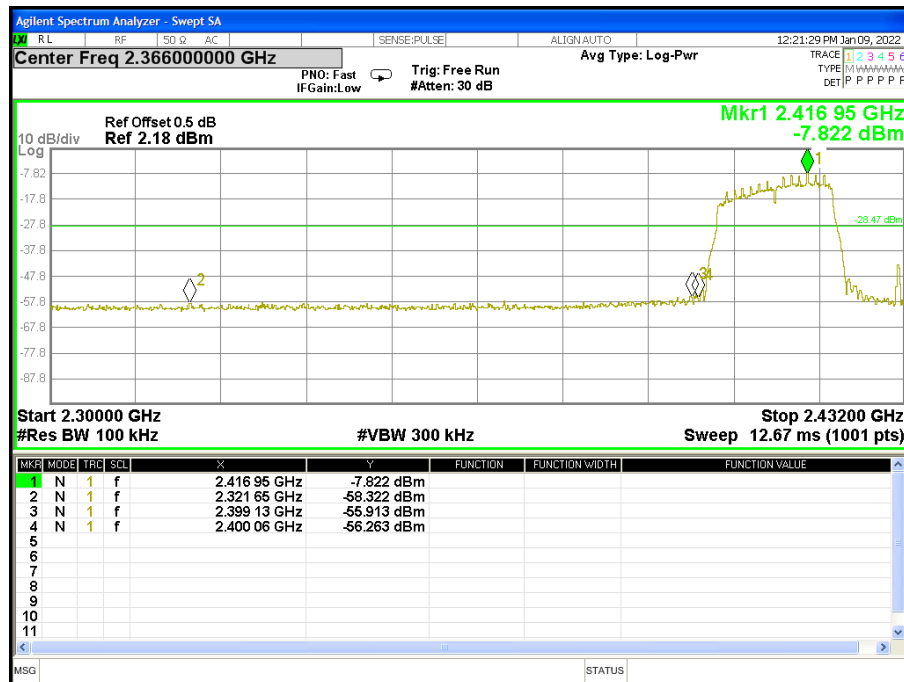
CH 11



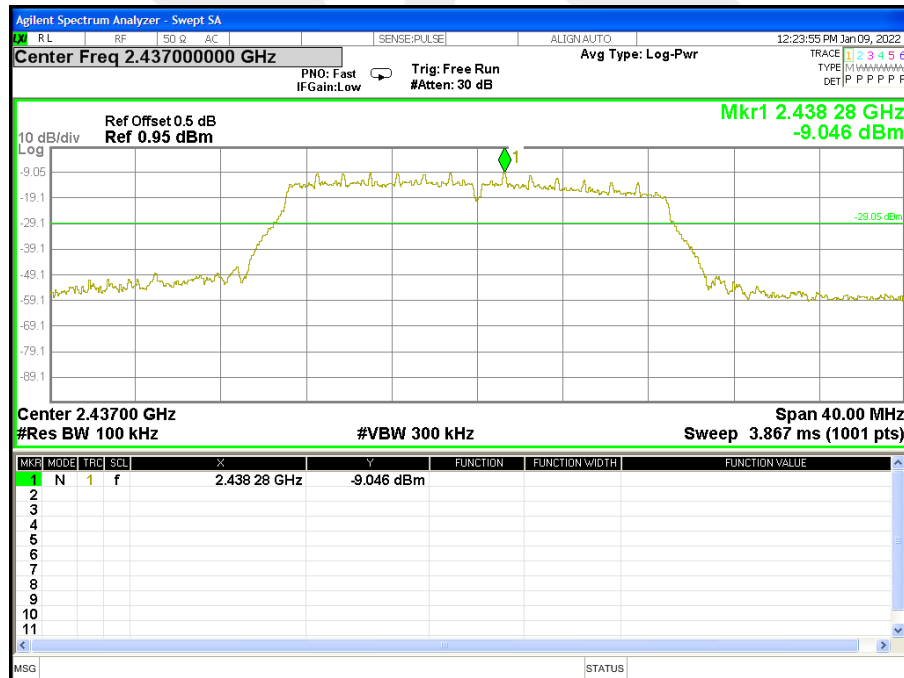


Band edge(it's also the reference level for conducted spurious emission)

CH 01

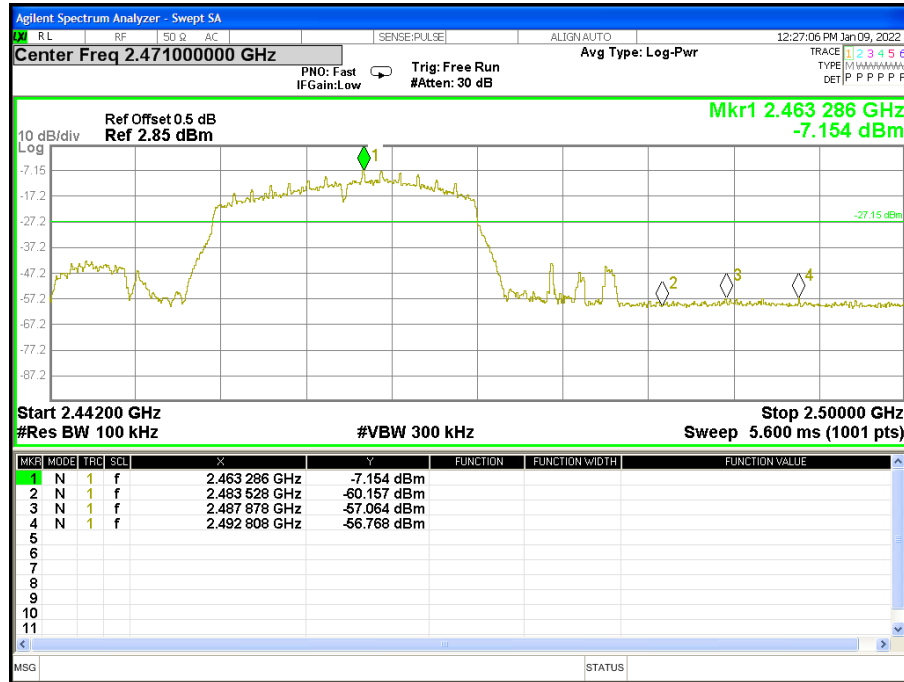


CH 06





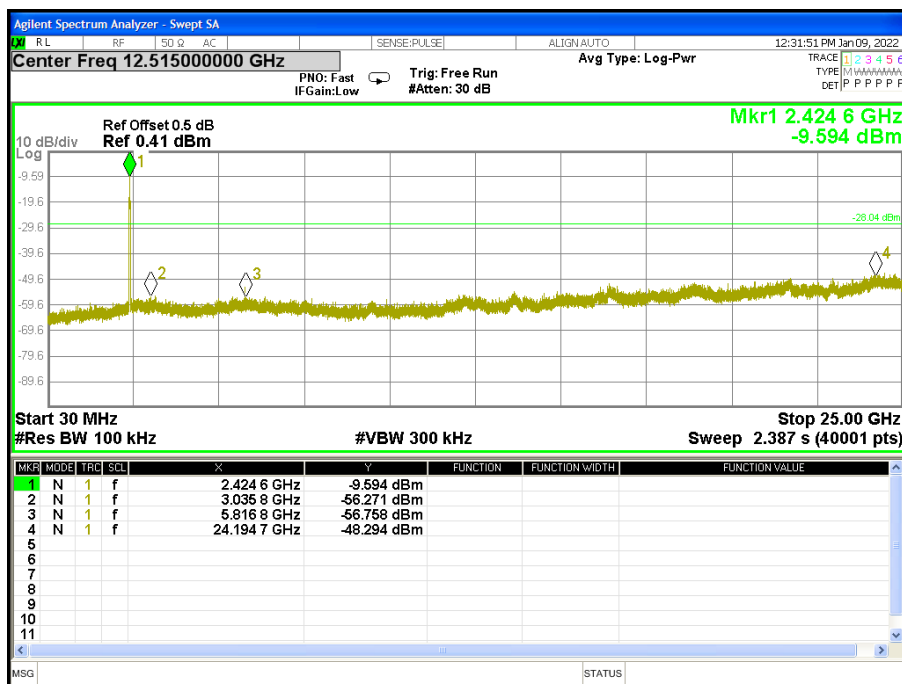
CH 11





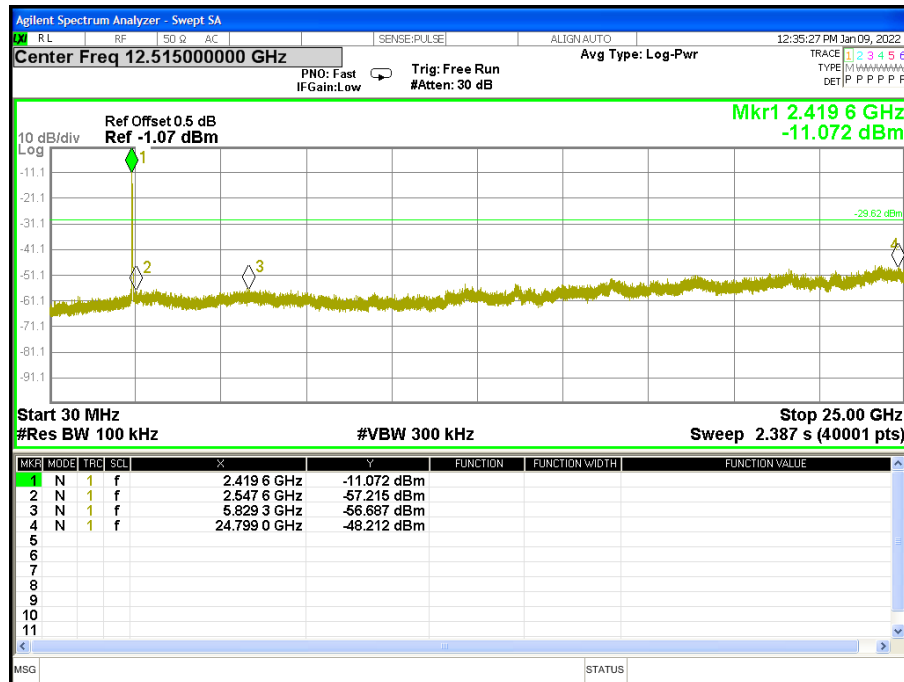
Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.85V	Test Mode:	TX n Mode(40M) /CH03, CH06, CH09

CH 03

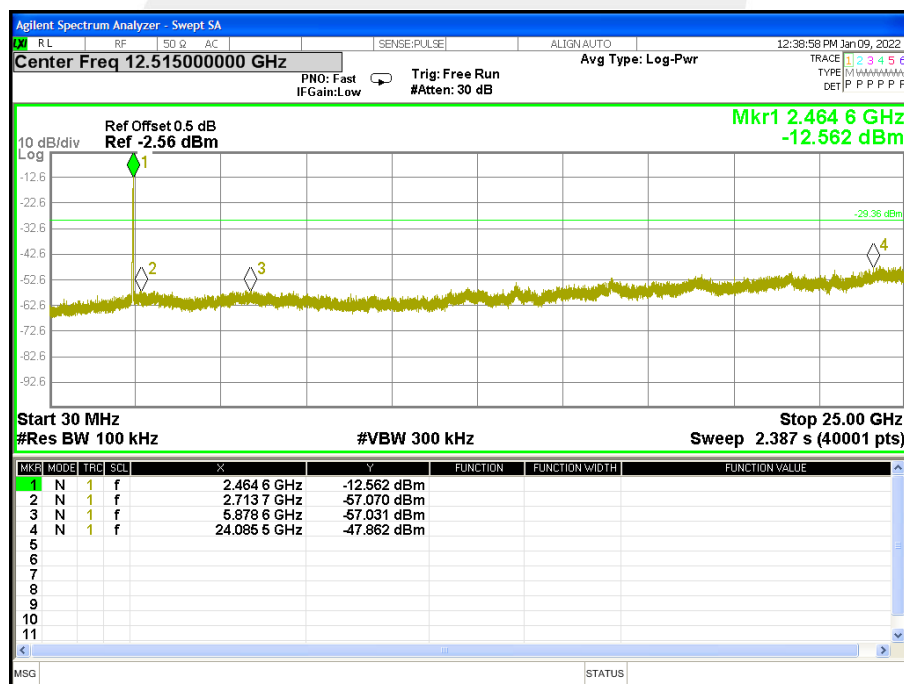




CH06



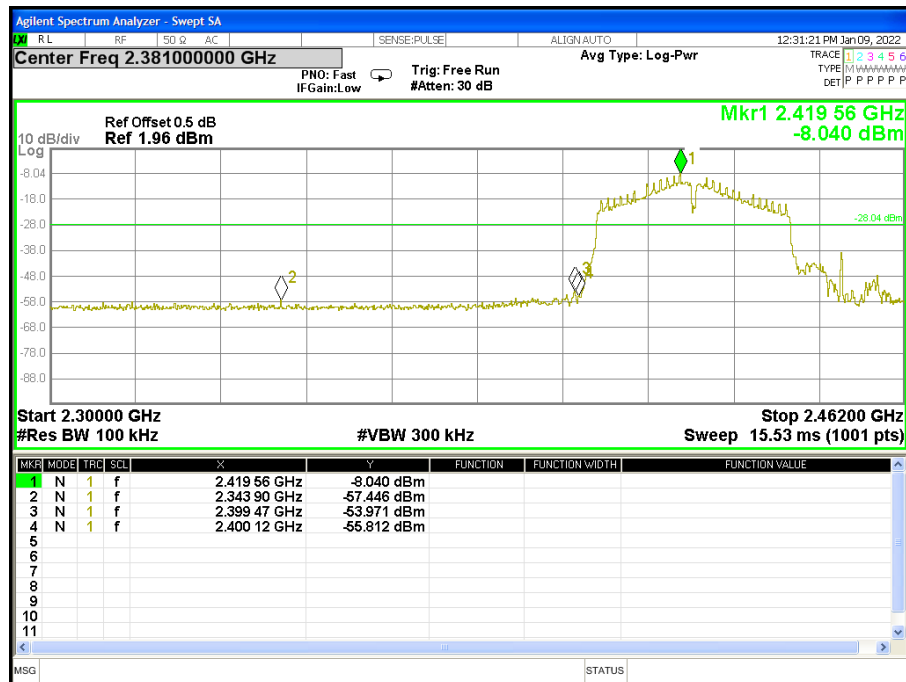
CH09



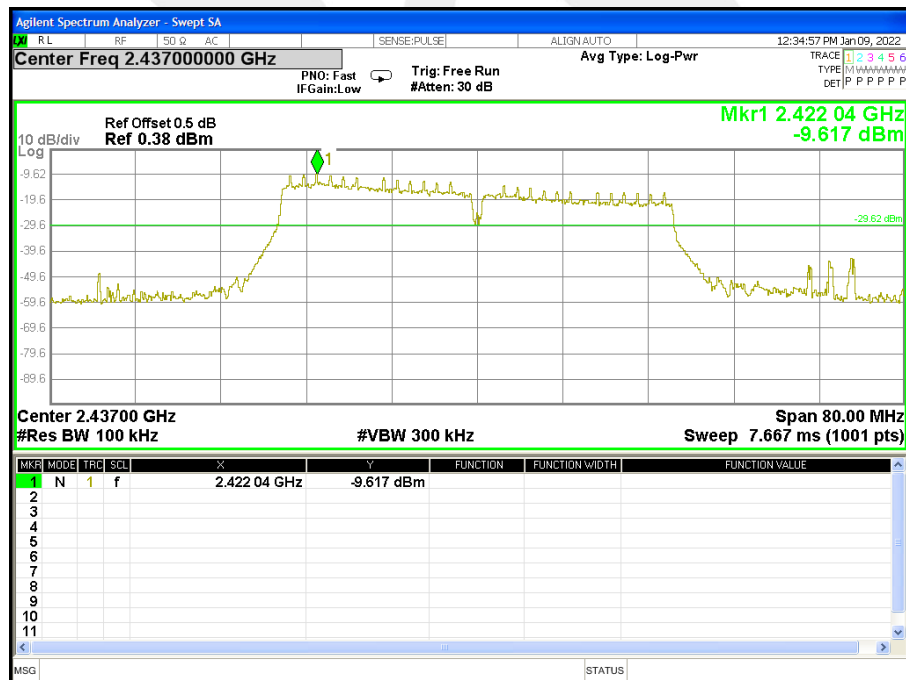


Band edge(it's also the reference level for conducted spurious emission)

CH03

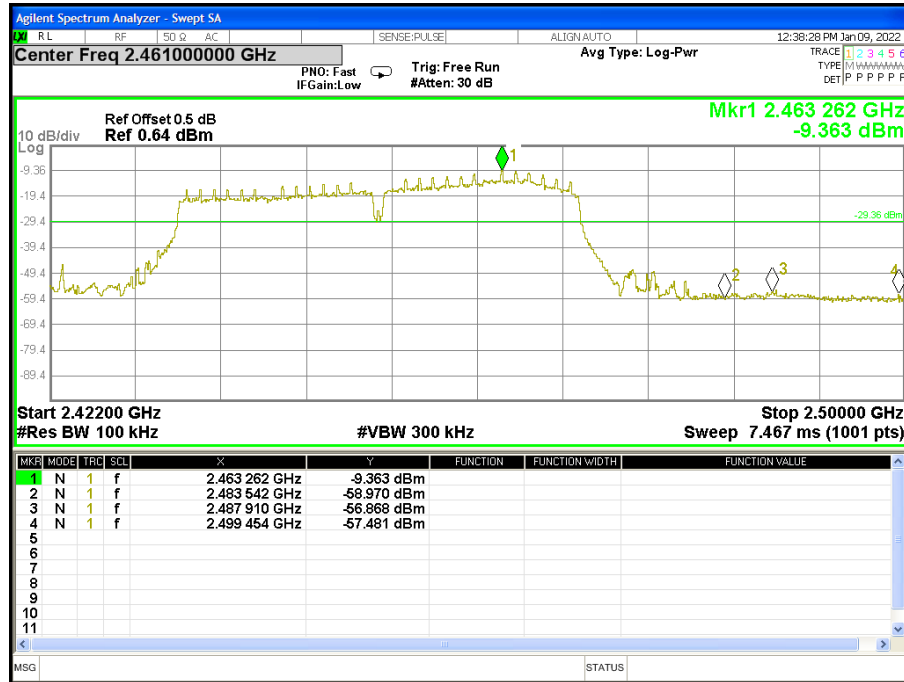


CH 06





CH 09





5. POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247 , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	≤ 8 dBm (RBW ≥ 3 KHz)	2400-2483.5	PASS

5.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the $100 \text{ kHz} \geq \text{RBW} \geq 3 \text{ kHz}$.
4. Set the $\text{VBW} \geq 3 \times \text{RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.