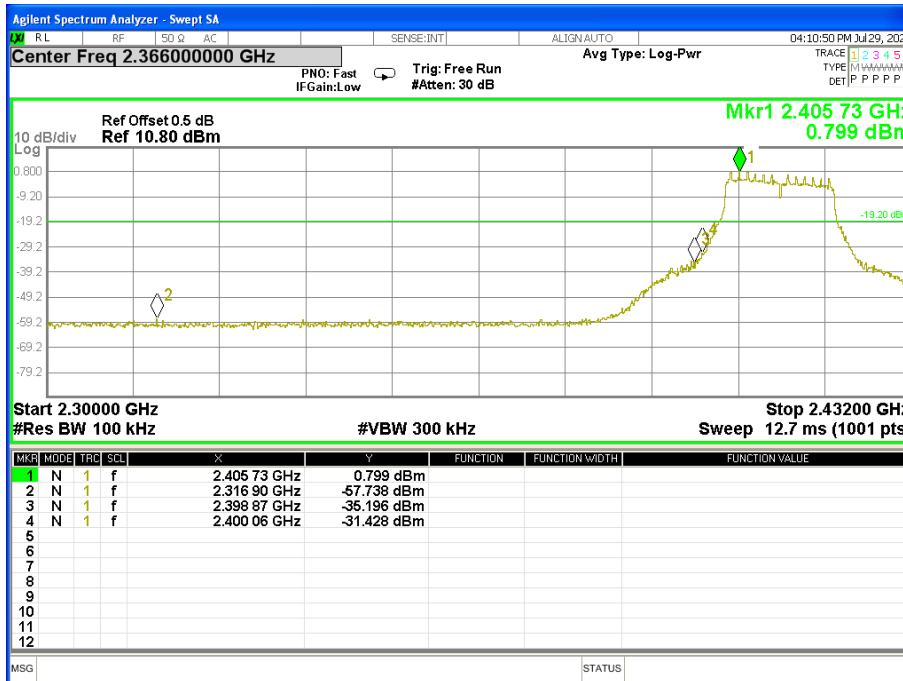


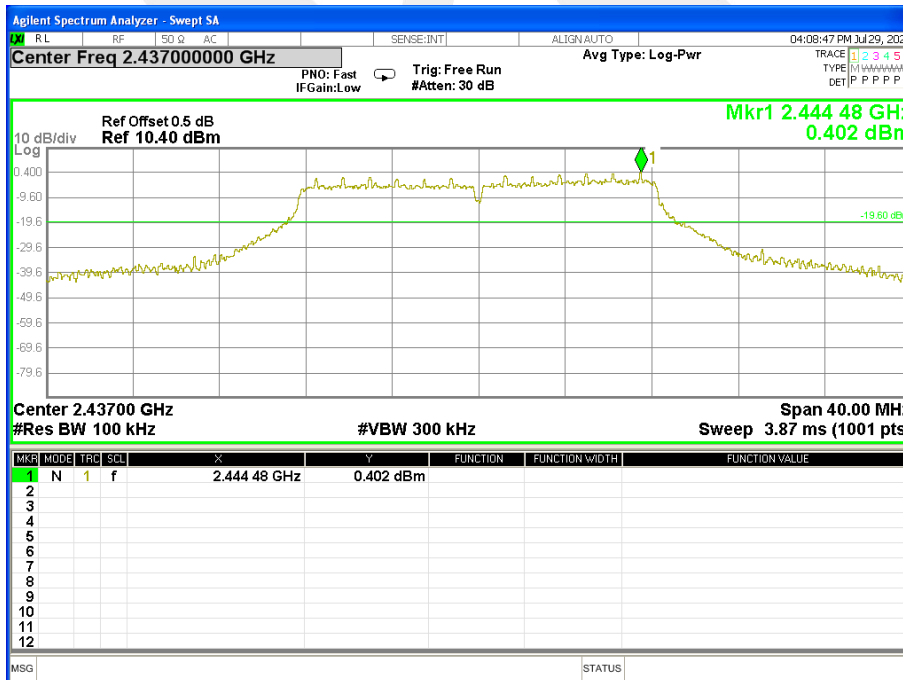


Band edge(it's also the reference level for conducted spurious emission)

CH 01

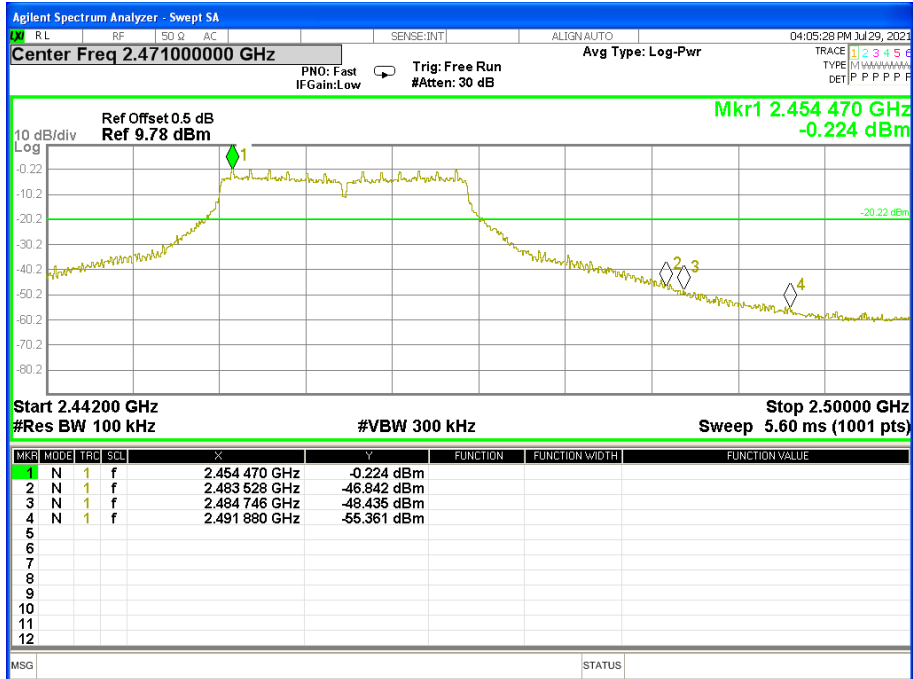


CH06





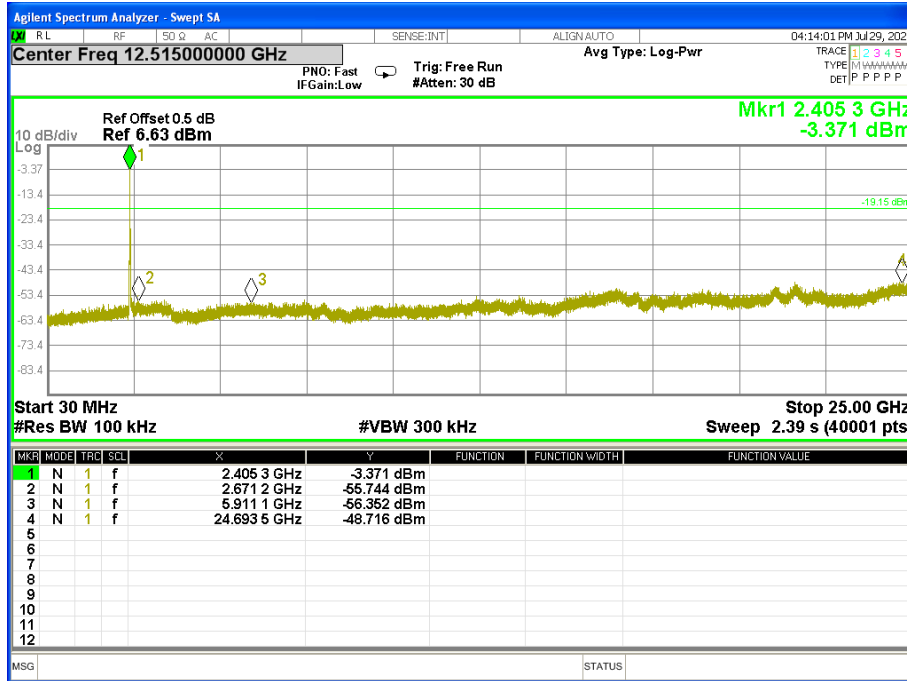
CH11



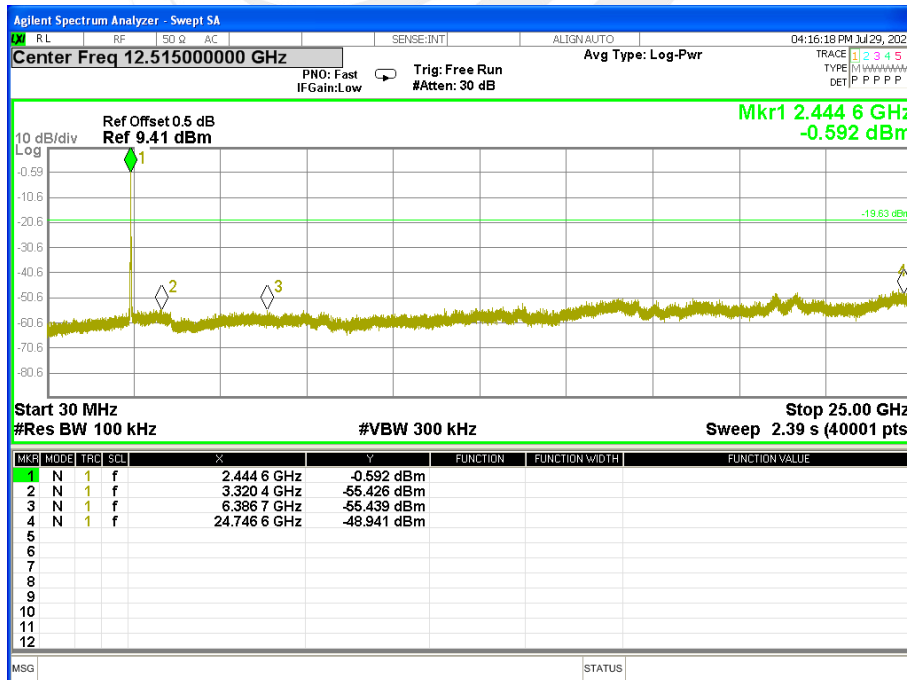


Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX n Mode(20M) /CH01, CH06, CH11

CH 01

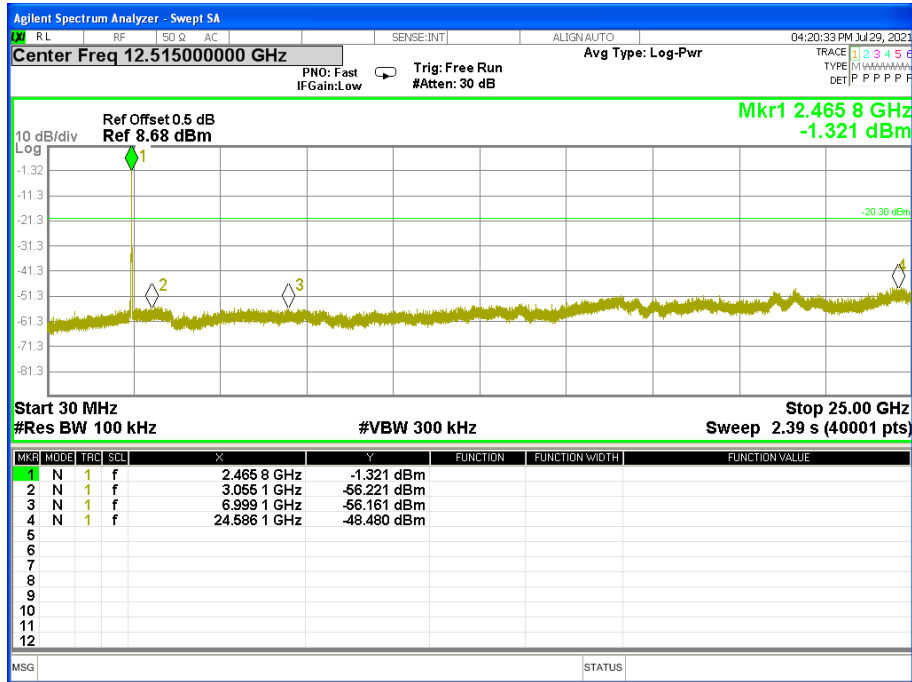


CH 06





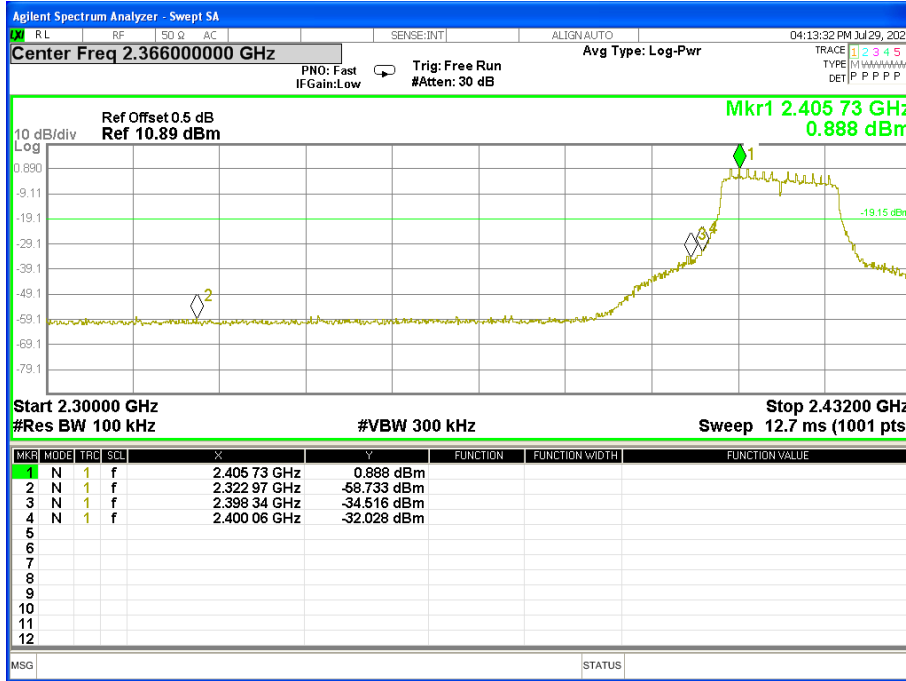
CH 11



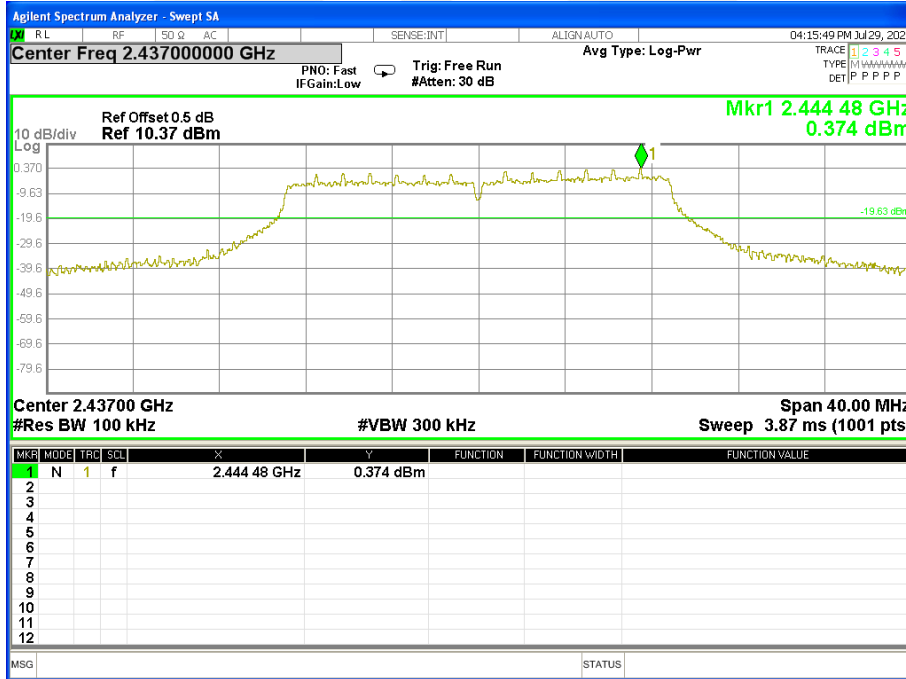


Band edge(it's also the reference level for conducted spurious emission)

CH 01

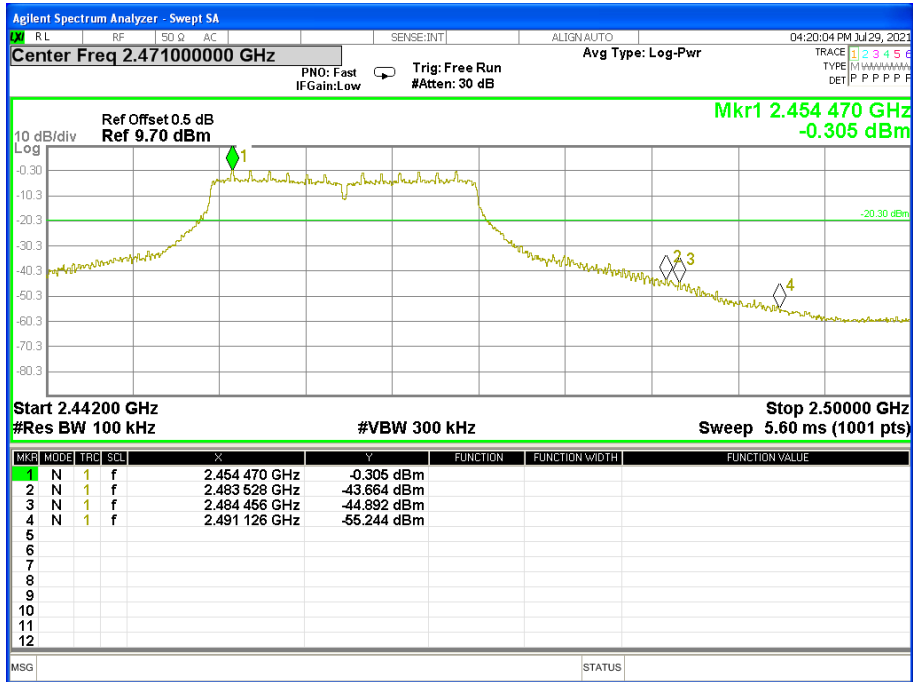


CH 06





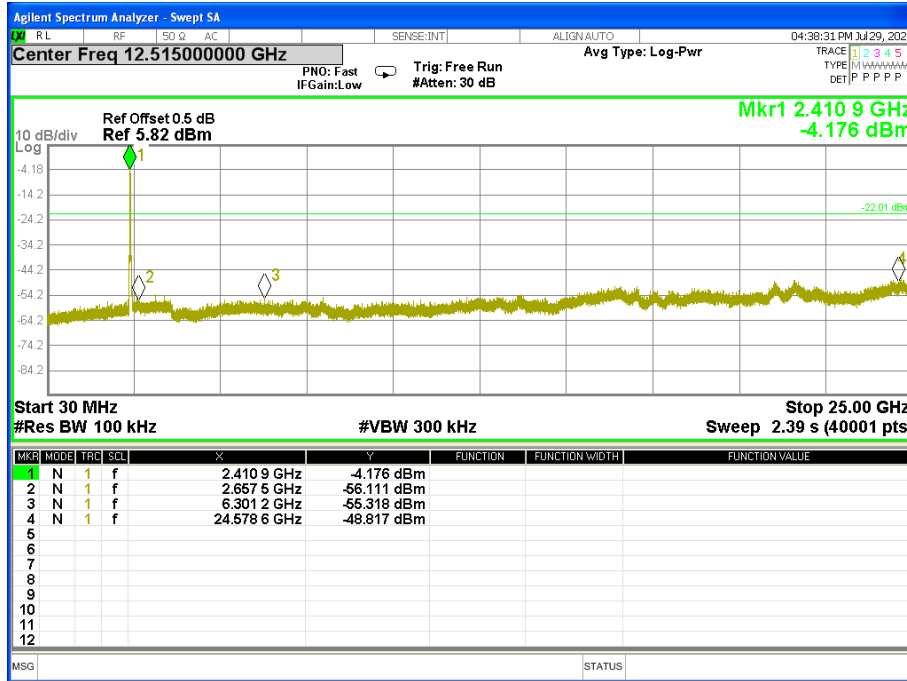
CH 11





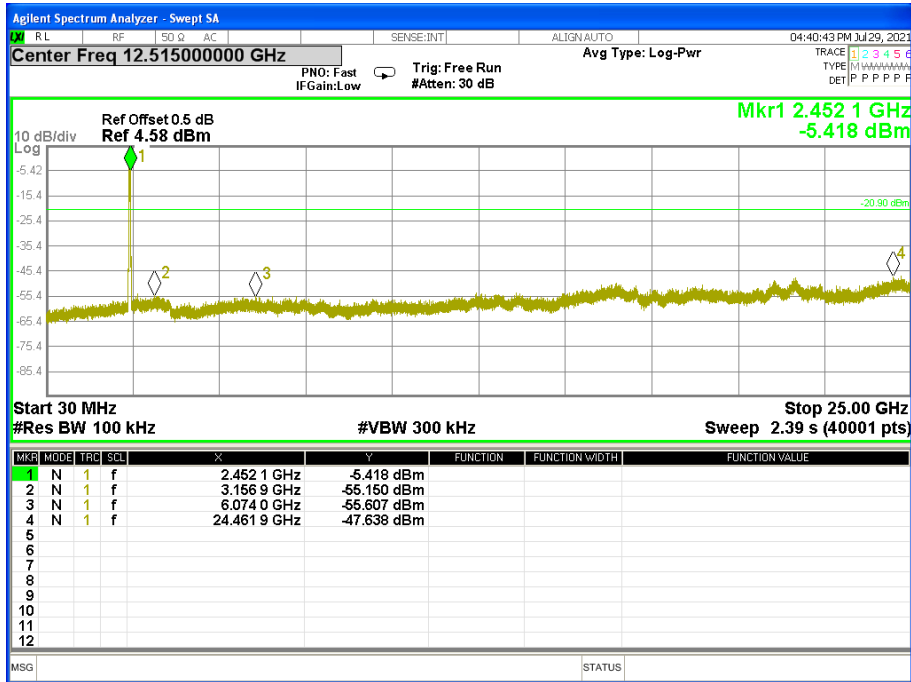
Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX n Mode(40M) /CH03, CH06, CH09

CH 03

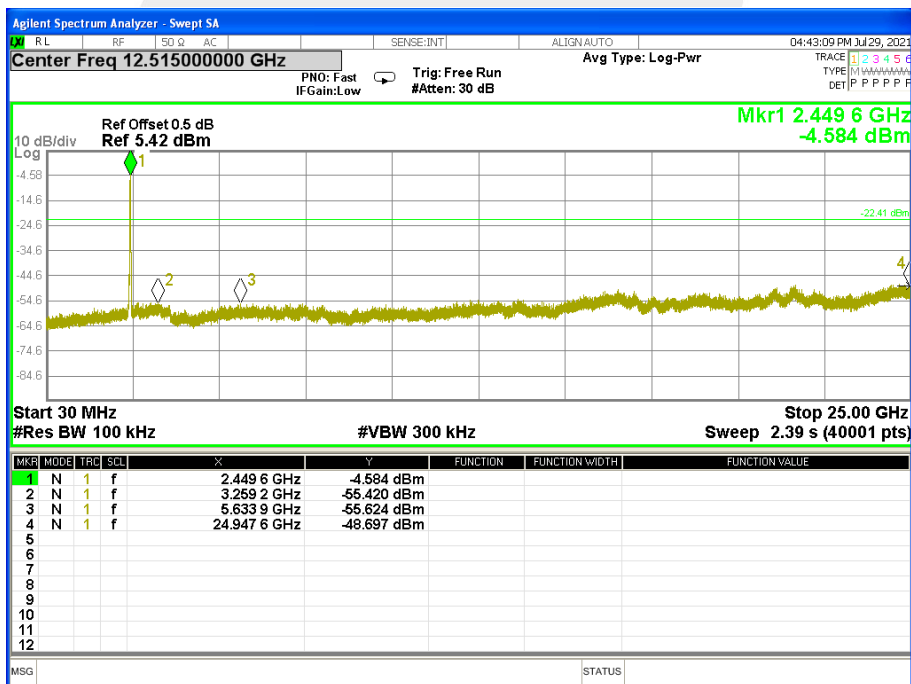




CH06



CH09

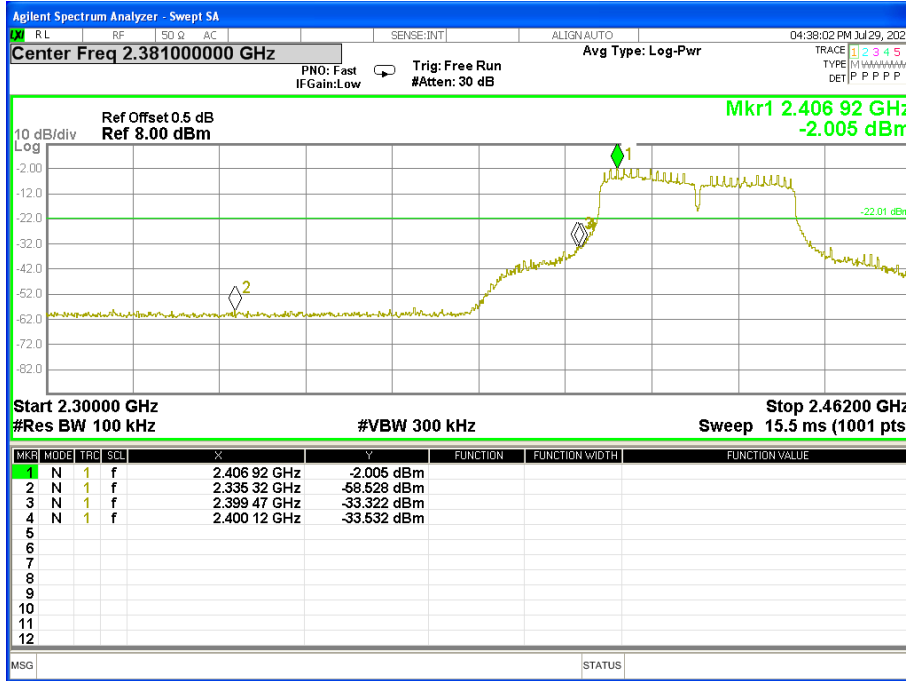






Band edge(it's also the reference level for conducted spurious emission)

CH03

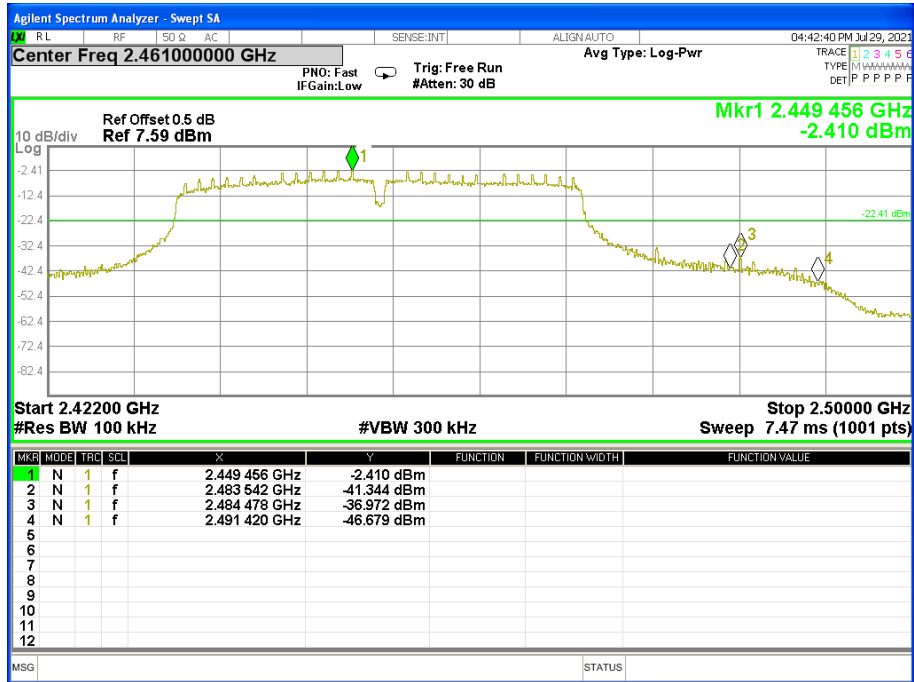


CH 06





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 ≥3KHz)	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 kHz ≥ RBW ≥3 kHz.
4. Set the VBW ≥ 3 x 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.

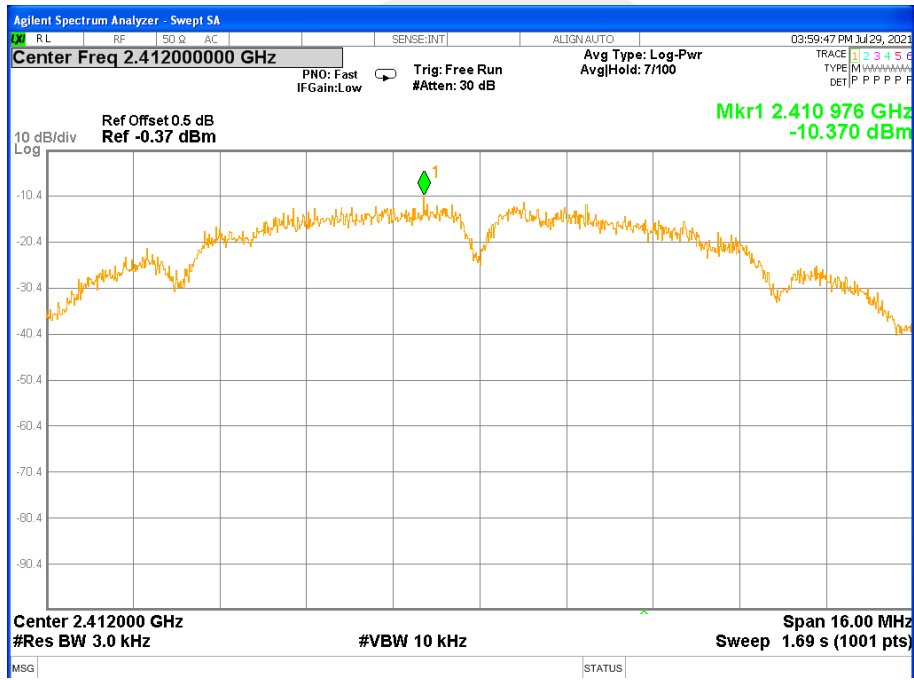


5.6 TEST RESULTS

Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX b Mode /CH01, CH06, CH11

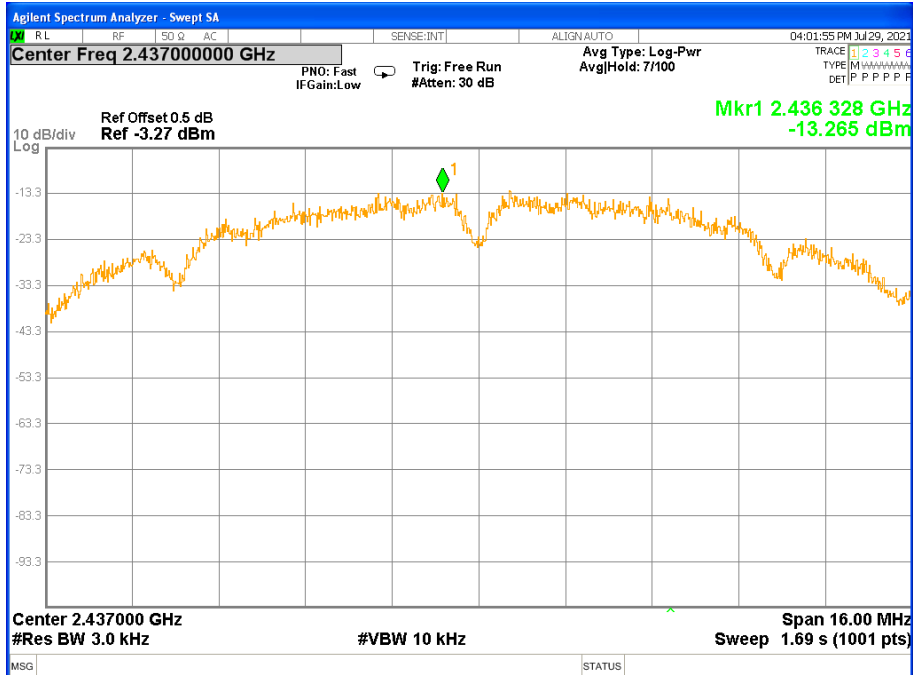
Frequency	Power Density	Limit (dBm/3KHz)	Result
	(dBm/3kHz)		
2412 MHz	-10.370	≤8	PASS
2437 MHz	-13.265	≤8	PASS
2462 MHz	-13.108	≤8	PASS

TX CH01

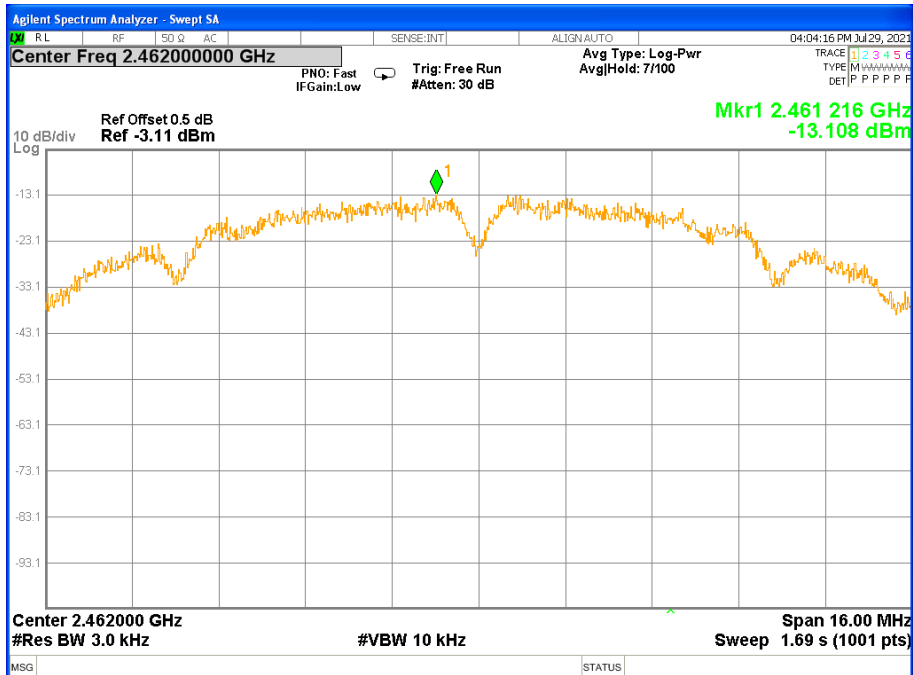




### TX CH06



### TX CH11

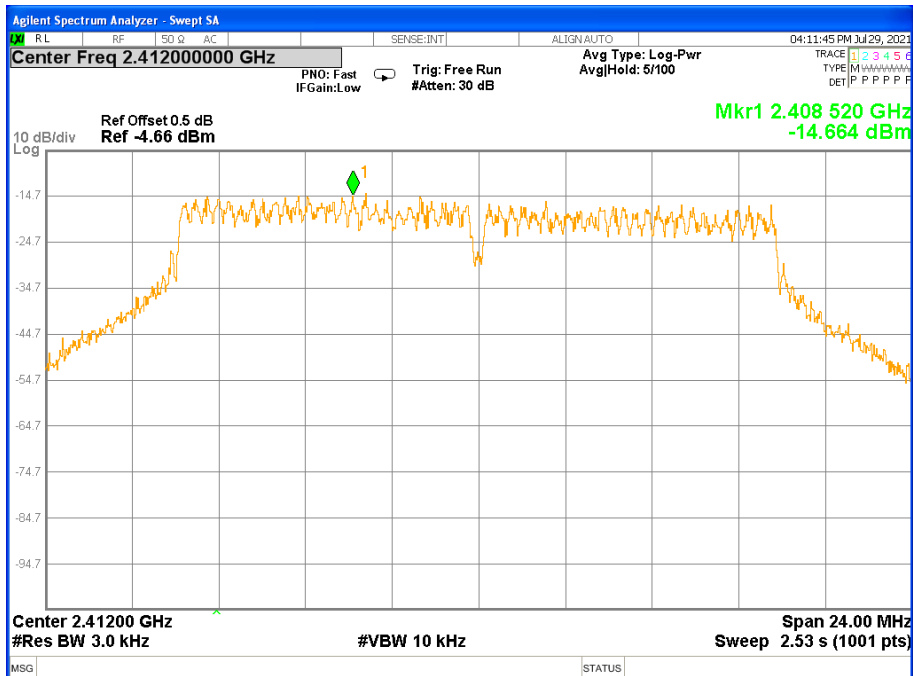




Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX g Mode /CH01, CH06, CH11

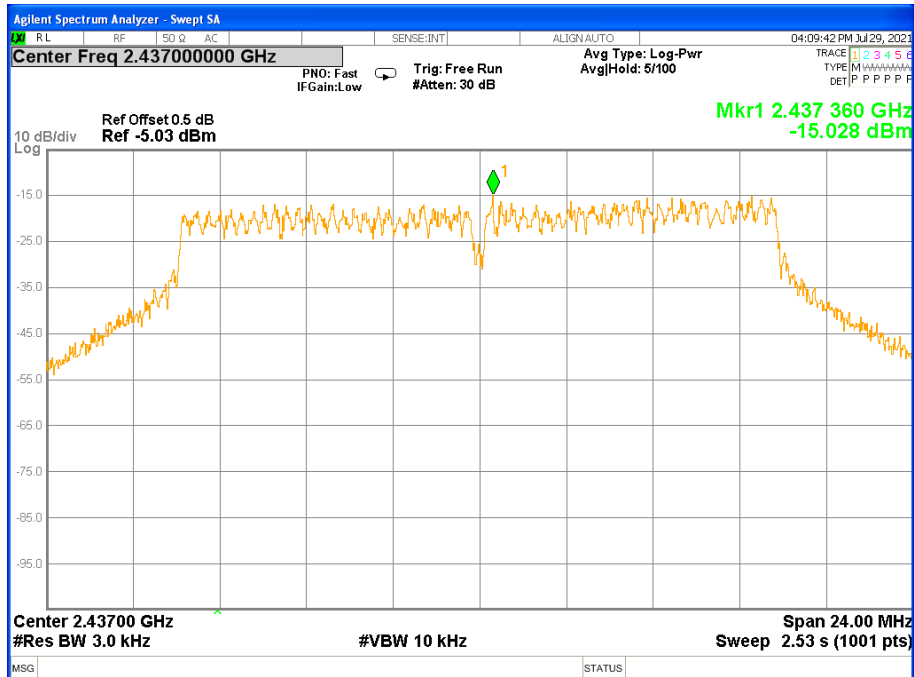
Frequency	Power Density	Limit (dBm/3KHz)	Result
	(dBm/3kHz)		
2412 MHz	-14.6640	≤8	PASS
2437 MHz	-15.0280	≤8	PASS
2462 MHz	-14.2910	≤8	PASS

TX CH01

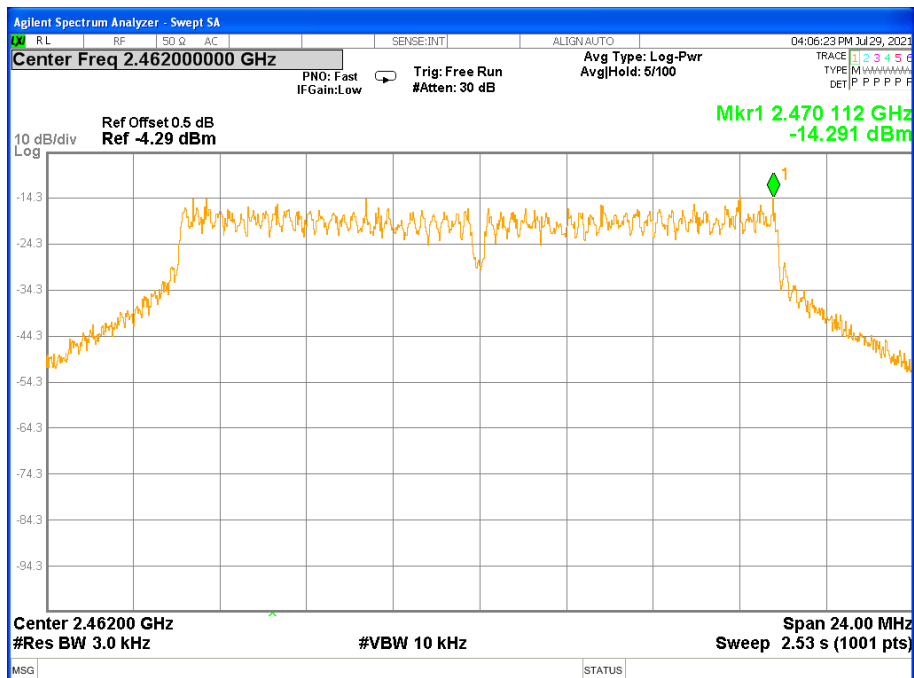




### TX CH06



### TX CH11

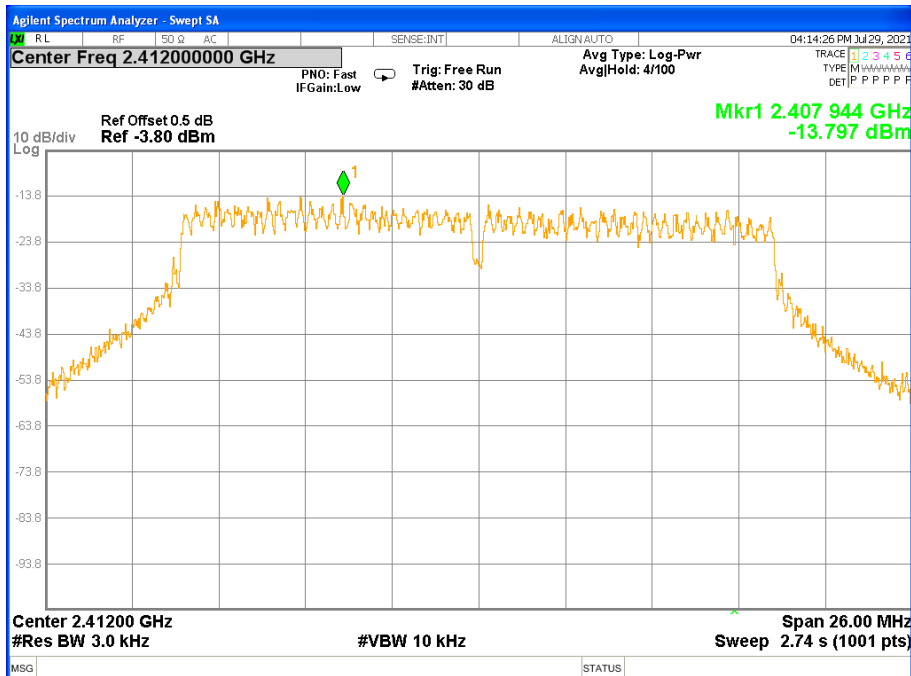




Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX n Mode(20M) /CH01, CH06, CH11

Frequency	Power Density	Limit (dBm/3KHz)	Result
	(dBm/3kHz)		
2412 MHz	-13.7970	≤8	PASS
2437 MHz	-14.7730	≤8	PASS
2462 MHz	-15.6450	≤8	PASS

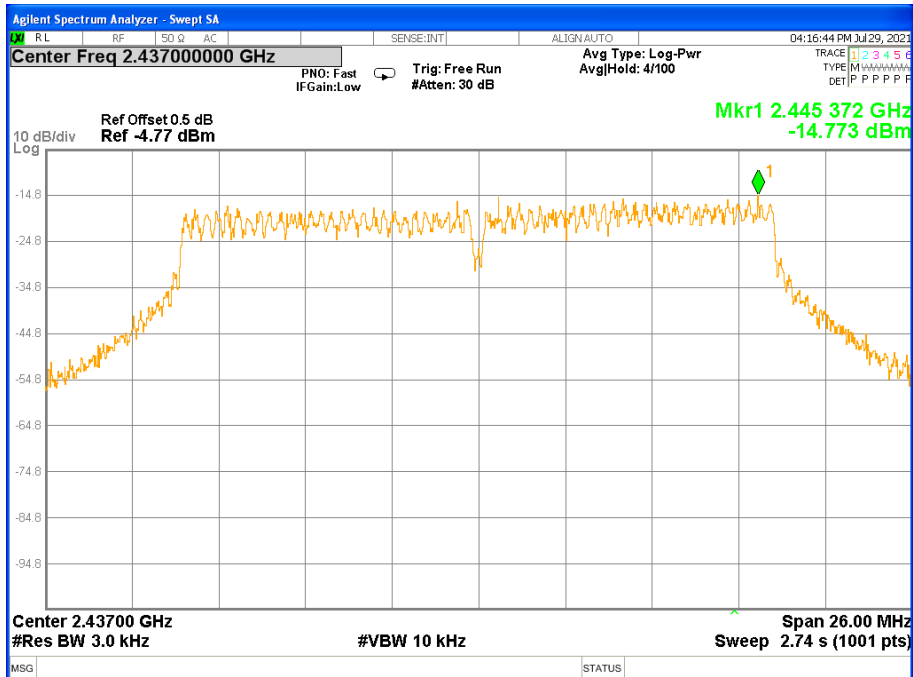
TX CH01



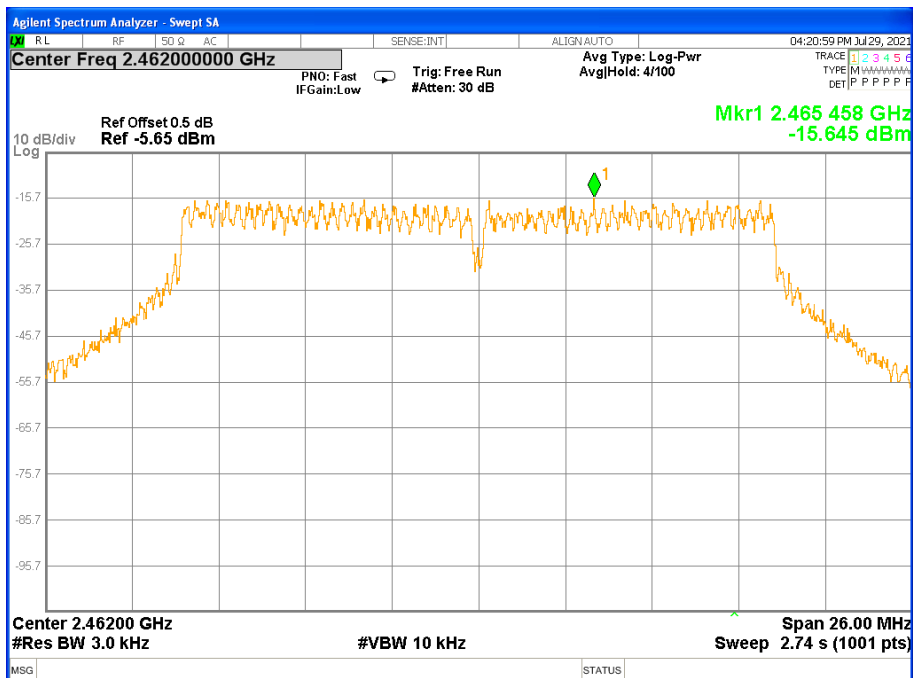




### TX CH06



### TX CH11

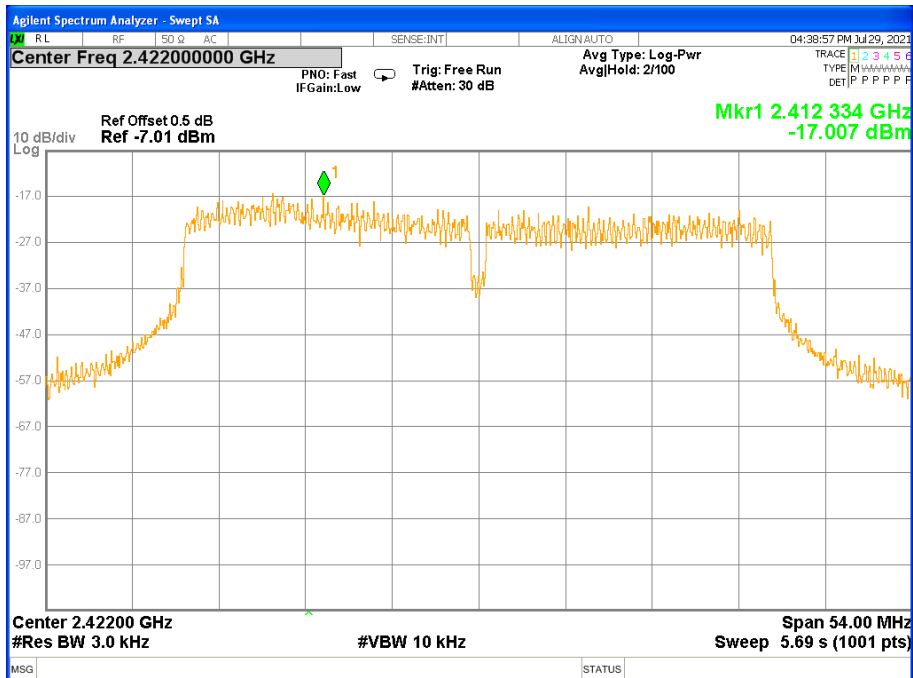




Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX n Mode(40M) /CH03, CH06, CH09

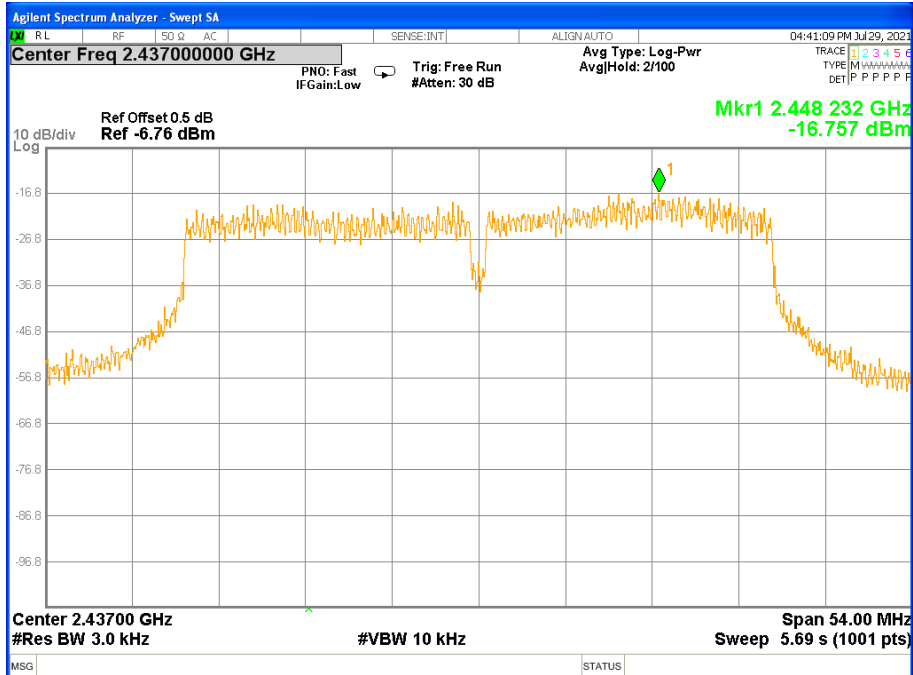
Frequency	Power Density	Limit (dBm/3KHz)	Result
	(dBm/3kHz)		
2422 MHz	-17.0070	≤8	PASS
2437 MHz	-16.7570	≤8	PASS
2452 MHz	-18.0910	≤8	PASS

**TX CH03**

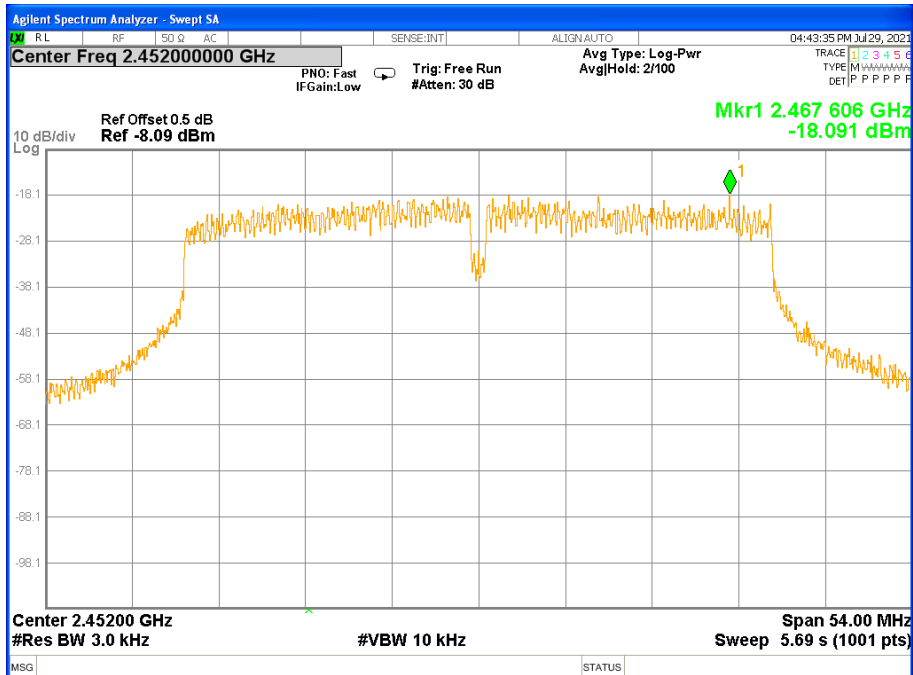




### TX CH06



### TX CH09



## 6. BANDWIDTH TEST

### 6.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

### 6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW $\geq$ 3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be  $\geq 6$  dB.

### 6.3 DEVIATION FROM STANDARD

No deviation.

### 6.4 TEST SETUP



### 6.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

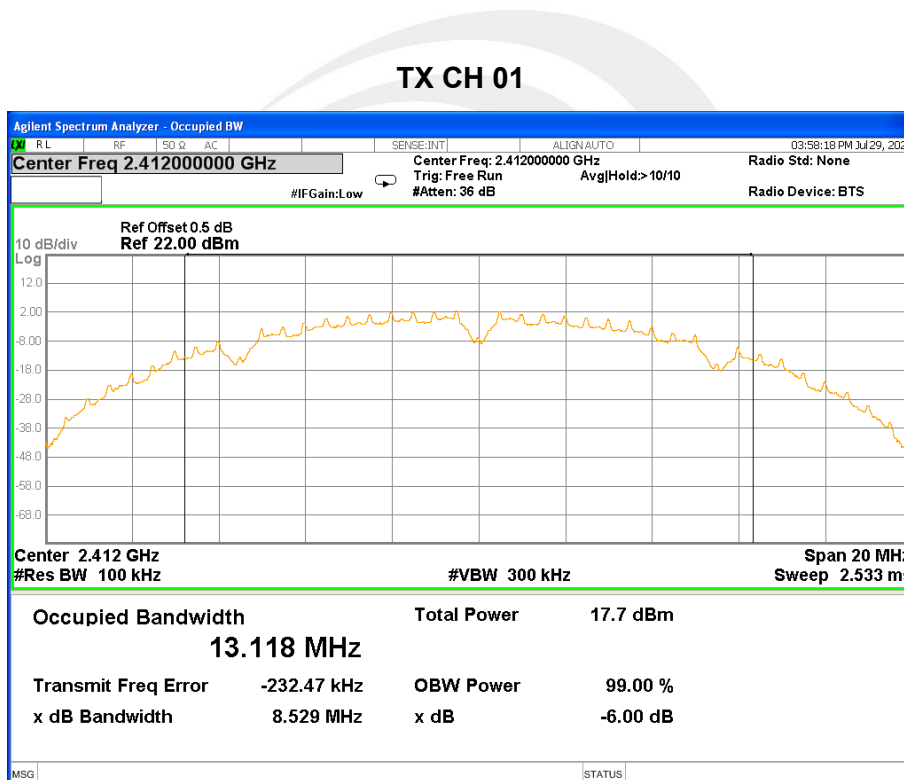


6.6 TEST RESULTS

Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX b Mode /CH01, CH06, CH11

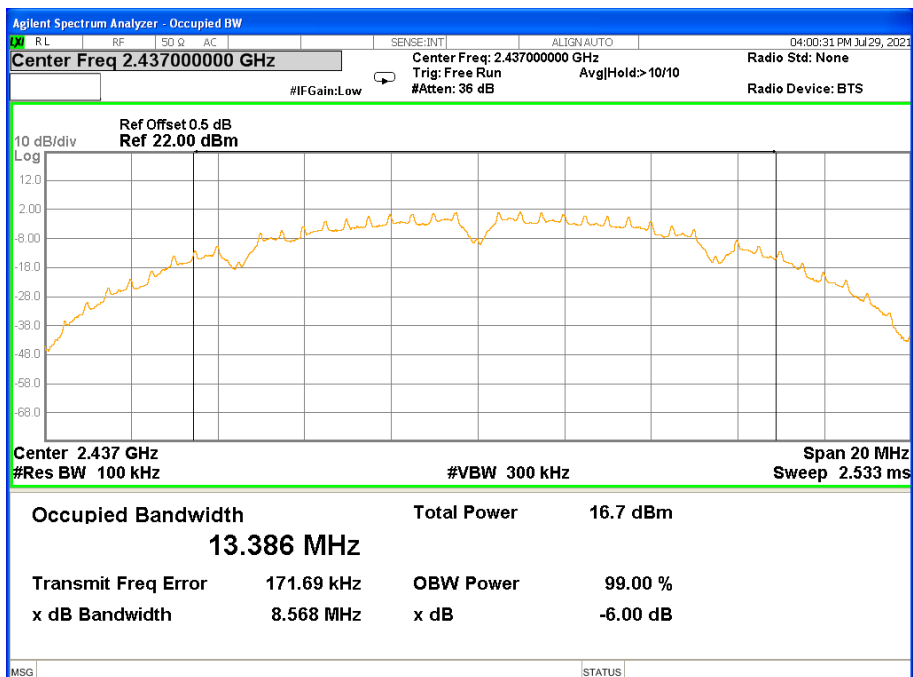
Remark: PEAK DETECTOR IS USED

Frequency	6dB Bandwidth	Limit	Result
	(MHz)	(KHz)	
2412 MHz	8.529	≥500KHz	PASS
2437 MHz	8.568	≥500KHz	PASS
2462 MHz	9.048	≥500KHz	PASS

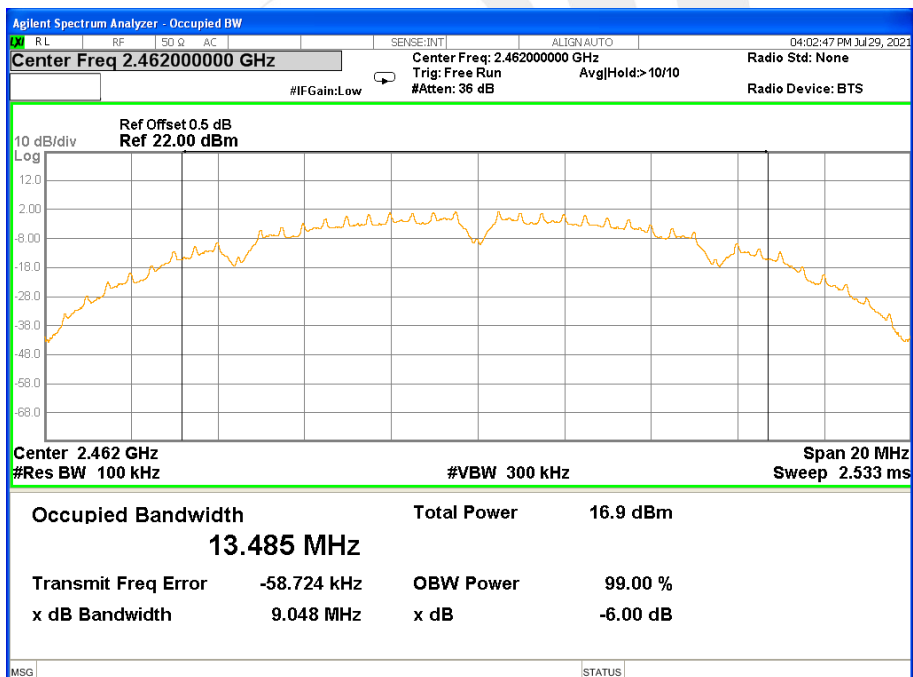




### TX CH 06



### TX CH 11

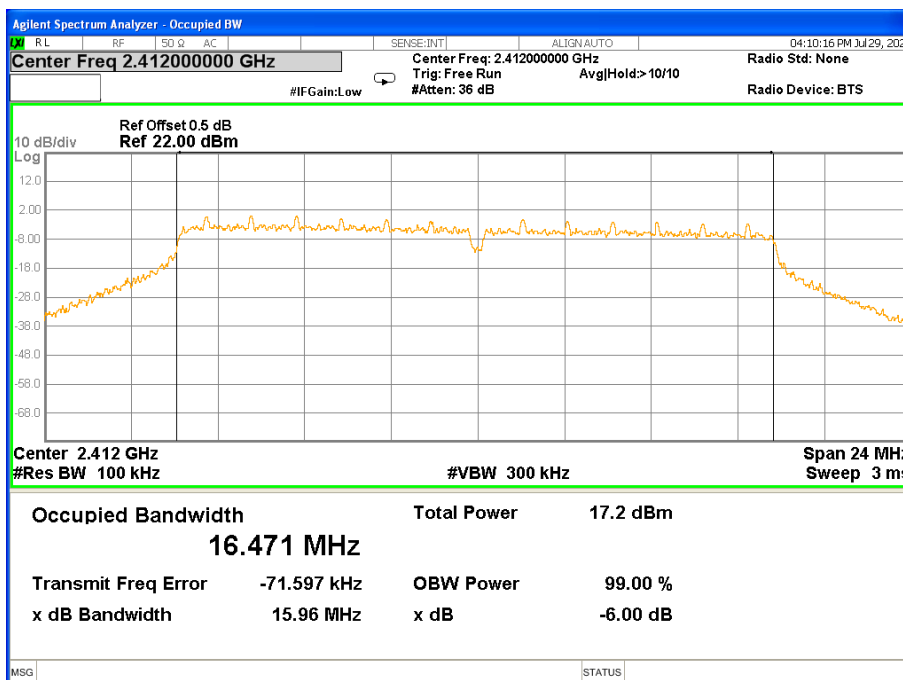




Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX g Mode /CH01, CH06, CH11

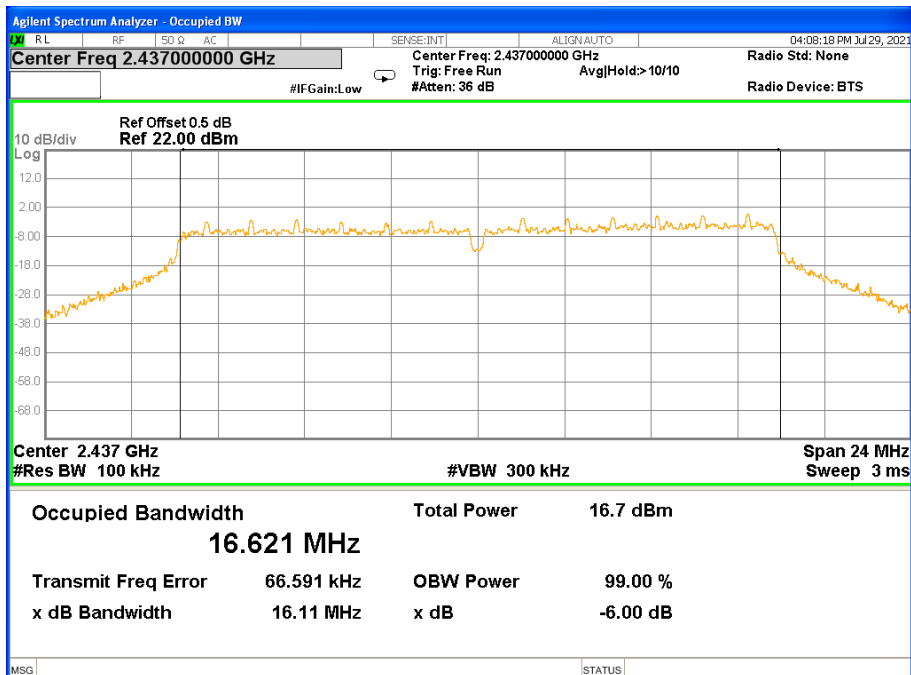
Frequency	6dB Bandwidth	Limit	Result
	(MHz)	(KHz)	
2412 MHz	15.96	≥500KHz	PASS
2437 MHz	16.11	≥500KHz	PASS
2462 MHz	16.44	≥500KHz	PASS

TX CH 01

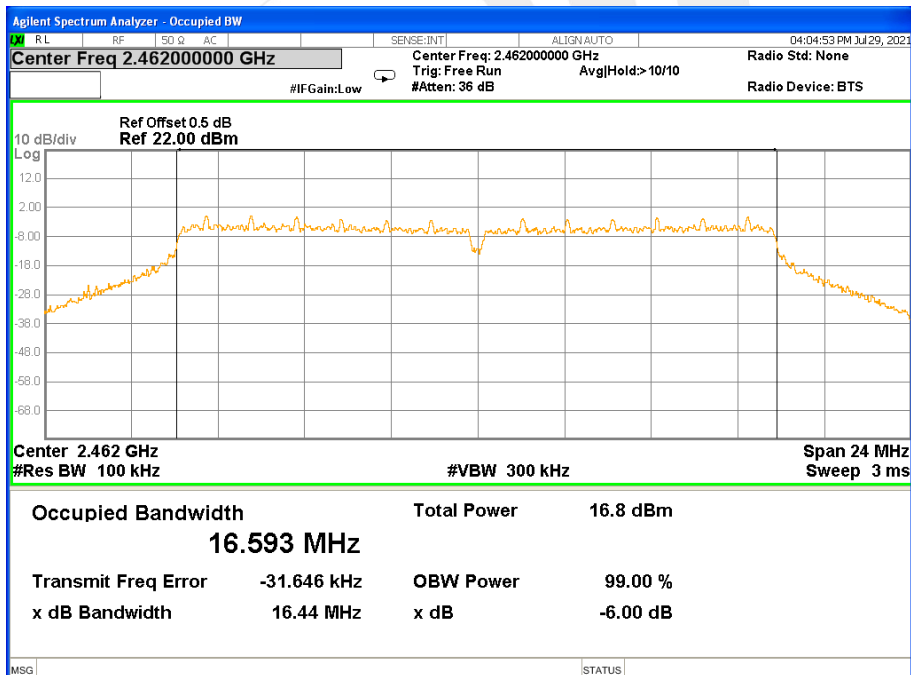




### TX CH 06



### TX CH 11



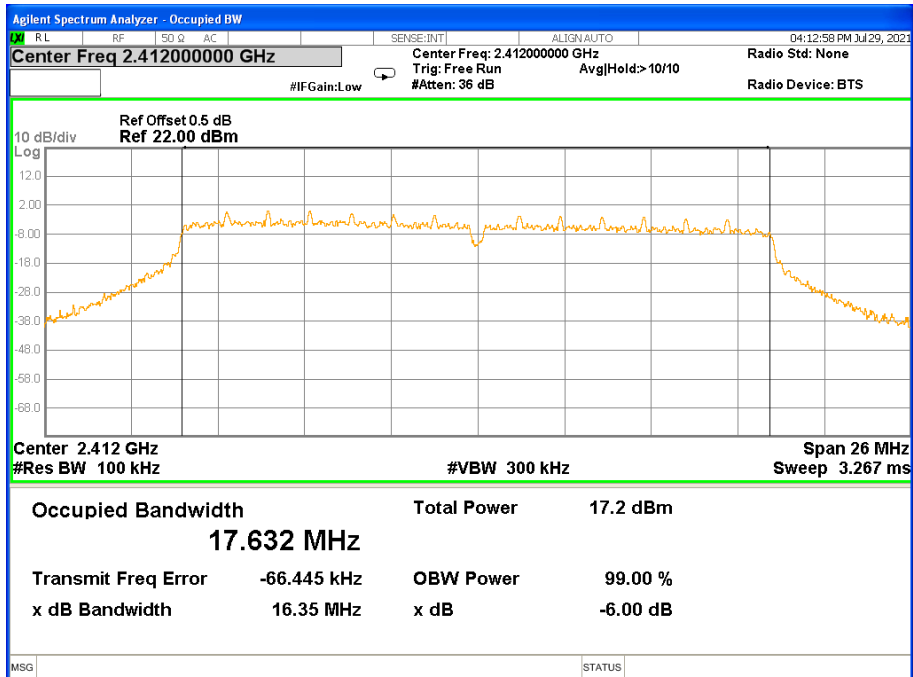




Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX n Mode(20M) /CH01, CH06, CH11

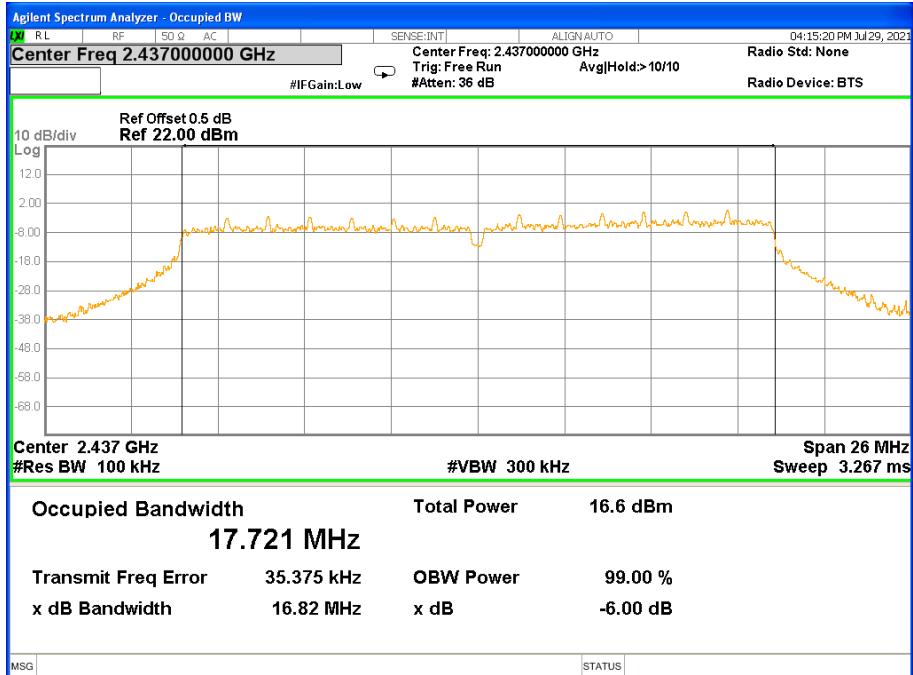
Frequency	6dB Bandwidth	Limit	Result
	(MHz)	(KHz)	
2412 MHz	16.35	≥500KHz	PASS
2437 MHz	16.82	≥500KHz	PASS
2462 MHz	17.62	≥500KHz	PASS

**TX CH 01**

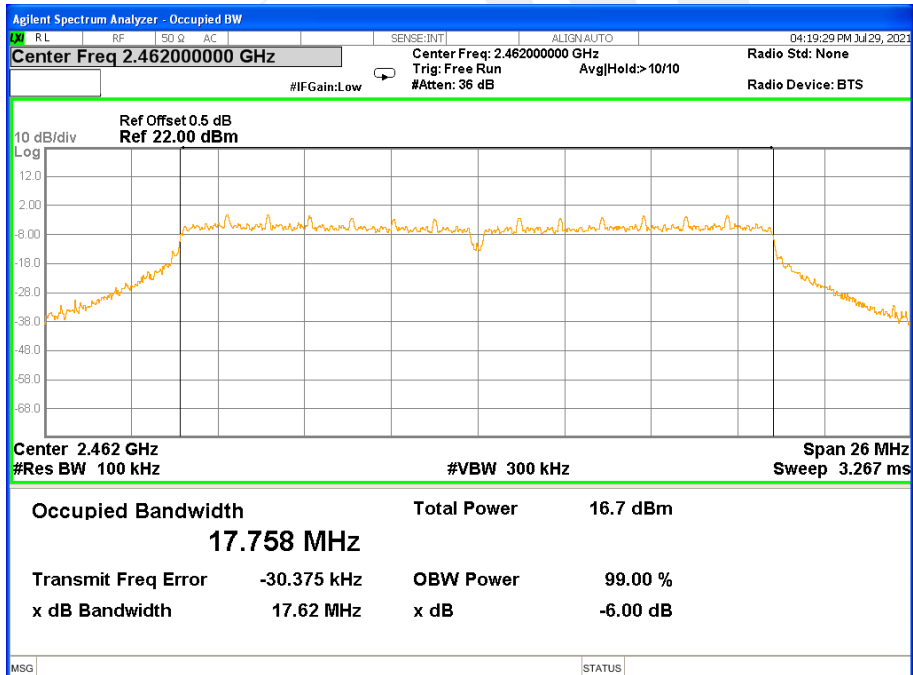




### TX CH 06



### TX CH 11

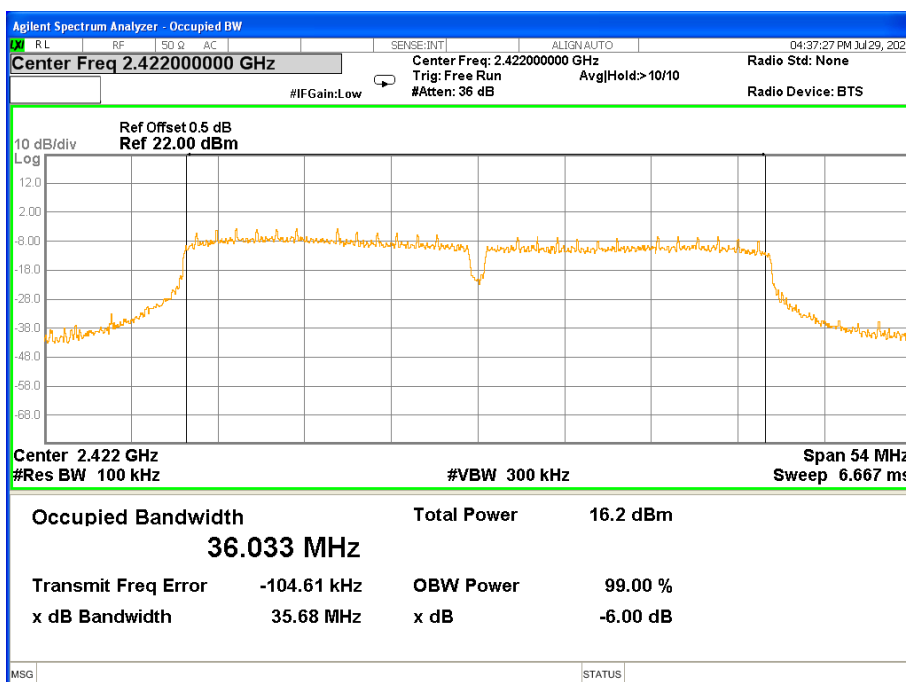




Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V	Test Mode:	TX n Mode(40M) /CH03, CH06, CH09

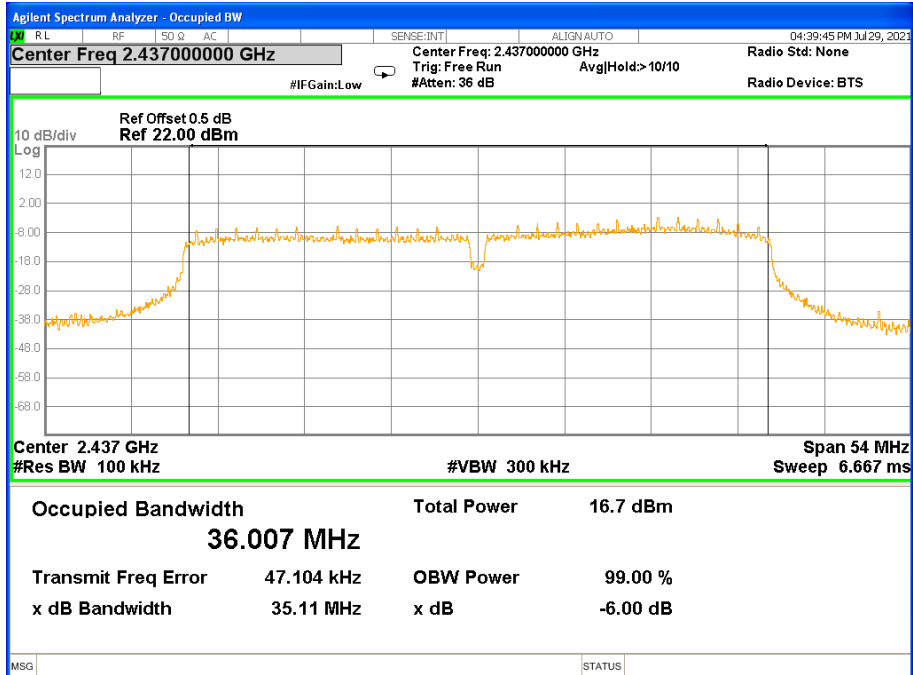
Frequency	6dB Bandwidth	Limit	Result
	(MHz)	(KHz)	
2422 MHz	35.68	≥500KHz	PASS
2437 MHz	35.11	≥500KHz	PASS
2452 MHz	35.10	≥500KHz	PASS

**TX CH 03**

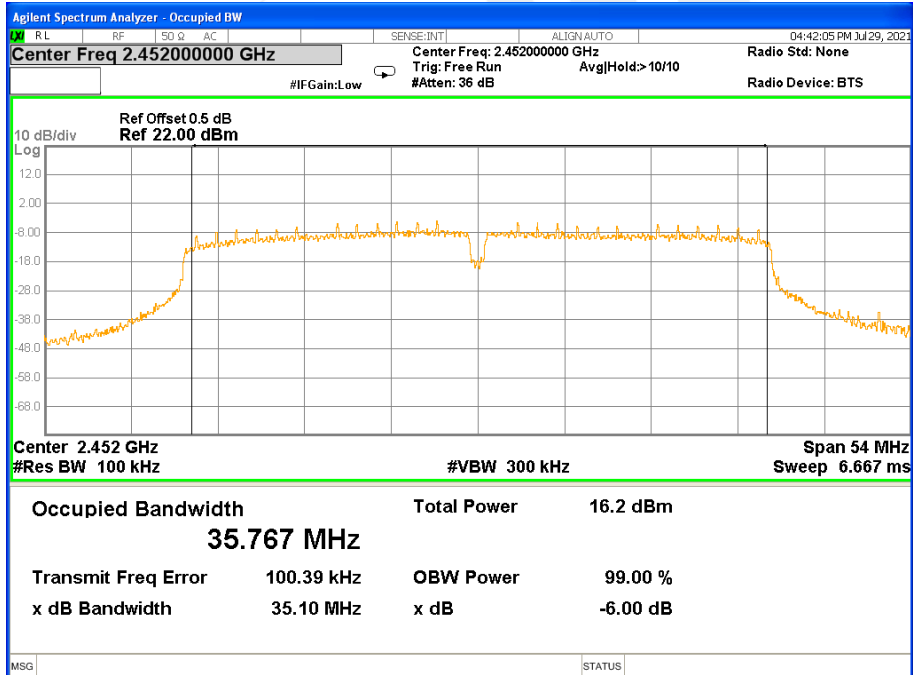




TX CH 06



TX CH 09





## 7. PEAK OUTPUT POWER TEST

### 7.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

### 7.2 TEST PROCEDURE

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

RBW  $\geq$  DTS bandwidth

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

- Set the RBW  $\geq$  DTS bandwidth.
- Set VBW  $\geq$  [3  $\times$  RBW].
- Set span  $\geq$  [3  $\times$  RBW].
- Sweep time = auto couple.
- Detector = peak.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use peak marker function to determine the peak amplitude level.

Integrated band power method:

The following procedure can be used when the maximum available RBW of the instrument is less than the

DTS bandwidth:

- Set the RBW = 1 MHz.
- Set the VBW  $\geq$  [3  $\times$  RBW].
- Set the span  $\geq$  [1.5  $\times$  DTS bandwidth].
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

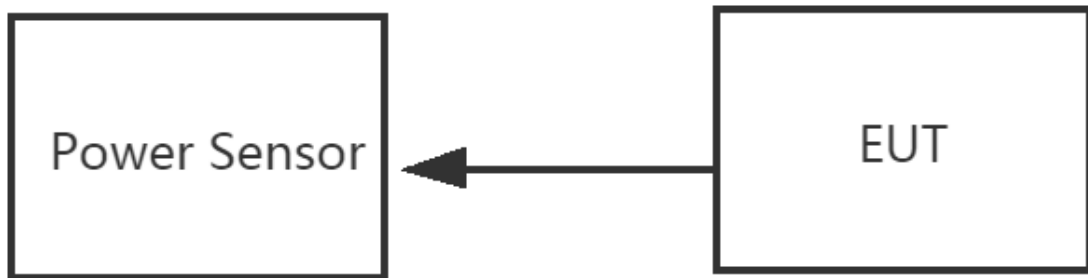
PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

### 7.3 DEVIATION FROM STANDARD

No deviation.

## 7.4 TEST SETUP



## 7.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.





## 7.6 TEST RESULTS

Temperature:	25°C	Relative Humidity:	60%
Test Voltage:	DC 3.8V		

Mode	Test Channel	Frequency	Peak Conducted Output Power	Average Conducted Output Power	LIMIT
		(MHz)	(dBm)	(dBm)	dBm
TX 802.11b	CH01	2412	14.18	10.88	30
	CH06	2437	12.68	9.94	30
	CH11	2462	13.20	10.44	30
TX 802.11g	CH01	2412	19.79	10.13	30
	CH06	2437	19.16	9.94	30
	CH11	2462	20.09	10.73	30
TX 802.11n20	CH01	2412	19.87	10.69	30
	CH06	2437	19.74	9.95	30
	CH11	2462	20.27	10.18	30
TX 802.11n40	CH03	2422	20.28	10.99	30
	CH06	2437	18.37	9.31	30
	CH09	2452	20.34	9.99	30

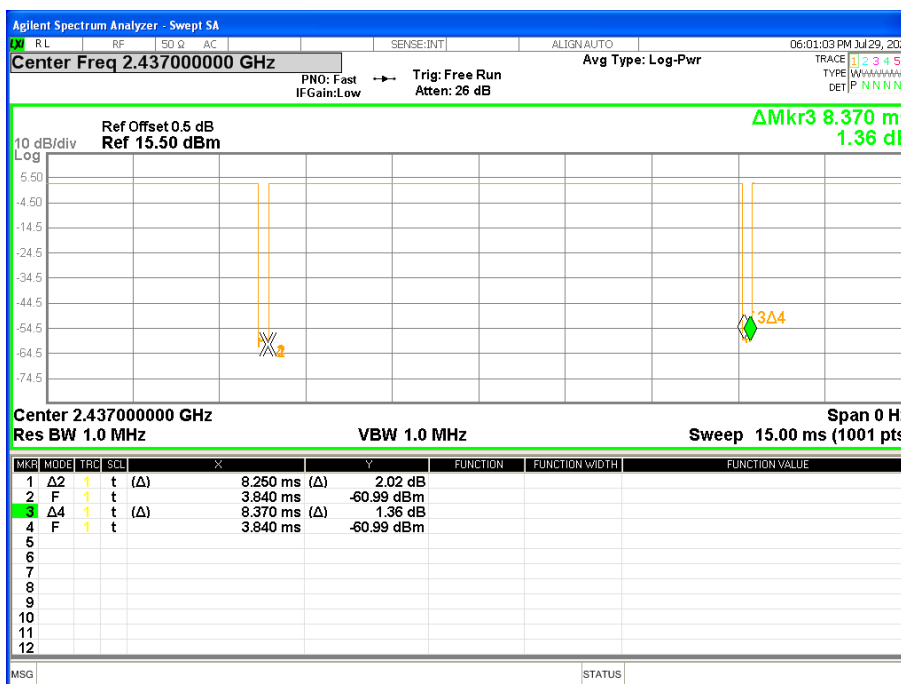
Note: Our power sensor test AVG power has no duty cycle display. The power sensor measures AVG power is Burst power. The software has considered the factor of the duty cycle factor, so it is unnecessary to add it again.



Duty cycle

Mode	Ton	Tp	Duty cycle(%)	Duty factor(dB)
802.11b	8.250	8.370	98.57%	0.06
802.11g	1.384	1.564	88.49%	0.53
802.11n20	1.284	1.468	87.47%	0.58
802.11n40	0.650	0.838	77.57%	1.10

802.11b



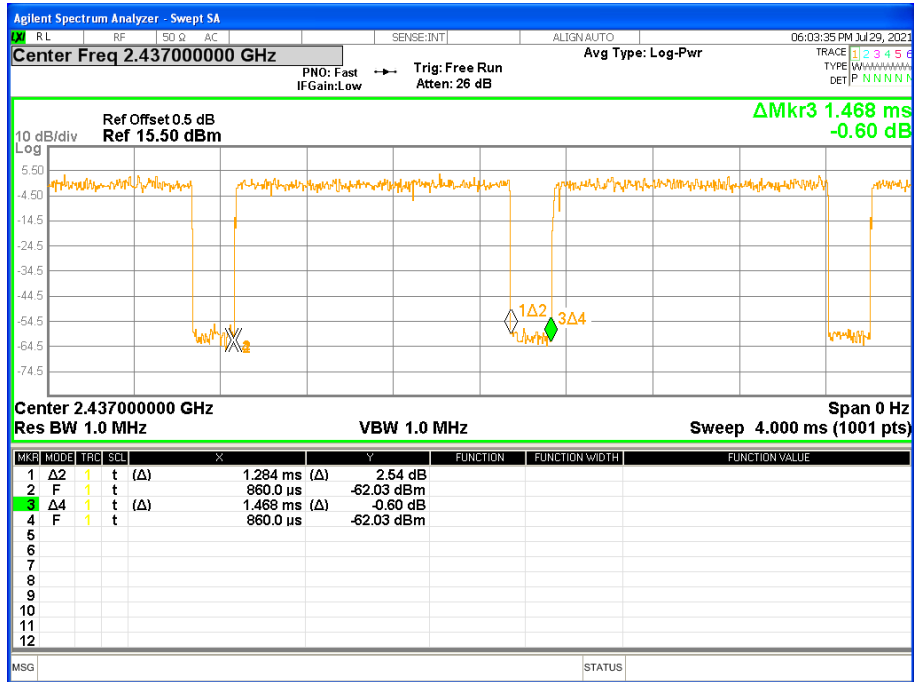
802.11g



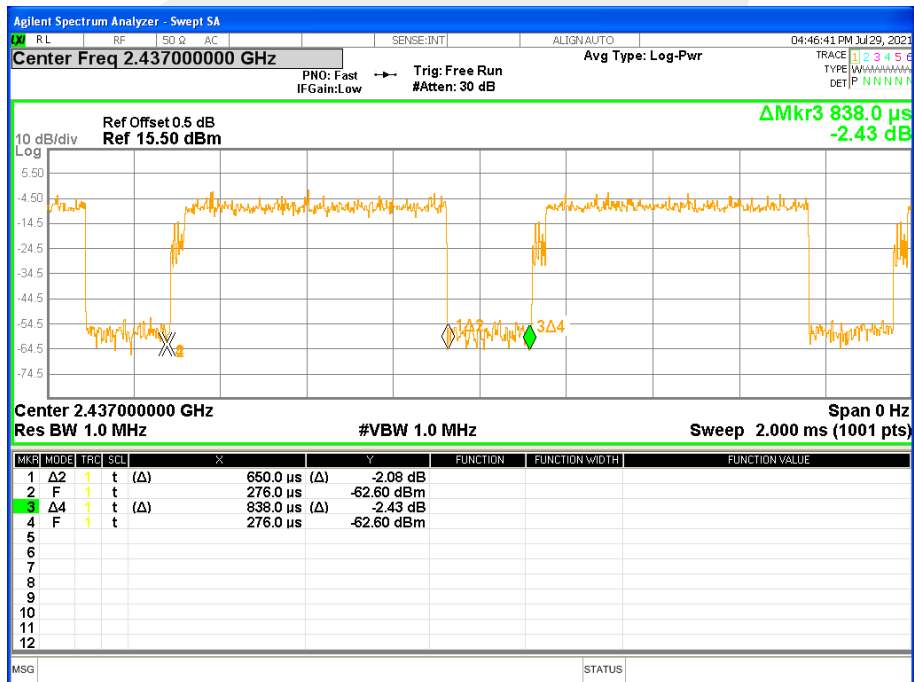




802.11n(HT20)



802.11n(HT40)





## 8. ANTENNA REQUIREMENT

### 8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### 8.2 EUT ANTENNA

The EUT antenna is External Antenna. It comply with the standard requirement.





## APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※END OF THE REPORT※※※※

