



FCC/ISED - TEST REPORT

Report Number : **709502408421-00B** Date of Issue: August 26, 2025

Model : JETBLACK VICTORY

Product Type : SMART TRAINER

Applicant : JETBLACK PRODUCTS Pty Ltd

Address : 31 WALKER STREET, SYDNEY, NSW, 2756, Australia

Production Facility : ANH NGHIA ANCL CO., LTD.

Address : No. 173, Hamlet 4, Group 25, Thai Hoa Hamlet, Ho Nai 3

Commune, Trang Bom District, Dong Nai Province, Vietnam

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including
Appendices

71



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2 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
709502408421-00B	First Issue	08/26/2025

3 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
No.16 Lane, 1951 Du Hui Road,
Shanghai 201108,
P.R. China

Telephone: +86 21 6141 0123

Fax: +86 21 6140 8600

FCC Registration No.: 820234

FCC Designation Number: CN1183

ISED CAB identifier CN0101

IC Registration No.: 31668



4 Description of the Equipment under Test

Product: SMART TRAINER

Model no.: JETBLACK VICTORY

Hardware Version Identification No. (HVIN) JETBLACK VICTORY

Product Marketing Name (PMN) JETBLACK VICTORY

FCC ID: 2BRHF-JBVICTORY

IC: 33472-JBVICTORY

Options and accessories: NA

Rating: For Adaptor:
Input: 100-240V~, 50-60Hz, 2,0A
Output: 19VDC, 4.74A
For JETBLACK VICTORY: 19VDC

RF Transmission Frequency: 2.4GHz BLE: 2402~2480 MHz
2.4GHz ANT+: 2457MHz

No. of Operated Channel: 2.4GHz BLE: 40
2.4GHz ANT+: 1

Modulation: 2.4GHz BLE: GFSK
2.4GHz ANT+: GFSK

Hardware Version: 3.9

Software Version: 4.1

Channel list: 2.4GHz BLE:

Bluetooth Low Energy							
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466



3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

2.4GHz ANT+:2457MHz

Antenna Type:	2.4GHz BLE: Chip Antenna 2.4GHz ANT+: Chip Antenna
Antenna Gain:	2.4GHz BLE: -0.81dBi 2.4GHz ANT+: -5.13dBi
Description of the EUT:	The Equipment Under Test (EUT) is a SMART TRAINER with BLE function and ANT+ function. We tested it and listed the worst data in this report.
Test sample no.:	SHA-855590-2 (Conducted sample), SHA-855590-3 (Radiated sample)

The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment, antenna gain or any information supplied.



5 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2024 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-Gen Issue 5 April 2018 + Amendment 1 March 2019 + Amendment 2 February 2021	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 3 August 2023	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSS) and License-Exempt Local Area Network (LE-LAN) Devices

All the test methods were according to KDB 558074 D01 15.247 Measurement Guidance v05r02 and ANSI C63.10-2020.



6 Summary of Test Results

Technical Requirements							
FCC Part 15 Subpart C & RSS-247 Issue 3/RSS-Gen Issue 5							
Test Condition			Pages	Test Site	Test Result		
					Pass	Fail	N/A
§15.207	RSS-GEN 8.8	Conducted emission AC power port	14-16	Site 1	☒	☐	☐
§15.247 (b) (3)	RSS-247 5.4(d)	Conducted peak output power	17-19	Site 1	☒	☐	☐
	RSS-247 5.4(d)	Equivalent Isotropic Radiated Power	17-19	Site 1	☒	☐	☐
§15.247(a)(1)	RSS-247 5.1(a) & RSS-Gen 6.7	20dB bandwidth and 99% Occupied Bandwidth	---	---	☐	☐	☒
§15.247(a)(1)	RSS-247 5.1(b)	Carrier frequency separation	---	---	☐	☐	☒
§15.247(a)(1)(iii)	RSS-247 5.1(d)	Number of hopping frequencies	---	---	☐	☐	☒
§15.247(a)(1)(iii)	RSS-247 5.1(d)	Dwell Time - Average Time of Occupancy	---	---	☐	☐	☒
§15.247(a)(2)	RSS-247 5.2(a) & RSS-GEN 6.7	6dB bandwidth and 99% Occupied Bandwidth	20-24	Site 1	☒	☐	☐
§15.247(e)	RSS-247 5.2(b)	Power spectral density	25-27	Site 1	☒	☐	☐
§15.247(d)	RSS-247 5.5	Spurious RF conducted emissions	28-34	Site 1	☒	☐	☐
§15.247(d)	RSS-247 5.5	Band edge	35-39	Site 1	☒	☐	☐
§15.247(d) & §15.209 & §15.205	RSS-247 5.5 & RSS-Gen 6.13	Spurious radiated emissions for transmitter	40-66	Site 1	☒	☐	☐
§15.203	RSS-Gen 6.8	Antenna requirement	See note 1		☒	☐	☐

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses a Chip Antenna, which gain is -0.81dBi for BLE function and -5.13dBi for 2.4GHz ANT+. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.

15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna



jack or electrical connector is prohibited. 15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi



7 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2BRHF-JBVICTORY, IC: 33472-JBVICTORY, complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules and RSS-247, RSS-GEN.

This report is only for the 2.4GHz BLE test report, for the ANT+ test report please refer to 709502408421-00C.

SUMMARY:

All tests according to the regulations cited on page 6 were

■ - Performed

□ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: October 8, 2024

Testing Start Date: November 15, 2024

Testing End Date: November 29, 2024

-TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by:

Prepared by:

Tested by:



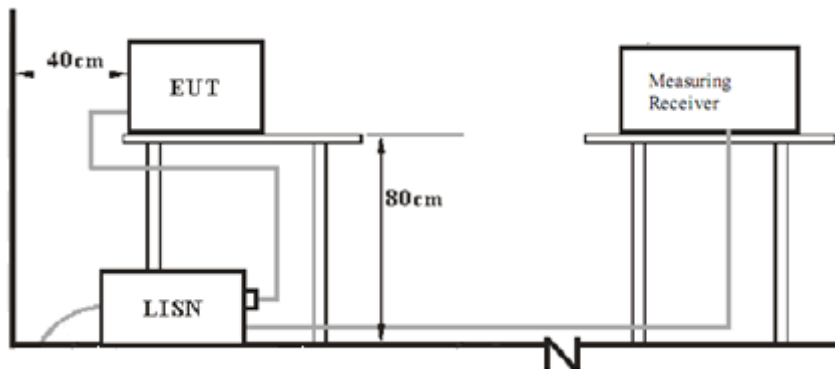
Hui TONG
EMC Section Manager

Wenqiang LU
EMC Project Engineer

Chengjie GUO
EMC Test Engineer

8 Test Setups

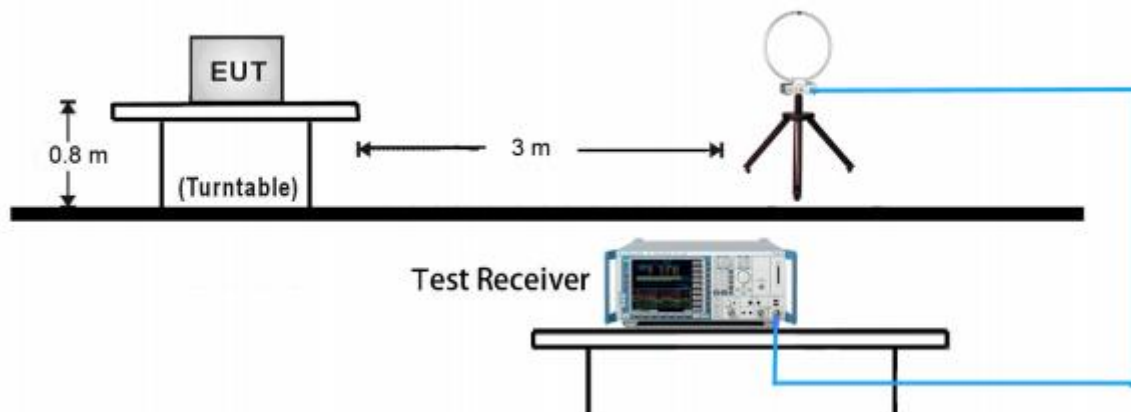
8.1 AC Power Line Conducted Emission test setups



Note: for floor-standing equipment, the supporting table (80 cm) shall be replaced by a insulating material (up to 12 mm thick).

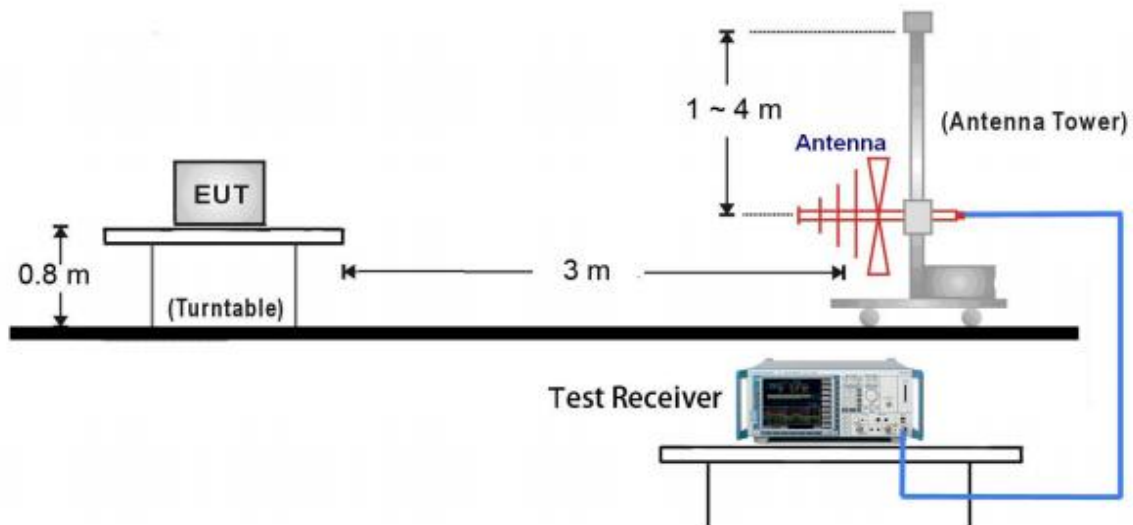
8.2 Radiated test setups

9kHz ~ 30MHz Test Setup:



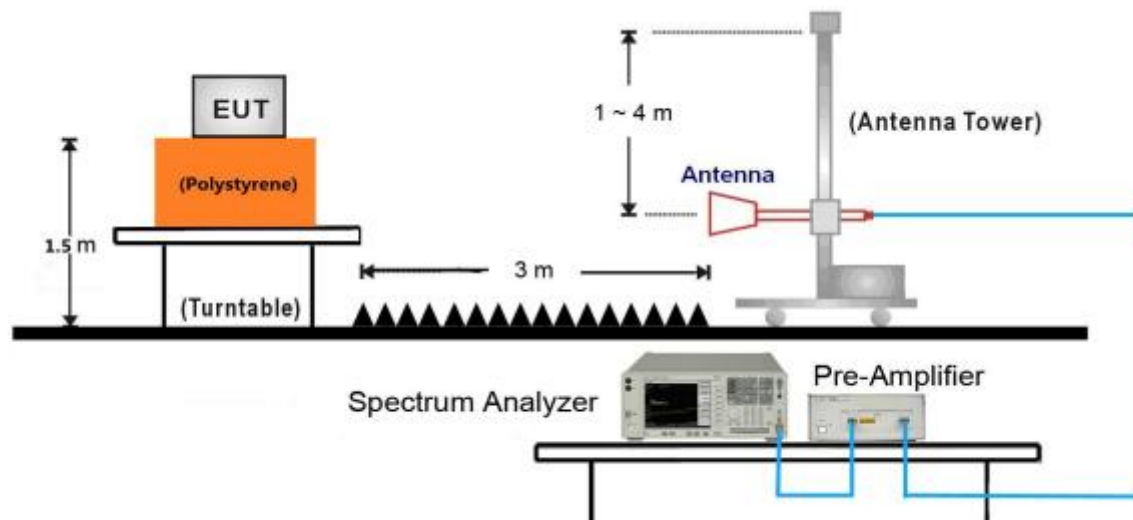
Note: for floor-standing equipment, the supporting table (80 cm) shall be replaced by a insulating material (up to 12 mm thick).

30MHz ~ 1GHz Test Setup:



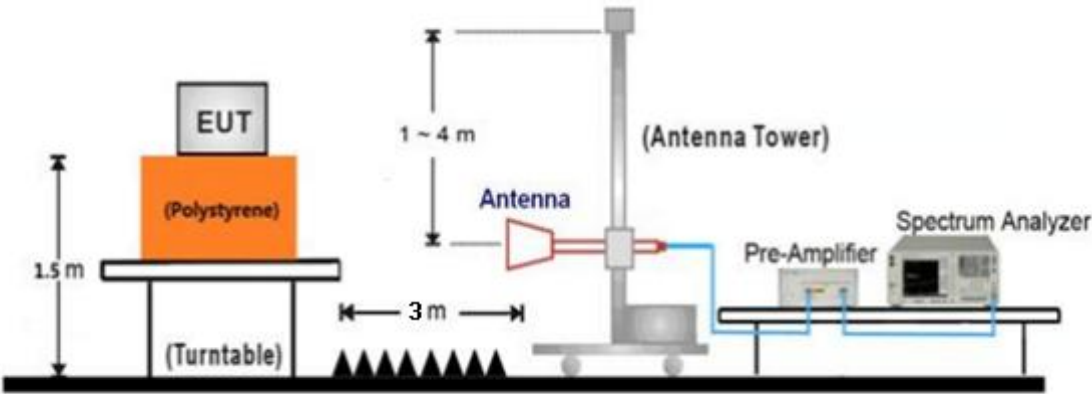
Note: for floor-standing equipment, the supporting table (80 cm) shall be replaced by a insulating material (up to 12 mm thick).

1GHz ~ 18GHz Test Setup:

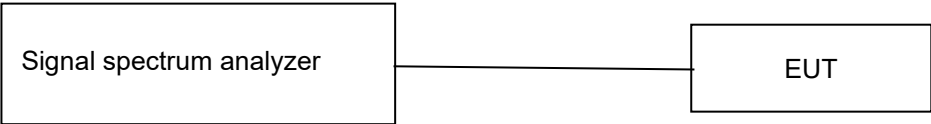




18GHz ~ 25GHz Test Setup:



8.3 Conducted RF test setups





9 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenove	X240	Notebook

Test software: Tera Term.exe

The system was configured to channel 0, 19, and 39 for the test.

Non-hopping mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power.

Test Mode Applicability and Tested Channel Detail:

Mode	Tested Channel	Data Rate (Mbps)	Modulation	Index Value (Power level setting)
Bluetooth LE	0	1	GFSK	default
	19	1	GFSK	default
	39	1	GFSK	default
	0	2	GFSK	default
	19	2	GFSK	default
	39	2	GFSK	default



10 Technical Requirement

10.1 Conducted Emission

Test Method

1. The EUT was placed on a 12mm thick insulating material above the reference ground plane.
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. An EMI test receiver is used to test the emissions from both sides of AC line

Limit

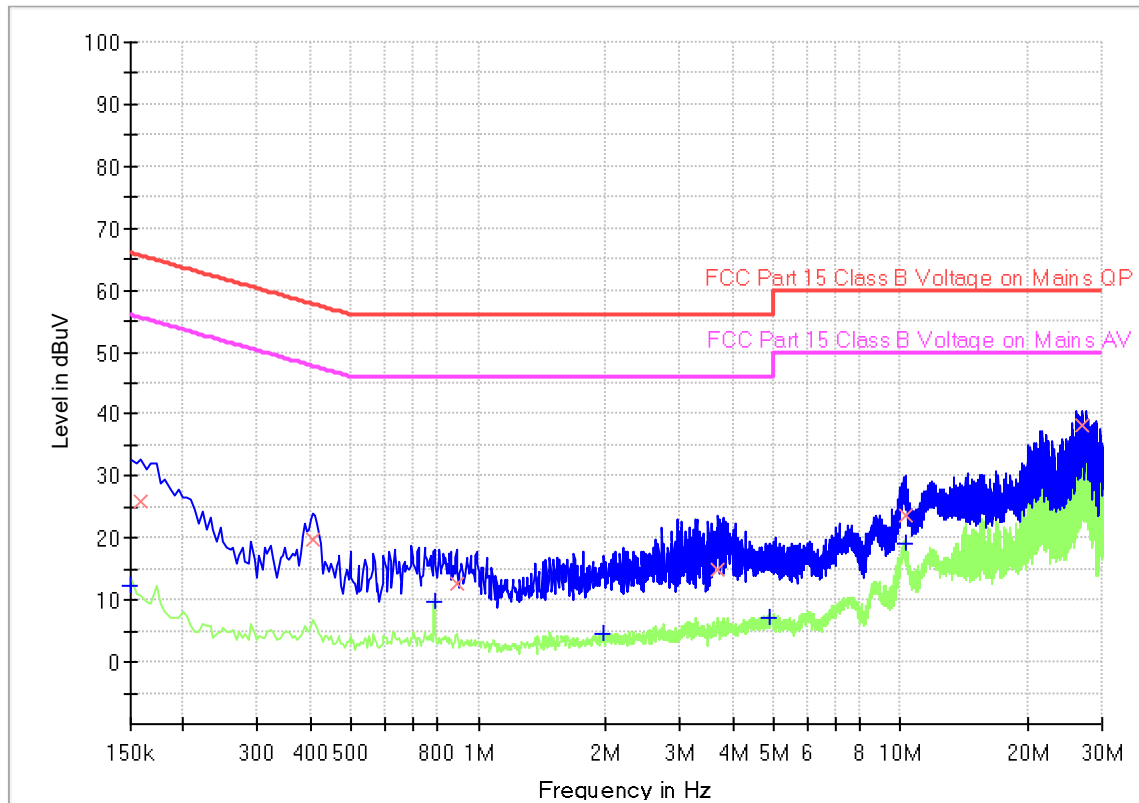
According to §15.207 & RSS-GEN 8.8, conducted emissions limit as below:

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

*Decreasing linearly with logarithm of the frequency



Product Type : SMART TRAINER
 M/N : JETBLACK VICTORY
 Operating Condition : Transmit mode, Tx_2402MHz, 2Mbps (worst case)
 Test Specification : L-line
 Comment : 120VAC

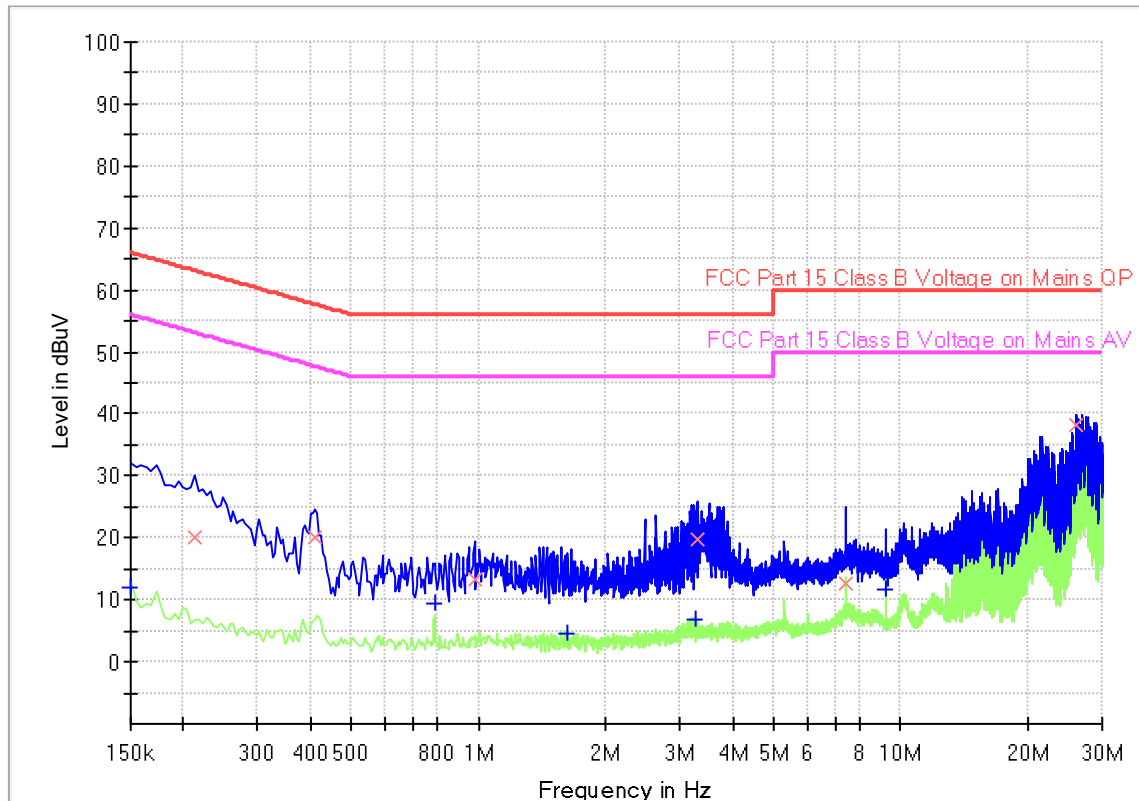


Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	12.28	56.00	43.72	1000.0	9.000	L1	19.5
0.159000	25.76	---	65.52	39.76	1000.0	9.000	L1	19.5
0.406500	19.72	---	57.72	38.00	1000.0	9.000	L1	19.5
0.789000	---	9.89	46.00	36.11	1000.0	9.000	L1	19.5
0.888000	12.79	---	56.00	43.21	1000.0	9.000	L1	19.5
1.977000	---	4.59	46.00	41.41	1000.0	9.000	L1	19.5
3.700500	15.06	---	56.00	40.94	1000.0	9.000	L1	19.6
4.902000	---	7.05	46.00	38.95	1000.0	9.000	L1	19.6
10.230000	23.51	---	60.00	36.49	1000.0	9.000	L1	19.8
10.279500	---	19.03	50.00	30.97	1000.0	9.000	L1	19.8
26.119500	---	35.62	50.00	14.38	1000.0	9.000	L1	20.9
26.799000	38.33	---	60.00	21.67	1000.0	9.000	L1	20.9

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
 Factor (dB) = Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator

Product Type : SMART TRAINER
 M/N : JETBLACK VICTORY
 Operating Condition : Transmit mode, Tx_2402MHz, 2Mbps (worst case)
 Test Specification : N-line
 Comment : 120VAC



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	12.08	56.00	43.92	1000.0	9.000	N	19.5
0.213000	20.18	---	63.09	42.91	1000.0	9.000	N	19.4
0.411000	20.12	---	57.63	37.51	1000.0	9.000	N	19.4
0.789000	---	9.30	46.00	36.70	1000.0	9.000	N	19.5
0.978000	13.40	---	56.00	42.60	1000.0	9.000	N	19.5
1.630500	---	4.48	46.00	41.52	1000.0	9.000	N	19.5
3.259500	---	6.81	46.00	39.19	1000.0	9.000	N	19.5
3.286500	19.68	---	56.00	36.32	1000.0	9.000	N	19.5
7.435500	12.71	---	60.00	47.29	1000.0	9.000	N	19.6
9.217500	---	11.54	50.00	38.46	1000.0	9.000	N	19.7
26.160000	38.15	---	60.00	21.85	1000.0	9.000	N	20.7
27.559500	---	35.63	50.00	14.37	1000.0	9.000	N	20.8

Note 1: Measure Level = Reading Level + Factor
 Factor = Cable Loss + LISN Factor + 10dB Attenuator



10.2 Conducted peak output power & EIRP

Test Method

1. Use the following spectrum analyzer settings:
RBW > the 6 dB bandwidth of the emission being measured, VBW $\geq$ 3RBW, Span $\geq$ 3RBW
Sweep = auto, Detector function = peak, Trace = max hold.
2. Add a correction factor to the display.
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power.

Limits

According to §15.247 (b) (3) & RSS-247 5.4(d), conducted peak output power limit as below:

	Frequency Range	Limit	Limit
	MHz	W	dBm
Conducted peak output power	2400-2483.5	≤ 1	≤ 30
e.i.r.p.	2400-2483.5	≤ 4	≤ 36

Test result as below table

1Mbps

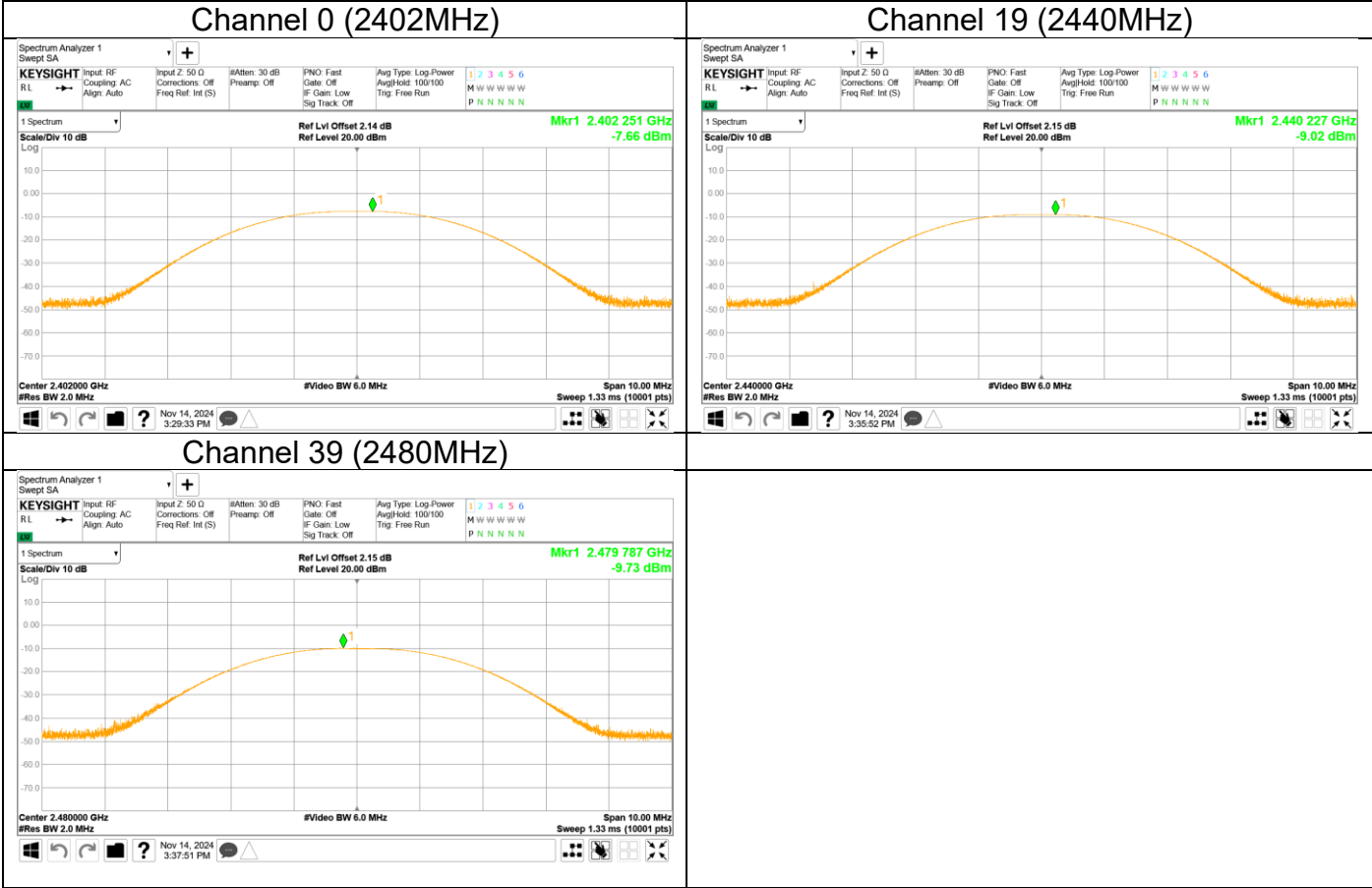
Frequency MHz	Conducted Peak Output Power dBm	E.I.R.P dBm	Result
Low channel 2402MHz	-7.66	-8.47	Pass
Middle channel 2440MHz	-9.02	-9.83	Pass
High channel 2480MHz	-9.73	-10.54	Pass

2Mbps

Frequency MHz	Conducted Peak Output Power dBm	E.I.R.P dBm	Result
Low channel 2402MHz	-7.66	-8.47	Pass
Middle channel 2440MHz	-9.07	-9.88	Pass
High channel 2480MHz	-9.98	-10.79	Pass

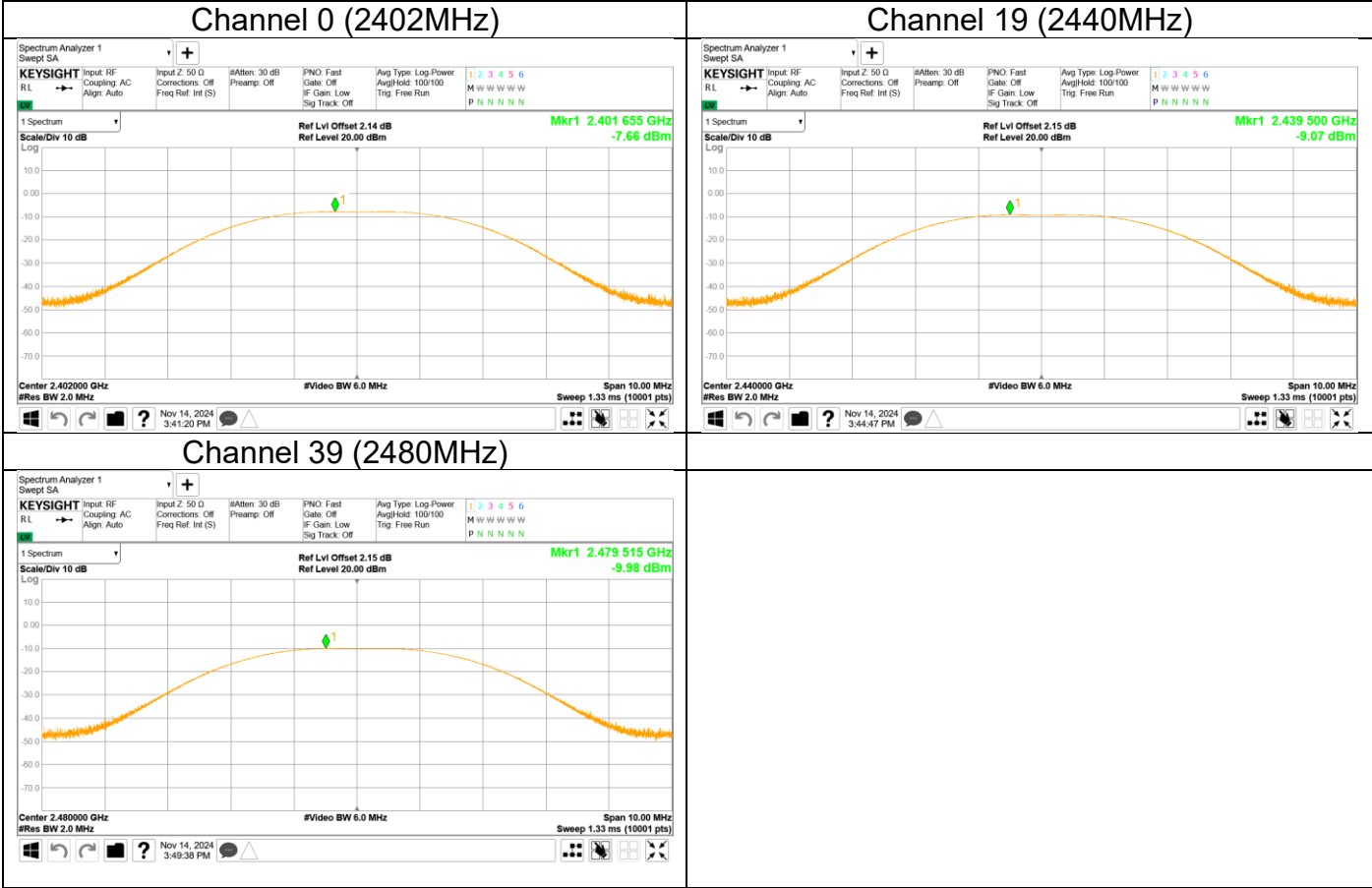


Peak output power (1Mbps)





Peak output power (2Mbps)





10.3 6dB bandwidth and 99% Occupied Bandwidth

Test Method for 6 dB Bandwidth

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
RBW=100KHz, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
5. Allow the trace to stabilize, record the 6 dB Bandwidth value.

Test Method for 99 % Bandwidth

1. Connect EUT test port to spectrum analyzer.
Use the following spectrum analyzer settings:
RBW=1% to 5% of the actual occupied, VBW≥3RBW, Sweep = auto,
Detector function = peak, Trace = max hold
2. Use the occupied bandwidth measurement capability of test receiver.
3. Allow the trace to stabilize, record the occupied bandwidth value.

Limit

According to §15.247(a)(2), 6dB bandwidth limit as below:

6dB bandwidth Limit [kHz]	99% bandwidth Limit [kHz]
≥500	--

Test result

1Mbps

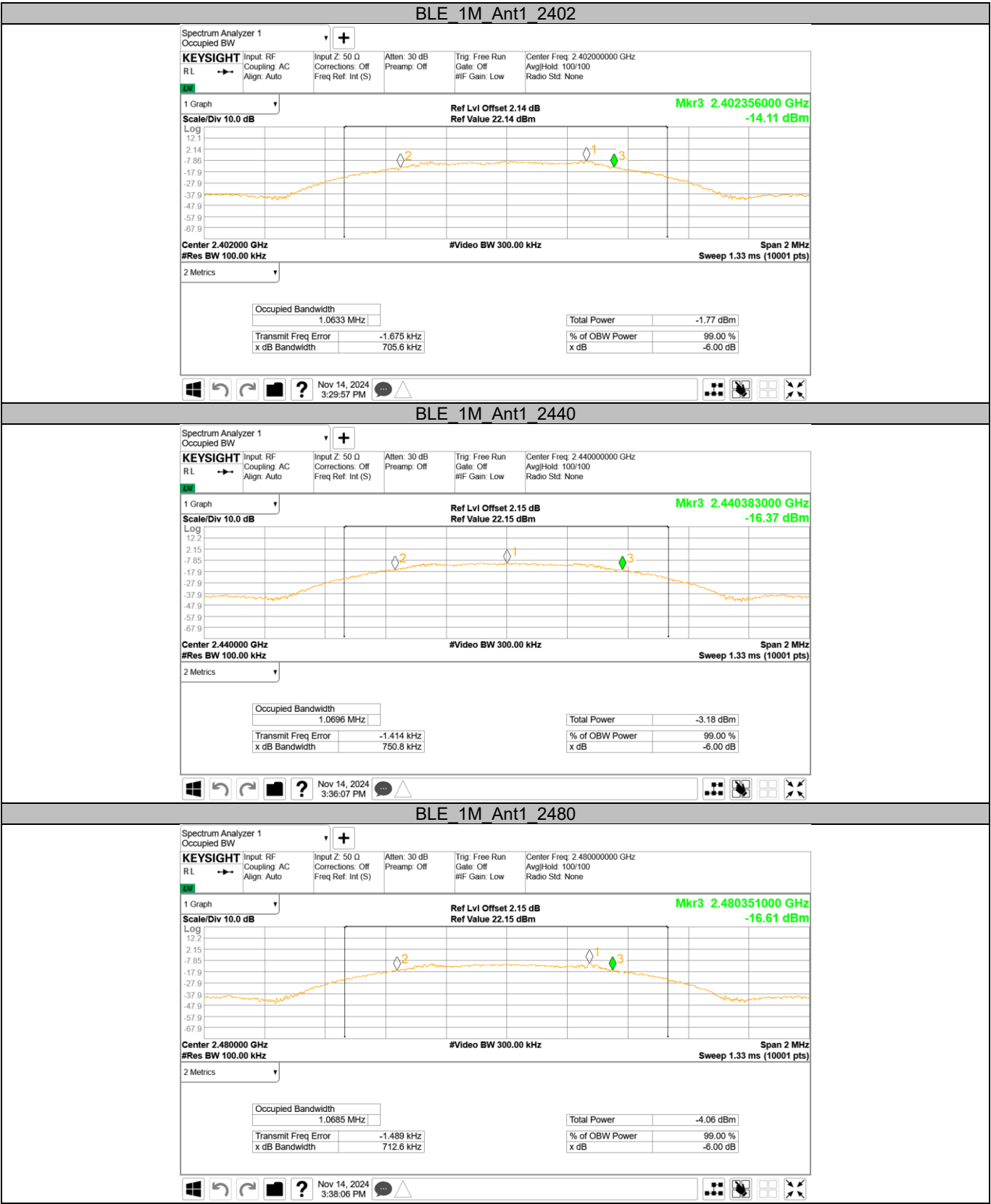
Frequency MHz	6dB bandwidth MHz	99% Bandwidth MHz	Result
Top channel 2402MHz	0.706	1.064	Pass
Middle channel 2440MHz	0.751	1.067	Pass
Bottom channel 2480MHz	0.713	1.071	Pass

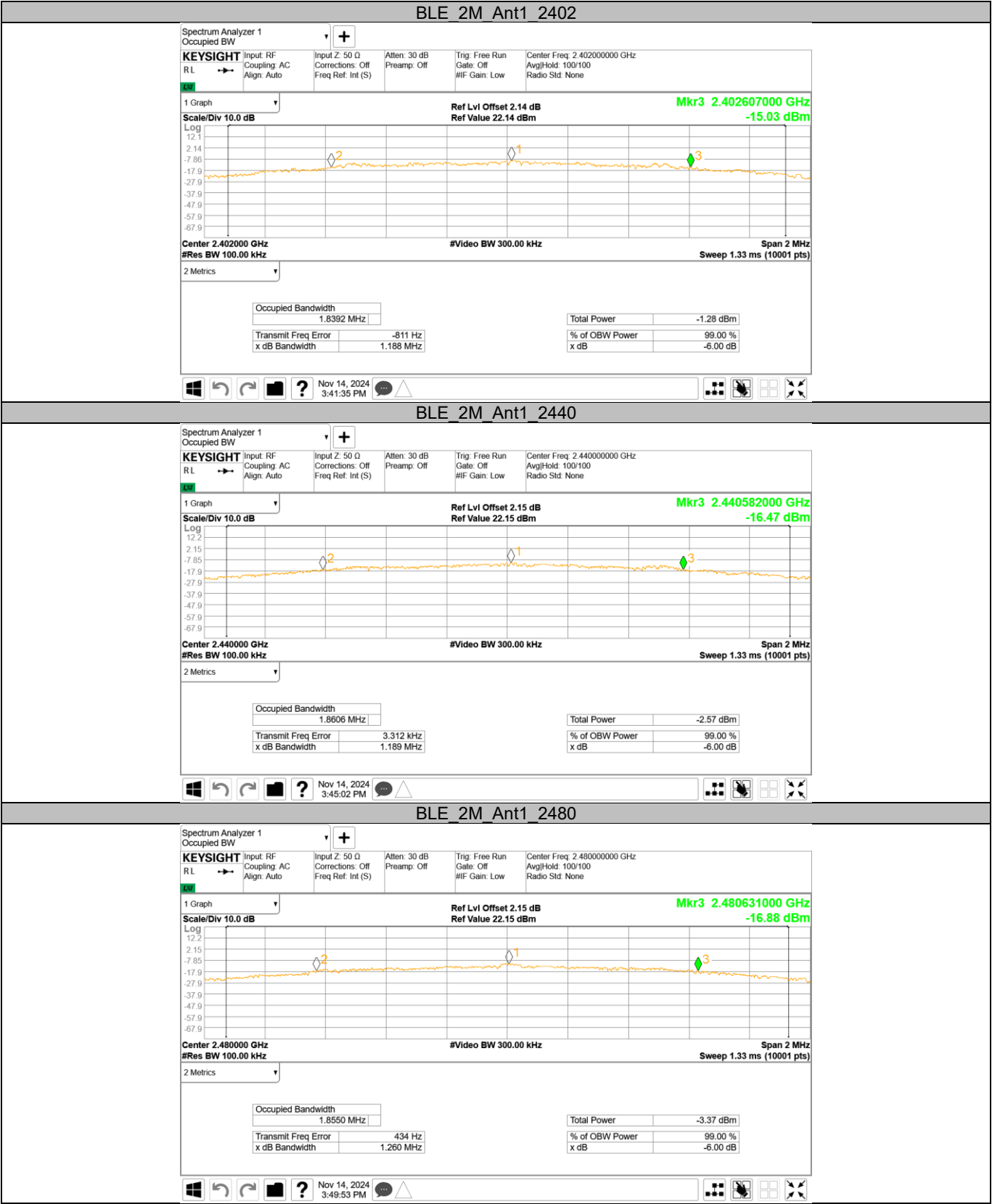
2Mbps

Frequency MHz	6dB bandwidth MHz	99% Bandwidth MHz	Result
Top channel 2402MHz	1.188	2.08	Pass
Middle channel 2440MHz	1.189	2.07	Pass
Bottom channel 2480MHz	1.26	2.054	Pass



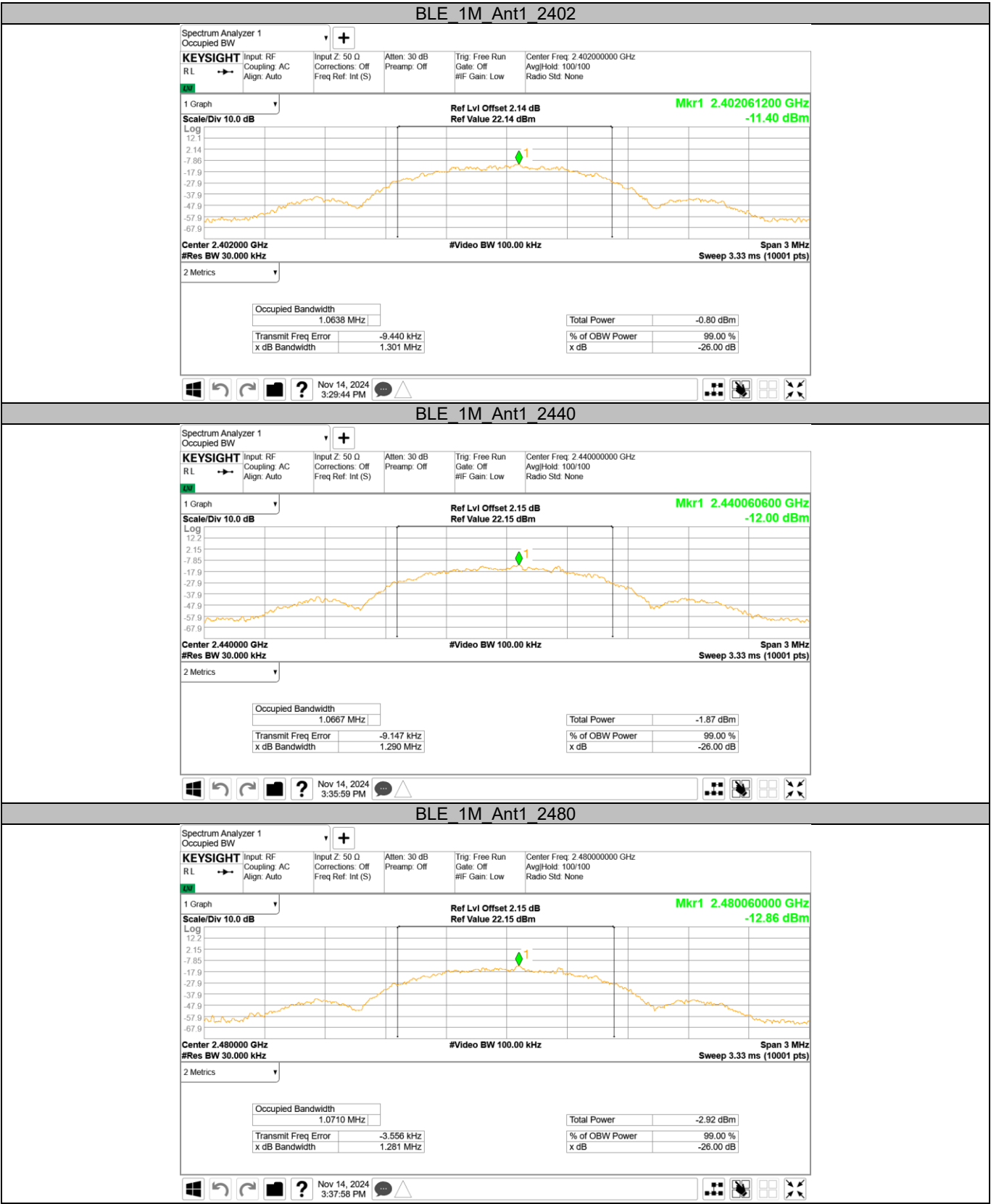
6dB Bandwidth

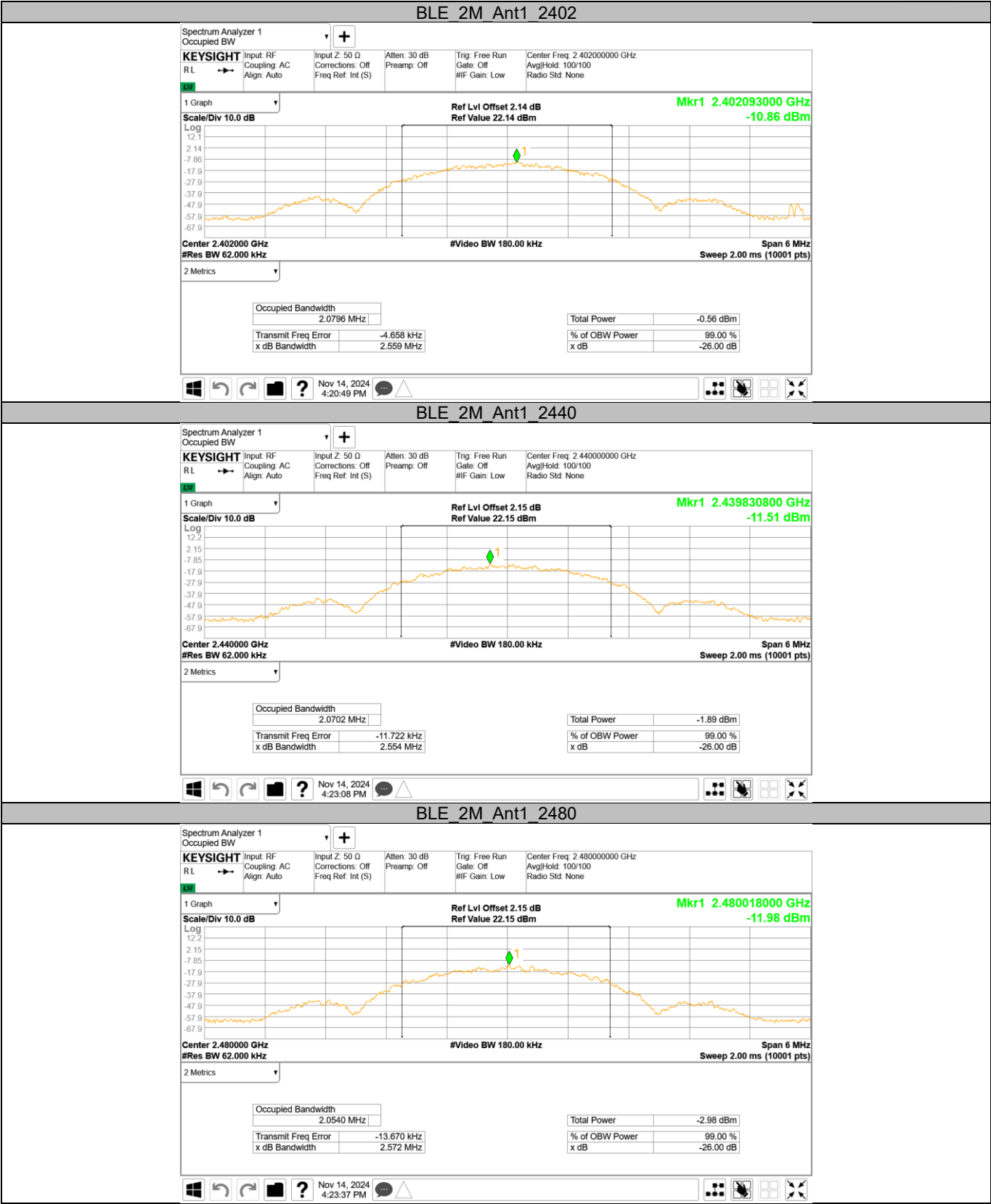






99% Occupied Bandwidth







10.4 Power spectral density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW $\geq$ 3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

Limit

Limit [dBm/3KHz]
 ≤ 8

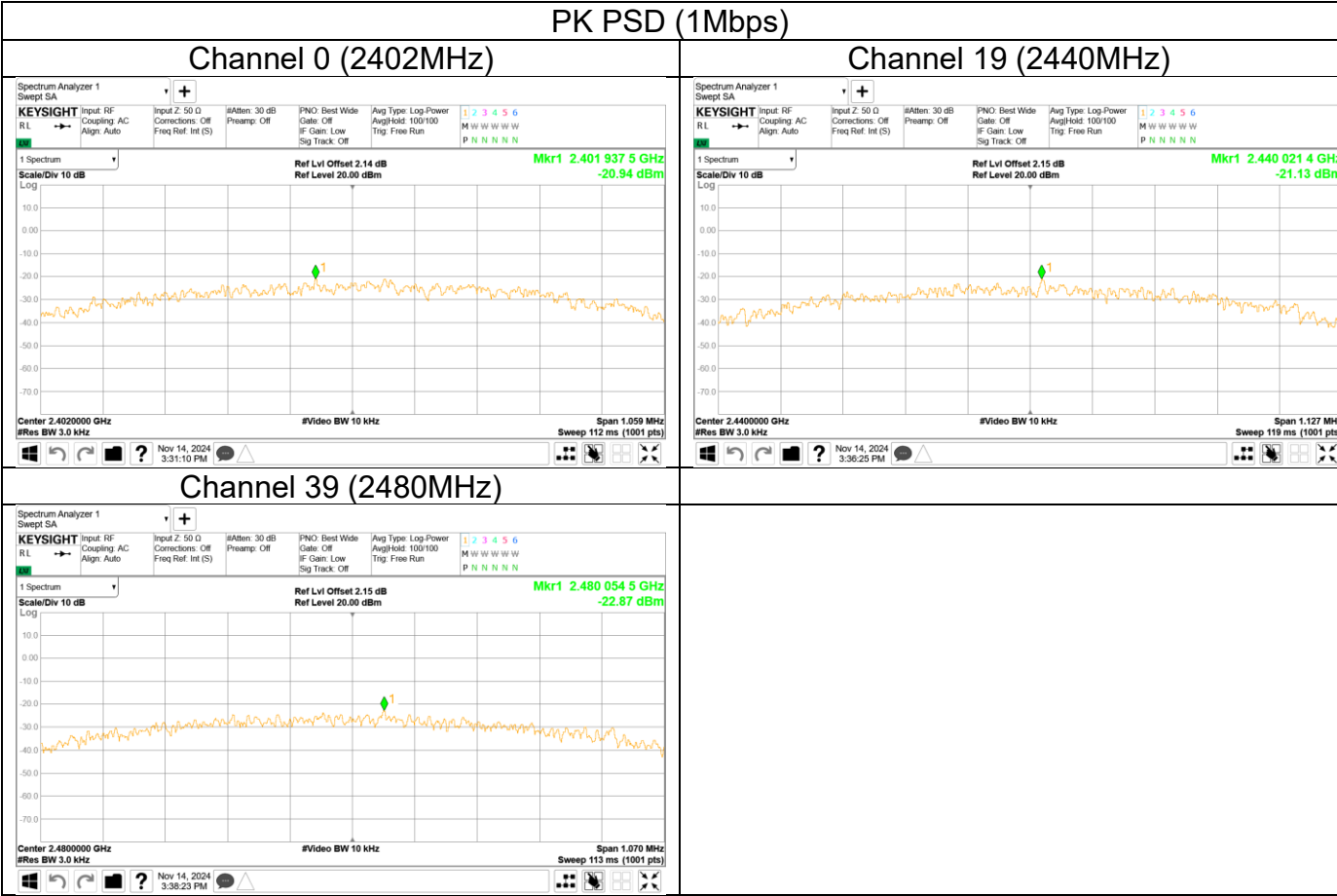
Test result

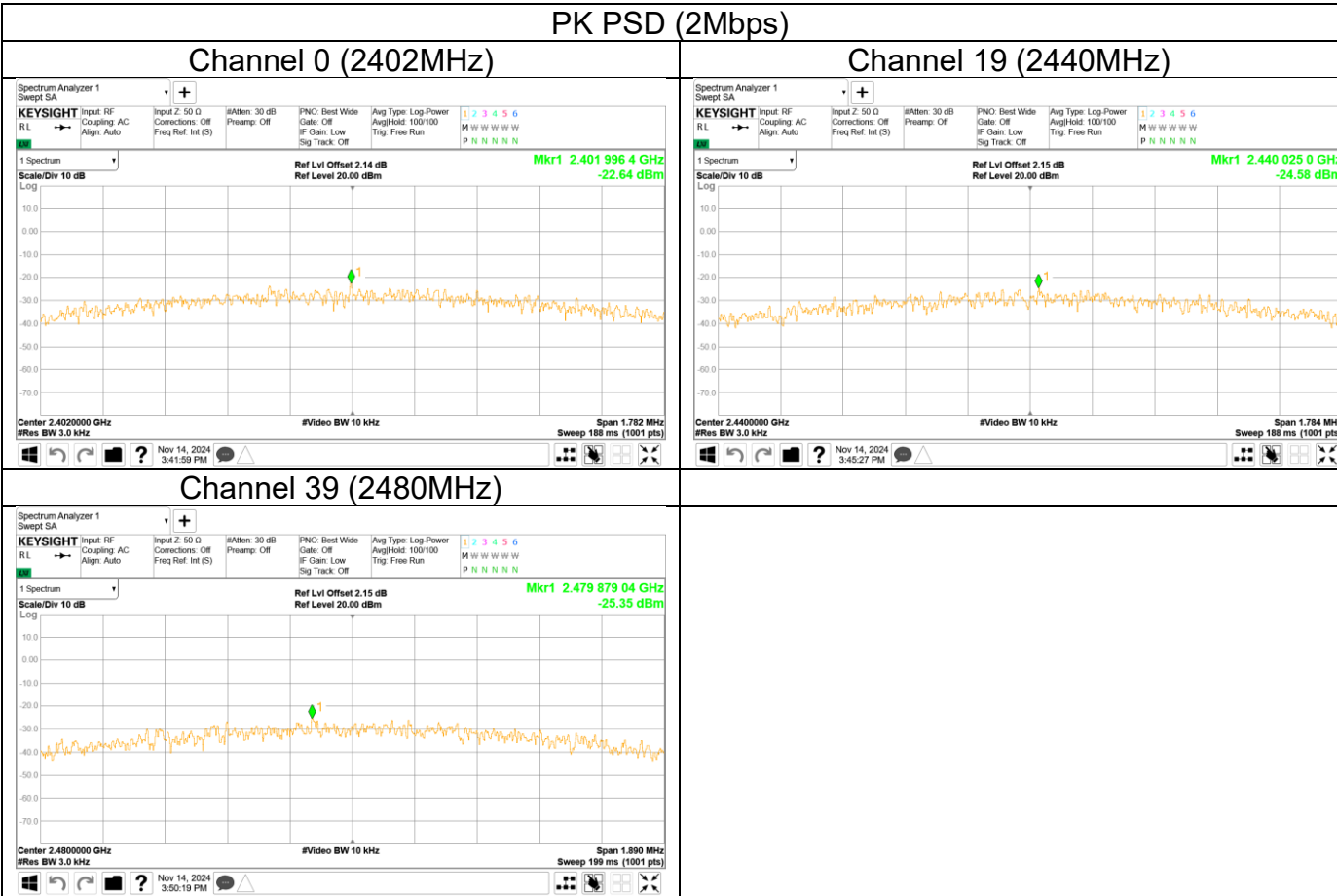
1Mbps

Frequency MHz	Power spectral density dBm/3kHz	Result
Top channel 2402MHz	-20.95	Pass
Middle channel 2440MHz	-21.13	Pass
Bottom channel 2480MHz	-22.87	Pass

2Mbps

Frequency MHz	Power spectral density dBm/3kHz	Result
Top channel 2402MHz	-22.64	Pass
Middle channel 2440MHz	-24.58	Pass
Bottom channel 2480MHz	-25.35	Pass







10.5 Spurious RF conducted emissions

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
5. The level displayed must comply with the limit specified in this Section. Submit these plots.
6. Repeat above procedures until all frequencies measured were complete.

Limit

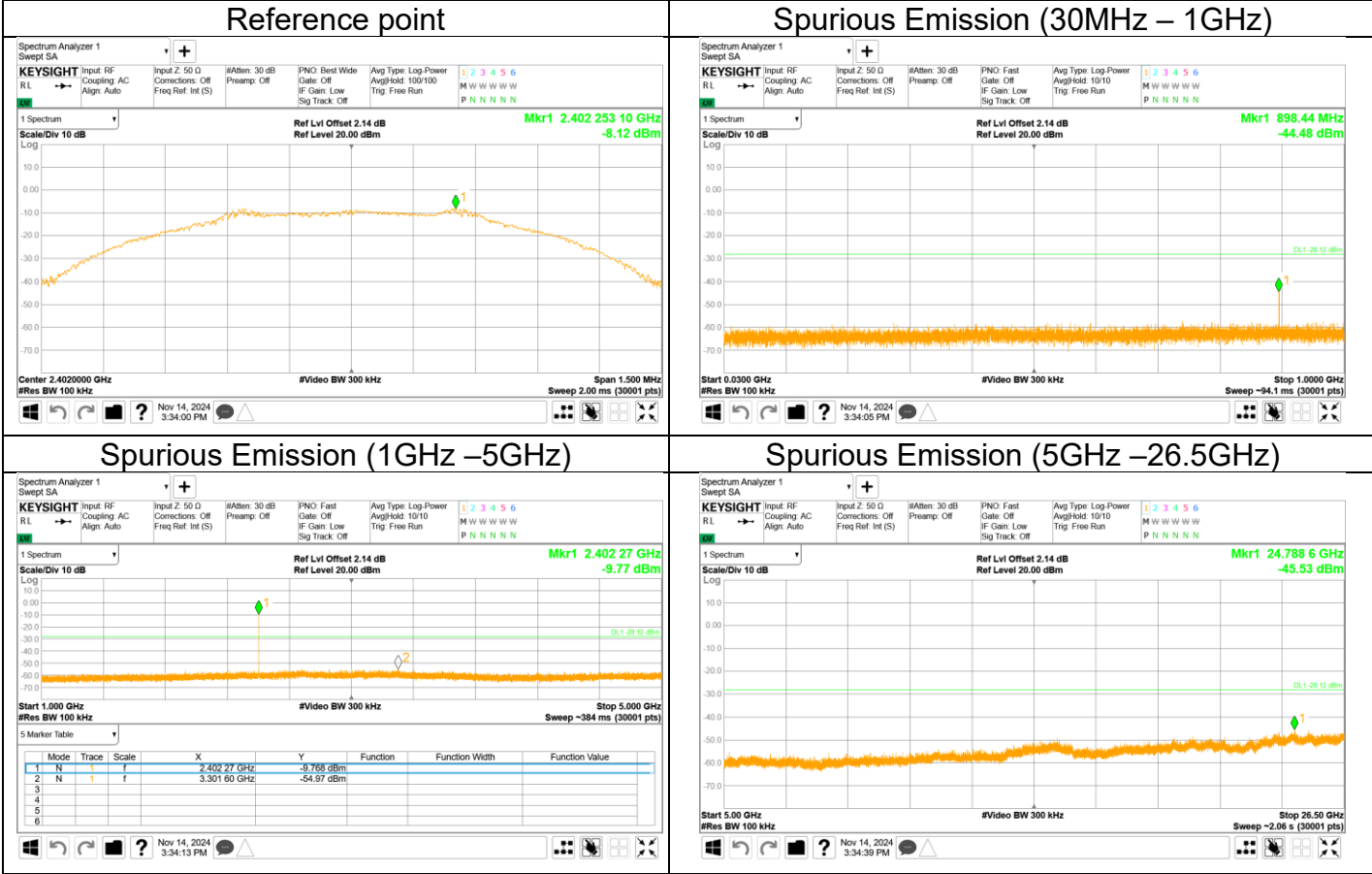
According to §15.247(d), spurious RF conducted emissions limit as below:

Frequency Range MHz	Limit (dBc)
30-25000	-20



Spurious RF conducted emissions

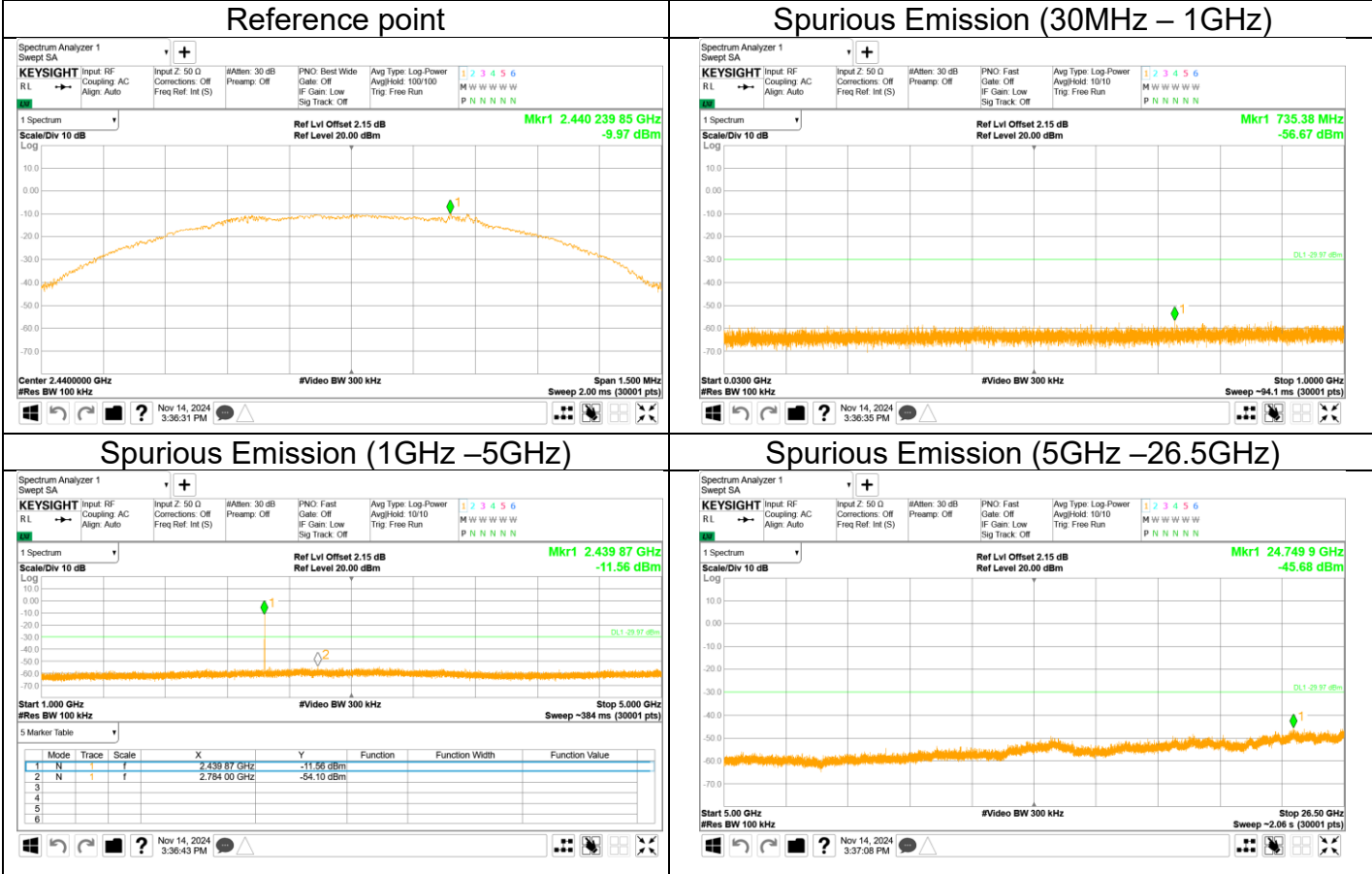
Out-of-Band Emissions (1Mbps)
Channel 0 (2402MHz)



Note: The emission which exceed the limit is the fundamental.



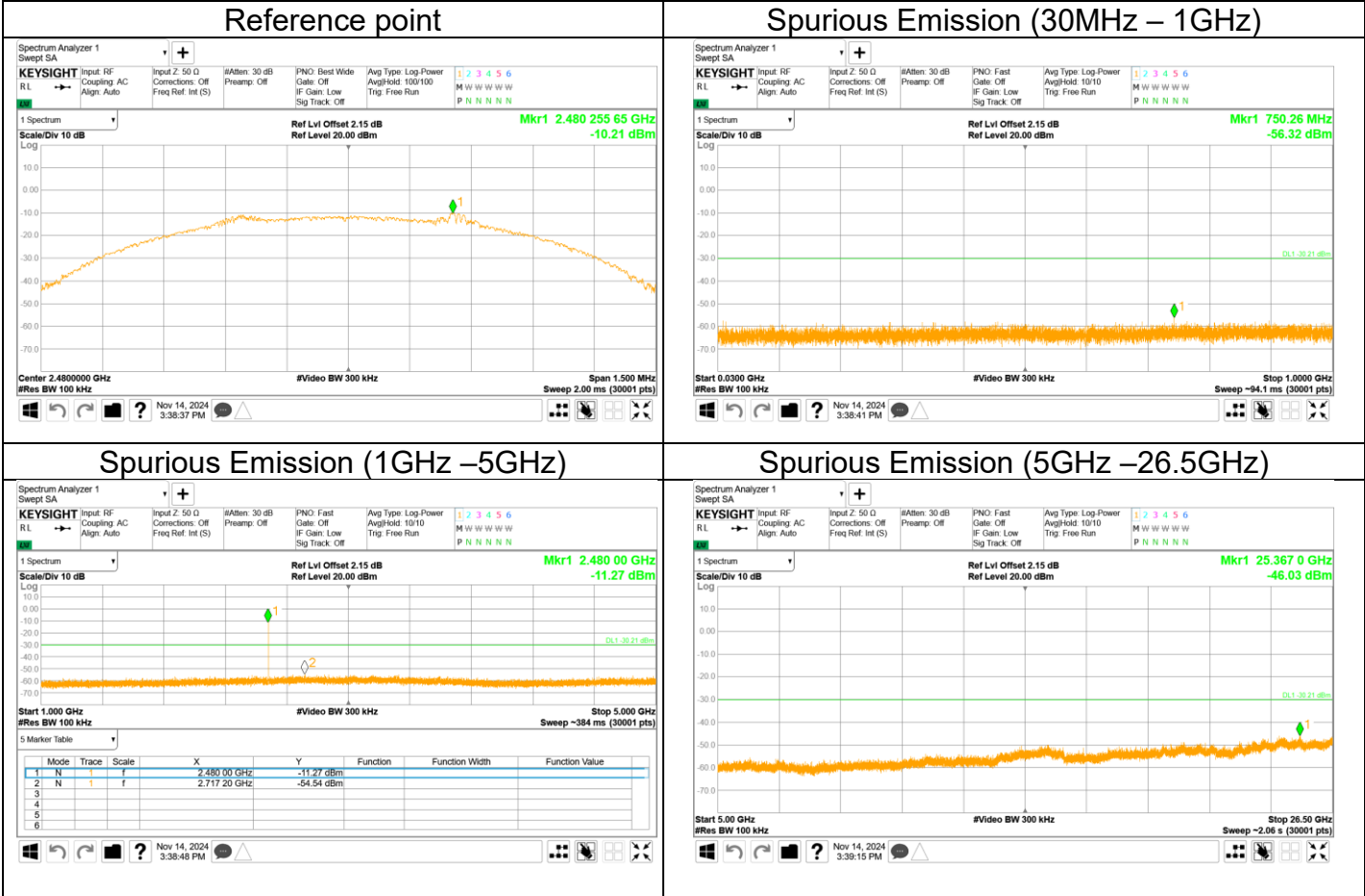
Out-of-Band Emissions (1Mbps)
Channel 19 (2440MHz)



Note: The emission which exceed the limit is the fundamental.



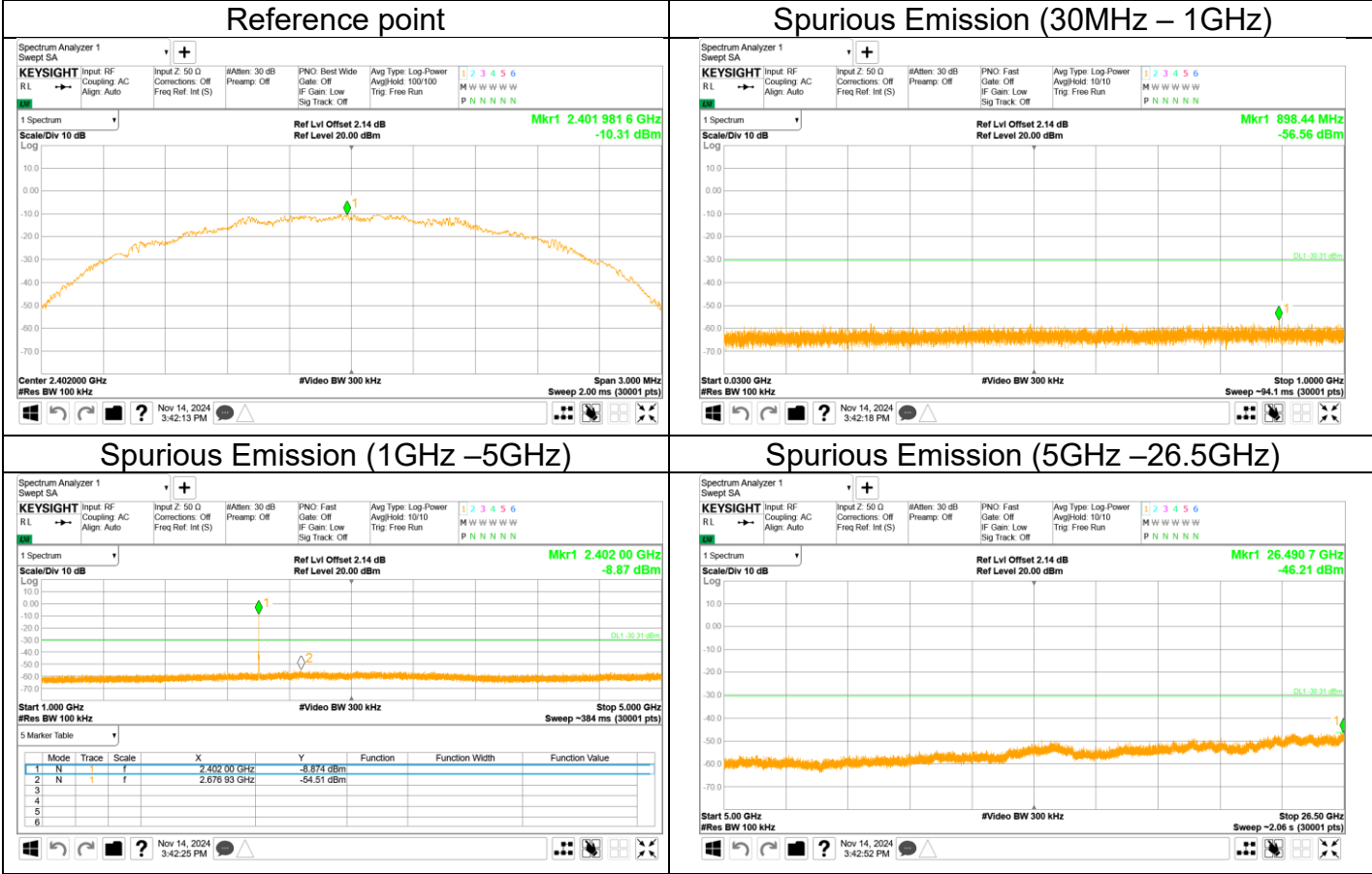
Out-of-Band Emissions (1Mbps)
Channel 39 (2480MHz)



Note: The emission which exceed the limit is the fundamental.



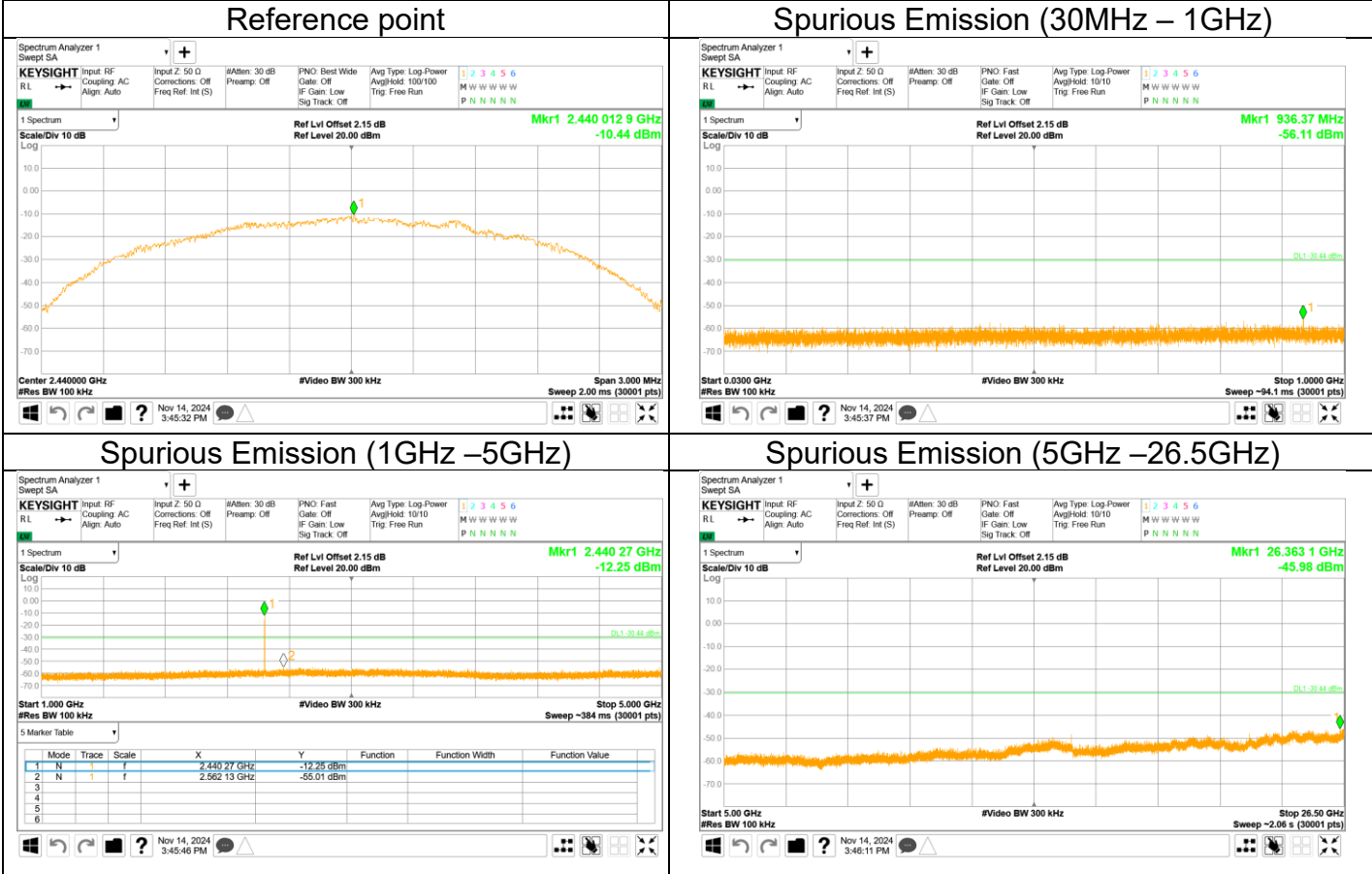
Out-of-Band Emissions (2Mbps)
Channel 0 (2402MHz)



Note: The emission which exceed the limit is the fundamental.



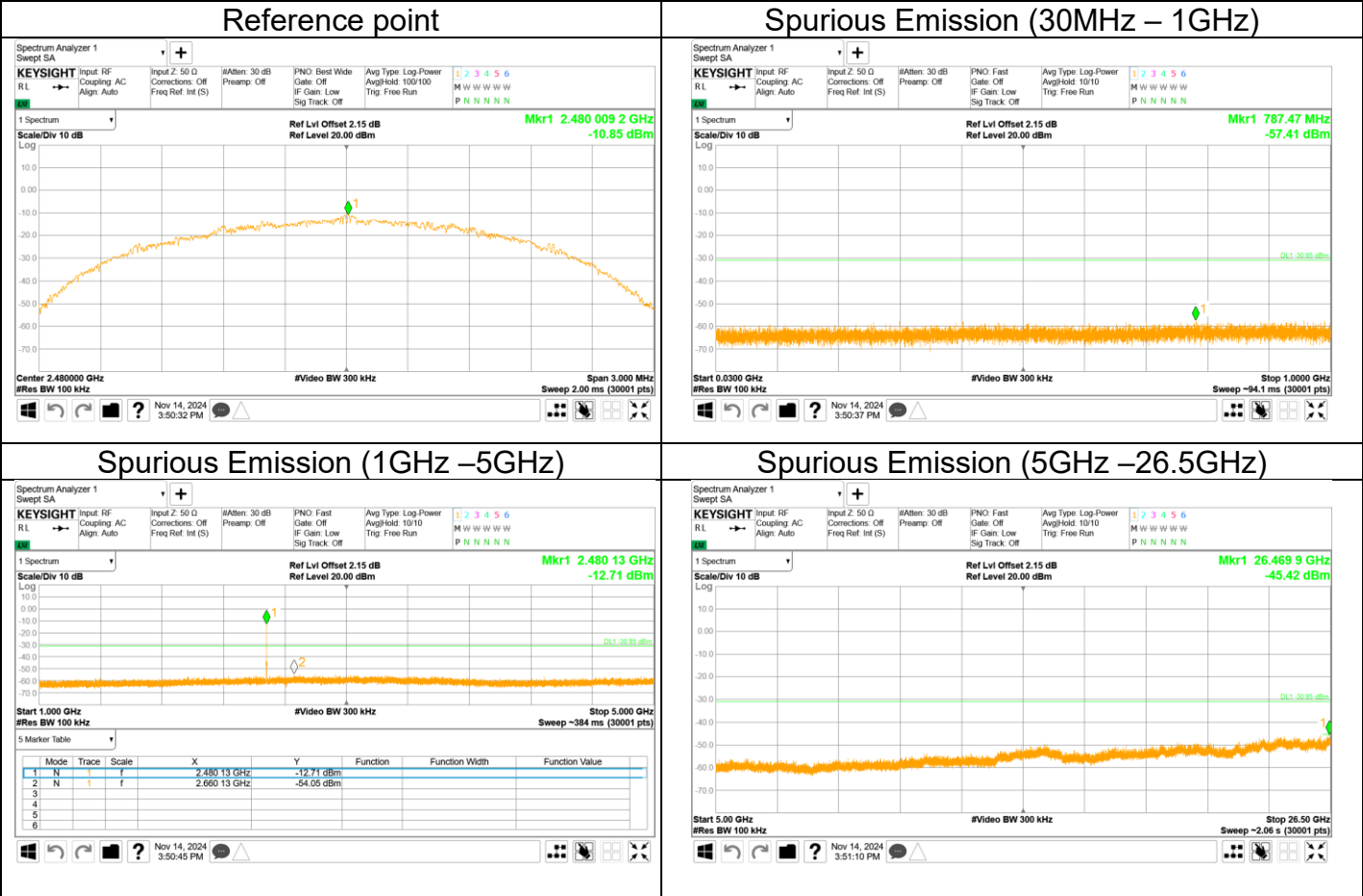
Out-of-Band Emissions (2Mbps)
Channel 19 (2440MHz)



Note: The emission which exceed the limit is the fundamental.



Out-of-Band Emissions (2Mbps)
Channel 39 (2480MHz)



Note: The emission which exceed the limit is the fundamental.