

FCC - TEST REPORT

Report Number : **709502503681-00A** Date of Issue: June 5, 2025

Model : SC155-WQ2, SC155-WQ3, SC155-WQ2A, SC155-WQ2B,
SC155-WQ2C, SC155-WQ3A, SC155-WQ3B, SC155-WQ3C,
SC155-WQ4, SC155-WQ4A, SC155-WQ4B, SC155-WQ4C,
SC155-WQ2D, SC155-WQ3D, SC155-WQ4D, SC256-WQ5

Product Type : Smart Camera

Applicant : Zhejiang Lingzhu Technology Co., Ltd.

Address : Room 302, No 1 Building Huace Center, Xihu District, Hangzhou
City, Zhejiang Province, China.

Manufacturer : Zhejiang Lingzhu Technology Co., Ltd.

Address : Room 302, No 1 Building Huace Center, Xihu District, Hangzhou
City, Zhejiang Province, China.

Test Result : **n Positive** **o Negative**

Total pages including
Appendices : 118



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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
709502503681-00A	First Issue	06/05/2025

3 Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
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Shanghai 201108,
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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 Camera

Model no.: SC155-WQ2, SC155-WQ3, SC155-WQ2A, SC155-WQ2B, SC155-WQ2C, SC155-WQ3A, SC155-WQ3B, SC155-WQ3C, SC155-WQ4, SC155-WQ4A, SC155-WQ4B, SC155-WQ4C, SC155-WQ2D, SC155-WQ3D, SC155-WQ4D, SC256-WQ5

FCC ID: 2BEWXSC155

Options and accessories: NA

Rating: 5V DC, 1.5A

RF Transmission Frequency: 802.11b/g/n-HT20: 2412~2462 MHz (Wi-Fi)
802.11n-HT40: 2422~2452 MHz (Wi-Fi)
2402~2480 MHz (BLE5.0)

No. of Operated Channel:

802.11b/g/n(HT20)				802.11n(HT40)			
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
1	2412	7	2442	3	2422	8	2447MHz
2	2417	8	2447	4	2427	9	2452MHz
3	2422	9	2452	5	2432		
4	2427	10	2457	6	2437		
5	2432	11	2462	7	2442		
6	2437						

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

Modulation: Direct Sequence Spread Spectrum (DSSS) for 802.11b
Orthogonal Frequency Division Multiplexing (OFDM) for 802.11g/n;
2.4GHz BLE: GFSK (1Mbps and 2Mbps)



Hardware Version:	V1.0.0: SC155-WQ3C V1.0.4: SC256-WQ5
Software Version:	V2.0.98: SC155-WQ3C V2.0.66: SC256-WQ5
Data speed:	2.4G Wi-Fi SISO:11b 1-11Mbps, 11g 6-54Mbps 11n HT20 6.5 ~ 72.2Mbps, 11n HT40 13.5 ~ 150Mbps 2.4G BLE: 1/2 Mbps
Antenna Type:	FPC Antenna
Antenna Gain:	0.18dBi
Description of the EUT:	The EUT was a Smart Camera. The Smart Camera has Wi-Fi and BLE function. We tested the Smart Camera and listed the worst data in this report. This report is only for Wi-Fi.
Test sample no.:	SC155-WQ3C: SHA-912069-2 (RF Radiated and Conducted) SC256-WQ5: SHA-912069-4 (RF Radiated and Conducted)

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 10-1-2023 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

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



6 Summary of Test Results

Technical Requirements						
FCC Part 15 Subpart C						
Test Condition		Pages	Test Site	Test Result		
				Pass	Fail	N/A
§15.207	Conducted emission AC power port	13-21	Site 1	☒	☐	☐
§15.247 (b) (3)	Conducted peak output power	22-24	Site 1	☒	☐	☐
§15.247(a)(1)	20dB bandwidth and 99% Occupied Bandwidth	---	---	☐	☐	☒
§15.247(a)(1)	Carrier frequency separation	---	---	☐	☐	☒
§15.247(a)(1)(iii)	Number of hopping frequencies	---	---	☐	☐	☒
§15.247(a)(1)(iii)	Dwell Time - Average Time of Occupancy	---	---	☐	☐	☒
§15.247(a)(2)	6dB bandwidth	25-29	Site 1	☒	☐	☐
§15.247(e)	Power spectral density	30-34	Site 1	☒	☐	☐
§15.247(e)	Spurious RF conducted emissions	35-47	Site 1	☒	☐	☐
§15.247(d)	Band edge	48-56	Site 1	☒	☐	☐
§15.247(d) & §15.209 & §15.205	Spurious radiated emissions for transmitter	57-114	Site 1	☒	☐	☐
§15.203	Antenna requirement	See note 1		☒	☐	☐

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses a FPC antenna, gain is 0.18dBi. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.



7 General Remarks

Remarks

This report was based on the report 709502310205-00A and 709502408362-00B for the following changes:

1. Added an alternative light board, main board, antenna as well as lens for model SC155-WQ3C. SC155-WQ3C uses the same mainboard as the previous models, but there are differences in the chip components: the battery monitoring circuit has been removed, and a circuit for white light has been added. However, the RF module TY004 has not made any changes.
2. Added a new model SC256-WQ5 to the model list. SC256-WQ5 uses a different mainboard and light board from the previous models, But the RF module TY004 keeps same as before.
3. SC155-WQ3C and SC256-WQ5 share a new antenna. The lens of the original models, SC155-WQ3C, and SC256-WQ5 are different.

So, in this test report only test data of "Conducted emission AC power port", "Conducted peak output power", and "Spurious radiated emissions for transmitter" were new data for model SC155-WQ3C, other test data were quoted from report 709502310205-00A and 709502408362-00B and the test data are still effective and full tests for model SC256-WQ5.

This submittal(s) (test report) is intended for FCC ID: 2BEWXSC155 complies with Section 15.205, 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C rules. This report is only for 2.4GHz Wi-Fi.

SUMMARY:

All tests according to the regulations cited on page 5 were

n - Performed

o - **Not** Performed

The Equipment under Test

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

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

Sample Received Date: April 30, 2025

Testing Start Date: May 6, 2025

Testing End Date: May 22, 2025

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

Reviewed by:

Hui Tong



Hui TONG
Review Engineer

Prepared by:

Jiaxi Xu

Jiaxi XU
Project Engineer

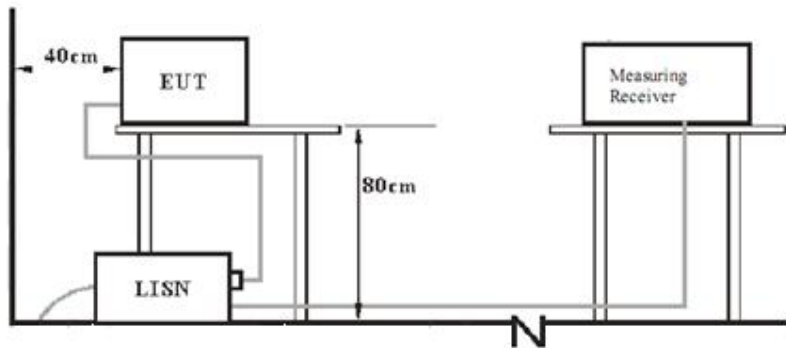
Tested by:

Chengjie Guo

Chengjie GUO
Test Engineer

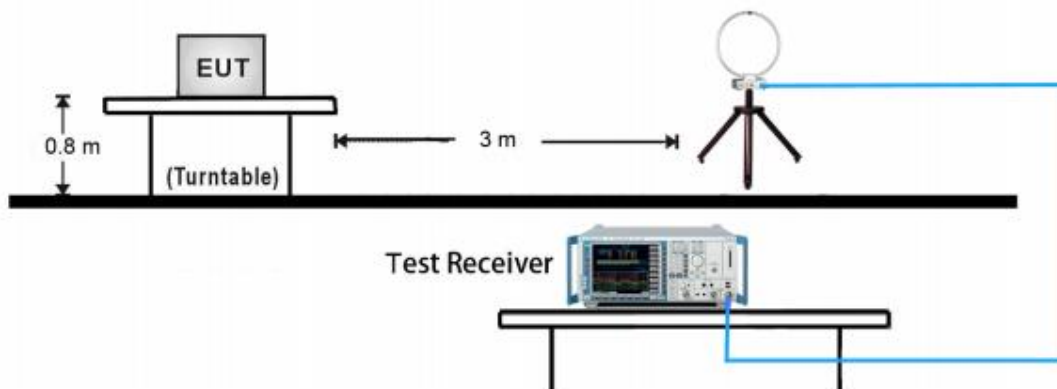
8 Test Setups

8.1 AC Power Line Conducted Emission test setups

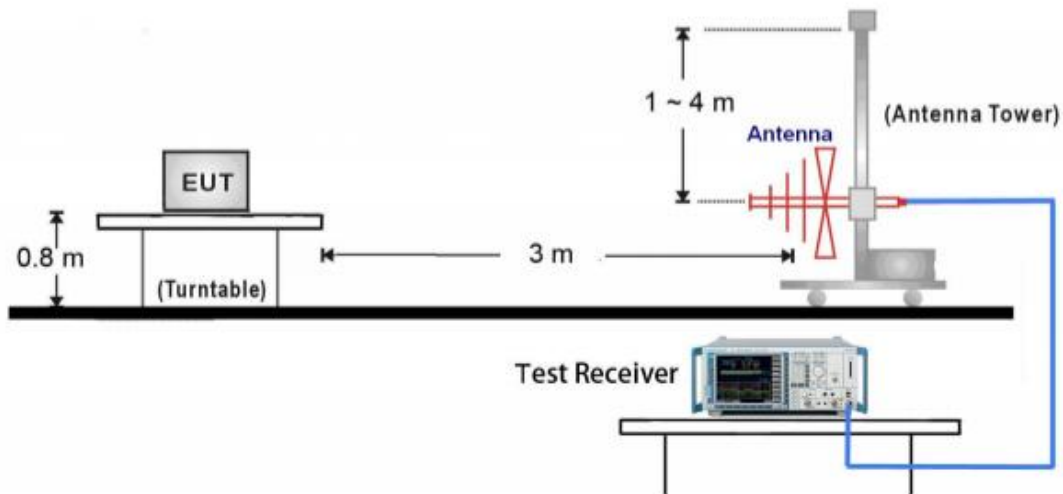


8.2 Radiated test setups

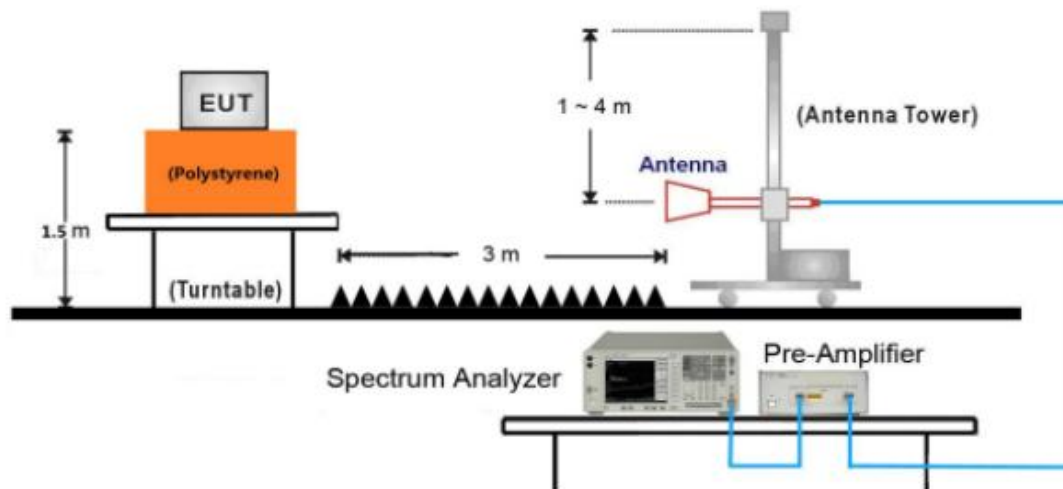
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:

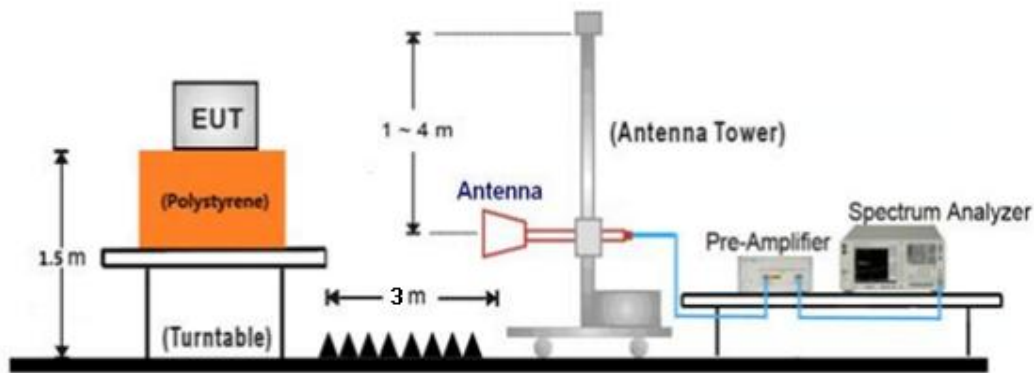


1GHz ~ 18GHz Test Setup:



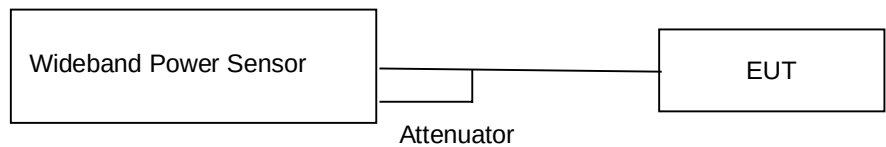


18GHz ~ 25GHz Test Setup:

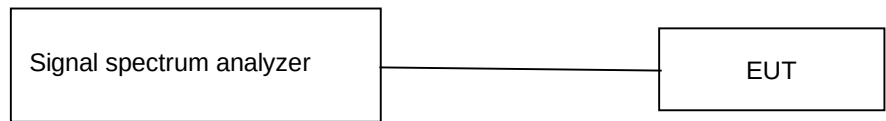


8.3 Conducted RF test setups

For Conducted peak output power



For other test items



9 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenovo	E470	PF-OU5TS7 17/09
AC/DC adapter	MLF	MLF-A260502000UU	--

Test software: AmebaD_mptool_2V1, which used to control the EUT in continues transmitting mode

The system was configured to channel 1(2412MHz), 6(2437MHz), and 11(2462MHz) for 802.11 b/g/n HT20 test and channel 3(2422MHz), 6(2437MHz), 9(2452MHz) for 802.11n (HT40).

Test Mode Applicability and Tested Channel Detail:

Mode	Tested Channel	Data Rate (Mbps)	Modulation	Index Value (Power level setting)
802.11b	1	1	CCK	98
	6	1	CCK	94
	11	1	CCK	96
802.11g	1	6	OFDM	92
	6	6	OFDM	93
	11	6	OFDM	86
802.11n HT20	1	MCS0	OFDM	88
	6	MCS0	OFDM	87
	11	MCS0	OFDM	84
802.11n HT40	1	MCS0	OFDM	80
	6	MCS0	OFDM	79
	11	MCS0	OFDM	80

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.

10 Technical Requirement

10.1 Conducted Emission

Test Method

1. The EUT was placed on a table, which is 0.8m above 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. A EMI test receiver is used to test the emissions from both sides of AC line

Limit

According to §15.207, 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

150k-30MHz Conducted Emission Test

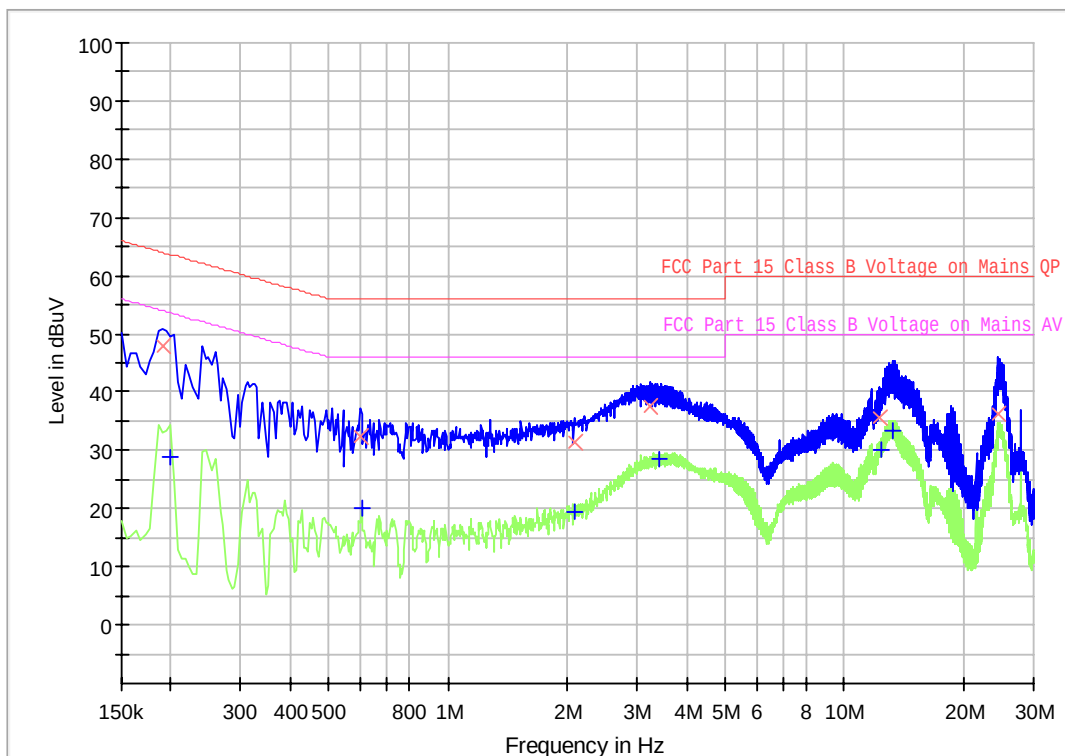
EUT Information

EUT Name:	Smart Camera
Model	SC155-WQ3C
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging by adapter and power on, TX at 802.11 g mode_2412MHz
Operator:	Guo Chengjie
Standard	FCC Part 15.207(a)
Comment:	Phase L
Sample No.:	SHA-912069-2

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup:	Voltage with 2-Line-LISN
Receiver:	[ESR 3]
Level Unit:	dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB





Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.190500	48.03	---	64.01	15.98	1000.0	9.000	L1	19.4
0.199500	---	28.95	53.63	24.68	1000.0	9.000	L1	19.4
0.600000	32.23	---	56.00	23.77	1000.0	9.000	L1	19.5
0.604500	---	20.06	46.00	25.94	1000.0	9.000	L1	19.5
2.076000	---	19.37	46.00	26.63	1000.0	9.000	L1	19.5
2.076000	31.50	---	56.00	24.50	1000.0	9.000	L1	19.5
3.232500	37.54	---	56.00	18.46	1000.0	9.000	L1	19.5
3.426000	---	28.61	46.00	17.39	1000.0	9.000	L1	19.6
12.219000	35.57	---	60.00	24.43	1000.0	9.000	L1	19.8
12.367500	---	30.25	50.00	19.75	1000.0	9.000	L1	19.8
13.182000	---	33.41	50.00	16.59	1000.0	9.000	L1	19.8
24.477000	36.30	---	60.00	23.70	1000.0	9.000	L1	20.8



150k-30MHz Conducted Emission Test

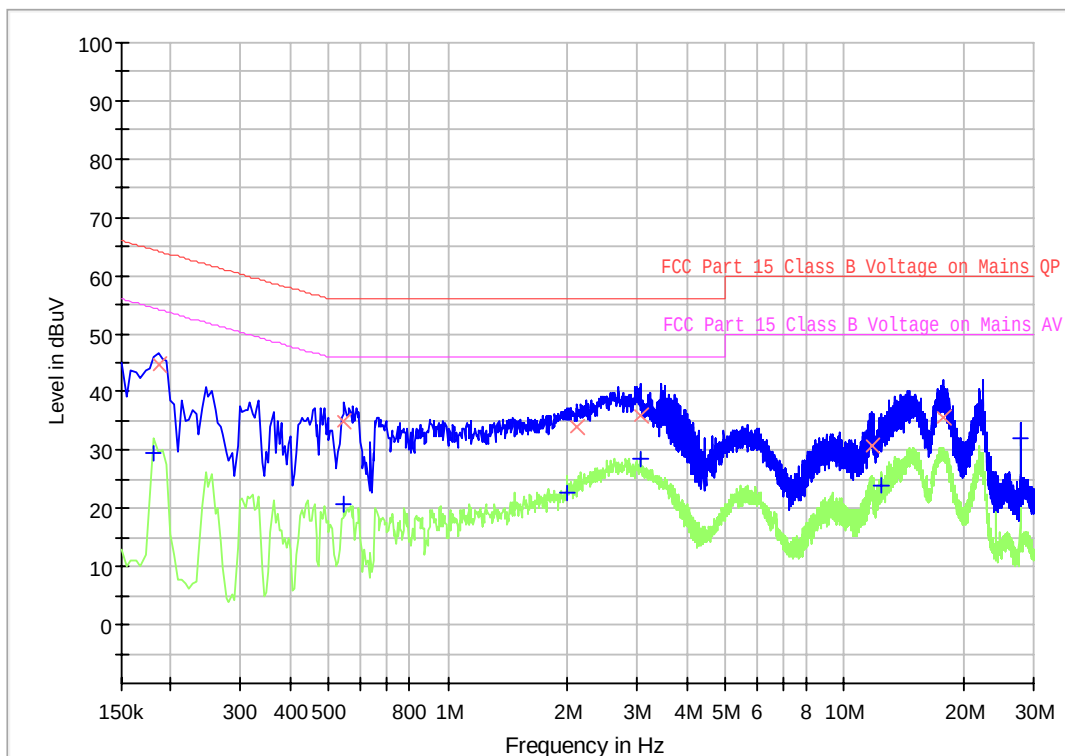
EUT Information

EUT Name: Smart Camera
 Model: SC155-WQ3C
 Client: Zhejiang Lingzhu Technology Co., Ltd
 Op Cond: Charging and power on, TX at 802.11 g mode_2412MHz
 Operator: Guo Chengjie
 Standard: FCC Part 15.207(a)
 Comment: Phase N
 Sample No.: SHA-912069-2

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup: Voltage with 2-Line-LISN
 Receiver: [ESR 3]
 Level Unit: dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB





Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.181500	---	29.36	54.42	25.06	1000.0	9.000	N	19.5
0.186000	44.72	---	64.21	19.49	1000.0	9.000	N	19.5
0.546000	---	20.62	46.00	25.38	1000.0	9.000	N	19.5
0.546000	35.09	---	56.00	20.91	1000.0	9.000	N	19.5
1.999500	---	22.79	46.00	23.21	1000.0	9.000	N	19.5
2.121000	33.92	---	56.00	22.08	1000.0	9.000	N	19.5
3.070500	35.94	---	56.00	20.06	1000.0	9.000	N	19.5
3.070500	---	28.58	46.00	17.42	1000.0	9.000	N	19.5
11.724000	30.68	---	60.00	29.32	1000.0	9.000	N	19.8
12.385500	---	23.99	50.00	26.01	1000.0	9.000	N	19.8
17.686500	35.76	---	60.00	24.24	1000.0	9.000	N	20.1
27.649500	---	32.19	50.00	17.81	1000.0	9.000	N	20.8

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator



150k-30MHz Conducted Emission Test

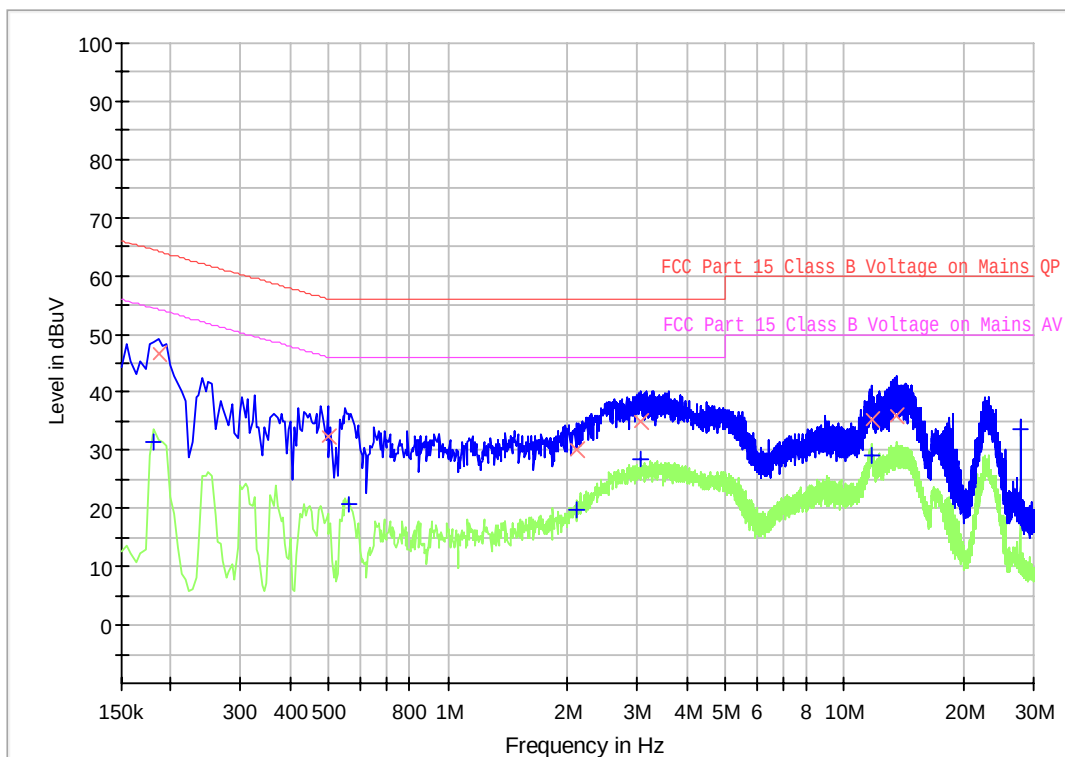
EUT Information

EUT Name:	Smart Camera
Model	SC256-WQ5
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging by adapter and power on, TX at 802.11 g mode_2412MHz
Operator:	Guo Chengjie
Standard	FCC Part 15.207(a)
Comment:	Phase L
Sample No.:	SHA-912069-4

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup:	Voltage with 2-Line-LISN
Receiver:	[ESR 3]
Level Unit:	dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB





Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.181500	---	31.54	54.42	22.88	1000.0	9.000	L1	19.5
0.186000	46.72	---	64.21	17.49	1000.0	9.000	L1	19.5
0.496500	32.38	---	56.06	23.68	1000.0	9.000	L1	19.5
0.559500	---	20.59	46.00	25.41	1000.0	9.000	L1	19.5
2.116500	30.14	---	56.00	25.86	1000.0	9.000	L1	19.5
2.121000	---	19.77	46.00	26.23	1000.0	9.000	L1	19.5
3.052500	34.88	---	56.00	21.12	1000.0	9.000	L1	19.5
3.070500	---	28.42	46.00	17.58	1000.0	9.000	L1	19.5
11.665500	---	28.99	50.00	21.01	1000.0	9.000	L1	19.8
11.683500	35.22	---	60.00	24.78	1000.0	9.000	L1	19.8
13.524000	35.92	---	60.00	24.08	1000.0	9.000	L1	19.8
27.649500	---	33.66	50.00	16.34	1000.0	9.000	L1	21.0



150k-30MHz Conducted Emission Test

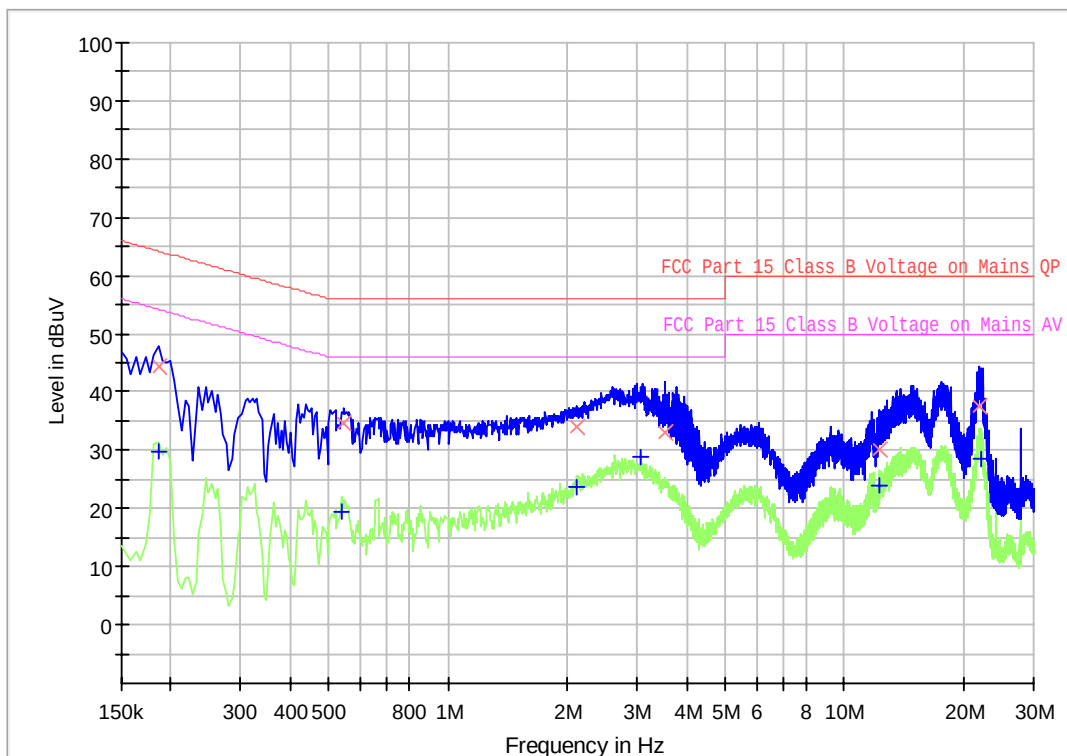
EUT Information

EUT Name:	Smart Camera
Model	SC256-WQ5
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging by adapter and power on, TX at 802.11 g mode_2412MHz
Operator:	Guo Chengjie
Standard	FCC Part 15.207(a)
Comment:	Phase N
Sample No.:	SHA-912069-4

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup:	Voltage with 2-Line-LISN
Receiver:	[ESR 3]
Level Unit:	dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB





Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.186000	---	29.77	54.21	24.44	1000.0	9.000	N	19.5
0.186000	44.38	---	64.21	19.83	1000.0	9.000	N	19.5
0.537000	---	19.41	46.00	26.59	1000.0	9.000	N	19.5
0.546000	34.78	---	56.00	21.22	1000.0	9.000	N	19.5
2.107500	---	23.65	46.00	22.35	1000.0	9.000	N	19.5
2.107500	34.14	---	56.00	21.86	1000.0	9.000	N	19.5
3.070500	---	28.71	46.00	17.29	1000.0	9.000	N	19.5
3.525000	33.15	---	56.00	22.85	1000.0	9.000	N	19.5
12.264000	30.15	---	60.00	29.85	1000.0	9.000	N	19.8
12.313500	---	23.98	50.00	26.02	1000.0	9.000	N	19.8
21.858000	37.62	---	60.00	22.38	1000.0	9.000	N	20.5
22.042500	---	28.59	50.00	21.41	1000.0	9.000	N	20.5

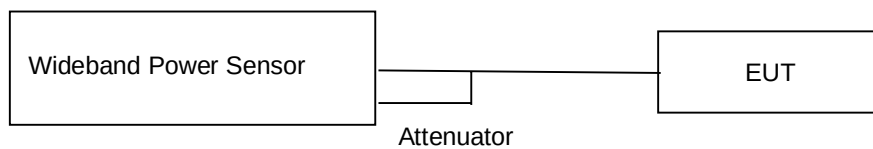
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator

10.2 Conducted peak output power

Test Method

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- 4) Measure the peak power of the transmitter. This measurement is a peak over both the ON and OFF periods of the transmitter.



Wideband Power Sensor conducted test setup

Limits

According to §15.247 (b) (1), conducted peak output power limit as below:

	Frequency Range	Limit	Limit
	MHz	W	dBm
Conducted peak output power	2400-2483.5	≤1	≤30

**Test result for SC155-WQ3C**

802.11b

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	17.68	Pass
Middle channel 2437MHz	17.74	Pass
High channel 2462MHz	17.49	Pass

802.11g

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	23.36	Pass
Middle channel 2437MHz	23.16	Pass
High channel 2462MHz	21.29	Pass

802.11n(HT20)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	22.23	Pass
Middle channel 2437MHz	21.28	Pass
High channel 2462MHz	21.45	Pass

802.11n(HT40)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2422MHz	20.46	Pass
Middle channel 2437MHz	20.19	Pass
High channel 2452MHz	20.66	Pass

**Test result for SC256-WQ5**

802.11b

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	17.71	Pass
Middle channel 2437MHz	17.62	Pass
High channel 2462MHz	17.68	Pass

802.11g

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	23.14	Pass
Middle channel 2437MHz	23.11	Pass
High channel 2462MHz	21.54	Pass

802.11n(HT20)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	22.32	Pass
Middle channel 2437MHz	21.98	Pass
High channel 2462MHz	21.25	Pass

802.11n(HT40)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2422MHz	20.25	Pass
Middle channel 2437MHz	20.52	Pass
High channel 2452MHz	20.74	Pass

10.36dB bandwidth

Test Method

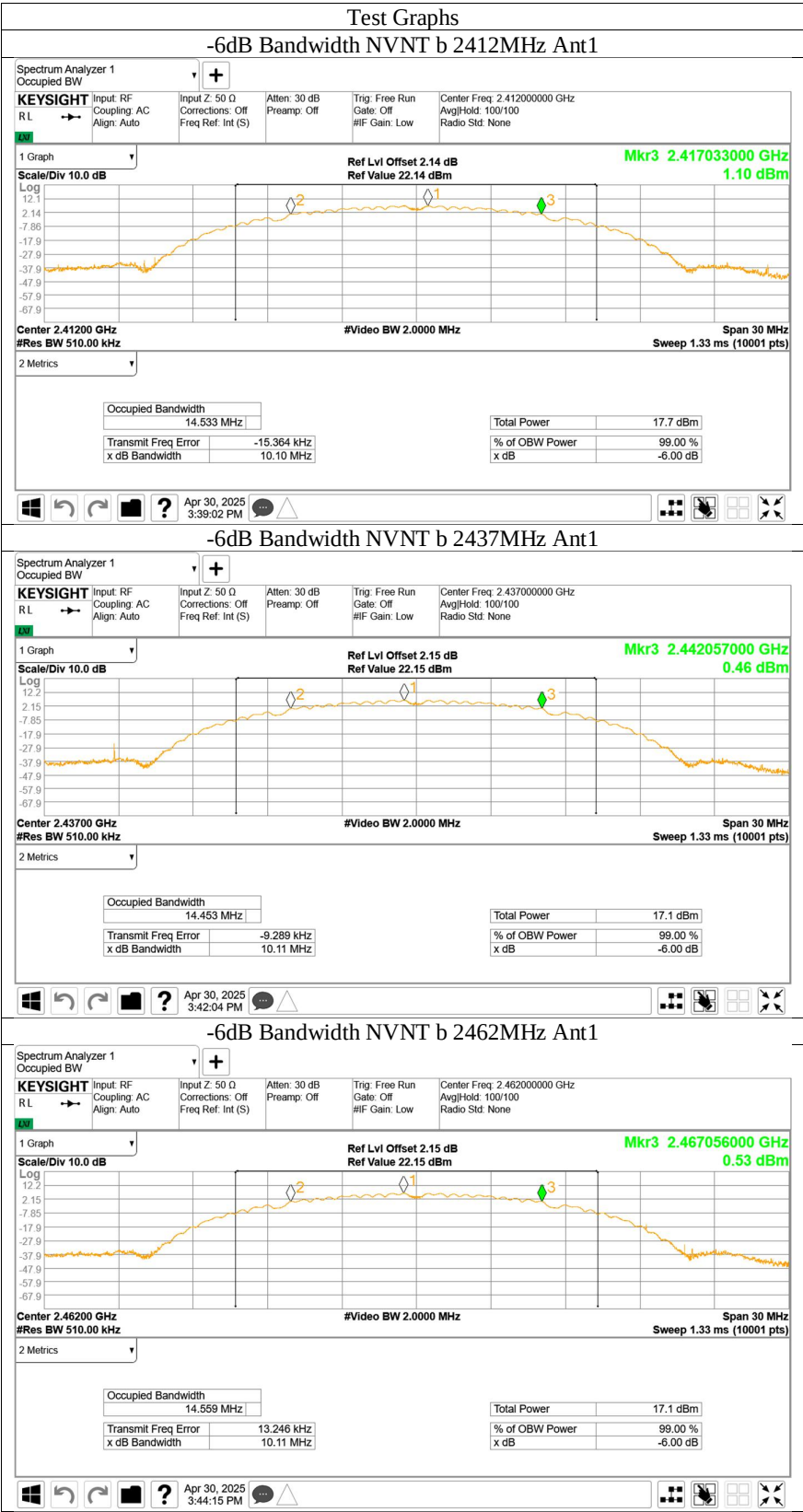
1. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
2. Set the VBW $\geq [3 \times \text{RBW}]$.
3. Detector = peak.
RBW=100KHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Trace mode = max-hold.
5. Sweep = No faster than coupled (auto) time.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-6 dB down amplitude”. If a marker is below this “-6 dB down amplitude” value, then it shall be as close as possible to this value.

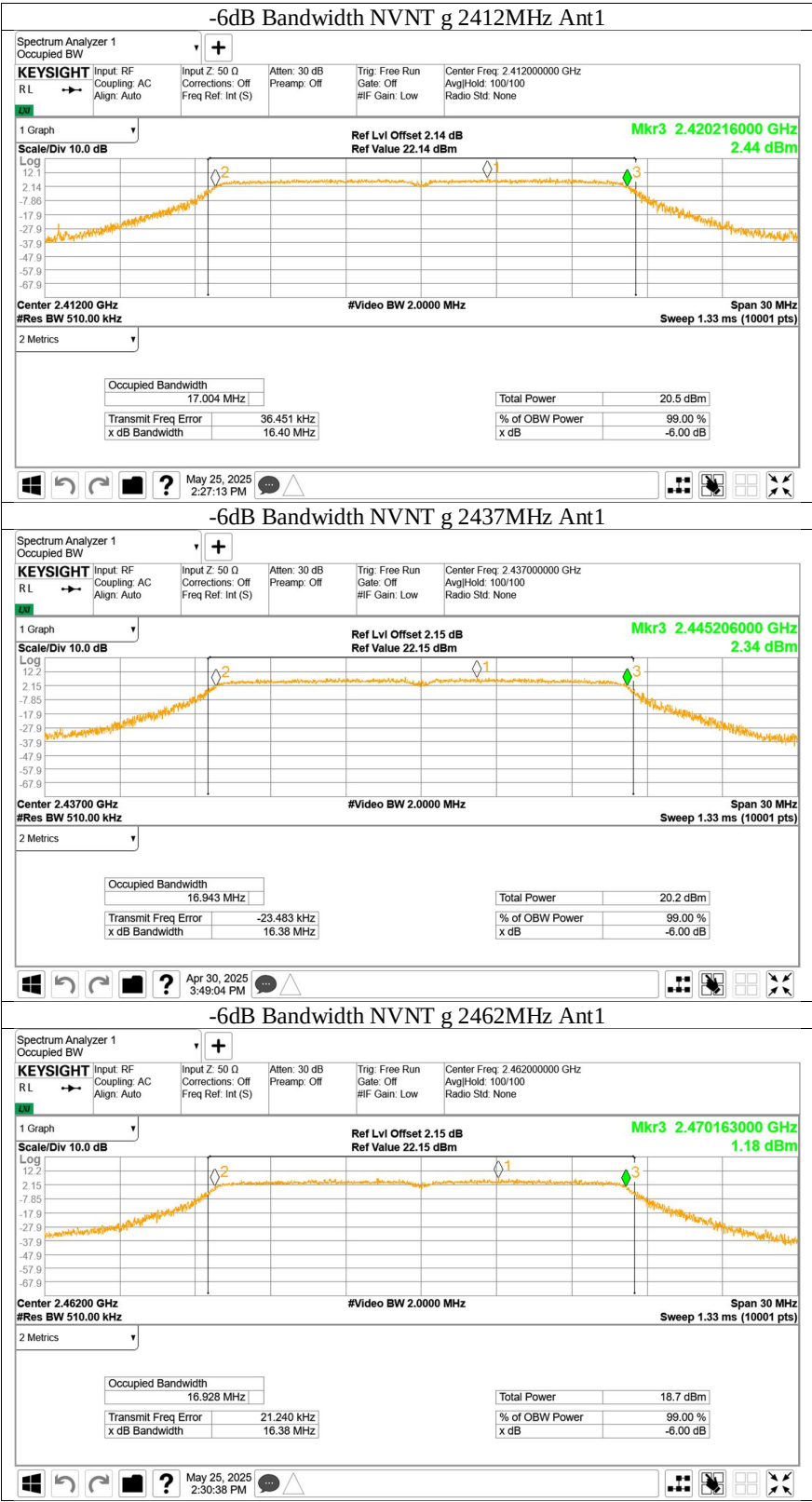
Limit

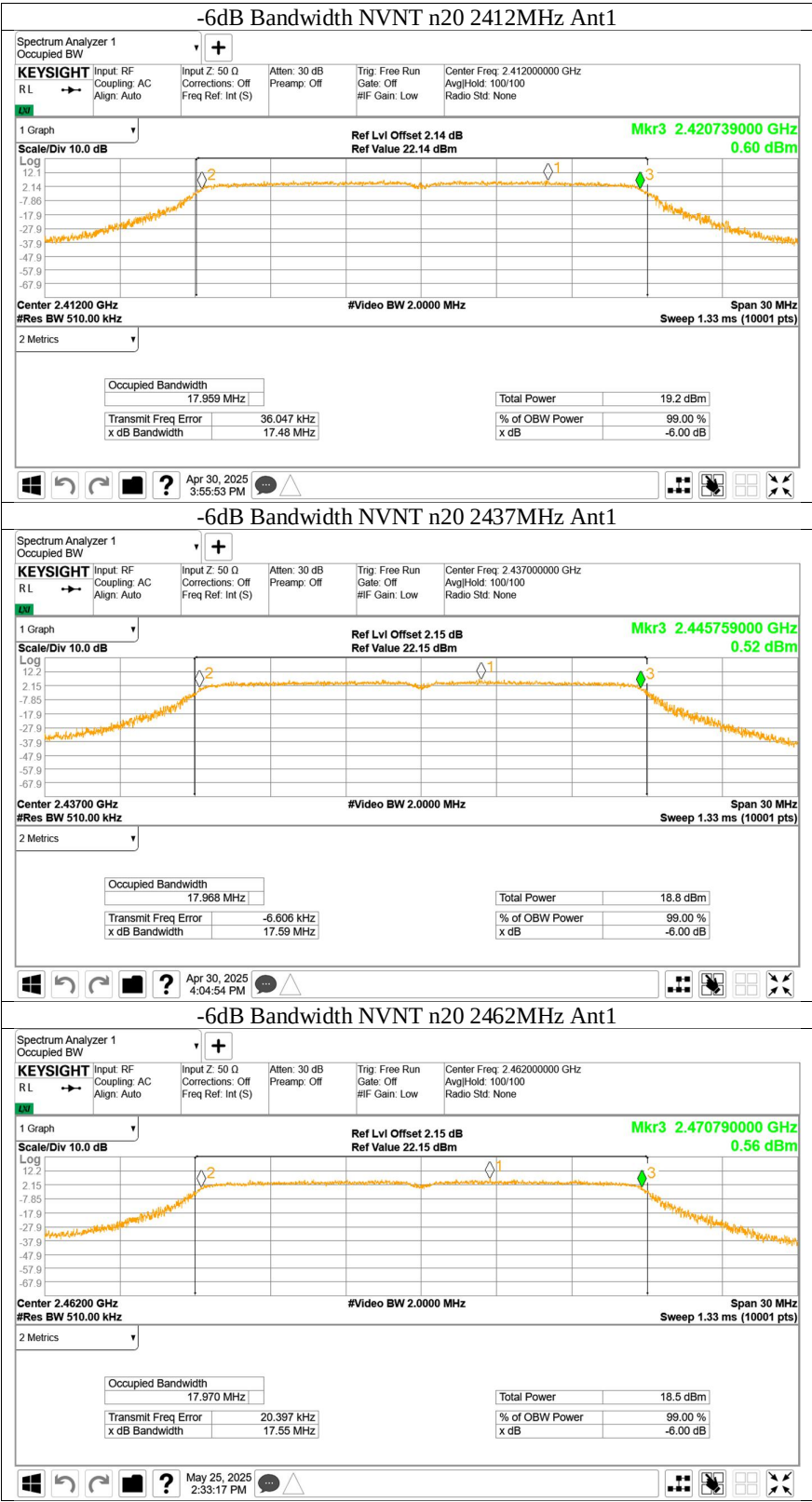
6dB bandwidth Limit [kHz]	≥ 500

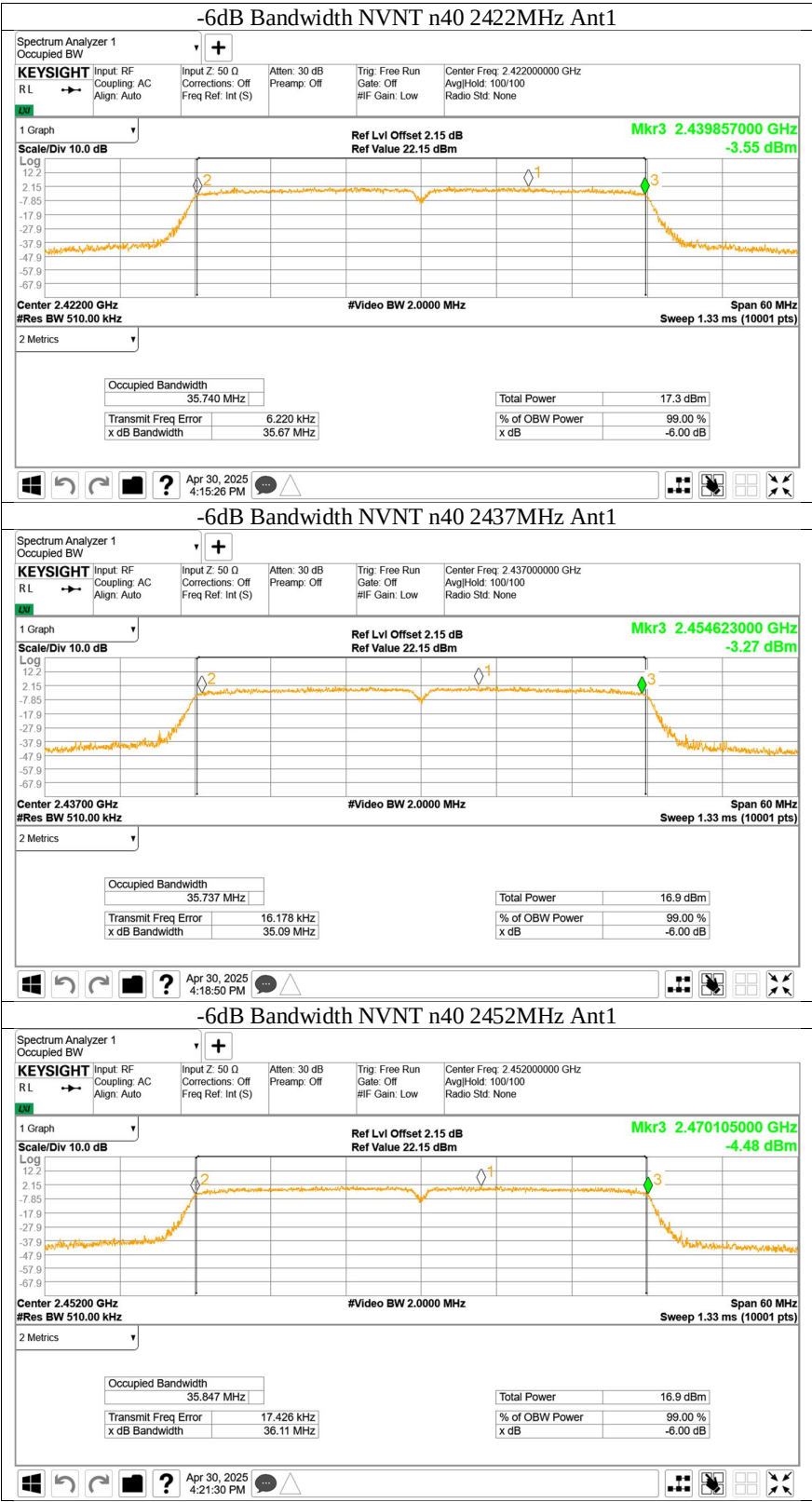
Test result for SC256-WQ5

Test Mode	Frequency MHz	6dB bandwidth (MHz)		Result
		result	limit	verdict
802.11b	2412	10.095	≥ 0.5	Pass
	2437	10.107	≥ 0.5	Pass
	2462	10.114	≥ 0.5	Pass
802.11g	2412	16.396	≥ 0.5	Pass
	2437	16.38	≥ 0.5	Pass
	2462	16.375	≥ 0.5	Pass
802.11n(HT20)	2412	17.476	≥ 0.5	Pass
	2437	17.592	≥ 0.5	Pass
	2462	17.552	≥ 0.5	Pass
802.11n(HT40)	2422	35.672	≥ 0.5	Pass
	2437	35.086	≥ 0.5	Pass
	2452	36.108	≥ 0.5	Pass









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 for SC256-WQ5

802.11 B

Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2412MHz	-7.63	Pass
Middle channel 2437MHz	-8.28	Pass
High channel 2462MHz	-8.52	Pass

802.11 G

Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2412MHz	-10.89	Pass
Middle channel 2437MHz	-10.27	Pass
High channel 2462MHz	-11.41	Pass

802.11 N20

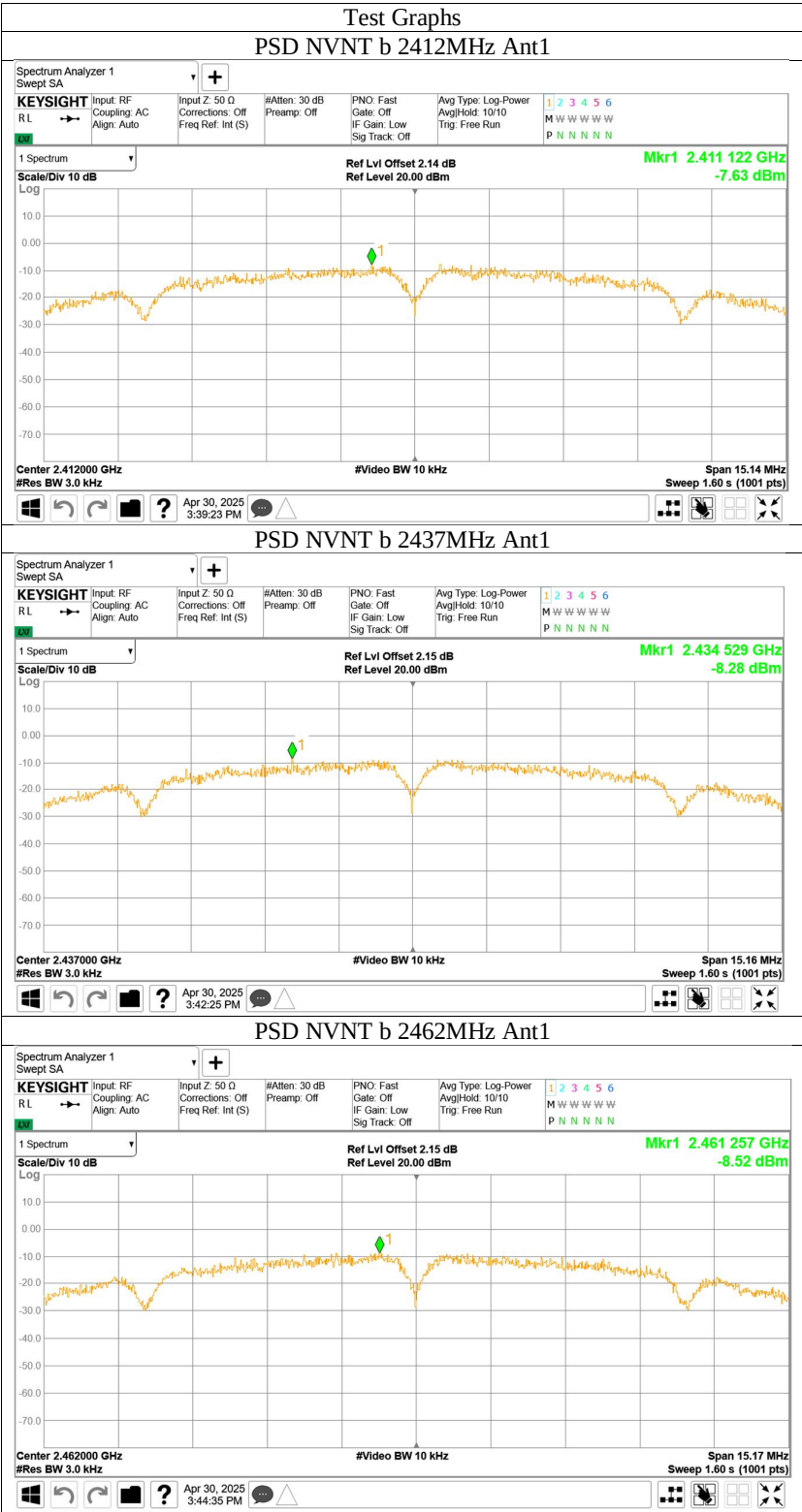
Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2412MHz	-12.32	Pass
Middle channel 2437MHz	-11.8	Pass
High channel 2462MHz	-12.53	Pass

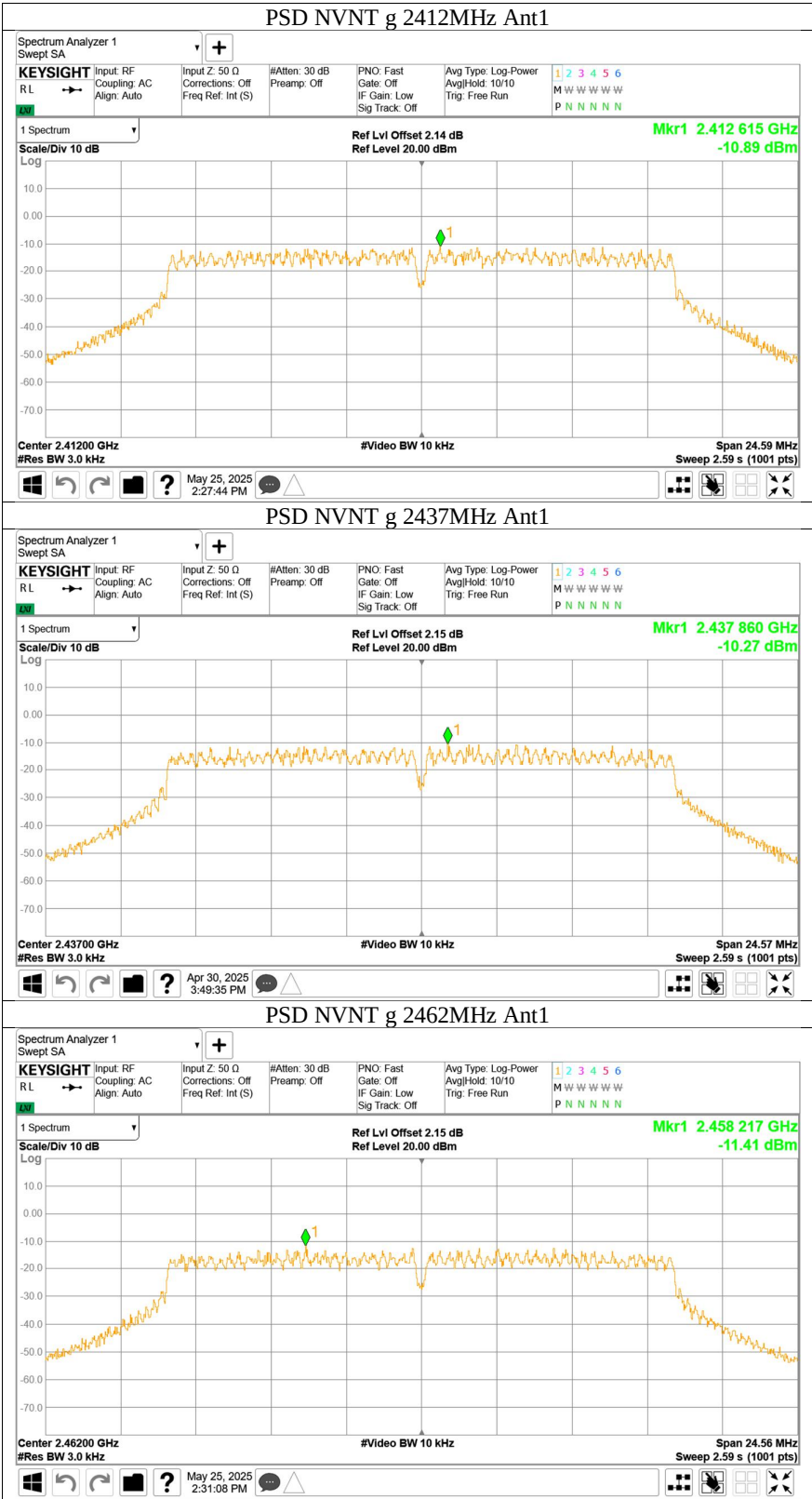
802.11 N40

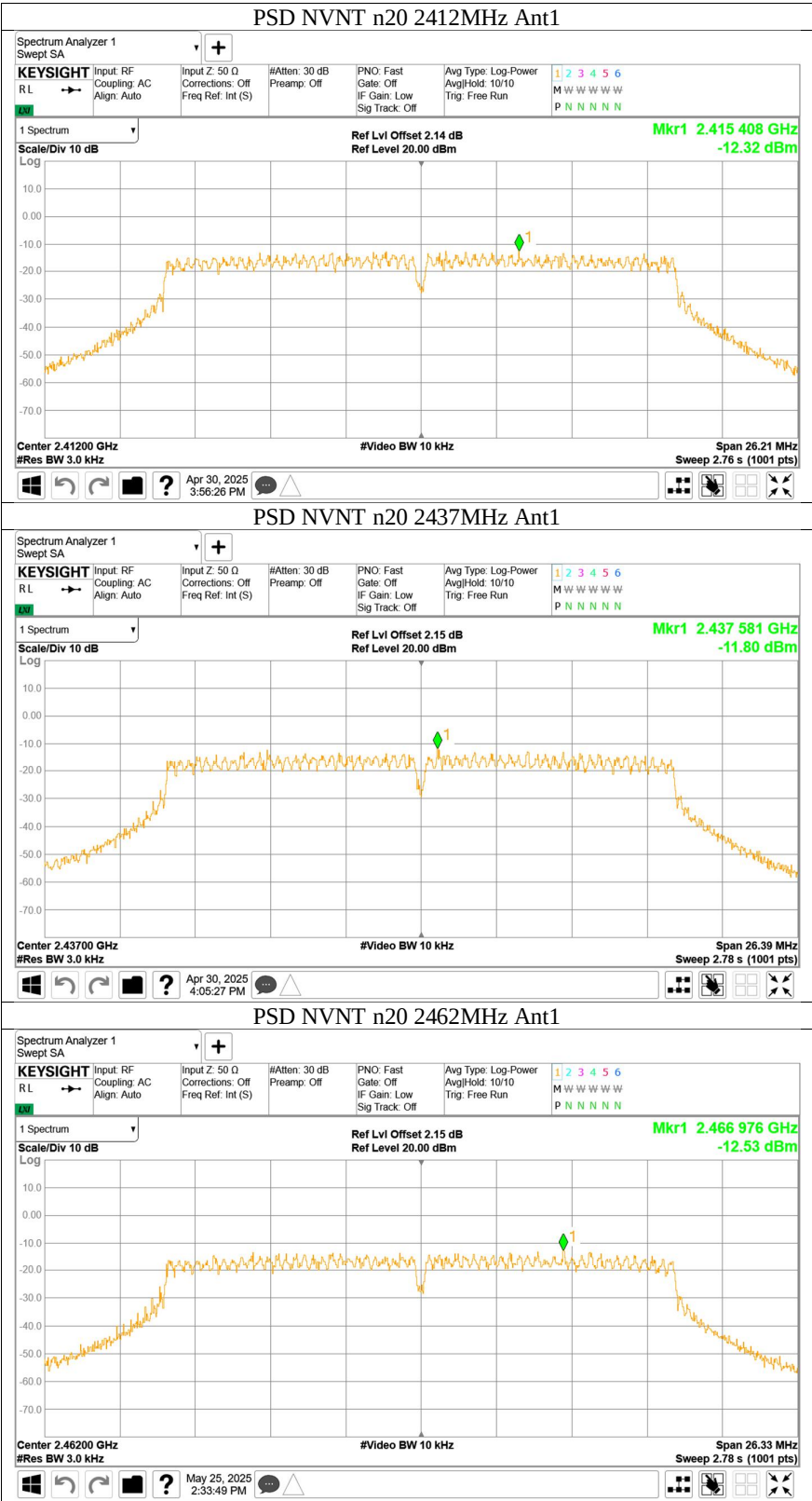
Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2422MHz	-16.8	Pass
Middle channel 2437MHz	-17.13	Pass
High channel 2452MHz	-16.64	Pass

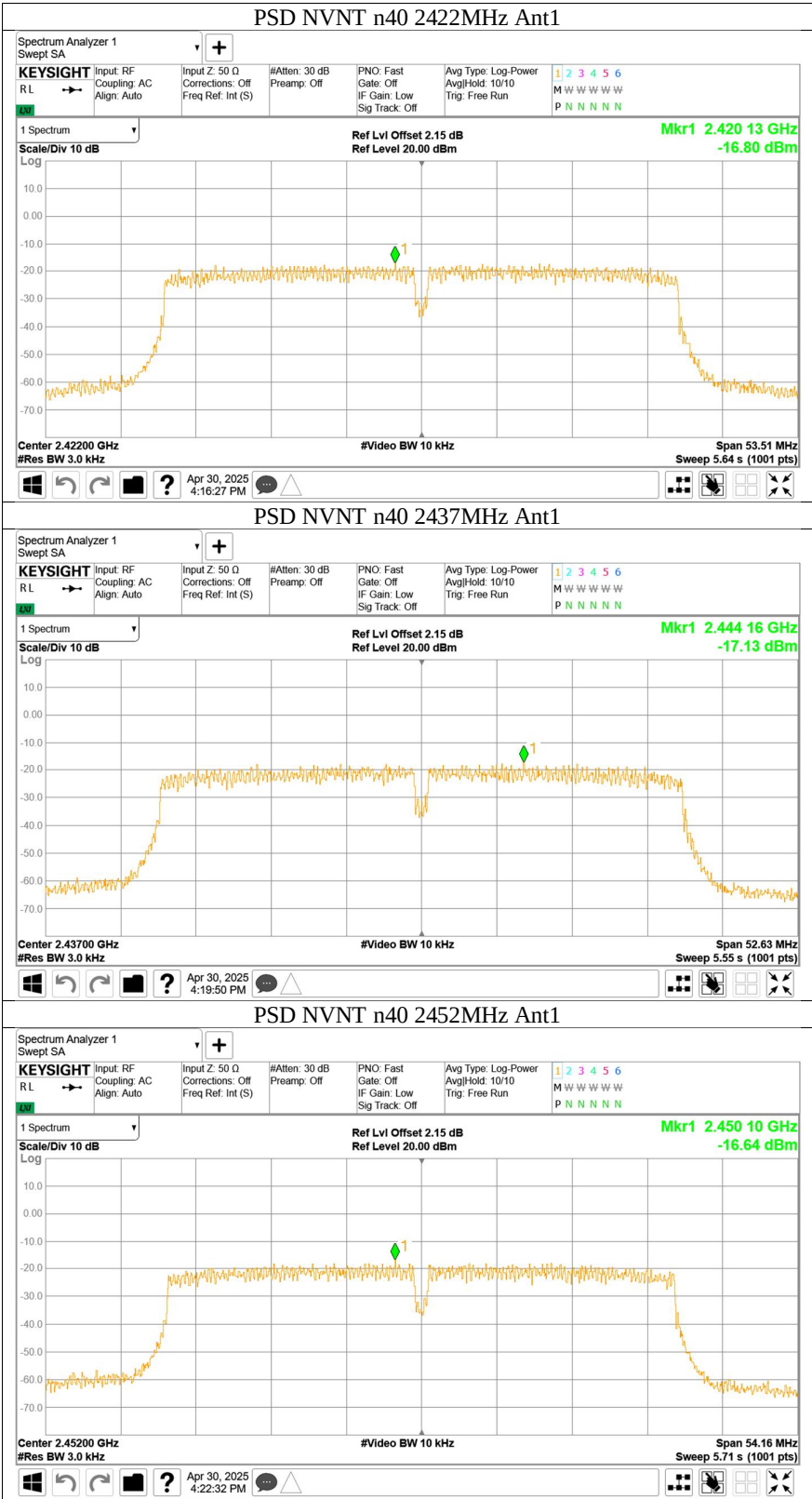


Power Spectral Density Level









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

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

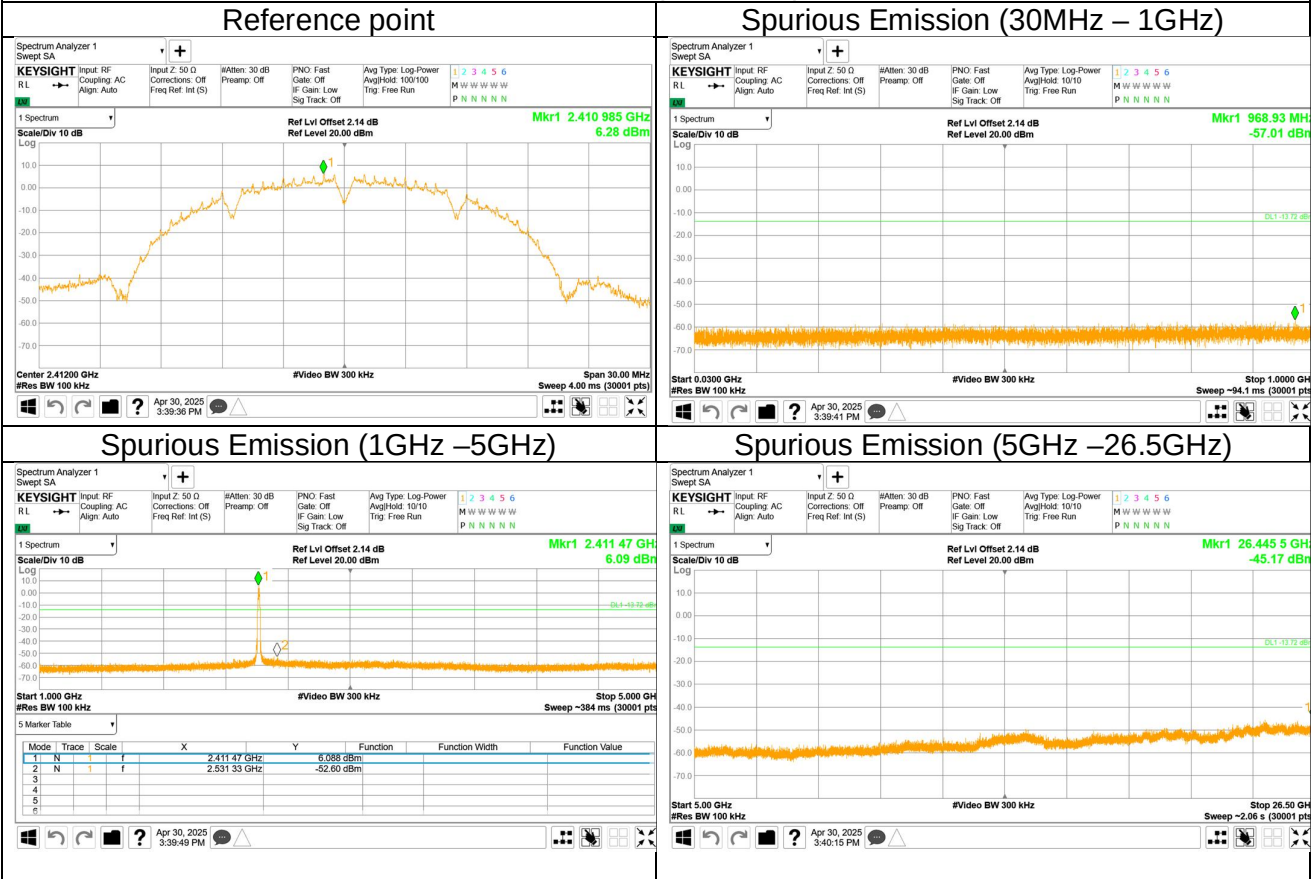


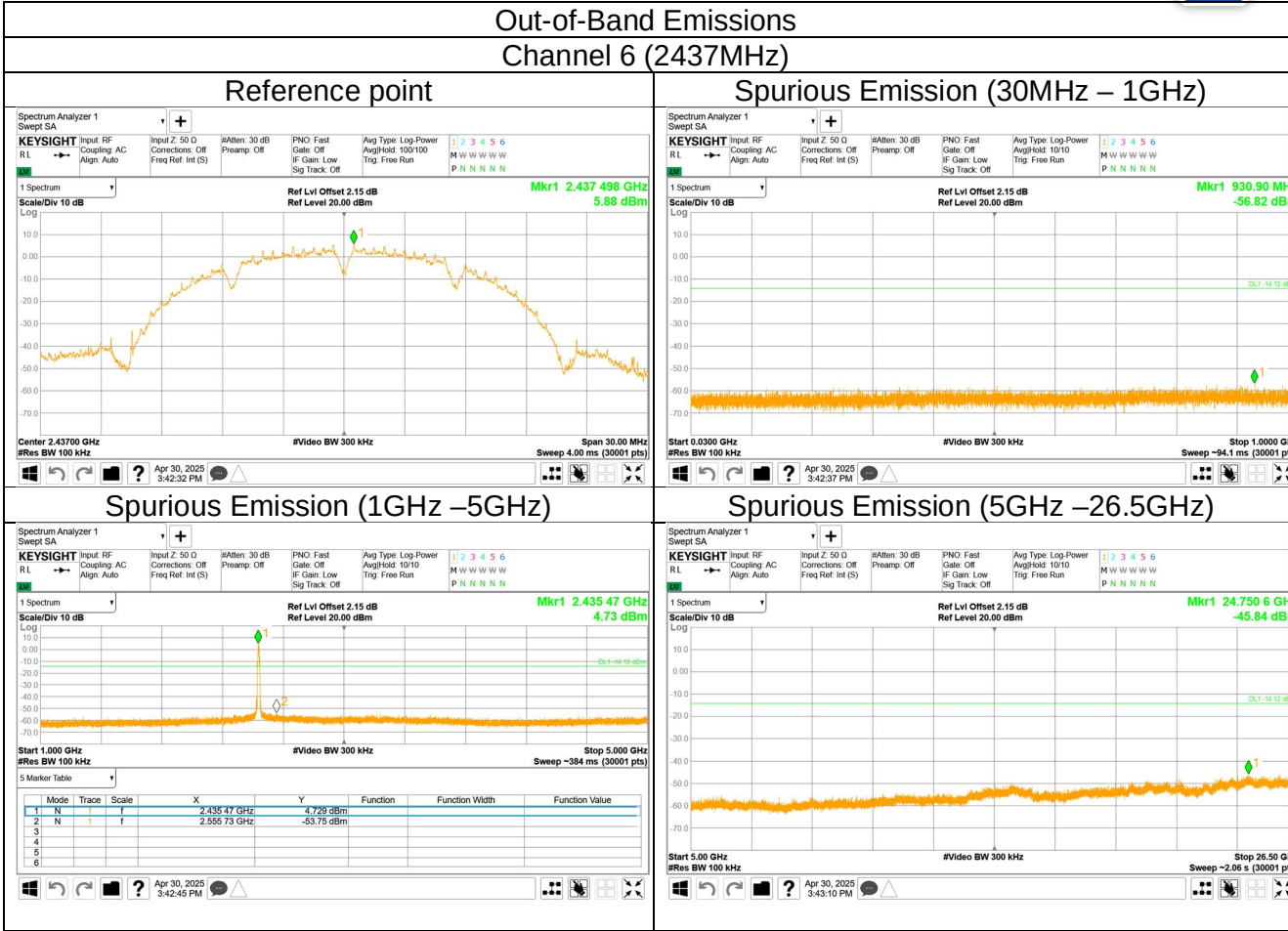
Spurious RF conducted emissions

Test result for SC256-WQ5

802.11 B

Out-of-Band Emissions
Channel 1 (2412MHz)

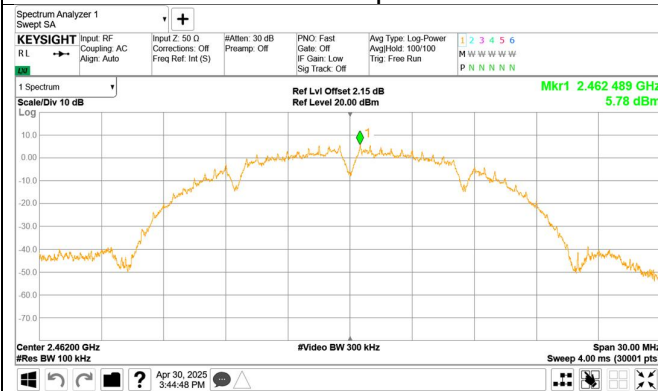




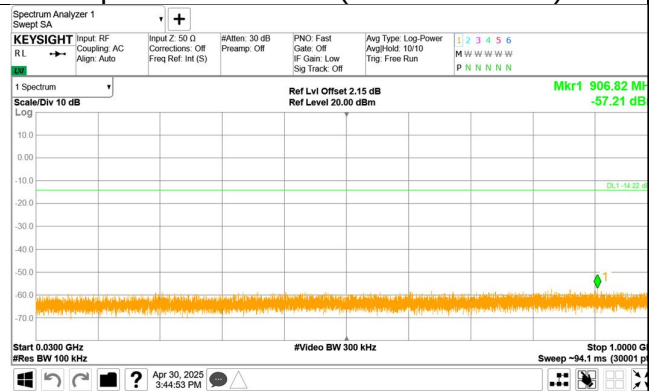


Out-of-Band Emissions
Channel 11 (2462MHz)

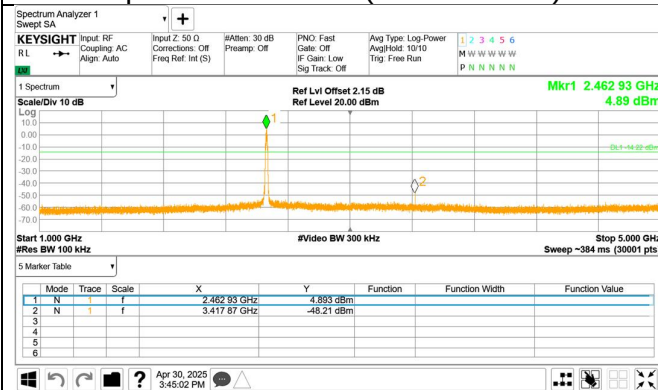
Reference point



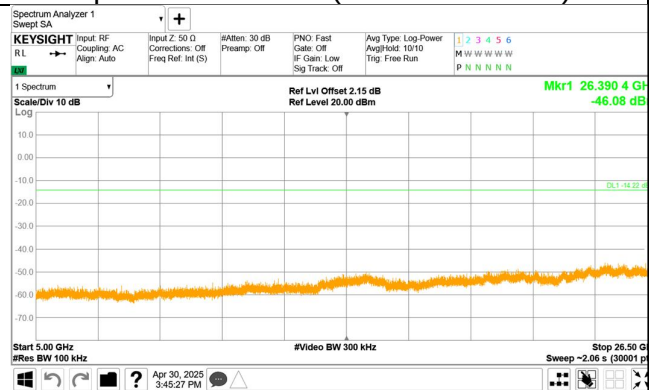
Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)

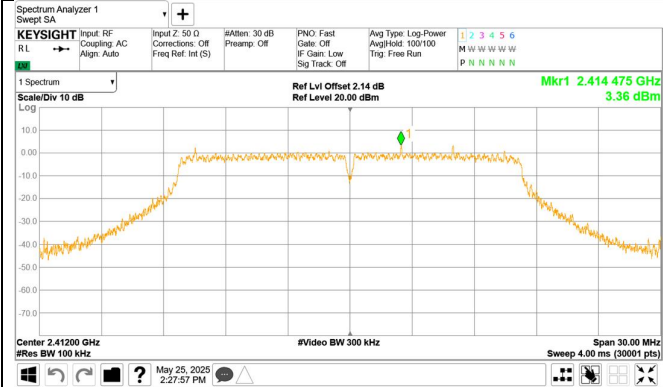




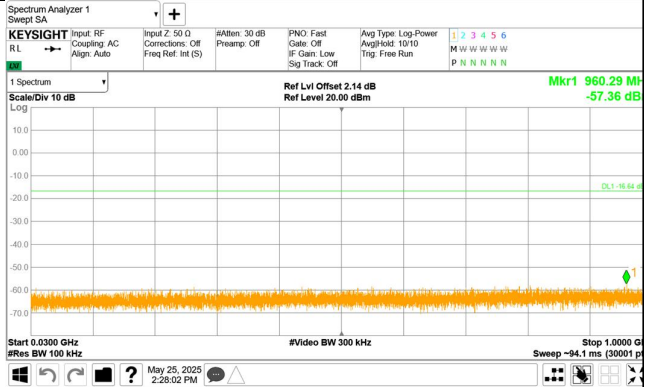
802.11 G

Out-of-Band Emissions
Channel 1 (2412MHz)

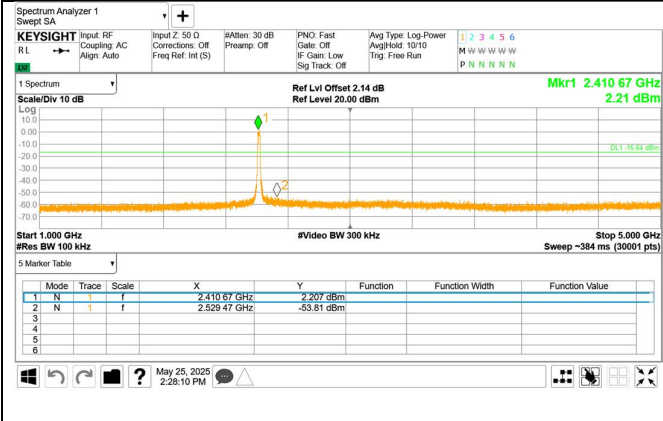
Reference point



Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)

