

# FCC - TEST REPORT

Report Number : **709502503681-00B** 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** ☐ Negative

Total pages including  
Appendices : **84**



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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
709502503681-00B	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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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 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	12-20	Site 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§15.247 (b) (3)	Conducted peak output power	21-25	Site 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§15.247(a)(1)	20dB bandwidth and 99% Occupied Bandwidth	---	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
§15.247(a)(1)	Carrier frequency separation	---	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
§15.247(a)(1)(iii)	Number of hopping frequencies	---	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
§15.247(a)(1)(iii)	Dwell Time - Average Time of Occupancy	---	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
§15.247(a)(2)	6dB bandwidth	26-28	Site 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§15.247(e)	Power spectral density	29-31	Site 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§15.247(e)	Spurious RF conducted emissions	32-38	Site 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§15.247(d)	Band edge	39-43	Site 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§15.247(d) & §15.209 & §15.205	Spurious radiated emissions for transmitter	44-81	Site 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§15.203	Antenna requirement	See note 1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 709502310205-00B and 709502408362-00C 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 709502310205-00B and 709502408362-00C 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 BLE.

### SUMMARY:

All tests according to the regulations cited on page 5 were

☒ - Performed

☐ - **Not** Performed

The Equipment under Test

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

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

Sample Received Date: April 30, 2025

Testing Start Date: May 6, 2025

Testing End Date: June 3, 2025

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

Reviewed by:

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Project Engineer

Tested by:

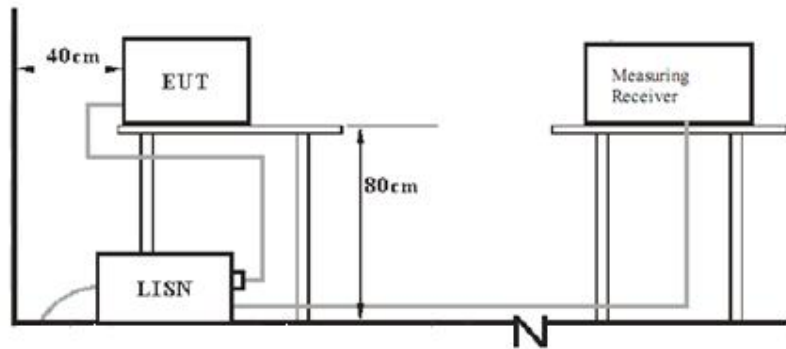
*Chengjie Guo*

Chengjie GUO  
Test Engineer



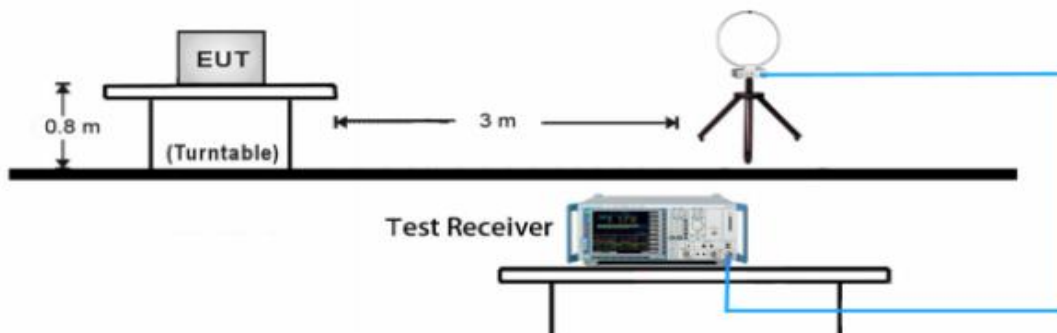
## 8 Test Setups

### 8.1 AC Power Line Conducted Emission test setups

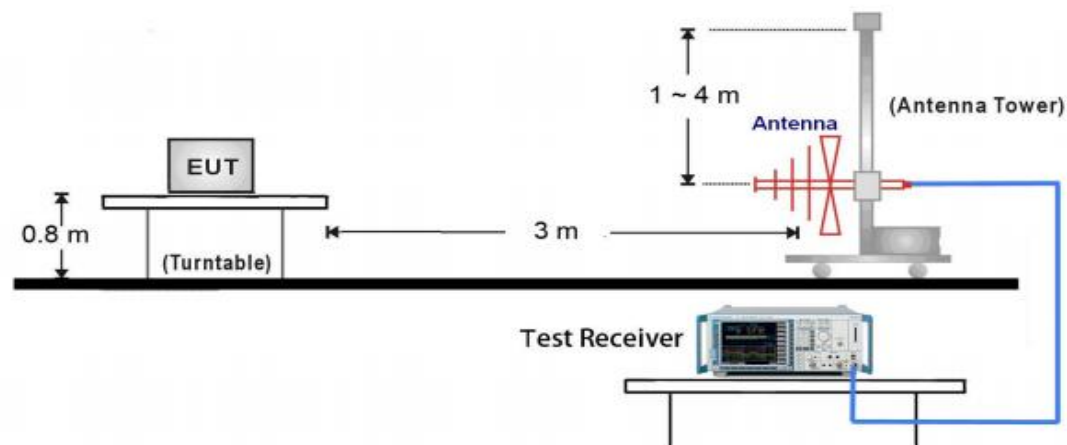


### 8.2 Radiated test setups

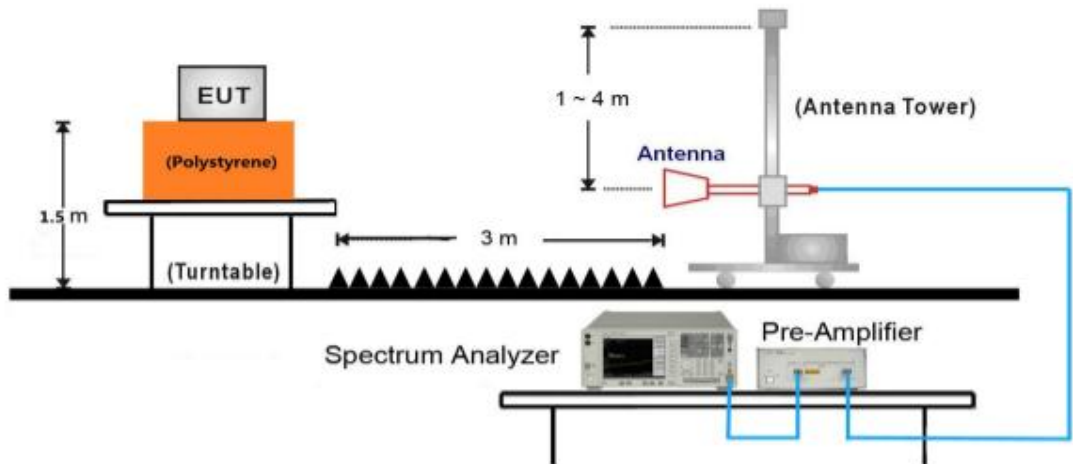
#### 9kHz ~ 30MHz Test Setup:



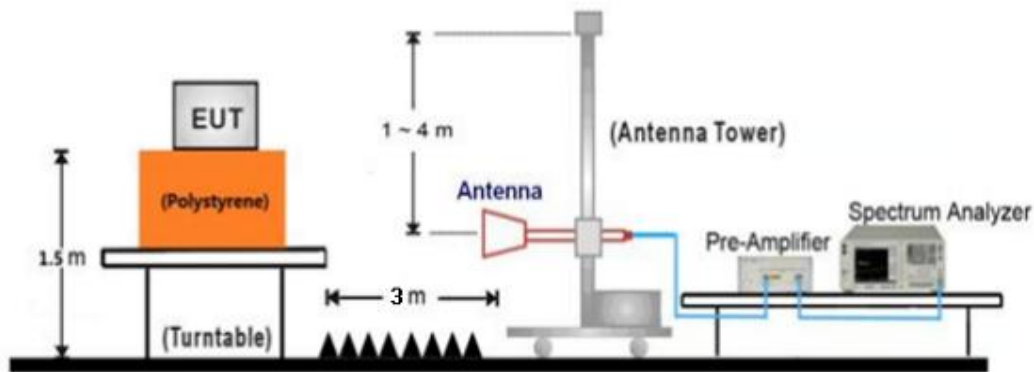
#### 30MHz ~ 1GHz Test Setup:



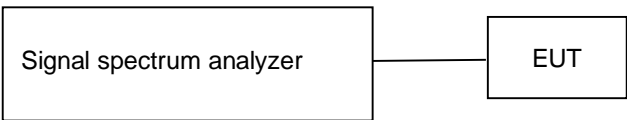
1GHz ~ 18GHz Test Setup:



18GHz ~ 25GHz Test Setup:



8.3 Conducted RF test setups



## 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: RTLBTAPP.exe, which used to control the EUT in continues transmitting mode

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

Test Mode Applicability and Tested Channel Detail:

Mode	Tested Channel	Data Rate (Mbps)	Modulation	Power level setting
Bluetooth LE	0	1	GFSK	06
	19	1	GFSK	06
	39	1	GFSK	06
Bluetooth LE	0	2	GFSK	06
	19	2	GFSK	06
	39	2	GFSK	06

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.

## 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 $\mu$ V	AV Limit dB $\mu$ 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

## Conducted Emission

# 150k-30MHz Conducted Emission Test

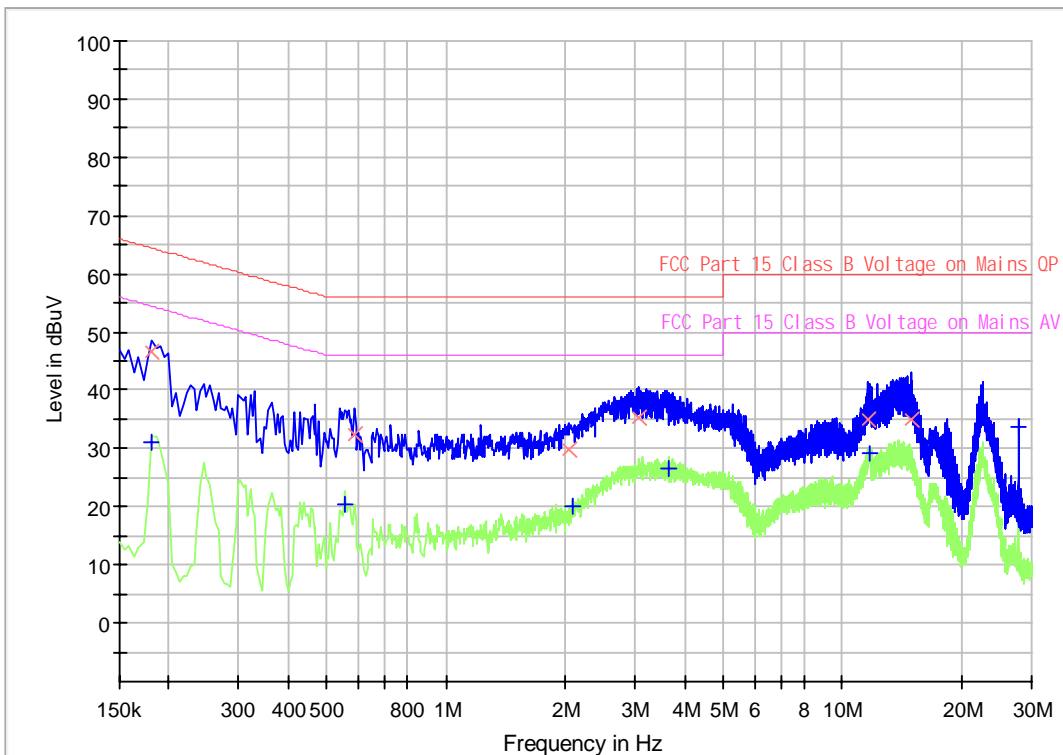
## EUT Information

EUT Name:	Smart Camera
Model	SC155-WQ3C
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging by adapter and power on, TX at 2480MHz_2Mbps
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	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	---	31.21	54.42	23.21	1000.0	9.000	L1	19.5
0.181500	46.76	---	64.42	17.66	1000.0	9.000	L1	19.5
0.555000	---	20.51	46.00	25.49	1000.0	9.000	L1	19.5
0.586500	32.42	---	56.00	23.58	1000.0	9.000	L1	19.5
2.031000	29.92	---	56.00	26.08	1000.0	9.000	L1	19.5
2.089500	---	20.06	46.00	25.94	1000.0	9.000	L1	19.5
3.057000	35.20	---	56.00	20.80	1000.0	9.000	L1	19.5
3.646500	---	26.51	46.00	19.49	1000.0	9.000	L1	19.5
11.652000	34.94	---	60.00	25.06	1000.0	9.000	L1	19.8
11.719500	---	29.18	50.00	20.82	1000.0	9.000	L1	19.8
14.851500	35.12	---	60.00	24.88	1000.0	9.000	L1	19.8
27.649500	---	33.64	50.00	16.36	1000.0	9.000	L1	21.0

# 150k-30MHz Conducted Emission Test

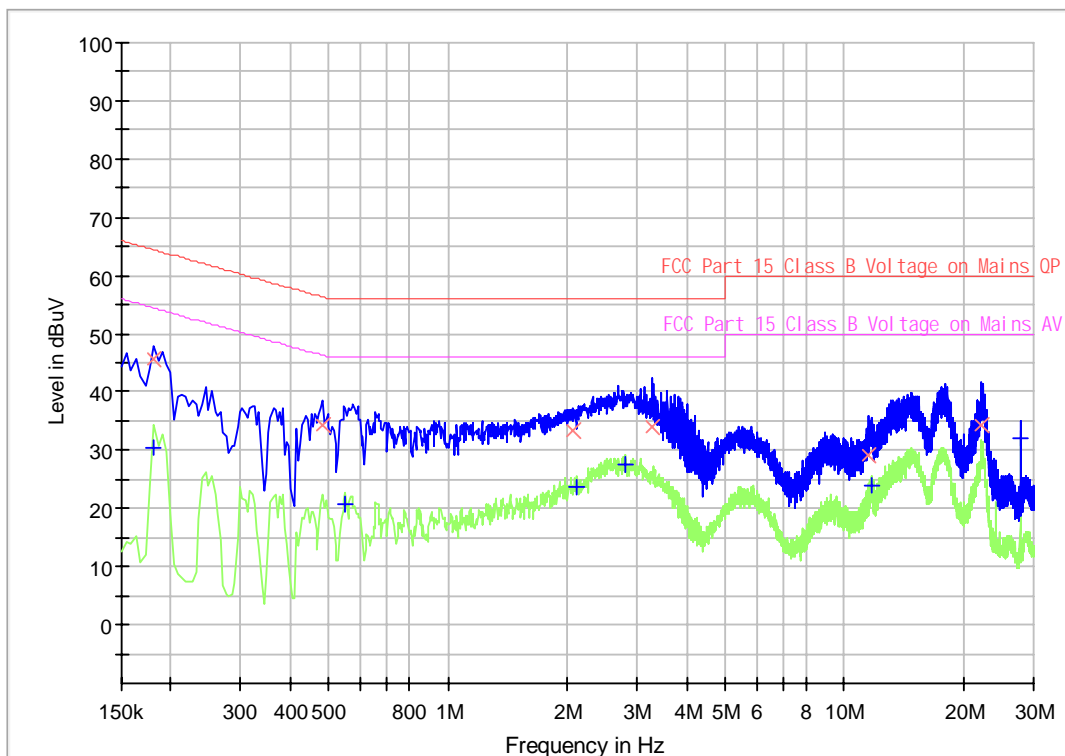
## EUT Information

EUT Name:	Smart Camera
Model	SC155-WQ3C
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging by adapter and power on, TX at 2480MHz_2Mbps
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	---	30.33	54.42	24.09	1000.0	9.000	N	19.5
0.181500	45.62	---	64.42	18.80	1000.0	9.000	N	19.5
0.483000	34.23	---	56.29	22.06	1000.0	9.000	N	19.5
0.550500	---	20.85	46.00	25.15	1000.0	9.000	N	19.5
2.053500	33.39	---	56.00	22.61	1000.0	9.000	N	19.5
2.121000	---	23.65	46.00	22.35	1000.0	9.000	N	19.5
2.809500	---	27.45	46.00	18.55	1000.0	9.000	N	19.5
3.273000	33.90	---	56.00	22.10	1000.0	9.000	N	19.5
11.499000	29.00	---	60.00	31.00	1000.0	9.000	N	19.8
11.706000	---	23.86	50.00	26.14	1000.0	9.000	N	19.8
22.213500	34.38	---	60.00	25.62	1000.0	9.000	N	20.5
27.649500	---	32.14	50.00	17.86	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

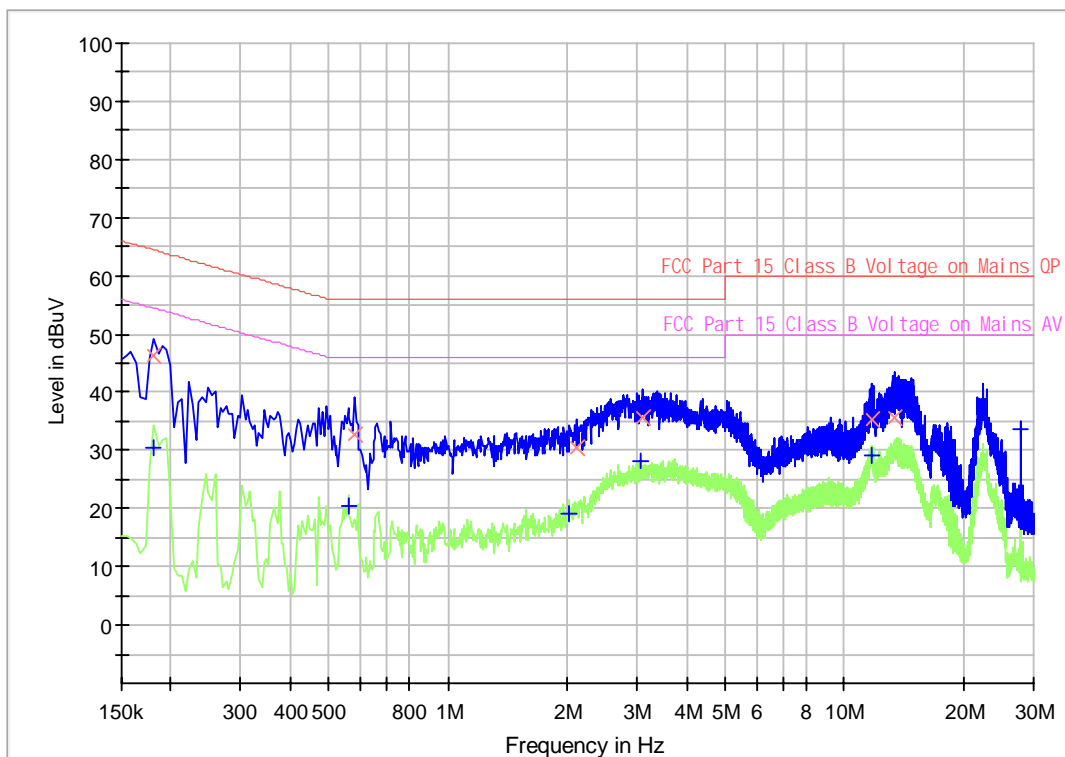
## EUT Information

EUT Name:	Smart Camera
Model	SC256-WQ5
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging by adapter and power on, TX at 2480MHz_2Mbps
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	---	30.58	54.42	23.84	1000.0	9.000	L1	19.5
0.181500	46.43	---	64.42	17.99	1000.0	9.000	L1	19.5
0.559500	---	20.44	46.00	25.56	1000.0	9.000	L1	19.5
0.582000	32.62	---	56.00	23.38	1000.0	9.000	L1	19.5
2.022000	---	19.05	46.00	26.95	1000.0	9.000	L1	19.5
2.103000	30.28	---	56.00	25.72	1000.0	9.000	L1	19.5
3.070500	---	28.18	46.00	17.82	1000.0	9.000	L1	19.5
3.097500	35.53	---	56.00	20.47	1000.0	9.000	L1	19.5
11.692500	35.42	---	60.00	24.58	1000.0	9.000	L1	19.8
11.733000	---	29.25	50.00	20.75	1000.0	9.000	L1	19.8
13.308000	35.53	---	60.00	24.47	1000.0	9.000	L1	19.8
27.649500	---	33.53	50.00	16.47	1000.0	9.000	L1	21.0

# 150k-30MHz Conducted Emission Test

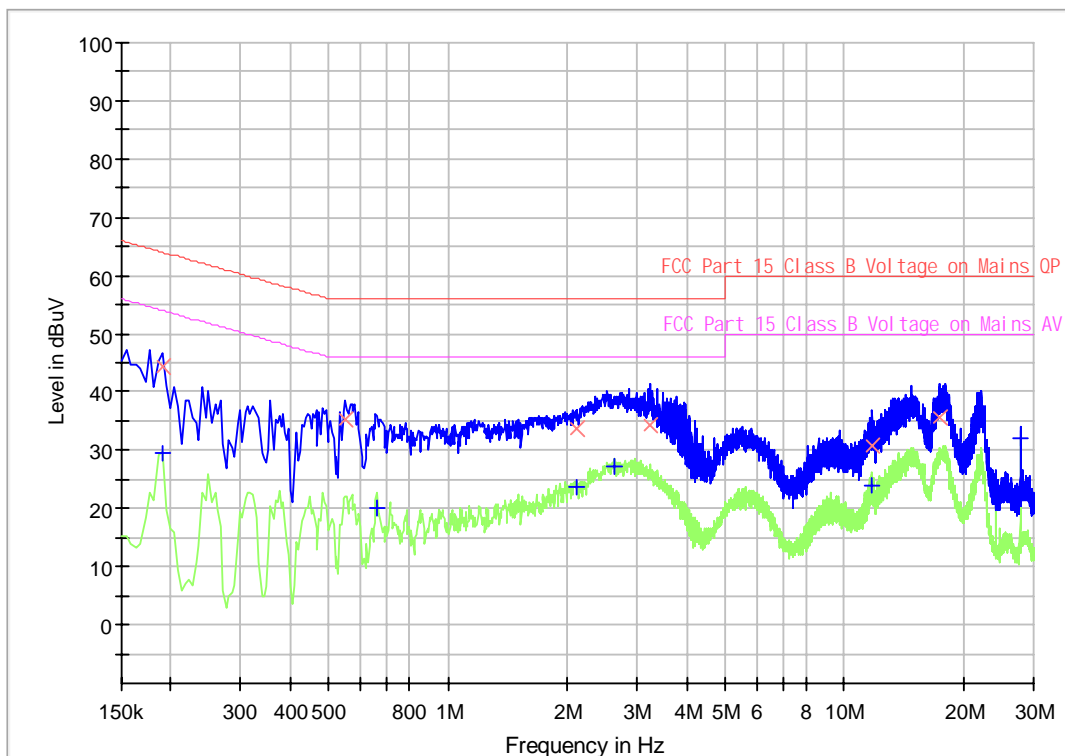
## EUT Information

EUT Name:	Smart Camera
Model	SC256-WQ5
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging by adapter and power on, TX at 2480MHz_2Mbps
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	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	---	29.40	54.01	24.61	1000.0	9.000	N	19.4
0.190500	44.30	---	64.01	19.71	1000.0	9.000	N	19.4
0.550500	35.18	---	56.00	20.82	1000.0	9.000	N	19.5
0.663000	---	20.16	46.00	25.84	1000.0	9.000	N	19.4
2.103000	33.66	---	56.00	22.34	1000.0	9.000	N	19.5
2.103000	---	23.77	46.00	22.23	1000.0	9.000	N	19.5
2.616000	---	27.33	46.00	18.67	1000.0	9.000	N	19.5
3.237000	34.23	---	56.00	21.77	1000.0	9.000	N	19.5
11.787000	30.69	---	60.00	29.31	1000.0	9.000	N	19.8
11.787000	---	23.99	50.00	26.01	1000.0	9.000	N	19.8
17.380500	35.47	---	60.00	24.53	1000.0	9.000	N	20.1
27.649500	---	32.16	50.00	17.84	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

## 10.2 Conducted peak output power

### 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), conducted peak output power limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	$\leq 1$	$\leq 30$

Test result as below table: SC155-WQ3C

Test Mode	Frequency MHz	Conducted Peak Output Power(dBm) §15.247 (b) (3)	Result
Data rate 1Mbps	2402MHz	6.48	Pass
	2440MHz	5.78	Pass
	2480MHz	4.68	Pass
Data rate 2Mbps	2402MHz	6.58	Pass
	2440MHz	6.01	Pass
	2480MHz	4.89	Pass

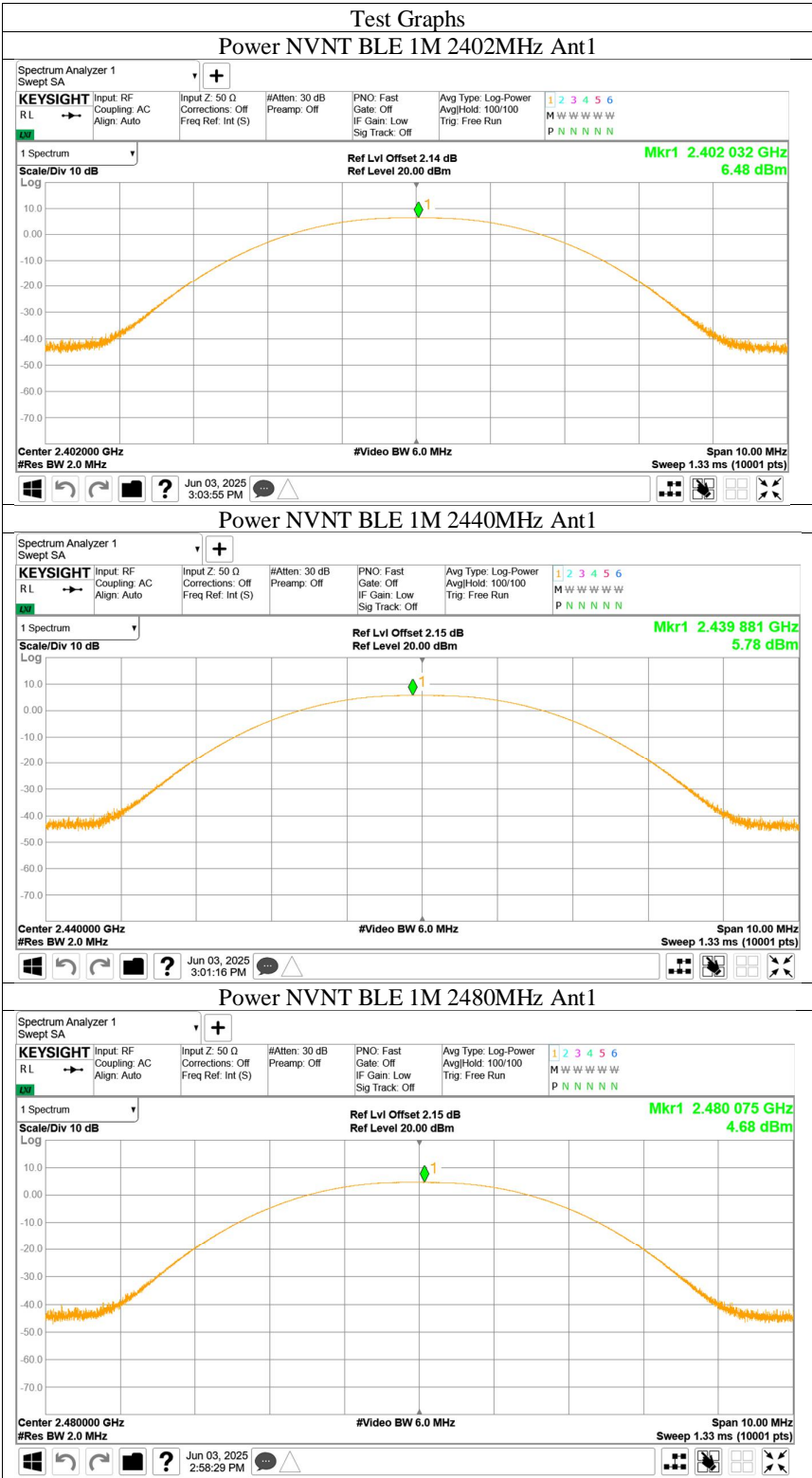
Test result as below table: SC256-WQ5

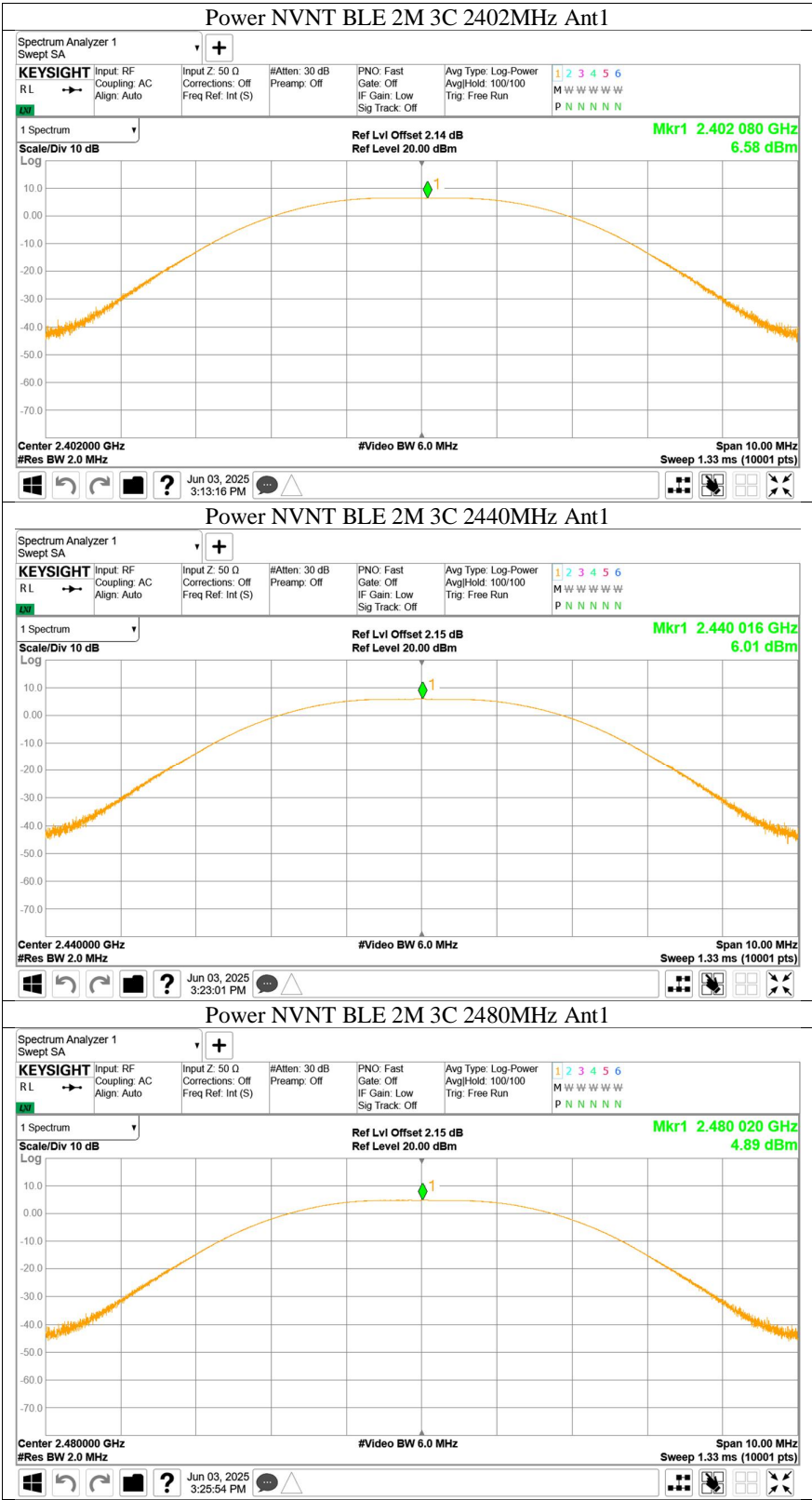
Test Mode	Frequency MHz	Conducted Peak Output Power(dBm) §15.247 (b) (3)	Result
Data rate 1Mbps	2402MHz	6.65	Pass
	2440MHz	5.9	Pass
	2480MHz	4.77	Pass
Data rate 2Mbps	2402MHz	6.61	Pass
	2440MHz	6.02	Pass
	2480MHz	4.89	Pass



Conducted peak output power

Model: SC155-WQ3C

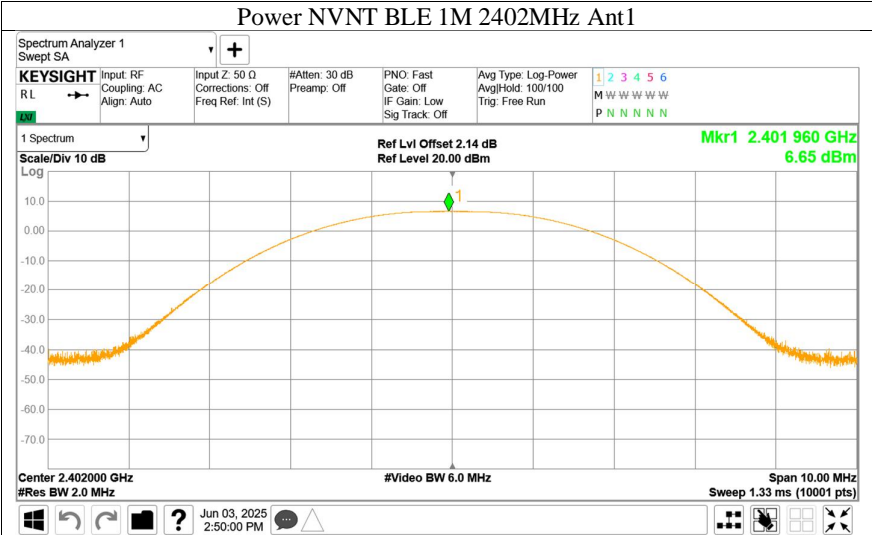




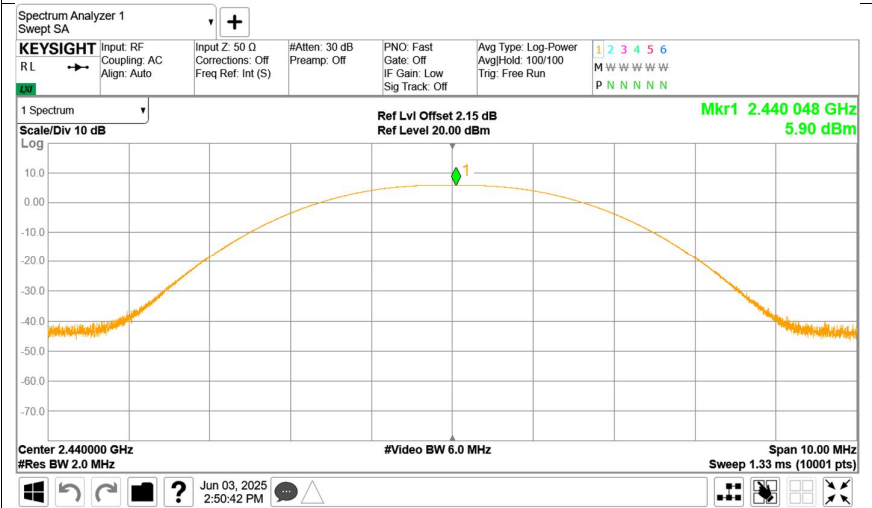


Model: SC256-WQ5

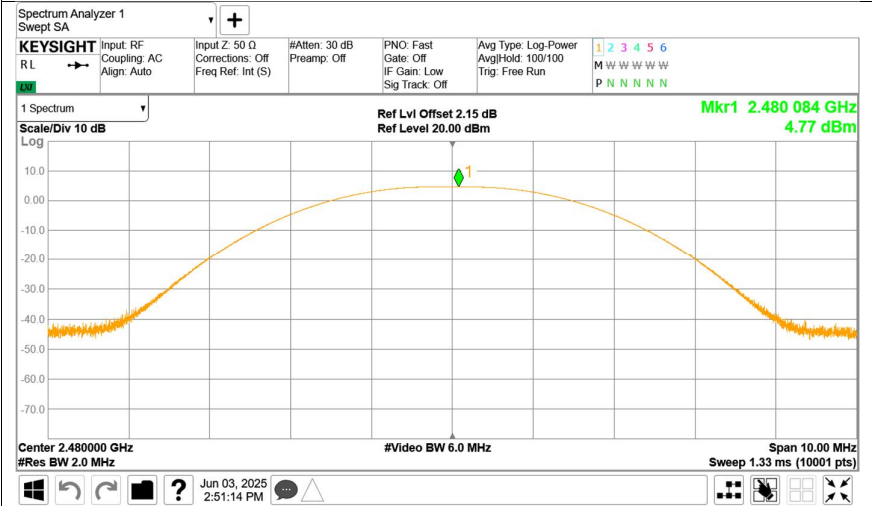
Power NVNT BLE 1M 2402MHz Ant1



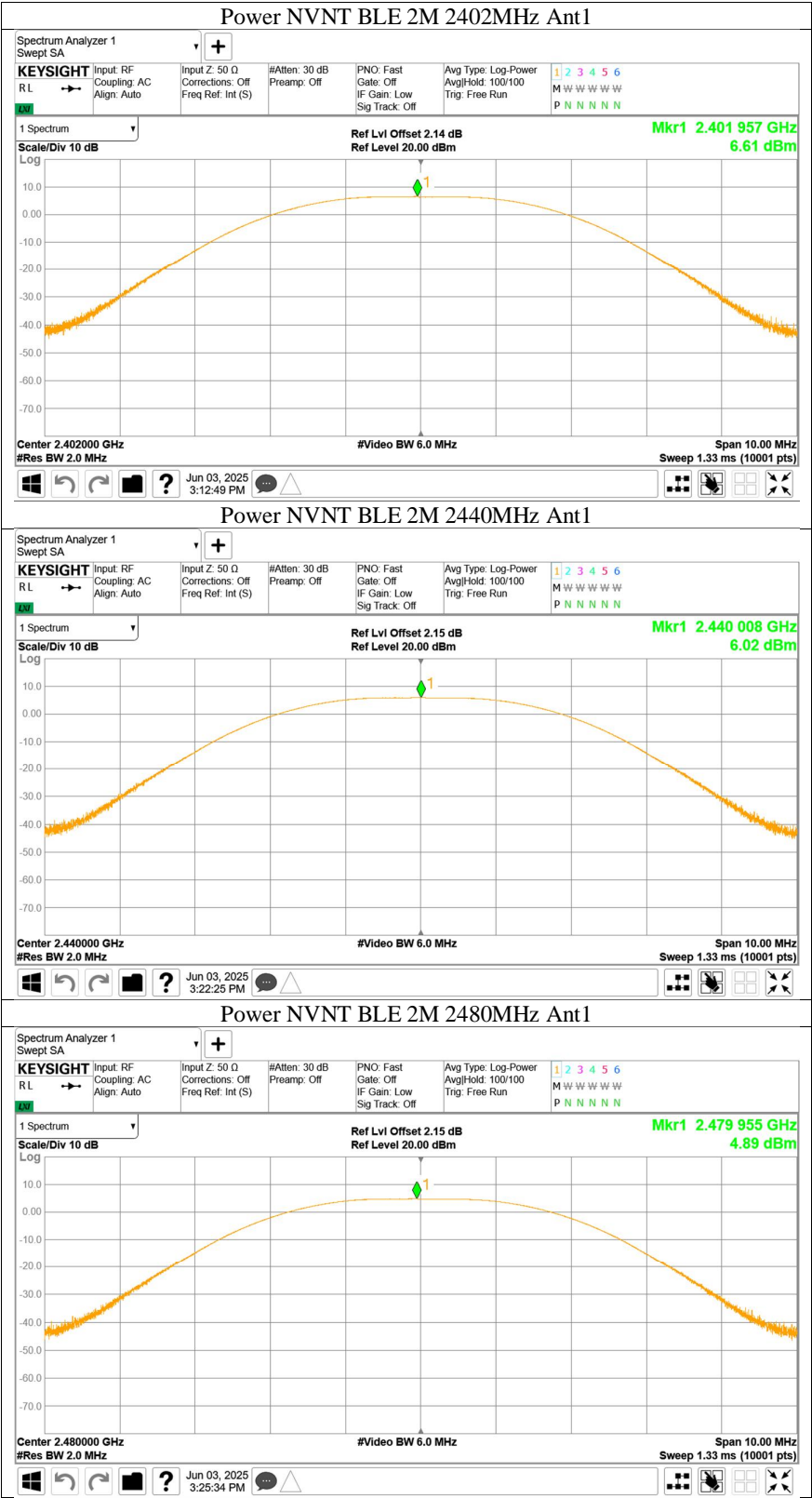
Power NVNT BLE 1M 2440MHz Ant1



Power NVNT BLE 1M 2480MHz Ant1







## 10.36dB bandwidth

### Test Method

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.

### Limit

Limit [kHz]

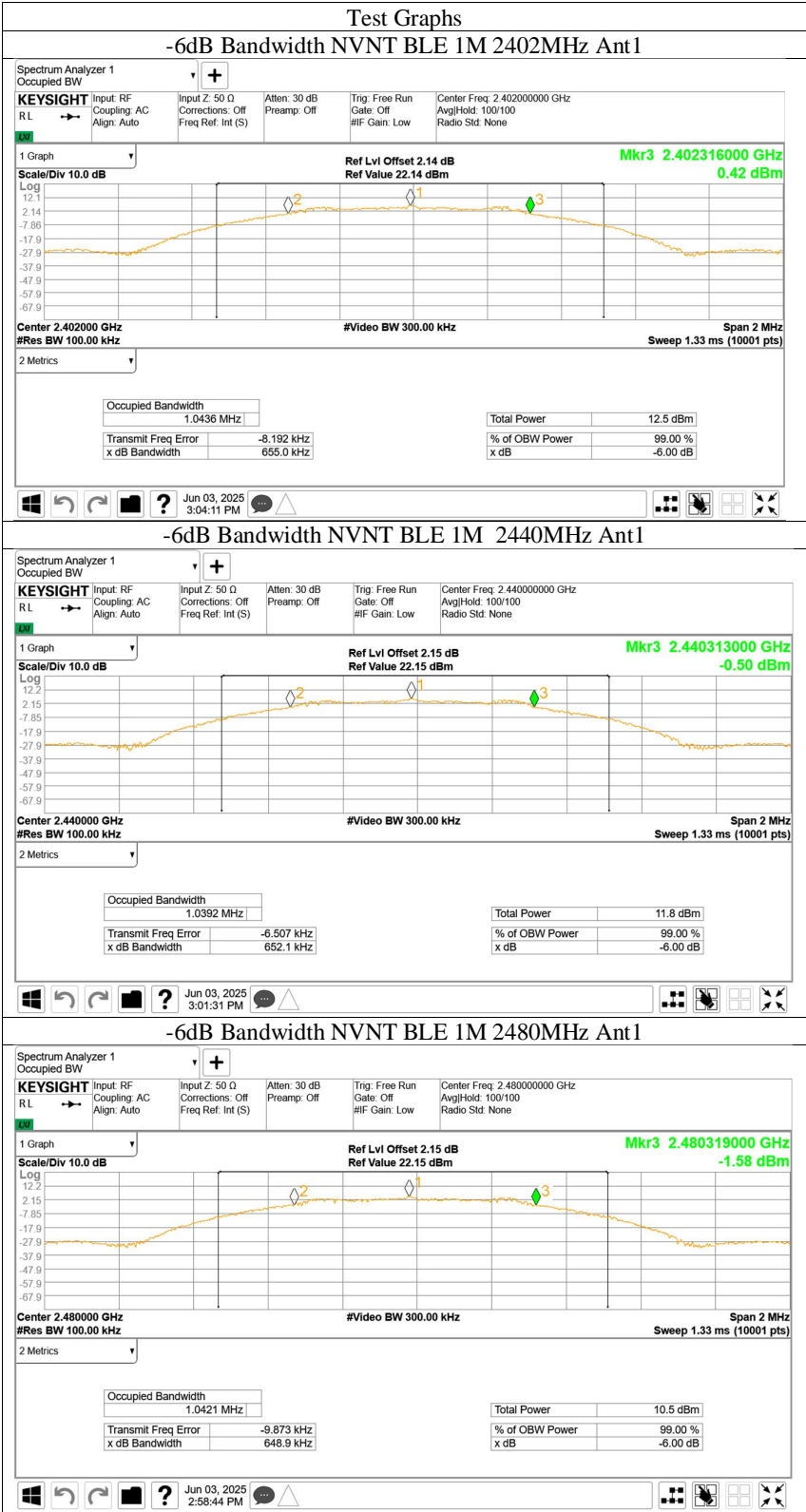
≥500

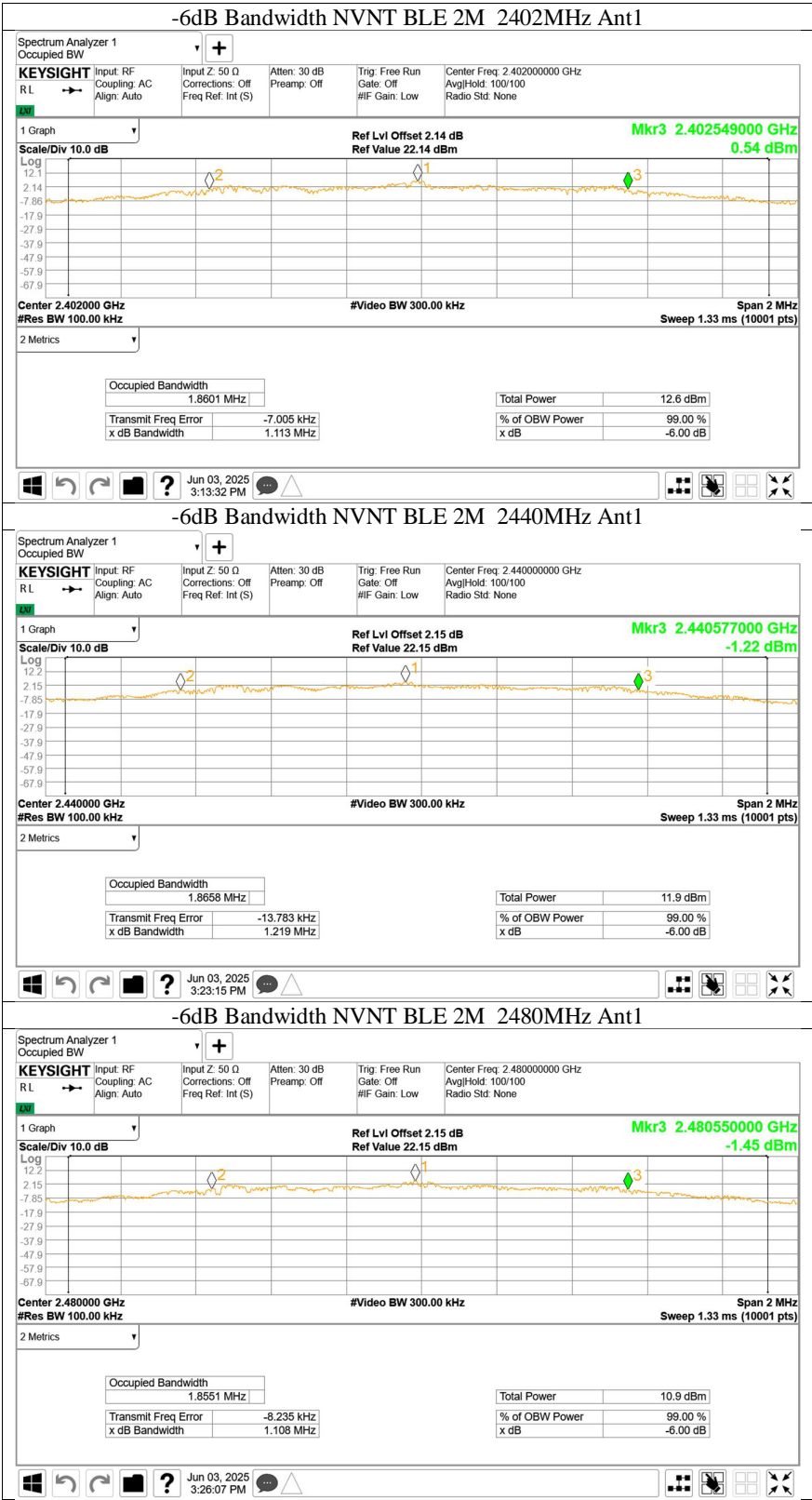
### Test result for SC256-WQ5

Test Mode	Frequency MHz	6dB bandwidth (MHz)		Result
		result	limit	verdict
Data rate 1Mbps	2402	0.655	≥0.5	Pass
	2440	0.652	≥0.5	Pass
	2480	0.649	≥0.5	Pass
Data rate 2Mbps	2402	1.113	≥0.5	Pass
	2440	1.219	≥0.5	Pass
	2480	1.108	≥0.5	Pass



6dB 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

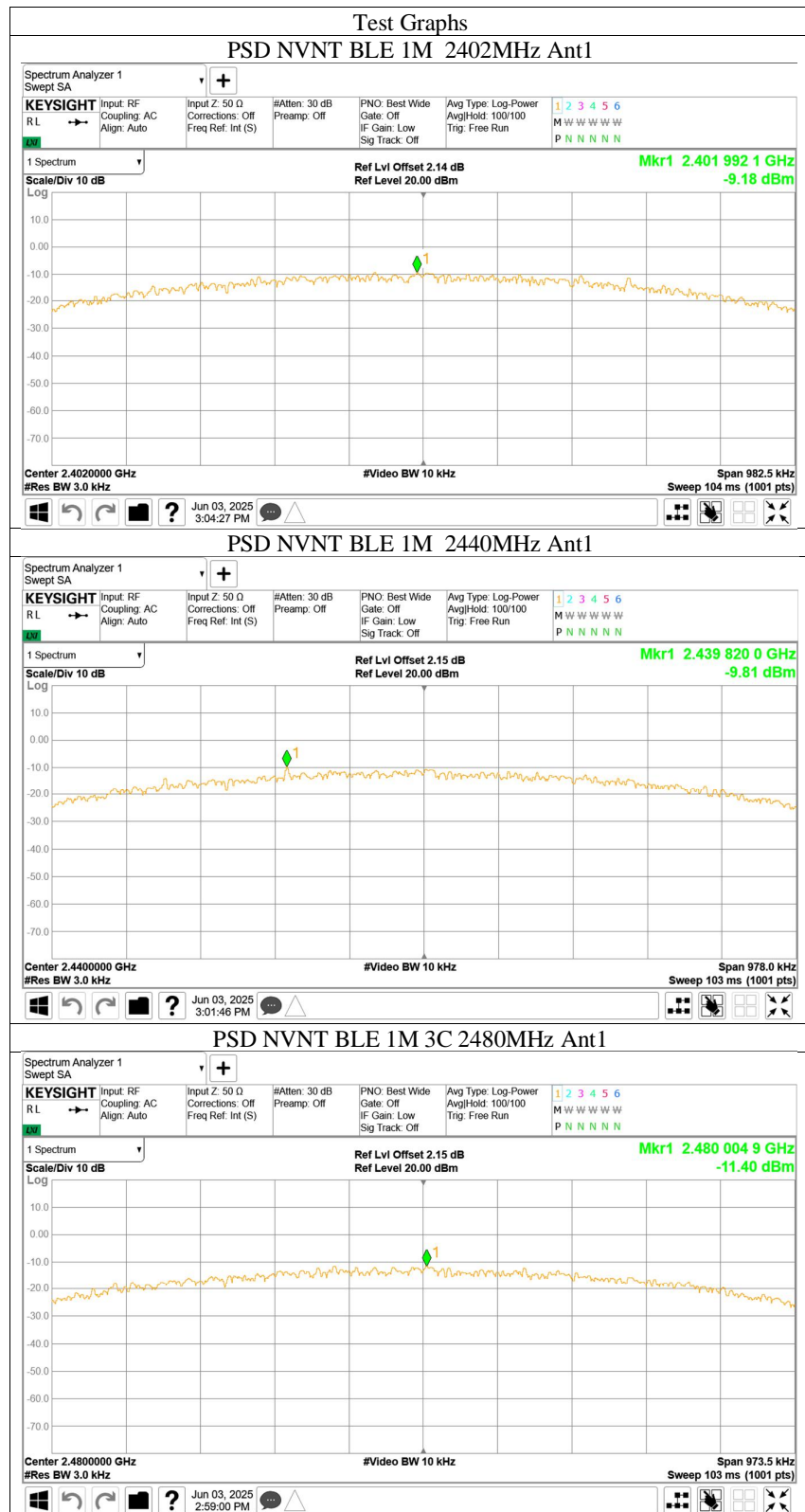
Limit [dBm/3kHz]

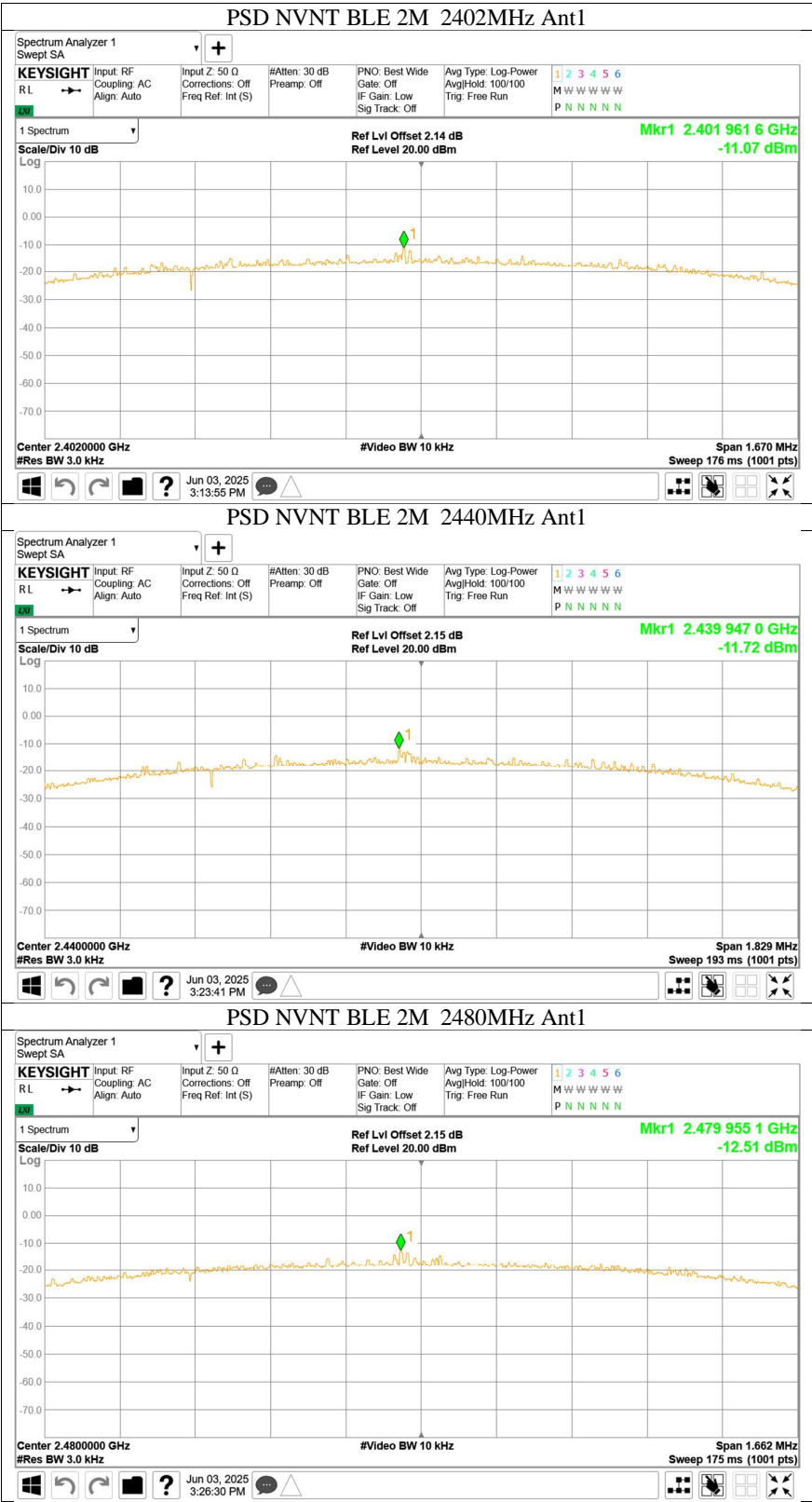
$\leq 8$

### Test result for SC256-WQ5

Data transmission rate	Frequency	Power spectral density	Result
1Mbps	MHz	dBm/3kHz	
	Top channel 2402MHz	-9.18	Pass
	Middle channel 2440MHz	-9.81	Pass
	Bottom channel 2480MHz	-11.4	Pass

Data transmission rate	Frequency	Power spectral density	Result
2Mbps	MHz	dBm/3kHz	
	Top channel 2402MHz	-11.07	Pass
	Middle channel 2440MHz	-11.72	Pass
	Bottom channel 2480MHz	-12.51	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 10<sup>th</sup> 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

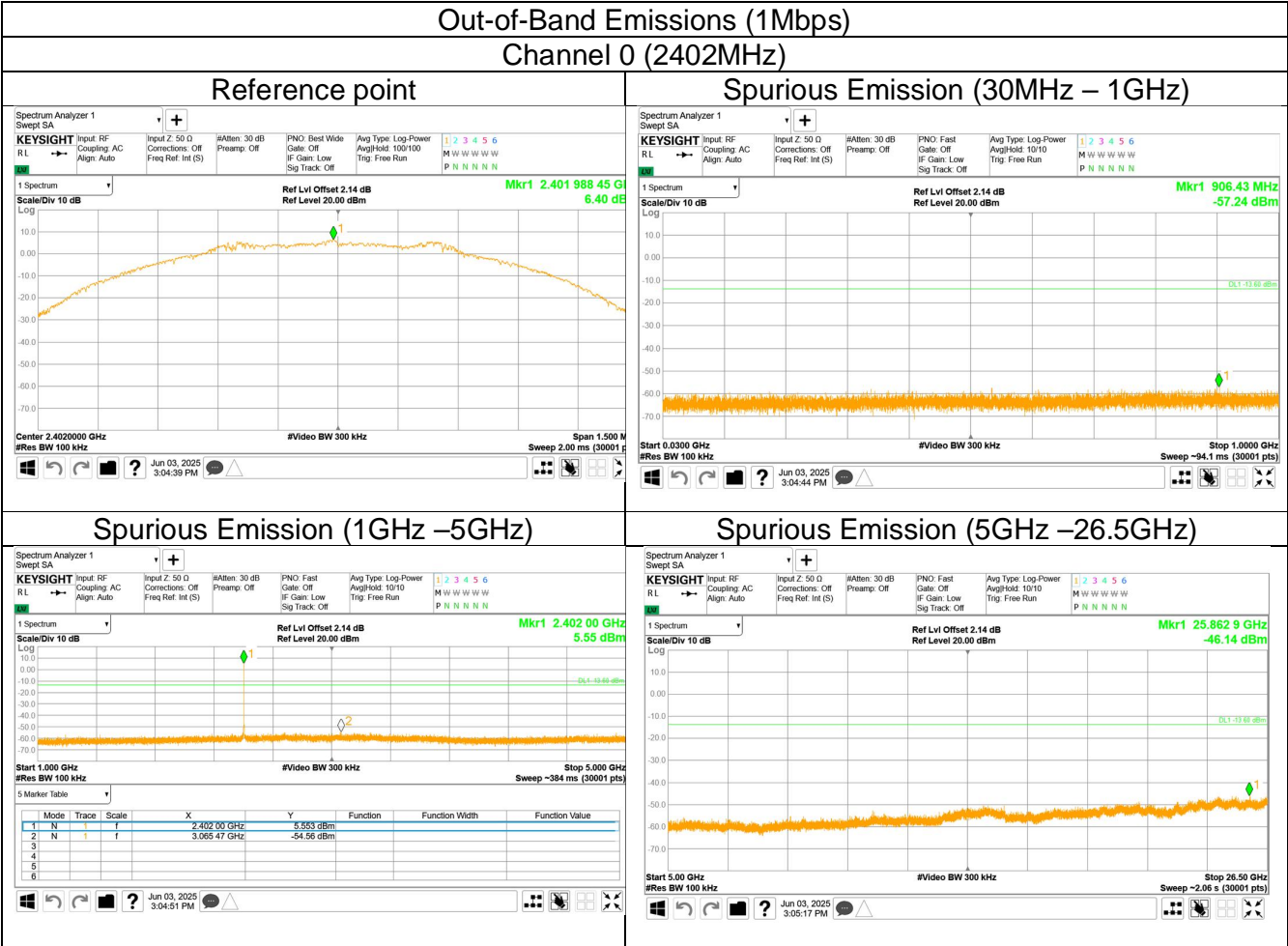
Frequency Range MHz	Limit (dBc)
30-25000	-20





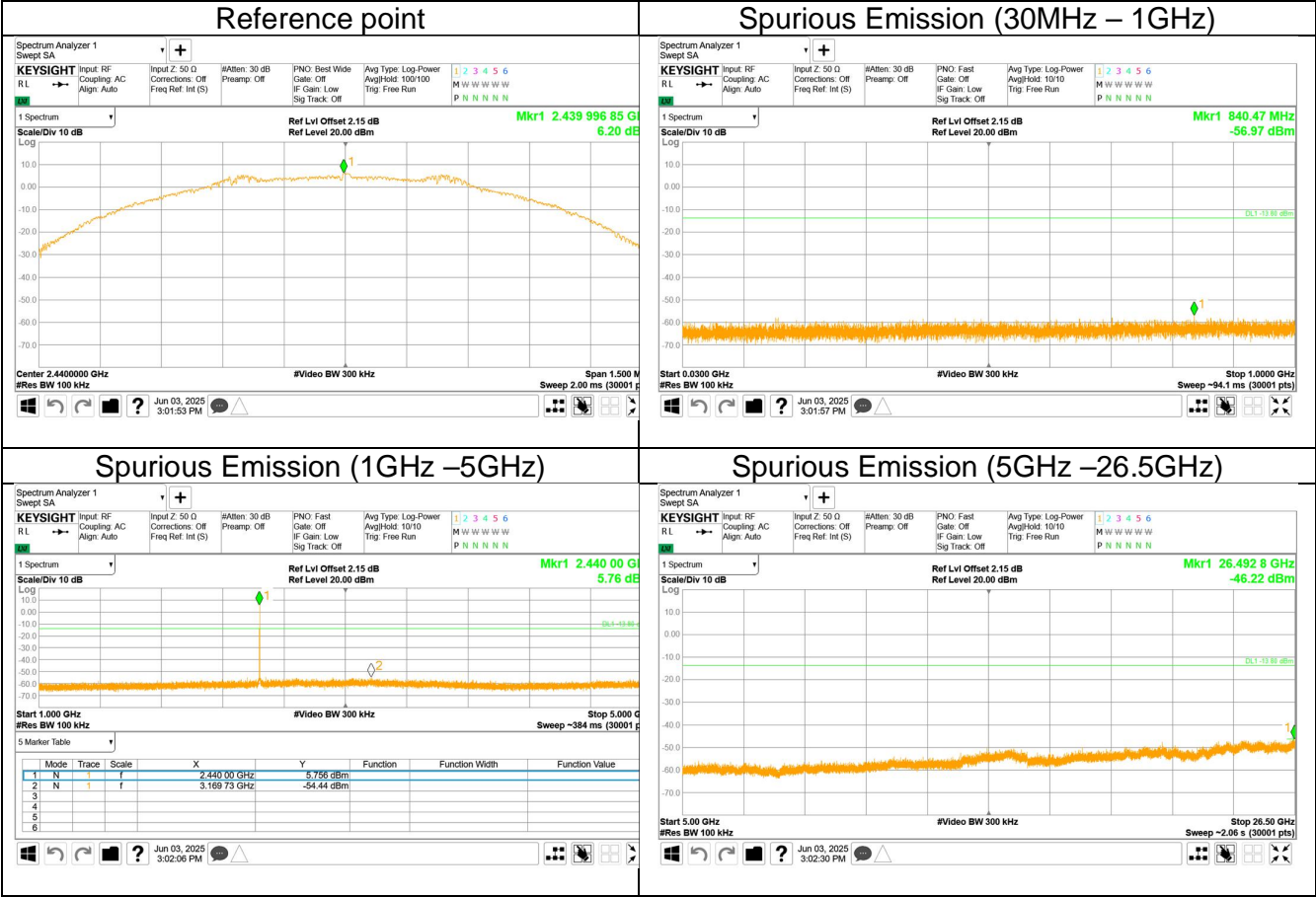
Spurious RF conducted emissions

Test result for SC256-WQ5



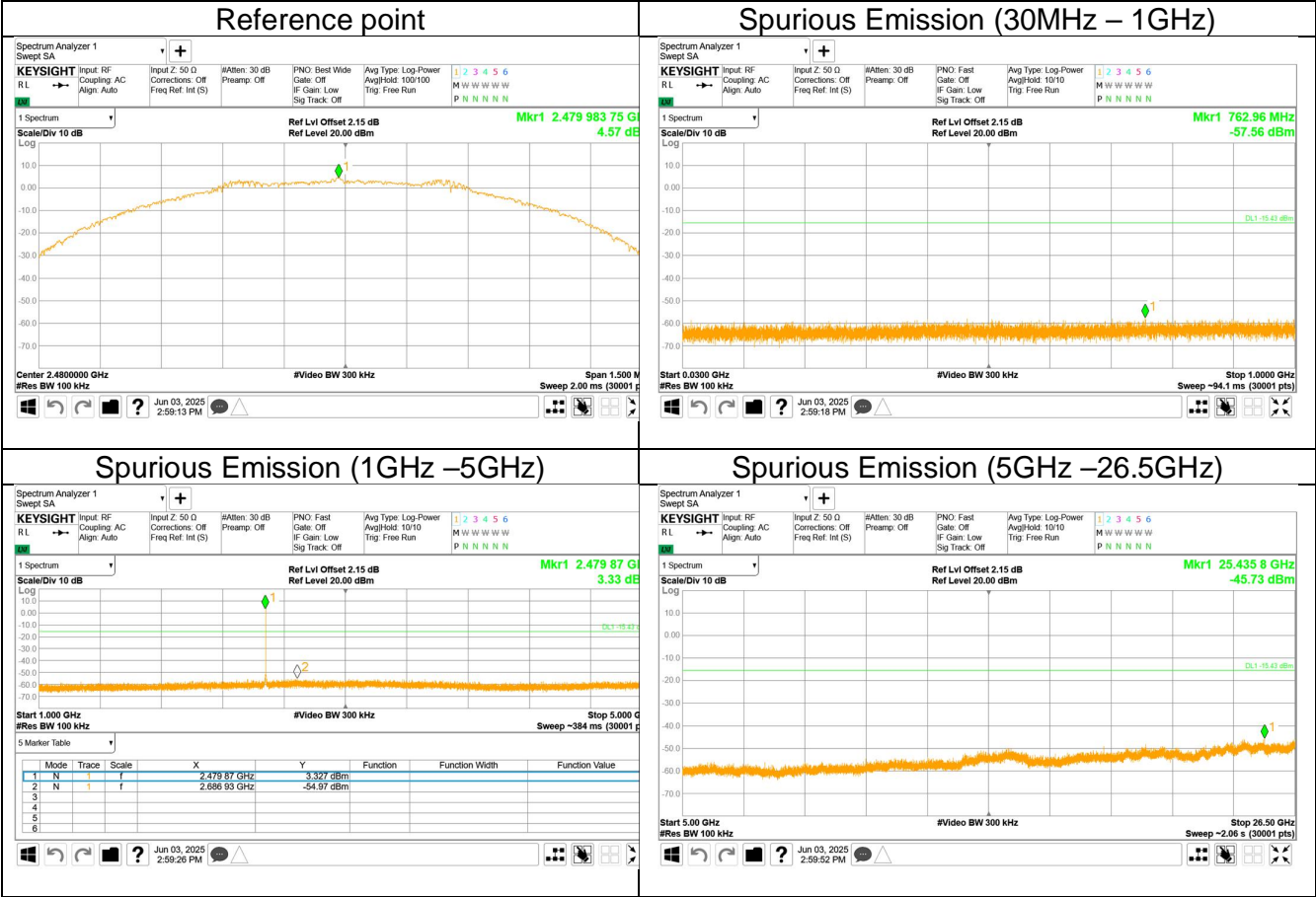


Out-of-Band Emissions (1Mbps)  
Channel 19 (2440MHz)



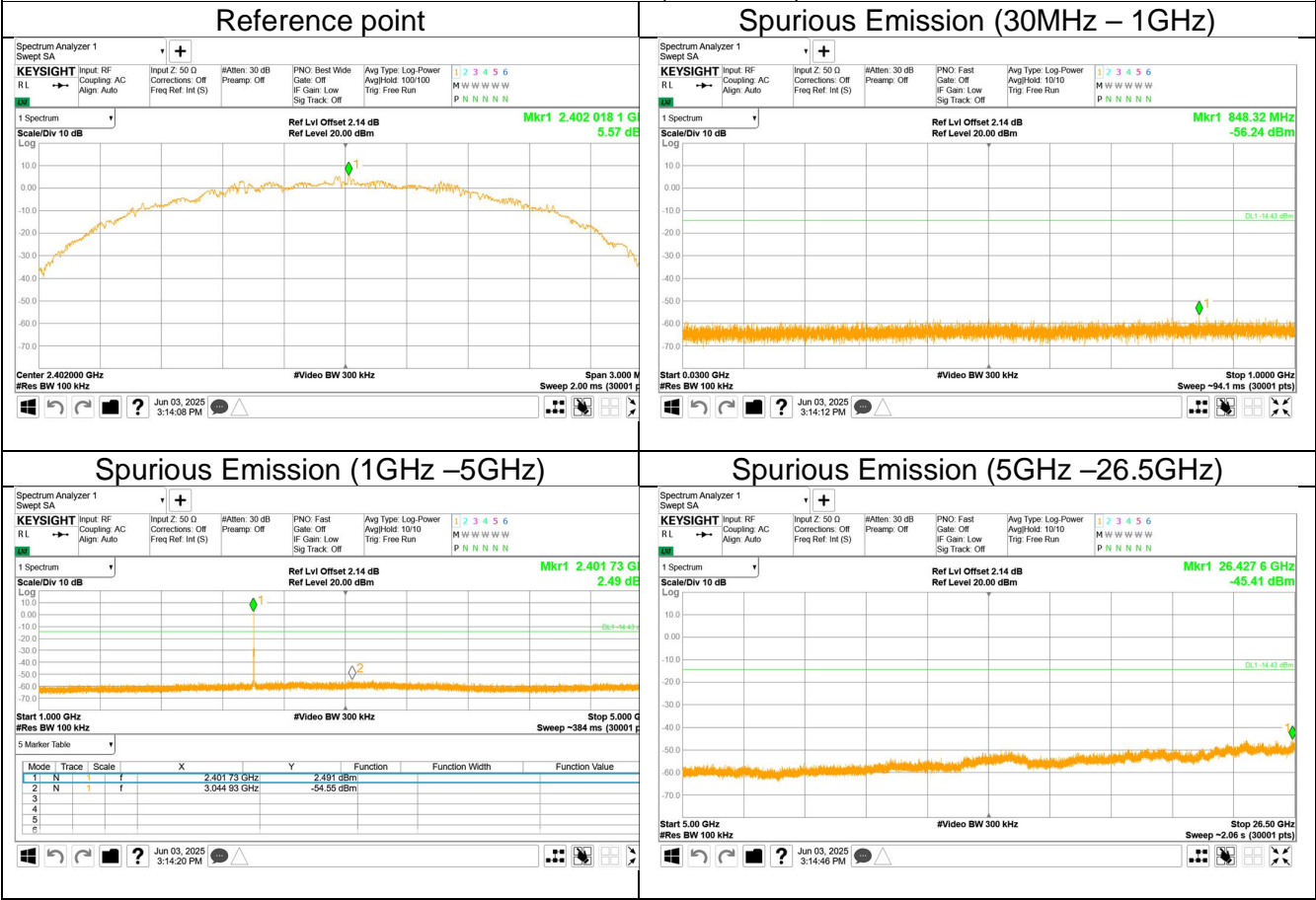


Out-of-Band Emissions (1Mbps)  
Channel 39 (2480MHz)



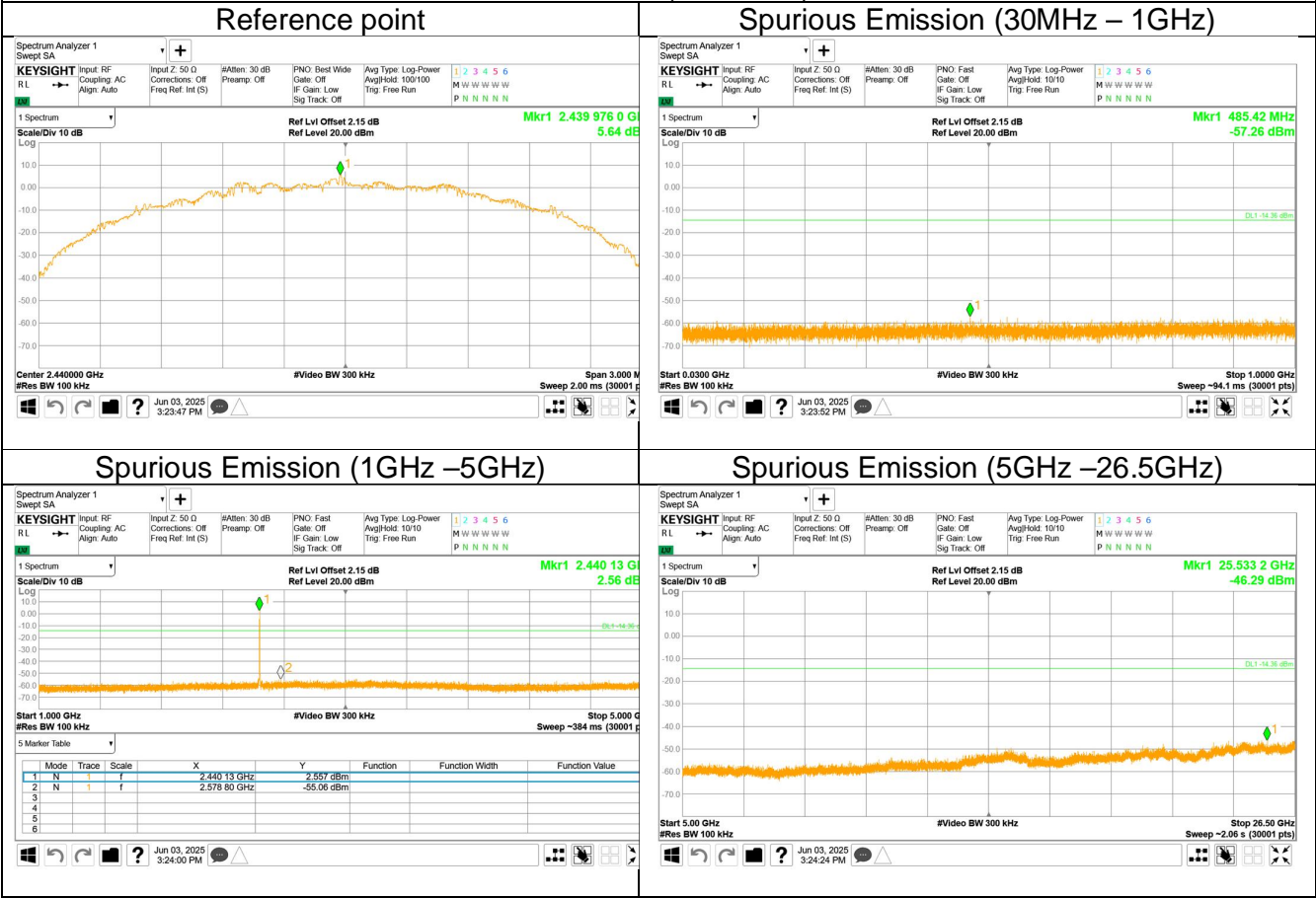


Out-of-Band Emissions (2Mbps)  
Channel 0 (2402MHz)



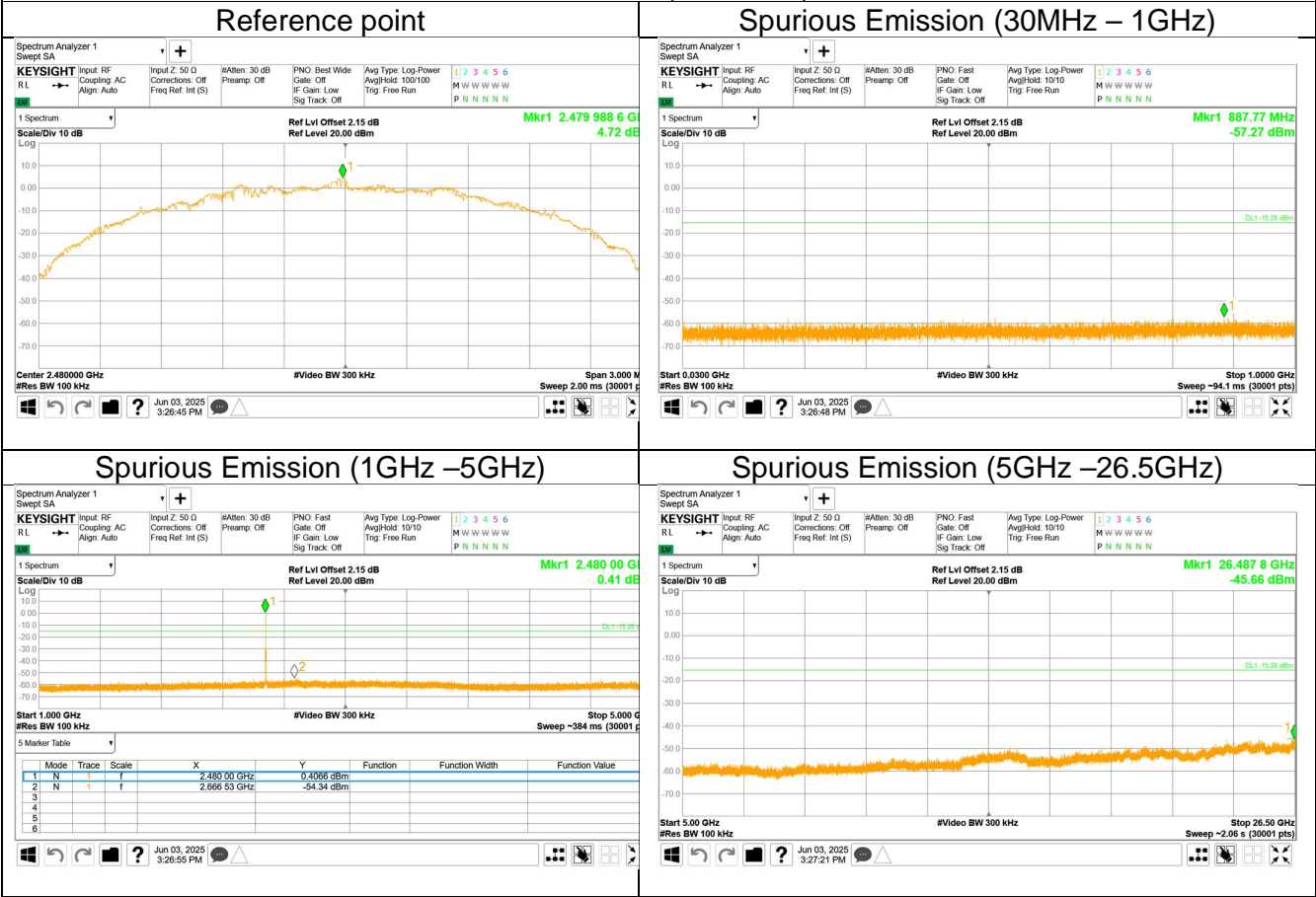


Out-of-Band Emissions (2Mbps)  
Channel 19 (2440MHz)





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





## 10.6 Band edge

### 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  
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize, use the peak and delta measurement to record the result.
5. The level displayed must comply with the limit specified in this Section.
6. Repeat above procedures until all frequencies measured were complete and submit all the plots.

### Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under § 15.247(b)(3), the attenuation required shall be 30 dB instead of 20 dB.



Test result for SC256-WQ5

