

TEST REPORT

Report Number: R16238088-E14a

Applicant : Samsung Electronics Co Ltd
129, Samsung-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, 16677, Rep. of Korea

Model : SM-F976U, SM-F976U1

FCC ID : A3LSMF976U

EUT Description : GSM/WCDMA/LTE/NR/SCS/NTN Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be,
UWB, WPT and NFC

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 4
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:

2026-04-24

Prepared by:

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2026-04-24	Initial Issue	B. Kiewra

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Samsung Electronics Co Ltd
129, Samsung-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, 16677, Rep. of Korea

EUT DESCRIPTION: GSM/WCDMA/LTE/NR/SCS/NTN Phone + BT/BLE, DTS/UNII
a/b/g/n/ac/ax/be, UWB, WPT and NFC

MODEL: SM-F976U, SM-F976U1

SERIAL NUMBER: ZBK0296M, ZBK0465M, ZBK0278M

SAMPLE RECEIPT DATE: 2026-03-09

DATE TESTED: 2026-03-09 to 2026-03-19

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	
ISED RSS-247 Issue 4	Refer to Section 2
ISED RSS-GEN Issue 5 + A1 + A2	

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the sample tested, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to ensure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released
For UL LLC By:

Prepared By:



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2. TEST RESULTS SUMMARY

This report contains info provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.

Below is a list of the data/info provided by the customer:

- 1)Antenna gain and type (see section 6.3)
- 2)Worst-case data rates (see section 6.5)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6.
-	RSS-GEN 6.7	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.3.
15.247 (a) (2)	RSS-247 6.3.1 (a)	6dB BW	Compliant	None
15.247 (b) (3)	RSS-247 6.3.2	Output Power		
See Comment		Average power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (e)	RSS-247 6.3.1 (b)	PSD	Compliant	None
15.247 (d)	RSS-247 6.6	Conducted Spurious Emissions		
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions		
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions		

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC 47 CFR Part 2, FCC 47 CFR Part 15, ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, RSS-GEN Issue 5 + A1 + A2, and RSS-247 Issue 4.

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr Durham, NC 27713, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	1.22%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	6.01 dB
Conducted Emissions (0.150-30MHz) - LISN	3.40 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	1.70%
Time	3.39%

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB)
– Preamp Gain (dB)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN
Insertion Loss.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a GSM/WCDMA/LTE/NR/SCS/NTN Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, UWB, WPT and NFC. This report covers testing of BLE and 2.4GHz WLAN radios.

Model differences:

Representative Model	Difference	Derivative Model
		SM-F976U1
SM-F976U	Hardware	Same as SM-F976U
	Software	Different UI

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
SISO			
2402 - 2480	BLE 125kbps	9.76	9.46
2402 - 2480	BLE 500kbps	10.25	10.59
2402 - 2480	BLE 1Mbps	19.26	84.33
2402 - 2480	BLE 2Mbps	19.35	86.10

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
MIMO			
2402 - 2480	BLE 1Mbps	17.62	57.81
2402 - 2480	BLE 2Mbps	17.65	58.21
2412 - 2472	802.11b	24.98	314.77
2412 - 2472	802.11g	26.40	436.52
2412 - 2472	802.11n HT20	26.39	435.51
2412 - 2472	802.11ax HE20 26T	24.57	286.42
2412 - 2472	802.11ax HE20 52T	25.61	363.92
2412 - 2472	802.11ax HE20 52+26T	26.15	412.10
2412 - 2472	802.11ax HE20 106T	27.19	523.60
2412 - 2472	802.11ax HE20 106+26T	27.13	516.42
2412 - 2472	802.11ax HE20 242T	28.97	788.86

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna(s) are with a gain, provided by the manufacturer, as follows:

Antenna	Frequency Range (MHz)	Maximum 3D Gain (dBi)	Type
0	2402-2480 MHz	-7.73	Inverted F type
1	2402-2480 MHz	-5.83	Inverted F type

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was F976USQU0AZB7.

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emissions were performed with the EUT set to transmit at the mode and channel with highest output power as worst-case scenario.

Note: Frequency ranges of 9kHz – 30MHz and >18GHz were investigated and no emissions within 20dB of limit found.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle (radiated emissions only) and high channels. Radiated emissions performed on the modes with the highest power and PSD per modulation type (CCK and OFDM).

The EUT was investigated in three orthogonal orientations: X,Y, and Z and folded, open, and 90° open. It was determined that the X-open orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the X-open orientation.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0
802.11ax HE20mode: MCS0
BLE 1 and 2Mbps

Notes: All conducted tested with the exception of power was run at mid-channel power.
For 802.11ax mode, PSD run on 26T, 52T, 106T, and 242T. These modes cover 52+26T and 106+26T since smaller BW and power is equivalent.
For 2.4GHz WLAN testing, the SISO and MIMO power levels are equivalent.
To reduce the size of report only representative plots are included for some conducted testing.
Full tone versus SU modes were investigated and full tone found to be worst-case, therefore all testing performed on full tone to cover both modes.

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Adapter	Sony	XQZ-UC11-010-236-21	NA	NA

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB-C	1	USB-C	Shielded	<3m	Phone to power adapter

TEST SETUP

The EUT is tested as a standalone device connected to AC adaptor.

SETUP DIAGRAMS

Please refer to R16238088-EP1 for setup diagrams

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
90410	Spectrum Analyzer	Keysight Technologies	N9030A	2025-07-10	2026-07-10
211055	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2025-07-30	2026-07-30
211056	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2025-07-30	2026-07-30
248881	Environmental Meter	Control Company	06-662-4	2024-04-10	2026-04-10
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23		
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0		
BT0001	CBT Bluetooth Tester	Rohde & Schwarz	1153.9000.35	N/A	N/A
259603	Conducted Switch Box	UL	CSB	2025-03-12	2026-03-30
226566	2.92mm Coaxial 10dB Attenuator 40GHz	Fairview Microwave	SA4014-10	2025-08-30	2026-08-30
226567	2.92mm Coaxial 10dB Attenuator 40GHz	Fairview Microwave	SA4014-10	2025-09-02	2026-09-02

Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
1-18 GHz					
88761	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-11-19	2027-11-19
18-40 GHz					
91186	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2024-05-16	2026-05-16
Gain-Loss Chains					
91979	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
135999	Gain-loss string: 18-40GHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-07-29	2026-07-29
90411	Spectrum Analyzer	Keysight	N9030A	2025-07-30	2026-07-30
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
241205	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
65682	Active Loop Antenna	ETS-Lindgren	6502	2025-10-14	2027-10-14
30-1000 MHz					
159203	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-03-05	2026-03-31
1-18 GHz					
86408	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-07-15	2027-07-15
18-40 GHz					
91186	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2024-05-16	2026-05-16
Gain-Loss Chains					
91975	Gain-loss string: 0.009-30MHz	Various	Various	2025-05-31	2026-05-31
91978	Gain-loss string: 25-1000MHz	Various	Various	2025-05-31	2026-05-31
91977	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
136042	Gain-loss string: 18-40GHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-05-12	2026-05-12
90411	Spectrum Analyzer	Keysight	N9030A	2025-07-30	2026-07-30
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
239540	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2025-04-17	2026-04-17
179892	Environmental Meter	Fisher Scientific	15-077-963	2025-08-5	2026-08-06
80391	LISN, 50-ohm/50-uH, 250uH 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50/250-25-2-01	2025-09-29	2026-09-29
75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2025-7-30	2026-07-30
52859	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2025-7-30	2026-07-30
PS214	AC Power Source	Elgar	CW2501M	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
84681	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2025-04-17	2026-04-17

8. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2020 Section 11.6

6 dB BW: ANSI C63.10-2020 Subclause -11.8.1

Occupied BW (99%): ANSI C63.10-2020 Section 6.9.3

Output Power: ANSI C63.10-2020 Subclause -11.9.1.2 Method PKPM1 Peak-reading power meter
ANSI C63.10-2020 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using
a gated RF average-reading power meter)

PSD: ANSI C63.10-2020 Subclause -11.10.2 Method PKPSD (peak PSD)

Conducted emissions non-restricted frequency bands: ANSI C63.10-2020 Subclause -11.11 and 6.10.4

Radiated emissions restricted frequency bands: ANSI C63.10-2020 Subclause -11.12.1 and 6.10.5, 6.3 to 6.6.

AC Power-line conducted emissions: ANSI C63.10-2020, Section 6.2.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

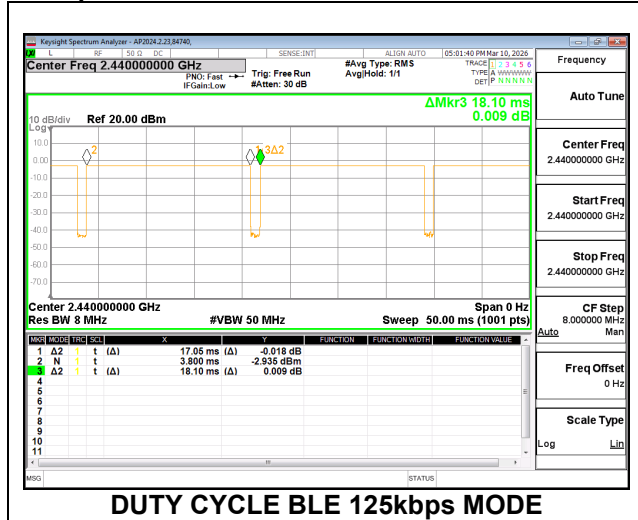
KDB 558074 Zero-Span Spectrum Analyzer Method.

Mode	ON Time B (ms)	Period (ms)	Duty Cycle x (linear)	Duty Cycle (%)	Voltage Duty Cycle Correction Factor (dB)	RMS Duty Cycle Correction Factor (dB)
BLE 125kbps	17.050	18.100	0.942	94.20	0.52	0.26
BLE 500kbps	4.560	5.320	0.857	85.70	1.34	0.67
BLE 1Mbps	2.130	2.500	0.852	85.20	1.39	0.70
BLE 2Mbps	1.075	1.405	0.765	76.50	2.33	1.16
802.11b	8.850	9.050	0.978	97.80	0.19	0.10
802.11g	1.460	1.660	0.880	88.00	1.11	0.56
802.11n HT20	0.635	0.755	0.841	84.10	1.50	0.75
802.11be HE20 26T	2.592	2.624	0.988	98.80	0.00	0.00
802.11be HE20 52T	2.592	2.622	0.989	98.90	0.00	0.00
802.11be HE20 52T+26T	1.985	2.024	0.981	98.10	0.00	0.00
802.11be HE20 106T	1.424	1.454	0.979	97.90	0.18	0.09
802.11be HE20 106T+26T	1.179	1.206	0.978	97.80	0.19	0.10
802.11be HE20 242T	0.675	0.697	0.969	96.90	0.27	0.14

Tester ID: 84740

Test Location: 2026-03-09, 2026-03-10

Example Plot:



9.2. 6dB/99% BANDWIDTH

LIMITS

6dB BW:

FCC §15.247 (a) (2)

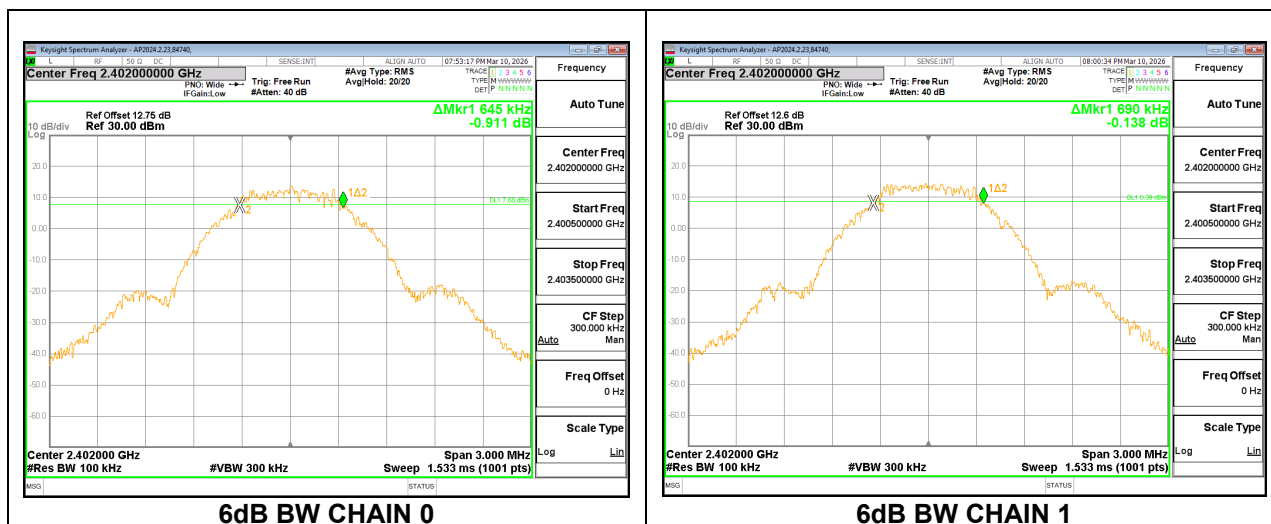
RSS-247 6.3.1 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

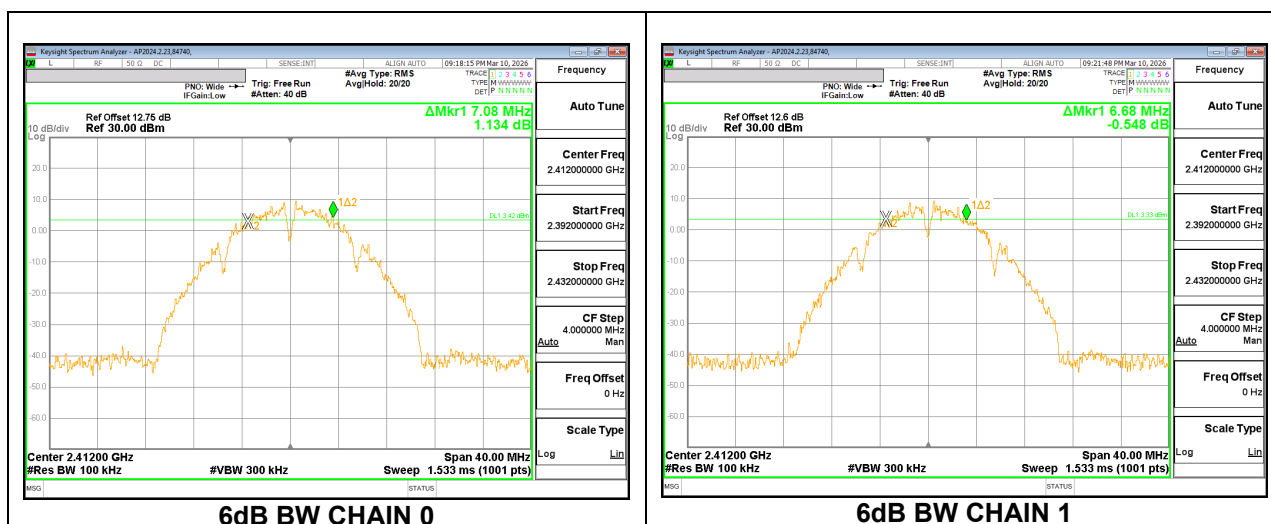
99% BW:

None; for reporting purposes only.

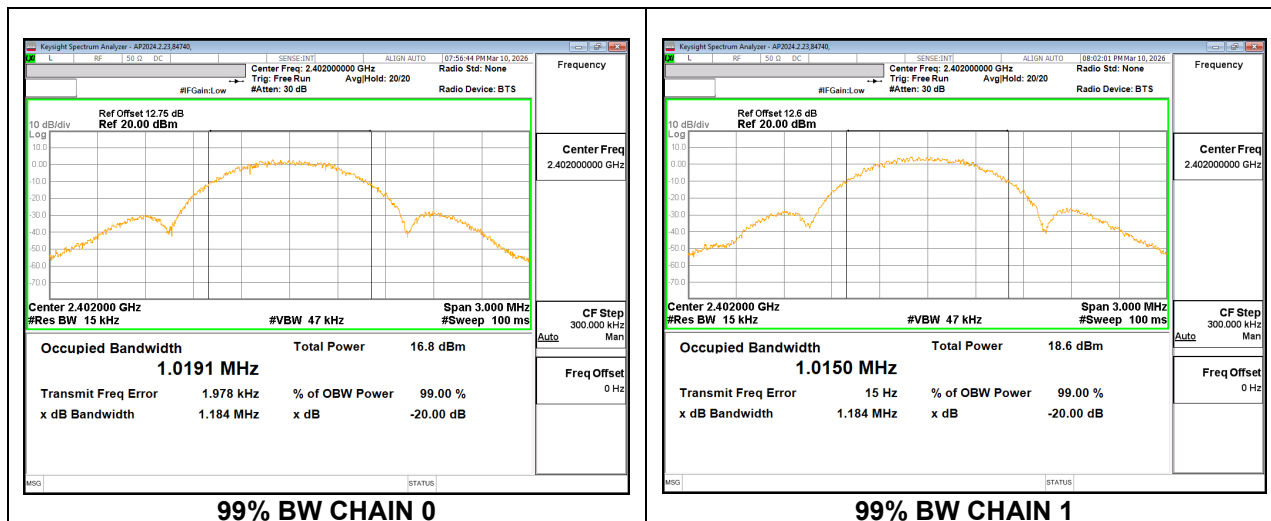
6 dB BW Example Plot, BLE 2Tx, 1Mbps, 2402 MHz:



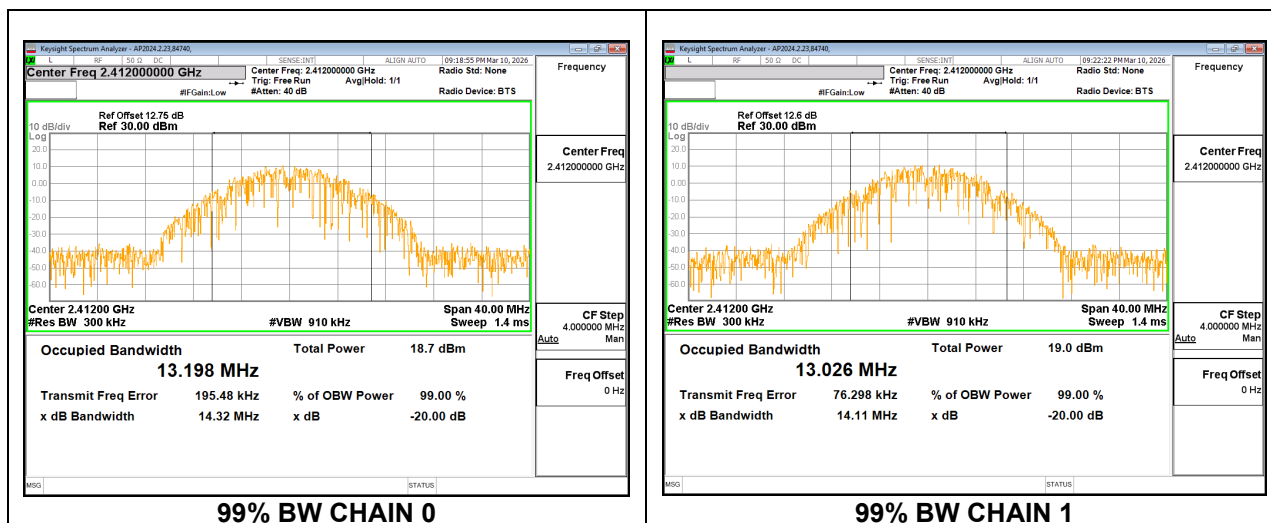
6dB BW Example Plot, 2.4 WLAN 2Tx, 802.11b 1Mbps, 2412MHz :



99% BW Example Plot, BLE 2Tx, 1Mbps, 2402 MHz:



99% BW Example Plot, 2.4 WLAN 2Tx, 802.11b 1Mbps, 2412MHz:



1TX MODE – CHAIN 0

Band	Tone	Center Frequency [MHz]	6dB BW [MHz]	Minimum 6dB BW [MHz]	99% BW [MHz]	Minimum 99% BW [MHz]
BLE 125kbps		2402	0.684	0.678	1.041	1.041
		2440	0.678		1.045	
		2480	0.684		1.047	
BLE 500kbps		2402	0.681	0.651	1.007	1.007
		2440	0.681		1.011	
		2480	0.651		1.008	
BLE 1Mbps		2402	0.657	0.657	1.024	1.016
		2440	0.657		1.016	
		2480	0.687		1.047	
BLE 2Mbps		2404	1.248	1.134	2.064	2.042
		2440	1.134		2.042	
		2478	1.224		2.105	

1TX MODE – CHAIN 1

Band	Tone	Center Frequency [MHz]	6dB BW [MHz]	Minimum 6dB BW [MHz]	99% BW [MHz]	Minimum 99% BW [MHz]
BLE 125kbps		2402	0.678	0.675	1.032	1.001
		2440	0.675		1.035	
		2480	0.675		1.001	
BLE 500kbps		2402	0.630	0.630	1.008	1.007
		2440	0.678		1.008	
		2480	0.663		1.007	
BLE 1Mbps		2402	0.663	0.663	1.019	1.019
		2440	0.678		1.020	
		2480	0.669		1.022	
BLE 2Mbps		2404	1.098	1.098	2.049	2.049
		2440	1.236		2.050	
		2478	1.152		2.057	

2TX CHAIN 0 + CHAIN 1 CDD MODE

Band	Tone	Center Frequency [MHz]	6dB BW [MHz]		Minimum 6dB BW [MHz]	99% BW [MHz]		Minimum 99% BW [MHz]
			Chain 0	Chain 1		Chain 0	Chain 1	
BLE 1Mbps		2402	0.645	0.690	0.645	1.019	1.015	1.015
		2440	0.660	0.684		1.018	1.018	
		2480	0.690	0.723		1.020	1.024	
BLE 2Mbps		2404	1.206	1.176	1.098	2.051	2.042	2.042
		2440	1.098	1.212		2.045	2.046	
		2478	1.176	1.170		2.046	2.048	
802.11b		2412	7.08	6.68	6.52	13.198	13.026	13.026
		2437	6.88	7.16		13.436	13.427	
		2472	6.52	7.80		13.035	13.097	
802.11g		2412	16.20	16.48	16.20	16.409	16.443	16.409
		2437	16.32	16.60		16.516	16.431	
		2472	16.36	16.28		16.435	16.427	
802.11n HT20		2412	17.40	17.68	17.08	17.810	17.758	17.546
		2437	17.32	17.60		17.769	17.744	
		2472	17.36	17.08		17.558	17.546	
802.11be EHT20	26T	2412	2.12	2.20	2.04	18.834	18.668	17.276
		2437	2.68	2.64		17.276	17.293	
		2472	2.04	2.04		18.322	18.353	
802.11be EHT20	52T	2412	4.12	4.04	4.04	18.463	18.508	17.246
		2437	4.12	4.12		17.268	17.246	
		2472	4.12	4.08		18.337	18.200	
802.11be EHT20	52T+26T	2412	6.24	6.24	6.16	17.171	17.094	17.030
		2437	6.68	6.68		17.322	17.233	
		2472	6.32	6.16		17.156	17.030	
802.11be EHT20	106T	2412	8.32	8.28	8.28	18.184	18.211	18.184
		2437	8.36	8.32		18.410	18.343	
		2472	8.28	8.28		18.309	18.213	
802.11be EHT20	106T+26T	2412	10.96	10.88	10.88	18.158	18.196	18.157
		2437	10.96	10.88		18.285	18.319	
		2472	10.88	10.88		18.219	18.157	
802.11be EHT20	242T	2412	18.88	18.84	18.84	19.115	19.035	18.904
		2437	19.16	19.16		19.095	19.083	
		2472	18.88	18.92		18.904	18.911	

9.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
RSS-247 6.3.2

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Chain	Directional Gain [dBi]	FCC Power Limit [dBm]
0	-7.73	30
1	-5.83	30
MIMO	-6.68	30

Directional gains for MIMO operations were determined using KDB662911 D01 Section F (2)(d)(i) and (ii) for unequal antenna gains, with equal transmit powers. The directional gains are calculated using the formulas for uncorrelated and correlated transmissions across the two transmit antennas.

- (i) Correlated gain = $10\log((10^{G1/20} + 10^{G2/20})^2 / N_{Ant})$
- (ii) Uncorrelated gain = $10\log((10^{G1/10} + 10^{G2/10}) / N_{Ant})$

Sample calculation, using 2 antennas:

Uncorrelated gain = $10\log((10^{-7.73/10} + 10^{-5.83/10})/2) = -6.68 \text{ dBi}$

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.88 dB (including 10.19 dB pad and 1.69 dB cable) for CHAIN 0 and 11.70 dB (including 10.03 dB pad and 1.67 dB cable) for CHAIN 1 was entered as an offset in the power meter.

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband power sensor. Peak output power was read directly from power meter.

Test Engineer:	85502
Test Date:	2026-03-09

1TX MODE – CHAIN 0

Mode	Freq. [MHz]	Output Power [dBm]	Maximum Power Limit [dBm]	Margin [dBm]	EIRP Limit [dBm]	Margin [dBm]
BLE 125kbps	2402	9.23	30.00	-20.77	36.00	-34.50
	2440	9.05	30.00	-20.95	36.00	-34.68
	2480	7.92	30.00	-22.08	36.00	-35.81
BLE 500kbps	2402	9.22	30.00	-20.78	36.00	-34.51
	2440	9.09	30.00	-20.91	36.00	-34.64
	2480	7.93	30.00	-22.07	36.00	-35.80
BLE 1Mbps	2402	18.37	30.00	-11.63	36.00	-25.36
	2440	18.06	30.00	-11.94	36.00	-25.67
	2480	19.26	30.00	-10.74	36.00	-24.47
BLE 2Mbps	2404	19.11	30.00	-10.89	36.00	-24.62
	2440	18.09	30.00	-11.91	36.00	-25.64
	2478	19.35	30.00	-10.65	36.00	-24.38

1TX MODE – CHAIN 1

Mode	Freq. [MHz]	Output Power [dBm]	Maximum Power Limit [dBm]	Margin [dBm]	EIRP Limit [dBm]	Margin [dBm]
BLE 125kbps	2402	9.43	30.00	-20.57	36.00	-32.40
	2440	9.76	30.00	-20.24	36.00	-32.07
	2480	9.55	30.00	-20.45	36.00	-32.28
BLE 500kbps	2402	8.98	30.00	-21.02	36.00	-32.85
	2440	10.25	30.00	-19.75	36.00	-31.58
	2480	9.57	30.00	-20.43	36.00	-32.26
BLE 1Mbps	2402	18.16	30.00	-11.84	36.00	-23.67
	2440	17.79	30.00	-12.21	36.00	-24.04
	2480	18.12	30.00	-11.88	36.00	-23.71
BLE 2Mbps	2404	18.66	30.00	-11.34	36.00	-23.17
	2440	17.67	30.00	-12.33	36.00	-24.16
	2478	17.65	30.00	-12.35	36.00	-24.18

2TX CHAIN 0 + CHAIN 1 CDD MODE

Mode	Freq. [MHz]	Output Power [dBm]			Maximum Limit [dBm]	Margin [dBm]	EIRP Limit [dBm]	Margin [dBm]
		Chain 0	Chain 1	MIMO				
BLE 1Mbps	2402	13.42	15.01	17.29	30.00	-12.71	36.00	-25.39
	2440	13.42	15.54	17.62	30.00	-12.38	36.00	-25.06
	2480	12.35	14.58	16.61	30.00	-13.39	36.00	-26.07
BLE 2Mbps	2404	13.35	15.09	17.32	30.00	-12.68	36.00	-25.36
	2440	13.47	15.56	17.65	30.00	-12.35	36.00	-25.03
	2478	12.41	14.53	16.61	30.00	-13.39	36.00	-26.07
802.11b	2412	22.18	21.74	24.98	30.00	-5.02	36.00	-17.70
	2437	21.98	21.65	24.83	30.00	-5.17	36.00	-17.85
	2462	21.65	22.09	24.89	30.00	-5.11	36.00	-17.79
	2467	7.12	7.81	10.49	30.00	-19.51	36.00	-32.19
	2472	0.90	1.80	4.39	30.00	-25.61	36.00	-38.29
802.11g	2412	23.40	23.01	26.22	30.00	-3.78	36.00	-16.46
	2437	23.41	23.37	26.40	30.00	-3.60	36.00	-16.28
	2462	23.10	23.11	26.12	30.00	-3.88	36.00	-16.56
	2467	10.87	11.09	13.99	30.00	-16.01	36.00	-28.69
	2472	9.10	9.73	12.44	30.00	-17.56	36.00	-30.24
802.11n HT20	2412	23.63	23.11	26.39	30.00	-3.61	36.00	-16.29
	2437	23.47	23.07	26.29	30.00	-3.71	36.00	-16.39
	2462	23.26	23.16	26.22	30.00	-3.78	36.00	-16.46
	2467	10.39	10.70	13.56	30.00	-16.44	36.00	-29.12
	2472	8.14	9.20	11.71	30.00	-18.29	36.00	-30.97
802.11ax HE20 26T	2412	20.78	21.23	24.02	30.00	-5.98	36.00	-18.66
	2437	21.42	21.70	24.57	30.00	-5.43	36.00	-18.11
	2462	21.27	21.60	24.44	30.00	-5.56	36.00	-18.24
	2467	12.84	13.56	16.22	30.00	-13.78	36.00	-26.46
	2472	9.26	10.34	12.84	30.00	-17.16	36.00	-29.84
802.11ax HE20 52T	2412	23.08	22.67	25.89	30.00	-4.11	36.00	-16.79
	2437	22.73	22.46	25.61	30.00	-4.39	36.00	-17.07
	2462	21.81	22.57	25.22	30.00	-4.78	36.00	-17.46
	2467	12.71	13.35	16.05	30.00	-13.95	36.00	-26.63
	2472	8.59	9.00	11.81	30.00	-18.19	36.00	-30.87
802.11ax HE20 52+26T	2412	23.20	23.07	26.15	30.00	-3.85	36.00	-16.53
	2437	22.18	22.33	25.26	30.00	-4.74	36.00	-17.42
	2462	22.56	22.41	25.50	30.00	-4.50	36.00	-17.18
	2467	12.79	12.89	15.85	30.00	-14.15	36.00	-26.83
	2472	8.50	9.18	11.86	30.00	-18.14	36.00	-30.82
802.11ax HE20 106T	2412	24.20	24.17	27.19	30.00	-2.81	36.00	-15.49
	2437	23.93	22.79	26.41	30.00	-3.59	36.00	-16.27
	2462	23.62	23.08	26.37	30.00	-3.63	36.00	-16.31
	2467	12.49	13.04	15.78	30.00	-14.22	36.00	-26.90
	2472	9.12	10.08	12.63	30.00	-17.37	36.00	-30.05
802.11ax HE20 106+26T	2412	24.11	24.13	27.13	30.00	-2.87	36.00	-15.55
	2437	23.38	23.94	26.68	30.00	-3.32	36.00	-16.00
	2462	23.63	23.81	26.73	30.00	-3.27	36.00	-15.95
	2467	12.55	12.85	15.71	30.00	-14.29	36.00	-26.97
	2472	10.16	9.95	13.07	30.00	-16.93	36.00	-29.61
802.11ax HE20 242T	2412	26.11	25.81	28.97	30.00	-1.03	36.00	-13.71
	2437	26.32	25.16	28.79	30.00	-1.21	36.00	-13.89
	2462	24.88	25.80	28.38	30.00	-1.62	36.00	-14.30
	2467	12.62	13.34	16.01	30.00	-13.99	36.00	-26.67
	2472	10.08	9.01	12.59	30.00	-17.41	36.00	-30.09

9.4. AVERAGE POWER

LIMITS

None; for reporting purposes only

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12.46 dB (including 10.19 dB pad and 2.27 dB cable) for CHAIN 0 and 12.31 dB (including 10.03 dB pad and 2.28 dB cable) for CHAIN 1 was entered as an offset in the power meter.

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband power sensor. Gated average output power was read directly from power meter.

Test Engineer:	85502
Test Date:	2026-03-09

1TX MODE – CHAIN 0

Mode	Freq. [MHz]	Average Power [dBm]
BLE 125kps	2402	8.94
	2440	8.75
	2480	7.42
BLE 500kbps	2402	8.99
	2440	8.81
	2480	7.70
BLE 1Mbps	2402	17.40
	2440	17.67
	2480	18.03
BLE 2Mbps	2404	17.94
	2440	17.67
	2478	18.21

1TX MODE – CHAIN 1

Mode	Freq. [MHz]	Average Power [dBm]
BLE 125kps	2402	9.17
	2440	9.51
	2480	9.30
BLE 500kbps	2402	8.73
	2440	9.98
	2480	9.32
BLE 1Mbps	2402	17.79
	2440	17.46
	2480	17.77
BLE 2Mbps	2404	18.34
	2440	17.42
	2478	17.36

2TX CHAIN 0 + CHAIN 1 CDD MODE

Mode	Freq. [MHz]	Output Power [dBm]		
		Chain 0	Chain 1	MIMO
BLE 1Mbps	2402	13.16	14.82	17.08
	2440	13.21	15.34	17.41
	2480	12.16	14.38	16.42
BLE 2Mbps	2404	13.04	14.86	17.05
	2440	13.28	15.33	17.43
	2478	12.16	14.27	16.35
802.11b	2412	19.36	19.10	22.24
	2437	19.21	18.90	22.07
	2462	18.91	19.27	22.11
	2467	4.26	4.91	7.61
	2472	-2.13	-1.18	1.39
802.11g	2412	17.42	17.05	20.25
	2437	17.56	17.13	20.36
	2462	17.26	17.26	20.27
	2467	4.41	4.86	7.65
	2472	-1.74	-1.21	1.54
802.11n HT20	2412	17.47	17.08	20.29
	2437	17.54	17.06	20.32
	2462	17.28	17.32	20.31
	2467	4.39	4.98	7.71
	2472	-1.88	-1.33	1.41
802.11ax HE20 26T	2412	13.13	13.29	16.22
	2437	13.12	12.89	16.02
	2462	13.54	13.26	16.42
	2467	4.56	4.73	7.65
	2472	-1.26	-1.02	1.87
802.11ax HE20 52T	2412	14.23	13.74	17.00
	2437	14.29	14.28	17.29
	2462	14.44	14.35	17.41
	2467	4.14	4.34	7.25
	2472	-2.06	-1.78	1.09
802.11ax HE20 52+26T	2412	14.37	14.06	17.23
	2437	14.18	14.09	17.15
	2462	14.16	14.29	17.24
	2467	4.69	4.98	7.85
	2472	-1.58	-1.17	1.64
802.11ax HE20 106T	2412	15.26	14.99	18.14
	2437	15.35	15.35	18.36
	2462	15.16	15.37	18.28
	2467	4.47	4.71	7.60
	2472	-1.59	-1.39	1.52
802.11ax HE20 106+26T	2412	15.27	15.17	18.23
	2437	15.47	15.33	18.41
	2462	15.11	15.32	18.23
	2467	4.47	4.90	7.70
	2472	-1.47	-1.24	1.66
802.11ax HE20 242T	2412	17.63	17.28	20.47
	2437	17.73	17.29	20.53
	2462	17.07	16.99	20.04
	2467	4.32	4.97	7.67
	2472	-1.80	-1.26	1.48

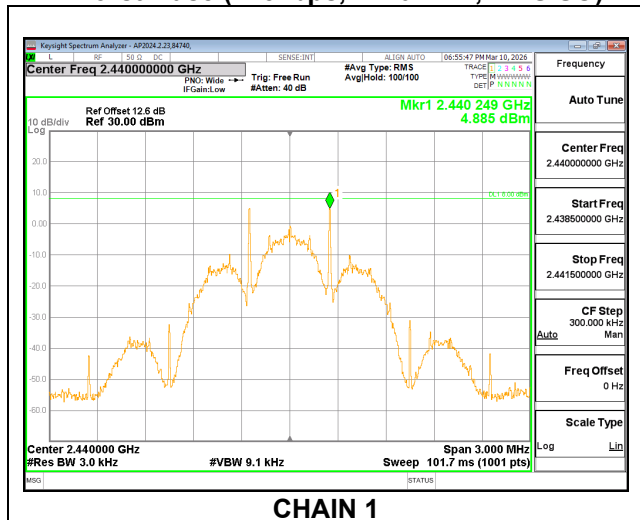
9.5. POWER SPECTRAL DENSITY

LIMITS

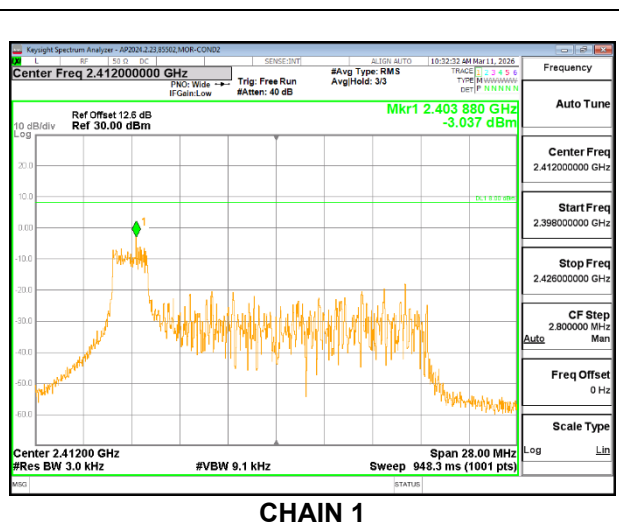
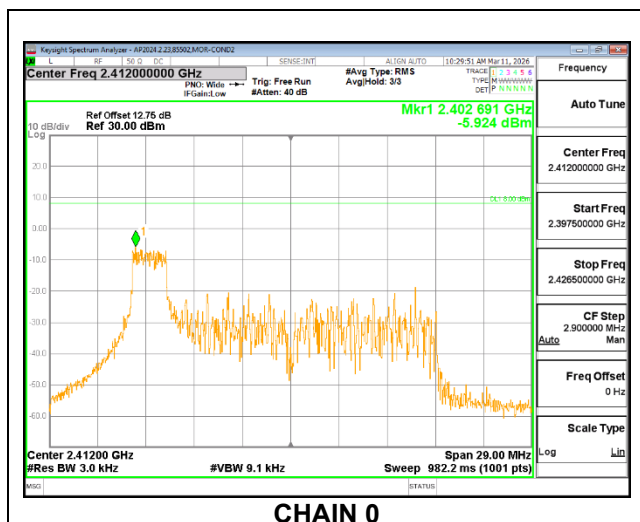
FCC §15.247 (e)
RSS-247 6.3.1 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

BLE Worst-Case (125kbps, 2440 MHz, C1 SISO)



2.4 WLAN Worst-Case (802.11be EHT20, 26T RU0, 2412 MHz, MIMO)



1TX MODE – CHAIN 0

Mode	Freq. [MHz]	PSD [dBm]	PSD Limit [dBm]	Margin [dBm]
BLE 125kbps	2402	3.63	8.00	-4.37
	2440	3.45	8.00	-4.55
	2480	2.29	8.00	-5.71
BLE 500kbps	2402	3.05	8.00	-4.95
	2440	3.26	8.00	-4.74
	2480	2.11	8.00	-5.89
BLE 1Mbps	2402	2.21	8.00	-5.79
	2440	2.43	8.00	-5.57
	2480	2.40	8.00	-5.60
BLE 2Mbps	2404	-0.37	8.00	-8.37
	2440	-0.54	8.00	-8.54
	2478	-0.35	8.00	-8.35

1TX MODE – CHAIN 1

Mode	Freq. [MHz]	PSD [dBm]	PSD Limit [dBm]	Margin [dBm]
BLE 125kbps	2402	3.31	8.00	-4.69
	2440	4.89	8.00	-3.12
	2480	4.17	8.00	-3.84
BLE 500kbps	2402	3.06	8.00	-4.94
	2440	4.30	8.00	-3.70
	2480	3.94	8.00	-4.06
BLE 1Mbps	2402	2.99	8.00	-5.01
	2440	3.18	8.00	-4.82
	2480	3.00	8.00	-5.01
BLE 2Mbps	2404	0.38	8.00	-7.62
	2440	0.20	8.00	-7.80
	2478	0.53	8.00	-7.47

2TX CHAIN 0 + CHAIN 1 CDD MODE

Mode	Freq. [MHz]	PSD Power [dBm]			PSD Limit [dBm]	Margin [dBm]
		Chain 0	Chain 1	MIMO		
BLE 1Mbps	2402	-2.16	-0.50	1.76	8.00	-6.24
	2440	-1.98	0.39	2.37	8.00	-5.63
	2480	-3.04	-0.82	1.22	8.00	-6.78
BLE 2Mbps	2404	-5.34	-3.50	-1.31	8.00	-9.31
	2440	-5.03	-2.68	-0.69	8.00	-8.69
	2478	-6.14	-3.94	-1.89	8.00	-9.89
802.11b	2412	-7.12	-6.78	-3.93	8.00	-11.93
	2437	-5.70	-4.93	-2.28	8.00	-10.28
	2472	-4.88	-5.51	-2.18	8.00	-10.18
802.11be EHT20 26T	2412	-5.92	-3.04	-1.23	8.00	-9.23
	2437	-5.76	-4.11	-1.84	8.00	-9.84
	2472	-6.08	-5.88	-2.97	8.00	-10.97
802.11be EHT20 52T	2412	-5.94	-6.08	-3.00	8.00	-11.00
	2437	-4.99	-5.95	-2.43	8.00	-10.43
	2472	-7.32	-6.43	-3.84	8.00	-11.84
802.11be EHT20 106T	2412	-6.80	-9.42	-4.91	8.00	-12.91
	2437	-7.50	-6.67	-4.06	8.00	-12.06
	2472	-7.81	-7.83	-4.81	8.00	-12.81
802.11be EHT20 242T	2412	-8.65	-9.71	-6.14	8.00	-14.14
	2437	-8.83	-9.81	-6.28	8.00	-14.28
	2472	-9.59	-9.58	-6.57	8.00	-14.57

9.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

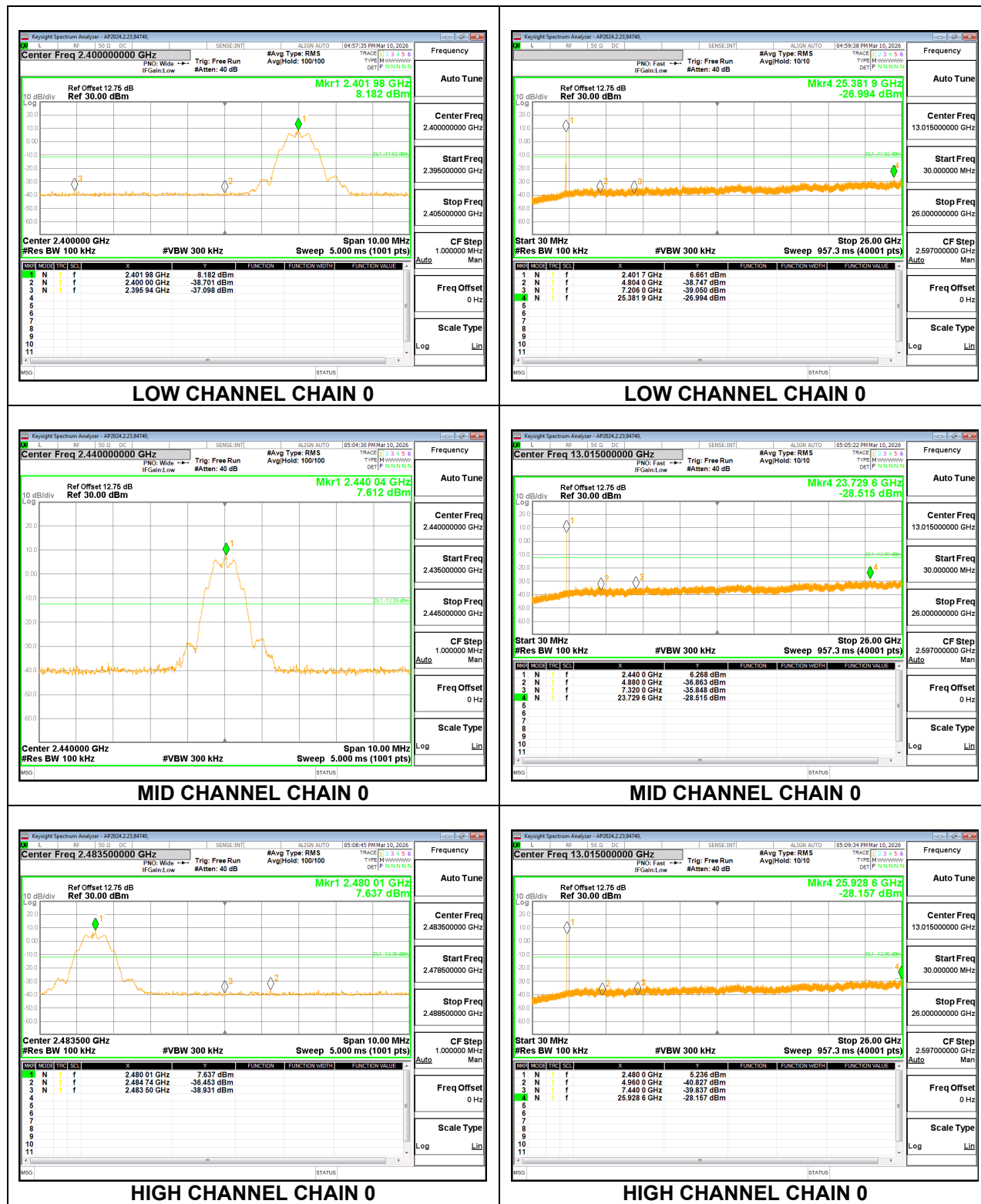
FCC §15.247 (d)
RSS-247 6.6

Output power was measured based on the use of peak measurement; therefore, the required attenuation is -20 dBc.

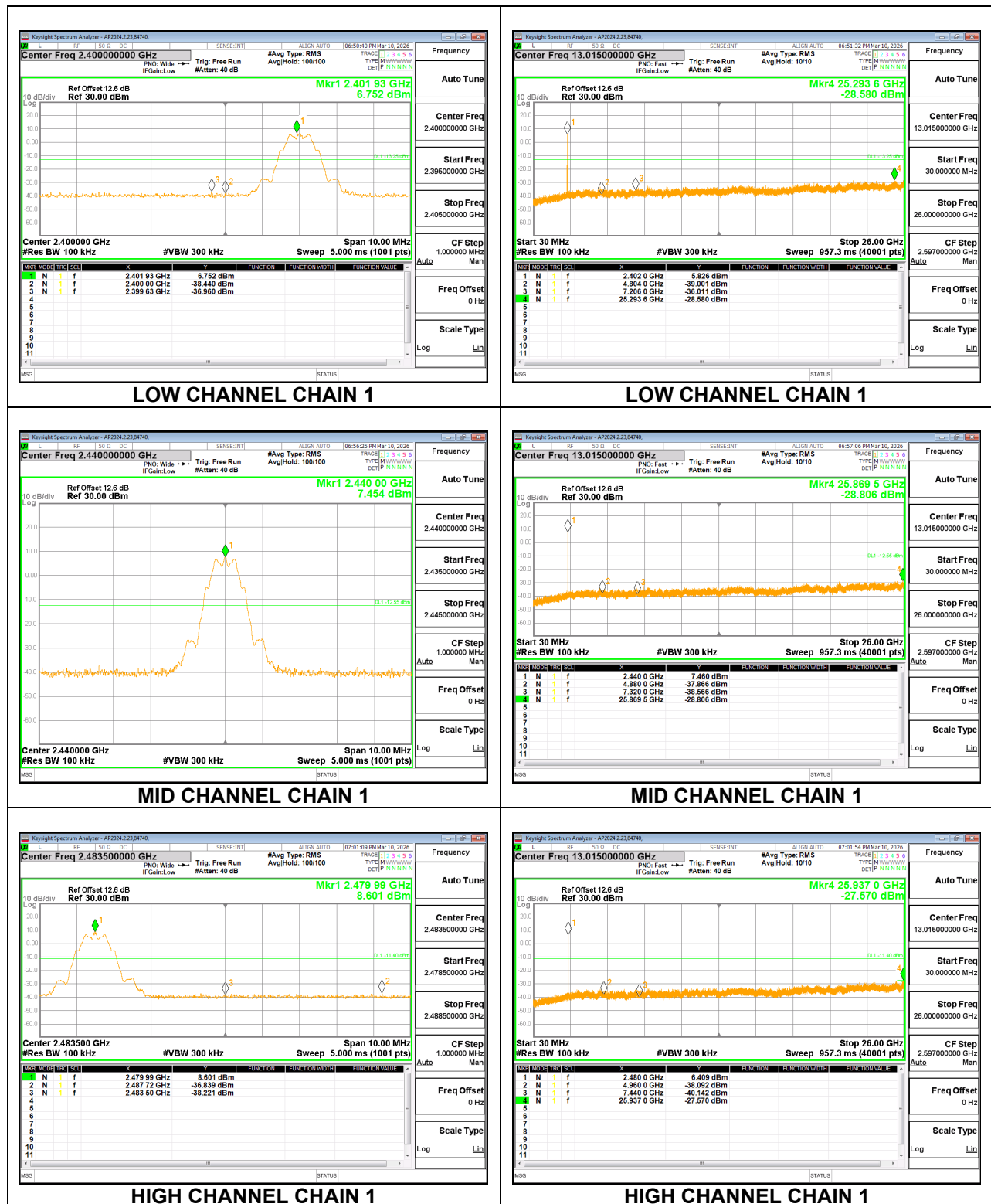
RESULTS

9.6.1. BLE 125kbps MODE

1TX CHAIN 0

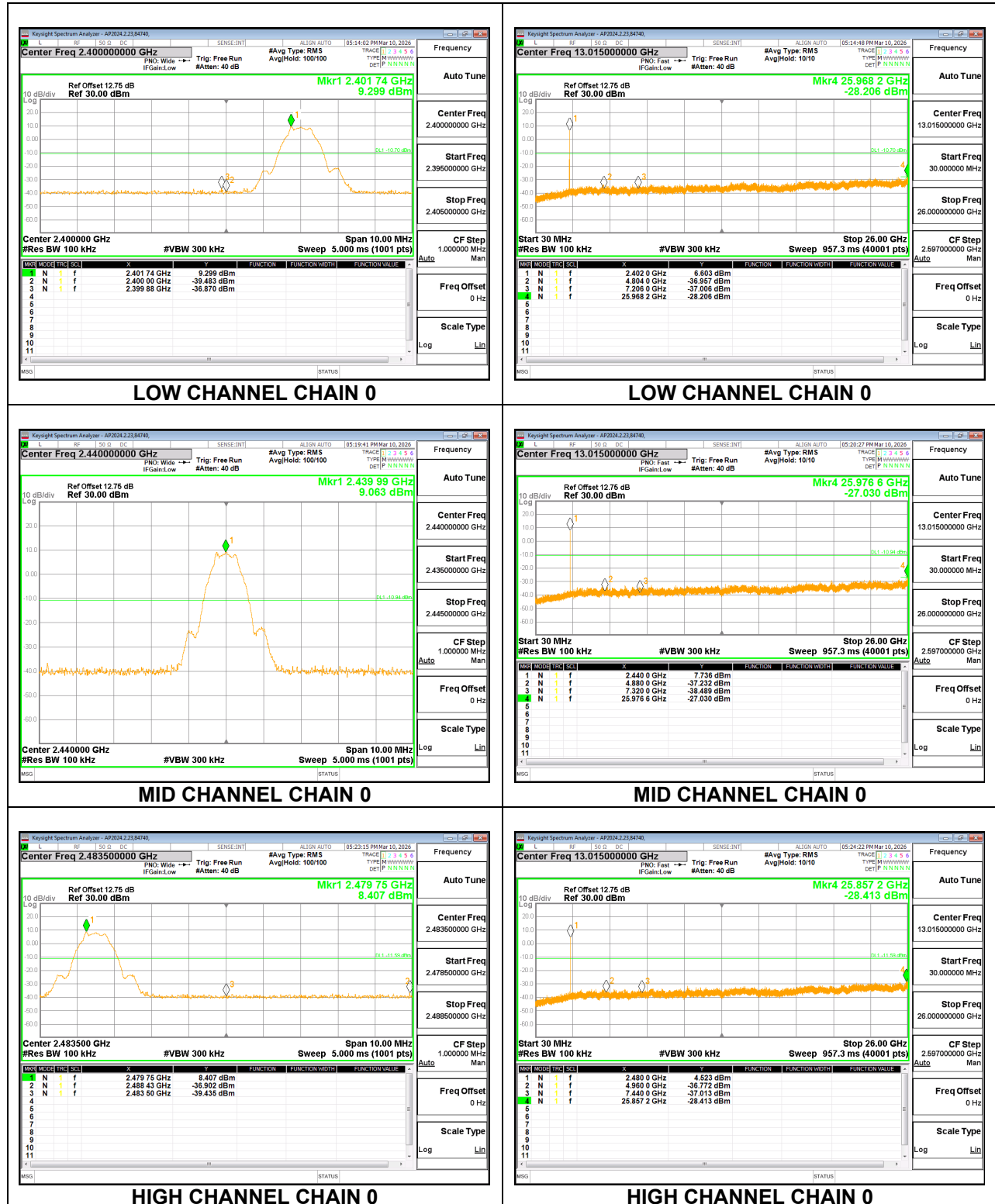


1TX CHAIN 1

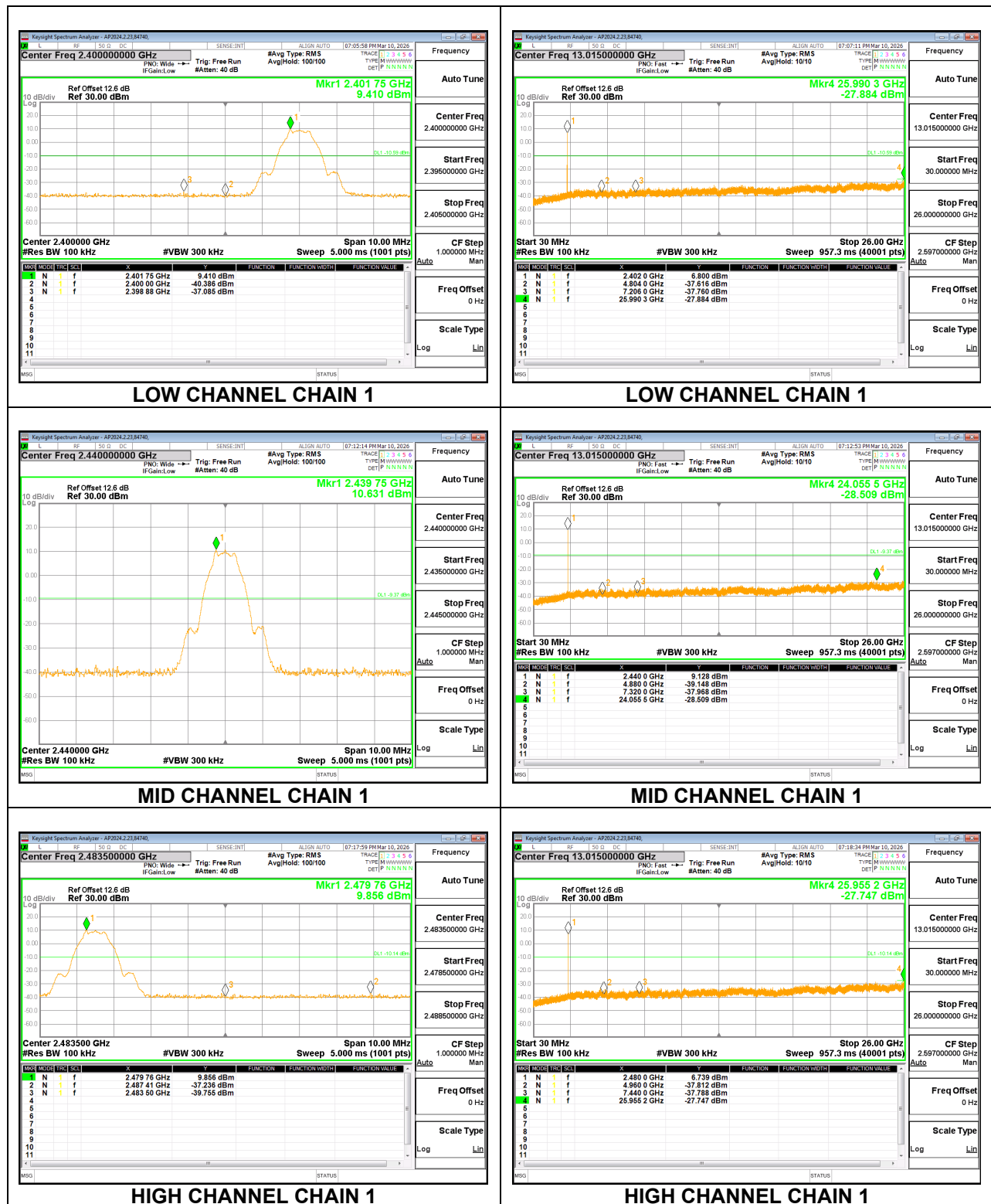


9.6.2. BLE 500kbps MODE

1TX CHAIN 0

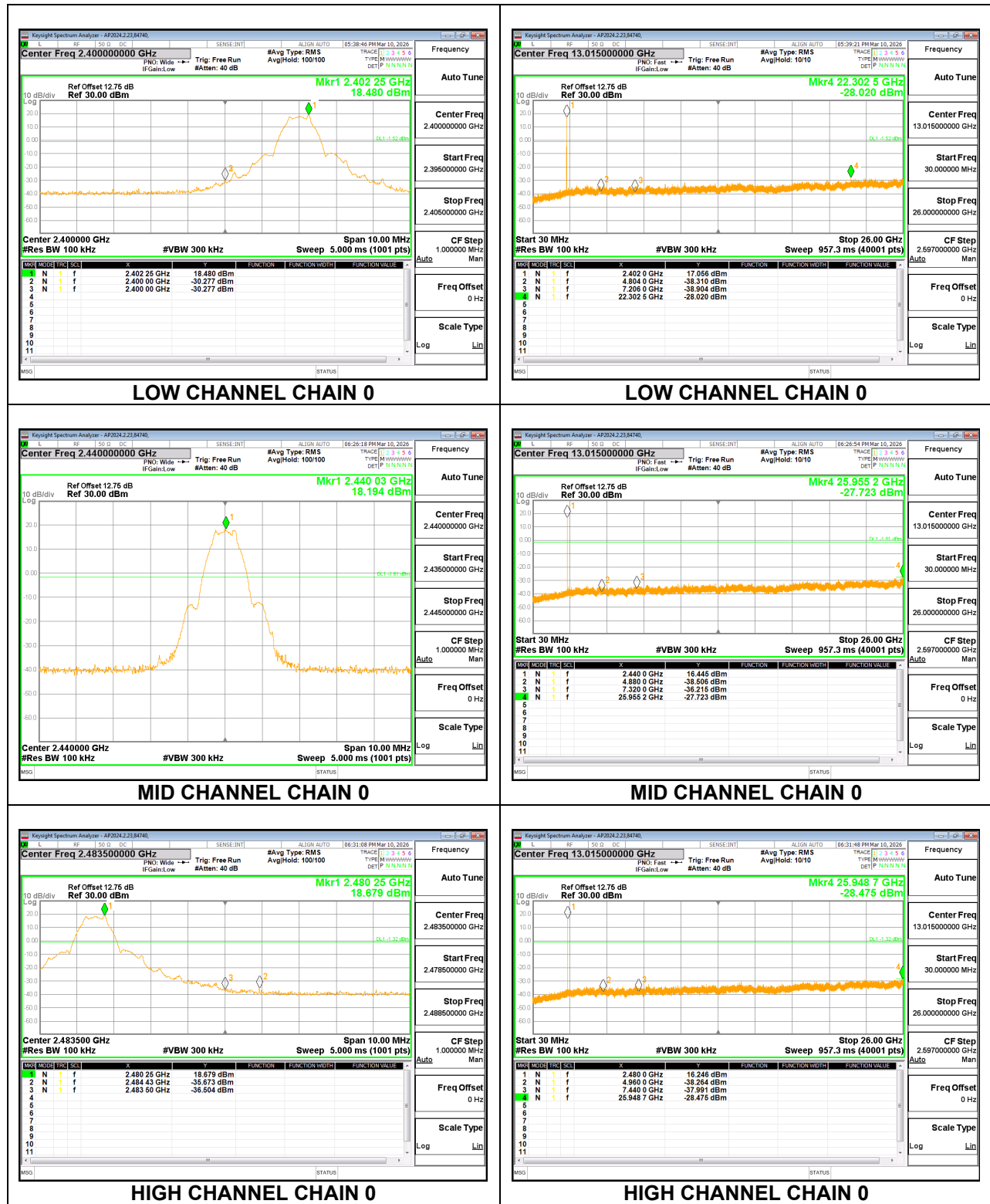


1TX CHAIN 1



9.6.3. BLE 1Mbps MODE

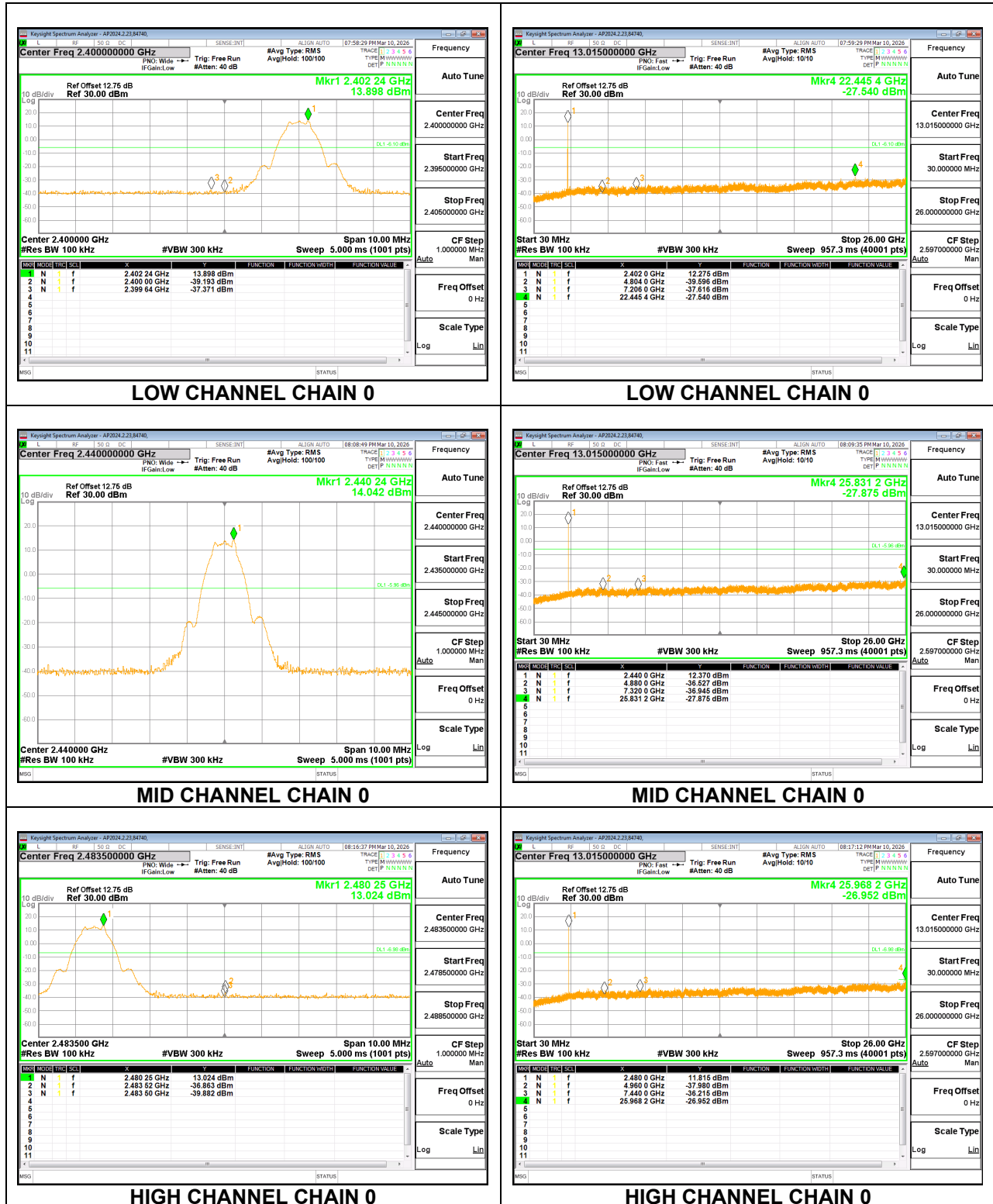
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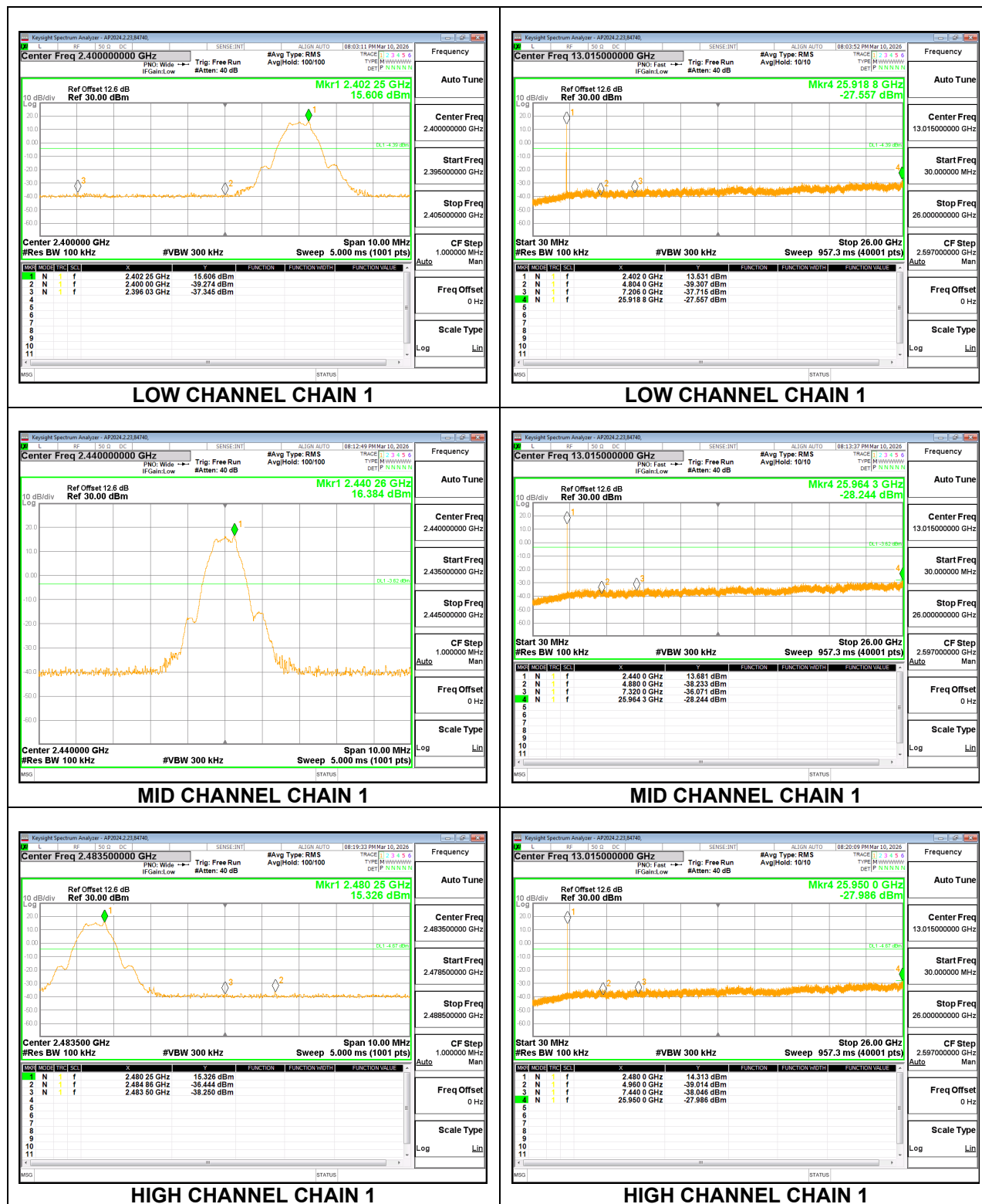


1TX CHAIN 1



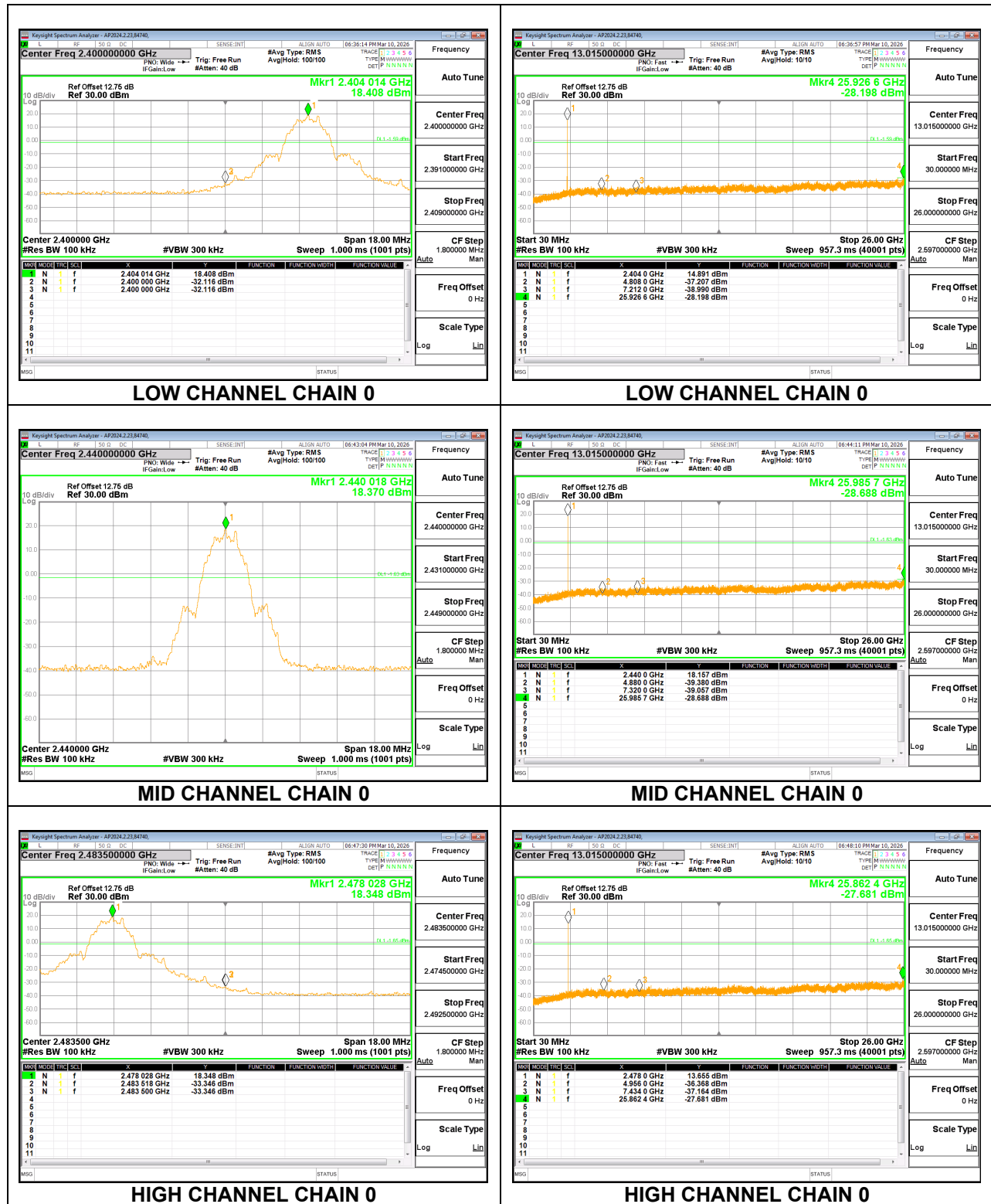
2TX CHAIN 0 + CHAIN 1



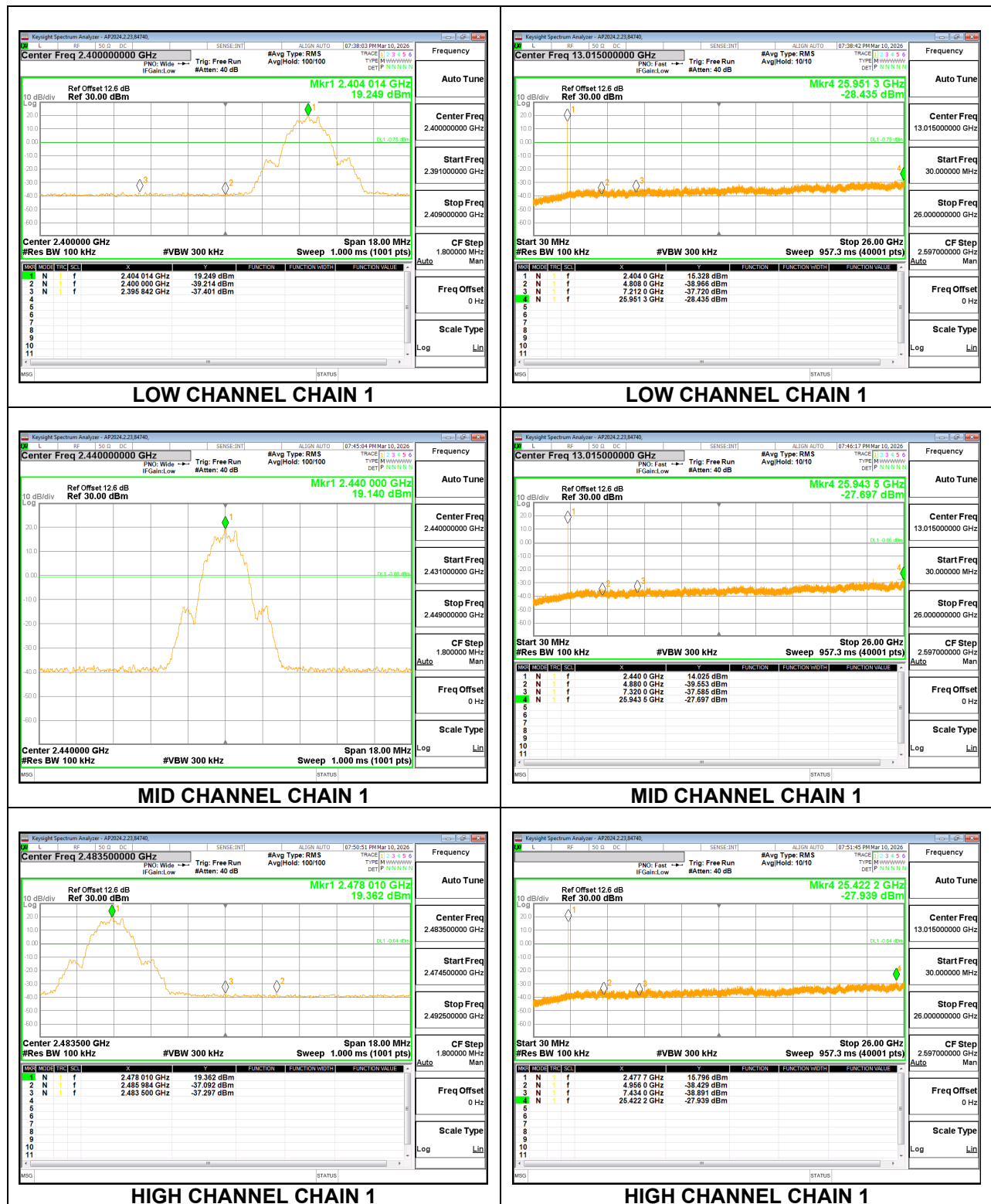


9.6.4. BLE 2Mbps MODE

1TX CHAIN 0



1TX CHAIN 1



2TX CHAIN 0 + CHAIN 1

