



CERTIFICATION TEST REPORT

Report Number. : S-4791615583-E8V2

Applicant : SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA

Model : SM-S937U, SM-S937U1

FCC ID : A3LSMS937U

EUT Description : GSM/WCDMA/LTE/NTN/5G NR Phone + BT/BLE,
DTS/UNII a/b/g/n/ac/ax/be, NFC, WPT and UWB

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C

Date Of Issue:
2025-02-25

Prepared by:
UL KOREA LTD.
26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL KOREA LTD. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902
FAX: (031) 213-5433



Revision History

Rev.	Issue Date	Revisions	Presented By
V1	2025-02-21	Initial issue	Jaejin Lee
V2	2025-02-25	Updated to address TCB's question	Jaejin Lee

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. DECISION RULES AND MEASUREMENT UNCERTAINTY	7
4.1. METROLOGICAL TRACEABILITY	7
4.2. SAMPLE CALCULATION	7
4.3. MEASUREMENT UNCERTAINTY	7
4.4. DECISION RULES	7
5. EQUIPMENT UNDER TEST	8
5.1. EUT DESCRIPTION	8
5.2. MAXIMUM OUTPUT POWER	8
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	9
5.4. WORST-CASE CONFIGURATION AND MODE	10
5.5. DESCRIPTION OF TEST SETUP	12
6. MEASUREMENT METHOD	14
7. TEST AND MEASUREMENT EQUIPMENT	15
8. TEST RESULTS SUMMARY	16
9. ANTENNA PORT TEST RESULTS	17
9.1. ON TIME AND DUTY CYCLE	17
9.2. 6 dB BANDWIDTH	18
9.2.1. Test data	18
9.2.2. 6 dB BANDWIDTH PLOTS	19
9.3. OUTPUT POWER	21
9.3.1. DIVERSITY MODE TEST DATA	21
9.3.2. DUAL MODE TEST DATA	22
9.3.3. PEAK POWER PLOTS	23
9.4. AVERAGE POWER	27
9.4.1. DIVERSITY MODE TEST DATA	27
9.4.2. DUAL MODE TEST DATA	28
9.5. POWER SPECTRAL DENSITY	29
9.5.1. Test data	29
9.5.2. PSD TEST PLOTS	30
9.6. CONDUCTED SPURIOUS EMISSIONS	33

9.6.1. Test plot.....	34
10. RADIATED TEST RESULTS.....	38
10.1. LIMITS AND PROCEDURE.....	38
10.2. TRANSMITTER ABOVE 1 GHz.....	40
10.2.1. TX ABOVE 1 GHz BLUETOOTH LE 1 Mbps.....	40
10.2.2. TX ABOVE 1 GHz BLUETOOTH LE 2 Mbps.....	44
10.3. WORST CASE BELOW 1 GHz	48
11. AC POWER LINE CONDUCTED EMISSIONS	49
11.1. AC Power Line.....	50

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: GSM/WCDMA/LTE/NTN/5G NR Phone + BT/BLE, DTS/UNII
a/b/g/n/ac/ax/be, NFC, WPT and UWB.

MODEL NUMBER: SM-S937U, SM-S937U1

SERIAL NUMBER: R3CXC0G5AQJ, R3CXC0G5D8T, R3CXC0G5DMA (CONDUCTED);
R3CXC0G5QHB, R3CXC0G5R7M, R3CXC0G5RVD (RADIATED)

DATE TESTED: 2025-01-03 ~ 2025-02-21

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
47 CFR Part 15 Subpart C	Complies

UL KOREA LTD. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL KOREA LTD. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

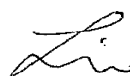
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL KOREA LTD. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL KOREA LTD. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL KOREA LTD. By:



Seokhwan Hong
Suwon Lab Engineer
UL KOREA LTD.

Tested By:



Jaejin Lee
Suwon Lab Engineer
UL KOREA LTD.

2. TEST METHODOLOGY

1. FCC 47 CFR Part 2.
2. FCC 47 CFR Part 15.
3. KDB 558074 D01 15.247 Meas Guidance v05r02.
4. KDB 662911 D01 v02r01
5. ANSI C63.10-2020.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro	
☒	Chamber 1(3m semi-anechoic chamber)
☒	Chamber 2(3m semi-anechoic chamber)
☒	Chamber 3(3m semi-anechoic chamber)
☐	Chamber 4(3m Full-anechoic chamber)
☐	Chamber 5(3m Full-anechoic chamber)

UL KOREA LTD. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

$$\begin{aligned} \text{AC Corrected Reading (dBuV)} &= \text{Measured Voltage (dBuV)} + \text{Extension Cord} \\ &\text{Loss (dB)} + \text{Cable Loss (dB)} \\ 44.72 \text{ dBuV} &= 34.72 \text{ dBuV} + 9.9 \text{ dB} + 0.1 \text{ dB} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
RF Output Power	0.69 dB
Power Spectral Density	1.4 dB
Occupied Bandwidth	0.04 %
Conducted Spurious Emissions	1.4 dB
Conducted Disturbance, 0.15 to 30 MHz	1.84 dB
Radiated Disturbance, 9 kHz to 30 MHz	2.41 dB
Radiated Disturbance, 30 MHz to 1 GHz	3.69 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.18 dB
Radiated Disturbance, above 18 GHz	5.07 dB

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

4.4. DECISION RULES

Decision rule for statement(s) of conformity is based on Clause 4.4.3 in IEC Guide 115:2023.

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a GSM/WCDMA/LTE/NTN/5G NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, NFC, WPT and UWB. This test report addresses the DTS (BLE) operational mode.

Representative model	Difference	Derivative model
		SM-S937U1
SM-S937U	Hardware	Same as SM-S937U
	Software	Different UI

The model SM-S937U was used for final testing and is representative of the test results in this report.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak and average conducted output power as follows:

Antenna1

Frequency Range[MHz]	Mode	Power Mode	Output Power [dBm]	Output Power [mW]
2 402 ~ 2 480	1 Mbps (37 pkt)	Peak	20.26	106.17
		Average	19.33	85.78
2 404 ~ 2 478	2Mbps (37 pkt)	Peak	20.08	101.86
		Average	19.16	82.49

Antenna2

Frequency Range[MHz]	Mode	Power Mode	Output Power [dBm]	Output Power [mW]
2 402 ~ 2 480	1 Mbps (37 pkt)	Peak	19.90	97.72
		Average	19.38	86.66
2 404 ~ 2 478	2Mbps (255 pkt)	Peak	20.15	103.51
		Average	19.33	85.70

Antenna Dual mode

Frequency Range[MHz]	Mode	Power Mode	Output Power [dBm]	Output Power [mW]
2 402 ~ 2 480	1 Mbps (255 pkt)	Peak	17.11	51.35
		Average	16.91	49.05
2 404 ~ 2 478	2Mbps (255 pkt)	Peak	17.11	51.40
		Average	16.86	48.57

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 shall be considered sufficient to comply with the provisions of this section.

**The internal antenna was Permanently attached.
Therefore this E.U.T Complies with the requirement of §15.203.**

The radio utilizes a internal antenna, with a maximum gain of:

Frequency Band[MHz]	ANT1 Gain [dBi]	ANT2 Gain [dBi]	Correlated Chains Directional Gain[dBi]
DTS 2400 – 2483.5	-2.82	-3.64	-0.21

Directional gain for the MIMO operations is determined using KDB 662911 D01 Multiple Transmitter Output section F (2)(d)(1) for *Unequal antenna gains, with equal transmit powers*. The gain is calculated using the formula for correlated transmissions across the two transmit antennas.

Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ dBi.

Sample calculation for this device with $N_{ANT} = 2$

Directional gain = $10 \log[(10^{-2.82/20} + 10^{-3.64/20})^2 / 2] = -0.21$ dBi

“SUB3” and “SUB5” as indicated in antenna specification are written as ANT1 and ANT2 in this report.

5.4. WORST-CASE CONFIGURATION AND MODE

Both Bluetooth LE Diversity mode and DUAL mode have been investigated and confirmed.

The fundamentals of the EUT were investigated in three orthogonal orientations X, Y and Z. It was determined that below table's orientation was the worst-case orientation.

ANT1	ANT2	Dual
X	X	X

For conducted power test, both Diversity and DUAL mode were tested and reported. For Dual mode, only the worst conducted power for packet size was reported, since no noticeable emissions were detected in the other test items.

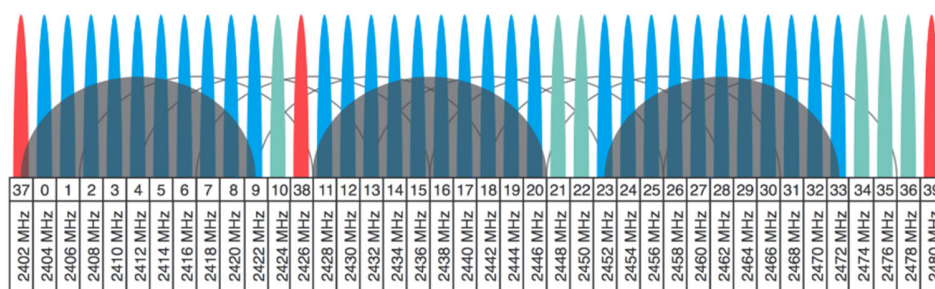
Radiated and power line conducted tests were performed with EUT connected to AC power adapter as the worst-case configuration. Radiated harmonics spurious 1~18 GHz Low/Mid/High channels, 18-26GHz were performed with the EUT set at the Diversity and DUAL mode. Radiated emission below 1GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

For Radiated band-edge and spurious test, tests were performed on Diversity and DUAL mode.

Due to modulation characteristics, BLE coded data was worse than 1Mbps in the RBW 3kHz PSD results. However, based on the RBW (1MHz) when measuring radiated spurious, the PSD of 1Mbps is higher, so 1Mbps was selected as the worst case to suit the radiation test environment.

All radiated and power line conducted tests were performed attached with travel adapter for the worst-case condition mode.

The EUT does not supported Primary PHY channels (2402[37] / 2426[38] / 2480[39] MHz) at the BLE 2Mbps data-rate. BLE Channels that used for testing are follows in below.



Power verification

The Output Power of all data rate are all investigated, the 1 Mbps and 2 Mbps power is the worst case for symbol rate. All tests were performed in these two modes.

Symbol Rate [Ms/s]	Mode	Freq. [MHz]	Conducted Burst Avg [dBm]	Symbol Rate [Ms/s]	Mode	Freq. [MHz]	Conducted Burst Avg [dBm]
1	1 Mbps 37 pkt ANT1	2 402	19.334	2	2 Mbps 37 pkt ANT1	2 404	19.076
		2 440	19.220			2 440	19.164
		2 480	19.222			2 478	18.876
	1 Mbps 37 pkt ANT2	2 402	18.232		2 Mbps 37 pkt ANT2	2 404	18.887
		2 440	19.010			2 440	18.660
		2 480	19.378			2 478	19.008
	1 Mbps 255 pkt ANT1	2 402	18.860		2 Mbps 255 pkt ANT1	2 404	18.909
		2 440	18.464			2 440	18.979
		2 480	18.685			2 478	18.599
	1 Mbps 255 pkt ANT2	2 402	18.169		2 Mbps 255 pkt ANT2	2 404	19.307
		2 440	18.634			2 440	18.851
		2 480	18.778			2 478	19.330
1 Coded S=8	125 kbps 37 pkt ANT1	2 402	10.162	1 Coded S=2	500 kbps 37 pkt ANT1	2 402	9.925
		2 440	10.361			2 440	10.360
		2 480	9.619			2 480	9.680
	125 kbps 37 pkt ANT2	2 402	9.332		500 kbps 37 pkt ANT2	2 402	9.543
		2 440	9.955			2 440	9.986
		2 480	8.560			2 480	8.601
	125 kbps 255 pkt ANT1	2 402	9.886		500 kbps 255 pkt ANT1	2 402	9.845
		2 440	10.236			2 440	10.276
		2 480	9.567			2 480	9.605
	125 kbps 255 pkt ANT2	2 402	9.734		500 kbps 255 pkt ANT2	2 402	9.736
		2 440	10.245			2 440	9.959
		2 480	8.772			2 480	8.787

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-T2510	RF7X1YF85Z1DKA	N/A
Data Cable	SAMSUNG	EP-DN980	N/A	N/A

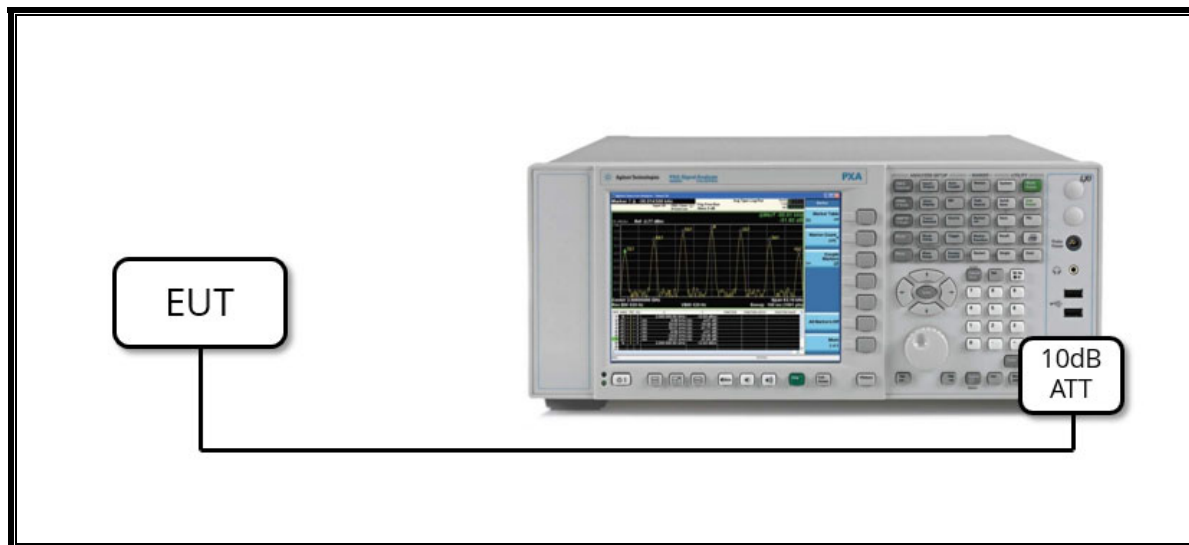
I/O CABLE

I/O Cable List						
Cable No.	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	C Type	Shielded	1.0 m	N/A

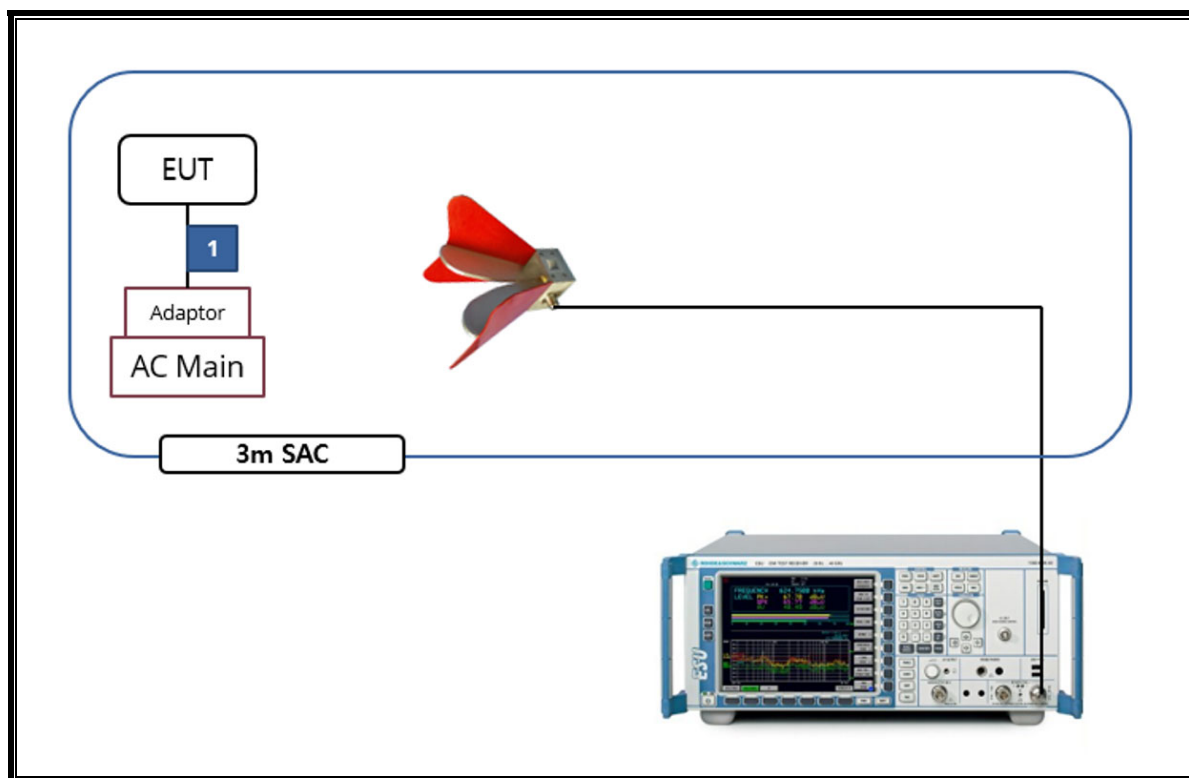
TEST SETUP

The EUT is a stand-alone unit during the tests.
Test software in hidden menu exercised the EUT to enable BLE mode.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. MEASUREMENT METHOD

6 dB BW : ANSI C63.10-2020, Section 11.8.2 Option 2

OUTPUT POWER: ANSI C63.10-2020, Section 11.9.1.1 RBW $\geq$ DTS bandwidth

POWER SPECTRAL DENSITY: ANSI C63.10-2020, Section 11.10.2 Method PKPSD (peak PSD)

Out-of-band Emissions (Conducted): ANSI C63.10-2020, Section 11.11 Emissions in nonrestricted frequency bands

Out-of-band Emissions in Non-restricted Bands: ANSI C63.10-2020, Section 11.11 Emissions in nonrestricted frequency bands

Out-of-band Emissions in Restricted Bands: ANSI C63.10-2020, Section 11.12 Emissions in restricted frequency bands

AC Power Line Conducted Emission: ANSI C63.10-2020, Section 6.2

7. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	S/N	Cal Due
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB 9163	750	2026-07-30
Antenna, Horn, 18 GHz	ETS	3117	00168717	2026-07-17
Antenna, Horn, 40 GHz	ETS	3116C	00166155	2026-07-23
Preamplifier	ETS	3116C-PA	00168841	2025-07-25
Preamplifier, 1000 MHz	Sonoma	310N	341282	2025-07-22
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	2025-07-23
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	2025-07-24
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	2026-01-02
Spectrum Analyzer, 44 GHz	KEYSIGHT	N9040B	MY60080268	2025-12-24
RF Switching Unit	TA Engineering	TA-018S-16	SW-1	N/A
Average Power Sensor	Agilent / HP	U2000A	MY54270007	2025-07-23
Average Power Sensor	Agilent / HP	U2000A	MY54260010	2025-07-23
Attenuator	PASTERNAK	PE7087-10	A001	2025-07-23
Attenuator	PASTERNAK	PE7087-10	A008	2025-07-23
EMI Test Receive, 40 GHz	R&S	ESU40	100439	2025-07-23
EMI Test Receive, 40 GHz	R&S	ESU40	100457	2025-07-22
EMI Test Receive, 3 GHz	R&S	ESR 3	101832	2025-07-22
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	2025-07-22
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	2025-07-22
High Pass Filter 6GHz	Micro-Tronics	HPS17542	21	2025-07-23
LISN	R&S	ENV216	101837	2025-07-22
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	2025-09-07
UL Software				
Description	Manufacturer	Model	Version	
Radiated software	UL	UL EMC	Ver 9.5	
AC Line Conducted software	UL	UL EMC	Ver 9.5	

8. TEST RESULTS SUMMARY

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	Occupied Bandwidth(6dB)	> 500kHz	Conducted	Complies
2.1051, 15.247(d)	Band Edge / Conducted Spurious Emission	-20 dBc		Complies
15.247 (b)(3)	TX conducted output power	< 30 dBm		Complies
15.247(e)	PSD	< 8 dBm/3kHz		Complies
15.207(a)	AC Power Line conducted emissions	Section 11	Power Line conducted	Complies
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m(Av)	Radiated	Complies

9. ANTENNA PORT TEST RESULTS

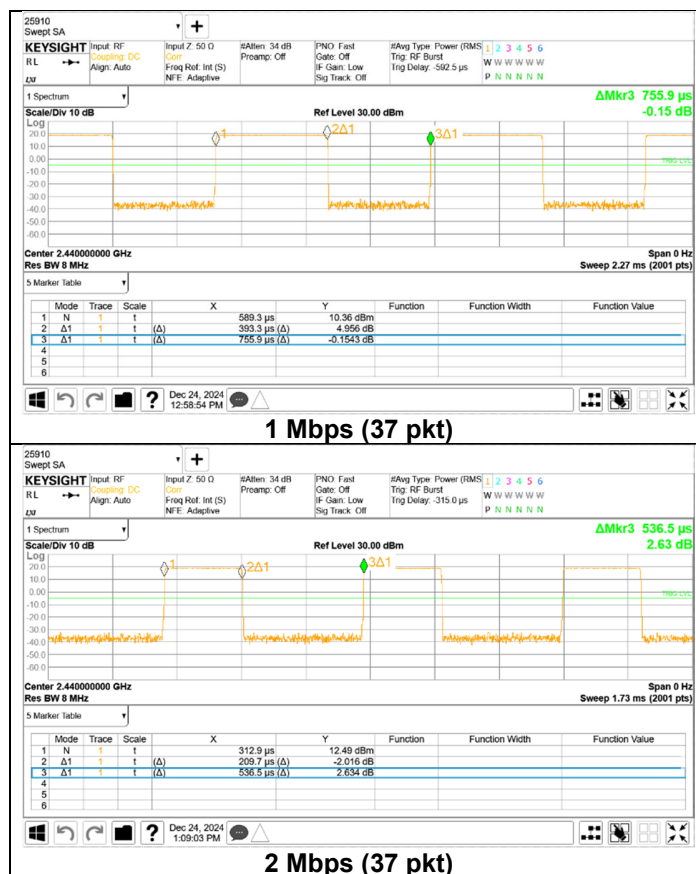
9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

Mode	On time [msec]	Period [msec]	Duty cycle x [Linear]	Duty Cycle [%]	Duty Cycle Correction Factor [dB]	1/T Minimum VBW [kHz]
2 400 ~ 2 483.5 MHz Bands						
1 Mbps [37pkt]	0.393	0.756	0.520	52.03	2.84	2.54
1 Mbps [255pkt]	2.136	2.500	0.854	85.44	0.68	0.47
2 Mbps [37pkt]	0.210	0.537	0.391	39.09	4.08	4.77
2 Mbps [255pkt]	1.082	1.408	0.768	76.85	1.14	0.92

Note: Due to All diversity and Dual mode have the same duty cycle, the duty cycle of ANT1 is reported as a representative in the table above.



9.2. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

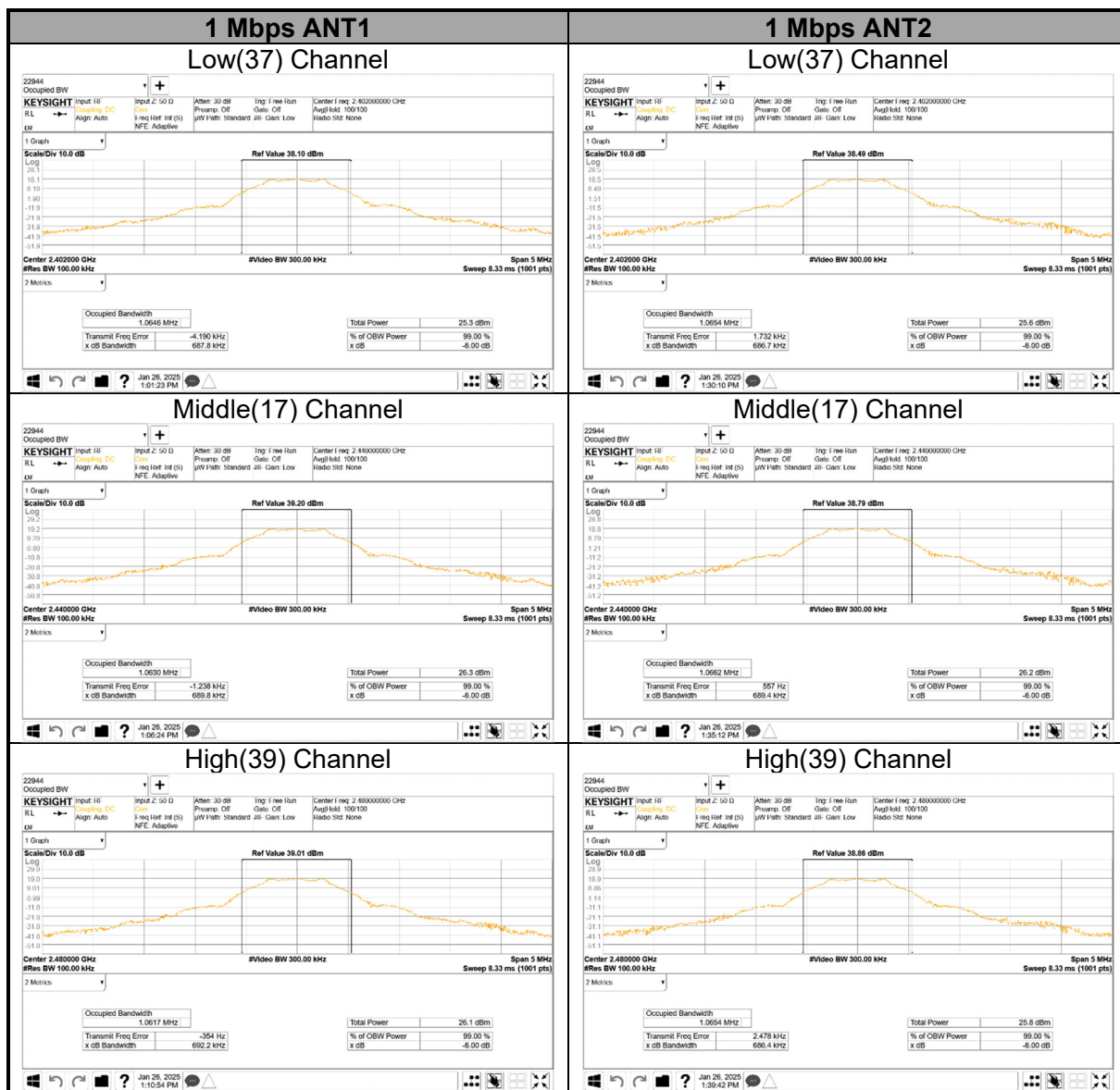
The minimum 6 dB bandwidth shall be at least 500 kHz.

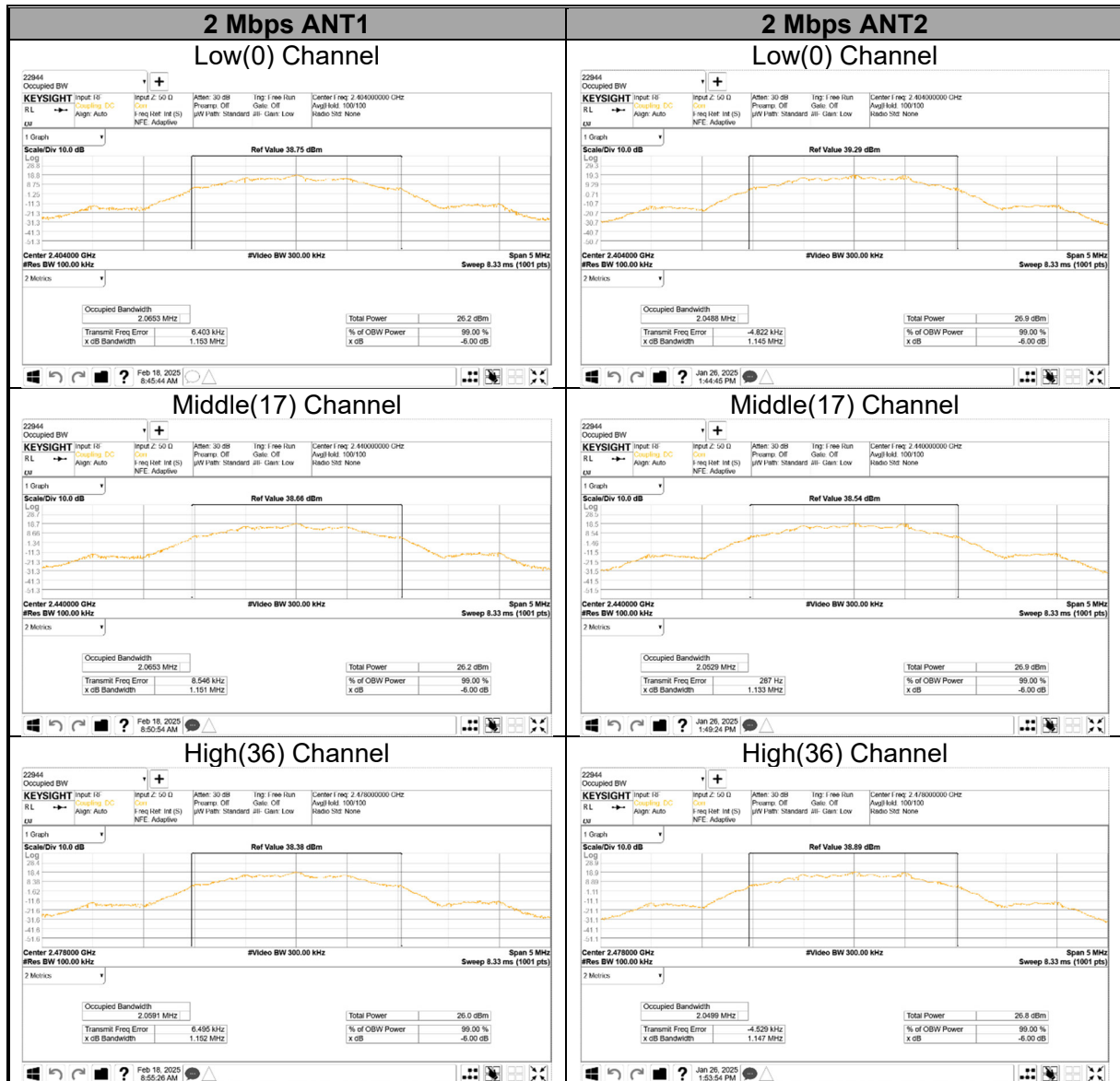
RESULTS

9.2.1. Test data

Mode	Antenna	Channel	Frequency [MHz]	6 dB Bandwidth [kHz]	Minimum Limit [kHz]
1 Mbps (37pkt)	ANT1	37	2 402	687.8	500.0
		17	2 440	689.8	
		39	2 480	692.2	
1 Mbps (37pkt)	ANT2	37	2 402	686.7	
		17	2 440	689.4	
		39	2 480	686.4	
2 Mbps (37pkt)	ANT1	0	2 404	1153.0	
		17	2 440	1151.0	
		36	2 478	1152.0	
2 Mbps (255pkt)	ANT2	0	2 404	1145.0	
		17	2 440	1133.0	
		36	2 478	1147.0	
Worst				686.4	500.0

9.2.2. 6 dB BANDWIDTH PLOTS





9.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

Peak power is measured using ANSI C63.10(2020) under section 11.9.1.1 utilizing spectrum analyzer(RBW $\cong$ DTS bandwidth).

RESULTS

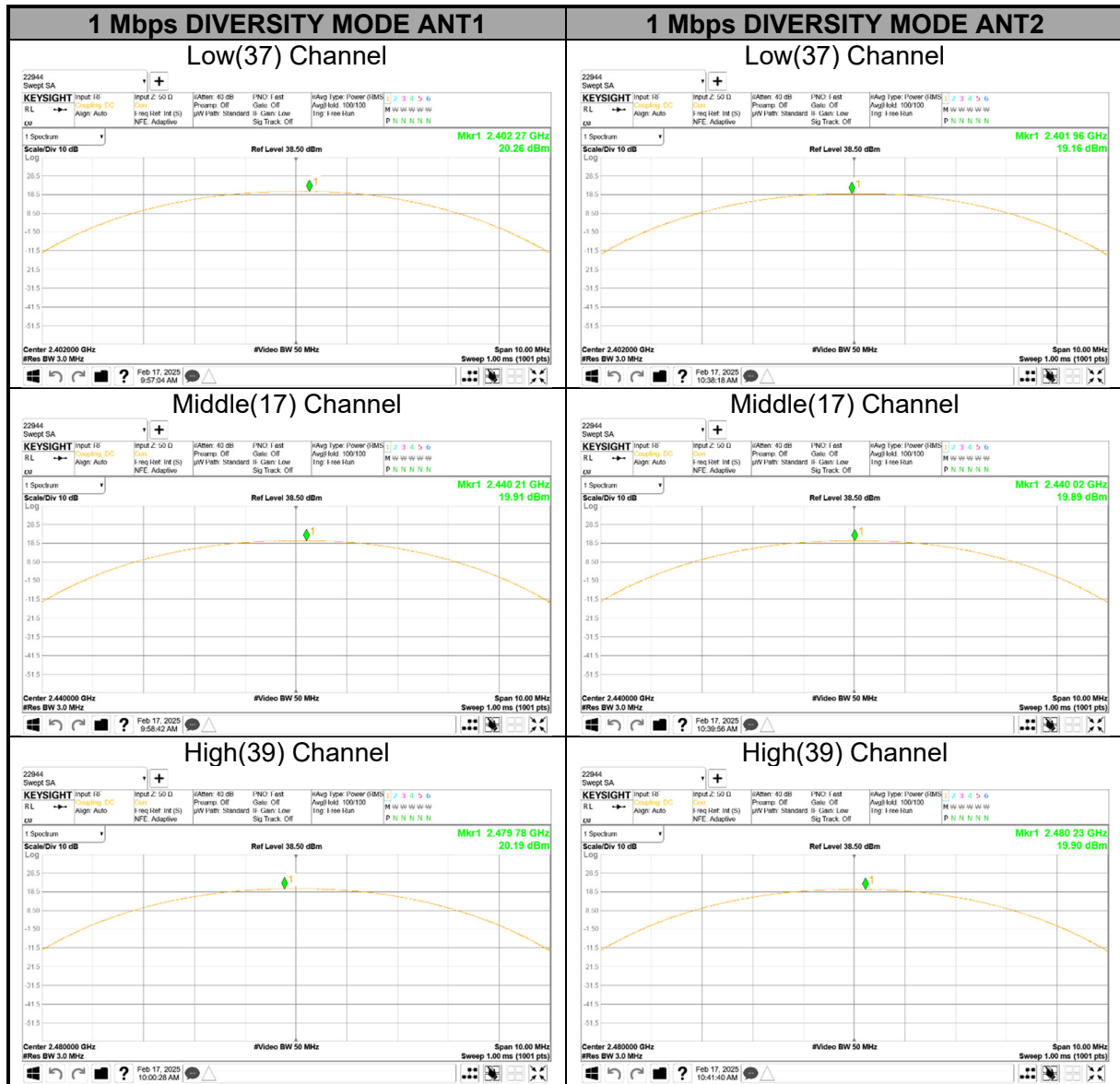
9.3.1. DIVERSITY MODE TEST DATA

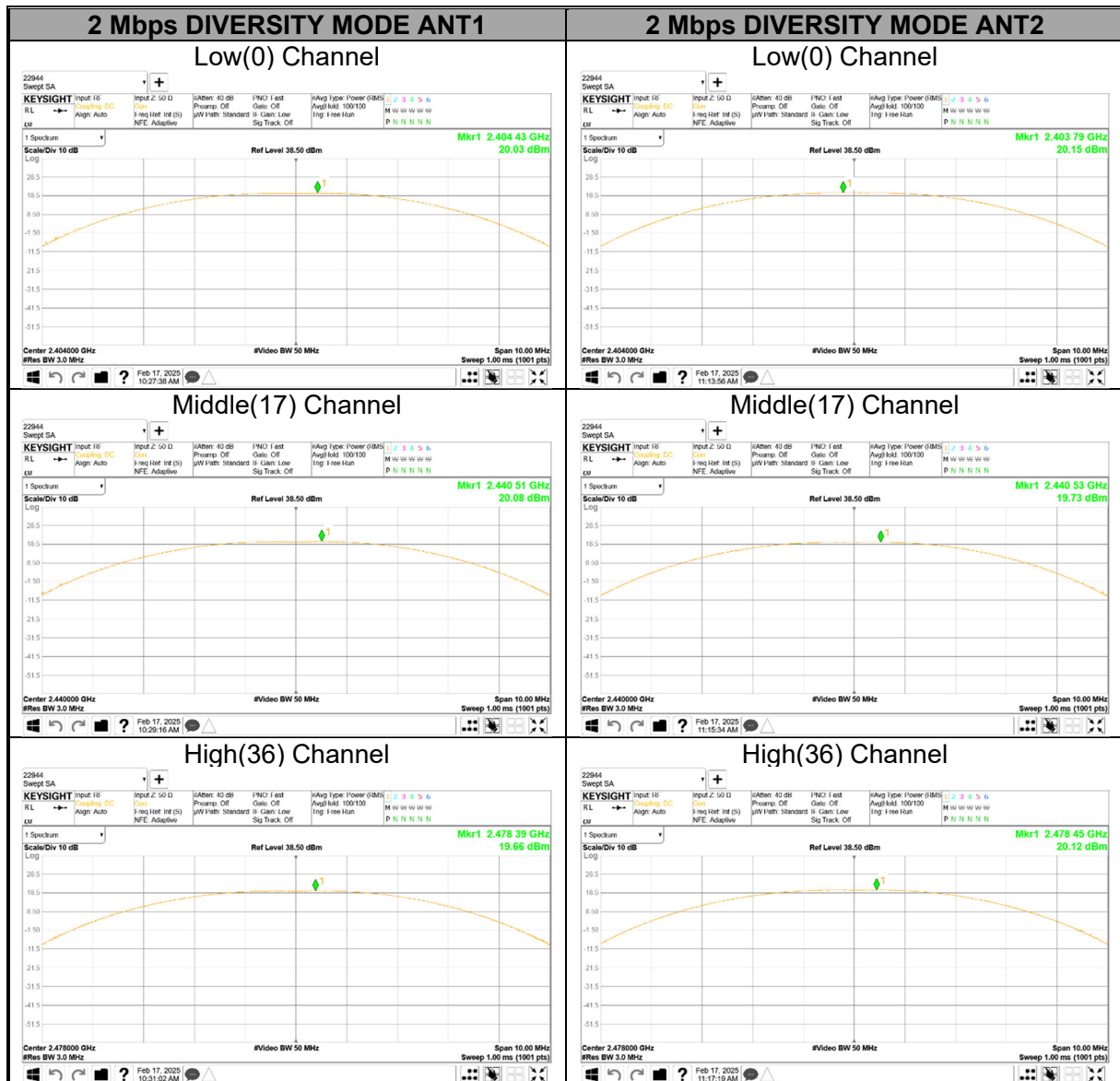
Mode	Antenna	Channel	Frequency [MHz]	Peak Output Power [dBm]	Limit [dBm]	Margin [dB]
1 Mbps (37 pkt)	ANT1	37	2 402	20.26	30.000	-9.74
		17	2 440	19.91		-10.09
		39	2 480	20.19		-9.81
1 Mbps (37 pkt)	ANT2	37	2 402	19.16		-10.84
		17	2 440	19.89		-10.11
		39	2 480	19.90		-10.10
2 Mbps (37 pkt)	ANT1	0	2 404	20.03		-9.97
		17	2 440	20.08		-9.92
		36	2 478	19.66		-10.34
2 Mbps (255 pkt)	ANT2	0	2 404	20.15		-9.85
		17	2 440	19.73		-10.27
		36	2 478	20.12		-9.88
Worst				20.26		-9.74

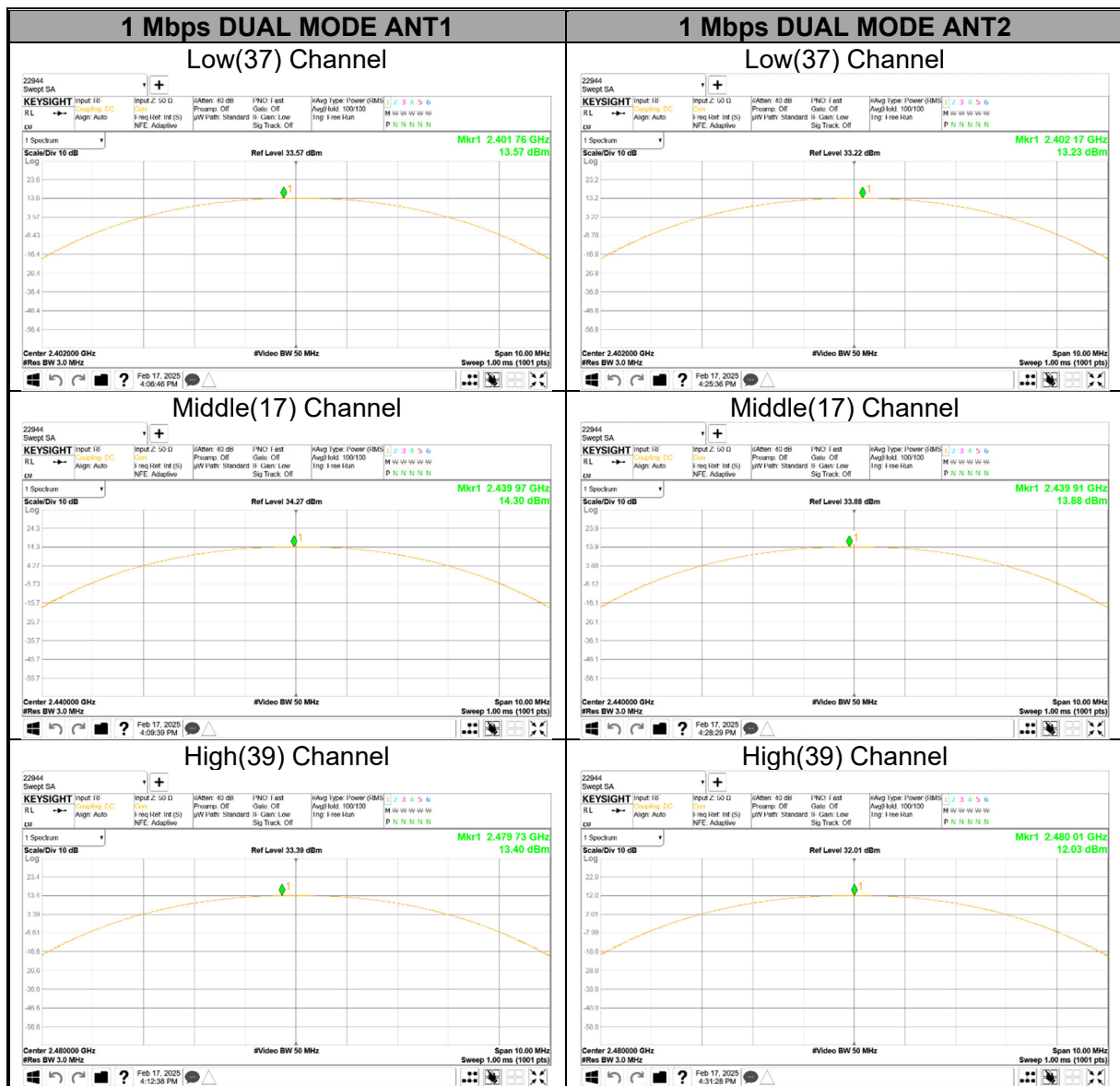
9.3.2. DUAL MODE TEST DATA

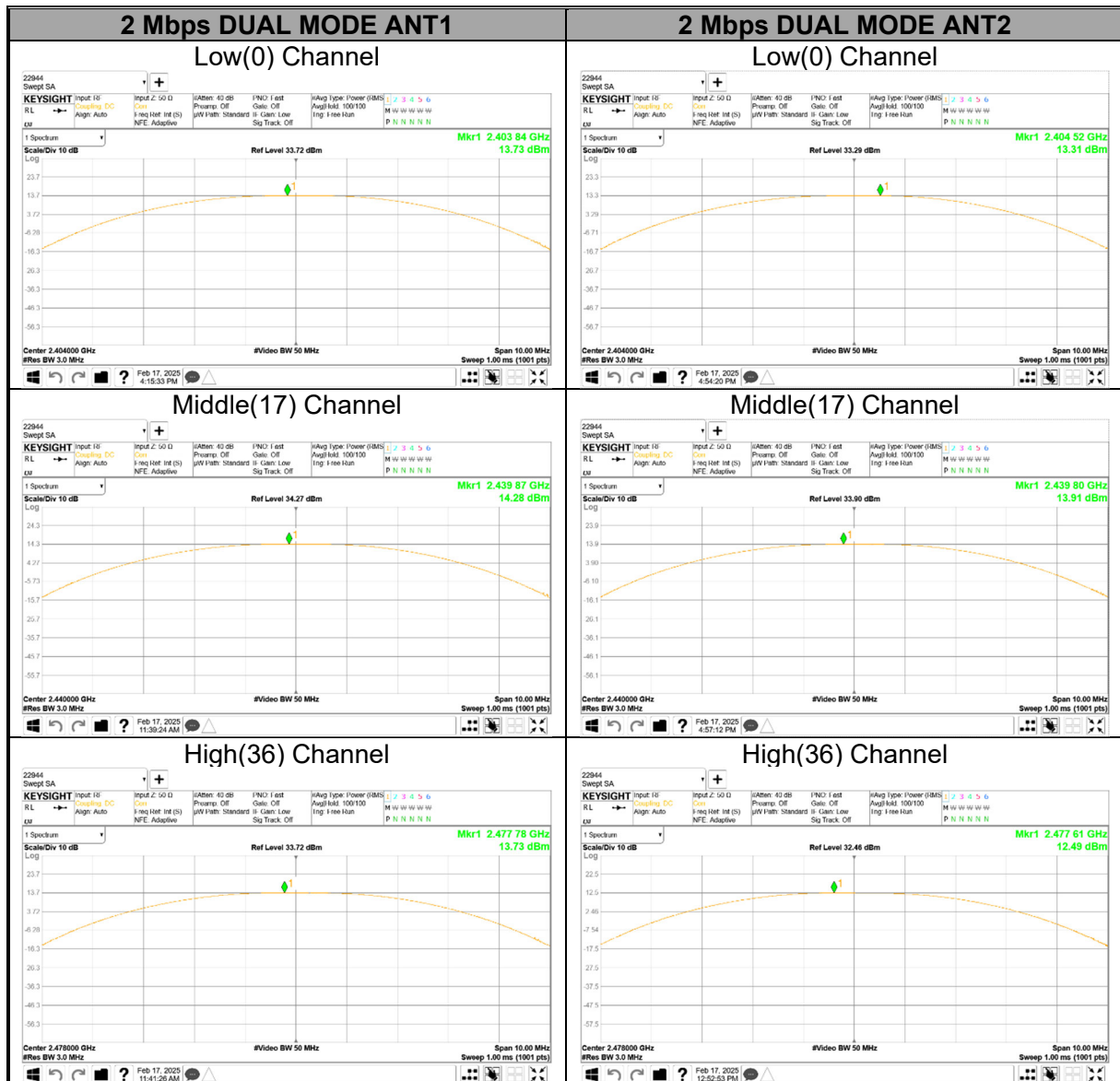
Mode	Antenna	Channel	Frequency [MHz]	Peak Output Power [dBm]	Limit [dBm]	Margin [dB]	
1 Mbps (255 pkt)	DUAL ANT1	37	2 402	13.57	30.000		
		17	2 440	14.30			
		39	2 480	13.40			
	DUAL ANT2	37	2 402	13.23			
		17	2 440	13.88			
		39	2 480	12.03			
	DUAL ANT1+2	37	2 402	16.41			-13.59
		17	2 440	17.11			-12.89
		39	2 480	15.78			-14.22
2 Mbps (255 pkt)	DUAL ANT1	0	2 404	13.73			
		17	2 440	14.28			
		36	2 478	13.73			
	DUAL ANT2	0	2 404	13.31			
		17	2 440	13.91			
		36	2 478	12.49			
	DUAL ANT1+2	0	2 404	16.54			-13.46
		17	2 440	17.11			-12.89
		36	2 478	16.16			-13.84
Worst				17.11	-12.89		

9.3.3. PEAK POWER PLOTS









9.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband RF frame average power sensor.
The cable assembly insertion loss and duty cycle correction factor were entered as an offset in the power meter to allow for direct reading of power.

RESULTS

9.4.1. DIVERSITY MODE TEST DATA

Mode	Antenna	Channel	Frequency [MHz]	Average Output Power [dBm]	Average Output Power [mW]
1 Mbps (37 pkt)	ANT1	37	2 402	19.334	85.783
		17	2 440	19.220	83.560
		39	2 480	19.222	83.599
1 Mbps (37 pkt)	ANT2	37	2 402	18.232	66.558
		17	2 440	19.010	79.616
		39	2 480	19.378	86.656
2 Mbps (37 pkt)	ANT1	0	2 404	19.076	80.835
		17	2 440	19.164	82.490
		36	2 478	18.876	77.197
2 Mbps (255 pkt)	ANT2	0	2 404	19.307	85.251
		17	2 440	18.851	76.754
		36	2 478	19.330	85.704

9.4.2. DUAL MODE TEST DATA

Mode	Antenna	Channel	Frequency [MHz]	Average Output Power [dBm]	Average Output Power [mW]
1 Mbps (255 pkt)	DUAL ANT1	37	2 402	13.49	
		17	2 440	14.09	
		39	2 480	13.19	
	DUAL ANT2	37	2 402	13.10	
		17	2 440	13.69	
		39	2 480	11.80	
	DUAL ANT1+2	37	2 402	16.31	42.757
		17	2 440	16.91	49.051
		39	2 480	15.56	35.994
2 Mbps (255 pkt)	DUAL ANT1	0	2 404	13.39	
		17	2 440	14.15	
		36	2 478	13.70	
	DUAL ANT2	0	2 404	12.83	
		17	2 440	13.54	
		36	2 478	12.33	
	DUAL ANT1+2	0	2 404	16.13	41.018
		17	2 440	16.86	48.572
		36	2 478	16.08	40.505

9.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

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.

TEST PROCEDURE

ANSI C63.10-2020, Section 11.10.2 Method PKPSD (peak PSD)

RESULTS

9.5.1. Test data

Mode	Antenna	Channel	Frequency [MHz]	PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
1 Mbps (37pkt)	ANT1	37	2 402	2.59	8.00	-5.41
		17	2 440	2.97		-5.03
		39	2 480	2.49		-5.51
1 Mbps (37pkt)	ANT2	37	2 402	2.58		-5.42
		17	2 440	3.55		-4.45
		39	2 480	2.90		-5.10
125 kbps (37pkt)	ANT1	37	2 402	4.55		-3.45
		17	2 440	4.94		-3.06
		39	2 480	4.23		-3.77
125 kbps (37pkt)	ANT2	37	2 402	4.38		-3.62
		17	2 440	4.71		-3.29
		39	2 480	2.73		-5.27
2 Mbps (37 pkt)	ANT1	0	2 404	0.77		-7.23
		17	2 440	0.97		-7.03
		36	2 478	0.25		-7.75
2 Mbps (255 pkt)	ANT2	0	2 404	-1.12		-9.12
		17	2 440	-0.51		-8.51
		36	2 478	-0.51		-8.51
Worst				4.94		-3.06

9.5.2. PSD TEST PLOTS

