

FCC RF Test Report

(2.4G Wi-Fi)

Report No.: JYTSZ-R12-2400776

Applicant: TECNO MOBILE LIMITED

Address of Applicant: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE
19-25 SHAN MEI STREET FOTAN NT HONGKONG

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: AE11

Trade Mark: TECNO

FCC ID: 2ADYY-YY5-AE11

Applicable Standards: FCC CFR Title 47 Part 15C (§15.247)

Date of Sample Receipt: 02 Jul., 2024

Date of Test: 03 Jul., to 13 Aug., 2024

Date of Report Issued: 14 Aug., 2024

Test Result: PASS

Project by:

James Peng
Project Engineer
James Zhao
Senior Engineer
James Wei
Manager

Date:

14 Aug., 2024

Reviewed by:

Date:

14 Aug., 2024

Approved by:

Date:

14 Aug., 2024

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	14 Aug., 2024	Original

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3 General Information

3.1 Client Information

Applicant:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Factory:	SHENZHEN TECNO TECHNOLOGY CO., LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R.China

3.2 General Description of E.U.T.

Product Name:	Mobile Phone
Model No.:	AE11
Operation Frequency:	2412 MHz - 2462 MHz (802.11b, g, n-HT20, ax-HE20) 2422 MHz - 2452 MHz (802.11n-HT40, ax-HE40)
Channel Numbers:	11 (802.11b, g, n-HT20, ax-HE20) 7 (802.11n-HT40, ax-HE40)
Channel Separation:	5MHz
Modulation Technology: (IEEE 802.11b)	DSSS-DBPSK, DQPSK, CCK
Modulation Technology: (IEEE 802.11g/802.11n)	OFDM-BPSK, QPSK, 16QAM, 64QAM
Modulation Technology: (IEEE 802.11ax)	OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Antenna Type:	Internal Antenna
Antenna Gain:	Unflip: ANT 4: -1.59 dBi (declare by applicant) ANT 12: -3.6 dBi (declare by applicant) Flip: ANT 4: -3.15 dBi (declare by applicant) ANT 12: -4.0 dBi (declare by applicant)
Antenna Transmit Mode:	SISO (1TX, 1RX)
Power Supply:	Rechargeable Li-ion Polymer Battery DC3.91V, 3410mAh & Rechargeable Li-ion Polymer Battery DC3.91V, 1180mAh
AC Adapter:	Model: U700TSA Input: AC100-240V, 50/60Hz, 2.0A Output: DC 5.0V, 3.0A 15.0W or 5.0-10.0V, 7.0A MAX or 11.0V, 6.4A MAX or 4.0-20.0V, 3.5A 70.0W MAX
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Test Mode and Environment

Test Mode:	
Transmitting mode:	Keep the EUT in continuous transmitting with modulation
Per-scan all kind of data rate, the follow list were the worst case:	
Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n-HT20	6.5Mbps
802.11n-HT40	13.5Mbps
802.11ax-HE20	8.6Mbps
802.11ax-HE40	17.2Mbps
Remark:	
- For AC power line conducted emission and radiated spurious emission (below 1GHz), pre-scan 802.11b, g, n, ax modulation mode, found 802.11b modulation mode was worse case mode. The report only reflects the test data of worst mode. - Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report.	
Operating Environment:	
Temperature:	15°C ~ 35°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.91Vdc, Extreme: Low 3.45Vdc, High 4.50Vdc
Test Engineer:	Logan Li (Conducted measurement) Alan Chen (Radiated measurement)

3.4 Description of Test Auxiliary Equipment

The EUT has been tested as an independent unit.

3.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Radiated Emission (30MHz ~ 200MHz) (3m SAC)	4.6 dB
Radiated Emission (200MHz ~ 1000MHz) (3m SAC)	5.8 dB
Radiated Emission (1GHz ~ 6GHz) (3m SAC)	4.5 dB
Radiated Emission (6GHz ~ 18GHz) (3m SAC)	4.7 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	5.34 dB
Radiated Emission (30MHz ~ 1GHz) (3m FAR)	3.43 dB
Radiated Emission (1GHz ~ 6GHz) (3m FAR)	4.95 dB
Radiated Emission (6GHz ~ 18GHz) (3m FAR)	5.23 dB
Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.	

3.6 Additions to, Deviations, or Exclusions from the Method

No

3.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

3.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

3.9 Test Instruments List

Radiated Emission(3m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	04-14-2021	04-13-2026
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	01-05-2024	01-04-2025
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	01-09-2024	01-08-2025
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	01-05-2024	01-04-2025
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-5	12-28-2023	12-27-2024
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXJ001-2	12-27-2023	12-26-2024
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	12-27-2023	12-26-2024
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	12-27-2023	12-26-2024
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	09-25-2023	09-24-2024
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	01-17-2024	01-16-2025
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

Radiated Emission(3m FAR):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m FAR	YUNYI	9m*6m*6m	WXJ097	06-15-2023	06-14-2028
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ097-2	06-26-2024	06-25-2025
Biconical Antenna	Schwarzbeck	VUBA9117	WXJ002-1	07-01-2024	06-30-2027
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ097-3	06-16-2024	06-15-2025
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-3	12-28-2023	12-27-2024
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-5	12-28-2023	12-27-2024
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-6	12-28-2023	12-27-2024
Pre-amplifier (30MHz ~ 1GHz)	YUNYI	PAM-310N	WXJ097-5	04-24-2024	04-23-2025
Pre-amplifier (1GHz ~ 18GHz)	YUNYI	PAM-118N	WXJ097-6	04-24-2024	04-23-2025
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXJ002-7	12-27-2023	12-26-2024
EMI Test Receiver	Rohde & Schwarz	ESCI3	WXJ003	12-27-2023	12-26-2024
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	12-27-2023	12-26-2024
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ081-1	06-11-2024	06-10-2025
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-13M	WXG097-1	08-01-2023	07-31-2024
				07-30-2024	07-29-2025
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG097-2	08-01-2023	07-31-2024
				07-30-2024	07-29-2025
Coaxial Cable (18GHz ~ 40GHz)	JYTSZ	JYT3M-40G-SS-8M	WXG097-3	08-01-2023	07-31-2024
				07-30-2024	07-29-2025
High Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Low Band Reject Filter Group	Tonscend	JS0806-F	WXJ097-4	N/A	
Test Software	Tonscend	TS+	Version: 5.0.0		

Conducted Method:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Keysight	N9010B	WXJ004-3	11-01-2023	10-31-2024
Temperature Humidity Chamber	ZHONG ZHI	CZ-A-80D	WXJ032-3	01-09-2023	01-08-2025
Power Detector Box	MWRFTTEST	MW100-PSB	WXJ007-4	09-25-2023	09-24-2024
DC Power Supply	Keysight	E3642A	WXJ025-2	N/A	
RF Control Unit	MWRFTTEST	MW100-RFCB	WXG006	N/A	
Test Software	MWRFTTEST	MTS 8310	Version: 2.0.0.0		

4 Measurement Setup and Procedure

4.1 Test Channel

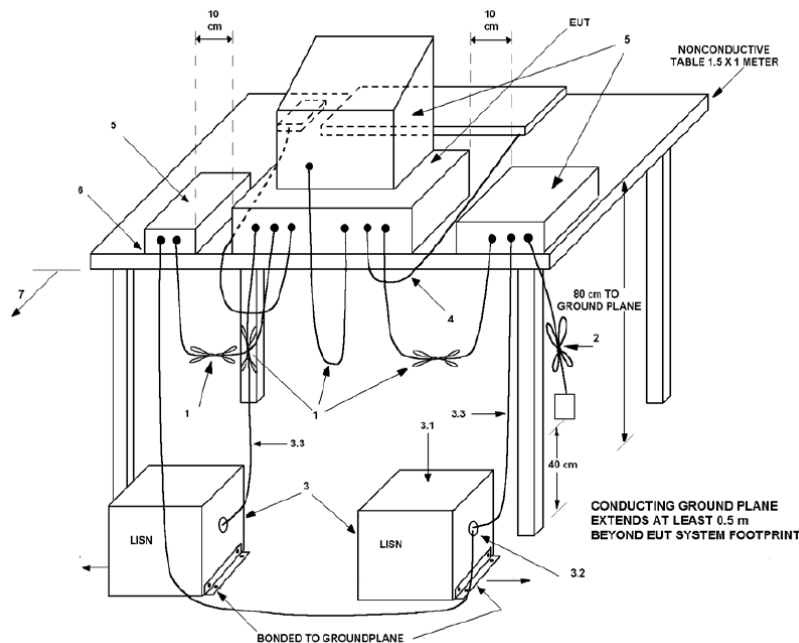
According to ANSI C63.10-2013 chapter 5.6.1 Table 4 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

802.11b, 802.11g, 802.11n-HT20, 802.11ax-HE20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	6	2437	11	2462

802.11n-HT40, 802.11ax-HE40					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
3	2422	6	2437	9	2452

4.2 Test Setup

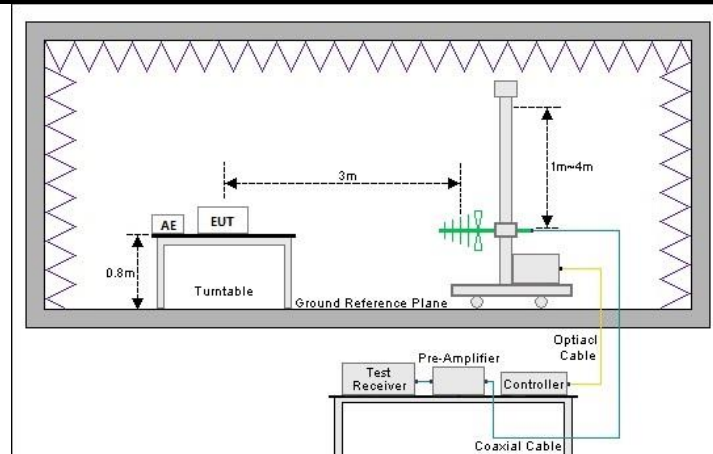
1) Conducted emission measurement:



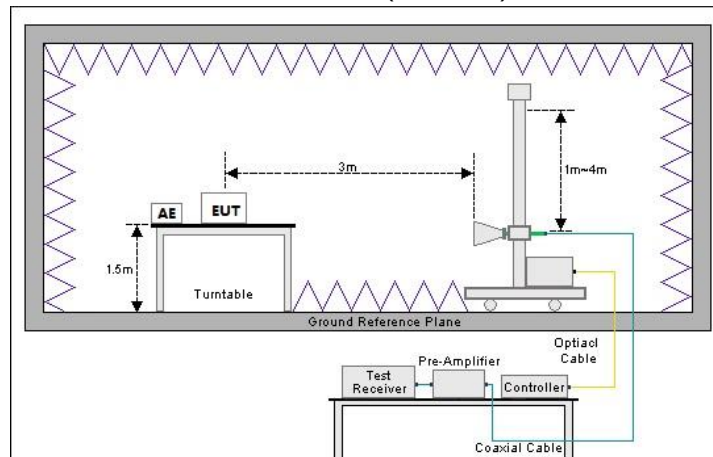
Note: The detailed descriptions please refer to Figure 8 of ANSI C63.4:2014.

2) Radiated emission measurement:

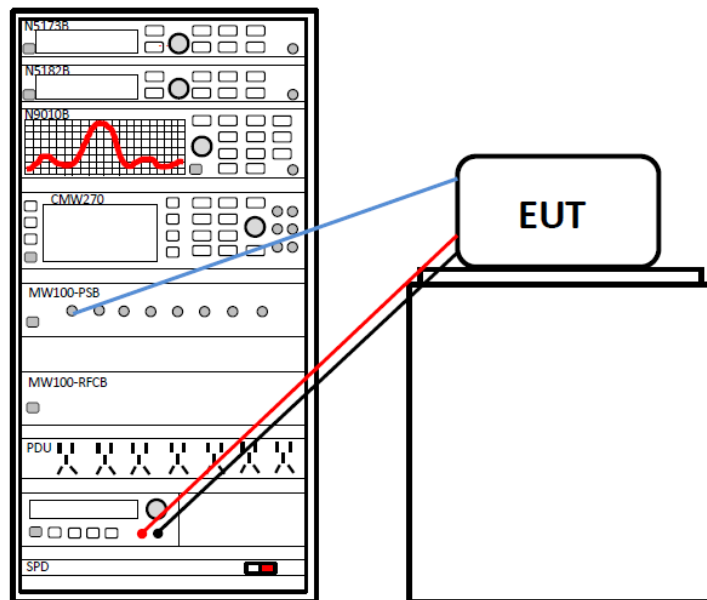
Below 1GHz (3m SAC)



Above 1GHz (3m SAC)



3) Conducted test method



4.3 Test Procedure

Test method	Test step
Conducted emission	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
Radiated emission	For below 1GHz: 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m . 2. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. For above 1GHz: 1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	1. The Wi-Fi antenna port of EUT was connected to the test port of the test system through an RF cable. 2. The EUT is keeping in continuous transmission mode and tested in all modulation modes. 3. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

5 Test Results

5.1 Summary

5.1.1 Clause and Data Summary

This report is revised according to the JYTSZ-R12-2400304 report, FCC ID: 2ADYY-AE11 issued by JianYan Testing Group Shenzhen Co., Ltd. Differences: FCC ID: 2ADYY-YYA-AE11 is in FCC ID: 2ADYY-AE11 models based on the change T6601/T6602/T6603/C3929/F6201/F6202/F6204/F6205/C3259/C3217/L3211 components of value, and changes the NFC antenna, so need to spot-check WiFi Conducted Output Power and Emissions in Non-restricted Frequency Bands.

Test items	Standard clause	Test data	Result
Antenna Requirement	15.203 15.247 (b)(4)	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
AC Power Line Conducted Emission	15.207	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
Duty Cycle	ANSI C63.10-2013	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
Conducted Output Power	15.247 (b)(3)	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
Power Spectral Density	15.247 (e)	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
Band-edge Emission Conduction Spurious Emission	15.247 (d)	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
Emissions in Restricted Frequency Bands	15.205 15.247 (d)	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
Emissions in Non-restricted Frequency Bands	15.209 15.247(d)	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.	Please refer to report JYTSZ-R12-2400304, FCC ID: 2ADYY-AE11.
Remark: 1. Pass: The EUT complies with the essential requirements in the standard. 2. N/A: Not Applicable. 3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer). 4. Please refer to FCC ID: 2ADYY-AE11, report No.: JYTSZ-R12-2400304 issue by JianYan Testing Group Shenzhen Co., Ltd.			
Test Method:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02		

5.1.2 Test Limit

Test items	Limit																														
AC Power Line Conducted Emission	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-Peak</th><th>Average</th></tr><tr><td>0.15 – 0.5</td><td>66 to 56 Note 1</td><td>56 to 46 Note 1</td></tr><tr><td>0.5 – 5</td><td>56</td><td>46</td></tr><tr><td>5 – 30</td><td>60</td><td>50</td></tr></table> Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency. Note 2: The more stringent limit applies at transition frequencies.	Frequency (MHz)	Limit (dBμV)		Quasi-Peak	Average	0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1	0.5 – 5	56	46	5 – 30	60	50																
Frequency (MHz)	Limit (dBμV)																														
	Quasi-Peak	Average																													
0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1																													
0.5 – 5	56	46																													
5 – 30	60	50																													
Conducted Output Power	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.																														
6dB Emission Bandwidth	The minimum 6 dB bandwidth shall be at least 500 kHz.																														
99% Occupied Bandwidth	N/A																														
Power Spectral Density	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.																														
Band-edge Emission Conduction Spurious Emission	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator 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 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 paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).																														
Emissions in Restricted Frequency Bands Emissions in Non-restricted Frequency Bands	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Limit (dBμV/m)</th><th rowspan="2">Detector</th></tr><tr><th>@ 3m</th><th>@ 10m</th></tr><tr><td>30 – 88</td><td>40.0</td><td>30.0</td><td>Quasi-peak</td></tr><tr><td>88 – 216</td><td>43.5</td><td>33.5</td><td>Quasi-peak</td></tr><tr><td>216 – 960</td><td>46.0</td><td>36.0</td><td>Quasi-peak</td></tr><tr><td>960 – 1000</td><td>54.0</td><td>44.0</td><td>Quasi-peak</td></tr></table> Note: The more stringent limit applies at transition frequencies. <table><tr><th rowspan="2">Frequency</th><th colspan="2">Limit (dBμV/m) @ 3m</th></tr><tr><th>Average</th><th>Peake</th></tr><tr><td>Above 1 GHz</td><td>54.0</td><td>74.0</td></tr></table> Note: The measurement bandwidth shall be 1 MHz or greater.	Frequency (MHz)	Limit (dBμV/m)		Detector	@ 3m	@ 10m	30 – 88	40.0	30.0	Quasi-peak	88 – 216	43.5	33.5	Quasi-peak	216 – 960	46.0	36.0	Quasi-peak	960 – 1000	54.0	44.0	Quasi-peak	Frequency	Limit (dBμV/m) @ 3m		Average	Peake	Above 1 GHz	54.0	74.0
Frequency (MHz)	Limit (dBμV/m)		Detector																												
	@ 3m	@ 10m																													
30 – 88	40.0	30.0	Quasi-peak																												
88 – 216	43.5	33.5	Quasi-peak																												
216 – 960	46.0	36.0	Quasi-peak																												
960 – 1000	54.0	44.0	Quasi-peak																												
Frequency	Limit (dBμV/m) @ 3m																														
	Average	Peake																													
Above 1 GHz	54.0	74.0																													

5.2 Emissions in Non-restricted Frequency Bands Spot-Check

Above 1GHz:

802.11b – ANT12						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	57.63	-7.92	49.71	74.00	24.29	Vertical
4824.00	57.42	-7.92	49.50	74.00	24.50	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	51.05	-7.92	43.13	54.00	10.87	Vertical
4824.00	50.60	-7.92	42.68	54.00	11.32	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	57.18	-7.55	49.63	74.00	24.37	Vertical
4874.00	57.88	-7.55	50.33	74.00	23.67	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	51.31	-7.55	43.76	54.00	10.24	Vertical
4874.00	50.51	-7.55	42.96	54.00	11.04	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	57.54	-7.21	50.33	74.00	23.67	Vertical
4924.00	58.06	-7.21	50.85	74.00	23.15	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	51.77	-7.21	44.56	54.00	9.44	Vertical
4924.00	50.31	-7.21	43.10	54.00	10.90	Horizontal
Remark: 1. Level = Reading + Factor. 2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

802.11g – ANT12						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	57.98	-7.92	50.06	74.00	23.94	Vertical
4824.00	57.36	-7.92	49.44	74.00	24.56	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	50.97	-7.92	43.05	54.00	10.95	Vertical
4824.00	50.52	-7.92	42.60	54.00	11.40	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	57.13	-7.55	49.58	74.00	24.42	Vertical
4874.00	57.52	-7.55	49.97	74.00	24.03	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	51.21	-7.55	43.66	54.00	10.34	Vertical
4874.00	50.82	-7.55	43.27	54.00	10.73	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	57.32	-7.21	50.11	74.00	23.89	Vertical
4924.00	58.44	-7.21	51.23	74.00	22.77	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	51.89	-7.21	44.68	54.00	9.32	Vertical
4924.00	50.51	-7.21	43.30	54.00	10.70	Horizontal
Remark: 1. Level = Reading + Factor. 2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

802.11b – ANT4						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	49.21	-7.92	41.29	74.00	32.71	Vertical
4824.00	49.99	-7.92	42.07	74.00	31.93	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	42.55	-7.92	34.63	54.00	19.37	Vertical
4824.00	42.64	-7.92	34.72	54.00	19.28	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	49.60	-7.55	42.05	74.00	31.95	Vertical
4874.00	49.56	-7.55	42.01	74.00	31.99	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	42.26	-7.55	34.71	54.00	19.29	Vertical
4874.00	42.75	-7.55	35.20	54.00	18.80	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	49.57	-7.21	42.36	74.00	31.64	Vertical
4924.00	50.17	-7.21	42.96	74.00	31.04	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	43.01	-7.21	35.80	54.00	18.20	Vertical
4924.00	43.03	-7.21	35.82	54.00	18.18	Horizontal
Remark: 1. Level = Reading + Factor. 2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

802.11g – ANT4						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	49.22	-7.92	41.30	74.00	32.70	Vertical
4824.00	50.01	-7.92	42.09	74.00	31.91	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	42.32	-7.92	34.40	54.00	19.60	Vertical
4824.00	42.98	-7.92	35.06	54.00	18.94	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	49.14	-7.55	41.59	74.00	32.41	Vertical
4874.00	49.53	-7.55	41.98	74.00	32.02	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	42.22	-7.55	34.67	54.00	19.33	Vertical
4874.00	42.84	-7.55	35.29	54.00	18.71	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	49.67	-7.21	42.46	74.00	31.54	Vertical
4924.00	49.74	-7.21	42.53	74.00	31.47	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	43.18	-7.21	35.97	54.00	18.03	Vertical
4924.00	43.28	-7.21	36.07	54.00	17.93	Horizontal
Remark: 1. Level = Reading + Factor. 2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

802.11n-HT20 – MIMO						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	57.74	-7.92	49.82	74.00	24.18	Vertical
4824.00	56.89	-7.92	48.97	74.00	25.03	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	50.73	-7.92	42.81	54.00	11.19	Vertical
4824.00	50.90	-7.92	42.98	54.00	11.02	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	56.67	-7.55	49.12	74.00	24.88	Vertical
4874.00	57.27	-7.55	49.72	74.00	24.28	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	51.14	-7.55	43.59	54.00	10.41	Vertical
4874.00	51.17	-7.55	43.62	54.00	10.38	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	57.66	-7.21	50.45	74.00	23.55	Vertical
4924.00	58.63	-7.21	51.42	74.00	22.58	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	52.28	-7.21	45.07	54.00	8.93	Vertical
4924.00	50.86	-7.21	43.65	54.00	10.35	Horizontal
Remark: 1. Level = Reading + Factor. 2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

802.11ax-HE20 – MIMO						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	57.24	-7.92	49.32	74.00	24.68	Vertical
4824.00	57.32	-7.92	49.40	74.00	24.60	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	51.01	-7.92	43.09	54.00	10.91	Vertical
4824.00	50.60	-7.92	42.68	54.00	11.32	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	57.15	-7.55	49.60	74.00	24.40	Vertical
4874.00	57.65	-7.55	50.10	74.00	23.90	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	50.80	-7.55	43.25	54.00	10.75	Vertical
4874.00	51.02	-7.55	43.47	54.00	10.53	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	58.02	-7.21	50.81	74.00	23.19	Vertical
4924.00	58.98	-7.21	51.77	74.00	22.23	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	52.19	-7.21	44.98	54.00	9.02	Vertical
4924.00	50.71	-7.21	43.50	54.00	10.50	Horizontal
Remark: 1. Level = Reading + Factor. 2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

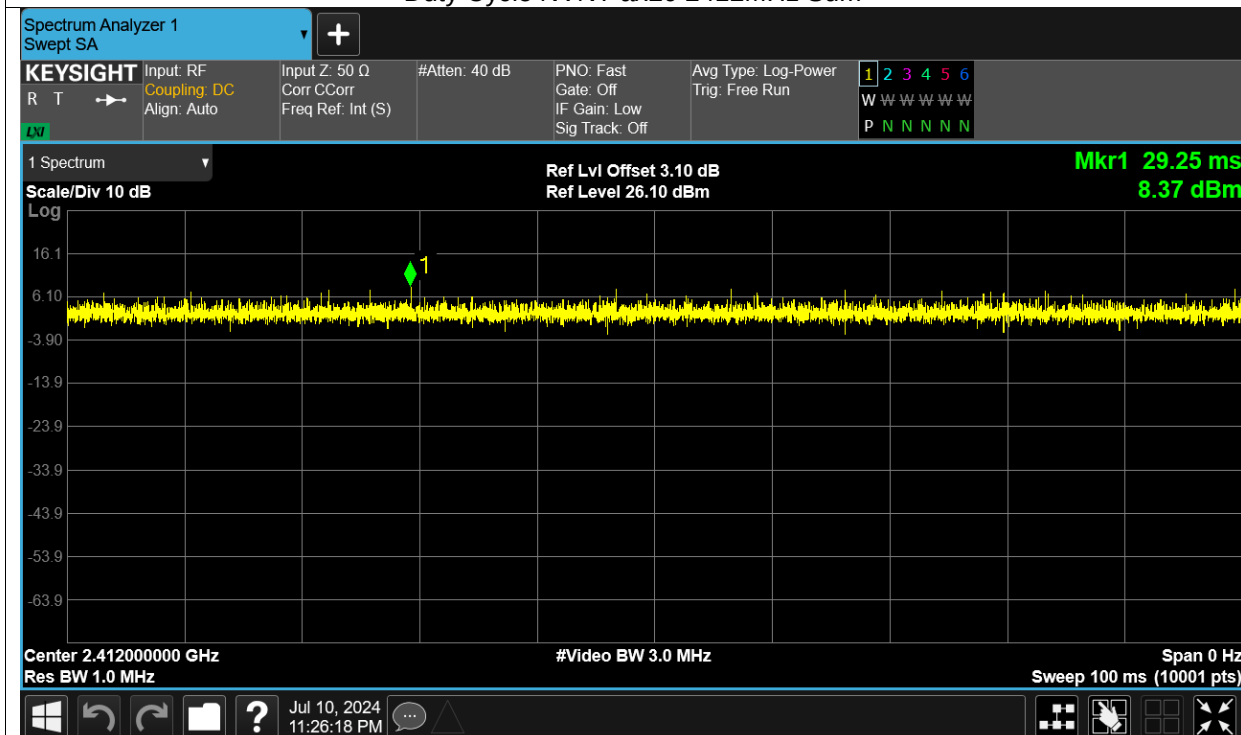
802.11ax-HE40 – MIMO						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4844.00	57.41	-7.83	49.58	74.00	24.42	Vertical
4844.00	56.74	-7.83	48.91	74.00	25.09	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4844.00	51.11	-7.83	43.28	54.00	10.72	Vertical
4844.00	50.67	-7.83	42.84	54.00	11.16	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	56.37	-7.55	48.82	74.00	25.18	Vertical
4874.00	57.06	-7.55	49.51	74.00	24.49	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	50.95	-7.55	43.40	54.00	10.60	Vertical
4874.00	51.17	-7.55	43.62	54.00	10.38	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4904.00	57.93	-7.27	50.66	74.00	23.34	Vertical
4904.00	58.15	-7.27	50.88	74.00	23.12	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4904.00	52.57	-7.27	45.30	54.00	8.70	Vertical
4904.00	50.62	-7.27	43.35	54.00	10.65	Horizontal
Remark: 1. Level = Reading + Factor. 2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

5.3 Duty Cycle--Spot-Check

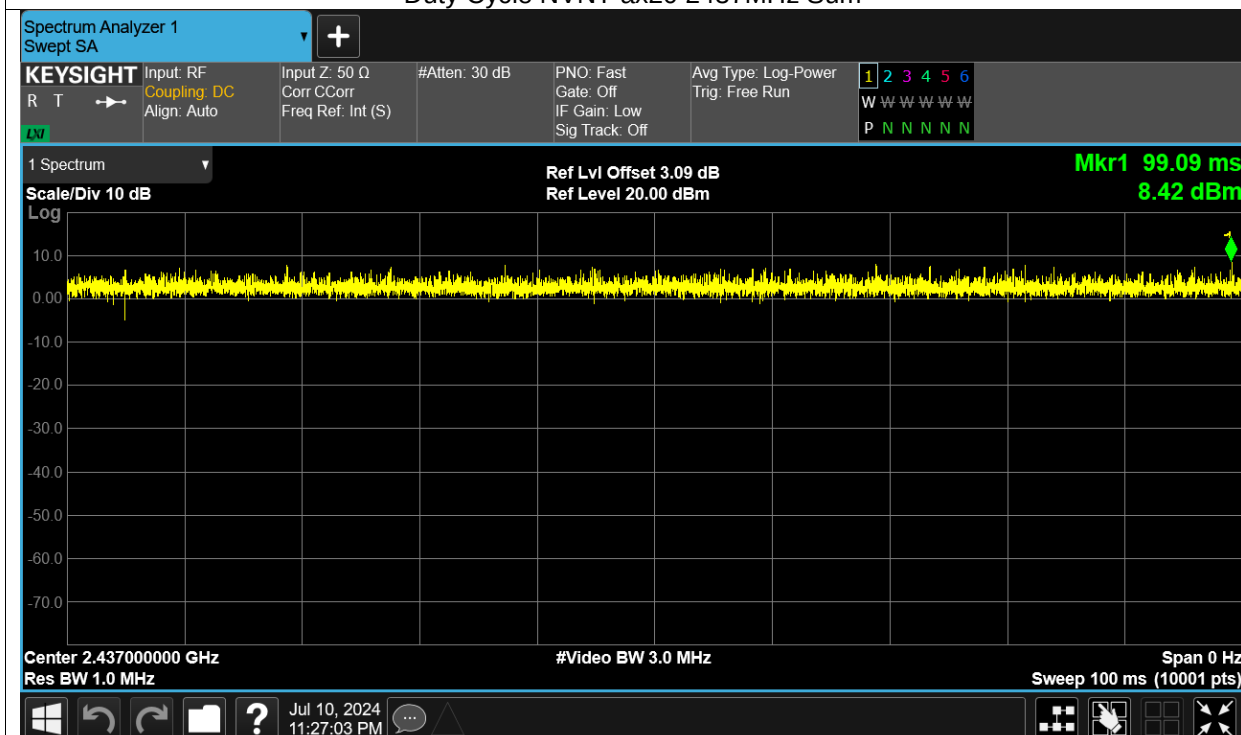
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	ax20	2412	Sum	100	0
NVNT	ax20	2437	Sum	100	0
NVNT	ax20	2462	Sum	100	0
NVNT	ax40	2422	Sum	100	0
NVNT	ax40	2437	Sum	100	0
NVNT	ax40	2452	Sum	100	0
NVNT	b	2412	Ant1	100	0
NVNT	b	2437	Ant1	100	0
NVNT	b	2462	Ant1	100	0
NVNT	b	2412	Ant2	100	0
NVNT	b	2437	Ant2	100	0
NVNT	b	2462	Ant2	100	0
NVNT	g	2412	Ant1	100	0
NVNT	g	2437	Ant1	100	0
NVNT	g	2462	Ant1	100	0
NVNT	g	2412	Ant2	100	0
NVNT	g	2437	Ant2	100	0
NVNT	g	2462	Ant2	100	0
NVNT	n20	2412	Sum	100	0
NVNT	n20	2437	Sum	100	0
NVNT	n20	2462	Sum	100	0

Test Graphs

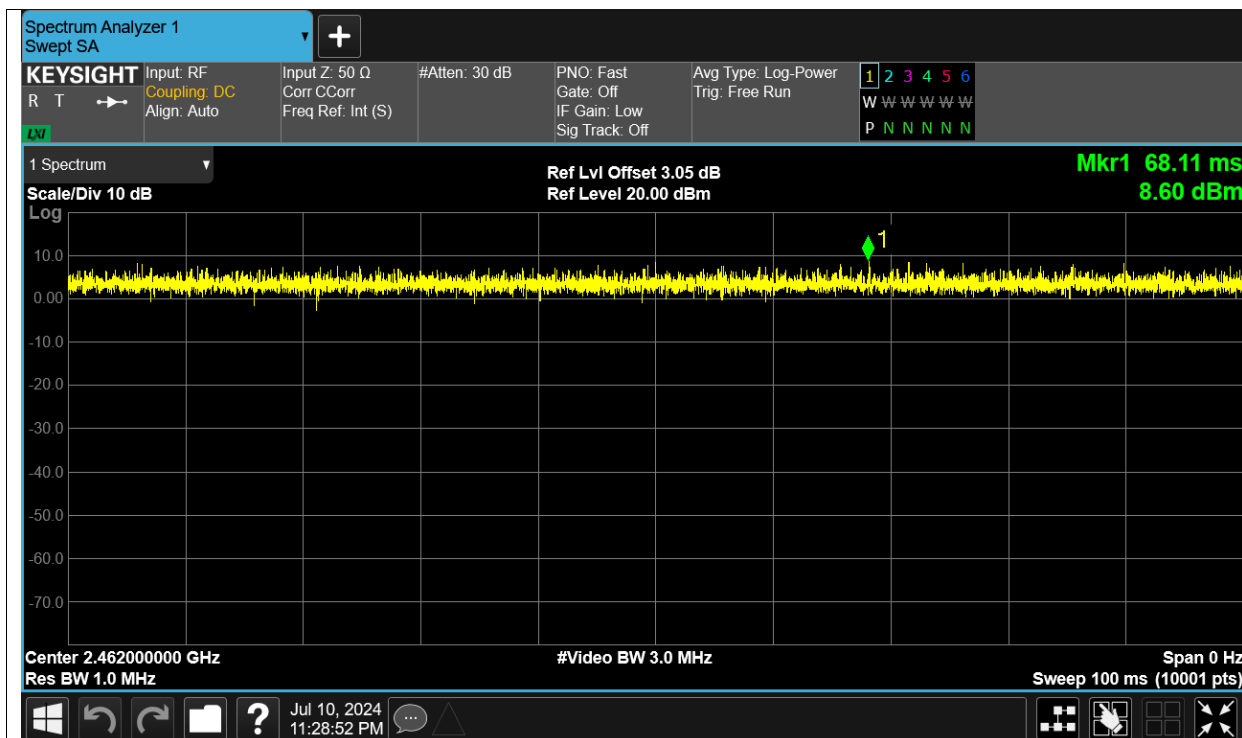
Duty Cycle NVNT ax20 2412MHz Sum



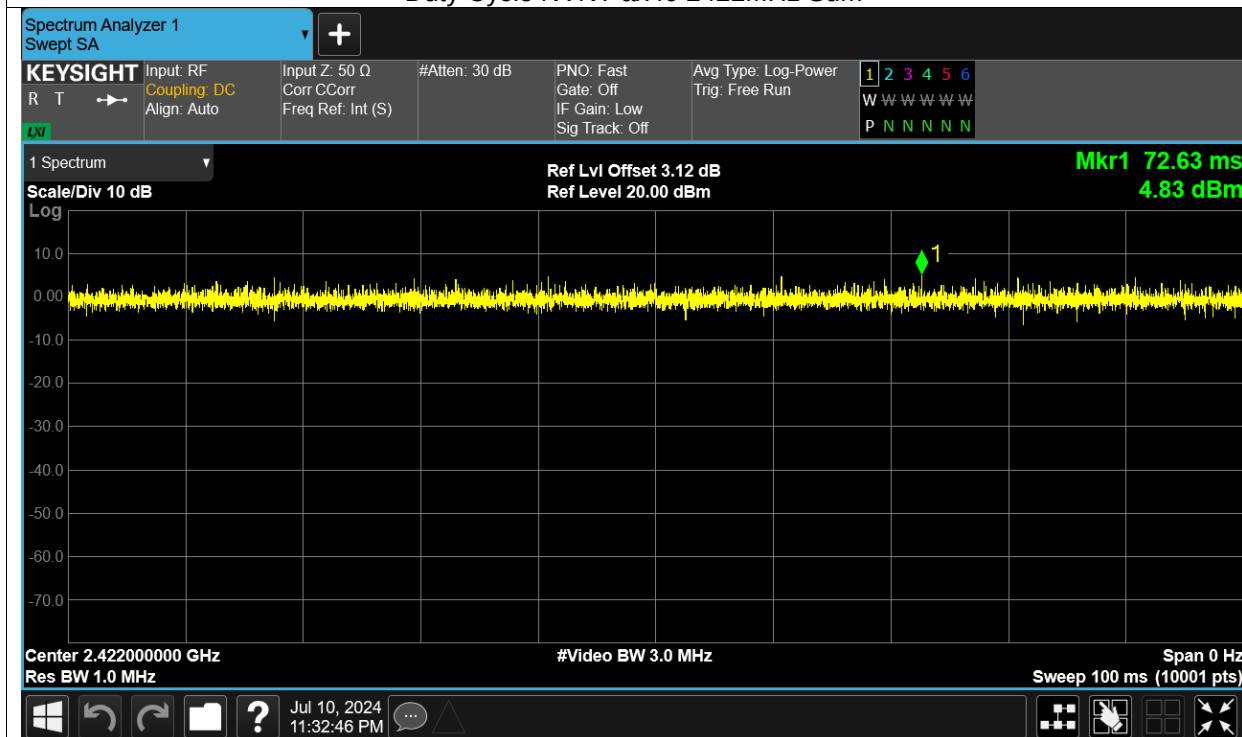
Duty Cycle NVNT ax20 2437MHz Sum



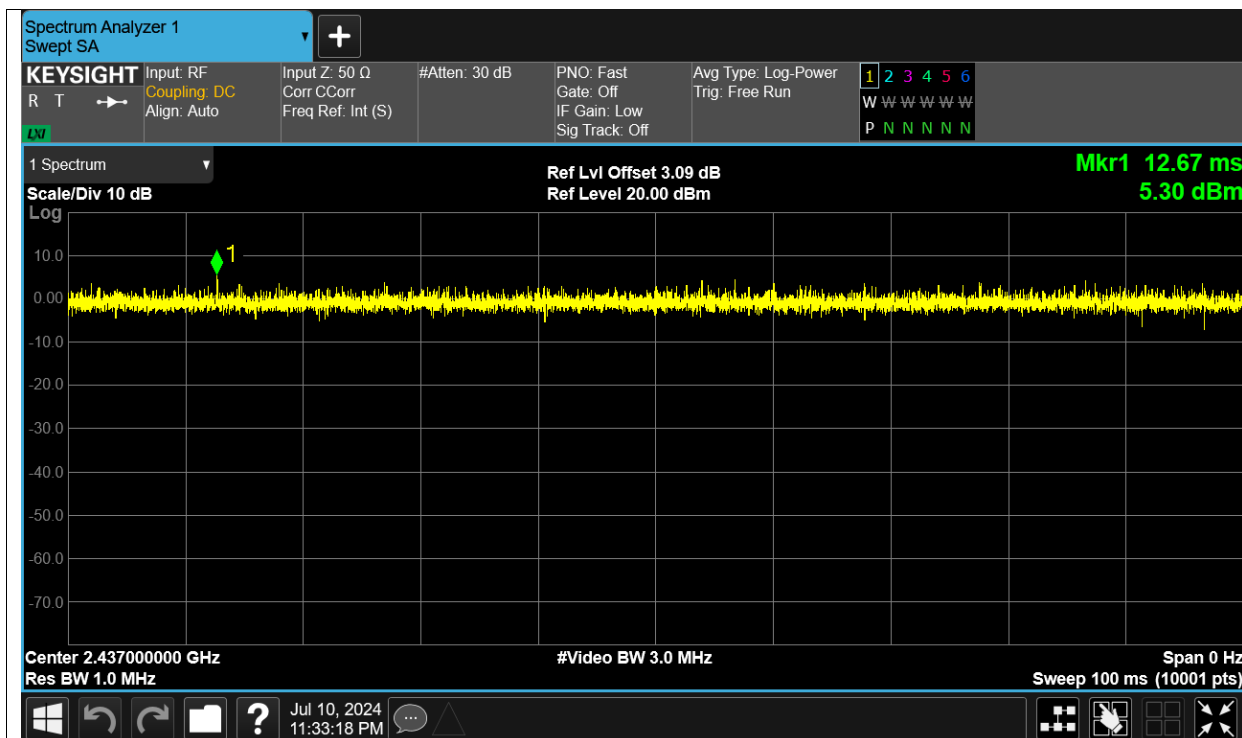
Duty Cycle NVNT ax20 2462MHz Sum



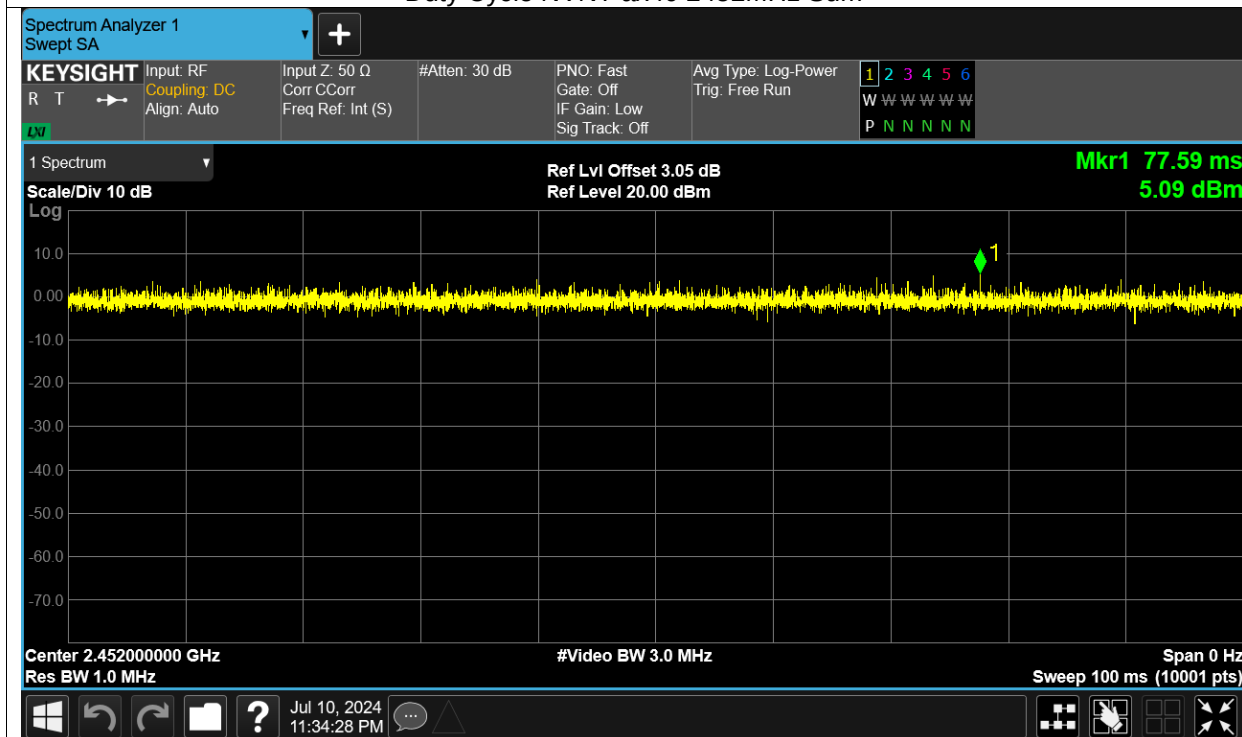
Duty Cycle NVNT ax40 2422MHz Sum



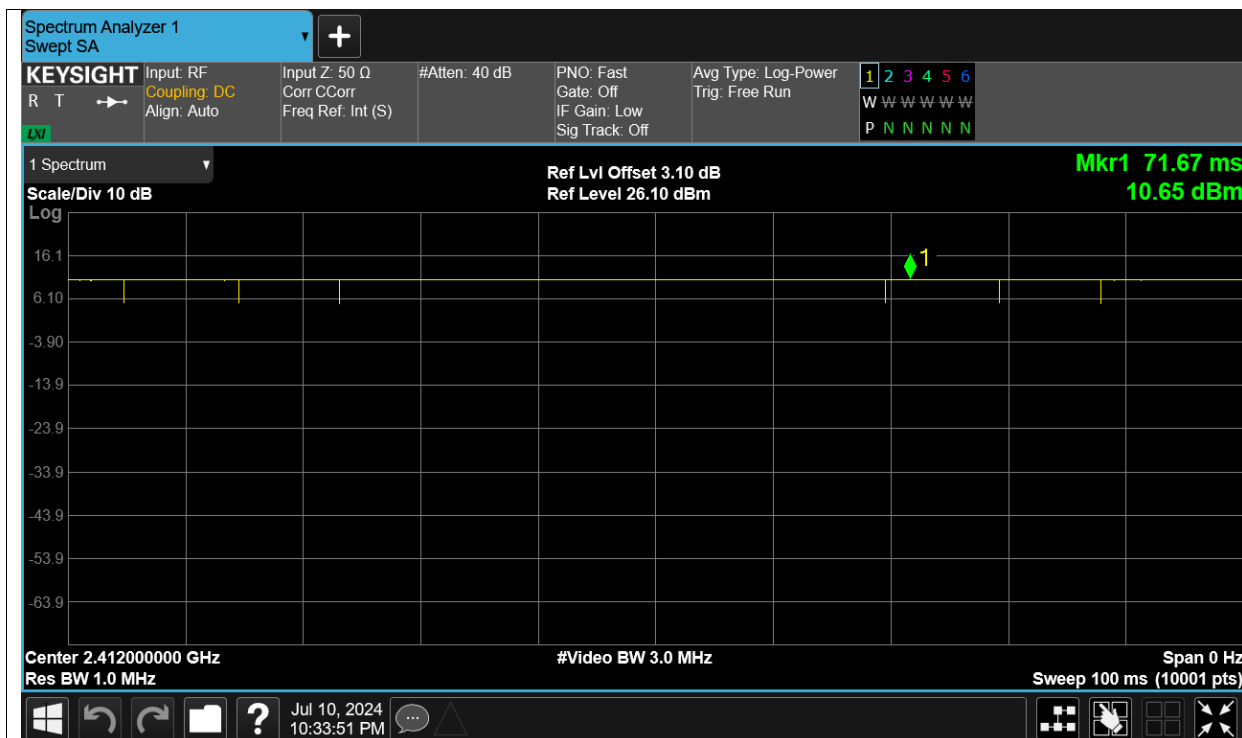
Duty Cycle NVNT ax40 2437MHz Sum



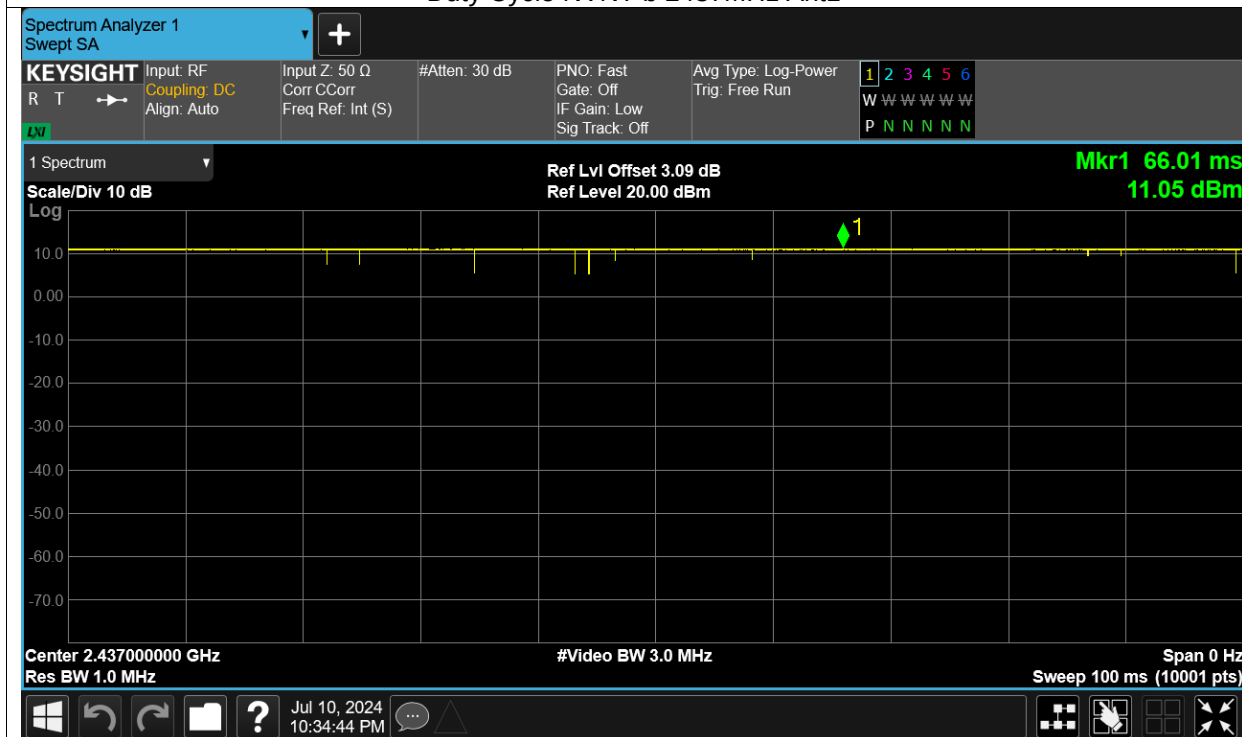
Duty Cycle NVNT ax40 2452MHz Sum



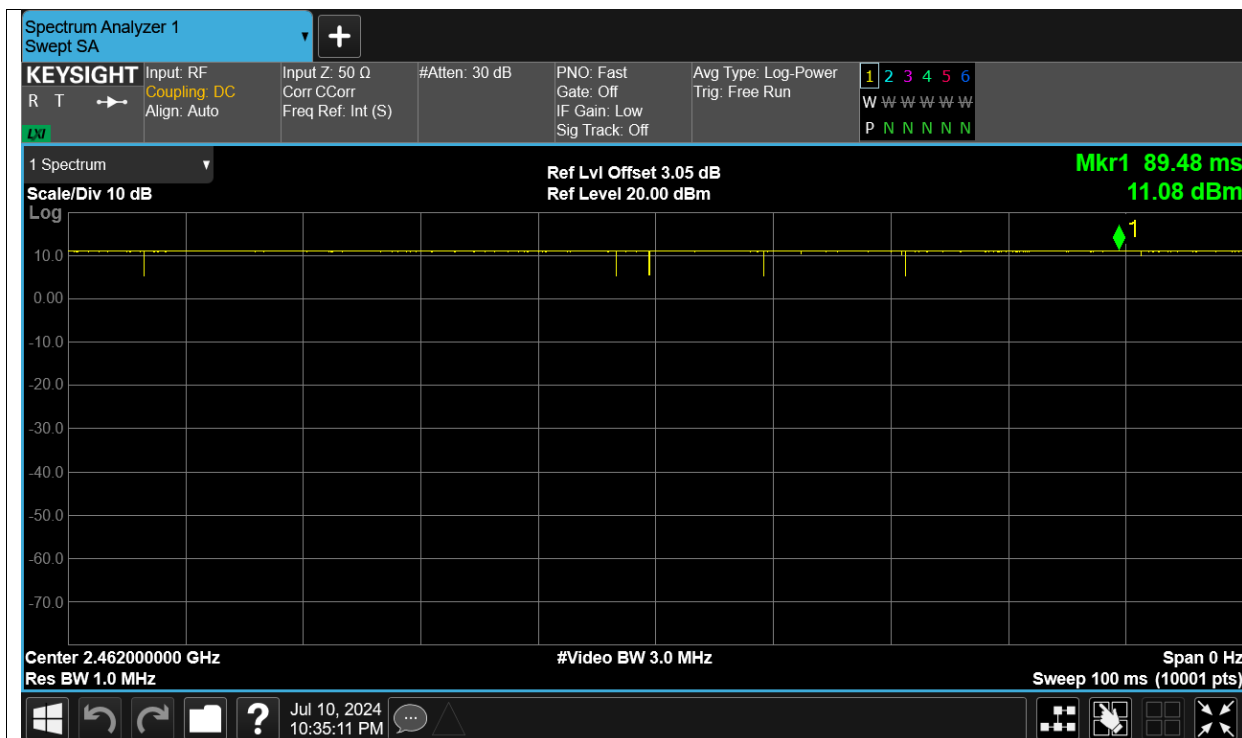
Duty Cycle NVNT b 2412MHz Ant1



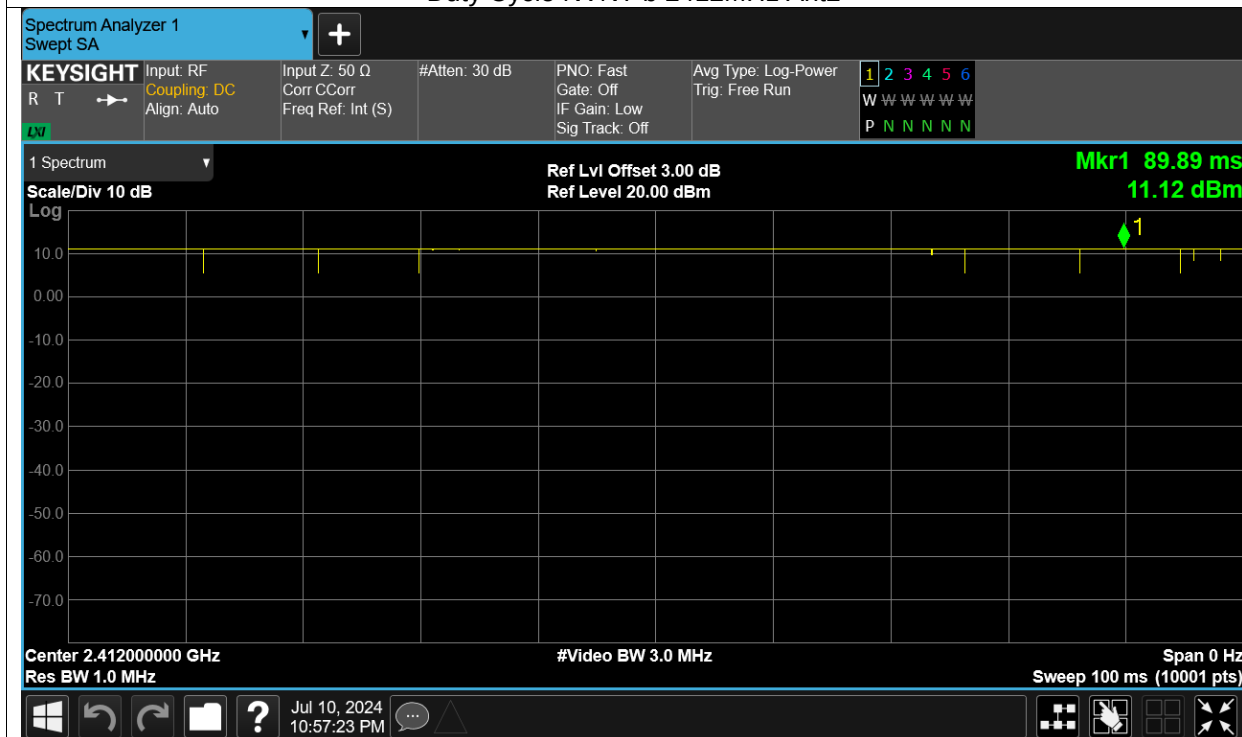
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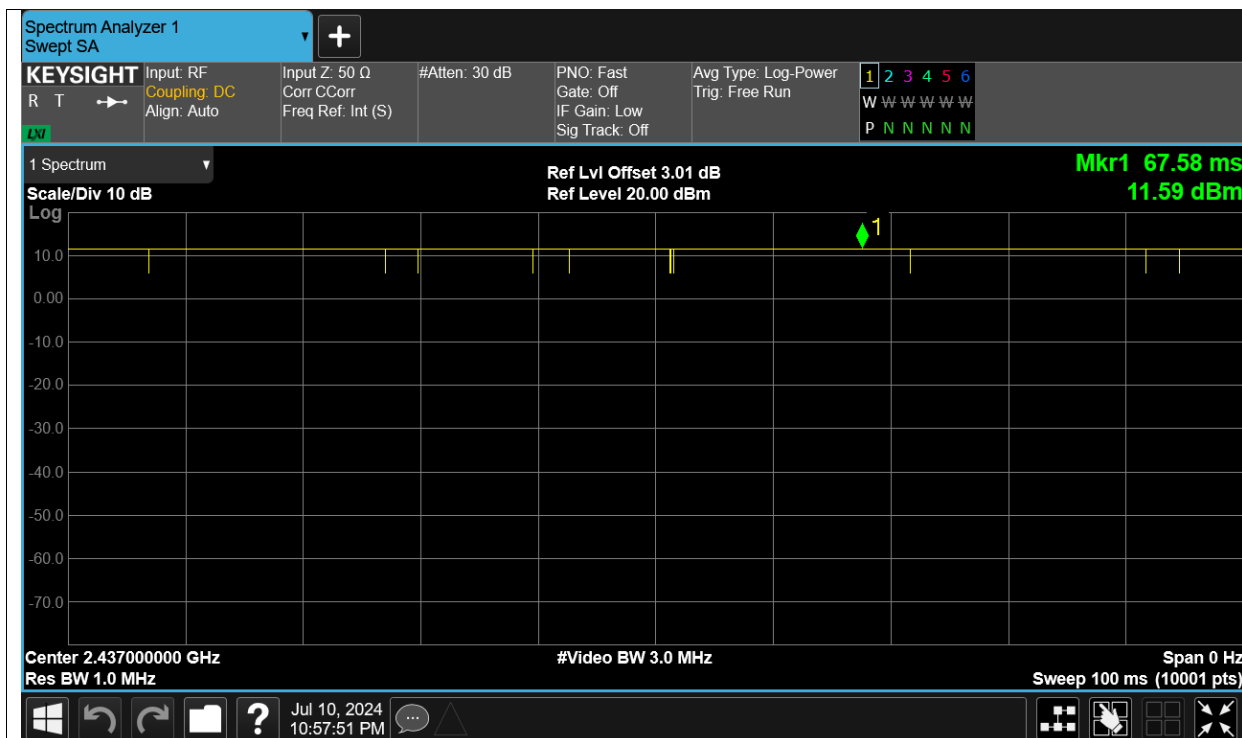
Duty Cycle NVNT b 2462MHz Ant1



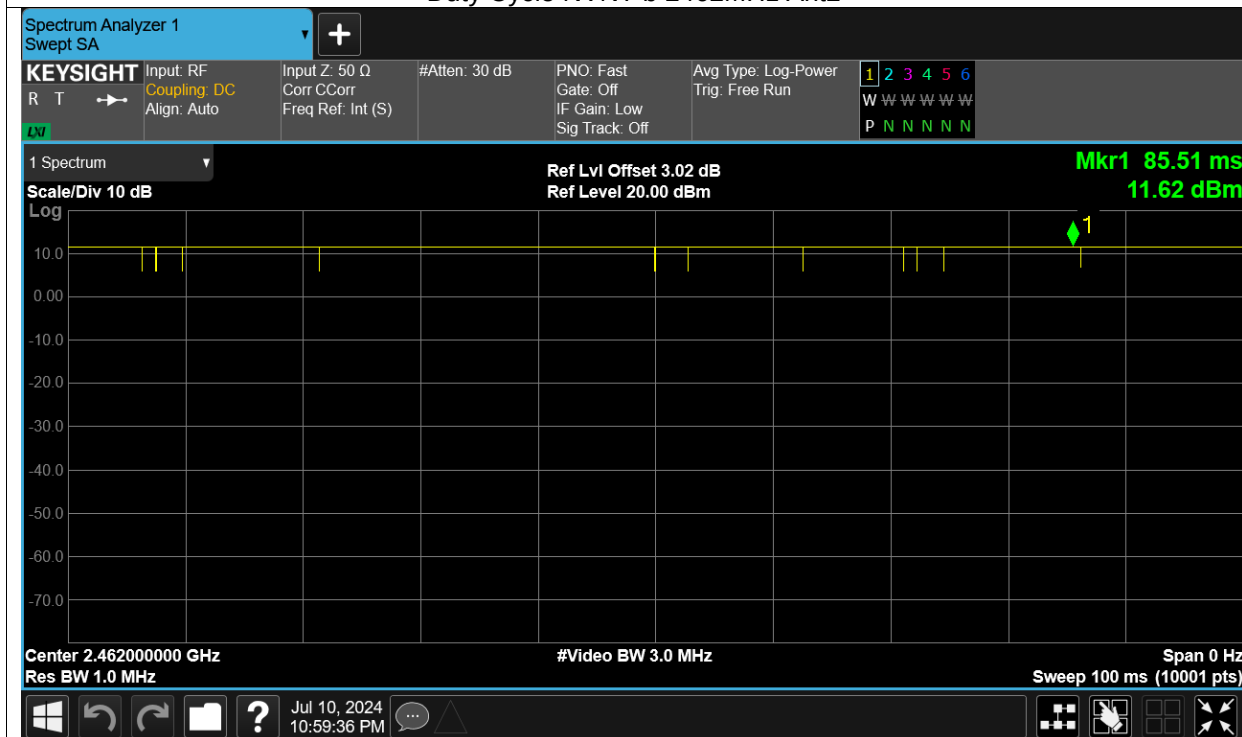
Duty Cycle NVNT b 2412MHz Ant2



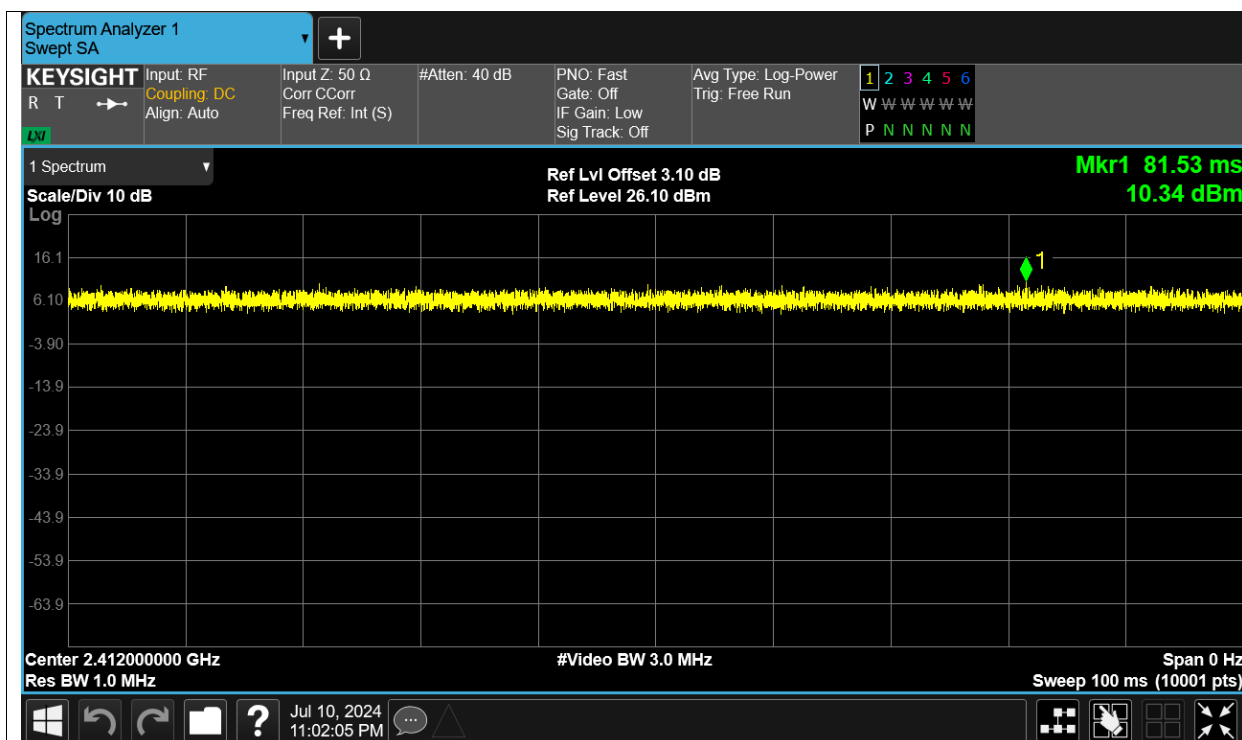
Duty Cycle NVNT b 2437MHz Ant2



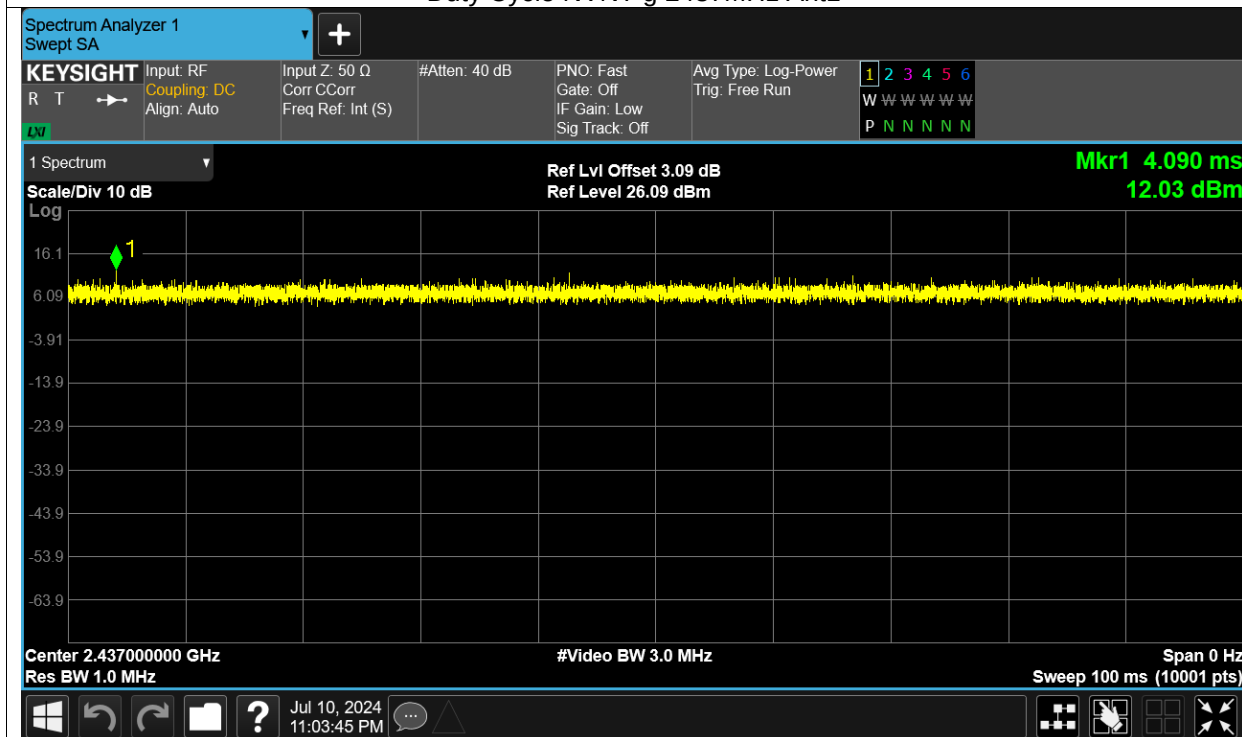
Duty Cycle NVNT b 2462MHz Ant2



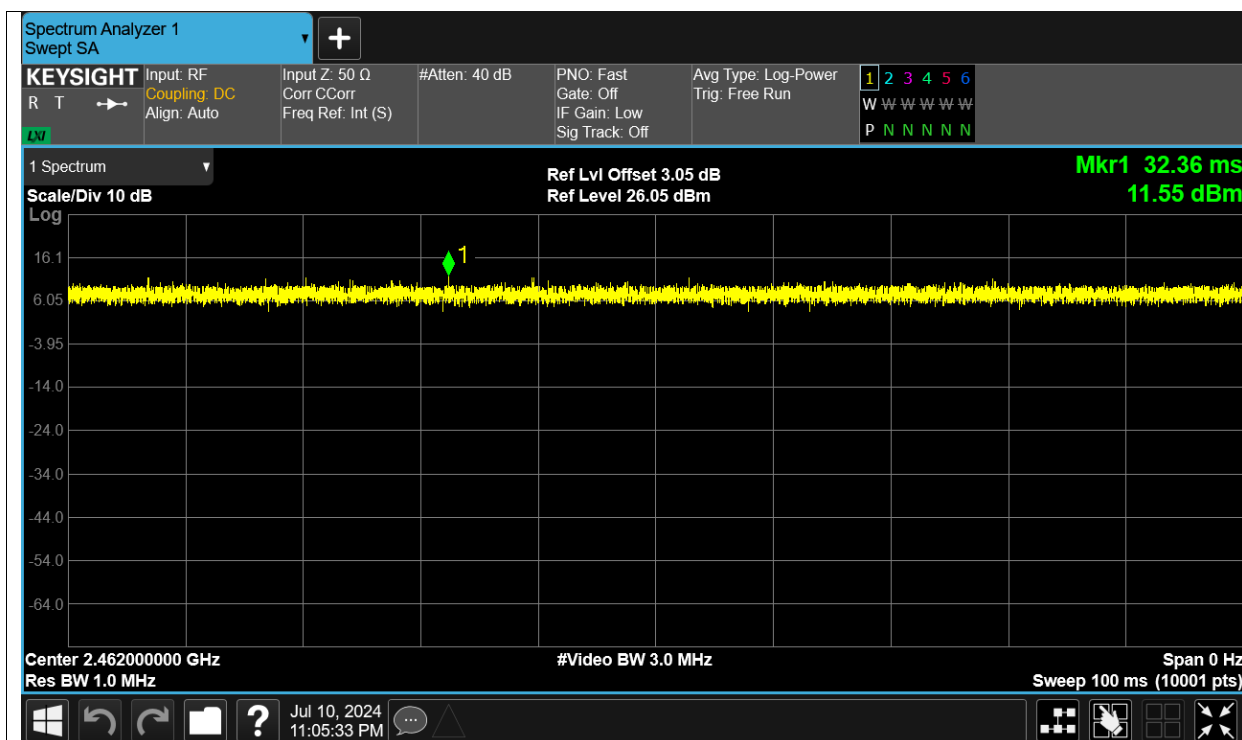
Duty Cycle NVNT g 2412MHz Ant1



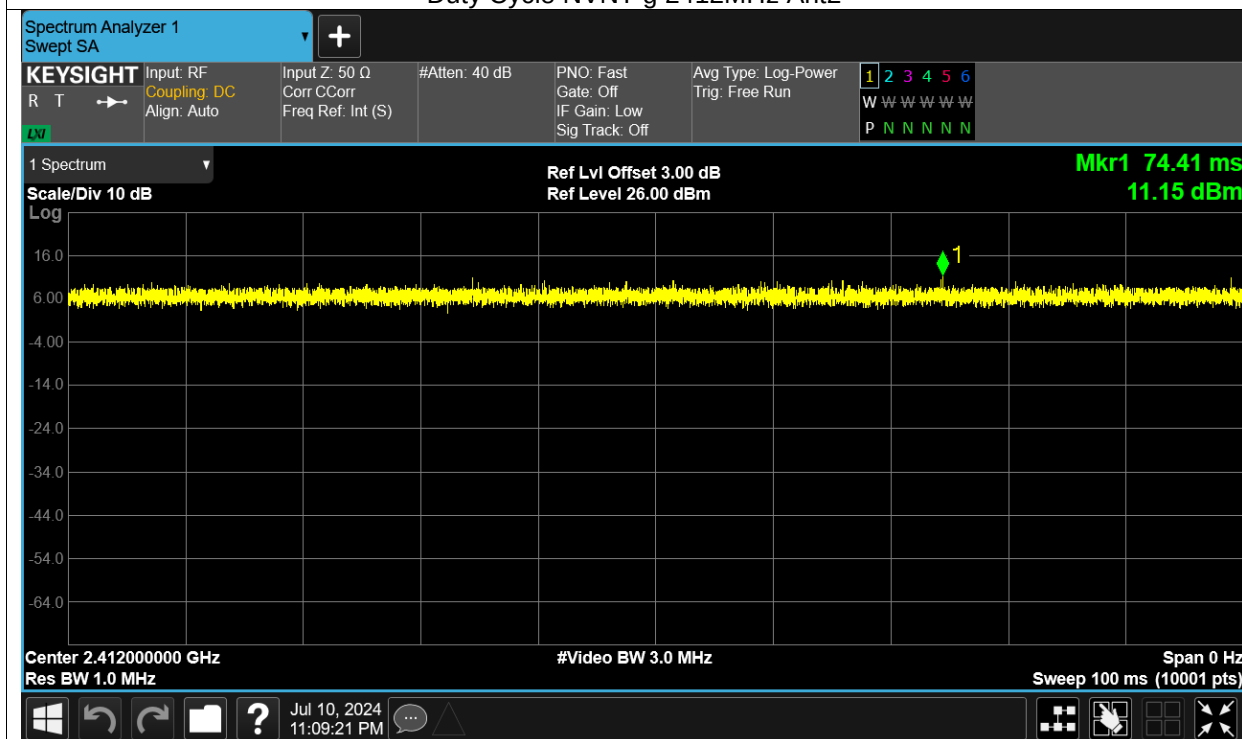
Duty Cycle NVNT g 2437MHz Ant1



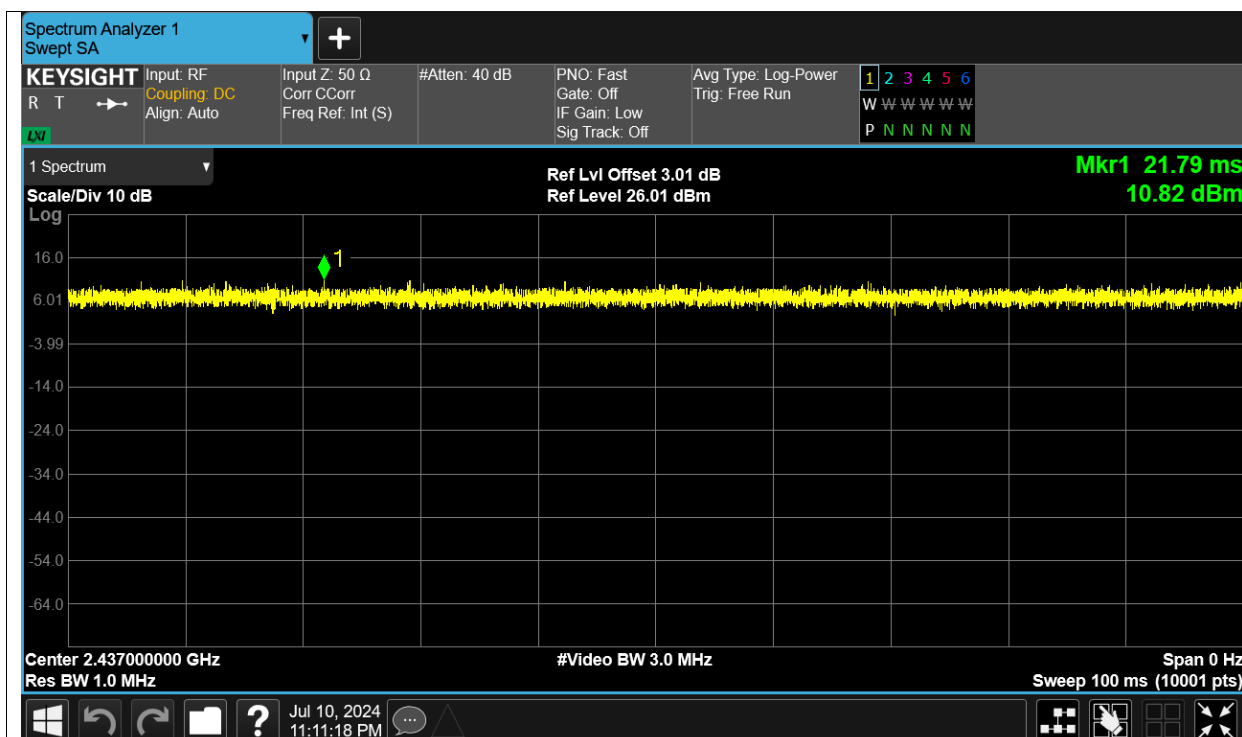
Duty Cycle NVNT g 2462MHz Ant1



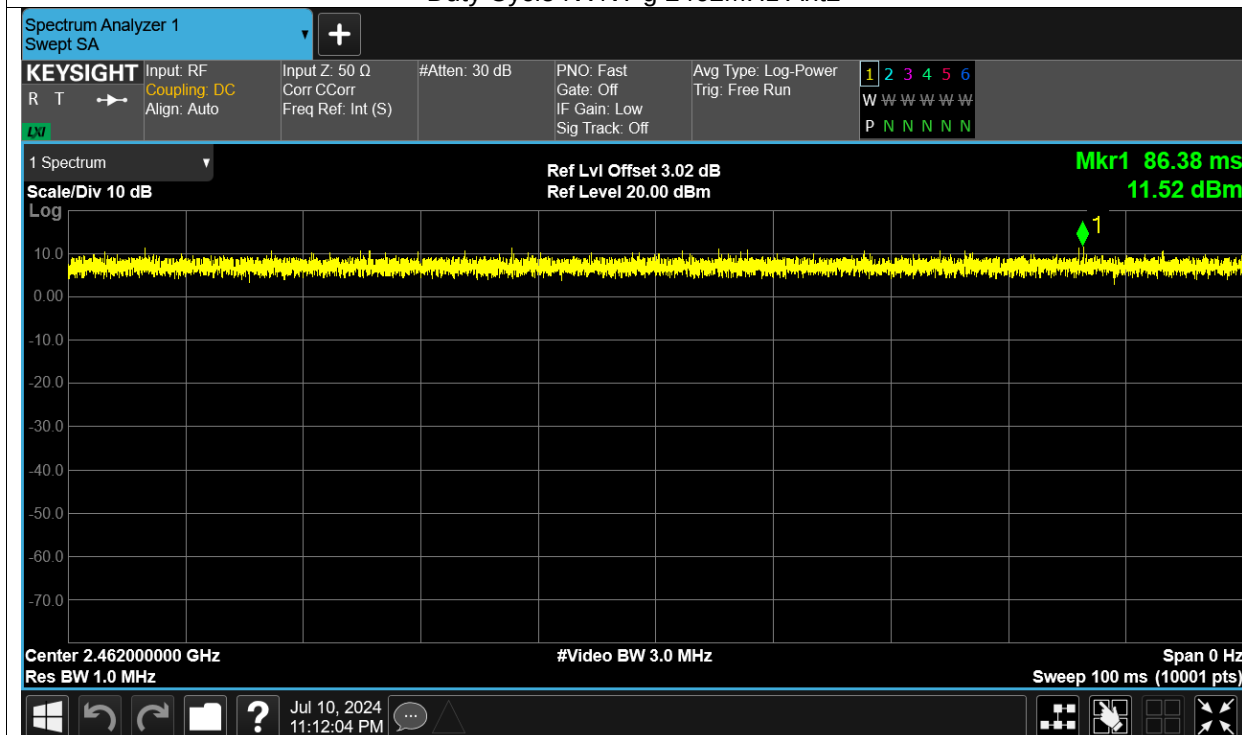
Duty Cycle NVNT g 2412MHz Ant2



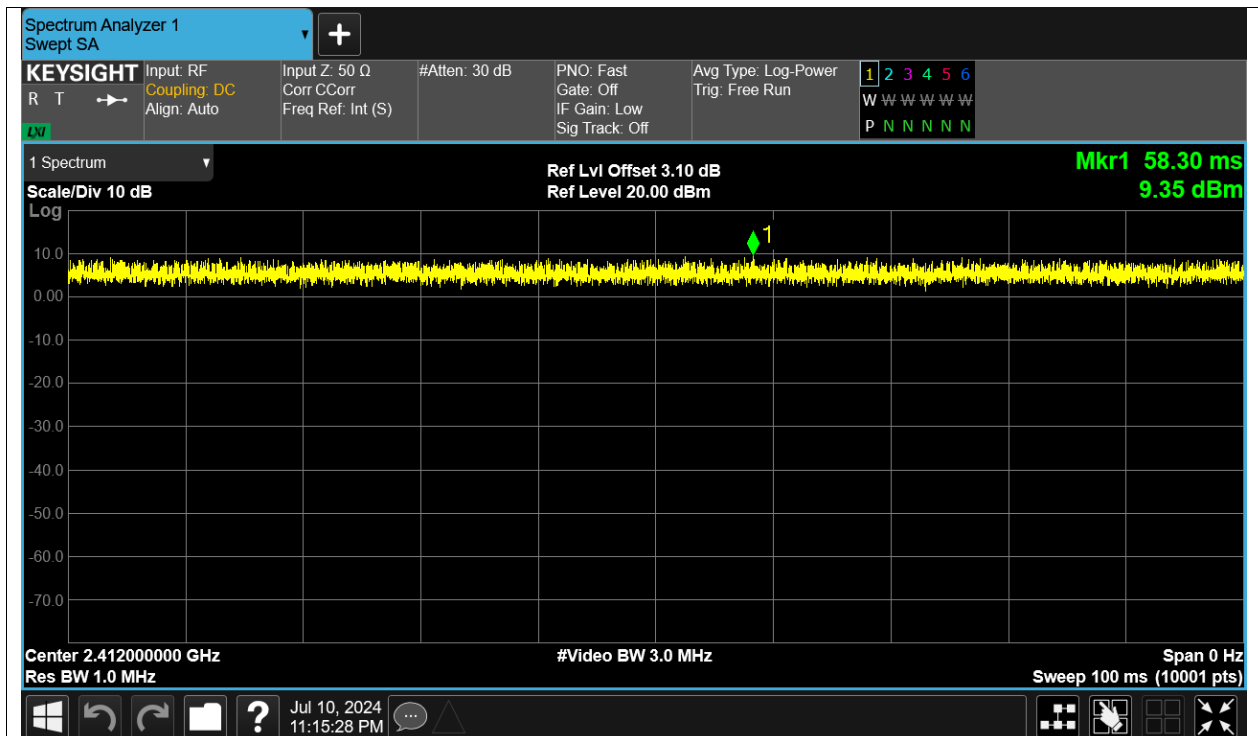
Duty Cycle NVNT g 2437MHz Ant2



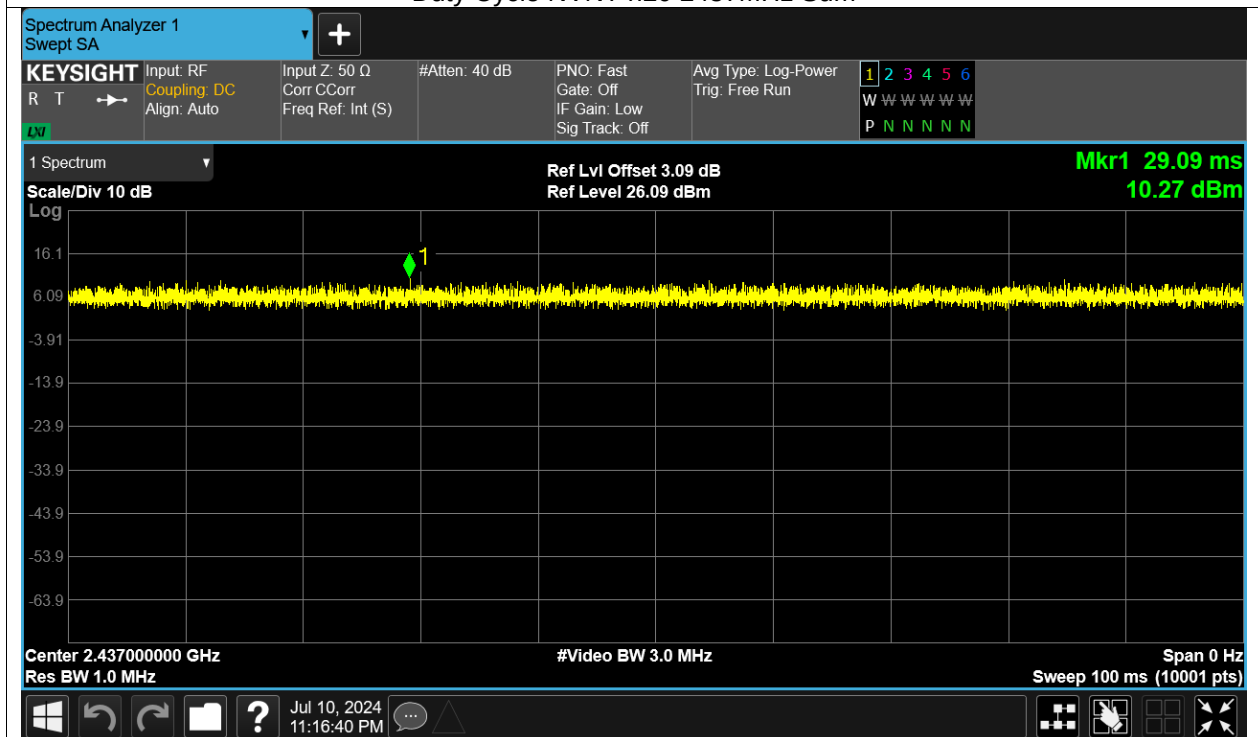
Duty Cycle NVNT g 2462MHz Ant2



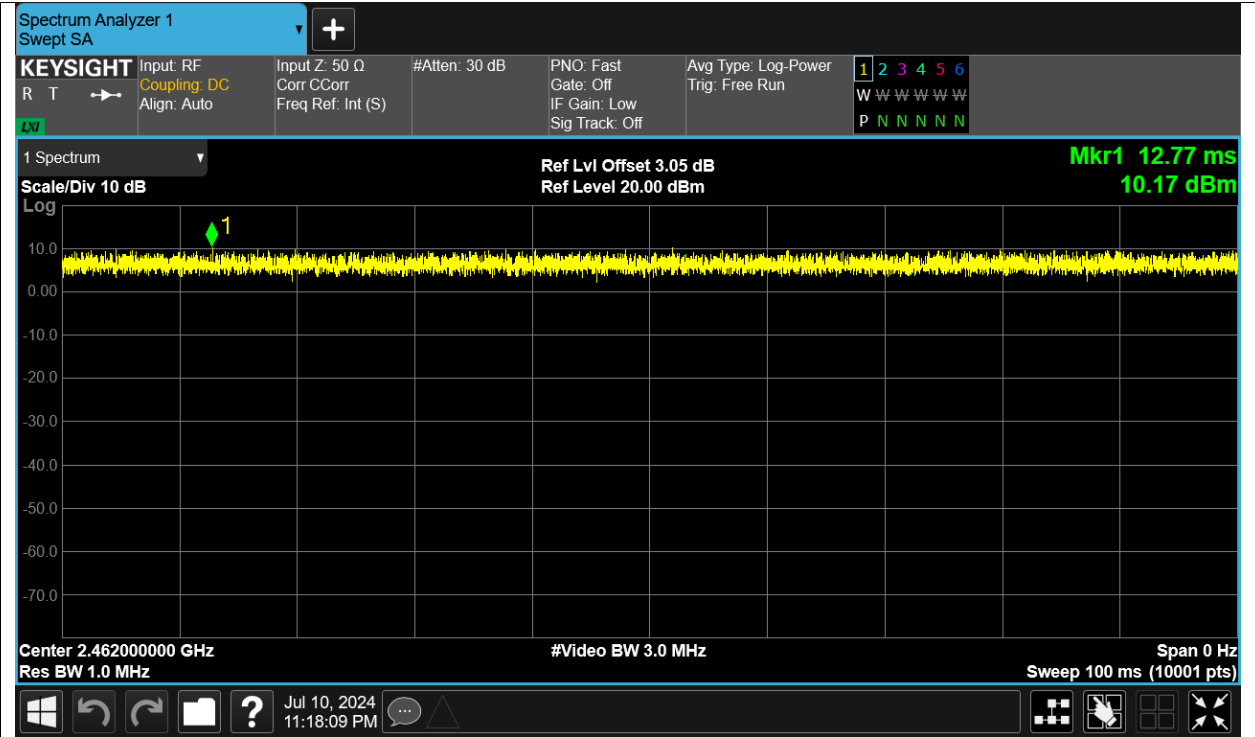
Duty Cycle NVNT n20 2412MHz Sum



Duty Cycle NVNT n20 2437MHz Sum



Duty Cycle NVNT n20 2462MHz Sum



5.4 Conducted Output Power Spot-check

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	ax20	2412	Ant1	9.53	0	9.53	30	Pass
NVNT	ax20	2412	Ant2	9.97	0	9.97	30	Pass
NVNT	ax20	2412	Sum	12.766	0	12.766	30	Pass
NVNT	ax20	2437	Ant1	8.77	0	8.77	30	Pass
NVNT	ax20	2437	Ant2	10.35	0	10.35	30	Pass
NVNT	ax20	2437	Sum	12.642	0	12.642	30	Pass
NVNT	ax20	2462	Ant1	9.72	0	9.72	30	Pass
NVNT	ax20	2462	Ant2	10.6	0	10.6	30	Pass
NVNT	ax20	2462	Sum	13.193	0	13.193	30	Pass
NVNT	ax40	2422	Ant1	9.79	0	9.79	30	Pass
NVNT	ax40	2422	Ant2	10.14	0	10.14	30	Pass
NVNT	ax40	2422	Sum	12.979	0	12.979	30	Pass
NVNT	ax40	2437	Ant1	8.9	0	8.9	30	Pass
NVNT	ax40	2437	Ant2	10.35	0	10.35	30	Pass
NVNT	ax40	2437	Sum	12.696	0	12.696	30	Pass
NVNT	ax40	2452	Ant1	9.2	0	9.2	30	Pass
NVNT	ax40	2452	Ant2	10.73	0	10.73	30	Pass
NVNT	ax40	2452	Sum	13.042	0	13.042	30	Pass
NVNT	b	2412	Ant1	16.24	0	16.24	30	Pass
NVNT	b	2437	Ant1	15.88	0	15.88	30	Pass
NVNT	b	2462	Ant1	16.14	0	16.14	30	Pass
NVNT	b	2412	Ant2	16.01	0	16.01	30	Pass
NVNT	b	2437	Ant2	16.6	0	16.6	30	Pass
NVNT	b	2462	Ant2	16.65	0	16.65	30	Pass
NVNT	g	2412	Ant1	13.34	0	13.34	30	Pass
NVNT	g	2437	Ant1	13.01	0	13.01	30	Pass
NVNT	g	2462	Ant1	13.79	0	13.79	30	Pass
NVNT	g	2412	Ant2	12.68	0	12.68	30	Pass
NVNT	g	2437	Ant2	13.15	0	13.15	30	Pass
NVNT	g	2462	Ant2	13.37	0	13.37	30	Pass
NVNT	n20	2412	Ant1	12.65	0	12.65	30	Pass
NVNT	n20	2412	Ant2	12.81	0	12.81	30	Pass
NVNT	n20	2412	Sum	15.741	0	15.741	30	Pass
NVNT	n20	2437	Ant1	12.33	0	12.33	30	Pass
NVNT	n20	2437	Ant2	13.42	0	13.42	30	Pass
NVNT	n20	2437	Sum	15.919	0	15.919	30	Pass
NVNT	n20	2462	Ant1	12.81	0	12.81	30	Pass
NVNT	n20	2462	Ant2	13.87	0	13.87	30	Pass
NVNT	n20	2462	Sum	16.383	0	16.383	30	Pass

-----End of report-----