REPORT No.: SZ24080004W04

TEST REPORT

APPLICANT	:	REMO TECH Co., Ltd
PRODUCT NAME	:	OBSBOT Tail 2
MODEL NAME	:	OAB-2305-CW
BRAND NAME	:	OBSBOT
FCC ID	:	2ASMC-OAB2305
STANDARD(S)	:	47 CFR Part 15 Subpart E
RECEIPT DATE	:	2024-11-06
TEST DATE	:	2024-12-02 to 2025-01-08
ISSUE DATE	:	2025-02-06

Edited by: Zeng Xiaoying (Rapporteur)

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DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2025-02-06	First edition

1. Summary of Test Result

No.	Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
1	15.203	Antenna Requirement	N/A	N/A	PASS	No deviation
2	ANSI C63.10	Duty Cycle of the Test Signal	Dec. 24&25, 2024	Lin Haoyang	PASS	No deviation
3	15.407(a)	Maximum Conducted Output Power	Dec. 24&25, 2024	Lin Haoyang	PASS	No deviation
4	15.407(a) (e)	Emission Bandwidth	Dec. 24&25, 2024	Lin Haoyang	PASS	No deviation
5	15.407(a)	Peak Power Spectral Density	Dec. 24&25, 2024	Lin Haoyang	PASS	No deviation
6	15.407(g)	Frequency Stability	Jan. 08, 2025	Lin Haoyang	PASS	No deviation
7	15.207	Conducted Emission	Dec. 02, 2024	Fan Shengquan	PASS	No deviation
8	15.407(b)	Restricted Frequency Bands	Dec. 11&18, 2024	Gao Jianrou	PASS	No deviation
9	15.407(b)	Radiated Emission	Dec. 07&18, 2024	Gao Jianrou	PASS	No deviation

Note 1: The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10 2013.

Note 2: These RF tests were performed according to the method of measurements prescribed in KDB 789033 D02 v02r01.

Note 3: These RF tests were performed according to the method of measurements prescribed in KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02.

Note 4: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 5: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

1.1. Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

• 47 CFR Part 15 Subpart E Radio Frequency Devices

1.2. Test Equipment List

1.2.1 Conducted Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2024.02.19	2025.02.18
USB Wideband Power Sensor	MY54180008	U2021XA	Agilent	2024.09.11	2025.09.10
Temperature Chamber	12108015	DTL-003S101	YOMA	2024.09.11	2025.09.10
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
SMA Connector	CN01	RF03	HUBER-SUHNER	N/A	N/A
Attenuator	MTJ6004-10	10dB	MTJ cooperation	N/A	N/A

1.2.2 Conducted Emission Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2024.01.25	2025.01.24
LISN	8127449	NSLK 8127	Schwarzbeck	2024.02.02	2025.02.01
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2024.05.30	2025.05.29
RF Coaxial Cable (DC-100MHz)	BNC	MRE04	Qualwave	2024.07.02	2025.07.01

1.2.3 List of Software Used

Description	Manufacturer	Software Version
Test System	MaiWei	2.0.0.0
Morlab EMCR	Morlab	V1.2
TS+ -[JS32-CE]	Tonscend	V2.5.0.0

1.2.4 Radiated Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2024.06.03	2025.06.02
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2024.06.22	2025.06.21
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2024.07.03	2025.07.02
Notch Filter	N/A	WRCG-5150-5350	Wainwright	N/A	N/A
Notch Filter	N/A	WRCG-5725-5850	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09

1.3. Measurement Uncertainty

Test Items	Uncertainty	Remark
Peak Output Power	±2.22dB	Confidence levels of 95%
Power Spectral Density	±2.22dB	Confidence levels of 95%
Bandwidth	±5%	Confidence levels of 95%
Restricted Frequency Bands	±5%	Confidence levels of 95%
Radiated Emission	±2.95dB	Confidence levels of 95%
Conducted Emission	±2.44dB	Confidence levels of 95%

1.4. Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
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FCC Designation Number:	CN1192
FCC Test Firm Registration Number:	226174

2. General Description

2.1. Information of Applicant and Manufacturer

Applicant:	REMO TECH Co., Ltd
Applicant Address:	Room 220, Building 6, Qianhai Shenzhen-Hong Kong Youth Innovation and Entrepreneur Hub, Nanshan District, Shenzhen, China
Manufacturer:	REMO TECH Co., Ltd
Manufacturer Address:	Room 220, Building 6, Qianhai Shenzhen-Hong Kong Youth Innovation and Entrepreneur Hub, Nanshan District, Shenzhen, China

2.2. Information of EUT

Product Name:	OBSBOT Tail 2		
Sample No.:	2#, 3#, 40#		
Hardware Version:	V200_20240923		
Software Version:	7.2.0.182		
Modulation Technology:	OFDM, OFDMA		
Modulation Mode:	802.11a, 802.11n (HT20), 802.11n (HT40) 802.11ac (VHT20), 802.11ac (VHT40), 802.11ax (HEW20), 802.11ax (HEW40), 802.11ax (HEW80)		
Operating Frequency Range:	5180MHz-5240MHz; 5745MHz-5825MHz		
Antenna Type:	PCB Monopole Antenna		
Antenna Gain(dBi):	ANT 1	ANT 2	Directional Gain Note2
	5.79	5.57	8.69
Accessory Information:	Battery 1		
	Brand Name:	N/A	
	Model No.:	DTP2*527572-5000mAh	
	Serial No.:	N/A	
	Capacity:	5000mAh	
	Rated Voltage:	7.6V	
	Charge Limit:	8.7V	
	Manufacturer:	Shenzhen Data Power Co..Ltd	
	Battery 2		
	Brand Name:	N/A	

	Model No.:	2X647573-5000mAh
	Serial No.:	N/A
	Capacity:	5000mAh
	Rated Voltage:	7.6V
	Charge Limit:	8.7V
	Manufacturer:	DONG GUAN HOWELLENERGYCO.,LTD

Note 1: The EUT supports a MIMO function. Physically, the EUT provides two completed transmitters and two receivers for 802.11n, 802.11ac and 802.11ax modulation mode.

Modulation Mode:	**TX Function**
802.11a	1TX
802.11n/ac/ax	2TX

Note 2: Directional gain is calculated based on KDB 662911 D01

KDB 662911 D01 Directional Gain Calculation			
Clause	Type	Correlation	Calculation formula
F.2.a	Equal G_{ANT} & Power	☐(i). Correlated	$G_{ANT} + 10\log(N_{ANT})$
		☐(ii). Uncorrelated	G_{ANT}
F.2.d	Unequal G_{ANT} & Equal Power	☒(i). Correlated	$10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N_{ANT}]$
		☐(ii). Uncorrelated	$10\log[(10^{G1/10} + 10^{G2/10} + \ldots + 10^{GN/10})/N_{ANT}]$

Where G_{ANT} is the antenna gain in dBi, N_{ANT} is the number of outputs.

Note 3: All radiation test items for 802.11n, 802.11ac and 802.11ax modulation mode operate at MIMO mode during the test. Other modulation mode operate at SISO mode, both of the two antennas were tested separately, we only recorded the worst test result(ANT 1) in this report.

Note 4: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.3. Channel List of EUT

(U-NII-1) 5180MHz-5240MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	**36**	**5180**	40	5200
	44	**5220**	**48**	**5240**
40MHz	**38**	**5190**	**46**	**5230**
80MHz	**42**	**5210**		
(U-NII-3) 5745MHz-5825MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	**149**	**5745**	153	5765
	157	**5785**	161	5805
	165	**5825**		
40MHz	**151**	**5755**	**159**	**5795**
80MHz	**155**	**5775**		

Note 1: The black bold channels were selected for test.

2.4. Test Configuration of EUT

2.4.1.Modulation Type and Data Rate of EUT

Mode	Bandwidth (MHz)	Modulation Technology	Modulation Type	Data Rate	RU Size
802.11a	20	OFDM	**BPSK**	**6**/9/12/18/24/36/48/54 Mbps	N/A
			QPSK		
			16QAM		
			64QAM		
802.11n	20/40 (HT20/40)	OFDM	**BPSK**	**MCS0**~MCS7	N/A
			QPSK		
			16QAM		
			64QAM		
802.11ac	20/40/80 (VHT20/40/80)	OFDM	**BPSK**	**MSC0**~MCS9	N/A
			QPSK		
			16QAM		
			64QAM		
			256QAM		
802.11ax	20/40/80 (HEW20/40/80)	OFDMA	**BPSK**	**MSC0**~MCS11	N/A
			QPSK		
			16QAM		
			64QAM		
			256QAM		
			1024QAM		

Note1: The worst-case mode (bold face) in all data rates has been determined during the pre-scan, only the test data of the worst-case were recorded in this report.

Note2: The RF signal transmission of EUT is controlled by the build-in engineering mode which is provided by the manufacturer. The recorded power setting value is the maximum that the engineering mode has configuration during testing.

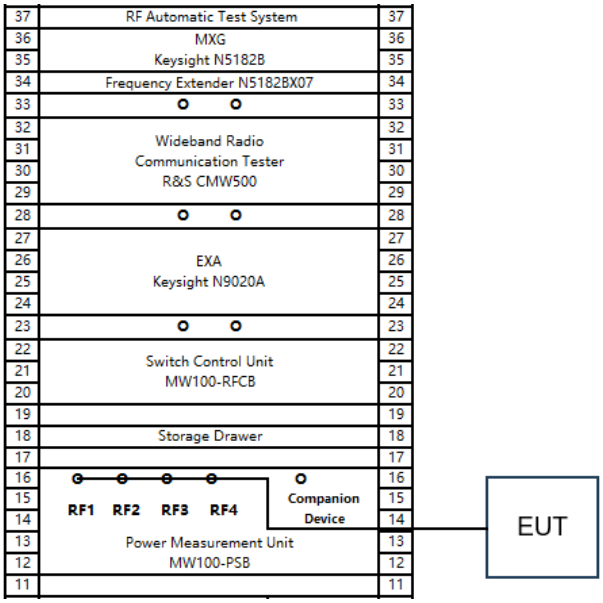
Note3: The RU allocation of 802.11ax mode, only full ru is supported.

2.5. Test Conditions

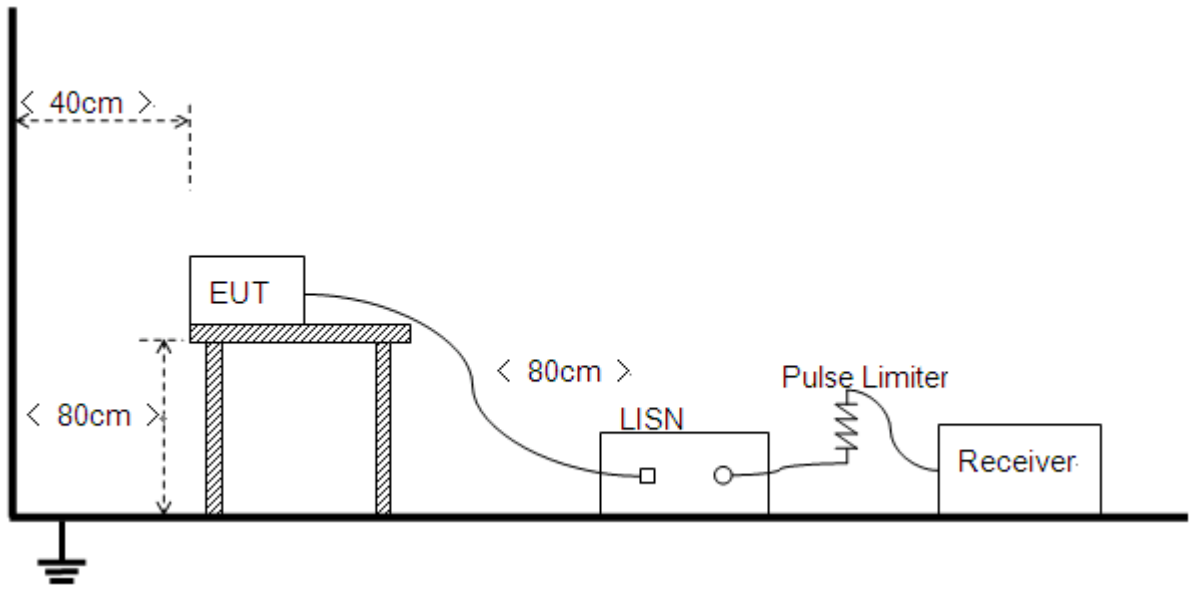
Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2.6. Test Setup Layout Diagram

2.6.1.Conducted Measurement

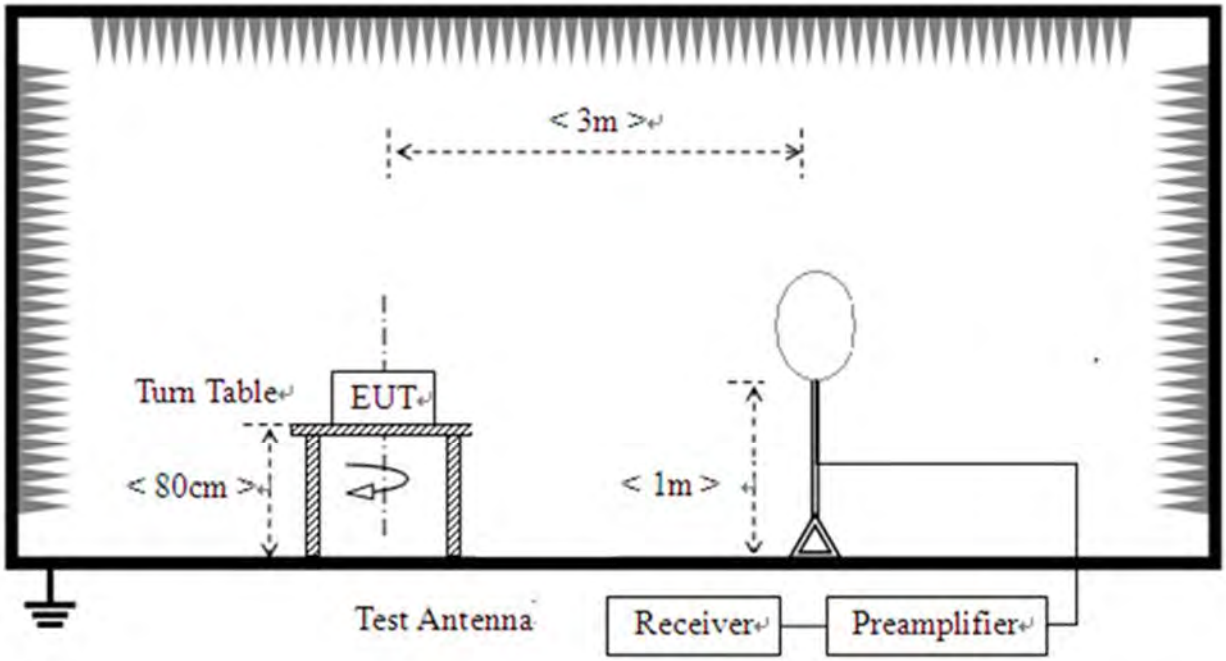


2.6.2.Conducted Emission Measurement

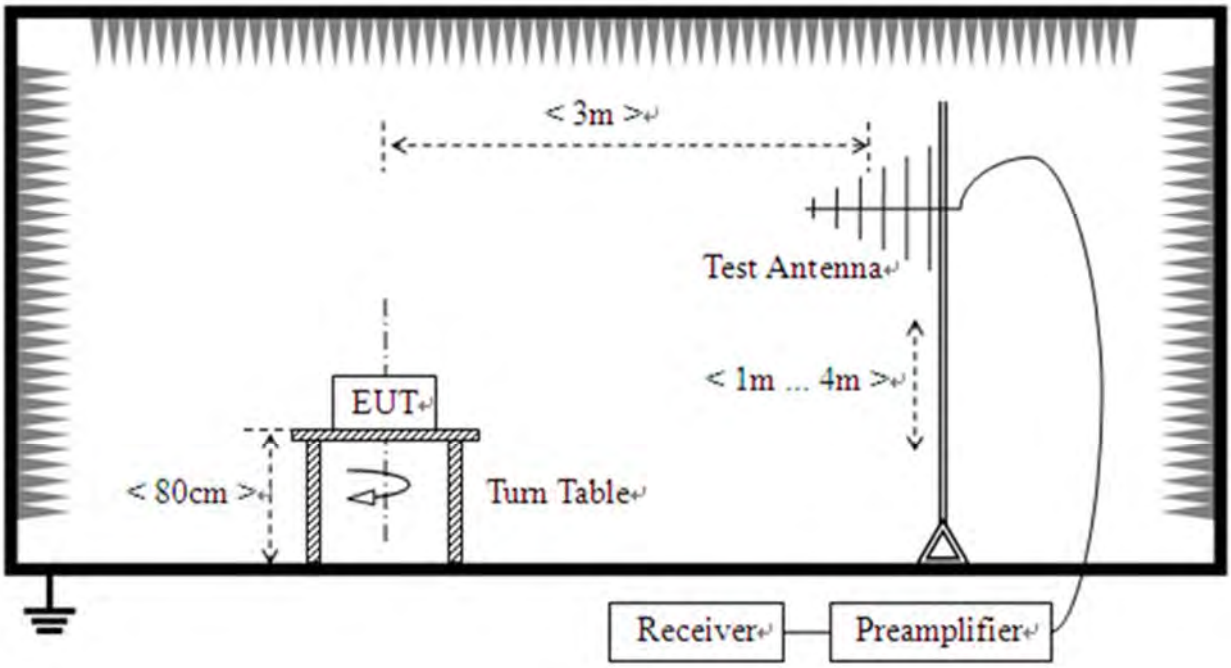


2.6.3.Radiation Measurement

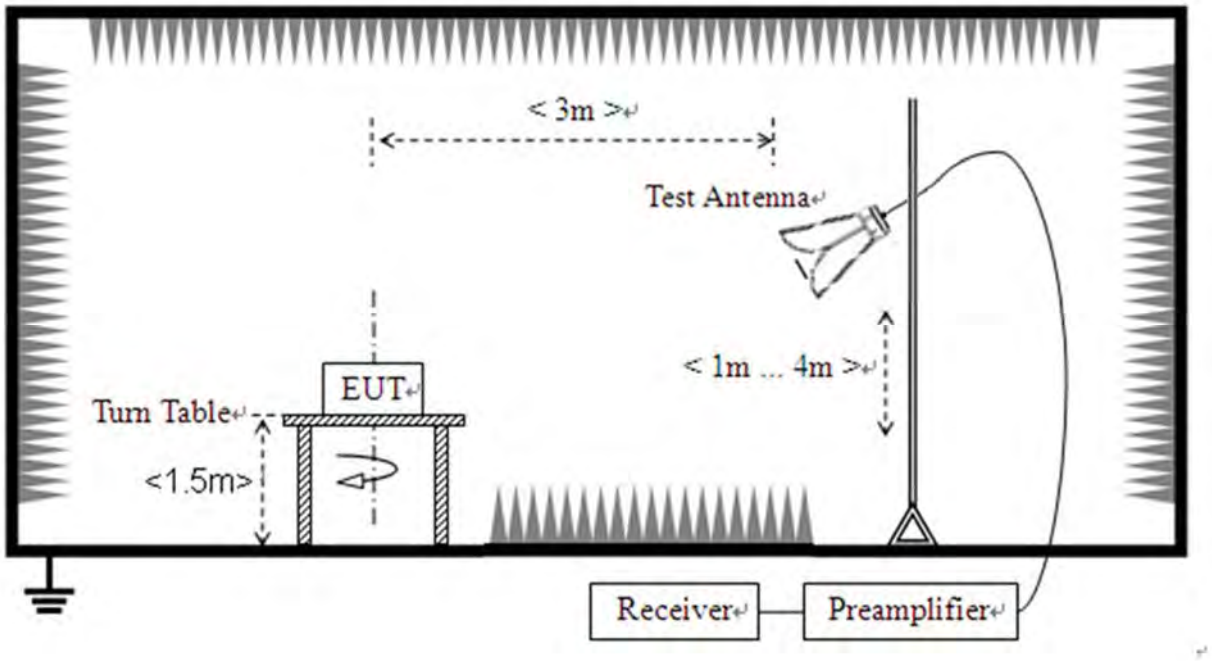
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



3. Test Results

3.1. Antenna Requirement

3.1.1.Requirement

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall 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.

3.1.2.Test Result

Antenna location	Antenna Type	Coupling Method
☒Internal ☐External	☐FPC Antenna ☐Spring Antenna ☐Ceramic Antenna ☐Integrated Antenna ☐Dipole Antenna ☐PCB Antenna ☐PIFA Antenna ☒PCB Monopole Antenna	☒I-PEX Connector ☐SMA Connector ☐RP-SMA Connector ☐Metal Shrapnel ☐Layout

3.2. Duty Cycle of Test Signal

3.2.1.Requirement

Preferably, all measurements of maximum conducted (average) output power will be performed with the EUT transmitting continuously (i.e., with a duty cycle of greater than or equal to 98%).When continuous operation cannot be realized, then the use of sweep triggering/signal gating techniques can be used to ensure that measurements are made only during transmissions at the maximum power control level. Such sweep triggering/signal gating techniques will require knowledge of the minimum transmission duration(T) over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation. Sweep triggering/signal gating techniques can then be used if the measurement/sweep time of the analyzer can be set such that it does not exceed T at any time that data are being acquired (i.e.,no transmitter OFF-time is to be considered).
When continuous transmission cannot be achieved and sweep triggering/signal gating cannot be implemented, alternative procedures are provided that can be used to measure the average power; however, they will require an additional measurement of the transmitter duty cycle (D). Within this sub clause, the duty cycle refers to the fraction of time over which the transmitter is ON and is transmitting at its maximum power control level. The duty cycle is considered to be constant if variations are less than ±2%; otherwise, the duty cycle is considered to be non constant.

3.2.2.Test Result

Refer to Annex A.1 in this report.

3.3. Maximum Conducted Output Power

3.3.1.Requirement

(1) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250mW provided the maximum antenna gain does not exceed 6dBi.
(2)For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or 11dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.
(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.
If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.
(4) According to KDB662911D01Measure-and-sum technique, the conducted emission level (e.g., transmit power or power in specified bandwidth) is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in units that are directly proportional to power.

3.3.2.Test Procedures

The EUT (Equipment under the test) which is coupled to the USB Wideband Power Sensor; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading, all test result in USB Wideband Power Sensor.

For ac (VHT80) mode power
The EUT (Equipment under the test) is coupled to the Spectrum analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading, all test result in Spectrum analyzer.

3.3.3.Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.3.4.Test Result

Refer to Annex A.2 in this report.

3.4. Emission Bandwidth

3.4.1.Requirement

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement. Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.4.1.Test Procedures

1. KDB 789033 Section C) 1) Emission Bandwidth was used in order to prove compliance
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
2. KDB 789033 Section C) 2) minimum emission bandwidth for the band 5.725-5.85GHz was used in order to prove compliance.
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for theband5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100 kHz.
b) Set video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.4.2.Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.4.3.Test Result

Refer to Annex A.3 in this report.

3.5. Peak Power Spectral Density

3.5.1.Requirement

(1) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.
(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.
(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30dBm in any 500kHz band.
If transmitting antennas of directional gain greater than 6dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.
(4) According to KDB662911D01Measure-and-sum technique, the conducted emission level (e.g., transmit power or power in specified bandwidth) is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in units that are directly proportional to power.

3.5.2.Test Procedures

KDB 789033 Section F) Maximum Power Spectral Density (PSD) Method SA-3 was used in order to prove compliance

1) Set span to encompass the entire 26-dB emission bandwidth
2) Set RBW = 1MHz. Set VBW ≥ 3MHz
3) Number of points in sweep ≥ 2 Span / RBW. Sweep time = auto
4) Detector = Average
5) Trace mode=Max hold

Record the max value

3.5.3.Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.5.4.Test Result

Refer to Annex A.4 in this report.

3.6. Frequency Stability

3.6.1. Requirement

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.6.2. Test Procedures

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between 5°Cto 40°C. The temperature was incremented by 10º intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.

3.6.3. Test Result

Refer to Annex A.5 in this report.

3.7. Conducted Emission

3.7.1.Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

Note:

(a) The lower limit shall apply at the band edges.

(b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.7.2.Test Procedures

The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.

3.7.3.Test Setup Layout

Refer to chapter 2.6.2 in this report.

3.7.4.Test Result

Refer to Annex A.6 in this report.

3.8. Restricted Frequency Bands

3.8.1.Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
(2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
(3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:
(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBμV/m);

$$E = 1000000 \times \sqrt{30P} / 3 \ \mu V/m$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).

3.8.2.Test Procedures

The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.
KDB 789033 Section H) 3)5)6(d)) was used in order to prove compliance
For the Test Antenna:
Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

3.8.3.Test Setup Layout

Refer to chapter 2.6.3 in this report.

3.8.4.Test Result

Refer to Annex A.7 in this report.

3.9. Radiated Emission

3.9.1.Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
(2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
(3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.
The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBμV/m);

$$E = 1000000 \times \sqrt{30P} / 3 \ \mu V/m$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).

3.9.2.Test Procedures

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz.The antenna to EUT distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For measurements above 1 GHz, keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

3.9.3.Test Setup Layout

Refer to chapter 2.6.3 in this report.

3.9.4.Test Result

Refer to Annex A.8 in this report.

Annex A Test Data and Result

A.1. Duty Cycle of Test Signal

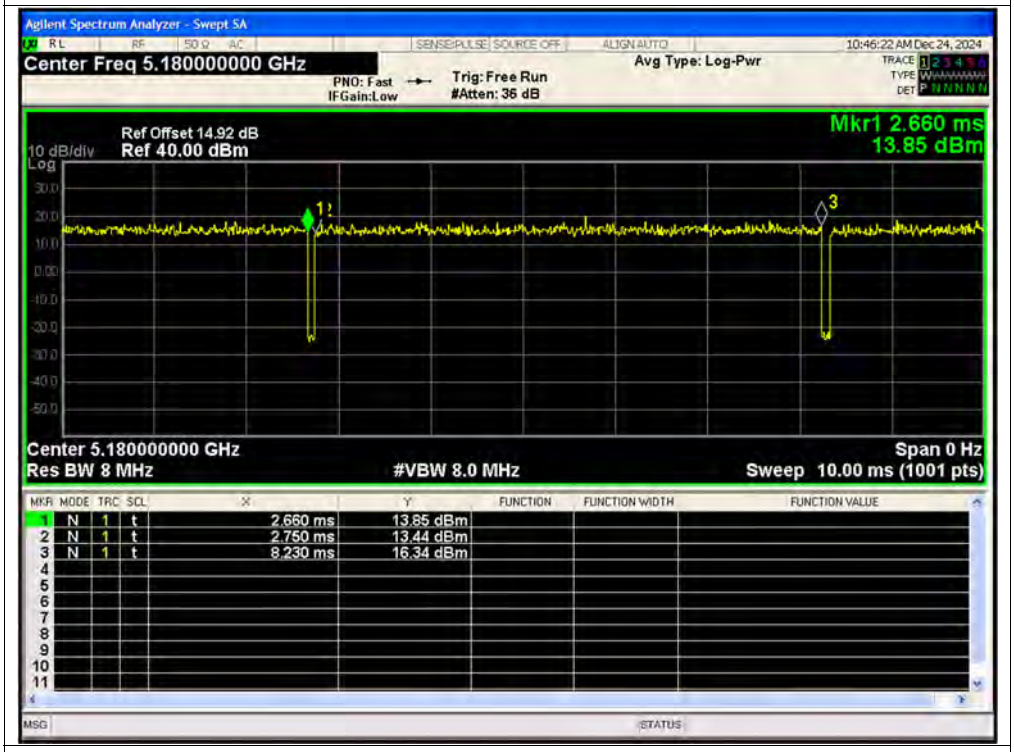
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	98.38	0.07	0.18
NVNT	a	5220	Ant1	98.21	0.08	0.18
NVNT	a	5240	Ant1	98.21	0.08	0.18
NVNT	a	5745	Ant1	98.39	0.07	0.18
NVNT	a	5785	Ant1	98.6	0.06	0
NVNT	a	5825	Ant1	99.2	0.03	0
NVNT	a	5180	Ant2	99.2	0.03	0
NVNT	a	5220	Ant2	99.1	0.04	0
NVNT	a	5240	Ant2	98.38	0.07	0.18
NVNT	a	5745	Ant2	99.2	0.03	0
NVNT	a	5785	Ant2	98.21	0.08	0.18
NVNT	a	5825	Ant2	98.38	0.07	0.18
NVNT	n20	5180	Ant1	99.2	0.03	0
NVNT	n20	5220	Ant1	98.35	0.07	0.19
NVNT	n20	5240	Ant1	98.35	0.07	0.19
NVNT	n20	5745	Ant1	99.2	0.03	0
NVNT	n20	5785	Ant1	98.35	0.07	0.19
NVNT	n20	5825	Ant1	98.35	0.07	0.19
NVNT	n20	5180	Ant2	98.18	0.08	0.19
NVNT	n20	5220	Ant2	98.35	0.07	0.19
NVNT	n20	5240	Ant2	98.35	0.07	0.19
NVNT	n20	5745	Ant2	98.17	0.08	0.19
NVNT	n20	5785	Ant2	99.2	0.03	0
NVNT	n20	5825	Ant2	98.17	0.08	0.19
NVNT	n20	5180	Sum	98.35	0.07	0.19
NVNT	n20	5220	Sum	98.35	0.07	0.19
NVNT	n20	5240	Sum	98.35	0.07	0.19
NVNT	n20	5745	Sum	98.35	0.07	0.19
NVNT	n20	5785	Sum	98.35	0.07	0.19
NVNT	n20	5825	Sum	98.35	0.07	0.19
NVNT	n40	5190	Ant1	97.11	0.13	0.33

NVNT	n40	5230	Ant1	97.11	0.13	0.33
NVNT	n40	5755	Ant1	97.11	0.13	0.33
NVNT	n40	5795	Ant1	97.11	0.13	0.33
NVNT	n40	5190	Ant2	96.79	0.14	0.33
NVNT	n40	5230	Ant2	96.79	0.14	0.33
NVNT	n40	5755	Ant2	97.11	0.13	0.33
NVNT	n40	5795	Ant2	97.11	0.13	0.33
NVNT	n40	5190	Sum	97.11	0.13	0.33
NVNT	n40	5230	Sum	97.11	0.13	0.33
NVNT	n40	5755	Sum	97.11	0.13	0.33
NVNT	n40	5795	Sum	97.11	0.13	0.33
NVNT	ac20	5180	Ant1	98.35	0.07	0.19
NVNT	ac20	5220	Ant1	98.35	0.07	0.19
NVNT	ac20	5240	Ant1	98.5	0.07	0
NVNT	ac20	5745	Ant1	98.35	0.07	0.19
NVNT	ac20	5785	Ant1	99.2	0.03	0
NVNT	ac20	5825	Ant1	99.2	0.03	0
NVNT	ac20	5180	Ant2	99.2	0.03	0
NVNT	ac20	5220	Ant2	98.18	0.08	0.19
NVNT	ac20	5240	Ant2	98.18	0.08	0.19
NVNT	ac20	5745	Ant2	98.18	0.08	0.19
NVNT	ac20	5785	Ant2	98.18	0.08	0.19
NVNT	ac20	5825	Ant2	98.18	0.08	0.19
NVNT	ac20	5180	Sum	98.35	0.07	0.19
NVNT	ac20	5220	Sum	98.35	0.07	0.19
NVNT	ac20	5240	Sum	98.35	0.07	0.19
NVNT	ac20	5745	Sum	98.35	0.07	0.19
NVNT	ac20	5785	Sum	98.35	0.07	0.19
NVNT	ac20	5825	Sum	98.35	0.07	0.19
NVNT	ac40	5190	Ant1	98.29	0.08	0.19
NVNT	ac40	5230	Ant1	98.29	0.08	0.19
NVNT	ac40	5755	Ant1	98.29	0.08	0.19
NVNT	ac40	5795	Ant1	98.29	0.08	0.19
NVNT	ac40	5190	Ant2	98.1	0.08	0.19
NVNT	ac40	5230	Ant2	98.1	0.08	0.19
NVNT	ac40	5755	Ant2	98.29	0.08	0.19
NVNT	ac40	5795	Ant2	98.6	0.06	0
NVNT	ac40	5190	Sum	98.29	0.08	0.19

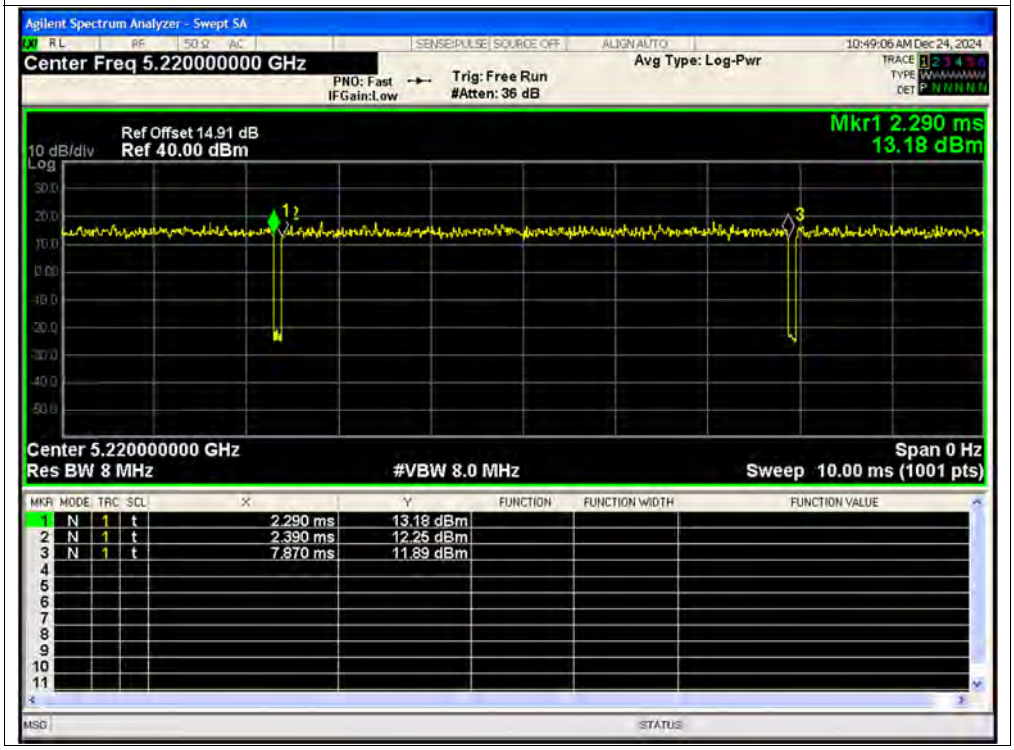
NVNT	ac40	5230	Sum	98.9	0.05	0
NVNT	ac40	5755	Sum	98.1	0.08	0.19
NVNT	ac40	5795	Sum	98.5	0.07	0
NVNT	ax20	5180	Ant1	86.67	0.62	0.85
NVNT	ax20	5220	Ant1	86.76	0.62	0.85
NVNT	ax20	5240	Ant1	87.31	0.59	0.85
NVNT	ax20	5745	Ant1	87.31	0.59	0.85
NVNT	ax20	5785	Ant1	87.31	0.59	0.85
NVNT	ax20	5825	Ant1	87.97	0.56	0.85
NVNT	ax20	5180	Ant2	87.41	0.58	0.85
NVNT	ax20	5220	Ant2	87.31	0.59	0.85
NVNT	ax20	5240	Ant2	87.31	0.59	0.85
NVNT	ax20	5745	Ant2	87.97	0.56	0.85
NVNT	ax20	5785	Ant2	86.67	0.62	0.85
NVNT	ax20	5825	Ant2	86.67	0.62	0.85
NVNT	ax20	5180	Sum	87.41	0.58	0.85
NVNT	ax20	5220	Sum	87.41	0.58	0.85
NVNT	ax20	5240	Sum	87.31	0.59	0.85
NVNT	ax20	5745	Sum	87.31	0.59	0.85
NVNT	ax20	5785	Sum	87.31	0.59	0.85
NVNT	ax20	5825	Sum	87.41	0.58	0.85
NVNT	ax40	5190	Ant1	98.1	0.08	0.22
NVNT	ax40	5230	Ant1	98.09	0.08	0.22
NVNT	ax40	5755	Ant1	98.1	0.08	0.22
NVNT	ax40	5795	Ant1	98.1	0.08	0.22
NVNT	ax40	5190	Ant2	97.89	0.09	0.22
NVNT	ax40	5230	Ant2	97.89	0.09	0.22
NVNT	ax40	5755	Ant2	98.09	0.08	0.22
NVNT	ax40	5795	Ant2	98.1	0.08	0.22
NVNT	ax40	5190	Sum	98.1	0.08	0.22
NVNT	ax40	5230	Sum	98.09	0.08	0.22
NVNT	ax40	5755	Sum	98.09	0.08	0.22
NVNT	ax40	5795	Sum	98.09	0.08	0.22
NVNT	ax80	5210	Ant1	98	0.09	0.23
NVNT	ax80	5775	Ant1	98	0.09	0.23
NVNT	ax80	5210	Ant2	97.79	0.1	0.23
NVNT	ax80	5775	Ant2	98	0.09	0.23
NVNT	ax80	5210	Sum	98.23	0.08	0.23

NVNT	ax80	5775	Sum	98	0.09	0.23

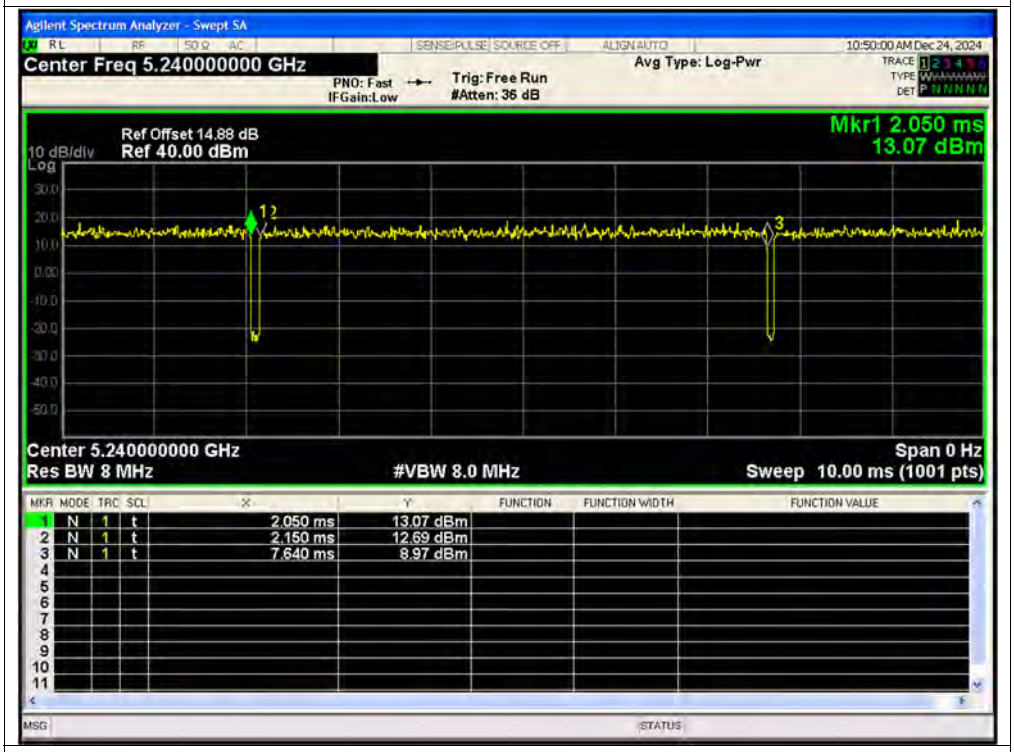
Test Graphs
Duty Cycle NVNT a 5180MHz Ant1



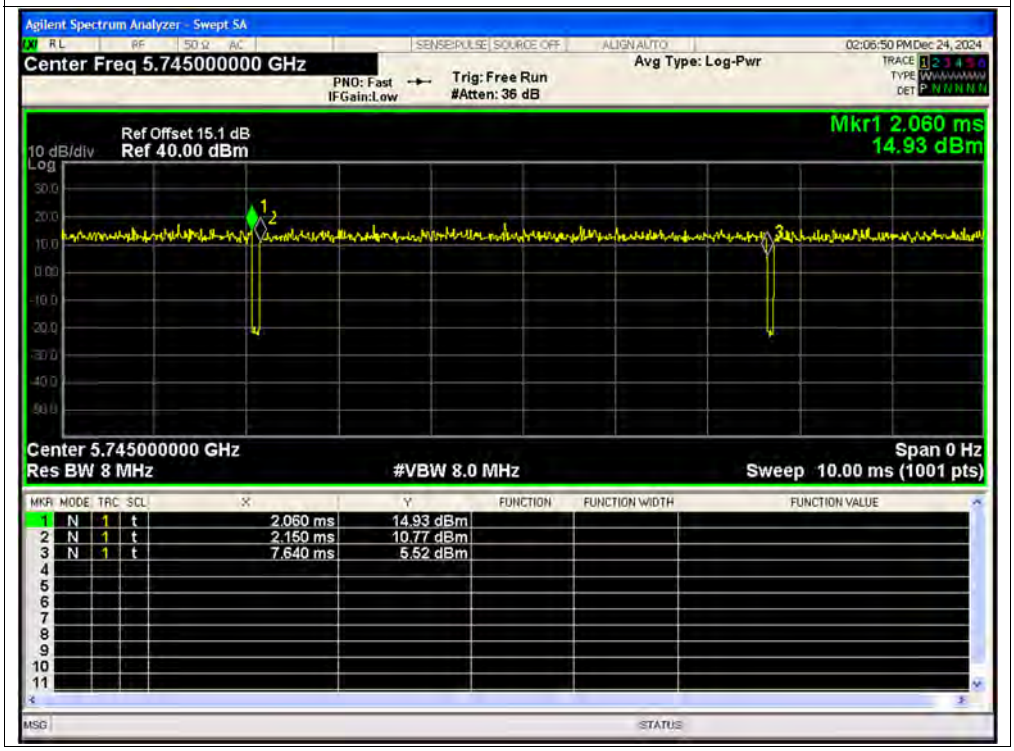
Duty Cycle NVNT a 5220MHz Ant1



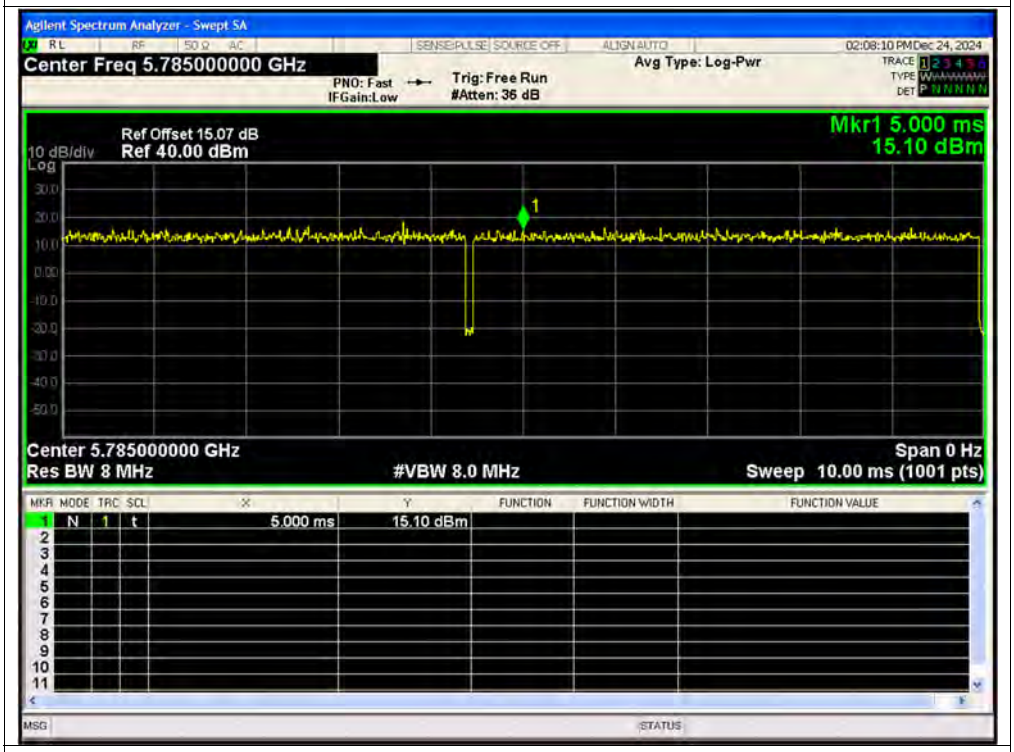
Duty Cycle NVNT a 5240MHz Ant1



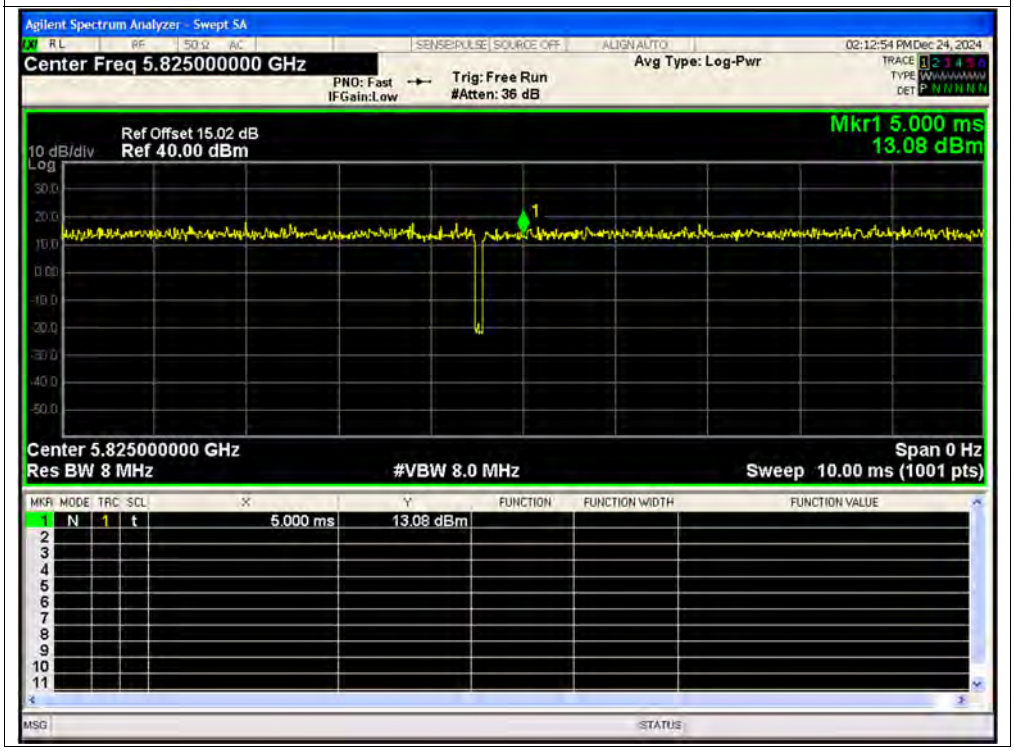
Duty Cycle NVNT a 5745MHz Ant1



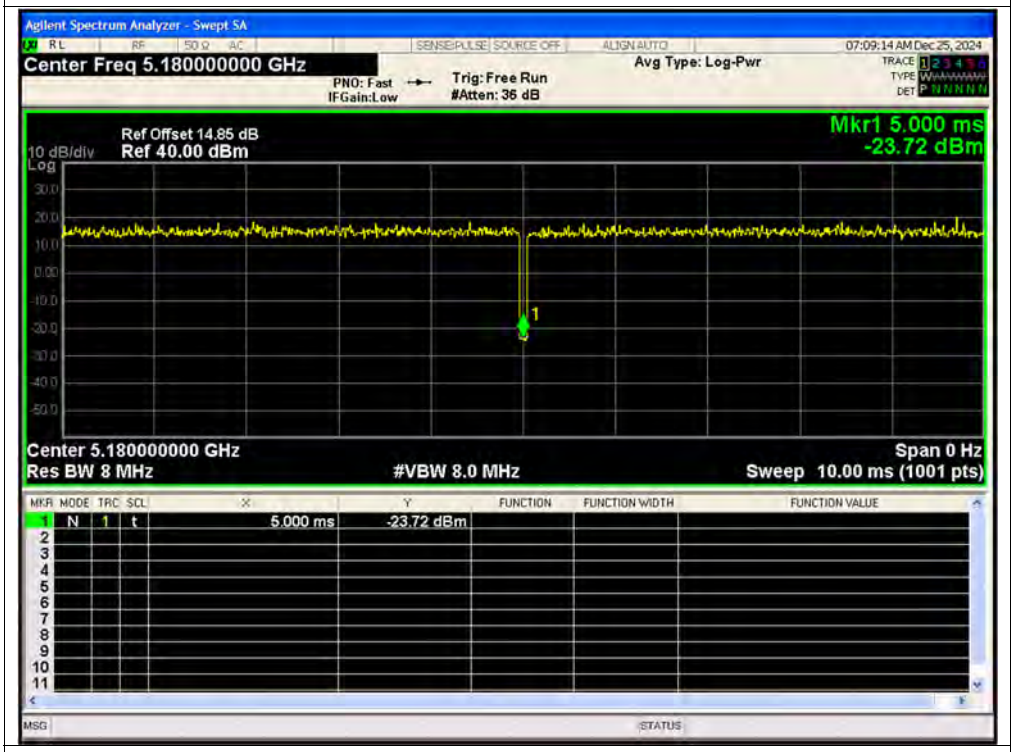
Duty Cycle NVNT a 5785MHz Ant1



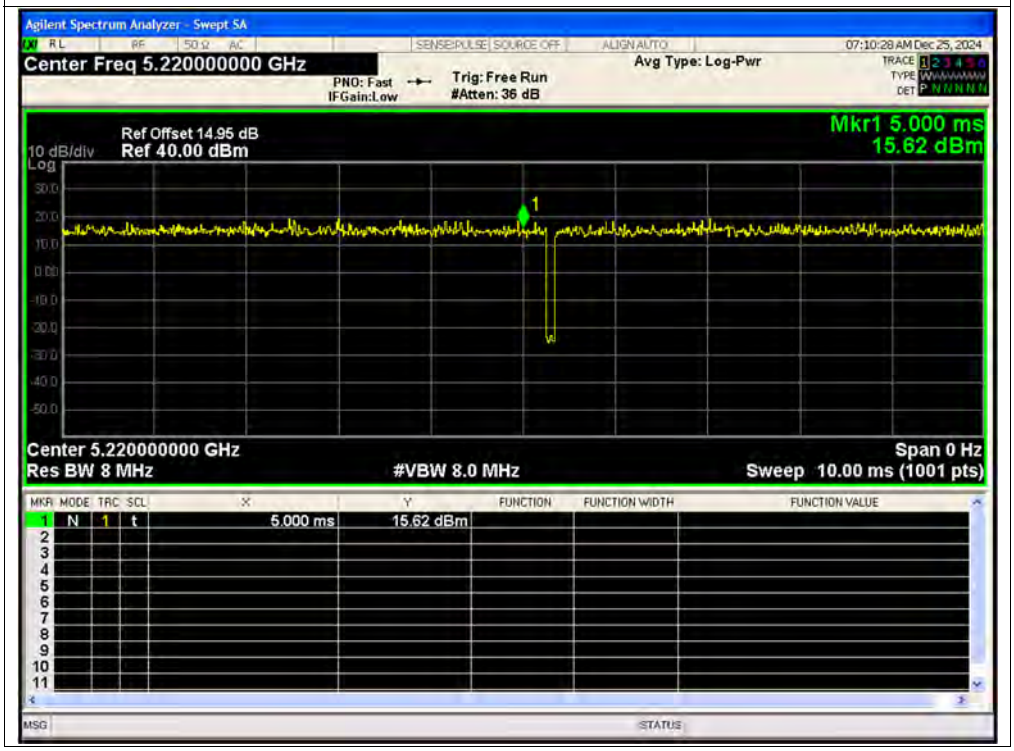
Duty Cycle NVNT a 5825MHz Ant1



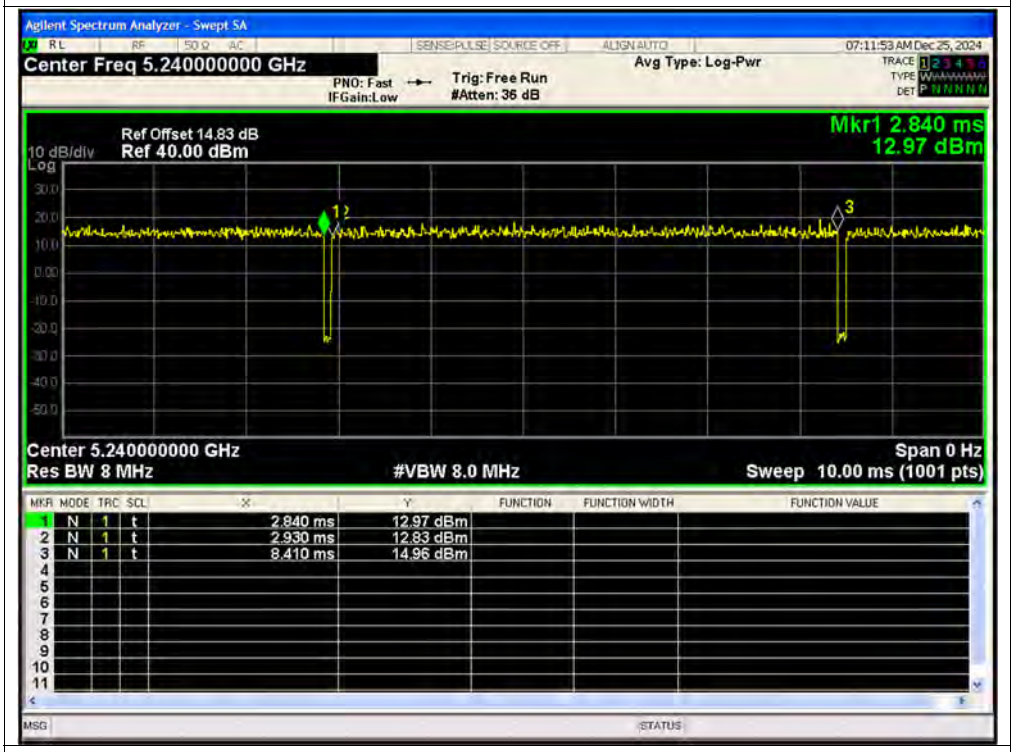
Duty Cycle NVNT a 5180MHz Ant2



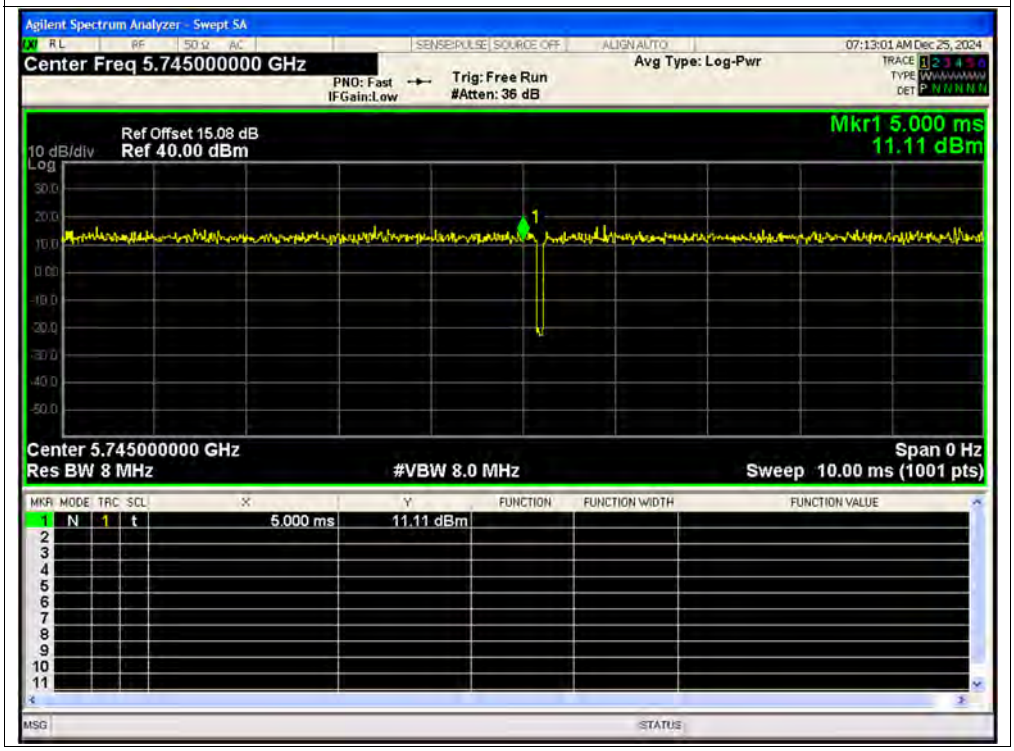
Duty Cycle NVNT a 5220MHz Ant2



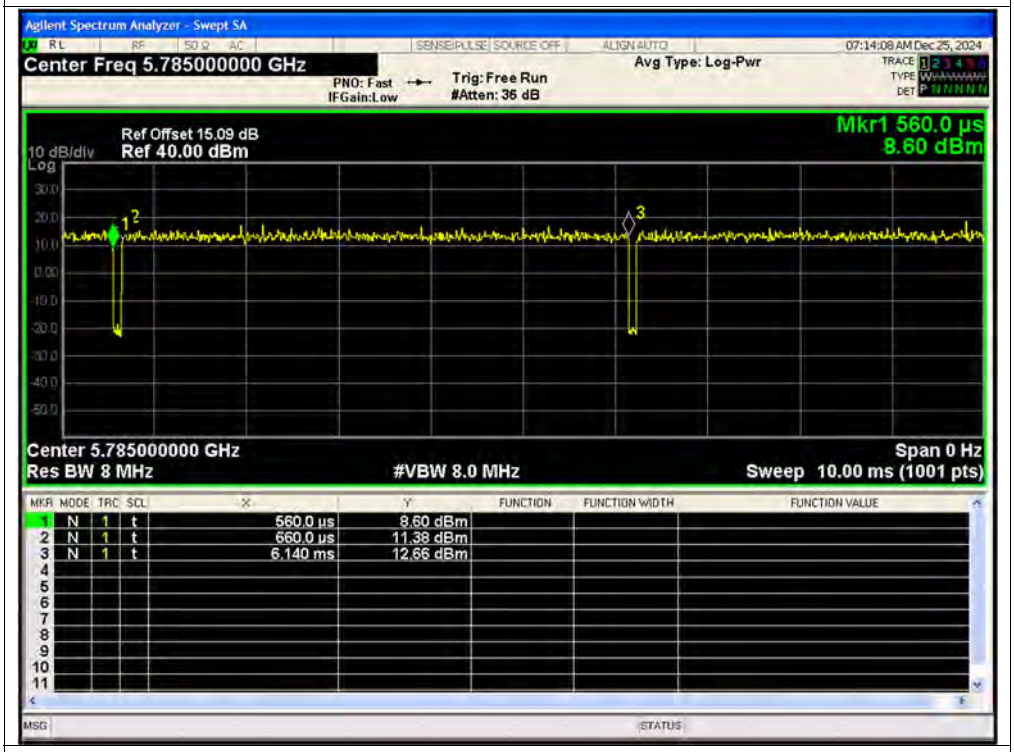
Duty Cycle NVNT a 5240MHz Ant2



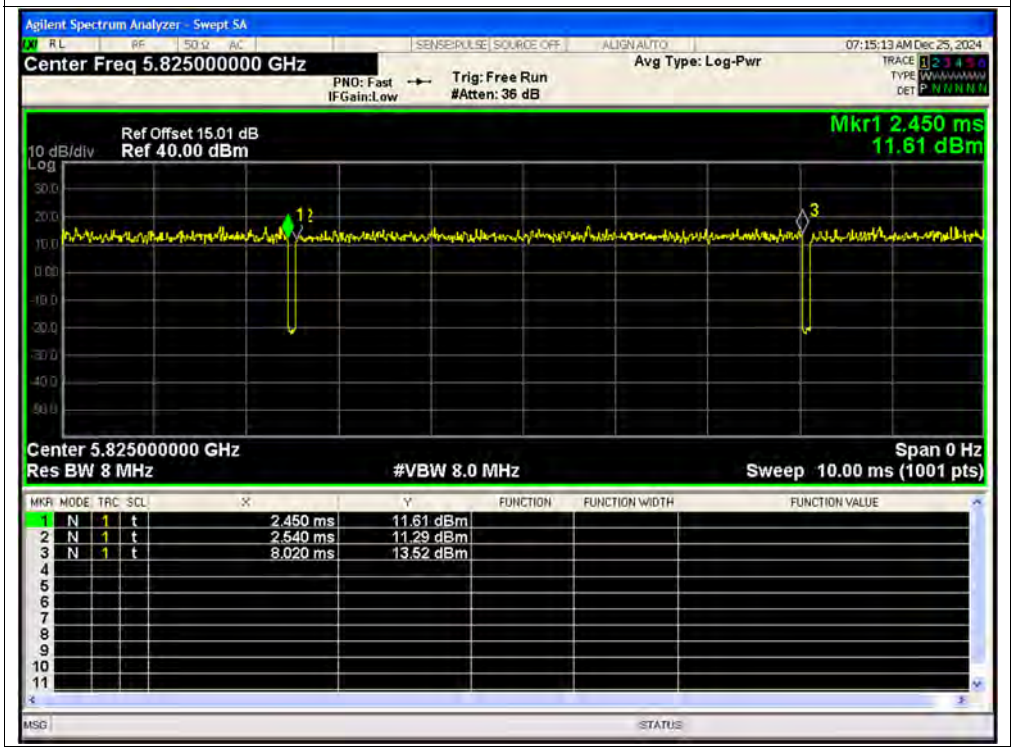
Duty Cycle NVNT a 5745MHz Ant2



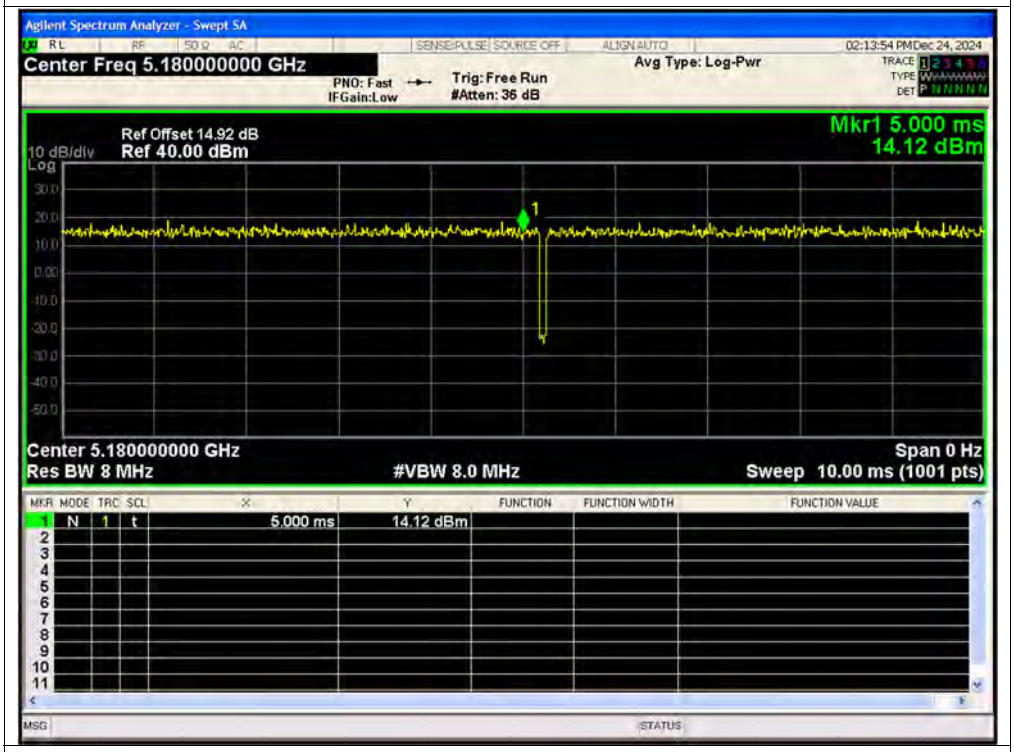
Duty Cycle NVNT a 5785MHz Ant2



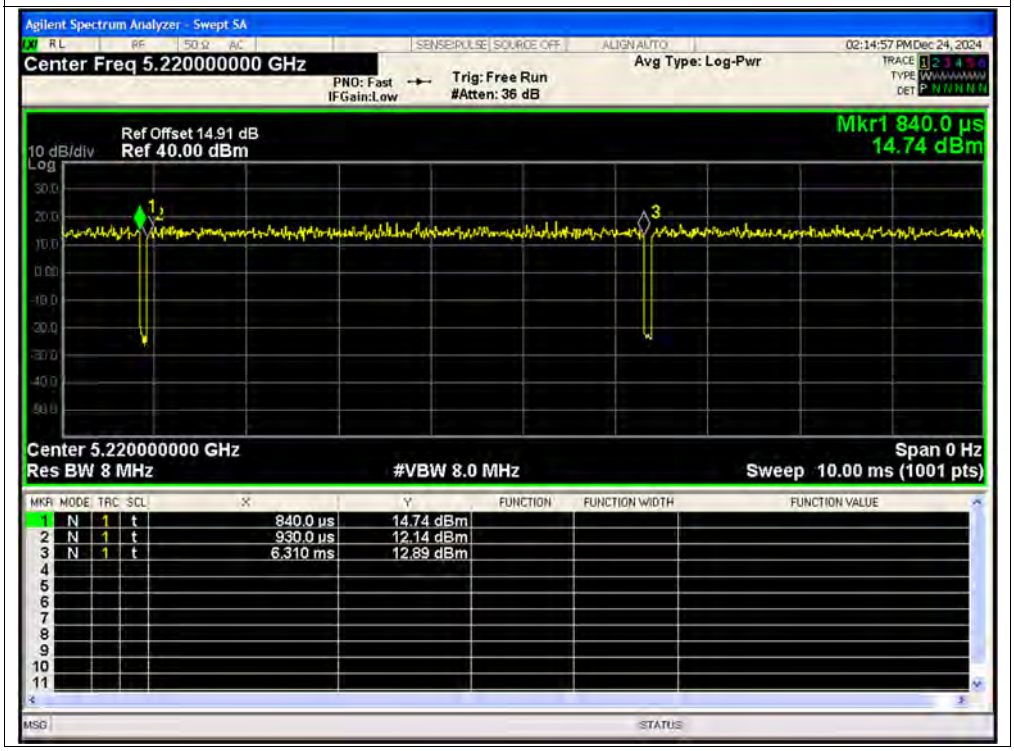
Duty Cycle NVNT a 5825MHz Ant2



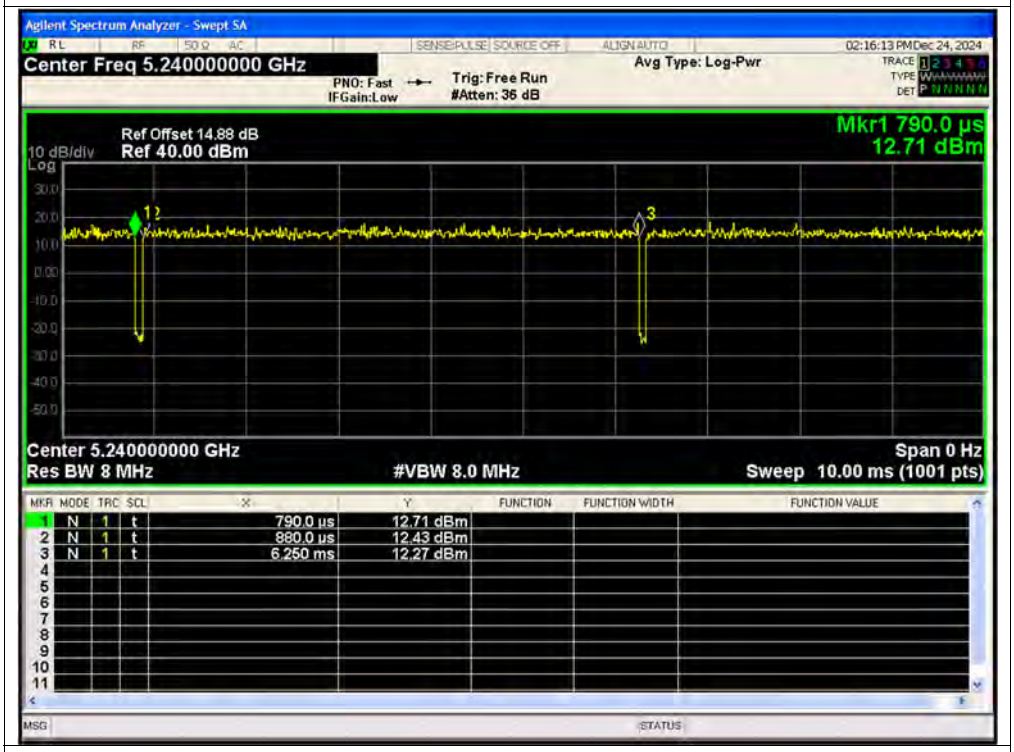
Duty Cycle NVNT n20 5180MHz Ant1



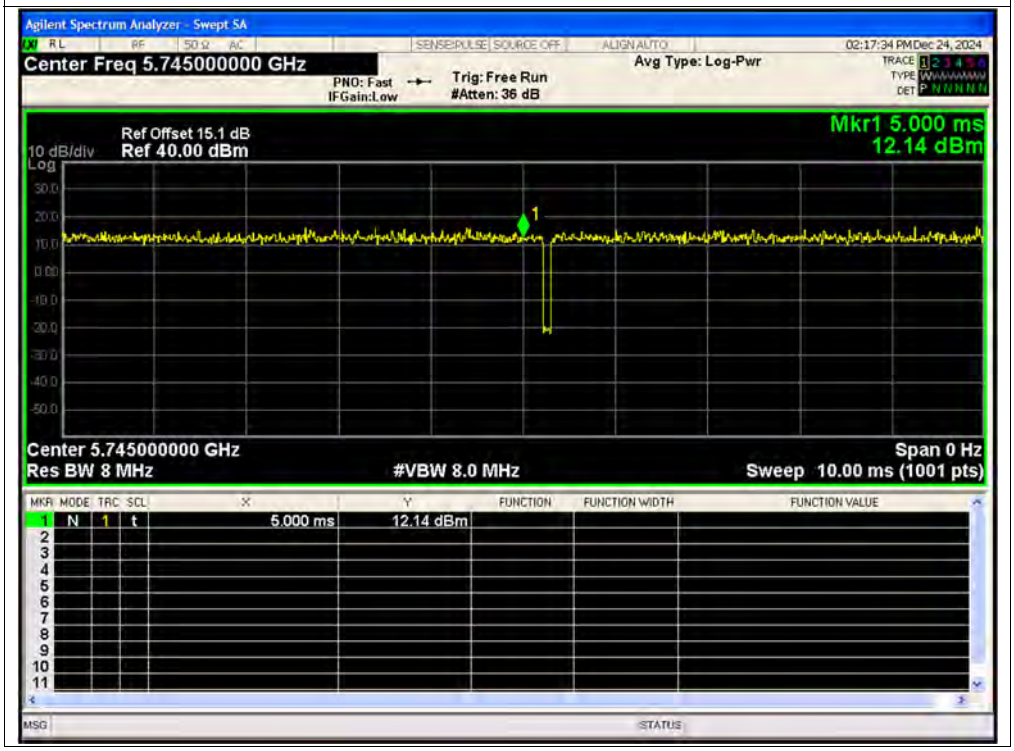
Duty Cycle NVNT n20 5220MHz Ant1



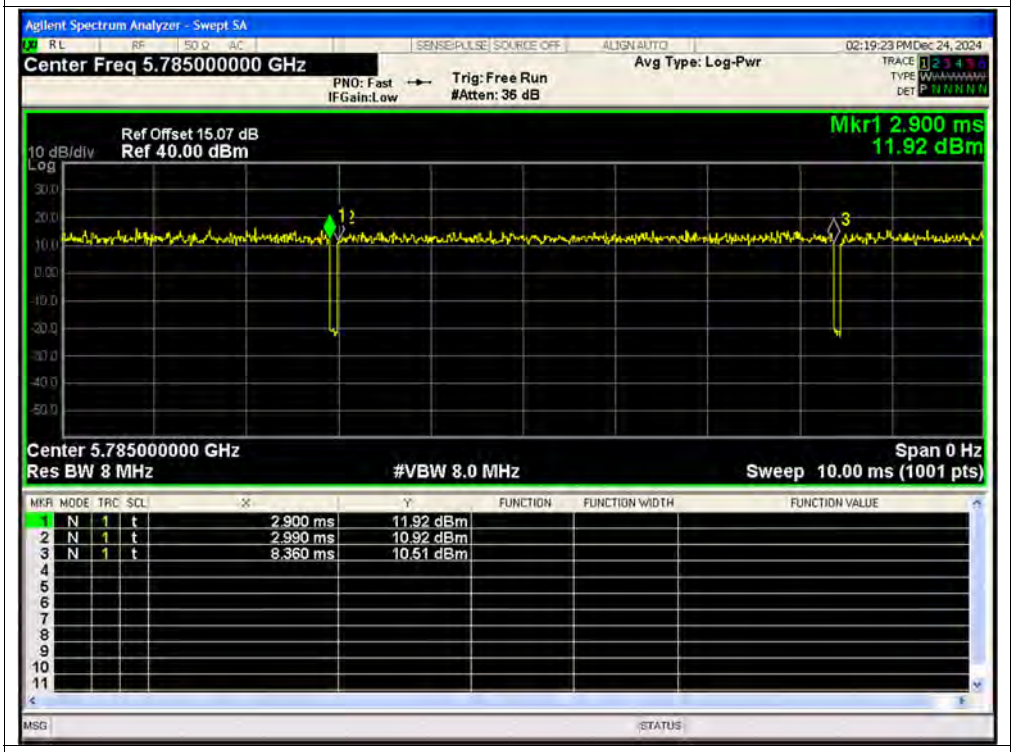
Duty Cycle NVNT n20 5240MHz Ant1



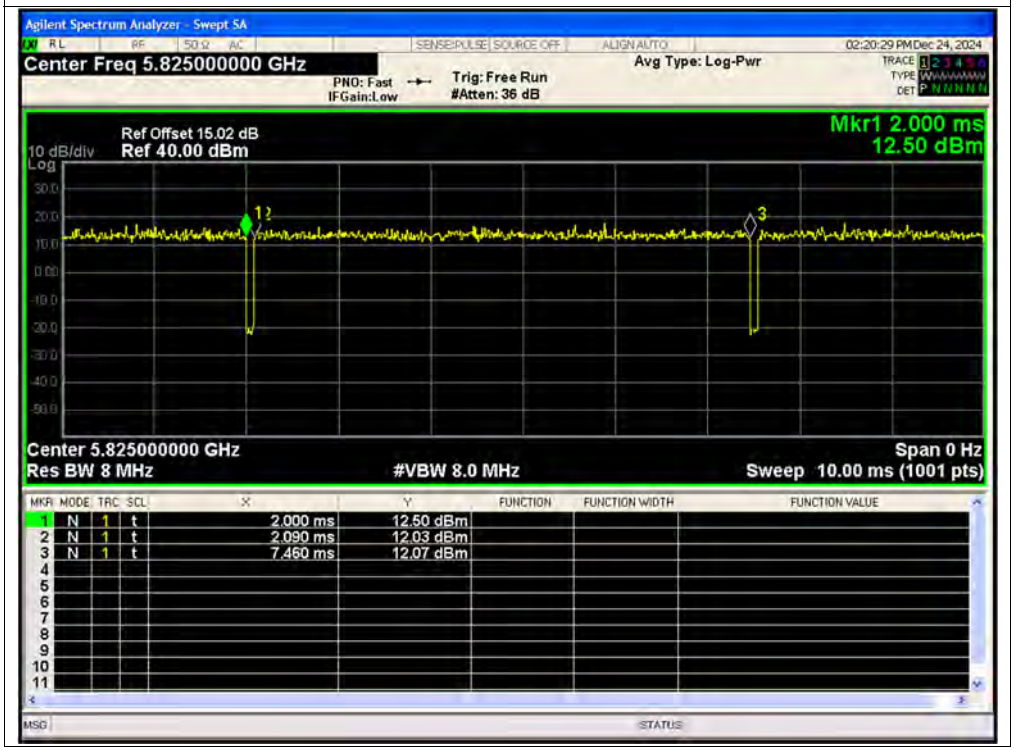
Duty Cycle NVNT n20 5745MHz Ant1



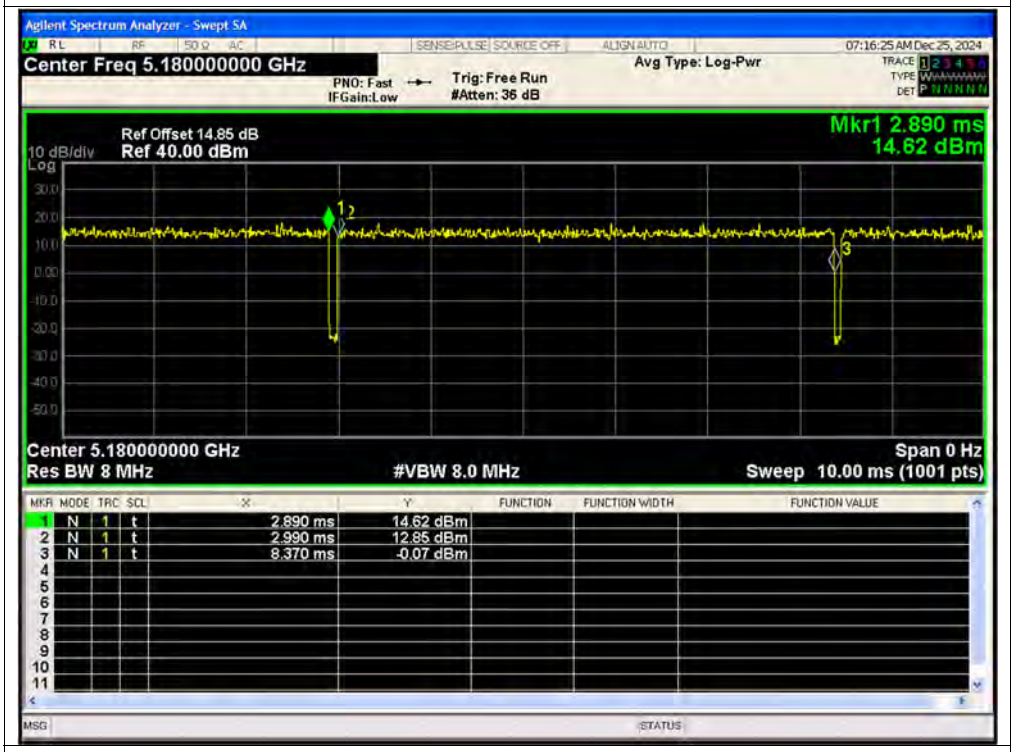
Duty Cycle NVNT n20 5785MHz Ant1



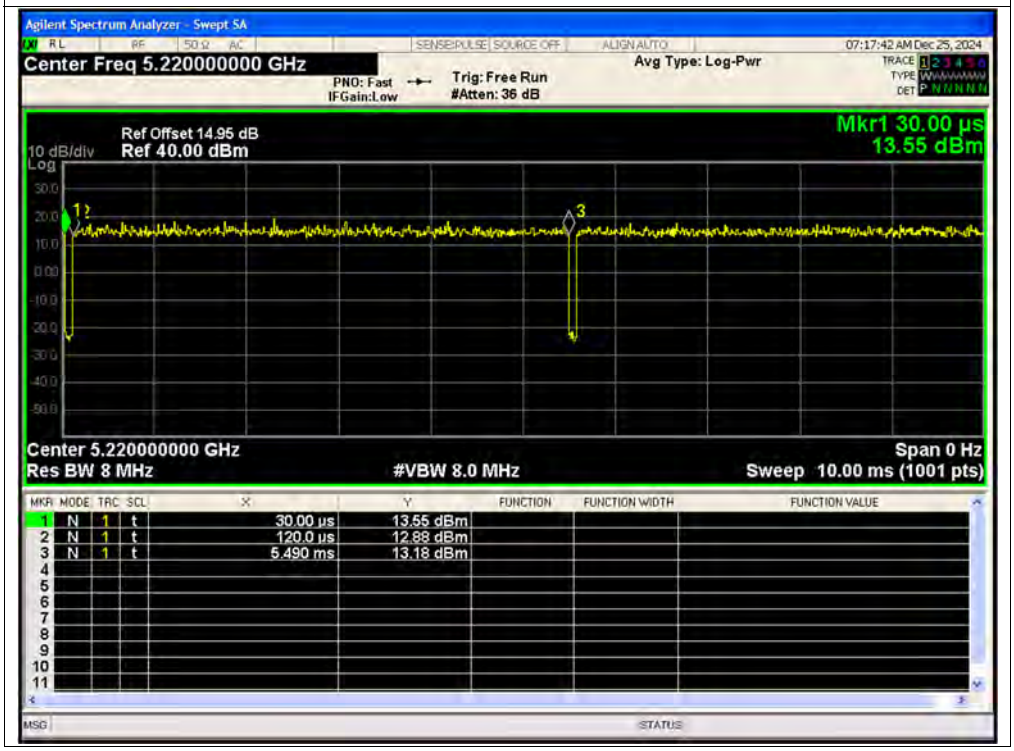
Duty Cycle NVNT n20 5825MHz Ant1



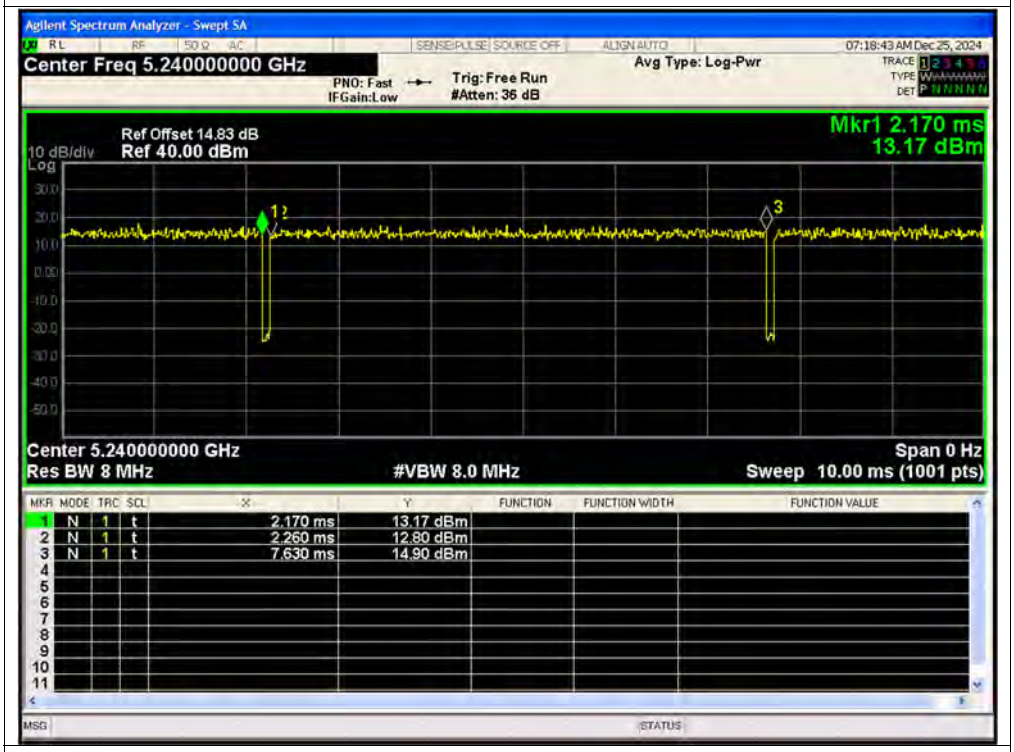
Duty Cycle NVNT n20 5180MHz Ant2



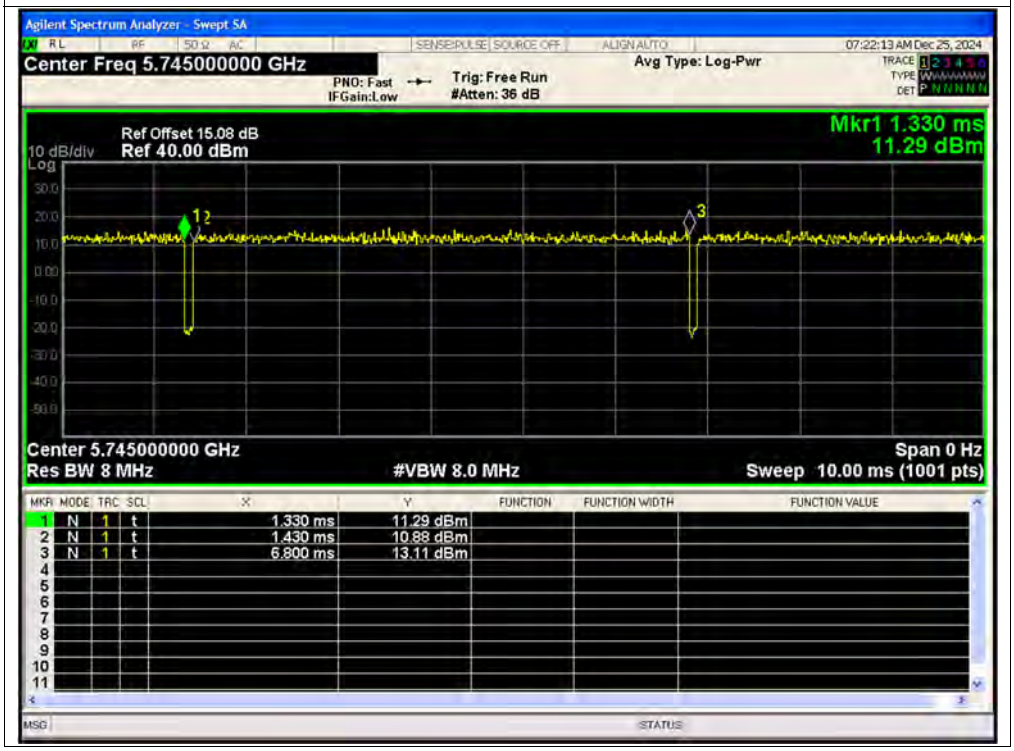
Duty Cycle NVNT n20 5220MHz Ant2



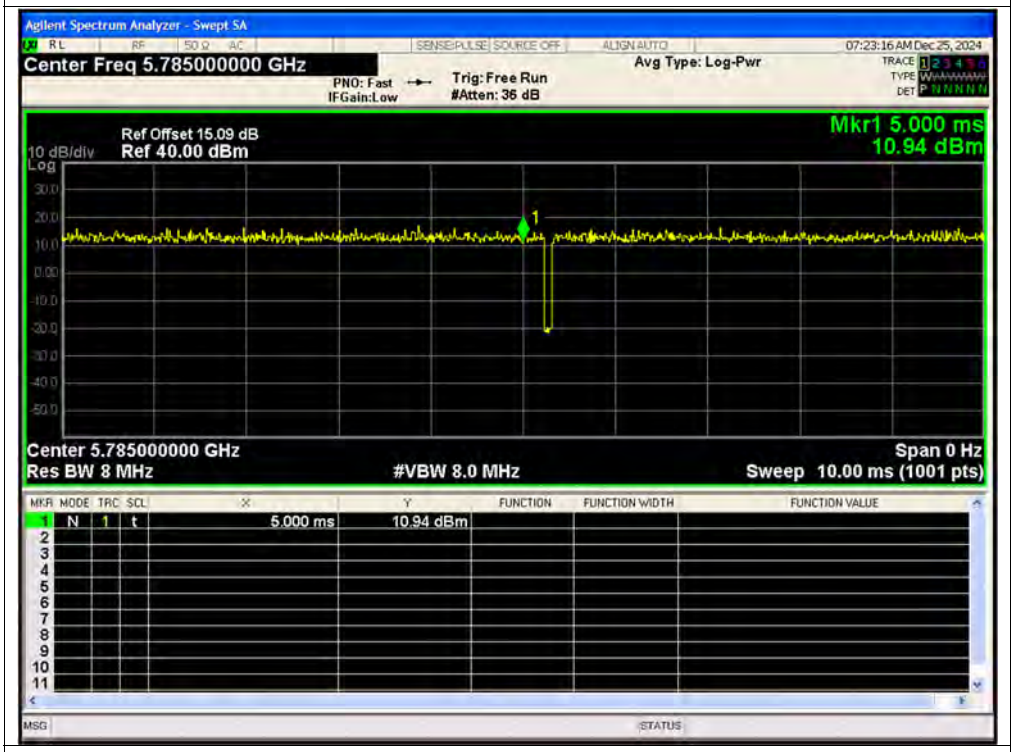
Duty Cycle NVNT n20 5240MHz Ant2



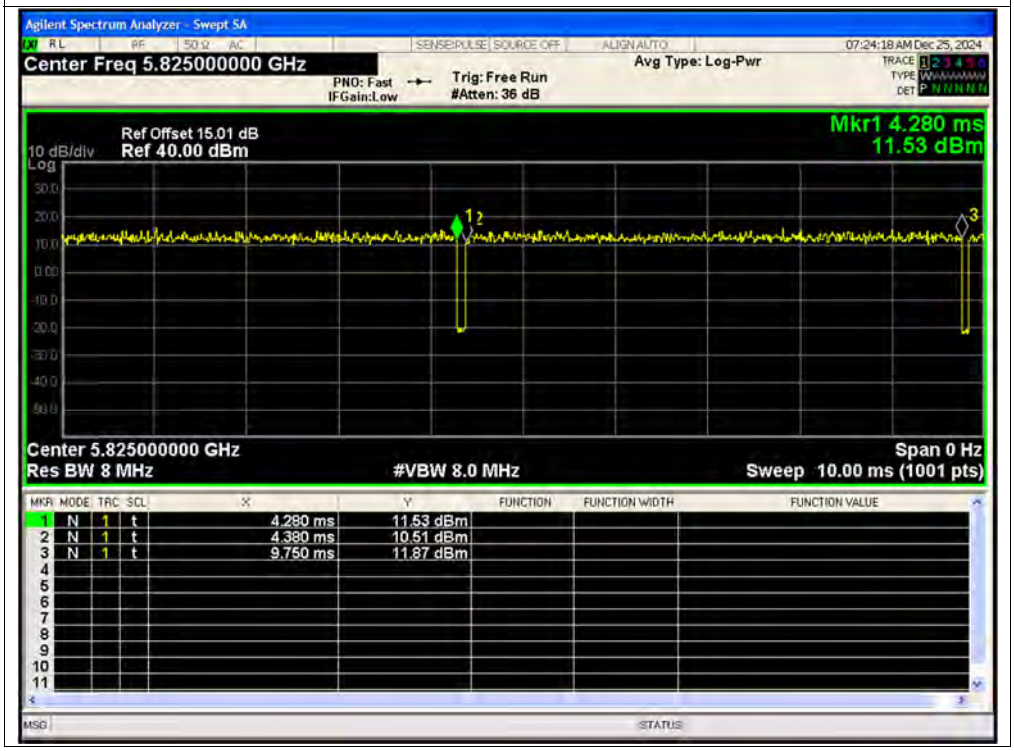
Duty Cycle NVNT n20 5745MHz Ant2



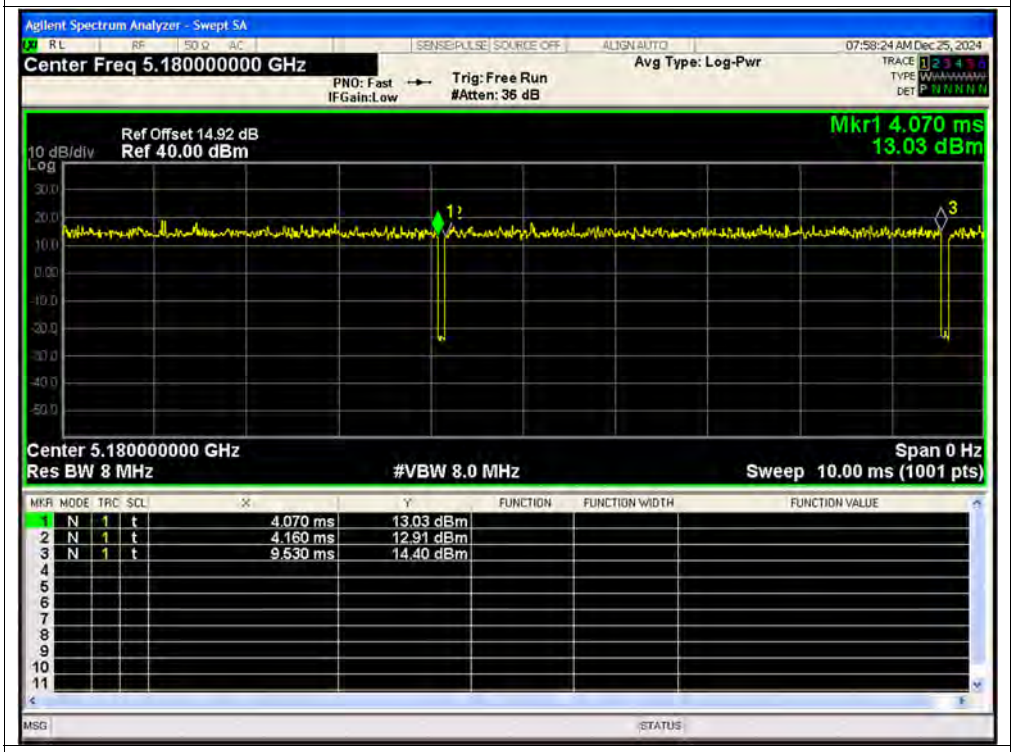
Duty Cycle NVNT n20 5785MHz Ant2



Duty Cycle NVNT n20 5825MHz Ant2



Duty Cycle NVNT n20 5180MHz Sum



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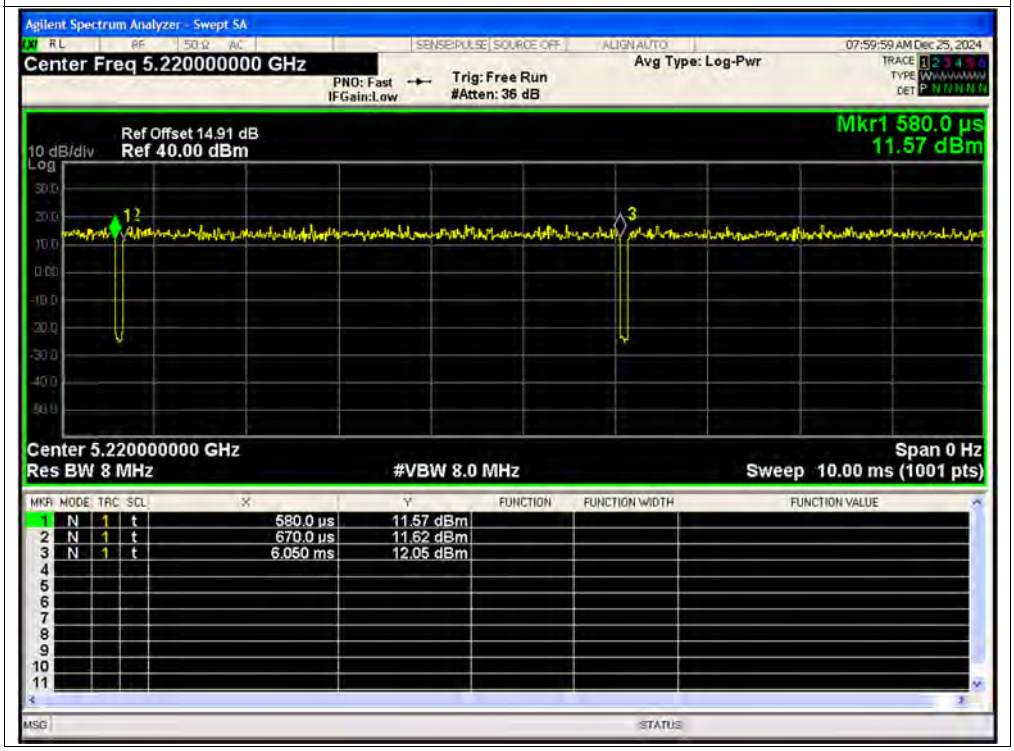
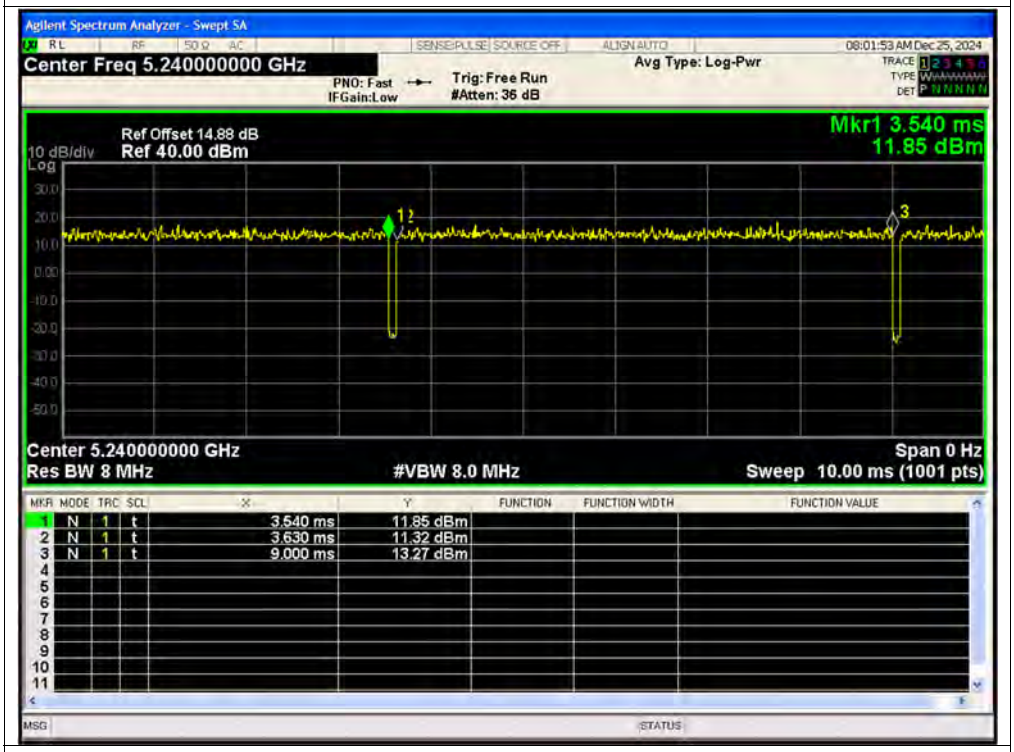
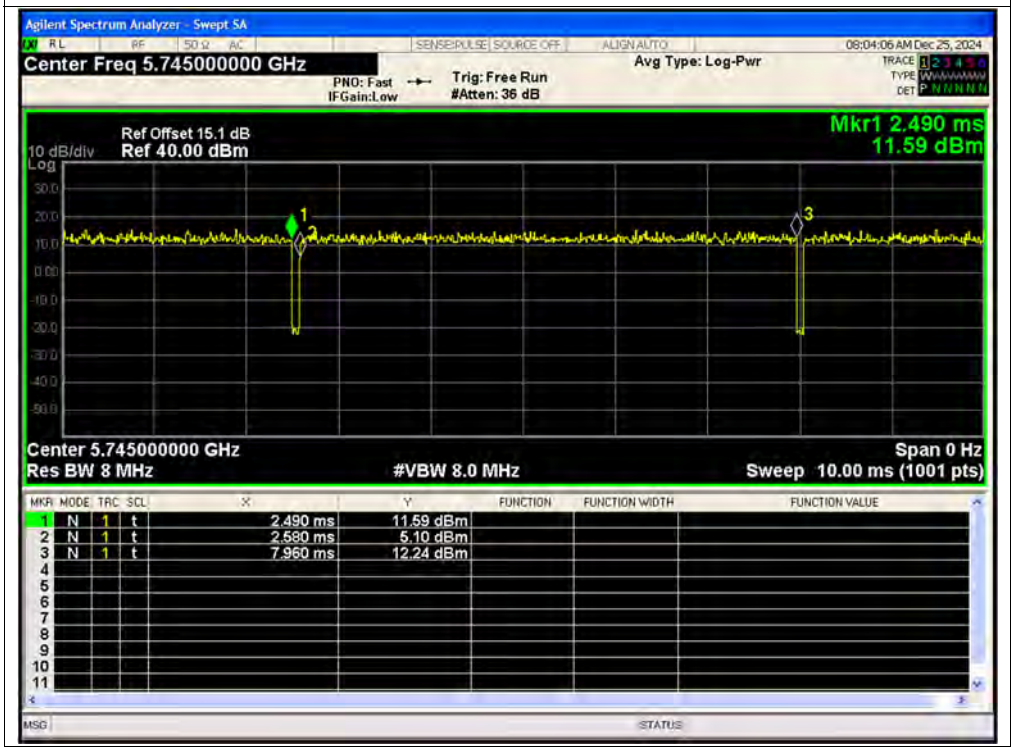


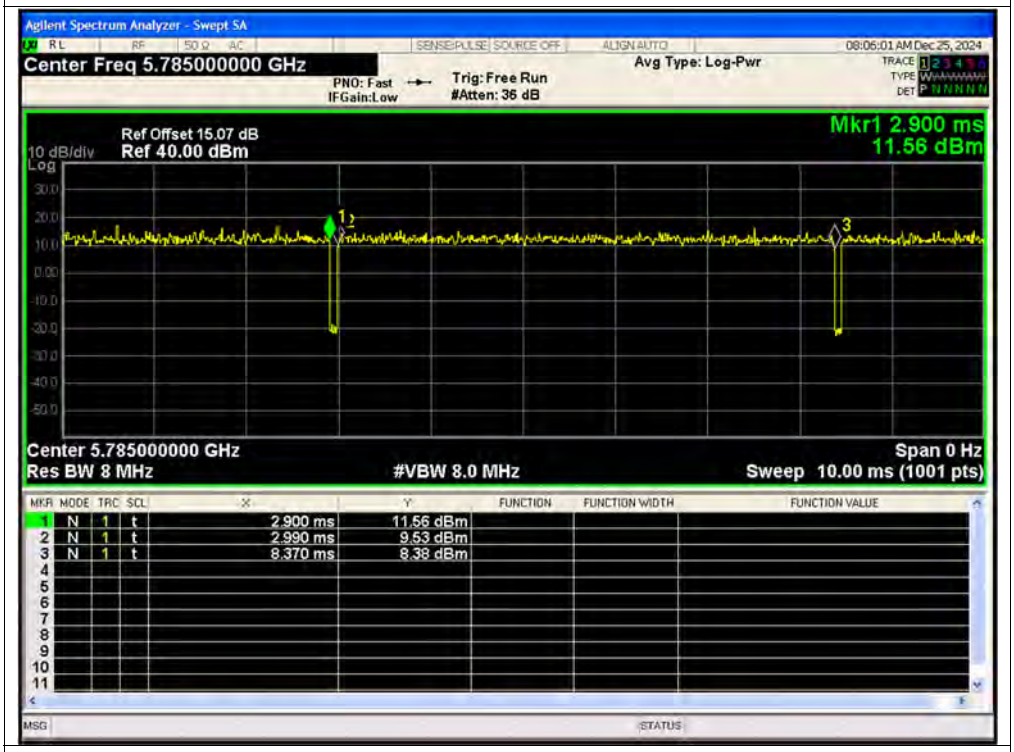
Duty Cycle NVNT n20 5240MHz Sum



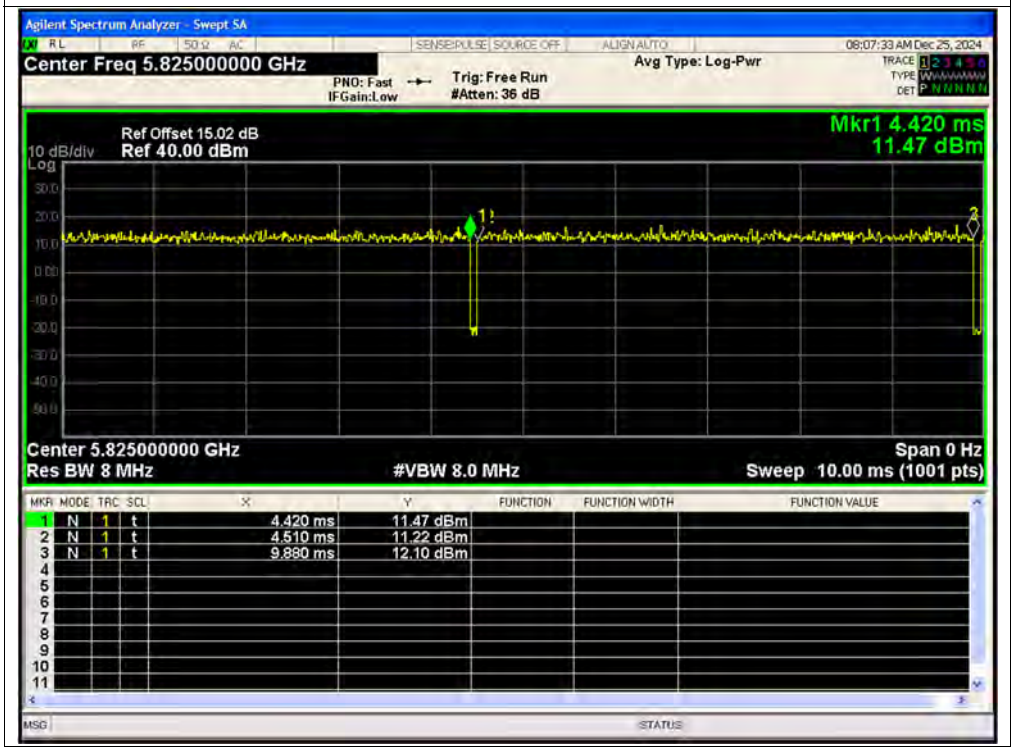
Duty Cycle NVNT n20 5745MHz Sum



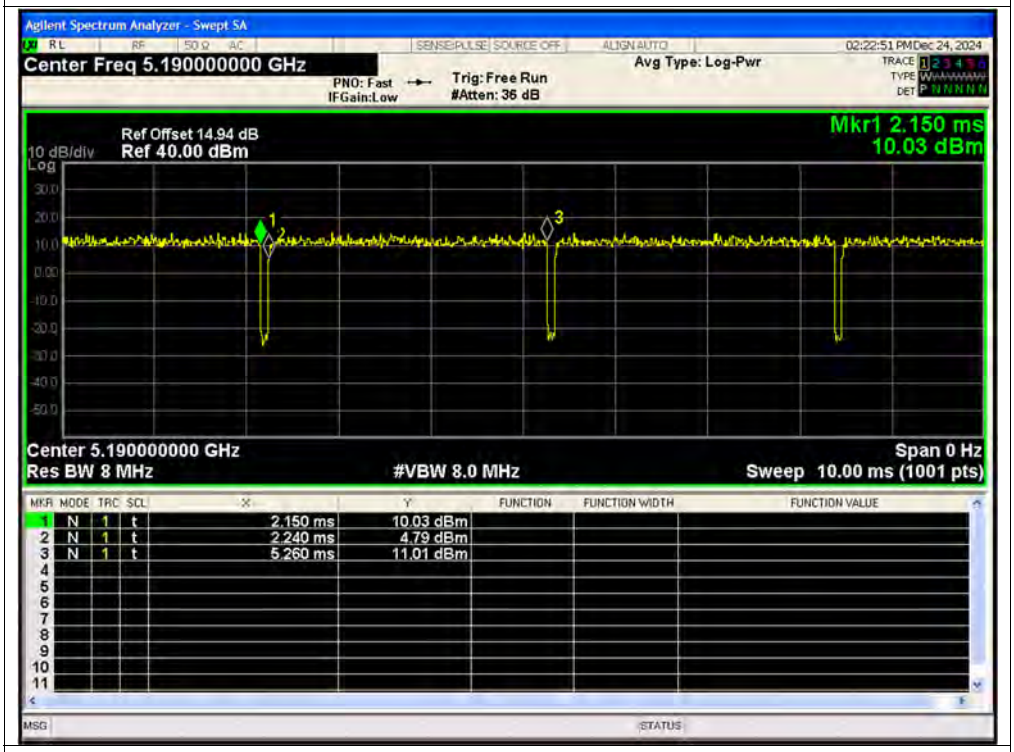
Duty Cycle NVNT n20 5785MHz Sum



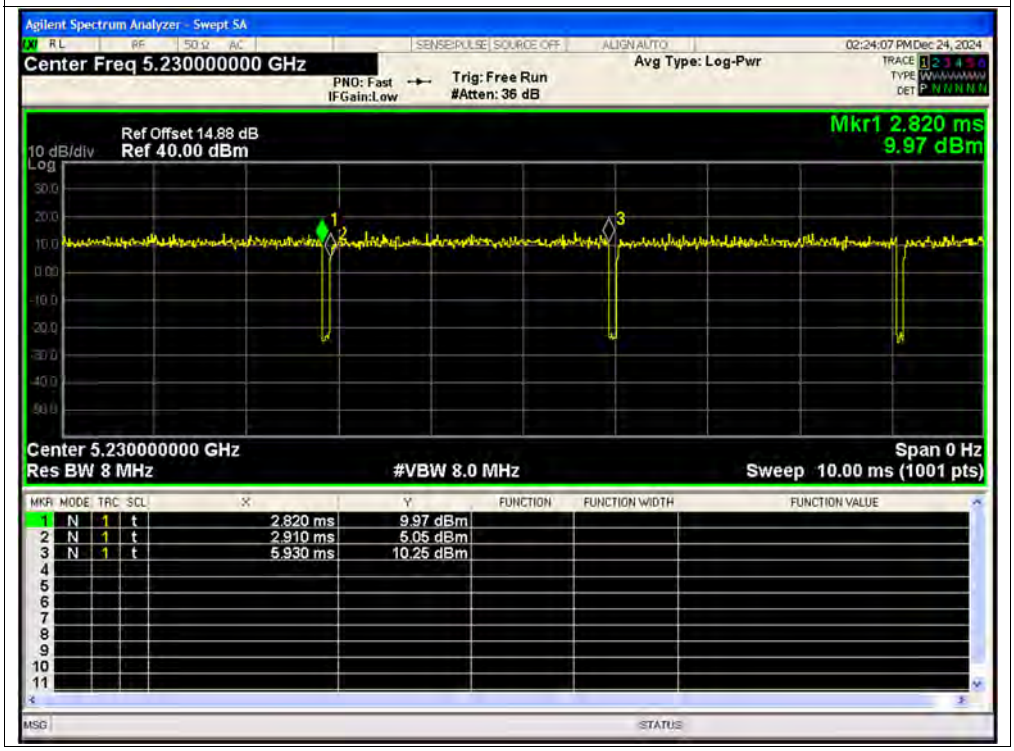
Duty Cycle NVNT n20 5825MHz Sum



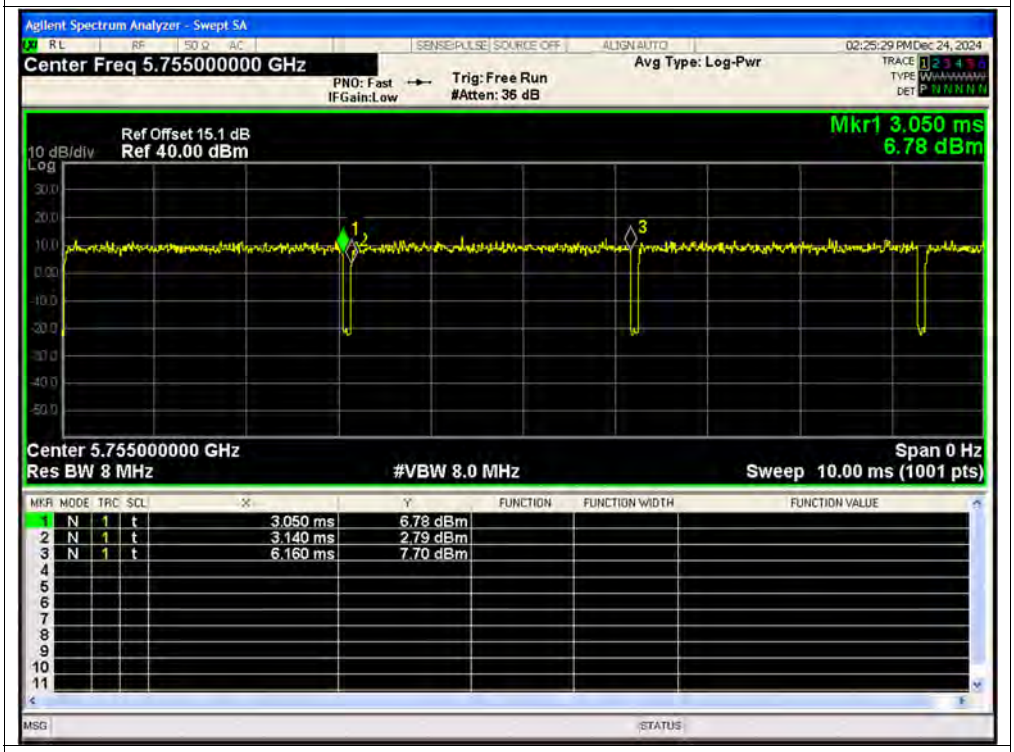
Duty Cycle NVNT n40 5190MHz Ant1



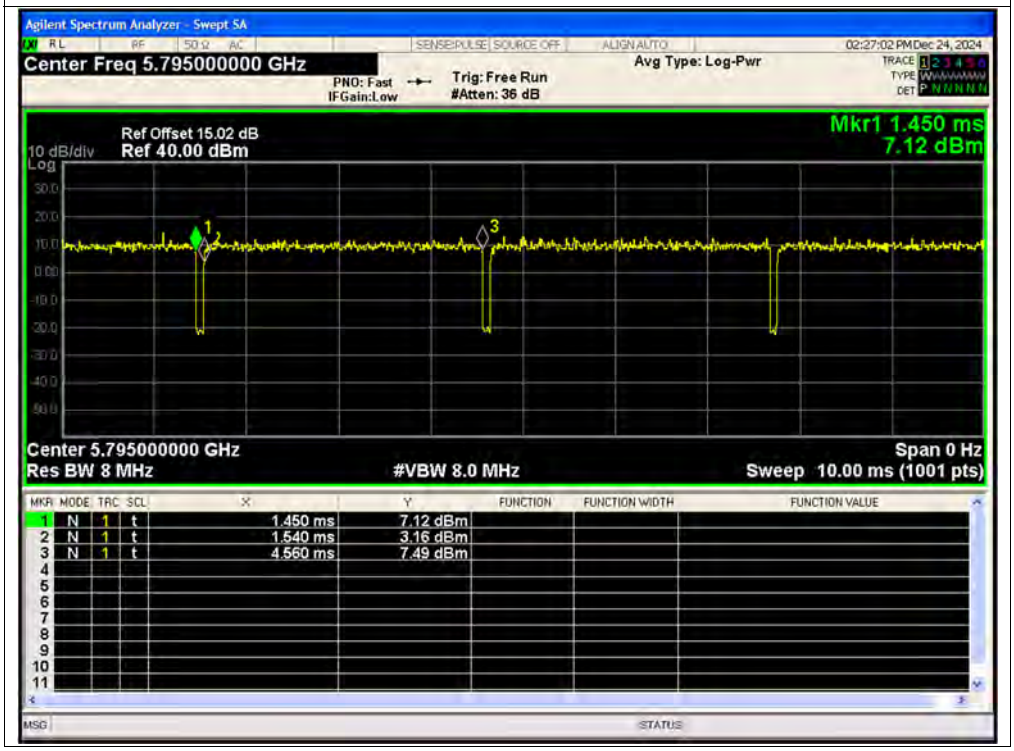
Duty Cycle NVNT n40 5230MHz Ant1



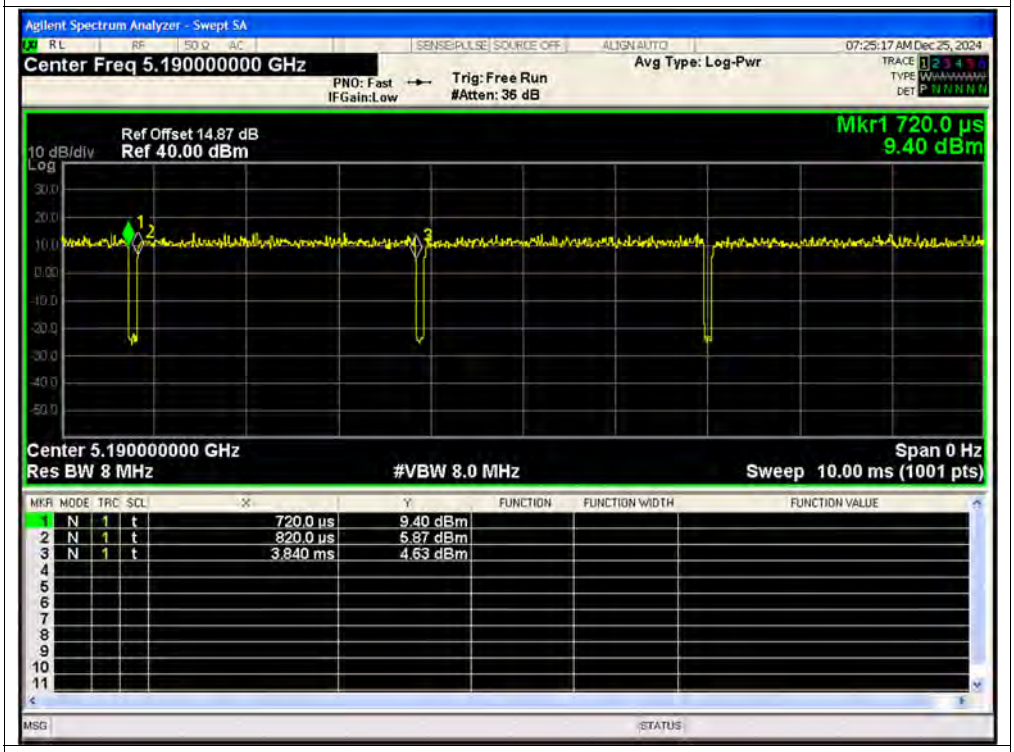
Duty Cycle NVNT n40 5755MHz Ant1



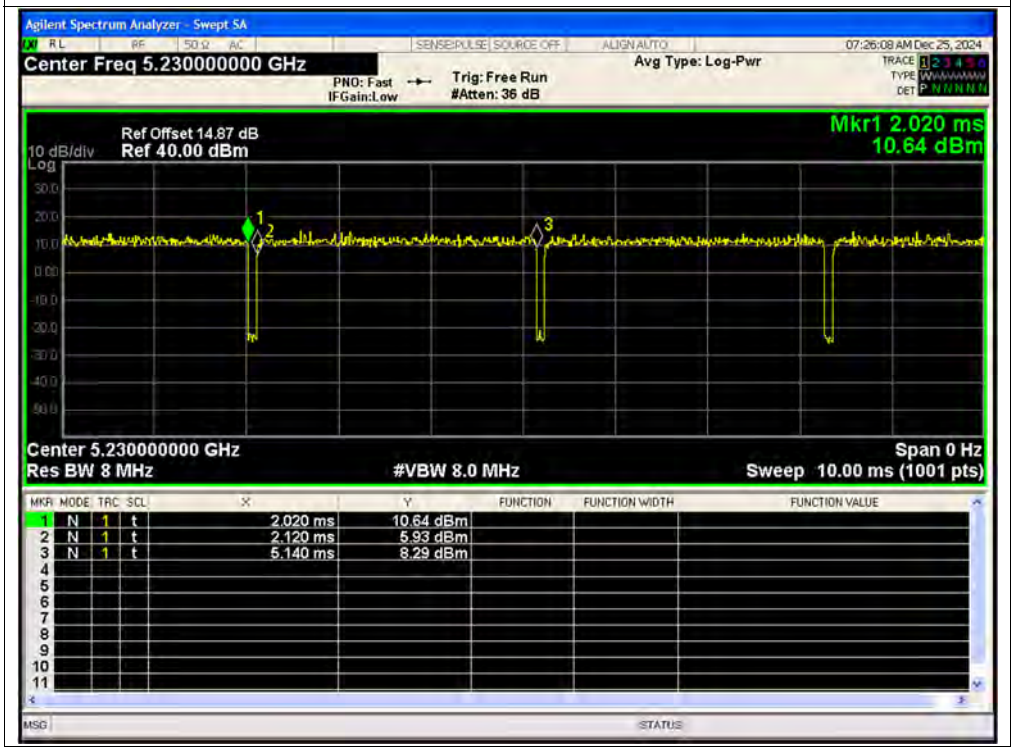
Duty Cycle NVNT n40 5795MHz Ant1



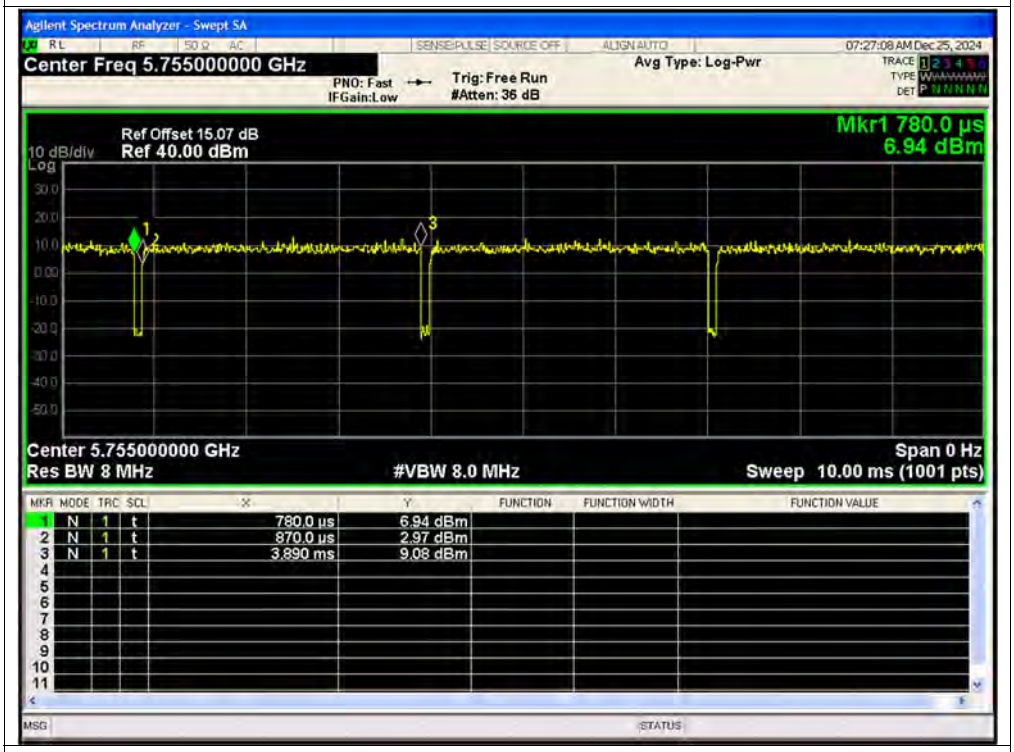
Duty Cycle NVNT n40 5190MHz Ant2



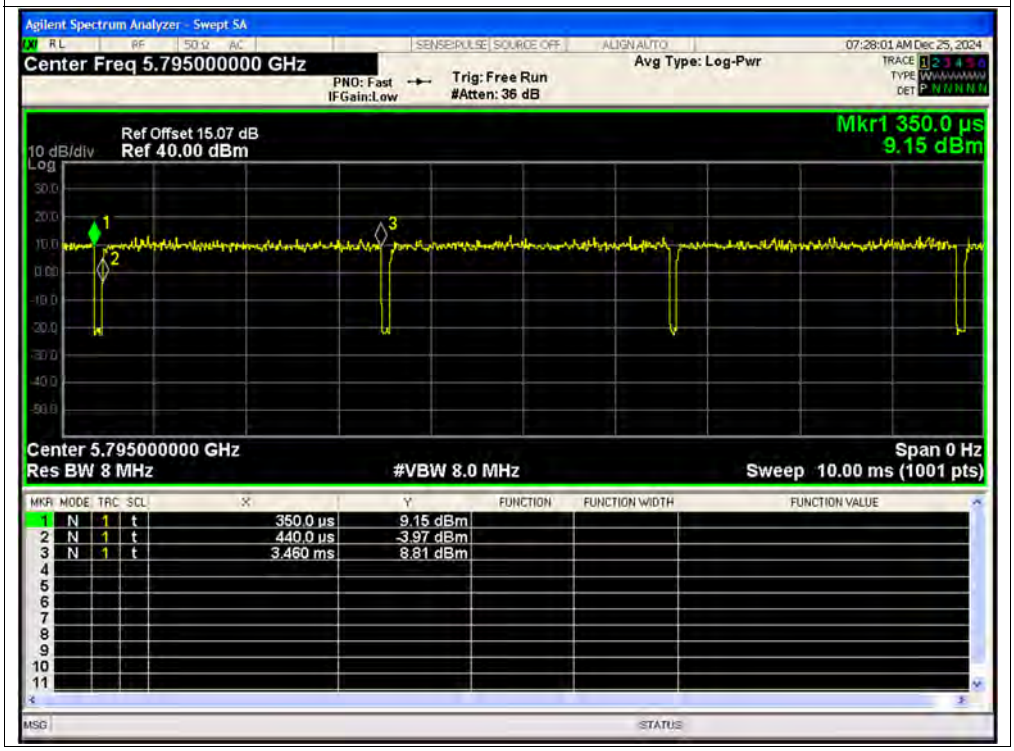
Duty Cycle NVNT n40 5230MHz Ant2



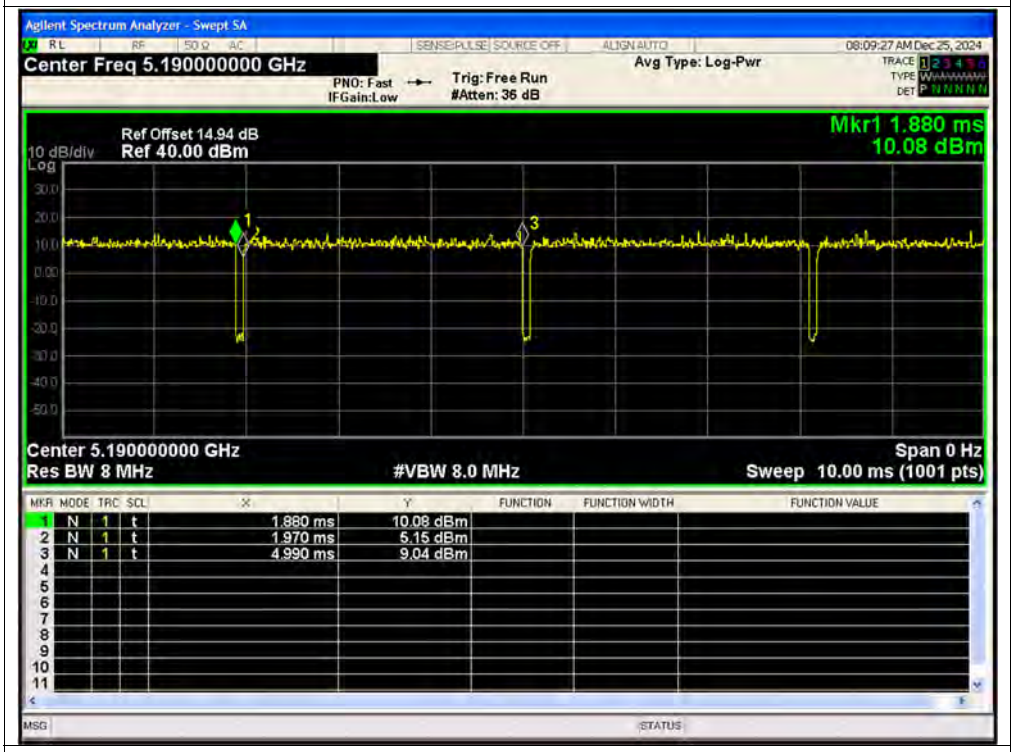
Duty Cycle NVNT n40 5755MHz Ant2



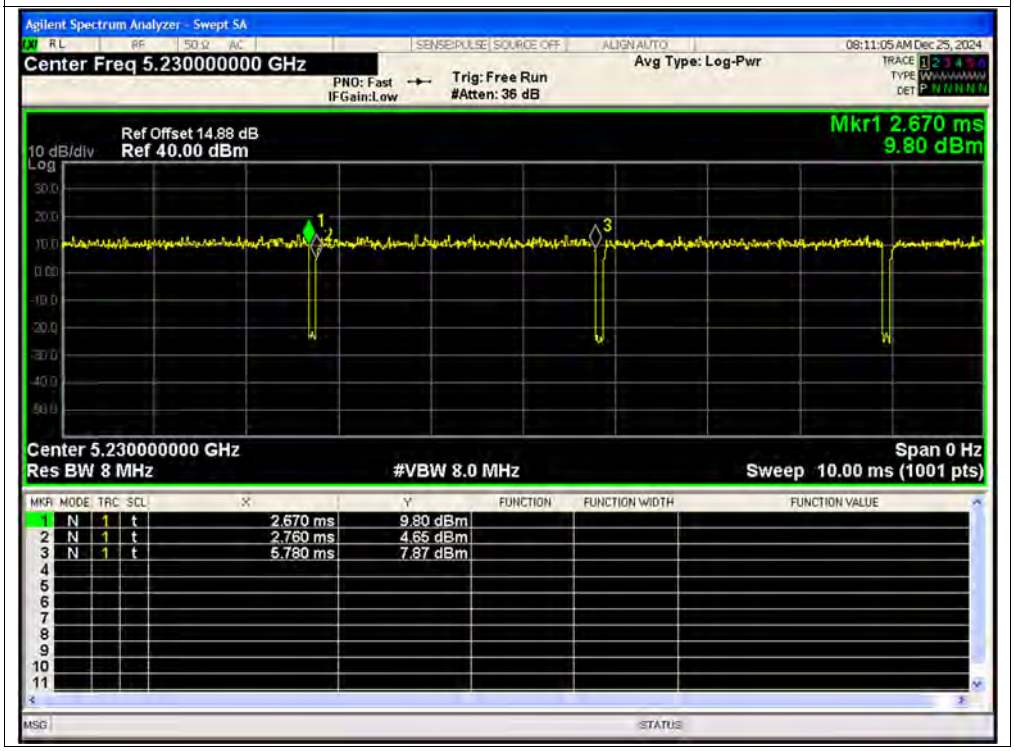
Duty Cycle NVNT n40 5795MHz Ant2



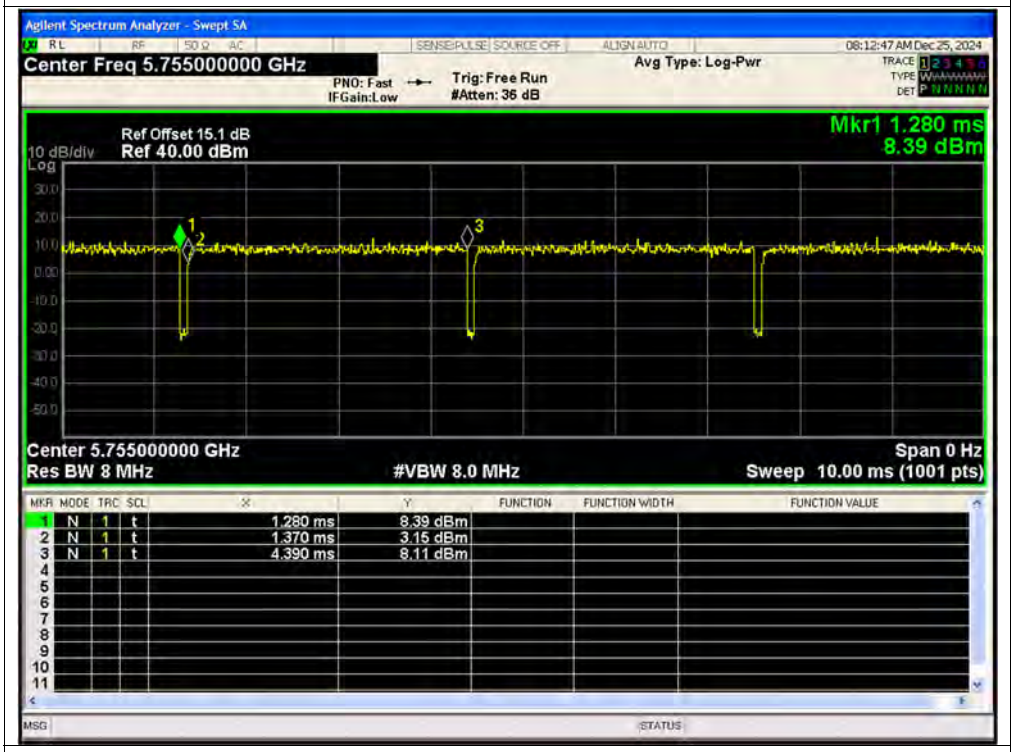
Duty Cycle NVNT n40 5190MHz Sum



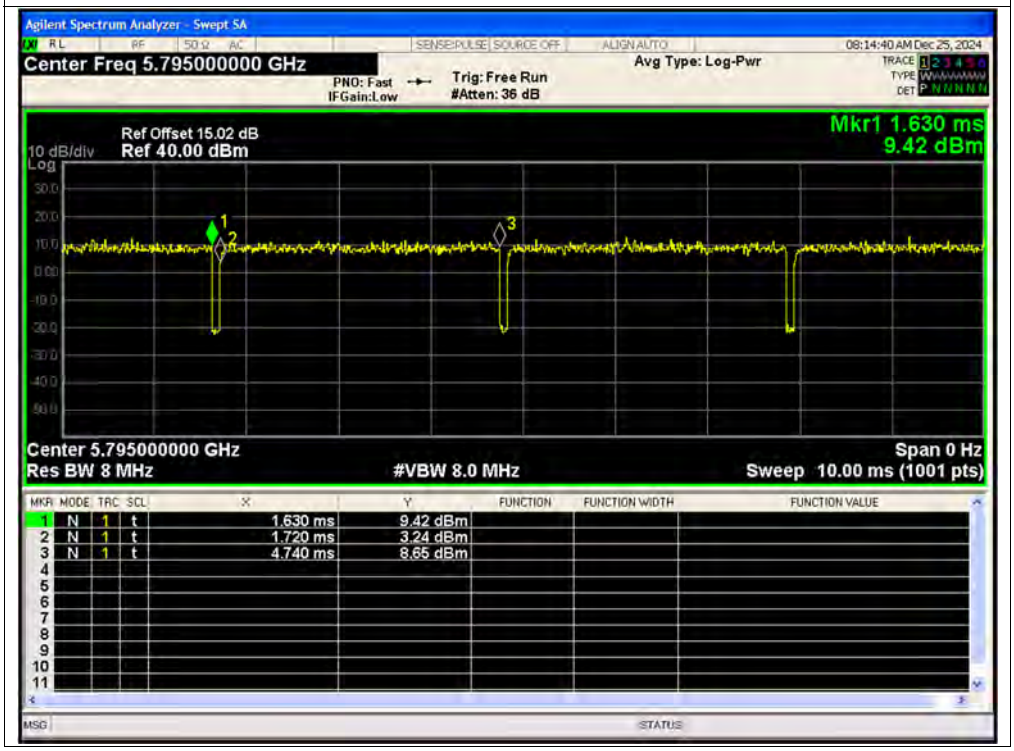
Duty Cycle NVNT n40 5230MHz Sum



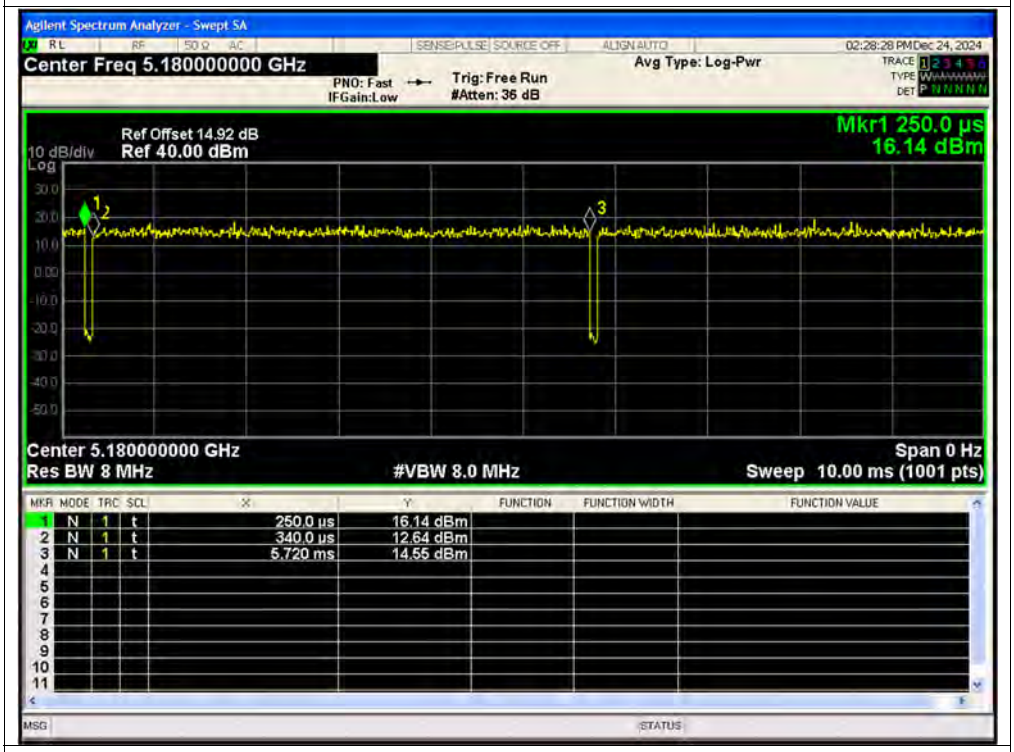
Duty Cycle NVNT n40 5755MHz Sum



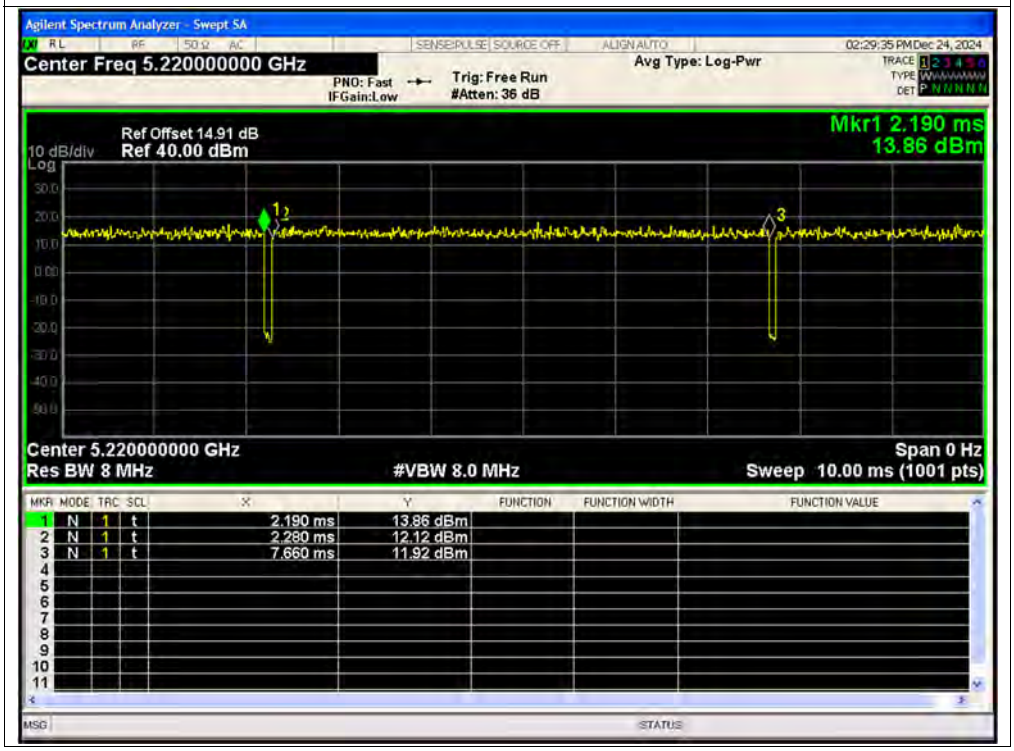
Duty Cycle NVNT n40 5795MHz Sum



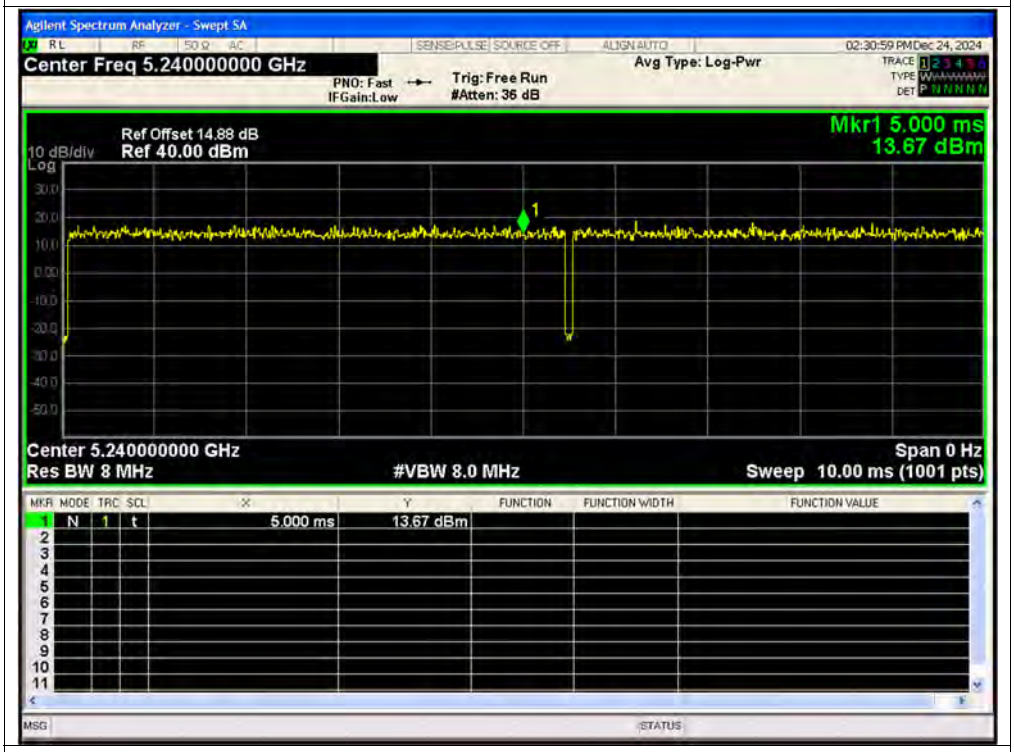
Duty Cycle NVNT ac20 5180MHz Ant1



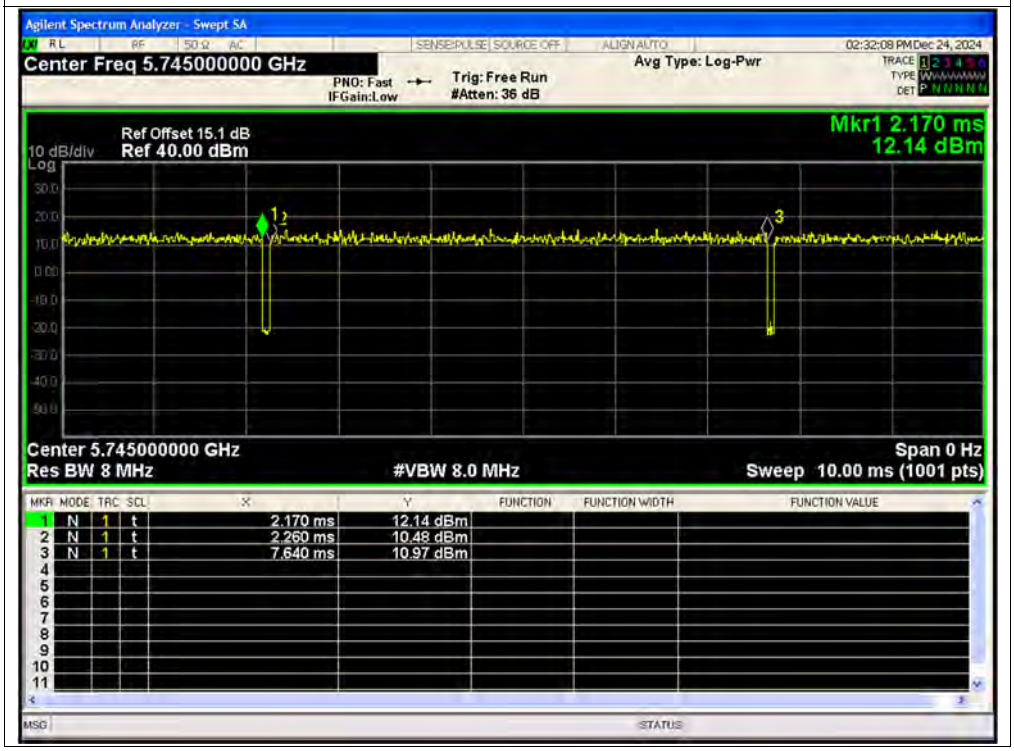
Duty Cycle NVNT ac20 5220MHz Ant1



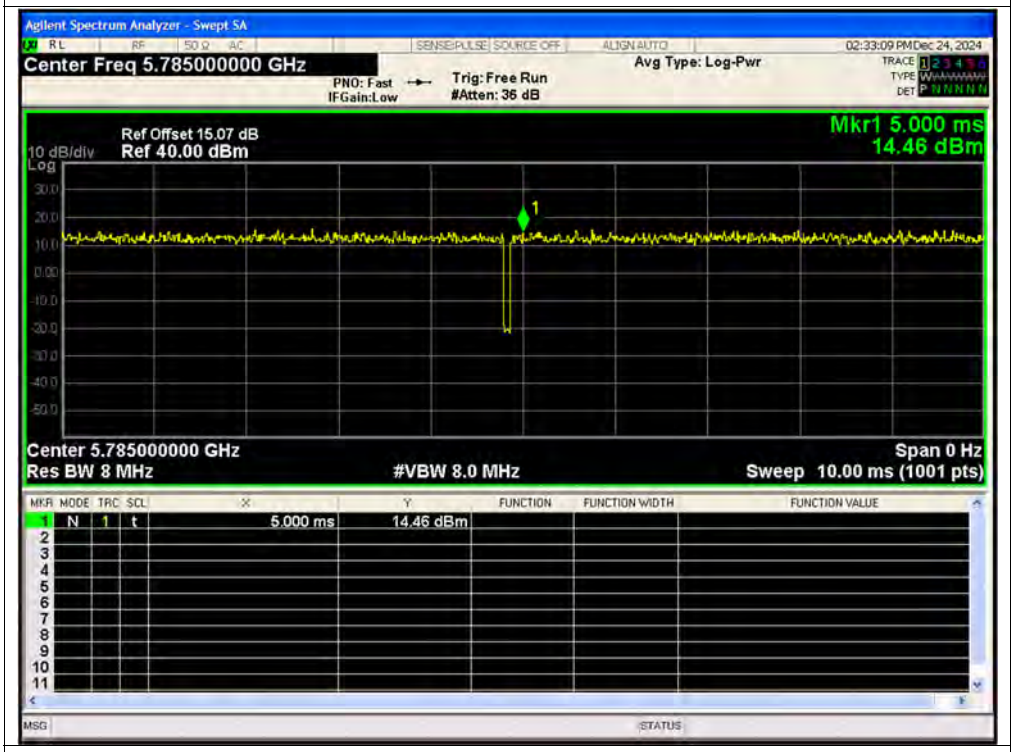
Duty Cycle NVNT ac20 5240MHz Ant1



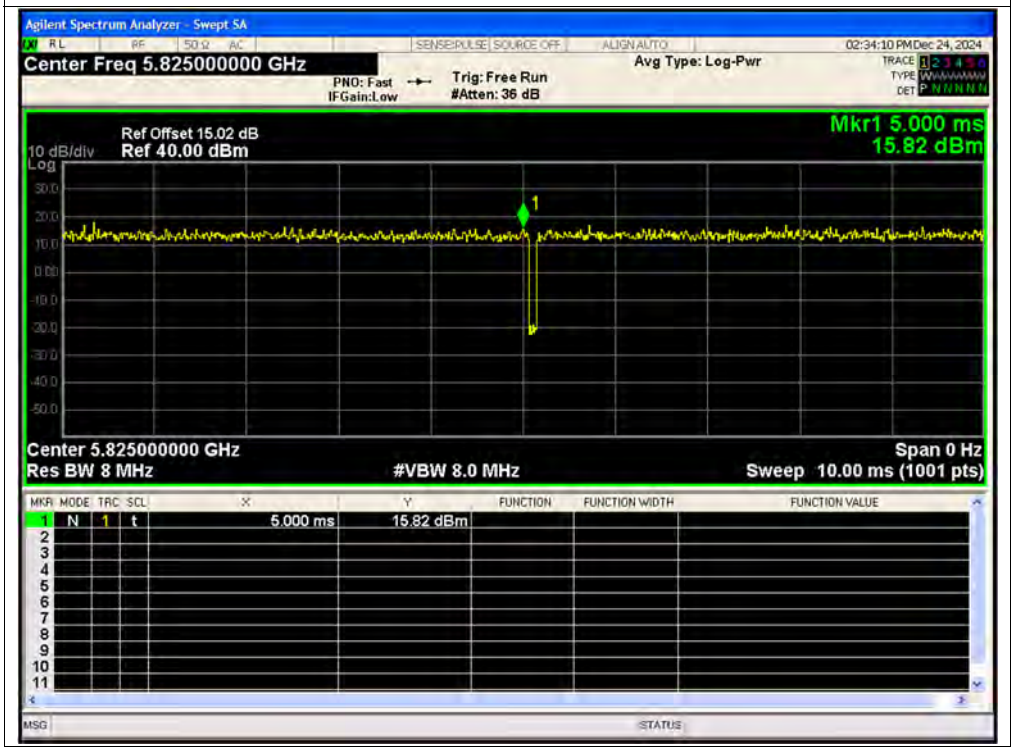
Duty Cycle NVNT ac20 5745MHz Ant1



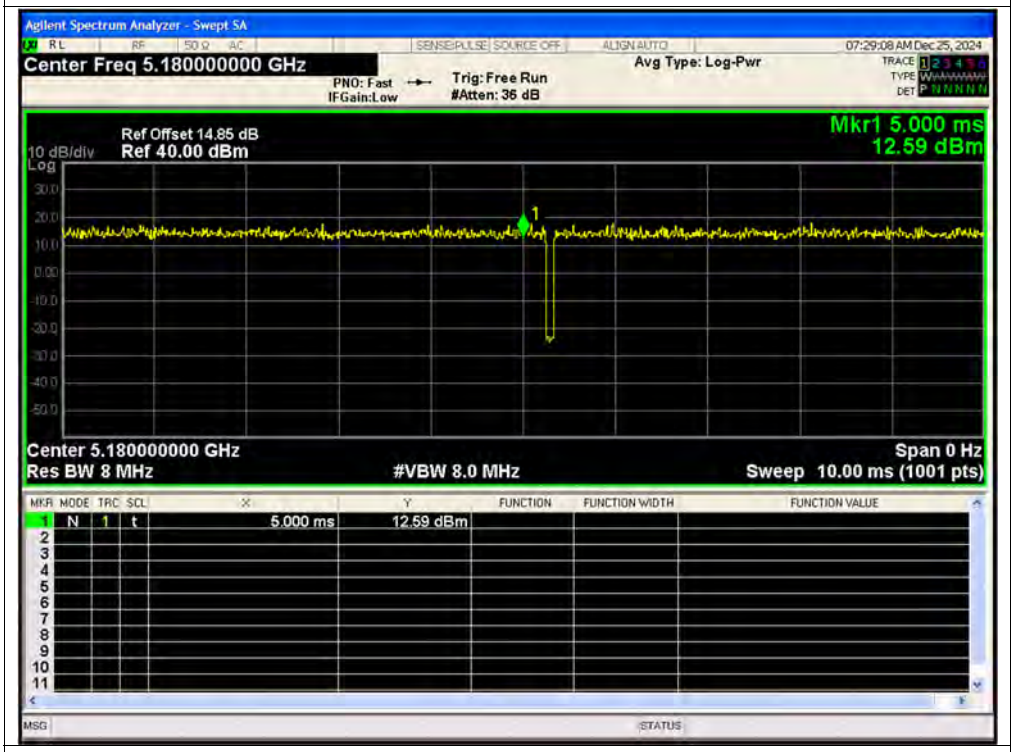
Duty Cycle NVNT ac20 5785MHz Ant1



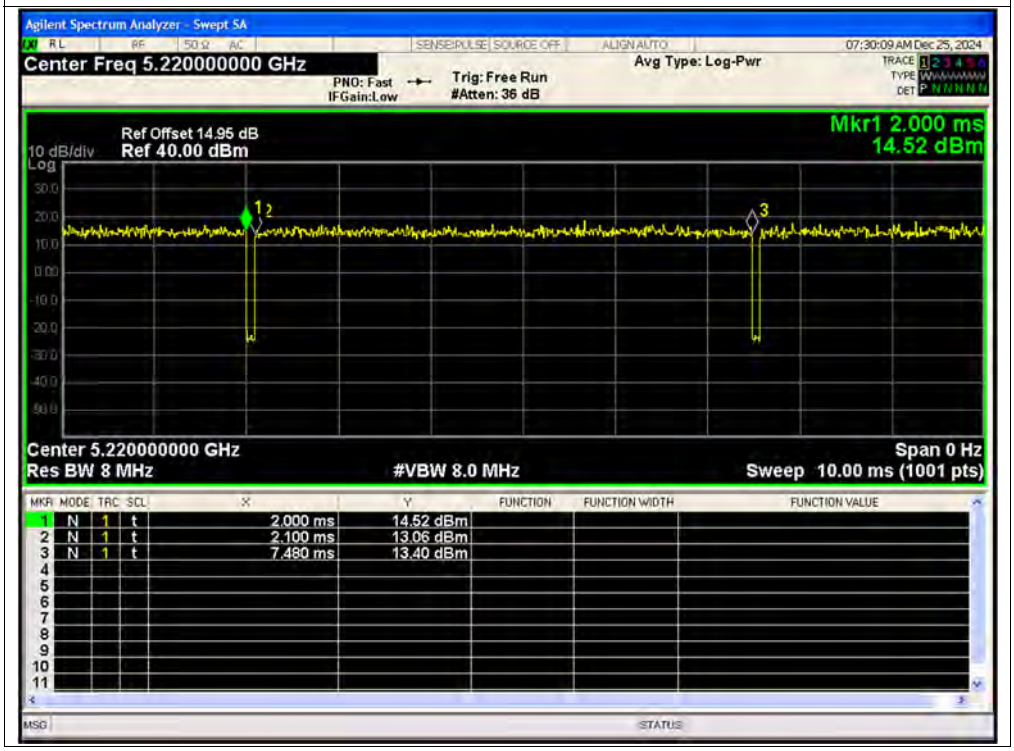
Duty Cycle NVNT ac20 5825MHz Ant1



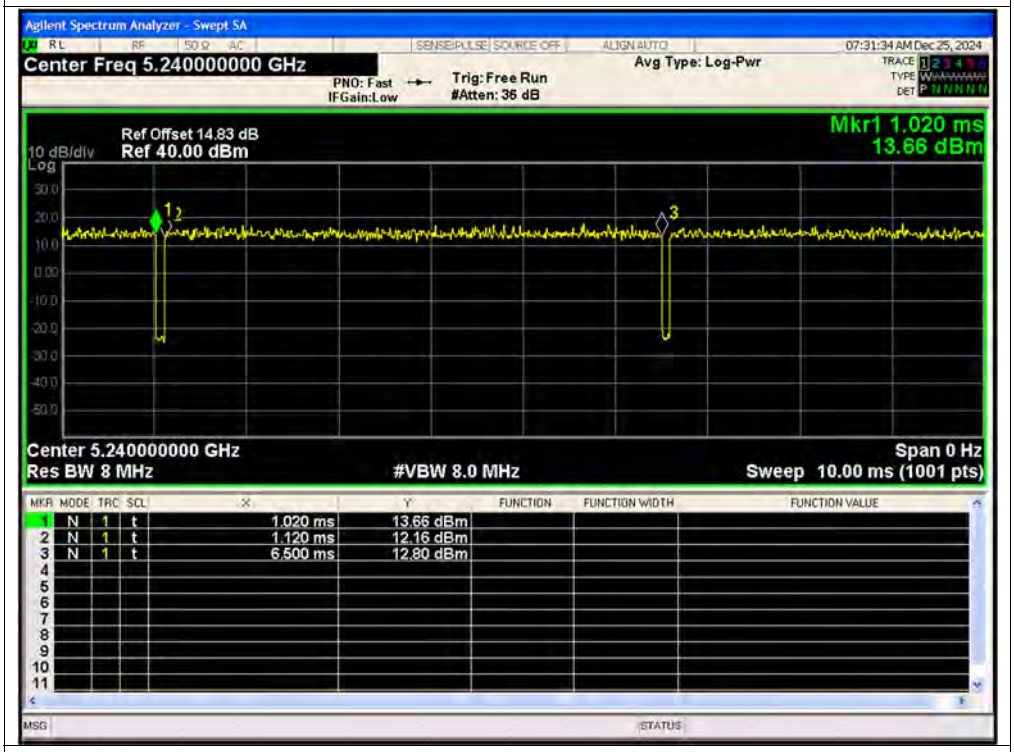
Duty Cycle NVNT ac20 5180MHz Ant2



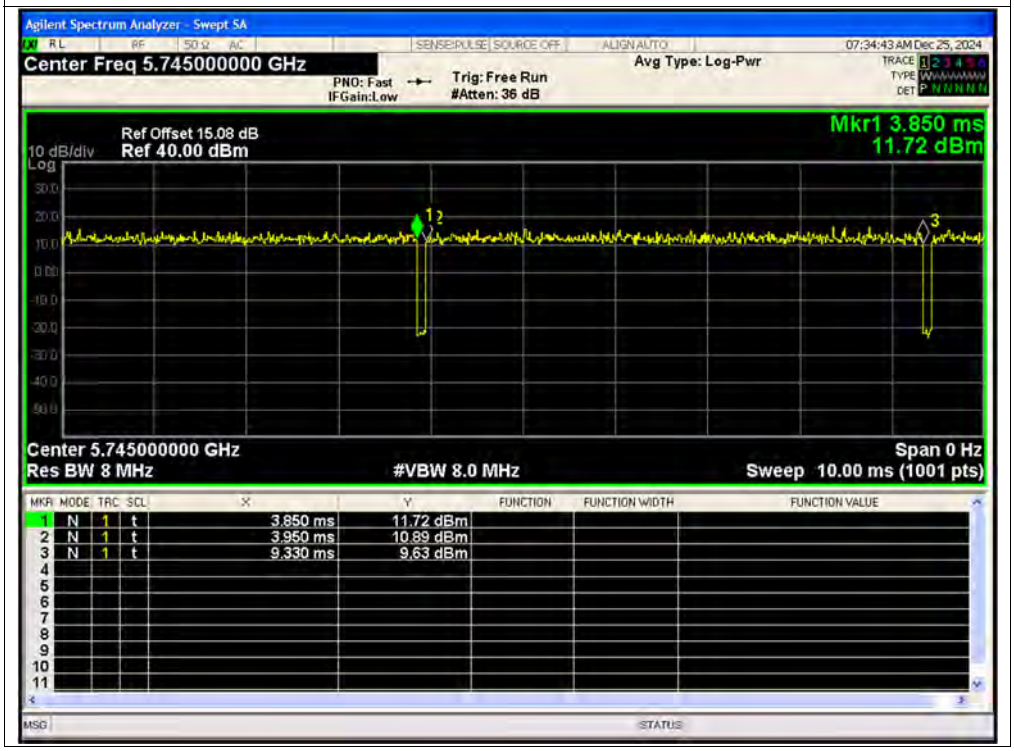
Duty Cycle NVNT ac20 5220MHz Ant2



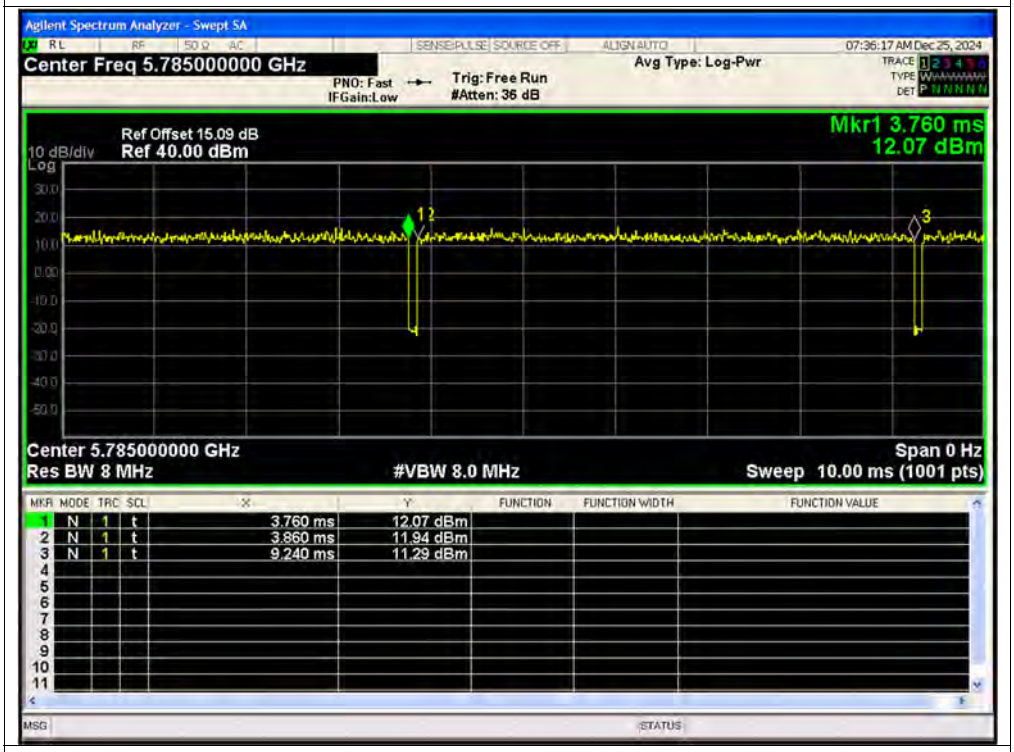
Duty Cycle NVNT ac20 5240MHz Ant2



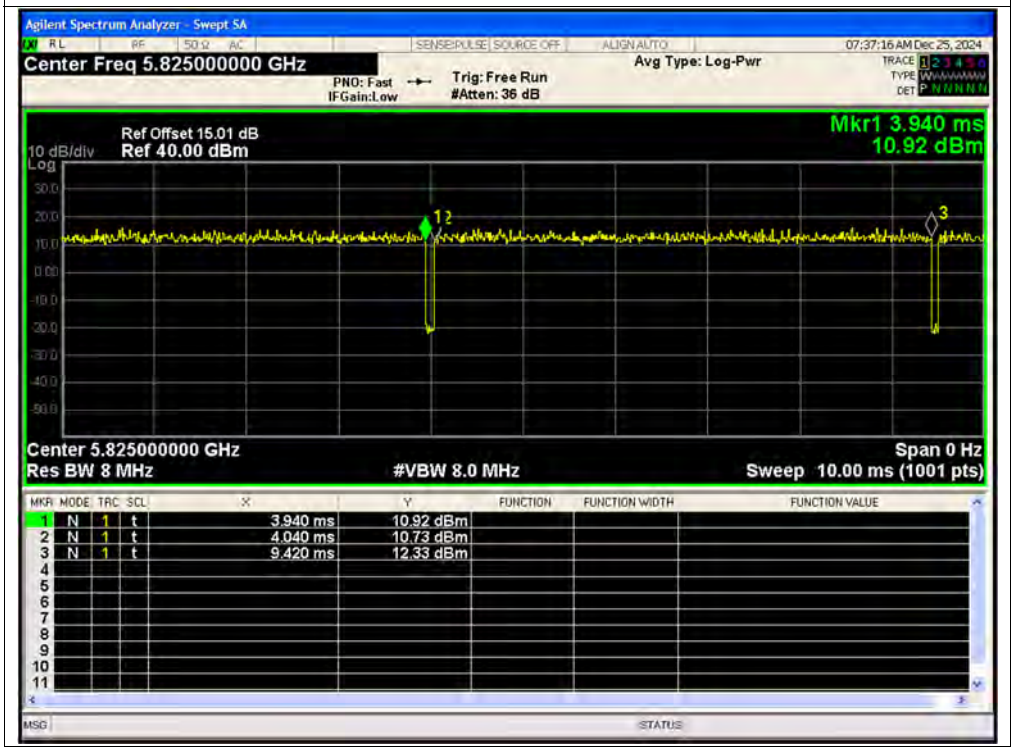
Duty Cycle NVNT ac20 5745MHz Ant2



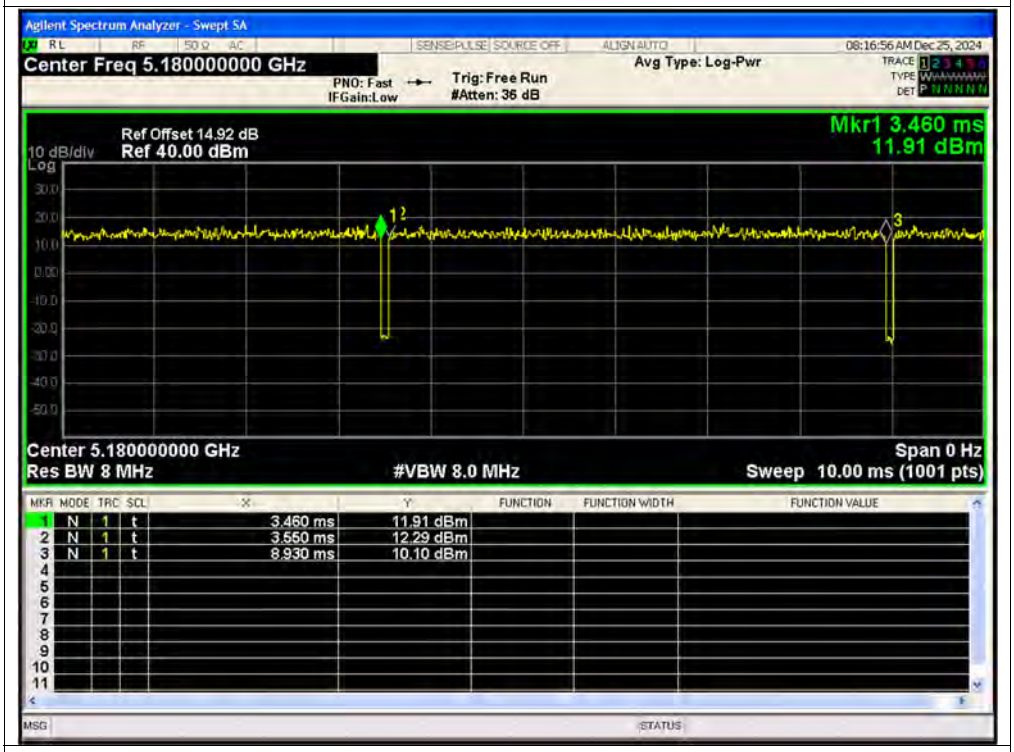
Duty Cycle NVNT ac20 5785MHz Ant2



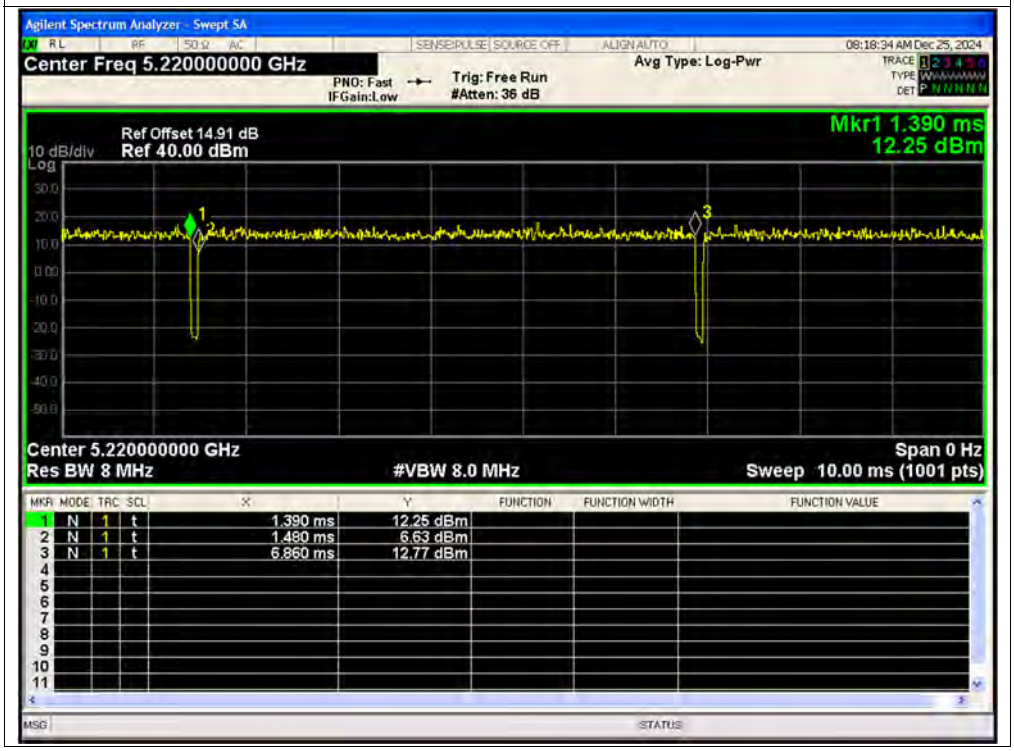
Duty Cycle NVNT ac20 5825MHz Ant2



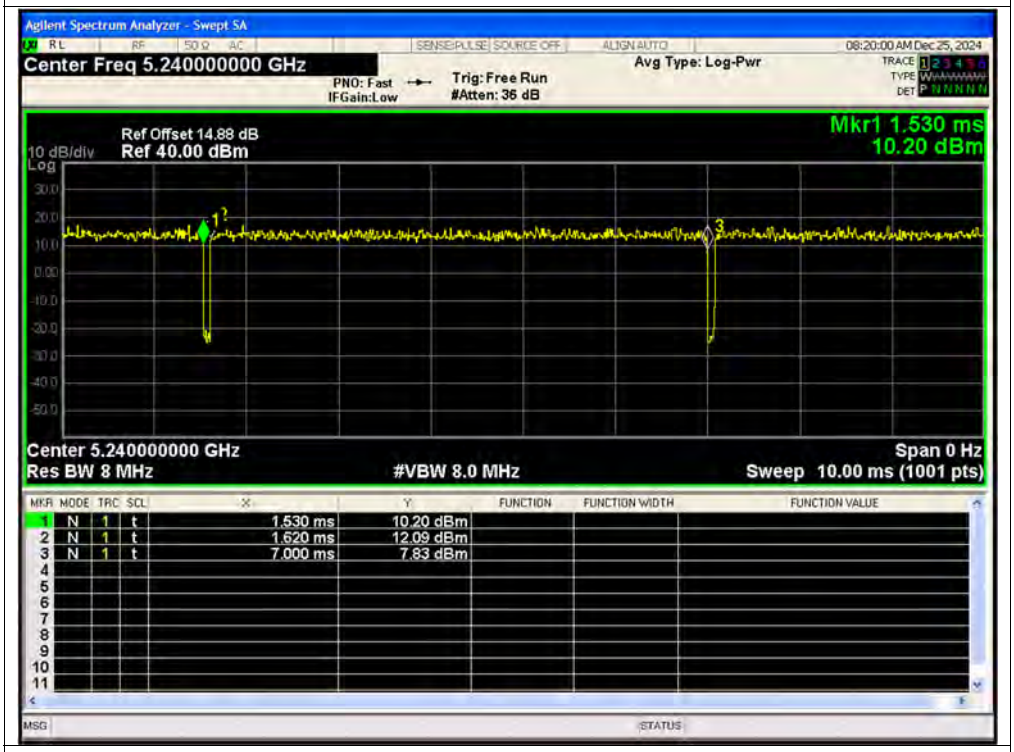
Duty Cycle NVNT ac20 5180MHz Sum



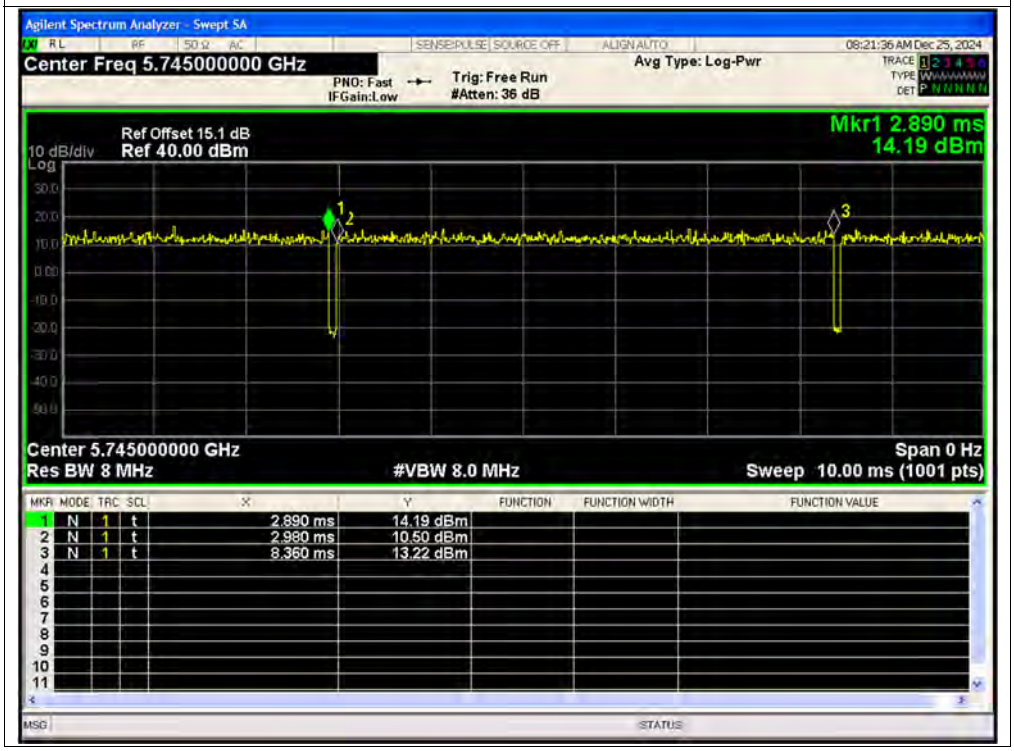
Duty Cycle NVNT ac20 5220MHz Sum



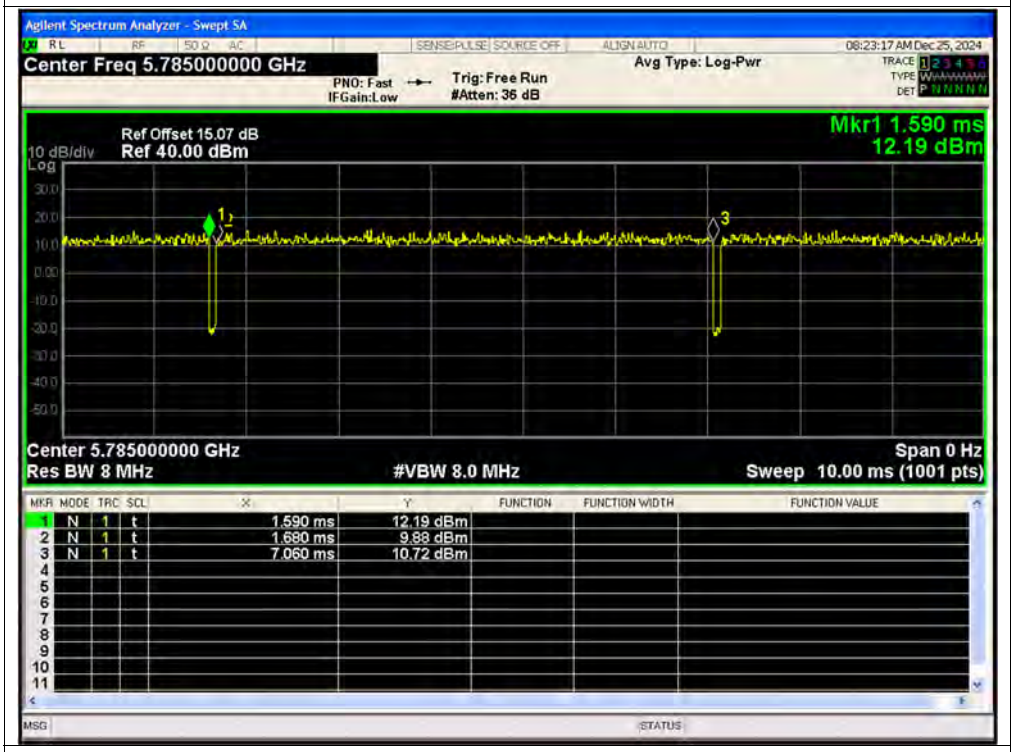
Duty Cycle NVNT ac20 5240MHz Sum



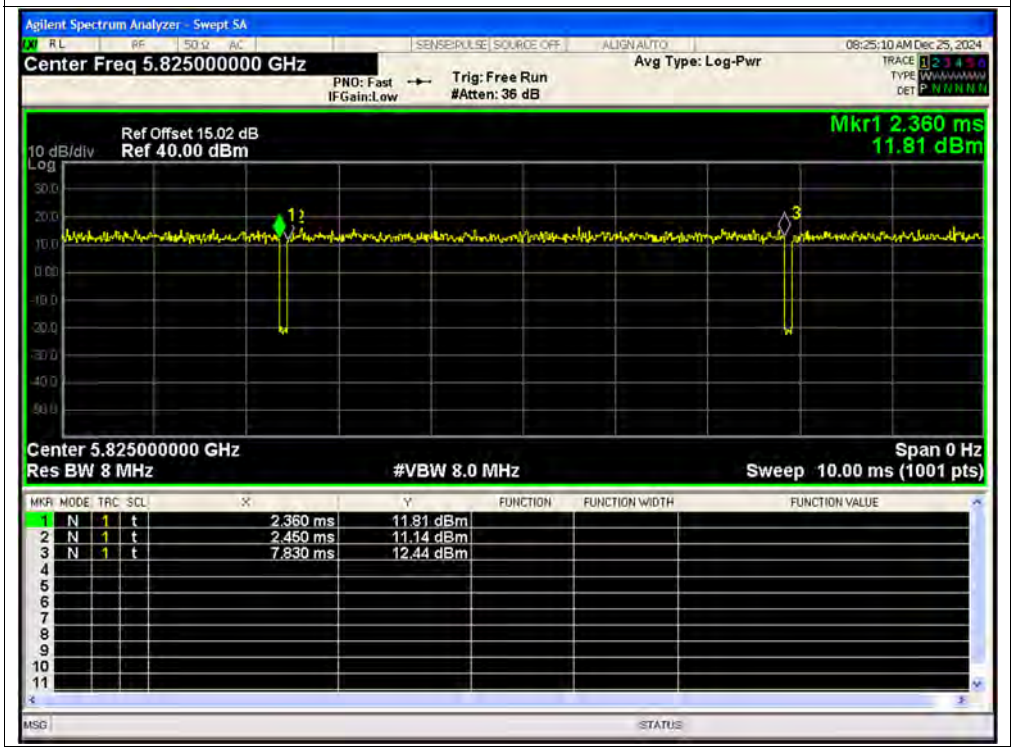
Duty Cycle NVNT ac20 5745MHz Sum



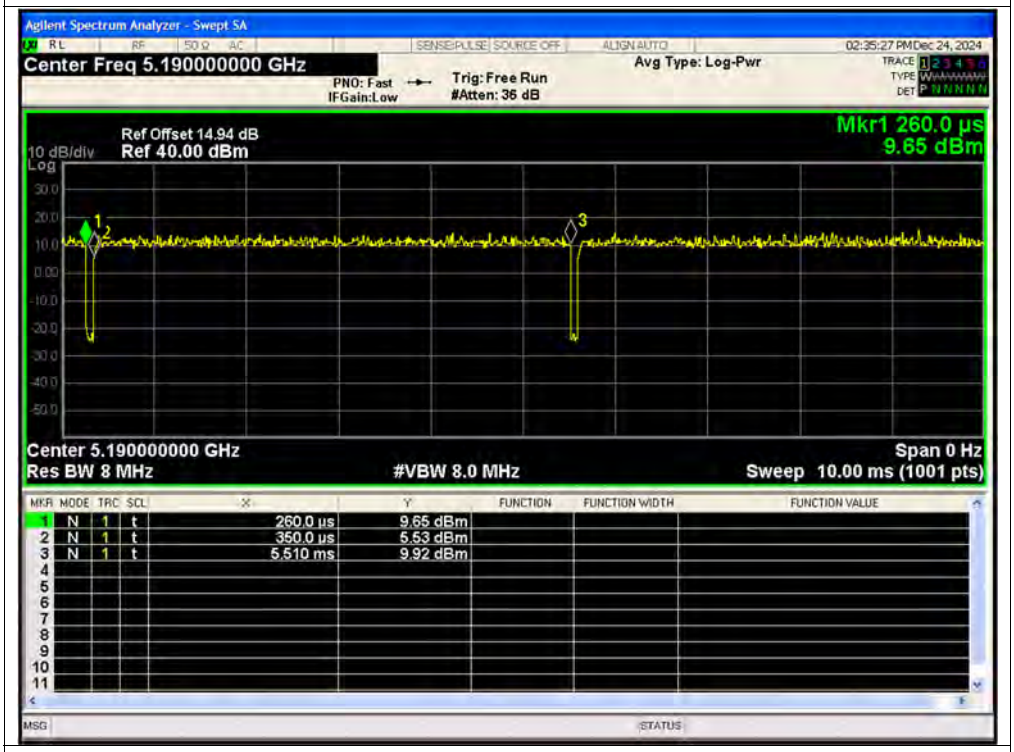
Duty Cycle NVNT ac20 5785MHz Sum



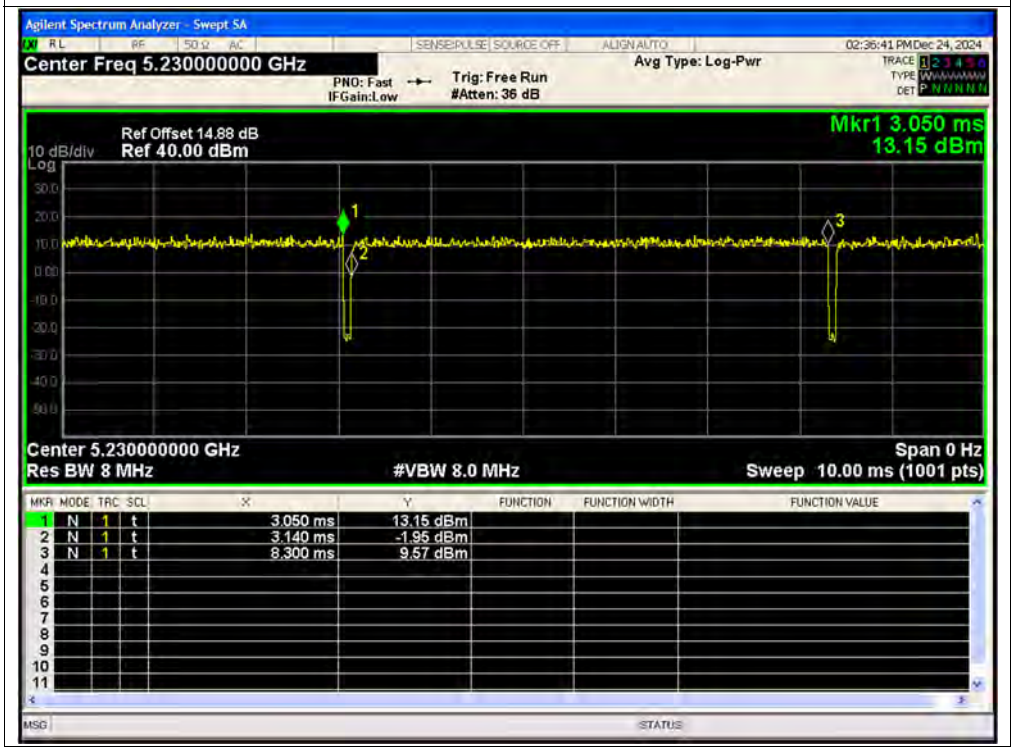
Duty Cycle NVNT ac20 5825MHz Sum



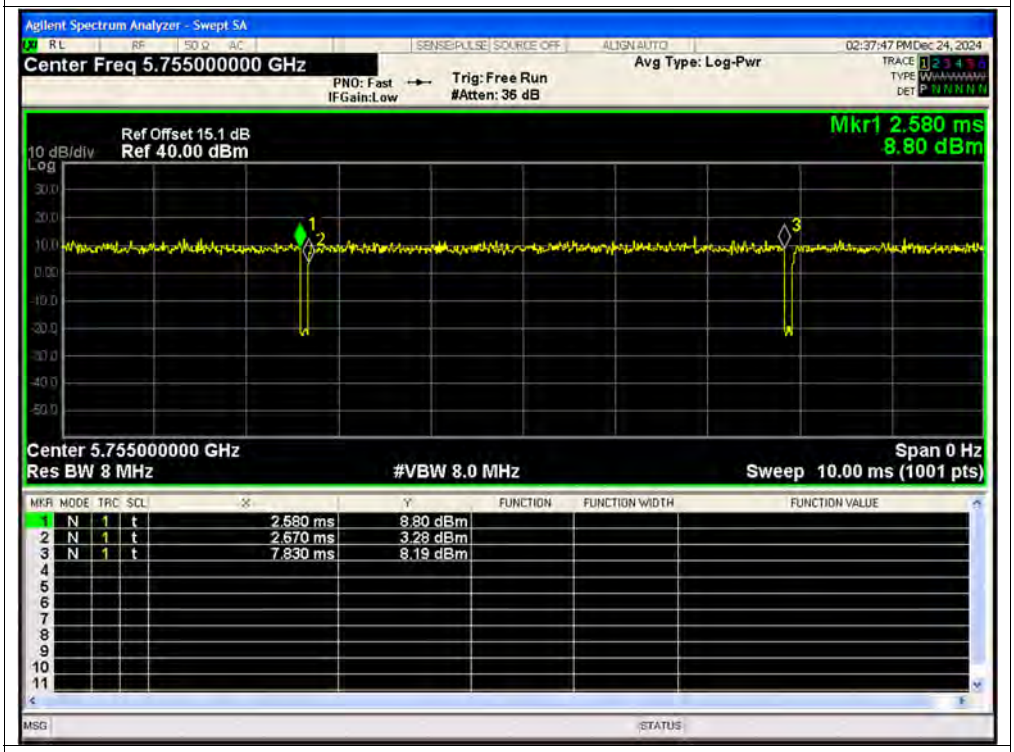
Duty Cycle NVNT ac40 5190MHz Ant1



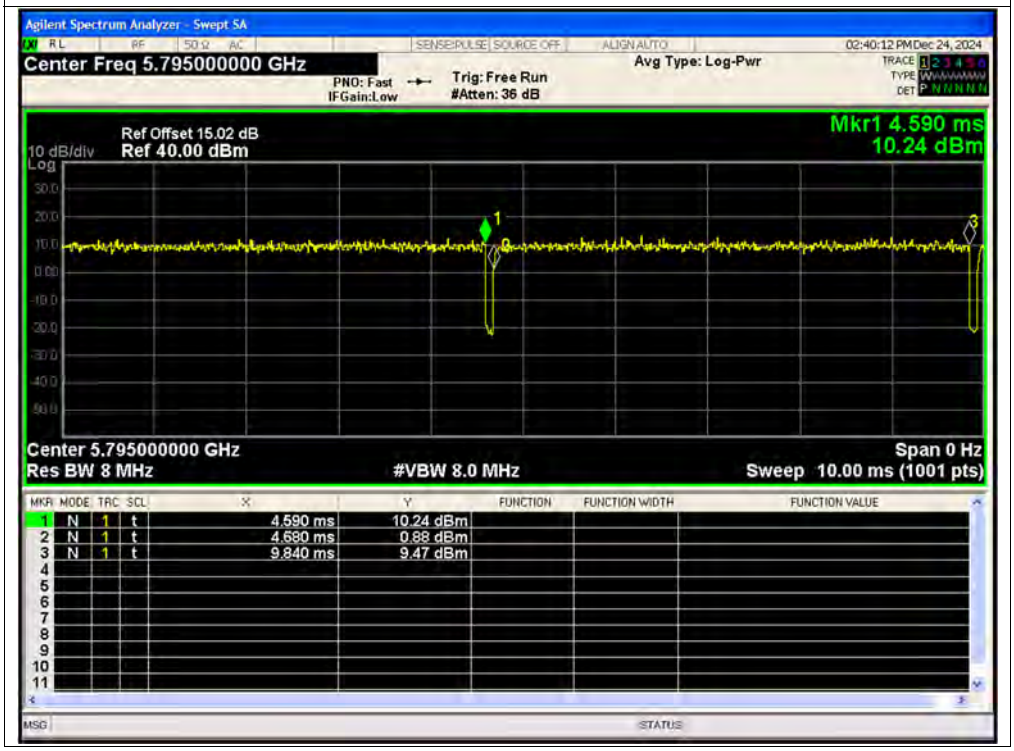
Duty Cycle NVNT ac40 5230MHz Ant1



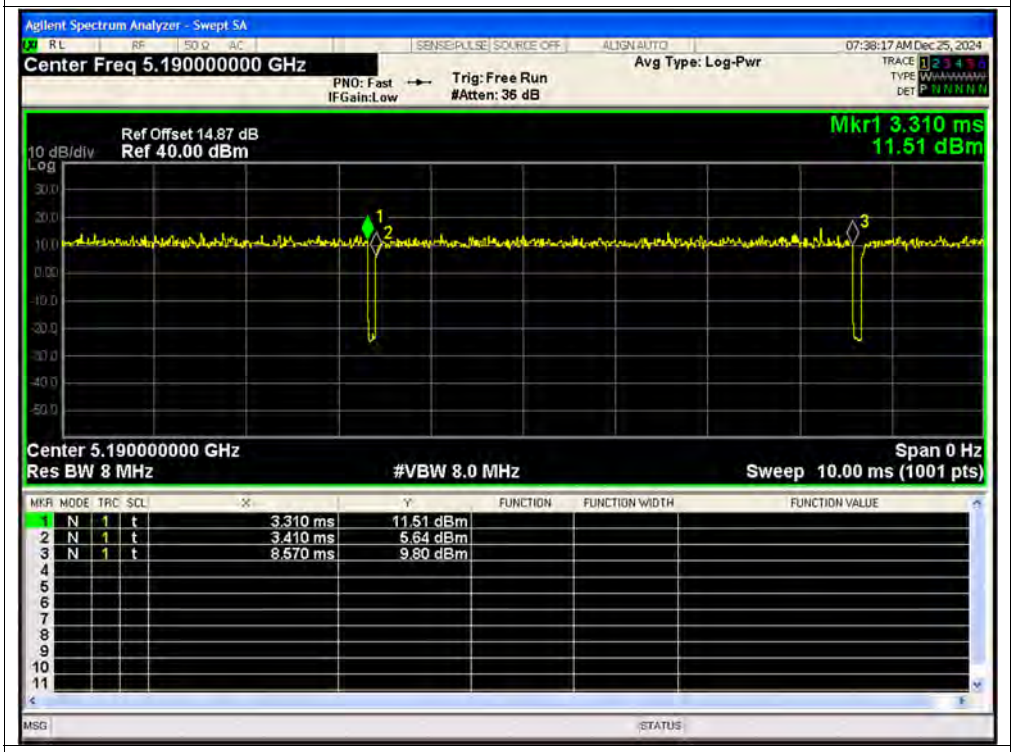
Duty Cycle NVNT ac40 5755MHz Ant1



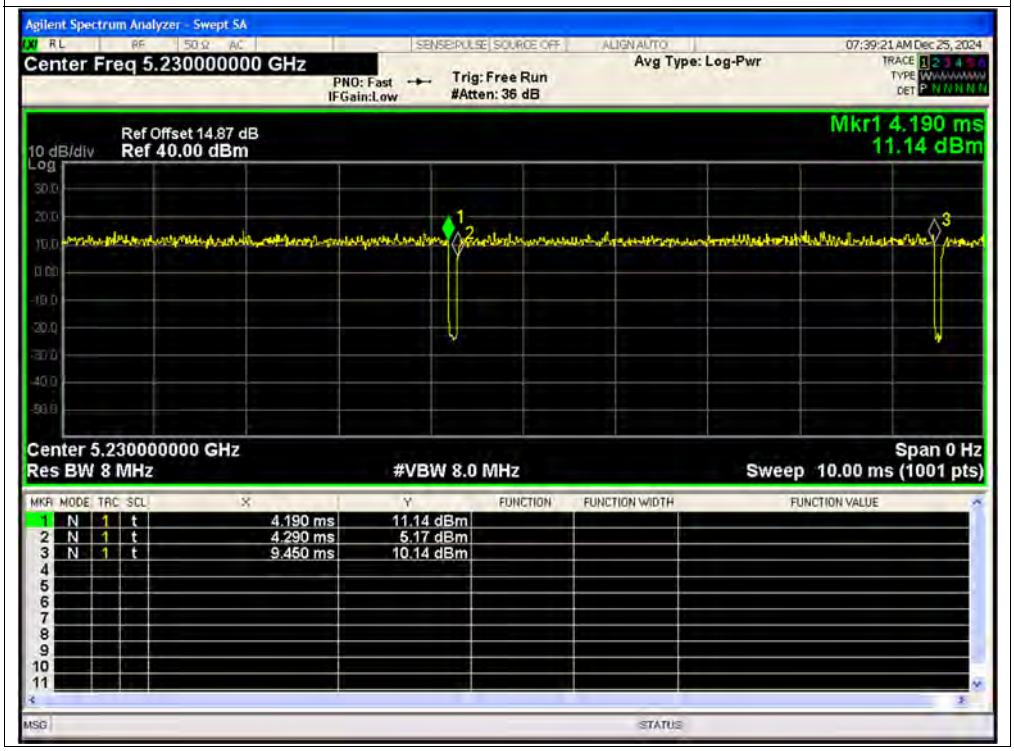
Duty Cycle NVNT ac40 5795MHz Ant1



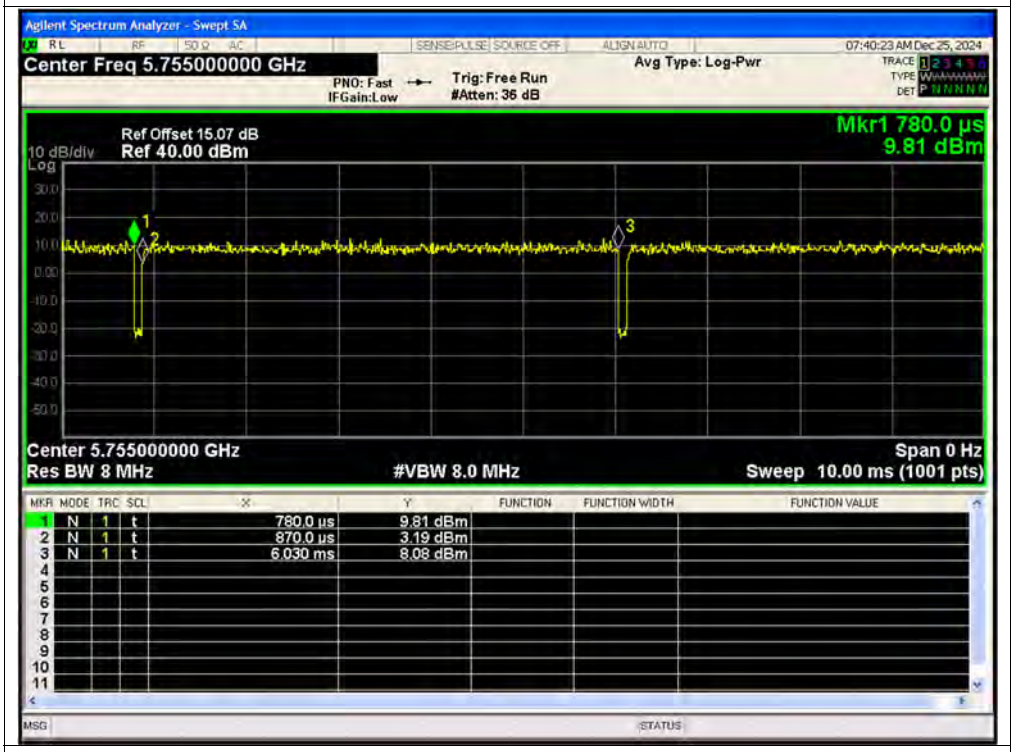
Duty Cycle NVNT ac40 5190MHz Ant2



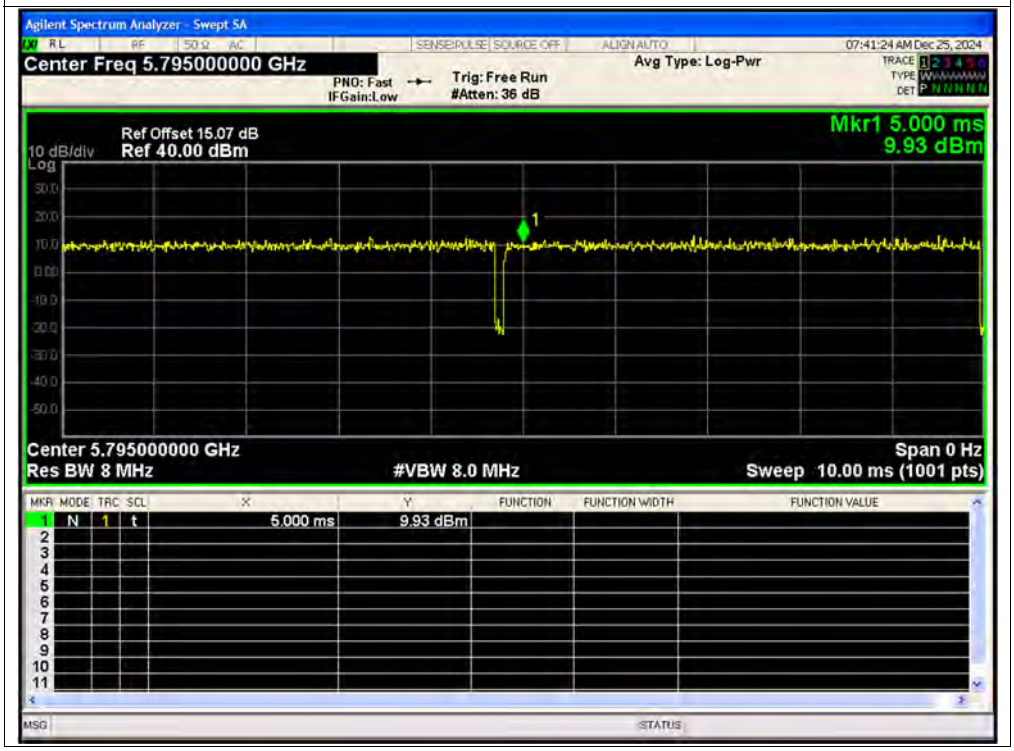
Duty Cycle NVNT ac40 5230MHz Ant2



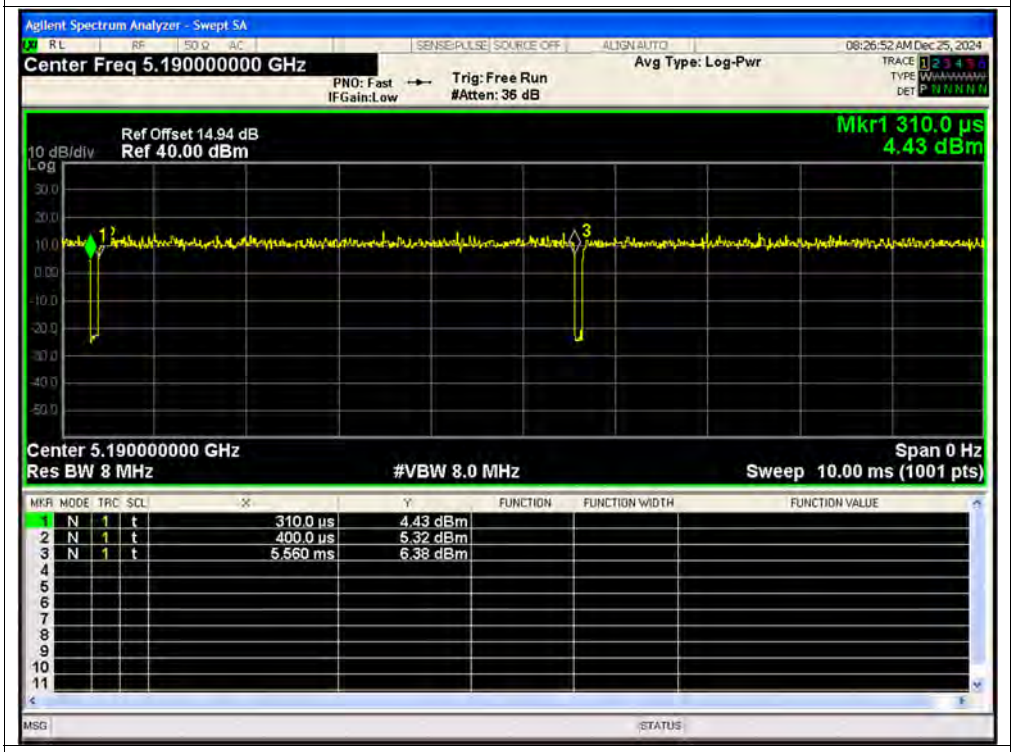
Duty Cycle NVNT ac40 5755MHz Ant2



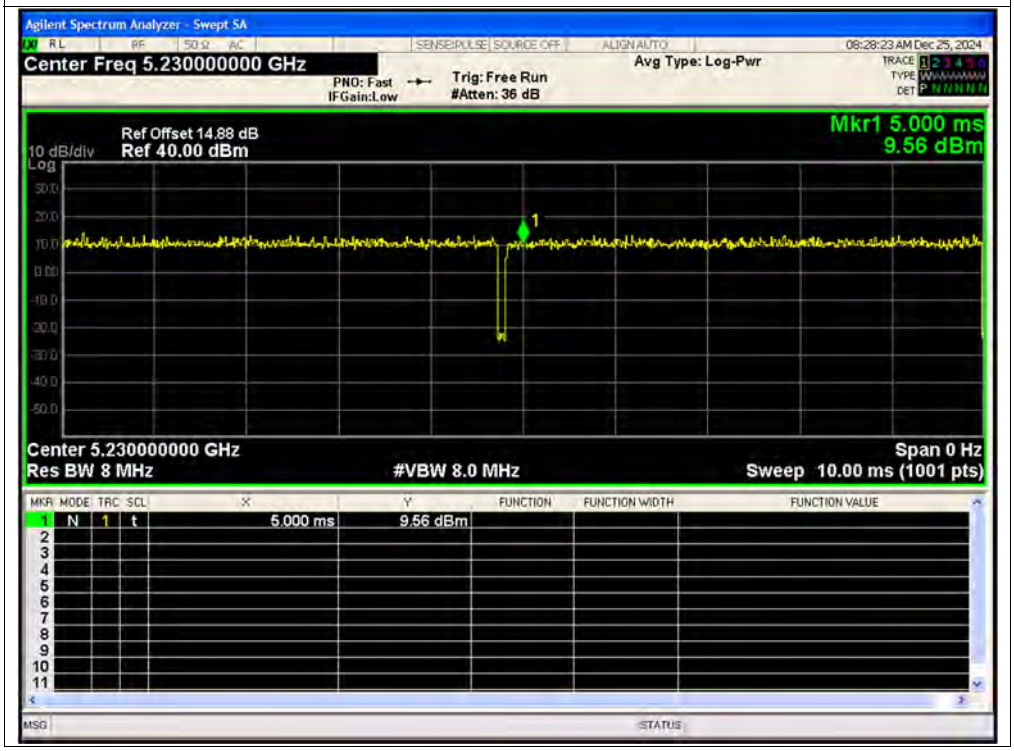
Duty Cycle NVNT ac40 5795MHz Ant2



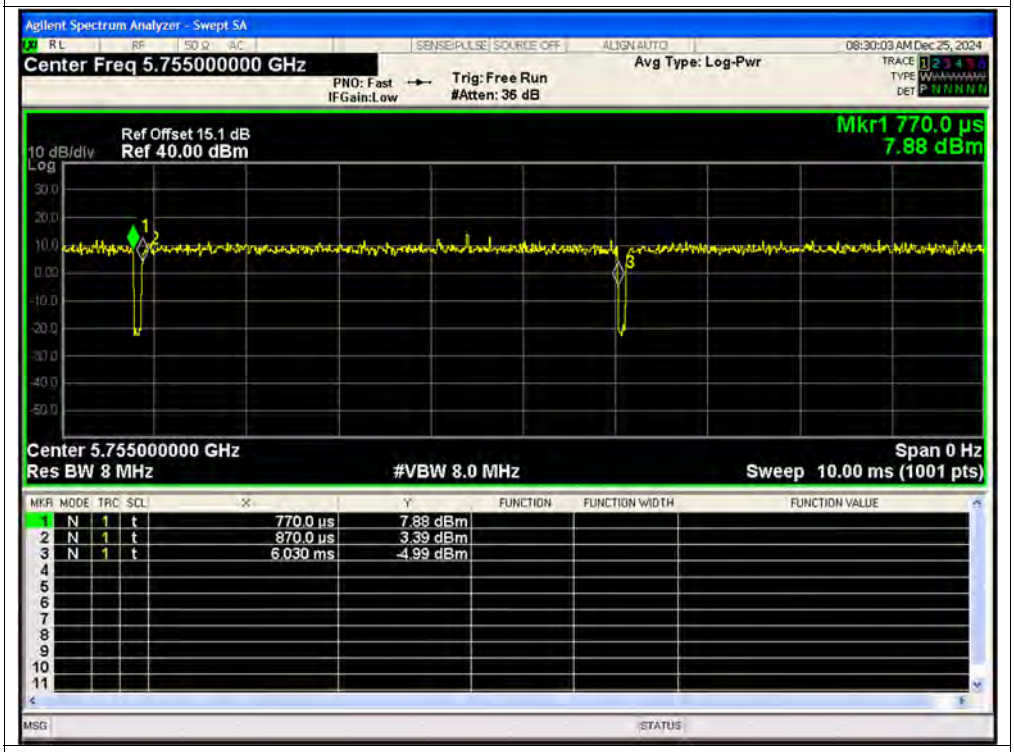
Duty Cycle NVNT ac40 5190MHz Sum



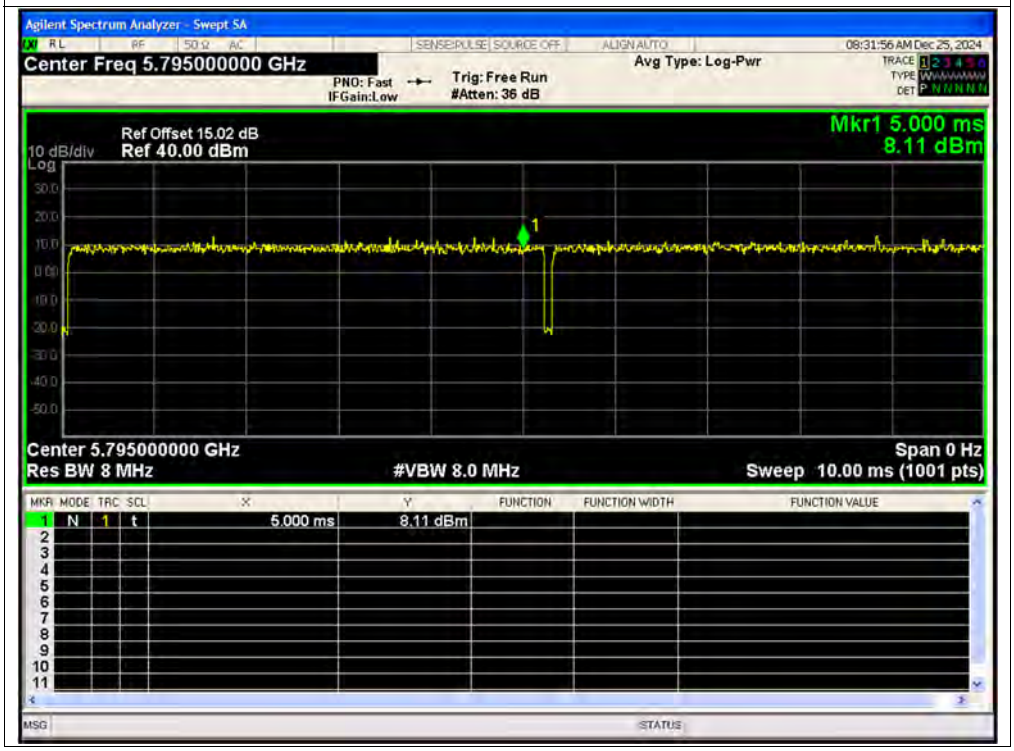
Duty Cycle NVNT ac40 5230MHz Sum



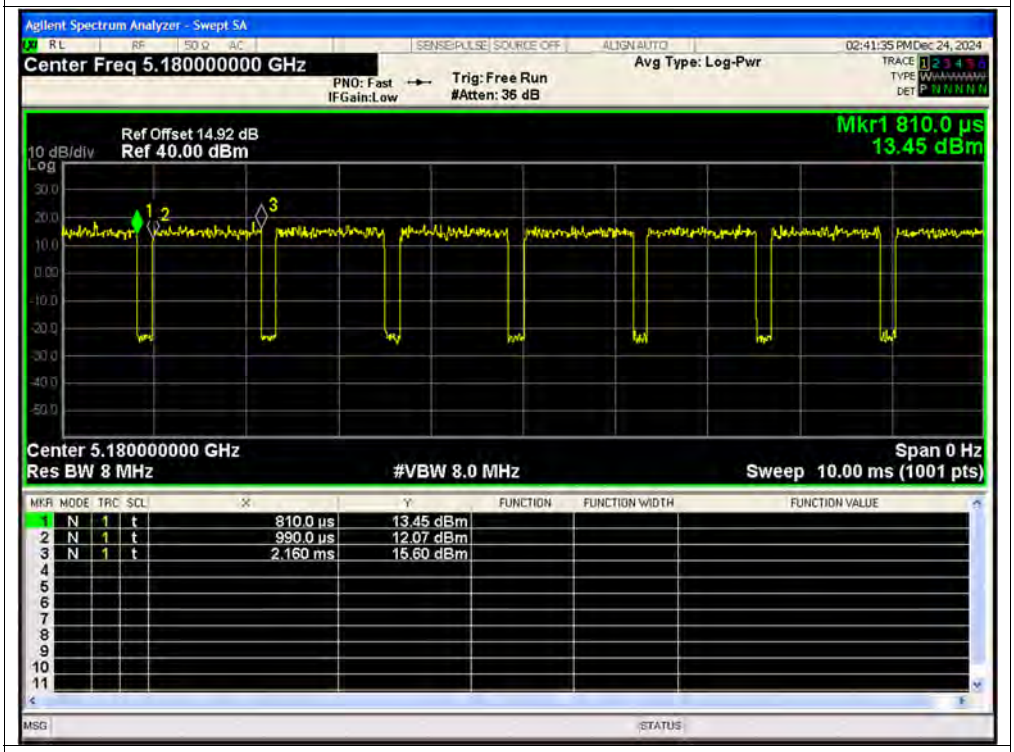
Duty Cycle NVNT ac40 5755MHz Sum



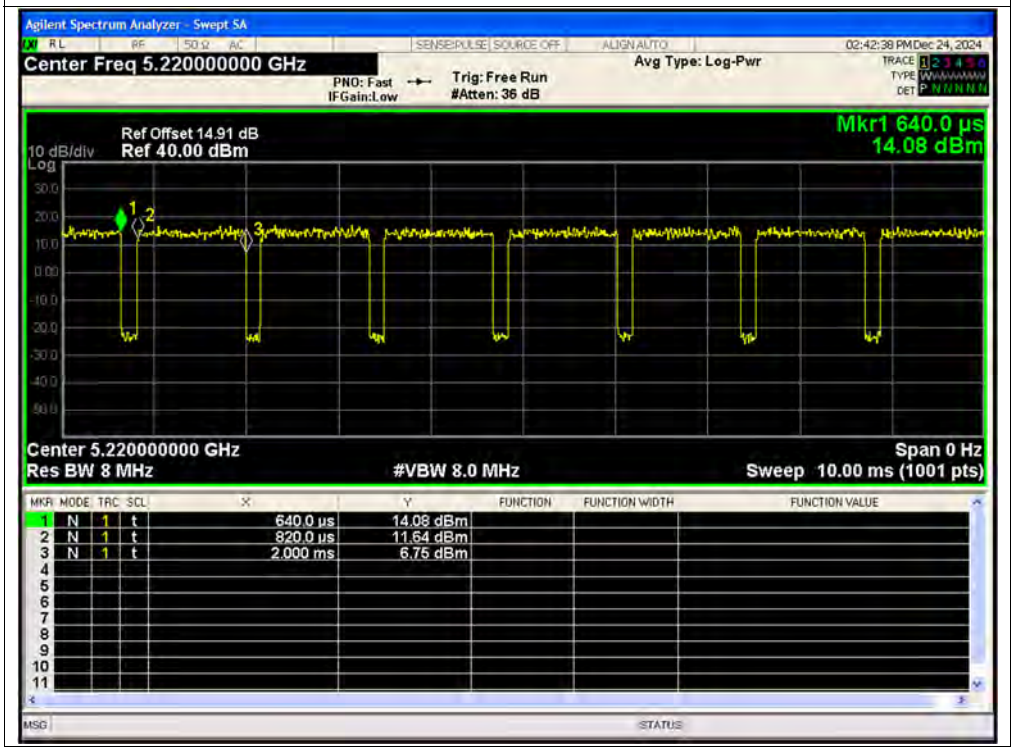
Duty Cycle NVNT ac40 5795MHz Sum



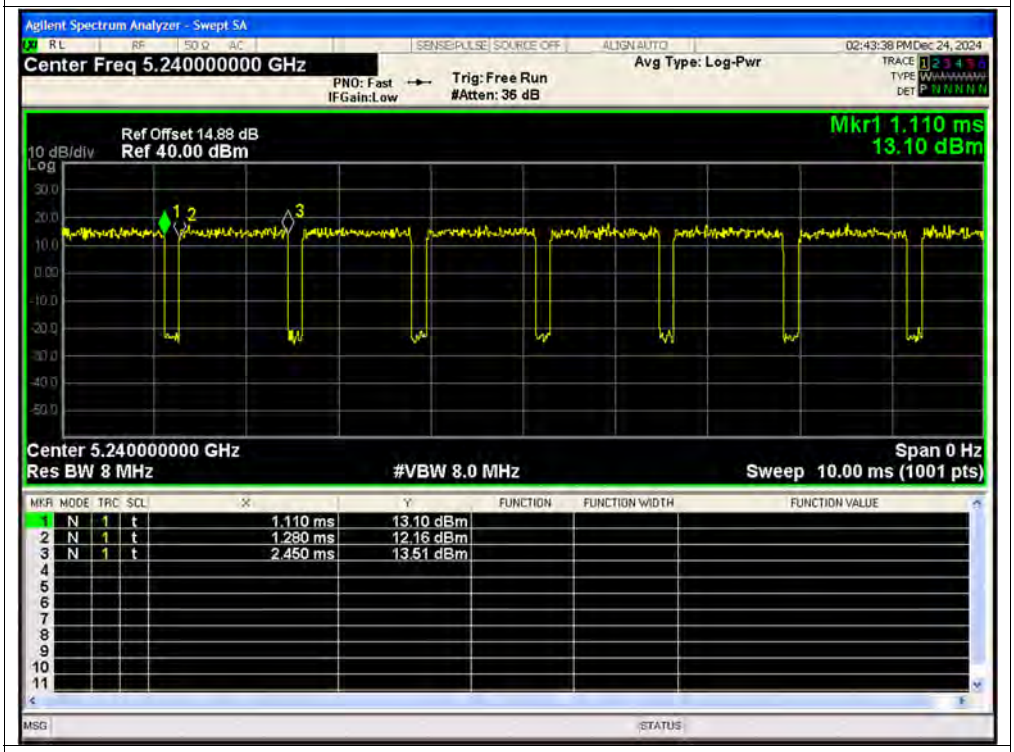
Duty Cycle NVNT ax20 5180MHz Ant1



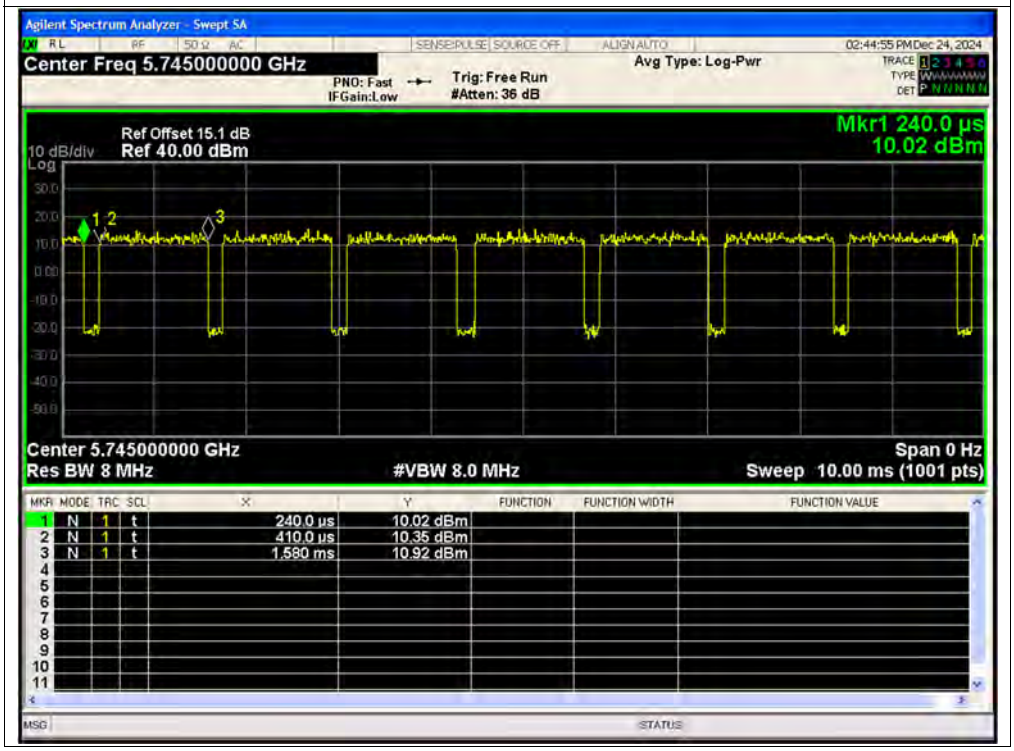
Duty Cycle NVNT ax20 5220MHz Ant1



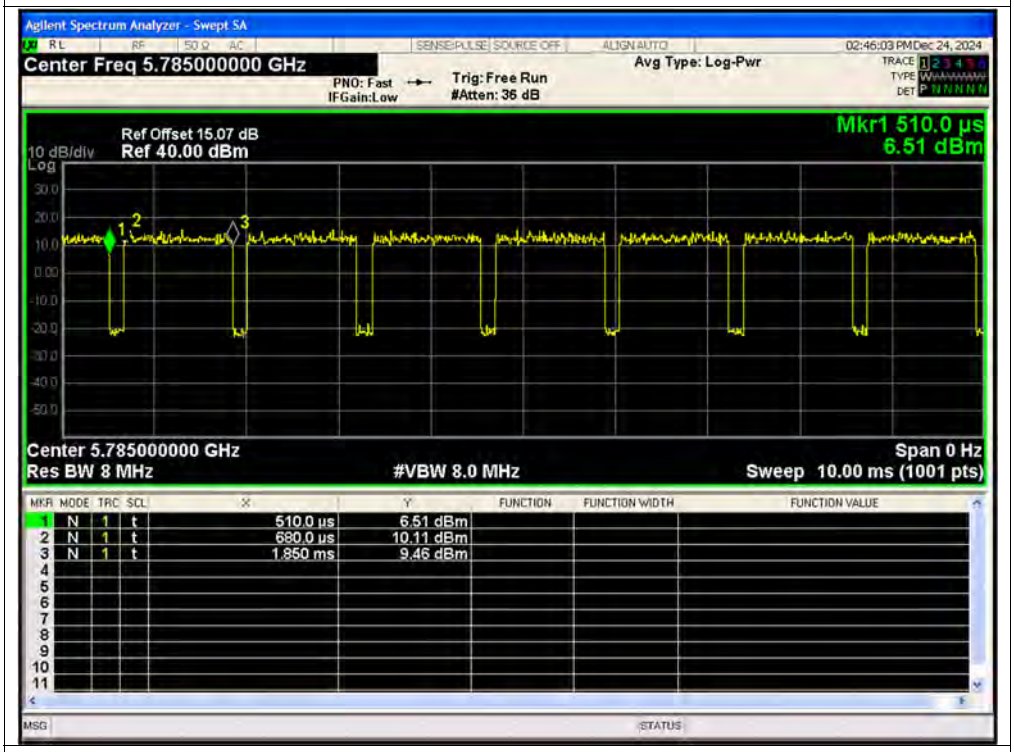
Duty Cycle NVNT ax20 5240MHz Ant1



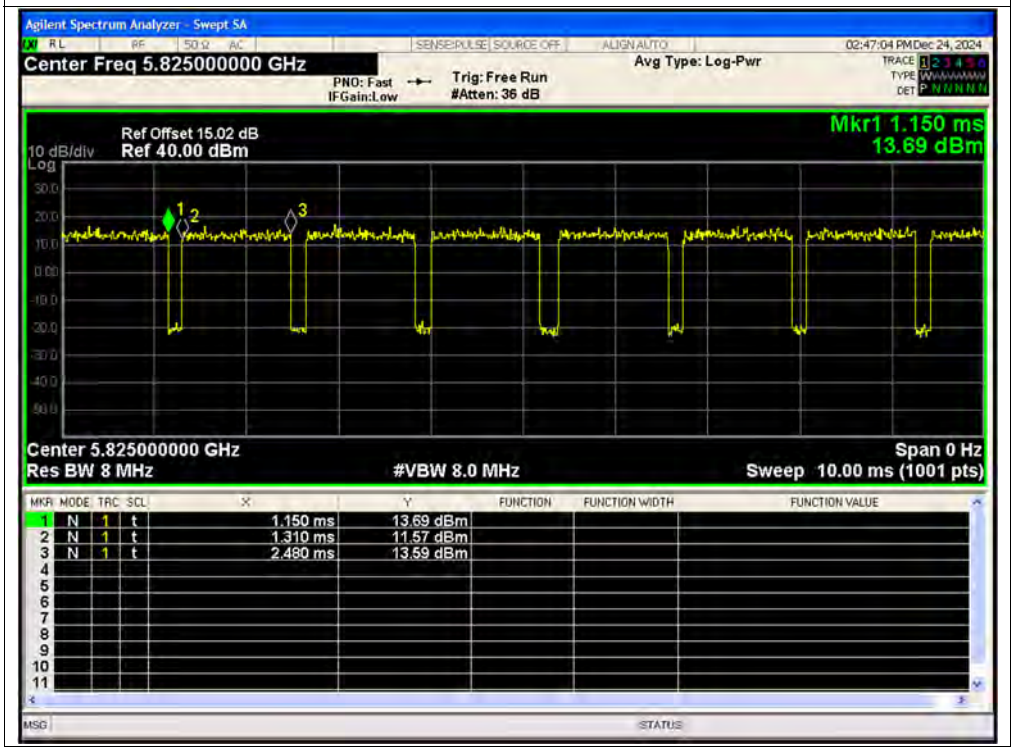
Duty Cycle NVNT ax20 5745MHz Ant1



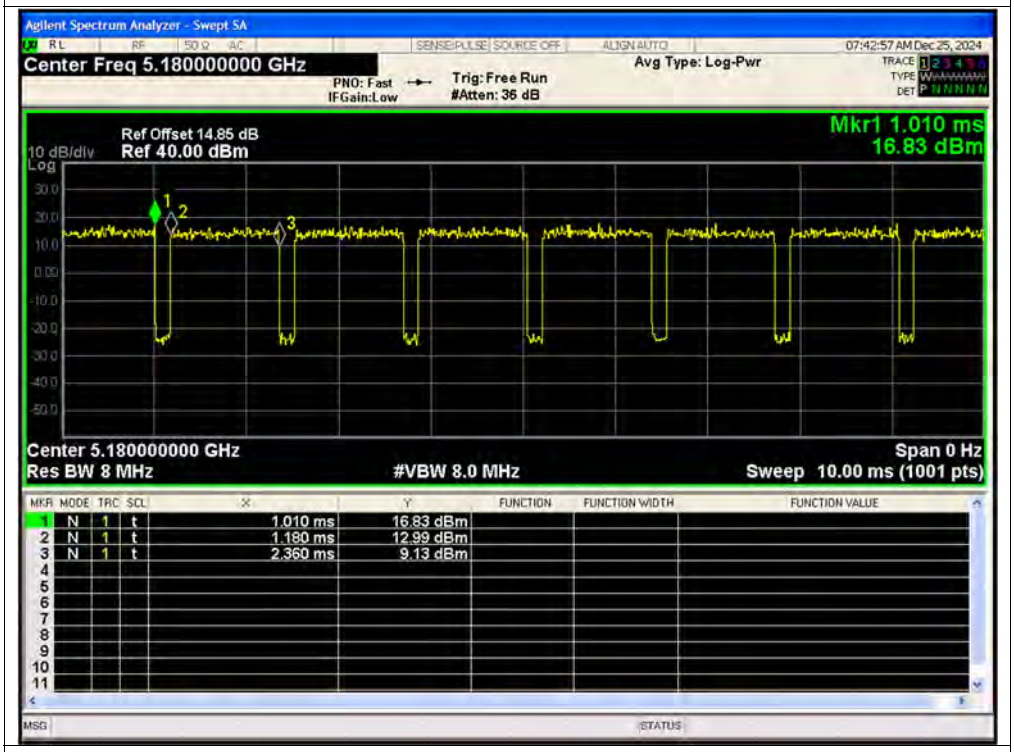
Duty Cycle NVNT ax20 5785MHz Ant1



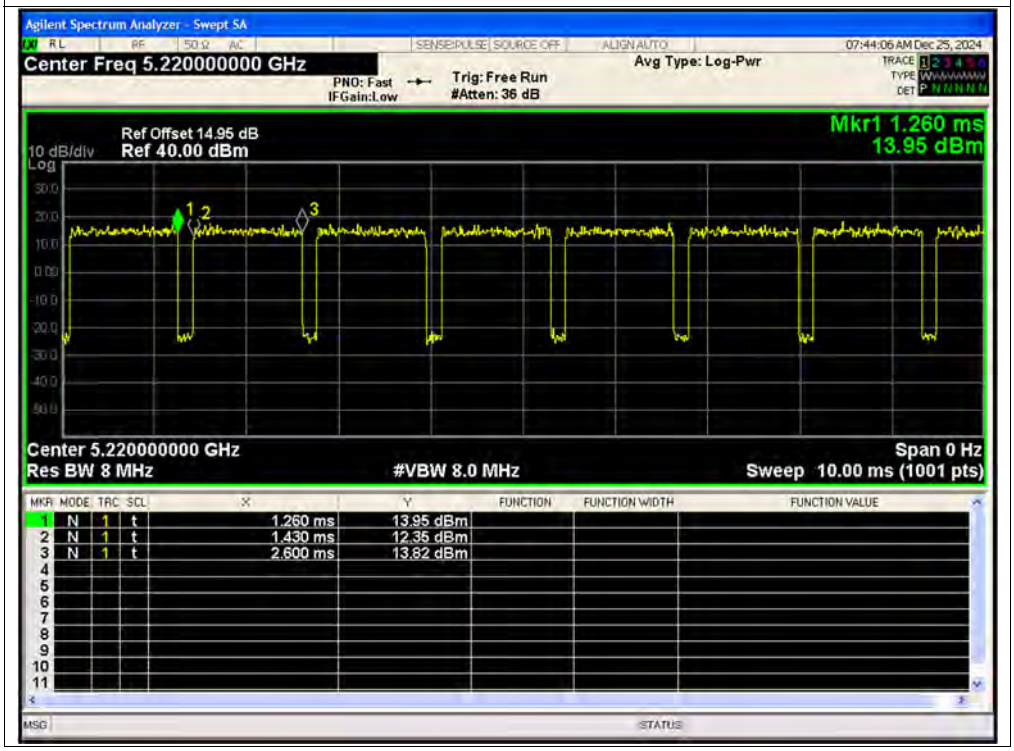
Duty Cycle NVNT ax20 5825MHz Ant1



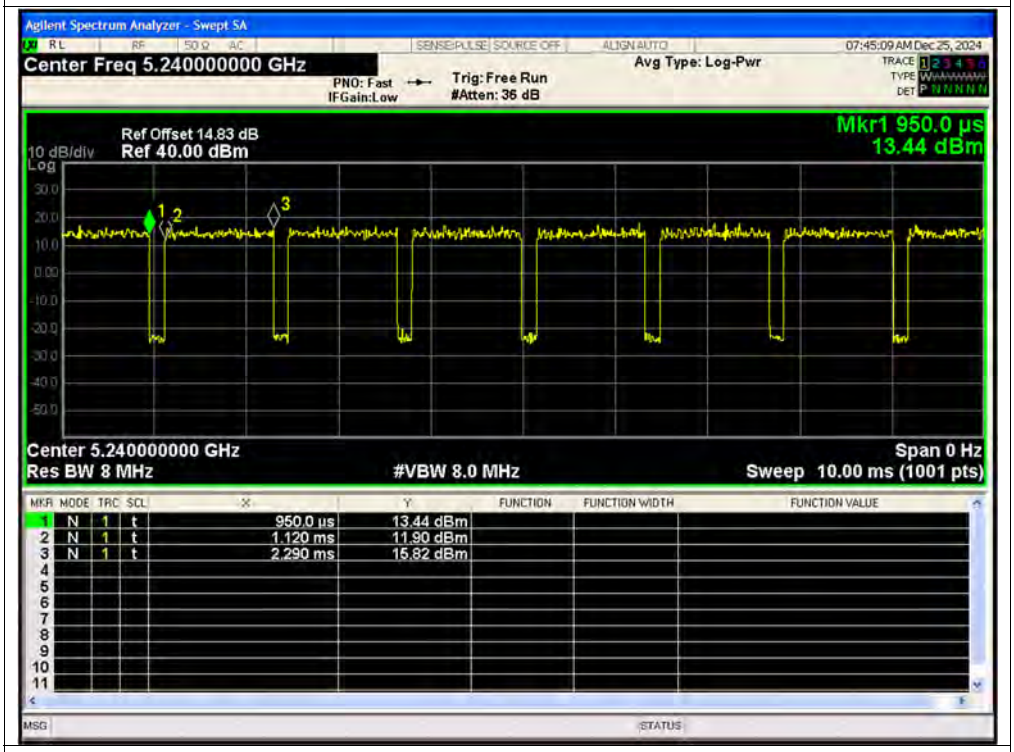
Duty Cycle NVNT ax20 5180MHz Ant2



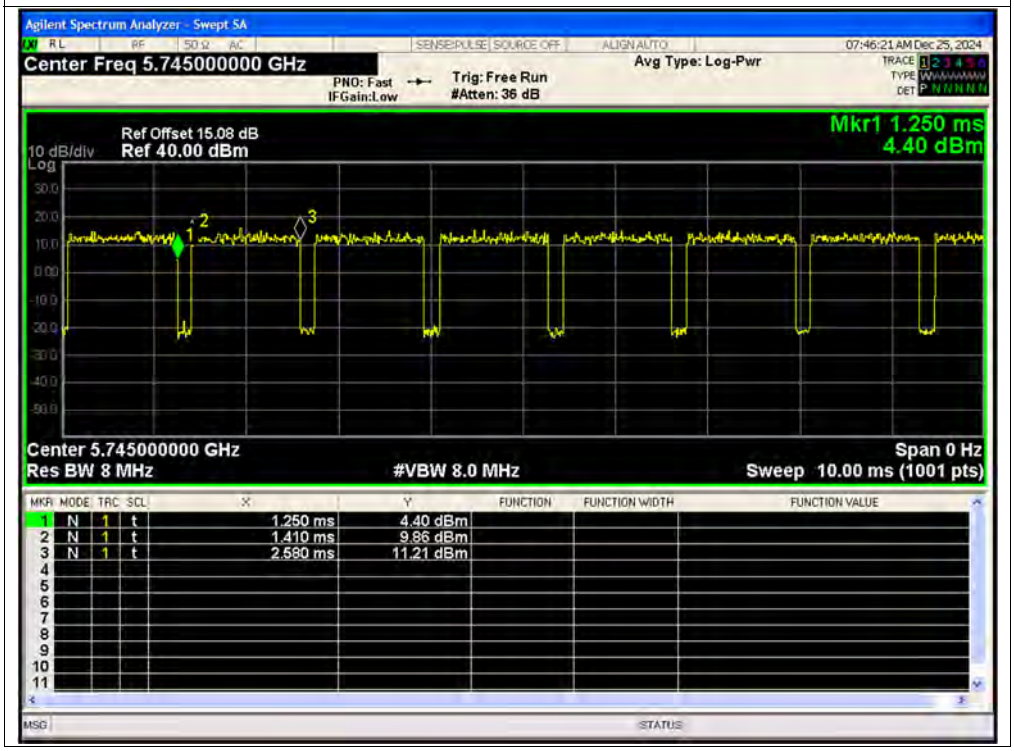
Duty Cycle NVNT ax20 5220MHz Ant2



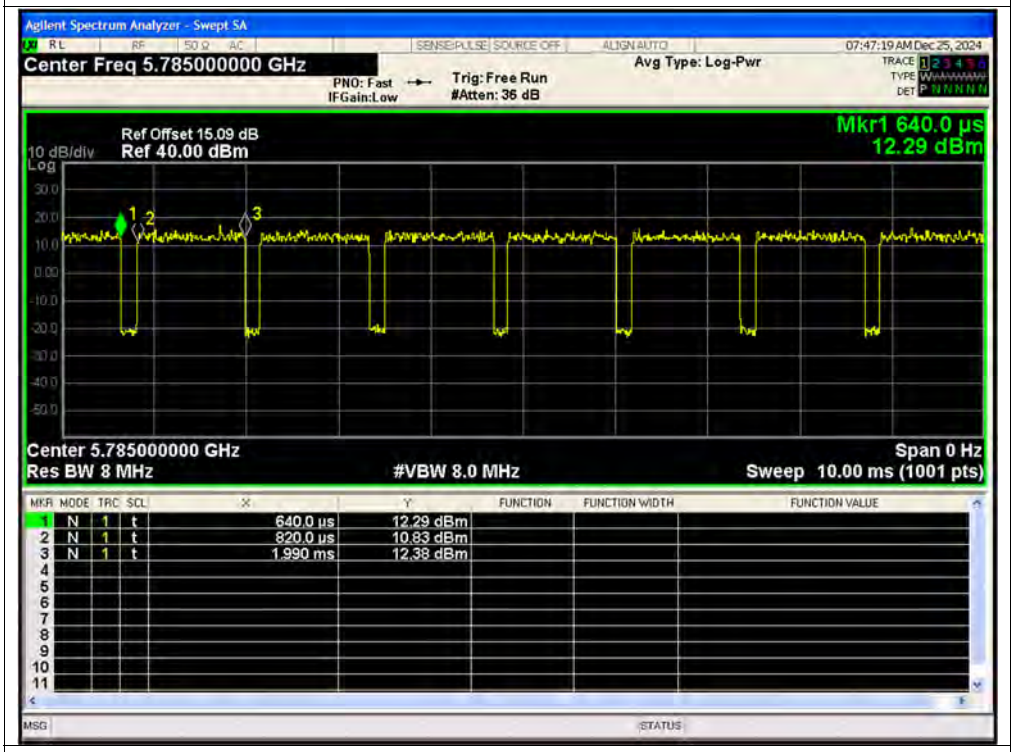
Duty Cycle NVNT ax20 5240MHz Ant2



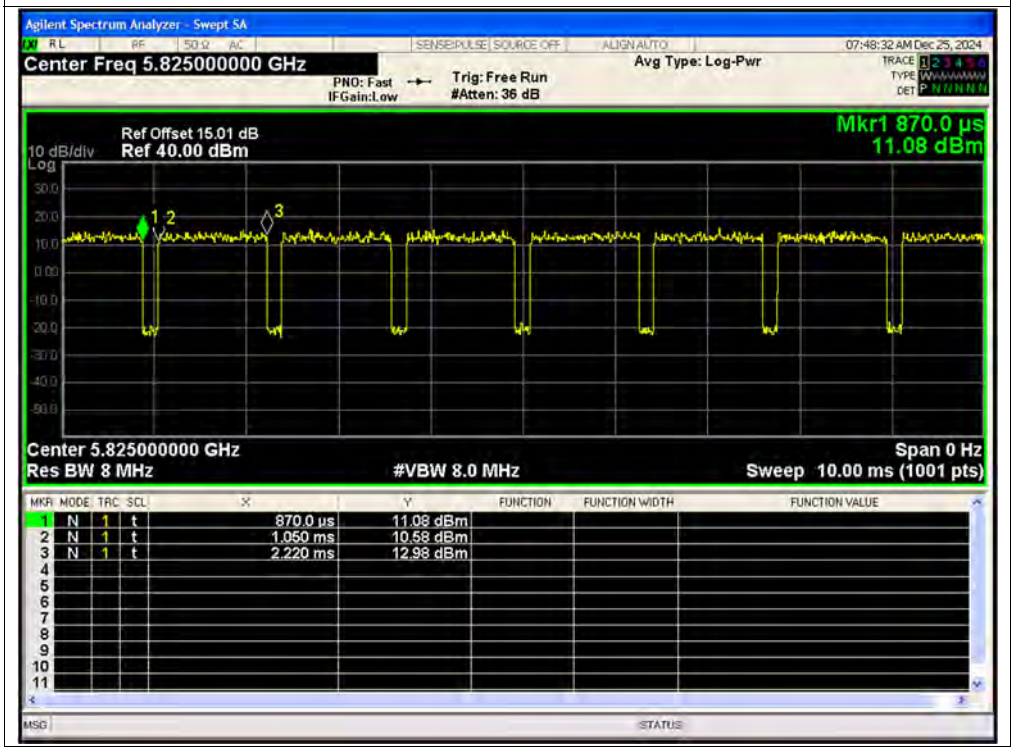
Duty Cycle NVNT ax20 5745MHz Ant2



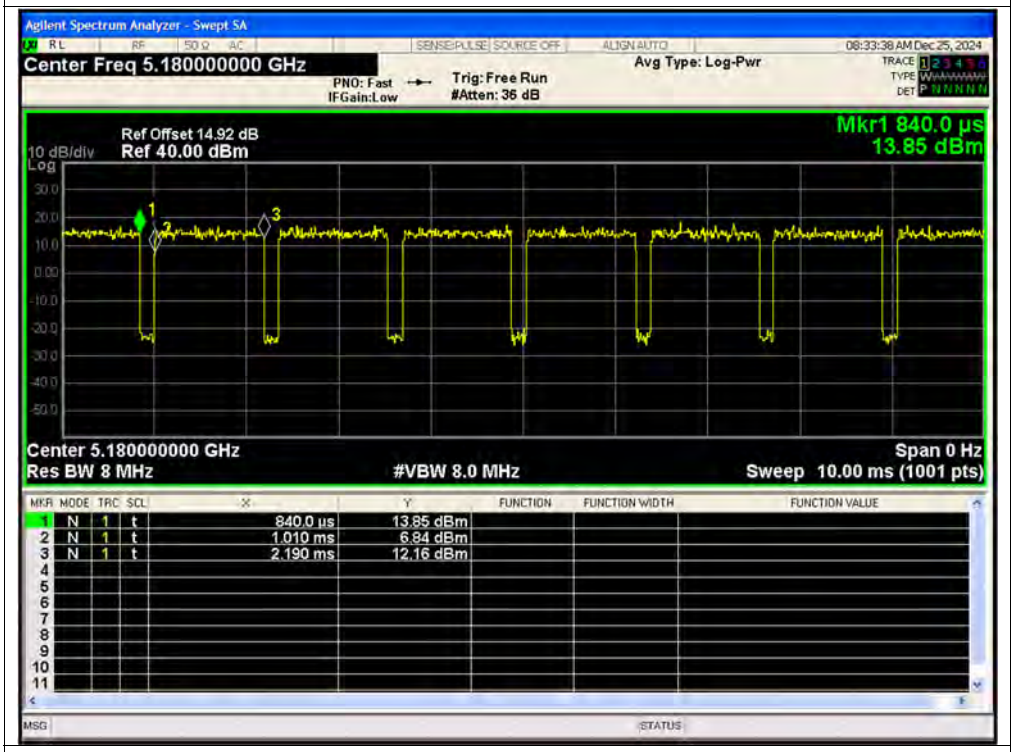
Duty Cycle NVNT ax20 5785MHz Ant2



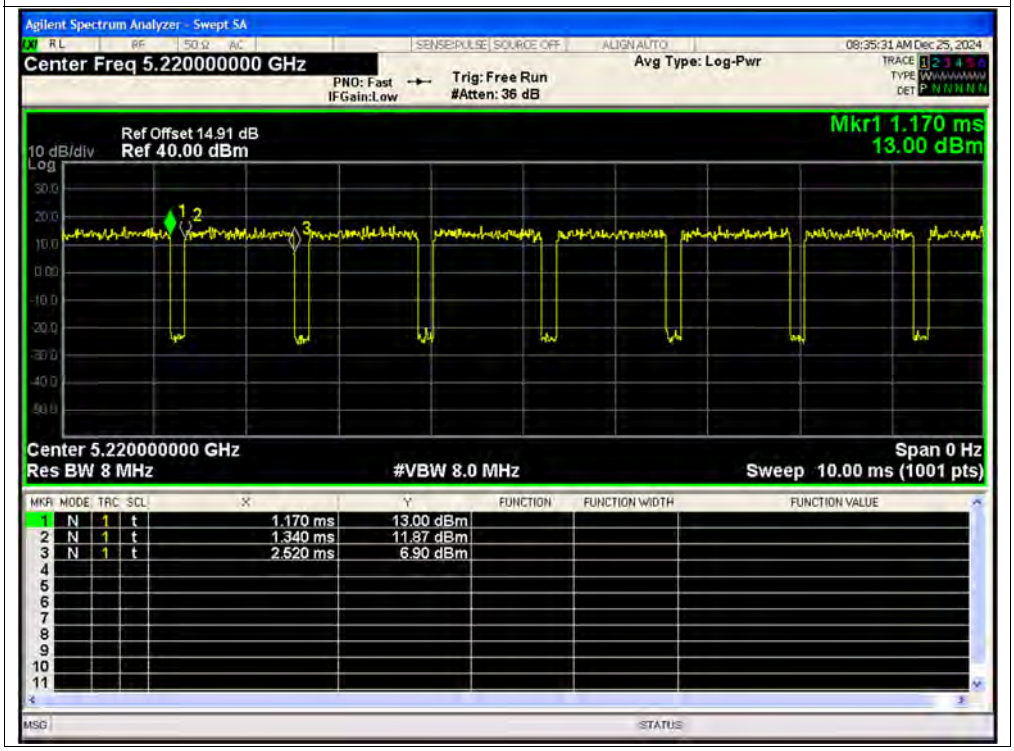
Duty Cycle NVNT ax20 5825MHz Ant2



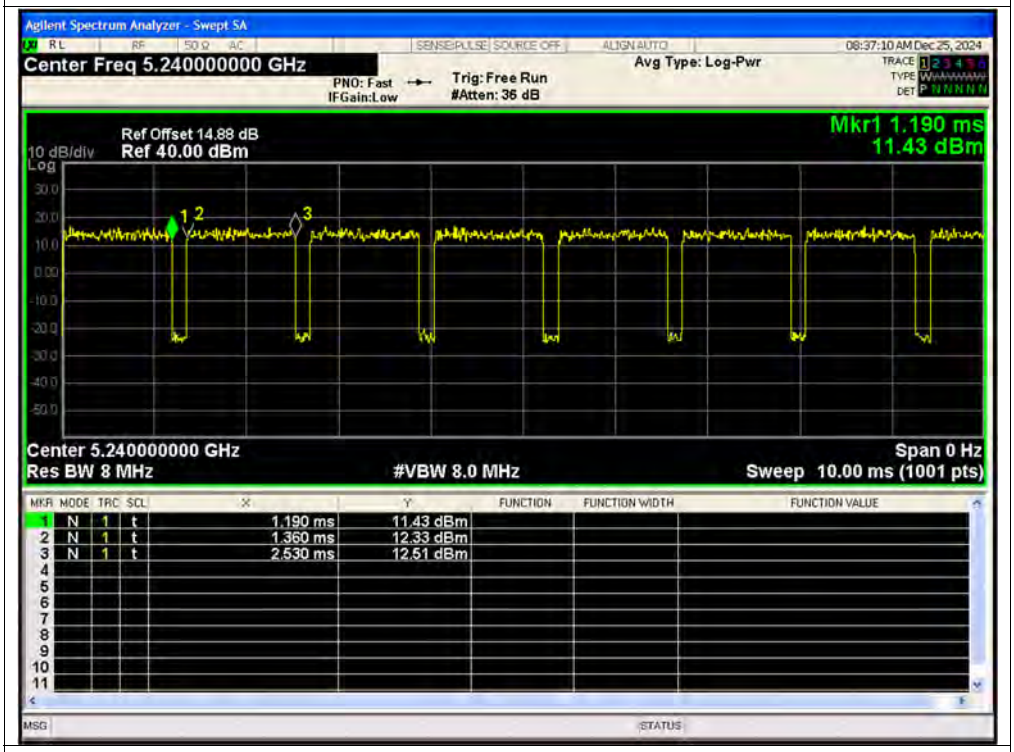
Duty Cycle NVNT ax20 5180MHz Sum



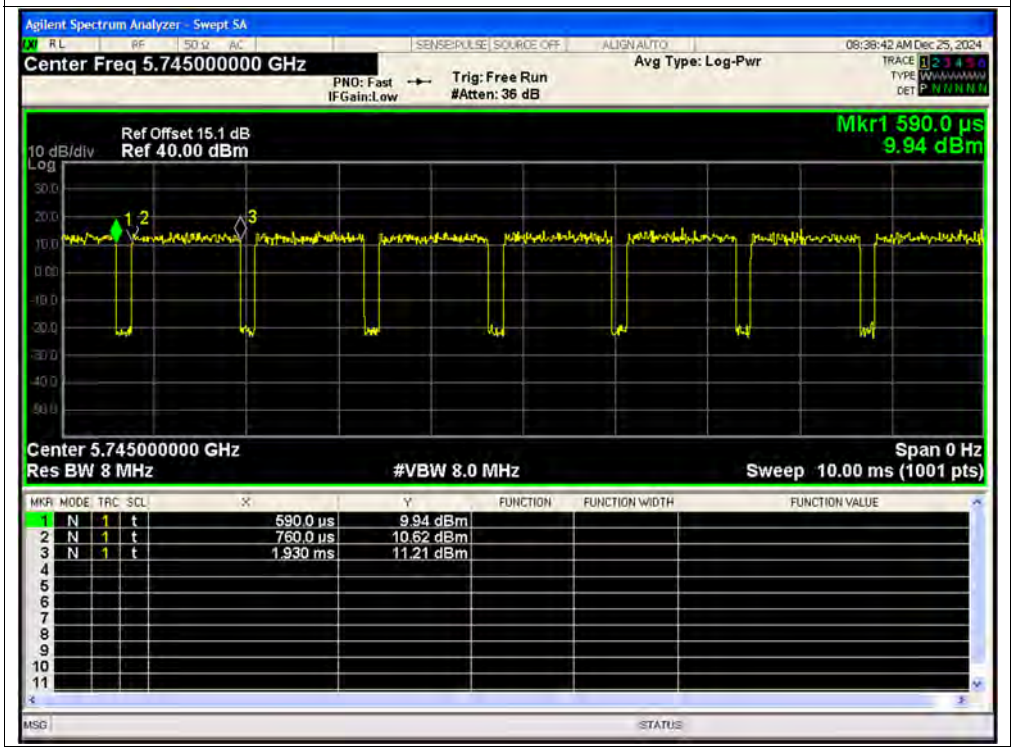
Duty Cycle NVNT ax20 5220MHz Sum



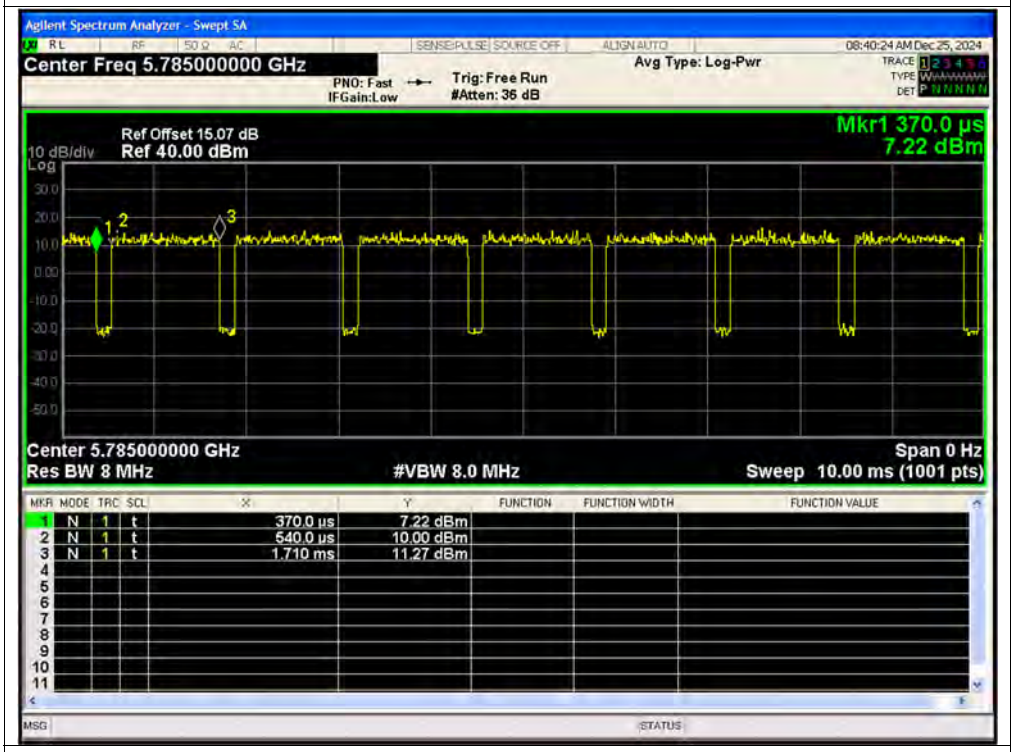
Duty Cycle NVNT ax20 5240MHz Sum



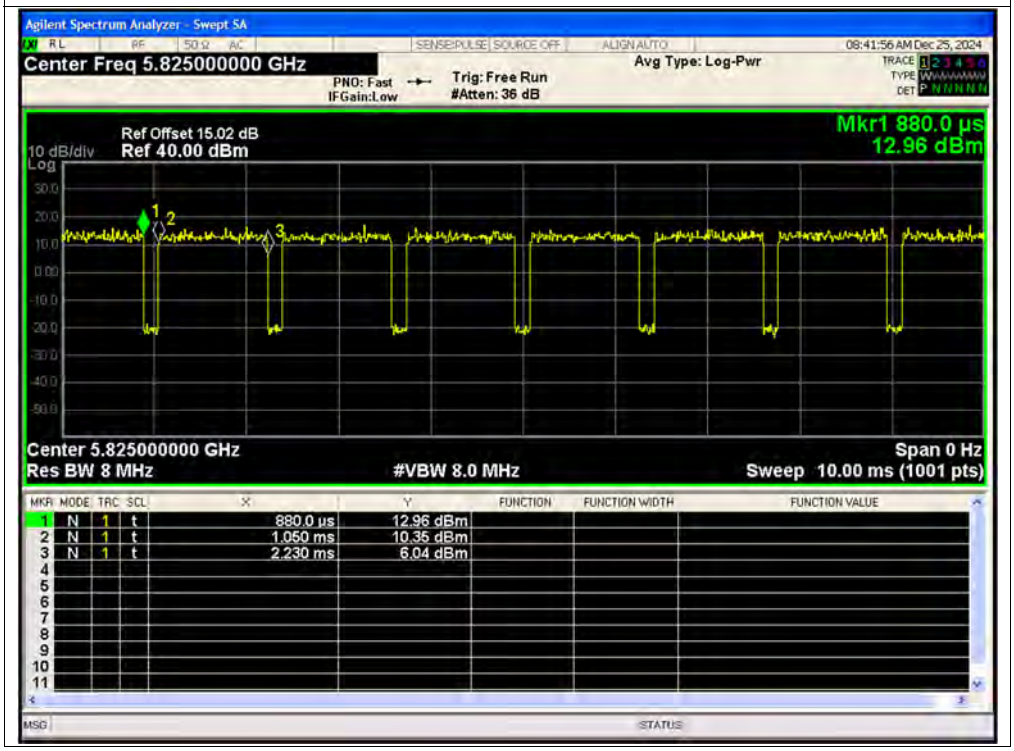
Duty Cycle NVNT ax20 5745MHz Sum



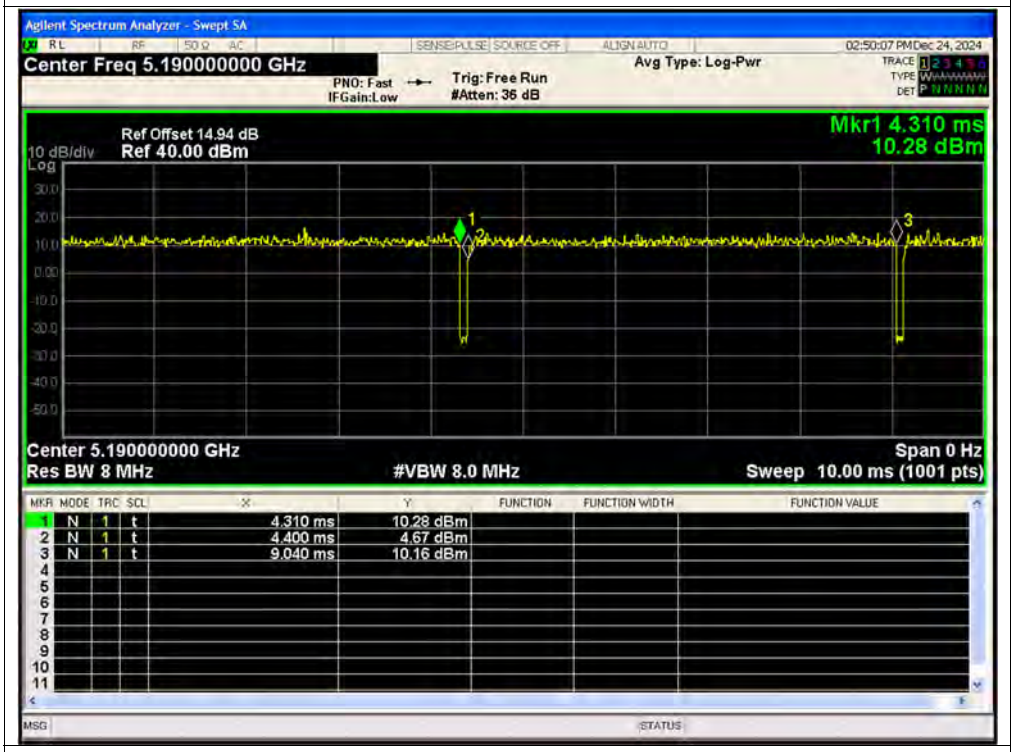
Duty Cycle NVNT ax20 5785MHz Sum



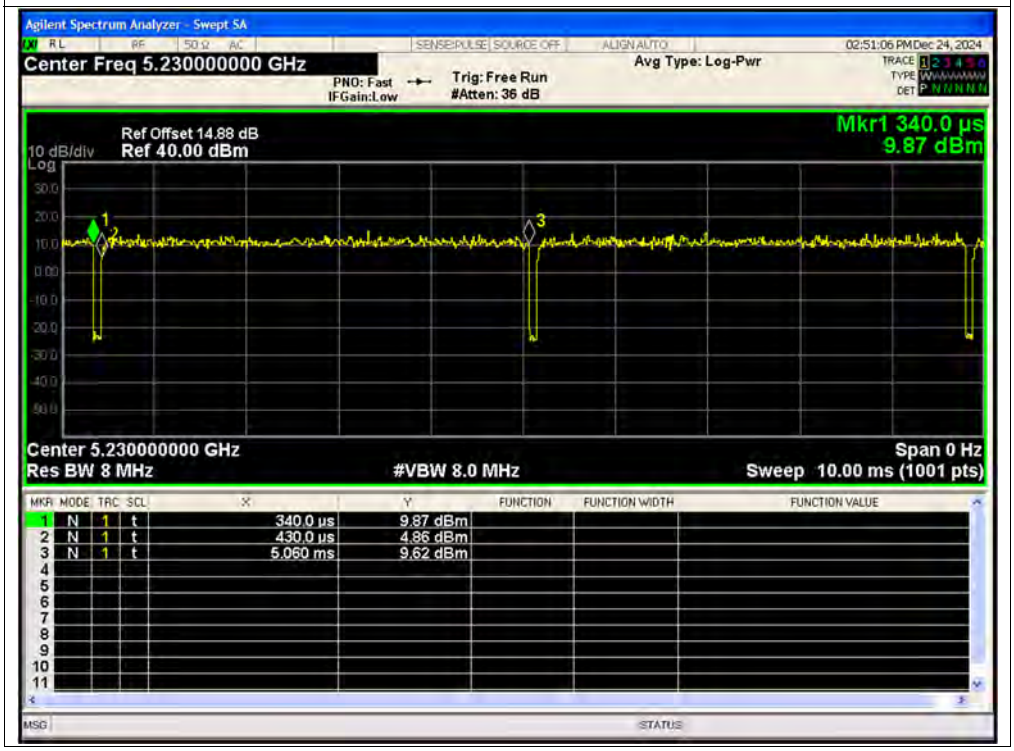
Duty Cycle NVNT ax20 5825MHz Sum



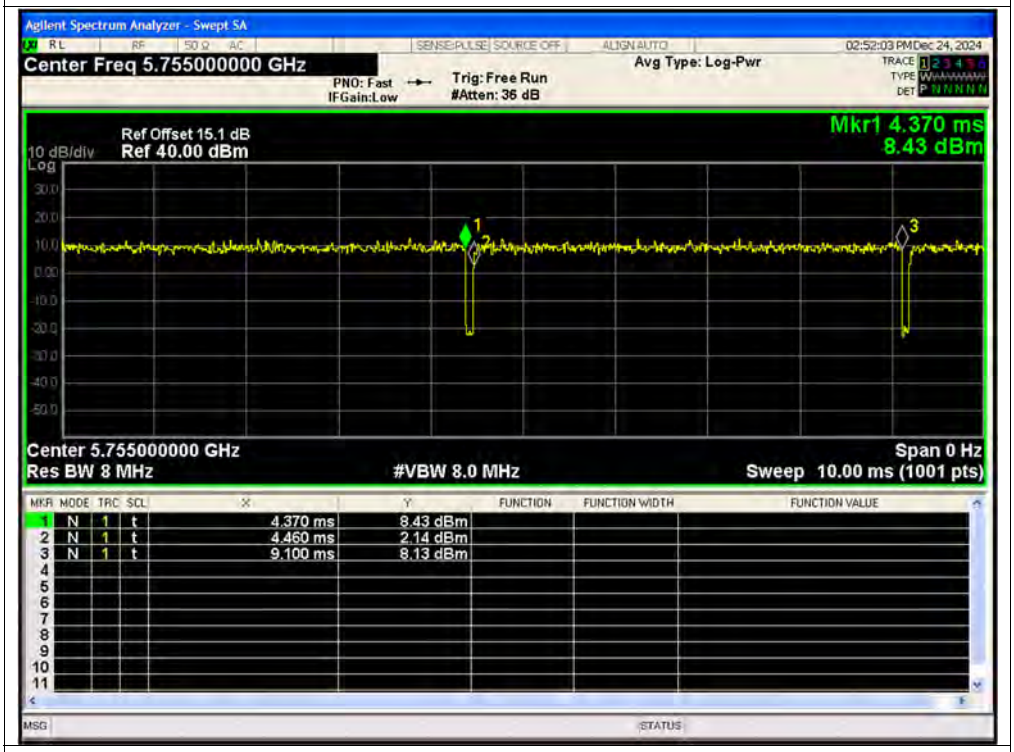
Duty Cycle NVNT ax40 5190MHz Ant1



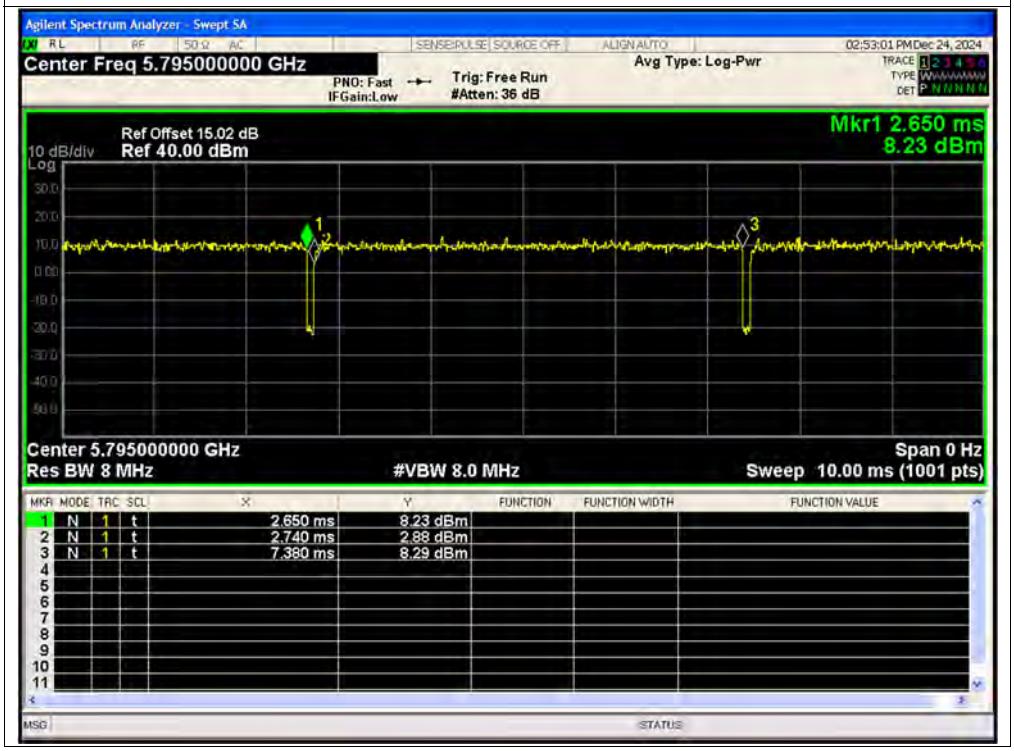
Duty Cycle NVNT ax40 5230MHz Ant1



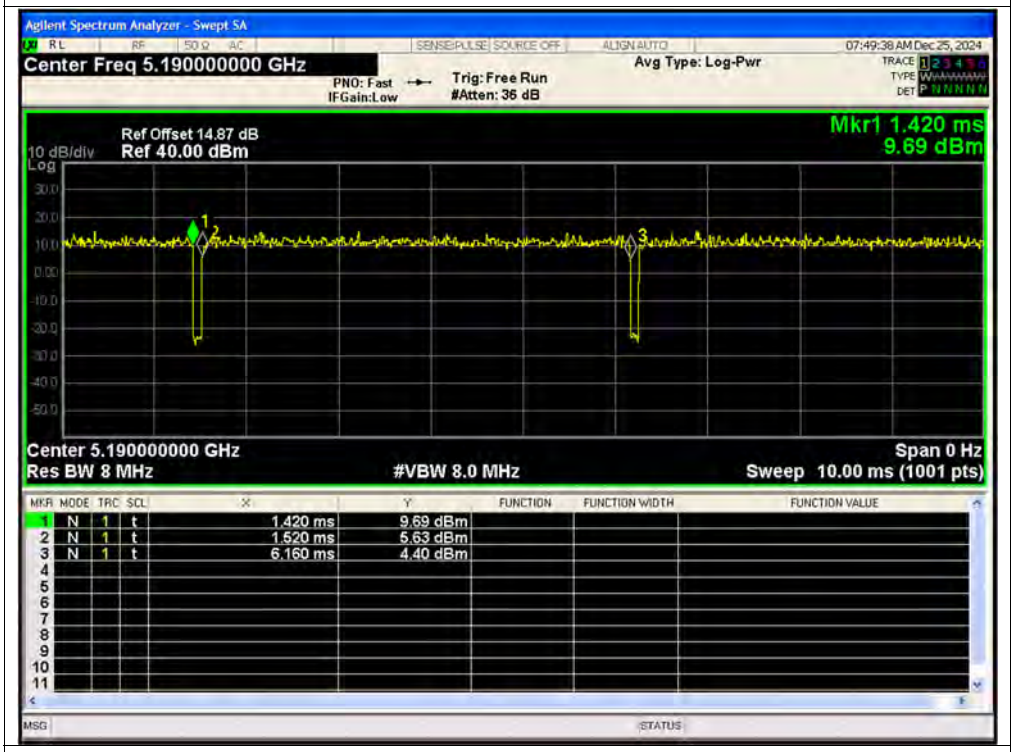
Duty Cycle NVNT ax40 5755MHz Ant1



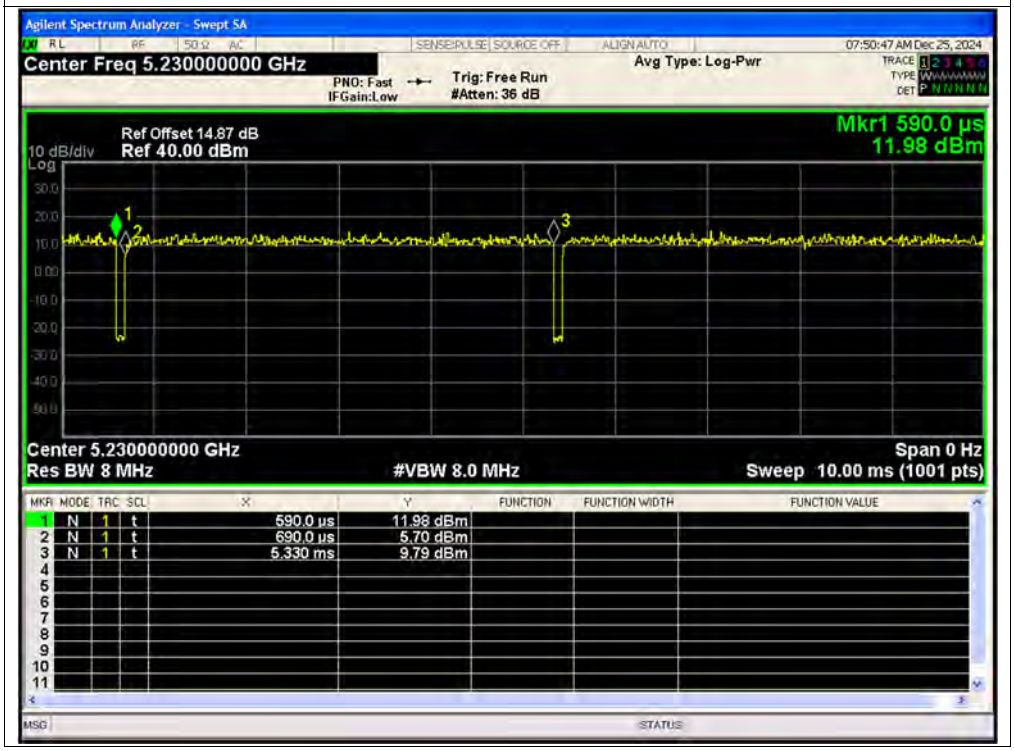
Duty Cycle NVNT ax40 5795MHz Ant1



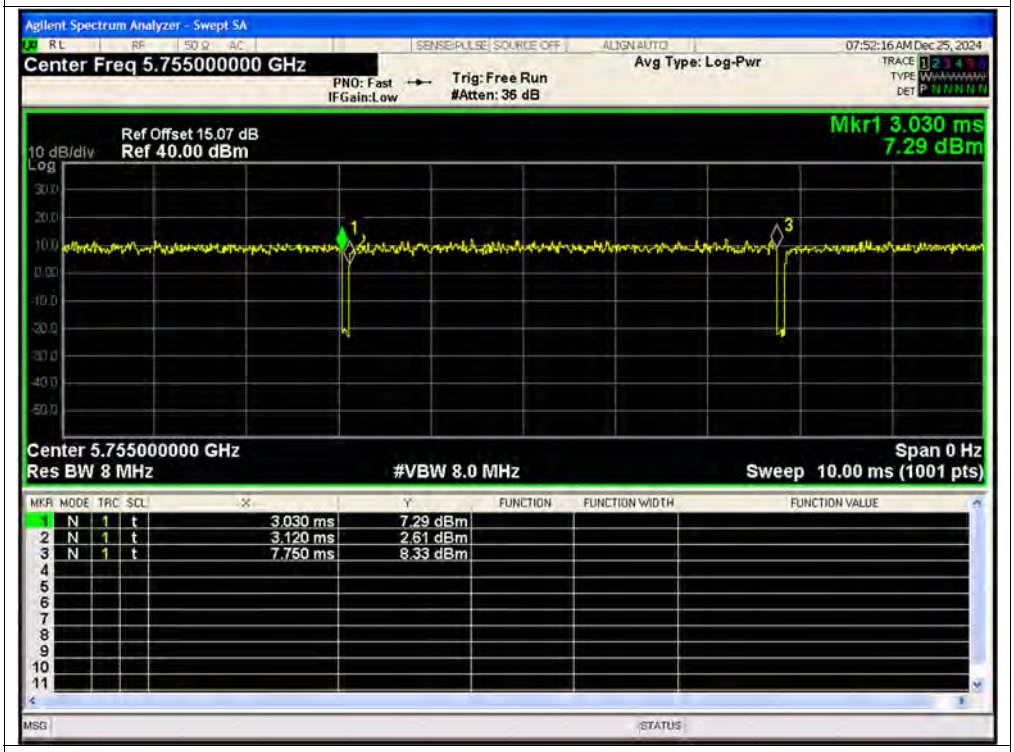
Duty Cycle NVNT ax40 5190MHz Ant2



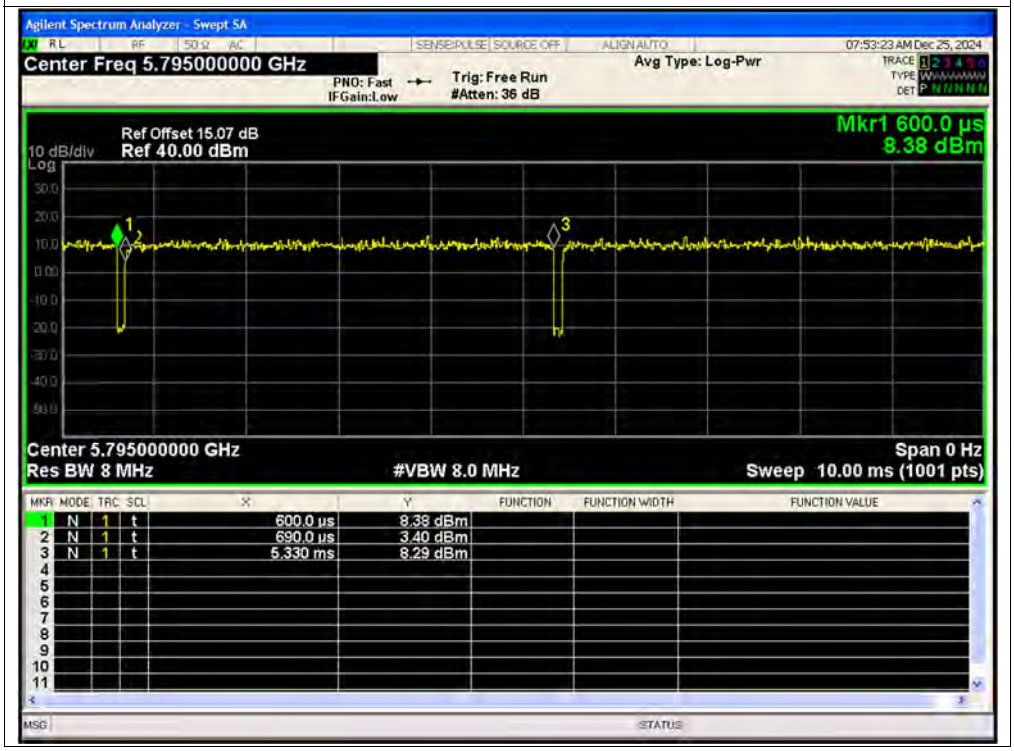
Duty Cycle NVNT ax40 5230MHz Ant2



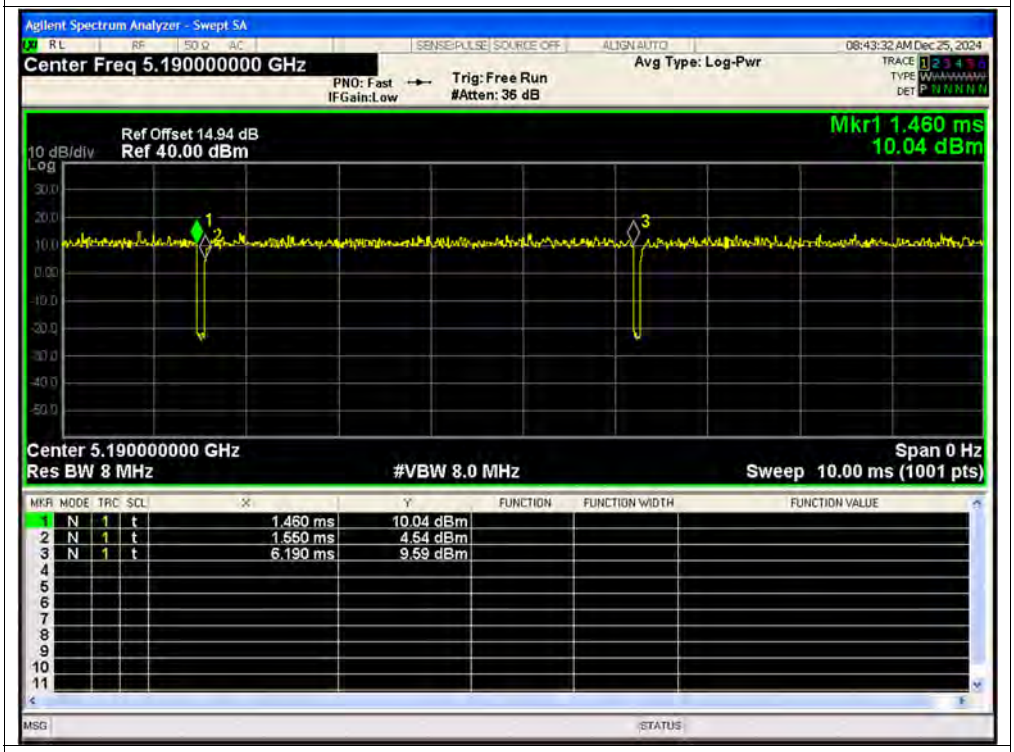
Duty Cycle NVNT ax40 5755MHz Ant2



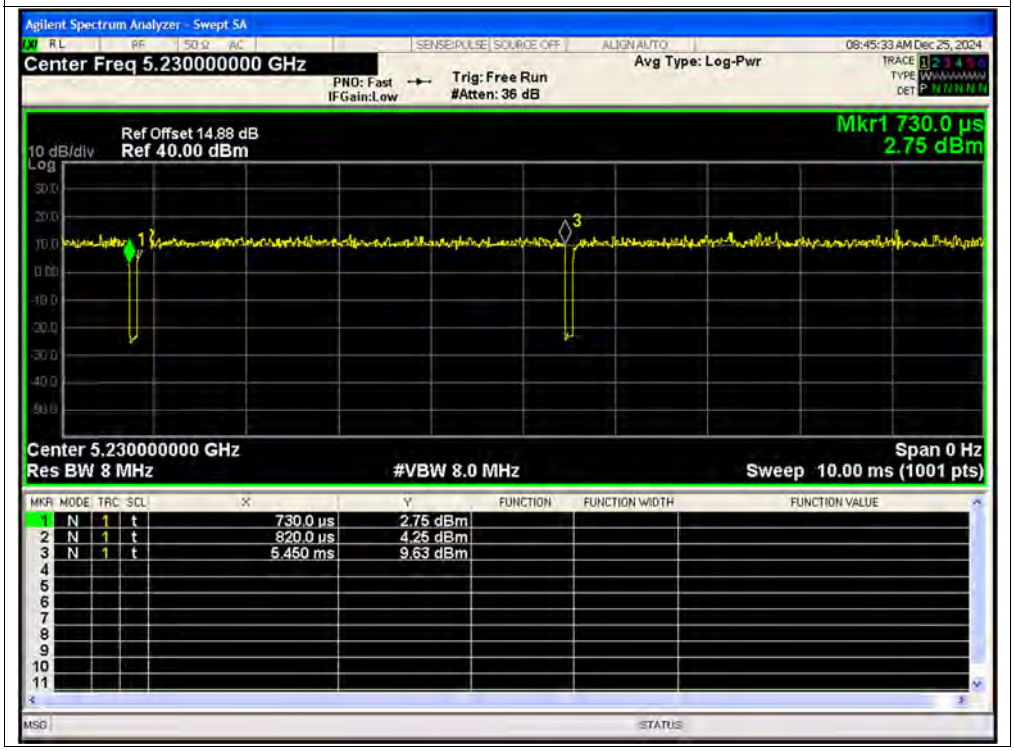
Duty Cycle NVNT ax40 5795MHz Ant2



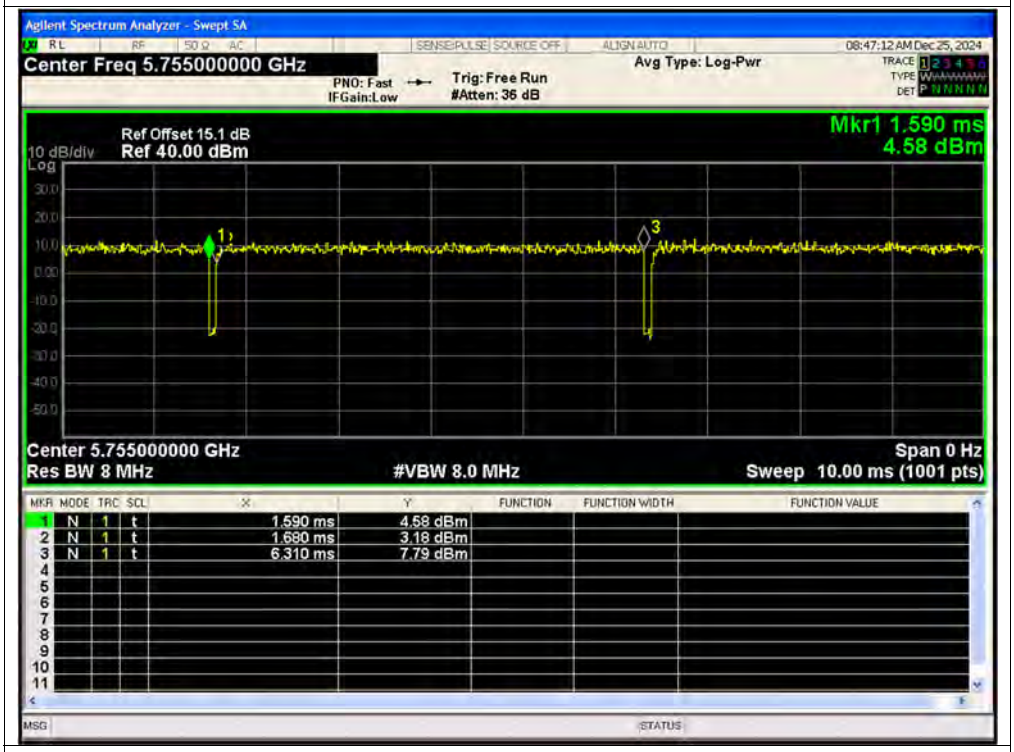
Duty Cycle NVNT ax40 5190MHz Sum



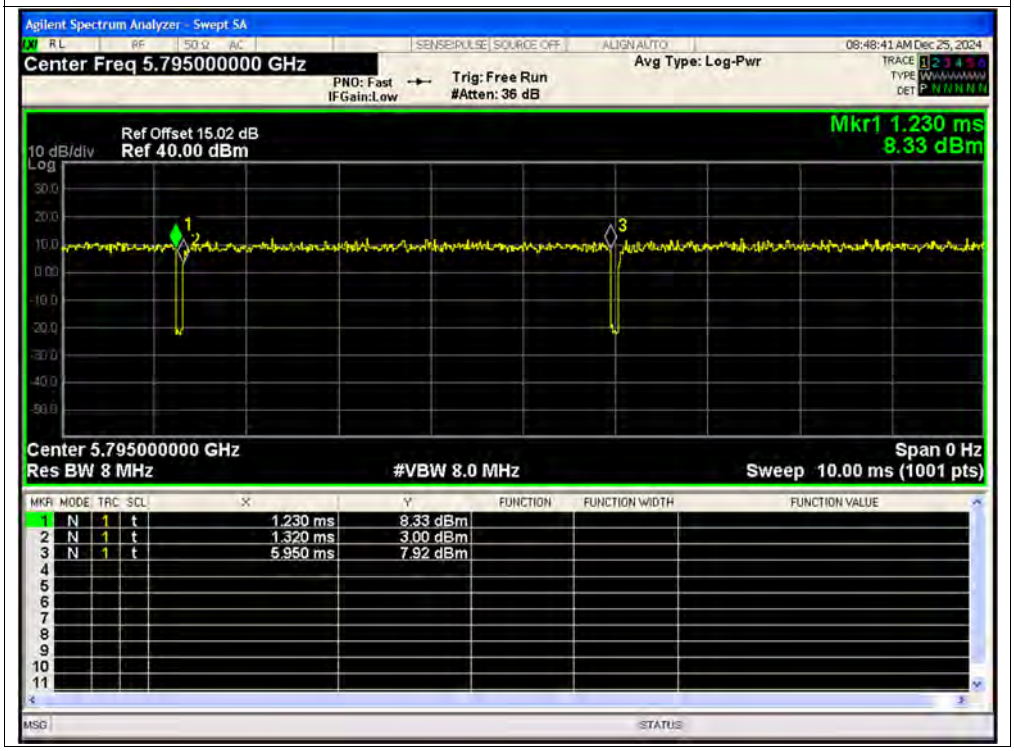
Duty Cycle NVNT ax40 5230MHz Sum



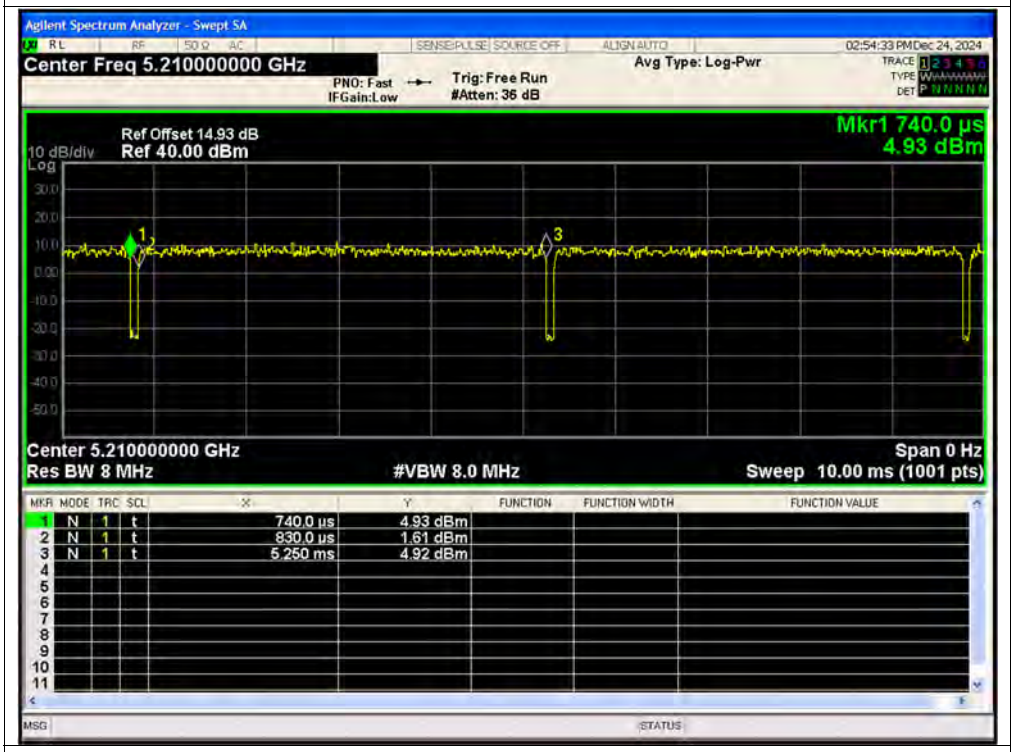
Duty Cycle NVNT ax40 5755MHz Sum



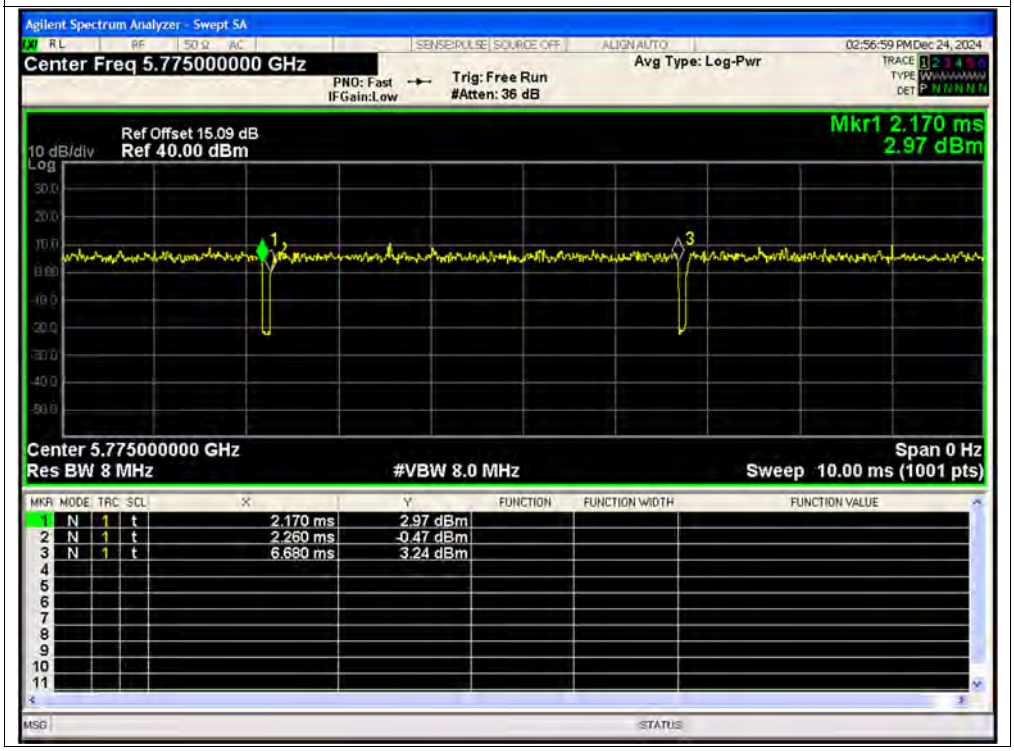
Duty Cycle NVNT ax40 5795MHz Sum



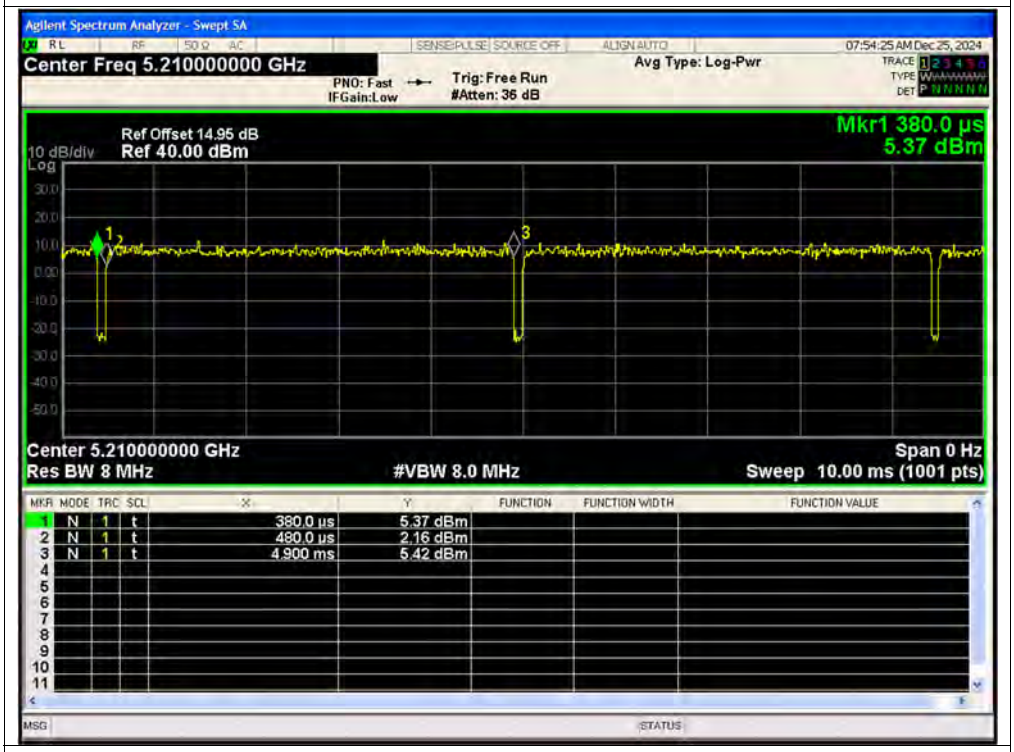
Duty Cycle NVNT ax80 5210MHz Ant1



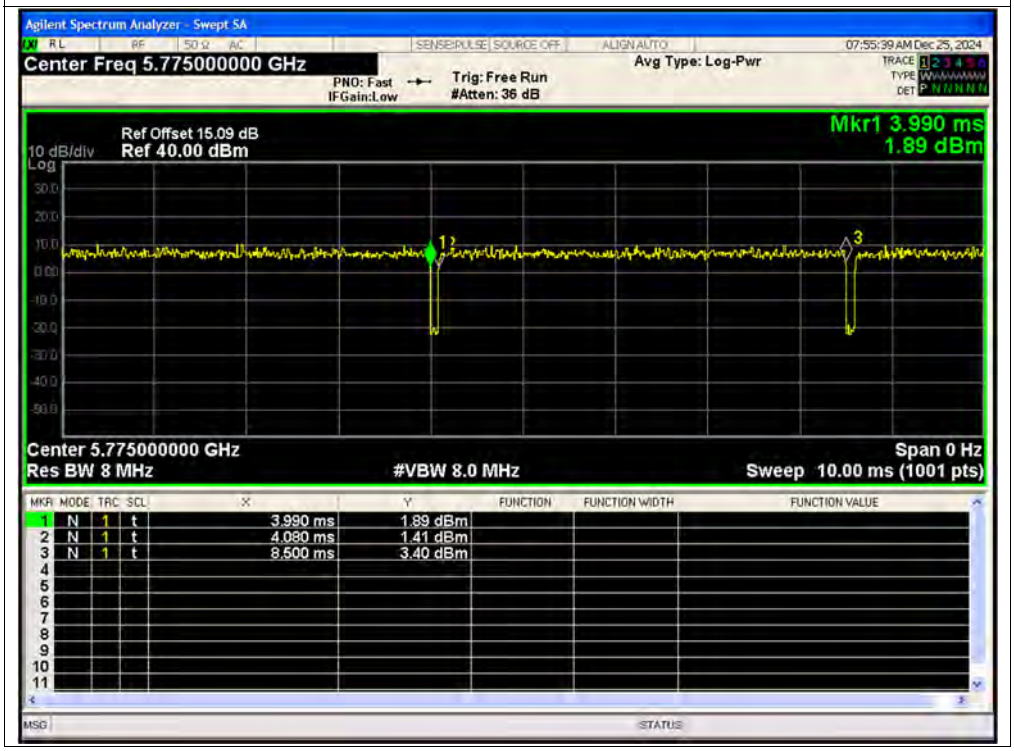
Duty Cycle NVNT ax80 5775MHz Ant1



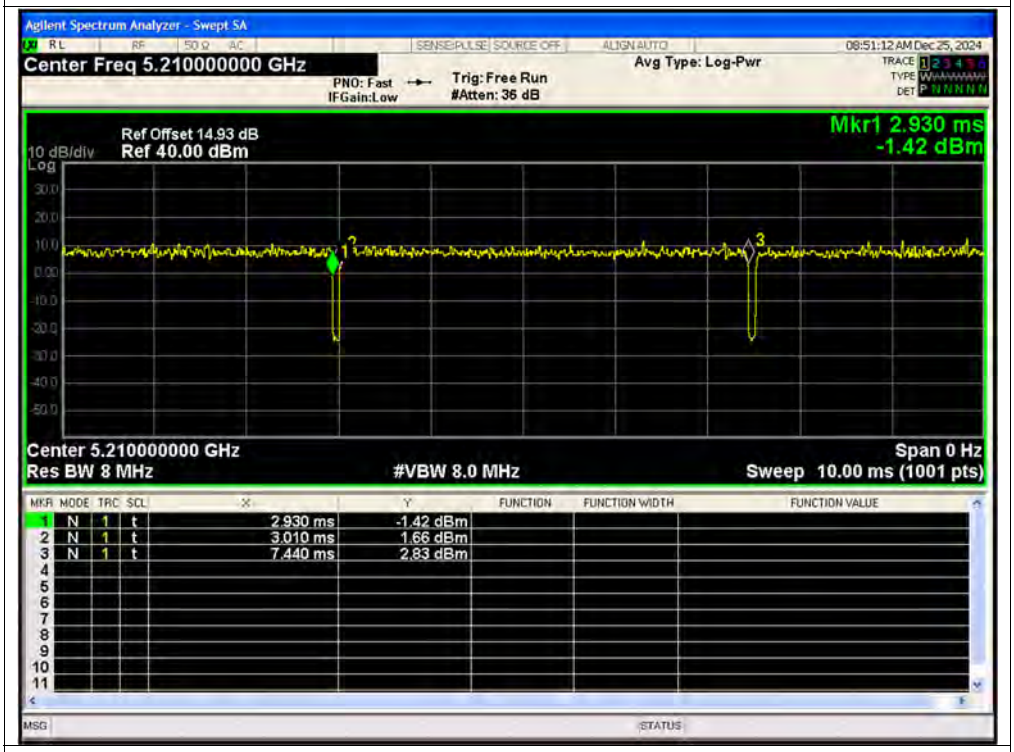
Duty Cycle NVNT ax80 5210MHz Ant2



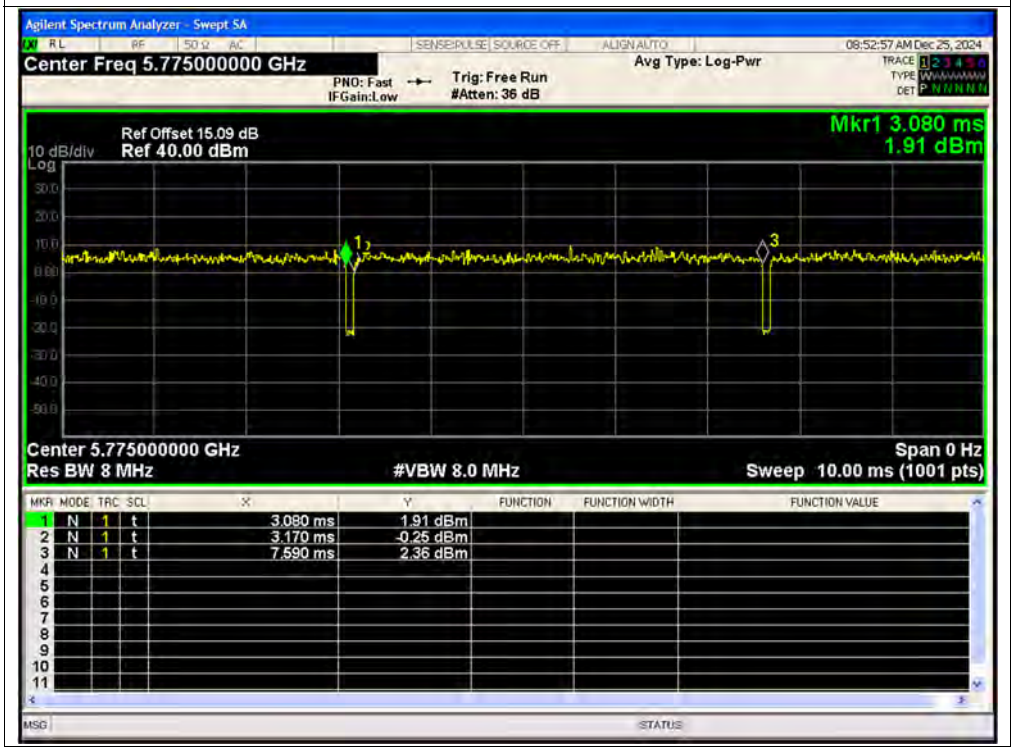
Duty Cycle NVNT ax80 5775MHz Ant2



Duty Cycle NVNT ax80 5210MHz Sum



Duty Cycle NVNT ax80 5775MHz Sum



A.2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Conducted Power (dBm)	Total Conducted Power (W)	Limit Conducted (dBm)	Verdict
NVNT	a	5180	Ant1	12.85	0.01928	24	Pass
NVNT	a	5220	Ant1	12.32	0.01706	24	Pass
NVNT	a	5240	Ant1	12.37	0.01726	24	Pass
NVNT	a	5745	Ant1	10.4	0.01096	30	Pass
NVNT	a	5785	Ant1	10.9	0.0123	30	Pass
NVNT	a	5825	Ant1	11.88	0.01542	30	Pass
NVNT	a	5180	Ant2	12.56	0.01803	24	Pass
NVNT	a	5220	Ant2	12.8	0.01905	24	Pass
NVNT	a	5240	Ant2	12.14	0.01637	24	Pass
NVNT	a	5745	Ant2	10.69	0.01172	30	Pass
NVNT	a	5785	Ant2	11.49	0.01409	30	Pass
NVNT	a	5825	Ant2	11.04	0.01271	30	Pass
NVNT	n20	5180	Ant1	12.79	0.01901	24	Pass
NVNT	n20	5220	Ant1	12.3	0.01698	24	Pass
NVNT	n20	5240	Ant1	12.24	0.01675	24	Pass
NVNT	n20	5745	Ant1	10.28	0.01067	30	Pass
NVNT	n20	5785	Ant1	10.67	0.01167	30	Pass
NVNT	n20	5825	Ant1	11.77	0.01503	30	Pass
NVNT	n20	5180	Ant2	12.37	0.01726	24	Pass
NVNT	n20	5220	Ant2	12.61	0.01824	24	Pass
NVNT	n20	5240	Ant2	12	0.01585	24	Pass
NVNT	n20	5745	Ant2	10.53	0.0113	30	Pass
NVNT	n20	5785	Ant2	11.33	0.01358	30	Pass
NVNT	n20	5825	Ant2	10.92	0.01236	30	Pass
NVNT	n20	5180	Ant1	12.33	0.0171	24	Pass
NVNT	n20	5180	Ant2	12.07	0.01611	24	Pass
NVNT	n20	5180	Sum	15.21	0.03321	21.31	Pass
NVNT	n20	5220	Ant1	11.85	0.01531	24	Pass
NVNT	n20	5220	Ant2	12.36	0.01722	24	Pass
NVNT	n20	5220	Sum	15.12	0.03253	21.31	Pass
NVNT	n20	5240	Ant1	11.75	0.01496	24	Pass
NVNT	n20	5240	Ant2	11.78	0.01507	24	Pass
NVNT	n20	5240	Sum	14.78	0.03003	21.31	Pass

NVNT	n20	5745	Ant1	10.24	0.01057	30	Pass
NVNT	n20	5745	Ant2	10.33	0.01079	30	Pass
NVNT	n20	5745	Sum	13.3	0.02136	27.31	Pass
NVNT	n20	5785	Ant1	10.22	0.01052	30	Pass
NVNT	n20	5785	Ant2	11.07	0.01279	30	Pass
NVNT	n20	5785	Sum	13.68	0.02331	27.31	Pass
NVNT	n20	5825	Ant1	11.17	0.01309	30	Pass
NVNT	n20	5825	Ant2	10.95	0.01245	30	Pass
NVNT	n20	5825	Sum	14.07	0.02554	27.31	Pass
NVNT	n40	5190	Ant1	12.71	0.01866	24	Pass
NVNT	n40	5230	Ant1	12.23	0.01671	24	Pass
NVNT	n40	5755	Ant1	10.67	0.01167	30	Pass
NVNT	n40	5795	Ant1	11.11	0.01291	30	Pass
NVNT	n40	5190	Ant2	12.39	0.01734	24	Pass
NVNT	n40	5230	Ant2	12.64	0.01837	24	Pass
NVNT	n40	5755	Ant2	10.79	0.01199	30	Pass
NVNT	n40	5795	Ant2	11.44	0.01393	30	Pass
NVNT	n40	5190	Ant1	12.21	0.01663	24	Pass
NVNT	n40	5190	Ant2	12.16	0.01644	24	Pass
NVNT	n40	5190	Sum	15.2	0.03308	21.31	Pass
NVNT	n40	5230	Ant1	11.78	0.01507	24	Pass
NVNT	n40	5230	Ant2	12.41	0.01742	24	Pass
NVNT	n40	5230	Sum	15.12	0.03248	21.31	Pass
NVNT	n40	5755	Ant1	10.25	0.01059	30	Pass
NVNT	n40	5755	Ant2	10.58	0.01143	30	Pass
NVNT	n40	5755	Sum	13.43	0.02202	27.31	Pass
NVNT	n40	5795	Ant1	10.59	0.01146	30	Pass
NVNT	n40	5795	Ant2	11.26	0.01337	30	Pass
NVNT	n40	5795	Sum	13.95	0.02482	27.31	Pass
NVNT	ac20	5180	Ant1	12.69	0.01858	24	Pass
NVNT	ac20	5220	Ant1	12.2	0.0166	24	Pass
NVNT	ac20	5240	Ant1	12.17	0.01648	24	Pass
NVNT	ac20	5745	Ant1	10.25	0.01059	30	Pass
NVNT	ac20	5785	Ant1	10.62	0.01153	30	Pass
NVNT	ac20	5825	Ant1	11.72	0.01486	30	Pass
NVNT	ac20	5180	Ant2	12.23	0.01671	24	Pass
NVNT	ac20	5220	Ant2	12.52	0.01786	24	Pass
NVNT	ac20	5240	Ant2	11.93	0.0156	24	Pass

NVNT	ac20	5745	Ant2	10.52	0.01127	30	Pass
NVNT	ac20	5785	Ant2	11.26	0.01337	30	Pass
NVNT	ac20	5825	Ant2	10.9	0.0123	30	Pass
NVNT	ac20	5180	Ant1	12.21	0.01663	24	Pass
NVNT	ac20	5180	Ant2	12.07	0.01611	24	Pass
NVNT	ac20	5180	Sum	15.15	0.03274	21.31	Pass
NVNT	ac20	5220	Ant1	11.72	0.01486	24	Pass
NVNT	ac20	5220	Ant2	12.33	0.0171	24	Pass
NVNT	ac20	5220	Sum	15.05	0.03196	21.31	Pass
NVNT	ac20	5240	Ant1	11.71	0.01483	24	Pass
NVNT	ac20	5240	Ant2	11.77	0.01503	24	Pass
NVNT	ac20	5240	Sum	14.75	0.02986	21.31	Pass
NVNT	ac20	5745	Ant1	10.27	0.01064	30	Pass
NVNT	ac20	5745	Ant2	10.36	0.01086	30	Pass
NVNT	ac20	5745	Sum	13.33	0.02151	27.31	Pass
NVNT	ac20	5785	Ant1	10.19	0.01045	30	Pass
NVNT	ac20	5785	Ant2	11.11	0.01291	30	Pass
NVNT	ac20	5785	Sum	13.68	0.02336	27.31	Pass
NVNT	ac20	5825	Ant1	11.17	0.01309	30	Pass
NVNT	ac20	5825	Ant2	11.01	0.01262	30	Pass
NVNT	ac20	5825	Sum	14.1	0.02571	27.31	Pass
NVNT	ac40	5190	Ant1	12.64	0.01837	24	Pass
NVNT	ac40	5230	Ant1	12.18	0.01652	24	Pass
NVNT	ac40	5755	Ant1	10.6	0.01148	30	Pass
NVNT	ac40	5795	Ant1	11.03	0.01268	30	Pass
NVNT	ac40	5190	Ant2	12.33	0.0171	24	Pass
NVNT	ac40	5230	Ant2	12.59	0.01816	24	Pass
NVNT	ac40	5755	Ant2	10.74	0.01186	30	Pass
NVNT	ac40	5795	Ant2	11.4	0.0138	30	Pass
NVNT	ac40	5190	Ant1	12.22	0.01667	24	Pass
NVNT	ac40	5190	Ant2	12.17	0.01648	24	Pass
NVNT	ac40	5190	Sum	15.2	0.03315	21.31	Pass
NVNT	ac40	5230	Ant1	11.79	0.0151	24	Pass
NVNT	ac40	5230	Ant2	12.4	0.01738	24	Pass
NVNT	ac40	5230	Sum	15.12	0.03248	21.31	Pass
NVNT	ac40	5755	Ant1	10.26	0.01062	30	Pass
NVNT	ac40	5755	Ant2	10.62	0.01153	30	Pass
NVNT	ac40	5755	Sum	13.45	0.02215	27.31	Pass

NVNT	ac40	5795	Ant1	10.6	0.01148	30	Pass
NVNT	ac40	5795	Ant2	11.23	0.01327	30	Pass
NVNT	ac40	5795	Sum	13.94	0.02476	27.31	Pass
NVNT	ax20	5180	Ant1	12.68	0.01854	24	Pass
NVNT	ax20	5220	Ant1	12.19	0.01656	24	Pass
NVNT	ax20	5240	Ant1	12.19	0.01656	24	Pass
NVNT	ax20	5745	Ant1	10.23	0.01054	30	Pass
NVNT	ax20	5785	Ant1	10.61	0.01151	30	Pass
NVNT	ax20	5825	Ant1	11.73	0.01489	30	Pass
NVNT	ax20	5180	Ant2	12.24	0.01675	24	Pass
NVNT	ax20	5220	Ant2	12.55	0.01799	24	Pass
NVNT	ax20	5240	Ant2	11.95	0.01567	24	Pass
NVNT	ax20	5745	Ant2	10.58	0.01143	30	Pass
NVNT	ax20	5785	Ant2	11.36	0.01368	30	Pass
NVNT	ax20	5825	Ant2	10.93	0.01239	30	Pass
NVNT	ax20	5180	Ant1	12.21	0.01663	24	Pass
NVNT	ax20	5180	Ant2	12.03	0.01596	24	Pass
NVNT	ax20	5180	Sum	15.13	0.03259	21.31	Pass
NVNT	ax20	5220	Ant1	11.74	0.01493	24	Pass
NVNT	ax20	5220	Ant2	12.34	0.01714	24	Pass
NVNT	ax20	5220	Sum	15.06	0.03207	21.31	Pass
NVNT	ax20	5240	Ant1	11.7	0.01479	24	Pass
NVNT	ax20	5240	Ant2	11.77	0.01503	24	Pass
NVNT	ax20	5240	Sum	14.75	0.02982	21.31	Pass
NVNT	ax20	5745	Ant1	10.21	0.0105	30	Pass
NVNT	ax20	5745	Ant2	10.38	0.01091	30	Pass
NVNT	ax20	5745	Sum	13.31	0.02141	27.31	Pass
NVNT	ax20	5785	Ant1	10.2	0.01047	30	Pass
NVNT	ax20	5785	Ant2	11.12	0.01294	30	Pass
NVNT	ax20	5785	Sum	13.69	0.02341	27.31	Pass
NVNT	ax20	5825	Ant1	11.18	0.01312	30	Pass
NVNT	ax20	5825	Ant2	10.92	0.01236	30	Pass
NVNT	ax20	5825	Sum	14.06	0.02548	27.31	Pass
NVNT	ax40	5190	Ant1	12.51	0.01782	24	Pass
NVNT	ax40	5230	Ant1	12.08	0.01614	24	Pass
NVNT	ax40	5755	Ant1	10.49	0.01119	30	Pass
NVNT	ax40	5795	Ant1	10.91	0.01233	30	Pass
NVNT	ax40	5190	Ant2	12.24	0.01675	24	Pass

NVNT	ax40	5230	Ant2	12.48	0.0177	24	Pass
NVNT	ax40	5755	Ant2	10.66	0.01164	30	Pass
NVNT	ax40	5795	Ant2	11.26	0.01337	30	Pass
NVNT	ax40	5190	Ant1	12.12	0.01629	24	Pass
NVNT	ax40	5190	Ant2	12.08	0.01614	24	Pass
NVNT	ax40	5190	Sum	15.11	0.03244	21.31	Pass
NVNT	ax40	5230	Ant1	11.69	0.01476	24	Pass
NVNT	ax40	5230	Ant2	12.29	0.01694	24	Pass
NVNT	ax40	5230	Sum	15.01	0.0317	21.31	Pass
NVNT	ax40	5755	Ant1	10.16	0.01038	30	Pass
NVNT	ax40	5755	Ant2	10.49	0.01119	30	Pass
NVNT	ax40	5755	Sum	13.34	0.02157	27.31	Pass
NVNT	ax40	5795	Ant1	10.51	0.01125	30	Pass
NVNT	ax40	5795	Ant2	11.15	0.01303	30	Pass
NVNT	ax40	5795	Sum	13.85	0.02428	27.31	Pass
NVNT	ax80	5210	Ant1	12.6	0.0182	24	Pass
NVNT	ax80	5775	Ant1	10.54	0.01132	30	Pass
NVNT	ax80	5210	Ant2	12.58	0.01811	24	Pass
NVNT	ax80	5775	Ant2	11.79	0.0151	30	Pass
NVNT	ax80	5210	Ant1	12.49	0.01774	24	Pass
NVNT	ax80	5210	Ant2	12.48	0.0177	24	Pass
NVNT	ax80	5210	Sum	15.49	0.03544	21.31	Pass
NVNT	ax80	5775	Ant1	9.97	0.00993	30	Pass
NVNT	ax80	5775	Ant2	11.66	0.01466	30	Pass
NVNT	ax80	5775	Sum	13.91	0.02459	27.31	Pass

Note : Directional gain = $10\log[(10^{G0/20}+10^{G1/20})^2/2$ = 8.69dBi＞6dBi, so the power limit shall be reduced to 24-(8.69-6) = 21.31dBm for 5.18-5.24GHz band and reduced to 30-(8.69-6) = 27.31dBm for 5.745-5.825GHz band.

A.3. Emission Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)
NVNT	a	5180	Ant1	19.67
NVNT	a	5220	Ant1	19.68
NVNT	a	5240	Ant1	19.75
NVNT	a	5180	Ant2	19.63
NVNT	a	5220	Ant2	19.83
NVNT	a	5240	Ant2	19.86
NVNT	n20	5180	Ant1	20.09
NVNT	n20	5220	Ant1	20.28
NVNT	n20	5240	Ant1	20.3
NVNT	n20	5180	Ant2	20.04
NVNT	n20	5220	Ant2	20.2
NVNT	n20	5240	Ant2	20.14
NVNT	n20	5180	Ant1	19.93
NVNT	n20	5180	Ant2	20.18
NVNT	n20	5220	Ant1	19.87
NVNT	n20	5220	Ant2	20.13
NVNT	n20	5240	Ant1	20.07
NVNT	n20	5240	Ant2	20.23
NVNT	n40	5190	Ant1	39.52
NVNT	n40	5230	Ant1	39.52
NVNT	n40	5190	Ant2	39.57
NVNT	n40	5230	Ant2	39.75
NVNT	n40	5190	Ant1	39.46
NVNT	n40	5190	Ant2	39.53
NVNT	n40	5230	Ant1	39.16
NVNT	n40	5230	Ant2	39.5
NVNT	ac20	5180	Ant1	20.24
NVNT	ac20	5220	Ant1	20.26
NVNT	ac20	5240	Ant1	20.14
NVNT	ac20	5180	Ant2	20.21
NVNT	ac20	5220	Ant2	20.24
NVNT	ac20	5240	Ant2	20.19
NVNT	ac20	5180	Ant1	19.82
NVNT	ac20	5180	Ant2	20.46
NVNT	ac20	5220	Ant1	19.87
NVNT	ac20	5220	Ant2	20.12

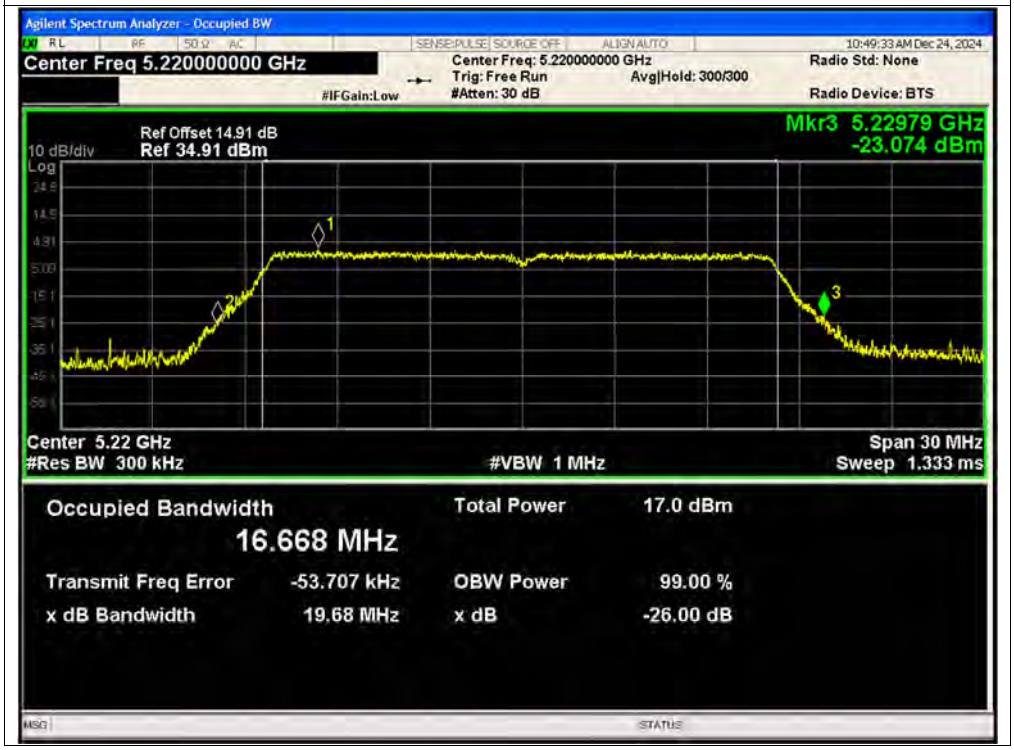
NVNT	ac20	5240	Ant1	19.91
NVNT	ac20	5240	Ant2	20.29
NVNT	ac40	5190	Ant1	39.43
NVNT	ac40	5230	Ant1	39.51
NVNT	ac40	5190	Ant2	39.59
NVNT	ac40	5230	Ant2	39.44
NVNT	ac40	5190	Ant1	39.31
NVNT	ac40	5190	Ant2	39.46
NVNT	ac40	5230	Ant1	39.18
NVNT	ac40	5230	Ant2	39.54
NVNT	ax20	5180	Ant1	20.33
NVNT	ax20	5220	Ant1	20.35
NVNT	ax20	5240	Ant1	20.39
NVNT	ax20	5180	Ant2	20.39
NVNT	ax20	5220	Ant2	20.32
NVNT	ax20	5240	Ant2	20.32
NVNT	ax20	5180	Ant1	20.43
NVNT	ax20	5180	Ant2	20.39
NVNT	ax20	5220	Ant1	20.24
NVNT	ax20	5220	Ant2	20.43
NVNT	ax20	5240	Ant1	20.27
NVNT	ax20	5240	Ant2	20.32
NVNT	ax40	5190	Ant1	39.93
NVNT	ax40	5230	Ant1	39.86
NVNT	ax40	5190	Ant2	39.75
NVNT	ax40	5230	Ant2	39.85
NVNT	ax40	5190	Ant1	39.93
NVNT	ax40	5190	Ant2	39.58
NVNT	ax40	5230	Ant1	39.74
NVNT	ax40	5230	Ant2	39.86
NVNT	ax80	5210	Ant1	84.32
NVNT	ax80	5210	Ant2	84.01
NVNT	ax80	5210	Ant1	83.56
NVNT	ax80	5210	Ant2	83.85

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	16.36	0.5	Pass
NVNT	a	5785	Ant1	16.41	0.5	Pass
NVNT	a	5825	Ant1	16.41	0.5	Pass
NVNT	a	5745	Ant2	16.39	0.5	Pass
NVNT	a	5785	Ant2	16.38	0.5	Pass
NVNT	a	5825	Ant2	16.36	0.5	Pass
NVNT	n20	5745	Ant1	17.55	0.5	Pass
NVNT	n20	5785	Ant1	17.58	0.5	Pass
NVNT	n20	5825	Ant1	17.56	0.5	Pass
NVNT	n20	5745	Ant2	17.56	0.5	Pass
NVNT	n20	5785	Ant2	17.56	0.5	Pass
NVNT	n20	5825	Ant2	17.54	0.5	Pass
NVNT	n20	5745	Ant1	17.6	0.5	Pass
NVNT	n20	5745	Ant2	17.56	0.5	Pass
NVNT	n20	5785	Ant1	17.6	0.5	Pass
NVNT	n20	5785	Ant2	17.54	0.5	Pass
NVNT	n20	5825	Ant1	17.58	0.5	Pass
NVNT	n20	5825	Ant2	17.55	0.5	Pass
NVNT	n40	5755	Ant1	35.78	0.5	Pass
NVNT	n40	5795	Ant1	36	0.5	Pass
NVNT	n40	5755	Ant2	35.89	0.5	Pass
NVNT	n40	5795	Ant2	36.02	0.5	Pass
NVNT	n40	5755	Ant1	36.3	0.5	Pass
NVNT	n40	5755	Ant2	35.81	0.5	Pass
NVNT	n40	5795	Ant1	35.92	0.5	Pass
NVNT	n40	5795	Ant2	36.07	0.5	Pass
NVNT	ac20	5745	Ant1	17.58	0.5	Pass
NVNT	ac20	5785	Ant1	17.57	0.5	Pass
NVNT	ac20	5825	Ant1	17.57	0.5	Pass
NVNT	ac20	5745	Ant2	17.59	0.5	Pass
NVNT	ac20	5785	Ant2	17.59	0.5	Pass
NVNT	ac20	5825	Ant2	17.54	0.5	Pass
NVNT	ac20	5745	Ant1	17.55	0.5	Pass
NVNT	ac20	5745	Ant2	17.57	0.5	Pass
NVNT	ac20	5785	Ant1	17.61	0.5	Pass
NVNT	ac20	5785	Ant2	17.55	0.5	Pass

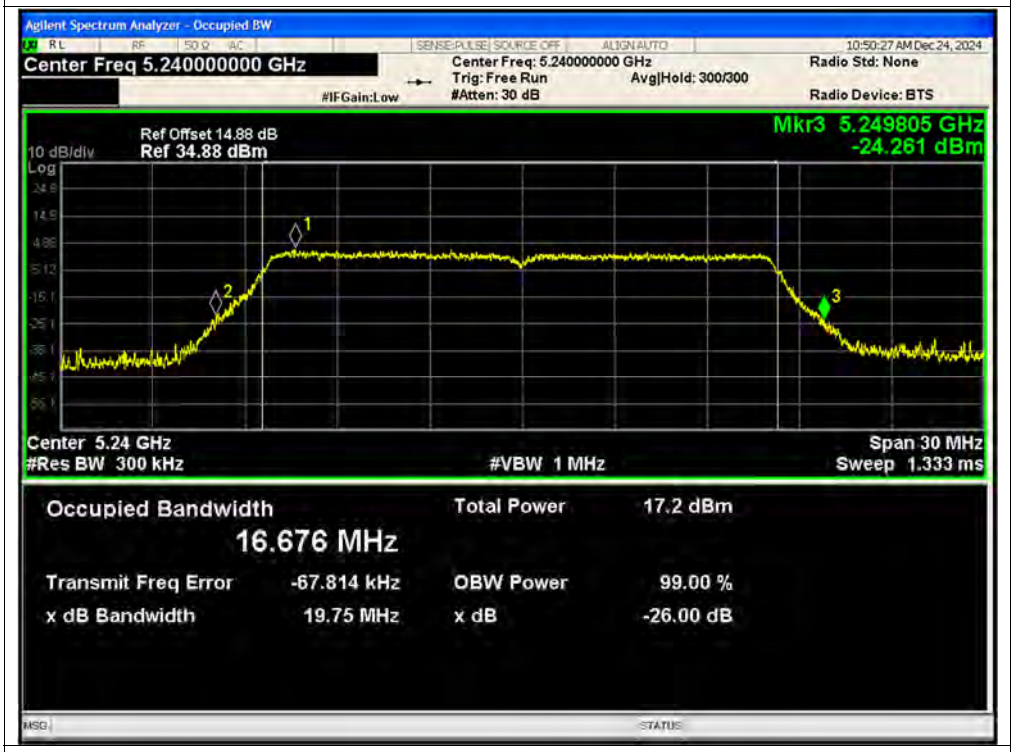
NVNT	ac20	5825	Ant1	17.57	0.5	Pass
NVNT	ac20	5825	Ant2	17.58	0.5	Pass
NVNT	ac40	5755	Ant1	36.07	0.5	Pass
NVNT	ac40	5795	Ant1	36.06	0.5	Pass
NVNT	ac40	5755	Ant2	36.29	0.5	Pass
NVNT	ac40	5795	Ant2	35.81	0.5	Pass
NVNT	ac40	5755	Ant1	36.31	0.5	Pass
NVNT	ac40	5755	Ant2	36.06	0.5	Pass
NVNT	ac40	5795	Ant1	36.06	0.5	Pass
NVNT	ac40	5795	Ant2	36.29	0.5	Pass
NVNT	ax20	5745	Ant1	18.56	0.5	Pass
NVNT	ax20	5785	Ant1	18.67	0.5	Pass
NVNT	ax20	5825	Ant1	18.35	0.5	Pass
NVNT	ax20	5745	Ant2	18.72	0.5	Pass
NVNT	ax20	5785	Ant2	18.4	0.5	Pass
NVNT	ax20	5825	Ant2	18.6	0.5	Pass
NVNT	ax20	5745	Ant1	18.48	0.5	Pass
NVNT	ax20	5745	Ant2	18.75	0.5	Pass
NVNT	ax20	5785	Ant1	18.74	0.5	Pass
NVNT	ax20	5785	Ant2	18.42	0.5	Pass
NVNT	ax20	5825	Ant1	18.57	0.5	Pass
NVNT	ax20	5825	Ant2	18.69	0.5	Pass
NVNT	ax40	5755	Ant1	36.72	0.5	Pass
NVNT	ax40	5795	Ant1	36.51	0.5	Pass
NVNT	ax40	5755	Ant2	36.49	0.5	Pass
NVNT	ax40	5795	Ant2	36.43	0.5	Pass
NVNT	ax40	5755	Ant1	36.62	0.5	Pass
NVNT	ax40	5755	Ant2	36.77	0.5	Pass
NVNT	ax40	5795	Ant1	36.63	0.5	Pass
NVNT	ax40	5795	Ant2	36.9	0.5	Pass
NVNT	ax80	5775	Ant1	78.03	0.5	Pass
NVNT	ax80	5775	Ant2	78.1	0.5	Pass
NVNT	ax80	5775	Ant1	78.08	0.5	Pass
NVNT	ax80	5775	Ant2	78.1	0.5	Pass

Test Graphs
-26dB Bandwidth NVNT a 5180MHz Ant1

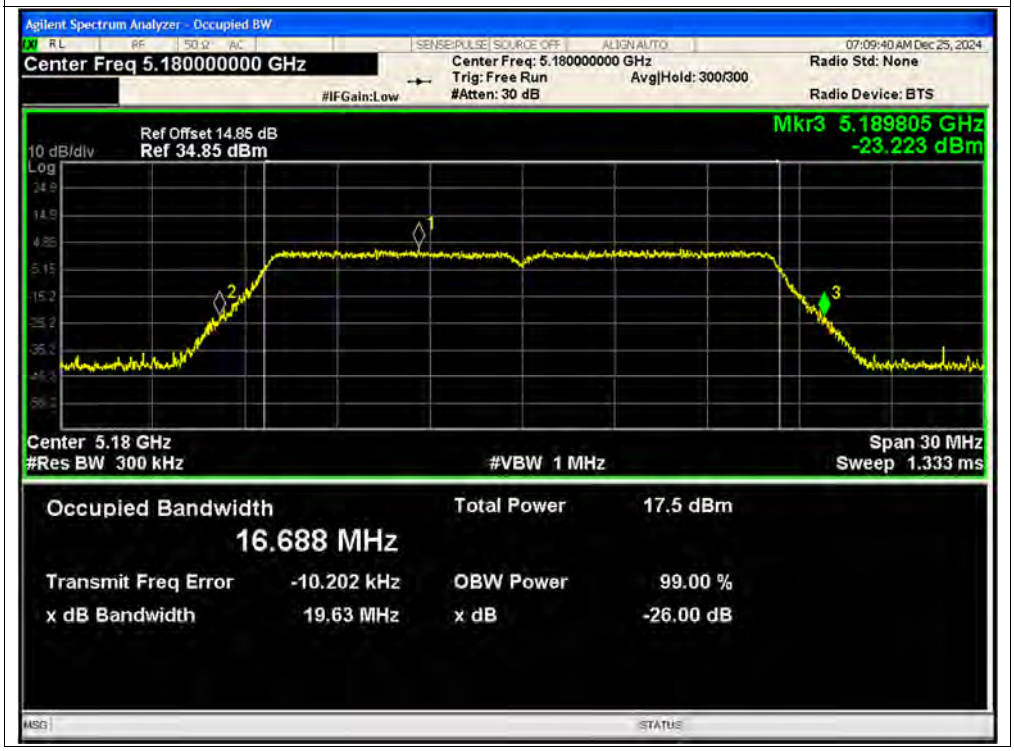
-26dB Bandwidth NVNT a 5220MHz Ant1



-26dB Bandwidth NVNT a 5240MHz Ant1

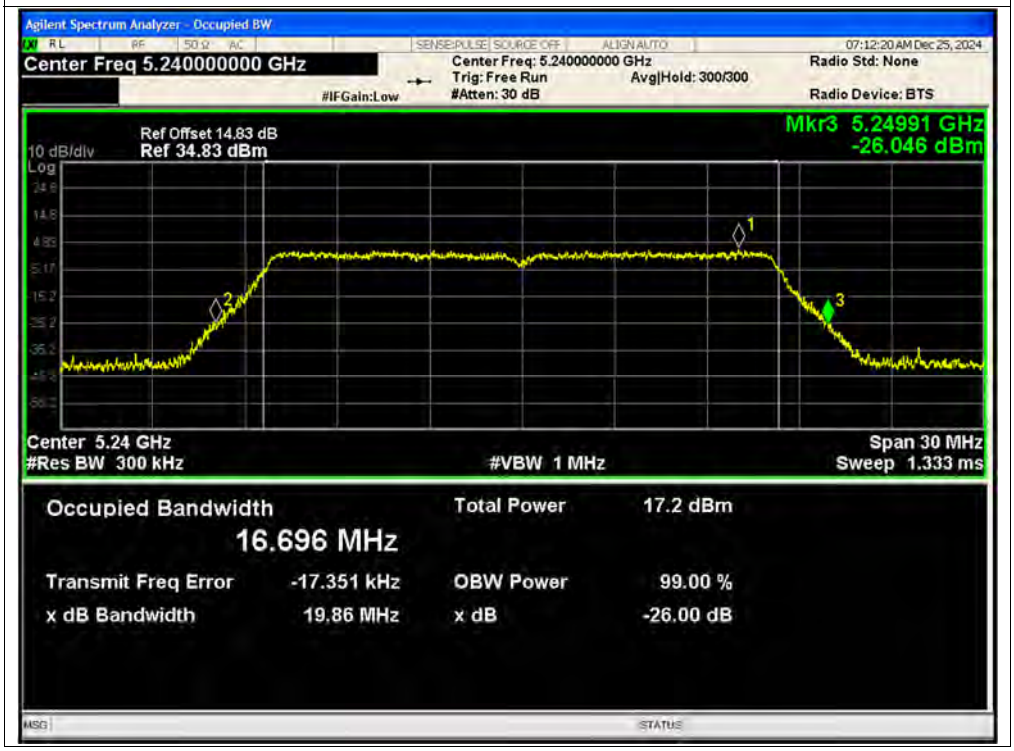


-26dB Bandwidth NVNT a 5180MHz Ant2



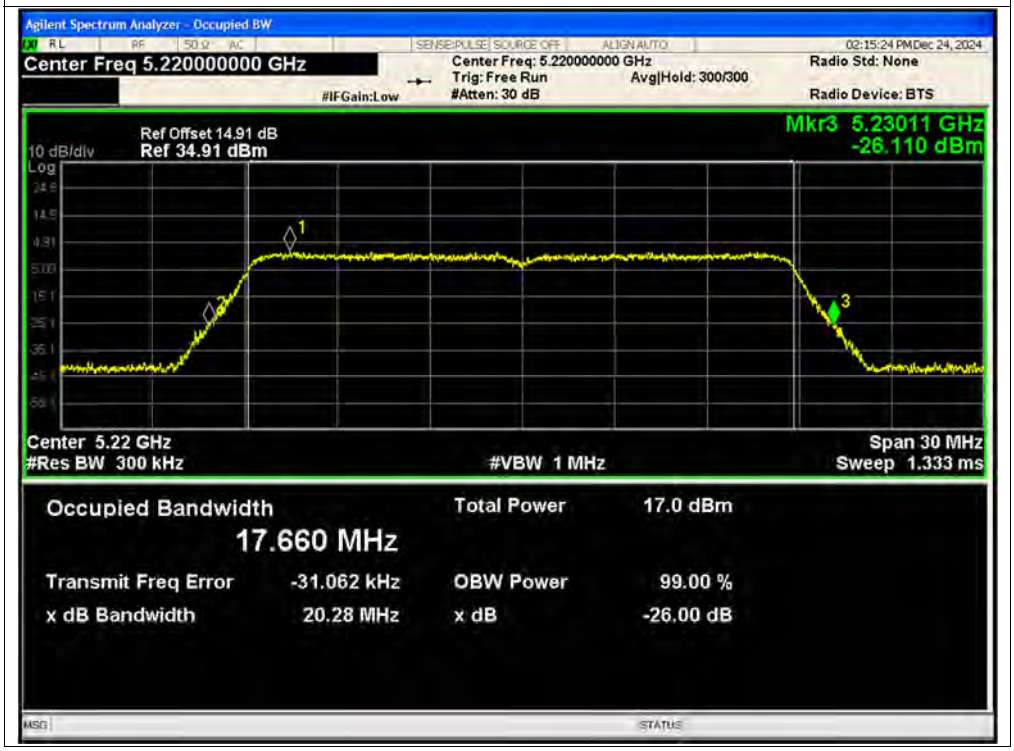
-26dB Bandwidth NVNT a 5220MHz Ant2

-26dB Bandwidth NVNT a 5240MHz Ant2



-26dB Bandwidth NVNT n20 5180MHz Ant1

-26dB Bandwidth NVNT n20 5220MHz Ant1

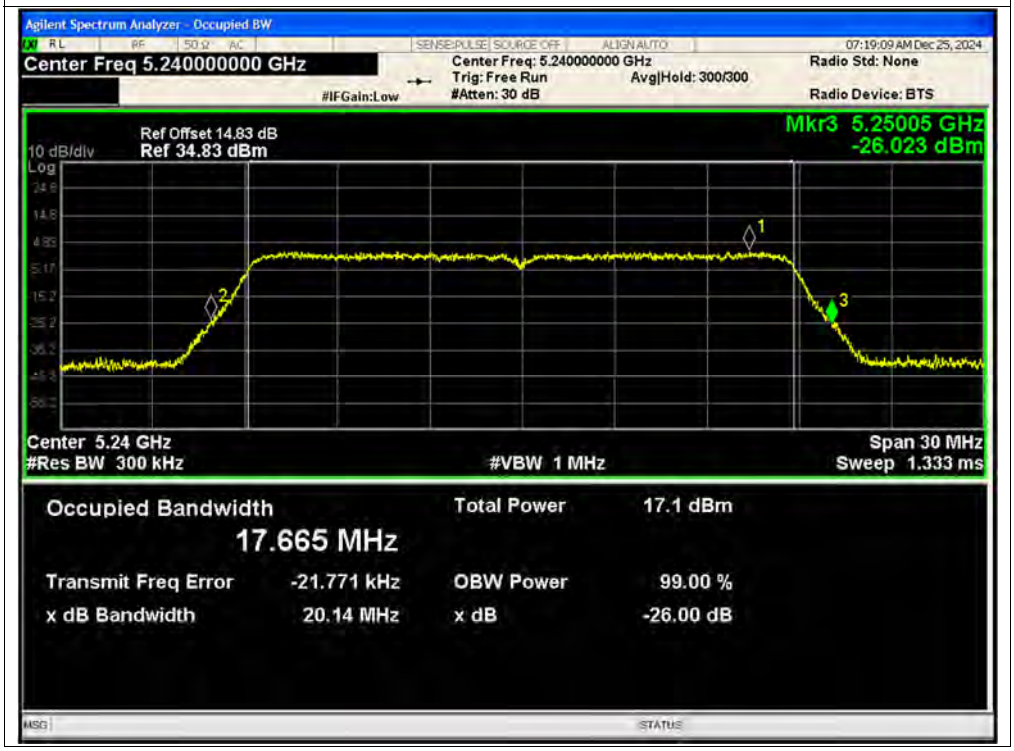


-26dB Bandwidth NVNT n20 5240MHz Ant1

-26dB Bandwidth NVNT n20 5180MHz Ant2

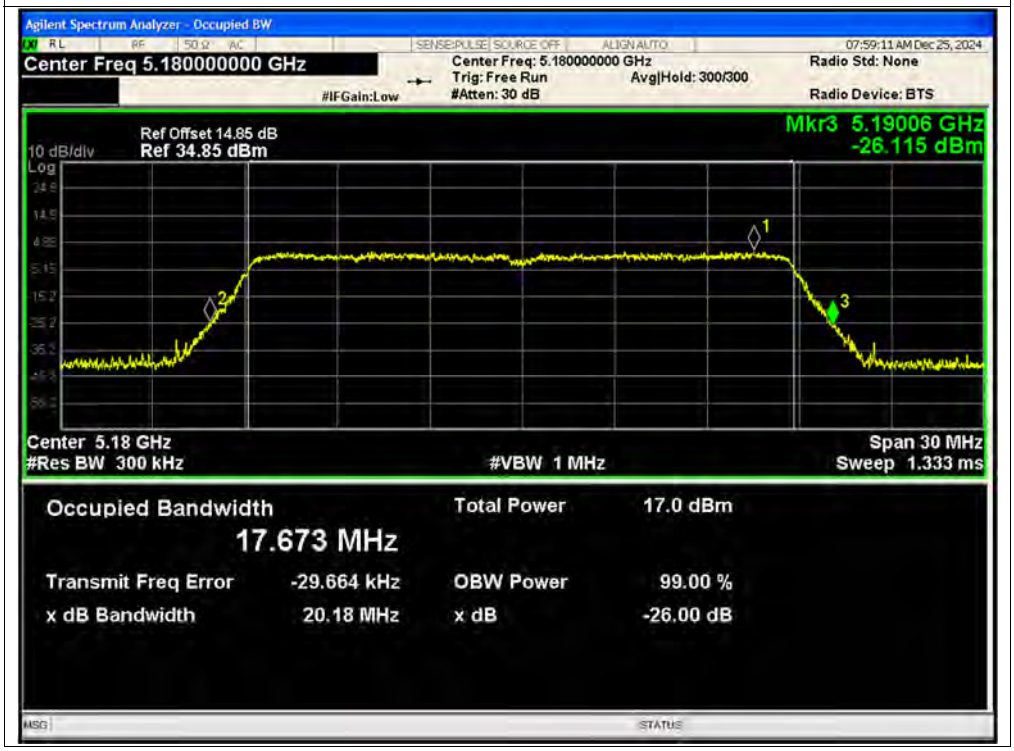
-26dB Bandwidth NVNT n20 5220MHz Ant2

-26dB Bandwidth NVNT n20 5240MHz Ant2

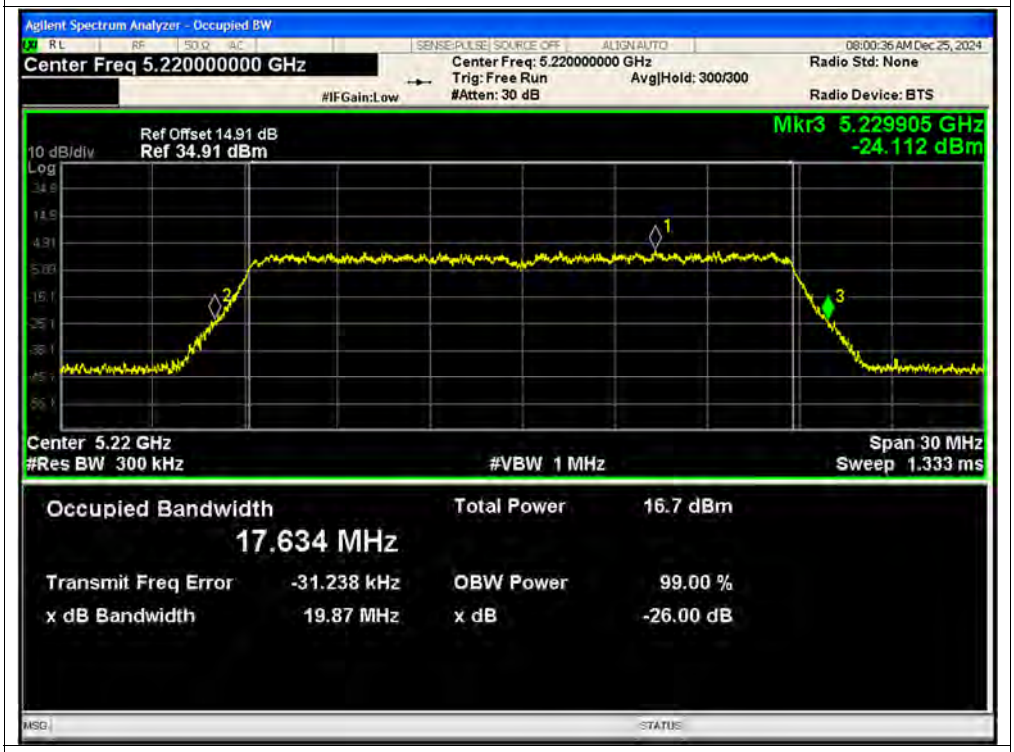


-26dB Bandwidth NVNT n20 5180MHz Ant1

-26dB Bandwidth NVNT n20 5180MHz Ant2

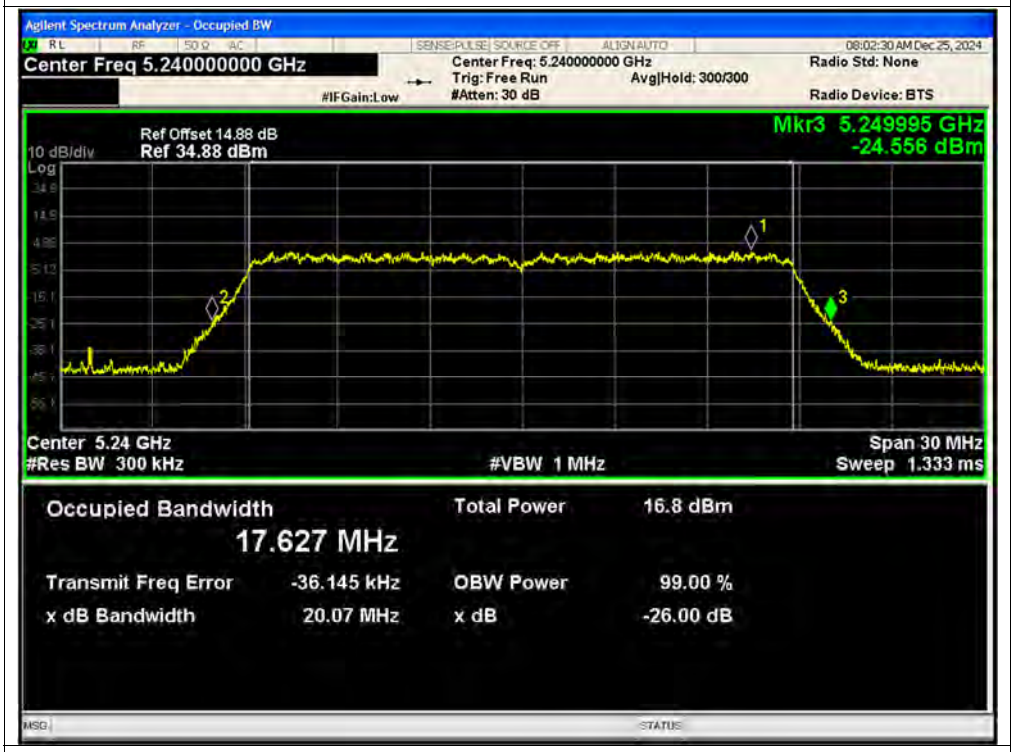


-26dB Bandwidth NVNT n20 5220MHz Ant1

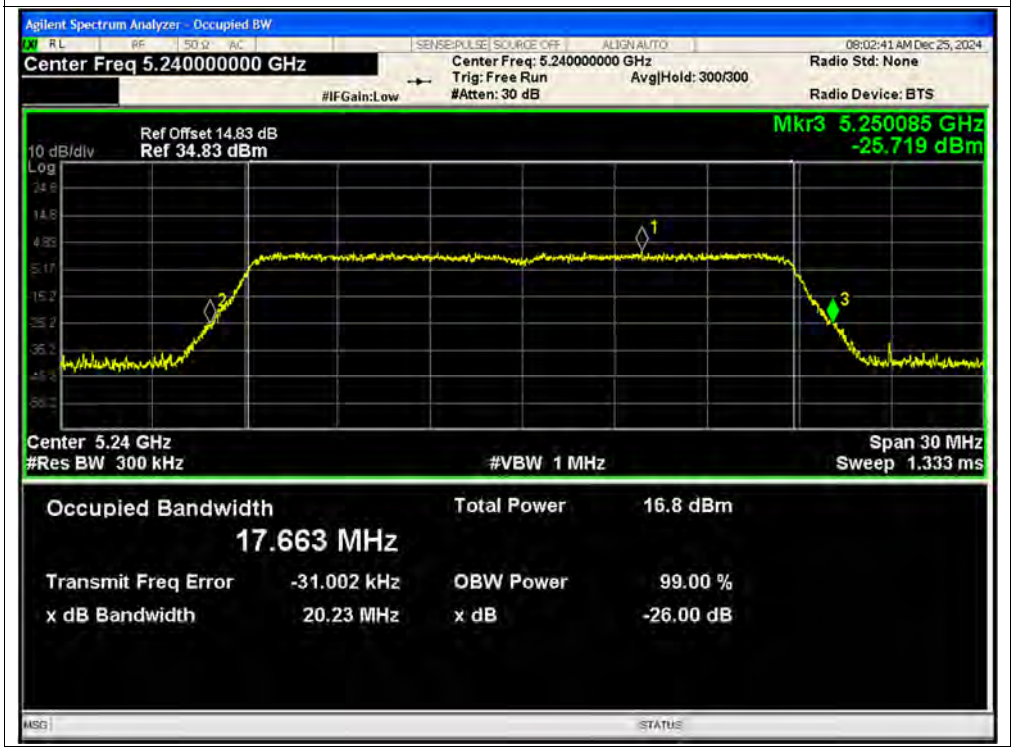


-26dB Bandwidth NVNT n20 5220MHz Ant2

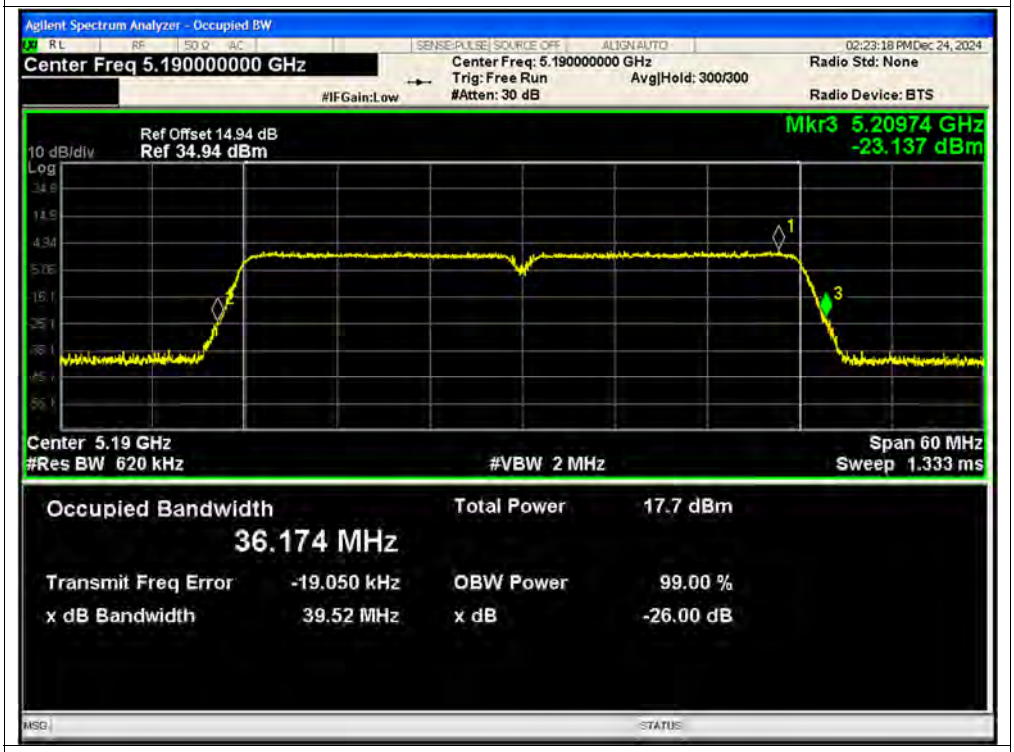
-26dB Bandwidth NVNT n20 5240MHz Ant1



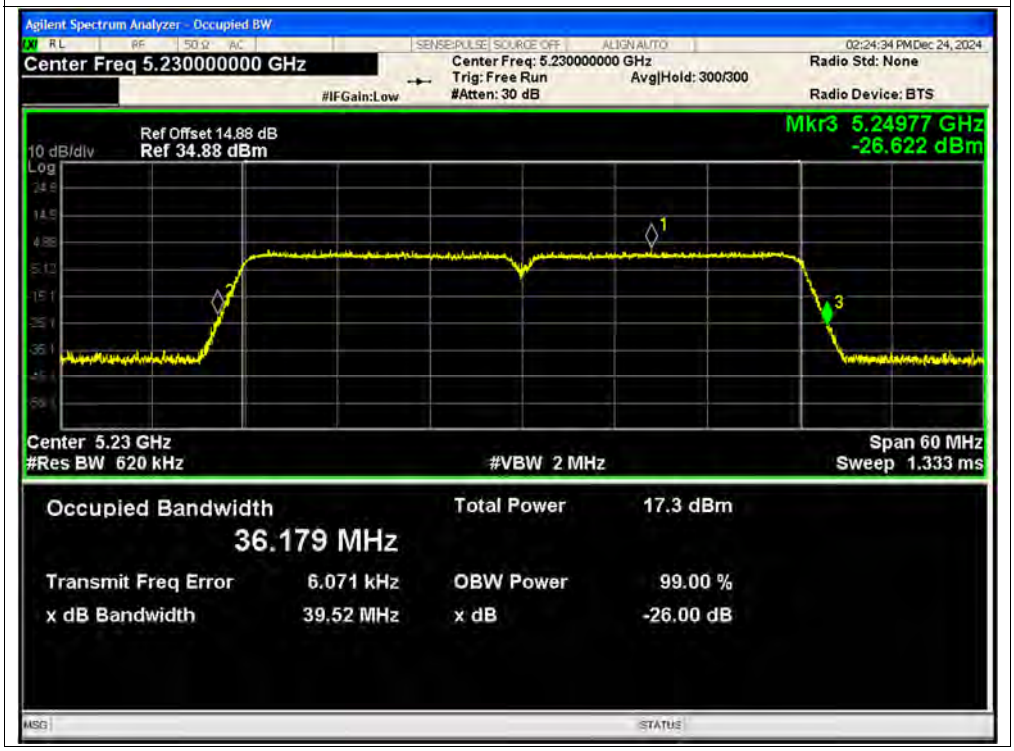
-26dB Bandwidth NVNT n20 5240MHz Ant2



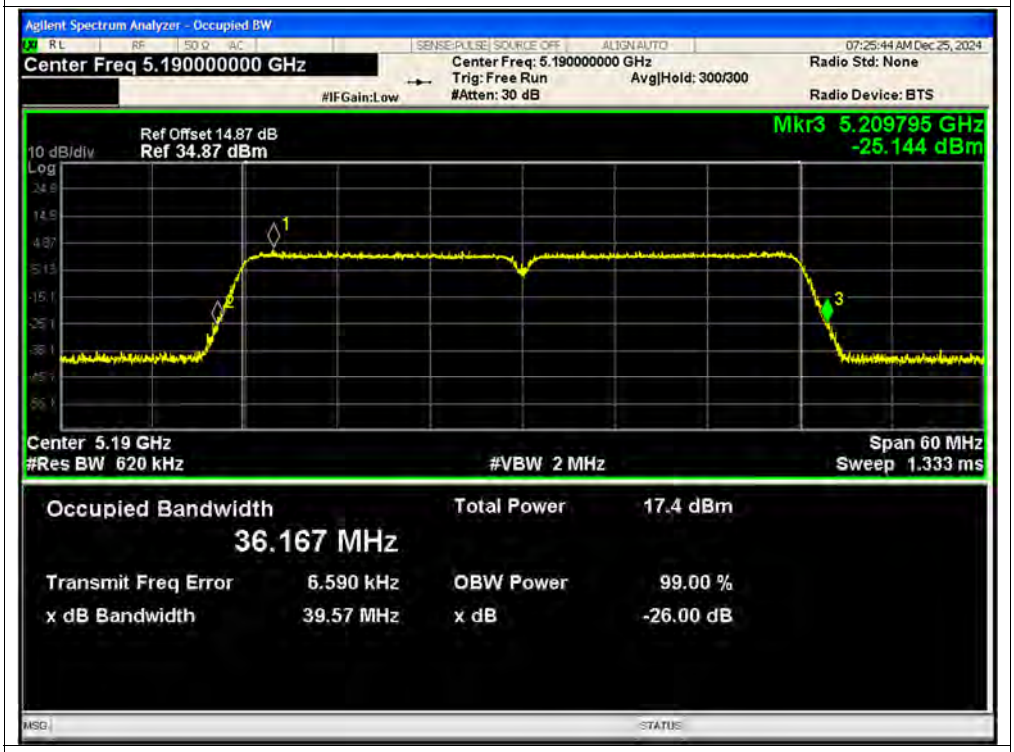
-26dB Bandwidth NVNT n40 5190MHz Ant1



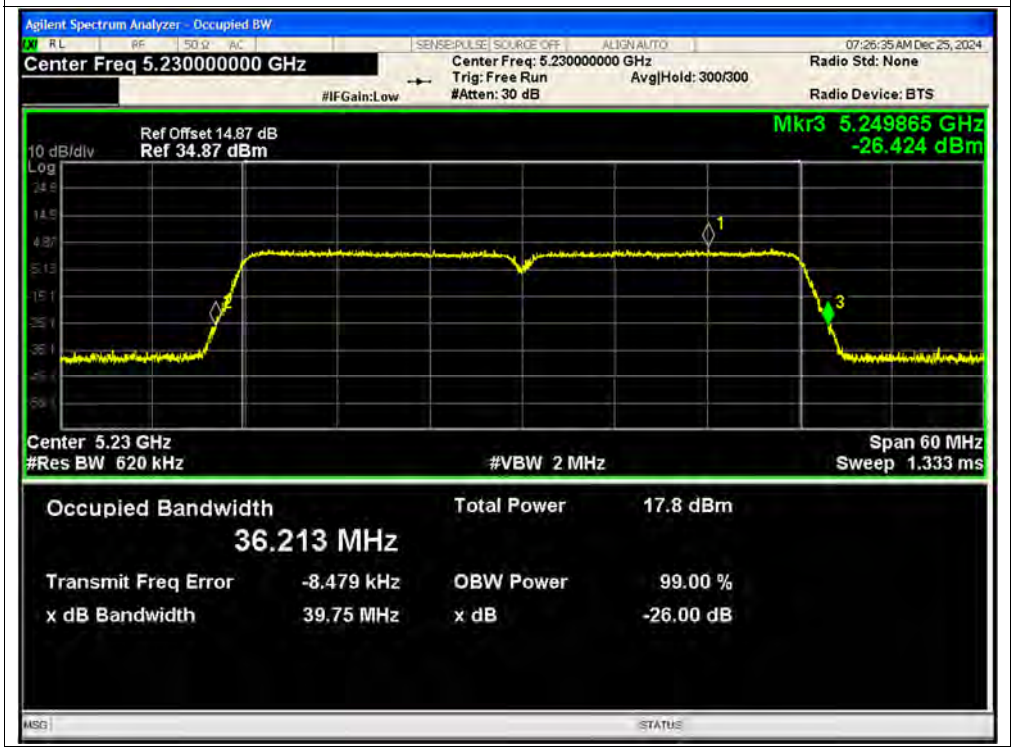
-26dB Bandwidth NVNT n40 5230MHz Ant1



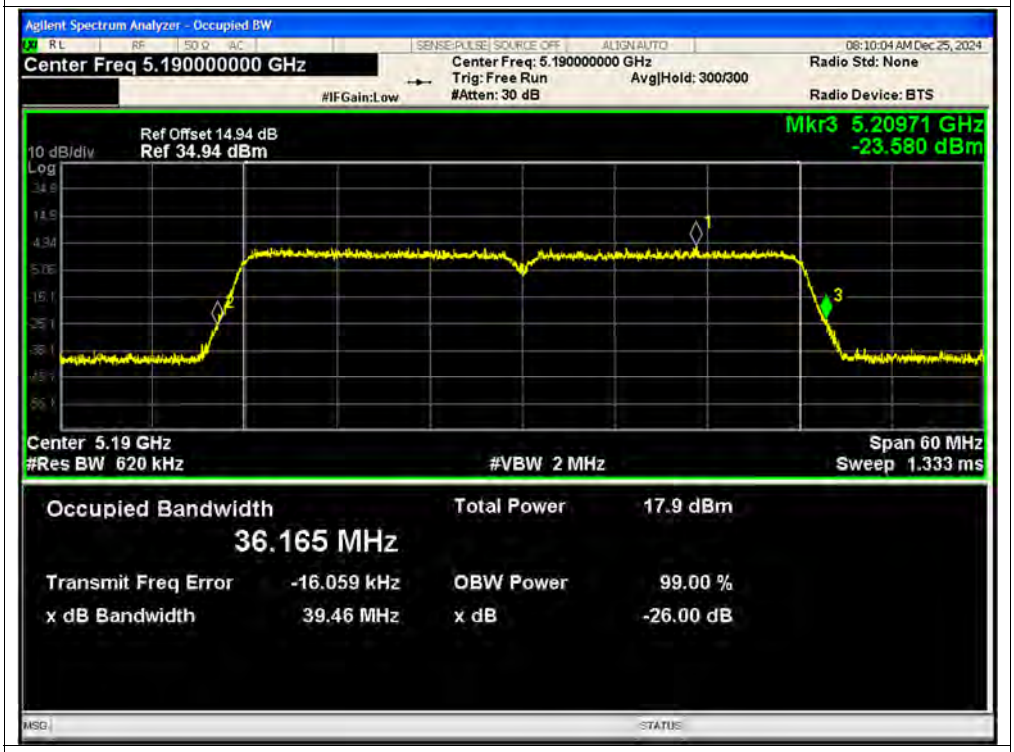
-26dB Bandwidth NVNT n40 5190MHz Ant2



-26dB Bandwidth NVNT n40 5230MHz Ant2

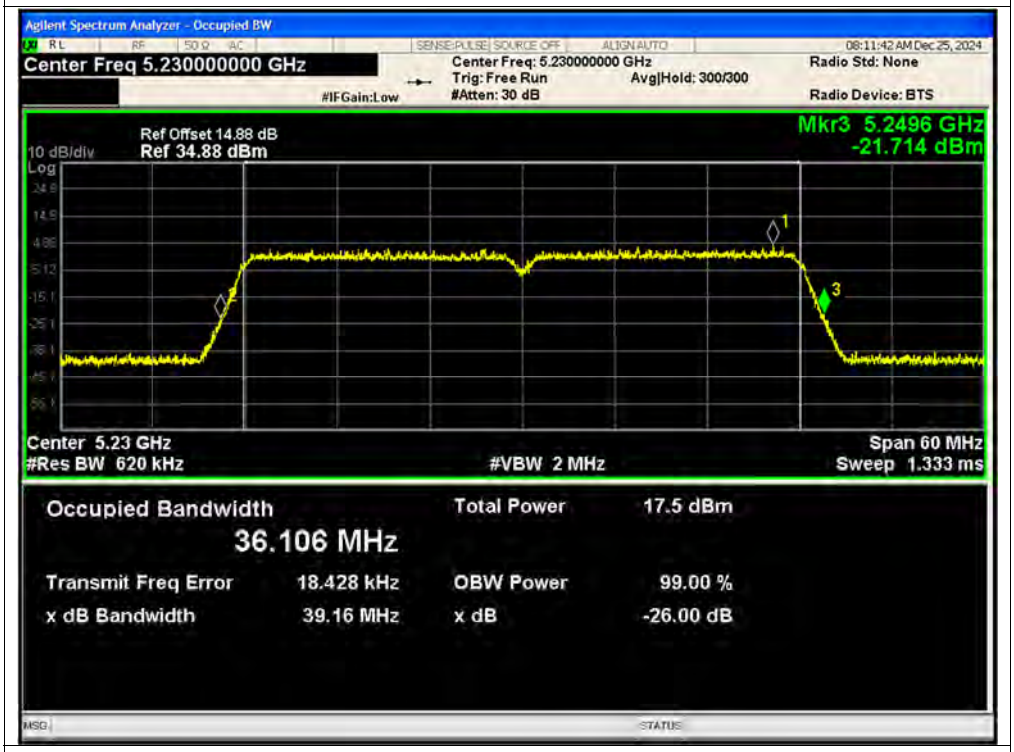


-26dB Bandwidth NVNT n40 5190MHz Ant1

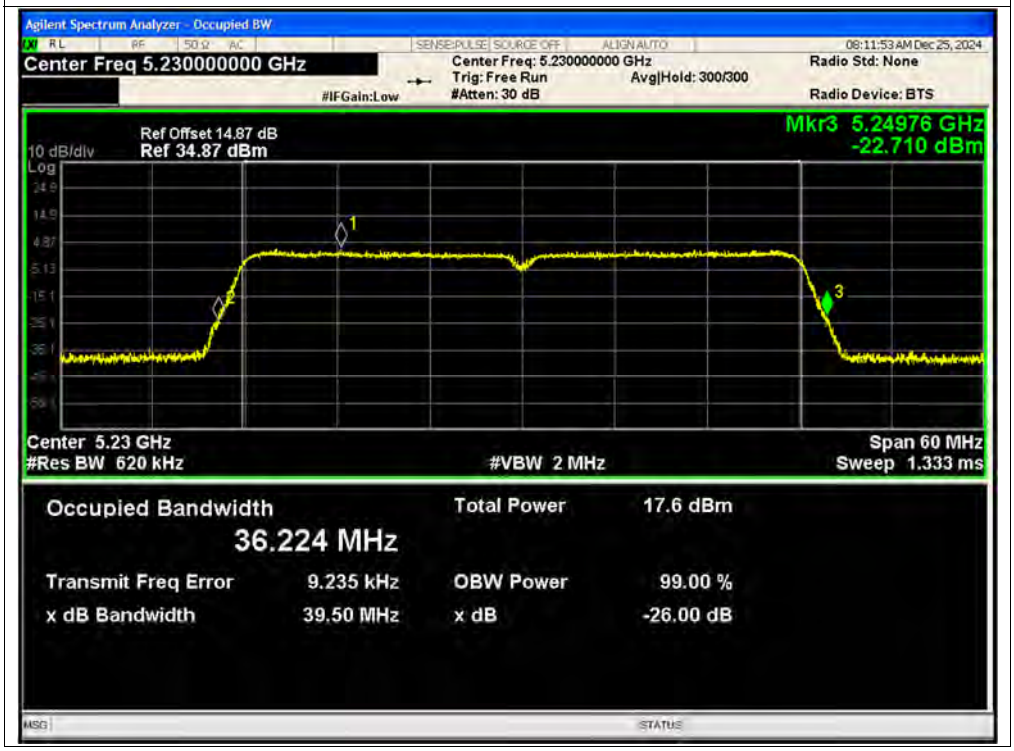


-26dB Bandwidth NVNT n40 5190MHz Ant2

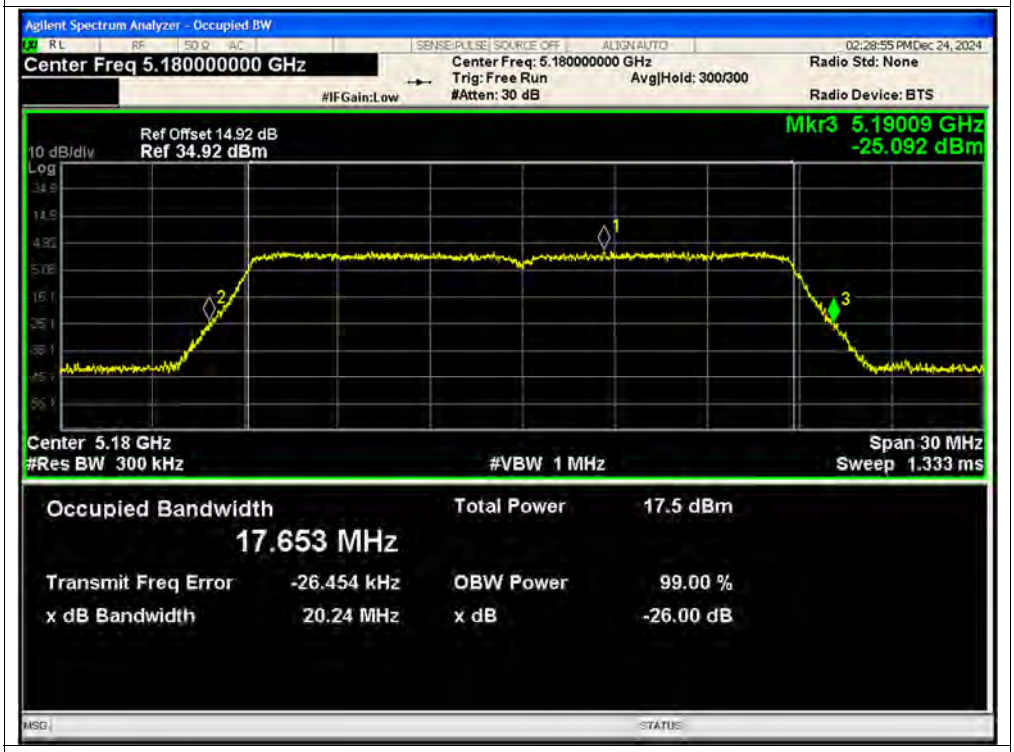
-26dB Bandwidth NVNT n40 5230MHz Ant1



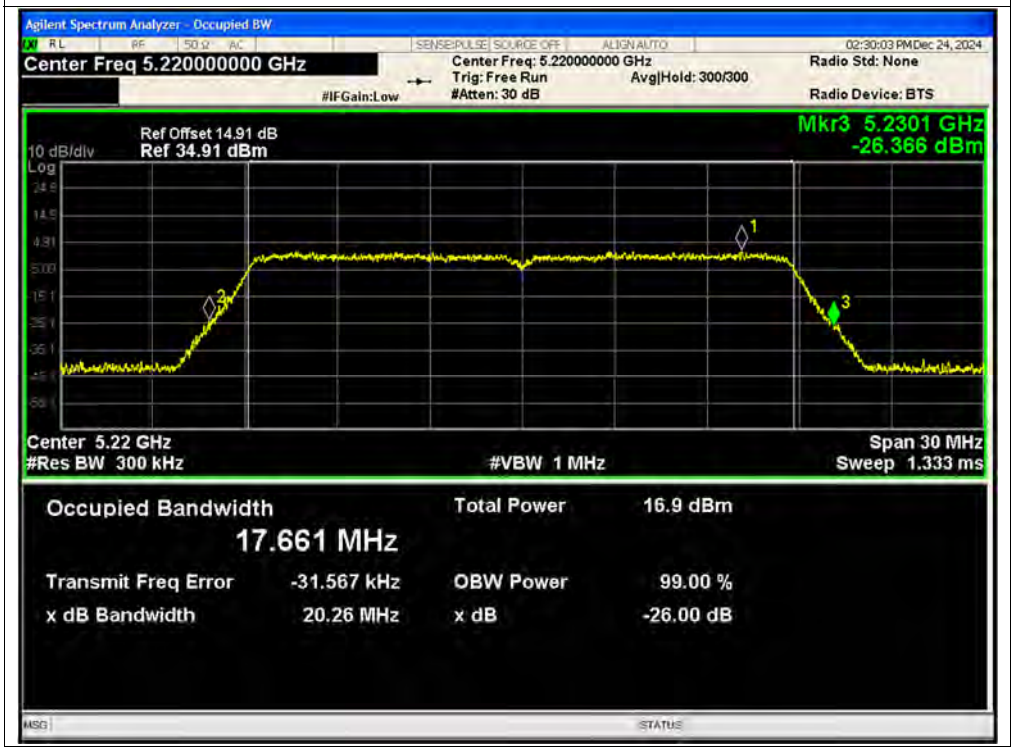
-26dB Bandwidth NVNT n40 5230MHz Ant2



-26dB Bandwidth NVNT ac20 5180MHz Ant1

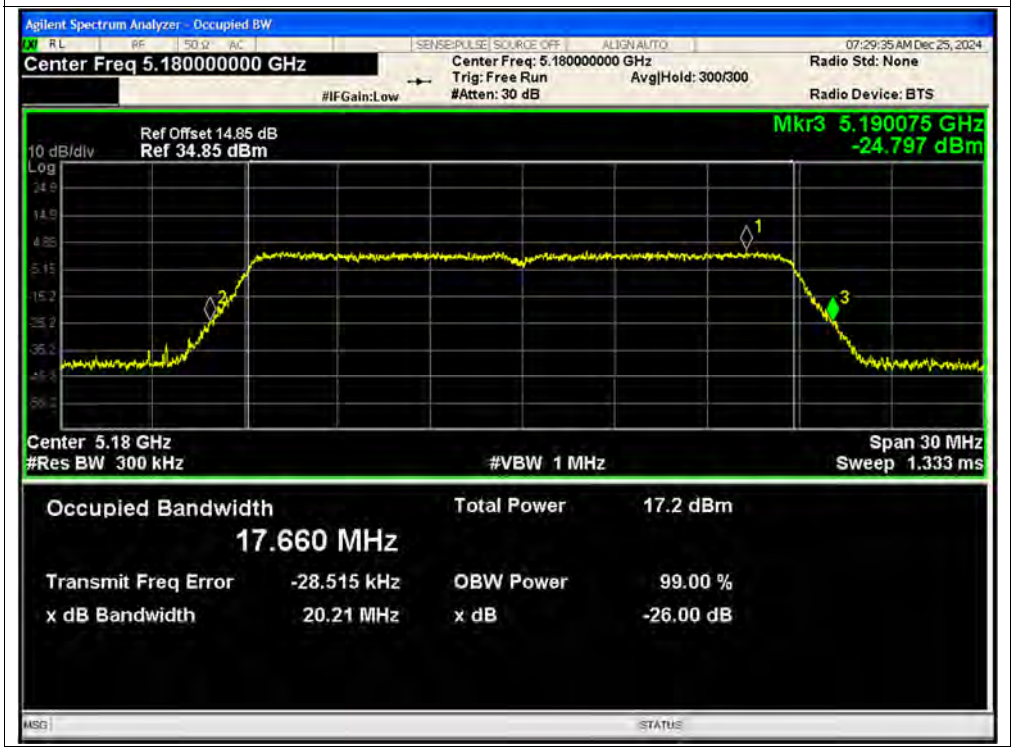


-26dB Bandwidth NVNT ac20 5220MHz Ant1

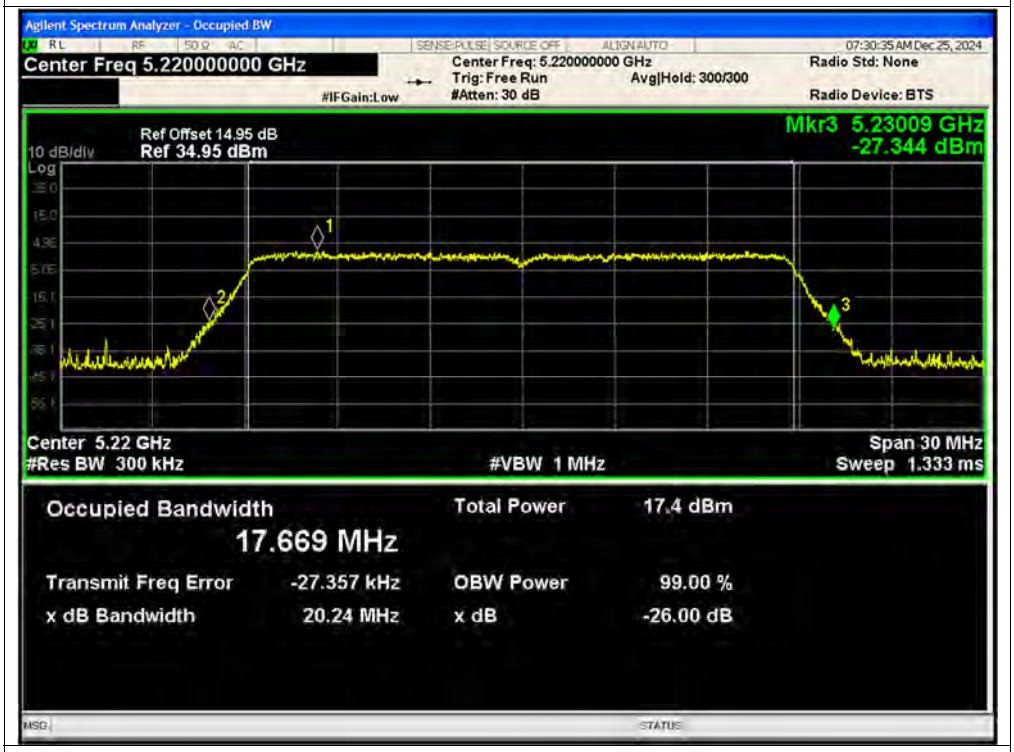


-26dB Bandwidth NVNT ac20 5240MHz Ant1

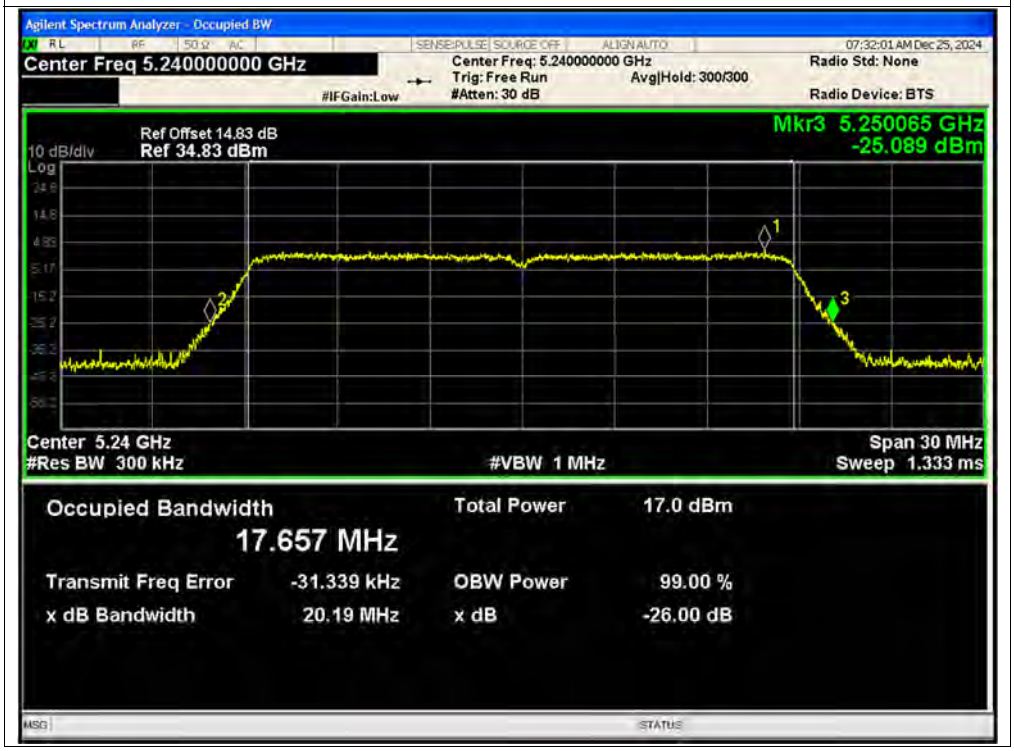
-26dB Bandwidth NVNT ac20 5180MHz Ant2



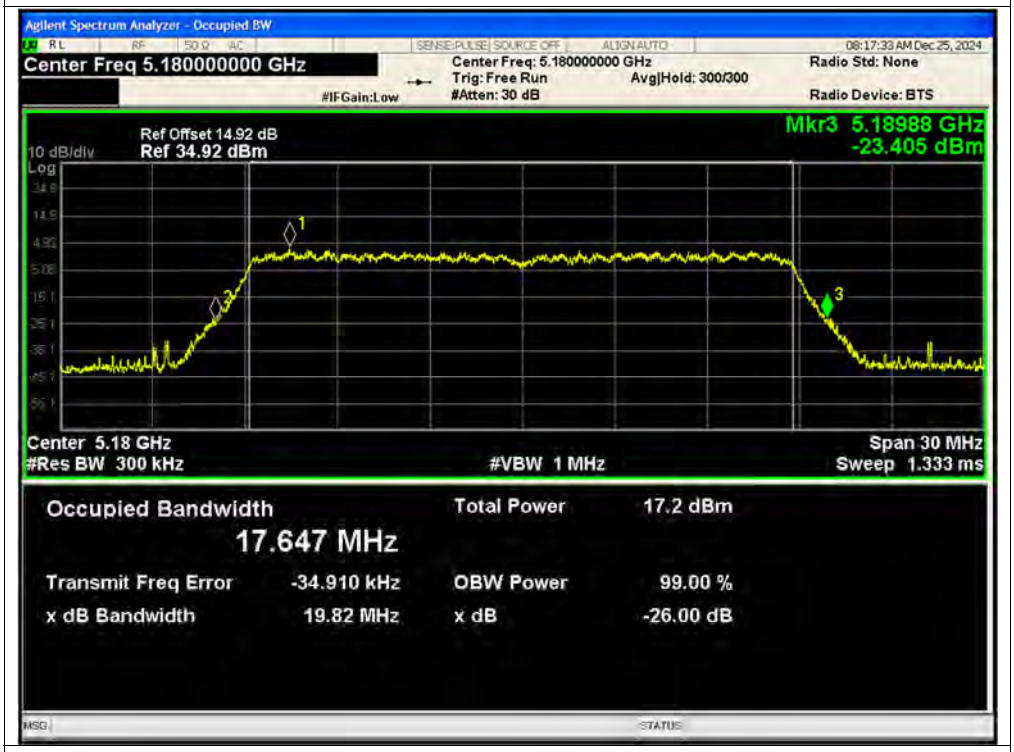
-26dB Bandwidth NVNT ac20 5220MHz Ant2



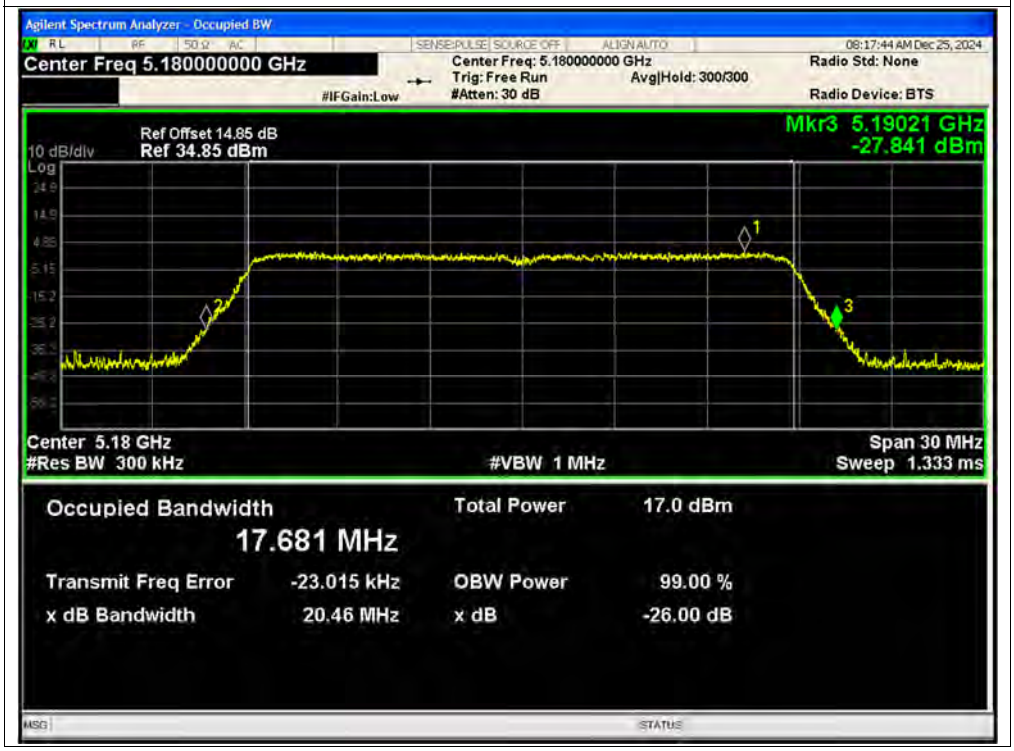
-26dB Bandwidth NVNT ac20 5240MHz Ant2



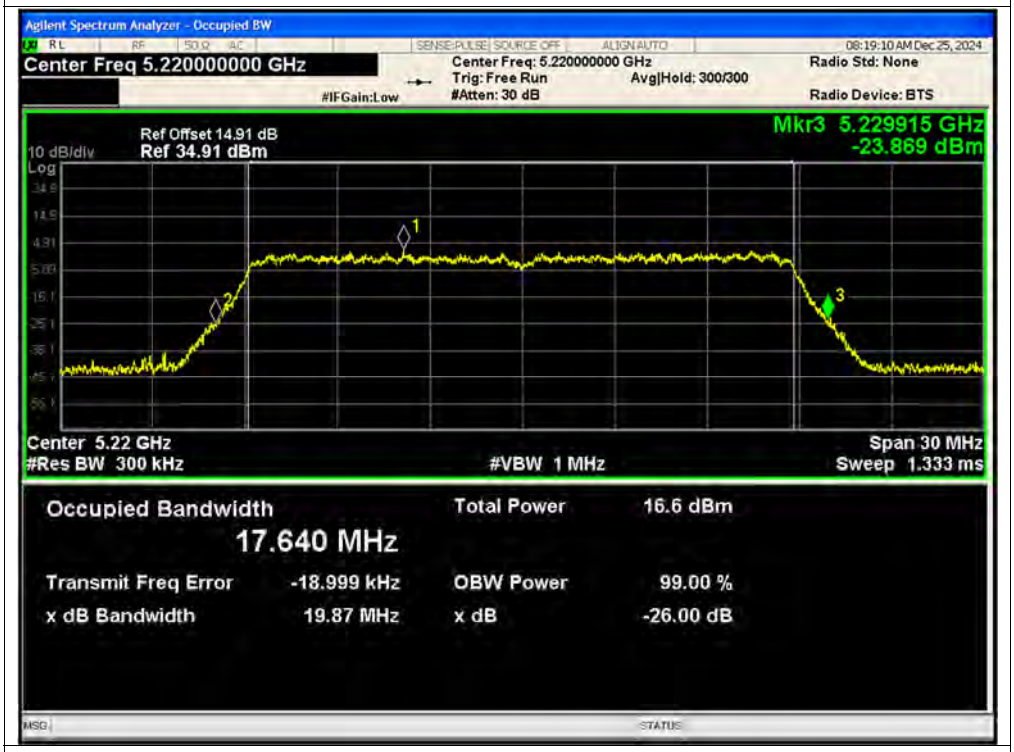
-26dB Bandwidth NVNT ac20 5180MHz Ant1



-26dB Bandwidth NVNT ac20 5180MHz Ant2



-26dB Bandwidth NVNT ac20 5220MHz Ant1



-26dB Bandwidth NVNT ac20 5220MHz Ant2