



# TEST REPORT

**APPLICANT** : JACS Solutions, Inc.  
**PRODUCT NAME** : LTE Indoor CPE  
**MODEL NAME** : TD0551  
**BRAND NAME** : N/A  
**FCC ID** : 2AGCDJACSTD0551  
**STANDARD(S)** : 47 CFR Part 15 Subpart E  
**RECEIPT DATE** : 2023-01-30  
**TEST DATE** : 2023-02-03 to 2023-02-15  
**ISSUE DATE** : 2023-03-09

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# DIRECTORY

<b>1. Summary of Test Result</b>	<b>4</b>
1.1. Testing Applied Standards	5
1.2. Test Equipment List	6
1.3. Measurement Uncertainty	8
1.4. Testing Laboratory	8
<b>2. General Description</b>	<b>9</b>
2.1. Information of Applicant and Manufacturer	9
2.2. Information of EUT	9
2.3. Channel List of EUT	11
2.4. Test Configuration of EUT	12
2.5. Test Conditions	12
2.6. Test Setup Layout Diagram	13
<b>3. Test Results</b>	<b>16</b>
3.1. Antenna Requirement	16
3.2. Duty Cycle of Test Signal	17
3.3. Maximum Conducted Output Power	18
3.4. Emission Bandwidth	20
3.5. Peak Power Spectral Density	22
3.6. Frequency Stability	23
3.7. Conducted Emission	24
3.8. Restricted Frequency Bands	25
3.9. Radiated Emission	27
<b>Annex A Test Data and Result</b>	<b>29</b>



Change History		
Version	Date	Reason for change
1.0	2023-03-09	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	Feb. 03, 2023	Su Xiaoxian	PASS	No deviation
3	15.407(a)	Maximum Conducted Output Power	Feb. 03, 2023	Su Xiaoxian	PASS	No deviation
4	15.407(a) (e)	Emission Bandwidth	Feb. 03, 2023	Su Xiaoxian	PASS	No deviation
5	15.407(a)	Peak Power Spectral Density	Feb. 06, 2023	Su Xiaoxian	PASS	No deviation
6	15.407(g)	Frequency Stability	Feb. 09, 2023	Su Xiaoxian	PASS	No deviation
7	15.207	Conducted Emission	Feb. 06, 2023	Fan Zehang	PASS	No deviation
8	15.407(b)	Restricted Frequency Bands	Feb. 15, 2023	Li Hanbin	PASS	No deviation
9	15.407(b)	Radiated Emission	Feb. 14, 2023	Li Hanbin	PASS	No deviation

**Note 1:** The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.102013.

**Note 2:** These RF tests were performed according to the method of measurements prescribed in KDB789033 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 Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2022.03.01	2023.02.28
USB Wideband Power Sensor	MY54180008	U2021XA	Agilent	2022.10.11	2023.10.10
Temperature Chamber	12108015	DTL-003S 101	YOMA	2022.10.10	2023.10.09
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
Coaxial Cable	CB02	RF02	Morlab	N/A	N/A
SMA Connector	CN01	RF03	HUBER-SUHNER	N/A	N/A

### 1.2.2 Conducted Emission Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2022.03.03	2023.03.02
LISN	8127449	NSLK 8127	Schwarzbeck	2022.03.03	2023.03.02
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2022.07.06	2023.07.05
RF Coaxial Cable (DC-100MHz)	BNC	MRE04	Qualwave	2022.07.08	2023.07.07
Notebook	N/A	A1370	APPLE	N/A	N/A
Notebook Adapter	N/A	A1374	APPLE	N/A	N/A

### 1.2.3 List of Software Used

Description	Manufacturer	Software Version
Test System	MaiWei	2.0.0.0
Morlab EMCR V1.2	Morlab	V1.0
TS+ -[JS32-CE]	Tonscend	V2.5.0.0

**1.2.4 Radiated Test Equipments**

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY54130016	N9038A	Agilent	2022.07.06	2023.07.05
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2022.05.25	2025.05.24
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2022.02.11	2025.02.10
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2022.07.13	2025.07.12
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2022.07.14	2025.07.13
Preamplifier (10MHz-6GHz)	46732	S10M100L38 02	LUCIX CORP.	2022.07.08	2023.07.07
Preamplifier (2GHz-18GHz)	61171/61172	S020180L32 03	LUCIX CORP.	2022.07.08	2023.07.07
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2022.07.23	2023.07.22
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-K K-0.5	Qualwave	2022.07.08	2023.07.07
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-K KF-2	Qualwave	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-N N-5	Qualwave	2022.07.08	2023.07.07
Notch Filter	N/A	WRCG-5150-5350	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCG-5725-5850	Wainwright	2022.07.08	2023.07.07
Anechoic Chamber	N/A	9m*6m*6m	CRT	2020.01.06	2023.01.05



### 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

<b>Laboratory Name</b>	Shenzhen Morlab Communications Technology Co., Ltd.
<b>Laboratory Address</b>	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
<b>Telephone</b>	+86 755 36698555
<b>Facsimile</b>	+86 755 36698525





## 2. General Description

### 2.1. Information of Applicant and Manufacturer

<b>Applicant</b>	JACS Solutions, Inc.
<b>Applicant Address</b>	809 Pinnacle Drive, Suite R, Linthicum Heights, MD 21090
<b>Manufacturer</b>	JACS Solutions, Inc.
<b>Manufacturer Address</b>	809 Pinnacle Drive, Suite R, Linthicum Heights, MD 21090

### 2.2. Information of EUT

<b>Product Name:</b>	LTE Indoor CPE	
<b>Sample No.:</b>	1#	
<b>Hardware Version:</b>	V1.0	
<b>Software Version:</b>	TD0551_JACS_V1.0.2	
<b>Modulation Technology:</b>	OFDM	
<b>Modulation Mode:</b>	802.11a, 802.11n (HT20), 802.11n (HT40) 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80)	
<b>Operating Frequency Range:</b>	5180MHz-5240MHz; 5745MHz-5825MHz	
<b>Antenna Type:</b>	PCB Antenna	
<b>Antenna Gain:</b>	ANT 1: 2.9dBi; ANT 2: 2.9dBi	
<b>Directional Gain:</b>	5.91dBi <sub>Note 2</sub>	
<b>Accessory Information:</b>	AC Adapter 1	
	<b>Brand Name:</b>	Shenzhen YWK Electronics Co.,Ltd.
	<b>Model No.:</b>	YWK-AD120100 U
	<b>Serial No.:</b>	N/A
	<b>Rated Output:</b>	12V $\overline{=}$ 1A
	<b>Rated Input:</b>	100-240V $\sim$ 50/60Hz, 0.3A
	<b>Manufacturer:</b>	Shenzhen YWK ElectronicsCo.,Ltd
	AC Adapter 2	
	<b>Brand Name:</b>	Huizhou Guoaotong Technology Co.,Ltd
	<b>Model No.:</b>	GA-1201000
	<b>Serial No.:</b>	N/A
	<b>Rated Output:</b>	12V $\overline{=}$ 1A
	<b>Rated Input:</b>	100-240V $\sim$ 50/60Hz, 0.3A
	<b>Manufacturer:</b>	Huizhou Guoaotong Technology Co.,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
802.11n	2TX
802.11ac	2TX

**Note 2:** According to KDB 662911 D01, the directional gain =  $G_{ANT} + 10\log(N_{ANT})$  dBi, where  $G_{ANT}$  is the maximum 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:** We use the dedicated software to control the EUT continuous transmission.

**Note 5:** 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

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

**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	<b>DBPSK</b>	1/2/5.5/11Mbps	N/A
			DQPSK		
			CCK		
802.11n	20/40 (HT20/40)	OFDM	<b>BPSK</b>	<b>MCS0~MCS7</b>	N/A
			QPSK		
			16QAM		
			64QAM		
802.11ac	20/40/80 (VHT20/40/80)	OFDM	<b>BPSK</b>	<b>MCS0~MCS9</b>	N/A
			QPSK		
			16QAM		
			64QAM		
			256QAM		

**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.

## 2.5. Test Conditions

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

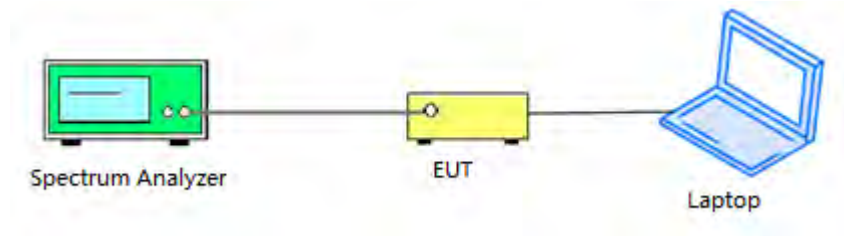
## 2.6. Test Setup Layout Diagram

### 2.6.1. Conducted Measurement

For power item that BW below 80MHz system:



For power item that BW equal or above 80MHz and other items:

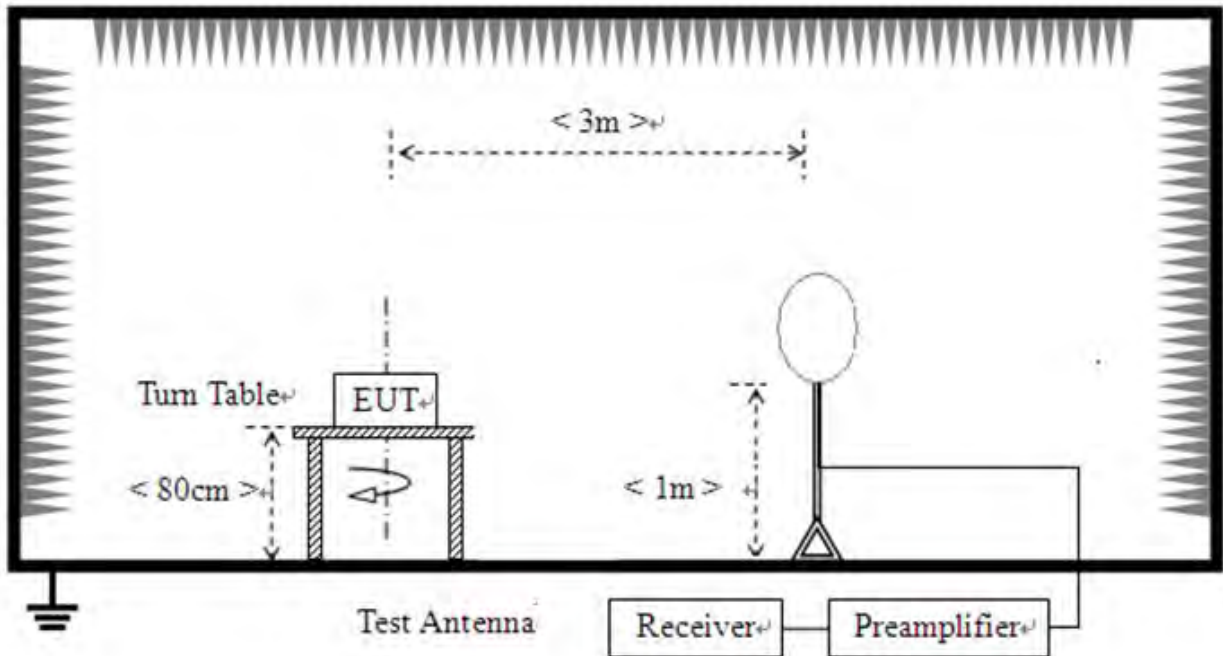


### 2.6.2. Conducted Emission Measurement

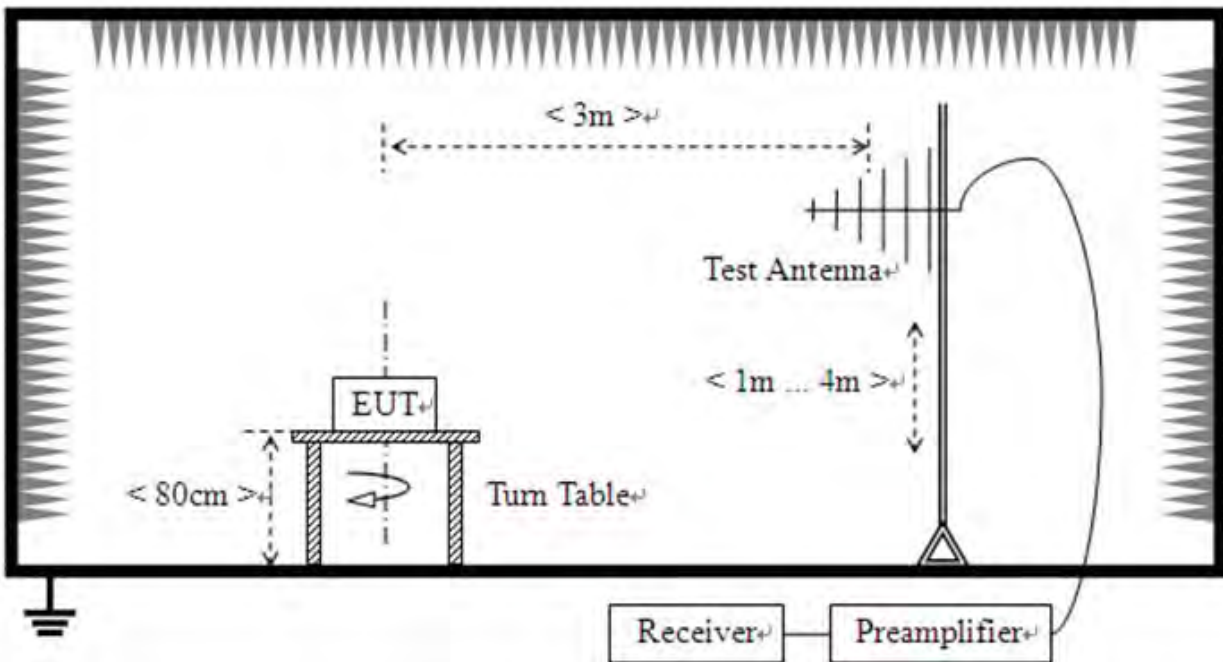


**2.6.3. Radiation Measurement**

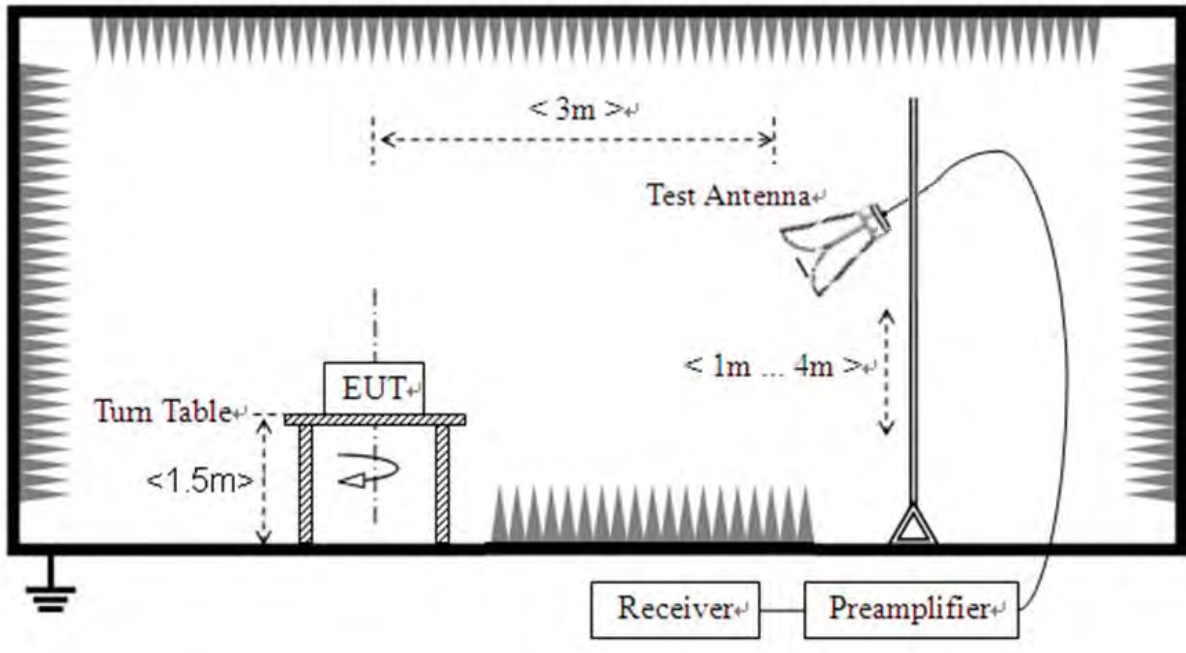
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



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

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.





## 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  $\pm 2\%$ ; 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  $11\text{dBm} + 10 \log B$ , 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.

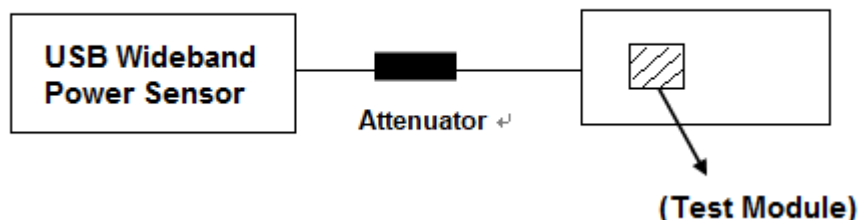
(4) According to KDB662911D01 Measure-and-sum technique, the conducted emission level (e.g., transmit power or power in specified bandwidth) is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in units that are directly proportional to power.

(5) According to KDB 662911 D01, the directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}})\text{dBi}$ , where  $G_{\text{ANT}}$  is the antenna gain in dBi,  $N_{\text{ANT}}$  is the number of outputs.

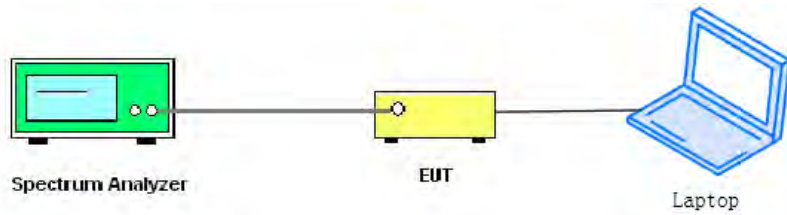
#### 3.3.2. Test Procedures

Section E) 3) of KDB 789033 defines a methodology using a USB Wideband Power Sensor.

##### Test Setup:



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 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)  $\geq 3 \times$  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.



REPORT No.: SZ23010057W02

### **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 KDB662911D01 Measure-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.

(5) According to KDB 662911 D01, the directional gain =  $G_{ANT} + 10\log(N_{ANT})$  dBi, where  $G_{ANT}$  is the antenna gain in dBi,  $N_{ANT}$  is the number of outputs.

### 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  $\geq$  3MHz
- 3) Number of points in sweep  $\geq$  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°C to 40°C. The temperature was incremented by 10° 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 50 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dB $\mu$ V)	
	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.7 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);

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

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 ( $\mu\text{V}/\text{m}$ )	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.8 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);

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

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.9 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	84.47	0.73	0.74
NVNT	a	5180	Ant2	83.95	0.76	0.74
NVNT	a	5220	Ant1	83.95	0.76	0.74
NVNT	a	5220	Ant2	84.47	0.73	0.74
NVNT	a	5240	Ant1	84.47	0.73	0.74
NVNT	a	5240	Ant2	84.47	0.73	0.74
NVNT	a	5745	Ant1	84.47	0.73	0.74
NVNT	a	5745	Ant2	84.47	0.73	0.74
NVNT	a	5785	Ant1	83.95	0.76	0.74
NVNT	a	5785	Ant2	83.95	0.76	0.74
NVNT	a	5825	Ant1	84.47	0.73	0.74
NVNT	a	5825	Ant2	84.47	0.73	0.74
NVNT	n20	5180	Ant1	82.14	0.85	0.87
NVNT	n20	5180	Ant2	81.43	0.89	0.88
NVNT	n20	5180	Sum	83.55	0.78	0.79
NVNT	n20	5220	Ant1	82.14	0.85	0.87
NVNT	n20	5220	Ant2	82.14	0.85	0.87
NVNT	n20	5220	Sum	83.66	0.77	0.78
NVNT	n20	5240	Ant1	81.56	0.89	0.87
NVNT	n20	5240	Ant2	81.43	0.89	0.88
NVNT	n20	5240	Sum	83.66	0.77	0.78
NVNT	n20	5745	Ant1	82.14	0.85	0.87
NVNT	n20	5745	Ant2	82.14	0.85	0.87
NVNT	n20	5745	Sum	83.01	0.81	0.79
NVNT	n20	5785	Ant1	82.14	0.85	0.87
NVNT	n20	5785	Ant2	82.14	0.85	0.87
NVNT	n20	5785	Sum	83.01	0.81	0.79
NVNT	n20	5825	Ant1	81.56	0.89	0.87
NVNT	n20	5825	Ant2	82.14	0.85	0.87
NVNT	n20	5825	Sum	83.55	0.78	0.79
NVNT	n40	5190	Ant1	71.59	1.45	1.59
NVNT	n40	5190	Ant2	71.59	1.45	1.59
NVNT	n40	5190	Sum	70.79	1.5	1.59



NVNT	n40	5230	Ant1	70.79	1.5	1.59
NVNT	n40	5230	Ant2	70.79	1.5	1.59
NVNT	n40	5230	Sum	71.59	1.45	1.59
NVNT	n40	5755	Ant1	70.79	1.5	1.59
NVNT	n40	5755	Ant2	70.79	1.5	1.59
NVNT	n40	5755	Sum	70.79	1.5	1.59
NVNT	n40	5795	Ant1	71.59	1.45	1.59
NVNT	n40	5795	Ant2	71.59	1.45	1.59
NVNT	n40	5795	Sum	70.79	1.5	1.59
NVNT	ac20	5180	Ant1	81.56	0.89	0.87
NVNT	ac20	5180	Ant2	82.14	0.85	0.87
NVNT	ac20	5180	Sum	83.66	0.77	0.78
NVNT	ac20	5220	Ant1	82.14	0.85	0.87
NVNT	ac20	5220	Ant2	81.56	0.89	0.87
NVNT	ac20	5220	Sum	83.66	0.77	0.78
NVNT	ac20	5240	Ant1	82.27	0.85	0.86
NVNT	ac20	5240	Ant2	82.27	0.85	0.86
NVNT	ac20	5240	Sum	83.66	0.77	0.78
NVNT	ac20	5745	Ant1	82.14	0.85	0.87
NVNT	ac20	5745	Ant2	82.14	0.85	0.87
NVNT	ac20	5745	Sum	83.66	0.77	0.78
NVNT	ac20	5785	Ant1	82.14	0.85	0.87
NVNT	ac20	5785	Ant2	82.14	0.85	0.87
NVNT	ac20	5785	Sum	83.66	0.77	0.78
NVNT	ac20	5825	Ant1	82.27	0.85	0.86
NVNT	ac20	5825	Ant2	82.14	0.85	0.87
NVNT	ac20	5825	Sum	83.55	0.78	0.79
NVNT	ac40	5190	Ant1	71.91	1.43	1.56
NVNT	ac40	5190	Ant2	71.91	1.43	1.56
NVNT	ac40	5190	Sum	71.59	1.45	1.59
NVNT	ac40	5230	Ant1	70.79	1.5	1.59
NVNT	ac40	5230	Ant2	70.79	1.5	1.59
NVNT	ac40	5230	Sum	70.79	1.5	1.59
NVNT	ac40	5755	Ant1	71.91	1.43	1.56
NVNT	ac40	5755	Ant2	71.91	1.43	1.56
NVNT	ac40	5755	Sum	71.91	1.43	1.56
NVNT	ac40	5795	Ant1	71.91	1.43	1.56
NVNT	ac40	5795	Ant2	71.91	1.43	1.56



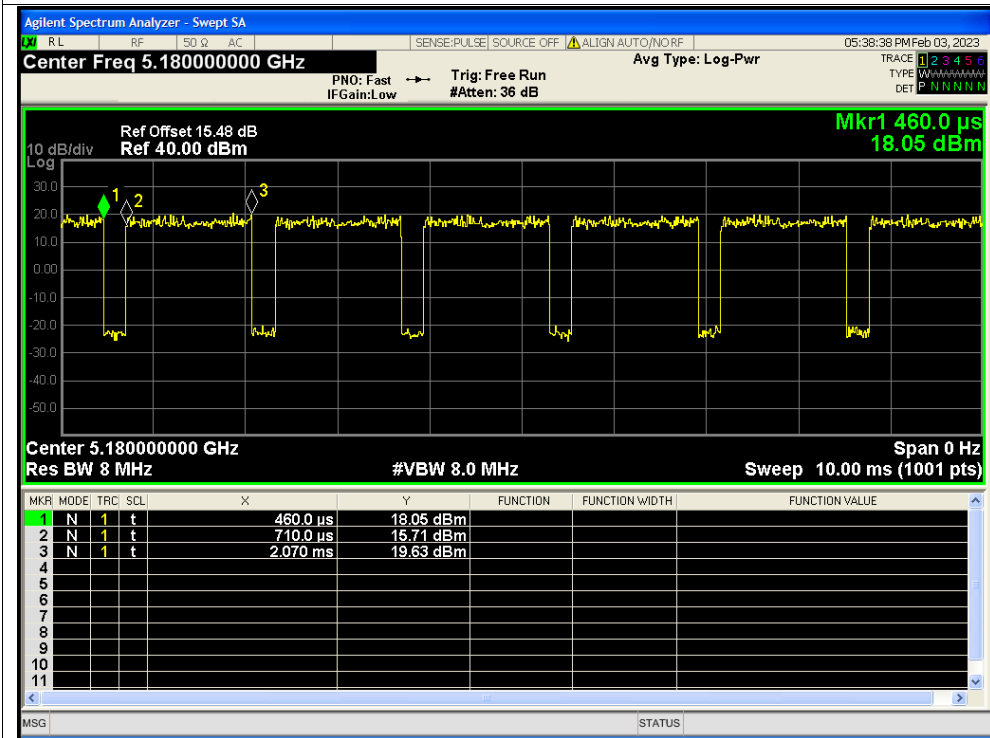
REPORT No.: SZ23010057W02

NVNT	ac40	5795	Sum	71.91	1.43	1.56
NVNT	ac80	5210	Ant1	56.14	2.51	3.13
NVNT	ac80	5210	Ant2	56.14	2.51	3.12
NVNT	ac80	5210	Sum	54.39	2.65	3.23
NVNT	ac80	5775	Ant1	54.39	2.65	3.23
NVNT	ac80	5775	Ant2	56.14	2.51	3.13
NVNT	ac80	5775	Sum	56.14	2.51	3.13

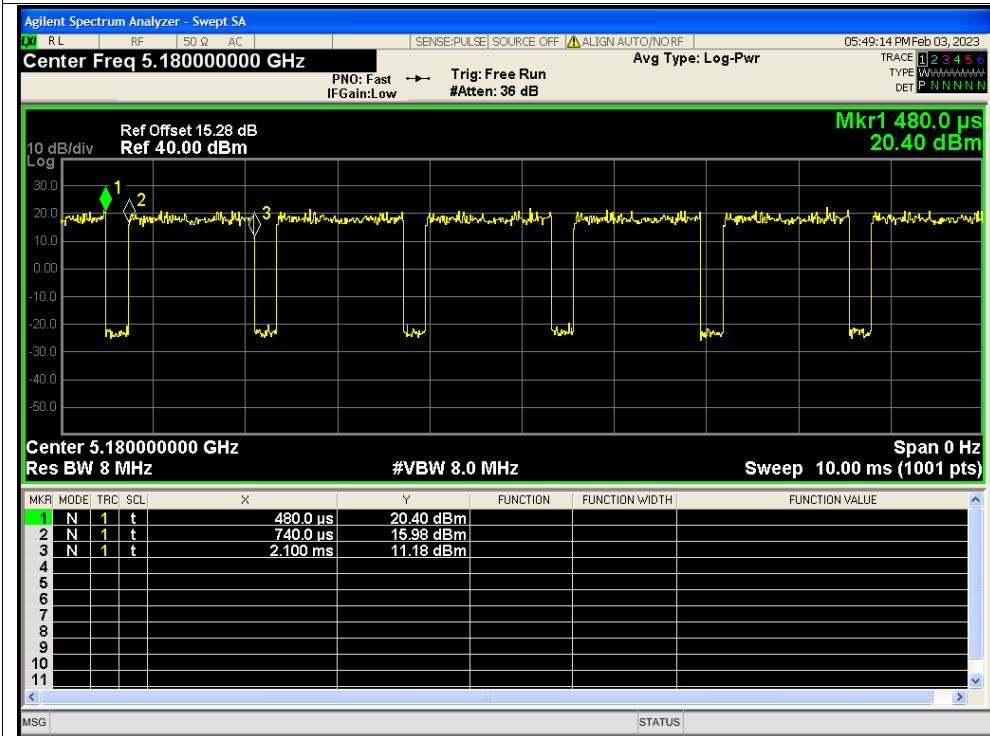


### Test Graphs

#### Duty Cycle NVNT a 5180MHz Ant1



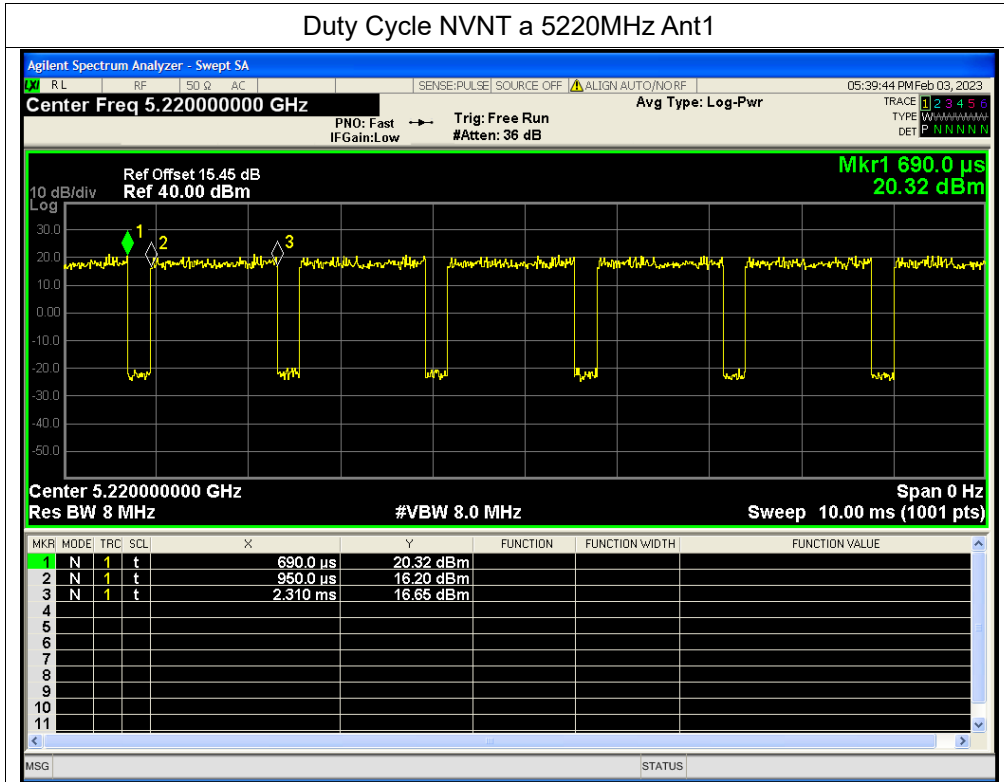
#### Duty Cycle NVNT a 5180MHz Ant2



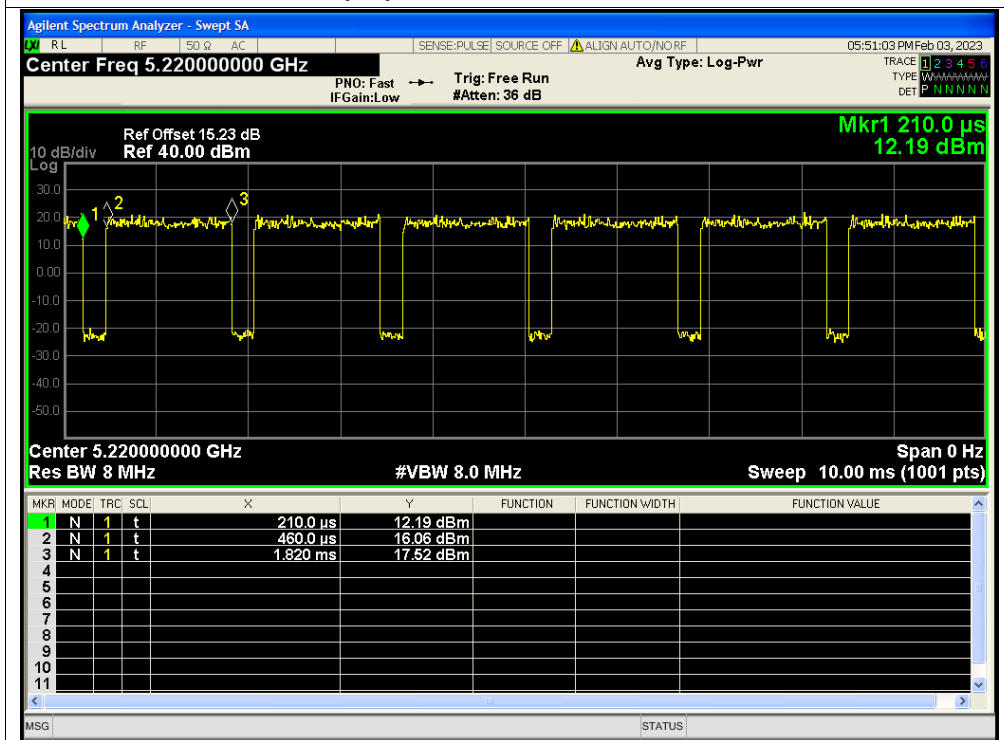




Duty Cycle NVNT a 5220MHz Ant1

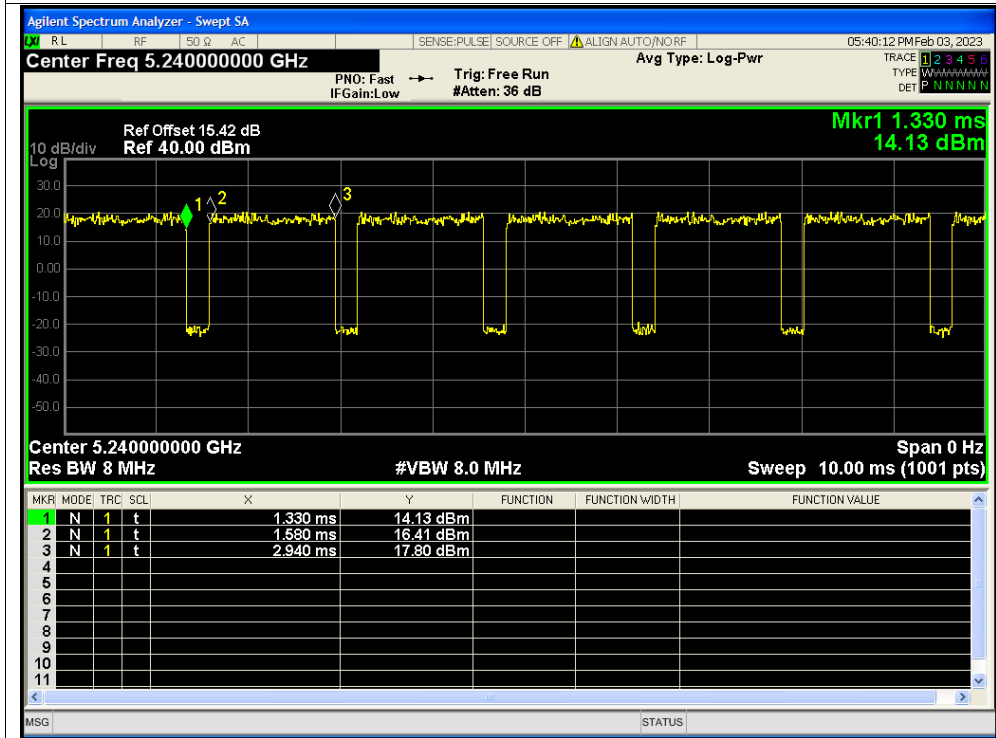


Duty Cycle NVNT a 5220MHz Ant2

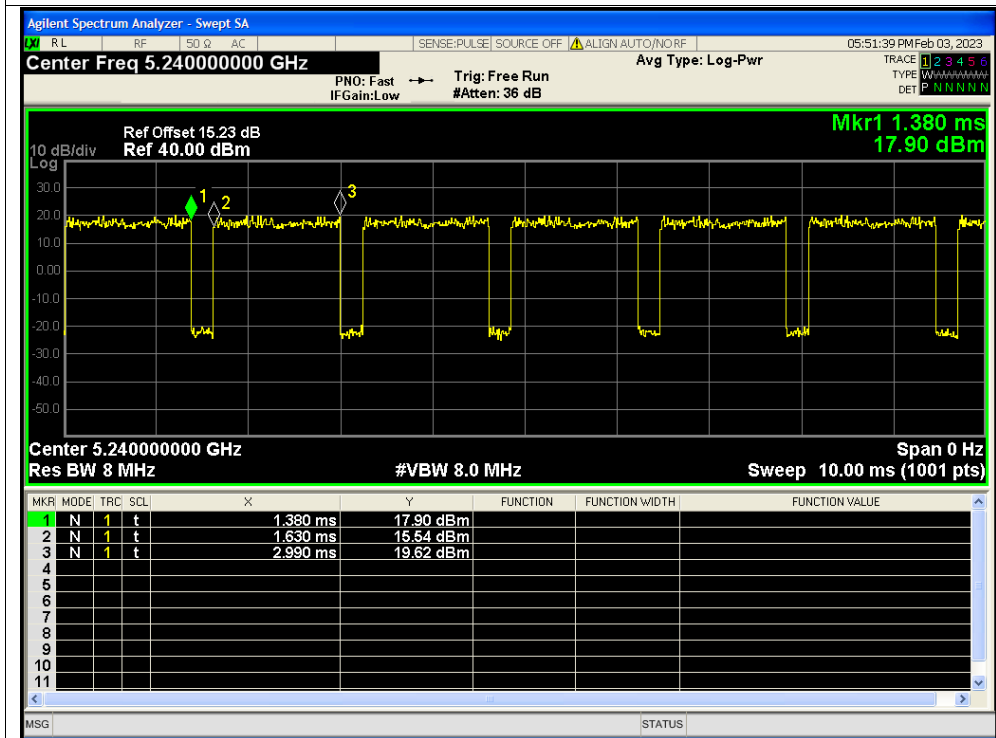




Duty Cycle NVNT a 5240MHz Ant1

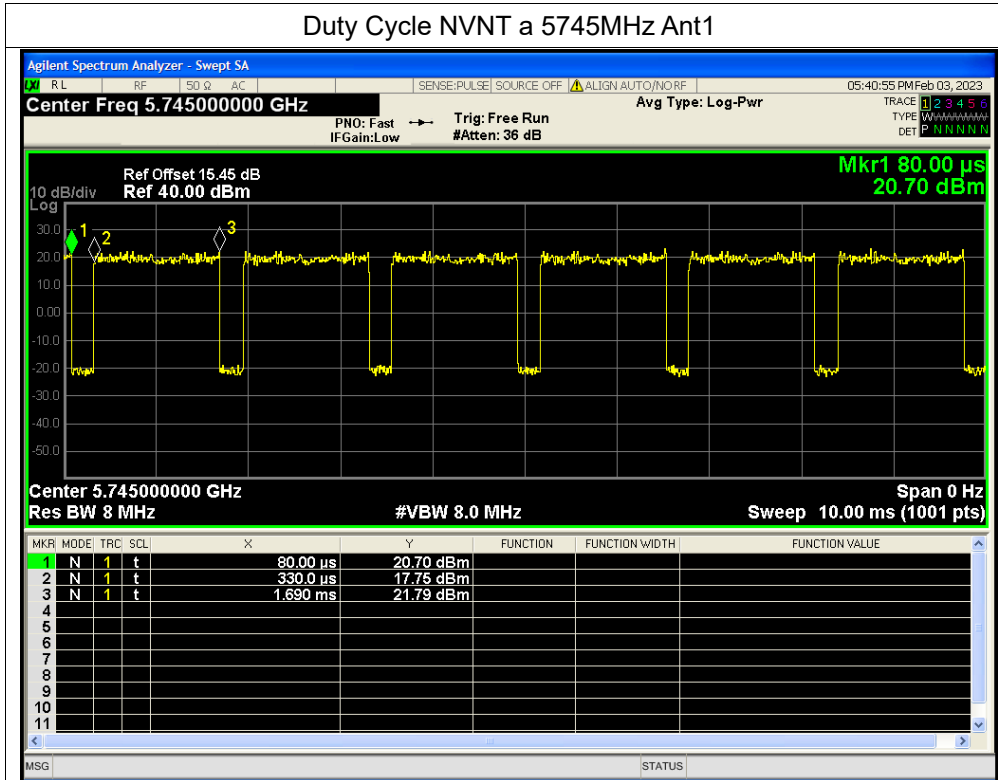


Duty Cycle NVNT a 5240MHz Ant2

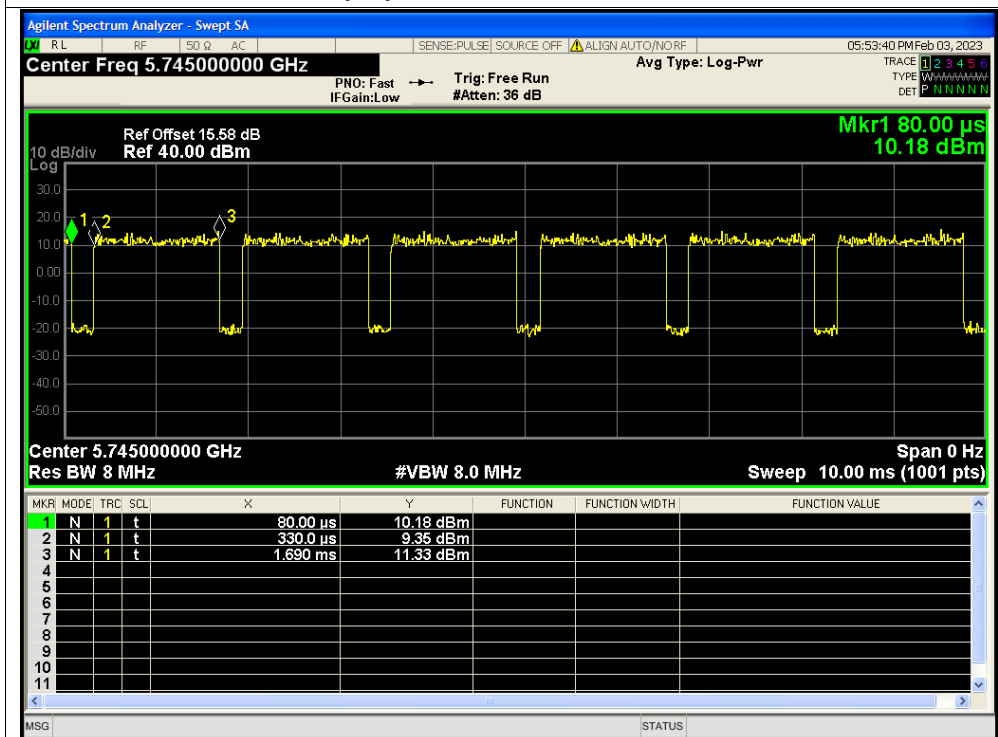




Duty Cycle NVNT a 5745MHz Ant1

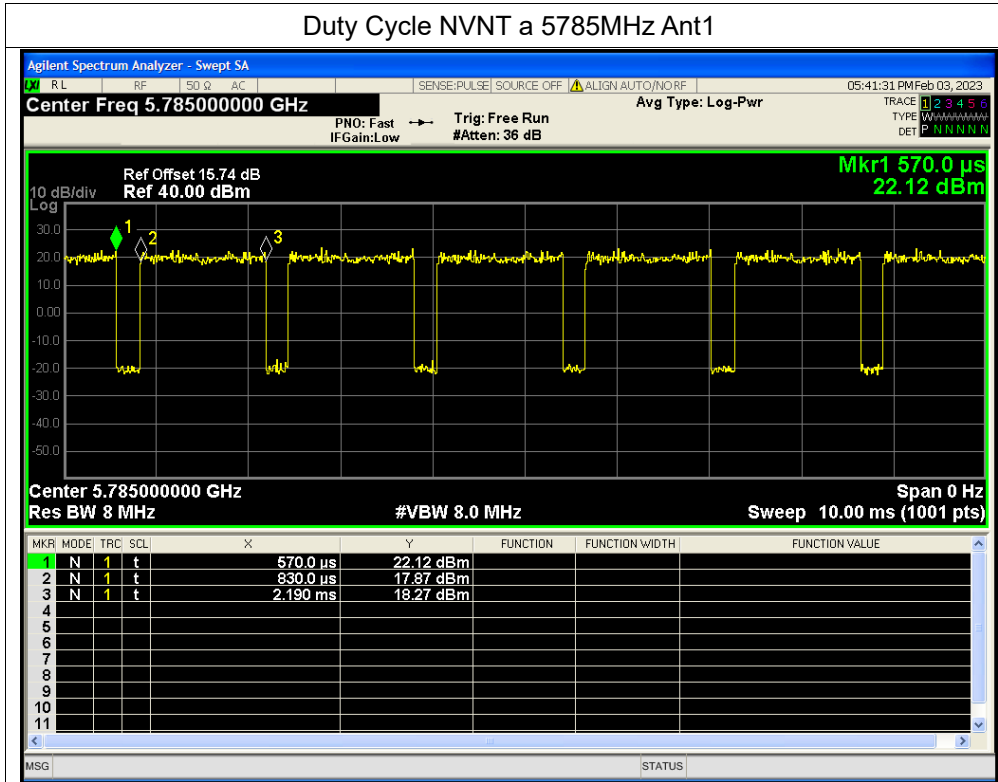


Duty Cycle NVNT a 5745MHz Ant2

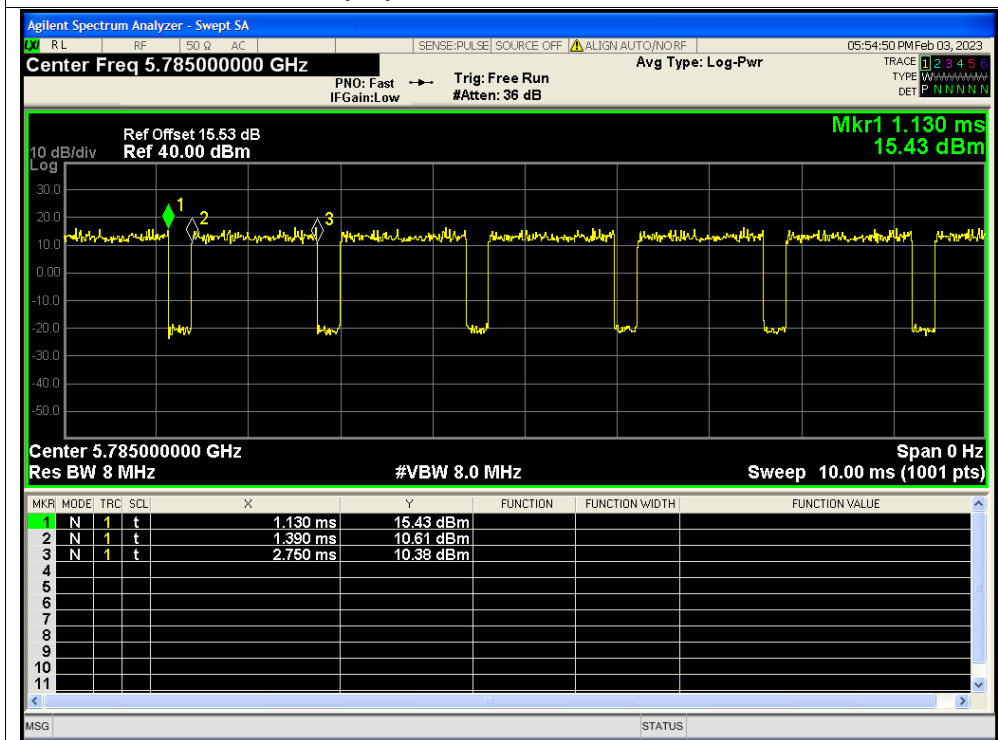




Duty Cycle NVNT a 5785MHz Ant1

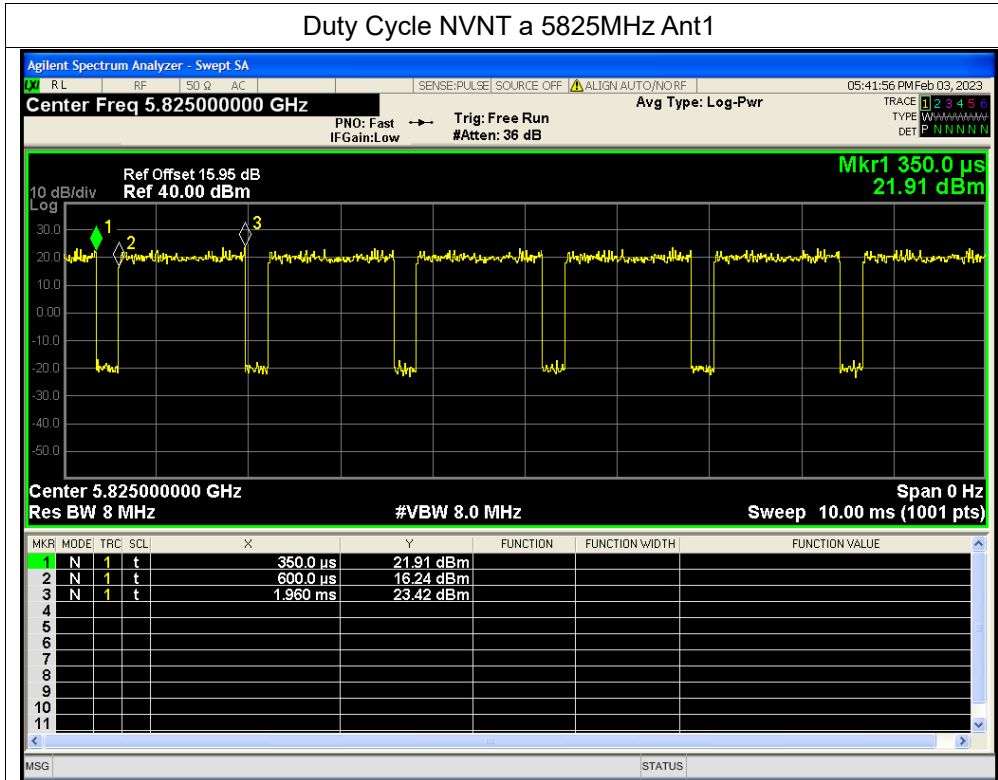


Duty Cycle NVNT a 5785MHz Ant2

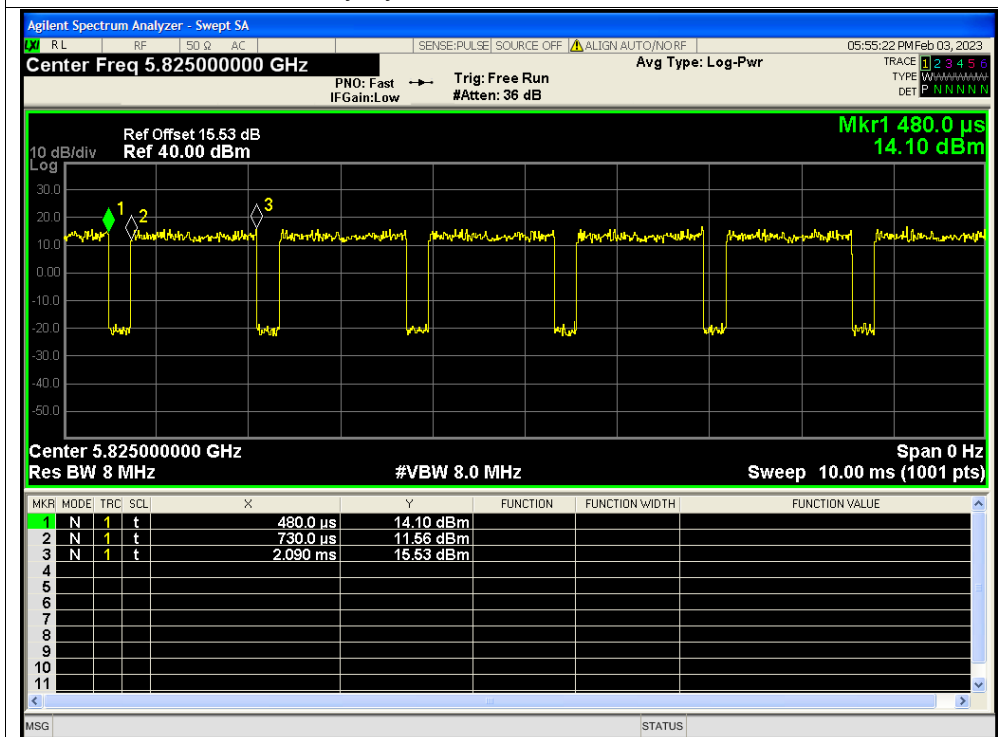




Duty Cycle NVNT a 5825MHz Ant1

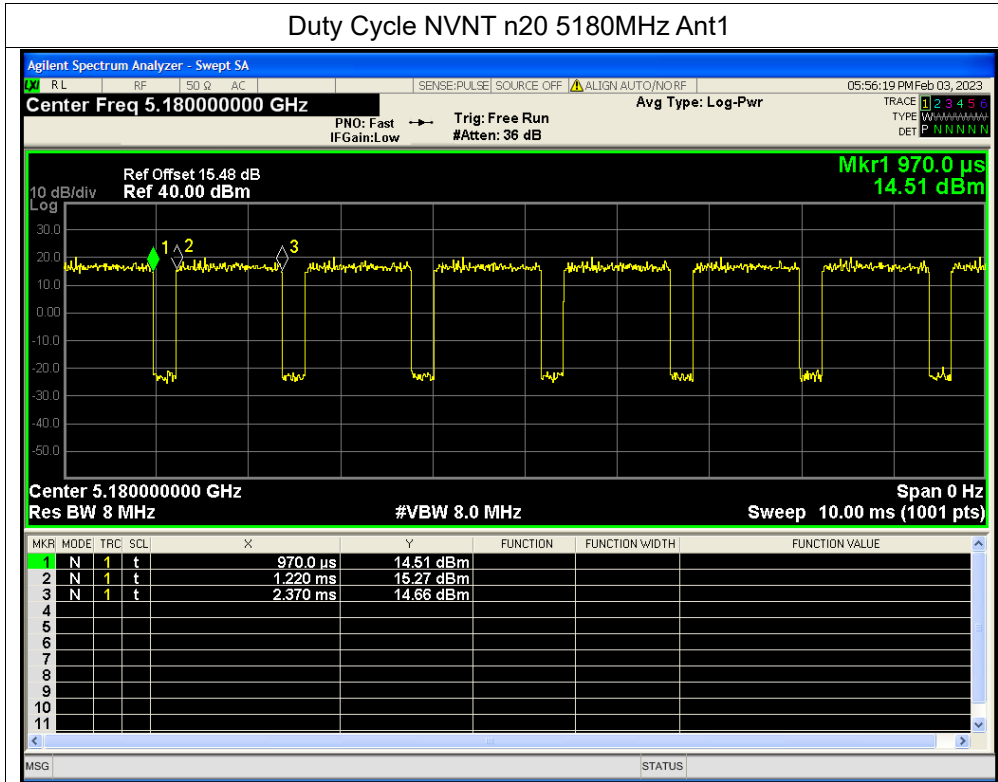


Duty Cycle NVNT a 5825MHz Ant2

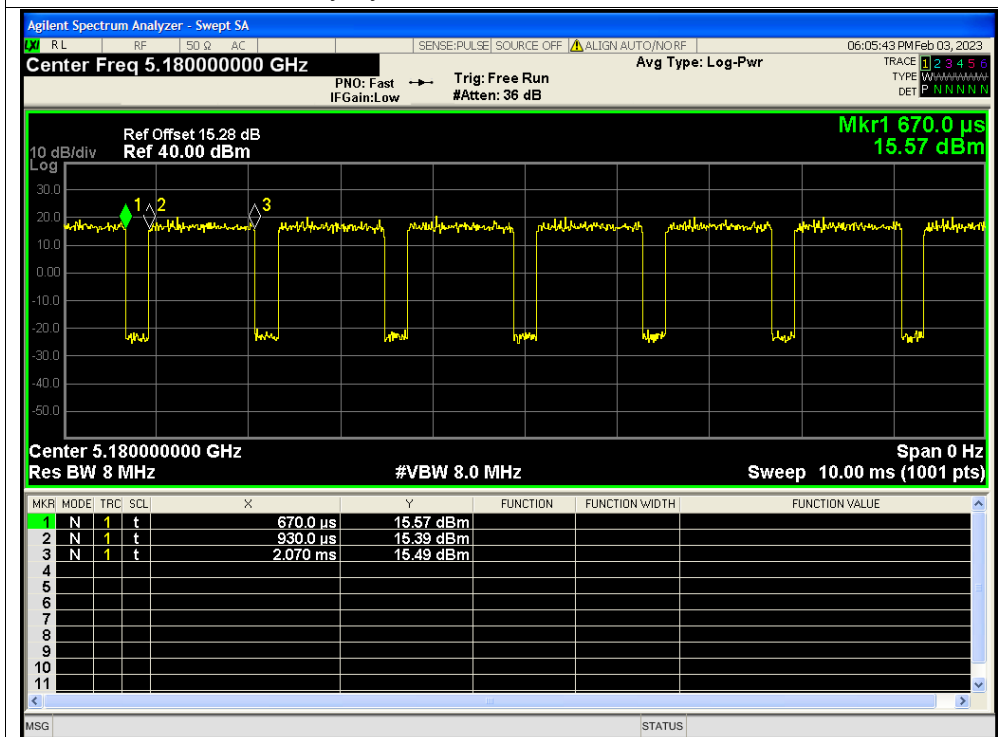




Duty Cycle NVNT n20 5180MHz Ant1

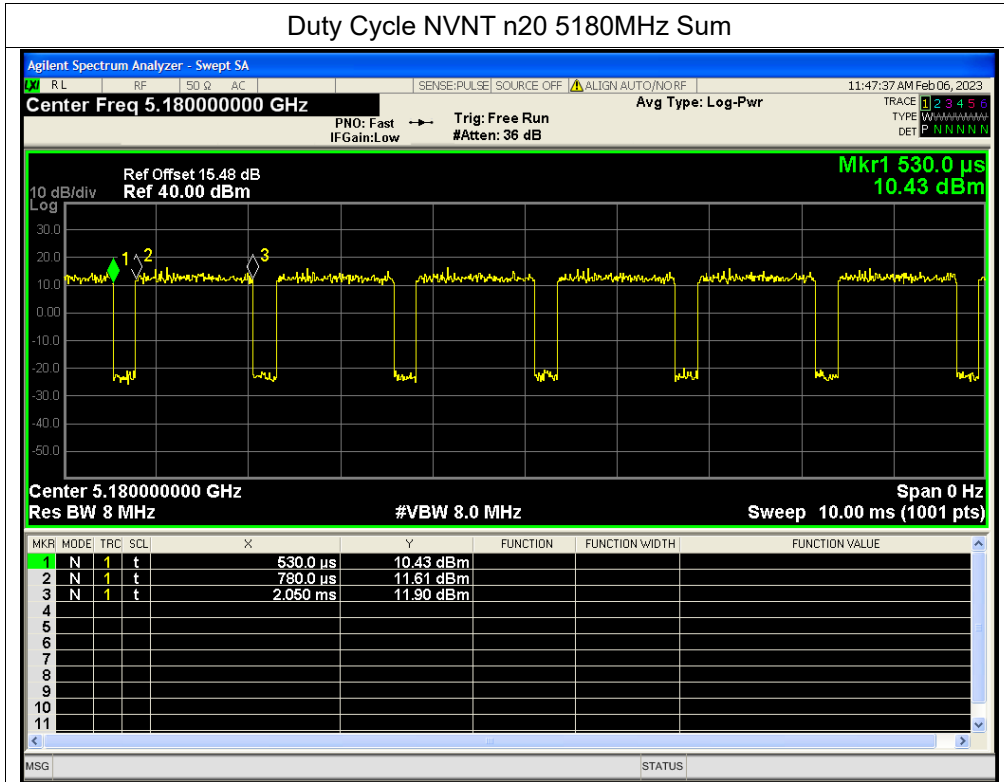


Duty Cycle NVNT n20 5180MHz Ant2

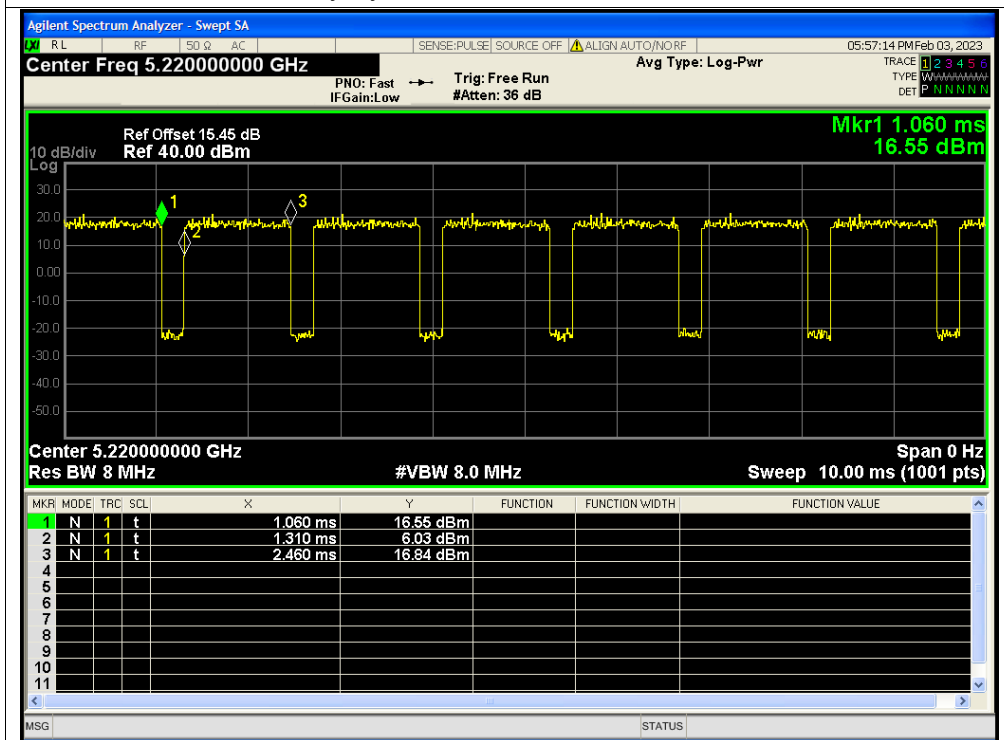




Duty Cycle NVNT n20 5180MHz Sum

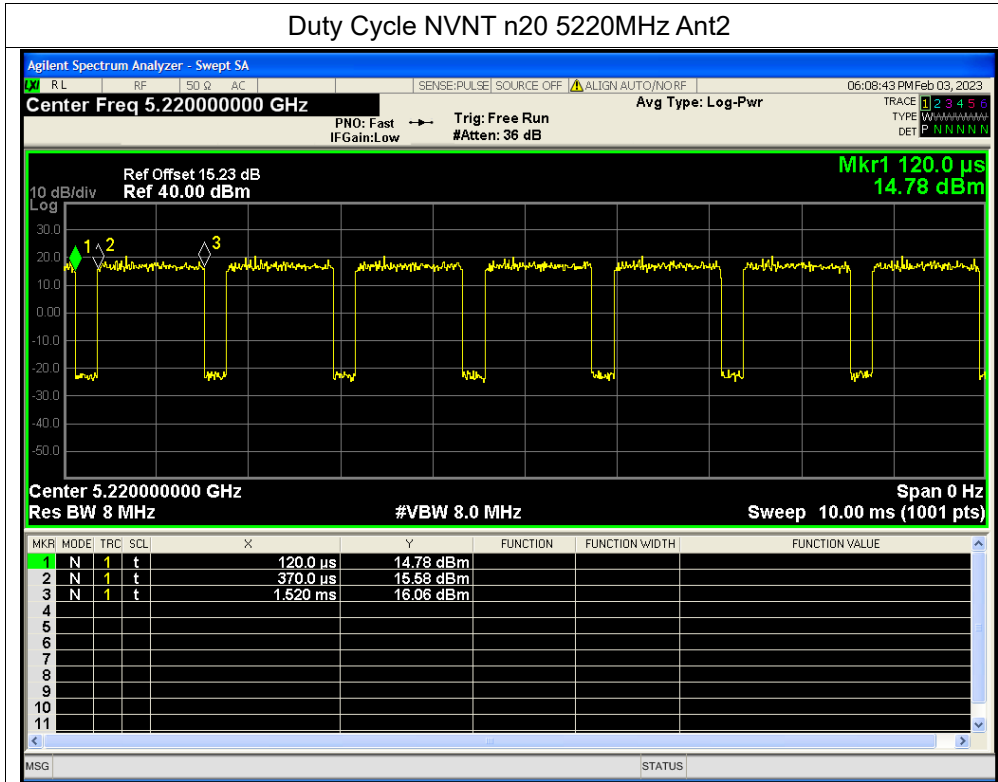


Duty Cycle NVNT n20 5220MHz Ant1

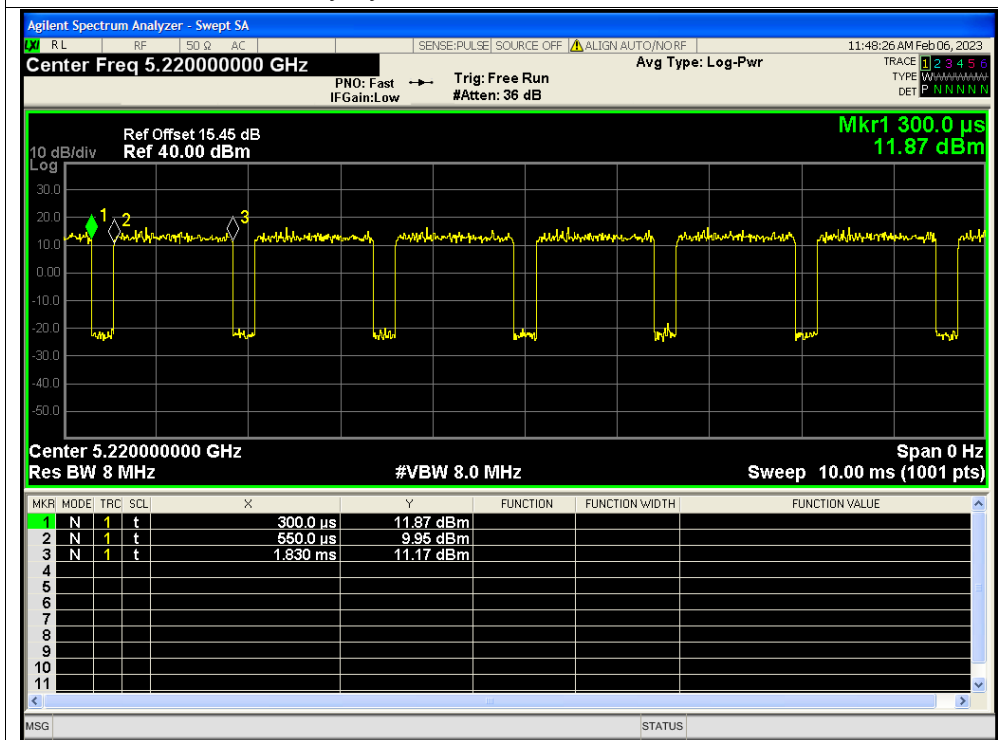




Duty Cycle NVNT n20 5220MHz Ant2



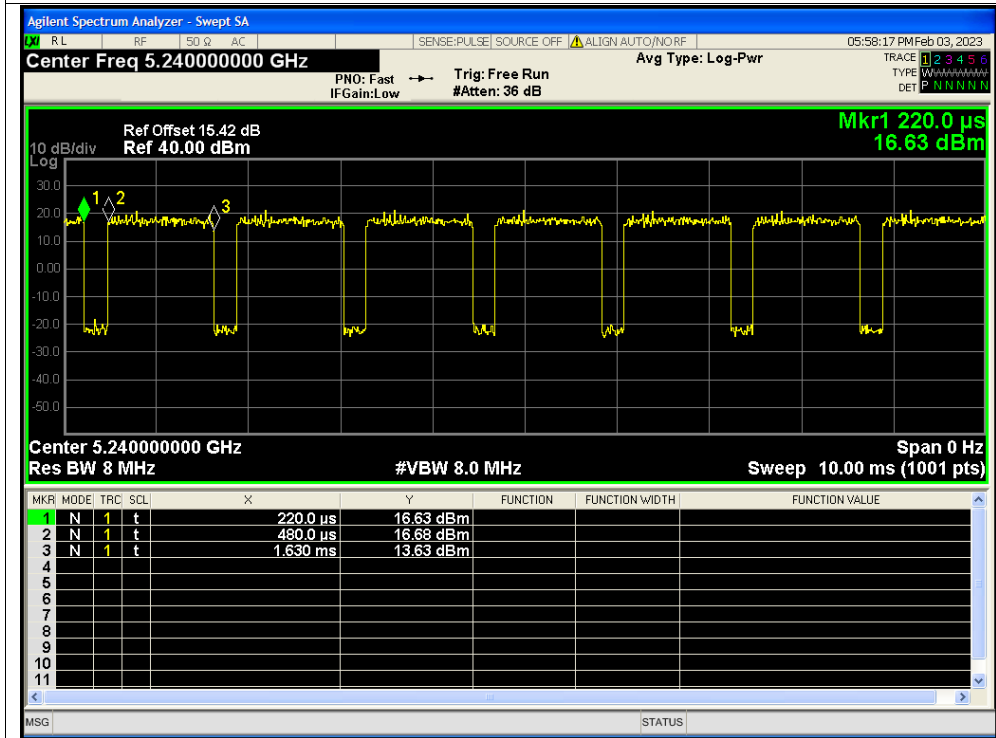
Duty Cycle NVNT n20 5220MHz Sum



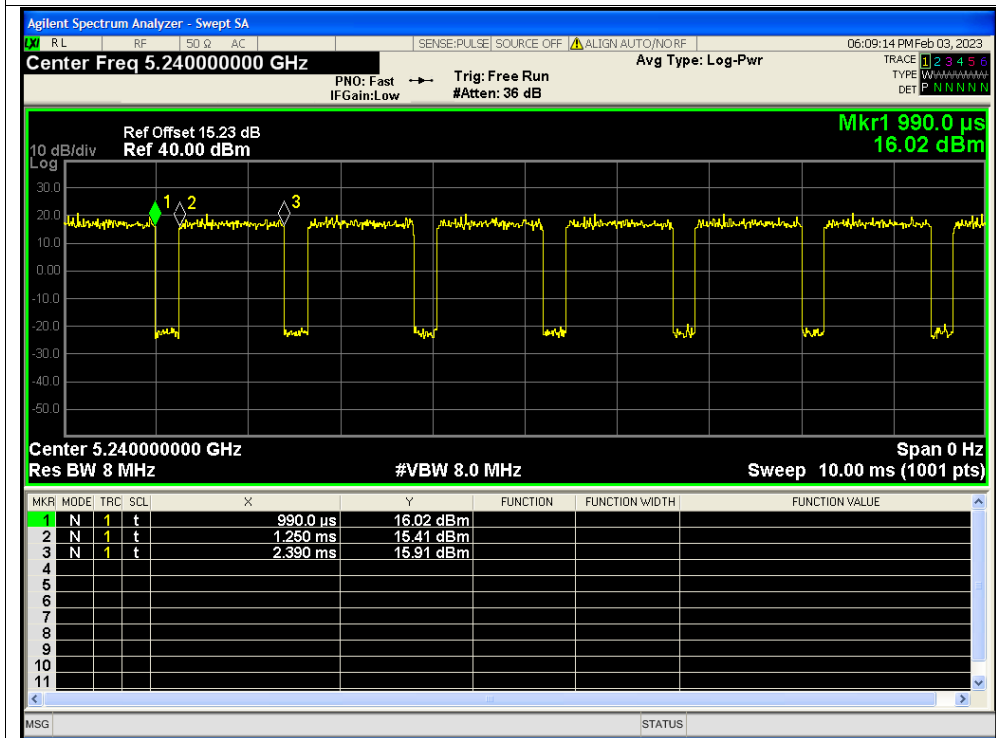




Duty Cycle NVNT n20 5240MHz Ant1

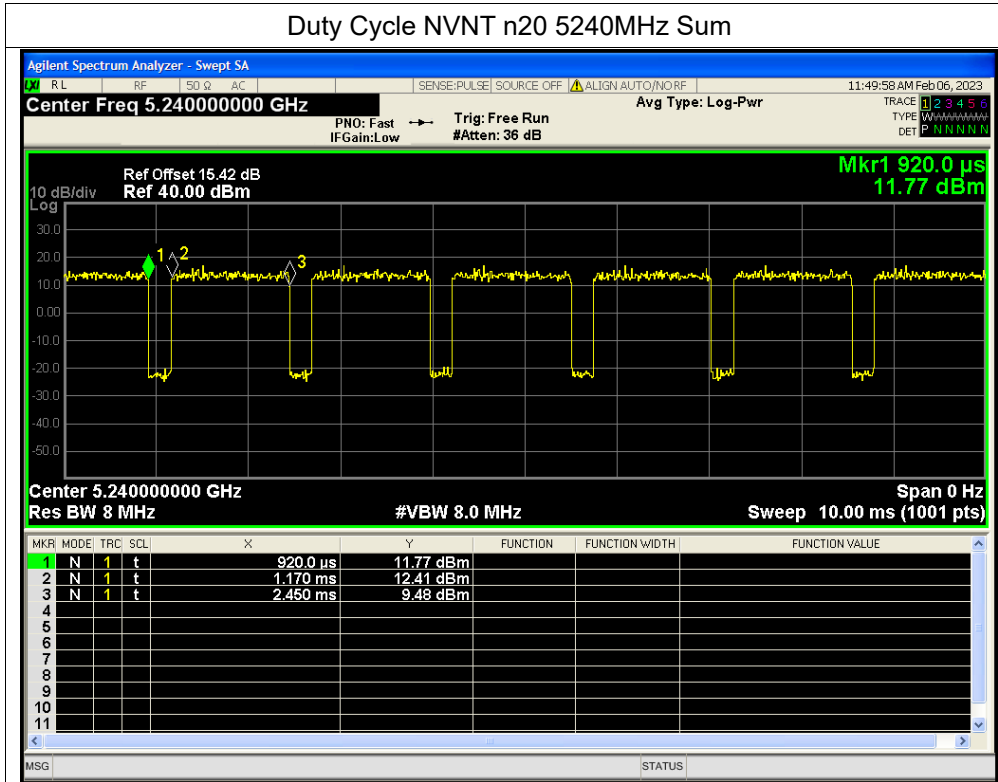


Duty Cycle NVNT n20 5240MHz Ant2

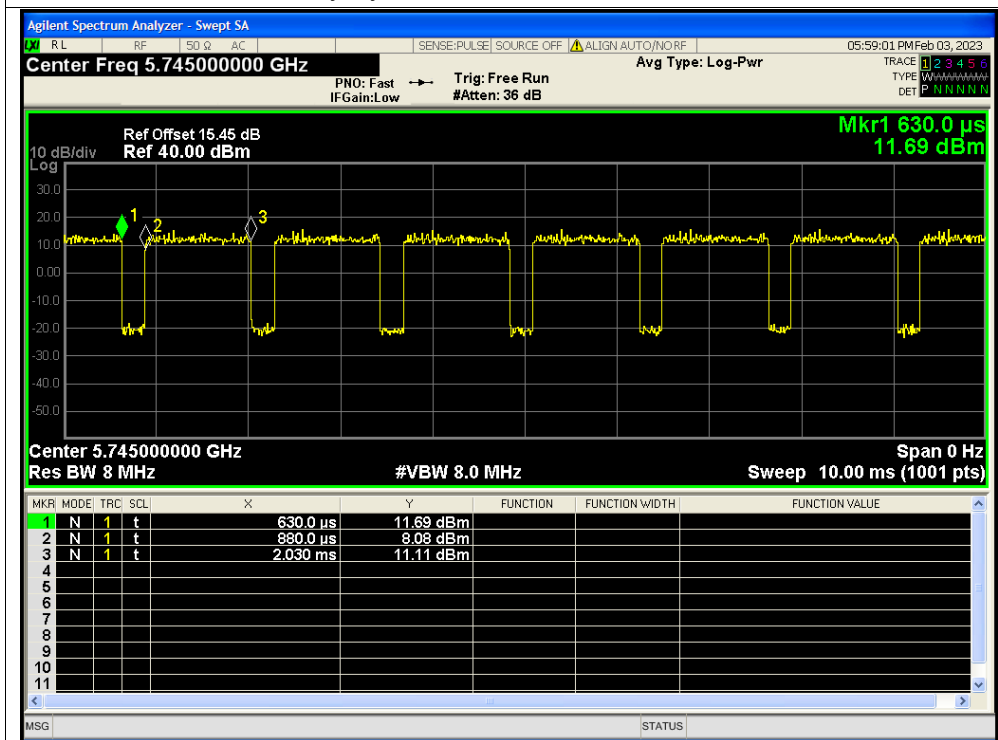




Duty Cycle NVNT n20 5240MHz Sum

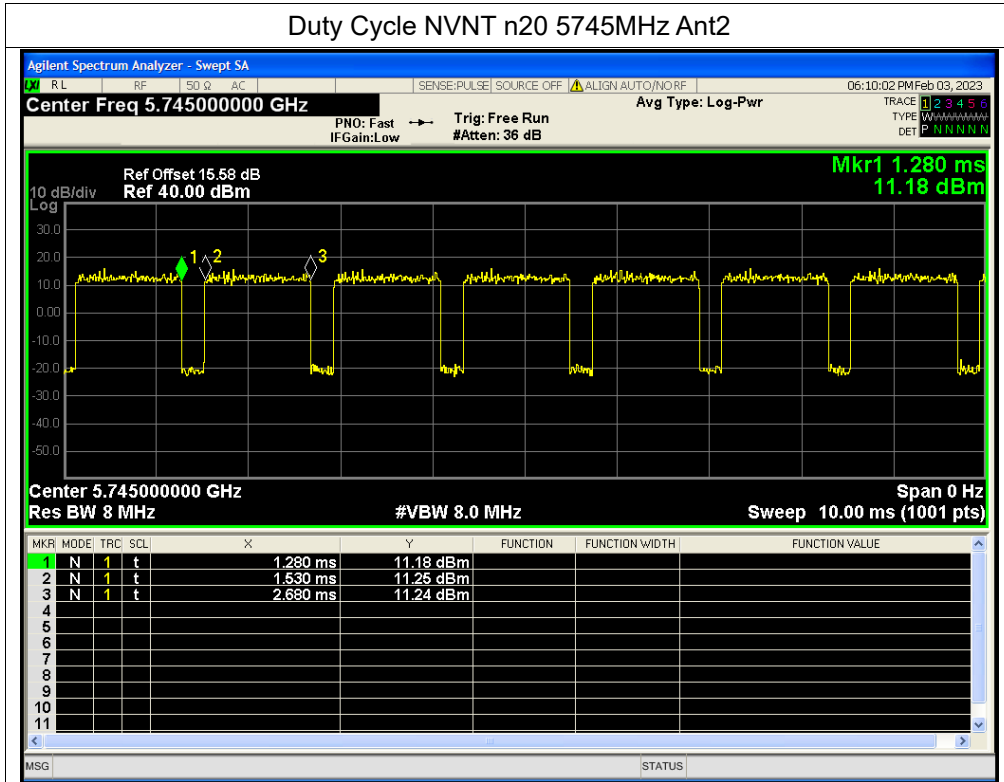


Duty Cycle NVNT n20 5745MHz Ant1

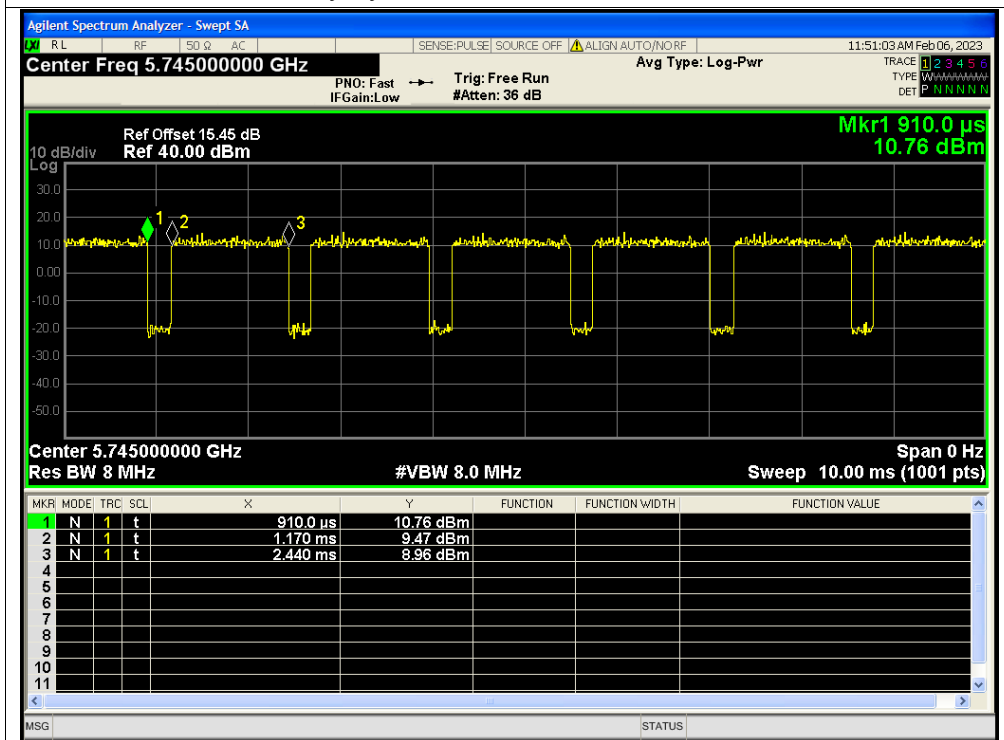




Duty Cycle NVNT n20 5745MHz Ant2

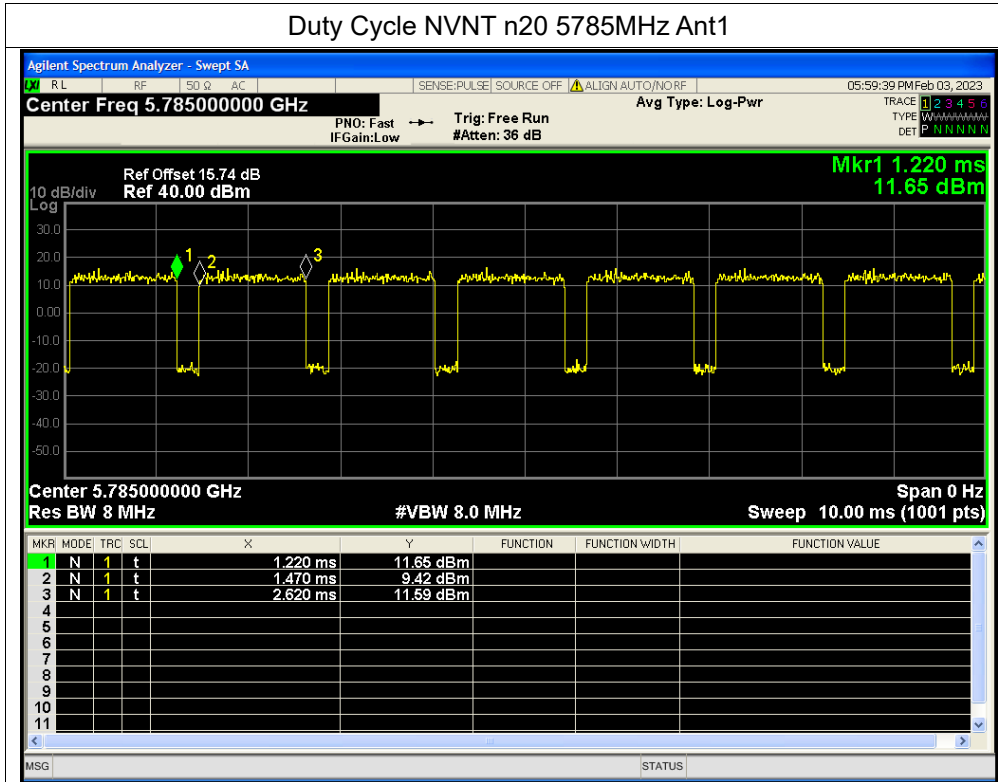


Duty Cycle NVNT n20 5745MHz Sum

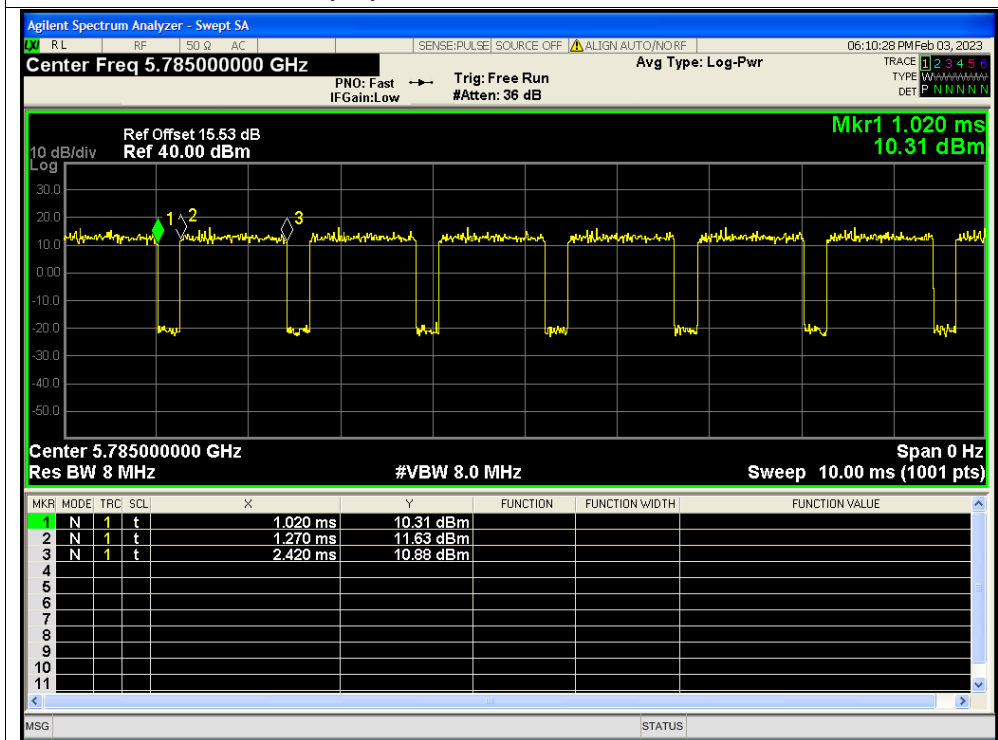




Duty Cycle NVNT n20 5785MHz Ant1

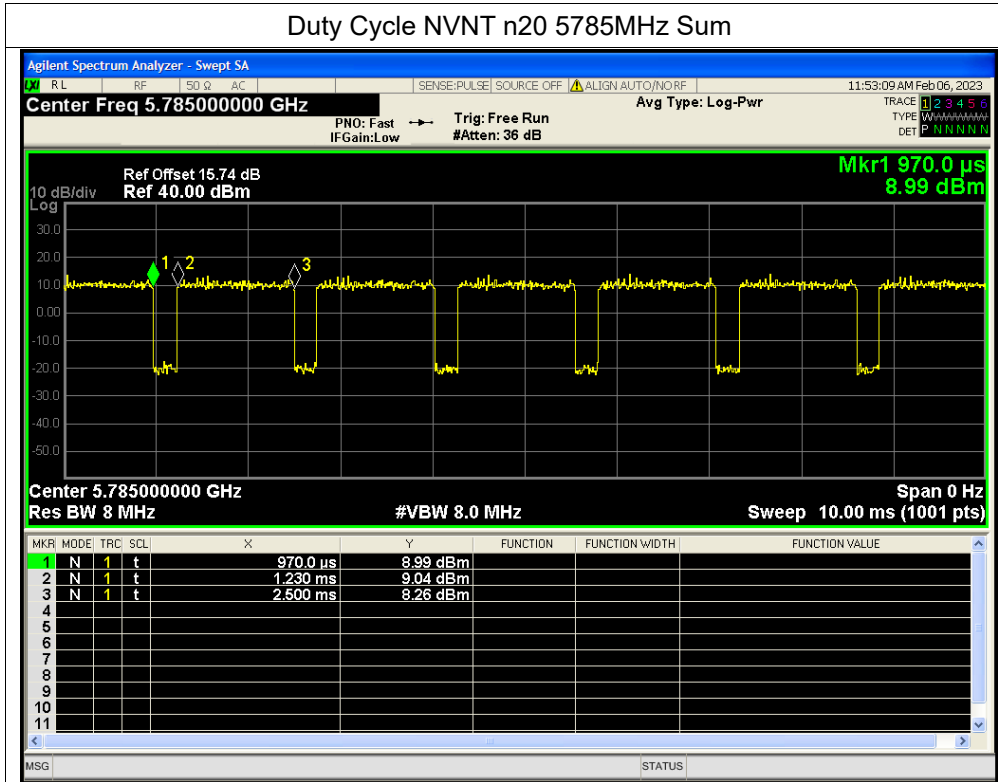


Duty Cycle NVNT n20 5785MHz Ant2

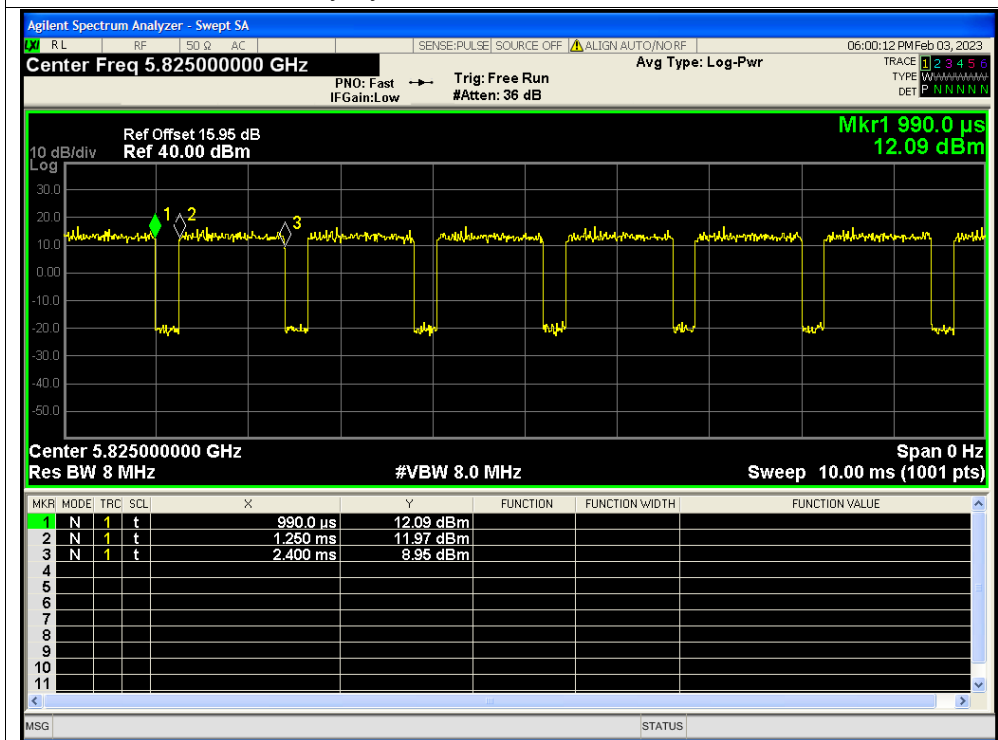




Duty Cycle NVNT n20 5785MHz Sum

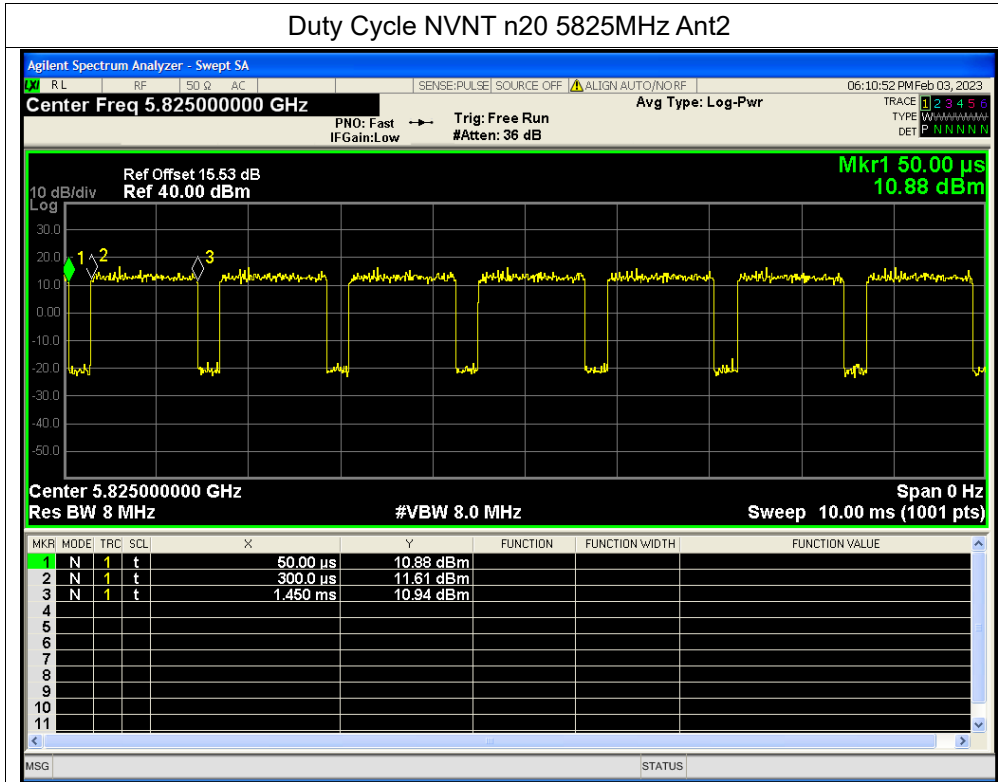


Duty Cycle NVNT n20 5825MHz Ant1

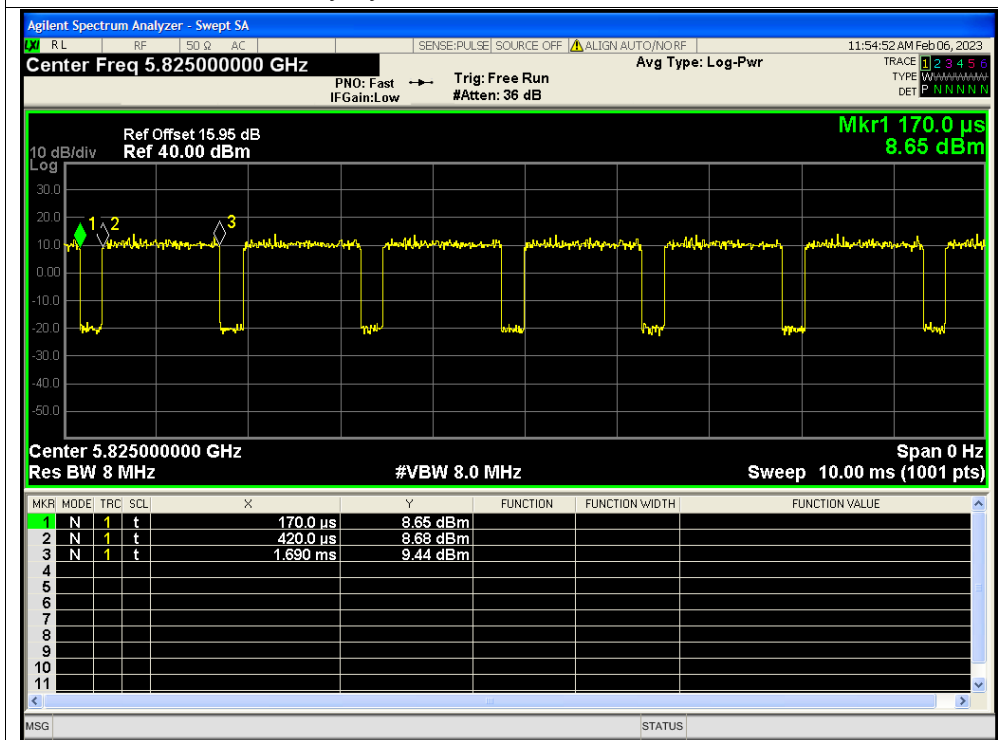




Duty Cycle NVNT n20 5825MHz Ant2

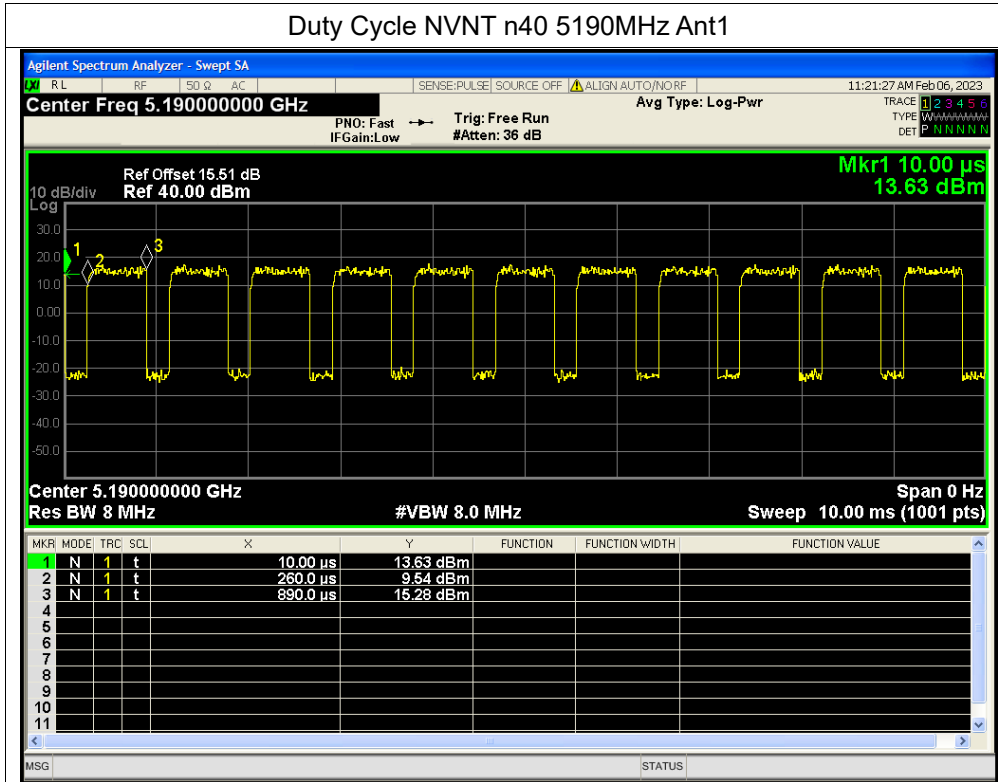


Duty Cycle NVNT n20 5825MHz Sum

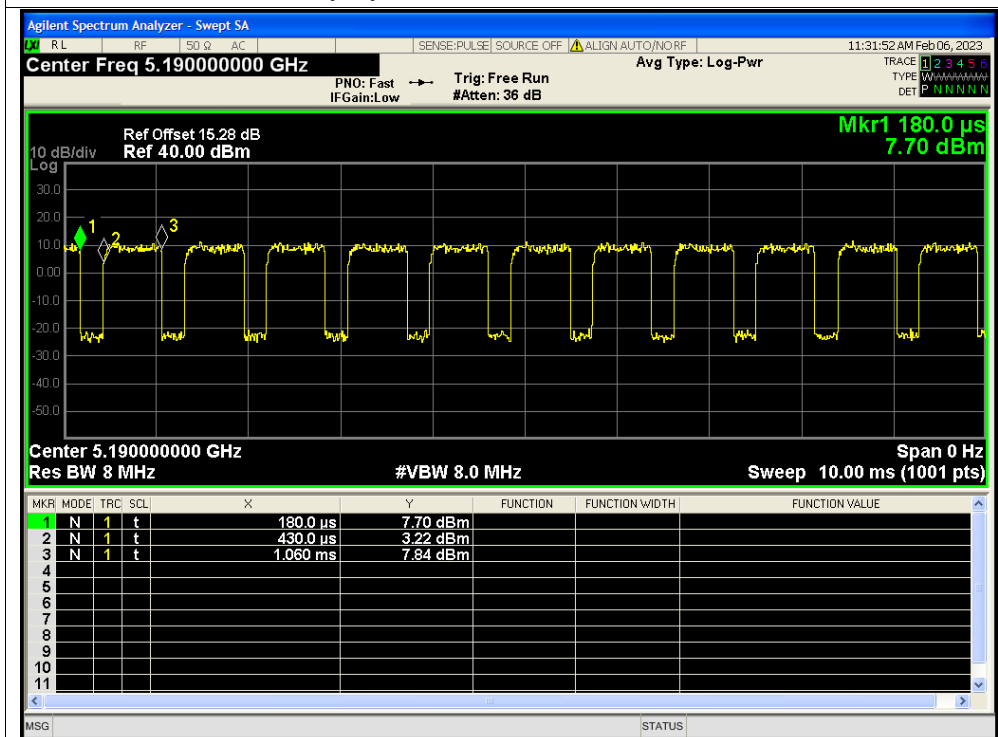




Duty Cycle NVNT n40 5190MHz Ant1

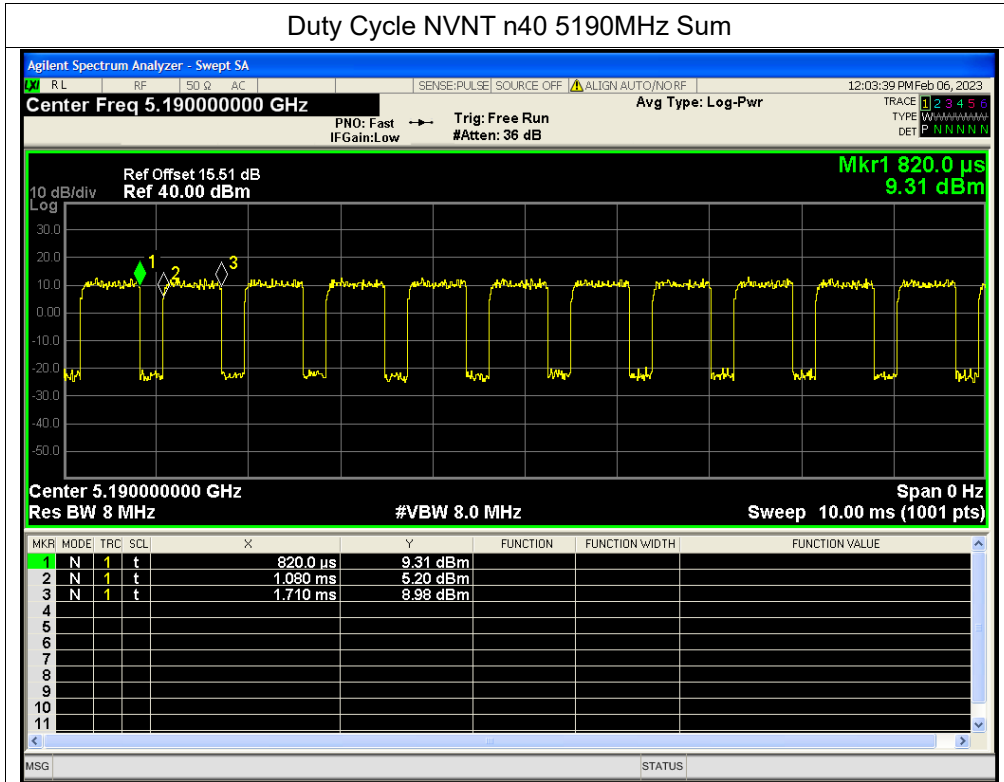


Duty Cycle NVNT n40 5190MHz Ant2

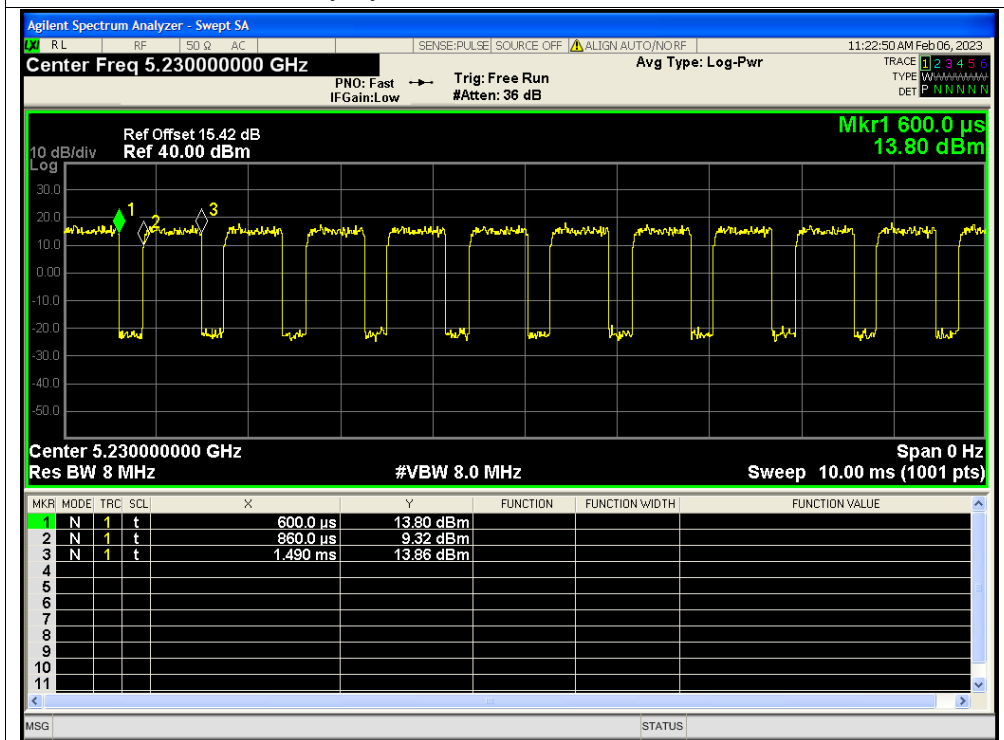




Duty Cycle NVNT n40 5190MHz Sum



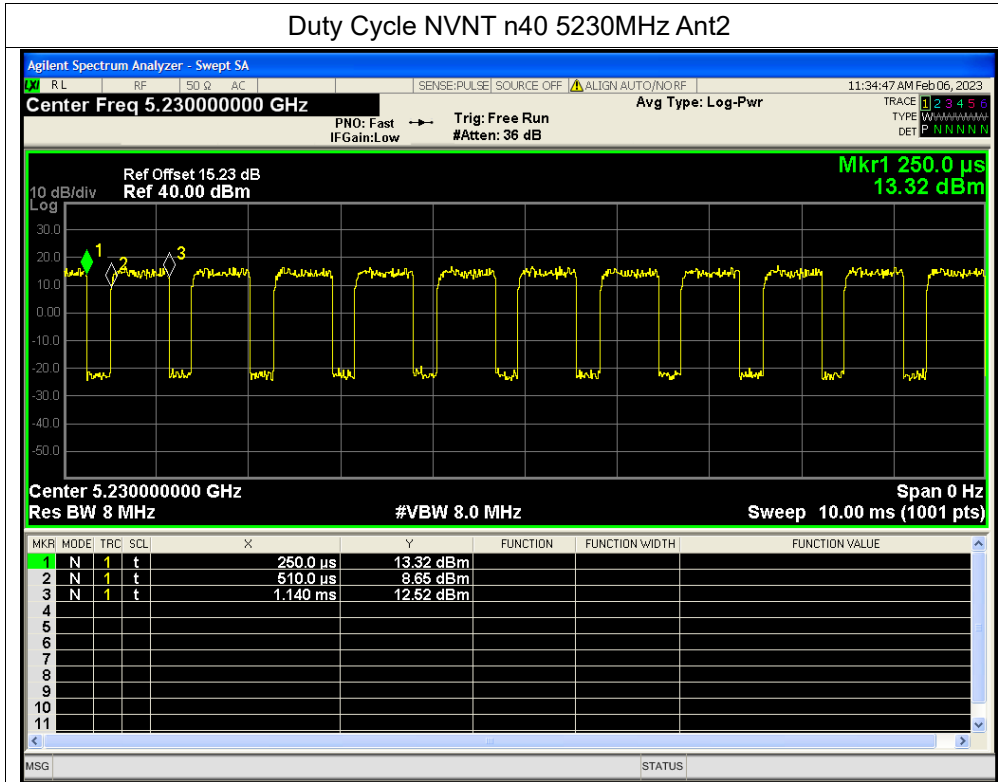
Duty Cycle NVNT n40 5230MHz Ant1



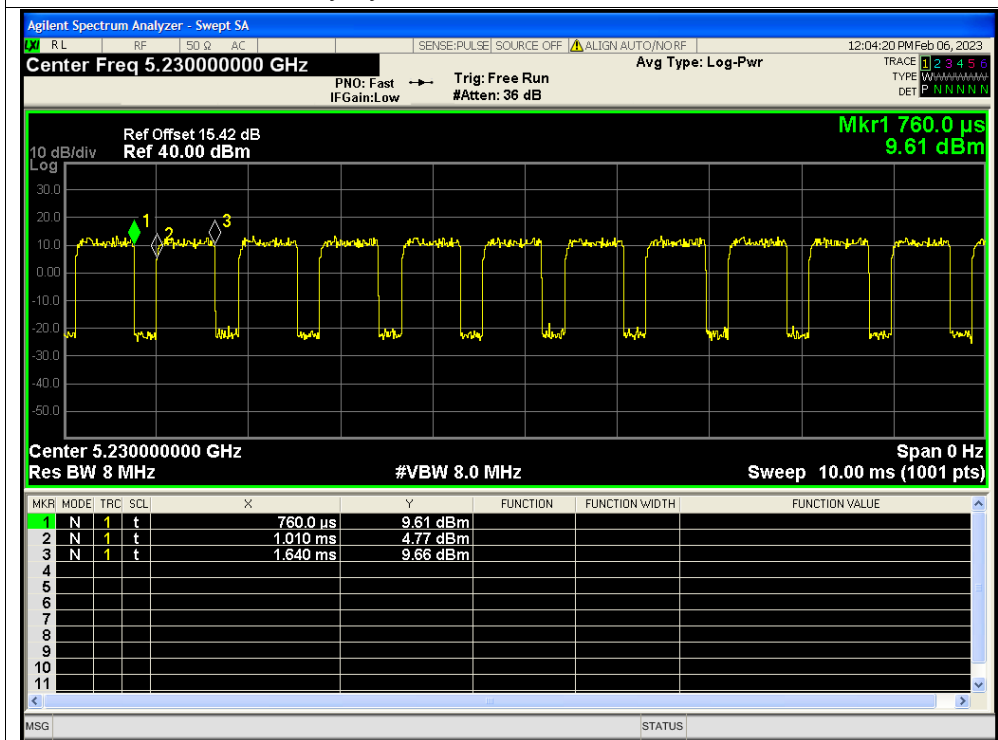




Duty Cycle NVNT n40 5230MHz Ant2

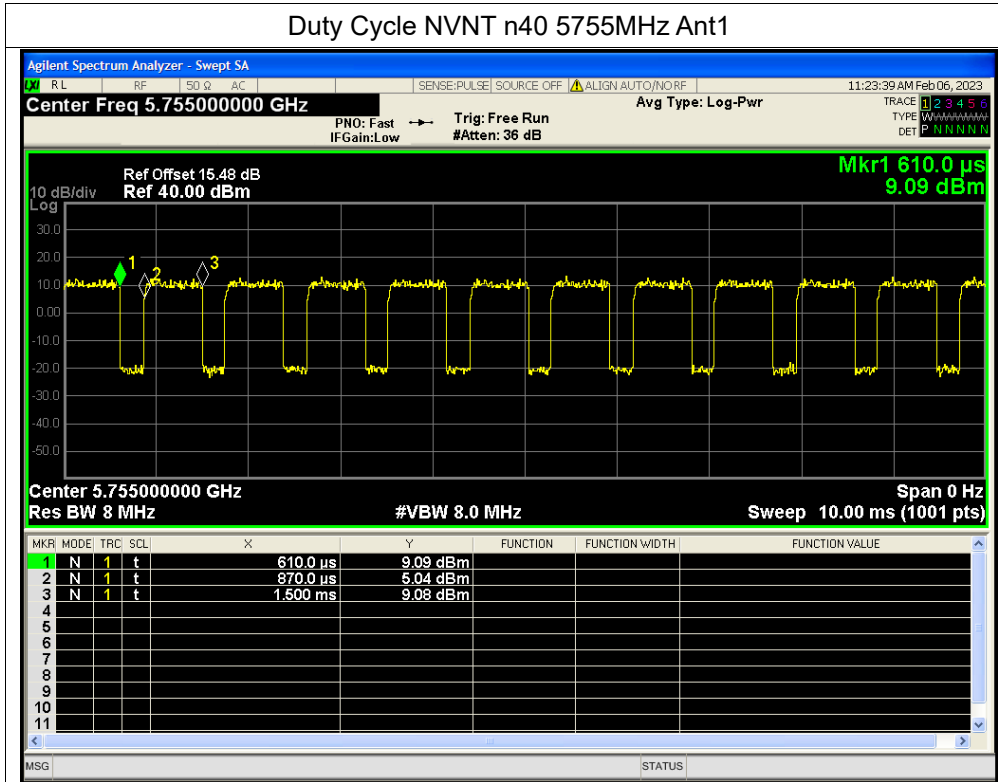


Duty Cycle NVNT n40 5230MHz Sum

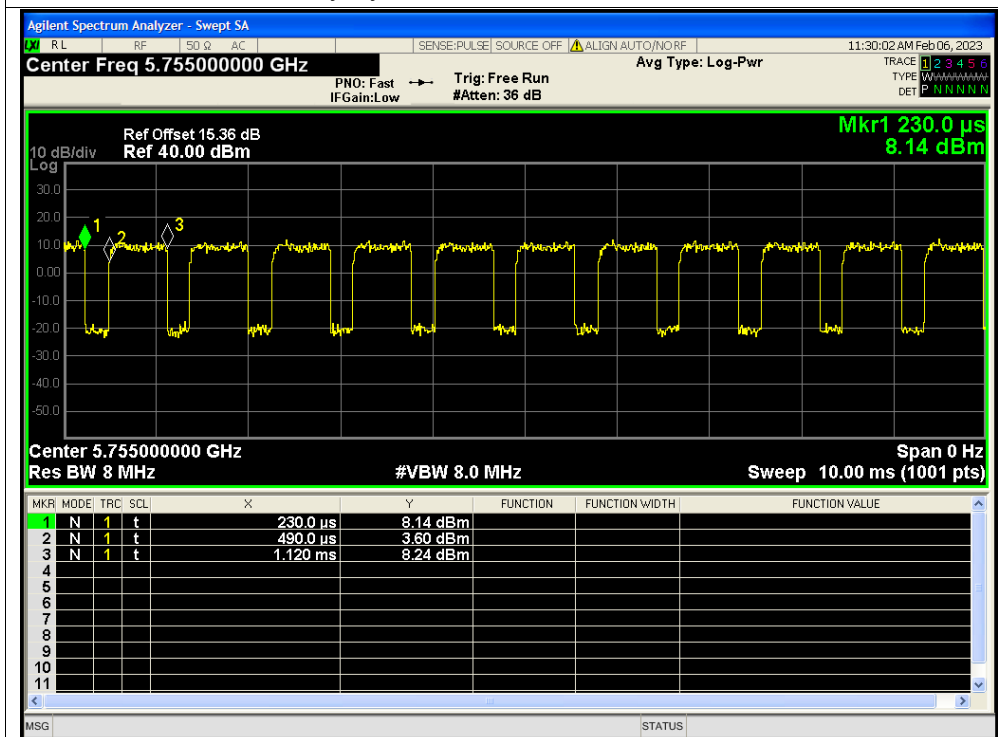




Duty Cycle NVNT n40 5755MHz Ant1

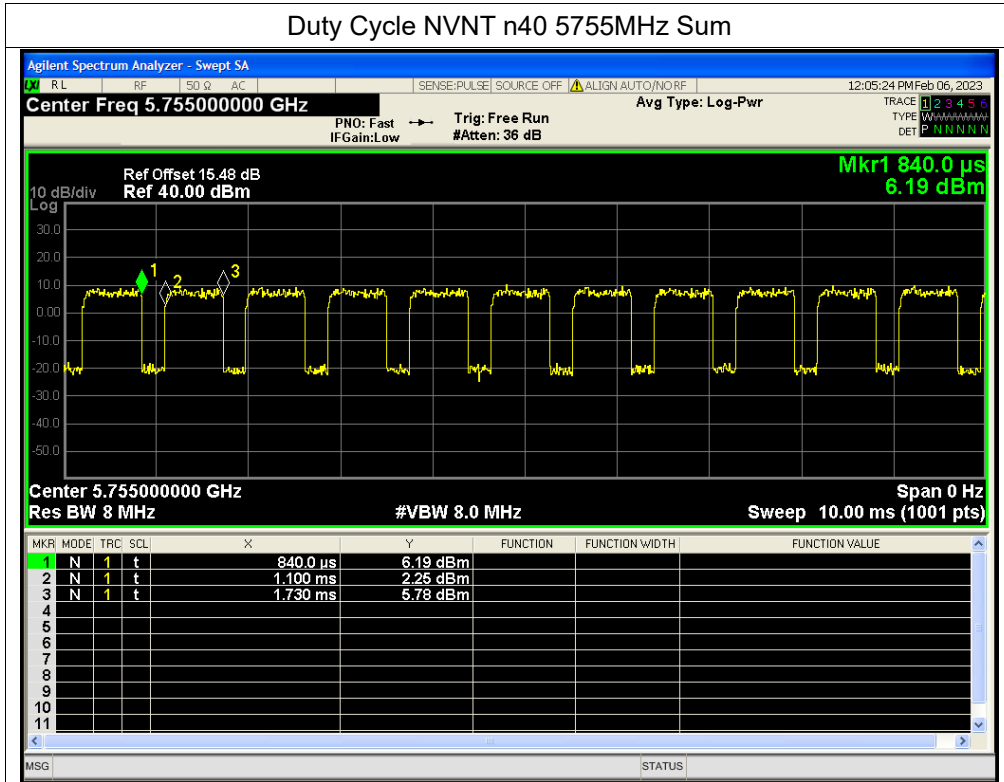


Duty Cycle NVNT n40 5755MHz Ant2

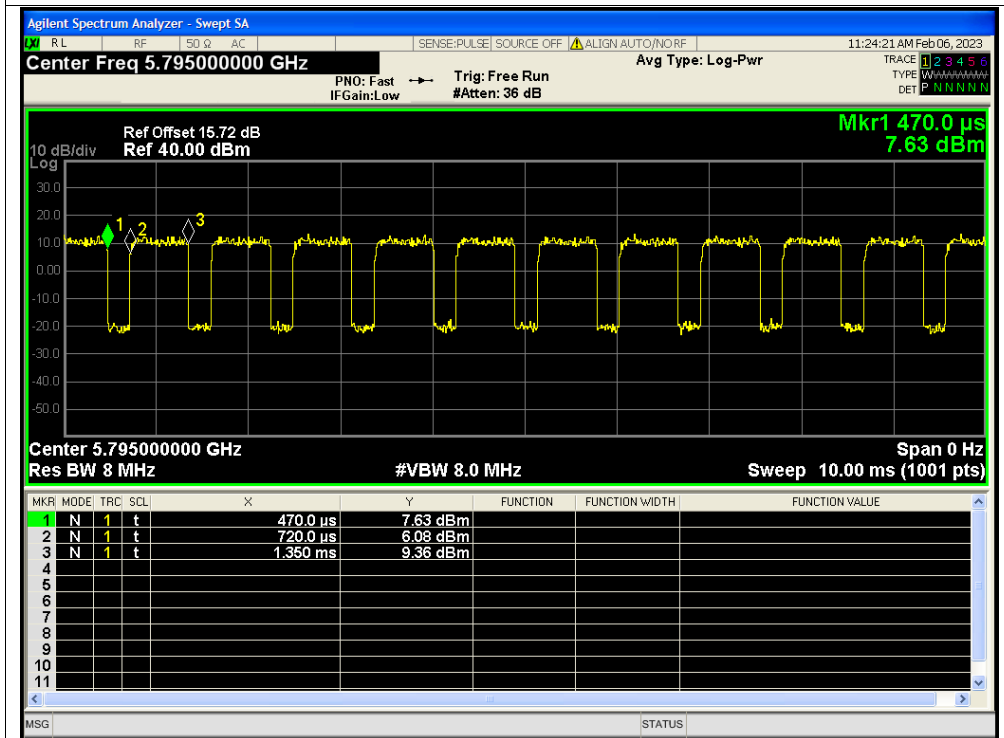




Duty Cycle NVNT n40 5755MHz Sum

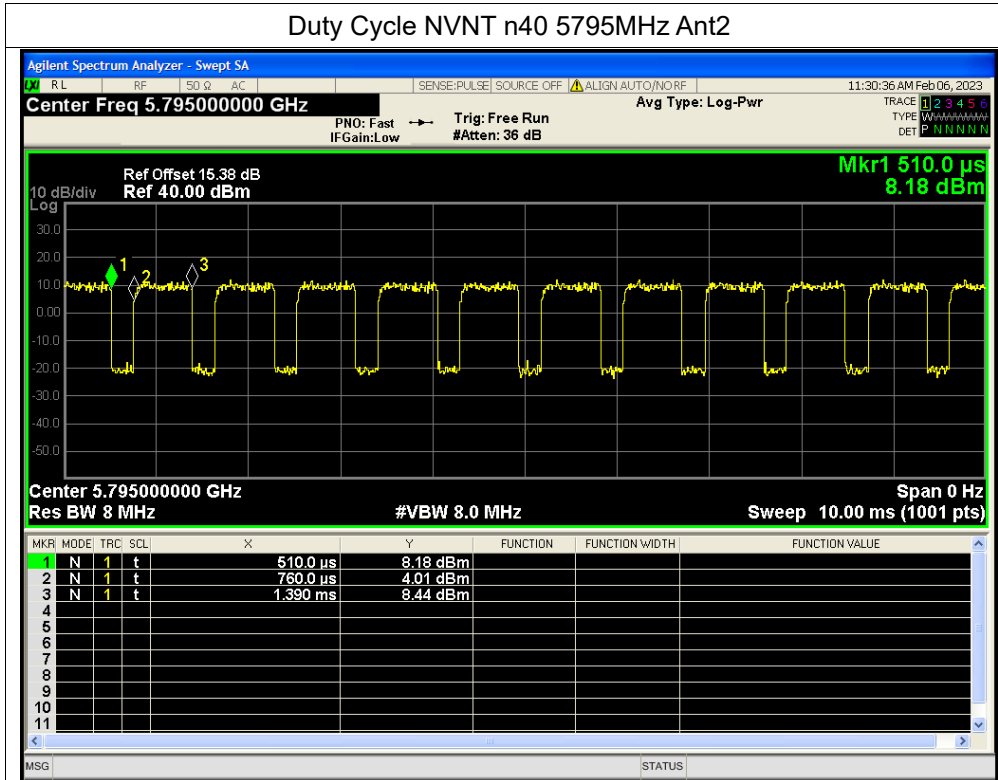


Duty Cycle NVNT n40 5795MHz Ant1

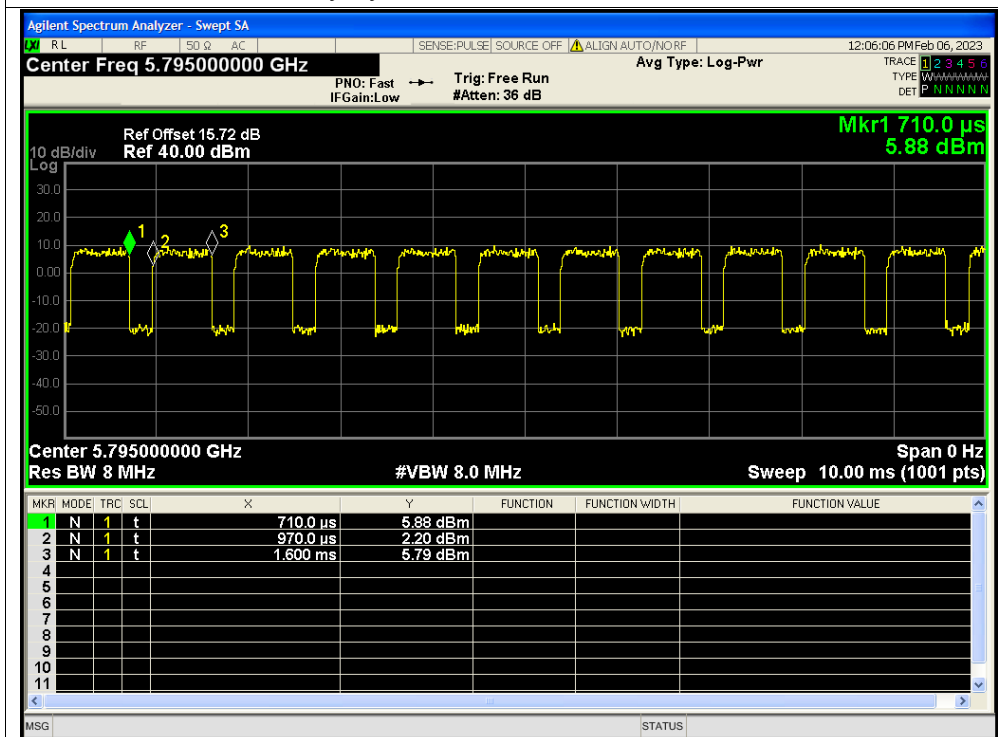




Duty Cycle NVNT n40 5795MHz Ant2

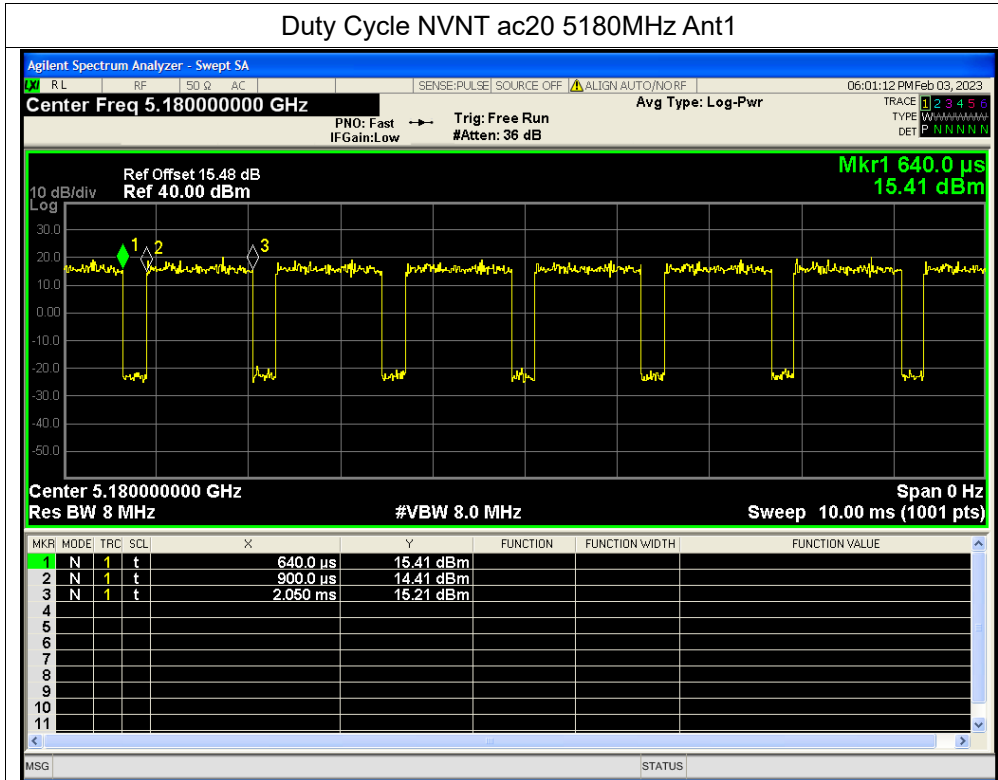


Duty Cycle NVNT n40 5795MHz Sum

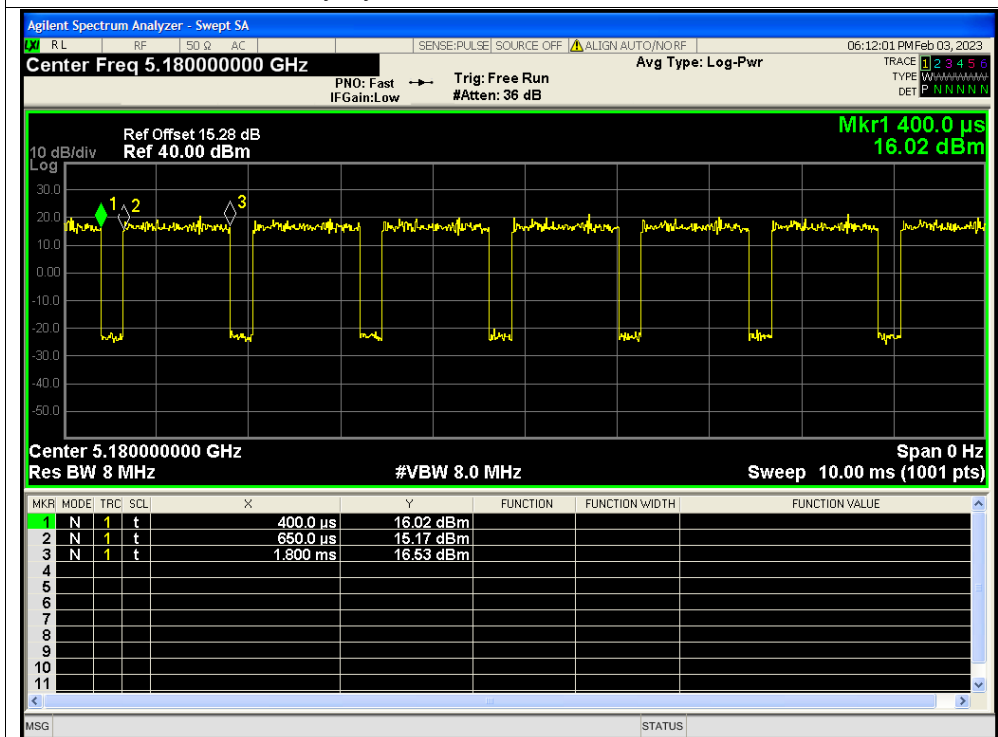




Duty Cycle NVNT ac20 5180MHz Ant1

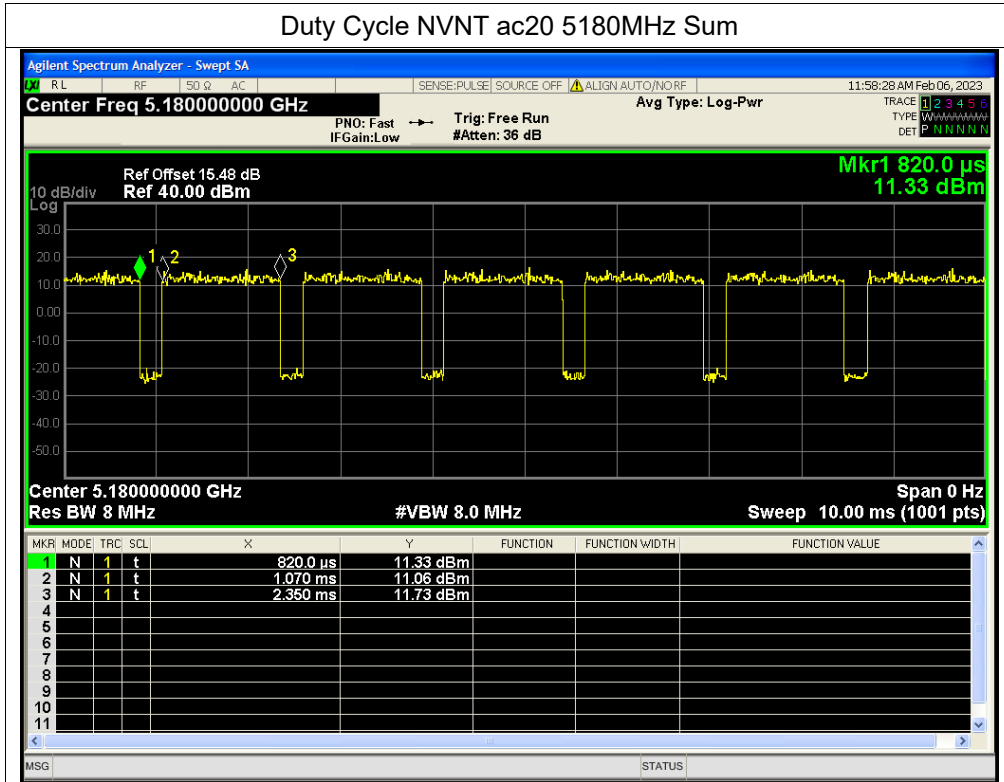


Duty Cycle NVNT ac20 5180MHz Ant2

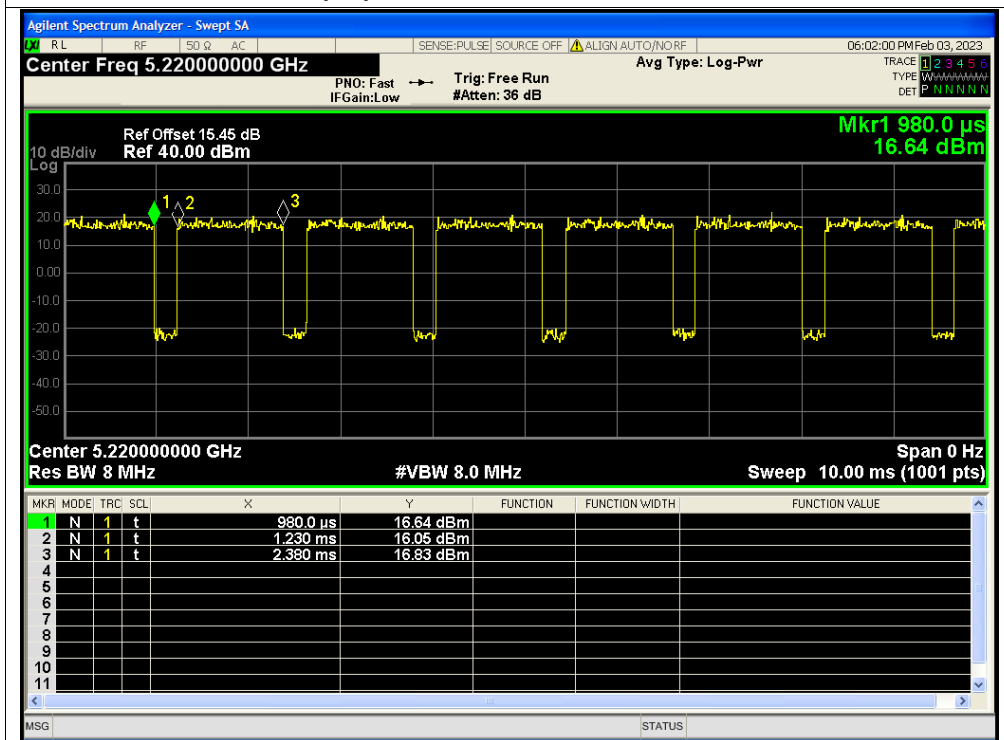




Duty Cycle NVNT ac20 5180MHz Sum

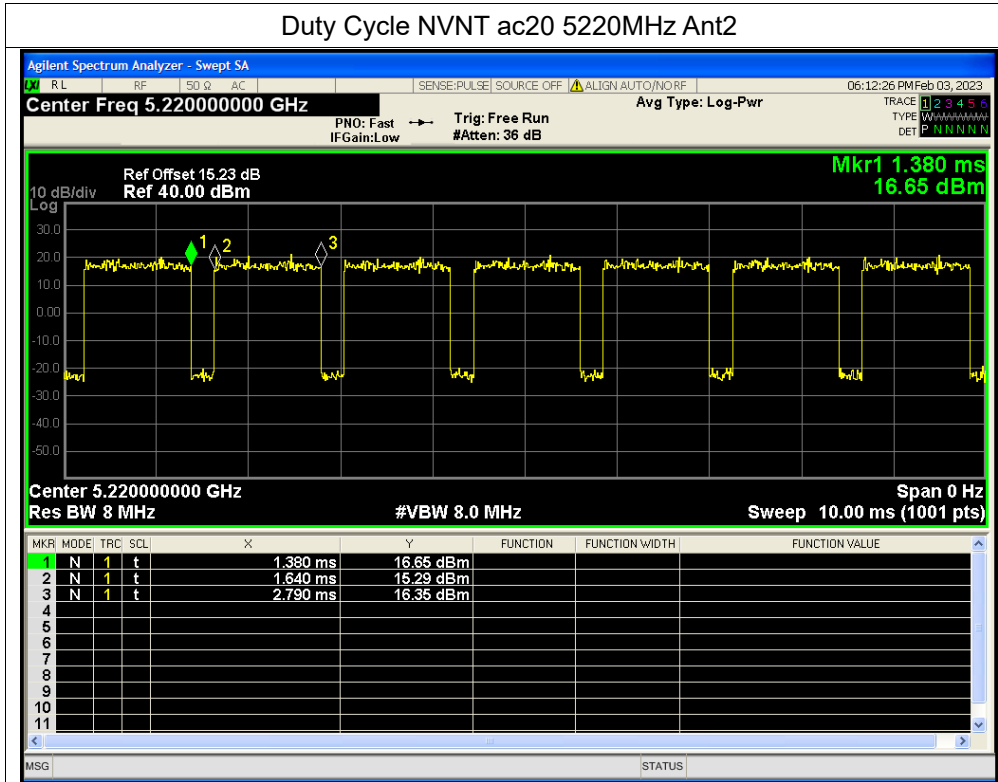


Duty Cycle NVNT ac20 5220MHz Ant1

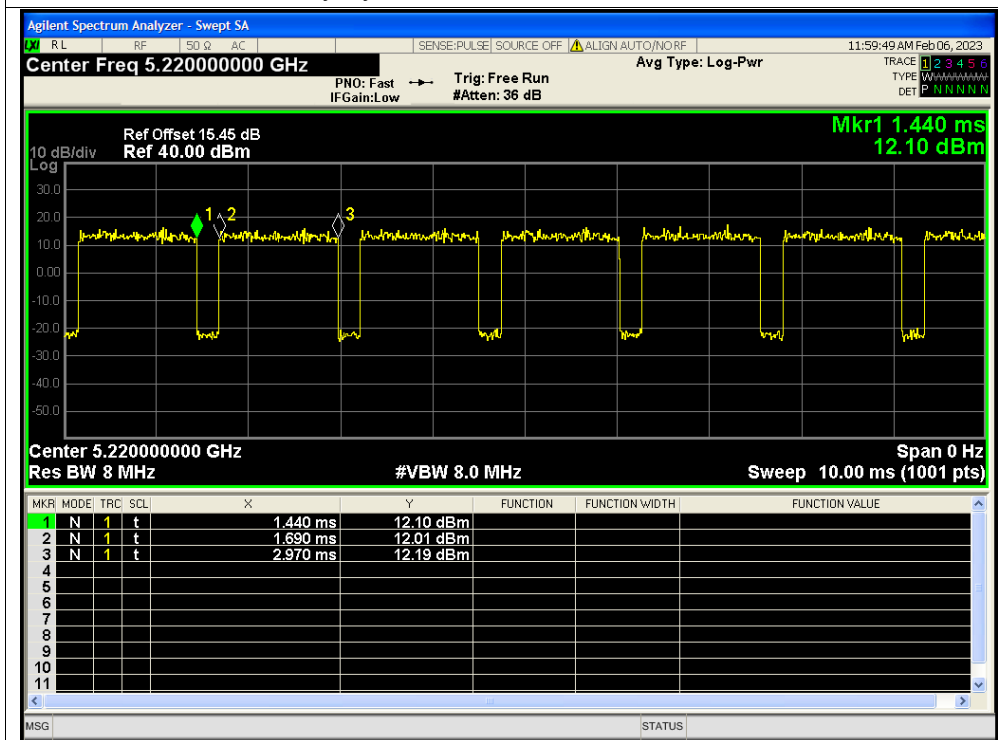




Duty Cycle NVNT ac20 5220MHz Ant2

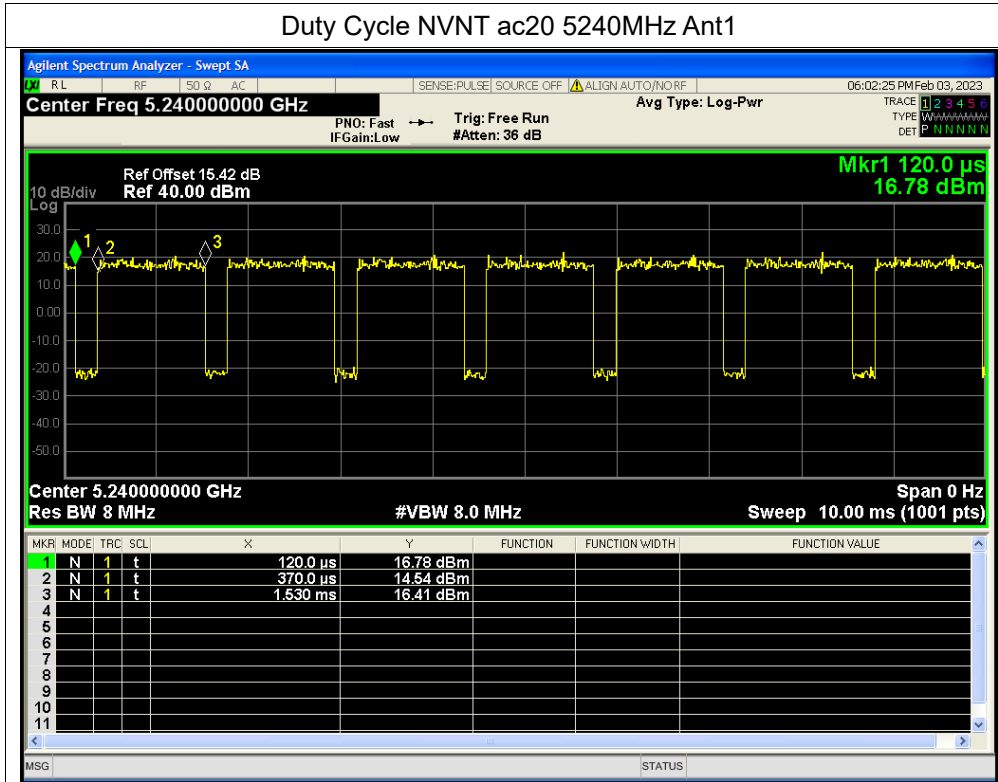


Duty Cycle NVNT ac20 5220MHz Sum

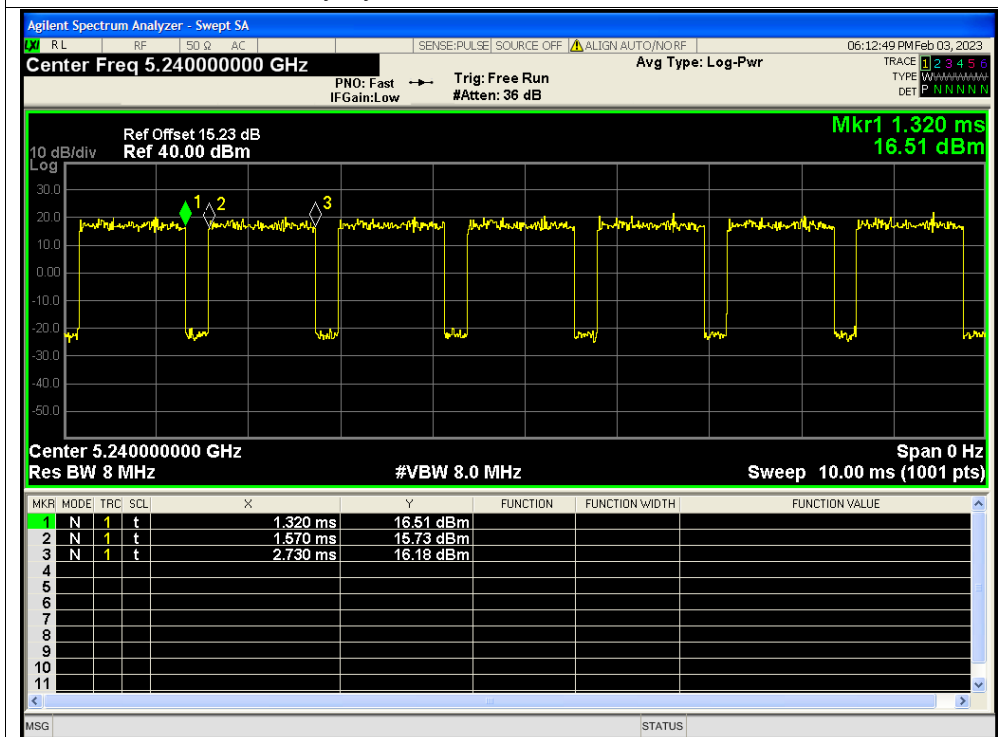




Duty Cycle NVNT ac20 5240MHz Ant1



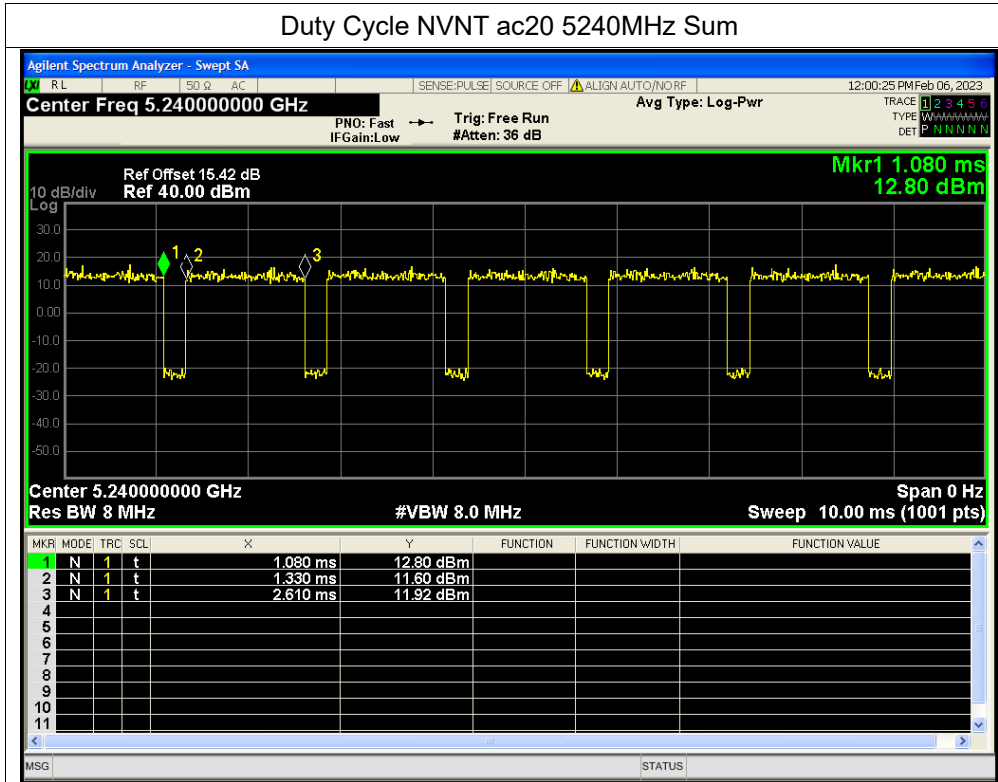
Duty Cycle NVNT ac20 5240MHz Ant2



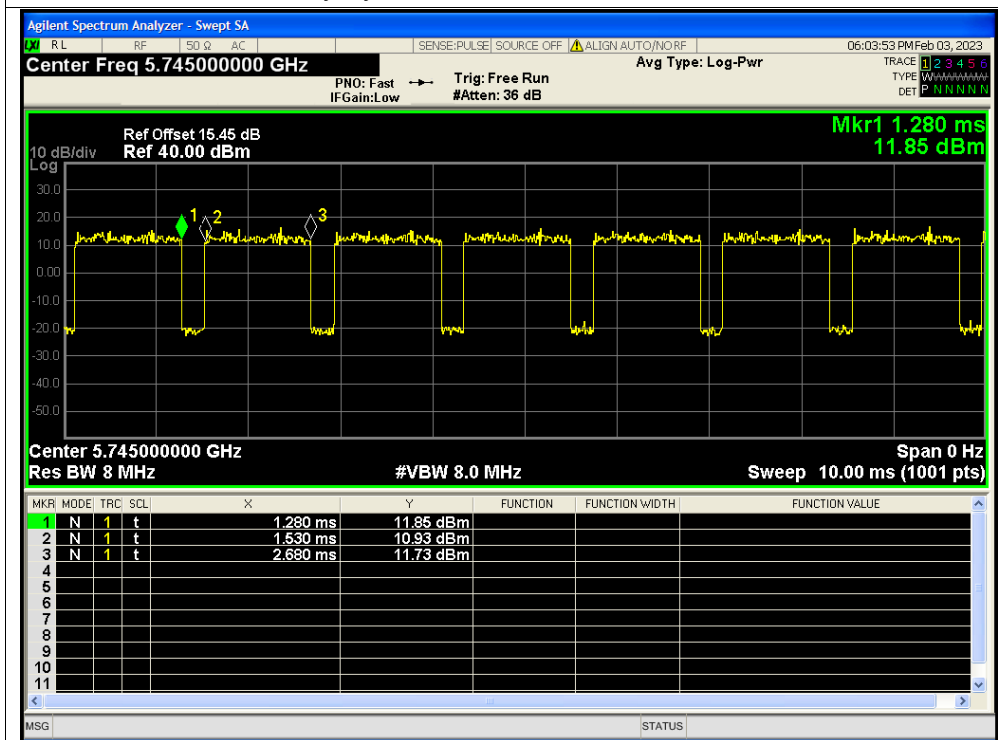




Duty Cycle NVNT ac20 5240MHz Sum

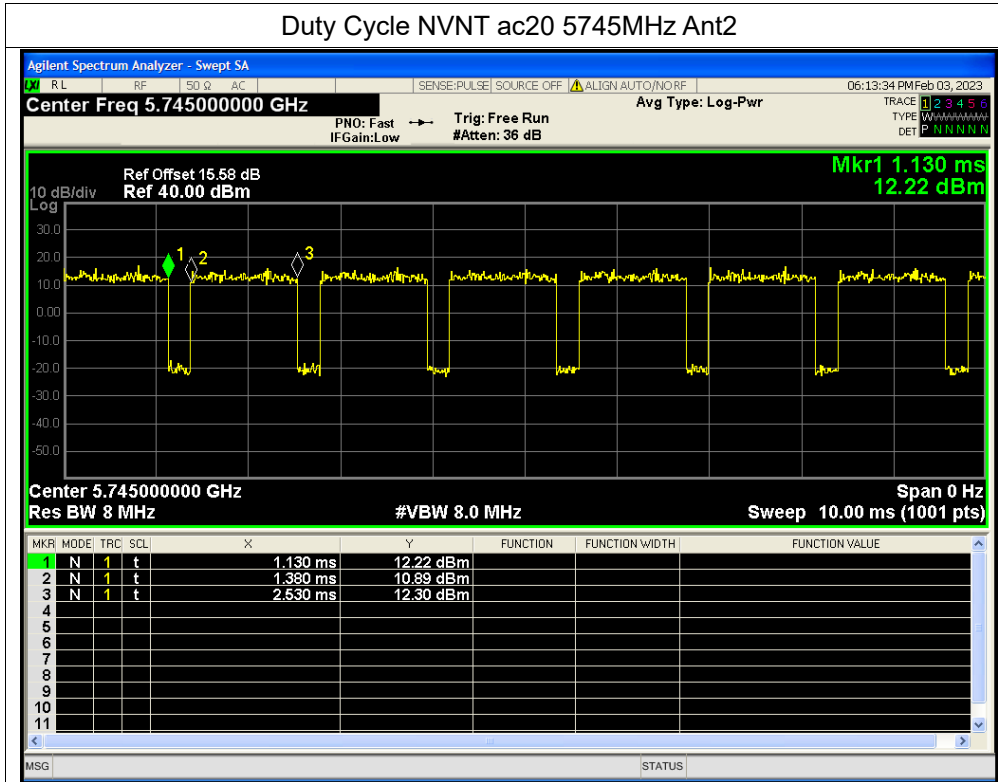


Duty Cycle NVNT ac20 5745MHz Ant1

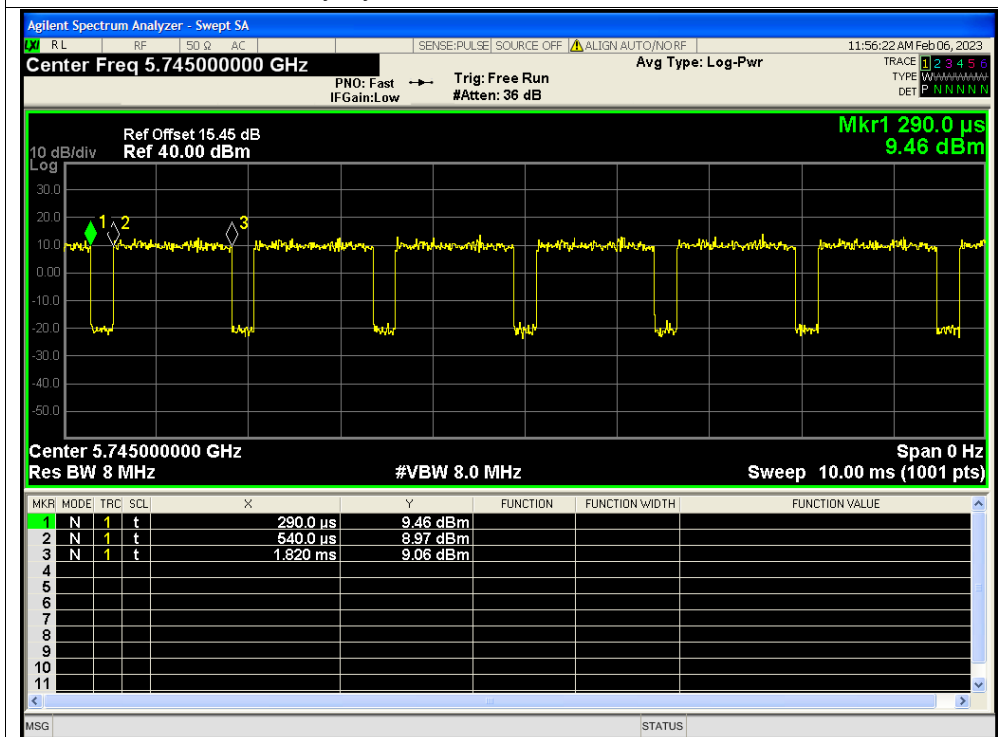




Duty Cycle NVNT ac20 5745MHz Ant2

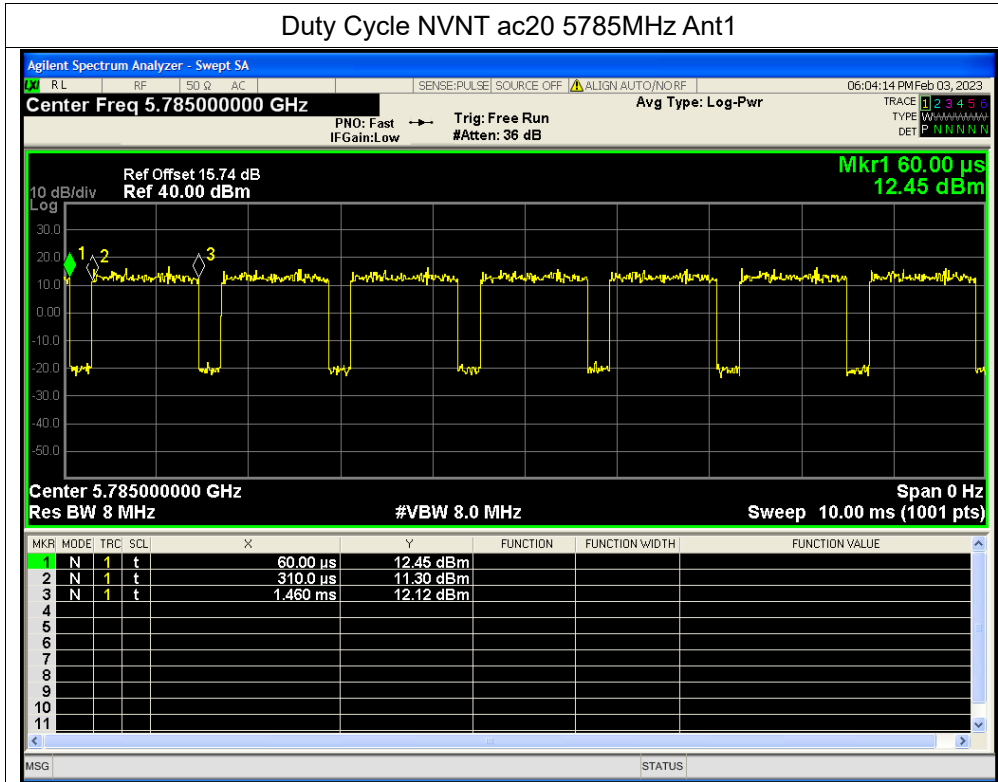


Duty Cycle NVNT ac20 5745MHz Sum

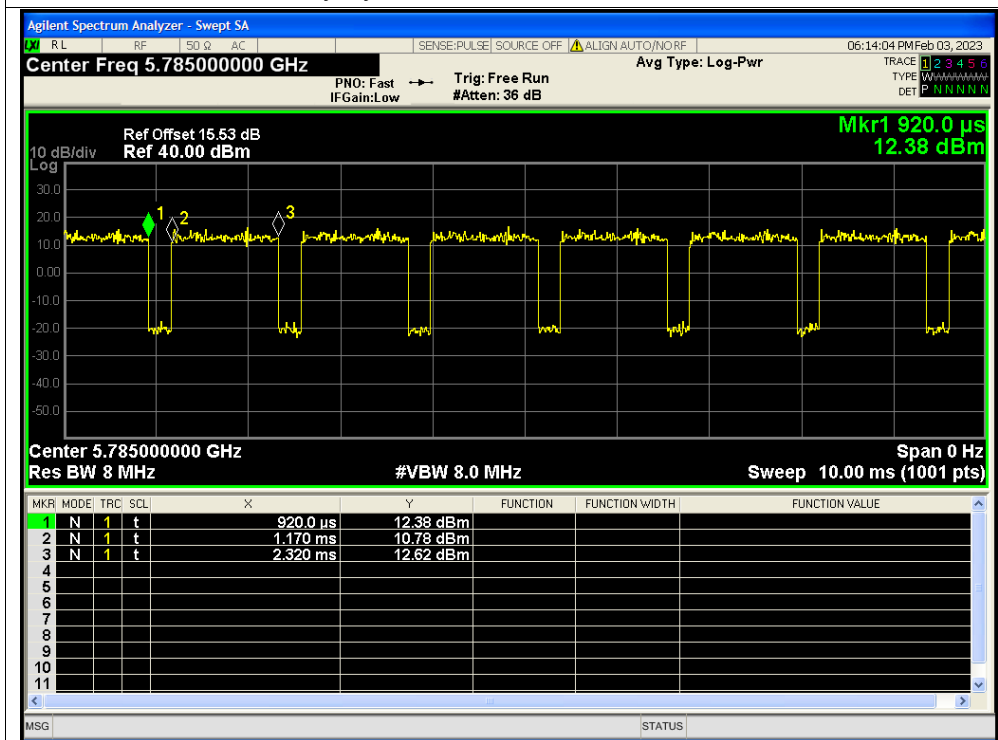




Duty Cycle NVNT ac20 5785MHz Ant1

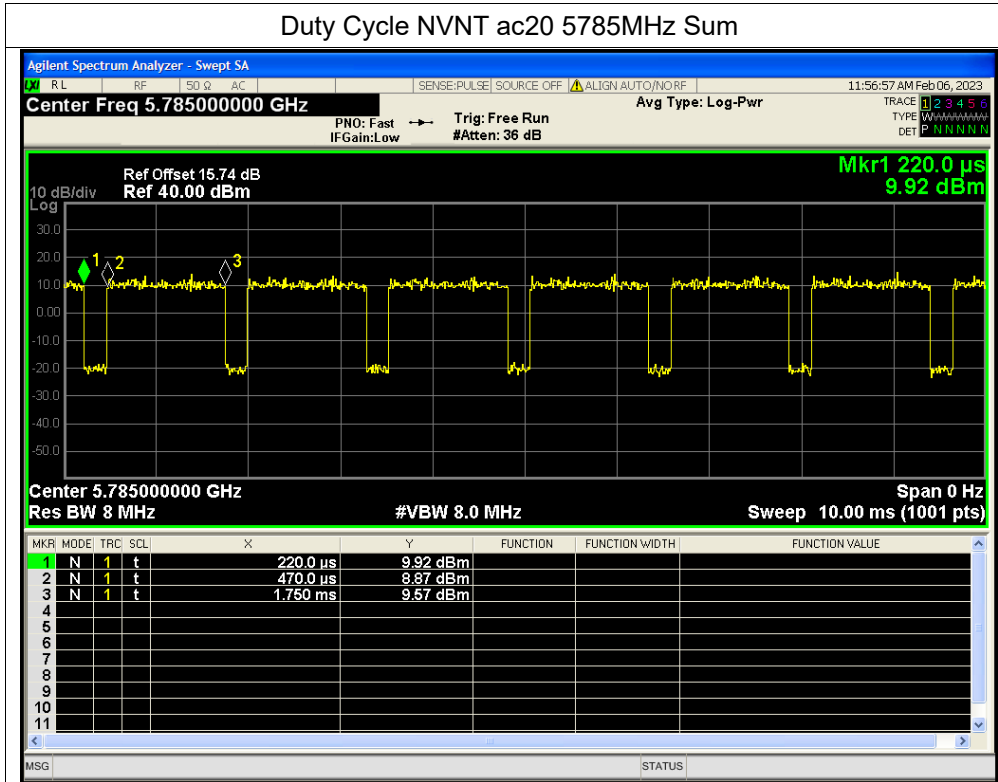


Duty Cycle NVNT ac20 5785MHz Ant2

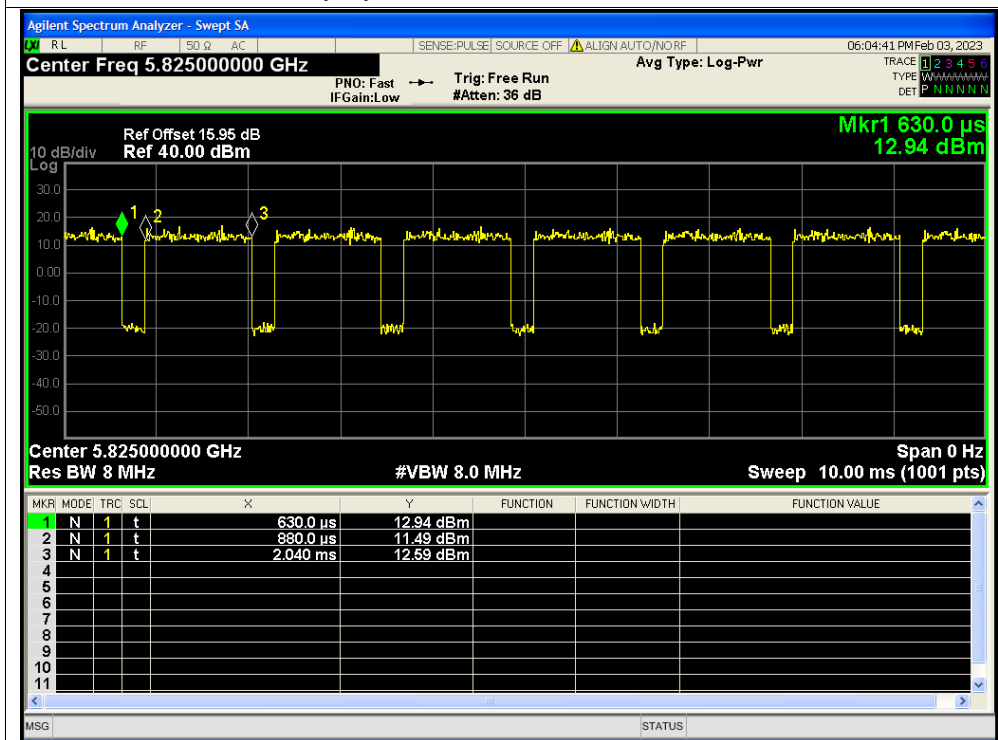




Duty Cycle NVNT ac20 5785MHz Sum

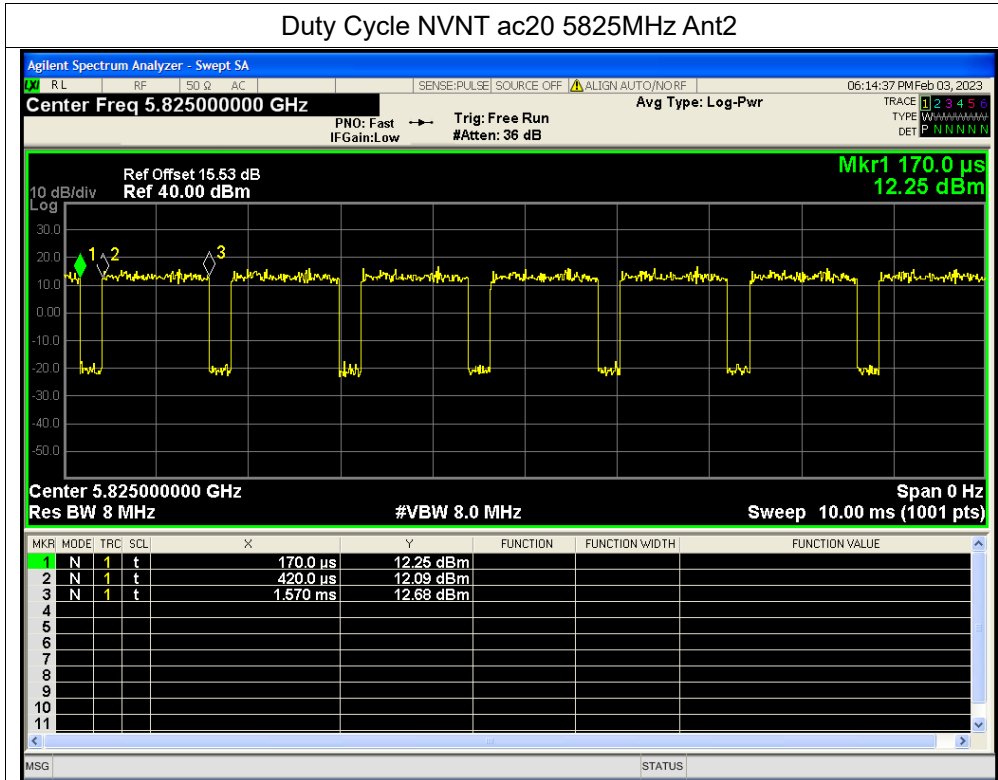


Duty Cycle NVNT ac20 5825MHz Ant1

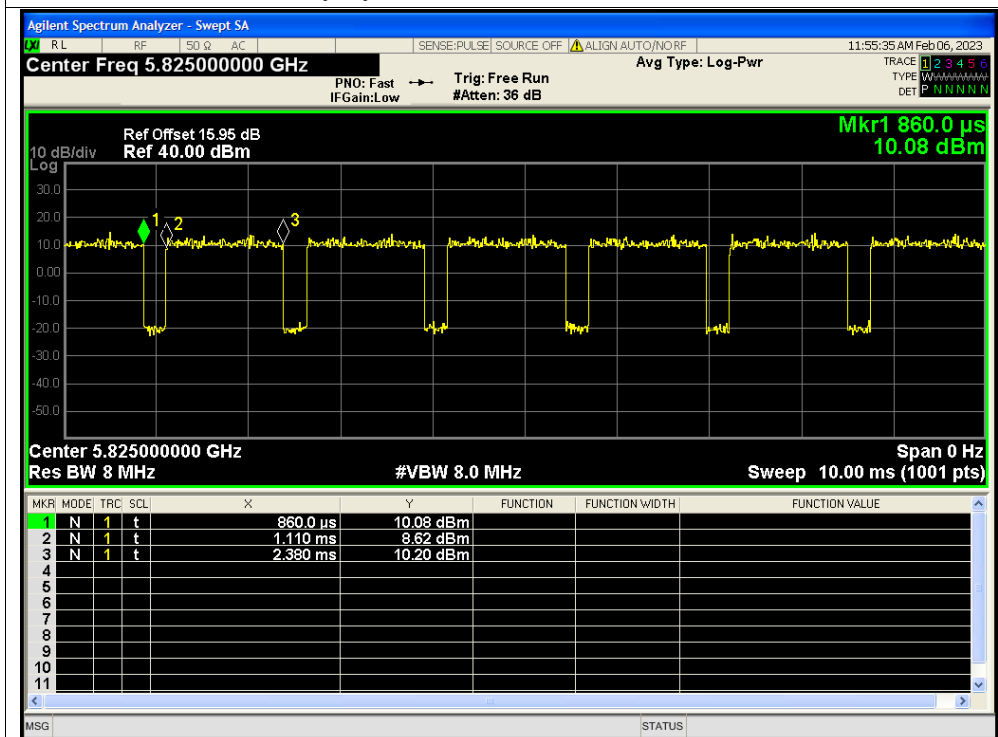




Duty Cycle NVNT ac20 5825MHz Ant2

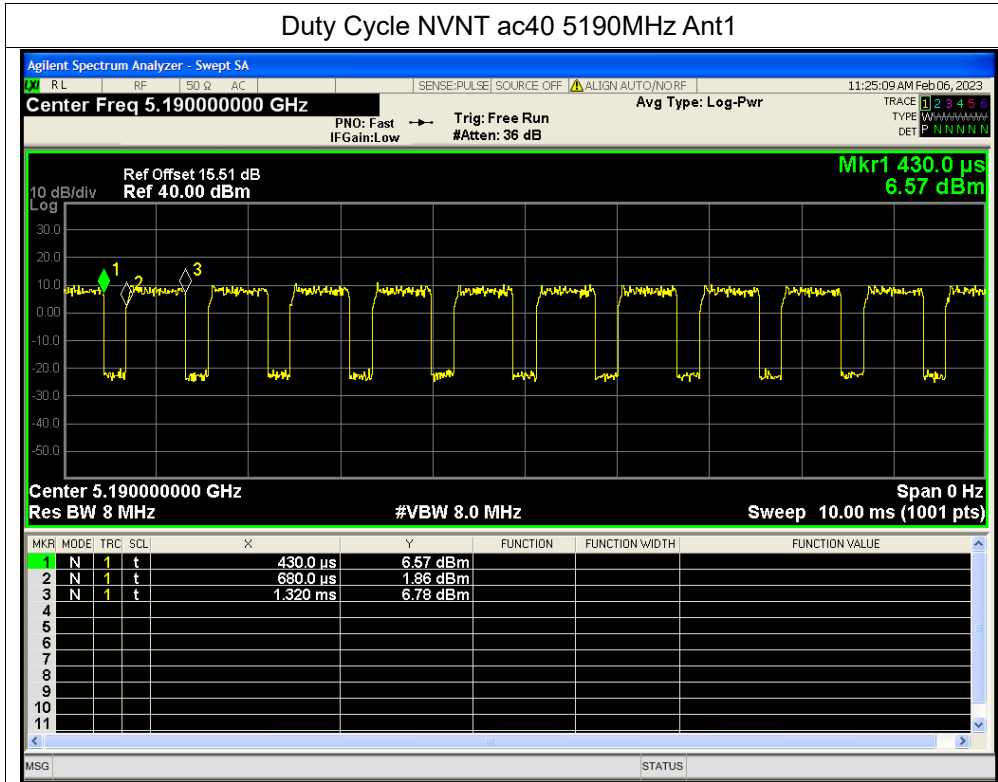


Duty Cycle NVNT ac20 5825MHz Sum

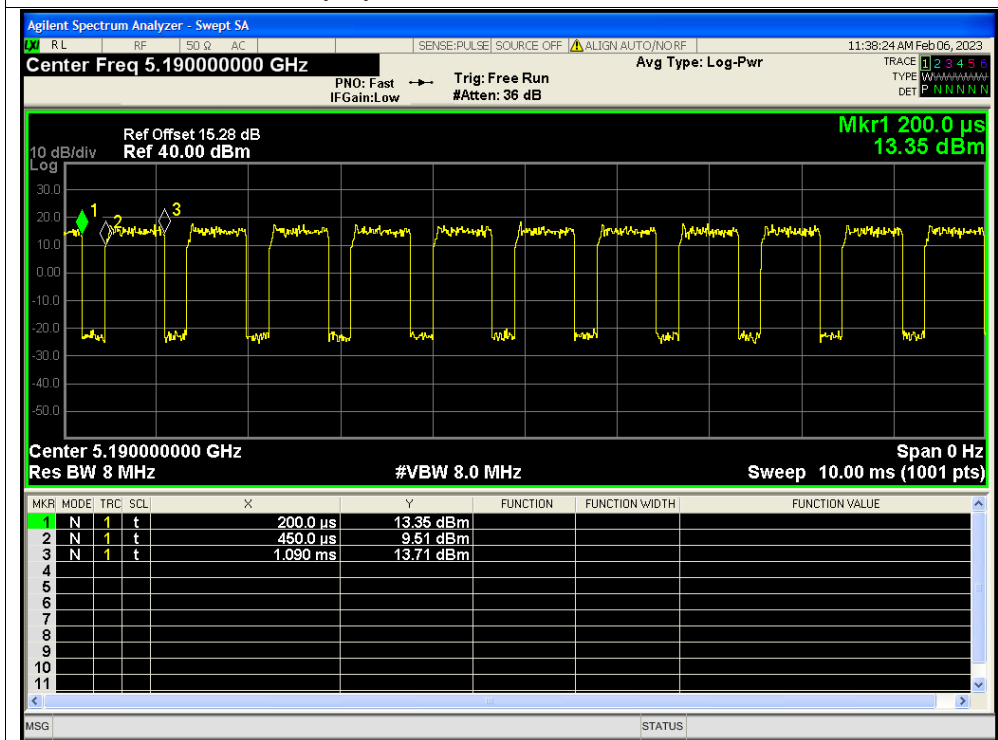




Duty Cycle NVNT ac40 5190MHz Ant1

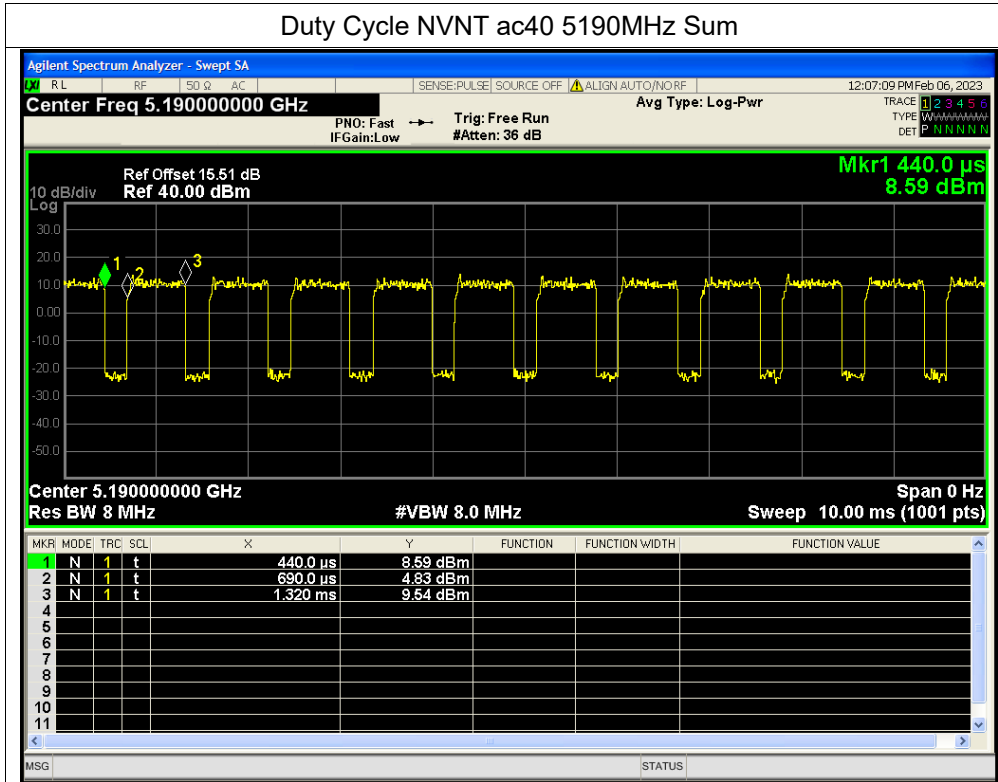


Duty Cycle NVNT ac40 5190MHz Ant2

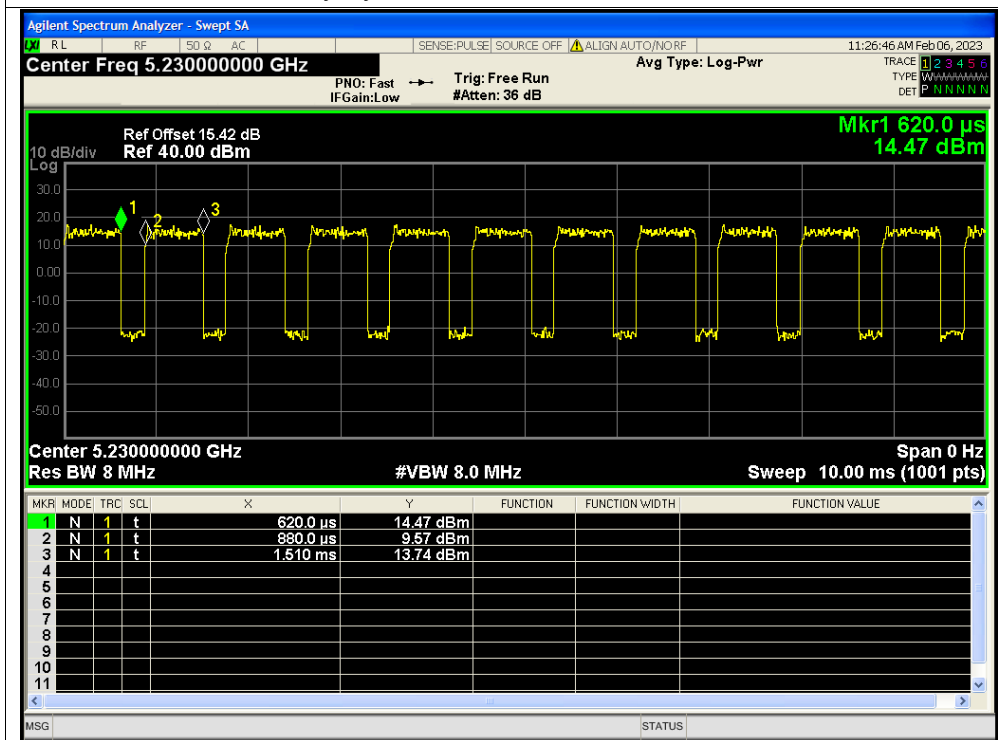




Duty Cycle NVNT ac40 5190MHz Sum

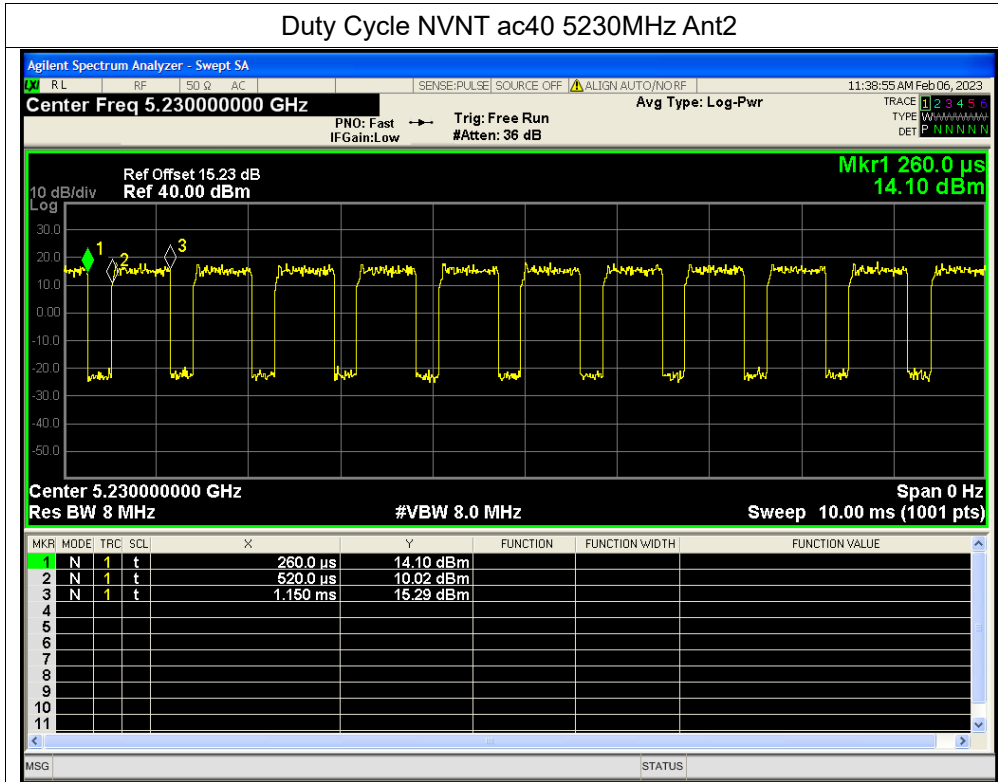


Duty Cycle NVNT ac40 5230MHz Ant1

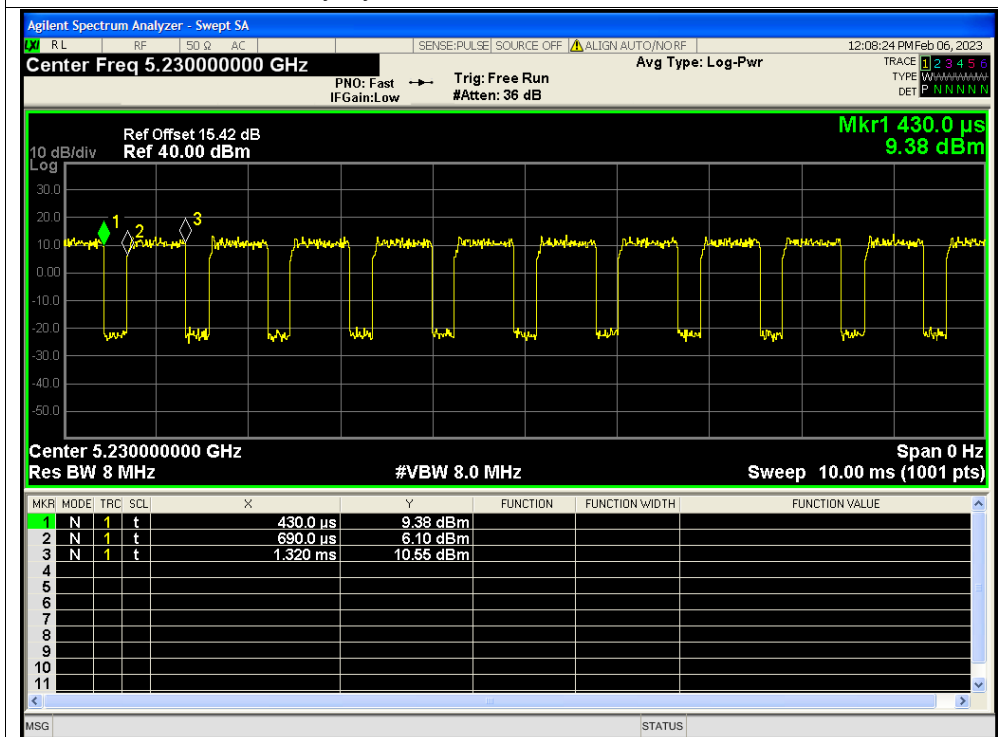




Duty Cycle NVNT ac40 5230MHz Ant2



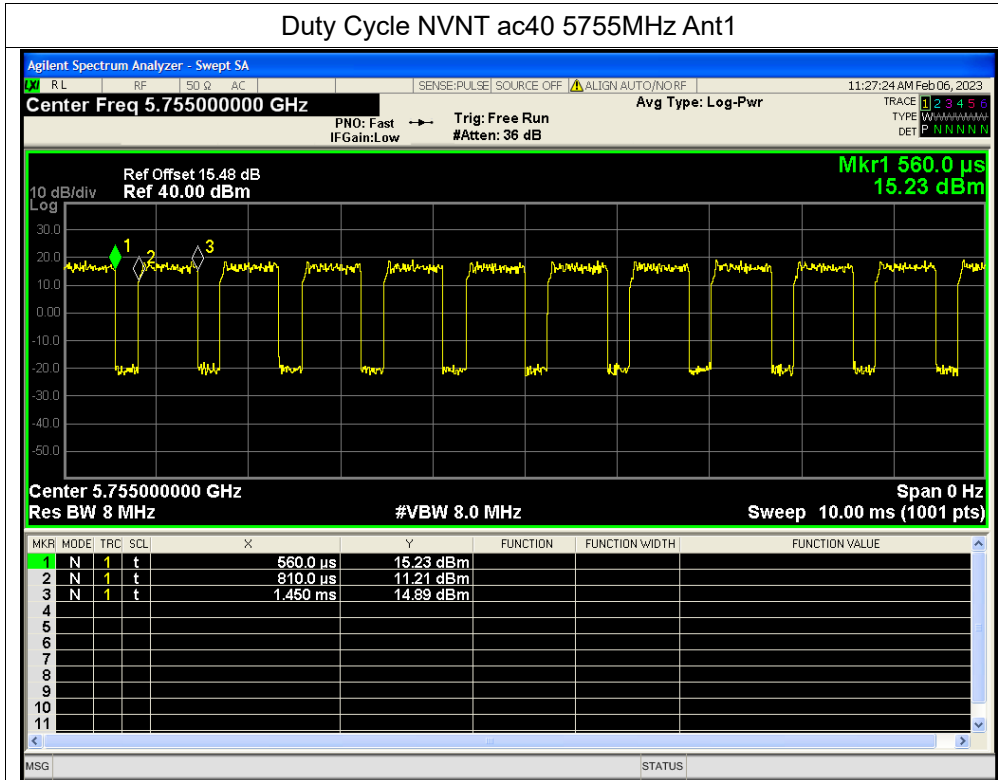
Duty Cycle NVNT ac40 5230MHz Sum



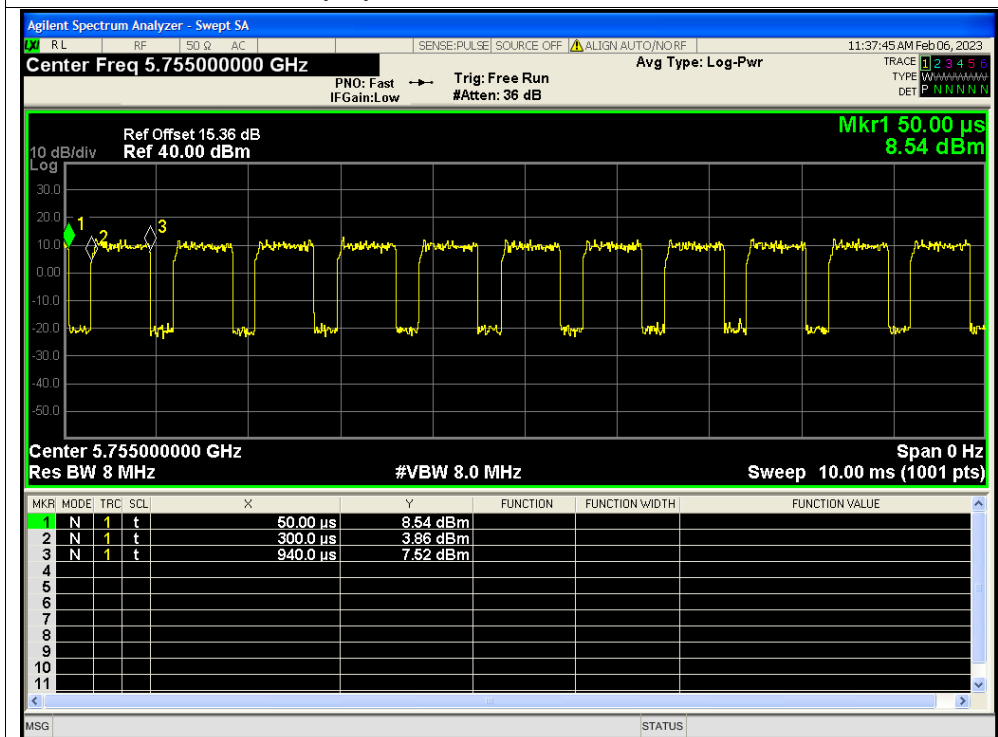




Duty Cycle NVNT ac40 5755MHz Ant1

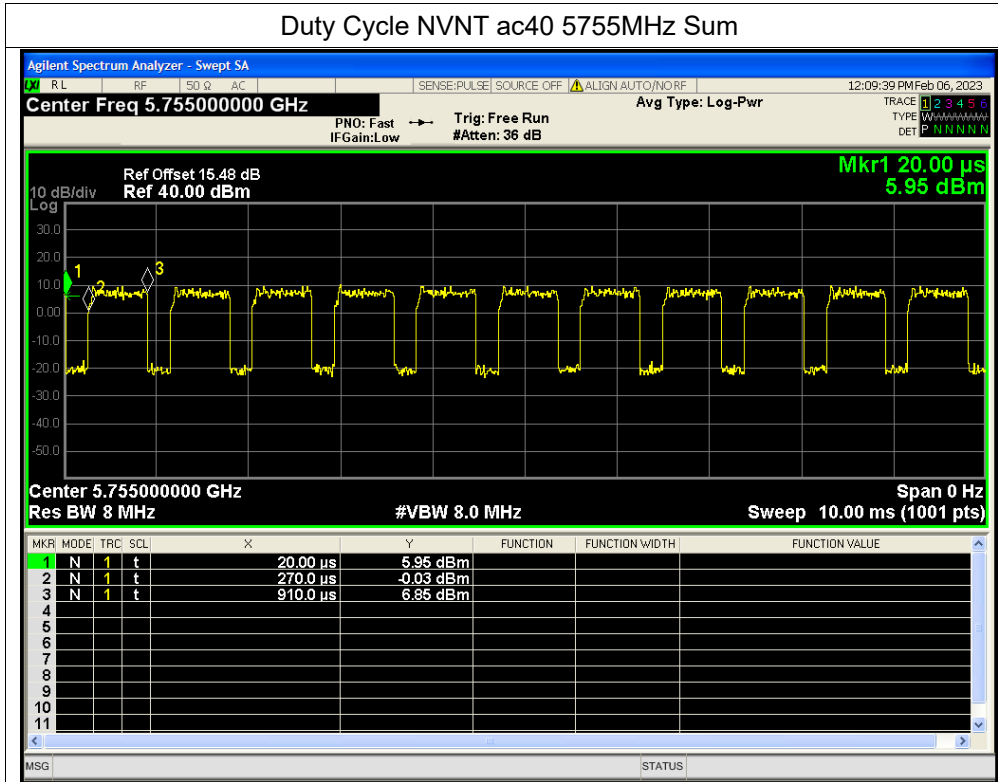


Duty Cycle NVNT ac40 5755MHz Ant2

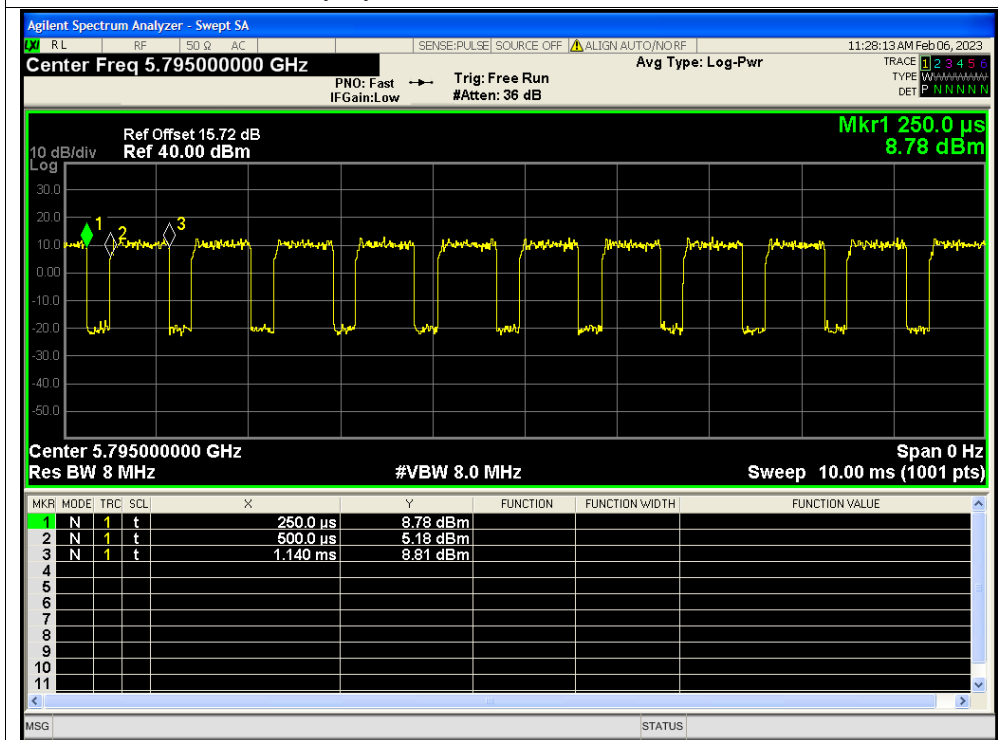




Duty Cycle NVNT ac40 5755MHz Sum

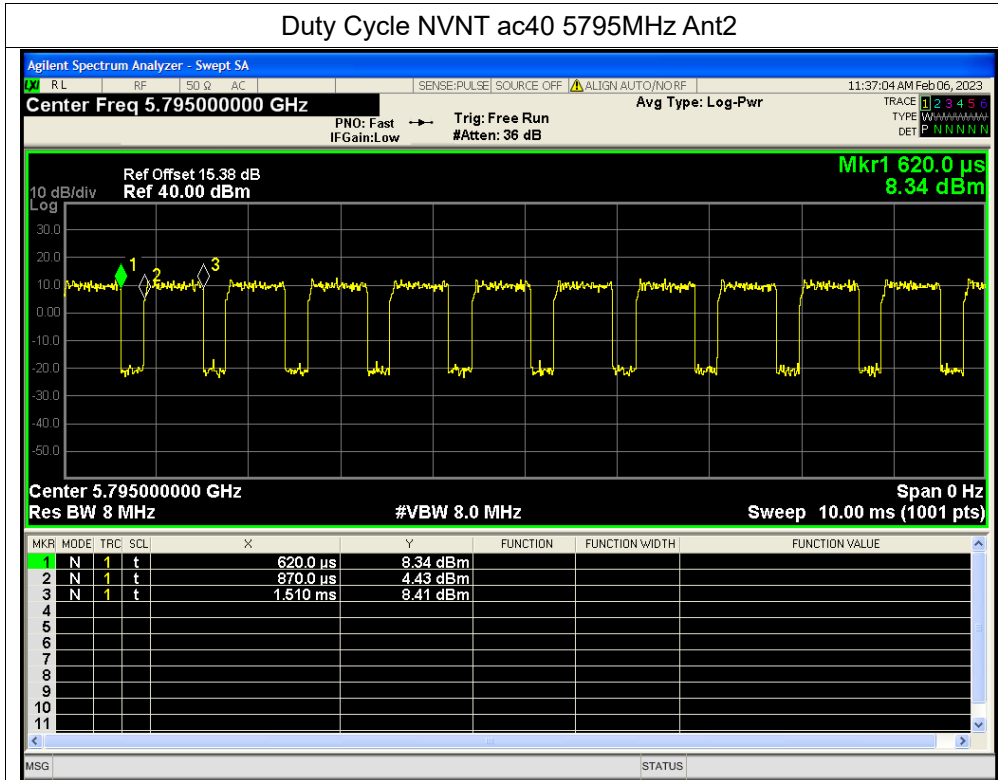


Duty Cycle NVNT ac40 5795MHz Ant1

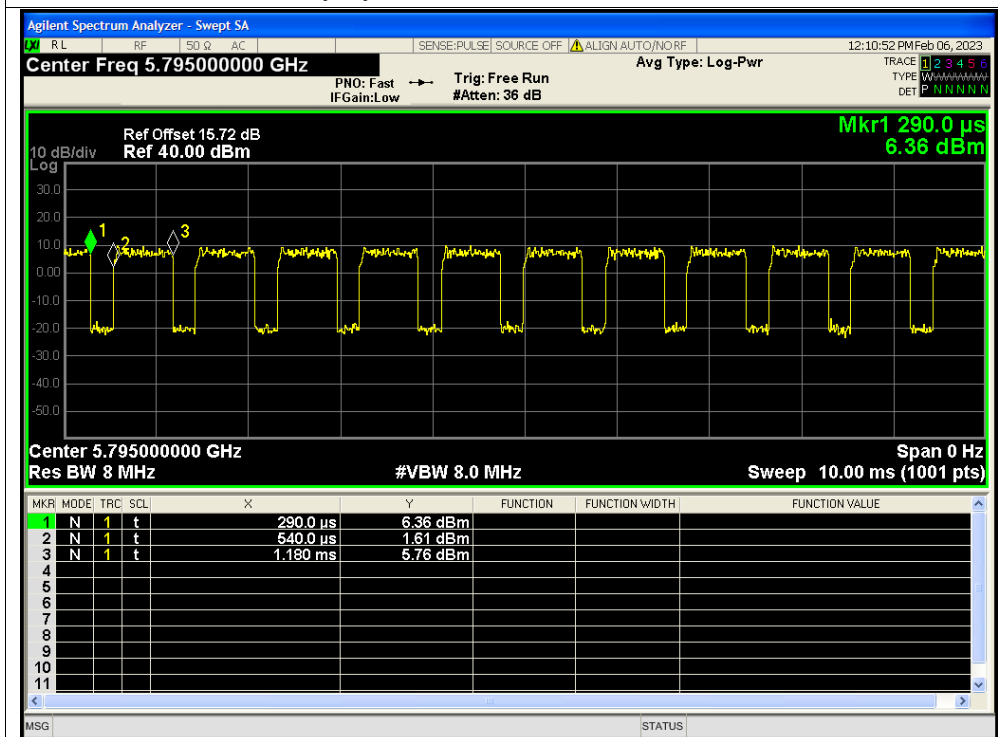




Duty Cycle NVNT ac40 5795MHz Ant2

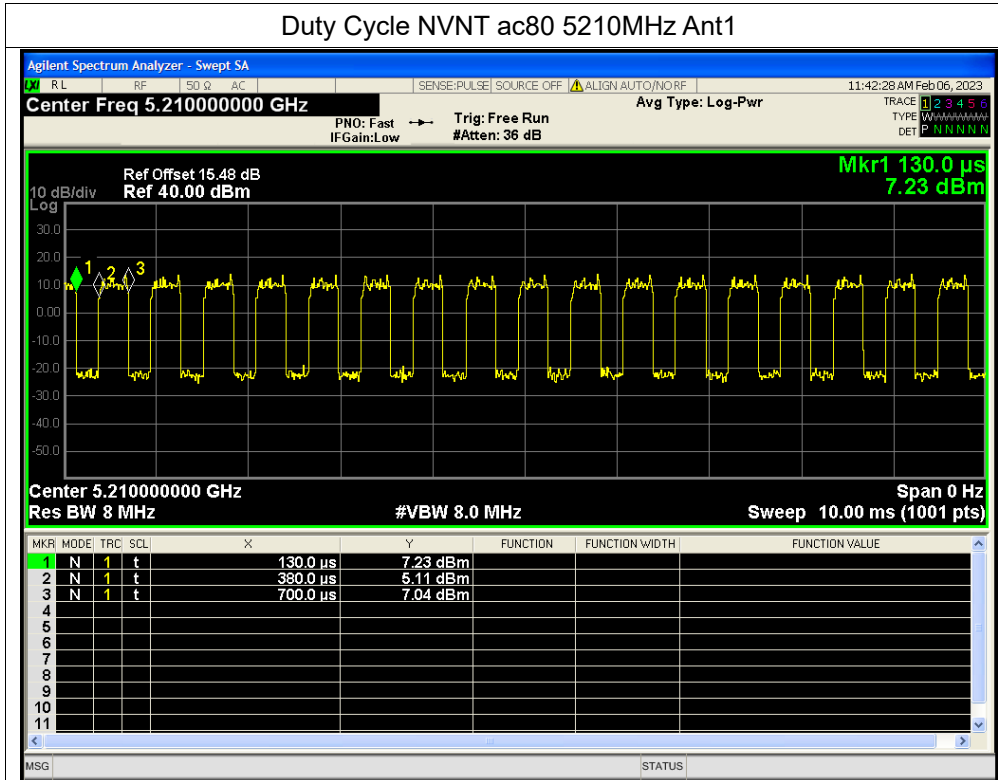


Duty Cycle NVNT ac40 5795MHz Sum

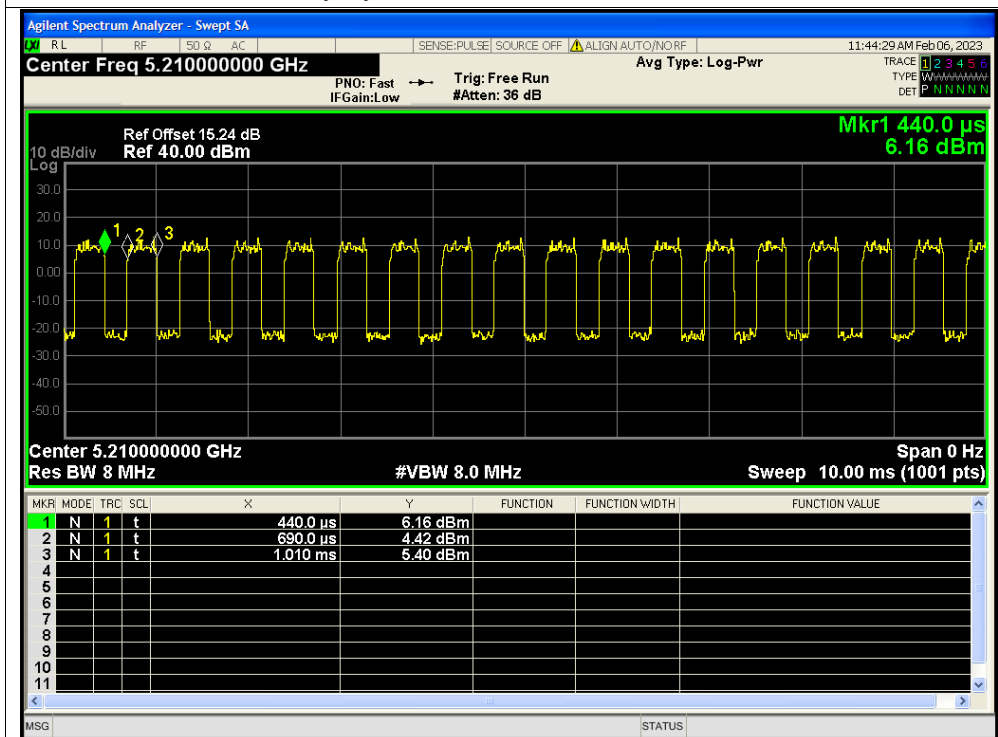




Duty Cycle NVNT ac80 5210MHz Ant1

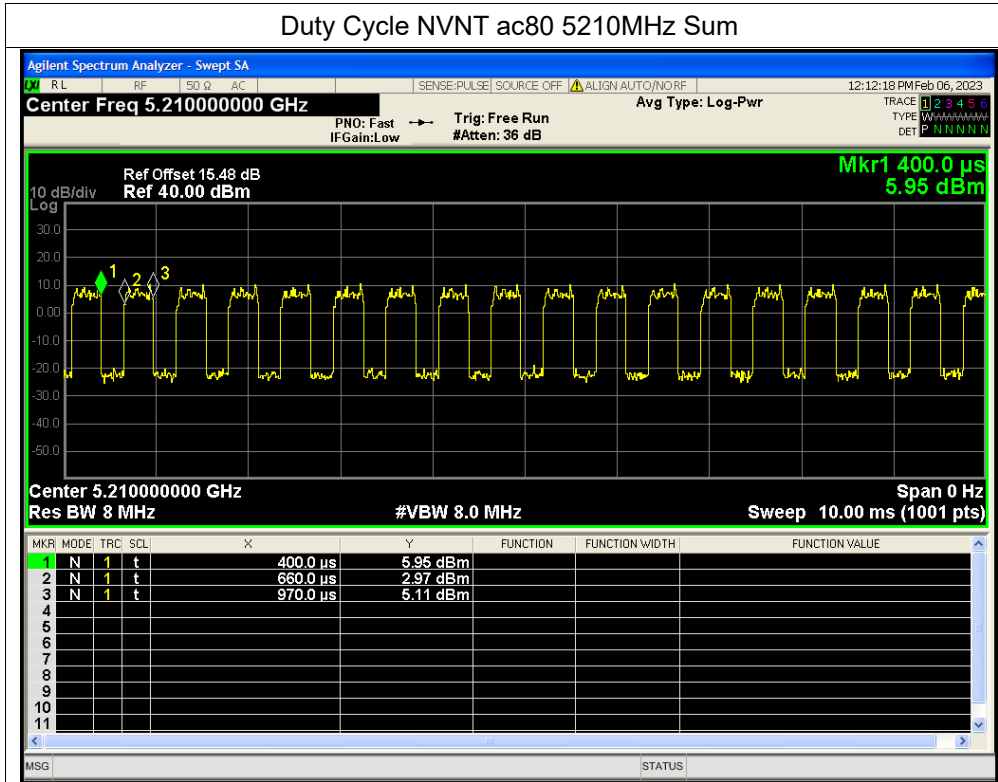


Duty Cycle NVNT ac80 5210MHz Ant2

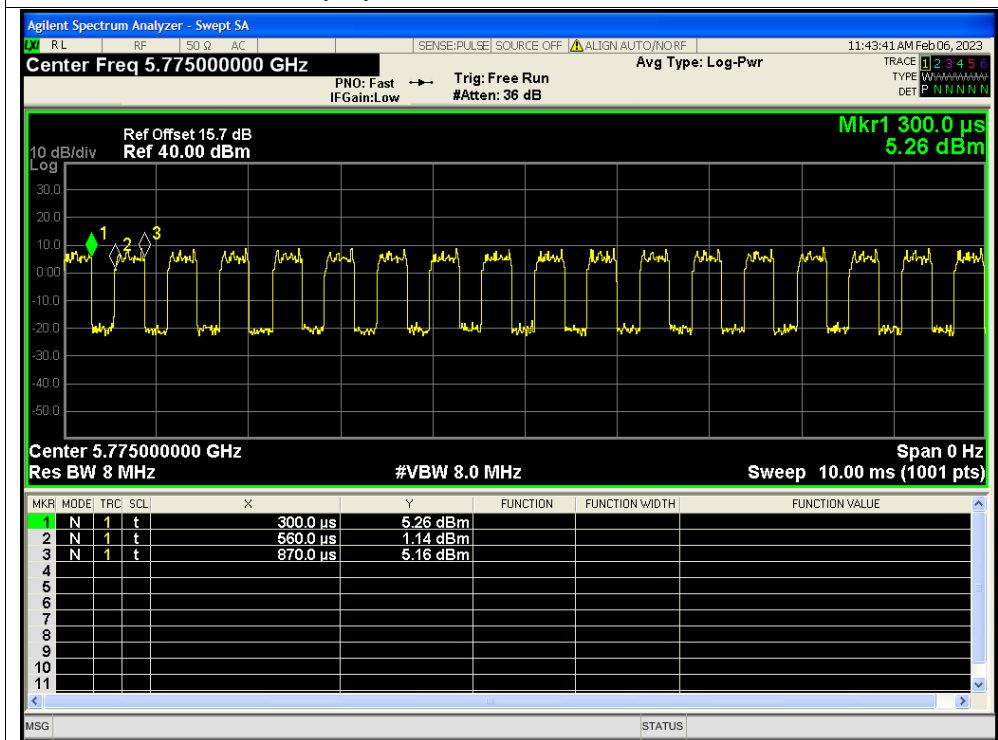




Duty Cycle NVNT ac80 5210MHz Sum

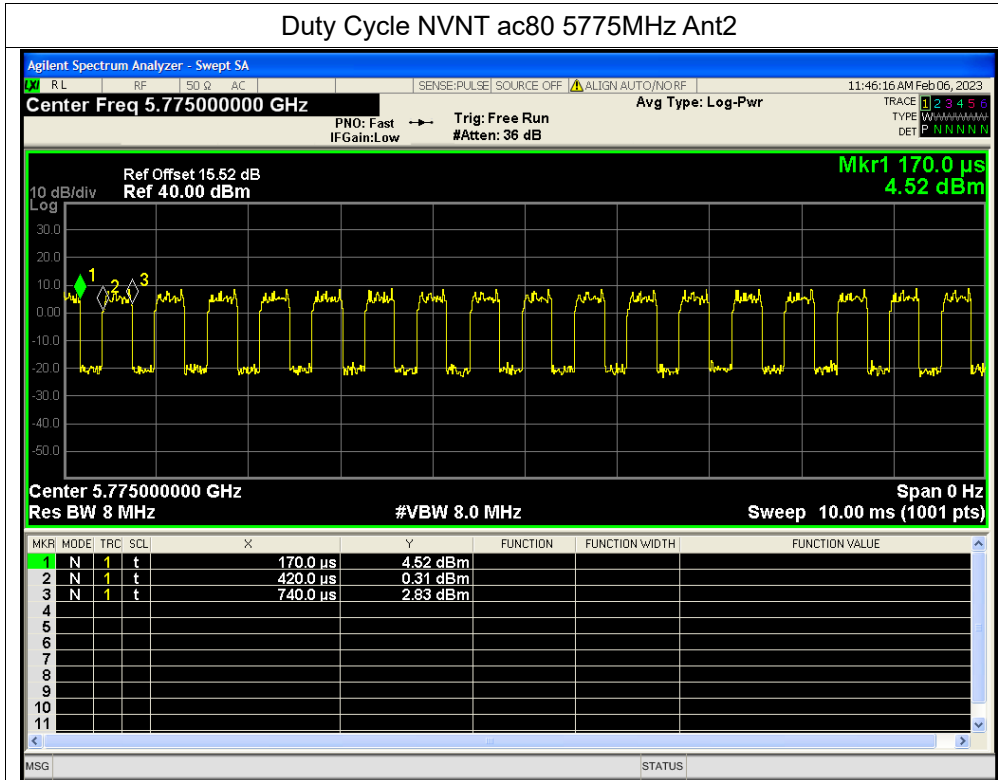


Duty Cycle NVNT ac80 5775MHz Ant1

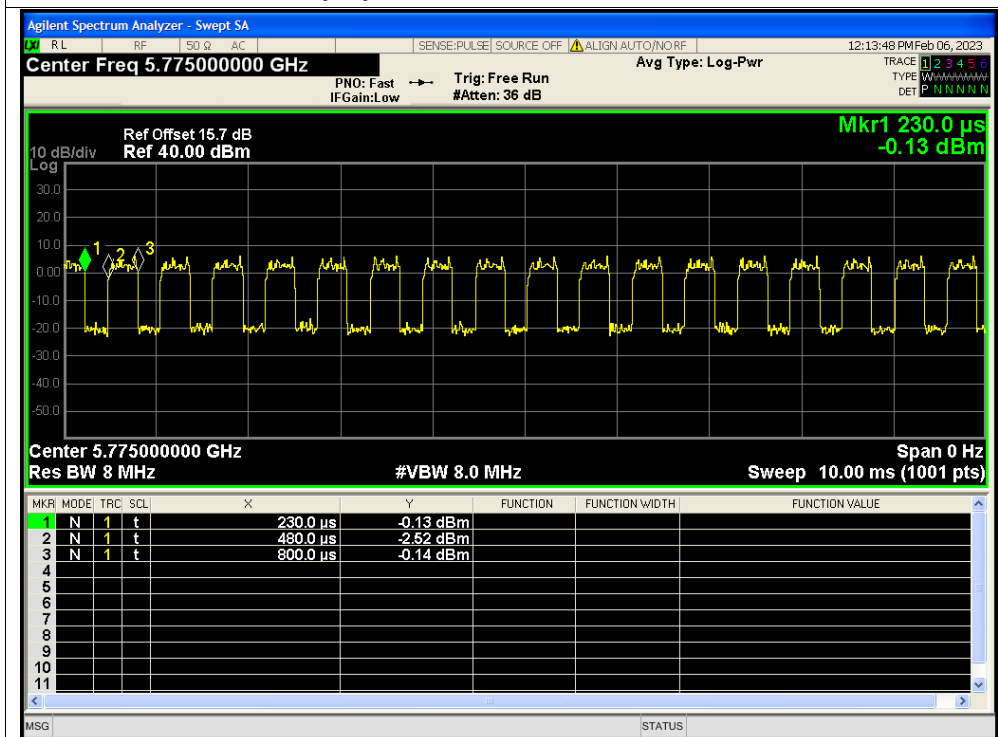




Duty Cycle NVNT ac80 5775MHz Ant2



Duty Cycle NVNT ac80 5775MHz Sum



**A.2. Maximum Conducted Output Power**

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	12.25	0.73	12.98	30	Pass
NVNT	a	5180	Ant2	12.2	0.76	12.96	30	Pass
NVNT	a	5220	Ant1	13.05	0.76	13.81	30	Pass
NVNT	a	5220	Ant2	12.61	0.73	13.34	30	Pass
NVNT	a	5240	Ant1	12.92	0.73	13.65	30	Pass
NVNT	a	5240	Ant2	12.54	0.73	13.27	30	Pass
NVNT	a	5745	Ant1	8.01	0.73	8.74	30	Pass
NVNT	a	5745	Ant2	8.29	0.73	9.02	30	Pass
NVNT	a	5785	Ant1	8.4	0.76	9.16	30	Pass
NVNT	a	5785	Ant2	8.41	0.76	9.17	30	Pass
NVNT	a	5825	Ant1	8.63	0.73	9.36	30	Pass
NVNT	a	5825	Ant2	8.36	0.73	9.09	30	Pass
NVNT	n20	5180	Ant1	11.95	0.85	12.8	30	Pass
NVNT	n20	5180	Ant2	11.85	0.89	12.74	30	Pass
NVNT	n20	5180	Ant1	8.2	0.78	8.98	30	Pass
NVNT	n20	5180	Ant2	9.72	0.78	10.5	30	Pass
NVNT	n20	5180	Sum	12.04	0.78	12.82	30	Pass
NVNT	n20	5220	Ant1	12.58	0.85	13.43	30	Pass
NVNT	n20	5220	Ant2	12.25	0.85	13.1	30	Pass
NVNT	n20	5220	Ant1	9.03	0.77	9.8	30	Pass
NVNT	n20	5220	Ant2	9.9	0.77	10.67	30	Pass
NVNT	n20	5220	Sum	12.5	0.77	13.27	30	Pass
NVNT	n20	5240	Ant1	12.77	0.89	13.66	30	Pass
NVNT	n20	5240	Ant2	12.53	0.89	13.42	30	Pass
NVNT	n20	5240	Ant1	9.33	0.77	10.1	30	Pass
NVNT	n20	5240	Ant2	10.22	0.77	10.99	30	Pass
NVNT	n20	5240	Sum	12.81	0.77	13.58	30	Pass
NVNT	n20	5745	Ant1	7.86	0.85	8.71	30	Pass
NVNT	n20	5745	Ant2	8.51	0.85	9.36	30	Pass
NVNT	n20	5745	Ant1	5.27	0.81	6.08	30	Pass
NVNT	n20	5745	Ant2	5.15	0.81	5.96	30	Pass
NVNT	n20	5745	Sum	8.22	0.81	9.03	30	Pass
NVNT	n20	5785	Ant1	8.24	0.85	9.09	30	Pass
NVNT	n20	5785	Ant2	8.34	0.85	9.19	30	Pass



NVNT	n20	5785	Ant1	5.58	0.81	6.39	30	Pass
NVNT	n20	5785	Ant2	4.97	0.81	5.78	30	Pass
NVNT	n20	5785	Sum	8.3	0.81	9.11	30	Pass
NVNT	n20	5825	Ant1	8.34	0.89	9.23	30	Pass
NVNT	n20	5825	Ant2	8.61	0.85	9.46	30	Pass
NVNT	n20	5825	Ant1	5.87	0.78	6.65	30	Pass
NVNT	n20	5825	Ant2	5.25	0.78	6.03	30	Pass
NVNT	n20	5825	Sum	8.58	0.78	9.36	30	Pass
NVNT	n40	5190	Ant1	12.24	1.45	13.69	30	Pass
NVNT	n40	5190	Ant2	11.88	1.45	13.33	30	Pass
NVNT	n40	5190	Ant1	7.65	1.5	9.15	30	Pass
NVNT	n40	5190	Ant2	9.05	1.5	10.55	30	Pass
NVNT	n40	5190	Sum	11.42	1.5	12.92	30	Pass
NVNT	n40	5230	Ant1	12.42	1.5	13.92	30	Pass
NVNT	n40	5230	Ant2	11.84	1.5	13.34	30	Pass
NVNT	n40	5230	Ant1	8.62	1.45	10.07	30	Pass
NVNT	n40	5230	Ant2	9.6	1.45	11.05	30	Pass
NVNT	n40	5230	Sum	12.15	1.45	13.6	30	Pass
NVNT	n40	5755	Ant1	7.89	1.5	9.39	30	Pass
NVNT	n40	5755	Ant2	7.83	1.5	9.33	30	Pass
NVNT	n40	5755	Ant1	4.95	1.5	6.45	30	Pass
NVNT	n40	5755	Ant2	4.57	1.5	6.07	30	Pass
NVNT	n40	5755	Sum	7.77	1.5	9.27	30	Pass
NVNT	n40	5795	Ant1	8.19	1.45	9.64	30	Pass
NVNT	n40	5795	Ant2	8.01	1.45	9.46	30	Pass
NVNT	n40	5795	Ant1	5.11	1.5	6.61	30	Pass
NVNT	n40	5795	Ant2	4.37	1.5	5.87	30	Pass
NVNT	n40	5795	Sum	7.77	1.5	9.27	30	Pass
NVNT	ac20	5180	Ant1	12.16	0.89	13.05	30	Pass
NVNT	ac20	5180	Ant2	12.13	0.85	12.98	30	Pass
NVNT	ac20	5180	Ant1	8.25	0.77	9.02	30	Pass
NVNT	ac20	5180	Ant2	9.44	0.77	10.21	30	Pass
NVNT	ac20	5180	Sum	11.9	0.77	12.67	30	Pass
NVNT	ac20	5220	Ant1	12.61	0.85	13.46	30	Pass
NVNT	ac20	5220	Ant2	12.42	0.89	13.31	30	Pass
NVNT	ac20	5220	Ant1	9.14	0.77	9.91	30	Pass
NVNT	ac20	5220	Ant2	9.9	0.77	10.67	30	Pass
NVNT	ac20	5220	Sum	12.55	0.77	13.32	30	Pass





NVNT	ac20	5240	Ant1	12.81	0.85	13.66	30	Pass
NVNT	ac20	5240	Ant2	12.3	0.85	13.15	30	Pass
NVNT	ac20	5240	Ant1	9.31	0.77	10.08	30	Pass
NVNT	ac20	5240	Ant2	9.64	0.77	10.41	30	Pass
NVNT	ac20	5240	Sum	12.49	0.77	13.26	30	Pass
NVNT	ac20	5745	Ant1	7.96	0.85	8.81	30	Pass
NVNT	ac20	5745	Ant2	8.32	0.85	9.17	30	Pass
NVNT	ac20	5745	Ant1	5.43	0.77	6.2	30	Pass
NVNT	ac20	5745	Ant2	4.87	0.77	5.64	30	Pass
NVNT	ac20	5745	Sum	8.17	0.77	8.94	30	Pass
NVNT	ac20	5785	Ant1	8.16	0.85	9.01	30	Pass
NVNT	ac20	5785	Ant2	8.47	0.85	9.32	30	Pass
NVNT	ac20	5785	Ant1	5.41	0.77	6.18	30	Pass
NVNT	ac20	5785	Ant2	5.01	0.77	5.78	30	Pass
NVNT	ac20	5785	Sum	8.22	0.77	8.99	30	Pass
NVNT	ac20	5825	Ant1	8.31	0.85	9.16	30	Pass
NVNT	ac20	5825	Ant2	8.25	0.85	9.1	30	Pass
NVNT	ac20	5825	Ant1	5.68	0.78	6.46	30	Pass
NVNT	ac20	5825	Ant2	5.12	0.78	5.9	30	Pass
NVNT	ac20	5825	Sum	8.42	0.78	9.2	30	Pass
NVNT	ac40	5190	Ant1	12.08	1.43	13.51	30	Pass
NVNT	ac40	5190	Ant2	11.76	1.43	13.19	30	Pass
NVNT	ac40	5190	Ant1	8.09	1.45	9.54	30	Pass
NVNT	ac40	5190	Ant2	9.26	1.45	10.71	30	Pass
NVNT	ac40	5190	Sum	11.72	1.45	13.17	30	Pass
NVNT	ac40	5230	Ant1	12.74	1.5	14.24	30	Pass
NVNT	ac40	5230	Ant2	12.38	1.5	13.88	30	Pass
NVNT	ac40	5230	Ant1	8.59	1.5	10.09	30	Pass
NVNT	ac40	5230	Ant2	9.55	1.5	11.05	30	Pass
NVNT	ac40	5230	Sum	12.11	1.5	13.61	30	Pass
NVNT	ac40	5755	Ant1	8.13	1.43	9.56	30	Pass
NVNT	ac40	5755	Ant2	7.54	1.43	8.97	30	Pass
NVNT	ac40	5755	Ant1	4.82	1.43	6.25	30	Pass
NVNT	ac40	5755	Ant2	4.41	1.43	5.84	30	Pass
NVNT	ac40	5755	Sum	7.63	1.43	9.06	30	Pass
NVNT	ac40	5795	Ant1	8.06	1.43	9.49	30	Pass
NVNT	ac40	5795	Ant2	7.73	1.43	9.16	30	Pass
NVNT	ac40	5795	Ant1	5.2	1.43	6.63	30	Pass

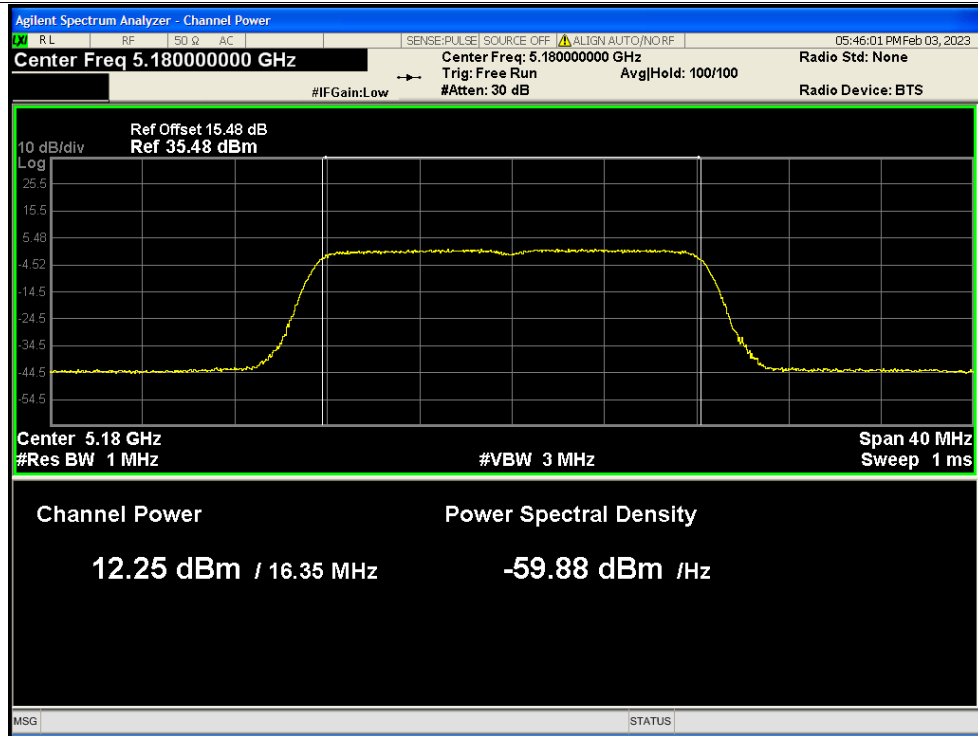


NVNT	ac40	5795	Ant2	4.38	1.43	5.81	30	Pass
NVNT	ac40	5795	Sum	7.82	1.43	9.25	30	Pass
NVNT	ac80	5210	Ant1	10.85	2.51	13.36	30	Pass
NVNT	ac80	5210	Ant2	10.54	2.51	13.05	30	Pass
NVNT	ac80	5210	Ant1	7.34	2.65	9.99	30	Pass
NVNT	ac80	5210	Ant2	8.27	2.65	10.92	30	Pass
NVNT	ac80	5210	Sum	10.84	2.65	13.49	30	Pass
NVNT	ac80	5775	Ant1	7	2.65	9.65	30	Pass
NVNT	ac80	5775	Ant2	6.88	2.51	9.39	30	Pass
NVNT	ac80	5775	Ant1	4.13	2.51	6.64	30	Pass
NVNT	ac80	5775	Ant2	3.53	2.51	6.04	30	Pass
NVNT	ac80	5775	Sum	6.85	2.51	9.36	30	Pass

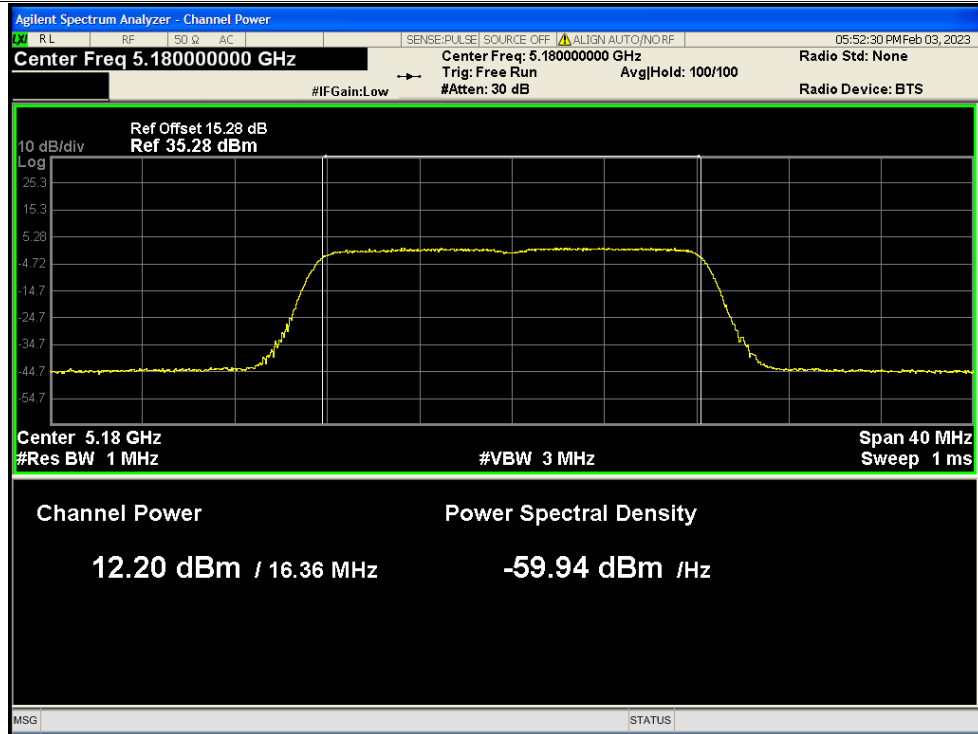


Test Graphs

Power NVNT a 5180MHz Ant1

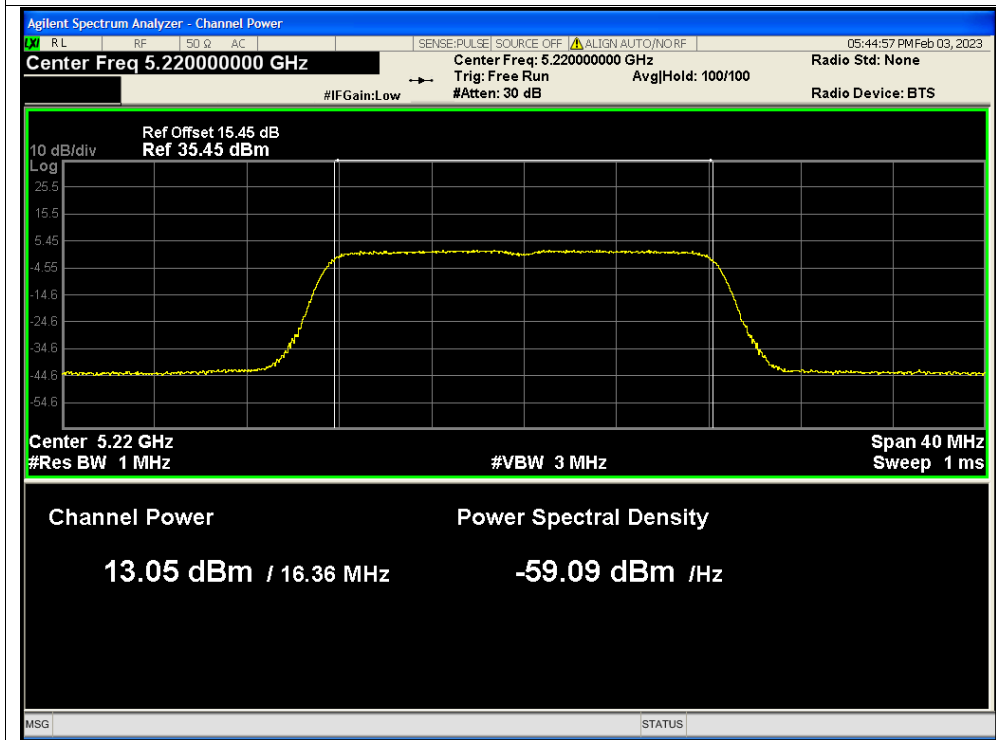


Power NVNT a 5180MHz Ant2

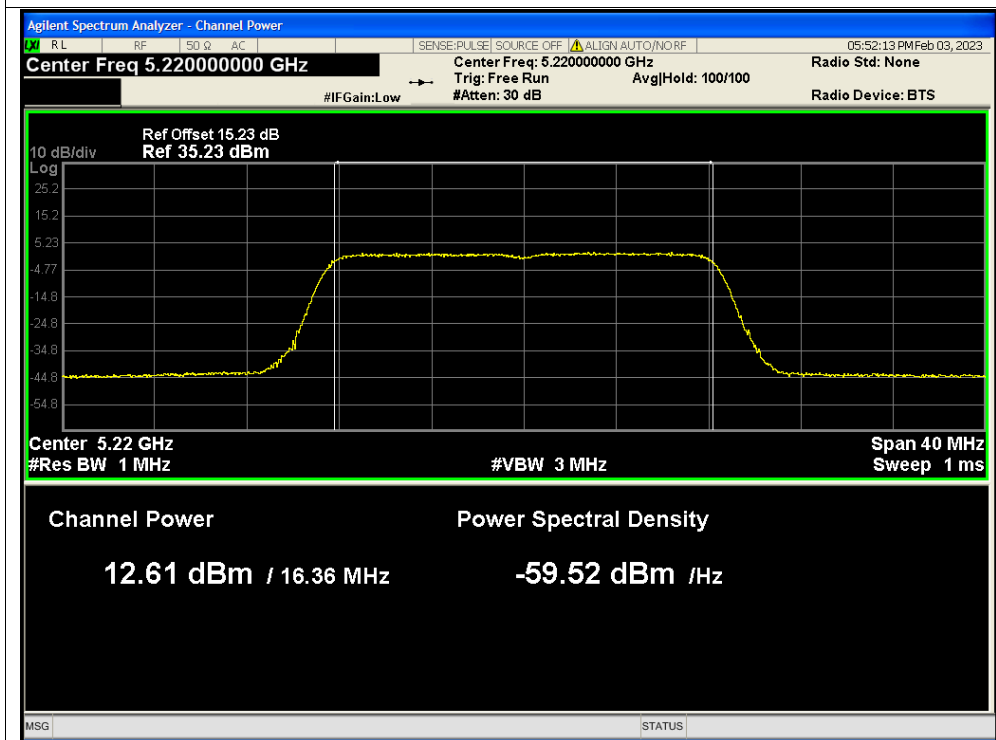




Power NVNT a 5220MHz Ant1

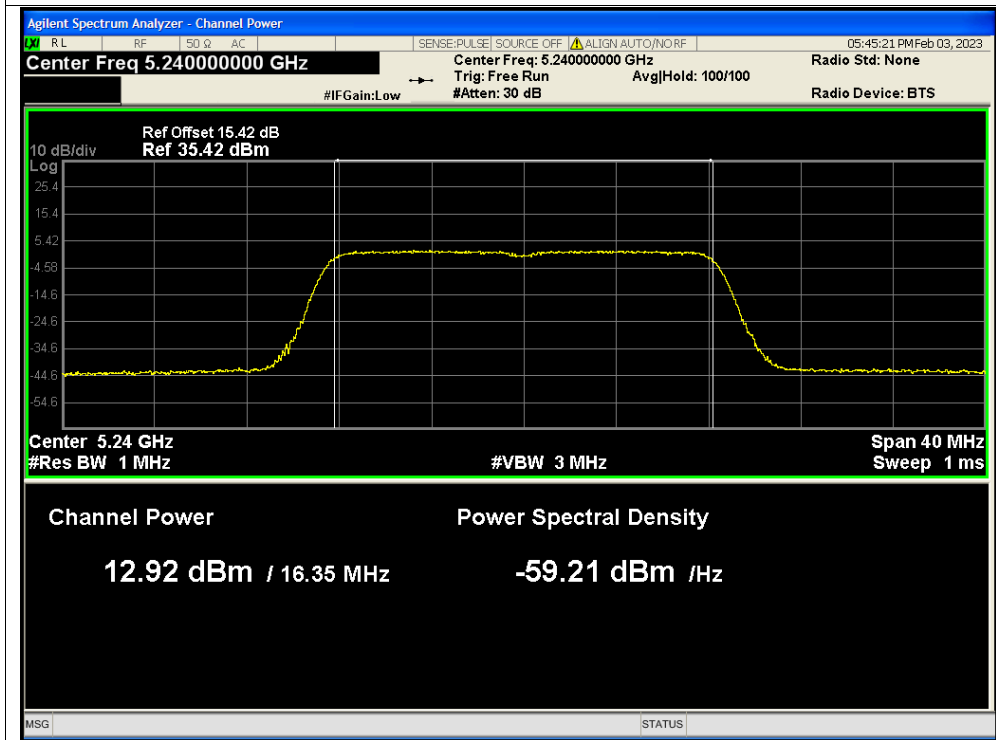


Power NVNT a 5220MHz Ant2

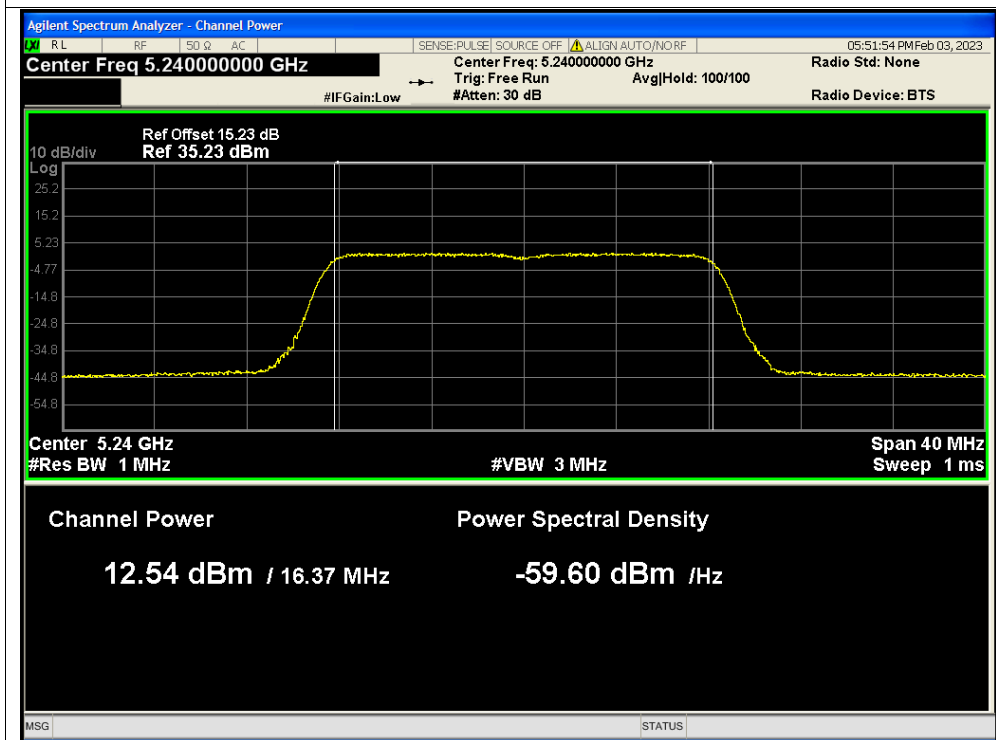




Power NVNT a 5240MHz Ant1

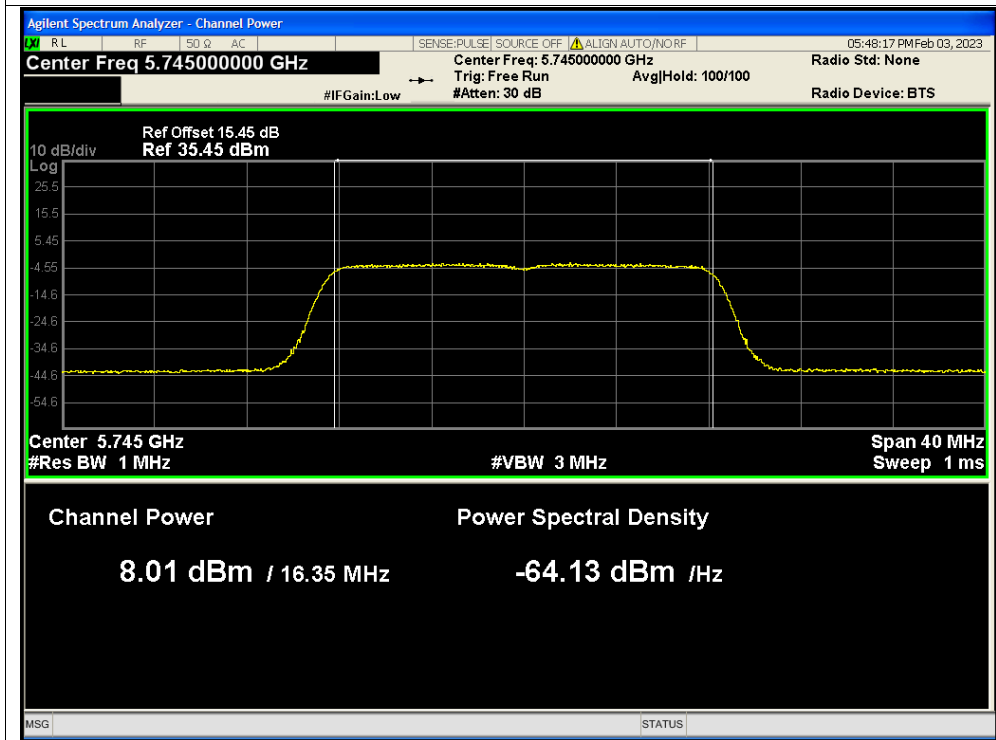


Power NVNT a 5240MHz Ant2

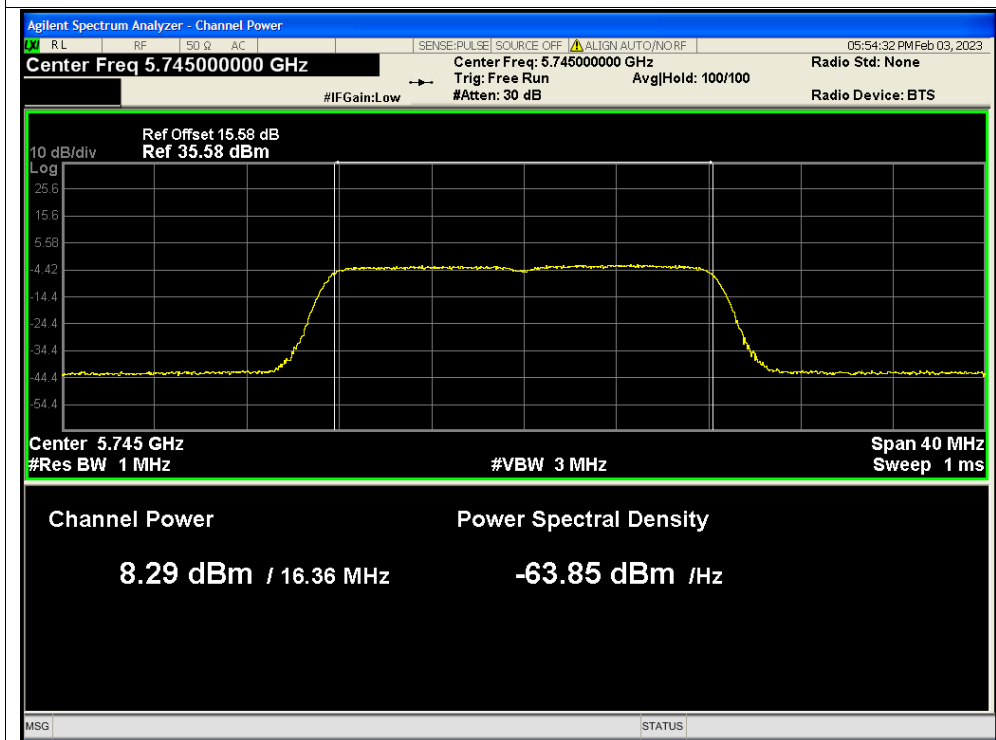




Power NVNT a 5745MHz Ant1

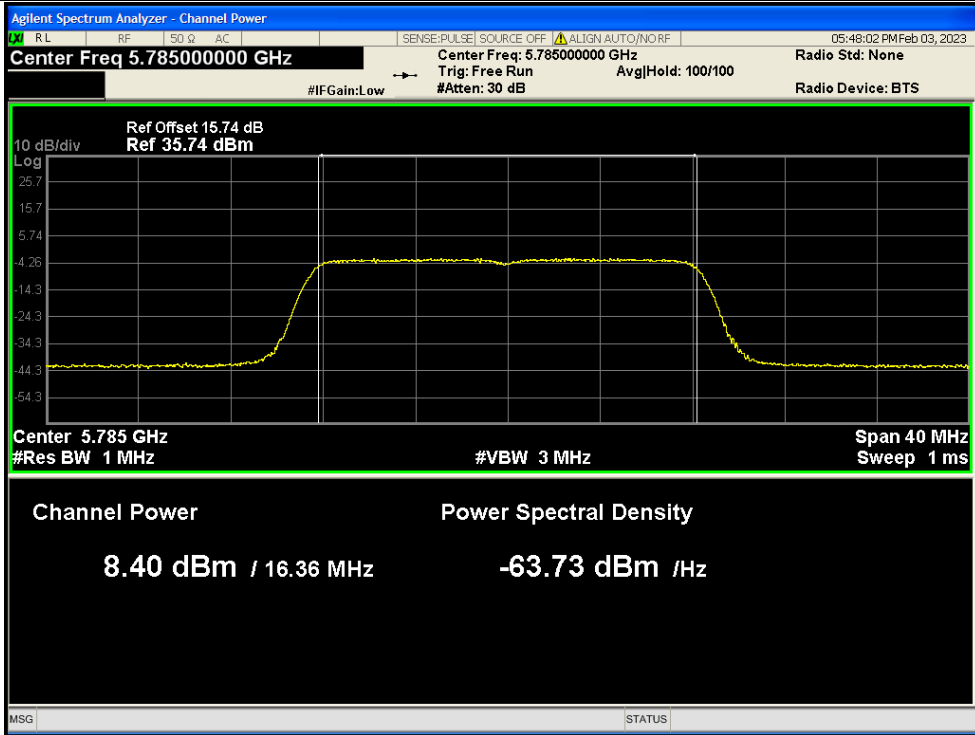


Power NVNT a 5745MHz Ant2

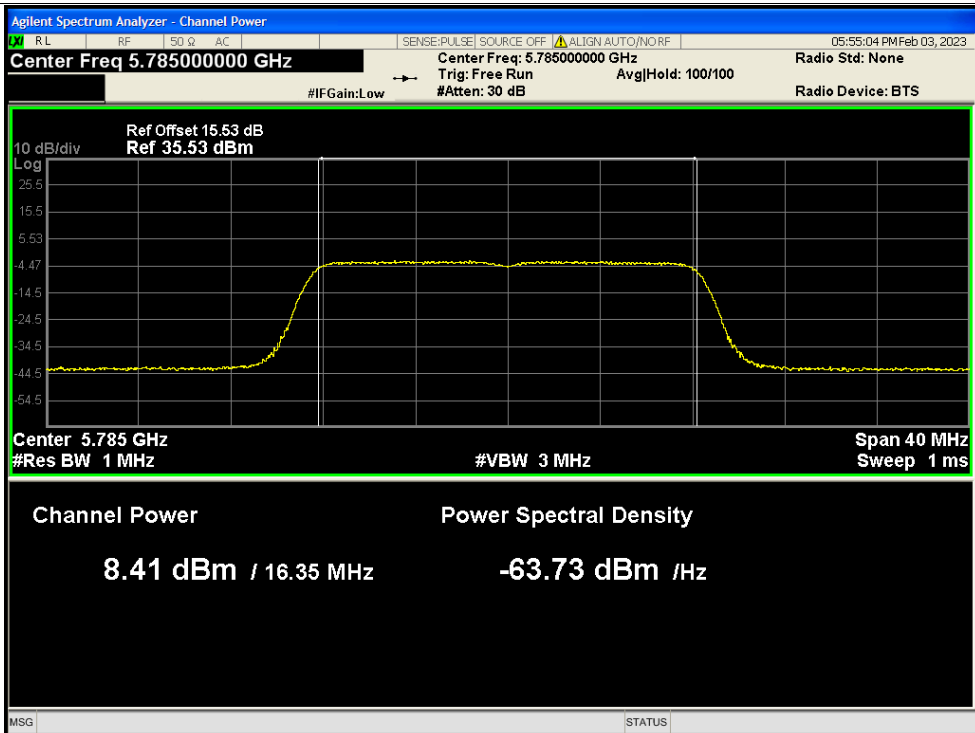




Power NVNT a 5785MHz Ant1

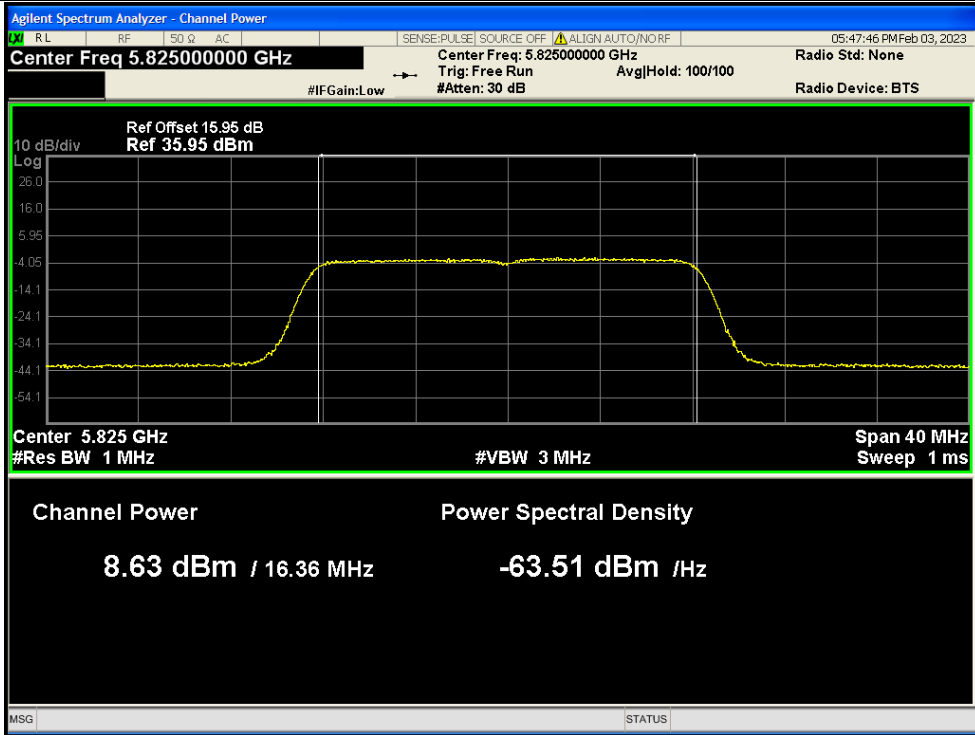


Power NVNT a 5785MHz Ant2

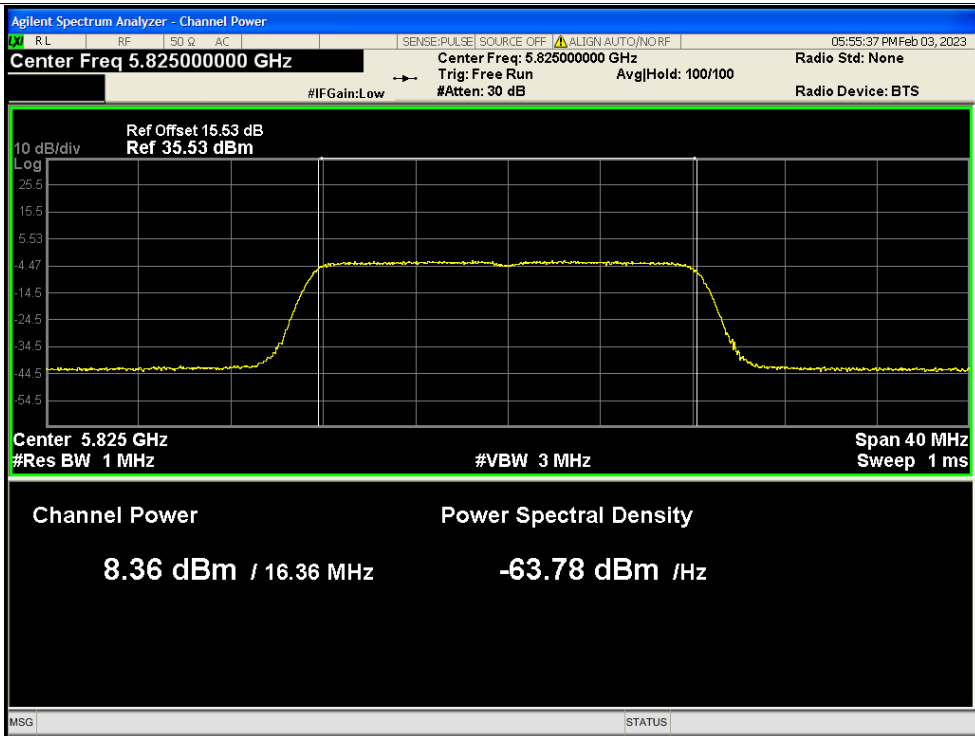




Power NVNT a 5825MHz Ant1



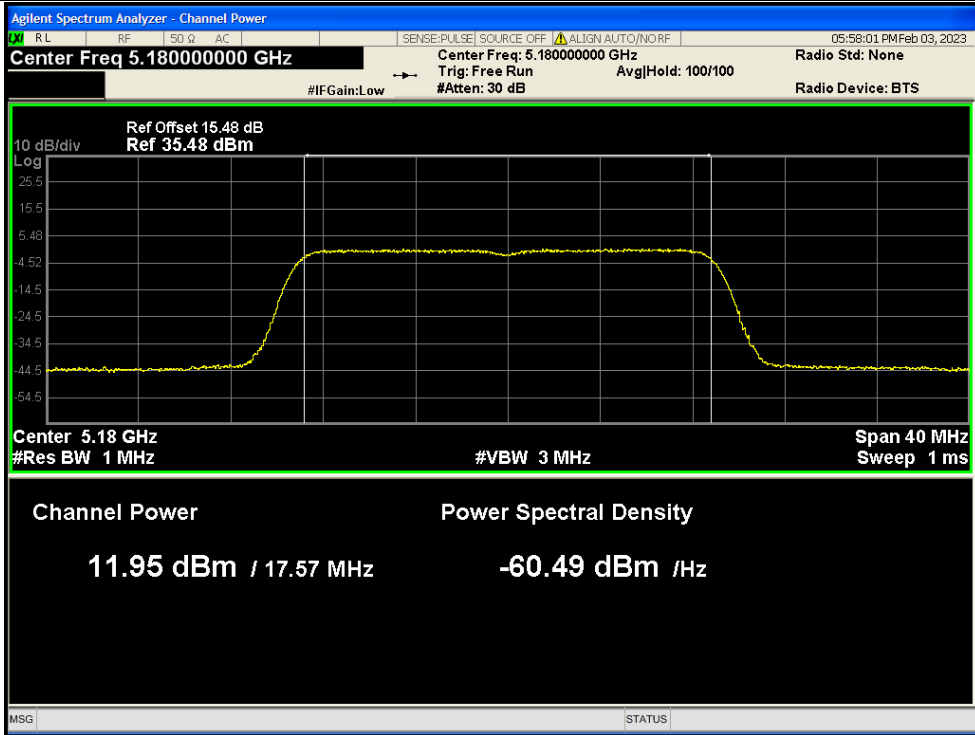
Power NVNT a 5825MHz Ant2



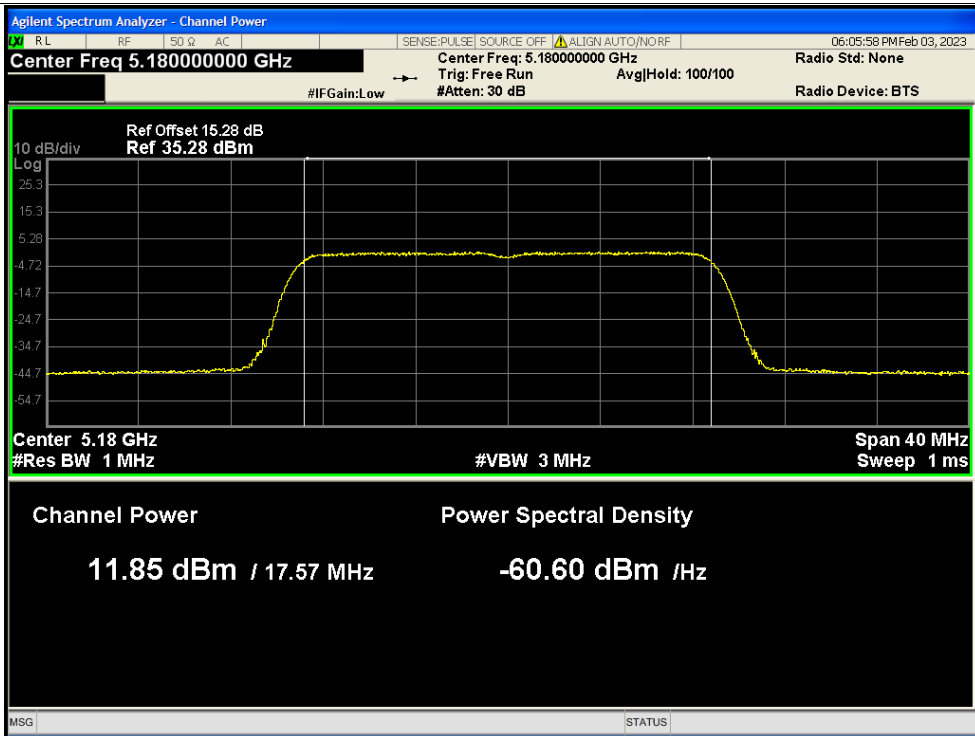




Power NVNT n20 5180MHz Ant1

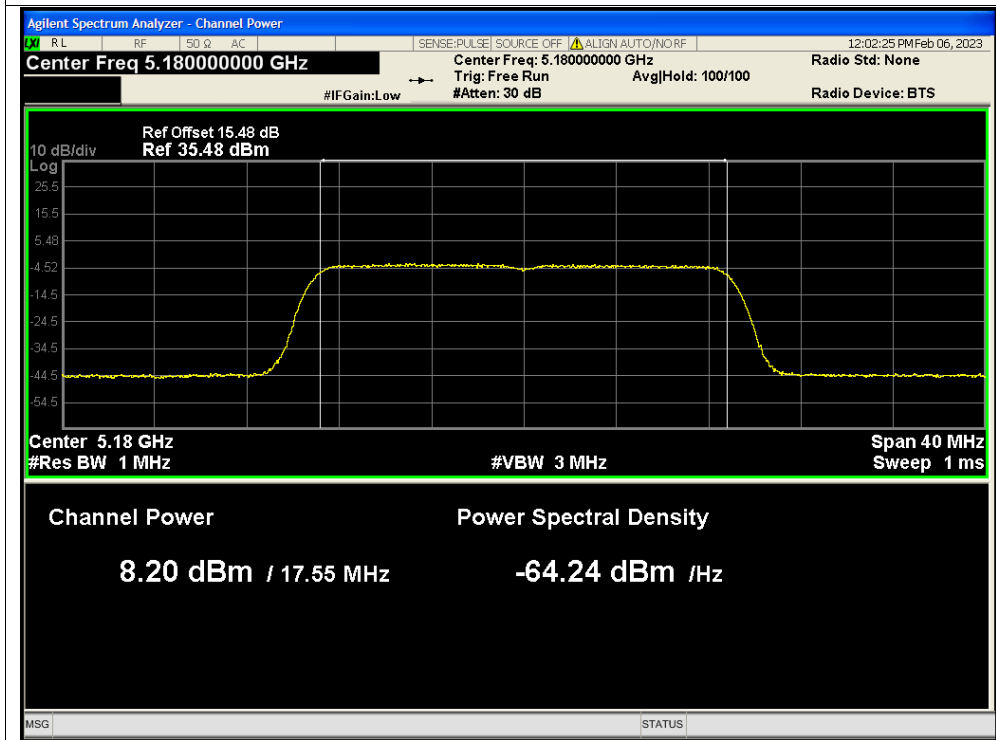


Power NVNT n20 5180MHz Ant2

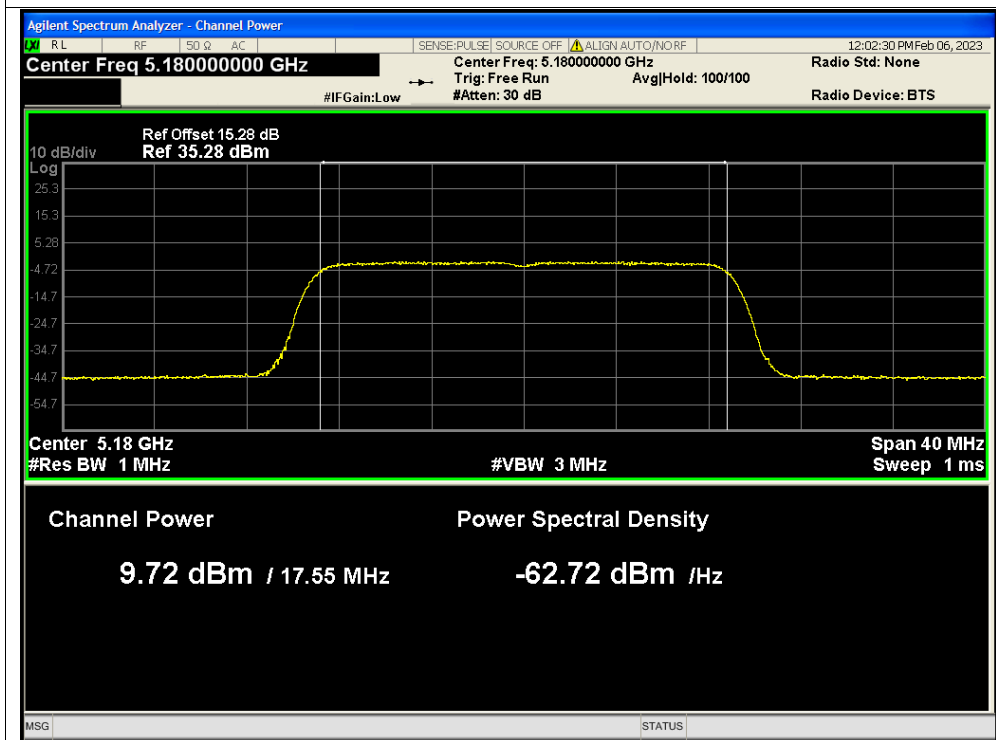




Power NVNT n20 5180MHz Ant1

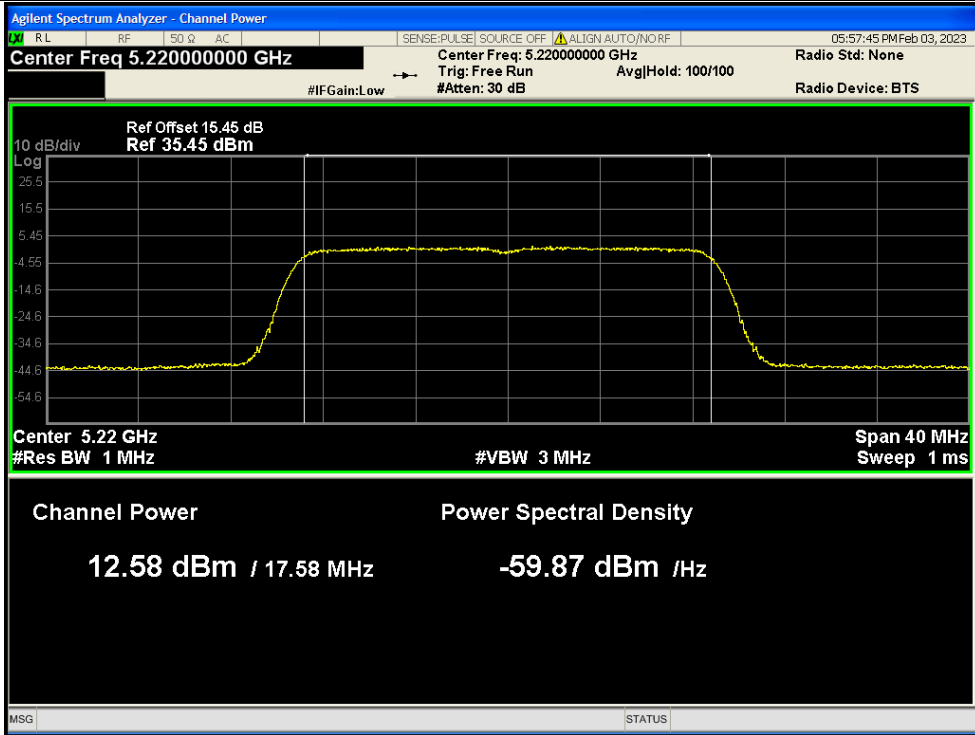


Power NVNT n20 5180MHz Ant2

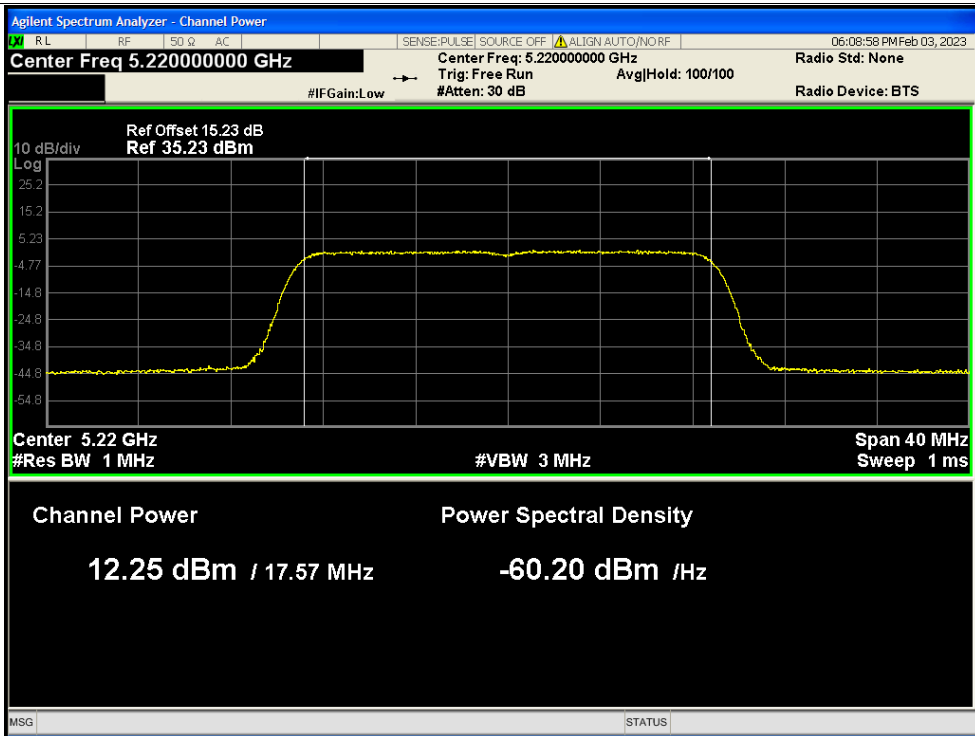




Power NVNT n20 5220MHz Ant1

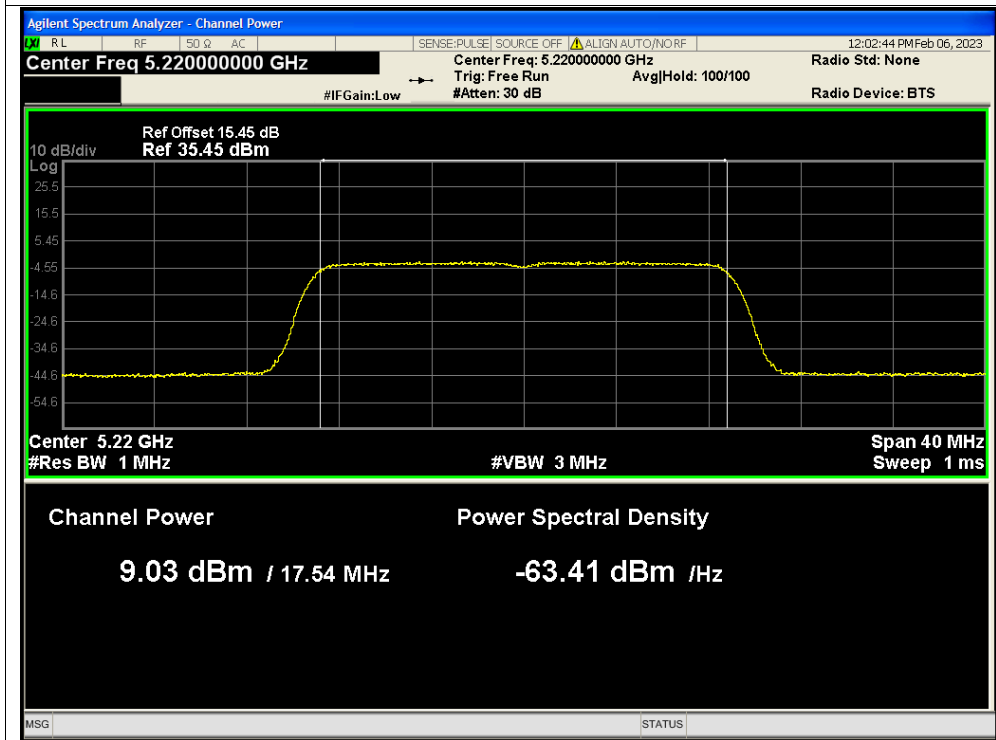


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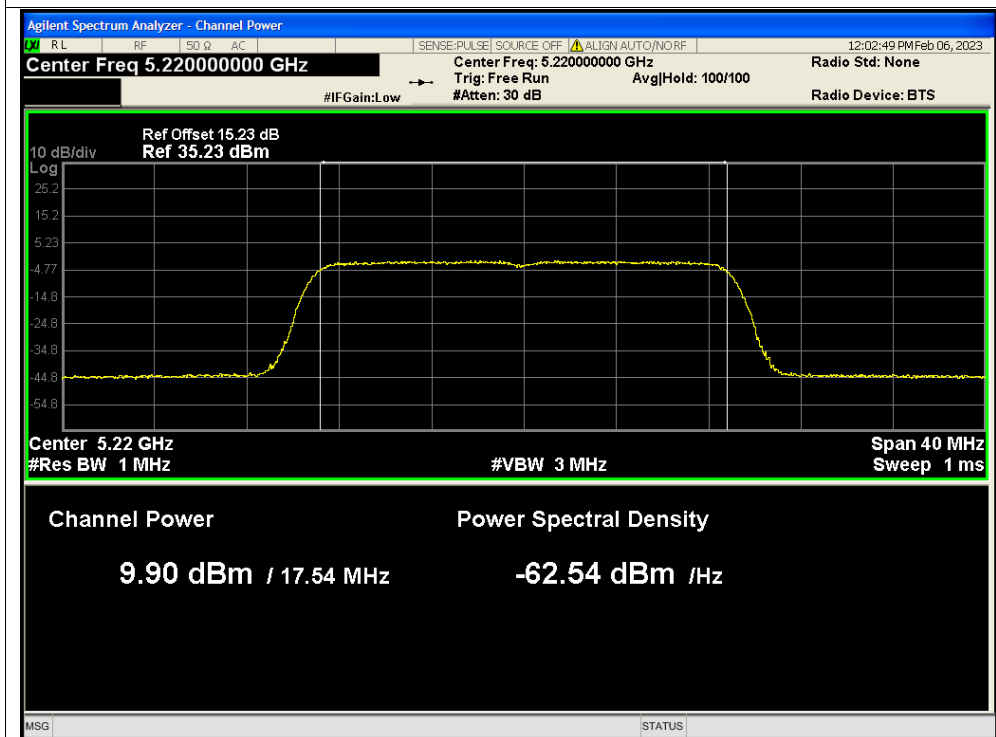




Power NVNT n20 5220MHz Ant1

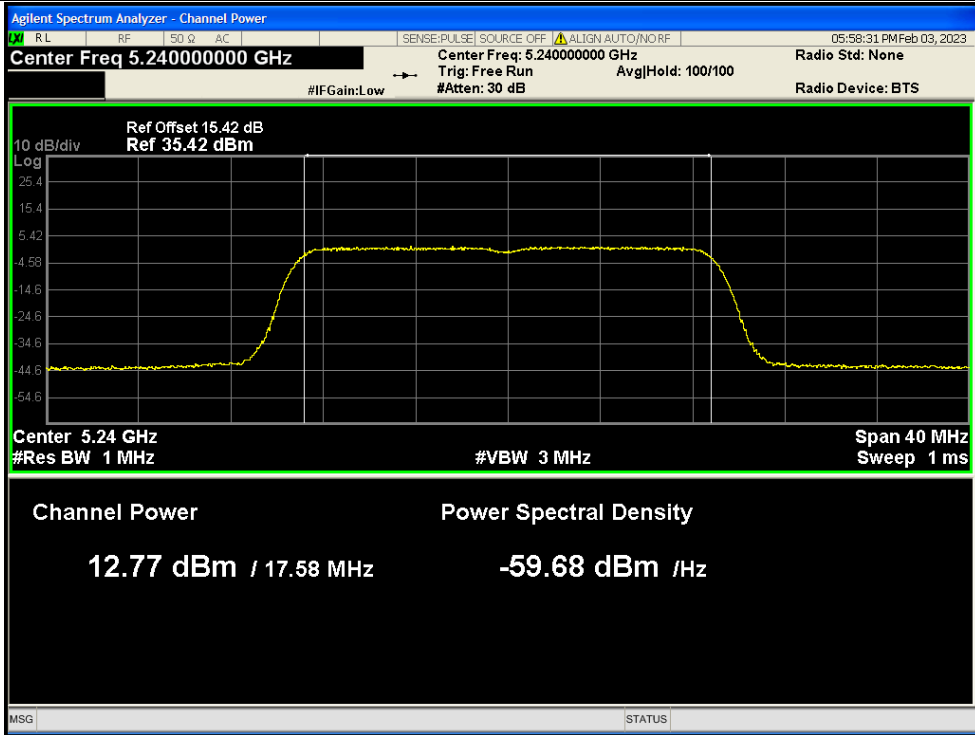


Power NVNT n20 5220MHz Ant2

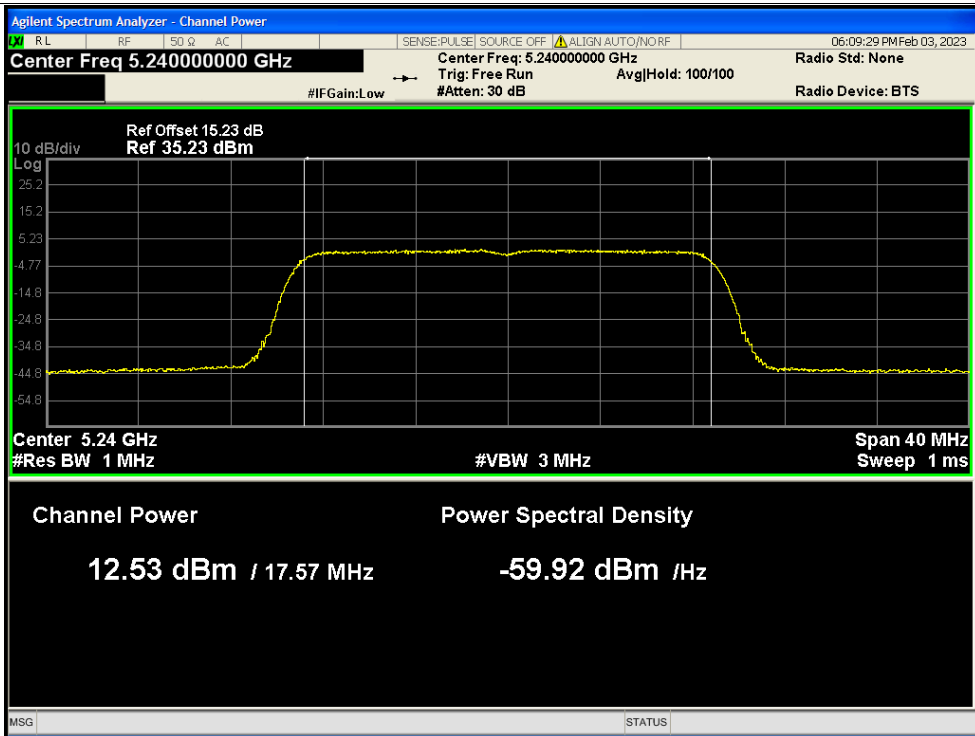




Power NVNT n20 5240MHz Ant1

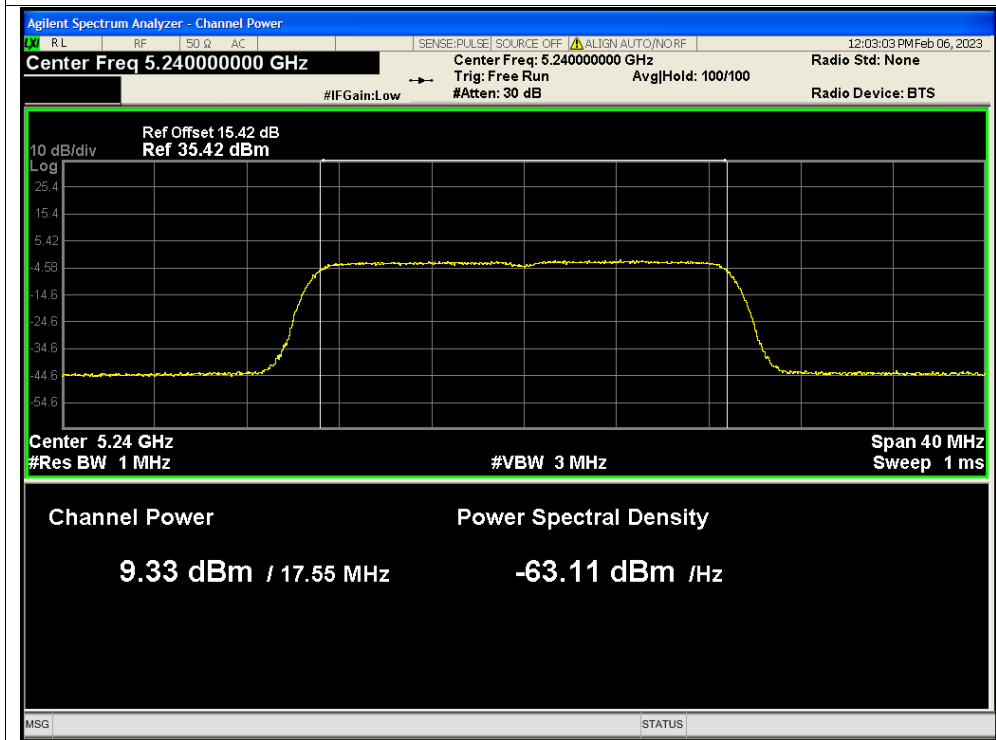


Power NVNT n20 5240MHz Ant2

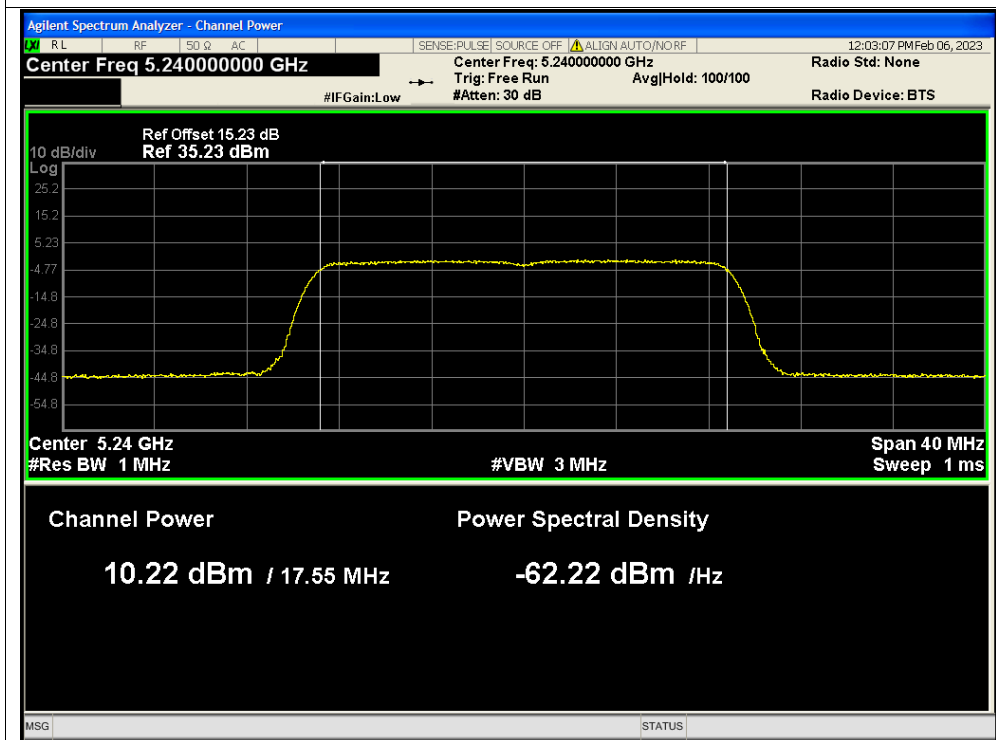




Power NVNT n20 5240MHz Ant1

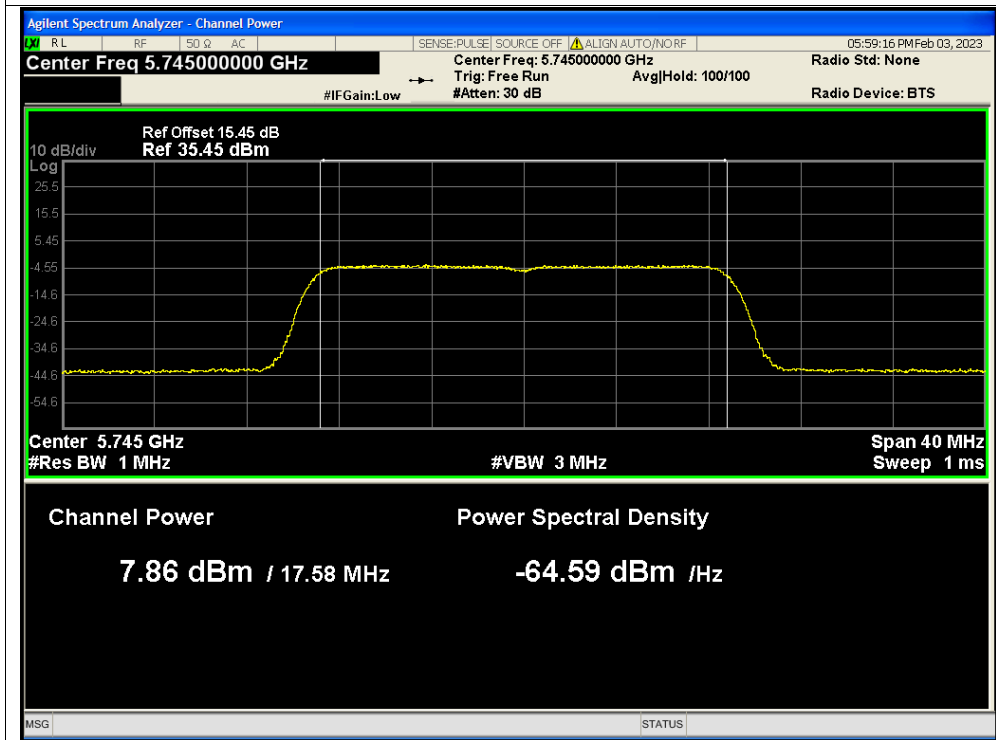


Power NVNT n20 5240MHz Ant2

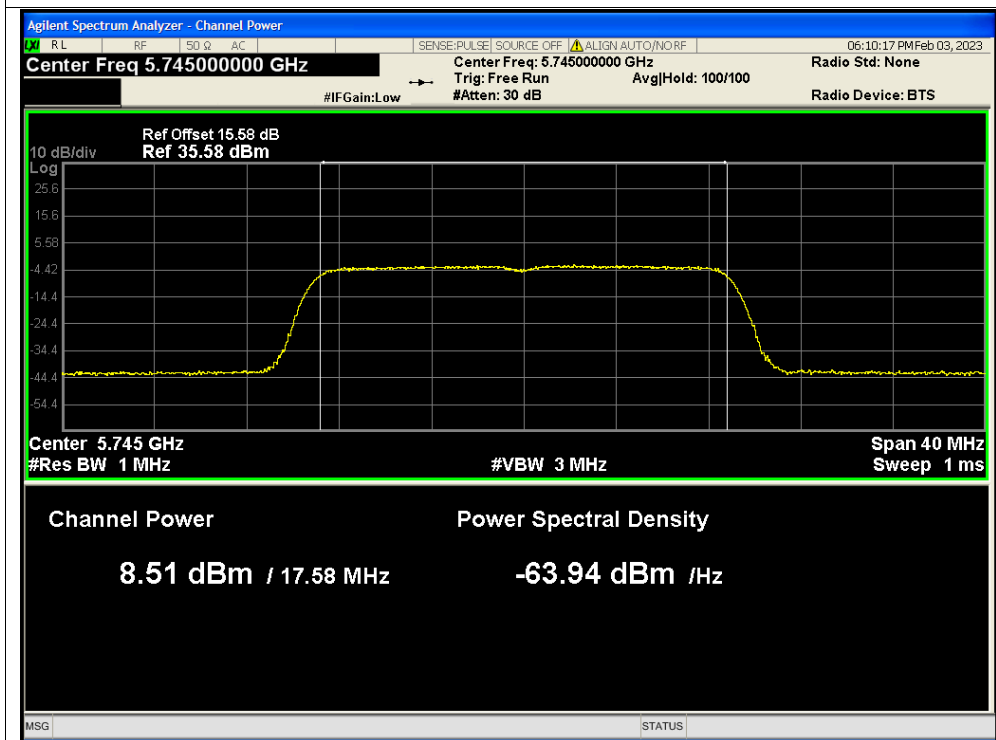




Power NVNT n20 5745MHz Ant1

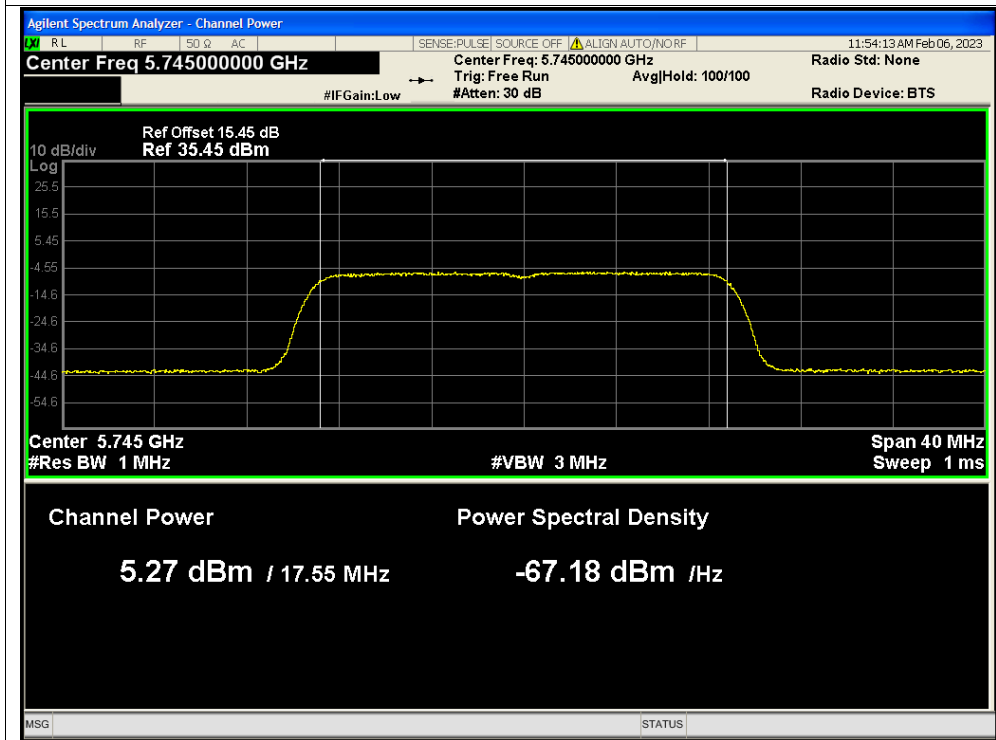


Power NVNT n20 5745MHz Ant2

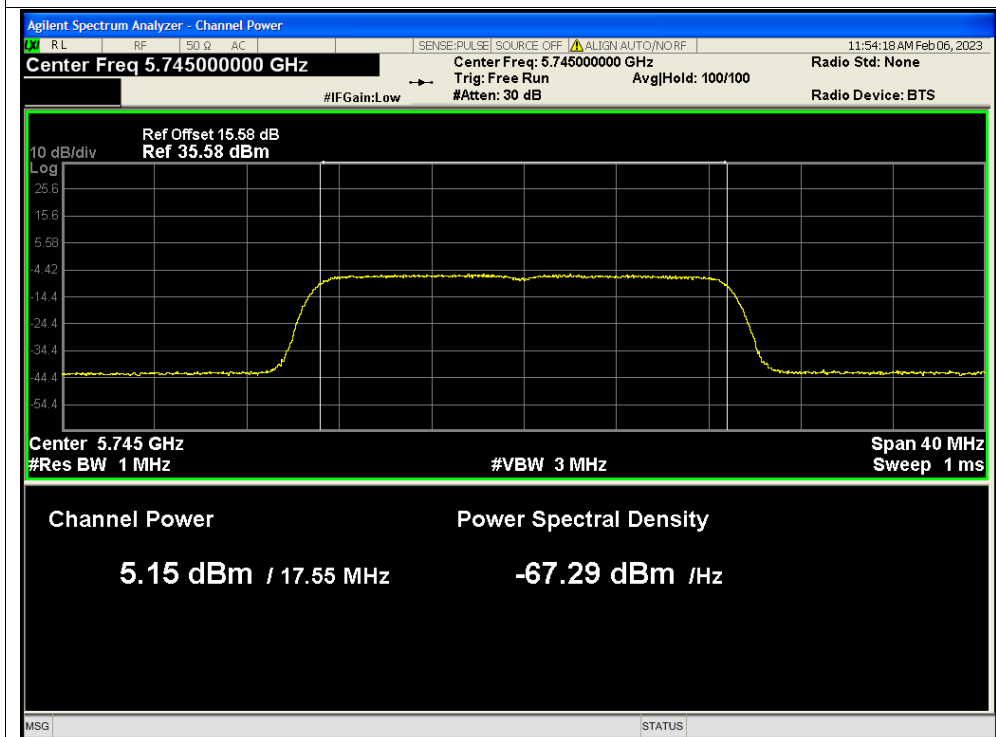




Power NVNT n20 5745MHz Ant1



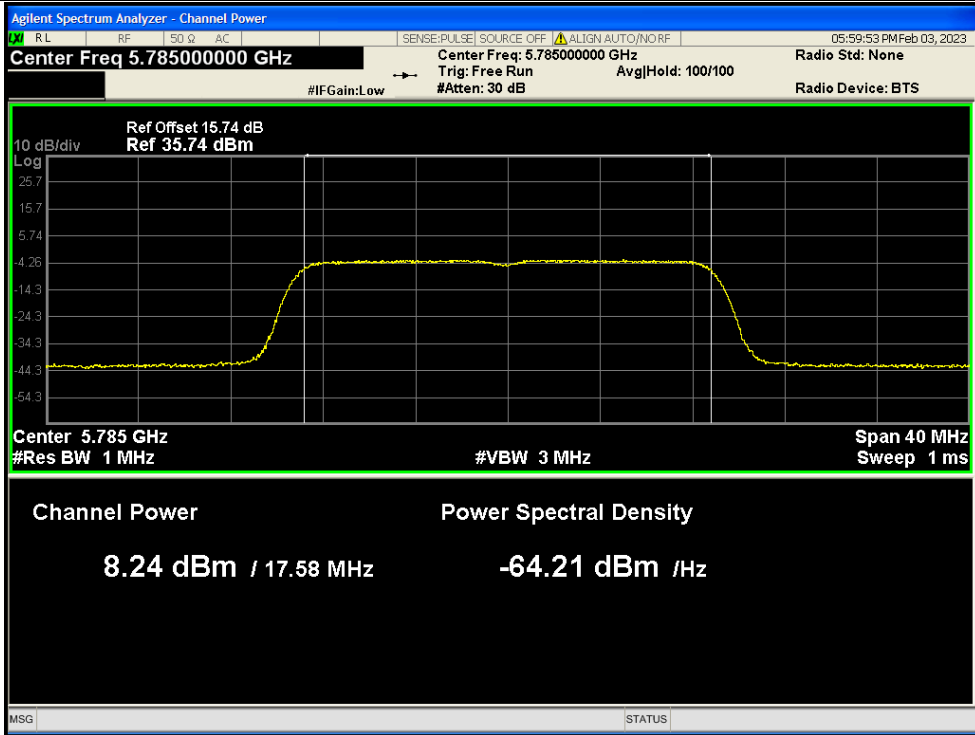
Power NVNT n20 5745MHz Ant2



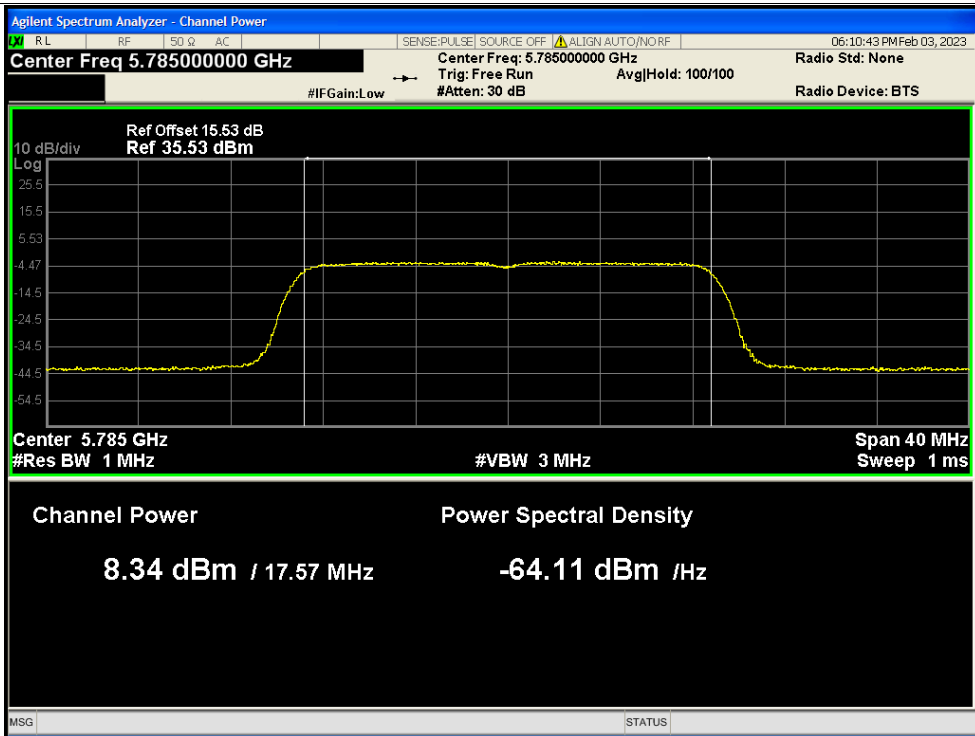




Power NVNT n20 5785MHz Ant1

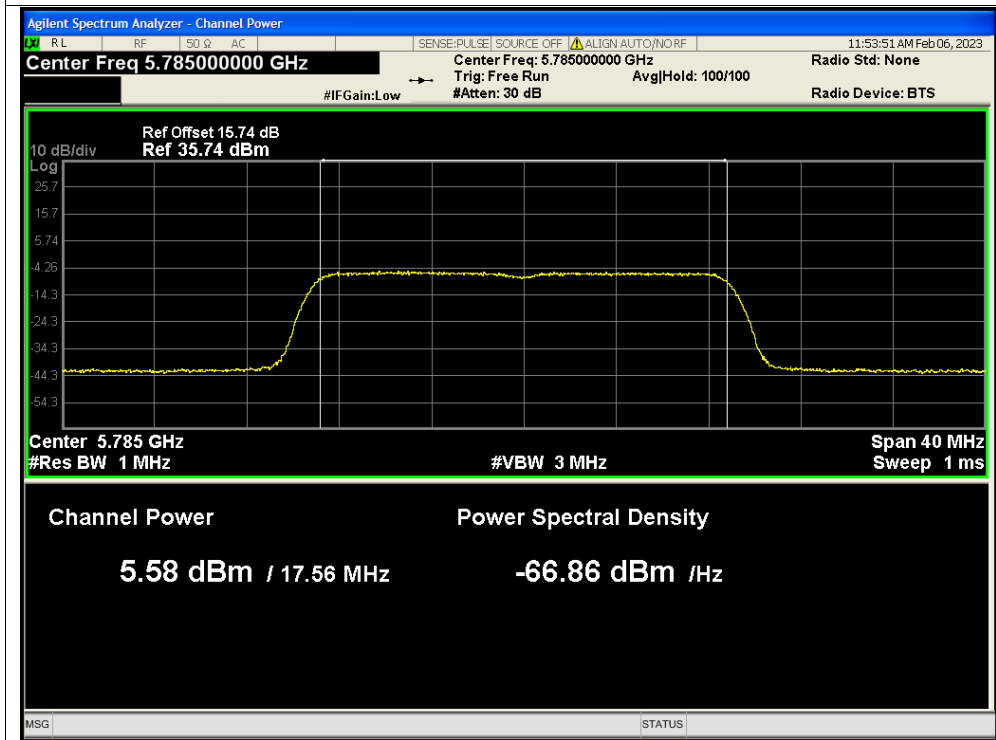


Power NVNT n20 5785MHz Ant2





Power NVNT n20 5785MHz Ant1



Power NVNT n20 5785MHz Ant2

