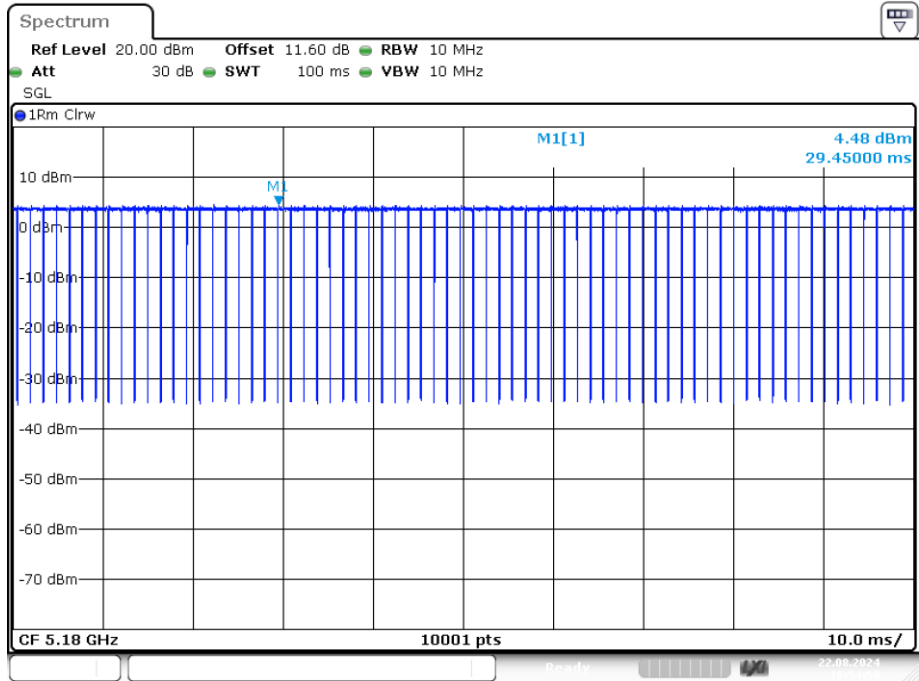
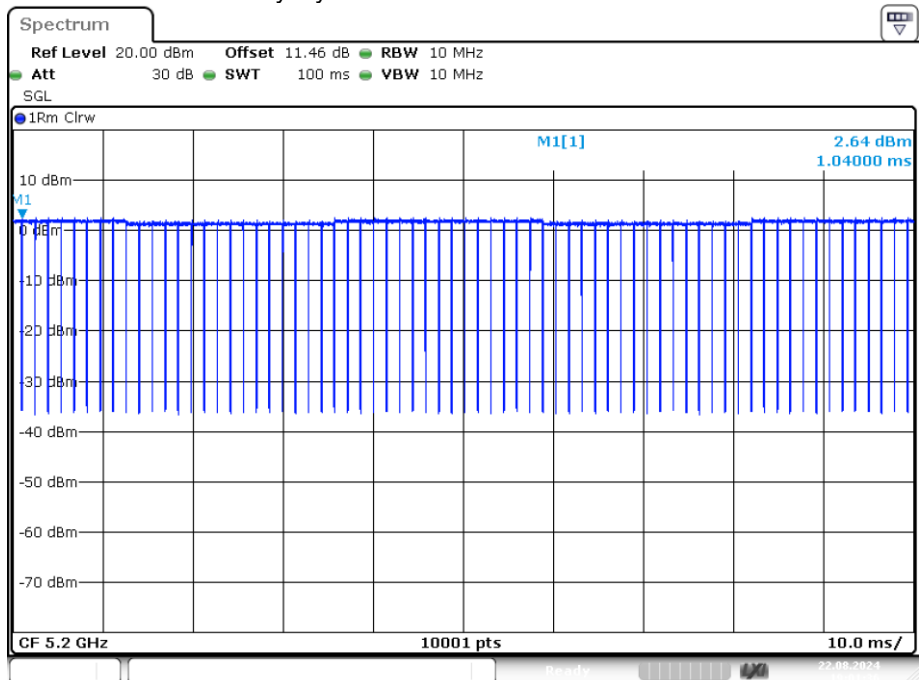


### Duty Cycle NVNT ac20 5180MHz Ant1



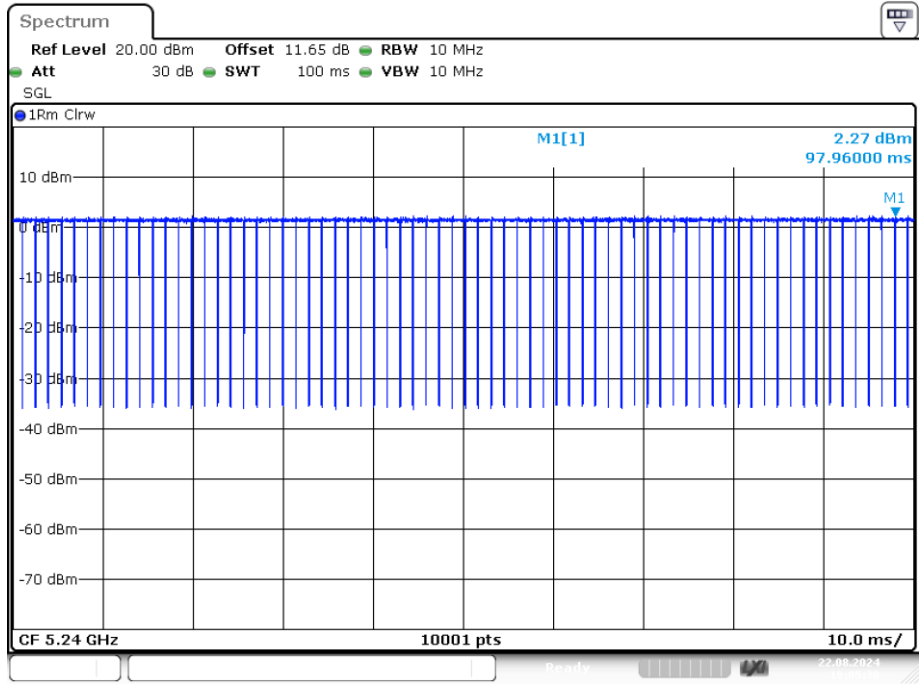
Date: 22.AUG.2024 18:54:59

### Duty Cycle NVNT ac20 5200MHz Ant1



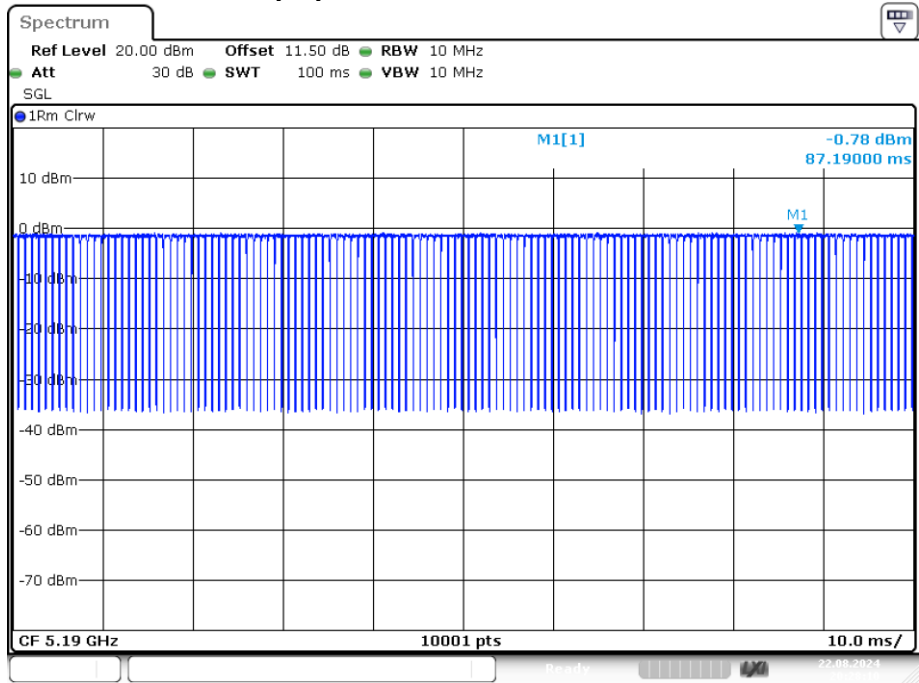
Date: 22.AUG.2024 19:01:36

### Duty Cycle NVNT ac20 5240MHz Ant1



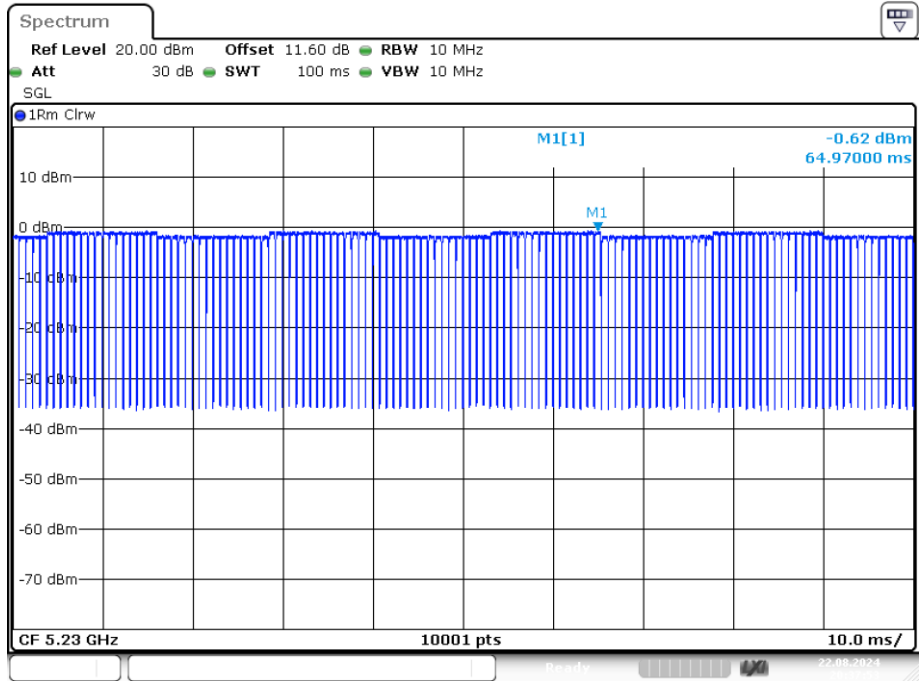
Date: 22.AUG.2024 19:05:30

### Duty Cycle NVNT ac40 5190MHz Ant1



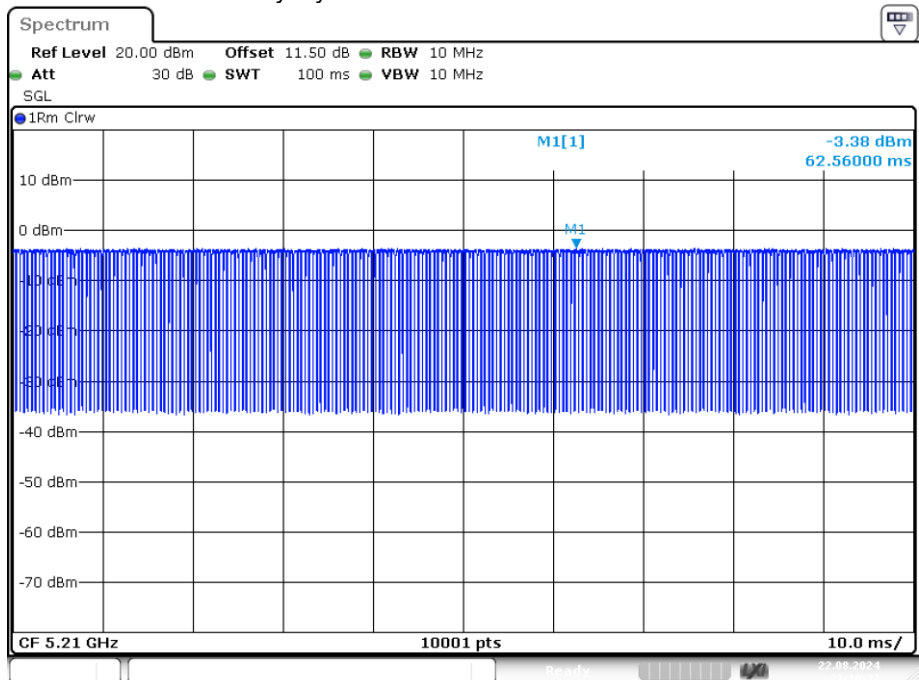
Date: 22.AUG.2024 20:28:11

### Duty Cycle NVNT ac40 5230MHz Ant1



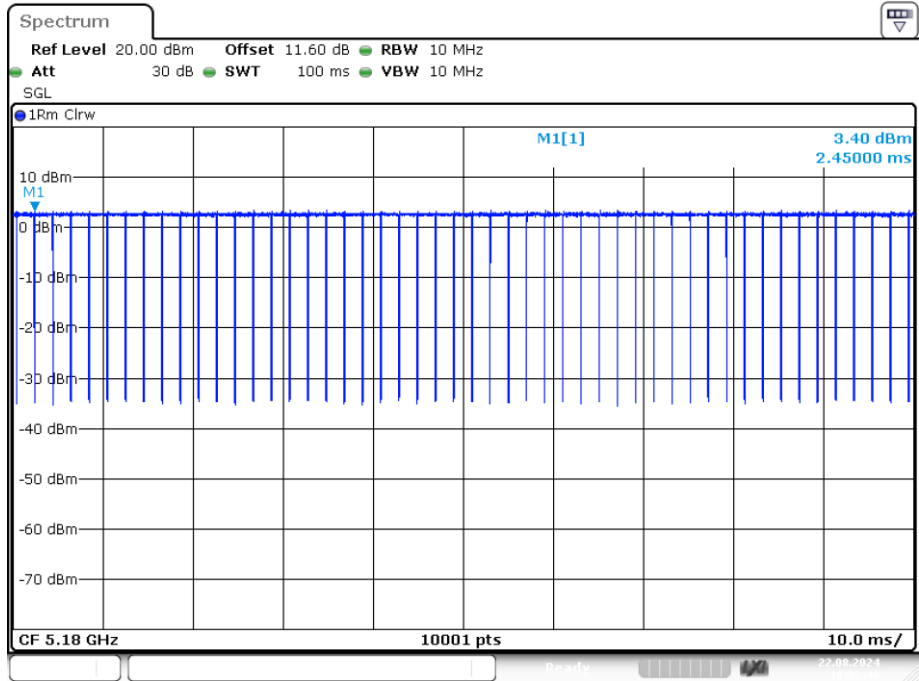
Date: 22.AUG.2024 20:37:53

### Duty Cycle NVNT ac80 5210MHz Ant1



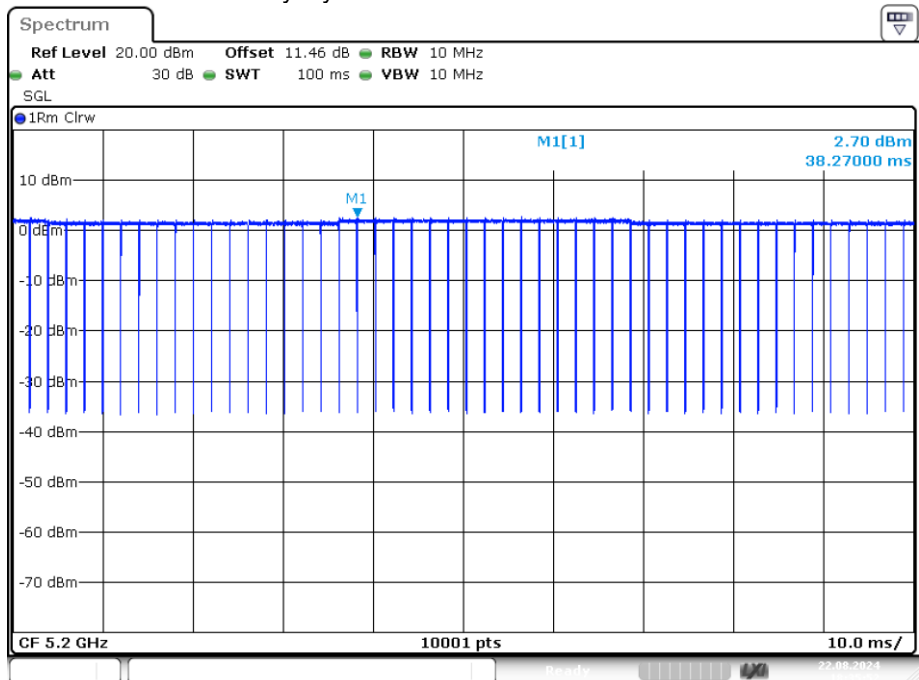
Date: 22.AUG.2024 21:10:32

### Duty Cycle NVNT n20 5180MHz Ant1



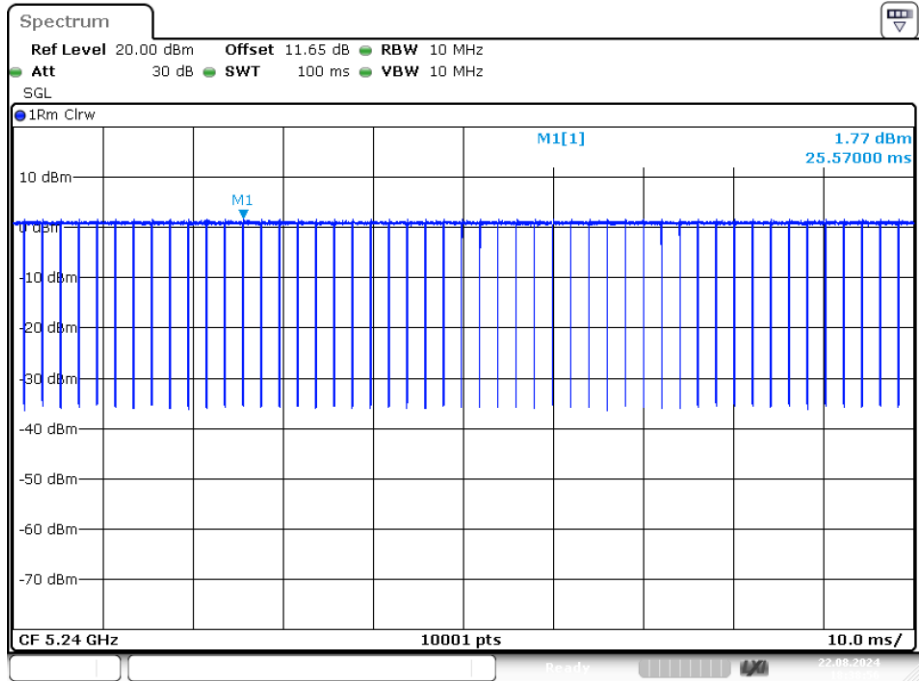
Date: 22.AUG.2024 18:32:47

### Duty Cycle NVNT n20 5200MHz Ant1



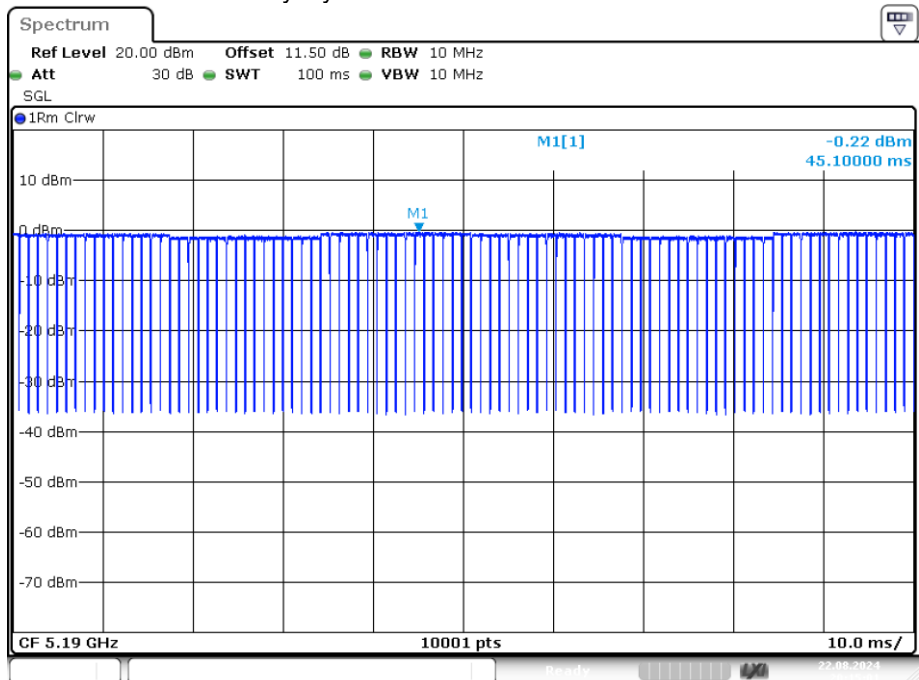
Date: 22.AUG.2024 18:35:52

### Duty Cycle NVNT n20 5240MHz Ant1



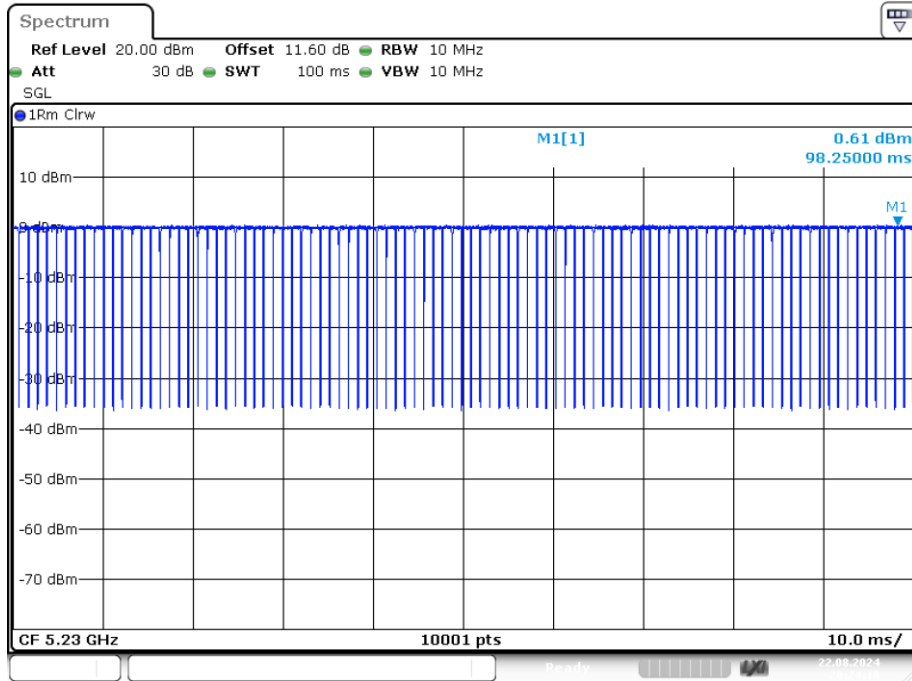
Date: 22.AUG.2024 18:38:56

### Duty Cycle NVNT n40 5190MHz Ant1



Date: 22.AUG.2024 20:15:01

Duty Cycle NVNT n40 5230MHz Ant1



Date: 22.AUG.2024 20:24:18

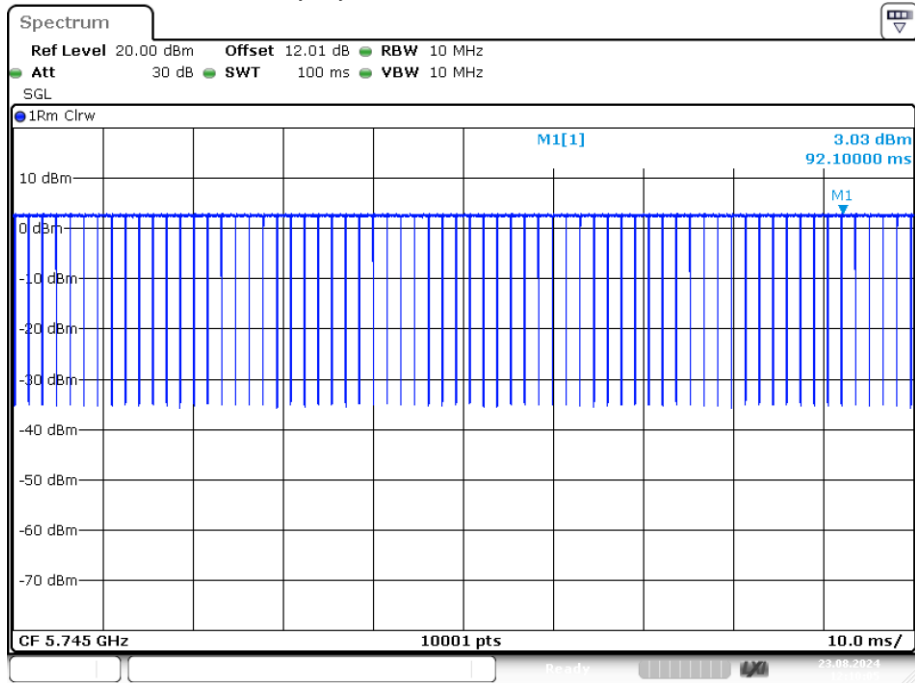
**Band 4 (5725 – 5850 MHz)**

Condition	Mode	Frequency (MHz)	Antenna	Duty cycle factor	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	0.27	14.007	30	Pass
NVNT	a	5785	Ant1	0.27	13.413	30	Pass
NVNT	a	5825	Ant1	0.26	13.784	30	Pass
NVNT	ac20	5745	Ant1	0.29	13.813	30	Pass
NVNT	ac20	5785	Ant1	0.29	14.059	30	Pass
NVNT	ac20	5825	Ant1	0.29	13.323	30	Pass
NVNT	ac40	5755	Ant1	0.58	13.766	30	Pass
NVNT	ac40	5795	Ant1	0.56	13.363	30	Pass
NVNT	ac80	5775	Ant1	1.11	13.668	30	Pass
NVNT	n20	5745	Ant1	0.2	13.801	30	Pass
NVNT	n20	5785	Ant1	0.21	14.126	30	Pass
NVNT	n20	5825	Ant1	0.21	13.188	30	Pass
NVNT	n40	5755	Ant1	0.41	13.604	30	Pass
NVNT	n40	5795	Ant1	0.41	13.55	30	Pass

**Duty Cycle**

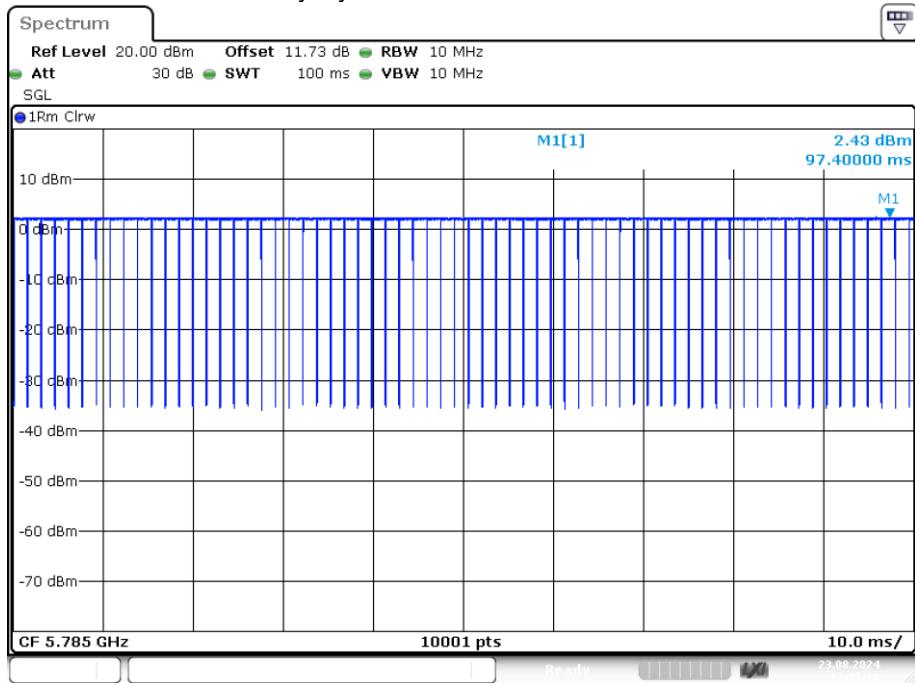
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	a	5745	Ant1	94.01	0.27
NVNT	a	5785	Ant1	94.06	0.27
NVNT	a	5825	Ant1	94.15	0.26
NVNT	ac20	5745	Ant1	93.56	0.29
NVNT	ac20	5785	Ant1	93.57	0.29
NVNT	ac20	5825	Ant1	93.54	0.29
NVNT	ac40	5755	Ant1	87.56	0.58
NVNT	ac40	5795	Ant1	87.8	0.56
NVNT	ac80	5775	Ant1	77.51	1.11
NVNT	n20	5745	Ant1	95.44	0.2
NVNT	n20	5785	Ant1	95.36	0.21
NVNT	n20	5825	Ant1	95.34	0.21
NVNT	n40	5755	Ant1	90.96	0.41
NVNT	n40	5795	Ant1	90.98	0.41

### Duty Cycle NVNT a 5745MHz Ant1



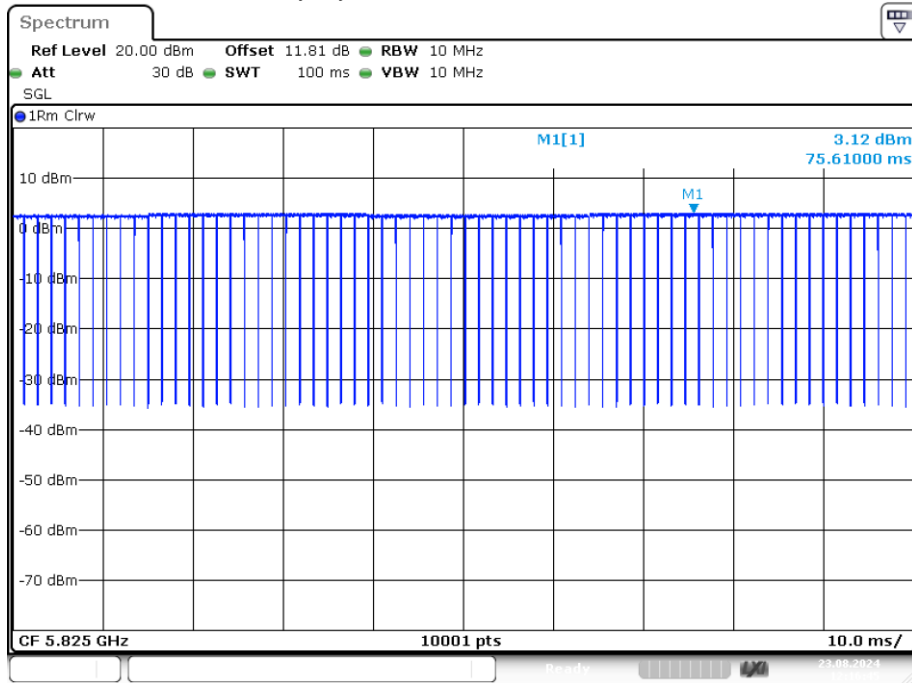
Date: 23.AUG.2024 12:10:05

### Duty Cycle NVNT a 5785MHz Ant1

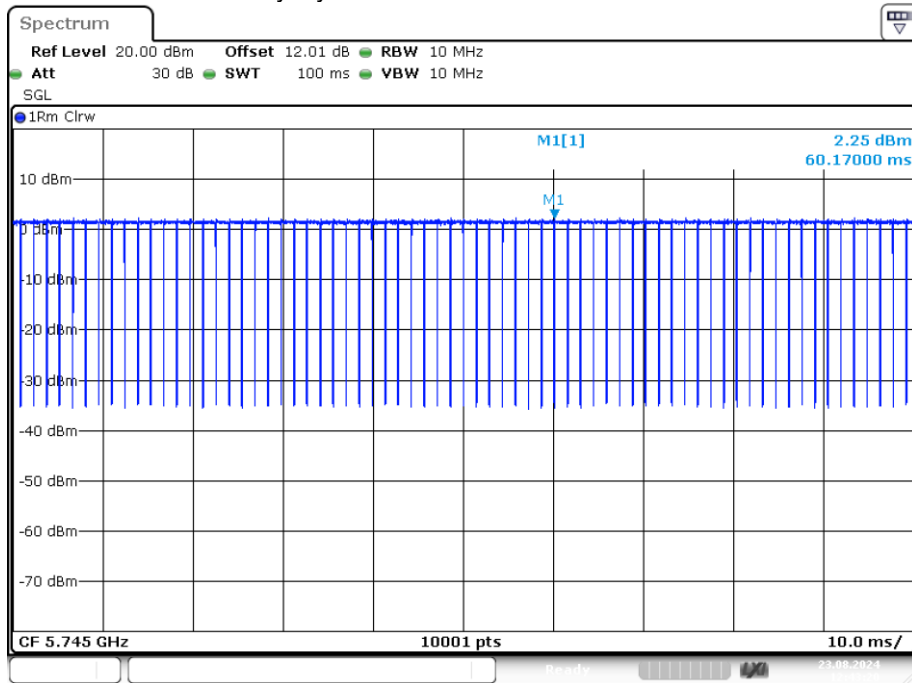


Date: 23.AUG.2024 12:13:10

### Duty Cycle NVNT a 5825MHz Ant1

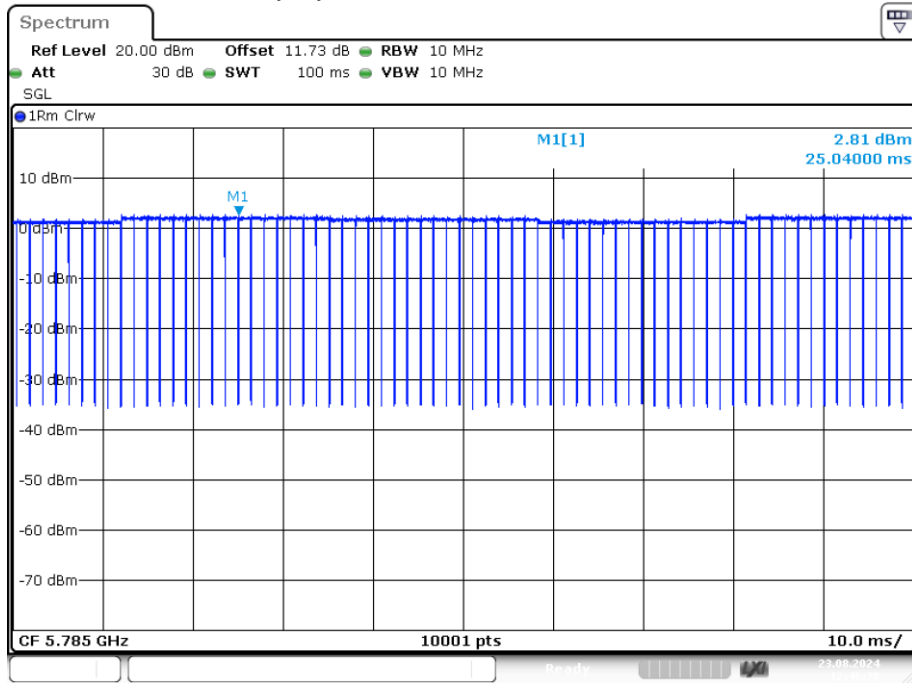


### Duty Cycle NVNT ac20 5745MHz Ant1



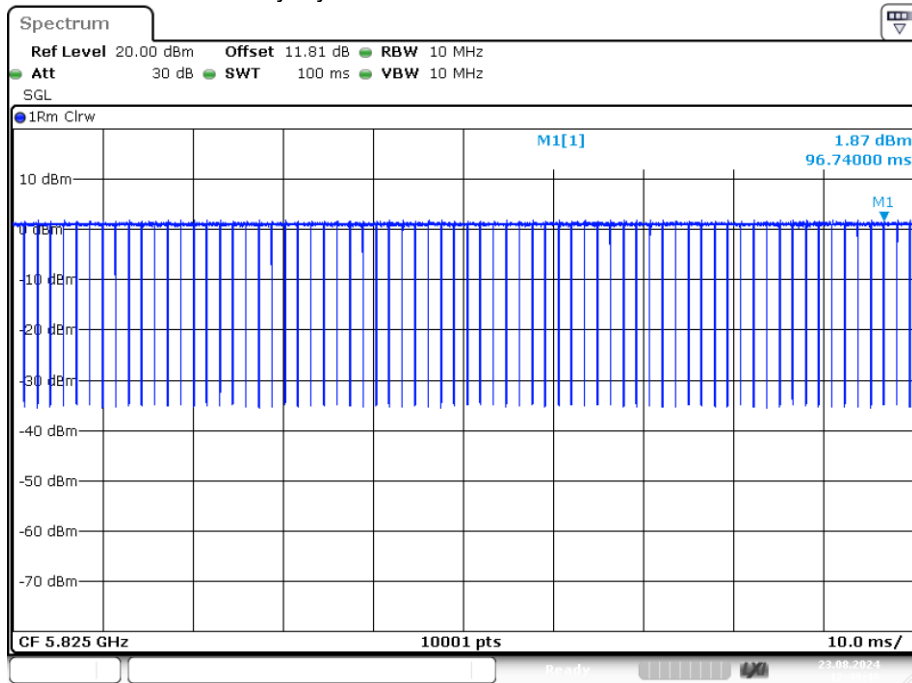


### Duty Cycle NVNT ac20 5785MHz Ant1



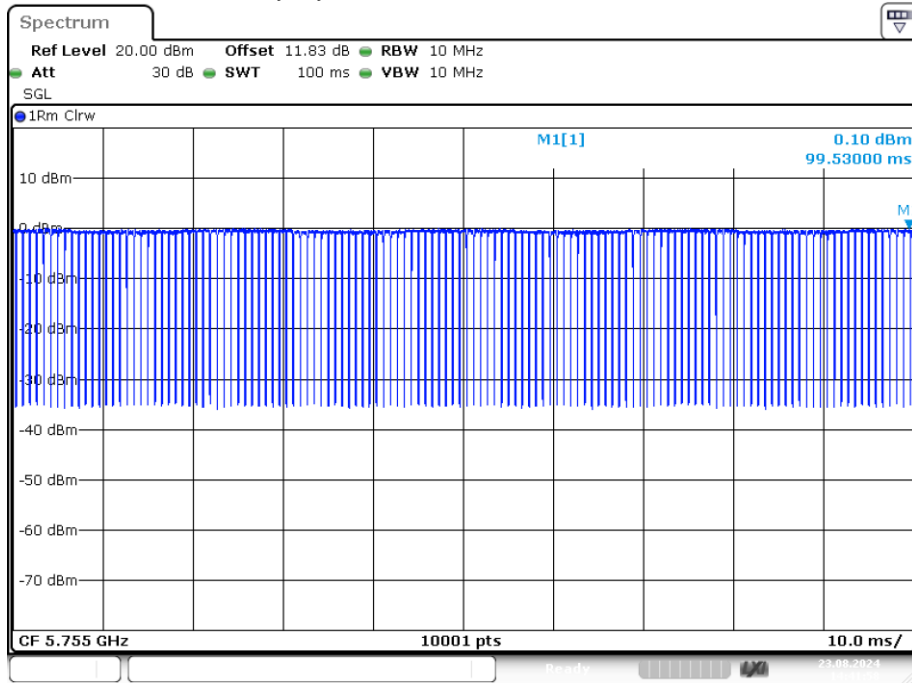
Date: 23.AUG.2024 12:46:38

### Duty Cycle NVNT ac20 5825MHz Ant1



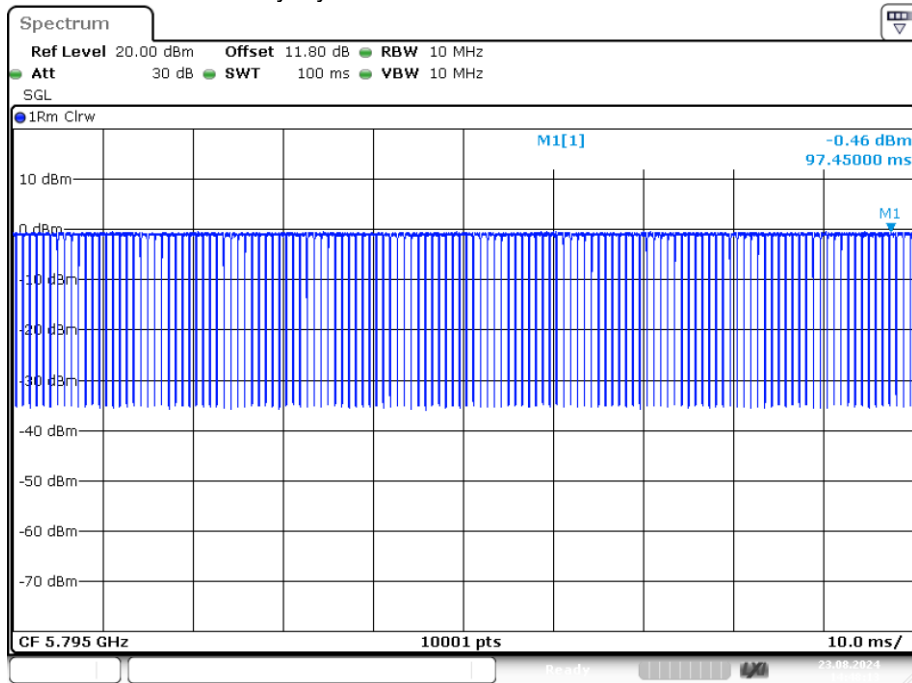
Date: 23.AUG.2024 12:49:48

### Duty Cycle NVNT ac40 5755MHz Ant1



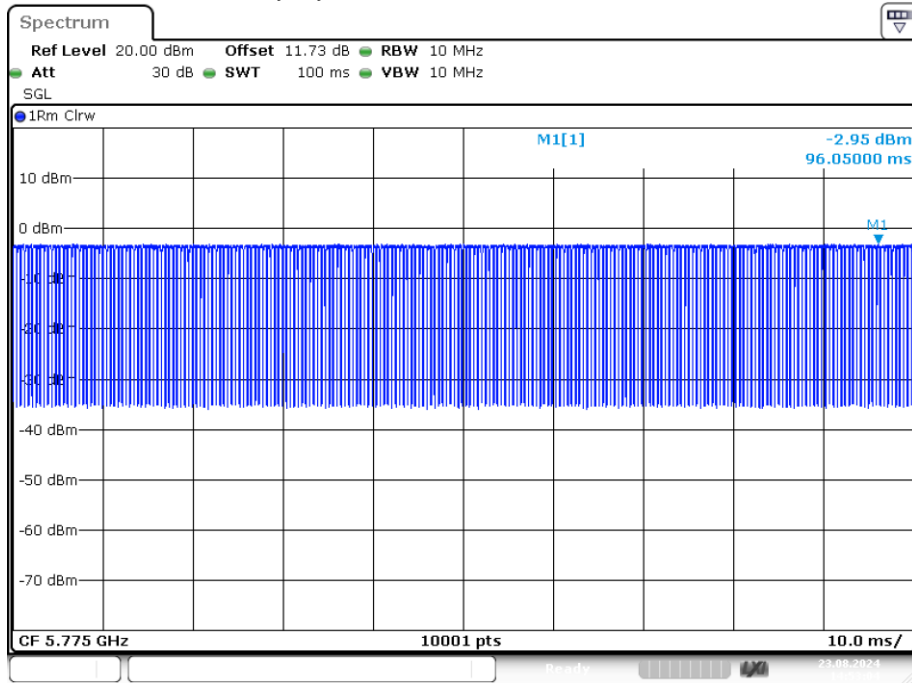
Date: 23.AUG.2024 14:41:57

### Duty Cycle NVNT ac40 5795MHz Ant1



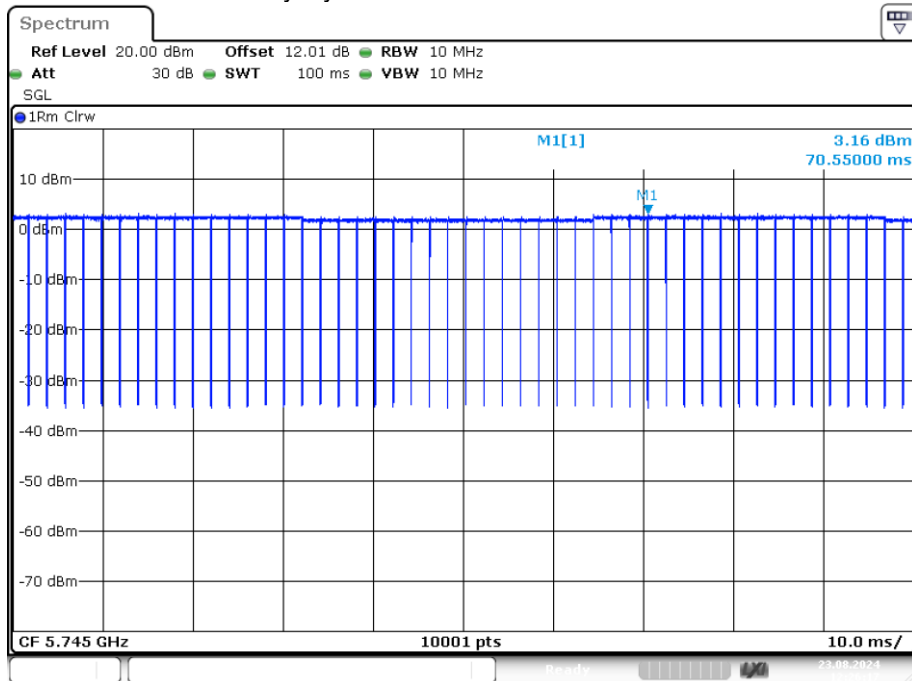
Date: 23.AUG.2024 14:46:13

### Duty Cycle NVNT ac80 5775MHz Ant1



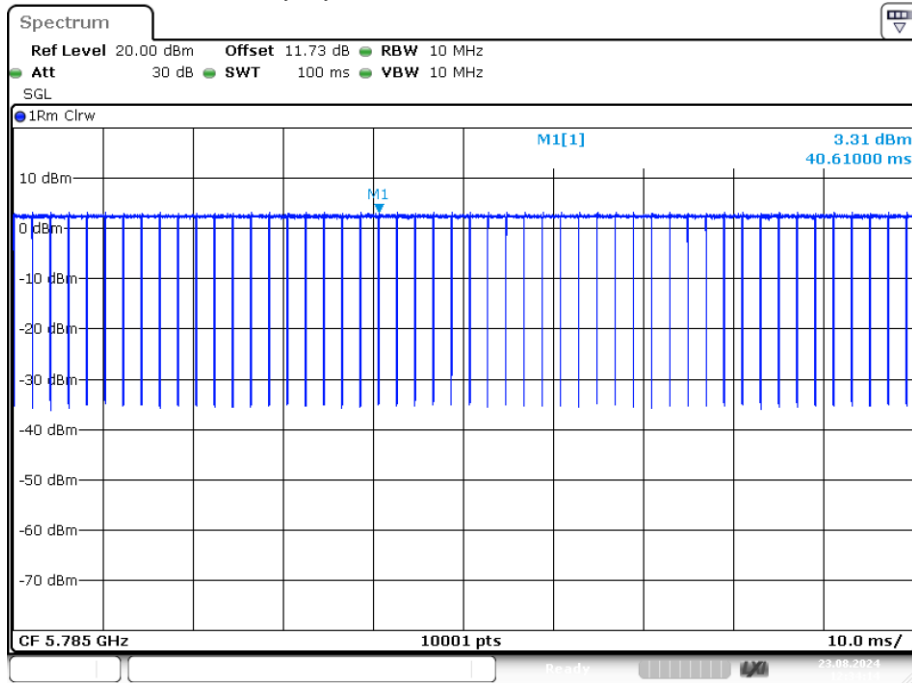
Date: 23.AUG.2024 14:53:04

### Duty Cycle NVNT n20 5745MHz Ant1

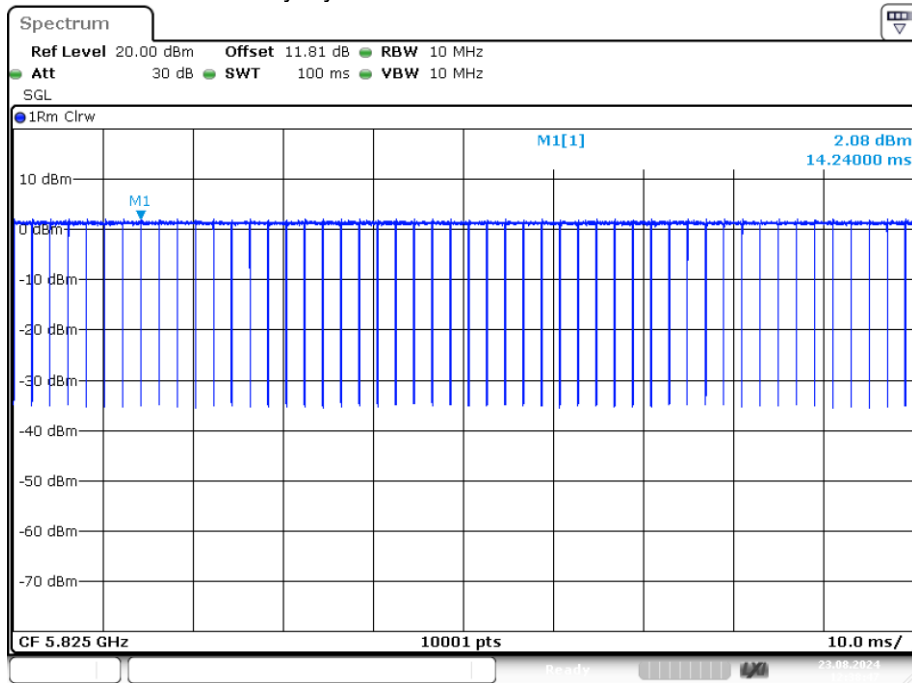


Date: 23.AUG.2024 12:26:17

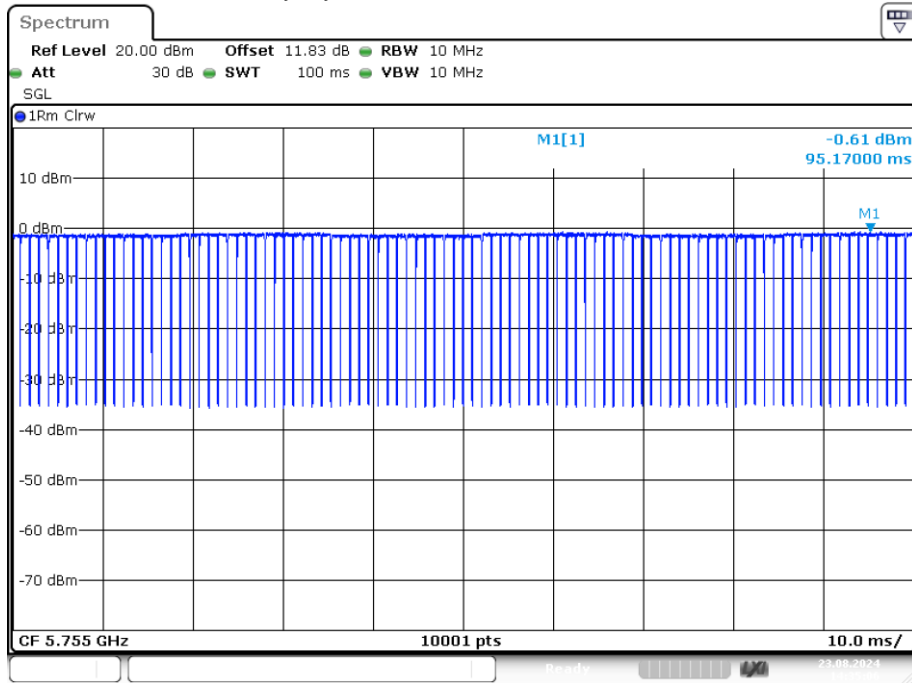
### Duty Cycle NVNT n20 5785MHz Ant1



### Duty Cycle NVNT n20 5825MHz Ant1

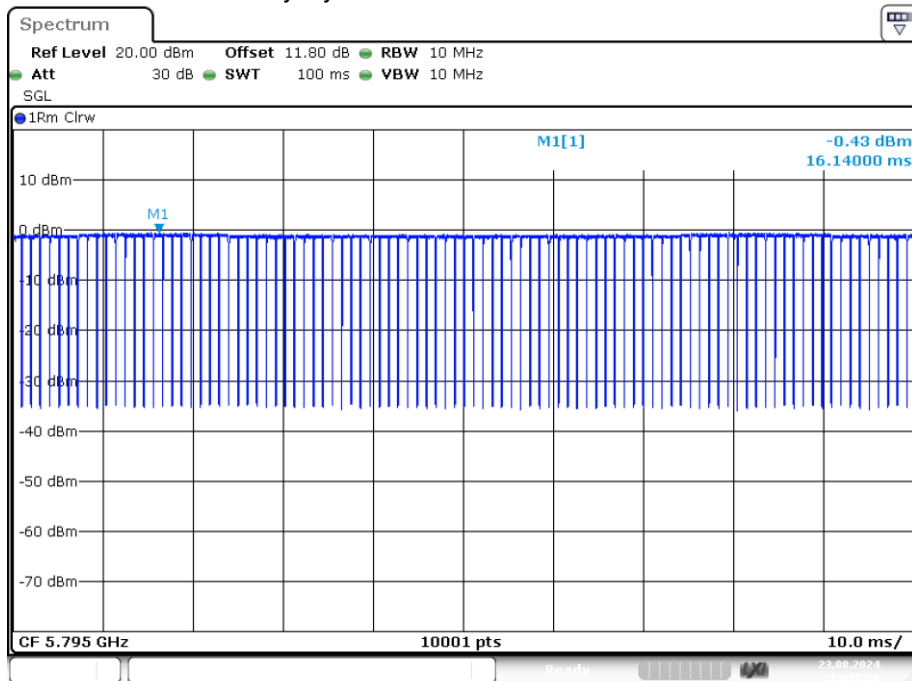


### Duty Cycle NVNT n40 5755MHz Ant1



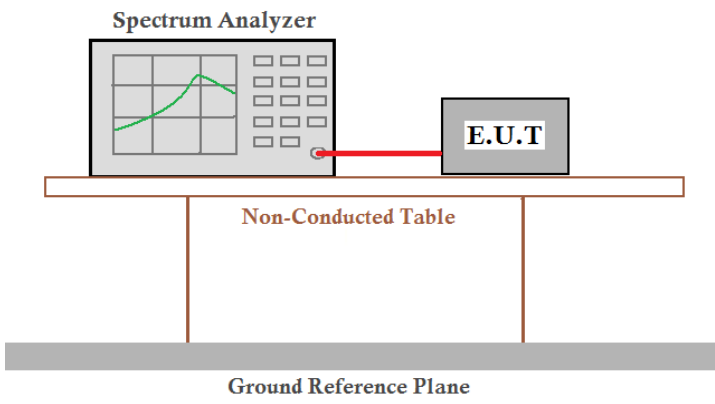
Date: 23.AUG.2024 14:35:06

### Duty Cycle NVNT n40 5795MHz Ant1



Date: 23.AUG.2024 14:38:35

## 4.5 Power Spectral Density

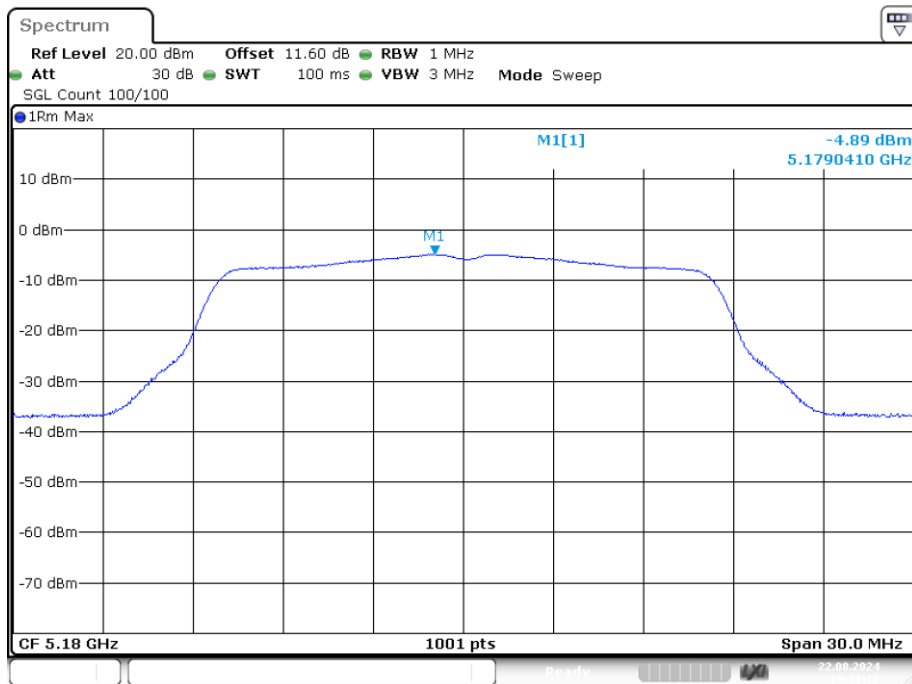
Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	$\leq 11.00\text{dBm/MHz}$ for 5150MHz-5250MHz, 5250-5350MHz and 5470-5725 MHz $\leq 30.00\text{dBm/500KHz}$ for 5725MHz-5850MHz  For 5150MHz-5250MHz: The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane.</p>
Test procedure:	<ol style="list-style-type: none"> <li>1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, "Compute power...".</li> <li>2) Use the peak search function on the instrument to find the peak of the spectrum.</li> <li>3) Make the following adjustments to the peak value of the spectrum, if applicable:             <ol style="list-style-type: none"> <li>a) If Method SA-2 or SA-2 Alternative was used, add <math>10 \log(1/x)</math>, where <math>x</math> is the duty cycle, to the peak of the spectrum.</li> <li>b) If Method SA-3 Alternative was used and the linear mode was used in step E)2)g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.</li> </ol> </li> <li>4) The result is the PSD.</li> </ol>
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

## Measurement Data

## Band 1 (5150 - 5250 MHz)

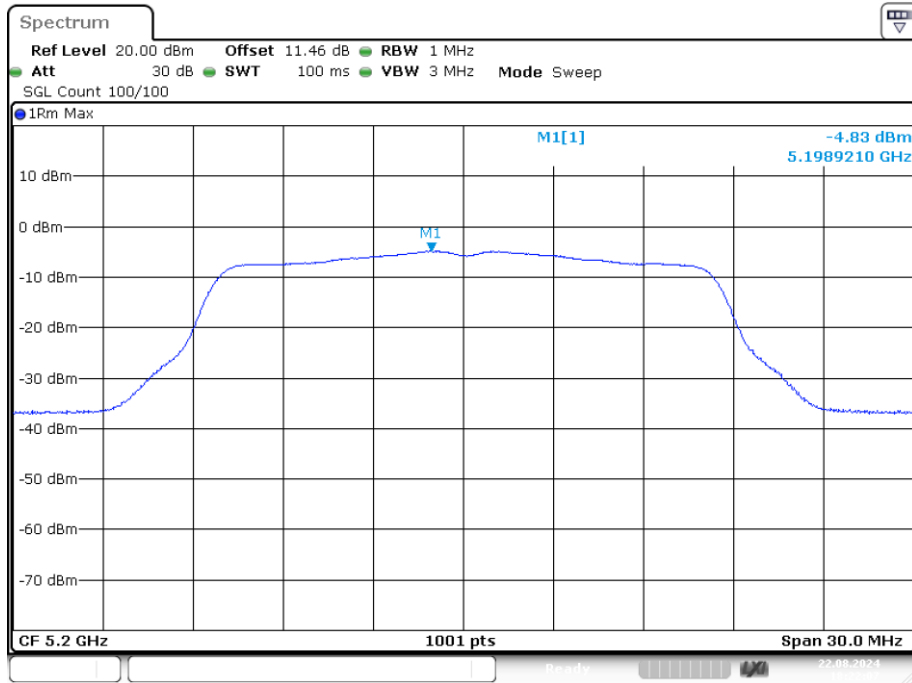
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	-4.892	11	Pass
NVNT	a	5200	Ant1	-4.833	11	Pass
NVNT	a	5240	Ant1	-2.875	11	Pass
NVNT	ac20	5180	Ant1	-3.214	11	Pass
NVNT	ac20	5200	Ant1	-5.197	11	Pass
NVNT	ac20	5240	Ant1	-3.6	11	Pass
NVNT	ac40	5190	Ant1	-6.238	11	Pass
NVNT	ac40	5230	Ant1	-7.735	11	Pass
NVNT	ac80	5210	Ant1	-10.407	11	Pass
NVNT	n20	5180	Ant1	-4.112	11	Pass
NVNT	n20	5200	Ant1	-4.692	11	Pass
NVNT	n20	5240	Ant1	-5.526	11	Pass
NVNT	n40	5190	Ant1	-7.892	11	Pass
NVNT	n40	5230	Ant1	-5.89	11	Pass

PSD NVNT a 5180MHz Ant1



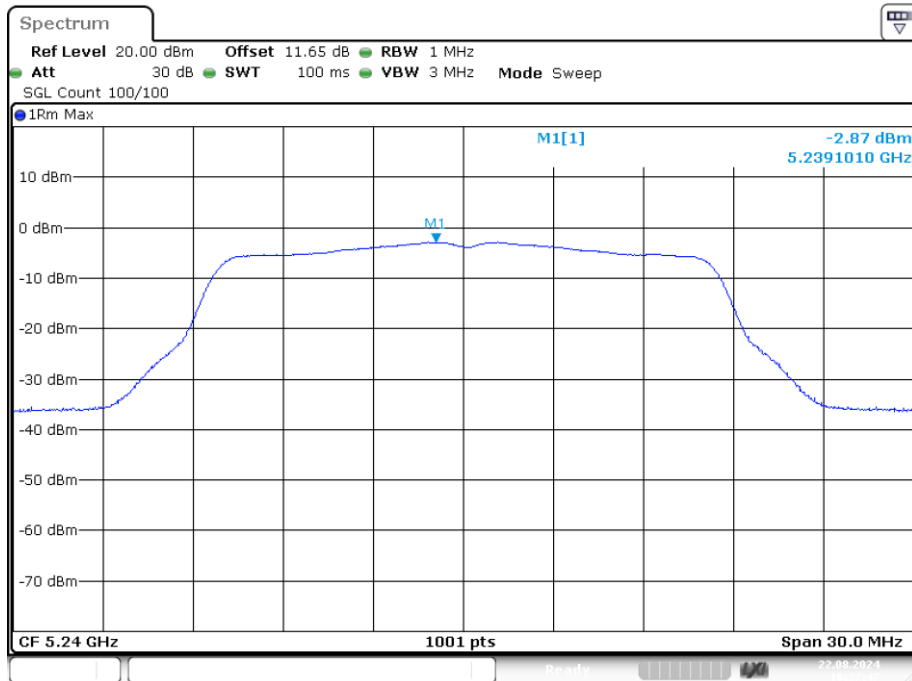
Date: 22.AUG.2024 18:11:17

### PSD NVNT a 5200MHz Ant1



Date: 22.AUG.2024 18:22:07

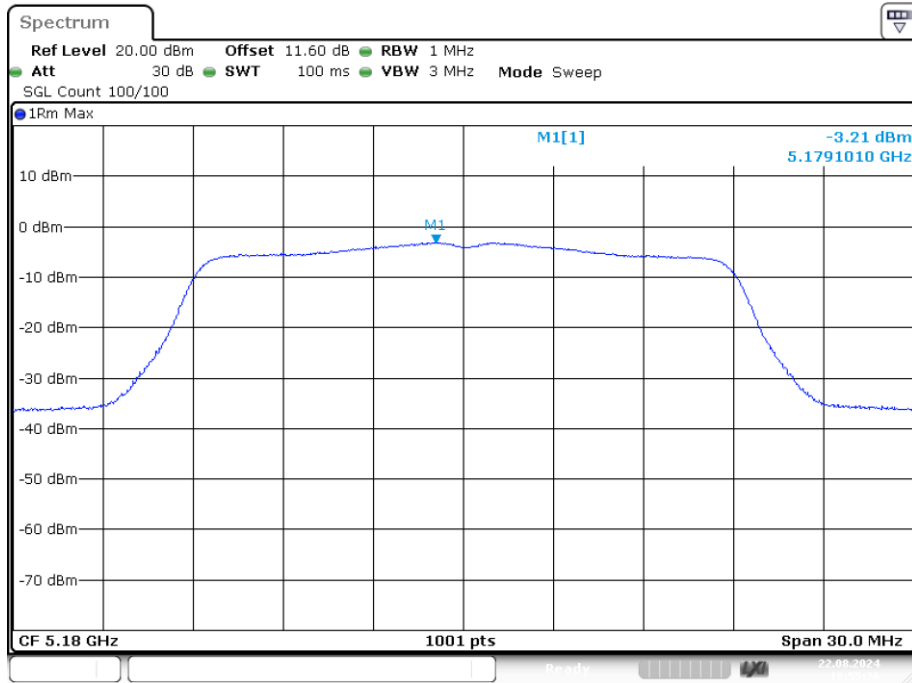
### PSD NVNT a 5240MHz Ant1



Date: 22.AUG.2024 18:27:48

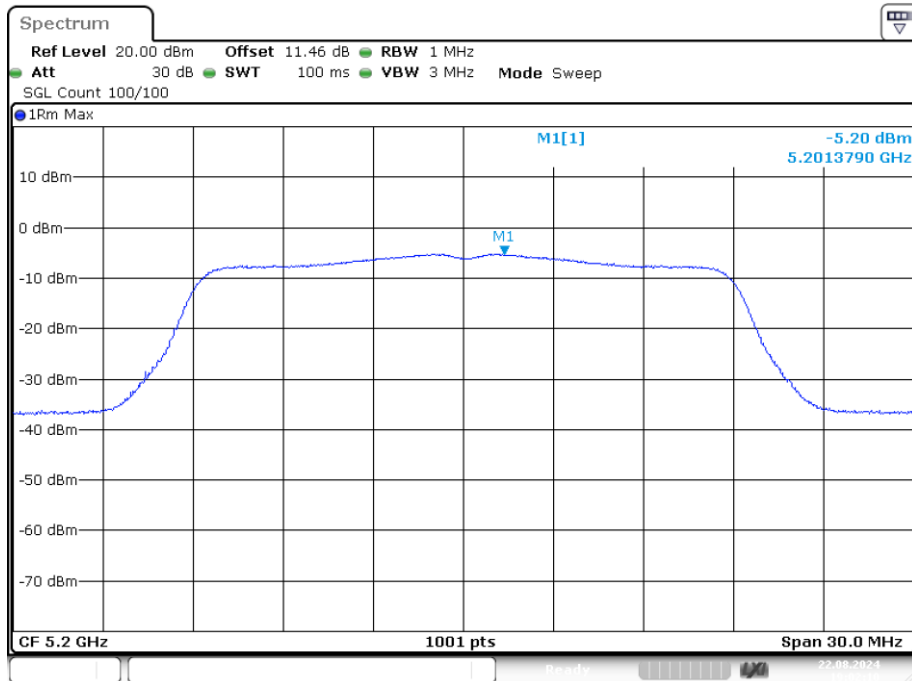


### PSD NVNT ac20 5180MHz Ant1



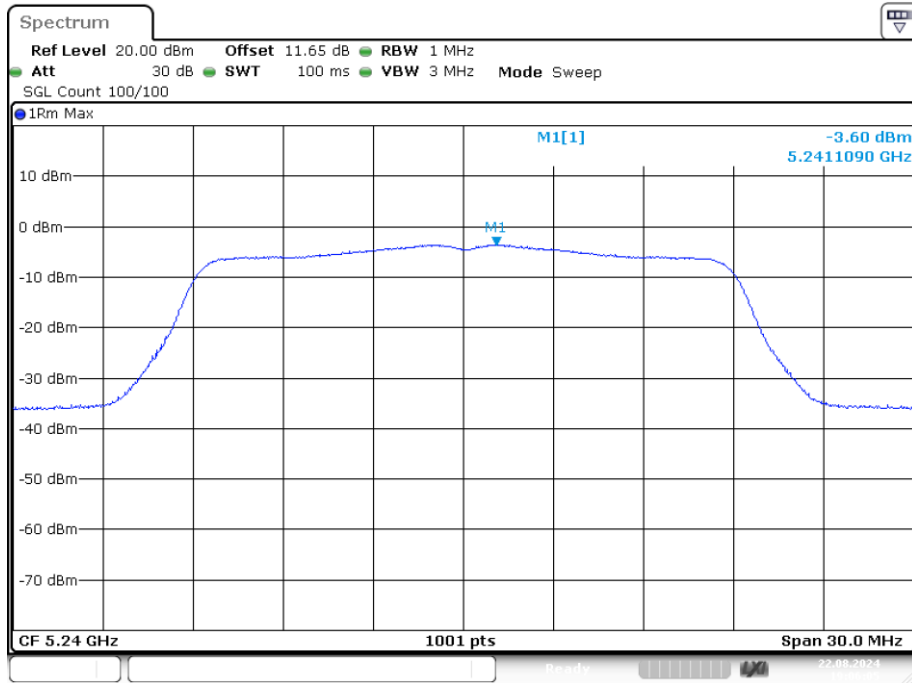
Date: 22.AUG.2024 18:55:36

### PSD NVNT ac20 5200MHz Ant1



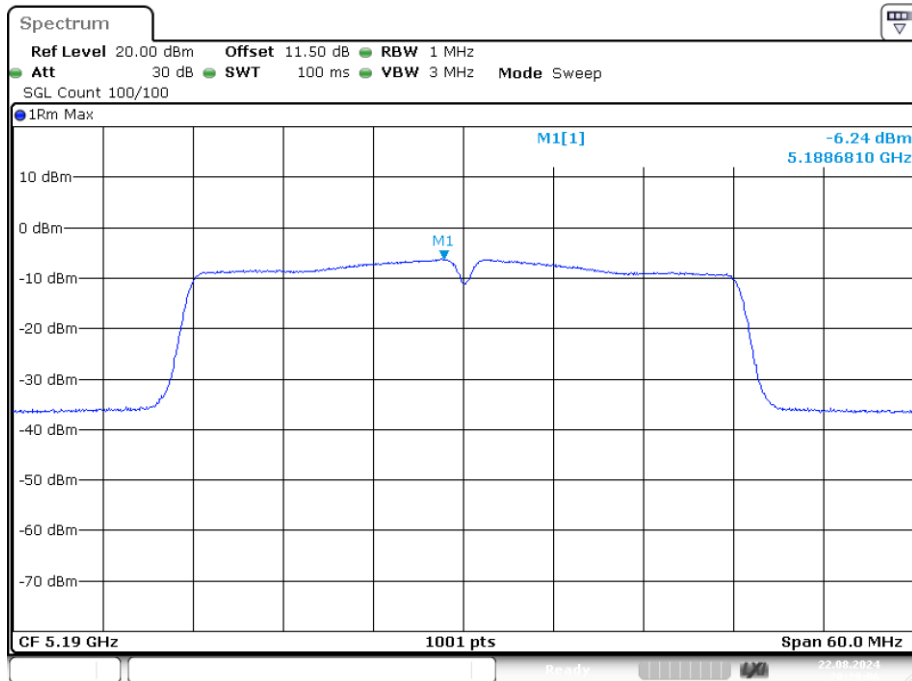
Date: 22.AUG.2024 19:02:10

### PSD NVNT ac20 5240MHz Ant1



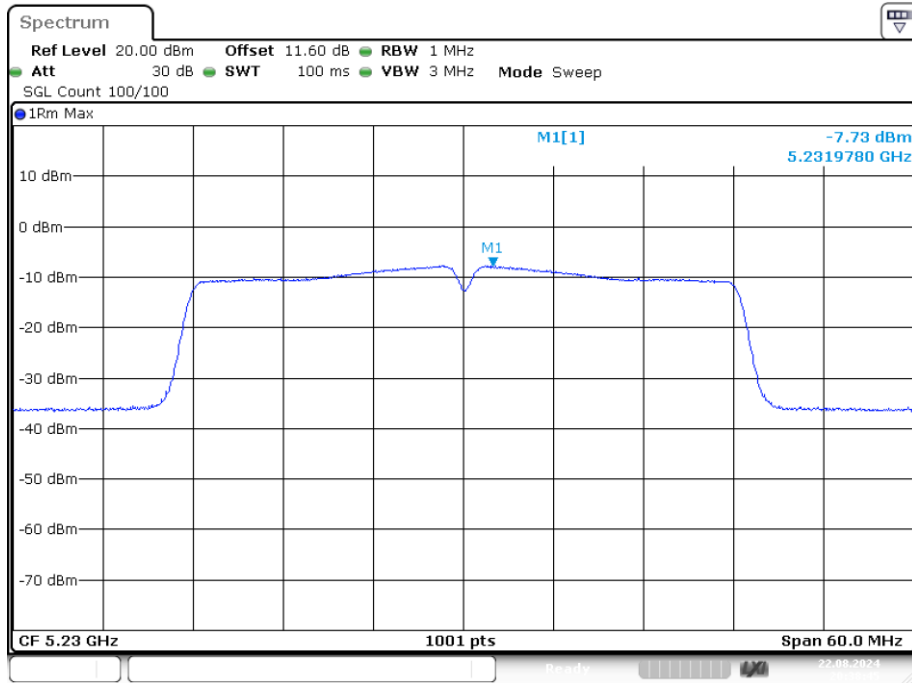
Date: 22.AUG.2024 19:06:05

### PSD NVNT ac40 5190MHz Ant1



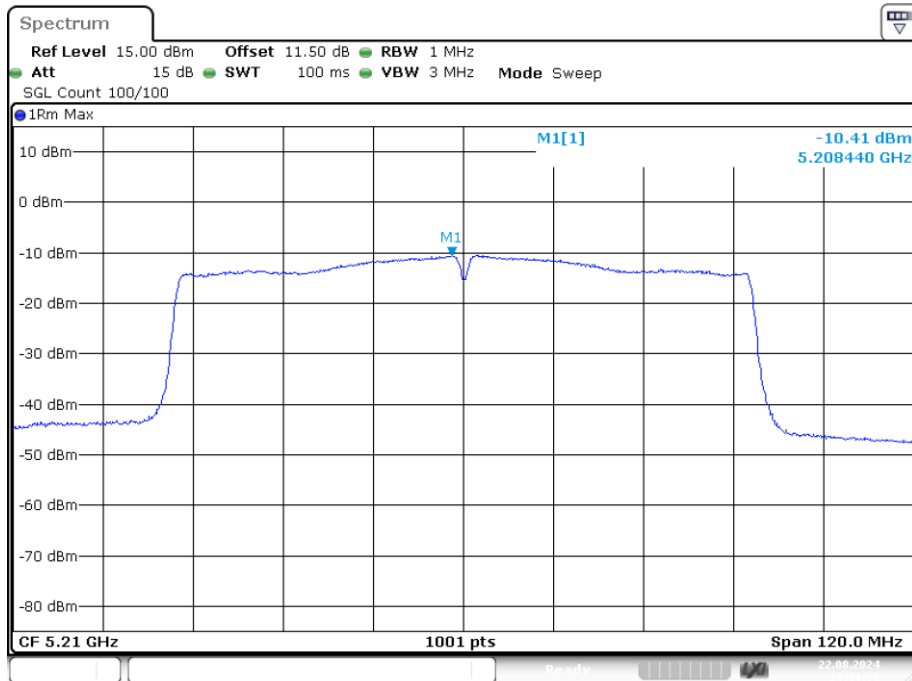
Date: 22.AUG.2024 20:29:05

### PSD NVNT ac40 5230MHz Ant1



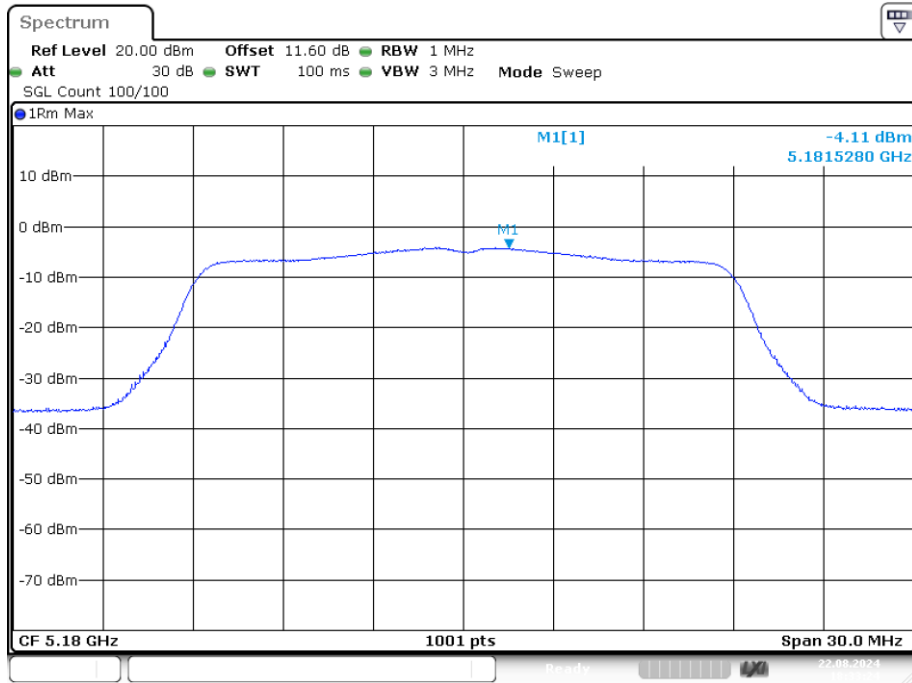
Date: 22.AUG.2024 20:38:45

### PSD NVNT ac80 5210MHz Ant1



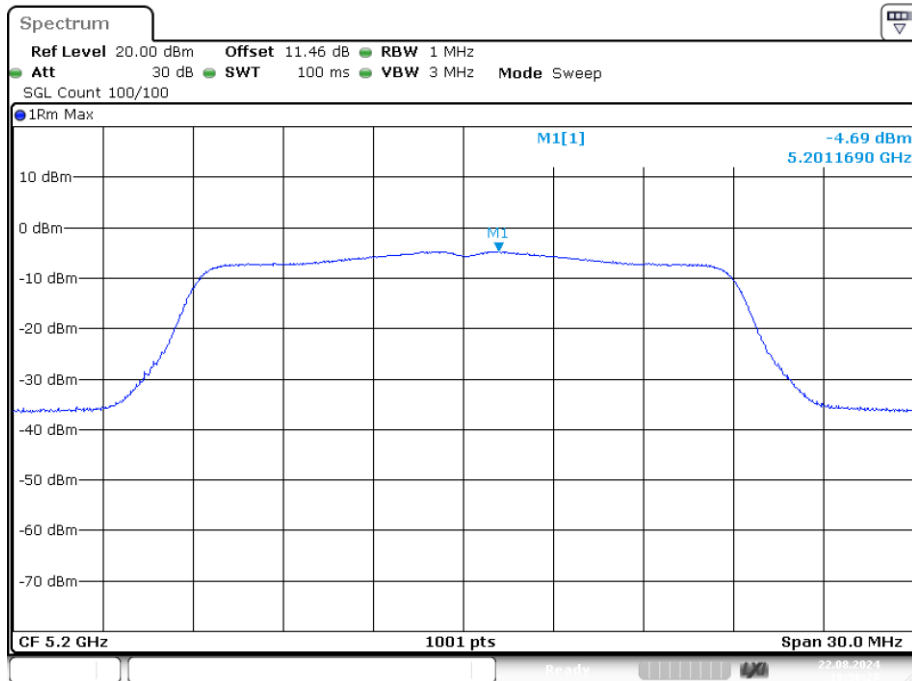
Date: 22.AUG.2024 21:11:31

### PSD NVNT n20 5180MHz Ant1



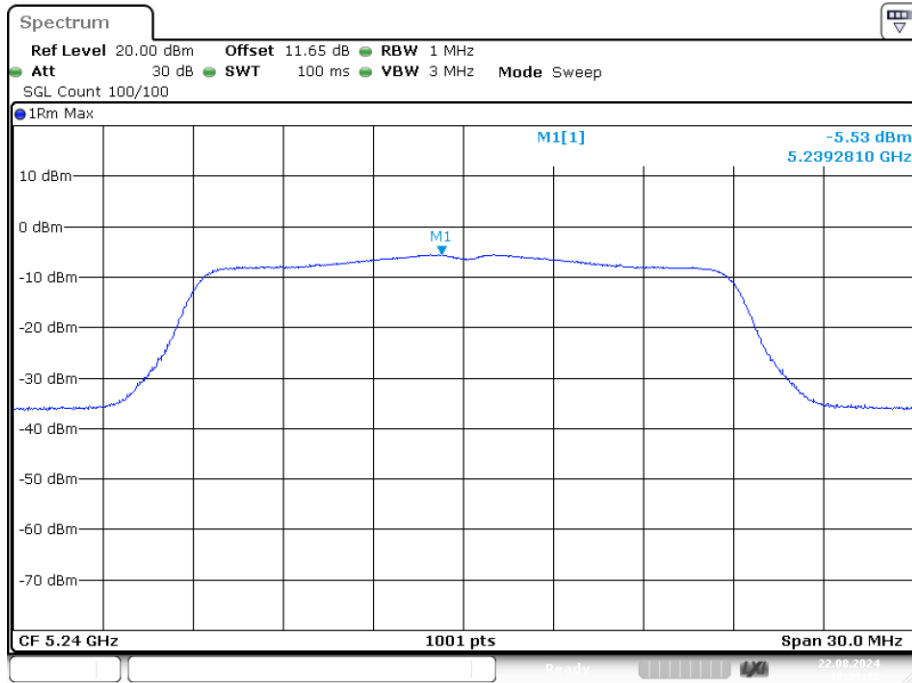
Date: 22.AUG.2024 18:33:24

### PSD NVNT n20 5200MHz Ant1



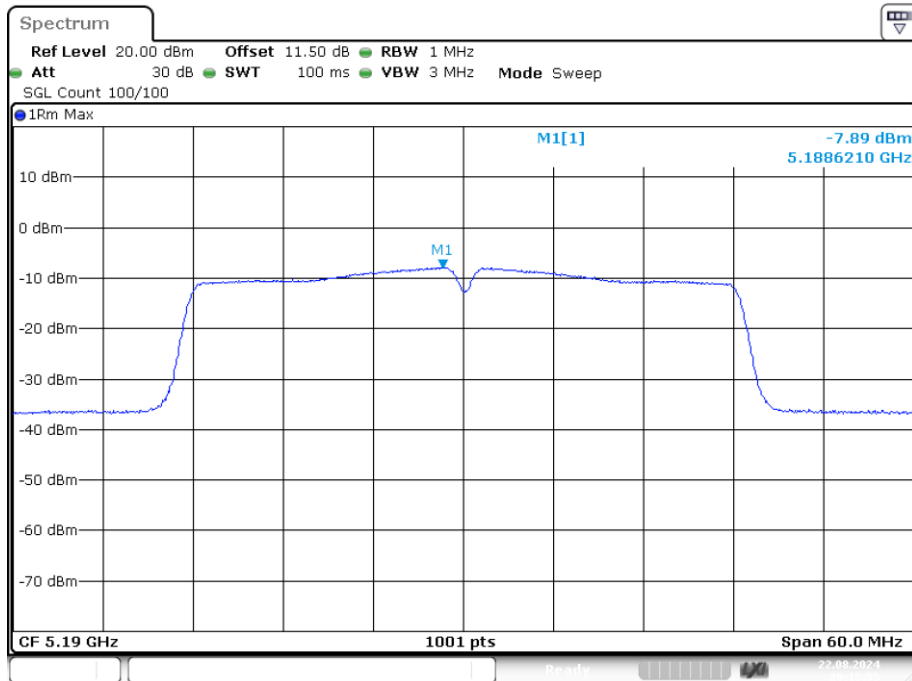
Date: 22.AUG.2024 18:36:27

### PSD NVNT n20 5240MHz Ant1



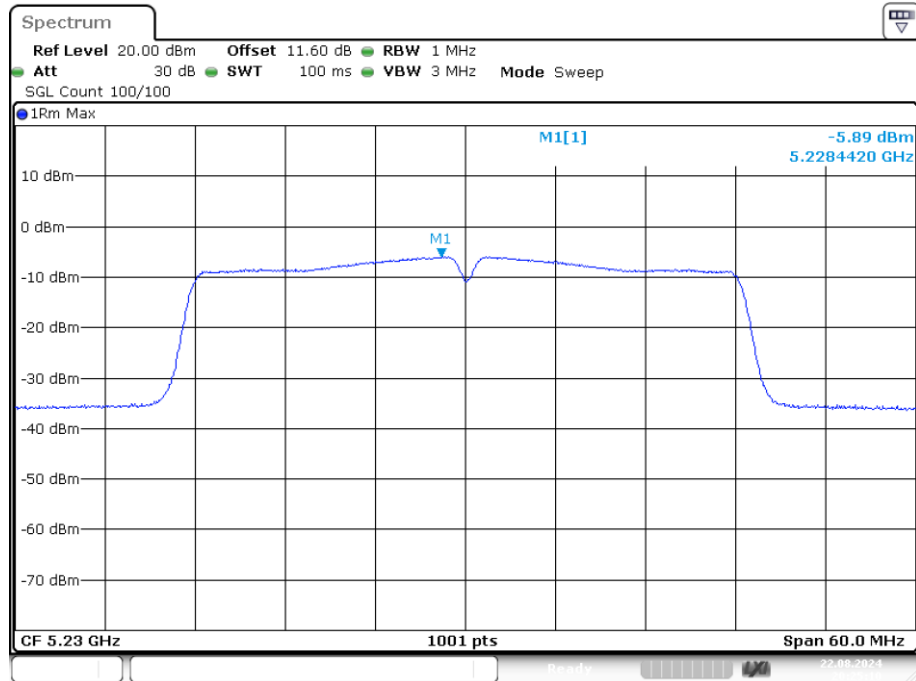
Date: 22.AUG.2024 18:39:31

### PSD NVNT n40 5190MHz Ant1



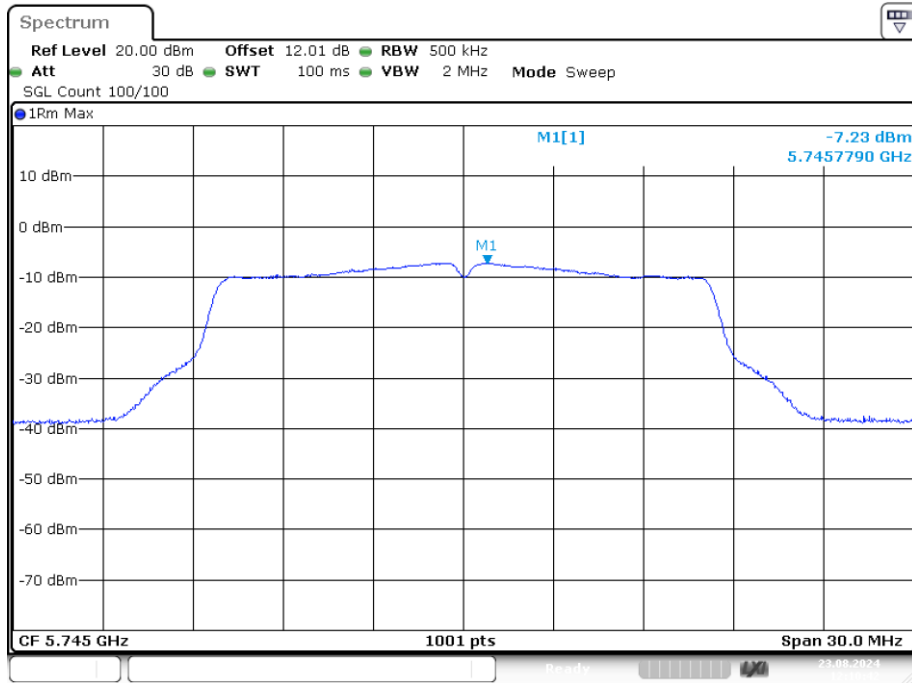
Date: 22.AUG.2024 20:15:55

## PSD NVNT n40 5230MHz Ant1

**Band 4 (5725 - 5850 MHz)**

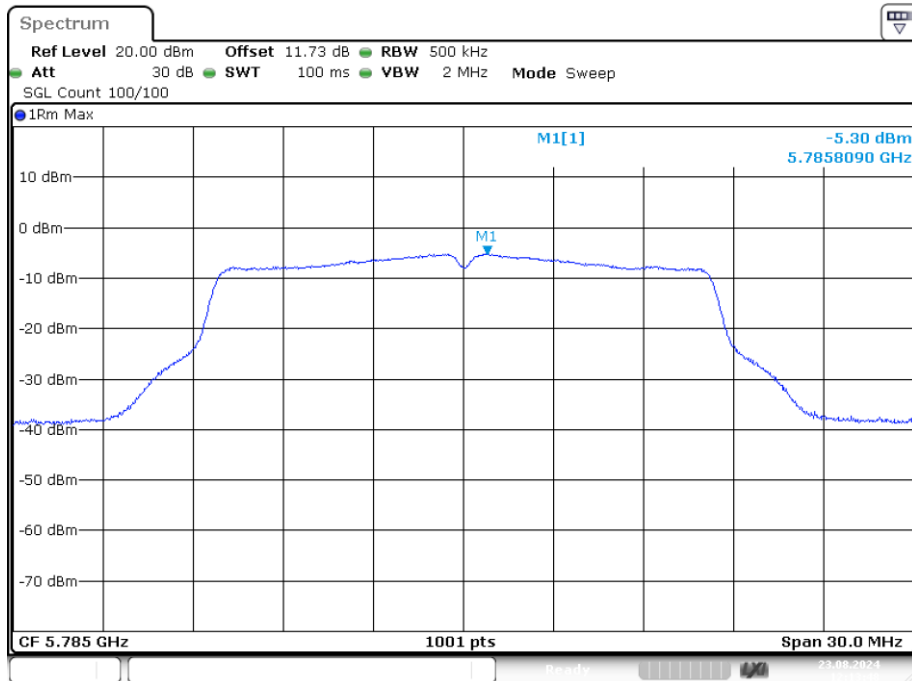
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	-7.226	30	Pass
NVNT	a	5785	Ant1	-5.3	30	Pass
NVNT	a	5825	Ant1	-6.592	30	Pass
NVNT	ac20	5745	Ant1	-8.252	30	Pass
NVNT	ac20	5785	Ant1	-7.519	30	Pass
NVNT	ac20	5825	Ant1	-8.167	30	Pass
NVNT	ac40	5755	Ant1	-10.813	30	Pass
NVNT	ac40	5795	Ant1	-11.144	30	Pass
NVNT	ac80	5775	Ant1	-13.19	30	Pass
NVNT	n20	5745	Ant1	-7.164	30	Pass
NVNT	n20	5785	Ant1	-6.922	30	Pass
NVNT	n20	5825	Ant1	-8.149	30	Pass
NVNT	n40	5755	Ant1	-11.375	30	Pass
NVNT	n40	5795	Ant1	-11.109	30	Pass

### PSD NVNT a 5745MHz Ant1



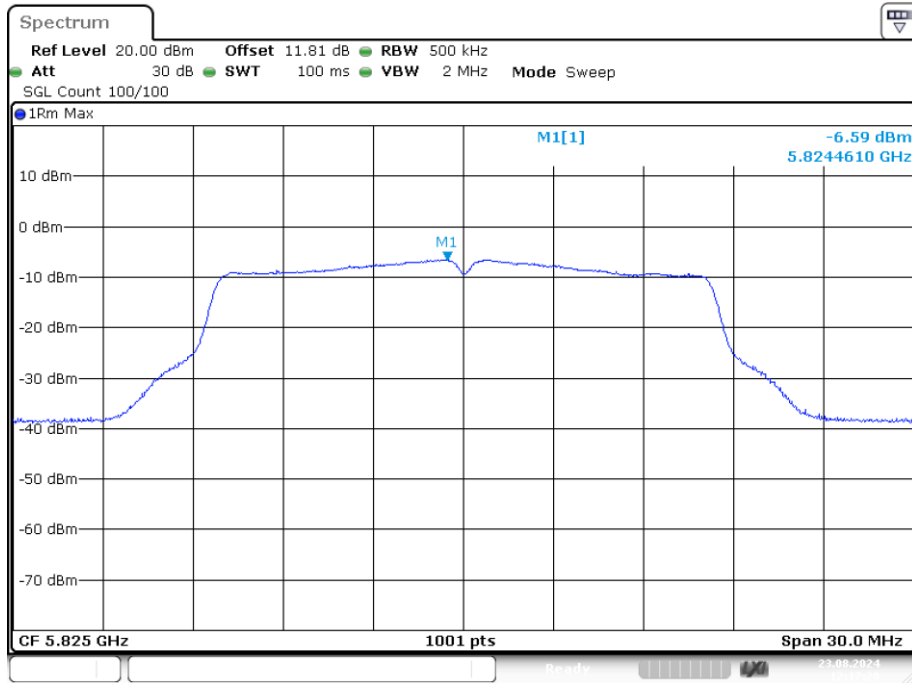
Date: 23.AUG.2024 12:10:42

### PSD NVNT a 5785MHz Ant1



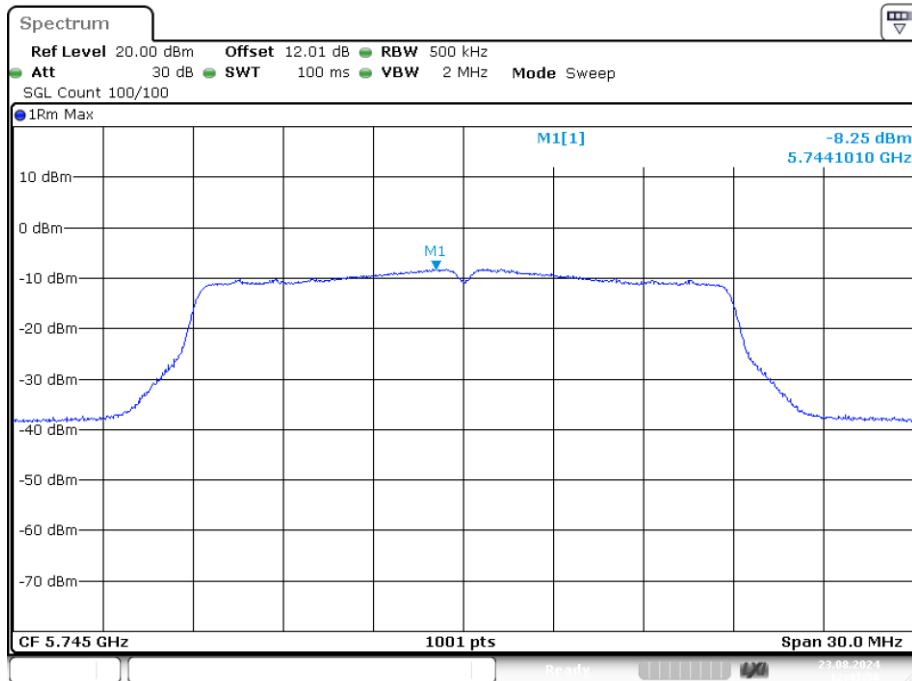
Date: 23.AUG.2024 12:13:48

### PSD NVNT a 5825MHz Ant1



Date: 23.AUG.2024 12:17:20

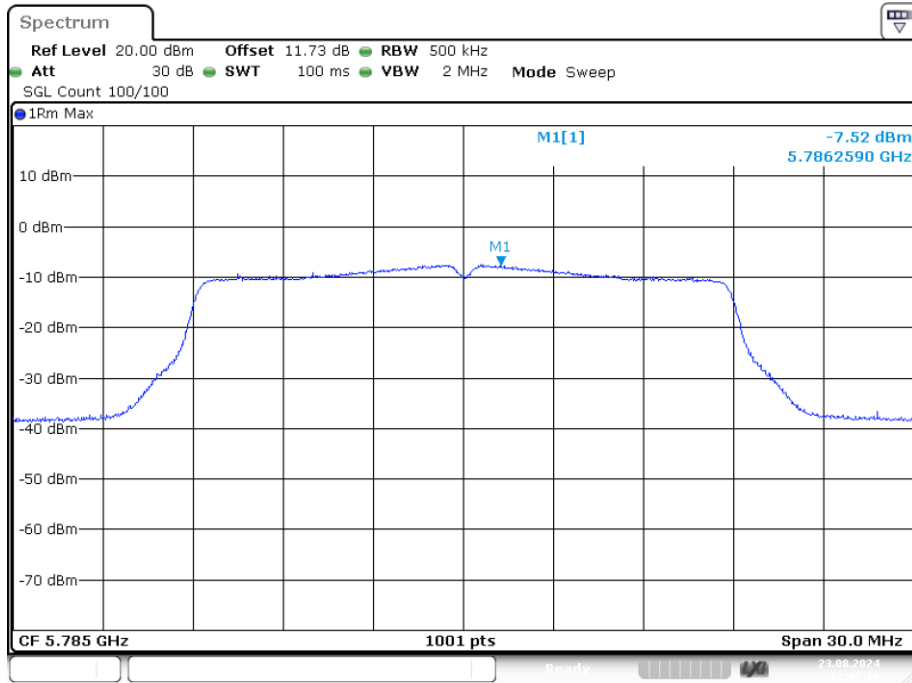
### PSD NVNT ac20 5745MHz Ant1



Date: 23.AUG.2024 12:43:58

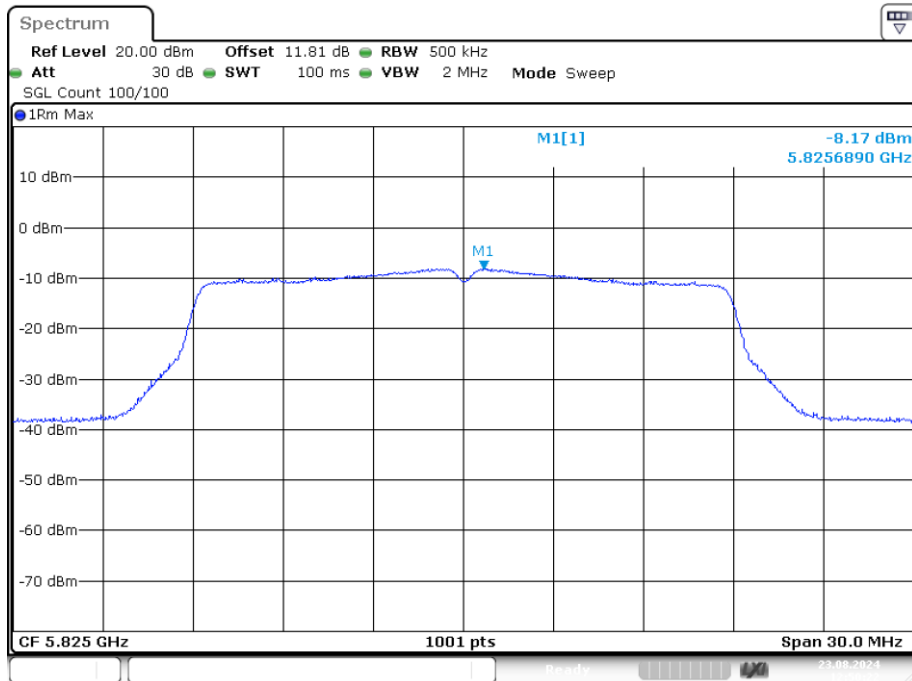


### PSD NVNT ac20 5785MHz Ant1



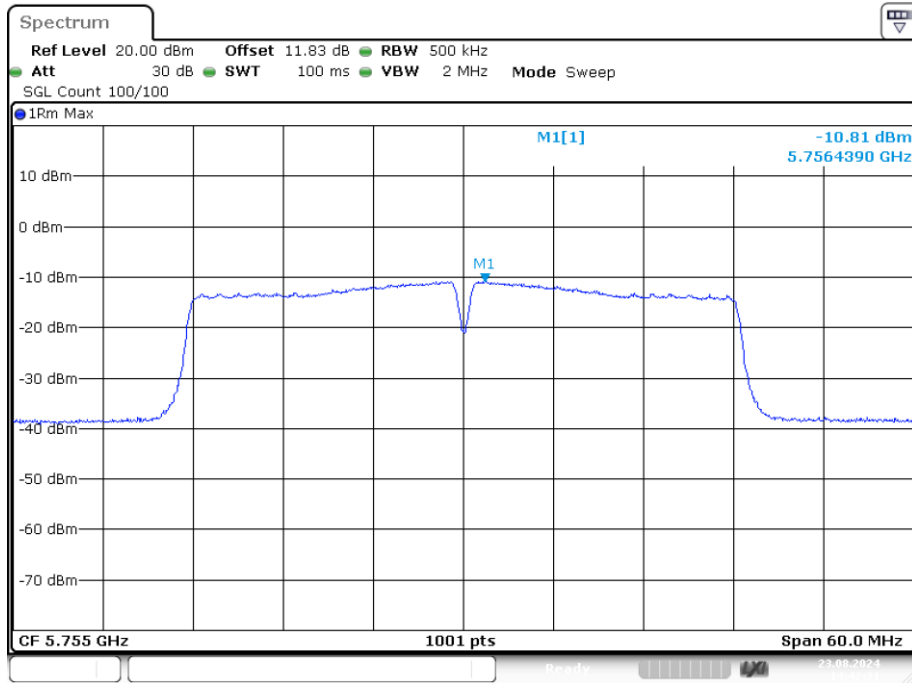
Date: 23.AUG.2024 12:47:16

### PSD NVNT ac20 5825MHz Ant1



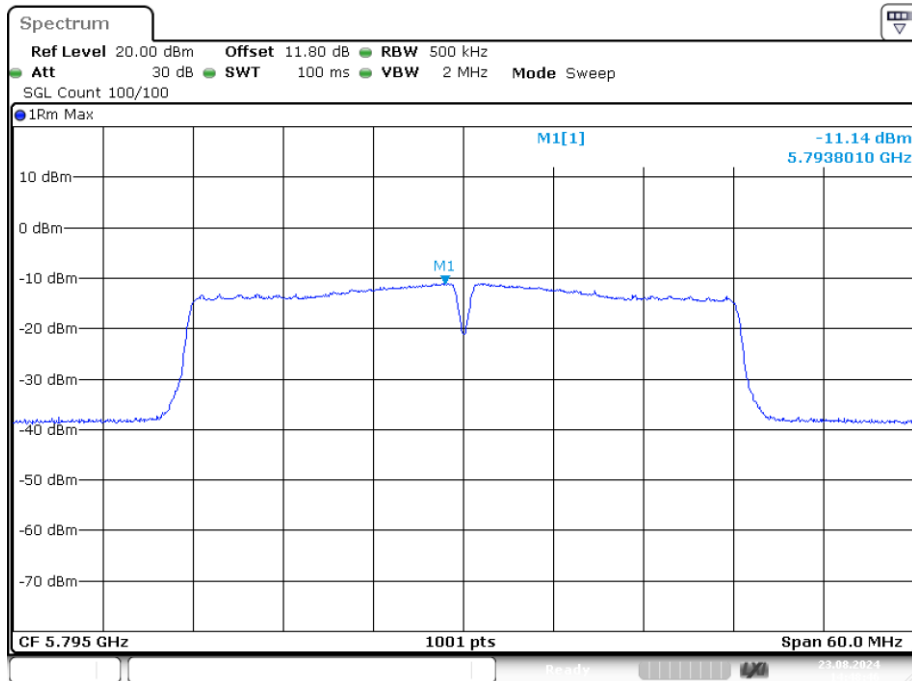
Date: 23.AUG.2024 12:50:22

### PSD NVNT ac40 5755MHz Ant1



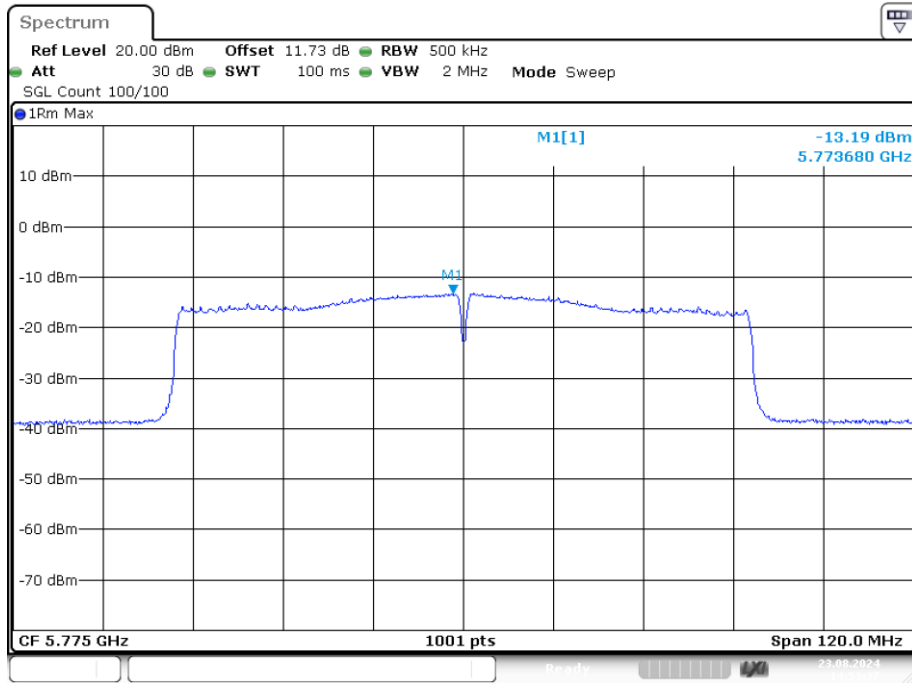
Date: 23.AUG.2024 14:42:31

### PSD NVNT ac40 5795MHz Ant1



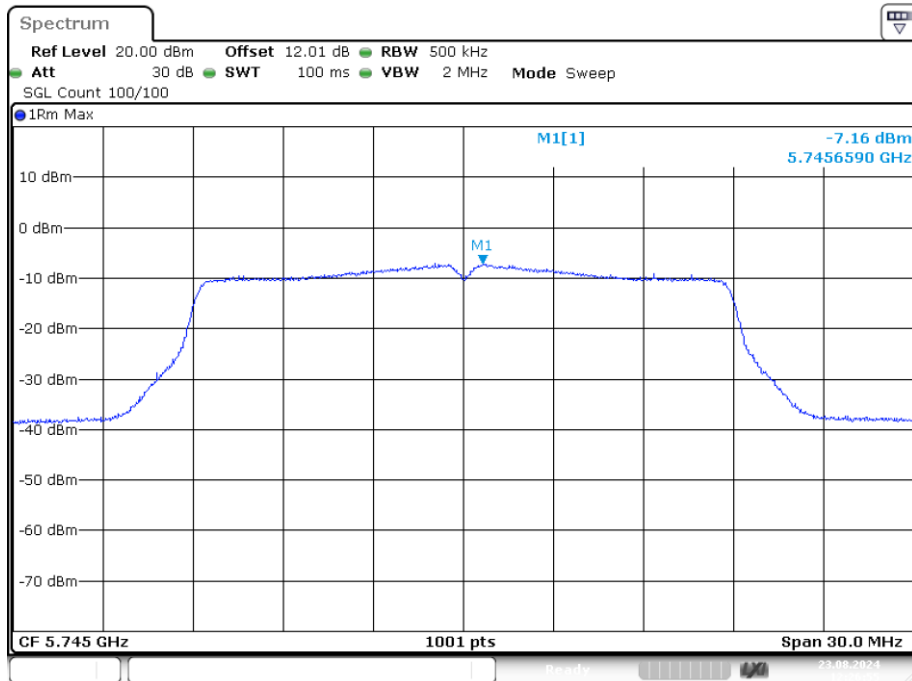
Date: 23.AUG.2024 14:46:47

### PSD NVNT ac80 5775MHz Ant1



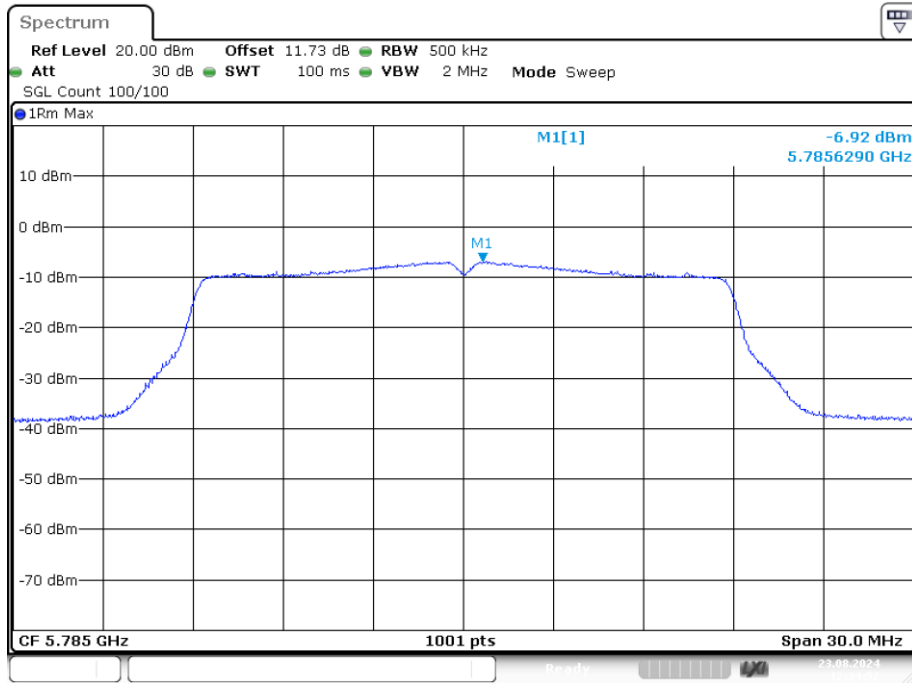
Date: 23.AUG.2024 14:53:38

### PSD NVNT n20 5745MHz Ant1



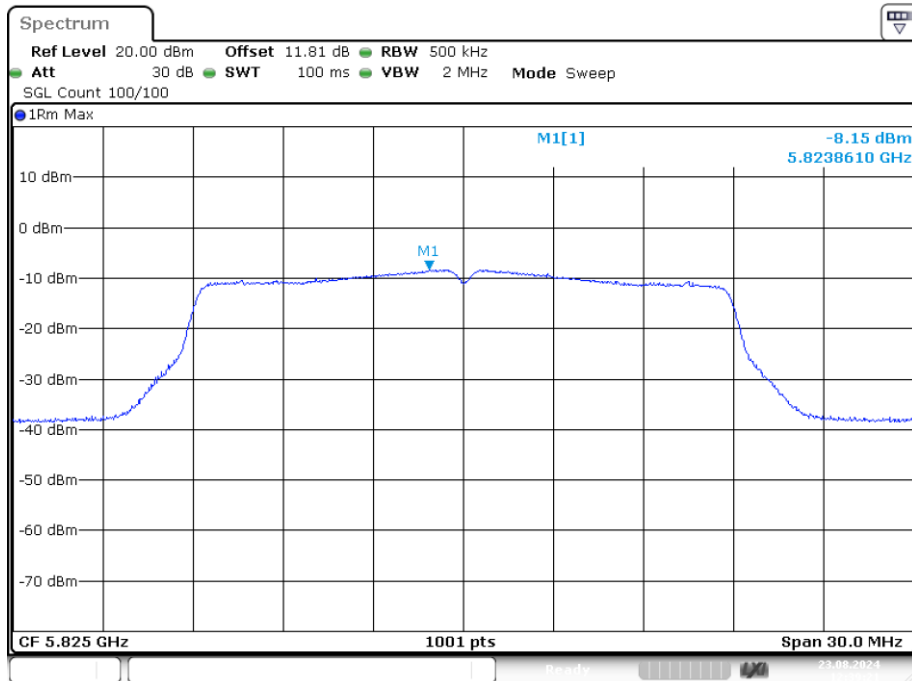
Date: 23.AUG.2024 12:26:54

### PSD NVNT n20 5785MHz Ant1



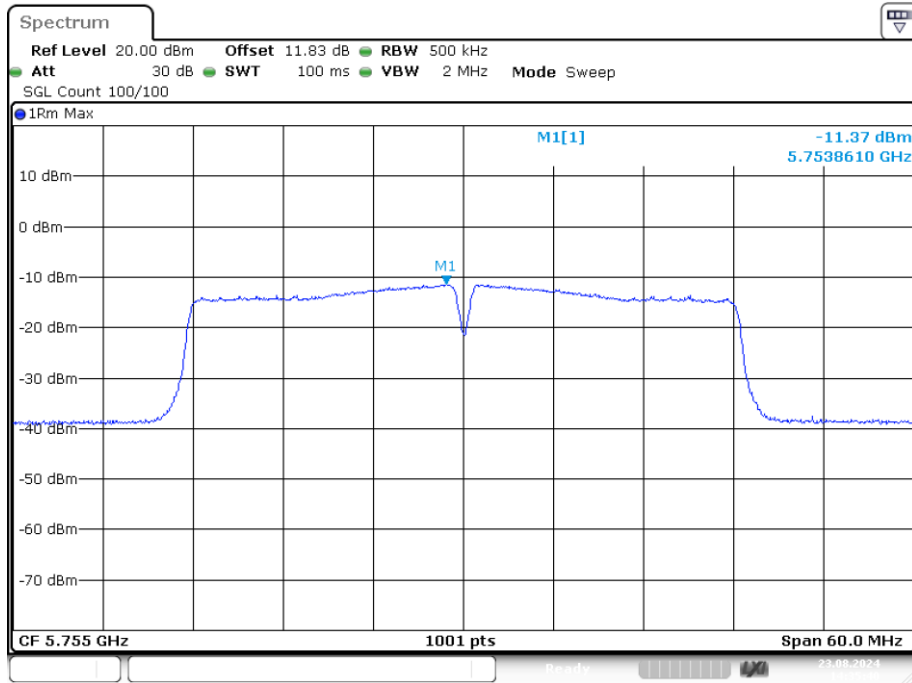
Date: 23.AUG.2024 12:34:52

### PSD NVNT n20 5825MHz Ant1

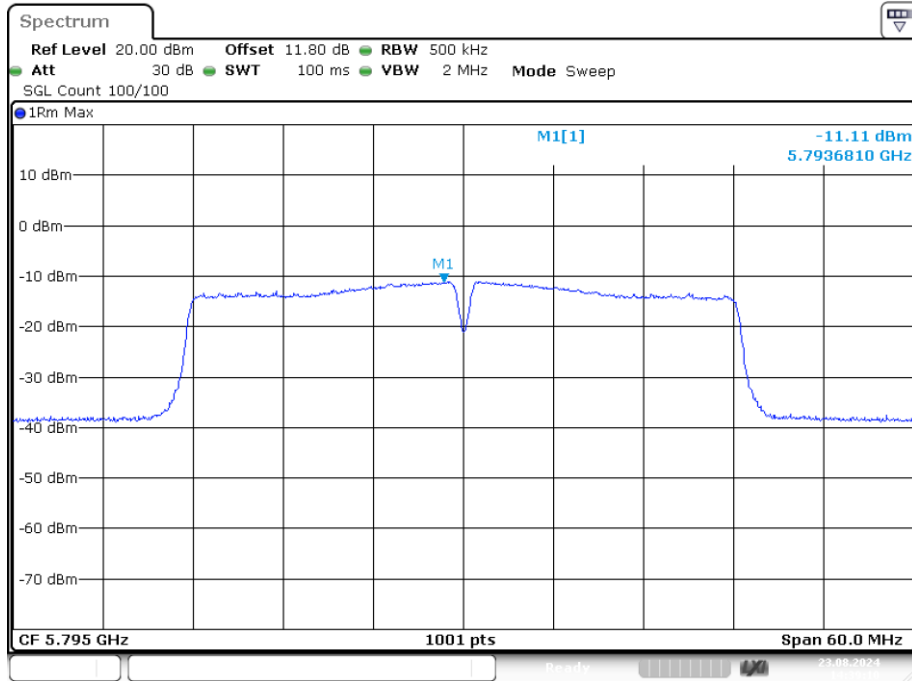


Date: 23.AUG.2024 12:39:21

### PSD NVNT n40 5755MHz Ant1

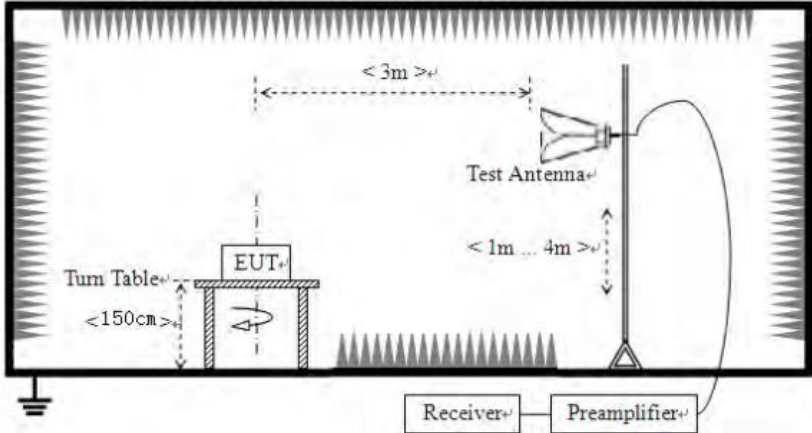


### PSD NVNT n40 5795MHz Ant1



## 4.6 Band Edge

Test Requirement:	FCC Part15 E Section 15.407 and 15.205,			
Test Method:	ANSI C63.10:2013			
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)			
Receiver setup:	Frequency	Detector	RBW	VBW
	30MHz-1GHz	Quasi-peak	100KHz	300KHz
	Above 1GHz	Peak	1MHz	3MHz
		AV	1MHz	3MHz
Limit:	Frequency	Limit (dBuV/m @3m)		Remark
	30MHz-88MHz	40.0		Quasi-peak Value
	88MHz-216MHz	43.5		Quasi-peak Value
	216MHz-960MHz	46.0		Quasi-peak Value
	960MHz-1GHz	54.0		Quasi-peak Value
	Above 1GHz	54.0		Average Value
		68.2		Peak Value
<p>Undesirable emission limits:</p> <p>(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 -27 dBm/MHz.</p> <p>(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 -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.</p> <p>(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 -27 dBm/MHz.</p>				
Test Procedure:	<p>a. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p>			
Test setup:	Above 1GHz			

	
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

## Remark:

According to KDB 789033 D02 v02r01 section G) 1) (d), for For measurements above 1000 MHz @ 3m distance, the limit of field strength is computed as follows:

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2,$$

For example, if EIRP = -27dBm

$$E[\text{dBuV/m}] = -27 + 95.2 = 68.2\text{dBuV/m}.$$

**Measurement Data:****Band1**

Mode:		802.11a		Frequency:		5180MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	38.05	17.21	55.26	68.20	-12.94	PK
V	5150.00	36.21	17.21	53.42	68.20	-14.78	PK
Mode:		802.11a		Frequency:		5180MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	24.57	17.18	41.75	54.00	-12.25	AV
V	5150.00	24.52	17.18	41.70	54.00	-12.30	AV
Mode:		802.11a		Frequency:		5240MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	35.47	17.21	52.68	68.20	-15.52	PK
V	5350.00	32.52	17.21	49.73	68.20	-18.47	PK
Mode:		802.11a		Frequency:		5240MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	26.58	17.18	43.76	54.00	-10.24	AV
V	5350.00	25.57	17.18	42.75	54.00	-11.25	AV



Mode:		802.11n(HT20)		Frequency:		5180MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	35.18	17.21	52.39	68.20	-15.81	PK
V	5150.00	36.22	17.21	53.43	68.20	-14.77	PK
Mode:		802.11n(HT20)		Frequency:		5180MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	23.14	17.18	40.32	54.00	-13.68	AV
V	5150.00	23.88	17.18	41.06	54.00	-12.94	AV
Mode:		802.11n(HT20)		Frequency:		5240MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	36.67	17.21	53.88	68.20	-14.32	PK
V	5350.00	36.18	17.21	53.39	68.20	-14.81	PK
Mode:		802.11n(HT20)		Frequency:		5240MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	27.53	17.18	44.71	54.00	-9.29	AV
V	5350.00	26.01	17.18	43.19	54.00	-10.81	AV

Mode:		802.11ac(HT20)		Frequency:		5180MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	37.34	17.21	54.55	68.20	-13.65	PK
V	5150.00	35.46	17.21	52.67	68.20	-15.53	PK
Mode:		802.11ac(HT20)		Frequency:		5180MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	23.50	17.18	40.68	54.00	-13.32	AV
V	5150.00	23.87	17.18	41.05	54.00	-12.95	AV
Mode:		802.11ac(HT20)		Frequency:		5240MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	36.56	17.21	53.77	68.20	-14.43	PK
V	5350.00	34.28	17.21	51.49	68.20	-16.71	PK
Mode:		802.11ac(HT20)		Frequency:		5240MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	25.40	17.18	42.58	54.00	-11.42	AV
V	5350.00	22.55	17.18	39.73	54.00	-14.27	AV

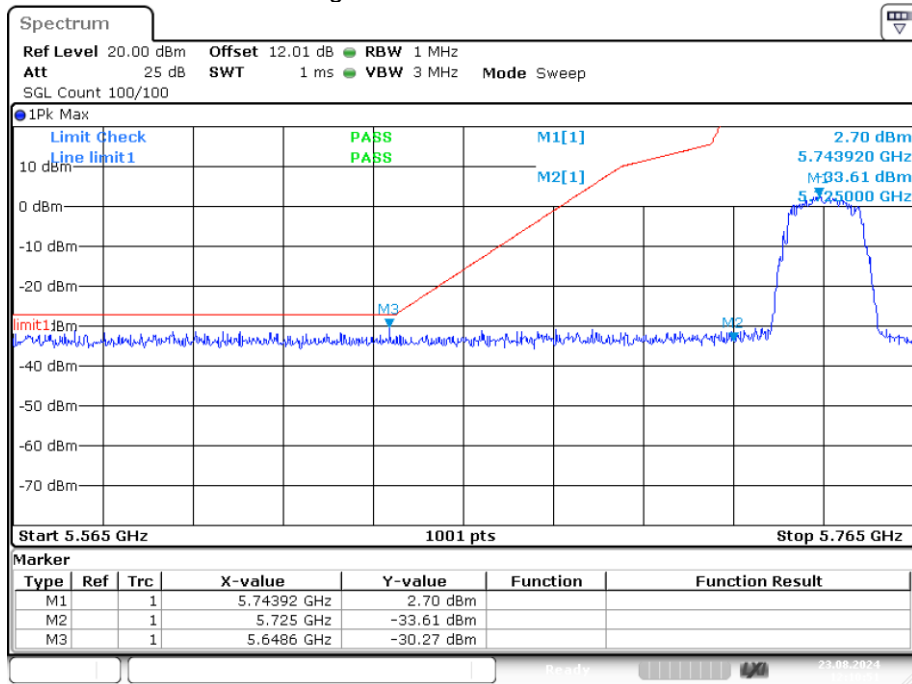
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Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	38.38	17.21	55.59	68.20	-12.61	PK
V	5150.00	34.70	17.21	51.91	68.20	-16.29	PK
Mode:		802.11n(HT40)		Frequency:		5190MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	23.98	17.18	41.16	54.00	-12.84	AV
V	5150.00	24.62	17.18	41.80	54.00	-12.20	AV
Mode:		802.11n(HT40)		Frequency:		5230MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	34.87	17.21	52.08	68.20	-16.12	PK
V	5350.00	34.14	17.21	51.35	68.20	-16.85	PK
Mode:		802.11n(HT40)		Frequency:		5230MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	25.63	17.18	42.81	54.00	-11.19	AV
V	5350.00	25.46	17.18	42.64	54.00	-11.36	AV

Mode:		802.11ac(HT40)		Frequency:		5190MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	37.54	17.21	54.75	68.20	-13.45	PK
V	5150.00	36.02	17.21	53.23	68.20	-14.97	PK
Mode:		802.11ac(HT40)		Frequency:		5190MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	22.93	17.18	40.11	54.00	-13.89	AV
V	5150.00	26.27	17.18	43.45	54.00	-10.55	AV
Mode:		802.11ac(HT40)		Frequency:		5230MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	36.02	17.21	53.23	68.20	-14.97	PK
V	5350.00	35.55	17.21	52.76	68.20	-15.44	PK
Mode:		802.11ac(HT40)		Frequency:		5230MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	27.80	17.18	44.98	54.00	-9.02	AV
V	5350.00	23.50	17.18	40.68	54.00	-13.32	AV

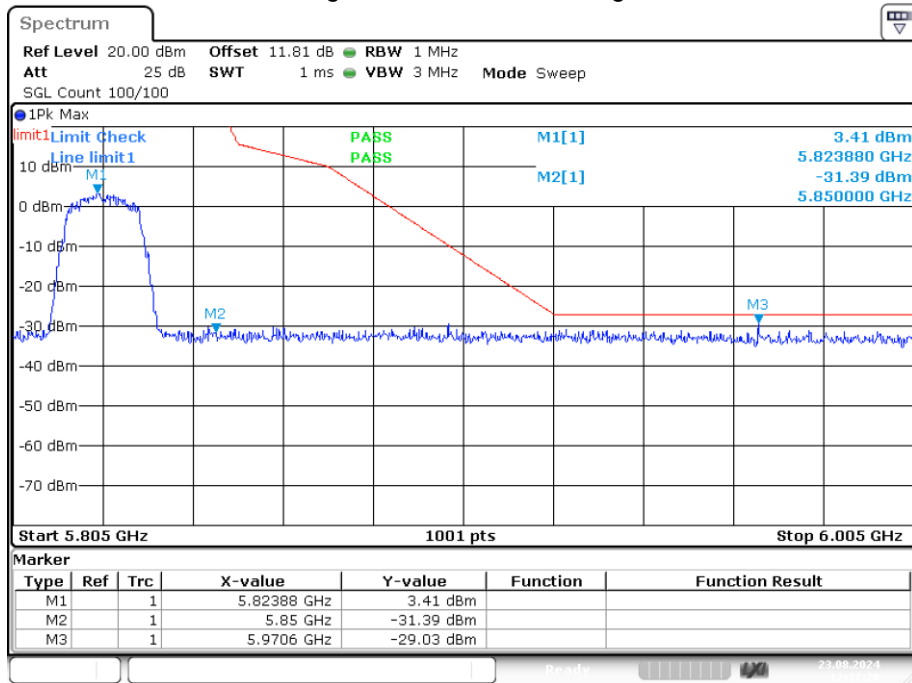
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Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	38.47	17.21	55.68	68.20	-12.52	PK
V	5150.00	36.82	17.21	54.03	68.20	-14.17	PK
Mode:		802.11ac(HT80)		Frequency:		5210MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5150.00	25.07	17.18	42.25	54.00	-11.75	AV
V	5150.00	26.43	17.18	43.61	54.00	-10.39	AV
Mode:		802.11ac(HT80)		Frequency:		5210MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	34.78	17.21	51.99	68.20	-16.21	PK
V	5350.00	35.28	17.21	52.49	68.20	-15.71	PK
Mode:		802.11ac(HT80)		Frequency:		5210MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5350.00	25.42	17.18	42.60	54.00	-11.40	AV
V	5350.00	25.36	17.18	42.54	54.00	-11.46	AV

**Band4**

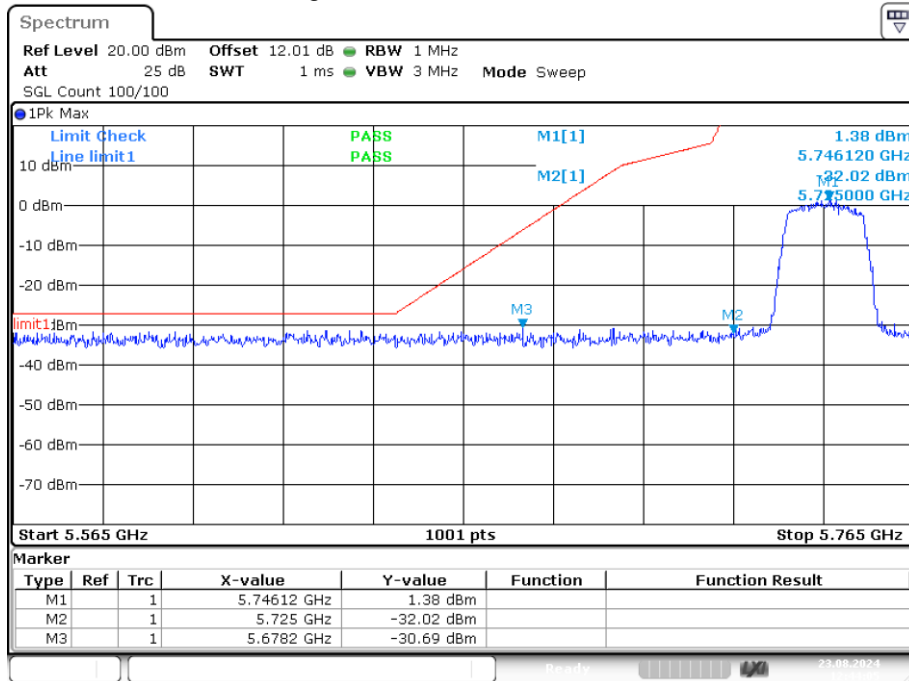
**Band Edge NVNT a 5745MHz Low Ant1**



**Band Edge NVNT a 5825MHz High Ant1**

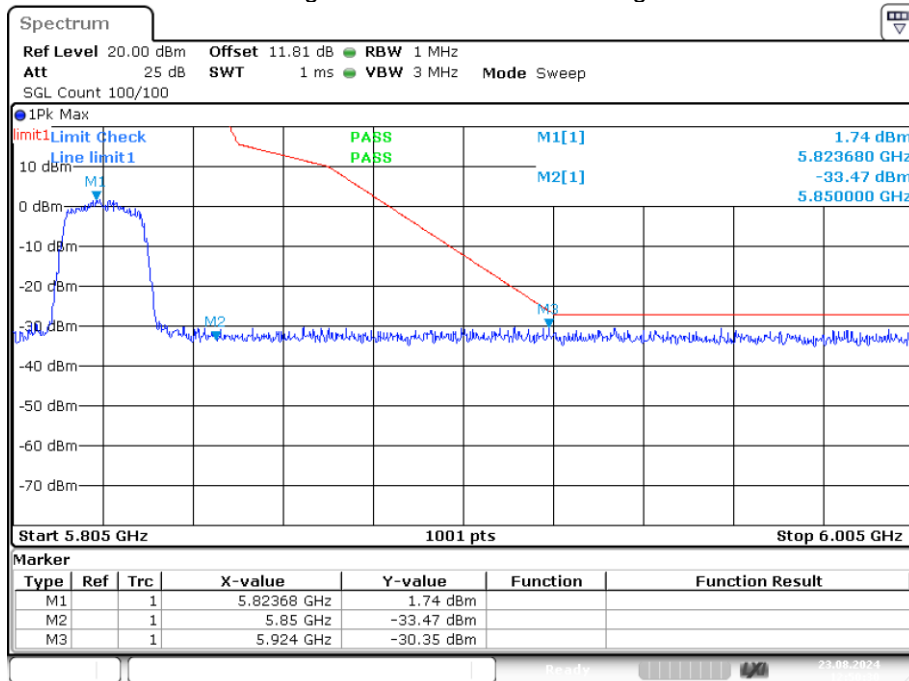


### Band Edge NVNT ac20 5745MHz Low Ant1



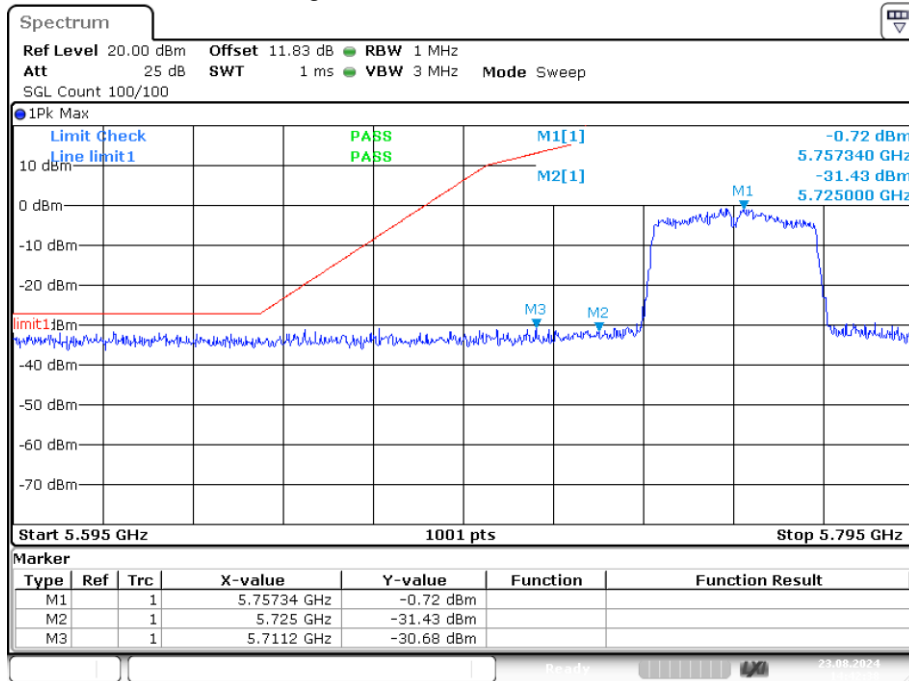
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### Band Edge NVNT ac20 5825MHz High Ant1



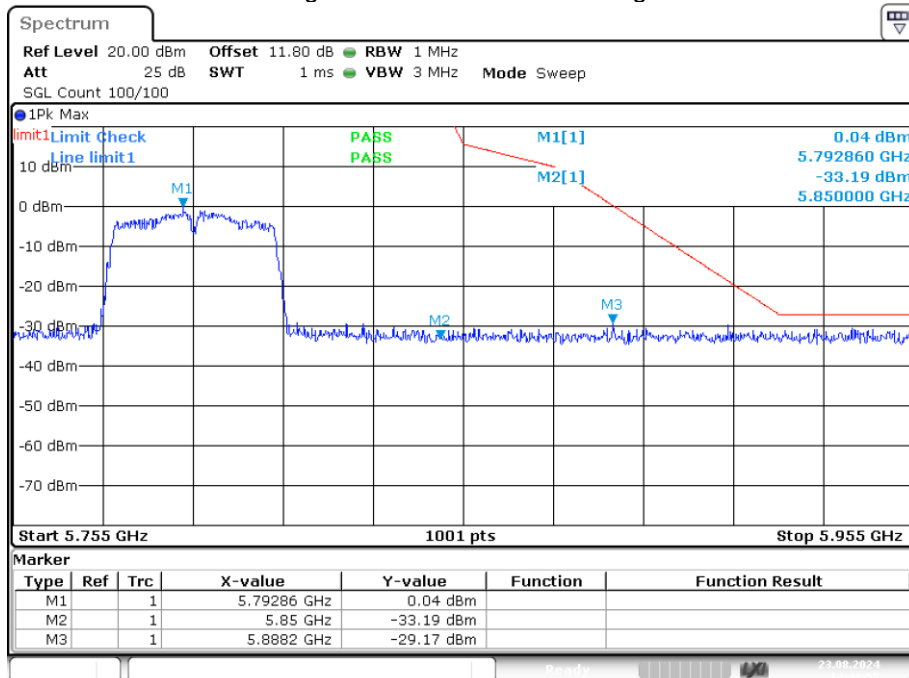
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### Band Edge NVNT ac40 5755MHz Low Ant1



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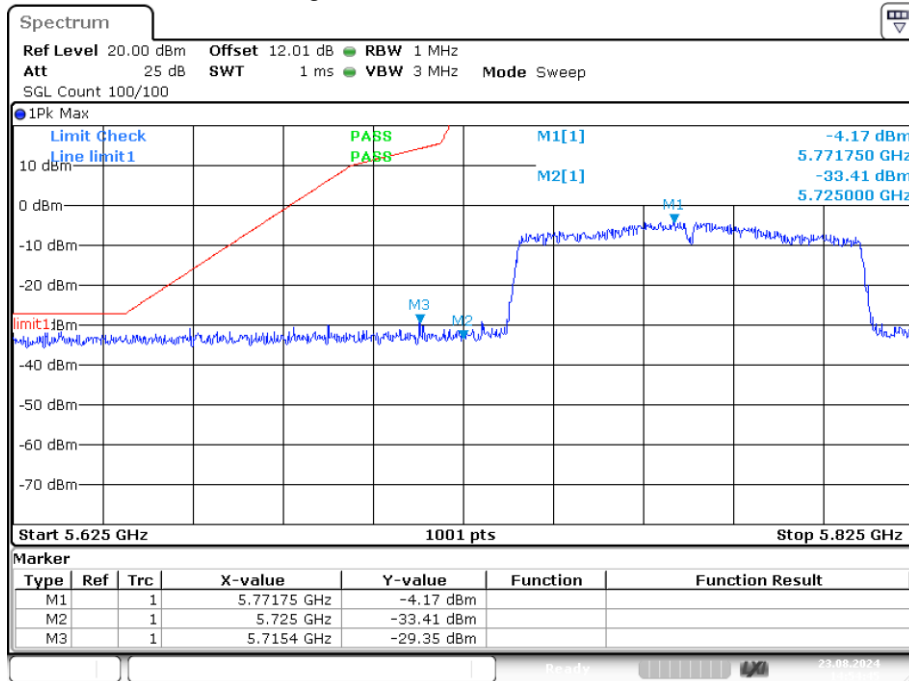
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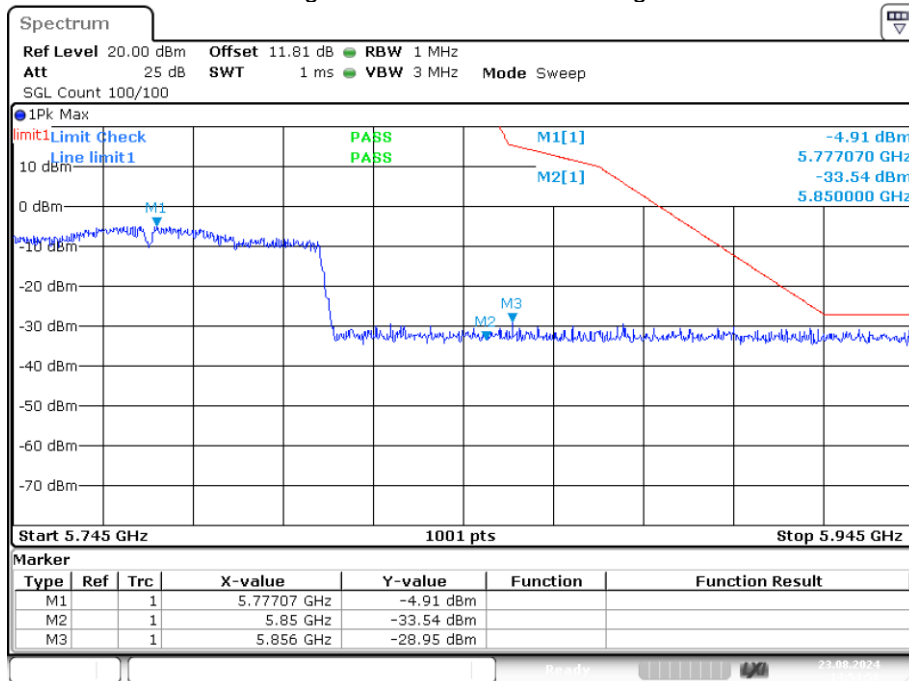


### Band Edge NVNT ac80 5745MHz Low Ant1



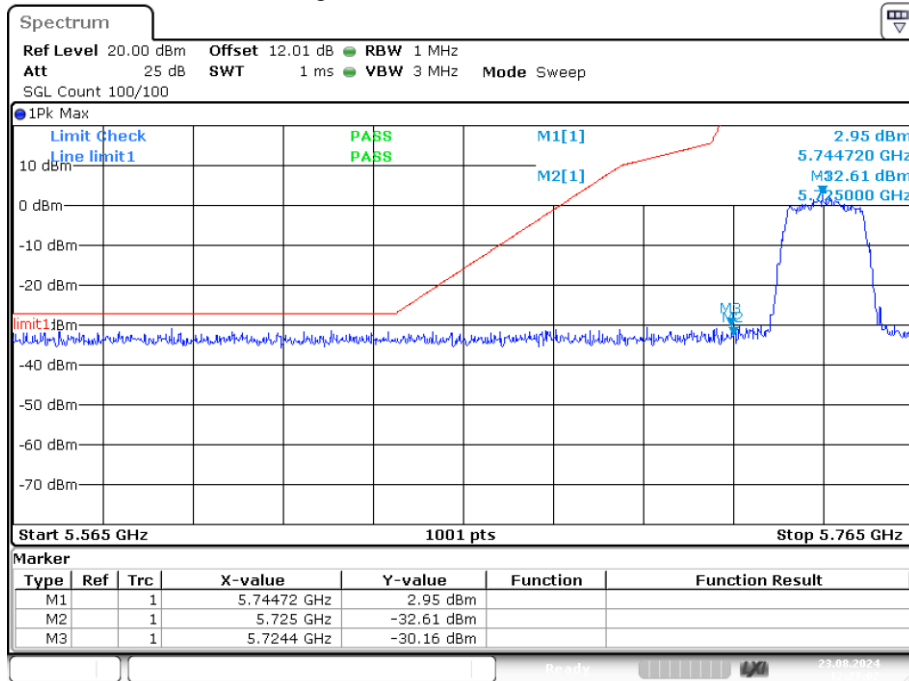
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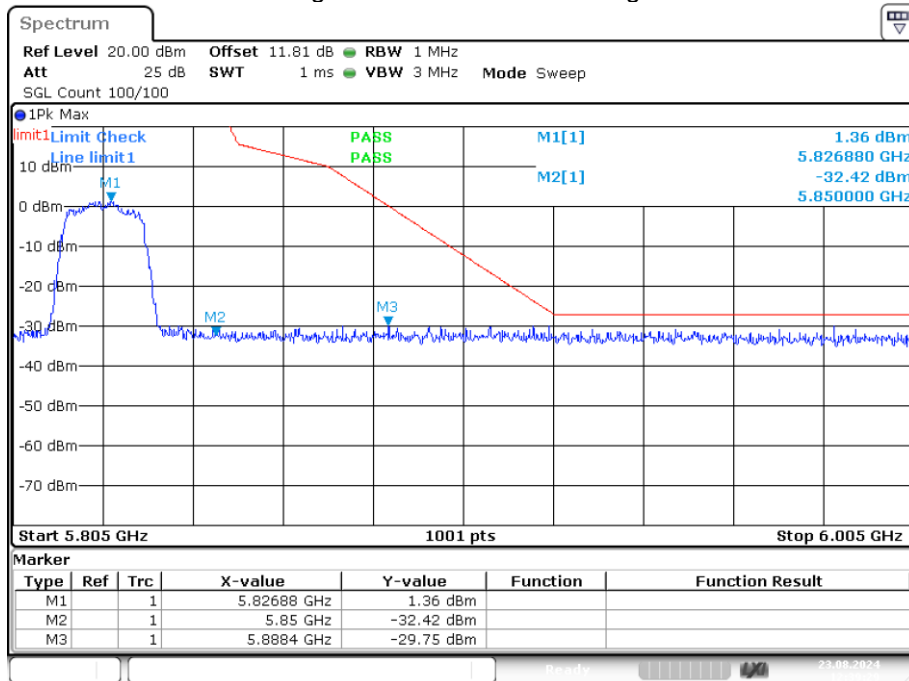
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### Band Edge NVNT n20 5745MHz Low Ant1



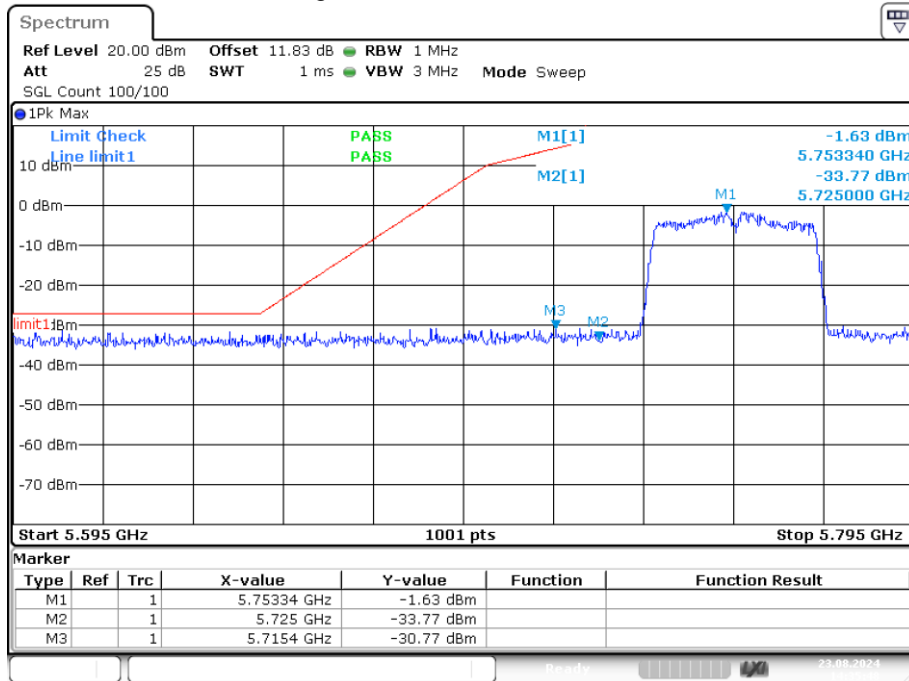
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### Band Edge NVNT n20 5825MHz High Ant1



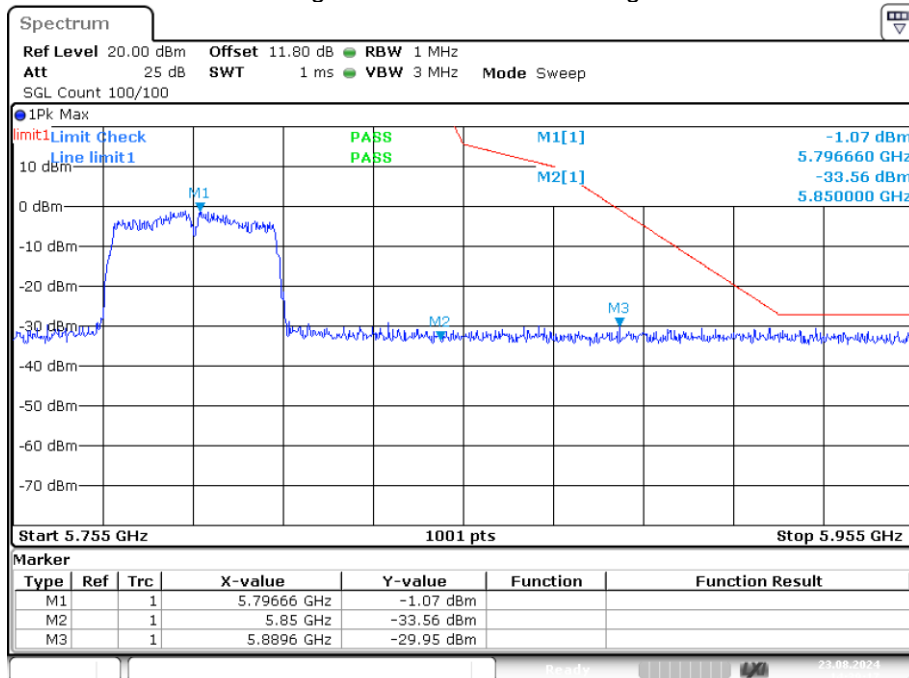
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Date: 23.AUG.2024 14:35:47

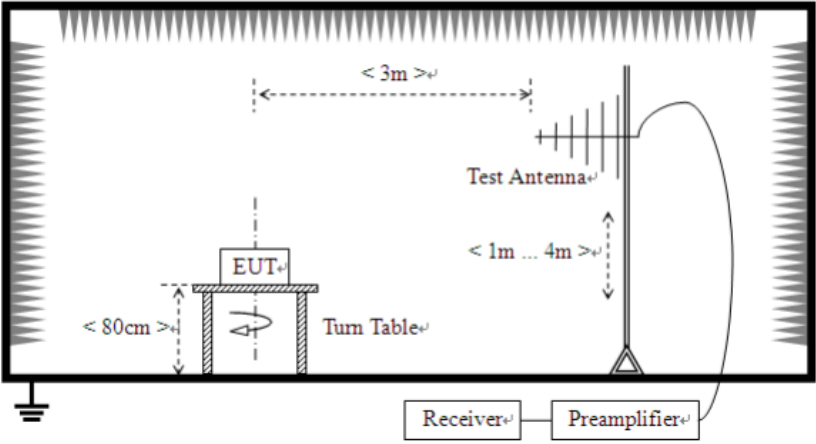
### Band Edge NVNT n40 5795MHz High Ant1

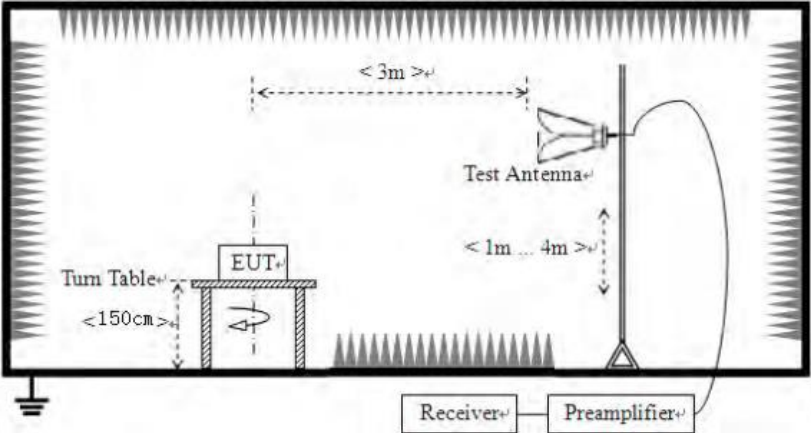


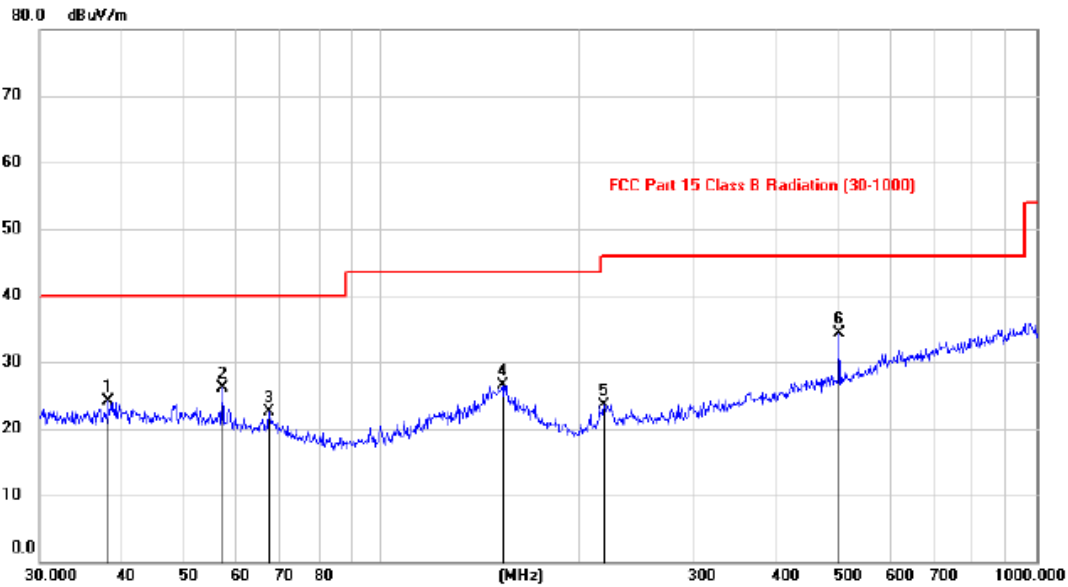
Date: 23.AUG.2024 14:39:17

## 4.7 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	30MHz to 40GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		AV	1MHz	3MHz	Average Value
Limit:	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		74.0		Peak Value
		54.0		Average Value	
Test Procedure:	<p>Substitution method was performed to determine the actual ERP emission levels of the EUT. The following test procedure as below:</p> <p>1&gt;.Below 1GHz test procedure:</p> <ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol> <p>2&gt;.Above 1GHz test procedure:</p> <ol style="list-style-type: none"> <li>1. On the test site as test setup graph above,the EUT shall be placed at the 1.5m support on the turntable and in the position closest to normal use as declared by the provider.</li> <li>2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.The output of the test antenna shall be connected to the measuring receiver.</li> <li>3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test.</li> <li>4. The test antenna shall be raised and lowered from 1m to 4m until a</li> </ol>				

	<p>maximum signal level is detected by the measuring receiver. Then the turntable should be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.</p> <ol style="list-style-type: none"> <li>5. Repeat step 4 for test frequency with the test antenna polarized horizontally.</li> <li>6. Remove the transmitter and replace it with a substitution antenna</li> <li>7. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends vertically polarized, and with the signal generator tuned to a particular test frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.</li> <li>8. Repeat step 7 with both antennas horizontally polarized for each test frequency.</li> <li>9. Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps 7 and 8 by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:  <math display="block">\text{EIRP(dBm)} = P_g(\text{dBm}) - \text{cable loss (dB)} + \text{antenna gain (dBi)}</math>           where:  <math>P_g</math> is the generator output power into the substitution antenna.</li> </ol>
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>

	
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

**Measurement Data:****Below 1GHz****Polarization: Horizontal**

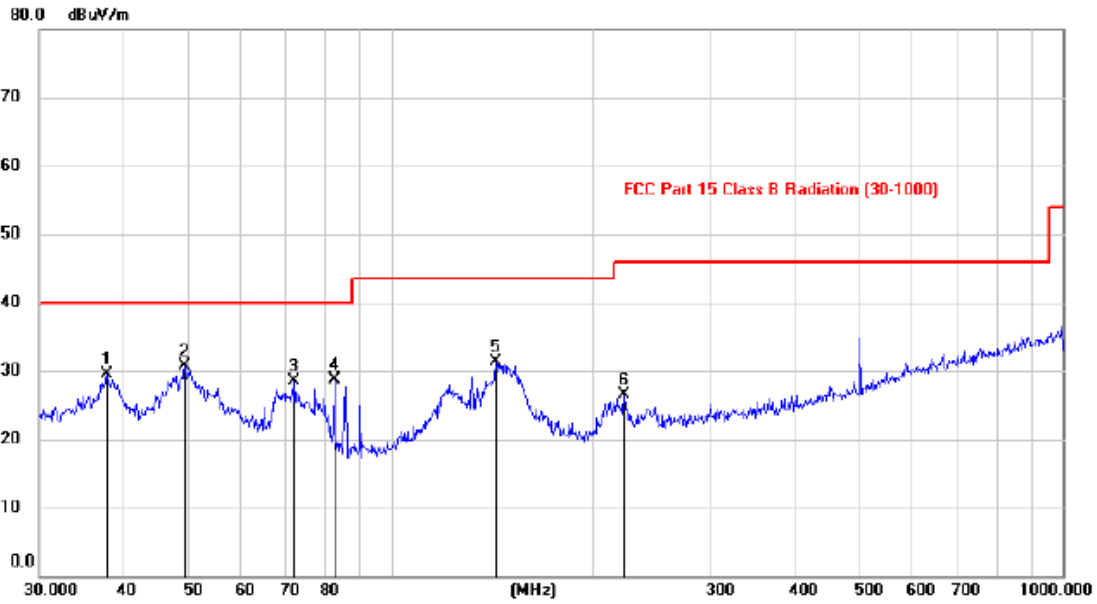
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		38.2567	9.87	14.20	24.07	40.00	-15.93			peak
2		56.9912	12.76	13.41	26.17	40.00	-13.83			peak
3		67.3358	10.70	11.78	22.48	40.00	-17.52			peak
4		152.8248	11.51	15.05	26.56	43.50	-16.94			peak
5		218.4106	11.96	11.63	23.59	46.00	-22.41			peak
6	*	500.0088	16.00	18.21	34.21	46.00	-11.79			peak

Note: 1. \*:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

**Polarization: Vertical**





No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree	Comment
1		37.9184	15.38	14.11	29.49	40.00	-10.51	peak		
2	*	49.4807	16.73	14.03	30.76	40.00	-9.24	peak		
3		71.8656	17.41	11.11	28.52	40.00	-11.48	peak		
4		82.3781	18.73	9.93	28.66	40.00	-11.34	peak		
5		143.5105	16.70	14.58	31.28	43.50	-12.22	peak		
6		222.4036	14.65	11.88	26.53	46.00	-19.47	peak		

Note:1. \*:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

**Above 1GHz:**

## 802.11a(HT20) 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.28	61.59	11.25	14.62	32.65	54.81	68.20	-13.39	Vertical
15540.01	64.27	11.93	17.66	34.46	59.40	74.00	-14.60	Vertical
10360.13	63.98	9.4	14.62	32.65	55.35	68.20	-12.85	Horizontal
15540.25	69.44	8.5	17.66	34.46	61.14	74.00	-12.86	Horizontal

## 802.11a(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.08	49.99	16.29	17.66	34.46	49.48	68.20	-18.72	Vertical
15600.23	52.10	21.83	17.66	34.46	57.13	74.00	-16.87	Vertical
10400.21	49.46	8.73	17.66	34.46	41.39	68.20	-26.81	Horizontal
15600.28	50.69	11.73	17.66	34.46	45.62	74.00	-28.38	Horizontal

## 802.11a(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.19	49.54	16.29	17.66	34.46	49.03	68.20	-19.17	Vertical
15720.14	49.57	21.83	17.66	34.46	54.60	74.00	-19.40	Vertical
10480.19	51.69	8.73	17.66	34.46	43.62	68.20	-24.58	Horizontal
15720.04	49.61	11.73	17.66	34.46	44.54	74.00	-29.46	Horizontal

## 802.11n(HT20) 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.07	60.41	11.25	14.62	32.65	53.63	68.20	-14.57	Vertical
15540.18	62.89	11.93	17.66	34.46	58.02	74.00	-15.98	Vertical
10360.12	64.55	9.4	14.62	32.65	55.92	68.20	-12.28	Horizontal
15540.16	66.82	8.5	17.66	34.46	58.52	74.00	-15.48	Horizontal

## 802.11n(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.28	52.09	16.29	17.66	34.46	51.58	68.20	-16.62	Vertical
15600.08	48.80	21.83	17.66	34.46	53.83	74.00	-20.17	Vertical
10400.18	51.71	8.73	17.66	34.46	43.64	68.20	-24.56	Horizontal
15600.00	51.21	11.73	17.66	34.46	46.14	74.00	-27.86	Horizontal

## 802.11n(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.24	50.18	16.29	17.66	34.46	49.67	68.20	-18.53	Vertical
15720.08	50.88	21.83	17.66	34.46	55.91	74.00	-18.09	Vertical
10480.17	52.56	8.73	17.66	34.46	44.49	68.20	-23.71	Horizontal
15720.21	50.76	11.73	17.66	34.46	45.69	74.00	-28.31	Horizontal

## 802.11ac(HT20) 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.05	61.50	11.25	14.62	32.65	54.72	68.20	-13.48	Vertical
15540.28	63.06	11.93	17.66	34.46	58.19	74.00	-15.81	Vertical
10360.07	64.98	9.4	14.62	32.65	56.35	68.20	-11.85	Horizontal
15540.01	66.68	8.5	17.66	34.46	58.38	74.00	-15.62	Horizontal

## 802.11ac(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400.26	49.56	16.29	17.66	34.46	49.05	68.20	-19.15	Vertical
15600.18	48.63	21.83	17.66	34.46	53.66	74.00	-20.34	Vertical
10400.17	49.63	8.73	17.66	34.46	41.56	68.20	-26.64	Horizontal
15600.01	50.00	11.73	17.66	34.46	44.93	74.00	-29.07	Horizontal

## 802.11ac(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480.19	50.15	16.29	17.66	34.46	49.64	68.20	-18.56	Vertical
15720.16	48.60	21.83	17.66	34.46	53.63	74.00	-20.37	Vertical
10480.17	48.81	8.73	17.66	34.46	40.74	68.20	-27.46	Horizontal
15720.14	51.88	11.73	17.66	34.46	46.81	74.00	-27.19	Horizontal

## 802.11n(HT40) 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380.03	63.15	11.25	14.62	32.65	56.37	68.20	-11.83	Vertical
15570.31	61.38	11.93	17.66	34.46	56.51	74.00	-17.49	Vertical
10380.20	66.00	9.4	14.62	32.65	57.37	68.20	-10.83	Horizontal
15570.05	69.28	8.5	17.66	34.46	60.98	74.00	-13.02	Horizontal

## 802.11n(HT40) 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460.07	50.77	16.29	17.66	34.46	50.26	68.20	-17.94	Vertical
15690.14	51.11	21.83	17.66	34.46	56.14	74.00	-17.86	Vertical
10460.29	48.81	8.73	17.66	34.46	40.74	68.20	-27.46	Horizontal
15690.31	50.31	11.73	17.66	34.46	45.24	74.00	-28.76	Horizontal

## 802.11ac(HT40) 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380.26	60.46	11.25	14.62	32.65	53.68	68.20	-14.52	Vertical
15570.29	63.91	11.93	17.66	34.46	59.04	74.00	-14.96	Vertical
10380.04	66.61	9.4	14.62	32.65	57.98	68.20	-10.22	Horizontal
15570.18	69.20	8.5	17.66	34.46	60.90	74.00	-13.10	Horizontal

## 802.11ac(HT40) 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460.26	49.61	16.29	17.66	34.46	49.10	68.20	-19.10	Vertical
15690.24	49.23	21.83	17.66	34.46	54.26	74.00	-19.74	Vertical
10460.17	50.92	8.73	17.66	34.46	42.85	68.20	-25.35	Horizontal
15690.04	51.65	11.73	17.66	34.46	46.58	74.00	-27.42	Horizontal

## 802.11ac(HT80) 5210MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10420.31	50.39	16.29	17.66	34.46	49.88	68.20	-18.32	Vertical
15630.00	49.67	21.83	17.66	34.46	54.70	74.00	-19.30	Vertical
10420.08	51.02	8.73	17.66	34.46	42.95	68.20	-25.25	Horizontal
15630.08	52.50	11.73	17.66	34.46	47.43	74.00	-26.57	Horizontal

## Note:

1. Level = Read Level + Antenna Factor+ Cable loss- Preamp Factor.
2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4. This Report only show the test plots of the worst case (U-NII-1).

#### 4.8 Frequency stability

Test limit	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.
Test results:	Pass

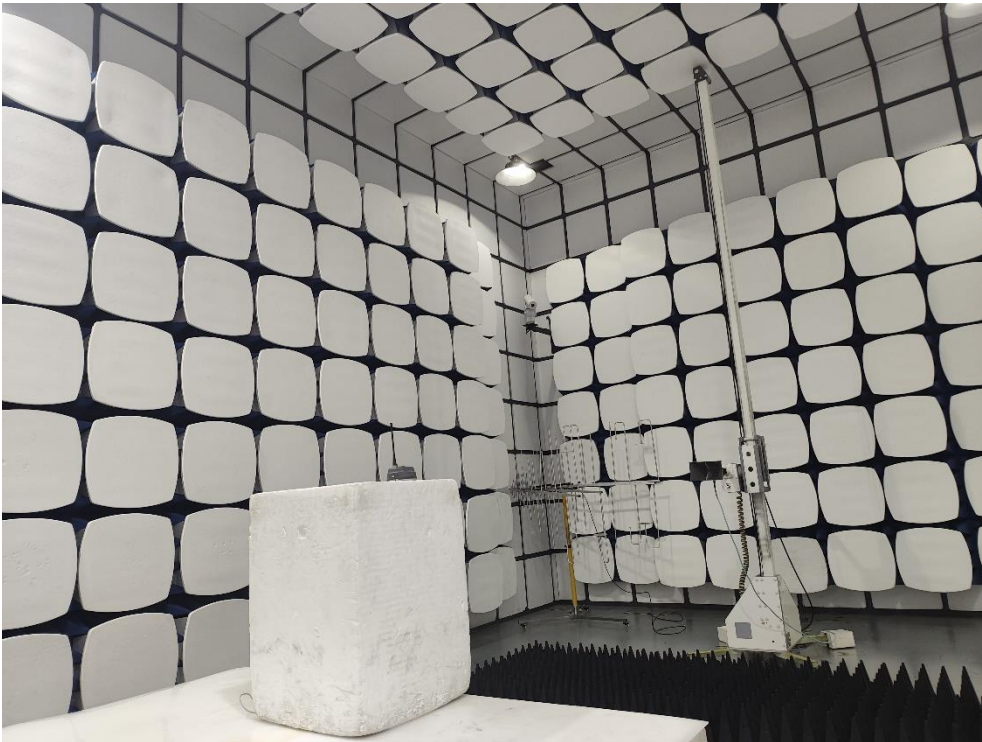
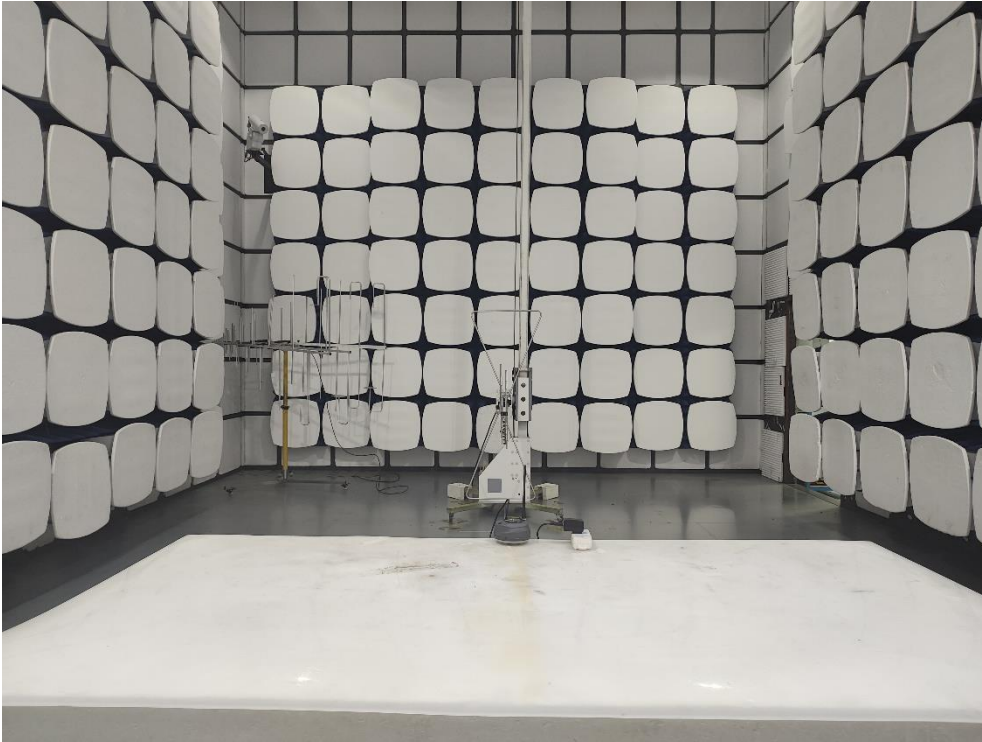
#### Measurement Data:

Mode	Voltage (V)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
Band 1 (5150-5250 MHz)	DC 6.12V	5179.993	7	5239.994	6
	DC 7.2V	5179.987	13	5239.995	5
	DC 8.28V	5179.989	11	5239.995	5
Mode	Voltage (V)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
Band 4 (5725-5850 MHz)	DC 6.12V	5744.990	10	5824.995	5
	DC 7.2V	5744.988	12	5824.989	11
	DC 8.28V	5744.990	10	5824.993	7

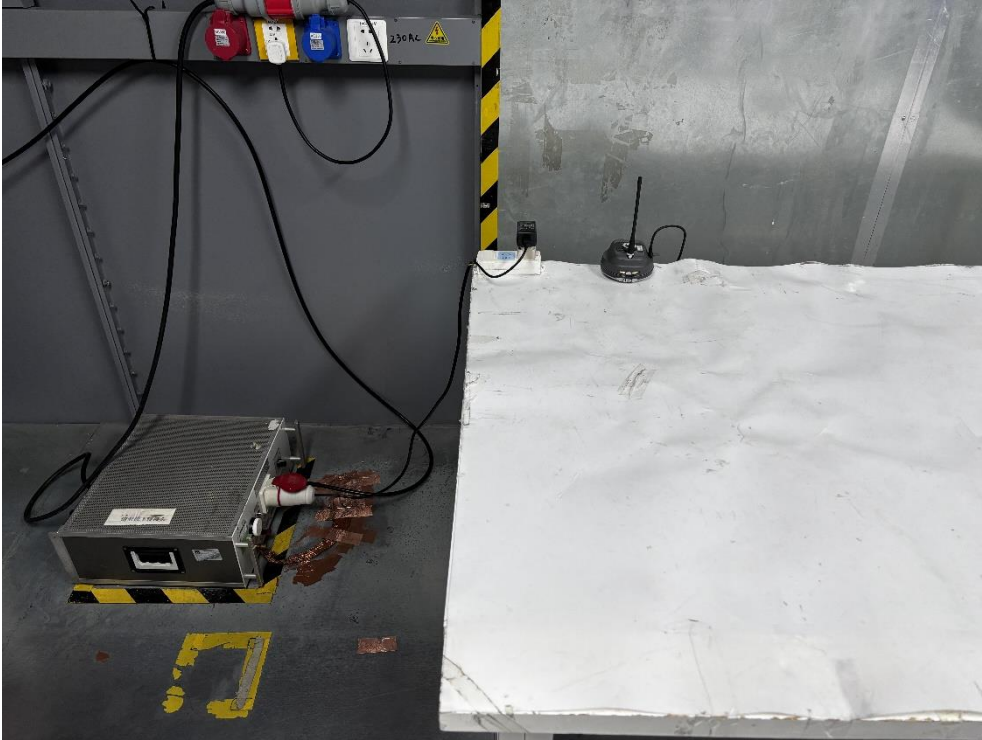
Mode	Temperature (°C)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
Band 1 (5150-5250 MHz)	-20°C	5179.990	10	5239.993	7
	-10°C	5179.988	12	5239.990	10
	-5°C	5179.995	5	5239.994	6
	0°C	5179.989	11	5239.992	8
	+10°C	5179.990	10	5239.995	5
	+20°C	5179.995	5	5239.989	11
	+30°C	5179.991	9	5239.987	13
	+40°C	5179.990	10	5239.988	12
	+50°C	5179.988	12	5239.988	12
Mode	Temperature (°C)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
Band 4 (5725-5850 MHz)	-20°C	5744.992	8	5824.990	10
	-10°C	5744.990	10	5824.991	9
	-5°C	5744.993	7	5824.993	7
	0°C	5744.993	7	5824.990	10
	+10°C	5744.991	9	5824.993	7
	+20°C	5744.994	6	5824.993	7
	+30°C	5744.989	11	5824.987	13
	+40°C	5744.989	11	5824.990	10
	+50°C	5744.992	8	5824.989	11

## 5 Test setup photo

### 5.1 Photos of Radiated emission



5.2 Photos of Conducted Emission test



-----END OF REPORT-----