

TEST REPORT

Report No.: BCTC2508148016-2E

Applicant: Shenzhen Sunell Technology Corporation

Product Name: Video Doorbell

Test Model: SN-MD150AS-A-B

Tested Date: 2025-08-27 to 2025-09-22

Issued Date: 2025-11-03



Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2BSAY-SN-MD150AS

Product Name: Video Doorbell

Trademark: sunell

Model/Type Reference: SN-MD150AS-A-B, SN-MD150BS-A-B, SN-MD150AR-A-B, SN-MD151AS-A-B, SN-MD151BS-A-B, SN-MD151AR-A-B, SN-MD152AS-A-B, SN-MD152BS-A-B, SN-MD152AR-A-B, SN-MD140AS-A-B, SN-MD140BS-A-B, SN-MD140AR-A-B, SN-MD180AS-A-B, SN-MD180BS-A-B, SN-MD180AR-A-B

Prepared For: Shenzhen Sunell Technology Corporation

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Manufacturer: Shenzhen Sunell Technology Corporation

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Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Sample Received Date: 2025-08-27

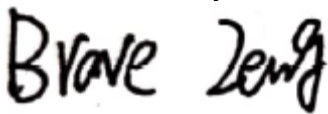
Sample Tested Date: 2025-08-27 to 2025-09-22

Report No.: BCTC2508148016-2E

Test Standards: FCC Part15 15.407
ANSI C63.10:2020

Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

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Table Of Content

Test Report Declaration	Page
1. Version	5
2. Test Summary	6
3. Measurement Uncertainty	7
4. Product Information And Test Setup	8
4.1 Product Information	8
4.2 Test Setup Configuration	9
4.3 Support Equipment	9
4.4 Channel List	10
4.5 Test Mode	11
4.6 Table Of Parameters Of Text Software Setting	11
5. Test Facility And Test Instrument Used	12
5.1 Test Facility	12
5.2 Test Instrument Used	12
6. Conducted Emissions	14
6.1 Block Diagram Of Test Setup	14
6.2 Limit	14
6.3 Test procedure	14
6.4 EUT operating Conditions	14
6.5 Test Result	15
7. Radiated Emissions	19
7.1 Block Diagram Of Test Setup	19
7.2 Limit	20
7.3 Test Procedure	21
7.4 EUT Operating Conditions	22
7.5 Test Result	22
8. Power Spectral Density Test	40
8.1 Block Diagram Of Test Setup	40
8.2 Limit	40
8.3 Test Procedure	41
8.4 EUT Operating Conditions	41
8.5 Test Result	42
9. 26dB & 6dB & 99% Emission Bandwidth	63
9.1 Block Diagram Of Test Setup	63
9.2 Limit	63
9.3 Test Procedure	63
9.4 EUT Operating Conditions	64
9.5 Test Result	65
10. Maximum Conducted Output Power	103
10.1 Block Diagram Of Test Setup	103
10.2 Limit	103
10.3 Test Procedure	103
10.4 EUT Operating Conditions	104
10.5 Test Result	105

11. Out Of Band Emissions	107
11.1 Block Diagram Of Test Setup.....	107
11.2 Limit	107
11.3 Test Procedure	107
11.4 EUT Operating Conditions	107
11.5 Test Result.....	108
12. Spurious RF Conducted Emissions.....	120
12.1 Block Diagram Of Test Setup.....	120
12.2 Limit	120
12.3 Test Procedure	120
12.4 Test Result.....	120
13. Frequency Stability Measurement	138
13.1 Block Diagram Of Test Setup.....	138
13.2 Limit	138
13.3 Test Procedure	138
13.4 Test Result.....	139
14. Duty Cycle Of Test Signal	151
14.1 Standard Requirement.....	151
14.2 Formula.....	151
14.3 Test Procedure	151
14.4 Test Result.....	151
15. Antenna Requirement	153
15.1 Limit	153
15.2 Test Result.....	153
16. EUT Test Setup Photographs.....	154

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2508148016-2E	2025-11-03	Original	Valid



2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a) 15.407 (b)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 a 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 a	PASS
6	Band Edge	15.407 b	PASS
7	Power Spectral Density	15.407 a	PASS
8	Spurious Emissions at Antenna Terminals	15.407 b	PASS
9	Antenna Requirement	15.203	PASS

CO., LTD.

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission(150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59°C

4. Product Information And Test Setup

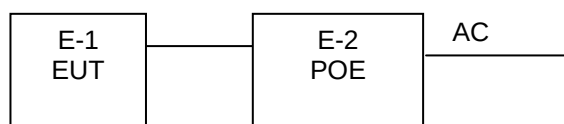
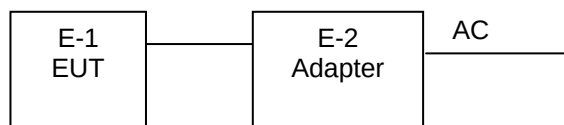
4.1 Product Information

Model/Type reference:	SN-MD150AS-A-B,SN-MD150BS-A-B,SN-MD150AR-A-B,SN-MD151AS-A-B,SN-MD151BS-A-B,SN-MD151AR-A-B,SN-MD152AS-A-B,SN-MD152BS-A-B,SN-MD152AR-A-B,SN-MD140AS-A-B,SN-MD140BS-A-B,SN-MD140AR-A-B,SN-MD180AS-A-B,SN-MD180BS-A-B,SN-MD180AR-A-B	
Model differences:	The following models of devices we produce are identical in terms of electrical, mechanical, and physical structure; The difference lies in the model name and appearance color, and we ultimately have SN-MD150AS-A-B as the test model. The prototype is equipped with two power supply methods for differential testing, one is adapter power supply and the other is POE power supply.	
Device type:	Client	
TPC Function:	☐ Applicable	☒ Not Applicable
Hardware Version:	N/A	
Software Version:	N/A	
IEEE 802.11 WLAN Mode Supported:	☒ 802.11a ☒ 802.11n(20MHz channel bandwidth) ☒ 802.11n(40MHz channel bandwidth)	
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20); 5190-5230MHz for 802.11n(HT40); 5260-5320MHz for 802.11a/n(HT20); 5270-5310MHz for 802.11n(HT40); 5500-5700MHz for 802.11a/n(HT20); 5510-5670MHz for 802.11n(HT40); 5745-5825 MHz for 802.11a/n(HT20); 5755-5795 MHz for 802.11n(HT40);	
Type of Modulation:	☒ OFDM with BPSK/QPSK/16QAM/64QAM for 802.11a/n	
Antenna installation:	Internal antenna	
Antenna Gain:	4.34dBi	
Remark:	The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.	
Ratings:	INPUT:AC 12-24V~,50/60Hz,0.6A POE INPUT: 48V,0.2A	
Adapter:	INPUT:AC 100-240V,50/60Hz,1.5A OUTPUT:AC 24V,2.5A	

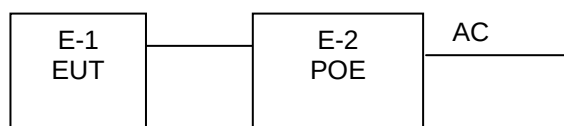
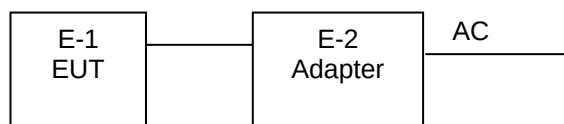
4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Video Doorbell	N/A	SN-MD150AS-A-B	N/A	EUT
E-2	Adapter	N/A	FYH24V2.5AC-F	N/A	Auxiliary
E-3	POE	N/A	N/A	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	N/A	N/A

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

(U-NII-1) 5180MHz-5240MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	36	5180	40	5200
	44	5220	48	5240
40MHz	38	5190	46	5230
(U-NII-2A) 5260MHz-5320MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	52	5260	56	5280
	60	5300	64	5320
40MHz	54	5270	62	5310
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	100	5500	105	5520
	108	5540	112	5560
	116	5580	132	5660
	136	5680	140	5700
40MHz	102	5510	110	5550
	134	5670		
(U-NII-3) 5745MHz-5825MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	149	5745	153	5765
	157	5785	161	5805
	165	5825		
40MHz	151	5755	159	5795

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a / n 20 CH36/ CH40/ CH 48 802.11a / n 20 CH52/ CH56/ CH 64 802.11a / n 20 CH100/ CH116/ CH 140 802.11a /n 20 CH149/ CH157/ CH 165
Mode 2	802.11n 40 CH38/ CH 46 802.11n 40 CH54/ CH 62 802.11n 40 CH102/ CH 110/CH134 802.11n 40 CH 151 / CH 159
Mode 3	Transmit mode

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.6 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version	CMD		
Parameters	DEF	DEF	DEF

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

5.2 Test Instrument Used

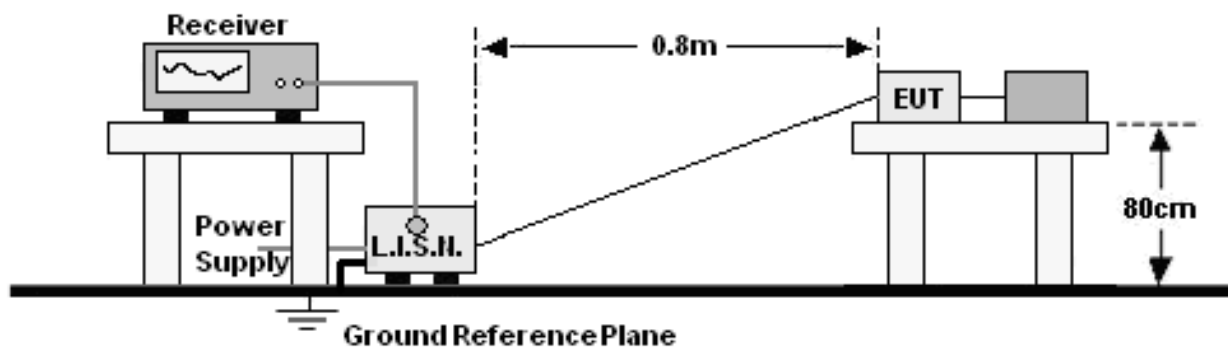
Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 08, 2025	May 07, 2026
LISN	R&S	ENV216	101375	May 14, 2025	May 13, 2026
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD 9561-F	01323	May 14, 2025	May 13, 2026

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power meter	Keysight	E4419	\	May 14, 2025	May 13, 2026
Power Sensor (AV)	Keysight	E9300A	\	May 14, 2025	May 13, 2026
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 14, 2025	May 13, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026

Radiated Emissions Test (966 Chamber02)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESR3	102075	May 08, 2025	May 07, 2026
Receiver	R&S	ESRP	101154	May 14, 2025	May 13, 2026
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 14, 2025	May 13, 2026
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 24, 2025	May 23, 2026
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 24, 2025	May 23, 2026
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 14, 2025	May 13, 2026
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 24, 2025	May 23, 2026
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 24, 2025	May 23, 2026
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 24, 2025	May 23, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:

- *Decreasing linearly with logarithm of frequency.
- The lower limit shall apply at the transition frequencies.

6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

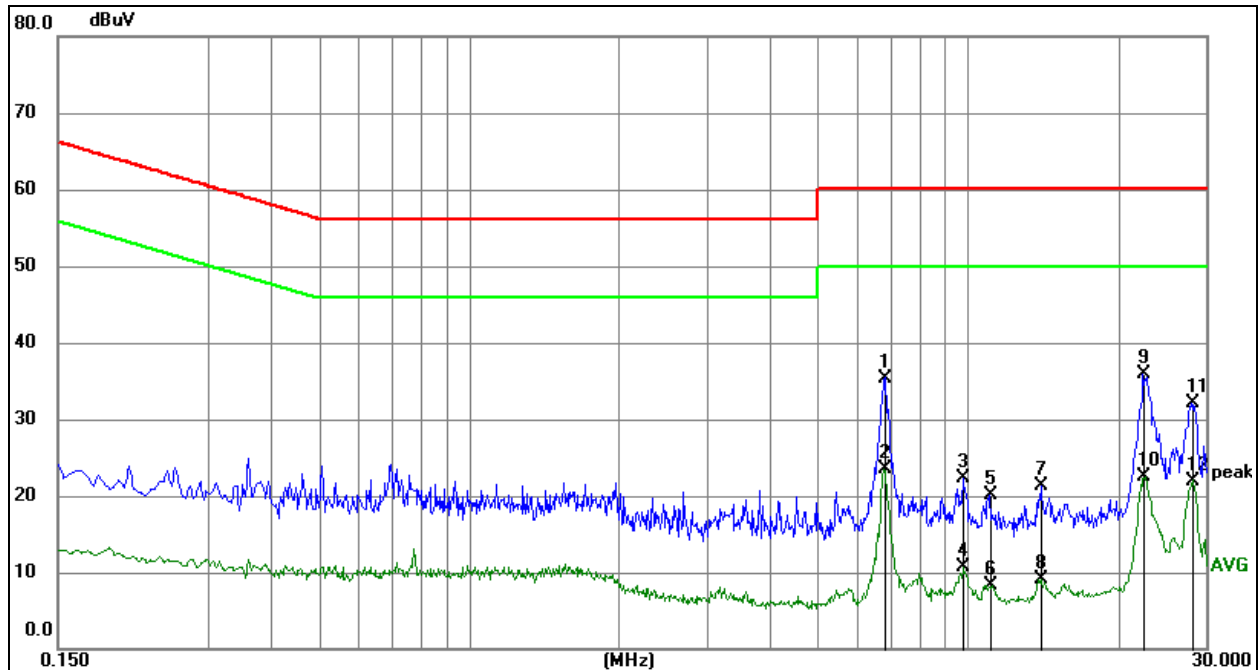
6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

6.5 Test Result

adapter power supply:

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 3	Test Voltage :	AC 24V

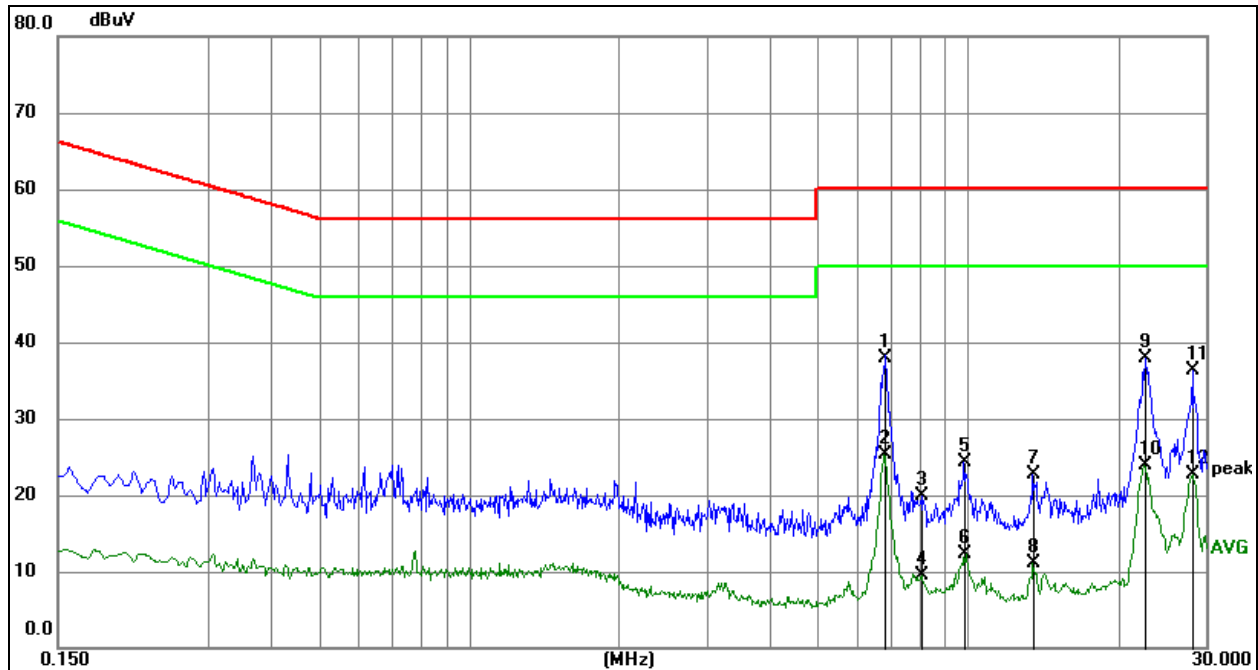


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	6.8010	23.99	11.23	35.22	60.00	-24.78	QP
2	6.8010	12.27	11.23	23.50	50.00	-26.50	AVG
3	9.8070	10.75	11.53	22.28	60.00	-37.72	QP
4	9.8070	-0.86	11.53	10.67	50.00	-39.33	AVG
5	11.0400	8.42	11.67	20.09	60.00	-39.91	QP
6	11.0400	-3.28	11.67	8.39	50.00	-41.61	AVG
7	14.0595	9.34	12.04	21.38	60.00	-38.62	QP
8	14.0595	-2.90	12.04	9.14	50.00	-40.86	AVG
9 *	22.4745	23.40	12.54	35.94	60.00	-24.06	QP
10	22.4745	10.00	12.54	22.54	50.00	-27.46	AVG
11	28.0995	19.53	12.61	32.14	60.00	-27.86	QP
12	28.0995	9.39	12.61	22.00	50.00	-28.00	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	N
Test Mode:	Mode 3	Test Voltage :	AC 24V



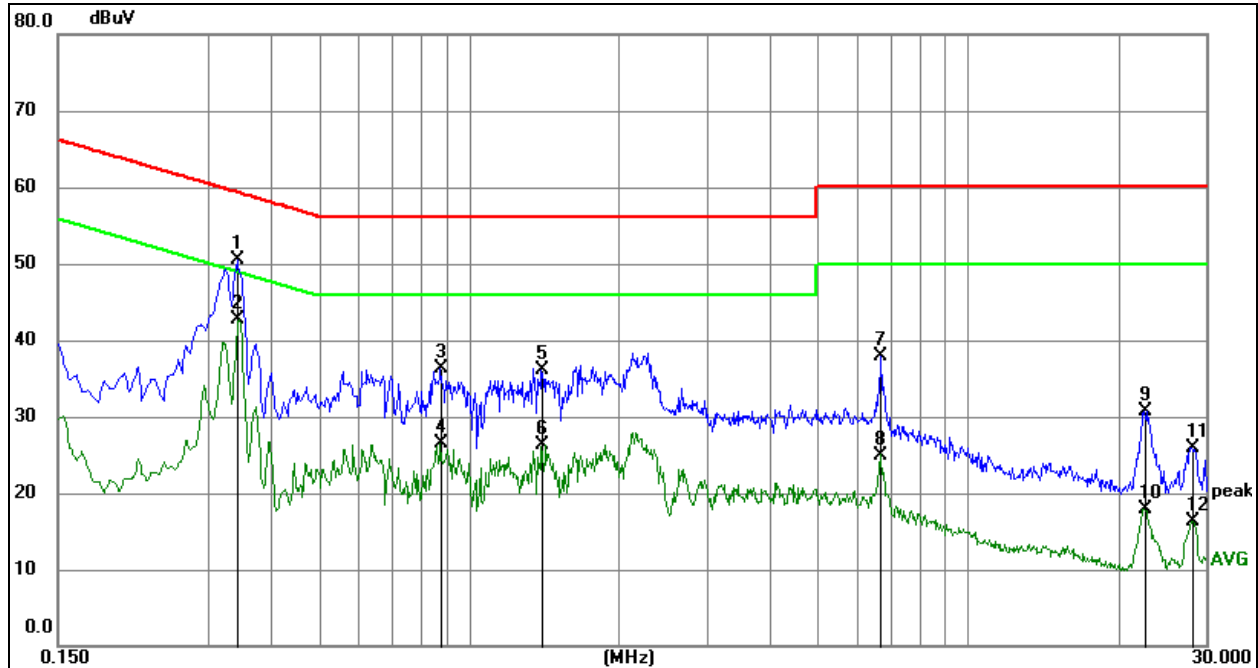
Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	6.8370	26.69	11.23	37.92	60.00	-22.08	QP
2	6.8370	13.98	11.23	25.21	50.00	-24.79	AVG
3	8.0925	8.64	11.34	19.98	60.00	-40.02	QP
4	8.0925	-1.86	11.34	9.48	50.00	-40.52	AVG
5	9.8385	12.71	11.53	24.24	60.00	-35.76	QP
6	9.8385	0.68	11.53	12.21	50.00	-37.79	AVG
7	13.4925	10.73	11.97	22.70	60.00	-37.30	QP
8	13.4925	-0.93	11.97	11.04	50.00	-38.96	AVG
9 *	22.5555	25.40	12.54	37.94	60.00	-22.06	QP
10	22.5555	11.32	12.54	23.86	50.00	-26.14	AVG
11	28.1580	23.61	12.61	36.22	60.00	-23.78	QP
12	28.1580	10.01	12.61	22.62	50.00	-27.38	AVG

POE power supply:

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 3	Test Voltage :	POE 48V

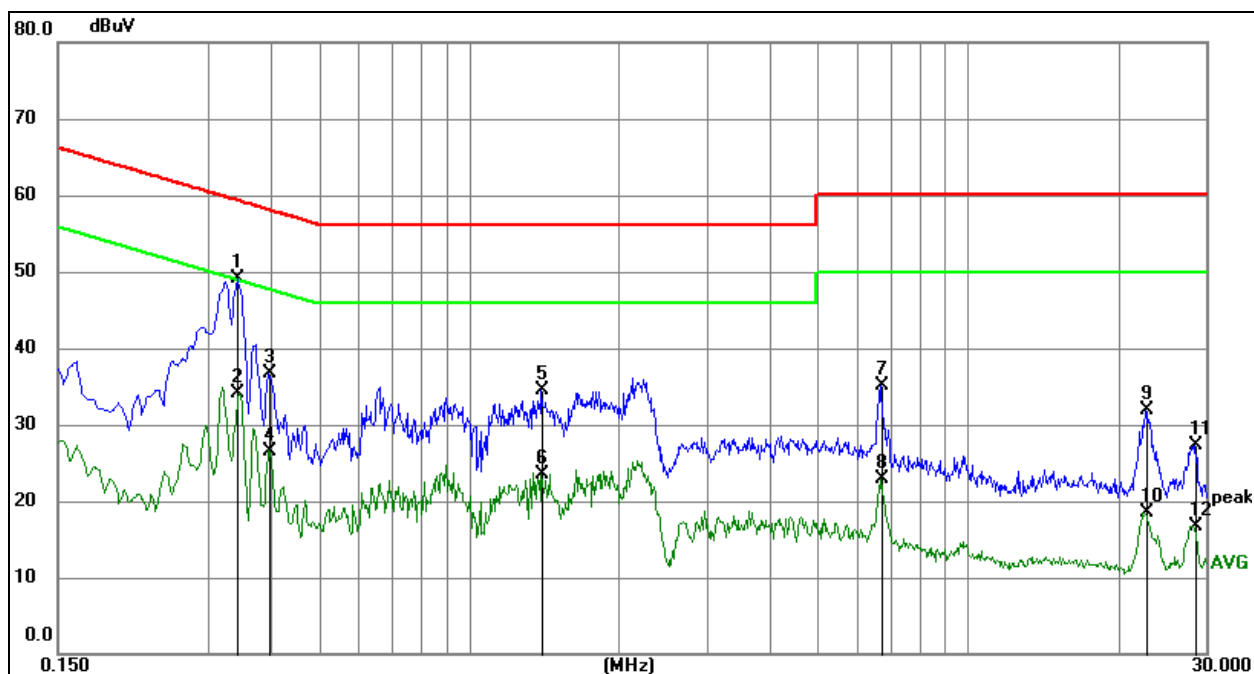


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3435	39.94	10.60	50.54	59.12	-8.58	QP
2 *	0.3435	32.09	10.60	42.69	49.12	-6.43	AVG
3	0.8790	25.77	10.62	36.39	56.00	-19.61	QP
4	0.8790	15.79	10.62	26.41	46.00	-19.59	AVG
5	1.3965	25.47	10.66	36.13	56.00	-19.87	QP
6	1.3965	15.63	10.66	26.29	46.00	-19.71	AVG
7	6.6975	26.70	11.21	37.91	60.00	-22.09	QP
8	6.6975	13.79	11.21	25.00	50.00	-25.00	AVG
9	22.6095	18.32	12.42	30.74	60.00	-29.26	QP
10	22.6095	5.51	12.42	17.93	50.00	-32.07	AVG
11	28.1220	13.34	12.65	25.99	60.00	-34.01	QP
12	28.1220	3.67	12.65	16.32	50.00	-33.68	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	N
Test Mode:	Mode 3	Test Voltage :	POE 48V



Remark:

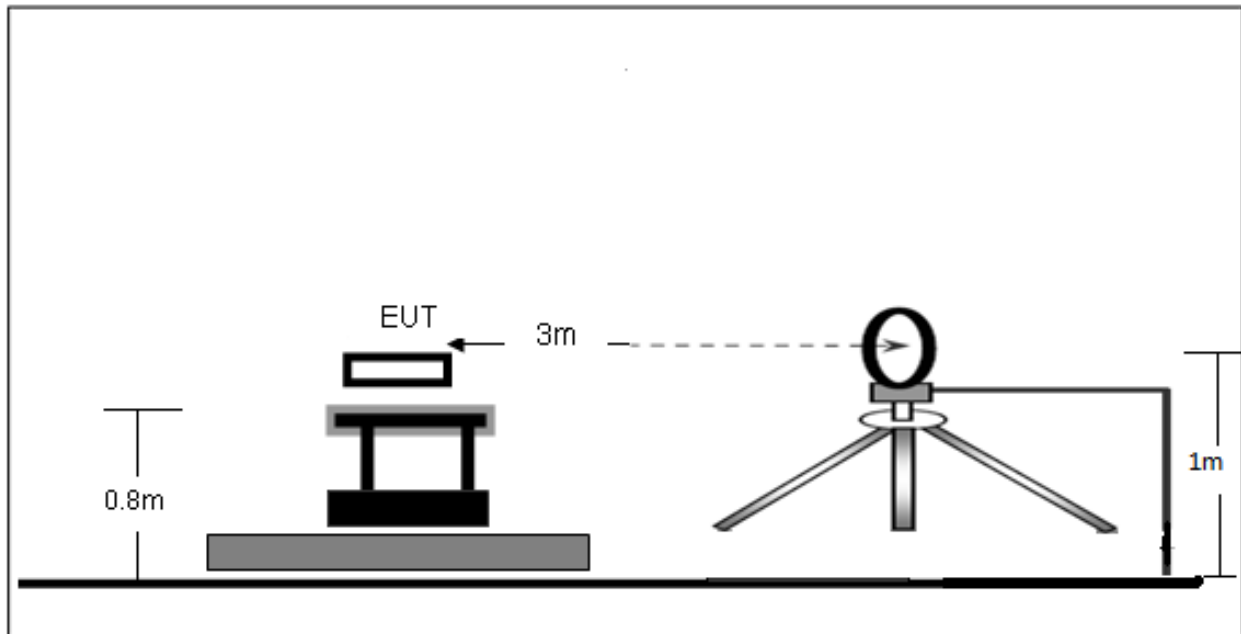
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1 *	0.3435	38.50	10.60	49.10	59.12	-10.02	QP
2	0.3435	23.59	10.60	34.19	49.12	-14.93	AVG
3	0.3975	26.02	10.61	36.63	57.91	-21.28	QP
4	0.3975	15.99	10.61	26.60	47.91	-21.31	AVG
5	1.4010	23.77	10.66	34.43	56.00	-21.57	QP
6	1.4010	12.81	10.66	23.47	46.00	-22.53	AVG
7	6.7245	23.89	11.23	35.12	60.00	-24.88	QP
8	6.7245	11.62	11.23	22.85	50.00	-27.15	AVG
9	22.6995	19.40	12.54	31.94	60.00	-28.06	QP
10	22.6995	5.90	12.54	18.44	50.00	-31.56	AVG
11	28.5315	14.65	12.61	27.26	60.00	-32.74	QP
12	28.5315	4.14	12.61	16.75	50.00	-33.25	AVG

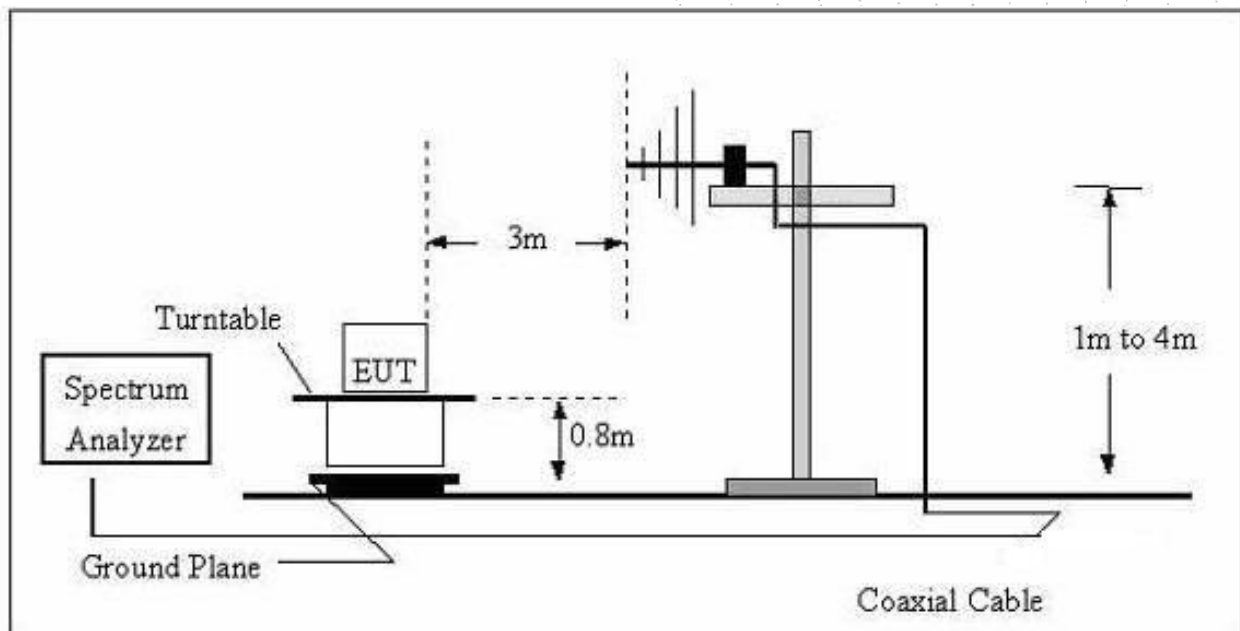
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

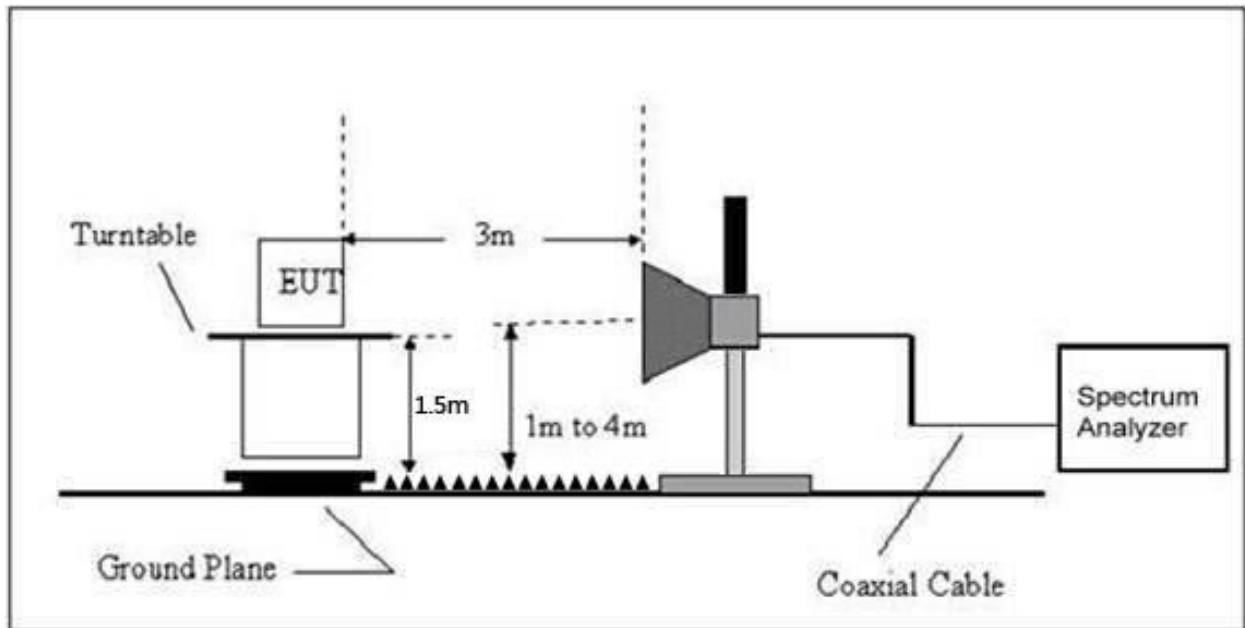
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency (MHz)	Field Strength uV/m	Distance (m)	Field Strength Limit at 3m Distance	
			uV/m	dBuV/m
0.009 ~ 0.490	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:

- (1)The limit for radiated test was performed according to FCC PART 15C.
- (2)The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

7.3 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205.

It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where $RBWCF [dB] = 10 \cdot \lg(100 [kHz] / \text{narrower RBW} [kHz])$. , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

7.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.5 Test Result

Below 30MHz

Temperature:	26°C	Relative Humidity:	24%
Pressure:	101 kPa	Test Voltage :	AC 24V
Test Mode:	Mode 3	Polarization:	--

Freq. (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	State P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

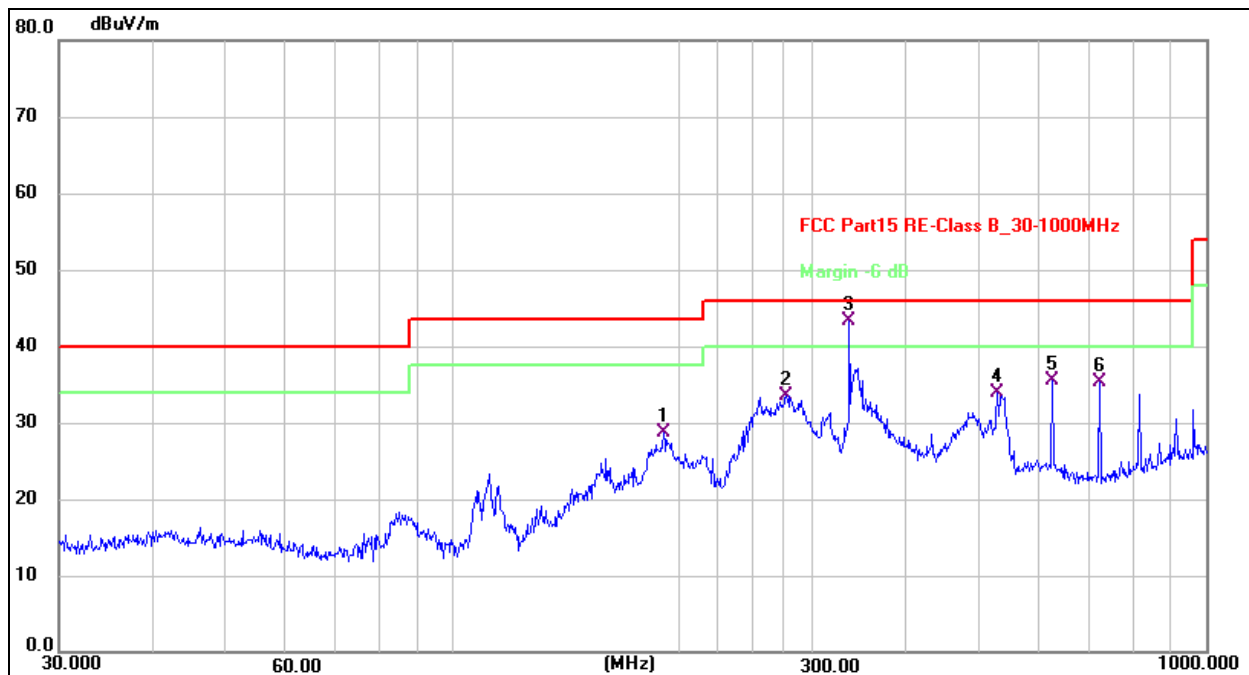
Distance extrapolation factor = $40 \log (\text{specific distance/test distance})(\text{dB})$;

Limit line = specific limits(dBuv) + distance extrapolation factor.

Between 30MHz – 1GHz

adapter power supply:

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	AC 24V	Test Mode:	Mode 3

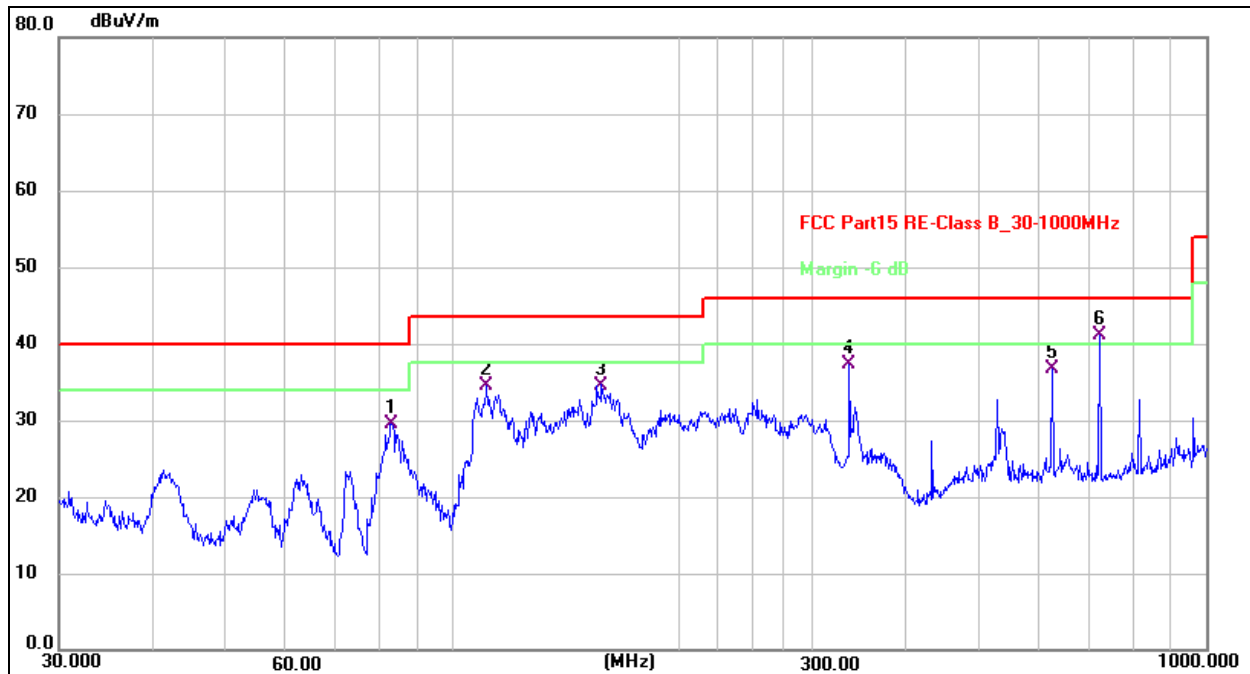


Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	190.4050	41.51	-12.90	28.61	43.50	-14.89	QP
2	277.0935	44.57	-11.00	33.57	46.00	-12.43	QP
3 *	336.0352	52.76	-9.39	43.37	46.00	-2.63	QP
4	528.2458	38.85	-5.00	33.85	46.00	-12.15	QP
5	625.0780	38.25	-2.75	35.50	46.00	-10.50	QP
6	721.7259	36.78	-1.53	35.25	46.00	-10.75	QP

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	AC 24V	Test Mode:	Mode 3



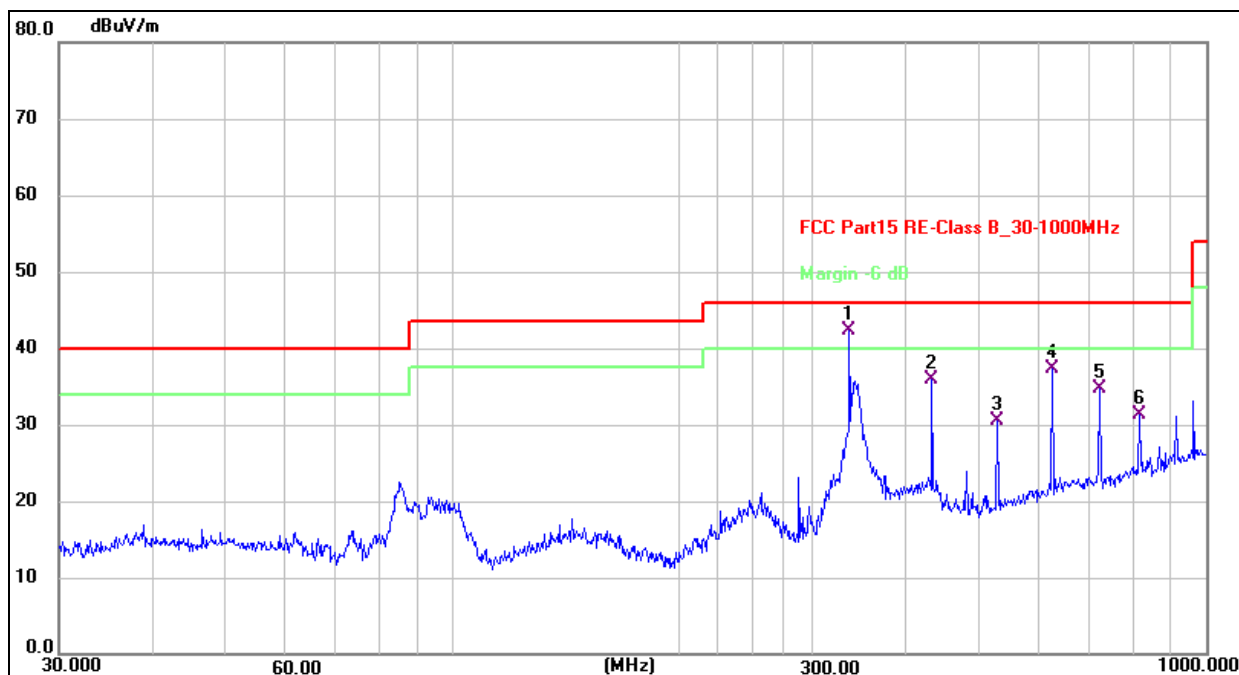
Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	82.9385	44.19	-14.64	29.55	40.00	-10.45	QP
2	110.9571	47.49	-12.96	34.53	43.50	-8.97	QP
3	157.5588	45.04	-10.44	34.60	43.50	-8.90	QP
4	336.0352	46.76	-9.39	37.37	46.00	-8.63	QP
5	625.0780	39.54	-2.75	36.79	46.00	-9.21	QP
6 *	721.7259	42.65	-1.53	41.12	46.00	-4.88	QP

POE power supply:

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	POE 48V	Test Mode:	Mode 3

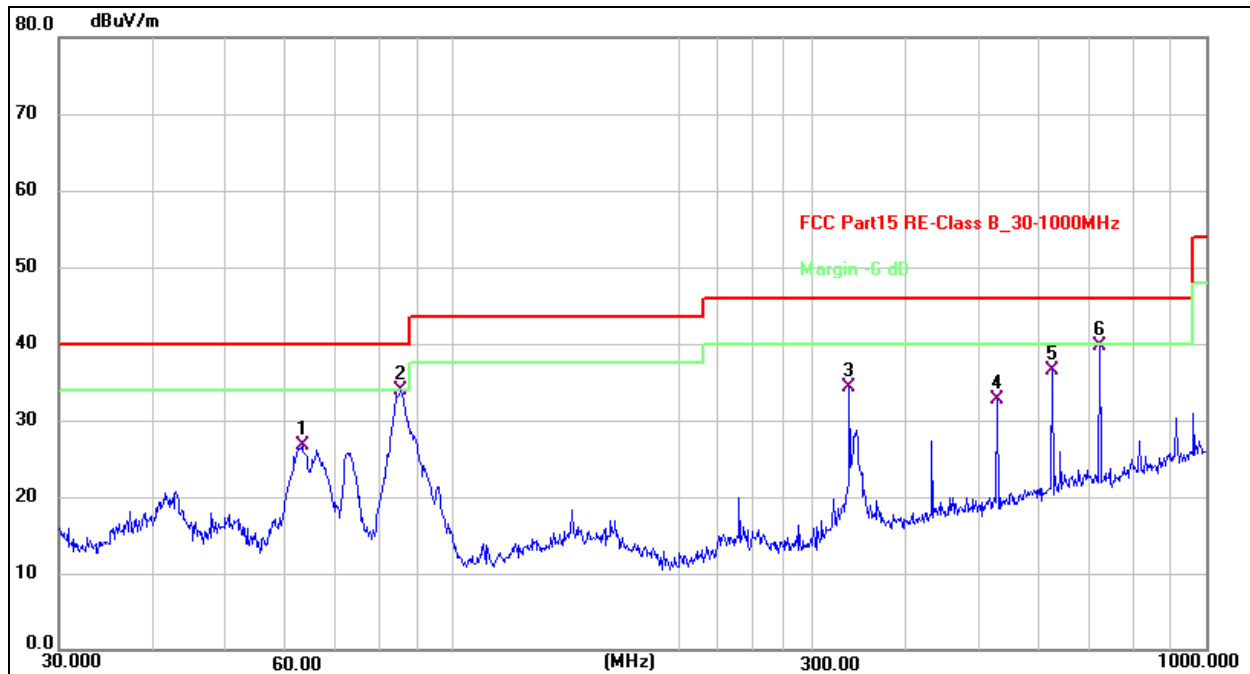


Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	336.0352	51.74	-9.39	42.35	46.00	-3.65	QP
2	432.5457	42.67	-6.74	35.93	46.00	-10.07	QP
3	528.2458	35.45	-5.00	30.45	46.00	-15.55	QP
4	625.0780	40.11	-2.75	37.36	46.00	-8.64	QP
5	721.7259	36.33	-1.53	34.80	46.00	-11.20	QP
6	815.9678	31.43	-0.16	31.27	46.00	-14.73	QP

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	POE 48V	Test Mode:	Mode 3



Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	63.0916	38.65	-11.96	26.69	40.00	-13.31	QP
2 *	85.2980	48.50	-14.53	33.97	40.00	-6.03	QP
3	336.0352	43.67	-9.39	34.28	46.00	-11.72	QP
4	528.2458	37.80	-5.00	32.80	46.00	-13.20	QP
5	625.0780	39.17	-2.75	36.42	46.00	-9.58	QP
6	721.7259	41.27	-1.53	39.74	46.00	-6.26	QP

Test Mode:	TX(5.1G) - 802.11a
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.005	74.81	-20.73	54.08	68.2	-14.12	PK
Vertical	4434.005	59.94	-20.73	39.21	54	-14.79	AV
Vertical	10360.131	63.97	-9.36	54.61	68.2	-13.59	PK
Vertical	10360.131	49.72	-9.36	40.36	54	-13.64	AV
Vertical	15540.076	63.77	-7.84	55.93	74	-18.07	PK
Vertical	15540.076	49.25	-7.84	41.41	54	-12.59	AV
Horizontal	4434.110	71.55	-20.73	50.82	68.2	-17.38	PK
Horizontal	4434.110	59.62	-20.73	38.89	54	-15.11	AV
Horizontal	10360.133	61.32	-9.36	51.96	68.2	-16.24	PK
Horizontal	10360.133	49.86	-9.36	40.50	54	-13.50	AV
Horizontal	15540.056	63.35	-7.84	55.51	74	-18.49	PK
Horizontal	15540.056	49.88	-7.84	42.04	54	-11.96	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.020	70.66	-20.42	50.24	74	-23.76	PK
Vertical	4592.020	59.71	-20.42	39.30	54	-14.70	AV
Vertical	10400.186	64.22	-9.30	54.92	68.2	-13.28	PK
Vertical	10400.186	49.74	-9.30	40.44	54	-13.56	AV
Vertical	15600.177	60.87	-7.82	53.05	74	-20.95	PK
Vertical	15600.177	49.37	-7.82	41.55	54	-12.45	AV
Horizontal	4592.131	72.88	-20.42	52.47	74	-21.53	PK
Horizontal	4592.131	59.80	-20.42	39.38	54	-14.62	AV
Horizontal	10400.094	63.40	-9.30	54.10	68.2	-14.10	PK
Horizontal	10400.094	49.44	-9.30	40.14	54	-13.86	AV
Horizontal	15600.124	64.15	-7.82	56.33	74	-17.67	PK
Horizontal	15600.124	49.98	-7.82	42.16	54	-11.84	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.185	72.08	-20.12	51.96	74	-22.04	PK
Vertical	4739.185	59.07	-20.12	38.95	54	-15.05	AV
Vertical	10480.188	63.49	-9.18	54.31	68.2	-13.89	PK
Vertical	10480.188	49.60	-9.18	40.42	54	-13.58	AV
Vertical	15720.022	63.38	-7.78	55.60	74	-18.40	PK
Vertical	15720.022	49.26	-7.78	41.48	54	-12.52	AV
Horizontal	4739.059	74.08	-20.12	53.95	74	-20.05	PK
Horizontal	4739.059	59.68	-20.12	39.55	54	-14.45	AV
Horizontal	10480.179	60.58	-9.18	51.40	68.2	-16.80	PK
Horizontal	10480.179	49.89	-9.18	40.71	54	-13.29	AV
Horizontal	15720.119	60.38	-7.78	52.60	74	-21.40	PK
Horizontal	15720.119	49.34	-7.78	41.56	54	-12.44	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT20
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Polar (H/V)	Fre- quency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.101	74.87	-20.73	54.13	68.2	-14.07	PK
Vertical	4434.101	59.58	-20.73	38.85	54	-15.15	AV
Vertical	10360.081	61.33	-9.36	51.97	68.2	-16.23	PK
Vertical	10360.081	49.70	-9.36	40.34	54	-13.66	AV
Vertical	15540.014	60.52	-7.84	52.68	74	-21.32	PK
Vertical	15540.014	49.96	-7.84	42.12	54	-11.88	AV
Horizontal	4434.134	74.45	-20.73	53.72	68.2	-14.48	PK
Horizontal	4434.134	59.40	-20.73	38.66	54	-15.34	AV
Horizontal	10360.105	61.89	-9.36	52.53	68.2	-15.67	PK
Horizontal	10360.105	49.62	-9.36	40.26	54	-13.74	AV
Horizontal	15540.111	60.43	-7.84	52.59	74	-21.41	PK
Horizontal	15540.111	49.16	-7.84	41.32	54	-12.68	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.122	73.42	-20.42	53.00	74	-21.00	PK
Vertical	4592.122	59.00	-20.42	38.59	54	-15.41	AV
Vertical	10400.151	62.20	-9.30	52.90	68.2	-15.30	PK
Vertical	10400.151	49.83	-9.30	40.53	54	-13.47	AV
Vertical	15600.088	60.41	-7.82	52.59	74	-21.41	PK
Vertical	15600.088	49.27	-7.82	41.45	54	-12.55	AV
Horizontal	4592.092	71.04	-20.42	50.62	74	-23.38	PK
Horizontal	4592.092	59.97	-20.42	39.55	54	-14.45	AV
Horizontal	10400.190	64.11	-9.30	54.81	68.2	-13.39	PK
Horizontal	10400.190	49.01	-9.30	39.71	54	-14.29	AV
Horizontal	15600.118	60.12	-7.82	52.30	74	-21.70	PK
Horizontal	15600.118	49.02	-7.82	41.20	54	-12.80	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.026	72.91	-20.12	52.79	74	-21.21	PK
Vertical	4739.026	59.40	-20.12	39.28	54	-14.72	AV
Vertical	10480.016	63.79	-9.18	54.61	68.2	-13.59	PK
Vertical	10480.016	49.78	-9.18	40.60	54	-13.40	AV
Vertical	15720.074	63.63	-7.78	55.85	74	-18.15	PK
Vertical	15720.074	49.18	-7.78	41.40	54	-12.60	AV
Horizontal	4739.131	72.56	-20.12	52.44	74	-21.56	PK
Horizontal	4739.131	59.85	-20.12	39.72	54	-14.28	AV
Horizontal	10480.166	60.14	-9.18	50.96	68.2	-17.24	PK
Horizontal	10480.166	49.31	-9.18	40.13	54	-13.87	AV
Horizontal	15720.080	63.96	-7.78	56.18	74	-17.82	PK
Horizontal	15720.080	49.94	-7.78	42.16	54	-11.84	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT40
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Polar (H/V)	Fre- quency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.065	70.62	-20.73	49.89	68.2	-18.31	PK
Vertical	4434.065	59.71	-20.73	38.98	54	-15.02	AV
Vertical	10380.106	61.90	-9.33	52.57	68.2	-15.63	PK
Vertical	10380.106	49.45	-9.33	40.12	54	-13.88	AV
Vertical	15570.130	64.33	-7.83	56.50	74	-17.50	PK
Vertical	15570.130	49.16	-7.83	41.33	54	-12.67	AV
Horizontal	4434.122	74.77	-20.73	54.04	74	-19.96	PK
Horizontal	4434.122	59.73	-20.73	38.99	54	-15.01	AV
Horizontal	10380.126	61.96	-9.33	52.63	68.2	-15.57	PK
Horizontal	10380.126	49.33	-9.33	40.00	54	-14.00	AV
Horizontal	15570.037	64.29	-7.83	56.46	74	-17.54	PK
Horizontal	15570.037	49.88	-7.83	42.05	54	-11.95	AV
High Channel (5230 MHz)-Above 1G							
Vertical	4739.081	70.48	-20.12	50.36	68.2	-17.84	PK
Vertical	4739.081	59.11	-20.12	38.99	54	-15.01	AV
Vertical	10460.165	61.39	-9.21	52.18	68.2	-16.02	PK
Vertical	10460.165	49.27	-9.21	40.06	54	-13.94	AV
Vertical	15690.007	62.56	-7.79	54.77	74	-19.23	PK
Vertical	15690.007	49.96	-7.79	42.17	54	-11.83	AV
Horizontal	4739.040	74.77	-20.12	54.65	68.2	-13.55	PK
Horizontal	4739.040	59.70	-20.12	39.58	54	-14.42	AV
Horizontal	10460.134	64.41	-9.21	55.20	68.2	-13.00	PK
Horizontal	10460.134	49.60	-9.21	40.39	54	-13.61	AV
Horizontal	15690.047	60.46	-7.79	52.67	74	-21.33	PK
Horizontal	15690.047	49.51	-7.79	41.72	54	-12.28	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

- ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
- All the modes 802.11a/n has been tested and the worst result 802.11n20 recorded as below:

Test mode: 802.11n20 Frequency(MHz): 5180

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5142.59	H	49.69	74	38.70	54
5120.17	V	46.01	74	37.20	54

Test mode: 802.11n20 Frequency(MHz): 5240

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5347.23	H	48.58	74	37.80	54
5366.58	V	47.13	74	36.70	54

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

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Test Mode:	TX(5.3G) - 802.11a
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5260 MHz)-Above 1G							
Vertical	4434.098	74.78	-20.73	54.05	68.2	-14.15	PK
Vertical	4434.098	59.03	-20.73	38.30	54	-15.70	AV
Vertical	10520.190	64.25	-9.12	55.13	68.2	-13.07	PK
Vertical	10520.190	49.07	-9.12	39.95	54	-14.05	AV
Vertical	15780.107	62.11	-7.77	54.34	74	-19.66	PK
Vertical	15780.107	49.16	-7.77	41.39	54	-12.61	AV
Horizontal	4434.091	71.79	-20.73	51.06	68.2	-17.14	PK
Horizontal	4434.091	59.66	-20.73	38.93	54	-15.07	AV
Horizontal	10520.003	63.31	-9.12	54.19	68.2	-14.01	PK
Horizontal	10520.003	49.37	-9.12	40.25	54	-13.75	AV
Horizontal	15780.064	62.62	-7.77	54.85	74	-19.15	PK
Horizontal	15780.064	49.75	-7.77	41.98	54	-12.02	AV
middle Channel (5280 MHz)-Above 1G							
Vertical	4592.068	73.27	-20.42	52.86	74	-21.14	PK
Vertical	4592.068	59.54	-20.42	39.12	54	-14.88	AV
Vertical	10560.040	61.44	-9.06	52.38	68.2	-15.82	PK
Vertical	10560.040	49.77	-9.06	40.71	54	-13.29	AV
Vertical	15840.155	61.47	-7.75	53.72	74	-20.28	PK
Vertical	15840.155	49.09	-7.75	41.34	54	-12.66	AV
Horizontal	4592.068	74.94	-20.42	54.52	74	-19.48	PK
Horizontal	4592.068	59.14	-20.42	38.72	54	-15.28	AV
Horizontal	10560.085	62.53	-9.06	53.47	68.2	-14.73	PK
Horizontal	10560.085	49.86	-9.06	40.80	54	-13.20	AV
Horizontal	15840.190	62.17	-7.75	54.42	74	-19.58	PK
Horizontal	15840.190	49.77	-7.75	42.02	54	-11.98	AV
High Channel (5320 MHz)-Above 1G							
Vertical	4739.193	71.00	-20.12	50.87	74	-23.13	PK
Vertical	4739.193	59.24	-20.12	39.12	54	-14.88	AV
Vertical	10640.182	62.13	-8.94	53.19	68.2	-15.01	PK
Vertical	10640.182	49.84	-8.94	40.90	54	-13.10	AV
Vertical	15960.072	60.88	-7.71	53.17	74	-20.83	PK
Vertical	15960.072	49.60	-7.71	41.89	54	-12.11	AV
Horizontal	4739.012	71.85	-20.12	51.73	74	-22.27	PK
Horizontal	4739.012	59.84	-20.12	39.72	54	-14.28	AV
Horizontal	10640.051	64.65	-8.94	55.71	68.2	-12.49	PK
Horizontal	10640.051	49.83	-8.94	40.89	54	-13.11	AV
Horizontal	15960.029	63.03	-7.71	55.32	74	-18.68	PK
Horizontal	15960.029	49.49	-7.71	41.78	54	-12.22	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.3G) - 802.11n-HT20
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5260 MHz)-Above 1G							
Vertical	4434.114	72.08	-20.73	51.35	68.2	-16.85	PK
Vertical	4434.114	59.40	-20.73	38.67	54	-15.33	AV
Vertical	10520.043	61.21	-9.12	52.09	68.2	-16.11	PK
Vertical	10520.043	49.43	-9.12	40.31	54	-13.69	AV
Vertical	15780.051	60.51	-7.77	52.74	74	-21.26	PK
Vertical	15780.051	49.59	-7.77	41.82	54	-12.18	AV
Horizontal	4434.133	70.21	-20.73	49.48	68.2	-18.72	PK
Horizontal	4434.133	59.48	-20.73	38.75	54	-15.25	AV
Horizontal	10520.198	63.67	-9.12	54.55	68.2	-13.65	PK
Horizontal	10520.198	49.87	-9.12	40.75	54	-13.25	AV
Horizontal	15780.108	61.20	-7.77	53.43	74	-20.57	PK
Horizontal	15780.108	49.32	-7.77	41.55	54	-12.45	AV
middle Channel (5280 MHz)-Above 1G							
Vertical	4592.052	70.53	-20.42	50.11	74	-23.89	PK
Vertical	4592.052	59.69	-20.42	39.28	54	-14.72	AV
Vertical	10560.191	63.44	-9.06	54.38	68.2	-13.82	PK
Vertical	10560.191	49.16	-9.06	40.10	54	-13.90	AV
Vertical	15840.099	60.46	-7.75	52.71	74	-21.29	PK
Vertical	15840.099	49.43	-7.75	41.68	54	-12.32	AV
Horizontal	4592.123	74.55	-20.42	54.13	74	-19.87	PK
Horizontal	4592.123	59.41	-20.42	38.99	54	-15.01	AV
Horizontal	10560.154	62.24	-9.06	53.18	68.2	-15.02	PK
Horizontal	10560.154	49.29	-9.06	40.23	54	-13.77	AV
Horizontal	15840.006	63.72	-7.75	55.97	74	-18.03	PK
Horizontal	15840.006	49.20	-7.75	41.45	54	-12.55	AV
High Channel (5320 MHz)-Above 1G							
Vertical	4739.177	72.02	-20.12	51.90	74	-22.10	PK
Vertical	4739.177	59.14	-20.12	39.02	54	-14.98	AV
Vertical	10640.095	61.25	-8.94	52.31	68.2	-15.89	PK
Vertical	10640.095	49.18	-8.94	40.24	54	-13.76	AV
Vertical	15960.054	60.88	-7.71	53.17	74	-20.83	PK
Vertical	15960.054	49.33	-7.71	41.62	54	-12.38	AV
Horizontal	4739.130	70.80	-20.12	50.68	74	-23.32	PK
Horizontal	4739.130	59.12	-20.12	39.00	54	-15.00	AV
Horizontal	10640.119	64.39	-8.94	55.45	68.2	-12.75	PK
Horizontal	10640.119	49.15	-8.94	40.21	54	-13.79	AV
Horizontal	15960.193	61.38	-7.71	53.67	74	-20.33	PK
Horizontal	15960.193	49.38	-7.71	41.67	54	-12.33	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.3G) - 802.11n-HT40
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Polar (H/V)	Fre- quency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5270 MHz)-Above 1G							
Vertical	4434.158	70.36	-20.73	49.62	68.2	-18.58	PK
Vertical	4434.158	59.00	-20.73	38.27	54	-15.73	AV
Vertical	10540.069	63.18	-9.09	54.09	68.2	-14.11	PK
Vertical	10540.069	49.94	-9.09	40.85	54	-13.15	AV
Vertical	15810.004	64.39	-7.76	56.63	74	-17.37	PK
Vertical	15810.004	49.36	-7.76	41.60	54	-12.40	AV
Horizontal	4434.047	70.41	-20.73	49.68	74	-24.32	PK
Horizontal	4434.047	59.78	-20.73	39.05	54	-14.95	AV
Horizontal	10540.100	60.99	-9.09	51.90	68.2	-16.30	PK
Horizontal	10540.100	49.35	-9.09	40.26	54	-13.74	AV
Horizontal	15810.171	62.95	-7.76	55.19	74	-18.81	PK
Horizontal	15810.171	49.41	-7.76	41.65	54	-12.35	AV
High Channel (5310 MHz)-Above 1G							
Vertical	4739.033	71.32	-20.12	51.20	68.2	-17.00	PK
Vertical	4739.033	59.76	-20.12	39.64	54	-14.36	AV
Vertical	10620.161	64.66	-8.97	55.69	68.2	-12.51	PK
Vertical	10620.161	49.00	-8.97	40.03	54	-13.97	AV
Vertical	15930.127	63.58	-7.72	55.86	74	-18.14	PK
Vertical	15930.127	49.88	-7.72	42.16	54	-11.84	AV
Horizontal	4739.026	72.28	-20.12	52.16	68.2	-16.04	PK
Horizontal	4739.026	59.80	-20.12	39.67	54	-14.33	AV
Horizontal	10620.199	61.42	-8.97	52.45	68.2	-15.75	PK
Horizontal	10620.199	49.37	-8.97	40.40	54	-13.60	AV
Horizontal	15930.115	61.46	-7.72	53.74	74	-20.26	PK
Horizontal	15930.115	49.38	-7.72	41.66	54	-12.34	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.6G) - 802.11a
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5500 MHz)-Above 1G							
Vertical	4434.087	70.44	-20.73	49.71	68.2	-18.49	PK
Vertical	4434.087	59.74	-20.73	39.01	54	-14.99	AV
Vertical	11000.197	64.66	-8.40	56.26	68.2	-11.94	PK
Vertical	11000.197	49.01	-8.40	40.61	54	-13.39	AV
Vertical	16500.111	64.18	-6.09	58.09	74	-15.91	PK
Vertical	16500.111	49.24	-6.09	43.15	54	-10.85	AV
Horizontal	4434.135	70.82	-20.73	50.08	68.2	-18.12	PK
Horizontal	4434.135	59.61	-20.73	38.88	54	-15.12	AV
Horizontal	11000.086	60.91	-8.40	52.51	68.2	-15.69	PK
Horizontal	11000.086	49.56	-8.40	41.16	54	-12.84	AV
Horizontal	16500.094	64.65	-6.09	58.56	74	-15.44	PK
Horizontal	16500.094	49.19	-6.09	43.10	54	-10.90	AV
middle Channel (5580 MHz)-Above 1G							
Vertical	4592.079	74.42	-20.42	54.00	74	-20.00	PK
Vertical	4592.079	59.57	-20.42	39.16	54	-14.84	AV
Vertical	11160.092	64.29	-8.53	55.76	68.2	-12.44	PK
Vertical	11160.092	49.44	-8.53	40.91	54	-13.09	AV
Vertical	16740.159	63.45	-5.31	58.14	74	-15.86	PK
Vertical	16740.159	49.03	-5.31	43.72	54	-10.28	AV
Horizontal	4592.108	72.41	-20.42	51.99	74	-22.01	PK
Horizontal	4592.108	59.58	-20.42	39.17	54	-14.83	AV
Horizontal	11160.103	61.04	-8.53	52.51	68.2	-15.69	PK
Horizontal	11160.103	49.05	-8.53	40.52	54	-13.48	AV
Horizontal	16740.120	60.31	-5.31	55.00	74	-19.00	PK
Horizontal	16740.120	49.74	-5.31	44.43	54	-9.57	AV
High Channel (5700 MHz)-Above 1G							
Vertical	4739.136	73.44	-20.12	53.32	74	-20.68	PK
Vertical	4739.136	59.47	-20.12	39.34	54	-14.66	AV
Vertical	11400.024	64.54	-8.72	55.82	68.2	-12.38	PK
Vertical	11400.024	49.80	-8.72	41.08	54	-12.92	AV
Vertical	17100.173	64.23	-3.92	60.31	74	-13.69	PK
Vertical	17100.173	49.43	-3.92	45.51	54	-8.49	AV
Horizontal	4739.157	73.17	-20.12	53.05	74	-20.95	PK
Horizontal	4739.157	59.73	-20.12	39.61	54	-14.39	AV
Horizontal	11400.171	61.51	-8.72	52.79	68.2	-15.41	PK
Horizontal	11400.171	49.89	-8.72	41.17	54	-12.83	AV
Horizontal	17100.065	62.81	-3.92	58.89	74	-15.11	PK
Horizontal	17100.065	49.00	-3.92	45.08	54	-8.92	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.6G) - 802.11n-HT20
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5500 MHz)-Above 1G							
Vertical	4434.084	73.85	-20.73	53.12	68.2	-15.08	PK
Vertical	4434.084	59.91	-20.73	39.18	54	-14.82	AV
Vertical	11000.134	63.19	-8.40	54.79	68.2	-13.41	PK
Vertical	11000.134	49.82	-8.40	41.42	54	-12.58	AV
Vertical	16500.138	62.03	-6.09	55.94	74	-18.06	PK
Vertical	16500.138	49.84	-6.09	43.75	54	-10.25	AV
Horizontal	4434.084	74.13	-20.73	53.40	68.2	-14.80	PK
Horizontal	4434.084	59.48	-20.73	38.75	54	-15.25	AV
Horizontal	11000.101	62.87	-8.40	54.47	68.2	-13.73	PK
Horizontal	11000.101	49.63	-8.40	41.23	54	-12.77	AV
Horizontal	16500.031	61.05	-6.09	54.96	74	-19.04	PK
Horizontal	16500.031	49.81	-6.09	43.72	54	-10.28	AV
middle Channel (5580 MHz)-Above 1G							
Vertical	4592.102	73.00	-20.42	52.59	74	-21.41	PK
Vertical	4592.102	59.44	-20.42	39.03	54	-14.97	AV
Vertical	11160.124	60.16	-8.53	51.63	68.2	-16.57	PK
Vertical	11160.124	49.24	-8.53	40.71	54	-13.29	AV
Vertical	16740.162	61.81	-5.31	56.50	74	-17.50	PK
Vertical	16740.162	49.36	-5.31	44.05	54	-9.95	AV
Horizontal	4592.009	73.41	-20.42	53.00	74	-21.00	PK
Horizontal	4592.009	59.20	-20.42	38.78	54	-15.22	AV
Horizontal	11160.164	64.26	-8.53	55.73	68.2	-12.47	PK
Horizontal	11160.164	49.97	-8.53	41.44	54	-12.56	AV
Horizontal	16740.029	62.07	-5.31	56.76	74	-17.24	PK
Horizontal	16740.029	49.85	-5.31	44.54	54	-9.46	AV
High Channel (5700 MHz)-Above 1G							
Vertical	4739.026	71.07	-20.12	50.95	74	-23.05	PK
Vertical	4739.026	59.76	-20.12	39.64	54	-14.36	AV
Vertical	11400.189	62.28	-8.72	53.56	68.2	-14.64	PK
Vertical	11400.189	49.46	-8.72	40.74	54	-13.26	AV
Vertical	17100.137	63.90	-3.92	59.98	74	-14.02	PK
Vertical	17100.137	49.18	-3.92	45.26	54	-8.74	AV
Horizontal	4739.073	70.49	-20.12	50.37	74	-23.63	PK
Horizontal	4739.073	59.56	-20.12	39.44	54	-14.56	AV
Horizontal	11400.013	60.32	-8.72	51.60	68.2	-16.60	PK
Horizontal	11400.013	49.27	-8.72	40.55	54	-13.45	AV
Horizontal	17100.179	64.13	-3.92	60.21	74	-13.79	PK
Horizontal	17100.179	49.44	-3.92	45.52	54	-8.48	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.6G) - 802.11n-HT40
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5510 MHz)-Above 1G							
Vertical	4434.055	64.62	-20.73	43.89	68.2	-24.31	PK
Vertical	4434.055	43.29	-20.73	22.56	54	-31.44	AV
Vertical	11020.093	60.04	-8.42	51.62	68.2	-16.58	PK
Vertical	11020.093	43.77	-8.42	35.35	54	-18.65	AV
Vertical	16530.069	60.65	-5.99	54.66	74	-19.34	PK
Vertical	16530.069	43.32	-5.99	37.33	54	-16.67	AV
Horizontal	4434.164	64.73	-20.73	44.00	74	-30.00	PK
Horizontal	4434.164	43.28	-20.73	22.55	54	-31.45	AV
Horizontal	11020.150	52.36	-8.42	43.94	68.2	-24.26	PK
Horizontal	11020.150	41.53	-8.42	33.11	54	-20.89	AV
Horizontal	16530.087	53.85	-5.99	47.86	74	-26.14	PK
Horizontal	16530.087	40.71	-5.99	34.72	54	-19.28	AV
middle Channel (5550 MHz)-Above 1G							
Vertical	4592.092	62.80	-20.42	42.38	74	-31.62	PK
Vertical	4592.092	43.30	-20.42	22.88	54	-31.12	AV
Vertical	11100.180	62.76	-8.40	54.36	68.2	-13.84	PK
Vertical	11100.180	43.83	-8.40	35.43	54	-18.57	AV
Vertical	16650.064	64.74	-5.60	59.14	74	-14.86	PK
Vertical	16650.064	43.35	-5.60	37.75	54	-16.25	AV
Horizontal	4592.016	60.34	-20.42	39.93	74	-34.07	PK
Horizontal	4592.016	43.40	-20.42	22.98	54	-31.02	AV
Horizontal	11100.130	53.55	-8.40	45.15	68.2	-23.05	PK
Horizontal	11100.130	42.60	-8.40	34.20	54	-19.80	AV
Horizontal	16650.098	51.84	-5.60	46.24	74	-27.76	PK
Horizontal	16650.098	42.55	-5.60	36.95	54	-17.05	AV
High Channel (5670 MHz)-Above 1G							
Vertical	4739.080	64.49	-20.12	44.37	68.2	-23.83	PK
Vertical	4739.080	43.90	-20.12	23.78	54	-30.22	AV
Vertical	11340.006	60.64	-8.67	51.97	68.2	-16.23	PK
Vertical	11340.006	43.08	-8.67	34.41	54	-19.59	AV
Vertical	17010.110	64.52	-4.41	60.11	74	-13.89	PK
Vertical	17010.110	43.01	-4.41	38.60	54	-15.40	AV
Horizontal	4739.183	63.01	-20.12	42.89	68.2	-25.31	PK
Horizontal	4739.183	43.72	-20.12	23.60	54	-30.40	AV
Horizontal	11340.010	50.99	-8.67	42.32	68.2	-25.88	PK
Horizontal	11340.010	40.92	-8.67	32.25	54	-21.75	AV
Horizontal	17010.122	53.17	-4.41	48.76	74	-25.24	PK
Horizontal	17010.122	40.04	-4.41	35.63	54	-18.37	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11a
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.090	74.86	-20.24	54.62	74	-19.38	PK
Vertical	4679.090	59.57	-20.24	39.33	54	-14.67	AV
Vertical	11490.160	64.45	-8.79	55.66	68.2	-12.54	PK
Vertical	11490.160	49.33	-8.79	40.54	54	-13.46	AV
Vertical	17235.101	57.48	-3.18	54.30	68.2	-13.90	PK
Vertical	17235.101	44.87	-3.18	41.69	54	-12.31	AV
Horizontal	4679.188	74.50	-20.73	53.77	74	-20.23	PK
Horizontal	4679.188	59.11	-20.73	38.38	54	-15.62	AV
Horizontal	11490.117	60.91	-8.79	52.12	68.2	-16.08	PK
Horizontal	11490.117	49.92	-8.79	41.13	54	-12.87	AV
Horizontal	17235.001	56.69	-3.18	53.51	68.2	-14.69	PK
Horizontal	17235.001	44.04	-3.18	40.86	54	-13.14	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.035	71.14	-20.42	50.73	74	-23.27	PK
Vertical	4592.035	59.37	-20.42	38.96	54	-15.04	AV
Vertical	11570.165	62.07	-8.86	53.21	68.2	-14.99	PK
Vertical	11570.165	49.82	-8.86	40.96	54	-13.04	AV
Vertical	17355.156	58.70	-2.52	56.18	68.2	-12.02	PK
Vertical	17355.156	44.68	-2.52	42.16	54	-11.84	AV
Horizontal	4592.012	71.77	-20.42	51.35	74	-22.65	PK
Horizontal	4592.012	59.96	-20.42	39.54	54	-14.46	AV
Horizontal	11570.118	63.85	-8.86	54.99	68.2	-13.21	PK
Horizontal	11570.118	49.86	-8.86	41.00	54	-13.00	AV
Horizontal	17355.058	55.94	-2.52	53.42	68.2	-14.78	PK
Horizontal	17355.058	44.68	-2.52	42.16	54	-11.84	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.008	70.98	-18.93	52.05	68.2	-16.15	PK
Vertical	6039.008	59.25	-18.93	40.32	54	-13.68	AV
Vertical	11650.105	61.88	-8.92	52.96	74	-21.04	PK
Vertical	11650.105	49.81	-8.92	40.89	54	-13.11	AV
Vertical	17475.138	56.90	-1.86	55.04	68.2	-13.16	PK
Vertical	17475.138	44.75	-1.86	42.89	54	-11.11	AV
Horizontal	6039.065	73.94	-18.93	55.01	68.2	-13.19	PK
Horizontal	6039.065	59.65	-18.93	40.72	54	-13.28	AV
Horizontal	11650.100	62.86	-8.92	53.94	74	-20.06	PK
Horizontal	11650.100	49.79	-8.92	40.87	54	-13.13	AV
Horizontal	17475.023	55.67	-1.86	53.81	68.2	-14.39	PK
Horizontal	17475.023	44.63	-1.86	42.77	54	-11.23	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode: TX(5.8G) - 802.11n-HT20

Polar (H/V)	Fre- quency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.040	71.61	-20.24	51.36	74	-22.64	PK
Vertical	4679.040	59.08	-20.24	38.84	54	-15.16	AV
Vertical	11490.160	60.81	-8.79	52.02	68.2	-16.18	PK
Vertical	11490.160	49.26	-8.79	40.47	54	-13.53	AV
Vertical	17235.148	59.45	-3.18	56.27	68.2	-11.93	PK
Vertical	17235.148	44.85	-3.18	41.67	54	-12.33	AV
Horizontal	4679.054	72.40	-20.24	52.16	74	-21.84	PK
Horizontal	4679.054	59.80	-20.24	39.56	54	-14.44	AV
Horizontal	11490.057	61.08	-8.79	52.29	68.2	-15.91	PK
Horizontal	11490.057	49.84	-8.79	41.05	54	-12.95	AV
Horizontal	17235.063	59.32	-3.18	56.14	68.2	-12.06	PK
Horizontal	17235.063	44.48	-3.18	41.30	54	-12.70	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.032	70.00	-20.42	49.59	74	-24.41	PK
Vertical	4592.032	59.53	-20.42	39.11	54	-14.89	AV
Vertical	11570.077	60.92	-8.86	52.06	68.2	-16.14	PK
Vertical	11570.077	49.41	-8.86	40.55	54	-13.45	AV
Vertical	17355.149	56.50	-2.52	53.98	68.2	-14.22	PK
Vertical	17355.149	44.99	-2.52	42.47	54	-11.53	AV
Horizontal	4592.049	74.25	-20.42	53.83	74	-20.17	PK
Horizontal	4592.049	59.46	-20.42	39.04	54	-14.96	AV
Horizontal	11570.134	61.18	-8.86	52.32	68.2	-15.88	PK
Horizontal	11570.134	49.92	-8.86	41.06	54	-12.94	AV
Horizontal	17355.012	59.12	-2.52	56.60	68.2	-11.60	PK
Horizontal	17355.012	44.20	-2.52	41.68	54	-12.32	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.152	72.01	-18.93	53.08	68.2	-15.12	PK
Vertical	6039.152	59.25	-18.93	40.31	54	-13.69	AV
Vertical	11650.093	64.30	-8.92	55.38	74	-18.62	PK
Vertical	11650.093	49.34	-8.92	40.42	54	-13.58	AV
Vertical	17475.107	56.40	-1.86	54.54	68.2	-13.66	PK
Vertical	17475.107	44.69	-1.86	42.83	54	-11.17	AV
Horizontal	6039.135	71.24	-18.93	52.31	68.2	-15.89	PK
Horizontal	6039.135	59.41	-18.93	40.48	54	-13.52	AV
Horizontal	11650.067	61.10	-8.92	52.18	74	-21.82	PK
Horizontal	11650.067	49.45	-8.92	40.53	54	-13.47	AV
Horizontal	17475.191	55.39	-1.86	53.53	68.2	-14.67	PK
Horizontal	17475.191	44.78	-1.86	42.92	54	-11.08	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11n-HT40
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Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.009	70.41	-20.24	50.17	74	-23.83	PK
Vertical	4679.009	59.37	-20.24	39.12	54	-14.88	AV
Vertical	11510.106	60.29	-8.81	51.48	74	-22.52	PK
Vertical	11510.106	49.27	-8.81	40.46	54	-13.54	AV
Vertical	17265.150	56.57	-3.01	53.56	68.2	-14.64	PK
Vertical	17265.150	44.37	-3.01	41.36	54	-12.64	AV
Horizontal	4679.081	70.54	-20.24	50.30	74	-23.70	PK
Horizontal	4679.081	59.83	-20.24	39.59	54	-14.41	AV
Horizontal	11510.197	64.83	-8.81	56.02	74	-17.98	PK
Horizontal	11510.197	49.55	-8.81	40.74	54	-13.26	AV
Horizontal	17265.087	56.23	-3.01	53.22	68.2	-14.98	PK
Horizontal	17265.087	44.56	-3.01	41.55	54	-12.45	AV
High Channel (5795 MHz)-Above 1G							
Vertical	6039.090	73.94	-18.93	55.01	68.2	-13.19	PK
Vertical	6039.090	59.59	-18.93	40.66	54	-13.34	AV
Vertical	11590.125	62.55	-8.87	53.68	74	-20.32	PK
Vertical	11590.125	49.78	-8.87	40.91	54	-13.09	AV
Vertical	17385.194	58.83	-2.35	56.48	68.2	-11.72	PK
Vertical	17385.194	44.05	-2.35	41.70	54	-12.30	AV
Horizontal	6039.158	70.91	-18.93	51.98	68.2	-16.22	PK
Horizontal	6039.158	59.78	-18.93	40.85	54	-13.15	AV
Horizontal	11590.169	64.39	-8.87	55.52	74	-18.48	PK
Horizontal	11590.169	49.68	-8.87	40.81	54	-13.19	AV
Horizontal	17385.082	57.23	-2.35	54.88	68.2	-13.32	PK
Horizontal	17385.082	44.58	-2.35	42.23	54	-11.77	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands

(b) (2) The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3 Test Procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3 RBW$.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ KHz})$ is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since $RBW=100 \text{ KHz}$ is available on nearly all spectrum analyzers.

8.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

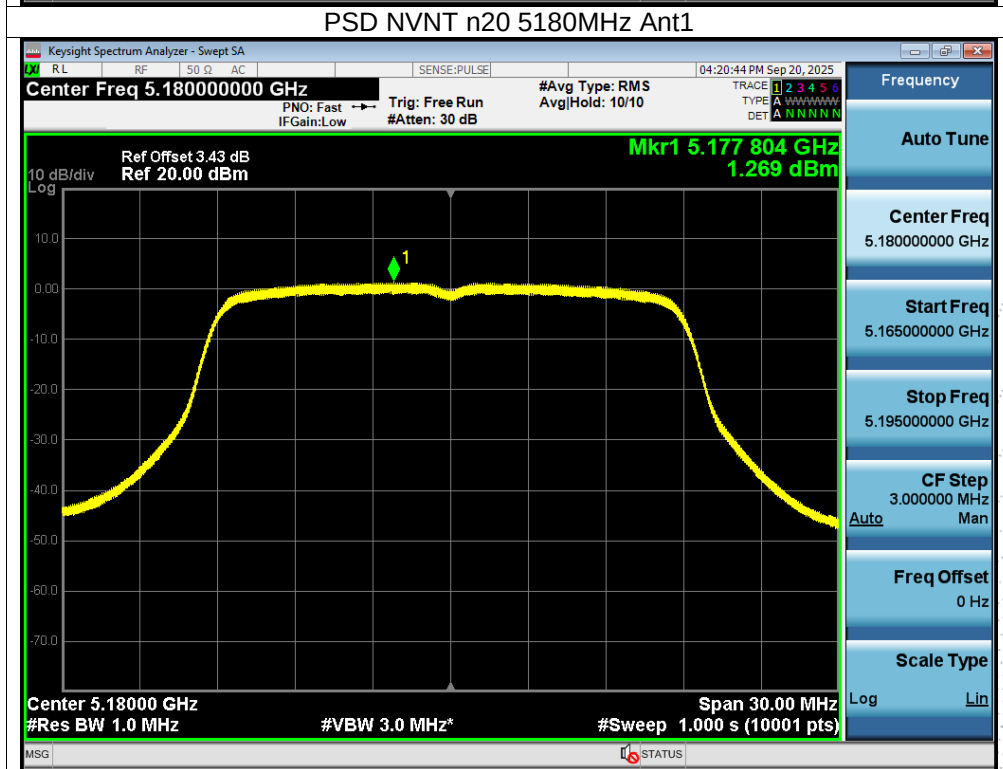
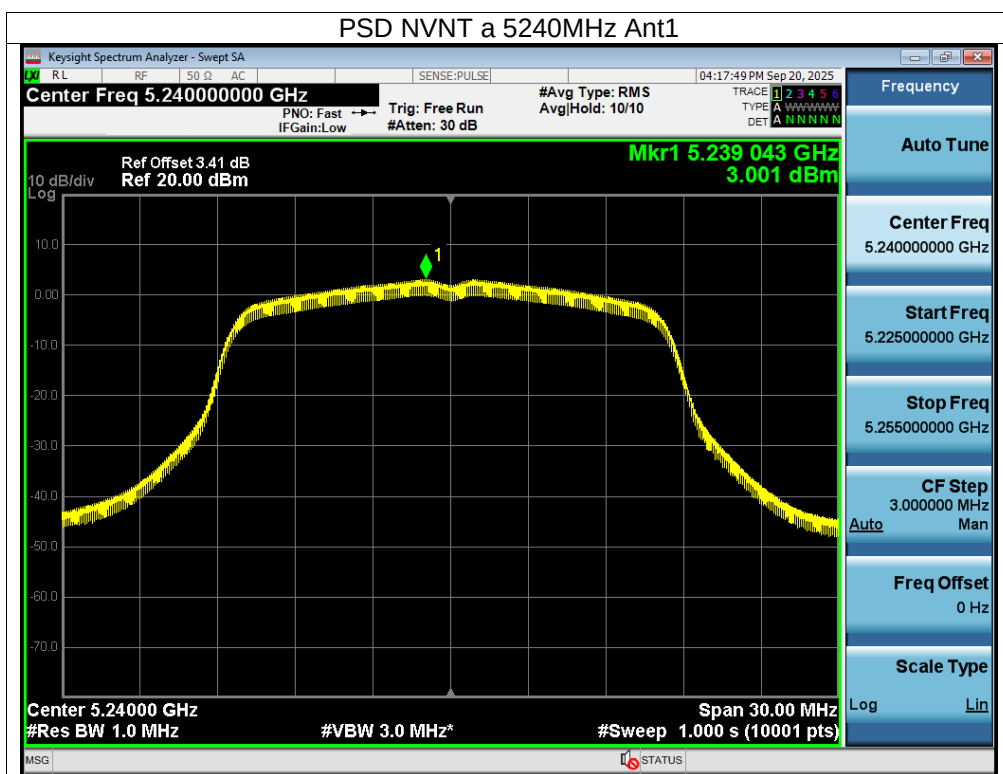
8.5 Test Result

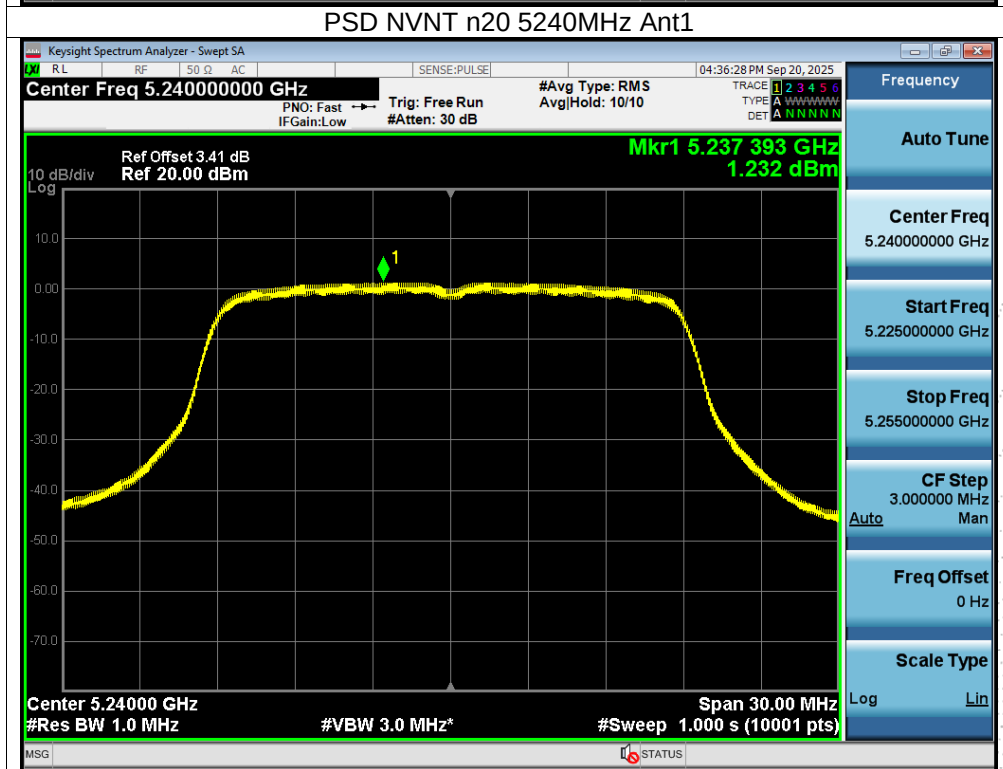
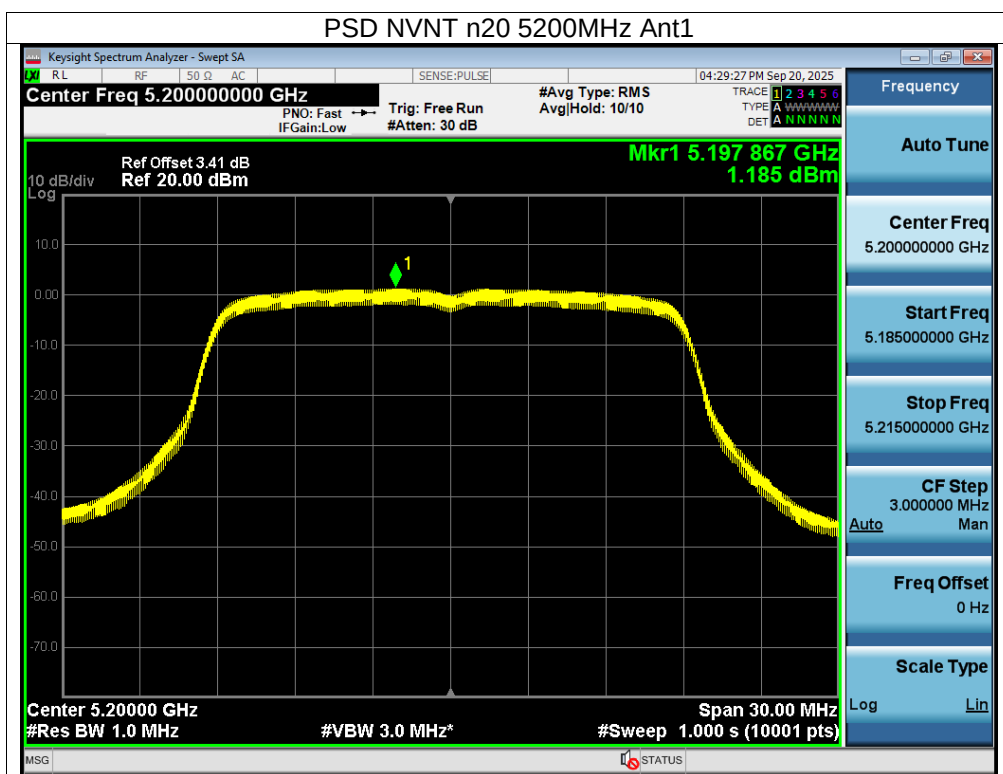
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Pressure:	101KPa	Test Voltage:	AC 24V
Test Mode:	(5180-5240MHz)		

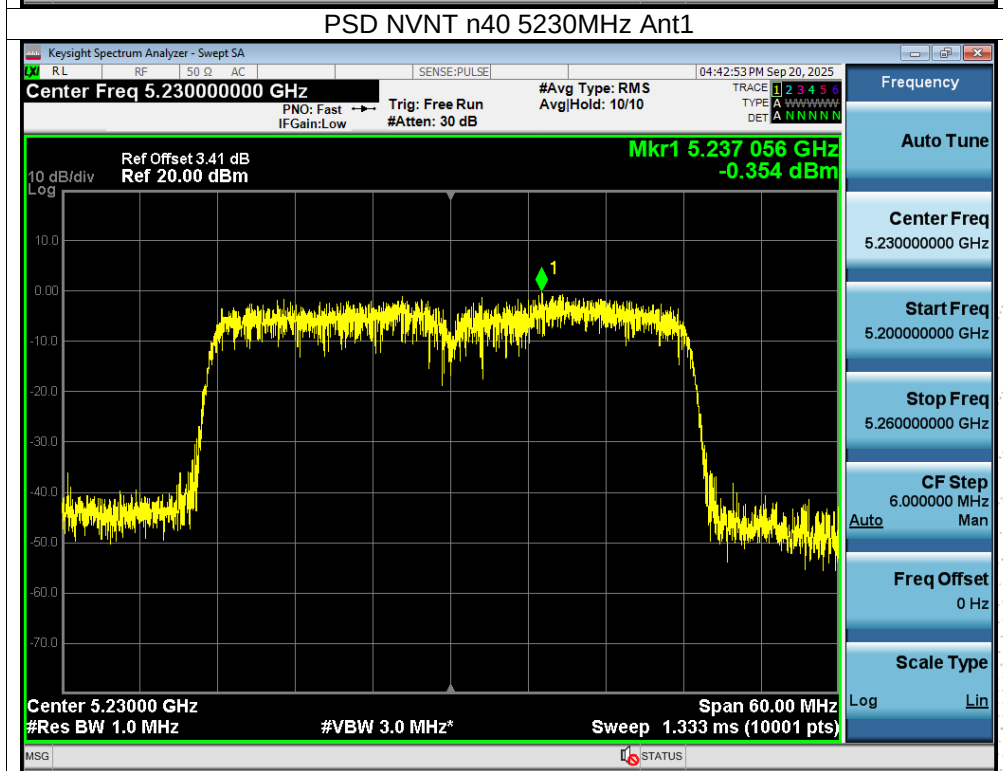
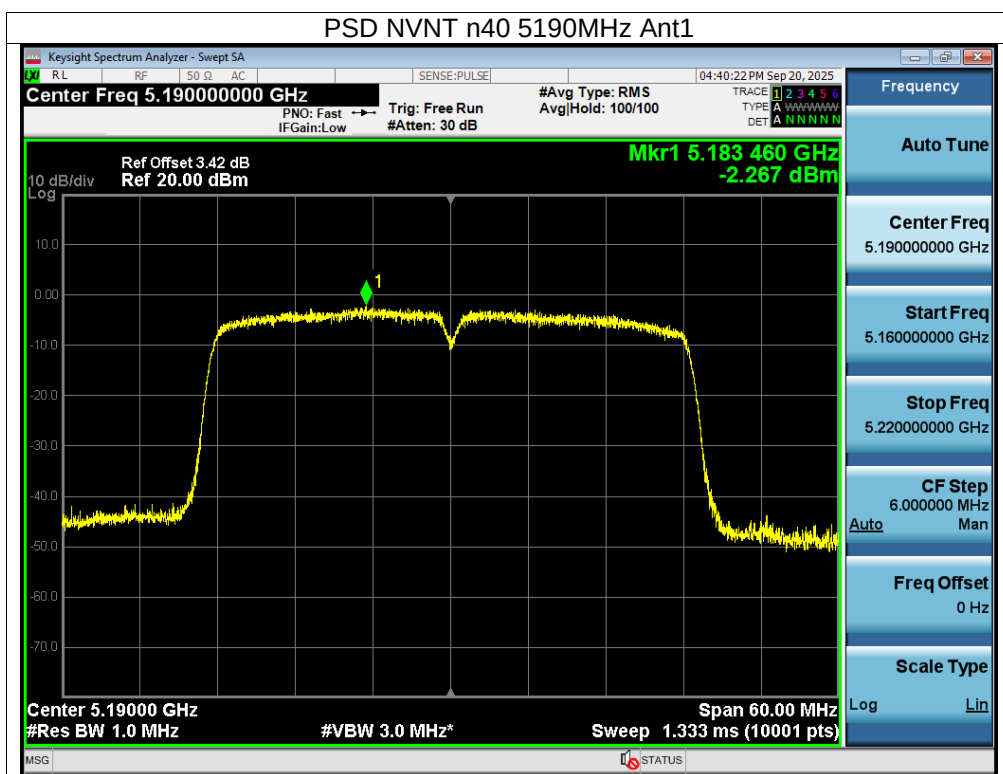
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	3.1	11	Pass
NVNT	a	5200	2.54	11	Pass
NVNT	a	5240	3	11	Pass
NVNT	n20	5180	1.27	11	Pass
NVNT	n20	5200	1.19	11	Pass
NVNT	n20	5240	1.23	11	Pass
NVNT	n40	5190	-2.27	11	Pass
NVNT	n40	5230	-0.35	11	Pass

C.O.LTD



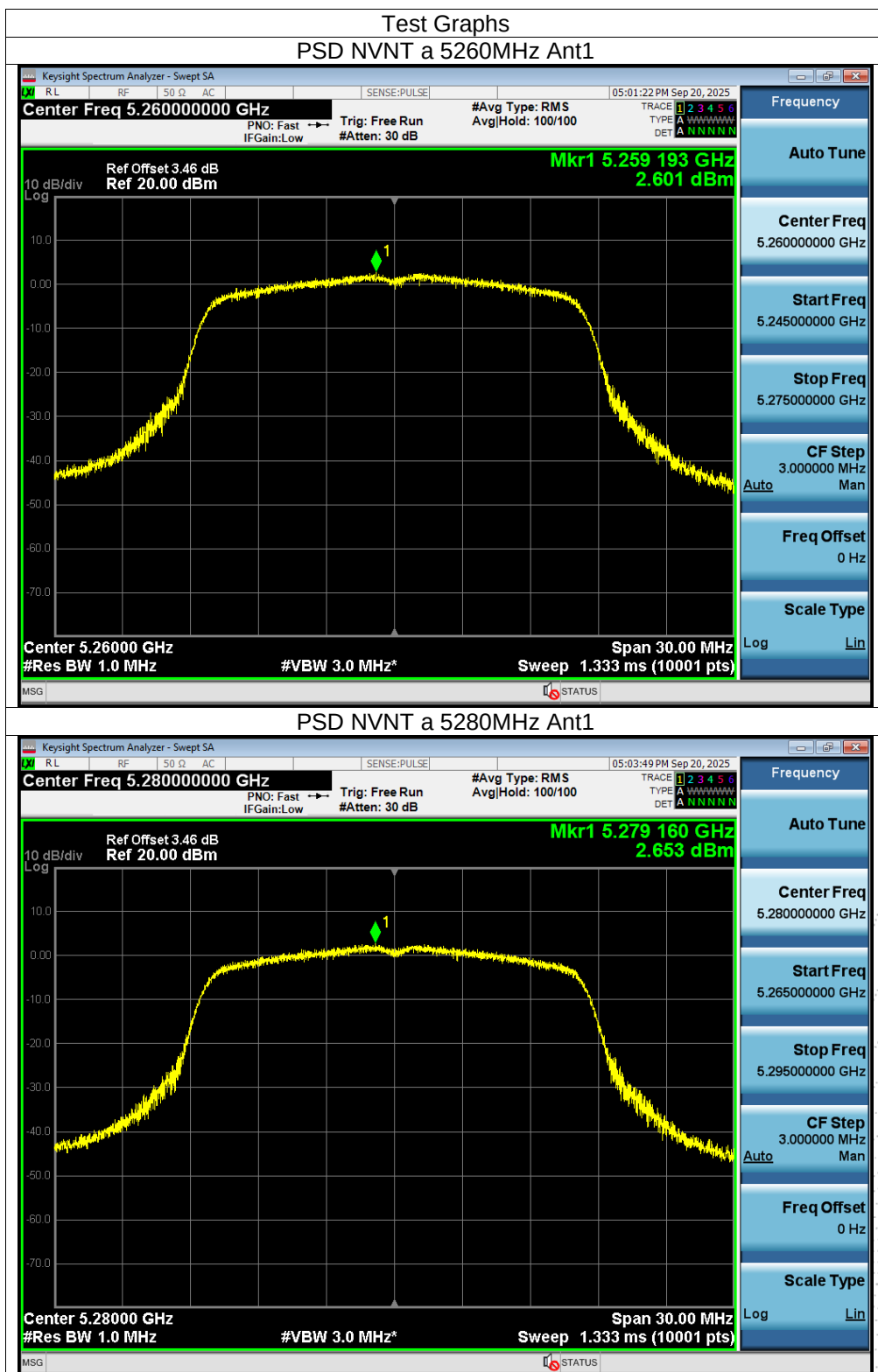


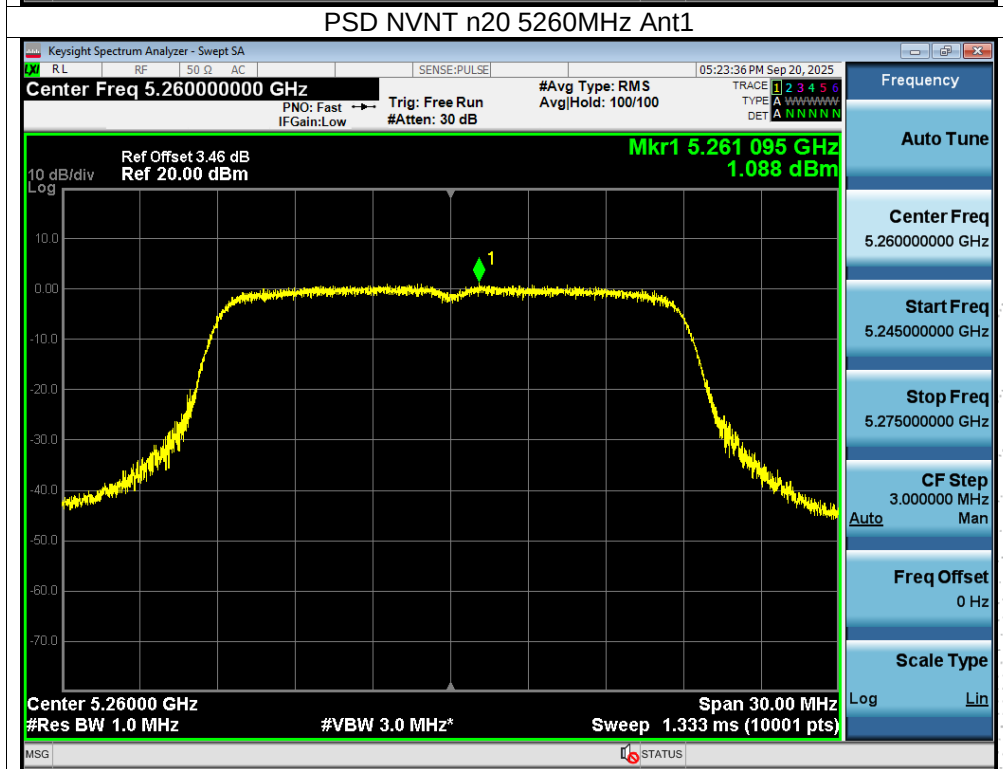
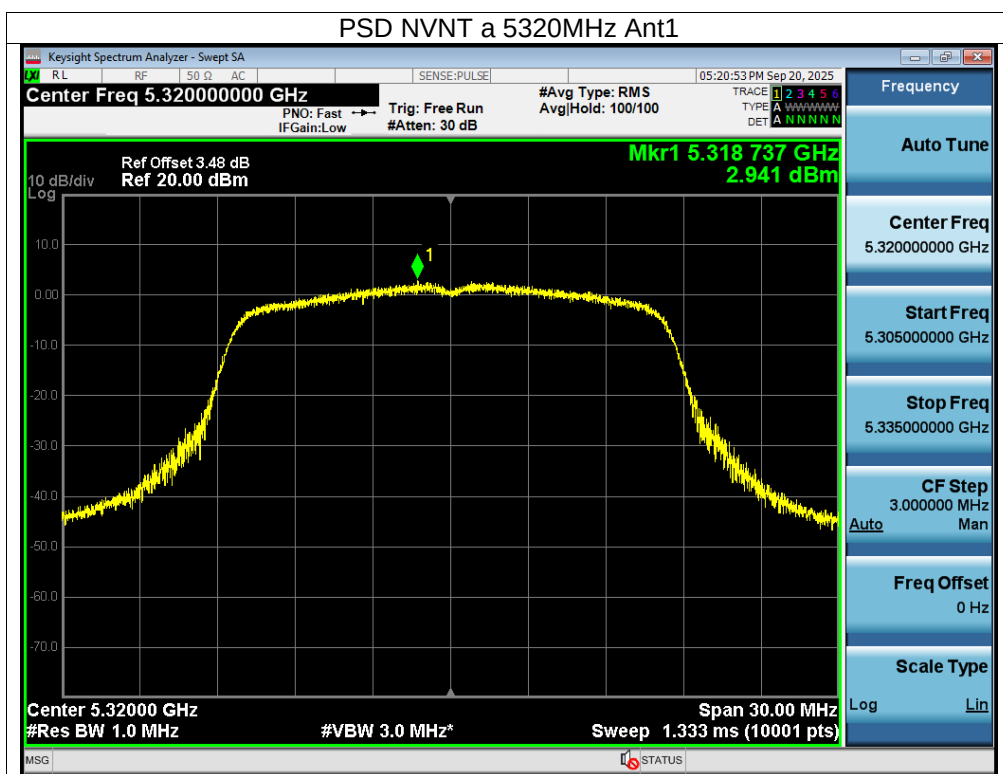


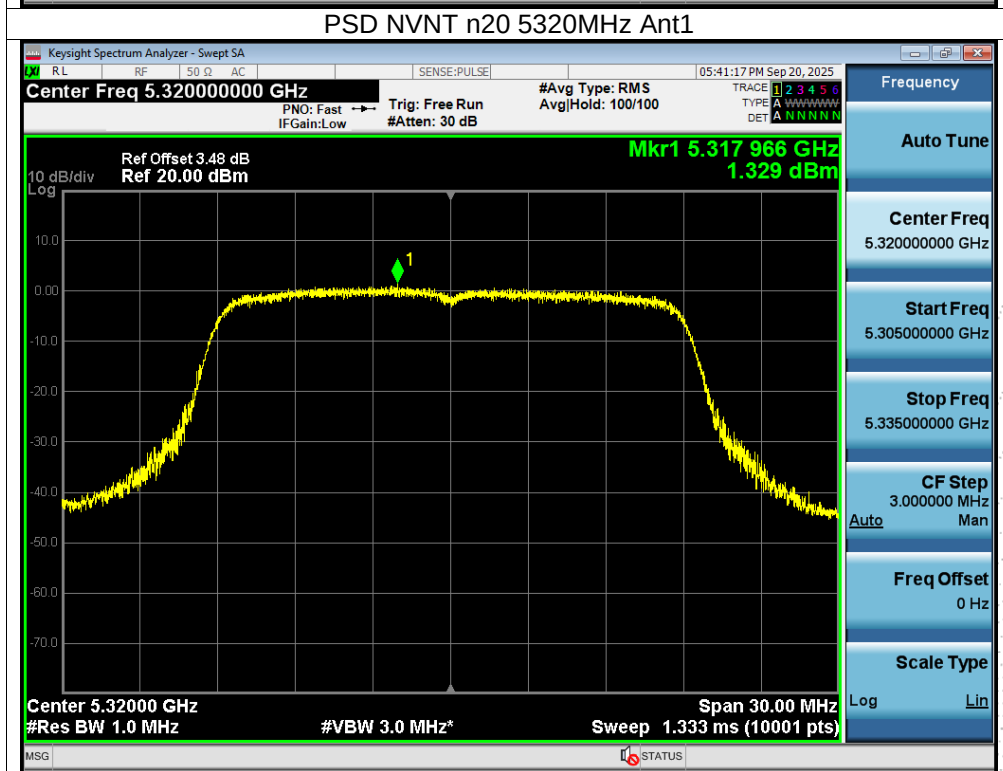
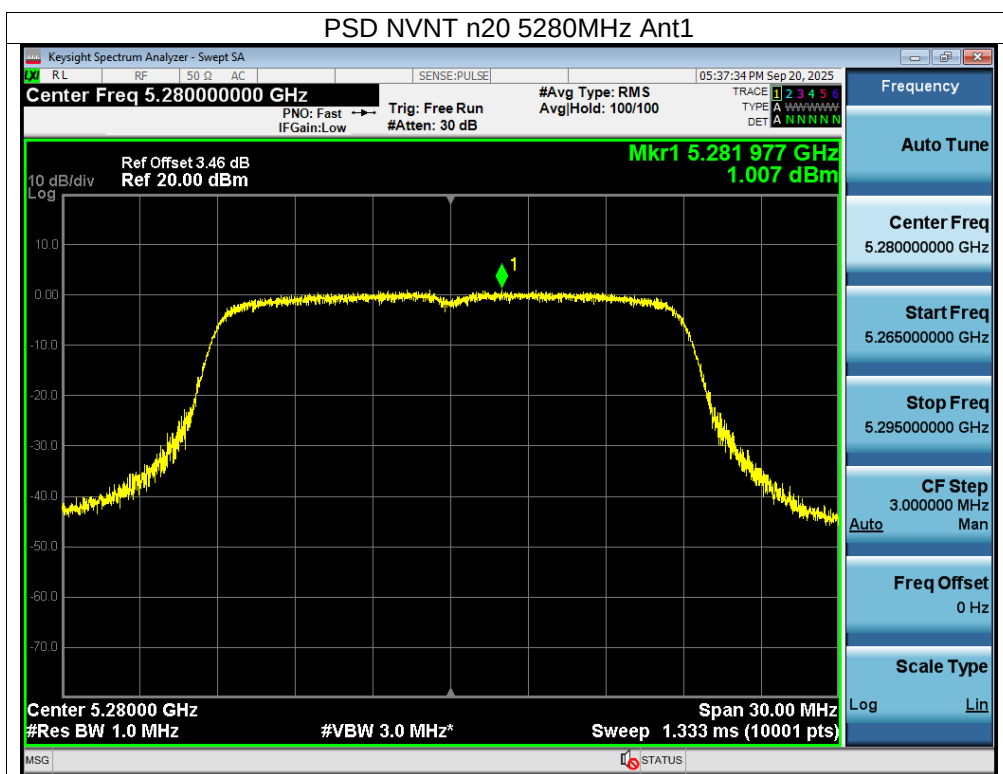


Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 24V
Test Mode:	(5260-5320MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5260	2.6	11	Pass
NVNT	a	5280	2.65	11	Pass
NVNT	a	5320	2.94	11	Pass
NVNT	n20	5260	1.09	11	Pass
NVNT	n20	5280	1.01	11	Pass
NVNT	n20	5320	1.33	11	Pass
NVNT	n40	5270	-1.95	11	Pass
NVNT	n40	5310	-1.67	11	Pass



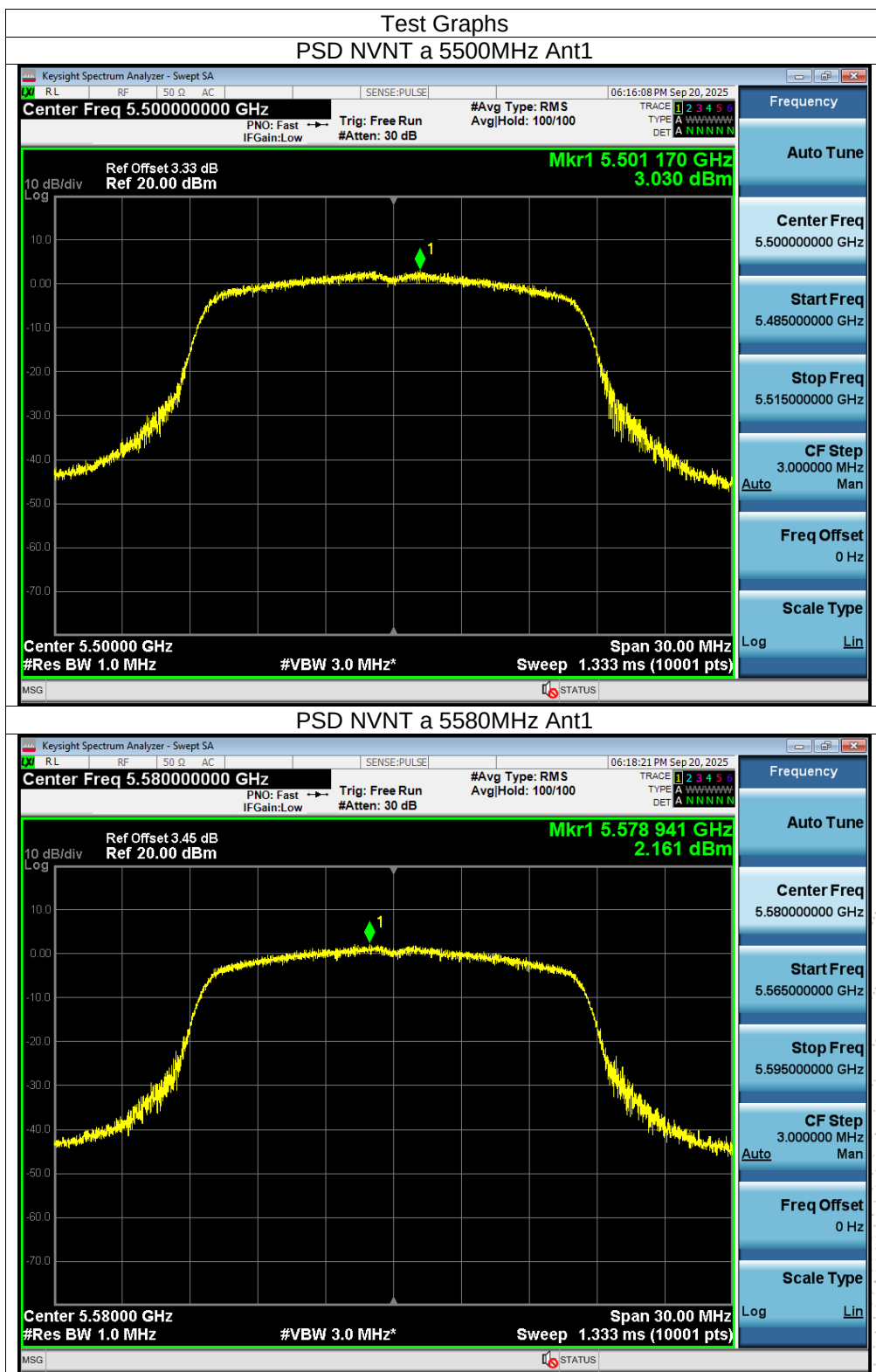


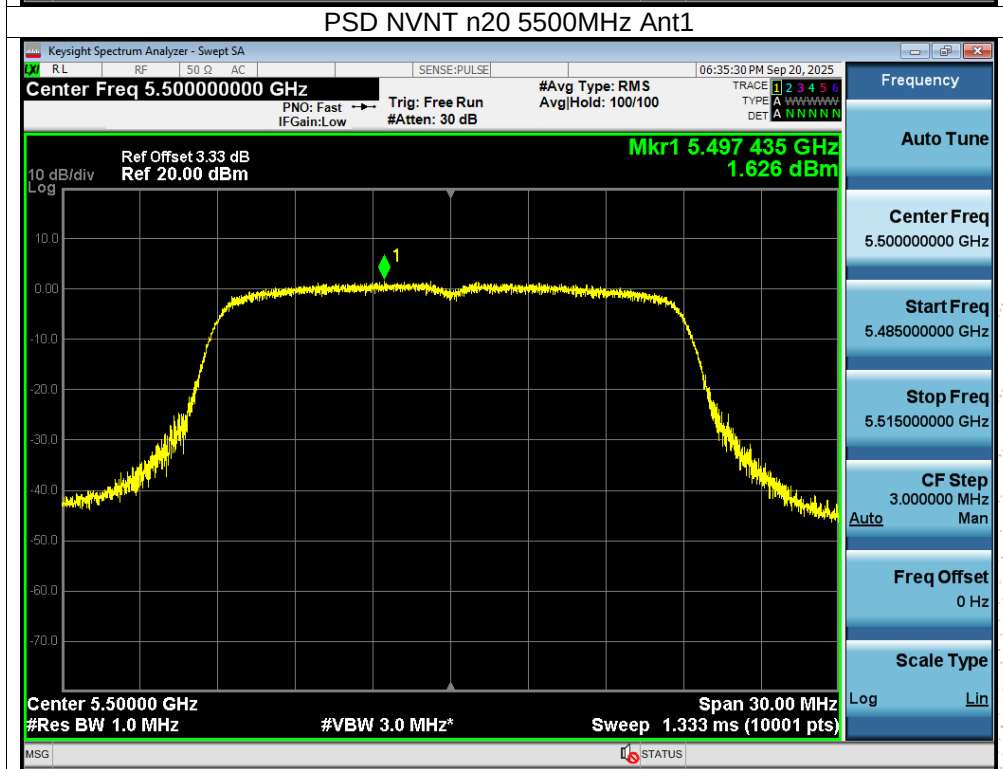
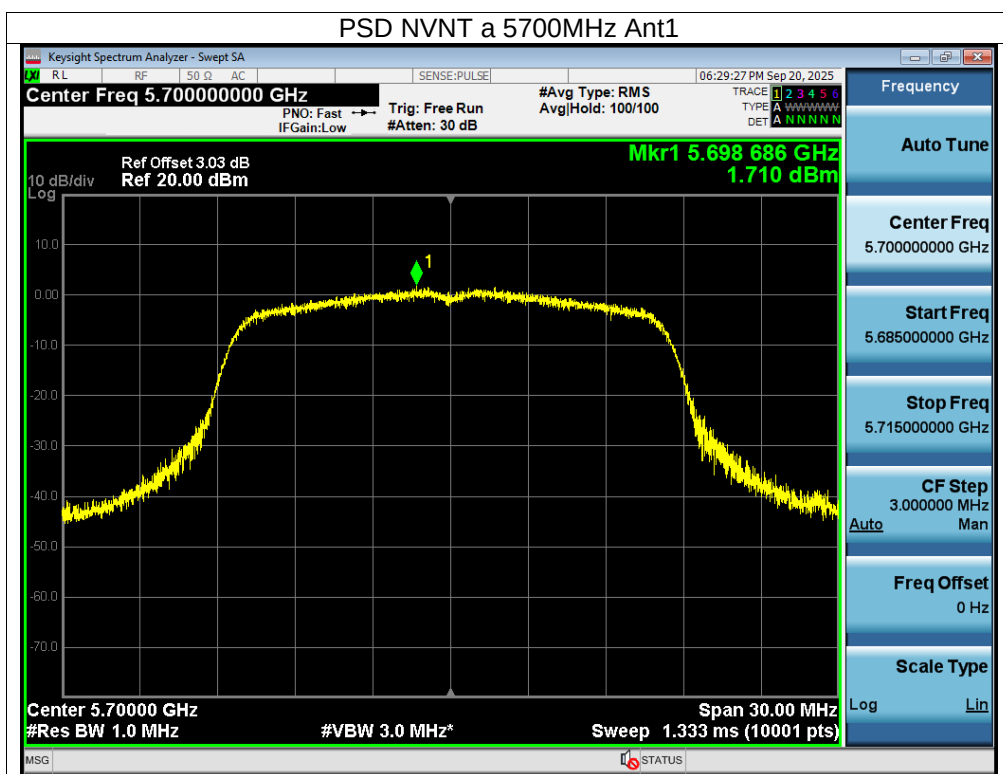


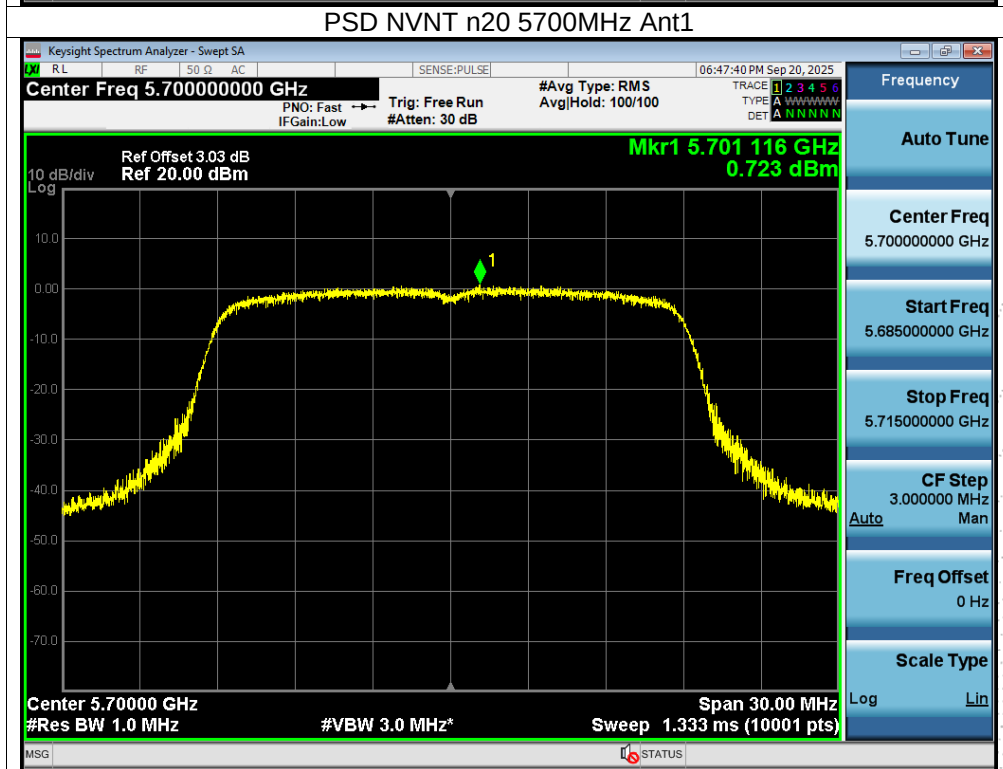
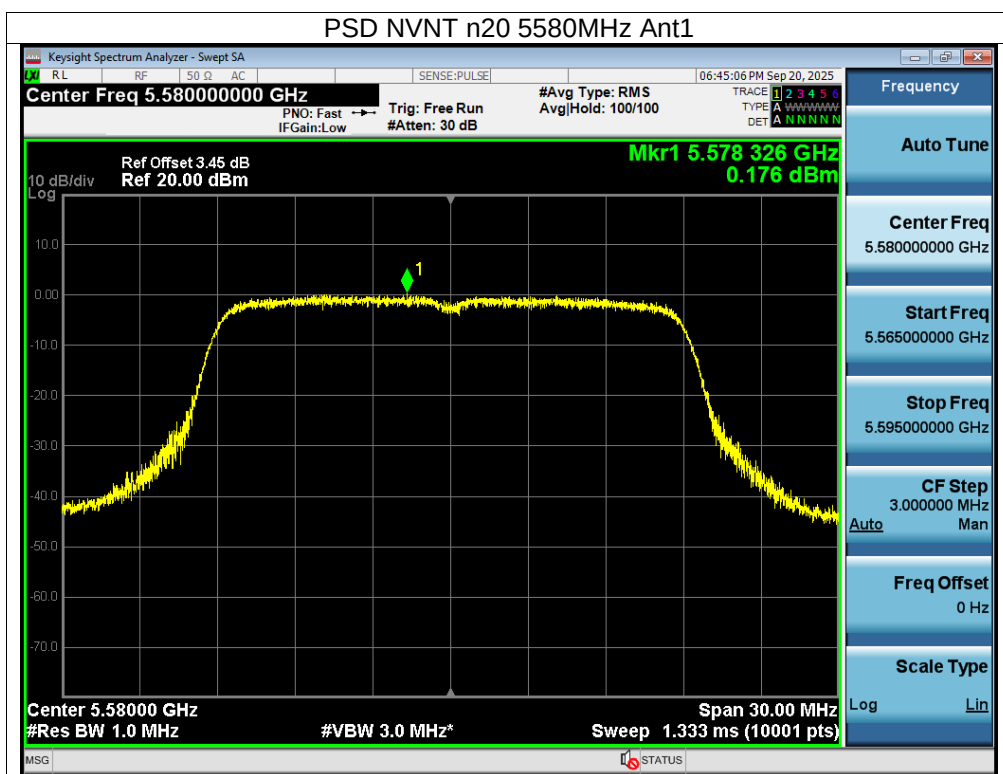


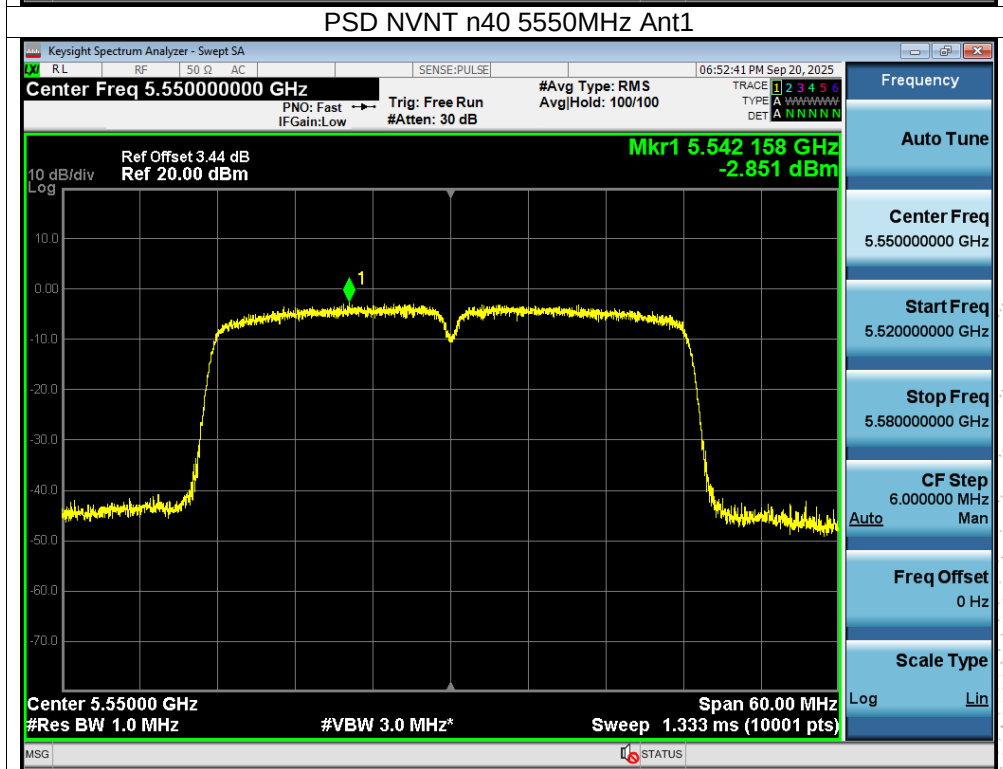
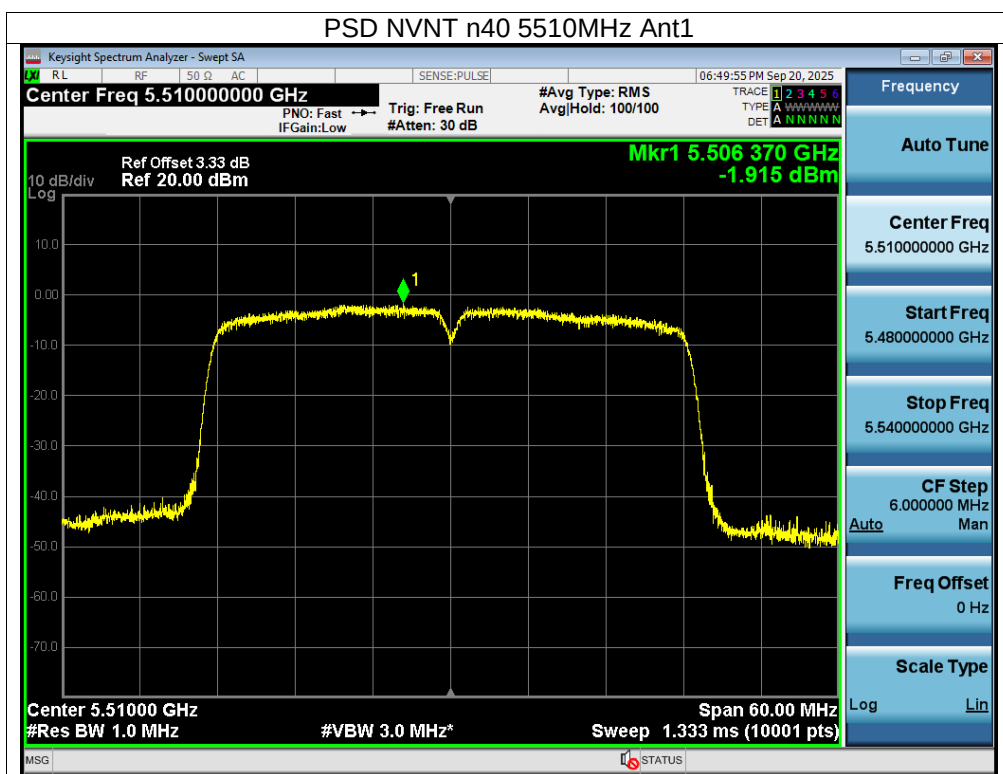
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Pressure:	101KPa	Test Voltage:	AC 24V
Test Mode:	(5500-5700MHz)		

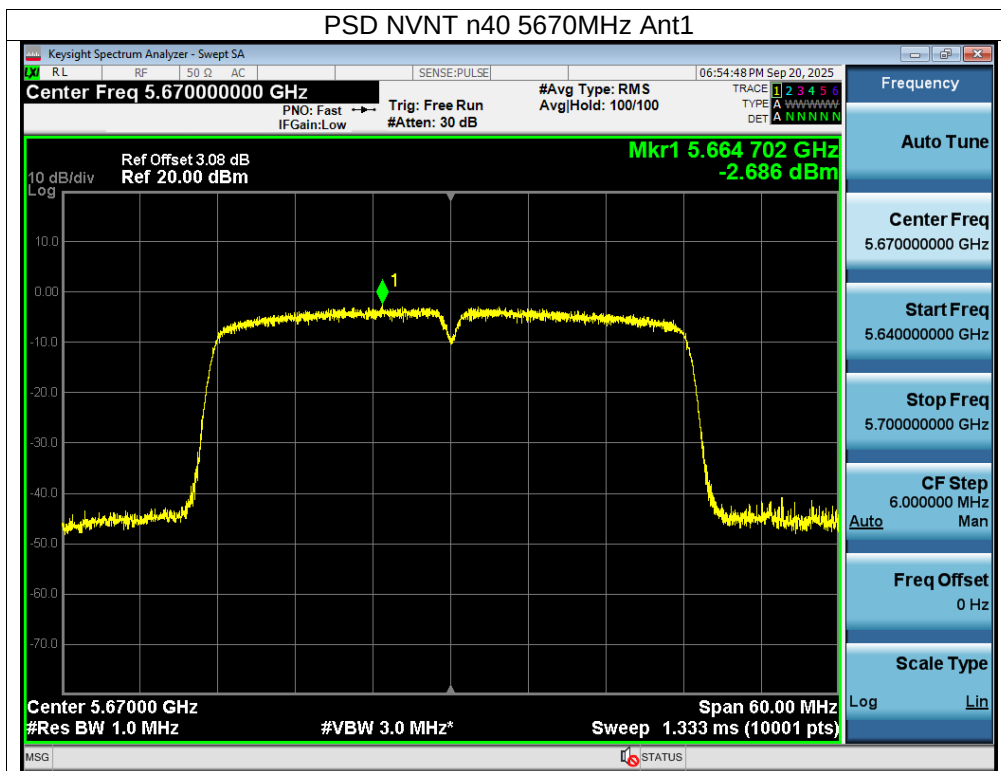
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5500	3.03	11	Pass
NVNT	a	5580	2.16	11	Pass
NVNT	a	5700	1.71	11	Pass
NVNT	n20	5500	1.63	11	Pass
NVNT	n20	5580	0.18	11	Pass
NVNT	n20	5700	0.72	11	Pass
NVNT	n40	5510	-1.92	11	Pass
NVNT	n40	5550	-2.85	11	Pass
NVNT	n40	5670	-2.69	11	Pass







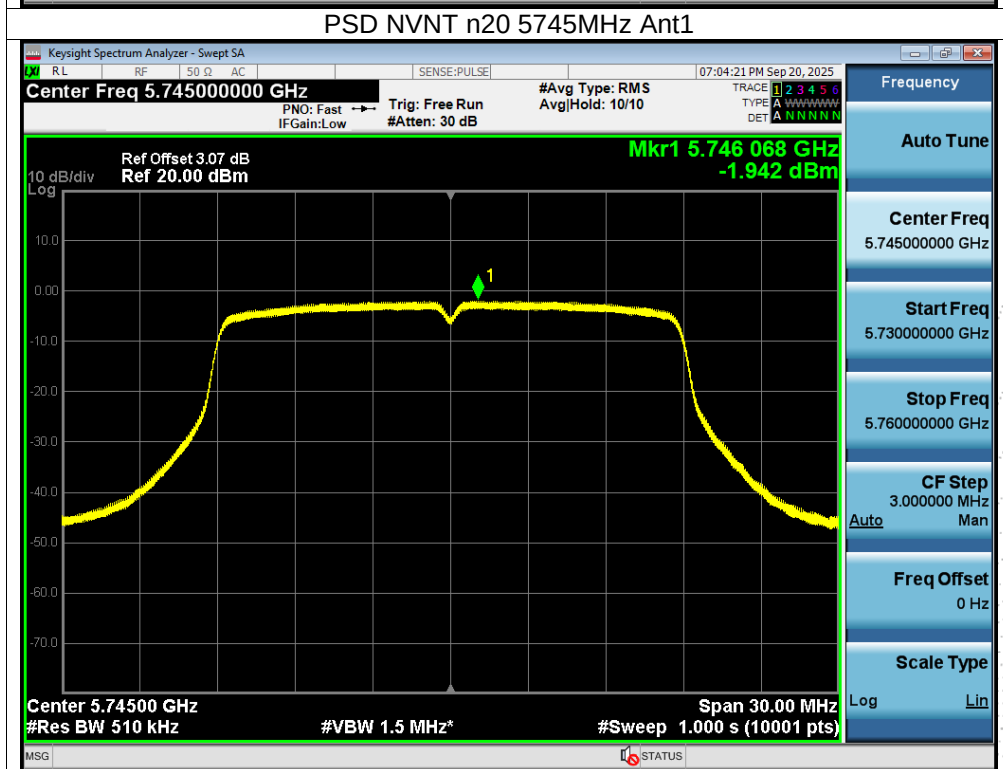
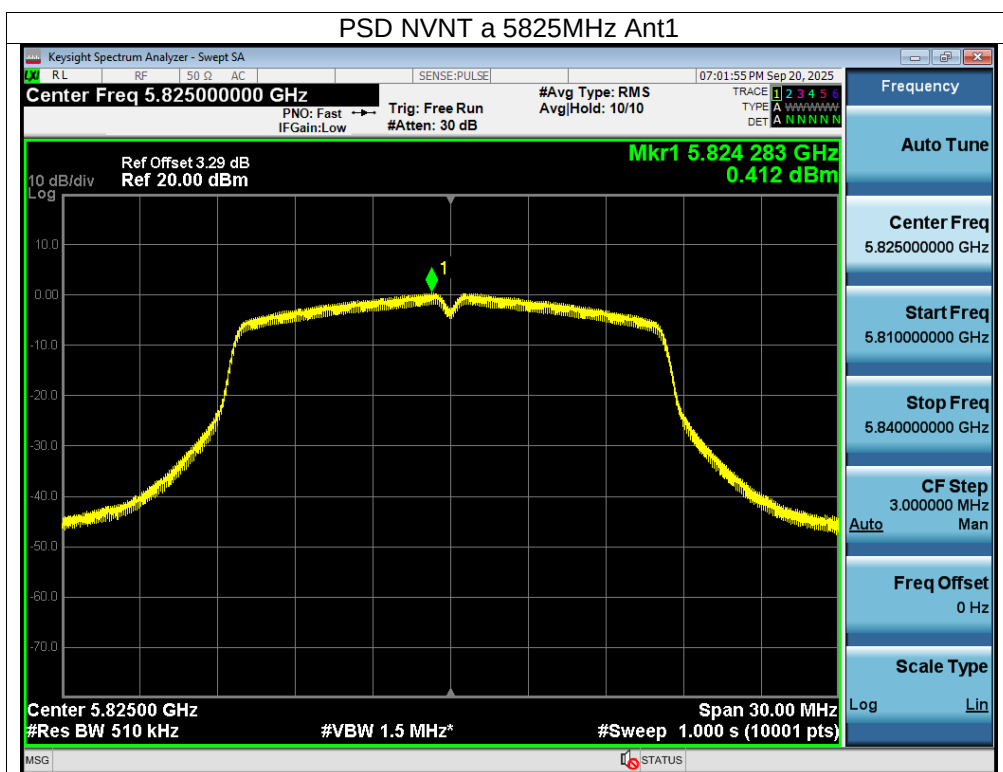


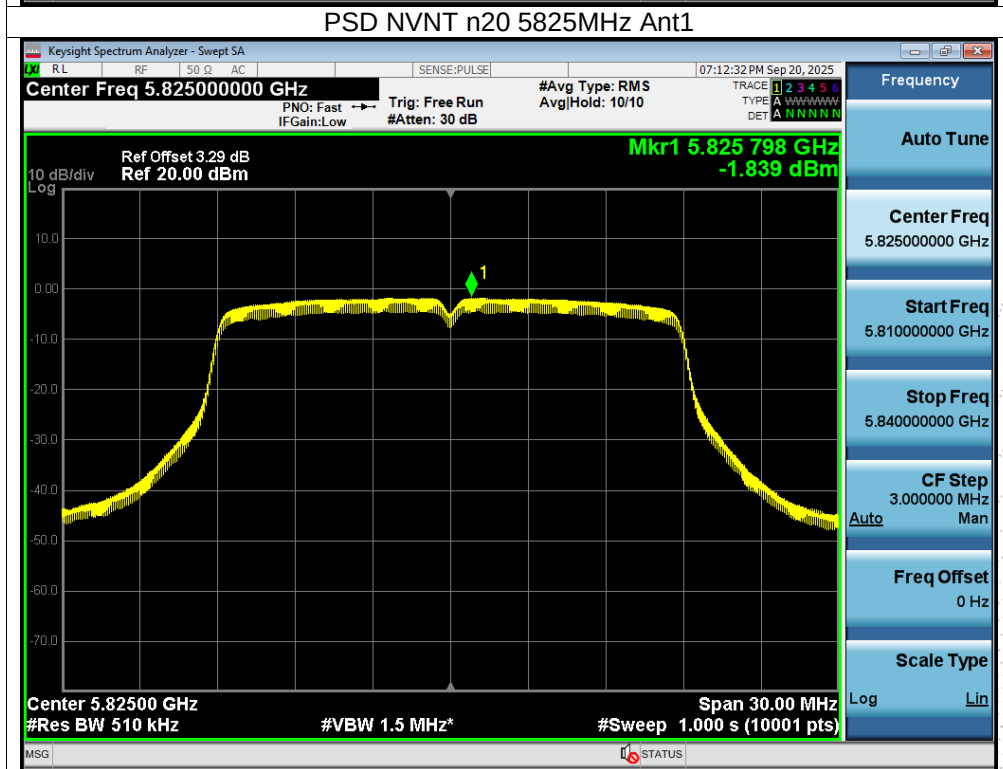
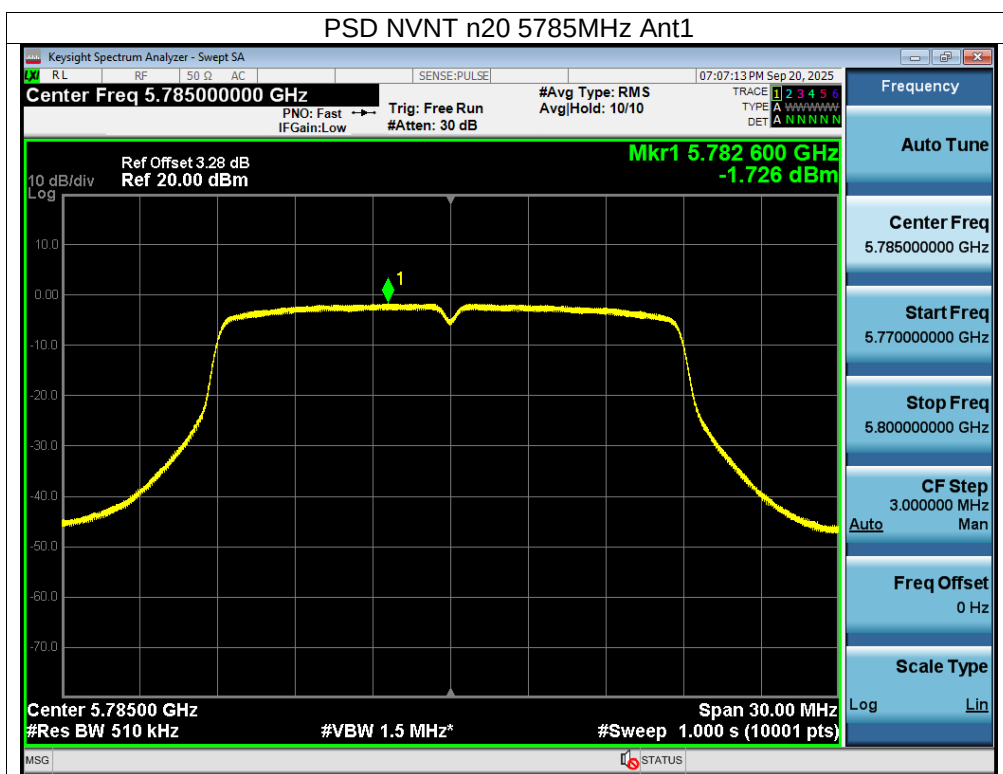


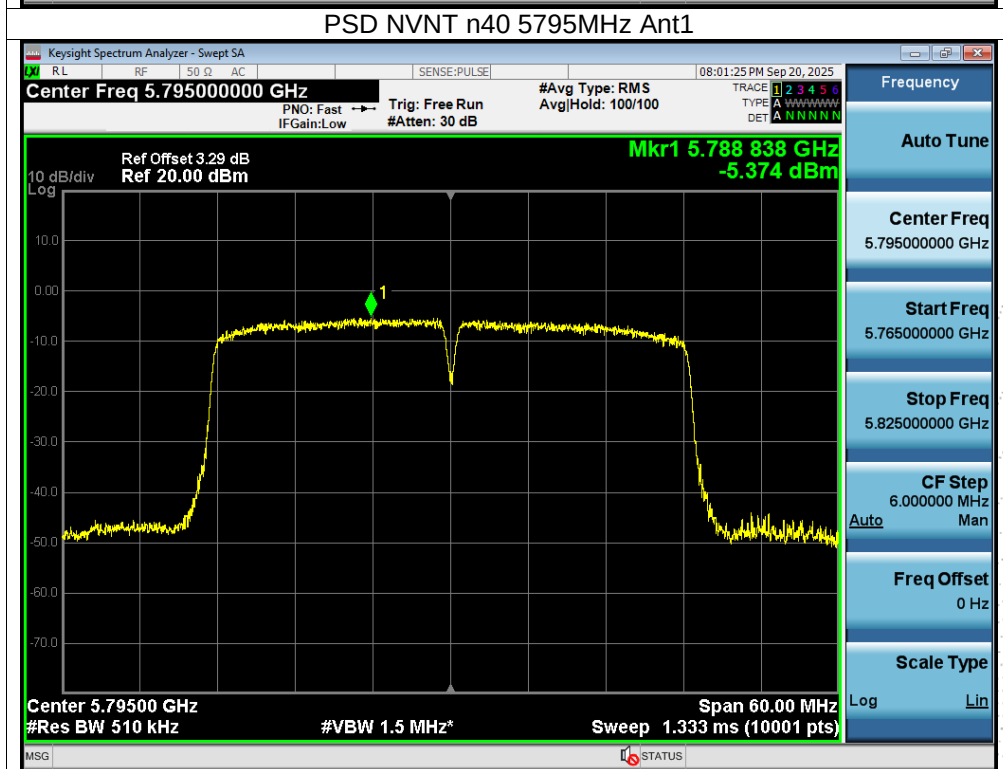
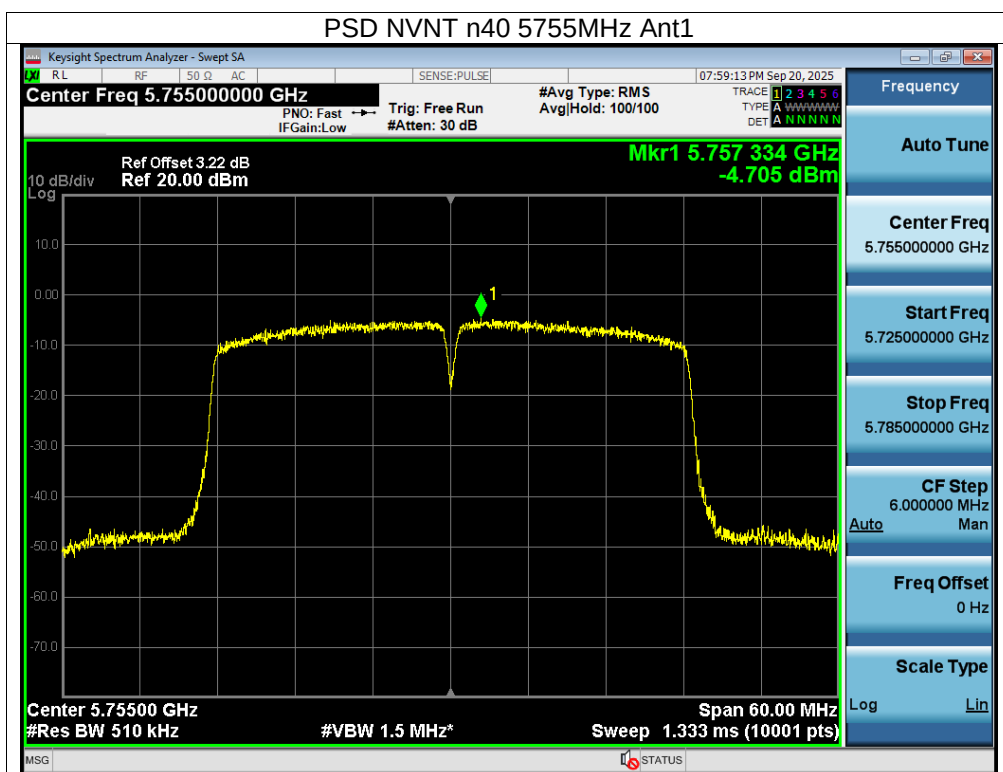
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 24V
Test Mode:	(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5745	-0.37	30	Pass
NVNT	a	5785	0.73	30	Pass
NVNT	a	5825	0.41	30	Pass
NVNT	n20	5745	-1.94	30	Pass
NVNT	n20	5785	-1.73	30	Pass
NVNT	n20	5825	-1.84	30	Pass
NVNT	n40	5755	-4.71	30	Pass
NVNT	n40	5795	-5.37	30	Pass



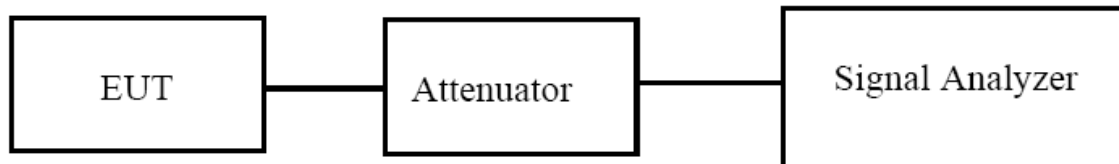






9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

(1) For the band 5.15-5.25 GHz.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(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 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(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. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

9.3 Test Procedure

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the maximum 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%.

The following procedure shall be used for measuring (99 %) power bandwidth:

- Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW $\geq 3 \cdot$ RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

9.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 24V
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	19.292	Pass
NVNT	a	5200	18.79	Pass
NVNT	a	5240	18.755	Pass
NVNT	n20	5180	20.553	Pass
NVNT	n20	5200	20.776	Pass
NVNT	n20	5240	20.254	Pass
NVNT	n40	5190	38.396	Pass
NVNT	n40	5230	38.332	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5180	16.203
NVNT	a	5200	16.202
NVNT	a	5240	16.200
NVNT	n20	5180	17.582
NVNT	n20	5200	17.553
NVNT	n20	5240	17.561
NVNT	n40	5190	35.728
NVNT	n40	5230	35.723

