TEST REPORT

APPLICANT	:	Shenzhen Thingx Technology Co., Ltd.
PRODUCT NAME	:	Smart Emotion Tracking Pendant
MODEL NAME	:	nuna01
BRAND NAME	:	nuna
FCC ID	:	2BRBQNUNA01
STANDARD(S)	:	47 CFR Part 15 Subpart C
RECEIPT DATE	:	2025-07-24
TEST DATE	:	2025-07-31 to 2025-09-01
ISSUE DATE	:	2025-09-15

Edited by: Su Xiaoxian

Su Xiaoxian (Rapporteur)

Approved by: Shen Junsheng

Shen Junsheng (Supervisor)

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MORLAB

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DIRECTORY

Change History		
Version	Date	Reason for change
1.0	2025-09-15	First edition

1. Summary of Test Result

No.	Section	Description	Test Date	Test Engineer	Result	Remark
1	15.203	Antenna Requirement	N/A	N/A	PASS	/
2	15.255(c)	E.I.R.P.	Aug. 7&11, 2025	Zhu Peihong	PASS	/
3	15.255(e)(2)	Emission Bandwidth and Occupied Bandwidth	Aug. 7, 2025	Zhu Peihong	PASS	/
4	15.207	Conducted Emission	Aug. 19, 2025	Wang Yapeng	PASS	/
5	15.255(d)	Radiated Spurious Emission	Aug. 6, 2025	Zhang Liyun	PASS	/
6	15.255(f)	Frequency Stability	Aug. 6, 2025	Zhang Liyun	PASS	/

Note 1: The tests were performed according to the method of measurements prescribed in ANSI C63.10-2020.

Note 2: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 3: Any additions, deviation, or exclusions from the method shall be noted in the “Remark”.

1.1. Testing Applied Standards

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

- 47 CFR 15.255
- ANSI C63.10-2020
- KDB 364244 D01 Meas 15.255 Radars v01r01

1.2. Test Equipment List

1.2.1 Radiated Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2025.05.13	2026.05.12
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2025.06.22	2026.06.21
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2025.05.16	2026.05.15
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2025.06.20	2026.06.19
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2025.06.20	2026.06.19
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2025.05.13	2026.05.12
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2025.05.13	2026.05.12
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2024.09.11	2025.09.10
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.09.11	2025.09.10
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2024.09.11	2025.09.10
Anechoic Chamber	N/A	9m*6m*6m	CRT	2025.06.21	2028.06.20
Low Noise Amplifier (40GHz-60GHz)	ADSE01	OQ-LNA-4060-3805C	Shanghai Ouqiao Electronics Technology Co., Ltd	2024.08.17	2026.08.16
Low Noise	ADJU05	OQ-LNA-60	Shanghai	2024.08.17	2026.08.16

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Amplifier(60GHz-90 GHz)		90-3805T	Ouqiao Electronics Technology Co., Ltd		
Low Noise Amplifier(90GHz-140GHz)	AEMA02	AT-LNA-90140-1806E	Shanghai AT Microwave Ltd.	2025.02.26	2026.02.25
Low Noise Amplifier(140GHz-200GHz)	ADAU01	OQ-LNA-140200-1606T	Shanghai Ouqiao Electronics Technology Co., Ltd	2024.08.17	2026.08.16
Horn Antenna (40GHz-60GHz)	2020036000036	LB-19-20-A	A-INFOMW	2022.06.16	2027.06.15
Horn Antenna(60GHz-90 GHz)	J202026347	LB-12-20-A	A-INFOMW	2022.06.16	2027.06.15
Horn Antenna(90GHz-140GHz)	J202062617	LB-8-25-A	A-INFOMW	2022.06.16	2027.06.15
Horn Antenna(140GHz-220GHz)	2020004000025	LB-5-20-A	A-INFOMW	2022.06.16	2027.06.15
Spectrum Analyzer Frequency Conversion Module (40GHz-60GHz)	2022081902	SAFC19	Nanjing Nuozhijie Electronic Technology Co.,Ltd	2022.06.16	2027.06.15
Spectrum Analyzer Frequency Conversion Module(60GHz-90 GHz)	2022081904	SAFC12	Nanjing Nuozhijie Electronic Technology Co.,Ltd	2024.08.17	2026.08.16
Spectrum Analyzer Frequency Conversion Module(90GHz-140 GHz)	2023022002	SAFC08	Nanjing Nuozhijie Electronic Technology Co.,Ltd	2025.02.18	2027.02.17

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Spectrum Analyzer Frequency Conversion Module(140GHz-220GHz)	2023022004	SAFC05	Nanjing Nuozhijie Electronic Technology Co.,Ltd	2025.02.18	2027.02.17
Signal&Spectrum Analyzer	1406.6000K03-183151-sS	FSW	R&S	2025.05.13	2026.05.12
RF Coaxial Cable (DC-40GHz)	158230831	RAC360-40MM-1000	RFTOP	2024.09.11	2025.09.10
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.09.11	2025.09.10
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KKF-0.5	Qualwave	2024.09.11	2025.09.10
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2024.09.11	2025.09.10

1.2.2 Conducted Emission Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	101052	ESPI	R&S	2025.05.15	2026.05.14
LISN	103131	ENV 216	R&S	2025.03.20	2026.03.19
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	R&S	2025.05.13	2026.05.12
RF Coaxial Cable (DC-100MHz)	EMC-CE-00514	N/A	N/A	2025.05.06	2026.05.05

1.2.3 List of Software Used

Description	Manufacturer	Software Version
MORLAB EMCR	Morlab	V1.2
TS+ -[JS32-CE]	Tonscend	V2.5.0.0

1.3. Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.:

Uncertainty of Radiated Emission Measurement

Test Items	Uncertainty	
Measuring Uncertainty for a Level of Confidence of 95%(U=2Uc(y))	30MHz-200MHz	±5.06dB
	200MHz-1000MHz	±5.04dB
	1GHz-6GHz	±5.18dB
	6GHz-18GHz	±5.48dB

1.4. Testing Laboratory

1.4.1. Identification and Location of the Responsible Testing Laboratory

Laboratory Name	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone	+86 755 36698555
Facsimile	+86 755 36698525
FCC Designation Number	CN1192
FCC Test Firm Registration Number	226174

2. General Description

2.1. Information of Applicant and Manufacturer

Applicant	Shenzhen Thingx Technology Co., Ltd.
Applicant Address	Room 510, Shenzhen Research Institute, CUHK, No.10, Yuexing 2nd Road, Nanshan, Shenzhen
Manufacturer	Shenzhen Thingx Technology Co., Ltd.
Manufacturer Address	Room 510, Shenzhen Research Institute, CUHK, No.10, Yuexing 2nd Road, Nanshan, Shenzhen

2.2. Information of EUT

Product Name:	Smart Emotion Tracking Pendant	
Sample No.:	4#	
Hardware Version:	P01_1V2	
Software Version:	V3.14.4.1212	
Equipment Type:	☒Field disturbance sensors/radars ☐Pulsed field disturbance sensors/radars ☐Devices other than field disturbance sensors	
Operating Frequency Range:	61GHz-61.5GHz	
Operating Frequency:	61.247GHz	
Modulation Type:	Pulse-Doppler	
Antenna Type:	Antennain-package	
Accessory Information:	Battery	
	Brand Name:	ZWDB
	Model No.:	ZWD402030V
	Serial No.:	N/A
	Capacity:	300mAh
	Rated Voltage:	3.8V
	Charge Limit:	4.35V
	Manufacturer:	ZHONGSHAN ZHONGWANGDE NEWENERGY TECHNOLOGY.LTD

Note 1: The declarations of EUT presented in the report are provided by applicant, and the test laboratory is not responsible for the accuracy of the information. For a more detailed description, please refer to specification or user's manual supplied by the applicant.

2.3. Test Configuration of EUT

The EUT was tested while in a continues transmitter/receiver mode under the control of tool which is provided by manufacturer, all the items of transmitter were tested under the maximum output power.

2.4. Test Conditions

2.4.1.Environment Condition

Temperature (°C):	5-35
Relative Humidity (%):	45-85
Atmospheric Pressure (kPa):	86-106

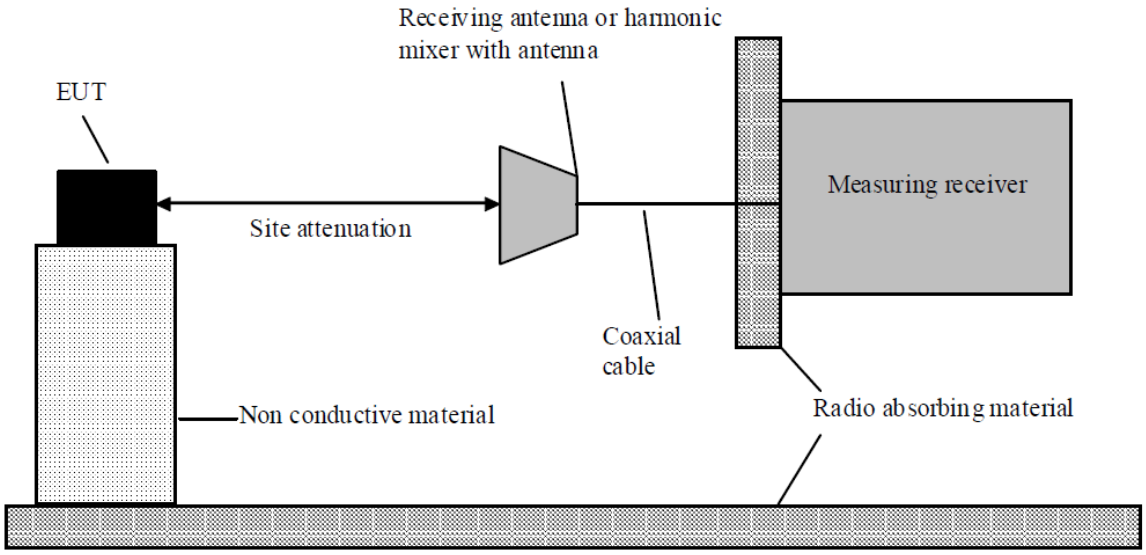
2.4.2.EUT Setup and Operating Conditions

The EUT is activated and controlled by the System Simulator and software. The EUT is powered by battery.

Supply Voltage:	Normal(NV)	3.8V
Test Temperature:	Normal(NT)	25°C

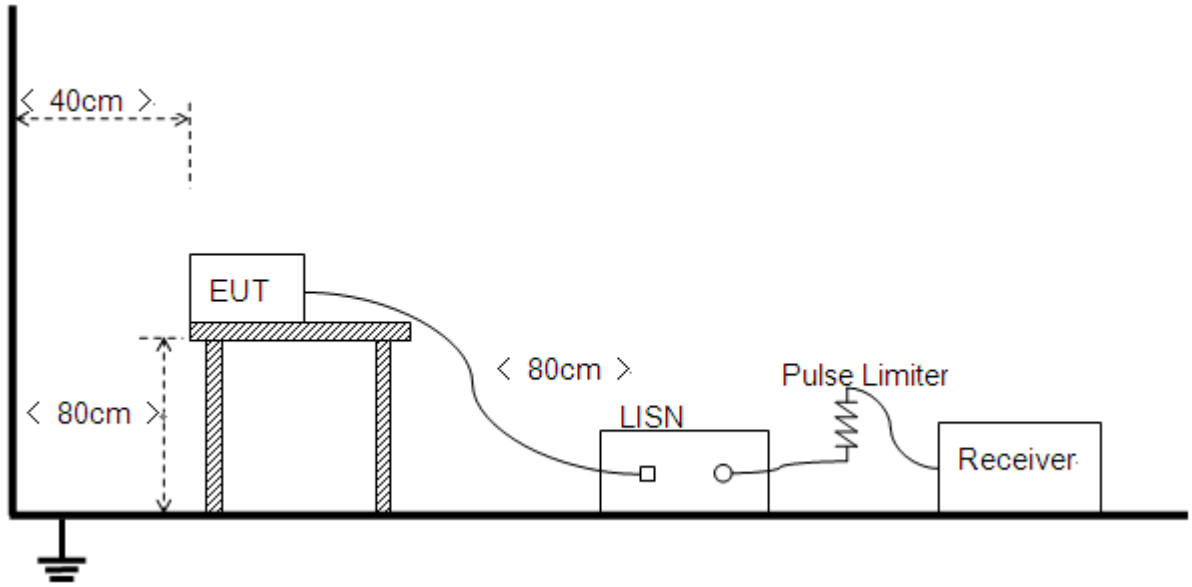
2.5. Test Setup Layout Diagram

2.5.1.General



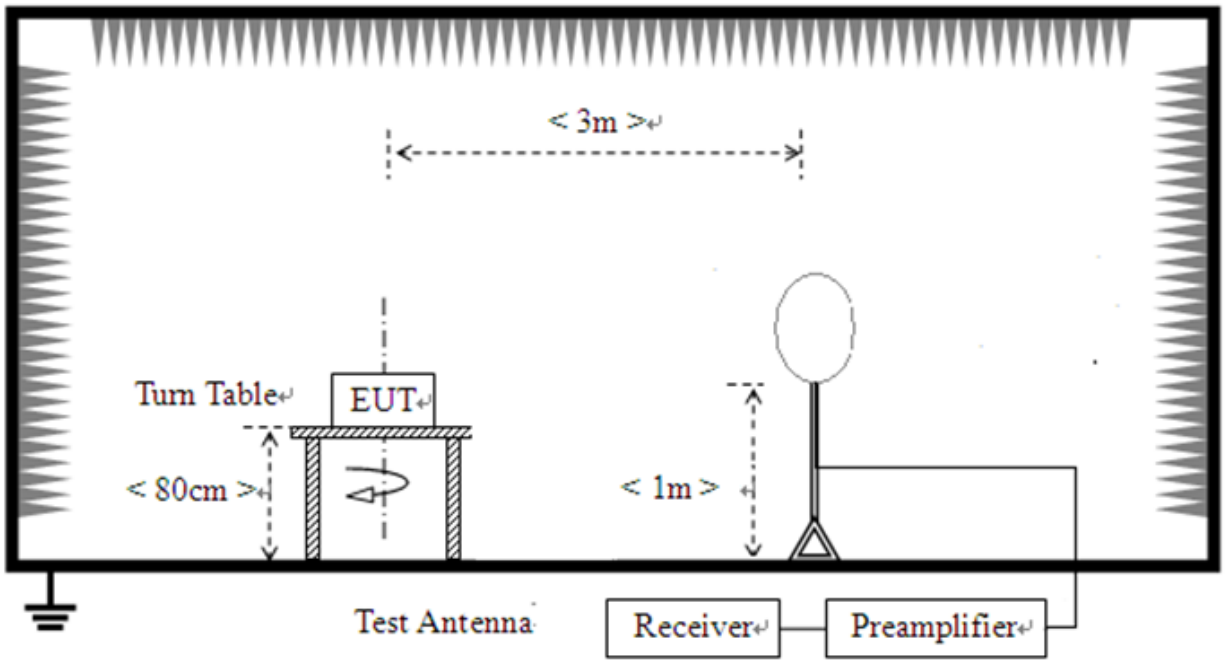
Free Space Loss (FSL): 68dB
Receive Antenna Gain (AG): 40dB
Cable Loss: 1dB
Attenuation: 0dB
Conversion Loss of Mixer: 4.97dB
Correction Factor = FSL – AG + Cable Loss + Attenuation + Conversion Loss of Mixer = 63.64dB

2.5.2.Conducted Emission

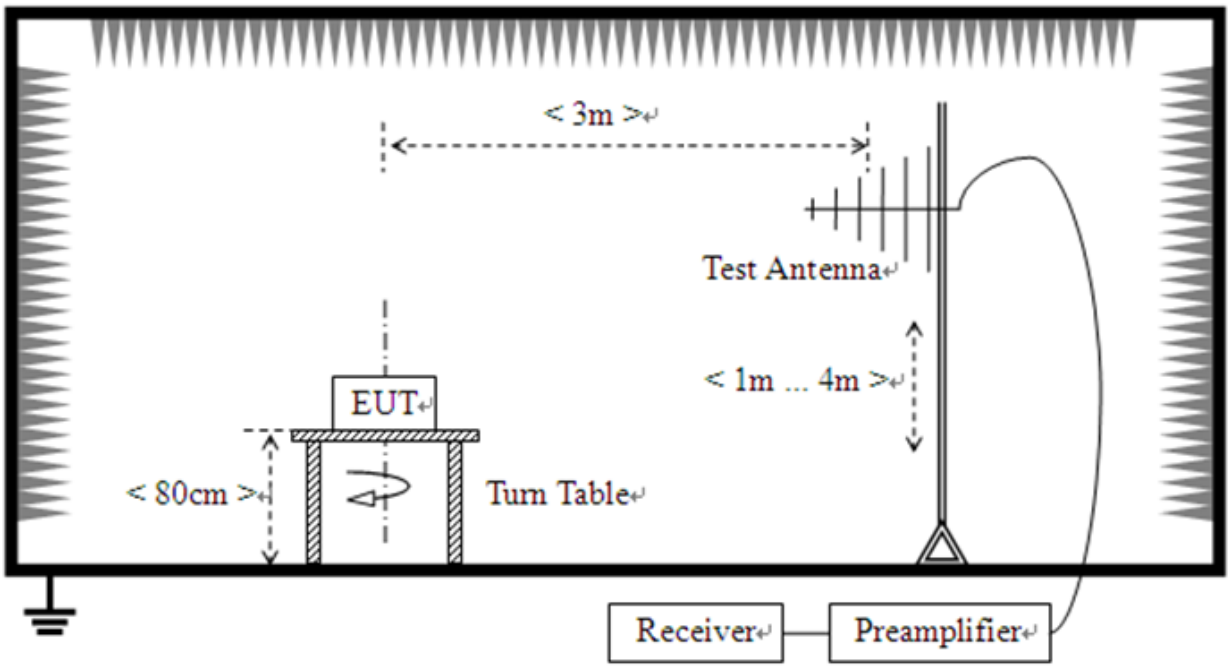


2.5.3.Radiation

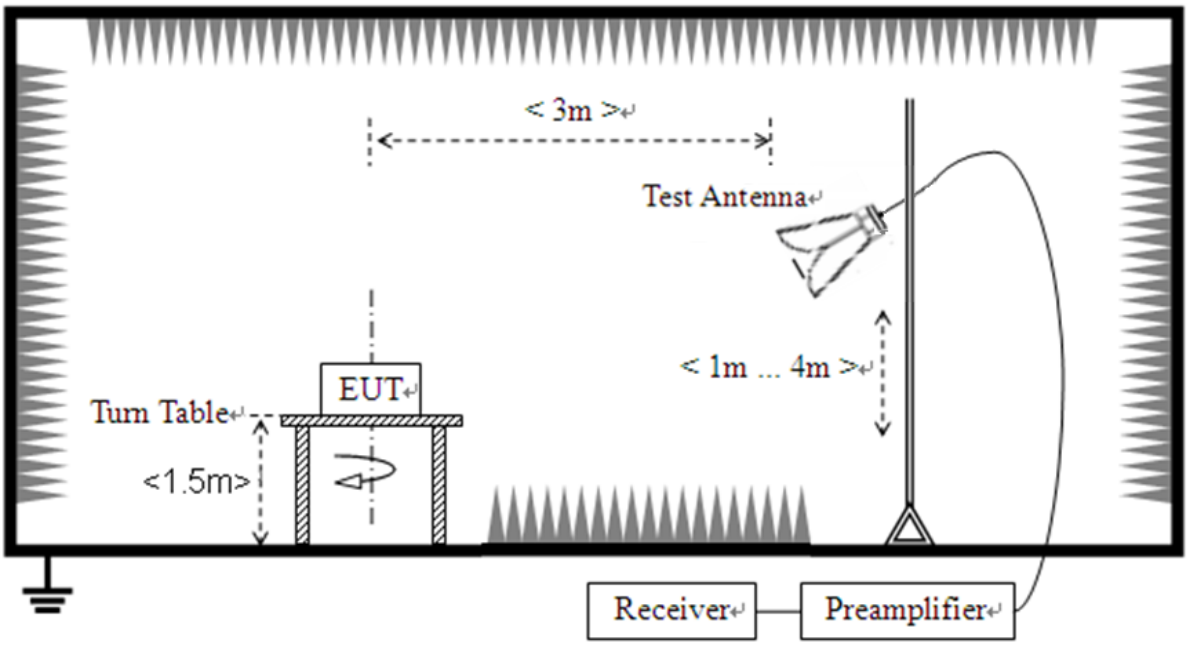
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



3. Test Results

3.1. Antenna Requirement

3.1.1.Requirements

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.1.2.Test Results

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

3.2. E.I.R.P. and Transmitter Conducted Output Power

3.2.1.Requirements

Equipment Type	Freq. Range/ Application	Peak EIRP	Average EIRP	Peak Conducted Power
Field disturbance sensors/radars	General	10dBm @15.255(c)(2)	-	<=-10dBm
	60-64GHz [1] (Deployed on unmanned aircraft)	<=20dBm (the sum of tx off-time of >=2ms >=16.5ms within 33ms; and <=121.92m above ground level) @15.255(b)(3)	-	-
	57.0-59.4 GHz [1]	<=20dBm (Indoor); <=30dBm (Outdoor). @15.255(c)(2)(i)	-	
	57.0-61.56 GHz [1]	<=3dBm; <=20dBm (the sum of tx off-time of >=2ms >=16.5ms within 33ms) @15.255(c)(2)(ii)	-	
	57.0-64.0 GHz [1]	<=14dBm (the sum of tx off-time of >=2ms >=25.5ms within 33ms) @15.255(c)(2)(iii)(A)	-	
		<=20dBm (the sum of tx off-time of >=2ms >=16.5ms within 33ms when operated outdoor) @15.255(c)(2)(iii)(B)	-	
	61.0-61.5 GHz [1]	<=43dBm; <=13dBm (Outside 61.0-61.5GHz, within 57-71GHz) @15.255(c)(2)(V)	<=40dBm; <=10dBm (Outside 61.0-61.5GHz, within 57-71GHz) @15.255(c)(2)(V)	

Devices other than field disturbance sensors	-	<=43dBm @15.255(c)(1)(i)	<=40dBm @15.255(c)(1)(i)	<=500mW*(6dB BW/100MHz),for 6dB BW<=100MHz @15.255(e)(2)
	Fixed P2P	<=85dBm (reduced by 2 dB for every dB that the antenna gain is less than 51 dBi) @15.255(c)(1)(ii)	<=82dBm (reduced by 2 dB for every dB that the antenna gain is less than 51 dBi) @15.255(c)(1)(ii)	
Pulsed field disturbance sensors/radars	57-64 GHz	<=20dB above the maximum permitted average emission limit applicable to the EUT@15.255(c)(3)	<=13dBm (pulse duration time<=6ns, duty cycle<=10% within 0.3μs) @15.255(c)(3)	Min [{-10dBm @15.255(c)(2)}, { <=500mW @15.255(e)(1)}]
			Average integrated EIRP<=5dBm within 61.5-64GHz (in any 0.3μs) @15.255(c)(3)	

Note 1: According to 47 CFR 15.255 (c)(2), this type will operate without being subject to a transmitter conducted output power limit.

3.2.2.Test Results

Equipment Type	Freq. Range/Application
☒Field disturbance sensors/radars	☐60-64GHz (Deployed on unmanned aircraft)
	☐57.0-59.4GHz
	☐57.0-61.56GHz
	☐57.0-64.0GHz @ RSS-210 J.3.2(b)(iii)(1)
	☒61.0-61.5GHz
☐Devices other than field disturbance sensors	☐Fixed P2P
☐Pulsed field disturbance sensors/radars	☐57-64GHz

This product type is not subject to a transmitter conducted output power limit.
For E.I.R.P. results, refer to Annex A.1 in this report.

3.3. Emission Bandwidth and Occupied Bandwidth

3.3.1.Requirements

For the purposes of this paragraph, emission bandwidth is defined as the instantaneous frequency range occupied by a steady state radiated signal with modulation, outside which the radiated power spectral density never exceeds 6 dB below the maximum radiated power spectral density in the band, as measured with a 100 kilohertz resolution bandwidth spectrum analyzer.

3.3.2.Test Results

Refer to Annex A.2 in this report.

3.4. Conducted Emission

3.4.1.Requirements

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

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

Note:

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

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

3.4.2.Test Results

Refer to Annex A.3 in this report.

Interpretation of the test data:

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the Average and Quasi peak limits, and that have narrow margins from the Average and Quasi peak limits will be re-measured with Average and Quasi peak detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A. Test Setup:

Test Mode: EUT+PC+PC adapter+Serial port board+DC source+Radar TX

Test voltage: AC 120V/60Hz

The measurement results are obtained as below:

$E\ [dB\mu V] = U_R[dB\mu V] + L_{Cable\ loss}\ [dB] + A_{Factor}\ [dB]$

U_R: Receiver Reading

A_{Factor}: Voltage division factor of LISN

3.5. Radiated Spurious Emission

3.5.1.Requirements

According to FCC section 15.255(d):
The power density of any emissions outside the 57-71 GHz band shall consist solely of spurious emissions.
Radiated emissions below 40 GHz shall not exceed the general limits in § 15.209.
Between 40 GHz and 200 GHz, the level of these emissions shall not exceed 90 pW/cm2 at a distance of 3 meters.
The levels of the spurious emissions shall not exceed the level of the fundamental emission.

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

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

Note1: For above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
Note2: For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK). In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).

3.5.2.Test Results

Refer to Annex A.4 in this report.

Interpretation of the test data:

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform a quasi-peak

measurement (or average).

The measurement results are obtained as below:

$A_{SUBST} = P_{SUBST\_TX} - P_{SUBST\_RX} - L_{SUBST\_CABLES} + G_{SUBST\_TX\_ANT}$

$A_{TOT} = L_{CABLES} + A_{SUBST}$

Where: A_{SUBST} is the final substitution correction including receive antenna gain.

P_{SUBST_TX} is signal generator level,

P_{SUBST_RX} is receiver level,

L_{SUBST_CABLES} is cable losses including TX cable,

$G_{SUBST\_TX\_ANT}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the test spectrum analyze, so spectrum analyze reading is the final values which contain the data of A_{TOT}.

For above 40GHz:

Power Density (W/m²) = 10^[(EIRP-30)/10]/ 4πd

Power Density (pW/cm2) = Power Density (W/m²)* 10^(-8)

Desensitization correction factor.

3.6. Frequency Stability

3.6.1.Requirements

Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range −20 to + 50 degrees Celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

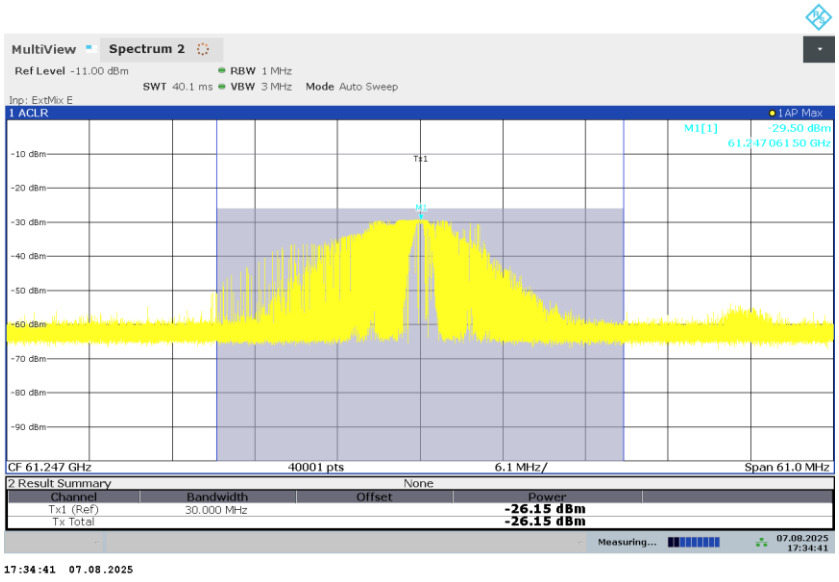
3.6.2.Test Results

Refer to Annex A.5 in this report.

Annex A Test Data and Result

A.1. E.I.R.P. and Transmitter Conducted Output Power

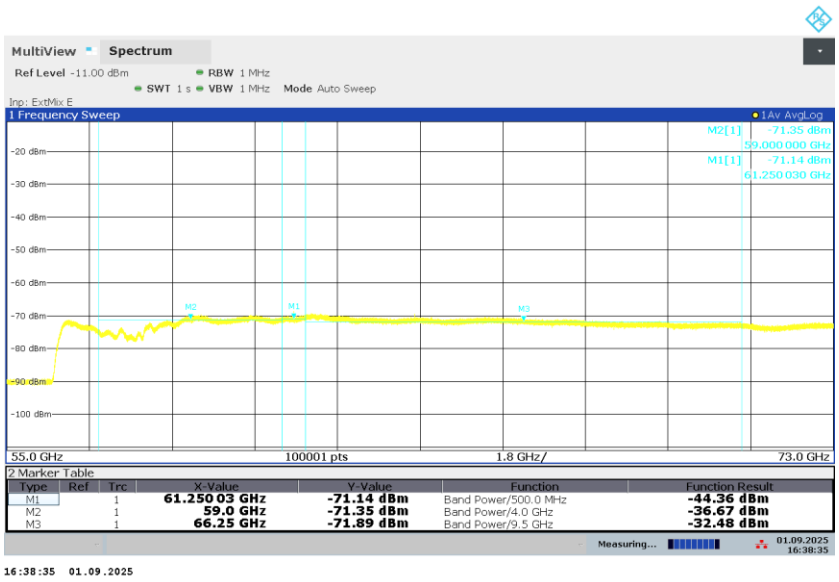
Freq. (GHz)	E.I.R.P.	Reading Value (dBm)			Duty Cycle Factor (dB)	E.I.R.P.$_{Corr.}$ (dBm)	Limit (dBm)	Verdict
		57-61GHz	61-61.5GHz	61.5-71GHz				
61.247	Peak	-	-26.15	-	-	7.82	43	PASS
	Average	-	-60.73	-	16.52	-10.24	40	PASS
57-71(Excluding 61-61.5)	Peak	-27.15	-	-22.62	-	2.66	13	PASS
	Average	-36.67	-	-32.48	16.52	9.41	10	PASS



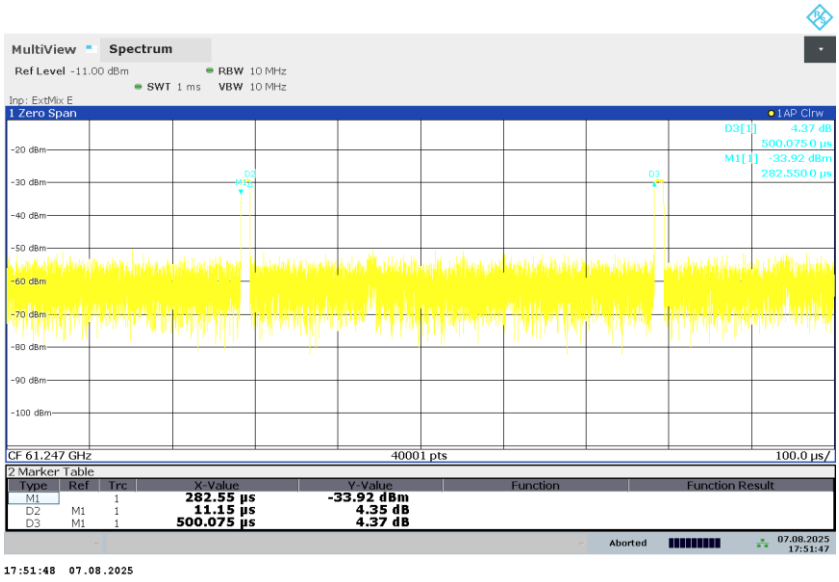
Peak E.I.R.P._61.247GHz

Average E.I.R.P._61.247GHz

Peak E.I.R.P._57-61GHz



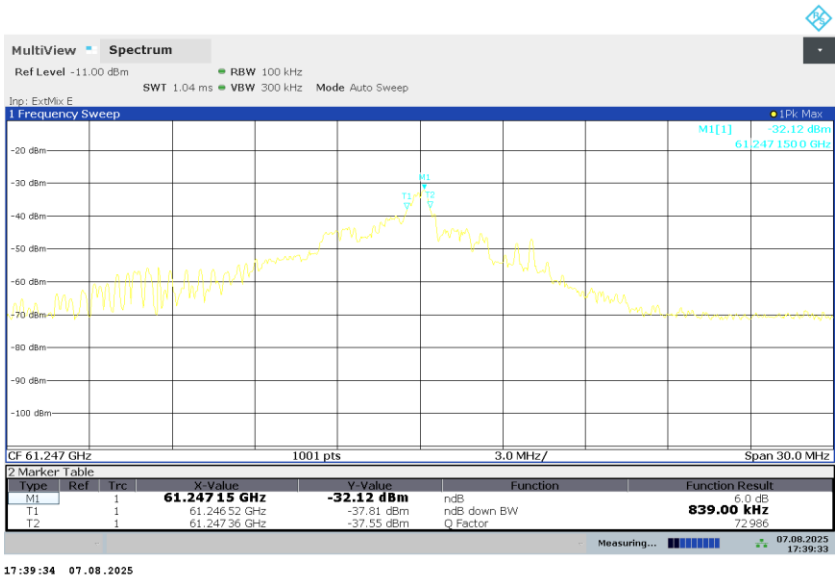
Average E.I.R.P._61.5-71GHz



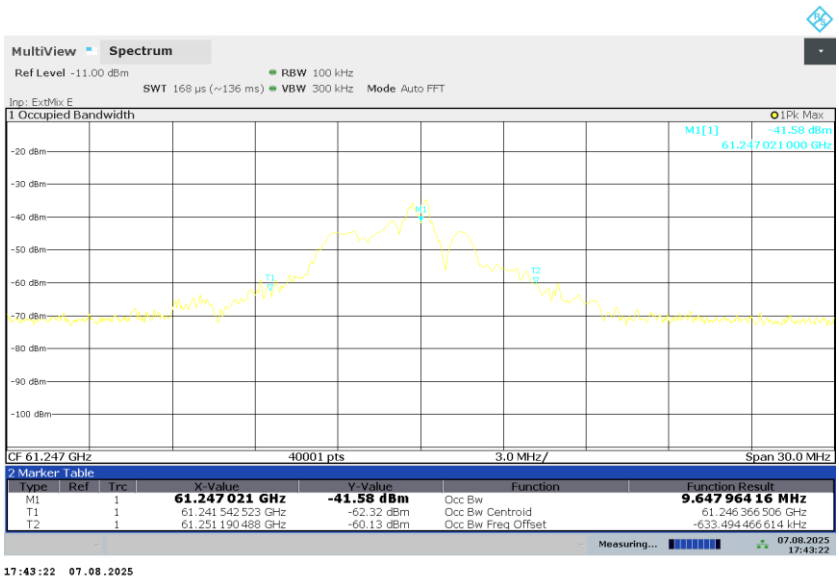
Duty Cycle

A.2. Emission Bandwidth and Occupied Bandwidth

Operation Frequency Band	Results	
	6dB Emission Bandwidth	Occupied Bandwidth
61-61.5GHz	0.839MHz	9.648MHz

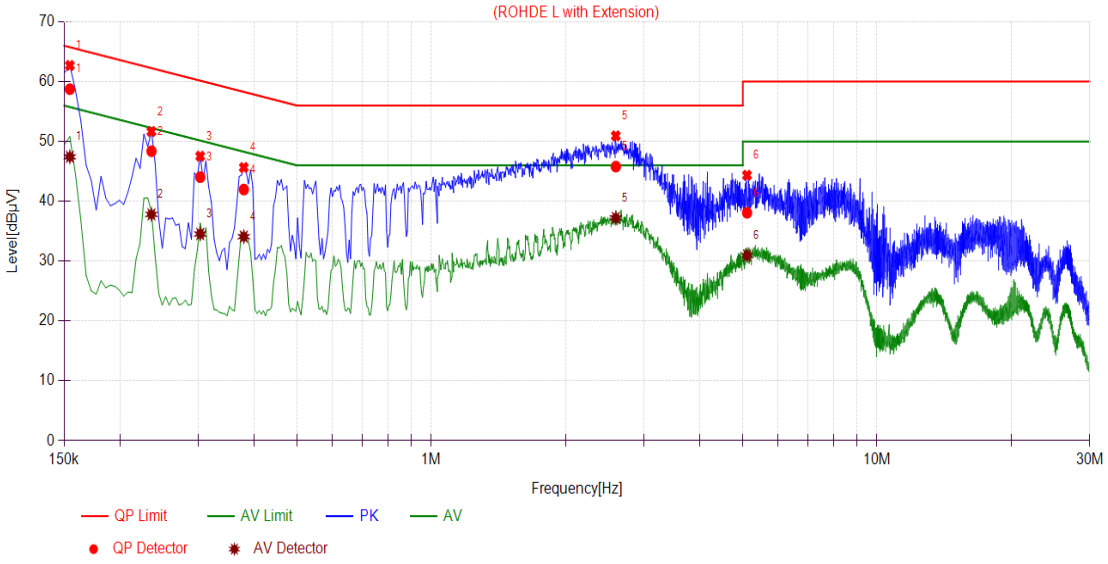


6dB Emission Bandwidth



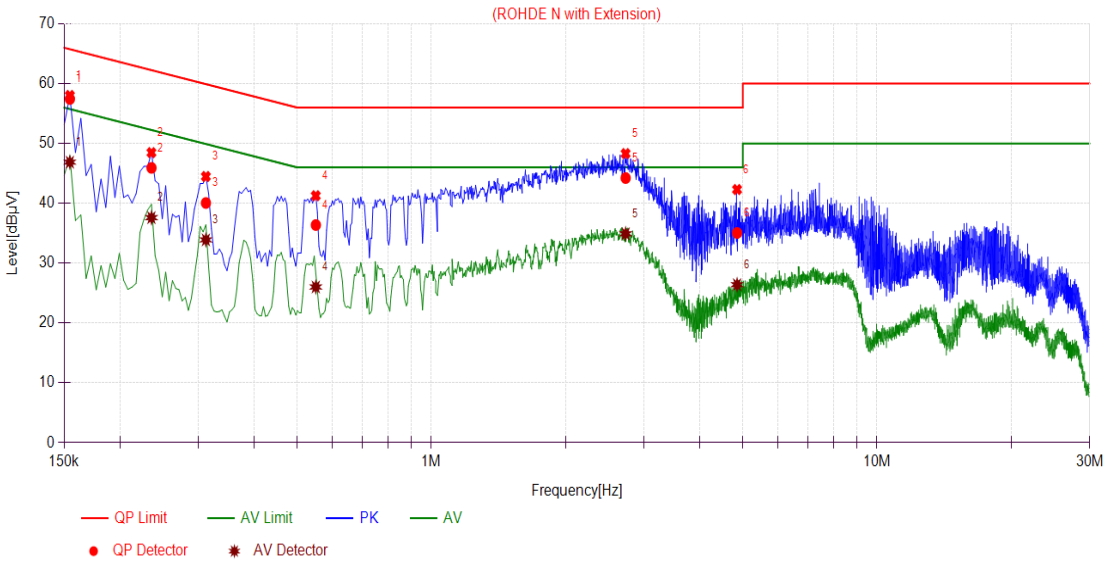
Occupied Bandwidth

A.3. Conducted Emission



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1545	58.74	47.44	65.75	55.75	Line	PASS
2	0.2355	48.38	37.82	62.25	52.25		PASS
3	0.3030	44.05	34.55	60.16	50.16		PASS
4	0.3795	41.98	34.10	58.29	48.29		PASS
5	2.5934	45.81	37.24	56.00	46.00		PASS
6	5.1092	38.09	30.96	60.00	50.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1545	57.44	46.88	65.75	55.75	Neutral	PASS
2	0.2355	45.93	37.61	62.25	52.25		PASS
3	0.3120	40.07	33.90	59.92	49.92		PASS
4	0.5505	36.38	26.03	56.00	46.00		PASS
5	2.7286	44.23	34.91	56.00	46.00		PASS
6	4.8529	35.06	26.41	56.00	46.00		PASS

A.4. Radiated Spurious Emission

Start Freq.	Stop Freq.	FMCW Width (Fs)	Ramp Time (Ts)	Sweep Rate	RBW	RBW	Normalized Sweep Rate	Desensitization Correction Factor	Desensitization Correction Factor
GHz	GHz	MHz	μs	MHz/μs	MHz	Hz	Lin.	Lin.	dB
61	61.5	500	10500	0.04762	1	10^6	$4.762*10^9$	0.5454733	-2.63

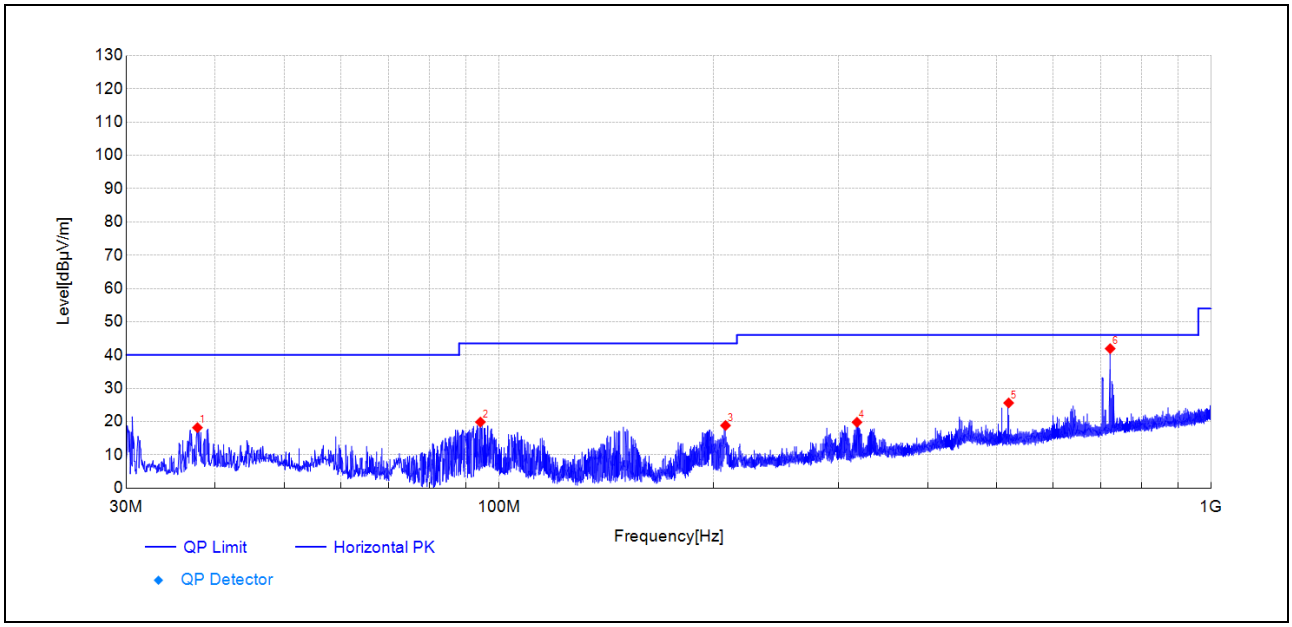
Note:

1. Cntr Freq=(Start Freq + Stop Freq) /2
2. FMCW Width,(Fs)=(Stop Freq-Start Freq)*1000
3. Sweep Rate (MHz/us)=FMCW Width, (Fs) / Ramp Time, (Ts)
4. Normalized Sweep Rate (lin)= Sweep Rate (Hz/s) / [RBW (Hz)]
5. Desensitization correction factor (lin) = $1/((1+(((2*LN(2))/3.14)^2*(\text{Normalized Sweep Rate (lin)})^2)))^{0.25}$)
6. Desensitization correction factor (dB) =[20*log(Desensitization correction factor (lin))]

Note 1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition (X axis) was recorded in this test report.

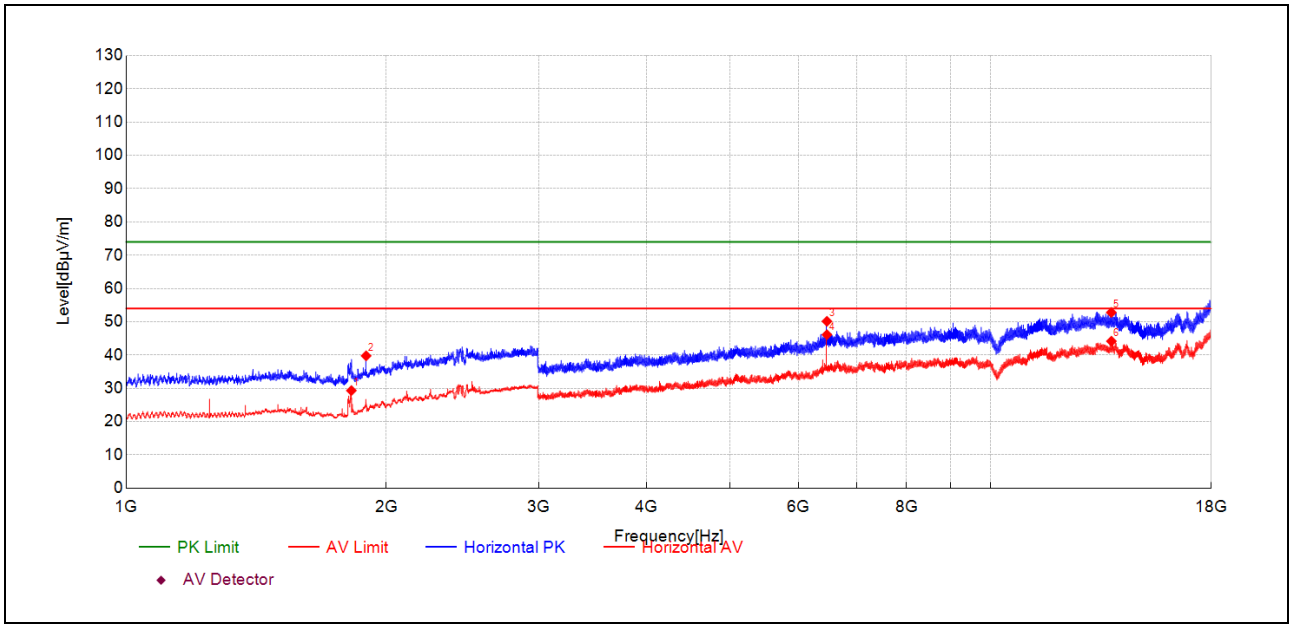
Note 2: The low frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

30MHz-18GHz



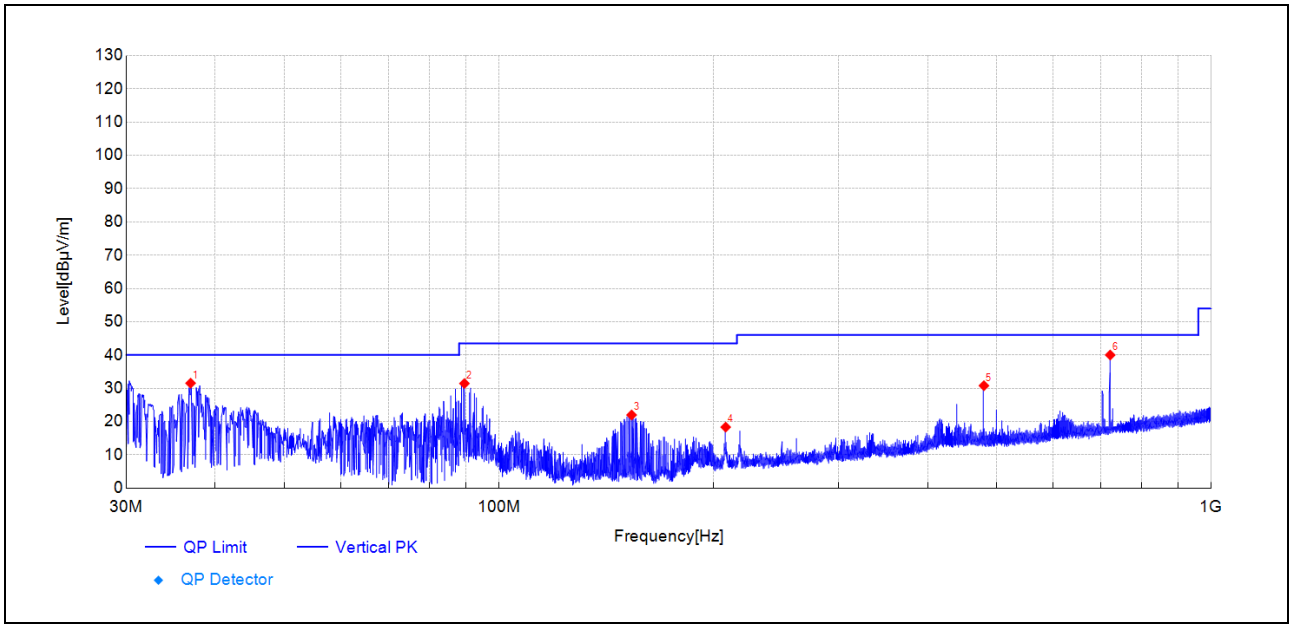
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
37.76	48.0	18.15	-29.800	40.00	21.85	150	226	PK	PASS
94.27	50.6	19.84	-30.800	43.50	23.66	150	186	PK	PASS
208.20	48.8	18.80	-29.950	43.50	24.70	150	186	PK	PASS
318.44	46.2	19.78	-26.430	46.00	26.22	150	11	PK	PASS
519.97	47.1	25.59	-21.480	46.00	20.41	150	11	PK	PASS
721.89	59.5	41.91	-17.620	46.00	4.09	150	52	PK	PASS



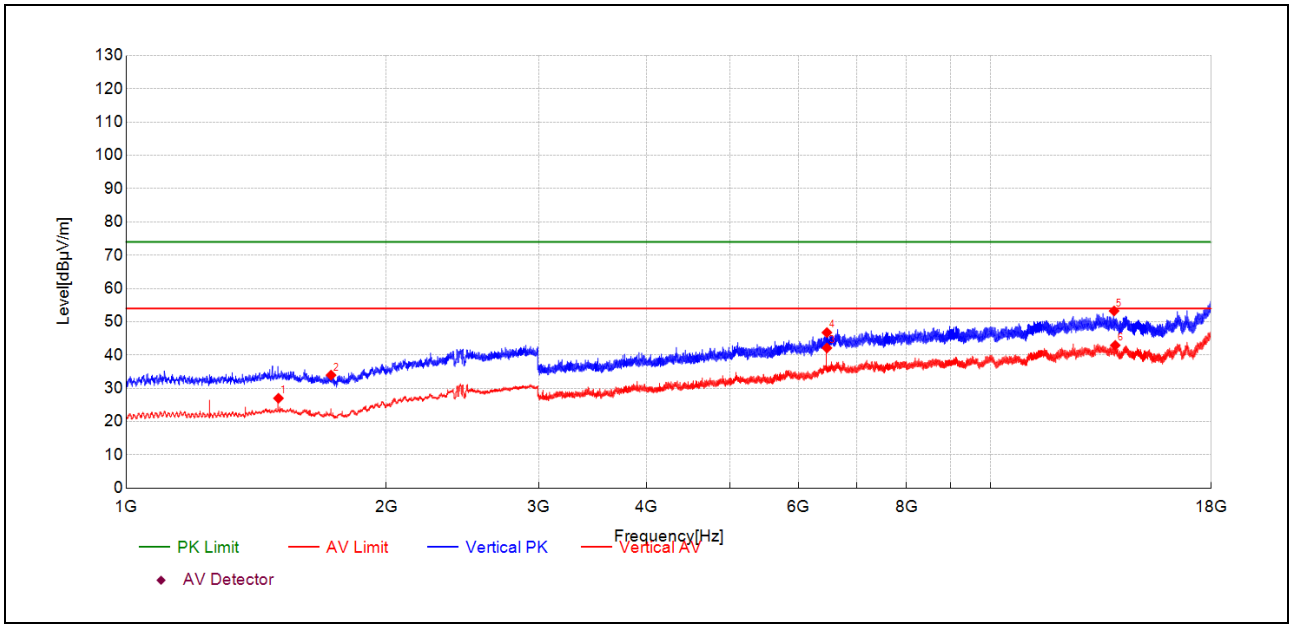
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1821.96	33.0	29.31	-3.730	54.00	24.69	150	212	AV	PASS
1894.87	43.0	39.75	-3.210	74.00	34.25	150	345	PK	PASS
6469.12	54.8	50.12	-4.650	74.00	23.88	150	352	PK	PASS
6469.12	50.7	46.09	-4.650	54.00	7.91	150	352	AV	PASS
13801.36	47.2	52.77	5.560	74.00	21.23	150	1	PK	PASS
13804.86	38.6	44.14	5.530	54.00	9.86	150	0	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

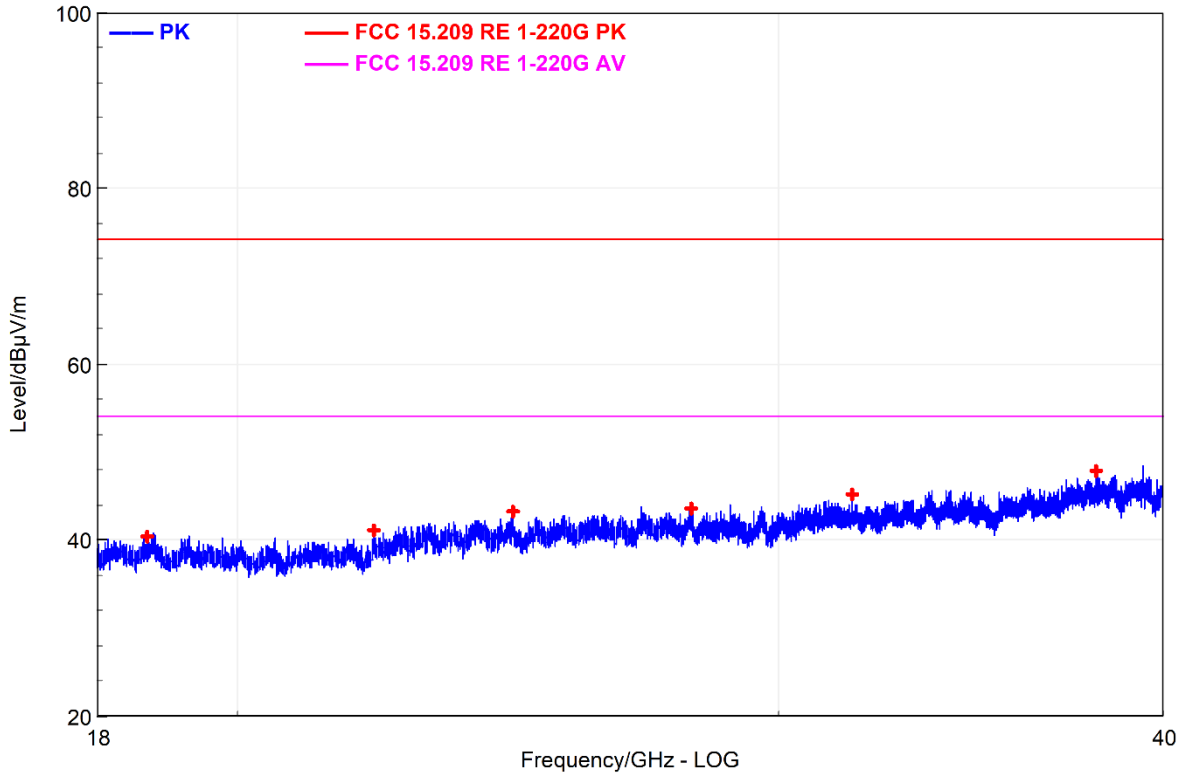
Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.94	61.6	31.52	-30.070	40.00	8.48	150	255	PK	PASS
89.51	63.6	31.44	-32.110	43.50	12.06	150	108	PK	PASS
153.68	55.1	21.97	-33.140	43.50	21.53	150	349	PK	PASS
208.29	48.3	18.32	-29.940	43.50	25.18	150	148	PK	PASS
480.01	53.1	30.77	-22.330	46.00	15.23	150	188	PK	PASS
721.94	57.6	39.99	-17.620	46.00	6.01	150	335	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

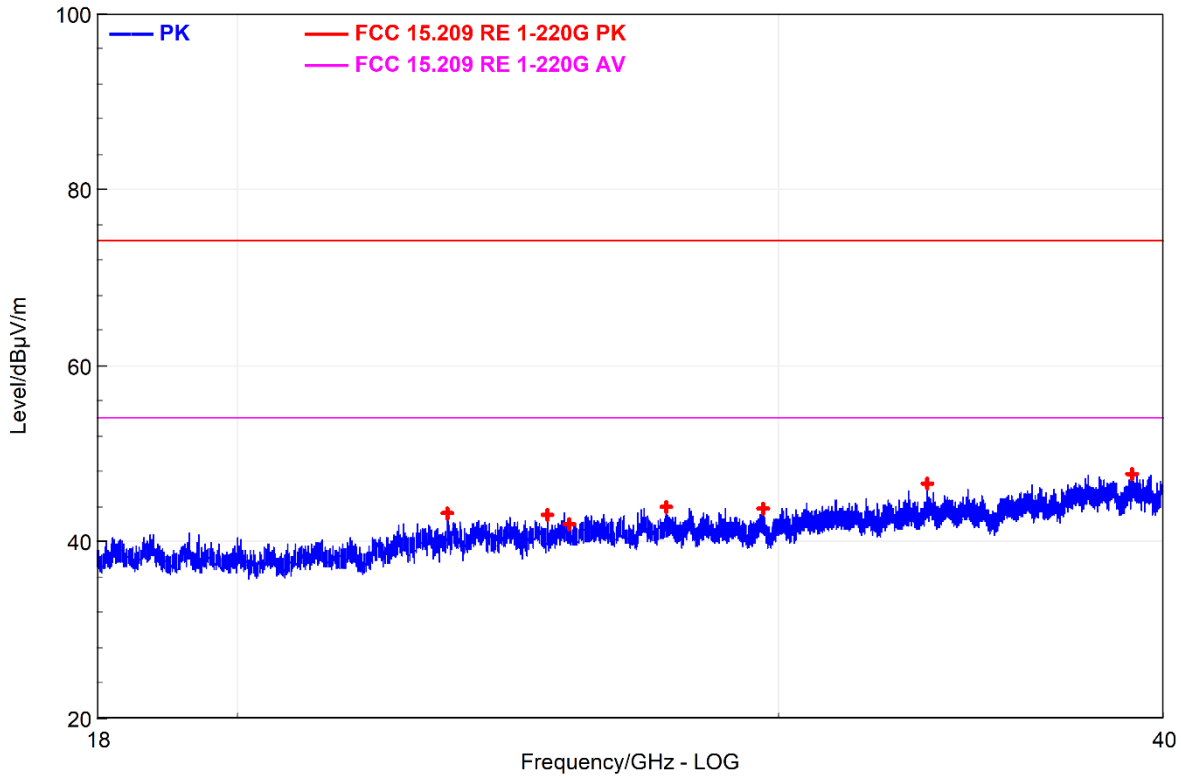
Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1500.11	31.1	26.98	-4.080	54.00	27.02	150	201	AV	PASS
1725.94	38.4	33.94	-4.440	74.00	40.06	150	237	PK	PASS
6469.12	46.8	42.11	-4.650	54.00	11.89	150	0	AV	PASS
6469.12	51.4	46.74	-4.650	74.00	27.26	150	0	PK	PASS
13904.86	48.6	53.24	4.600	74.00	20.76	150	140	PK	PASS
13947.86	37.9	42.90	5.010	54.00	11.10	150	164	AV	PASS

18GHz-40GHz



No.	Fre.	E	Limit	EUT Axial	ANT Pol.	Remark	Verdict
	GHz	dBµV/m	dBµV/m				
1	18.698032	40.3	74	X	H	Peak	Pass
2	22.158189	40.96	74	X	H	Peak	Pass
3	24.5953	43.03	74	X	H	Peak	Pass
4	28.12446	43.54	74	X	H	Peak	Pass
5	31.719624	45.11	74	X	H	Peak	Pass
6	38.060912	47.68	74	X	H	Peak	Pass

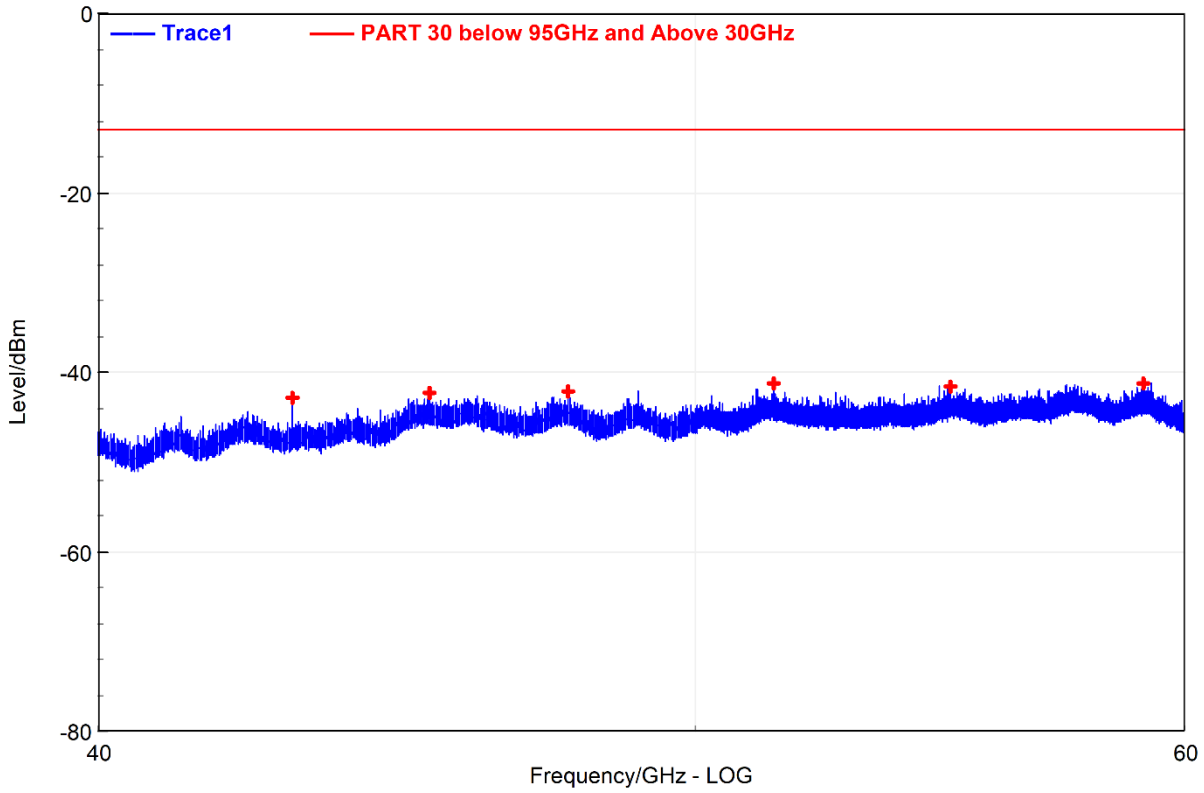
(Antenna Horizontal, 18GHz to 40GHz)



No.	Fre.	E	Limit	EUT Axial	ANT Pol.	Remark	Verdict
	GHz	dBµV/m	dBµV/m				
1	23.434247	43.13	74	X	V	Peak	Pass
2	25.25333	42.91	74	X	V	Peak	Pass
3	25.662348	41.84	74	X	V	Peak	Pass
4	27.582436	43.79	74	X	V	Peak	Pass
5	29.65653	43.69	74	X	V	Peak	Pass
6	33.554707	46.57	74	X	V	Peak	Pass

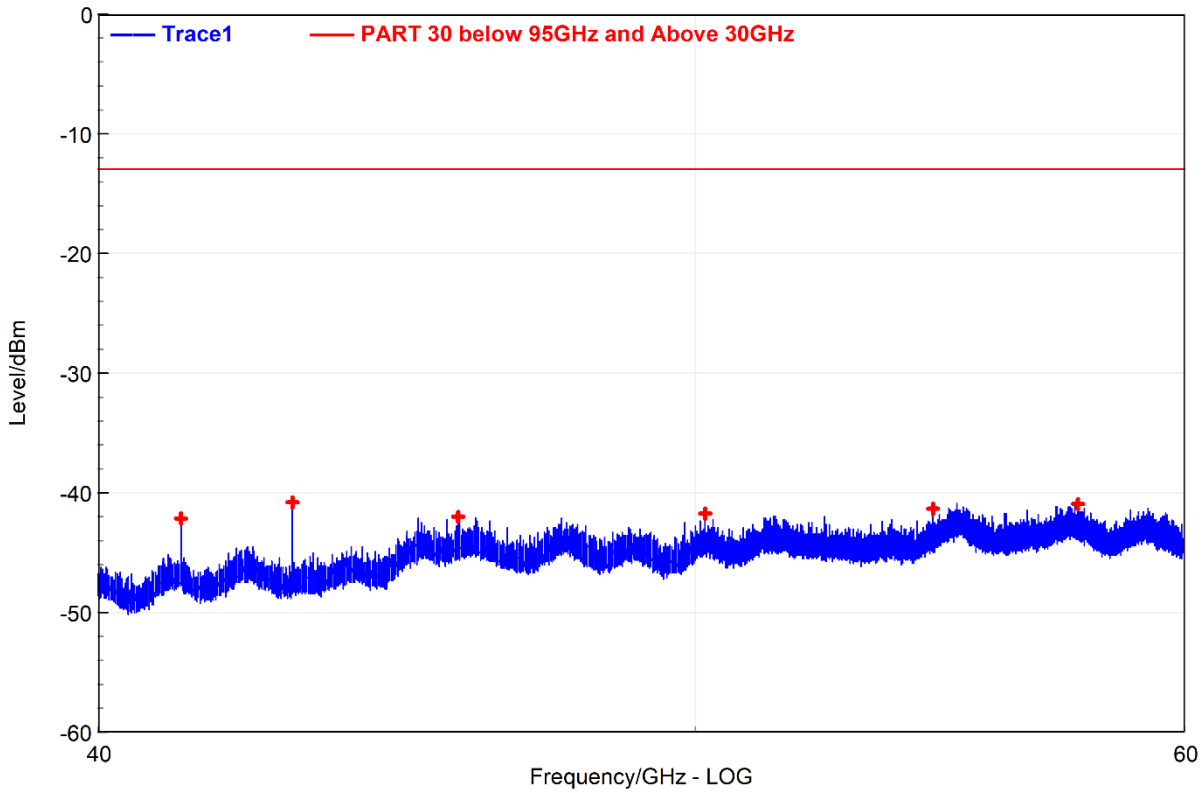
(Antenna Vertical, 18GHz to 40GHz)

40GHz to 60GHz



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm^2	pW/cm^2		
43.0255	-42.99	-2.63	-45.62	0.0242	90	X	PASS
45.2915	-42.45	-2.63	-42.45	0.0503	90	X	PASS
47.689	-42.15	-2.63	-42.15	0.0539	90	X	PASS
51.4775	-41.29	-2.63	-41.29	0.0657	90	X	PASS
54.9915	-41.62	-2.63	-41.62	0.0609	90	X	PASS
59.123	-41.31	-2.63	-41.31	0.0654	90	X	PASS

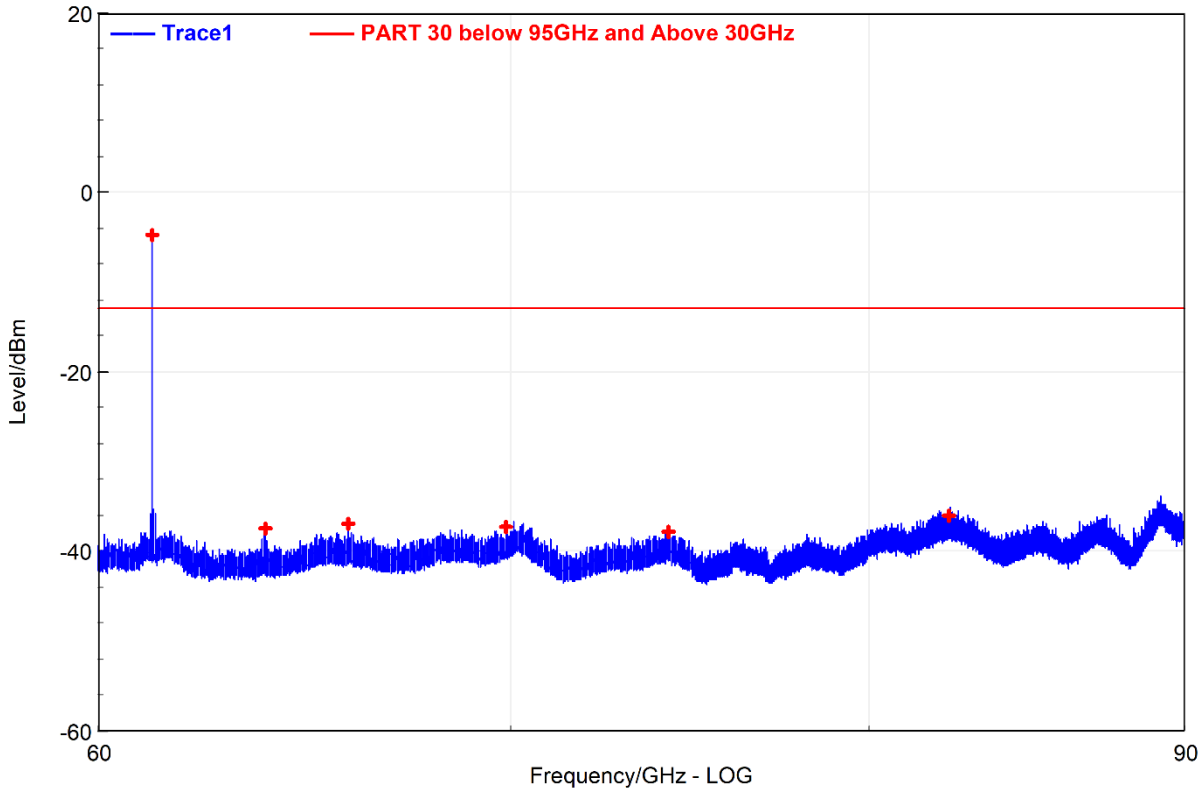
(Antenna Horizontal, 40GHz to 60GHz)



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm^2	pW/cm^2		
41.27	-42.13	-2.63	-44.76	0.0295	90	X	PASS
43.026	-40.83	-2.63	-42.45	0.0503	90	X	PASS
45.775	-42.07	-2.63	-42.15	0.0539	90	X	PASS
50.1785	-41.77	-2.63	-41.29	0.0657	90	X	PASS
54.6465	-41.39	-2.63	-41.62	0.0609	90	X	PASS
57.6675	-41.01	-2.63	-41.31	0.0654	90	X	PASS

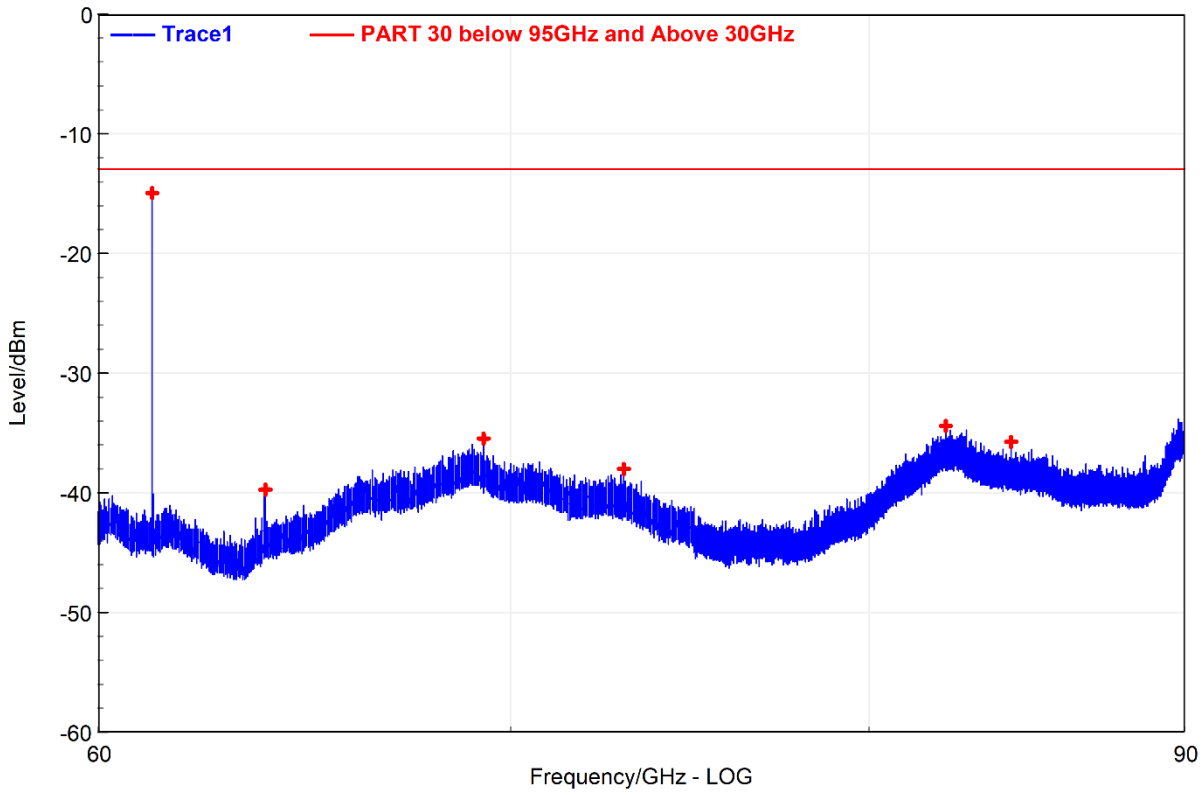
(Antenna Vertical, 40GHz to 60GHz)

60GHz to 90GHz



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm^2	pW/cm^2		
61.2465	-4.95	-2.63	-7.58	154.3646	90	X	N/A
63.9025	-37.63	-2.63	-42.45	0.0503	90	X	PASS
65.8965	-37.01	-2.63	-42.15	0.0539	90	X	PASS
69.8945	-37.34	-2.63	-41.29	0.0657	90	X	PASS
74.2835	-37.98	-2.63	-41.62	0.0609	90	X	PASS
82.466	-36.17	-2.63	-41.31	0.0654	90	X	PASS

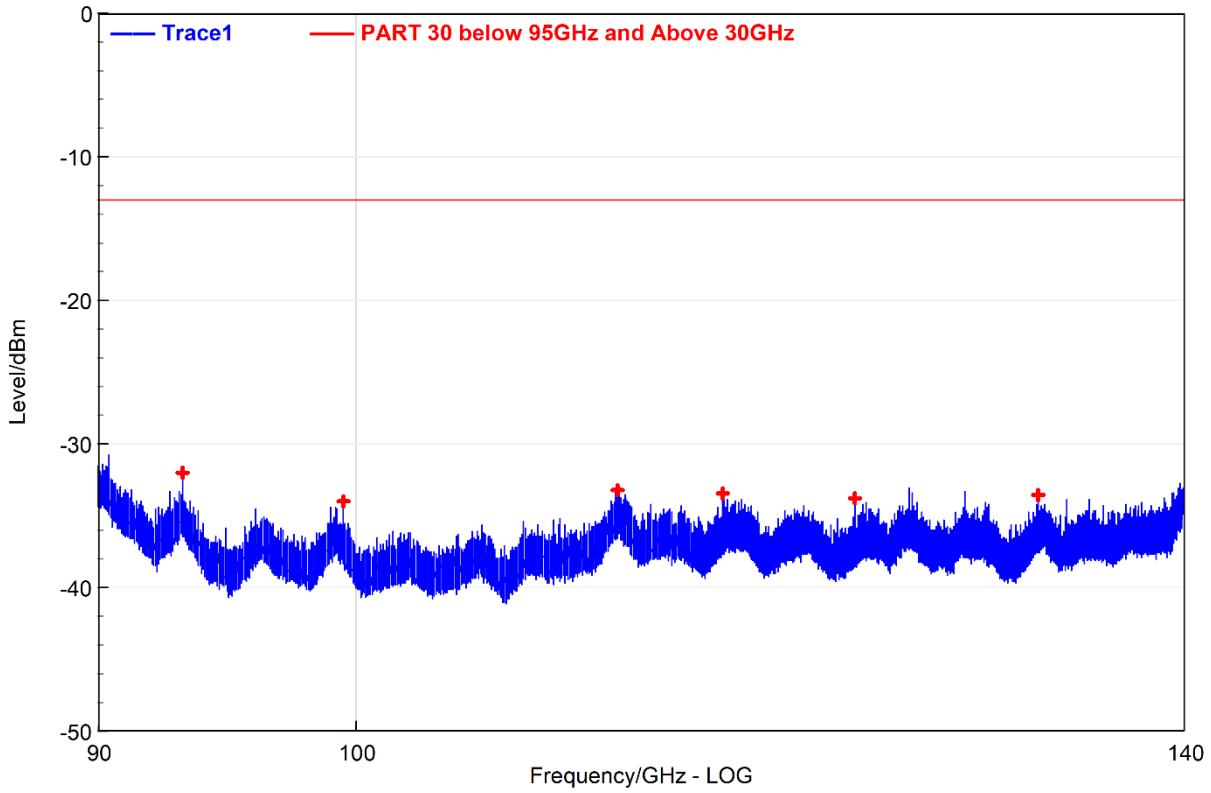
(Antenna Horizontal, 60GHz to 90GHz)



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm2	pW/cm^2		
61.247	-15	-2.63	-17.63	15.2598	90	X	N/A
63.889	-39.8	-2.63	-42.45	0.0503	90	X	PASS
69.297	-35.57	-2.63	-42.15	0.0539	90	X	PASS
73.0205	-38.02	-2.63	-41.29	0.0657	90	X	PASS
82.355	-34.53	-2.63	-41.62	0.0609	90	X	PASS
84.4105	-35.74	-2.63	-41.31	0.0654	90	X	PASS

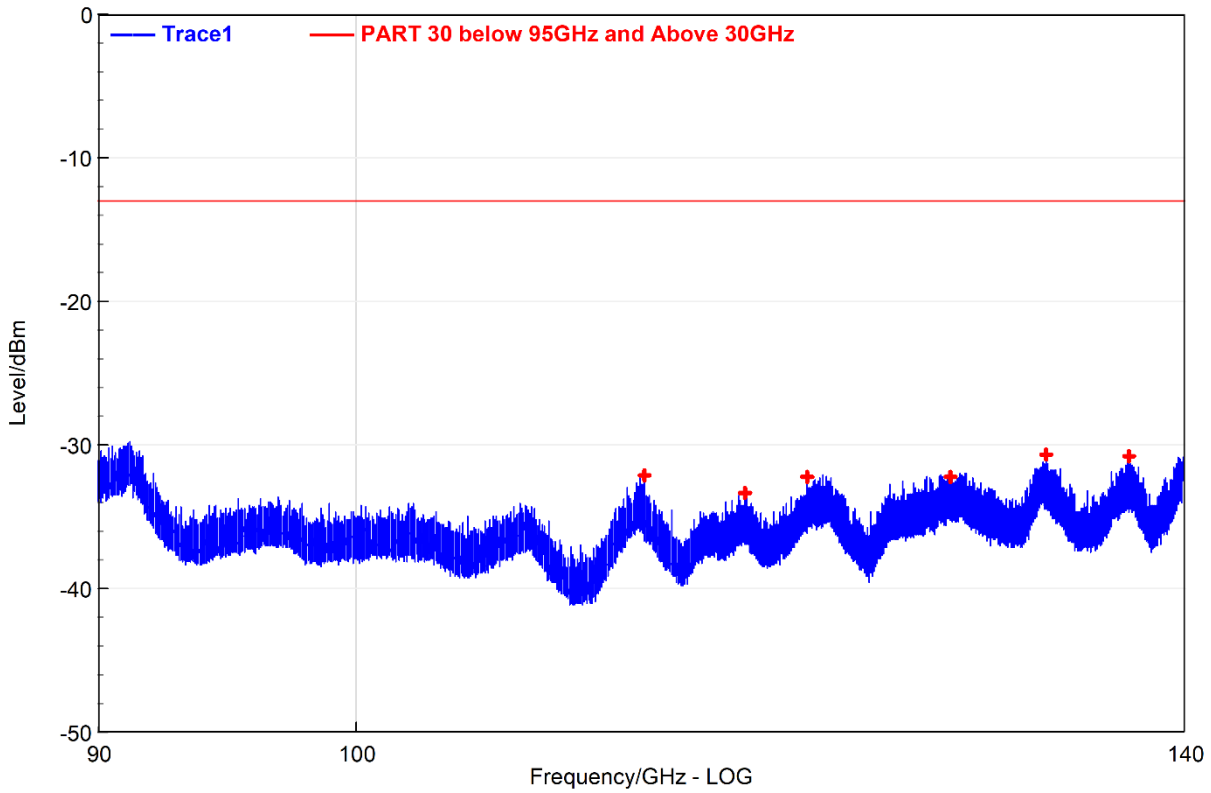
(Antenna Vertical, 60GHz to 90GHz)

90GHz to 140GHz



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm^2	pW/cm^2		
93.166250	-32.09	-2.63	-34.72	0.2982	90	X	PASS
99.515625	-34.04	-2.63	-42.45	0.0503	90	X	PASS
111.18375	-33.29	-2.63	-42.15	0.0539	90	X	PASS
116.079375	-33.46	-2.63	-41.29	0.0657	90	X	PASS
122.493125	-33.84	-2.63	-41.62	0.0609	90	X	PASS
131.958125	-33.61	-2.63	-41.31	0.0654	90	X	PASS

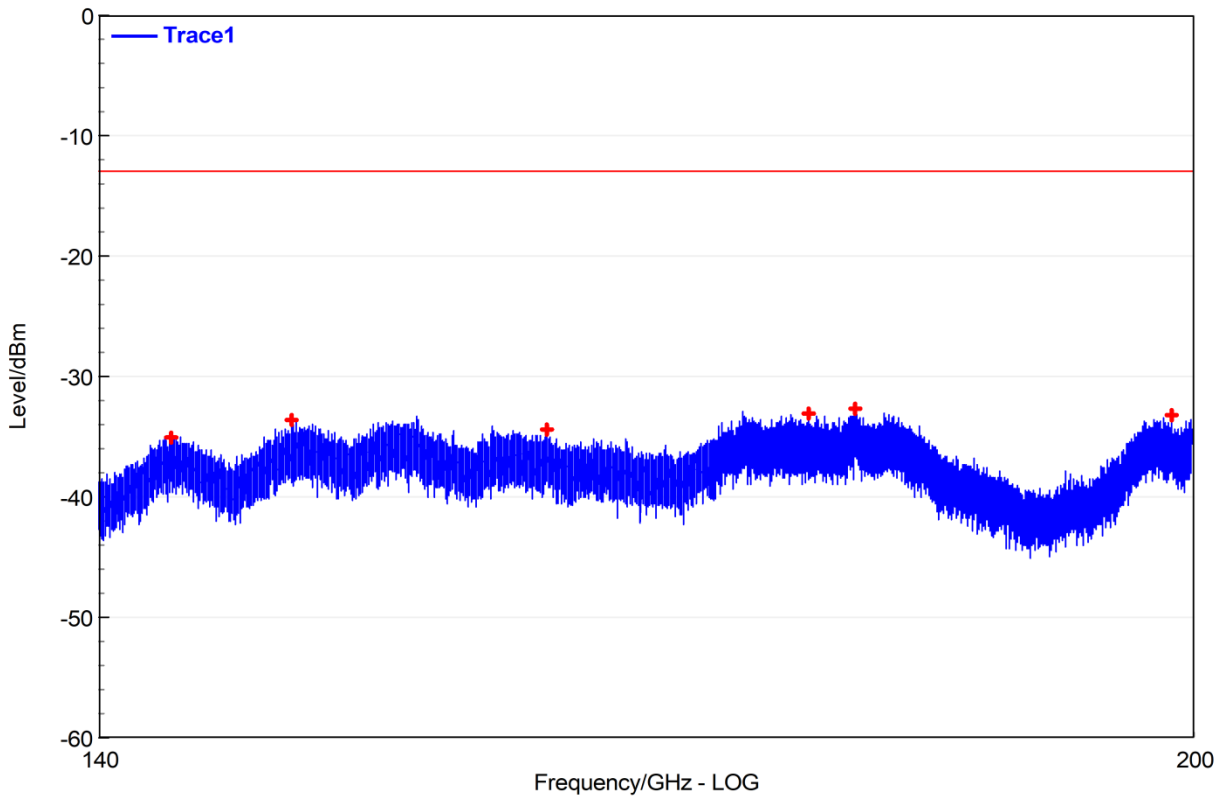
(Antenna Horizontal, 90GHz to 140GHz)



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm^2	pW/cm^2		
112.44375	-32.19	-2.63	-34.82	0.2914	90	X	PASS
117.14375	-33.35	-2.63	-42.45	0.0503	90	X	PASS
120.103125	-32.25	-2.63	-42.15	0.0539	90	X	PASS
127.355	-32.25	-2.63	-41.29	0.0657	90	X	PASS
132.34875	-30.7	-2.63	-41.62	0.0609	90	X	PASS
136.91375	-30.8	-2.63	-41.31	0.0654	90	X	PASS

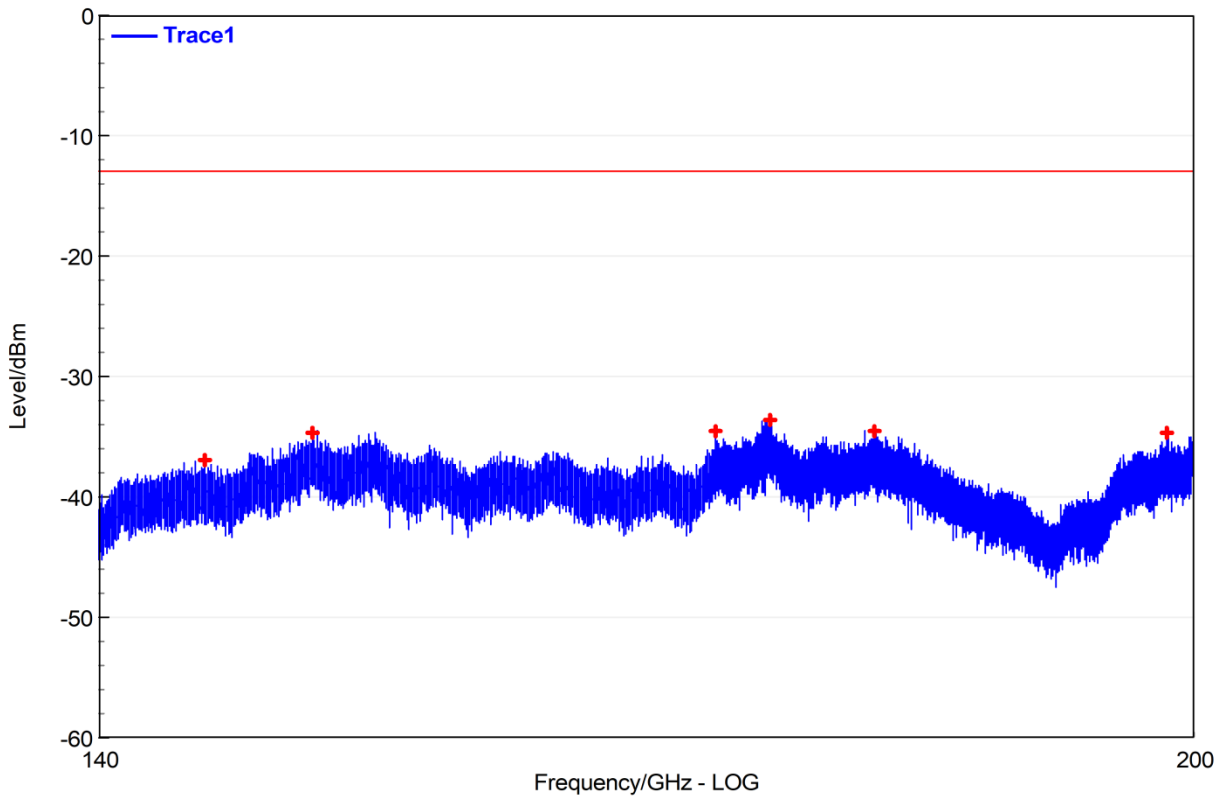
(Antenna Vertical, 90GHz to 140GHz)

140GHz to 200GHz



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm^2	pW/cm^2		
143.1116	-25.77	-2.63	-28.4	1.2780	90	X	PASS
150.1232	-24.66	-2.63	-42.45	0.0503	90	X	PASS
153.542	-24.2	-2.63	-42.15	0.0539	90	X	PASS
160.1492	-25.27	-2.63	-41.29	0.0657	90	X	PASS
172.6232	-24.22	-2.63	-41.62	0.0609	90	X	PASS
178.9514	-23.81	-2.63	-41.31	0.0654	90	X	PASS

(Antenna Horizontal, 140GHz to 200GHz)



Freq.	Prescan Peak Level	FMCW Desensitization Factor	Final Peak Level	Power Density @3m	Power Density Limit@3m	EUT Axis	Conclusion
GHz	dBm	dB	dBm	pW/cm^2	pW/cm^2		
144.7742	-27.69	-2.63	-30.32	0.8214	90	X	PASS
149.9264	-24.92	-2.63	-42.45	0.0503	90	X	PASS
153.0392	-25.41	-2.63	-42.15	0.0539	90	X	PASS
159.1046	-27.45	-2.63	-41.29	0.0657	90	X	PASS
174.1442	-24.42	-2.63	-41.62	0.0609	90	X	PASS
181.9322	-25.38	-2.63	-41.31	0.0654	90	X	PASS

(Antenna Vertical, 140GHz to 200GHz)

A.5. Frequency Stability

f_L (GHz)	f_H (GHz)	Limit	Verdict
61.2415	61.2512	61.0 to 61.5GHz	PASS

Note: Test performed under both normal and extreme conditions, only worst-case reported.

END OF REPORT