



REPORT No.: SZ24060253W07

TEST REPORT

APPLICANT : Ascom (Sweden) AB

PRODUCT NAME : Myco 4 DECT Wi-Fi, Myco 4 DECT Wi-Fi EEA

MODEL NAME : SH4-AADE, SH4-AADB

BRAND NAME : ascom

FCC ID : BXZSH4D

STANDARD(S) : 47 CFR Part 15 Subpart D

RECEIPT DATE : 2024-09-23

TEST DATE : 2024-10-10 to 2024-11-07

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Change History		
Version	Date	Reason for change
1.0	2024-11-21	First edition



1. Summary of Test Results

No.	Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
1	15.317	Antenna Requirement	N/A	N/A	PASS	No deviation
2	15.319(b)	Modulation Techniques & Frequency Range	Oct. 10, 2024	N/A	PASS	No deviation
3	15.319(c), (e)	Peak Transmit Power	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
4	15.319(d)	Power Spectral Density	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
5	15.323(a)	26dB Emission Bandwidth	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
6	15.323(d)	Emissions inside the band	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
7	15.323(d)	Emissions outside the band	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
8	15.323(f)	Frequency Stability	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
9	15.323(c)	Spectrum Monitoring Mechanism	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
10	15.323(e)	Frame Period	Oct. 10, 2024	Su Xiaoxian	PASS	No deviation
11	15.319(f)	Automatically Discontinue Transmission	Oct. 10, 2024	N/A	PASS	No deviation
12	15.207	Conducted Emission	Oct. 10, 2024	Wang Deyong	PASS	No deviation
13	15.209, 15.247(d)	Radiated Emission	Oct. 10, 2024	Li Hanbin	PASS	No deviation

Note 1: 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 2: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.



1.1.Applicable Standards

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

- 47 CFR Part 15 Subpart D Radio Frequency Devices

1.2.Applicable Test Methods

- ANSI C63.17-2013



1.3. Test Equipment List

1.3.1. Conducted

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal & Spectrum Analyzer	1331.5003K4 3-102271-zt	FSW	ROHDE&SCHWARZ	2024.05.30	2025.05.29
Digital Radiocommunication Tester	835064/014	CMD 60	ROHDE&SCHWARZ	2024.11.01	2025.10.31
MXG Vector Signal Generator	MY47420969	N518 2A	Keysight	2024.11.01	2025.10.31
MXG Vector Signal Generator	MY53050509	N518 2B	Keysight	2024.09.11	2025.09.10

1.3.2. Conducted Emission

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

1.3.3. Radiated

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2024.06.03	2025.06.02
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21



Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2024.06.22	2025.06.21
Preamplifier (10MHz-6GHz)	46732	S10M100L38 02	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L32 03	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2024.07.03	2025.07.02
Notch Filter	N/A	WRCG-2400-2483.5-60SS	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09



1.4. Test Software List

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

1.5. Measurement Uncertainty

Test Items	Uncertainty	Remark
Peak transmit power	$\pm 2.22\text{dB}$	Confidence levels of 95%
Power Spectral Density	$\pm 2.22\text{dB}$	Confidence levels of 95%
Bandwidth	$\pm 5\%$	Confidence levels of 95%
Conducted Spurious Emission	$\pm 2.77\text{dB}$	Confidence levels of 95%
Radiated Emission	$\pm 2.95\text{dB}$	Confidence levels of 95%
Conducted Emission	$\pm 2.44\text{dB}$	Confidence levels of 95%

1.6. 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
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FCC Designation Number:	CN1192
FCC Test Firm Registration Number:	226174



2. General Description

2.1. Information of Applicant and Manufacturer

Applicant:	Ascom (Sweden) AB
Applicant Address:	Grimbodalen 2, SE-417 49 Gothenburg, Sweden
Manufacturer:	Ascom (Sweden) AB
Manufacturer Address:	Grimbodalen 2, SE-417 49 Gothenburg, Sweden

2.2. Information of EUT

Product Name:	Myco 4 DECT Wi-Fi, Myco 4 DECT Wi-Fi EEA	
Sample No.:	6#,12#	
Hardware Version:	V0.40	
Software Version:	SH4_ASCOM_A14_025.00	
Equipment Type:	UPCS Transceiver	
Operating Frequency Range:	1920 MHz – 1930 MHz	
Antenna Type:	Ant1	PIFA Antenna
	Ant2	Loop Antenna
Antenna Gain:	Ant1	0.33 dBi
	Ant2	0.48 dBi
Operating Temperature:	-20-60°C	
Accessory Information:	Battery 1	
	Brand Name:	N/A
	Model No.:	685261
	Serial No.:	N/A
	Capacity:	3950mAh
	Rated Voltage:	3.87V
	Charge Limit:	4.45V
	Manufacturer:	Zhejiang Liwinon Energy Technology Co., Ltd.
	Battery 2	
	Brand Name:	N/A
	Model No.:	291342
	Serial No.:	N/A
	Capacity:	150mAh
	Rated Voltage:	3.8V



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	Charge Limit:	4.35V
	Manufacturer:	Zhejiang Liwinon Energy Technology Co., Ltd.

Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



2.3.Channel List of EUT

Channel	Frequency (MHz)
1	1921.536
2	1923.264
3	1924.992
4	1926.720
5	1928.448

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

2.4. Test Configuration of EUT

The EUT is controlled by dedicated software to transmit at the default maximum power level.

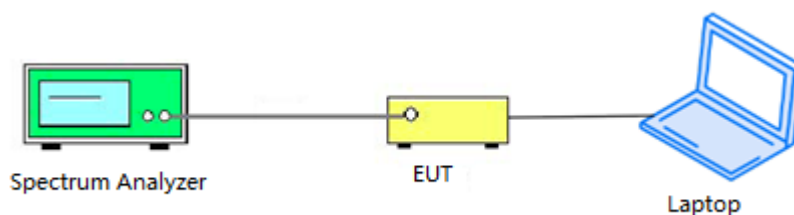
2.5. Test Conditions

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

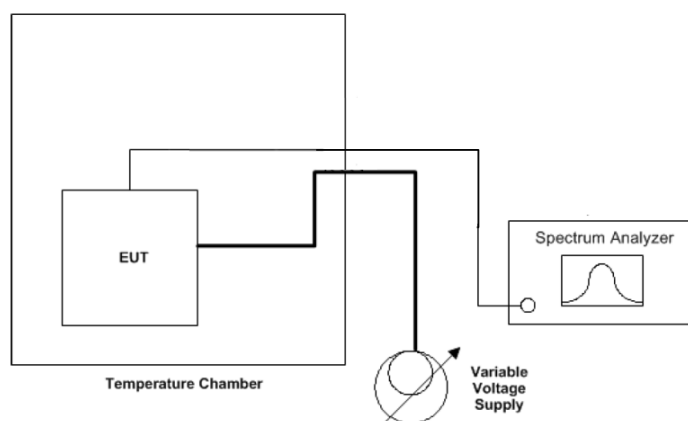
2.6. Test Setup Layout Diagram

2.6.1. Conducted

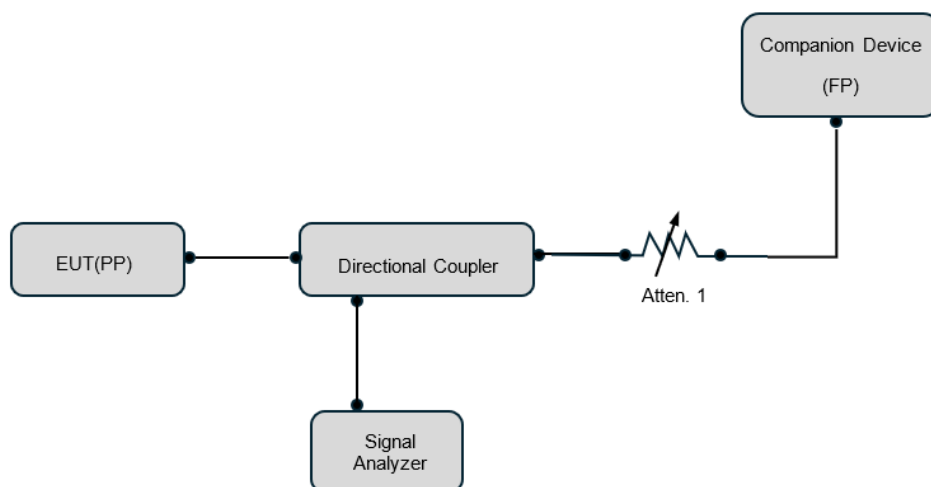
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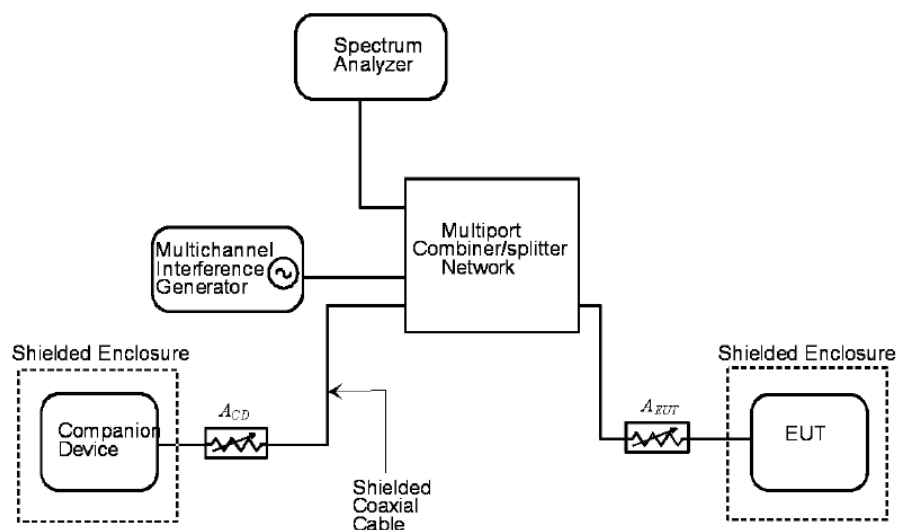
2) Frequency Stability



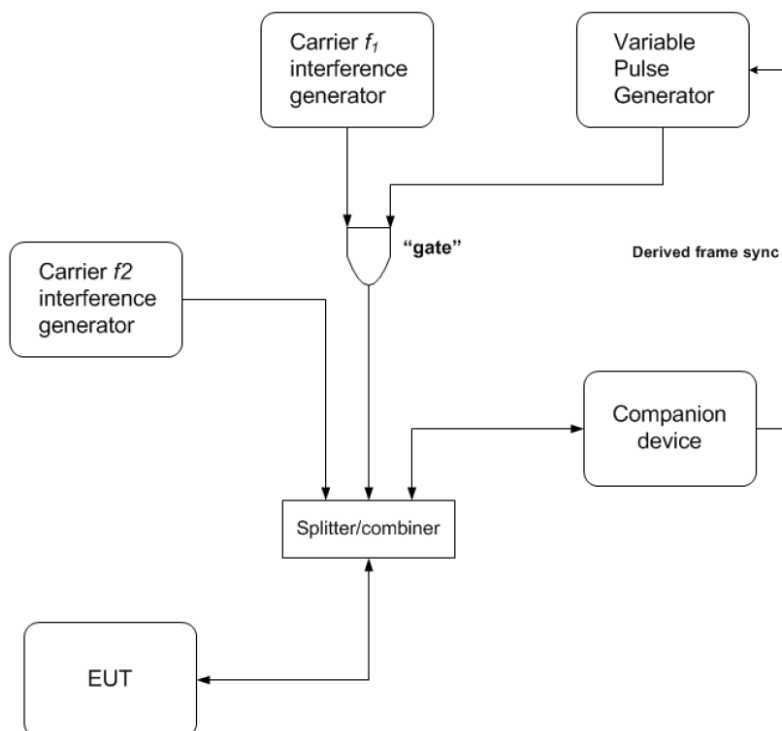
3) Automatically Discontinue Transmission / Frame Period



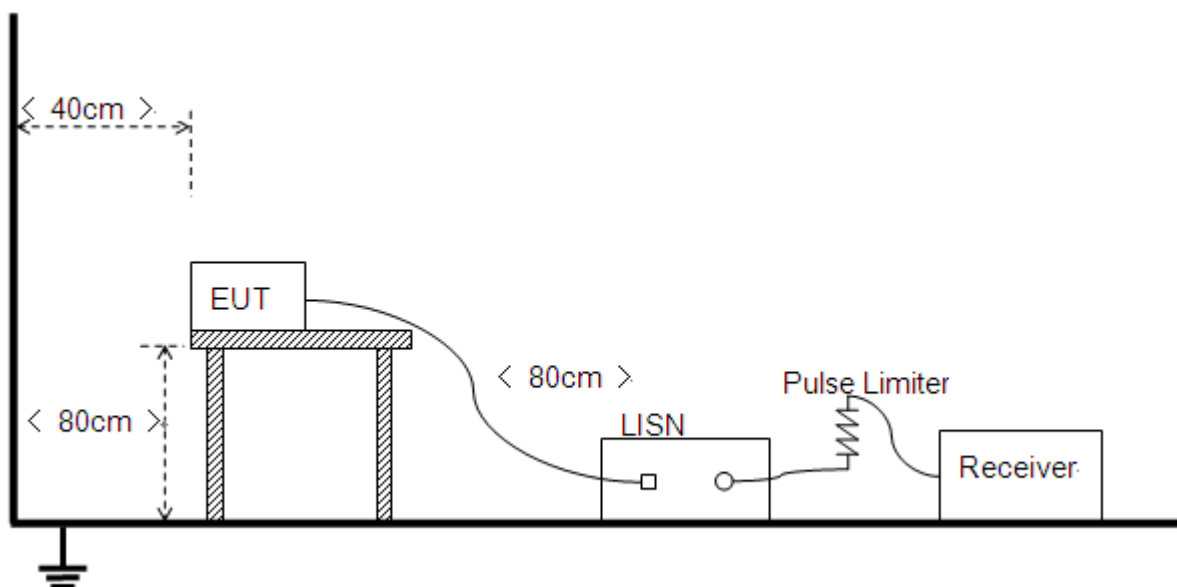
4) Spectrum Monitoring Mechanism



5) Maximum Reaction Time

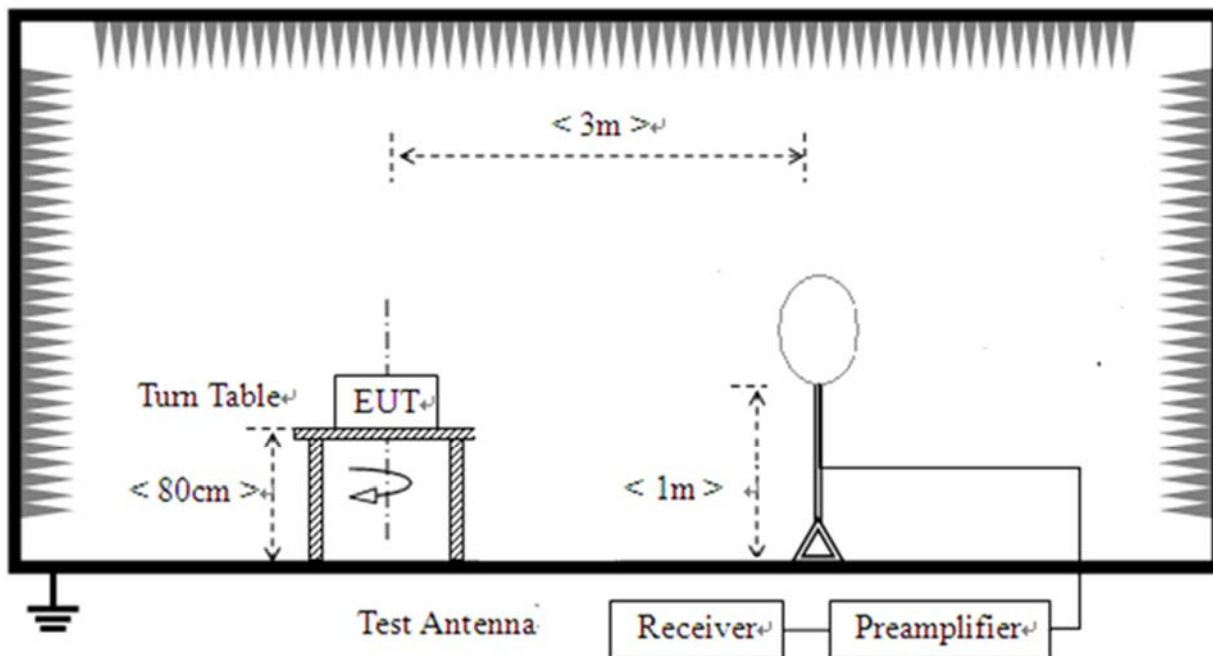


2.6.2. Conducted Emission

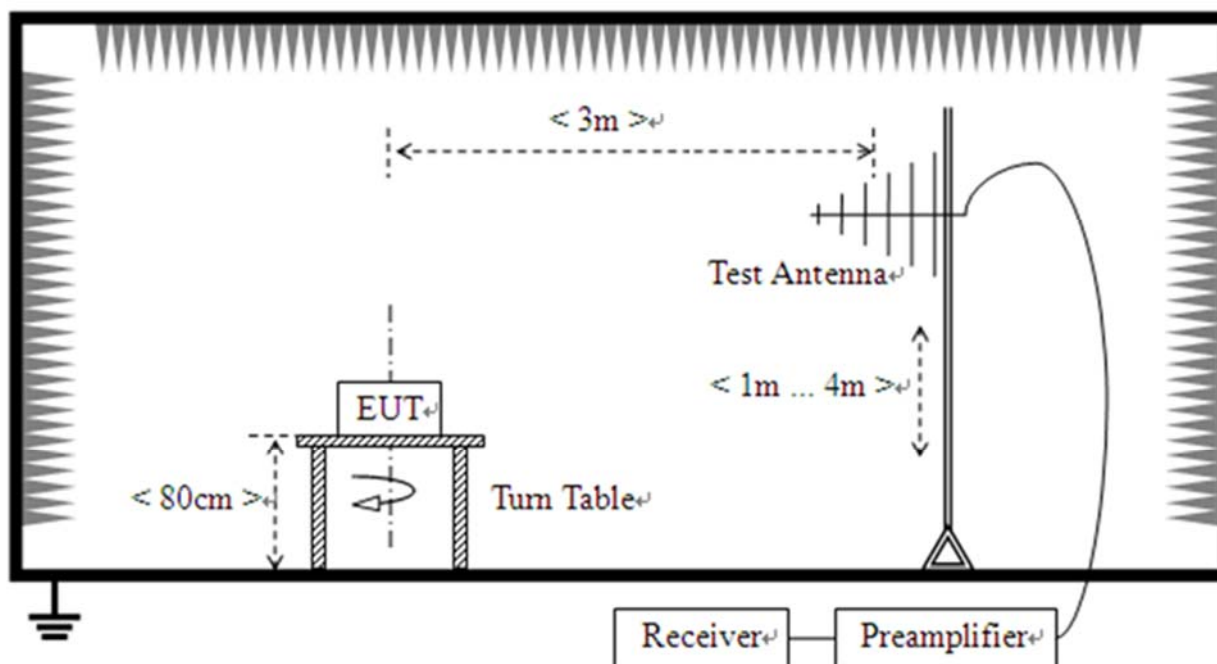


2.6.3.Radiation

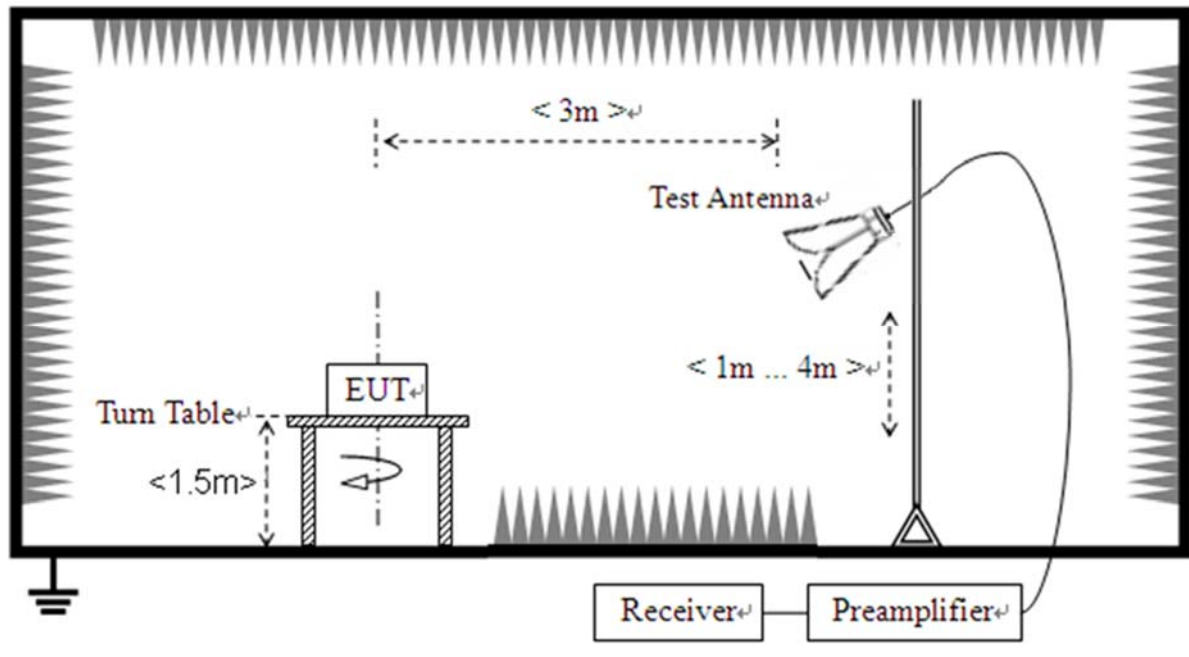
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz





3. Description of Test Items

3.1. Antenna Requirement

3.1.1. Requirement

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

3.1.2. Test Result

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



3.2. Modulation Techniques and Frequency Range

3.2.1. Requirement

Item	Limit
Modulation Techniques	Digital modulation
Frequency Range	1920-1930MHz

3.2.2. Test Result (Attestation)

The EUT operated in the 1920 MHz – 1930 MHz.

The modulation techniques of the EUT are MC/TDMA/TDD (Multi Carrier / Time Division Multiple Access / Time Division Duplex) using GFSK modulations which is based on DECT technology as described in European standards EN 300 175-2 and EN 300 175-3.



3.3. Peak Transmit Power

3.3.1. Requirement

Item	Limit
Peak transmit power	$\leq 100\mu W \times \sqrt{EBW}$;or $\leq 5 \times \log_{10}(EBW) - 10dBm$ ¹

Note 1: EBW is 26 dB emission bandwidth in Hz.

3.3.2. Test Result

Refer to Annex A.1 in this report.



3.4. Power Spectral Density (PSD)

3.4.1. Requirement

Item	Limit
Power spectral density	$\leq 3\text{mW}/3\text{kHz}$ (4.77dBm/3kHz)

3.4.2. Test Result

Refer to Annex A.2 in this report.



3.5.26dB Emission Bandwidth (EBW)

3.5.1.Requirement

Item	Limit
EBW	50 kHz ≤ EBW ≤ 2.5 MHz

3.5.2.Test Result

Refer to Annex A.3 in this report.



3.6. Emissions inside the band

3.6.1. Requirement

Reference Power	Freq. offset form Cf	Limit
Transmit power premitted	1B-2B ¹	≤ -30 dBc
	2B-3B	≤ -50 dBc
	3B-Bandedge	≤ -60 dBc

Note 1: B is 26 dB emission bandwidth in Hz.

3.6.2. Test Result

Refer to Annex A.4 in this report.



3.7. Emissions outside the band

3.7.1. Requirement

Reference Power	Freq. offset form bandedge	Limit
112 mW (20.5dBm)	0-1.25MHz	≤ -30 dBc (≤ -9.5 dBm)
	1.25-2.5MHz	≤ -50 dBc (≤ -29.5 dBm)
	>2.5MHz	≤ -60 dBc (≤ -39.5 dBm)

3.7.2. Test Result

Refer to Annex A.5 in this report.



3.8. Frequency Stability

3.8.1. Requirement

Item	Limit
Frequency Stability	$\leq \pm 10$ ppm within min [1h, internal between channel access monitoring]; (-20~50°@NV; 85~115% Rated voltage@20°) ¹

Note 1: For equipment that is capable only of operating from a battery, the frequency stability tests shall be performed using a new battery without any further requirement to vary supply voltage.

3.8.2. Test Result

Refer to Annex A.6 in this report.

3.9. Spectrum Monitoring Mechanism

3.9.1. Requirement

Item	Limit
Monitor Period	$\geq 10\text{ms}$, for frame period $\leq 10\text{ms}$; $\geq 20\text{ms}$, for frame period $\leq 20\text{ms}$;
Monitoring Threshold	Above the thermal noise power $\leq 30\text{ dB}^1$
Duration of Transmission	≤ 8 hours is not permitted without repeating the access criteria
Monitoring Bandwidth & Maximum Reaction Time	The monitoring system bandwidth: $\geq$ the emission bandwidth of the intended transmission; Maximum reaction time: $< 50 \times \sqrt{1.25/EBW}^2 \mu\text{s}$, for signal at applicable threshold level (shall not be required to be less than $50\mu\text{s}$); $< 35 \times \sqrt{1.25/EBW} \mu\text{s}$, for signal at applicable threshold level $\geq 6\text{dB}$ (shall not be required to be less than $35\mu\text{s}$).

Note 1: Monitoring detection threshold may increase the amount that the transmitter power is below the maximum permitted.

Note 2: EBW is 26dB emission bandwidth in MHz.

Calculation the monitoring limit threshold (T_L):

$$T_L \leq (-174 + 10\log B + M_L + P_{\max} - P_{EUT}) \text{ dBm}$$

Where:

$P_{\max}$ is equal to $5\log B - 10\text{dBm}$

B is 26dB emission bandwidth in Hz

P_{EUT} is peak transmit power of EUT

M_L is the maximum amount in decibels by which the limiting threshold may exceed thermal noise

Ch./Freq(MHz)	EBW(Hz)	$M_L(\text{dB})$	$P_{\max}(\text{dBm})$	$P_{EUT}(\text{dBm})$	$T_L(\text{dBm})$
3/1924.992	1350000	30	20.652	20.010	-82.05

Calculation the Maximum Reaction Time:



Ch./Freq(MHz)	EBW(MHz)	Maximum Reaction Time(μ s)
3/1924.992	1.35	48.11

3.9.2.Test Result

Item	Result	Verdict
Monitor Period	15 ms	Pass
Monitoring Threshold	-84 dBm	Pass
Duration of Transmission	400 μs	Pass
Monitoring Bandwidth	As declared by the manufacturer the EUT uses the radio receiver used for communication for monitoring	Pass

Maximum Reaction Time	f1 Level (dBm)	f2 Level (dBm)	EUT Tx Freq.	Pulse Width(μs)	Verdict
$50 \times \sqrt{1.25/EBW}$	$T_L + U_M$	T_L	f2	45	Pass
$35 \times \sqrt{1.25/EBW}$	$T_L + U_M + 6$	T_L	f2	35	Pass



3.10. Frame Period

3.10.1.Requirement

Item	Limit
Frame Period	=20 ms or 10 ms / X, where X is a positive whole number.

3.10.2.Test Result

Ch./Freq(MHz)	Result(ms)	Verdict
3/1924.992	10	Pass



3.11. Automatically Discontinue Transmission

3.11.1.Requirement

According to FCC section 15.319(f), The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. The provisions in this section are not intended to preclude transmission of control and signaling information or use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

3.11.2.Test Result

The following operation were performed after connection had been established with the companion device.

Operation	Result	Verdict
Shut down the companion Device	Connection breakdown and crease all transmissions.	Pass
Power removed from EUT	Connection breakdown and crease all transmissions.	Pass

3.12. Conducted Emission

3.12.1.Requirement

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

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

Note:

- (a) The lower limit shall apply at the band edges.
- (b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.12.2.Test Result

Refer to Annex A.7 in this report.

3.13. Radiated Spurious Emission

3.13.1.Requirement

According to FCC section 15.319(g), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

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

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	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).

3.13.2.Test Result

Refer to Annex A.8 in this report.



Annex A Test Data and Results

A.1. Peak Transmit Power

Antenna	Frequency (MHz)	Peak transmit power (dBm)	Limit(dBm)	Verdict
Ant1	1921.536	19.990	20.652	Pass
Ant1	1924.992	20.010	20.652	Pass
Ant1	1928.448	20.010	20.684	Pass
Ant2	1921.536	19.770	20.652	Pass
Ant2	1924.992	19.780	20.668	Pass
Ant2	1928.448	19.780	20.668	Pass

Note: Power Limit=5 Log₁₀ EBW-10 dBm

Test Graphs

Peak transmit power DECT 1921.536MHz Ant1



Peak transmit power DECT 1924.992MHz Ant1



Peak transmit power DECT 1928.448MHz Ant1



Peak transmit power DECT 1921.536MHz Ant2





Peak transmit power DECT 1924.992MHz Ant2



Peak transmit power DECT 1928.448MHz Ant2



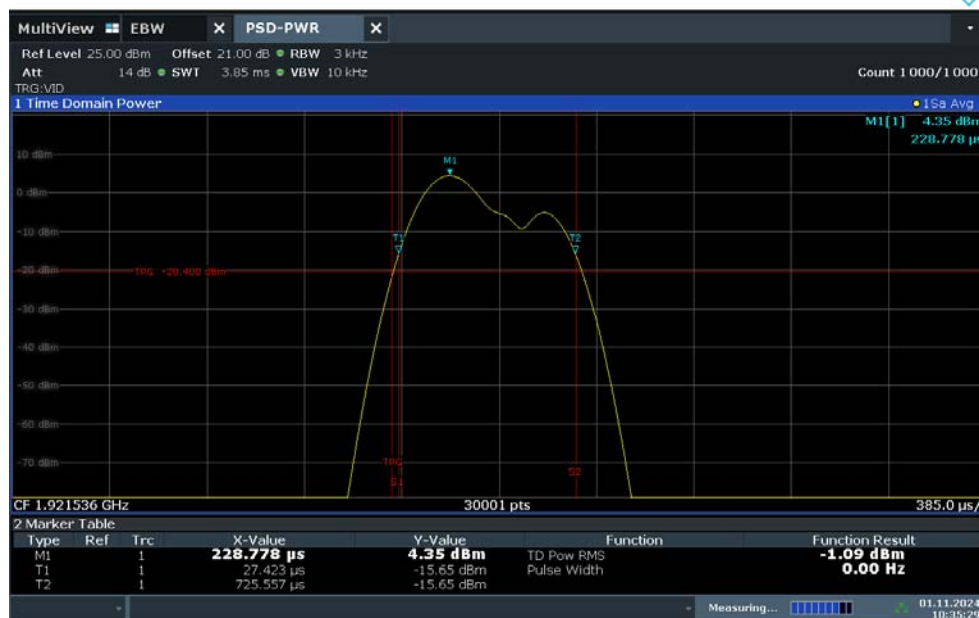
**A.2. Power Spectral Density**

Antenna	Frequency (MHz)	PSD		Limit (mW/3kHz)	Verdict
		(dBm/3kHz)	(mW/3kHz)		
Ant1	1921.536	-1.09	0.778	3	Pass
Ant1	1924.992	-2.49	0.564	3	Pass
Ant1	1928.448	-3.92	0.406	3	Pass
Ant2	1921.536	-3.37	0.460	3	Pass
Ant2	1924.992	-0.77	0.838	3	Pass
Ant2	1928.448	-2.27	0.593	3	Pass



Test Graphs

PSD DECT 1921.536MHz Ant1



PSD DECT 1924.992MHz Ant1





PSD DECT 1928.448MHz Ant1

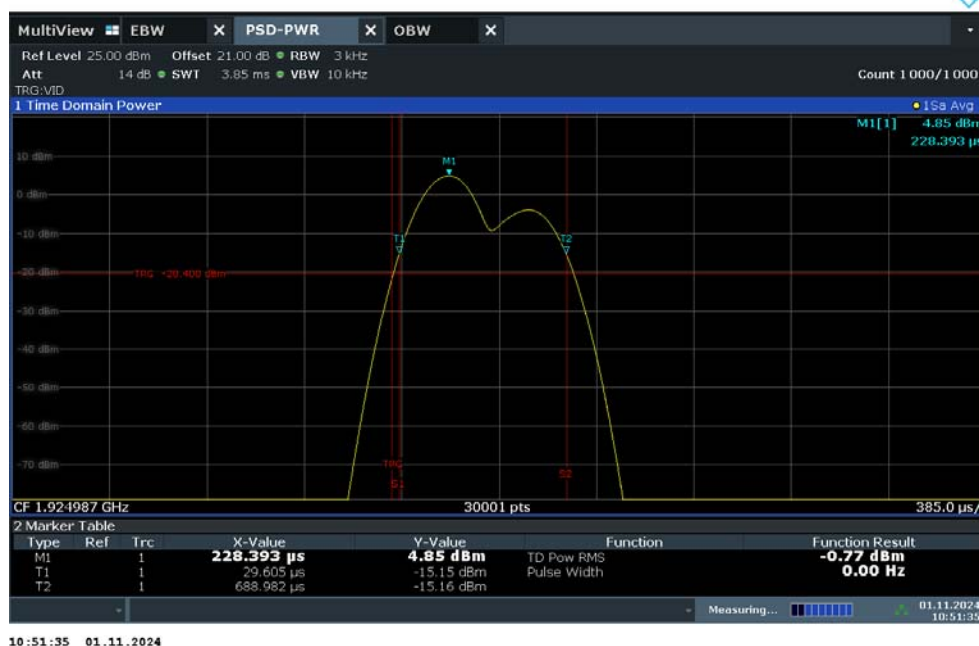


PSD DECT 1921.536MHz Ant2





PSD DECT 1924.992MHz Ant2



10:51:35 01.11.2024

PSD DECT 1928.448MHz Ant2



10:52:37 01.11.2024

**A.3. 26dB Emission Bandwidth**

Antenna	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	Limit	Verdict
Ant1	1921.536	1.350	50 kHz < EBW < 2.5 MHz	Pass
Ant1	1924.992	1.350	50 kHz < EBW < 2.5 MHz	Pass
Ant1	1928.448	1.370	50 kHz < EBW < 2.5 MHz	Pass
Ant2	1921.536	1.350	50 kHz < EBW < 2.5 MHz	Pass
Ant2	1924.992	1.360	50 kHz < EBW < 2.5 MHz	Pass
Ant2	1928.448	1.360	50 kHz < EBW < 2.5 MHz	Pass



Test Graphs

26dB Emission Bandwidth DECT 1921.536MHz Ant1



10:36:04 01.11.2024

26dB Emission Bandwidth DECT 1924.992MHz Ant1



11:04:28 01.11.2024



26dB Emission Bandwidth DECT 1928.448MHz Ant1



26dB Emission Bandwidth DECT 1921.536MHz Ant2





26dB Emission Bandwidth DECT 1924.992MHz Ant2



10:51:08 01.11.2024

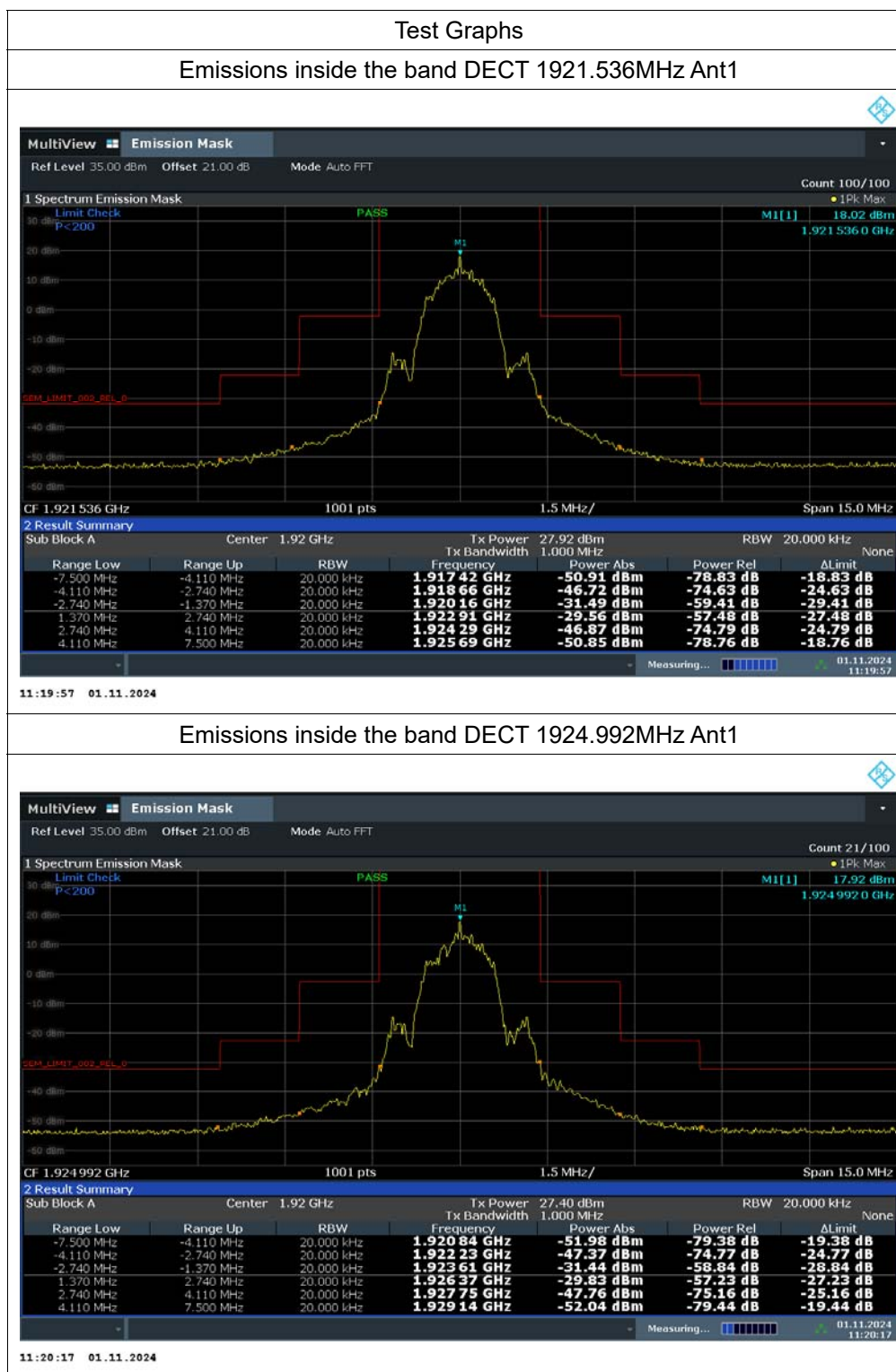
26dB Emission Bandwidth DECT 1928.448MHz Ant2



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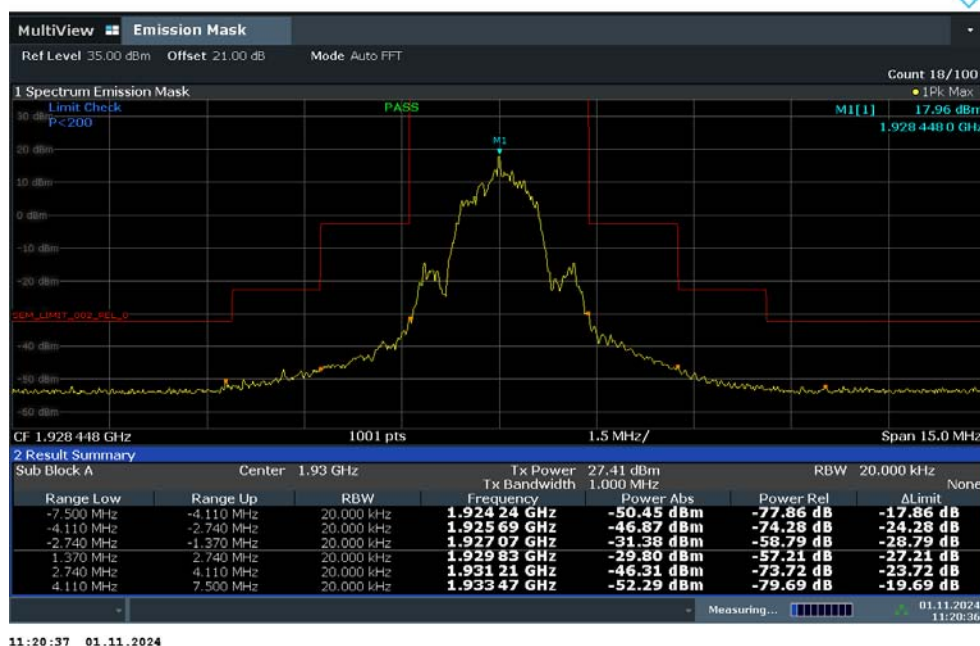


A.4. Emissions inside the band

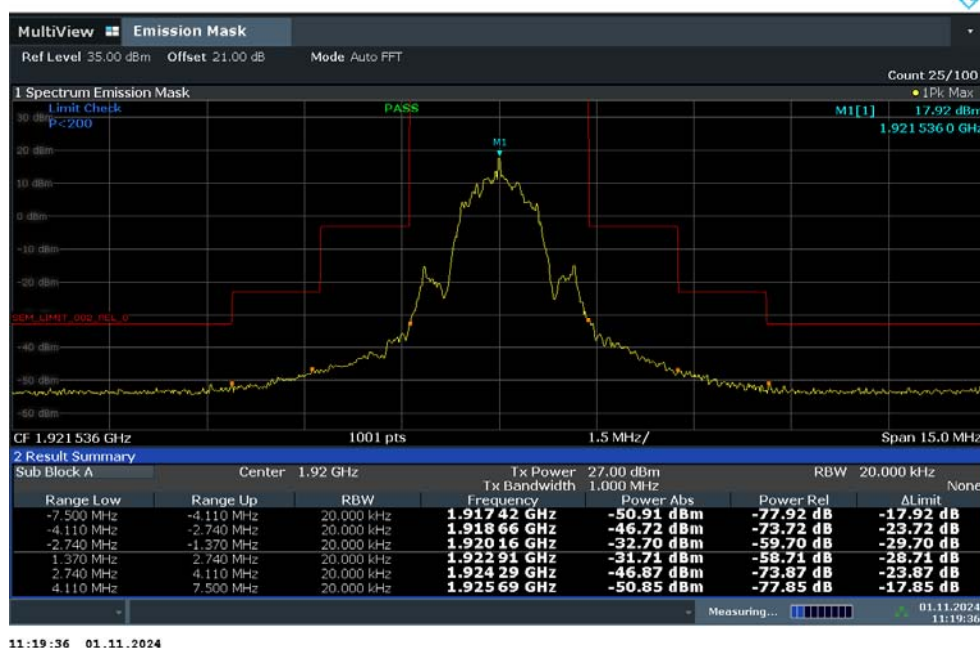




Emissions inside the band DECT 1928.448MHz Ant1

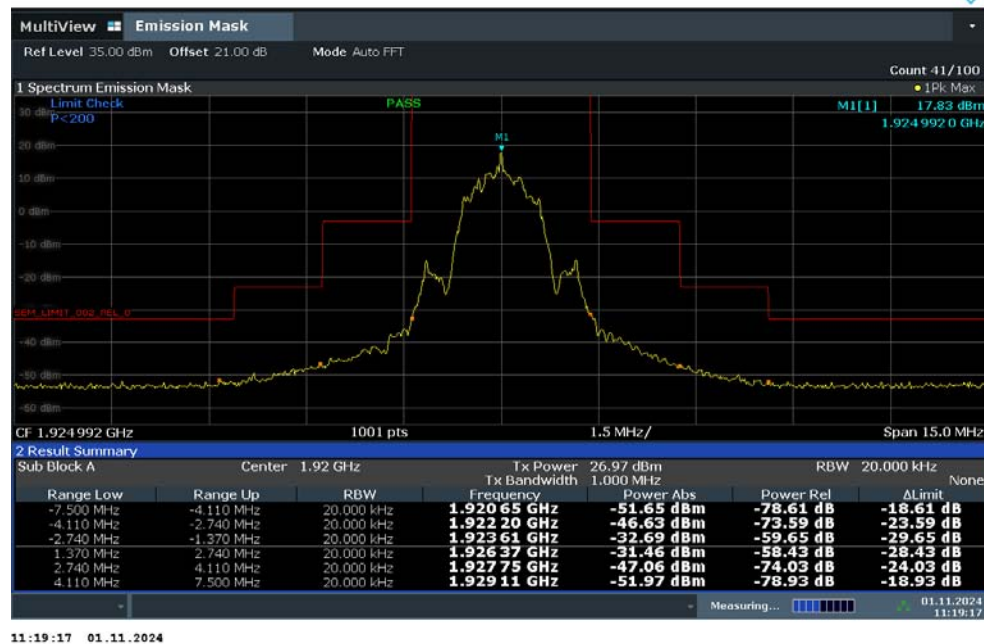


Emissions inside the band DECT 1921.536MHz Ant2

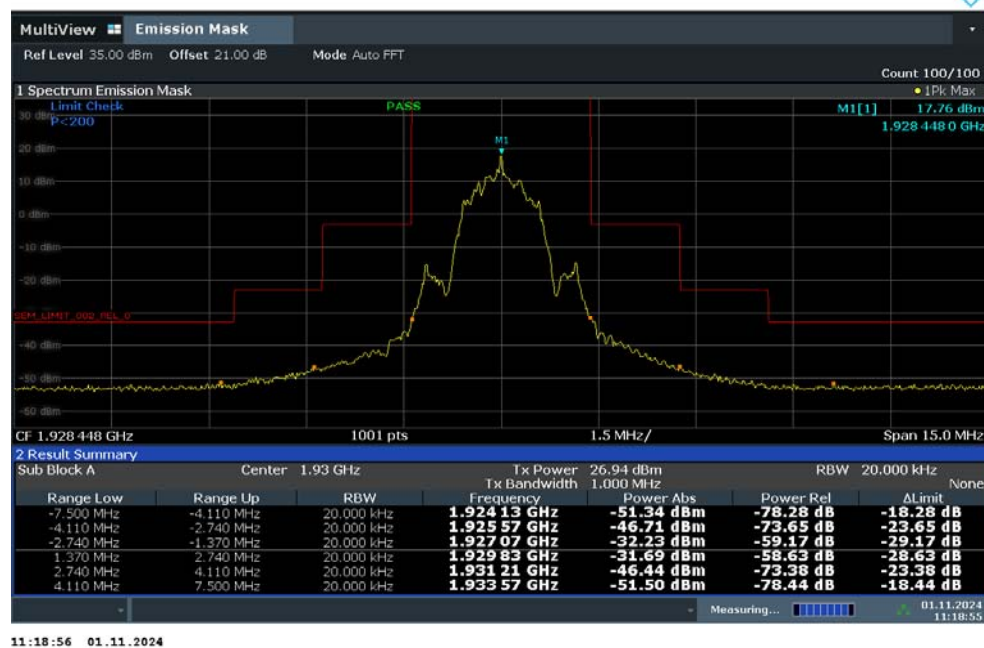




Emissions inside the band DECT 1924.992MHz Ant2

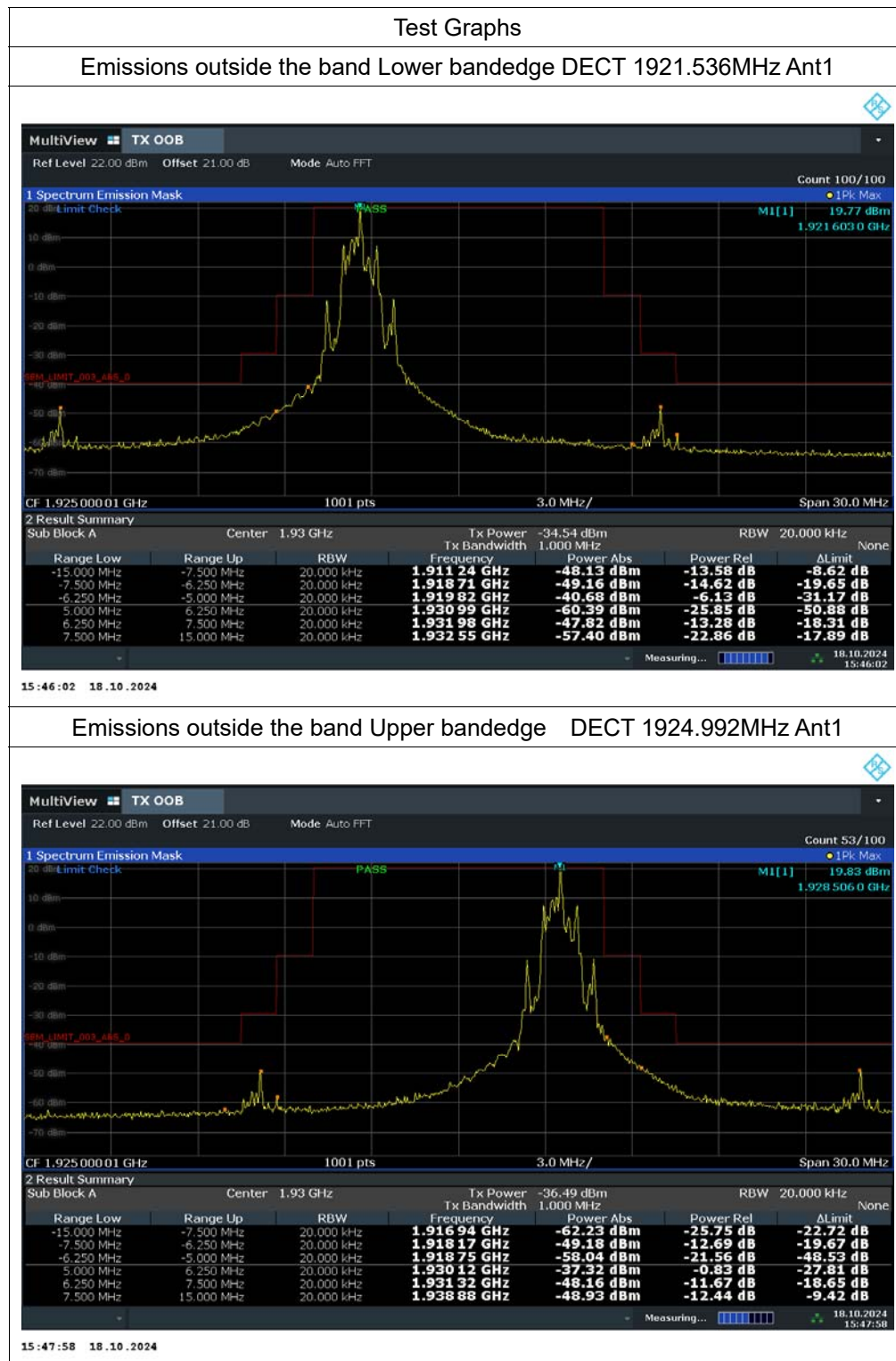


Emissions inside the band DECT 1928.448MHz Ant2



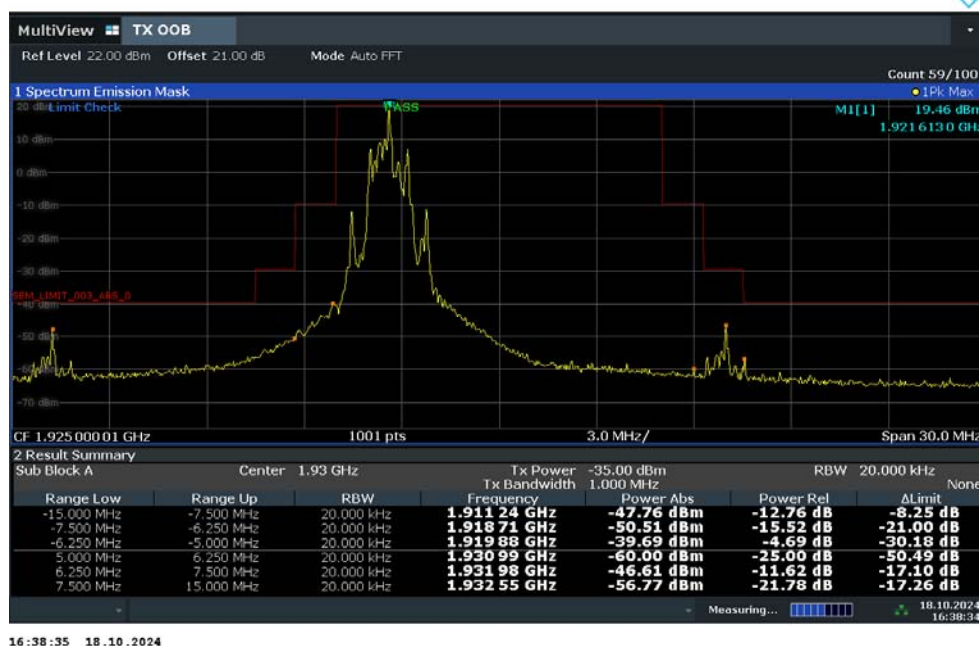


A.5. Emissions outside the band

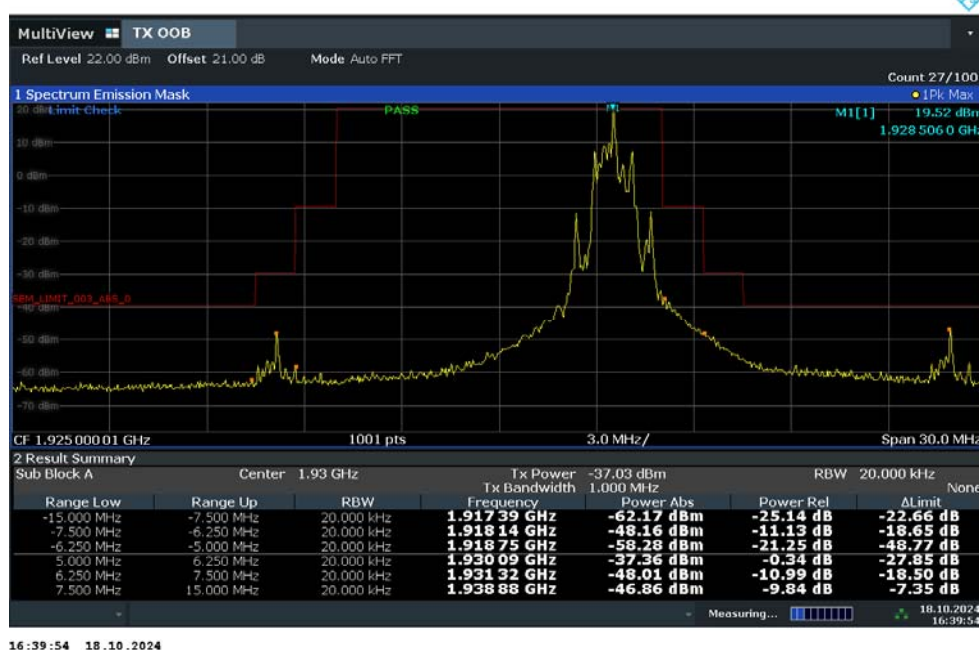




Emissions outside the band Lower bandedge DECT 1921.536MHz Ant2



Emissions outside the band Upper bandedge DECT 1924.992MHz Ant2



**A.7. Frequency Stability**

Voltage (VDC)	Temperature (°C)	Frequency (MHz)	Frequency Offset (kHz)	Frequency Tolerance (ppm)	Limit(ppm)	Verdict
3.87	-20	1924.992	8	4.156	10	Pass
3.87	-10	1924.992	8	4.156	10	Pass
3.87	0	1924.992	8	4.156	10	Pass
3.87	10	1924.992	7	3.636	10	Pass
3.87	20	1924.992	5	2.597	10	Pass
3.87	30	1924.992	5	2.597	10	Pass
3.87	40	1924.992	7	3.636	10	Pass
3.87	50	1924.992	8	4.156	10	Pass



A.8. Conducted Emission

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. 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+Adapter+Charging base+Data line+DECT TX

Test voltage: AC 120V/60Hz

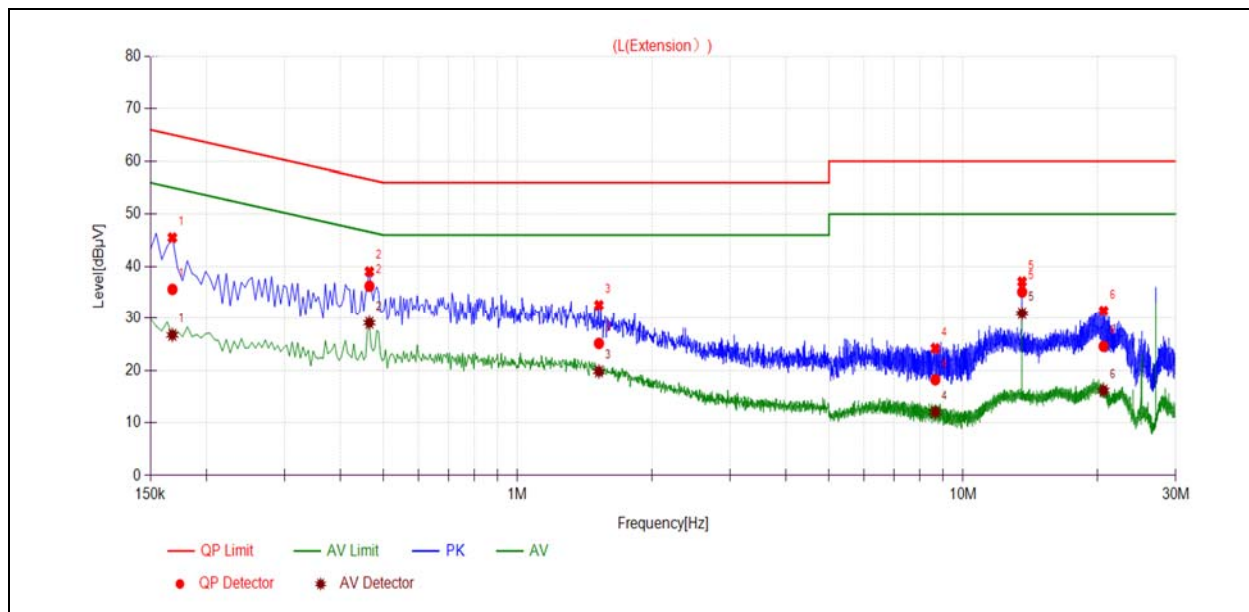
The measurement results are obtained as below:

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

U_R : Receiver Reading

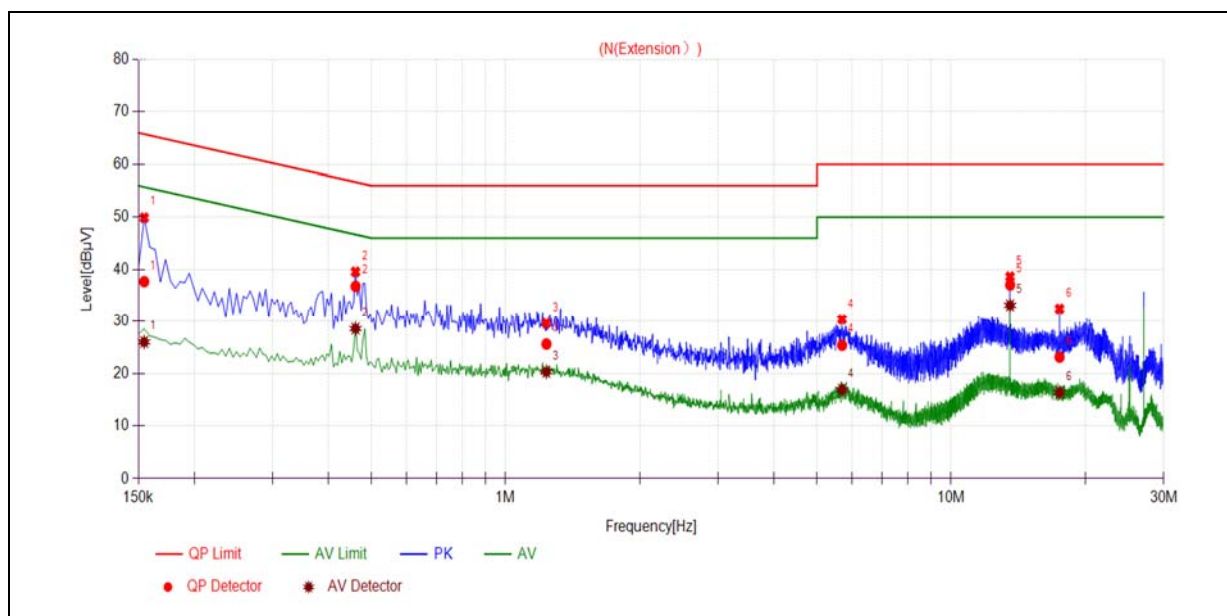
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1680	35.64	26.76	65.06	55.06	Line	PASS
2	0.4650	36.23	29.10	56.60	46.60		PASS
3	1.5224	25.13	19.77	56.00	46.00		PASS
4	8.6597	18.20	12.01	60.00	50.00		PASS
5	13.5608	35.15	30.98	60.00	50.00		PASS
6	20.6646	24.57	16.15	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	37.70	25.99	65.75	55.75	Neutral	PASS
2	0.4605	36.79	28.56	56.68	46.68		PASS
3	1.2346	25.60	20.29	56.00	46.00		PASS
4	5.6900	25.37	16.87	60.00	50.00		PASS
5	13.5606	37.07	33.15	60.00	50.00		PASS
6	17.5106	23.10	16.35	60.00	50.00		PASS



A.9. Radiated Emission

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 an quasi-peak measurement (or average).

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note3: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

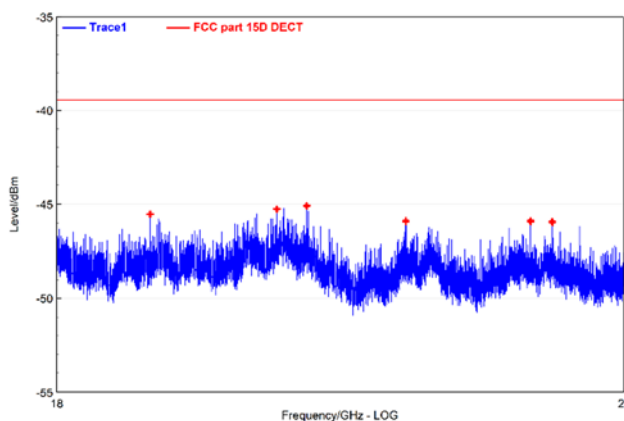


Plot for 1921.536MHz



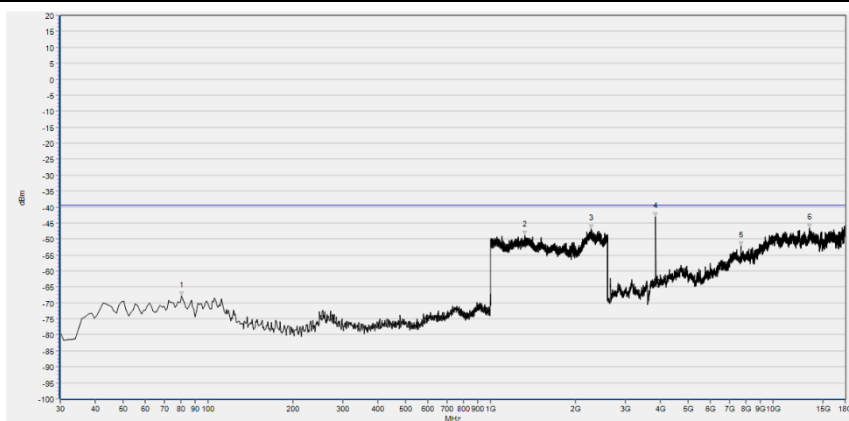
Fre. (MHz)	PK (dBμV/m)	Detector	Limit-PK (dBμV/m)	Antenna	Verdict
81.410	-68.28	PK	-39.50	Horizontal	PASS
1182.473	-48.48	PK	-39.50	Horizontal	PASS
1921.329	-47.61	PK	-39.50	Horizontal	N/A
3843.426	-47.38	PK	-39.50	Horizontal	PASS
8103.001	-52.14	PK	-39.50	Horizontal	PASS
13471.577	-45.28	PK	-39.50	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



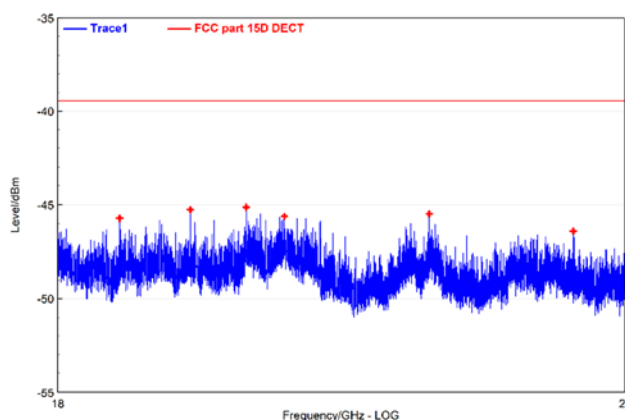
Fre. (MHz)	PK (dBm)	Detector	Limit (dBm)	Antenna	Verdict
18.317053	-45.58	PK	-39.5	Horizontal	PASS
18.751368	-45.33	PK	-39.5	Horizontal	PASS
18.855789	-45.13	PK	-39.5	Horizontal	N/A
19.208211	-45.91	PK	-39.5	Horizontal	PASS
19.657053	-45.93	PK	-39.5	Horizontal	PASS
19.736421	-45.98	PK	-39.5	Horizontal	PASS

(Antenna Horizontal, 18GHz to 20GHz)



Fre. (MHz)	PK (dBμV/m)	Detector	Limit-PK (dBμV/m)	Antenna	Verdict
80.440	-67.73	PK	-39.50	Vertical	PASS
1322.689	-48.82	PK	-39.50	Vertical	PASS
2266.427	-46.81	PK	-39.50	Vertical	N/A
3843.426	-42.96	PK	-39.50	Vertical	PASS
7685.725	-52.19	PK	-39.50	Vertical	PASS
13465.976	-46.67	PK	-39.50	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)



Fre. (MHz)	PK (dBm)	Detector	Limit (dBm)	Antenna	Verdict
18.209684	-45.77	PK	-39.5	Vertical	PASS
18.450316	-45.33	PK	-39.5	Vertical	PASS
18.641684	-45.17	PK	-39.5	Vertical	N/A
18.775368	-45.67	PK	-39.5	Vertical	PASS
19.286105	-45.55	PK	-39.5	Vertical	PASS
19.808632	-46.43	PK	-39.5	Vertical	PASS

(Antenna Vertical, 18GHz to 20GHz)

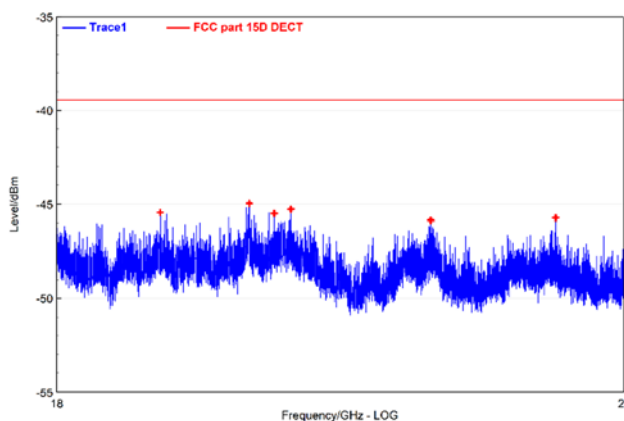


Plot for 1928.448MHz



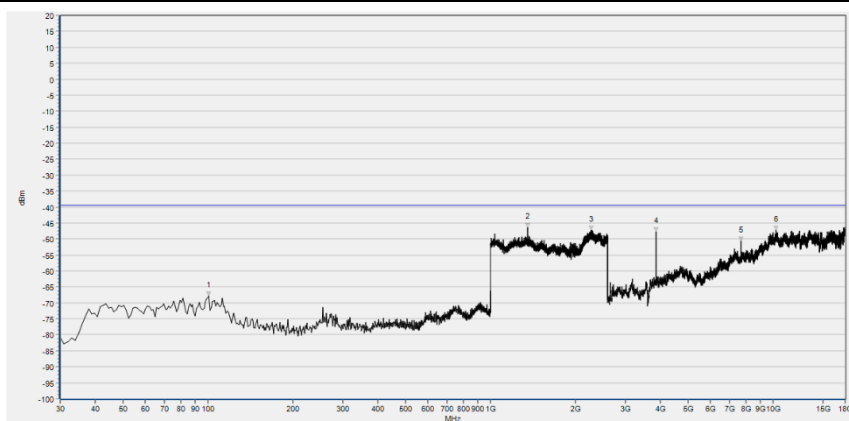
Fre. (MHz)	PK (dBμV/m)	Detector	Limit-PK (dBμV/m)	Antenna	Verdict
73.650	-68.73	PK	-39.50	Horizontal	PASS
1350.220	-46.01	PK	-39.50	Horizontal	PASS
2263.225	-46.89	PK	-39.50	Horizontal	N/A
3857.429	-51.29	PK	-39.50	Horizontal	PASS
7713.730	-50.09	PK	-39.50	Horizontal	PASS
12345.772	-46.54	PK	-39.50	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



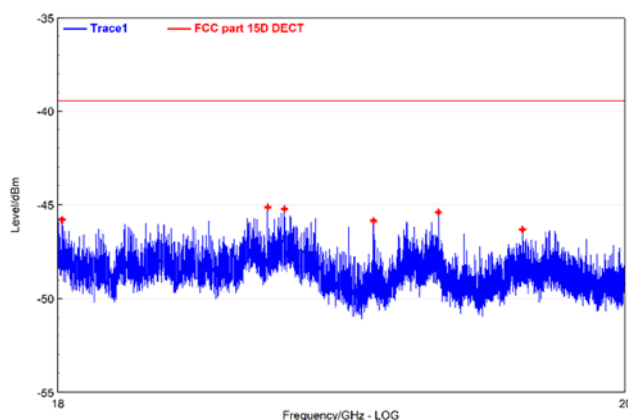
Fre. (MHz)	PK (dBm)	Detector	Limit (dBm)	Antenna	Verdict
18.350947	-45.47	PK	-39.5	Horizontal	PASS
18.655789	-45.01	PK	-39.5	Horizontal	PASS
18.744632	-45.52	PK	-39.5	Horizontal	N/A
18.800632	-45.33	PK	-39.5	Horizontal	PASS
19.296632	-45.91	PK	-39.5	Horizontal	PASS
19.749684	-45.75	PK	-39.5	Horizontal	PASS

(Antenna Horizontal, 18GHz to 20GHz)



Fre. (MHz)	PK (dBμV/m)	Detector	Limit-PK (dBμV/m)	Antenna	Verdict
100.810	-67.84	PK	-39.50	Vertical	PASS
1350.220	-46.30	PK	-39.50	Vertical	PASS
2264.506	-47.30	PK	-39.50	Vertical	N/A
3857.429	-47.71	PK	-39.50	Vertical	PASS
7713.730	-50.72	PK	-39.50	Vertical	PASS
10267.794	-47.17	PK	-39.50	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)



Fre. (MHz)	PK (dBm)	Detector	Limit (dBm)	Antenna	Verdict
18.017263	-45.85	PK	-39.5	Vertical	PASS
18.718105	-45.19	PK	-39.5	Vertical	PASS
18.776211	-45.28	PK	-39.5	Vertical	N/A
19.089895	-45.89	PK	-39.5	Vertical	PASS
19.319789	-45.46	PK	-39.5	Vertical	PASS
19.623789	-46.31	PK	-39.5	Vertical	PASS

(Antenna Vertical, 18GHz to 20GHz)

END OF REPORT