

## TEST REPORT

**Report Number: 24020910HKG-001**

Class II Permissive Change of 47 CFR Part 15 Certification

Unlicensed Personal Communication Service Devices

(Base Unit)

**FCC ID: EW780-0899-00**

**Prepared and Checked by:**

**Approved by:**

Signed on File

Leung Chiu Kuen, Stanley  
Engineer

Tang Kwan Mo, Jess  
Assistant Supervisor  
Date: Jul 19, 2024

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## TEST REPORT

### GENERAL INFORMATION

<b>Grantee:</b>	VTech Telecommunications Ltd.
<b>Grantee Address:</b>	23/F., Tai Ping Industrial Centre, Block 1, 57 Ting Kok Road, Tai Po, Hong Kong.
<b>FCC Specification Standard:</b>	FCC Part 15, October 1, 2022 Edition
<b>FCC ID:</b>	EW780-0899-00
<b>FCC Model(s):</b>	C620, C620 XXXXX
<b>Type of EUT:</b>	Unlicensed Personal Communications Service Devices
<b>Description of EUT:</b>	SIP Wireless Conference Phone – Base Unit
<b>Serial Number:</b>	CHNLB26012400021
<b>Sample Receipt Date:</b>	March 04, 2024
<b>Date of Test:</b>	March 07, 2024 to March 20, 2024
<b>Report Date:</b>	July 19, 2024
<b>Environmental Conditions:</b>	Temperature: +10 to 40°C Relative Humidity: 10 to 90%
<b>Conclusion:</b>	Test was conducted by client submitted sample. The submitted sample as received complied with the 47 CFR Part 15 Certification.

## TEST REPORT

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## TEST REPORT

### 1.0 TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

#### 1.1 Summary of Test Results

General Technical Requirements				
Test Items	FCC Part 15 Section	Test Procedure ANSI C63.17 / ANSI C63.4*	Results	Details See Section
Antenna Requirement	15.317	---	Complied	4.1
Occupied/Emission Bandwidth	15.323(a)	6.1.3	Complied	4.2
Directional Gain of the Antenna	15.319(e)	4.3.1	Complied	4.3
Power Spectral Density	15.319(d)	6.1.5	Complied	4.4
AC Power Line Conducted Emissions from EUT	15.315	7 *	Complied	4.7

## TEST REPORT

### 1.2 Summary of Test Results

Test Items	Specific Requirements for UPCS Device		Results	Details See
	FCC Part 15 Section	Test Procedure ANSI C63.17		
Unwanted Emission Inside the Sub-Band	15.323(d)	6.1.6.1	Complied	4.5
Emissions Outside the Sub-Band	15.323(d)	6.1.6.2	Complied	4.6

### 1.3 Statement of Compliance

The equipment under test is found to be complying with the following standards:

FCC Part 15, October 1, 2022 Edition

## TEST REPORT

### 2.0 GENERAL DESCRIPTION

#### 2.1 Product Description

The C620 (35-400172BS) is a SIP Wireless Conference Phone – Base Unit. It operates at frequency range of 1921.536MHz to 1928.448MHz with 5 channels (1921.536MHz, 1923.264MHz, 1924.992MHz, 1926.720MHz and 1928.448MHz). The Base Unit is powered by an adaptor 100-240VAC 50/60Hz 0.3A.

The antennas used in Base Unit are integral, and the test sample is a prototype.

For FCC, the Model(s): C620 XXXXX is the same as the Model: C620 in electronics/electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure as declared by client. The only differences between these models are color, model number and trade name to be sold for marketing purpose as declared by client. Suffix ("X, X, X, X, X" of "C620 XXXXX") can be 0-9, a-z, A-Z or blank to represent different packaging or color options as declared by client.

#### 2.2 Purpose of Change

The purpose of change is saved with filename: product change.pdf.

#### 2.3 Test Methodology

The radiated emission measurements for unintentional radiator and AC power line-conducted emission measurements were performed according to the test procedures specified in ANSI C63.4 (2014). The radiated emission measurements for intentional radiator contained in UPCS device, conducted emission measurements were performed according to the test procedures specified in ANSI C63.17 (2013). All radiated measurements were performed in radiated emission test site. Preliminary scans were performed in the radiated emission test site only to determine worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

#### 2.4 Test Facility

The radiated emission test site, AC power line conducted measurement facility and antenna port conducted measurement facility used to collect the radiated data, AC Power Line conducted data are at Intertek Testing Services Hong Kong Limited, which is located at Workshop No. 3, G/F., World-Wide Industrial Centre, 43-47 Shan Mei Street, Fo Tan, Sha Tin, N.T., Hong Kong SAR, China. This test facility and site measurement data have been fully placed on file with FCC.

## TEST REPORT

### 3.0 SYSTEM TEST CONFIGURATION

#### 3.1 Justification

For emissions testing, the equipment under test (EUT) was set up to transmit continuously in burst mode with pseudo-random data to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst-case emissions.

The Base Unit was powered by an adaptor 100-240VAC 50/60Hz 0.3A to 5VDC 2.0A 10.0W.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the EUT is attached to accessories, they were connected and operational (as typical as possible).

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Detector function was in peak mode. Radiated emissions are taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

For UPCS transmitter radiated measurement, the spectrum analyzer resolution bandwidth was approximately 1% of EUT emission bandwidth, unless otherwise specified.

Radiated emission measurements for UPCS transmitter were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

As the Base Unit has 2 antennas, both have been checked. While conducting the test on one of antennas, another one was being disable its transmission. The data in this report represented the worst-case

For FCC, RF module and antenna for C620 is the same with original granted model VDP800. Therefore, conducted emission measurement for jitter, frame repetition stability, carrier stability and listen before transmit requirements for the C620 are skipped.

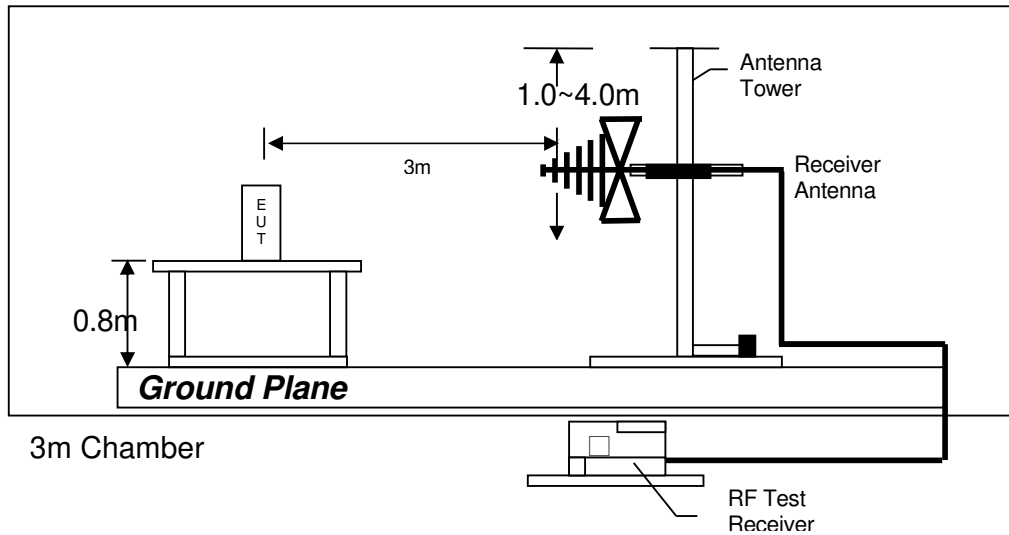
For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50ohm coupling impedance for measuring instrument. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled.

All connecting cables of EUT and peripherals were manipulated to find the maximum emission. All relevant operation modes have been tested and the worst data is included in this report.

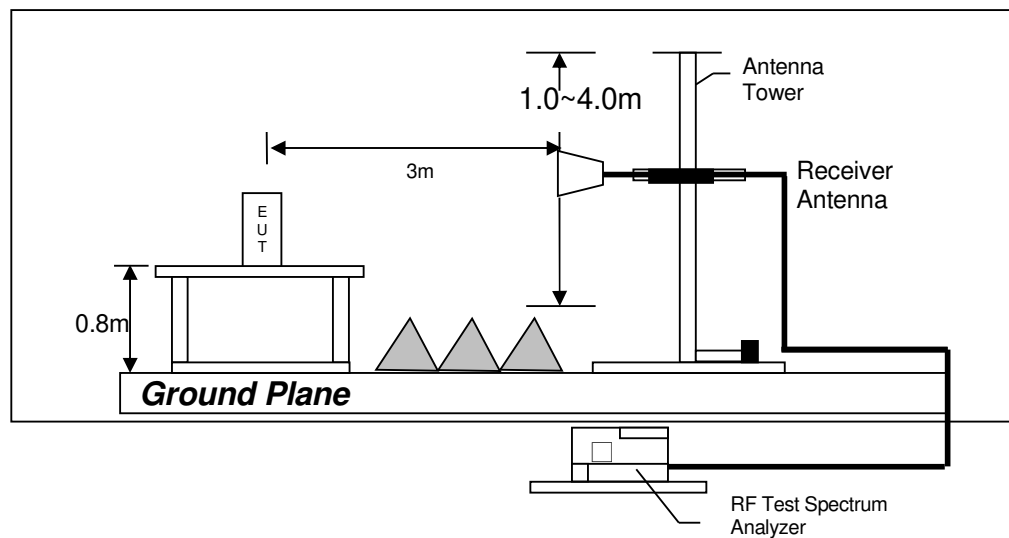
## TEST REPORT

### 3.2 Radiated Emission Test Setup

The figure below shows the test setup, which is utilized to make these measurements.



Test setup of radiated emissions up to 1GHz



Test setup of radiated emissions above 1GHz

Figure 3.2.1



## TEST REPORT

### 3.3 AC Line Conducted Emission Test Setup

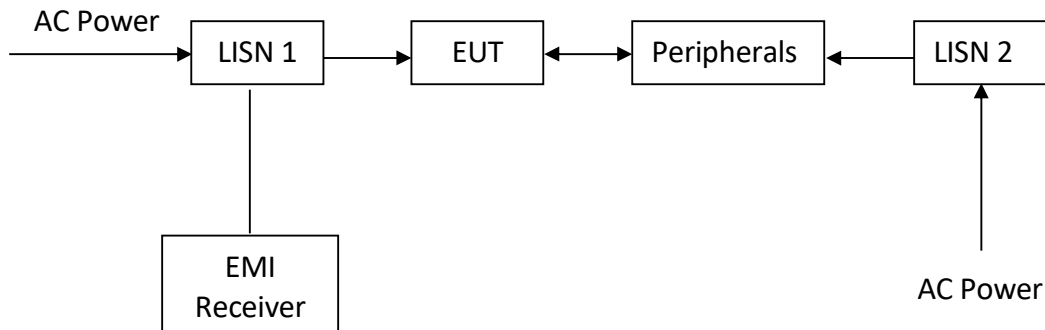


Figure 3.3.1

### 3.4 Conducted Emission Test Configuration

The setup and equipment setting were made in accordance with ANSI C63.17. The antenna of EUT transmitter was replaced by a coaxial cable. The impedance matching of connection, cable loss and external RF attenuator are taken into account. The EUT was arranged to communicate via a fixed carrier frequency between its transmitter and a companion device. The transmission was configured in burst mode with pseudo-random data as typical as normal operation.

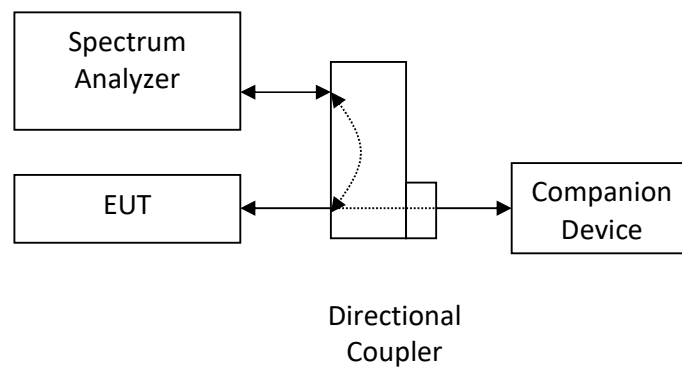


Figure 3.4.1

## TEST REPORT

### 3.5 Conducted Monitoring and Operation Test Configuration

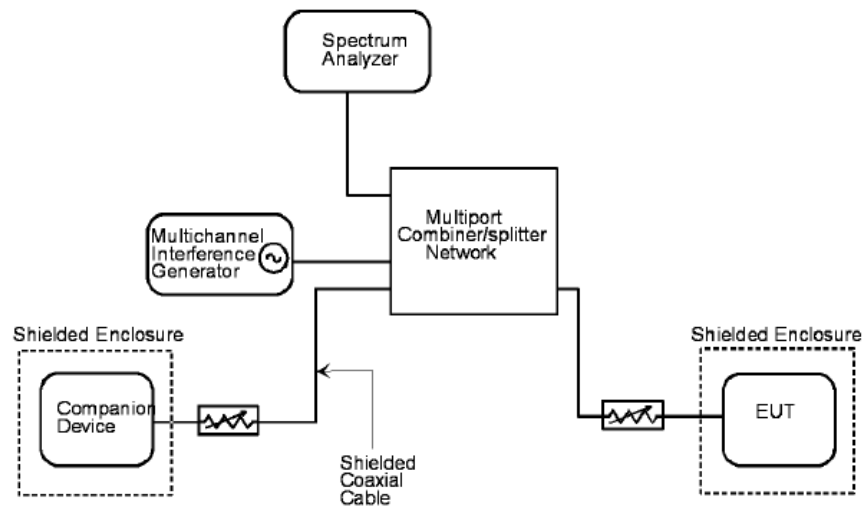


Figure 3.5.1

### 3.6 EUT Exercising Software

The EUT exercise program Unit tools V4.9.1 used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

## TEST REPORT

### 3.7 Details of EUT and Description of Accessories

Details of EUT:

An AC adaptor was used to power the device. Their descriptions are listed below.

- (1) Base Unit: alternative AC adaptor (100-240VAC 50/60Hz 0.3A to 5VDC 2.0A 10.0W, Model: NBS12E050200UV, Brand: MASS POWER) (Provided by Applicant)

Description of Accessories:

- (1) Speaker Box, Model: C620, FCC ID: EW780-1553-00 (Provided by Applicant)
- (2) Wireless Mic, Model: C620, FCC ID: EW780-1553-01 (Provided by Applicant)
- (3) 2 x CAT5 LAN cable with 1.5m long (Supplied by Intertek)
- (4) Notebook, HP Model: RTL8188EE, FCC ID: TX2-RTL8188EE (Supplied by Intertek)

### 3.8 Measurement Uncertainty

Decision Rule for compliance: For FCC/IC standard, the measured value must be within the limits of applicable standard without accounting for the measurement uncertainty. For EN/IEC/HKTA/HKTC standard, conformity rules will be used as per standard directly excepted EN/IEC 61000-3-2, EN/IEC 61000-3-3, HKTA1004, HKCA1008, HKTA1019, HKTA1020, HKTA1041 and HKTA1044. The values of the Measurement uncertainty for radiated emission test, AC line conducted emission test and RF conducted test are  $\pm 5.3\text{dB}$ ,  $\pm 4.2\text{dB}$  and  $\pm 1\text{dB}$  respectively.

Uncertainty and Compliance - Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

## TEST REPORT

### 4.0 MEASUREMENT RESULTS

#### 4.1 Antenna Requirements, FCC Rule 15.317:

EUT must meet the antenna requirement of FCC Rule 15.203.

[ X ] EUT uses permanently attached antenna(s) which is considered sufficient to comply with the provisions of this rule. Please refer to internal photos.pdf for more details.

[ ] EUT uses unique antenna jack(s) or electrical connector(s) which is considered sufficient to comply with the provisions of this rule. Please refer to internal photos.pdf for more details.

#### 4.2 Emission Bandwidth, FCC Rule 15.323(a):

Operation shall be contained within the 1920 – 1930 MHz band. The emission bandwidth (*B*) shall be less than 2.5 MHz and greater than 50 kHz.

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.3. Test setup is shown in section 3.4 Figure 3.4.1.

Test Results:

##### I. Base unit - Traffic Carrier

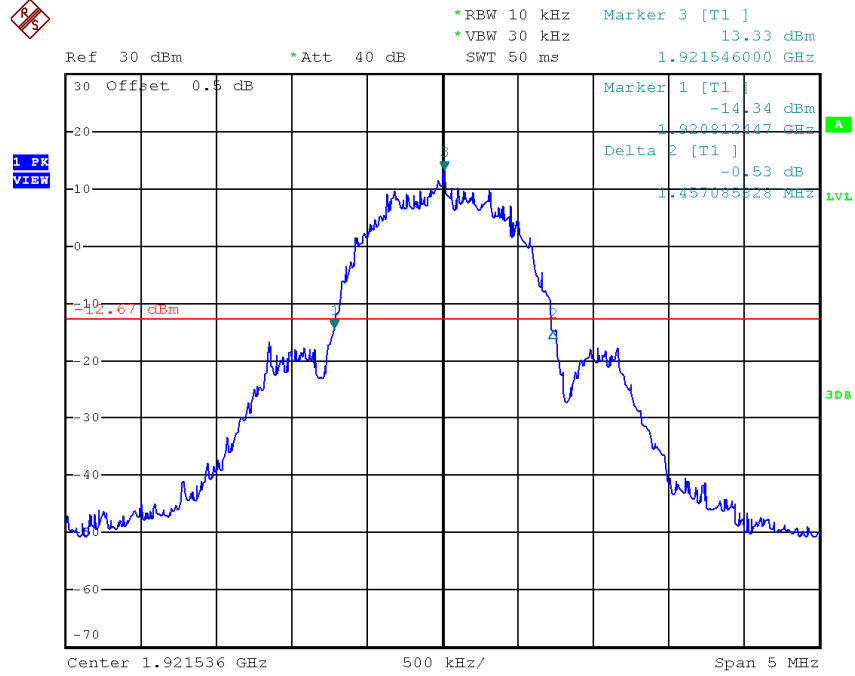
Channel	Channel Frequency (MHz)	Measuring Signal Level	Measured Emission Bandwidth (MHz)	Results
Lowest	1921.536	26 dB down	1.46	Pass
Highest	1928.448	26 dB down	1.49	Pass

The plots of emission bandwidth are saved as below.

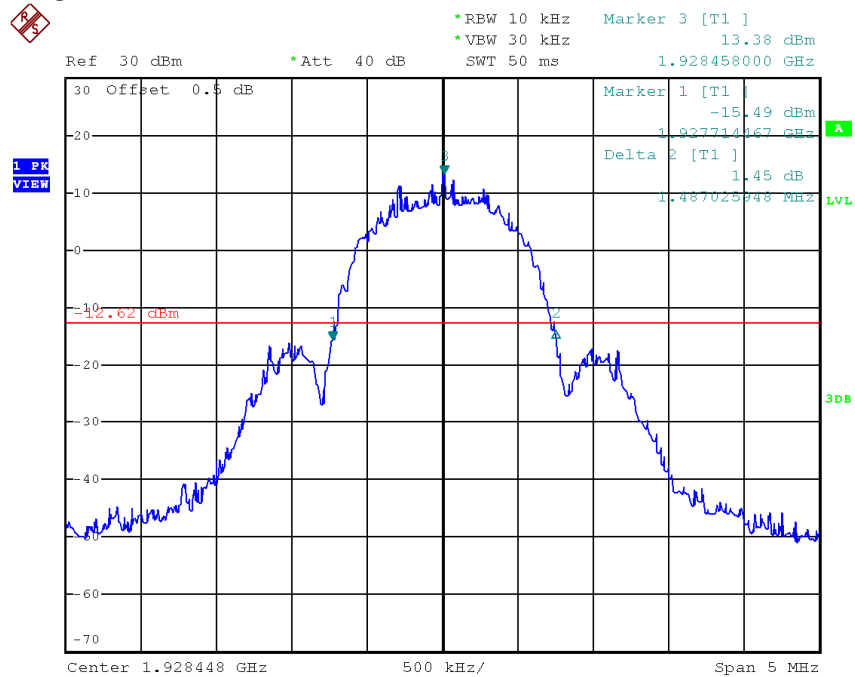
## TEST REPORT

### PLOTS OF EMISSION BANDWIDTH

Base unit, Lowest channel, Traffic carrier



Base unit, Highest channel, Traffic carrier



## TEST REPORT

### 4.3 Directional Gain of the Antenna, FCC Rule FCC 15.319(e):

The peak transmit power limit shall be reduced by the amount in dB that the maximum directional gain of the antenna exceeds 3 dBi.

The requirements are made in accordance with ANSI C63.17 sub-clause 4.3.1.

- ☒ [ X ] Manufacturer declares that the directional gain of the antenna is less than or equal to 3dBi. No peak transmit power limit reduction is required.
- ☐ [ ] Manufacturer declares that the directional gain of the antenna is greater than 3dBi. The peak transmit power limit shall be reduced by \_\_\_\_\_ dB.

## TEST REPORT

### 4.4 Power Spectral Density, FCC Rule 15.319(d):

Power spectral density shall not exceed 3 mW (4.8dBm) in any 3 kHz bandwidth as measured with a spectrum analyzer having a resolution bandwidth of 3 kHz.

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.5. Test setup is shown in section 3.4 Figure 3.4.1.

Test Results:

#### I. Base unit - Traffic Carrier

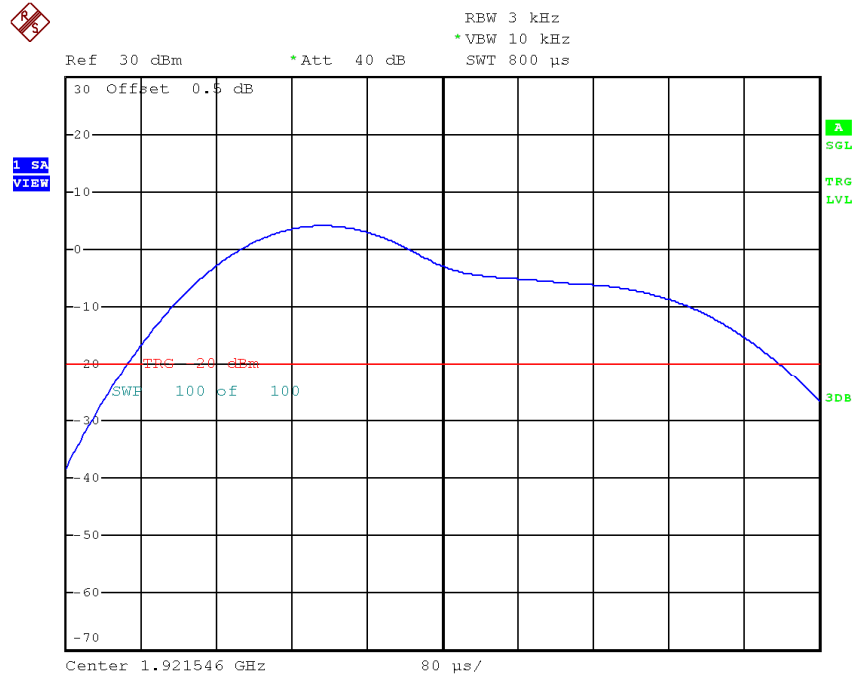
Channel	Channel Frequency (MHz)	Measured Power Spectral Density (dBm/3kHz)	Limit (dBm/3 kHz)	Results
Lowest	1921.536	-2.3	4.8	Pass
Highest	1928.448	-2.4	4.8	Pass

The plots of the power spectral density are as below.

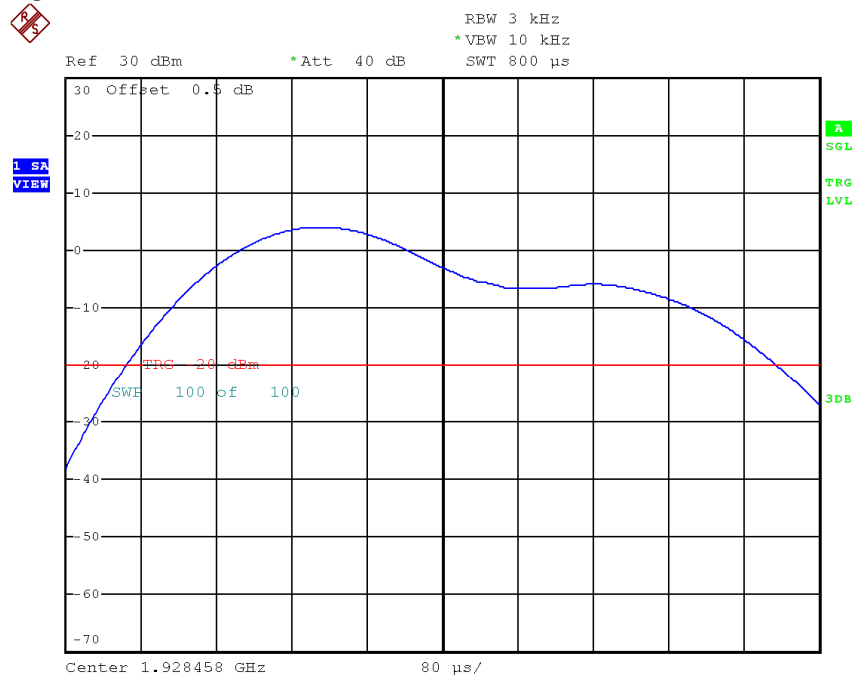
## TEST REPORT

### PLOTS OF THE POWER SPECTRAL DENSITY

Base unit, Lowest channel, Traffic carrier



Base unit, Highest channel, Traffic carrier





## TEST REPORT

### 4.5 Unwanted Emission Inside the Sub-Band, FCC Rule 15.323(d):

Emissions inside the sub-band must comply with the following emission mask:

1. In the bands between  $1B$  and  $2B$  measured from the center of the emission bandwidth, emission shall be at least 30 dB below the permitted peak transmit power.
2. In the bands between  $2B$  and  $3B$  measured from the center of the emission bandwidth, emission shall be at least 50 dB below the permitted peak transmit power.
3. In the bands between  $3B$  and the band edge, emission shall be at least 60 dB below the permitted peak transmit power.

Where  $B$  = emission bandwidth in Hz

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.6.1. Test setup is shown in section 3.4 Figure 3.4.1

Test Results:

#### I. Base unit - Traffic Carrier

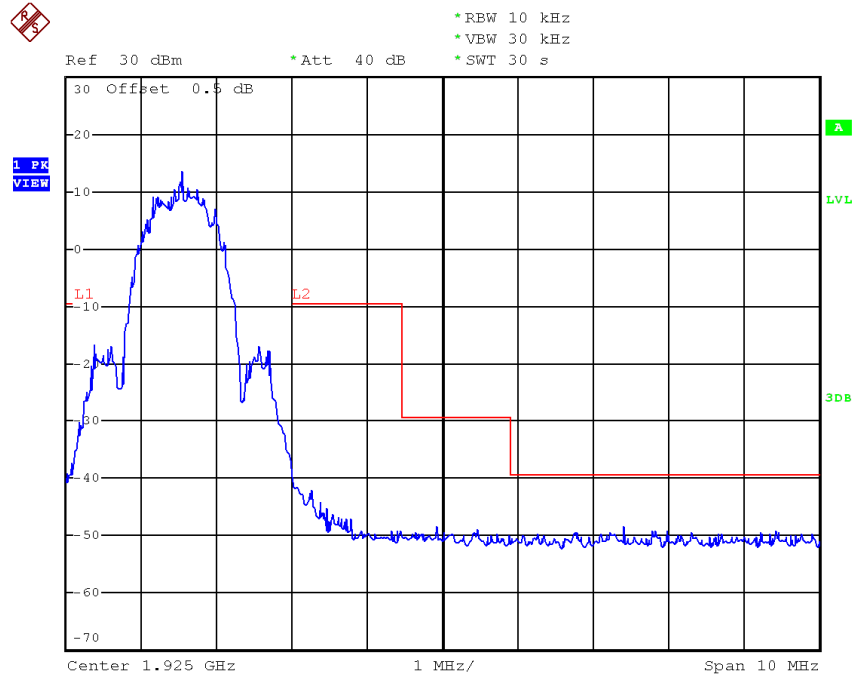
Channel	Channel Frequency (MHz)	Results
Lowest	1921.536	Pass
Middle	1924.992	Pass
Highest	1928.448	Pass

The plots of the unwanted emission inside the sub-band are as below.

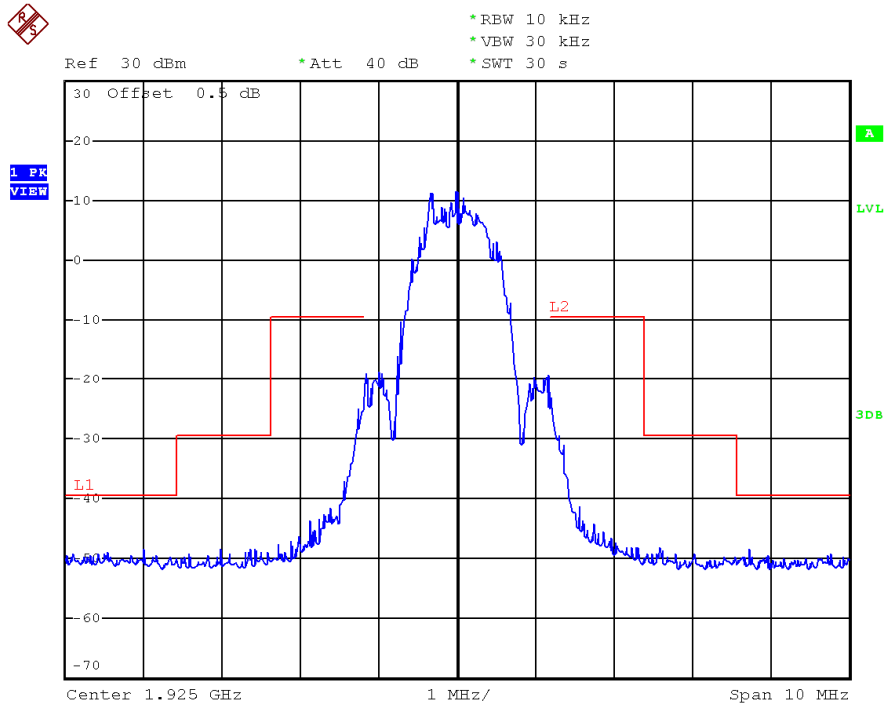
## TEST REPORT

### PLOTS OF THE UNWANTED EMISSION INSIDE THE SUB-BAND

Base unit, Lowest channel, Traffic carrier



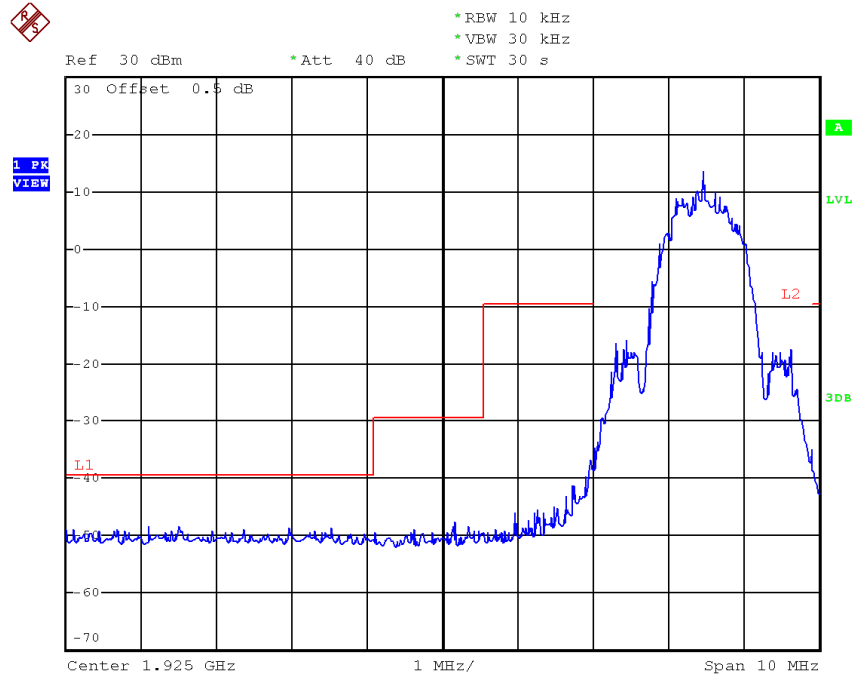
Base unit, Middle channel, Traffic carrier



## TEST REPORT

### PLOTS OF THE UNWANTED EMISSION INSIDE THE SUB-BAND

Base unit, Highest channel, Traffic carrier



## TEST REPORT

### 4.6 Emissions Outside the Sub-Band, FCC Rule 15.323(d):

Emissions outside the sub-band shall be attenuated below a reference power of 112 mW (20.5 dBm) as follows:

1. 30 dB between the band edge and 1.25 MHz above or below the band;
2. 50 dB between 1.25 and 2.5 MHz above or below the band; and
3. 60 dB at 2.5 MHz or greater above or below the band, or shall meet the requirement of FCC Rule 15.319(g) which shall not exceed the limits of FCC Rule 15.209.

Example: Calculation of Limit for emissions between the band edge and 1.25 MHz (1920.000 – 1918.750 MHz)

The emissions shall not exceed the Limit: 20.5 dBm – 30 dB = -9.5 dBm

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.6.2. Radiated emissions test method is used. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured.

Test setup is shown in section 3.2 Figure 3.2.1

Test Results:

Channel	Carrier Frequency (MHz)	Measured Band (MHz)	Limit (dBm)	Results
Lowest	1921.536	1920.000 - 1918.750	-9.5	Pass
		1918.750 - 1917.500	-29.5	Pass
		0.009 - 1917.500 & 1932.500 - 19300.000	-39.5 / FCC Rule 15.209	Pass
Highest	1928.448	1930.000 - 1931.250	-9.5	Pass
		1931.250 - 1932.500	-29.5	Pass
		0.009 – 1917.500 & 1932.500 - 19300.000	-39.5 / FCC Rule 15.209	Pass

## TEST REPORT

### 4.6.1 Radiated Emissions Configuration Photographs:

Worst Case Radiated Emission  
at

Base Unit: 3843.072 MHz

The worst case radiated emission configuration photographs are saved with filename: config photos.pdf

### 4.6.2 Radiated Emissions Data:

Data are included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection unless otherwise specified.

The data in table 1-3 list the significant emission frequencies, the limit and the margin of compliance.

Judgement:

Base Unit - Passed by 9.1 dB margin

## TEST REPORT

### RADIATED EMISSIONS DATA

Mode: DECT Transmission

Table 1, Base Unit

#### Pursuant to FCC Part 15 Section 15.323 (d) Emissions Requirements

Lowest Channel

Polarization	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
V	1917.429	-59.0	-39.5	-19.5
V	1918.734	-53.7	-29.5	-24.2
V	1919.819	-44.9	-9.5	-35.4
V	2881.687	-59.6	-39.5	-20.1
V	3843.072	-48.6	-39.5	-9.1
V	5764.608	-67.7	-39.5	-28.2
V	7686.144	-65.2	-39.5	-25.7
H	9607.680	-67.4	-39.5	-27.9
V	11529.216	-64.2	-39.5	-24.7

#### NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters.
3. Negative value in the margin column shows emission below limit.

## TEST REPORT

Mode: DECT Transmission

Table 2, Base Unit

### Pursuant to FCC Part 15 Section 15.323 (d) Emissions Requirements

Highest Channel

Polarization	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
V	1930.036	-51.0	-9.5	-41.5
V	1931.368	-59.2	-29.5	-29.7
V	1932.760	-60.3	-39.5	-20.8
V	2892.313	-52.2	-39.5	-12.7
H	3856.896	-55.2	-39.5	-15.7
H	5785.344	-64.7	-39.5	-25.2
V	7713.792	-68.7	-39.5	-29.2
V	9642.240	-67.3	-39.5	-27.8
V	11570.688	-65.2	-39.5	-25.7

#### NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters.
3. Negative value in the margin column shows emission below limit.

## TEST REPORT

Mode: Talk

Table 3, Base Unit

### Pursuant to FCC Part 15 Section 15.323 (d) Emissions Requirements

Polarization	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
V	56.069	-70.4	-39.5	-30.9
V	92.323	-76.8	-39.5	-37.3
V	145.188	-80.2	-39.5	-40.7
H	374.956	-64.8	-39.5	-25.3
V	425.033	-59.8	-39.5	-20.3
V	499.965	-58.9	-39.5	-19.4
V	552.951	-60.1	-39.5	-20.6
V	624.974	-49.3	-39.5	-9.8
H	825.036	-57.9	-39.5	-18.4
V	925.068	-59.0	-39.5	-19.5
V	950.045	-57.5	-39.5	-18.0

#### NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters.
3. Negative value in the margin column shows emission below limit.



## TEST REPORT

### 4.6.3 4.4.3 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG + PD + AV$$

Where FS = Field Strength in dBμV/m

RA = Receiver Amplitude (including preamplifier) in dBμV

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

PD = Pulse Desensitization in dB

AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD + AV$$

#### Example

Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29.0 dB is subtracted. The pulse desensitization factor of the spectrum analyzer is 0.0 dB, and the resultant average factor is -10.0 dB. The net field strength for comparison to the appropriate emission limit is 32.0 dBμV/m. This value in dBμV/m is converted to its corresponding level in μV/m.

$$RA = 62.0 \text{ dB}\mu\text{V}$$

$$AF = 7.4 \text{ dB}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$PD = 0.0 \text{ dB}$$

$$AV = -10 \text{ dB}$$

$$FS = 62.0 + 7.4 + 1.6 - 29.0 + 0.0 + (-10.0) = 32.0 \text{ dB}\mu\text{V/m}$$

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm } [(32.0 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

$$\text{Level in dBm (EIRP)} = FS - 95.23 = 32 - 95.23 = -63.23 \text{ dBm}$$

$$\text{Level in dBm (ERP)} = FS - 95.23 - 2.15 = 32 - 95.23 - 2.15 = -65.38 \text{ dBm}$$

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### 4.6.4 Average Factor Calculation and Transmitter ON Time Measurements, FCC Rule 15.35(b, c)

- [ ] The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SPAN function on the analyzer was set to ZERO. The transmitter ON time was determined from the resultant time-amplitude display:

Please refer to the attached plots for more details:

The plots of Transmitter ON Time Measurements are as below.

- [ ] Please refer to the attached transmitter timing diagram that are provided by manufacturer
- [ × ] Not applicable - No average factor is required.
- [ ] Please refer to Technical Description (descri.pdf) for more details

## TEST REPORT

### 4.7 AC Power Line Conducted Emissions, FCC Rule 15.315:

The AC power line conducted emission shall not exceed the limits of FCC Rule 15.207.4.

Measurements are made in accordance with ANSI C63.4 sub-clause 7. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured.

Test setup is shown in section 3.3 Figure 3.3.1.

[ ] Not applicable – EUT is only powered by battery for operation.

[ × ] EUT connects to AC power line. Emission Data is listed in following pages.

[ ] Base Unit connects to AC power line and has transmission. Speaker Box connects to AC power line (indirectly) but has no transmission. Emission Data of Base Unit is listed in following pages.

[ ] Speaker Box connects to AC power line (indirectly) only during charging. Emission Data is listed in following pages.

## TEST REPORT

### 4.7.1 AC Power Line Conducted Emissions Configuration Photographs:

Worst Case AC Power Line Conducted Emission  
at

Base Unit: 451.5 kHz

The worst case AC power Line conducted emission configuration photographs are saved with filename:  
config photos.pdf

### 4.7.2 AC Power Line Conducted Emissions Data:

The plot(s) and data in the following pages list the significant emission frequencies, the limit and the worst case margin of compliance.

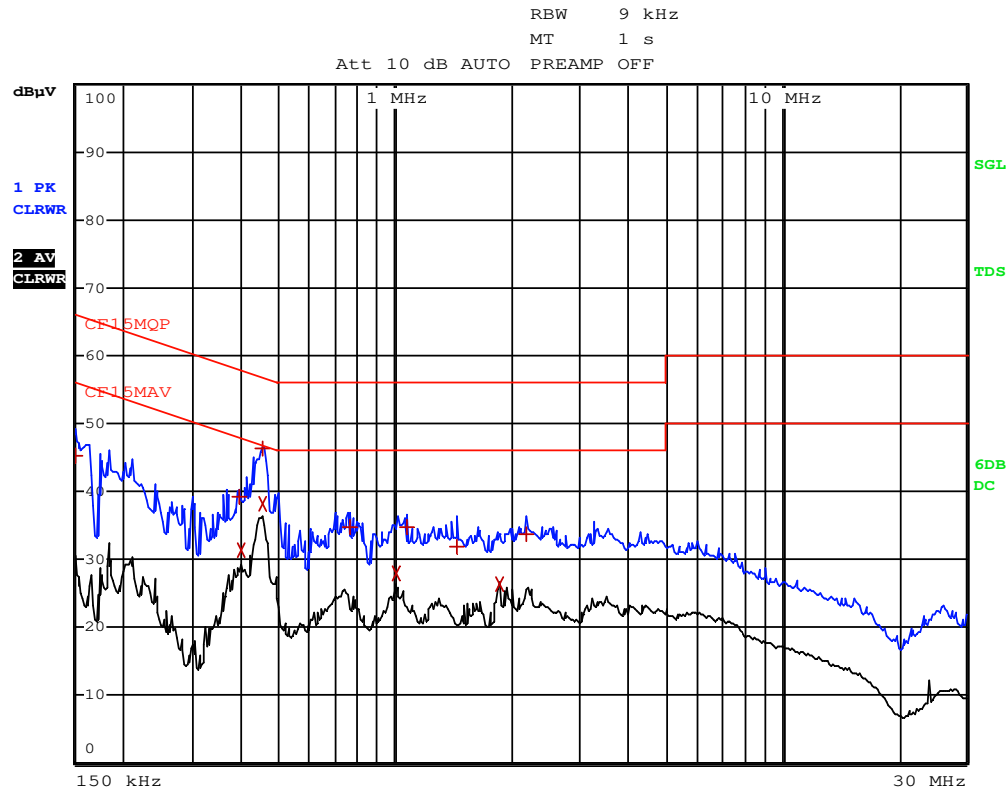
Judgment:

Passed by 8.61dB margin compared with CISPR Average limit

## TEST REPORT

### CONDUCTED EMISSIONS DATA

Worst Case: Talk



## TEST REPORT

### CONDUCTED EMISSIONS DATA

Worst Case: Talk

EDIT PEAK LIST (Final Measurement Results)					
Trace1:		CF15MQP			
Trace2:		CF15MAV			
Trace3:		---			
	TRACE	FREQUENCY	LEVEL	dB $\mu$ V	DELTA LIMIT dB
1	Quasi Peak	150 kHz	45.15	L1	-20.84
1	Quasi Peak	393 kHz	39.19	N	-18.80
2	CISPR Average	397.5 kHz	31.38	N	-16.52
1	Quasi Peak	451.5 kHz	46.25	N	-10.59
2	CISPR Average	451.5 kHz	38.23	N	-8.61
1	Quasi Peak	766.5 kHz	34.78	N	-21.21
2	CISPR Average	1.005 MHz	27.99	N	-18.00
1	Quasi Peak	1.068 MHz	34.75	N	-21.24
1	Quasi Peak	1.437 MHz	31.80	N	-24.19
2	CISPR Average	1.869 MHz	26.45	N	-19.54
1	Quasi Peak	2.1885 MHz	33.84	N	-22.15

## TEST REPORT

### 5.0 EQUIPMENT LIST

#### 1) Radiated Emissions Test

Equipment	EMI Test Receiver	Signal and Spectrum Analyzer (10Hz to 40GHz)	BiConiLog Antenna (30MHz - 6GHz)
Registration No.	EW-3156	EW-2466	EW-3061
Manufacturer	ROHDESCHWARZ	ROHDESCHWARZ	EMCO
Model No.	ESR	FSP	3142E
Calibration Date	January 31, 2024	October 10, 2023	August 23, 2023
Calibration Due Date	January 31, 2025	October 10, 2024	February 23, 2025

Equipment	14m Double Shield RF Cable (9kHz - 6GHz)	14m Double Shield RF Cable (1GHz - 26GHz)	Double Ridged Guide Antenna
Registration No.	EW-2376	EW-2781	EW-0194
Manufacturer	RADIALL	RADIALL	EMCO
Model No.	N(m)-BR56-BNC(m) L= 14M	SMA(m)-SHF5MPU-SMA(m) R.A 14m, 26G	3115
Calibration Date	September 19, 2023	January 16, 2024	May 10, 2023
Calibration Due Date	September 19, 2024	January 16, 2025	November 10, 2024

Equipment	Log Periodic Antenna (200MHz - 2GHz)	Biconical Antenna (30MHz – 300MHz)	RF Pre-Amplifier (9kHz to 40GHz)
Registration No.	EW-3244	EW-3241	EW-3229
Manufacturer	EMCO	EMCO	BONN ELEKTRO
Model No.	3148B	3110C	BLMA 0118-5G
Calibration Date	August 30, 2022	February 26, 2022	September 26, 2023
Calibration Due Date	May 30, 2024	May 26, 2024	September 26, 2024

Equipment	1.9GHz Notch Filter	Pyramidal Horn Antenna (18.0 - 26.5)GHz
Registration No.	EW-3434	EW-0905
Manufacturer	Microwave	EMCO
Model No.	N0319501	3160-09
Calibration Date	December 20, 2023	December 15, 2023
Calibration Due Date	December 20, 2024	June 15, 2025

## TEST REPORT

### 5.0 EQUIPMENT LIST (CONT'D)

#### 2) Conducted Emissions Test

Equipment	EMI Test Receiver	RF Cable RG142 (9kHz-30MHz) 2.4m length	LISN
Registration No.	EW-3095	EW-2454	EW-3360
Manufacturer	ROHDESCHWARZ	RADIALL	R&S
Model No.	ESCI	BNC M ST/ 142	ENV-216
Calibration Date	January 18, 2024	June 13, 2023	April 25, 2023
Calibration Due Date	January 18, 2025	June 13, 2024	April 25, 2024

**END OF TEST REPORT**