EUROFINS ETS PRODUCT SERVICE GMBH

TEST - REPORT

FCC PART 15 D for Isochronous UPCS devices
RSS-213 for LE-PCS devices

FCC ID: BCE-GN9125
IC: 2386C-GN9125

Test report no.:

G0M20805-1795-C-2

ACCREDITED

Certificate #1983.01

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1 General Information
1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.
The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.
Furthermore, there is no guarantee that a test sample which has Passed all the relevant tests conforms to a specification.
Neither is there any guarantee that such a test sample will interoperate with other genuinely open systems.
The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.
The test report may only be reproduced or published in full.
Reproduction or publication of extracts from the report requires the prior written approval of the Eurofins ETS Product Service GmbH.

Specific Conditions:
Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration are performed, for certification by competent authorities FCC; IC.
This report is related to FCC Part 15 D applied to UPCS devices of which technology is derived from DECT standard.
Additional this report covers the requirement of RSS-213, 2 GHz Licence exempt Personal Communications Services Devices (LE-PCS) released by Industry Canada (IC). In following the term UPCS covers the term LE-PCS too.

Operator:

Date	Eurofins-Lab.	Name	Signature
18.07.2008		W. Treffke	

Technical responsibility for area of testing:

Date	Eurofins	Name	Signature
18.07.2008		K. Damm	

1.2 Testing laboratory

1.2.1 Location

EUROFINS ETS PRODUCT SERVICE GMBH
Storkower Str. 38c
15526 Reichenwalde b. Berlin
Germany

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1.2.2 Details of accreditation status

DAR ACCREDITED TESTING LABORATORY
DAR-REGISTRATION NUMBER: DAT-P-268/08

RECOGNIZED NOTIFIED BODY EMC
REGISTRATION NUMBER: BNetzA-bS EMV-07/61

RECOGNIZED NOTIFIED BODY R&TTE
REGISTRATION NUMBER: BNetzA-bS-02/51-53

FCC FILED TEST LABORATORY
REG.-NO. 96970

A2LA ACCREDITED TESTING LABORATORY
CERTIFICATE NO. 1983.01

BLUETOOTH QUALIFICATION TEST FACILITY (BQTF)
ACCREDITED BY BLUETOOTH QUALIFICATION REVIEW BOARD

INDUSTRY CANADA FILED TEST LABORATORY
REG. NO. IC 3470

1.3 Details of approval holder

Name	: GN Netcom A/S
Street	: Lautrupbjerg 7,
Town	: 2750 Ballerup
Country	: Denmark
Telephone	: +45 7211 8686
Fax	: +45 7211 8689
Contact	: Mr. J.B. Rasmussen
Telephone	: +45 7211 8686
E-mail	: jrasmussen@gn.com

1.4 Application details

Date of receipt of application : 16.05.2008
Date of receipt of test item : 16.05.2008
Date of test : 26.06.2008 – 07.07.2008

1.5 Test item

Description of test item : Isochronous UPCS device, cordless phone based on DECT modified technology.

Function	
Portable part	☒
Base station	
Repeater	

Description of test item : Wireless headset with Base

Type identification : Jabra GN9125
Portable Part

GN9125 headset Flex
GN9125 headset Midi
GN9125 headset Micro
GN9125 headset Duo
GN9125 headset LR

Serial number : Test model without serial number.

Photos : See annex

Technical data

Frequency bands : 1920 – 1930 MHz

Operating Channel numbers	Test Frequencies	Channel center frequency (MHz)
4	F_L	1921.536
3		1923.264
2	F_M *)	1924.992
1		1926.720
0	F_U	1928.448

*) for frequency stability test and spurious emission test in RX mode only

Number of channels : 60 (in time and spectrum window, declared by manufacturer)
Operating modes : MC/TDMA/TDD
Type of modulation : GFSK

Max. slot type:

single slot	☒
double slot	☐

Fixed point-to-point operation: Yes/No

Antenna	Type	Gain [dBi]	internal	external
1	Inverted F	0	☒	☐

Antenna connector : ./.

Antenna diversity :

Antenna	Diversity supported	
	Tx	Rx
1	☒	☐

Host device : none

Classification : related to radio frequency radiation exposure

Fixed Device	☐
Mobile Device (Human Body distance > 20cm)	☐
Portable Device (Human Body distance < 20cm)	☒

Power supply : 3.7 V DC 120 V AC/DC Adapter

Data connection :

Connection	used
None	☐
PSTN	☐
Data Networks	☐
others	☒

Remark: Devices intended to be connected to PSTN have to be applied for FCC PART 68 registration, in USA and for Industry Canada standard CS-03.

Manufacturer:
(if applicable)

Name	:	GN Netcom A/S
Street	:	Lautrupbjerg 7,
Town	:	2750 Ballerup
Country	:	Denmark

1.6 Test standards

Technical standard : FCC PART 15, Subpart D; RSS-213

Test method and procedure: Following requirements of FCC Part 15 D, RSS-213 and ANSI C63.17-1998 (Revision Draft 3.5 , January 14, 2006 if applicable)

Additional information : The row scheme for frequency generation, radio channels, receiver parameters, synchronization procedure, and other parameters are determined by the DECT standard. Details are content of operational description provided by manufacturer.

This Headset exists in 5 variants with minor technical differences.
GN 9125 Headset Flex was tested in complete.
For GN 9125 headset Micro
GN 9125 headset Midi
GN 9125 headset Duo
GN 9125 headset Flex LR the tests were done according to a reducted test plan covering radiated tests only.
Related diagrams are in Annex N.

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

or

The deviations as specified in 2.5 were ascertained in the course of the tests performed. ☐

2.2 Test environment

Temperature	: 25°C				
Relative humidity content	: 20 ... 75 %				
Air pressure	: 86 ... 103 kPa				
Details of power supply	: 3.7 V DC	120 V AC/DC Adapter			
Extreme conditions parameters: (manufacturer declaration)	: test voltage - extreme		min :	3.5 V, DC	
			max:	4.2 V, DC	
	temperatures – extreme		min:	0°C	1)
			max:	40°C	1)

Remarks: 1) declared by manufacturer

2.3 Test equipment utilized

No.	Test equipment	Type	Manufacturer
ETS 0012	Biconical Antenna	HK 116	R & S
ETS 0013	LPD Antenna	HL 223	R & S
ETS 0014	Log Periodical Antenna	HL 025	R & S
ETS 0031	Turn table	DS 412	Heinrich Deisel
ETS 0064	CDN IEC 61000-4-6		Keytek/ EMC
ETS 0066	EM Injection Clamp		FCC/ EMC
ETS 0067	Calibration Fixture	IEC 801-2031 CF	FCC/ EMC
ETS 0105	RF Signal Generator (High power synthesizer/ sweeper)	SMP 02 (SMP 22 / 02)	R & S
ETS 0125	Reference dipole	0003126-1880	ETS Lindgren
ETS 0224C	Programmable high resolution timer counter	PM6654G	Philips
ETS 0253	Spectrum Analyzer	FSIQ 26	R & S
ETS 0267	RF Signal Generator	SMT 03	R & S
ETS 0273	Signal Generator	SME 03	R & S
ETS 0288	Artificial mains	ESH2-Z5	R & S
ETS 0310	Anechoic chamber	AC 3	Frankonia
ETS 0474	EMI Test Receiver	ESCS 30	R&S
ETS 0492	Indusrtial Cotroller	PSM12	R & S
ETS 0494	Switching unit	SSCU	R & S
ETS 0495	RF Step Attenuator	RSP	R & S
ETS 0496	Spectrum Analyzer	FSP	R & S
ETS 0497	Power Meter	NRVD	R & S
ETS 0498	Diode Power Sensor	NRV-Z1	R & S
ETS 0500	Signal Generator	SMIQ03	R & S
ETS 0501	Signal Generator	SMIQ03	R & S
ETS 0502	Power Splitter	DS-808-4	Macom

3 RESULTS OF EXAMINATIONS AND TESTS (enclosure)

TEST CASE	FCC Rules	RSS-213	Required	Customer Declaration	Test passed	Test failed
Coordination with fixed microwave service	15.307 (b)		☒	☒	☐	☐
Reference to Subpart B	15.309 (b)		☒	☒	☐	☐
Conducted limits AC Power line	15.315 , 15.207	4.2; 6.3	☒	☐	☒	☐
Antenna requirement	15.317, 15.203		☒	☒	☐	☐
Modulation techniques	15.319 (b)	6.1	☒	☒	☐	☐
Emission bandwidth	15.323 (a)	6.4	☒	☐	☒	☐
Peak Transmit Power	15.319 (c)	4.3.1; 6.5	☒	☐	☒	☐
Power spectral density	15.319 (d)	4.3.1; 6.6	☒	☐	☒	☐
Directional gain of the antenna	15.319 (e)	4.1 (e)	☒	☒	☐	☐
Automatic discontinuation of transmission	15.319 (f)	4.3.4 (a)	☒	☒	☐	☐
Radio frequency radiation exposure	15.319 (i)	RSS – 102 Gen 5.5	☒	☐	☒	☐
Monitoring threshold	15.323(c)(2); (c)(9)	4.3.4 (b)(2)	☒	☐	☒	☐
Monitoring of intended transmit window and maximum reaction time	15.323(c)(1)	4.3.4 (b)(1)	☒	☐	☒	☐
Monitoring bandwidth	15.323 (c)(7)	4.3.4 (b)(7)	☒	☐	☒	☐
Random waiting interval,	15.323 (c)(6)	4.3.4 (b)(6)	☐	☐	☐	☐
Duration of transmission,	15.323 (c)(3)	4.3.4 (b)(3)	☒	☐	☒	☐
Connection acknowledgement,	15.323 (c)(4)	4.3.4 (b)(4)	☒	☐	☒	☐
Selected channel confirmation, power accuracy, segment occupancy	15.323 (c)(5)	4.3.4 (b)(5)	☒	☐	☒	☐
Monitoring antenna,	15.323 (c)(8)	4.3.4 (b)(8)	☒	☒	☐	☐
Duplex connections	15.323 (c)(10)	4.3.4 (b)(10)	☒	☐	☒	☐
Alternative monitoring interval for co-located devices	15.323 (c)(11)	4.3.4 (b)(11)	☒	☒	☐	☐
Fair access to spectrum related to (c)(10) and (c)(11)	15.323 (c)(12)	4.3.4 (b)(12)	☒	☒	☐	☐
Emissions inside and outside the sub-band	15.323 (d)	6.7	☒	☐	☒	☐
Frame period	15.323 (e)	4.3.4 (c)	☒	☐	☒	☐
Frequency stability	15.323 (f)	6.2	☒	☐	☒	☐
Receiver spurious emissions		6.8	☒	☐	☒	☐

3.1 Examinations and Test Procedures

The test procedures are performed following the requirements of FCC Part 15, RSS-213 and test standard ANSI C63.17-1998 [American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices] and Revision Draft 3.5 ANSI-C63.17-1998 January 14, 2006 if applicable.

3.1.1 Coordination with fixed microwave service, FCC 15.307 (b)

For USA UTAM, Inc., is designated to coordinate and manage the transition of the 1910 – 1930 MHz band from Private Operational-Fixed Microwave Service (OFS) operating under Part 94 of this Chapter to unlicensed PCS operations.
Therefore each applicant for certification operating under the provisions of this Subpart must be accompanied by an affidavit from UTAM, Inc. certifying that the applicant is a participating member of UTAM, Inc.

The affidavit from UTAM Inc. is attached in Annex	☐
The applicant will provide the affidavit from UTAM Inc. later in the course of certification by TCB or FCC	☒

3.1.2 Reference to Subpart B, FCC 15.309 (b)

For USA the requirements of Subpart D apply only to the radio transmitter contained in the PCS device. Other aspects of the operation of a PCS device may be subject to requirements contained elsewhere in this Chapter. In particular, a PCS device that includes digital circuitry not direct associated with the radio transmitter also is subject to the requirements for unintentional radiators in Subpart B,
For Canada unintentional radiators, other than radio receivers, are regulated by the Departments Interference Causing Equipment Standards.

Test procedures: FCC Part 15B, ICES - 003

This requirement is not applicable because the test sample does not include digital circuitry which is not direct associated with the radio transmitter	☒
For test results according to FCC 15B and / or ICES – 003 see Appendix C	☐
This requirement is covered by results of radiated emission test according to FCC 15.323(d) and / or RSS – 213 6.7	☐

3.1.3 Conducted limits AC Power line, FCC 15.315, 15.207; RSS–213 4.2, 6.3 / RSS – Gen 7.2.2

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table below. Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Test equipment used: ETS 0288; ETS 0474

Frequency	Level	
	quasi-peak	average
150 kHz	Lower limit line	Lower limit line

For measurements diagrams see Annex B.

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Verdict:

Pass	Fail
☒	☐

3.1.4 Antenna requirement, FCC 15.317, 15.203

For USA an UPCS device must meet the antenna requirement of Section 15.203.

Outcome of visual inspection:

This unit uses internal antennas. There is no provision for an external antenna.	☒
This unit uses an unique antenna jack for connection to dedicated external antenna	☐
This unit has an external antenna which is fix attached.	☐
This unit with its antenna will be professionally installed as described in manufacturers description.	☐

See Annex A for pictures.

In this arrangement the EUT fulfils the requirements of FCC 15.203.

3.1.5 Modulation techniques, FCC 15.319 (b); RSS-213 6.1

All transmissions must use only digital modulation.

The test sample is an isochronous digital modulated device that operates in 1920-1930 MHz band.
This device bases on DECT technology described in European Standards EN 300 175-2 and EN 300 175-3, now operating in frequency channels mentioned before on sub-clause 1.5.

The operating modes are MC/TDMA/TDD (Multi carrier / Time Division Multiple Access / Time Division Duplex) using Digital GFSK modulation.

For further details see operational description provided by manufacturer.

3.1.6 Emission bandwidth, FCC 15.323 (a); RSS 213 6.4

Operation will be contained within the 1920 – 1930 MHz band. The emission bandwidth shall be less than 2.5 MHz , but in no event the emission bandwidth shall be less than 50 kHz.

Emission bandwidth is measured according to ANSI 63.17 sub-clause 6.1.3 using test set-up no. 1.

f_x = 1921.54 MHz			
Δ P	$f_{(low)}$	$f_{(high)}$	$\Delta f = f_{(high)}-f_{(low)}$
-26	1920.826	1922.246	1.42
-12	1920.958	1922.118	1.22
-6	1921.184	1921.904	0.72

f_x = 1924.99 MHz			
Δ P	$f_{(low)}$	$f_{(high)}$	$\Delta f = f_{(high)}-f_{(low)}$
-26	1924.274	1925.704	1.43
-12	1924.416	1925.578	1.16
-6	1924.600	1925.396	0.79

f_x = 1928.45 MHz			
Δ P	$f_{(low)}$	$f_{(high)}$	$\Delta f = f_{(high)}-f_{(low)}$
-26	1927.720	1929.178	1.46
-12	1927.870	1929.030	1.16
-6	1928.066	1928.852	0.78

Occupied Bandwidth (99%) – RSS Gen

Test conditions	Channel 4	Channel 2	Channel 0
	MHz	MHz	MHz
T_{nom} = 25 ° C V_{nom} = 3.7 V	1.216	1.208	1.192
Measurement uncertainty	< 10 Hz		

Limit:

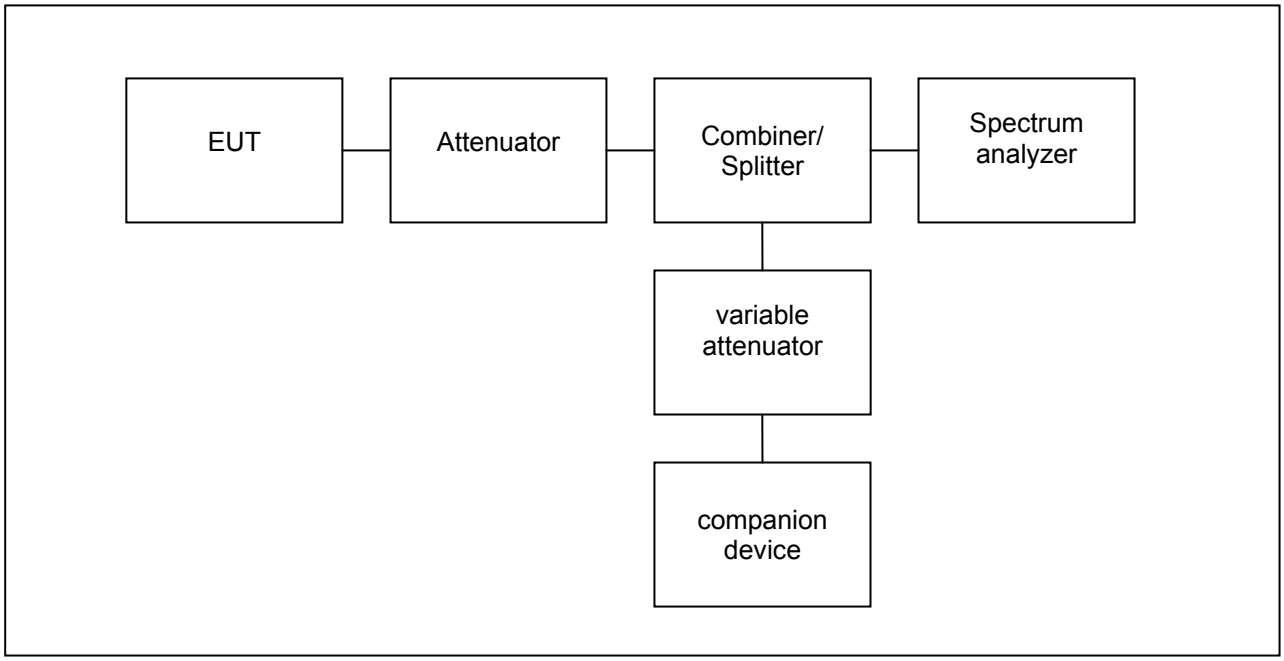
Δ f_{min} (-26dB)	>	50 kHz
Δ f_{max} (-26dB)	<	2.5 MHz

Verdict:

Pass	Fail
☒	☐

For measurements diagrams see Annex C.

Test set-up 1 – General equipment configuration for conducted RF tests



Test equipment used: ETS 0990, ETS 0492, ETS 0495, ETS 0496, ETS 0502

3.1.7 Peak transmit power, FCC 15.319 (c), FCC 15.31(e); RSS–213 4.3.1, 6.5

Peak transmit power shall not exceed 100 microwatts multiplied by the square root of the emission bandwidth in hertz. Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

The Peak transmit Power is measured according to ANSI 63.17 sub-clause 6.1.2. using test set-up No. 1.
The limit for Peak Transmit Power has to be calculated according to following formula using the emission bandwidth measured before and the directional antenna gain.

$$PTP = 100\mu W \times \sqrt{EBW}$$

when $G_A \leq g$

$$PTP = 100\mu W \times \sqrt{EBW - (G_A - g)}$$

EBW = emission bandwidth [Hz]
G_A = EUT antenna gain [dBi]
g = Allowable excess gain over that of an isotropic antenna without a transmit power reduction [g = 3 dB, acc. to FCC 15.319 (e)] and / or RSS–213 4.1(e)

The directional gain of used antenna has to be considered.
The test is performed with the variation of supply voltage of +/- 15% for FP. For PP a full battery is used. For devices with transmitter antenna diversity is checked that the feeding way to all antennas is identical. Therefore one conducted PTP measurements is sufficient.

Results:

On the attached diagrams PEAK AVG represents the related measurement value determined by values in time between T1 and T2.

Frequency [MHz]	Power [dBm]		
	for U_{nom}	for U_{max}	for U_{min}
F_L	20.32	--	--
F_M	20.19	--	--
F_H	20.12	--	--

For measurements diagrams see Annex D.

Limit:

EBW [MHz]	Max. power [dBm]	Corrected by antenna gain > 3 dBi
1.46	20.81	--

Verdict:

Pass	Fail
☒	☐

3.1.8 Power spectral density, FCC 15.319 (d); RSS–213 4.3.2.1, 6.6

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

Power spectral density is measured according to ANSI 63.17 sub-clause 6.1.5 using test set-up No. 1.

Max Hold function is applied to Max Peak detector with used sweep time as long as no changes on the curve are visible.

Results:

Frequency [MHz]	Power density [mW/3kHz]
F_L	0.8010
F_M	0.8133
F_H	0.8332

For measurements diagrams see Annex E.

Limit:

Power spectral Density	Test condition
3 mW = 4.77 dBm	3 kHz bandwidth

Verdict:

Pass	Fail
☐	☐

3.1.9 Directional gain of antenna, FCC 15.319 (e), RSS 213 4.1(e)

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

Procedure: Consideration of antenna gain value provided by manufacturer or additional radiated test of Peak transmit power.

Max antenna gain [dBi]	Exceeds 3 dBi by amount [dB]
0	0

The antenna gain value is derived from:

Manufacturer declaration	☒
Antenna diagram	☐
Measured gain of complete system	☐

Comment: Manufacturer declaration documents or Antenna diagrams will be considered in course of certification by responsible authority.

3.1.10 Automatic discontinuation of transmission, FCC 15.319 (f); RSS–213 4.3.4 (a)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions 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.

FP repetitive codes are allowed	☐
PP	☒

Automatic break off the transmission means break off of connection and break of transmissions which are not control and signaling information or receptive codes of complete frame or burst intervals. In case of devices using basics of DECT technology at least fixed parts and repeaters are using control and signaling information without direct connection to their remote station.

Evaluation		Verdict
Test according to a)	☒	pass
Assessment of manufacturer declaration	☐	

a) The tests are done after establishment of a connection to counter part.

	Test case	Reaction of EUT	Verdict
1	Switch – off counterpart	A	pass
2	Hook-on by counterpart	A	pass
3	Switch- off by EUT	A	pass
4	Hook -on on EUT side	A	pass
5	Remove power from EUT	A	pass
6	Remove power from counterpart	A	pass

A – Connection break down, cease of transmit
B – Connection break down, EUT transmits signaling information
C – Connection break down, counter part transmits signaling information

3.1.11 Radio frequency radiation exposure, FCC 15.319 (i); RSS-102

UPCS devices are subject to the radio frequency radiation exposure requirements specified in FCC parts 1.1307 (b), 2.1091, 2.1093 and RSS-102, as appropriate. All equipment shall be considered to operate in a "general population / uncontrolled environment. For portable devices tests according to IEEE 1528 are requested, if applicable.

Consideration of radio frequency radiation exposure for EUT is done as

SAR test acc. IEEE 1528	☒
MPE calculation as below	☐

SAR test results: Please see SAR test report G0M20805-1795-S-8.

MPE calculation: not applicable

The EUT is considered as a mobile device according to OET Bulletin 65, Edition – 97 – 01.
Therefore distance to human body of min. 20 cm is determined.

The internal / external antennas used for this mobile transmitter must provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

A safety statement concerning minimum separation distances from enclosure of the device will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RFE exposure compliance.

Formula:

$$S = EIRP / 4\pi R^2 \qquad (EIRP = P*G)$$

Calculation:

EIRP	Radiated Power [dBm]	--
EIRP	Radiated Power [mW]	--
R	Distance [cm]	--
S	Power Density [mW/cm^2]	--

Limit:

The limit of Power density for General Population / Uncontrolled Exposure is 1.0 mW/cm^2.
Compliance with the requirements will be considered by calculation of power density derived from radiated power value.

Verdict:

Pass	Fail
☐	☐

3.1.12 Monitoring threshold; Least interfered channel; FCC 15.323 (c)(2); (c)(5); (c)(9); RSS–213 4.3.4 (b)(2)

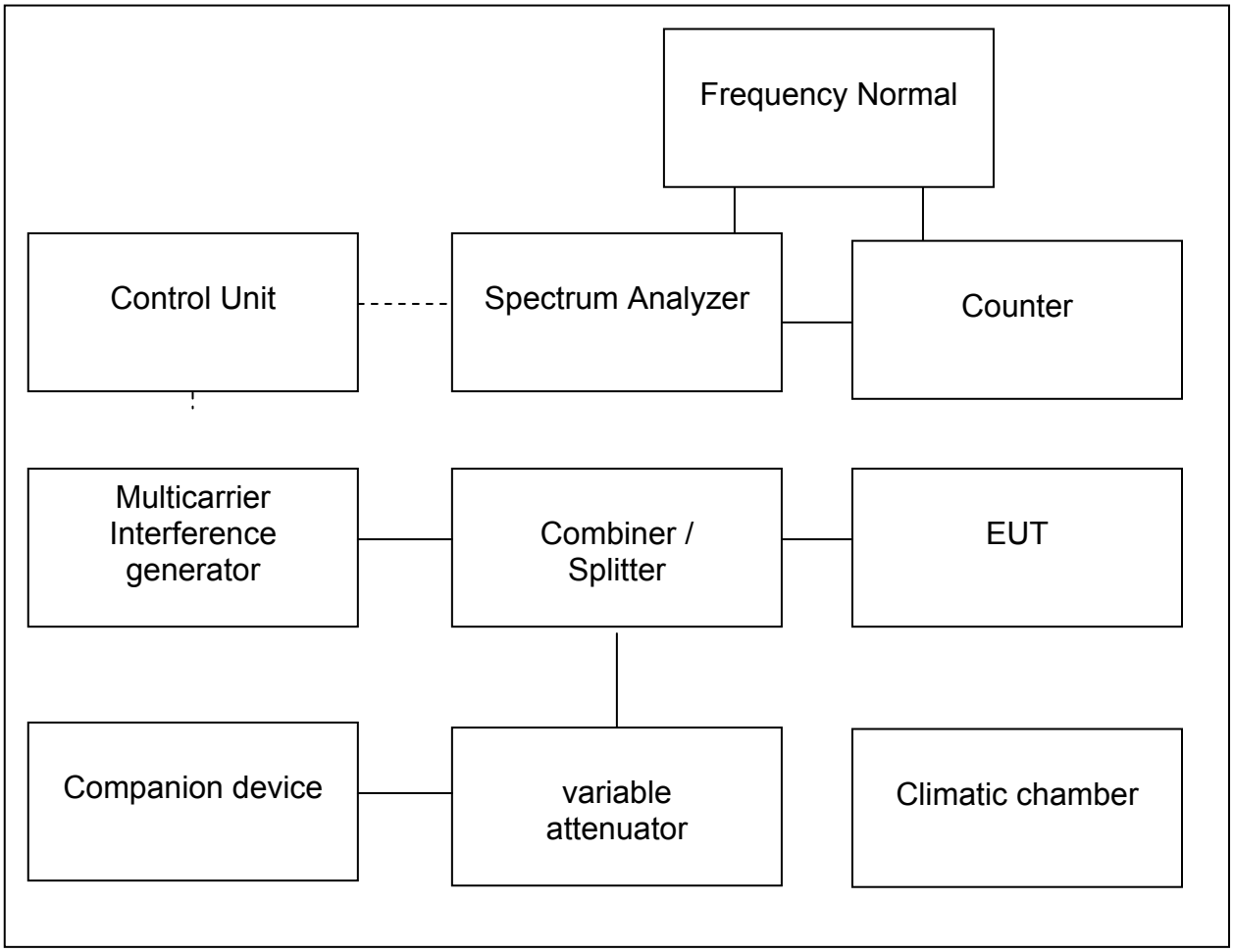
The lower monitoring threshold for EUTs without LIC procedure (least interfered channel) must not be more than 30 dB above the thermal noise power for a bandwidth equivalent to the emission bandwidth of the device.

Devices that have a power output lower than the maximum permitted under the rules can increase their monitoring detection threshold by one decibel for each one decibel that the transmitter power is below the maximum permitted.

For EUTs which support least interfered channel procedure (LIC) there is no need to measure the lower threshold because the rule 15.323(c)(2) is automatically met by the LIC procedure. For EUTs with 40 and more logical channels the upper threshold is applicable.

Monitoring threshold is measured according to Revision Draft ANSI 63.17 sub-clause 7.1, 7.2, 7.3 using test set-up No. 2.

This test set-up is used for most tests related to monitoring.



Test set-up 2 General equipment configuration for monitoring tests

Test equipment used: ETS 0496, ETS 0495, ETS 0267, ETS 0273, ETS 0500, ETS 0501, ETS 0502, ETS 0497, ETS 0498, ETS 0105, ETS 0312, ETS 0224 C

Monitoring tests generally determine the lower and upper threshold of the EUT , and verify that if the EUT is operating in the “least-interfered channel” mode, it can properly select the channel with the lowest interference power, within a 6 dB resolution. The “preferred” end of the 1920-1930 MHz band denotes the end at which the search for channels with interference below the lower threshold shall begin. For devices with an emission bandwidth of less than 625 kHz, the search shall begin within 3 MHz , of the lower end of the band (i.e., 1920 MHz). For device with an emission bandwidth of greater than 625 kHz, the search shall begin within 3 MHz of the upper end of the band.

Calculation of monitoring threshold limits for isochronous devices:

Lower threshold:

$$T_L = 15 \log_{10}B - 184 + 30 - P \ \text{(dBm)}$$

Upper threshold:

$$T_H = 15 \log_{10}B - 184 + 50 - P \ \text{(dBm)}$$

B= emission bandwidth (Hz) }

P = transmitted power (dBm) } } measured values

calculated thresholds:

lower threshold [dBm]	-81.9
upper threshold [dBm]	-61.9

The upper threshold is applicable for systems which have defined a minimum of 40 duplex system access channels.

Measurement procedure:

For devices without LIC procedure:
For a not or defined interfered band the system will initiate a connection on channel with the lowest level. After that interferer level on this channel will be increased by 1dB steps, until a new connection on an other channel will established. The related interferer level represents the measured lower threshold.

For devices supporting LIC (least interferer channel) procedure:
Except of two channels (f_1; f_2) all other channels are blocked by interferers at levels of 26 dB above the lower limit. Then interferers apply to f_1 and f_2 with dedicated levels related to calculated lower threshold according to Revision Draft ANSI 63.17 sub-clause 7.3.3, check the behavior and repeat each test case 5 times. If the behavior is correct all times, the test is passed.

Upper threshold (for > 40 channels):
An interferer level of about 16 dB above calculated upper threshold is applicable on all system carriers. The interference level is uniformly decreased on all carriers until the EUT starts to transmit. This level is upper threshold.

Results:

Least interfered channel	pass
Lower threshold [dBm]	n.a.
Upper threshold [dBm]	-63.0

For measurements diagrams see Annex F.

Limits:

Used results	Emission bandwidth [MHz]	1.46
	Peak transmit power [dBm]	20.32
Limits	Lower threshold [dBm] + 6 dB margin	≤ - 81.9 … - 75.9
	Upper threshold [dBm] + 6 dB margin	≤ - 61.9 … - 55.9

3.1.13 Monitoring of intended transmit window and maximum reaction time, FCC 15.323 (c)(1); RSS–213 4.3.4 (b)(1)

Immediately prior to initiating transmission, devices must monitor the combined time and spectrum window in which they intend to transmit. For a period of at least 10 milliseconds for systems designed to use a 10 millisecond or shorter frame period or at least 20 milliseconds for systems designed to use a 20 millisecond frame period.

Monitoring of intended transmit window is tested according to Revision Draft ANSI 63.7 sub-clause 7.5 using test set-up No. 2.
These tests are related to isochronous reaction time and monitoring interval.
The reaction time is the duration of the RF power, during the monitoring interval, that shall be detected by the device to determine that the monitored time and spectrum window is occupied.
The objective of the test is to demonstrate that the device defers use of a region of spectrum when the interfering signals are of a time duration that exceeds the allowed limit.
If the sample fulfills the requirements of reaction time it shows that it has monitored the intended transmit window.

Test c:

With the channel interferer level at the calculated threshold limit, plus a 6 dB margin verify that the EUT does not establish a connection when the width of the interference pulse exceeds the largest of 50 µs and 50 √1.25/B µs.

B-Emission bandwidth of EUT in MHz

Test d:

With the channel interferer set to a level that is 6 dB above the calculated threshold limit, plus a 6 dB margin, verify that no connection occurs with a interference pulse width which exceeds the largest of 35 µs and 35√ 1.25/B µs.

Results:

Pulse width	Connection	
	F_L	F_U
50 µs or 50 √ 1.25/B µs	no	no
35 µs or 35 √ 1.25/B µs	no	no

For measurements diagrams see Annex G.

Verdict:

Pass	Fail
☒	☐

Calculation of applied pulse width and maximum reaction time:
For Emission bandwidth > 1,25 MHz the pulse width is always 35 µs and 50 µs

Used results	Emission bandwidth [MHz]	e.g. 1.434
Max. reaction time and Pulse width	50 √ 1.25/B µs.	46.68
	35 √ 1.25/B µs	32.67

3.1.14 Monitoring bandwidth, Monitoring reaction time, FCC 15.323 (c)(7); RSS–213, 4.3.4 (b)(7)

Monitoring bandwidth is measured according to Revision Draft ANSI 63.17 sub-clause 7.4.1. using test set-up No. 2.

Test procedure:

Center the interfering signal at a frequency above the center of the emission of the EUT, separated by 30% of the emission bandwidth of the EUT, at a level that is 10 dB + U_M above the appropriate threshold limit. The bandwidth of the interfering signal shall be equal to or greater than the minimum emission bandwidth allowed for the sub-band. It shall be verified that the EUT does not establish a connection. The procedure is repeated with the interference centered at a frequency below the center of the emission of the EUT, separated by 30% of the emission bandwidth of the EUT, at a level that is 10 dB + U_M above the appropriate threshold limit. It shall be verified that the EUT does not establish a connection.

Results:

Interferer level [dBm]		- 51.9
Test frequency	Interferer frequency	Connection
F_L	F_L - 30 % BW	no
	F_L + 30 % BW	no
F_U	F_U - 30% BW	no
	F_U + 30 % BW	no

For measurements diagrams see Annex H.

Verdict:

Pass	Fail
☒	☐

3.1.15 Random waiting interval, FCC 15.323 (c)(6); RSS–213, 4.3.4 (b)(6)

If the selected combined time and spectrum windows are unavailable, the device may either monitor and select different windows or seek to use the same window after waiting an amount of time, randomly chosen from a uniform random distribution between 10 and 150 milliseconds, commencing when the channel becomes available.

Random waiting interval is considered according ANSI 63.17 sub-clause 8.1.3.
This test applies to an EUT capable of transmitting control and signaling information on its own without companion device.

It is measured the time interval between the end of the EUT transmission and the beginning of transmission by the EUT in the same time and spectrum window..
Test set-up No. 1 is used.

Comment: This test is not applicable for this EUT.

Test procedure: ANSI 63.17 Sub-clause 8.1

3.1.16 Duration of Transmission, FCC 15.323 (c)(3); RSS–213 4.3.4 (b)(3)

If no signal above the threshold level is detected, transmission may commence and continue with the same emission bandwidth in the monitored time and spectrum windows without further monitoring. However, occupation of the same combined time and spectrum window by a device or group of cooperating devices continuously over a period of time longer than 8 hours is not permitted without repeating the access criteria.

Duration of Transmission (Maximum transmit period) is measured according to Revision Draft ANSI 63.17 sub-clause 8.2.2 using test set-up No. 1.

Comment: For DECT based technology the PP is the initiating device and determines duration of transmission. The fix part follows the portable part.

Result:

Maximum transmission time	4 h

For measurements diagrams see Annex I.

Limit:

Maximum transmission time [h]	< 8

Verdict:

Pass	Fail
☒	☐

3.1.17 Connection acknowledgements, Unacknowledged transmissions FCC 15.323 (c)(4); RSS-213 4.3.4 (b)(4)

Once access to specific combined time and spectrum windows is obtained an acknowledgement from a system participant must be received by the initiating transmitter within one second or transmission must cease. Periodic acknowledgements must be received at least every 30 seconds or transmission must cease. Channels used exclusively for control and signaling information may transmit continuously for 30 seconds without receiving an acknowledgement, at which time the access criteria must be repeated.

Connection acknowledgements are tested according to Revision Draft ANSI 63.17 sub-clause 8.2.1, Unacknowledged transmission following sub clause 8.1.1. Access criteria test interval and 8.1.2 Access criteria functional test. subclause 8.1.3 Access criteria functional test is not applicable because option FCC 15.323 (c)(6) /RSS-213 4.3.4 (b)(6) is not implemented.

Unacknowledged transmission:

Results:

Requirement	Time	Verdict
Access criteria test interval (8.1.1)	--	n.a.
Access criteria functional test (8.1.2)	--	n.a.

Limits:

Requirement	Value
Access criteria test interval (8.1.1)	≤ 30 s
Access criteria functional test (8.1.2)	mandatory

Connection acknowledgement

Results:

Requirement	Time	Verdict
Connection acknowledgement [8.2.1 (a)(b)] PP only	612 ms	pass
Termination of transmission [8.2.1 (c)]	5 s	pass

Limits:

Requirement	Value
Connection acknowledgement [8.2.1 (a)(b)] PP only	≤ 1 s
Termination of transmission [8.2.1 (c)]	≤ 30 s

For measurements diagrams see Annex J.

3.1.18 Selected channel confirmation, segment occupancy, FCC 15.323 (c)(5); RSS–213 4.3.4 (b)(5)

If a minimum of 40 duplex system access channels are defined, the system must have monitored all access channels defined for its system within the last 10 seconds and must verify, within the 20 milliseconds (40 milliseconds for devices designed to use a 20 milliseconds frame period) immediately preceding actual channel access that the detected power of the selected time and spectrum windows is no higher than the previously detected value.
The power measurement resolution for this comparison must be accurate within 6 dB.
No device or group of co-operating devices located within 1 meter of each other shall during any frame period occupy more than 6 MHz of aggregate bandwidth, or alternatively, more than one third of the time and spectrum windows defined by the system.

Selected channel confirmation:

This test is done according to Revision Draft ANSI 63.17 sub-clause 7.3.4 using test set-up No. 2.

Results:

Test	Transmit on f_1	Transmit on f_2	Verdict
c	yes	no	pass

Power accuracy

The power measurement resolution for the previous comparisons must be accurate to within 6 dB.
This requirement was proved automatically by testing of monitoring thresholds according to FCC 15.323 (c)(2); RSS-213 4.3.4 (b)(2), see 2.4.12.

Segment occupancy

Document	available	sufficient
Manufacturers declaration	☒	☒
Technical description	☐	☐

For measurements diagrams see Annex K.

3.1.19 Monitoring antenna, FCC 15.323 (c)(8); RSS–213 4.3.4 (b)(8)

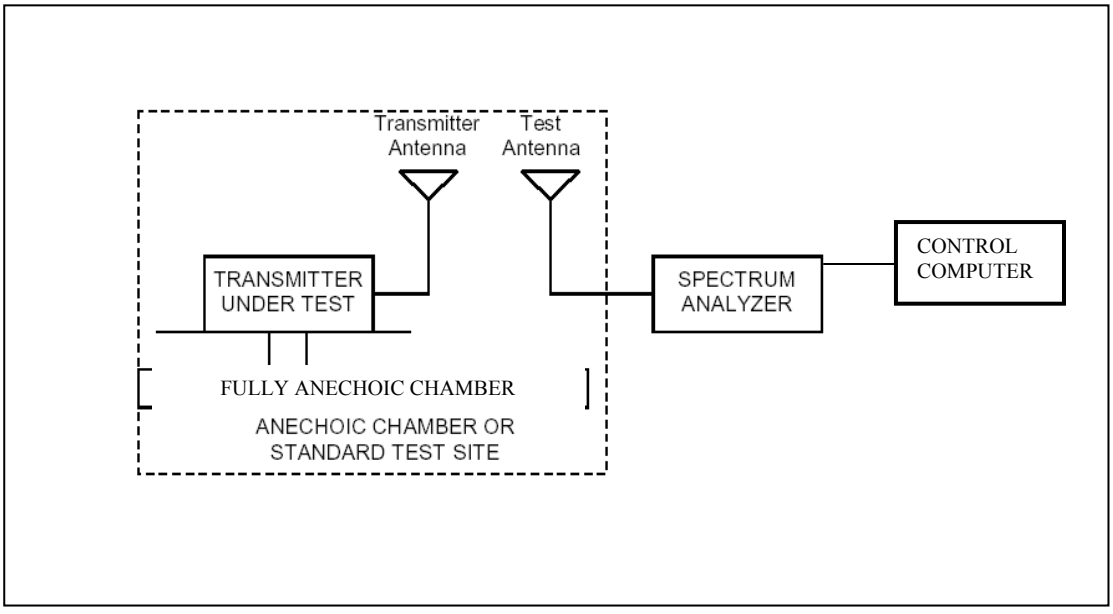
The monitoring system shall use the same antenna used for transmission, or an antenna that yields equivalent reception at that location.

The monitoring system shall use the same antenna used for transmission or an antenna that yields equivalent reception at that location.

System uses same antenna(s)	☒
System uses different antenna(s)	☐

If the monitoring antenna is different from the transmitting antenna, it shall be verified that the monitoring antenna provides coverage equivalent to that of the transmitting antenna.

The related tests are to perform according to Revision Draft ANSI 63.17 sub-clause 4.5 using test set-up No. 3.



Test set-up 3 Equipment configuration for radiated tests

Test equipment used: ETS 0012, ETS 0013, ETS 0014, ETS 0031, ETS 0253, ETS 0310

3.1.20 Duplex connections, FCC 15.323 (c)(10); RSS-213 4.3.4 (b)(10)

An initiating device may attempt to establish a duplex connection by monitoring both its intended transmit and receive time spectrum windows. If both the intended transmit and receive time and spectrum window meet the access criteria, then the initiating device can initiate a transmission in the intended transmit time and spectrum window. If the power detected by the responding device can be decoded as a duplex connection signal from the initiating device, then the responding device may immediately begin transmitting on the receive time and spectrum window monitored by the initiating device.

This test verifies that the two devices communicating over a duplex connection comply with the access criteria. The Initiating device is the EUT, the responding device is the companion device tested in conjunction with the EUT.

The EUT is a responding device Therefore these tests are not applicable	☐
The EUT do not implement upper threshold. ANSI 63.17 8.3.1 is applicable	☐
The EUT implements upper threshold. ANSI 63.17 8.3.2 is applicable	☒

Tests according to subclause 8.3.1 “Validation of dual access criteria check for EUTs which do not implement the upper threshold”:

Test b)
The test proves the basic conditions for the following tests. The out-of-operating-region interference is used to confine the EUT to the band.

Test c) and d)
These tests proves whether a connection can be established with interferences levels of $T_L + U_M$ on all if its receive time/spectrum windows except one which is interference free.

Apply interference at $T_L + U_M$ on all transmit time/spectrum windows of the EUT.
If a connection is established the test fails.

Test e) and f)
These tests proves whether a connection can be established with interferences levels of $T_L + U_M$ on all if its transmit time/spectrum windows except one which is interference free.
Apply interference at $T_L + U_M$ on all receive time/spectrum windows of the EUT.
If a connection is established the test fails.

Tests according to subclause 8.3.2 “Validation of dual access criteria check for EUTs which implement the upper threshold”:

Test b)
The test proves the basic conditions for the following tests. The out-of-operating-region interference is used to confine the EUT to the band.

Test c) and d)

Apply interferences of T_L + U_M to the EUT on the EUTs transmit time/ spectrum windows except for one which is free of interferences. Apply interferences of T_L + U_M + 7 dB to the receive time/spectrum windows except for one which is free of interferences. The interference-free receive time/spectrum window must not be the duplex mate of the interference-free transmit time/spectrum window. The connection should be made on the interference-free time/spectrum window and its duplex mate.

Test e) and f)

Apply interferences of T_L + U_M to the EUT on the EUTs receive time/spectrum windows except one which is free of interferences. Apply interferences of T_L +U_M +7dB to the transmit time/spectrum windows except one which is free of interferences. The interference-free time/spectrum windows should not constitute a duplex pair.

The connection should be made on the interference free transmit time/spectrum window and its duplex mate.

Test g)

Raise the interferences to the EUT on all of the EUTs transmit and receive time/spectrum windows to T_U+U_M except for a single transmit time/spectrum window and a single transmit time/spectrum window and a single receive time/spectrum window which shall have low interference levels.

These low-interference level time/spectrum windows shall not constitute a duplex pair. If the EUT transmits or a connection is established, the test is failed.

Test		applicable	Connection	No connection	verdict
8.3.1	c) and d)	☐	☐	☐	n.a.
	e) and f)	☐	☐	☐	n.a.
8.3.2	c) and d)	☒	☒	☐	pass
	e) and f)	☒	☒	☐	pass
	g)	☒	☐	☒	pass

Comment: For DECT based technology the PP is the initiating device and determines duplex connections.
The fix part is the responding device and follows the initiating device in its functions.

For measurements diagrams see Annex L.

3.1.21 Alternative monitoring interval for co-located devices, FCC 15.323 (c)(11); RSS–213 4.3.4 (b)(11)

An initiating device that is prevented from monitoring during its intended transmit window due to monitoring system blocking from the transmissions of a co-located (within one meter) transmitter of the same system, may monitor the portions of the time and spectrum windows in which they intend to receive over a period of at least 10 milliseconds. The monitored time and spectrum window must total at least 50 percent of the 10 millisecond frame interval and the monitored spectrum must be within 1.25 MHz of the center frequency of channel(s) already occupied by that device or
co-located co-operating device. If the access criteria is met for the intended receive time and spectrum window under the above conditions, then transmission in the intended transmit window by the initiating device may commence.

Alternative monitoring interval for co-located devices may be tested according Revision Draft ANSI 63.17 sub-clause 8.4 using test set-up No. 2.

Results.

The manufacturer declares that this provision is not utilized by the EUT.

3.1.22 Fair access to spectrum related to (c)(10) and (c)(11), FCC 15.323 (c)(12); RSS–213 4.3.4 (b)(12)

The provisions of FCC 15.323 (c)(10) or (c)(11) and RSS–213 4.3.4 (b)(10) or (11) shall not be used to extend the range of spectrum occupied over space or time for the purpose of denying fair access to spectrum for other devices.

The manufacturer declares that is device does not work in a mode which denies fair access to spectrum for other participants.

3.1.23 Emissions inside and outside the sub-bands, FCC 15.323 (d); RSS–213 6.7

Emissions outside the sub-bands shall be attenuated below a reference power of 112 milliwats as follows: 30 dB between the sub-band and 1.25 MHz above or below the sub-band, (-9.5 dBm); 50 dB between 1.25 and 2.5 MHz above or below the sub-band, (-29,5 dBm); and 60 dB at 2.5 MHz or greater above or below the sub-band, (-39.5 dBm)

Emissions inside the sub-band must comply with the following emission mask: In the bands between 1B and 2B ("B" is defined as the emission bandwidth of the device in hertz) measured from the center of the emission bandwidth the total power emitted by the device shall be at least 50 dB below the transmit power permitted for that radiator; in the bands between 3B and the sub-band edge the total power emitted by an intentional radiator in the measurement bandwidth shall be at least 60 dB below the transmit power permitted for that radiator.

Compliance with the emission limits is based on the use of measurement instrumentation employing peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

Emission inside and outside the sub-band are tested according to ANSI 63.17 sub-clauses 6.1.6.1 and 6.1.6.2.

Determination of measurement bandwidth:

BT_T = approx. 1% of B

Used results	Emission bandwidth [MHz]	1.46
Calculated value	Resolution bandwidth [kHz]	14.6
Determined value	Resolution bandwidth [kHz]	10

Emissions inside the sub-band

Testing of emissions inside the sub-band are performed using test set-up No.1.
The applied emission mask limit was created using the current emission bandwidth.

Emissions outside the sub-band

Out of sub band emissions are tested as radiated measurement bandwidth of about 1% of emission bandwidth near the band edges and at critical frequencies where the measurement values come near the limits. For practical reasons other frequencies the more stringent bandwidth of 100 kHz is used.
As test environment serves a fully anechoic chamber providing a free space environment (test set-up No. 3)

All results will be updated by an automatic measuring system in accordance with point 2.3.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The significant peak and average values are listed in the tables below showing the compliance with the above calculated limits. For frequency ranges with measurement value far below the limits no measurement diagrams are shown.

Summary table with radiated data of the test plots

Freq.	Used Ch.	Frequency Marker [GHz]	Polari-zation	Δ corrections dB	Max. Power level [dBm]	Compliance Limit [dBm]	Detec-tor	BW [kHz]	Margin [dB]
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

Freq. – Frequency Range:

1: 30 – 200 MHz
2: 200 – 1000 MHz
3: 1 – 4 GHz
4: 4 – 8 GHz
5: 8 – 12 GHz
6: 12 – 17 GHz
7: 17 – 26.5 GHz

For measurement results see diagrams in Annex M.

Limits:

For spectrum mask and limit lines see diagrams.

Verdict:

Pass	Fail
☒	☐

3.1.24 Frame period, FCC 15.323 (e); RSS-213 4.3.4 (c)

The frame period (a set of consecutive time slots in which the position of each time slot can be identified by reference to a synchronizing source) of an intentional radiator operating in these subbands shall be 20 milliseconds/X where x is a positive whole number. Each device that implements time division for the purposes of maintaining a duplex connection on a given frequency carrier shall maintain a frame repetition rate with a frequency stability of at least 50 parts per millions (ppm). Each devices which further divides access in time in order to support multiple communication links on a given frequency carrier shall maintain a frame repetition rate with a frequency stability of at least 10 ppm. The jitter (time-related, abrupt, spurious variations in the duration of the frame interval) introduced at the two ends of such a communication link shall not exceed 25 microseconds for any two consecutive transmissions.
Transmissions shall be continuous in every time and spectrum window during the frame period defined for the device.

Frame repetition stability is tested according to Revision Draft ANSI 63.17 sub-clause 6.2.2. Frame period and jitter are tested following sub-clause 6.2.3. For all measurements test set-up No.1 is used.

Frame repetition stability:

The spectrum analyzer is used as an envelope detector and provides gating signals to a frequency counter.
The obtained frequency values are computed to get mean value, deviation and frame repetition stability. Frame repetition stability is three times of the standard deviation SD.

Results:

Frequency (MHz)	Standard Deviation	Mean(Hz)	3 x SD (ppm)
1924.992	0.000018	100.000037	0.548872

Limits:

Time division mode	Frame repetition stability	applicable
TDA	50 ppm	☐
TDMA	10 ppm	☒

Verdict:

Pass	Fail
☒	☐

Frame period and jitter:

Frame period and jitter test the spectrum and modulation is used to obtain the time duration between rising edges. These measurement value are used to compute the difference between any two consecutive frame periods (jitter).
The measured mean time is the frame period.

Results:

Frequency (MHz)	Mean (ms)	Deviation (Hz)	Peak to Peak (µs)
1924.992	9.998791	0.000148	1.802109

For measurement results see diagrams in Annex N.

Limits:

Frame period [ms]	20 or 10/x
Max. jitter [µs]	25
3 times the standard deviation SD [µs] value of jitter [2)]	12.5

[2)] This item is not required by FCC 15.323(e).

Verdict:

Pass	Fail
☒	☐

3.1.25 Frequency stability, FCC 15.323 (f); RSS – 213 6.2

The frequency stability of the carrier frequency of the intentional radiator shall be maintained within ± 10 ppm over 1 hour or the interval between channel access monitoring, whichever is shorter. The frequency stability shall be maintained over a temperature variation of -20° to +50 ° degrees C at normal supply voltage, and over a variation in the primary supply voltage of 85 percent to 115 percent of the rated supply voltage at a temperature of 20°C. 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 requirements to vary supply voltage.

Frequency stability is measured by spectrum analyzer in modulation mode according to Revision Draft ANSI 63.17 sub-clause 6.2.1.
The procedure is carried out with conditions shown in result table below, where the first row shows the carrier frequency stability over time.

Results:

Temp °C	Supply Voltage	Frequency of carrier (MHz)	Stability over time f_{max} (ppm)	Stability over time f_{min} (ppm)	Mean (MHz)	Stability (ppm)
25	Vnom	1924.991678	0.85	0.59	1924.991678	Reference
0	Vnom	1924.991678	0.89	0.80	1924.991740	0.03
40	Vnom	1924.991678	1.03	1.06	1924.991491	0.10

Limit : 10 ppm

$$Deviation\ ppm = \frac{FR - FM}{FR} * 10^6 \quad 69$$

FR = Reference frequency of carrier at 20°C and V_{nom}

FM = Measured frequency of carrier

For measurement results see diagrams in Annex O.

Limit:

Temperature [°C]	Supply voltage	Frequency deviation [ppm]
25	85-115% or new batteries	Reference
-25	Normal	10
+50	Normal	10
Others [1] 0	Normal	10
Others [1] +40	Normal	10

[1] declared by manufacturer

Verdict:

Pass	Fail
☒	☐

3.1.26 Receiver spurious emissions, RSS-213 6.8

Receiver spurious emissions shall comply with the limits specified in RSS-Gen.
For radiated measurements the resolution bandwidth of the spectrum analyzer shall be 100 kHz for spurious emissions below 1 GHz and 1 MHz above 1 GHz. For emissions below 1 GHz a CISPR quasi peak demodulator is used. Above 1 GHz an average detector is used.
The receiver operating frequency shall be putted to the middle of the band for this test.

Results:

Device Frequency	Frequency marker indication [MHz]	Antenna polarization	Worst case emission level [µV/m]	Compliance limit [µV/m]	Results [µV/M]
Flex Antenna 1	195,571	V	46,29	150	-103,71
	198,978	H	44,57	150	-105,43
	993,587	V	13,00	500	-487,00
	456,513	H	19,41	200	-180,59
	3916,000	V	191,65	500	-308,35
	3958,000	H	187,93	500	-312,07
	7671,000	V	211,59	500	-288,41
	7495,000	H	196,34	500	-303,66
Flex Antenna 2	198,297	V	49,66	150	-100,34
	188,758	H	46,99	150	-103,01
	991,984	V	12,96	500	-487,04
	456,513	H	18,86	200	-181,14
	3820,000	V	180,51	500	-319,49
	3940,000	H	192,97	500	-307,03
	7952,000	V	206,06	500	-293,94
	8000,000	H	200,45	500	-299,55
Duo	194,208	V	46,67	150	-103,33
	196,934	H	49,55	150	-100,45
	996,794	V	16,67	500	-483,33
	996,794	H	23,77	500	-476,23
	3964,000	V	160,14	500	-339,86
	3862,000	H	161,62	500	-338,38
	7984,000	V	310,10	500	-189,90
	7655,000	H	291,07	500	-208,93

Device Frequency	Frequency marker indication [MHz]	Antenna polarization	Worst case emission level [µV/m]	Compliance limit [µV/m]	Results [µV/M]
Micro	200,000	V	44,82	150	-105,18
	189,780	H	47,32	150	-102,68
	988,778	V	14,62	500	-485,38
	663,327	H	27,64	200	-172,36
	3880,000	V	163,68	500	-336,32
	3928,000	H	159,22	500	-340,78
	7888,000	V	282,16	500	-217,84
	7960,000	H	269,46	500	-230,54
Midi	190,461	V	43,75	150	-106,25
	194,549	H	46,08	150	-103,92
	996,794	V	15,96	500	-484,04
	996,794	H	20,25	200	-179,75
	3922,000	V	152,41	500	-347,59
	3922,000	H	152,41	500	-347,59
	7968,000	V	281,84	500	-218,16
	7960,000	H	321,00	500	-179,00
	190,461	V	43,75	150	-106,25

Freq. – Frequency Range:

1: 30 – 200 MHz
2: 200 – 1000 MHz
3: 1 – 4 GHz
4: 4 – 8 GHz

For results see diagrams in Annex P.

Limit:

Spurious Frequency (MHz)	Field Strength (microvolt/m at 3 metres)	dBµV/m
30 – 88	100	40
88 – 216	150	43.5
216 – 960	200	46
Above 960	500	54

Verdict:

Pass	Fail
☒	☐

Annex

A	**Pictures**	**14 Pages**
B	**Conducted limits AC Power line**	**3 pages**
C	**Emission bandwidth**	**9 pages**
D	**Peak Transmit Power**	**3 pages**
E	**Power spectral density**	**3 pages**
F	**Monitoring threshold**	**5 pages**
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M	**Emissions inside and outside the sub-band**	**152 pages**
N	**Frame period**	**2 pages**
O	**Frequency stability**	**3 pages**
P	**Receiver spurious emissions**	**46 pages**