

EUROFINS PRODUCT SERVICE GMBH



TEST - REPORT

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

FCC ID:UTCAP300E-001 IC: 140Q-AP300E01

IP-DECT access point AP300E

Test report no.:G0M21007-3464-C-1_rev01



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1 General Information

1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

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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 are performed for each individual configuration.

This report relates to FCC-Part15B applied on UPCS devices with the technology which is derived from the DECT standard.

Additionally this report covers the requirements of RSS-213 (2GHz Licence-exempt Personal Communications Services Devices (LE-PCS)), released by Industry Canada (IC). In the following the term UPCS covers therefore also LE-PCS.

Operator:				
02.09.2010		W. Treffke	W. Treff	
Date	Eurofins Lab.	Name	Signature	
Technical respo	onsibility for area	of testing:		
02.09.2010		T. Jahn	T. T.	
Date	Eurofins	Name	Signature	



1.2 Testing laboratory

1.2.1 Location

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Germany

Telefon: +49 33631 888 00 Telefax: +49 33631 888 66

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 : NEC Unified Solutions Nederland B.V.

Street : Anton Philipsweg 1
Town : 1223 KZ Hilversum
Country : Netherlands
Telephone : +31 35 689 1137

Contact : Mr. Federico Dosil Telephone : +31 35 689 1137

E-mail : federico.dosil@nec-unified.com



1.4 Application details

Date of receipt of application : 29.07.2010
Date of receipt of test item : 29.07.2010

Date of test : 29.07.2010 - 30.07.2010

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 : IP-DECT access point

Type identification : AP300E

Serial number : SO06400122

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 _H	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



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Max. s	lot type:			I 5			
			single slot double slot		\subseteq		
						<u></u>	
ן Fixed	ooint-to-poin	t operation: Yes/	<u>No</u>				
	Antenna	-	Туре	Gain [dBi	i]	internal	external
	1		ctional antenna C-DECTKIT	8dBi			
Antenr	na diversity	:					
		Antonna		Diversity su	ıpported		
		Antenna	Tx			Rx	
		1	\boxtimes			\boxtimes	
	L			L			
Host d		: none					
Classif	ication	: related t	o radio frequency	radiation exp	oosure		
			Fixed Device	Э			
		Mobile Dev	ice (Human Body	distance > 20	0cm)		
		Portable Dev	vice (Human Body	/ distance < 2	20cm)		
Power	supply	: 48VDC \	via external Powe	r Over Etherr	net powe	r supply	
Data c	onnection	:					
		Connection				used	
		None					
		PSTN					
		Data Networks					
		others					

Manufacturer: (if applicable)

Name : NEC Unified Solutions Nederland B.V.

Street : Anton Philipsweg 1
Town : 1223 KZ Hilversum

Country : Netherlands

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 C63.17-2006

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.

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 3.0 were ascertained in the course of the tests performed.	

2.2 Test environment

Temperature : 23°C

Relative humidity content : 20 ... 75 %

Air pressure : 86 ... 103 kPa

Details of power supply : 48VDC via external Power Over Ethernet power supply

Extreme conditions parameters: : test voltage - extreme min : 36VDC

(manufacturer declaration) max: 57VDC

temperatures – extreme min: 0°C ¹⁾

max: 50°C 1)

Remarks: 1) declared by manufacturer



2.3 Test equipment utilized

No.	Test equipment	Туре	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



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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	15 210 (i)	RSS - 102	×		×	
exposure	15.319 (i)	Gen 5.5	A	Ц	E.	
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)	X		×	
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)	×	X		
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)	×	X		
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	×		×	

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3.1 Examinations and Test Procedures

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

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 Annex	
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.

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

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBuV)		
	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 external antenna.	
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.

Even slot

f _x = 1921.54 MHz					
Δ P $f_{(low)}$ $f_{(high)}$ $\Delta f = f_{(high)} - f_{(low)}$					
-26	1920.854	1922.284	1.43		
-12	1920.970	1922.164	1.19		
-6	1921.154	1922.036	0.88		

f _x = 1928.45 MHz					
Δ P $f_{(low)}$ $f_{(high)}$ $\Delta f = f_{(high)} - f_{(low)}$					
-26	1927.770	1929.200	1.43		
-12	1927.886	1929.088	1.20		
-6	1928.062	1928.948	0.88		

Odd slot

f _x = 1921.54 MHz					
Δ P $f_{(low)}$ $f_{(high)}$ $\Delta f = f_{(high)} - f_{(low)}$					
-26	1920.842	1922.274	1.43		
-12	1920.962	1922.136	1.17		
-6	1921.072	1922.052	0.98		

f _x = 1928.45 MHz					
Δ P $f_{(low)}$ $f_{(high)}$ $\Delta f = f_{(high)} - f_{(low)}$					
-26	1927.776	1929.192	1.42		
-12	1927.882	1929.068	1.19		
-6	1928.066	1928.864	0.80		



Occupied Bandwidth (99%) - RSS Gen

Test conditions		Channel 4	Channel 2	Channel 0
		MHz	MHz	MHz
T _{nom} = 23 ° C V _{nom} = 48 V	Even slot	1.232	1.232	1.240
$T_{\text{nom}} = 23 ^{\circ} \text{C}$ $V_{\text{nom}} = 48 ^{\circ} \text{V}$	Odd slot	1.248	1.232	1.232
Measurement uncertainty		< 10 Hz		

Limit:

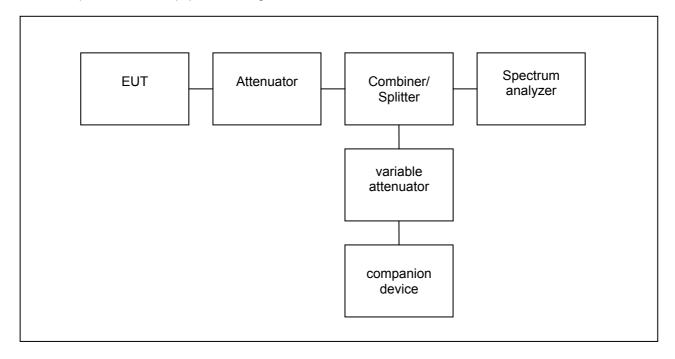
Δf_{min} (-26dB)	>	50 KHz	
Δf_{max} (-26dB)	<	2.5 MHz	

Verdict:

Pass	Fail



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



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 = 100μW x
$$\sqrt{\text{EBW}}$$

when G_A ≤ g PTP = 100μW x $\sqrt{\text{EBW}}$ – (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.

Even slot

Frequency [MHz]	Power [dBm]		
	for V _{nom}	for V _{max}	for V _{min}
FL	15.57	15.57	15.57
F _H	15.58	15.61	15.61

Odd slot

Francisco (MIII-1	Power [dBm]		
Frequency [MHz]	for V _{nom}	for V _{max}	for V_{min}
FL	15.32	15.32	15.32
F _H	15.29	15.29	15.30



Limit:

EBW [MHz]	Max. power [dBm]	Corrected by antenna gain > 3 dBi
1.43	20.77	15.77

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.

Resul	lts:

Even slot

Frequency [MHz]	Power density [mW/3kHz]
F_L	0.1478
F _H	0.3599

Odd slot

Frequency [MHz]	Power density [mW/3kHz]
F_L	0.3161
F _H	0.3447

Limit:

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

Verdict:

Pass	Fail
\boxtimes	



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]
8.0dBi	5dBi

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)	\boxtimes	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	В	Pass
2	Hook-on by counterpart	В	Pass
3	Switch- off by EUT	Α	Pass
4	Hook -on on EUT side	n.a.	
5	Remove power from EUT	Α	Pass
6	Remove power from counterpart	В	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: not applicable

MPE calculation:

Please find radiated power test results in Annex.

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:

 $S = EIRP / 4\pi R^2$

Calculation:

EIRP Radiated Power [dBm]		23.67
EIRP	Radiated Power [mW]	232.809
R	Distance [cm]	20
S	Power Density [mW/cm ²]	0.05

Limit:

The limit of Power density for General Population / Uncontrolled Exposure is 1.0 mW/cm². 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)

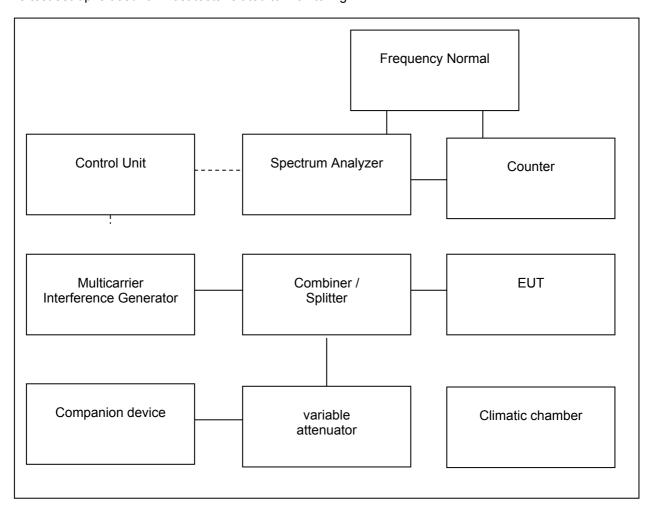
The lower monitoring threshold for EUTs without LIC procedure (least interfered channel) must not be more than 30 dB above the thermal noise power for a bandwidth equivalent to the emission bandwidth of the device.

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 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

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:

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

Upper threshold:

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

B= emission bandwidth (Hz) }

} measured values

P = transmitted power (dBm) }

calculated thresholds:

lower threshold [dBm]	-82.4
upper threshold [dBm]	-62.4

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 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]	-67

For measurements diagrams see Annex.

Limits:

Used results	Emission bandwidth [MHz]	1.43
Osed results	Peak transmit power [dBm]	15.67
Limits	Lower threshold [dBm] + 6 dB margin	≤ -82.4 76.4
Liiilits	Upper threshold [dBm] + 6 dB margin	≤ -62.4 56.4



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 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 μ s and 50 $\sqrt{1.25/B}$ μ s.

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 μ s and 35 $\sqrt{1.25/B}$ μ s.

Results:

Pulse width	Connection	
	F∟	Fυ
50 μs or 50 √ 1.25/B μs	no	no
35 μs or 35 √ 1.25/B μs	no	no

Verdict:

Pass	Fail



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

Used results	Emission bandwidth [MHz]	e.g. 1.434
Max. reaction time and	50 √ 1.25/B μs.	46.68
Pulse width	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 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]		-57
Test frequency	Interferer frequency	Connection
Е	F _L - 30 % BW	no
F _L	F _L + 30 % BW	no
_	F _U - 30% BW	no
F_{U}	F _U + 30 % BW	no

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 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 [min] -
Limit:

Maximum transmission time [h] < 8

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 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)	180ms	Pass
Access criteria functional test (8.1.2)	840 µs	Pass

Limits:

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

Connection acknowledgement

Results: For measurements diagrams see Annex.

Requirement	Time	Verdict
Connection acknowledgement [8.2.1 (a)(b)] PP only	-1	n.a.
Termination of transmission [8.2.1 (c)]	6.0 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

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 ANSI 63.17 sub-clause 7.3.4 using test set-up No. 2.

Results:

Test	Transmit on f₁	Transmit on f ₂	Verdict	
С	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	\boxtimes	
Technical description		



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

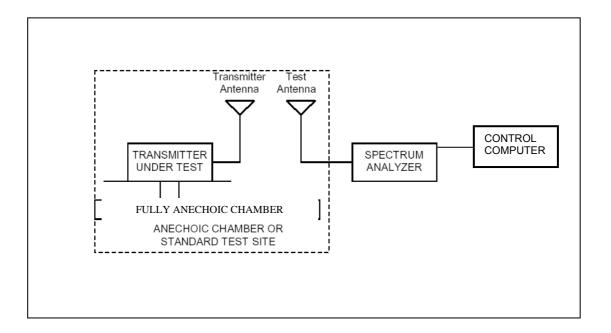
The monitoring system shall use the same antenna used for transmission, or an antenna that yields equivalent reception at that location.

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)	\boxtimes
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 ANSI 63.17 sub-clause 4.5 using test set-up No. 3.



Test set-up 3 Equipment configuration for radiated tests



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 $\underline{\text{do not}}$ 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 <u>transmit</u> time/spectrum windows except one which is interference free.

Apply interference at $T_L + U_M$ on all <u>receive</u> 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 $\underline{transmit}$ time/ spectrum windows except for one which is free of interferences. Apply interferences of $T_L + U_M + 7$ dB to the $\underline{receive}$ time/spectrum windows except for one which is free of interferences. The interference-free $\underline{receive}$ time/spectrum window must not be the duplex mate of the interference-free $\underline{transmit}$ 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 <u>receive</u> time/spectrum windows except one which is free of interferences. Apply interferences of $T_L + U_M + 7dB$ to the <u>transmit</u> 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 <u>transmit</u> 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)				n.a.
	e) and f)				n.a.
	g)				n.a.

Comment: For DECT based technology the PP is the initiating device and determines duplex connections.



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 to ANSI 63.17 subclause 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 Radiated spurious emissions, generally requirements

Reference

FCC	CFR part 15.247(d), 15.205. 15.209, 15.35
IC	RSS-210 A8.5, RSS-210 2.7

Method of measurement

Spurious emission was measured with modulation (declared by manufacturer).

According to 47 CFR 15, Part 15.247 (d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Calculation of Limit:

required.

All results are updated by an automatic measuring system in accordance to point 2.3

Limit = max. reading (because peak detector is used)

Limit = Max. reading - 20 dB (because average detector is used)

Limits for restricted bands

		ut power, emissions which f) must comply the following limi		
	Frequency of emission	Field strength	Field strength	
	[MHz]	[μV / m]	[dB _µ V / m]	
FCC & IC	30 - 88	100	40.0	
FCC & IC	88 - 216	150	43.5	
	216 - 960	200	46.0	
	Above 960	500	54.0	
	For frequencies above 1 G	Hz (Avg measurements): 54.0 (dBμV / m	
	For frequencies above 1 G	Hz (Pk measurements):		
	Limit + 20 dB = 54.0 dB μ V	$/ m + 20 dB = 74 dB\mu V / m$		

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results.

The peak and average spurious emission plots was measured with the average limits.

In the Table being listed the critical peak and average value an exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Marker-Delta-Method" or the "Duty-Cycle Correction Factor".

15.35 (c) Duty cycle correction average value

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.

Duty cycle correction = 20 log (dwell time / 100 ms or less)

DA 00-705 Duty cycle correction peak value

The analyzer setting was as following:

Eroguenov rongo	RES b	andwidth	Video bandwidth		
Frequency range	Pk	Avg	Pk	Avg	
f < 1GHz	100 kHz	100 kHz	10 Hz	10 Hz	
f > 1GHz	1 MHz	1 MHz	10 Hz	10 Hz	

Set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from 20 log (dwell time / 100 ms), in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

Test results Summary table with radiated data of the test plots - antenna 0 / even slot

Freq.	Used Ch.	Frequency Marker	Polari- zation	Δ corrections	Max. Power level [dBm]	Compliance Limit	Detec- tor	BW	<u>Margin</u>
		[GHz]		dB		[dBm]		[kHz]	[dB]
3	0/4	1.867	V		-47.83 dBm	-39.5 dBm	Р	100	<u>-1.51</u>
4	0/4	5.766	V		-48.11 dBm	-39.5 dBm	Р	10	<u>-0.76</u>
4	0/4	5.784	V		-45.55 dBm	-39.5 dBm	Р	10	<u>-7.45</u>
4	0/4	5.766	h		-48.37 dBm	-39.5 dBm	Р	10	<u>-4.42</u>
4	0/4	5.787	h		-51.18 dBm	-39.5 dBm	Р	10	<u>-6.91</u>
5	0/4	9.609	V		-46.19 dBm	-39.5 dBm	Р	10	<u>-4.80</u>



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5	0/4	9.644	V	-45.46 dBm	-39.5 dBm	10	
5	0/4	9.606	h	-44.84 dBm	-39.5 dBm	10	
5	0/4	9.640	h	-46.28 dBm	-39.5 dBm	10	
7	0/4	17.290	V	-46.75 dBm	-39.5 dBm	10	
7	0/4	17.353	V	-49.3 dBm	-39.5 dBm	10	

Summary table with radiated data of the test plots - antenna 1/ even slot

Freq.	Used Ch.	Frequency Marker	Polari- zation	Δ corrections	Max. Power level [dBm]	Compliance Limit	Detec- tor	BW	<u>Margin</u>
		[GHz]		dB		[dBm]		[MHz]	[dB]
3	0/4	1.867	٧		-47.39 dBm	-39.5 dBm	Р	100	
4	0/4	5.766	>		-47.9 dBm	-39.5 dBm	Р	10	
4	0/4	5.784	٧		-47.13 dBm	-39.5 dBm	Р	10	
4	0/4	5.763	h		-49.58 dBm	-39.5 dBm	Р	10	
4	0/4	5.787	h		-50.61 dBm	-39.5 dBm	Р	10	
5	0/4	9.609	v		-46.55 dBm	-39.5 dBm	Р	10	
5	0/4	9.644	٧		-49.84 dBm	-39.5 dBm	Р	10	
5	0/4	9.606	h		-44.12 dBm	-39.5 dBm	Р	10	
5	0/4	9.644	h		-43.48 dBm	-39.5 dBm	Р	10	
7	0/4	17.291	٧		-46.94 dBm	-39.5 dBm	Р	10	
7	0/4	17.359	٧		-45.63 dBm	-39.5 dBm	Р	10	

Summary table with radiated data of the test plots - antenna 0 / odd slot

Freq.	Used Ch.	Frequency Marker	Polari- zation	Δ corrections	Max. Power level [dBm]	Compliance Limit	Detec- tor	BW	<u>Margin</u>
		[GHz]		dB		[dBm]		[kHz]	[dB]
3	0/4	1.867	V		-47.37 dBm	-39.5 dBm	Р	100	
3	0/4	1.915	V		-47.29 dBm	-39.5 dBm	Р	100	
4	0/4	5.764	V		-47.16 dBm	-39.5 dBm	Р	10	
4	0/4	5.784	٧		-46.01 dBm	-39.5 dBm	Р	10	
4	0/4	5.763	h		-48.14 dBm	-39.5 dBm	Р	10	
4	0/4	5.784	h		-51.12 dBm	-39.5 dBm	Р	10	
5	0/4	9.607	V		-46.84 dBm	-39.5 dBm	Р	10	
5	0/4	9.641	V		-44.02 dBm	-39.5 dBm	Р	10	
5	0/4	9.606	h		-46.02 dBm	-39.5 dBm	Р	10	
5	0/4	9.641	h	_	-50.1 dBm	-39.5 dBm	Р	10	

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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

Comment: For measurements diagrams see Annex.



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]	1.43
Calculated value	Resolution bandwidth [kHz]	14.30
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.

For measurements diagrams see Annex.

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.

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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]	Δ corrections dB	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 measurements diagrams see Annex.

Limits:

For spectrum mask and limit lines see diagrams.

Verdict:

Pass	Fail
\boxtimes	

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 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 (Hz)	Mean(Hz)	3 x SD (ppm)
1924.992	4.0E-06	100.000023	0.124215

Limits:

Time division mode	Frame repetition stability	applicable
TDA	50 ppm	
TDMA	10 ppm	\boxtimes

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	Mean	Deviation	Peak to Peak	
(MHz)	(ms)	(Hz)	(μs)	
1924.992	9.999873	9.0E-06		

Limits:

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

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

Verdict:

Pass	Fail
\boxtimes	

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 \pm 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 ANSI 63.17 subclause 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 ov (ppm f _{max}		Mean (MHz)	Deviation ppm
20	Vnom	1925.018695	1.84	1.72	1925.018695	Reference
20	Vmin	1925.018695	1.91	1.26	1925.018638	0.03
20	Vmax	1925.018695	1.70	1.76	1925.018605	0.05
0	Vnom	1925.018695	2.68	2.37	1925.021058	-1.23
50	Vnom	1925.018695	1.32	2.49	1925.023567	-2.53

Limit: 10 ppm $Ppm = \frac{FR - FM}{FR} * 10^6$ g

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

FM = Measured frequency of carrier

Limit:

Temperature [°C]	Supply voltage	Frequency deviation [ppm]
20	85-115% or new batteries	Reference
-20	Normal	10
+50	Normal	10
Others 1)0	Normal	10
Others 1) +50	Normal	10

declared by manufacturer

Verdict:

Pass	Fail

Test Report No.: G0M21007-3464-C-1_rev01

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:

Summary table

Freq.	Frequency Marker [GHz]	Polari- zation	Δ corrections dB	Worst case emission level [μV/m]	Compliance Limit [μV/m]	<u>Margin</u> [μV/m]
	84,168	V		57,21	100	-42,79
	133,226	Н		67,45	150	-82,55
	666,533	V		90,26	200	-109,74
1924,992	666,533	Н		103,87	200	-96,13
1924,992	1198,000	V		481,39	500	-18,61
	1066,000	Н		244,62	500	-255,38
	7928,000	V		334,20	500	-165,80
	7960,000	Н		328,85	500	-171,15

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

For measurements diagrams see Annex.



Annex B Conducted limits AC Power line

EMI voltage test in the ac-mains according to FCC 15B

Order number: G0M21007-3464

Manufacturer: NEC Unified Solutions B.V. EUT Name: IP-DECT Access Point

Model: AP300E

Test Site: Eurofins Product Service GmbH

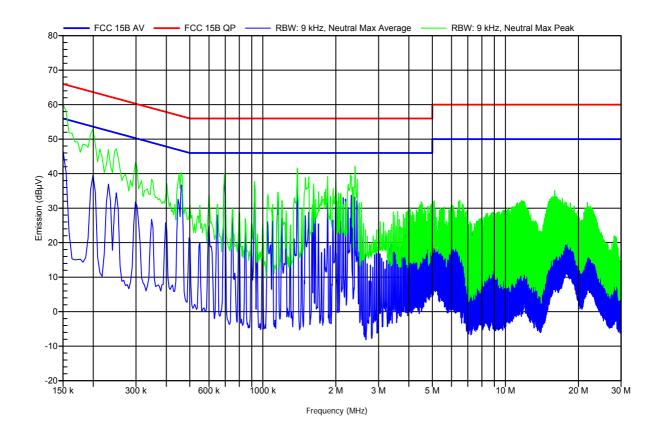
Operator: Mr. Marquardt

Test Conditions: Tnom: 23°C, Unom: 120VAC

LISN: ESH2-Z5 N/L

Mode: POE

Test Date: 30.07.2010



Annex C Emission bandwidth

FCC Part 15.303(b) Emission bandwidth

Testprocedure ANSI 63.17-2006 6.1.3 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

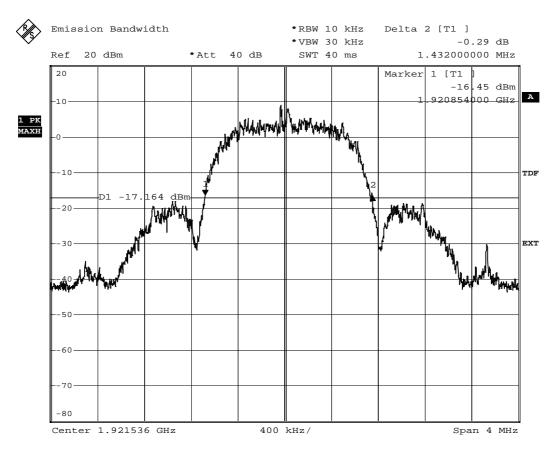
Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.3 Emission bandwidth / even slot

Measured Bandwidth Emission Bandwidth = 1.43MHz

Max. Permitted Power Limit = 2.5 MHz

Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.3
Date: 29.JUL.2010 09:08:34



Additional values as required for the detailed threshold monitoring bandwidth test ANSI C63.17-2006

-6 dB points

Lower frequency : 1921.154MHz Higher frequency : 1922.036MHz

-12 dB points

Lower frequency : 1920.97MHz Higher frequency : 1922.164MHz

Test Report No.: G0M21007-3464-C-1_rev01

FCC Part 15.303(b) Emission bandwidth

Testprocedure ANSI 63.17-2006 6.1.3 UPCS

EUT IP-DECT Access Point

Model AP300E

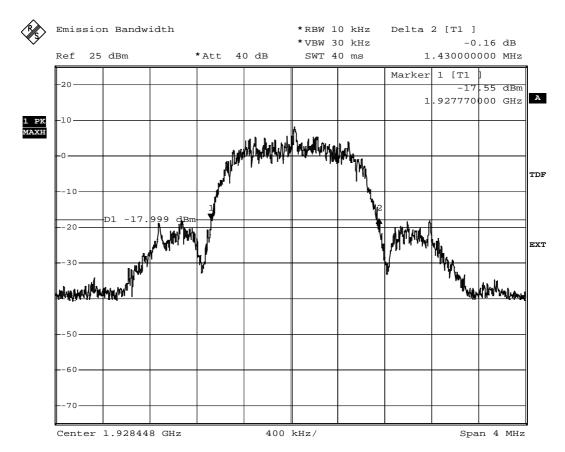
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.3 Emission bandwidth / even slot

Measured Bandwidth Emission Bandwidth = 1.43MHz

Max. Permitted Power Limit = 2.5 MHz



Comment: Ansi C63.17-2006 6.1.3 Date: 29.JUL.2010 11:05:23



Additional values as required for the detailed threshold monitoring bandwidth test ANSI C63.17-2006

-6 dB points

Lower frequency : 1928.062MHz Higher frequency : 1928.948MHz

-12 dB points

Lower frequency : 1927.886MHz Higher frequency : 1929.088MHz

FCC Part 15.303(b) Emission bandwidth

Testprocedure ANSI 63.17-2006 6.1.3 UPCS

EUT IP-DECT Access Point

Model AP300E

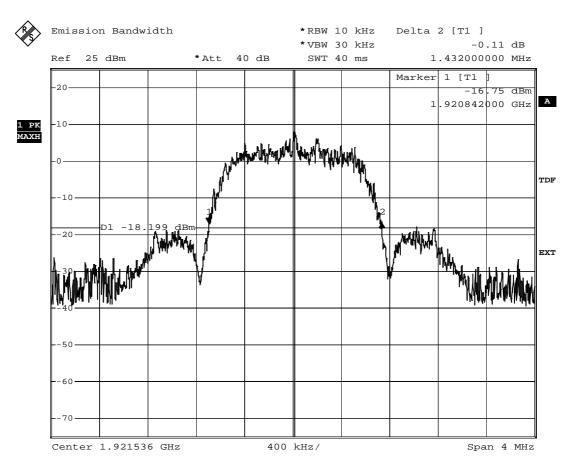
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.3 Emission bandwidth / odd slot

Measured Bandwidth Emission Bandwidth = 1.43MHz

Max. Permitted Power Limit = 2.5 MHz



Comment: Ansi C63.17-2006 6.1.3 Date: 29.JUL.2010 12:33:12



Additional values as required for the detailed threshold monitoring bandwidth test ANSI C63.17-2006

-6 dB points

Lower frequency : 1921.072MHz Higher frequency : 1922.052MHz

-12 dB points

Lower frequency : 1920.962MHz Higher frequency : 1922.136MHz

Test Report No.: G0M21007-3464-C-1_rev01

FCC Part 15.303(b) Emission bandwidth

Testprocedure ANSI 63.17-2006 6.1.3 UPCS

EUT IP-DECT Access Point

Model AP300E

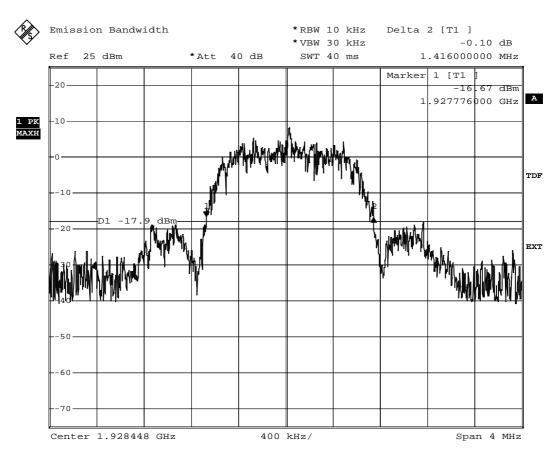
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.3 Emission bandwidth / odd slot

Measured Bandwidth Emission Bandwidth = 1.42MHz

Max. Permitted Power Limit = 2.5 MHz



Comment: Ansi C63.17-2006 6.1.3 Date: 29.JUL.2010 12:51:38



Additional values as required for the detailed threshold monitoring bandwidth test ANSI C63.17-2006

-6 dB points

Lower frequency : 1928.066MHz Higher frequency : 1928.864MHz

-12 dB points

Lower frequency : 1927.882MHz Higher frequency : 1929.068MHz

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

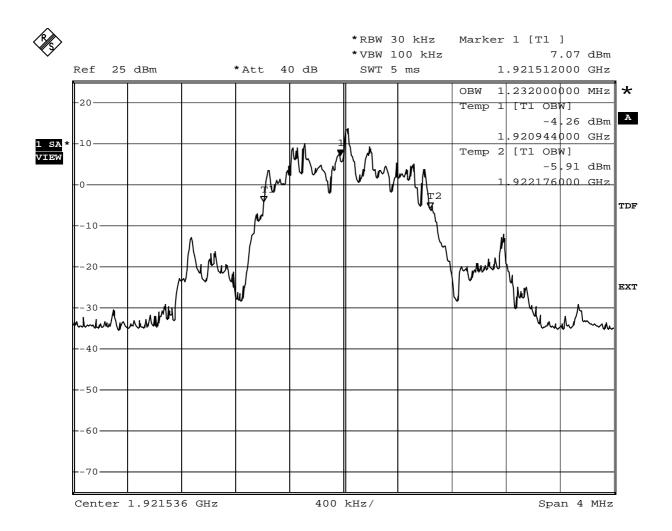
Test Specification 4.4.1 Occupied Bandwidth

Comment 1 Channel.: 4

Comment 2 A spectrum analyzer with an integrated 99% power BW function is

used

Comment 3 OBW:1.23 MHz



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 11:03:43

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

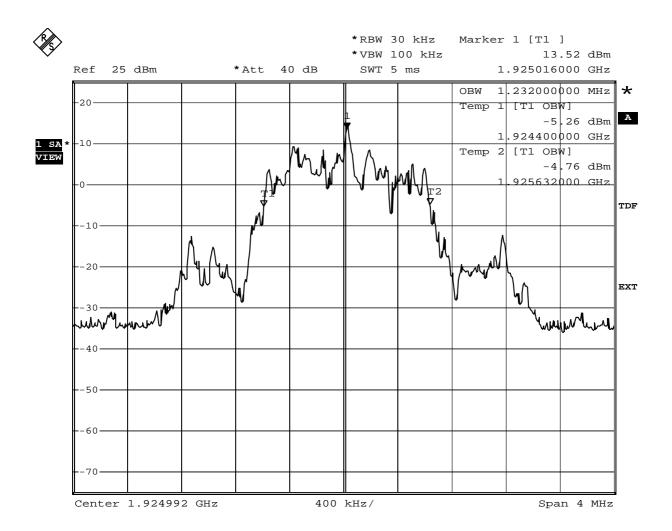
Test Specification 4.4.1 Occupied Bandwidth

Comment 1 Channel.: 2

Comment 2 A spectrum analyzer with an integrated 99% power BW function is

used

Comment 3 OBW:1.23 MHz



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 11:10:01

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

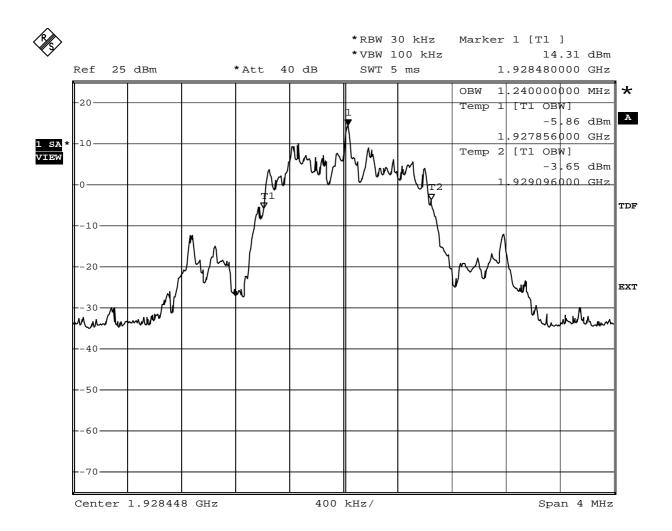
Test Specification 4.4.1 Occupied Bandwidth

Comment 1 Channel.: 0

Comment 2 A spectrum analyzer with an integrated 99% power BW function is

used

Comment 3 OBW:1.24 MHz



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 11:12:51

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

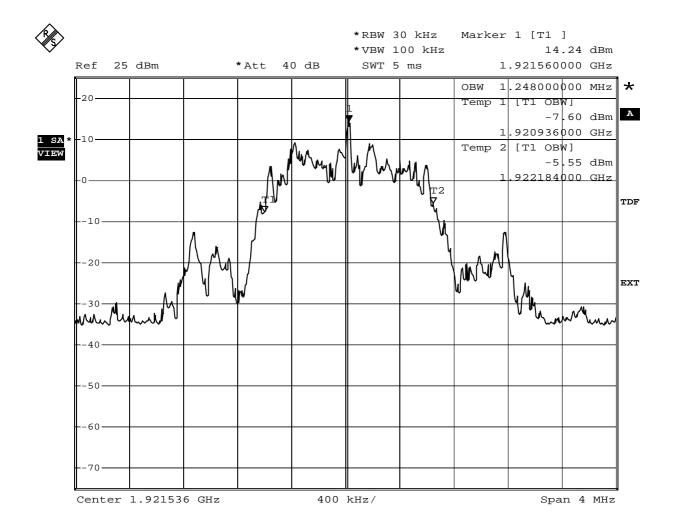
Test Specification 4.4.1 Occupied Bandwidth

Comment 1 Channel.: 4

Comment 2 A spectrum analyzer with an integrated 99% power BW function is

used

Comment 3 OBW:1.25 MHz



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 11:06:13

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

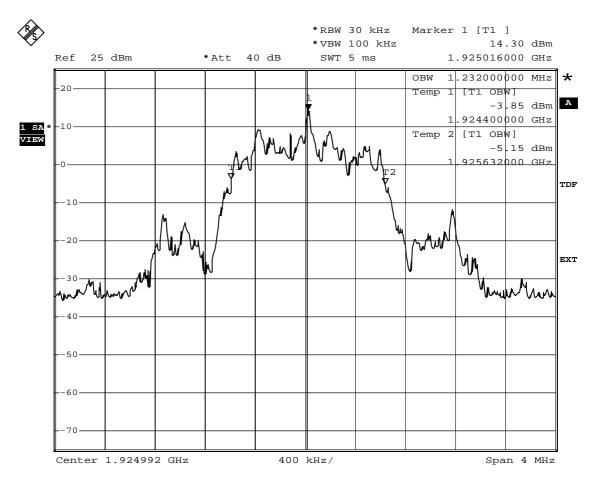
Test Specification 4.4.1 Occupied Bandwidth

Comment 1 Channel.: 2

Comment 2 A spectrum analyzer with an integrated 99% power BW function is

used

Comment 3 OBW:1.23 MHz



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 11:08:16

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

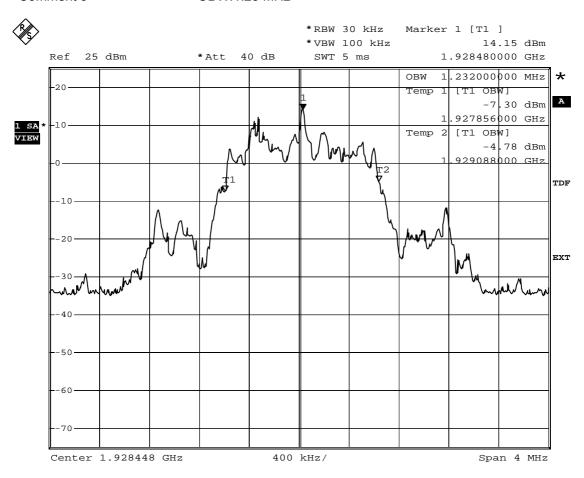
Test Specification 4.4.1 Occupied Bandwidth

Comment 1 Channel.: 0

Comment 2 A spectrum analyzer with an integrated 99% power BW function is

used

Comment 3 OBW:1.23 MHz



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 11:15:41

Annex D Peak Transmit Power

FCC Part 15.319(c) Peak Transmit Power limit

Testprocedure ANSI 63.17-2006 6.1.2 **UPCS**

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator **Eurofins Product Service GmbH Test Specification** 6.1.2 Peak transmit power / even slot

Supply Vnom Measured Bandwidth 1.43MHz

Max. Permitted Power 20,77 dBm Measured Power 15,57 dBm Test result Verdict = PASS



Peak transmit power

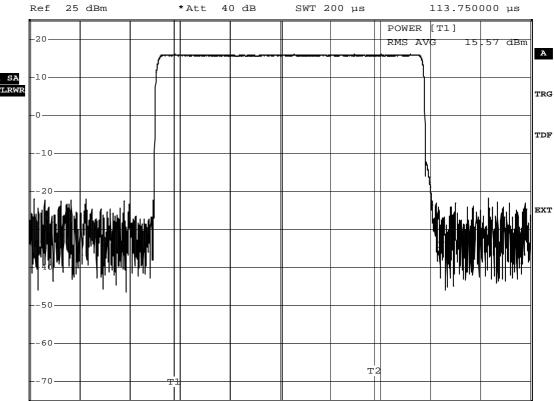
RBW 3 MHz *VBW 10 MHz Marker 1 [T1]

-36.97 dBm

*Att 40 dB

SWT 200 µs

113.750000 µs



Comment: Ansi C63.17-2006 6.1.2

Center 1.921536 GHz

29.JUL.2010 11:36:54

20 μs/

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification 6.1.2 Peak transmit power / even slot

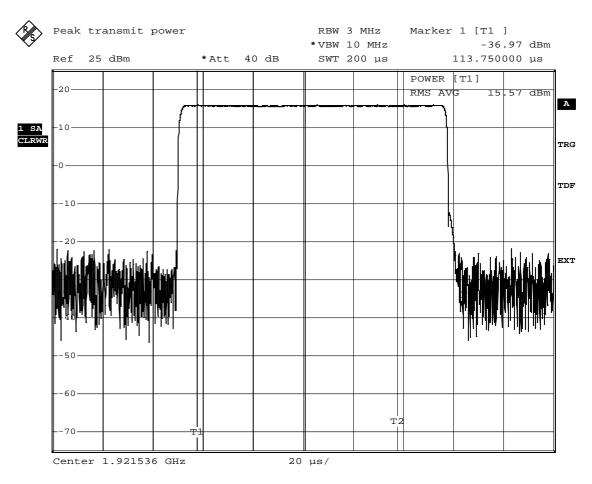
Supply Vmin

Measured Bandwidth 1.43MHz

Max. Permitted Power 20,77 dBm

Measured Power 15,57 dBm

Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 11:36:54

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

Model AP300E

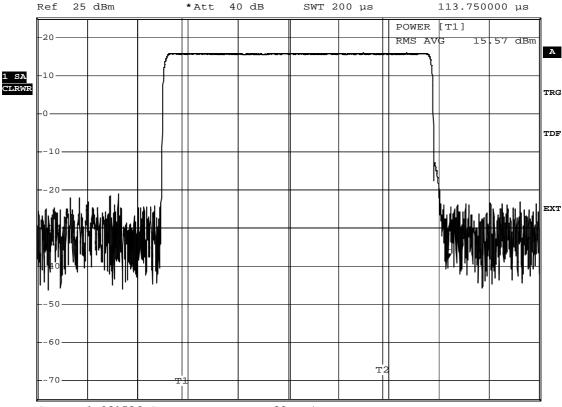
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification 6.1.2 Peak transmit power / even slot

Supply Vmax
Measured Bandwidth 1.43MHz
Max. Permitted Power 20,77 dBm
Measured Power 15,57 dBm
Test result Verdict = PASS





Center 1.921536 GHz 20 µs

Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 11:40:46

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification 6.1.2 Peak transmit power / even slot

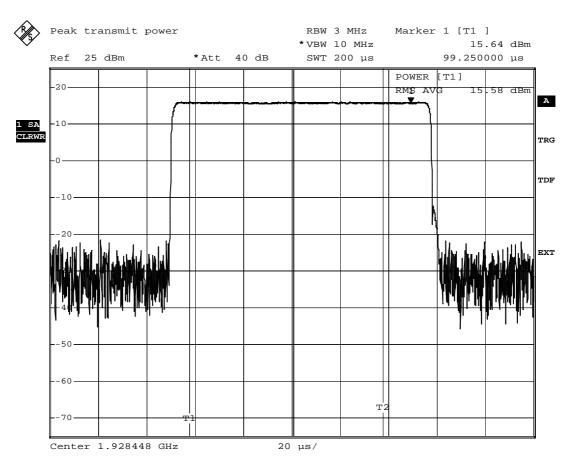
Supply Vnom

Measured Bandwidth 1.43MHz

Max. Permitted Power 20,77 dBm

Measured Power 15,58 dBm

Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 11:49:05

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification 6.1.2 Peak transmit power / even slot

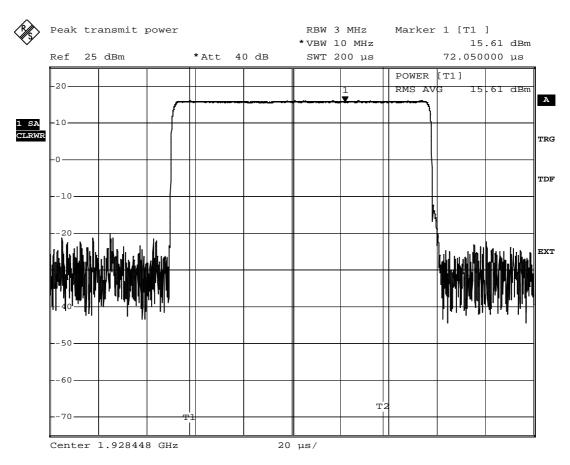
Supply Vmin

Measured Bandwidth 1.43MHz

Max. Permitted Power 20,77 dBm

Measured Power 15,61 dBm

Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 12:21:53

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

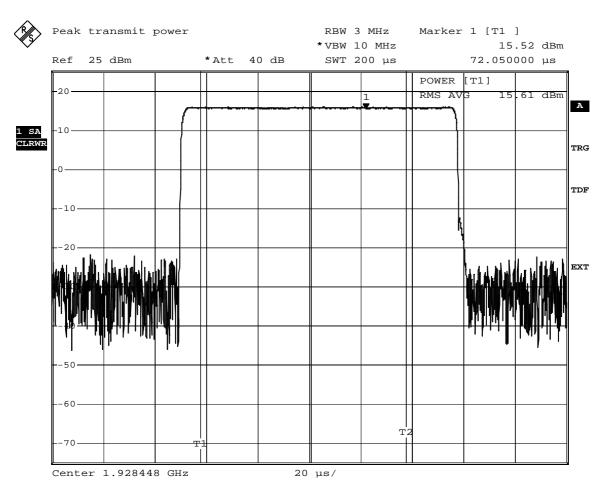
Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification 6.1.2 Peak transmit power / even slot

Supply Vmax
Measured Bandwidth 1.43MHz
Max. Permitted Power 20,77 dBm
Measured Power 15,61 dBm
Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 12:20:18

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.2 Peak transmit power / odd slot

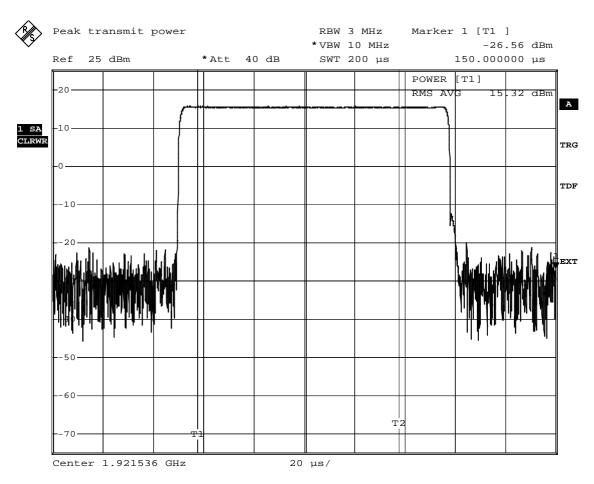
Supply Vnom

Measured Bandwidth 1.416MHz

Max. Permitted Power 20,75 dBm

Measured Power 15,32 dBm

Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 13:13:38

Testprocedure ANSI 63.17-2006 6.1.2 **UPCS**

EUT IP-DECT Access Point

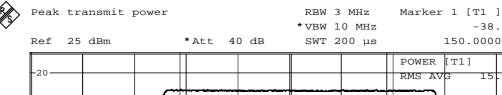
Model AP300E

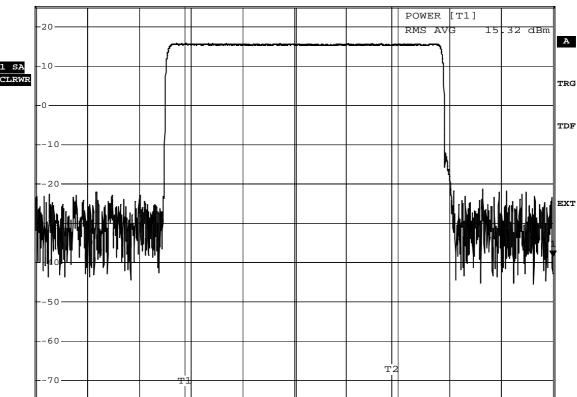
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator **Eurofins Product Service GmbH** Test Specification 6.1.2 Peak transmit power / odd slot

Supply Vmin Measured Bandwidth 1.416MHz Max. Permitted Power 20,75 dBm Measured Power 15,32 dBm Test result Verdict = PASS





-38.47 dBm

150.000000 µs

Center 1.921536 GHz 20 µs/

Comment: Ansi C63.17-2006 6.1.2 29.JUL.2010 13:14:34

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

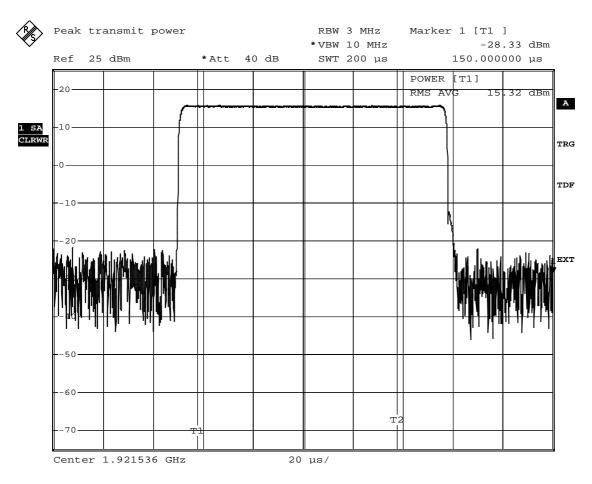
Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.2 Peak transmit power / odd slot

Supply Vmax
Measured Bandwidth 1.416MHz
Max. Permitted Power 20,75 dBm
Measured Power 15,32 dBm
Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 13:15:27

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.2 Peak transmit power / odd slot

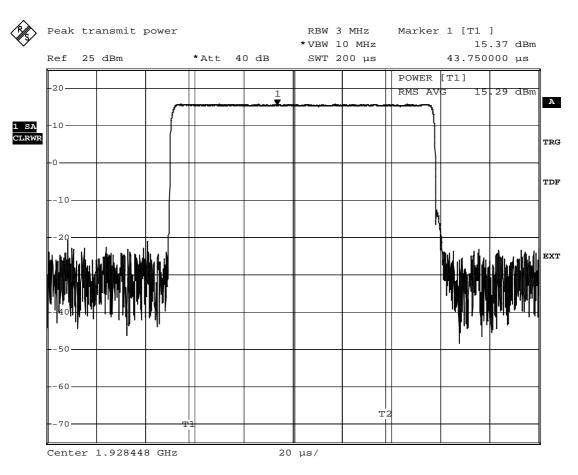
Supply Vnom

Measured Bandwidth 1.416MHz

Max. Permitted Power 20,75 dBm

Measured Power 15,29 dBm

Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 13:06:56

FCC Part 15.319(c) Peak Transmit Power limit

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.2 Peak transmit power / odd slot

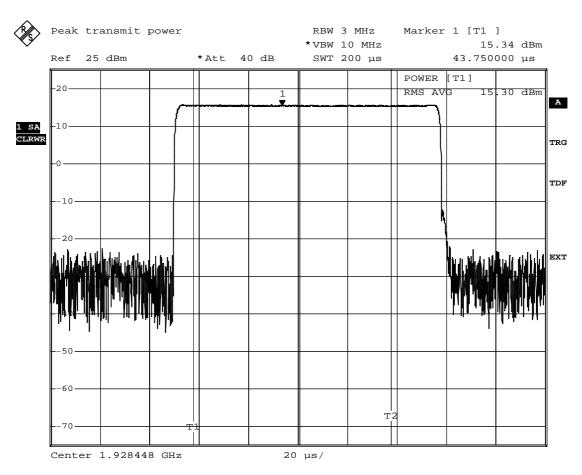
Supply Vmin

Measured Bandwidth 1.416MHz

Max. Permitted Power 20,75 dBm

Measured Power 15.30 dBm

Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 13:08:15

FCC Part 15.319(c) Peak Transmit Power limit

Testprocedure ANSI 63.17-2006 6.1.2 UPCS

EUT IP-DECT Access Point

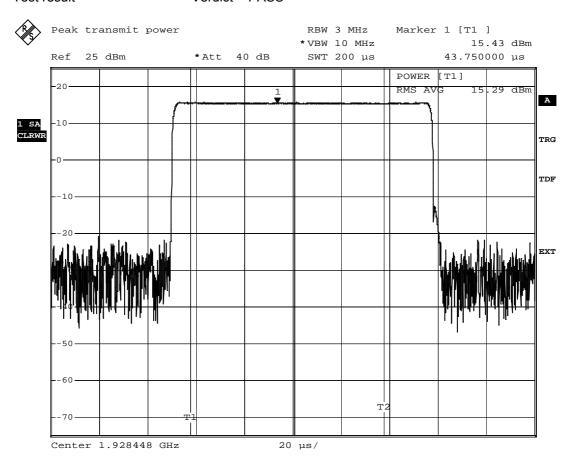
Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification Eurofins Product Service GmbH
6.1.2 Peak transmit power / odd slot

Supply Vmax
Measured Bandwidth 1.416MHz
Max. Permitted Power 20,75 dBm
Measured Power 15,29 dBm
Test result Verdict = PASS



Comment: Ansi C63.17-2006 6.1.2 Date: 29.JUL.2010 13:09:38

Annex E Power spectral density

FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-2006 6.1.5 UPCS

PSD in dBm

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

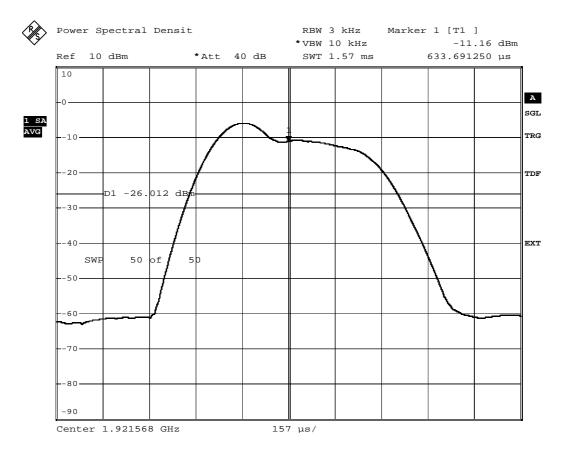
Test Site / Operator Eurofins Product Service GmbH

Test Specification 6.1.5 Power spectral density / even s

Test Specification 6.1.5 Power spectral density / even slot Peak Frequency in MHz 1921,568000 MHz

-8,3028 dBm

Total pulse energy in mW 0,000058 mW
Wideband pulse duration in ms
PSD in mW 0,392500 ms
0,1478 mW



Comment: Ansi C63.17-2006 6.1.5 Date: 29.JUL.2010 10:53:33

FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-2006 6.1.5 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

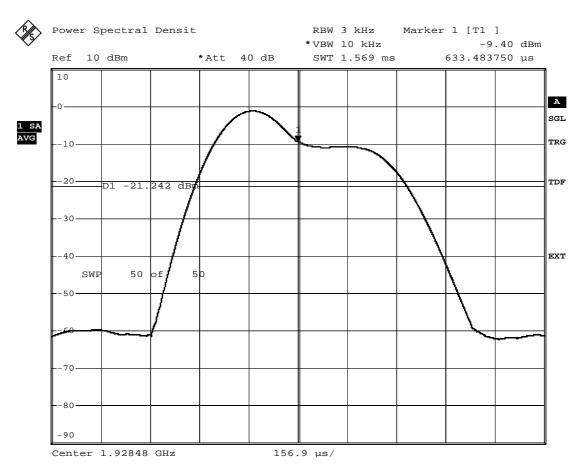
Test Site / Operator Eurofins Product Service GmbH

Test Specification 6.1.5 Power spectral density / even slot

Peak Frequency in MHz
Total pulse energy in mW
0,000141 mW
Wideband pulse duration in ms

Wideband pulse duration in ms
PSD in mW
PSD in dBm

0,392250 ms
0,3599 mW
-4,4382 dBm

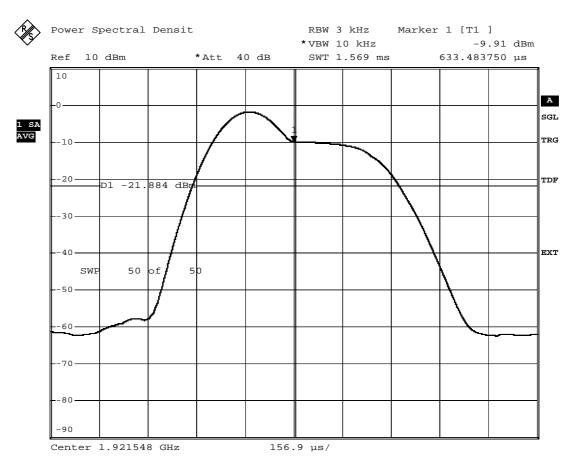


Comment: Ansi C63.17-2006 6.1.5 Date: 29.JUL.2010 11:07:35

FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-2006 6.1.5 UPCS

EUT IP-DECT Access Point Model AP300E NEC Unified Solutions B.V. Applicant Temperature 23°C Test Site / Operator **Eurofins Product Service GmbH Test Specification** 6.1.5 Power spectral density / odd slot Peak Frequency in MHz 1921,548000 MHz Total pulse energy in mW 0.000124 mW Wideband pulse duration in ms 0,392125 ms PSD in mW 0,3161 mW PSD in dBm -5,0017 dBm



Comment: Ansi C63.17-2006 6.1.5 Date: 29.JUL.2010 12:35:02

FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-2006 6.1.5 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification 6.1.5 Power spectral density / odd slot

Peak Frequency in MHz
Total pulse energy in mW
Wideband pulse duration in ms
1928,480000 MHz
0,000116 mW
0,337875 ms

PSD in dBm

0,337875 ms
0,337875 ms
0,3447 mW
-4,6252 dBm



Comment: Ansi C63.17-2006 6.1.5
Date: 29.JUL.2010 12:57:00



Annex F **Monitoring threshold**

ANSI_7.3.2_upper_threshold.xml Date 29.07.2010 14:35:24 Test case

Reference to the EUT G0M21007-3464 / AP300E

Comment: initial setup

> **IP-DECT Access Point** NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:02:43.9218750	-57,4	-57,4	-57,3	-57,3	-57,2	-58 dBm
	-58,5	-58,5	-58,5	-58,4	-58,4	
00:03:00.0937500	-58,3	-58.2	-58,1	-58,1	-58	-59 dBm
00.00.00.000	-59,5	-59,5	-59,5	-59,4	-59,4	OO GEIII
00:03:12.4062500	-58,8	-59,2	-59,1	-59,1	-58,9	-60 dBm
	-60,4	-60,5	-60,5	-60,5	-60,4	00 dB
00:03:24.0781250	-60,1	-60,1	-59,7	-59,7	-59,8	-61 dBm
	-61,5	-61,5	-61,6	-61,5	-61,4	01 05
00:03:38.5312500	-60,9	-61	-60,7	-60,4	-60,6	-62 dBm
	-62,5	-62,6	-62,5	-62,4	-62,4	02 02
00:03:50.9843750	-61,7	-61,7	-61,7	-61,5	-61,2	-63 dBm
	-63,5	-63,5	-63,5	-63,4	-63,4	0.0.0
00:04:06.5468750	-62,4	-62,5	-62,5	-62,6	-62,4	-64 dBm
	-64,5	-64,5	-64,5	-64,4	-64,4	0.00
00:04:20.3437500	-63,5	-63,4	-63,4	-63,3	-63,2	-65 dBm
	-65,5	-65,5	-65,5	-65,4	-65,4	00 0.2
00:04:34.5937500	-63,4	-64,1	-63,8	-63,9	-64	-66 dBm
	-66,4	-66,5	-66,5	-66,4	-66,4	00 02
00:04:49.8125000	-18,7	-55,8	-52,1	-64,8	-64,4	Upper
2213 11 1010 1 2000	-42,6	-67,2	-67,2	-67,4	-67,4	threshold level=-67dBm



Eurofins Product Service

Test case ANSI_7.3.3_least_interfered_channel.xml

Date 29.07.2010 14:59:21
Reference to the EUT G0M21007-3464 / AP300E

Comment: 7.3.3_b

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:22:40.3437500	-85,3	-86,6	-86,3	-85,5	-86,7	Interferer off
	-95,5	-95,5	-95,6	-95,5	-95,5	
00:22:46.9218750	-62,4	-62,4	-62,4	-74,3	-78,8	Interferer on
	-63	-63,1	-63,2	-76,1	-82,9	
00:22:55.1250000	-62	-62,1	-61,6	-52,2	-23,4	OK 1
	-62,9	-62,9	-62,9	-70,3	-43,4	
00:23:03.5781250	-62,5	-62,7	-62,8	-74,2	-79	
	-63	-63,2	-63,2	-76,2	-83	
00:24:52.9062500	-62,4	-62,2	-61,4	-53,4	-23,3	OK 2
	-62,9	-62,9	-62,9	-73,6	-46,7	
00:27:10.9843750	-62,5	-62,4	-62,7	-738	-79,1	
	-63	-63,2	-63,1	-76,2	-82	
00:25:00.4375000	-62	-62,3	-61,6	-52,6	-22,3	OK 3
	-62,9	-63	-63	-73,5	-46,5	
00:25:09.9687500	-62,4	-62,5	-62,6	-74	-78,9	
	-62,9	-63	-63	-76	-82,8	
00:26:53.2812500	-62	-62	-62,4	-52,6	-34,2	OK 4
	-62,9	-62,9	-63	-72	-55	
00:27:10.9843750	-62,5	-62,5	-62,7	-73,9	-79,1	
	-63	-63,2	-63,2	-76,2	-83	
00:28:51.8437500	-62,3	-62,1	-61,9	-52,6	-23,4	OK 5
	-62,9	-62,9	-62,9	-72,1	-47	- · · · ·



Reference to the EUT

Eurofins Product Service

Test case ANSI_7.3.3_least_interfered_channel.xml

Date 29.07.2010 15:14:08 G0M21007-3464 / AP300E

Comment: 7.3.3_c

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:34:00.3125000	-86	-86,6	-86,3	-86,5	-85,8	Interferer off
	-95,6	-95,5	-95,5	-95,4	-95,4	
00:34:05.8593750	-62,5	-62,7	-62,8	-79	-74,2	Interferer on
	-63	-63,2	-63,3	-83	-76,3	
00:39:49.1250000	-62,1	-62,4	-51	-33,1	-52,5	OK 1
	-62,9	-63	-62,6	-54,7	-73,3	
00:40:04.1250000	-62,5	-62,7	-62,7	-79	-74,1	
	-63	-63,2	-63,2	-82,9	-76,2	
00:41:41.2031250	-62,1	-61,7	-52,2	-34	-52,7	OK 2
	-62,9	-62,9	-62,8	-55	-71,6	0.11
00:41:50.9218750	-62,5	-62,7	-62,8	-79,2	-74,4	
	-63	-63,2	-63,2	-83	-76,2	
00:43:36.5468750	-62,2	-62,4	-50,7	-34,2	-71,6	OK 3
	-62,9	-62,9	-62,6	-55	-75,8	
00:40:04.1250000	-62,4	-62,7	-628	-79,1	-74,4	
	-63	-63,2	-63,2	-82,9	-76,2	
00:41:41.2031250	-62,1	-61,6	-52,3	-34,2	-526	OK 4
	-62,8	-62,9	-62,8	-55	-71,6	
00:40:04.1250000	-62,5	-62,5	-62,5	-79.2	-74,3	
	-63,1	-63,2	-63,2	-82,9	-76,2	
00:41:41.2031250	-62,1	-616	-52,2	-34,4	-52,8	OK 5
	-62,7	-62,9	-62,8	-55	-71,6	0.00



Eurofins Product Service

Test case ANSI_7.3.3_least_interfered_channel.xml

Date 29.07.2010 15:28:13
Reference to the EUT G0M21007-3464 / AP300E

Comment: 7.3.3_d

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
00:48:35.9062500	-85,8	-85,7	-85,1	-86,2	-85,1	Interferer off
	-95,5	-95,6	-95,4	-95,4	-95,6	
00:48:41.3281250	-62,5	-62,7	-62,7	-78,3	-82,2	Interferer on
	-63	-63,2	-63,2	-82,1	-88,4	
00:50:18.0468750	-62,3	-62,1	-61,5	-74,3	-23	Ok 1
	-62,9	-62,9	-62,9	-81,5	-44,2	
00:50:27.1718750	-62,5	-62,7	-62,8	-78,7	-81,7	
	-63	-63,2	-63,3	-82,1	-88,3	
00:52:09.8906250	-62,2	-61,7	-61,9	-52,9	-23,1	Ok 2
	-62,9	-63	-63	-76,2	-46,9	
00:52:25.4843750	-62,5	-62,6	-62,7	-78,4	-82,3	
	-63	-63,2	-63,3	-82,1	-88,2	
00:54:05.5156250	-62,4	-61,8	-61,5	-75	-23,2	Ok 3
	-62,9	-62,9	-62,9	-81,6	-44,2	
00:54:11.3906250	-62,3	-62,5	-62,6	-78,5	-82	
	-62,9	-63 [°]	-63 [°]	-81,8	-88,2	
00:55:58.7812500	-62	-33	-61,9	-76	-34,1	Ok 4
	-62,9	-53	-63	-81,6	-58,1	
00:56:04.8125000	-62,3	-62,4	-62,4	-78,1	-82,2	
	-62,9	-63	-63	-81,8	-88,1	
00:57:48.9531250	-62,3	-62,3	-62,4	-53,3	-34,2	Ok 5
	-62,9	-63	-62,9	-73,9	-55,1	- · · · ·



Eurofins Product Service

Test case ANSI_7.3.3_least_interfered_channel.xml

Date 29.07.2010 15:48:25
Reference to the EUT G0M21007-3464 / AP300E

Comment: 7.3.3_e

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm RMS in dBm					
00:34:00.3125000	-86 -95,6	-86,6 -95,5	-86,3 -95,5	-86,5 -95,4	-85,8 -95,2	Interferer off
00:34:05.8593750	-62,5 -63	-62,7 -63,2	-62,8 -63,3	-78,8 -83	-74,2 -76,3	Interferer on
01:05:26.7812500	-61,9 -62,9	-62,3 -63	-50,7 -62,6	-34,3 -55,1	-52,9 -75,6	OK 1
01:05:38.2812500	-62,6 -63	-62,7 -63,2	-62,7 -63,3	-81,9 -88,2	-78,4 -82,1	
01:07:43.9218750	-61,6 -62,9	-62,3 -63	-50 -62,6	-33,1 -54,7	-53,2 -75,5	OK 2
01:07:50.7187500	-62,5 -63,1	-62,7 -63,2	-62,7 -63,3	-82,4 -88,1	-78,4 -82,1	
01:10:23.2500000	-61,9 -62,9	-62 -63	-62,1 -63	-22,4 -44	-75,5 -81,6	OK 3
01:10:29.4687500	-62,3 -62,9	-62,5 -63	-62,5 -63	-81,8 -87,9	-78,4 -81,9	
01:13:02.5000000	-62,2 -62,9	-62,3 -63	-50,5 -62,8	-22,2 -46,6	-52,7 -75,6	OK 4
01:13:11.1093750	-62,3 -62,9	-62,4 -63	-62,5 -63	-82,3 -88	-78,4 -81,9	
01:17:56.3593750	-62,3 -62,9	-62,3 -63	-51,4 -62,7	-34,1 -55,1	-51,9 -72,9	OK 5



Annex G Monitoring of intended transmit window and maximum reaction time

Test case ANSI_7.5_reaction_time_low_ch.xml

Date 30.07.2010 09:56:56

Reference to the EUT G0M21007-3464 / AP300E

Comment: 7.5_low_ch_35 / 50us

IP-DECT Access Point

NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm RMS in dBm	-				
00:54:49.2343750	-75,1 -84,4	-74,8 -84,4	-75,2 -84,3	-74,5 -84,4	-73,7 -84,3	Interferer off
00:55:19.0625000	-36,5 -57	-28,5 -55,7	-74,7 -84,5	-62,7 -82,7	-20,8 -44,3	Dummy on ch. 0
00:57:28.2343750	-55,8 -66,2	-60,8 -62,7	-61,1 -62,7	-60,8 -62,6	-60,7 -62,5	50 µs interferer on, Dummy release
00:57:41.6093750	-33,7 -58	-19,5 -42,1	-61,2 -81	-51,8 -76,4	-66,9 -84	Dummy on ch. 3
00:59:50.5625000	-50,5 -62,2	-61,2 -62,9	-61,4 -63	-61 -63	-61,2 -63	35 µs interferer on, Dummy release



Test case ANSI_7.5_reaction_time_high_ch.xml

Date 30.07.2010 09:46:29 G0M21007-3464 / AP300E

Comment: 7.5_high_ch_35 / 50us

Reference to the EUT

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:41:32.8593750	-75,4	-74,5	-74,7	-74,9	-74,4	Interferer off
	-84,3	-84,4	-84,4	-84,4	-84,4	
00:42:00.9218750	-35,2 -60,7	-32,7 -57,8	-36 -56,5	-21,2 -43,7	-61,9 -82,3	Dummy on ch.1
00:45:43.3593750	-60,9 -62,7	-61 -62,7	-60,9 -62,7	-60,6 -62,6	-55,8 -66	50µs interference on, dummy release
00:46:13.6718750	-19,3 -42,2	-61,7 -81,1	-51,7 -76,2	-69,4 -83,9	-75,2 -84,4	Dummy on ch.4
00:49:02.6250000	-60 -61,7	-60,3 -61,8	-60,5 -61,8	-60,3 -61,9	-55,3 -65,5	35µs interference on, dummy release



Annex H Monitoring bandwidth

Test case ANSI_7.4.1_monitoring_bandwidth.xml

Date 30.07.2010 09:22:05
Reference to the EUT G0M21007-3464 / AP300E

Comment: 7.4.1 simple compliance test_low_-30%

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHz	MHz	MHz	MHz	
	Peak in dBm					
	RMS in dBm					
00:24:33.2812500	-74,2	-74,5	-75,4	-74,6	-75,1	Interferer off
	-84,3	-84,4	-84,4	-84,4	-84,4	
00:24:50.4687500	-33,1	-21,2	-29,2	-55,7	-74,4	Dummy on
	-58,3	-43,8	-55,6	-80,2	-84,3	ch. 3
00:25:06.3125000	-51,5	-60,2	-60,2	-60,3	-60,4	Interferer
	-52,1	-61,7	-61,8	-61,9	-61,9	on, dummy release



Test case ANSI_7.4.1_monitoring_bandwidth.xml

Date 30.07.2010 09:25:44
Reference to the EUT G0M21007-3464 / AP300E

Comment: 7.4.1 simple compliance test_low_+30%

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:27:58.3750000	-74,9	-74,4	-75	-75,1	-73,7	Interferer off
	-84,3	-84,3	-84,4	-84,4	-84,4	
00:28:24.7500000	-33,7	-34,6	-29,4	-35,8	-27,9	Dummy on
	-57,9	-55,3	-55,5	-56,4	-55,2	ch. 0
00:29:53.0937500	-51,5	-60,1	-60,5	-60,3	-60,5	Interferer
	-52	-61,7	-61,8	-61,9	-62	on, dummy
						release



Test case ANSI_7.4.1_monitoring_bandwidth.xml

Date 30.07.2010 09:29:49
Reference to the EUT G0M21007-3464 / AP300E

Comment: 7.4.1 simple compliance test_ high_-30%

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:31:55.6250000	-74,3	-75,6	-75,1	-75,2	-75,1	Interferer off
	-84,3	-84,5	-84,3	-84,4	-84,3	
00:32:17.8906250	-69,8 -84,2	-32,8 -56,6	-35,9 -56,5	-20,4 -44,1	-62 -82,4	Dummy on ch. 1
00:34:30.9062500	-75,3 -84,4	-75,5 -84,4	-73,7 -84,4	-75 -84,3	-75,3 -84,3	Interferer on, dummy release



Reference to the EUT

Test case ANSI_7.4.1_monitoring_bandwidth.xml

Date 30.07.2010 09:34:28 G0M21007-3464 / AP300E

Comment: 7.4.1 simple compliance test_ high_+30%

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:36:13.1875000	-75,6	-74,9	-74,4	-75	-75	Interferer off
	-84,4	-84,3	-84,5	-84,4	-84,3	
00:36:57.5468750	-69	-33,4	-35,9	-20,9	-62,3	Dummy on
	-84,1	-56,1	-56,5	-44,1	-82,4	ch. 1
00:39:13.0468750	-60,2	-60,4	-60,3	-60,2	-51,7	Interferer
	-61,7	-61,8	-61,8	-61,8	-52,3	on, dummy
						release

Annex I Connection acknowledgement

ANSI C63.17-2006 ANSI 8.1.2 Access criteria functional test UPCS1900

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

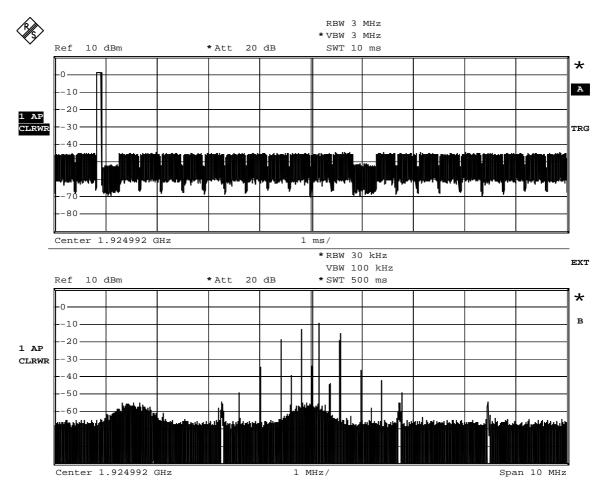
Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

Test Specification ANSI C63.17-2006 ANSI 8.1.2 Access criteria functional test

Comment 1 initial condition

Comment 2 Connection at channel 2 (1924,992 MHz), in time slot 2 (840 µs)

Comment 3



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 07:39:54

ANSI C63.17-2006 ANSI 8.1.2 Access criteria functional test UPCS1900

EUT IP-DECT Access Point

Model AP300E

Approval Holder NEC Unified Solutions B.V.

Temperature / Voltage 25°C / Vnom

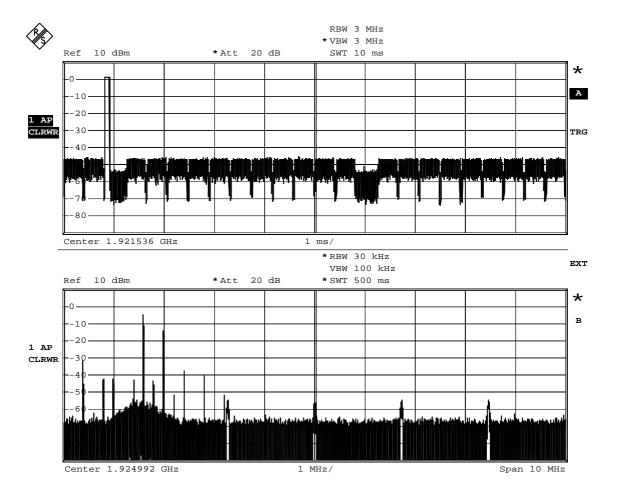
Test Site / Operator Eurofins Product Service GmbH / Mr. Treffke

Test Specification ANSI C63.17-2006 ANSI 8.1.2 Access criteria functional test

Comment 1 CW interference on ch 2 (initial traffic channel)

Comment 2 after the next pause

Comment 3 New connection at channel 4 (1921,536 MHz), in time slot 2 (820 µs)



Comment: Ansi C63.17-1998 6.1.6.2 Date: 30.JUL.2010 07:55:18



Test case ANSI_8.2.1_Acknowledgments_30s.xml

Date 30.07.2010 08:34:29
Reference to the EUT G0M21007-3464 / AP300E

Comment: 8.2.1 Acknowledgments for b) and c)

IP-DECT Access Point NEC Unified Solutions B.V.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:05:13.1406250	-65,4	-567	-12,2	-57,1	-63,4	connection
	-74,8	-72,1	-30,1	-726	-74,4	
00:06:00.1406250	-65,5 -74,8	-56,9 -72,2	-12,4 -32,4	-57,1 -73,2	-63,4 -74,5	Block achnowledg e-ments from the companion device
00:06:06.0468750	-65,0 -74,3	-59,1 -74,2	-65,8 -74,4	-27,3 -51,5	-12,5 -36,3	Traffic bearer release, dummy bearer on

The EUT terminates transmissions on the communications channel after 6 seconds.



Annex J Selected channel

Test case ANSI 7.3.4 selected channel confirmation.xml

Date 30.07.2010 08:58:45 Reference to the EUT G0M21007-3464 / AP300E

Comment: initial setup

IP-DECT Access Point NEC Unified Solutions B.V.

Time stamp	1921.536 MHZ	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm					
	RMS in dBm					
00:00:12.7812500	-86,3	-85,7	-85,7	-86,6	-85,6	Interferer off
	-95,2	-95,5	-95,3	-95,4	-95,4	
00:00:17.6406250	-61,2	-61,3	-61,3	-78,4	-78,3	Interferer on
00.00.17.0400230	-61,6	-61,7	-61,7	-81,5	-81,7	interierer on
00:00:52.3281250	-61,8	-61,9	-62,1	-43.6	-23,3	OK 1
	-62,7	-62,8	-62,7	-64,1	-47,4	
00:00:58,2968750	-62	-62	-62	-23,3	-38,5	OK 2
	-62,7	-62,8	-62,7	-47,4	-62,2	02

Annex K Emission inside and outside the sub-band; Spurious Emission

FCC Part 15.323(d.2) In-band unwanted emission

Testprocedure ANSI 63.17-2006 6.1.6.1 UPCS

EUT IP-DECT Access Point

Model AP300E

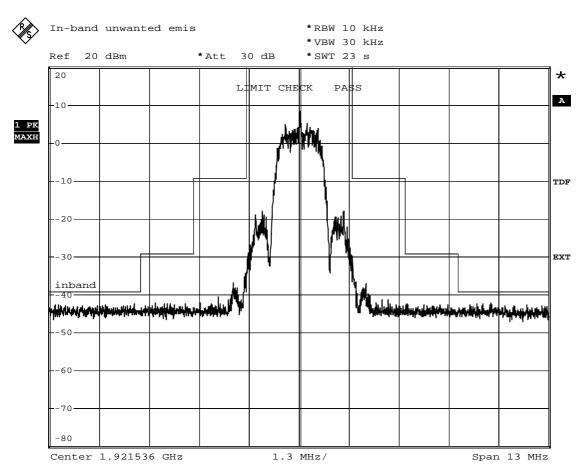
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH

Test Specification 6.1.6.1 In-band unwanted emission / even slot

1.38MHz



Comment: Ansi C63.17-2006 6.1.6.1 Date: 29.JUL.2010 10:49:17



FCC Part 15.323(d.2) In-band unwanted emission

Testprocedure ANSI 63.17-2006 6.1.6.1 **UPCS**

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator **Eurofins Product Service GmbH**

Test Specification 6.1.6.1 In-band unwanted emission / even slot

1.43MHz



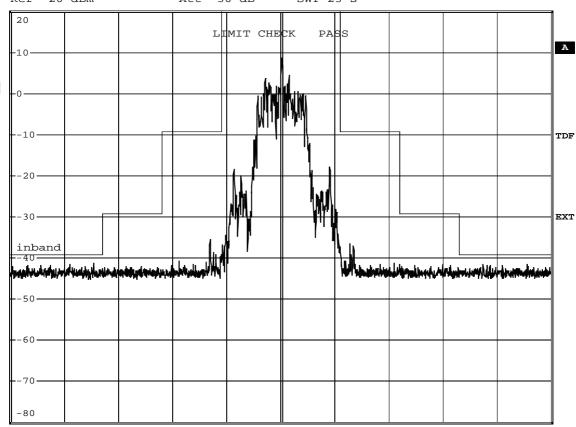
In-band unwanted emis

*RBW 10 kHz

*VBW 30 kHz

20 dBm *Att 30 dB *SWT 23 s





Center 1.928448 GHz

1.3 MHz/

Span 13 MHz

Comment: Ansi C63.17-2006 6.1.6.1 Date: 29.JUL.2010 11:22:03

FCC Part 15.323(d.1) Out-of-band emission

Testprocedure ANSI 63.17-2006 6.1.6.2 **UPCS**

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator **Eurofins Product Service GmbH**

Test Specification 6.1.6.2 Out-of-band emission / even slot

measurement on the lowest carrier

Carrier=1921.536MHz



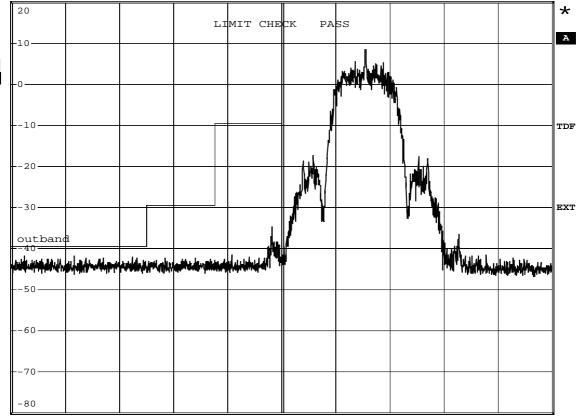
Out-of-band emission

*RBW 10 kHz

*VBW 30 kHz

20 dBm *Att 30 dB *SWT 23 s Ref 20 LIMIT CHECK PASS





Center 1.92 GHz

1 MHz/

Span 10 MHz

Comment: Ansi C63.17-2006 6.1.6.2 29.JUL.2010 10:46:32 Date:

FCC Part 15.323(d.1) Out-of-band emission

Testprocedure ANSI 63.17-2006 6.1.6.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

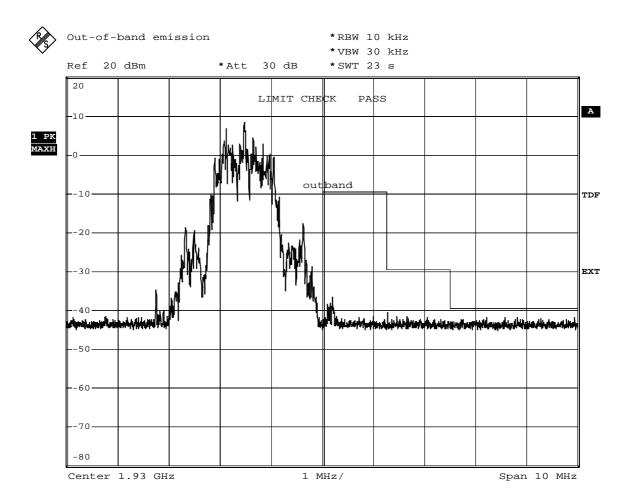
Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH

Test Specification 6.1.6.2 Out-of-band emission / even slot

measurement on the highest carrier

Carrier=1928.448MHz



Comment: Ansi C63.17-2006 6.1.6.2 Date: 29.JUL.2010 11:26:00

FCC Part 15.323(d.2) In-band unwanted emission

Testprocedure ANSI 63.17-2006 6.1.6.1 UPCS

EUT IP-DECT Access Point

Model AP300E

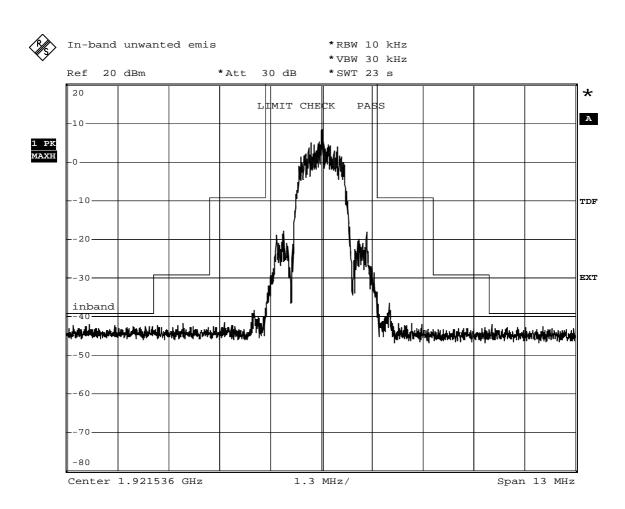
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH

Test Specification 6.1.6.1 In-band unwanted emission / odd slot

1.432MHz



Comment: Ansi C63.17-2006 6.1.6.1 Date: 29.JUL.2010 12:36:58

FCC Part 15.323(d.2) In-band unwanted emission

Testprocedure ANSI 63.17-2006 6.1.6.1 UPCS

EUT IP-DECT Access Point

Model AP300E

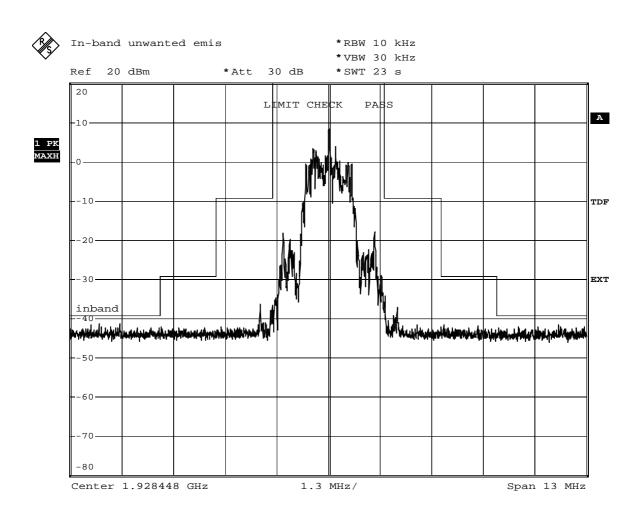
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH

Test Specification 6.1.6.1 In-band unwanted emission / odd slot

1.416MHz



Comment: Ansi C63.17-2006 6.1.6.1 Date: 29.JUL.2010 13:01:38

FCC Part 15.323(d.1) Out-of-band emission

Testprocedure ANSI 63.17-2006 6.1.6.2 UPCS

EUT IP-DECT Access Point

Model AP300E

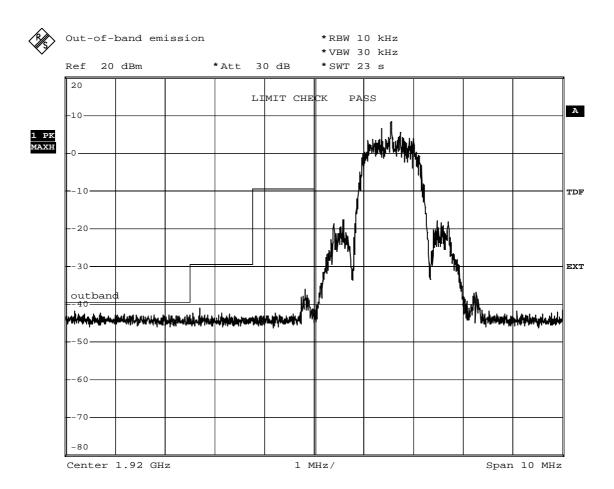
Applicant NEC Unified Solutions B.V.

Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH
Test Specification 6.1.6.2 Out-of-band emission / odd slot

measurement on the lowest carrier

Carrier=1921.536MHz



Comment: Ansi C63.17-2006 6.1.6.2 Date: 29.JUL.2010 12:38:46

FCC Part 15.323(d.1) Out-of-band emission

Testprocedure ANSI 63.17-2006 6.1.6.2 UPCS

EUT IP-DECT Access Point

Model AP300E

Applicant NEC Unified Solutions B.V.

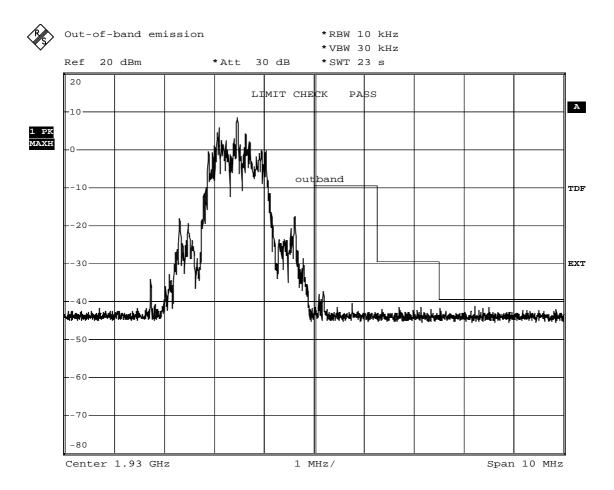
Temperature 23°C

Test Site / Operator Eurofins Product Service GmbH / odd slot

Test Specification 6.1.6.2 Out-of-band emission

measurement on the highest carrier

Carrier=1928.448MHz



Comment: Ansi C63.17-2006 6.1.6.2 Date: 29.JUL.2010 13:04:26

FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

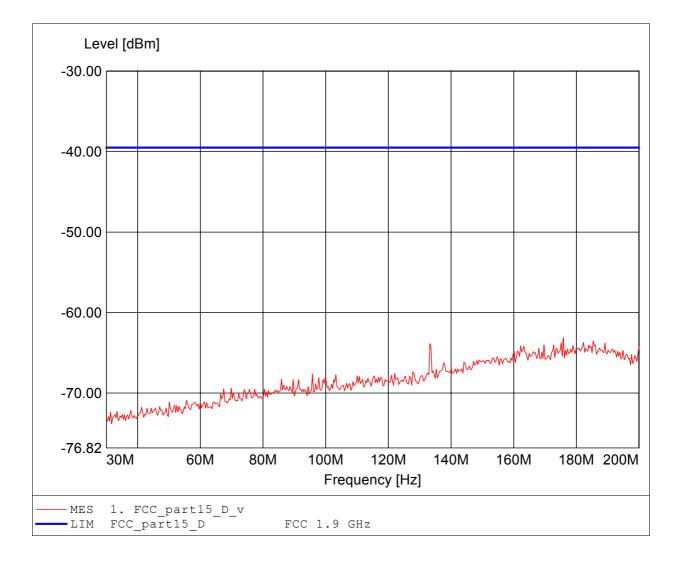
IP-DECT Access Point EUT:

AP300E / Ch.: 4, 0 / ant.: 0 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx

Dist.: 3m, Ant.: HK 116, Comment 1:

Comment 2: Freq:175.812MHz Pmax:-63.10dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

IP-DECT Access Point EUT:

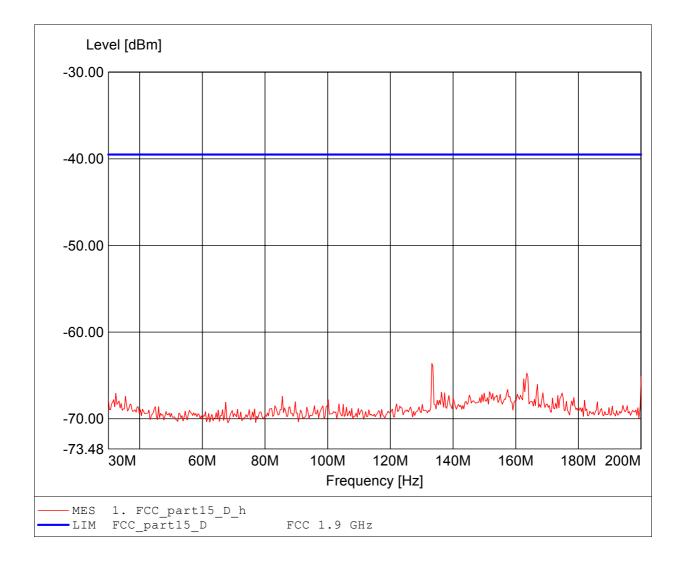
AP300E / Ch.: 4, 0 / ant.: 0 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Dist.: 3m, Ant.: HK 116, Comment 1:

Comment 2: Freq:133.226MHz Pmax:-63.62dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

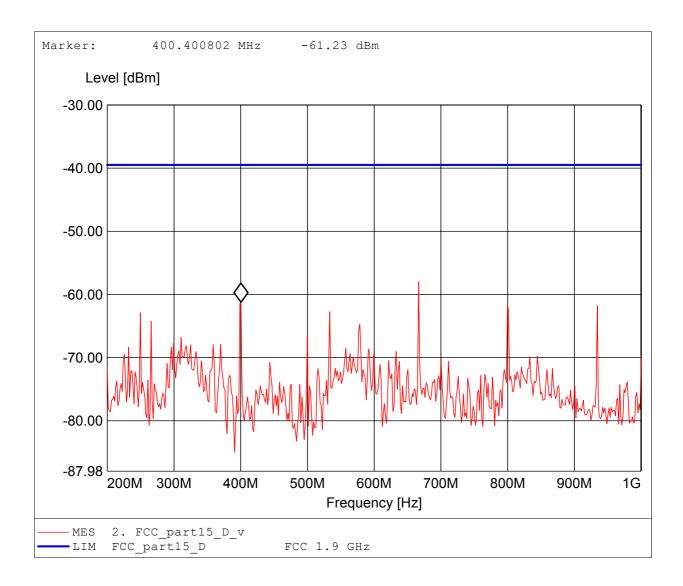
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.

Comment 2: Freq:666.533MHz Pmax:-57.98dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

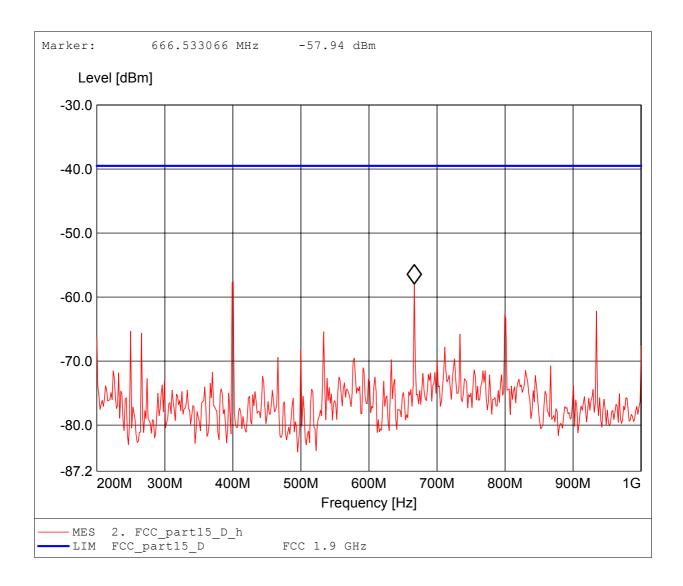
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: $24\,^{\circ}\text{C}$ / Unom: $48\,^{\circ}\text{V}$ DC (POE)

Test Condition: Thom.: 24 C / Unom: 48 V DC (POR Test Specification: Fully anechoic chamber / mode: Tx Comment 1: Dist.: 3m, Ant.: HL 223, ampl.

Comment 2: Freq:400.401MHz Pmax:-57.55dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

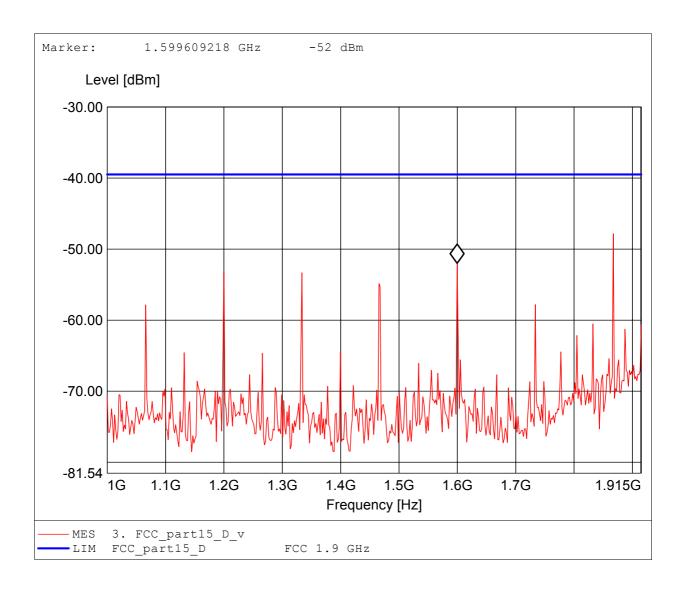
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.867GHz Pmax:-47.83dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

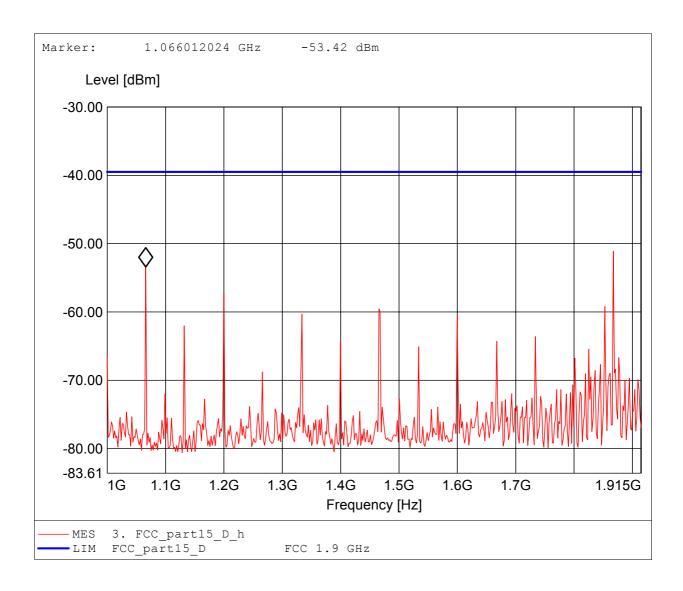
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.867GHz Pmax:-51.12dBm RBW: 100 kHz

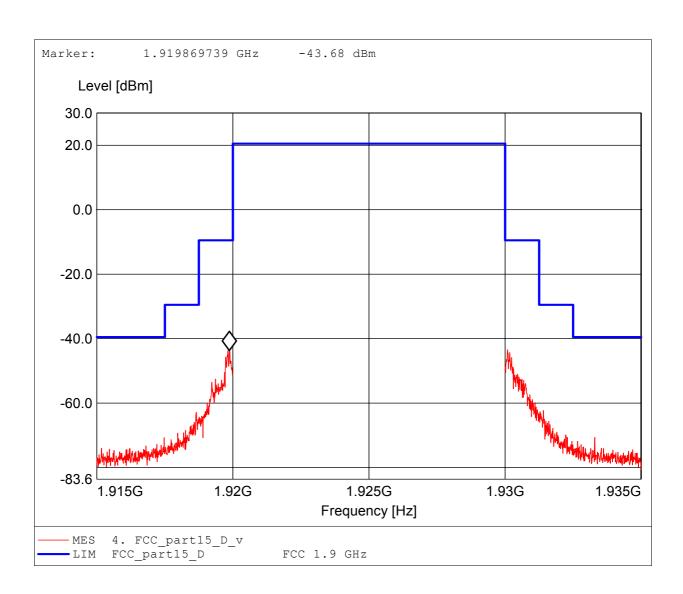


FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 IP-DECT Access Point EUT: AP300E / Ch.: 4, 0 / ant.: 0 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: $24\,^{\circ}\text{C}$ / Unom: $48\,^{\circ}\text{V}$ DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: BBHA 9120D, ampl. Freq:1.930GHz Pmax:-43.44dBm RBW: 10 kHz Comment 1:

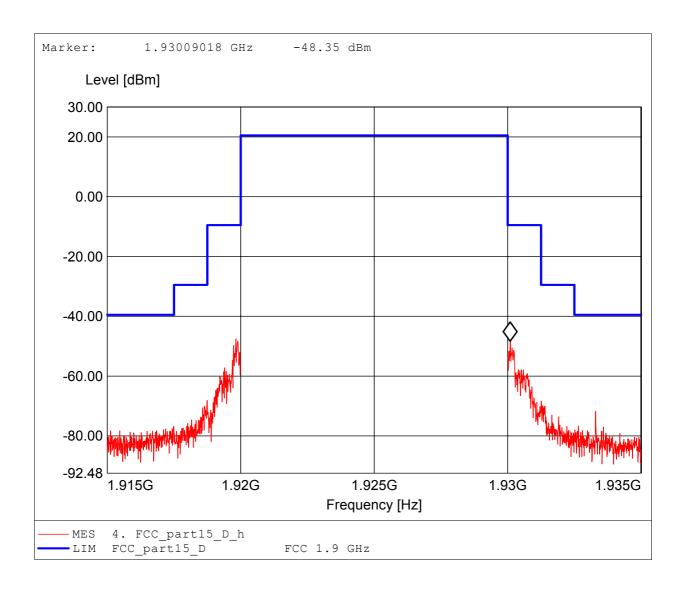
Comment 2:



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.
Comment 2: Freq:1.920GHz Pmax:-47.55dBm RBW: 10 kHz



FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

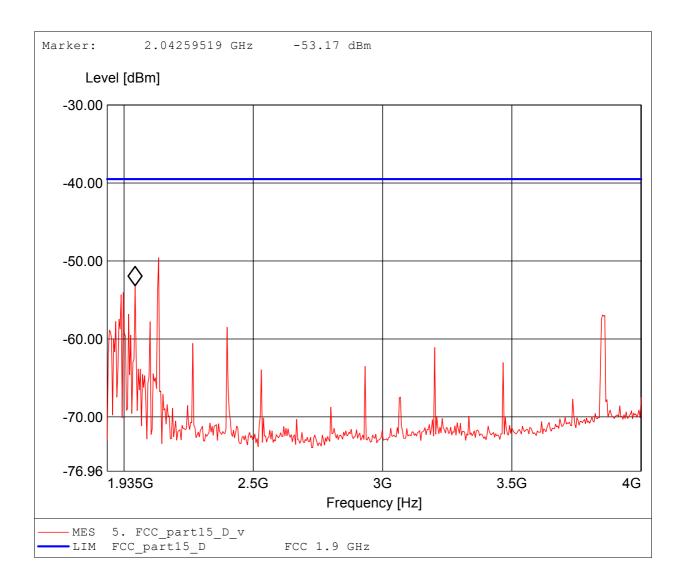
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:2.134GHz Pmax:-49.60dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

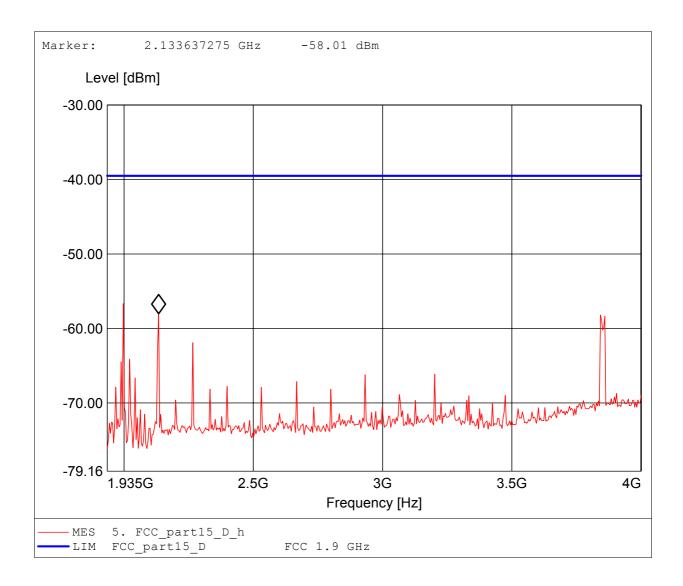
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: $24\,^{\circ}\text{C}$ / Unom: $48\,^{\circ}\text{V}$ DC (POE)

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.997GHz Pmax:-56.66dBm RBW: 100 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

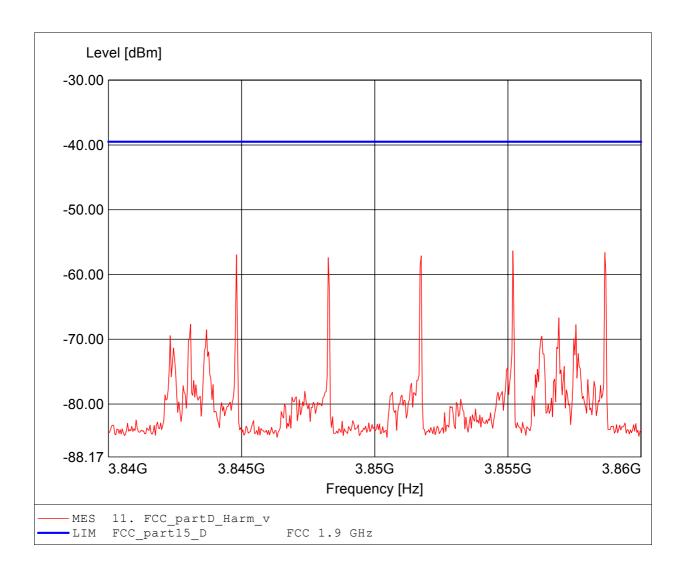
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:3.855GHz Pmax:-56.34dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

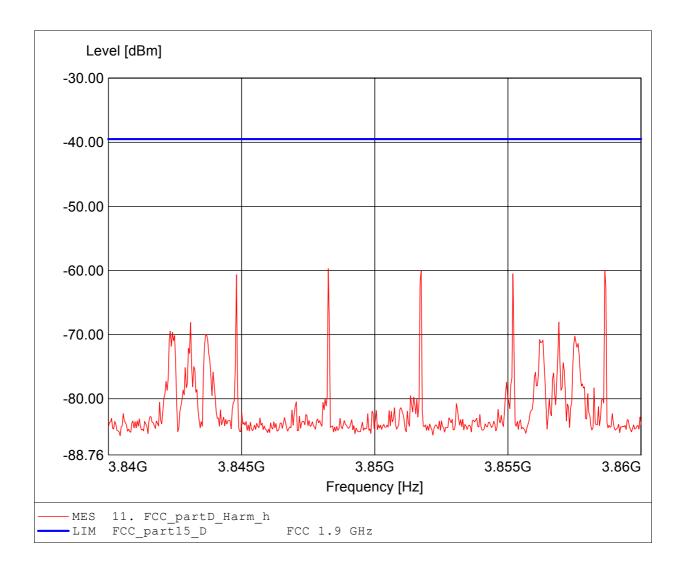
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:3.848GHz Pmax:-59.70dBm RBW:10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

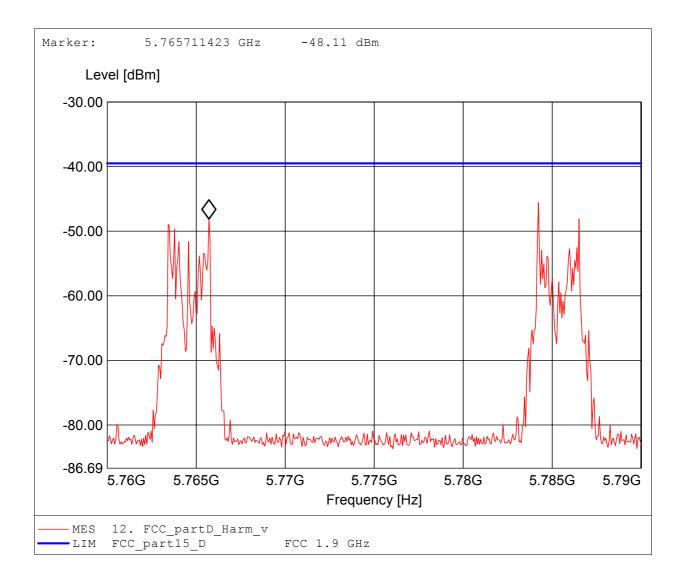
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Freq:5.784GHz Pmax:-45.55dBm RBW:10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

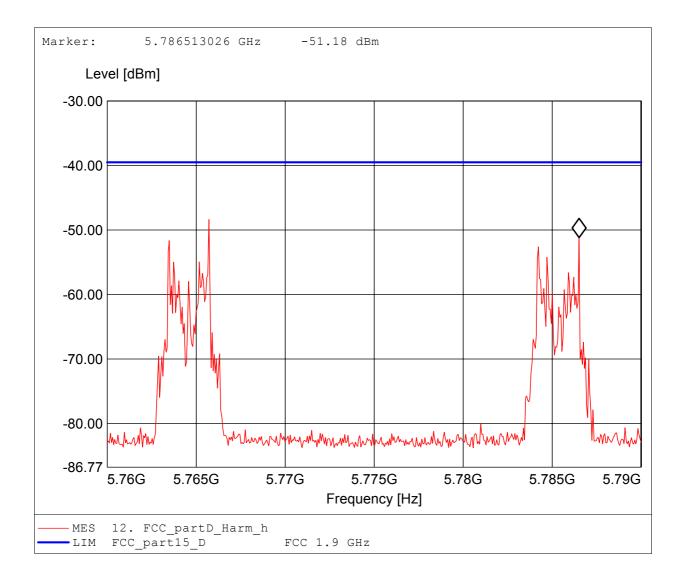
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Freq:5.766GHz Pmax:-48.37dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

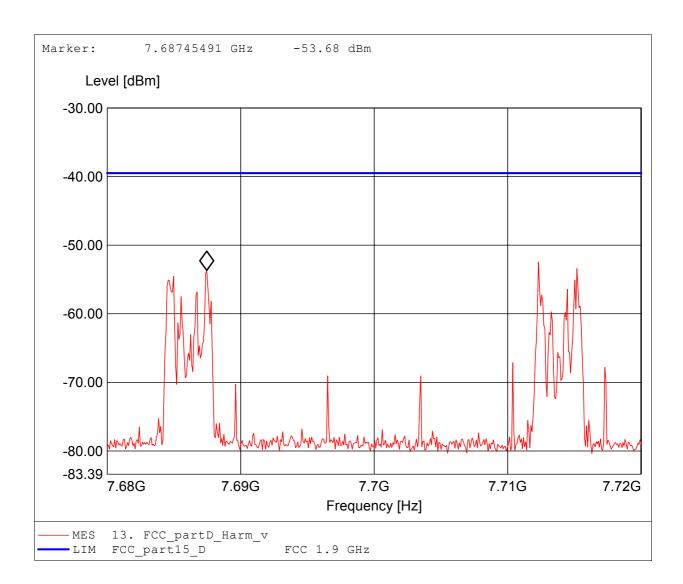
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:7.712GHz Pmax:-52.45dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

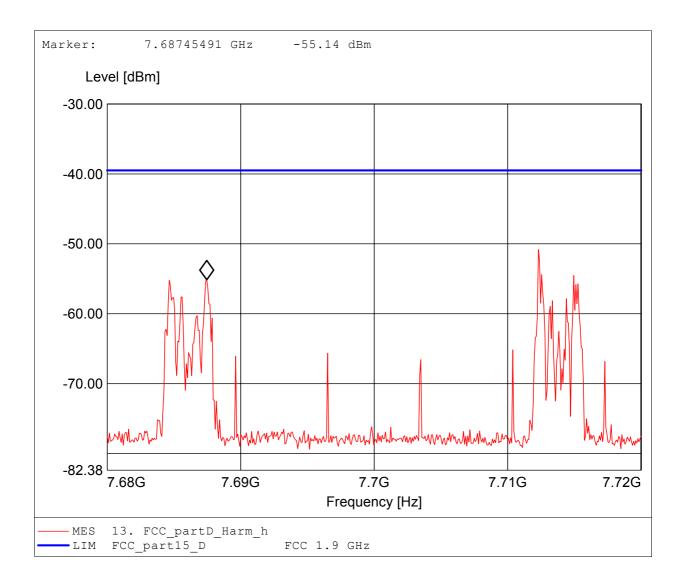
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:7.712GHz Pmax:-50.81dBm RBW:10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

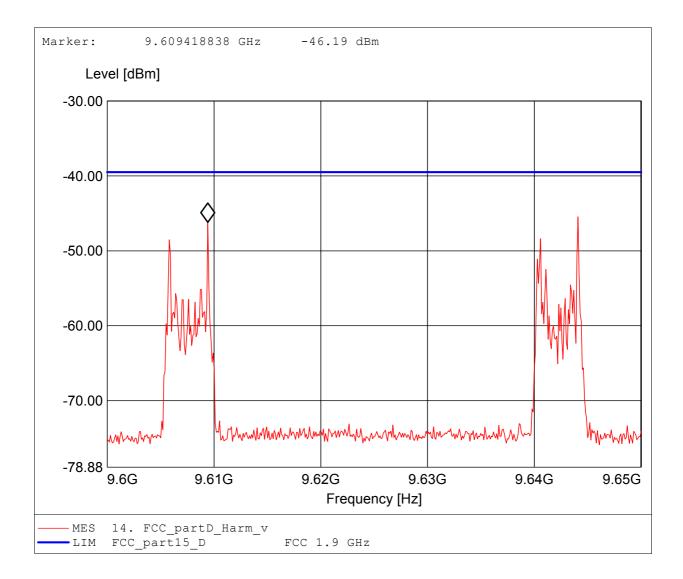
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Freq: 9.644GHz Pmax: -45.46dBm RBW: 10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

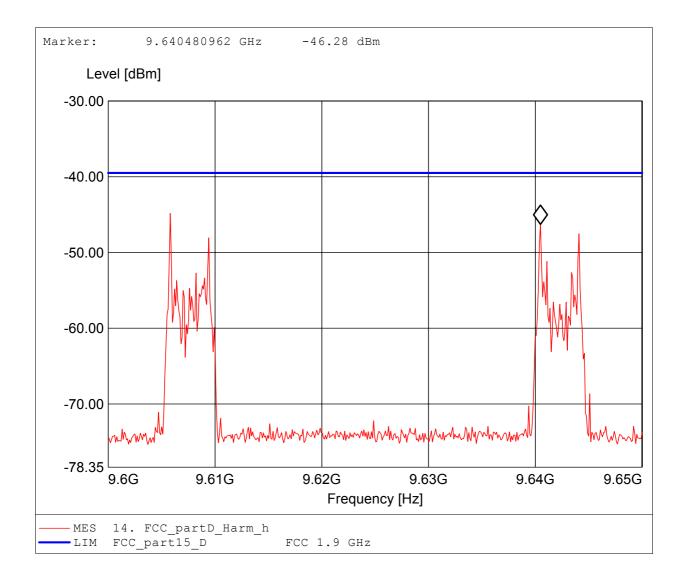
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Freq: 9.606GHz Pmax: -44.84dBm RBW: 10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

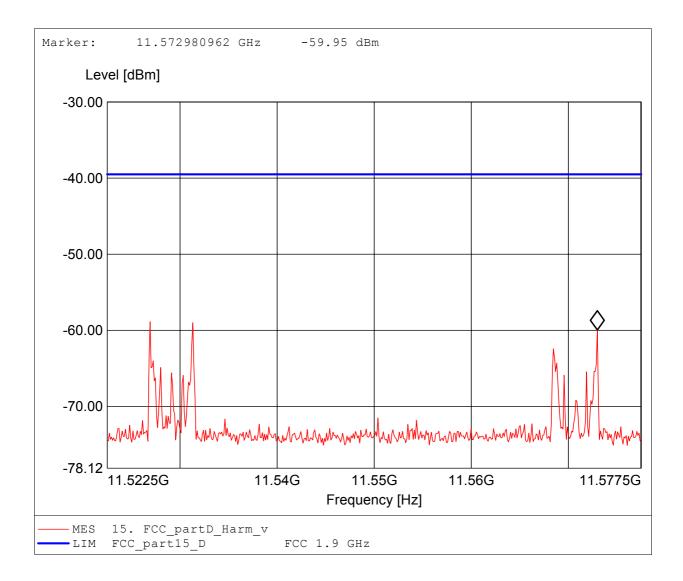
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:11.527GHz Pmax:-58.87dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

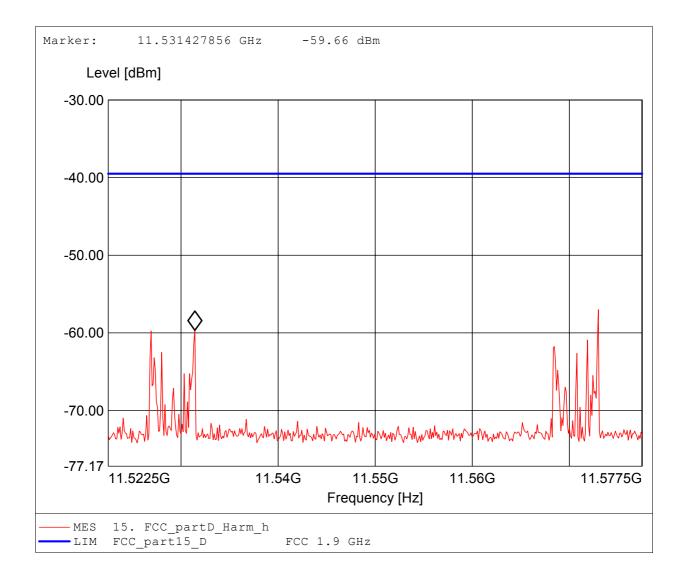
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

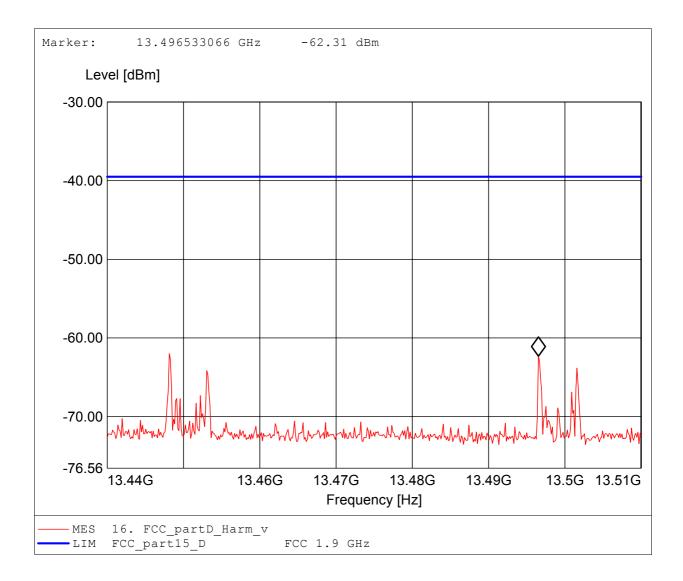
Comment 2: Freq:11.573GHz Pmax:-56.99dBm RBW:10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 IP-DECT Access Point EUT: AP300E / Ch.: 4, 0 / ant.: 0 / even slot Model: Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Tnom.: 24°C / Unom: 48 V DC (POE) Test Condition: Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: BBHA 9120D, ampl. Comment 1: Freq:13.448GHz Pmax:-61.99dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

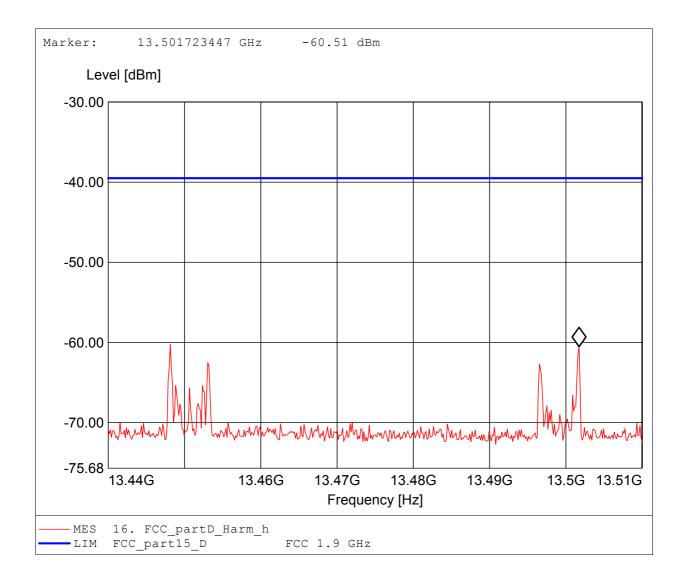
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:13.448GHz Pmax:-60.20dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

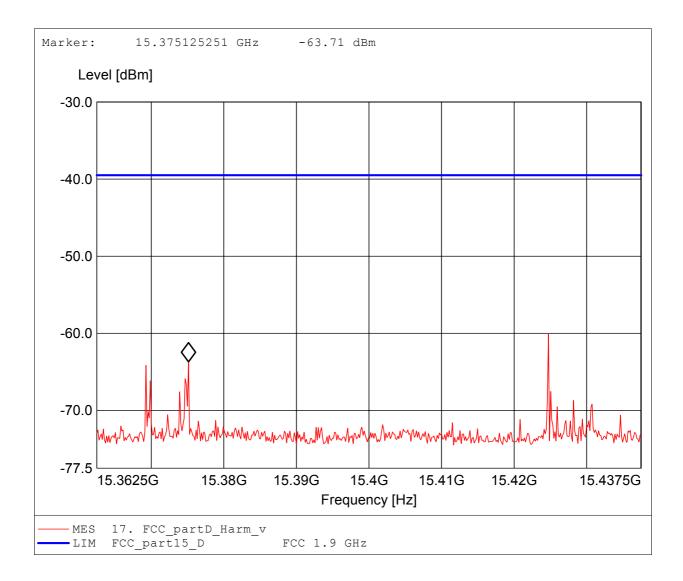
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

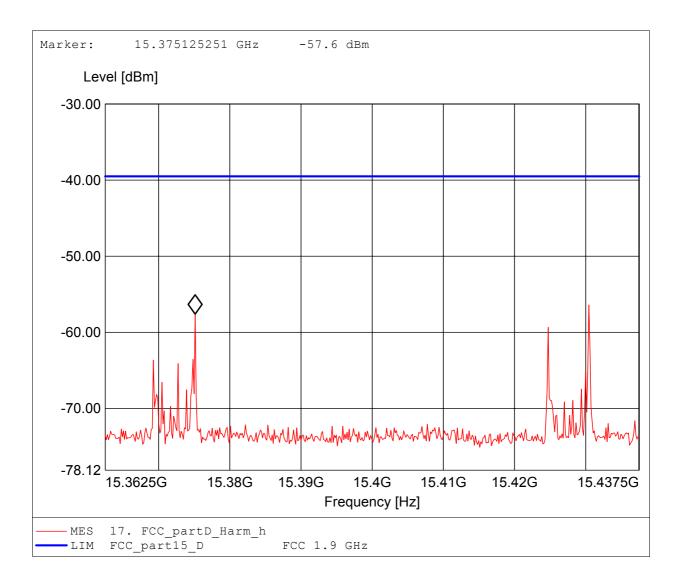
Comment 2: Freq:15.425GHz Pmax:-60.11dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464
EUT: IP-DECT Access Point
Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik
Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx

Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.
Comment 2: Freq:15.430GHz Pmax:-56.41dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

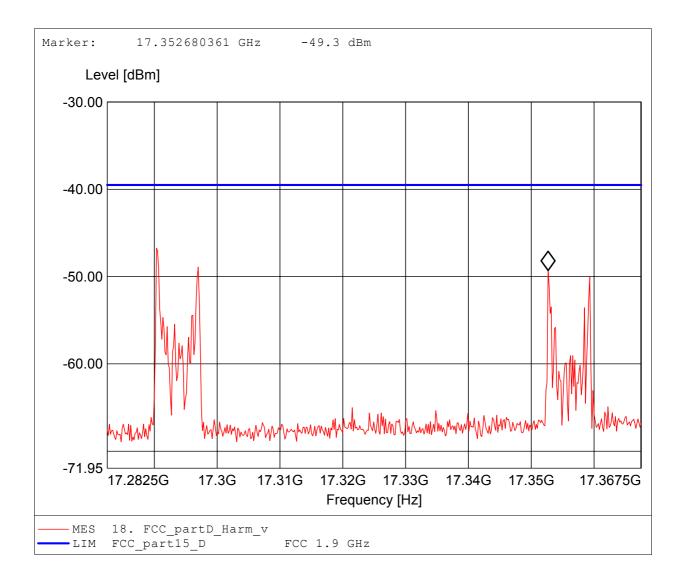
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Condition: Thom.: 24 C / Onom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:17.290GHz Pmax:-46.75dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / even slot

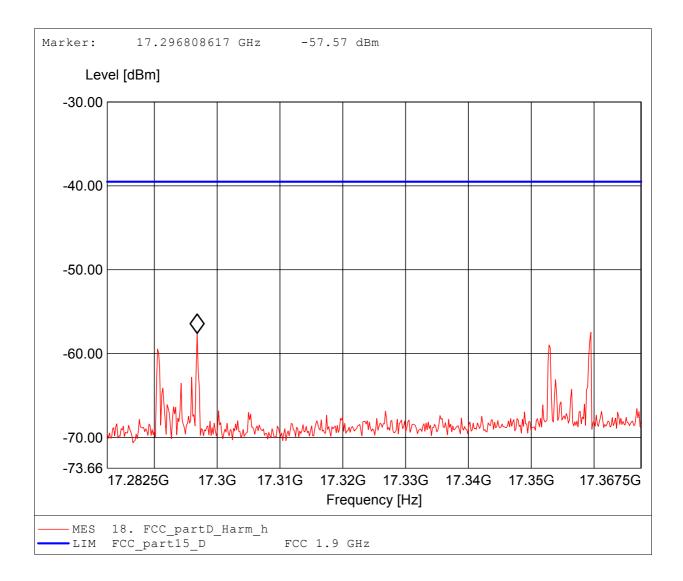
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:17.359GHz Pmax:-57.44dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

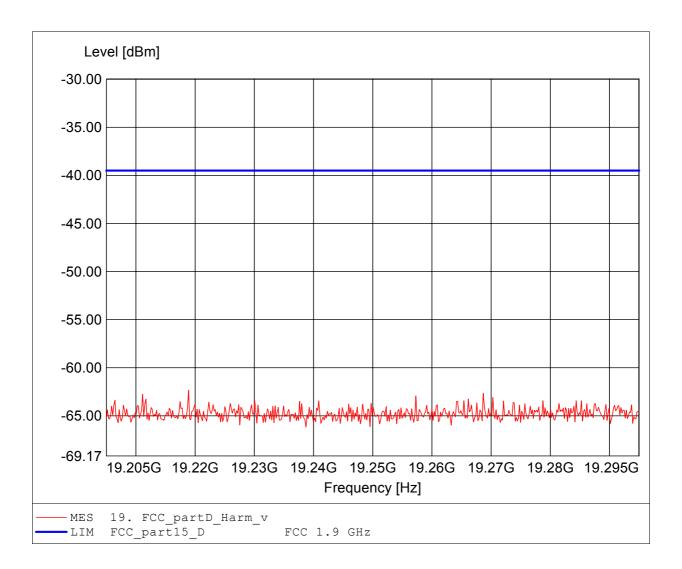
IP-DECT Access Point EUT:

AP300E / Ch.: 4, 0 / ant.: 0 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: $24\,^{\circ}\text{C}$ / Unom: $48\,^{\circ}\text{V}$ DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: HL 025, ampl. Comment 1:

Freq:19.219GHz Pmax:-62.32dBm RBW:10 kHz Comment 2:



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

NEC Unified Solutions B.V. / Ord.: G0M21007-3464 Approval Holder:

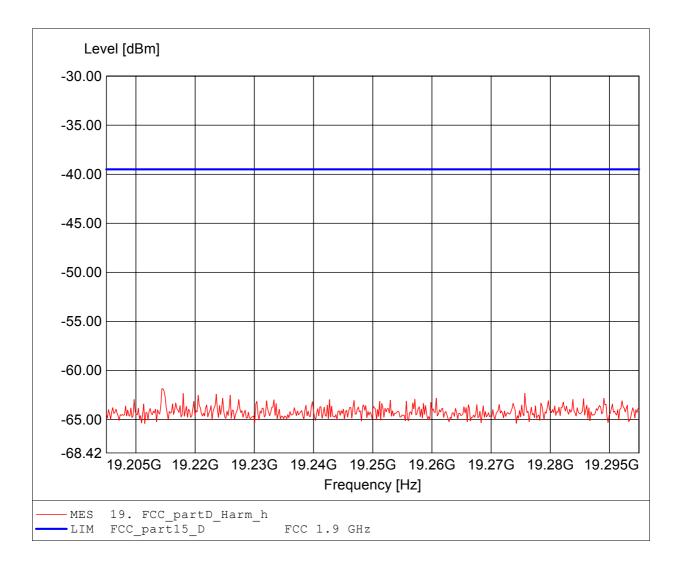
IP-DECT Access Point EUT:

AP300E / Ch.: 4, 0 / ant.: 0 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: $24\,^{\circ}\text{C}$ / Unom: $48\,^{\circ}\text{V}$ DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: HL 025, ampl. Comment 1:

Freq:19.215GHz Pmax:-61.87dBm RBW:10 kHz Comment 2:



FCC RULES PART 15, SUBPART D

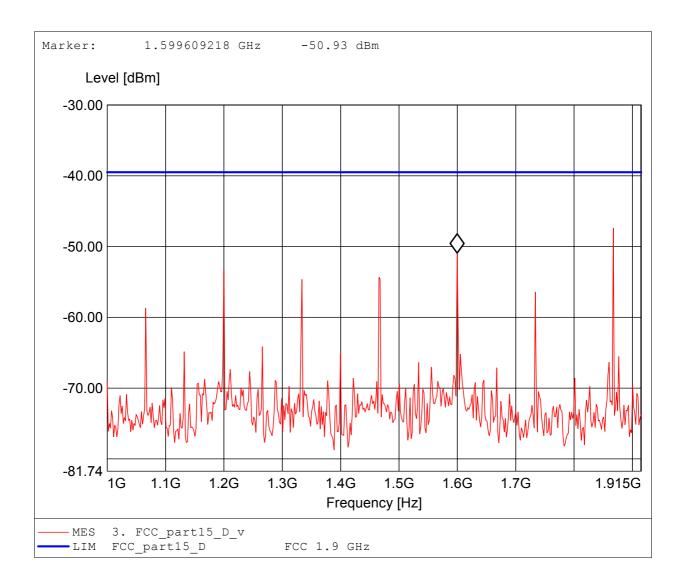
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

IP-DECT Access Point EUT:

AP300E / Ch.: 4, 0 / ant.: 1 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.867GHz Pmax:-47.39dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

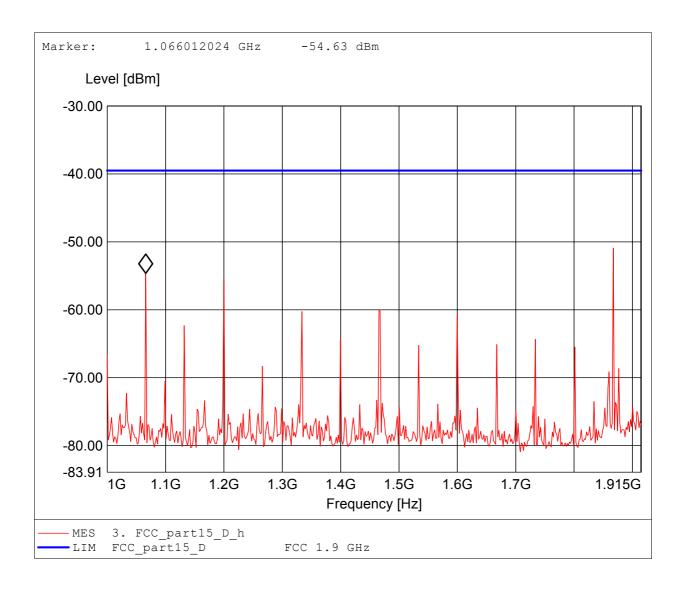
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

IP-DECT Access Point EUT:

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: BBHA 9120D, ampl. Comment 1:

Comment 2: Freq:1.867GHz Pmax:-50.91dBm RBW: 100 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

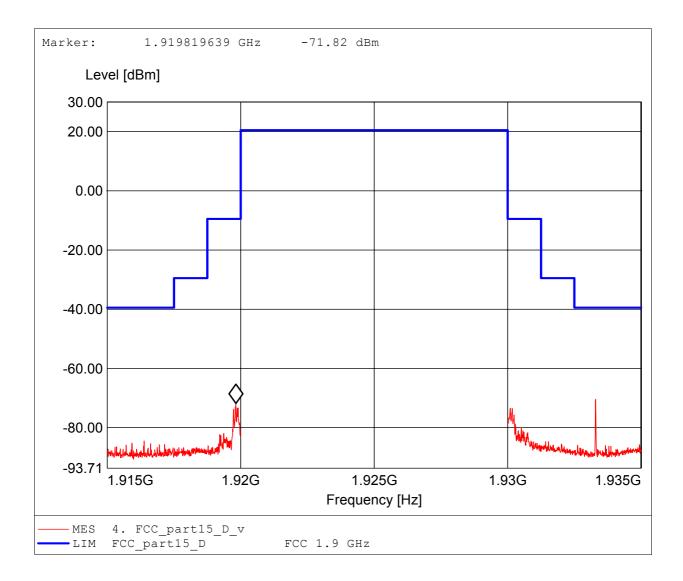
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

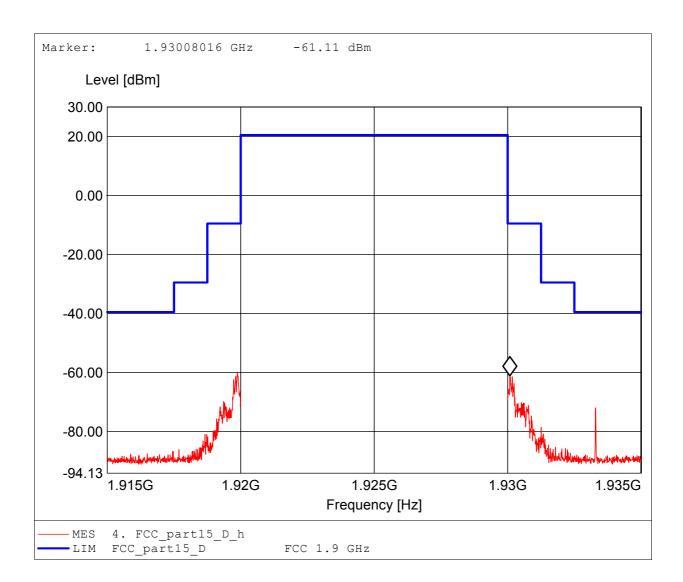
Comment 2: Freq:1.933GHz Pmax:-70.45dBm RBW: 10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 IP-DECT Access Point EUT: AP300E / Ch.: 4, 0 / ant.: 1 / even slot Model: Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: BBHA 9120D, ampl. Freq:1.920GHz Pmax:-59.82dBm RBW: 10 kHz Comment 1:



FCC RULES PART 15, SUBPART D

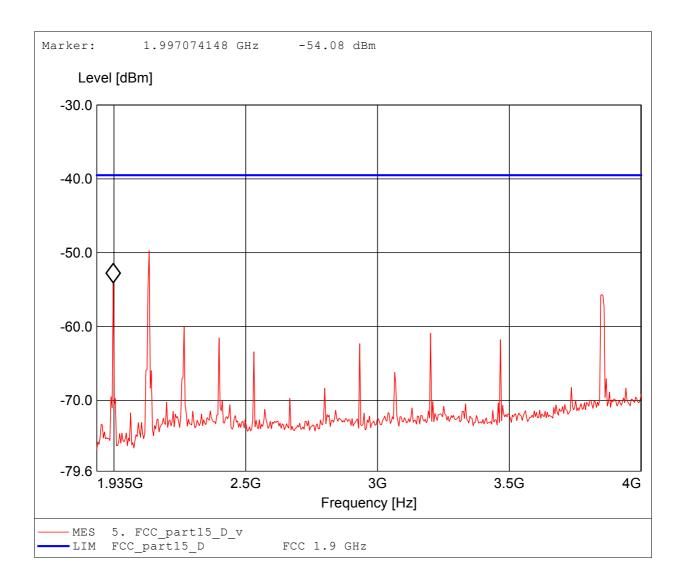
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

IP-DECT Access Point EUT:

AP300E / Ch.: 4, 0 / ant.: 1 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: BBHA 9120D, ampl. Comment 1:

Comment 2: Freq:2.134GHz Pmax:-49.72dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

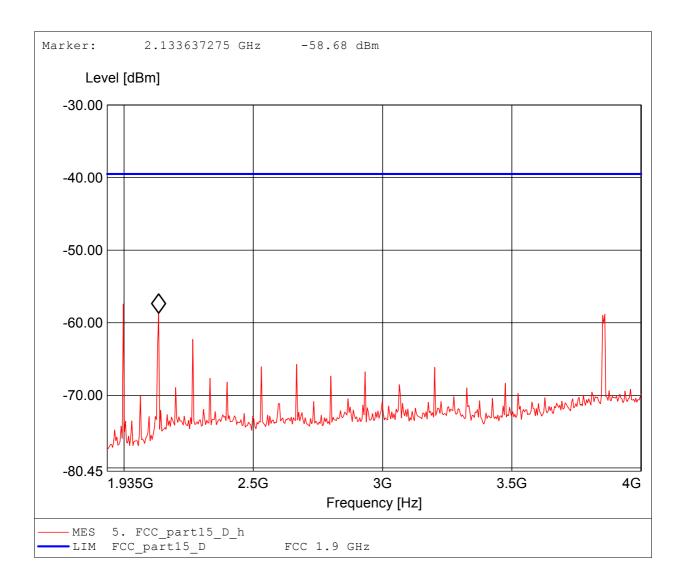
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

IP-DECT Access Point EUT:

AP300E / Ch.: 4, 0 / ant.: 1 / even slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Dist.: 1m, Ant.: BBHA 9120D, ampl. Comment 1:

Comment 2: Freq:1.997GHz Pmax:-57.42dBm RBW: 100 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

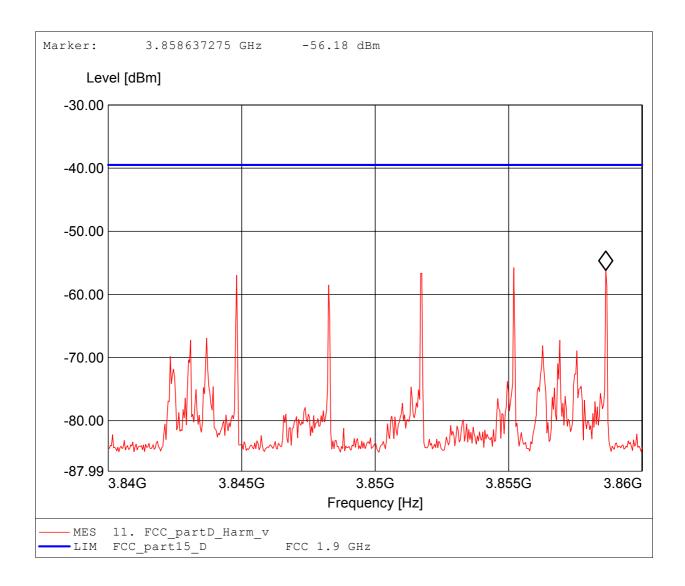
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:3.855GHz Pmax:-55.75dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

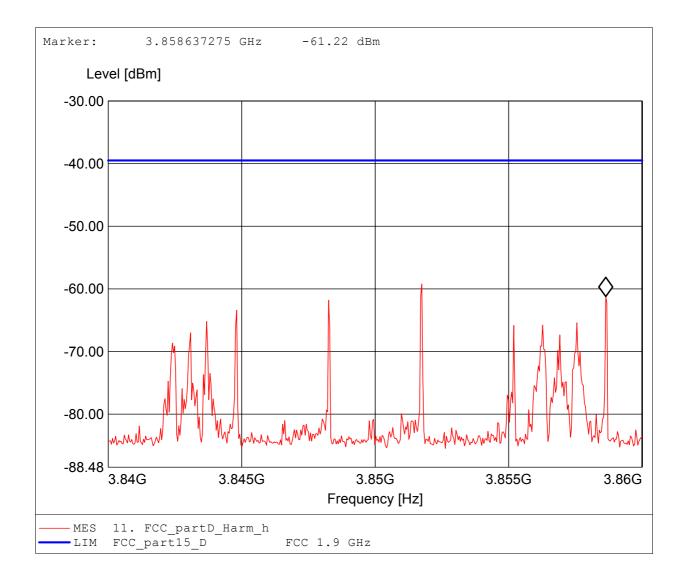
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:3.852GHz Pmax:-59.21dBm RBW:10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

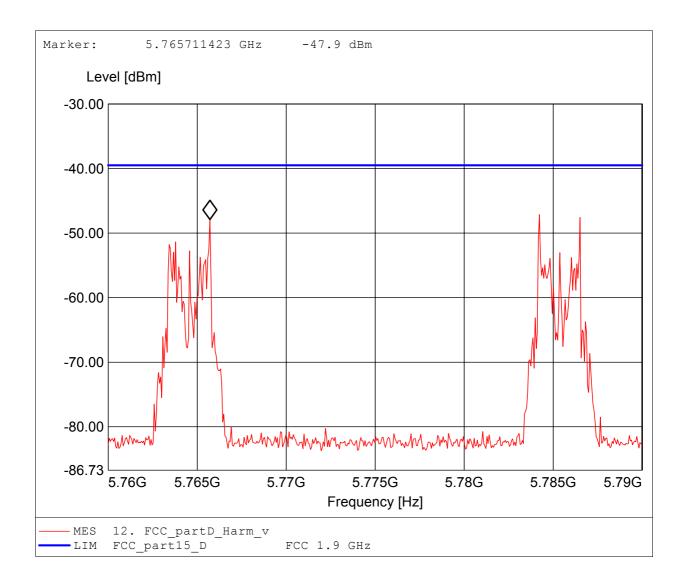
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Freq:5.784GHz Pmax:-47.13dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

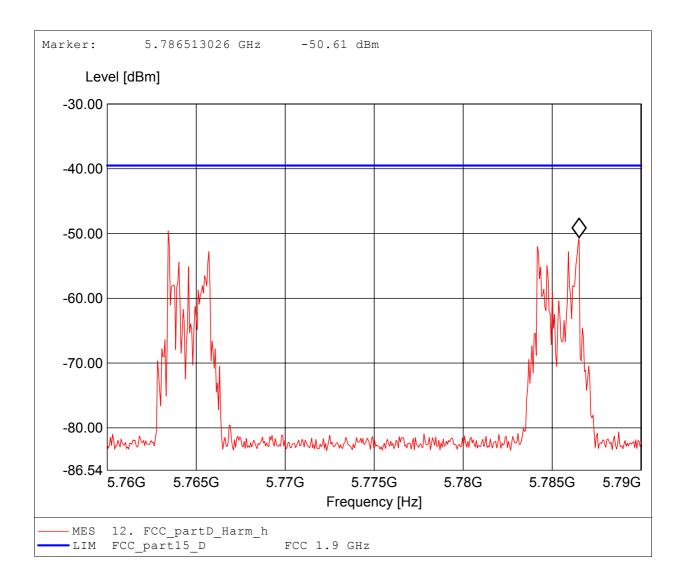
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:5.763GHz Pmax:-49.58dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

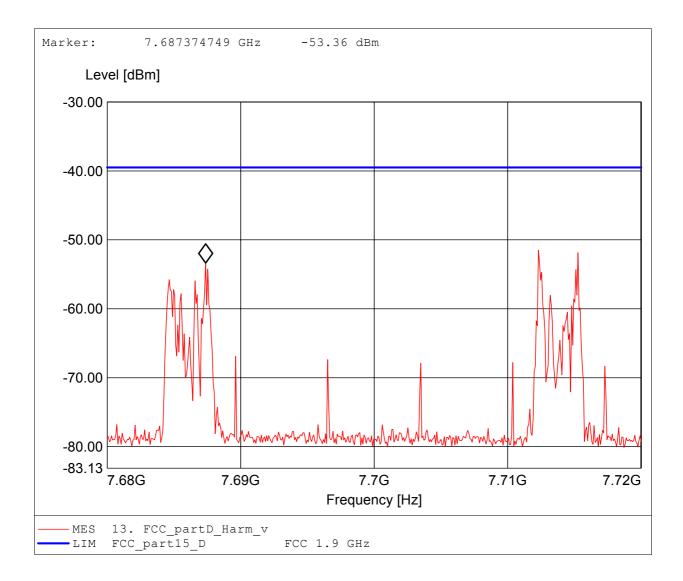
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:7.712GHz Pmax:-51.51dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

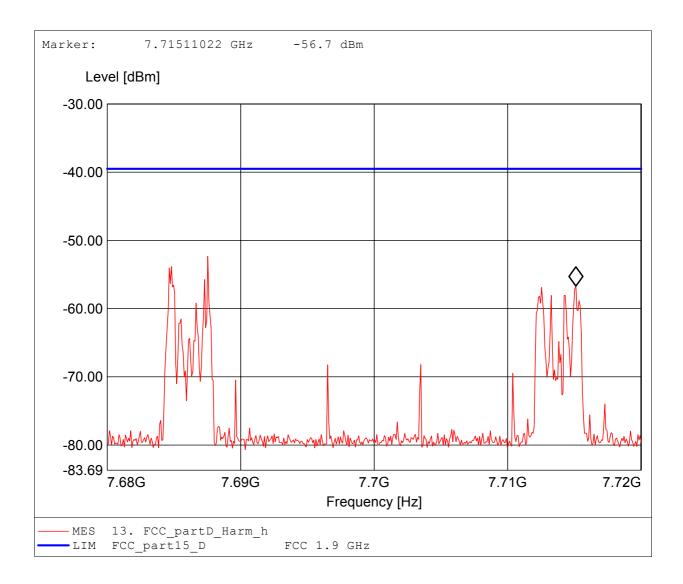
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:7.688GHz Pmax:-52.32dBm RBW:10 kHz



Comment 2:

FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

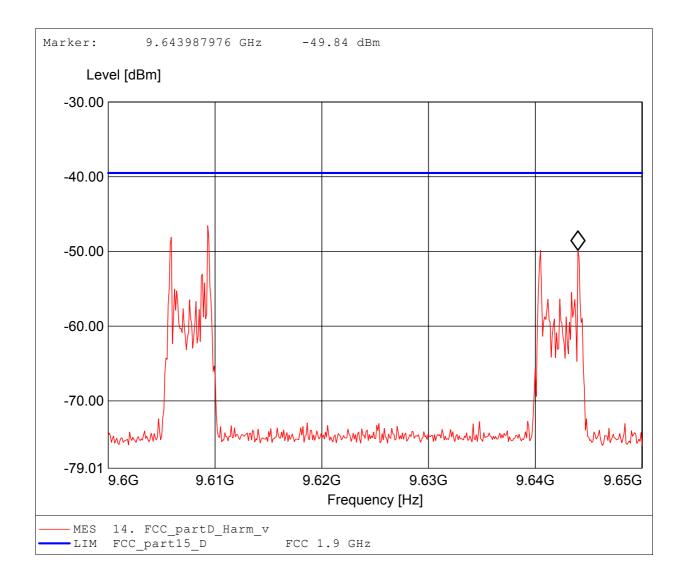
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Freq: 9.609GHz Pmax: -46.55dBm RBW: 10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

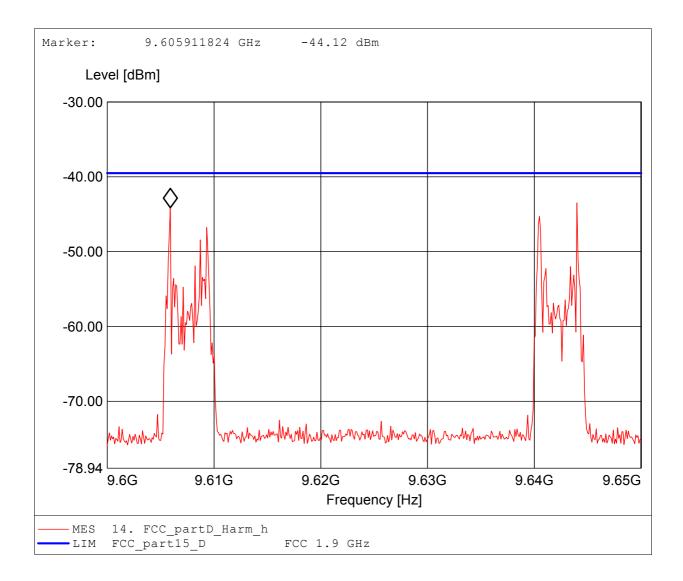
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq: 9.644GHz Pmax: -43.48dBm RBW: 10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

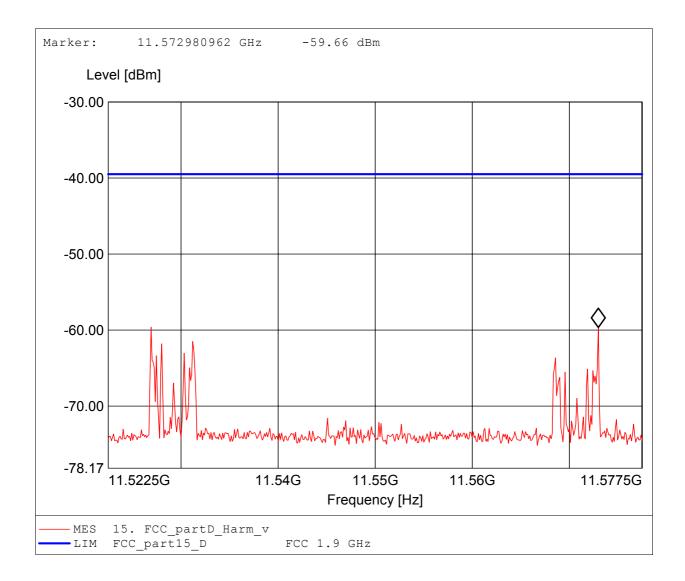
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:11.527GHz Pmax:-59.61dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

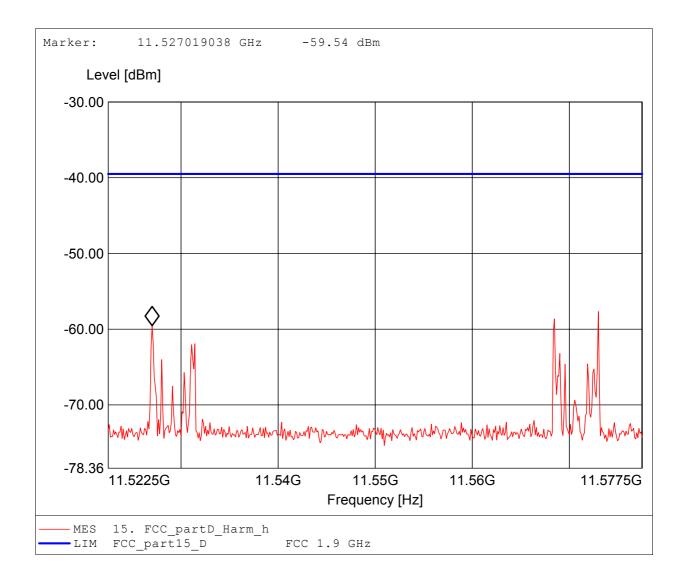
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:11.573GHz Pmax:-57.67dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

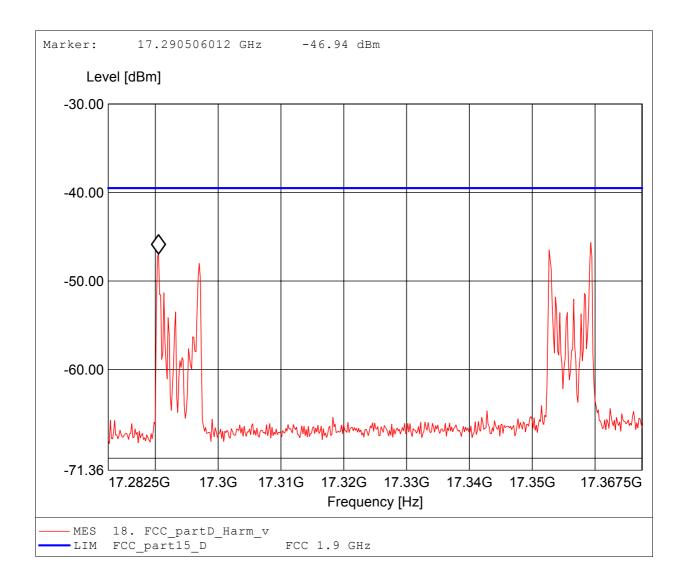
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:17.359GHz Pmax:-45.63dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 1 / even slot

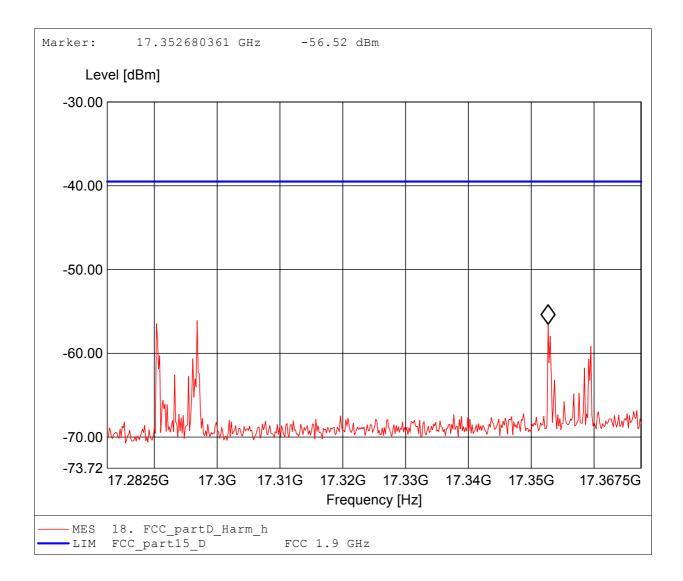
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:17.297GHz Pmax:-56.11dBm RBW:10 kHz



FCC RULES PART 15, SUBPART D

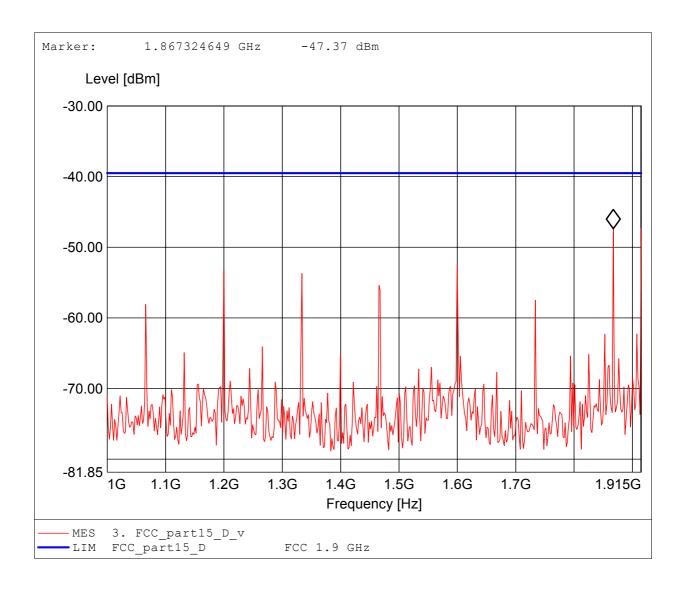
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

IP-DECT Access Point EUT:

AP300E / Ch.: 4, 0 / ant.: 0 / odd slot Model:

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: $24\,^{\circ}\text{C}$ / Unom: $48\,^{\circ}\text{V}$ DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Comment 1:

Dist.: 1m, Ant.: BBHA 9120D, ampl. Comment 2: Freq:1.915GHz Pmax:-47.29dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

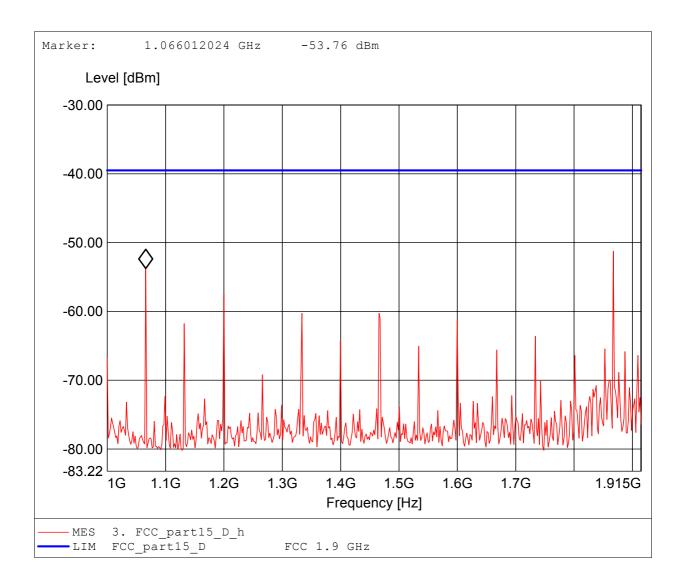
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.867GHz Pmax:-51.23dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

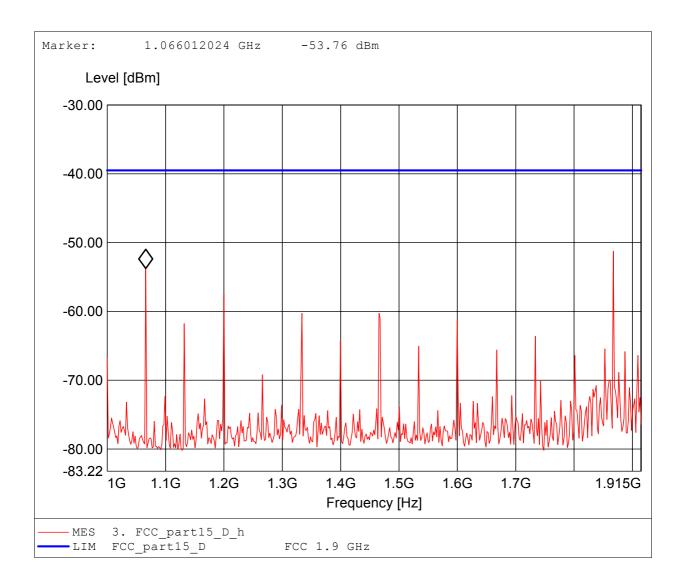
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE) Test Specification: Fully anechoic chamber / mode: Tx Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.867GHz Pmax:-51.23dBm RBW: 100 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

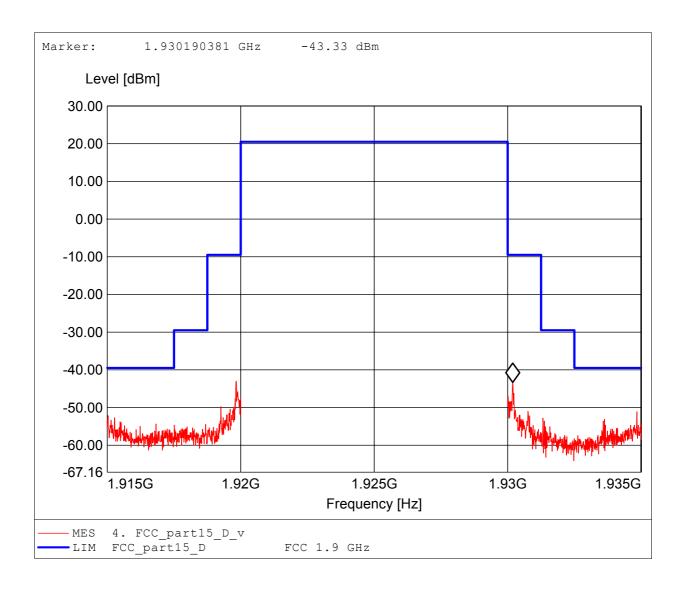
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.920GHz Pmax:-43.00dBm RBW: 10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: GOM21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

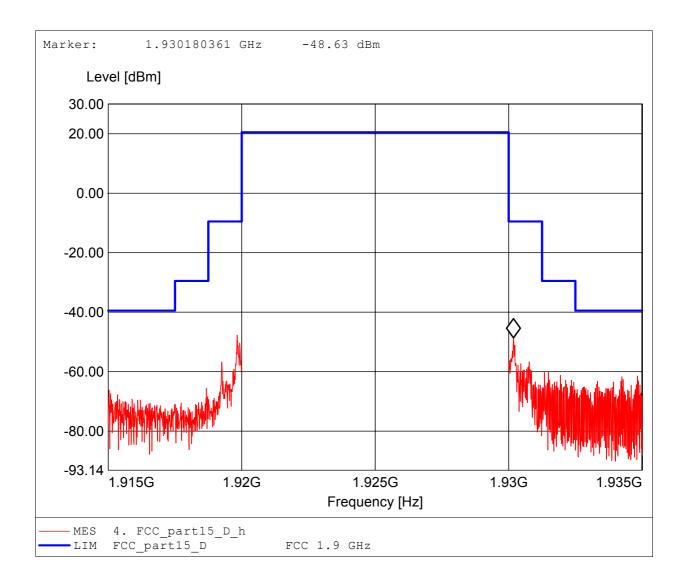
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.920GHz Pmax:-47.78dBm RBW: 10 kHz



FCC RULES PART 15, SUBPART D

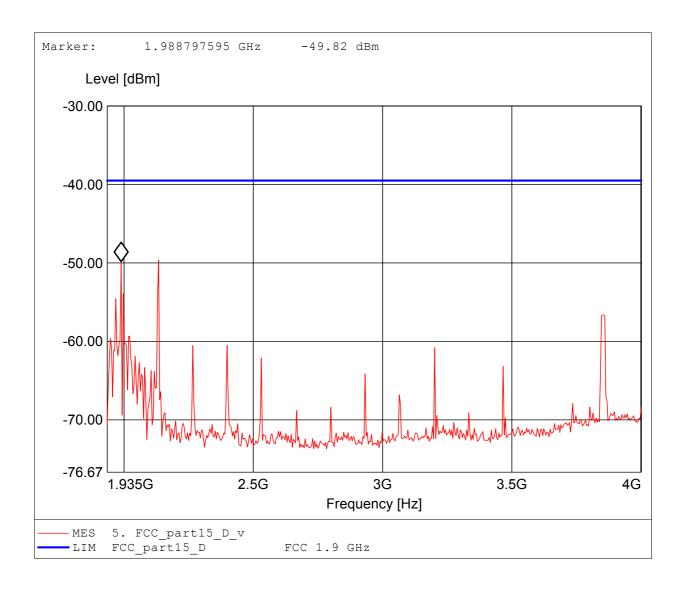
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:2.134GHz Pmax:-49.66dBm RBW: 100 kHz



FCC RULES PART 15, SUBPART D

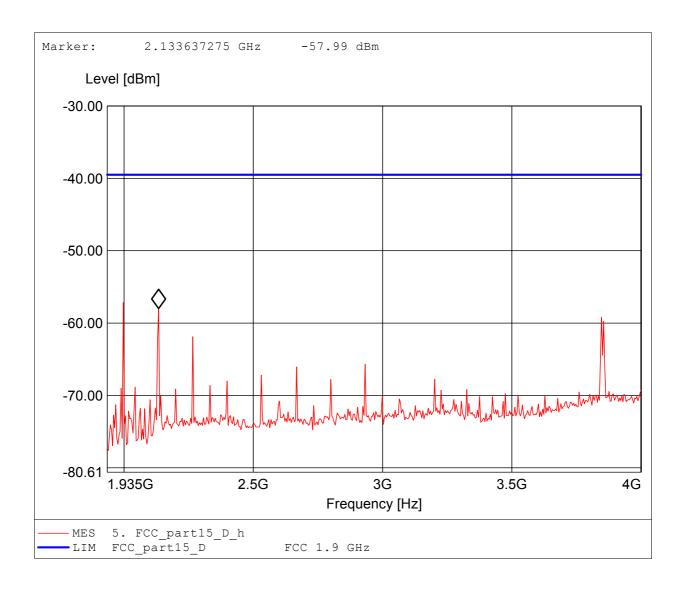
Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464

EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:1.997GHz Pmax:-57.16dBm RBW: 100 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

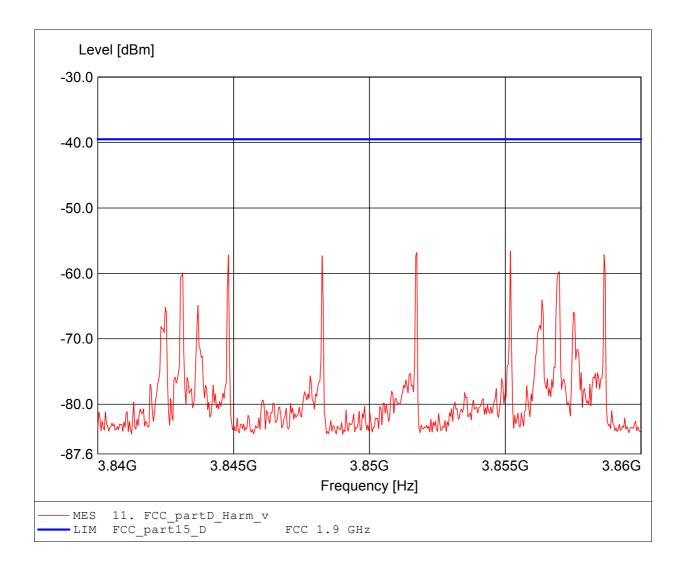
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:3.855GHz Pmax:-56.57dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

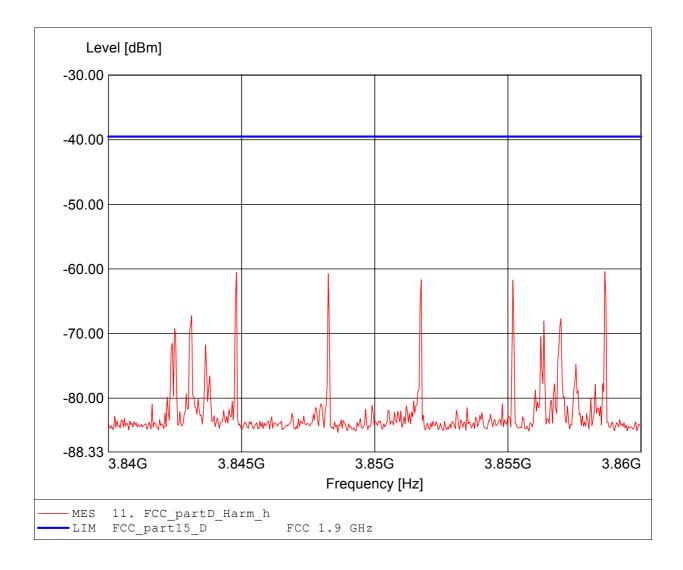
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:3.859GHz Pmax:-60.39dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

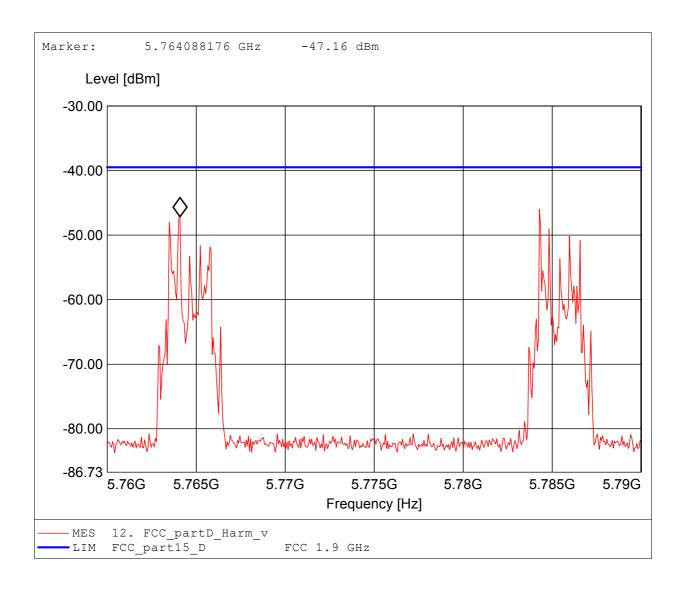
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:5.784GHz Pmax:-46.01dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

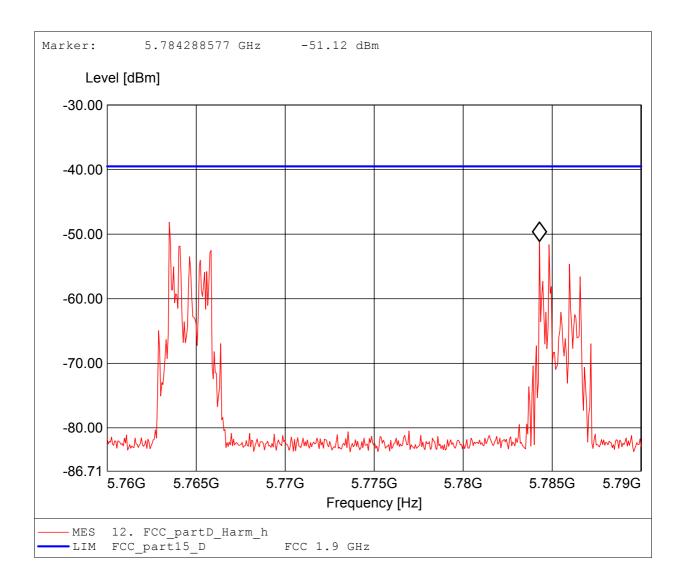
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:5.763GHz Pmax:-48.14dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

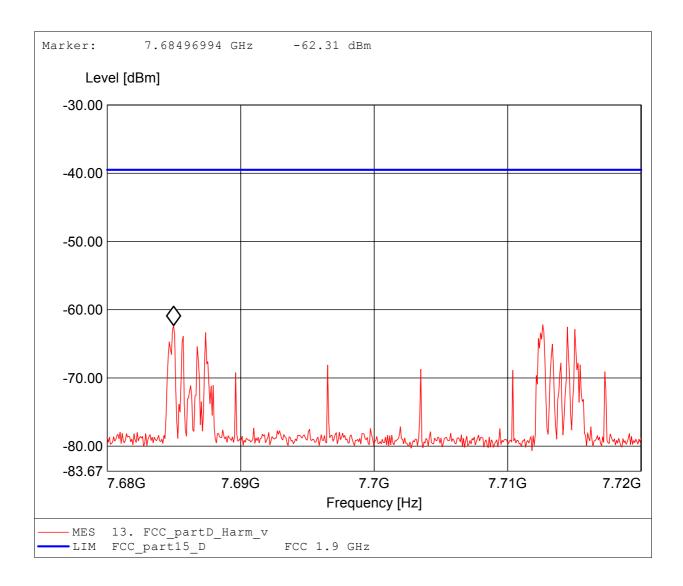
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:7.713GHz Pmax:-62.21dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

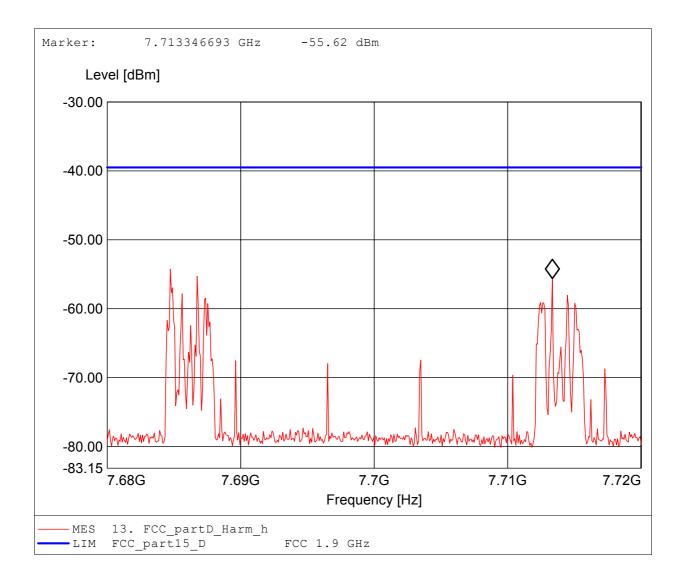
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:7.685GHz Pmax:-54.26dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

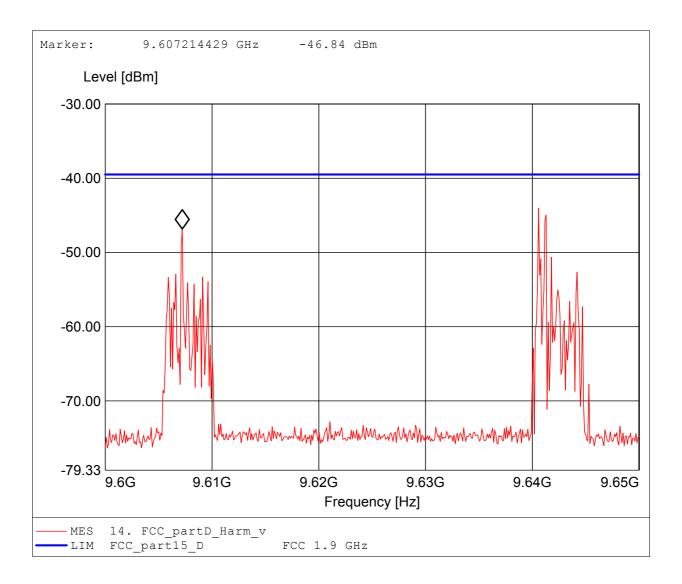
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:9.641GHz Pmax:-44.02dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

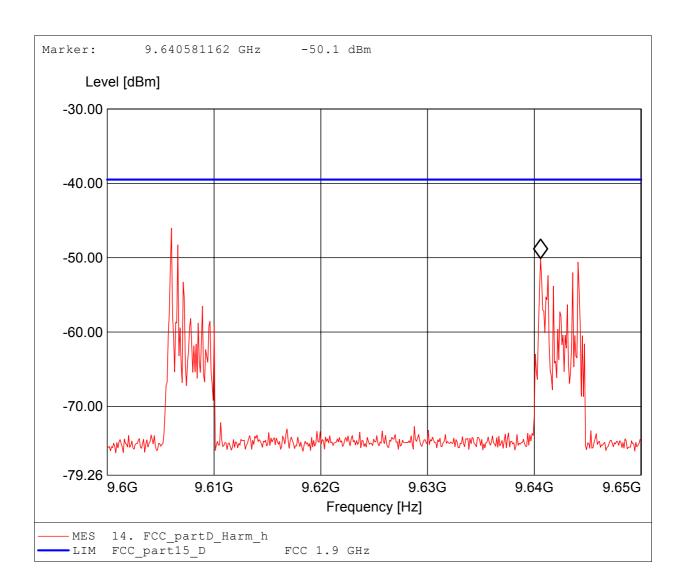
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:9.606GHz Pmax:-46.02dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464
EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

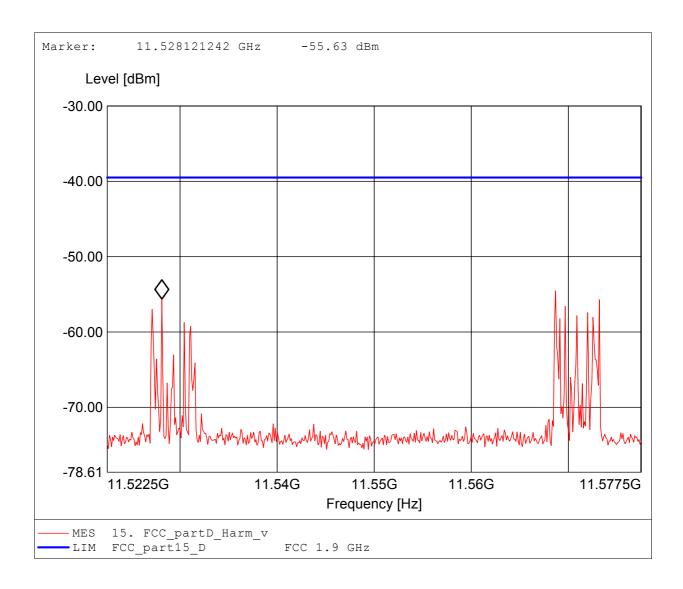
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:11.569GHz Pmax:-54.55dBm RBW:10 kHz



FCC PART 15, SUBPART D (ANSI C63.17, Subclause 6.1.6.3)

Approval Holder: NEC Unified Solutions B.V. / Ord.: G0M21007-3464 EUT: IP-DECT Access Point

Model: AP300E / Ch.: 4, 0 / ant.: 0 / odd slot

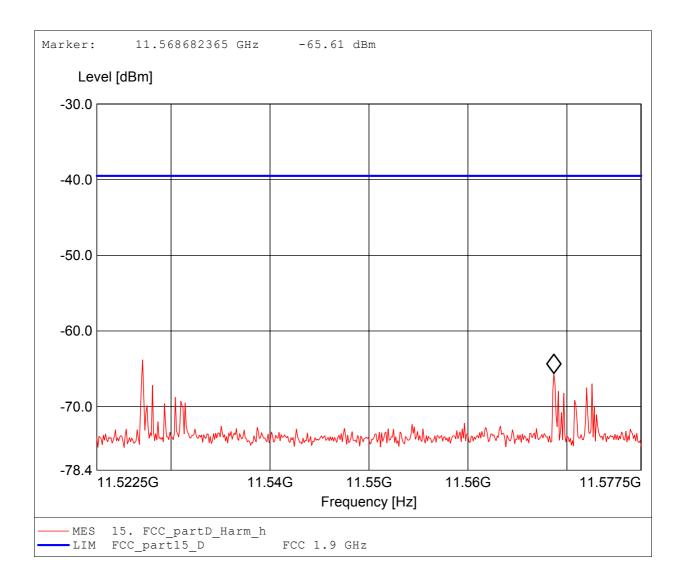
Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Test Specification: Fully anechoic chamber / mode: Tx

Comment 1: Dist.: 1m, Ant.: BBHA 9120D, ampl.

Comment 2: Freq:11.527GHz Pmax:-63.83dBm RBW:10 kHz





Annex L Receiver spurious emission

Test Report No.: G0M21007-3464-C-1_rev01

Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V. EUT: IP-DECT Access Point

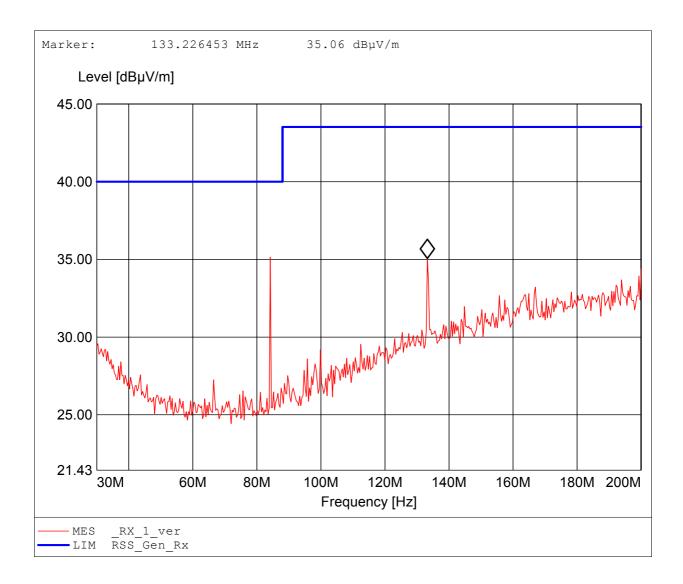
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Comment 1: Dist.: 3m, Ant.: HK 116

Comment 2: Freq:84.168MHz Emax:35.15dBµV/m RBW: 100 kHz



Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V. EUT: IP-DECT Access Point

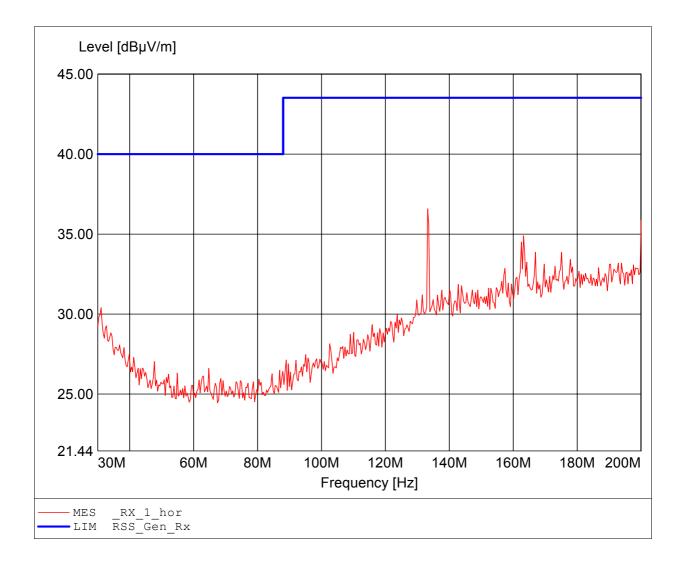
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Comment 1: Dist.: 3m, Ant.: HK 116

Comment 2: Freq:133.226MHz Emax:36.58dBpV/m RBW: 100 kHz



Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V.

IP-DECT Access Point EUT:

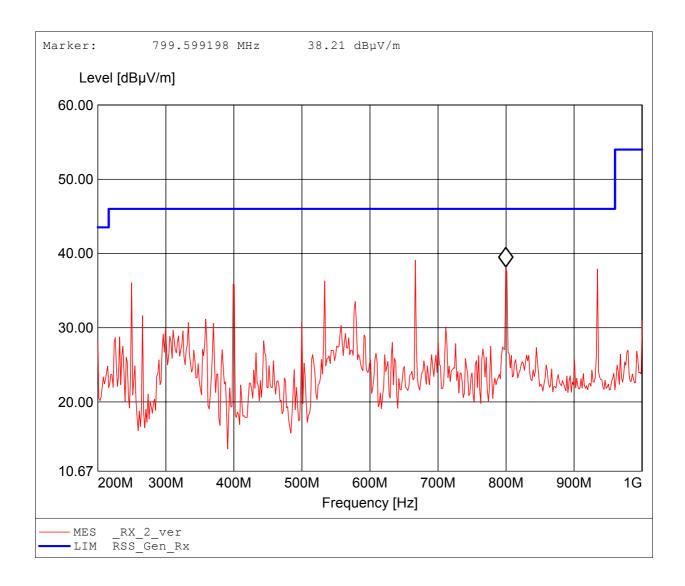
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Comment 1: Dist.: 3m, Ant.: HL 223, ampl.

Comment 2: Freq:666.533MHz Emax:39.11dBuV/m RBW: 100 kHz



Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V. EUT: IP-DECT Access Point

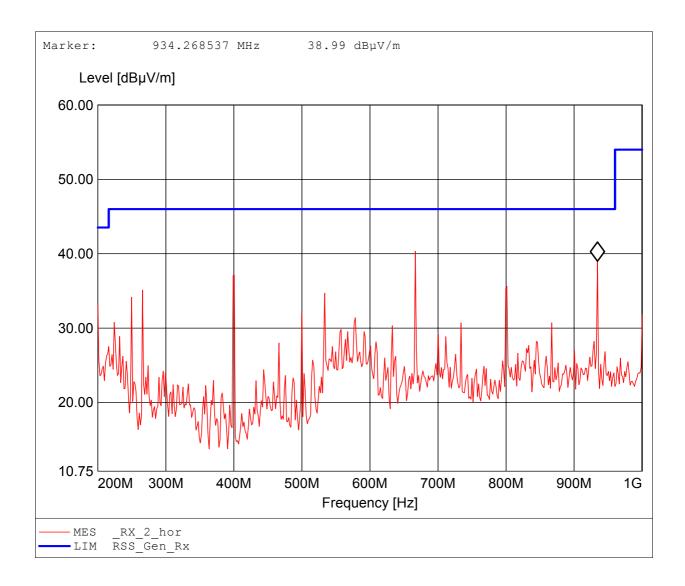
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Comment 1: Dist.: 3m, Ant.: HL 223, ampl.

Comment 2: Freq:666.533MHz Emax:40.33dBuV/m RBW: 100 kHz



Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V. EUT: IP-DECT Access Point

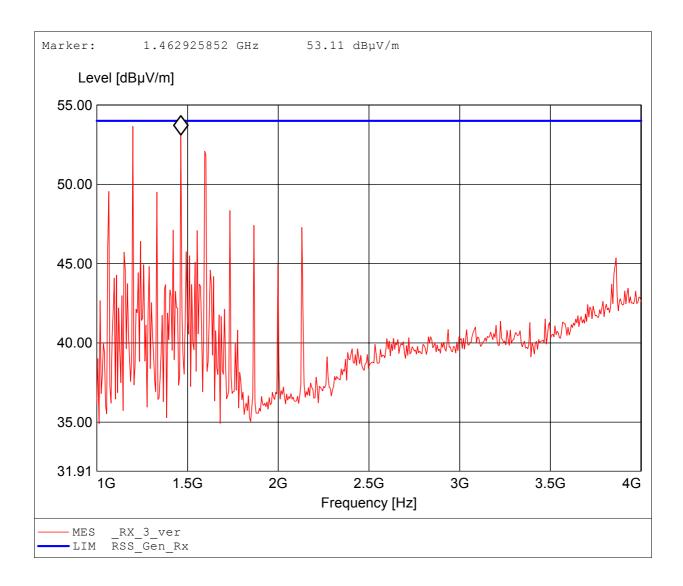
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Comment 1: Dist.: 3m, Ant.: HL025, ampl.

Comment 2: Freq:1.198GHz Emax:53.65dBuV/m RBW: 1 MHz



Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V.

IP-DECT Access Point EUT:

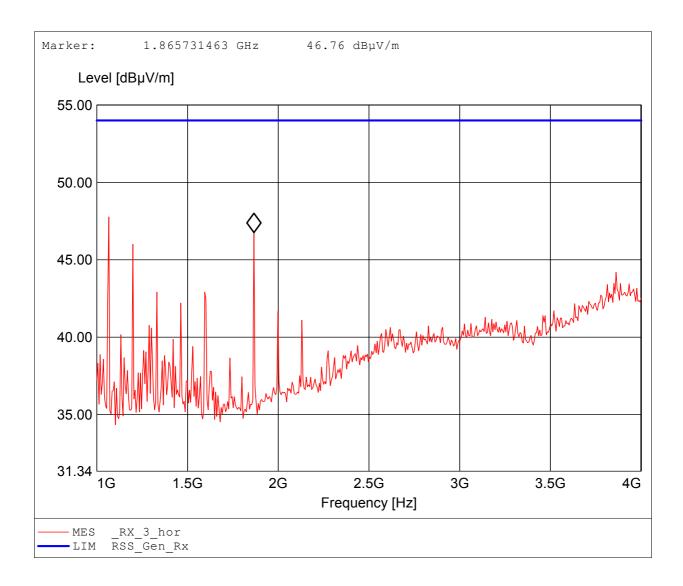
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Tnom.: 24°C / Unom: 48 V DC (POE) Test Condition:

Dist.: 3m, Ant.: HL025, ampl. Comment 1:

Comment 2: Freq:1.066GHz Emax:47.77dBuV/m RBW: 1 MHz



Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V.

IP-DECT Access Point EUT:

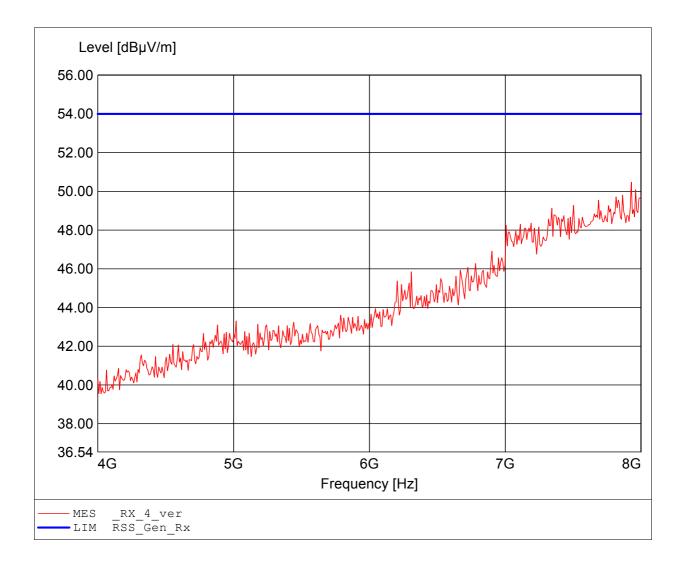
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Comment 1: Dist.: 3m, Ant.: HL025, ampl.

Comment 2: Freq:7.928GHz Emax:50.48dBuV/m RBW: 1 MHz



Standards Industry Canada, RSS-GEN

Approval Holder: NEC Unified Solutions B.V. EUT: IP-DECT Access Point

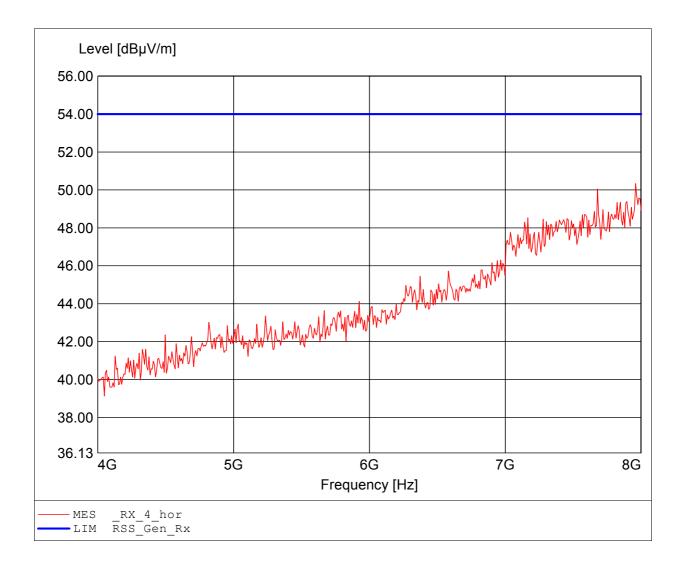
Model: AP300E

Test Site / Operator: Eurofins Product Service GmbH / Mr. Handrik

Test Condition: Tnom.: 24°C / Unom: 48 V DC (POE)

Comment 1: Dist.: 3m, Ant.: HL025, ampl.

Comment 2: Freq:7.960GHz Emax:50.34dBuV/m RBW: 1 MHz





Revision History

Revision	Issue Date	Revision	Revised by
01	02.09.2010	Replaced document:: G0M21007-3464-C-1 Replaced by: G0M21007-3464-C-1_rev01 Reason:	A. Bartusch
		 Page 8: The manufacturer was updated from NEC Philips Unified Solutions B.V to NEC Unified Solutions B.V 	