





## **TEST REPORT**

Test Report No.: 1-9380/15-01-03



#### **Testing Laboratory**

#### **CETECOM ICT Services GmbH**

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#### **Accredited Testing Laboratory:**

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2005) by the Deutsche Akkreditierungsstelle GmbH (DAkkS) The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number: D-PL-12076-01-00

#### **Applicant**

#### **Gigaset Communications GmbH**

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46395 Bocholt/Germany Phone: +49 2871 91-0 Fax: +49 2871 91-62857

Contact: Uwe Alt

e-mail: <u>uwe.alt@gigaset.com</u>

#### Manufacturer

same as applicant

#### **Test Standard/s**

47 CFR 15 2013-10 Subpart B - Unintentional Radiators

ICES-003, Issue 5 2012-08 Interference-Causing Equipment Standard Digital Apparatus

**Test Item** 

Kind of test item: Cordless Phone DECT 6.0

Radio Communications & EMC

Model name:Gigaset C530HS/N serial number:S30852-Q2552-R301

HW hardware status: 01

SW software status: V107.035.00 Power Supply: AC 115V/60Hz



Radio Communications & EMC

This test report is electronically signed and valid without handwritten signature. The public keys can be requested at the test laboratory to verify the electronic signatures.

lest performed:	lest Report authorised:			
Hans-Joachim Wolsdorfer	Uli Kraus			



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#### 2 General information

#### 2.1 Notes and disclaimer

The test results of this test report relate exclusively to the test item specified in this test report. CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

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### 2.2 Application details

Date of receipt of 2015-03-11

order:

Date of receipt of test item: 2015-03-20 Start of test: 2015-03-23 End of test: 2015-03-23

Person(s) present during the test: -

#### 3 Test standard/s:

Test StandardVersionTest Standard Description47 CFR 152013-10Subpart B - Unintentional RadiatorsICES-003, Issue 52012-08Interference-Causing Equipment Standard Digital Apparatus

#### 4 Test Environment

Temperature:  $20^{\circ}\text{C} - 25^{\circ}\text{C}$  Relative humidity content: 30 % - 50 % Air pressure: 1020 hPa Power supply: 230 V / 50 Hz

#### 5 Test Laboratories sub-contracted

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#### 6 Information about Test Conditions

### 6.1 Test Item

Kind of test item :	Cordless Phone DECT 6.0	Cordless Phone DECT 6.0					
Type identification :	Gigaset C530H						
Equipment classification:	Equipment for fixed use						
Environment classification:	Residential, commercial and lig	ght industry					
Supply voltage :	AC 115 V/ 60 Hz	•					
Ports :	Description	Description Direction Length					
(maximum cable lengths	AC power port	Input	> 3m				
declared by manufacturer)		·					
Is mounting position / usual operating position defined?							
Additional information:							
- the radio part of the device is already tested and not part of this test report							

# 6.2 EUT: Type, S/N etc. and Short Descriptions Used in this Test Report

short descrip- tion*)	EUT	Туре	S/N serial number	HW hardware status	SW software status
EUT A	DECT portable	Gigaset C530H	S30852-Q2552- R301	01	V107.035.00
EUT B	charging station	S30852-S2582-R10x		unknown	
EUT C	AC/DC adapter	C39280-Z4-C708	A5B00076051086	unknown	

<sup>\*)</sup> EUT short description is used to simplify the identification of the EUT in this test report



## 6.3 Auxiliary Equipment (AE): Type, S/N etc. and Short Descriptions

## 6.4 EUT Set-up(s)

EUT set-up no.*)	Combination of EUT and AE	Remarks
set. 1	EUT A + EUT B + EUT C	

<sup>\*)</sup> EUT set-up no. is used to simplify the identification of the EUT set-up in this test report.

## 6.5 EUT Operating Modes

EUT operating mode no.*)	Description of operating modes	Additional information
op. 1	idle + charging	<del></del>

<sup>\*)</sup> EUT operating mode no. is used to simplify the test report.



## 7 Summary of Test Results

No deviations from the technical specifications were ascertained□ There were deviations from the technical specifications ascertained

#### 7.1 Emission

### 7.1.1 Enclosure

EMI Phenomenon	Frequency range	Basic standard	Result
Radiated Interference Field Strength	30 - 1000 MHz	FCC Part 15 Class B	passed
Radiated Interference Field Strength	> 1 GHz	FCC Part 15 Class B	passed

## 7.1.2 AC Mains Power Input/Output Ports

EMI Phenomenon	Frequency range	Basic standard	Result
Conducted interference voltage	0,15– 30 MHz	FCC Part 15 Class B	passed

#### Remarks:

NA1	Not tested because not required by used standard
NA2	Test not applicable because port does not exists
NA3	Test not applicable because port only for services
NA4	Test not applicable because port lengths not longer than 3m
NA5	Not tested because not required by customer
NA6	Not tested because used frequency < 108 MHz



### 7.2 Measurement and Test Set-up

Note: The test configuration is in accordance with the requirements given in the standards in point 3

### 7.3 Measurement uncertainty

The uncertainty of the measurement equipment fulfils CISPR 16 and the related European and national standards.

The semi anechoic chamber fulfils the requirements of CISPR 16-1 (ANSI C63.4) for a test volume of 4m  $\varnothing$ .

The table below shows the measurement uncertainties for each measurement method. The expended uncertainty (k=2 or 95%) was calculated with worst case values.

Measurement Method	Frequency area Impulse duration time	Description	Expanded uncertainty (k=2 or 95%)
Radiated Emission FCC part 15 B, ANSI C63.4	30 MHz – 18 GHz	-/-	± 4.28 dB
Conducted Emission FCC part 15 B, ANSI C63.4	9 kHz – 30 MHz	-/-	± 3.49 dB



#### 8 Detailed test results - Emission

#### 8.1 Conducted Emission

### 8.1.1 Instrumentation for Test (see equipment list)

G 1	G 2	F 21					

#### 8.1.2 Test Plan

EUT set-up	set 1					
Operating mode	Port / Line	Limit	Result			
op 1	AC power line	FCC part 15 B Class B	passed			

Remark: Powered by external power supply (115V / 60Hz)

### 8.1.3 Conducted Limits (Power-Line)

	FCC part 18	5 B Class B	FCC part 15 B Class A			
Frequency- range	Quasi-Peak (dBµV)	Average (dBµV)	Quasi-Peak (dBµV)	Average (dBµV)		
0,15 MHz - 0,5 MHz	66-56	56-46	79	66		
0,5 MHz -5 MHz	56	46	73	60		
5 MHz -30 MHz	60	50	73	60		

#### 8.1.4 Calibration Information

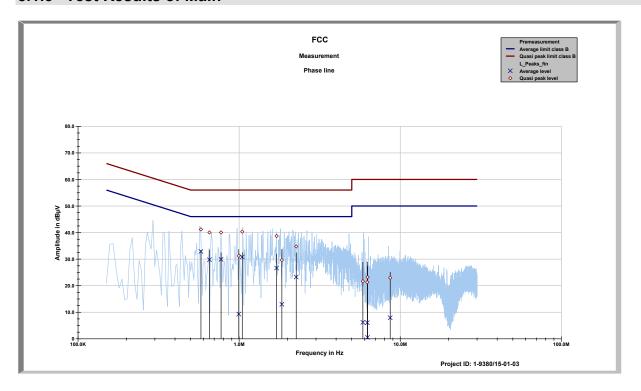
Device	Serial number	ICT Number	Calibration valid until	Calibration interval
HP 8542 EMI Receiver with RF Filter Unit	3617A00170	300000568	01 / 2016	12 month
VISN ESH 3-Z5	892475/017	300002209	06 / 2016	24 month

Remarks: All emission components and the shielded room were checked weekly

Cable loss: 0.6 to 2.4 dB (150kHz to 30 MHz)



### 8.1.5 Test Results of Main



FCC Phase line tbl

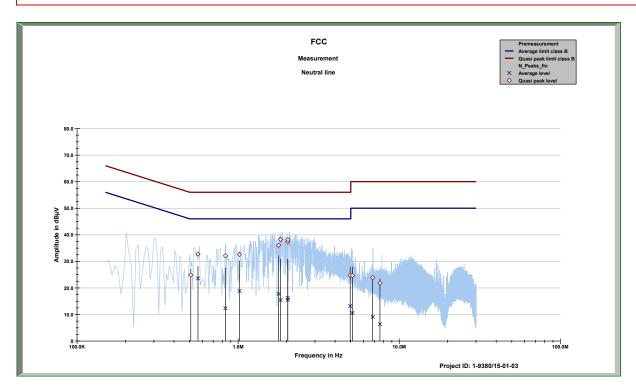
Project ID: 1-9380/15-01-03

08:58:26 AM, Monday, March 23, 2015

Frequency	Quasi peak level	Margin quasi peak	Average level	Margin average
MHz	dΒμV	dΒμV	dΒμV	dΒμV
0.57921	41.20	14.80	32.90	13.10
0.6541	40.03	15.97	29.77	16.23
0.7723	40.02	15.98	29.91	16.09
0.99481	31.22	24.78	9.30	36.70
1.04562	40.33	15.67	30.81	15.19
1.7075	38.70	17.30	26.65	19.35
1.8413	29.60	26.40	13.00	33.00
2.2605	34.77	21.23	23.26	22.74
5.8601	21.69	38.31	6.21	43.79
6.2423	21.32	38.68	6.06	43.94
6.2673	23.21	36.79	0.52	49.48
8.6607	22.96	37.04	7.93	42.07

Project ID - 1-9380/15-01-03 EUT - Gigaset C530H SN - S30852-Q2552-R301 Operating mode - idle + charging





FCC Neutral line tbl

Project ID: 1-9380/15-01-03

08:58:26 AM, Monday, March 23, 2015

Frequency	Quasi peak level	Margin quasi peak	Average level	Margin average
MHz	dΒμV	dΒμV	dΒμV	dΒμV
0.50833	24.86	31.14	-3.06	49.06
0.56343	32.73	23.27	23.58	22.42
0.83338	32.09	23.91	12.33	33.67
1.02029	32.61	23.39	18.85	27.15
1.782	36.07	19.93	17.75	28.25
1.8326	38.25	17.75	15.42	30.58
2.0299	37.32	18.68	15.47	30.53
2.0334	38.10	17.90	16.24	29.76
4.961	24.74	31.26	13.16	32.84
5.1179	24.66	35.34	10.59	39.41
6.8395	23.87	36.13	9.08	40.92
7.5855	21.80	38.20	6.33	43.67

Project ID - 1-9380/15-01-03 EUT - Gigaset C530H

SN - S30852-Q2552-R301

Operating mode - idle + charging



### 8.1.6 Signal strength calculation

#### Calculation formula:

SS = UR + CF + VC

#### List of abbreviations:

SS ▶ signal strength

UR 

voltage at the receiver

CF loss of the cable and filter (passband filter 130 kHz − 30 MHz)

VC ► correction factor of the ISN (ESH3-Z5)

#### List with correction factors:

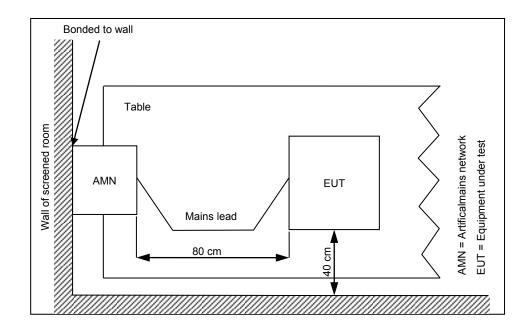
Frequency [MHz]	CF [dB]	VC [dB]
0,150	9,80	1,42
1,000	9,80	0,41
5,000	9,90	0,32
10,000	9,90	0,23
15,000	10,00	0,39
20,000	10,00	1,19
25,000	10,20	1,55
30,000	10,30	1,31

#### Example calculation:

For example at 10,000 000 MHz the measured Voltage (UR) is 37,62 dB $\mu$ V, the loss of the cable and filter (CF) is 9,90 dB and the correction factor of the ISN (VC) is 0,23 dB the final result will be calculated: SS [dB $\mu$ V] = 37,62 [dB $\mu$ V] + 9,90 [dB] + 0,23 [dB] =  $\frac{47,75}{6}$  [dB $\mu$ V] (244, 06  $\mu$ V)

### 8.1.7 Test Set-up

According to EMC basic standard ANSI 63.4





## 8.2 Electromagnetic Radiated Emissions (Distance 10 m)

### 8.2.1 Instrumentation for Test (see equipment list)

E 1	E 2	E 4h	E 5	E 6	E 7	ΕО	E 21		
	F Z	F 40	ГЭ	F 0	F   I	ГО	F Z I		

### 8.2.2 Test Plan

EUT set-up	set 1	set 1						
Operating mode	Application Limit Result							
op1	Enclosure	FCC part 15 B Class B	passed					

Remarks: Powered by external power supply (115V / 60Hz)

#### 8.2.3 Radiated Limits

Frequency- range	FCC part 15 B Class B	FCC part 15 B Class A
30 MHz – 88 MHz	30 dBμV/m	39,1 dBμV/m
88 MHz – 216 MHz	33,5 dBµV/m	43,5 dBμV/m
216 MHz – 960 MHz	36 dBµV/m	46,4 dBμV/m
960 MHz – 40000 MHz	44 dBμV/m	49,5 dBμV/m
	* This values are recalculated from the	
	class B limits at 3 m antenna distance in	
	§15.109 (g 2) of the FCC rules	

#### 8.2.4 Calibration Information

Device	Serial number	ICT Number	Calibration valid until	Calibration interval						
ESCI 3 Receiver	100083/003	300003312	01/2016	12 month						
Trilog Antenna	Trilog Antenna 9163-295		04/2016	24 month						
Remarks:										
System check of all relevant devices and the chamber (weekly)										



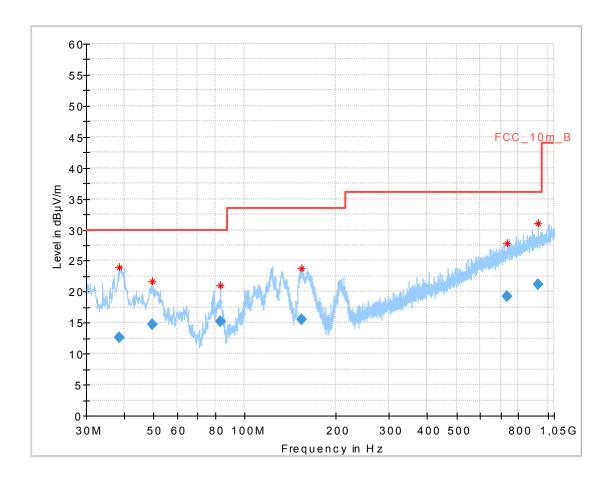
#### 8.2.5 Test Results

#### **Common Information**

EUT: Gigaset C530H
Serial number: S30852-Q2552-R301
Test description: FCC part 15 class B @ 10 m

Operating condition: idle + charging
Operator name: Wolsdorfer

Comment: Power: AC 115V/60Hz



#### **Final Result**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
38.645250	12.54	30.00	17.46	1000.0	120.000	104.0	٧	320	14.0
49.624950	14.66	30.00	15.34	1000.0	120.000	102.0	٧	185	12.7
82.954800	15.22	30.00	14.78	1000.0	120.000	101.0	٧	85	8.8
154.033950	15.46	33.50	18.04	1000.0	120.000	100.0	٧	50	9.0
732.702150	19.23	36.00	16.77	1000.0	120.000	400.0	Н	5	22.3
927.233100	21.13	36.00	14.87	1000.0	120.000	273.0	Н	117	24.2



### 8.2.6 Hardware Set-up

Subrange 1

Frequency Range: 30 MHz - 2 GHz

Receiver: Receiver [ESCI 3]

@ GPIB0 (ADR 20), SN 100083/003, FW 4.42

Signal Path: without Notch

FW 1.0

Antenna: VULB 9163

SN 9163-295, FW ---

Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113

Correction Table (vertical): Cable\_EN\_1GHz (1005) Correction Table (horizontal): Cable\_EN\_1GHz (1005)

Antenna Tower: Tower [EMCO 2090 Antenna Tower]

@ GPIB0 (ADR 8), FW REV 3.12

Turntable: Turntable [EMCO Turntable]

@ GPIB0 (ADR 9), FW REV 3.12

Software version EMC32 V9.12.10



### 8.2.7 Signal strength calculation

#### Calculation formula:

 $SS = U_R + CL + AF$ 

#### List of abbreviations:

List with correction factors:

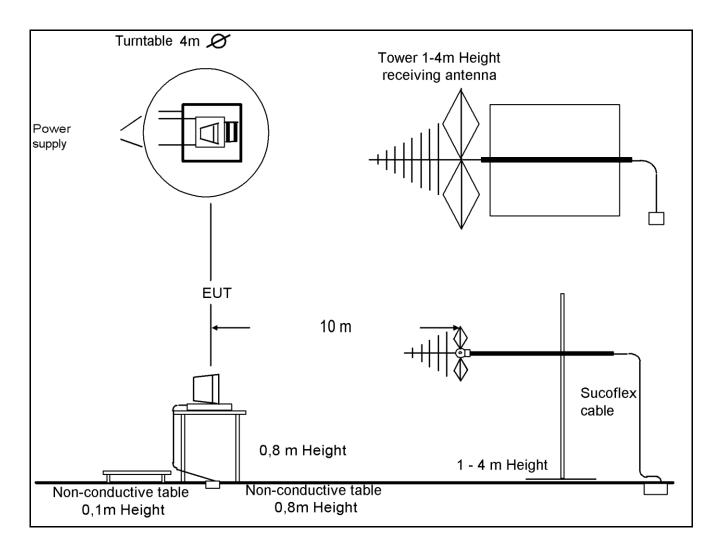
Frequency [MHz]	CL [dB]	AF [dBμV/m]
30,000	0,20	12,30
100,000	0,60	11,30
200,000	1,10	10,60
300,000	1,30	13,20
400,000	1,60	15,30
500,000	1,90	16,80
600,000	2,00	18,80
700,000	2,20	20,30
800,000	2,30	21,50
900,000	2,40	22,80
1000,000	2,50	23,30

#### Example calculation:

For example at 500,000 000 MHz the measured Voltage ( $U_R$ ) is 12,35 dB $\mu$ V/m, the loss of the cable (CL) is 1,90 dB and the antenna factor (AF) is 16,80 dB $\mu$ V/m the final result will be calculated: SS [dB $\mu$ V/m] + 1,90 [dB] + 16,80 [dB $\mu$ V/m] = 31,05 [dB $\mu$ V/m] (35,69  $\mu$ V/m)



## 8.2.8 Test Set-up





## 8.3 Electromagnetic Radiated Emissions (Distance 5 m)

## 8.3.1 Instrumentation for Test (see equipment list)

F 1	F6	F 21	F 29	F 30	F 33			
	-		_					

### 8.3.2 Test Plan

EUT set-up	set 1		
Operating mode	Application	Limit	Result
op 1	Enclosure	FCC part 15 class B	passed

Remarks:	The measured values are recalculated from 5m to 3m distance
Remarks.	Powered by external power supply (115V / 60Hz)

#### 8.3.3 Radiated Limits

Frequency- range	47CFR15: (FCC part 15 B) Class B	47CFR15: (FCC part 15 B) Class A *
30 MHz – 88 MHz	40 dBμV/m	49,1 dBμV/m
88 MHz – 216 MHz	43,5 dBµV/m	53,5 dBμV/m
216 MHz – 960 MHz	46 dBμV/m	56,4 dBμV/m
960 MHz – 18000 MHz	54 dBµV/m	59,5 dBμV/m
		* This values are recalculated from the
	class A limits at 10 m antenna distar	
		§15.109 (g 2) of the FCC rules.

### 8.3.4 Calibration Information

Device	Serial number	ICT Number	Calibration valid until	Calibration interval
FSU 26	200809	300003874	01/2016	12 month
Horn Antenna	9120B188	300003896	06/2015	24 month
Remarks:				

System check of all relevant devices and the chamber (weekly)

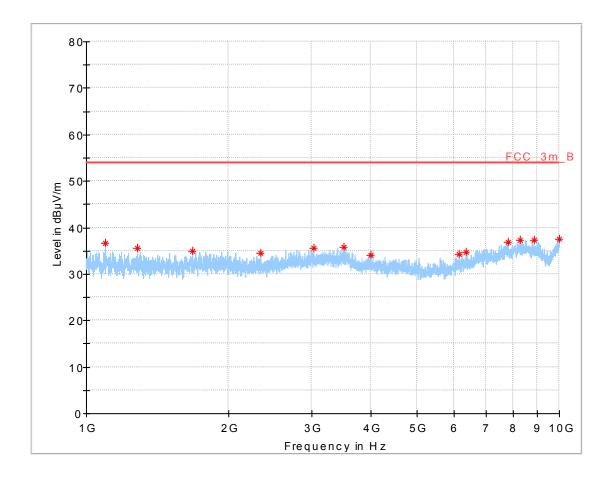


#### 8.3.5 Test Results

#### **Common Information**

EUT: Gigaset C530H
Serial number: S30852-Q2552-R301
Test description: FCC part 15 class B
Operating condition: idle + charging
Operator name: Wolsdorfer

Comment: Power: AC 115V/60Hz



#### Critical Freqs

Cillical_i it	ontical_i reqo								
Frequency	MaxPeak	Limit	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr.
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	Time	(kHz)	(cm)		(deg)	(dB)
				(ms)					
1099.000000	36.64	54.00	17.36			100.0	Н	0	-4.7
3991.600000	34.15	54.00	19.85			100.0	Н	0	-2.2
2334.250000	34.55	54.00	19.45			100.0	Н	47	-4.2
6150.700000	34.19	54.00	19.81			100.0	Н	175	0.9
3031.300000	35.48	54.00	18.52			100.0	Н	287	-2.7
7811.650000	36.82	54.00	17.18			100.0	Н	326	3.7
3502.900000	35.70	54.00	18.30			100.0	٧	0	-2.1
8256.250000	37.40	54.00	16.60			100.0	V	102	4.0
6345.550000	34.78	54.00	19.22			100.0	٧	121	1.4
1280.350000	35.61	54.00	18.39			100.0	٧	179	-4.7
1678.150000	34.91	54.00	19.09			100.0	٧	199	-4.5
8865.100000	37.33	54.00	16.67			100.0	V	208	3.6
9999.550000	37.52	54.00	16.48			100.0	٧	320	4.8



### 8.3.6 Hardware Set-up

Subrange 1

Frequency Range: 1 GHz - 10 GHz

Receiver: ESU [ESU 26]

@ GPIB0 (ADR 17), SN 100037/026, FW 4.43

Signal Path: 1\_6\_EN

FW 1.0

Correction Table: 3 5m

Correction Table: LNA\_EN (matix)

Antenna: BBHA 9120 B

Correction Table (vertical): BBHA9120 Correction Table (horizontal): BBHA9120

Correction Table (vertical): Cable\_Horn\_EN (1103) Correction Table (horizontal): Cable\_Horn\_EN (1103)

Antenna Tower: Generic Tripod [Generic Tripod]

@ GPIB0 (ADR 19), SN ?

Turntable: Turntable [EMCO Turntable]

@ GPIB0 (ADR 9), FW REV 3.12



#### 8.3.7 Signal strength calculation

#### Calculation formula:

 $SS = U_R + CL + AF + PA + DC$ 

#### List of abbreviations:

SS ▶ signal strength

U<sub>R</sub> ▶ voltage at the receiver

CL loss of the cable and gain of the preamp

AF ▶ antenna factor

DC distance correction (results measured on 5 m calculated to 3 m)

<u>List with correction factors:</u> column CL in table contains cable factor and preamplifier correction

Frequency [GHz]	CL [dB]	AF [dBµV/m]	DC [dB]
1,000	-35,50	26,20	4,40
1,500	-35,20	26,10	4,40
2,000	-35,10	26,70	4,40
2,500	-35,00	26,50	4,40
3,000	-34,70	27,60	4,40
3,500	-34,80	28,40	4,40
4,000	-35,00	28,60	4,40
4,500	-34,90	28,90	4,40
5,000	-34,80	29,30	4,40
5,500	-34,35	29,80	4,40
6,000	-34,00	30,30	4,40
6,500	-33,50	31,20	4,40
7,000	-33,10	31,20	4,40
7,500	-33,40	31,70	4,40
8,000	-33,80	32,10	4,40
8,500	-33,75	32,30	4,40
9,000	-33,70	31,70	4,40
9,500	-33,50	29,40	4,40
10,000	-33,40	33,00	4,40

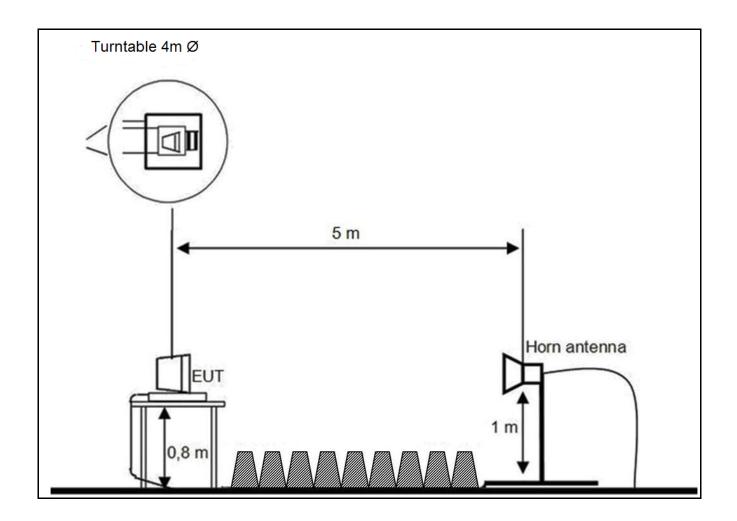
#### Example calculation:

For example at 4,000 000 000 GHz the measured Voltage ( $U_R$ ) is 46,13 dB $\mu$ V/m, the loss of the cable (CL) is - 35,00 dB, the antenna factor (AF) is 28,60 dB $\mu$ V/m and the distance correction (DC) is 4,40 dB the final result will be calculated:

SS [dB $\mu$ V] = 46,13 [dB $\mu$ V/m] + (-35,00) [dB] + 28,60 [dB $\mu$ V/m] + 4,4 [dB] = 44,13 [dB $\mu$ V/m] (160,88  $\mu$ V/m)



# 8.3.8 Test Set-up





## 9 Test equipment and ancillaries used for tests

To simplify the identification of the test equipment and/or ancillaries which were used, the reporting of the relevant test cases only refer to the test item number as specified in the table below.

No.	Instrument/Ancillary			Serial-No.	Internal identification
	Radiated emission in cl	namber F			
F-1	Control Computer	F+W		FW0502032	300003303
F-2	Trilog-Antenna	Schwarzbeck	VULB 9163	9163-295	300003787
F-3a	Amplifier	Veritech Microwave Inc.	0518C-138	-/-	- / -
F-4b	Switch	HP	3488A	-/-	300000368
F-5	EMI Test receiver	R&S	ESCI	100083	300003312
F-6	Turntable Interface-Box	EMCO / ETS- LINDGREN	Model 105637	44583	300003747
F-7	Tower/Turntable Controller	EMCO / ETS- LINDGREN	Model 2090	64672	300003746
F-8	Tower	EMCO / ETS- LINDGREN	Model 2175	64762	300003745
F-9	Ultra Notch-Filter Rejected band Ch. 62	WRCD		9	
	Radiated immunity in c	hamber F		•	
F-10	Control Computer	F+W		FW0502032	300003303
F-11	Signal Generator	R&S	SMB 100A	1406.6000k02	300004881
F-13	RF-Amplifier	ar	60S1G3	313649	300003410
F-14	Stacked Logper Antenna	Schwarzbeck	STLP9128 E	9128 E 013	300003408
F-15	RF-Amplifier	BONN	BLWA 0810-250	129100	300004536
F-16	Directional Coupler	ar	DC7144A	312786	300003411
F-17	Horn Antenna	ar	AT 4002	19739	300000633
F-18	Power Meter	R&S	NRV	860327/024	F033
F-19	Power sensor	R&S	URV5-Z2	839080/005	300002844.02
F-20	Power sensor	R&S	URV5-Z2	830755/057	F032
	Harmonics and flicker i	n front of chambe	r F		
F-21	Flicker and Harmonics Test System	Spitzenberger & Spies	PHE4500/B I PHE4500/B II	B5983 B5984	300000210
F-28	Power Supply	Hewlett Packard	6032 A	2920 A 04466	300000580
	Radiated emission in c		T==	1	
F-29	Horn antenna	Schwarzbeck	BBHA 9120 B	188	300003896
F-30	Amplifier	ProNova	0518C-138	005	F 024
F-31	Amplifier	Miteq	42-00502650-28-5A	1103782	300003379
F-32	Horn antenna	Emco	3115	9709-5289	300000213
F-33	Spectrum Analyzer	R&S	FSU26	200809	300003874
F-34	Loop antenna	EMCO	6502	8905-2342	300000256



No.	Instrument/Ancillary	ent/Ancillary Manufacturer Type Serial-No.		Internal identification			
	Conducted emission in	Conducted emission in chamber G					
G-1	EMI Receiver	Hewlett Packard	8542 E	3617A00170	300000568		
G-2	V-ISN	Rohde & Schwarz	ESH 3-Z5	892475/017	300002209		
G-2a	V-ISN	Rohde & Schwarz	ESH 2-Z5	892602/024	300000587		
G-3	2-Wire ISN	Schaffner	ISN T200	19075	300003422		
G-4	4-Wire ISN	Schaffner	ISN T400	22325	300003423		
G-5	Shielded wire ISN	Schaffner	ISN ST08	22583	300003433		
G-6	Unshielded 8 wire ISN	Teseq	ISN T800	26113	300003833		
G-7	Unshielded 8 wire ISN	Teseq	ISN T8-Cat. 6	26374	300003851		
G-8	RF Current probe	FCC	F-33-4	46	300003257		
G-9	V-ISN	Schaffner	ISN PLC-150	21579	300003318		
G-10	V-ISN	Schaffner	ISN PLC-25-30	21584	300003319		
G 10a	PLC Filter	TESEQ	Filter PLC	23436	300003598		
G 10b	Coupling unit 75 Ohm	Fiedler	AC		300003272.04		
	Conducted immunity in	chamber G					
G-11	Signal generator	R&S	SMG	8610647025	300000204.01		
G-12	RF-Amplifier	BONN	BSA 0125-75	066502-01	300003545		
G-13	Power Meter	R&S	URV 5	837723/025	300002844.01		
G-14	Power Sensor	R&S	URV 5-Z2	832874/021	300002239		
G-15	Directional coupler	emv	DC 2000	9401-1677	300000592		
G-16	Attenuator 6dB	Alan	50HP6-100 N	121048 0348	300003148		
G-17	EM-Injection Clamp	FCC	203i	232	300000626		
G-18	CDN	FCC	FCC-801-M3-16	237	300000627		
G-19	CDN	FCC	FCC-801-T2	78	300000629		
G-20	CDN	FCC	FCC-801-AF 2	62	300000630		
G-21	CDN	FCC	FCC-801-AF 4	61	300000631		
G-22	CDN	FCC	FCC-801-M1	2027	300002761		
G-23	CDN	TESEQ	CDN M016S	38741	300004847		
G-23a	CDN	TESEQ	CDN M516A	35049	300004848		
G-24	Transformator for 50Hz Loop Antenna	EM-Test	MC2630	0200-10	300002659.01		
G-25	50Hz Loop Antenna	EM-Test	MS 100	none	300002659		
	Surge, Burst, Dips and	Interruptions in chan	nber G				
G-26	Hybrid-Generator	EM-Test	UCS 500N5	V112711033	300004257		
G-27	Motor Variac	EM-Test	MV 2616	0600-01	300002658		
G-28	Capacitive Coupling Clamp	MWB	KKS 100		300000589		
G-29a	Coupling Decoupling Network	EMC-Partner	CDN-2000-06-32	158	300004108		
G-29	Coupling Decoupling Network	EMC-Partner	CDN-UTP8 ED3	1503	300004752		
	ESD in chamber G			1			
G-30	ESD generator	Schaffner	NSG 435	308	300002249		
	Emission on bench in c			1	, , , , , , , , , , , , , , , , , , , ,		
G-31	Absorbing Clamp	R&S	MDS-21	832 231/006	300000527		
· ·	generic in chamber G			202 20 11000	355555527		
G-32	power supply	Hewlett Packard	6038A	2848A06673	300001512		
J 02	Conducted interference	· L	300071	20.07.00070	333301012		
G 33	Signal generator	R&S	AFGU	862490/032	300001201		
G 34	Audio amplifier	Crown 5002VZ	MACRO-TECH 5002VZ	8001641218	300001201		
G 35	Shunt	Schwarzbeck	Shunt 9570	9570118	300004107		
G 36					300004107		
G 30	Coupling network	EM-Test	CN 200N1	P1322118851	300004742		



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No observations, exceeding those reported with the single test cases, have been made.



# Annex A Photographs of the test set-up

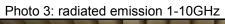




Photo 2: radiated emission <1GHz











#### Annex B Photographs of the EUT

Photo 4: EUT A



Photo 5: EUT A





Photo 6: EUT A



Photo 7: EUT A





Photo 8: EUT A internal pcb

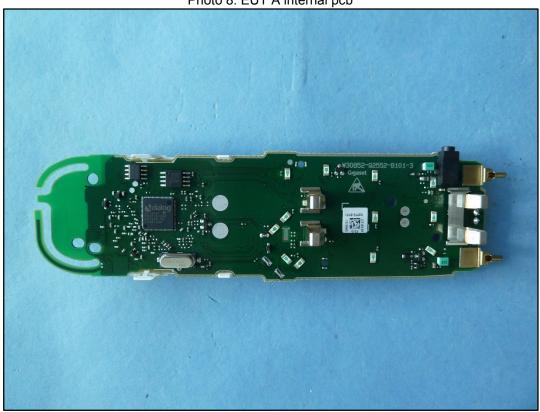


Photo 9: EUT A internal pcb





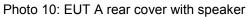




Photo 11: EUT A keypad





Photo 12: EUT A keypad



Photo 13: EUT B





Photo 14: EUT B



Photo 15: EUT C





Photo 16: EUT C label





## Annex C Document history

Version	Applied changes	Date of release
-/-	Initial release	2015-04-24

#### Annex D Further information

#### **Glossary**

DUT - Device under Test

EMC - Electromagnetic Compatibility

EUT - Equipment under Test

FCC - Federal Communication Commission

FCC ID - Company Identifier at FCC

HW - Hardware

IC - Industry Canada
Inv. No. - Inventory number
N/A - not applicable
S/N - Serial Number
SW - Software