



CETECOM ICT Services consulting - testing - certification >>>

# **TEST REPORT**



Deutsche Akkreditierungsstelle D-PL-12076-01-00

Test report no.: 1-9958/15-02-06

# **Testing laboratory**

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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

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### Manufacturer

**Guangdong Be-Tech Security Systems Co, Ltd.** No 17, Keyuan 3 Road, Ronggui, Foshan 528306 Guangdong / CHINA

# Test standard/s

47 CFR Part 15Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devicesRSS - 210 Issue 8Spectrum Management and Telecommunications Radio Standards Specification - Licence-<br/>exempt Radio Apparatus (All Frequency Bands): Category I EquipmentRSS - Gen Issue 4Spectrum Management and Telecommunications Radio Standards Specifications - General<br/>Requirements and Information for the Certification of Radio ApparatusFor further applied test standards please refer to section 3 of this test report.

	Test I	tem
Kind of test item: Model name:	RFID door access point DT710	
FCC ID:	TCN012	
IC:	5103A-012	
Frequency:	13.56 MHz	010
Technology tested:	RFID	
Antenna:	Integrated antenna	
Power supply:	5.0 V to 6.4 V DC	Y Contraction
Temperature range:	0.0°C to +40°C	

This test report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

# Test report authorized:

Andreas Luckenbill Lab Manager Radio Communications & EMC

# **Test performed:**

Christoph Schneider Testing Manager Radio Communications & EMC



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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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This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

### 2.2 Application details

Date of receipt of order:	2015-05-28
Date of receipt of test item:	2015-09-17
Start of test:	2015-09-22
End of test:	2015-09-24
Person(s) present during the test:	-/-

### 3 Test standard/s

Test standard	Date	Test standard description
47 CFR Part 15		Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices
RSS - 210 Issue 8	December 2010	Spectrum Management and Telecommunications Radio Standards Specification - Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment
RSS - Gen Issue 4	November 2014	Spectrum Management and Telecommunications Radio Standards Specifications - General Requirements and Information for the Certification of Radio Apparatus



# 3.1 Measurement guidance

Guidance	Version	Description
ANSI C63.4-2014	-/-	American national standard for methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
ANSI C63.10-2013	-/-	American national standard of procedures for compliance testing of unlicensed wireless devices



# 4 Test environment

Temperature :		T <sub>nom</sub> T <sub>max</sub> T <sub>min</sub>	<ul> <li>+22 °C during room temperature tests</li> <li>+55 °C during high temperature tests</li> <li>-20 °C during low temperature tests</li> </ul>
Relative humidity content	:		55 %
Barometric pressure	:		not relevant for this kind of testing
Power supply : V <sub>nom</sub> V <sub>max</sub> V <sub>min</sub>		V <sub>max</sub>	<ul> <li>6.0 V DC by Battery</li> <li>6.9 V</li> <li>5.1 V</li> </ul>

### 5 Test item

## 5.1 General description

Kind of test item :	RFID door access point
Type identification :	DT710
PMN :	DT710
HVIN :	DT710-TRF
FVIN :	-/-
HMN :	-/-
S/N serial number :	-/-
HW hardware status :	1.3
Firmware status :	9.0.0.15
Frequency band :	13.56 MHz
Type of radio transmission : Use of frequency spectrum :	Single carrier
Type of modulation :	NON
Number of channels :	1
Antenna :	Integrated antenna
Power supply :	5.0 V to 6.4 V DC by Battery
Temperature range :	0.0°C to +40°C

# 5.2 Additional information

The content of the following annexes is defined in the QA. It may be that not all of the listed annexes are necessary for this report, thus some values in between may be missing.

Test setup- and EUT-photos are included in test report:

1-9958/15-02-01\_AnnexA 1-9958/15-02-01\_AnnexB 1-9958/15-02-01\_AnnexF

### 6 Test laboratories sub-contracted

None



### 7 Description of the test setup

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, RF generating and signaling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

#### Agenda: Kind of Calibration

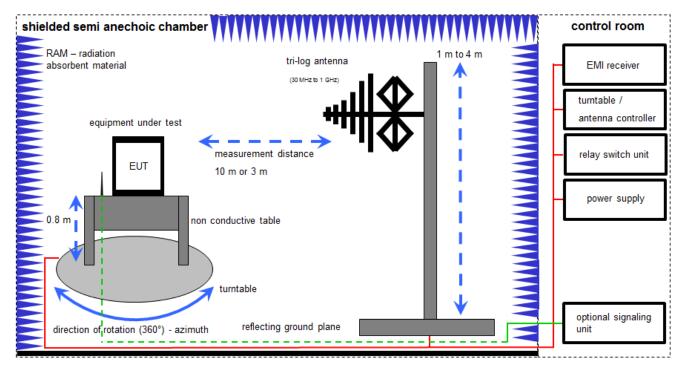
- k calibration / calibrated
- ne not required (k, ev, izw, zw not required)
- ev periodic self verification
- Ve long-term stability recognized
- vlkl! Attention: extended calibration interval
- NK! Attention: not calibrated

- EK limited calibration
- zw cyclical maintenance (external cyclical maintenance)
- izw internal cyclical maintenance
- g blocked for accredited testing
- \*) next calibration ordered / currently in progress



# 7.1 Shielded semi anechoic chamber

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas are confirmed with specifications ANSI C63. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received. The wanted and unwanted emissions are received by spectrum analyzers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



FS = UR + CL + AF

(FS-field strength; UR-voltage at the receiver; CL-loss of the cable; AF-antenna factor)

### Example calculation:

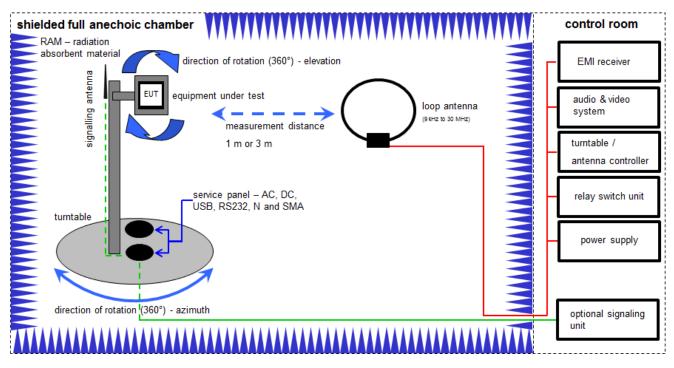
 $FS [dB\mu V/m] = 12.35 [dB\mu V/m] + 1.90 [dB] + 16.80 [dB/m] = 31.05 [dB\mu V/m] (35.69 \mu V/m)$ 

### Equipment table:

No.	Lab / Item	Equipment	Туре	Manufacturer	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	A	Switch-Unit	3488A	HP	2719A14505	30000368	ev		
2	A	RF-Filter-section	85420E	HP	3427A00162	300002214	k	27.11.2006	
3	A	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	26.01.2015	26.01.2016
4	A	Antenna Tower	Model 2175	ETS-Lindgren	64762	300003745	izw		
5	А	Positioning Controller	Model 2090	ETS-Lindgren	64672	300003746	izw		
6	А	Turntable Interface- Box	Model 105637	ETS-Lindgren	44583	300003747	izw		
7	A	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	22.04.2014	22.04.2016



# 7.2 Shielded fully anechoic chamber



FS = UR + CA + AF

(FS-field strength; UR-voltage at the receiver; CA-loss of the signal path; AF-antenna factor)

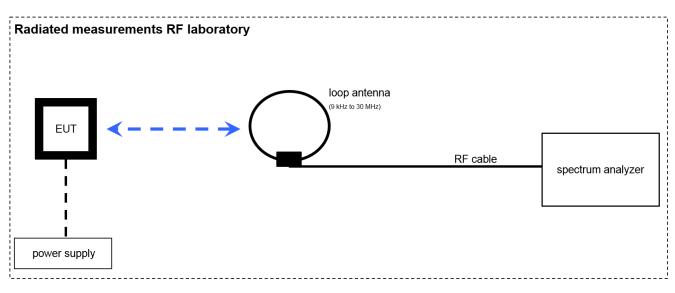
<u>Example calculation</u>: FS [dB $\mu$ V/m] = 40.0 [dB $\mu$ V/m] + (-35.8) [dB] + 32.9 [dB/m] = 37.1 [dB $\mu$ V/m] (71.61  $\mu$ V/m)

# Equipment table:

No.	Lab / Item	Equipment	Туре	Manufacturer	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	Α	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
2	Α	Switch / Control Unit	3488A	HP	*	300000199	ne		
3	А	Active Loop Antenna 10 kHz to 30 MHz	6502	EMCO/2	8905-2342	300000256	k	24.06.2015	24.06.2017
4	А	MXE EMI Receiver 20 Hz to 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405	k	06.03.2015	06.03.2016
5	А	4U RF Switch Platform	L4491A	Agilent Technologies	MY5000037	300004509	ne		



# 7.3 Conducted measurements



### Equipment table:

No.	Lab / Item	Equipment	Туре	Manufacturer	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	А	EMI Test Receiver 9 kHz - 3 GHz incl. Preselector	ESPI3	R&S	101713	300004059	k	23.01.2015	23.01.2016
2	А	Active Loop Antenna 10 kHz to 30 MHz	6502	EMCO/2	8905-2342	300000256	k	24.06.2015	24.06.2017
3	Α	RF Cable BNC	RG58	Huber & Suhner		400001209	ev		



# 8 Measurement uncertainty

Measurement uncertainty					
Test case	Uncertainty				
Occupied bandwidth	± 5 kHz				
Field strength of the fundamental	± 3 dB				
Field strength of the harmonics and spurious emissions below 30 MHz	± 3 dB				
Field strength of the harmonics and spurious emissions 30 MHz to 1 GHz	± 3 dB				
Frequency error	± 10 Hz				



### 9 Sequence of testing

### 9.1 Sequence of testing 9 kHz to 30 MHz

### Setup

- The equipment was set up to simulate a typical usage like descripted in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter (see ANSI C 63.4) see each test details
- The EUT was set into operation.

### Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 1.5 meter.
- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

### Final measurement

- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axis (0° to 360°).
- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK (QPK / see ANSI C 63.4) detector
- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.



# 9.2 Sequence of testing 30 MHz to 1 GHz

### Setup

- The equipment was set up to simulate a typical usage like descripted in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 10 or 3 meter (see ANSI C 63.4) see each test details
- The EUT was set into operation.

### Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 to 3 meter.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions
- ٠

### **Final measurement**

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.
- The final measurement will be done with QP (Quasi-Peak / see ANSI C 63.4) detector with an EMI receiver
- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.



# 10 Summary of measurement results

$\boxtimes$	No deviations from the technical specifications were ascertained
	There were deviations from the technical specifications ascertained
	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC Identifier	Description	Verdict	Date	Remark
RF-Testing	CFR Part 15 RSS 210 Issue 8 RSS Gen Issue 4	See table!	2015-11-09	-/-

Test specification clause	Test case	Temperature conditions	Power source conditions	с	NC	NA	NP	Remark
RSS Gen Issue 4	Occupied bandwidth	Nominal	Nominal	$\boxtimes$				-/-
§ 15.225 (a)	Field strength of the fundamental	Nominal	Nominal	$\boxtimes$				-/-
§ 15.209 & § 15.225 (b-d)	Field strength of the harmonics and spurious	Nominal	Nominal	$\boxtimes$				-/-
§ 15.109	Receiver spurious emissions and cabinet radiations	Nominal	Nominal			$\boxtimes$		no decdicated RX mode
§15.107 §15.207	Conducted limits	Nominal	Nominal			$\boxtimes$		battery powered only
§ 15.225 (a)	Frequency tolerance	Normal & extreme conditions	Normal & extreme conditions	$\boxtimes$				-/-

Note: C = compliant; NC = not compliant; NA = Not Applicable; NP = Not Performed

# 11 Additional comments

Reference documents: None

Special test descriptions: None

Configuration descriptions: None



### 12 Measurement results

### 12.1 Occupied bandwidth

#### Measurement:

The emission bandwidth (x dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated x dB below the maximum in-band spectral density of the modulated signal.

Measurement parameters				
Detector:	Peak			
Resolution bandwidth:	1 % – 5 % of the occupied bandwidth			
Video bandwidth:	≥ 3x RBW			
Trace mode:	Max hold			
Analyser function:	99 % power function			
Used equipment:	See chapter 7.3 A			
Measurement uncertainty:	See chapter 8			

#### Limit:

IC for RSP-100 test report coversheet only

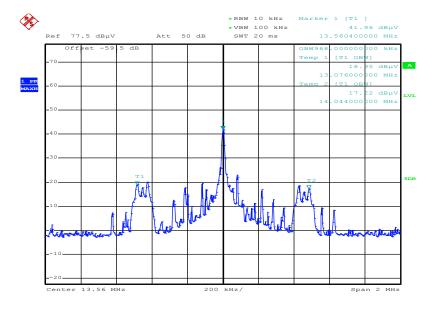
#### Result:

99% emission bandwidth	
968 kHz	



### Plot:





Date: 25.SEP.2015 08:20:47



# 12.2 Field strength of the fundamental

### Measurement:

The maximum detected field strength for the carrier signal.

Measurement parameters			
Detector:	Quasi peak / peak (worst case)		
Resolution bandwidth:	120 kHz		
Video bandwidth:	≥ 3x RBW		
Trace mode:	Max hold		
Used equipment:	See chapter 7.2 A		
Measurement uncertainty:	See chapter 8		

## Limit:

FCC & IC						
Frequency	Measurement distance					
(MHz)	(µV/m)	(m)				
13.553 to 13.567	15,848 (84 dBµV/m)	30				

### **Recalculation:**

According to ANSI C63.10						
Frequency	Formula	Correction value				
13.56 MHz	$FS_{limit} = FS_{max} - 40 \log\left(\frac{d_{\mathit{vestried}}}{d_{\mathit{messurr}}}\right) - 20 \log(\frac{d_{\mathit{unit}}}{d_{\mathit{messurr}}})$	-21.39				

# ANSI C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices

### Result:

Field strength of the fundamental						
Frequency	13.56 MHz					
Distance	@ 3 m	@ 30 m				
Measured / calculated value	50.0 dBµV/m	28.61 dBµV/m				



# 12.3 Field strength of the harmonics and spurious

### Measurement:

The maximum detected field strength for the harmonics and spurious.

Measurement parameters				
Detector:	Quasi peak / average or			
Delector.	peak (worst case – pre-scan)			
	F < 150 kHz: 200 Hz			
Resolution bandwidth:	150 kHz < F < 30 MHz: 9 kHz			
	30 MHz < F < 1 GHz: 120 kHz			
	F < 150 kHz: 1 kHz			
Video bandwidth:	150 kHz < F < 30 MHz: 100 kHz			
	30 MHz < F < 1 GHz: 300 kHz			
Trace mode:	Max hold			
Used equipment:	See chapter 7.1 A / 7.2 A / 7.3 A			
Measurement uncertainty:	See chapter 8			

### Limit:

	FCC & IC							
Frequency	Field strength	Measurement distance						
(MHz)	(dBµV/m)	(m)						
0.009 - 0.490	2400/F(kHz)	300						
0.490 – 1.705	24000/F(kHz)	30						
1.705 – 30	30 (29.5 dBµV/m)	30						
30 – 88	100 (40 dBµV/m)	3						
88 – 216	150 (43.5 dBµV/m)	3						
216 – 960	200 (46 dBµV/m)	3						

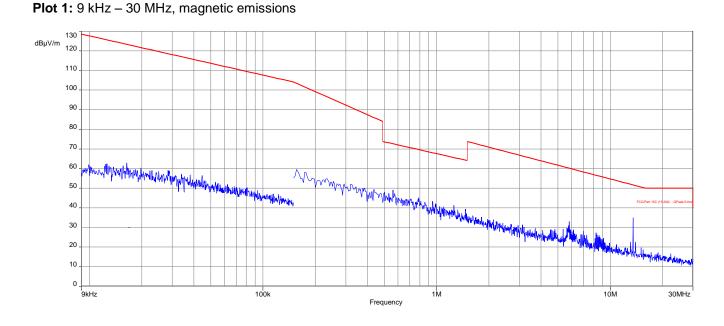
**Note:** For a reduced measurement distance, please take a look at the limit line and the ANSI C63.10-2013 sub clause 6.4 radiated emissions from unlicensed wireless devices below 30 MHz.

### Result:

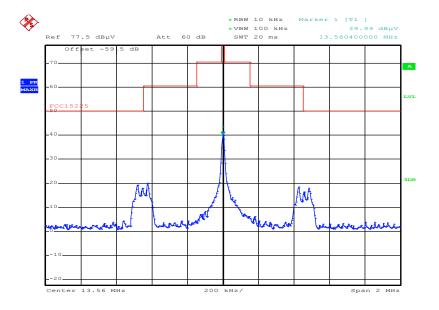
Detected emissions							
Frequency (MHz)DetectorResolution bandwidth (kHz)Detected value							
	See result table below the 30 MHz to 1 GHz plot.						



### Plots:

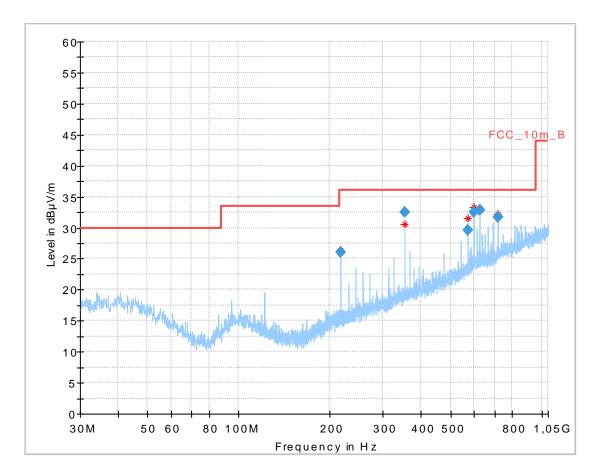


Plot 2: Spectrum mask (the limits are recalculated according to the ANSI C63.10-2013 sub clause 6.4)



Date: 25.SEP.2015 08:19:18





Plot 3: 30 MHz - 1 GHz, vertical and horizontal polarisation

# Final\_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
216.962700	26.06	36.00	9.94	1000.0	120.000	274.0	Н	73	12.3
352.573800	32.45	36.00	3.55	1000.0	120.000	200.0	Н	277	16.1
569.551650	29.61	36.00	6.39	1000.0	120.000	274.0	V	5	19.9
596.678100	32.53	36.00	3.47	1000.0	120.000	102.0	Н	187	20.6
623.784450	32.78	36.00	3.22	1000.0	120.000	274.0	V	1	20.9
718.704900	31.72	36.00	4.28	1000.0	120.000	103.0	Н	187	22.0



# 12.4 Frequency error

### Measurement:

The maximum detected field strength for the spurious.

Measurement parameters		
Detector:	Peak detector	
Resolution bandwidth:	10 Hz / 100 Hz	
Video bandwidth:	> RBW	
Trace mode:	Max hold	
Used equipment:	See chapter 7.3 A	
Measurement uncertainty:	See chapter 8	

### Limit:

FCC The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. (±1.356 kHz)

### Result: Temperature variation

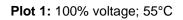
Frequency tolerance		
Measured frequency (MHz)	Conditions	Result
13.560732	-20 °C & 100% voltage	compliant
13.560749	-10 °C & 100% voltage	compliant
13.560775	0 °C & 100% voltage	compliant
13.560778	+10 °C & 100% voltage	compliant
13.560761	+20 °C & 100% voltage	compliant
13.560769	+30 °C & 100% voltage	compliant
13.560764	+40 °C & 100% voltage	compliant
13.560750	+50 °C & 100% voltage	compliant
13.560749	+55 °C & 100% voltage	compliant

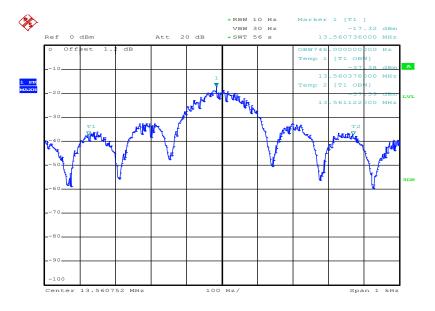
### Result: Voltage variation

Frequency tolerance			
Measured frequency (MHz)	Temperature	Result	
13.560759	+20 °C & 85% voltage	compliant	
13.560761	+20 °C & 100% voltage	compliant	
13.560759	+20 °C & 115% voltage	compliant	

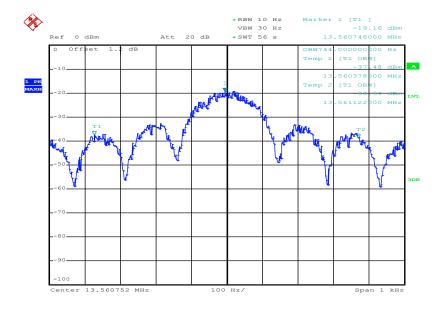


### Plots:





Date: 15.0CT.2015 17:02:41

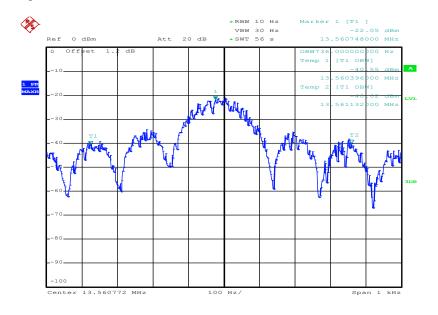


### Plot 2: 100% voltage; 50°C

Date: 15.0CT.2015 16:55:04



Plot 3: 100% voltage; 40°C



Date: 15.0CT.2015 16:47:57

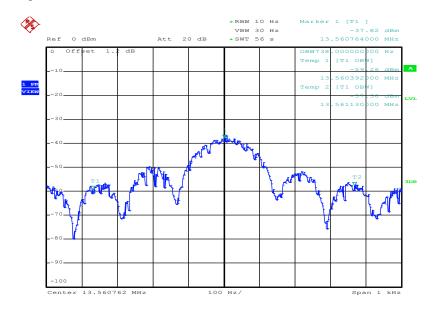


Plot 4: 100% voltage; 30°C

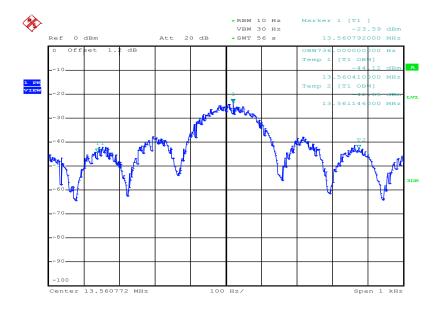
Date: 15.0CT.2015 16:27:18



Plot 5: 100% voltage; 20°C



Date: 16.0CT.2015 07:44:14



Plot 6: 100% voltage; 10°C

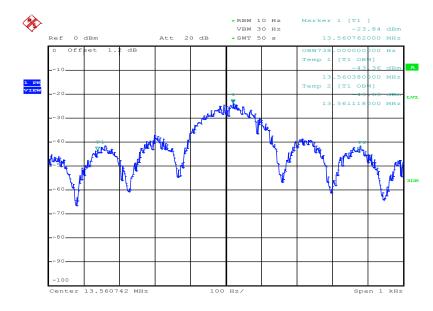
Date: 15.0CT.2015 16:14:15



Plot 7: 100 % voltage; 0°C



Date: 15.0CT.2015 16:07:47

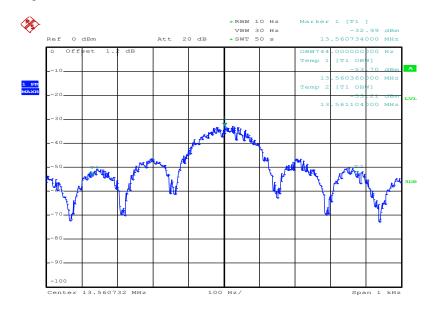


Plot 8: 100 % voltage; -10°C

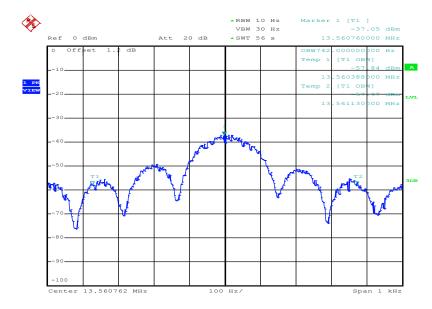
Date: 15.0CT.2015 15:47:05



Plot 9: 100 % voltage; -20°C



Date: 15.0CT.2015 15:37:38

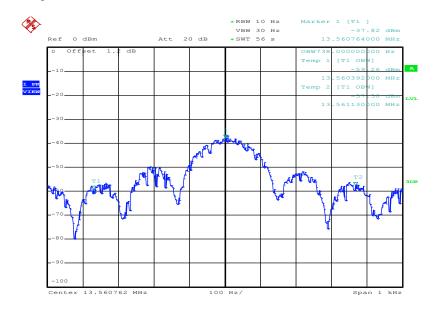


Plot 10: 115 % voltage; 20°C

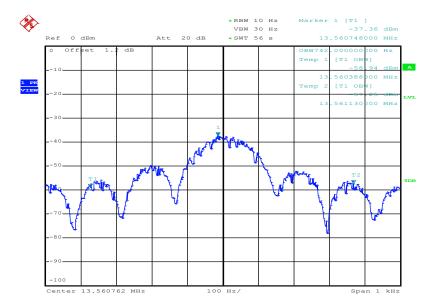
Date: 16.0CT.2015 07:57:51



Plot 11: 100 % voltage; 20°C



Date: 16.0CT.2015 07:44:14



Plot 12: 85 % voltage; 20°C

Date: 16.0CT.2015 07:50:00



# 13 Observations

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



# Annex A Document history

Version	Applied changes	Date of release
	Initial release	2015-11-09

# Annex B Further information

### <u>Glossary</u>

AVG DUT EMC EN EUT ETSI FCC FCC ID HW IC Inv. No.		Average Device under test Electromagnetic Compatibility European Standard Equipment under test European Telecommunications Standard Institute Federal Communication Commission Company Identifier at FCC Hardware Industry Canada Inventory number
PP	-	Positive peak
QP	-	Quasi peak
S/N	-	Serial number
SW	-	Software
PMN		Product marketing name
HMN		Host marketing name
HVIN		Hardware version identification number
FVIN		Firmware version identification number



# Annex C Accreditation Certificate

Front side of certificate	Back side of certificate
DALKS Deutsche Akkreditierungsszelle	
Deutsche Akkreditierungsstelle GmbH	Deutsche Akkreditierungsstelle GmbH
Beliehene gemäß § 8 Absatz 1 AkkStelle G i V.m. § 1 Absatz 1 AkkStelle GBV Unterzeichnerin der Multilateralen Atikommen von EA, ILAC und IAF zur gegenseitigen Anerkennung	Standort Berlin Standort Frankfurt arr Main Standort Braunschweig Spittelmarkt 10 Gartenstraße 6 Bundesalles 100 10117 Jerlin 60594 Frankfurt am Main 38116 Braunschweig
Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium	
CETECOM ICT Services GmbH Untertürkheimer Straße 6-10, 66117 Saarbrücken	
die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Prüfungen in folgenden Bereichen durchzuführen:	
Drahtgebundene Kommunikation einschließlich xDSL VolP und DECT Akustik Funk einschließlich WLAN Short Range Devices (SRD) RFID WilMax und Richtfunk Mobilfunk (GSM / DCS, Over the Air (OTA) Performance) Elektromagnetische Verträglichkeit (EMV) einschließlich Automotive Produktsicherheit SAR und Hearing Aid Compatibility (HAC) Umweltsimulation Smart Carf Terminals Bluetooth Wi-FI- Services	Die auszugsweise Veröffentlichung der Akkreditierungsteilunde besterf der verheinigen schriftlichen Zusfimmung der Deutsche Akkreditierungsstelle Greht (DAMAS, Ausgemennen davon ist die separate Weiserversreitung des Deutsche akkreditierungstelle Greht (DAMAS, Ausgemennen davon ist die separate Weiserversreitung des Deutsche akkreditierungstenden Kanformittelbewertungsstelle in unveränderter Form. Es oarf nicht der Anschein erweist werden, dass sich die Akkreditierung auch auf Berteiche erstreect, die über den durch die DAAS besteltigten Akkreditierungsbernich in nussellen. Die Akkreditierung erfolgte gemäßt das Geschers über die Akkreditierungstenn. Die Akkreditierung erfolgte gemäßt dass Geschers über verberung 16 Nr. 766/2003 des Europääschen Parlaments und des Reits werd. Is Jak 2003 sowie der Verondnung 16 Nr. 766/2003 des Europääschen Parlaments und des Reits werd. Is Jak 2003 sowie der Verondnung 16 Nr. 766/2003 des Europääschen Parlaments und des Reits werd. Is Jak 2003 sowie der Verondnung 16 Nr. 766/2003 des Europääschen Parlaments und des Reits werd. Is Jak 2003 sowie der Verondnung 16 Nr. 766/2003 des Europääschen Parlaments und des Reits werd. Is Jak 2003 sowie der Verondnung 16 Nr. 766/2003 des Europääschen Parlaments und des Reits werd. Is Jak 2003 sowie der Verondnung 16 Nr. 766/2003 des Europääschen Parlaments die Bakerter bereit der Versitärktung ver Parlauften (Jak). 21 Bak 2003 des 10 Jak 2003 des 2003 Die DAk 51 uf Uterzie cherch der Zuster der Kanzellischen Akkreditierung aus gemeinter einermeinne Index Kanzellischen Akkreditierung aus gemeinter des Abernetieren zuster des Parlauften (Jak). 2014 des Versiteren des Abernetieren Akkreditierung des einermeinne Inter Akkreditierung gegemeinter des Abernetieren zuster des Abernetieren Einer werden des Arlaufter des Geschlichen des States einer abernetieren zuster des Abernetieren zuster zuster Einer werden des Arlaufter des Abernetieren des Abernetieren zuster des Abernetieren zuster des Abernetieren des Abernetieren zuster zuster des Abernetie
Registrierungsnummer der Urkunde: D-PL-12076-01-00	HAC: www.ilac.org IAR: www.ilac.nu
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#### Note:

The current certificate including annex is published on our website (see link below) or may be received from CETECOM ICT Services on request.

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