

# TEST REPORT No.I17Z60078-SRD04

for

**TCL Communication Ltd.** 

LTE / UMTS / GSM mobile phone

FCC ID:2ACCJH071

with

**Hardware Version: PIO** 

**Software Version: v6KC5** 

Issued Date: 2017-3-14



#### Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

#### **Test Laboratory:**

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# 1. Test Laboratory

# 1.1. Testing Location

Company Name:

CTTLBeijing, TelecommunicationMetrologyCenter of MIIT

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Postal Code:

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Telephone:

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# 1.2. Testing Environment

Ambient Temperature:

15 ~ 25°C

Relative Humidity:

30 ~ 60%

Air pressure

860 ~ 1060 mbar

# 1.3. Project Data

Receipt of Sample:

2017-02-08

Testing Start Date:

2017-02-08

Testing End Date:

2017-03-13

# 1.4. Signature

颖蓉薤

**Zheng Mengxuan** 

(Prepared this test report)

Zhu Liang

(Reviewedthis test report)

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(Approved this test report)



# 2. Client Information

# 2.1. Applicant Information

Company Name: TCL Communication Ltd.

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Country: China

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# 2.2. Manufacturer Information

Company Name: TCL Communication Ltd.

Address: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,

Pudong Area Shanghai, P.R. China. 201203

Country: China

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# 3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

# 3.1. About EUT

Description:	LTE / UMTS / GSM mobile phone
FCC ID	2ACCJH071
With NFC Function:	Yes
Frequency:	13.56 MHz
Antenna:	Internal
Operation Voltage:	3.5VDC to 4.2VDC (nominal: 3.8VDC)
Operation Temperature:	-10°C to +55°C

Note1: Photographs of EUT are shown in ANNEX B of this test report. For component list, please refer to documents of the manufacturer.

# 3.2. Internal Identification of EUT Used during the Test

### Mobile phone identification

EUT ID*	IMEI	<b>HW Version</b>	SW Version
EUT1	354032080104529	PIO	v6KC5
EUT41	354032080104248	PIO	v6KC5

<sup>\*</sup>EUT ID: is used to identify the test sample in the lab internally.

# 3.3. Internal Identification of AE Used during the Test

AE ID*	Description	SN	Reversion
AE1	Charger	/	1760078CH006
AE2	USB Cable	/	1760078DC037
AE3	PICC CARD	/	/
AE1			
Model		CBA0057AA1C1	
Manufact	urer	BYD	
Length of cable		/	
AE2			
Model		CDA6050000C8	
Manufact	urer	PUAN	
Length of	cable	100cm	
AE3			
Type		/	
Manufact	urer	/	
Type of c	ard	PICC	
**			

<sup>\*</sup>AE ID: is used to identify the test sample in the lab internally.



# 3.4. General Description

This is a product supporting LTE / UMTS / GSM mobile phone with 2.4G/5G technologies.

Manuals and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

Manufacturer's declaration: NFC work does not depend on other access methods, such as WLAN, GPRS, etc.

# 3.5. EUT Set-ups

EUT Set-up No.	Combination of EUT and AE	Remarks
Set. NFC01	EUT1 + AE1 + AE2 + AE3	
Set. NFC02	EUT1	
Set. NFC03	EUT1 + AE3	
Set. NFC04	EUT41 + AE3	

The TransmitState of NFC: the NFC function is on. The EUT will transmit the NFC data and command continuously during the test.

The TransmitStateof without modulation: The EUT will transmit the CW signal at the operating frequency.



# 4. Reference Documents

# 4.1. Documents Supplied by the Applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

# 4.2. Regulations and Standards

The following documents listed in this section are referred for testing.

Reference	Title	Version
CFR 47 Part 2	Part 2—Frequency Allocations and Radio Treaty Matters;	2015
	General Rules and Regulations.	
CFR 47 Part15	Part 15 — Radio Frequency Devices.	2015
	Subpart C—Intentional Radiators.	
	§ 15.35Measurement detector functions and bandwidths.	
	§ 15.207 Conducted limits.	
	§ 15.209 Radiated emission limits, general requirements.	
	§15.215Additional provisions to the general radiated	
	emission limitations.	
	§15.225 Operation within the band 13.110–14.010 MHz.	
ANSI C63.10	American National Standard of Procedures for Compliance	2013
	Testing of Unlicensed Wireless Devices	



# 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamberSAC-1**(23 meters × 17meters × 10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C,Max. = 35 °C	
Relative humidity	Min. = 15 %, Max. = 75 %	
Shielding effectiveness	0.014MHz-1MHz, >60dB;	
	1MHz - 1000MHz, >90dB.	
Electrical insulation	>2 MΩ	
Ground system resistance	< 4Ω	
Normalised site attenuation (NSA)	<±4 dB, 3m/10m distance,	
	from 30 to 1000 MHz	
Site voltage standing-wave ratio(S <sub>VSWR</sub> )	Between 0 and 6 dB, from 1GHz to 18GHz	
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz	

**Fully-Anechoic Chamber FAC-3**(8.6m×6.1m×3.85m) did not exceed following limits along thetesting:

Temperature	Min. = 15 °C, Max. = 25°C		
Relative humidity	Min. = 30 %, Max. = 60 %		
Shielding effectiveness	> 110 dB		
Electrical insulation	>2MΩ		
Ground system resistance	< 1Ω		
Site voltage standing-wave ratio ( $S_{VSWR}$ )	Between 0 and 6 dB, from 1to 18GHz		
Uniformity of field strength	Between 0 and 6 dB, from 80 to 4000 MHz		

# Conducted Chamber did not exceed following limits along the testing:

Temperature	Min. = 15 °C, Max. = 25°C	
Relative humidity	Min. = 30 %, Max. = 60 %	
Shielding effectiveness	> 110 dB	
Electrical insulation	>2MΩ	
Ground system resistance	< 0.5 Ω	

# **Control Room** did not exceed following limits along the testing:

Temperature	Min. = 15 °C,Max. = 25°C	
Relative humidity	Min. =30 %, Max. = 60 %	
Shielding effectiveness	> 110 dB	
Electrical insulation	>2MΩ	
Ground system resistance	< 0.5 Ω	



# 6. SUMMARY OF TEST RESULTS

# 6.1. Summary of Test Results

No	Test Cases	Clause in Regulation	Section in This Report	Verdict
1	Electric Field Strength of	CFR 47 § 15.225(a)	۸.4	P(Set. NFC03)
'	Fundamental Emissions	CFR 47 § 15.225(a)		
2	Electric Field Strength of	CFR 47 § 15.225(b)	A.1	P(Set. NFC03)
2	Outside the Allocated Bands	CFR 47 § 15.225(c)		
3	Electric Field Radiated	CFR 47 § 15.209	A.2	P(Set. NFC01)
3	Emissions	CFR 47 § 15.225(d)	A.3	P(Set. NFC01)
4	Frequency Tolerance	CFR 47 § 15.225(e)	A.4	P(Set. NFC02)
5	20dB Bandwidth	CFR 47 § 15.215(c)	A.5	P(Set. NFC02,
5				03)
6	Conducted Emissions	CFR 47 § 15.207	A.6	P(Set. NFC01)
The measurement is carried out according to ANSI C63.4.See ANNEX A for details.				

### **Test Conditions:**

For this report, all the test cases listed above were tested under normalTemperature, Voltage, Humidity, and Air Pressure. The specific conditions are as following:

	Tmin	-20 ℃
Temperature	T nom	25°C
	T max	55°C
	V min	3.5V
Voltage	V nom	3.8V
	V max	4.2 V
Humidity	H nom	44%
Air Pressure	A nom	1010 mbar



# 6.2. Terms Used in the Summary of Test Results

#### **Terms Used in Condition Column:**

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage
V min	Low Voltage
V max	High voltage
H nom	Norm Humidity
A nom	Norm Air Pressure

### **Terms Used in Verdict Column:**

Р	Pass, The EUT complies with the essential requirements in the standard.
NP	Not Perform, The test was not performed by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

#### **Abbreviations:**

AC	Alternating Current	
AFH	Adaptive Frequency Hopping	
BW	Band Width	
E.I.R.P.	equivalent is tropical radiated power	
ISM	Industrial, Scientific and Medical	
RF	Radio Frequency	
TX	Transmitter	

# 6.3. Statements

The test cases listed in Section 6.1 of this report for the EUT specified in Section 3 were performed by CTTL according to the reference documents in Section 4.

The EUT meets all applicable requirements of the regulations and standards in Section 4.2.

This report only deals with the NFC function among the features described in section 3.



# 7. TestEquipments Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CAL. DUE DATE	
1.	Thermal Chamber	PL-2G	343074	ESPEC	2017-05-12	
2.	Spectrum Analyzer	RSA3408A	B 010277	Tektronix	2017-05-27	
3.	H-field Antenna	HFH2-Z2	829324/0007	R&S	2017-12-16	
4.	EMI Antenna	VULB 9163	9163-235	Schwarz beck	2017-03-02	
5.	Test Receiver	ESCI	100344	R&S	2017-03-01	
6.	Universal Radio	CMW500	143008	R&S	2017-12-01	
	Communication Tester				= 3 : : : : : : : : : : : : : : : : : :	
7.	Universal Radio CMW500	116588	R&S	2017-12-01		
/ .	Communication Tester	CIVIVV300	110300	Nas	2017-12-01	
8.	Spectrum Analyzer	E4440A	MY48250642	Agilent	2017-03-03	
9.	LISN	ESH2-Z5	829991/012	R&S	2017-04-11	



# **ANNEX A: MEASUREMENT RESULTS**

# A.1.Electric Field Strength of Fundamentaland Outside the Allocated bands

#### A.1.1. Reference

See Clause 13.5, Clause 13.4, Clause 8, and Annex E of ANSI C63.4-2014 specifically. See Clause 4, Clause 5, and Clause 6 of ANSI C63.4-2014 generally.

#### A.1.2. MeasurementMethods

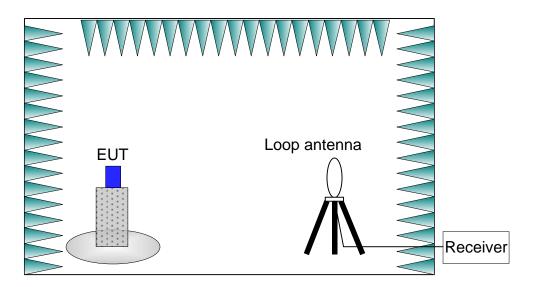
The transmitter carrier output levels (E-Field) from the EUT are measured in a semi-anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3mfrom the receiving antenna. The center of the receiving loop antenna is 1.0 meter above the ground. The E-field is measured with a shielded loop antenna connected to a measurement receiver. Detected E-field was maximized by rotating the EUT through 360° and adjusting the receiving antenna polarizations. The maximization processes were repeated with the EUT positioned respectively in its three orthogonal axes. The measurements were performed with thepeak detector and if required, the quasi-peak detector.

The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/VBW		
12.56-14.56	10/30kHz		

The E-field measured at 3m is calculated as:

E-field  $(dB\mu V/m) = Rx (dB\mu V) + CableLoss (dB) + AF@3m (dB/m)$ 



### A.1.3. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state of NFC (See 3.5).

The EUT is powered by a travel adapter.

During the measurements, the ambient temperature of the electromagnetic anechoic chamber is



in the range of  $15 \sim 25$  °C.

### A.1.4. Limits

FrequencyRange (MHz)	E-field Strength Limit @ 30 m (µV/m)	E-field Strength Limit @ 3 m (dBµV/m)	
13.560 ± 0.007	+15,848	124	
13.410 to 13.553	+334	90	
13.567 to 13.710	+334	90	
13.110 to 13.410	+106	81	
13.710 to 14.010	+100		

Note: Where the limits have been defined at one distance, and a signal level measured at another, the limits have been extrapolated using the following formula:

Extrapolation(dB) =  $40\log_{10}$  (Measurement Distance/Specification Distance)

#### A.1.5. Measurement Results

Measurement results of normal conditions see Figure A-1 for different set-ups of EUT. The result displayed take into account applicable antenna factors and cable losses.

Conclusions: Set. NFC03,PASS.

15.22512.56-14.56M

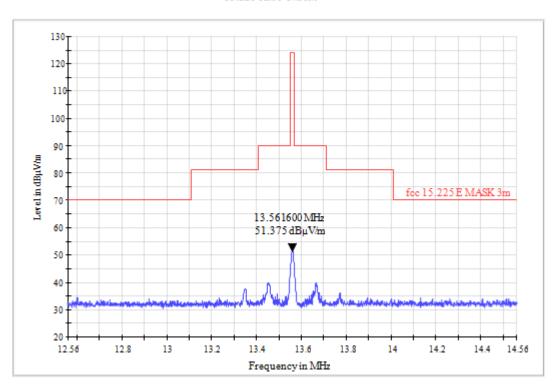


Figure A-1: Set. NFC03

### A.1.6. Measurement Uncertainty

Measurement uncertainty: U = 4.0 dB, k=2.



# A.2. Electric Field Radiated Emissions (< 30MHz)

#### A.2.1. Reference

See Clause 6.4 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

#### A.2.2. MeasurementMethods

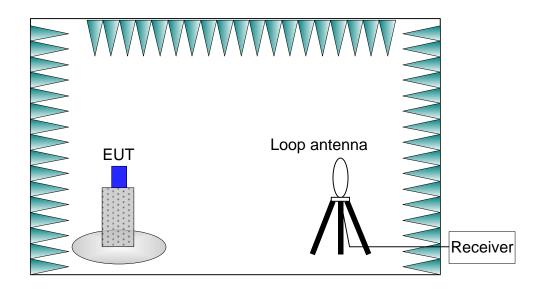
The transmitter carrier output levels (E-Field) from the EUT are measured in a semi-anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3mfrom the receiving antenna. The center of the receiving loop antenna is 1.0 meter above the ground. The E-field is measured with a shielded loop antenna connected to a measurement receiver. Detected E-field was maximized by rotating the EUT through 360° and adjusting the receiving antenna polarizations. The maximization processes were repeated with the EUT positioned respectively in its three orthogonal axes. The measurements were performed with the peak detector and if required, the quasi-peak detector.

#### The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/VBW
0.009-0.15	100/300 Hz
0.15-30	10/30 kHz

The E-field measured at 3m is calculated as:

E-field  $(dB\mu V/m) = Rx (dB\mu V) + CableLoss (dB) + AF@3m (dB/m)$ 



#### A.2.3. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state of NFC (See 3.5).

The EUT is powered by a travel adapter.

During the measurements, the ambient temperature of the electromagnetic anechoic chamber is ©Copyright. All rights reserved byCTTL Beijing.



in the range of  $15 \sim 25$  °C.

### A.2.4. Limits

FrequencyRange (MHz)	E-field Strength Limit @ 30m (uV/m)	E-field Strength Limit @ 3m (dBµV/m)		
0.009-0.490	2400/F(kHz)	129-94		
0.490-1.705	24000/F(kHz)	74-63		
1.705-30	30	70		

Note: Where the limits have been defined at one distance, and a signal level measured at another, the limits have been extrapolated using the following formula:

Extrapolation(dB) =  $40\log_{10}$  (Measurement Distance/Specification Distance)

#### A.2.5. Measurement Results

Measurement results of normal conditions see Figure A-2 for different set-ups of EUT. The result displayed take into account applicable antenna factors and cable losses.

Conclusions: Set. NFC01,PASS.

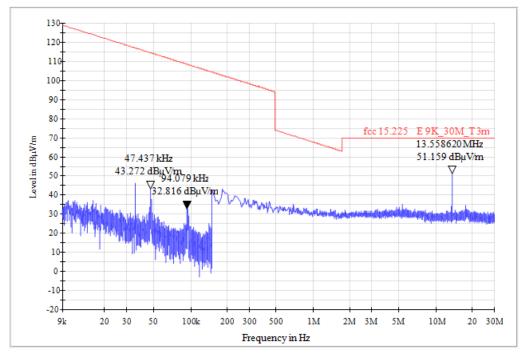


Figure A-2: Set. NFC01

### A.2.6. Measurement Uncertainty

Measurement uncertainty: U = 4.0 dB, k=2.



# A.3. Electric Field Radiated Emissions (≥30MHz)

#### A.3.1. Reference

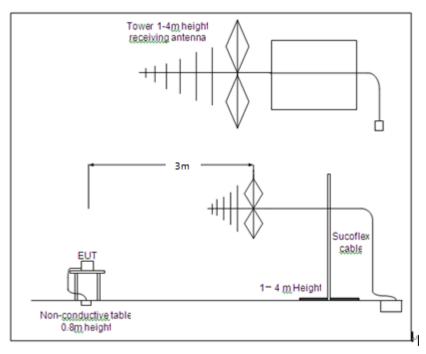
See Clause 6.5 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

#### A.3.2. MeasurementMethods

The electric field radiated emissions from the EUT are measured in a semi-anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 10mfrom the receiving antenna. The receiving antennasconnected to a measurement receiver comply with Clause 15 of ANSI C63.2-1996 and Clause 4.1.5 of ANSI C63.4-2014. In order to search for maximum field strength emitted from the EUT, the receiving antenna can be moved between the height of 1.0 mto 4.0 m.Detected E-field was maximized at each frequencyby rotating the EUT through 360° and adjusting the receiving antenna positions for both vertical and horizontal antenna polarizations. The maximization processes were repeated with the EUT positioned respectively in its three orthogonal axes. The measurements were performed with the peak detector and if required, the quasi-peak detector.

The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/VBW
30-1000	120kHz



### A.3.3. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state of NFC (See 3.5).

EUT1 had been connected to a travel adapter.

During the measurements, the ambient temperature of the electromagnetic anechoic chamber is in the range of  $15 \sim 25$  °C.



#### A.3.4. Limits

FraguencyPange	E-field Strength Limit	E-field Strength Limit	E-field Strength Limit
FrequencyRange	@ 3m	@ 3m	@ 10m
(MHz)	(mV/m)	(dBµV/m)	(dBµV/m)
30-88	100	40	30
88-216	150	43.5	33.5
216-960	200	46	36
960-1000	500	54	44

#### A.3.5. Measurement Results

Measurement results of normal conditions see Figure A-3for different set-ups of EUT. The result displayed take into account applicable antenna factors and cable losses.

Conclusions: Set. NFC01,PASS.

# A.3.6. Measurement Uncertainty

Measurement uncertainty: U=3.9 dB, k=2

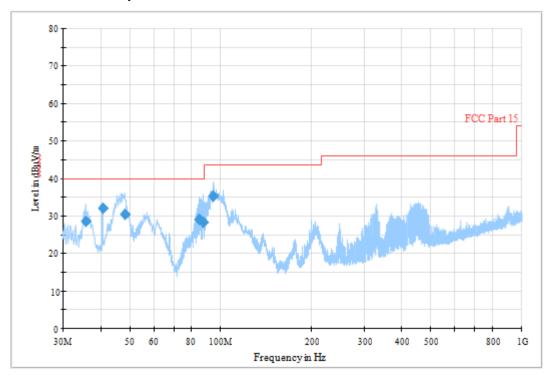


Figure A-3: Set. NFC01

# **Final Result 1**

Frequency	QuasiPeak	Height	Polarization	Azimuth	Corr.	Margin	Limit	Comment
(MHz)	(dBµV/m)	(cm)		(deg)	(dB)	(dB)	(dBµV/m)	
35.723000	28.6	100.0	V	112.0	-20.2	11.4	40.0	
40.670000	32.2	126.0	V	68.0	-19.3	7.8	40.0	
48.042000	30.4	100.0	V	82.0	-18.4	9.6	40.0	
84.805000	29.3	222.0	Н	-18.0	-22.7	10.7	40.0	



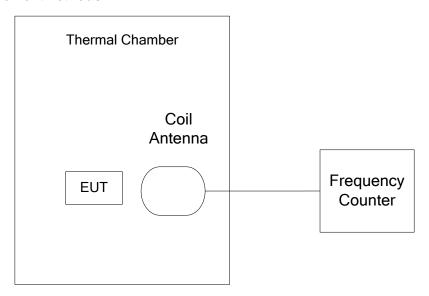
87.618000	28.3	207.0	Н	179.0	-21.8	11.8	40.0	
94.893000	35.4	205.0	н	179.0	-19.4	8.1	43.5	

### A.4. Frequency Tolerance

#### A.4.1. Reference

See Clause 6.8 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

#### A.4.2. MeasurementMethods



The transmitter output signal was picked up by coil antenna connected to the frequency counter. The center frequency was measured with 30Hz RBW and 1kHz span.

During the test, the EUT was placed in a thermal chamber until thermal balance and lasting appropriate time.

#### A.4.3. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state of without modulation (See 3.5). EUT1 had been not connected to a travel adapter.

Operation Temperature: T min, T nom, and T max with V nom.

\_\_\_\_\_\_

Operation Voltage: V min and V max with T nom.

# A.4.4. Test Layouts

See A.4.2.

#### A.4.5. Limits

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.



#### A.4.6. Measurement Results

Measurement results see Table A-1for different test conditions.

Conclusions: Set. NFC02, PASS.

Table A-1: Frequency Stability VS Temperature and Voltage

Temperature	Voltage	Frequency Error (MHz)					
		Startup	2 Min Later	5 Min Later	10 Min Later		
T min	V nom	13.5601375	13.5601375	13.5601875	13.5601375		
T max	V nom	13.5601875	13.5601875	13.5600657	13.5600560		
T nom	V nom	13.5600657	13.5601875	13.5601875	13.5600150		
T nom	V min	13.5601750	13.5601750	13.5600560	13.5600560		
T nom	V max	13.5601750	13.5600657	13.5600657	13.5601875		

Temperature	Voltage	Frequency Error (%)					
		Startup	2 Min Later	5 Min Later	10 Min Later		
T min	V nom	0.001	0.001	0.001	0.001		
T max	V nom	0.001	0.001	0.000	0.000		
T nom	V nom	0.000	0.001	0.001	0.000		
T nom	V min	0.001	0.001	0.000	0.000		
T nom	V max	0.001	0.000	0.000	0.001		

#### A.4.7. Measurement Uncertainty

Measurement uncertainty: *U* =77Hz, k=2

# A.5. 20dB Bandwidth

#### A.5.1. Reference

See Clause 6.9of ANSI C63.10-2013 specifically.

See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

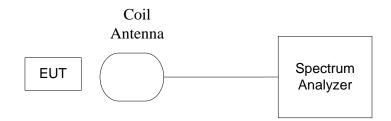
#### A.5.2. MeasurementMethods

The transmitter output signal was picked up by coil antenna to the spectrum analyzer.

The transmitter output signal was picked up by coil antenna connected to the spectrum analyzer. The bandwidth of the center frequency was measured with 140Hz RBW, 420Hz VBW and 14kHz

span.





### A.5.3. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state of NFC and without modulation (See 3.5).

EUT had been not connected to a travel adapter..

During the measurements, the ambient temperature is in the range of 15 ~ 25 °C.

### A.5.4. Test Layouts

See A.5.2.

#### A.5.5. Limits

The 20dB bandwidth shall be less than 80% of the permittedfrequency band. For 13.56 MHz NFC, the permittedfrequency band is 14kHz, so the limit is 11.2 kHz.

#### A.5.6. Measurement Results

Measurement results see Figure A-4.

Conclusions: Set. NFC02 and NFC03, PASS.

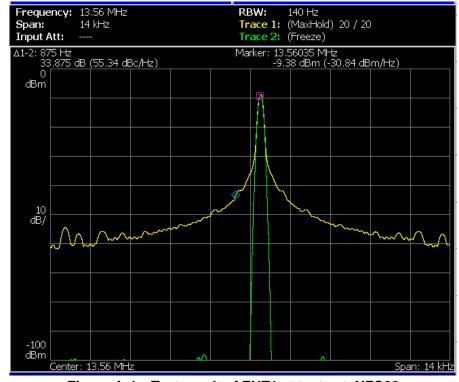


Figure A-4: Test result of EUT1 at test set. NFC02



### A.5.7. Measurement Uncertainty

Measurement uncertainty: *U* =77Hz, k=2

### A.6. Conducted emission

#### A.6.1. Reference

See Clause 6.2 of ANSI C63.10-2013 specifically. See Clause 4 and Clause 5 of ANSI C63.10-2013 generally.

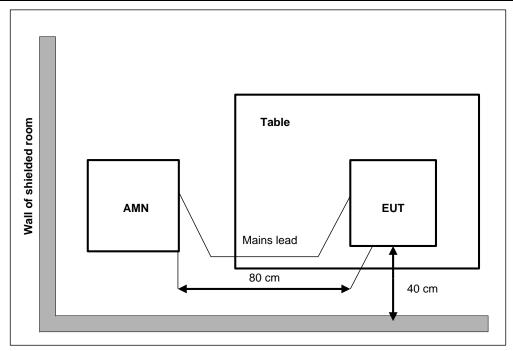
#### A.6.2. MeasurementMethods

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak/ AverageDetector.

The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/VBW		
0.15-30	9kHz		



### A.6.3. EUT Operating Mode and Test Conditions

The measurement of EUT is carried out under the transmit state of NFC (See 3.5).

The EUT is powered by a travel adapter.

During the measurements, the ambient temperature is in the range of 15 ~ 25  $^{\circ}$ C.



#### A.6.4. Limits

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	
0.15 to 0.5	66 to 56	56 to 46	
0.5 to 5	56	46	
5 to 30	60	50	

#### A.6.5. Measurement Results

Measurement results see Figure A-5.

Conclusions: Set. NFC01, PASS.

Note: The measurement result at 13.56MHz is the fundamental emission of NFC signal.

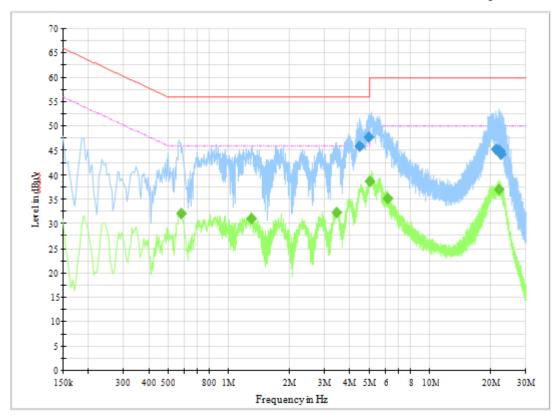


Figure A-5: Test result of EUT1 at test set. NFC01

# **Final Result 1**

Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
4.470000	46.0	GND	N	10.4	10.0	56.0
4.974000	47.8	GND	N	10.4	8.2	56.0
21.318000	45.3	GND	N	11.0	14.7	60.0
22.092000	45.2	GND	N	11.0	14.8	60.0
22.312500	44.9	GND	N	11.0	15.1	60.0
22.623000	44.3	GND	N	11.0	15.7	60.0



# **Final Result 2**

Frequency	Average	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
0.577500	32.2	GND	N	10.3	13.8	46.0
1.288500	31.2	GND	N	10.3	14.8	46.0
3.448500	32.3	GND	N	10.4	13.7	46.0
4.987500	38.7	GND	N	10.4	7.3	46.0
6.148500	35.2	GND	N	10.5	14.8	50.0
22.092000	37.2	GND	N	11.0	12.8	50.0

# A.6.6. Measurement Uncertainty

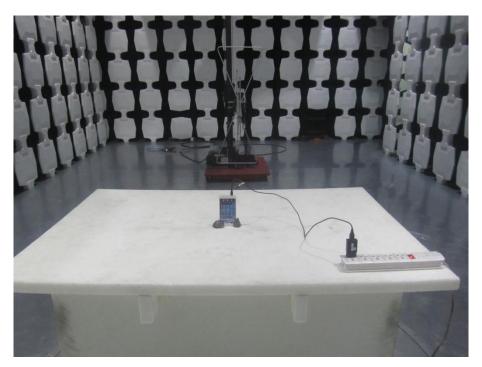
Measurement uncertainty: U = 3.2 dB, k=2

# **ANNEX C: TEST LAYOUT**

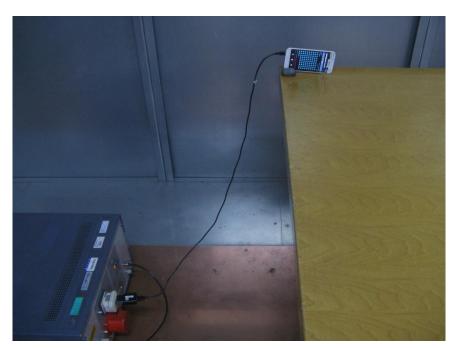


Picture C-1: Field Strength Measurements (Below 30MHz)





Picture C-2: Field Strength Measurements (Above 30MHz)



**Picture C-3: Conducted Emissions Measurements** 

\*\*\*END OF REPORT\*\*\*