EMC TEST REPORT

ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55032:2015+A11:2020 EN 55035:2017+A11:2020 EN IEC 61000-3-2:2019 EN61000-3-3:2013+A1:2019

> Product : 4G Tablet Trade Mark : Blackview Model Name : Tab 12 Family Model : N/A Report No. : STR211227002011E

Prepared for

DOKE COMMUNICATION (HK) LIMITED.

RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD WANCHAI HK, CHINA

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

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> Tel. 400-800-6106, 0755-2320 0050, 0755-2320 0090 Website: http://www.ntek.org.cn

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TE	ST RESULT CERTIFICATION 🛸 🍣 🍼 🍼						
Applicant's Name	DOKE COMMUNICATION (HK) LIMITED.						
Address	RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD WANCHAI HK, CHINA						
Manufacturer's Name	Shenzhen DOKE Electronic Co.,Ltd.						
Address	801, Building3, 7th Industrial Zone, Yulv Community, Yutang Road, Guangming District, Shenzhen, China.						
Product description							
Product name	4G Tablet						
Trade Mark	Blackview						
Model Name	Tab 12						
Family Model	N/A 炎 🛛 🖉 🗟 🖉 🖉						
	ETSI EN 301 489-1 V2.2.3 (2019-11)						
* *	ETSI EN 301 489-3 V2.1.1 (2019-03)						
the second second	ETSI EN 301 489-17 V3.2.4 (2020-09)						
Standards	ETSI EN 301 489-19 V2.1.1 (2019-04)						
V A	ETSI EN 301 489-52 V1.2.1 (2021-11)						
At A	EN 55032:2015+A11:2020; EN 55035:2017+A11:2020						
	EN IEC 61000-3-2:2019; EN61000-3-3:2013+A1:2019						
	as been tested by NTEK, and the test results show that the						
	in compliance with the of article 3.1(b) of the Directive 2014/53/EU						
	ble only to the tested sample identified in the report.						
	uced except in full, without the written approval of NTEK, this vised by NTEK, personnel only, and shall be noted in the revision						
of the document.	vised by NTER, personner only, and shall be noted in the revision						
Date of Test							
	5: Dec 27, 2021 ~ Feb 16, 2022						
Date of Issue							
Test Result	Pass 👉 🤜 🖉						
t t	A S . A L						

Testing Engineer

Allen. Huang

(Allen Huang)

Authorized Signatory :

(Alex Li)

N2017.03.22.0322.V.1.0

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		4	F	age 5 0	04 1	Cepoir No		7002011L
1. TEST	SUMMARY	L.	+ #			* *	A A	A .
Test proc	cedures acco	ording to	the technical standar	ds: 🗡	Ś	2	· \$ 3	× ×
ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55032:2015+A11:2020; EN 55035:2017+A11:2020 EN IEC 61000-3-2:2019; EN61000-3-3:2013+A1:2019								
		<u>, 10, 11</u>	EMC Emi		~			
Sta	andard		Test Item			Limit	Judgmer	nt Remar
N.N.	7	Cond	lucted Emission On AC Port 150kHz to 30		lecom	Class B	PASS	N
A	- At		sturbance Voltage at T Ferminals (30MHz To 2			A.	N/A	4
55032:2	EN 015+A11:20 20		d signal and disturband RF output termin (30MHz To 2150N	nals 💉	e at the		N/A	A.
t	A.		Radiated Emiss 30MHz to 1000M	4	Λ.,	Class B	PASS	the state
N.N.	×	1st	Radiated Emiss 1GHz to 6GHz			Class B	PASS	
	N IEC -3-2:2019		Harmonic Current Er	mission	14	Class A	N/A	NOTE (1
	0-3-3:2013+ :2019	d'	Voltage Fluctuations &	& Flicker	V		PASS	
			EMC Imm	nunity				
EN 550	Section 35:2017+A1	1:2020	Test Item		Perforn Crite		Judgment	Remark
EN 6	61000-4-2:20	009	Electrostatic Disch	arge	БВ	N.S.	PASS	the state
	1000-4-3:20 2008+A2:20		RF electromagnetic	c field	A		PASS	1
EN 61000-4-4:2012 EN 61000-4-5:2014+ A1:2017		Fast transients	5	В	L.	PASS	A	
		Surges	- 5	В		PASS	XXX	
EN 6	61000-4-6:20	014	Continuous radio free disturbances or Inje Current	ected	A	THE NEW	PASS	the second
EN 6	61000-4-8:20	010	Power Frequency Ma Field	agnetic	А		N/A	NOTE (3)
EN 6	1000-4-11:2	004	Volt. Interruptions Vo	olt. Dips	В / С NOTE		PASS	L &

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NOTE:

- (1)" N/A" denotes test is not applicable in this Test Report
- (2) Voltage dip: 100% reduction Performance Criteria B
- Voltage dip: 30% reduction Performance Criteria C
- Voltage Interruption: 100% Interruption Performance Criteria C

(3) Applicable only to equipment containing devices intrinsically susceptible to magnetic fields, such as CRT monitors, Hall effect elements, electro-dynamic microphones, magnetic field sensors or audio frequency transformers.

(4) For client's request and manual description, the test will not be executed.

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1.1 TEST FACILITY

Shenzhen NTEK Testing Technology Co., Ltd. Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street Bao'an District, Shenzhen 518126 P.R. China

CNAS-Lab. 🤍 :	The Certificate Registration Number is L5516
IC-Registration :	The Certificate Registration Number is CN0074
FCC- Accredited :	Test Firm Registration Number: 463705
1 5	Designation Number: CN1184
A2LA-Lab. :	The Certificate Registration Number is 4298.01
No the	This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories.
AT A	This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system

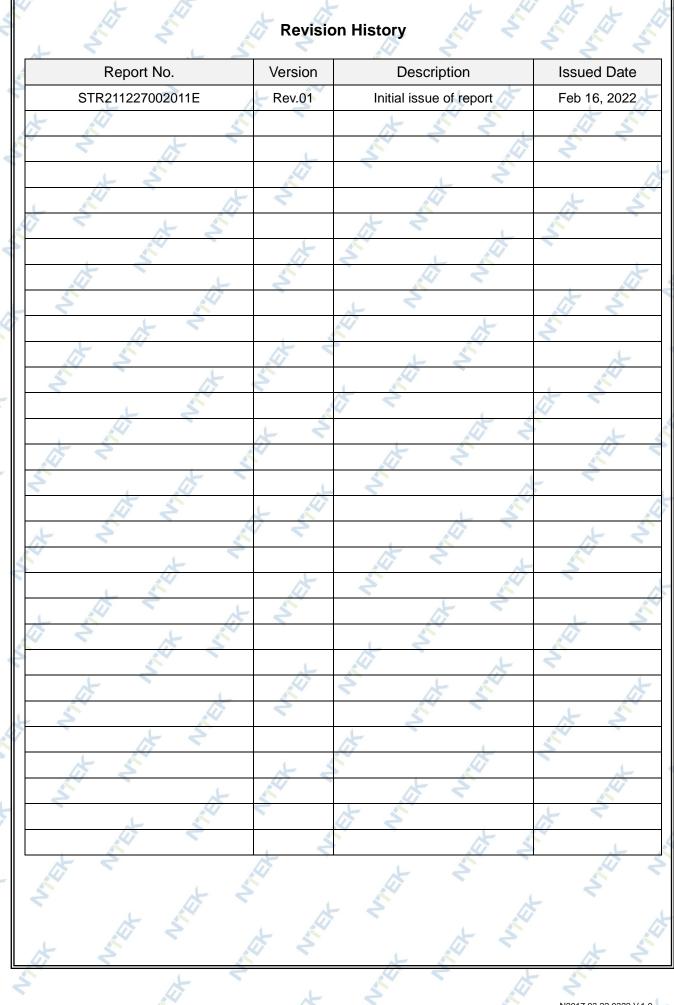
1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U}$, where expended uncertainty \mathbf{U} is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

(refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

	Test Item	Measurement Frequency Range	к	U(dB)
AC Mains Conducted Emission		0.009kHz ~ 0.15MHz	2	2.66
AC	Mains Conducted Emission	0.15MH ~ 30MHz	2	2.80
Teleco	om Conducted Emission (Cat 3)	0.15MHz ~ 30MHz	2	2.40
Teleco	om Conducted Emission (Cat 5)	0.15MHz ~ 30MHz	2	2.58
×	Radiated Emission	30MHz ~ 1000MHz	2	2.64
A A	Radiated Emission	1000MHz ~ 6000MHz	2	2.40
	Radiated Emission	6000MHz ~ 18000MHz	2	2.52
				×

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2. GENERAL INFORMATION 2.1 GENERAL DESCRIPTION OF EUT Equipment 4G Tablet Trade Mark Blackview Tab 12 Model Name Family Model N/A Model Difference N/A BT(1Mbps/2 Mbps)/BLE: GFSK 2.4G WIFI: 802.11b/g/n(20MHz): 2412~2472MHz 802.11n(40MHz):2422~2462MHz SG WIFI:802.11a/n(20/40)/ac(20/40/80): 5180MHz~5240MHz(20MHz) 5190MHz~5230MHz(40MHz) 5210MHz(80MHz); 5745MHz~5825 MHz(20MHz); 5755MHz~5795 MHz(40MHz); 5775MHz(80MHz); GSM/GPRS/EGPRS 900: 880~915MHz(TX) 925~960MHz (Rx) GSM/GPRS/EGPRS 1800: 1710~1785MHz(TX) 1805~1880MHz(Rx) WCDMA Band I: 1920 MHz ~1980 MHz(TX); 2110 MHz~2170 MHz(RX) WCDMA Band VIII: 880~915MHz(TX); 925~960MHz(RX) Frequency Bands: E-UTRA FDD Band I, III, VII, VIII, XX E-UTRA TDD XL FDD Band I: Uplink: 1920 MHz to 1980MHz Downlink: 2110 MHz to 2170 MHz FDD Band III: Uplink:1710 MHz to 1785 MHz Downlink: 1805 MHz to 1880 MHz FDD Band VII: Uplink: 2500 MHz to 2570 MHz Downlink: 2620 MHz to 2690 MHz FDD Band VIII: Uplink: 880MHz to 915 MHz Downlink: 925 MHz to 960 MHz FDD Band XX: Uplink: 832 MHz to 862 MHz Downlink: 791 MHz – 821 MHz TDD Band XL: Uplink & Downlink: 2300 MHz to 2400 MHz GPS: 1.57542GHz FM Receiver: 87.5 MHz to 108 MHz

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V	A A	LA LAALA
IN VI VI	Modulation Mode:	 BT(1Mbps)/BLE: GFSK BT EDR(2Mbps): ∏/4-DQPSK BT EDR(3Mbps): 8-DPSK BLE(2M): GFSK IEEE 802.11b : DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g/n (HT20/HT40) : OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE802.11a: OFDM (BPSK / QPSK / 16QAM) IEEE802.11n: OFDM (QPSK/BPSK/16QAM/64QAM) 802.11ac:OFDM (QPSK/BPSK/16QAM/64QAM/256QAM) GSM/GPRS/EGPRS: GMSK, 8PSK WCDMA(Voice /HSDPA/HSUPA): QPSK LTE: QPSK, 16QAM GPS: BPSK modulation FM Receiver: FM
	SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
-	Power Rating	DC 3.8V from battery or DC 5V from Adapter
	Adapter	Adapter 1: Model: HJ-0502000C2-EU Input: 100-240V~50/60Hz 0.3A Output: 5V2.0A 10.0W Adapter 2: Model: HJ-0502000K9-EU Input: 100-240V~50/60Hz 0.3A Output: 5V2.0A 10.0W
	Battery	DC 3.8V, 6580mAh
	Connecting I/O Port(s)	Please refer to the User's Manual
	Antenna:	BT/WIFI/GPS: PIFA Antenna; GSM/WCDMA/LTE: PIFA Antenna; FM: Use earphone as Antenna;
	Hardware Version	T30-9863A-V1.0-220120-G
	Software Version	Tab 12_EEA_T30_V1.0

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2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	TF Playing
Mode 2	Data transmission
Mode 3	
Mode 4	FM(87.6MHz / 98MHz / 107.9MHz)
Mode 5	BT Link mode
Mode 6	Wi-Fi 2.4G/ 5.2G/5.8G
Mode 7	GSM / GPRS / EGPRS 900 / 1800
Mode 8	WCDMA / HSDPA / HSUPA B1 / B8
Mode 9	LTE Band 1 / 3 / 7 / 8 / 20 / 40
Mode 10	GPS Receiver

For Conducted Test				
Final Test Mode	Description			
Mode 1 TF Playing				
5				
	At A Street			
L X	the state of the s			

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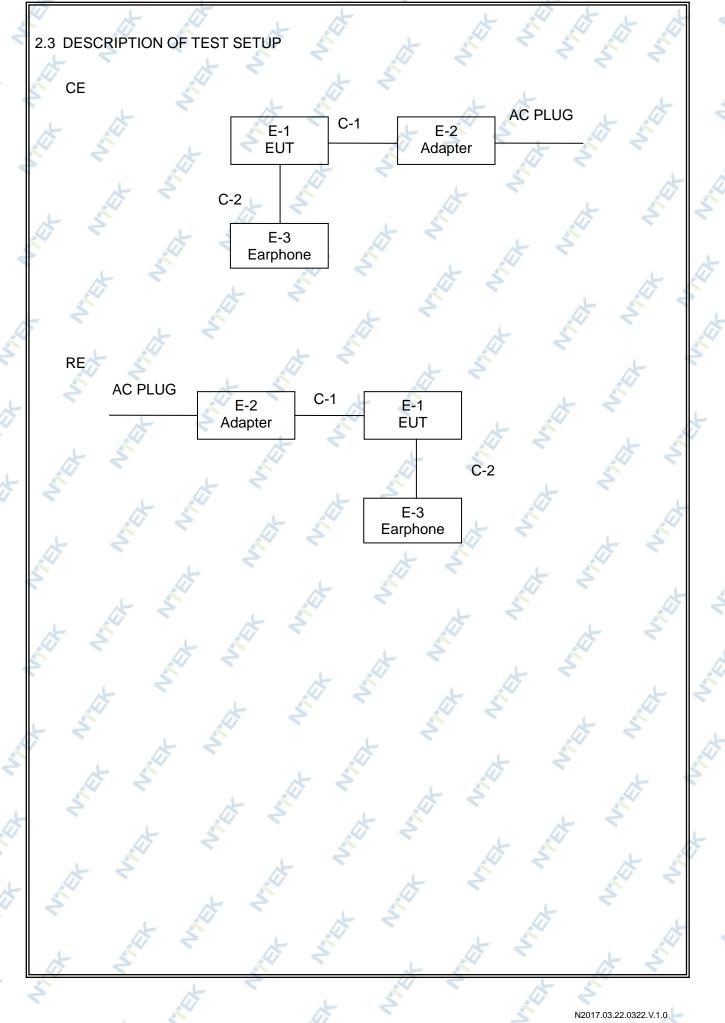
r A	No.	~	AT .	2	4	2	4
		For Rad	diated Test				
Final Test Mode		Description					
Mode 1	N,	TF Playing <				1.	
Mode 2		Data transmission 🧹 🤝					
A E		A.		4 7			
		For F	MC Toot				

	For EMS Test					
Pretest Mode	Pretest Mode Description					
Mode 1	TF Playing					
Mode 2	Data transmission					
Mode 3 📈	REC					
Mode 4	FM(87.6MHz / 98MHz / 107.9MHz)					
Mode 5	BT Link mode	×				
Mode 6	Wi-Fi 2.4G/ 5.2G/5.8G	1				
Mode 7	GSM / GPRS / EGPRS 900 / 1800	7				
Mode 8	WCDMA / HSDPA / HSUPA B1 / B8					
Mode 9	LTE Band 1 / 3 / 7 / 8 / 20 / 40	AL AN				
Mode 10	GPS Receiver					

NOTE: The test modes were carried out for all operation modes. The final test mode of the EUT was the worst test mode for EMI, and its test data was showed.

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2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Model/Type No.	Series No.	Note
E-1	4G Tablet	Tab 12	N/A	L EUT
E-2	Adapter1	HJ-0502000C2-EU	N/A	Peripherals
E-2	Adapter2	HJ-0502000K9-EU	N/A	Peripherals
E-3	Earphone	N/A 📈	N/A	Peripherals
		t t		5 1
~		1	t r	
			1	AT I
	5 5		· ·	4
2		なか		

					4
Item	Cable Type	Shielded Type	Ferrite Core	Length	Note
C-1	USB Cable	YES	NO	<u>1.0m</u>	A A
C-2	Earphone Cable	NO	NO	1.2m	~
	t t				~
	N N	A E		t S	L.
X	1	N. V	1	L'	1 1
	t			a t	E.
	L'	A	E C	L'	
	マン	+ 5		4 2	

Note: (1)

(2)

The support equipment was authorized by Declaration of Confirmation.

For detachable type I/O cable should be specified the length in cm in [Length] column.

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			4		-			
×11	2.5 N	IEASUREMEN		NTS LIST	t t	the second	N. A.	The state
2	2.5.1	CONDUCTED	EMISSION		, S	7		
1	Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
	A1	Test Cable	N/A 🔏	C01	N/A 🙏	Mar. 29, 2021	Mar. 28, 2024	3 years
	2	Test Cable	N/A	C02	N/A	Mar. 29, 2021	Mar. 28, 2024	3 years
	3	Test Cable	N/A	C03	N/A	Mar. 29, 2021	Mar. 28, 2024	3 years
	4	Pulse Limiter	SCHWARZBE CK	VTSD 9561F	9716	Apr. 27, 2021	Apr. 26, 2022	1 year
	5	50Ω Switch	ANRITSU CORP	MP59B	620098370 4	Mar. 29, 2021	Mar. 28, 2024	3 year
	6	EMI Test Receiver	R&S	ESCI	101160	Apr .27, 2021	Apr .26, 2022	1 year
t.	7	Unversal radio communication tester	R&S	CMU200	1100.008.0 2	Apr .27, 2021	Apr .26, 2022	1 year
	8	Wideband Radio Communication Tester Specifications	R&S	CMW500	148500	Apr .27, 2021	Apr .26, 2022	1 year
	9	LISN	SCHWARZBE CK	NNLK 8129	8129245	Apr .27, 2021	Apr .26, 2022	1 year
	10	LISN	R&S	ENV216	101313	Apr .27, 2021	Apr .26, 2022	1 year
	2		A L	4	1		X	
2	2.5.2	RADIATED TES		, D			X	Calibration
	Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	period
	1	Antenna Mast	EM	SC100_1	N/A	N/A	N/A	N/A
	2	Turn Table	EM	SC100	060531	N/A	N/A 🔨	N/A
	3	EMI Test Receiver	R&S	ESCI-7	101318	Apr .27, 2021	Apr .26, 2022	1 year
	4	50Ω Switch	Anritsu Corp	MP59B	620098370 5	Apr .27, 2021	Apr .26, 2022	1 year
	5	Spectrum Analyzer	Aglient	E4407B	MY451080 40	Apr .27, 2021	Apr .26, 2022	1 year
×	6	Unversal radio						
		communication tester	R&S	CMU200	1100.008.0 2	Jul. 01, 2021	Jun. 30, 2022	1 year
	7		R&S R&S	CMU200 CMW500		Jul. 01, 2021 Jul. 01, 2021	Jun. 30, 2022 Jun. 30, 2022	1 year
		tester Wideband Radio Communication Tester			2	A A	N. N	
	7	tester Wideband Radio Communication Tester Specifications	R&S	CMW500	2	Jul. 01, 2021	Jun. 30, 2022	1 year
	7	tester Wideband Radio Communication Tester Specifications Test Cable	R&S N/A	CMW500 R-01 R-02 CBL6111D	2 148500 N/A N/A 31216	Jul. 01, 2021 Aug. 07, 2019	Jun. 30, 2022 Aug. 06, 2022	1 year 3 years
	7 8 9	tester Wideband Radio Communication Tester Specifications Test Cable Test Cable	R&S N/A N/A	CMW500 R-01 R-02	2 148500 N/A N/A	Jul. 01, 2021 Aug. 07, 2019 Aug. 07, 2019	Jun. 30, 2022 Aug. 06, 2022 Aug. 06, 2022	1 year 3 years 3 years

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253	HARMONICS A		to the	ţ.	AT.	A A	AT .
Item	Kind of	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Harmonic & Flicker		DPA500	0303-04	Mar. 29, 2021	Mar. 28, 2022	1 year
2	AC Power Source	EM TEST	ACS500	0203-01	Mar. 29, 2021	Mar. 28, 2022	1 year
3	Unversal radio communication tester	R&S	CMU200	1100.008.0 2	Jul. 01, 2021	Jun. 30, 2022	1 year
4	Wideband Radio Communication Tester Specifications	R&S	CMW500	148500	Jul. 01, 2021	Jun. 30, 2022	1 year
2.5.4	ESD	the second secon	2		A.Y.	A	N.E.
Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Unversal radio communication tester	R&S	CMU200	1100.008.0 2	Jul. 01, 2021	Jun. 30, 2022	1 year
2	Wideband Radio Communication Tester Specifications	R&S	CMW500	148500	Jul. 01, 2021	Jun. 30, 2022	1 year
	Electrostatic	X				at 1	•
3	Discharge Generator	Lioncel	ESD-203B	ESD203B0 150402	Jul. 01, 2021	Jun. 30, 2022	1 year
*	Generator	Lioncel	ESD-203B		Jul. 01, 2021	Jun. 30, 2022	1 year
3 2.5.5 Item	RS Kind of	Lioncel	ESD-203B Type No.	150402	Jul. 01, 2021	<u> </u>	1 year Calibratio period
2.5.5	RS Kind of	1	* *	150402	- St	<u> </u>	Calibratio
2.5.5 Item	Generator RS Kind of Equipment Unversal radio communication	Manufacturer	Type No.	150402 Serial No. 1100.008.0	Last calibration	Calibrated until	Calibratio
2.5.5 Item 1	Generator RS Kind of Equipment Unversal radio communication tester Wideband Radio Communication Tester	Manufacturer R&S	Type No. CMU200	150402 Serial No. 1100.008.0 2	Last calibration Jul. 01, 2021	Calibrated until Jun. 30, 2022	Calibratio period 1 year
2.5.5 Item 1 2	GeneratorRSKind of EquipmentUnversal radio communication testerWideband RadioCommunication Tester SpecificationsAudio Power	Manufacturer R&S R&S	Type No. CMU200 CMW500	150402 Serial No. 1100.008.0 2 148500	Last calibration Jul. 01, 2021 Jul. 01, 2021	Calibrated until Jun. 30, 2022 Jun. 30, 2022	Calibratio period 1 year 1 year
2.5.5 Item 1 2 3	GeneratorRSKind of EquipmentUnversal radio communication testerWideband RadioCommunication TesterSpecificationsAudio Power AmplifierMouth	Manufacturer R&S R&S Brüel & Kjær	Type No. CMU200 CMW500 4602B	150402 Serial No. 1100.008.0 2 148500 2185667	Last calibration Jul. 01, 2021 Jul. 01, 2021 Apr .27, 2021	Calibrated until Jun. 30, 2022 Jun. 30, 2022 Apr .26, 2022	Calibratio period 1 year 1 year 1 year
2.5.5 Item 1 2 3 4	GeneratorRSKind of EquipmentUnversal radio communication testerWideband Radio Communication Tester SpecificationsAudio Power AmplifierMouth Simulator Sound	Manufacturer R&S R&S Brüel & Kjær Brüel & Kjær	Type No. CMU200 CMW500 4602B 2669	150402 Serial No. 1100.008.0 2 148500 2185667 2143265	Last calibration Jul. 01, 2021 Jul. 01, 2021 Apr .27, 2021 Apr .27, 2021	Calibrated until Jun. 30, 2022 Jun. 30, 2022 Apr .26, 2022 Apr .26, 2022	Calibratio period 1 year 1 year 1 year 1 year
2.5.5 Item 1 2 3 4 5	Generator RS Kind of Equipment Unversal radio communication tester Wideband Radio Communication Tester Specifications Audio Power Amplifier Mouth Simulator Sound Calibrator 1/2" Pressure- field	Manufacturer R&S R&S Brüel & Kjær Brüel & Kjær Brüel & Kjær	Type No. CMU200 CMW500 4602B 2669 4185	150402 Serial No. 1100.008.0 2 148500 2185667 2143265 2194825	Last calibration Jul. 01, 2021 Jul. 01, 2021 Apr .27, 2021 Apr .27, 2021 Apr .27, 2021	Calibrated until Jun. 30, 2022 Jun. 30, 2022 Apr .26, 2022 Apr .26, 2022 Apr .26, 2022	Calibratio period 1 year 1 year 1 year 1 year 1 year

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-		4	No. of the second secon	A Q		1	N AT	X G
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	9	Ear Simulator for Telephonometr y	Brüel & Kjær	4185	2553612	Apr .27, 2021	Apr .26, 2022	1 year
The a	10	Bilog Antenna	ETS	3142E(Fequ ency range 30MHz to 6 GHz)	00214344	Mar. 29, 2021	Mar. 28, 2022	1 year
	11	Broadband Amplifier	AR	60S1G6	0350414	Mar. 25, 2021	Mar. 24, 2022	1 year
4	12	PSG Analog Signal Generator	Agilent	E8257D	MY511101 12	Jul. 01, 2021	Jun. 30, 2022	1 year
	13	Power Amplifier	rflight	NTWPA-00 810200	17063153	Jul. 01, 2021	Jun. 30, 2022	1 year
	14	Power Amplifier	AR	25S1G4A	308598	Jul. 01, 2021	Jun. 30, 2022	1 year
	15	Power Meter	Agilent	E4419B	MY451025 38	Jul. 01, 2021	Jun. 30, 2022	1 year
	16	Power Sensor	Agilent	E9301A	MY414956 44	Jul. 01, 2021	Jun. 30, 2022	1 year
	17	Power Sensor	Agilent	E9301A	US392121 48	Jul. 01, 2021	Jun. 30, 2022	1 year

#### 2.5.6 SURGE, EFT/BURST, VOLTAGE INTERRUPTION/DIPS

~								
	Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
	$1_{\gamma}$	Surge Generator	EVERFINE	EMS61000- 5A-V1 🙏	1101002	Apr .27, 2021	Apr .26, 2022	1 year
	2	DIPS Generator	EVERFINE	EMS61000- 11K	1011002	Apr .27, 2021	Apr .26, 2022	1 year
-	3	EFT/B Generator	EVERFINE	EMS61000- 4A-V2	1012005	Apr .27, 2021	Apr .26, 2022	1 year
	4	Unversal radio communication tester	R&S	CMU200	1100.008.0 2	Jul. 01, 2021	Jun. 30, 2022	1 year
-	4	Wideband Radio	t a	V		N.C.	A.	N
113	5	Communication	R&S	CMW500	148500	Jul. 01, 2021	Jun. 30, 2022	1 year
		Tester Specifications		AL.	SN	XX	7	x
		N.						

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Y I	the second secon	AT .	x A	7	t	N A	A D
2.5.7	INJECTION CL	JRRENT	4	A		75	2 8
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Attenuator	TESEQ	ATN 6075	38411	N/A	N/A	N/A
2	RF Cable	TESEQ	RF Cable	N/A	N/A	N/A	N/A
3	Signal Generator	🗼 R&S <	SML03	100954	Jul. 01, 2021	Jun. 30, 20 <mark>2</mark> 2	1 year
4	Power Amplifier	TESEQ	CBA 230M-080	T44376	Jul. 01, 2021	Jun. 30, 2022	1 year
5	EM Clamp	FCC	F-203I-23M M	504	Jul. 01, 2021	Jun. 30, 2022	1 year
6	Audio Power Amplifier	Brüel & Kjær	4602B	2185667	Jul. 01, 2021	Jun. 30, 2022	1 year
7	Mouth Simulator	Brüel & Kjær	2669	2143265	Jul. 01, 2021	Jun. 30, 2022	1 year
8	Sound Calibrator	Brüel & Kjær	4185	2194825	Jul. 01, 2021	Jun. 30, 2022	1 year
9	1/2" Pressure- field Microphone	Brüel & Kjær	735	2641678	Jul. 01, 2021	Jun. 30, 2022	1 year
10	Audio Analyzer	R&S	UPV	100419	Jul. 01, 2021	Jun. 30, 2022	1 year
11	Ear Simulator for Telephonometr y	Brüel & Kjær	4185	2553612	Apr .27, 2021	Apr .26, 2022	1 year
12	Telephone Test Head	Brüel & Kjær	4185	2631728	Apr .27, 2021	Apr .26, 2022	1 year
13	Unversal radio communication tester	R&S	CMU200	1100.008.0 2	Apr .27, 2021	Apr .26, 2022	1 year
N.	Wideband Radio	t v		The second	1	to the second	
14	Communication Tester	R&S	CMW500	148500	Apr .27, 2021	Apr .26, 2022	1 year
t	Specifications				47	t	~~~
15	Coupling and Decoupling Network	TESEQ	CDN M016	38722	Apr .27, 2021	Apr .26, 2022	1 year

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#### 3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT 3.1.1 POWER LINE CONDUCTED EMISSION

(Frequency Range 150kHz-30MHz)

 
 Table A.8 – Requirements for conducted emissions from the AC mains power ports of Class A equipment

le to			
ins power ports (3.1.1)			
Frequency range MHz	Coupling device (see Table A.7)	Detector type / bandwidth	Class A limits dΒ(μV)
0,15 - 0,5	6 M M	Oueei Beek ( 0 kill=	79
0,5 – 30	AIVIN		73
0,15 - 0,5	A M N I		66
0,5 - 30	AWIN	Average / 9 KHZ	60
	Frequency range MHz           0,15 - 0,5           0,5 - 30           0,15 - 0,5	Frequency range MHz         Coupling device (see Table A.7)           0,15 - 0,5         AMN           0,15 - 0,5         AMN	Frequency range MHz       Coupling device (see Table A.7)       Detector type / bandwidth         0,15 - 0,5       AMN       Quasi Peak / 9 kHz         0,15 - 0,5       AMN       Average / 9 kHz

Apply A8.1 and A8.2 across the entire frequency range.

### Table A.9 – Requirements for conducted emissions from the AC mains power ports of Class B equipment

Applicabl	e to					
1. AC mains power ports (3.1.1)						
Table clause	Frequency range MHz	Coupling device (see Table A.7)	Detector type / bandwidth	Class B limits dB(µV)		
A9.1	0,15 - 0,5			66 – 56		
	0,5 – 5	AMN	Quasi Peak / 9 kHz	56		
	5 – 30			60		
A9.2	0,15 – 0,5			56 – 46		
	0,5 – 5	AMN	Average / 9 kHz	46		
	5 – 30			50		

Apply A9.1 and A9.2 across the entire frequency range.

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

#### 3.1.2 TELECOMMUNICATION PORT CONDUCTED EMISSION(VOLTAGE LIMITS)

(Frequency Range 150kHz-30MHz)

Table A.10 – Requirements for asymmetric mode conducted emissions from Class A equipment

#### Applicable to

1. wired network ports (3.1.30) 2. optical fibre ports (3.1.24) with metallic shield or tension members 3. antenna ports (3.1.3)

o. untoin					1	
Table clause	Frequency range MHz	Coupling device (see Table A.7)	Detector type / bandwidth	Class A voltage limits dB(µV)	Class A current limits dB(µA)	
A10.1	0,15 - 0,5	A A N	Quasi Peak / 9 kHz	97 – 87		
	0,5 – 30	AAN	Quasi Peak / 9 kHz	87	- /-	
	0,15 - 0,5	A A NI		84 – 74	n/a	
	0,5 – 30	AAN	Average / 9 kHz	74	-	
A10.2	0,15 – 0,5	CVP	Oversi Darsk ( 0. kilo	97 – 87	53 – 43	
	0,5 – 30	and current probe	Quasi Peak / 9 kHz	87	43	
	0,15 - 0,5	CVP		84 – 74	40 – 30	
	0,5 – 30	and current probe	Average / 9 kHz	74	30	
A10.3	0,15 - 0,5	Current Probe	Quasi Peak / 9 kHz		53 – 43	
	0,5 – 30	Current Prope	Quasi Peak / 9 KHZ		43	
	0,15 - 0,5	Oursent Droke		- n/a	40 – 30	
	0,5 – 30	Current Probe	Average / 9 kHz		30	

The choice of coupling device and measurement procedure is defined in Annex C.

AC mains ports that also have the function of a wired network port shall meet the limits given in Table A.8.

The test shall cover the entire frequency range.

The application of the voltage and/or current limits is dependent on the measurement procedure used. Refer to Table C.1 for applicability.

Testing is required at only one EUT supply voltage and frequency.

Applicable to ports listed above and intended to connect to cables longer than 3 m.

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Table A.12 – Requirements for conducted differenti	ial voltage emis	sions
from Class B equipment	5	

Applicable to 1. TV broadcast receiver tuner ports (3.1.8) with an accessible connector 2. RF modulator output ports (3.1.27)

3. FM broadcast receiver tuner ports (3.1.8) with an accessible connector

	Table	Frequency	Detector type/		Class B lim	its	Applicability
N.	clause	range	bandwidth		dΒ(μV) 75	Ω	
		MHz		Other	Local Oscillator Fundamental	Local Oscillator Harmonics	
	A12.1	30 – 950		46	46	46	See a)
1		950 – 2 150	For frequencies ≤1 GHz	46	54	54	
	A12.2	950 – 2 150	Quasi Peak/	46	54	54	See b)
	A12.3	30 – 300	120 kHz	46	54	50	See c)
		300 – 1 000				52	
	A12.4	30 – 300	For frequencies	46	66	59	See d)
		300 – 1 000	≥1 GHz			52	
	A12.5	30 – 950	Peak/ 1 MHz	46	76	46	See e)
		950 – 2 150			n/a	54	

Television receivers (analogue or digital), video recorders and PC TV broadcast receiver tuner cards working in channels between 30 MHz and 1 GHz, and digital audio receivers. a)

Tuner units (not the LNB) for satellite signal reception. b)

Frequency modulation audio receivers and PC tuner cards. c)

Frequency modulation car radios. d)

Applicable to EUTs with RF modulator output ports (for example DVD equipment, video recorders, camcorders e) and decoders etc.) designed to connect to TV broadcast receiver tuner ports.

Testing is required at only one EUT supply voltage and frequency.

The term 'other' refers to all emissions other than the fundamental and the harmonics of the local oscillator.

The test shall be performed with the device operating at each reception channel.

The test shall cover the entire frequency range.

ceiver
Setting
10 dB
0.15 MHz 🖉 <
30 MHz 💉
S NHz

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#### 3.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

### 3.1.4 TEST SETUP Vertical Reference G round Plane E U T 40cm B0cm H orizon tal Reference G round Plane H orizon tal Reference G round Plane

Note: 1.Support units were connected to second LISN. 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

#### 3.1.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.2 Unless otherwise a special operating condition is specified in the follows during the testing.

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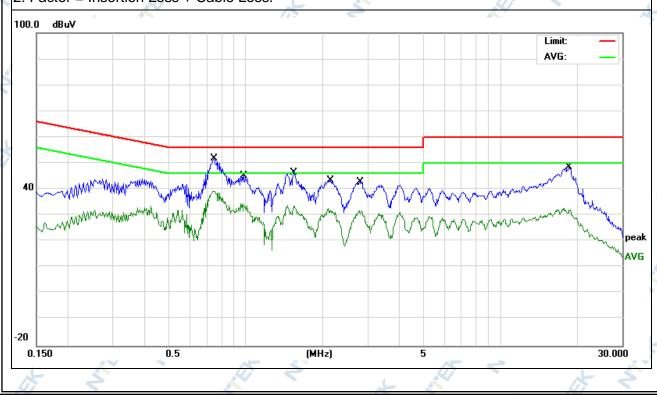
#### 3.1.6 TEST RESULTS

AT .		5	
EUT:	4G Tablet	Model Name:	Tab 12
Temperature:	24.7°C	Relative Humidity:	53%
Pressure:	1010hPa 🖉	Phase:	
Test Voltage:	DC 5V from Adapter 1 AC 230V/50Hz	Test Mode:	Mode 1

			7 7		N.		
6	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
	0.7500	42.11	9.74	51.85	56.00	-4.15	QP
	0.7500	29.47 🦟	9.74	39.21 💰	46.00	-6.79	AVG
	0.9819	35.50	9.75	45.25	56.00	-10.75	QP
	0.9819	24.42	9.75	34.17	46.00	-11.83	AVG
	1.5380	36.69	9.76	46.45	56.00	-9.55	QP
	1.5380	23.89	9.76	33.65 🖉	46.00	-12.35	AVG
	2.1538	33.72	9.75	43.47	56.00	-12.53	QP
	2.1538	22.83	9.75	32.58	46.00	-13.42	AVG
	2.8020	33.17	9.73	42.90	56.00	-13.10	QP
	2.8020	22.11	9.73	31.84	46.00	-14.16	AVG
	18.4659	38.77	9.84	48.61	60.00	-11.39	QP
	18.4659	22.83	9.84	32.67	50.00	<u></u> 17.33	AVG 📈
1			×/ =				

#### Remark:

All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.



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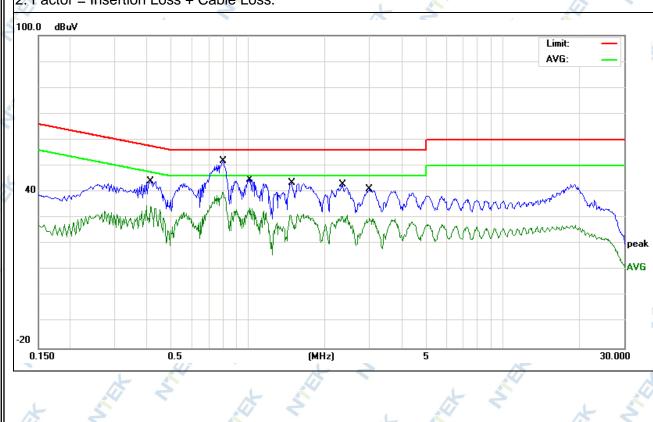
		4	A		X		A A	A C
EUT:	4G Tablet	A A	5	Model Nam	e:	Tab	12	X X
Temperature:	<b>21.1℃</b> / <			Relative Hu	midity:	50%	, D	~ /
Pressure:	1010hPa		4	Phase:		Ν	1	
Test Voltage:	DC 5V from Adap 230V/50Hz	oter 1 AC		Test Mode:		Moc	le 1	the the
	A R			L.	2	V	t S	~ ~
Frequency	Meter Reading	Factor	Emis	sion Level	Limit	s	Margin	Devent
(MHz)	(dBµV)	(dB)	(	dBµV)	(dBµ\	/)	(dB)	Remark
0.3980	31.59 📈	9.71		41.30	57.89	9	-16.59	QP
0.3980	16.50	9.71		26.21	47.89	9	-21.68	AVG
0.7500	38.01	9.66 🏑		47.67	56.00	o 🗸	-8.33	QP
0.7500	22.96	9.66		32.62	46.00	0	-13.38	AVG
1.5300	32.74	9.71		42.45 <	56.00	)	-13.55	QP
1.5300	16.39	9.71		26.10	46.00	21	-19.90	AVG
2.0979	30.43	9.66	S	40.09	56.00	5	-15.91	QP
2.0979	16.03	9.66		25.69	46.00	)	-20.31	AVG
2.7820	29.80	9.71	1	39.51	56.00	2	-16.49	QP
2.7820	15.63	9.71		25.34	46.00		-20.66	AVG
18.7018	34.99	9.74		44.73	60.00		-15.27	QP
18.7018	18.35	9.74		28.09	50.00		-21.91	AVG
2. Factor = Ins	ertion Loss + Cabl	e Loss.			J.		Limit:	±
40 	man Maria Maria	Martin Martin	Kan watar Marina			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	AVG:	how how peak
-20	0.5	÷	(MHz)	X	5		The second secon	30.000

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	E A	At .	AT .	at	A.		E R	A A
EUT:	4G Tablet	S S		Model Nam	e:	Tab	12	2 4
Temperature:	<b>24.7</b> ℃		X	Relative Hu	midity:	53%	0	
Pressure:	1010hPa	t		Phase:		L	*	X
Test Voltage:	DC 5V from Adap 230V/50Hz	oter 2 AC		Test Mode:		Mod	de 1	
	ALL NO.		Ļ	No.			2	
Frequency	Meter Reading	Factor	Emis	sion Level	Limit	s	Margin	Remark
(MHz)	(dBµV) 🛛 🖉	(dB)	(	dBµV) 🧹	(dBµ∖	/)	(dB) 🔗	Remark
0.4139	34.50 🧹	9.64		44.14	57.57	7	-13.43	QP
0.4139	25.16	9.64 🖉	۷۷ ۱۰	34.80	47.57	1	-12.77	AVG
0.7980	42.04	9.74		51.78	56.00	)	-4.22	QP
0.7980	30.08	9.74		39.82 <	46.00	)	-6.18	AVG
1.0180	35.04	9.75	4	44.79	56.00	1 L	-11.21	QP
1.0180	23.96	9.75	1	33.71	46.00	)	-12.29	AVG
1.4859	33.58	9.75		43.33 🧄	56.00	)	-12.67	QP
1.4859	21.73	9.75	X	31.48 🚫	46.00	)	-14.52	AVG
2.3460	33.21	9.74	X	42.95	56.00	)	-13.05	QP
2.3460	21.27	9.74	2	31.01	46.00	)	-14.99	AVG
2.9940	31.32	9.72		41.04	56.00	)	-14.96	QP
2.9940	20.35	9.72		30.07	46.00	)	-15.93	AVG
			X				SI	

Remark: 1. All readings are Quasi-Peak and Average values. 2. Factor = Insertion Loss + Cable Loss.



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## NTEK JLW

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EUT:	4G Tablet	4	Model Name	e: Tab	12	RE
Temperature:	21.1°C	5 7	Relative Hu			~ ~
Pressure:	1010hPa		Phase:	N		
Test Voltage:	DC 5V from Adap 230V/50Hz	iter 2 AC	Test Mode:	Мо	de 1	x A
	t P		LT .	4. 4	x s	~ ~
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	<b></b>
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.4020	31.43 📈	9.71	41.14	57.81	-16.67	QP
0.4020	16.89 🔷	9.71	26.60	47.81	-21.21	AVG
0.5580	31.31	9.71	41.02	56.00	-14.98	QP
0.5580	16.20	9.71	25.91	46.00	-20.09	AVG
0.7860	38.33	9.67	48.00 <	56.00	-8.00	QP
0.7860	22.98	9.67	32.65	46.00	-13.35	AVG
1.0420	32.88	9.75	<b>42.63</b>	56.00	-13.37	QP
1.0420	16.67	9.75	26.42	46.00	-19.58	AVG
1.7059	31.24	9.69	40.93	56.00	-15.07	QP
1.7059	14.52	9.69	24.21	46.00	-21.79	AVG
2.9860	30.44	9.72	40.16	56.00	-15.84	QP
2.9860	13.57	9.72	23.29	46.00	-22.71	AVG
+ 2	ertion Loss + Cabl	C 2033.		A C		+
100.0 dBu¥					AVG:	
40 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	month and		Xuymun Xuyun myr yr y		m	the many pe

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#### 3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT (Below

(Below 1000MHz)

Table A.2 – Requirements for radiated emissions at frequencies up to 1 GHz for Class A equipment

Table clause	Frequency range	М	easurement	Class A limits dB(µV/m)
	MHz	Distance m	Detector type/ bandwidth	OATS/SAC (see Table A.1)
A2.1	30 – 230	10		40
	230 – 1 000	10	Quasi Peak /	47
A2.2	30 – 230	3	120 kHz	50
	230 – 1 000	3		57

Apply only A2.1 or A2.2 across the entire frequency range.

### Table A.4 – Requirements for radiated emissions at frequencies up to 1 GHz for Class B equipment

Table clause	Frequency range	Ме	asurement	Class Β limits dB(μV/m)	
clause	MHz	Distance m	Detector type/ bandwidth	OATS/SAC (see Table A.1)	
A4.1	30 – 230	10		30	
	230 – 1 000	10	Quasi Peak /	37	
A4.2	30 – 230		120 kHz	40	
	230 – 1 000	3		47	

Apply only table clause A4.1 or A4.2 across the entire frequency range.

#### Table A.6 – Requirements for radiated emissions from FM receivers

Table	Frequency range	Ме	asurement	Class B lim	it dB(μV/m)
clause	MHz	Distance	Detector type/	Fundamental	Harmonics
		m	bandwidth	OATS/SAC (see Table A.1)	OATS/SAC (see Table A.1)
A6.1	30 – 230				42
	230 – 300	10		50	42
	300 – 1 000		Quasi peak/		46
A6.2	30 – 230		120 kHz		52
	230 – 300	3		60	52
	300 – 1 000				56

Apply only A.6.1 or A.6.2 across the entire frequency range.

These relaxed limits apply only to emissions at the fundamental and harmonic frequencies of the local oscillator. Signals at all other frequencies shall be compliant with the limits given in Table A.4.

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#### 3.2.2 LIMITS OF RADIATED EMISSION MEASUREMENT

(Above 1000MHz)

### Table A.3 – Requirements for radiated emissions at frequencies above 1 GHzfor Class A equipment

Table clause	Frequency range	Me	easurement	Class A limits dB(µV/m)
	MHz	Distance m	Detector type/ bandwidth	FSOATS (see Table A.1)
A3.1	1 000 – 3 000		Average /	56
	3 000 - 6 000		1 MHz	60
A3.2	1 000 – 3 000	3	Peak /	76
	3 000 - 6 000		1 MHz	80

Apply A3.1 and A3.2 across the frequency range from 1 000 MHz to the highest required frequency of measurement derived from Table 1.

### Table A.5 – Requirements for radiated emissions at frequencies above 1 GHz for Class B equipment

Table clause	Frequency range	Me	asurement	Class B limits dB(µV/m)	
ciuuse	MHz	Distance m	Detector type/ bandwidth	FSOATS (see Table A.1)	
A5.1	1 000 – 3 000		Average/	50	
	3 000 – 6 000		1 MHz	54	
A5.2	1 000 – 3 000	3	Peak/	70	
	3 000 - 6 000		1 MHz	74	

Apply A5.1 and A5.2 across the frequency range from 1 000 MHz to the highest required frequency of measurement derived from Table 1.

#### Notes:

- (1) The limit for radiated test was performed according to as following: CISPR 32.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBµV/m)=20log Emission level (uV/m).

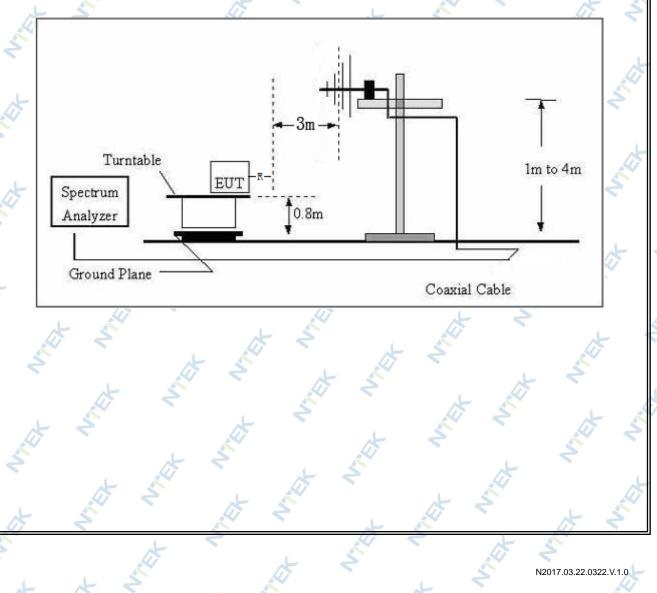
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#### 3.2.3 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

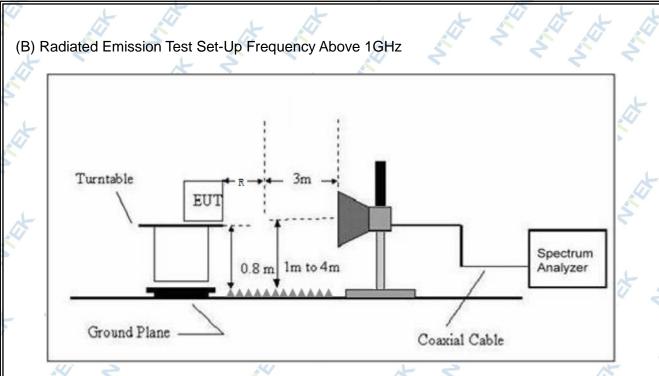
#### 3.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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#### 3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.2** Unless otherwise a special operating condition is specified in the follows during the testing.

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	EUT:	4G Tablet		A	Model Nar	ne:	Tab 1	2	
Т	emperature:	<b>23.9℃</b>	4	~	Relative H	lumidity:	52%		t A
F	Pressure:	1010 hPa	S		Polarizatio	n:	Horiz	ontal 🔨	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Т	est Power:	DC 5V from Ada 230V/50Hz	pter1 AC	*	Test Mode	:	Mode	2	
	5	2307/30112	L 5			1	Ę	6	
1	Frequency	Meter Reading	Factor	Emiss	ion Level	Limit	s	Margin	
	(MHz)	(dBµV)	(dB)	(dE	βµV/m)	(dBµV/	′m)	(dB)	Remar
	96.7749	<b>14.02</b>	16.08	3	0.10	40.0	0	-9.90	QP
	102.7192	14.09	16.51	3	0.60 🛛	40.0	0	-9.40	QP
	143.3261	9.55	18.15	2	7.70	40.0	0	-12.30	QP
	203.5228	17.83	14.97	3	2.80	40.0	0	-7.20	QP
	256.5211	21.63	20.07	4	1.70	47.0	0	-5.30	QP
	480.5276	5.51 📈	24.59	3	0.10 💉	47.0	0	-16.90	QP
	32	manufacture and the second	A water	3 1. M	//////////////////////////////////////	What your w	lunder	a dala and a series of the ser	under deurte
-{	B 30.000 40	50 60 70 80		(MHz)		300	400	500 600 700	0 1000.00
		AT A	t	A.M.	7 2	4	t	A.	T T

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Εl	JT:	4G Tablet			Model Nam	e:	Tab 1	2	K S
Те	mperature:	<b>24.5℃</b> / <	2		Relative Hu	midity:	51%		~ '
٦r	essure:	1010 hPa		5	Polarization	1	Vertic	al	
Ге	est Power:	DC 5V from Adap 230V/50Hz	oter1 AC		Test Mode:		Mode	2	x A
7	S.	* *	•		AT .	2	5	* 5	~ ~
	Frequency	Meter Reading	Factor	Emis	ssion Level	Limi	its 💉	Margin	Remark
	(MHz)	(dBµV)	(dB)	(0	dBµV/m)	(dBµ∖	//m)	(dB)	Remark
	30.2109	5.34	25.08		30.42	40.0	00	-9.58	QP
	33.3278	6.85	22.42		29.27	40.0	00	-10.73	QP
F	208.5801	2.62	15.20		27.82	40.0	00	-12.18	QP 📘
F	675.2078	7.34	28.08		35.42	47.0	00	-11.58	QP
F	821.7103	7.08	29.82		36.90	47.0	00	-10.10	QP
F	948.7608	7.57	30.91		38.48	47.0	00	-8.52	QP
1	Remark: I. Emission L 72.0 dBuV/m	evel= Meter Read	ing+ Facto	or, Mar	gin= Emissio	on Level	- Limit	X	11 at
1	I. Emission L	evel= Meter Read	ling+ Facto	or, Mar	gin= Emissio	on Level	- Limit	Limit: Margin:	
1	I. Emission L	evel= Meter Read	ling+ Facto	or, Mar	rgin= Emissio	on Level	- Limit	Limit:	A STATE
1	I. Emission L							Limit: Margin:	
1	1. Emission L 72.0 dBuV/m 32, 2							Limit: Margin:	6
1	1. Emission L 72.0 dBuV/m 32, 2				rgin= Emissio			Limit: Margin:	6
	1. Emission L 72.0 dBuV/m 32, 2							Limit: Margin:	6

Note: The test modes were carried out for all operation modes. The worst test mode for test data was showed in the report.

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3.2.7 TEST R	ESULTS(1	000-6000MHz	<u>z)</u>	t.	× ~	- St		Y
A.		* ~	-					
EUT:	4G Table	t	5	Model Name:	Tab 12	2		
Temperature:	24.5℃	A	5	Relative Humi	dity: 51%			
Pressure:	1010 hPa	a 🖉		Test Mode:	Mode	1	* ~	
Test Power:	DC 5V fr	om Adapter1 A	AC 230V/50	)Hz 🔨 🤜		4 5	~	
			A	~	L			1
Polar Fre	equency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark	

Polar	Frequency	Reading	Factor Level		Limits	Margin	Remark	
(H/V)	/V) (MHz) (dBµV/m)		(dB) (dBµV/m)		(dBµV/m)	(dB)		
V	1250.000	41.26	-1.60	39.66	70.00	-30.34	peak	
v	1737.500	39.87	0.52	40.39	70.00	-29.61	peak	
V	2200.000	39.61	1.88	41.49	70.00	-28.51	peak	
V	2962.500	39.46	4.83	44.29	70.00	-25.71	peak	
V	4250.000	37.62	6.71	44.33	74.00	-29.67	peak	
V	5562.500	36.02	7.86	43.88	74.00	-30.12	eak	
Н	1187.500	40.68	-2.00	38.68	70.00	-31.32	peak	
t	1625.000	40.35	0.19	40.54	70.00	-29.46	peak	
Ϋ́Η	2600.000	39.16	3.23	42.39	70.00	-27.61	🔷 peak	
Н	2925.000	40.04	4.60	44.64	70.00	-25.36	peak 📈	
хH	3962.500	36.74	6.60	43.34	74.00	-30.66	peak	
Н	4400.000	36.46	6.98	43.44	74.00	-30.56	v peak	

#### Remark:

Emission Level= Meter Reading+ Factor, Margin= Emission Level- Limit

Note: The test modes were carried out for all operation modes. The worst test mode for test data was showed in the report.

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	A.	A L	N. N.	x	A A	4		
EUT:	4G Tablet	~	-	Model Nar	ne:	Tab '		
Temperature:	<b>23.9℃</b>		<u>L</u>	Relative H	umidity:	52%		
Pressure:	1010 hPa		~	Polarizatio	n:	Horiz	contal	+ 4
Test Power:	DC 5V from Ada 230V/50Hz	pter2 AC	-	Test Mode	:	Mode		2
		-			<b></b>			
Frequency	Meter Reading	Factor		sion Level	Limit		Margin	Remark
(MHz)	(dBµV)	(dB)		3µV/m)	(dBµV/	m)	(dB)	V
30.3170	6.07	24.96	3	31.03	40.00		-8.97	QP
137.9028	<b>13.28</b>	18.39	3	1.67	40.00	2	-8.33	QP
160.9088	14.78 🗼	17.57	3	2.35	40.00	C	-7.65	QP
364.2595	12.25	21.89	3	4.14	47.00	)	-12.86	QP
537.5891	11.69	25.60	3	7.29	47.00	)	-9.71	QP
996.4995	7.23	32.16	3	9.39 📈	47.00	)	-7.61	QP
	nen merken han der son	Annewskie		annang / mga and da a	* *	Winne	And the second s	In the second
-8 30.000 40	50 60 70 80	A	(MHz)		300	400	500 600 700	) 1000.000
	50 60 70 80	They want	(MHz)	t Mill	300	400	500 600 700	

## NTEK JL测®

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EUT:	4G Tablet	5	Model Nar	ne: Tab	12	
Femperature:	<b>24.5℃</b>	Relative Humidity				2 7
Pressure:	1010 hPa		Polarizatio			
Test Power:	DC 5V from Adapt 230V/50Hz	ter2 AC	Test Mode		le 1	x X
	t ?		AL AND	2. 1	A S	~ ~
Frequency	Meter Reading	Factor	Emission Level	Limits 🗸	Margin	Domorile
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Remark
30.0000	9.61	25.31	34.92	40.00	-5.08	QP
45.6948	13.85	16.47	30.32	40.00	-9.68	QP
68.8721	15.68	12.48	28.16	40.00	-11.84	QP (
166.6511	11.34	16.71	28.05	40.00	-11.95	QP
711.6734	7.71	28.11	35.82	47.00	-11.18	QP
857.0247	7.66	30.28	37.94	47.00	-9.06	QP
					Limit: Margir	n:
1					5 attubu mittu	S XIMM
32 my langer with the	Aman Mumman	routhermotory	monthern	formationsportion	MM ^{AN}	
	1.11					

Note: The test modes were carried out for all operation modes. The worst test mode for test data was showed in the report.

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	3.2.8 TEST RE	ESULTS(1	000-6000MHz	z)	the second	A.	2	2	A A	A.
1	EUT:	4G Table	et	5	Model Name:	Та	ab 12			
	Temperature:	24.5°C	X	5	Relative Humi	idity: 5	1%			X
	Pressure:	1010 hPa	a 💦		Test Mode:	Μ	lode 1	6	*	1
	Test Power:	DC 5V fr	om Adapter2 A	AC 230V/50	Hz 🔨 <		X	- 5		
		A.C.		A	2		1			1
										le la

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark	
(H/V)	(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
V	1475.000	40.17	-0.32	39.85	70.00	-30.15	peak	
v	2162.500	39.16	1.76	40.92	70.00	-29.08	peak	
V	2975.000	39.83	4.90	44.73	70.00	-25.27	peak	
V	4212.500	37.77	6.65	44.42	74.00	-29.58	peak	
V	4750.000	36.87	6.99	43.86	74.00	-30.14	peak	
V	5600.000	35.66	7.86	43.52	74.00	-30.48	Speak	
Н	1450.000	40.65	-0.42	40.23	70.00	-29.77	peak	
H	2362.500	39.69	2.26	41.95	70.00	-28.05	peak	
ŚН	2975.000	39.25	4.90	44.15	70.00	-25.85	🗟 peak	
Н	3400.000	37.22	5.62	42.84	74.00	-31.16	peak 📈	
ĻН	4237.500	37.50	6.69	44.19	74.00	-29.81	peak	
Н	5475.000	35.60	7.84	43.44	74.00	-30.56	peak	

#### Remark:

Emission Level= Meter Reading+ Factor, Margin= Emission Level- Limit

Note: The test modes were carried out for all operation modes. The worst test mode for test data was showed in the report.

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3.3 HARMONICS CURRENT

3.3.1LIMITS OF HARMONICS CURRENT

Table 1 – Limits for Class A equipment

Harmonic order (n)	Maximum permissible harmonic current (A)
Sodd ha	armonics
3	2.3
5	1.14
	0.77
9	0.4
5 11	0.33
13 🖉 🔨	0.21
15≪n≪39	0.15*(15/n)
Even h	armonics
2 2	1.08
4	0.43
6	0.30
8≤n≤40	0.23*(8/n)

Note: Reference standard of the table above: EN61000-3-2.

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### 3.3.2 TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions.

b. The classification of EUT is according to section 5 of EN 61000-3-2. The EUT is classified as follows:

Class A: Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.

Class B: Portable tools. Portable tools.; Arc welding equipment which is not professional equipment.

Class C: Lighting equipment.

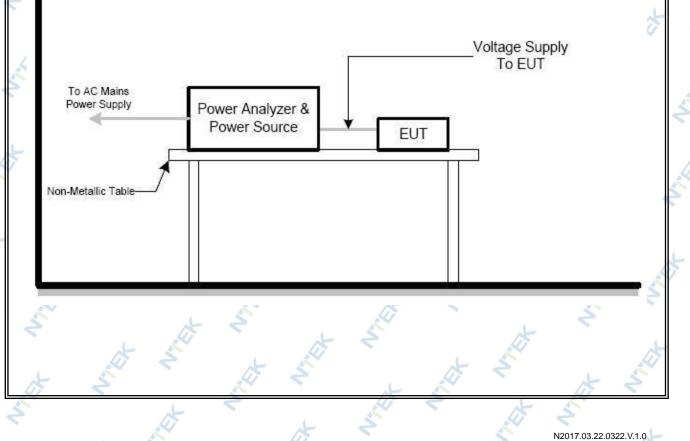
Class D: Equipment having a specified power less than or equal to 600W of the following types: Personal computers and personal computer monitors and television receivers.

c. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

### 3.3.3 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

### 3.3.4 TEST SETUP



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### 3.3.5 TEST RESULTS

A V	t i	~	~ ~		1 2	7
EUT:	4G Tablet	A	Model Name:	Tab 12		
Temperature:	22°C <	L	Relative Humidity:	53%		X
Pressure:	1012hPa 🛛 📈	7	Test duration:	150s	A	AL AND
Classification:	Class A <		Test Power:	N/A 🔶	L	2
Test Mode:	N/A 🖉	x	2	N.	~	

Note: The active input power of the EUT is less than 75 W. No limits apply for equipment with an active input power up to and including 75W.

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### 3.4 VOLTAGE FLUCTUATION AND FLICKERS

#### 3.4.1 LIMITS OF VOLTAGE FLUCTUATION AND FLICKERS

Test items Limits(EN61000-3-3)		Descriptions
$P_{st} \leq 1.0, T_p=10min$		short-term flicker indicator
$P_{lt}$ $\leq 0.65, T_p=2h$		long-term flicker indicator
d _c	≤3.3%	relative steady-state voltage change
d _{max}	≪4%(or 6% _{Note(1)} , 7% _{Note(2)} )	maximum relative voltage change:
d(t)	≤3.3%, more than 500ms	relative voltage change characteristic

#### Note:

- 1. 6 % for equipment which is:
  - a. switched manually, or

b. switched automatically more frequently than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds), or manual restart, after a power supply interruption.

2. 7 % for equipment which is

a. attended whilst in use (for example: hair dryers, vacuum cleaners, kitchen equipment such as mixers, garden equipment such as lawn mowers, portable tools such as electric drills), or b. switched on automatically, or is intended to be switched on manually, no more than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds) or manual restart, after a power supply interruption.

### 3.4.2 TEST PROCEDURE

a. Harmonic Current Test:

Test was performed according to the procedures specified in Sub-clause 6.2 of IEC/EN 61000-3-2 depend on which standard adopted for compliance measurement. b. Fluctuation and Flickers Test:

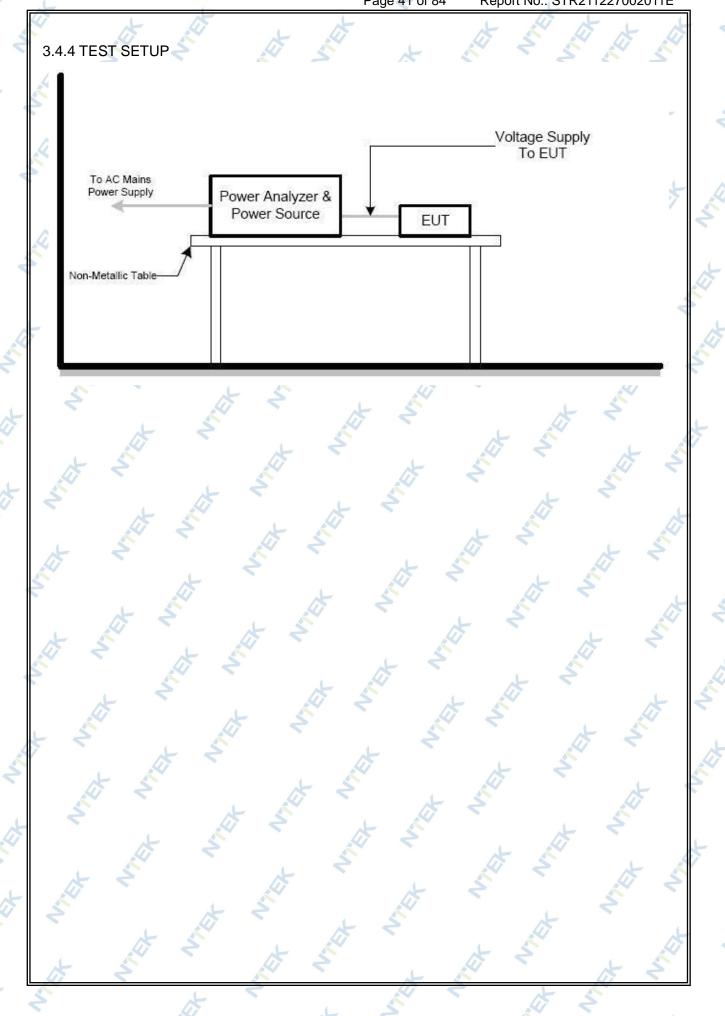
Tests was performed according to the Test Conditions/Assessment of Voltage Fluctuations specified in Clause 6.0/4.0 of IEC/EN 61000-3-3 depend on which standard adopted for compliance measurement.

c. All types of harmonic current and/or voltage fluctuation in this report are assessed by direct measurement using flicker-meter.

### 3.4.3 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

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### 3.4.5 TEST RESULTS

A	+ 2			
EUT:	4G Tablet	A	Model Name:	Tab 12
Temperature:	22.2°C	1 st	Relative Humidity:	52%
Pressure:	1010 hPa		Test Power:	DC 5V from Adapter1 AC 230V/50Hz
Test Mode:	Mode 1	L	5	

EUT values	Limit 🖉	Result
0.028	1.00	PASS
0.028	0.65	PASS
0.000	3.30	PASS
0.191	4.00	PASS
0.000	0.50	PASS
	0.028 0.028 0.000 0.191	0.028         1.00           0.028         0.65           0.000         3.30           0.191         4.00

		4		
EUT:	4G Tablet 🖉	2	Model Name:	Tab 12 🔔 💉
Temperature:	<b>22.2℃</b>		Relative Humidity:	52%
Pressure:	1010 hPa	ti ti	Test Power:	DC 5V from Adapter2 AC 230V/50Hz
Test Mode:	Mode 1	5		5

5	Se la compañía de la compañía	EUT values	Limit	Result
	Pst	0.028	1.00	PASS
	Plt 🔔 💙	0.028	0.65	PASS
	dc [%]	0.000	3.30	PASS
	dmax [%]	0.133	4.00	PASS
	Tmax [s]	0.000	0.50	PASS
-				

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### 4. EMC IMMUNITY TEST

4.1 GENERAL PERFORMANCE CRITERIA

### 4.1.1 PERFORMANCE CRITERIA

According to EN 55035 standard, the general performance criteria as following:

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended.

**Criterion A** The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level

Criterion B specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the **Criterion C** manufacturer's instructions.

Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

According to EN 301 489-3 standard, the general performance criteria as following:

	Criteria	During the test	After the test
F.	W	Operate as intended No loss of function	Operate as intended No loss of function
	A	No unintentional responses	No degradation of performance No loss of stored data or user programmable functions
	B	May show loss of function No unintentional responses	Operate as intended Lost function(s) shall be self-recoverable No degradation of performance No loss of stored data or user programmable functions

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Criteria	During the test	After the test
	Shall operate as intended (see note 1).	Shall operate as intended.
t	Shall be no loss of function.	Shall be no degradation of performance
	Shall be no unintentional	(see note 3).
А	transmissions	Shall be no loss of function.
		Shall be no loss of stored data or user
1 4		programmable functions
	May show loss of function (one or	Functions shall be self-recoverable.
	more).	Shall operate as intended after recovering.
в 🗸	May show degradation of performance	Shall be no degradation of performance
	(see note 2).	(see note 3).
V	Shall be no unintentional	Shall be no loss of stored data or user
-	transmissions.	programmable functions.
	E E	Functions shall be recoverable by the
Ś	At A	operator.
С	May be loss of function (one or more)	Shall operate as intended after recovering.
		Shall be no degradation of performance
t	S II	(see note 3).

minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

NOTE 2: Degradation of performance during the test is understood as a degradation to a level not below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance.

If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

NOTE 3: No degradation of performance after the test is understood as no degradation below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. After the test no change of actual operating data or user retrievable data is allowed. If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

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According to **EN 301 489-19** standard, the general performance criteria as following: If the EUT is of a non specialized nature or the EUT is combined with an ancillary equipment, the test modulation, test arrangements, etc. as required in clause 4 shall apply.

The EUT, for all immunity tests according to the present document, except the spot frequency test of the immunity test with radiated RF electromagnetic fields (see ETSI EN 301 489-1 [1], clause 9.2), shall be assessed for:

- the storage of messages in the memory of the EUT at the start of the test;
- unintentional responses of the EUT during the test;
- the maintenance of the EUT memory assessed at the conclusion of the test;
- the ability to receive and store messages at the conclusion of the test.

For the spot frequency test of the immunity test with radiated RF electromagnetic fields (see ETSI EN 301 489-1 [1], clause 9.2) the EUT shall be assessed by monitoring the accuracy of the call received alert signal.

Performance criteria for Continuous phenomena applied to ROMES and ROGNSS receivers (CR)

For the EUT, excluding spot frequency tests as part of the immunity test with radiated RF electromagnetic fields (see ETSI EN 301 489-1 [1], clause 9.2):

- the general performance criteria set out in clause 6.1;
- during the test no false calls shall occur;

• at the conclusion of the test comprising the series of individual exposures the EUT shall operate as intended with no loss of functions or stored data (messages), as declared by the manufacturer.

For the spot frequency test as part of the immunity test with radiated RF electromagnetic fields (see ETSI EN 301 489-1 [1], clause 9.2) the EUT shall be assessed by monitoring the accuracy of the call received alert signal.

### Performance criteria for Transient phenomena applied to ROMES and ROGNSS receivers (TR)

For the EUT:

- the general performance criteria set out in clause 6.1;
- during the test no false calls shall occur;

 at the conclusion of the test comprising the series of individual exposures, the EUT shall operate as intended with no loss of function and/or stored data (messages), as declared by the manufacturer.

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### Special conditions for EMC immunity tests Table 2: Special conditions for EMC immunity tests

Reference to clauses in ETSI EN 301 489-1 [1]	Special product-related conditions, additional to or modifying the test conditions in ETSI EN 301 489-1 [1], clause 9
9.1 Test configuration; Fest methods and levels for immunity ests	The message memory shall be loaded with recognizable messages. The EUT shall operate in stand-by mode of operation, except for the spot frequency test as part of the immunity test with radiated RF electromagnetic fields (see ETSI EN 301 489-1 [1], clause 9.2) where repetitive calls shall be coupled to the input of the receiver. • for the immunity tests of ancillary equipment, without a separate pass/fail criteria, an EUT coupled to the ancillary equipment shall
0.2.2 Test method;	be used to judge whether the ancillary equipment passes or fails. Spot frequency test:
Radio frequency electromagnetic field	A spot frequency test shall additionally be performed at:
	<ul> <li>80 MHz;</li> <li>104 MHz;</li> <li>136 MHz;</li> <li>165 MHz;</li> <li>200 MHz;</li> <li>260 MHz;</li> <li>330 MHz;</li> <li>430 MHz;</li> <li>560 MHz;</li> <li>715 MHz ± 1 MHz;</li> <li>a spot frequency test shall be performed at 920 MHz ± 1 MHz</li> </ul>

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### PERFORMANCE FOR TT

The performance criteria B shall apply, except for voltage dips of 100 ms and voltage interruptions of 5 000 ms duration, for which performance criteria C shall apply. Tests shall be repeated with the EUT in standby mode (if applicable) to ensure that unintentional transmission does not occur. In systems using acknowledgement signals, it is recognized that an acknowledgement (ACK) or not-acknowledgement (NACK) transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

### PERFORMANCE FOR TR

The performance criteria B shall apply, except for voltage dips of 100 ms and voltage interruptions of 5 000 ms duration for which performance criteria C shall apply. Where the EUT is a transceiver, under no circumstances, shall the transmitter operate unintentionally during the test. In systems using acknowledgement signals, it is recognized that an ACK or NACK transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

### PERFORMANCE FOR CT

The performance criteria A shall apply. Tests shall be repeated with the EUT in standby mode (if applicable) to ensure that unintentional transmission does not occur. In systems using acknowledgement signals, it is recognized that an Acknowledgement (ACK) or Not Acknowledgement (NACK) transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

### PERFORMANCE FOR CR

The performance criteria A shall apply. Where the EUT is a transceiver, under no circumstances, shall the transmitter operate unintentionally during the test. In systems using acknowledgement signals, it is recognized that an ACK or NACK transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

According to EN 301 489-52 standard, the general performance criteria as following:

**GSM and DCS Performance Criteria** Please refer to the standard ETSI EN 301 489-52 V1.2.1 (2021-11) clause 6.1.

CDMA Direct Spread (UTRA and E-UTRA) Performance Criteria Please refer to the standard ETSI EN 301 489-52 V1.2.1 (2021-11) clause 6.2.

### 4.2 GENERAL PERFORMANCE CRITERIA TEST SETUP

The EUT tested system was configured as the statements of **2.2** Unless otherwise a special operating condition is specified in the follows during the testing.

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### 4.3 ESD TESTING

### 4.3.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Required Performance	B 🖟 🗧 🧳
Discharge Voltage:	Air Discharge: 2kV/4kV/8kV
	Contact Discharge: 2kV/4kV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point
	Contact Discharge: min. 200 times in total
Discharge Mode:	A/C Discharge
Discharge Period:	1 second minimum

### 4.3.2 TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

- a. Indirect application of the discharge:
  - Vertical Coupling Plane (VCP):
    - At least 10 single discharges (in the most sensitive polarity) shall be applied to the centre of one vertical edge of the coupling plane. The coupling plane, of dimensions 0,5 m  $\times$  0,5 m, is placed parallel to, and positioned at a distance of 0,1 m from, the EUT.

Discharges shall be applied to the coupling plane, with sufficient different positions such that the four faces of the EUT are completely illuminated. One VCP position is considered to illuminate 0.5 m  $\times$  0.5 m area of the EUT surface.

### Horizontal Coupling Plane (HCP):

Discharge to the HCP shall be made horizontally to the edge of the HCP.

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the centre point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

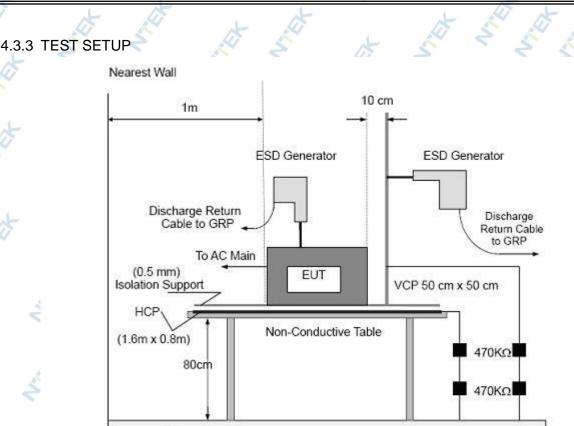
The discharge electrode shall be in contact with the edge of the HCP before the discharge switch is operated

#### b. Direct application of discharges to the EUT

The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied.

For the time interval between successive single discharges an initial value of 1 s is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.

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Ground Reference Plane(GRP) Bonded to PE

#### Note:

### TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940k total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of 1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

### FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.

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4.3.4 TE	ST RF	SULT	s	*		La la			Ļ		* *		A.	A
			1 ×						4	~		~ ~		
EUT:		4G Ta	blet			X	M	lode	el Na	ame:	Tab 12			
Temperat		<b>22℃</b>	2	-	2	~					53%			t
Pressure:		1010 ł	nPa				Te	est I	Pow	/er:	DC 5V 230V/5	from Adapte 0Hz / DC 5\	er1/2 A0 / from I	C PC
Test Mod	e:	Mode	1/2/3/4/5/6/7/8	3/9/1	10			2				7 1		
	4	2			X					1	2			6
L	Mode		Contact D	isch	arg	e (Ir	ndire	ect)						
Test	Test level(kV) Test Location		Test Point	4	2	2	1	6	6	Crite	rion	Resul	t	
Test				+	-	+	-	+	-					
4			Front	Р	Ρ	Р	Ρ			N. N	5		Q	
- 2		-	Rear	Ρ	Ρ	Р	P			7		4	~	
	HCP	A	Left	Ρ	Ρ	Р	Ρ	-		1	A	S		
A	VCP		Right	P	Ρ	Р	Р			1 3			A	
			Front	Ρ	Ρ	Ρ	P			Б		Compli	es	
			Rear	Р	Ρ	Р	Ρ		2			t.	2	
			Left	Ρ	P	Р	Р				A	S	4	
×	5	-	Right	P	P	P	P		1				A	
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TEST RES Mode 5/6/7			0	Ż		F		Y	L)		Λ.				-	L'	- A	7	×.	2 A	
Mode		A	ir I	Dis	scha	arg	е		(	Cor	nta	ct D	Dis	cha	rge	e	BT / WIFI / GSM /				
Test level(kV)	4	2	4	1	8	3	1	5	2	2	4	4	(	6	8	3	WCDMA / LTE	GPS Obser	Crite rion	Result	
Test Location	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	Observati on	vation			
A1	Ρ	Ρ	P	Ρ	Ρ	Ρ		1		-	21						X	7			
🔎 A2 💉	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	A			1							S.		4	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
A3	Ρ	Ρ	Ρ	Ρ	P	P	1.								5			A	N		
C1			SAL						Ρ	Ρ	P	Ρ		n			×			1	
C2							Y		Ρ	P	Ρ	Ρ					TT,TR	TR	В	Complies	N.
C3						1			Ρ	Ρ	Ρ	Ρ		オ			V	6	A	2	
C4		4	Y			•			Ρ	Ρ	Ρ	Ρ	5					5	2		
C5	V	51.							P	Ρ	Ρ	Ρ					入い			di la	
C6						4			P	Ρ	Ρ	Ρ	<	-		1	2		4	S	
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Mode	1/2	/3/4					4	F		2	1				F			L	* *		
the state		Mode		A	\ir I	Dis	cha	arg	е		(	Cor	nta	ct D	Disc	cha	rge	e			
in.		Test level(kV)	2	2	4	1	8	3	1	5	4	2	2	1	6	6	8	3	Crite rion	Result	t
A.	1	Test Location	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	1			N
		A1 📈	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ		Y			As.						1		
		A2	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	17.								メ		V		<u>A</u>
×	2	A3	Ρ	Ρ	Ρ	P	Ρ	Ρ								1				A.	1
1		C1 🖉			V						Ρ	Ρ	Ρ	P					t	No.	
		C2								5	Ρ	P	Р	Ρ			F		в	Complies	L
	0	C3			X				1.		Ρ	Ρ	Ρ	Ρ		172			V		AT .
L.		C4		1							Ρ	Ρ	Ρ	Ρ					4	L.	2
		C5							L		P	Ρ	Ρ	Ρ					4	~	
	5	C6			1			2.			Ρ	Ρ	Ρ	Ρ		Y		V			A

### Note:

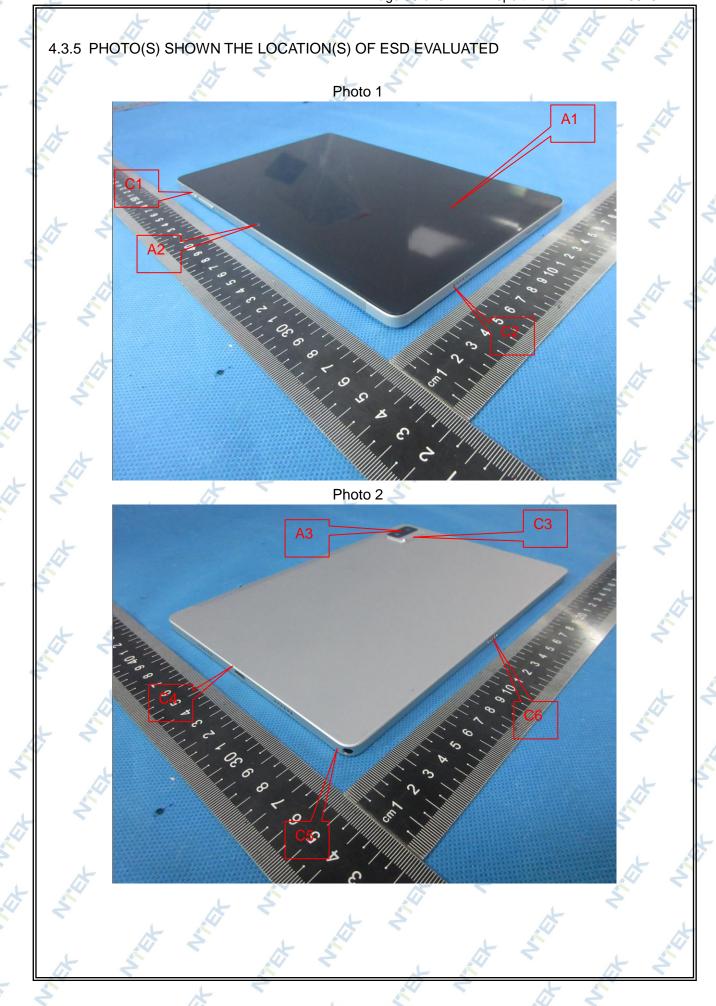
1) +/- denotes the Positive/Negative polarity of the output voltage.

2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.

3) There was not any unintentional transmission in standby mode.

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### 4.4 RS TESTING

### 4.4.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance	
Frequency Range:	According to EN 301 489-1:
	80 MHz - 6000 MHz ;
	According to EN 55035:
	80 MHz to 1000 MHz
	1800 MHz 💉 🔿 🦽 💉
	2600 MHz
	3500 MHz
	5000 MHz
Field Strength:	3 V/m 🥒 🔶
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3 m 🦉 🧳
Antenna Height:	1.5 m
Dwell Time:	at least 3 seconds

### 4.4.2 TEST PROCEDURE

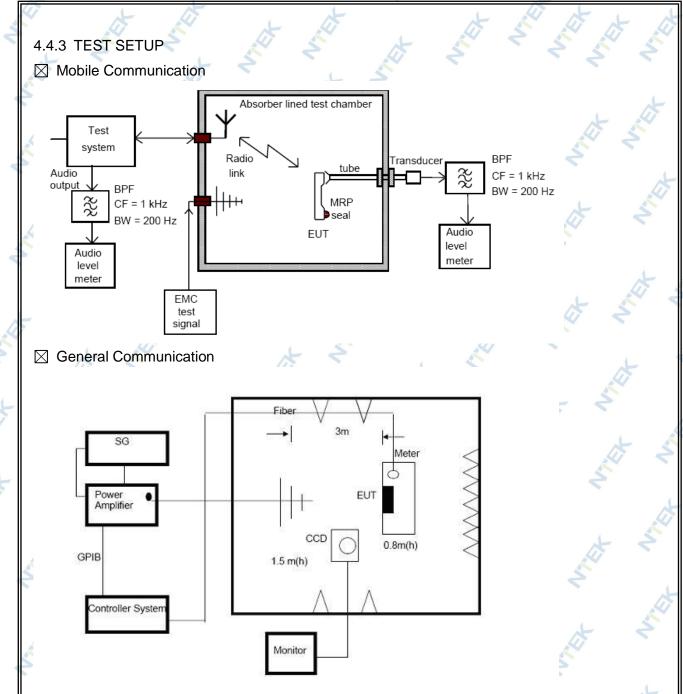
The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber.

The testing distance from antenna to the EUT was 3 meters.

The other condition as following manner:

- a. The field strength level was 3V/m.
- b. The frequency range is swept from 80 MHz to 6000 MHz, 1800 MHz, 2600 MHz, 3500 MHz, 5000 MHz with the signal 80% amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed 1.5 x 10⁻³ decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- c. Sweep Frequency 900 MHz, with the Duty Cycle:1/8 and Modulation: Pulse 217 Hz(if applicable)
- d. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- e. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

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### Note:

For the actual test configuration, please refer to the related Item –EUT Test Photos. TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

### FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

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### 4.4.4 TEST RESULTS

	1×	4 7		
1	EUT:	4G Tablet	Model Name:	Tab 12
	Temperature:	23°C 💎 🗼 💉	Relative Humidity:	57%
	Pressure:	1010 hPa		DC 5V from Adapter1/2 AC 230V/50Hz / DC 5V from PC
-	Test Mode:	Mode 1/2/3/4/5/6/7/8/9/10	5	~ ~

### TEST RESULT

#### LTE FDD B1 / B3 / B7 / B8 / B20 / B40 Data Link

Frequency Range	RF Field	R.F.	Azimuth	Observation	Results
(MHz)	Position	Field Strength	Azimum	Observation	Nesuits
	A.		Front		t N
80~1000	Ĥ/V	3 V/m (rms) AM Modulated	Rear	CT.CR	
1000-6000		1000Hz, 80%	Left		F
A X		100002, 80%	Right		di la

#### Note:

1. The exclusion band has not been tested in 80MHz~6GHz.

For channelized equipment the exclusion band shall be calculated by using the following formulae:

For the lower edge for the exclusion band:

EXband(lower) = BandRX(lower) - nChWRX

and for the upper edge of the exclusion band:

- EXband(upper) = BandRX(upper) + nChWRX
- Where n = number of channel widths required for exclusion band.
- 2. In the data transfer mode, the performance criteria shall be that the throughput shall be  $\ge$  95 % of the maximum throughput of the reference measurement channel

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GSM 900 / 1800 / W	/CDMA 210	00 / 900 Uplink a	and Downlin	ik 🖉 🥈		4 5
Frequency Range	RF Field	R.F.	Azimuth	Observation	Perform.	Results
(MHz)	Position	Field Strength	Azimum	Observation	Criteria	Results
80~1000 1000-6000	н∕∨	3 V/m (rms) AM Modulated 1000Hz, 80%	Front Rear Left Right	CT,CR	A A	P AVE

#### Note:

The exclusion band has not been tested in 80MHz~6GHz.
 For channelized equipment the exclusion band shall be calculated by using the following formulae:
 For the lower edge for the exclusion band:

For the lower edge for the exclusion band: EXband(lower) = BandRX(lower) - nChWRXand for the upper edge of the exclusion band: EXband(upper) = BandRX(upper) + nChWRXWhere n = number of channel widths required for exclusion band.

2: "A" stand for: the uplink/downlink speech output level shall be at least 35 dB less than the previously recorded reference levels, when measured through an audio band pass filter of width 200 Hz, centred on 1 kHz (audio breakthrough check). The RXQUAL of the downlink is not exceeding the value of three, measured during each individual exposure in the test sequence. Or During and after the test, the apparatus continue to operate as intended. No degradation of performance or loss of function is allowed below a permissible performance level.

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		4
<b>GPRS / EGPRS / HS</b>	Unlink and	Downlink
	opinik and	DOWININ

Frequency	RF Field	R.F.	Azimuth	Observation	Perform.	Results					
Range (MHz)	Position	Field Strength	/ Zimath	Observation	Criteria	results					
LA	н/у-	3 V/m (rms)	Front	CT,CR	14	¥	4				
80~1000		AM Modulated	Rear		7 At						
1000-6000		1000Hz, 80%	🗶 Left <		R	V					
A	1	1000112, 80 /8	Right	t	1	3	-				

#### Note:

The exclusion band has not been tested in 80MHz~6GHz.
 For channelized equipment the exclusion band shall be calculated by using the following formulae:

For the lower edge for the exclusion band:

EXband(lower) = BandRX(lower) – nChWRX

and for the upper edge of the exclusion band:

EXband(upper) = BandRX(upper) + nChWRX

Where n = number of channel widths required for exclusion band.

2. During the test, the Maximum Bit Error Ratio was less than  $1 \times 10^{-3}$ .

3. During the test, the Maximum Block Error Ratio was less than 1×10⁻².

### BT / WIFI link

	Frequency	RF Field	R.F.	Azimuth	Observation	Perform.	n. Results	
	Range (MHz)	Position	Field Strength	Azimuth	Observation	Criteria	Results	
100		A		Front 📈		X	2	
	80~1000	H/V	3 V/m (rms)	🗸 Rear	CT CB	S.	P	
	1000-6000		1000Hz, 80%	Left	CT,CR	A	×	2
-		A	1000112, 0070	Right 🔟	SN		L.	

### Note:

- 1. The exclusion band has not been tested in 80MHz~6GHz.
- The exclusion band for immunity testing of equipment operating in the 2,4 GHz band shall be: lower limit of exclusion band = lowest allocated band edge frequency -120 MHz, i.e. 2 280 MHz; • upper limit of exclusion band = highest allocated band edge frequency +120 MHz, i.e. 2 603,5MHz.

2. "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions.

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	AT I	K	A A		AT S		
(	GPS Receiver Mod	e Link	2 5	X	8 5	5 3	1 5
	Frequency Range	RF Field	R.F.	Azimuth	Observation	Perform.	Results
	(MHz)	Position	Field Strength	Azimum	Observation	Criteria	Results
	LA		N.	Front		t	E
	80~1000	H/V	53 V/m (rms)	Rear	2 2	+ 2	~
	1000-6000		AM Modulated	4	CR 🔀	Α	Р
			1000Hz, 80%	Left	+ 7		L
			た	Right		A	5
	80,104,136,	* *		Front <			
	165,200,260, 💉		3 V/m (rms)	Rear	AT IN		
	330,430,560,	H/V	Unmodulated		CR	Α	P
	715 MHz ± 1,	A	200Hz, 100%	Left 🔬		A	
	920 MHz ± 1	1		Right	t	14 Alexandre	
L					AT I		J

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions.

### TF Playing /REC /Data Transmission / FM Mode

Fr	equency Range	RF Field	R.F.	Azimuth	Perform.	Results	N
	(MHz)	Position	Field Strength	Azimum	Criteria	Results	2
K.	80~1000	~		Front		L L	
	1000~6000	*	3 V/m (rms)	ų –	4		
	1800 了		AM Modulated	Rear	St.	Р	6
1	2600	H/V	2	Left	Α 🤝	1 5	
4	3500	* 5	1000Hz, 80%				
	5000 💰		1	Right	t t		
ſ					SI	4	

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions. There was not any unintentional transmission in standby mode.

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4.5 EFT/BURST TESTING

### 4.5.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-4
Required Performance	В
Test Voltage:	Power Line: 1 kV
	DC/Signal/ wired network Line: 0.5 KV
Polarity:	Positive & Negative
Impulse Frequency:	For xDSL wired network ports: 100 kHz
	For DC/AC ports: 5 kHz
Impulse Wave shape :	5/50 ns
Burst Duration:	15 ms
Burst Period:	300 ms 🦟 🍣 💦 🤾
Test Duration:	Not less than 1 min.

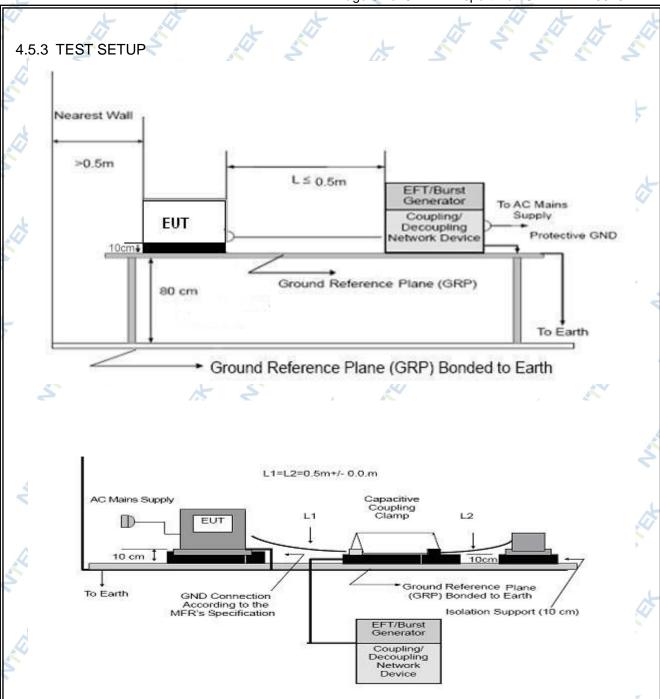
### 4.5.2 TEST PROCEDURE

The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min.

The other condition as following manner:

- a. The length of power cord between the coupling device and the EUT should not exceed 1 meter.
- b. Both positive and negative polarity discharges were applied.
- c. The duration time of each test sequential was 1 minute
- d. For the actual test configuration, please refer to the related Item -EUT Test Photos.

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#### Note:

#### TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table (0.8m high) standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system. A minimum distance of 0.5m was provided between the EUT and the walls of the laboratory or any other metallic structure. FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-4 and its cables, were isolated from the Ground Reference Plane by an insulating support that is 0.1-meter thick. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system.

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	454	TEST RE	รมเ	TS			1		K	V	de la	<b>A A</b>		A R
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			40 7	- la la	5						As del Nemer	Tab 40		
	EUT:		4G T		t				4		/lodel Name:	Tab 12		
	Temp	perature:	<b>22°</b> ℃							r	Relative Humidity:			
	Pressure: 1010 hPa						est Power:	230V/50	DC 5V from Adapter1/2 AC 230V/50Hz					
	Test Mode: Mode 1/3/4/5/6/7/8/9/10						1		5		n z			
	Test Mode.   Mode 1/3/4/3/0/178/9/10							2		A				
	TES		. <			1		5			t.		1	
		e 5/6/7/8/9				Q							4	~ ~
		e 510/110/3		-	-		1.41	10						
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	Cou	pling Line	0	.5		l	2	2	4		GSM / WCDMA / LTE	Observ	Criteri	Result
			<b>—</b>								Observation	ation	on	
			+	-	+	-	+	-	+	-		_		
		Ļ	P	Ρ	Ρ	Ρ				2	~	4	~	Complies
		<b>N</b>	Р	Ρ	Ρ	Ρ		5		5		5		Complies
		PE			~		Z				LT -			N. N
-	AC	L+N	Р	Р	P	P				0			A	Complies
	line		F-			-				Ś		to		oomplies
		L+PE									TT,TR	TR	e B	A S
	A	N+PE					1				LT I	~		
	2	L+N+PE			X					L	~		オ	
	D	C Line 🏑		5				~	X	7		. 2		
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-	K						N.M.				L.			
	XX				5					L	S		X	
			*	Ś			4		A	U		L &		5
	+	E C					1		~		4	かん		N to the
L	47	7				-								4
-	2			4							S. C.	-	5 3	

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	4	to the	7		t	J.				6		A A D
	Mode 1/3/4	~ ~			Ũ	5		X		K	1	
					Т	est lev	∕el (k∖	/)				
	Coupli	ng Line	0	.5		1	2	2	2	1	Criterion	Result
			+	-	+	-	+	-	+	-		
	2	L	P	Р	Р	Ρ		N.S.			L.	Complies
		N	Р	Р	Р	Р					1	Complies
		PE		X	V							t S
	AC line	L+N	P	Р	Р	Р		Y	V			Complies
		L+PE				オ	5				В	
	4	N+PE			3					4.	1	L.
	~	L+N+PE					1		N			the state
	DC	Line 🗶	V				S				* *	
	Signa	al Line			4		1.			~		al-
II.						-	-	-				117

#### Note:

1)There was not any unintentional transmission in standby mode

- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) There was not any unintentional transmission in standby mode.

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### 4.6 SURGE TESTING

### 4.6.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-5
Required Performance	В
Wave-Shape:	Combination Wave
	1.2 / 50 us Open Circuit Voltage
<u></u>	8 / 20 us Short Circuit Current
Test Voltage:	Power Line:0.5 kV, 1 kV, 2 kV
Surge Input / Output:	L-N, L-PE, N-PE
Generator Source:	2 ohm between networks
Impedance:	12 ohm between network and ground
Polarity:	Positive / Negative
Phase Angle:	0 / 90 / 180 / 270
Pulse Repetition Rate:	1 time / min. (maximum)
Number of Tests:	5 positive and 5 negative at selected points

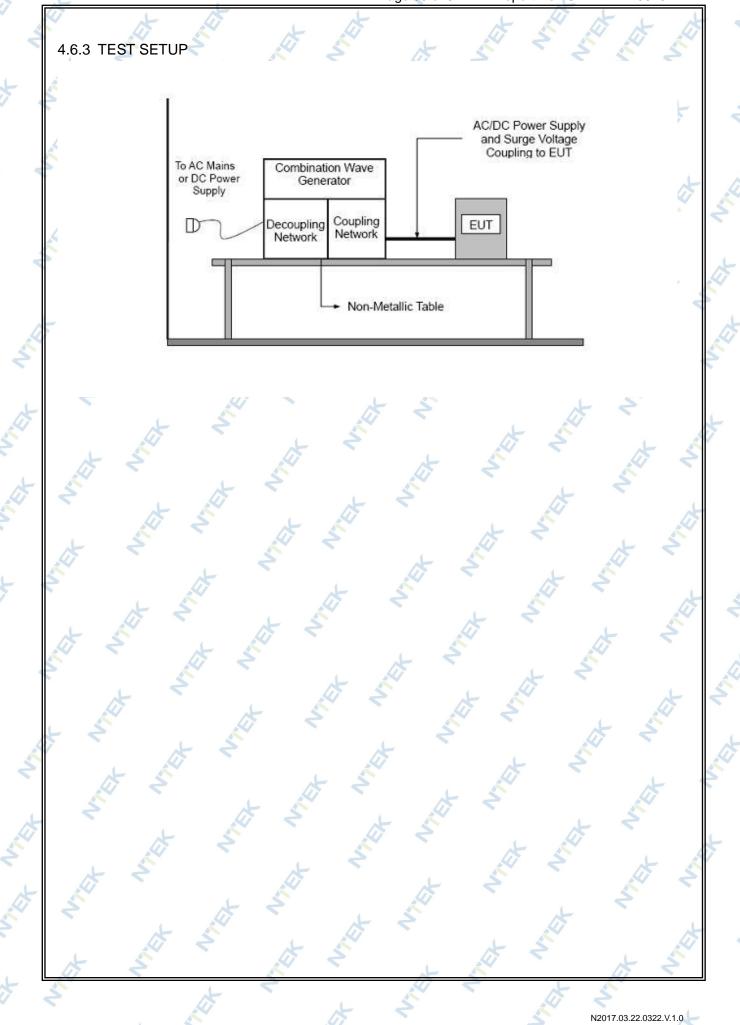
### 4.6.2 TEST PROCEDURE

- a. For EUT power supply:
- The surge is to be applied to the EUT power supply terminals via the capacitive coupling network. Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave. The power cord between the EUT and the coupling/decoupling networks shall be 2meters in length (or shorter).
- b. For test applied to unshielded unsymmetrically operated interconnection lines of EUT: The surge is applied to the lines via the capacitive coupling. The coupling /decoupling networks shall not influence the specified functional conditions of the EUT. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).
- c. For test applied to unshielded symmetrically operated interconnection /telecommunication lines of EUT:

The surge is applied to the lines via gas arrestors coupling. Test levels below the ignition point of the coupling arrestor cannot be specified. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).

d. For the actual test configuration, please refer to the related Item -EUT Test Photos.

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4.6.4		RESUL	rs	4		WE	ţ	An	AL A		LEL.	With	WE	ALL AN
EUT:		4G Ta	able	ť					5	N	Model Name:	Tab 1	2	
Tempe	erature:	<b>22</b> ℃	2			X		2		F	Relative Hum			A
Pressure: 1010 hPa						Test Power: DC 5V from Adapter1/2 AC 230V/50Hz								
Test Mode: Mode 1/3/4/5/6/7/8/9/10						5		4 4						
TEST RESULT Mode 5/6/7/8/9/10							t the		Li					
					Te	est le	evel				BT / WIFI / GSM /			
Co	oupling L	.ine	0.5	δkV	11	κV	2k	V	4k	V	WCDMA / LTE	GPS Observati	Criterion	Result
			+	-	+	-	+	-	+	-	Observati on	on		
	x	0°	Ρ	Ρ	Ρ	Ρ	A		Λ.		4	L.		.L
1	L-N	90°	Р	Р	Р	Р					A.	V		Campling
4		180°	Р	Р	Р	Ρ				オ			x	Complies
		270°	Р	Р	Р	Р			2			×	N. S.	
4	1					X	4				t	X	7	AL C
AC line	L-PE	t	X	F		ľ			X	-	TT,TR	TR	B	1
						5		1				x ×		
5					ľ						at-	N. C.		
			5						_		E C		みい	
	N-PE	1						2			7	5		4
x	L.				L.	6.	A						A	·
	DC Line	;	5	V	5						t i		K	
	ignal Lir	A	~					~						1
	A				*		V					5 8	1	A Start
		d	ć .	Ś							L 7		LT.	2
	A	ALE A					2					A.	2	4
7				6	*		A CONTRACTOR				A	~	<i>x</i>	ALL NO.
		d.		2					2	L)		×	The second secon	

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R	10de 1/3/4	t 3				1ª					4	No and a second	to the for	5
						2	Test	level						
	Coupling Line			0.5	0.5 kV		kV	2	2 kV		٢V	Criterion	Result	,
				+	-	+	-	+	-	+	-			
4	5 Š		0°	Р	Ρ	Ρ	Р			2	V	t		
		L-N	90°	Ρ	Р	Р	Ρ	N				AL C	Complies	L
	4	- 2	180°	Ρ	P	Р	Ρ			X			Complies	5
	+ 5		270°	Р	Ρ	Ρ	Ρ	L	1			the second se	5 2	
11		L.	1			1						たち		
	AC line	L-PE					2			t	1	в	x	
	L'		A		V				12					1
10.		-	5				4	¢.					14	
	A	AT .			t		5				Q	1		
	4	N-PE			4		·		A		1.		AT I	
	2	-	<u> </u>	V			A	-				x	No.	
		A	2			1	N N				A			
	1	DC Line		1	1.	V					Y	r	A	Ś
	S	ignal Line		1				4		4	1.			•
	5		X					5				1		

#### Note:

- 1) There was not any unintentional transmission in standby mode
- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) There was not any unintentional transmission in standby mode.

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### 4.7 INJECTION CURRENT TESTING

### 4.7.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-6
Required Performance	A
Frequency Range:	0.15 MHz - 80 MHz
Field Strength:	3 Vr.m.s.
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Dwell Time:	at least 3 seconds

### 4.7.2 TEST PROCEDURE

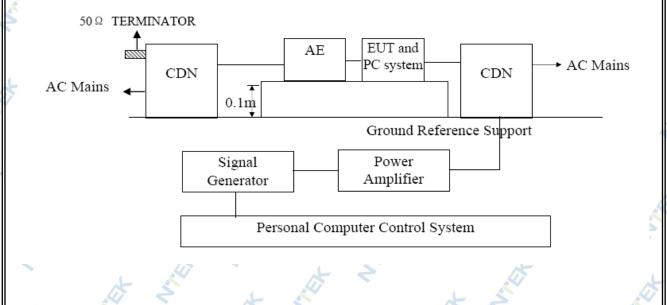
The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min.

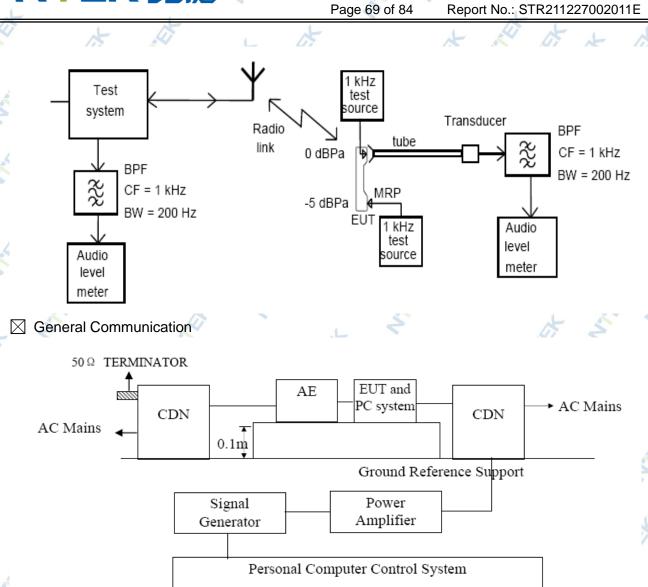
The other condition as following manner:

- a. The field strength level was 3V.
- b. The frequency range is swept from 150 KHz to 80 MHz, with the signal 80% amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed  $1.5 \times 10^{-3}$  decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- d. For the actual test configuration, please refer to the related Item -EUT Test Photos.

### 4.7.3 TEST SETUP

Mobile Communication





For the actual test configuration, please refer to the related Item –EUT Test Photos. NOTE:

### FLOOR-STANDING EQUIPMENT

The equipment to be tested is placed on an insulating support of 0.1 meters height above a ground reference plane. All relevant cables shall be provided with the appropriate coupling and decoupling devices at a distance between 0.1 meters and 0.3 meters from the projected geometry of the EUT on the ground reference plane.

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### 4.7.4 TEST RESULTS

	A.	* ~			
1	EUT:	4G Tablet	K	Model Name:	Tab 12
	Temperature:	22℃ <	5	Relative Humidity:	53%
	Pressure:	1010 hPa		Test Power:	DC 5V from Adapter1/2 AC 230V/50Hz
	Test Mode:	Mode1/3/4/5/6/7/8/9/10	A	5	K K

### TEST RESULT LTE FDD B1 / B3 / B7 / B8 / B20 / B40 Link

Test Ports (Mode)	Freq. Range (MHz)	Field Strength	Observation	Results
Input / Output	0.1580	A AND	CT, CR	P
AC. Power Port		3V(rms)		i V
Input / Output	0.15 80	AM Modulated	N/A 🗧	N/A
DC. Power Port	0.10 00	1000Hz, 80%		
Signal Line	0.15 80	LT .	N/A	N/A

Note: In the data transfer mode, the performance criteria shall be that the throughput shall be  $\geq$  95 % of the maximum throughput of the reference measurement channel

### GSM 900 / 1800 / WCDMA 2100 / 900 Uplink and Downlink

Test Ports (Mode)	Freq. Range (MHz)	Field Strength	Observation	Perform. Criteria	Results
Input / Output AC. Power Port	0.1580	3V(rms)	CT, CR	A	Р
Input / Output DC. Power Port	0.15 80	AM Modulated 1000Hz, 80%	N/A	N/A	N/A
Signal Line	0.15 80	A E	N/A	N/A	N/A

EUT is used for this calibration, the output of the audio source was adjusted to achieve a reference Level equivalent to a SPL of –5 dB Pa at 1 kHz at the Mouth Reference Point (MRP), the reading of the audio level meter, which was connected to the output of the communication tester, was recorded as a reference level. During the test, the uplink speech output level was monitored, it was confirmed to be at least 35 dB less than the previously- recorded reference level.

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GPRS / EGPRS	/ HSDPA / HSUPA	A Uplink and Downlink	

Test Ports (Mode)	Freq. Range (MHz)	Field Strength	Observation	Perform. Criteria	Results
Input / Output AC. Power Port	0.1580	3V(rms)	CT, CR	A	Ч Руд
Input / Output DC. Power Port	0.15 80	AM Modulated 1000Hz, 80%	N/A	N/A S	N/A
Signal Line	0.15 80	N	N/A	N/A	N/A 🔨

Note: During the test, the Maximum Bit Error Ratio was less than  $1 \times 10^{-3}$ . During the test, the Maximum Block Error Ratio was less than  $1 \times 10^{-2}$ .

### BT / WIFI link

Test Ports (Mode)	Freq. Range (MHz)	Field Strength	Observation	Perform. Criteria	Results
Input / Output AC. Power Port	0.1580	3V(rms)	CT, CR	А	P
Input / Output DC. Power Port	0.15 80	AM Modulated 1000Hz, 80%	N/A	N/A	N/A
Signal Line	0.15 80	,,	N/A	N/A	N/A
				4	

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions.

### **GPS Receiver Mode Link**

_					
	Test Ports (Mode)	Freq. Range (MHz)	Field Strength	Perform. Criteria	Results
	Input / Output AC. Power Port	0.15 80	3V(rms)	A	P
	Input / Output DC. Power Port	0.15 80	AM Modulated 1000Hz, 80%	N/A	N/A
	Signal Line	0.15 80	A.	N/A	N/A

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions.

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	REC / TF Playing / FM	Mode 🖉	St At	2 2	
	Test Ports	Freq. Range	Field Strength	Perform.	Results
	(Mode)	(MHz)	Tield Otterigti	Criteria	Tresuits
•	Input / Output	0.1580			Þ.
1	AC. Power Port	0.1300	3V(rms) AM Modulated 1000Hz, 80%	5 2	4 5
	Input / Output	0.15 80		N/A	N/A
	DC. Power Port				
	Signal Line	0.15 80 🔷	,	N/A	N/A
	K N				N.

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions.

Note:

- 1)There was not any unintentional transmission in standby mode
- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) There was not any unintentional transmission in standby mode.

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#### 4.8 VOLTAGE INTERRUPTION/DIPS TESTING

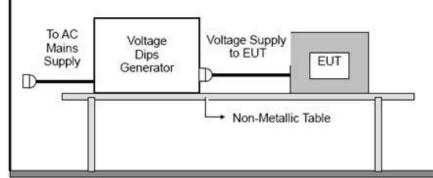
#### 4.8.1 TEST SPECIFICATION

IEC/EN 61000-4-11
100% reduction, 0.5 Cycle
100% reduction, 1.0 Cycle
30% reduction, 25 Cycles
30% reduction, 0.5 Cycle
100% reduction, 250 Cycles
Minimum three test events in sequence
Minimum ten seconds
0°/45°/90°/135°/180°/225°/270°/315°/360°
3 times

#### 4.8.2 TEST PROCEDURE

The EUT shall be tested for each selected combination of test levels and duration with a sequence of three dips/interruptions with intervals of 10 s minimum (between each test event). Each representative mode of operation shall be tested. Abrupt changes in supply voltage shall occur at zero crossings of the voltage waveform.

#### 4.8.3 TEST SETUP



For the actual test configuration, please refer to the related Item -EUT Test Photos.

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#### 4.8.4 TEST RESULTS

	A.	4 7			
1	EUT:	4G Tablet	A	Model Name:	Tab 12
	Temperature:	22℃ <	~	Relative Humidity:	53%
	Pressure:	1010 hPa		Test Power:	DC 5V from Adapter1/2 AC 230V/50Hz
	Test Mode:	Mode 1/3/4/5/6/7/8/9/10	4	5	です

#### TEST RESULT

Mode	5/6/7/8/9/10

		BT / WIFI /			
Voltage	Duration	GSM /	GPS	Perform	Results
Reduction	(ms)	WCDMA / LTE	Observation	Criteria	ILESUIIS
		Observation			
Voltage dip: 0%	10	TT, TR	TR 👉	В	Р
Voltage dip: 0%	20 🖉	TT, TR	TR TR	В	P
Voltage dip: 70%	10	TT, TR	TR	C	P
Voltage dip: 70%	500	TT, TR	TR 🗼	C	Р
Voltage interruptions: 0%	5000	TT, TR	TR	C	P
	~	N. N			5

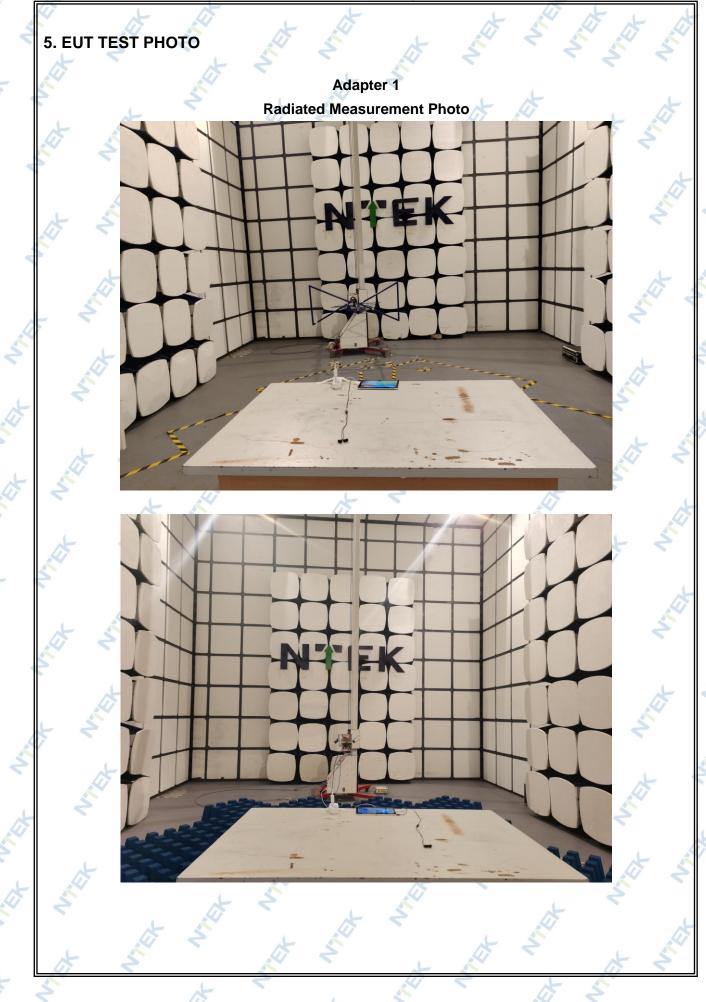
2		
Mode	1/3/4	L

wou				A	
	Voltage	Duration	Perform	Doculto	
	Reduction	(ms)	Criteria	Results	
	Voltage dip: 0%	10	V B	P	
	Voltage dip: 0%	20	в	Р	
x	Voltage dip: 70%	10	¢ c	× P ×	
	Voltage dip: 70%	500 🔶	← c	Р	
	Voltage interruptions: 0%	5000	L C	Р	
				117	

#### Note:

- 1) There was not any unintentional transmission in standby mode
- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) There was not any unintentional transmission in standby mode.

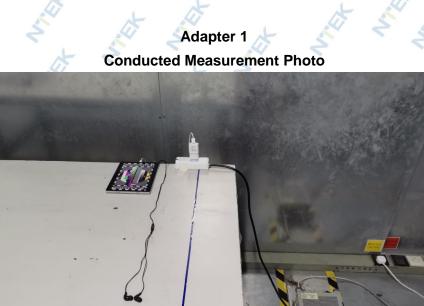
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测试中



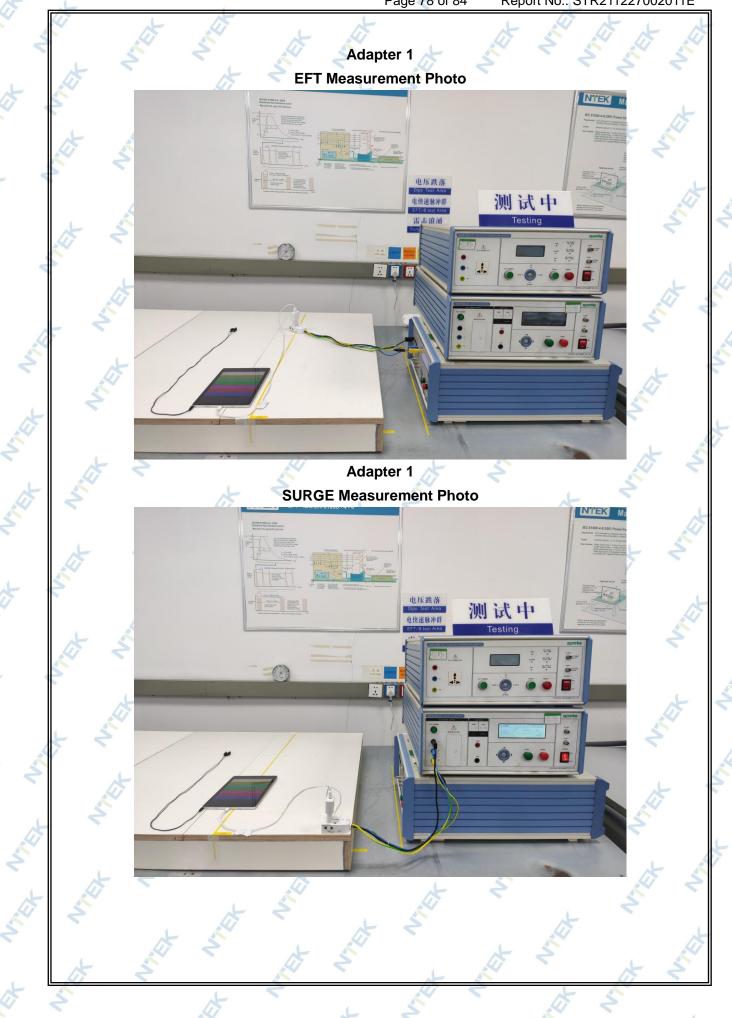
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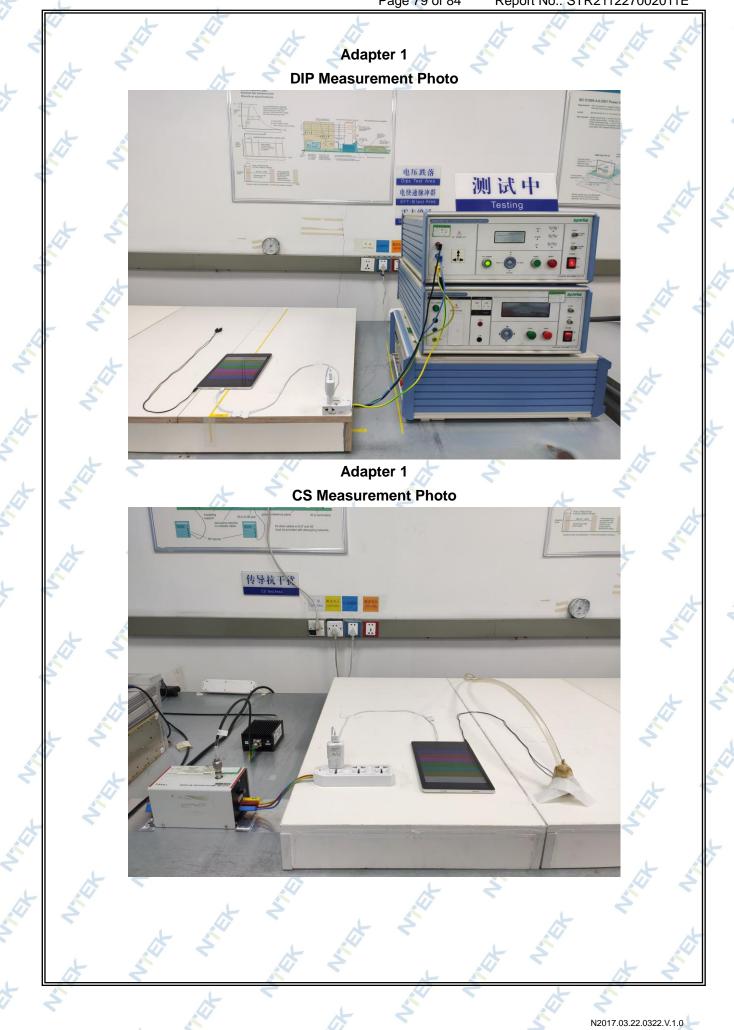
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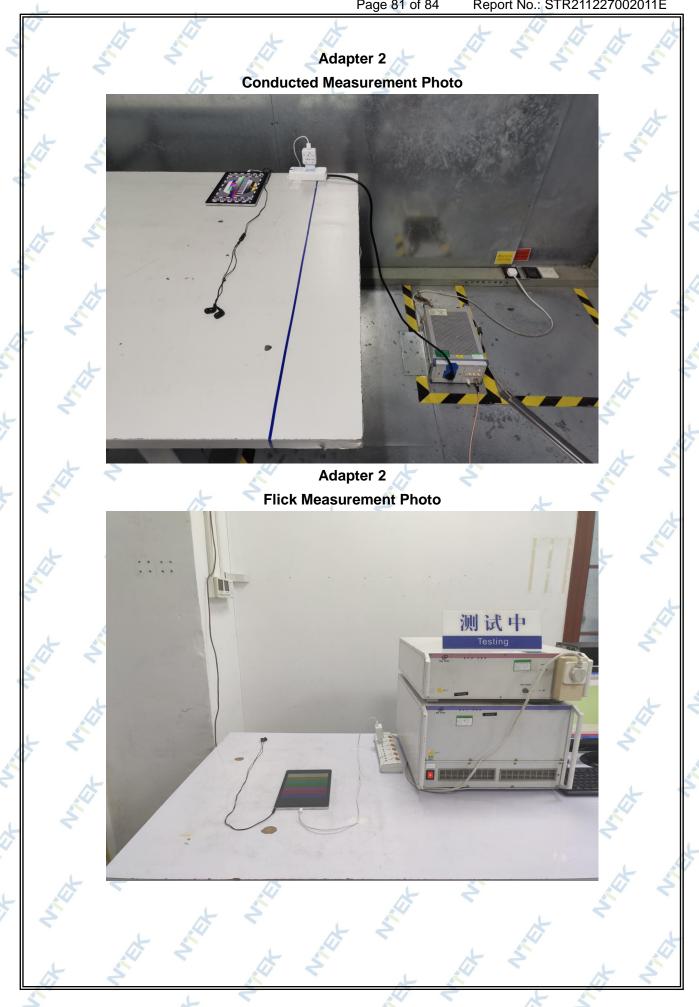
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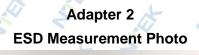
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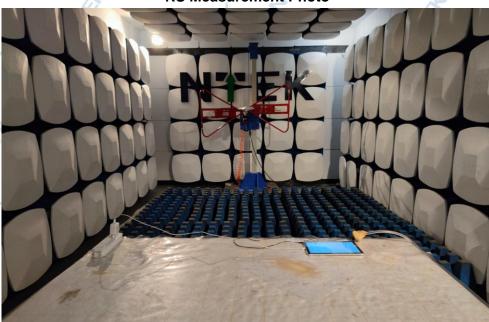


NITEK ESD - IEC/EN 61000-4-2

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Adapter 2 RS Measurement Photo



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