



CTC Laboratories, Inc.

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TEST REPORT

Report No. : **CTC20210068E08**

Applicant : **XonTel Technology Trd. Co. W.L.L**

Address..... : Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait

Manufacturer..... : XonTel Technology Trd. Co. W.L.L

Address..... : Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait

Product Name : **IP Phone**

Trade Mark : XonTel

Model/Type reference..... : XT-40G

Listed Model(s) : N/A

Standard : **EN 62311: 2008**

Date of receipt of test sample... : Mar. 10, 2020

Date of testing..... : Mar. 11, 2020 to Mar. 24, 2020

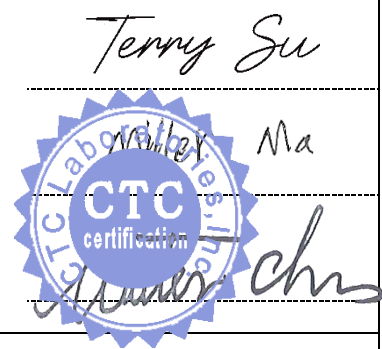
Date of issue..... : Jan. 20, 2021

Result..... : **PASS**

Compiled by:
(Printed name+signature) Terry Su

Supervised by:
(Printed name+signature) Miller Ma

Approved by:
(Printed name+signature) Walter Chen



Testing Laboratory Name : **CTC Laboratories, Inc.**

Address..... : 2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

[EN62311:2008](#) - Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz) Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0Hz to 300GHz) (Official Journal L 197 of 30 July 1999).

1.2. Report version

Revised No.	Date of issue	Description
01	Jan. 20, 2021	Original

Note: Update applicant, manufacturer, trademark and model name, This report is based on the report of CTC20200268E14.





1.3. Test Facility

Address of the report laboratory

CTC Laboratories, Inc.

Add: 2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5365

CTC Laboratories, Inc. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation. Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.

1.4. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.



2. GENERAL INFORMATION

2.1. Client Information

Applicant:	XonTel Technology Trd. Co. W.L.L
Address:	Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait
Manufacturer:	XonTel Technology Trd. Co. W.L.L
Address:	Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait

2.2. General Description of EUT

Product Name:	IP Phone
Trade Mark:	XonTel
Model/Type reference:	XT-40G
Listed Model(s):	N/A
Power supply:	5Vdc/2A from AC/DC Adapter Supplied from POE
Adapter 1 Model:	F12W8-050200SPAV Input: AC100-240V 50/60Hz 0.3A Output:5V/2A
Adapter 2 Model:	F12W8-050200SPAB Input: AC100-240V 50/60Hz 0.3A Output:5V/2A
Hardware version:	N/A
Software version:	N/A
Antenna type:	FPC Antenna
Antenna gain:	2.2dBi for 2.4G 2.3dBi for 5G
BT	
Supported type:	Bluetooth 4.2+BLE
Modulation:	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
2.4G WIFI	
Supported type:	<input checked="" type="checkbox"/> 802.11b <input checked="" type="checkbox"/> 802.11g <input checked="" type="checkbox"/> 802.11n(HT20) <input checked="" type="checkbox"/> 802.11n(HT40)
Modulation:	DSSS for 802.11b OFDM for 802.11g/802.11n(H20)/802.11n(H40)
Operation frequency:	2412MHz~2472MHz for 802.11b/802.11g/802.11n(HT20) 2422MHz~2462MHz for 802.11n(HT40)



Channel number:	13 for 802.11b/802.11g/802.11n(HT20) 9 for 802.11n(HT40)
Channel separation:	5MHz
5G WIFI	
Supported type:	<input checked="" type="checkbox"/> 802.11a <input checked="" type="checkbox"/> 802.11n <input checked="" type="checkbox"/> 802.11ac
Support bandwidth:	802.11a <input checked="" type="checkbox"/> 20MHz
	802.11n <input checked="" type="checkbox"/> 20MHz <input checked="" type="checkbox"/> 40MHz
	802.11ac <input checked="" type="checkbox"/> 20MHz <input checked="" type="checkbox"/> 40MHz <input checked="" type="checkbox"/> 80MHz <input type="checkbox"/> 160MHz
Modulation:	<input checked="" type="checkbox"/> BPSK <input checked="" type="checkbox"/> QPSK <input checked="" type="checkbox"/> 16QAM <input checked="" type="checkbox"/> 64QAM
Operation frequency:	<input checked="" type="checkbox"/> Lower Band: 5150MHz-5250MHz <input checked="" type="checkbox"/> Higher Band: 5725MHz-5850MHz





3. TEST ITEM AND RESULTS

3.1. RF Exposure

Limit

E-field strength: 61V/m

Reference levels for electric, magnetic and electromagnetic fields (0Hz to 300GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density Seq(W/m2)
0-1Hz	--	3.2×104	4×104	--
1-8Hz	10000	3.2×104/f2	4×104/f2	--
8-25Hz	10000	4000/f	5000/f	--
0.025-0.8KHz	250/f	4/f	5/f	--
0.8-3KHz	250/f	5	6.25	--
3-150KHz	87	5	6.25	--
0.15-1MHz	87	0.73/f	0.92/f	--
1-10MHz	87/f ^{1/2}	0.73/f	0.92/f	--
10-400MHz	28	0.073	0.092	2
400-2000MHz	1.375f ^{1/2}	0.0037f ^{1/2}	0.0046f ^{1/2}	f/200
2-300GHz	61	0.16	0.20	10

Notes:

1. As indicated in the frequency range column.
2. For frequencies between 100kHz and 10GHz, S_{eq} , E^2 , H^2 and B^2 are to be averaged over any six-minute period.
3. For frequencies exceeding 10GHz, S_{eq} , E^2 , H^2 and B^2 are to be averaged over any $68/f^{1.05}$ -minute period (.in GHz).
4. No E-field value is provided for frequencies <1Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 20kV/m. Spark discharges causing stress or annoyance should be avoided.

MPE Calculation Method

Equation from page 26 of EN 62311, Edition 2008

$$E = \eta_0 H = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

Where:

E: E-field strength (V/m)

P: power input to antenna (Watt)

G: is the antenna gain relative to an isotropic antenna;

θ, ϕ : are elevation and azimuth angles to point of investigation;

r: is the distance from observation point to the antenna;

η_0 : is the characteristic impedance of free space.

**TEST RESULTS**

Type	EIRP (dBm)	r (m)	E-field strength (V/m)	Limit (V/m)@ E-field strength	Result
GFSK	11.39	0.2	4.1403	61	Pass
$\pi/4$ -DQPSK	10.29	0.2	3.6478	61	
8-DPSK	10.15	0.2	3.5895	61	
GFSK (BLE)	8.94	0.2	3.1227	61	

Type	EIRP (dBm)	r (m)	E-field strength (V/m)	Limit (V/m)@ E-field strength	Result
802.11b	17.01	0.2	7.9073	61	Pass
802.11g	15.68	0.2	6.7847	61	
802.11n(HT20)	14.49	0.2	5.9160	61	
802.11n(HT40)	14.13	0.2	5.6758	61	

5150MHz~5250MHz Type	EIRP (dBm)	r (m)	E-field strength (V/m)	Limit (V/m)@ E-field strength	Result
802.11a	12.93	0.2	5.0007	61	Pass
802.11n(HT20)	12.66	0.2	4.8476	61	
802.11n(HT40)	12.26	0.2	4.6295	61	
802.11ac	12.64	0.2	4.8365	61	
802.11ac(HT40)	11.96	0.2	4.4723	61	
802.11ac(HT80)	11.31	0.2	4.1498	61	

5725MHz~5850MHz Type	EIRP (dBm)	r (m)	E-field strength (V/m)	Limit (V/m)@ E-field strength	Result
802.11a	12.10	0.2	4.5450	61	Pass
802.11n(HT20)	12.04	0.2	4.5137	61	
802.11n(HT40)	11.38	0.2	4.1834	61	
802.11ac	10.42	0.2	3.7457	61	
802.11ac(HT40)	9.31	0.2	3.2963	61	
802.11ac(HT80)	8.87	0.2	3.1335	61	

Note:

r is the distance from observation point to the antenna which is declared by the applicant.

*****THE END*****