



47 CFR PART 15 SUBPART B

TEST REPORT

of

CDMA 1X DIGITAL MOBILE PHONE

Model Name: OT-203C
Brand Name: ALCATEL
Report No.: SH10030040E01
FCC ID: R5C203C

prepared for

TCL Mobile Communication Co., Ltd

No.23 Zone, Zhongkai High-Technology Development Zone, Huizhou, Guangdong, P.R.China



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Bluetooth®

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Authorized Test Lab

LAB CODE 20081223-00

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1. TEST CERTIFICATION

Equipment under Test: CDMA 1X DIGITAL MOBILE PHONE

Brand Name: ALCATEL

Model Name: OT-203C

FCC ID: R5C203C

Applicant: TCL Mobile Communication Co., Ltd.

No.23 Zone, Zhongkai High-Technology Development Zone,
Huizhou, Guangdong, P.R.China

Manufacturer: TCL Mobile Communication Co., Ltd.

No.23 Zone, Zhongkai High-Technology Development Zone,
Huizhou, Guangdong, P.R.China

Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): Mar. 20 ,2010 –Mar.30 , 2010

Test Result: PASS

* We Hereby Certify That:

The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Huang yunlong Dated: 2010.3.30
Huang yunlong 2010.3.30

Reviewed by: Zhang Jun Dated: 2010.3.30
Zhang Jun 2010.3.30

Approved by: Wei Bei Dated: 2010.3.30
Wei Bei 2010.3.30



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type.....: CDMA 1X DIGITAL MOBILE PHONE
Model Name: OT-203C
Serial No.....: (n.a., marked #1 by test site)
Hardware Version: CS08-H-V1.1
Software Version: AL203CMT01
Modulation Type.....: QPSK
Ancillary Equipment 1: Battery
 Brand name: ALCATEL
 Mode Name.: CAB2060000C1
 Capacitance: 670mAh
 Rated voltage: 3.7V
 Charge limited: 4.2V
 Manufacturer: SHENZHEN BAK BATTERY CO.,LTD
 BAK INDUSTRIAL ZONE, KUICHONG
 ST.,
 LONGGANG DISTRICT, SHENZHEN,
 GUANGDONG 518119,
 P.R.CHINA
Ancillary Equipment 2: AC Adapter
 Model Name: WIN350mA5V00-00
 Brand Name: ALCATEL
 Rated Input: 100—240V AC 0.15A
 Rated Output: 5.0V DC 350mA
 Manufacturer: HUIZHOU BYD ELECTRONIC CO., LTD.

Note 1: A communication link between the EUT and a System Simulator (SS) is established at the start of the test, and maintained during the all test in this report.

Note 2: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.107	Conducted Emission	PASS
2	15.109	Radiated Emission	PASS

2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Laboratories (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	20 - 25
Relative Humidity (%):	40 - 60
Atmospheric Pressure (kPa):	96

3. TEST CONDITIONS SETTING

3.1 CDMA Test Mode

1. During the measurement, the CDMA radio is working. The test modes of the EUT are showed as below:

- (1) Traffic operating CDMA 1xRTT EUT+Charger mode

The EUT configuration of the emission tests is EUT + charger

A communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA Cellular mid ARFCN (384) and maximum output power (All up bit).

- (2) Traffic operating CDMA 1xRTT EUT+PC mode

The EUT configuration of the emission tests is EUT + Mini USB+PC

A communication link was established between the EUT and a System Simulator (SS); data was transmitted between EUT and System Simulator (SS), and maintained during the measurement. the EUT operated at CDMA Cellular mid ARFCN (384) and maximum output power (All up bit)

- (3) Idle operating mode

The EUT configuration of the emission tests is EUT + PC

The EUT was registered to the base station simulator but no call was set up.

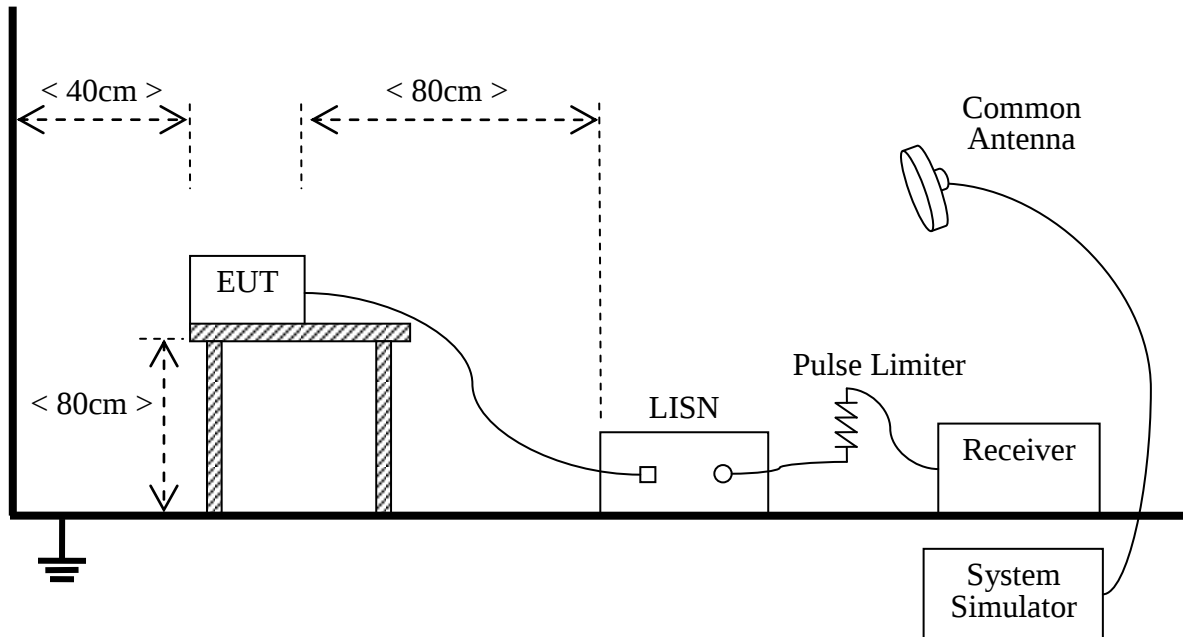
Note: All test modes are performed, only the worst cases are recorded in this report.

Note: In the Radiated Emission, the worst cases are operated at CDMA 1xRTT EUT+Charger

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



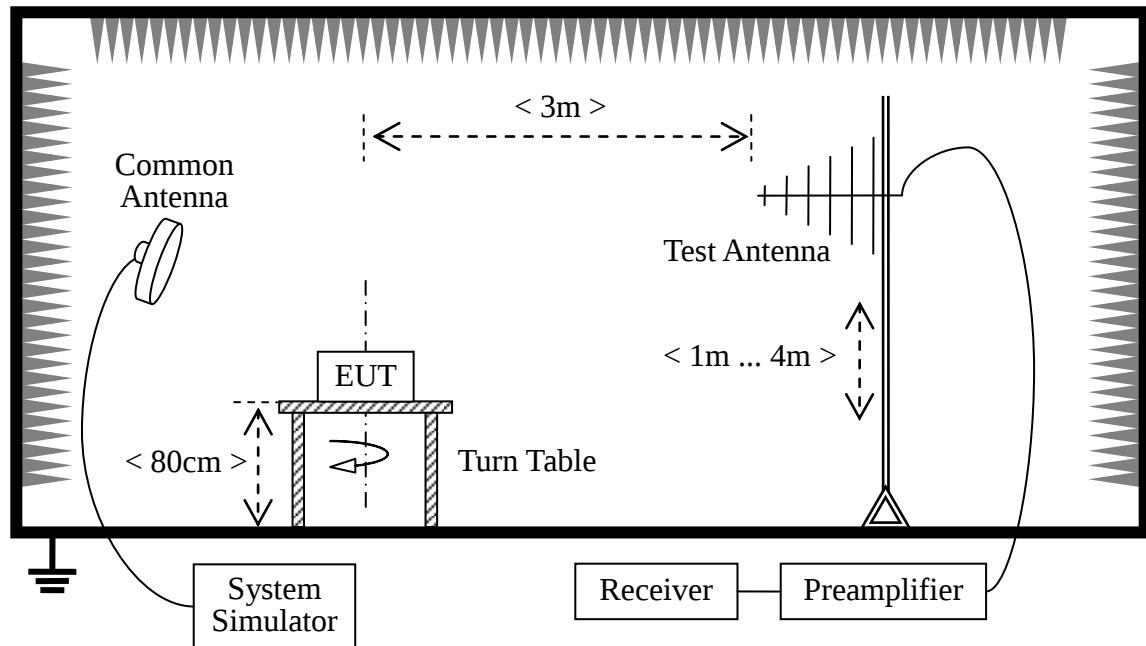
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides 50Ω/50 μH of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Rohde&Schwarz	ESCI3	100666	2009.11	1year
LISN	Rohde&Schwarz	ENV216	812744	2009.11	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2009.12.	1year
Personal Computer	Lenovo	(n.a.)	(n.a.)	(n.a.)	(n.a.)

3.2.2 Radiated Emission

C. Test Setup:



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. The Common Antenna is used for the call between the EUT and the System Simulator (SS).

D. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Rohde&Schwarz	ESCI3	100666	2009.11	1year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2009.11	1year
Test Antenna - Bi-Log	Rohde&Schwarz	HL562	100385	2009.11	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2009.12	1year
Personal Computer	Lenovo	(n.a.)	(n.a.)	(n.a.)	(n.a.)

4. 47 CFR Part 15B Requirements

4.1 Conducted Emission

4.1.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

NOTE:

- a) The limit subjects to the Class B digital device.
- b) The lower limit shall apply at the band edges.
- c) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

4.1.2 Test Description

See section 2.3.1 of this report.

4.1.3 Test Result

The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

A. Test Verdict Recorded for Suspicious Points:

EUT+Charger Mode(Plot A1/B1) :

Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.202238	46.4	1000.000	9.000	N	9.6	17.0	63.4	PASS
4.213331	37.2	1000.000	9.000	N	9.9	18.8	56.0	PASS
4.627500	39.4	1000.000	9.000	N	9.9	16.6	56.0	PASS
4.646156	39.5	1000.000	9.000	N	9.9	16.5	56.0	PASS
4.687200	39.1	1000.000	9.000	N	9.9	16.9	56.0	PASS
4.724512	38.4	1000.000	9.000	N	9.9	17.6	56.0	PASS
4.534219	43.2	1000.000	9.000	L1	9.9	12.8	56.0	PASS
4.571531	43.3	1000.000	9.000	L1	9.9	12.7	56.0	PASS
4.612575	42.9	1000.000	9.000	L1	9.9	13.1	56.0	PASS
4.687200	43.0	1000.000	9.000	L1	9.9	13.0	56.0	PASS
4.888688	42.5	1000.000	9.000	L1	9.9	13.5	56.0	PASS
4.967044	43.2	1000.000	9.000	L1	9.9	12.8	56.0	PASS

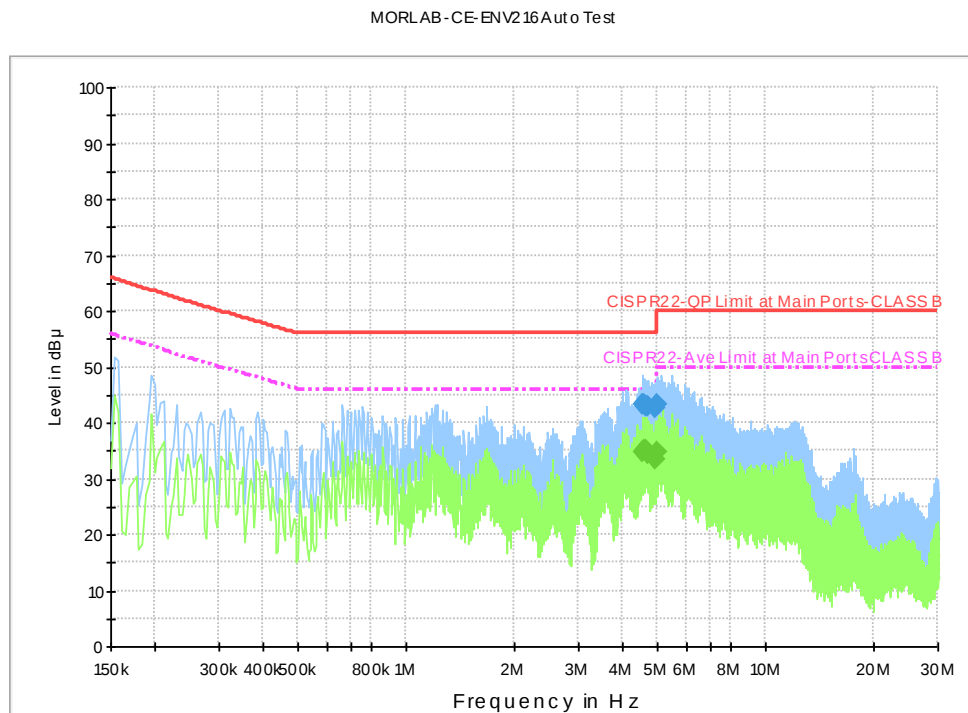
Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.239550	30.5	1000.000	9.000	N	9.6	21.4	51.9	PASS
4.586456	31.2	1000.000	9.000	N	9.9	14.8	46.0	PASS
4.605112	31.1	1000.000	9.000	N	9.9	14.9	46.0	PASS
4.646156	31.3	1000.000	9.000	N	9.9	14.7	46.0	PASS
4.664812	31.0	1000.000	9.000	N	9.9	15.0	46.0	PASS
4.724512	29.4	1000.000	9.000	N	9.9	16.6	46.0	PASS
4.530488	34.7	1000.000	9.000	L1	9.9	11.3	46.0	PASS
4.571531	35.2	1000.000	9.000	L1	9.9	10.8	46.0	PASS
4.649888	34.9	1000.000	9.000	L1	9.9	11.1	46.0	PASS
4.690931	34.5	1000.000	9.000	L1	9.9	11.5	46.0	PASS
4.929731	33.6	1000.000	9.000	L1	9.9	12.4	46.0	PASS
4.967044	34.6	1000.000	9.000	L1	9.9	11.4	46.0	PASS

EUT+Mini USB Mode (Plot A2/B2) :

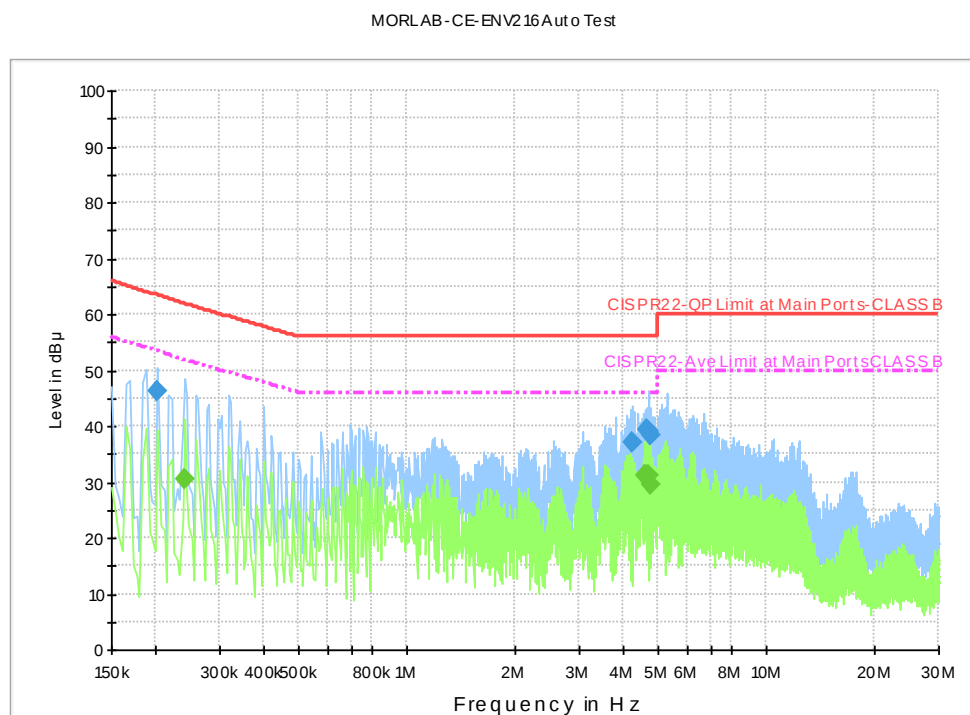
Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
4.470788	37.4	1000.000	9.000	N	9.9	18.6	56.0	PASS
4.526756	38.8	1000.000	9.000	N	9.9	17.2	56.0	PASS
4.590188	38.8	1000.000	9.000	N	9.9	17.2	56.0	PASS
4.668544	38.7	1000.000	9.000	N	9.9	17.3	56.0	PASS
4.746900	38.4	1000.000	9.000	N	9.9	17.6	56.0	PASS
4.787944	36.4	1000.000	9.000	N	9.9	19.6	56.0	PASS
4.478250	42.6	1000.000	9.000	L1	9.9	13.4	56.0	PASS
4.672275	42.6	1000.000	9.000	L1	9.9	13.4	56.0	PASS
4.873762	42.7	1000.000	9.000	L1	9.9	13.3	56.0	PASS
4.911075	43.3	1000.000	9.000	L1	9.9	12.7	56.0	PASS
4.948388	43.6	1000.000	9.000	L1	9.9	12.4	56.0	PASS
4.989431	43.6	1000.000	9.000	L1	9.9	12.4	56.0	PASS

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
4.508100	30.2	1000.000	9.000	N	9.9	15.8	46.0	PASS
4.526756	30.7	1000.000	9.000	N	9.9	15.3	46.0	PASS
4.586456	30.8	1000.000	9.000	N	9.9	15.2	46.0	PASS
4.608844	30.8	1000.000	9.000	N	9.9	15.2	46.0	PASS
4.646156	30.1	1000.000	9.000	N	9.9	15.9	46.0	PASS
4.668544	30.0	1000.000	9.000	N	9.9	16.0	46.0	PASS
4.515562	35.0	1000.000	9.000	L1	9.9	11.0	46.0	PASS
4.593919	35.3	1000.000	9.000	L1	9.9	10.7	46.0	PASS
4.832719	32.5	1000.000	9.000	L1	9.9	13.5	46.0	PASS
4.911075	33.5	1000.000	9.000	L1	9.9	12.5	46.0	PASS
4.948388	34.8	1000.000	9.000	L1	9.9	11.2	46.0	PASS
4.989431	35.1	1000.000	9.000	L1	9.9	10.9	46.0	PASS

B. Test Plot:

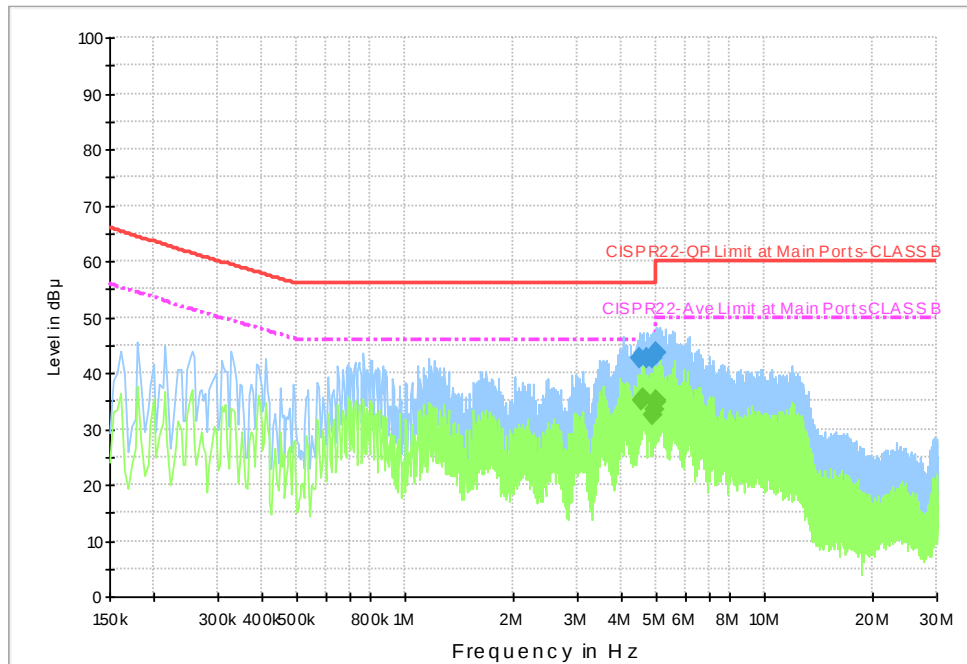


(Plot A1:L Phase)



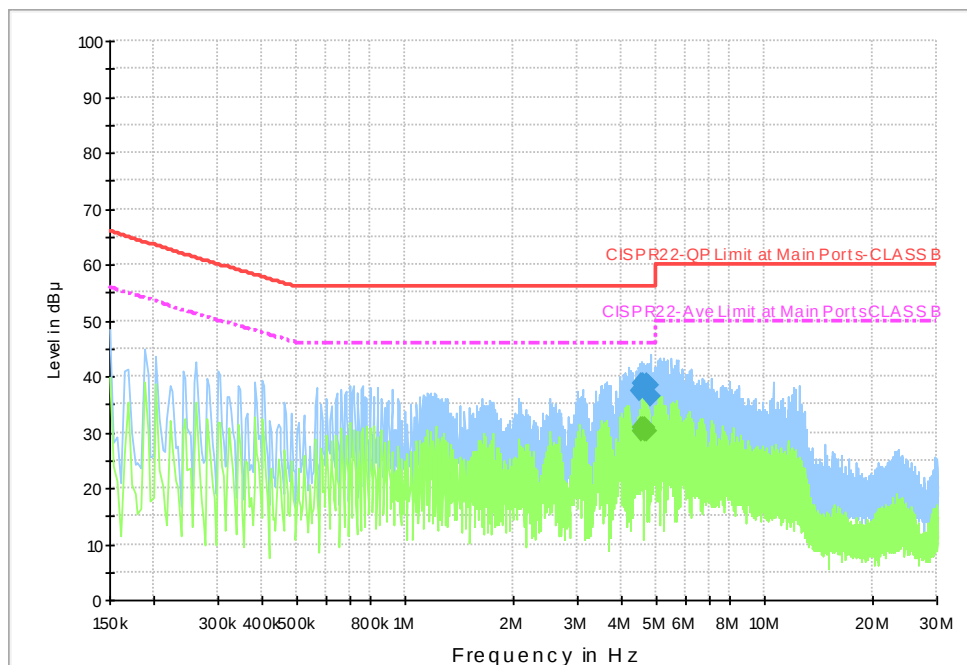
(Plot B1:N Phase)

MORLAB-CE-ENV216Auto Test



(Plot A2:L Phase)

MORLAB-CE-ENV216Auto Test



(Plot B2:N Phase)

4.2 Radiated Emission

4.2.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

- a) Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$.
- b) In the emission tables above, the tighter limit applies at the band edges.

4.2.2 Test Description

See section 2.3.2 of this report.

4.2.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

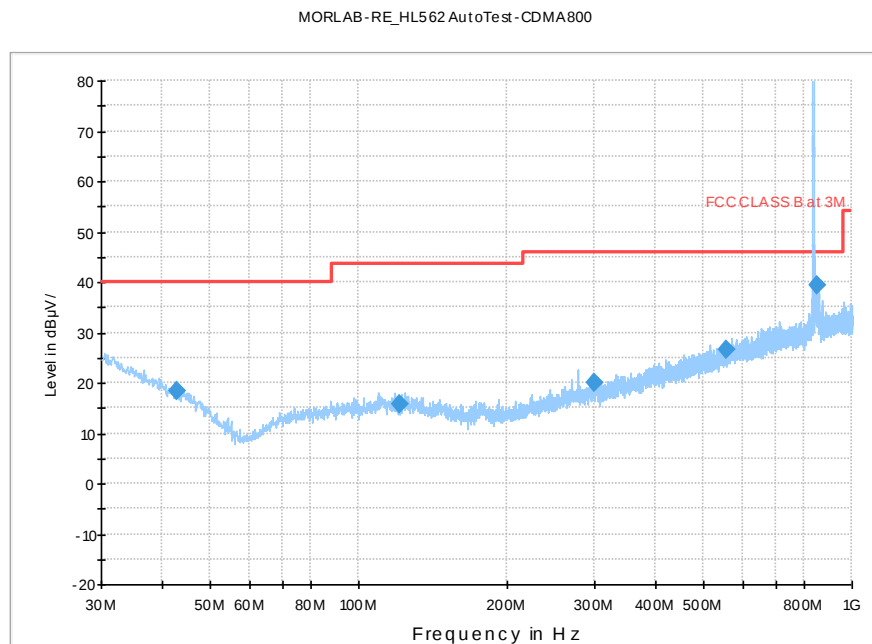
A. Test Verdict Recorded for Suspicious Points:

EUT+Charger Mode(Plot A/B)

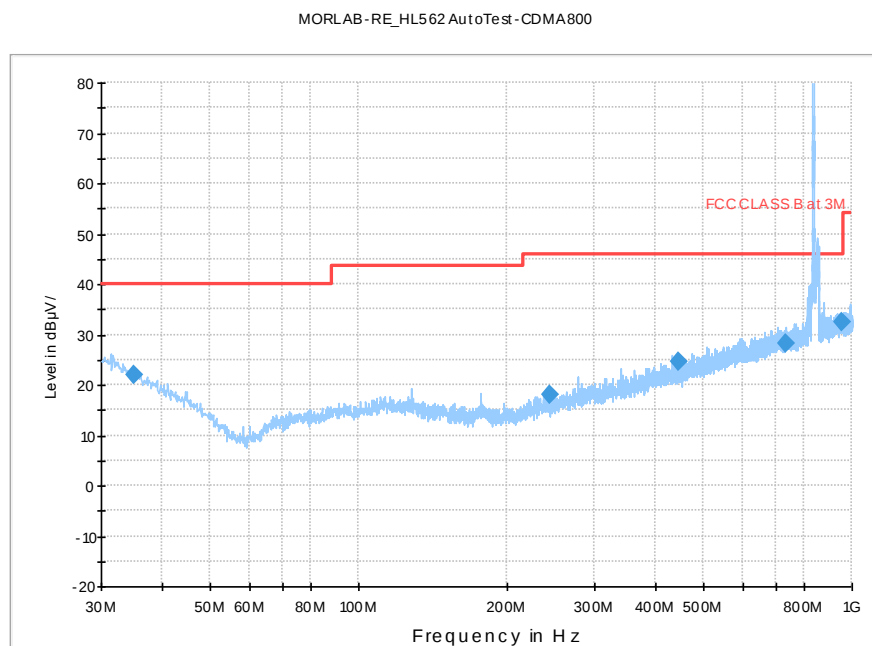
Frequency (MHz)	QuasiPeak (dBμ)	Antenna height (cm)	Polarity	Turntable position	Corr. (dB)	Margin (dB)	Limit (dBμ V/m)	Verdict
34.97125	21.8	100.0	H	155.0	17.7	18.2	40.0	PASS
244.9762	17.9	100.0	H	285.0	12.7	28.1	46.0	PASS
445.4025	24.5	100.0	H	210.0	19.4	21.5	46.0	PASS
733.1287	28.2	100.0	H	225.0	25.5	17.8	46.0	PASS
954.1675	32.6	100.0	H	210.0	28.5	13.4	46.0	PASS
34.97125	21.8	100.0	H	155.0	17.7	18.2	40.0	PASS
42.61000	18.4	100.0	V	0.0	13.7	21.6	40.0	PASS
121.4225	15.8	100.0	V	29.0	12.1	27.7	43.5	PASS
299.7812	19.9	100.0	V	0.0	14.9	26.1	46.0	PASS
556.7100	26.5	100.0	V	139.0	22.0	19.5	46.0	PASS
852.3175	39.2	100.0	V	62.0	27.3	6.8	46.0	PASS
42.61000	18.4	100.0	V	0.0	13.7	21.6	40.0	PASS

B. Test Plot:

Note: Following is the plots for emission measurement; please note that marked spikes with circle should be ignored because they are MS and SS carrier frequency.



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

**** END OF REPORT ****