



FCC Part 96.47 Test Report

Applicant : Motorola Mobility LLC
Equipment : Mobile Cellular Phone
Brand Name : Motorola
Model Name : XT2301-1
FCC ID : IHDT56AH1
Standard : FCC Part 96.47
Test Date(s) : Nov. 15, 2022

We, Sporton International Inc. (ShenZhen), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (ShenZhen), the test report shall not be reproduced except in full.

Jason Jia



Approved by: Jason Jia

Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China



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APPENDIX A. TEST SETUP PHOTO



History of this test report

Report No.	Version	Description	Issued Date
FG292622H	01	Initial issue of report	Dec. 12, 2022

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3	96.47	End User Device additional requirement	Pass	-



1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2301-1
FCC ID	IHDT56AH1
IMEI Code	350007550023676/350007550023684
HW Version	DVT2
SW Version	TTR33.124
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 48: 3550 MHz ~ 3700 MHz
Rx Frequency	LTE Band 48: 3550 MHz ~ 3700 MHz
Antenna Type	Monopole Antenna
Antenna Gain	-1.8dBi
Type of Modulation	QPSK/16QAM/64QAM/256QAM



1.5 Testing Location

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	DFS01-SZ	CN1256	421272
Test Engineer	Sam Zheng		
Temperature	24~26 °C		
Relative Humidity	50~53 %		

1.6 Test Software

Item	Site	Manufacturer	Name	Version
1.	DFS01-SZ	Sporton	DFS & Adaptivity Test Tools	1.0



1.7 Applicable Standards

- ♦ FCC Part 96.47
- ♦ FCC KDB 940660 D01 Part 96 CBRS Eqpt v03
- ♦ WINNF-TS-0122-V1.0.2 CBRS CBSD Test Specification

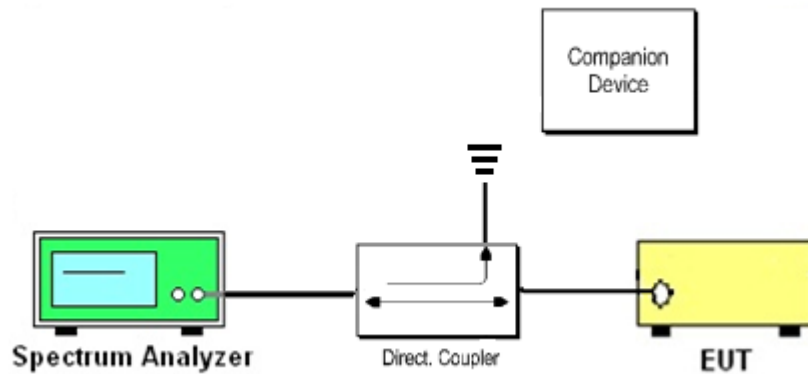
Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

1.8 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola (Chenyang)	Model Name	MC-681N
AC Adapter 2(US)	Brand Name	Motorola (Acbel)	Model Name	MC-681N
Battery 1	Brand Name	Motorola(SCUD)	Model Name	PC51
Earphone 1	Brand Name	Motorola (Lyand)	Model Name	MI181C(SH38D62338)
USB Cable 1	Brand Name	Motorola(Saibao)	Model Name	SC18D24968
C to HDMI HDMI/USBC Cable 1	Brand Name	Motorola(Linxee)	Model Name	SC18D02146
C to HDMI HDMI/USBC Cable 2	Brand Name	Motorola(Linxee)	Model Name	SC18D38847

2 Test Configuration of Equipment Under Test

2.1 Connection Diagram of Test System



The companion device is certified CBRS (FCC ID: S9GQ710US02)



3 End User Device additional requirement

3.1 Test Requirement

FCC Part 96.47

(a) End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.

(1) An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

3.2 Test Procedure

Following procedure can be done by applying WINNF-TS-0122-V1.0.1 CBRS CBSD Test Specification, use the certified Ruckus CBSD (FCC ID: S9GQ710US02) as companion device to show compliance with Part 96.47 requirement for End User Device (EUD):

1. Setup with frequency 3600-3620MHz and power level 13dBm/MHz
2. Enable AP service from Ruckus Cloud management
3. Check EUD Tx Frequency and power
4. Disable AP service from Ruckus Cloud management
 - a. Check EUD stops transmission within 10seconds.

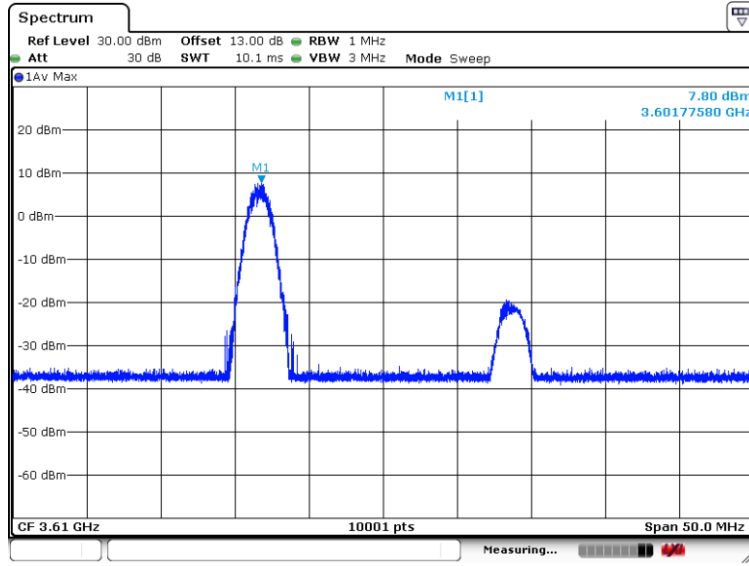
5. Setup with 3670-3690MHz & power level 8dBm/MHz
6. Enable AP service from Ruckus Cloud management
7. Check EUD Tx Frequency and power
8. Disable AP service from Ruckus Cloud management
 - a. Check EUD stops transmission within 10seconds.



3.3 Test Result

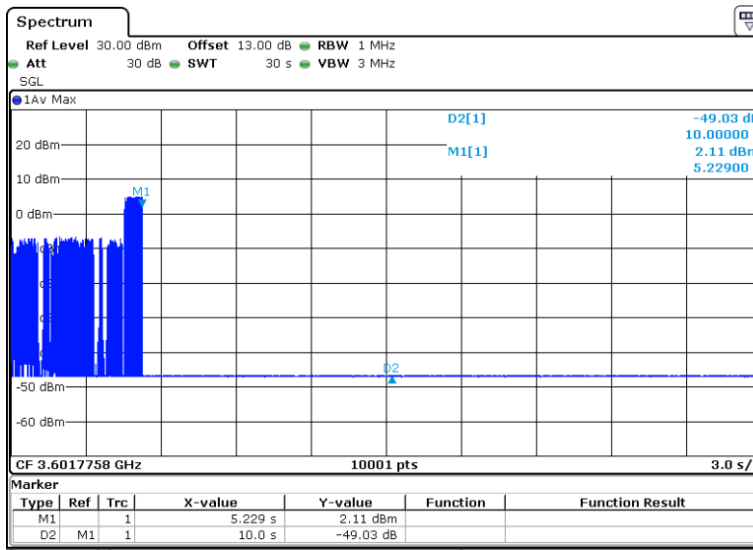
[Step 1] Setup with frequency 3600-3620 MHz and power level 13dBm/MHz

[Step 3] Check EUD Tx Frequency and power



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[Step 4.a.] EUD stops transmission within 10 seconds of receiving instructions from its associated CBSD.

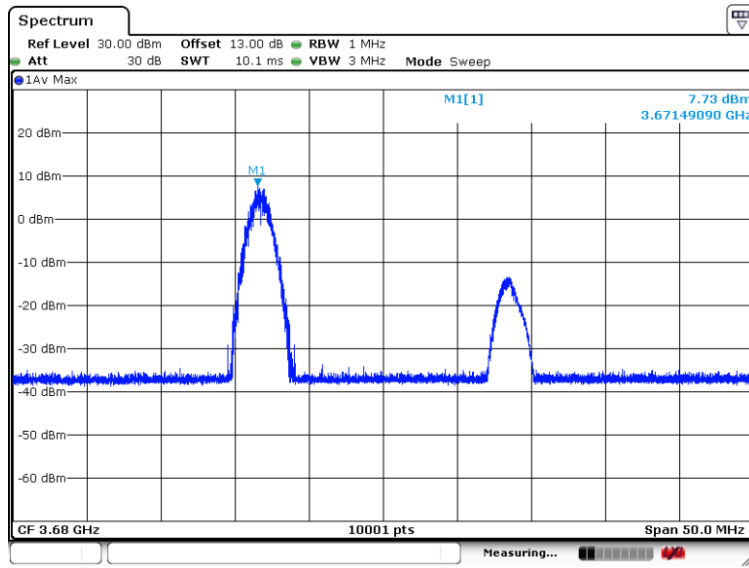


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[Step 5] Setup with 3670-3690 MHz & power level 8dBm/MHz

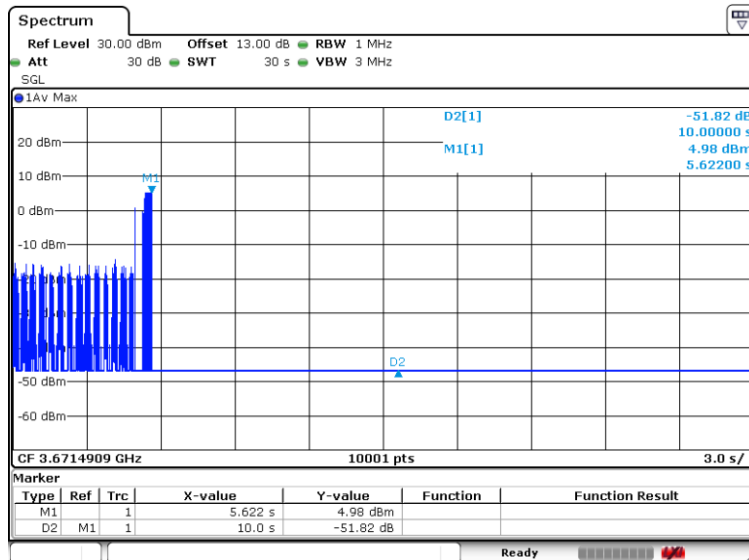
[Step 7] Check EUD Tx Frequency and power



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[Step 8.a.] After changing the frequency and power level,

The module (EUT) discontinues operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD. Test result is PASS.



Date: 15.NOV.2022 18:44:42



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Signal Analyzer	R&S	FSV40	101916	10Hz~40GHz	Jul. 07, 2022	Nov.15, 2022	Jul. 06, 2023	Conducted (DFS01-SZ)

----- THE END -----