



FCC Part 96.47 Test Report

Applicant : Nokia Shanghai Bell Co. Ltd.
Equipment : Nokia FastMile 5G Gateway 3.2
Brand Name : Nokia
Model Name : 5G16-12W-A
FCC ID : 2ADZR5G1612WA
Standard : FCC Part 96.47
Test Date(s) : Mar. 16, 2023

We, Sporton International Inc. (Kunshan), 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. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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History of this test report

Report No.	Version	Description	Issued Date
FG1O2908-01B	01	Initial issue of report	Mar. 17, 2023

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

Nokia Shanghai Bell Co. Ltd.

No. 388, Ningqiao Rd. Pilot Free Trade Zone, Shanghai 201206, China

1.2 Manufacturer

Nokia Solutions and Networks Oy

Karakaari 7 02610 Espoo Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Nokia FastMile 5G Gateway 3.2
Brand Name	Nokia
Model Name	5G16-12W-A
FCC ID	2ADZR5G1612WA
HW Version	3TG01797A
SW Version	5GGW3-OMNI-1_D210400Bh3T0301E0156
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	5G NR n48: 3550 MHz ~ 3700 MHz
Rx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
Antenna Gain / Type	Ant. 5: 6.0 dBi / Dipole Antenna Ant. 6: 6.0 dBi / Dipole Antenna
Type of Modulation	DFT-s-OFDM (PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM) CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM)

1.5 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	DFS01-KS	CN1257	314309
Test Engineer	Chad Wang		
Temperature	20 ~ 24.5 °C		
Relative Humidity	40 ~ 60 %		

1.6 Test Software

Item	Site	Manufactor	Name	Version
1.	DFS01-KS	Sporton	DFS & Adaptivity Test Tools	1.0

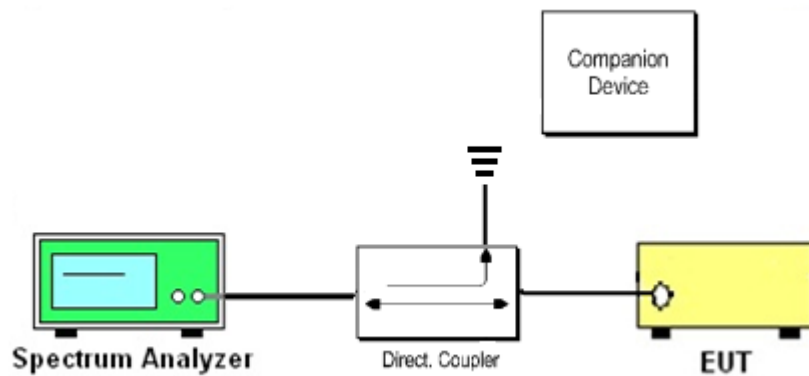
1.7 Applicable Standards

- ♦ 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.

2 Test Configuration of Equipment Under Test

2.1 Connection Diagram of Test System



The companion device is certified CBRS (FCC ID: PIDAS2900)



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-V1.0.2 CBRS CBSD Test Specification, use the certified CBSD (FCC ID: PIDAS2900) as companion device to show compliance with Part 96.47 requirement for End User Device (EUD):

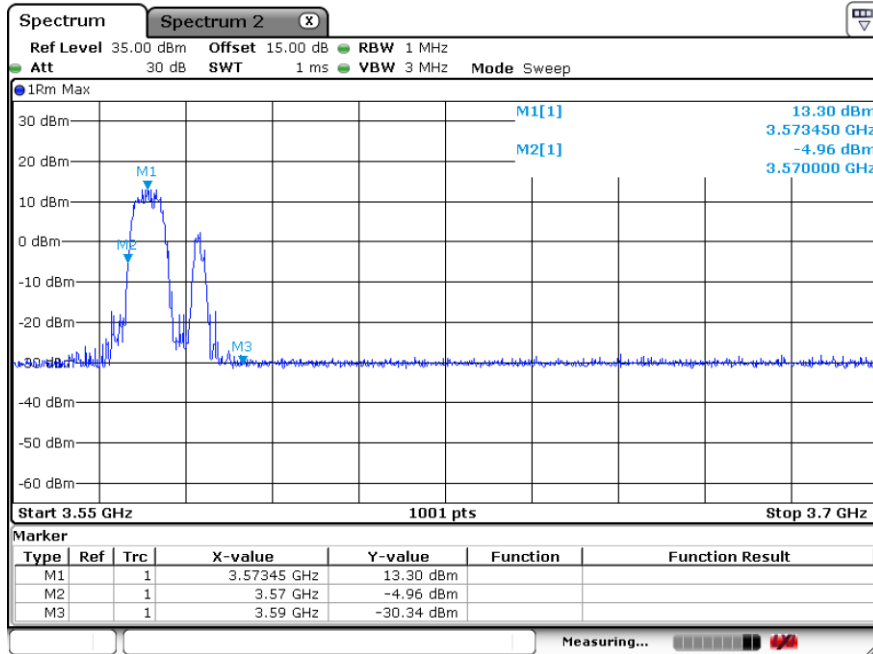
1. Configure SAS granted CBSD to operate at frequency 3570-3590MHz & power level 34dBm/MHz
2. Enable AP service from CBSD Cloud management
3. Check EUD Tx Frequency and power
4. Disable AP service from CBSD Cloud management
5. Check EUD stops transmission within 10seconds.

6. Configure SAS granted CBSD to operate at frequency 3670-3690MHz & power level 20dBm/MHz
7. Enable AP service from CBSD Cloud management
8. Check EUD Tx Frequency and power
9. Disable AP service from CBSD Cloud management
10. Check EUD stops transmission within 10seconds.

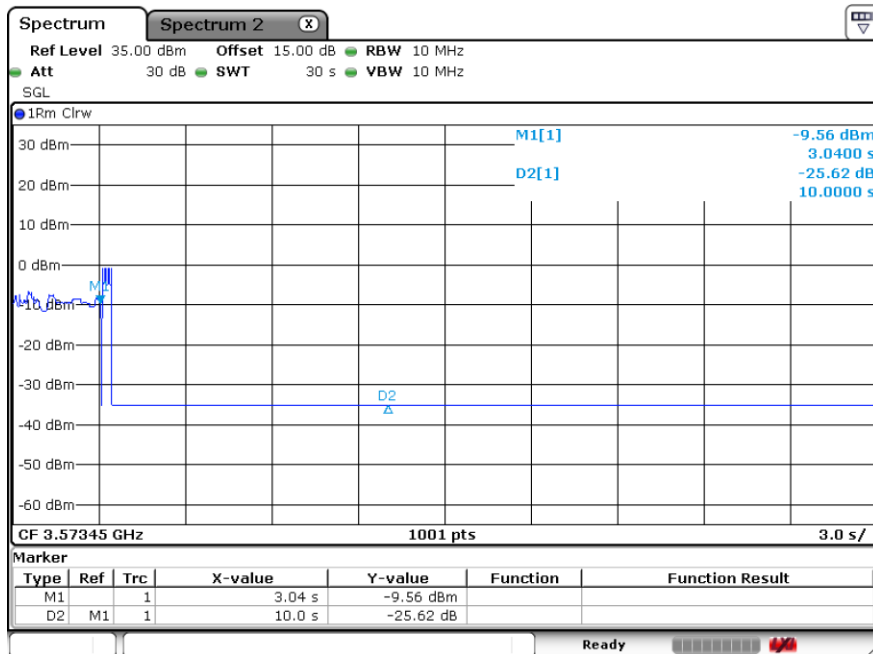
3.3 Test Result

Configure SAS granted CBSD to operate at frequency 3570-3590MHz & power level 34dBm/MHz

Check EUD Tx Frequency and power



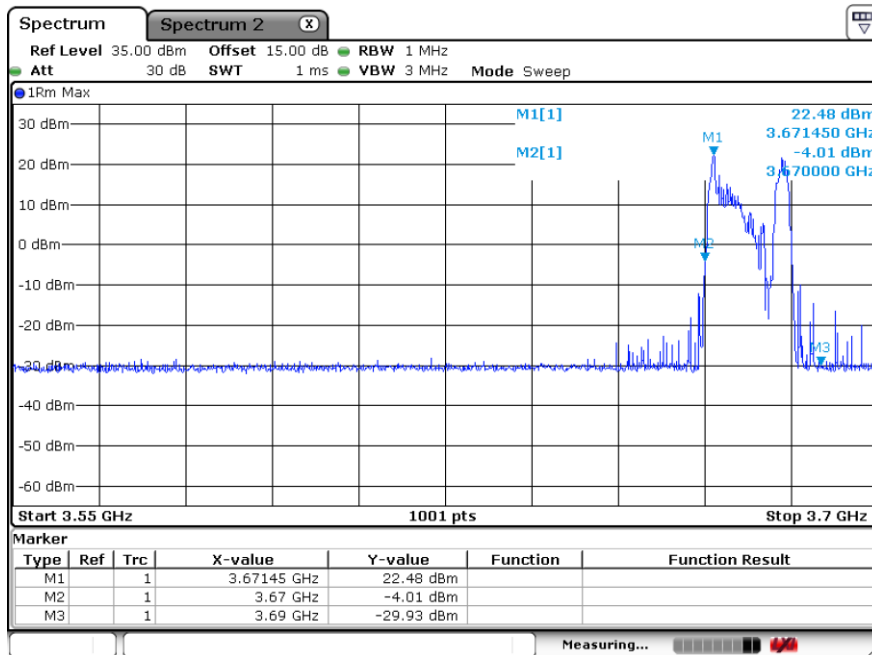
EUD stops transmission within 10 seconds of receiving instructions from its associated CBSD.





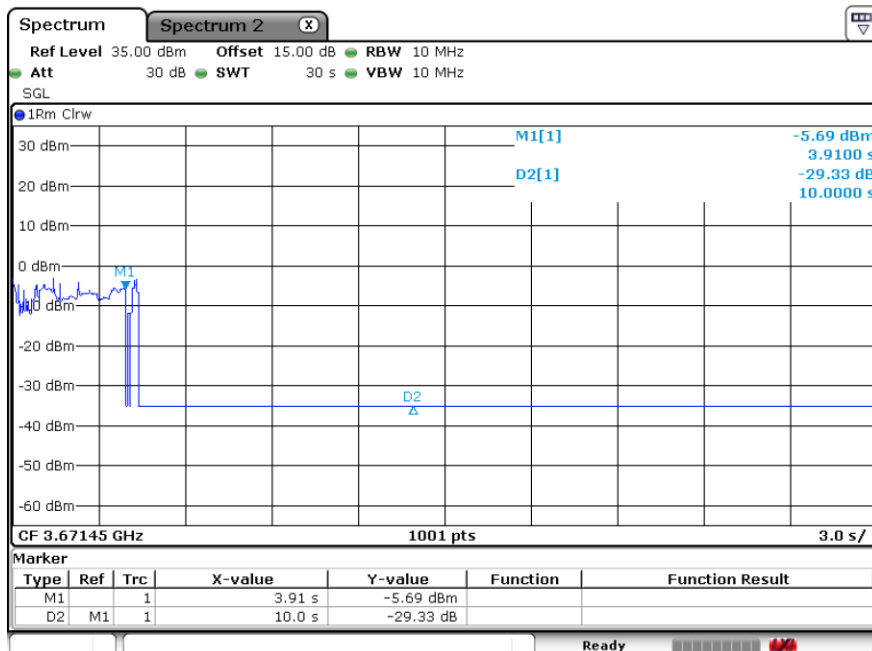
Configure SAS granted CBSD to operate at frequency 3670-3690MHz & power level 20dBm/MHz

Check EUD Tx Frequency and power



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.





4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Signal Analyzer	R&S	FSV7	101472	10Hz~7GHz	Jan. 05, 2023	Mar. 16, 2023	Jan. 04, 2024	Conducted (DFS01-KS)
Combiner	MTJ Cooperation	MTJ7112	N/A	0.4-6GHz	NCR	Mar. 16, 2023	NCR	Conducted (DFS01-KS)

NCR: No Calibration Requirement.

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