

EMF TEST REPORT

Test Report No. : OT-243-RWD-040

Reception No. : 2312004422

Applicant : Firstsilicon

Address : 25, Gasan digital 1-ro, Geumcheon-gu, Seoul, South Korea

Manufacturer : Firstsilicon

Address : 25, Gasan digital 1-ro, Geumcheon-gu, Seoul, South Korea

Type of Equipment : USB8269

FCC ID. : 2BE2I-FU100

Model Name : FU100

Multiple Model Name : N/A

Serial number : N/A

Total page of Report : 6 pages (including this page)

Date of Incoming : January 31, 2024

Date of issue : March 18, 2024


SUMMARY

The equipment complies with the regulation; *FCC CFR 47 PART 2.1093*

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.



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Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-243-RWD-040	March 18, 2024	Initial Release	All

1. VERIFICATION OF COMPLIANCE

Applicant : Firstsilicon
Address : 25, Gasan digital 1-ro, Geumcheon-gu, Seoul, South Korea
Contact Person : Jung ho, Hyun / Certification test personnel
Telephone No. : +82-2-3402-7479
FCC ID : 2BE2I-FU100
Model Name : FU100
Brand Name : USB8269
Serial Number : N/A
Date : March 18, 2024

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	USB8269
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	KDB 447498 D01 General RF Exposure Guidance v06
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
Modifications on the Equipment to Achieve Compliance	None

- . The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The Firstsilicon, Model FU100 (referred to as the EUT in this report) is a USB8269. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	USB8269
OPERATING FREQUENCY	2 405 MHz ~ 2 480 MHz
MODULATION TYPE	DSSS
RF OUTPUT POWER	6.15 dBm
ANTENNA TYPE	Dipole Antenna
ANTENNA GAIN	4.03 dBi
List of each Osc. or crystal Freq.(Freq. \geq 1 MHz)	12 MHz
RATED SUPPLY VOLTAGE	DC 5.0 V

2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

3. EUT MODIFICATIONS

-. None

4. RF EXPOSURE EVALUATION

4.1 RF Exposure Calculation

According to the FCC rule §4.3. General SAR test exclusion guidance, the limit for 1-g and 10-g SAR test exclusion thresholds are ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR by the device operating 100 MHz to 6 GHz and test separation distances ≤ 50 mm

4.2 EUT Description

Kind of EUT	USB8269
Device Category	<input checked="" type="checkbox"/> Portable (< 20 cm separation) <input type="checkbox"/> Mobile (> 20 cm separation) <input type="checkbox"/> Others
Exposure Evaluation Applied	<input type="checkbox"/> MPE <input type="checkbox"/> SAR <input checked="" type="checkbox"/> N/A

4.3 Test Result

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3.0$$

$$= [(5.19/5)] \times \sqrt{2.405} = 1.61$$

4.3.1 Test data

Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
2 405.00	6.15 ± 1.0	7.15	5.19	5	1.61
2 480.00	-12.83 ± 1.0	-11.83	0.065 6	5	0.02 1