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TEST REPORT

EVALUATION Test for MR23GA

APPLICANT
LG Electronics Inc.

DATE OF ISSUE
July 08, 2022

Tested by
Kyung Jun Woo (signature)

Technical Manager
Jong Seok Lee (signature)

HCT CO., LTD.
BongJai Huh / CEO

HCT Co., Ltd.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Tel. +82 31 634 6300 F ax. +82 31 645 6401

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Additional Model
-

Applicant	**LG Electronics Inc.** 222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea
FCC ID IC	BEJMR23GA 2703H-MR23GA
Equipment Class(es) FCC Rule Part(s)	DTS Part 15 subpart C 15.247
ISED Part(s)	RSS-Gen Issue 5
Application's Statement	The applicant takes full responsibility that the test data referenced below represents compliance for this FCC ID/IC.
Differences Brief Description	Hardware and software of this device are identical to the implementation in BEJMR23GN/2703H-MR23GN except removing passive NFC component and relevant PCB described in operational description. The data from that application has been verified through appropriate spot checks to demonstrate compliance for this device as shown in the summary table.
Test Reference	KDB 484596 D01 Reference Test Data v01

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	July 08, 2022	Initial Release

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

The detail test data can be found in this documents, Appendix A.

Category	Spot Check	Verdict
Unlicensed EMC	Band Edge	Share
	Spurious Emissions	Share

Reference Detail Section

Reference	Equipment Class	Report Title	Section
FCC ID : BEJMR23GN IC : 2703H-MR23GN	DTS	BT LE Report	All sections

1. Summary of the spot check for Unlicensed EMC

Mod	Test Item	Mod / Channel	Measured Frequency [MHz]	MR23GN (dBµV/m)		MR23GA (dBµV/m)		Deviation (dB)	
				Average	Peak	Average	Peak	Average	Peak
BT LE	Band Edge	1M Bit/s 37 Byte / Ch. 0	2 310 ~2 390	45.06	55.72	44.56	54.87	0.50	0.85
	RSE	1M Bit/s 37 Byte / Ch. 0	4 804	50.79	58.29	50.74	58.50	0.05	-0.21
	Receiver Spurious Emissions	1M Bit/s 37 Byte / Ch. 0	4 804	47.44	51.63	46.40	50.93	1.04	0.70

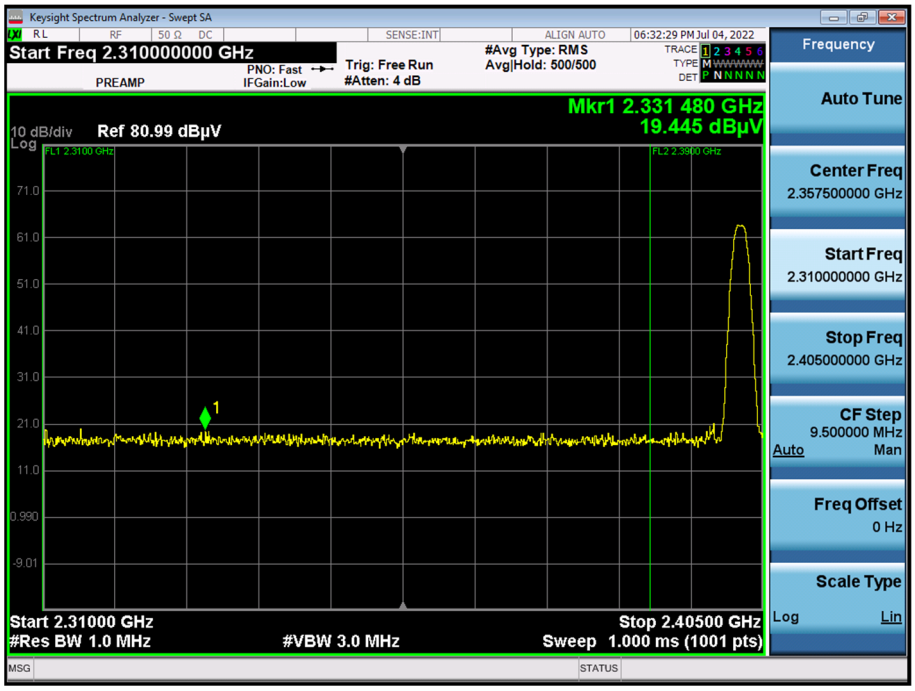
2. Test Plot

BT(LE) Band Edge (LE(4.2) 1M 37 byte/ch.0)

Bandedge

Frequency	Measured Value	Duty Cycle Factor	AF+CL+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	19.45	0.00	35.43	H	54.87	73.98	19.11	PK
2390.0	7.30	1.84	35.43	H	44.56	53.98	9.42	AV

[Radiated Restricted Band Edges plot – Peak Result]



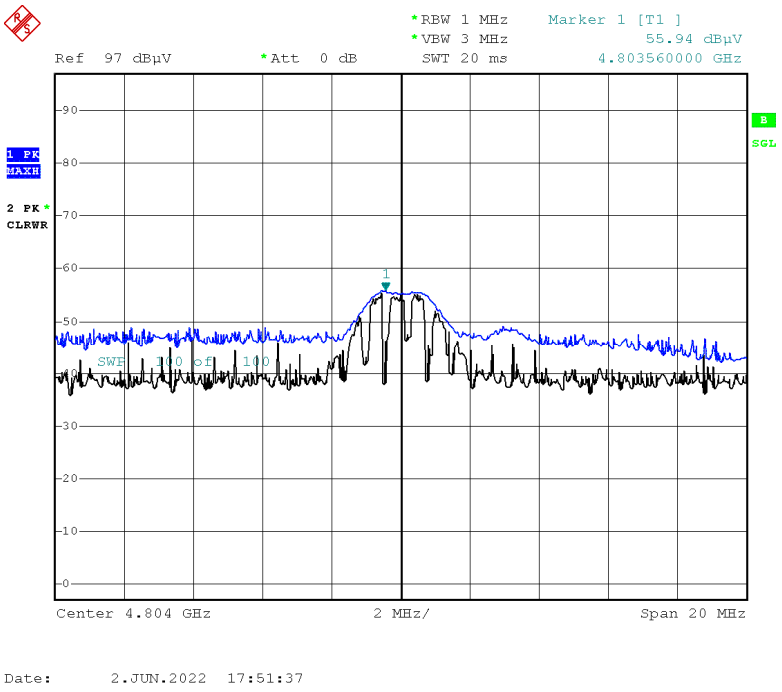
[Radiated Restricted Band Edges plot – Average Result]

BT(LE) R.S.E 2nd Harmonic (LE(4.2) 1M 37 byte/ch.0)

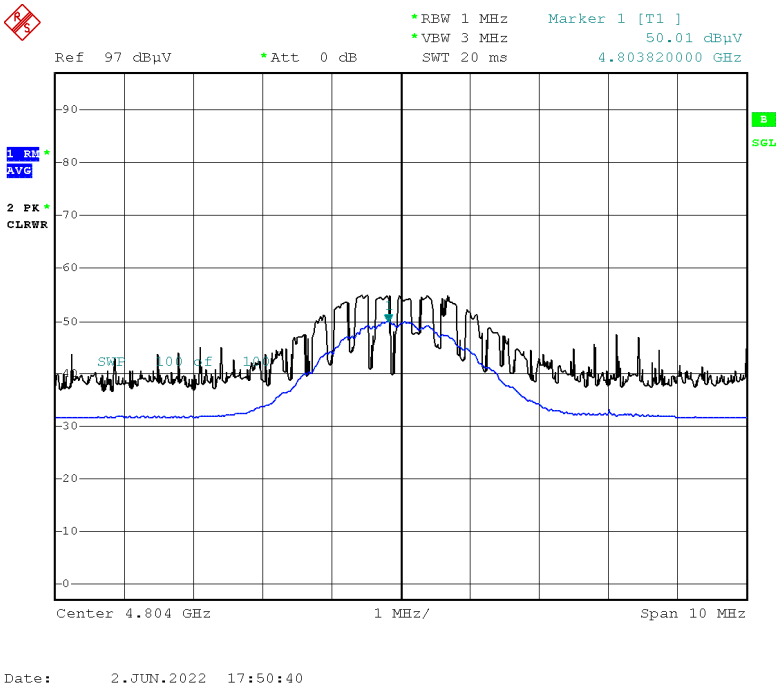
RSE

Frequency	Measured Value	Duty Cycle	DCCF Factor	AF+CL+DF-AG	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	Factor[dB]	[dB/m]	[dB]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
4804	55.94	0.00	0.00	2.56	H	58.50	73.98	15.48	PK
4804	50.01	1.84	-3.66	2.56	H	50.74	53.98	3.24	AV

[Radiated Spurious Emissions plot – Peak Result]



[Radiated Spurious Emissions plot – Average Result]

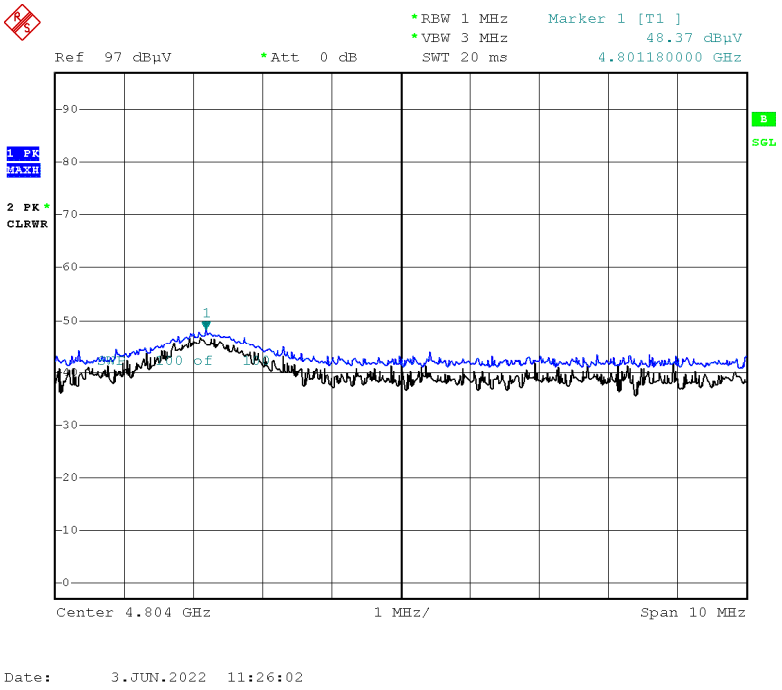


BT(LE) Receiver Spurious Emissions 2nd Harmonic (LE(4.2) 1M 37 byte/ch.0)

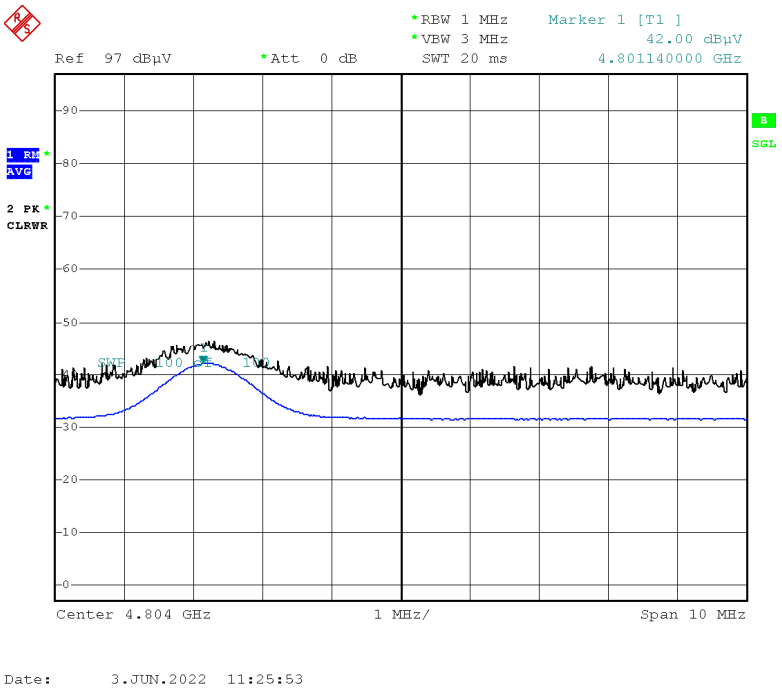
Receiver Spurious Emissions

Frequency	Measured Value	Duty Cycle Factor	AF+CL+DF-AG	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
4804	48.37	0.00	2.56	H	50.93	73.98	23.05	PK
4804	42.00	1.84	2.56	H	46.40	53.98	7.58	AV

[Receiver Spurious Emissions plot – Peak Result]



[Receiver Spurious Emissions plot – Average Result]



3. List of test equipment

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Controller(Antenna mast)	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP-EP	Innco system	N/A	N/A	N/A
Controller	EM2090	Emco	060520	N/A	N/A
Turn Table	N/A	Ets	N/A	N/A	N/A
Loop Antenna	FMZB 1513	Rohde & Schwarz	1513-333	03/17/2024	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	09/04/2022	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1191	11/18/2023	Biennial
Horn Antenna (15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Amp & Filter Bank Switch Controller	FBSM-01A	TNM system	0	N/A	N/A
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	01/06/2023	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	5	06/13/2023	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	6	06/13/2023	Annual
Band Reject Filter	WRCJV5100/5850-40/50-8EEK	Wainwright Instruments	1	02/07/2023	Annual
ATT(3 dB) + LNA2(6~18 GHz)	18B-03, CBL06185030	WEINSCHEL CERNEX	N/A	12/22/2022	Annual
ATT(10 dB) + LNA1(0.1~18 GHz)	56-10, CBLU1183540B-01	Api tech, CERNEX	N/A	12/22/2022	Annual
High Pass Filter	WHKX10-2700-3000-18000-40SS	Wainwright Instruments	N/A	12/22/2022	Annual
High Pass Filter	WHKX8-6090-7000-18000-40SS	Wainwright Instruments	N/A	12/22/2022	Annual
Thru	COAXIAL ATTENUATOR	T&M SYSTEM	N/A	12/22/2022	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/02/2022	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/11/2023	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	04/05/2023	Annual
Spectrum Analyzer	FSP(9 kHz ~ 30 GHz)	Rohde & Schwarz	836650/016	09/13/2022	Annual
Spectrum Analyzer	FSV40-N(9 kHz ~ 30 GHz)	Rohde & Schwarz	101068-SZ	09/15/2022	Annual