TEST REPORT

FCC RF Exposure Test for TFBMEEBN6FU
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-SR-2507-FC014-R3

DATE OF ISSUE
September 11, 2025

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TEST REPORT

FCC SAR Test for certification

REPORT NO.
HCT-SR-2507-FC014-R3

DATE OF ISSUE
Sep. 11, 2025

FCC ID
2BO3LTFBMEEBN6FU

Applicant	LG Electronics Inc. 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
Product Name	Telematics
Model Name	TFBMEEBN6FU
Additional Model Name	TFBMEEBN6FR, TFBMNENN0FN
Location of Test	■ Permanent Testing Lab ☐ On Site Testing Lab (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA)
FCC Rule Part(s)	CFR § 2.1093
Test Results	PASS (TER Limit : 1.0) Refer to the clause 3.2 Attestation of test result

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	Jul. 28, 2025	Initial Release
1	Aug. 04, 2025	Revised Sec.3, Sec.4, Sec.6, Sec.7
2	Aug. 08, 2025	Revised Sec.4
3	Sep. 11, 2025	Revised Sec.4.3

Notice

Content
The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated. The test results have only been applied with the test methods required by the standard(s). The laboratory is not accredited for the test results marked *. Information provided by the applicant is marked **. Test results provided by external providers are marked ***. When confirmation of authenticity of this test report is required, please contact www.hct.co.kr The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

CONTENTS

1. Test Regulations

The tests documented in this report were performed in accordance with FCC CFR § 2.1093, IEEE 1528-2013, ANSI C63.26-2015 the following FCC Published RF exposure KDB procedures:

- FCC KDB Publication 447498 D04 Interim General RF Exposure Guidance v01
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03

2. Test Location

2.1 Test Laboratory

Company Name	HCT Co., Ltd.
Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si,Gyeonggi-do, 17383 KOREA
Telephone	031-645-6300
Fax.	031-645-6401

2.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Korea	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Testing No. KT197)

3. Information of the EUT

3.1 General Information of the EUT

Model Name	TFBMEEBN6FU
Additional Model Name	TFBMEEBN6FR, TFBMNENN0FN
Equipment Type	Telematics
FCC ID	2BO3LTFBMEEBN6FU
Application Type	Certification
Applicant	LG Electronics Inc.

3.2 Attestation of test result of device under test

The Highest Estimated SAR			
Band	Tx. Frequency	Equipment Class	Reported SAR (W/kg) 1 g Body
WLAN 2.4 GHz	2 412 MHz~ 2 462 MHz	DTS	0.18
WLAN 5 GHz UNII 1&2A	5 180 MHz~ 5 320 MHz	NII	0.26
WLAN 5 GHz UNII 2C	5 500 MHz~ 5 720 MHz	NII	0.29
WLAN 5 GHz UNII3	5 745 MHz ~ 5 825 MHz	NII	0.20
Bluetooth	2 402 MHz ~ 2 480 MHz	DTS	<0.1
Simultaneous SAR per KDB 690783 D01v01r03			1.322

The calculated MPE			
Band	Tx. Frequency	Equipment Class	MPE (mW/ cm^2)
WLAN 6 GHz UNII5,6,7	5 925 MHz ~ 6865 MHz	6VL	0.053
WLAN 6 GHz UNII8	6 865 MHz ~ 7 115 MHz	6VL	0.039

Total Exposure Ratio Summary	
WWAN+2.4GHz/5GHz WLAN+BT	0.826
WWAN+6GHz WLAN+BT	0.700
FCC TER limit	< 1.0

4. Device Under Test Description

4.1 DUT specification

4.1.1 TFBMEEBN6FU

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
UMTS Band 2	Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 5	Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 7	Data	2 502.5 MHz ~ 2 567.5 MHz
LTE FDD Band 12	Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 13	Data	779.5 MHz ~ 784.5 MHz
LTE FDD Band 17	Data	706.5 MHz ~ 713.5 MHz
LTE FDD Band 25	Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Data	814.7 MHz ~ 848.3 MHz
LTE TDD Band 38	Data	2 572.5 MHz ~ 2 617.5 MHz
LTE TDD Band 42	Data	3 452.5 MHz ~ 3 547.5 MHz
LTE TDD Band 48	Data	3 552.5 MHz ~ 3 697.5 MHz
LTE FDD Band 66 (AWS)	Data	1 710.7 MHz ~ 1 779.3 MHz
LTE FDD Band 71	Data	665.5 MHz ~ 695.5 MHz
NR FDD Band n2 (PCS)	Data	1 852.5 MHz ~ 1 907.5 MHz
NR FDD Band n5	Data	826.5 MHz ~ 846.5 MHz
NR FDD Band n7	Data	2 502.5 MHz ~ 2 567.5 MHz
NR FDD Band n12	Data	701.5 MHz ~ 713.5 MHz
NR FDD Band n25 (PCS)	Data	1 852.5 MHz ~ 1 912.5 MHz
NR TDD Band n41	Data	2 501.01 MHz ~ 2 685 MHz
NR TDD Band n48	Data	3 555 MHz ~ 3 695.01 MHz
NR FDD Band n66	Data	1 712.5 MHz ~ 1 777.5 MHz
NR FDD Band n71	Data	665.5 MHz ~ 695.5 MHz
NR TDD Band n77	Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Data	3 445.01 MHz ~ 3 544.98 MHz
NR TDD Band n78	Data	3 705 MHz ~ 3 795 MHz
U-NII-1	Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Data	5 745 MHz ~ 5 825 MHz
U-NII-5	Data	5 925 MHz ~ 6 425 MHz
U-NII-6	Data	6 425 MHz ~ 6 525 MHz
U-NII-7	Data	6 525 MHz ~ 6 865 MHz
U-NII-8	Data	6 865 MHz ~ 7 115 MHz
2.4 GHz WLAN	Data	2 412 MHz ~ 2 462 MHz
LE	Data	2 402 MHz ~ 2 480 MHz
Device Description		
The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.		

Note : WWAN SAR testing results of model TFBMEEBN6FU were referred to SAR Test Report, Report No. HCT-SR-2507-FC002-R2, and was also used to perform simultaneous transmission analysis.

4.1.2 TFBMEEBN6FR

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Data	824.2 MHz ~ 848.8 MHz
GSM1900	Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 7	Data	2 502.5 MHz ~ 2 567.5 MHz
LTE FDD Band 12	Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 17	Data	706.5 MHz ~ 713.5 MHz
LTE FDD Band 25	Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Data	814.7 MHz ~ 848.3 MHz
LTE TDD Band 38	Data	2 572.5 MHz ~ 2 617.5 MHz
LTE TDD Band 41	Data	2 498.5 MHz ~ 2 687.5 MHz
LTE TDD Band 42	Data	3 452.5 MHz ~ 3 547.5 MHz
NR FDD Band n7	Data	2 502.5 MHz ~ 2 567.5 MHz
NR TDD Band n41	Data	2 501.01 MHz ~ 2 685 MHz
NR TDD Band n77	Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Data	3 445.01 MHz ~ 3 544.98 MHz
NR TDD Band n78	Data	3 705 MHz ~ 3 795 MHz
U-NII-1	Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Data	5 745 MHz ~ 5 825 MHz
U-NII-5	Data	5 925 MHz ~ 6 425 MHz
U-NII-6	Data	6 425 MHz ~ 6 525 MHz
U-NII-7	Data	6 525 MHz ~ 6 865 MHz
U-NII-8	Data	6 865 MHz ~ 7 115 MHz
2.4 GHz WLAN	Data	2 412 MHz ~ 2 462 MHz
LE	Data	2 402 MHz ~ 2 480 MHz
Device Description		
The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.		

Note : WWAN SAR testing results of model TFBMEEBN6FR were referred to SAR Test Report, Report No. HCT-SR-2507-FC013-R2, and was also used to perform simultaneous transmission analysis.

4.1.3 TFBNNEBN0FN

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
U-NII-1	Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Data	5 745 MHz ~ 5 825 MHz
U-NII-5	Data	5 925 MHz ~ 6 425 MHz
U-NII-6	Data	6 425 MHz ~ 6 525 MHz
U-NII-7	Data	6 525 MHz ~ 6 865 MHz
U-NII-8	Data	6 865 MHz ~ 7 115 MHz
2.4 GHz WLAN	Data	2 412 MHz ~ 2 462 MHz
LE	Data	2 402 MHz ~ 2 480 MHz
Device Description		
The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.		

Note : WWAN of model TFBMNENN0FN does not include any cellular module. Therefore, simultaneous transmission analysis was not required.

4.2 Nominal and Maximum Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D04v01.

4.2.1 WLAN Nominal Output Power

A. WLAN SISO

Band	Bandwidth	SISO						tolerance
		a	b	g	n	ac	ax(SU)	
2.4GHz	20MHz	NA	5.5	5.5	5.5	5.5	5.5	- 2 / + 2 dB
	40MHz	NA	-	-	5.5	5.5	5.5	- 2 / + 2 dB
5GHz	20MHz	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	NA	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	- 2 / + 2 dB - 8 / + 2 dB (UNII3)
	40MHz	NA	NA	NA	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	- 2 / + 2 dB
	80MHz	NA	NA	NA	NA	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	- 2 / + 2 dB
	160MHz	NA	NA	NA	NA	NA	NA	-
6GHz	20MHz	-3dBm Ch.2 : -7dBm Ch.45 : -5dBm	NA	NA	NA	NA	-3dBm Ch.2 : -7dBm Ch.45 : -5dBm	- 2 / + 2 dB
	40MHz	NA	NA	NA	NA	NA	-1dBm	- 2 / + 2 dB
	80MHz	NA	NA	NA	NA	NA	1dBm	- 2 / + 2 dB
	160MHz	NA	NA	NA	NA	NA	1dBm	- 2 / + 2 dB

B. WLAN SISO_11ax RU TX

Band	Band width	SISO							tolerance
		26T	52T	106T	242T	484T	996T	2x996T	
2.4 GHz	20MHz	5.5	5.5	5.5	5.5	NA	NA	NA	- 2 / + 2 dB
	40MHz	5.5	5.5	5.5	5.5	5.5	NA	NA	- 2 / + 2 dB
5 GHz	20MHz	UNII1&2A -1dBm UNII2C 2dBm UNII3 4dBm	UNII1&2A 1dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	NA	NA	- 2 / + 2 dB - 4 / +2 dB (UNII1&2A) - 17 / + 2 dB (UNII3)
	40MHz	UNII1&2A -1dBm UNII2C 2dBm UNII3 4dBm	UNII1&2A 1dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	NA	- 2 / + 2 dB - 4 / + 2dB (UNII1&2A)
	80MHz	UNII1&2A -1dBm UNII2C 2dBm UNII3 4dBm	UNII1&2A 1dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	- 2 / + 2 dB - 3 / + 2dB (UNII1&2A)
	160MHz	NA	NA	NA	NA	NA	NA	NA	-
6 GHz	20MHz	-9dBm	-7dBm	-5dBm	-3dBm	NA	NA	NA	- 2 / + 2 dB - 5 / + 2 dB (UNII5)
	40MHz	-9dBm	-7dBm	-5dBm	-3dBm	-1dBm	NA	NA	- 2 / + 2 dB - 10 / + 2 dB (UNII5)
	80MHz	-9dBm	-7dBm	-5dBm	-3dBm	-1dBm	1dBm Ch.183,199,215 : 0dBm	NA	- 2 / + 2 dB - 9 / + 2 dB (UNII5)
	160MHz	-9dBm	-7dBm	-5dBm	-3dBm	-1dBm	1dBm Ch.175,207 :0dBm	1dBm Ch.175 : -2dBm Ch.207 : -4dBm	- 2 / + 2 dB - 8 / + 2 dB (UNII5)

C. WLAN MIMO

Band	Bandwidth	MIMO						tolerance
		a	b	g	n	ac	ax(SU)	
2.4GHz	20MHz	NA	5.5	5.5	5.5	5.5	5.5	-2 / + 2 dB
	40MHz	NA	-	-	5.5	5.5	5.5	- 3 / + 2 dB
5GHz	20MHz	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	NA	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	- 2 / + 2 dB - 8 / + 2 dB (UNII 3)
	40MHz	NA	NA	NA	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	- 2 / + 2 dB - 4 / + 2 dB (UNII 2C)
	80MHz	NA	NA	NA	NA	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	- 2 / + 2 dB - 4 / + 2 dB (UNII 2C)
	160MHz	NA	NA	NA	NA	NA	NA	-
6GHz	20MHz	-9dBm	NA	NA	NA	NA	-9dBm	- 2 / + 2 dB
	40MHz	NA	NA	NA	NA	NA	-6dBm	- 2 / + 2 dB
	80MHz	NA	NA	NA	NA	NA	-3dBm	- 2 / + 2 dB
	160MHz	NA	NA	NA	NA	NA	0dBm	- 2 / + 2 dB

D. WLAN MIMO_11ax RU TX

Band	Band width	MIMO							tolerance
		26T	52T	106T	242T	484T	996T	2x996T	
2.4 GHz	20MHz	5.5	5.5	5.5	5.5	NA	NA	NA	-2 / + 2 dB
	40MHz	5.5	5.5	5.5	5.5	5.5	NA	NA	- 3 / + 2 dB
5 GHz	20MHz	UNII1&2A -1dBm UNII2C 2dBm UNII3 4dBm	UNII1&2A 1dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	NA	NA	- 2 / + 2 dB -4 / +2dB (UNII1&2A) -16/+2dB (UNII 3)
	40MHz	UNII1&2A -1dBm UNII2C 2dBm UNII3 4dBm	UNII1&2A 1dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	NA	- 2 / + 2 dB -4 / +2dB (UNII1&2A)
	80MHz	UNII1&2A -1dBm UNII2C 2dBm UNII3 4dBm	UNII1&2A 1dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	UNII1&2A 2dBm UNII2C 3.5dBm UNII3 4dBm	NA	- 2 / + 2 dB -3 / +2dB (UNII1&2A)
	160MHz	NA	NA	NA	NA	NA	NA	NA	-
6 GHz	20MHz	-16dBm	-13dBm	-10dBm	-7dBm	NA	NA	NA	-13/+2dB
	40MHz	-16dBm	-13dBm	-10dBm	-7dBm	-4dBm	NA	NA	-17/+2dB
	80MHz	-16dBm	-13dBm	-10dBm	-7dBm	-4dBm	-1dBm	NA	-16/+2dB
	160MHz	-16dBm	-13dBm	-10dBm	-7dBm	-4dBm	-1dBm	1dBm Ch.207 : -1.5dBm	-18/+2dB

E. Bluetooth

Band	Target	tolerance
Bluetooth LE 1M	0dB	- 3 / + 3 dB
Bluetooth LE 2M	0dB	- 3 / + 3 dB

4.3 DUT Antenna Locations

Test Configurations for the WWAN Main Module within Host

The DUT is classified and evaluated as a portable device considering its installation environment and intended use case.

Testing was performed using a unified distance as part of a conservative and consistent approach.

MIMO1, MIMO2

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	45.0 mm	Yes	The test separation distance (45.0 mm) is declared by the OEM manufacturer and is normally determined by the closest distance between the antenna and the user.

BUA

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	22.0 mm	Yes	The test separation distance (22.0 mm) is declared by the OEM manufacturer and is normally determined by the closest distance between the antenna and the user.

5. SAR Summation Scenario

According to FCC KDB 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown below paths and are mode in same rectangle to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.
This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB 447498 D01v06.

WWAN

MIMO1		MIMO2		BUA		Scenario
4G	5G	4G	5G	4G	5G	
O	O	X	X	X	X	MIMO1
O	X	X	O	X	X	MIMO1 + MIMO2
X	X	X	X	O	O	BUA

WLAN/BT

Configurations	SISO			MIMO	
	Ant.1	Ant.2	Ant.3	CDD	SDM
Bluetooth	X	X	O	X	X
WLAN 2.4GHz(802.11b/g)	X	X	O	O	X
WLAN 2.4GHz(802.11n/ac/ax)	X	X	O	O	O
WLAN 5GHz(802.11a)	X	X	O	O	X
WLAN 5GHz(802.11n/ac/ax)	X	X	O	O	O
WLAN 6GHz(802.11a)	X	X	O	O	X
WLAN 6GHz(802.11n/ac/ax)	X	X	O	O	O

Note:

1. O = Support, X = Not Support
2. SISO = Single Input Single Output
3. SDM = Spatial Diversity Multiplexing
4. CDD = Cyclic Delay Diversity
5. MIMO = MIMO(Ant.1 + Ant.2), MIMO(Ant.1 + Ant.3)
6. The highest reported SAR for each exposure condition is used for SAR summation purpose.
7. LTE + 5G NR FR1 Scenarios are supported NSA and SA Connectivity.
8. 2.4 GHz WLAN and 5 GHz WLAN and 6 GHz WLAN cannot transmit simultaneously.
9. 2.4 GHz/5 GHz/6 GHz WLAN and Bluetooth can transmit simultaneously.

6. RF Exposure Evaluation

6.1 Limit for Maximum Permissive Exposure

According to FCC § 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in § 1.1307(b)

Limits For Maximum Permissible Exposure (MPE)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f^2)	6
30–300	61.4	0.163	1.0	6
300–1500	.....	.....	f/300	6
1500–100,000	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)—Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
30–300	27.5	0.073	0.2	30
300–1500	.....	.....	f/1500	30
1500–100,000	.....	.....	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

6.2 Limit for SAR

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population	CONTROLLED ENVIRONMENT Occupational
	W/kg	W/kg
The SAR averaged over the whole body mass.	0.08	0.4
The peak spatially-averaged SAR for the head, neck and trunk, averaged over any 1 g of tissue*	1.6	8
The peak spatially-averaged SAR in the limbs, averaged over any 10 g of tissue*	4	20

NOTES:

* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

** The Spatial Average value of the SAR averaged over the whole-body.

*** The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be mad fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e.as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

6.3 RF Exposure Exemption

For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph § 1.1307(b)(2) of this section): A single RF source is exempt if:

(Option A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph § 1.1307(b)(3)(ii)(A) of this section.
Medical implant devices may only use this exemption and that in paragraph § 1.1307(b)(3)(ii)(A);

or

(Option B) the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6GHz. P is given by :

$$P\,th(mW) = \{ERP_{20cm}(d\ /\ 20cm)^x \quad d \le 20cm$$

$$P\,th(mW) = \{ERP_{20cm} \quad 20cm < d \le 40cm$$

Where

$x = -log_{10}\left(\frac{60}{ERP_{20cm}\sqrt{f}}\right)$ and f is in GHz;

and

$$ERP_{20cm}(mW) = \{2040f \quad 0.3GHz \le f < 1.5GHz$$

$$ERP_{20cm}(mW) = \{3060 \quad 1.5GHz \le f \le 6GHz$$

or

(Option C) using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least λ/2π, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of λ/4 or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 –Single RF Sources Subject to Routine Environmental Evaluation under MPE-Based Exemption

Transmitter Frequency	Threshold ERP
0.3 – 1.34	1,920 R^2
1.34 – 30	3,450 R^2/f^2
30 – 300	3.83 R^2
300 – 1,500	0.0128 R^2f
1,500 – 100,000	19.2 R^2
Note: Transmitter Frequency is in MHz, Threshold ERP is in watts, R is in meters, f is in MHz.	

For multiple RF sources: Multiple RF sources are exempt if:

(A) The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those is paragraph § 1.1307(b)(3)(i)(A) of this section. Medical implant devices may only use this exemption and that in paragraph § 1.1307(b)(3)(i)(A).

(B) in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^{a} \frac{P_i}{P_{th,i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

Where:
a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph § 1.1307(b)(3)(i)(B) of this section for P_{th}, including existing exempt transmitters and those being added.
b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph § 1.1307(b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.
c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.
P_i= the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source $_i$ at a distance between 0.5 cm and 40 cm (inclusive).
$Pth_{,i}$= the exemption threshold power (P_{th}) according to paragraph § 1.1307(b)(3)(i)(B) of this section for fixed, mobile, or portable RF source $_i$.
ERP_j = the ERP of fixed, mobile, or portable RF source $_j$.
$ERPth._j$ = exemption threshold ERP for fixed, mobile, or portable RF source $_j$, at a distance of at least $\lambda/2\pi$ according to the applicable formula of paragraph § 1.1307(b)(3)(i)(C) of this section.
$Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.
$Exposure\ Limit_k$ = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as applicable from § 1.1310 of this chapter.

6.4 Calculated Result

6.4.1 The Estimated SAR for Below 6GHz WLAN (Option B)

Per FCC KDB 447498 D04v01, The SAR exclusion threshold for distance between 5 ~ 400mm is defined by the following equation and table:

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases} \quad \text{(B.1)}$$

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\,\text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,\text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \quad \text{(B.2)}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1).
The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz) \ Distance (mm)	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

Estimated SAR for Simultaneous Transmission:

For antennas exempt from standalone SAR testing, SAR values are not measured.
In such cases, estimated SAR is calculated for simultaneous transmission analysis per FCC KDB 447498 D04v01 § 1.1307(b)(3)(ii)(B) and Appendix C:

$$Estimated\ SAR = 1.6 * \frac{P_{ant}}{P_{th}}\ [W/kg]$$

Where P_{ant} is the maximum time-averaged power or ERP (whichever is greater), and P_{th} is the threshold from Formula (B.2).
Estimated SAR is used only for simultaneous transmission exemption and is not reported as standalone SAR.

Band	Config.	Ant	Highest Freq. (MHz)	Maximum Target Power (dBm)	Antenna Gain(dBi)	Maximum Allowed Power (dBm) EIRP	Maximum Allowed Power (dBm) ERP	Maximum Allowed Power (mW) ERP	Separation Distance (mm)	exclusion Limit (mW)	SISO estimated SAR (1g) (W/kg)	MIMO estimated SAR (1g) (W/kg)
BT 2.4G	SISO	WIFI1(Shark)	2480	3.00	7.34	10.34	8.19	6.59	45	179	0.059	
WLAN 2.4G	SISO	WIFI3(BUA)	2462	7.50	0.88	8.38	6.23	4.20	22	38	0.177	
WLAN 5G UNII 1&2A	SISO	WIFI3(BUA)	5320	4.00	4.15	8.15	6.00	3.98	22	25	0.255	
WLAN 5G UNII 2C	SISO	WIFI3(BUA)	5720	5.50	3.17	8.67	6.52	4.49	22	25	0.287	
WLAN 5G UNII3	SISO	WIFI3 (BUA)	5825	6.00	0.78	6.78	4.63	2.90	22	25	0.186	
WLAN 2.4G (WIFI1+ WIFI2)	MIMO	WIFI1(Shark)	2462	5.00	7.34	12.34	10.19	10.45	45	179	0.093	0.147
		WIFI2(Shark)	2462	4.00	5.92	9.92	7.77	5.98	45	179	0.053	
WLAN 2.4G (WIFI1+ WIFI3)	MIMO	WIFI1(Shark)	2462	5.00	7.34	12.34	10.19	10.45	45	179	0.093	0.172
		WIFI3(BUA)	2462	4.00	0.88	4.88	2.73	1.87	22	38	0.079	
WLAN 5G UNII 1&2A (WIFI1+WIFI2)	MIMO	WIFI1(Shark)	5320	0.50	9.13	9.63	7.48	5.60	45	136	0.066	0.141
		WIFI2(Shark)	5320	1.50	8.72	10.22	8.07	6.41	45	136	0.075	
WLAN 5G UNII 1&2A (WIFI1+WIFI3)	MIMO	WIFI1(Shark)	5320	0.50	9.13	9.63	7.48	5.60	45	136	0.066	0.209
		WIFI3(BUA)	5320	1.50	4.15	5.65	3.50	2.24	22	25	0.143	
WLAN 5G UNII 2C (WIFI1+WIFI2)	MIMO	WIFI1(Shark)	5720	2.00	8.28	10.28	8.13	6.50	45	136	0.076	0.137
		WIFI2(Shark)	5720	3.00	6.26	9.26	7.11	5.14	45	136	0.060	
WLAN 5G UNII 2C (WIFI1+WIFI3)	MIMO	WIFI1(Shark)	5720	2.00	8.28	10.28	8.13	6.50	45	136	0.076	0.238
		WIFI3(BUA)	5720	3.00	3.17	6.17	4.02	2.52	22	25	0.162	
WLAN 5G UNII 3 (WIFI1+WIFI2)	MIMO	WIFI1(Shark)	5825	2.00	8.67	10.67	8.52	7.11	45	136	0.084	0.159
		WIFI2(Shark)	5825	4.00	6.21	10.21	8.06	6.40	45	136	0.075	
WLAN 5G UNII 3 (WIFI1+WIFI3)	MIMO	WIFI1(Shark)	5825	2.00	8.67	10.67	8.52	7.11	45	136	0.084	0.201
		WIFI3(BUA)	5825	4.00	0.78	4.78	2.63	1.83	22	25	0.117	

Note

1. Estimated SAR was calculated using the worst-case antenna gain for each model.

2. The Maximum Target Power for each antenna under MIMO configuration was determined with reference to the conducted power results provided in the following RF test reports:

- Report No. HCT-RF-2507-FC077(DTS)
- Report No. HCT-RF-2507-FC078(DTS ax)
- Report No. HCT-RF-2507-FC080(UNII)
- Report No. HCT-RF-2507-FC081(UNII ax)

6.4.2 The MPE-based exemption for Above 6GHz WLAN (Option C)

Per § 1.1307(b)(3)(i)(C) of FCC rules and FCC KDB 447498 D04v01, an alternative to the SAR-based exemption is the MPE-based exemption, which applies over a wider frequency range from 300 kHz to 100 GHz. This exemption is applicable when the separation distance is greater than or equal to $\lambda / (2\pi)$, where λ is the free-space wavelength in meters.

Under this condition, the exemption is based on effective radiated power (ERP), defined as the product of the maximum antenna gain (linear scale) and the maximum time-averaged output power.

Table B.1 provides general frequency- and separation distance-dependent ERP thresholds that apply to all RF sources (fixed, mobile, and portable transmitters).

TABLE B.1—THRESHOLDS FOR SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

RF Source Frequency			**Minimum Distance**			**Threshold ERP**
f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W
0.3	–	1.34	159 m	–	35.6 m	1,920 R^2
1.34	–	30	35.6 m	–	1.6 m	3,450 R^2/f^2
30	–	300	1.6 m	–	159 mm	3.83 R^2
300	–	1,500	159 mm	–	31.8 mm	0.0128 R^2f
1,500	–	100,000	31.8 mm	–	0.5 mm	19.2R^2
Subscripts L and H are low and high; λ is wavelength. From § 1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.						

The power density was calculated using the equation

$$S = \frac{ERP}{4\pi R^2}\ [mW/cm^2] \leq MPE\ Limit (1.0)$$

where ERP is the effective radiated power in watts, and R is the separation distance in meters.

Band	Config.	Ant	Highest Frequency (MHz)	Maximum Target Power (dBm)	Antenna Gain(dBi)	Maximum Allowed Power (dBm) EIRP	Maximum Allowed Power (dBm) ERP	Maximum Allowed Power (mW) ERP	Separation Distance (mm)	ERP Exclusion Threshold (mW)	SISO MPE (mW/cm²)	MIMO MPE (mW/cm²)
WLAN 6G UNII5,6,7	SISO	WIFI3(BUA)	6875	3.00	2.24	5.24	3.09	2.04	22	9.29	0.033	
WLAN 6G UNII8	SISO	WIFI3(BUA)	7125	3.00	0.00	3.00	0.85	1.22	22	9.29	0.020	
WLAN 6G UNII5,6,7 (WIFI1+WIFI2)	MIMO	WIFI1(Shark)	6875	1.00	10.71	11.71	9.56	9.04	45	38.88	0.036	0.053
		WIFI2(Shark)	6875	-1.00	9.67	8.67	6.52	4.49	45	38.88	0.018	
WLAN 6G UNII5,6,7 (WIFI1+WIFI3)	MIMO	WIFI1(Shark)	6875	1.00	10.71	11.71	9.56	9.04	45	38.88	0.036	0.049
		WIFI3(BUA)	6875	-1.00	2.24	1.24	-0.91	0.81	22	9.29	0.013	
WLAN 6G UNII8 (WIFI1+WIFI2)	MIMO	WIFI1(Shark)	7125	1.00	8.90	9.90	7.75	5.96	45	38.88	0.023	0.039
		WIFI2(Shark)	7125	-1.00	9.06	8.06	5.91	3.90	45	38.88	0.015	
WLAN 6G UNII5,6,7 (WIFI1+WIFI3)	MIMO	WIFI1(Shark)	7125	1.00	8.90	9.90	7.75	5.96	45	38.88	0.023	0.031
		WIFI3(BUA)	7125	-1.00	0.00	-1.00	-3.15	0.48	22	9.29	0.008	

Note

1. Estimated SAR was calculated using the worst-case antenna gain for each model.

2. The Maximum Target Power for each antenna under MIMO configuration was determined with reference to the conducted power results provided in the following RF test reports:

- Report No. HCT-RF-2507-FC098 (UNII6G)

7. Simultaneous SAR Analysis

7.1 TFBMEEBN6FU

For transmitters operating below 6 GHz, SAR-based assessment was conducted using either measured or estimated SAR values in accordance with the exemption and estimation procedures described in 447498D04v01.
For above 6 GHz transmitters, RF exposure was evaluated based on MPE criteria using power density limits in § 1.1310(e)(1).
The combined exposure was assessed based on the applicable simultaneous transmission criteria in § 1.1307(b)(3)(ii)(B).

7.1.1 WWAN + Bluetooth Simultaneous SAR Analysis

Simultaneous Transmission Scenario						
Band		Position	LTE SAR (W/kg)	NR SAR (W/kg)	Bluetooth (W/kg)	Σ 1-g SAR (W/kg)
MIMO1	MIMO1		1	2	3	1+2+3
LTE Band 25(2)	LTE Band 12(17)	Rear	0.025	0.029	0.059	0.113
LTE Band 12(17)	LTE Band 66(4)	Rear	0.029	0.070	0.059	0.158

Simultaneous Transmission Scenario						
Band		Position	LTE SAR (W/kg)	NR SAR (W/kg)	Bluetooth (W/kg)	Σ 1-g SAR (W/kg)
MIMO1	MIMO1		1	2	3	1+2+3
LTE Band 26(5)	NR Band 25(2)	Rear	0.124	0.017	0.059	0.200
LTE Band 12(17)			0.029		0.059	0.105
LTE Band 13			0.036		0.059	0.112
LTE Band 48			0.000		0.059	0.076
LTE Band 25(2)	NR Band 5	Rear	0.025	0.068	0.059	0.152
LTE Band 48			0.000		0.059	0.127
LTE Band 66(4)			0.070		0.059	0.197
LTE Band 26(5)	NR Band 66	Rear	0.124	0.056	0.059	0.239
LTE Band 12(17)			0.029		0.059	0.144
LTE Band 13			0.036		0.059	0.151
LTE Band 48			0.000		0.059	0.115
LTE Band 25(2)	NR Band 71	Rear	0.025	0.011	0.059	0.095
LTE Band 7			0.065		0.059	0.135
LTE Band 66(4)			0.070		0.059	0.140
LTE Band 25(2)	NR Band 77(78)	Rear	0.025	0.060	0.059	0.144
LTE Band 26(5)			0.124		0.059	0.243
LTE Band 7			0.065		0.059	0.184
LTE Band 12(17)			0.029		0.059	0.148
LTE Band 13			0.036		0.059	0.155
LTE Band 48			0.000		0.059	0.119
LTE Band 66(4)			0.070		0.059	0.189

Simultaneous Transmission Scenario						
Band		Position	LTE SAR (W/kg)	NR SAR (W/kg)	Bluetooth (W/kg)	Σ 1-g SAR (W/kg)
MIMO1	MIMO2		1	2	3	1+2+3
LTE Band 25(2)	NR Band 77(78)	Rear	0.025	0.043	0.059	0.127
LTE Band 26(5)			0.124		0.059	0.226
LTE Band 7			0.065		0.059	0.167
LTE Band 12(17)			0.029		0.059	0.131
LTE Band 13			0.036		0.059	0.138
LTE Band 48			0.000		0.059	0.102
LTE Band 66(4)			0.070		0.059	0.172

Simultaneous Transmission Scenario						
Band		Position	LTE SAR (W/kg)	NR SAR (W/kg)	Bluetooth (W/kg)	Σ 1-g SAR (W/kg)
BUA	BUA		1	2	3	1+2+3
LTE Band 25(2)	NR Band 25(2)	Rear	0.554	0.422	0.059	1.035
LTE Band 26(5)			0.214		0.059	0.695
LTE Band 25(2)	NR Band 5	Rear	0.554	0.221	0.059	0.834
LTE Band 66(4)			0.176		0.059	0.456
LTE Band 26(5)	NR Band 66	Rear	0.214	0.192	0.059	0.465
LTE Band 66(4)			0.176		0.059	0.427

Note : WWAN SAR testing results of model TFBMEEBN6FU were referred to SAR Test Report, Report No. HCT-SR-2507-FC002-R2, and was also used to perform simultaneous transmission analysis.

7.1.2 WWAN + WLAN + BT Simultaneous Transmission and TER Summary

in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^{a} \frac{P_i}{P_{th,i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

Band	Position	WWAN+BT SAR	WLAN 2.4/5G SAR	WWAN+WLAN+BT SAR	Σ TER
		(W/kg)	(W/kg)	(W/kg)	
WLAN 2.4G	Rear	1.035	0.177	1.212	0.758
WLAN 5G UNII 1&2A	Rear	1.035	0.255	1.290	0.806
WLAN 5G UNII 2C	Rear	1.035	0.287	1.322	0.826
WLAN 5G UNII3	Rear	1.035	0.201	1.236	0.773

Band	Position	WWAN+BT SAR	WWAN+BT TER	WLAN 6G MPE	WLAN 6G TER	Σ TER
		(W/kg)		(W/m^2)		
WLAN 6G UNII5,6,7	Rear	1.035	0.647	0.053	0.053	0.700
WLAN 6G UNII8	Rear	1.035	0.647	0.039	0.039	0.686

7.2 TFBMEEBN6FR

For transmitters operating below 6 GHz, SAR-based assessment was conducted using either measured or estimated SAR values in accordance with the exemption and estimation procedures described in 447498D04v01.
For above 6 GHz transmitters, RF exposure was evaluated based on MPE criteria using power density limits in § 1.1310(e)(1).
The combined exposure was assessed based on the applicable simultaneous transmission criteria in § 1.1307(b)(3)(ii)(B).

7.2.1 WWAN + Bluetooth Simultaneous SAR Analysis

Simultaneous Transmission Scenario				
Band	Position	LTE SAR (W/kg)	Bluetooth (W/kg)	Σ 1-g SAR (W/kg)
BUA		1	2	1+2
LTE Band 7	Rear	0.759	0.059	**0.818**

Simultaneous Transmission Scenario						
Band		Position	LTE SAR (W/kg)	NR SAR (W/kg)	Bluetooth (W/kg)	Σ 1-g SAR (W/kg)
MIMO1	MIMO1		1	2	3	1+2+3
LTE Band 7	NR Band 77(78)	Rear	0.047	0.051	0.059	0.157
LTE Band 26(5)			0.064		0.059	0.174
LTE Band 41(38)			0.000		0.059	0.110

Simultaneous Transmission Scenario						
Band		Position	LTE SAR (W/kg)	NR SAR (W/kg)	Bluetooth (W/kg)	Σ 1-g SAR (W/kg)
MIMO1	MIMO2		1	2	3	1+2+3
LTE Band 7	NR Band 77(78)	Rear	0.047	0.025	0.059	0.131
LTE Band 26(5)			0.064		0.059	0.148
LTE Band 41(38)			0.000		0.059	0.084

7.2.2 WWAN + WLAN + BT Simultaneous Transmission and TER Summary

in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^{a} \frac{P_i}{P_{th,i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

Band	Position	WWAN+BT SAR	WLAN 2.4/5G SAR	WWAN+WLAN+BT SAR	Σ TER
		(W/kg)	(W/kg)	(W/kg)	
WLAN 2.4G	Rear	0.818	0.177	0.995	0.622
WLAN 5G UNII 1&2A	Rear	0.818	0.255	1.073	0.671
WLAN 5G UNII 2C	Rear	0.818	0.287	**1.105**	**0.691**
WLAN 5G UNII3	Rear	0.818	0.201	1.019	0.637

Band	Position	WWAN+BT SAR	WWAN+BT TER	WLAN 6G MPE	WLAN 6G TER	Σ TER
		(W/kg)		(W/m^2)		
WLAN 6G UNII5,6,7	Rear	0.818	0.511	**0.053**	**0.053**	**0.564**
WLAN 6G UNII8	Rear	0.818	0.511	0.039	0.039	0.550

Note : WWAN SAR testing results of model TFBMEEBN6FR were referred to SAR Test Report, Report No. HCT-SR-2507-FC013-R2, and was also used to perform simultaneous transmission analysis.

8. Measurement Uncertainty

The measured SAR was <1.5 W/Kg for 1g SAR and <3.75 W/Kg, for 10g SAR for all frequency Bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

9. Conclusion

The SAR and RF Exposure measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the abortion and distribution of electromagnetic energy in the body are very complex phenomena the depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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