

RF Exposure Report

Report No.: MFBCKS-WTW-P23080370

FCC ID: NKR-UMCSTD35HN

Model No.: UMC-STD35HN

Received Date: 2023/8/17

Test Date: 2023/8/29 ~ 2023/11/21

Issued Date: 2024/1/4

Applicant: Wistron NeWeb Corporation

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, TAIWAN

FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
MFBCKS-WTW-P23080370	Original release.	2024/1/4

1 Certificate of Conformity

Product: Automotive 5G-NR NAD

Brand: WNC

Test Model: UMC-STD35HN

Sample Status: Engineering sample

Applicant: Wistron NeWeb Corporation

Test Date: 2023/8/29 ~ 2023/11/21

FCC Rule Part: FCC Part 2 (Section 2.1091)

Standards: KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** 2024/1/4
Celine Chou / Senior Specialist

Approved by : Jeremy Lin , **Date:** 2024/1/4
Jeremy Lin / Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 29cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

Mode	Tune-up power (dBm)	Gain (dBi)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
GSM 850	35.00	2.63	37.63	29	0.548	0.549
GSM 1900	32.00	2.03	34.03	29	0.239	1.000
WCDMA Band 2	25.00	2.03	27.03	29	0.048	1.000
WCDMA Band 4	25.00	2.03	27.03	29	0.048	1.000
WCDMA Band 5	25.00	2.63	27.63	29	0.055	0.550
LTE Band 2	25.00	2.03	27.03	29	0.048	1.000
LTE Band 4	25.00	2.03	27.03	29	0.048	1.000
LTE Band 5	25.00	2.63	27.63	29	0.055	0.549
LTE Band 7	25.00	2.26	27.26	29	0.050	1.000
LTE Band 12	25.00	1.63	26.63	29	0.044	0.466
LTE Band 13	25.00	1.63	26.63	29	0.044	0.519
LTE Band 14	25.00	1.63	26.63	29	0.044	0.527
LTE Band 17	25.00	1.63	26.63	29	0.044	0.471
LTE Band 25	25.00	2.03	27.03	29	0.048	1.000
LTE Band 26 (814-824 MHz)	25.00	2.63	27.63	29	0.055	0.543
LTE Band 26 (824-849 MHz)	25.00	2.63	27.63	29	0.055	0.549
LTE Band 41	25.00	2.26	27.26	29	0.050	1.000
LTE Band 66	25.00	2.03	27.03	29	0.048	1.000
LTE Band 71	25.00	1.63	26.63	29	0.044	0.443
SA 5G NR n2	25.00	2.03	27.03	29	0.048	1.000
SA 5G NR n5	25.00	2.63	27.63	29	0.055	0.549
SA 5G NR n7	25.00	2.26	27.26	29	0.050	1.000
SA 5G NR n41	28.00	2.26	30.26	29	0.100	1.000
SA 5G NR n66	25.00	2.03	27.03	29	0.048	1.000
SA 5G NR n71	25.00	1.63	26.63	29	0.044	0.443
SA 5G NR n77, 78 (3450-3550 MHz)	28.00	2.62	30.62	29	0.109	1.000
SA 5G NR n77 (3700-3980 MHz)	28.00	2.62	30.62	29	0.109	1.000

Mode		Tune-up power (dBm)	Gain (dBi)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Co-located Ratio<1
ENDC 5G NR n2		25.00	2.03	27.03	29	0.048	1.000	-
ENDC n2	LTE Band 5	25.00	2.63	27.63	29	0.055	0.549	0.148
	LTE Band 13	25.00	1.63	26.63	29	0.044	0.519	0.133
	LTE Band 71	25.00	1.63	26.63	29	0.044	0.443	0.147
ENDC 5G NR n5		25.00	2.63	27.63	29	0.055	0.549	-
ENDC n5	LTE Band 66	25.00	2.03	27.03	29	0.048	1.000	0.148
ENDC 5G NR n7		25.00	2.26	27.26	29	0.050	1.000	-
ENDC n7	LTE Band 5	25.00	2.63	27.63	29	0.055	0.549	0.150
	LTE Band 12	25.00	1.63	26.63	29	0.044	0.466	0.144
ENDC 5G NR n41		28.00	2.26	30.26	29	0.100	1.000	-
ENDC n41	LTE Band 5	25.00	2.63	27.63	29	0.055	0.549	0.200
	LTE Band 26	25.00	2.63	27.63	29	0.055	0.543	0.201
	LTE Band 71	25.00	1.63	26.63	29	0.044	0.443	0.199
ENDC 5G NR n66		25.00	2.03	27.03	29	0.048	1.000	-
ENDC n66	LTE Band 5	25.00	2.63	27.63	29	0.055	0.549	0.148
	LTE Band 12	25.00	1.63	26.63	29	0.044	0.466	0.142
	LTE Band 13	25.00	1.63	26.63	29	0.044	0.519	0.133
ENDC 5G NR n71		25.00	1.63	26.63	29	0.044	0.443	-
ENDC n71	LTE Band 2	25.00	2.03	27.03	29	0.048	1.000	0.147
	LTE Band 7	25.00	2.26	27.26	29	0.050	1.000	0.149
	LTE Band 66	25.00	2.03	27.03	29	0.048	1.000	0.147
ENDC 5G NR n77		28.00	2.62	30.62	29	0.109	1.000	-
ENDC n77	LTE Band 5	25.00	2.63	27.63	29	0.055	0.549	0.209
	LTE Band 13	25.00	1.63	26.63	29	0.044	0.519	0.194
ENDC 5G NR n78		28.00	2.62	30.62	29	0.109	1.000	-
ENDC n78	LTE Band 7	25.00	2.26	27.26	29	0.050	1.000	0.159
	LTE Band 12	25.00	1.63	26.63	29	0.044	0.466	0.203
	LTE Band 71	25.00	1.63	26.63	29	0.044	0.443	0.208

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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