RF Exposure Info.

FCC ID: NDX-GW2
IC: 4678A-GW2

1 RF Exposure Compliance

1.1 Test Standards

Test standard	:	FCC 47 CFR Part 2 Section 2.1091 RSS-102 Issue 5 Section 3.2

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1.2 MPE Limits of FCC and IC

MPE Limit for FCC

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(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
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

MPE Limit for IC

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
$0.003\text{-}10^{21}$	83	90	-	Instantaneous*
0.1-10	-	$0.73/f$	-	6**
1.1-10	$87/f^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	$58.07/f^{0.25}$	$0.1540/f^{0.25}$	$8.944/f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142f^{0.3417}$	$0.008335f^{0.3417}$	$0.02619f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158f^{0.5}$	$4.21 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	$616000/f^{1.2}$

Note: f is frequency in MHz.
*Based on nerve stimulation (NS).
** Based on specific absorption rate (SAR).

1.3 Test Result

Test Result: PASS

This device is mobile device, and the applicant declares that the minimum separation distance is greater than 20cm, detail minimum distance refer to to below calculation table. Therefore MPE measurement or computational modeling should be used to determine compliance.

MPE Calculation is based on the conducted power, and considering maximum power and antenna gain. The following formula is used to MPE evaluation.

(1) The power density according to far-field model is:

$$S = \frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2}$$

Where:

P	= input power of the antenna.
G	= antenna gain relative to an isotropic antenna.
θ, ϕ	= elevation and azimuth angles.
R	= distance from the antenna to the point of investigation.

(2) For single or multiple RF sources, the calculated power density should comply with following:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Where:

S_i	= the power density when the f is i.
$S_{Limit,i}$	= the reference level requirement for power density when f is i.
f	= operating frequency.

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A. Stand-alone operation mode (worst mode)

Operating Mode	Band	PG (dBm)	PG (W)	Calculation (mW/cm^2)	FCC Limit (mW/cm^2)	Verdict
FLRC	2402-2480MHz	1.35	0.001	0.0003	1.0	Pass
Wi-Fi	2412-2472MHz	24.88	0.307	0.0612	1.0	Pass

Operating Mode	Band	PG (dBm)	PG (W)	Calculation (W/m^2)	IC Limit (W/m^2)	Verdict
FLRC	2402-2480MHz	1.35	0.001	0.003	5.35	Pass
Wi-Fi	2412-2472MHz	24.88	0.307	0.612	5.35	Pass

B. Simultaneous Transmission operation mode (worst mode)

FCC					
Operating Mode	FLRC Ratio	Wi-Fi Ratio	Sum Ratio	Limit	Result
FLRC + Wi-Fi	0.0003	0.0612	0.0615	<1	Pass
IC					
Operating Mode	FLRC Ratio	Wi-Fi Ratio	Sum Ratio	Limit	Result
FLRC + Wi-Fi	0.0006	0.1143	0.1149	<1	Pass

Note:

1. R = 0.2m