5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

According to §1.1307(b)(3)(ii)(B)

Simultaneous Transmission with both SAR-based and MPE-Based Test Exemptions

This case is described in detail in § 1.1307(b)(3)(ii)(B) and covers the situations where both SAR-based and MPE-based exemption may be considered for test exemption in fixed, mobile, or portable device exposure conditions. For these cases, a device with multiple RF sources transmitting simultaneously will be considered an RF exempt device if the condition of Formula (1) is satisfied.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
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	19.2R^2.

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

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (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 (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).

$P_{th,i}$ = the exemption threshold power (P_{th}) according to paragraph (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*.

$ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source *j*, at a distance of at least λ/2π according to the applicable formula of paragraph (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.

5.2 Measurement Result

Radio	Frequency (MHz)	λ /2Π (mm)	Distance (mm)	Exemption ERP (mW)	Maximum Conducted Power including Tune-up Tolerance (dBm)	Antenna Gain (dBi)	ERP	
							dBm	mW
DECT	1920-1930	24.87	200	768	20.5	0	18.35	68.39
BDR/EDR	2402-2480	19.88	200	768	2	0	-0.15	0.97

Note:

1. The Value of Maximum Conducted Power including Tune-up Tolerance was declared by the customer.
2. The DECT and BDR/EDR can transmit simultaneously.

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

$=ERP_{DECT} / ERP_{th} + ERP_{BDR/EDR} / ERP_{th}$

$=68.39/768 + 0.97/768$

$=0.091$

< 1.0

Result: The device compliant the MPE-Based Exemption at 20cm distances.

DECLARATION OF SIMILARITY LETTER

vtech

VTech Telecommunications Ltd

Apr. 10, 2023

To whom it may concern,

FCC-Multiple Models Confirmation Letter

I, the undersigned, hereby confirm that the family models are listed in the following table.

These models are **identical** as follows:

☒ Electrical designs, including software & firmware
☒ PCB layout ☒ Construction design/Physical design/Enclosure
☐ Others, please specify _____

The only **differences** between these models are the follows for marketing purpose:

☒ Color ☐ Cosmetic details
☐ Trade name ☒ Model number
☒ Others, please specify Package type, no. of Handset and Charger.

☒ Suffix ("X,Y" in BL102-XY andBL102-0Y) represents
☐ Color code ☐ Packing configuration
☒ Others, please specify
X= any alphanumeric character or blank is presenting number of Handset and extra Charger.
Y= any alphanumeric character or blank is presenting different package type (material). or color of enclosure.

,but models with suffix (X,Y,Z) are identical in:
☒ Electrical designs, including software & firmware
☒ PCB layout
☒ Construction design/Physical design/Enclosure
☐ Others, please specify

For the product subject to authorization under FCC Declaration of Conformity:
In addition, it is to confirm that all the below information
1) The U.S. responsible party,
2) FCC label artworks and location,
3) FCC required statement in the user manual
Are the same but different in the following model numbers only:

Item #	New Model	Model Number	Trade Name	Remarks
1	☒ YES	BL102	AT&T	1 base + 1 handset
2	☒ YES	BL102-2	AT&T	1 base + 2 handsets + 1 charger
3	☒ YES	BL102-3	AT&T	1 base + 3 handsets + 3 chargers
4	☒ YES	BL102-4	AT&T	1 base + 4 handsets + 3 chargers
5	☒ YES	BL102-5	AT&T	1 base + 5 handsets + 4 chargers
6	☒ YES	BL102-XY	AT&T	1 base + X handsets + (X-1) chargers

The sample(s) being submitted to China Certification ICT Co., Ltd (Dongguan) for conformity assessment is BL102-2 of the above list.

vtech

VTech Telecommunications Ltd

Regards,

Michael Tsui
Approbation Supervisor

===== END OF REPORT =====