

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	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

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

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 $\lambda/2\pi$ 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)	$\lambda / 2 \Pi$ (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	0.00	-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.

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

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

$$=68.39/768 + 0.97/768$$

$$=0.091$$

$$< 1.0$$

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

DECLARATION OF SIMILARITY LETTER



Apr. 10, 2023

VTech Telecommunications Ltd

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 and BL102-0Y) 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

Regards,



Michael Tsui
Approbation Supervisor

VTech Telecommunications Ltd

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