

## 1. Purpose

This report evaluates the RF exposure of the C25 base station.

## 2. References

- RSS-102 issue 6
- FCC 47 CFR Part 1, section 1.310
- FCC KDB 447498 DO1, RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices, V6
- OET bulletin 65, Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, Edition 97-01

## 3. Equipment Description

Description: DECT Base Station  
Model: C25  
Additional Model(s): None  
Brand Name(s): Lightspeed Corporation  
Serial Number: 02-C25-Z-S2340-00028  
HW version: Rev A  
FW Version: 7.1.00  
FCC ID: ORV-LSC25  
IC: 1732B-LSC25  
Equipment type: End Product

### 3.1. Radiation Sources

Mode	Description	
UPCS	Frequency Range	1921.536 – 1928.448 MHz
	Channels	5
	Modulations	GFSK
	Max Conducted power [dBm]	13.9
	Antenna gain [dBi]	6.7

4. Rf Exposure Classification

Threshold calculation FCC

FCC Limits – General Population / Uncontrolled Exposure				
Frequency range [MHz]	Electric field strength [V/M]	Magnetic field strength [A/M]	Power density [mW/cm <sup>2</sup> ]	Averaging time [min]
0.3 - 1.34	614	1.63	100	30
1.34 - 30	842/f	2.19 / f	180 / f <sup>2</sup>	30
30 - 300	27.5	0.073	0.2	30
300 - 1500	N/A	N/A	f / 1500	30
1500 - 100000	N/A	N/A	<b>1</b>	30

Threshold calculation RSS-102 Issue 6

Below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance).
At or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where $f$ is in MHz.
At or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance).
At or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where $f$ is in MHz.
At or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

5. Assessment

OET bulletin 65 uses the following equation to predict the strength of an RF field at a given distance:

The results of the assessment are shown below:

Threshold calculation, FCC

Assessment Results		
Variable	Value	Unit
Assessment frequency (f)	1921.536	MHz
FCC Limit	<b>1</b>	
Peak Conducted Power (P)	13.9	dBm
	24.547	mW
Peak Antenna Gain (G)	6.7	dBi
	4.677	
Distance (R)	20	cm
Power Density (S)	<b>0.0228</b>	mW/cm <sup>2</sup>
	<b>0.2284</b>	W/m <sup>2</sup>

The power density of the EUT at 20cm is below the FCC limit.

Threshold calculation, RSS-102 issue 6

separation distance	20	cm
frequency	1928	MHz
Threshold	2.3	W

EUT Output Power

Assessment Results		
Max power	13.9	dBm
Antenna gain	6.7	dBi
Power for RF	<b>20.6</b>	dBm
Exposure	<b>0.11</b>	W (EIRP)

As both conducted power and EIRP are below  $P_{th}$  the device is exempt from rf exposure evaluation.