

1. Purpose

This report evaluates the RF exposure of the T25 base station. This report follows the calculations outlined in OET bulletin 65, Edition 97-01.

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: T25
Additional Model(s): None
Brand Name(s): Lightspeed Corporation
Serial Number: T25-Z-2428-00003
HW version: 389-00011 Rev A
FW Version: 7.1.01
FCC ID: ORV-LST25
IC: 1732B-LST25
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]	15.11
	Antenna gain [dBi]	6.5

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 ²]	Averaging time [min]
0.3 - 1.34	614	1.63	100	30
1.34 - 30	842/f	2.19 / f	180 / f ²	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	1	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	1	W/m ²
Peak Conducted Power (P)	15.11	dBm
	32.4	mW
Peak Antenna Gain (G)	6.5	dBi
	4.5	
Distance (R)	20	cm
Power Density (S)	0.2901	W/m ²

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

Threshold calculation, RSS-102 issue 6

separation distance	200	mm
frequency	1921.536	MHz
Threshold	2.3	W

EUT Output Power

Assessment Results		
Max power	15.11	dBm
Antenna gain	6.5	dBi
Power for RF	21.61	dBm
Exposure	0.144877	W (EIRP)

As EIRP is below Threshold the device is exempt from rf exposure evaluation.