1. Purpose

   This report evaluates the RF exposure of the CMT

2. References

   • RSS-102 issue 6

   • FCC KDB 447498 DO4

3. Equipment Description

Description:	DECT Microphone
Model:	CMT
Additional Model(s):	None
Brand Name(s):	Lightspeed Corporation
Serial Number:	03-CMT-Z-S2342-00116
HW version:	Rev A
FW Version:	7.1.00
FCC ID:	ORV-LSCMT
IC:	1732B-LSCMT
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]	12.1
	Antenna gain [dBi]	-4.31

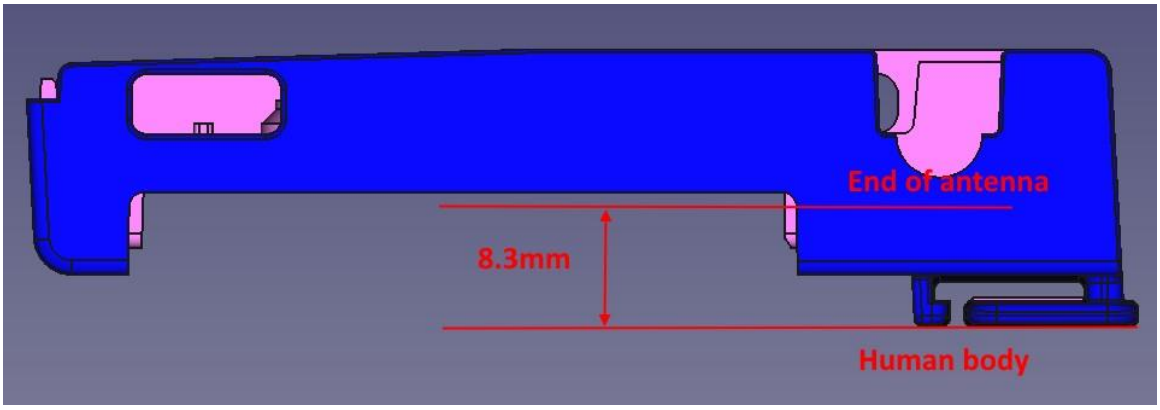

Figure 1 – Minimum distance to body

4. Rf Exposure Classification

Threshold calculation, KDB 447498 D04

$$ERP_{20\,\mathrm{cm}}\,(\mathrm{mW}) = \begin{cases} 2040f & 0.3\ \mathrm{GHz} \le f < 1.5\ \mathrm{GHz} \\ 3060 & 1.5\ \mathrm{GHz} \le f \le 6\ \mathrm{GHz} \end{cases} \qquad \text{(B. 1)}$$

$$P_{\mathrm{th}}\,(\mathrm{mW}) = \begin{cases} ERP_{20\,\mathrm{cm}}(d/20\ \mathrm{cm})^{x} & d \le 20\ \mathrm{cm} \\ ERP_{20\,\mathrm{cm}} & 20\ \mathrm{cm} < d \le 40\ \mathrm{cm} \end{cases}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\mathrm{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20\mathrm{cm}}$ is per Formula (B.1).

Threshold calculation RSS-102 Issue 6

Section 6.3 SAR exemption limits

Frequency (MHz)	≤ 5 mm(mW)	10 mm (mW)	15 mm(mW)	20 mm(mW)	25 mm(mW)	30 mm(mW)	35 mm(mW)	40 mm(mW)	45 mm(mW)	> 50 mm(mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

5. Assessment

The results of the assessment are shown below:

Threshold calculation, RSS-102 issue 6

separation distance	5	mm
frequency	1928	MHz
Threshold	6	mW at MHz: 1900
P_{th}	6	mW

EUT Output Power

Assessment Results		
Max power	12.1	dBm
	16.1	mW
Duty cycle	0.131	(13.1% duty cycle)
Antenna gain	-4.31	dBi
Power for RF	**2.1**	mW (conducted)
Exposure	**0.05**	mW (EIRP)

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

Threshold calculation, KDB 447498 D04

separation distance	5	mm
frequency	1928	MHz
ERP_{20cm}	3060	
P_{th}	3.3	mW

EUT Output Power

Assessment Results		
Max power	12.1	dBm
	16.1	mW
Duty cycle	0.131	(13.1% duty cycle)
Antenna gain	-4.31	dBi
Power for RF	**2.1**	mW (conducted)
Exposure	0.05	mW (EIRP)
	0.03	mW (ERP)