

RF Exposure information

The Vence Collar System is classified as portable device with separation distance of 5 mm (is ensured by the physical dimensions of the case, PCB and integrated antenna and was measured as the distance between the closest point of the external case to the outermost point of the internal antenna). The Vence Collar System includes, LoRa FHSS and LoRa DTS transmitters operating according to FCC part 15 subpart C section 15.247 (DTS, FHSS).

The RF technologies: LoRaWAN FHSS and LoRaWAN DTS are not transmitting simultaneously.

Maximum measured transmitter power:

Pout conducted		Maximum antenna gain, dBi	Pout EIRP	
dBm	mW		dBm	mW
24.27	267.3	1.2	25.47	352.37

The SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and separation distance ≤ 50 mm are as in below table .

MHz	5	10	15	20	25	30	35	40	45	50	mm
150	39	77	116	155	194	232	271	310	349	387	SAR Test Exclusion Threshold (mW)
300	27	55	82	110	137	164	192	219	246	274	
450	22	45	67	89	112	134	157	179	201	224	
835	16	33	49	66	82	98	115	131	148	164	
900	16	32	47	63	79	95	111	126	142	158	
1500	12	24	37	49	61	73	86	98	110	122	
1900	11	22	33	44	54	65	76	87	98	109	
2450	10	19	29	38	48	57	67	77	86	96	
3600	8	16	24	32	40	47	55	63	71	79	
5200	7	13	20	26	33	39	46	53	59	66	
5400	6	13	19	26	32	39	45	52	58	65	
5800	6	12	19	25	31	37	44	50	56	62	

According to the manufacturer declaration the worst case condition is transmission of 394 ms within 1 hours in the normal operating mode, but in any case no more than 394 ms within 5 min.

The max transmission duty cycle is $0.394s / 300s = 0.001313 = 0.13\%$

The equivalent average EIRP is:

$$352.37 \text{ mW} \times 0.001313 = 0.462 \text{ mW} \leq 16 \text{ mW}$$

According to KDB 447498 D01 v05r02 the device is excluded from SAR evaluation.