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Report No.: 2304TW5401-U2
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RF Exposure Evaluation

FCC ID	:	CHQ7250T
APPLICANT	:	RHINE ELECTRONIC CO., LTD.
Product	:	Transmitter
Model No.	:	UC7250T
Brand Name	:	RHINE
FCC Rule Part(s):	:	Part 2.1093 (Portable)
Received Date	:	April 25, 2023

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Testing Laboratory
3261

Revision History

Report No.	Version	Description	Issue Date	Note
2304TW5401-U2	0.0	Draft Report	2023-06-02	

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	Transmitter
Model No.	UC7250T
Frequency Range	433.92MHz
Type of modulation	ASK
Antenna Type	Integral Antenna

2. RF Exposure Evaluation

2.1. FCC Limits

According to FCC KDB 447498 D04V01 - SAR-Based Exemption

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula .

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

where

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

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

$$P_{\text{th}}\ (\text{mW}) = ERP_{20\ \text{cm}}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

The example values shown as below are for illustration only.

Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)									
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

Note: when 10-g extremity SAR applies, SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds.

2.2. Test Result of RF Exposure Evaluation

Mode	Frequency Band (MHz)	E-field (dBuV/m)	EIRP (mW)	SAR Test Exclusion Threshold (mW)
433.92MHz	433.92	73.51	0.0067	22

So, this device can complies the SAR test exclusion.

The End