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RF Exposure Evaluation

- FCC ID : CHQ7254T
- **APPLICANT** : RHINE ELECTRONIC CO., LTD.
- **Application Type** : Certification
- Product : Transmitter
- Model No. : UC7254T
- Brand Name : RHINE
- FCC Rule Part(s): : Part 2.1093 (Portable)
- Received Date : June 17, 2023
- Tested By: Fran Chen
(Fran Chen)Reviewed By: Paddy Chen
(Paddy Chen)Approved By: Chenz Ker)

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
2306TW5402-U2	1.0	Original Report	2023-07-07	



1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	Transmitter
Model No.	UC7254T
Brand Name	RHINE
Frequency Range	303.875 MHz



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 .

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

where

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

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

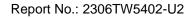
$$P_{\text{th}} (\text{mW}) = ERP_{20 \text{ cm}} (\text{mW}) = \begin{cases} 2040f & 0.3 \text{ GHz} \le f < 1.5 \text{ GHz} \\ \\ 3060 & 1.5 \text{ GHz} \le f \le 6 \text{ GHz} \end{cases}$$

The example values shown as below are for illustration only.

	Distance (mm)										
Frequency (MHz)		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

Example Power Thresholds (mW)

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)	Maximum EIRP (dBm)	EIRP (mW)	FCC SAR Test Exclusion Threshold (mW)	
Sub-1G	303.875	-36.47	-64.46	2.5	

So, this device can complies the SAR test exclusion.

—— The End