

RF EXPOSURE REPORT



Applicant: Advanced Radiotech Corporation
No.3, South 1st Road, Chien Chen District, Kaohsiung, 806, Taiwan

Manufacturer: Advanced Radiotech Corporation
No.3, South 1st Road, Chien Chen District, Kaohsiung, 806, Taiwan

Product Name: 406TX(2.4GHz)

Brand Name: Advanced Radiotech Corporation

Model No.: 406TX(2.4GHz)

Model Difference: N/A

FCC ID R4UARCRFM2400TX

Date of EUT Received: Apr. 01, 2024

Issue Date: Aug. 08, 2024

John Yeh
Approved By _____

John Yeh

We hereby certify that:

The above equipment was evaluated by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1091, KDB 447498 D01 v06.

The results of this report relate only to the sample identified in this report.

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| Revision History | | | | | |
|------------------|----------|-------------|---------------|-------------|--------|
| Report Number | Revision | Description | Issue Date | Revised By | Remark |
| TESA2403000162ES | 00 | Original | Aug. 08, 2024 | Kimmy Chiou | |
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Note:

- 1、The remark "*" indicates modification of the report upon requests from certification body.

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

| | |
|-------------------|--------------------------------|
| Product Name: | 406TX(2.4GHz) |
| Brand Name: | Advanced Radiotech Corporation |
| Model No.: | 406TX(2.4GHz) |
| Model Difference: | N/A |

1.2 Evaluation site

| Laboratory | Site Address | | FCC Designation number | ISED Company Number | CAB Identifier |
|---|-------------------------------------|---|------------------------|---------------------|----------------|
| SGS Taiwan Ltd. Central RF Lab. (TAF code 3702) | <input checked="" type="checkbox"/> | No. 134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, 24803, Taiwan. | TW0027 | 4620A | TW3702 |
| | <input type="checkbox"/> | No. 2, Keji 1st Rd., Guishan Township, Taoyuan County, 333 Taiwan. | TW0028 | 4620E | |
| | <input type="checkbox"/> | 1F, No. 8, Alley 15, Lane 120, Sec. 1, Nei Hu Road, Neihu District, Taipei City, 222 Taiwan. | TW0029 | 23862 | |

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1.3 Antenna Information:

| Freq. (MHz) | Peak Antenna Gain (dBi) |
|----------------|----------------------------|
| 2400-2500 | 0.00 |

Note: Antenna information is provided by the applicant.

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2 FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 FCC Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm ²) | Averaging Time (minute) |
|---|-------------------------------|-------------------------------|-------------------------------------|-------------------------|
| Limits for General Population/Uncontrolled Exposure | | | | |
| 0.3-1.34 | 614 | 1.63 | *(100) | 30 |
| 1.34-30 | 824/f | 2.19/f | *(180/f ²) | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | / | / | f/1500 | 30 |
| 1500-100000 | / | / | 1.0 | 30 |

f = frequency in MHz

* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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2.2 Power Density Calculation (Worst Case)

FCC Standalone MPE

| Operation Mode | Evaluation Frequency (MHz) | Operation Distance (cm) | Max. Output Power Include Tolerance (dBm) | Antenna Gain (dBi) | Max. EIRP (mW) | Power Density (PD) (mW/cm ²) | Limit (mW/cm ²) | Pass / Fail | Power Density / Limit |
|----------------|----------------------------|-------------------------|---|--------------------|----------------|--|-----------------------------|-------------|-----------------------|
| SRD | 2405 | 20 | 20 | 0.00 | 100.00 | 0.020 | 1.000 | Pass | 0.020 |

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.

~ End of Report ~

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