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RF Exposure Evaluation Report

Report No. :	CQASZ20210901617E-02
Applicant:	AETHER EYEWEAR PTE. LTD.
Address of Applicant:	160 Robinson Road #14-04 Singapore Business Federation Centre (068914)
Equipment Under Test (EUT):	
EUT Name:	AETHER AUDIO EYEWEAR(Charging warehouse)
Model No.:	T-HT1
Brand Name:	Aether
FCC ID:	2A2D8-THT1
Standards:	47 CFR Part 1.1307 47 CFR Part 1.1310 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt:	2021-05-31
Date of Test:	2021-05-31 to 2021-09-24
Date of Issue:	2021-9-26
Test Result :	**PASS***

***In the configuration tested, the EUT complied with the standards specified above**

Tested By: lewis zhou
(Lewis Zhou)

Reviewed By: Timo Lei
(Timo Lei)

Approved By:
(Jack Ai)

Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20210901617E-02	Rev.01	Initial report	2021-9-26

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2 General Information

2.1 Client Information

Applicant:	AETHER EYEWEAR PTE. LTD.
Address of Applicant:	160 Robinson Road #14-04 Singapore Business Federation Centre (068914)
Manufacturer:	AETHER TECHNOLOGIES LTD
Address of Manufacturer:	Unit 301 Central Construction Bld, 18 Yanshan Road, Nanshan District, Shenzhen, Guangdong Province PR China
Factory:	AETHER TECHNOLOGIES LTD
Address of Factory:	Unit 301 Central Construction Bld, 18 Yanshan Road, Nanshan District, Shenzhen, Guangdong Province PR China

2.2 General Description of EUT

Product Name:	AETHER AUDIO EYEWEAR(Charging warehouse)
Model No.:	T-HT1
Trade Mark:	Aether
Hardware Version:	v12
Software Version:	WATA_Tx_ES7P003_V21_21070801
Frequency Range:	13.56MHz
Modulation Type:	ASK
Number of Channels:	N/A
Sample Type:	☐ Mobile ☒ Portable ☐ Fix Location
Antenna Type:	Integral antenna
Antenna Gain:	0dBi
Power Supply:	DC 5V 2A

3 SAR Evaluation

3.1 RF Exposure Compliance Requirement

3.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

3.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation[17]
The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

3.1.3 EUT RF Exposure

eirp = pt x gt = $(E \times d)^2/30$
where:
pt = transmitter output power in watts,
gt = numeric gain of the transmitting antenna (unitless),
E = electric field strength in V/m, ---$10^{((dB\mu V/m)/20)}/10^6$,
d = measurement distance in meters (m)---3m,
So pt = $(E \times d)^2/30$ / gt

The worst case (refer to report CQASZ20210901617E-01) is below:

Frequency (MHz)	Level (dBuV/m)	Polarization
13.56	81.52	Peak

For 13.56MHz wireless:
Field strength = 81.52dBμV/m @3m
Ant. gain 0dBi; so Ant numeric gain=1
So pt={$[10^{(81.52/20)}/10^6 x3]^2/30$ /1}x1000mW =0.043mW
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]=(0.043mW/5mm)*√0.01356=0.001<3

So the SAR report is not required.