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FCC ID.: JFZLP120XBTA

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KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

DIRECT DRIVE Turntable

Model: AT-LP120XBT-USB

Data Applies To: N/A

Trade Name: audio-technica

Issued to

Audio-Technica Corporation
2-46-1 Nishi-naruse, Machida, Tokyo 194-8666, JAPAN

Issued By

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)

Issued Date: March 21, 2022

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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REVISION HISTORY

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	March 21, 2022	Initial Issue	ALL	Angel Cheng



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1. TEST RESULT CERTIFICATION

We hereby certify that:

The equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirement of the applicable standards. The test record, data evaluation and Equipment under Test (EUT) configurations represented herein are true and accurate accounts of the measurement of the sample's RF characteristics under the conditions specified in this report.

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted
Statements of Conformity	
Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

Approved by:



Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.

2. LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

3. EUT SPECIFICATION

EUT	DIRECT DRIVE Turntable		
Model	AT-LP120XBT-USB		
Brand	audio-technica		
RF Module	Sunitec	Model:	BM356
Frequency band (Operating)	<input type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462MHz 802.11n HT40: 2422MHz ~ 2452MHz <input checked="" type="checkbox"/> Others 2402MHz ~ 2480MHz (BT3.0 BT 4.0 BT5.0)		
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others		
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm ²) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm ²)		
Antenna Specification	Multilayer Chip Antenna / Gain: 1.50 dBi (Numeric gain: 1.41) worst		
Maximum Average output power	GFSK:	1.71 dBm	(1.483 mW)
	8-DPSK	-1.09 dBm	(0.777 mW)
	GFSK(4.0)	-3.50 dBm	(0.447 mW)
	GFSK(5.2)	-3.39 dBm	(0.458 mW)
Maximum Tune up Power	GFSK:	2.50 dBm	(1.778 mW)
	8-DPSK:	-0.50 dBm	(0.891 mW)
	GFSK(4.0)	-3.50 dBm	(0.447 mW)
	GFSK(5.2)	-2.50 dBm	(0.562 mW)
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A		
Reported Date	March 15, 2022		

Note: RF power data reference report (TMTN2201000126NR & TMTN2201000127NR)

4. TEST RESULTS

No non-compliance noted.

Calculation

$$\text{Given } E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{377}$$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where $P =$ Power in mW

$G =$ Numeric antenna gain

$S =$ Power density in mW / cm²

GFSK:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	Result
High	2480	1.778	1.41	20	0.0005	1	Pass

8-DPSK:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	Result
Mid	2441	0.891	1.41	20	0.0003	1	Pass

GFSK(4.0):

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	Result
High	2480	0.447	1.41	20	0.0001	1	Pass

GFSK(5.2):

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	Result
High	2480	0.562	1.41	20	0.0002	1	Pass