



FCC ID.: 2AM73-DJMS7
Report No.: T200717N01-MF

Page: 1 / 7
Rev.: 00

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

DJ MIXER

Model: DJM-S7

Data Applies To: N/A

Trade Name: Pioneer DJ

Issued to

AlphaTheta Corporation
6F, Yokohama i-Mark place, 4-4-5 Minatomirai, Nishi-ku
Yokohama, Kanagawa, 220-0012, Japan

Issued By

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

Issued Date: October 29, 2020

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.
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: T200717N01-MF

Page: 2 / 7
Rev.: 00

REVISION HISTORY

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	October 29, 2020	Initial Issue	ALL	Angel Cheng



Report No.: T200717N01-MF

Page: 3 / 7
Rev.: 00

TABLE OF CONTENTS

1. LIMIT.....	4
2. EUT SPECIFICATION	5
3. TEST RESULTS.....	6
4. MAXIMUM PERMISSIBLE EXPOSURE.....	7



Report No.: T200717N01-MF

Page: 4 / 7
Rev.: 00

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	DJ MIXER		
Model	DJM-S7		
Brand	Pioneer DJ		
RF Module	Sunitec	Model:	BM308
Frequency band (Operating)	☐ 802.11b/g/n HT20: 2412MHz ~ 2462MHz 802.11n HT40: 2422MHz ~ 2452MHz ☒ Others 2402MHz ~ 2480MHz (BT3.0 BT 4.0)		
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation) ☐ Others		
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm ²) ☒ General Population/Uncontrolled exposure (S=1mW/cm ²)		
Antenna Specification	Multilayer Chip Antenna / Gain:	-5.0 dBi	(Numeric gain: 0.32) worst
Maximum Output power	GFSK: 8-DPSK GFSK(4.2)	5.97 dBm 4.50 dBm 5.35 dBm	(3.954 mW) (2.818 mW) (3.428 mW)
Maximum Average output power	GFSK: 8-DPSK GFSK(4.2)	5.78 dBm 1.84 dBm 4.92 dBm	(3.784 mW) (1.528 mW) (3.105 mW)
Maximum Tune up Power	GFSK: 8-DPSK: GFSK(4.2)	6.00 dBm 2.00 dBm 5.00 dBm	(3.981 mW) (1.585 mW) (3.162 mW)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A		
Received Date	July 17, 2020		
Reported Date	September 30, 2020		

Note: RF power data reference report (T200717N01-RP1-1, T200717N01-RP1-2)

4. TEST RESULTS

No non-compliance noted.

Calculation

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

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:

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

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

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²



Report No.: T200717N01-MF

Page: 7 / 7
Rev.: 00

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
Mid	2441	3.981	0.32	20	0.0003	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	1.585	0.32	20	0.0001	1	Pass

GFSK(4.2):

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	Result
Mid	2442	3.162	0.32	20	0.0002	1	Pass