



RF TEST REPORT

Product Name: Alco RF OBC Dock

Model Name: A5-APU-1-PTB-915-D, Colorado

FCC ID: ZDLRF6

Issued For : Buddi Limited

Talbot House, 17 Church Street, Rickmansworth, WD3 1DE,
United Kingdom

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Chen Hsong Industrial Park,
No.177 Renmin West Road, Jinsha Community, Kengzi
Street, Pingshan New District, Shenzhen, China

Report Number: LGT24K083HA02

Sample Received Date: Nov. 15, 2024

Date of Tested: Nov. 15, 2024 - Dec. 04, 2024

Date of Issue: Dec. 04, 2024

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TEST REPORT CERTIFICATION

Applicant Buddi Limited
Address Talbot House, 17 Church Street, Rickmansworth, WD3 1DE, United Kingdom
Manufacturer Buddi Limited
Address Talbot House, 17 Church Street, Rickmansworth, WD3 1DE, United Kingdom
Product Name Alco RF OBC Dock
Trademark buddi
Model Name A5-APU-1-PTB-915-D, Colorado
Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR §2.1091	PASS

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Revision History

Rev.	Issue Date	Contents
00	Dec. 04, 2024	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Alco RF OBC Dock		
Brand Name	buddi		
Model Name	A5-APU-1-PTB-915-D, Colorado		
Series Model	The difference only in the model name.		
Model Difference	Only the model is different		
Product Description	The EUT is Alco RF OBC Dock		
	Operation Frequency:	914.5~921 MHz	
	Modulation Type:	FSK	
	Antenna gain:	0.76dBi	
	Antenna Designation:	Flex Antenna	
Power input	Input: AC 100~240V,47-63Hz,0.4A Output: DC 5.99V 2A Max		
Hardware Version	V5.2		
Software Version	2.14		

1.2 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Chen Hsong Industrial Park, No.177 Renmin West Road, Jinsha Community, Kengzi Street, Pingshan New District, Shenzhen, China
Accreditation Certificate	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136



2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



2.5 TEST RESULT

Turn up

Frequency (MHz)	Detector	Turn up Power (dBm)
914.5-921	Peak	-1+/-1

Frequency (MHz)	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit (mW/cm ²)
917.5	0.00	1.00	0.76	1.19	0.0002	1

※※※※※ END OF THE REPORT ※※※※※