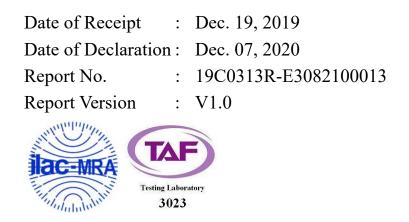
# RF Exposure Evaluation Report

Product Name : BF-IDU07 Model No. : BIS U-620-068-111-00-S115, BIS U-620-068-111-00-ST29, BIS U-626-069-111-06-ST31, BIS U-626-069-111-06-ST32 FCC ID : 2AGZY-BFIDU07

Applicant : Balluff GmbH

Address : Schurwaldstrasse 9, Neuhausen a.d.F. 73765, Germany



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.



Issued Date: Dec. 07, 2020 Report No.: 19C0313R-E3082100013



Product Name	BF-IDU07				
Applicant	Balluff GmbH				
Address	Schurwaldstrasse 9, Neuhausen a.d.F. 73765, Germany				
Manufacturer	Balluff GmbH				
Model No.	BIS U-620-068-111-00-S115, BIS U-620-068-111-00-ST29, BIS U-626-069-111-06-ST31, BIS U-626-069-111-06-ST32				
FCC ID.	2AGZY-BFIDU07				
Trade Name	BALLUFF				
Applicable Standard	KDB 447498 D01 v06	$ \begin{tabular}{ c c c c } \hline & & \\ \hline \hline & & \\ \hline \hline & & \\ \hline & & \\ \hline & & \\ \hline \hline \\ \hline & & \\ \hline \hline \\ \hline \\$			
Test Result	Complied				
Documented By	:	Joanne Lin			
	( Seni	or Adm. Specialist / Joanne Lin )			
Tested By	:	wentee			
		(Supervisor / Wen Lee)			
Approved By	:	Hondo			
		(Director / Vincent Lin)			



# **Revision History**

Report No.	Version	Description	Issued Date
19C0313R-E3082100013	V1.0	Initial issue of report.	2020-12-07



# 1. GENERAL INFORMATION

# **1.1. EUT Description**

Product Name	BF-IDU07
Trade Name	BALLUFF
Model No.	BIS U-620-068-111-00-S115, BIS U-620-068-111-00-ST29,
	BIS U-626-069-111-06-ST31, BIS U-626-069-111-06-ST32
FCC ID.	2AGZY-BFIDU07
Contain FCC ID.(BT)	RFRMSR
Frequency Range	902.75-927.25MHz
Channel Number	50
Type of Modulation	FHSS:ASK
Antenna Type	Patch Antenna
Channel Control	Auto
Antenna Gain	Refer to the table "Antenna List"

#### 1.2. Antenna List :

No.	Manufacturer	Product No.	Antenna Type	Peak Gain	Peak Gain
1	BALLUFF	BIS U-303-C1-TNCB	Patch Antenna	8.5dBic	5.5dBi

Note:

(1) Only the higher gain antenna was tested and recorded in this report.

(2) dBi = dBic - 3

## 2. **RF Exposure Evaluation**

## 2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b) LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range	Electric Field	Magnetic Field	Power Density	Average Time			
(MHz)	Strength (V/m)	Strength (A/m) $(mW/cm^2)$ (N		(Minutes)			
(A) Limits for Occupational/ Control Exposures							
300-1500			F/300	6			
1500-100,000			5	6			
(B) Limits for General Population/ Uncontrolled Exposures							
300-1500			F/1500	6			
1500-100,000			1	30			

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $Pd = (Pout*G)/(4*pi*r^2)$ 

Where

 $Pd = power density in mW/cm^2$ 

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

#### 2.2. Test Result of RF Exposure Evaluation

Product	:	BF-IDU07
Test Item	:	<b>RF</b> Exposure Evaluation

#### RFID Peak Gain: 5.5dBi

Band	Frequency (MHz)	Conducted maximum Peak Power (dBm)	ERP Power (dBm)	ERP Power (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Pass/Fail
RFID	902.75~927.25	27.78	31.13	1297.2	0.258	0.602	Pass

Note: The Maximum conducted output power is refer to report No.: 19C0313R-RFUSP23V00 from the DEKRA.