



# Jabra Evolve2 65 Flex Antenna report (Model: HSC190W)

**Revision:** 1  
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**Date:** 2022-11-11

### Revision History:

Revision	Date	Change by	Description
1	2022.11.11	Haller Liu	First Revision

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## **1 Introduction**

This document describes the radiation performance measurements made on a Jabra Evolve2 65 Flex. The measurement results provided in this report are: the total radiated power at three frequencies and the antenna radiation patterns at three frequencies in free space.

The measurements have been performed by:

**Haller Liu**

**RF Engineer**

**GN Audio A/S**

## 2 Specification

### 2.1 Electrical Properties

Frequency Range:	2.402GHz ~2.480GHz
Impedance:	50 $\Omega$ nominal
Radiation:	omni-directional

### 2.2 Physical Properties

Type:	PIFA antenna
Operating temp:	-20 ~ +60 °C
Antenna gain (Peak)	2.66 dBi

### 3 Anechoic Chamber



## 4 Results

### 4.1 Conducted power

**Results:**

a conducted output power of 12dBm on each channel.

### 4.2 Total radiated power

Channel	0	39	78
Frequency[MHz]	2402	2441	2480
Peak Equivalent isotropic radiated power (EIRP)	14.66 dBm	14.18dBm	13.73 dBm
Total radiated power	10.10 dBm	9.49 dBm	8.81 dBm

### 4.3 Antenna patterns

**2.402 GHz**

# CTIA TRP Report (RP\_Bluetoc

## Common Information:

Test Description:	GN OTA Test Report
Operating Conditions:	Cypress_Alph2
Operator Name:	Haller
Comment:	

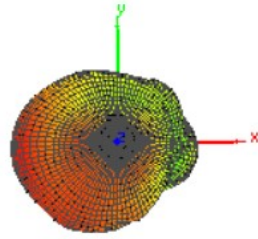
## Test Information:

Test Method:	Radiated Power Mobile Phone
Test Condition:	FS: Free Space
Frequency:	2402.000 MHz
Test Time:	Start: 11/11/2022 3:46:08 PM; Stop:
CMU200 Connectors:	In: RF2 (45.0 dB), Out: RF2 (45.0 c
Cal Data Hor:	18.71 dB (X-OTA_OTA_RadPwr_2
Cal Data Ver:	19.74 dB (X-OTA_OTA_RadPwr_2

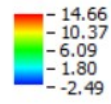
## OTA Evaluation Results:

Total Radiated Power	10.10 dBm
Peak EIRP	14.66 dBm
Directivity	4.56 dBi
Peak Gain	14.66 dBi
NHPRP 45 j ā	8.54 dBm
NHPRP 45 j ā / TRP	-1.56 dB
NHPRP 45 j ā / TRP	69.81 %
NHPRP 30 j ā	7.10 dBm
NHPRP 30 j ā / TRP	-3.00 dB
NHPRP 30 j ā / TRP	50.17 %
NHPRP 22.5 j ā	5.93 dBm
NHPRP 22.5 j ā / TRP	-4.17 dB
NHPRP 22.5 j ā / TRP	38.26 %
UHRP	8.21 dBm
UHRP / TRP	-1.89 dB
UHRP / TRP	64.76 %
LHRP	5.57 dBm
LHRP / TRP	-4.53 dB
LHRP / TRP	35.24 %

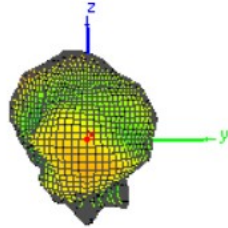
**Theta = 0, Phi = 0**



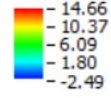
**Theta = 180, Phi**



**Theta = 90, Phi = 0**



**Theta = 90, Phi =**





**2.441GHZ**

F

# CTIA TRP Report (RP\_Bluetoo

## Common Information:

Test Description:	GN OTA Test Report
Operating Conditions:	Cypress_Alph2
Operator Name:	Haller
Comment:	

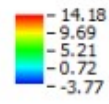
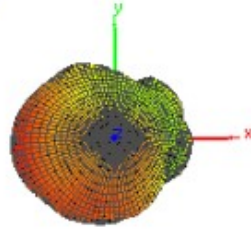
## Test Information:

Test Method:	Radiated Power Mobile Phone
Test Condition:	FS: Free Space
Frequency:	2441.000 MHz
Test Time:	Start: 11/11/2022 3:46:08 PM; Stop:
CMU200 Connectors:	In: RF2 (45.0 dB), Out: RF2 (45.0 dB)
Cal Data Hor:	18.60 dB (X-OTA_OTA_RadPwr_2)
Cal Data Ver:	19.59 dB (X-OTA_OTA_RadPwr_2)

## OTA Evaluation Results:

Total Radiated Power	9.49 dBm
Peak EIRP	14.18 dBm
Directivity	4.70 dBi
Peak Gain	14.18 dBi
NHPRP 45 j ā	7.96 dBm
NHPRP 45 j ā / TRP	-1.53 dB
NHPRP 45 j ā / TRP	70.36 %
NHPRP 30 j ā	6.53 dBm
NHPRP 30 j ā / TRP	-2.95 dB
NHPRP 30 j ā / TRP	50.69 %
NHPRP 22.5 j ā	5.36 dBm
NHPRP 22.5 j ā / TRP	-4.13 dB
NHPRP 22.5 j ā / TRP	38.67 %
UHRP	7.56 dBm
UHRP / TRP	-1.93 dB
UHRP / TRP	64.12 %
LHRP	5.03 dBm
LHRP / TRP	-4.45 dB
LHRP / TRP	35.00 %

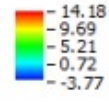
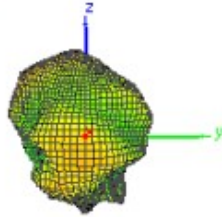
**Theta = 0, Phi = 0**



**Theta = 180, Phi =**

x

**Theta = 90, Phi = 0**



**Theta = 90, Phi =**

y

**2.480GHZ**

# CTIA TRP Report (RP\_Bluetoo

## Common Information:

Test Description:	GN OTA Test Report
Operating Conditions:	Cypress_Alph2
Operator Name:	Haller
Comment:	

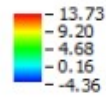
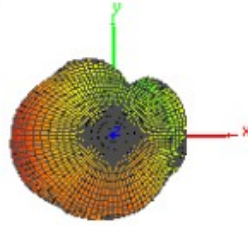
## Test Information:

Test Method:	Radiated Power Mobile Phone
Test Condition:	FS: Free Space
Frequency:	2480.000 MHz
Test Time:	Start: 11/11/2022 3:46:08 PM; Sto
CMU200 Connectors:	In: RF2 (45.0 dB), Out: RF2 (45.0
Cal Data Hor:	18.58 dB (X-OTA_OTA_RadPwr_;
Cal Data Ver:	19.25 dB (X-OTA_OTA_RadPwr_;

## OTA Evaluation Results:

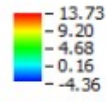
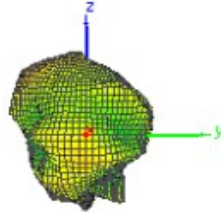
Total Radiated Power	8.81 dBm
Peak EIRP	13.73 dBm
Directivity	4.91 dBi
Peak Gain	13.73 dBi
NHPRP 45 j ä	7.40 dBm
NHPRP 45 j ä / TRP	-1.41 dB
NHPRP 45 j ä / TRP	72.28 %
NHPRP 30 j ä	6.02 dBm
NHPRP 30 j ä / TRP	-2.80 dB
NHPRP 30 j ä / TRP	52.50 %
NHPRP 22.5 j ä	4.84 dBm
NHPRP 22.5 j ä / TRP	-3.97 dB
NHPRP 22.5 j ä / TRP	40.07 %
UHRP	6.88 dBm
UHRP / TRP	-1.93 dB
UHRP / TRP	64.12 %
LHRP	4.36 dBm
LHRP / TRP	-4.45 dB
LHRP / TRP	25.88 %

**Theta = 0, Phi = 0**



**Theta = 180, Phi =**

**Theta = 90, Phi = 0**



**Theta = 90, Phi =**

## 5 Conclusion

The total radiated power from the Jabra Evolve2 65 Flex varies from 13.73 dBm to 14.66 dBm in free space depending on the frequency. The conducted power is 12 dBm. These figures yield an antenna gain(peak) in the range of 2.66 dBi and 1.73 dBi.

	2402 MHz	2440 MHz	2480 MHz
Conducted power	12 dBm	12 dBm	12 dBm
Peak Equivalent isotropic radiated power (EIRP)	14.66 dBm	14.18dBm	13.73 dBm

	2402 MHz	2440 MHz	2480 MHz
Antenna gain (Peak)	2.66 dBi	2.18 dBi	1.73 dBi