

RF Exposure Evaluation Report

APPLICANT : Relay, Inc.
EQUIPMENT : Relay Beacon XL2
BRAND NAME : Relay
MODEL NAME : RY0280
FCC ID : 2AMBHRY0280
STANDARD : 47 CFR PART 2.1093
FCC KDB 447498 D01 v06

The product evaluation date was started from Sep. 05, 2024 and completed on Sep. 05, 2024. We, Sporton International Inc. (Kunshan), would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1093 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.



Approved by: Si Zhang



Sporton International Inc. (Kunshan)

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA473016	Rev. 01	Initial issue of report	Dec. 10, 2024



1. Administration Data

1.1. Testing Laboratory

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR01-KS	CN1257	314309

Applicant	
Company Name	Relay, Inc.
Address	4200 Six Forks Rd, Suite 1800, Raleigh NC 27609, USA

Manufacturer	
Company Name	Relay, Inc.
Address	4200 Six Forks Rd, Suite 1800, Raleigh NC 27609, USA



2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Relay Beacon XL2
Brand Name	Relay
Model Name	RY0280
FCC ID	2AMBHRY0280
Wireless Technology and Frequency Range	Bluetooth: 2402 MHz ~ 2480 MHz
Mode	Bluetooth LE
Antenna Type	Bluetooth : PCB Antenna
Antenna Gain	Bluetooth: gain 1.89 dBi
HW Version	DVT
SW Version	RelayTag nRF52811 V0.1.8 20240812
EUT Stage	Identical Prototype
Remark:	
1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

Comments and Explanations:
1. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.
2. The maximum RF output tune up power, antenna gain also the safe distance used for evaluate RF exposure were declared by manufacturer.

3. Maximum RF Tune Up power among production units

<Bluetooth>

Mode	Maximum Average Power (dBm)
Bluetooth LE	2.00

4. RF Exposure Evaluation

Mode	Maximum Average Power (dBm)
Bluetooth LE	2.00

Note:

- Per KDB 447498 D01v06 the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison

Bluetooth Max Power (dBm)	Separation Distance (mm)	Frequency (GHz)	exclusion thresholds
2.00	< 5	2.48	0.5

Conclusion:

Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 0.5 which is ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, 1-g SAR and extremity SAR testing is not required, and complied with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for 1g SAR and 4.0 W/kg for extremity SAR) specified in FCC 47 CFR part 2 (2.1093).

-----THE END-----