

RF EXPOSURE REPORT

OF

Applicant: SHARP CORPORATION
492 MINOSHO-CHO, YAMATOKORIYAMA-SHI, NARA 639-1186, JAPAN

Manufacturer: Sharp Corporation
1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan

Product Name: Bluetooth Transmitter

Brand Name: SHARP

Model No.: AN-WD3

Model Difference: N/A

Report Number: ER/2020/10081

FCC ID: APYTCG00044

FCC Rule Part: Part 2.1091

Issue Date: Mar. 27, 2020

We hereby certify that:

The above equipment was verified by SGS Taiwan Ltd. The evaluation in this report is in compliance with the above rule(s).

The results of this report relate only to the sample identified in this report.

Approved By:

John Teh

Yeh John / Asst. Manager

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.

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Revision History

Report Number	Revision	Description	Issue Date	Remark
ER/2020/10081	Rev.00	Original.	Mar. 27, 2020	Revised By: Yuri Tsai

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 General:

Product Name:	Bluetooth Transmitter
Brand Name:	SHARP
Model No.:	AN-WD3
Model Difference:	N/A
Hardware Version:	1.00
Software Version:	1.09
USB Cable:	Model No.: QCNWGA244WJZZ, Supplier: DONGGUAN YUQIU ELECTRONIC CO., LTD.
Power Supply:	5Vdc from USB Port

Radio Technology:	Bluetooth BR+EDR
Channel number:	79 channels
Modulation type:	GFSK + $\pi/4$ DQPSK + 8DPSK
Average Power:	7.52dBm
Frequency Range:	2.402GHz – 2.480GHz
Dwell Time:	$\leq 0.4s$
Antenna Designation:	Printing Antenna, Gain: 2.22dBi

Radio Technology:	Bluetooth LE dual mode
Frequency Range:	2402 – 2480MHz
Channel number:	40 channels
Modulation type:	GFSK
Average Power:	3.21dBm
Antenna Designation:	Printing Antenna, Gain: 2.22dBi

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2 FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 FCC Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-15000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S = PG / 4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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2.2 Power Density Calculation (Worst Case)

Operation Mode	Evaluation Frequency (MHz)	Operation Distance (cm)	Max. output Power (dBm)	Antenna Gain (dBi)	Max. output Power EIRP (mW)	Power Density (PD) (mW/cm ²)	Limit (mW/cm ²)	Pass / Fail
BT	2441.00	20	7.52	2.22	9.42	0.002	1.000	Pass

~ End of Report ~

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