

# **RF EXPOSURE REPORT**

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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:

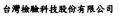
Yeh John / Asst. Manager



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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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## **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 + π/4DQPSK + 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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#### FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE) 2

#### 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	cy Range Electric Field Magnetic Field Po		Power Density	Averaging Time
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm <sup>2</sup> )	(minute)
	Limits for Genera	al Population/Uncon	trolled Exposure	
0.3-1.34	614	1.63	*(100) 30	
1.34-30 824/f		2.19/f	*(180/f <sup>2</sup> )	30
30-300	30-300 27.5		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/4πR<sup>2</sup>

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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Pass / Fail
BT	2441.00	20	7.52	2.22	9.42	0.002	1.000	Pass

~ End of Report ~

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