

# RF EXPOSURE REPORT

Applicant	TCL Technoly Electronics (Huizhou) Co., Ltd.
Address	Section 37, Zhongkai High-tech Development Zone, Huizhou City, Guang Dong Province, P.R.China.



Manufacturer or Supplier	Panasonic Corporation
Address	1-15 Matsuo-cho Kadoma-shi, Osaka 571-8504 Japan
Product	Bluetooth Module
Brand Name	Panasonic
Model	TBM-QCC307
Additional Model & Model Difference	N/A
Date of tests	Feb. 21, 2019 ~ Mar. 28, 2019

☒ **FCC Part 2 (Section 2.1091)**

☒ **KDB 447498 D01**

☒ **IEEE C95.1**

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Andy Zhu Project Engineer / EMC Department	Approved by Glyn He Supervisor/ EMC Department
	  Date: Apr. 03, 2019

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## TABLE OF CONTENTS

RELEASE CONTROL RECORD .....	3
1. CERTIFICATION.....	4
2. RF EXPOSURE LIMIT .....	5
3. MPE CALCULATION FORMULA.....	5
4. CLASSIFICATION .....	5
5. ANTENNA GAIN .....	6
6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER.....	6



Test Report No.: FM190221N016

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM190221N016	Original release	Apr. 03, 2019

## 1. CERTIFICATION

<b>FCC ID:</b>	ZVAMS000025
<b>PRODUCT:</b>	Bluetooth Module
<b>BRAND NAME:</b>	Panasonic
<b>MODEL NO.:</b>	TBM-QCC307
<b>ADDITIONAL NO.:</b>	N/A
<b>APPLICANT:</b>	TCL Technoly Electronics (Huizhou) Co., Ltd.
<b>STANDARDS:</b>	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1

## 2. RF EXPOSURE LIMIT

### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm <sup>2</sup> )	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

## 3. MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

## 4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

## 5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	Antenna Type
Chain 0	3.2	PCB Antenna

## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED AV POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
GFSK	2402-2480	1	+/-2	-1	3
8DPSK	2402-2480	-2	+/-2	-4	0

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
GFSK	2441	1.23
8DPSK	2441	-1.38

FREQUENCY BAND (MHz)	MAX AVERAGE POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2402-2480	3	3.2	20	8.2933e-4	1.0

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