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COMMERCIAL-IN-CONFIDENCE

SAR EXCLUSION DOCUMENT

Document 75951962-03 Issue 02

2.4 GHz Transmitter:

FCC Standalone SAR Test Exclusion Considerations (KDB 447498 D01) Section 4.3.1 b)

100 MHz – 6 GHz – Separation Distance >50 mm

The SAR Test exclusion thresholds for 1500 MHz to 6 GHz test separation distances >50 mm are determined by:

Step a) Threshold result from Formula in Section 4.3.1 a):

The Step a) formula has to be re-arranged to give power allowed at numeric threshold at 50 mm test separation distance as required by Step b):

Power Allowed At Numeric Threshold = $\{(\text{Numeric Threshold} / \sqrt{f_{(\text{GHz})}}) \times 50 \text{ mm Separation Distance} \}$ mW

- Numeric threshold = 3 for Head/Body or 7.5 for Extremities
- 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

Step b) 2) 1500MHz to 6GHz

Power threshold = $\{ [\text{Power allowed at numeric threshold for 50 mm} \{ \text{Formula Step A} \}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10] \}$ mW

- Power and distance are rounded to the nearest mW and mm before calculation.
- The result is rounded to one decimal place for comparison

This document has been up-issued to Issue 2 to include an amended application form.

Approved by 

Ryan Henley
Authorised Signatory

Date 5 July 2021



SAR Exclusion Result:

Frequency (MHz)	Power Output mW	Duty Cycle %	Maximum Power (Tune up Value) * (mW)	Test Separation Distance (mm)	SAR Exclusion Power Threshold (mW)	SAR Test Exclusion (Yes/No)
2402	6	100	6	200	1596.8	Yes
2480	6	100	6	200	1595.3	Yes

* Maximum power including tolerance of the time averaged declared conducted output power of the device.

The SAR exclusion threshold has been evaluated using the formula described above from information supplied by the manufacturer below. Based on the calculation above, the EUT is categorically excluded from SAR testing.



Manufacturer's Declaration of Product information:

Equipment Description

Technical Description: <i>(Please provide a brief description of the intended use of the equipment)</i>	The BTM-1254 Stereo Audio Module uses a Qualcomm-QCC5125 chip with 64M Flash.
Manufacturer:	Rayson Technology Co., Ltd.
Model:	BTM-1254
Part Number:	BTM-1254

If more than one frequency band is supported, please confirm which combinations of bands are capable of Simultaneous Transmit.	Classic Bluetooth only.
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Frequency Band 1:

Antenna Model:	Inverted-L PCB conductor	
Antenna length:	1.1 and 1.6	cm
Bottom frequency:	2402	MHz
Middle frequency:	2442	MHz
Top frequency:	2480	MHz

Maximum power (input to the antenna including a tolerance):	8	dBm
Antenna gain (or maximum gain allowed):	4	dBi

Separation distance from antenna to the user/bystander	>20	cm
Transmitter Duty Cycle:	50	%

I hereby declare that the information supplied is correct and complete.

Name: Ashley Harper
Position held: Compliance Engineer
Date: 21 April 2021