

MPE TEST REPORT

FCC ID: 2AF3W-1136235

Equipment : Emax Pro BT Comms
Brand Name : Caldwell
Test Model : 1136235
Series Model : N/A
Applicant : AOB Products Company
Address : 1800 North Route Z Suite A, Columbia, Missouri, United States, 65202
Manufacturer : Wenzhou Only Electronics Co.,Ltd.
Address : No.139 Jiangnan Avenue,Nanbin Street, Ruian, Wenzhou, Zhejiang
(Room 401, 402, 501, 502, Building 23, Gexiang High-Tech Industrial Park)
Date of Receipt : 2022.11.05
Date of Test : 2022.11.05-2022.11.21
Issued Date : 2022.11.21
Report Version : V1.0
Test Sample : Engineering Sample No.: AIT22110413-1
Standard(s) : FCC Title 47 Part 2. 1091
KDB 447498 001 General RF exposure guidance v06

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This device described above has been tested by Dongguan Yaxu (AiT) Technology Limited and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Reviewed by:

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1. EVALUATION METHOD AND LIMIT

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure requirement KDB447498 v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

2. CALCULATION

According to KDB447498 D01 General RF Exposure Guidance v06 Section 4.3.1 Standalone SAR test exclusion considerations: "Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition, listed below, is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.²² The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander (see 5) of section 4.1). To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, typically in the SAR measurement or SAR analysis report, according to the required published RF exposure KDB procedures. When no other RF exposure testing or reporting is required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for the SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops & tablets etc.²³ "

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot [\sqrt{f} \text{ (GHz)}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where:}$$

- 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
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Manufacturing Tolerance

FM						
Frequency (MHz)	Antenna 1					
	462.6375	462.6500	467.6375			
Target (dBm)	3.0	3.0	3.0			
Tolerance $\pm$ (dB)	1.0	1.0	1.0			

[Bluetooth]

GFSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	-3	-2	-1
Tolerance $\pm$ (dB)	1.0	1.0	1.0
$\pi/4$ DQPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	-1	0	1
Tolerance $\pm$ (dB)	1.0	1.0	1.0

3. Evaluation Result

Frequency (MHz)	Max. Tune up Power (dBm)	Max.Tune up Output Power (mW)	Test Exclusion Threshold	Limit	Results
462.6375	4.0	2.51	0.794	3	Pass
2480	2.0	1.58	0.501	3	Pass

Note:

- Only the worst case recorded.
- The 2.48GHz and 462.6375MHz band can transmit simultaneously
 Σ of (the highest measured or estimated SARBT+SARFRS)/1.6 =
 $(0.0668+0.0531)/1.6 = 0.1 < 1.0$;

4. Conclusion :

Compliance the RF exposure requirement.

----END OF REPORT----