

## **RF Exposure Evaluation for FCC ID: 2AU44DA30BT00-T1**

Refer user manual this device is a Drupp Dropp TWS earphone, and this device was designed used in portable devices that the minimum distance between human's body is **5mm**. Based on the 47CFR 2.1093, this device belongs to portable device. The definition of the category as following:

### **Portable Derives:**

CFR Title 47 § 2.1093(b)

(b) For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

### **FCC KDB 447498 D01 General RF Exposure Guidance v06 Limit**

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. 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.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

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

Where

- $f(\text{GHz})$  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

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and

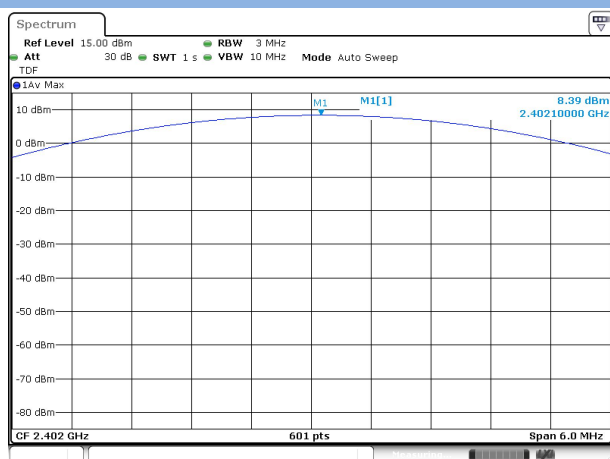
for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

## Test data

BLUETOOTH			
Mode	BR/EDR		
	GFSK		
Channel	Low	Middle	High
Average Power (dBm)	8.39	<b>8.64</b>	8.40
Mode	π/4-DQPSK		
	GFSK		
Channel	Low	Middle	High
Average Power (dBm)	7.96	8.20	7.98
Mode	8-DPSK		
	GFSK		
Channel	Low	Middle	High
Average Power (dBm)	7.91	8.16	7.93

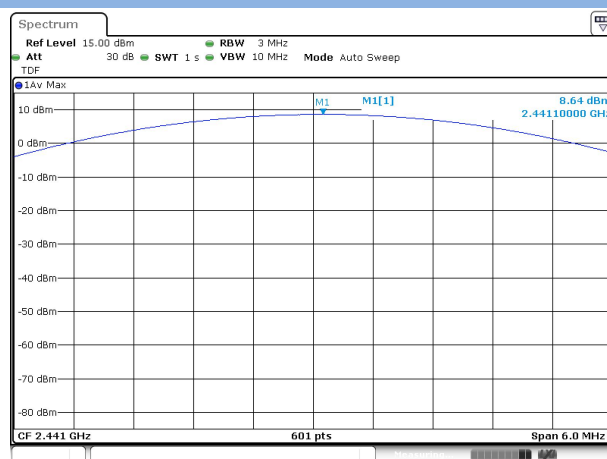
## Test plots

GFSK LOW CHANNEL



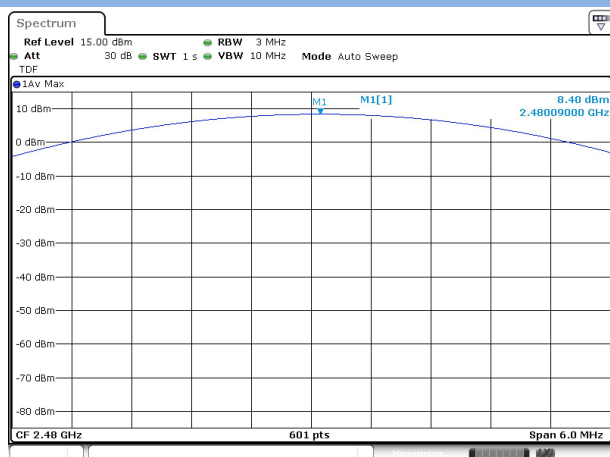
Date: 19.NOV.2019 08:13:18

GFSK MIDDLE CHANNEL



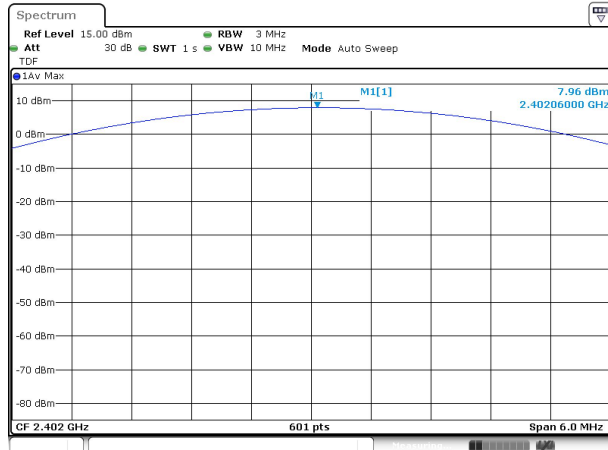
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GFSK HIGH CHANNEL



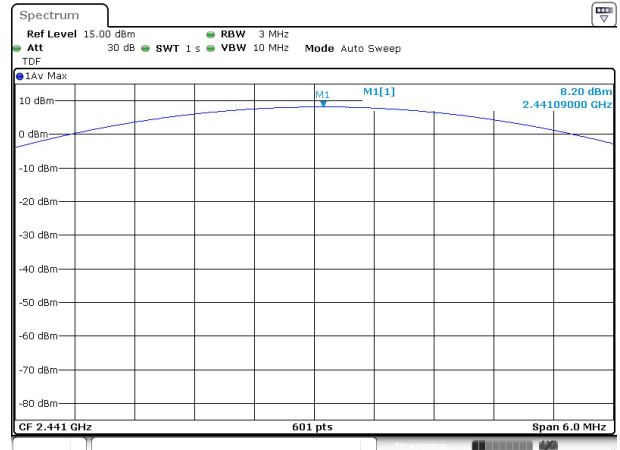
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## $\Pi/4$ -DQPSK LOW CHANNEL



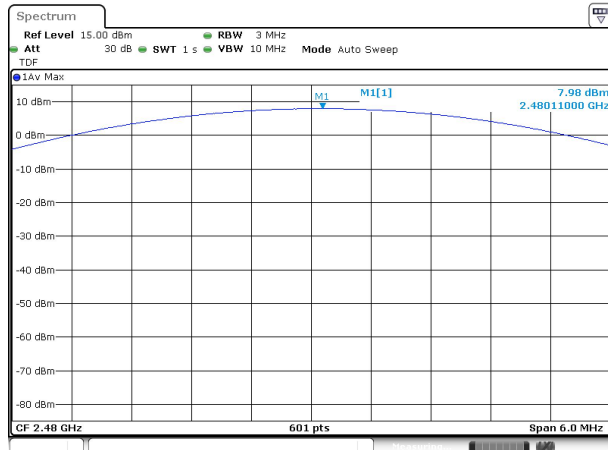
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## $\Pi/4$ -DQPSK MIDDLE CHANNEL



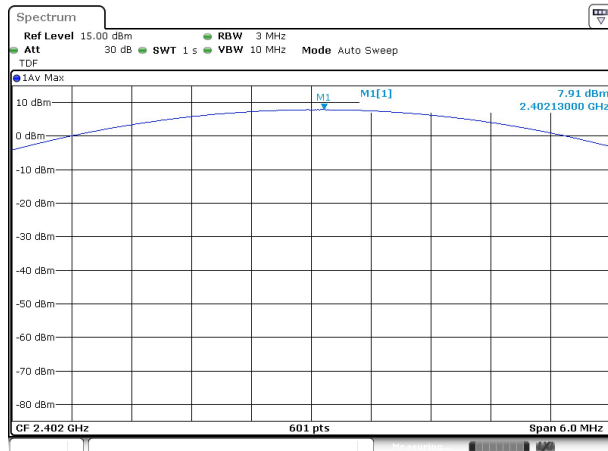
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## $\Pi/4$ -DQPSK HIGH CHANNEL



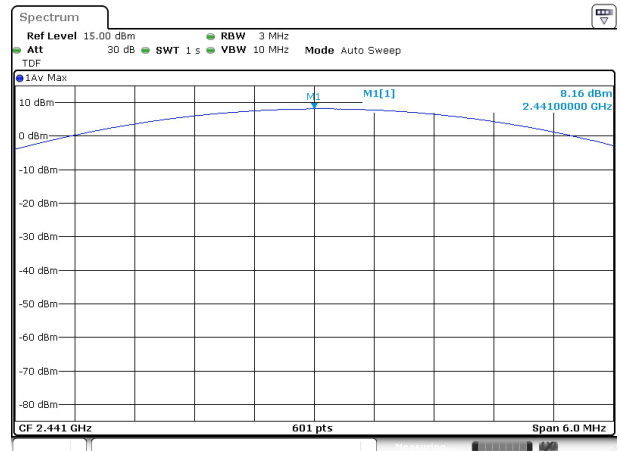
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## 8-DPSK LOW CHANNEL



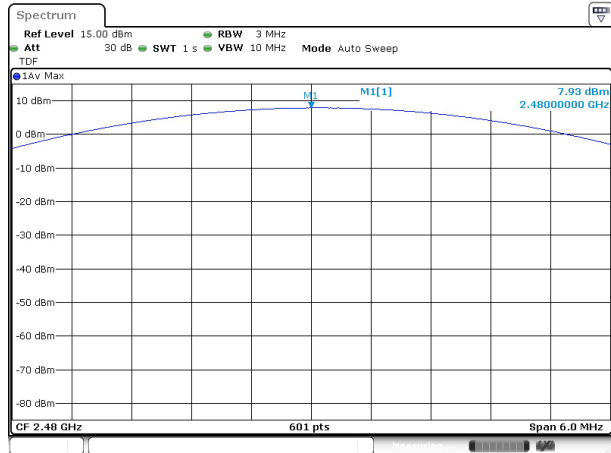
Date: 19.NOV.2019 08:18:22

## 8-DPSK MIDDLE CHANNEL



Date: 19.NOV.2019 08:18:54

## 8-DPSK HIGH CHANNEL



Date: 19.NOV.2019 08:19:22

### Turn-up power

Band	Mode	Range (dBm)
Bluetooth	GFSK	7.00-9.00
	π/4-DQPSK	6.50-8.50
	8-DPSK	6.50-8.50

$$\text{FCC exclusion condition} = [7.94 \text{ mW}/5 \text{ mm}] \cdot [\sqrt{2.48 \text{ GHz}}] = 2.5 < 3.0$$

RF Exposure Evaluation Result: **Pass**

Note: More power data, Please refer to the RF report.