

RF Exposure Requirements

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Dongguan Yande Electronic Technology Co., Ltd
Address of applicant: Room 508, Building 3, No. 19 Jinpeng Road, Fenggang Town, Dongguan City, Guangdong Province, China

Manufacturer: Dongguan Yande Electronic Technology Co., Ltd
Address of manufacturer: Room 508, Building 3, No. 19 Jinpeng Road, Fenggang Town, Dongguan City, Guangdong Province, China

General Description of EUT

Product Name: earphone
Trade Name: /
Model No.: JR02
JR01, JR03, JR04, JR05, JR06, JR07, JR08, JR09, JR10, YD01, YD02, YD03, YD04, YD05, YD06, YD07, YD08, YD09, YD10, BQ10, BQ20, BQ30, BQ40, BQ50, BQ60, BQ70, BQ80, BQ90, GT01, GT02, GT03, GT04, GT05, GT06, GT07, GT08, GT09, GT10, TM10, TM11, TM12, TM13, TM20, TM30, TM40, TM50, TM60, TM70, TM80, TM90, S20, F9, M10, M25, M28, M90, M41, M99, M98, M97, M96, M95, M94, M93, M92, M91, SM01, SM02, SM03, SM04, SM05, SM06, SM07, SM08, SM09, SM10, TG01, TG02, TG03, TG04, TG05, TG06, TG07, TG08, TG09, TG10, TG11, TG12, VG02, VG06, VG09, M12, M100, VG121, x15
Adding Model(s):
Rated Voltage: DC 3.7V from Battery
Power Adapter Model: /
Serial number: S-001
FCC ID: 2BDZJ-JR02

Technical Characteristics of EUT	
Bluetooth Version:	BLE
Frequency Range:	2402-2480MHz
RF Output Power:	3.25dBm
Data Rate:	1Mbps
Modulation:	GFSK

Quantity of Channels:	40
Channel Separation:	2MHz
Type of Antenna:	Chip
Antenna Gain:	1.5dBi

1.2 Standard Applicable

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

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

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 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 4.1 f) is applied to determine SAR test exclusion.

1.3 Calculation Method

Bluetooth

Tx frequency range: 2402~2480MHz

Min. test separation distance: 5mm

Maximum Tune-up Conducted Output Power: 3.5dBm

RF channel transmit frequency: 2402MHz

Result: 0.6939

Limit: 3.0

So the transmitter complies with the RF exposure requirements and the SAR is not required.