



FCC RF EXPOSURE REPORT

Applicant : Beijing Xiaomi Electronics Co.,Ltd
Address : Room 707,7F,Building 5,No 58,Jinghai Wulu Road,
Beijing economic and Technological Development
Zone,100176 Beijing City,China
Equipment : XIAOMI TV Stick
Model No. : MDZ-27-AA
Trade Name : Xiaomi
FCC ID. : 2AIMRMITVMDZ27AA

I HEREBY CERTIFY THAT :

The sample was received on Oct. 28, 2022 and the testing was completed on Nov. 07, 2022 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Leevin Li /Supervisor



Contents

1. Test Configuration of Equipment under Test.....	4
1.1 Feature of Equipment	4
1.2 General Information of Test.....	5
2. Radio Frequency Exposure	6



History of this test report

Note: This is the amended report application basing on the original report DEDJ2107060. The differences between them as following:

1) Reduced WiFi power by software.



1. Test Configuration of Equipment under Test

1.1 Feature of Equipment

Equipment	XIAOMI TV Stick
Model Name	MDZ-27-AA
Model Discrepancy	N/A
Frequency Range	BT/BLE/ WIFI 2.4G: 2400MHz-2483.5MHz WIFI 5G: 5150MHz-5350MHz, 5470-5725MHz, 5725MHz -5850MHz
Modulation Type	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 802.11b: CCK, DQPSK, DBPSK 802.11a/g: 64-QAM,16-QAM, QPSK, BPSK 802.11n: 64-QAM,16-QAM, QPSK, BPSK 802.11ac: 256-QAM,64-QAM,16-QAM, QPSK, BPSK
Data Rate	BT: GFSK:1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK:3Mbps BLE: GFSK: 1Mbps WIFI 2.4G: 802.11b: 1, 2 ,5.5,11Mbps 802.11g: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to 300Mbps WIFI 5G: 802.11a: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to 300Mbps 802.11ac: VHT20 reach up to 173.3Mbps, VHT40 reach up to 400Mbps, VHT80 reach up to 866.7Mbps
Antenna Type	BT/BLE:PCB Antenna WIFI 2.4G/5G: PCB Antenna for Antenna A; PCB Antenna for Antenna B
Power Source	POWER ADAPTER A319-050100U-US1 Input:100-240V~ 50/60Hz 0.2A Max. Output:5V___1A

Note: 1) For more details, please refer to the User's manual of the EUT.



1.2 General Information of Test

Test Site	Cerpass Technology Corporation(Cerpass Laboratory) Address: Room 102, No. 5, Xing'an Road, Chang'an Town, Dongguan City, Guangdong Province Tel: +86-769-8547-1212 Fax: +86-769-8547-1912
FCC Designation No.:	CN1288



2. Radio Frequency Exposure

Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation)
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure ($S = 5\text{mW/cm}^2$) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure ($S=1\text{mW/cm}^2$)
Antenna diversity	<input type="checkbox"/> Single antenna <input checked="" type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

TEST RESULTS

No non-compliance noted.

Calculation

$$\text{Given } E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{3770}$$

Where E = Field strength in Volts / meter
 P = Power in Watts
 G = Numeric antenna gain
 d = Distance in meters
 S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770d^2}$$

Changing to units of mW and cm, using:

$$P(\text{mW}) = P(\text{W}) / 1000 \text{ and}$$

$$d(\text{cm}) = d(\text{m}) / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm
 P = Power in mW
 G = Numeric antenna gain
 S = Power density in mW / cm²

**Maximum Permissible Exposure****Bluetooth**

Mode	Frequency band (MHz)	Peak output power(dBm)	Peak output power(mW)	Antenna Gain (dBi)	Antenna gain (Numeric)	Distance (cm)	Power density (mW/cm ²)	Limit (mW/cm ²)
Bluetooth EDR	2402-2480	6.79	4.775292737	0.6	1.15	20	0.001091071	1
Bluetooth LE	2402-2480	3.93	2.471724145	0.6	1.15	20	0.000564746	1

Wlan**MIMO****ANT A**

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)
2412-2462	20.31	22.31	1.3	20	0.046
5150-5250	10.40	12.40	4.1	20	0.009
5250-5350	10.84	12.84	3.9	20	0.009
5470-5725	10.07	12.07	3.5	20	0.007
5725-5850	8.83	10.83	3.1	20	0.005

ANT B

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)
2412-2462	20.56	22.56	1.3	20	0.048
5150-5250	11.46	13.46	4.1	20	0.011
5250-5350	11.44	13.44	3.9	20	0.011
5470-5725	10.63	12.63	3.5	20	0.008
5725-5850	10.24	12.24	3.1	20	0.007

The sum of the ratios of the spatially averaged results to the applicable frequency dependent MPE limits :

Simultaneous transmission mode	The sum of the ratios	Result
ANT A+ANT B	0.046/1+0.048/1	0.094 < 1

Maximum Permissible Exposure (Co-location)

the sum of the ratios of the spatially averaged results to the applicable frequency dependent MPE limits :

Simultaneous transmission mode	The sum of the ratios	Result
Bluetooth +WLAN	0.001/1+0.046/1+0.048/1	0.095 < 1

Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----End of the report -----