



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 Jul. 10, 2021 and the testing was completed on Aug. 10, 2021 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



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History of this test report

☒ Original

☐ Additional attachment as following record:

Attachment No.	Issue Date	Description
DEFJ2107060	Aug. 13, 2021	Original



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 to300Mbps 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: 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	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm ²) ☒ General Population/Uncontrolled exposure (S=1mW/cm ²)
Antenna diversity	☐ Single antenna ☒ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A

TEST RESULTS

No non-compliance noted.

Calculation

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

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:

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

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/cm2)	Limit (mW/cm2)
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

Test Mode	Frequency band (MHz)	Peak output power(dBm)	Peak output power(mW)	Antenna Gain (dBi)	Antenna gain (Numeric)	Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
WLAN 2.4G	2412-2462	22.67	184.9268619	1.3	1.35	20	0.049642435	1
WLAN 5G	5150-5250	17.59	57.41164622	4.1	2.57	20	0.02936656	1
	5250-5350	18.06	63.97348355	3.9	2.45	20	0.03125022	1
	5470-5725	19.16	82.4138115	3.5	2.24	20	0.036715807	1
	5725-5850	17.21	52.60172664	3.1	2.04	20	0.021372389	1

Note:

Maximum Permissible Exposure (Co-location)

Modulation Mode	Frequency band (MHz)	Peak output power(dBm)	Peak output power(mW)	Antenna Gain (dBi)	Antenna gain (Numeric)	Distance (cm)	Power density (mW/cm2)
Bluetooth	2402-2480	3.93	2.471724145	0.6	1.15	20	0.000564746
Wlan	2412-2462	25.47	352.370871	1.3	1.35	20	0.09459171
Co-location Total							0.095156456
Maximum Permissible Exposure Limit							1

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