

TEST REPORT

Product Name : POWER TOWER DUAL CHARGING
BLUETOOTH SPEAKER
Model Number : iPBT50, iPBT50X (X could be single or multiple
digits by any alphabets and punctuation marks
denoting different year version, buyers and
cabinet colors)
FCC ID : EMOIPBT50A

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1. TEST RESULT CERTIFICATION

Applicant : SDI Technologies Inc.

Manufacturer : SDI Technologies Inc.

EUT : POWER TOWER DUAL CHARGING BLUETOOTH SPEAKER

Model Name : iPBT50, iPBT50X (X could be single or multiple digits by any alphabets and punctuation marks denoting different year version, buyers and cabinet colors)

Trademark : iHome

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1093	PASS

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : January 03, 2024 to January 20, 2024

Prepared by : Warren Deng
Warren Deng /Editor

Reviewer : Tim Dong
Tim Dong /Supervisor

Approve & Authorized Signer : Sam Lv / Manager



Modified History

Version	Report No.	Revision Date	Summary
	EDG2401030182E00401R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	POWER TOWER DUAL CHARGING BLUETOOTH SPEAKER All product names refer to the same product, but the descriptions are different.
Model Number:	iPBT50, iPBT50X (X could be single or multiple digits by any alphabets and punctuation marks denoting different year version, buyers and cabinet colors) Note: These models are the same, except for the model names and appearance;iPBT50 was selected for full test.
Device Type:	Bluetooth V5.3
Data Rate:	1Mbps for GFSK modulation 2Mbps for $\pi/4$ -DQPSK modulation 3Mbps for 8DPSK modulation
Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Operating Frequency Range(s):	2402-2480MHz
Number of Channels:	79 channels
Transmit Power Max:	3.97 dBm(0.002495 W)
Antenna Type:	Integral Antenna
Antenna Gain:	0 dBi
Input Rating:	100-240V~ 50/60Hz 0.6A
Temperature Range:	-10℃to +45℃

3. Test Requirement:

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

1 Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π =3.1416

R = distance between observation point and center of the radiator in cm

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

4. Measurement Result

Antenna gain: 0 dBi

Transmit Frequency (MHz)	Mode	Output Power (dBm)	E.I.R.P (dBm)	Target Power W/tolerance (dBm)	Max tune up power (dBm) tolerance	Max tuneup power (mW) tolerance	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)
2402	GFSK	1.36	1.36	1±1	2	1.58	0.000276	1
2441	GFSK	0.1	0.1	0±1	1	1.26	0.000219	1
2480	GFSK	-1.02	-1.02	-2±1	-1	0.79	0.000138	1
2402	Π/4-DQPSK	3.42	3.42	3±1	4	2.51	0.000437	1
2441	Π/4-DQPSK	2.08	2.08	2±1	3	2.00	0.000347	1
2480	Π/4-DQPSK	0.96	0.96	0±1	1	1.26	0.000219	1
2402	8DPSK	3.97	3.97	3±1	4	2.51	0.000437	1
2441	8DPSK	2.59	2.59	2±1	3	2.00	0.000347	1
2480	8DPSK	1.55	1.55	1±1	2	1.58	0.000276	1

*** End of Report ***