



中国认可
国际互认
检测
TESTING
CNAS L5313



DEKRA

RF Exposure Evaluation Declaration

Product Name : Speaker
Model No. : CMCR001
FCC ID : YJ7CMCR001

Applicant : Black & Decker (Suzhou) Co., Ltd
Address : No. 200 Suhong Road, Export Processing Zone,
Suzhou Industrial Park, China

Date of Receipt : Mar. 20, 2018
Test Date : Mar. 21, 2018~ Apr. 15, 2018
Issued Date : Aug. 10, 2018
Report No. : 1832130R-RF-US-P20V01
Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, CNAS or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.

Test Report Certification

Issued Date : Aug. 10, 2018

Report No. : 1832130R-RF-US-P20V01



Product Name : Speaker

Applicant : Black & Decker (Suzhou) Co., Ltd

Address : No. 200 Suhong Road, Export Processing Zone, Suzhou
Industrial Park, China

Manufacturer : Black & Decker (U.S.) Inc.

Address : 701 East Joppa Rd. Towson, Maryland 21286 U.S.A

Model No. : CMCR001

FCC ID : YJ7CMCR001

EUT Voltage : 20Vdc/12Vdc

Test Voltage : AC 120V/60Hz

Applicable Standard : KDB 447498D01V06
FCC Part1.1310

Test Result : Complied


Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,
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Documented By :



(Adm. Specialist: Kitty Li)

Reviewed By :



(Senior Engineer: Frank He)

Approved By :



(Engineering Manager : Harry Zhao)

1. RF Exposure Evaluation

1.1. Limits

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 (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

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

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

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

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18 and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	Speaker
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

Antenna Information:

Antenna manufacturer	N/A								
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX		<input type="checkbox"/>	2*TX+2*RX		<input type="checkbox"/>	3*TX+3*RX	
Antenna technology	<input checked="" type="checkbox"/>	SISO							
	<input type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic					
			<input type="checkbox"/>	CDD					
			<input type="checkbox"/>	Beam-forming					
Antenna Type	<input type="checkbox"/>	External	<input type="checkbox"/>	Dipole					
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/>	PIFA					
			<input checked="" type="checkbox"/>	PCB					
			<input type="checkbox"/>	Ceramic Chip Antenna					
			<input type="checkbox"/>	Metal plate type F antenna					
Antenna Gain	1.5dBi								

- Output Power into Antenna & RF Exposure Evaluation Distance
- Standalone modes

Test Mode	Frequency Band (MHz)	Maximum Output Power to Antenna (dBm)	Directional Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Power Density Limit at R = 20 cm (mW/cm ²)
BT	2400 ~ 2483.5 MHz	8.92	1.5	0.0022	1.0

Note: The simultaneous transmission power density is 0.0540mW/cm² for Speaker without any other radio equipment.

_____ The End _____