



中国认可  
国际互认  
检测  
TESTING  
CNAS L5313



DEKRA

## RF Exposure Evaluation Declaration

Product Name : Speaker  
Model No. : DCR010  
FCC ID : YJ7DCR010

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

Date of Receipt : May. 24, 2018  
Test Date : May. 25, 2018~ July. 09, 2018  
Issued Date : July. 23, 2018  
Report No. : 1852148R-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.

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# Test Report Certification

Issued Date : July. 23, 2018

Report No. : 1852148R-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. : DCR010  
FCC ID : YJ7DCR010  
EUT Voltage : 20Vdc/12Vdc  
Test Voltage : AC120V/60Hz  
Brand Name : DEWALT  
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,  
215006, Jiangsu, China  
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098  
FCC Registration Number: 800392

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Reviewed By : Frank he  
(Senior Engineer: Frank He )

Approved By : Harry zhuo  
(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 <sup>2</sup> )	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/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. 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:

Model No.	N/A					
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"/>	Sectorized		
			<input type="checkbox"/>	Beam-forming		
Antenna Type	<input type="checkbox"/>	External	<input type="checkbox"/>	Dipole		
			<input type="checkbox"/>	Sectorized		
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/>	PIFA		
			<input checked="" type="checkbox"/>	PCB		
			<input type="checkbox"/>	Ceramic Chip Antenna		
			<input type="checkbox"/>	Monopole Antenna		
	Antenna Technology	Ant Gain (dBi)				
<input checked="" type="checkbox"/>	SISO	Ant1:1.5				

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

Test Mode	Frequency Band (MHz)	Maximum Output Power to Antenna (dBm)	Directional Gain (dBi)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Power Density Limit at R = 20 cm (mW/cm <sup>2</sup> )
BT	2400 ~ 2483.5	9.58	1.5	0.0026	1.0

Note: The simultaneous transmission power density is 0.0026mW/cm<sup>2</sup> for Speaker without any other radio equipment.

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