

RF Exposure Evaluation Report

Product Name : ACTIVE SPEAKER

Model No. : DALI KATCH ONE

FCC ID : 2AFD2KATCHONE

Applicant : DALI A/S

Address : Dali Alle 1, Norager 9610, Denmark

Date of Receipt : Oct. 23, 2018

Date of Declaration : Jan. 18, 2019

Report No. : 18A0305R-SAUSP03V00

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 report of the equipment and evaluated measurement uncertainty herein.

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Issued Date: Jan. 18, 2019

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Product Name	ACTIVE SPEAKER
Applicant	DALI A/S
Address	Dali Alle 1, Norager 9610, Denmark
Manufacturer	DALI A/S
Model No.	DALI KATCH ONE
FCC ID.	2AFD2KATCHONE
Trade Name	DALI
Applicable Standard	FCC 47 CFR 1.1310
Test Result	Complied

Documented By :



(Senior Adm. Specialist / Joanne Lin)

Tested By :



(Senior Engineer / Wen Lee)

Approved By :



(Director / Vincent Lin)

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	ACTIVE SPEAKER
Trade Name	DALI
Model No.	DALI KATCH ONE
FCC ID.	2AFD2KATCHONE
Frequency Range	2402 – 2480MHz
Channel Number	79CH
Type of Modulation	FHSS: GFSK(1Mbps) / π / 4DQPSK(2Mbps) / 8DPSK(3Mbps)
Antenna Type	PCB Antenna
Antenna Gain	Refer to the table “Antenna List”

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Meiloon Acoustic Equipments (Dongguan) Co., LTd.	RF-TRSPIPAD	PCB Antenna	2.03dBi in 2.4 GHz

2. RF Exposure Evaluation

2.1. 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: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

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.

2.2. Test Result of RF Exposure Evaluation

Product : ACTIVE SPEAKER
Test Item : RF Exposure Evaluation

BT Peak Gain: 2.03dBi

Band	Frequency	Conducted Peak Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mWc/m ²)	Pass/Fail
1Mbps	2480	9.25	8.41	0.0027	1	Pass
2Mbps	2480	8.46	7.01	0.0022	1	Pass
3Mbps	2480	8.97	7.89	0.0025	1	Pass

Note: The conducted output power is refer to report No.: 18A0305R-RFUSP03V00 from the DEKRA.