RF EXPOSURE REPORT

Applicant	DEI Sales, Inc., dba Polk Audio
Address	1 Viper Way Vista, California 92801, USA

Manufacturer or Supplier	DEI Sales, Inc., dba Polk Audio
Address	1 Viper Way Vista, California 92801, USA
Product	Smart Speaker
Brand Name	Polk
Model	ASSIST
Additional Model & Model Difference	N/A
Date of tests	Nov. 29, 2017 ~ Mar. 15, 2018

☒ **FCC Part 2 (Section 2.1091)**
☒ **KDB 447498 D01**
☒ **IEEE C95.1**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Andy Zhu Project Engineer / EMC Department	Approved by Glyn He Supervisor/ EMC Department
	 Date: Apr. 04, 2018

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM171129N008	Original release	Apr. 04, 2018

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1. CERTIFICATION

PRODUCT:	Smart Speaker
BRAND NAME:	Polk
MODEL NO.:	ASSIST
ADDITIONAL MODEL:	N/A
FCC ID:	WLQAM9305
TEST SAMPLE:	ENGINEERING SAMPLE
APPLICANT:	DEI Sales, Inc., dba Polk Audio
TESTED DATES:	Nov. 29, 2017 ~ Mar. 15, 2018
STANDARDS:	FCC Part 2 (Section 2.1091) KDB 447498 D01 IEEE C95.1

2. RF EXPOSURE LIMIT

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)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = 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

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Frequency Band	Antenna Gain (dBi)	Antenna Type
Wi-Fi 2.4GHz	3.03	FPC Antenna
BT 2.4GHz	3.03	FPC Antenna
Wi-Fi 5GHz (5150-5250MHz)	2.09	FPC Antenna
Wi-Fi 5GHz (5250-5350MHz)	2.09	FPC Antenna
Wi-Fi 5GHz (5500-5725MHz)	2.54	FPC Antenna
Wi-Fi 5GHz (5725-5850MHz)	2.59	FPC Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
BT (GFSK)	2402-2480MHz	3	+-2	1	5
BT (8DPSK)	2402-2480MHz	2	+-2	0	4
BT-LE (GFSK)	2402-2480MHz	4	+-2	2	6
802.11b	2412-2462MHz	13	+-2	11	15
802.11g	2412-2462MHz	12	+-2	10	14
802.11n HT20	2412-2462MHz	12	+-2	10	14
802.11n HT40	2422-2452MHz	12	+-2	10	14
Wi-Fi 5GHz(Band1)	5150-5250MHz	13	+-2	11	15
Wi-Fi 5GHz(Band2)	5250-5350MHz	13	+-2	11	15
Wi-Fi 5GHz(Band3)	5500-5725MHz	11	+-2	9	13
Wi-Fi 5GHz(Band4)	5725-5850MHz	13	+-2	11	15

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
BT (GFSK)	2480	4.63
BT (8DPSK)	2480	3.34
BT-LE (GFSK)	2480	5.21
802.11b	2437	13.94
802.11g	2437	12.53
802.11n HT20	2437	12.49
802.11n HT40	2437	12.33
Wi-Fi 5GHz(Band1)	5240	13.86
Wi-Fi 5GHz(Band2)	5310	14.14
Wi-Fi 5GHz(Band3)	5700	12.17
Wi-Fi 5GHz(Band4)	5825	14.13

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
BT 2.4GHz	6	3.03	20	0.001591	1.0
Wi-Fi 2.4GHz	15	3.03	20	0.012639	1.0
Wi-Fi 5GHz	15	2.59	20	0.011422	1.0

CONCLUSION:

Both of the WLAN 2.4GHz and 5GHz can not transmit simultaneously.

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