RF EXPOSURE REPORT

Applicant	Zultys, Inc.
Address	785 Lucerne Drive, Sunnyvale, CA 94085, USA

Manufacturer or Supplier	Zultys, Inc.
Address	785 Lucerne Drive, Sunnyvale, CA 94085, USA
Product	Smart Business Phone
Brand Name	ZULTYS
Model	ZIP 49GE
Additional Model & Model Difference	N/A
Date of tests	Jun. 28, 2019 ~ Jul. 05, 2019

☒ **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: Aug. 01, 2019

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM190628N080	Original release	Aug. 01, 2019

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1. CERTIFICATION

PRODUCT:	Smart Business Phone
BRAND NAME:	ZULTYS
MODEL NO.:	ZIP 49GE
ADDITIONAL MODEL:	N/A
FCC ID:	2APWA-ZIP49GE
TEST SAMPLE:	ENGINEERING SAMPLE
APPLICANT:	Zultys, Inc.
TESTED DATES:	Jun. 28, 2019 ~ Jul. 05, 2019
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
BT 2.4GHz	3.31	FPC Antenna
Wi-Fi 2.4GHz	3.31	FPC Antenna
Wi-Fi 5GHz (5150-5250MHz)	3.42	FPC Antenna
Wi-Fi 5GHz (5250-5350MHz)	3.42	FPC Antenna
Wi-Fi 5GHz (5500-5725MHz)	3.42	FPC Antenna
Wi-Fi 5GHz (5725-5850MHz)	3.42	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	4	+-2	2	6
BT (8DPSK)	2402-2480MHz	4	+-2	2	6
BT-LE (GFSK)	2402-2480MHz	5	+-2	3	7
802.11b	2412-2462MHz	14	+-3	11	17
802.11g	2412-2462MHz	13	+-3	10	16
802.11n HT20	2412-2462MHz	12	+-3	9	15
802.11n HT40	2422-2452MHz	11	+-3	8	14
Wi-Fi 5GHz(Band1)	5150-5250MHz	9	+-4	5	13
Wi-Fi 5GHz(Band2)	5250-5350MHz	11	+-4	7	15
Wi-Fi 5GHz(Band3)	5500-5725MHz	10	+-4	6	16
Wi-Fi 5GHz(Band4)	5725-5850MHz	7	+-4	3	11

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
BT (GFSK)	2480	3.18
BT (8DPSK)	2441	3.34
BT-LE (GFSK)	2480	6.12
802.11b	2412	15.06
802.11g	2437	13.97
802.11n HT20	2437	13.60
802.11n HT40	2437	13.46
Wi-Fi 5GHz(Band1)	5200	10.84
Wi-Fi 5GHz(Band2)	5300	14.18
Wi-Fi 5GHz(Band3)	5600	11.61
Wi-Fi 5GHz(Band4)	5785	8.03

FREQUENCY BAND (MHz)	MAX AVERAGE POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
BT 2.4GHz	7	3.31	20	0.002137	1.0
Wi-Fi 2.4GHz	17	3.42	20	0.021914	1.0
Wi-Fi 5GHz	16	3.42	20	0.017407	1.0

CONCLUSION:

The BT 2.4GHz and Wi-Fi can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

(0.002137/1)+(0.021914 /1) = 0.024051 <1, which is less than the “1” limit.

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