



Spectrum Research & Testing Lab., Inc.

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

TEST REPORT

Reference No.: A17103001
Report No.: MPE17103001-02
FCC ID : AHL-ALMOND3S
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Date: Dec. 28, 2017

Product Name: Almond 3S
Model No.: A3S
Applicant: Securifi Ltd.
11F, No.92, Sec. 5, Nanjing E. Rd.,
Songshan Dist., Taipei 105, Taiwan
Date of Receipt: Oct. 30, 2017
Finished date of Test: Dec. 12, 2017
Applicable Standards: KDB 447498
KDB 865664

We, **Spectrum Research & Testing Laboratory Inc.**, hereby certify that one sample of the above was tested in our laboratory with positive results according to the above-mentioned standards. The records in the report are an accurate account of the results. Details of the results are given in the subsequent pages of this report.

Tested By : Richard Lin , Date: 12/28/2017
(Richard Lin)

Approved By : Johnson Ho , Date: 12/28/2017
(Johnson Ho, Director)



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1. DOCUMENT POLICY AND TEST STATEMENT

1.1 DOCUMENT POLICY

- The report shall not be reproduced except in full, without the written approval of SRT Lab, Inc.

1.2 TEST STATEMENT

- The test results in the report apply only to the unit tested by SRT Lab.
- There was no deviation from the requirements of test standards during the test.
- DC power source from Battery or external adapter.

1.3 EUT MODIFICATION

- No modification in SRT Lab.



2. DESCRIPTION OF EUT AND TEST MODE

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Almond 3S
MODEL NO.	A3S
POWER SUPPLY	DC power source from Battery or external adapter Brand Name: Shenzhen Gongjin Electronics Co. Ltd Model No.:S36B52-120A250-04 Input: 100~240V 50~60Hz Max 1.0A Output: 12V 2.5A
FREQUENCY BAND	5.1G band : 5.15 GHz ~ 5.25 GHz 5.8G band : 5.725 ~ 5.85 GHz
CARRIER FREQUENCY	5.18 GHz ~ 5.24 GHz, 5.745 GHz ~ 5.825 GHz
NUMBER OF CHANNEL	5.1G band : 802.11a/n/ac - HT20 : 4 ch 802.11n/ac - HT40 : 2 ch 802.11ac - HT80 : 1 ch 5.8G band : 802.11a/n/ac - HT20 : 5 ch 802.11n/ac - HT40 : 2 ch 802.11ac - HT80 : 1 ch
RATED RF OUTPUT POWER	5.1G band : 802.11a : 9.29 dBm (8.49 mW) 802.11n - HT20 : 11.92 dBm (15.56 mW) 802.11n - HT40 : 11.51 dBm (14.17 mW) 802.11ac - HT20 : 11.91 dBm (15.57 mW) 802.11ac - HT40 : 10.70 dBm (11.74 mW) 802.11ac - HT80 : 11.19 dBm (13.16 mW) 5.8G band : 802.11a : 9.28 dBm (8.47 mW) 802.11n - HT20 : 11.48 dBm (14.06 mW) 802.11n - HT40 : 11.03 dBm (12.66 mW) 802.11ac - HT20 : 11.33 dBm (13.58 mW) 802.11ac - HT40 : 11.09 dBm (12.84 mW) 802.11ac - HT80 : 11.16 dBm (13.08 mW)
MODULATION	IEEE802.11b DSSS(BPSK/QPSK/CCK)

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TYPE	IEEE802.11g OFDM(BPSK/16-QAM/64-QAM) IEEE802.11n MIMO-OFDM(BPSK/QPSK/16-QAM/64-QAM) IEEE802.11a OFDM(BPSK/ QPSK/16-QAM/64-QAM) IEEE802.11ac MIMO-OFDM(BPSK/QPSK/16-QAM/64-QAM/256-QAM)
MODE OF OPERATION	Duplex
ANTENNA TYPE	Printed Antenna
ANTENNA GAIN	2.0 dBi (ANT#1), 2.0 dBi (ANT#2)

NOTE:

For more detailed information, please refer to the EUT's specification or user's manual provided by manufacturer.



3. RF POWER EXPOSURE EVALUATION TEST

3.1 LIMIT

According to the requirements of Part 1.1310(e), KDB 447498 D01 General RF Exposure Guidance v06, Section7, and KDB 865664 D02 RF Exposure Reporting v01r02, section 2 .

Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength(E) (V/m)	Magnetic Field Strength(H) (A/m)	Power density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength(E) (V/m)	Magnetic Field Strength(H) (A/m)	Power density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.



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3.2 TEST PROCEDURE

1. The EUT was operating in Tx mode.
2. The EUT uses an Printed Antenna, the antenna gain of 2 dBi is declared by the manufacturer.

$$S = PG / 4 \pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

3.3 EUT OPERATING CONDITION

1. Setup the EUT and all peripheral devices .
2. Turn on the power of all equipment and EUT.
3. Set the EUT under continuous transmission condition mode.
4. The EUT was set to the highest available power level.

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Date: Dec. 28, 2017**3.4 CONNECT POWER AT THE ANTENNA CONNECTOR RESULT**

Temperature: 20 °C Humidity: 54 % RH
 Spectrum Detector: PK. Tested Mode: 5.1G_802.11a
 Tested By: Richard Lin Tested Date: Dec. 12, 2017

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	MPE DISTANCE (cm)	ANTENNA GAIN (dBi)	PEAK POWER OUTPUT		CALCULATED RF EXPOSURE (mW/cm ²)	LIMIT (mW/cm ²)
				dBm	mW		
CH36	5180	20	2	9.29	8.49	0.00268	1

Temperature: 20 °C Humidity: 54 % RH
 Spectrum Detector: PK. Tested Mode: 5.1G_802.11n - HT20
 Tested By: Richard Lin Tested Date: Dec. 12, 2017

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	MPE DISTANCE (cm)	ANTENNA GAIN (dBi)	PEAK POWER OUTPUT		CALCULATED RF EXPOSURE (mW/cm ²)	LIMIT (mW/cm ²)
				dBm	mW		
CH36_ANT1	5180	20	2	8.20	15.56	0.00491	1
CH36_ANT1			2	9.52			

Temperature: 20 °C Humidity: 54 % RH
 Spectrum Detector: PK. Tested Mode: 5.1G_802.11n - HT40
 Tested By: Richard Lin Tested Date: Dec. 12, 2017

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	MPE DISTANCE (cm)	ANTENNA GAIN (dBi)	PEAK POWER OUTPUT		CALCULATED RF EXPOSURE (mW/cm ²)	LIMIT (mW/cm ²)
				dBm	mW		
CH38_ANT1	5190	20	2	7.73	14.17	0.00447	1
CH38_ANT2			2	9.16			

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Temperature: 20 °C Humidity: 54 % RH
 Spectrum Detector: PK. Tested Mode: 5.1G_802.11ac - HT20
 Tested By: Richard Lin Tested Date: Dec. 12, 2017

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	MPE DISTANCE (cm)	ANTENNA GAIN (dBi)	PEAK POWER OUTPUT		CALCULATED RF EXPOSURE (mW/cm ²)	LIMIT (mW/cm ²)
				dBm	mW		
CH36_ANT1	5180	20	2	8.26	15.57	0.00491	1
CH36_ANT2			2	9.48			

Temperature: 20 °C Humidity: 54 % RH
 Spectrum Detector: PK. Tested Mode: 5.1G_802.11ac - HT40
 Tested By: Richard Lin Tested Date: Dec. 12, 2017

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	MPE DISTANCE (cm)	ANTENNA GAIN (dBi)	PEAK POWER OUTPUT		CALCULATED RF EXPOSURE (mW/cm ²)	LIMIT (mW/cm ²)
				dBm	mW		
CH38_ANT1	5190	20	2	6.26	11.74	0.00370	1
CH38_ANT2			2	8.76			



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Temperature: 20 °C Humidity: 54 % RH
Spectrum Detector: PK. Tested Mode: 5.1G_802.11ac - HT80
Tested By: Richard Tested Date: Dec. 12, 2017

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	MPE DISTANCE (cm)	ANTENNA GAIN (dBi)	PEAK POWER OUTPUT		CALCULATED RF EXPOSURE (mW/cm ²)	LIMIT (mW/cm ²)
				dBm	mW		
CH42_ANT1	5210	20	2	7.35	13.16	0.00415	1
CH42_ANT2			2	8.88			

NOTE: Limits for Occupational/Controlled Exposure