

Report No. : EED39M00060003

# RF Exposure Evaluation Report

**Product** : Voice Amplifier  
**Trade mark** : NORWII / KNORVAY  
**Model/Type reference** : S358 Pro  
**Serial Model** : S100,S108,S118,S128,S158,S168,S188,S198,S200,  
S208,S218,S228,S258,S268,S288,S298,S300,S301,  
S302,S303,S305,S306,S307,S308,S309,S310,S311,  
S312,S315,S316,S317,S318,S319,S320,S328,S330,  
S338,S358,S360,S365,S368,S378,S388,S398,S500,  
S501,S502,S503,S505,S506,S507,S508,S509,S510,  
S511,S512,S515,S516,S517,S518,S519,S520,S528,  
S530,S558,S560,S565,S568,S578,S588,S598,S600,  
S601,S602,S603,S605,S606,S607,S608,S609,S610,  
S611,S612,S615,S616,S617,S618,S619,S620,S628,  
S630,S6580,S655,S658,S668,S678,S680,S688,S698,  
S700,S800,S801,S802,S803,S805,S806,S807,S809,  
S810,S811,S812,S815,S816,S817,S818,S819,S820,  
S828,S830,S858,S860,S865,S868,S878,S880,S900,  
S358Pro+  
**Report Number** : EED39M00060003  
**FCC ID** : 2AXGRVA1  
**Date of Issue** : Mar 30, 2021  
**Test Standards** : 47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Test result** : PASS

Prepared for:

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Prepared by:

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Mar 30, 2021

Check No.: 3915566929

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Modification Record

No.	Last Report No.	Modification Description
1	EED39M00060003	First report

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# 1 General Information

## 1.1 Client Information

Applicant:	Shanghai Norwii Technology Co., Ltd.
Address of Applicant:	NO.277, Jinfeng Road, Pudong New Area, Shanghai 201201, China
Manufacturer:	Shanghai Norwii Technology Co., Ltd.
Address of Manufacturer:	NO.277, Jinfeng Road, Pudong New Area, Shanghai 201201, China
Factory:	Shanghai Norwii Technology Co., Ltd.
Address of Factory:	NO.277, Jinfeng Road, Pudong New Area, Shanghai 201201, China

## 1.2 General Description of EUT

Product Name:	Voice Amplifier
Model No.(EUT):	S358 Pro
Serial Model:	S100,S108,S118,S128,S158,S168,S188,S198,S200,S208,S218,S228,S258,S268,S288,S298,S300,S301,S302,S303,S305,S306,S307,S308,S309,S310,S311,S312,S315,S316,S317,S318,S319,S320,S328,S330,S338,S358,S360,S365,S368,S378,S388,S398,S500,S501,S502,S503,S505,S506,S507,S508,S509,S510,S511,S512,S515,S516,S517,S518,S519,S520,S528,S530,S558,S560,S565,S568,S578,S588,S598,S600,S601,S602,S603,S605,S606,S607,S608,S609,S610,S611,S612,S615,S616,S617,S618,S619,S620,S628,S630,S6580,S655,S658,S668,S678,S680,S688,S698,S700,S800,S801,S802,S803,S805,S806,S807,S809,S810,S811,S812,S815,S816,S817,S818,S819,S820,S828,S830,S858,S860,S865,S868,S878,S880,S900, S358Pro+
Model difference:	The same is Circuit principle, PCB Layout, key components, etc. The difference is the product color, model.
Trade Mark:	NORWII / KNORVAY
EUT Supports Radios application:	Bluetooth V4.2 Dual mode

## 1.3 Product Specification subjective to this standard

Frequency Range:	BT& BLE: 2402MHz to 2480MHz
Modulation Type:	BT: GFSK, $\pi/4$ DQPSK BLE: GFSK
Number of Channels:	BT: 79 BLE: 40
Sample Type:	Portable production
Test Power Grade:	2(manufacturer declare )
Test Software of EUT:	FCC Assist 2.4 (manufacturer declare)
Antenna Type:	PCB antenna
Antenna Gain:	-0.58dbi

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Power Supply:	Input: DC 5V	
	Battery:	DC3.7V 2000 mAh (Li-on Rechargeable Battery )
Max output power:	BT:2.16dBm(1.644mW)* BLE:1.53dBm(1.422mW)*	
	The Max BT Output power refer to the report EED39M00060001 The Max BLE Output power refer to the report EED39M00060002	
Sample Received Date:	Feb. 23, 2021	
Sample tested Date:	Feb. 23, 2021 to Mar. 3, 2021	
The tested sample(s) and the sample information are provided by the client.		

## 1.4 Test Location

All test facilities used to collect the test data are located at Building 18, Zhihui New Town Ecological Industrial Park, No. 1206, Jinyang East Road, Lujia Town, Kunshan, Jiangsu, China.

## 1.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

### **A2LA-Lab Cert. No. 5734.01**

Centre Testing International (Suzhou) CO., LTD. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration. Laboratories and any additional program requirements in the identified field of testing.

### **FCC-Designation No.:CN1290**

Centre Testing International Group Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The American association for Centre Testing International Group Co., Ltd. EMC laboratory accreditation Designation No.:CN1290

## 1.6 Deviation from Standards

None.

## 1.7 Abnormalities from Standard Conditions

None.

## 1.8 Other Information Requested by the Customer

None.



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## 2 SAR Evaluation

### 2.1 RF Exposure Compliance Requirement

#### 2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 2.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances

$\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and

for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation

distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

#### 2.1.3 EUT RF Exposure

The Max Conducted Output Power is 2.16dBm in lowest channel(2.402GHz);

The Max gain of the antenna is -0.58dBi.

2.16dBm logarithmic terms convert to numeric result is nearly 1.644mW

According to the formula. calculate the test result:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}]$

General RF Exposure =  $(1.644\text{mW} / 5 \text{ mm}) \times \sqrt{2.402\text{GHz}} = 0.5097$  ①

SAR requirement:

S= 3.0

②;

① < ②.

So the SAR report is not required.

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## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED39M00060001 for EUT external and internal photos.

The testing data and results in this report are just for scientific research, education, internal quality control and product development etc.

\*\*\* End of Report \*\*\*

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.