

FCC Test Report

Report No.: AGC01110240326FR02A

FCC ID	:	2AOKB-A3028C
APPLICATION PURPOSE	:	Class II Permissive Change
PRODUCT DESIGNATION	:	soundcore Q30, soundcore Q30i
BRAND NAME	:	soundcore
MODEL NAME	:	A3028
APPLICANT	:	Anker Innovations Limited
DATE OF ISSUE	:	Jan. 02, 2025
STANDARD(S)	:	FCC Part 15 Subpart C §15.247
REPORT VERSION	:	V1.0







Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes	
V1.0	/	Jan. 02, 2025	Valid	Initial Release	

Note: The original test report AGC01110240326FR02 (dated Apr. 07, 2024 and tested from Mar. 13, 2024 to Apr. 07, 2024) was modified on Jan. 02, 2025, including the following changes and additions:

-Changed the product designation;

-Changed the software version;

-Updated applicant address and manufacturer address;

-Updated the antenna gain (Changes in antenna matching parameters lead to changes in gain.);

-The positions of four solder joints were adjusted, and the circuit was finely adjusted to optimize noise reduction function;

-The charging board is added with functions such as charging NTC controlled by MCU, anti-burning port and sectional charging;

-Updated the layout design of the charging board which changed to four-layer board;

For the above described change the following tests was considered to be necessary:

Clause	Testing
§15.209	Radiated Spurious Emission & Band Edge



Table of Contents

1. General Information	
2. Product Information	5
2.1 Product Technical Description	5
2.2 Test Frequency List	5
2.3 Related Submittal(S) / Grant (S)	6
2.4 Test Methodology	6
2.5 Receiver Input Bandwidth	6
2.6 Equally Average Use of Frequencies And Behaviour	6
2.7 Pseudorandom Frequency Hopping Sequence	7
2.8 Special Accessories	
2.9 Equipment Modifications	
2.10 Antenna Requirement	
3. Test Environment	9
3.1 Address of The Test Laboratory	9
3.2 Test Facility	9
3.3 Environmental Conditions	
3.4 Measurement Uncertainty	
3.5 List of Equipment Used	11
4. System Test Configuration	
4.1 EUT Configuration	
4.2 EUT Exercise	
4.3 Configuration of Tested System	
4.4 Equipment Used in Tested System	
4.5 Summary of Test Results	
5. Description of Test Modes	14
6. Radiated Spurious Emission	
6.1 Measurement Limit	
6.2 Measurement Procedure	
6.3 Measurement Setup (Block Diagram of Configuration)	
6.4 Measurement Result	
Appendix I: Photographs of Test Setup	
Appendix II: Photographs of Test EUT	



1. General Information

Applicant	Anker Innovations Limited
Address	Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong
Manufacturer	Anker Innovations Limited
Address	Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong
Factory	N/A
Address	N/A
Product Designation	soundcore Q30, soundcore Q30i
Brand Name	soundcore
Test Model	A3028
Series Model(s)	N/A
Difference Description	N/A
Date of receipt of test item	Nov. 11, 2024
Date of Test	Nov. 11, 2024 to Jan. 02, 2025
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-FCC-BR_EDR-V1

Note: The test results of this report relate only to the tested sample identified in this report.

ACI Li Prepared By Cici Li Jan. 02, 2025 (Project Engineer) Calvin Lin **Reviewed By** Calvin Liu Jan. 02, 2025 (Reviewer) sol Approved By Angela Li Jan. 02, 2025 (Authorized Officer)



2. Product Information

2.1 Product Technical Description

Frequency Band	2400MHz-2483.5MHz
Operation Frequency Range	2402MHz-2480MHz
Bluetooth Version	V5.3
Modulation Type	BR 🖾 GFSK, EDR 🖾 π /4-DQPSK, 🖾 8DPSK
Number of channels	79 Channels
Channel Separation	1 MHz
Maximum Transmitter Power	8.141dBm
Hardware Version	V04
Software Version	V5.06
Antenna Designation	PCB Antenna
Antenna Gain	1.66dBi
Power Supply	DC 3.7V by battery

2.2 Test Frequency List

Frequency Band	Channel Number	Frequency			
	0	2402 MHz			
	1	2403 MHz			
	:	:			
2400~2483.5MHz	39	2441MHz			
	:	:			
	77	2479 MHz			
	78	2480 MHz			
Note: f = 2402 + 1k MHz, k =	Note: f = 2402 + 1k MHz, k = 0,, 78 ; "f "is the operating frequency (MHz); "k" is the operating channel.				



2.3 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for FCC ID: 2AOKB-A3028C, filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

2.4 Test Methodology

The tests were performed according to following standards:

No.	Identity	Document Title	
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations	
2	2 FCC 47 CFR Part 15 Radio Frequency Devices		
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices	
4	KDB 558074 D01 15.247 Meas Guidance v05r02	Guidance for compliance measurements on Digital Transmission Systems, Frequency Hopping Spread Spectrum system, and Hybrid system devices operating under Section 15.247 of the FCC rules	

2.5 Receiver Input Bandwidth

The input bandwidth of the receiver is 1.3MHz, in every connection one Bluetooth device is the master and the other one is slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally, the type of connection (e.g. single of multi slot packet) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also, the slave of the connection will use these settings. Repeating of a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

2.6 Equally Average Use of Frequencies And Behaviour

The generation of the hopping sequence in connection mode depends essentially on two input values:

1. LAP/UAP of the master of the connection.

2. Internal master clock.

The LAP (lower address part) are the 24 LSB's of the 48 BD_ADDRESS. The BD_ADDRESS is an unambiguous number of every Bluetooth unit. The UAP (upper address part) are the 24MSB's of the 48BD_ADDRESS

The internal clock of a Bluetooth unit is derived from a free running clock which is never adjusted and is never turned off. For behavior action with other units only offset is used. It has no relation to the time of the day. Its resolution is at least half the RX/TX slot length of 312.5us. The clock has a cycle of about one day(23h30).

In most case it is implemented as 28 bits counter. For the deriving of the hopping sequence the entire. LAP (24 bits),4LSB's(4bits) (Input 1) and the 27MSB's of the clock (Input 2) are used. With this input values different mathematical procedures (permutations, additions, XOR-operations) are performed to generate the Sequence. This will be done at the beginning of every new transmission.

Regarding short transmissions the Bluetooth system has the following behavior:

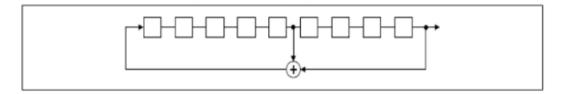
The first connection between the two devices is established, a hopping sequence was generated. For Transmitting the wanted data the complete hopping sequence was not used. The connection ended. The second connection will be established. A new hopping sequence is generated. Due to the fact the Bluetooth clock has a different value, because the period between the two transmission is longer (and it Cannot be shorter) than the minimum resolution of the clock(312.5us). The hopping sequence will always differ from the first one.



2.7 Pseudorandom Frequency Hopping Sequence

The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONEs; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 29 1 = 511 bits
- Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of The PRBS Sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:

44	35	78	03	20) 76	02	19		 21	64	75
				·					 		
			Ιi						1		
			¦			1			i.		
				L		<u>'i</u>		1	 		

Each frequency used equally on the average by each transmitter.

The system receivers have input bandwidths that match the hopping channel bandwidths of their Corresponding transmitters and shift frequencies in synchronization with the transmitted signals.



2.8 Special Accessories

Not available for this EUT intended for grant.

2.9 Equipment Modifications

Not available for this EUT intended for grant.

2.10 Antenna Requirement

Standard Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi

EUT Antenna:

The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is 1.66dBi.



3. Test Environment

3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 Test Facility

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

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.



3.3 Environmental Conditions

	Normal Conditions
Temperature range (°C)	15 - 35
Relative humidity range	20 % - 75 %
Pressure range (kPa)	86 - 106
Power supply	DC 3.7V by battery

3.4 Measurement Uncertainty

The reported uncertainty of measurement y \pm U, where expended uncertainty U is based on a standard

uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 2.9 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 3.9 \text{ dB}$
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.9 \text{ dB}$
Uncertainty of total RF Power, Conducted	$U_c = \pm 0.8 \text{ dB}$
Uncertainty of RF Power Density, Conducted	$U_c = \pm 2.6 \text{ dB}$
Uncertainty of Spurious Emissions, Conducted	$U_c = \pm 2 \%$
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2 \%$
Uncertainty of Dwell Time	$U_c = \pm 2 \%$



3.5 List of Equipment Used

• F	Radiated Spurious Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)	
\boxtimes	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2024-02-01	2025-01-31	
	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2024-05-24	2025-05-23	
\boxtimes	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27	
\boxtimes	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04	
\boxtimes	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10	
\boxtimes	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2024-03-31	2025-03-30	
\boxtimes	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-09-24	2025-09-23	
\boxtimes	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2024-07-24	2026-07-23	
\boxtimes	AGC-EM-A119	2.4GHz Filter	SongYi	N/A	N/A	2024-05-23	2025-05-22	
\boxtimes	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08	
	AGC-EM-A139	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08	

• Te	Test Software											
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information							
	AGC-EM-S003	RE Test System	FARA	EZ-EMC	V.RA-03A							
\boxtimes	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0							



4. System Test Configuration

4.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

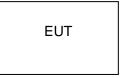
4.2 EUT Exercise

1

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 Configuration of Tested System

Radiated Emission Configure:



4.4 Equipment Used in Tested System

The following peripheral devices and interface cables were connected during the measurement: Test Accessories Come From The Laboratory

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	Control Box	RISYM	USB-TTL		
	Test Accessories	Come From The	Manufacturer		
No.	Equipment	Manufacturer	Model No.	Specification Information	Cable



4.5 Summary of Test Results

Item	FCC Rules	Description of Test	Result
1	§15.209	Radiated Spurious Emission& Band Edge	Pass



5. Description of Test Modes

	Summary table of Test Cases						
Toot Itom	Data Rate / Modulation						
Test Item	Bluetooth – BR_EDR (GFSK/π /4-DQPSK/8DPSK)						
Radiated & Conducted Test Cases	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps (Battery powered) Mode 2: Bluetooth Tx CH39_2441 MHz_1Mbps (Battery powered) Mode 3: Bluetooth Tx CH78_2480 MHz_1Mbps (Battery powered) Mode 4: Bluetooth Tx CH00_2402 MHz_2Mbps (Battery powered) Mode 5: Bluetooth Tx CH39_2441 MHz_2Mbps (Battery powered) Mode 6: Bluetooth Tx CH78_2480 MHz_2Mbps (Battery powered) Mode 6: Bluetooth Tx CH78_2480 MHz_3Mbps (Battery powered) Mode 7: Bluetooth Tx CH00_2402 MHz_3Mbps (Battery powered) Mode 8: Bluetooth Tx CH39_2441 MHz_3Mbps (Battery powered) Mode 9: Bluetooth Tx CH78_2480 MHz_3Mbps (Battery powered) Mode 10: Bluetooth Tx CH78_2480 MHz_3Mbps (Battery powered) Mode10: Bluetooth Tx Hopping-1Mbps (Battery powered)						
	Mode12: Bluetooth Tx Hopping-3Mbps (Battery powered)						
2. The battery is full-cha	worst case was recorded in the report, if no other cases. Irged during the test. n, 3axis were chosen for testing for each applicable mode.						
	Software Setting Diagram						
	0 BT_Tool – 🗆 X						
	COMx Baudrate						
	Classic BLE						
	Test Mode						
	FCC Test image: Test imag						
	RF Control						
	RF Mode TX TEST \checkmark Packet Type DH5 \checkmark						
	Hopping OFF V TX Frequency 2441 V						
	TX Power 7 v RX Frequency 2480 v						
	Scenario PRBS Pattern 🗸						
	LOG: FCC test mode LOG: [COM6] open, 1500000bps LOG: BR/EDR Test LOG: Test end LOG: BR/EDR Test						
	COM6 is open 1500000bps						



6. Radiated Spurious Emission

6.1 Measurement Limit

15.209 Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

6.2 Measurement Procedure

- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection"

Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.

- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/3MHz for Peak, 1MHz/3MHz for Average

The following table is the setting of spectrum analyzer and receiver.

Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP



• Quasi-Peak Measurements below 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = as shown in the table above
- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

Peak Measurements above 1GHz

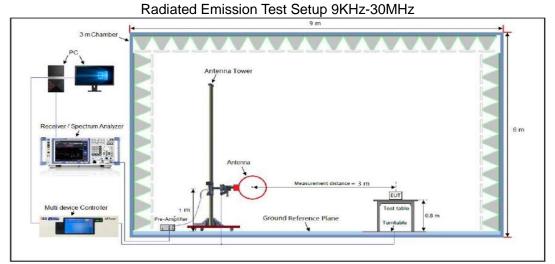
- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

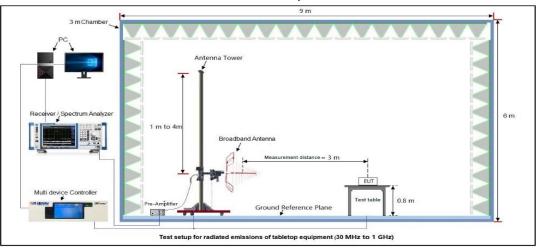
- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW setting requirements are as follows:
- 4. If the EUT is configured to transmit with duty cycle \ge 98%, set VBW = 10 Hz.
- 5. If the EUT duty cycle is < 98%, set VBW \geq 1/T. T is the minimum transmission duration.
- 6. Detector = Peak
- 7. Sweep time = auto
- 8. Trace mode = max hold
- 8. Trace was allowed to stabilize



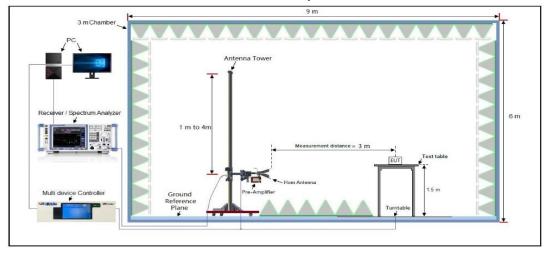
6.3 Measurement Setup (Block Diagram of Configuration)



Radiated Emission Test Setup 30MHz-1000MHz



Radiated Emission Test Setup Above 1000MHz



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

 Attestation of Global Compliance(Shenzhen)Co., Ltd

 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agccert.com

 Web: http://www.agccert.com/



6.4 Measurement Result

Radiated Emission Below 30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

		Rad	liated Emiss	sion Test Re	esults at 30	MHz-1GH	z		
EUT Name	sound	lcore Q30,	soundcore C	230i	Model Name			A3028	
Temperature	22.4°C	C			Relati	ity 5	9.6%		
Pressure	960hF	Pa			Test V	/oltage	D	C 3.7V by battery	
Test Mode	Mode	7			Anten	na Polari	ty H	lorizontal	
72.0 d	iBuV/m								
				Marked any Turan Alder		and the second sec		mit:	
-8 30.000) 40	50 60 70	D 80	(MHz)	31	00 400	500 600	700 1000.000	
No	. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	
1		41.7129	5.78	13.78	19.56	40.00	-20.44	peak	
				15.41	22.44	43.50	-21.06	peak	
2	2 1	36.4598	7.03	10.41					
2		36.4598 50.3012	7.03 5.02	15.09	20.11	46.00	-25.89	peak	
	3 2					46.00 46.00	-25.89 -15.25		
3	3 2 1 4	50.3012	5.02	15.09	20.11			peak	



			Ra	diated E	miss	ion lest k	esults at	301VI H2	z-1GH	z				
EUT Name	sour	ndcore	Q30	, soundc	ore Q	e Q30i Mc			Model Name			A3028		
Temperature	22.4	°C					Rel	Relative Humidity			59.6%			
Pressure	960ł	nPa					Tes	t Volta	age		DC	3.7	V by b	atter
Test Mode	Mod	e 7					Ant	enna	Polari	ty	Ve	rtical		
72.0	dBuV/m													
32			1					3			Limit: Marg	in:		
	wannationalista	adlinghy, glaphath	u Kun	a determination	not y la basanat	Warnin Rughrapman	hiteranteranterant	n Tomor						
-8 30.00		50	60	ⁿ uddwraddiw 70 80	urt fature	(MHz)		300	400		00 7		1000.000	I
-8		50			ling		Measur	300 '@-			00 7			1
-8	0 40	50 FI	60	70 80 Read	ling	(MHz)	Measur	300 '@- L	400	500 6 Ove	00 70 Ər		1000.000)
-8 30.00 No	0 40	50 FI	60 req.	70 80 Read	ling el	(MH2) Correct Factor	Measur	300 'e- L	400	500 6 Ove	00 70 9 F	00	1000.000)
-8 30.00 No	0 40 D. Mk.	50 FI	60 req. 1Hz 251	70 80 Read Leve	ling el V	(MH2) Correct Factor dB	Measur ment dBuV/m	300 Te- L dl 4(400 Limit BuV/m	500 6 Ove	00 70 ∋r 67	Dete	1000.000)
-8 30.00 No	0 40 D. Mk. 1	50 Fr M 59.0	60 req. 1Hz 251 506	70 80 Read Leve dBu	ling el IV 24 35	(MH2) Correct Factor dB 17.09	Measur ment dBuV/m 24.33	300 Te- L dt 4(4(400 .imit BuV/m D.00	500 6 Ove dB -15.6	00 7 er 67 95	Dete	ector ak ak)
-8 30.00	0 40 5. Mk. 1 2 3	50 Fr M 59.0 145.3	60 req. 1Hz 251 506 867	70 80 Read Leve dBu 7.2 6.3	ling el V 24 35 39	(MHz) Correct Factor dB 17.09 18.20	Measur ment dBuV/m 24.33 24.55	300 Te- L 4(4(4(400 .imit BuV/m 0.00 3.50	500 6 Ove dB -15.0 -18.9	00 7 er 67 95	Dete pea	ector ak ak)
-8 30.00	0 40 0. Mk. 1 2 3 4	50 Fi 59.0 145.3 311.0	60 req. 1Hz 251 506 867 514	70 80 Read Leve dBu 7.2 6.3 6.8 5.7	ling el Ⅳ 24 35 39 77	(мн₂) Соггест Factor dB 17.09 18.20 19.68	Measur ment dBuV/m 24.33 24.55 26.57	300 'e- L 4(4(4(400 .imit BuV/m 0.00 3.50 6.00	500 6 Ove dB -15.0 -18.9 -19.4	00 7 er 67 95 43 35	Dete pea pea	ector ak ak ak)

RESULT: Pass

Note: 1. Factor=Antenna Factor + Cable loss, Over= Measurement- Limit.



UT Name	soundcore (Q30, soundco	ore Q30i Mod	el Name	A3028		
emperature	22.4 ℃		Rela	tive Humidity	59.6%		
ressure	960hPa		Test	Voltage	DC 3.7	V by battery	
est Mode	Mode 7		Ante	nna Polarity	Horizor	ntal	
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
4804.000	47.28	0.08	47.36	74	-26.64	peak	
4804.000	38.46	0.08	38.54	54	-15.46	AVG	
7206.000	43.17	2.21	45.38	74	-28.62	peak	
7206.000	31.52	2.21	33.73	54	-20.27	AVG	
Remark:							
Factor = Anter	nna Factor + Cabl	e Loss – Pre-	amplifier.			-	
UT Name	soundcore (Q30, soundco	ore Q30i Mod	el Name	A3028		
emperature	22.4 ℃		Rela	tive Humidity	59.6% DC 3.7V by battery		
ressure	960hPa		Test	Voltage			
est Mode	Mode 7		Ante	Antenna Polarity		l	
	Meter Reading	Factor	Emission Level	Limits	Margin		
Frequency		1 40101			(dB)	Value Type	
Frequency (MHz)	· · · · ·	(dR)	(dBuV/m)	(dBu\//m)		1	
(MHz)	(dBµV)	(dB)	(dBµV/m) 46.6	(dBµV/m) 74		peak	
(MHz) 4804.000	(dBµV) 46.52	0.08	46.6	74	-27.4	peak AVG	
(MHz) 4804.000 4804.000	(dBµV) 46.52 37.45	0.08	46.6 37.53	74 54	-27.4 -16.47	AVG	
(MHz) 4804.000 4804.000 7206.000	(dBµV) 46.52 37.45 40.57	0.08 0.08 2.21	46.6 37.53 42.78	74 54 74	-27.4 -16.47 -31.22	1	
(MHz) 4804.000 4804.000	(dBµV) 46.52 37.45	0.08	46.6 37.53	74 54	-27.4 -16.47	AVG peak	
(MHz) 4804.000 4804.000 7206.000	(dBµV) 46.52 37.45 40.57	0.08 0.08 2.21	46.6 37.53 42.78	74 54 74	-27.4 -16.47 -31.22	AVG peak	
(MHz) 4804.000 4804.000 7206.000	(dBµV) 46.52 37.45 40.57	0.08 0.08 2.21	46.6 37.53 42.78	74 54 74	-27.4 -16.47 -31.22	AVG peak	

Radiated Emissions Test Results Above 1GHz

RESULT: Pass



Radiated	Emissions	Test Results	for A	Above [•]	1GHz

EUT Name	soundcore Q	soundcore Q30, soundcore Q30i 22.4°C			el Name	A3028		
Temperature	22.4 ℃				tive Humidity	59.6%		
Pressure	960hPa			Test	Voltage	DC 3.7V by batte		
lest Mode	Mode 8			Ante	nna Polarity	Horizor	ntal	
Frequency	Meter Reading	Factor	Emissio	n Level	Limits	Margin		
(MHz)	(dBµV)	(dB)	(dBµ∖	//m)	(dBµV/m)	(dB)	Value Type	
4882.000	47.69	0.14	47.8	33	74	-26.17	peak	
4882.000	36.52	0.14	36.6	6	54	-17.34	AVG	
7323.000	40.34	2.36	42.	7	74	-31.3	peak	
7323.000	31.85	2.36	34.2	21	54	-19.79	AVG	
Remark: Factor = Anten	na Factor + Cable	e Loss – Pre-	amplifier.					
EUT Name	soundcore Q	30, soundco	re Q30i	Mode	el Name	A3028		
Temperature	22.4 ℃			Relative Humidity		59.6%		
Pressure	960hPa	960hPa Mode 8			Test Voltage Antenna Polarity		V by battery	
Fest Mode	Mode 8						l	
Frequency	Meter Reading	Factor	Emissio	n Level	Limits	Margin		
(MHz)	(dBµV)	(dB)	(dBµ∖	//m)	(dBµV/m)	(dB)	Value Type	
4882.000			,	74	-25.15	peak		
4882.000	36.95	0.14	37.0)9	54	-16.91	AVG	
7323.000			8	74	-28.82	peak		
			32	54	-20.18	AVG		
7323.000					1			
7323.000 Remark:								

RESULT: Pass



EUT Name		soundcore Q	30, soundco	re Q30i	Model	Name	A3028	
Temperature		22.4 ℃			Relative Humidity		59.6%	
Pressure		960hPa			Test Voltage		DC 3.7V	by battery
Test	Mode	Mode 9			Anten	na Polarity	Horizont	al
	Frequency	Meter Reading	Factor	Emissio	on Level	Limits	Margin	Value Type
	(MHz)	(dBµV)	(dB)	(dBµ	V/m)	(dBµV/m)	(dB)	value Type
	4960.000	46.34	0.22	46.	.56	74	-27.44	peak
	4960.000	37.95	0.22	38.	.17	54	-15.83	AVG
	7440.000	41.24	2.64	43.	.88	74	-30.12	peak
	7440.000	30.78	2.64	33.	.42	54	-20.58	AVG
	Remark:							
CUT		nna Factor + Cable			Model	Namo	42028	
-	Name	soundcore Q				Name	A3028	
-						Name ve Humidity	A3028 59.6%	
Tem	Name	soundcore Q			Relati		59.6%	by battery
Tem Pres	Name perature	soundcore Q 22.4 °C			Relati Test V	ve Humidity	59.6%	by battery
Tem Pres	Name perature ssure	soundcore Q 22.4℃ 960hPa			Relati Test V Anten	ve Humidity oltage	59.6% DC 3.7V	
Tem Pres	Name perature ssure Mode	soundcore Q 22.4℃ 960hPa Mode 9	30, soundco	re Q30i	Relati Test V Anten	ve Humidity oltage na Polarity	59.6% DC 3.7V Vertical	by battery Value Type
Tem Pres	Name perature ssure Mode	soundcore Q 22.4°C 960hPa Mode 9 Meter Reading	30, soundco Factor	re Q30i	Relation Test V Anten	ve Humidity oltage na Polarity Limits	59.6% DC 3.7V Vertical	
Tem Pres	Name perature ssure Mode Frequency (MHz)	Soundcore Q 22.4 ℃ 960hPa Mode 9 Meter Reading (dBµV)	30, soundco Factor (dB)	re Q30i Emissic	Relation Test V Anten On Level V/m) .85	ve Humidity foltage na Polarity Limits (dBµV/m)	59.6% DC 3.7V Vertical Margin (dB)	- Value Type
Tem Pres	Name perature ssure Mode Frequency (MHz) 4960.000	Soundcore Q 22.4℃ 960hPa Mode 9 Meter Reading (dBµV) 47.63	30, soundco Factor (dB) 0.22	re Q30i Emissic (dBµ 47	Relation Test V Anten	ve Humidity oltage na Polarity Limits (dBµV/m) 74	59.6% DC 3.7V Vertical Margin (dB) -26.15	- Value Type peak
Tem Pres	Name perature ssure Mode Frequency (MHz) 4960.000 4960.000	soundcore Q3 22.4 °C 960hPa Mode 9 Meter Reading (dBµV) 47.63 36.58	30, soundco Factor (dB) 0.22 0.22	re Q30i Emissic (dBµ 47. 36	Relation Test V Anten	ve Humidity foltage na Polarity Limits (dBµV/m) 74 54	59.6% DC 3.7V Vertical Margin (dB) -26.15 -17.2	- Value Type peak AVG
Tem Pres	Name perature ssure Mode Frequency (MHz) 4960.000 7440.000 7440.000	soundcore Q3 22.4 °C 960hPa Mode 9 Meter Reading (dBµV) 47.63 36.58 41.42	30, soundcol Factor (dB) 0.22 0.22 2.64	re Q30i Emissic (dBµ 47, 36 44.	Relation Test V Anten	ve Humidity foltage na Polarity Limits (dBµV/m) 74 54 74	59.6% DC 3.7V Vertical Margin (dB) -26.15 -17.2 -29.94	Value Type peak AVG peak
Tem Pres	Name perature ssure Mode Frequency (MHz) 4960.000 7440.000 7440.000 7440.000	soundcore Q3 22.4 °C 960hPa Mode 9 Meter Reading (dBµV) 47.63 36.58 41.42	30, soundcor Factor (dB) 0.22 0.22 2.64 2.64	re Q30i Emissic (dBµ 47. 36 44. 34	Relation Test V Anten	ve Humidity foltage na Polarity Limits (dBµV/m) 74 54 74	59.6% DC 3.7V Vertical Margin (dB) -26.15 -17.2 -29.94	Value Type peak AVG peak

RESULT: Pass

Note:

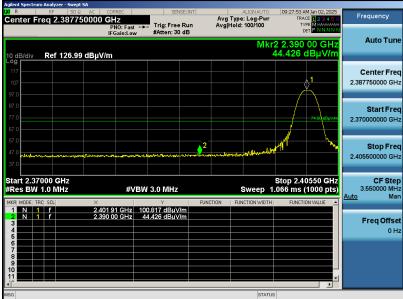
- 1. The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.
- 2. Factor = Antenna Factor + Cable loss Pre-amplifier gain, Margin = Emission Level-Limit.
- 3. The "Factor" value can be calculated automatically by software of measurement system.



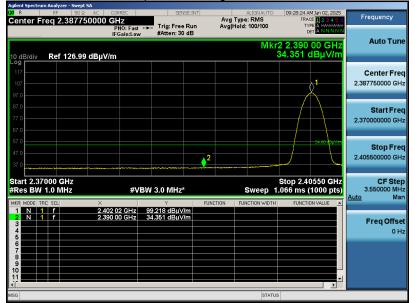
EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna Polarity	Horizontal

Band Edge Emission Test Results for Restricted Bands

Test Graph for Peak Measurement



Test Graph for Average Measurement

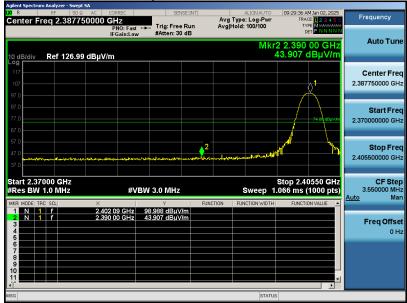


RESULT: Pass

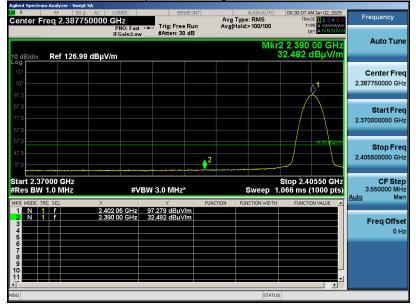


Band Edge	Emission	Test Results for	Restricted Bands
Dunia Lago	LIIII33IOII		Restricted Burnas

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna Polarity	Vertical



Test Graph for Average Measurement

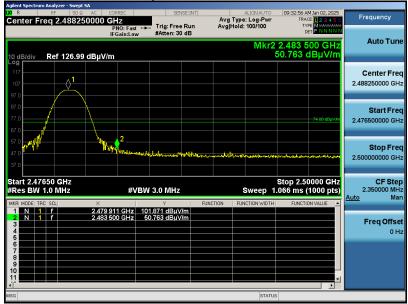


RESULT: Pass

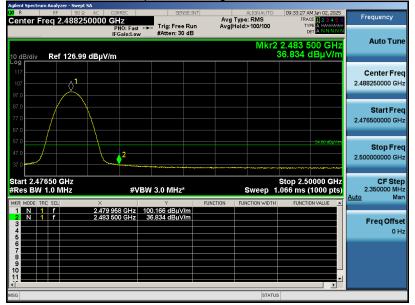


Band Edge	Emission	Test Results for	Restricted Bands
Bund Lugo	LIIIISSIOII	rest nessure for	Restincted Builds

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna Polarity	Horizontal



Test Graph for Average Measurement

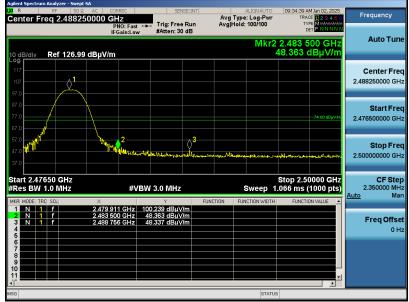


RESULT: Pass

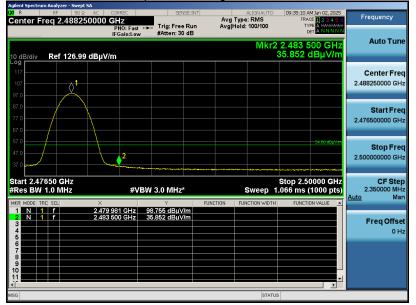


Band Edge	Emission	Test Results for	Restricted Bands
Dania Lugo	LIIII33IOII		Restricted Darius

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna Polarity	Vertical



Test Graph for Average Measurement



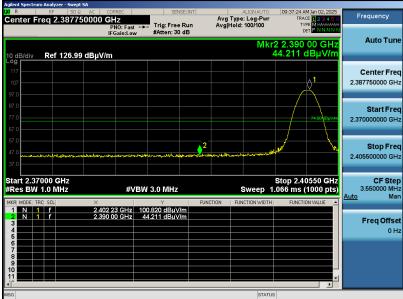
RESULT: Pass



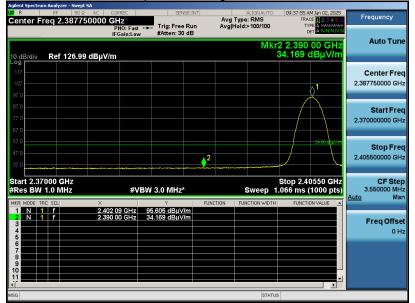
EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3°C	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 4	Antenna Polarity	Horizontal

Band Edge Emission Test Results for Restricted Bands

Test Graph for Peak Measurement



Test Graph for Average Measurement

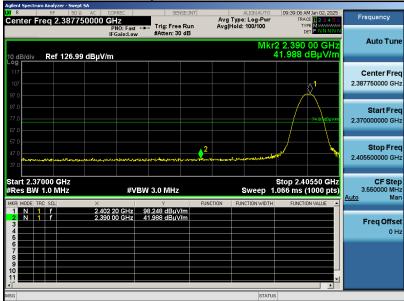


RESULT: Pass

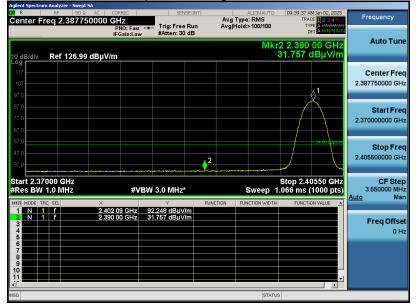


Band Edge	Fmission	Test Results for	Restricted Bands
Danu Luge	LIIII331011	reat neaulta ior	Restricted Danus

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 4	Antenna Polarity	Vertical



Test Graph for Average Measurement

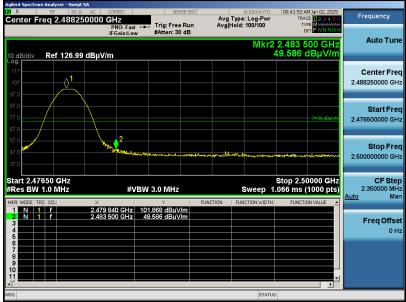


RESULT: Pass

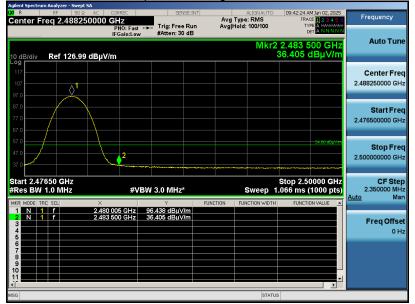


Band Edge	Emission	Test Results for	Restricted Bands
Dania Lugo	LIIII33IOII	rest nesults for	Restricted Danas

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 6	Antenna Polarity	Horizontal



Test Graph for Average Measurement



RESULT: Pass

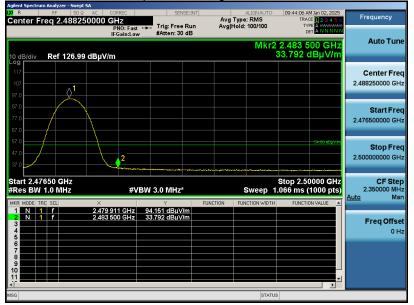


Band Edge	Emission	Test Results for	Restricted Bands
Dania Lugo	LIIII33IOII	rest nesults for	Restricted Danas

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 6	Antenna Polarity	Vertical



Test Graph for Average Measurement



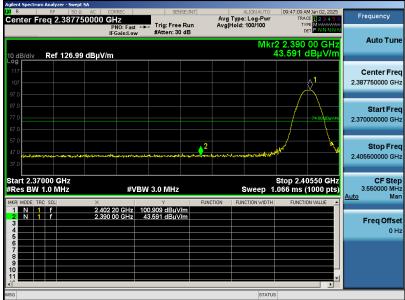
RESULT: Pass



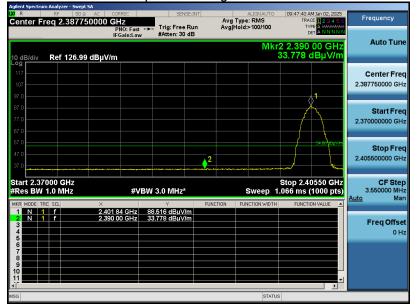
EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3°C	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 7	Antenna Polarity	Horizontal

Band Edge Emission Test Results for Restricted Bands

Test Graph for Peak Measurement



Test Graph for Average Measurement

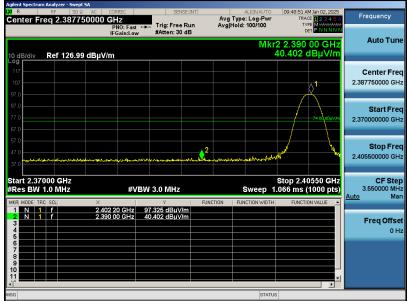


RESULT: Pass

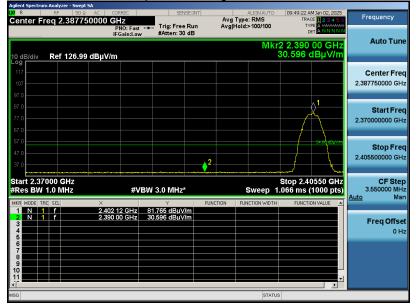


Band Edge	Emission	Test Results for	Restricted Bands
Dania Lugo	LIIII33IOII	TCSt RCSults for	Restricted Darius

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 7	Antenna Polarity	Vertical



Test Graph for Average Measurement

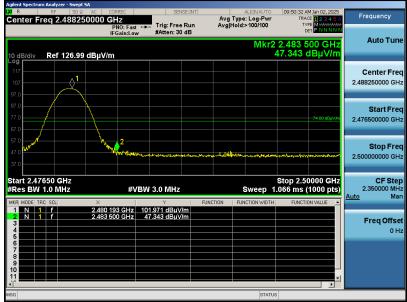


RESULT: Pass

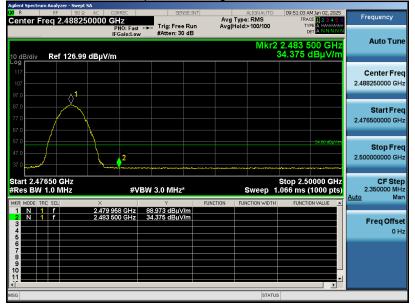


Band Edge	Emission	Test Results for	Restricted Bands
Danu Luge	LIIII331011	reat neauta ior	Restricted Danus

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 9	Antenna Polarity	Horizontal



Test Graph for Average Measurement

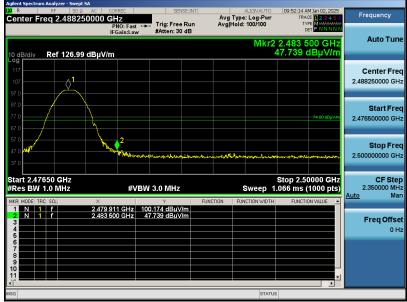


RESULT: Pass



Band Edge	Emission	Test Results for	r Restricted Bands
Dana Lugo	LIIII33IOII	TCSt NCSults IV	Restricted Darius

EUT Name	soundcore Q30, soundcore Q30i	Model Name	A3028
Temperature	22.3 ℃	Relative Humidity	59%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 9	Antenna Polarity	Vertical



Test Graph for Average Measurement



RESULT: Pass

Note: The factor had been edited in the "Input Correction" of the Spectrum Analyzer.



Report No.: AGC01110240326FR02A Page 36 of 36

Appendix I: Photographs of Test Setup

Refer to the Report No.: AGC01110240326AP02A

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC01110240326AP03A

-----End of Report-----



Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.