FCC (USA)/ISED (Canada) TEST REPORT

FCC 47 CFR Part 15D

Unlicensed Personal Communications Service Devices

Industry Canada RSS-213

2 GHz License-exempt Personal Communications Service Devices (LE-PCS)

Report Reference No: SON20220810

Testing Laboratory: ElectroMagnetic Investigations, LLC

Address: 8531 NE Cornell Road. Suite 600, Hillsboro, OR, USA

Accreditation: A2LA Accredited Testing Laboratory

Applicant's name: Sonetics Corporation

Address: 17600 SW 65th Ave.

Lake Oswego OR 97035

United States

Testing specification

Standard: FCC 47 CFR Part 15D

FCC 47 CFR Part 15C

FCC 47 CFR Part 15B

RSS-213, Issue 2, 2005-12

RSS-Gen, Issue 3, 2010-12

ANSI C63.17:2013

ANSI C63.4:2014

Equipment Under test (EUT)

Product description: DECT 6.0 Base Station

Model No. SON151

Additional Model(s): FL51Cv2, FL51PCv2, WB505Rv2

Hardware version: SON151 Rev A

Firmware / Software version: V0.1

FCC-ID: V9N950344001V1

Test result: Passed

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Possible test case verdicts

Neither assessed nor tested: N/N

Required by standard but not applicable: N/A

Required by standard but not tested: **NOT PERFORMED**

Not required by standard: N/R

EUT meets the requirement: P (Pass)

EUT does not meet the requirement: F (Fail)

Testing

Test Lab Temperature: 20 - 28 C

Test Lab Humidity: 30 - 38 %

Date EUT received: August 29, 2022

Date(s) of performance of tests: August 29, 2022 to March 13, 2023

Ryan Benity
Ryan Benity
Henry W. Benity Complied by: Ryan Benitez

Ryan Benitez Tested by:

Approved by: Henry Benitez

Date of issue: March 15, 2023

Total number of pages: 68

General remarks

The test results presented in this report relate only to the object tested. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report shall not be reproduced, except in full, without written approval of the issuing test laboratory.

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Revision History

Version	Date Issued	Description of Revision	

Authorizations

FCC (**USA**): Accepted by FCC for performance of radiated emissions and conducted emissions measurements. FCC ID: US1092.

Industry Canada: Accepted by Industry Canada for performance of radiated emissions and conducted emissions measurements. ISED Canada CAB ID US0203.

European Union (CE): ElectroMagnetic Investigations, LLC is equipped and capable of performing EMC CE compliance testing to European Union EMC CE requirements for Information Technology Equipment (ITE), Measurement, Control and Laboratory Equipment (MCL), and other equipment.

American Association of Lab Accreditations (A2LA): ElectroMagnetic Investigations is accredited to perform the tests contained within this report to the standards listed.



Certificate #2569.01

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1 Equipment (Test item) description

Description: DECT 6.0 Base Station

Model: SON151 Additional Model(s): None

Brand Name(s): Sonetics Corporation

Serial number: PROTO1
Hardware version: Rev A
Software / Firmware version: V0.1

FCC-ID: V9N950344001V1
IC: 7895A-950344001
Equipment type: End product

Equipment type: End product Radio type: DECT fixed part

Number of radios: 1 transceiver built into device

Radio technology: DECT 6.0

Operating frequency range: 1921.536 – 1928.448 MHz

Assigned frequency band: 1920 – 1930 MHz

Number of RF channels: 5

Supported slots: even and odd

Number of time slots: $12 \times Tx + 12 \times Rx = 24$

Channels F₀ CH:1 / 1928.448 MHz

F₁ CH:2 / 1926.720 MHz
 F₂ CH:3 / 1924.992 MHz
 F₃ CH:4 / 1923.264 MHz
 F₄ CH:5 / 1921.532 MHz

Main test frequencies F_{low} CH:5 / 1921.532 MHz

 $\begin{array}{ll} F_{mid} & \text{CH:3 / 1924.992 MHz} \\ F_{high} & \text{CH:1 / 1928.448 MHz} \end{array}$

Modulations GFSK
Emissions designator F7D
Nominal emission bandwidth 1.42 MHz
Channel spacing 1728 kHz

Spectrum access Listen before transmit

Nominal lower threshold N/A
Nominal upper threshold -60 dBm

Number of antennas 2 per transceiver

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Antenna 1 Type integrated

Model printed f antenna

Manufacturer Sonetics Gain 0 dBi

Antenna 2 Type external dedicated

Model HG1930RD-RSP

Manufacturer L-Com Gain 3 dBi

Antenna 3 Type external dedicated

Model TRA6927M3NW001

Manufacturer Laird

Gain 5.5 dBi - 2.6 dB cable loss = 2.9 dBi

Manufacturer Sonetics Corporation

17600 SW 65th Ave. Lake Oswego OR 97035

United States

Power supply V_{nom} 12 V DC

 $\begin{array}{ccc} V_{min} & & 4.5 \text{ V DC} \\ V_{max} & & 15 \text{ V DC} \end{array}$

AC/DC adaptor Model YMC06-3U

Vendor Ji Ming

Input 100-240 V AC 50/60 Hz

Output 12 V DC

 $Temperature \qquad \qquad T_{nom} \qquad \qquad 25 \ C$

 $\begin{array}{lll} T_{min} & -40 \ C \\ T_{max} & 70 \ C \end{array}$

1.1 Photos – Equipment external

See dedicated report

1.2 Photos – Equipment internal

See dedicated report

1.3 Photos – Test setup

See dedicated report

1.4 Supporting equipment used during testing

Product type*	Device	Manufacturer	Model No.	Comments				
	None							
*Note: Use the follo	owing abbreviations:							
AE : Auxiliary/Assoc	ciated Equipment							
SIM : Simulator (Not Subject to Test)								
CABL : Connecting of	cables							

1.5 Test modes

Mode #		Description
TDMA	General conditions:	EUT powered by a laboratory power supply. Active
		connection to companion device.
	Radio conditions:	Mode = Transmit mode
		Modulation = GFSK
		Duty cycle = 1/24
		Power level = Maximum
Receive	General conditions:	EUT powered by a laboratory power supply.
	Radio conditions:	Mode = standalone receive
		Modulation = GFSK
AC-Powerline	General conditions:	Active data connection between EUT and companion device.
		EUT connected to AM main via AC/DC Adaptor
	Radio conditions:	Mode = Transmit mode
		Modulation = GFSK
		Duty cycle = 1/24
		Power level = Maximum

1.6 Test equipment used during testing

Conducted						
Description	Cal. Date	Cal. Due				
Analyzer	Agilent	E4440A	2022/01/28	2023/07/28		
DECT Tester	R&S	CMD60	2023/03/16	2024/03/16		
Signal generator	R&S	SME06	2021/09/03	2026/09/03		
Coupler	Narda	4222-16	2022/12/05	2023/12/05		

	Radiated spurious emissions						
Description	Manufacturer	Model	Cal. Date	Cal. Due			
Analyzer	Agilent	E4440A	2022/01/28	2023/07/28			
Analyzer	Agilent	E4443A	2023/01/30	2026/01/30			
Antenna	Com-Power	AC-220	2021/08/30	2023/08/30			
Antenna	Com-Power	AHA-118	2021/08/24	2023/08/24			
Antenna	Com-Power	AH-1840	2022/11/11	2027/11/11			
Pre-Amp	Amplifier Research	LN1000	2023/02/18	2024/02/18			

AC powerline conducted emissions						
Description	Description Manufacturer Model Cal. Date Cal. Due					
Analyzer Agilent		E4443A	2023/01/30	2026/01/30		
LISN Fischer Custom		FCC-50-50-04-02	2020/12/08	2025/12/08		
	Communications					

1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in $dB\mu V$. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric field strength to voltage that can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

Reading on analyzer $(dB\mu V) + A.F. (dB) = Net field strength <math>(dB\mu V/m)$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of $dB\mu V/m$). The FCC limits are given in units of $\mu V/m$. The following formula is used to convert the units of $\mu V/m$ to $dB\mu V/m$:

Limit (dB
$$\mu$$
V/m) = 20*log(μ V/m)

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A positive margin indicates the emission was below the limit. A negative margin indicates that the emission exceeds the emission was below the limit.

Example only:

Reading + A.F. = Net Reading : FCC limit – Net reading = Margin 21.5 dB μ V + 26 db = 47.5 dB μ V/m : 57.0 dB μ V/m - 47.5 dB μ V/m = 9.5 dB

2 Result summary

FCC 47 CFR Part 15D, 15C, IC RSS-213. IC RSS-Gen					
Section	Requirement - Test	FCC	IC	ANSI	Result
3.1	Channel Frequencies	15.303	RSS-213 5.1		PASS
3.2	AC power line	15.107(a)	RSS-213 5.4	C63.4 7	PASS
	conducted emissions	15.207(a)	RSS-Gen 7.2 / 8.8		
3.3	Antenna	15.317, 15.203	RSS-GEN 6.8		PASS
	Requirement				
3.4	Digital modulation	15.319(b)	RSS -213 5.1	6.1.4	PASS
3.5	Occupied Bandwidth	N/A	RSS-GEN 6.7	6.1.3	PASS
3.6	Emission Bandwidth	15.323(a)	RSS-213 5.5	6.1.3	PASS
3.7	Peak Transmit Power	15.319(c)(e)	RSS-213 5.6	6.1.2	PASS
	and Antenna Gain	15.31(e)	RSS-GEN 8.3		
3.8	Power Spectral	15.319(d)	RSS-213 5.7	6.1.5	PASS
	Density				
3.9	Frequency stability	15.323(f)	RSS-213 5.3	6.2.2	N/T
3.10	In-band unwanted	15.323(d)	RSS-213 5.8.2	6.1.6.1	PASS
	emissions				
3.11	Out-of-band-	15.323(d)	RSS-213 5.8.1	6.1.6.2	PASS
	emissions				
3.12	Spurious Emissions	15.319(g)	RSS-GEN 7.3 / 8.9	C63.4	PASS
	(Radiated)	15.109(a)			
		15.209(a)			
3.13	Automatic	15.319(f)	RSS-213 5.2		N/T
	discontinuation of				
	transmission				
3.14	Radiofrequency	15.319(i)	RSS-102		N/A
	radiation exposure				
3.15	Monitoring threshold	15.323(c)(2)(5)(9)	RSS-213 5.2 (2)(5)(9)	7.3.1	N/T
3.16	LIC confirmation	15.323(c)(5)	RSS-213 5.2 (5)	7.3.2	N/T
3.17	LIC selection	15.323(c)(5)	RSS-213 5.2 (5)	7.3.2	N/T
3.18	Monitoring antenna	15.323(c)(8)	RSS-213 5.2 (8)	4	N/T
3.19	Monitoring time	15.323(c)(1)	RSS-213 5.2 (1)	7.3.3	N/T
3.20	Monitoring	15.323(c)(7)	RSS-213 5.2 (7)	7.4	N/T
	bandwidth				
3.21	Monitoring reaction	15.323(c)(7)	RSS-213 5.2 (7)	7.5	N/T
	time				
N/A	Access criteria test	15.323(c)(4)(6)	RSS-213 5.2 (6)		N/T
	interval				
3.22	Access criteria	15.323(c)(4)(6)	RSS-213 5.2 (6)	8.1.2 or 8.1.3	N/T
	functional test				
3.23	Acknowledgments	15.323(c)(4)	RSS-213 5.2 (4)	8.1 or 8.2	N/T

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N/A	Maximum transmit duration	15.323(c)(3)	RSS-213 5.2 (3)		N/A
3.24	Maximum spectrum occupancy	15.323(c)(5)	RSS-213 5.2 (5)		PASS
N/A	Duplex connections	15.323(c)(10)	RSS-213 5.2 (10)	8.3	N/A
N/A	Alternative monitoring interval	15.323(c)(11)(12)	RSS-213 5.2 (11)(12)	8.4	N/A
3.25	Fair access	FCC 15.323(c)(12)	IC RSS-213 4.3.4(b)(12)		PASS
3.26	Frame period and jitter	15.323(e)	RSS-213 5.2 (13)	6.2.3	N/T
3.27	Frame repetition stability	15.323(e)	RSS-213 5.2 (13)	6.2.2	N/T

N/T – Not tested and not included in the scope of this test report. Refer to Intertek test report 22110137HKG.

3 Test conditions and results

3.1 Channel Frequencies

FCC 15.303, RSS-213 Issue 3, clause 5.1:

Within 1920 – 1930 MHz band for isochronous devices.

UPCS Channel	Frequency (MHz)
Upper Band Edge	1930.000
1 (Highest)	1928.448
2	1926.720
3	1924.992
4	1923.264
5 (Lowest)	1921.536
Lower Band Edge	1920.000

3.2 Test conditions and results – AC power line conducted emissions

Conducted emissions acc. to FCC 47 CFR 15D / IC RSS-213 Verdic				Verdict: PASS		
Test performed by: ElectroMagnetic	Investigations					
EUT requirement			Reference			
rule parts and clause		FCC 15	5.107(a), FCC 15.	207(a)		
		RSS-21	3 5.4, RSS-Gen 7	.2 / 8.8		
Test according referenc	ed	R	eference Metho	d		
standards			ANSI C63.4			
Fully configured sample scanne	d over the		Frequency range			
following frequency ran	ge	0.15 MHz to 30 MHz				
Points of Application		Application Interface				
AC Mains			LISN			
EUT test mode		AC-Powerline				
	Limits and	results				
Frequency [MHz]	Quasi-Peak	Result	Average	Result		
	[dBµV]		[dBµV]			
0.15 to 0.5	66 to 56*	PASS	56 to 46*	PASS		
0.5 to 5	56	PASS	46	PASS		
5 to 30	60	PASS	50	PASS		
Comments: *Limit decreases linearly	with the logarit	hm of the frequ	Comments: *Limit decreases linearly with the logarithm of the frequency.			

Revision 11 CONDUCTED EMISSIONS DATA SHEET 6/30/2021 Customer: Sonetics Corporation Job Reference#: SON20220810 Contact: Michael Barger Date: 8/31/2022 DUT: **DECT Base Station Model SON151** Temperature (°C): 27.9 Serial Number: Relative Humidity (%): 30 Voltage/Freq: 120 V 60 Hz Barometric Pressure: Location: Hillsboro Tested by: Ryan Benitez Product Standards: FCC Part 15 Subpart B Class B N/A Test Standard: FCC Part 15 Class B TEST RESULTS TEST TYPE LINE RUN# Line Pass Compliance Peak Data - Average Limit QP Limit Average Data QP Data 70 60 50 40 dBuV 30 20 10 0 0.1 10 100 MHz COMMENTS SIGNATURE 120 V 60 Hz; Channel 5 (low chan) test mode; Peak Data Average Data QP Data Amplitude Freq Amplitude Margin Amplitude Margin Margin Limit Limit (MHz) (dBµV) (dB) (dBµV) (dBmV) (dB) (dBµV) (dBmV) (dB) 53.03 56.00 0.55 2.97 46.00 46.91 9.09 36.82 9.19 0.7043.43 12.57 25.13 46.00 20.87 36.40 56.00 19.60 1.08 43.90 12.10 22.46 46.00 23.54 36.03 56.00 19.97 48.30 7.70 22.70 23.30 18.14 1.13 46.00 37.86 56.00 1.53 40.57 15.43 21.83 46.00 24.17 32.67 56.00 23.33 15.59 31.91 2.47 40.42 20.16 46.00 25.84 56.00 24.09

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3.3 Test conditions and results – Antenna requirement

Antenna requirement acc. to FCC 47 CFR 15D / IC RSS	Verdict: PASS			
Test performed by: ElectroMagnetic Investigations				
EUT requirement Reference				
rule parts and clause FCC 15.317, FCC 15.203, RSS-GE				
Test according to measurement reference Reference				
Visual inspection & declaration				
Requirements				

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 shall be considered sufficient to comply with the provisions of this section. 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.

When an antenna conducted measurement is used to determine the RF output power of the device, the effective gain of the antenna intended for the device must be stated based on measurement or on data from the measured RF output power before using the power limits.

Results					
Antenna No.	Antenna gain	Antenna gain in			
		[dBi]	excess of 3 dBi		
1	internal	0	0		
2	external	3	0		
3	external	2.9	0		

Comment: Uses reverse SMA connector for antenna port.

Antenna No. 3 is used with specific cabling to provide effective gain < 3dBi.

3.4 Test conditions and results – Digital modulation

Antenna requirement acc. to FCC 47 CFR 15D /	IC RSS-213 Verdict: Pass			
Test performed by: ElectroMagnetic Investigation	tions			
EUT requirement Reference				
rule parts and clause	FCC 15.319(b), IC RCC-213 5.1			
Test according to Reference Method				
measurement reference Declaration				
Requirements				
All transmission must use only digital modulation techniques.				
Resu	ılts			

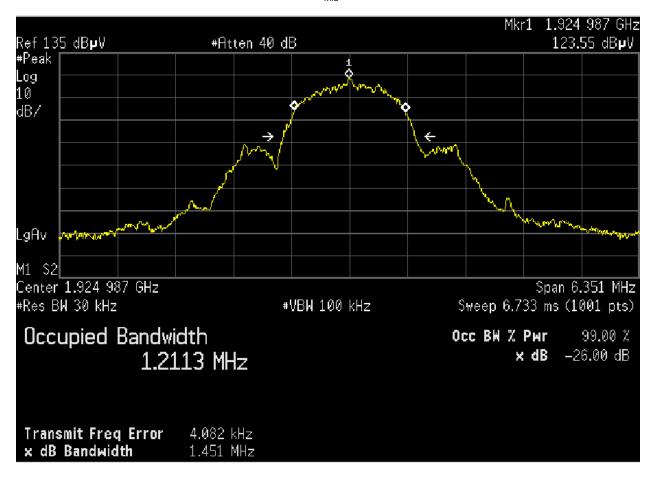
The test sample is an isochronous digital modulated device that operates in 1920-1930 MHz band. This device based on DECT technology described in European Standards EN 300 175-2 and EN 300 175-3, now operating in frequency channels mentioned above.

The operating modes are MC/TDMA/TDD (Multi carrier / Time Division Multiple Access / Time Division Duplex) using Digital GFSK modulation.

For further details see operational description provided by manufacturer.

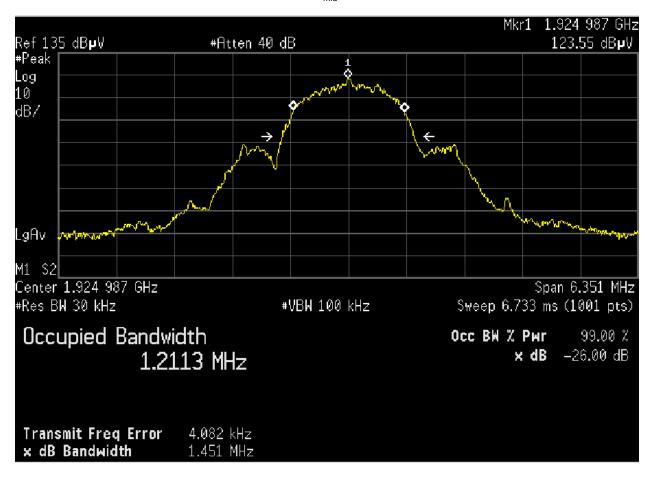
3.5 Test conditions and results – Occupied bandwidth

Occupied Bandwidth acc. to IC RSS-GEN Verdict: PASS				Verdict: PASS	
Test performed by	: ElectroMagnetic Investiga	tions			
Test	according to	R	eference Metho	d	
measure	ement reference		IC RSS-GEN 6.7		
Teste	d frequencies		F_{mid}		
EU ⁻	T test mode		TDMA		
		Limits			
	0.05 MHz <= Occu	pied Bandwidth < 2	.5 MHz		
	Т	est results			
Channel	Center frequency [MHz]	Lower edge	Upper edge	Occupied	
		[MHz] [MHz] Bandwidth [MI			
F _{mid}	1924.992	1924.386 1925.597 1.2113			
Comments: refer	Comments: refer to Intertek test report 22110137HKG for FLOW and FHIGH				



3.6 Test conditions and results – Emission Bandwidth

Emission Bandwidth acc. to FCC 47 CFR 15D and RSS-213 Verdict: PASS				Verdict: PASS			
Test performed	d by: ElectroMaរូ	gnetic Inv	estigations				
Test acco	ording to		R	eference			
measureme	nt reference		FCC 15.323	(a), IC RSS-213 5.	5		
Test acco	ording to		Refer	ence Method			
measureme	nt reference		ANSI	C63.17 6.1.3			
Tested fre	equencies		F	low / F _{high}			
EUT tes	st mode			TDMA			
			Limits				
	0.05 M	Hz ≤ Emis	sion Bandwidth <	2.5 MHz			
		Т	est results				
Channel	Center	Mode	Lower edge	Upper edge	Emission		
	frequency		[MHz]	[MHz]	Bandwidth		
	[MHz]				[MHz]		
F _{low}	1921.536	-26 dB	NOT	NOT	NOT		
			PERFORMED	PERFORMED	PERFORMED		
F _{MID}	1924.992	-26 dB	1924.267	1925.718	1.451		
F _{high}	1928.448	-26 dB	-26 dB NOT NOT NOT				
			PERFORMED PERFORMED PERFORMED				
Comments: re	fer to Intertek to	est report	: 22110137HKG fo	or F _{LOW} and F _{HIGH}			



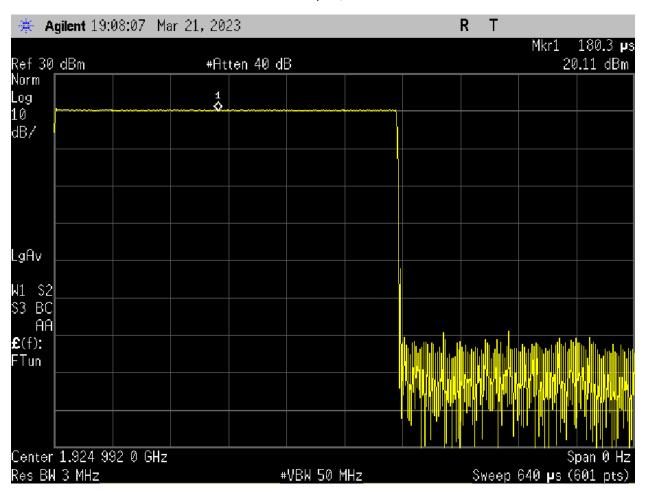
3.7 Test conditions and results – Peak transmit power

Peak transmit power acc. to FCC 47 CFR 15D / ICC RSS-213 Verdict: PASS			
Test performed by: ElectroMagnetic Investigations			
EUT requirement	Reference		
rule parts and clause	FCC 15.319(c),(e), IC RSS-5.6, IC RSS-GEN 8.3		
Test according to	Reference Method		
measurement reference	ANSI C63.17 6.1.2		
Tested frequencies	F _{low} / F _{MID} / F _{high}		
EUT test mode	TDMA		
Antenna excess gain	0 dB		
Limits			

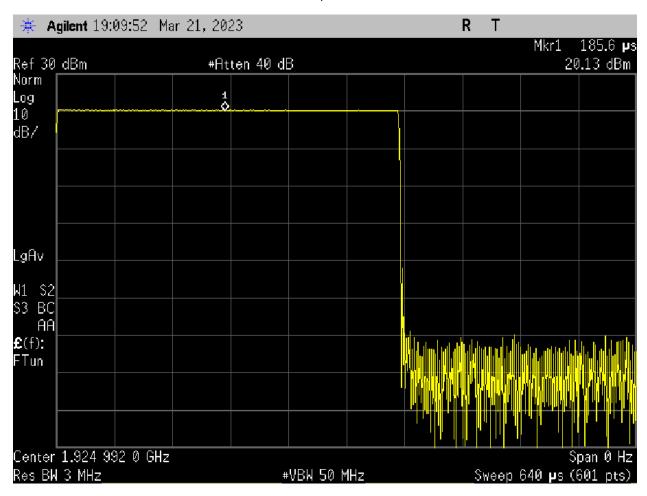
Peak transmit power shall not exceed 100 microwatts multiplied by the square root of the emission bandwidth in hertz. The peak transmit power shall be reduced by the amount in decibels that the maximum directional gain of the antenna exceeds 3 dBi.

	Test results - FCC					
Channel	Frequency [MHz]	Peak Power	Peak Power Excess gain [dB] Limit [dBm] Mar			
		[dBm]				
F_{MID} , V_{NOM}	1924.992	20.11	0	20.88	0.77	
F _{MID} , V _{MIN}	1924.992	20.13	0	20.88	0.75	
F _{MID} , V _{MAX}	1924.992	20.25	0	20.88	0.63	
		Tes	t results – IC			
Channel	Frequency [MHz]	Peak Power	Excess gain [dB]	Limit [dBm]	Margin [dB]	
		[dBm]				
F _{MID} , V _{NOM}	1924.992	20.11	0	20.45	0.34	
F _{MID} , V _{MIN}	1924.992	20.13	0	20.45	0.32	
F _{MID} , V _{MAX}	1924.992	20.25	0	20.45	0.20	
Comments: r	Comments: refer to report 22110137HKG for F _{low} / F _{high}					

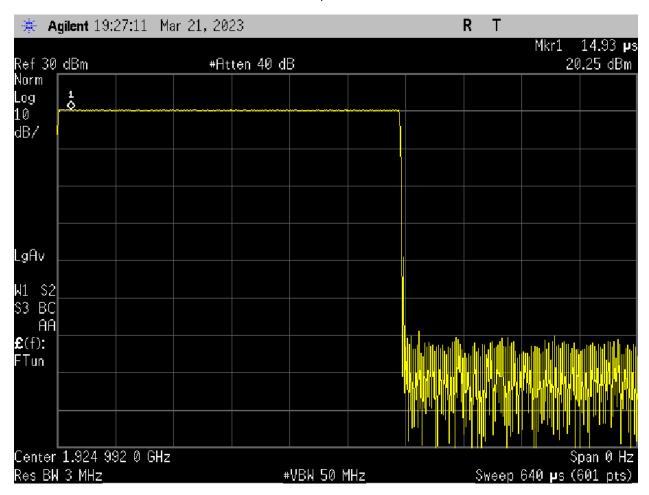
 $F_{\text{MID}},\,V_{\text{NOM}}$



 F_{MID} , V_{MIN}

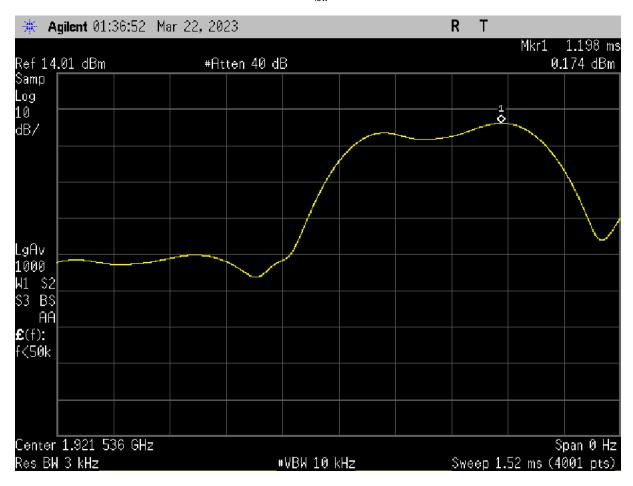


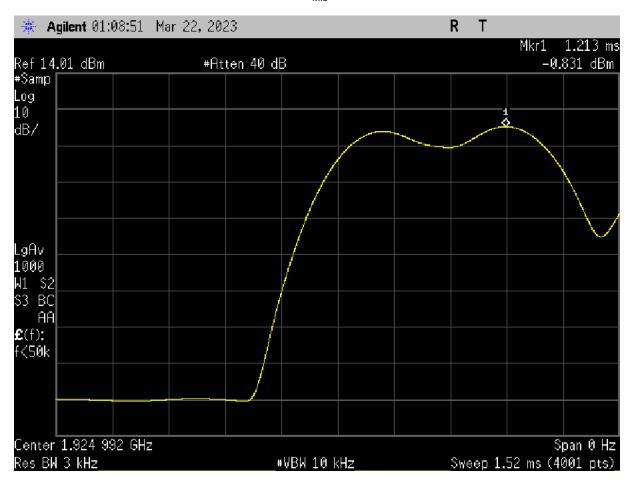
 $F_{\text{MID}}\text{, }V_{\text{MAX}}$



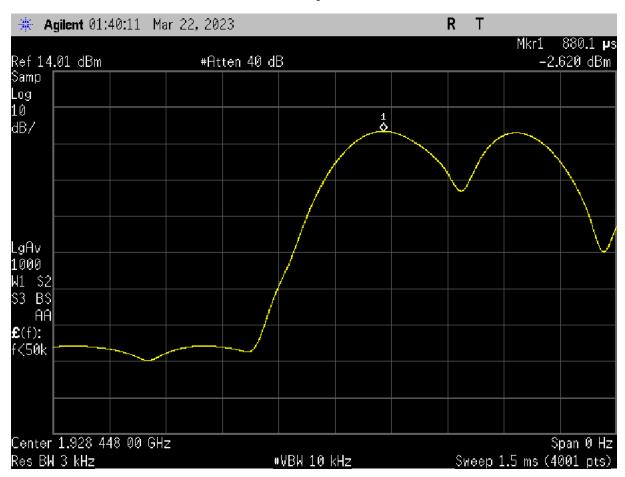
3.8 Test conditions and results – Power spectral density

Power spectral density acc. to FCC 47 CFR 15D / IC RSS-213				Verdict: PASS	
Test performed by: Electrol	Magnetic Investi	gations			
EUT requireme	nt		Reference		
rule parts and cla	ause	FCC 15.	319(d) / IC RSS-2:	13 5.7	
Test according	to	R	eference Method		
measurement refe	rence	A	NSI C63.17 6.1.5		
Tested frequence	cies		F _{low} / F _{high}		
EUT test mod	e		TDMA		
		Limits			
	≤ mW (4.7	77 dBm) / 3 kHz			
	Tes	t results			
Channel	Frequency	Peak Density	Limit	Margin [dB]	
	[MHz]	[dBm/3kHz]	[dBm/3kHz]		
F _{low}	1921.536	1921.536 0.175 4.77 4.595			
F _{MID}	1924.992	-0.821 4.77 5.601			
F _{high}	1928.448	-2.62	4.77	7.390	
Comments:					





 F_{high}



3.9 Test conditions and results – Frequency stability

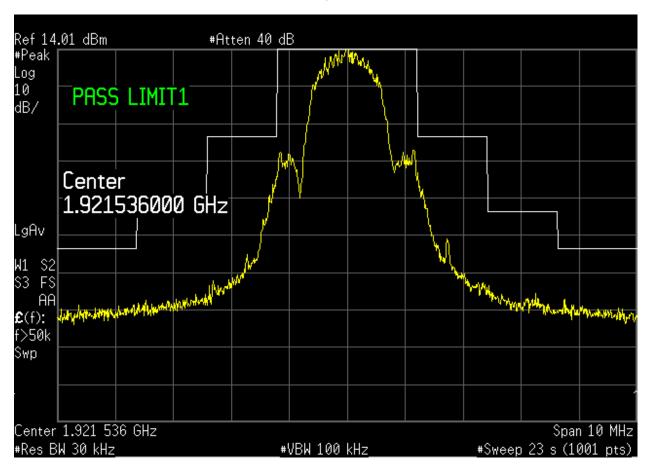
Frequency stability acc. to FCC 47 CFR 15D / IC RSS-213 Verdict: NOT PERFORMED					
EUT requ	uirement	Ref	erence		
•	and clause	FCC 15.323(f) / IC RSS	213 5.3	
Test acc	ording to	Referen	ce Meth	od	
measureme	nt reference	ANSI C	53.17 6.2	.1	
Tested fr	equencies		F _{mid}		
EUT tes	st mode	Т	DMA		
		Limits			
		± 10 ppm / hour			
		Test results			
Voltage	Temperature	Maximum Frequency deviation	Limit	Verdict	
		[ppm]	[ppm]		
Nominal			±10	NOT PERFORMED	
85%			±10	NOT PERFORMED	
115%			±10	NOT PERFORMED	
Nominal		±10 NOT PERFORMED			
Nominal ±10 NOT PERFORMED					
Comments: Te	Comments: Test not performed – refer to Intertek test report 22110137HKG				

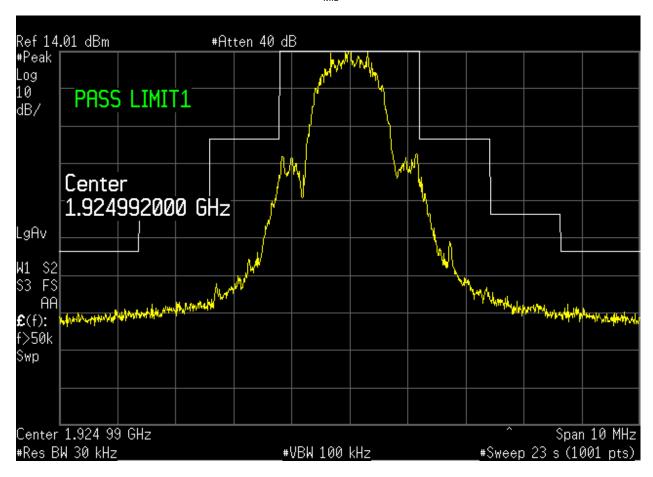
3.10 Test conditions and results – Transmitter in-band unwanted emissions

In-band unwanted emissions acc. to Verdict: PAS				
FCC 47 CFR 15D / IC RSS-213				
Test performed by: ElectroMagnetic Investigati	ions			
EUT requirement		Re	eference	
rule parts and clause		FCC 15.323(d) / IC RSS-213 5.8.2	
Test according to		Refere	nce Method	
measurement reference		ANSI C	63.17 6.1.6.1	
Tested frequencies		Fid	ow / F _{high}	
Test frequency range		1920 -	– 1930 MHz	
L	imits			
Frequency range [MHz]		Detector	Limit [dBc]	
UPCS Band Edge to (F _C – 3B)		Peak	-60	
$(F_C - 3B)$ to $(F_C - 2B)$		Peak	-50	
(F _C – 2B) to (F _C – 1B)		Peak	-30	
(F _C + 1B) to (F _C + 2B)	$(F_C + 1B)$ to $(F_C + 2B)$ Peak -30			
(F _C + 2B) to (F _C + 3B)	Peak -50		-50	
(F _C + 3B) to UPCS Band Edge Peak -60			-60	
B = emission / occupied bandwidth of selected channel				
F _C = Center frequency of selected channel	F _C = Center frequency of selected channel			

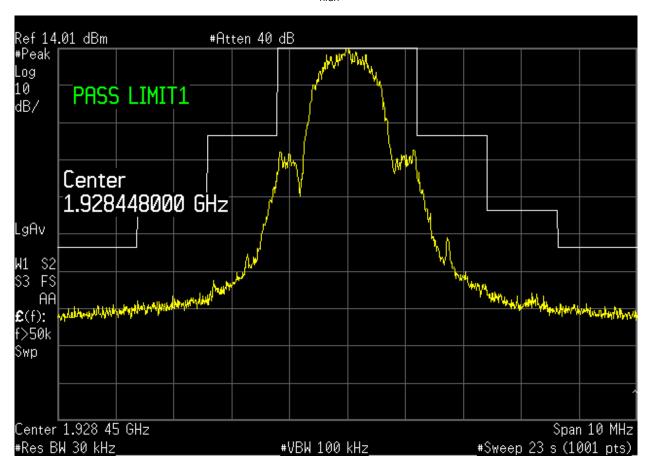
Test results		
Channel	Frequency [MHz]	Verdict
F _{low}	1921.536	Pass
F _{MID}	1924.992	Pass
F _{high}	1928.448	Pass
Comments:		

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 \textbf{F}_{HIGH}



3.11 Test conditions and results – Transmitter out-of-band emissions

Out-of-band emissions acc. to FCC 47 (Verdict: PASS				
Test performed by: ElectroMagnetic Ir	nvestigations					
EUT requirement		Reference				
rule parts and clause	2		FCC 15.323(d) / IC RSS213 6.7.1			
Test according to		Reference Method				
measurement referen	ce		ANSI C63.17 6.1.6			
Tested frequencies			F_{low} / F_{high}			
Test frequency range	9		30 MHz – 10 th Harmon	ic		
	Lim	its				
Frequency range [MHz]	Detecto	r	Limit	Limit Distance		
				[meters]		
30 – 88	Quasi-Pea	ak	100 μV/m (40 dBμV/m)	3		
88 – 216	Quasi-Pea	ak	150 μV/m (43.5 dBμV/m)	3		
216 – 960	Quasi-Pea	ak	200 μV/m (46 dBμV/m)	3		
960 – 1000	Quasi-Pea	ak	500 μV/m (54 dBμV/m)	3		
1000 – 1917.5	Average	2	500 μV/m (54 dBμV/m)	3		
Below 1917.5	Peak		-39.5 dBm *	N/A		
1917.5 - 1918.75	Peak		-29.5 dBm *	N/A		
1918.75 – 1920	Peak		-9.5 dBm *	N/A		
1930 – 1931.25	Peak		-9.5 dBm *	N/A		
1931.25 – 1932.5	Peak		-29.5 dBm *	N/A		
Above 1932.5	Peak		-39.5 dBm *	N/A		
1932.5 - 20000	Average	<u> </u>	500 μV/m (54 dBμV/m)	3		

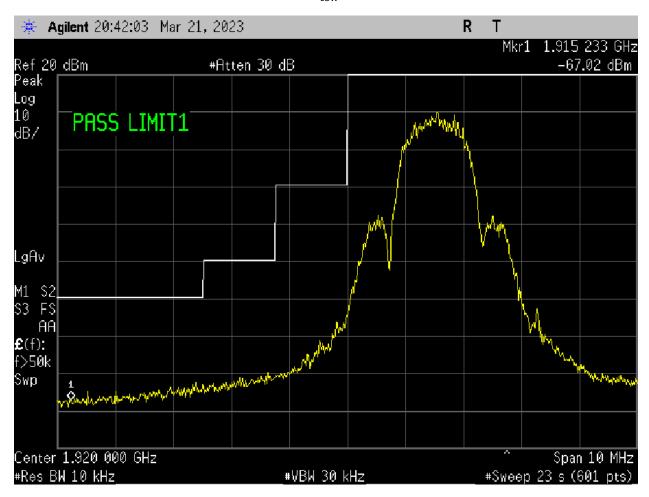
Radiated emissions which fall in the restricted bands, ad defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

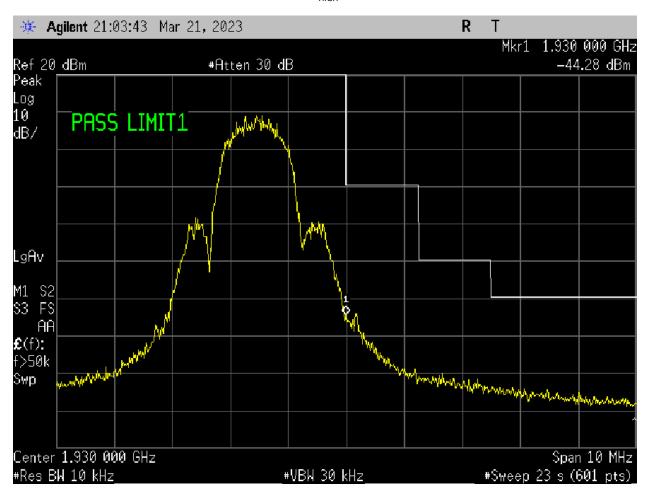
*Measurement is performed with conducted measurement setup

Comments: refer to Intertek test report 22110137HKG

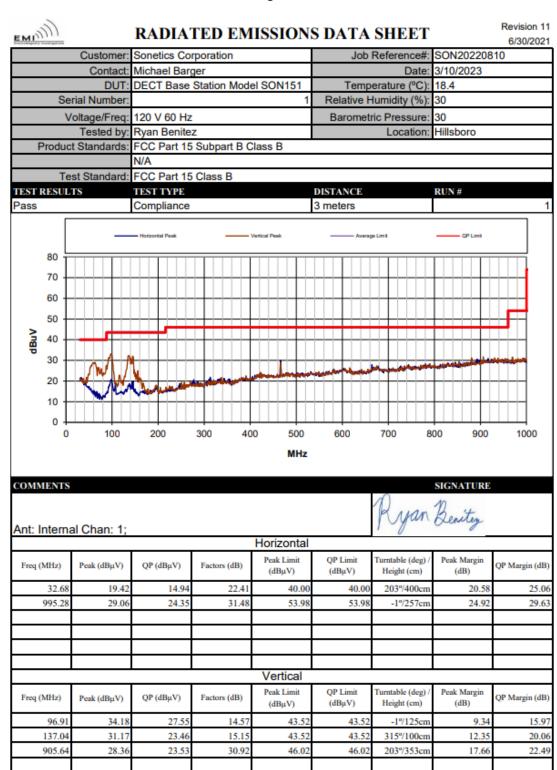
Internal antenna tested to supplement 22110137HKG report.



FHIGH



Antenna: integrated / Channel: 1



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17.976

63.514

52.641

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EMI		IV. IDIA I	LID LIVE	10010110	Dittin Shieel		6/30/202
	Customer:	Sonetics Cor	poration		Job Reference#	SON20220	0810
	Contact:	Michael Barg			Date	3/9/2023	
	DUT:	DECT Base \$	Station Mod	del SON151	Temperature (°C)	18.6	
Sei	rial Number:			1	Relative Humidity (%)	: 30	
V	oltage/Freq:	120 V 60 Hz			Barometric Pressure	: 30	
	Tested by:	Ryan Benitez			Location	Hillsboro	
TEST STAN	DARDS						
Produ	ct Standard:	FCC Part 15	Subpart B	Class B			
Te	st Standard:	FCC Part 15	Class B				
TEST RESU	LTS	TEST TYPE			Distance	RUN#	
Pass		Compliance			3 meters		
100	Horizontal Peak	Vertical Peak	- Hortzontal Average	Vertical As	Peak Linit	- Average Limit •	Max Average
80							
70							
60							
	<u> </u>	· - - - -		+++			-
∑ 50 40						III Company	
	The second	11					
30				++		 	
20				++			
10	++			++			
0	1 N W	0 r0 4	7 8	9 1 1	12 13 14 15	6 7 8	19 20
COMMENT	s			GHz	1.0	SIGNATURE	
Ant: intern	nal; Chan: 1			Tabulated data	Ryan	Benity	
Freq (GHz)	Peak (dBμV)	Final (dBμV)	Peak Limit (dBmV)	Final Limit (dBµV)	Orientation	Peak Margin (dB)	Average Margi
1.928	91.045	91.021	73.98	53.98	Horizontal	N/A	N/A
3.856	48.14	47.311	73.98	53.98	Horizontal	25.84	6.669
3.858	48.137	47.272	73.98	53.98	Horizontal	25.843	6.708
4.958	46.012	44.136	73.98	53.98	Horizontal	27.968	9.844
5.786	44.956	41.775	73.98	53.98	Vertical	29.024	12.205
7.783	54.286	42.406	73.98	53.98	Horizontal	19.694	11.574
7.820	54.47	42.432	73.98	53.98	Horizontal	19.51	11.548
7.827	54.473	42.436	73.98	53.98	Horizontal	19.507	11.544
7.831	54.474	42.438	73.98	53.98	Horizontal	19.506	11.542
9.058	54.956	43.673	73.98	53.98	Horizontal	19.024	10.307
10.750	55.619	45.374	73.98	53.98	Horizontal	18.361	8.606
14.498	57.912	49.143	73.98	53.98	Vertical	16.068	4.837
14.881	58.858	49.528	73.98	53.98	Vertical	15.122	4.452
17.966	63.842	52.631	73.98	53.98	Vertical	10.138	1.349

53.98

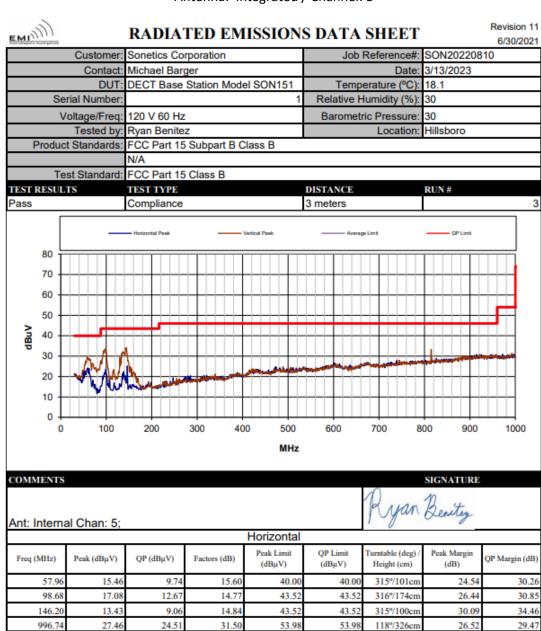
73.98

Vertical

1.339

10.466

Antenna: integrated / Channel: 5



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Vertical Peak Limit

(dBuV)

43.52

43.52

46.02

Freq (MHz)

97.92

144.86

814.89

Peak (dBµV)

34.36

27.7

27.16

QP (dBµV)

27.84

24.15

21.62

Factors (dB)

14.68

14.84

29.72

QP Limit

(dBµV)

43.5

46.02

Turntable (deg)

Height (cm)

0º/102cm

315°/102cn

96°/324cm

Peak Margin

9.16

15.81

18.86

QP Margin (dB)

15.68

19.31

24.40



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EMI		KADIAI	ED ENII	BBIONS	DATA SHEET		6/30/2021
	Customer:	Sonetics Cor	poration		Job Reference#:	SON20220	810
	Contact:	Michael Barg	er		Date:	3/9/2023	
		DECT Base S		el SON151	Temperature (°C):	18.6	
Ser	ial Number:			1	Relative Humidity (%):	30	
Vo	oltage/Freg:	120 V 60 Hz			Barometric Pressure:		
		Ryan Benitez					
TEST STANI		r yani Doimida					
		FCC Part 15	Subpart B (Class B			
		FCC Part 15		Jidoo B			
TEST RESUL		TEST TYPE	Oldoo D		Distance	RUN#	
Pass		Compliance			3 meters	NO.TH	1
		Обтриалов			o motoro		
——н	iorizontal Peak	Vertical Peak	Horizontal Average	Vertical Av	erage ———— Peak Limit —————	Average Limit •	Max Average
100 -							
90 -							
80 -							
70 -							
≥ 60 .							
Angp 50		1		ergang paparah			
40 .							
30 -				+++			********
20 -				+++			
10 -				+++			
0 -							
	1 N 3	A 0 0	8	° 51	12 13 14 15 15	1 18	20 19
				GHz			
COMMENTS	9					SIGNATURE	
COMMENTS							
Ant: intern	al; Chan: 5				Ryan	Benites	
				Tabulated data			
Freq (GHz)	Dook (JD., V)	Final (dBµV)	Peak Limit	Final Limit	Orientation	Peak Margin	Average Margin
ried (GHZ)	Peak (dBμV)	rinai (disµv)	(dBmV)	(dBµV)	Orientation	(dB)	(dB)
1.921	91.409	91.384	73.98	53.98	Horizontal	N/A	N/A
3.842	47.737	47.184	73.98	53.98	Horizontal	26.243	6.796
3.844	47.735	47.181	73.98	53.98	Horizontal	26.245	6.799
5.765	47.861	43.802	73.98	53.98	Vertical	26.119	10.178
7.739	53.726	42.552	73.98	53.98	Vertical	20.254	11.428
7.798	53.756	42.515	73.98	53.98	Vertical	20.224	11.465
7.819	53.767	42.502	73.98	53.98	Vertical	20.213	11.478
7.829	53.772	42.495	73.98	53.98	Vertical	20.208	11.485
10.571	55.169	45.09	73.98	53.98	Vertical	18.811	8.89
14.700	58.107	49.249	73.98	53.98	Horizontal	15.873	4.731
14.886	58.405	49.436	73.98	53.98	Horizontal	15.575	4.544
17.762	63.353	52.333	73.98	53.98	Vertical	10.627	1.647
17.971	63.788	52.544	73.98	53.98	Horizontal	10.192	1.436
17.571	03.766	32.344	15.50	22.70	Horizontai	10.172	1.450
	_						
						l	

3.12 Test conditions and results – Receiver spurious emissions

Receiver spurious emissions acc. to IC RSS-	Ve	rdict: PASS			
Test performed by: ElectroMagnetic Invest	tigations				
EUT requirement		Refere	ence		
rule parts and clause	rule parts and clause			7.3 / 8.9	
Test according to			Reference	Method	
measurement reference			ANSI C	63.4	
Tested frequencies			Scan (All)	
Test frequency range			30 MHz – 5 th	Harmonic	
EUT test mode			Recei	ive	
	Li	mits			
Frequency range [MHz]	Det	ector	Limit [μV/m]	Limit	Limit
				[dBµV/m]	Distance
					[meters]
30 – 88	Quas	si-Peak	100	40	3
88 – 216	Quas	si-Peak	150	43.5	3
216 – 960	Quas	si-Peak	200	46	3
960 – 1000	Quas	si-Peak	500	54	3
>1000	Ave	erage	500	54	3

Comments:

^{*}Physical distance between EUT and measurement antenna.

^{**}Emission level corresponds to ambient noise floor.

Antenna: integrated / Channel 3

	Custome	er: Sonetics Co	rporation		Job	Reference#:	SON202208	10
		ct: Michael Bar					3/10/2023	
	DU		Station Mode	el SON151	Temp	erature (°C):		
	Serial Number			1		lumidity (%):		
	Voltage/Fre	q: 120 V 60 Hz			Barometi	ric Pressure:	30	
	Tested b					Location:		
Pr	oduct Standard	s: FCC Part 15	Subpart B C	lass B				
		N/A						
	Test Standar	d: FCC Part 15	Class B					
EST RI	ESULTS	TEST TYPE			DISTANCE		RUN#	
ass		Compliance			3 meters			
dBuV	80 70 60 50 40 30 20 10 0	Porteonal Peak	300 40	Vertical Peak	600		OP Limit	1000
omme	ternal Chan:	3;		Horizontal		Ryan	Benity	
Freq (M	Hz) Peak (dBμV	QP (dBμV)	Factors (dB)	Peak Limit	QP Limit	Turntable (deg) /	Peak Margin	QP Margin (d
rieq (M	riz) Peak (dBµV	QF (dBμV)	raciois (dB)	(dBµV)	(dBµV)	Height (cm)	(dB)	QF Margin (c
98	88.30 28.	09 24.35	31.51	53.98	53.98	94º/146cm	25.89	29.
		<u></u>	<u> </u>					
				Vertical				
Freq (M	Hz) Peak (dRu)	QP (dBμV)	Factors (dB)	Vertical Peak Limit	QP Limit	Turntable (deg) /	Peak Margin	OP Margin (c
		,	Factors (dB)	Peak Limit (dBμV)	(dBµV)	Height (cm)	(dB)	
	Hz) Peak (dBμV 97.61 33. 38.52 31.	51 27.40	Factors (dB) 14.64 15.08	Peak Limit			(dB) 10.01	QP Margin (d

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The second secon									
		Sonetics Cor			Jo			SON2022	0810
		Michael Barg						3/9/2023	
		DECT Base S	Station Mod	el SON151		nperature			
	erial Number:			1		Humidity			
	Voltage/Freq:				Barom	Barometric Pressure			
		Ryan Benitez	2			Location			
	NDARDS	F00 P-+ 45	0.1	D					
	uct Standard:			Jiass B					
	est Standard:		Class B		m: .			TATES: //	
Pass	SULTS	Compliance			Distance 3 meters			RUN#	
455		Compliance			3 meters	1		<u> </u>	
	Horizontal Peak	Vertical Peak	Horizontal Average	Vertical Av	rerage	Peak Limit		Average Limit	Max Average
100	0								
90	0 +			++					
80	o 			++					
70	0			++					
60	0			++					
Angp 50	0								- C - C - C - C - C - C - C - C - C - C
₩ 40	0				100				W
_	O MANAGEMENT								
3									
30									
20	0								
20	0	4 U O	8	9 10 11	12 13	14 0	n o	17 18	19
10	0 2 2 3	4 5	- 8	9 10 11 GHz	72 33	10		SIGNATUR	
20 10 0	0 2 2 3	4 5 6		GHz	72 33	10			
20 10 0	on the state of th	Final (dBµV)		0 4		10		SIGNATUR	Ε
20 10 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0	ornal; Chan: 3		Peak Limit	GHz Tabulated data Final Limit	0	Ry		Benity Peak Margin	Average Mar
20 10 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1	ernal; Chan: 3	Final (dBµV)	Peak Limit (dBmV)	GHz Tabulated data Final Limit (dBμV)	O	Ry		Benity Peak Margin (dB)	Average Mar
20 10 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Final (dBµV) 91.021	Peak Limit (dBmV) 73.98	GHz Tabulated data Final Limit (dBμV) 53.98	O H	Ry rientation prizontal		Benity Peak Margin (dB) N/A	Average Mar (dB)
20 10 0 0 0 0 0 0 0 0 0 0 0 0 1.928 3.856	Peak (dBμV) 91.045 48.14	Final (dBµV) 91.021 47.311	Peak Limit (dBmV) 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98	О Н Н	Pyrientation orizontal orizontal		Benity Peak Margin (dB) N/A 25.84	Average Man (dB) N/A 6.669
20 10 00 00 00 00 00 00 00 00 00 00 00 00	Peak (dBμV) 91.045 48.14 48.137	Final (dBµV) 91.021 47.311 47.272	Peak Limit (dBmV) 73.98 73.98 73.98	GHz Tabulated data Final Limit (dBμV) 53.98 53.98 53.98	0 H H H	rientation orizontal orizontal		Peak Margin (dB) N/A 25.84 25.843	Average Mar (dB) N/A 6.669 6.708
20 10 00 00 00 00 00 00 00 00 00 00 00 00	Peak (dBμV) 91.045 48.14 48.137 46.012	Final (dBµV) 91.021 47.311 47.272 44.136	Peak Limit (dBmV) 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98	O H H	rientation orizontal orizontal orizontal orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968	Average Mar (dB) N/A 6.669 6.708 9.844
20 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Peak (dBμV) 91.045 48.14 48.137 46.012 44.956	Final (dBµV) 91.021 47.311 47.272 44.136 41.775	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98	O H H H	rientation orizontal orizontal orizontal orizontal		Peak Margin (dB) N/A 25.84 27.968 29.024	Average Mar (dB) N/A 6.669 6.708 9.844 12.205
20 10 0 0 0 0 0 1.928 3.856 3.858 4.958 5.786 7.783	Peak (dBµV) 91.045 48.14 48.137 46.012 44.956 54.286	Final (dBµV) 91.021 47.311 47.272 44.136 41.775 42.406	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98	O H H H H	rientation orizontal orizontal orizontal orizontal orizontal orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968 29.024 19.694	Average Mar (dB) N/A 6.669 6.708 9.844 12.205 11.574
20 10 0 0 0 10 19 19 19 19 19 19 19 19 19 19 19 19 19	Peak (dBμV) 91.045 48.14 48.137 46.012 44.956 54.286 54.47	Final (dBµV) 91.021 47.311 47.272 44.136 41.775 42.406 42.432	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98	O H H H H	rientation orizontal orizontal orizontal orizontal orizontal orizontal orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968 29.024 19.694	Average Mar (dB) N/A 6.669 6.708 9.844 12.205 11.574
20 10 0 0 0 10 1.928 3.856 3.858 4.958 5.786 7.783 7.820 7.827	Peak (dBμV) 91.045 48.14 48.137 46.012 44.956 54.286 54.47 54.473	Final (dBµV) 91.021 47.311 47.272 44.136 41.775 42.406 42.432 42.436	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	O H	rientation orizontal orizontal orizontal orizontal orizontal orizontal orizontal orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968 29.024 19.694 19.51	Average Man (dB) N/A 6.669 6.708 9.844 12.205 11.574 11.548
20 10 0 0 0 10 1.928 3.856 3.858 4.958 5.786 7.783 7.820 7.827 7.831	Peak (dBμV) 91.045 48.14 48.137 46.012 44.956 54.286 54.47 54.473 54.474	Final (dBµV) 91.021 47.311 47.272 44.136 41.775 42.406 42.432 42.436 42.438	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	O H	rientation orizontal orizontal orizontal orizontal orizontal orizontal orizontal orizontal orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968 29.024 19.694 19.51 19.507	Average Man (dB) N/A 6.669 6.708 9.844 12.205 11.574 11.548 11.544
20 10 00MMEN 20 1.928 3.856 3.858 4.958 5.786 7.783 7.820 7.827 7.831 9.058	Peak (dBμV) 91.045 48.14 48.137 46.012 44.956 54.286 54.47 54.473 54.474 54.956	Final (dBµV) 91.021 47.311 47.272 44.136 41.775 42.406 42.432 42.436 42.438 43.673	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	O H	rientation orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968 29.024 19.507 19.506 19.024	Average Man (dB) N/A 6.669 6.708 9.844 12.205 11.574 11.548 11.544 11.542
20 10 00MMEN Ant: inte Freq (GHz 1.928 3.856 3.858 4.958 5.786 7.783 7.820 7.827 7.831 9.058 10.750	Peak (dB _µ V) 91.045 48.14 48.137 46.012 44.956 54.286 54.47 54.473 54.474 54.956 55.619	Final (dBµV) 91.021 47.311 47.272 44.136 41.775 42.406 42.432 42.436 42.438 43.673 45.374	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	O H H H H H H H H H	rientation orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968 29.024 19.507 19.506 19.024 18.361	Average Mar (dB) N/A 6.669 6.708 9.844 12.205 11.574 11.548 11.544 11.542 10.307 8.606
20 10 10 10 10 10 10 10 10 10 10 10 10 10	Peak (dBμV) 91.045 48.14 48.137 46.012 44.956 54.286 54.47 54.473 54.474 54.956 55.619 57.912	Final (dBµV) 91.021 47.311 47.272 44.136 41.775 42.406 42.432 42.436 42.438 43.673 45.374 49.143	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	O H H H H H H H H H	rientation orizontal		Peak Margin (dB) N/A 25.84 25.843 27.968 29.024 19.51 19.507 19.506 19.024 18.361 16.068	Average Mar (dB) N/A 6.669 6.708 9.844 12.205 11.574 11.548 11.544 11.542 10.307 8.606 4.837

Antenna: HG1930RD-RSP / Channel 3

EMINI Revision 11 RADIATED EMISSIONS DATA SHEET 6/30/2021 Customer: Sonetics Corporation Job Reference#: SON20220810 Contact: Michael Barger Date: 3/10/2023 DUT: **DECT Base Station Model SON151** Temperature (°C): 18.4 Serial Number: Relative Humidity (%): 30 Voltage/Freq: 120 V 60 Hz Barometric Pressure: 30 Tested by: Ryan Benitez Location: Hillsboro Product Standards: FCC Part 15 Subpart B Class B Test Standard: FCC Part 15 Class B RUN# TEST RESULTS DISTANCE TEST TYPE Pass 3 meters Compliance - QP Limit 80 70 60 50 40 30 20 10 0 100 200 300 400 500 600 700 800 900 1000 0 MHz COMMENTS SIGNATURE Ant: Black Chan: 3; Horizontal Turntable (deg) Peak Limit QP Limit Peak Margin Freq (MHz) Peak (dBµV) QP (dBµV) Factors (dB) QP Margin (dB) (dBµV) (dBµV) Height (cm) (dB) 32.92 315°/400cm 19.00 14.99 22.34 40.00 40.00 21.00 25.01 31.23 949.38 28.70 24.11 46.02 46.02 109°/400cm 17.32 21.91

E١	/II4019.05			Testing Re	port		Page 49 of 6	8
D.c	port SON2	N220810		ElectroMa	SON151			
Ne	port_301421	0220010		Investiga	tions			

Vertical Peak Limit

(dBµV)

43.52

46.02

Factors (dB)

14.58

15.33

31.50

QP (dBµV)

23.12

24.28

Peak (dBµV)

33.00

28.50

28.67

Freq (MHz)

96.98

134.53

932.88

QP Limit

(dBµV)

43.5

43.52

46.02

Turntable (deg)

Height (cm)

113°/100cm

248°/100cm

185°/100cm

Peak Margin

15.02

17.35

QP Margin (dB)

16.46

20.40

21.74

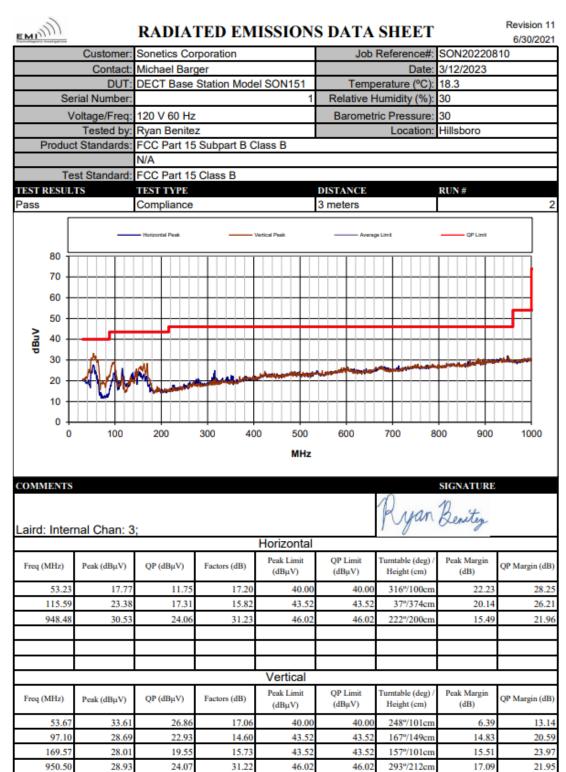


RADIATED EMISSIONS DATA SHEET

Revision 11 6/30/2021

		Constine Con	norotion				1010
	Customer:	Sonelics Cor	poration		Job Reference#		70 10
		Michael Barg			Date	: 3/10/2023	
	DUT:	DECT Base S	Station Mod	lel SON151	Temperature (°C)	: 18.4	
Ser	ial Number:			1	Relative Humidity (%)	: 30	
Vo	oltage/Freq:	120 V 60 Hz			Barometric Pressure	: 30	
	Tested by:	Ryan Benitez	:		Location	: Hillsboro	
EST STANI	DARDS						
Produc	t Standard:	FCC Part 15	Subpart B (Class B			
		FCC Part 15					
EST RESUI		TEST TYPE			Distance	RUN#	
ass		Compliance			3 meters		
100 - 90 - 80 - 70 - 60 - 50 - 40 - 40 - 60	orizontal Peak	Vertical Peak	Hofzonial Average				Max Average
30 - 20 - 10 - 0 -	2 3	4 0 0	8	© ∂ ∃ GHz	2 2 4 5	18	19
20 · 10 · 0 · 0 · 0 · 0 · 0 · 0 · 0 · 0 ·	- ν ω			GHz	140	SIGNATURE Benity	
20 · 10 · 0 · 0 · 0 · 0 · 0 · 0 · 0 · 0 ·	λ ν ω			GHz Tabulated data	140	Benity	
20 · 10 · 0 · 0 · 0 · 0 · 0 · 0 · 0 · 0 ·	λ ν ω		Peak Limit	GHz Tabulated data Final Limit	140	SIGNATURE Benitz	Average Mary
OMMENTS ont: Black	Chan: 3	Final (dBμV)	Peak Limit (dBmV)	GHz Tabulated data Final Limit (dBμV)	Ryar	Benity Peak Margin (dB)	Average Mar (dB)
OMMENTS ont: Black Freq (GHz) 1.925	; Chan: 3 Peak (dBμV) 94.982	Final (dBµV)	Peak Limit (dBmV) 73.98	GHz Tabulated data Final Limit (dBμV) 53.98	Orientation Horizontal	Benity Peak Margin (dB) N/A	Average Mar (dB)
20 - 10 - 0 - 10 - 10 - 10 - 10 - 10 - 1	Chan: 3 Peak (dBμV) 94.982 54.855	Final (dB _µ V) 94.97 53.497	Peak Limit (dBmV) 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98	Orientation Horizontal Horizontal	Peak Margin (dB) N/A 19.125	Average Mar (dB) N/A 0.483
20 - 10 - 0 - 10 - 10 - 10 - 10 - 10 - 1	Peak (dBμV) 94.982 54.855 54.855	Final (dBµV) 94.97 53.497	Peak Limit (dBmV) 73.98 73.98 73.98	GHz Tabulated data Final Limit (dBμV) 53.98 53.98	Orientation Horizontal Horizontal Horizontal	Peak Margin (dB) N/A 19.125	Average Mar (dB) N/A 0.483 0.483
20 - 10 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	Peak (dBμV) 94.982 54.855 54.856	Final (dBµV) 94.97 53.497 53.489	Peak Limit (dBmV) 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Horizontal	Peak Margin (dB) N/A 19.125 19.125	Average Mar (dB) N/A 0.483 0.483
20 - 10 - 0 - 10 - 10 - 10 - 10 - 10 - 1	Peak (dBμV) 94.982 54.855 54.856 54.325	Final (dBµV) 94.97 53.497 53.489 42.661	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical	Peak Margin (dB) N/A 19.125 19.124 19.655	Average Mar (dB) N/A 0.483 0.483 0.491 11.319
20 - 10 - 0 - 10 - 10 - 10 - 10 - 10 - 1	Peak (dBμV) 94.982 54.855 54.856 54.325 54.295	Final (dBµV) 94.97 53.497 53.489 42.661 42.561	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical Vertical	Peak Margin (dB) N/A 19.125 19.124 19.655 19.685	Average Mar (dB) N/A 0.483 0.491 11.319 11.419
20 - 10 - 0 - 10 - 10 - 10 - 10 - 10 - 1	Penk (dBμV) 94.982 54.855 54.856 54.325 54.295 54.239	Final (dBµV) 94.97 53.497 53.489 42.661 42.371	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical Vertical	Peak Margin (dB) N/A 19.125 19.125 19.655 19.685 19.741	Average Mar (dB) N/A 0.483 0.483 0.491 11.319 11.419 11.609
20 - 10 - 0 - 10 - 10 - 10 - 10 - 10 - 1	Peak (dBμV) 94.982 54.855 54.855 54.295 54.239 54.23	Final (dBµV) 94.97 53.497 53.489 42.561 42.371 42.375	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical	Peak Margin (dB) N/A 19.125 19.125 19.124 19.655 19.685 19.741	Average Mar (dB) N/A 0.483 0.491 11.319 11.419 11.609 11.605
20 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Peak (dBμV) 94.982 54.855 54.856 54.325 54.239 54.23 55.388	Final (dBµV) 94.97 53.497 53.489 42.661 42.371 42.375 45.424	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Vertical Horizontal	Peak Margin (dB) N/A 19.125 19.125 19.124 19.655 19.685 19.741 19.75 18.592	Average Mar (dB) N/A 0.483 0.483 0.491 11.319 11.609 11.605 8.556
20 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Peak (dBμV) 94.982 54.855 54.856 54.325 54.295 54.239 54.23 55.388 57.33	Final (dBµV) 94.97 53.497 53.497 53.497 42.661 42.561 42.375 45.424 49.235	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical	Peak Margin (dB) N/A 19.125 19.125 19.124 19.655 19.685 19.741 19.75 18.592 16.65	Average Mar (dB) N/A 0.483 0.483 0.491 11.319 11.609 11.605 8.556 4.745
20 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Peak (dBμV) 94.982 54.855 54.856 54.325 54.239 54.23 55.388	Final (dBµV) 94.97 53.497 53.497 53.489 42.661 42.561 42.371 42.375 45.424 49.235 49.25	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Vertical Horizontal Horizontal Horizontal Horizontal	Peak Margin (dB) N/A 19.125 19.125 19.124 19.655 19.685 19.741 19.75 18.592	Average Mar (dB) N/A 0.483 0.483 0.491 11.319 11.609 11.605 8.556
20 - 10 - 0 - 10 - 10 - 10 - 10 - 10 - 1	Peak (dBμV) 94.982 54.855 54.856 54.325 54.295 54.239 54.23 55.388 57.33	Final (dBµV) 94.97 53.497 53.497 53.497 42.661 42.561 42.375 45.424 49.235	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98	Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Horizontal Horizontal	Peak Margin (dB) N/A 19.125 19.125 19.124 19.655 19.685 19.741 19.75 18.592 16.65	Average Mar (dB) N/A 0.483 0.483 0.491 11.319 11.609 11.605 8.556 4.745

Antenna: TRA6927M3NW001 / Channel 3



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Report_SON20220810 ElectroMagnetic SON151
Investigations



RADIATED EMISSIONS DATA SHEET

Revision 11 6/30/2021

	Customer									
		Sonetics Cor				Job Refe	erence#	: SON20220	SON20220810	
	Contact:	Michael Barg					Date	: 3/9/2023		
	DUT:	DECT Base	Station Mod	lel SON151	Te	emperati	ure (°C)	: 18.6		
Se	erial Number:			1	Relativ	ve Humi	dity (%)	: 30		
\	Voltage/Freq:	120 V 60 Hz			Baro	metric P	ressure	: 30		
	Tested by:	Ryan Benitez	Z		Location:			Hillsboro		
	T STANDARDS									
Produ	uct Standard:	FCC Part 15	Subpart B (Class B						
Te	est Standard:	FCC Part 15	Class B							
TEST RES	ULTS	TEST TYPE			Distance			RUN#		
ass		Compliance			3 meter	rs				
	- Horizontal Peak	Vertical Peak	Horizontal Average	Vertical Av	rerage	Peak Limit		- Average Limit •	Max Average	
100	·									
90) 									
80) 			444						
70										
60	, —————			4						
Ang 50										
₩ 40										
30						1				
20								10010010		
10	, ++									
0) 	0 0 4	7	9 3 3 GHz	12	4 &	<u>5</u>	16 17 18	20	
	Δ Ν ω	4 5 6	7 8	0 4	12			SIGNATURE		
OMMEN	Δ Ν ω	4 5 6	7	GHz	12					
COMMEN	TS No W	4 5 6		GHz	12			SIGNATURE Benity		
OMMEN	TS d; Chan: 3	4 σ σ	Peak Limit	GHz Tabulated data Final Limit			yan	SIGNATURE		
Ant: Laire	d; Chan: 3	Final (dBμV)	Peak Limit (dBmV)	GHz Tabulated data Final Limit (dBμV)		Orientation	yan	Beauty Peak Margin (dB)	Average Marg	
Ant: Laire Freq (GHz)	TS d; Chan: 3 Peak (dBμV) 95.11	Final (dBμV) 95.074	Peak Limit (dBmV) 73.98	GHz Tabulated data Final Limit (dBμV) 53.98		Orientation	yan	Benity Peak Margin (dB) N/A	Average Marg (dB)	
Freq (GHz) 1.925 3.849	TS d; Chan: 3 Peak (dBμV) 95.11 52.977	Final (dBµV) 95.074 53.078	Peak Limit (dBmV) 73.98 73.98	GHz Tabulated data Final Limit (dBμV) 53.98 53.98		Orientation Horizontal	yan	Peak Margin (dB) N/A 21.003	Average Mary (dB) N/A 0.902	
Freq (GHz) 1.925 3.849 3.851	d; Chan: 3 Peak (dBμV) 95.11 52.977 52.977	Final (dBµV) 95.074 53.078 53.043	Peak Limit (dBmV) 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98		Orientation Horizontal Horizontal	yan	Peak Margin (dB) N/A 21.003	Average Mary (dB) N/A 0.902 0.937	
Freq (GHz) 1.925 3.849 3.851 5.775	TS d; Chan: 3 Peak (dBμV) 95.11 52.977 52.977 52.731	Final (dBµV) 95.074 53.078 53.043 52.672	Peak Limit (dBmV) 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBµV) 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal	yan	Peak Margin (dB) N/A 21.003 21.249	Average Marg (dB) N/A 0.902 0.937 1.308	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746	TS d; Chan: 3 Peak (dBμV) 95.11 52.977 52.977 52.731 54.03	Final (dBμV) 95.074 53.078 53.043 52.672 42.849	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical	yan	Peak Margin (dB) N/A 21.003 21.249 19.95	Average Marg (dB) N/A 0.902 0.937 1.308	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822	TS d; Chan: 3 Peak (dB _μ V) 95.11 52.977 52.731 54.03 53.899	Final (dBµV) 95.074 53.078 53.043 52.672 42.849 42.39	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical	yan	Peak Margin (dB) N/A 21.003 21.249 19.95 20.081	Average Marg (dB) N/A 0.902 0.937 1.308 11.131 11.59	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822 7.831	TS d; Chan: 3 Peak (dBμV) 95.11 52.977 52.731 54.03 53.899 53.885	Final (dBμV) 95.074 53.078 53.043 52.672 42.849 42.39 42.39	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical Vertical	yan	Peak Margin (dB) N/A 21.003 21.249 19.95 20.081 20.095	Average Marg (dB) N/A 0.902 0.937 1.308 11.131 11.59 11.583	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822 7.831 7.832	Peak (dBμV) 95.11 52.977 52.977 52.731 54.03 53.899 53.885 53.882	Final (dBµV) 95.074 53.078 53.043 52.672 42.849 42.39 42.397 42.399	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical	yan	Peak Margin (dB) N/A 21.003 21.249 19.95 20.081 20.095	Average Marg (dB) N/A 0.902 0.937 1.308 11.131 11.59 11.583	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822 7.831 7.832 10.648	Peak (dBμV) 95.11 52.977 52.977 52.731 54.03 53.899 53.885 53.882 49.068	Final (dBµV) 95.074 53.078 53.043 52.672 42.849 42.39 42.397 42.399 45.153	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Vertical	yan	Peak Margin (dB) N/A 21.003 21.249 19.95 20.081 20.098 24.912	Average Marg (dB) N/A 0.902 0.937 1.308 11.131 11.59 11.583 11.581 8.827	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822 7.831 7.832 10.648 11.193	Peak (dBμV) 95.11 52.977 52.731 54.03 53.899 53.885 53.882 49.068 48.685	Final (dBµV) 95.074 53.078 53.043 52.672 42.849 42.39 42.397 42.399 45.153	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Vertical Horizontal Vertical Vertical Horizontal	yan	Peak Margin (dB) N/A 21.003 21.249 19.95 20.081 20.095 20.98 24.912 25.295	Average Mary (dB) N/A 0.902 0.937 1.308 11.131 11.59 11.583 11.581 8.827 8.28	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822 7.831 7.832 10.648 11.193 12.436	Peak (dBμV) 95.11 52.977 52.977 52.731 54.03 53.899 53.885 53.882 49.068 48.685 49.351	Final (dBµV) 95.074 53.078 53.043 52.672 42.849 42.39 42.397 42.399 45.153 45.7 46.947	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical	yan	Peak Margin (dB) N/A 21.003 21.003 21.249 19.95 20.081 20.095 20.098 24.912 25.295 24.629	Average Marg (dB) N/A 0.902 0.937 1.308 11.131 11.59 11.583 11.581 8.827 8.28 7.033	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822 7.831 7.832 10.648 11.193 12.436 12.688	Peak (dBμV) 95.11 52.977 52.977 52.731 54.03 53.899 53.885 53.882 49.068 48.685 49.351 50.306	Final (dBµV) 95.074 53.078 53.043 52.672 42.849 42.39 42.397 42.399 45.153 45.7 46.947 47.199	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical	yan	Peak Margin (dB) N/A 21.003 21.249 19.95 20.081 20.095 20.098 24.912 25.295 24.629 23.674	Average Marg (dB) N/A 0.902 0.937 1.308 11.131 11.59 11.583 11.581 8.827 8.28 7.033 6.781	
Freq (GHz) 1.925 3.849 3.851 5.775 7.746 7.822 7.831 7.832 10.648 11.193 12.436	Peak (dBμV) 95.11 52.977 52.977 52.731 54.03 53.899 53.885 53.882 49.068 48.685 49.351	Final (dBµV) 95.074 53.078 53.043 52.672 42.849 42.39 42.397 42.399 45.153 45.7 46.947	Peak Limit (dBmV) 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98 73.98	Tabulated data Final Limit (dBμV) 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98 53.98		Orientation Horizontal Horizontal Horizontal Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical	yan	Peak Margin (dB) N/A 21.003 21.003 21.249 19.95 20.081 20.095 20.098 24.912 25.295 24.629	Average Marg (dB) N/A 0.902 0.937 1.308 11.131 11.59 11.583 11.581 8.827 8.28 7.033	

3.13 Test conditions and results – Automatic discontinuation of transmission

Automatic discontinuation of transmission	utomatic discontinuation of transmission acc. to FCC 15D / RSS-213						
EUT requirement	Ref	ference					
rule parts and clause	IC RS	S-213 5.2					
Test according to	Referer	nce Method					
measurement reference	AN:	SI C63.4					
EUT equipment type	EUT equipment type Scan (All)						
	Requirements						

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. This is not intended to preclude transmission of control and signaling information or use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Result		
Test	Reaction	Verdict
Power removed: EUT	NOT	NOT
	PERFORMED	PERFORMED
Power removed: Companion device	NOT	NOT
	PERFORMED	PERFORMED
Switch -off: EUT	NOT	NOT
	PERFORMED	PERFORMED
Switch -off: Companion device	NOT	NOT
	PERFORMED	PERFORMED
Hook-on: EUT	NOT	NOT
	PERFORMED	PERFORMED
Hook-on: Companion device	NOT	NOT
	PERFORMED	PERFORMED
Comments: Test not performed – refer to Intertek test report 22110	137HKG	

3.14 Test conditions and results – Radiofrequency radiation exposure

Radiofrequency radiation exposure acc. to FCC 47 CFR 15D / IC RSS-213 Ver		lict: N/A
Test performed by: ElectroMagnetic Investigations		
EUT requirement	Reference	
rule parts and clause	FCC 15.319(c)(i) / IC RSS-GEN 5.6	
Requiren	nents	
FCC: Unlicensed PCS devices are subject to the radiofrequency radiation exposure requirements specified in §§1.1307(b), 2.1091 and 2.1093. All equipment shall be considered to operate in a "general population/uncontrolled" environment. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for thus statement must be submitted to the Commission upon request.		
IC: Category I and Category II equipment shall comply with the applicable requirements of RSS-102.		
Result		
Reference		Verdict
RF Exposure is addressed in a separate exhibit.		N/A

3.15 Test conditions and results – Monitoring threshold

Monitoring threshold acc. to FCC 47 CFR 15D / IC I	RSS-213 Verdict: NOT PERFORMED		
EUT requirement	Reference		
rule parts and clause	FCC 15.323(c)(2),(5),(9) / IC RSS-213 4.3.4(b)(2),(5),(9)		
Test according to referenced standards	Reference Method		
	ANSI C63.17 7.3.4		
Number of duplex channels used 5 carrier with 12 duplex timeslots = 60 dup			
Requirements			

The monitoring threshold must not be more than 30 dB above the thermal noise power (KTB) of a bandwidth equivalent to the emission/occupied bandwidth of the device.

Devices that have a power output lower than the maximum permitted under this standard may increase their detection threshold by 1 dB for each 1 dB that the transmitter power is below the maximum permitted.

IC: If access to spectrum is not available as determined by the above, a minimum of 40 duplex system access channels are defined for the system, the time and spectrum windows with a power level below a monitoring threshold of 50 dB above the terminal noise power determined for the occupied bandwidth may be accessed.

```
\begin{split} &T_u[dBm] = -174 + 10 * log_{10}(Bandwidth~[Hz])~M_U + P_{MAX}[dBm] - P_{EUT}[dBm] \\ &T_L[dBm] = -174 + 10 * log_{10}(Bandwidth~[Hz])~M_L + P_{MAX}[dBm] - P_{EUT}[dBm] \end{split}
```

With $M_U = 50$ dB and $M_L = 30$ dB, P_{MAX} as given under "Peak transmit power" and bandwidth as emission or occupied bandwidth. The power threshold limit is given by $T_U + U_M (U_M = 6 \text{ dB})$.

Comments: Test not performed – refer to Intertek test report 22110137HKG

3.16 Test conditions and results – LIC confirmation

LIC confirmation acc. to FCC 47 CFR 15D	/ IC RSS-213	Verdict: NOT PERFORMED
EUT requirement	Refere	nce
rule parts and clause	FCC 15.323(c)(5) / IC F	SS-213 4.3.4(b)(5)
Test according referenced standards	Reference I	Method
	ANSI C63.1	7 7.3.2
Requirements		
A device utilizing the provisions of FCC 47 CFR 15.323(c)(5) / IC RSS-213(b)(5) must have monitored all access channels		
defined for its system within the last 10 seconds and must verify, within the 20 milliseconds (40 milliseconds for		
devices designed to use a 20 millisecond frame period) immediately preceding actual channel access, that the detected		
power of the selection time and spectrum windows is no higher than the previously detected value.		
Test Result		
Evaluation		Verdict
The requirement is verified using the "Monitoring time" and "LIC Selection" test.		NOT PERFORMED
Comments: Test not performed – refer to Intertek test report 22110137HKG		

3.17 Test conditions and results – LIC selection

LIC confirmation acc. to FCC 47 CFR 15D / IC RSS-213		Verdict: NOT PERFORMED
EUT requirement	Refe	erence
rule parts and clause	FCC 15.323(c)(5) / IC RSS-213 4.3.4(b)(5)	
Test according referenced	Reference	ce Method
standards	ANSI C63.17 7.3.3	
Requirements		

FCC: if access to spectrum is not available as determined by the above, and a minimum of 20 duplex system access channels are defined for the system, the time and spectrum windows with the lowest power levels may be accessed.

IC: If access to spectrum is not available as determined by the above, and a minimum of 40 duplex system access channels are defined for the system, the time and spectrum windows with a power level below a monitoring threshold of 50 dB above the thermal noise power determined for the occupied bandwidth may be accessed.

Test Result			
Interferer Level f ₁	Interferer Level f ₂	Communication channel	Verdict
$T_L + U_M + 7 dB$	$T_L + U_M$	f ₂	NOT PERFORMED
T _L + U _M	$T_L + U_M + 7 dB$	f_1	NOT PERFORMED
$T_L + U_M + 1 dB$	T _L + U _M - 6 dB	f ₂	NOT PERFORMED
T _L + U _M - 6 dB	$T_L + U_M + 1 dB$	f_1	NOT PERFORMED

Comments: T_L corresponds to the lower threshold power value

Test not performed – refer to Intertek test report 22110137HKG

3.18 Test conditions and results – Monitoring antenna

Monitoring antenna acc. to FCC 47 CFR 1	5D / IC RSS-213 Verdict: NOT PERFORMED	
EUT requirement	Reference	
rule parts and clause	FCC 15.319(c)(8) / IC RSS-213 (b)(8)	
Test according referenced	Reference Method	
standards	ANSI C63.17 4.6	
Monitoring antenna	The same as transmitting antenna	
Requirements		
The monitoring system shall use the same antenna used for transmission, or antenna that yields equivalent		

The monitoring system shall use the same antenna used for transmission, or antenna that yields equivalent reception at the location.

Results		
Connection status	Verdict	
N/A (monitoring antenna identical to transmitting antenna)	NOT PERFORMED	
Comments: Test not performed – refer to Intertek test report 22110137HKG		

3.19 Test conditions and results – Monitoring time

Monitoring Time acc. to FCC 47 CFR 15D / IC RSS-213			Verdict: NOT PERFORMED
F. I.T		D (
EUT requirement		Reference	
rule parts and clause		FCC 15.323(c)(1) / IC RSS-213 4.	.3.4(b)(1)
Test according referenced		Reference Method	
standards		ANSI C63.17 7.3.4	
	Requ	irements	
Immediately prior to initiating transmission, devices must monitor the combined time and spectrum windows in			
which they intend to transmit for a period of at least 10 milliseconds for systems designed to use a 10 millisecond or			
shorter frame period or at least 20 milliseconds for systems designed to use a 20 millisecond frame period.			cond frame period.
Test results			
Initial transmit channel	Interferer level	Final transmit channel	Verdict
F ₂	0	F ₂	NOT PERFORMED
F ₂	T _U + U _M	F ₁	NOT PERFORMED
Comments: Test not performe	d – refer to Intertek test i	report 22110137HKG	•

3.20 Test conditions and results – Monitoring bandwidth

Monitoring bandwidth acc. to	o FCC 47 CFR 15D / IC RSS-2	13	Verdict: NOT PERFORMED		
EUT requirement		Reference			
•			2.4/5\/7\		
rule parts and clause		FCC 15.323(c)(7) / IC RSS-213 4	.3.4(D)(7)		
Test according reference	d	Reference Method			
standards		ANSI C63.17 7.4			
	Requ	irements			
The monitoring system band	width must be equal or grea	ter than the emission bandwid	th of the intended		
transmission.					
	Test	results			
Initial transmit channel	Interferer level	Interferer level Transmission status Verdict			
F _{LOW} + 30% BW	$T_U + U_M + 10 dB$	None	NOT PERFORMED		
F _{LOW} - 30% BW	$T_{U} + U_{M} + 10 \text{ dB}$	T _U + U _M + 10 dB None NOT PERFORMED			
F _{HIGH} + 30% BW	$T_{U} + U_{M} + 10 \text{ dB}$	None	NOT PERFORMED		
F _{HIGH} - 30% BW	$T_{U} + U_{M} + 10 \text{ dB}$	T _U + U _M + 10 dB None NOT PERFORMED			
Comments: Test not performed – refer to Intertek test report 22110137HKG					

3.21 Test conditions and results – Monitoring reaction time

Monitoring reaction time acc. to FCC 47 CFR 15D / IC RSS-213		Verdict: NOT PERFORMED
EUT requirement	Refe	rence
rule parts and clause	FCC 15.323(c)(7) / IC RSS-213 4.3.4(b)(7)	
Test according referenced	Referenc	e Method
standards ANSI C63.17 7.5		53.17 7.5
Requirements		

The monitor shall have a maximum reaction time less than 50xSQRT (1.25/emission(occupied) bandwidth in MHz) microseconds for signal at the applicable threshold level but shall not be required to be less than 50 microseconds. If a signal is detected that is 6 dB or more above the applicable threshold level the maximum reaction time shall be 35xSQRT (1.25/emission(occupied) bandwidth in MHz) microseconds but shall not be required to be less than 35 microseconds.

Test results	
Test not performed – refer to Intertek test report 22110137HKG	

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3.22 Test conditions and results – Access criteria functional test

Access criteria functional test acc. to FCC 47	CFR 15D / IC RSS-213 Verdict: NOT PERFORMED	
EUT requirement	Reference	
rule parts and clause	FCC 15.323(c)(6) / IC RSS-213 4.3.4(b)(6)	
Test according referenced standards	Reference Method	
	ANSI C63.17 8.1.2 / 8.1.3	
Option implemented	No	
Requirements		

If the selected combined time and spectrum windows are unavailable the device may either monitor and select different windows or seek to use the same window after waiting an amount of time randomly chosen from a uniform distribution between 10 and 150 milliseconds commencing from the time when the channel becomes available.

Test results – Access criteria functional test option not implemented				
Initial channel / timeslot	Interferer level	Final Channel /	Final Channel / timeslot	
F ₁ / Slot 2	0	F ₁ / Slot 2		NOT PERFORMED
F ₁ / Slot 2	Tu + U _M	F ₁ / Slot 4		NOT PERFORMED
	Test results – Access criteria functional test option implemented			
Minimum waiting time [ms]	Lower limit [ms]	Maximum waiting time [ms]	Upper limit [ms]	Verdict
N/A	10	N/A	150	NOT PERFORMED
Comments: Test not performed – refer to Intertek test report 22110137HKG				

3.23 Test conditions and results – Acknowledgements

Acknowledgements acc. to FCC 47 CFR 15D /	/ IC RSS-213 Verdict: NOT PERFORMED	
EUT requirement Reference		
rule parts and clause FCC 15.323(c)(4) / IC RSS-213 4.3.4(b)(4)		
Test according to referenced standards	Reference Method	
	ANSI C63.17 8.2.1	
EUT can initiate a communication session No		
Requirements		
Once access to specific combined time and spectrum windows is obtained an acknowledgement from a system		

Once access to specific combined time and spectrum windows is obtained an acknowledgement from a system participant must be received by the initial transmitter within one second or transmission muse cease. Periodic acknowledgements must be received at least every 30 seconds or transmission must cease.

Test results			
Maximum initial transmission [s]	Transmission time limit [s]	Verdict	
1.25	30	NOT PERFORMED	
Maximum transmission time [s]	Transmission time limit [s]	Verdict	
7.0	30	NOT PERFORMED	
Comments: Test not performed – refer to Intertek test report 22110137HKG			

3.24 Test conditions and results – Maximum spectral occupancy

Maximum spectral occupancy acc. to FCC 47 CFR 15D / IC RSS-213		Verdict: PASS	
Test performed by: ElectroMagnetic Investigations			
EUT requirement	Reference		
rule parts and clause	FCC 15.323(c)(5) / IC RSS-213 4.3.4(b)(5)		
Test according to referenced standards	Reference Method		
	Customer declaration		
	Requirements		
Once access to specific combined time and spectrum windows is obtained an acknowledgement from a system			
participant must be received by the initial transmitter within one second or transmission muse cease.			
Periodic acknowledgements must be received at least every 30 seconds or transmission must cease.			
Test result			
Evaluation Verd			
According to the technical documentation the	PASS		
12 = 60			
According to customer declaration the total number of concurrent time and spectrum windows is:			
12			
The number of concurrent allocated time and spectrum windows is less than one third of the total			
time and spectrum windows of the EUT			
Comments:			

3.25 Test conditions and results – Fair access

Fair access acc. to FCC 47 CFR 15D / IC RSS-213 Verdict: F			
Test performed by: ElectroMagnetic Investigations			
EUT requirement Reference			
rule parts and clause	FCC 15.323(c)(11) / IC RSS-213 4.3.4(b)(11)		
Test according to measurement reference	Reference Method		
	Customer declaration		
Requirements			
The provisions of FCC 47 CFR 15.323(c)(10), IC RSS-213(b)(10) or FCC 47 CFR 15.323(c)(11), IC RSS – 213(b)(11) shall			
not be used to extend the range of spectrum occupied over space or time for the purpose of denying fair access to			
spectrum to other devices.			
Declaration			
The manufacturer declares that the device does not work in a mode which denies fair access to spectrum for other participants.			

3.26 Test conditions and results – Frame period and jitter

Frame period and jitter acc. to FCC 47 CFR 15D / IC RSS-213 Verdict		t: NOT PERFORMED	
EUT requirement			
rule parts and clause	Reference FCC 15.323(e)(1),(4) / IC RSS-213 4.3.4(c)(1),(4)		
Test according to referenced standards	Reference Method		
	ANSI C63.17 6.2.3		
Requirements			
The frame period (a set of consecutive time	slots in which the position of each time slot can be id	dentified by	
reference to a synchronizing source) of an intentional radiator operating in the sub-band shall be 20 milliseconds/X			
where X is a positive whole number.			
The jitter (time-related, abrupt, spurious variations in the duration of the duration of the frame interval) introduced			
at the two ends of a communication link shall not exceed 25 microseconds for any two consecutive transmissions.			
Test results – Frame period			
Mean value [ms]	Divider X (10 ms/X)	Verdict	
10 – 0.000095 = 9.999905	1	NOT PERFORMED	
Test results – Jitter			
Maximum difference between frames [μs]	Limit [μs]	Verdict	
N/A	25 – 0.000095 = 24.999905	NOT PERFORMED	
Comments: Test not performed – refer to Intertek test report 22110137HKG			

3.27 Test conditions and results – Frame and repetition stability

Frame and TDMA repetition stability acc. to FCC 47 CFR 15D / IC RSS-213 Verdict: N		Verdict: NOT PERFORMED	
EUT requirement	EUT requirement Reference		
rule parts and clause	FCC 15.323(e)(2),(3) / IC RSS-213 4.3.4(c)(2),(3)		
Test according referenced standards	Reference Method		
	ANSI C63.17 6.2.2		
Access scheme used	Time Division Multiple Access		
Requirements			
Each device that implements time division for the purpose of maintaining a duplex connection on a given frequency			
carrier shall maintain a frame repetition rate with a frequency stability of at least 50 parts per millions (ppm).			
Each device which further divides access in time in order to support multiple communication links on a given			
frequency carrier shall maintain a frame repetition rate with a frequency stability of at least 10 ppm.			
Test results			

Test results				
Access scheme	Error [ppm]	Limit [ppm]	Verdict	
Time Division Access	NOT PERFORMED	50	NOT PERFORMED	
Time Division multiple Access NOT PERFORMED 10 NOT PERFORMED				
Comments: Test not performed – refer to Intertek test report 22110137HKG				

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