

# RADIO PERFORMANCE TEST REPORT (CLASS II PERMISSIVE CHANGE)

Test Report No.	: OT-22N-RWD-078
Reception No.	: 2211003657
Applicant	: Samsung Electronics Co Ltd
Address	: 19 Chapin Rd., Building D, Pine Brook, New Jersey, 07058, United States
Manufacturer	: Samsung Electronics Co Ltd
Address	: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16677, Korea
Type of Equipment	: Audio Transceiver
FCC ID	: A3LWSA520S
Model Name	: WSA520S
Multiple Model Name	e:N/A
Serial number	: N/A
Total page of Report	: 44 pages (including this page)
Date of Incoming	: November 11, 2022
Date of Issuing	: November 23, 2022

# SUMMARY

The equipment complies with the requirements of FCC CFR 47 PART 15 SUBPART C Section 15.249

This test report contains only the result of a single test of the sample supplied for the examination.

It is not a general valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.

M

Tested by Si-eon Lee / Assistant Manager ONETECH Corp.

Reviewed by Tae-Ho, Kim / General Manager ONETECH Corp.

Approved by Ki-Hong, Nam / General Manager ONETECH Corp.

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OTC-TRF-RF-001(0)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



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# ONETECH

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Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-20N-RWD-035	November 11, 2020	Initial Release	All
1	OT-216-RWD-093	June 30, 2021	The module LDO chip has changed. (Class II Permissive Change)	All
2	OT-227-RWD-037	July 27, 2022	Changed to use only Antenna 0 by firmware modification and Part L3 changed to 100pF. (Class II Permissive Change)	All
3	OT-22N-RWD-078	November 23, 2022	Operating frequency extension using software. (5 773.35 MHz ~ 5 871.35 MHz → 5 729.35 MHz ~ 5 871.35 MHz) (Class II Permissive Change)	All

# **Revision History**



#### **1. VERIFICATION OF COMPLIANCE**

Applicant	: Samsung Electronics Co Ltd				
Address	: 19 Chapin Rd., Building	: 19 Chapin Rd., Building D, Pine Brook, New Jersey, 07058, United States			
Contact Person	: Hansung You / Staff Eng	ineer			
Telephone No.	: +82-31-277-2746				
FCC ID	: A3LWSA520S				
Model Name	: WSA520S				
Brand Name	SAMSUNG				
Serial Number	: N/A				
Date	: November 23, 2022				
DEVICE TYPE		DXX – Low Power Communication Device Transmitter			
E.U.T. DESCRIP	TION	Modular Transmitter, Audio Transceiver			
THIS REPORT CONCERNS		Class II Permissive Change			
MEASUREMENT PROCEDURES		ANSI C63.10: 2013			
TYPE OF EQUIPMENT TESTED		Pre-Production			
KIND OF EQUIPMENT					
AUTHORIZATIO	ON REQUESTED	Certification			
EQUIPMENT WILL BE OPERATED					
UNDER FCC RULES PART(S)		FCC CFR47 Part 15 Subpart C Section 15.249			
MODIFICATIONS ON THE EQUIPMENT		News			
TO ACHIEVE CO	OMPLIANCE	None			
FINAL TEST WA	AS CONDUCTED ON	3 m Semi Anechoic Chamber			

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.



### 2. TEST SUMMARY

#### 2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.249 (a)	Field Strength of Emission	Met the Limit / PASS
15.249 (c)	Measurement distance	Met the Requirement / PASS
15.249 (d)	Emissions Radiated Outside of the Specified Frequency Band	Met the Limit / PASS
15.249, 15.215	Minimum 20 dB Bandwidth	Met the Limit / PASS
15.249 (e)	Radiated Emissions above 1 000 MHz	Met the Limit / PASS
15.209	Radiated Emission Limits, General Requirement	Met the Limit / PASS
15.207	Conducted Limits	Met the Limit / PASS
15.203	Antenna Requirement	Met the Requirement / PASS

#### 2.2 Related Submittal(s) / Grant(s)

Class II Permissive Change

Following modification(s) is/are made on the product, which was already granted on November 17, 2020

- Operating frequency extension using software. (5 773.35 MHz ~ 5 871.35 MHz → 5 729.35 MHz ~ 5 871.35 MHz)

#### 2.3 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in section 2.1.

#### 2.4 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiate d testing was performed at a distance of 3 m from EUT to the antenna.



#### 2.5 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si,

Gyeonggi-do, 12735, Korea.

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-20122/ C-14617/ G-10666/ T-11842

ISED (Innovation, Science and Economic Development Canada) - Registration No. Site# 3736A-3

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013



### **3. GENERAL INFORMATION**

#### **3.1 Product Description**

The Samsung Electronics Co Ltd, Model WSA520S (referred to as the EUT in this report) is an Audio Transceiver, Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Audio Transceiver			
Temperature Range	-5 °C ~ 40 °C			
OPERATING FREQUENCY	5 729.35 MHz	z ~ 5 871.35 MHz		
MODULATION TYPE	DQPSK	DQPSK		
Field Strength Of Fundamental	95.83 dBµV/m at 3 m			
ANTENNA TYPE	PCB Antenna			
	Antenna 0	3.10 dBi		
ANTENNA GAIN	Antenna 1	3.10 dBi		
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	16 MHz			

Note: This Device works a Diversity Antenna. So, We Tested only Antenna 0.

#### **3.2** Alternative type(s)/model(s); also covered by this test report.

-. None

### 4. EUT MODIFICATIONS

-. None



## **5. SYSTEM TEST CONFIGURATION**

#### 5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the

following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	Samsung Electronics Co Ltd	AVM510 REV1.0	N/A

#### 5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
WSA520S	Samsung Electronics Co Ltd	Audio Transceiver(EUT)	-
AVM500 ANTEATER REV01	N/A	Jig Board	EUT / Notebook PC
HP Probook	НР	Notebook PC	EUT
	ACBEL ELECTRONIC		
TPN-AA05	(WUHAN) CO., LTD	AC Adapter	-

#### 5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting is programmed.

For final testing, the EUT was set at 5 729.35 MHz, 5 799.35 MHz, and 5 871.35 MHz to get a maximum emission levels from the EUT. The EUT was moved throughout the XY, XZ, and YZ planes and the worst case is "XY" axis, but the worst data was recorded in this report.



-. Duty Cycle

Mode	Tx On Time	Tx Off Time	Duty Cycle	Correction Factor
Mode	[ ms ]	[ ms ]	[%]	[ dB ]
-	-	-	100.00	-

Note – Duty Cycle : (Tx On Time / (Tx On Time + Tx Off Time)) \* 100

Correction Factor : 10 \* Log(1 / (Duty Cycle / 100))

-. Test Plot

Ref Level 20.00 dBm Offset :		
● Att 30 dB ● SWT TRG:VID	10 ms 👄 <b>VBW</b> 28 MHz	
1Pk View		
10 dBm		
<del>0 dBm  </del> TRG 0.000 dBm		
-10 dBm		
-20 dBm		
-20 4511		
-30 dBm		
-40 dBm		
-50 dBm		
-30 UBIII		
-60 dBm		
-70 dBm		



#### -. Channel List

Channel	Frequency[MHz]	Channel	Frequency[MHz]	Channel	Frequency[MHz]
0	5729.35	25	5779.35	50	5829.35
1	5731.35	26	5781.35	51	5831.35
2	5733.35	27	5783.35	52	5833.35
3	5735.35	28	5785.35	53	5835.35
4	5737.35	29	5787.35	54	5837.35
5	5739.35	30	5789.35	55	5839.35
6	5741.35	31	5791.35	56	5841.35
7	5743.35	32	5793.35	57	5843.35
8	5745.35	33	5795.35	58	5845.35
9	5747.35	34	5797.35	59	5847.35
10	5749.35	35	5799.35	60	5849.35
11	5751.35	36	5801.35	61	5851.35
12	5753.35	37	5803.35	62	5853.35
13	5755.35	38	5805.35	63	5855.35
14	5757.35	39	5807.35	64	5857.35
15	5759.35	40	5809.35	65	5859.35
16	5761.35	41	5811.35	66	5861.35
17	5763.35	42	5813.35	67	5863.35
18	5765.35	43	5815.35	68	5865.35
19	5767.35	44	5817.35	69	5867.35
20	5769.35	45	5819.35	70	5869.35
21	5771.35	46	5821.35	71	5871.35
22	5773.35	47	5823.35		
23	5775.35	48	5825.35		
24	5777.35	49	5827.35		



#### **5.4 Configuration of Test System**

Line Conducted Test:	The EUT was connected to Jig Board and the power of USB was connected to Notebook
	PC. All supporting equipment were connected to another LISN. Preliminary Power line
	Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 to
	determine the worse operating conditions
Radiated Emission Test :	Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10:
	2013 to determine the worse operating conditions. The radiated emissions measurements
	were performed on the 10 m Semi Anechoic Chamber.
	For frequencies from 150 kHz to 30 MHz measurements were made of the magnetic H field.
	The measuring antenna is an electrically screened loop antenna.
	The frequency spectrum from 30 MHz to 1 000 MHz was scanned and maximum emission
	levels maximized at each frequency recorded. The system was rotated 360°, and the antenna
	was varied in the height between 1.0 m and 4.0 m in order to determine the maximum
	emission levels. This procedure was performed for both horizontal and vertical polarization
	of the receiving antenna.

#### 5.5 Antenna Requirement

For intentional device, according to section 15.203, 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.

#### Antenna Construction:

The antenna of the EUT is PCB Antenna on the main board in the EUT, so no consideration of replacement by the user.

### 6. PRELIMINARY TEST

#### 6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	Х

#### **6.2 Radiated Emissions Tests**

During Preliminary Tests, the following operating modes were investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	Х



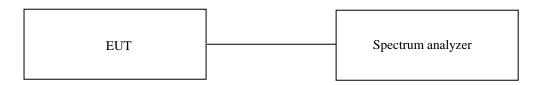
### 7. MINIMUM 20 dB BANDWIDTH

#### 7.1 Operating environment

Temperature	:	22 °C
Relative humidity	:	46 % R.H.

#### 7.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 50 kHz, and peak detection was used. The 20 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 20 dB.



#### 7.3 Test Date

November 16, 2022 ~ November 18, 2022



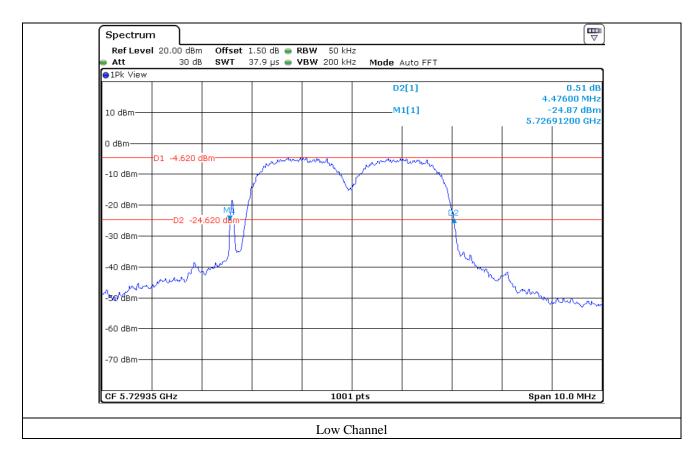
#### 7.4 Test data

-. Test Result

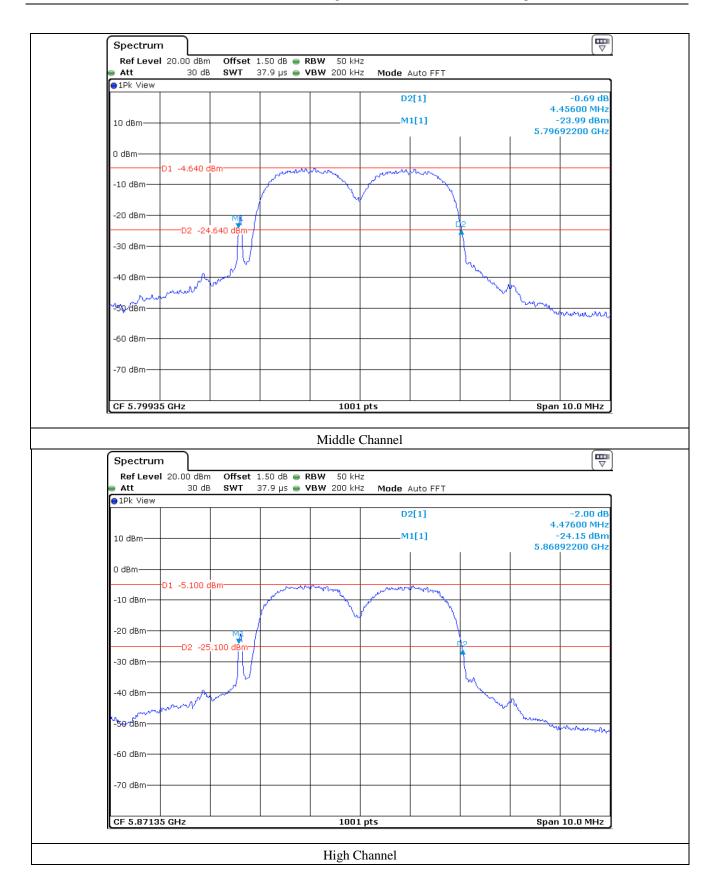
CHANNEL	FREQUENCY(MHz)	MEASURED VALUE (MHz)
Low	5 729.35	4.48
Middle	5 799.35	4.46
High	5 871.35	4.48

Remark. Margin = Measured Value - Limit

: Pass









#### 8. RADIATED EMISSION TEST

#### 8.1 Operating environment

Temperature	:	22 °C
Relative humidity	:	46 % R.H.

#### 8.2 Test set-up

The radiated emissions measurements were on the 3 m, semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from up to 40 GHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

#### 8.3 Measurement uncertainty

Radiated emission electric field intensity, 9 kHz ~ 30 MHz	: ± 3.83 dB
Radiated emission electric field intensity, 30 MHz ~ 1000 MHz	: ± 3.71 dB
Radiated emission electric field intensity, 1 GHz ~ 40 GHz	: ± 4.86 dB
Measurement uncertainty is calculated in accordance with CISPR 16-4	-2. The measurement uncertainty is given with a
confidence of 95 % with the coverage factor, $k = 2$ .	

8.4 Test Date

November 16, 2022 ~ November 18, 2022

#### **8.5 Final Result of Measurement**

#### 8.5.1 Field Strength of the Fundamental Frequency

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Limits apply to	: FCC CFR 47, PART 15, SUBPART C, SECTION 15.249(a)
Result	: <u>PASSED</u>
EUT	: Audio Transceiver
Operating Condition	: TX mode
Distance	: 3 m

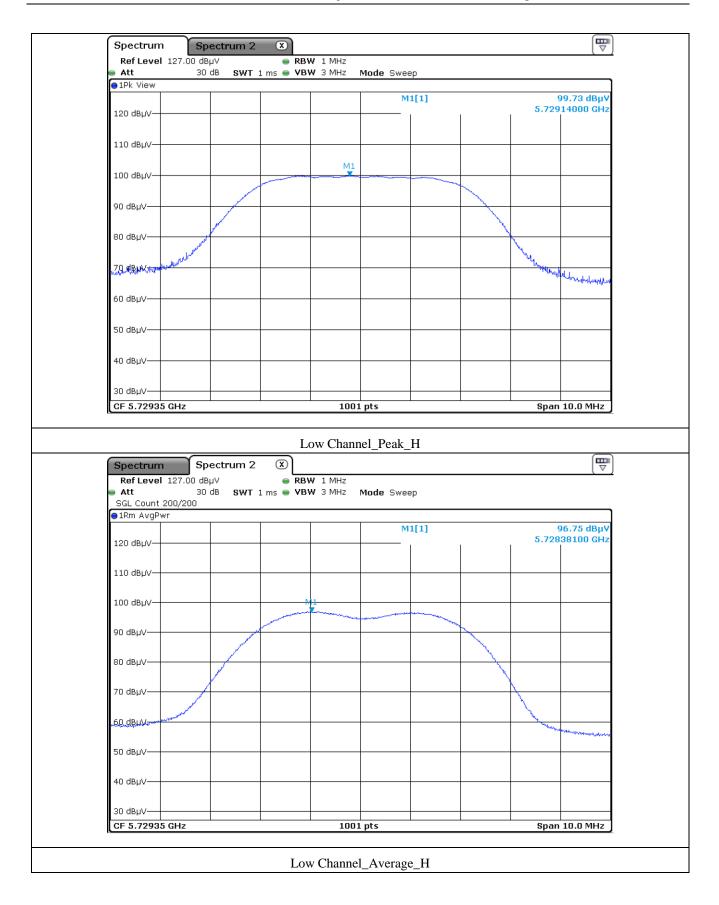
Radi	ated Emission	ons	Ant	Cor	rection Fac	ctors	Total	FCC	Limit
Carrier Freq. (MHz)	Reading (dBµV)	Detector Mode	Pol.	Ant. Factor	Cable Loss	Amp Gain	Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
			Те	est Data for	Low Char	nnel			
	99.73	Peak	Н	32.00	8.50	44.40	95.83	114.00	18.17
5 720 25	96.75	Average	Н	32.00	8.50	44.40	92.85	94.00	1.15
5 729.35	98.70	Peak	V	32.00	8.50	44.40	94.80	114.00	19.20
	95.96	Average	V	32.00	8.50	44.40	92.06	94.00	1.94
			Tes	t Data for I	Middle Cha	annel			
	98.85	Peak	Н	32.20	8.60	44.40	95.25	114.00	18.75
5 700 25	96.18	Average	Н	32.20	8.60	44.40	92.58	94.00	1.42
5 799.35	98.30	Peak	V	32.20	8.60	44.40	94.70	114.00	19.30
	95.58	Average	V	32.20	8.60	44.40	91.98	94.00	2.02
			Те	st Data for	High Chai	nnel			
	98.50	Peak	Н	32.30	8.70	44.40	95.10	114.00	18.90
	95.80	Average	Н	32.30	8.70	44.40	92.40	94.00	1.60
5 871.35	97.82	Peak	V	32.30	8.70	44.40	94.42	114.00	19.58
	95.08	Average	V	32.30	8.70	44.40	91.68	94.00	2.32

\*Remark: To get a maximum emission level from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes, but the worst plane data were recorded in the report.

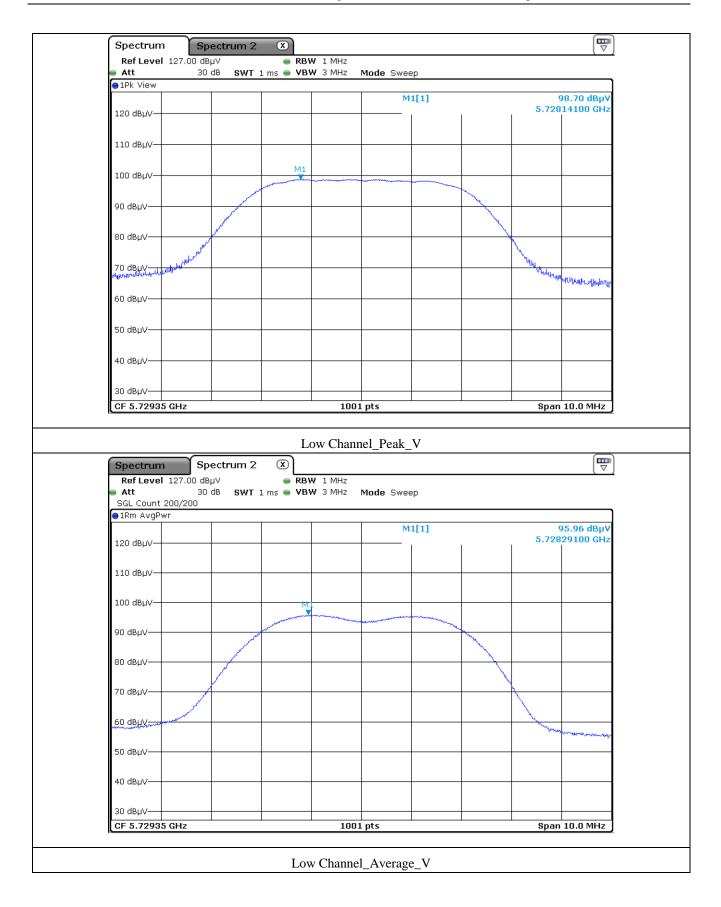
Margin (dB) = Limit (dBuV/m) – Total (dBuV/m)

Total = Reading + Antenna Factor + Cable Loss + Duty Cycle Reduction

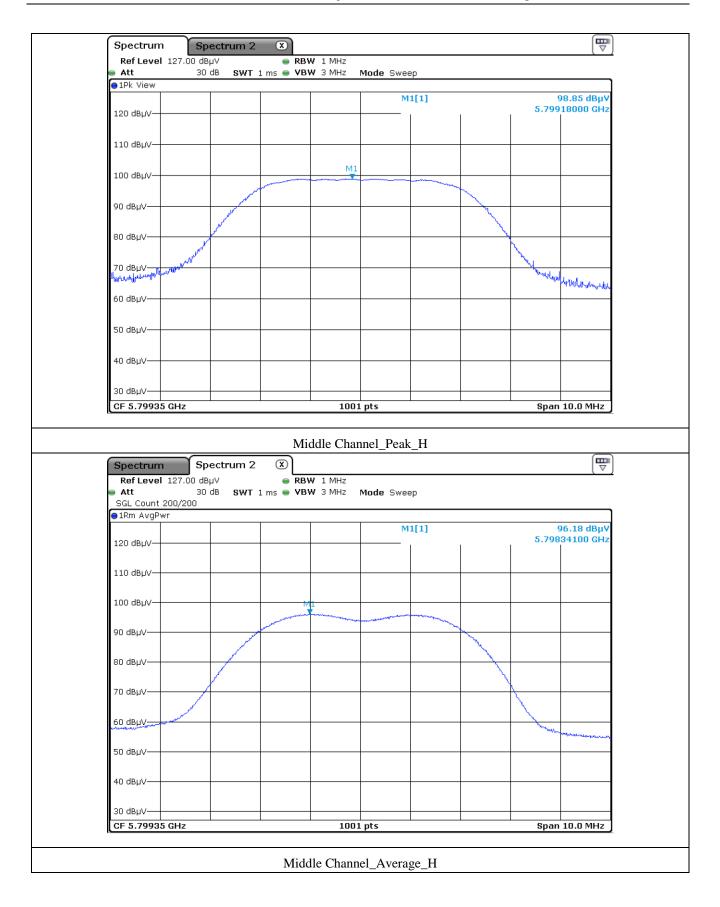




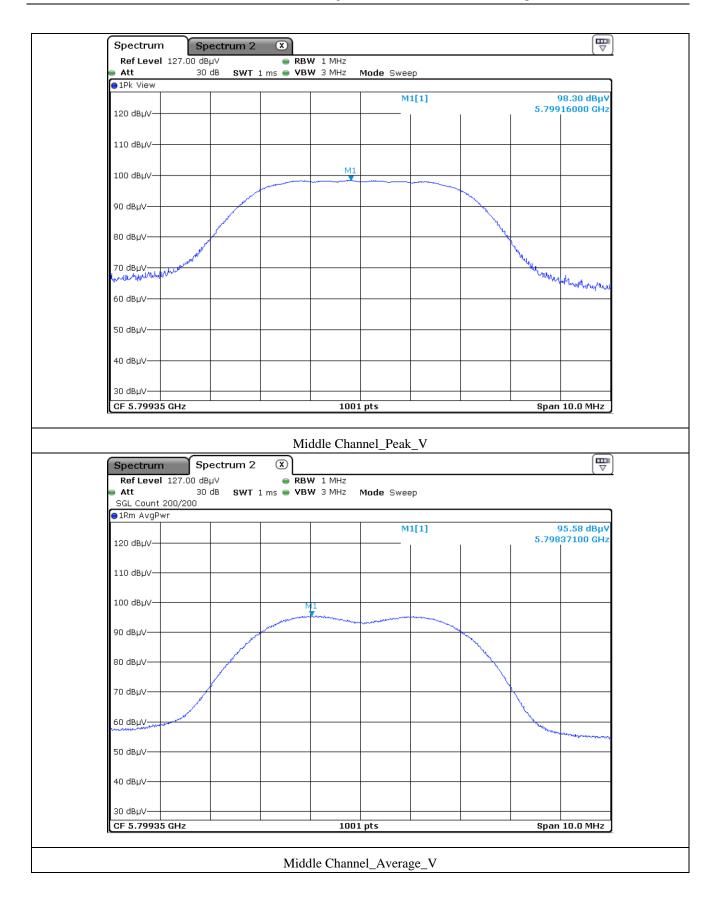




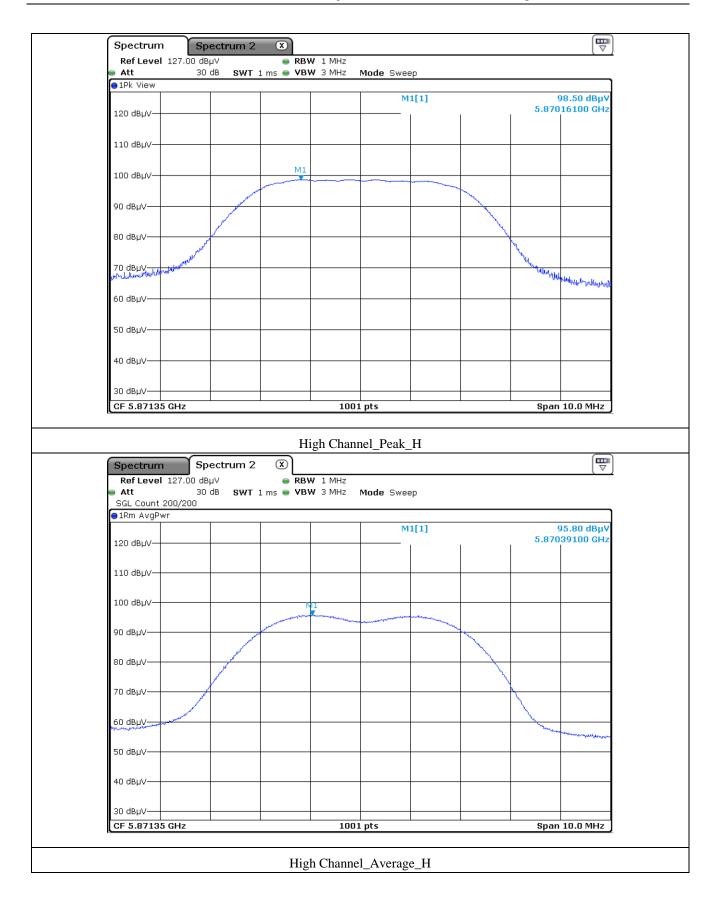




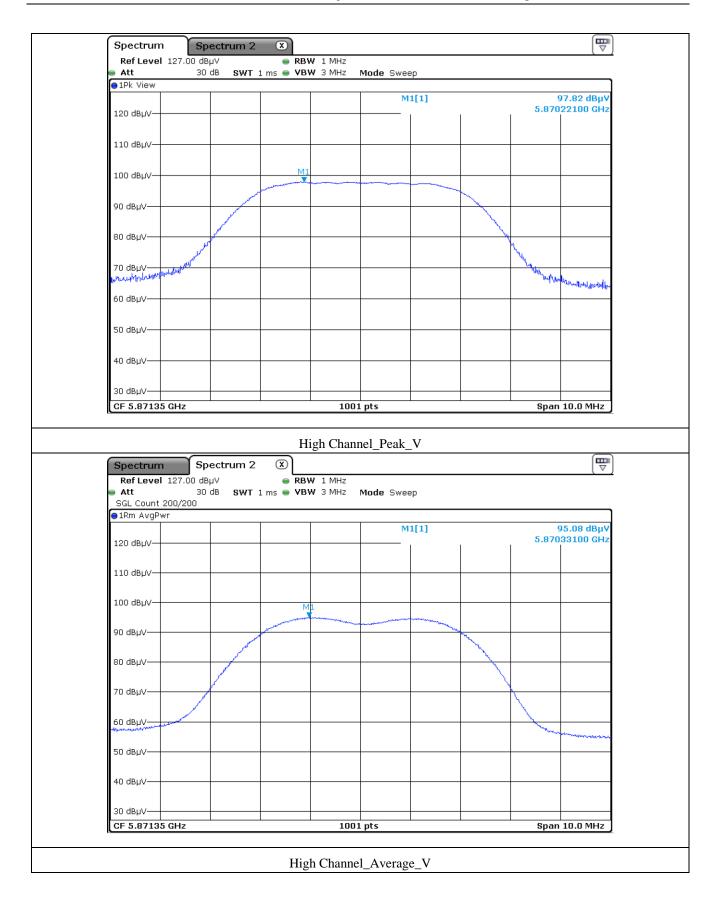














#### 8.5.2 Emissions Radiated Outside of the Specified Frequency Bands\_ Harmonic

Limits apply to	)	: FCC CF	R 47, PA	ART 15, SU	BPART C,	SECTION 1	5.249(a)		
Result		: PASSED	<u>)</u>						
EUT		: Audio T	ransceiv	er					
Operating Con-	dition	: TX mode	e						
Distance		: 3 m							
Radi	iated Emissio	ons	Ant	Cor	rection Fa	ctors	Total	FCC	Limit
Carrier	Reading	Detector		Ant.	Cable		Amplitude	Limit	Margin
Freq. (MHz)	(dBµV)	Mode	Pol.	Factor	Loss	Amp Gain	(dBµV/m)	(dBµV/m)	( <b>dB</b> )
			Те	est Data for	Low Char	nnel			
	47.98	Peak	Н	40.10	12.50	45.30	55.28	74.00	18.72
	36.21	Average	Н	40.10	12.50	45.30	43.51	54.00	10.49
11 458.70	47.58	Peak	v	40.10	12.50	45.30	54.88	74.00	19.12
	36.18	Average	v	40.10	12.50	45.30	43.48	54.00	10.52
			Tes	t Data for I	Aiddle Cha	annel			
	47.43	Peak	Н	39.60	12.80	45.30	54.53	74.00	19.47
	35.93	Average	Н	39.60	12.80	45.30	43.03	54.00	10.97
11 598.70	47.32	Peak	v	39.60	12.80	45.30	54.42	74.00	19.58
	36.01	Average	V	39.60	12.80	45.30	43.11	54.00	10.89
			Te	st Data for	High Cha	nnel			
	47.79	Peak	Н	39.00	13.10	45.30	54.59	74.00	19.41
11 5 (2 5 2	36.60	Average	Н	39.00	13.10	45.30	43.40	54.00	10.60
11 742.70	47.91	Peak	v	39.00	13.10	45.30	54.71	74.00	19.29
	36.61	Average	v	39.00	13.10	45.30	43.41	54.00	10.59
		Oth	er freque	encies were	not found u	p to 10 GHz	2.		

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical, "\*" Frequency fall in restricted band

Margin (dB) = Limit (dBuV/m) - Total (dBuV/m)

Total = Reading + Ant. Factor + Cable Loss + Amp Gain



Poflovol 101	7.00 dBµV		V 1 MHz					
Att		ГЗms 🖷 VBV		Mode Swee	эр			
●1Pk View								
100 dBµV				M	1[1]			+7.98 dBμV 78000 GHz
100 UBDV								
90 dBµV								
50 GDD1								
80 dBµV								
70 dBµV		_						
60 dBµV								
				41				
50 dBµV	handrondelement							
	an a	sunder and and part	and the solution of the second s	etwarennen	eyida Maaleha Doorykaha	hardeter ny diffed	Maran management	Խհակուտենելը,երեն
40 dBµV								
30 dBµV								
20 dBµV								
10 dBµV								
CF 11.4587 GH			1001	pts	•	-	Span	10.0 MHz
Spectrum Ref Level 107	<b>Spectrum</b> 2	2 🗶 🖷 RBV	ow Chann	el_Peak_				
Spectrum Ref Level 107 Att SGL Count 200,	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🕱	ow Chann	el_Peak_				
Spectrum Ref Level 107 Att SGL Count 200,	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			
Spectrum Ref Level 107 Att SGL Count 200, 1Rm AvgPwr	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee				(₩ ▼ 36.21 dBµV 22900 GHz
Spectrum Ref Level 107 Att	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum Ref Level 107 Att SGL Count 200, 1Rm AvgPwr	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   IRm AvgPwr   100 dBµV   90 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum Ref Level 107 Att SGL Count 200, 1Rm AvgPwr 100 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 103   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	lel_Peak_ Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 103   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   100 dBµV   90 dBµV   80 dBµV   60 dBµV   50 dBµV   30 dBµV	<b>Spectrum</b> 2 7.00 dBμV 10 dB <b>SW</b> 1	2 🗶 🖷 RBV	ow Chann	Mode Swee	əp			36.21 dΒμV
Spectrum   Ref Level 107   Att   SGL Count 200,   100 dBµV   90 dBµV   80 dBµV   60 dBµV   50 dBµV   30 dBµV	Эресtrum 2 7.00 dBµV 10 dB sw1 /200	2 🗶 🖷 RBV	ow Chann	Mode Sweet	əp		11.459	36.21 dΒμV



Ref Level 10	)7.00 dBµV	n 2 🗶	W 1 MHz				
Att		WT 3 m s 👄 VB		Mode Sweep			
●1Pk View			1	544543			47.58 dBµ\
100 dBµV				M1[1]			47.58 dBµv 74100 GHz
100 GBHA							
oo dawa							
90 dBµV							
80 dBµV							
80 dBhA							
70 40.44							
70 dBµV							
60 dBµV							
оо цвру-							
50 dBµV			v11				
Man and a state of the state of	an March Marthalan	matrin Morenale mouth	Last Call & Beacher	all build war would will be a work of the	and a differentiable set	mondurander	manustructural
40 dBµV	- 40		500. July 01100 01	- come a source designer allow			- (Free or (0)
-γο αρμν							
30 dBµV							
30 UBHV							
20 dBµV							
20 UBHV							
10 dBµV							
CF 11.4587 G	H7		1001	nte		Snan	10.0 MHz
				F			
Spectrum	Spectrun	n 2 🕱		el_Peak_V			
Spectrum Ref Level 10 Att	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱	W 1 MHz				
Spectrum Ref Level 10	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz				
Spectrum Ref Level 10 Att SGL Count 200	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz				, 36.18 dBµ\
Spectrum Ref Level 10 Att SGL Count 200	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			
Spectrum Ref Level 10 Att SGL Count 200 IRm AvgPwr 100 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum Ref Level 10 Att SGL Count 200 1Rm AvgPwr	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   Image: Auge wr   100 dBµV   90 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum Ref Level 10 Att SGL Count 200 IRm AvgPwr 100 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   91Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   Image: SGL Count 200   SGL Count 200   Image: SGL Count 200 </td <td>Spectrun 17.00 dBµV 10 dB <b>S</b>1</td> <td>n 2 🕱 🖷 RB</td> <td>W 1 MHz</td> <td>Mode Sweep</td> <td></td> <td></td> <td>, 36.18 dBµ\</td>	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   91Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   91Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   • 1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   91Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			, 36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   • 1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   • 1Rm AvgPwr   100 dBµV   90 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   • 1Rm AvgPwr   100 dBµV   90 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   90 dBµV   90 dBµV   80 dBµV   60 dBµV   50 dBµV   40 dBµV   30 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep 			36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   90 dBµV   90 dBµV   80 dBµV   60 dBµV   50 dBµV   40 dBµV   30 dBµV	Spectrun 17.00 dBµV 10 dB <b>S</b> 1	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep 			36.18 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   90 dBµV   90 dBµV   80 dBµV   60 dBµV   50 dBµV   40 dBµV   30 dBµV	Spectrum 17.00 dBµV 10 dB St 1/200	n 2 🕱 🖷 RB	W 1 MHz	Mode Sweep			36.18 dBµ\



Ref Level 10			W 1 MHz					
Att 1Pk View	10 aB <b>S</b>	SWT 3 ms 👄 VB	wr ∃MHz	Mode Swee	p			
				M	1[1]			47.43 dBμ\
100 dBµV					I	I		87800 GH: 
90 dBµV								
80 dBµV								
70 dBµV								
60 dBµV								
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	n.e.e.m.n.h.h.h.h.h.h.h.h.h.h.h.h.h.h.h.h.h.h	wpwaluthovell-helder-held	mon and the second second		vikiligiyanterranyaahaala	parter approximation of the second	nathernally	www.www.aruabilitum
40 dBµV								
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CF 11.5987 G	17		1001	nts			Span	10.0 MHz
Spectrum	Spectru	m 2 🗷	ddle Char		_H			
Spectrum Ref Level 10 Att	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🗷	ddle Char w 1 MHz	nel_Peak				
Spectrum Ref Level 10	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nel_Peak				
Spectrum Ref Level 10 Att SGL Count 200	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee				35.93 dBµ\
Spectrum Ref Level 10 Att SGL Count 200	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			
Spectrum Ref Level 10 Att SGL Count 200 IRm AvgPwr 100 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum Ref Level 10 Att SGL Count 200 IRm AvgPwr	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum Ref Level 10 Att SGL Count 200 P1Rm AvgPwr 100 dBµV- 90 dBµV-	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum Ref Level 10 Att SGL Count 200 IRm AvgPwr 100 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   ●1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum Ref Level 10 Att SGL Count 200 P1Rm AvgPwr 100 dBµV- 90 dBµV-	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   ●1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   90 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p			35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   60 dBµV   50 dBµV   30 dBµV   30 dBµV	<b>Spectru</b> 7.00 dBμV 10 dB <b>s</b>	m 2 🛞 🖷 RB	ddle Char w 1 MHz	nnel_Peak Mode Swee	p	MI1		35.93 dBµ\
Spectrum   Ref Level 10   Att   SGL Count 200   90 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV	Spectrum   7.00 dBµV   10 dB s   /200	m 2 🛞 🖷 RB	ddle Char w 1 MHz	Mode Swee	p		11.601	35.93 dBµ\



Ref Level 10		e Ri	BW 1 MHz				
🛛 Att		SWT 3 ms 🖷 V	BW 3 MHz Mo	ode Sweep			
●1Pk View				M1[1]			47.32 dBµ\
100 dBµV							939800 GH
90 dBµV							
80 dBµV							
70 dBµV							
60 dBµV							
50 dBµV	henderstation	arturenset	When in which the work of the	perfection of the perfection o		mound	marte marte
40 dBµV							v v on o
30 dBµV			+				
20 dBµV							
10 dBµV							
CF 11.5987 G	Hz		1001 p	ts	1	Span	10.0 MHz
Spectrum Ref Level 10	Spectru	m 2 🗵	liddle Channe BW 1 MHz	el_Peak_V			
Ref Level 10 Att SGL Count 200	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	Iiddle Channe BW 1 MHz BW 3 MHz MG				
RefLevel 10 Att	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			
Ref Level 10 Att SGL Count 200	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz				(₩ ▼ 36.01 dBµV 175800 GHz 
Ref Level 10 Att SGL Count 200 1Rm AvgPwr	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10 Att SGL Count 200 IRm AvgPwr 100 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV   30 dBµV	)7.00 dBμV 10 dB <b>s</b>	m 2 🗷 🖷 RI	BW 1 MHz	ode Sweep			36.01 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   90 dBµV   90 dBµV   60 dBµV   50 dBµV   50 dBµV   30 dBµV   30 dBµV   20 dBµV	17.00 dBµV 10 dB s 3/200	m 2 🗷 🖷 RI	BW 1 MHz	Dde Sweep			36.01 dBµV



Reflevel 10	<b>Spectrι</b> 7.00 dBμV		• RBW 1 M	H7				
Att			■ КВЖ ІМ		Sweep			
1Pk View								
					M1[1]			47.79 dBµV 239000 GHz
100 dBµV						1		
90 dBµV								
80 dBµV								
70 dBµV								
60 dBµV								
50 dBµV		1		M1	-	li in tilia in	L	
		uristunglishwellikary	And Marken Mark	r varahiterna dada kata kaliki	konpresidente de la presidente de la pre	U	nurun werken her	of the property of the second s
40 dBµV								
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20 dBµV								
10 dBµV								
CF 11.7427 Gł	IZ			1001 pts			Spar	10.0 MHz
Spectrum Ref Level 10	Spectru		B RBW 1 M					
	7.00 dBµV 10 dB		0	Hz				₹
RefLevel 10 Att	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			
Ref Level 10 Att SGL Count 200 1Rm AvgPwr	7.00 dBµV 10 dB		B RBW 1 M	Hz				36.60 dBµV
Ref Level 10 Att SGL Count 200	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep	1		
Ref Level 10 Att SGL Count 200 1Rm AvgPwr 100 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10 Att SGL Count 200 1Rm AvgPwr	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att SGL Count 200   JRm AvgPwr 100 dBµV   90 dBµV 90 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10 Att SGL Count 200 1Rm AvgPwr 100 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att SGL Count 200   IRm AvgPwr 100 dBµV   90 dBµV 90 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att SGL Count 200   JRm AvgPwr 100 dBµV   90 dBµV 90 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att SGL Count 200   IRm AvgPwr 100 dBµV   90 dBµV 90 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   50 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   50 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz Mode	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   50 dBµV   50 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   50 dBµV   50 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz Mode	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   90 dBµV   90 dBµV   50 dBµV   50 dBµV   50 dBµV   50 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz Mode	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   IRm AvgPwr   100 dBµV   90 dBµV   90 dBµV   90 dBµV   50 dBµV   50 dBµV   50 dBµV   50 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz Mode	Sweep			36.60 dBµV
Ref Level 10   Att   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV   90 dBµV   70 dBµV   50 dBµV   50 dBµV   40 dBµV   30 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz Mode	Sweep			36.60 dBµV
Ref Level 10   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV			B RBW 1 M	Hz Mode	Sweep		11.742	36.60 dBµV 260000 GH2
Ref Level 10   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV	7.00 dBµV 10 dB		B RBW 1 M	Hz Mode	Sweep			36.60 dBµV
Ref Level 10   SGL Count 200   1Rm AvgPwr   100 dBµV   90 dBµV			B RBW 1 M	Hz Mode	Sweep		11.742	36.60 dBµV



	.00 dBµV	R	BW 1 MHz				
🖷 Att		VT 3 ms 🖷 V		de Sweep			
●1Pk View	1			544F - 3			47.04.45
100 49.44				M1[1]			47.91 dBµ 806000 GH
100 dBµV				[			
90 dBµV							
90 aBhA							
80 dBµV							
00 0000							
70 dBµV							
60 dBµV							
50 dBµV				M1			
nonaldownerwonordelber	hollitherapitations	hirthethydathered	washerer or the block have been	Herry Horn tom gerfer beach	allef you to work had been as the second s	-perilition the patho	umsperiment
40 dBµV							
30 dBµV			+ +				
20 dBµV							
10 dBµV							
CF 11.7427 GH	z		1001 pt	.5		span	10.0 MHz
Spectrum	Spectrum	12 🗵	High Channel	_Peak_V			
Spectrum Ref Level 107 Att	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	High Channel				
Spectrum Ref Level 107	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			
Spectrum Ref Level 107 Att SGL Count 200/ 1Rm AvgPwr	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz				, 36.61 dΒμ\
Spectrum Ref Level 107 Att SGL Count 200/	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			( ▼ 36.61 dBµ\ 254000 GH: 
Spectrum Ref Level 107 Att SGL Count 200/ IRm AvgPwr 100 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum Ref Level 107 Att SGL Count 200/ 1Rm AvgPwr	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum Ref Level 107 Att SGL Count 200/ IRm AvgPwr 100 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum Ref Level 107 Att SGL Count 200/ IRm AvgPwr 100 dBµV 90 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum Ref Level 107 Att SGL Count 200/ IRm AvgPwr 100 dBµV 90 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			36.61 dBµ'
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz Mo	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum Ref Level 107 Att SGL Count 200/ 1Rm AvgPwr 100 dBµV- 90 dBµV- 80 dBµV- 70 dBµV- 60 dBµV-	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz Mo	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz Mo	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz Mo	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	Spectrum .00 dBµV 10 dB <b>SV</b>	12 🕱 • R	BW 1 MHz Mo	<b>de</b> Sweep			, 36.61 dΒμ\
Spectrum   Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	Spectrum 10 dBµV 10 dB SV 200	12 🕱 • R	BW 1 MHz Mo	de Sweep			, 36.61 dΒμ\



#### 8.5.3 Test Data for Frequency range: 30 MHz ~ 1 000 MHz

Limits app	ply to		<u>CC CFR 47</u>				ECTION 1	5.249 (d)			
Result		: <u>P</u>	ASSED								
EUT Detector			udio Transo ISPR Quas		6 dB Band	width: 120	) kHz)				
[dBu	uV/m]		P DATA>>						ZONTAL	/ ×VER	RTICA
60											
50											
40											
30							¥	ж	1 . Pranthe	atrian de vicing de la francésia	A CONTRACTOR
20	May 1			hand	hologradyment	many	mohalumana	wellinghow	MAMANA		
10			NK N WW								
0 30M	501	VI 70	M 10	IOM		200M	300N	1	500M	700M Frequer	10 ncy[Hz
No.	FREQ RE	EADING QP F.	ANT LO ACTOR	OSS	GAIN RE	SULT I	LIMIT MA	ARGIN <i>A</i>	ANTENNA	TABLE	
		[dBuV]		[dB]	[dB] [d	BuV/m][0	dBuV/m]	[dB]	[cm]	[DEG]	
	- Horizont				20.0	10.1	40.0	0.0.0	200	0	
1 2 3	71.710 359.800 504.331	36.9 34.2 35.1	13.1 20.0 23.1	1.1 2.4 2.9	32.0 32.0 32.1	24.6 29.0	40.0 46.0 46.0	20.9 21.4 17.0	300 100 100	0 0 0	
	- Vertical										
4	1 312.270	35.5	19.4	2.3	32.0	25.2	46.0	20.8	200	220	



#### 8.5.4 Test Data for Below 30 MHz

Resolution bandwidth: 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)Frequency range: 9 kHz ~ 30 MHz

Measurement distance : 3 m

Limits apply to

: FCC CFR 47, PART 15, SUBPART C, SECTION 15.249 (d)

Result : PASSED

Frequency	Reading	Ant. Pol.	Ant.	Angle	Ant. Factor	Cable	Emission	Limits	Margin
(MHz)	(dBµV)	(H/V)	Height (m)	(°)	(dB/m)	Loss	Level(dBµV/m)	(dBµV/m)	(dB)
			It was not o	observed a	any emissions t	from the H	EUT.		

#### 8.5.5 Test Data above 1 GHz except for harmonic

Resolution	bandwidth	• • 1	MHz and Pe	ak Detecto	or for Peak Mo	ode			
. Resolution	Januwiuu								
		1	MHz and RM	18 Detecto	or for Average	Mode			
Video ban	dwidth	: 3	MHz for Pea	k and Ave	erage Mode				
Frequency	range	: 1	GHz ~ 40 GH	Hz					
Measurem	ent distanc	e : 3	m						
Limits app	ly to	: F	CC CFR 47, I	PART 15,	SUBPART C	, SECTIC	ON 15.249 (d)		
- Result		: P	ASSED						
result		• •							
Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
Frequency	-	Ant. Pol.	Ant.						
Frequency	-	Ant. Pol.	Ant.						
Frequency	-	Ant. Pol.	Ant. Height (m)	(°)		Loss	Level(dBµV/m)		
Frequency	-	Ant. Pol.	Ant. Height (m)	(°)	(dB/m)	Loss	Level(dBµV/m)		



#### 8.5.6 Band Edge

- -. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
  - 1 MHz and RMS Detector for Average Mode
- -. Video bandwidth : 3 MHz for Peak and Average Mode
- -. Measurement distance : 3 m

#### : FCC CFR 47, PART 15, SUBPART C, SECTION 15.249 (d)

-. Result

-. Limits apply to

: PASSED

Radi	ated Emissio	ons	Ant	Cor	rection Fac	ctors	Total	FCC	Limit
Carrier	Reading	Detector	Pol.	Ant.	Cable	Amp Gain	Amplitude	Limit	Margin
Freq. (MHz)	(dBµV)	Mode		Factor	Loss	•	$(dB\mu V/m)$	(dBµV/m)	( <b>dB</b> )
			Те	est Data for	Low Char	nnel			
	65.53	Peak	Н	32.00	8.40	44.40	61.53	74.00	12.47
5 725 00	56.96	Average	Н	32.00	8.40	44.40	52.96	54.00	1.04
5 725.00	64.97	Peak	v	32.00	8.40	44.40	60.97	74.00	13.03
	56.60	Average	V	32.00	8.40	44.40	52.60	54.00	1.40
	49.28	Peak	Н	32.30	8.80	44.40	45.98	74.00	28.02
5 075 00	39.53	Average	Н	32.30	8.80	44.40	36.23	54.00	17.77
5 875.00	48.64	Peak	v	32.30	8.80	44.40	45.34	74.00	28.66
	39.83	Average	V	32.30	8.80	44.40	36.53	54.00	17.47
			Tes	t Data for N	Middle Cha	annel			
	50.80	Peak	Н	32.00	8.40	44.40	46.80	74.00	27.20
	41.71	Average	Н	32.00	8.40	44.40	37.71	54.00	16.29
5 725.00	49.74	Peak	v	32.00	8.40	44.40	45.74	74.00	28.26
	41.50	Average	v	32.00	8.40	44.40	37.50	54.00	16.50
	50.14	Peak	Н	32.30	8.80	44.40	46.84	74.00	27.16
5.075.00	41.23	Average	Н	32.30	8.80	44.40	37.93	54.00	16.07
5 875.00	49.75	Peak	v	32.30	8.80	44.40	46.45	74.00	27.55
	41.07	Average	V	32.30	8.80	44.40	37.77	54.00	16.23

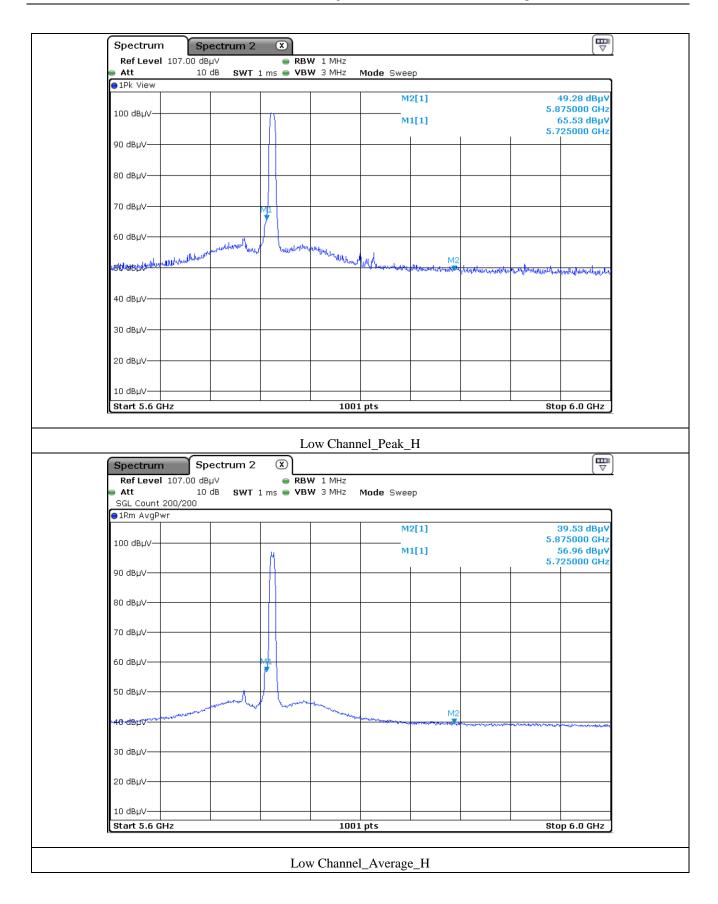


Radi	iated Emissio	ons	Ant	Cor	rection Fac	ctors	Total	FCC	Limit
Carrier	Reading	Detector	Dal	Ant.	Cable		Amplitude	Limit	Margin
Freq. (MHz)	(dBµV)	Mode	Pol.	Factor	Loss	Amp Gain	(dBµV/m)	(dBµV/m)	( <b>dB</b> )
			Те	st Data for	High Char	nnel			
	46.55	Peak	Н	32.00	8.40	44.40	42.55	74.00	31.45
	38.60	Average	Н	32.00	8.40	44.40	34.60	54.00	19.40
5 725.00	46.05	Peak	v	32.00	8.40	44.40	42.05	74.00	31.95
	38.87	Average	v	32.00	8.40	44.40	34.87	54.00	19.13
	67.11	Peak	Н	32.30	8.80	44.40	63.81	74.00	10.19
	56.37	Average	Н	32.30	8.80	44.40	53.07	54.00	0.93
5 875.00	66.78	Peak	V	32.30	8.80	44.40	63.48	74.00	10.52
	56.00	Average	v	32.30	8.80	44.40	52.70	54.00	1.30

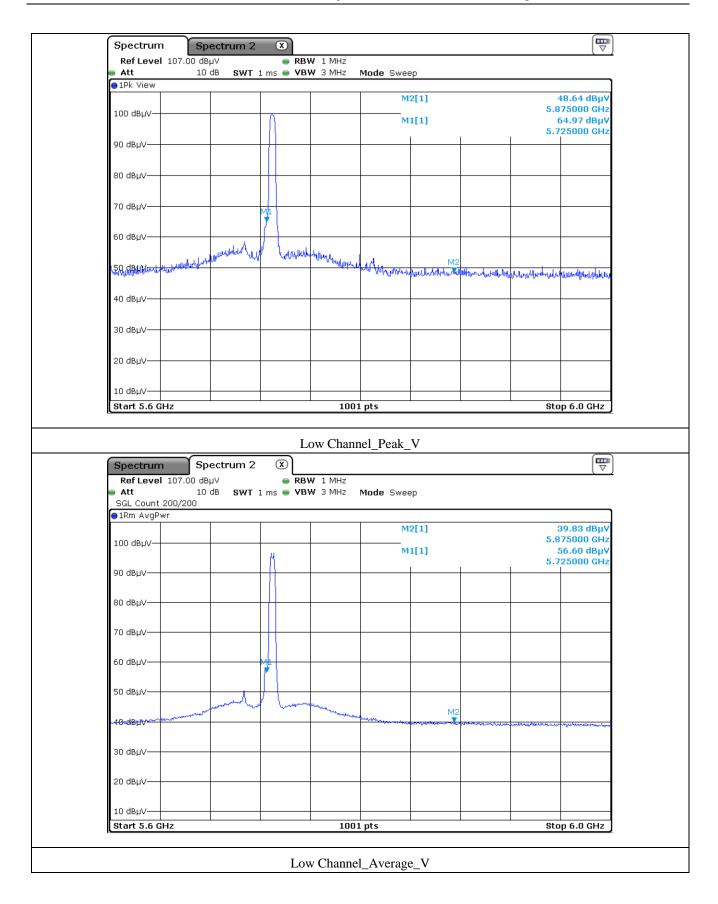
Remark. Margin (dB) = Limit (dBuV/m) - Total (dBuV/m)

Total = Reading + Ant. Factor + Cable Loss + Amp Gain

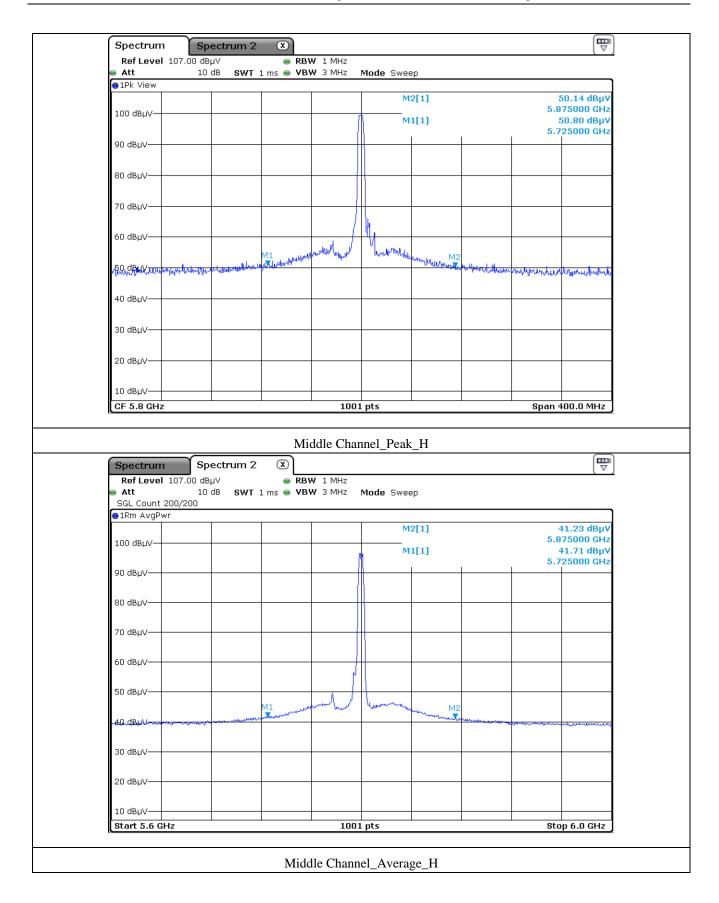














Spectrum		ectrum 2	×						
Ref Level 🗄 Att	107.00 dBµ			WI MHz WI MHz	Made Corre				
● 1Pk View	10 0	ID SWI	I ms 🔲 🕶	W JIMHZ	MODE SWEE	ab			
					М	2[1]			+9.75 dBμV
100 dBµV				1		1[1]			75000 GHz 19.74 dBµV
						1[1]			25000 GHz
90 dBµV									
80 dBµV									
70 dBµV									
				/	l l				
60 dBµV				1	HL.				
			M1	Allower Garde	Proprior	MAN MA			
59. dBHK	Monarchiller	unterson the sold				We dway M2	motometar	Markelengenerek	roughedrich
40 dBµV									
20 db. 4									
30 dBµV									
20 dBµV									
	T								
10 dBµV									
CF 5.8 GHz				1001	pts			Span 4	00.0 MHz
Spectrum		ctrum 2	Mi	ddle Char	nnel_Peak	c_V			
Ref Level 🗄 Att	107.00 dBµ 10 c	V	(X)	ddle Char w 1 MHz w 3 MHz					
Ref Level 🗄	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz					
Ref Level 3 Att SGL Count 20	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee				⊦1.07 dBµV
Ref Level 3 Att SGL Count 20	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz
Ref Level : Att SGL Count 21 1Rm AvgPwr 100 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	əp		5.8	⊦1.07 dBµV
Ref Level 3 Att SGL Count 20 1Rm AvgPwr	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level : Att SGL Count 21 1Rm AvgPwr 100 dBµV 90 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level : Att SGL Count 21 1Rm AvgPwr 100 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level S   Att SGL Count 20   1Rm AvgPwr 100 dBµV   90 dBµV 80 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level : Att SGL Count 21 1Rm AvgPwr 100 dBµV 90 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level S   Att SGL Count 20   1Rm AvgPwr 100 dBµV   90 dBµV 80 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	107.00 dBµ 10 с 00/200	V	RB1 1 ms • VB	W 1 MHz	Mode Swee	ep 2[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 2t   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	107.00 dBµ 10 с 00/200	V	(X)	W 1 MHz W 3 MHz	Mode Swee	2[1] 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	107.00 dBµ 10 с 00/200	V	RB1 1 ms • VB	W 1 MHz W 3 MHz	Mode Swee	ep 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 2!   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	107.00 dBµ 10 с 00/200	V	RB1 1 ms • VB	W 1 MHz W 3 MHz	Mode Swee	2[1] 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 2t   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	107.00 dBµ 10 с 00/200	V	RB1 1 ms • VB	W 1 MHz W 3 MHz	Mode Swee	2[1] 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 21   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV	107.00 dBµ 10 с 00/200	V	RB1 1 ms • VB	W 1 MHz W 3 MHz	Mode Swee	2[1] 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 2!   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	107.00 dBµ 10 с 00/200	V	RB1 1 ms • VB	W 1 MHz W 3 MHz	Mode Swee	2[1] 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 21   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV	107.00 dBµ 10 с 00/200	V	RB1 1 ms • VB	W 1 MHz W 3 MHz	Mode Swee	2[1] 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV
Ref Level :   Att   SGL Count 2t   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV   20 dBµV	107.00 dBµ 10 c 00/200	V	RB1 1 ms • VB	W 1 MHz W 3 MHz	Mode Swee	2[1] 2[1] 1[1]		5.8	+1.07 dBμV 75000 GHz +1.50 dBμV



Spectrum									(₩
Ref Level 1	07.00 dBµ	VI.		W 1 MHz					
Att 1Pk View	10 0	IB SWT	1 ms 🖷 VB	W 3 MHz	Mode Swee	эр			
					М	2[1]			57.11 dBµV
100 dBµV								5.8	75000 GHz
					м	1[1] D			46.55 dBµV 25000 GHz
90 dBµV								0.7	
80 dBµV									
70 dBµV						has			
70 dbpv						Ť			
60 dBµV									
						1 1			
50 dBuV			6.4.1			montand l	- al down the hard love	hu	
Millerunderforstational	rillihishiphologi	pulsepergenerald	Hilling and All Ale ~	A HAAA MANA AND A AND	Manilla da a		· · ·	and the production of the second of the second s	whenter here when
40 dBµV									
30 dвµV									
20 dBµV									
10 dBµV									
CF 5.8 GHz				1001	nts			Snan 4	100.0 MHz
Spectrum		ectrum 2	×	igh Chanr	nel_Peak_	H			
Ref Level 1	.07.00 dBµ	VI	(X)	W 1 MHz					
Ref Level 1 Att SGL Count 20	07.00 dBµ 10 d	VI	(X)						
RefLevel 1 Att	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	əp			
Ref Level 1 Att SGL Count 20 1Rm AvgPwr	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee				56.37 dBµV
Ref Level 1 Att SGL Count 20	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	əp		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1 Att SGL Count 20 IRm AvgPwr 100 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]	1	5.8	56.37 dBµV 75000 GHz
Ref Level 1 Att SGL Count 20 1Rm AvgPwr	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1 Att SGL Count 20 IRm AvgPwr 100 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV	07.00 dBµ 10 d	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	07.00 dBµ 10 d	VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	07.00 dBµ 10 c 0/200	VI	(X)	W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	07.00 dBµ 10 d	VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	07.00 dBµ 10 c 0/200	VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	07.00 dBµ 10 c 0/200	VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	07.00 dBµ 10 c 0/200	VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV	07.00 dBµ 10 c 0/200	VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV	07.00 dBµ 10 c 0/200	VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV
Ref Level 1   Att   SGL Count 20   IRm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV   20 dBµV		VI		W 1 MHz	Mode Swee	ep 2[1]		5.8	56.37 dBµV 75000 GHz 38.60 dBµV



Ref Level 107	.UU abuv		W 1 MHz					
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●1Pk View					0[1]			to the state
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100 dBµV				M	1[1]		4	46.05 dBμV
					ı A	1	5.7	25000 GHz
90 dBµV								
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Spectrum Ref Level 107		2 🕱	Iigh Chann W 1 MHz		V			
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Ref Level 107 Att SGL Count 200/	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_				
Ref Level 107 Att	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee				56.00 dBµV
Ref Level 107 Att SGL Count 200/	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz
Ref Level 107 Att SGL Count 200/ 1Rm AvgPwr	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	p		5.8	56.00 dBµV
Ref Level 107 Att SGL Count 200/ 1Rm AvgPwr	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107 Att SGL Count 200/ IRm AvgPwr 100 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107 Att SGL Count 200/ IRm AvgPwr 100 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107 Att SGL Count 200/ ●1Rm AvgPwr 100 dBµV- 90 dBµV- 80 dBµV-	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107 Att SGL Count 200/ 1Rm AvgPwr 100 dBµV- 90 dBµV-	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107 ● Att SGL Count 200/ ● 1Rm AvgPwr 100 dBµV 90 dBµV 80 dBµV 70 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107 Att SGL Count 200/ ●1Rm AvgPwr 100 dBµV- 90 dBµV- 80 dBµV-	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1]		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107 ● Att SGL Count 200/ ● 1Rm AvgPwr 100 dBµV 90 dBµV 80 dBµV 70 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 🗶 🖷 RB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 (8) RB T 1 ms • VB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   ●1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 (8) RB T 1 ms • VB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 (8) RB T 1 ms • VB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   91Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 (8) RB T 1 ms • VB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   ●1Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 (8) RB T 1 ms • VB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   91Rm AvgPwr   100 dBµV   90 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   30 dBµV   20 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 (8) RB T 1 ms • VB	W 1 MHz	el_Peak_ Mode Swee	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV
Ref Level 107   Att   SGL Count 200/   91Rm AvgPwr   100 dBµV   90 dBµV   80 dBµV   70 dBµV   60 dBµV   50 dBµV   40 dBµV	7.00 dBµV 10 dB <b>SW</b>	2 (8) RB T 1 ms • VB	W 1 MHz	el_Peak_	2[1] 1[1] M		5.8	56.00 dBµV 75000 GHz 38.87 dBµV



### 9. CONDUCTED EMISSION TEST

#### 9.1 Operating environment

Temperature	:	22 °C
Relative humidity	:	46 % R.H.

#### 9.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50  $\Omega$  / 50  $\mu$ H + 5  $\Omega$  Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

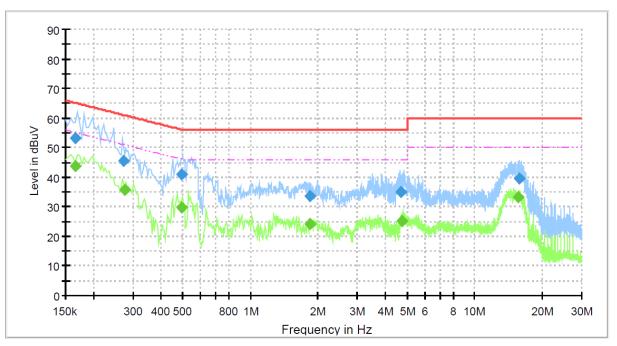
#### 9.3 Test Date

November 16, 2022 ~ November 18, 2022



#### 9.4 Test data

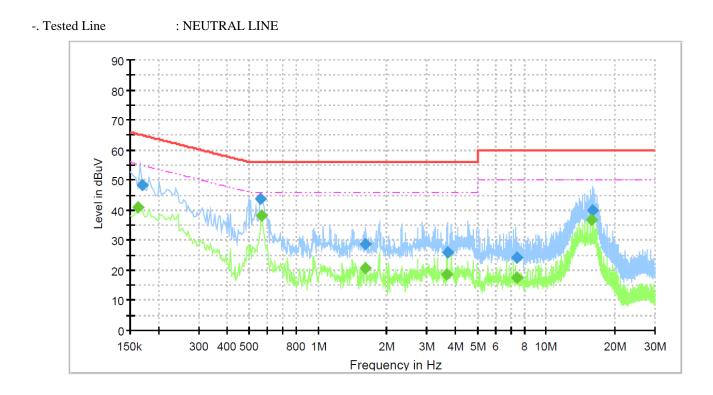
- -. Resolution bandwidth : 9 kHz
- -. Frequency range : 0.15 MHz ~ 30 MHz
- -. Tested Line : HOT LINE



# **Final\_Result**

Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Line	Corr.
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dB)	(ms)	(kHz)		(dB)
0.166		43.88	55.18	11.31	1000.0	9.0	L1	9.98
0.166	53.26		65.18	11.92	1000.0	9.0	L1	9.98
0.274	45.61		61.01	15.41	1000.0	9.0	L1	10.04
0.275		35.64	50.98	15.34	1000.0	9.0	L1	10.04
0.497		29.80	46.05	16.25	1000.0	9.0	L1	10.10
0.497	41.00		56.05	15.05	1000.0	9.0	L1	10.10
1.844	33.62		56.00	22.38	1000.0	9.0	L1	10.19
1.848		24.05	46.00	21.95	1000.0	9.0	L1	10.19
4.709	35.05		56.00	20.95	1000.0	9.0	L1	10.25
4.715		25.13	46.00	20.87	1000.0	9.0	L1	10.25
15.697		33.31	50.00	16.69	1000.0	9.0	L1	10.59
15.717	39.51		60.00	20.49	1000.0	9.0	L1	10.59





# **Final Result**

Frequency	QuasiPeak	CAverage	Limit	Margin	Meas. Time	Bandwidth	Line	Corr.
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dB)	(ms)	(kHz)		(dB)
0.161		41.07	55.39	14.32	1000.0	9.0	N	9.95
0.171	48.30		64.94	16.63	1000.0	9.0	Ν	9.95
0.560	43.74		56.00	12.26	1000.0	9.0	Ν	9.97
0.568		38.02	46.00	7.98	1000.0	9.0	Ν	9.97
1.606		20.53	46.00	25.47	1000.0	9.0	Ν	10.02
1.606	28.84		56.00	27.16	1000.0	9.0	Ν	10.02
3.677		18.41	46.00	27.59	1000.0	9.0	Ν	10.08
3.709	25.82		56.00	30.18	1000.0	9.0	Ν	10.09
7.428		17.40	50.00	32.60	1000.0	9.0	Ν	10.23
7.432	24.27		60.00	35.73	1000.0	9.0	N	10.23
15.862		36.60	50.00	13.40	1000.0	9.0	Ν	10.58
16.030	39.80		60.00	20.20	1000.0	9.0	N	10.59

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



# **10. LIST OF TEST EQUIPMENT**

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)	
FSV30	Rohde & Schwarz	Signal Analyzer	101372	Jul. 14, 2022 (1Y)	
ESU	Rohde & Schwarz	EMI Test Receiver	100261	Mar. 07, 2022 (1Y)	
ESR3	Rohde & Schwarz	EMI Test Receiver	102602	Mar. 14, 2022 (1Y)	
310N	Sonoma Instrument	Pre-Amplifier	392756	Oct. 13, 2022 (1Y)	
SCU40A	Rohde & Schwarz	Signal Conditioning unit	100436	Jan. 18, 2022 (1Y)	
SCU18	Rohde & Schwarz	Signal Conditioning unit	102266	Jul. 12, 2022 (1Y)	
WT-A1856-R12	Microwave	Cavity Band Rejection Filter	WT22040502-4	Jun. 21, 2022 (1Y)	
DT2000-2t	Innco Systems GmbH	Turn Table	N/A	N/A	
MA-4000XPET	Innco System	Antenna Master	MA4000/509	N/A	
CO3000	Innco System	Controller	1026/40960617/P	N/A	
HLP-2008	TDK	Hybrid Antenna	131316	Mar. 07, 2022 (2Y)	
BBHA9120D	Schwarzbeck	Horn Antenna	9120D-1366	Jul. 05, 2022 (1Y)	
BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 06, 2022 (1Y)	
FMZB 1513	Schwarzbeck	Active Loop Antenna	1513-235	Mar. 24. 2022 (2Y)	
NSLK8126	Schwarzbeck	AMN	8126-404	Mar. 14, 2022 (1Y)	
ESH3Z2	Rohde & Schwarz	PULSE LIMITER	357.8810.52	Mar. 14, 2022 (1Y)	