



Audio Precision

APx516B

Bluetooth Radio

Report: AUDI0315.2 Rev. 1, Issue Date: January 2, 2024

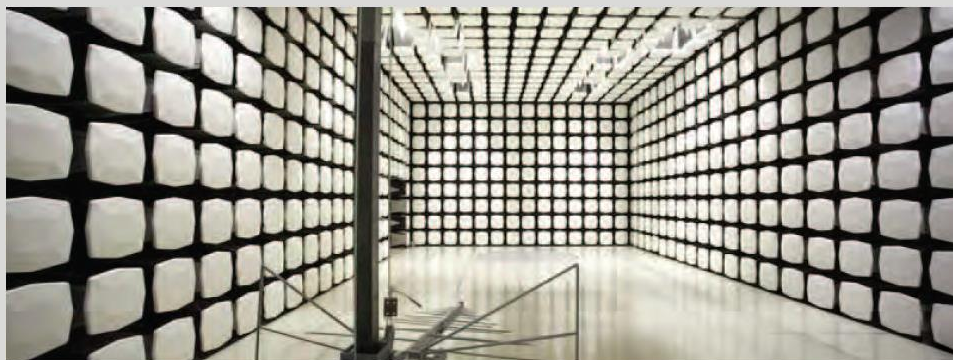


TABLE OF CONTENTS

Section	Page Number
Certificate of Test	3
Revision History	5
Accreditations.....	6
Facilities	7
Measurement Uncertainty	8
Product Description	9
Test Setup Block Diagrams.....	10
Power Settings and Antennas	13
Configurations	14
Modifications	17
Powerline Conducted Emissions.....	18
Spurious Radiated Emissions	27
Duty Cycle.....	40
Carrier Frequency Separation	46
Number of Hopping Frequencies	49
Dwell Time	52
Output Power	63
Equivalent Isotropic Radiated Power	70
Band Edge Compliance	72
Band Edge Compliance - Hopping Mode	77
Emissions Bandwidth	82
Spurious Conducted Emissions	89
Occupied Bandwidth (99%).....	106
End of Report.....	113

CERTIFICATE OF TEST



Last Date of Test: December 21, 2023

Audio Precision

EUT: APx516B

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	
RSS-Gen Issue 5:2018+A1:2019+A2:2021	

Guidance

FCC KDB 558074 v05r02:2019
Notice 2021 - CEB0001

Results

Test Description	Result	FCC Section(s)	RSS Section(s)	ANSI C63.10 Section(s)	Comments
Powerline Conducted Emissions	Pass	15.207	RSS-Gen 8.8	6.2	
Spurious Radiated Emissions	Pass	15.247(d)	RSS-247 5.5	6.5, 6.6	
Duty Cycle	Pass	15.247	RSS-Gen 3.2	7.5	
Carrier Frequency Separation	Pass	15.247(a)(1)	RSS-247 5.1(b)	7.8.2	
Number of Hopping Frequencies	Pass	15.247(a)(1)(iii)	RSS-247 5.1(d)	7.8.3	
Dwell Time	Pass	15.247(a)(1)(iii)	RSS-247 5.1(d)	7.8.4	
Output Power	Pass	15.247(b)(1)	RSS-247 5.4(b)	7.8.5	
Equivalent Isotropic Radiated Power	Pass	15.247(b)(1)	RSS-247 5.4(b)	7.8.5	
Band Edge Compliance	Pass	15.247(d)	RSS-247 5.5	7.8.6	
Band Edge Compliance - Hopping Mode	Pass	15.247(d)	RSS-247 5.5	7.8.6	
Emissions Bandwidth	Pass	15.247(a)(1)	RSS-247 5.1(a)	7.8.7	
Spurious Conducted Emissions	Pass	15.247(d)	RSS-247 5.5	7.8.8	
Occupied Bandwidth (99%)	Pass	N/A	RSS-Gen 6.7	6.9.3	

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

CERTIFICATE OF TEST



Deviations From Test Standards

None

Approved By:

Cole Ghizzone, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY

Revision Number	Description	Date (yyyy-mm-dd)	Page Number
01	Updated antenna gain value in power settings and antenna page and EIRP calculation.	2024-01-02	10,70

ACCREDITATIONS AND AUTHORIZATIONS



United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Each laboratory is accredited by A2LA to ISO / IEC 17025, and as a product certifier to ISO / IEC 17065 which allows Element to certify transmitters to FCC and IC specifications.

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

European Union

European Commission – Recognized as an EU Notified Body validated for the EMCD and RED Directives.

United Kingdom

BEIS – Recognized by the UK as an Approved Body under the UK Radio Equipment and UK EMC Regulations.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIT / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFCA – Recognized by OFCA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

For details on the Scopes of our Accreditations, please visit:

[California](#)

[Minnesota](#)

[Oregon](#)

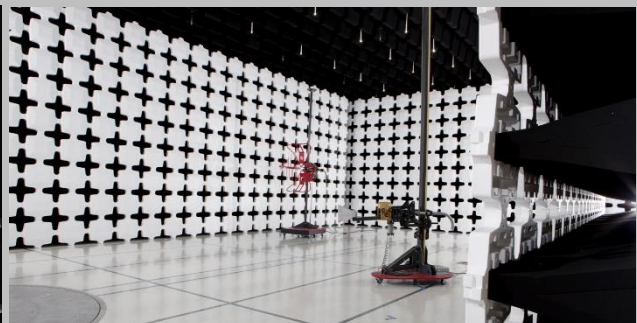
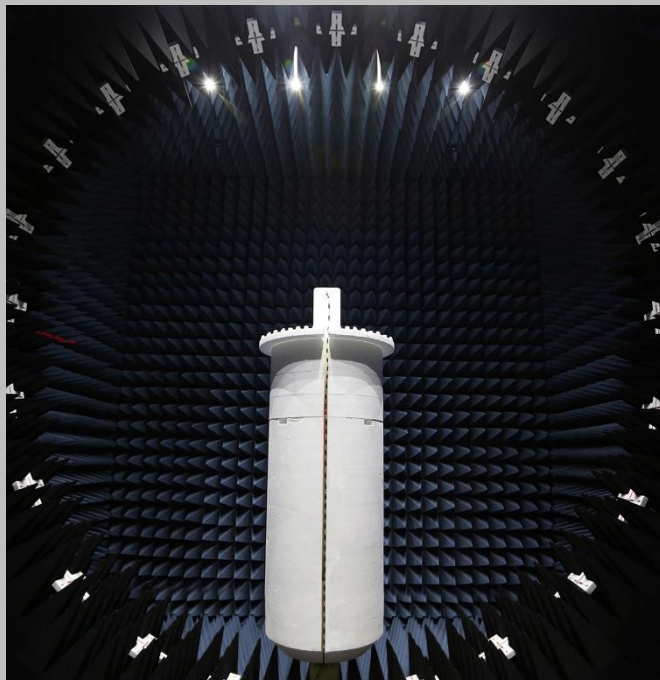
[Texas](#)

[Washington](#)

FACILITIES



California Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Minnesota Labs MN01-11 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612) 638-5136	Oregon Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	Texas Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Washington Labs NC01-05 19201 120 th Ave NE Bothell, WA 98011 (425) 984-6600
A2LA				
Lab Code: 3310.04	Lab Code: 3310.05	Lab Code: 3310.02	Lab Code: 3310.03	Lab Code: 3310.06
Innovation, Science and Economic Development Canada				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
BSMI				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI				
A-0029	A-0109	A-0108	A-0201	A-0110
Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
US0158	US0175	US0017	US0191	US0157



MEASUREMENT UNCERTAINTY

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found in the table below. A lab specific value may also be found in the applicable test description section. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	3.2 dB	-3.2 dB

PRODUCT DESCRIPTION

Client and Equipment under Test (EUT) Information

Company Name:	Audio Precision
Address:	9290 SW Nimbus Ave
City, State, Zip:	Beaverton, OR 97008
Test Requested By:	Bill Bunnell
EUT:	APx516B
First Date of Test:	November 6, 2023
Last Date of Test:	December 21, 2023
Receipt Date of Samples:	November 6, 2023
Equipment Design Stage:	Prototype
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

The APx516B is a two-channel audio analyzer built for versatility. It is compatible with any current or future APx500 digital audio interface module, including Bluetooth, PDM, Digital Serial, and HDMI. The Bluetooth option contains two distinct Bluetooth radios (Source and Sink).

Testing Objective:

To demonstrate compliance of the Bluetooth radios to FCC 15.247/RSS-247 requirements.

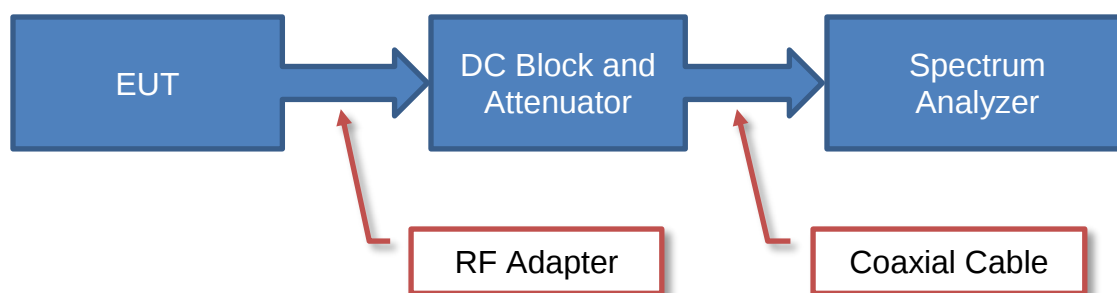
TEST SETUP BLOCK DIAGRAMS

Measurement Bandwidths

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

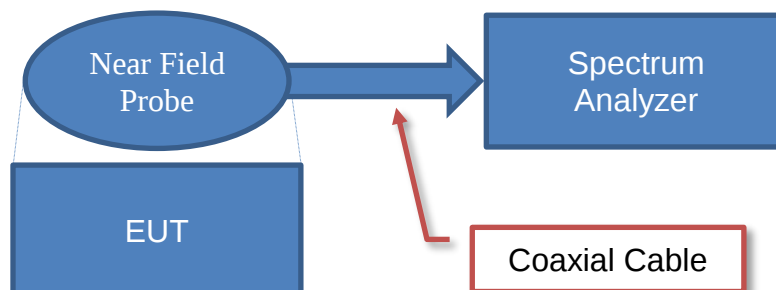
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

Near Field Test Fixture Measurements

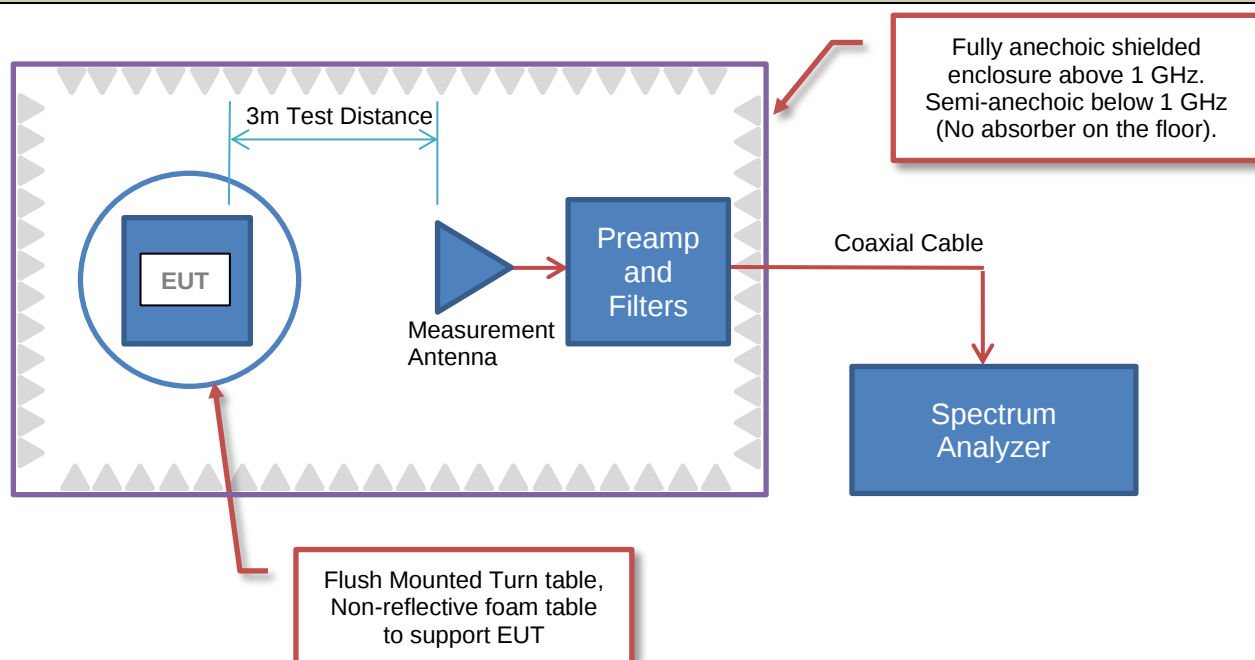


Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

TEST SETUP BLOCK DIAGRAMS

Emissions Measurements



Sample Calculation (logarithmic units)

Radiated Emissions:

Measured Level (Amplitude)	Factor			Distance Adjustment Factor	External Attenuation	Field Strength
	Antenna Factor	Cable Factor	Amplifier Gain			
42.6	28.6	3.1	40.8	0.0	0.0	33.5

Conducted Emissions:

Measured Level (Amplitude)	Factor		External Attenuation	Adjusted Level
	Transducer Factor	Cable Factor		
26.7	0.3	0.1	20.0	47.1

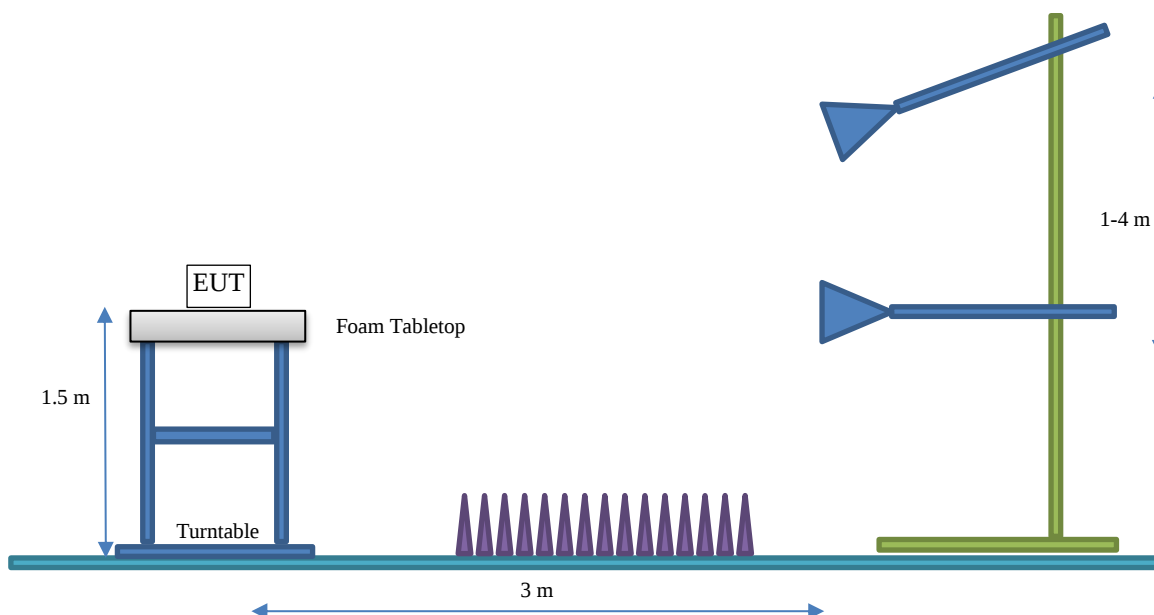
Radiated Power (ERP/EIRP) – Substitution Method:

Measured Level into Substitution Antenna (Amplitude dBm)	Substitution Antenna Factor (dBi)	EIRP to ERP (if applicable)	Measured power (dBm ERP/EIRP)
10.0	6.0	2.15	13.9/16.0

TEST SETUP BLOCK DIAGRAMS

Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



POWER SETTINGS AND ANTENNAS



The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit at during normal operation.

ANTENNA GAIN (dBi)

Type	Provided by:	Frequency Range (MHz)	Gain (dBi)
1/4 Wave Helical	Manufacturer	2400 - 2480	2.6

The EUT was tested using the power settings provided by the manufacturer which were based upon:

- ☒ Test software settings Test software/firmware installed on EUT: **2.6.6.1311**
☐ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

Bluetooth Radio:	Modulation Types	Type	Channel	Position	Frequency (MHz)	Power Setting: [Internal PA], [External PA]
Source	GFSK, DH5	FHSS	0	Low Channel	2402	[255],[63]
			39	Mid Channel	2441	
			78	High Channel	2480	
	pi/4-DQPSK, 2DH5	FHSS	0	Low Channel	2402	[255],[63]
			39	Mid Channel	2441	
			78	High Channel	2480	
	8-DPSK, 3DH5	FHSS	0	Low Channel	2402	[255],[63]
			39	Mid Channel	2441	
			78	High Channel	2480	
Sink	GFSK, DH5	FHSS	0	Low Channel	2402	[255],[63]
			39	Mid Channel	2441	
			78	High Channel	2480	
	pi/4-DQPSK, 2DH5	FHSS	0	Low Channel	2402	[255],[63]
			39	Mid Channel	2441	
			78	High Channel	2480	
	8-DPSK, 3DH5	FHSS	0	Low Channel	2402	[255],[63]
			39	Mid Channel	2441	
			78	High Channel	2480	

CONFIGURATIONS



Configuration AUDI0315-1

Software/Firmware Running During Test	
Description	Version
APx500	v8.1.0.730 Beta
BlueTest3	2.6.6.1311

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
APx516B	Audio Precision	APx516B	3516 B

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Inspron 15-3567	9tvw7f2
SPI to Ethernet Adapter #1	CSR	M1616V2	None
SPI to Ethernet Adapter #2	CSR	M1616V2	None
USB to SPI Converter	CSR	1324 USB-SPI Converter	373641

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8	No	APx516B	AC Power
USB Cable	Yes	1.5	Yes	APx516B	Laptop
Cat5e flat cable	No	1.8	No	SPI to Ethernet Adapter	USB to SPI Converter

CONFIGURATIONS

Configuration AUDI0315-2

Software/Firmware Running During Test	
Description	Version
APx500	v8.1.0.730 Beta
BlueTest3	2.6.6.1311

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
1/4 Wave Helical Antenna	Embedded Antenna Design Ltd.	FBTS35024-SM-RA	N/A
1/4 Wave Helical Antenna	Embedded Antenna Design Ltd.	FBTS35024-SM-RA	N/A
APx516B	Audio Precision	APx516B	3516 B

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Inspron 15-3567	9tvw7f2

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
XLR Cable x4	Yes	1.0	Yes	APx516B	Unterminated
RG223 Cable x4	Yes	0.5	No	APx516B	Unterminated
AC Power	No	1.8	No	APx516B	AC Power
USB Cable	Yes	1.5	Yes	APx516B	Laptop
RG58CU Cable x4	Yes	1.0	No	APx516B	Unterminated
RS232 DB9 Cables x2	Yes	1.5	No	APx516B	Unterminated

CONFIGURATIONS



Configuration AUDI0315-3

Software/Firmware Running During Test	
Description	Version
APx500	v8.1.0.730 Beta

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
1/4 Wave Helical Antenna	Embedded Antenna Design Ltd.	FBTS35024-SM-RA	N/A
1/4 Wave Helical Antenna	Embedded Antenna Design Ltd.	FBTS35024-SM-RA	N/A
APx516B	Audio Precision	APx516B	3516 B

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Inspron 15-3567	9tvw7f2

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
XLR Cable x4	Yes	1.0	Yes	APx516B	Unterminated
RG223 Cable x4	Yes	0.5	No	APx516B	Unterminated
AC Power	No	1.8	No	APx516B	AC Power
RG58CU Cable x4	Yes	1.0	No	APx516B	Unterminated
RS232 DB9 Cables x2	Yes	1.5	No	APx516B	Unterminated
USB Cable	Yes	1.5	Yes	APx516B	USB Extension
USB Extension	Yes	3.0	No	USB Cable	Laptop

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2023-11-06	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2023-11-06	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	2023-11-06	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2023-11-06	Equivalent Isotropic Radiated Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	2023-11-06	Emissions Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	2023-11-06	Band Edge Compliance - Hopping Mode	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	2023-11-06	Carrier Frequency Separation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2023-11-06	Number of Hopping Frequencies	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
9	2023-11-06	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
10	2023-11-06	Occupied Bandwidth (99%)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
11	2023-11-08	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
12	2023-11-10	Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
13	2023-12-21	Dwell Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Per the standard, an insulating material was also added to ground plane between the EUT's power and remote I/O cables. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Gauss Instruments	TDEMI 30M	ARN	2023-05-08	2024-05-08
Cable - Conducted Cable Assembly	Northwest EMC	EVG, HHD, RKT, VAB	EVGA	2023-05-16	2024-05-16
LISN	Solar Electronics	9252-50-R-24-BNC	LIR	2023-09-11	2024-09-11

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	3.2 dB	-3.2 dB

CONFIGURATIONS INVESTIGATED

AUDI0315-2

MODES INVESTIGATED

Bluetooth - Tx, Sink: Mid Ch = 2441 MHz, DH5
Bluetooth - Tx, Source: Mid Ch = 2441 MHz, DH5

POWERLINE CONDUCTED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-10
Customer:	Audio Precision	Temperature:	19.3°C
Attendees:	None	Relative Humidity:	45.9%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Christopher Ladwig and Jeff Alcoke	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	AUDI0315-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2023	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	6	Line:	High Line	Add. Ext. Attenuation (dB):	0
--------	---	-------	-----------	-----------------------------	---

COMMENTS

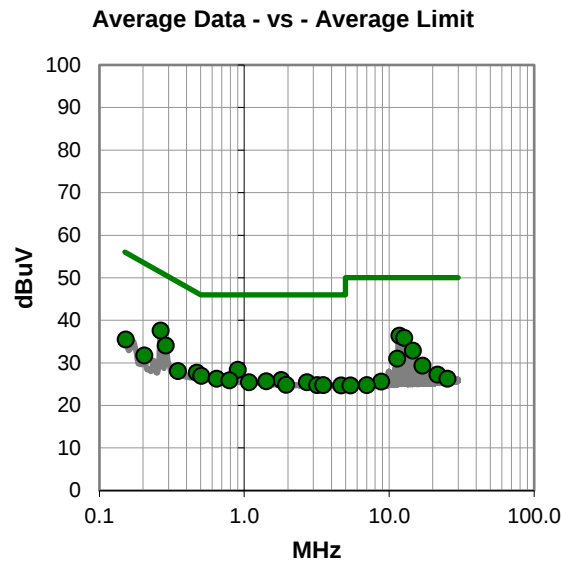
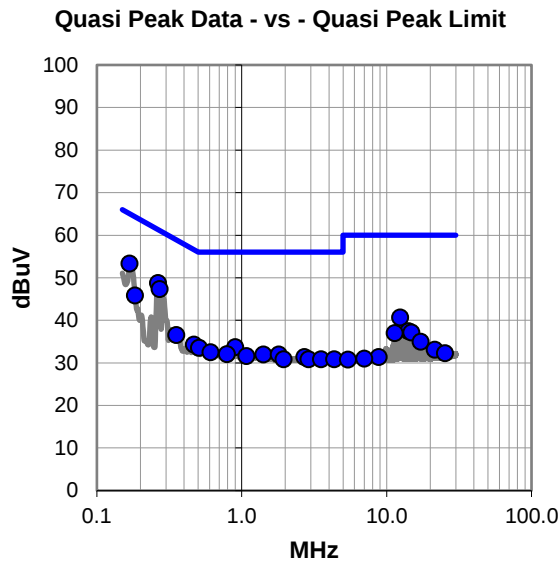
None

EUT OPERATING MODES

Bluetooth - Tx, Sink: Mid Ch = 2441 MHz, DH5
--

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #6

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.168	33.4	20.0	53.4	65.0	-11.6
0.264	28.8	20.0	48.8	61.3	-12.5
0.272	27.4	20.0	47.4	61.1	-13.7
0.184	25.9	20.0	45.9	64.3	-18.4
12.419	20.0	20.7	40.7	60.0	-19.3
0.469	14.4	19.9	34.3	56.5	-22.2
0.353	16.7	19.9	36.6	58.9	-22.3
0.901	13.7	20.0	33.7	56.0	-22.3
0.507	13.7	19.9	33.6	56.0	-22.4
14.126	16.7	20.8	37.5	60.0	-22.5
14.789	16.4	20.8	37.2	60.0	-22.8
11.377	16.3	20.7	37.0	60.0	-23.0
0.609	12.5	20.0	32.5	56.0	-23.5
0.791	12.1	20.0	32.1	56.0	-23.9
1.415	11.9	20.1	32.0	56.0	-24.0
1.804	11.9	20.1	32.0	56.0	-24.0
1.078	11.6	20.0	31.6	56.0	-24.4
2.704	11.3	20.1	31.4	56.0	-24.6
17.160	14.0	21.0	35.0	60.0	-25.0
1.947	10.8	20.1	30.9	56.0	-25.1
2.890	10.8	20.1	30.9	56.0	-25.1
3.524	10.7	20.2	30.9	56.0	-25.1
4.351	10.7	20.2	30.9	56.0	-25.1
21.519	11.8	21.3	33.1	60.0	-26.9
25.312	10.8	21.5	32.3	60.0	-27.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.755	15.7	20.7	36.4	50.0	-13.6
0.264	17.6	20.0	37.6	51.3	-13.7
12.704	15.1	20.8	35.9	50.0	-14.1
0.287	14.1	20.0	34.1	50.6	-16.5
14.599	12.1	20.8	32.9	50.0	-17.1
0.902	8.4	20.0	28.4	46.0	-17.6
0.470	7.8	19.9	27.7	46.5	-18.8
0.504	7.1	19.9	27.0	46.0	-19.0
11.377	10.3	20.7	31.0	50.0	-19.0
0.644	6.3	20.0	26.3	46.0	-19.7
1.802	5.9	20.1	26.0	46.0	-20.0
0.789	5.9	20.0	25.9	46.0	-20.1
1.415	5.6	20.1	25.7	46.0	-20.3
0.152	15.4	20.1	35.5	55.9	-20.4
1.076	5.5	20.0	25.5	46.0	-20.5
2.704	5.4	20.1	25.5	46.0	-20.5
16.970	8.4	21.0	29.4	50.0	-20.6
0.348	8.2	19.9	28.1	49.0	-20.9
1.946	4.8	20.1	24.9	46.0	-21.1
3.185	4.6	20.2	24.8	46.0	-21.2
3.511	4.6	20.2	24.8	46.0	-21.2
4.657	4.5	20.2	24.7	46.0	-21.3
0.203	11.8	20.0	31.8	53.5	-21.7
21.520	6.0	21.3	27.3	50.0	-22.7
25.217	4.8	21.5	26.3	50.0	-23.7

CONCLUSION

Pass


Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-10
Customer:	Audio Precision	Temperature:	19.3°C
Attendees:	None	Relative Humidity:	45.9%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Christopher Ladwig and Jeff Alcoke	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	AUDI0315-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2023	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	7	Line:	Neutral	Add. Ext. Attenuation (dB):	0
--------	---	-------	---------	-----------------------------	---

COMMENTS

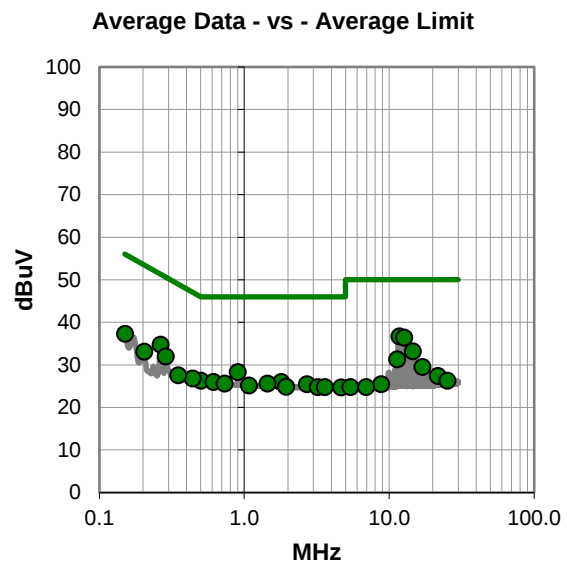
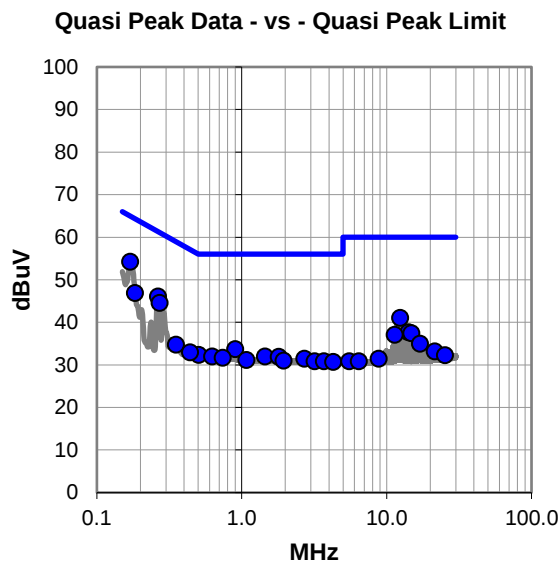
None

EUT OPERATING MODES

Bluetooth - Tx, Sink: Mid Ch = 2441 MHz, DH5
--

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #7

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.170	34.3	20.0	54.3	65.0	-10.7
0.264	26.1	20.0	46.1	61.3	-15.2
0.272	24.6	20.0	44.6	61.1	-16.5
0.184	26.9	20.0	46.9	64.3	-17.4
12.419	20.4	20.7	41.1	60.0	-18.9
0.901	13.7	20.0	33.7	56.0	-22.3
14.126	16.9	20.8	37.7	60.0	-22.3
14.789	16.7	20.8	37.5	60.0	-22.5
11.377	16.4	20.7	37.1	60.0	-22.9
0.504	12.5	19.9	32.4	56.0	-23.6
0.626	12.0	20.0	32.0	56.0	-24.0
1.445	11.9	20.1	32.0	56.0	-24.0
0.351	14.9	19.9	34.8	58.9	-24.1
0.440	13.1	19.9	33.0	57.1	-24.1
1.802	11.8	20.1	31.9	56.0	-24.1
0.740	11.7	20.0	31.7	56.0	-24.3
2.706	11.4	20.1	31.5	56.0	-24.5
1.079	11.2	20.0	31.2	56.0	-24.8
1.949	10.9	20.1	31.0	56.0	-25.0
16.969	14.0	21.0	35.0	60.0	-25.0
3.182	10.7	20.2	30.9	56.0	-25.1
3.693	10.7	20.2	30.9	56.0	-25.1
4.285	10.5	20.2	30.7	56.0	-25.3
21.520	11.9	21.3	33.2	60.0	-26.8
25.219	10.8	21.5	32.3	60.0	-27.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.755	16.0	20.7	36.7	50.0	-13.3
12.704	15.6	20.8	36.4	50.0	-13.6
0.264	14.8	20.0	34.8	51.3	-16.5
14.599	12.4	20.8	33.2	50.0	-16.8
0.902	8.3	20.0	28.3	46.0	-17.7
0.287	12.0	20.0	32.0	50.6	-18.6
11.377	10.6	20.7	31.3	50.0	-18.7
0.150	17.2	20.1	37.3	56.0	-18.7
0.502	6.4	19.9	26.3	46.0	-19.7
0.612	6.0	20.0	26.0	46.0	-20.0
1.802	5.9	20.1	26.0	46.0	-20.0
0.440	6.9	19.9	26.8	47.1	-20.3
0.203	13.1	20.0	33.1	53.5	-20.4
0.733	5.6	20.0	25.6	46.0	-20.4
1.448	5.5	20.1	25.6	46.0	-20.4
2.704	5.4	20.1	25.5	46.0	-20.5
16.969	8.5	21.0	29.5	50.0	-20.5
1.079	5.2	20.0	25.2	46.0	-20.8
1.946	4.8	20.1	24.9	46.0	-21.1
3.218	4.6	20.2	24.8	46.0	-21.2
3.600	4.6	20.2	24.8	46.0	-21.2
4.656	4.5	20.2	24.7	46.0	-21.3
0.350	7.7	19.9	27.6	49.0	-21.4
21.615	6.1	21.3	27.4	50.0	-22.6
25.216	4.8	21.5	26.3	50.0	-23.7

CONCLUSION

Pass


Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-10
Customer:	Audio Precision	Temperature:	19.3°C
Attendees:	None	Relative Humidity:	45.9%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Christopher Ladwig and Jeff Alcoke	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	AUDI0315-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2023	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	8	Line:	Neutral	Add. Ext. Attenuation (dB):	0
--------	---	-------	---------	-----------------------------	---

COMMENTS

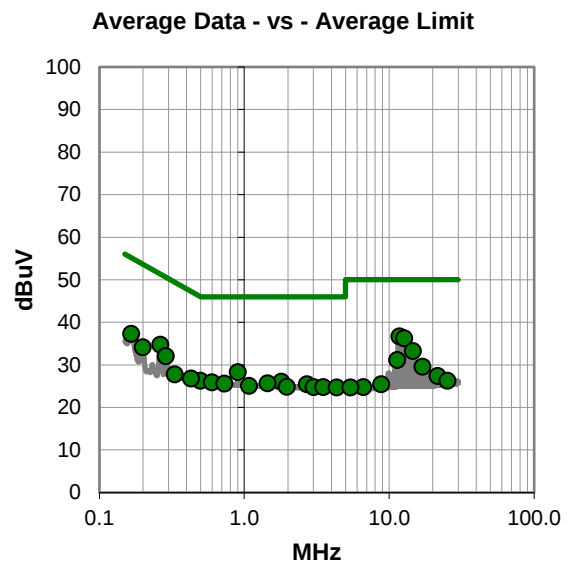
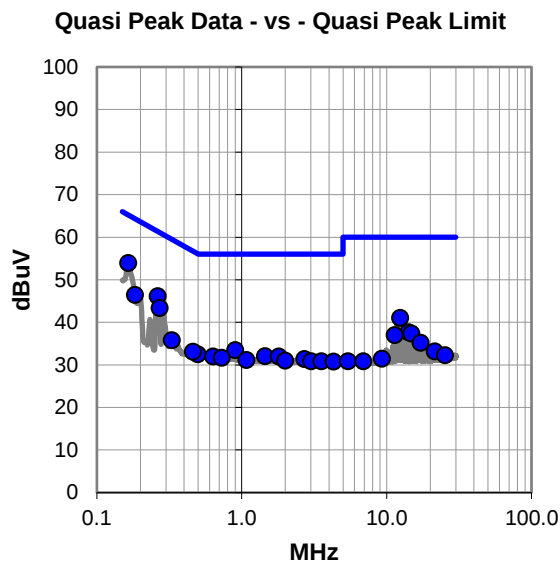
None

EUT OPERATING MODES

Bluetooth - Tx, Source: Mid Ch = 2441 MHz, DH5
--

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #8

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	34.0	20.0	54.0	65.2	-11.2
0.263	26.2	20.0	46.2	61.3	-15.1
0.272	23.4	20.0	43.4	61.1	-17.7
0.184	26.5	20.0	46.5	64.3	-17.8
12.419	20.4	20.7	41.1	60.0	-18.9
14.125	16.9	20.8	37.7	60.0	-22.3
0.901	13.5	20.0	33.5	56.0	-22.5
14.789	16.6	20.8	37.4	60.0	-22.6
11.377	16.3	20.7	37.0	60.0	-23.0
0.498	12.6	19.9	32.5	56.0	-23.5
0.461	13.2	19.9	33.1	56.7	-23.6
0.330	15.9	19.9	35.8	59.5	-23.7
1.445	12.0	20.1	32.1	56.0	-23.9
0.634	12.0	20.0	32.0	56.0	-24.0
1.802	11.9	20.1	32.0	56.0	-24.0
0.727	11.7	20.0	31.7	56.0	-24.3
2.704	11.3	20.1	31.4	56.0	-24.6
1.076	11.2	20.0	31.2	56.0	-24.8
17.160	14.2	21.0	35.2	60.0	-24.8
1.993	10.9	20.1	31.0	56.0	-25.0
3.009	10.8	20.1	30.9	56.0	-25.1
3.543	10.7	20.2	30.9	56.0	-25.1
4.297	10.6	20.2	30.8	56.0	-25.2
21.520	11.9	21.3	33.2	60.0	-26.8
25.216	10.8	21.5	32.3	60.0	-27.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.755	16.0	20.7	36.7	50.0	-13.3
12.704	15.5	20.8	36.3	50.0	-13.7
0.263	14.8	20.0	34.8	51.3	-16.5
14.599	12.5	20.8	33.3	50.0	-16.7
0.902	8.3	20.0	28.3	46.0	-17.7
0.165	17.3	20.0	37.3	55.2	-17.9
0.287	12.1	20.0	32.1	50.6	-18.5
11.377	10.5	20.7	31.2	50.0	-18.8
0.199	14.2	20.0	34.2	53.7	-19.5
0.496	6.4	19.9	26.3	46.1	-19.8
1.802	6.0	20.1	26.1	46.0	-19.9
0.597	5.9	20.0	25.9	46.0	-20.1
1.448	5.6	20.1	25.7	46.0	-20.3
0.727	5.6	20.0	25.6	46.0	-20.4
16.970	8.6	21.0	29.6	50.0	-20.4
0.429	6.9	19.9	26.8	47.3	-20.5
2.704	5.4	20.1	25.5	46.0	-20.5
1.076	5.1	20.0	25.1	46.0	-20.9
1.964	4.8	20.1	24.9	46.0	-21.1
3.003	4.7	20.1	24.8	46.0	-21.2
3.510	4.6	20.2	24.8	46.0	-21.2
4.334	4.5	20.2	24.7	46.0	-21.3
0.330	7.9	19.9	27.8	49.5	-21.7
21.520	6.1	21.3	27.4	50.0	-22.6
25.216	4.8	21.5	26.3	50.0	-23.7

CONCLUSION

Pass


Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-10
Customer:	Audio Precision	Temperature:	19.3°C
Attendees:	None	Relative Humidity:	45.9%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Christopher Ladwig and Jeff Alcoke	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	AUDI0315-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2023	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	9	Line:	High Line	Add. Ext. Attenuation (dB):	0
--------	---	-------	-----------	-----------------------------	---

COMMENTS

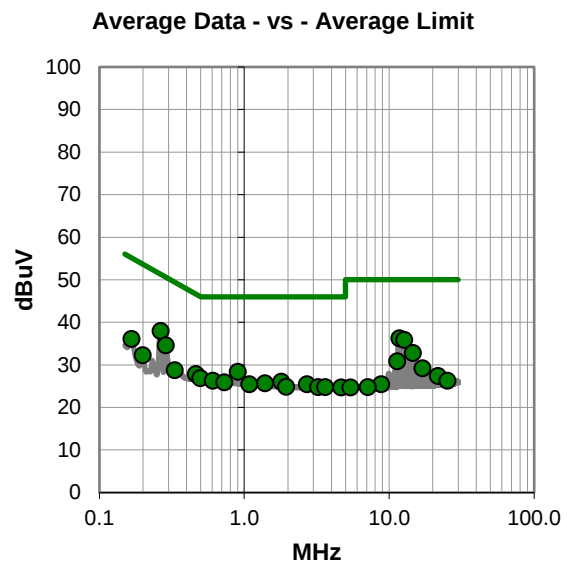
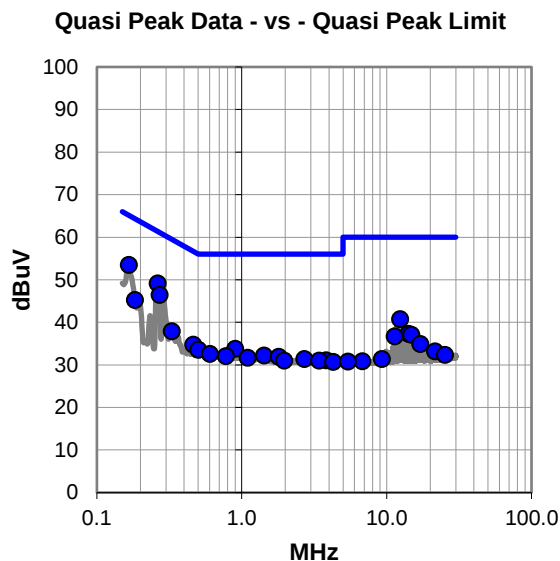
None

EUT OPERATING MODES

Bluetooth - Tx, Source: Mid Ch = 2441 MHz, DH5

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #9

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.167	33.5	20.0	53.5	65.1	-11.6
0.263	29.2	20.0	49.2	61.3	-12.1
0.272	26.5	20.0	46.5	61.1	-14.6
0.184	25.3	20.0	45.3	64.3	-19.0
12.419	20.1	20.7	40.8	60.0	-19.2
0.330	18.0	19.9	37.9	59.5	-21.6
0.463	14.9	19.9	34.8	56.6	-21.8
0.902	13.8	20.0	33.8	56.0	-22.2
0.502	13.7	19.9	33.6	56.0	-22.4
14.125	16.5	20.8	37.3	60.0	-22.7
14.789	16.3	20.8	37.1	60.0	-22.9
11.377	16.0	20.7	36.7	60.0	-23.3
0.605	12.6	20.0	32.6	56.0	-23.4
1.423	12.1	20.1	32.2	56.0	-23.8
0.780	12.1	20.0	32.1	56.0	-23.9
1.802	11.8	20.1	31.9	56.0	-24.1
1.102	11.7	20.0	31.7	56.0	-24.3
2.704	11.3	20.1	31.4	56.0	-24.6
3.830	10.9	20.2	31.1	56.0	-24.9
1.966	10.9	20.1	31.0	56.0	-25.0
3.417	10.8	20.2	31.0	56.0	-25.0
17.065	13.9	21.0	34.9	60.0	-25.1
4.273	10.5	20.2	30.7	56.0	-25.3
21.615	11.9	21.3	33.2	60.0	-26.8
25.217	10.9	21.5	32.4	60.0	-27.6

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.264	18.0	20.0	38.0	51.3	-13.3
11.755	15.6	20.7	36.3	50.0	-13.7
12.704	15.1	20.8	35.9	50.0	-14.1
0.287	14.6	20.0	34.6	50.6	-16.0
14.599	12.0	20.8	32.8	50.0	-17.2
0.902	8.4	20.0	28.4	46.0	-17.6
0.463	8.0	19.9	27.9	46.6	-18.7
0.167	16.1	20.0	36.1	55.1	-19.0
11.377	10.2	20.7	30.9	50.0	-19.1
0.496	7.0	19.9	26.9	46.1	-19.2
0.605	6.3	20.0	26.3	46.0	-19.7
1.804	6.0	20.1	26.1	46.0	-19.9
0.727	5.9	20.0	25.9	46.0	-20.1
1.387	5.6	20.1	25.7	46.0	-20.3
1.084	5.5	20.0	25.5	46.0	-20.5
2.706	5.4	20.1	25.5	46.0	-20.5
0.330	8.9	19.9	28.8	49.5	-20.7
16.969	8.2	21.0	29.2	50.0	-20.8
1.944	4.8	20.1	24.9	46.0	-21.1
3.231	4.6	20.2	24.8	46.0	-21.2
3.607	4.6	20.2	24.8	46.0	-21.2
4.654	4.5	20.2	24.7	46.0	-21.3
0.199	12.3	20.0	32.3	53.7	-21.4
21.615	6.1	21.3	27.4	50.0	-22.6
25.216	4.8	21.5	26.3	50.0	-23.7

CONCLUSION

Pass


Tested By

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies (in no-hop, single channel mode) and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These "pre-scans" are not included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

RMS measurements taken for a FHSS radio also may have a duty cycle correction subtracted using the formula $10 \cdot \log(DC)$, where DC is the worst-case dwell time of the radio while in a hopping mode in a 100 ms period.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2023-02-06	2024-02-06
Antenna - Biconilog	Teseq	CBL 6141B	AXR	2022-11-01	2024-11-01
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2022-03-02	2024-03-02
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-09	AHY	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-09	AIV	NCR	NCR
Cable	N/A	Bilog Cables	EVA	2023-11-05	2024-11-05
Cable	N/A	Double Ridge Horn Cables	EVB	2023-03-26	2024-03-26
Cable	None	Standard Gain Horn Cables	EVF	2023-10-31	2024-10-31
Cable	ESM Cable Corp.	TTBJ141-KMKM-72	EVY	2023-07-10	2024-07-10
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AOL	2023-11-05	2024-11-05
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2023-03-26	2024-03-26
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-08001200-30-10P	PAO	2023-10-31	2024-10-31
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2023-10-31	2024-10-31
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	2023-07-10	2024-07-10
Attenuator	Coaxicom	3910-10	AWX	2023-02-10	2024-02-10
Filter - High Pass	Micro-Tronics	HPM50111	HFO	2023-11-06	2024-11-06

SPURIOUS RADIATED EMISSIONS

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.2 dB	-5.2 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 26500 MHz

POWER INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

AUDI0315-2
AUDI0315-3*

*This configuration was used for measurements below 1000 MHz

MODES INVESTIGATED

Bluetooth - Tx, Source: Low Ch =2402 MHz, Mid Ch = 2441 MHz, High Ch - 2480 MHz.
Bluetooth - Tx, Sink: Low Ch =2402 MHz, Mid Ch = 2441 MHz, High Ch - 2480 MHz.

SPURIOUS RADIATED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-08
Customer:	Audio Precision	Temperature:	21.4°C
Attendees:	None	Relative Humidity:	43.3%
Customer Project:	None	Bar. Pressure (PMSL):	1031 mb
Tested By:	Christopher Ladwig and Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	AUDI0315-2, -3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

TEST PARAMETERS

Run #:	30	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

Test mode operates at 77.9% duty cycle, upward DCCF correction applied based on $10 \cdot \log(1/\text{Duty cycle}) = 1.1$ dB. When operating in FHSS mode, the worst-case transmission time over any 100 ms period is 2.975 ms. Downward DCCF correction applied based on $10 \cdot \log(\text{On Time}/100 \text{ ms}) = -15.3$ dB. Total correction applied = -14.2 dB.

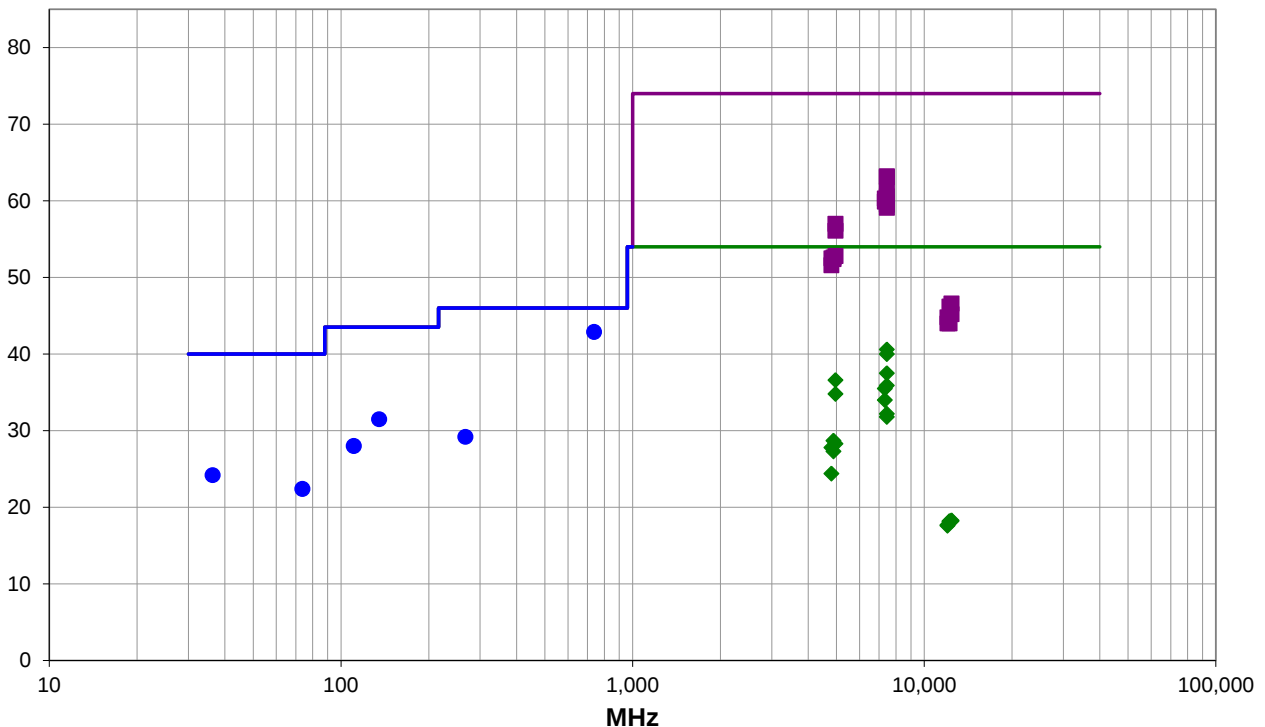
Please reference data comments below for channel, data rate, and antenna orientation

EUT OPERATING MODES

Bluetooth - Tx, Source: Low Ch = 2402 MHz, Mid Ch = 2441 MHz, High Ch = 2480 MHz.

DEVIATIONS FROM TEST STANDARD

None



Run #: 30

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #30

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
737.278	31.6	11.3	1.1	68.0	0.0	0.0	Horz	QP	0.0	42.9	46.0	-3.1	High Ch. DH5 Ant Vert
7439.517	47.6	15.6	1.2	21.0	0.0	0.0	Vert	PK	0.0	63.2	74.0	-10.8	High Ch. DH5 Ant Vert
7440.503	47.5	15.6	2.4	20.0	0.0	0.0	Horz	PK	0.0	63.1	74.0	-10.9	High Ch. DH5 Ant Horz
135.168	34.4	-2.9	2.0	326.0	0.0	0.0	Horz	QP	0.0	31.5	43.5	-12.0	High Ch. DH5 Ant Vert
7439.207	45.7	15.6	2.4	53.0	0.0	0.0	Horz	PK	0.0	61.3	74.0	-12.7	High Ch. DH5 Ant Vert
7440.630	45.0	15.6	3.1	16.0	0.0	0.0	Vert	PK	0.0	60.6	74.0	-13.4	High Ch. DH5 Ant Horz
7440.050	39.2	15.6	2.4	20.0	-14.2	0.0	Horz	AV	0.0	40.6	54.0	-13.4	High Ch. DH5 Ant Horz
7322.643	44.9	15.4	2.5	354.0	0.0	0.0	Horz	PK	0.0	60.3	74.0	-13.7	Mid Ch. DH5 Ant Horz
7439.983	38.6	15.6	1.2	21.0	-14.2	0.0	Vert	AV	0.0	40.0	54.0	-14.0	High Ch. DH5 Ant Vert
7322.263	44.5	15.4	1.0	17.0	0.0	0.0	Vert	PK	0.0	59.9	74.0	-14.1	Mid Ch. DH5 Ant Vert
7438.542	43.9	15.6	1.5	70.0	0.0	0.0	Horz	PK	0.0	59.5	74.0	-14.5	High Ch. 2DH5, Ant Horz
7442.108	43.5	15.6	1.5	70.0	0.0	0.0	Horz	PK	0.0	59.1	74.0	-14.9	High Ch. 3DH5 Ant Horz
110.595	32.6	-4.6	2.8	37.0	0.0	0.0	Horz	QP	0.0	28.0	43.5	-15.5	High Ch. DH5 Ant Vert
36.283	20.8	3.4	1.9	286.0	0.0	0.0	Vert	QP	0.0	24.2	40.0	-15.8	High Ch. DH5 Ant Vert
7440.010	36.1	15.6	2.4	53.0	-14.2	0.0	Horz	AV	0.0	37.5	54.0	-16.5	High Ch. DH5 Ant Vert
266.940	30.3	-1.1	1.1	86.0	0.0	0.0	Horz	QP	0.0	29.2	46.0	-16.8	High Ch. DH5 Ant Vert
4959.597	49.3	7.7	1.4	308.0	0.0	0.0	Vert	PK	0.0	57.0	74.0	-17.0	High Ch. DH5 Ant Vert
4960.007	43.1	7.7	1.4	308.0	-14.2	0.0	Vert	AV	0.0	36.6	54.0	-17.4	High Ch. DH5 Ant Vert
73.730	31.0	-8.6	3.8	170.0	0.0	0.0	Horz	QP	0.0	22.4	40.0	-17.6	High Ch. DH5 Ant Vert
4959.980	48.4	7.7	2.2	49.0	0.0	0.0	Horz	PK	0.0	56.1	74.0	-17.9	High Ch. DH5 Ant Horz
7439.970	34.5	15.6	3.1	16.0	-14.2	0.0	Vert	AV	0.0	35.9	54.0	-18.1	High Ch. DH5 Ant Horz
7322.870	34.3	15.4	1.0	17.0	-14.2	0.0	Vert	AV	0.0	35.5	54.0	-18.5	Mid Ch. DH5 Ant Vert
4960.020	41.3	7.7	2.2	49.0	-14.2	0.0	Horz	AV	0.0	34.8	54.0	-19.2	High Ch. DH5 Ant Horz
7323.023	32.8	15.4	2.5	354.0	-14.2	0.0	Horz	AV	0.0	34.0	54.0	-20.0	Mid Ch. DH5 Ant Horz
4960.520	45.1	7.7	1.5	316.0	0.0	0.0	Horz	PK	0.0	52.8	74.0	-21.2	High Ch. DH5 Ant Vert
4881.807	44.9	7.7	3.5	5.0	0.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	Mid Ch. DH5 Ant Horz
4804.320	44.8	7.7	4.0	355.0	0.0	0.0	Vert	PK	0.0	52.5	74.0	-21.5	Low Ch. DH5 Ant Vert
4882.070	44.7	7.7	1.1	303.0	0.0	0.0	Vert	PK	0.0	52.4	74.0	-21.6	Mid Ch. DH5 Ant Vert
7441.008	30.8	15.6	1.5	70.0	-14.2	0.0	Horz	AV	0.0	32.2	54.0	-21.8	High Ch. 3DH5 Ant Horz
7439.150	30.4	15.6	1.5	70.0	-14.2	0.0	Horz	AV	0.0	31.8	54.0	-22.2	High Ch. 2DH5, Ant Horz
4803.517	43.9	7.7	1.5	122.0	0.0	0.0	Horz	PK	0.0	51.6	74.0	-22.4	Low Ch. DH5 Ant Horz
4881.940	35.2	7.7	3.5	5.0	-14.2	0.0	Horz	AV	0.0	28.7	54.0	-25.3	Mid Ch. DH5 Ant Horz
4960.073	34.8	7.7	1.5	316.0	-14.2	0.0	Horz	AV	0.0	28.3	54.0	-25.7	High Ch. DH5 Ant Vert
4803.883	34.3	7.7	4.0	355.0	-14.2	0.0	Vert	AV	0.0	27.8	54.0	-26.2	Low Ch. DH5 Ant Vert
4882.130	33.8	7.7	1.1	303.0	-14.2	0.0	Vert	AV	0.0	27.3	54.0	-26.7	Mid Ch. DH5 Ant Vert
12397.850	45.3	1.3	1.5	202.0	0.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	High Ch. DH5 Ant Horz
12207.020	45.4	0.8	1.5	352.0	0.0	0.0	Horz	PK	0.0	46.2	74.0	-27.8	Mid Ch. DH5 Ant Horz
12398.590	43.9	1.3	3.0	108.0	0.0	0.0	Vert	PK	0.0	45.2	74.0	-28.8	High Ch. DH5 Ant Vert
12010.590	44.2	0.6	1.5	39.0	0.0	0.0	Horz	PK	0.0	44.8	74.0	-29.2	Low Ch. DH5 Ant Horz
4803.363	30.9	7.7	1.5	122.0	-14.2	0.0	Horz	AV	0.0	24.4	54.0	-29.6	Low Ch. DH5 Ant Horz

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12009.790	43.4	0.6	1.5	49.0	0.0	0.0	Vert	PK	0.0	44.0	74.0	-30.0	Low Ch. DH5 Ant Vert
12204.920	43.2	0.8	2.8	88.0	0.0	0.0	Vert	PK	0.0	44.0	74.0	-30.0	Mid Ch. DH5 Ant Vert
12398.850	31.2	1.3	3.0	108.0	-14.2	0.0	Vert	AV	0.0	18.3	54.0	-35.7	High Ch. DH5 Ant Vert
12203.790	31.6	0.8	2.8	88.0	-14.2	0.0	Vert	AV	0.0	18.2	54.0	-35.8	Mid Ch. DH5 Ant Vert
12399.650	31.1	1.3	1.5	202.0	-14.2	0.0	Horz	AV	0.0	18.2	54.0	-35.8	High Ch. DH5 Ant Horz
12204.830	31.5	0.8	1.5	352.0	-14.2	0.0	Horz	AV	0.0	18.1	54.0	-35.9	Mid Ch. DH5 Ant Horz
12007.970	31.3	0.6	1.5	49.0	-14.2	0.0	Vert	AV	0.0	17.7	54.0	-36.3	Low Ch. DH5 Ant Vert
12008.450	31.2	0.6	1.5	39.0	-14.2	0.0	Horz	AV	0.0	17.6	54.0	-36.4	Low Ch. DH5 Ant Horz

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-08
Customer:	Audio Precision	Temperature:	21.4°C
Attendees:	None	Relative Humidity:	43.3%
Customer Project:	None	Bar. Pressure (PMSL):	1031 mb
Tested By:	Christopher Ladwig and Jeff Alcoke	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	AUDI0315-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

TEST PARAMETERS

Run #:	33	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

Test mode operates at 77.9% duty cycle, upward DCCF correction applied based on $10 \cdot \log(1/\text{Duty cycle}) = 1.1$ dB. When operating in FHSS mode, the worst-case transmission time over any 100 ms period is 2.975 ms. Downward DCCF correction applied based on $10 \cdot \log(\text{On Time}/100 \text{ ms}) = -15.3$ dB. Total correction applied = -14.2 dB.

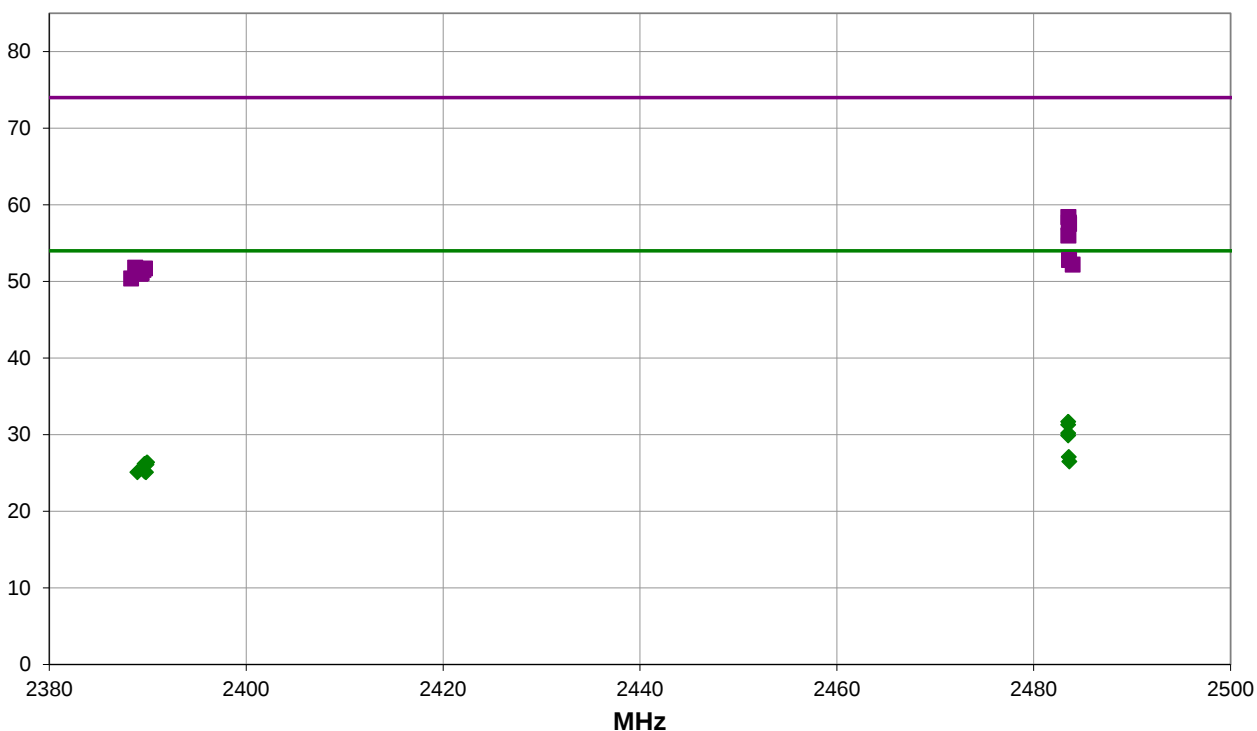
Please reference data comments below for channel, data rate, and antenna orientation

EUT OPERATING MODES

Bluetooth - Tx, Source: Low Ch = 2402 MHz, Mid Ch = 2441 MHz, High Ch = 2480 MHz.

DEVIATIONS FROM TEST STANDARD

None



Run #: 33

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #33

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.513	50.7	-2.3	3.8	339.0	0.0	10.0	Vert	PK	0.0	58.4	74.0	-15.6	High Ch. 3DH5 Ant Vert
2483.570	50.0	-2.3	4.0	13.0	0.0	10.0	Horz	PK	0.0	57.7	74.0	-16.3	High Ch. 2DH5 Ant Horz
2483.587	49.8	-2.3	3.8	342.0	0.0	10.0	Vert	PK	0.0	57.5	74.0	-16.5	High Ch. 2DH5 Ant Vert
2483.523	48.3	-2.3	3.9	353.0	0.0	10.0	Horz	PK	0.0	56.0	74.0	-18.0	High Ch. 3DH5 Ant Horz
2483.593	45.1	-2.3	4.0	13.0	0.0	10.0	Horz	PK	0.0	52.8	74.0	-21.2	High Ch. DH5 Ant Horz
2483.957	44.5	-2.3	4.0	13.0	0.0	10.0	Vert	PK	0.0	52.2	74.0	-21.8	High Ch. DH5 Ant Vert
2388.723	44.4	-2.6	1.5	347.0	0.0	10.0	Vert	PK	0.0	51.8	74.0	-22.2	Low Ch. 3DH5 Ant Vert
2389.720	44.3	-2.6	1.5	87.0	0.0	10.0	Horz	PK	0.0	51.7	74.0	-22.3	Low Ch. 2DH5 Ant Horz
2483.503	38.2	-2.3	3.8	339.0	-14.2	10.0	Vert	AV	0.0	31.7	54.0	-22.3	High Ch. 3DH5 Ant Vert
2389.553	44.1	-2.6	1.5	347.0	0.0	10.0	Vert	PK	0.0	51.5	74.0	-22.5	Low Ch. 2DH5 Ant Vert
2483.500	37.8	-2.3	3.8	342.0	-14.2	10.0	Vert	AV	0.0	31.3	54.0	-22.7	High Ch. 2DH5 Ant Vert
2389.363	43.7	-2.6	1.5	87.0	0.0	10.0	Horz	PK	0.0	51.1	74.0	-22.9	Low Ch. DH5 Ant Horz
2389.260	43.6	-2.6	1.5	347.0	0.0	10.0	Vert	PK	0.0	51.0	74.0	-23.0	Low Ch. DH5 Ant Vert
2388.303	43.0	-2.6	1.5	87.0	0.0	10.0	Horz	PK	0.0	50.4	74.0	-23.6	Low Ch. 3DH5 Ant Horz
2483.500	36.7	-2.3	3.9	353.0	-14.2	10.0	Horz	AV	0.0	30.2	54.0	-23.8	High Ch. 3DH5 Ant Horz
2483.500	36.4	-2.3	4.0	13.0	-14.2	10.0	Horz	AV	0.0	29.9	54.0	-24.1	High Ch. 2DH5 Ant Horz
2483.560	33.6	-2.3	4.0	13.0	-14.2	10.0	Vert	AV	0.0	27.1	54.0	-26.9	High Ch. DH5 Ant Vert
2483.617	33.0	-2.3	4.0	13.0	-14.2	10.0	Horz	AV	0.0	26.5	54.0	-27.5	High Ch. DH5 Ant Horz
2389.927	33.2	-2.6	1.5	347.0	-14.2	10.0	Vert	AV	0.0	26.4	54.0	-27.6	Low Ch. 3DH5 Ant Vert
2389.673	33.0	-2.6	1.5	347.0	-14.2	10.0	Vert	AV	0.0	26.2	54.0	-27.8	Low Ch. DH5 Ant Vert
2389.863	32.9	-2.6	1.5	347.0	-14.2	10.0	Vert	AV	0.0	26.1	54.0	-27.9	Low Ch. 2DH5 Ant Vert
2389.687	32.0	-2.6	1.5	87.0	-14.2	10.0	Horz	AV	0.0	25.2	54.0	-28.8	Low Ch. 3DH5 Ant Horz
2389.813	31.9	-2.6	1.5	87.0	-14.2	10.0	Horz	AV	0.0	25.1	54.0	-28.9	Low Ch. DH5 Ant Horz
2388.940	31.9	-2.6	1.5	87.0	-14.2	10.0	Horz	AV	0.0	25.1	54.0	-28.9	Low Ch. 2DH5 Ant Horz

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-07
Customer:	Audio Precision	Temperature:	21.6°C
Attendees:	None	Relative Humidity:	46.5%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Christopher Ladwig and Jeff Alcoke	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	AUDI0315-2, -3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

TEST PARAMETERS

Run #:	12	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

Test mode operates at 77.9% duty cycle, upward DCCF correction applied based on $10 \cdot \log(1/\text{Duty cycle}) = 1.1 \text{ dB}$. When operating in FHSS mode, the worst-case transmission time over any 100 ms period is 2.975 ms. Downward DCCF correction applied based on $10 \cdot \log(\text{On Time}/100 \text{ ms}) = -15.3 \text{ dB}$. Total correction applied = -14.2 dB.

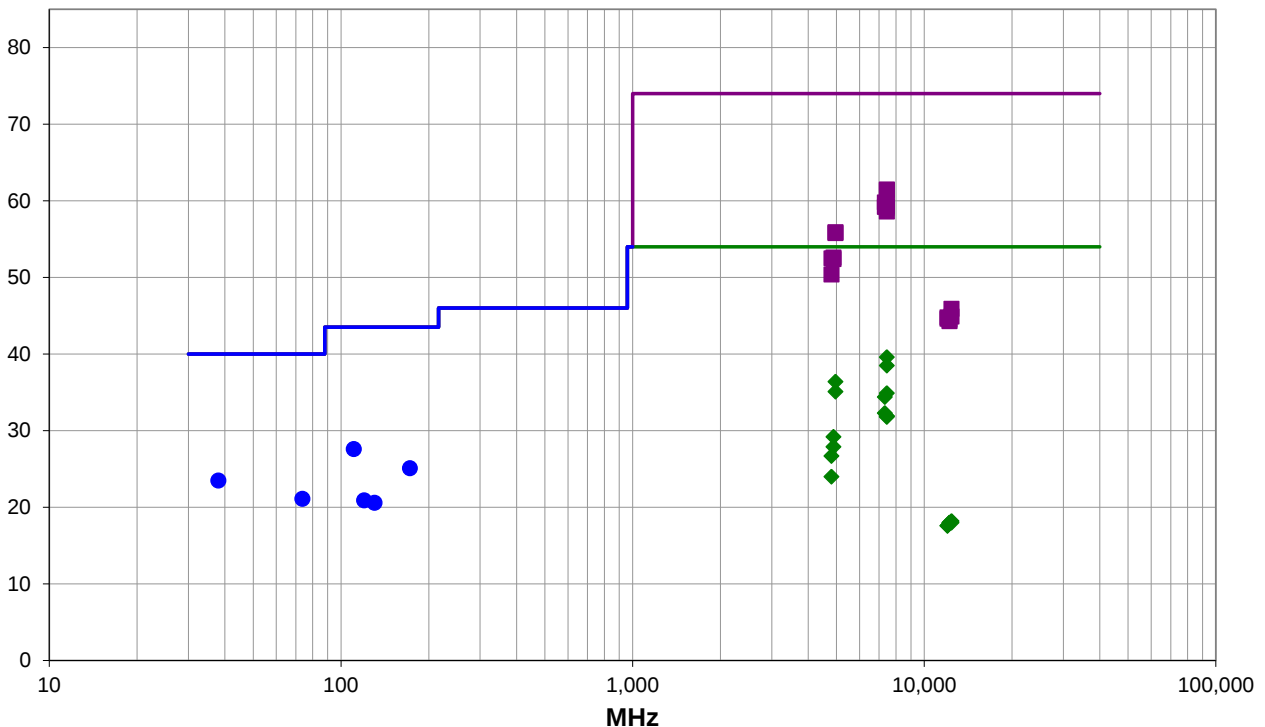
Please reference data comments below for channel, data rate, and antenna orientation

EUT OPERATING MODES

Bluetooth - Tx, Sink: Low Ch = 2402 MHz, Mid Ch = 2441 MHz, High Ch = 2480 MHz.

DEVIATIONS FROM TEST STANDARD

None



Run #: 12

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #12

High Ch. DH5 Ant Horz (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7440.175	45.9	15.6	1.7	349.0	0.0	0.0	Vert	PK	0.0	61.5	74.0	-12.5	High Ch. DH5 Ant Vert
7440.733	45.8	15.6	2.6	362.0	0.0	0.0	Horz	PK	0.0	61.4	74.0	-12.6	High Ch. DH5 Ant Horz
7323.717	44.4	15.4	1.2	16.0	0.0	0.0	Vert	PK	0.0	59.8	74.0	-14.2	Mid Ch. DH5 Ant Vert
7440.758	44.1	15.6	2.7	353.0	0.0	0.0	Horz	PK	0.0	59.7	74.0	-14.3	High Ch. 3DH5 Ant Horz
7440.008	38.2	15.6	2.6	362.0	-14.2	0.0	Horz	AV	0.0	39.6	54.0	-14.4	High Ch. DH5 Ant Horz
7441.675	43.7	15.6	3.0	160.0	0.0	0.0	Horz	PK	0.0	59.3	74.0	-14.7	High Ch. 2DH5 Ant Horz
7324.558	43.8	15.4	1.5	308.0	0.0	0.0	Horz	PK	0.0	59.2	74.0	-14.8	Mid Ch. DH5 Ant Horz
7437.983	43.5	15.6	1.9	202.0	0.0	0.0	Horz	PK	0.0	59.1	74.0	-14.9	High Ch. DH5 Ant Vert
7441.192	43.0	15.6	3.6	301.0	0.0	0.0	Vert	PK	0.0	58.6	74.0	-15.4	High Ch. DH5 Ant Horz
7439.958	37.1	15.6	1.7	349.0	-14.2	0.0	Vert	AV	0.0	38.5	54.0	-15.5	High Ch. DH5 Ant Vert
110.592	32.2	-4.6	2.8	162.0	0.0	0.0	Horz	QP	0.0	27.6	43.5	-15.9	Low Ch. DH5 ANT Vert
37.970	20.8	2.7	2.0	256.0	0.0	0.0	Vert	QP	0.0	23.5	40.0	-16.5	Low Ch. DH5 ANT Vert
4960.000	42.9	7.7	1.1	62.0	-14.2	0.0	Vert	AV	0.0	36.4	54.0	-17.6	High Ch. DH5 Ant Vert
4959.767	48.2	7.7	3.6	330.0	0.0	0.0	Horz	PK	0.0	55.9	74.0	-18.1	High Ch. DH5 Ant Horz
4960.075	48.1	7.7	1.1	62.0	0.0	0.0	Vert	PK	0.0	55.8	74.0	-18.2	High Ch. DH5 Ant Vert
172.308	29.1	-4.0	1.0	192.0	0.0	0.0	Vert	QP	0.0	25.1	43.5	-18.4	Low Ch. DH5 ANT Vert
73.730	29.7	-8.6	3.9	174.0	0.0	0.0	Horz	QP	0.0	21.1	40.0	-18.9	Low Ch. DH5 ANT Vert
4959.933	41.6	7.7	3.6	330.0	-14.2	0.0	Horz	AV	0.0	35.1	54.0	-18.9	High Ch. DH5 Ant Horz
7440.008	33.5	15.6	2.7	353.0	-14.2	0.0	Horz	AV	0.0	34.9	54.0	-19.1	High Ch. 3DH5 Ant Horz
7323.150	33.2	15.4	1.2	16.0	-14.2	0.0	Vert	AV	0.0	34.4	54.0	-19.6	Mid Ch. DH5 Ant Vert
4881.433	44.9	7.7	3.8	329.0	0.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	Mid Ch. DH5 Ant Horz
4804.108	44.8	7.7	1.2	303.0	0.0	0.0	Vert	PK	0.0	52.5	74.0	-21.5	Low Ch. DH5 Ant Vert
4881.375	44.7	7.7	1.4	304.0	0.0	0.0	Vert	PK	0.0	52.4	74.0	-21.6	Mid Ch. DH5 Ant Vert
7322.775	31.1	15.4	1.5	308.0	-14.2	0.0	Horz	AV	0.0	32.3	54.0	-21.7	Mid Ch. DH5 Ant Horz
7440.375	30.5	15.6	1.9	202.0	-14.2	0.0	Horz	AV	0.0	31.9	54.0	-22.1	High Ch. DH5 Ant Vert
7441.875	30.5	15.6	3.0	160.0	-14.2	0.0	Horz	AV	0.0	31.9	54.0	-22.1	High Ch. 2DH5 Ant Horz
7439.475	30.4	15.6	3.6	301.0	-14.2	0.0	Vert	AV	0.0	31.8	54.0	-22.2	High Ch. DH5 Ant Horz
119.998	24.6	-3.7	2.8	102.0	0.0	0.0	Horz	QP	0.0	20.9	43.5	-22.6	Low Ch. DH5 ANT Vert
130.302	23.7	-3.1	1.0	170.0	0.0	0.0	Vert	QP	0.0	20.6	43.5	-22.9	Low Ch. DH5 ANT Vert
4804.350	42.7	7.7	1.5	160.0	0.0	0.0	Horz	PK	0.0	50.4	74.0	-23.6	Low Ch. DH5 Ant Horz
4881.975	35.7	7.7	3.8	329.0	-14.2	0.0	Horz	AV	0.0	29.2	54.0	-24.8	Mid Ch. DH5 Ant Horz
4881.908	34.4	7.7	1.4	304.0	-14.2	0.0	Vert	AV	0.0	27.9	54.0	-26.1	Mid Ch. DH5 Ant Vert
4804.050	33.2	7.7	1.2	303.0	-14.2	0.0	Vert	AV	0.0	26.7	54.0	-27.3	Low Ch. DH5 Ant Vert
12399.500	44.6	1.3	1.5	127.0	0.0	0.0	Vert	PK	0.0	45.9	74.0	-28.1	High Ch. DH5 Ant Vert
12397.770	43.6	1.3	1.5	190.0	0.0	0.0	Horz	PK	0.0	44.9	74.0	-29.1	High Ch. DH5 Ant Horz
12007.920	44.2	0.6	1.5	305.0	0.0	0.0	Horz	PK	0.0	44.8	74.0	-29.2	Low Ch. DH5 Ant Horz
12011.490	44.0	0.6	1.5	24.0	0.0	0.0	Vert	PK	0.0	44.6	74.0	-29.4	Low Ch. DH5 Ant Vert
12205.350	43.7	0.8	2.9	257.0	0.0	0.0	Horz	PK	0.0	44.5	74.0	-29.5	Mid Ch. DH5 Ant Horz
12207.350	43.5	0.8	1.5	357.0	0.0	0.0	Vert	PK	0.0	44.3	74.0	-29.7	Mid Ch. DH5 Ant Vert
4805.158	30.5	7.7	1.5	160.0	-14.2	0.0	Horz	AV	0.0	24.0	54.0	-30.0	Low Ch. DH5 Ant Horz

SPURIOUS RADIATED EMISSIONS

High Ch. DH5 Ant Horz (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12399.660	31.1	1.3	1.5	127.0	-14.2	0.0	Vert	AV	0.0	18.2	54.0	-35.8	High Ch. DH5 Ant Vert
12206.880	31.4	0.8	2.9	257.0	-14.2	0.0	Horz	AV	0.0	18.0	54.0	-36.0	Mid Ch. DH5 Ant Horz
12203.940	31.4	0.8	1.5	357.0	-14.2	0.0	Vert	AV	0.0	18.0	54.0	-36.0	Mid Ch. DH5 Ant Vert
12399.700	30.9	1.3	1.5	190.0	-14.2	0.0	Horz	AV	0.0	18.0	54.0	-36.0	High Ch. DH5 Ant Horz
12008.630	31.2	0.6	1.5	24.0	-14.2	0.0	Vert	AV	0.0	17.6	54.0	-36.4	Low Ch. DH5 Ant Vert
12009.220	31.2	0.6	1.5	305.0	-14.2	0.0	Horz	AV	0.0	17.6	54.0	-36.4	Low Ch. DH5 Ant Horz

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-07
Customer:	Audio Precision	Temperature:	21.6°C
Attendees:	None	Relative Humidity:	46.5%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Christopher Ladwig and Jeff Alcoke	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	AUDI0315-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

TEST PARAMETERS

Run #:	15	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

Test mode operates at 77.9% duty cycle, upward DCCF correction applied based on $10 \cdot \log(1/\text{Duty cycle}) = 1.1$ dB. When operating in FHSS mode, the worst-case transmission time over any 100 ms period is 2.975 ms. Downward DCCF correction applied based on $10 \cdot \log(\text{On Time}/100 \text{ ms}) = -15.3$ dB. Total correction applied = -14.2 dB.

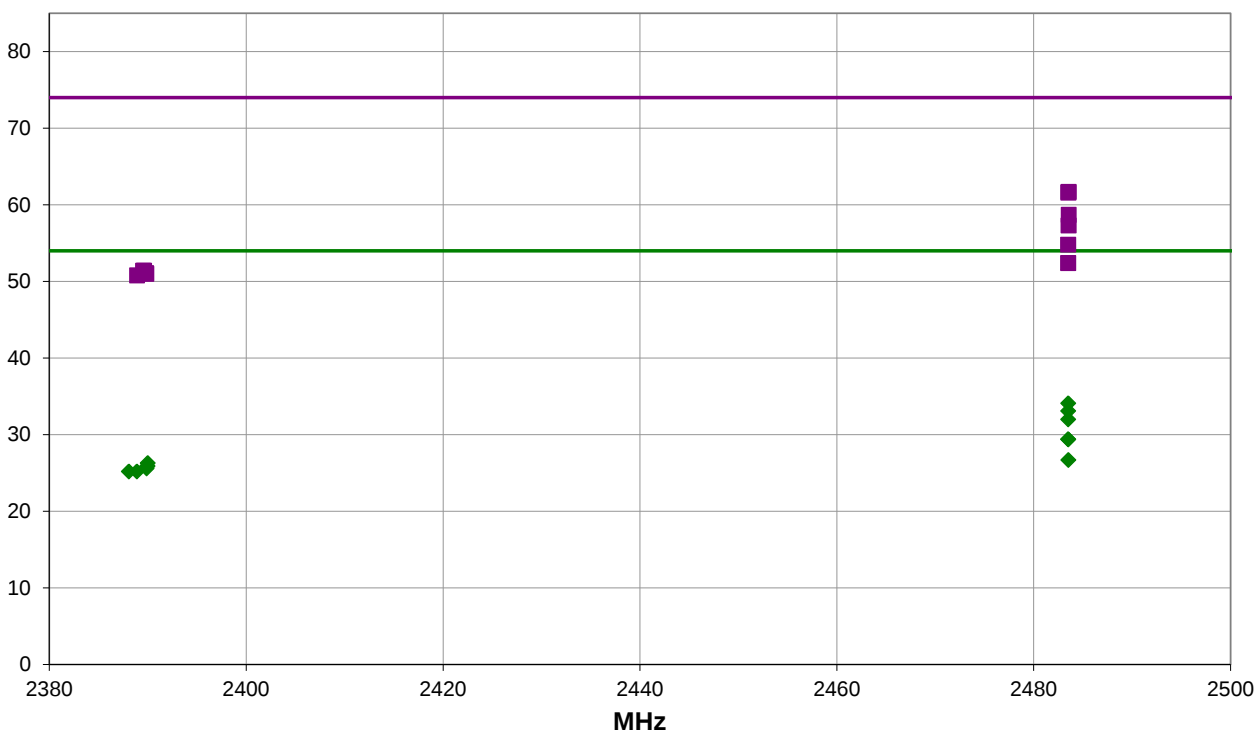
Please reference data comments below for channel, data rate, and antenna orientation

EUT OPERATING MODES

Bluetooth - Tx, Sink: Low Ch = 2402 MHz, Mid Ch = 2441 MHz, High Ch = 2480 MHz.

DEVIATIONS FROM TEST STANDARD

None



Run #: 15

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #15

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.537	54.0	-2.3	3.8	353.0	0.0	10.0	Horz	PK	0.0	61.7	74.0	-12.3	High Ch. 2DH5 Ant Horz
2483.513	53.9	-2.3	3.6	343.0	0.0	10.0	Horz	PK	0.0	61.6	74.0	-12.4	High Ch. 3DH5 Ant Horz
2483.553	51.0	-2.3	3.3	59.0	0.0	10.0	Horz	PK	0.0	58.7	74.0	-15.3	High Ch. 3DH5 Ant Vert
2483.537	49.6	-2.3	2.0	339.0	0.0	10.0	Vert	PK	0.0	57.3	74.0	-16.7	High Ch. 3DH5 Ant Vert
2483.500	47.1	-2.3	3.8	353.0	0.0	10.0	Horz	PK	0.0	54.8	74.0	-19.2	High Ch. DH5 Ant Horz
2483.503	40.6	-2.3	3.8	353.0	-14.2	10.0	Horz	AV	0.0	34.1	54.0	-19.9	High Ch. 2DH5 Ant Horz
2483.500	39.6	-2.3	3.6	343.0	-14.2	10.0	Horz	AV	0.0	33.1	54.0	-20.9	High Ch. 3DH5 Ant Horz
2483.500	44.7	-2.3	2.4	265.0	0.0	10.0	Vert	PK	0.0	52.4	74.0	-21.6	High Ch. 3DH5 Ant Horz
2483.500	38.5	-2.3	3.3	59.0	-14.2	10.0	Horz	AV	0.0	32.0	54.0	-22.0	High Ch. 3DH5 Ant Vert
2389.620	44.0	-2.6	3.6	5.0	0.0	10.0	Horz	PK	0.0	51.4	74.0	-22.6	Low Ch. 3DH5 Ant Horz
2389.513	44.0	-2.6	4.0	305.0	0.0	10.0	Horz	PK	0.0	51.4	74.0	-22.6	Low Ch. DH5 Ant Horz
2389.830	43.7	-2.6	1.5	34.0	0.0	10.0	Horz	PK	0.0	51.1	74.0	-22.9	Low Ch. 3DH5 Ant Vert
2389.620	43.7	-2.6	4.0	305.0	0.0	10.0	Horz	PK	0.0	51.1	74.0	-22.9	Low Ch. 2DH5 Ant Horz
2389.853	43.6	-2.6	1.5	237.0	0.0	10.0	Vert	PK	0.0	51.0	74.0	-23.0	Low Ch. 3DH5 Ant Horz
2388.907	43.4	-2.6	1.5	348.0	0.0	10.0	Vert	PK	0.0	50.8	74.0	-23.2	Low Ch. 3DH5 Ant Vert
2483.503	35.9	-2.3	2.0	339.0	-14.2	10.0	Vert	AV	0.0	29.4	54.0	-24.6	High Ch. 3DH5 Ant Vert
2483.500	35.9	-2.3	3.8	353.0	-14.2	10.0	Horz	AV	0.0	29.4	54.0	-24.6	High Ch. DH5 Ant Horz
2483.517	33.2	-2.3	2.4	265.0	-14.2	10.0	Vert	AV	0.0	26.7	54.0	-27.3	High Ch. 3DH5 Ant Horz
2389.990	33.1	-2.6	4.0	305.0	-14.2	10.0	Horz	AV	0.0	26.3	54.0	-27.7	Low Ch. DH5 Ant Horz
2389.967	32.7	-2.6	3.6	5.0	-14.2	10.0	Horz	AV	0.0	25.9	54.0	-28.1	Low Ch. 3DH5 Ant Horz
2389.943	32.7	-2.6	4.0	305.0	-14.2	10.0	Horz	AV	0.0	25.9	54.0	-28.1	Low Ch. 2DH5 Ant Horz
2389.877	32.4	-2.6	1.5	348.0	-14.2	10.0	Vert	AV	0.0	25.6	54.0	-28.4	Low Ch. 3DH5 Ant Vert
2388.887	32.0	-2.6	1.5	237.0	-14.2	10.0	Vert	AV	0.0	25.2	54.0	-28.8	Low Ch. 3DH5 Ant Horz
2388.073	32.0	-2.6	1.5	34.0	-14.2	10.0	Horz	AV	0.0	25.2	54.0	-28.8	Low Ch. 3DH5 Ant Vert

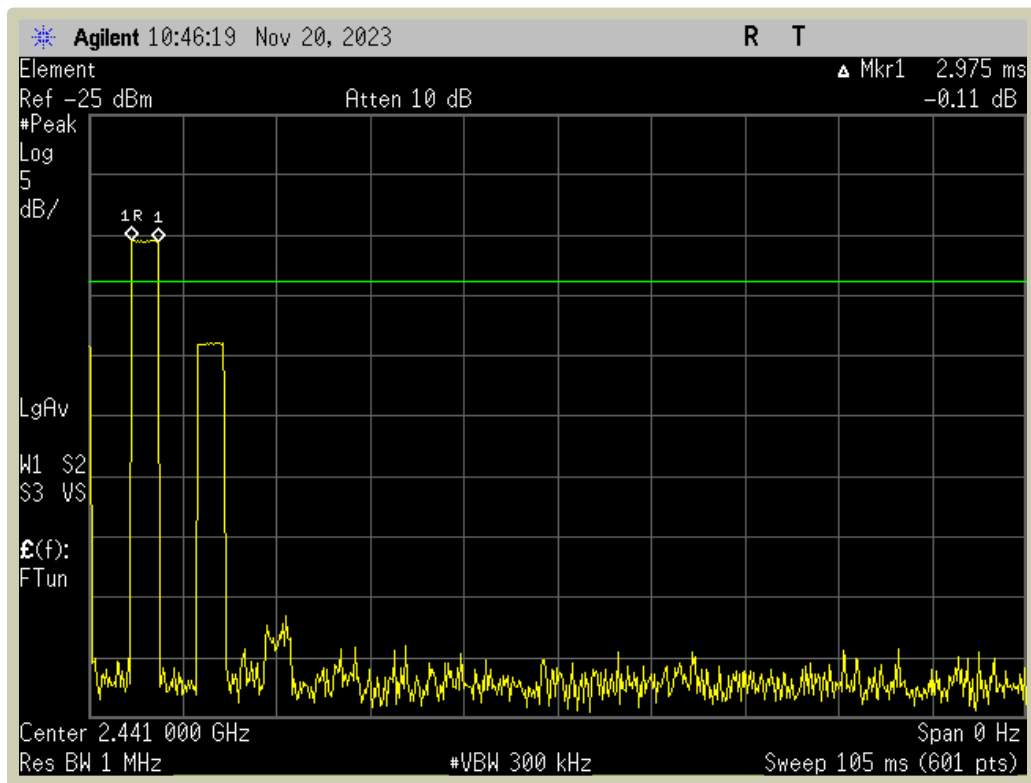
CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



On time in 100 ms

DUTY CYCLE

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the measurement during the burst duration.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2023-10-04	2024-10-04
Block - DC	Fairview Microwave	SD3379	AMW	2023-03-13	2024-03-13
Attenuator	S.M. Electronics	SA26B-20	AUY	2023-03-13	2024-03-13
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2022-12-02	2023-12-02
Generator - Signal	Keysight	N5182B	TFU	2022-12-02	2024-12-02

DUTY CYCLE

TEST INFORMATION

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-06
Customer:	Audio Precision	Temperature:	20.5°C
Attendees:	None	Relative Humidity:	51.5%
Customer Project:	None	Bar. Pressure (PMSL):	1002 mbar
Tested By:	Christopher Ladwig and Jeff Alcock	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	AUDI0315-1
Signature:			

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 20 dB attenuator, and measurement cable
--

DEVIATIONS FROM TEST STANDARD

None

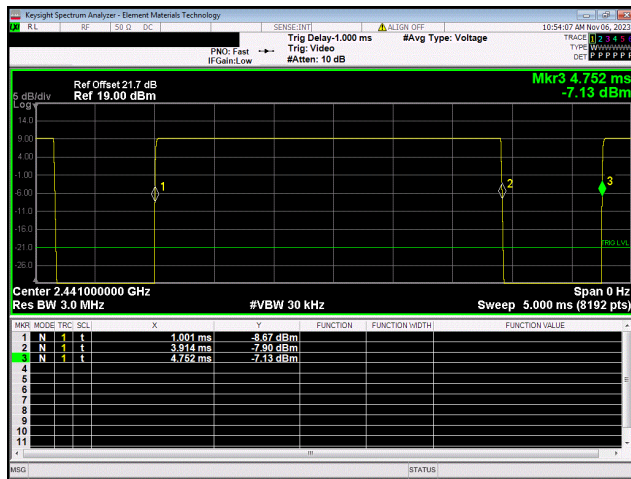
TEST RESULTS

		Pulse Width	Period	Number of Pulses	Value (%)	Limit N/A ()	Results
Source							
DH5, GFSK							
Low Channel, 2402 MHz		2.913 ms	3.751 ms	1	77.7	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
Mid Channel, 2441 MHz		2.913 ms	3.751 ms	1	77.7	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
High Channel, 2480 MHz		2.906 ms	3.751 ms	1	77.5	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
2DH5, pi/4-DQPSK							
Low Channel, 2402 MHz		2.92 ms	3.75 ms	1	77.9	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
Mid Channel, 2441 MHz		2.921 ms	3.75 ms	1	77.9	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
High Channel, 2480 MHz		2.911 ms	3.751 ms	1	77.6	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
3DH5, 8-DPSK							
Low Channel, 2402 MHz		2.922 ms	3.75 ms	1	77.9	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
Mid Channel, 2441 MHz		2.922 ms	3.75 ms	1	77.9	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
High Channel, 2480 MHz		2.916 ms	3.751 ms	1	77.7	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A
Sink							
DH5, GFSK							
Low Channel, 2402 MHz		2.913 ms	3.75 ms	1	77.7	N/A	N/A
		N/A	N/A	5	N/A	N/A	N/A

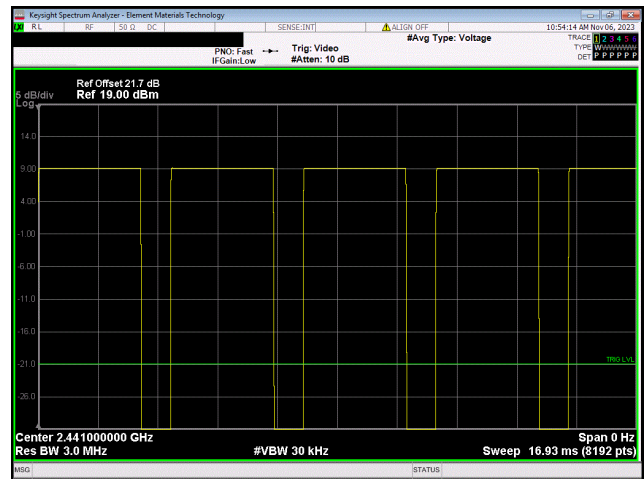
DUTY CYCLE

	Pulse Width	Period	Number of Pulses	Value (%)	Limit N/A ()	Results
Mid Channel, 2441 MHz	2.913 ms	3.75 ms	1	77.7	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
High Channel, 2480 MHz	2.913 ms	3.75 ms	1	77.7	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
2DH5, pi/4-DQPSK						
Low Channel, 2402 MHz	2.921 ms	3.75 ms	1	77.9	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
Mid Channel, 2441 MHz	2.921 ms	3.75 ms	1	77.9	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
High Channel, 2480 MHz	2.921 ms	3.75 ms	1	77.9	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
3DH5, 8-DPSK						
Low Channel, 2402 MHz	2.922 ms	3.75 ms	1	77.9	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
Mid Channel, 2441 MHz	2.922 ms	3.75 ms	1	77.9	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
High Channel, 2480 MHz	2.916 ms	3.75 ms	1	77.8	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A

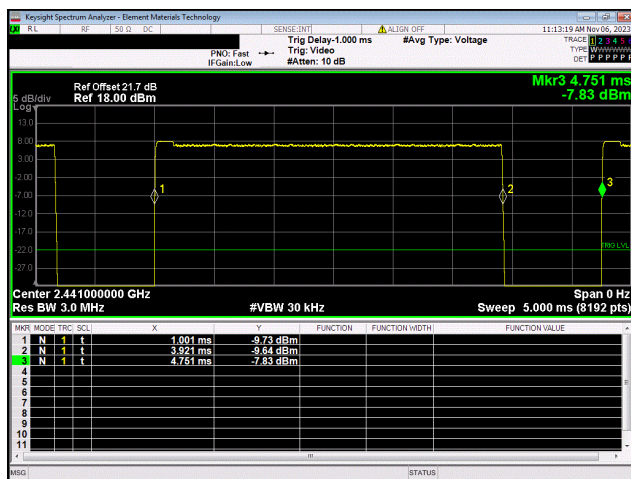
DUTY CYCLE



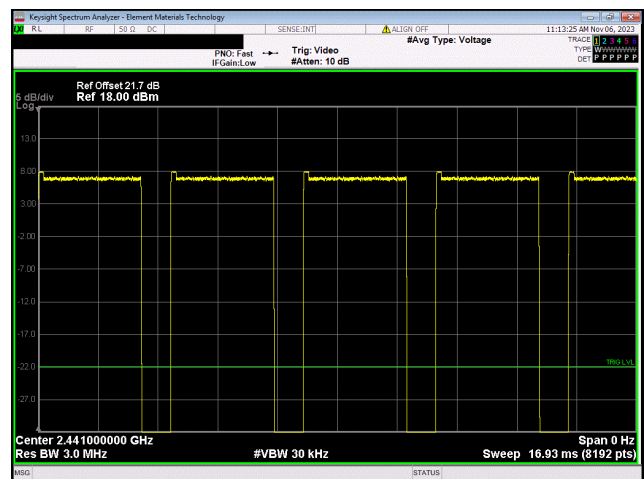
Source
DH5, GFSK
Mid Channel, 2441 MHz



Source
DH5, GFSK
Mid Channel, 2441 MHz

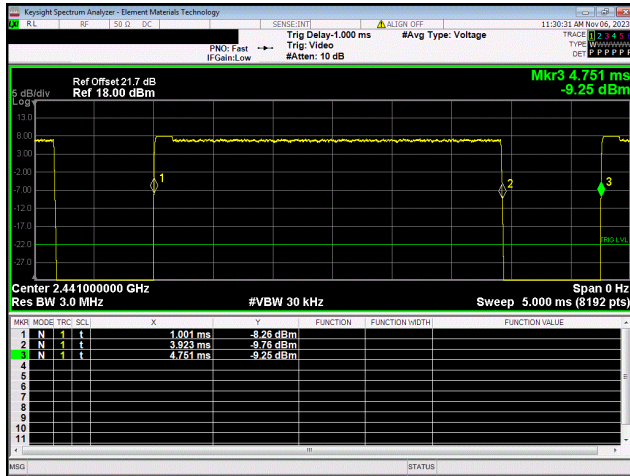


Source
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

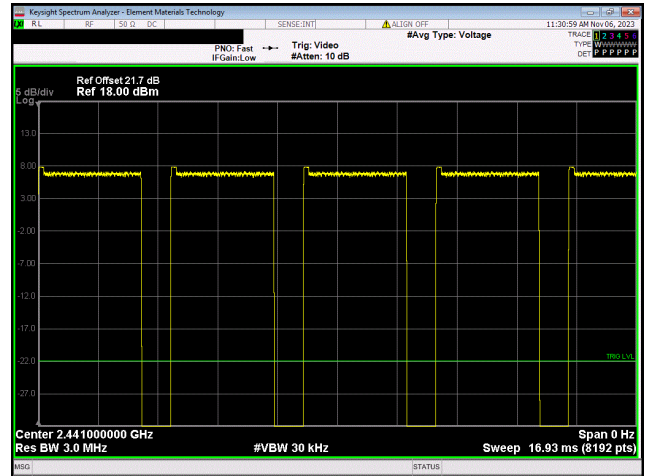


Source
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

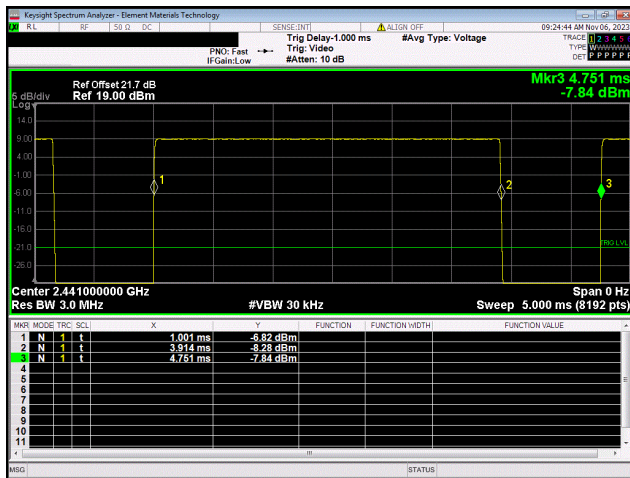
DUTY CYCLE



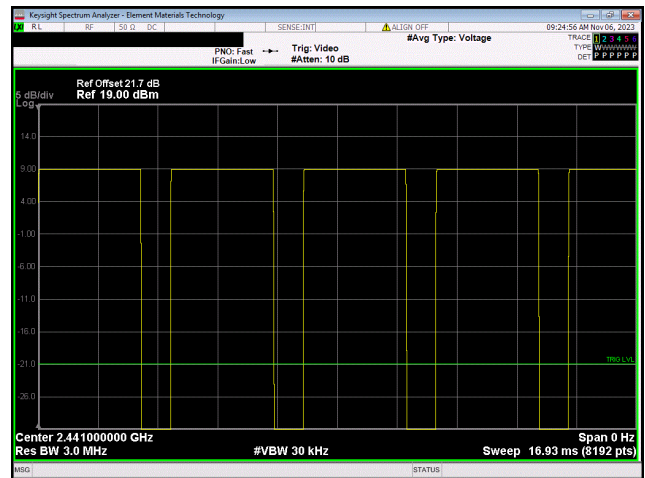
Source
3DH5, 8-DPSK
Mid Channel, 2441 MHz



Source
3DH5, 8-DPSK
Mid Channel, 2441 MHz

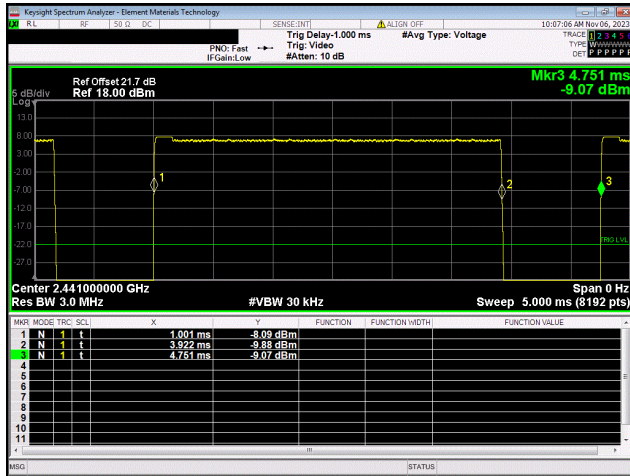


Sink
DH5, GFSK
Mid Channel, 2441 MHz

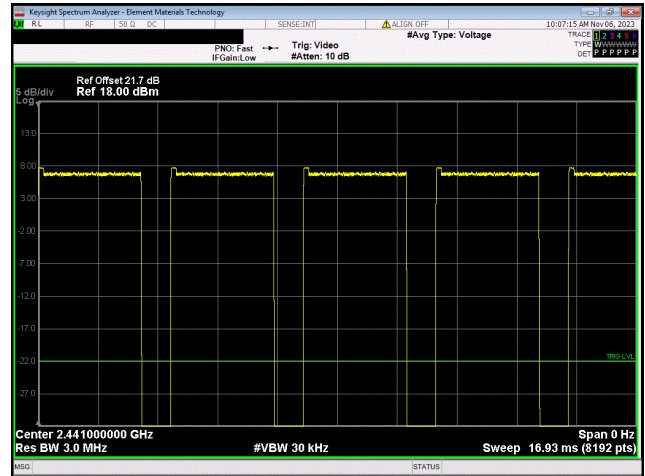


Sink
DH5, GFSK
Mid Channel, 2441 MHz

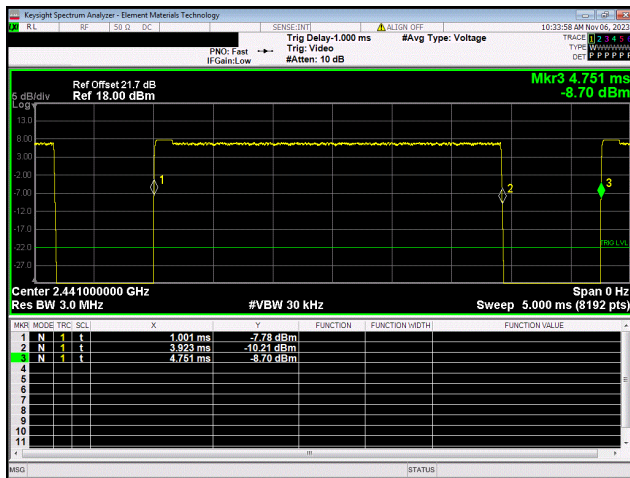
DUTY CYCLE



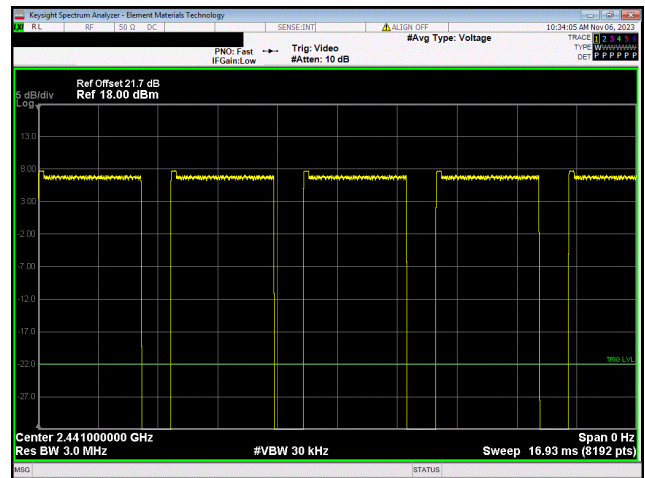
Sink
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz



Sink
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz



Sink
3DH5, 8-DPSK
Mid Channel, 2441 MHz



Sink
3DH5, 8-DPSK
Mid Channel, 2441 MHz

CARRIER FREQUENCY SEPARATION

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The channel carrier frequencies in the 2400-2483.5MHz band must be separated by 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater. Or, if the output power is less than 125 mW, the channel separation can be 25 kHz or 2/3 of the 20dB bandwidth. The EUT was operated in pseudorandom hopping mode. The spectrum was scanned across two adjacent peaks. The separation between the peaks of these channels was measured.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2023-10-04	2024-10-04
Block - DC	Fairview Microwave	SD3379	AMW	2023-03-13	2024-03-13
Attenuator	S.M. Electronics	SA26B-20	AUY	2023-03-13	2024-03-13
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2022-12-02	2023-12-02
Generator - Signal	Keysight	N5182B	TFU	2022-12-02	2024-12-02

CARRIER FREQUENCY SEPARATION



EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-06
Customer:	Audio Precision	Temperature:	20.2°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure (PMSL):	1003 mbar
Tested By:	Christopher Ladwig and Jeff Alcock	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	AUDI0315-1
Signature:			

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 20 dB attenuator, and measurement cable

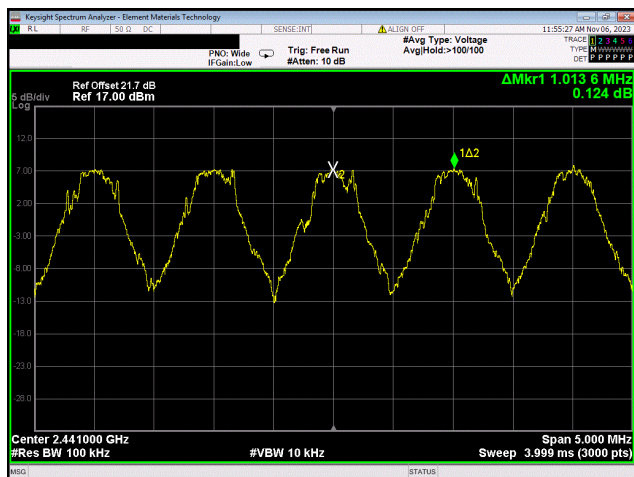
DEVIATIONS FROM TEST STANDARD

None

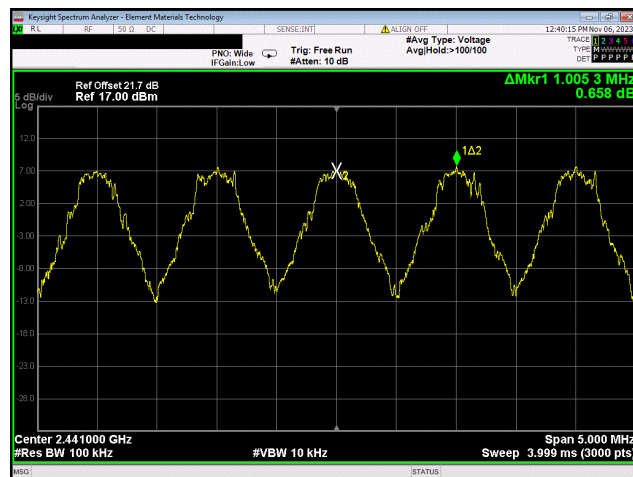
TEST RESULTS

		Value	Limit (≥)	Results
Source	Hopping Mode (All Channels)			
	DH5, GFSK			
	Mid Channel, 2441 MHz	1.0 MHz	1 MHz	Pass
Sink	Hopping Mode (All Channels)			
	DH5, GFSK			
	Mid Channel, 2441 MHz	1.0 MHz	1 MHz	Pass

CARRIER FREQUENCY SEPARATION



Source
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz



Sink
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

NUMBER OF HOPPING FREQUENCIES

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The number of hopping frequencies was measured across the authorized band. The hopping function of the EUT was enabled.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2023-10-04	2024-10-04
Block - DC	Fairview Microwave	SD3379	AMW	2023-03-13	2024-03-13
Attenuator	S.M. Electronics	SA26B-20	AUY	2023-03-13	2024-03-13
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2022-12-02	2023-12-02
Generator - Signal	Keysight	N5182B	TFU	2022-12-02	2024-12-02

NUMBER OF HOPPING FREQUENCIES

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-11-06
Customer:	Audio Precision	Temperature:	20.2°C
Attendees:	None	Relative Humidity:	52.7%
Customer Project:	None	Bar. Pressure (PMSL):	1003 mbar
Tested By:	Christopher Ladwig and Jeff Alcock	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	AUDI0315-1
Signature:			

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 20 dB attenuator, and measurement cable

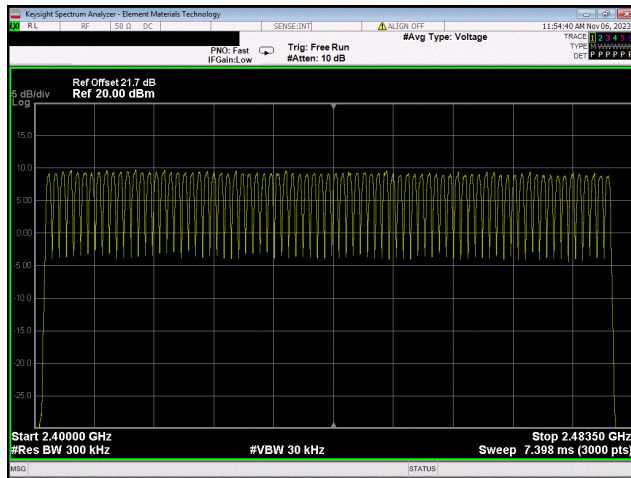
DEVIATIONS FROM TEST STANDARD

None

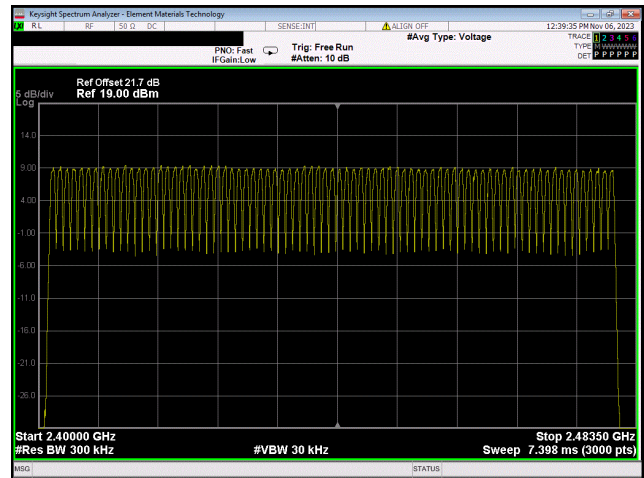
TEST RESULTS

		Number of Channels	Limit (≥)	Results
Source	Hopping Mode (All Channels)			
	DH5, GFSK			
	Mid Channel, 2441 MHz	79	15	Pass
Sink	Hopping Mode (All Channels)			
	DH5, GFSK			
	Mid Channel, 2441 MHz	79	15	Pass

NUMBER OF HOPPING FREQUENCIES



Source
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz



Sink
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

DWELL TIME

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The hopping function of the EUT was enabled.

The dwell time limit is based on the Number of Hopping Channels * 400 mS. For Bluetooth this would be 79 Channels * 400mS = 31.6 Sec.

On Time During 31.6 Sec = Pulse Width * Average Number of Pulses * Scale Factor

- Average Number of Pulses is based on 4 samples.
- Scale Factor = 31.6 Sec / Screen Capture Sweep Time = 31.6 Sec / 6.32 Sec = 5

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	2023-11-29	2024-11-29
Block - DC	Fairview Microwave	SD3379	AMW	2023-03-13	2024-03-13
Attenuator	S.M. Electronics	SA26B-20	AUY	2023-03-13	2024-03-13
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2023-11-22	2024-11-22
Generator - Signal	Keysight	N5182B	TFU	2022-12-02	2024-12-02

DWELL TIME

EUT:	APx516B	Work Order:	AUDI0315
Serial Number:	3516 B	Date:	2023-12-21
Customer:	Audio Precision	Temperature:	23°C
Attendees:	None	Relative Humidity:	47%
Customer Project:	None	Bar. Pressure (PMSL):	1014 mbar
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	AUDI0315-1
Signature:			

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2023	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC block, 20 dB attenuator, and measurement cable.

DEVIATIONS FROM TEST STANDARD

None

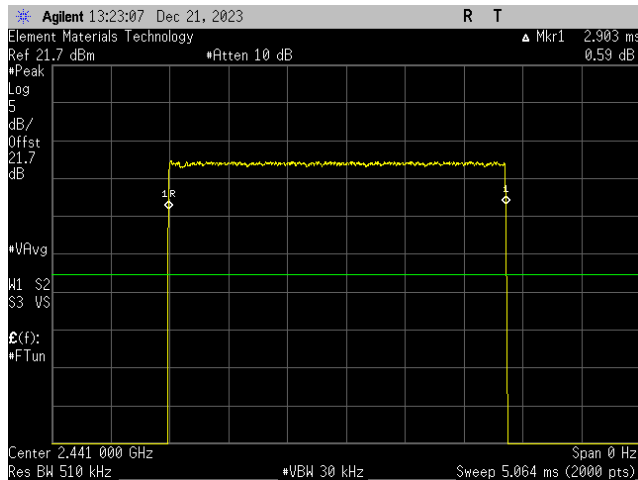
TEST RESULTS

	Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
Source							
Hopping Mode (All Channels)							
DH5, GFSK							
Mid Channel, 2441 MHz	2.903	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	2.903	N/A	22	5	319.33	400	Pass
2DH5, pi/4-DQPSK							
Mid Channel, 2441 MHz	2.913	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	2.913	N/A	22	5	320.43	400	Pass
3DH5, 8-DPSK							
Mid Channel, 2441 MHz	2.916	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	2.916	N/A	22	5	320.76	400	Pass
Sink							

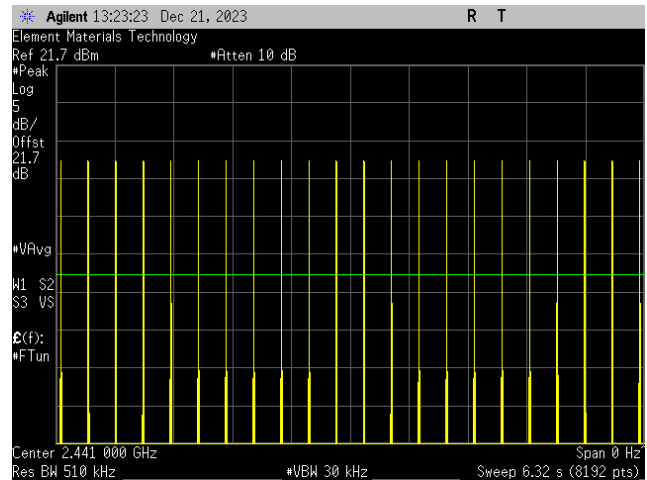
DWELL TIME

	Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
Hopping Mode (All Channels)							
DH5, GFSK							
Mid Channel, 2441 MHz	2.907	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	2.907	N/A	22	5	319.77	400	Pass
2DH5, pi/4-DQPSK							
Mid Channel, 2441 MHz	2.916	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	2.916	N/A	22	5	320.76	400	Pass
3DH5, 8-DPSK							
Mid Channel, 2441 MHz	2.916	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	N/A	22	N/A	N/A	N/A	N/A	N/A
	2.916	N/A	22	5	320.76	400	Pass

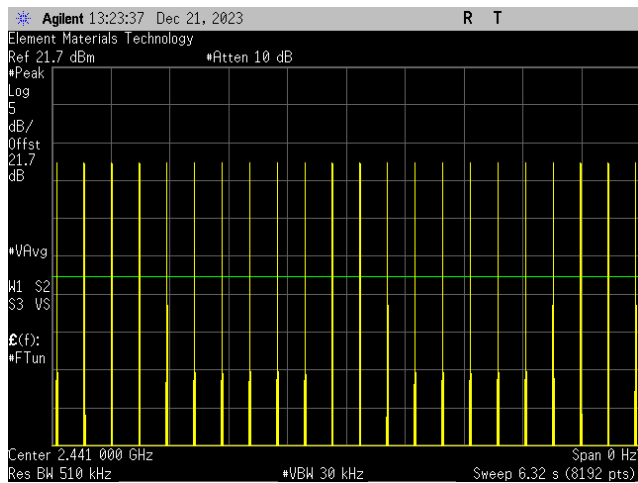
DWELL TIME



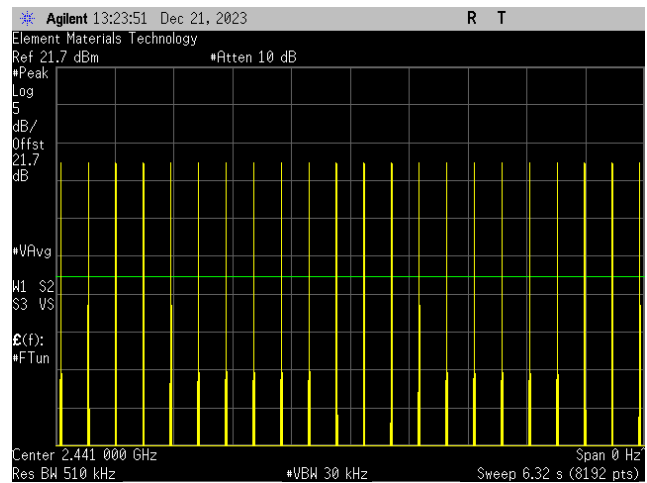
Source
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz



Source
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

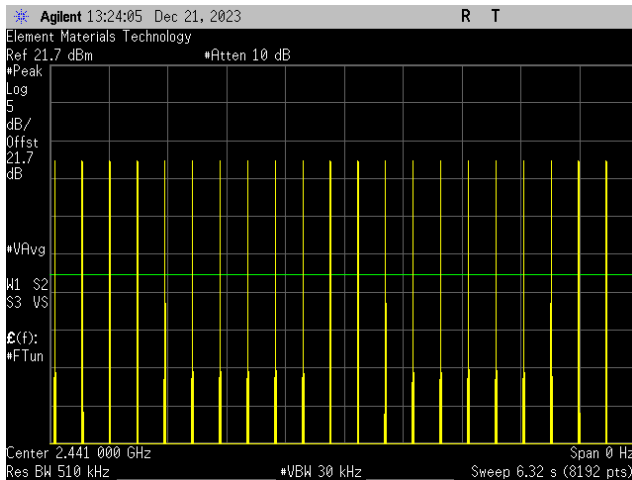


Source
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

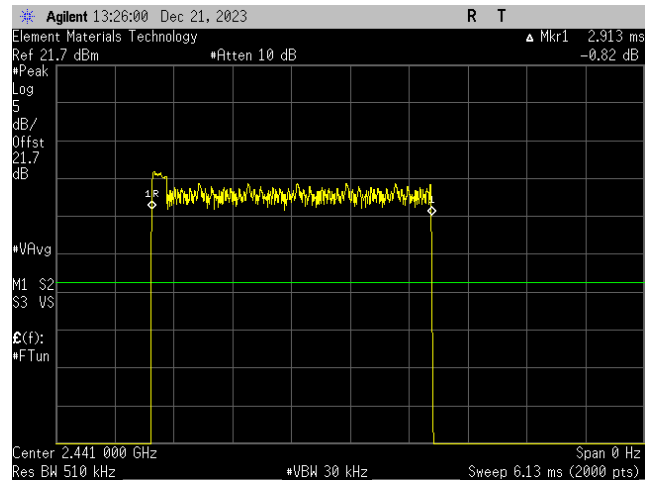


Source
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

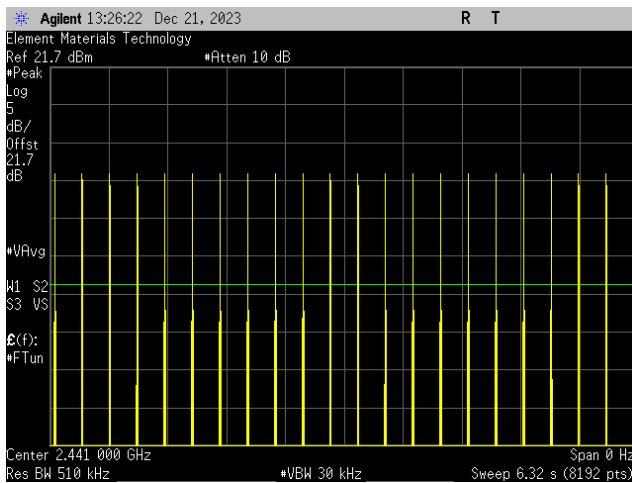
DWELL TIME



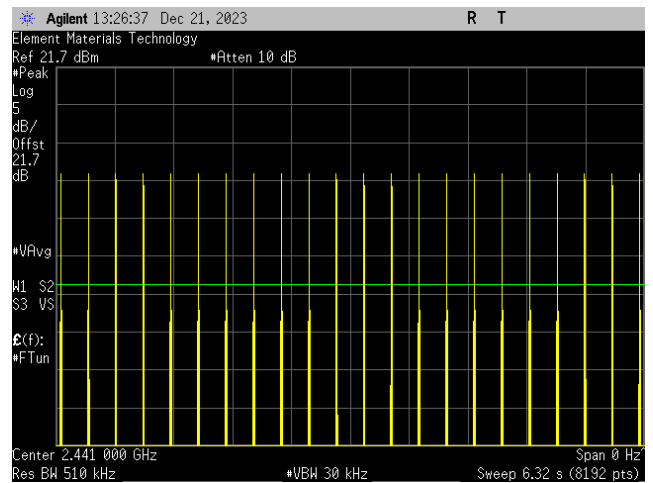
Source
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz



Source
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

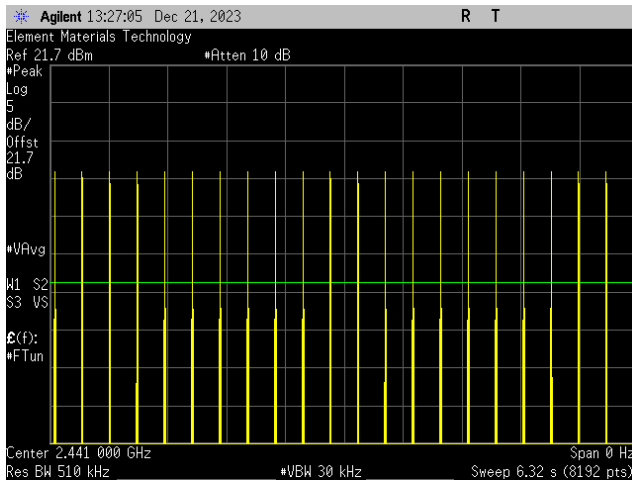


Source
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

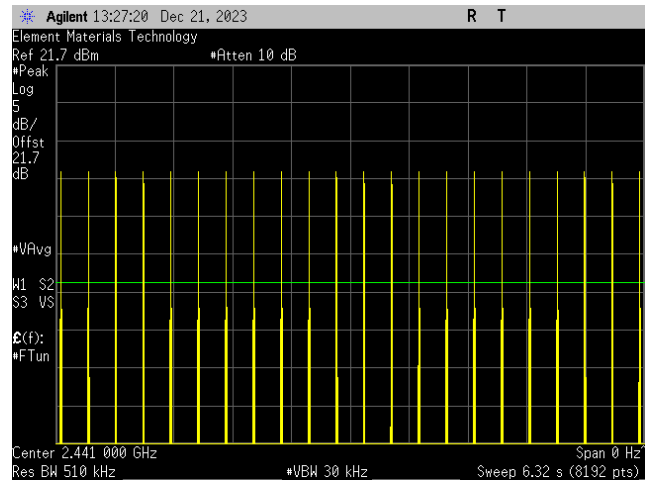


Source
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

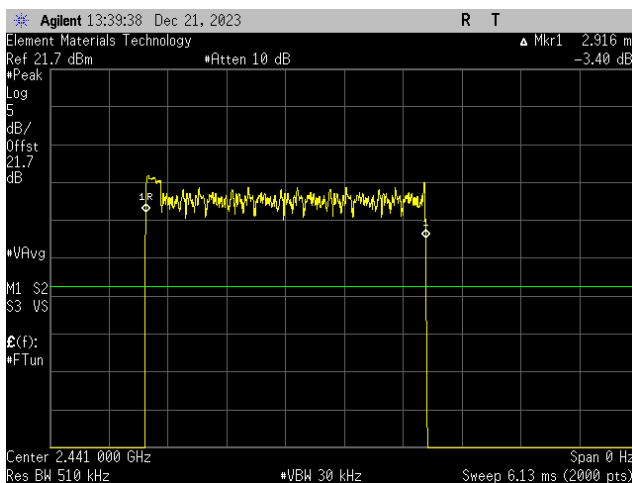
DWELL TIME



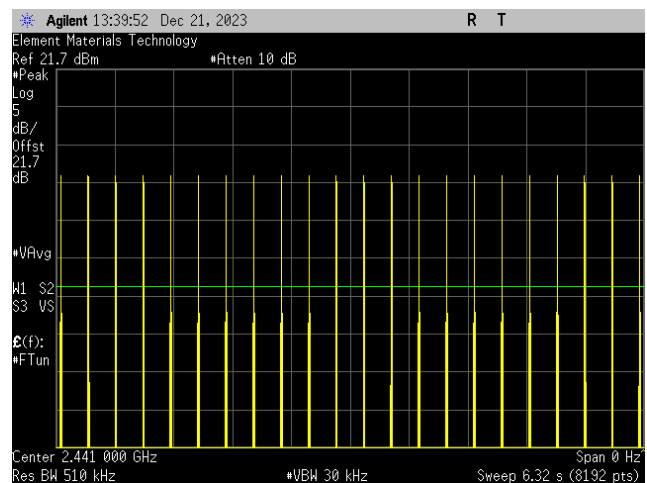
Source
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz



Source
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

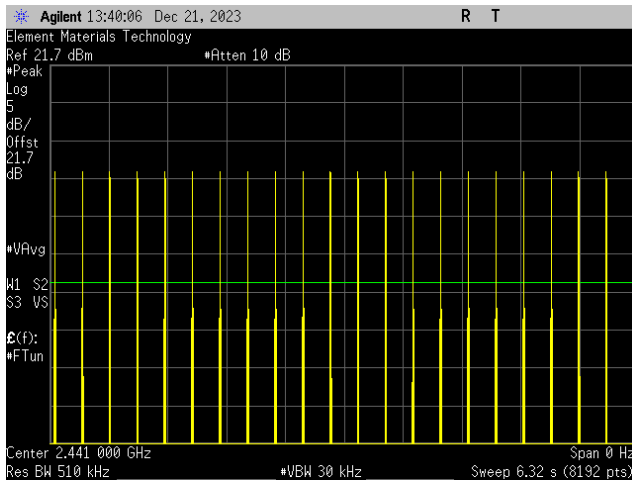


Source
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz

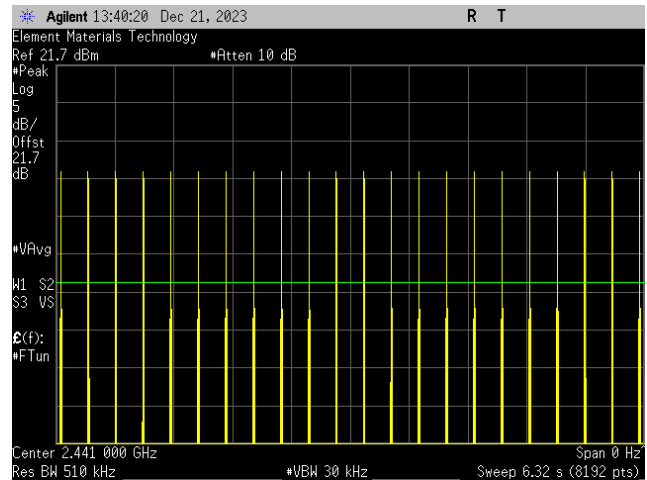


Source
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz

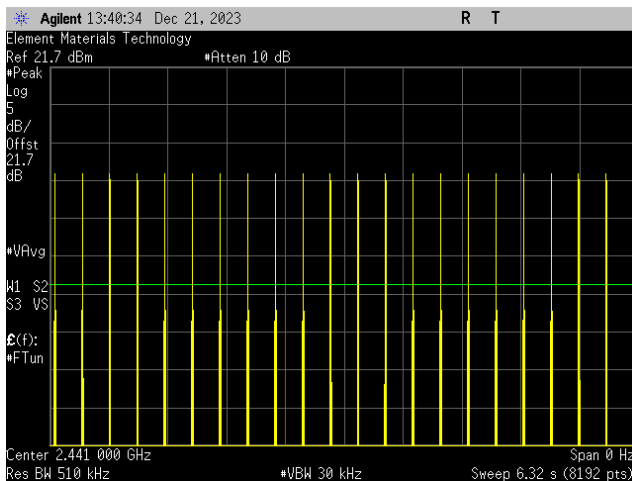
DWELL TIME



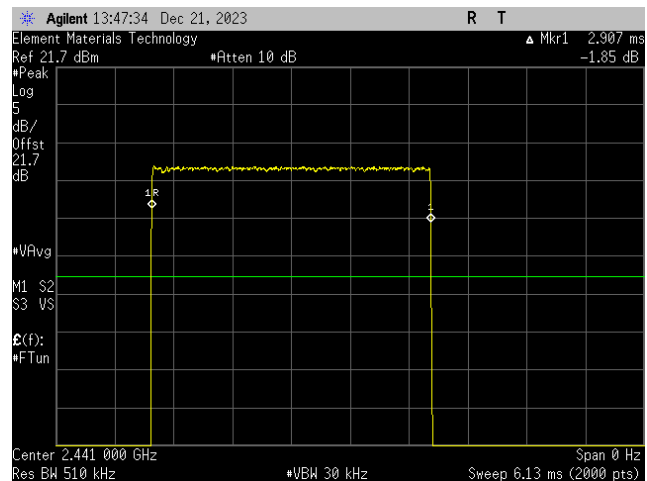
Source
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz



Source
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz

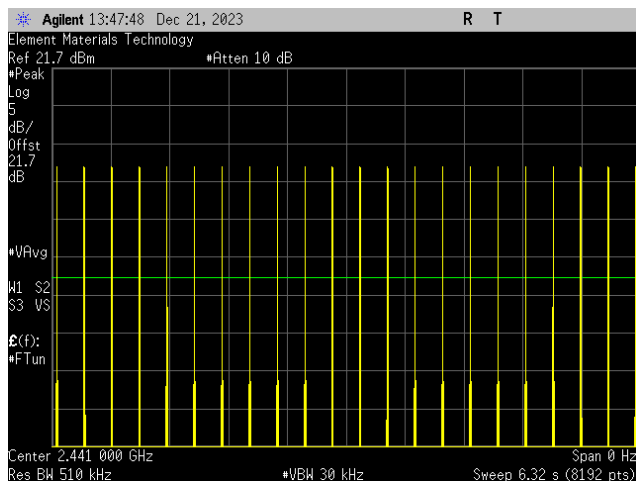


Source
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz

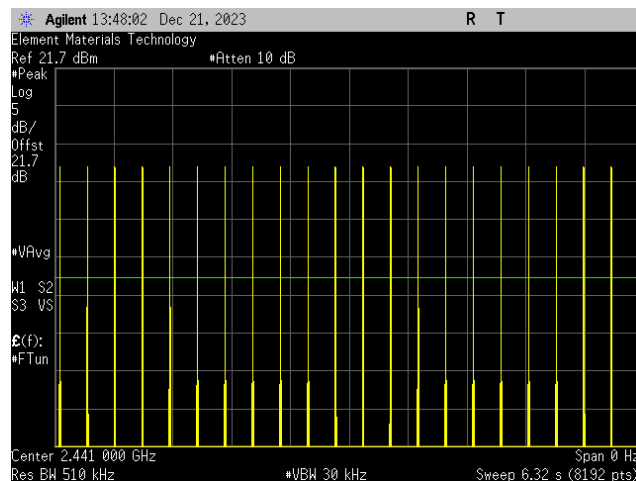


Sink
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

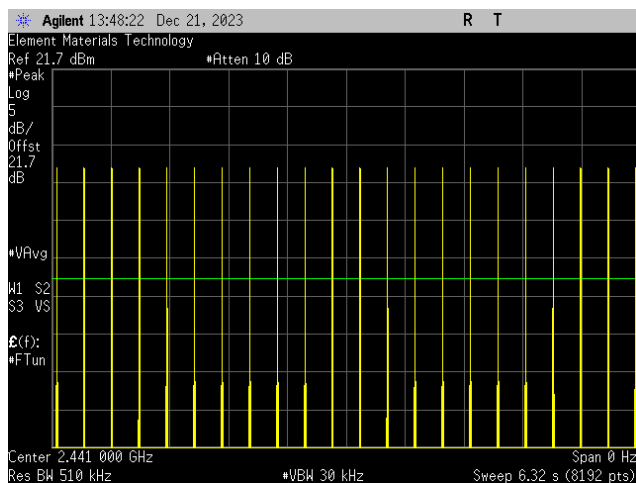
DWELL TIME



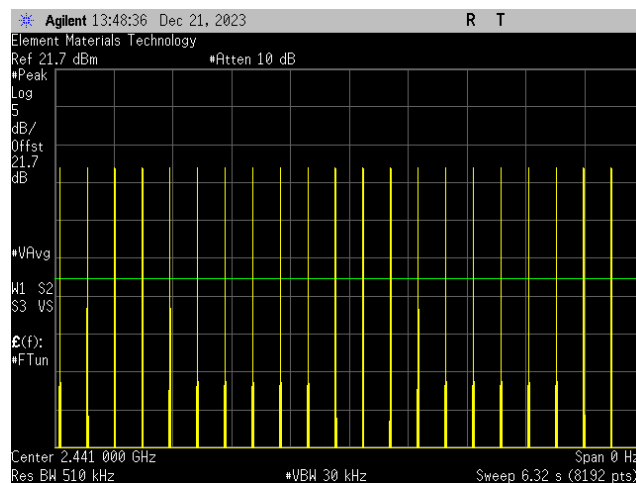
Sink
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz



Sink
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

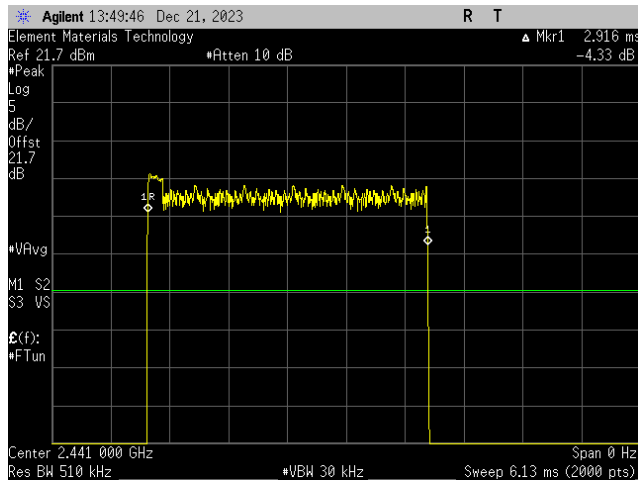


Sink
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

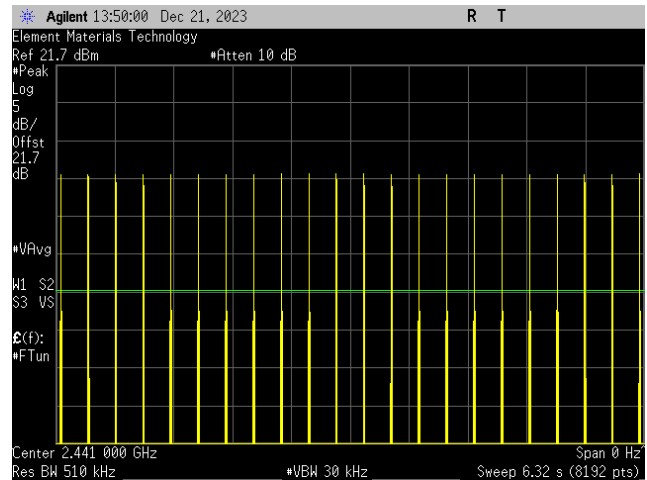


Sink
Hopping Mode (All Channels)
DH5, GFSK
Mid Channel, 2441 MHz

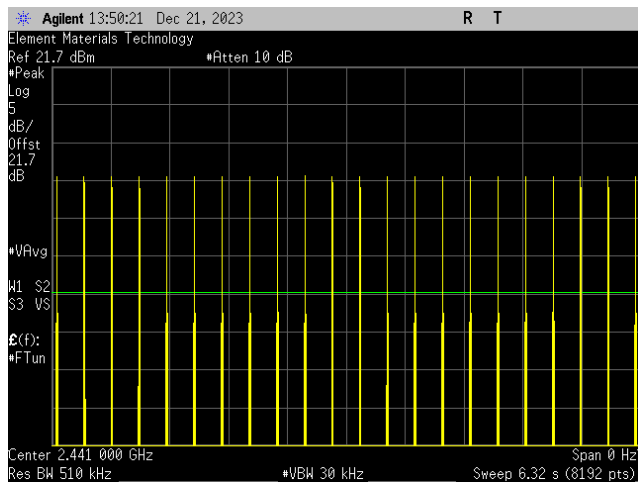
DWELL TIME



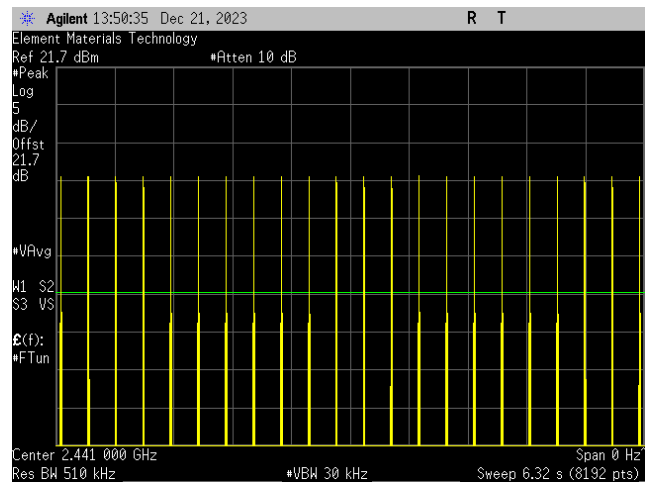
Sink
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz



Sink
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

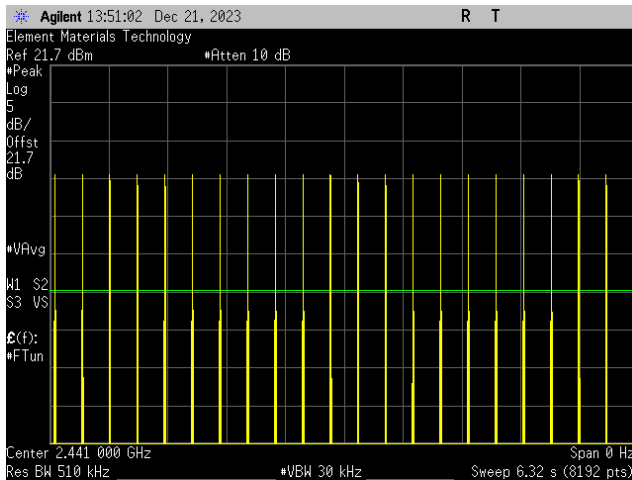


Sink
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

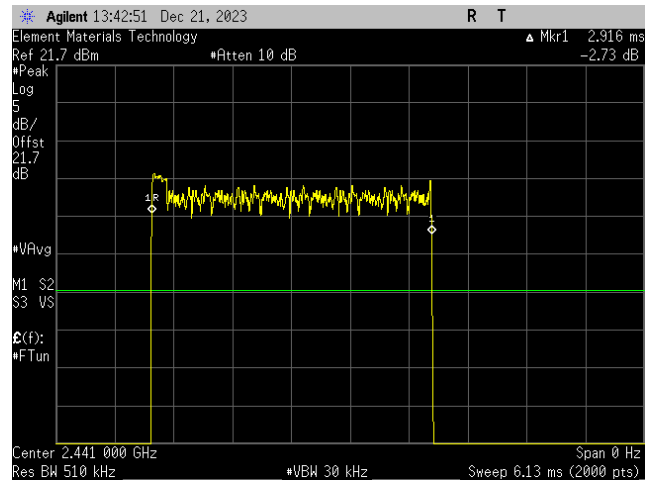


Sink
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz

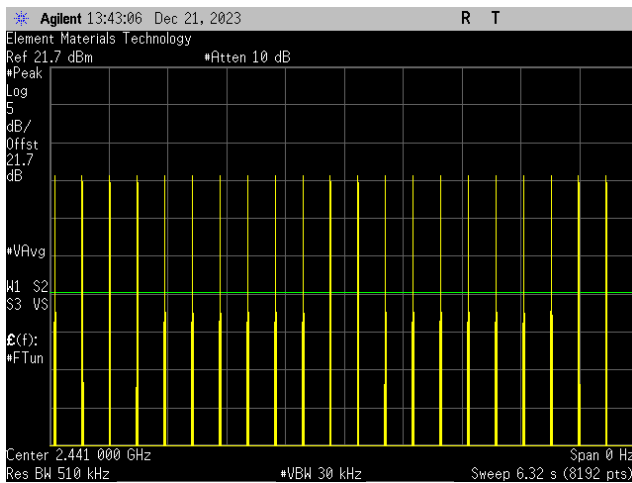
DWELL TIME



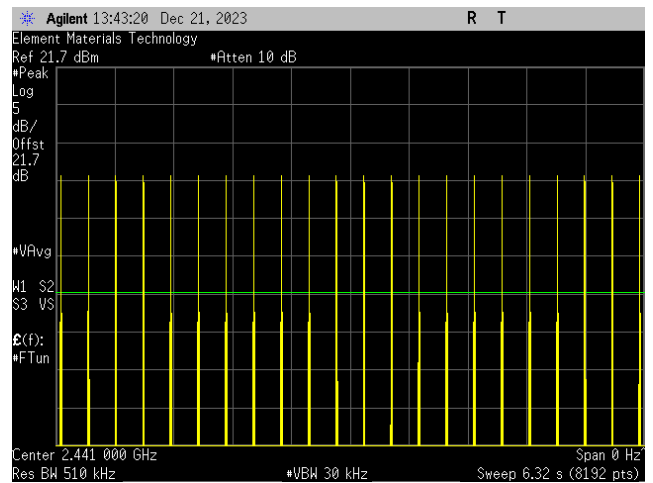
Sink
Hopping Mode (All Channels)
2DH5, pi/4-DQPSK
Mid Channel, 2441 MHz



Sink
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz

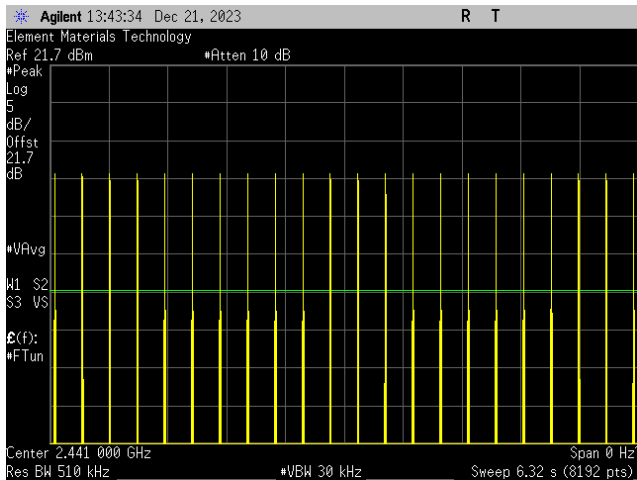


Sink
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz

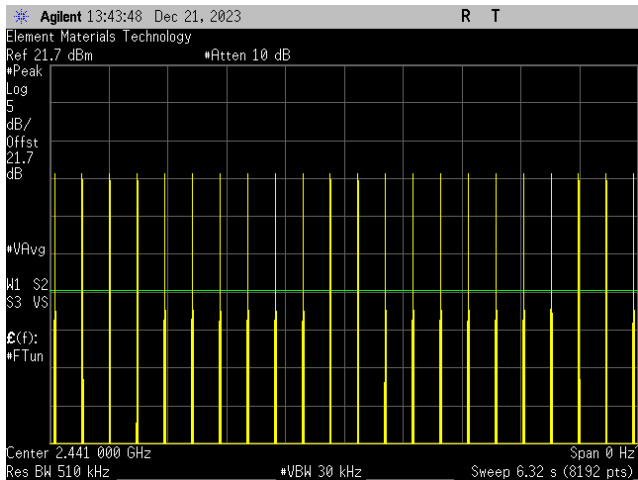


Sink
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz

DWELL TIME



Sink
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz



Sink
Hopping Mode (All Channels)
3DH5, 8-DPSK
Mid Channel, 2441 MHz