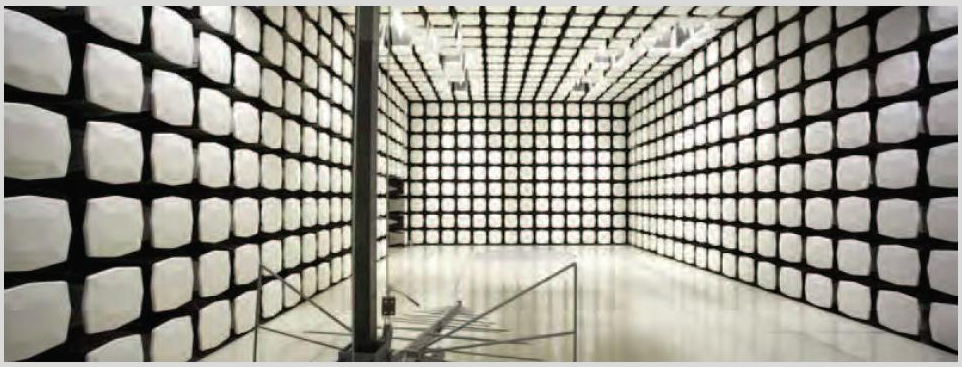
Starkey Laboratories, Inc.

Remote Microphone + Model 900

FCC 15.247:2019

Bluetooth Radio

Report # STAK0155



NVLAP LAB CODE: 200881-0

CERTIFICATE OF TEST

Last Date of Test: January 16, 2019
Starkey Laboratories, Inc.
Model: Remote Microphone + Model 900

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2019	ANSI C63.10:2013

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	No	N/A	Not required. Covered by testing under STAK0117
6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
7.5	Duty Cycle	No	N/A	Not required. Covered by testing under STAK0117
7.8.2	Carrier Frequency Separation	No	N/A	Not required. Covered by testing under STAK0117
7.8.3	Number of Hopping Frequencies	No	N/A	Not required. Covered by testing under STAK0117
7.8.4	Dwell Time	No	N/A	Not required. Covered by testing under STAK0117
7.8.5	Output Power	Yes	Pass	
7.8.6	Band Edge Compliance	No	N/A	Not required. Covered by testing under STAK0117
7.8.6	Band Edge Compliance - Hopping Mode	No	N/A	Not required. Covered by testing under STAK0117
7.8.7	Occupied Bandwidth	No	N/A	Not required. Covered by testing under STAK0117
7.8.8	Spurious Conducted Emissions	No	N/A	Not required. Covered by testing under STAK0117

Deviations From Test Standards

None

Approved By:

Matt Nuernberg, 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
00	None		

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 - Accredited by A2LA to ISO / IEC 17065 as a product certifier. This allows Element to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with ISED.

European Union

European Commission – Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

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

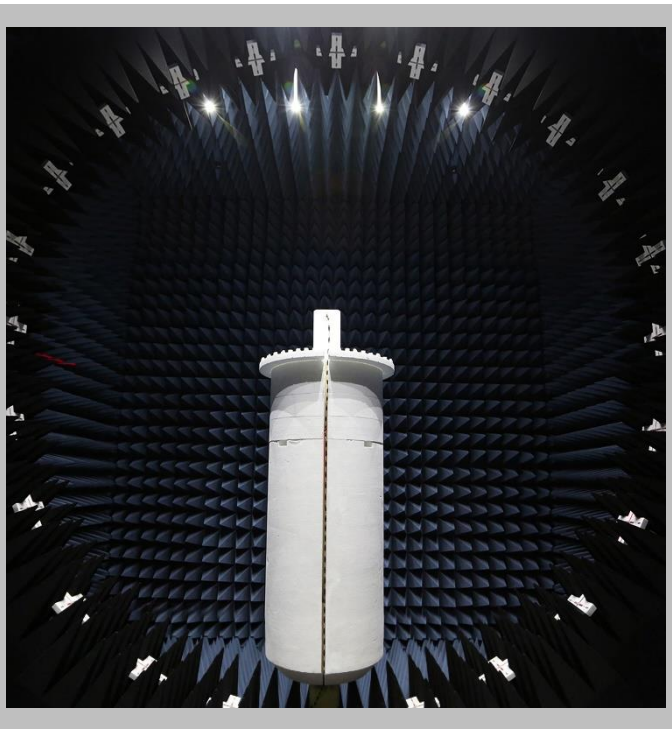
MIC – Recognized by MIC as a CAB for the acceptance of test data.

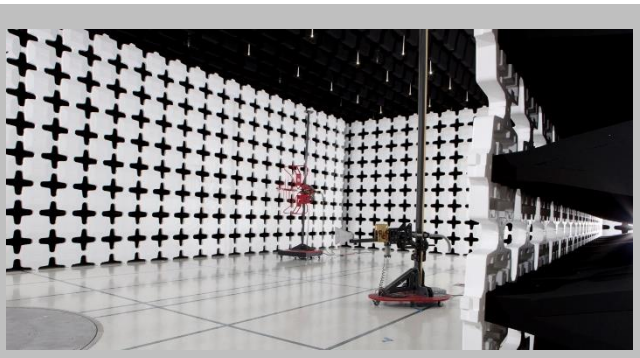
SCOPE

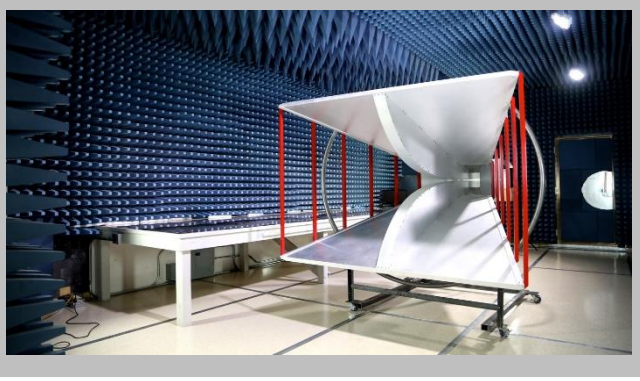
For details on the Scopes of our Accreditations, please visit:
https://www.nwemc.com/emc-testing-accreditations

FACILITIES

California	Minnesota	New York	Oregon	Texas	Washington
Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Innovation, Science and Economic Development Canada					
2834B-1, 2834B-3	2834E-1, 2834E-3	N/A	2834D-1	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157







MEASUREMENT UNCERTAINTY

element
TMU.2015.07.10

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.

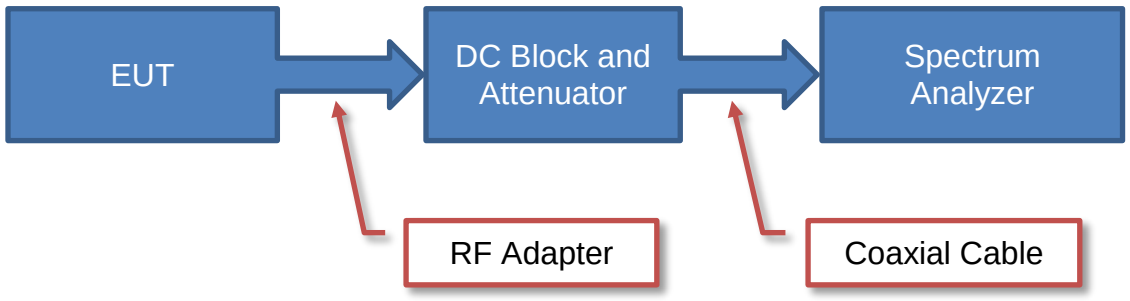
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. 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.

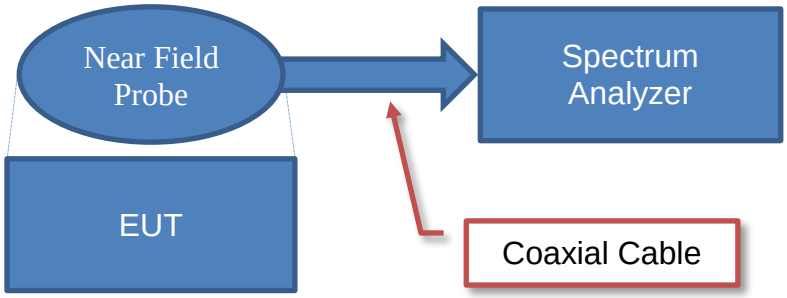
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

Test Setup Block Diagrams

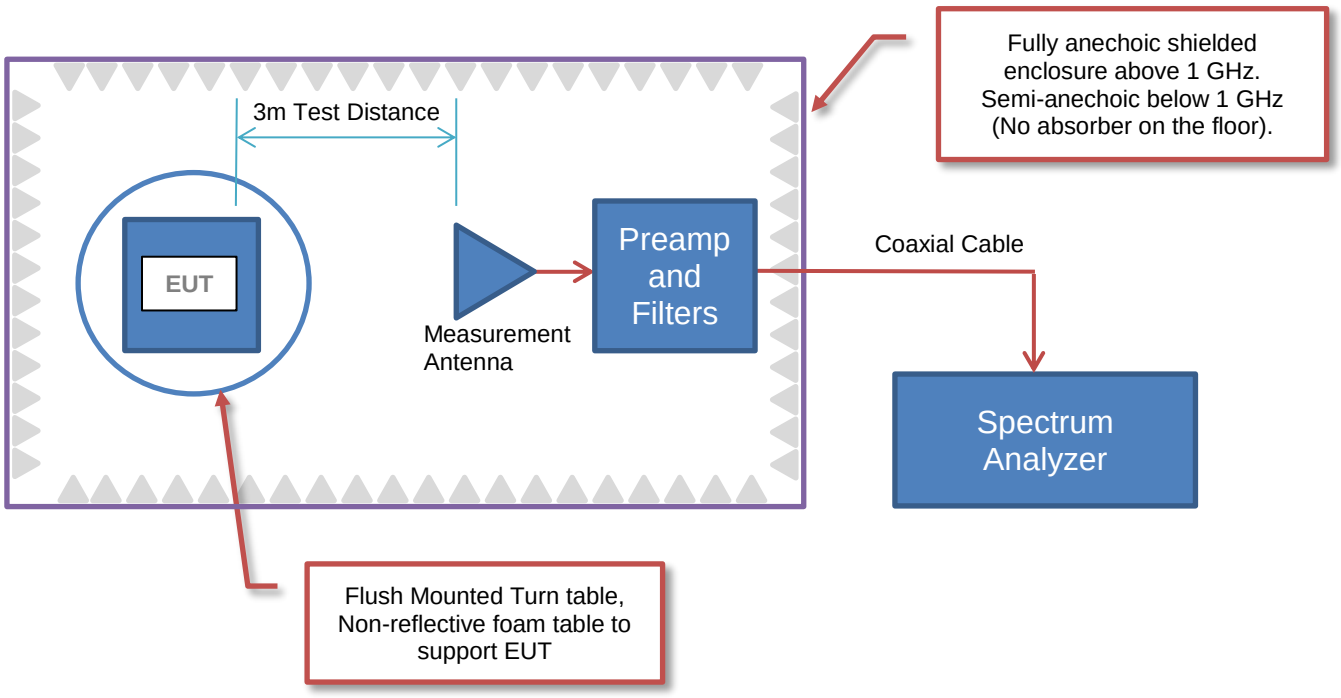
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Starkey Laboratories, Inc.
Address:	6600 Washington Ave S
City, State, Zip:	EDEN PRAIRIE, MN 55344-3404
Test Requested By:	Bill Mitchell
Model:	Remote Microphone + Model 900
First Date of Test:	December 10, 2018
Last Date of Test:	January 16, 2019
Receipt Date of Samples:	December 10, 2018
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Remote microphone device.

Testing Objective:
To demonstrate compliance of the Bluetooth radio to FCC 15.247 requirements.

CONFIGURATIONS

Configuration STAK0155- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote Microphone +	Starkey Inc.	900	182810378B

Configuration STAK0155- 5

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote Microphone +	Starkey Inc.	900	182810800B

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Lenovo	ThinkPad T430	11306
Power Supply (Laptop)	Lenovo	ADLX90NCT2A	11S45N0311Z1ZLZ633M0T4
USB to Serial Converter	CSR	CNS10020V3A	381800

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
USB Cable	Yes	1.8 m	No	Laptop	USB to Serial Converter
Serial Cable	No	0.2 m	No	USB to Serial Converter	Remote Microphone +
AC Cable	No	1.0 m	No	AC Mains	Power Supply (Laptop)
DC Cable	No	1.8 m	Yes	Power Supply (Laptop)	Laptop

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2018-12-10	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.
2	2019-01-16	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2018.07.27

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 test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Tx Low Ch. 2402 MHz, Mid Ch. 2440 MHz, and High Ch. 2480 MHz

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

STAK0155 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26500 MHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	13-Sep-2018	12 mo
Cable	ESM Cable Corp	TTBJ141 KMKM-72	MNP	12-Sep-2018	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	0 mo
Filter - High Pass	Micro-Tronics	HPM50111	HFM	26-Sep-2018	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	24-Feb-2018	12 mo
Filter - Low Pass	Micro-Tronics	LPM50004	HGG	26-Sep-2018	12 mo
Attenuator	Coaxicom	3910-20	AXY	26-Sep-2018	12 mo
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-12001800-30-10P	PAP	24-Feb-2018	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	24-Feb-2018	12 mo
Antenna	ETS-Lindgren	3160-08	AJP	NCR	0 mo
Antenna	ETS-Lindgren	3160-07	AJJ	NCR	0 mo
Cable	Element	Standard Gain Cable	MNW	24-Feb-2018	12 mo
Cable	Element	Double Ridge Guide Horn Cables	MNV	24-Feb-2018	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIB	27-Aug-2018	24 mo
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	26-Mar-2018	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079 and SA18E-10	AOO	24-Feb-2018	12 mo
Cable	Element	Biconilog Cable	MNX	24-Feb-2018	12 mo
Antenna - Biconilog	ETS Lindgren	3142D	AXO	15-Dec-2017	24 mo

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 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.

Measurements at the edges of the allowable band may be presented in an alternative method as provided for in the ANSI C63.10 Marker-Delta method. This method involves performing an in-band fundamental measurement followed by a screen capture of the fundamental and out-of-band emission using reduced measurement instrumentation bandwidths. The amplitude delta measured on this screen capture is applied to the fundamental emission value to show the out-of-band emission level as applied to the limit.

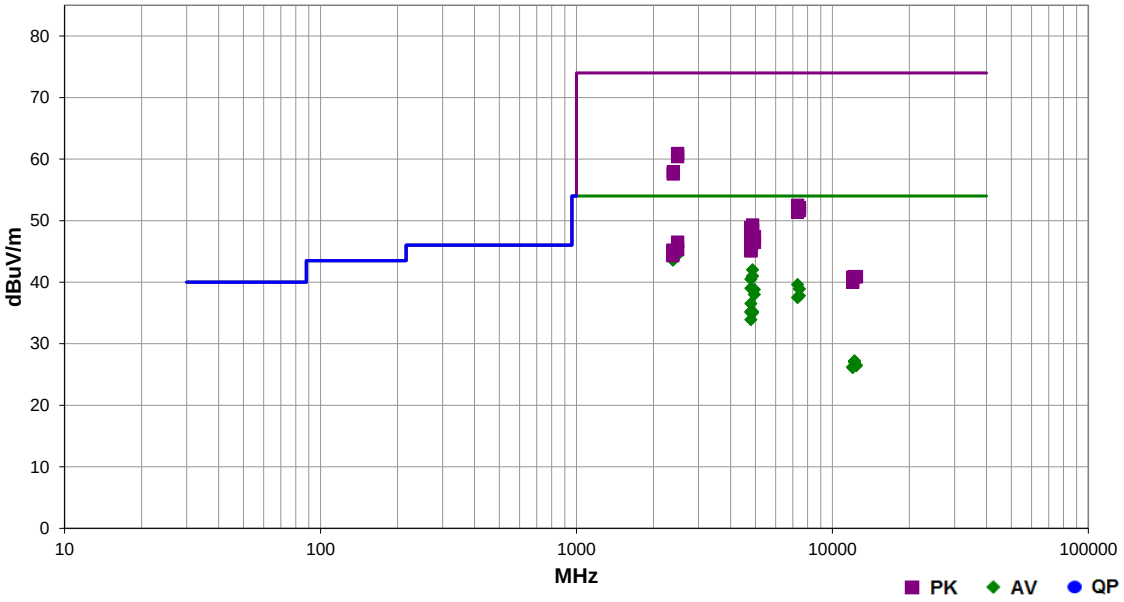
SPURIOUS RADIATED EMISSIONS

EmiR5 2018.09.26 PSA-ESCI 2018.07.27

Work Order:	STAK0155	**Date:**	10-Dec-2018		
Project:	None	**Temperature:**	20.6 °C		
Job Site:	MN09	**Humidity:**	21.1% RH		
Serial Number:	182810378B	**Barometric Pres.:**	1024 mbar	**Tested by:**	Chris Patterson, Andrew Rogstad
EUT:	Remote Microphone + Model 900				
Configuration:	1				
Customer:	Starkey Laboratories, Inc.				
Attendees:	Charlie Esch				
EUT Power:	Battery				
Operating Mode:	Tx Low Ch. 2402 MHz, Mid Ch. 2440 MHz, and High Ch. 2480 MHz				
Deviations:	None				
Comments:	See data comments for EUT orientation, Tx modulation, and channel				

Test Specifications	**Test Method**
FCC 15.247:2019	ANSI C63.10:2013

Run #	20	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.635	29.8	-4.2	1.0	256.0	3.0	20.0	Horz	AV	0.0	45.6	54.0	-8.4	High Ch, DH5, EUT Horz
2379.300	29.2	-4.5	1.0	285.0	3.0	20.0	Vert	AV	0.0	44.7	54.0	-9.3	Low Ch, DH5, EUT Vert
2483.600	28.8	-4.2	1.0	199.0	3.0	20.0	Horz	AV	0.0	44.6	54.0	-9.4	High Ch, 2DH5, EUT Horz
2485.075	28.7	-4.2	1.0	103.0	3.0	20.0	Vert	AV	0.0	44.5	54.0	-9.5	High Ch, DH5, EUT Vert
2483.500	28.7	-4.2	1.0	37.0	3.0	20.0	Horz	AV	0.0	44.5	54.0	-9.5	High Ch, 3DH5, EUT Horz
2382.050	28.2	-4.5	1.0	256.0	3.0	20.0	Horz	AV	0.0	43.7	54.0	-10.3	Low Ch, DH5, EUT Horz
2385.150	28.1	-4.5	1.0	16.0	3.0	20.0	Horz	AV	0.0	43.6	54.0	-10.4	Low Ch, 2DH5, EUT Horz
2385.267	28.1	-4.5	1.0	103.0	3.0	20.0	Horz	AV	0.0	43.6	54.0	-10.4	Low Ch, 3DH5, EUT Horz
4880.083	38.0	4.0	3.9	0.0	3.0	0.0	Vert	AV	0.0	42.0	54.0	-12.0	Mid Ch, DH5, EUT Vert
4880.067	37.0	4.0	1.0	159.0	3.0	0.0	Horz	AV	0.0	41.0	54.0	-13.0	Mid Ch, DH5, EUT Horz
2483.767	45.1	-4.2	1.0	37.0	3.0	20.0	Horz	PK	0.0	60.9	74.0	-13.1	High Ch, 3DH5, EUT Horz
4804.050	36.2	4.3	2.3	140.0	3.0	0.0	Horz	AV	0.0	40.5	54.0	-13.5	Low Ch, DH5, EUT Horz
2483.625	44.6	-4.2	1.0	199.0	3.0	20.0	Horz	PK	0.0	60.4	74.0	-13.6	High Ch, 2DH5, EUT Horz
7319.975	27.5	12.1	1.0	14.0	3.0	0.0	Vert	AV	0.0	39.6	54.0	-14.4	Mid Ch, DH5, EUT Vert
4804.058	34.7	4.3	2.2	77.0	3.0	0.0	Horz	AV	0.0	39.0	54.0	-15.0	Low Ch, DH5, EUT On Side
7440.175	26.4	12.5	1.0	1.0	3.0	0.0	Vert	AV	0.0	38.9	54.0	-15.1	High Ch, DH5, EUT Vert
4960.058	34.8	4.0	1.0	18.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	High Ch, DH5, EUT Vert
4960.067	34.0	4.0	2.6	151.0	3.0	0.0	Horz	AV	0.0	38.0	54.0	-16.0	High Ch, DH5, EUT Horz
2389.600	42.4	-4.5	1.0	16.0	3.0	20.0	Horz	PK	0.0	57.9	74.0	-16.1	Low Ch, 2DH5, EUT Horz
7440.208	25.3	12.5	1.0	279.0	3.0	0.0	Horz	AV	0.0	37.8	54.0	-16.2	High Ch, DH5, EUT Horz
2387.850	42.1	-4.5	1.0	103.0	3.0	20.0	Horz	PK	0.0	57.6	74.0	-16.4	Low Ch, 3DH5, EUT Horz
7320.300	25.4	12.1	1.0	249.0	3.0	0.0	Horz	AV	0.0	37.5	54.0	-16.5	Mid Ch, DH5, EUT Horz
4804.033	32.2	4.3	1.0	1.0	3.0	0.0	Vert	AV	0.0	36.5	54.0	-17.5	Low Ch, DH5, EUT Vert

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4804.058	30.9	4.3	1.0	270.0	3.0	0.0	Vert	AV	0.0	35.2	54.0	-18.8	Low Ch, DH5, EUT Horz
4880.058	31.2	4.0	1.0	201.0	3.0	0.0	Vert	AV	0.0	35.2	54.0	-18.8	Mid Ch, 3DH5, EUT Vert
4804.058	30.8	4.3	1.0	298.0	3.0	0.0	Vert	AV	0.0	35.1	54.0	-18.9	Low Ch, DH5, EUT On Side
4880.075	31.0	4.0	1.0	169.0	3.0	0.0	Vert	AV	0.0	35.0	54.0	-19.0	Mid Ch, 2DH5, EUT Vert
4804.108	29.6	4.3	2.2	272.0	3.0	0.0	Horz	AV	0.0	33.9	54.0	-20.1	Low Ch, DH5, EUT Vert
7320.550	40.4	12.1	1.0	14.0	3.0	0.0	Vert	PK	0.0	52.5	74.0	-21.5	Mid Ch, DH5, EUT Vert
7439.592	39.6	12.5	1.0	1.0	3.0	0.0	Vert	PK	0.0	52.1	74.0	-21.9	High Ch, DH5, EUT Vert
7440.917	39.2	12.5	1.0	279.0	3.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	High Ch, DH5, EUT Horz
7318.042	39.3	12.1	1.0	249.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	Mid Ch, DH5, EUT Horz
4880.225	45.3	4.0	3.9	0.0	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	Mid Ch, DH5, EUT Vert
4804.250	44.5	4.3	2.3	140.0	3.0	0.0	Horz	PK	0.0	48.8	74.0	-25.2	Low Ch, DH5, EUT Horz
4879.825	44.5	4.0	1.0	159.0	3.0	0.0	Horz	PK	0.0	48.5	74.0	-25.5	Mid Ch, DH5, EUT Horz
4804.375	43.7	4.3	2.2	77.0	3.0	0.0	Horz	PK	0.0	48.0	74.0	-26.0	Low Ch, DH5, EUT On Side
4960.625	43.4	4.0	1.0	18.0	3.0	0.0	Vert	PK	0.0	47.4	74.0	-26.6	High Ch, DH5, EUT Vert
12198.160	27.4	-0.2	1.0	103.0	3.0	0.0	Vert	AV	0.0	27.2	54.0	-26.8	Mid Ch, DH5, EUT Vert
12198.230	27.2	-0.2	1.0	359.0	3.0	0.0	Horz	AV	0.0	27.0	54.0	-27.0	Mid Ch, DH5, EUT Horz
4879.892	42.7	4.0	1.0	169.0	3.0	0.0	Vert	PK	0.0	46.7	74.0	-27.3	Mid Ch, 2DH5, EUT Vert
4804.475	42.3	4.3	1.0	1.0	3.0	0.0	Vert	PK	0.0	46.6	74.0	-27.4	Low Ch, DH5, EUT Vert
4959.683	42.5	4.0	2.6	151.0	3.0	0.0	Horz	PK	0.0	46.5	74.0	-27.5	High Ch, DH5, EUT Horz
12398.080	27.0	-0.5	1.0	308.0	3.0	0.0	Horz	AV	0.0	26.5	54.0	-27.5	High Ch, DH5, EUT Horz
2483.635	30.7	-4.2	1.0	256.0	3.0	20.0	Horz	PK	0.0	46.5	74.0	-27.5	High Ch, DH5, EUT Horz
12399.240	26.9	-0.5	1.0	102.0	3.0	0.0	Vert	AV	0.0	26.4	54.0	-27.6	High Ch, DH5, EUT Vert
4879.650	42.4	4.0	1.0	201.0	3.0	0.0	Vert	PK	0.0	46.4	74.0	-27.6	Mid Ch, 3DH5, EUT Vert
12007.790	28.0	-1.8	1.0	187.0	3.0	0.0	Vert	AV	0.0	26.2	54.0	-27.8	Low Ch, DH5, EUT Vert
12007.670	27.9	-1.8	1.0	338.0	3.0	0.0	Horz	AV	0.0	26.1	54.0	-27.9	Low Ch, DH5, EUT Horz
4805.092	41.4	4.3	2.2	272.0	3.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	Low Ch, DH5, EUT Vert
2485.075	29.5	-4.2	1.0	103.0	3.0	20.0	Vert	PK	0.0	45.3	74.0	-28.7	High Ch, DH5, EUT Vert
2379.300	29.7	-4.5	1.0	285.0	3.0	20.0	Vert	PK	0.0	45.2	74.0	-28.8	Low Ch, DH5, EUT Vert
4804.325	40.8	4.3	1.0	298.0	3.0	0.0	Vert	PK	0.0	45.1	74.0	-28.9	Low Ch, DH5, EUT On Side
4804.517	40.8	4.3	1.0	270.0	3.0	0.0	Vert	PK	0.0	45.1	74.0	-28.9	Low Ch, DH5, EUT Horz
2382.050	28.8	-4.5	1.0	256.0	3.0	20.0	Horz	PK	0.0	44.3	74.0	-29.7	Low Ch, DH5, EUT Horz
12201.270	41.1	-0.2	1.0	359.0	3.0	0.0	Horz	PK	0.0	40.9	74.0	-33.1	Mid Ch, DH5, EUT Horz
12198.290	41.1	-0.2	1.0	103.0	3.0	0.0	Vert	PK	0.0	40.9	74.0	-33.1	Mid Ch, DH5, EUT Vert
12399.460	41.4	-0.5	1.0	308.0	3.0	0.0	Horz	PK	0.0	40.9	74.0	-33.1	High Ch, DH5, EUT Horz
12397.680	41.4	-0.5	1.0	102.0	3.0	0.0	Vert	PK	0.0	40.9	74.0	-33.1	High Ch, DH5, EUT Vert
12008.080	42.6	-1.8	1.0	187.0	3.0	0.0	Vert	PK	0.0	40.8	74.0	-33.2	Low Ch, DH5, EUT Vert
12010.580	41.7	-1.7	1.0	338.0	3.0	0.0	Horz	PK	0.0	40.0	74.0	-34.0	Low Ch, DH5, EUT Horz

OUTPUT POWER

XMit 2017.12.13

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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	13-Dec-18	13-Dec-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Block - DC	Fairview Microwave	SD3379	AMI	7-Sep-18	7-Sep-19
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet.

The method found in ANSI C63.10:2013 Section 7.8.5 was used for a FHSS radio.

OUTPUT POWER

TbtTx 2018.09.13 XMit 2017.12.13

EUT:	**Remote Microphone + Model 900**			**Work Order:**	**STAK0155**
Serial Number:	**182810800B**			**Date:**	**16-Jan-19**
Customer:	**Starkey Laboratories, Inc.**			**Temperature:**	**21.1 °C**
Attendees:	**Charle Esch**			**Humidity:**	**20.9% RH**
Project:	**None**			**Barometric Pres.:**	**1028 mbar**
Tested by:	**Kyle McMullan**	**Power:**	**3.9VDC**	**Job Site:**	**MN08**
TEST SPECIFICATIONS			**Test Method**		
FCC 15.247:2019			ANSI C63.10:2013		

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

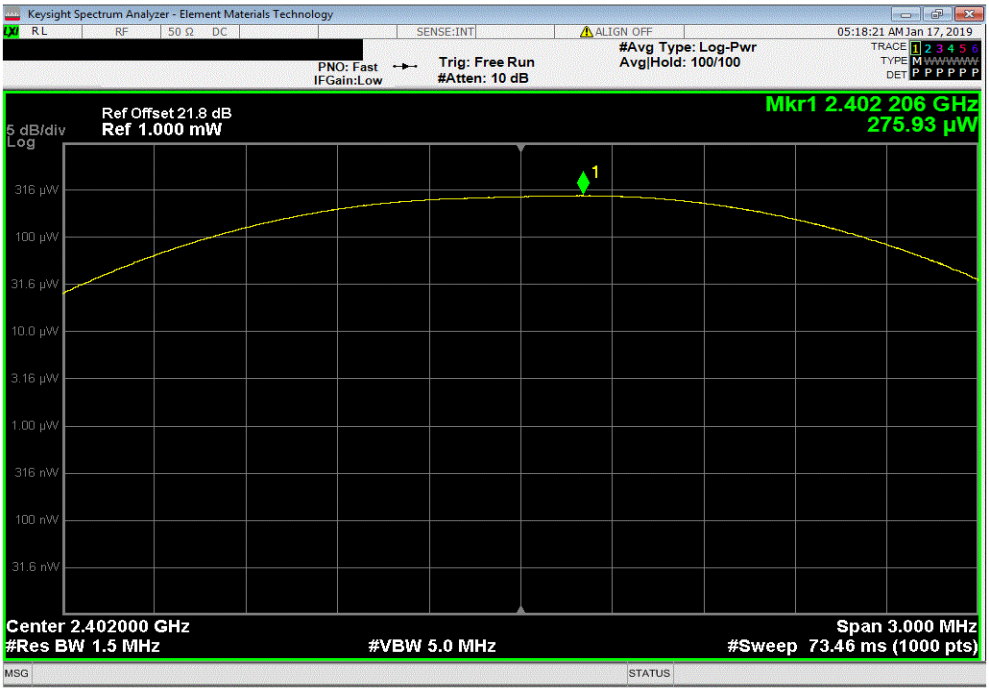
None

Configuration #	**5**	*Signature*

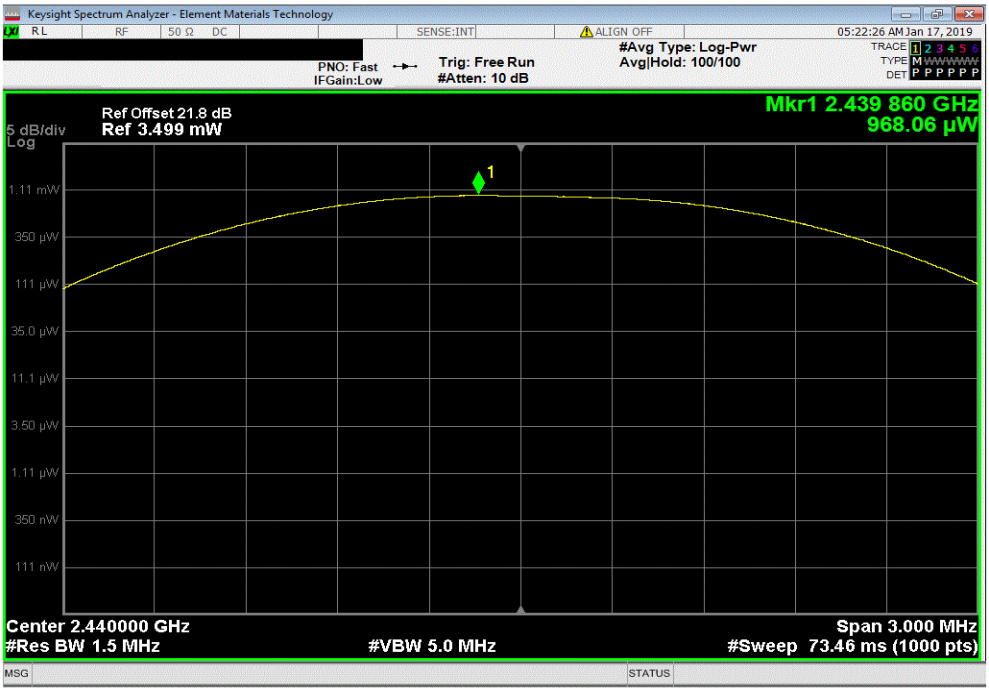
		Value	**Limit (<)**	**Result**
DH5, GFSK				
	Low Channel	275.93 uW	125 mW	Pass
	Mid Channel	968.06 uW	125 mW	Pass
	High Channel	512.34 uW	125 mW	Pass
2DH5, pi/4-DQPSK				
	Low Channel	258.36 uW	125 mW	Pass
	Mid Channel	868.84 uW	125 mW	Pass
	High Channel	469.28 uW	125 mW	Pass
3DH5, 8-DPSK				
	Low Channel	288.49 uW	125 mW	Pass
	Mid Channel	953.24 uW	125 mW	Pass
	High Channel	514.25 uW	125 mW	Pass

OUTPUT POWER

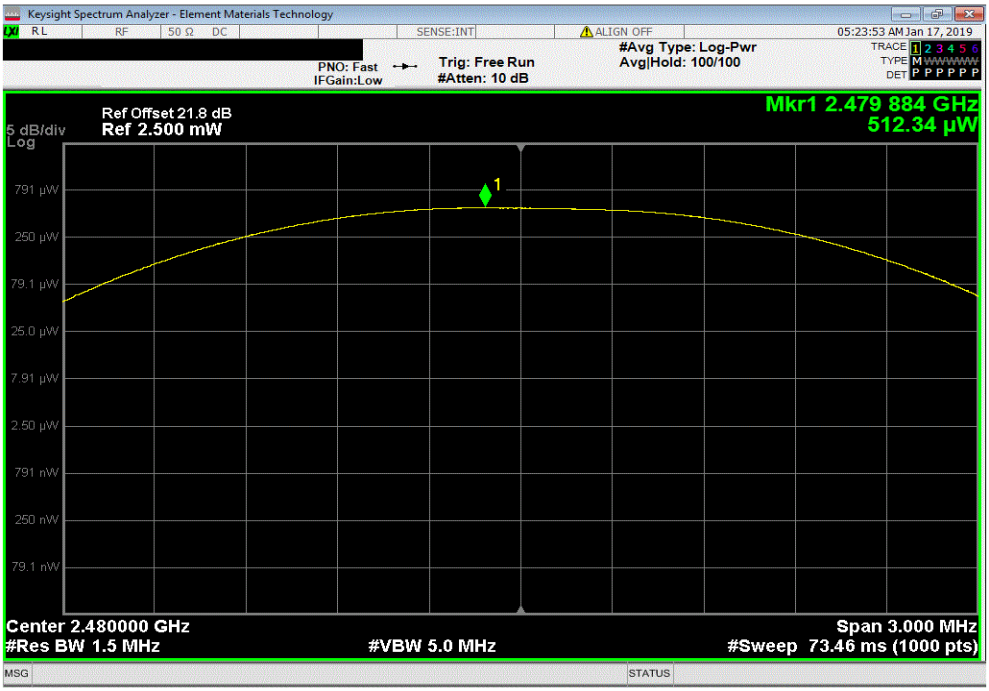
DH5, GFSK, Low Channel						
				Value	Limit (<)	Result
				275.93 uW	125 mW	Pass



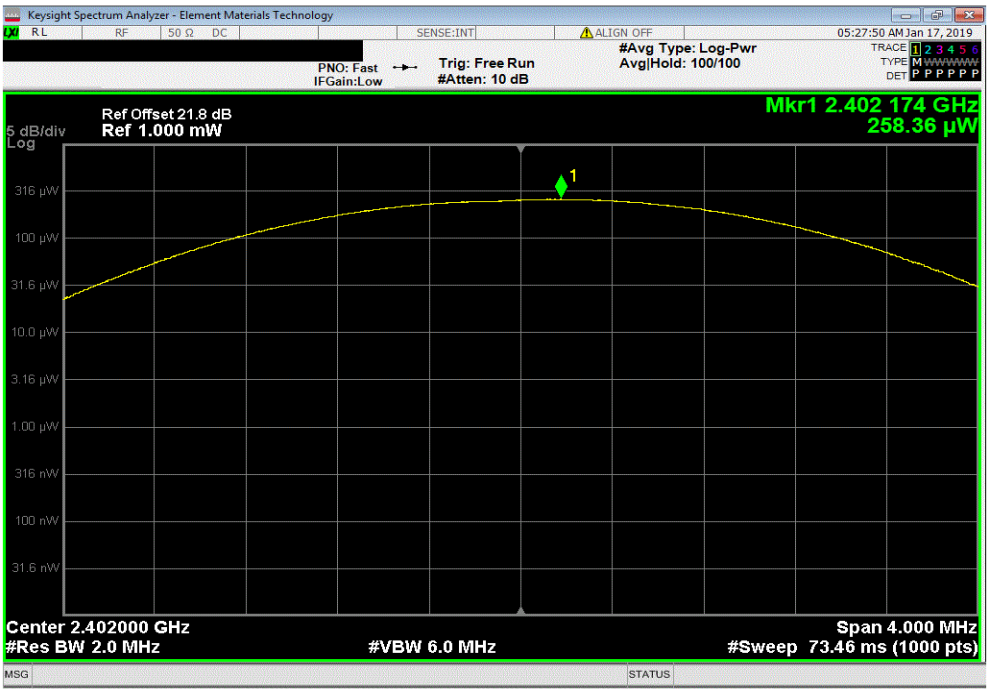
DH5, GFSK, Mid Channel						
				Value	Limit (<)	Result
				968.06 uW	125 mW	Pass



DH5, GFSK, High Channel						
				Value	Limit (<)	Result
				512.34 uW	125 mW	Pass

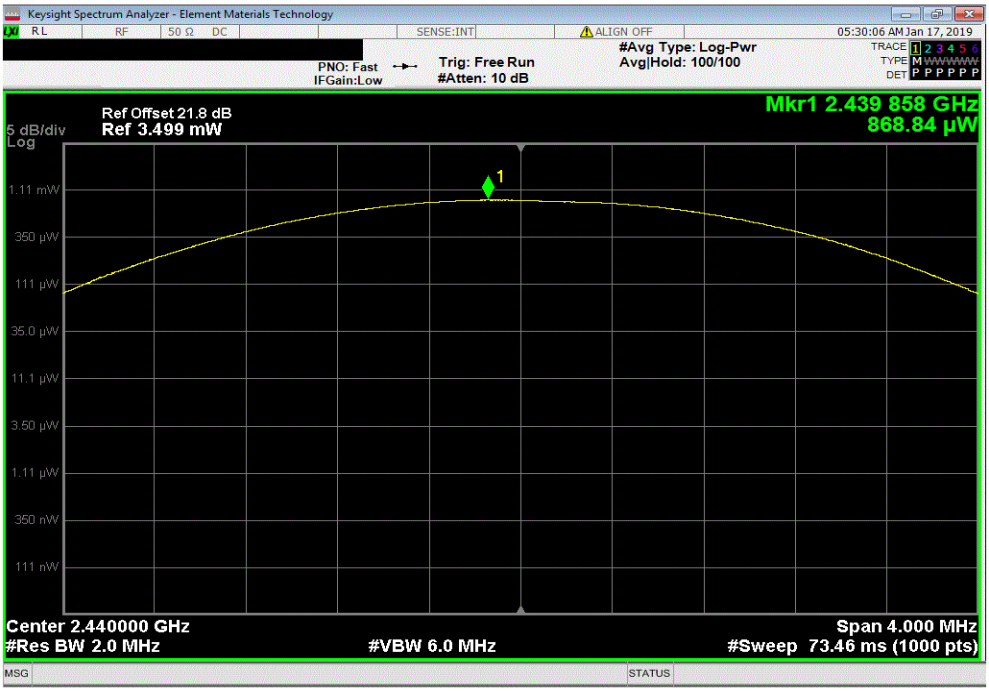


2DH5, pi/4-DQPSK, Low Channel						
				Value	Limit (<)	Result
				258.36 uW	125 mW	Pass

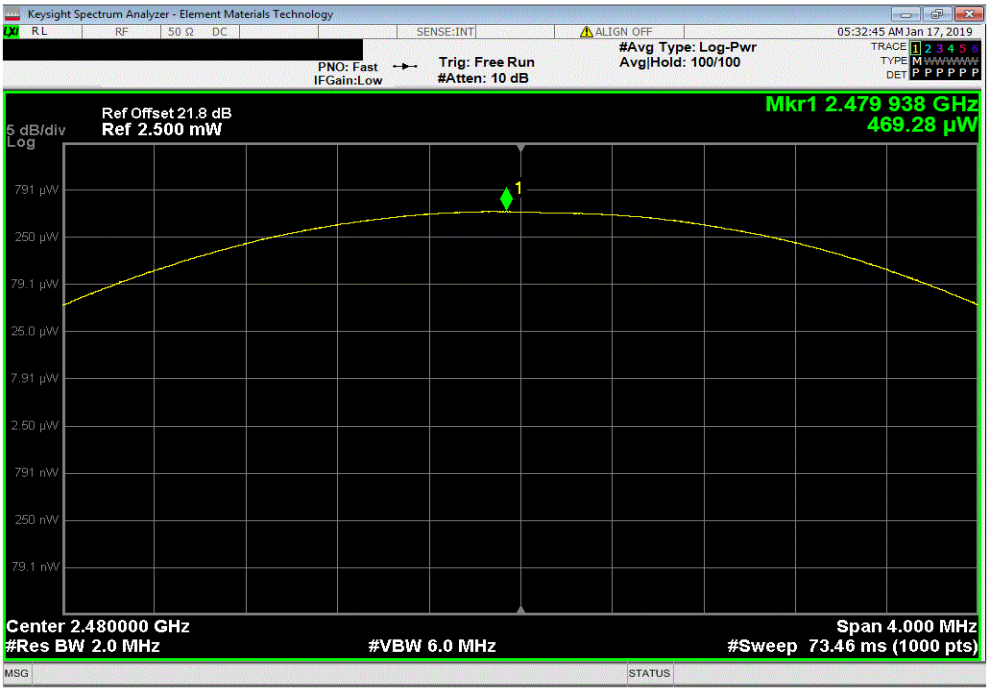


OUTPUT POWER

2DH5, pi/4-DQPSK, Mid Channel						
				Value	Limit (<)	Result
				868.84 uW	125 mW	Pass

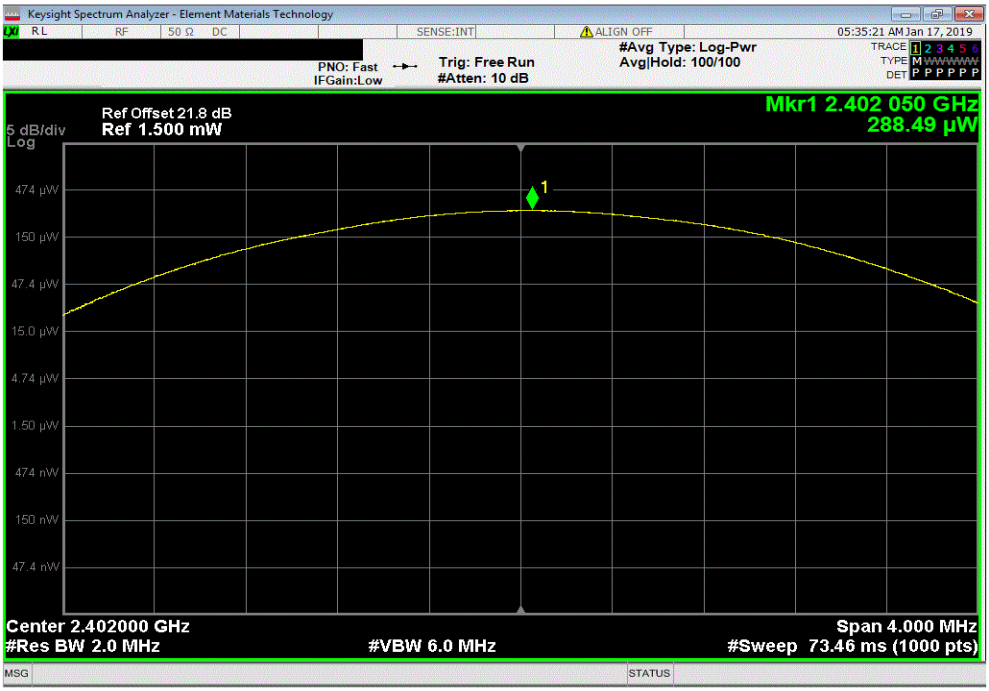


2DH5, pi/4-DQPSK, High Channel						
				Value	Limit (<)	Result
				469.28 uW	125 mW	Pass

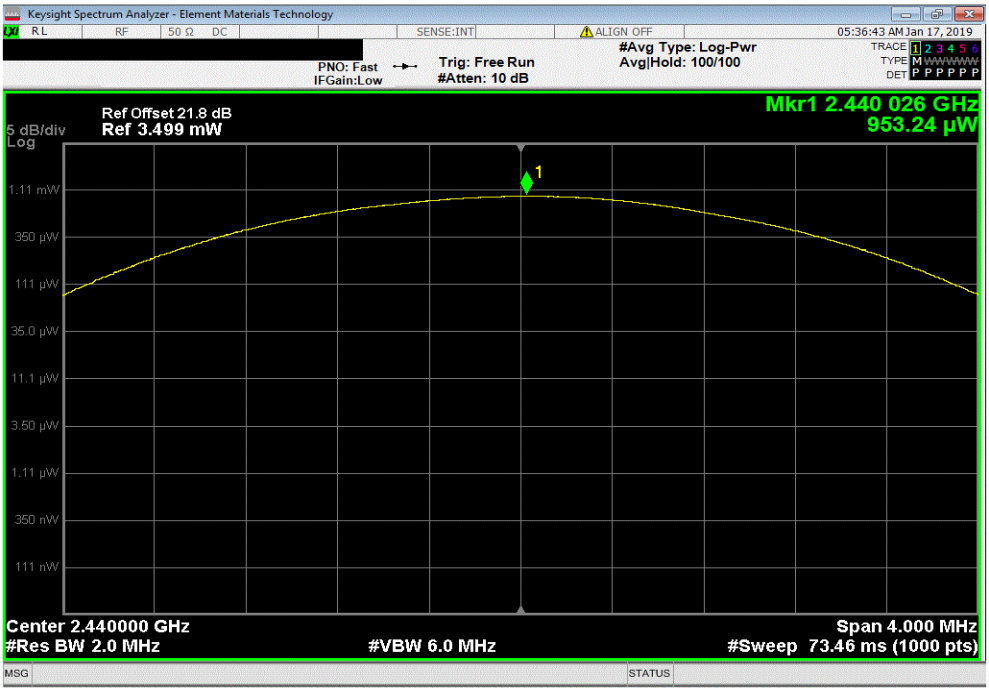


OUTPUT POWER

3DH5, 8-DPSK, Low Channel						
				Value	Limit (<)	Result
				288.49 uW	125 mW	Pass



3DH5, 8-DPSK, Mid Channel						
				Value	Limit (<)	Result
				953.24 uW	125 mW	Pass



OUTPUT POWER

3DH5, 8-DPSK, High Channel						
				Value	Limit (<)	Result
				514.25 uW	125 mW	Pass