

NORTHWEST EMC

Walt Disney Parks and Resorts US, Inc.

TPv2 (DAP 2)

FCC 15.207:2016

FCC 15.247:2016

Bluetooth Radio Module

Report # SYNA0194.2



NVLAP Lab Code: 200630-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America. This Report may only be duplicated in its entirety

CERTIFICATE OF TEST

Last Date of Test: September 13, 2016
Walt Disney Parks and Resorts US, Inc.
Model: TPv2 (DAP 2)

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2016	ANSI C63.10:2013
FCC 15.247:2016	

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	AC - Powerline Conducted Emissions	Yes	Pass	
6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
7.5	Duty Cycle	No	N/A	See International Certification Corp Test Report # FR362601AD
7.8.2	Carrier Frequency Separation	No	N/A	
7.8.3	Number of Hopping Frequencies	No	N/A	
7.8.4	Dwell Time	No	N/A	
7.8.5	Output Power	Yes	Pass	
7.8.6	Band Edge Compliance	No	N/A	See International Certification Corp Test Report # FR362601AD
7.8.6	Band Edge Compliance - Hopping Mode	No	N/A	
7.8.7	Occupied Bandwidth	No	N/A	
7.8.8	Spurious Conducted Emissions	No	N/A	

Deviations From Test Standards

None

Approved By:



Rod Munro, 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.

REVISION HISTORY

Revision Number		Description	Date	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 Northwest EMC 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 – Validated by the European Commission as a Notified Body under the R&TTE Directive.

Australia/New Zealand

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

Korea

MSIP / 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:

<http://www.nwemc.com/accreditations/>
<http://gsi.nist.gov/global/docs/cabs/designations.html>

MEASUREMENT UNCERTAINTY

Measurement Uncertainty

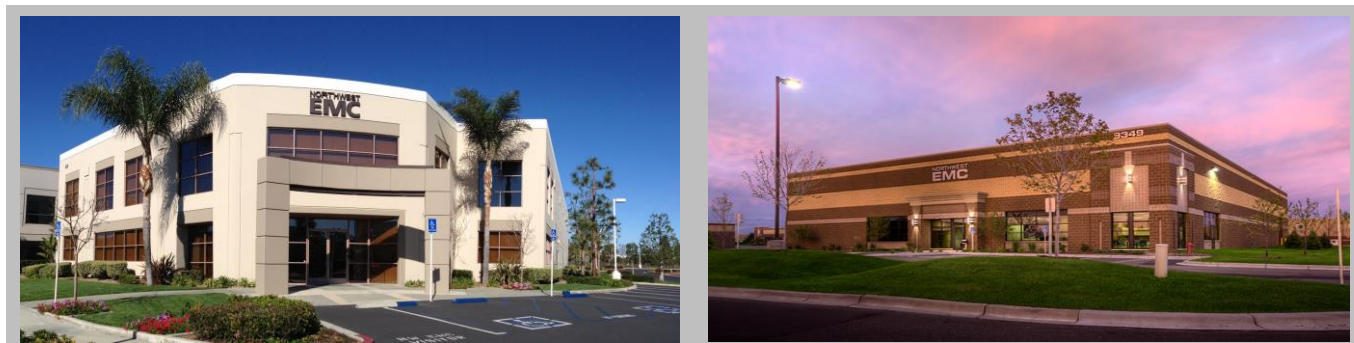
When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement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

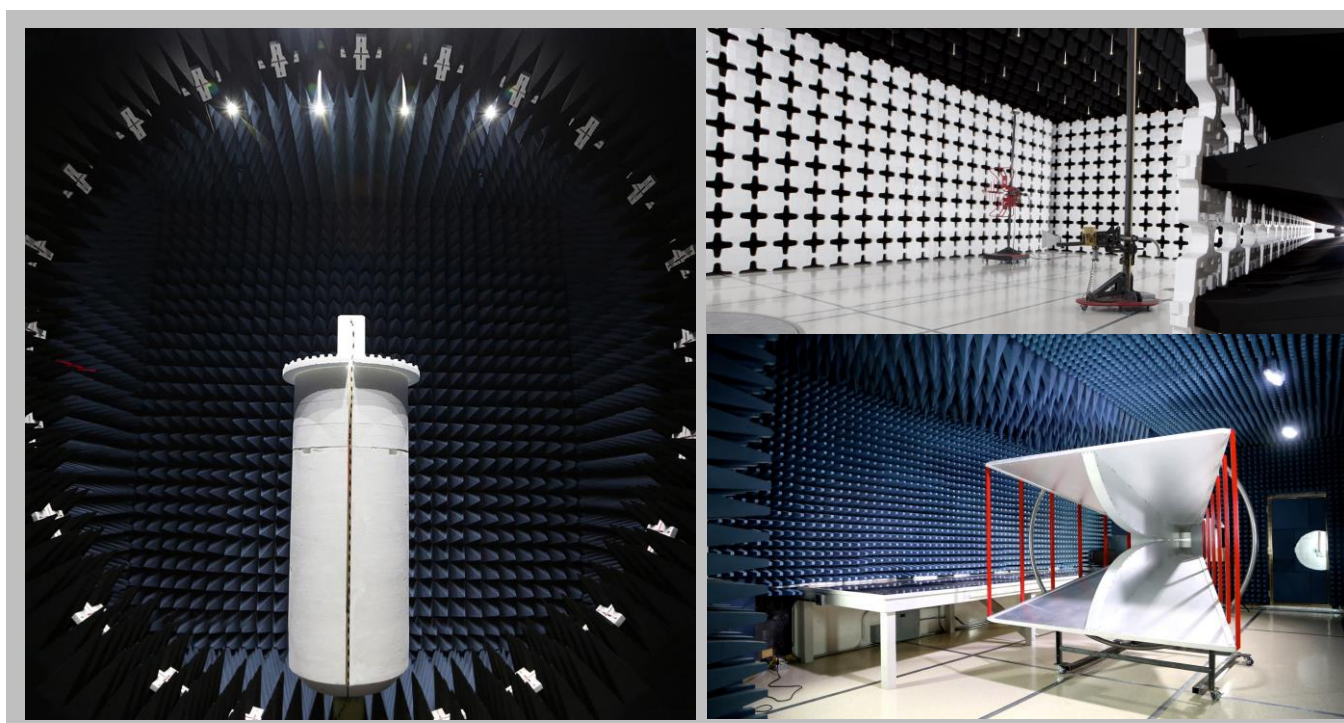
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

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

FACILITIES



California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Minnesota Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Oregon Labs EV01-12 22975 NW Evergreen Pkwy 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
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	N/A	2834D-1, 2834D-2	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/RRR, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Walt Disney Parks and Resorts US, Inc.
Address:	PO Box 10000
City, State, Zip:	Lake Buena Vista, FL 32830
Test Requested By:	Brian Piquette of Synapse Product Development LLC
Model:	TPv2 (DAP 2)
First Date of Test:	September 07, 2016
Last Date of Test:	September 13, 2016
Receipt Date of Samples:	August 31, 2016
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Multi-ticket media reader with Ethernet network interface Device containing an HF RFID reader (ISO 14443), UHF RFID Reader (ISO 18000), BT/BLE Radio, and proprietary 2.4GHz DTS radio.
Testing Objective:
To demonstrate compliance of the Bluetooth Classic (BR/EDR) radio to FCC 15.247 requirements.

CONFIGURATIONS

Configuration SYNA0194- 1

Software/Firmware Running during test					
Description			Version		
LRR Firmware (2.4 GHz)			0.10F		
EUT					
Description	Manufacturer		Model/Part Number	Serial Number	
Access Point	Walt Disney Parks and Resorts US, Inc.		TPv2	850-1631035	
Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power Cable	No	.5m	No	Access Point	DC Power Supply

Configuration SYNA0194- 6

Software/Firmware Running during test					
Description			Version		
LRR Firmware (2.4 GHz)			0.10F		
EUT					
Description	Manufacturer		Model/Part Number	Serial Number	
Access Point	Walt Disney Parks and Resorts US, Inc.		TPv2	850-1631028	
Peripherals in test setup boundary					
Description	Manufacturer		Model/Part Number	Serial Number	
Access Point Fixture	Walt Disney Parks and Resorts US, Inc.		310-019778-Rev-01	No	
Scanner	Zebra		SE4710	Unknown	
Remote Equipment Outside of Test Setup Boundary					
Description	Manufacturer	Model/Part Number		Serial Number	
POE Injector	Unknown	Unknown		Unknown	
Laptop	Apple	Macbook Air		C02NP2WDG5RQ	
Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Ethernet Cable	No	6m	No	Access Point	POE Injector
USB Cable	Yes	1m	No	Access Point	Scanner
Ethernet Cable	No	1m	No	POE Injector	Laptop

CONFIGURATIONS

Configuration SYNA0194- 7

Software/Firmware Running during test					
Description			Version		
UHFTool (900 MHz)			0.0		
EUT					
Description	Manufacturer		Model/Part Number	Serial Number	
Access Point	Walt Disney Parks and Resorts US, Inc.		TPv2	850-1631004	
Peripherals in test setup boundary					
Description	Manufacturer		Model/Part Number	Serial Number	
Access Point Fixture	Walt Disney Parks and Resorts US, Inc.		310-019778-Rev-01	No	
Scanner	Zebra		SE4710	Unknown	
Remote Equipment Outside of Test Setup Boundary					
Description	Manufacturer		Model/Part Number	Serial Number	
POE Injector	Unknown		Unknown	Unknown	
Laptop	Apple		Macbook Air	C02NP2WDG5RQ	
DC Power Supply	Topward Electronics		TPS-2000	TPD	
Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power Cable	No	.5m	No	Access Point	DC Power Supply
Ethernet Cable	No	6m	No	Access Point	POE Injector
USB Cable	Yes	1m	No	Access Point	Scanner
Ethernet Cable	No	1m	No	POE Injector	Laptop
AC Power	No	2.5m	No	DC Power Supply	AC mains

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	9/7/2016	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	9/12/2016	AC – Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	9/13/2016	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

AC – 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
Cable - Conducted Cable Assembly	Northwest EMC	EVG, HHD, RKA	EVGA	5/10/2016	5/10/2017
LISN	Solar Electronics	9252-50-R-24-BNC	LIP	1/27/2015	1/27/2017
Receiver	Rohde & Schwarz	ESCI	ARH	3/21/2016	3/21/2017
Power Supply - DC	Topward	TPS-2000	TPD	NCR	NCR

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.4 dB	-2.4 dB

CONFIGURATIONS INVESTIGATED

SYNA0194-6

MODES INVESTIGATED

Transmit. Middle Channel, 2441 MHz, DH5.

AC – POWERLINE CONDUCTED EMISSIONS

EUT:	TPv2 (DAP 2)	Work Order:	SYNA0194
Serial Number:	850-1631004	Date:	09/12/2016
Customer:	Walt Disney Parks and Resorts US, Inc.	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	40.5%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	24 VDC	Configuration:	SYNA0194-6

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2016	ANSI C63.10:2013

TEST PARAMETERS

Run #:	1	Line:	High Line	Add. Ext. Attenuation (dB):	0
--------	---	-------	-----------	-----------------------------	---

COMMENTS

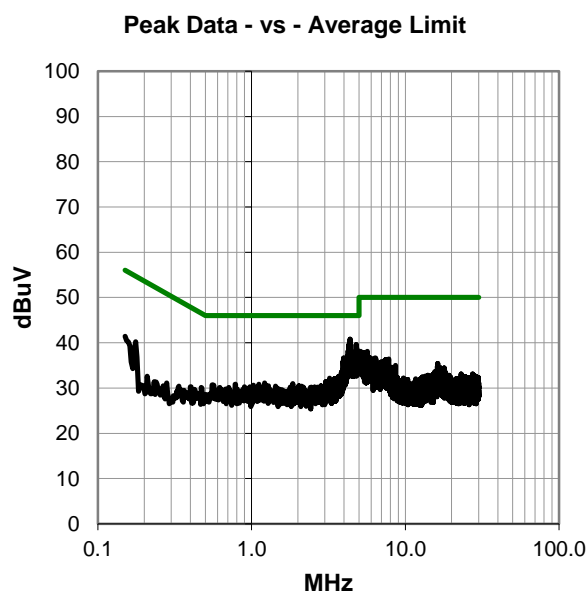
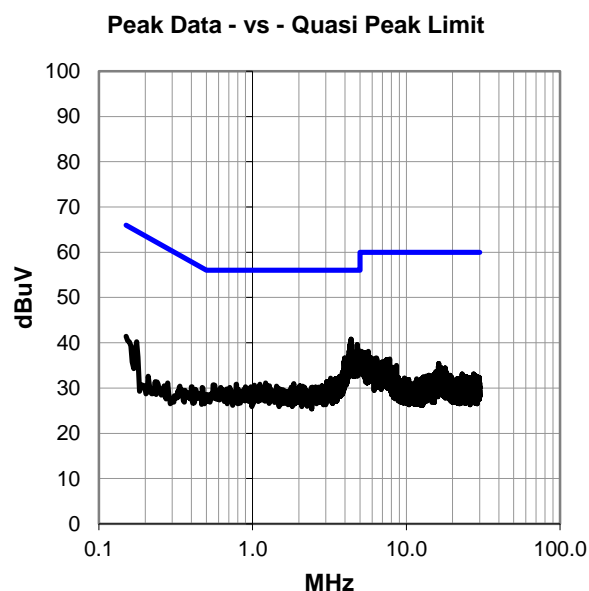
face plate # 3691-3605.

EUT OPERATING MODES

Transmit. Middle Channel, 2441 MHz, DH5.

DEVIATIONS FROM TEST STANDARD

None.



AC – POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #1

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
4.366	20.9	19.9	40.8	56.0	-15.2
4.795	19.7	19.9	39.6	56.0	-16.4
4.284	19.6	19.9	39.5	56.0	-16.5
4.847	18.7	19.9	38.6	56.0	-17.4
4.317	18.4	19.9	38.3	56.0	-17.7
4.407	18.4	19.9	38.3	56.0	-17.7
4.254	18.3	19.9	38.2	56.0	-17.8
4.694	18.1	19.9	38.0	56.0	-18.0
4.922	17.8	20.0	37.8	56.0	-18.2
4.981	17.7	20.0	37.7	56.0	-18.3
4.433	17.3	19.9	37.2	56.0	-18.8
4.526	17.2	19.9	37.1	56.0	-18.9
4.705	17.2	19.9	37.1	56.0	-18.9
4.593	17.0	19.9	36.9	56.0	-19.1
4.168	16.9	19.9	36.8	56.0	-19.2
4.198	16.9	19.9	36.8	56.0	-19.2
4.966	16.7	20.0	36.7	56.0	-19.3
3.967	16.7	19.9	36.6	56.0	-19.4
4.549	16.7	19.9	36.6	56.0	-19.4
4.627	16.7	19.9	36.6	56.0	-19.4
4.187	16.5	19.9	36.4	56.0	-19.6
3.940	16.1	19.9	36.0	56.0	-20.0
4.101	15.3	19.9	35.2	56.0	-20.8
4.015	14.5	19.9	34.4	56.0	-21.6
3.907	14.2	19.9	34.1	56.0	-21.9
5.131	18.1	20.0	38.1	60.0	-21.9

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
4.366	20.9	19.9	40.8	46.0	-5.2
4.795	19.7	19.9	39.6	46.0	-6.4
4.284	19.6	19.9	39.5	46.0	-6.5
4.847	18.7	19.9	38.6	46.0	-7.4
4.317	18.4	19.9	38.3	46.0	-7.7
4.407	18.4	19.9	38.3	46.0	-7.7
4.254	18.3	19.9	38.2	46.0	-7.8
4.694	18.1	19.9	38.0	46.0	-8.0
4.922	17.8	20.0	37.8	46.0	-8.2
4.981	17.7	20.0	37.7	46.0	-8.3
4.433	17.3	19.9	37.2	46.0	-8.8
4.526	17.2	19.9	37.1	46.0	-8.9
4.705	17.2	19.9	37.1	46.0	-8.9
4.593	17.0	19.9	36.9	46.0	-9.1
4.168	16.9	19.9	36.8	46.0	-9.2
4.198	16.9	19.9	36.8	46.0	-9.2
4.966	16.7	20.0	36.7	46.0	-9.3
3.967	16.7	19.9	36.6	46.0	-9.4
4.549	16.7	19.9	36.6	46.0	-9.4
4.627	16.7	19.9	36.6	46.0	-9.4
4.187	16.5	19.9	36.4	46.0	-9.6
3.940	16.1	19.9	36.0	46.0	-10.0
4.101	15.3	19.9	35.2	46.0	-10.8
4.015	14.5	19.9	34.4	46.0	-11.6
3.907	14.2	19.9	34.1	46.0	-11.9
5.131	18.1	20.0	38.1	50.0	-11.9

CONCLUSION

Pass



Tested By

AC – POWERLINE CONDUCTED EMISSIONS

EUT:	TPv2 (DAP 2)	Work Order:	SYNA0194
Serial Number:	850-1631004	Date:	09/12/2016
Customer:	Walt Disney Parks and Resorts US, Inc.	Temperature:	23.3°C
Attendees:	None	Relative Humidity:	40.5%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	24 VDC	Configuration:	SYNA0194-6

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2016	ANSI C63.10:2013

TEST PARAMETERS

Run #:	2	Line:	Neutral	Add. Ext. Attenuation (dB):	0
--------	---	-------	---------	-----------------------------	---

COMMENTS

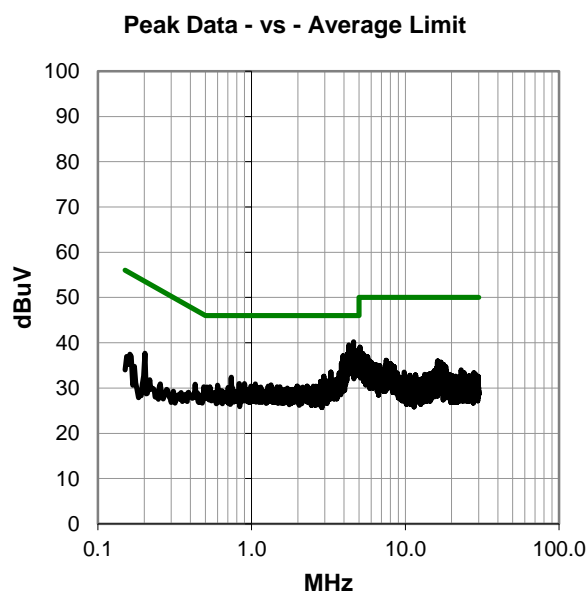
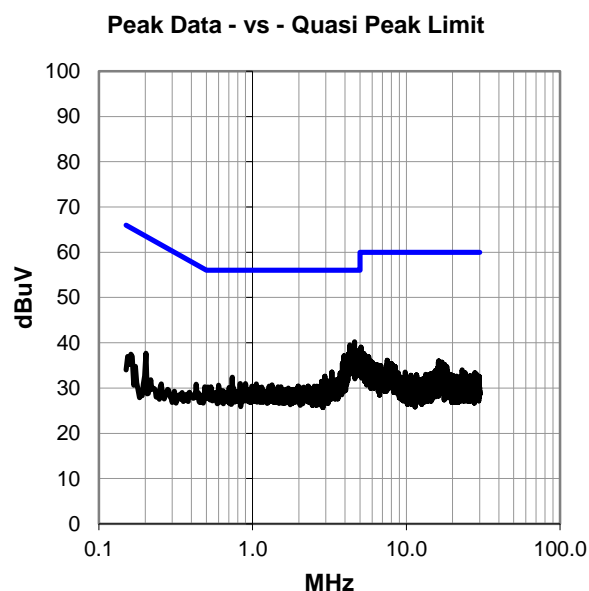
face plate # 3691-3605.

EUT OPERATING MODES

Transmit. Middle Channel, 2441 MHz, DH5.

DEVIATIONS FROM TEST STANDARD

None.



AC – POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #2

Peak Data - vs - Quasi Peak Limit

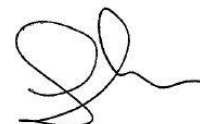
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
4.601	20.3	19.9	40.2	56.0	-15.8
4.280	19.6	19.9	39.5	56.0	-16.5
4.325	18.4	19.9	38.3	56.0	-17.7
4.813	18.3	19.9	38.2	56.0	-17.8
4.933	17.9	20.0	37.9	56.0	-18.1
4.974	17.9	20.0	37.9	56.0	-18.1
4.474	17.8	19.9	37.7	56.0	-18.3
4.683	17.8	19.9	37.7	56.0	-18.3
4.224	17.7	19.9	37.6	56.0	-18.4
4.903	17.6	20.0	37.6	56.0	-18.4
4.881	17.6	19.9	37.5	56.0	-18.5
4.567	17.5	19.9	37.4	56.0	-18.6
4.168	17.4	19.9	37.3	56.0	-18.7
4.388	17.4	19.9	37.3	56.0	-18.7
4.403	17.4	19.9	37.3	56.0	-18.7
4.552	17.4	19.9	37.3	56.0	-18.7
3.929	17.2	19.9	37.1	56.0	-18.9
4.634	17.2	19.9	37.1	56.0	-18.9
4.064	17.0	19.9	36.9	56.0	-19.1
3.978	16.9	19.9	36.8	56.0	-19.2
4.769	16.9	19.9	36.8	56.0	-19.2
4.828	16.8	19.9	36.7	56.0	-19.3
4.265	16.7	19.9	36.6	56.0	-19.4
4.082	16.0	19.9	35.9	56.0	-20.1
4.023	15.7	19.9	35.6	56.0	-20.4
3.843	15.6	19.9	35.5	56.0	-20.5

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
4.601	20.3	19.9	40.2	46.0	-5.8
4.280	19.6	19.9	39.5	46.0	-6.5
4.325	18.4	19.9	38.3	46.0	-7.7
4.813	18.3	19.9	38.2	46.0	-7.8
4.933	17.9	20.0	37.9	46.0	-8.1
4.974	17.9	20.0	37.9	46.0	-8.1
4.474	17.8	19.9	37.7	46.0	-8.3
4.683	17.8	19.9	37.7	46.0	-8.3
4.224	17.7	19.9	37.6	46.0	-8.4
4.903	17.6	20.0	37.6	46.0	-8.4
4.881	17.6	19.9	37.5	46.0	-8.5
4.567	17.5	19.9	37.4	46.0	-8.6
4.168	17.4	19.9	37.3	46.0	-8.7
4.388	17.4	19.9	37.3	46.0	-8.7
4.403	17.4	19.9	37.3	46.0	-8.7
4.552	17.4	19.9	37.3	46.0	-8.7
3.929	17.2	19.9	37.1	46.0	-8.9
4.634	17.2	19.9	37.1	46.0	-8.9
4.064	17.0	19.9	36.9	46.0	-9.1
3.978	16.9	19.9	36.8	46.0	-9.2
4.769	16.9	19.9	36.8	46.0	-9.2
4.828	16.8	19.9	36.7	46.0	-9.3
4.265	16.7	19.9	36.6	46.0	-9.4
4.082	16.0	19.9	35.9	46.0	-10.1
4.023	15.7	19.9	35.6	46.0	-10.4
3.843	15.6	19.9	35.5	46.0	-10.5

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

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

DH5, GFSK

2DH5, pi/4-DQPSK

3DH5, 8-DPSK

CHANNELS TESTED

Low Ch. 2402

Mid Ch. 2441 MHz

High Ch. 2480

POWER SETTINGS INVESTIGATED

48 VDC

POE

CONFIGURATIONS INVESTIGATED

SYNA0194 - 7

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
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	4/22/2016	12 mo
Antenna - Biconilog	Teseq	CBL 6141B	AXR	6/30/2016	24 mo
Cable	N/A	Bilog Cables	EVA	3/11/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AOL	3/11/2016	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2/3/2016	24 mo
Cable	N/A	Double Ridge Horn Cables	EVB	3/11/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	3/11/2016	12 mo
Attenuator	Coaxicom	3910-20	AXZ	5/18/2016	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-08	AHV	NCR	0 mo
Cable	Northwest EMC	20MHz-6GHz, Radiated Immunity	EVD	1/29/2016	12 mo
Cable	None	Standard Gain Horns Cable	EVF	3/11/2016	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	3/11/2016	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AIV	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	11/4/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	3/11/2016	12 mo
Cable	ESM Cable Corp.	KMKM-72	EVY	11/4/2015	12 mo

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


TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

SPURIOUS RADIATED EMISSIONS

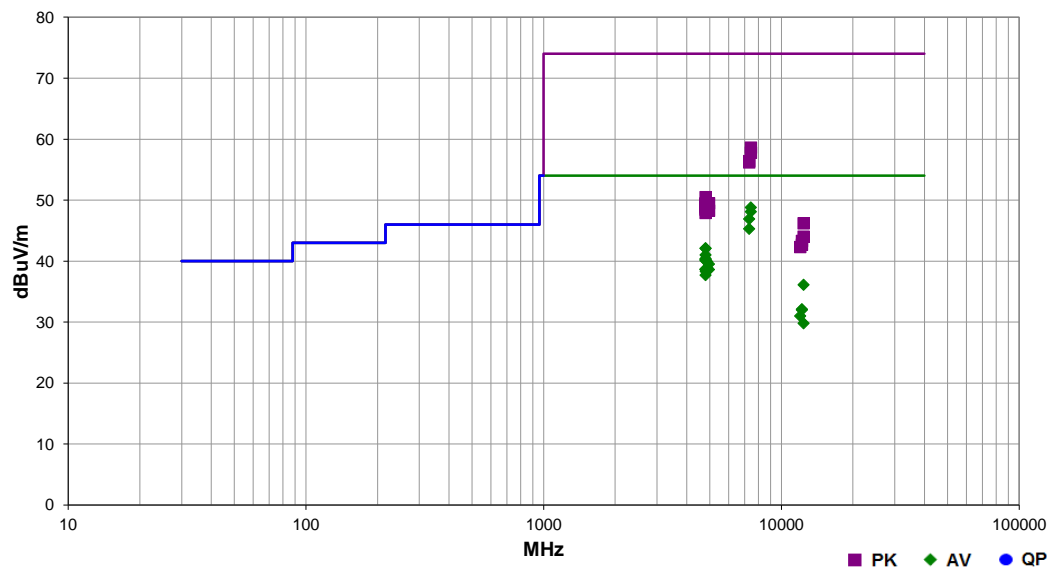


PSA-ESCI 2016.07.22
EmiR5 2016.07.22.1

Work Order:	SYNA0194	Date:	09/07/16	
Project:	None	Temperature:	23.4 °C	
Job Site:	EV01	Humidity:	46.8% RH	
Serial Number:	850-1631004	Barometric Pres.:	1023 mbar	
EUT:		TPv2 (DAP 2)		
Configuration: 7				
Customer:		Walt Disney Parks and Resorts US, Inc.		
Attendees:		Hattie Spetla		
EUT Power:		Please refer to the data comments for EUT Power		
Operating Mode:		Tx continuous, BT Please reference the data comments for operating mode		
Deviations:		None		
Comments:		face plate # 3691-3605. Please reference the data comments for data rate, frequency, channel, EUT power and orientation. The EUT can operate on either POE or 24VDC		

Test Specifications	FCC 15.247:2016	Test Method	ANSI C63.10:2013
---------------------	-----------------	-------------	------------------

Run #	43	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
7439.930	30.3	18.5	1.0	76.0	3.0	0.0	Vert	AV	0.0	48.8	54.0	-5.2	High Ch. 2480MHz, DH5, POE, EUT Horizontal
7440.060	29.6	18.5	1.7	20.0	3.0	0.0	Horz	AV	0.0	48.1	54.0	-5.9	High Ch. 2480MHz, DH5, POE, EUT On Side
7322.760	29.1	17.8	1.1	79.0	3.0	0.0	Vert	AV	0.0	46.9	54.0	-7.1	Mid Ch. 2441MHz, DH5, POE, EUT Horizontal
7323.055	27.5	17.8	1.0	139.0	3.0	0.0	Horz	AV	0.0	45.3	54.0	-8.7	Mid Ch. 2441MHz, DH5, POE, EUT On Side
4803.970	33.1	9.0	1.1	254.0	3.0	0.0	Vert	AV	0.0	42.1	54.0	-11.9	Low Ch. 2402MHz, DH5, POE, EUT Horizontal
4803.975	33.1	9.0	1.0	252.0	3.0	0.0	Vert	AV	0.0	42.1	54.0	-11.9	Low Ch. 2402MHz, DH5, 24VDC, EUT Horizontal
4803.940	32.0	9.0	2.1	69.0	3.0	0.0	Horz	AV	0.0	41.0	54.0	-13.0	Low Ch. 2402MHz, DH5, POE, EUT On Side
4803.955	31.4	9.0	1.0	343.0	3.0	0.0	Vert	AV	0.0	40.4	54.0	-13.6	Low Ch. 2402MHz, DH5, POE, EUT Vertical
4804.035	31.3	9.0	1.4	16.0	3.0	0.0	Horz	AV	0.0	40.3	54.0	-13.7	Low Ch. 2402MHz, DH5, POE, EUT Vertical
4803.990	31.2	9.0	1.7	3.0	3.0	0.0	Horz	AV	0.0	40.2	54.0	-13.8	Low Ch. 2402MHz, DH5, 24VDC, EUT On Side
4803.980	31.1	9.0	1.7	3.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	Low Ch. 2402MHz, 2DH5, POE, EUT On Side
4881.915	30.7	9.2	1.1	226.0	3.0	0.0	Vert	AV	0.0	39.9	54.0	-14.1	Mid Ch. 2441MHz, DH5, POE, EUT Horizontal
4959.940	30.1	9.4	1.0	230.0	3.0	0.0	Vert	AV	0.0	39.5	54.0	-14.5	High Ch. 2480MHz, DH5, POE, EUT Horizontal
4882.070	29.7	9.2	2.1	323.0	3.0	0.0	Horz	AV	0.0	38.9	54.0	-15.1	Mid Ch. 2441MHz, DH5, POE, EUT On Side
4804.070	29.7	9.0	1.0	357.0	3.0	0.0	Vert	AV	0.0	38.7	54.0	-15.3	Low Ch. 2402MHz, DH5, POE, EUT On Side
4803.980	29.6	9.0	1.1	254.0	3.0	0.0	Vert	AV	0.0	38.6	54.0	-15.4	Low Ch. 2402MHz, 2DH5, POE, EUT Horizontal
4804.070	29.6	9.0	1.1	254.0	3.0	0.0	Vert	AV	0.0	38.6	54.0	-15.4	Low Ch. 2402MHz, 3DH5, POE, EUT Horizontal
4959.985	29.2	9.4	3.8	205.0	3.0	0.0	Horz	AV	0.0	38.6	54.0	-15.4	High Ch. 2480MHz, DH5, POE, EUT On Side
7440.630	40.1	18.5	1.0	76.0	3.0	0.0	Vert	PK	0.0	58.6	74.0	-15.4	High Ch. 2480MHz, DH5, POE, EUT Horizontal
4804.165	29.3	9.0	1.1	276.0	3.0	0.0	Horz	AV	0.0	38.3	54.0	-15.7	Low Ch. 2402MHz, DH5, POE, EUT Horizontal
7440.765	39.3	18.5	1.7	20.0	3.0	0.0	Horz	PK	0.0	57.8	74.0	-16.2	High Ch. 2480MHz, DH5, POE, EUT On Side
4804.035	28.7	9.0	1.7	3.0	3.0	0.0	Horz	AV	0.0	37.7	54.0	-16.3	Low Ch. 2402MHz, 3DH5, POE, EUT On Side
7322.600	38.6	17.8	1.1	79.0	3.0	0.0	Vert	PK	0.0	56.4	74.0	-17.6	Mid Ch. 2441MHz, DH5, POE, EUT Horizontal
7323.075	38.4	17.8	1.0	139.0	3.0	0.0	Horz	PK	0.0	56.2	74.0	-17.8	Mid Ch. 2441MHz, DH5, POE, EUT On Side
12399.480	31.1	5.0	1.9	310.0	3.0	0.0	Vert	AV	0.0	36.1	54.0	-17.9	High Ch. 2480MHz, DH5, POE, EUT On Side
12197.980	27.7	4.4	1.0	50.0	3.0	0.0	Horz	AV	0.0	32.1	54.0	-21.9	Mid Ch. 2441MHz, DH5, POE, EUT Horizontal
12201.090	27.6	4.4	1.0	164.0	3.0	0.0	Vert	AV	0.0	32.0	54.0	-22.0	Mid Ch. 2441MHz, DH5, POE, EUT On Side
12010.040	27.7	3.3	1.0	64.0	3.0	0.0	Horz	AV	0.0	31.0	54.0	-23.0	Low Ch. 2402MHz, DH5, POE, EUT Horizontal
4803.955	41.5	9.0	1.0	252.0	3.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	Low Ch. 2402MHz, DH5, 24VDC, EUT Horizontal
12399.160	24.8	5.0	1.0	11.0	3.0	0.0	Horz	AV	0.0	29.8	54.0	-24.2	High Ch. 2480MHz, DH5, POE, EUT Horizontal
4803.850	40.5	9.0	1.1	254.0	3.0	0.0	Vert	PK	0.0	49.5	74.0	-24.5	Low Ch. 2402MHz, DH5, POE, EUT Horizontal

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
4960.085	40.1	9.4	1.0	230.0	3.0	0.0	Vert	PK	0.0	49.5	74.0	-24.5	High Ch. 2480MHz, DH5, POE, EUT Horizontal
4804.730	40.4	9.0	1.4	16.0	3.0	0.0	Horz	PK	0.0	49.4	74.0	-24.6	Low Ch. 2402MHz, DH5, POE, EUT Vertical
4804.060	40.4	9.0	1.0	343.0	3.0	0.0	Vert	PK	0.0	49.4	74.0	-24.6	Low Ch. 2402MHz, DH5, POE, EUT Vertical
4804.320	40.2	9.0	1.7	3.0	3.0	0.0	Horz	PK	0.0	49.2	74.0	-24.8	Low Ch. 2402MHz, DH5, 24VDC, EUT On Side
4804.170	40.1	9.0	1.1	254.0	3.0	0.0	Vert	PK	0.0	49.1	74.0	-24.9	Low Ch. 2402MHz, 3DH5, POE, EUT Horizontal
4803.565	40.1	8.9	2.1	69.0	3.0	0.0	Horz	PK	0.0	49.0	74.0	-25.0	Low Ch. 2402MHz, DH5, POE, EUT On Side
4803.740	40.0	9.0	1.7	3.0	3.0	0.0	Horz	PK	0.0	49.0	74.0	-25.0	Low Ch. 2402MHz, 2DH5, POE, EUT On Side
4803.225	39.9	8.9	1.1	276.0	3.0	0.0	Horz	PK	0.0	48.8	74.0	-25.2	Low Ch. 2402MHz, DH5, POE, EUT Horizontal
4881.560	39.6	9.2	1.1	226.0	3.0	0.0	Vert	PK	0.0	48.8	74.0	-25.2	Mid Ch. 2441MHz, DH5, POE, EUT Horizontal
4881.985	39.5	9.2	2.1	323.0	3.0	0.0	Horz	PK	0.0	48.7	74.0	-25.3	Mid Ch. 2441MHz, DH5, POE, EUT On Side
4803.490	39.6	8.9	1.1	254.0	3.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	Low Ch. 2402MHz, 2DH5, POE, EUT Horizontal
4804.290	39.4	9.0	1.0	357.0	3.0	0.0	Vert	PK	0.0	48.4	74.0	-25.6	Low Ch. 2402MHz, DH5, POE, EUT On Side
4959.775	38.9	9.4	3.8	205.0	3.0	0.0	Horz	PK	0.0	48.3	74.0	-25.7	High Ch. 2480MHz, DH5, POE, EUT On Side
4802.755	39.0	8.9	1.7	3.0	3.0	0.0	Horz	PK	0.0	47.9	74.0	-26.1	Low Ch. 2402MHz, 3DH5, POE, EUT On Side
12399.090	41.2	5.0	1.9	310.0	3.0	0.0	Vert	PK	0.0	46.2	74.0	-27.8	High Ch. 2480MHz, DH5, POE, EUT On Side
12398.180	39.0	5.0	1.0	11.0	3.0	0.0	Horz	PK	0.0	44.0	74.0	-30.0	High Ch. 2480MHz, DH5, POE, EUT Horizontal
12201.420	38.9	4.4	1.0	164.0	3.0	0.0	Vert	PK	0.0	43.3	74.0	-30.7	Mid Ch. 2441MHz, DH5, POE, EUT On Side
12199.850	38.3	4.4	1.0	50.0	3.0	0.0	Horz	PK	0.0	42.7	74.0	-31.3	Mid Ch. 2441MHz, DH5, POE, EUT Horizontal
12012.330	39.0	3.3	1.0	64.0	3.0	0.0	Horz	PK	0.0	42.3	74.0	-31.7	Low Ch. 2402MHz, DH5, POE, EUT Horizontal

SPURIOUS RADIATED EMISSIONS

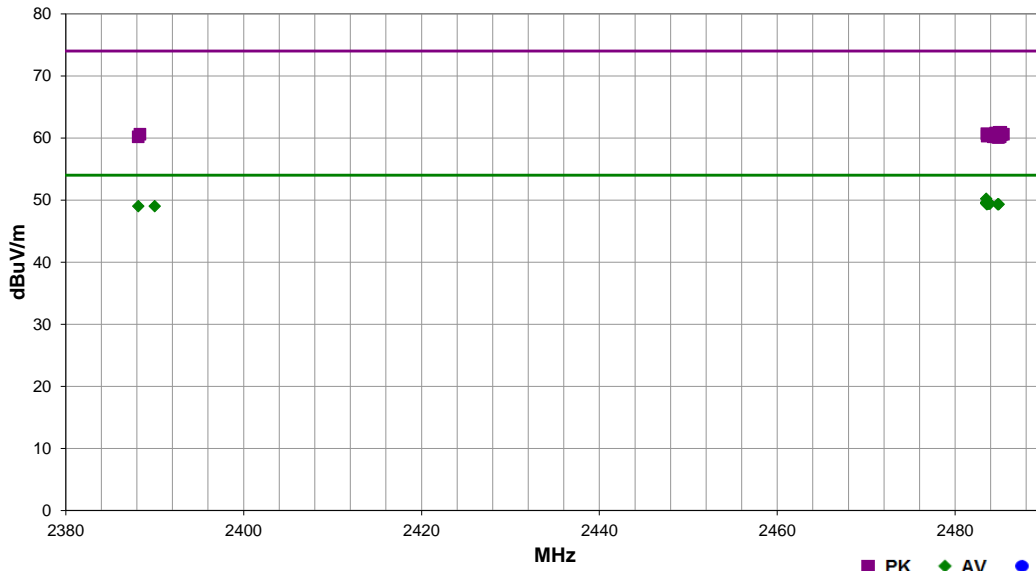


PSA-ESCI 2016.07.22
EmiR5 2016.07.22.1

Work Order:	SYNA0194	Date:	09/07/16		
Project:	None	Temperature:	23.4 °C		
Job Site:	EV01	Humidity:	46.8% RH		
Serial Number:	850-1631004	Barometric Pres.:	1023 mbar	Tested by:	Jared Ison
EUT:	TPv2 (DAP 2)				
Configuration:	7				
Customer:	Walt Disney Parks and Resorts US, Inc.				
Attendees:	None				
EUT Power:	Please refer to the data comments for EUT Power				
Operating Mode:	Tx continuous, BT Please reference the data comments for operating mode				
Deviations:	None				
Comments:	face plate # 3691-3605. Please reference the data comments for data rate, frequency, channel, EUT power and orientation. The EUT can operate on either POE or 24VDC				

Test Specifications	Test Method
FCC 15.247:2016	ANSI C63.10:2013

Run #	45	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
2483.507	31.3	-1.1	1.0	23.0	3.0	20.0	Vert	AV	0.0	50.2	54.0	-3.8	High Ch. 2480MHz, DH5, POE, EUT Horz
2483.593	30.7	-1.1	3.0	327.0	3.0	20.0	Horz	AV	0.0	49.6	54.0	-4.4	High Ch. 2480MHz, DH5, POE, EUT On Side
2483.690	30.7	-1.1	1.0	232.0	3.0	20.0	Horz	AV	0.0	49.6	54.0	-4.4	High Ch. 2480MHz, DH5, 24VDC, EUT Vert
2483.500	30.7	-1.1	1.0	242.0	3.0	20.0	Vert	AV	0.0	49.6	54.0	-4.4	High Ch. 2480MHz, DH5, 24VDC, EUT Horz
2483.563	30.7	-1.1	1.0	360.0	3.0	20.0	Horz	AV	0.0	49.6	54.0	-4.4	High Ch. 2480MHz, DH5, 24VDC, EUT On Side
2483.530	30.6	-1.1	1.0	314.0	3.0	20.0	Vert	AV	0.0	49.5	54.0	-4.5	High Ch. 2480MHz, DH5, POE, EUT On Side
2483.507	30.6	-1.1	1.0	108.0	3.0	20.0	Horz	AV	0.0	49.5	54.0	-4.5	High Ch. 2480MHz, DH5, POE, EUT Vert
2483.520	30.6	-1.1	1.0	338.0	3.0	20.0	Horz	AV	0.0	49.5	54.0	-4.5	High Ch. 2480MHz, DH5, 24VDC, EUT Horz
2483.553	30.5	-1.1	3.3	0.0	3.0	20.0	Vert	AV	0.0	49.4	54.0	-4.6	High Ch. 2480MHz, DH5, POE, EUT Vert
2483.910	30.5	-1.1	1.0	44.0	3.0	20.0	Horz	AV	0.0	49.4	54.0	-4.6	High Ch. 2480MHz, DH5, POE, EUT Horz
2483.780	30.5	-1.1	1.0	290.0	3.0	20.0	Vert	AV	0.0	49.4	54.0	-4.6	High Ch. 2480MHz, DH5, 24VDC, EUT Vert
2483.577	30.4	-1.1	3.9	0.0	3.0	20.0	Vert	AV	0.0	49.3	54.0	-4.7	High Ch. 2480MHz, DH5, 24VDC, EUT On Side
2484.900	30.4	-1.1	1.0	172.0	3.0	20.0	Vert	AV	0.0	49.3	54.0	-4.7	High Ch. 2480MHz, 2DH5, POE, EUT Horz
2484.813	30.4	-1.1	1.0	172.0	3.0	20.0	Vert	AV	0.0	49.3	54.0	-4.7	High Ch. 2480MHz, 3DH5, POE, EUT Horz
2388.167	30.6	-1.6	1.2	50.0	3.0	20.0	Horz	AV	0.0	49.0	54.0	-5.0	Low Ch. 2402MHz, DH5, POE, EUT On Side
2390.000	30.6	-1.6	2.9	34.0	3.0	20.0	Vert	AV	0.0	49.0	54.0	-5.0	Low Ch. 2402MHz, DH5, POE, EUT Horz
2484.963	42.0	-1.1	1.0	108.0	3.0	20.0	Horz	PK	0.0	60.9	74.0	-13.1	High Ch. 2480MHz, DH5, POE, EUT Vert
2485.127	42.0	-1.1	1.0	290.0	3.0	20.0	Vert	PK	0.0	60.9	74.0	-13.1	High Ch. 2480MHz, DH5, 24VDC, EUT Vert
2484.550	41.9	-1.1	3.0	327.0	3.0	20.0	Horz	PK	0.0	60.8	74.0	-13.2	High Ch. 2480MHz, DH5, POE, EUT On Side
2485.100	41.8	-1.1	1.0	338.0	3.0	20.0	Horz	PK	0.0	60.7	74.0	-13.3	High Ch. 2480MHz, DH5, 24VDC, EUT Horz
2483.570	41.8	-1.1	3.9	0.0	3.0	20.0	Vert	PK	0.0	60.7	74.0	-13.3	High Ch. 2480MHz, DH5, 24VDC, EUT On Side
2485.433	41.7	-1.1	1.0	314.0	3.0	20.0	Vert	PK	0.0	60.6	74.0	-13.4	High Ch. 2480MHz, DH5, POE, EUT On Side
2388.340	42.2	-1.6	1.2	50.0	3.0	20.0	Horz	PK	0.0	60.6	74.0	-13.4	Low Ch. 2402MHz, DH5, POE, EUT On Side
2485.200	41.6	-1.1	1.0	232.0	3.0	20.0	Horz	PK	0.0	60.5	74.0	-13.5	High Ch. 2480MHz, DH5, 24VDC, EUT Vert
2483.757	41.6	-1.1	1.0	360.0	3.0	20.0	Horz	PK	0.0	60.5	74.0	-13.5	High Ch. 2480MHz, DH5, 24VDC, EUT On Side
2483.600	41.4	-1.1	1.0	23.0	3.0	20.0	Vert	PK	0.0	60.3	74.0	-13.7	High Ch. 2480MHz, DH5, POE, EUT Horz
2484.293	41.3	-1.1	1.0	44.0	3.0	20.0	Horz	PK	0.0	60.2	74.0	-13.8	High Ch. 2480MHz, DH5, POE, EUT Horz
2485.067	41.3	-1.1	1.0	242.0	3.0	20.0	Vert	PK	0.0	60.2	74.0	-13.8	High Ch. 2480MHz, DH5, 24VDC, EUT Horz
2388.153	41.8	-1.6	2.9	34.0	3.0	20.0	Vert	PK	0.0	60.2	74.0	-13.8	Low Ch. 2402MHz, DH5, POE, EUT Horz

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
2484.800	41.3	-1.1	1.0	172.0	3.0	20.0	Vert	PK	0.0	60.2	74.0	-13.8	High Ch. 2480MHz, 3DH5, POE, EUT Horz
2484.907	41.2	-1.1	3.3	0.0	3.0	20.0	Vert	PK	0.0	60.1	74.0	-13.9	High Ch. 2480MHz, DH5, POE, EUT Vert
2484.793	41.2	-1.1	1.0	172.0	3.0	20.0	Vert	PK	0.0	60.1	74.0	-13.9	High Ch. 2480MHz, 2DH5, POE, EUT Horz

OUTPUT POWER

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
Power Supply - DC	Topward	TPS-2000	TPD	NCR	NCR
Meter - Multimeter	Tektronix	DMM912	MMH	2/17/2016	2/17/2019
Generator - Signal	Keysight	N5182B	TFU	10/27/2015	10/27/2018
Cable	ESM Cable Corp.	TT	EV1	NCR	NCR
Attenuator	S.M. Electronics	SA26B-20	AUY	6/27/2016	6/27/2017
Block - DC	Pasternack	PE8210	AME	10/1/2015	10/1/2016
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFP	8/10/2016	8/10/2017


TEST DESCRIPTION

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.

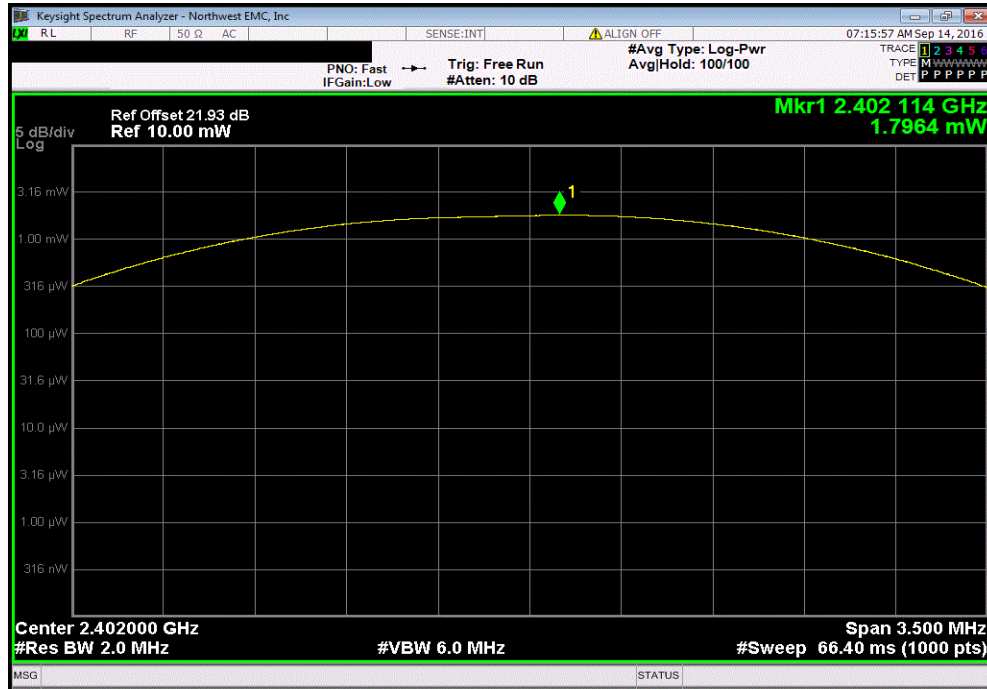
De Facto EIRP Limit: The EUT meets the de facto EIRP limit of +36 dBm.

OUTPUT POWER

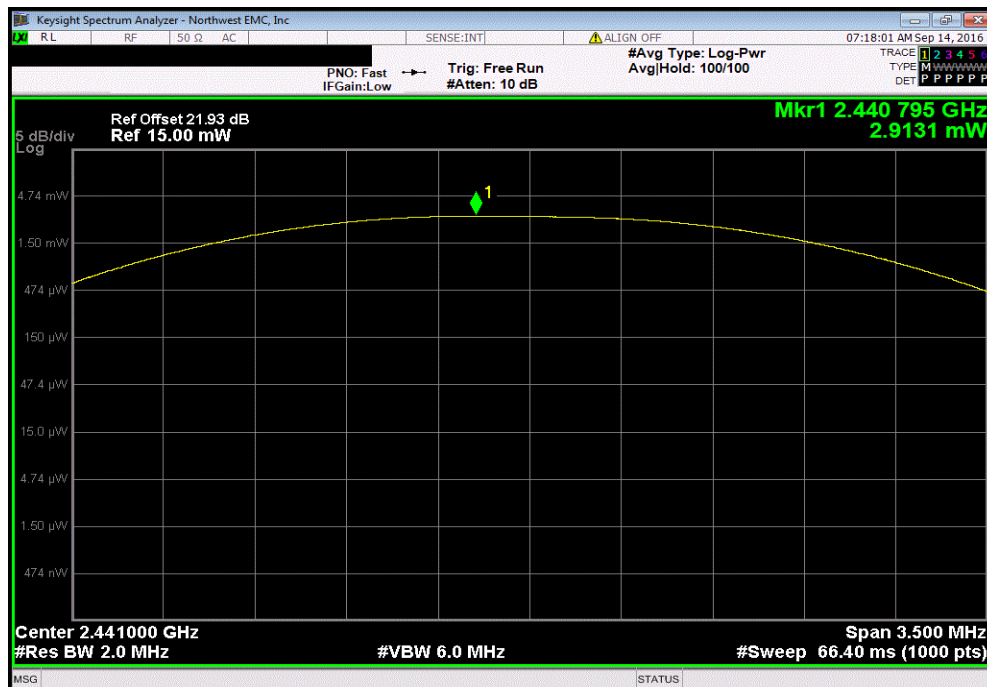
EUT: TPv2 (DAP 2)		Work Order: SYNA0194	
Serial Number: 850-1631035		Date: 09/13/16	
Customer: Walt Disney Parks and Resorts US, Inc.		Temperature: 23.7 °C	
Attendees: Hattie Spetla		Humidity: 37.5% RH	
Project: None		Barometric Pres.: 1015 mbar	
Tested by: Jared Ison	Power: 24 VDC	Job Site: EV06	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2016		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Value	Limit (<)
DH5, GFSK			
	Low Channel	1.796 mW	125 mW
	Mid Channel	2.913 mW	125 mW
	High Channel	4.581 mW	125 mW
2DH5, pi/4-DQPSK			
	Low Channel	1.216 mW	125 mW
	Mid Channel	2.148 mW	125 mW
	High Channel	3.666 mW	125 mW
3DH5, 8-DPSK			
	Low Channel	1.311 mW	125 mW
	Mid Channel	2.299 mW	125 mW
	High Channel	3.854 mW	125 mW

OUTPUT POWER

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

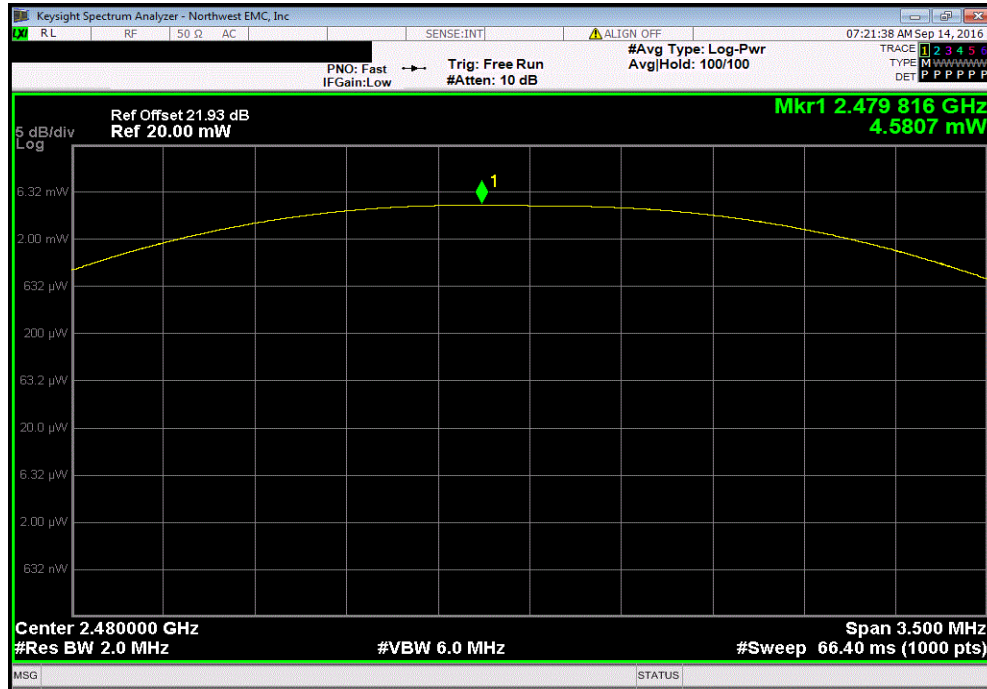


DH5, GFSK, Mid Channel						
				Value	Limit (<)	Result
				2.913 mW	125 mW	Pass

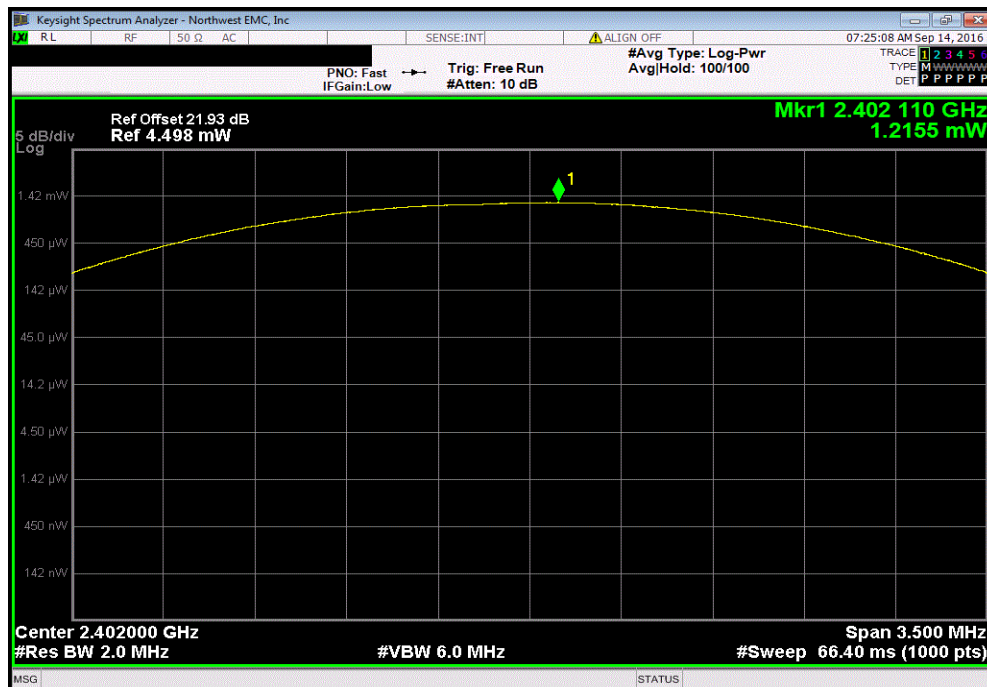


OUTPUT POWER

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

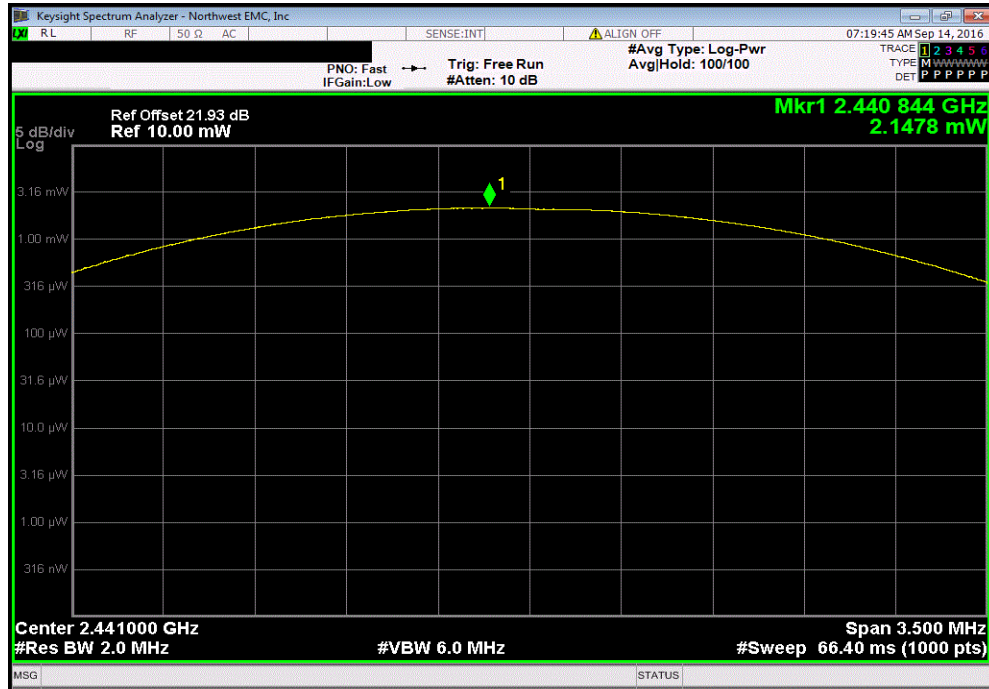


2DH5, pi/4-DQPSK, Low Channel						
				Value	Limit (<)	Result
				1.216 mW	125 mW	Pass

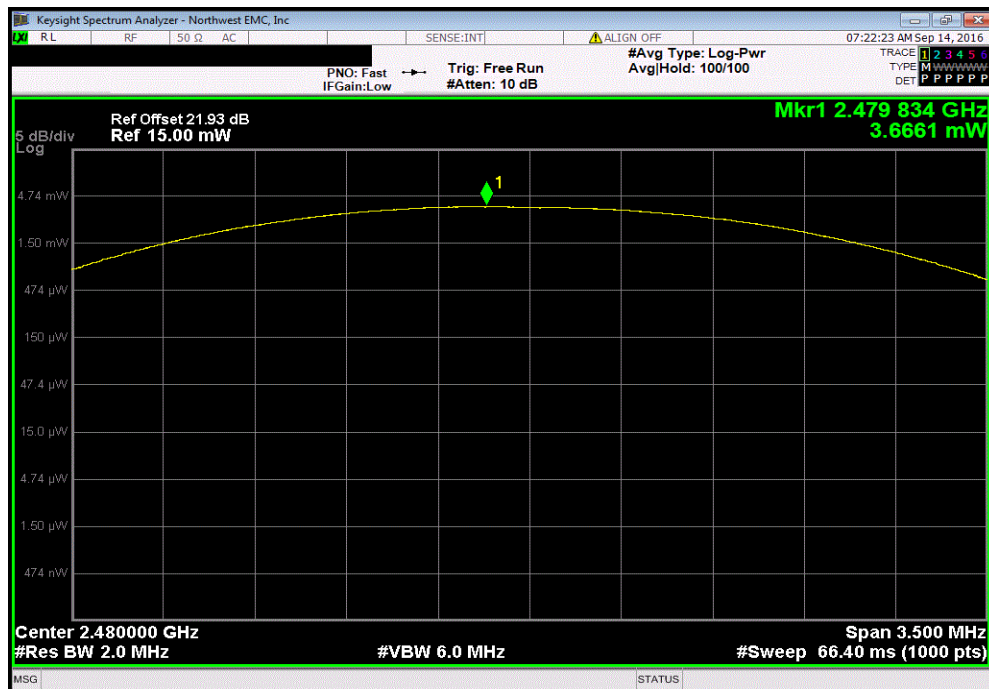


OUTPUT POWER

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

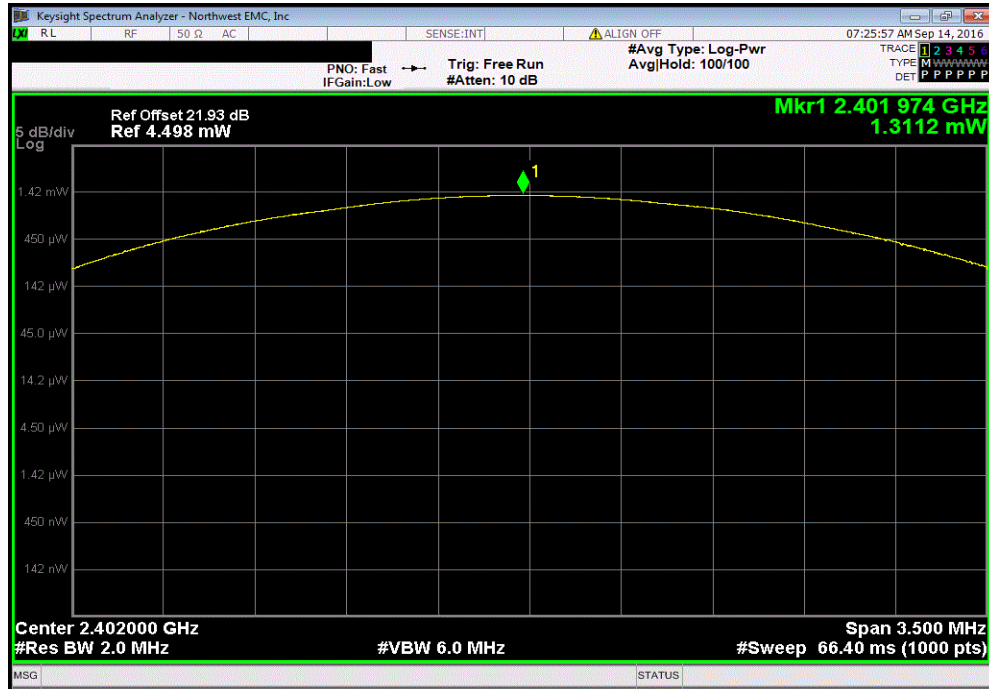


2DH5, pi/4-DQPSK, High Channel						
				Value	Limit (<)	Result
				3.666 mW	125 mW	Pass

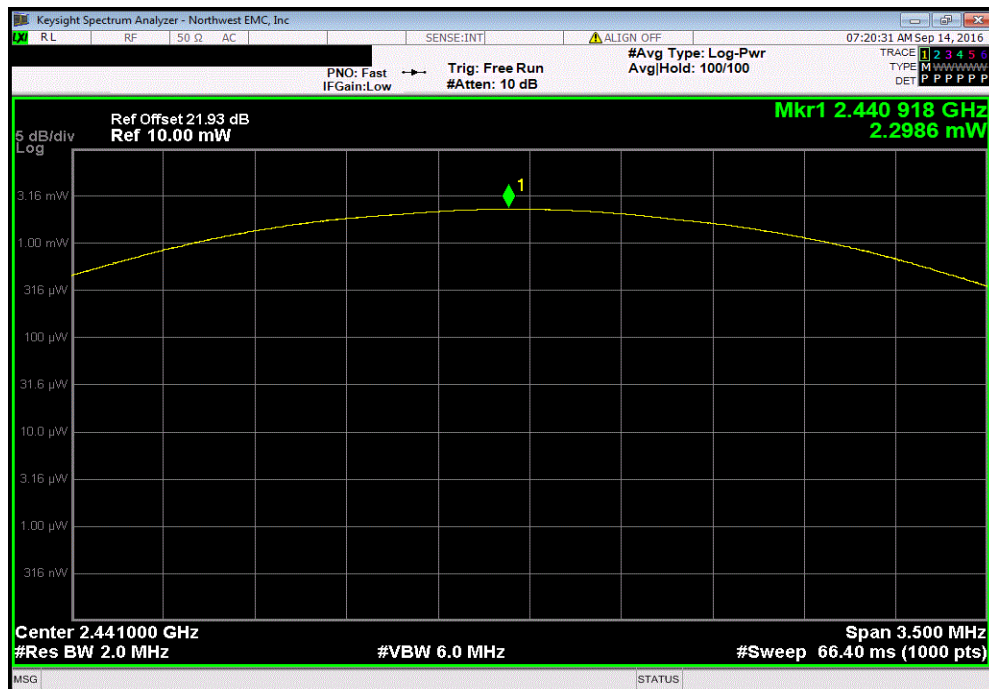


OUTPUT POWER

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



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



OUTPUT POWER

3DH5, 8-DPSK, High Channel						
				Value	Limit	Result
				3.854 mW	125 mW	Pass

