



adidas International, Inc.

miCoach SMART BALL

FCC 15.207:2014

FCC 15.247:2014

Report #: ADID0013



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

CERTIFICATE OF TEST

Last Date of Test: April 02, 2014
adidas International, Inc.
Model: miCoach SMART BALL

Emissions

Test Description	Specification	Test Method	Pass/Fail
Duty Cycle	FCC 15.247:2014	ANSI C63.10:2009	Pass
Occupied Bandwidth	FCC 15.247:2014	ANSI C63.10:2009	Pass
Output Power	FCC 15.247:2014	ANSI C63.10:2009	Pass
Power Spectral Density	FCC 15.247:2014	ANSI C63.10:2009	Pass
Band Edge Compliance	FCC 15.247:2014	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.247:2014	ANSI C63.10:2009	Pass
AC Powerline Conducted Emissions	FCC 15.207:2014	ANSI C63.10:2009	Pass

Deviations From Test Standards

None

Approved By:



Rod Munro, Operations Manager



NVLAP Lab Code: 200629-0
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.

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. This Report may only be duplicated in its entirety. 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.

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

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 Guide 65 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

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

European Union

European Commission – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and 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

KCC / 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.

Hong Kong

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

Vietnam

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

Russia

GOST – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

SCOPE

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

<http://www.nwemc.com/accreditations/>

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.

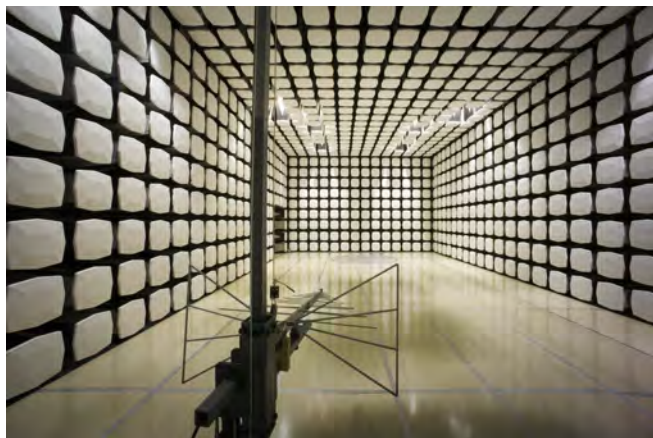
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is listed below. Our measurement 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 16-4-1 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)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	3.80	-3.80
AC Powerline Conducted Emissions (dB)	2.94	-2.94



Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Minnesota Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	Washington Labs NC01-05, SU02, SU07 19201 120 th Ave. NE Bothell, WA 98011 (425) 984-6600
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-2	2834B-1, 2834B-2, 2834B-3		2834E-1	2834C-1
NVLAP				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0





PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	adidas International, Inc.
Address:	5055 N Greeley Ave
City, State, Zip:	Portland, OR 97217
Test Requested By:	Christian DiBenedetto
Model:	miCoach SMART BALL
First Date of Test:	March 25, 2014
Last Date of Test:	April 02, 2014
Receipt Date of Samples:	March 25, 2014
Equipment Design Stage:	Preproduction
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
miCoach SMART BALL with Bluetooth radio module with 1 antenna(s).
Testing Objective:
To demonstrate compliance to FCC 15.247 requirements.

Configuration ADID0013- 1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Pit Board	adidas AG	Rev 3	9072-061

Configuration ADID0013- 2

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Pit Board	adidas AG	Rev 3	8946-35

Configuration ADID0013- 4

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Charging Station	adidas AG	V 0.0	DB0000594
Soccer Ball	adidas AG	miCoach SMART BALL	DB0000594

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Power Adapter	None	FY0501000	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power Leads	No	1.5m	No	AC Power Adapter	Charging Station
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Configuration ADID0018- 1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Pit Board	adidas AG	Rev 3	8946-35

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	3/25/2014	Duty Cycle	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	3/25/2014	Occupied Bandwidth	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	3/27/2014	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.
4	3/28/2014	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT was taken home by the client before the next scheduled test.
5	4/2/2014	Output Power	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.
6	4/2/2014	Power Spectral Density	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.
7	4/2/2014	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

DUTY CYCLE

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.	Interval
40GHz DC Block	Fairview Microwave	SD3379	AMJ	7/3/2013	12
NC02 Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	7/3/2013	12
Attenuator	Fairview Microwave	SA4014-20	TKE	2/13/2014	12
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	24
Signal Generator	Agilent	E4422B	TGR	7/21/2011	36

TEST DESCRIPTION

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.

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. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used.

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 was used during some of the other tests in this report to only measure during the burst duration.

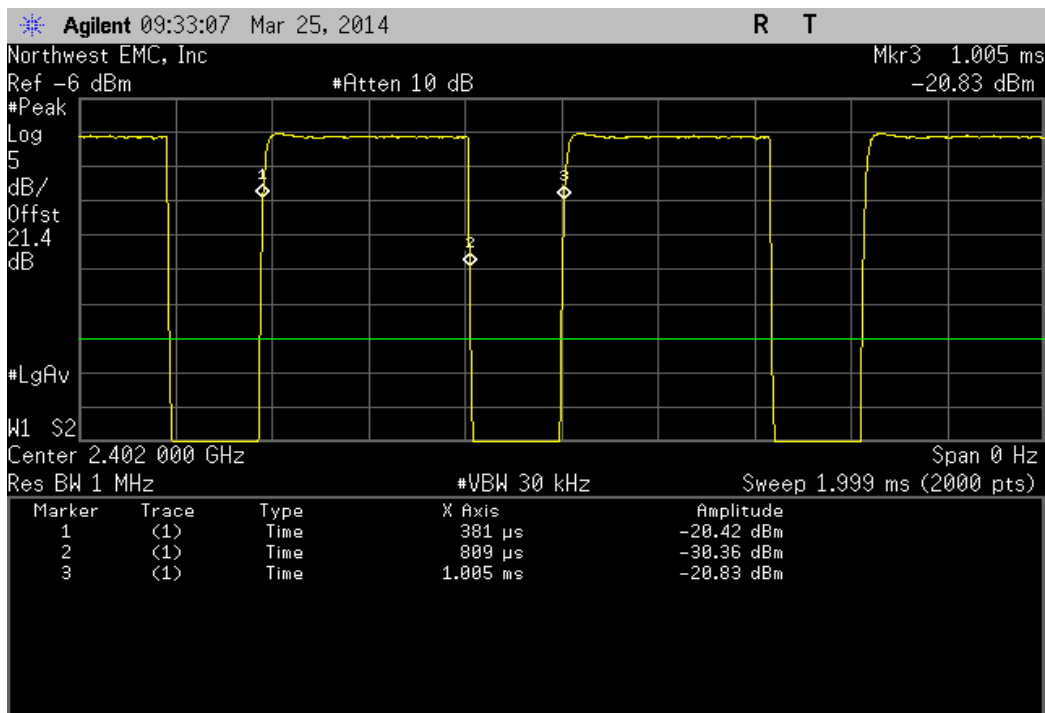


DUTY CYCLE

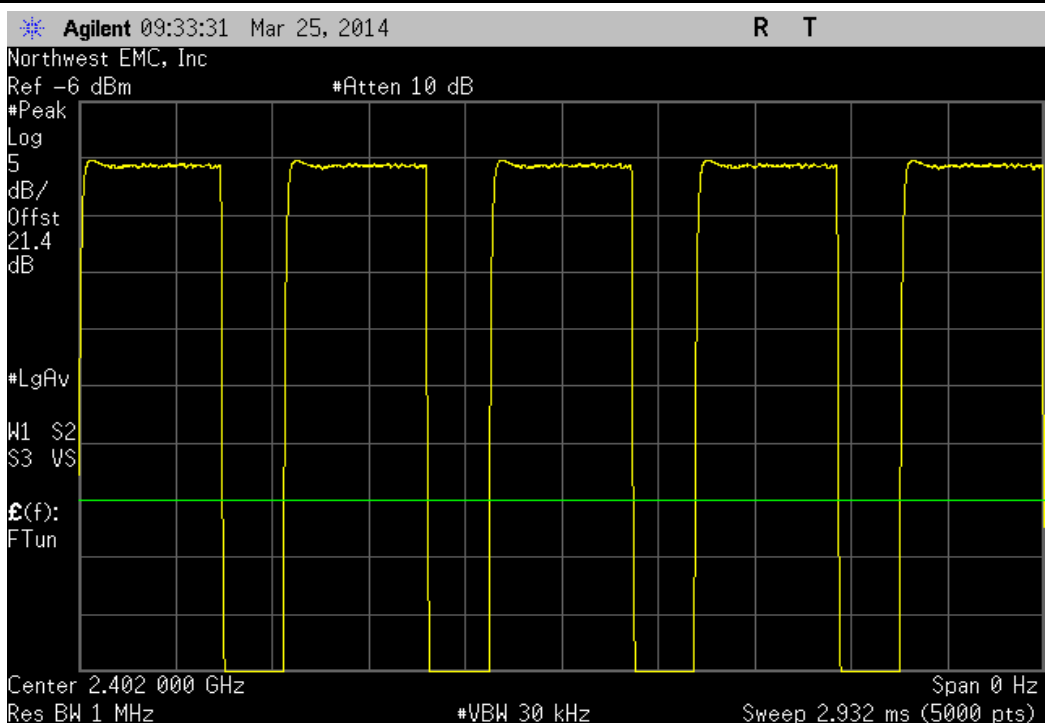
XMit 2013.08.15
PsaTx 2013.10.23

EUT: miCoach SMART BALL		Work Order: ADID0013					
Serial Number: 9072-061		Date: 03/25/14					
Customer: adidas International, Inc		Temperature: 23°C					
Attendees: Ben Valenti		Humidity: 32%					
Project: None		Barometric Pres.: 1005					
Tested by: Richard Mellroth		Power:					
Job Site: NC06							
TEST SPECIFICATIONS		Test Method					
FCC 15.247:2014		ANSI C63.10:2009					
COMMENTS							
Testing Pit Board with battery and coil, using DB Communicator for PC.							
DEVIATIONS FROM TEST STANDARD							
None							
Configuration #	1	Signature 					
		Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
BLE - Advertising							
	Low Channel 0, 2402 MHz	428 uS	624 uS	1	68.6	N/A	N/A
	Low Channel 0, 2402 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 12, 2426 MHz	428 uS	624 uS	1	68.6	N/A	N/A
	Mid Channel 12, 2426 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 39, 2480 MHz	427 uS	624 uS	1	68.4	N/A	N/A
	High Channel 39, 2480 MHz	N/A	N/A	5	N/A	N/A	N/A
BLE - Data							
	Low Channel 1, 2404 MHz	427 uS	624 uS	1	68.4	N/A	N/A
	Low Channel 1, 2404 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 18, 2442 MHz	428 uS	623 uS	1	68.7	N/A	N/A
	Mid Channel 18, 2442 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 38, 2478 MHz	428 uS	624 uS	1	68.6	N/A	N/A
	High Channel 38, 2478 MHz	N/A	N/A	5	N/A	N/A	N/A

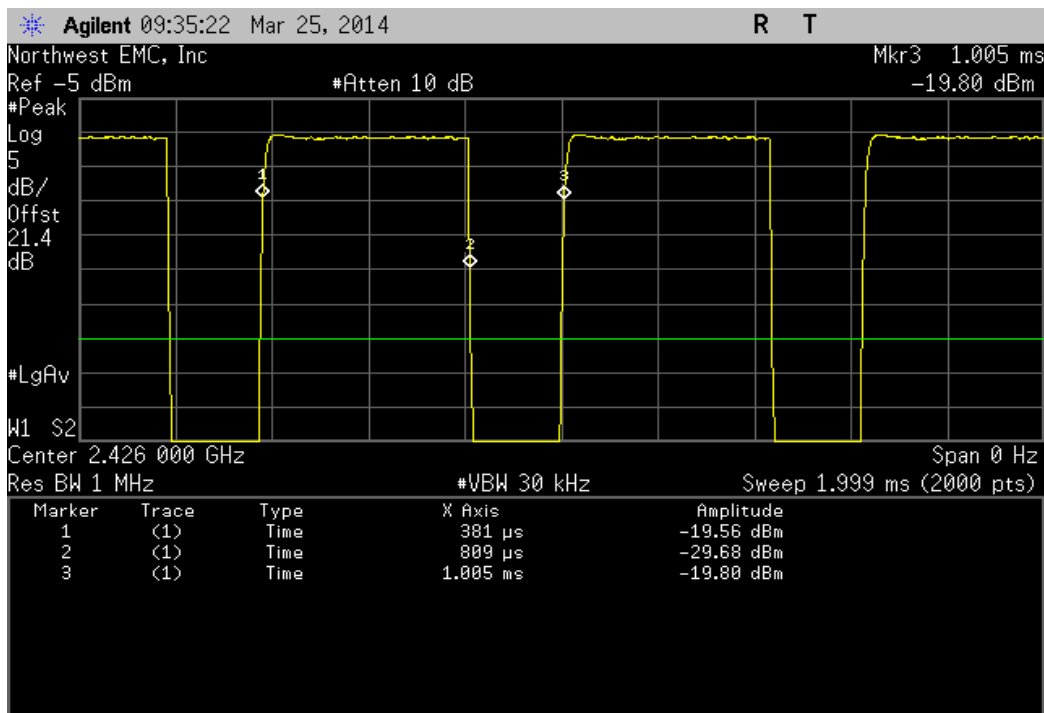
BLE - Advertising, Low Channel 0, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	428 uS	624 uS	1	68.6	N/A	N/A



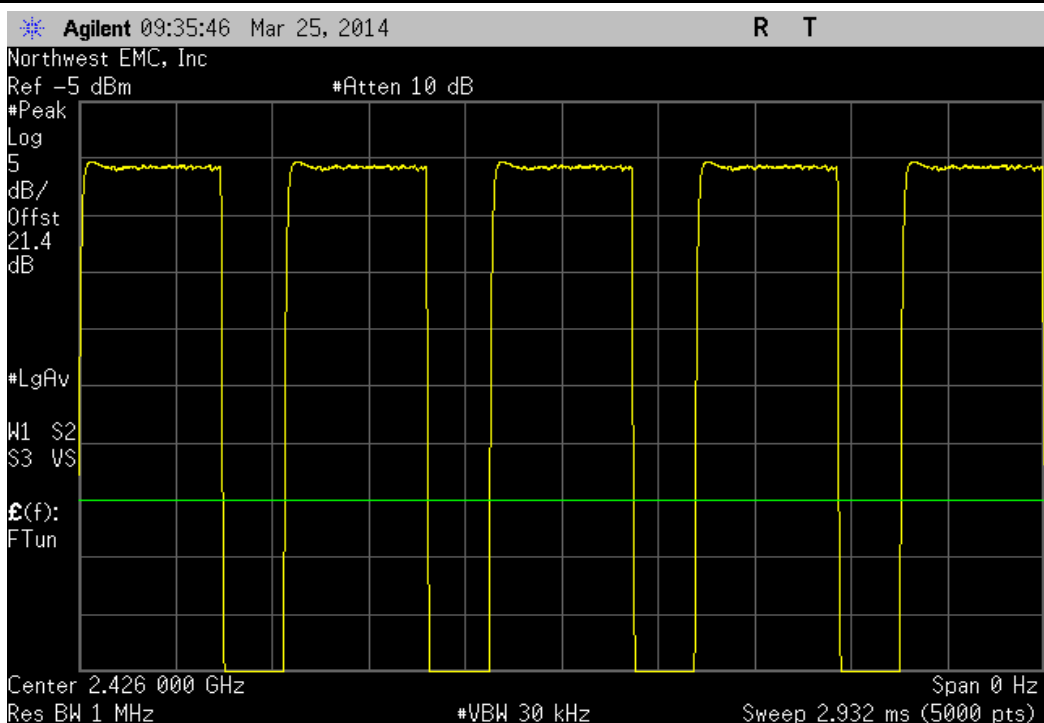
BLE - Advertising, Low Channel 0, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



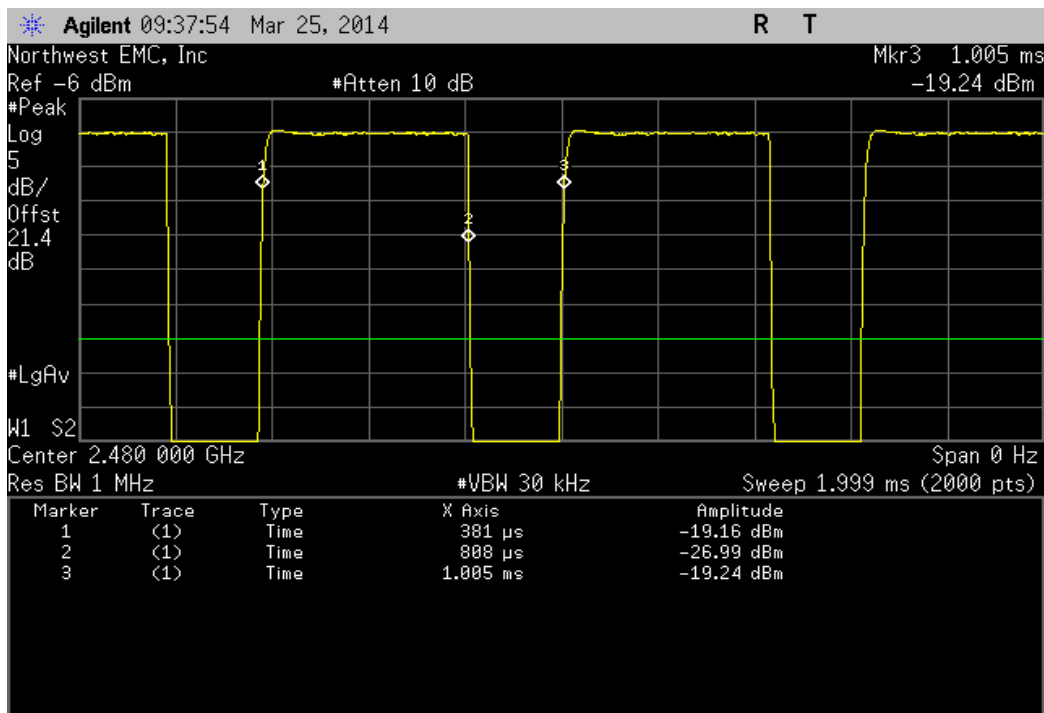
BLE - Advertising, Mid Channel 12, 2426 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	428 uS	624 uS	1	68.6	N/A	N/A



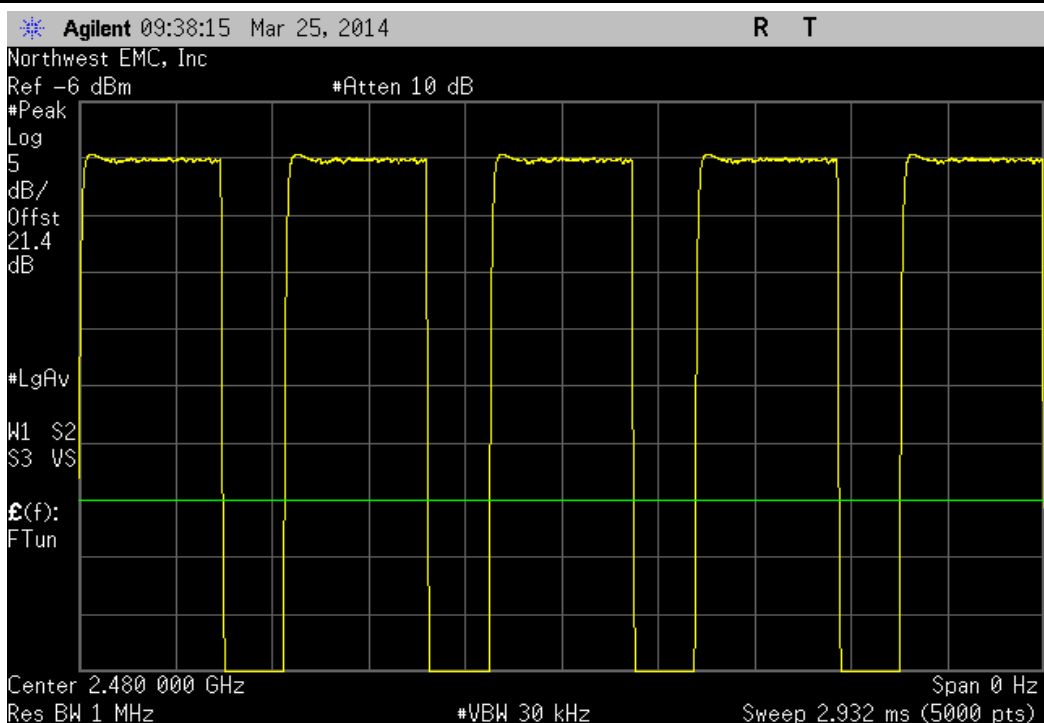
BLE - Advertising, Mid Channel 12, 2426 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



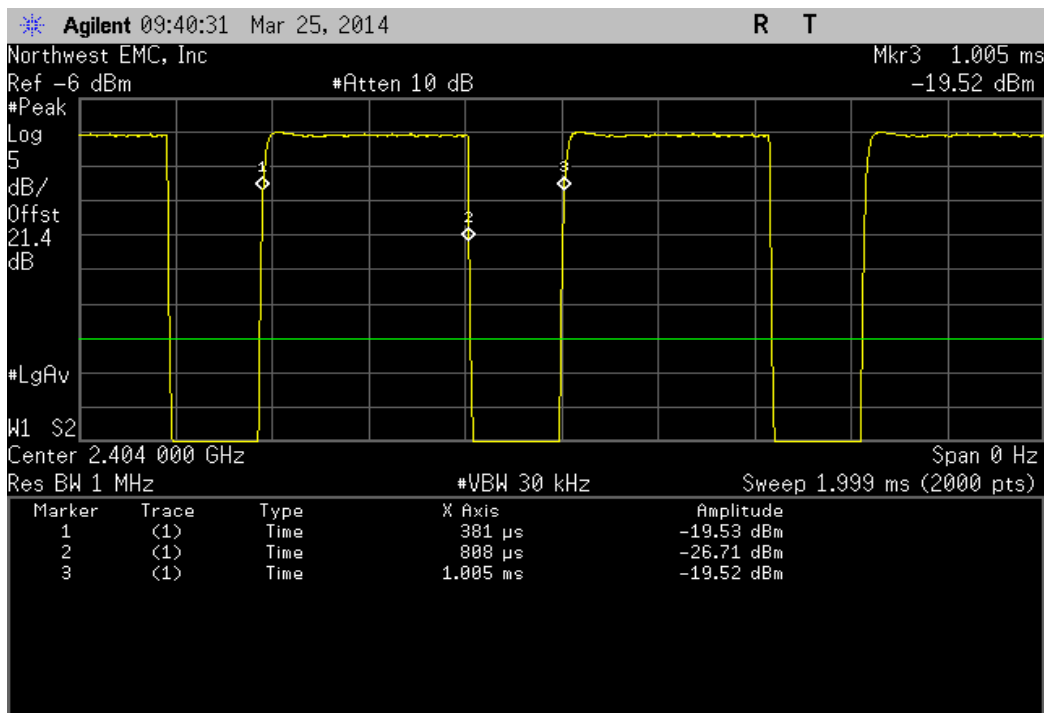
BLE - Advertising, High Channel 39, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	427 uS	624 uS	1	68.4	N/A	N/A



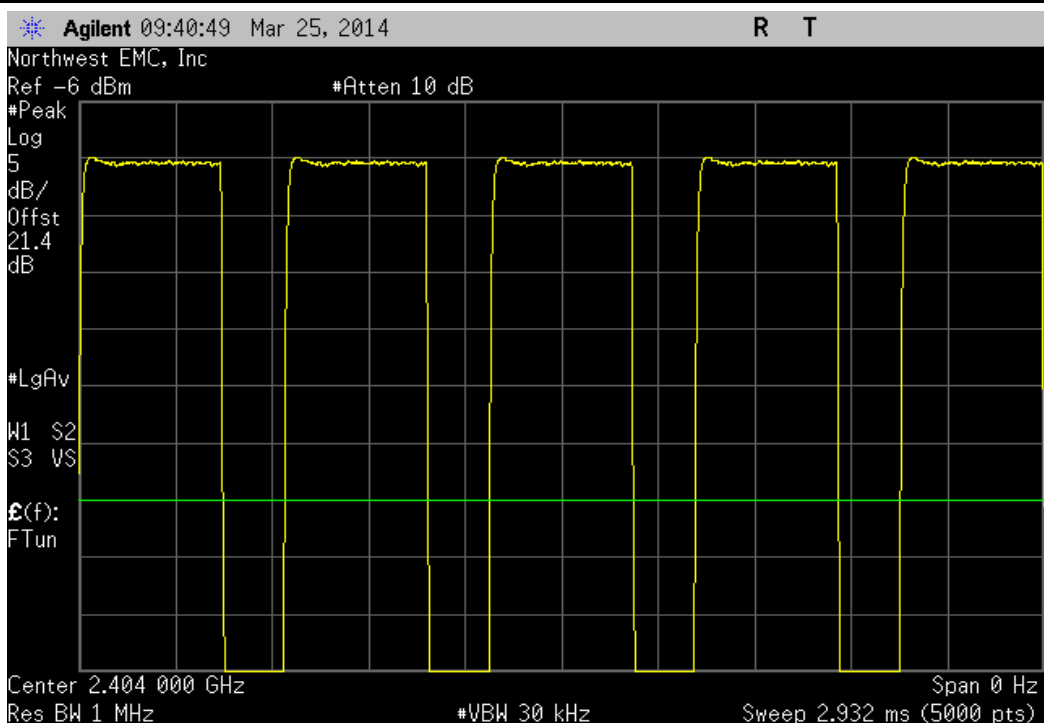
BLE - Advertising, High Channel 39, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



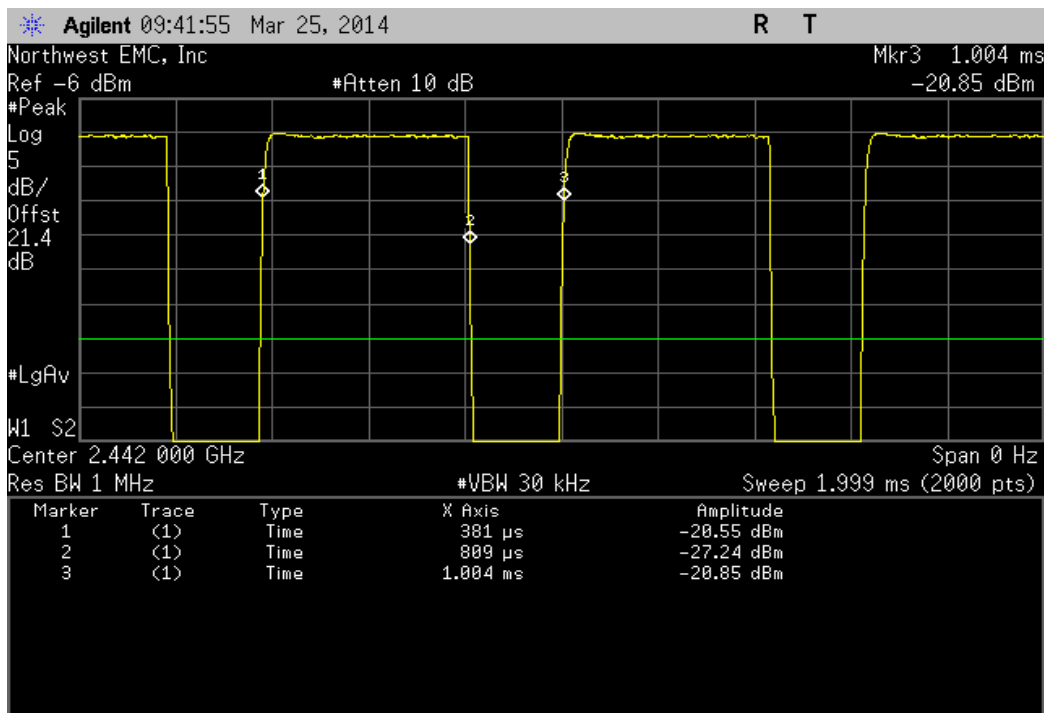
BLE - Data, Low Channel 1, 2404 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	427 uS	624 uS	1	68.4	N/A	N/A



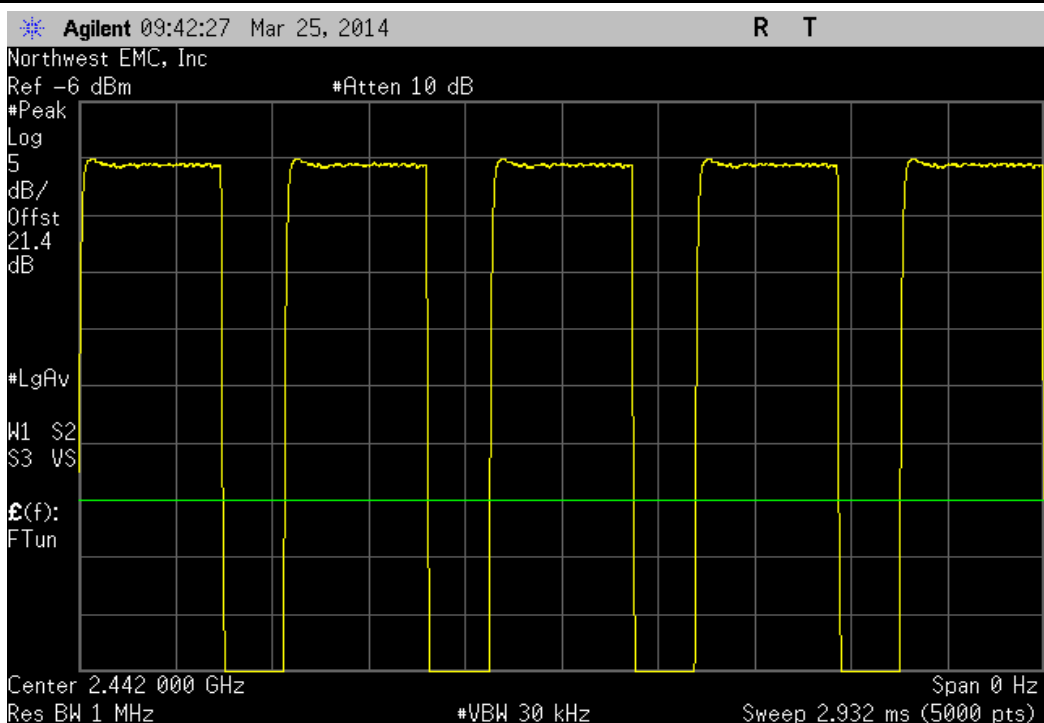
BLE - Data, Low Channel 1, 2404 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



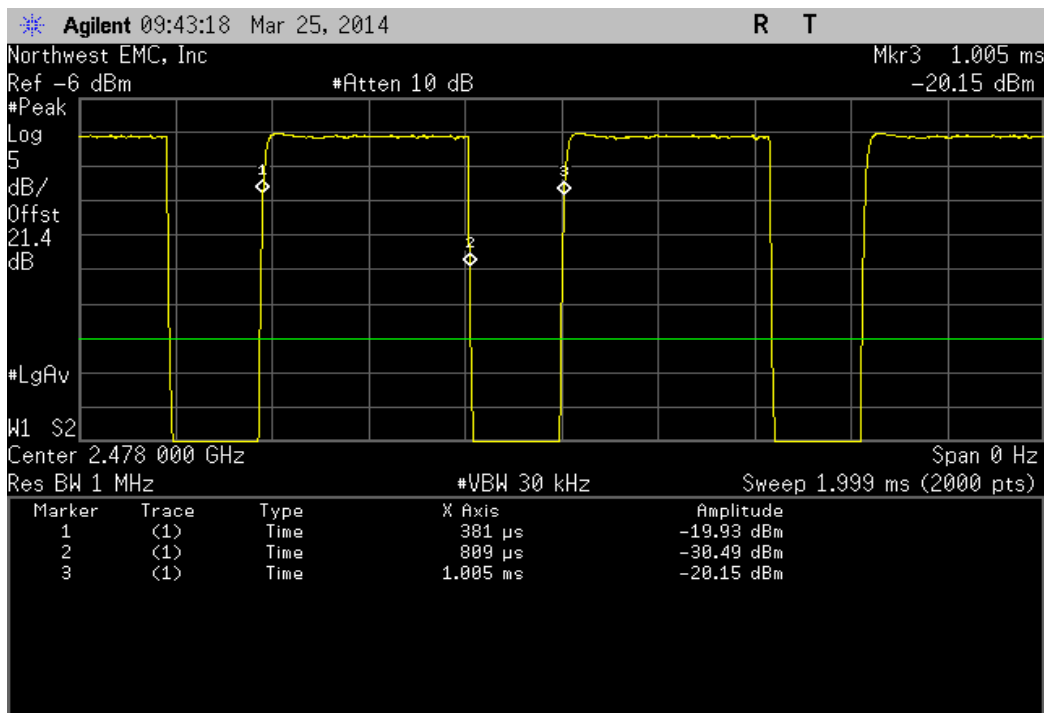
BLE - Data, Mid Channel 18, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	428 uS	623 uS	1	68.7	N/A	N/A



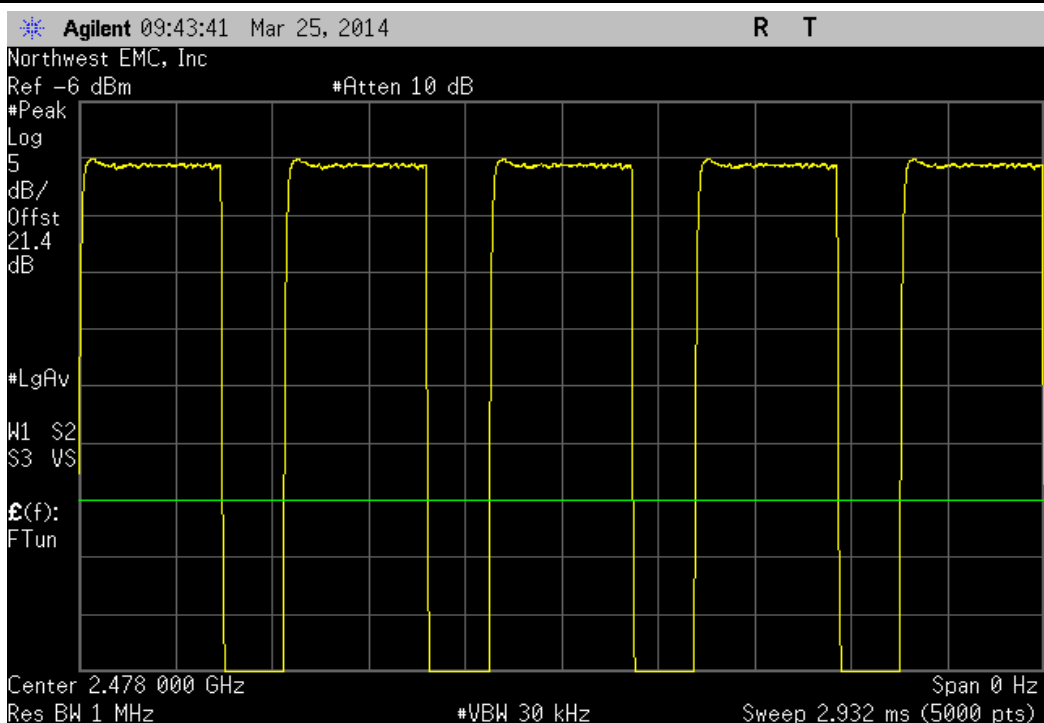
BLE - Data, Mid Channel 18, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



BLE - Data, High Channel 38, 2478 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	428 uS	624 uS	1	68.6	N/A	N/A



BLE - Data, High Channel 38, 2478 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



OCCUPIED BANDWIDTH

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.	Interval
NC02 Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	7/3/2013	12
40GHz DC Block	Fairview Microwave	SD3379	AMJ	7/3/2013	12
Attenuator	Fairview Microwave	SA4014-20	TKE	2/13/2014	12
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	24
Signal Generator	Agilent	E4422B	TGR	7/21/2011	36

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

The EUT was set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.



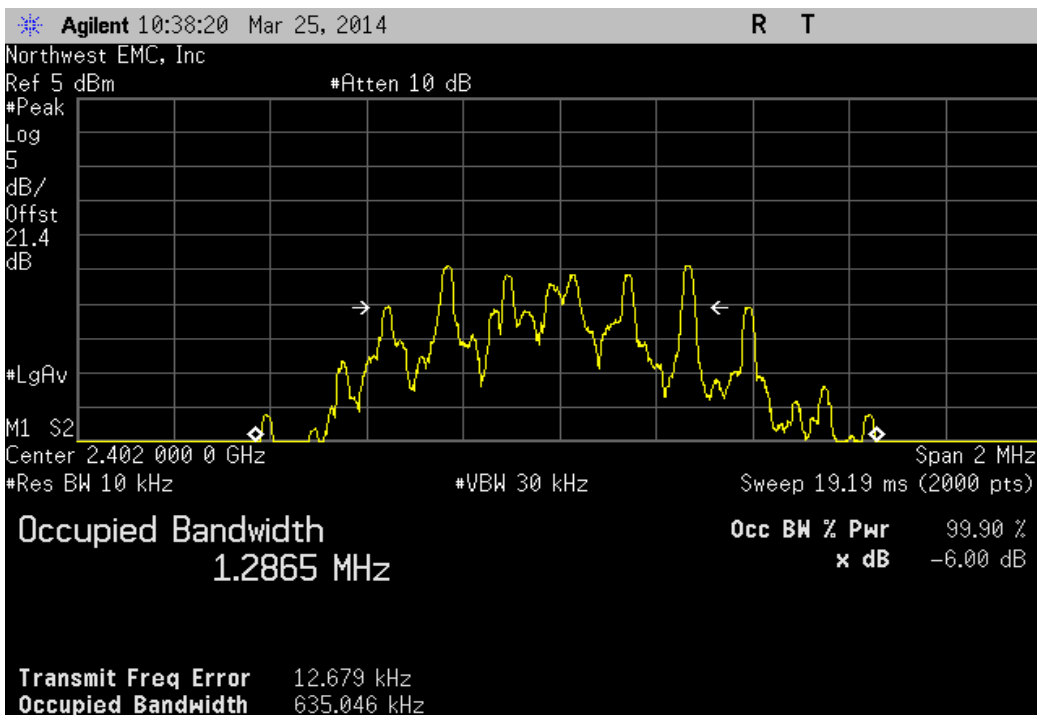
OCCUPIED BANDWIDTH

XMit 2013.08.15
PsaTx 2013.10.23

EUT: miCoach SMART BALL		Work Order: ADID0013	
Serial Number: 9072-061		Date: 03/25/14	
Customer: adidas International, Inc.		Temperature: 23°C	
Attendees: Ben Valenti		Humidity: 32%	
Project: None		Barometric Pres.: 1005	
Tested by: Richard Mellroth		Power:	
Job Site: NC06			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
Testing Pit Board with battery and coil, using DB Communicator for PC.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Value	Limit
BLE - Advertising			Result
Low Channel 0, 2402 MHz		635.046 kHz	≥ 500 kHz
Mid Channel 12, 2426 MHz		760.157 kHz	≥ 500 kHz
High Channel 39, 2480 MHz		737.29 kHz	≥ 500 kHz
BLE - Data			
Low Channel 1, 2404 MHz		640.379 kHz	≥ 500 kHz
Mid Channel 18, 2442 MHz		526.328 kHz	≥ 500 kHz
High Channel 38, 2478 MHz		626.847 kHz	≥ 500 kHz

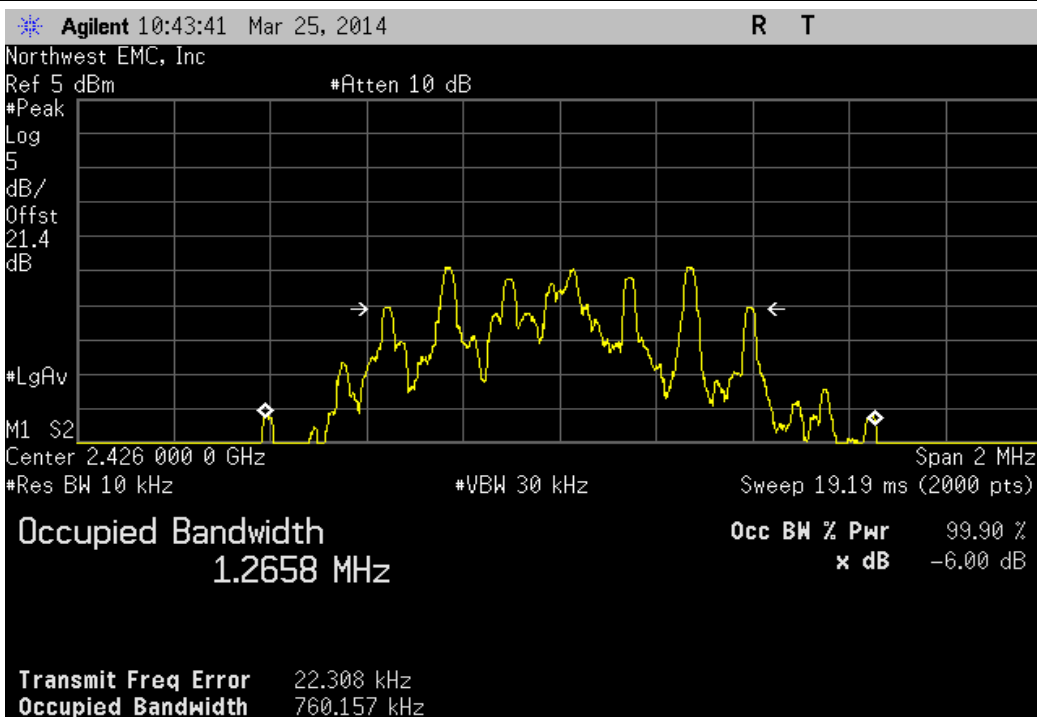
BLE - Advertising, Low Channel 0, 2402 MHz

				Value	Limit	Result
				635.046 kHz	≥ 500 kHz	Pass



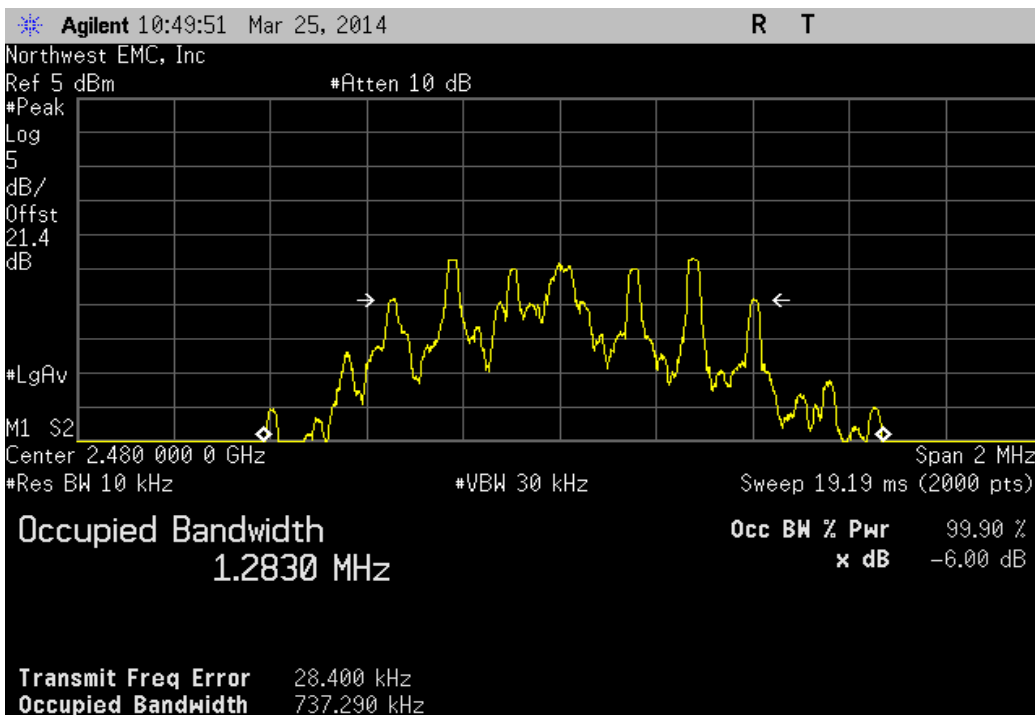
BLE - Advertising, Mid Channel 12, 2426 MHz

				Value	Limit	Result
				760.157 kHz	≥ 500 kHz	Pass



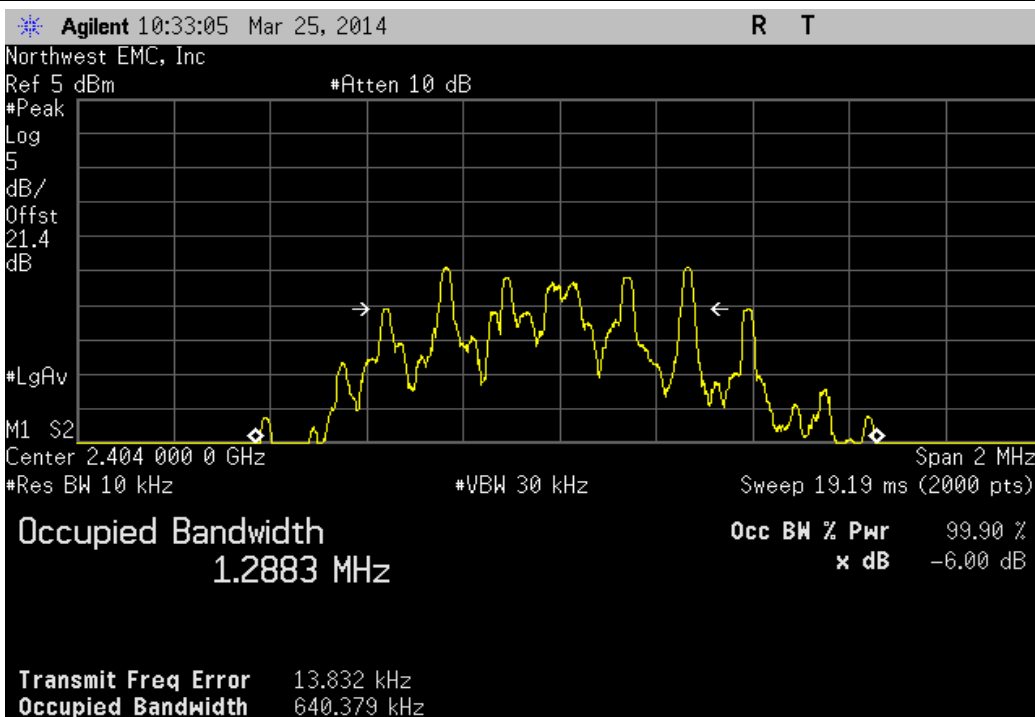
BLE - Advertising, High Channel 39, 2480 MHz

				Value	Limit	Result
				737.29 kHz	≥ 500 kHz	Pass

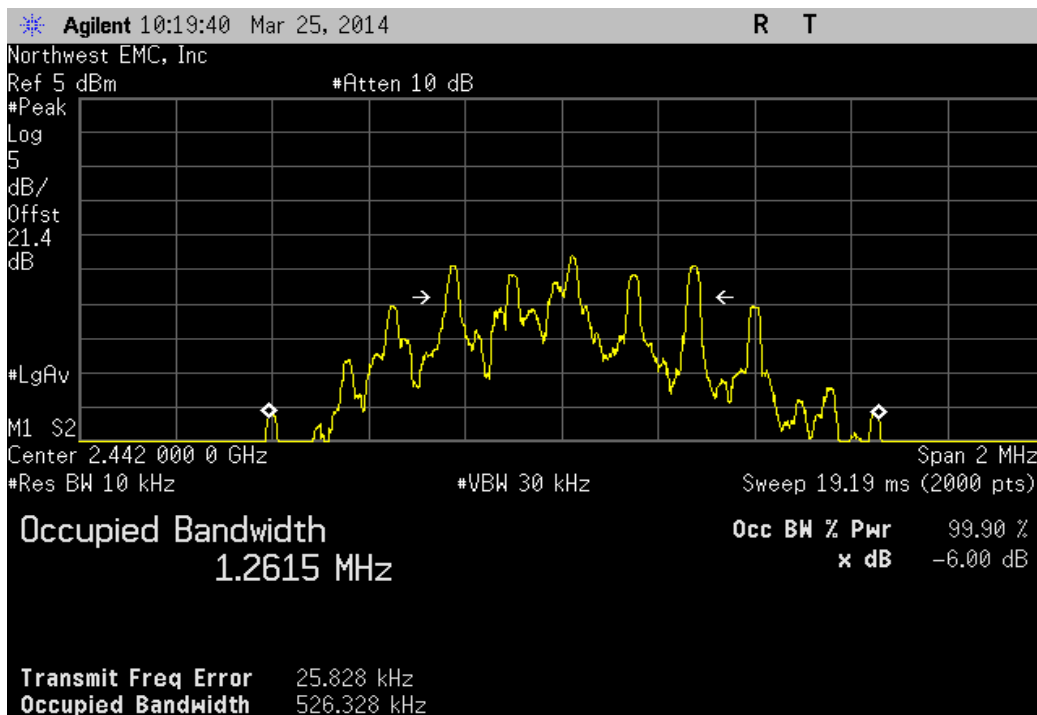


BLE - Data, Low Channel 1, 2404 MHz

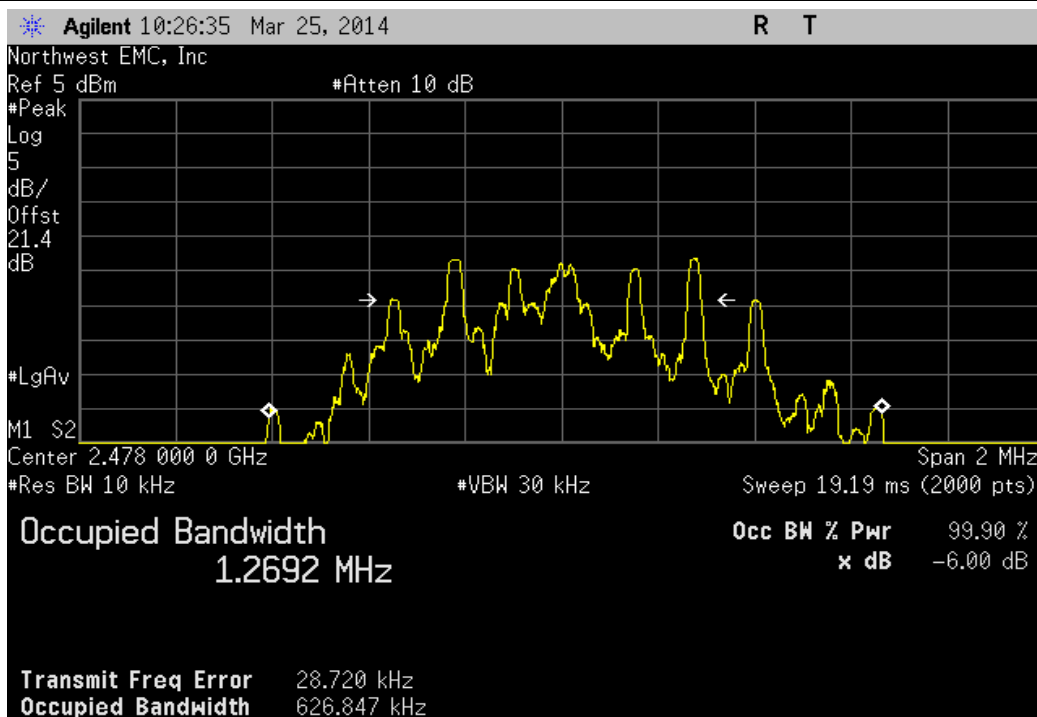
				Value	Limit	Result
				640.379 kHz	≥ 500 kHz	Pass



BLE - Data, Mid Channel 18, 2442 MHz						
				Value	Limit	Result
				526.328 kHz	≥ 500 kHz	Pass



BLE - Data, High Channel 38, 2478 MHz						
				Value	Limit	Result
				626.847 kHz	≥ 500 kHz	Pass



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

MODES OF OPERATION

Transmitting BLE, ADVERTISING (ADV)

Transmitting BLE, DATA

CHANNELS TESTED

DATA Channel 1, 2404 MHz

DATA Channel 18, 2442 MHz

DATA Channel 38, 2478 MHz

ADV Channel 0, 2402 MHz

ADV Channel 12, 2426 MHz

ADV Channel 39, 2480 MHz

POWER SETTINGS INVESTIGATED

Battery (4VDC)

CONFIGURATIONS INVESTIGATED

ADID0018 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency 1 GHz

Stop Frequency 3 GHz

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
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24 mo
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	2/18/2014	12 mo
Antenna, Horn	ETS	3115	AIZ	1/27/2014	36 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

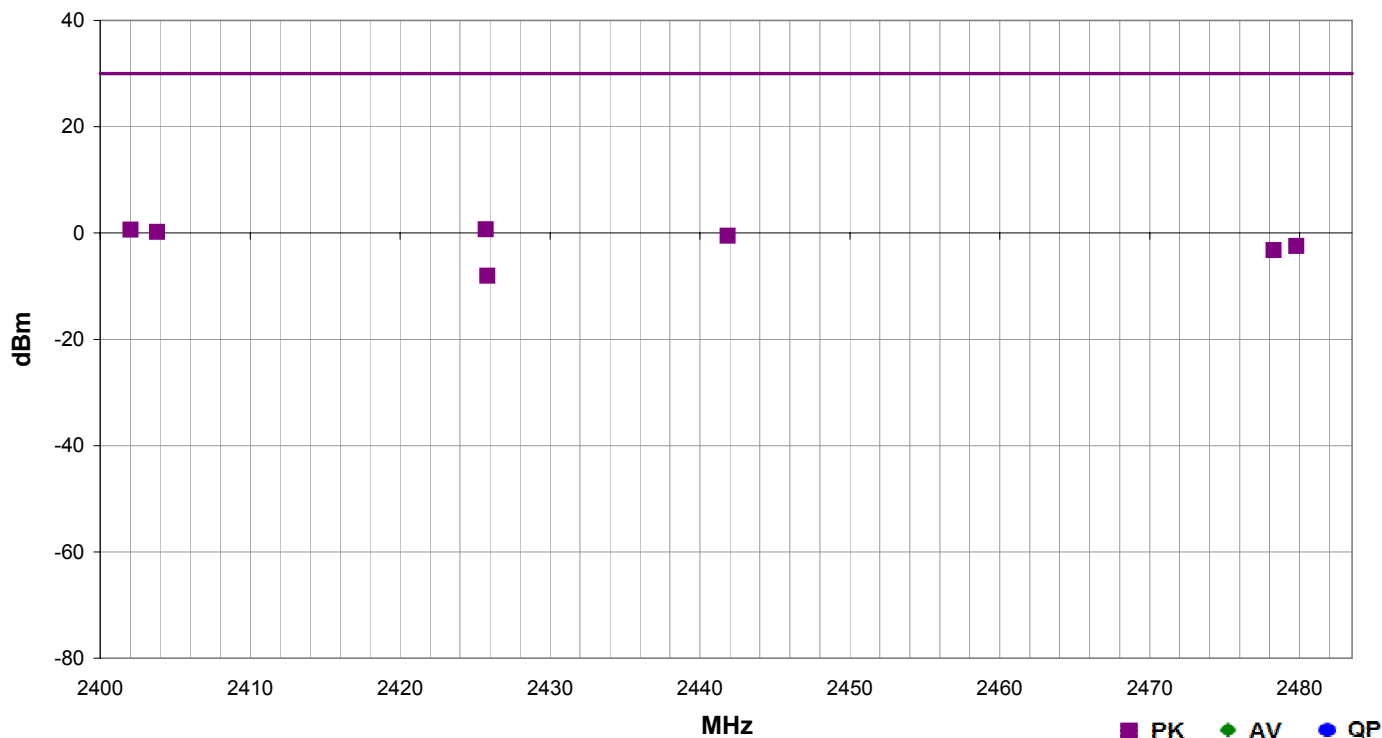
TEST DESCRIPTION

The antenna intended to be used with the EUT was tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT and EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009).

Work Order:	ADID0018	Date:	04/02/14	
Project:	None	Temperature:	20.5 °C	
Job Site:	EV01	Humidity:	38.1% RH	
Serial Number:	8946-35	Barometric Pres.:	1016 mbar	
Tested by:	Brandon Hobbs			
EUT:	miCoach SMART BALL			
Configuration:	1			
Customer:	adidas International, Inc.			
Attendees:	None			
EUT Power:	Battery (4VDC)			
Operating Mode:	Tx, Please refer to data comments for specific operating mode			
Deviations:	None			
Comments:	Please reference the data comments for EUT orientation, modulation and channel.			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.4:2003

Run #	1	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2425.710	1.0	204.0	Horz	PK	1.16E-03	0.7	30.0	-29.3	Mid Ch. ADV 2426MHz, EUT Vert
2402.030	1.0	20.0	Horz	PK	1.15E-03	0.6	30.0	-29.4	Low Ch. ADV 2402MHz, EUT Vert
2403.800	1.0	17.0	Horz	PK	1.05E-03	0.2	30.0	-29.8	Low Ch. DATA 2404MHz, EUT Vert
2441.855	1.0	203.0	Horz	PK	8.82E-04	-0.5	30.0	-30.5	Mid Ch. DATA 2442MHz, EUT Vert
2479.790	1.0	224.0	Horz	PK	5.73E-04	-2.4	30.0	-32.4	High Ch. ADV 2480MHz, EUT Vert
2478.275	1.0	223.0	Horz	PK	4.75E-04	-3.2	30.0	-33.2	High Ch. DATA 2478MHz, EUT Vert
2425.830	2.7	92.0	Vert	PK	1.57E-04	-8.0	30.0	-38.0	Mid Ch. ADV 2426MHz, EUT Horz

POWER SPECTRAL DENSITY

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.	Interval
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	2/18/2014	12
Antenna, Horn	ETS	3115	AIZ	1/27/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The peak power spectral density was measured with the EUT set to low, mid and high transmit frequencies. The radiated power spectral density was measured using a spectrum analyzer and a horn antenna in a semi-anechoic chamber. The level of fundamental emission was maximized by rotating the turntable and moving the measurement antenna from 1- 4 meters in height. Per the procedure outlined in FCC KDB 558074 D01 DTS Measurement Section 10.2, the spectrum analyzer was used as follows:

- RBW = 100 kHz
- VBW = 300 kHz
- Detector = Peak (to match method used for power measurement)
- Trace = Max hold

The observed power level is then scaled to an equivalent value in 3 kHz by adding a Bandwidth Correction Factor (BWCF) where:

$$BWCF = 10 \cdot \log(3 \text{ kHz} / 100 \text{ kHz}) = -15.2 \text{ dB}$$

All relevant losses related to the radiated measurements were accounted for in the offset of the analyzer.

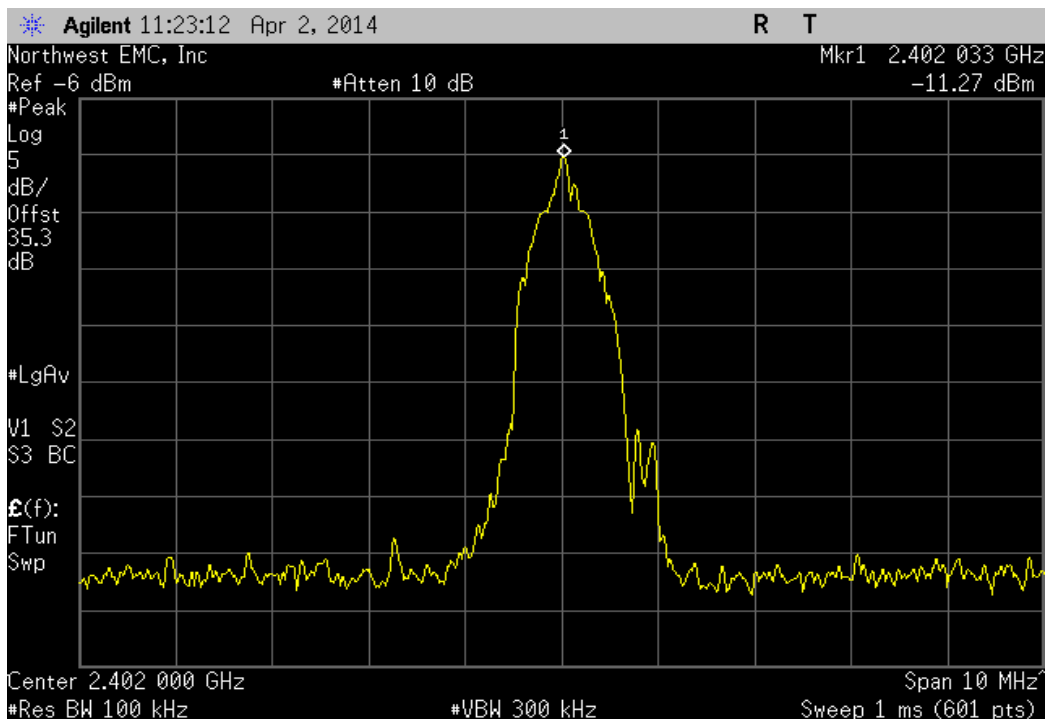


POWER SPECTRAL DENSITY

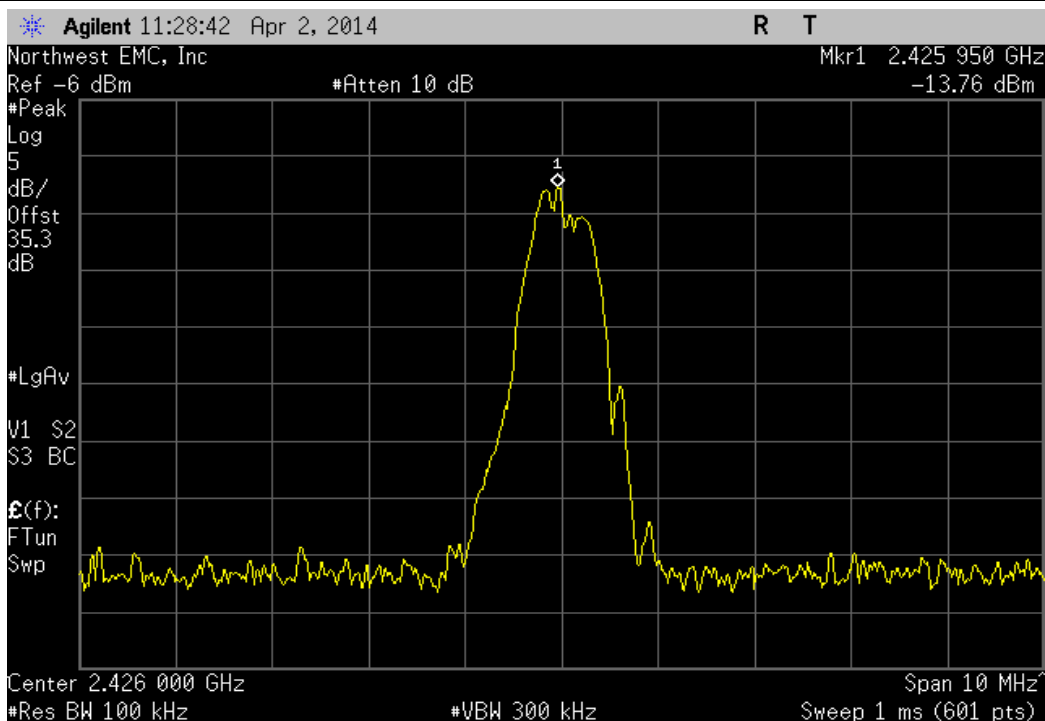
XMit 2013.08.15
PsaTx 2013.06.07

EUT: miCoach SMART BALL		Work Order: ADID0018				
Serial Number: 8946-35		Date: 04/02/14				
Customer: adidas International, Inc.		Temperature: 21.7°C				
Attendees: None		Humidity: 37%				
Project: None		Barometric Pres.: 1016.8				
Tested by: Brandon Hobbs		Power: Battery (4VDC)				
		Job Site: EV01				
TEST SPECIFICATIONS		Test Method				
FCC 15.247:2014		ANSI C63.10:2009				
COMMENTS						
The EUT is in the Vertical orientation. The transducer and cable losses were accounted for in the spectrum analyzer offset value.						
DEVIATIONS FROM TEST STANDARD						
None						
Configuration #	1	Signature 				
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
BLE - Advertising						
Low Channel, 2402 MHz		-11.27	-15.2	-26.47	8	Pass
Mid Channel, 2426 MHz		-13.76	-15.2	-28.96	8	Pass
High Channel, 2480 MHz		-16.377	-15.2	-31.577	8	Pass
BLE - Data						
Low Channel, 2404 MHz		-12.471	-15.2	-27.671	8	Pass
Mid Channel, 2442 MHz		-15.663	-15.2	-30.863	8	Pass
High Channel, 2478 MHz		-14.962	-15.2	-30.162	8	Pass

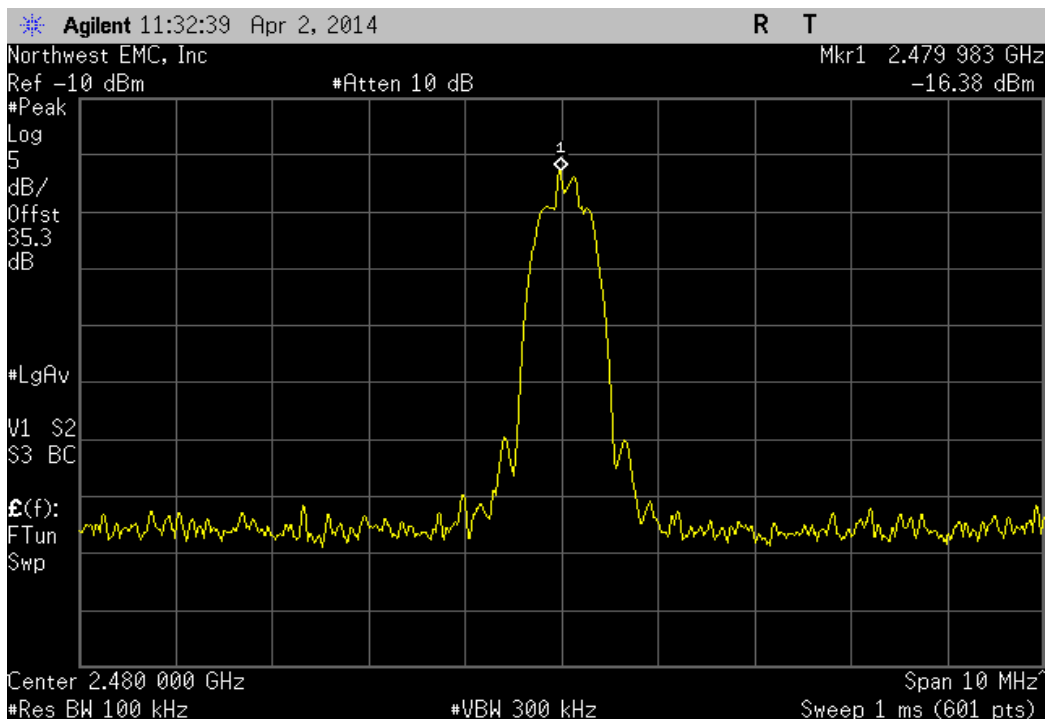
BLE - Advertising, Low Channel, 2402 MHz					
Value	dBm/100kHz	Value	Limit	Result	
dBm/100kHz	To dBm/3kHz	dBm/3kHz	dBm/3kHz		
-11.27	-15.2	-26.47	8	Pass	



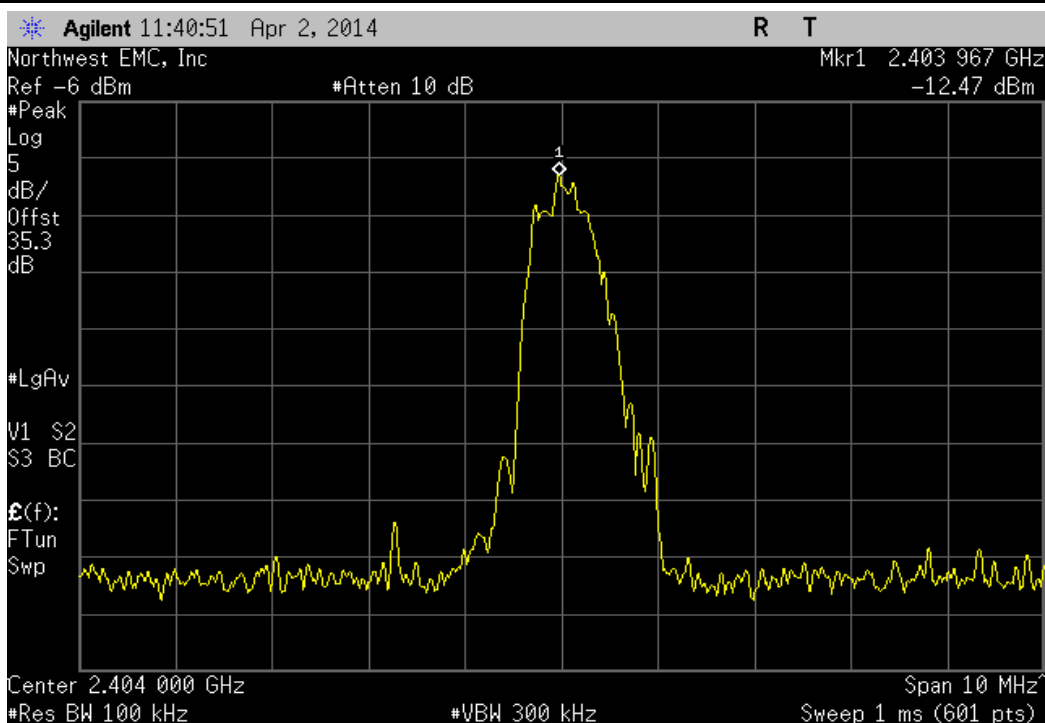
BLE - Advertising, Mid Channel, 2426 MHz					
Value	dBm/100kHz	Value	Limit	Result	
dBm/100kHz	To dBm/3kHz	dBm/3kHz	dBm/3kHz		
-13.76	-15.2	-28.96	8	Pass	



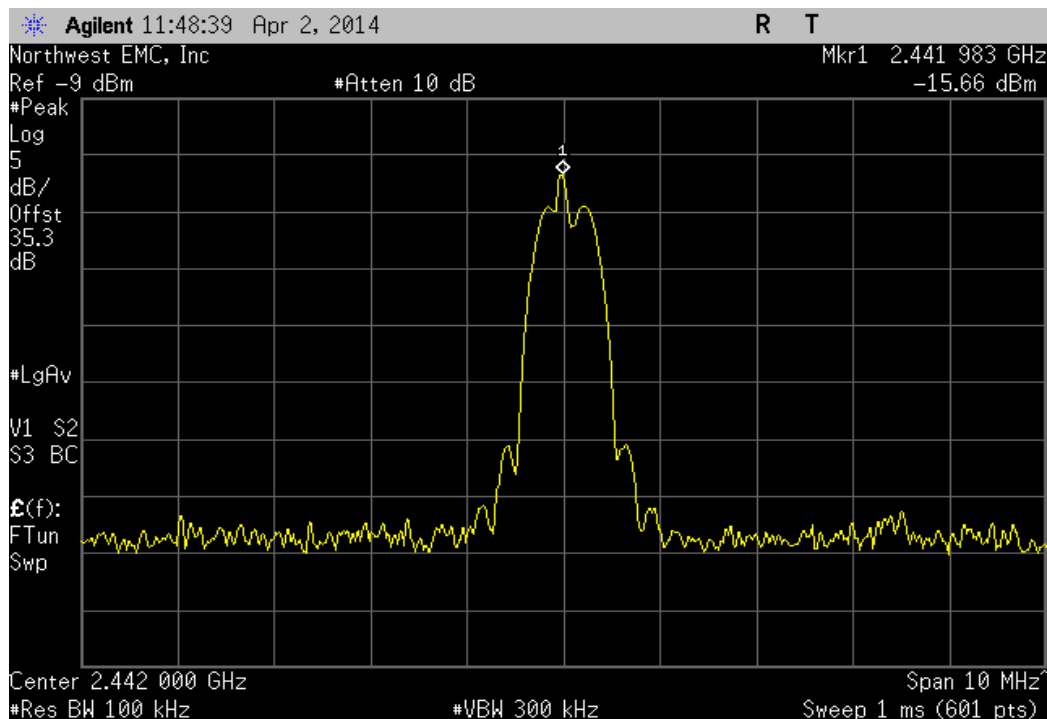
BLE - Advertising, High Channel, 2480 MHz					
Value	dBm/100kHz	Value	Limit		
dBm/100kHz	To dBm/3kHz	dBm/3kHz	dBm/3kHz	Result	
-16.377	-15.2	-31.577	8	Pass	



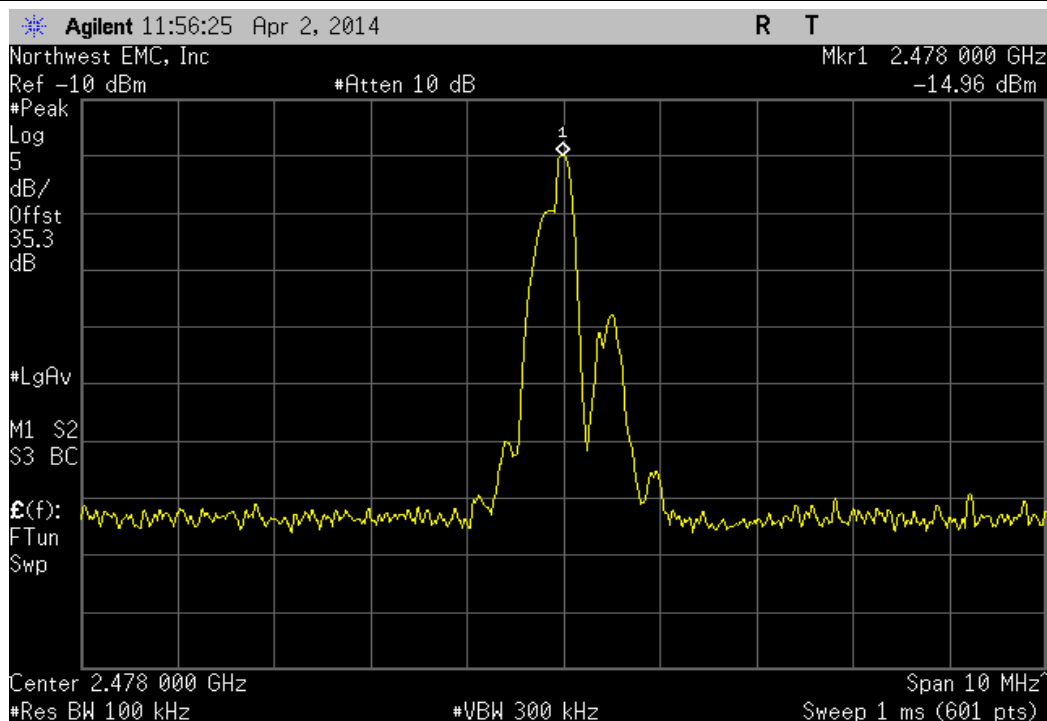
BLE - Data, Low Channel, 2404 MHz					
Value	dBm/100kHz	Value	Limit		
dBm/100kHz	To dBm/3kHz	dBm/3kHz	dBm/3kHz	Result	
-12.471	-15.2	-27.671	8	Pass	



BLE - Data, Mid Channel, 2442 MHz					
	Value	dBm/100kHz	Value	Limit	Result
		To dBm/3kHz	dBm/3kHz		
	-15.663	-15.2	-30.863	8	Pass



BLE - Data, High Channel, 2478 MHz					
	Value	dBm/100kHz	Value	Limit	Result
		To dBm/3kHz	dBm/3kHz		
	-14.962	-15.2	-30.162	8	Pass



BAND EDGE COMPLIANCE

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.	Interval
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	2/18/2014	12
Antenna, Horn	ETS	3115	AIZ	1/27/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The band edges were measured with the EUT set to low and high transmit frequencies. The radiated band edges were measured using a spectrum analyzer and a horn antenna in a semi-anechoic chamber. The level of fundamental emission was maximized by rotating the turntable and moving the measurement antenna from 1- 4 meters in height.

The spectrum was scanned below the lower band edge and above the higher band edge. All relevant losses were accounted for in the offset of the analyzer.



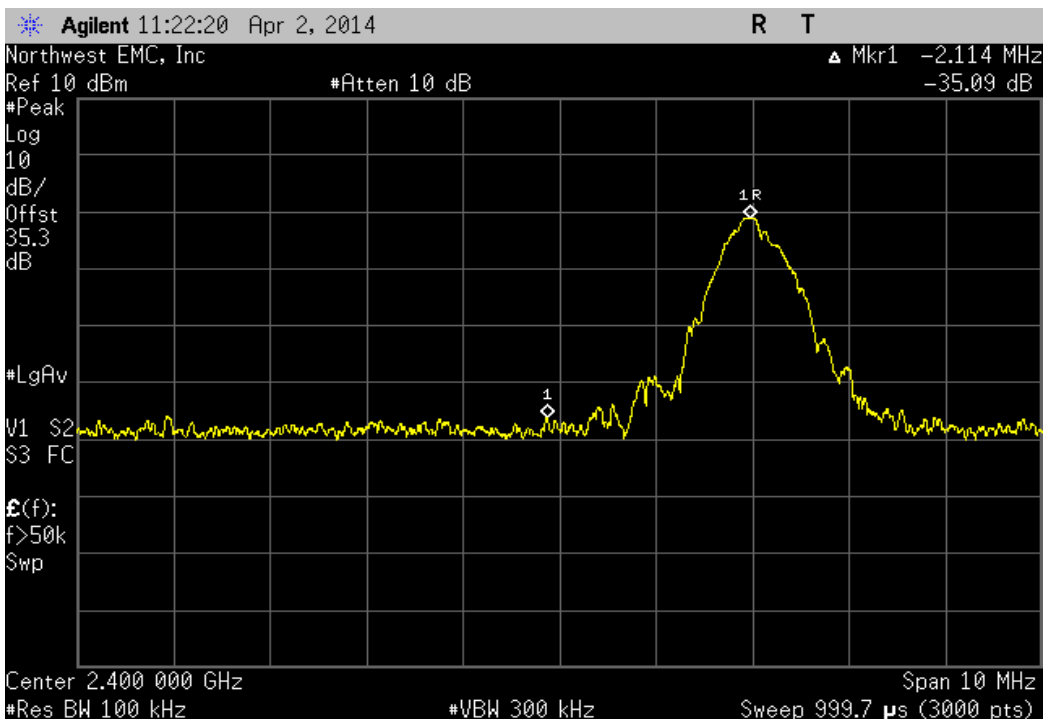
BAND EDGE COMPLIANCE

XMit 2013.08.15
PsaTx 2013.06.07

EUT: miCoach SMART BALL		Work Order: ADID0018	
Serial Number: 8946-35		Date: 04/02/14	
Customer: adidas International, Inc		Temperature: 21.7°C	
Attendees: None		Humidity: 37%	
Project: None		Barometric Pres.: 1016.8	
Tested by: Brandon Hobbs		Power: Battery (4VDC)	
		Job Site: EV01	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
The EUT is in the Vertical orientation. All relevant losses were accounted for in the offset of the analyzer.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Value	Limit
BLE - Advertising			Result
Low Channel, 2402 MHz		-35.08 dBc	≤ -20 dBc
High Channel, 2480 MHz		-31.88 dBc	≤ -20 dBc
BLE - Data			
Low Channel, 2404 MHz		-35.15 dBc	≤ -20 dBc
High Channel, 2478 MHz		-30.95 dBc	≤ -20 dBc

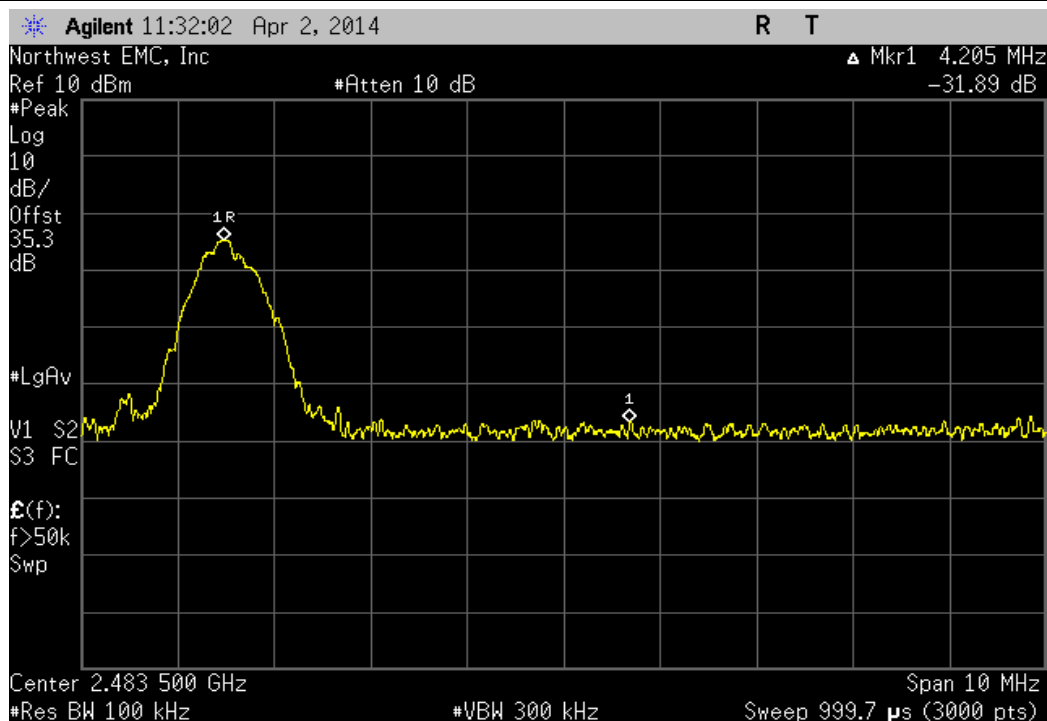
BLE - Advertising, Low Channel, 2402 MHz

Value	Limit	Result
-35.08 dBc	≤ -20 dBc	Pass



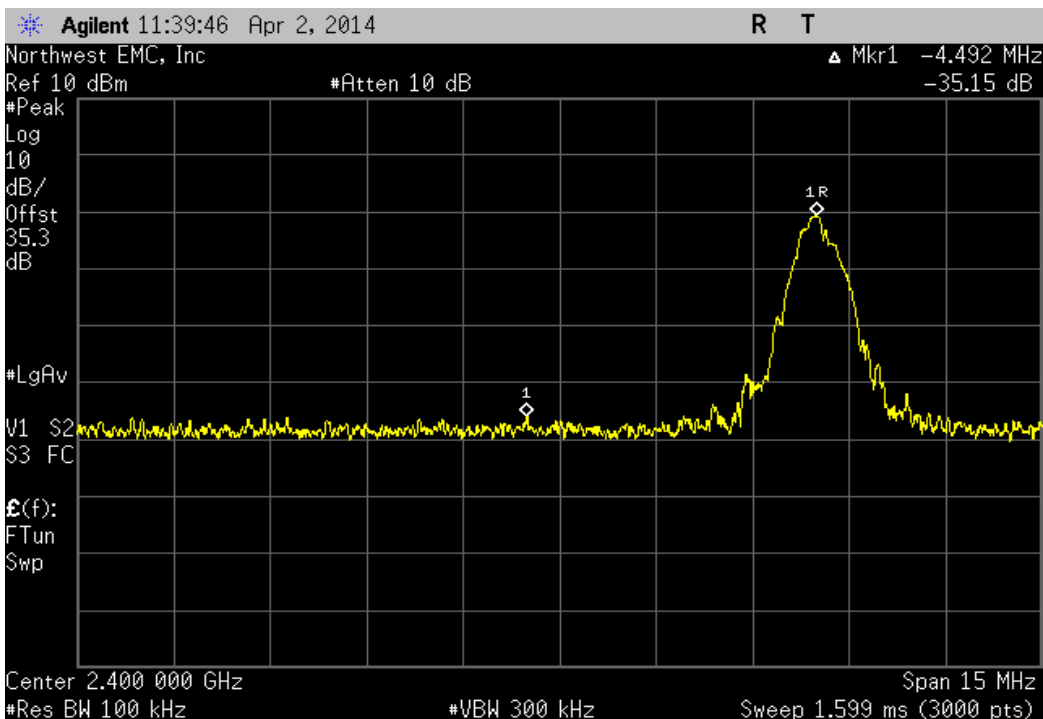
BLE - Advertising, High Channel, 2480 MHz

Value	Limit	Result
-31.88 dBc	≤ -20 dBc	Pass



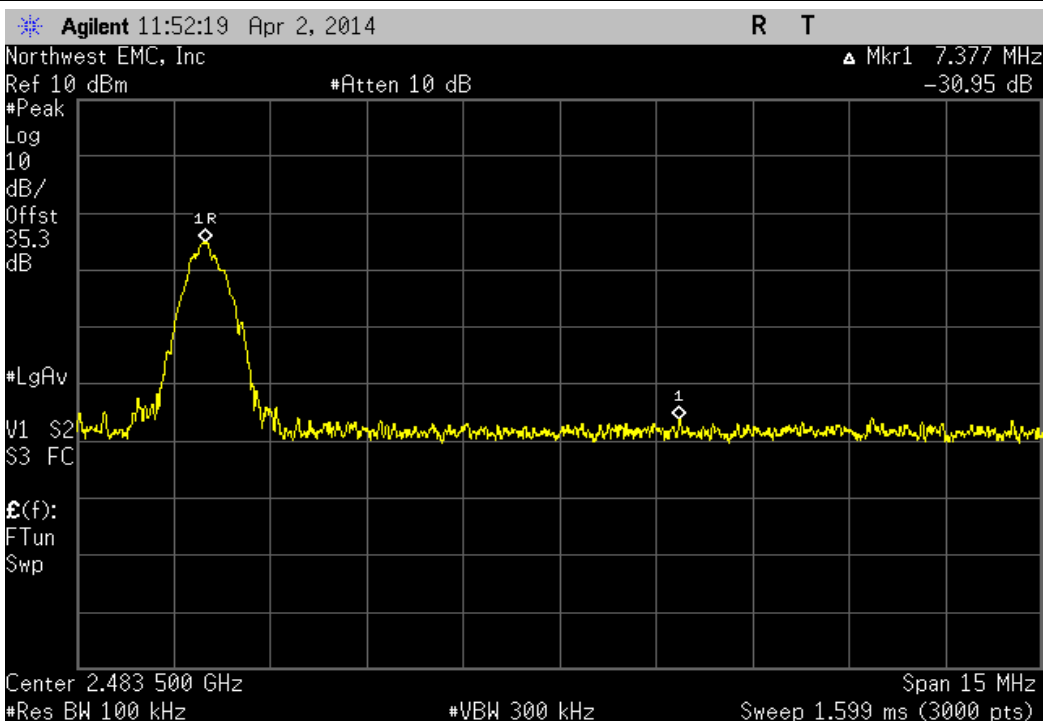
BLE - Data, Low Channel, 2404 MHz

Value	Limit	Result
-35.15 dBc	≤ -20 dBc	Pass



BLE - Data, High Channel, 2478 MHz

Value	Limit	Result
-30.95 dBc	≤ -20 dBc	Pass



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

Charging, Transmitting BLE, ADVERTISING (ADV)

Charging, Transmitting BLE, DATA

CHANNELS TESTED

DATA Channel 1, 2404 MHz

DATA Channel 18, 2442 MHz

DATA Channel 38, 2478 MHz

ADV Channel 0, 2402 MHz

ADV Channel 12, 2426 MHz

ADV Channel 39, 2480 MHz

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ADID0013 - 4

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz

Stop Frequency 26000 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
Spectrum Analyzer	Agilent	E4440A	AAW	2/21/2013	24 mo
Antenna, Biconilog	EMCO	3142	AXJ	5/16/2012	36 mo
Antenna, Horn	EMCO	3115	AHM	6/19/2012	24 mo
Antenna, Horn	EMCO	3160-07	AHP	NCR	0 mo
Antenna, Horn	EMCO	3160-08	AHO	NCR	0 mo
Antenna, Horn	ETS	3160-09	AIY	NCR	0 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAB	10/24/2013	12 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVZ	10/24/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOK	12/6/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOJ	12/6/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOD	7/10/2013	12 mo
NC01 Cables	N/A	Bilog Cables	NC1	10/24/2013	12 mo
NC01 Cables	N/A	3115 Horn Cable	NC2	10/24/2013	12 mo
NC01 Cables	N/A	Standard Gain Horn Cable	NC3	12/6/2013	12 mo
Cable I	N/A	N/A	SUM	7/10/2013	12 mo
LP Filter	Micro-Tronics	LPM50004	LFF	11/14/2013	24 mo
HP Filter	Micro-Tronics	HPM50111	HHi	1/18/2013	24 mo
Attenuator	Fairview Microwave	SA18E-20	AQV	12/6/2013	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.



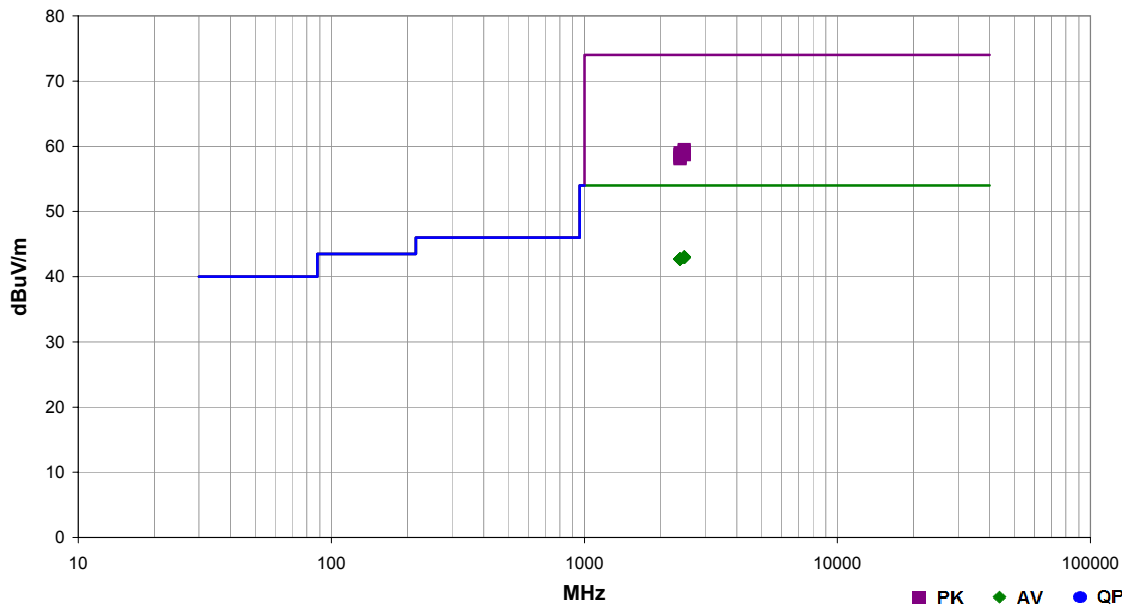
SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2014.02.19
EmiR5 2014.01.02

Work Order:	ADID0013	Date:	03/28/14	
Project:	None	Temperature:	24 °C	
Job Site:	NC01	Humidity:	31% RH	
Serial Number:	DB0000594	Barometric Pres.:	1008 mbar	
Tested by: Richard Mellroth				
EUT:	miCoach SMART BALL			
Configuration:	4			
Customer:	adidas International, Inc.			
Attendees:	Ben Valenti			
EUT Power:	110VAC/60Hz			
Operating Mode:	Charging, Transmitting BLE, ADV. See comments next to data points for EUT orientation and channel information.			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	122	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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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
2485.180	25.0	-2.0	1.2	0.0	3.0	20.0	Vert	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT Face Up
2484.827	25.0	-2.0	1.4	305.0	3.0	20.0	Vert	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT on Side
2484.710	25.0	-2.0	1.2	180.0	3.0	20.0	Vert	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT Standing
2484.113	25.0	-2.0	1.2	197.0	3.0	20.0	Horz	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT Face Up
2484.033	25.0	-2.0	1.2	110.0	3.0	20.0	Horz	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT Standing
2483.737	25.0	-2.0	2.7	236.0	3.0	20.0	Horz	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT on Side
2389.930	24.9	-2.2	2.7	218.0	3.0	20.0	Horz	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT on Side
2388.310	24.9	-2.2	1.2	350.0	3.0	20.0	Horz	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Standing
2388.227	24.9	-2.2	1.2	107.0	3.0	20.0	Horz	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Face Up
2388.207	24.9	-2.2	1.2	7.0	3.0	20.0	Vert	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Standing
2388.197	24.9	-2.2	1.2	190.0	3.0	20.0	Vert	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Face Up
2388.187	24.9	-2.2	2.5	298.0	3.0	20.0	Vert	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT on Side
2484.533	41.5	-2.0	1.2	0.0	3.0	20.0	Vert	PK	0.0	59.5	74.0	-14.5	ADV Ch 39, 2480 MHz, EUT Face Up
2483.920	41.3	-2.0	2.7	236.0	3.0	20.0	Horz	PK	0.0	59.3	74.0	-14.7	ADV Ch 39, 2480 MHz, EUT on Side
2483.700	41.1	-2.0	1.4	305.0	3.0	20.0	Vert	PK	0.0	59.1	74.0	-14.9	ADV Ch 39, 2480 MHz, EUT on Side
2389.247	41.2	-2.2	1.2	107.0	3.0	20.0	Horz	PK	0.0	59.0	74.0	-15.0	ADV Ch 0, 2402 MHz, EUT Face Up
2484.750	40.9	-2.0	1.2	197.0	3.0	20.0	Horz	PK	0.0	58.9	74.0	-15.1	ADV Ch 39, 2480 MHz, EUT Face Up
2485.280	40.7	-2.0	1.2	180.0	3.0	20.0	Vert	PK	0.0	58.7	74.0	-15.3	ADV Ch 39, 2480 MHz, EUT Standing
2484.510	40.7	-2.0	1.2	110.0	3.0	20.0	Horz	PK	0.0	58.7	74.0	-15.3	ADV Ch 39, 2480 MHz, EUT Standing
2389.987	40.9	-2.2	1.2	190.0	3.0	20.0	Vert	PK	0.0	58.7	74.0	-15.3	ADV Ch 0, 2402 MHz, EUT Face Up
2389.693	40.8	-2.2	1.2	350.0	3.0	20.0	Horz	PK	0.0	58.6	74.0	-15.4	ADV Ch 0, 2402 MHz, EUT Standing
2389.393	40.5	-2.2	1.2	7.0	3.0	20.0	Vert	PK	0.0	58.3	74.0	-15.7	ADV Ch 0, 2402 MHz, EUT Standing
2389.040	40.4	-2.2	2.7	218.0	3.0	20.0	Horz	PK	0.0	58.2	74.0	-15.8	ADV Ch 0, 2402 MHz, EUT on Side
2389.547	40.3	-2.2	2.5	298.0	3.0	20.0	Vert	PK	0.0	58.1	74.0	-15.9	ADV Ch 0, 2402 MHz, EUT on Side



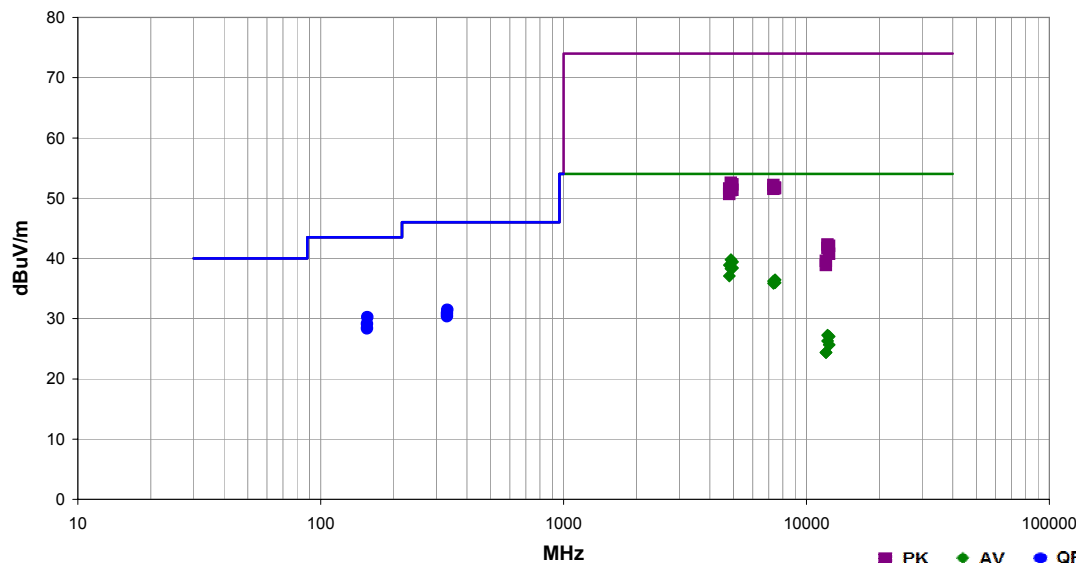
SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2014.02.19
EmiR5 2014.01.02

Work Order:	ADID0013	Date:	03/28/14		
Project:	None	Temperature:	24 °C		
Job Site:	NC01	Humidity:	31% RH		
Serial Number:	DB0000594	Barometric Pres.:	1008 mbar	Tested by:	Richard Mellroth
EUT:	miCoach SMART BALL				
Configuration:	4				
Customer:	adidas International, Inc.				
Attendees:	Ben Valenti				
EUT Power:	110VAC/60Hz				
Operating Mode:	Charging, Transmitting BLE, DATA. See comments next to data points for EUT orientation and channel information.				
Deviations:	None				
Comments:	None				

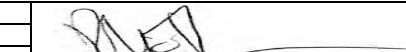
Test Specifications	N/A	Test Method
FCC 15.247:2014		ANSI C63.10:2009

Run #	102,126-127	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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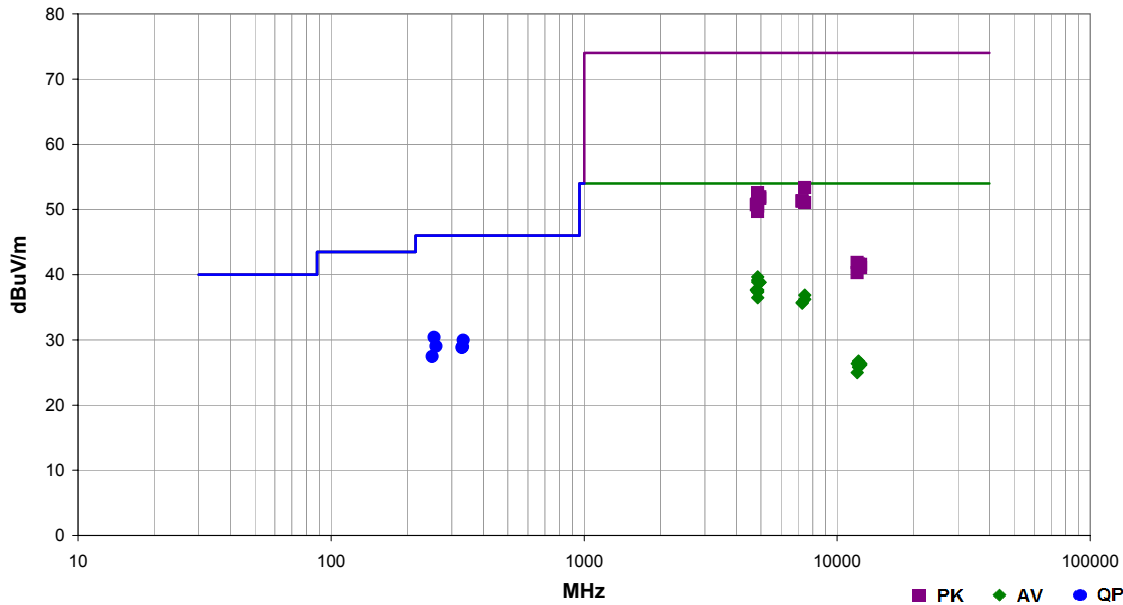
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
155.913	34.7	-4.5	2.0	324.0	3.0	0.0	Horz	QP	0.0	30.2	43.5	-13.3	DATA Ch 1, 2404 MHz, EUT Standing
4884.050	32.5	7.3	1.3	321.0	3.0	0.0	Horz	AV	0.0	39.8	54.0	-14.2	DATA Ch 18, 2442 MHz, EUT Standing
155.287	33.7	-4.6	2.0	93.0	3.0	0.0	Horz	QP	0.0	29.1	43.5	-14.4	DATA Ch 18, 2442 MHz, EUT Standing
332.056	30.3	1.1	1.0	34.0	3.0	0.0	Horz	QP	0.0	31.4	46.0	-14.6	DATA Ch 38, 2478 MHz, EUT Standing
4956.055	31.9	7.5	1.2	323.0	3.0	0.0	Horz	AV	0.0	39.4	54.0	-14.6	DATA Ch 38, 2478 MHz, EUT Standing
4808.040	31.7	7.2	1.7	125.0	3.0	0.0	Horz	AV	0.0	38.9	54.0	-15.1	DATA Ch 1, 2404 MHz, EUT Standing
331.181	29.8	1.1	1.0	22.0	3.0	0.0	Horz	QP	0.0	30.9	46.0	-15.1	DATA Ch 1, 2404 MHz, EUT Standing
155.095	33.0	-4.6	2.0	123.0	3.0	0.0	Horz	QP	0.0	28.4	43.5	-15.1	DATA Ch 38, 2478 MHz, EUT Standing
331.401	29.3	1.1	1.0	360.0	3.0	0.0	Horz	QP	0.0	30.4	46.0	-15.6	DATA Ch 18, 2442 MHz, EUT Standing
4956.045	30.9	7.5	1.2	276.0	3.0	0.0	Vert	AV	0.0	38.4	54.0	-15.6	DATA Ch 38, 2478 MHz, EUT Standing
4884.050	31.0	7.3	1.0	220.0	3.0	0.0	Vert	AV	0.0	38.3	54.0	-15.7	DATA Ch 18, 2442 MHz, EUT Standing
4808.045	29.9	7.2	1.2	91.0	3.0	0.0	Vert	AV	0.0	37.1	54.0	-16.9	DATA Ch 1, 2404 MHz, EUT Standing
7433.445	23.7	12.7	1.1	326.0	3.0	0.0	Vert	AV	0.0	36.4	54.0	-17.6	DATA Ch 38, 2478 MHz, EUT Standing
7325.430	24.0	12.2	1.2	22.0	3.0	0.0	Horz	AV	0.0	36.2	54.0	-17.8	DATA Ch 18, 2442 MHz, EUT Standing
7433.400	23.2	12.7	1.2	354.0	3.0	0.0	Horz	AV	0.0	35.9	54.0	-18.1	DATA Ch 38, 2478 MHz, EUT Standing
7326.680	23.6	12.2	1.2	168.0	3.0	0.0	Vert	AV	0.0	35.8	54.0	-18.2	DATA Ch 18, 2442 MHz, EUT Standing
4884.475	45.2	7.3	1.3	321.0	3.0	0.0	Horz	PK	0.0	52.5	74.0	-21.5	DATA Ch 18, 2442 MHz, EUT Standing
4955.485	44.8	7.5	1.2	323.0	3.0	0.0	Horz	PK	0.0	52.3	74.0	-21.7	DATA Ch 38, 2478 MHz, EUT Standing
7326.810	39.9	12.3	1.2	22.0	3.0	0.0	Horz	PK	0.0	52.2	74.0	-21.8	DATA Ch 18, 2442 MHz, EUT Standing
7434.445	39.0	12.7	1.1	326.0	3.0	0.0	Vert	PK	0.0	51.7	74.0	-22.3	DATA Ch 38, 2478 MHz, EUT Standing
7433.360	38.9	12.7	1.2	354.0	3.0	0.0	Horz	PK	0.0	51.6	74.0	-22.4	DATA Ch 38, 2478 MHz, EUT Standing
4808.420	44.4	7.2	1.7	125.0	3.0	0.0	Horz	PK	0.0	51.6	74.0	-22.4	DATA Ch 1, 2404 MHz, EUT Standing
7325.710	39.3	12.2	1.2	168.0	3.0	0.0	Vert	PK	0.0	51.5	74.0	-22.5	DATA Ch 18, 2442 MHz, EUT Standing
4956.515	43.9	7.5	1.2	276.0	3.0	0.0	Vert	PK	0.0	51.4	74.0	-22.6	DATA Ch 38, 2478 MHz, EUT Standing
4884.265	44.0	7.3	1.0	220.0	3.0	0.0	Vert	PK	0.0	51.3	74.0	-22.7	DATA Ch 18, 2442 MHz, EUT Standing
4807.685	43.5	7.2	1.2	91.0	3.0	0.0	Vert	PK	0.0	50.7	74.0	-23.3	DATA Ch 1, 2404 MHz, EUT Standing
12208.980	29.4	-2.1	1.1	324.0	3.0	0.0	Vert	AV	0.0	27.3	54.0	-26.7	DATA Ch 18, 2442 MHz, EUT Standing
12389.010	29.1	-2.0	1.2	326.0	3.0	0.0	Vert	AV	0.0	27.1	54.0	-26.9	DATA Ch 38, 2478 MHz, EUT Standing
12208.890	28.4	-2.1	1.2	353.0	3.0	0.0	Horz	AV	0.0	26.3	54.0	-27.7	DATA Ch 18, 2442 MHz, EUT Standing
12391.450	27.7	-2.0	1.2	117.0	3.0	0.0	Horz	AV	0.0	25.7	54.0	-28.3	DATA Ch 38, 2478 MHz, EUT Standing
12017.890	26.6	-2.2	1.2	174.0	3.0	0.0	Horz	AV	0.0	24.4	54.0	-29.6	DATA Ch 1, 2404 MHz, EUT Standing
12017.930	26.6	-2.2	1.2	211.0	3.0	0.0	Vert	AV	0.0	24.4	54.0	-29.6	DATA Ch 1, 2404 MHz, EUT Standing
12211.490	44.4	-2.1	1.1	324.0	3.0	0.0	Vert	PK	0.0	42.3	74.0	-31.7	DATA Ch 18, 2442 MHz, EUT Standing
12389.410	44.1	-2.0	1.2	326.0	3.0	0.0	Vert	PK	0.0	42.1	74.0	-31.9	DATA Ch 38, 2478 MHz, EUT Standing

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
12209.980	43.8	-2.1	1.2	353.0	3.0	0.0	Horz	PK	0.0	41.7	74.0	-32.3	DATA Ch 18, 2442 MHz, EUT Standing
12391.500	42.8	-2.0	1.2	117.0	3.0	0.0	Horz	PK	0.0	40.8	74.0	-33.2	DATA Ch 38, 2478 MHz, EUT Standing
12019.110	41.8	-2.2	1.2	211.0	3.0	0.0	Vert	PK	0.0	39.6	74.0	-34.4	DATA Ch 1, 2404 MHz, EUT Standing
12019.490	41.1	-2.2	1.2	174.0	3.0	0.0	Horz	PK	0.0	38.9	74.0	-35.1	DATA Ch 1, 2404 MHz, EUT Standing

Work Order:	ADID0013	Date:	03/28/14		
Project:	None	Temperature:	24 °C		
Job Site:	NC01	Humidity:	31% RH		
Serial Number:	DB0000594	Barometric Pres.:	1008 mbar	Tested by:	Richard Mellroth
EUT:	miCoach SMART BALL				
Configuration:	4				
Customer:	adidas International, Inc.				
Attendees:	Ben Valenti				
EUT Power:	110VAC/60Hz				
Operating Mode:	Charging, Transmitting BLE, ADV. See comments next to data points for EUT orientation and channel information.				
Deviations:	None				
Comments:	None				

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	103,123-125	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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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
4852.030	32.4	7.3	1.2	327.0	3.0	0.0	Horz	AV	0.0	39.7	54.0	-14.3	ADV Ch 12, 2426 MHz, EUT Standing
4852.030	31.9	7.3	1.3	217.0	3.0	0.0	Vert	AV	0.0	39.2	54.0	-14.8	ADV Ch 12, 2426 MHz, EUT Standing
4852.045	31.6	7.3	1.0	287.0	3.0	0.0	Horz	AV	0.0	38.9	54.0	-15.1	ADV Ch 12, 2426 MHz, EUT Face Up
4960.045	31.3	7.5	1.2	337.0	3.0	0.0	Horz	AV	0.0	38.8	54.0	-15.2	ADV Ch 39, 2480 MHz, EUT Standing
4960.020	31.3	7.5	1.2	268.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	ADV Ch 39, 2480 MHz, EUT Standing
255.627	31.6	-1.2	1.3	359.0	3.0	0.0	Horz	QP	0.0	30.4	46.0	-15.6	ADV Ch 39, 2480 MHz, EUT Standing
332.865	28.8	1.2	1.1	13.0	3.0	0.0	Horz	QP	0.0	30.0	46.0	-16.0	ADV Ch 0, 2402 MHz, EUT Standing
4804.010	30.5	7.2	1.2	328.0	3.0	0.0	Horz	AV	0.0	37.7	54.0	-16.3	ADV Ch 0, 2402 MHz, EUT Standing
4852.020	30.4	7.3	1.1	0.0	3.0	0.0	Horz	AV	0.0	37.7	54.0	-16.3	ADV Ch 12, 2426 MHz, EUT on Side
4804.015	30.4	7.2	1.2	218.0	3.0	0.0	Vert	AV	0.0	37.6	54.0	-16.4	ADV Ch 0, 2402 MHz, EUT Standing
4852.030	30.1	7.3	1.3	302.0	3.0	0.0	Vert	AV	0.0	37.4	54.0	-16.6	ADV Ch 12, 2426 MHz, EUT Face Up
260.014	30.1	-1.1	1.0	14.0	3.0	0.0	Horz	QP	0.0	29.0	46.0	-17.0	ADV Ch 0, 2402 MHz, EUT Standing
331.062	27.8	1.1	1.0	11.0	3.0	0.0	Horz	QP	0.0	28.9	46.0	-17.1	ADV Ch 12, 2426 MHz, EUT Standing
7439.540	24.1	12.7	1.2	33.0	3.0	0.0	Horz	AV	0.0	36.8	54.0	-17.2	ADV Ch 39, 2480 MHz, EUT Standing
329.483	27.8	1.0	1.0	357.0	3.0	0.0	Horz	QP	0.0	28.8	46.0	-17.2	ADV Ch 39, 2480 MHz, EUT Standing
4852.000	29.2	7.3	1.2	181.0	3.0	0.0	Vert	AV	0.0	36.5	54.0	-17.5	ADV Ch 12, 2426 MHz, EUT on Side
7439.475	23.5	12.7	2.1	291.0	3.0	0.0	Vert	AV	0.0	36.2	54.0	-17.8	ADV Ch 39, 2480 MHz, EUT Standing
7277.335	23.8	11.9	1.2	54.0	3.0	0.0	Horz	AV	0.0	35.7	54.0	-18.3	ADV Ch 12, 2426 MHz, EUT Standing
7277.595	23.7	11.9	4.0	157.0	3.0	0.0	Vert	AV	0.0	35.6	54.0	-18.4	ADV Ch 12, 2426 MHz, EUT Standing
250.995	28.7	-1.2	1.4	347.0	3.0	0.0	Horz	QP	0.0	27.5	46.0	-18.5	ADV Ch 12, 2426 MHz, EUT Standing
7439.420	40.6	12.7	1.2	33.0	3.0	0.0	Horz	PK	0.0	53.3	74.0	-20.7	ADV Ch 39, 2480 MHz, EUT Standing
4851.355	45.3	7.3	1.2	327.0	3.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	ADV Ch 12, 2426 MHz, EUT Standing
4852.585	44.8	7.3	1.3	217.0	3.0	0.0	Vert	PK	0.0	52.1	74.0	-21.9	ADV Ch 12, 2426 MHz, EUT Standing
4960.560	44.4	7.5	1.2	337.0	3.0	0.0	Horz	PK	0.0	51.9	74.0	-22.1	ADV Ch 39, 2480 MHz, EUT Standing
4960.275	44.2	7.5	1.2	268.0	3.0	0.0	Vert	PK	0.0	51.7	74.0	-22.3	ADV Ch 39, 2480 MHz, EUT Standing
4851.590	44.3	7.3	1.0	287.0	3.0	0.0	Horz	PK	0.0	51.6	74.0	-22.4	ADV Ch 12, 2426 MHz, EUT Face Up
7278.750	39.4	12.0	1.2	54.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	ADV Ch 12, 2426 MHz, EUT Standing

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
7277.120	39.3	11.9	4.0	157.0	3.0	0.0	Vert	PK	0.0	51.2	74.0	-22.8	ADV Ch 12, 2426 MHz, EUT Standing
7440.525	38.3	12.7	2.1	291.0	3.0	0.0	Vert	PK	0.0	51.0	74.0	-23.0	ADV Ch 39, 2480 MHz, EUT Standing
4804.615	43.6	7.2	1.2	328.0	3.0	0.0	Horz	PK	0.0	50.8	74.0	-23.2	ADV Ch 0, 2402 MHz, EUT Standing
4804.235	43.5	7.2	1.2	218.0	3.0	0.0	Vert	PK	0.0	50.7	74.0	-23.3	ADV Ch 0, 2402 MHz, EUT Standing
4852.415	43.3	7.3	1.1	0.0	3.0	0.0	Horz	PK	0.0	50.6	74.0	-23.4	ADV Ch 12, 2426 MHz, EUT on Side
4851.875	43.2	7.3	1.3	302.0	3.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	ADV Ch 12, 2426 MHz, EUT Face Up
4852.090	42.4	7.3	1.2	181.0	3.0	0.0	Vert	PK	0.0	49.7	74.0	-24.3	ADV Ch 12, 2426 MHz, EUT on Side
12128.860	28.9	-2.2	1.4	332.0	3.0	0.0	Vert	AV	0.0	26.7	54.0	-27.3	ADV Ch 12, 2426 MHz, EUT Standing
12008.940	28.6	-2.2	1.2	328.0	3.0	0.0	Vert	AV	0.0	26.4	54.0	-27.6	ADV Ch 0, 2402 MHz, EUT Standing
12398.970	28.4	-2.0	1.2	3.0	3.0	0.0	Vert	AV	0.0	26.4	54.0	-27.6	ADV Ch 39, 2480 MHz, EUT Standing
12398.930	28.2	-2.0	1.2	351.0	3.0	0.0	Horz	AV	0.0	26.2	54.0	-27.8	ADV Ch 39, 2480 MHz, EUT Standing
12128.840	28.0	-2.2	1.2	151.0	3.0	0.0	Horz	AV	0.0	25.8	54.0	-28.2	ADV Ch 12, 2426 MHz, EUT Standing
12011.440	27.2	-2.2	1.2	29.0	3.0	0.0	Horz	AV	0.0	25.0	54.0	-29.0	ADV Ch 0, 2402 MHz, EUT Standing
12011.180	44.1	-2.2	1.2	328.0	3.0	0.0	Vert	PK	0.0	41.9	74.0	-32.1	ADV Ch 0, 2402 MHz, EUT Standing
12128.820	43.8	-2.2	1.4	332.0	3.0	0.0	Vert	PK	0.0	41.6	74.0	-32.4	ADV Ch 12, 2426 MHz, EUT Standing
12398.590	43.6	-2.0	1.2	3.0	3.0	0.0	Vert	PK	0.0	41.6	74.0	-32.4	ADV Ch 39, 2480 MHz, EUT Standing
12129.470	43.5	-2.2	1.2	151.0	3.0	0.0	Horz	PK	0.0	41.3	74.0	-32.7	ADV Ch 12, 2426 MHz, EUT Standing
12398.510	43.1	-2.0	1.2	351.0	3.0	0.0	Horz	PK	0.0	41.1	74.0	-32.9	ADV Ch 39, 2480 MHz, EUT Standing
12010.570	42.5	-2.2	1.2	29.0	3.0	0.0	Horz	PK	0.0	40.3	74.0	-33.7	ADV Ch 0, 2402 MHz, EUT Standing

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

Transmitting BLE, ADVERTISING (ADV)

Transmitting BLE, DATA

CHANNELS TESTED

DATA Channel 1, 2404 MHz

DATA Channel 18, 2442 MHz

DATA Channel 38, 2478 MHz

ADV Channel 0, 2402 MHz

ADV Channel 12, 2426 MHz

ADV Channel 39, 2480 MHz

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

ADID0013 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 MHz
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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
Attenuator	Fairview Microwave	SA18E-20	AQV	12/6/2013	12 mo
HP Filter	Micro-Tronics	HPM50111	HHI	1/18/2013	24 mo
LP Filter	Micro-Tronics	LPM50004	LFF	11/14/2013	24 mo
Cable I	N/A	N/A	SUM	7/10/2013	12 mo
NC01 Cables	N/A	Standard Gain Horn Cable	NC3	12/6/2013	12 mo
NC01 Cables	N/A	3115 Horn Cable	NC2	10/24/2013	12 mo
NC01 Cables	N/A	Bilog Cables	NC1	10/24/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOD	7/10/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOJ	12/6/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOK	12/6/2013	12 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVZ	10/24/2013	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAB	10/24/2013	12 mo
Antenna, Horn	ETS	3160-09	AIY	NCR	0 mo
Antenna, Horn	EMCO	3160-08	AHO	NCR	0 mo
Antenna, Horn	EMCO	3160-07	AHP	NCR	0 mo
Antenna, Horn	EMCO	3115	AHM	6/19/2012	24 mo
Antenna, Biconilog	EMCO	3142	AXJ	5/16/2012	36 mo
Spectrum Analyzer	Agilent	E4440A	AAW	2/21/2013	24 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

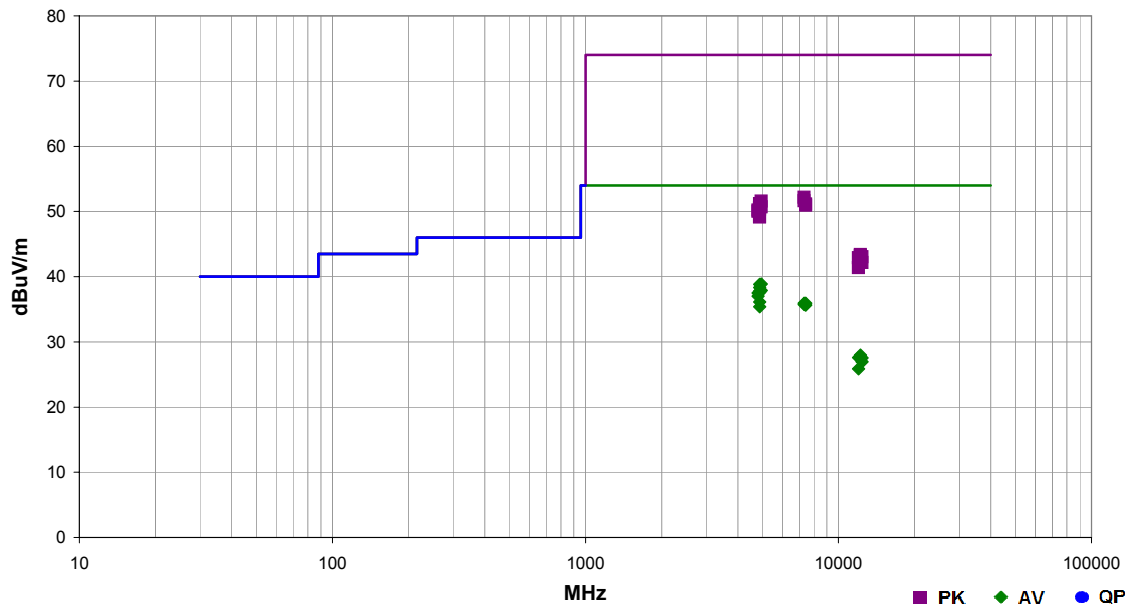
TEST DESCRIPTION

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.

Work Order:	ADID0013	Date:	03/25/14	
Project:	None	Temperature:	23 °C	
Job Site:	NC01	Humidity:	32% RH	
Serial Number:	8946-35	Barometric Pres.:	1005 mbar	
EUT:	miCoach SMART BALL			Tested by: Richard Mellroth
Configuration:	2			
Customer:	adidas International, Inc.			
Attendees:	Ben Valenti			
EUT Power:	Battery			
Operating Mode:	Transmitting BLE, DATA. See comments next to data points for EUT channel and orientation.			
Deviations:	None			
Comments:	Testing Pit Board with battery, no coil, using DB Communicator for PC.			

Test Specifications	N/A	Test Method
FCC 15.247:2014		ANSI C63.10:2009

Run #	31-32,36	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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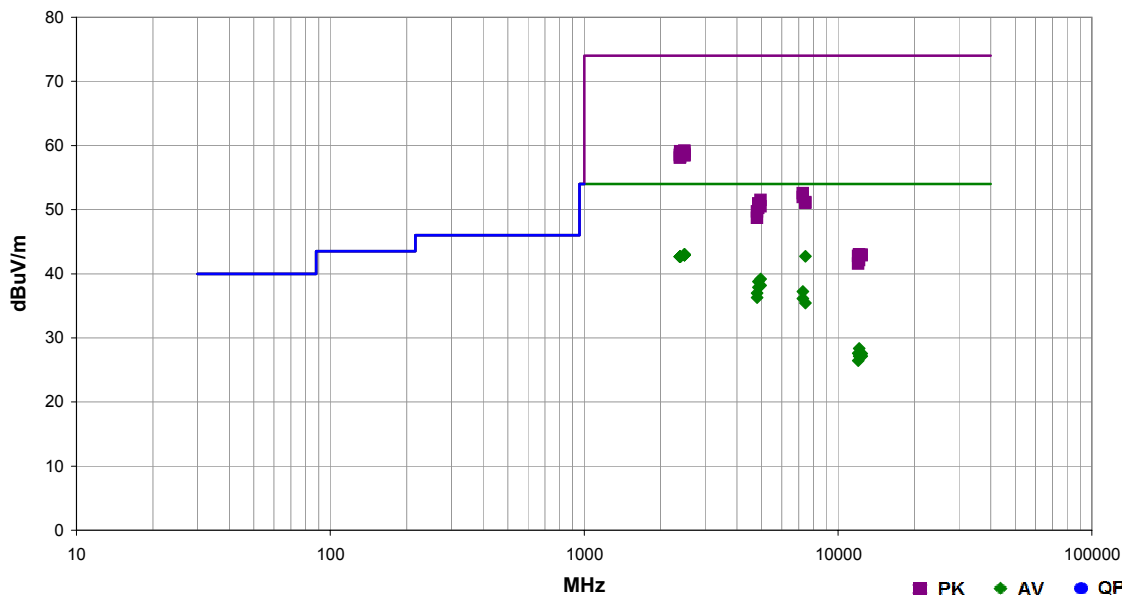
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4956.065	31.4	7.5	1.2	82.0	3.0	0.0	Vert	AV	0.0	38.9	54.0	-15.1	DATA Ch 38, 2478 MHz, EUT Vert
4884.080	31.5	7.3	1.0	109.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	DATA Ch 18, 2442 MHz, EUT Vert
4884.050	31.0	7.3	1.2	17.0	3.0	0.0	Horz	AV	0.0	38.3	54.0	-15.7	DATA Ch 18, 2442 MHz, EUT Horz
4956.060	30.4	7.5	1.2	19.0	3.0	0.0	Horz	AV	0.0	37.9	54.0	-16.1	DATA Ch 38, 2478 MHz, EUT Horz
4884.040	30.5	7.3	1.2	303.0	3.0	0.0	Horz	AV	0.0	37.8	54.0	-16.2	DATA Ch 18, 2442 MHz, EUT Flat
4884.010	30.3	7.3	1.2	202.0	3.0	0.0	Vert	AV	0.0	37.6	54.0	-16.4	DATA Ch 18, 2442 MHz, EUT Horz
4808.040	30.3	7.2	1.2	136.0	3.0	0.0	Vert	AV	0.0	37.5	54.0	-16.5	DATA Ch 1, 2404 MHz, EUT Vert
4807.995	29.8	7.2	1.2	149.0	3.0	0.0	Horz	AV	0.0	37.0	54.0	-17.0	DATA Ch 1, 2404 MHz, EUT Horz
4884.060	28.8	7.3	1.2	133.0	3.0	0.0	Horz	AV	0.0	36.1	54.0	-17.9	DATA Ch 18, 2442 MHz, EUT Vert
7326.585	23.7	12.2	1.2	87.0	3.0	0.0	Horz	AV	0.0	35.9	54.0	-18.1	DATA Ch 18, 2442 MHz, EUT Horz
7433.345	23.2	12.7	1.6	145.0	3.0	0.0	Horz	AV	0.0	35.9	54.0	-18.1	DATA Ch 38, 2478 MHz, EUT Horz
7326.960	23.5	12.3	3.1	193.0	3.0	0.0	Vert	AV	0.0	35.8	54.0	-18.2	DATA Ch 18, 2442 MHz, EUT Vert
7433.395	22.9	12.7	1.2	144.0	3.0	0.0	Vert	AV	0.0	35.6	54.0	-18.4	DATA Ch 38, 2478 MHz, EUT Vert
4884.080	28.1	7.3	1.2	196.0	3.0	0.0	Vert	AV	0.0	35.4	54.0	-18.6	DATA Ch 18, 2442 MHz, EUT Flat
7327.385	39.9	12.3	3.1	193.0	3.0	0.0	Vert	PK	0.0	52.2	74.0	-21.8	DATA Ch 18, 2442 MHz, EUT Vert
7327.175	39.4	12.3	1.2	87.0	3.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	DATA Ch 18, 2442 MHz, EUT Horz
4955.945	44.1	7.5	1.2	82.0	3.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	DATA Ch 38, 2478 MHz, EUT Vert
4884.545	43.9	7.3	1.0	109.0	3.0	0.0	Vert	PK	0.0	51.2	74.0	-22.8	DATA Ch 18, 2442 MHz, EUT Vert
7435.360	38.4	12.7	1.2	144.0	3.0	0.0	Vert	PK	0.0	51.1	74.0	-22.9	DATA Ch 38, 2478 MHz, EUT Vert
7434.360	38.2	12.7	1.6	145.0	3.0	0.0	Horz	PK	0.0	50.9	74.0	-23.1	DATA Ch 38, 2478 MHz, EUT Horz
4955.590	43.2	7.5	1.2	19.0	3.0	0.0	Horz	PK	0.0	50.7	74.0	-23.3	DATA Ch 38, 2478 MHz, EUT Horz
4884.060	43.3	7.3	1.2	17.0	3.0	0.0	Horz	PK	0.0	50.6	74.0	-23.4	DATA Ch 18, 2442 MHz, EUT Horz
4884.125	43.2	7.3	1.2	303.0	3.0	0.0	Horz	PK	0.0	50.5	74.0	-23.5	DATA Ch 18, 2442 MHz, EUT Flat
4884.050	43.0	7.3	1.2	202.0	3.0	0.0	Vert	PK	0.0	50.3	74.0	-23.7	DATA Ch 18, 2442 MHz, EUT Horz
4807.995	43.0	7.2	1.2	149.0	3.0	0.0	Horz	PK	0.0	50.2	74.0	-23.8	DATA Ch 1, 2404 MHz, EUT Horz
4807.810	42.8	7.2	1.2	136.0	3.0	0.0	Vert	PK	0.0	50.0	74.0	-24.0	DATA Ch 1, 2404 MHz, EUT Vert
4884.590	41.9	7.3	1.2	133.0	3.0	0.0	Horz	PK	0.0	49.2	74.0	-24.8	DATA Ch 18, 2442 MHz, 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
4884.415	41.8	7.3	1.2	196.0	3.0	0.0	Vert	PK	0.0	49.1	74.0	-24.9	DATA Ch 18, 2442 MHz, EUT Flat
12209.080	30.1	-2.1	1.1	109.0	3.0	0.0	Horz	AV	0.0	28.0	54.0	-26.0	DATA Ch 18, 2442 MHz, EUT Horz
12019.070	29.8	-2.2	1.2	51.0	3.0	0.0	Horz	AV	0.0	27.6	54.0	-26.4	DATA Ch 1, 2404 MHz, EUT Horz
12209.100	29.7	-2.1	1.2	349.0	3.0	0.0	Vert	AV	0.0	27.6	54.0	-26.4	DATA Ch 18, 2442 MHz, EUT Vert
12389.090	29.6	-2.0	1.2	228.0	3.0	0.0	Horz	AV	0.0	27.6	54.0	-26.4	DATA Ch 38, 2478 MHz, EUT Horz
12389.090	29.0	-2.0	1.2	324.0	3.0	0.0	Vert	AV	0.0	27.0	54.0	-27.0	DATA Ch 38, 2478 MHz, EUT Horz
12019.060	28.1	-2.2	1.2	180.0	3.0	0.0	Vert	AV	0.0	25.9	54.0	-28.1	DATA Ch 1, 2404 MHz, EUT Vert
12211.230	45.5	-2.1	1.1	109.0	3.0	0.0	Horz	PK	0.0	43.4	74.0	-30.6	DATA Ch 18, 2442 MHz, EUT Horz
12211.270	45.3	-2.1	1.2	349.0	3.0	0.0	Vert	PK	0.0	43.2	74.0	-30.8	DATA Ch 18, 2442 MHz, EUT Vert
12390.750	45.1	-2.0	1.2	228.0	3.0	0.0	Horz	PK	0.0	43.1	74.0	-30.9	DATA Ch 38, 2478 MHz, EUT Horz
12018.620	45.1	-2.2	1.2	51.0	3.0	0.0	Horz	PK	0.0	42.9	74.0	-31.1	DATA Ch 1, 2404 MHz, EUT Horz
12391.290	44.2	-2.0	1.2	324.0	3.0	0.0	Vert	PK	0.0	42.2	74.0	-31.8	DATA Ch 38, 2478 MHz, EUT Horz
12020.530	43.6	-2.2	1.2	180.0	3.0	0.0	Vert	PK	0.0	41.4	74.0	-32.6	DATA Ch 1, 2404 MHz, EUT Vert

Work Order:	ADID0013	Date:	03/25/14		
Project:	None	Temperature:	23 °C		
Job Site:	NC01	Humidity:	32% RH		
Serial Number:	8946-35	Barometric Pres.:	1005 mbar		
EUT:	miCoach SMART BALL			Tested by:	Richard Mellroth
Configuration:	2				
Customer:	adidas International, Inc.				
Attendees:	Ben Valenti				
EUT Power:	Battery				
Operating Mode:	Transmitting BLE, ADV. See comments next to data points for EUT channel and orientation.				
Deviations:	None				
Comments:	Testing Pit Board with battery, no coil, using DB Communicator for PC.				

Test Specifications	N/A	Test Method
FCC 15.247:2014		ANSI C63.10:2009

Run #	33-35	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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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
2485.013	25.0	-2.0	3.2	2.0	3.0	20.0	Horz	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT Vert
2483.623	25.0	-2.0	1.9	121.0	3.0	20.0	Horz	AV	0.0	43.0	54.0	-11.0	ADV Ch 39, 2480 MHz, EUT Horz
2485.480	24.9	-2.0	2.7	58.0	3.0	20.0	Vert	AV	0.0	42.9	54.0	-11.1	ADV Ch 39, 2480 MHz, EUT Horz
2485.120	24.9	-2.0	1.2	99.0	3.0	20.0	Horz	AV	0.0	42.9	54.0	-11.1	ADV Ch 39, 2480 MHz, EUT Flat
2485.147	24.9	-2.0	1.2	354.0	3.0	20.0	Vert	AV	0.0	42.9	54.0	-11.1	ADV Ch 39, 2480 MHz, EUT Flat
2483.767	24.9	-2.0	1.2	60.0	3.0	20.0	Vert	AV	0.0	42.9	54.0	-11.1	ADV Ch 39, 2480 MHz, EUT Vert
7440.265	30.0	12.7	2.2	51.0	3.0	0.0	Horz	AV	0.0	42.7	54.0	-11.3	ADV Ch 39, 2480 MHz, EUT Horz
2388.927	24.9	-2.2	1.2	263.0	3.0	20.0	Vert	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Flat
2388.837	24.9	-2.2	1.2	129.0	3.0	20.0	Horz	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Horz
2388.630	24.9	-2.2	1.2	77.0	3.0	20.0	Horz	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Vert
2388.367	24.9	-2.2	1.2	215.0	3.0	20.0	Vert	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Horz
2388.257	24.9	-2.2	1.2	2.0	3.0	20.0	Horz	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Flat
2388.140	24.9	-2.2	2.6	26.0	3.0	20.0	Vert	AV	0.0	42.7	54.0	-11.3	ADV Ch 0, 2402 MHz, EUT Vert
2485.450	41.2	-2.0	1.9	121.0	3.0	20.0	Horz	PK	0.0	59.2	74.0	-14.8	ADV Ch 39, 2480 MHz, EUT Horz
4960.060	31.7	7.5	1.2	118.0	3.0	0.0	Vert	AV	0.0	39.2	54.0	-14.8	ADV Ch 39, 2480 MHz, EUT Vert
2483.587	41.1	-2.0	1.2	99.0	3.0	20.0	Horz	PK	0.0	59.1	74.0	-14.9	ADV Ch 39, 2480 MHz, EUT Flat
2389.843	41.3	-2.2	1.2	263.0	3.0	20.0	Vert	PK	0.0	59.1	74.0	-14.9	ADV Ch 0, 2402 MHz, EUT Flat
4852.050	31.5	7.3	1.3	80.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	ADV Ch 12, 2426 MHz, EUT Vert
2484.410	40.7	-2.0	2.7	58.0	3.0	20.0	Vert	PK	0.0	58.7	74.0	-15.3	ADV Ch 39, 2480 MHz, EUT Horz
2389.053	40.9	-2.2	1.2	129.0	3.0	20.0	Horz	PK	0.0	58.7	74.0	-15.3	ADV Ch 0, 2402 MHz, EUT Horz
2389.383	40.8	-2.2	1.2	215.0	3.0	20.0	Vert	PK	0.0	58.6	74.0	-15.4	ADV Ch 0, 2402 MHz, EUT Horz
2484.670	40.5	-2.0	1.2	60.0	3.0	20.0	Vert	PK	0.0	58.5	74.0	-15.5	ADV Ch 39, 2480 MHz, EUT Vert
2484.417	40.5	-2.0	3.2	2.0	3.0	20.0	Horz	PK	0.0	58.5	74.0	-15.5	ADV Ch 39, 2480 MHz, EUT Vert
2483.800	40.5	-2.0	1.2	354.0	3.0	20.0	Vert	PK	0.0	58.5	74.0	-15.5	ADV Ch 39, 2480 MHz, EUT Flat
2388.600	40.7	-2.2	1.2	2.0	3.0	20.0	Horz	PK	0.0	58.5	74.0	-15.5	ADV Ch 0, 2402 MHz, EUT Flat
4960.030	30.7	7.5	1.2	156.0	3.0	0.0	Horz	AV	0.0	38.2	54.0	-15.8	ADV Ch 39, 2480 MHz, EUT Horz
2389.663	40.4	-2.2	2.6	26.0	3.0	20.0	Vert	PK	0.0	58.2	74.0	-15.8	ADV Ch 0, 2402 MHz, EUT Vert
2388.507	40.3	-2.2	1.2	77.0	3.0	20.0	Horz	PK	0.0	58.1	74.0	-15.9	ADV Ch 0, 2402 MHz, 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
4852.015	30.6	7.3	1.2	147.0	3.0	0.0	Horz	AV	0.0	37.9	54.0	-16.1	ADV Ch 12, 2426 MHz, EUT Horz
7277.495	25.3	11.9	1.9	139.0	3.0	0.0	Horz	AV	0.0	37.2	54.0	-16.8	ADV Ch 12, 2426 MHz, EUT Horz
4804.017	29.8	7.2	1.2	109.0	3.0	0.0	Vert	AV	0.0	37.0	54.0	-17.0	ADV Ch 0, 2402 MHz, EUT Vert
4804.017	29.1	7.2	1.2	156.0	3.0	0.0	Horz	AV	0.0	36.3	54.0	-17.7	ADV Ch 0, 2402 MHz, EUT Horz
7277.450	24.2	11.9	1.7	215.0	3.0	0.0	Vert	AV	0.0	36.1	54.0	-17.9	ADV Ch 12, 2426 MHz, EUT Vert
7439.540	22.7	12.7	1.2	334.0	3.0	0.0	Vert	AV	0.0	35.4	54.0	-18.6	ADV Ch 39, 2480 MHz, EUT Vert
7278.845	40.6	12.0	1.9	139.0	3.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	ADV Ch 12, 2426 MHz, EUT Horz
7276.765	40.0	11.9	1.7	215.0	3.0	0.0	Vert	PK	0.0	51.9	74.0	-22.1	ADV Ch 12, 2426 MHz, EUT Vert
4959.775	44.0	7.5	1.2	118.0	3.0	0.0	Vert	PK	0.0	51.5	74.0	-22.5	ADV Ch 39, 2480 MHz, EUT Vert
7440.120	38.4	12.7	1.2	334.0	3.0	0.0	Vert	PK	0.0	51.1	74.0	-22.9	ADV Ch 39, 2480 MHz, EUT Vert
7440.450	38.3	12.7	2.2	51.0	3.0	0.0	Horz	PK	0.0	51.0	74.0	-23.0	ADV Ch 39, 2480 MHz, EUT Horz
4851.610	43.7	7.3	1.3	80.0	3.0	0.0	Vert	PK	0.0	51.0	74.0	-23.0	ADV Ch 12, 2426 MHz, EUT Vert
4960.030	43.0	7.5	1.2	156.0	3.0	0.0	Horz	PK	0.0	50.5	74.0	-23.5	ADV Ch 39, 2480 MHz, EUT Horz
4851.570	43.0	7.3	1.2	147.0	3.0	0.0	Horz	PK	0.0	50.3	74.0	-23.7	ADV Ch 12, 2426 MHz, EUT Horz
4803.992	42.5	7.2	1.2	109.0	3.0	0.0	Vert	PK	0.0	49.7	74.0	-24.3	ADV Ch 0, 2402 MHz, EUT Vert
4803.942	41.5	7.2	1.2	156.0	3.0	0.0	Horz	PK	0.0	48.7	74.0	-25.3	ADV Ch 0, 2402 MHz, EUT Horz
12129.040	30.5	-2.2	1.2	44.0	3.0	0.0	Horz	AV	0.0	28.3	54.0	-25.7	ADV Ch 12, 2426 MHz, EUT Horz
12009.010	29.8	-2.2	1.2	51.0	3.0	0.0	Horz	AV	0.0	27.6	54.0	-26.4	ADV Ch 0, 2402 MHz, EUT Horz
12399.080	29.6	-2.0	1.2	239.0	3.0	0.0	Horz	AV	0.0	27.6	54.0	-26.4	ADV Ch 39, 2480 MHz, EUT Horz
12399.060	29.2	-2.0	1.2	347.0	3.0	0.0	Vert	AV	0.0	27.2	54.0	-26.8	ADV Ch 39, 2480 MHz, EUT Vert
12129.010	29.3	-2.2	1.2	325.0	3.0	0.0	Vert	AV	0.0	27.1	54.0	-26.9	ADV Ch 12, 2426 MHz, EUT Vert
12009.030	28.7	-2.2	1.2	331.0	3.0	0.0	Vert	AV	0.0	26.5	54.0	-27.5	ADV Ch 0, 2402 MHz, EUT Vert
12129.020	45.2	-2.2	1.2	44.0	3.0	0.0	Horz	PK	0.0	43.0	74.0	-31.0	ADV Ch 12, 2426 MHz, EUT Horz
12398.750	45.0	-2.0	1.2	239.0	3.0	0.0	Horz	PK	0.0	43.0	74.0	-31.0	ADV Ch 39, 2480 MHz, EUT Horz
12399.590	44.9	-2.0	1.2	347.0	3.0	0.0	Vert	PK	0.0	42.9	74.0	-31.1	ADV Ch 39, 2480 MHz, EUT Vert
12010.460	45.0	-2.2	1.2	51.0	3.0	0.0	Horz	PK	0.0	42.8	74.0	-31.2	ADV Ch 0, 2402 MHz, EUT Horz
12129.930	44.3	-2.2	1.2	325.0	3.0	0.0	Vert	PK	0.0	42.1	74.0	-31.9	ADV Ch 12, 2426 MHz, EUT Vert
12010.210	43.8	-2.2	1.2	331.0	3.0	0.0	Vert	PK	0.0	41.6	74.0	-32.4	ADV Ch 0, 2402 MHz, EUT Vert

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. 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 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50 Ω .

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARE	05/30/2013	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HHF	01/22/2014	12 mo
NC05 Cables	N/A	Conducted / NF Probe Cable	NC4	12/12/2013	12 mo
Attenuator	Fairview Microwave	SA03B-20	RKD	12/12/2013	12 mo
Comb Generator Conducted	KJR Enterprises	CCG-40	TCE	NCR	0 mo

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

CONFIGURATIONS INVESTIGATED

ADID0013-4

MODES INVESTIGATED

Charging, Transmitting on BT Advertising - High Channel 2480MHz
 Charging, Transmitting on BT Advertising - Low Channel 2402MHz
 Charging, Transmitting on BT Advertising - Mid Channel 2426MHz

AC POWERLINE CONDUCTED EMISSIONS

EUT:	miCoach SMART BALL	Work Order:	ADID0013
Serial Number:	DB0000594	Date:	03/27/2014
Customer:	adidas International, Inc.	Temperature:	23.6°C
Attendees:	Ben Valenti	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1008 mb
Tested By:	Matthew Barnes	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	ADID0013-4

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

TEST PARAMETERS

Run #:	3	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

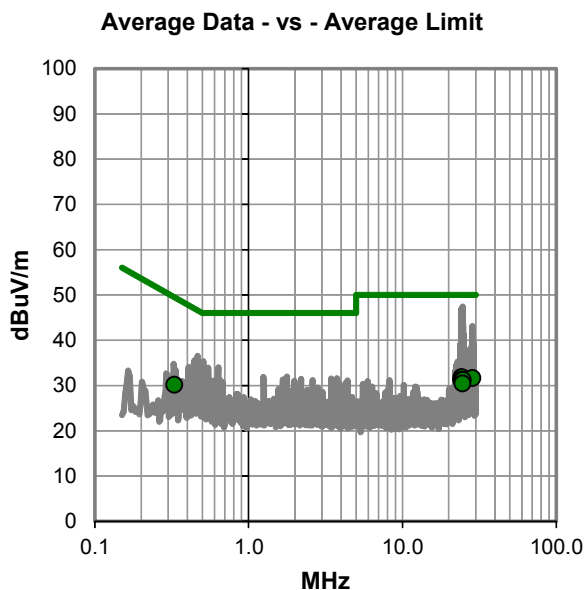
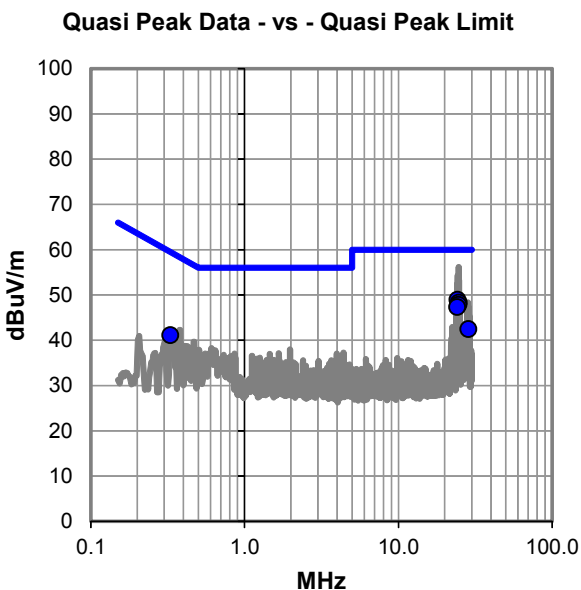
None

EUT OPERATING MODES

Charging, Transmitting on BT Advertising - Low Channel 2402MHz

DEVIATIONS FROM TEST STANDARD

None



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #3

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.306	26.9	22.0	48.9	60.0	-11.1
24.723	26.2	22.1	48.3	60.0	-11.7
24.622	25.7	22.1	47.8	60.0	-12.2
24.187	25.3	22.0	47.3	60.0	-12.7
28.561	19.9	22.5	42.4	60.0	-17.6
0.328	20.9	20.2	41.1	59.5	-18.4

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.306	9.8	22.0	31.8 50.0		-18.2
28.561	9.1	22.5	31.6 50.0		-18.4
24.187	9.3	22.0	31.3 50.0		-18.7
24.723	9.1	22.1	31.2 50.0		-18.8
0.328	10.0	20.2	30.2 49.5		-19.3
24.622	8.4	22.1	30.5 50.0		-19.5

CONCLUSION

Pass

Matthew W. Brown

Tested By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	miCoach SMART BALL	Work Order:	ADID0013
Serial Number:	DB0000594	Date:	03/27/2014
Customer:	adidas International, Inc.	Temperature:	23.6°C
Attendees:	Ben Valenti	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1008 mb
Tested By:	Matthew Barnes	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	ADID0013-4

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

TEST PARAMETERS

Run #:	4	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

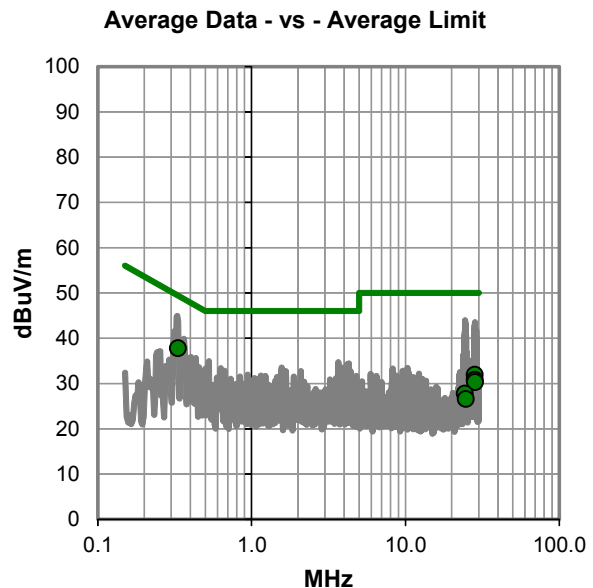
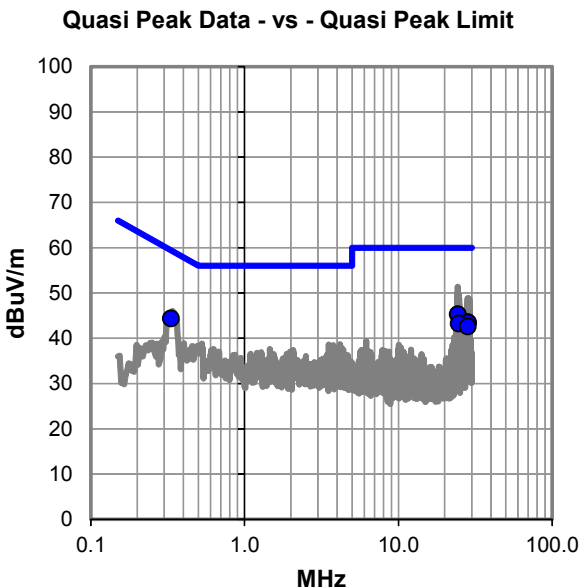
None

EUT OPERATING MODES

Charging, Transmitting on BT Advertising - Low Channel 2402MHz

DEVIATIONS FROM TEST STANDARD

None



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #4

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.428	23.2	22.1	45.3	60.0	-14.7
0.332	24.2	20.2	44.4	59.4	-15.0
28.343	21.0	22.5	43.5	60.0	-16.5
28.398	20.9	22.5	43.4	60.0	-16.6
24.717	21.1	22.1	43.2	60.0	-16.8
28.279	20.1	22.5	42.6	60.0	-17.4

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
0.332	17.6	20.2	37.8	50.0	-11.6
28.343	9.4	22.5	31.9	50.0	-18.1
28.279	8.3	22.5	30.8	50.0	-19.2
28.398	7.8	22.5	30.3	50.0	-19.7
24.428	5.7	22.1	27.8	50.0	-22.2
24.717	4.5	22.1	26.6	50.0	-23.4

CONCLUSION

Pass

Matthew W. Brown

Tested By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	miCoach SMART BALL	Work Order:	ADID0013
Serial Number:	DB0000594	Date:	03/27/2014
Customer:	adidas International, Inc.	Temperature:	23.6°C
Attendees:	Ben Valenti	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1008 mb
Tested By:	Matthew Barnes	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	ADID0013-4

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

TEST PARAMETERS

Run #:	5	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

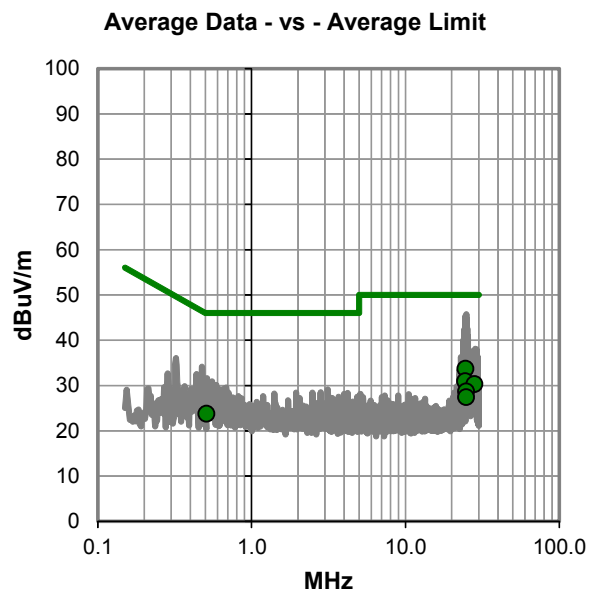
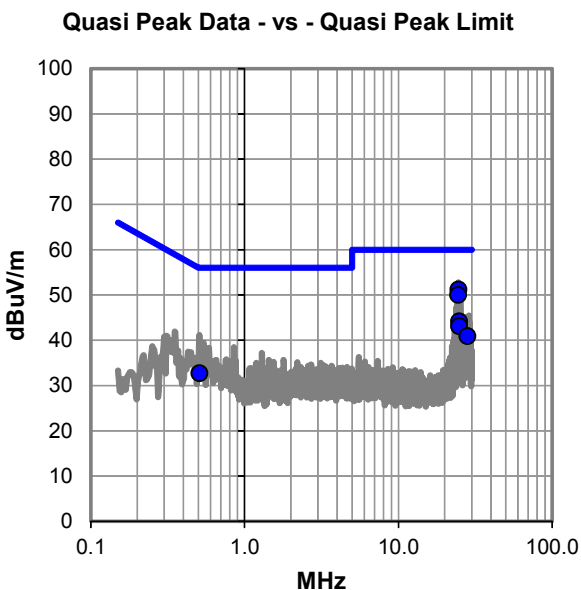
None

EUT OPERATING MODES

Charging, Transmitting on BT Advertising - Mid Channel 2426MHz

DEVIATIONS FROM TEST STANDARD

None



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #5

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.559	29.1	22.1	51.2	60.0	-8.8
24.524	27.9	22.1	50.0	60.0	-10.0
24.887	22.0	22.1	44.1	60.0	-15.9
24.859	21.0	22.1	43.1	60.0	-16.9
28.206	18.4	22.5	40.9	60.0	-19.1
0.509	12.6	20.1	32.7	56.0	-23.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.559	11.6	22.1 33.0	7	50.0	-16.3
24.524	8.9	22.1	31.0 50.0		-19.0
28.206	7.8	22.5	30.3 50.0		-19.7
24.887	6.6	22.1	28.7 50.0		-21.3
0.509	3.6	20.1	23.7 46.0		-22.3
24.859	5.3	22.1	27.4 50.0		-22.6

CONCLUSION

Pass

Matthew W. Brown

Tested By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	miCoach SMART BALL	Work Order:	ADID0013
Serial Number:	DB0000594	Date:	03/27/2014
Customer:	adidas International, Inc.	Temperature:	23.6°C
Attendees:	Ben Valenti	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1008 mb
Tested By:	Matthew Barnes	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	ADID0013-4

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

TEST PARAMETERS

Run #:	6	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

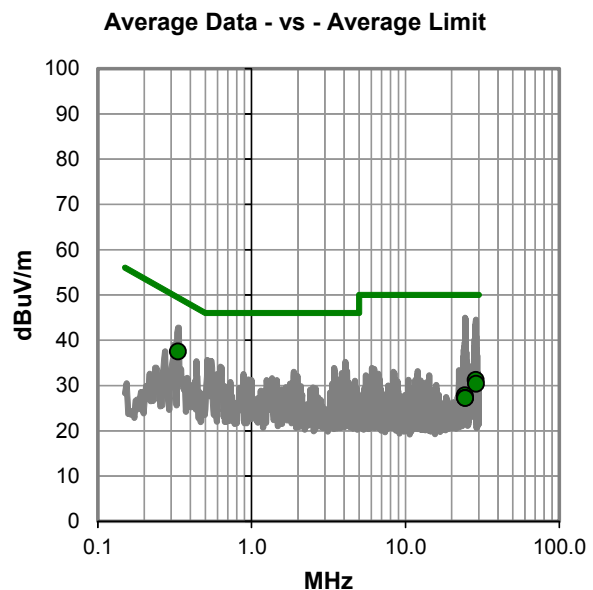
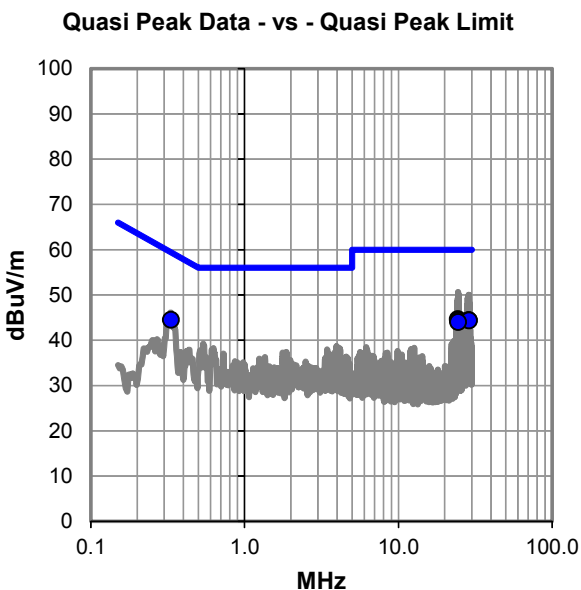
None

EUT OPERATING MODES

Charging, Transmitting on BT Advertising - Mid Channel 2426MHz

DEVIATIONS FROM TEST STANDARD

None



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #6

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
0.333	24.3	20.2	44.5	59.4	-14.9
24.413	22.6	22.1	44.7	60.0	-15.3
28.700	21.9	22.6	44.5	60.0	-15.5
24.526	22.3	22.1	44.4	60.0	-15.6
28.820	21.8	22.6	44.4	60.0	-15.6
24.520	21.9	22.1	44.0	60.0	-16.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
0.333	17.3	20.2	37.5	49.4	-11.9
28.700	8.7	22.6	31.3	50.0	-18.7
28.820	7.8	22.6	30.4	50.0	-19.6
24.413	5.8	22.1	27.9	50.0	-22.1
24.526	5.2	22.1	27.3	50.0	-22.7
24.520	5.1	22.1	27.2	50.0	-22.8

CONCLUSION

Pass

Matthew W. Brown

Tested By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	miCoach SMART BALL	Work Order:	ADID0013
Serial Number:	DB0000594	Date:	03/27/2014
Customer:	adidas International, Inc.	Temperature:	23.6°C
Attendees:	Ben Valenti	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1008 mb
Tested By:	Matthew Barnes	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	ADID0013-4

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

TEST PARAMETERS

Run #:	7	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

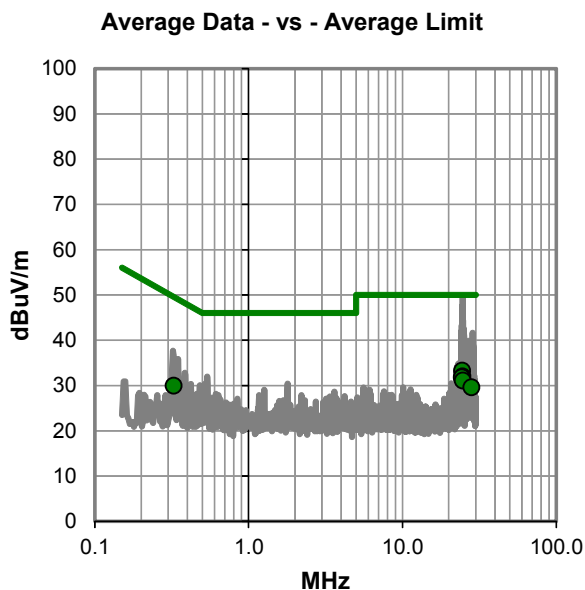
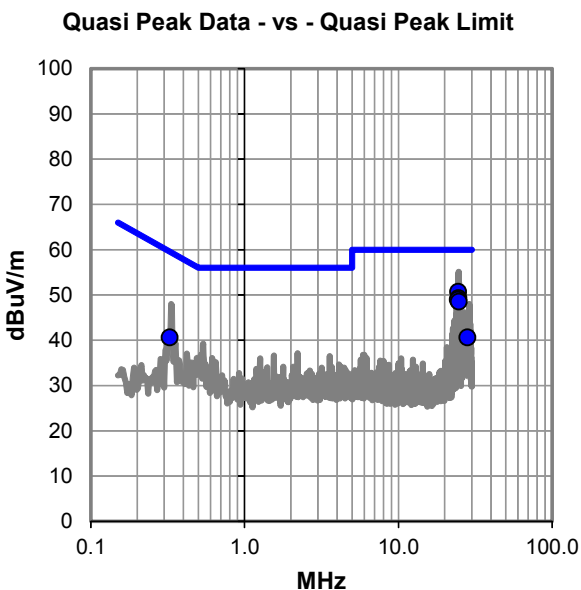
None

EUT OPERATING MODES

Charging, Transmitting on BT Advertising - High Channel 2480MHz

DEVIATIONS FROM TEST STANDARD

None



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #7

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.551	28.6	22.1	50.7	60.0	-9.3
24.640	27.2	22.1	49.3	60.0	-10.7
24.433	26.9	22.1	49.0	60.0	-11.0
24.676	26.4	22.1	48.5	60.0	-11.5
0.325	20.4	20.2	40.6	59.6	-19.0
28.200	18.1	22.5	40.6	60.0	-19.4

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.551	11.2	22.1 33.0	3	50.0	-16.7
24.640	9.9	22.1	32.0 50.0		-18.0
24.433	9.7	22.1	31.8 50.0		-18.2
24.676	9.0	22.1	31.1 50.0		-18.9
0.325	9.8	20.2	30.0 49.6		-19.6
28.200	7.1	22.5	29.6 50.0		-20.4

CONCLUSION

Pass

Matthew W. Brown

Tested By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	miCoach SMART BALL	Work Order:	ADID0013
Serial Number:	DB0000594	Date:	03/27/2014
Customer:	adidas International, Inc.	Temperature:	23.6°C
Attendees:	Ben Valenti	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1008 mb
Tested By:	Matthew Barnes	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	ADID0013-4

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

TEST PARAMETERS

Run #:	8	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

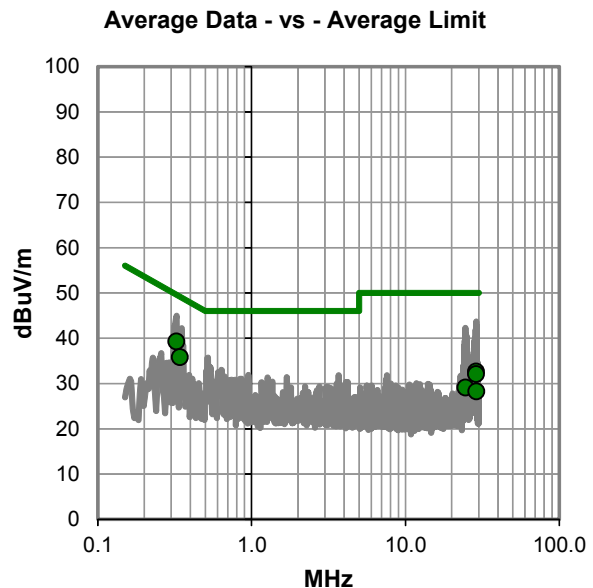
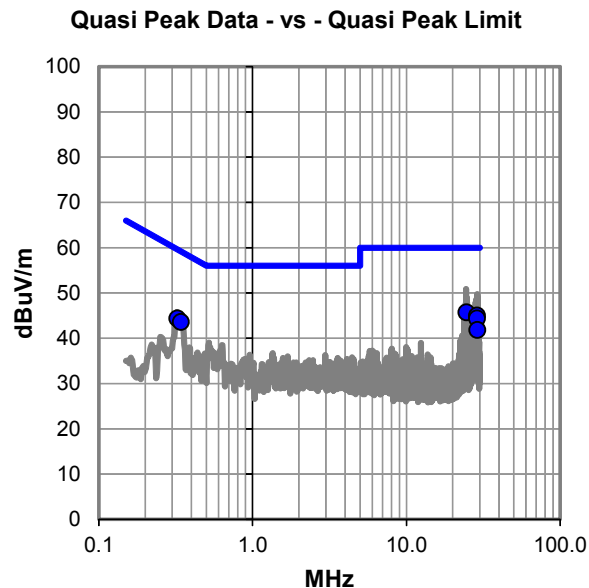
None

EUT OPERATING MODES

Charging, Transmitting on BT Advertising - High Channel 2480MHz

DEVIATIONS FROM TEST STANDARD

None



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #8

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
24.565	23.6	22.1	45.7	60.0	-14.3
28.855	22.4	22.6	45.0	60.0	-15.0
0.325	24.2	20.2	44.4	59.6	-15.2
0.342	23.4	20.2	43.6	59.2	-15.6
28.838	21.8	22.6	44.4	60.0	-15.6
28.993	19.2	22.6	41.8	60.0	-18.2

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Margin (dB)
0.325	19.1	20.2	39.3 49.5		-10.3
0.342	15.6	20.2	35.8 49.2		-13.4
28.855	10.1	22.6	32.7 50.0		-17.3
28.838	9.5	22.6	32.1 50.0		-17.9
24.565	7.0	22.1	29.1 50.0		-20.9
28.993	5.7	22.6	28.3 50.0		-21.7

CONCLUSION

Pass

Matthew W. Brown

Tested By