Application for Certification
For a Limited Modular Transceiver

ZAGG Inc.
3855 South 500 West
Salt Lake City, UT 84115 USA

Limited Modular Transceiver
M/N: V031260

FCC ID: QTG-ZKIS

REPORT # UT66000A-002

This report was prepared in accordance with the requirements of the FCC Rules and Regulations Part 2, Subpart J, 2.1033, Part 15.247, and other applicable sections of the rules as indicated herein.

Prepared By:

DNB Engineering, Inc.
1100 E Chalk Creek Road
Coalville, UT 84017

6 Oct 2015

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Paragraph numbers in this report follow the application section numbers found in the FEDERAL COMMUNICATIONS COMMISSION Rules and Regulations, Part 2, Subpart J for Certification of electronic equipment.

1.0 ADMINISTRATIVE DATA

1.1 Certifications and Qualifications

I certify that DNB Engineering, Inc conducted the tests performed in order to obtain the technical data presented in this application. Also, based on the results of the enclosed data, I have concluded that the equipment tested meets or exceeds the requirements of the Rules and Regulations governing this application.

1.2 Measurement Repeatability Information

The test data presented in this report has been acquired using the guidelines set forth in FCC Part 2.1031 through 2.1057, Part 15. The test results presented in this document are valid only for the equipment identified herein under the test conditions described. Repeatability of these test results will only be achieved with identical measurement conditions. These conditions include: The same test distance, EUT Height, Measurement Site Characteristics, and the same EUT System Components. The system must have the same Interconnecting Cables arranged in identical placement to that in the test set-up, with the system and/or EUT functioning in the identical mode of operation (i.e. software and so on) as on the date of the test. Any deviation from the test conditions and the environment on the date of the test may result in measurement repeatability difficulties.

All changes made to the EUT during the course of testing as identified in this test report must be incorporated into the EUT or identical models to ensure compliance with the FCC regulations.

C. L. Payne III (Para. 1.1)
Facility Manager
Coalville Facility.
DNB Engineering, Inc.
Tel. (435) 336-4433
FAX (435) 336-4436

1.3 Test Equipment List

TEST EQUIPMENT LIST - CONDUCTED EMISSIONS				
Description	**Manufacturer/MN**	**Asset #**	**Serial #**	**Cal Due**
LISN	Fisher LISN-50/32-4-01	U-286	2020	19-Jan-16
LISN	FisherFCCLISN-50/250/25/8	U-062	5003	11-Nov-15
Spectrum Analyzer	Agilent/E7401A	U-257	MY42000103	08-Jan-16
Spectrum Analyzer	R&S/FSV30	U-248	101367	18-Jun-16
CDN 16 amp	Fischer/FCC801M316A	U-169	64	09-Jul-17
TILE Software	ETS Lindgren/ 3.4.11.13	U-317	8112006	13-Oct-15
Current Probe	Solar/ 6741-1	U-267	966727	19-Jan-16

TEST EQUIPMENT LIST - RADIATED EMISSIONS				
Description	**Manufacturer/MN**	**Asset #**	**Serial #**	**Cal Due**
Amplifier	HP/8447D	U-065	2727A06180	5-Jan-16
Amplifier	HP/8447D	U-066	2727A06181	5-Jan-16
Amplifier	HP/8447D	U-068	2727A06184	5-Jan-16
Bicon Antenna	SCH/BBA9106	U-186	7	18-May-17
Log P Antenna	SCH/UHAL09107	U-010	10	10-Oct-15
DRG Horn Antenna	AH Systems/SAS-200/571	U-156	222	23-Apr-17
Spectrum Analyzer	Agilent/E7401A	U-257	MY42000103	8-Jan-16
Spectrum Analyzer	R&S/FSV30	U-248	101367	18-Jun-16
TILE Software	ETS- Lindgern/ 3.4.11.13	U-317	8112006	13-Oct-15

TEST EQUIPMENT LIST - ANTENNA CONDUCTED				
Description	**Manufacturer/MN**	**Asset #**	**Serial #**	**Cal Due**
Spectrum Analyzer	R&S/FSV30	U-248	101367	18-Jun-16

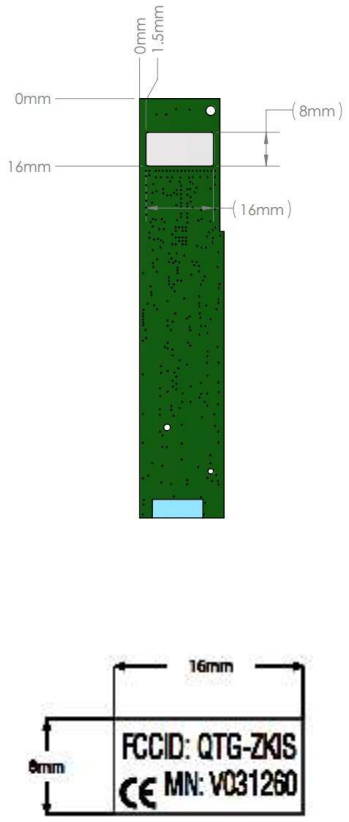
2.1033 (b) (1) Application for Certification

Name of Applicant:		ZAGG Inc. 3855 South 500 West Salt Lake City, UT 84115 USA
FRN Number:		0022140180
Applicant is: Vendor Licensee Prospective Licensee Other	X	ZAGG Inc.
Name of Manufacturer :		VPI Engineering Inc 11814 S. Election Road Draper, UT 84020
Description:		Limited Modular Transceiver
Model Number:		V031260
Anticipated Production Quantity:		Multiple Units
Frequency Band:		2402 - 2480 MHz
Rated Power:		0.6 mW
Type of Signal:		DSS (Part 15 Spread Spectrum)
Hopping Channels:		79
Modulation:		GFSK
Max Data Rate:		1Mpbs
Antenna Designation:		Integral (On board PCB trace)
Antenna Gain:		2dBi

2.1033 (b) (2) FCC Identifier

FCC ID: QTG-ZKIS

Figure 1 - Label and location



2.1033 (b) (3) Installation and Operating Instructions

Supplied separately.

2.1033 (b) (4) Brief Description of Circuit Function

Supplied separately for confidentiality.

2.1033 (b) (5) Block Diagram

Supplied separately for confidentiality.

2.1033 (b) (6) Report of Measurements

Information regarding use of Host Device

EUT has been installed in a Host Device supplied by ZAGG,Inc. This is not the only host that the EUT will be installed in. The other potential hosts are similar keyboards with slight variations in size and language keys to accommodate different tablets. All of the keyboards will be ZAGG Inc. products and under strict control to comply. The EUT will not be marketed separately to anyone and will only be sold when integrated into a final keyboard product to be marketed to end consumer customers. The EUT will only be installed by Contract Manufacturers under direct control of ZAGG Inc. The end user will never install it.

15.207 Conducted Emissions (General Provisions)

Test Procedure: As specified in IEEE C63.10-2013

To measure conducted emissions, the EUT was set upon a wooden table in the shielded enclosure. AC power was fed into the EUT from the Artificial Mains Network. With the Artificial Mains Network connected to an Rhode & Schwarz FSV Signal and Spectrum Analyzer, and using Personal Computer with TILES Measurement Software, the spectrum was searched from 0.15 - 30 MHz for emissions emanating from the EUT.

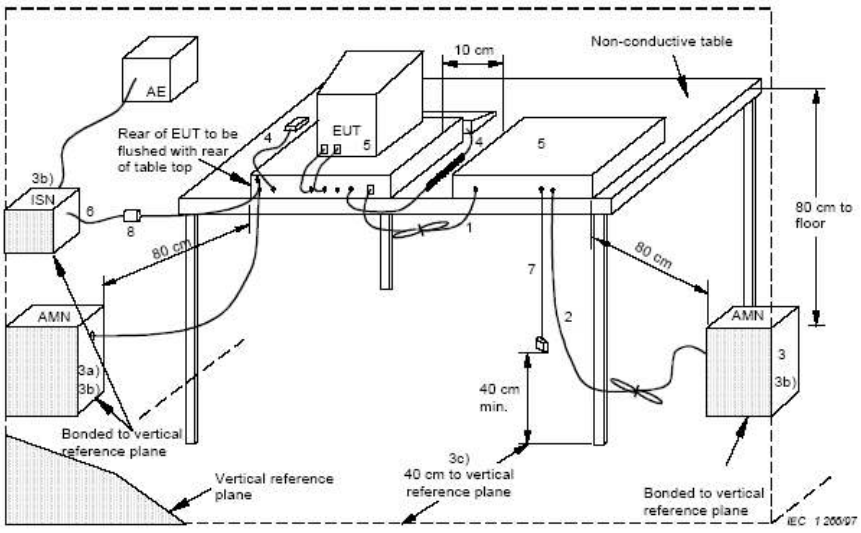
Frequency of emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency.

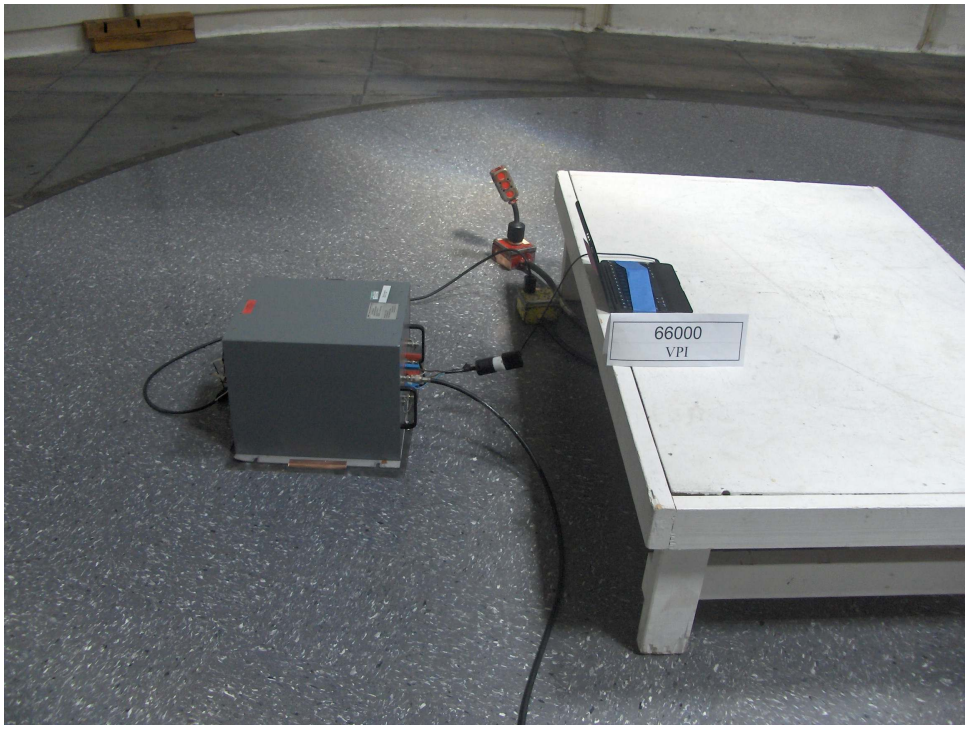
EUT operating conditions:

The software provided by the client to enable the EUT to transmit continuously.

Test Set Up:



	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Conducted Emissions**	
DNB Job Number:	66000	Date: 6 Jul 2015	Specification [X] 15.207 [X] IEEE C63.10-2013
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		
	Set Up		



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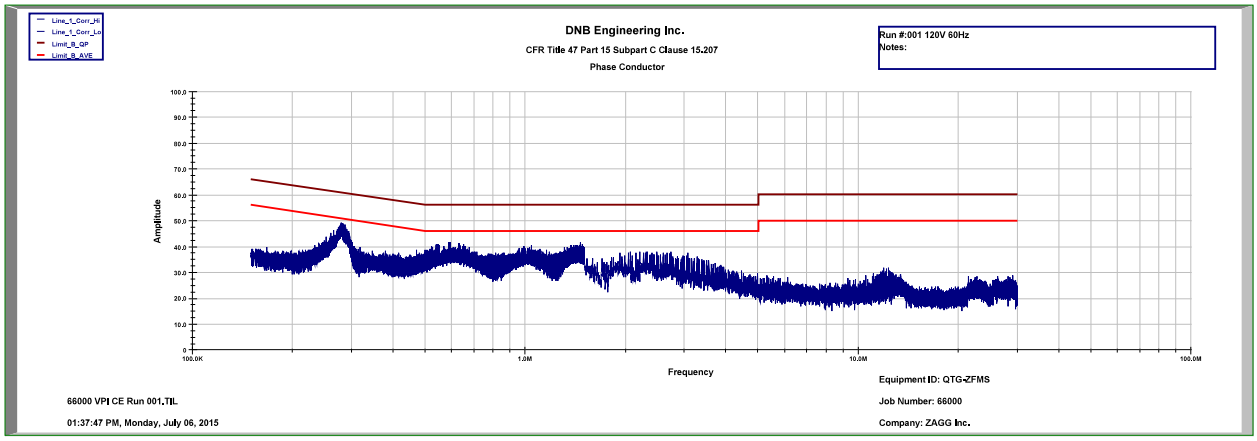
Conducted Emissions

DNB Job Number:	66000	Date: 6 Jul 2015	Specification
Customer:	ZAGG Inc.		[X] 15.207
Model Number:	V031260		[X] IEEE C63.10-2013
Description:	Limited Modular Transceiver		
	Phase Conductor		

Freq in Mhz	Raw Meter Reading	Correction Factors			Corrected Reading dBuV	Limit dBuV	Delta	Limit Type	Detector Type
		LISN	Cable	Total					
		dB	dB	dB					
0.265	27.99	0.10	0.00	0.10	28.09	63.00	-34.91	QP	QP
0.265	17.09	0.10	0.00	0.10	17.19	53.00	-35.81	AVE	AVE
0.282	34.00	0.10	0.00	0.10	34.10	52.00	-17.90	AVE	AVE
0.282	42.20	0.10	0.00	0.10	42.30	62.00	-19.70	QP	QP
0.286	39.59	0.11	0.00	0.11	39.70	52.00	-12.30	AVE	AVE
0.286	46.36	0.10	0.00	0.10	46.46	62.00	-15.54	QP	QP
0.288	39.46	0.10	0.00	0.10	39.56	52.00	-12.44	AVE	AVE
0.288	45.79	0.10	0.00	0.10	45.89	62.00	-16.11	QP	QP
0.290	37.49	0.10	0.00	0.10	37.59	62.00	-24.41	QP	QP
0.290	24.43	0.10	0.00	0.10	24.53	52.00	-27.47	AVE	AVE
0.594	14.98	0.00	0.00	0.00	14.98	46.00	-31.02	AVE	AVE
0.594	23.14	0.00	0.00	0.00	23.14	56.00	-32.86	QP	QP
1.470	13.82	0.00	0.40	0.40	14.22	46.00	-31.78	AVE	AVE
1.470	21.39	0.00	0.40	0.40	21.79	56.00	-34.21	QP	QP



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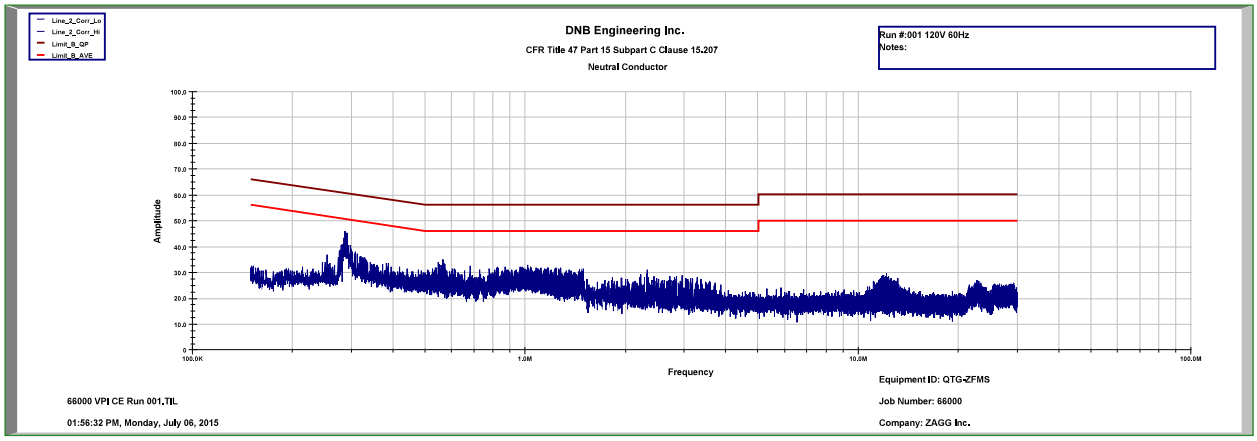
Conducted Emissions

DNB Job Number:	66000	Date: 6 Jul 2015	Specification
Customer:	ZAGG Inc.		[X] 15.207
Model Number:	V031260		[X] IEEE C63.10-2013
Description:	Limited Modular Transceiver		
	Neutral Conductor		

Freq in Mhz	Raw Meter Reading	Correction Factors			Corrected Reading dBuV	Limit dBuV	Delta	Limit Type	Detector Type
		LISN	Cable	Total					
		dB	dB	dB					
0.281	30.46	0.10	0.00	0.10	30.56	62.00	-31.44	QP	QP
0.281	19.11	0.10	0.00	0.10	19.21	52.00	-32.79	AVE	AVE
0.286	34.69	0.10	0.00	0.10	34.79	62.00	-27.21	QP	QP
0.286	21.97	0.10	0.00	0.10	22.07	52.00	-29.93	AVE	AVE
0.291	35.95	0.10	0.00	0.10	36.05	62.00	-25.95	QP	QP
0.291	23.39	0.10	0.00	0.10	23.49	52.00	-28.51	AVE	AVE
0.298	32.28	0.10	0.00	0.10	32.38	62.00	-29.62	QP	QP
0.298	21.38	0.10	0.00	0.10	21.48	52.00	-30.52	AVE	AVE
0.303	36.47	0.10	0.00	0.10	36.57	62.00	-25.43	QP	QP
0.303	23.36	0.10	0.00	0.10	23.46	52.00	-28.54	AVE	AVE
0.550	34.10	0.00	0.00	0.00	34.10	56.00	-21.90	QP	QP
0.550	16.66	0.00	0.00	0.00	16.66	46.00	-29.34	AVE	AVE



15.209 Radiated Emissions (General Provisions)

Test Procedure: IEEE C63.10-2013

The EUT was measured on an open area test site (OATS).

A measuring distance of at least 3 m shall be used for measurements at frequencies up to 1 GHz. For frequencies above 1 GHz, any suitable measuring distance may be used. The equipment size (excluding the antenna) shall be less than 20 % of the measuring distance.

Sufficient precautions shall be taken to ensure that reflections from extraneous objects adjacent to the site do not degrade the measurement results, in particular:

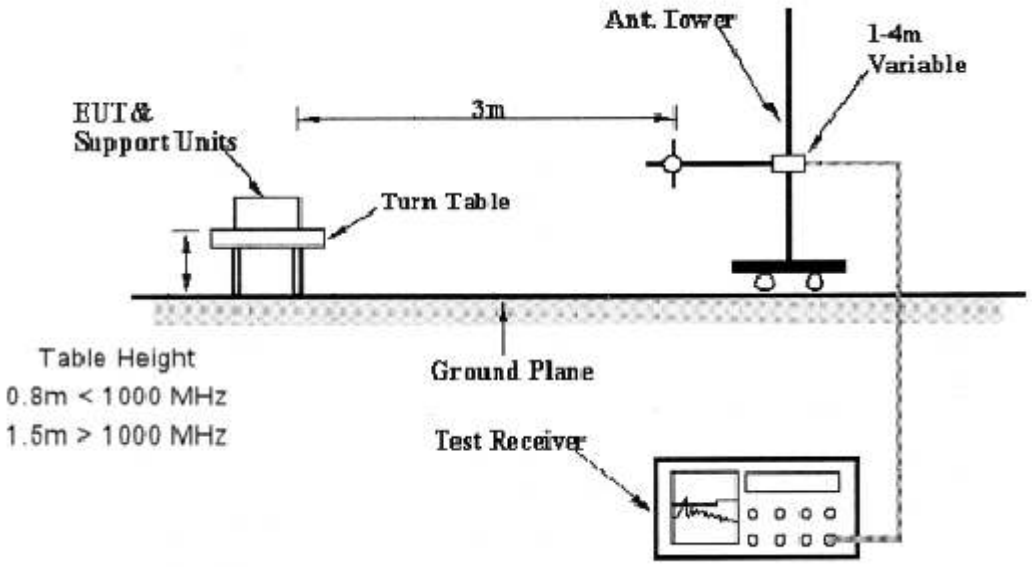
- no extraneous conducting objects having any dimension in excess of a quarter wavelength of the highest frequency tested shall be in the immediate vicinity of the site;

- all cables shall be as short as possible; as much of the cables as possible shall be on the ground plane or preferably below; and the low impedance cables shall be screened.

The EUT shall be placed upon a non-conductive table 1.5 meters above the ground plane and shall be placed in the "worst case" transmitting mode. The EUT shall be rotated 360 degrees to find the azimuth maxima. The receive antenna shall then be raised and lowered between 1 to 4 meters to find the maximum signal emanating from the EUT. This signal strength is then recorded on the data sheets.

Frequency (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measurement Distance (meters)
.0009 - 0.490	2400/F(kHz)	$20*(Log_{10}(2400/F(kHz))$	300
0.490 - 1.705	24000/F(kHz)	$20*(Log_{10}(24000/F(kHz))$	30
1.705 - 30.0	30	29.5	30
30 - 88	100	40.0	3
88 - 216	150	43.5	3
216 - 960	200	46.0	3
Above 960	500	54.0	3

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Spurious)	
DNB Job Number:	66000	Date: 6 Jul 2015	Specification
Customer:	ZAGG Inc.		[X] 15.209 [X] IEEE C63.10-2013
Model Number:	V031260		
Description:	Limited Modular Transceiver		
	Test Set Up		



	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (General)	
DNB Job Number:	66000	Date: 6 Jul 2015	Specification [X] 15.209 [X] IEEE C63.10-2013
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		
Test Set Up - Bicon - Horizontal			

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (General)	
DNB Job Number:	66000	Date: 6 Jul 2015	Specification [X] 15.209 [X] IEEE C63.10-2013
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		
Test Set Up - Log Periodic - Horizontal			

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Radiated Emissions (General)

DNB Job Number:	66000	Date: 6 Jul 2015	Specification
Customer:	ZAGG Inc.		[X] 15.209
Model Number:	V031260		[X] IEEE C63.10-2013
Description:	Limited Modular Transceiver		

EUT is in conformance with FCC 15.209	X	YES		NO	Signed	*Y Staples*

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Positions			
		Ant	Cbl	Amp	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt
80.027	55.38	6.40	1.70	26.40	37.08	40.00	-2.92	141	1.00	Vert	QP
48.942	49.58	11.00	1.40	26.50	35.48	40.00	-4.52	130	4.00	Horz	QP
49.985	49.05	10.60	1.40	26.50	34.55	40.00	-5.45	130	4.00	Horz	QP
49.691	48.47	10.70	1.40	26.50	34.07	40.00	-5.93	319	1.00	Vert	QP
44.014	45.92	12.80	1.30	26.50	33.52	40.00	-6.48	36	1.00	Vert	QP
48.470	46.98	11.20	1.40	26.50	33.08	40.00	-6.92	319	1.00	Vert	QP
48.032	45.49	11.30	1.40	26.50	31.69	40.00	-8.31	313	1.00	Vert	QP
57.791	46.77	8.30	1.50	26.40	30.17	40.00	-9.83	218	1.00	Vert	QP
56.598	45.61	8.60	1.50	26.40	29.31	40.00	-10.69	218	1.00	Vert	QP

Note: EUT was in Frequency Hopping transmit mode, above data represents worst case readings from 30 MHz to 1000 MHz.

15.247 (d) Spurious Radiated Emissions

This test is required for any spurious emission or modulation product that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured
RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW = ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

Follow the guidelines in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

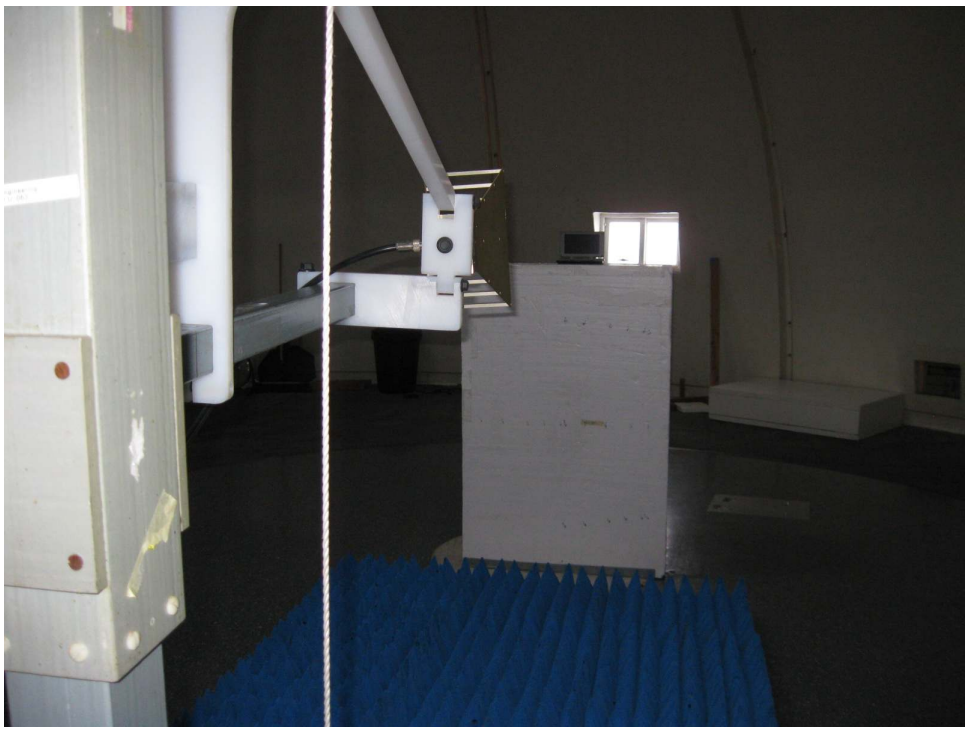
Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from 20log(dwell time/100 ms), in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

If the emission on which a radiated measurement must be made is located at the edge of the authorized band of operation, then the alternative "marker-delta" method, listed at the end of this document, may be employed.

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Spurious)

DNB Job Number:	66000	Date: 13 Jul 2013	Specification
Customer:	ZAGG Inc.		[X] 15.247 (d) [X] IEEE C63.10-2013
Model Number:	V031260		
Description:	Limited Modular Transceiver		

Test Set Up (**Horizontal- DRG**) (Bore-sight antenna)



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Radiated Emissions (Spurious)

DNB Job Number:	66000	Date: 13 Jul 2015	Specification
Customer:	ZAGG Inc.		[X] 15.247 (d)
Model Number:	V031260		[X] IEEE C63.10-2013
Description:	Limited Modular Transceiver		
	Low Channel		

Note 1: GF = Ground Floor = If Y reading was at ground floor, If N reading was identifiable signal
Note 2: Limit listed is the general limit as specified in 15.209 in order to show compliance with the restricted bands of operation as well as the out of band limit in 15.247. No other identifiable signals were observed in the restricted bands as specified in 15.205.
Note3: Highest frequency investigated was the tenth harmonic of the fundamental, no emissions were detected above the 2nd harmonic. Only data to the 7th harmonic has been provided.

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Positions				GF
		Ant	Cbl	Amp	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt	
2402	78.40	29.45	3.36	24.95	86.26	Fund	N/A	Peak	140	Hor	1.08	N
2402	78.24	29.45	3.36	24.95	86.10	Fund	N/A	Ave	140	Hor	1.08	N
4804	34.77	32.99	7.80	24.50	51.07	74.00	-22.93	Peak	170	Hor	3.20	N
4804	25.16	32.99	7.80	24.50	41.46	54.00	-12.54	Ave	170	Hor	3.20	N
7206	36.16	37.18	8.29	24.20	57.42	74.00	-16.58	Peak	67	Hor	2.04	N
7206	28.13	37.18	8.29	24.20	49.39	54.00	-4.61	Ave	67	Hor	2.04	N
9608	28.86	37.84	5.42	23.45	48.67	74.00	-25.33	Peak	0	Hor	1.00	Y
9608	15.90	37.84	5.42	23.45	35.71	54.00	-18.29	Ave	0	Hor	1.00	Y
12010	28.62	39.73	11.12	23.60	55.87	74.00	-18.13	Peak	0	Hor	1.00	Y
12010	15.12	39.73	11.12	23.60	42.37	54.00	-11.63	Ave	0	Hor	1.00	Y
14412	28.65	41.51	13.51	23.30	60.37	74.00	-13.63	Peak	0	Hor	1.00	Y
14412	15.10	41.51	13.51	23.30	46.82	54.00	-7.18	Ave	0	Hor	1.00	Y
16814	27.39	41.92	14.38	23.40	60.29	74.00	-13.71	Peak	0	Hor	1.00	Y
16814	14.08	41.92	14.38	23.40	46.98	54.00	-7.02	Ave	0	Hor	1.00	Y
2402	82.03	29.45	3.36	24.95	89.89	Fund	N/A	Peak	188	Vert	2.04	N
2402	81.50	29.45	3.36	24.95	89.36	Fund	N/A	Ave	188	Vert	2.04	N
4804	36.55	32.99	7.80	24.50	52.85	74.00	-21.15	Peak	161	Vert	2.23	N
4804	27.36	32.99	7.80	24.50	43.66	54.00	-10.34	Ave	161	Vert	2.23	N
7206	35.66	37.18	8.29	24.20	56.92	74.00	-17.08	Peak	216	Vert	2.37	N
7206	28.72	37.18	8.29	24.20	49.98	54.00	-4.02	Ave	216	Vert	2.37	N
9608	28.77	37.84	5.42	23.45	48.58	74.00	-25.42	Peak	169	Vert	1.51	Y
9608	16.27	37.84	5.42	23.45	36.08	54.00	-17.92	Ave	169	Vert	1.51	Y
12010	30.66	39.73	11.12	23.60	57.91	74.00	-16.09	Peak	169	Vert	3.01	Y
12010	18.77	39.73	11.12	23.60	46.02	54.00	-7.98	Ave	169	Vert	3.01	Y
14412	29.56	41.51	13.51	23.30	61.28	74.00	-12.72	Peak	0	Vert	1.00	Y
14412	15.24	41.51	13.51	23.30	46.96	54.00	-7.04	Ave	0	Vert	1.00	Y
16814	27.11	41.92	14.38	23.40	60.01	74.00	-13.99	Peak	0	Vert	1.00	Y
16814	14.00	41.92	14.38	23.40	46.90	54.00	-7.10	Ave	0	Vert	1.00	Y

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Radiated Emissions (Spurious)

DNB Job Number:	66000	Date: 12 Jul 2015	Specification
Customer:	ZAGG Inc.		[X] 15.247 (d) [X] IEEE C63.10-2013-2013
Model Number:	V031260		
Description:	Limited Modular Transceiver		
	Middle Channel		

Note 1: GF = Ground Floor = If Y reading was at ground floor, If N reading was identifiable signal
Note 2: Limit listed is the general limit as specified in 15.209 in order to show compliance with the restricted bands of operation as well as the out of band limit in 15.247. No other identifiable signals were observed in the restricted bands as specified in 15.205.
Note3: Highest frequency investigated was the tenth harmonic of the fundamental, no emissions were detected above the 2nd harmonic. Only data to the 7th harmonic has been provided.

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Positions				GF
		Ant	Cbl	Amp	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt	
2441	77.41	29.55	3.42	24.90	85.47	Fund	N/A	Peak	146	Hor	1.05	N
2441	76.61	29.55	3.42	24.90	84.67	Fund	N/A	Ave	146	Hor	1.05	N
4882	36.50	33.28	7.88	24.55	53.11	74.00	-20.89	Peak	274	Hor	2.69	N
4882	29.13	33.28	7.88	24.55	45.74	54.00	-8.26	Ave	274	Hor	2.69	N
7323	34.30	37.11	8.45	24.20	55.66	74.00	-18.34	Peak	62	Hor	3.14	N
7323	25.04	37.11	8.45	24.20	46.40	54.00	-7.60	Ave	62	Hor	3.14	N
9764	28.55	37.91	5.73	23.50	48.68	74.00	-25.32	Peak	0	Hor	1.00	Y
9764	15.12	37.91	5.73	23.50	35.25	54.00	-18.75	Ave	0	Hor	1.00	Y
12205	29.09	40.27	11.59	23.65	57.31	74.00	-16.69	Peak	0	Hor	1.00	Y
12205	15.53	40.27	11.59	23.65	43.75	54.00	-10.25	Ave	0	Hor	1.00	Y
14646	27.95	41.80	13.52	23.20	60.08	74.00	-13.92	Peak	0	Hor	1.00	Y
14646	14.69	41.80	13.52	23.20	46.82	54.00	-7.18	Ave	0	Hor	1.00	Y
17087	25.83	42.54	15.14	23.00	60.51	74.00	-13.49	Peak	0	Hor	1.00	Y
17087	13.08	42.54	15.14	23.00	47.76	54.00	-6.24	Ave	0	Hor	1.00	Y
2441	79.20	29.55	3.42	24.90	87.26	Fund	N/A	Peak	192	Vert	2.91	N
2441	78.90	29.55	3.42	24.90	86.96	Fund	N/A	Ave	192	Vert	2.91	N
4882	36.63	33.28	7.88	24.55	53.24	74.00	-20.76	Peak	226	Vert	1.81	N
4882	28.61	33.28	7.88	24.55	45.22	54.00	-8.78	Ave	226	Vert	1.81	N
7323	36.36	37.11	8.45	24.20	57.72	74.00	-16.28	Peak	0	Vert	1.00	N
7323	29.22	37.11	8.45	24.20	50.58	54.00	-3.42	Ave	0	Vert	1.00	N
9764	29.69	37.91	5.73	23.50	49.82	74.00	-24.18	Peak	204	Vert	1.91	Y
9764	16.37	37.91	5.73	23.50	36.50	54.00	-17.50	Ave	204	Vert	1.91	Y
12205	29.68	40.27	11.59	23.65	57.90	74.00	-16.10	Peak	10	Vert	2.10	Y
12205	17.25	40.27	11.59	23.65	45.47	54.00	-8.53	Ave	10	Vert	2.10	Y
14646	28.38	41.80	13.52	23.20	60.51	74.00	-13.49	Peak	0	Vert	1.00	Y
14646	14.32	41.80	13.52	23.20	46.45	54.00	-7.55	Ave	0	Vert	1.00	Y
17087	26.83	42.54	15.14	23.00	61.51	74.00	-12.49	Peak	0	Vert	1.00	Y
17087	13.10	42.54	15.14	23.00	47.78	54.00	-6.22	Ave	0	Vert	1.00	Y

1100 E Chalk Creek Road
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Radiated Emissions (Spurious)

DNB Job Number:	66000	Date: 13 Jul 2015	Specification
Customer:	ZAGG Inc.		[X] 15.247 (d)
Model Number:	V031260		[X] IEEE C63.10-2013
Description:	Limited Modular Transceiver		
	High Channel		

Note 1: GF = Ground Floor = If Y reading was at ground floor, If N reading was identifiable signal
Note 2: Limit listed is the general limit as specified in 15.209 in order to show compliance with the restricted bands of operation as well as the out of band limit in 15.247. No other identifiable signals were observed in the restricted bands as specified in 15.205.
Note3: Highest frequency investigated was the tenth harmonic of the fundamental, no emissions were detected above the 2nd harmonic. Only data to the 7th harmonic has been provided.

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Positions				GF
		Ant	Cbl	Amp	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt	
2480	76.13	29.65	3.47	24.90	84.35	Fund	N/A	Peak	150	Hor	2.93	N
2480	75.34	29.65	3.47	24.90	83.56	Fund	N/A	Ave	150	Hor	2.93	N
4960	34.30	33.56	7.96	24.55	51.27	74.00	-22.73	Peak	162	Hor	3.48	N
4960	26.30	33.56	7.96	24.55	43.27	54.00	-10.73	Ave	162	Hor	3.48	N
7440	33.11	37.04	8.62	24.15	54.61	74.00	-19.39	Peak	269	Hor	3.10	N
7440	23.89	37.04	8.62	24.15	45.39	54.00	-8.61	Ave	269	Hor	3.10	N
9920	28.30	37.97	6.04	23.55	48.76	74.00	-25.24	Peak	0	Hor	1.00	Y
9920	13.95	37.97	6.04	23.55	34.41	54.00	-19.59	Ave	0	Hor	1.00	Y
12400	28.06	40.82	12.06	23.50	57.44	74.00	-16.56	Peak	0	Hor	1.00	Y
12400	14.41	40.82	12.06	23.50	43.79	54.00	-10.21	Ave	0	Hor	1.00	Y
14880	27.25	42.13	13.24	23.10	59.53	74.00	-14.47	Peak	0	Hor	1.00	Y
14880	14.45	42.13	13.24	23.10	46.73	54.00	-7.27	Ave	0	Hor	1.00	Y
17360	26.01	42.98	15.91	23.05	61.84	74.00	-12.16	Peak	0	Hor	1.00	Y
17360	13.22	42.98	15.91	23.05	49.05	54.00	-4.95	Ave	0	Hor	1.00	Y
2480	80.41	29.65	3.47	24.90	88.63	Fund	N/A	Peak	170	Vert	1.47	N
2480	79.87	29.65	3.47	24.90	88.09	Fund	N/A	Ave	170	Vert	1.47	N
4960	38.86	33.56	7.96	24.55	55.83	74.00	-18.17	Peak	162	Vert	2.04	N
4960	29.44	33.56	7.96	24.55	46.41	54.00	-7.59	Ave	162	Vert	2.04	N
7440	36.46	37.04	8.62	24.15	57.96	74.00	-16.04	Peak	223	Vert	1.44	N
7440	27.79	37.04	8.62	24.15	49.29	54.00	-4.71	Ave	223	Vert	1.44	N
9920	32.63	37.97	6.04	23.55	53.09	74.00	-20.91	Peak	185	Vert	1.00	Y
9920	18.66	37.97	6.04	23.55	39.12	54.00	-14.88	Ave	185	Vert	1.00	Y
12400	32.20	40.82	12.06	23.50	61.58	74.00	-12.42	Peak	166	Vert	1.48	Y
12400	19.62	40.82	12.06	23.50	49.00	54.00	-5.00	Ave	166	Vert	1.48	Y
14880	33.49	42.13	13.24	23.10	65.77	74.00	-8.23	Peak	0	Vert	1.00	Y
14880	14.72	42.13	13.24	23.10	47.00	54.00	-7.00	Ave	0	Vert	1.00	Y
17360	26.39	42.98	15.91	23.05	62.22	74.00	-11.78	Peak	0	Vert	1.00	Y
17360	13.29	42.98	15.91	23.05	49.12	54.00	-4.88	Ave	0	Vert	1.00	Y

15.247 (a,2) 20 dB Bandwidth (Occupied Bandwidth)

Test Procedure: IEEE C63.10-2013

20 dB Bandwidth

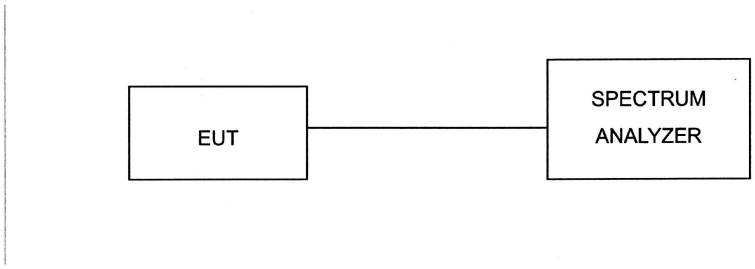
Use the following spectrum analyzer settings:
Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel
RBW ≥ 1% of the 20 dB bandwidth
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

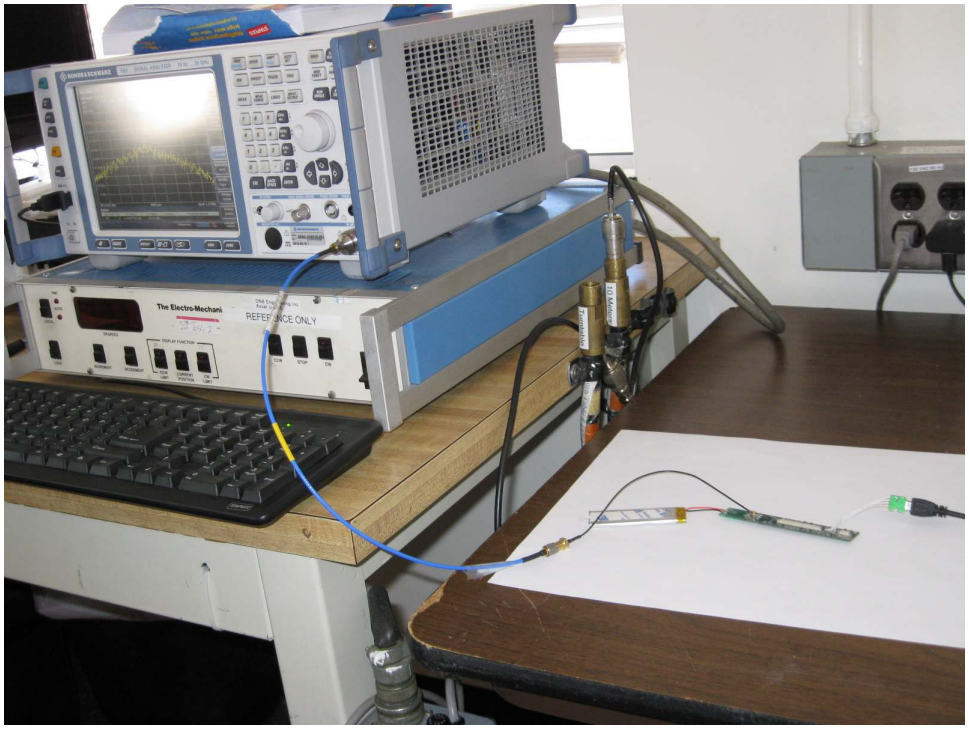
EUT operating conditions:

The software provided by the client to enable the EUT to transmit continuously.

Test Set Up: (Note following set up was used for all antenna conducted measurements)



	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Measurement Test Set Up**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247
Antenna Conducted Measurement Set Up			



	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**20 dB Single Channel Bandwidth**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(a,2)
	Test Procedure		

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

20 dB Bandwidth

Use the following spectrum analyzer settings:
Span = approximately 2 to 3 times the 20dB bandwidth, centered on a hopping channel
RBW ≥ 1% of the 20dB bandwidth
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

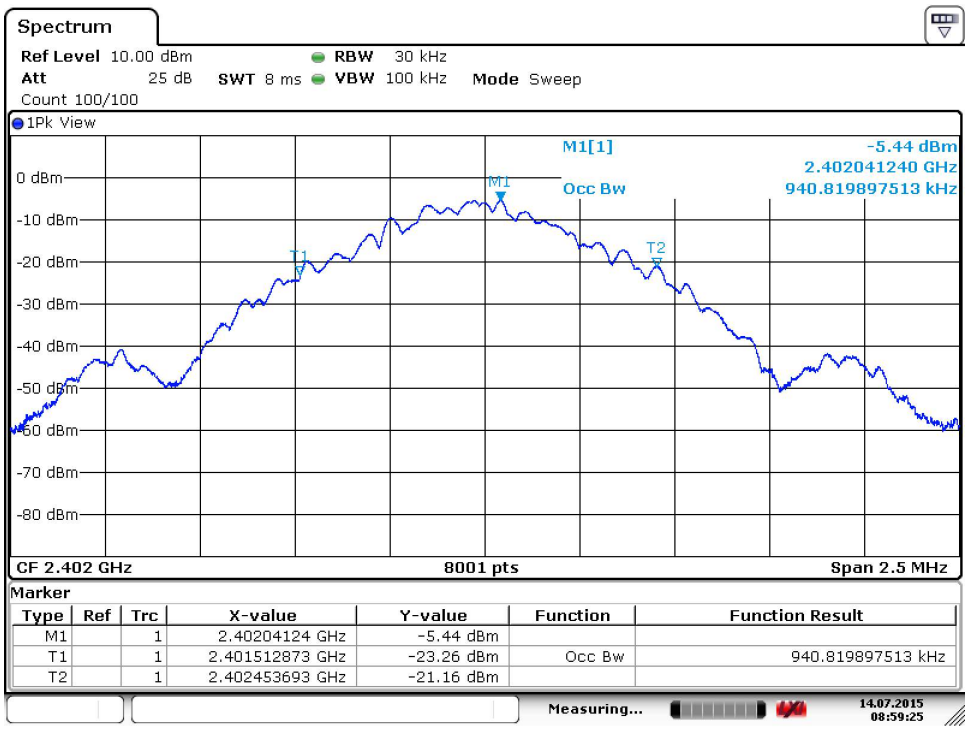
The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**20 dB Single Channel Bandwidth**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate)		**Clause** 15.247(a,2)

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Channel	Chl Freq (MHz)	20dB BW (kHz)	Limit	Pass/Fail
Low	2402	940.820	> 500 kHz	Pass



Date: 14.JUL.2015 08:59:25

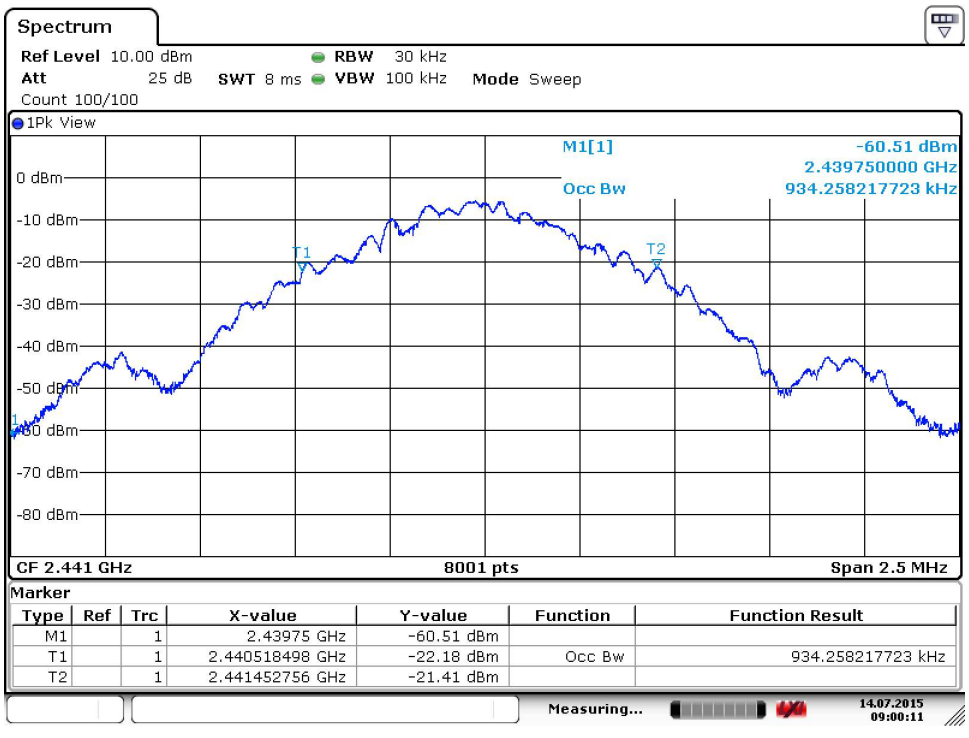
	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**20 dB Single Channel Bandwidth**

DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate)		**Clause** 15.247(a,2)

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Channel	Chl Freq (MHz)	20dB BW (kHz)	Limit	Pass/Fail
Middle	2440	934.258	> 500 kHz	Pass



Date: 14.JUL.2015 09:00:11

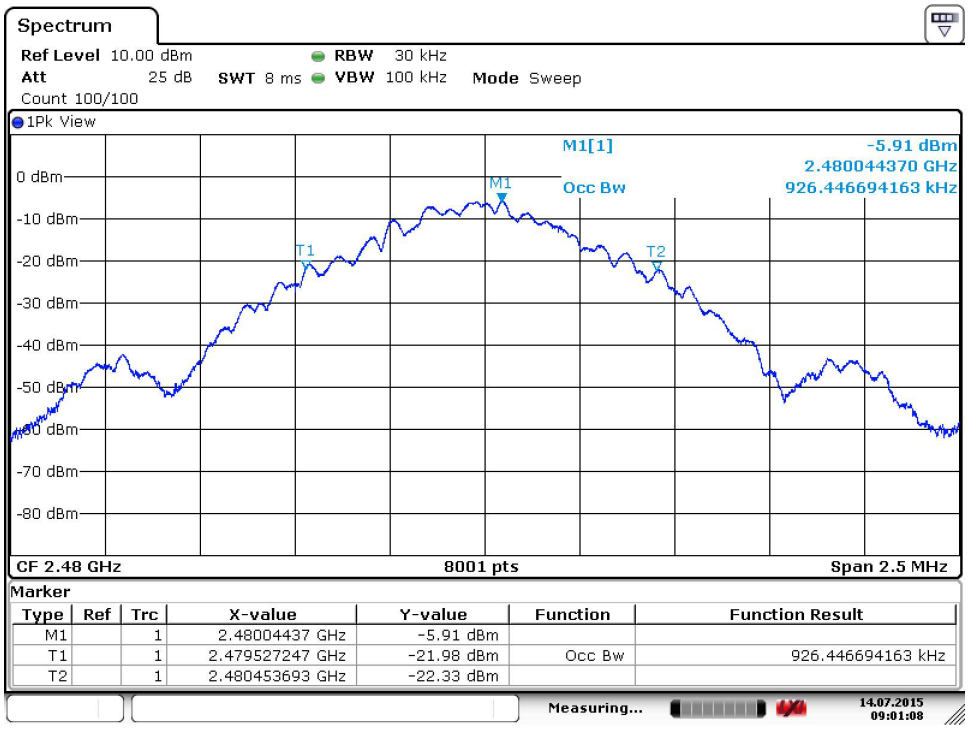
	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**20 dB Single Channel Bandwidth**

DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate)		**Clause** 15.247(a,2)

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Channel	Chl Freq (MHz)	20dB BW (MHz)	Limit	Pass/Fail
High	2480	926.447	> 500 kHz	Pass



Date: 14.JUL.2015 09:01:08

15.247 (b) Maximum Peak Output Power (Conducted)

Test Procedure: IEEE C63.10-2013

Peak Output Power

Use the following spectrum analyzer settings:
Span = approximately 5 times the 20 B bandwidth, centered on a hopping channel
RBW > the 20 dB bandwidth of the emission being measured
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power (see the NOTE above regarding external attenuation and cable loss). The limit is specified in one of the subparagraphs of this Section. Submit this plot. A peak responding power meter may be used instead of a spectrum analyzer.

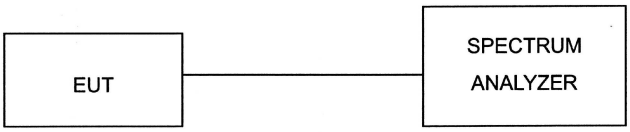
The transmitter output was connected to a spectrum analyzer.

Requirement: The maximum peak output power shall not exceed .125W (21dBm)

EUT operating conditions:

The software provided by the client to enable the EUT to transmit continuously at the low, mid, and upper channels respectively.

Test Set Up:

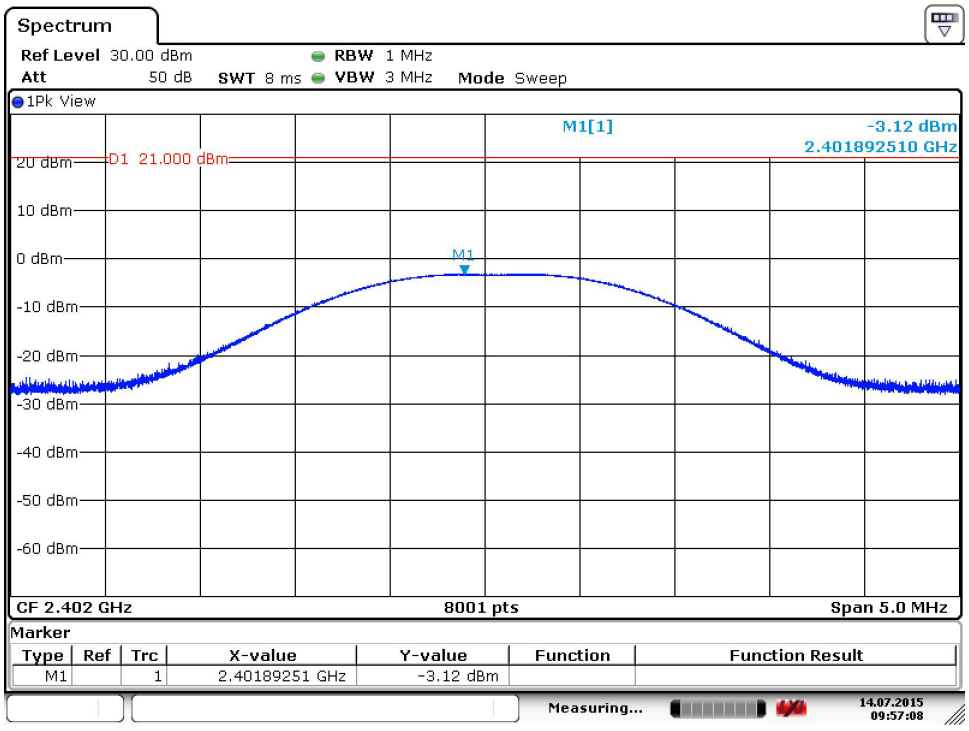


	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Peak Output Power** (Cond)	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate) - Low Channel		**Clause** 15.247(b)

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Freq MHz	Meas Peak Pwr (dBm)	Limit (dBm)	Delta (dBm)	Meas Peak Pwr (mW)	Limit (mW)	Delta (mW)	Pass/Fail
2402	- 3.12	20.97	-24.09	0.488	125	-124.512	Pass



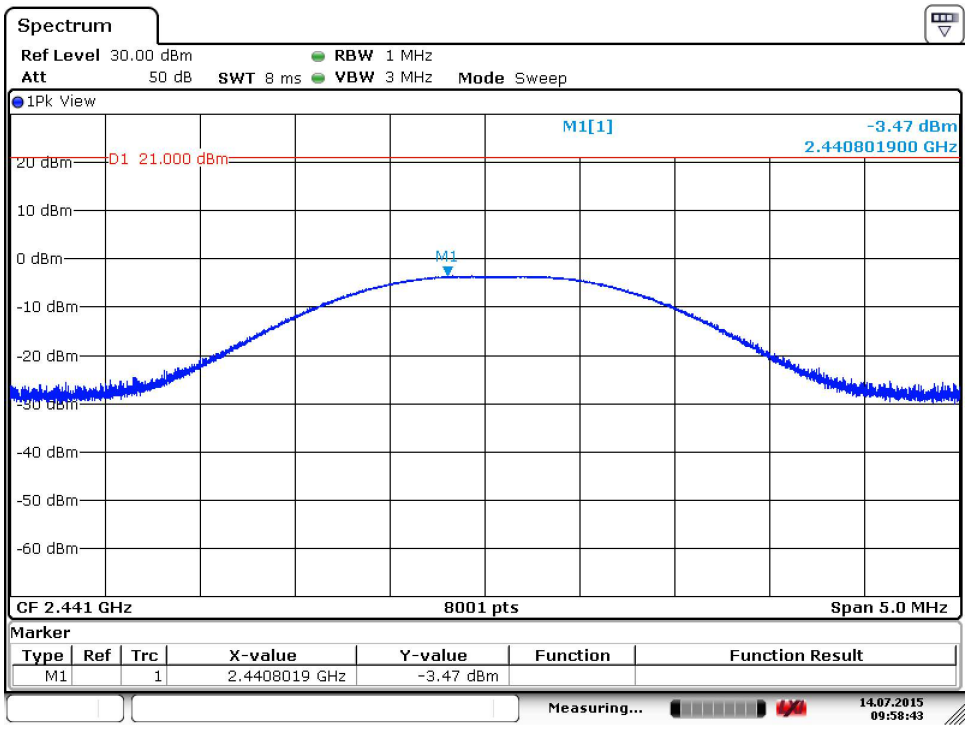
Date: 14.JUL.2015 09:57:08

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Peak Output Power** (Cond)	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate) - Mid Channel		**Clause** 15.247(b)

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Freq MHz	Meas Peak Pwr (dBm)	Limit (dBm)	Delta (dBm)	Meas Peak Pwr (mW)	Limit (mW)	Delta (mW)	Pass/Fail
2440	-3.47	20.97	-24.44	0.450	125	-124.55	Pass



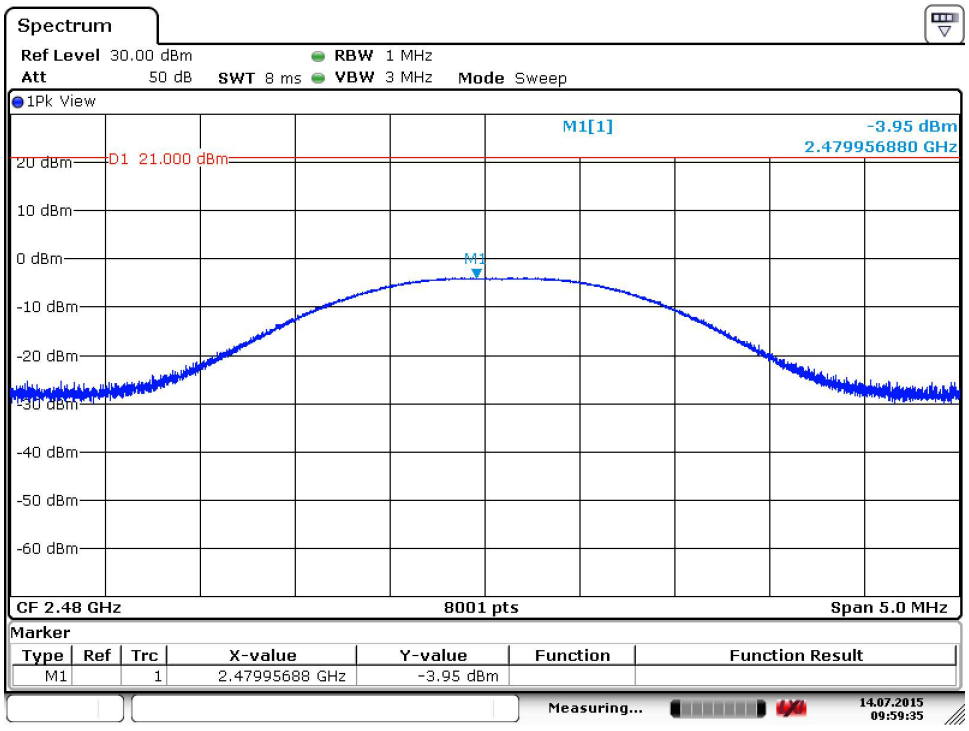
Date: 14.JUL.2015 09:58:43

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Peak Output Power** (Cond)	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate) - High Channel		**Clause** 15.247(b)

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Freq MHz	Meas Peak Pwr (dBm)	Limit (dBm)	Delta (dBm)	Meas Peak Pwr (mW)	Limit (mW)	Delta (mW)	Pass/Fail
2480	-3.95	20.97	-24.92	0.422	125	-124.578	Pass



Date: 14.JUL.2015 09:59:34

15.247 (d) Conducted Band Edge Measurements and Out of Band Emissions

Test Procedure: IEEE C63.10-2013

Band-edge Compliance of RF Conducted Emissions

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the emission operating on the channel closest to the bandedge, as well as any modulation products which fall outside of the authorized band of operation
RBW ≥ 1% of the span
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. The marker-delta value now displayed must comply with the limit specified in this Section. Submit this plot.

Now, using the same instrument settings, enable the hopping function of the EUT. Allow the trace to stabilize. Follow the same procedure listed above to determine if any spurious emissions caused by the hopping function also comply with the specified limit. Submit this plot.

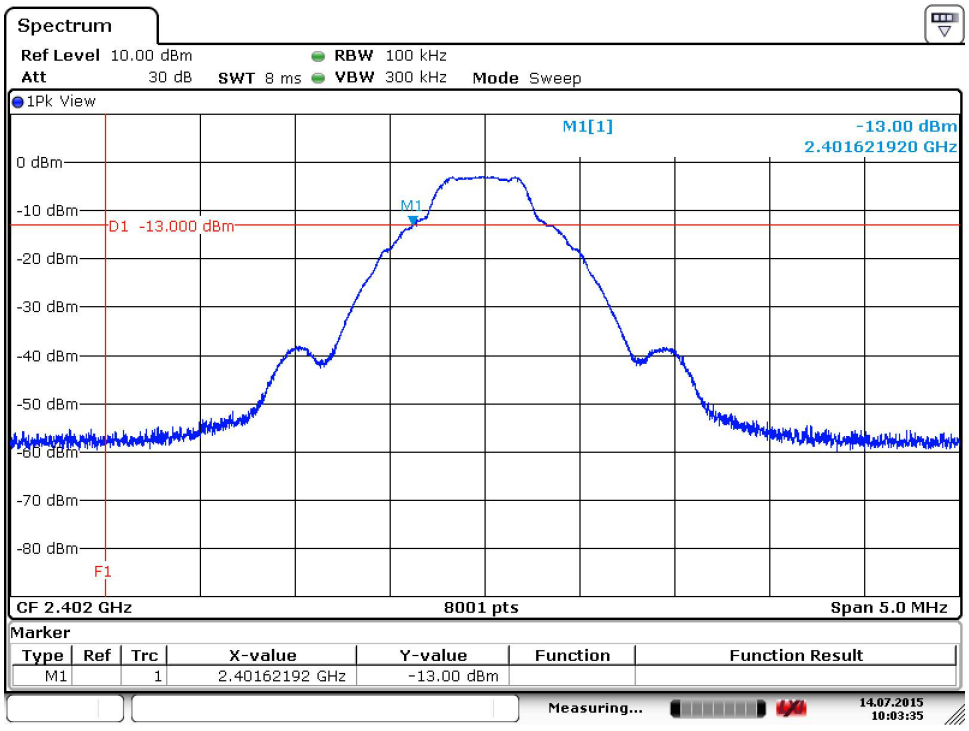
Test Set Up: Same as 15.247 (a,2) 20dB Emission Bandwidth

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Band Edge Measurements**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate)		**Clause** 15.247(d)

Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Band Edge Measurement - Single Channel			Freq Delta (MHz)	Pass/Fail
Limit	Lower (MHz)	Upper (MHz)		
2400	2401.626		1.626	Pass



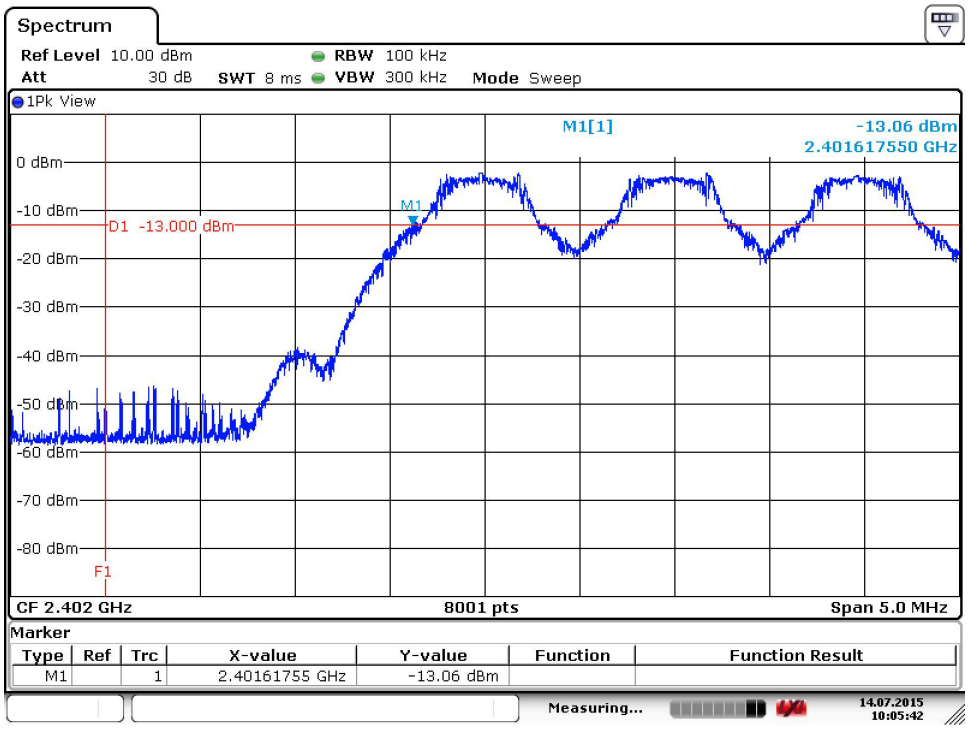
Date: 14.JUL.2015 10:03:35

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Band Edge Measurements**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate)		**Clause** 15.247(d)

Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Conducted Band Edge Measurement - All Channels			Freq Delta (MHz)	Pass/Fail
Limit	Lower (MHz)	Upper (MHz)		
2400	2401.618		1.618	Pass



Date: 14.JUL.2015 10:05:42

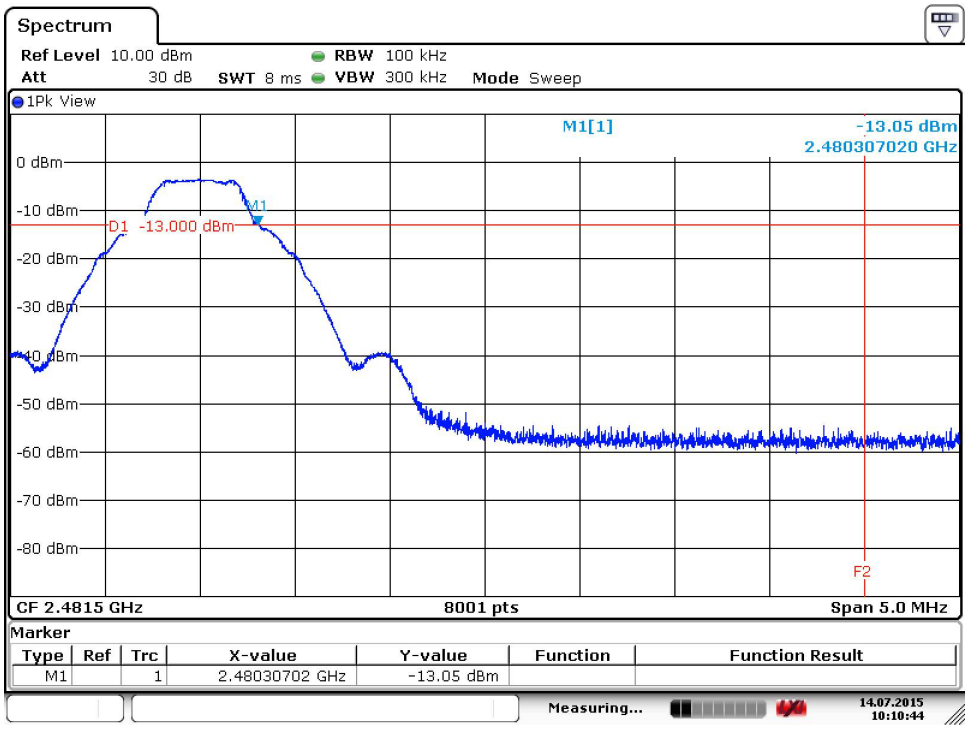
	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Band Edge Measurements**	

DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(d)
	1Mbps data rate (Basic data rate)		

Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Conducted Band Edge Measurement - Single Channel			Freq Delta (MHz)	Pass/Fail
Limit	Lower (MHz)	Upper (MHz)		
2483.5		2480.307	3.193	Pass



Date: 14.JUL.2015 10:10:44

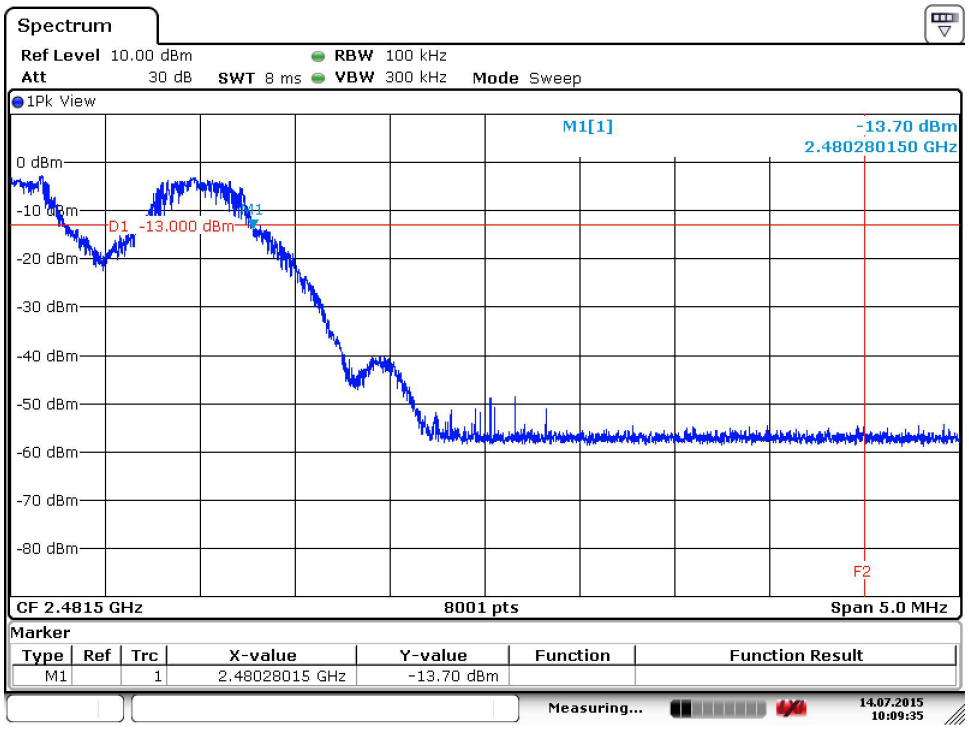
	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Band Edge Measurements**	

DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate)		**Clause** 15.247(d)

Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Conducted Band Edge Measurement - All Channels			Freq Delta (MHz)	Pass/Fail
Limit	Lower (MHz)	Upper (MHz)		
2483.5		2480.280	3.220	Pass



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	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**FHSS Characteristics**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(g & h)
	1Mbps data rate (Basic data rate)		
EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*			

15.247g,h FHSS Characteristics

RECEIVER INPUT BANDWIDTH

The input bandwidth of the receiver is 1.3MHZ,In every connection one Bluetooth device is the master and the other one is slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection(e.g. single of multislot packet) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

EXAMPLE OF A HOPPING SEQUENCY IN DATA MODE

Example of a 79 hopping sequence in data mode:
40,21,44,23,42,53,46,55,48,33,52,35,50,65,54,67
56,37,60,39,58,69,62,71,64,25,68,27,66,57,70,59
72,29,76,31,74,61,78,63,01,41,05,43,03,73,07,75
09,45,13,47,11,77,15,00,64,49,66,53,68,02,70,06
01, 51, 03, 55, 05, 04

EQUALLY AVERAGE USE OF FREQUENCIES AND BEHAVIOUR

The generation of the hopping sequence in connection mode depends essentially on two input values:
1. LAP/UAP of the master of the connection.
2. Internal master clock

The LAP(lower address part) are the 24 LSB's of the 48 BD_ADDRESS. The BD_ADDRESS is an unambiguous number of every Bluetooth unit. The UAP(upper address part) are the 24MSB's of the 48BD_ADDRESS. The internal clock of a Bluetooth unit is derived from a free running clock which is never adjusted and is never turned off. For ehavior zation with other units only offset are used. It has no relation to the time of the day. Its resolution is at least half the RX/TX slot length of 312.5us.The clock has a cycle of about one day(23h30).In most case it is implemented as 28 bit counter. For the deriving of the hopping sequence the entire. LAP(24 bits),4LSB's(4bits)(Input 1) and the 27MSB's of the clock(Input 2) are used. With this input values different mathematical procedures(permutations, additions, XOR-operations)are performed to generate the sequence. This will be done at the beginning of every new transmission. Regarding short transmissions the Bluetooth system has the following behavior: The first connection between the two devices is established, a hopping sequence was generated. For transmitting the wanted data the complete hopping sequence was not used. The connection ended. The second connection will be established. A new hopping sequence is generated. Due to the fact the Bluetooth clock has a different value, because the period between the two transmission is longer(and it cannot be shorter) than the minimum resolution of the clock(312.5us).The hopping sequence will always differ from the first one.

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Hopping Channels**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(a,1,iii)
	1Mbps data rate (Basic data rate)		

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

15.247 Number of Hopping Frequencies

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = the frequency band of operation
RBW ≥ 1% of the span
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

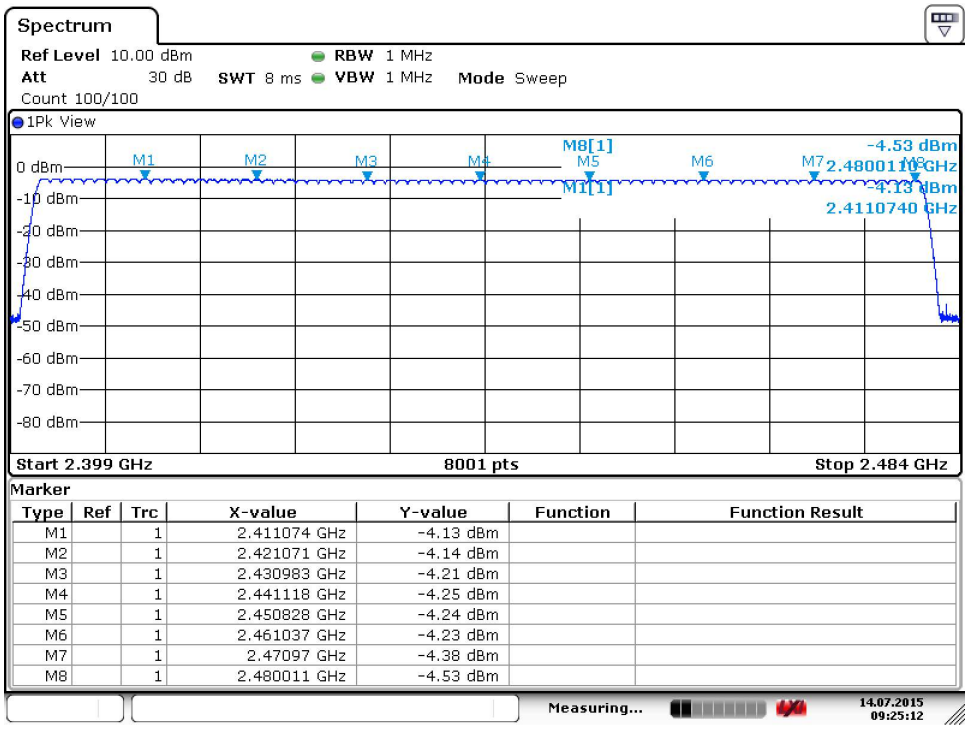
Allow the trace to stabilize. It may prove necessary to break the span up to sections, in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Hopping Channels**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(a,1,iii)
	1Mbps data rate (Basic data rate)		

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Center Frequency	Frequency Span	Hopping Channels	Min Limit	Pass/Fail
2441.700 MHz	85 MHz	79	15	Pass



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	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Max Time on Channel Freq**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(a,1,iii)
	1Mbps data rate (Basic data rate)		

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

15.247 Time of Occupancy (Dwell Time)

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
Span = zero span, centered on a hopping channel
RBW = 1 MHz
VBW ≥ RBW
Sweep = as necessary to capture the entire dwell time per hopping channel
Detector function = peak
Trace = max hold
Trigger = video (positive trace)

If possible, use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s). An oscilloscope may be used instead of a spectrum analyzer.

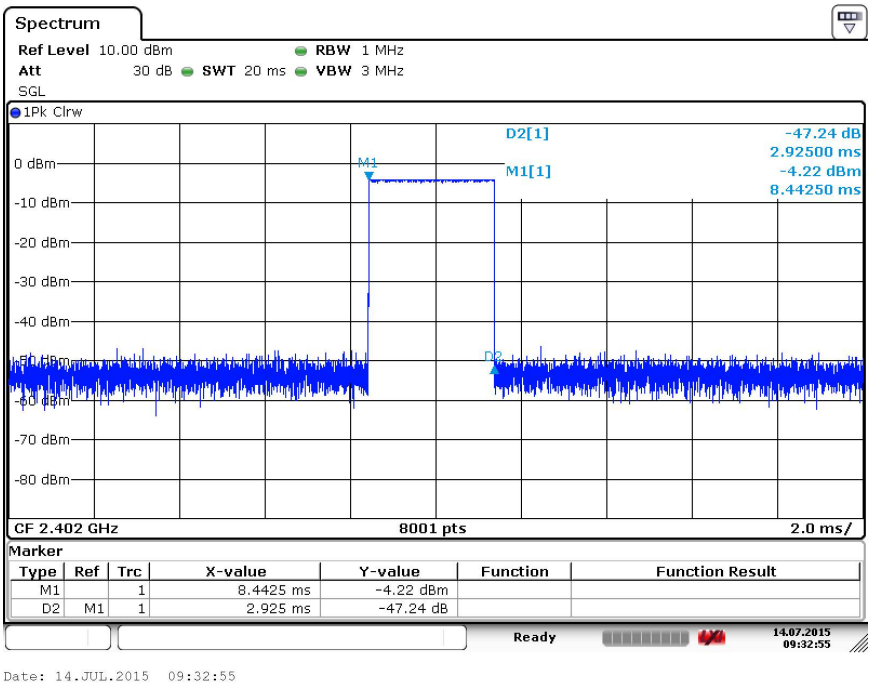
	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Max Time on Channel Freq**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate)		**Clause** 15.247(a,1,iii)

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Center Freq Chl	Pulse Duration	Number of Pulses in 31.6 Seconds	Calculated on time	Allowed On Time	Pass/Fail
2402MHz	0.002925 Sec	115	0.336375	0.4sec in 31.6sec window	Pass

Single channel on time = 0.002925 sec = 2.925msec = 2925usec
Calculated on time = 115 * 2.925msec = 174.5msec = 0.336375 seconds
Limit is based upon 0.4seconds times number of hopping channels = 0.4 * 79 = 31.6sec



	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Max Time on Channel Freq**

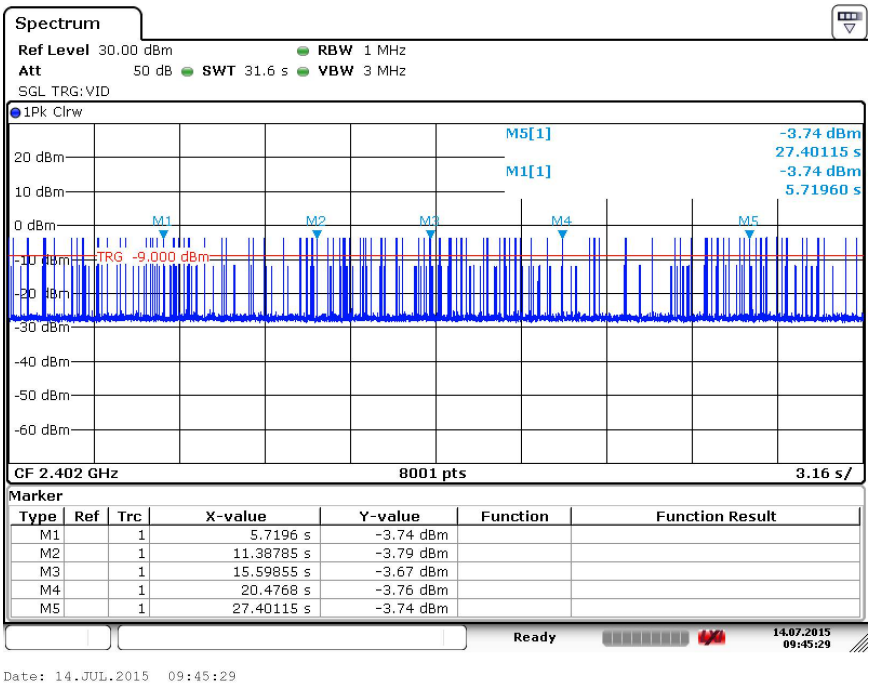
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard**
Customer:	ZAGG Inc.		FCC Part 15
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(a,1,iii)
	1Mbps data rate (Basic data rate)		

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Center Freq Chl	Pulse Duration	Number of Pulses in 31.6 Seconds	Calculated on time	Allowed On Time	Pass/Fail
2402MHz	0.002925 Sec	115	0.336375	0.4sec in 31.6sec window	Pass

Single channel on time = 0.002925 sec = 2.925msec = 2925usec
Calculated on time = 115 * 2.925msec = 174.5msec = 0.336375 seconds
Limit is based upon 0.4seconds times number of hopping channels = 0.4 * 79 = 31.6sec



	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Channel Separation**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(a,1,iii)
	1Mbps data rate (Basic data rate)		

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

15.247 Carrier Frequency Separation

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
Span = wide enough to capture the peaks of two adjacent channels
Resolution (or IF) Bandwidth (RBW) ≥ 1% of the span
Video (or Average) Bandwidth (VBW) ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section. Submit this plot.

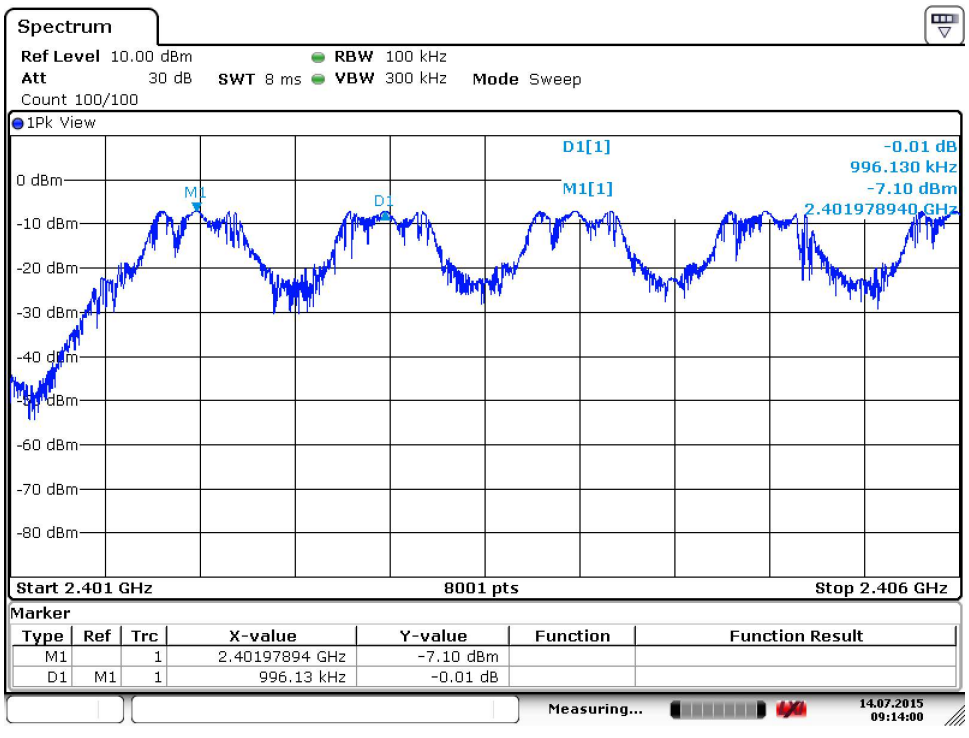
	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Channel Separation**	

DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard**
Customer:	ZAGG Inc.		FCC Part 15
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(a,1,iii)
	1Mbps data rate (Basic data rate)		

Environmental Conditions		
Ambient Temperature	Relative Humidity	Barometric Pressure
19 °C	28 %	101.8 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Hopping Channel 1	Hopping Channel 2	Delta	Limit (2/3 the 20dB BW)	Pass/Fail
2.40197894 GHz	2.40297507 GHz	996.13 kHz	618 kHz	Pass



Date: 14.JUL.2015 09:14:00

1100 E Chalk Creek Road
Coalville, UT 84017
(435) 336-4433
FAX (435) 336-4436

Conducted Spurious

DNB Job Number:	66000	Date:	4 Jul 2015	**Conformance Standard**
Customer:	ZAGG Inc.			FCC Part 15
Model Number:	V031260			
Description:	Limited Modular Transceiver			**Clause** 15.247(d)
	Test Procedure			

Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Test Procedure: IEEE C63.10-2013

15.247(d) Spurious RF Conducted Emissions

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

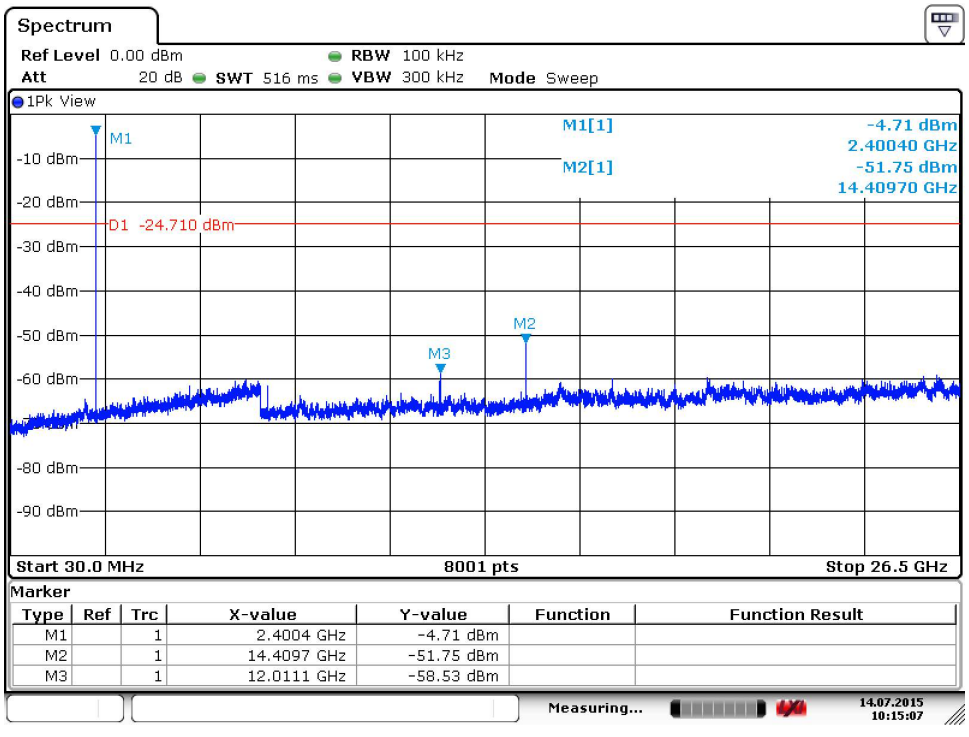
Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this Section. Submit these plots.

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Conducted Spurious**	
DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver 1Mbps data rate (Basic data rate) - Low Channel		**Clause** 15.247(d)

Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Peak Output Power	Reading	-20dBc	Pass/Fall
-3.12 dBm	-4.71 dBm	-24.71 dBm	Pass



Date: 14.JUL.2015 10:15:07

1100 E Chalk Creek Road
Coalville, UT 84017
(435) 336-4433
FAX (435) 336-4436

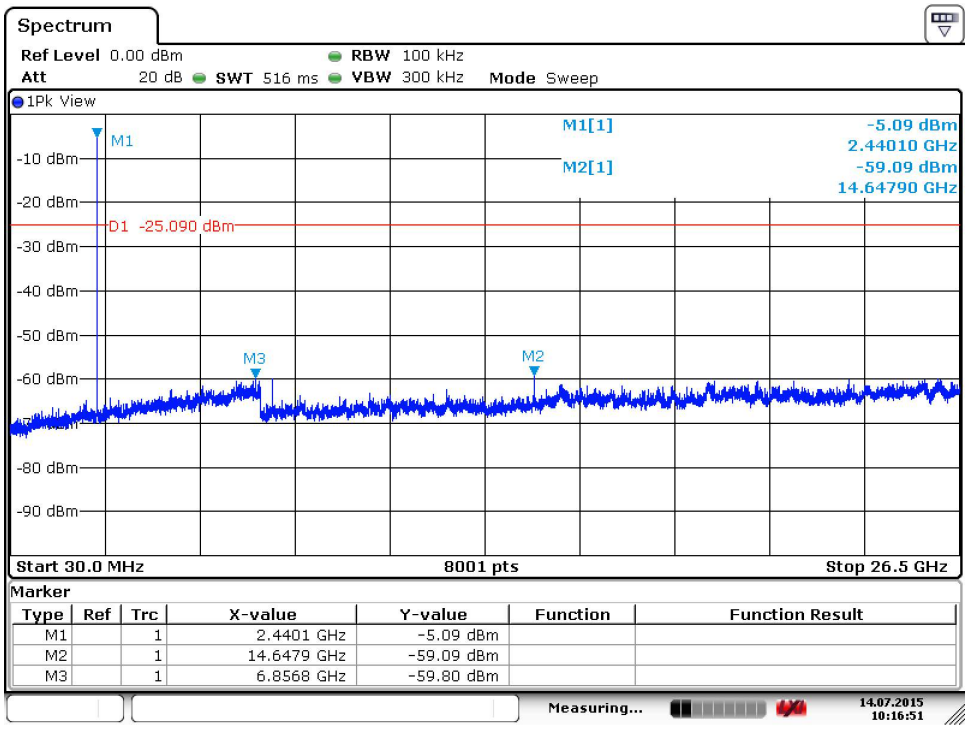
Conducted Spurious

DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard**
Customer:	ZAGG Inc.		FCC Part 15
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(d)
	1Mbps data rate (Basic data rate) - Mid Channel		

Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Peak Output Power	Reading	-20dBc	Pass/Fall
-3.47 dBm	-5.09 dBm	-25.09 dBm	Pass



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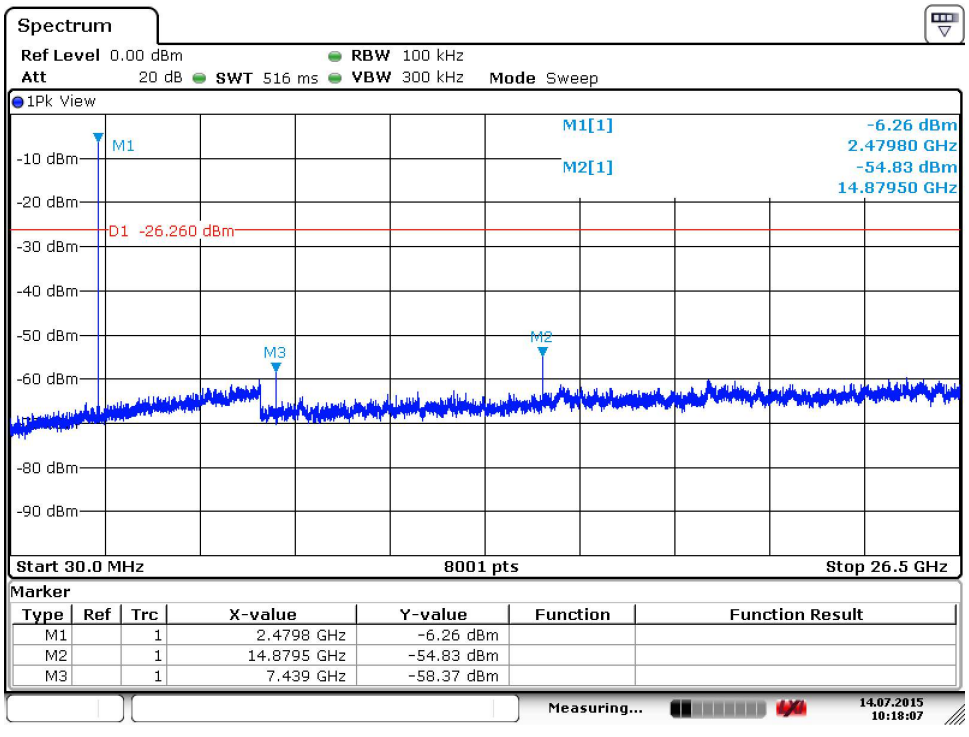
	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Conducted Spurious**

DNB Job Number:	66000	Date: 14 Jul 2015	**Conformance Standard** FCC Part 15
Customer:	ZAGG Inc.		
Model Number:	V031260		
Description:	Limited Modular Transceiver		**Clause** 15.247(d)
	1Mbps data rate (Basic data rate) - High Channel		

Ambient Temperature	Relative Humidity	Barometric Pressure
21 °C	25 %	101.2 kPa

EUT performed within the requirements of the applicable standard [X] Yes [ ] No *Les Payne*

Peak Output Power	Reading	-20dBc	Pass/Fall
-3.95 dBm	-6.26 dBm	-26.26 dBm	Pass



Date: 14.JUL.2015 10:18:07

2.1033 (b) (7) Equipment Photographs

Photo 1	Internal	Top of PCB
Photo 2	Internal	Bottom of PCB
Photo 3	External	Host device

Photo 1 Internal Top of PCB

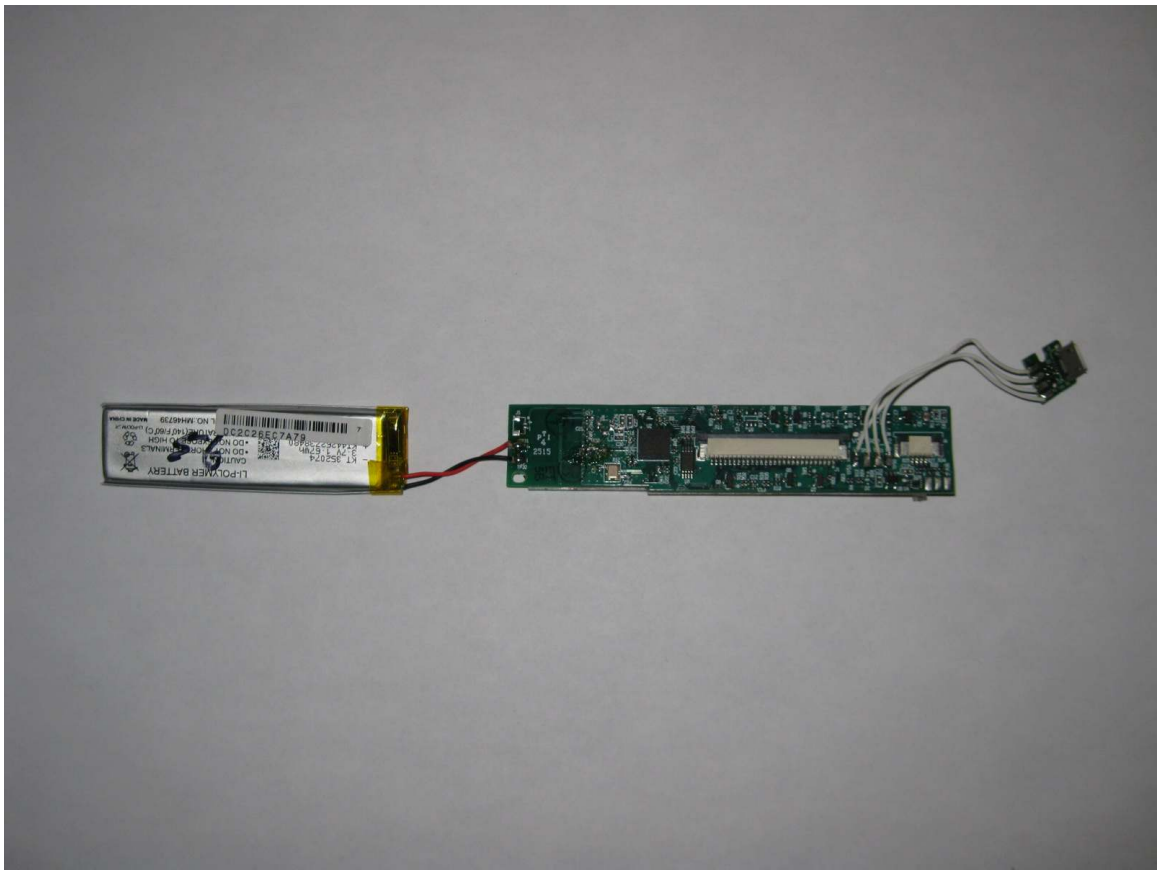


Photo 2 Internal Bottom of PCB

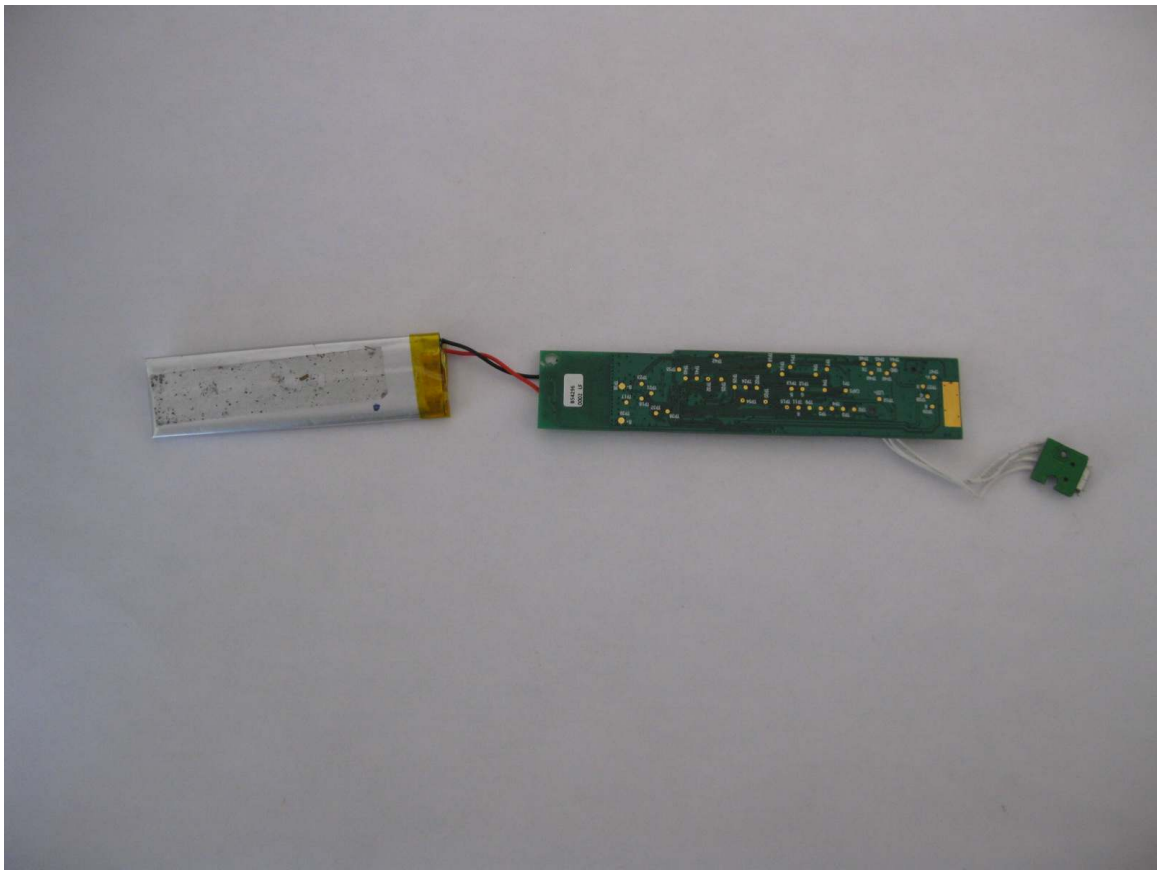


Photo 3 External (in Host Device)

End of Report UT66000A-002