Application for Certification
For a Transmitter.

Orbit Irrigation Products Inc.
845 N. Overland Rd.
North Salt Lake, UT 84054

Irrigation Controller

M/N: 21005

FCC ID: ML6HT25
IC ID: 3330A-HT25
HVIN: HT25

REPORT # UT86022A-001

This report was prepared in accordance with the requirements of the FCC Rules and Regulations Part 2, Subpart J, 2.1033, Part 15.247, RSS-247 Issue 2, and other applicable sections of the rules as indicated herein.

Prepared By:

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

27 Oct 2017

TABLE OF CONTENTS

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	17-Dec-17
LISN	FisherFCCLISN-50/250/25/8	U-062	5003	16-Nov-17
Spectrum Analyzer	Agilent/E7401A	U-257	MY42000103	29-Dec-17
CDN 16 amp	Fischer/FCC801M316A	U-169	64	10-Jul-19
TILE Software	ETS Lindgren/ 3.4.11.13	U-317	8112006	01-Dec-17
Current Probe	Solar/ 6741-1	U-267	966727	17-Dec-17

TEST EQUIPMENT LIST - RADIATED EMISSIONS				
Description	**Manufacturer/MN**	**Asset #**	**Serial #**	**Cal Due**
Amplifier	HP/8447D	U-065	2727A06180	31-May-18
Bicon Antenna	SCH/BBA9106	U-186	7	5-May-19
Log P Antenna	SCH/UHAL09107	U-010	10	21-Dec-17
DRG Horn Antenna	AH Systems/SAS-200/571	U-156	222	23-Apr-18
Spectrum Analyzer	Agilent/E7401A	U-257	MY42000103	29-Dec-17
Spectrum Analyzer	R&S/FSV30	U-248	101367	18-Jun-18
TILE Software	ETS- Lindgern/ 3.4.11.13	U-317	8112006	01-Dec-17

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

-

1.4 Test Summary Cross Reference

Test Item	FCC Requirement	IC Requirement	Test Method	Result
Antenna Requirement	FCC Part 15, Subpart C Section 15.203 / 15.247	RSS-Gen Section 8.1.3	---	Pass
AC Power Line Conducted Emissions	FCC Part 15, Subpart C Section 15.207	RSS-Gen Section 8.8	ANSI C63.10 (2013) Section 6.2	Pass
Minimum 6dB Bandwidth	FCC Part 15, Subpart C Section 15.247 (a,2)	RSS-247 Issue 1 May 2015 Section 5.2	ANSI C63.10 (2013) Section 11.8.1	Pass
99% Occupied Bandwidth	---	RSS-Gen Section 6.6	RSS-Gen Section 6.6	Pass
Conducted Peak Output Power	FCC Part 15, Subpart C Section 15.247 (a,2,b,3)	RSS-247 Issue 1 May 2015 Section 5.4	ANSI C63.10 (2013) Section 11.9.1.2	Pass
Power Spectrum Density	FCC Part 15, Subpart C Section 15.247 (a,2,e)	RSS-247 Issue 1 May 2015 Section 5.2	ANSI C63.10 (2013) Section 11.10.2	Pass
Conducted Spurious Emissions and Band Edge	FCC Part 15, Subpart C Section 15.247 (a,2,d)	RSS-247 Issue 1 May 2015 Section 5.5	ANSI C63.10 (2013) Section 11.12.2.4	Pass
Radiated Spurious Emissions and Band Edge	FCC Part 15, Subpart C Section 15.209 / 15.205	RSS-247 Issue 1 May 2015 Section 5.5	ANSI C63.10 (2013) Section 6.4, 6.5, 6.6, 6.10	Pass

Preliminary scans were performed to determine worst case modulation, packet length, and data rates. Only worst case data has been recorded within the body of the test report.

1.5 Measurement Uncertainty

Measurement Type	Uncertainty
AC Conducted Emissions	N/A
OATS - Radiated Emissions - Vertical Biconical (30-300MHz)	± 4.17 dB
OATS - Radiated Emissions - Horizontal Biconical (30-300MHz)	± 4.22 dB
OATS - Radiated Emissions - Vertical Log Periodic (300-100MHz)	± 4.92 dB
OATS - Radiated Emissions - Horizontal Log Periodic (300-1000MHz)	± 4.79 dB
OATS - Radiated Emissions - Vertical DRG Horn (> 1GHz)	± 5.74 dB
OATS - Radiated Emissions - Horizontal DRG Horn (>1GHz)	± 5.80 dB
Antenna Conducted Measurements	± 1.96 dB

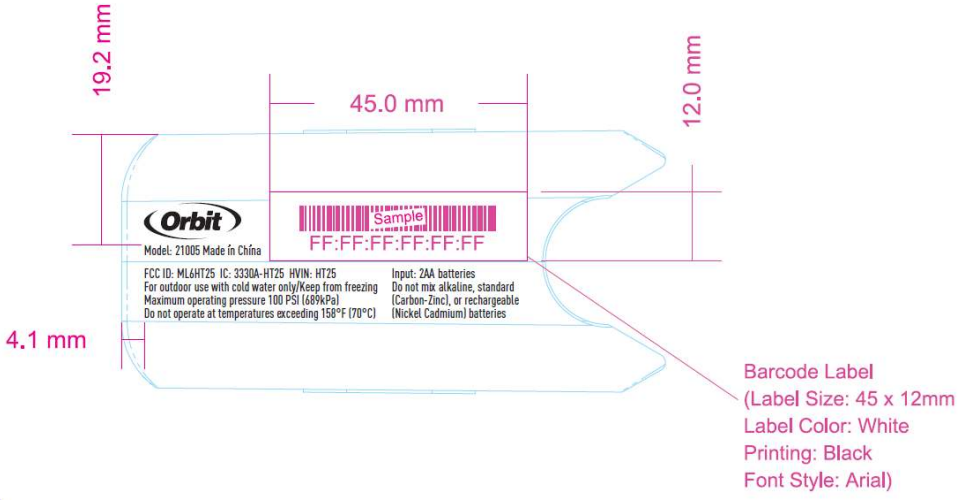
2.1033 (b) (1) Application for Certification

Name of Applicant:	Orbit Irrigation Products Inc. 845 N. Overland Rd. West North Salt Lake, UT 84054
FRN Number:	0023422009
IC Number:	3330A
Name of Manufacturer :	Edwin McAuley Electronics Limited 8/F, Block C, Seaview Estate 2-8 Watson Road, North Point, Hong Kong
Description:	Irrigation Timer with BLE Transmitter
Model Number(s):	21005
Transmitter HVIN:	HT25
Anticipated Production Quantity:	Multiple Units
Frequency Band:	2402 - 2480 MHz
Rated Power:	8.69 dBm (7.396 mW)
Type of Signal:	Digital Transmission System (DTS)
Channels:	40 (BLE)
Max Data Rate:	1Mpbs (mega-bit) - Data transmission is not continuous, it happens for short intervals for short periods of time.
Antenna Type:	Monopole (PWB Trace)
Antenna Gain:	2dBi
Firmware/Software Version:	CSR uEnergy SDK 2.6.2.9

2.1033 (b) (2) FCC Identifier

Model Number:	21005
FCC ID:	ML6HT25
IC ID:	3330A-HT25
HVIN:	HT25

Figure 1 - Label



2.1033 (b) (3) Installation and Operating Instructions

Supplied separately.

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

The HT25 is an Irrigation timer with internal Bluetooth Low Energy (BLE) radio that allows for remote operation of the solenoid which is internal to the hose bib. The HT25 is an outdoor irrigation timer which is powered by to AA batteries and connects to the hose bib directly. The HT25 has an internal DC operated solenoid to open/close the water flow from the hose bib to the sprinkler heads.

2.1033 (b) (5) Block Diagram

Supplied separately for confidentiality.

2.1033 (b) (6) Report of Measurements

15.203 Antenna Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Pass - Antenna gain is less than 2dBi

Pass - The antenna is part of the pwb and is permanently attached within the device and can not be replaced by the user.

15.207 Conducted Emissions (General Provisions)

Test Procedure: As specified in ANSI 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.

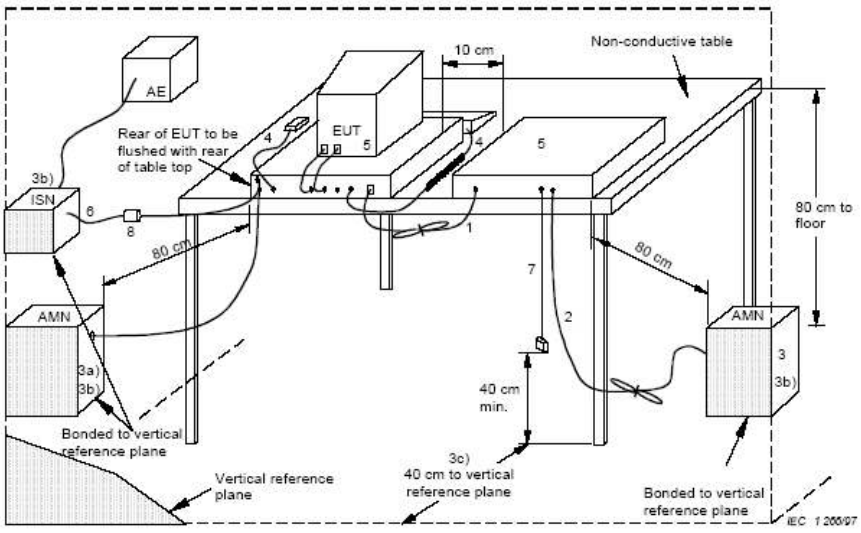
Frequency of emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

* 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:	86022	Date: 27 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.207 [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		

TEST SET UP - CONDUCTED EMISSIONS

NOT APPLICABLE - BATTERY OPERATED

15.209 Radiated Emissions (General Provisions)

Test Procedure: ANSI 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;

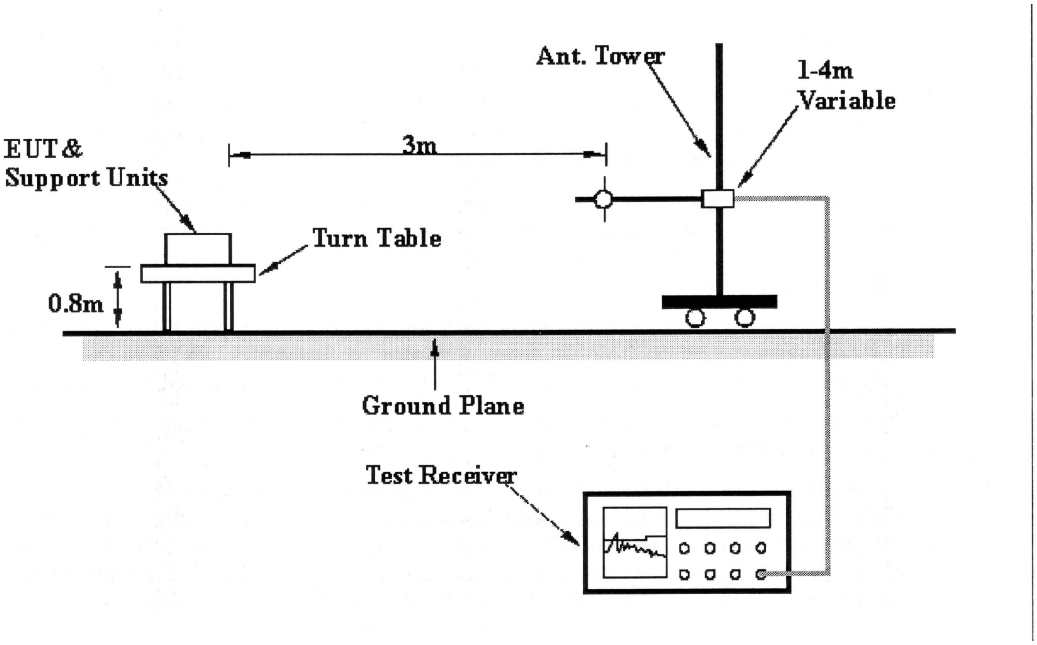
- all cables shall be as short as possible; as much of the cables as possible shall be on the ground plane or preferably below; and the low impedance cables shall be screened.

- EUT was positioned in three orthogonal axis - only the worst case data (X-Axis) has been recorded

The EUT shall be placed upon a non-conductive table (wooden for below 1GHz and styrene above 1GHz) 0.80 meters above the ground plane for frequencies from 30 to 1000MHz and 1.5 meters above the ground plane above 1 Ghz 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** (General)	
DNB Job Number:	86022	Date: 5 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.209 [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	Test Set Up		



	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (General)	
DNB Job Number:	86022	Date: 5 Oct 2017	Specification [X] 15.209 [X] ANSI C63.10-2013
Customer:	Orbit Irrigation Products Inc.		
Model Number:	HT25		
Description:	BLE Transmitter		
Test Set Up - Horizontal - 30-1000MHz			

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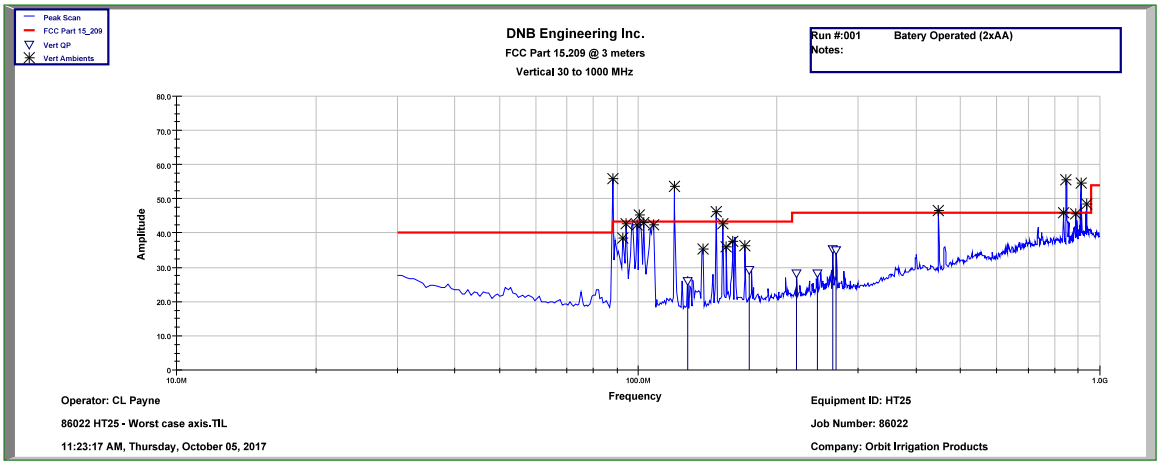
Radiated Emissions (General)

DNB Job Number:	86022	Date: 5 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.209
Model Number:	HT25		[X] ANSI C63.10-2013
Description:	BLE Transmitter		

EUT is in conformance with FCC 15.209	X	YES		NO	Signed	*CL Payne*

FREQ (Mhz)	S/A Reading	Correction Factors (dB)			dBuV/m			Positions			
		Ant	Cbl	Amp	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt
127.875	42.78	7.80	1.98	26.36	26.20	43.51	-17.31	QP	302	Vert	1.00
174.475	43.11	9.91	2.34	26.23	29.14	43.51	-14.37	QP	288	Vert	2.15
221.025	40.86	10.87	2.63	26.02	28.34	46.01	-17.67	QP	310	Vert	1.50
245.325	39.24	11.98	2.77	25.92	28.08	46.01	-17.93	QP	305	Vert	1.20
264.225	45.98	12.37	2.89	25.90	35.34	46.01	-10.67	QP	107	Vert	1.00
268.950	45.50	12.43	2.91	25.90	34.94	46.01	-11.07	QP	0	Vert	1.50



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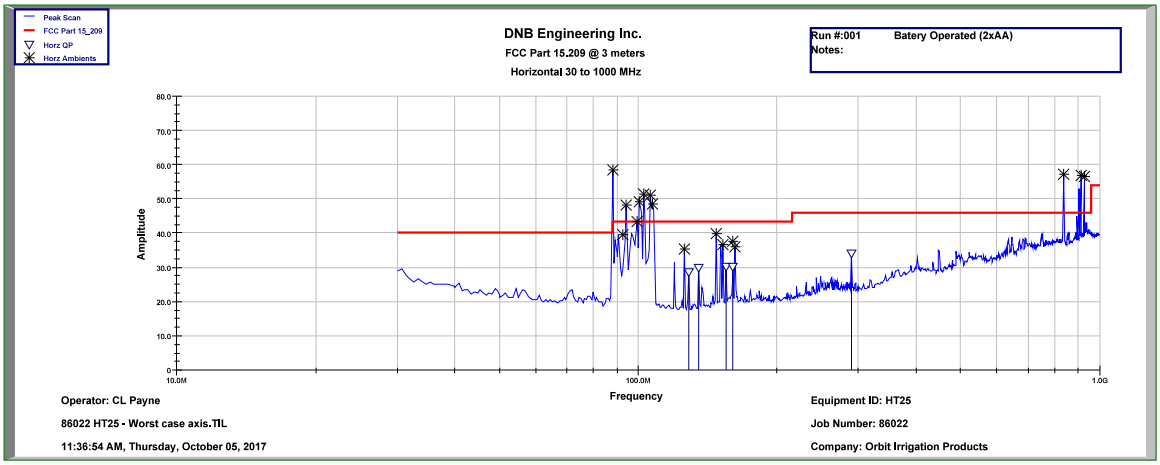
Radiated Emissions (General)

DNB Job Number:	86022	Date: 5 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.209
Model Number:	HT25		[X] ANSI C63.10-2013
Description:	BLE Transmitter		

EUT is in conformance with FCC 15.209	X	YES		NO	Signed	*CL Payne*

FREQ (Mhz)	S/A Reading	Correction Factors (dB)			dBuV/m			Positions			
		Ant	Cbl	Amp	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt
128.550	45.09	7.81	1.99	26.36	28.53	43.51	-14.98	QP	300	Horz	3.89
135.300	46.15	7.98	2.05	26.32	29.86	43.51	-13.65	QP	276	Horz	4.00
154.875	44.71	9.66	2.17	26.30	30.25	43.51	-13.26	QP	389	Horz	4.00
160.275	43.92	10.19	2.20	26.30	30.02	43.51	-13.49	QP	10	Horz	3.75
289.875	44.17	12.68	3.04	25.90	33.99	46.01	-12.02	QP	306	Horz	4.00



15.247 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 C63.10-2013with 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 repeat the measurement using the average detector of the spectrum analyzer. 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.

Note 1: 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.

Note 2: Highest frequency investigated was the tenth harmonic of the fundamental, no radiated emissions were detected above the 3rd harmonic.

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Spurious)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
Test Set Up - (Horizontal - DRG)			

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Radiated Emissions (Spurious)

DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c)
Model Number:	HT25		[X] ANSI C63.10-2013
Description:	BLE Transmitter		

Low Channel - X Axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4804	32.05	32.99	7.04	25.82	46.27	74.00	-27.73	Peak	Peak	Hor
4804	20.32	32.99	7.04	25.82	34.54	54.00	-19.46	Ave	Ave	Hor
7206	30.59	29.50	8.78	25.53	43.33	74.00	-30.67	Peak	Peak	Hor
7206	18.13	29.50	8.78	25.53	30.87	54.00	-23.13	Ave	Ave	Hor
9608	30.62	33.10	10.46	24.91	49.27	74.00	-24.73	Peak	Peak	Hor
9608	18.26	33.10	10.46	24.91	36.91	54.00	-17.09	Ave	Ave	Hor
12010	29.29	39.73	10.95	24.52	55.45	74.00	-18.55	Peak	Peak	Hor
12010	17.37	39.73	10.95	24.52	43.53	54.00	-10.47	Ave	Ave	Hor
14412	29.57	41.51	13.15	23.09	61.14	74.00	-12.86	Peak	Peak	Hor
14412	17.12	41.51	13.15	23.09	48.69	54.00	-5.31	Ave	Ave	Hor
16814	28.19	41.92	14.63	23.56	61.17	74.00	-12.83	Peak	Peak	Hor
16814	15.65	41.92	14.63	23.56	48.63	54.00	-5.37	Ave	Ave	Hor
4804	38.05	32.99	7.04	25.82	52.27	74.00	-21.73	Peak	Peak	Vert
4804	28.58	32.99	7.04	25.82	42.80	54.00	-11.20	Ave	Ave	Vert
7206	34.86	29.50	8.78	25.53	47.60	74.00	-26.40	Peak	Peak	Vert
7206	23.35	29.50	8.78	25.53	36.09	54.00	-17.91	Ave	Ave	Vert
9608	32.65	33.10	10.46	24.91	51.30	74.00	-22.70	Peak	Peak	Vert
9608	20.75	33.10	10.46	24.91	39.40	54.00	-14.60	Ave	Ave	Vert
12010	30.48	39.73	10.95	24.52	56.64	74.00	-17.36	Peak	Peak	Vert
12010	17.87	39.73	10.95	24.52	44.03	54.00	-9.97	Ave	Ave	Vert
14412	29.79	41.51	13.15	23.09	61.36	74.00	-12.64	Peak	Peak	Vert
14412	17.09	41.51	13.15	23.09	48.66	54.00	-5.34	Ave	Ave	Vert
16814	28.39	41.92	14.63	23.56	61.37	74.00	-12.63	Peak	Peak	Vert
16814	15.58	41.92	14.63	23.56	48.56	54.00	-5.44	Ave	Ave	Vert

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Radiated Emissions (Spurious)

DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c)
Model Number:	HT25		[X] ANSI C63.10-2013
Description:	BLE Transmitter		

Low Channel - Y Axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4804	38.25	32.99	7.04	25.82	52.47	74.00	-21.53	Peak	Peak	Hor
4804	28.80	32.99	7.04	25.82	43.02	54.00	-10.98	Ave	Ave	Hor
7206	32.87	29.50	8.78	25.53	45.61	74.00	-28.39	Peak	Peak	Hor
7206	20.80	29.50	8.78	25.53	33.54	54.00	-20.46	Ave	Ave	Hor
9608	31.08	33.10	10.46	24.91	49.73	74.00	-24.27	Peak	Peak	Hor
9608	19.19	33.10	10.46	24.91	37.84	54.00	-16.16	Ave	Ave	Hor
12010	29.68	39.73	10.95	24.52	55.84	74.00	-18.16	Peak	Peak	Hor
12010	17.38	39.73	10.95	24.52	43.54	54.00	-10.46	Ave	Ave	Hor
14412	29.22	41.51	13.15	23.09	60.79	74.00	-13.21	Peak	Peak	Hor
14412	17.20	41.51	13.15	23.09	48.77	54.00	-5.23	Ave	Ave	Hor
16814	27.94	41.92	14.63	23.56	60.92	74.00	-13.08	Peak	Peak	Hor
16814	15.64	41.92	14.63	23.56	48.62	54.00	-5.38	Ave	Ave	Hor
4804	32.75	32.99	7.04	25.82	46.97	74.00	-27.03	Peak	Peak	Vert
4804	19.84	32.99	7.04	25.82	34.06	54.00	-19.94	Ave	Ave	Vert
7206	30.76	29.50	8.78	25.53	43.50	74.00	-30.50	Peak	Peak	Vert
7206	18.18	29.50	8.78	25.53	30.92	54.00	-23.08	Ave	Ave	Vert
9608	30.72	33.10	10.46	24.91	49.37	74.00	-24.63	Peak	Peak	Vert
9608	18.38	33.10	10.46	24.91	37.03	54.00	-16.97	Ave	Ave	Vert
12010	30.04	39.73	10.95	24.52	56.20	74.00	-17.80	Peak	Peak	Vert
12010	17.44	39.73	10.95	24.52	43.60	54.00	-10.40	Ave	Ave	Vert
14412	29.42	41.51	13.15	23.09	60.99	74.00	-13.01	Peak	Peak	Vert
14412	17.26	41.51	13.15	23.09	48.83	54.00	-5.17	Ave	Ave	Vert
16814	28.10	41.92	14.63	23.56	61.08	74.00	-12.92	Peak	Peak	Vert
16814	15.74	41.92	14.63	23.56	48.72	54.00	-5.28	Ave	Ave	Vert

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

Radiated Emissions (Spurious)

DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		

Low Channel - Z Axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4804	39.68	32.99	7.04	25.82	53.90	74.00	-20.10	Peak	Peak	Hor
4804	30.61	32.99	7.04	25.82	44.83	54.00	-9.17	Ave	Ave	Hor
7206	34.20	29.50	8.78	25.53	46.94	74.00	-27.06	Peak	Peak	Hor
7206	22.87	29.50	8.78	25.53	35.61	54.00	-18.39	Ave	Ave	Hor
9608	32.19	33.10	10.46	24.91	50.84	74.00	-23.16	Peak	Peak	Hor
9608	20.26	33.10	10.46	24.91	38.91	54.00	-15.09	Ave	Ave	Hor
12010	29.94	39.73	10.95	24.52	56.10	74.00	-17.90	Peak	Peak	Hor
12010	17.68	39.73	10.95	24.52	43.84	54.00	-10.16	Ave	Ave	Hor
14412	28.96	41.51	13.15	23.09	60.53	74.00	-13.47	Peak	Peak	Hor
14412	17.00	41.51	13.15	23.09	48.57	54.00	-5.43	Ave	Ave	Hor
16814	27.77	41.92	14.63	23.56	60.75	74.00	-13.25	Peak	Peak	Hor
16814	15.47	41.92	14.63	23.56	48.45	54.00	-5.55	Ave	Ave	Hor
4804	34.62	32.99	7.04	25.82	48.84	74.00	-25.16	Peak	Peak	Vert
4804	23.62	32.99	7.04	25.82	37.84	54.00	-16.16	Ave	Ave	Vert
7206	30.38	29.50	8.78	25.53	43.12	74.00	-30.88	Peak	Peak	Vert
7206	18.23	29.50	8.78	25.53	30.97	54.00	-23.03	Ave	Ave	Vert
9608	30.84	33.10	10.46	24.91	49.49	74.00	-24.51	Peak	Peak	Vert
9608	18.31	33.10	10.46	24.91	36.96	54.00	-17.04	Ave	Ave	Vert
12010	30.28	39.73	10.95	24.52	56.44	74.00	-17.56	Peak	Peak	Vert
12010	17.36	39.73	10.95	24.52	43.52	54.00	-10.48	Ave	Ave	Vert
14412	29.32	41.51	13.15	23.09	60.89	74.00	-13.11	Peak	Peak	Vert
14412	17.15	41.51	13.15	23.09	48.72	54.00	-5.28	Ave	Ave	Vert
16814	28.59	41.92	14.63	23.56	61.57	74.00	-12.43	Peak	Peak	Vert
16814	15.61	41.92	14.63	23.56	48.59	54.00	-5.41	Ave	Ave	Vert

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Radiated Emissions (Spurious)

DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		

Middle Channel - X axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4880	32.76	33.27	7.11	25.80	47.33	74.00	-26.67	Peak	Peak	Hor
4880	20.93	33.27	7.11	25.80	35.51	54.00	-18.49	Ave	Ave	Hor
7320	29.99	37.11	8.83	25.51	50.42	74.00	-23.58	Peak	Peak	Hor
7320	17.97	37.11	8.83	25.51	38.40	54.00	-15.60	Ave	Ave	Hor
9760	30.09	37.90	10.59	24.90	53.68	74.00	-20.32	Peak	Peak	Hor
9760	17.86	37.90	10.59	24.90	41.45	54.00	-12.55	Ave	Ave	Hor
12200	29.97	40.26	11.24	24.44	57.03	74.00	-16.97	Peak	Peak	Hor
12200	17.67	40.26	11.24	24.44	44.73	54.00	-9.27	Ave	Ave	Hor
14640	29.92	41.80	13.46	22.84	62.34	74.00	-11.66	Peak	Peak	Hor
14640	17.46	41.80	13.46	22.84	49.88	54.00	-4.12	Ave	Ave	Hor
17080	28.28	42.53	15.12	23.28	62.64	74.00	-11.36	Peak	Peak	Hor
17080	15.99	42.53	15.12	23.28	50.35	54.00	-3.65	Ave	Ave	Hor
4880	40.94	33.27	7.11	25.80	55.52	74.00	-18.48	Peak	Peak	Vert
4880	32.74	33.27	7.11	25.80	47.32	54.00	-6.68	Ave	Ave	Vert
7320	35.56	37.11	8.83	25.51	55.99	74.00	-18.01	Peak	Peak	Vert
7320	25.24	37.11	8.83	25.51	45.67	54.00	-8.33	Ave	Ave	Vert
9760	33.46	37.90	10.59	24.90	57.05	74.00	-16.95	Peak	Peak	Vert
9760	21.83	37.90	10.59	24.90	45.42	54.00	-8.58	Ave	Ave	Vert
12200	30.67	40.26	11.24	24.44	57.73	74.00	-16.27	Peak	Peak	Vert
12200	18.69	40.26	11.24	24.44	45.75	54.00	-8.25	Ave	Ave	Vert
14640	29.69	41.80	13.46	22.84	62.11	74.00	-11.89	Peak	Peak	Vert
14640	17.50	41.80	13.46	22.84	49.92	54.00	-4.08	Ave	Ave	Vert
17080	28.32	42.53	15.12	23.28	62.68	74.00	-11.32	Peak	Peak	Vert
17080	15.88	42.53	15.12	23.28	50.24	54.00	-3.76	Ave	Ave	Vert

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Radiated Emissions (Spurious)

DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		

Middle Channel - Y axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4880	39.30	33.27	7.11	25.80	53.88	74.00	-20.12	Peak	Peak	Hor
4880	30.82	33.27	7.11	25.80	45.40	54.00	-8.60	Ave	Ave	Hor
7320	32.51	37.11	8.83	25.51	52.94	74.00	-21.06	Peak	Peak	Hor
7320	20.06	37.11	8.83	25.51	40.49	54.00	-13.51	Ave	Ave	Hor
9760	30.75	37.90	10.59	24.90	54.34	74.00	-19.66	Peak	Peak	Hor
9760	18.31	37.90	10.59	24.90	41.90	54.00	-12.10	Ave	Ave	Hor
12200	30.17	40.26	11.24	24.44	57.23	74.00	-16.77	Peak	Peak	Hor
12200	17.73	40.26	11.24	24.44	44.79	54.00	-9.21	Ave	Ave	Hor
14640	30.58	41.80	13.46	22.84	63.00	74.00	-11.00	Peak	Peak	Hor
14640	17.47	41.80	13.46	22.84	49.89	54.00	-4.11	Ave	Ave	Hor
17080	28.52	42.53	15.12	23.28	62.88	74.00	-11.12	Peak	Peak	Hor
17080	15.99	42.53	15.12	23.28	50.35	54.00	-3.65	Ave	Ave	Hor
4960	33.23	33.56	7.19	25.79	48.18	74.00	-25.82	Peak	Peak	Vert
4960	21.74	33.56	7.19	25.79	36.69	54.00	-17.31	Ave	Ave	Vert
7440	30.70	37.04	8.90	25.48	51.15	74.00	-22.85	Peak	Peak	Vert
7440	18.69	37.04	8.90	25.48	39.14	54.00	-14.86	Ave	Ave	Vert
9920	30.70	37.97	10.72	24.89	54.50	74.00	-19.50	Peak	Peak	Vert
9920	17.76	37.97	10.72	24.89	41.56	54.00	-12.44	Ave	Ave	Vert
12400	28.61	40.82	11.55	24.37	56.61	74.00	-17.39	Peak	Peak	Vert
12400	18.04	40.82	11.55	24.37	46.04	54.00	-7.96	Ave	Ave	Vert
14880	30.17	42.13	13.61	22.67	63.24	74.00	-10.76	Peak	Peak	Vert
14880	17.54	42.13	13.61	22.67	50.61	54.00	-3.39	Peak	Peak	Vert
17360	28.44	42.98	15.44	23.05	63.81	74.00	-10.19	Peak	Peak	Vert
17360	16.01	42.98	15.44	23.05	51.38	54.00	-2.62	Ave	Ave	Vert

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Radiated Emissions (Spurious)

DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		

Middle Channel - Z axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4880	40.43	33.27	7.11	25.80	55.01	74.00	-18.99	Peak	Peak	Hor
4880	32.05	33.27	7.11	25.80	46.63	54.00	-7.37	Ave	Ave	Hor
7320	34.68	37.11	8.83	25.51	55.11	74.00	-18.89	Peak	Peak	Hor
7320	22.86	37.11	8.83	25.51	43.29	54.00	-10.71	Ave	Ave	Hor
9760	31.76	37.90	10.59	24.90	55.35	74.00	-18.65	Peak	Peak	Hor
9760	19.86	37.90	10.59	24.90	43.45	54.00	-10.55	Ave	Ave	Hor
12200	30.61	40.26	11.24	24.44	57.67	74.00	-16.33	Peak	Peak	Hor
12200	18.02	40.26	11.24	24.44	45.08	54.00	-8.92	Ave	Ave	Hor
14640	30.09	41.80	13.46	22.84	62.51	74.00	-11.49	Peak	Peak	Hor
14640	17.41	41.80	13.46	22.84	49.83	54.00	-4.17	Ave	Ave	Hor
17080	28.28	42.53	15.12	23.28	62.64	74.00	-11.36	Peak	Peak	Hor
17080	15.96	42.53	15.12	23.28	50.32	54.00	-3.68	Ave	Ave	Hor
4880	35.84	33.27	7.11	25.80	50.42	74.00	-23.58	Peak	Peak	Vert
4880	25.56	33.27	7.11	25.80	40.14	54.00	-13.86	Ave	Ave	Vert
7320	30.57	37.11	8.83	25.51	51.00	74.00	-23.00	Peak	Peak	Vert
7320	18.51	37.11	8.83	25.51	38.94	54.00	-15.06	Ave	Ave	Vert
9760	30.27	37.90	10.59	24.90	53.86	74.00	-20.14	Peak	Peak	Vert
9760	17.85	37.90	10.59	24.90	41.44	54.00	-12.56	Ave	Ave	Vert
12200	30.79	40.26	11.24	24.44	57.85	74.00	-16.15	Peak	Peak	Vert
12200	17.65	40.26	11.24	24.44	44.71	54.00	-9.29	Ave	Ave	Vert
14640	30.17	41.80	13.46	22.84	62.59	74.00	-11.41	Peak	Peak	Vert
14640	17.42	41.80	13.46	22.84	49.84	54.00	-4.16	Ave	Ave	Vert
17080	28.25	42.53	15.12	23.28	62.61	74.00	-11.39	Peak	Peak	Vert
17080	15.93	42.53	15.12	23.28	50.29	54.00	-3.71	Ave	Ave	Vert

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Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c)
Model Number:	HT25		[X] ANSI C63.10-2013
Description:	BLE Transmitter		

High Channel - X axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4960	34.41	33.56	7.19	25.79	49.36	74.00	-24.64	Peak	Peak	Hor
4960	23.67	33.56	7.19	25.79	38.62	54.00	-15.38	Ave	Ave	Hor
7440	31.00	37.04	8.90	25.48	51.45	74.00	-22.55	Peak	Peak	Hor
7440	18.57	37.04	8.90	25.48	39.02	54.00	-14.98	Ave	Ave	Hor
9920	29.87	37.97	10.72	24.89	53.67	74.00	-20.33	Peak	Peak	Hor
9920	17.71	37.97	10.72	24.89	41.51	54.00	-12.49	Ave	Ave	Hor
12400	30.86	40.82	11.55	24.37	58.86	74.00	-15.14	Peak	Peak	Hor
12400	18.07	40.82	11.55	24.37	46.07	54.00	-7.93	Ave	Ave	Hor
14880	29.49	42.13	13.61	22.67	62.56	74.00	-11.44	Peak	Peak	Hor
14880	17.52	42.13	13.61	22.67	50.59	54.00	-3.41	Peak	Peak	Hor
17360	28.14	42.98	15.44	23.05	63.51	74.00	-10.49	Peak	Peak	Hor
17360	15.98	42.98	15.44	23.05	51.35	54.00	-2.65	Ave	Ave	Hor
4960	41.61	33.56	7.19	25.79	56.56	74.00	-17.44	Peak	Peak	Vert
4960	34.01	33.56	7.19	25.79	48.96	54.00	-5.04	Ave	Ave	Vert
7440	32.28	37.04	8.90	25.48	52.73	74.00	-21.27	Peak	Peak	Vert
7440	19.81	37.04	8.90	25.48	40.26	54.00	-13.74	Ave	Ave	Vert
9920	30.05	37.97	10.72	24.89	53.85	74.00	-20.15	Peak	Peak	Vert
9920	17.96	37.97	10.72	24.89	41.76	54.00	-12.24	Ave	Ave	Vert
12400	30.81	40.82	11.55	24.37	58.81	74.00	-15.19	Peak	Peak	Vert
12400	18.01	40.82	11.55	24.37	46.01	54.00	-7.99	Ave	Ave	Vert
14880	29.98	42.13	13.61	22.67	63.05	74.00	-10.95	Peak	Peak	Vert
14880	17.44	42.13	13.61	22.67	50.51	54.00	-3.49	Peak	Peak	Vert
17360	28.48	42.98	15.44	23.05	63.85	74.00	-10.15	Peak	Peak	Vert
17360	15.97	42.98	15.44	23.05	51.34	54.00	-2.66	Ave	Ave	Vert

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Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		

High Channel - Y axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4960	37.56	33.56	7.19	25.79	52.51	74.00	-21.49	Peak	Peak	Hor
4960	28.35	33.56	7.19	25.79	43.30	54.00	-10.70	Ave	Ave	Hor
7440	31.19	37.04	8.90	25.48	51.64	74.00	-22.36	Peak	Peak	Hor
7440	18.57	37.04	8.90	25.48	39.02	54.00	-14.98	Ave	Ave	Hor
9920	30.52	37.97	10.72	24.89	54.32	74.00	-19.68	Peak	Peak	Hor
9920	18.09	37.97	10.72	24.89	41.89	54.00	-12.11	Ave	Ave	Hor
12400	30.63	40.82	11.55	24.37	58.63	74.00	-15.37	Peak	Peak	Hor
12400	17.58	40.82	11.55	24.37	45.58	54.00	-8.42	Ave	Ave	Hor
14880	30.51	42.13	13.61	22.67	63.58	74.00	-10.42	Peak	Peak	Hor
14880	17.59	42.13	13.61	22.67	50.66	54.00	-3.34	Peak	Peak	Hor
17360	29.05	42.98	15.44	23.05	64.42	74.00	-9.58	Peak	Peak	Hor
17360	16.04	42.98	15.44	23.05	51.41	54.00	-2.59	Ave	Ave	Hor
4960	33.23	33.56	7.19	25.79	48.18	74.00	-25.82	Peak	Peak	Vert
4960	21.74	33.56	7.19	25.79	36.69	54.00	-17.31	Ave	Ave	Vert
7440	30.70	37.04	8.90	25.48	51.15	74.00	-22.85	Peak	Peak	Vert
7440	18.69	37.04	8.90	25.48	39.14	54.00	-14.86	Ave	Ave	Vert
9920	30.70	37.97	10.72	24.89	54.50	74.00	-19.50	Peak	Peak	Vert
9920	17.76	37.97	10.72	24.89	41.56	54.00	-12.44	Ave	Ave	Vert
12400	28.61	40.82	11.55	24.37	56.61	74.00	-17.39	Peak	Peak	Vert
12400	18.04	40.82	11.55	24.37	46.04	54.00	-7.96	Ave	Ave	Vert
14880	30.17	42.13	13.61	22.67	63.24	74.00	-10.76	Peak	Peak	Vert
14880	17.54	42.13	13.61	22.67	50.61	54.00	-3.39	Peak	Peak	Vert
17360	28.44	42.98	15.44	23.05	63.81	74.00	-10.19	Peak	Peak	Vert
17360	16.01	42.98	15.44	23.05	51.38	54.00	-2.62	Ave	Ave	Vert

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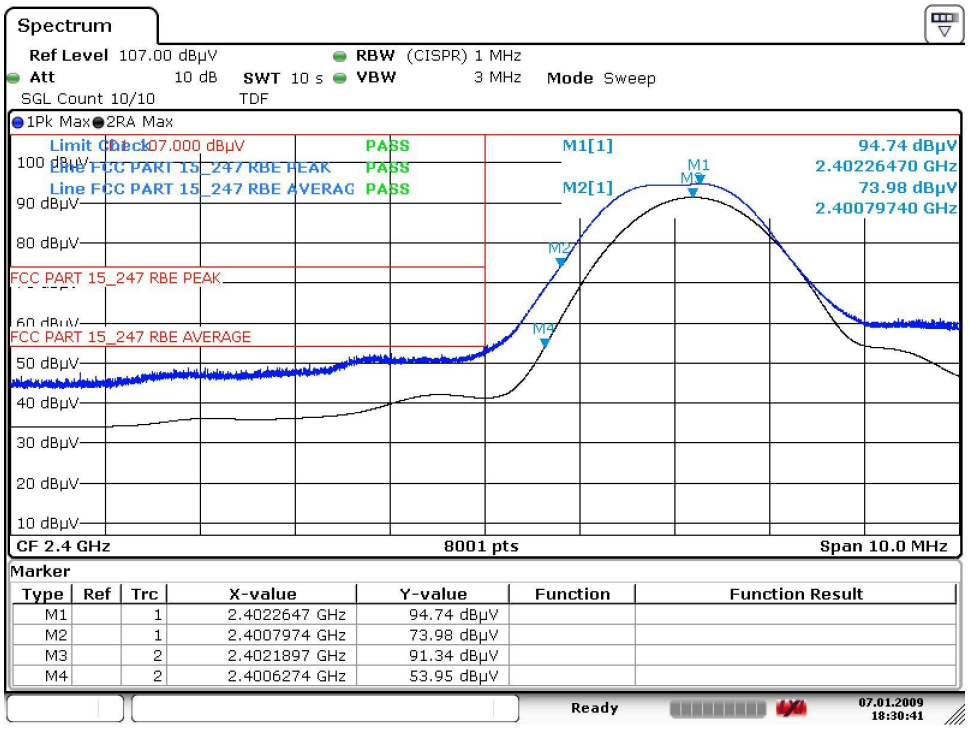
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		

High Channel - Z axis

FREQ (Mhz)	Meter	Correction Factors (dB)			dBuV/m			Type		Polarity
		Ant	Cbl	Amp	Corr	Lim	Delta	Lim	Rdng	
4960	42.50	33.56	7.19	25.79	57.45	74.00	-16.55	Peak	Peak	Hor
4960	34.88	33.56	7.19	25.79	49.83	54.00	-4.17	Ave	Ave	Hor
7440	32.30	37.04	8.90	25.48	52.75	74.00	-21.25	Peak	Peak	Hor
7440	20.78	37.04	8.90	25.48	41.23	54.00	-12.77	Ave	Ave	Hor
9920	30.05	37.97	10.72	24.89	53.85	74.00	-20.15	Peak	Peak	Hor
9920	17.85	37.97	10.72	24.89	41.65	54.00	-12.35	Ave	Ave	Hor
12400	30.73	40.82	11.55	24.37	58.73	74.00	-15.27	Peak	Peak	Hor
12400	18.03	40.82	11.55	24.37	46.03	54.00	-7.97	Ave	Ave	Hor
14880	29.49	42.13	13.61	22.67	62.56	74.00	-11.44	Peak	Peak	Hor
14880	17.47	42.13	13.61	22.67	50.54	54.00	-3.46	Peak	Peak	Hor
17360	28.57	42.98	15.44	23.05	63.94	74.00	-10.06	Peak	Peak	Hor
17360	15.97	42.98	15.44	23.05	51.34	54.00	-2.66	Ave	Ave	Hor
4960	44.35	33.56	7.19	25.79	59.30	74.00	-14.70	Peak	Peak	Vert
4960	35.40	33.56	7.19	25.79	50.35	54.00	-3.65	Ave	Ave	Vert
4960	37.34	33.56	7.19	25.79	52.29	74.00	-21.71	Peak	Peak	Vert
4960	28.24	33.56	7.19	25.79	43.19	54.00	-10.81	Ave	Ave	Vert
7440	30.62	37.04	8.90	25.48	51.07	74.00	-22.93	Peak	Peak	Vert
7440	18.78	37.04	8.90	25.48	39.23	54.00	-14.77	Ave	Ave	Vert
9920	30.30	37.97	10.72	24.89	54.10	74.00	-19.90	Peak	Peak	Vert
9920	17.87	37.97	10.72	24.89	41.67	54.00	-12.33	Ave	Ave	Vert
12400	30.86	40.82	11.55	24.37	58.86	74.00	-15.14	Peak	Peak	Vert
12400	18.28	40.82	11.55	24.37	46.28	54.00	-7.72	Ave	Ave	Vert
14880	30.08	42.13	13.61	22.67	63.15	74.00	-10.85	Peak	Peak	Vert
14880	17.66	42.13	13.61	22.67	50.73	54.00	-3.27	Peak	Peak	Vert
17360	28.95	42.98	15.44	23.05	64.32	74.00	-9.68	Peak	Peak	Vert
17360	16.16	42.98	15.44	23.05	51.53	54.00	-2.47	Ave	Ave	Vert

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

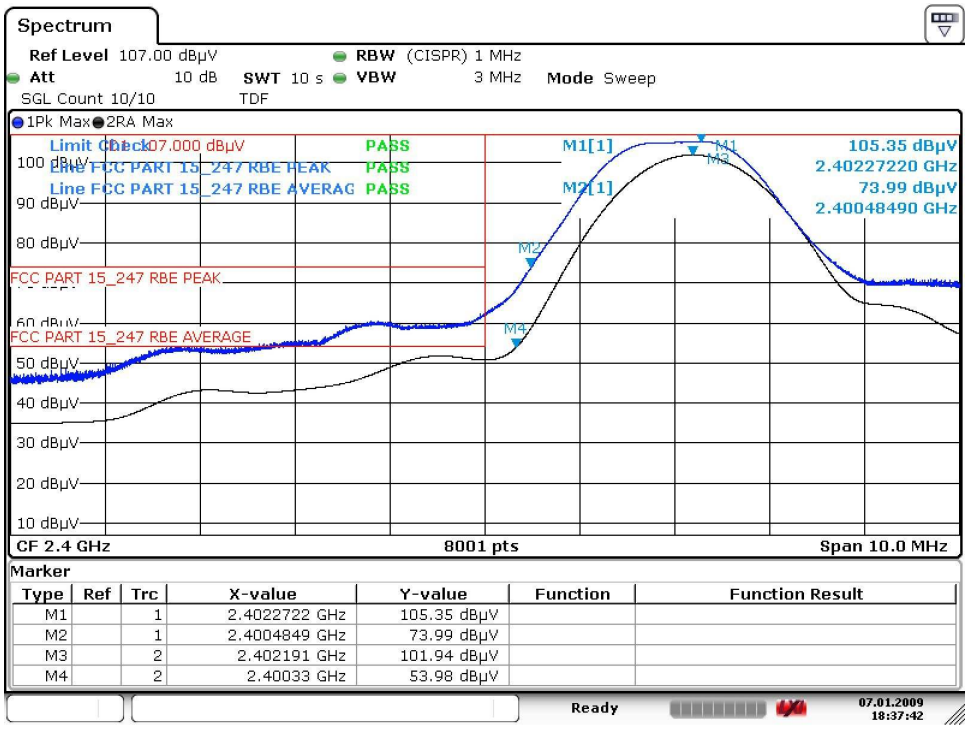
Radiated Corrected Band Edge - Lower Edge - X axis - Horizontal



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

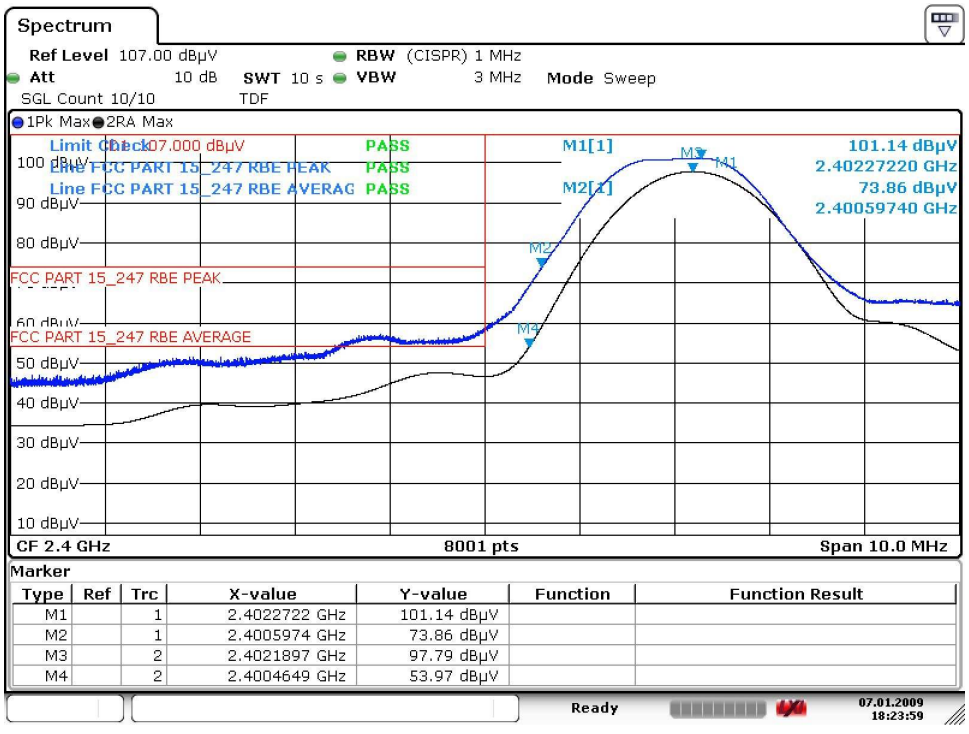
Radiated Corrected Band Edge - Lower Edge - X Axis - Vertical



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

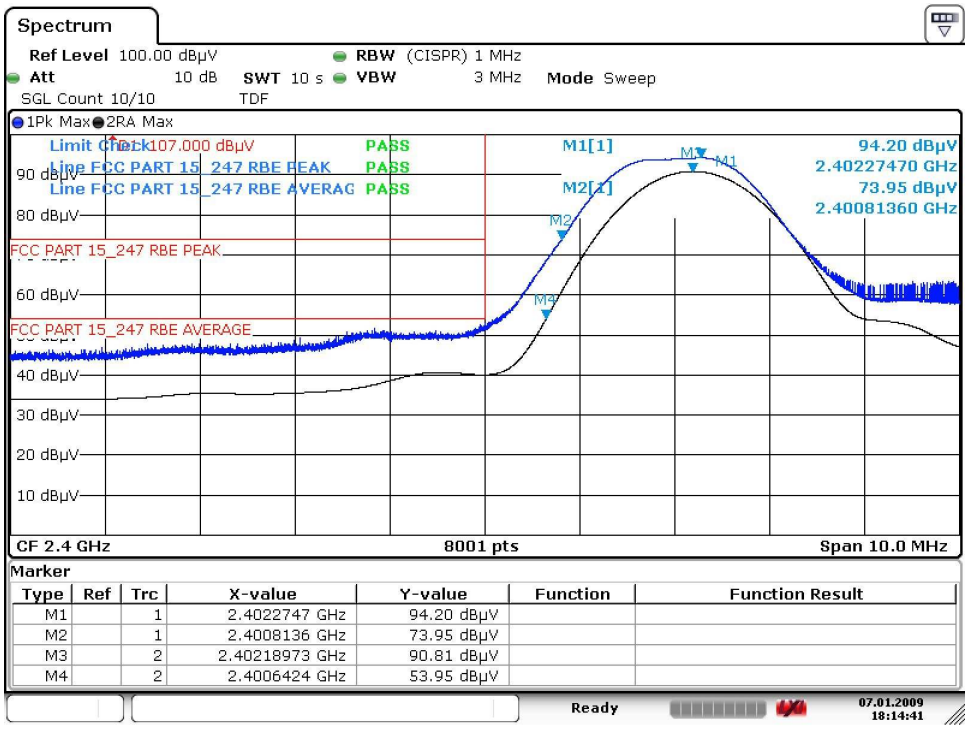
Radiated Corrected Band Edge - Lower Edge - Y axis - Horizontal



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification [X] 15.247 (c) [X] ANSI C63.10-2013
Customer:	Orbit Irrigation Products Inc.		
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

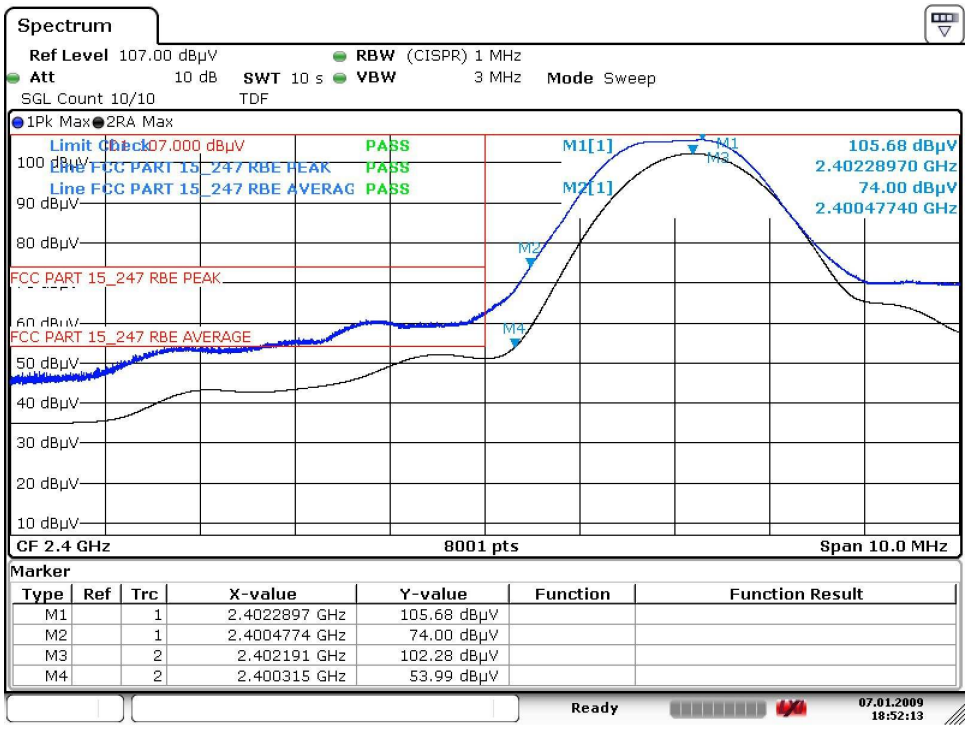
Radiated Corrected Band Edge - Lower Edge - Y Axis - Vertical



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

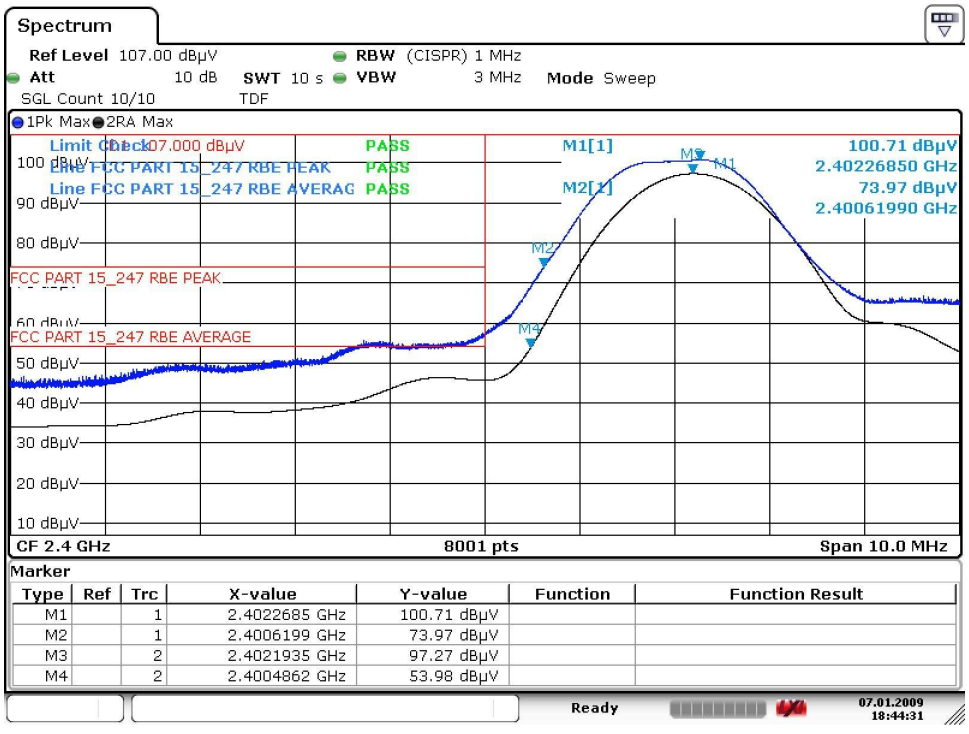
Radiated Corrected Band Edge - Lower Edge - Z axis - Horizontal



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	**Radiated Emissions** (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

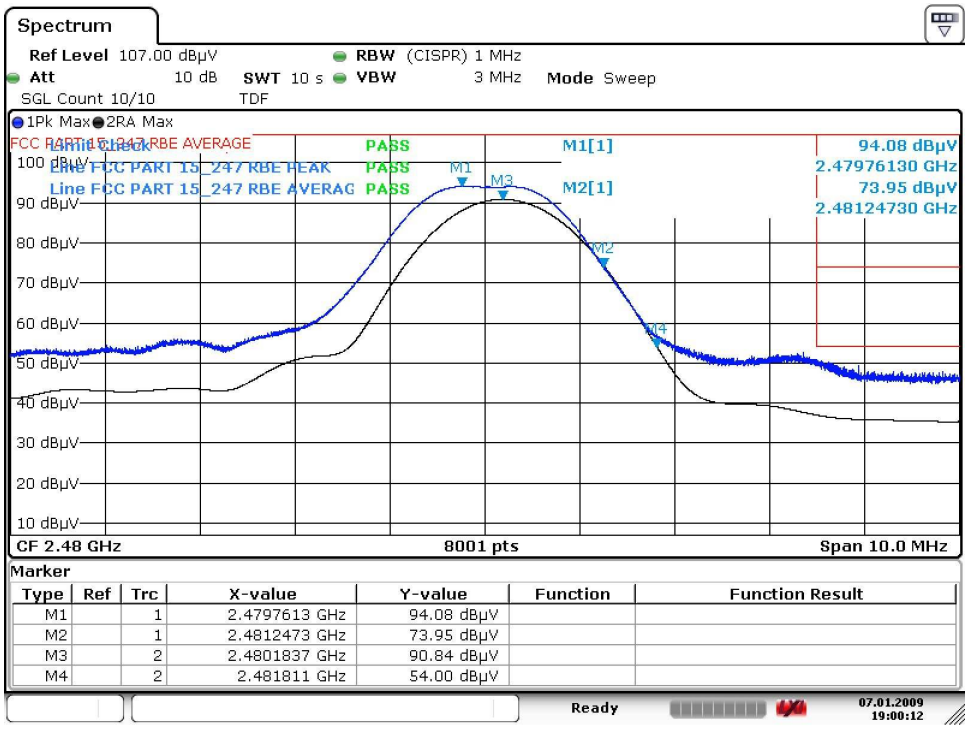
Radiated Corrected Band Edge - Lower Edge - Z Axis - Vertical



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	Radiated Emissions (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

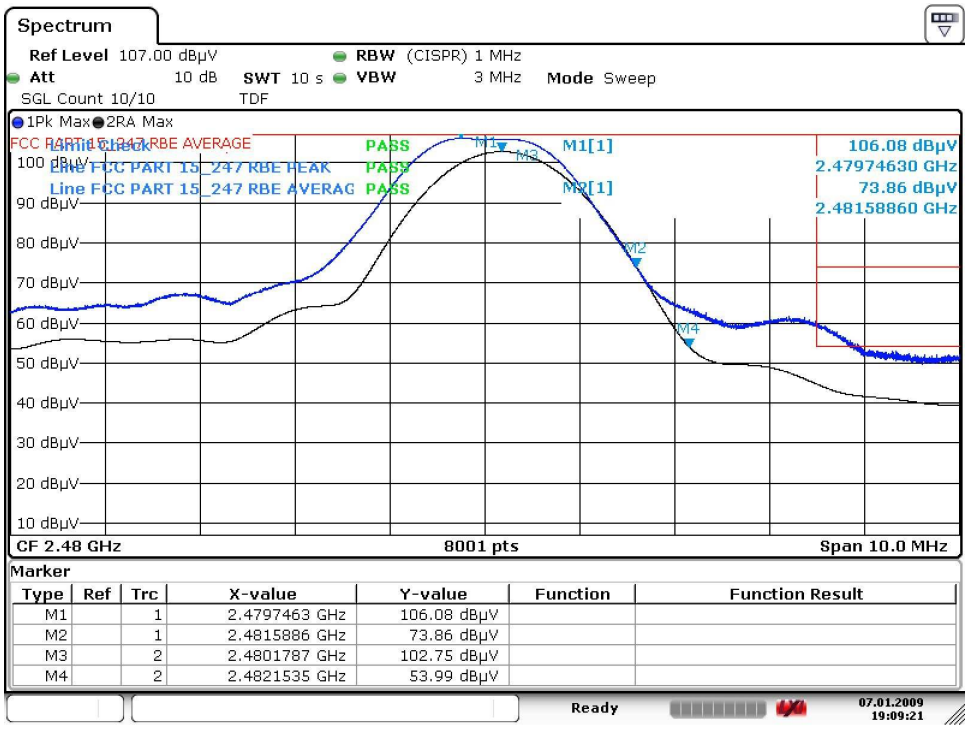
Radiated Corrected Band Edge - Upper Edge - X Axis - Horizontal



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	Radiated Emissions (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

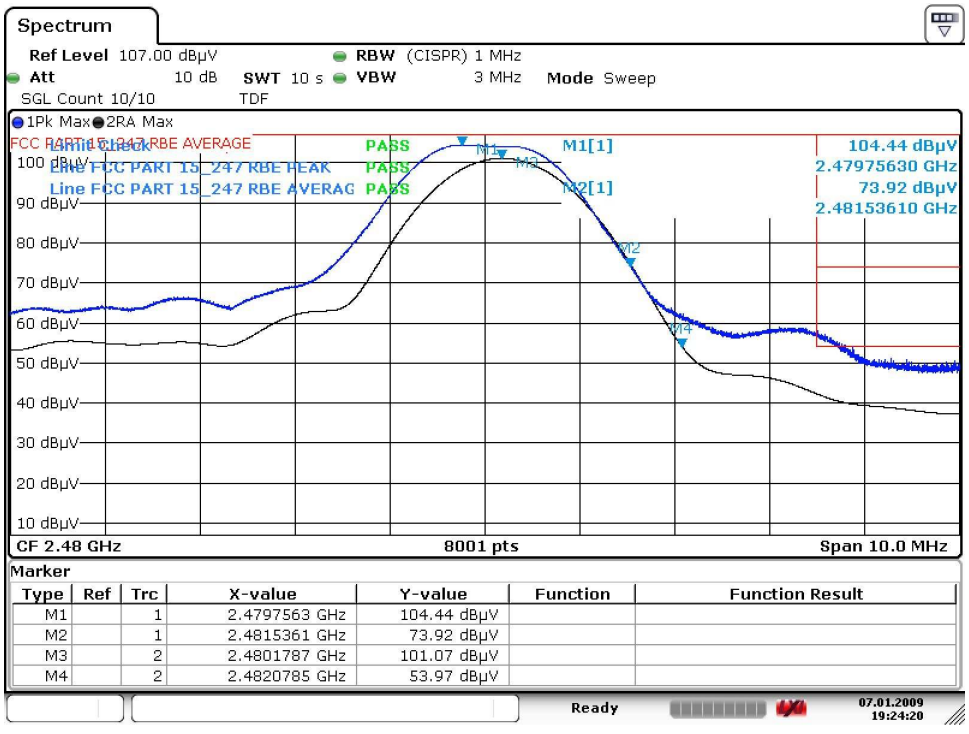
Radiated Corrected Band Edge - Upper Edge - X Axis - Vertical



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	Radiated Emissions (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

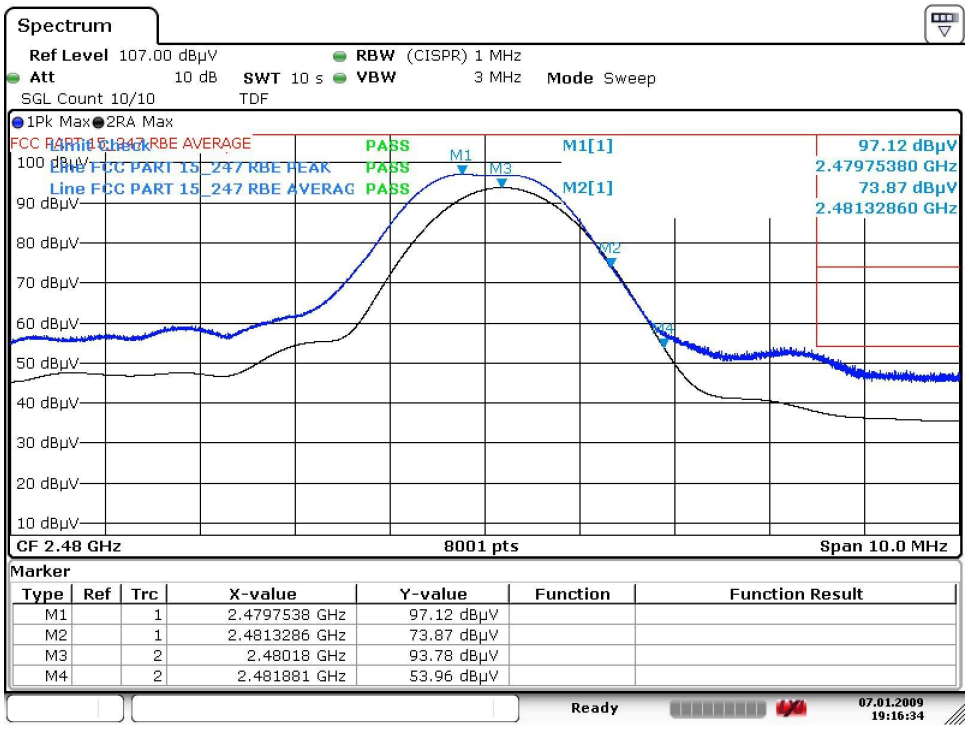
Radiated Corrected Band Edge - Upper Edge - Y Axis - Horizontal



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	Radiated Emissions (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

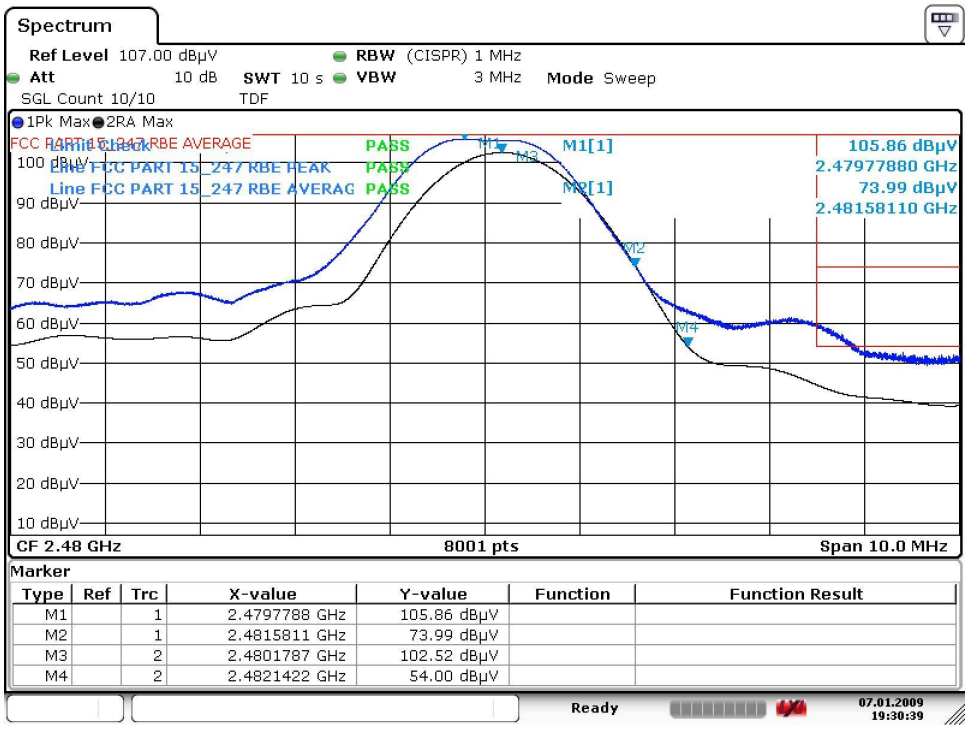
Radiated Corrected Band Edge - Upper Edge - Y Axis - Vertical



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	Radiated Emissions (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

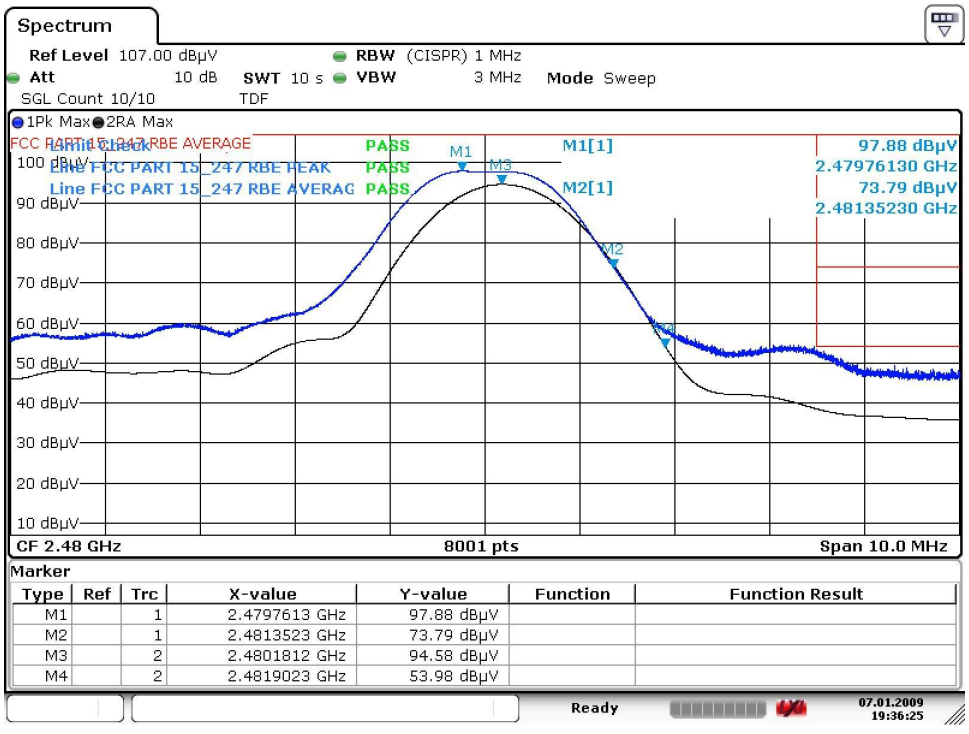
Radiated Corrected Band Edge - Upper Edge - Z Axis - Horizontal



Date: 4 Oct 2017

	1100 E Chalk Creek Road Coalville, UT 84017 (435) 336-4433 FAX (435) 336-4436	Radiated Emissions (Bandedge)	
DNB Job Number:	86022	Date: 4 Oct 2017	Specification
Customer:	Orbit Irrigation Products Inc.		[X] 15.247 (c) [X] ANSI C63.10-2013
Model Number:	HT25		
Description:	BLE Transmitter		
	1 Mbps (Basic data rate)		

Radiated Corrected Band Edge - Upper Edge - Z Axis - Vertical



Date: 4 Oct 2017

15.247 (a,2) 6 dB Bandwidth

Test Procedure: ANSI C63.10-2013

6 dB Bandwidth

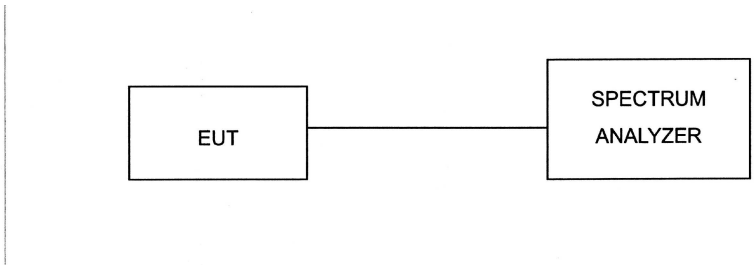
Use the following spectrum analyzer settings:
Span = approximately 2 to 3 times the 6 dB bandwidth, centered on a hopping channel
RBW ≥ 1% of the 6 dB bandwidth
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

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 6 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 6 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:	86022	Date:	10 Oct 2017	Conformance Standard FCC Part 15
Customer:	Orbit Irrigation Products Inc.			
Model Number:	HT25			
Description:	BLE Transmitter			Clause 15.247
Antenna Conducted Measurement Set Up