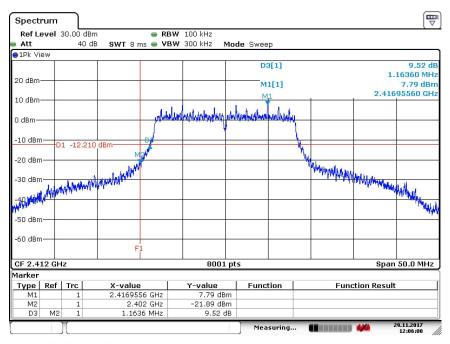


# Band Edge Measurements

		' '			Barra Lago Micasar cirrorits			
DNB Job Number:	88022			Date:		29 Nov 2017	Conformance	
Customer:	Orbit Irriga	tion Pro		Standard				
Model Number:	BH1			FCC Part 15				
Description:	WiFi Trans	mitter					Clause	
	802.11g						15.247(a,2,d)	
Ambient Tempe	erature		Relative Hur	midity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed within	the requireme	nts of th	e applicable sta	andard	[X] Ye	es [] No C	CL Payne	
Conduc	ted Band Edge	Measu	rement		Freq			
Limit	Lower (MI	Hz) Upper (MHz)			Delta (MHz)		Pass/Fail	
2402	2403.1636	00			1.164		Pass	

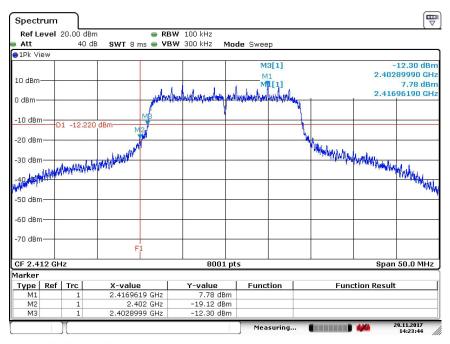


Date: 29.NOV.2017 12:06:00



# Band Edge Measurements

		, ,			Barra Eago Micasar cirricints			
DNB Job Number:	88022			Date:		29 Nov 2017	Conformance	
Customer:	Orbit Irriga	tion Pro		Standard				
Model Number:	BH1			FCC Part 15				
Description:	WiFi Trans	mitter					Clause	
	802.11n						15.247(a,2,d)	
Ambient Tempe	erature		Relative Hur	midity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed within	the requireme	nts of th	e applicable sta	andard	[X] Ye	es [] No C	CL Payne	
Conduc	ted Band Edge	d Band Edge Measurement					5 (5 !)	
Limit	Lower (MI	Hz) Upper (MHz)			Delta (MHz)		Pass/Fail	
2402	2402.8999	00				0.900	Pass	

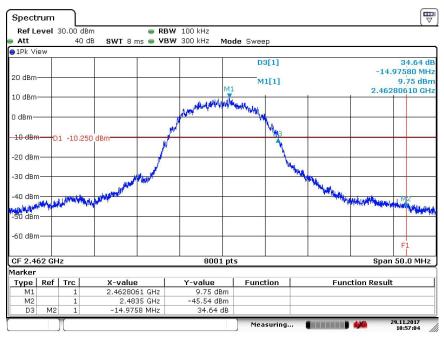


Date: 29.NOV.2017 14:23:45



# Band Edge Measurements

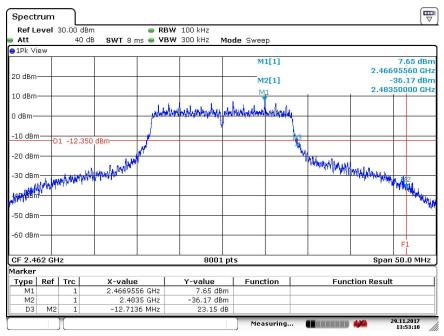
				Barra Eago misasar smisins				
DNB Job Number:	88022			Date:		29 Nov 2017	Conformance	
Customer:	Orbit Irriga	tion Pro		Standard				
Model Number:	BH1			FCC Part 15				
Description:	WiFi Trans	mitter	Clause					
	802.11b			15.247(a,2,d)				
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			1	02.70 kPa	
EUT performed within	n the requireme	nts of th	ne applicable sta	andard	[X] Ye	es []No C	L Payne	
Conduc	cted Band Edge	Measu	Freq	D (5.11				
Limit	Lower (MI	Hz) Upper (MHz)			Delta (MHz)		Pass/Fail	
2483.5			2468.5242	200	14.976		Pass	





# Band Edge Measurements

				Barra Eage Wiedear emierite				
DNB Job Number:	88022			Date:		29 Nov 2017	Conformance	
Customer:	Orbit Irriga	tion Pro		Standard				
Model Number:	BH1			FCC Part 15				
Description:	WiFi Trans	mitter	Clause					
	802.11g			15.247(a,2,d)				
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			1	02.70 kPa	
EUT performed within	n the requireme	nts of th	ne applicable sta	andard	[X] Ye	es []No C	L Payne	
Condu	cted Band Edge	d Band Edge Measurement Freq					5 (5.11	
Limit	Lower (MI	Hz) Upper (MHz)			— Delta (MHz)		Pass/Fail	
2483.5			2470.7864	100	12.714		Pass	

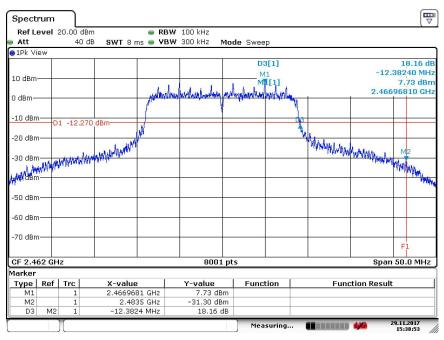


Date: 29.NOV.2017 13:53:10



# Band Edge Measurements

		, , -		Daria Lage Measur efficits					
DNB Job Number:	88022	Date: 29 N				29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Pro	ducts Inc.				Standard		
Model Number:	BH1		FCC Part 15						
Description:	WiFi Trans	mitter					Clause		
	802.11n			15.247(a,2,d)					
Ambient Tempe	erature		Relative Hur	nidity		Baror	metric Pressure		
25 °C			33 %			1	02.70 kPa		
EUT performed within	the requireme	nts of th	ne applicable sta	andard	[X] Ye	es []No C	L Payne		
Conduc	ted Band Edge	ge Measurement Freq					D /F . ! !		
Limit	Lower (MI	Hz) Upper (MHz)			— Delta (MHz)		Pass/Fail		
2483.5			2471.1176	500	12.382		Pass		



Date: 29.NOV.2017 15:38:53



## **Conducted Spurious**

DNB Job Number:	88022	Conformance								
Customer:	Orbit Irriga	tion Products Inc.		Standard						
Model Number:	BH1	FCC Part 1								
Description:	WiFi Trans	mitter	Clause 15.247(a,2,d)							
	Test Proced	Test Procedure								
Ambient Temper	ature	Relative Hur	midity	Baron	netric Pressure					
25 °C	02.70 kPa									
EUT performed within the requirements of the applicable standard [X] Yes [] No Les Payne										

Test Procedure: ANSI C63.10-2013

15.247 (a,2,d) Spurious RF Conducted Emissions

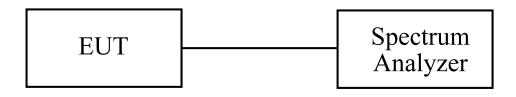
Use the following spectrum analyzer settings:

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 10<sup>th</sup> 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.

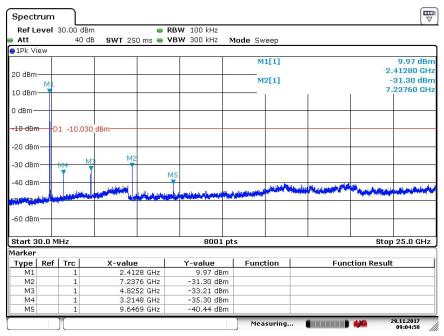
Test Set Up: Same as 15.247 (a,2) 6dB Emission Bandwidth





## **Conducted Spurious**

		,		Conducted Sparious				
DNB Job Number:	88022	88022 Date: 29 Nov 201					Conformance Standard	
Customer:	Orbit Irrigation	Orbit Irrigation Products Inc.						
Model Number:	BH1	BH1						
Description:	WiFi Transm	ViFi Transmitter						
	802.11b			15.247(a,2,d)				
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed withi	n the requiremen	ne requirements of the applicable standard [X] Yes [] No CL						
Channel	Peak Output Po	Power Reading (dBm)			-20dBc (dBm)		Pass/Fall	
Low	13.74 dBm	m 9.97 -10.03					Pass	

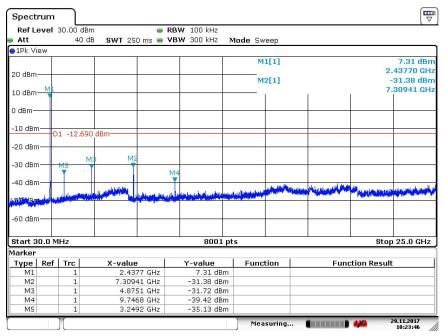


Date: 29.NOV.2017 09:04:58



# **Conducted Spurious**

DNB Job Number:	88022	88022				29 Nov 2017	Conformance Standard	
Customer:	Orbit Irriga	Orbit Irrigation Products Inc.						
Model Number:	BH1		FCC Part 15					
Description:	WiFi Trans	mitter					Clause	
	802.11b		15.247(a,2,d)					
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed within	n the requireme	he requirements of the applicable standard [X] Yes [] No Cl						
Channel	Peak Output I	Power	Reading (d	Bm)	n) -20dBc (dBm)		Pass/Fall	
Middle	13.87 dB	m	7.31		-12.69		Pass	

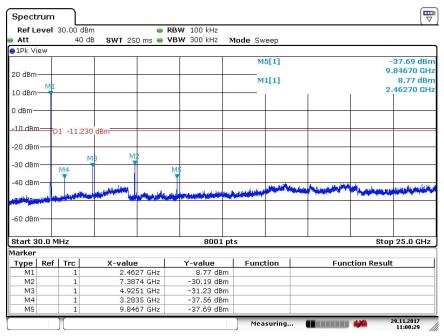


Date: 29.NOV.2017 10:23:46



# **Conducted Spurious**

					00	madotod o	p 4	
DNB Job Number:	88022	88022				29 Nov 2017	Conformance Standard	
Customer:	Orbit Irrigat	Orbit Irrigation Products Inc.						
Model Number:	BH1	BH1						
Description:	WiFi Transn	nitter					Clause	
	802.11b			15.247(a,2,d)				
Ambient Tempe	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed within	the requiremer	ne requirements of the applicable standard [X] Yes [] No CL						
Channel	Peak Output P	ower	Reading (d	Bm)	-20dBc (dBm)		Pass/Fall	
High	14.20 dBn	n	8.77		-11.23		Pass	

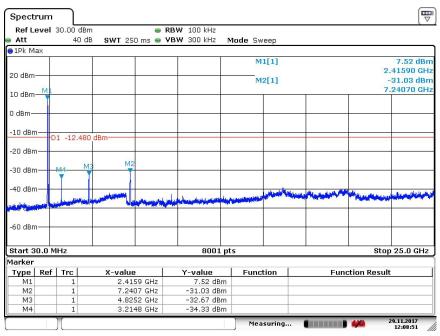


Date: 29.NOV.2017 11:00:29



## **Conducted Spurious**

	(	17.07 (100) 000 1100				Conducted Spanious			
DNB Job Number:	88022	88022 Date: 29 Nov 2017							
Customer:	Orbit Irrigat	Orbit Irrigation Products Inc.							
Model Number:	BH1						FCC Part 15		
Description:	WiFi Transn	WiFi Transmitter							
	802.11g		15.247(a,2,d)						
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure		
25 °C			33 %			10	02.70 kPa		
EUT performed within	n the requiremer	ne requirements of the applicable standard [X] Yes [] No CL							
Channel	Peak Output P	ower	Reading (d	Bm)	-20dBc (dBm)		Pass/Fall		
Low	10.57 dBn	n	7.52		-12.48		Pass		

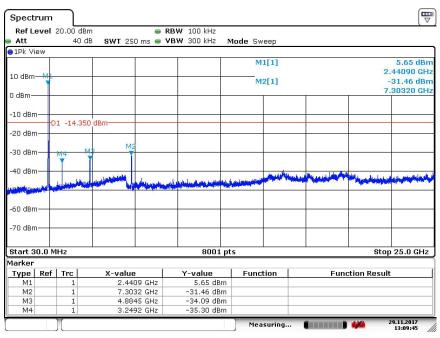


Date: 29.NOV.2017 12:08:51



## **Conducted Spurious**

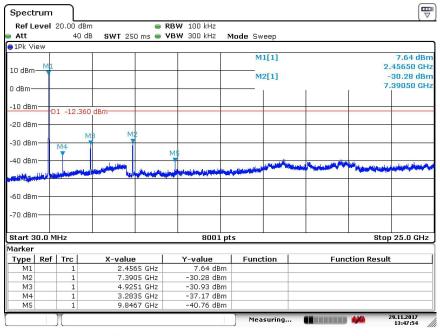
		( )		Conducted Sparious				
DNB Job Number:	88022	88022 Date: 29 Nov 2017				29 Nov 2017	Conformance Standard	
Customer:	Orbit Irriga	Orbit Irrigation Products Inc.						
Model Number:	BH1	BH1						
Description:	WiFi Trans	WiFi Transmitter						
	802.11g		15.247(a,2,d)					
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed within	n the requireme	ne requirements of the applicable standard [X] Yes [] No CL						
Channel	Peak Output I	Power Reading (dBm)			-20dBc (dBm)		Pass/Fall	
Middle	10.51 dB	m 5.65 -14.35					Pass	





## **Conducted Spurious**

	(	1711 (100) 000 1100			Conducted Spanious				
DNB Job Number:	88022		Conformance Standard						
Customer:	Orbit Irrigat	Orbit Irrigation Products Inc.							
Model Number:	BH1						FCC Part 15		
Description:	WiFi Transr	WiFi Transmitter							
	802.11g		15.247(a,2,d)						
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure		
25 °C			33 %			10	02.70 kPa		
EUT performed within	n the requiremer	ne requirements of the applicable standard [X] Yes [] No CL							
Channel	Peak Output P	Power	Reading (d	Bm)	-20dBc (dBm)		Pass/Fall		
High	10.63 dBr	n	7.64		-12.36		Pass		

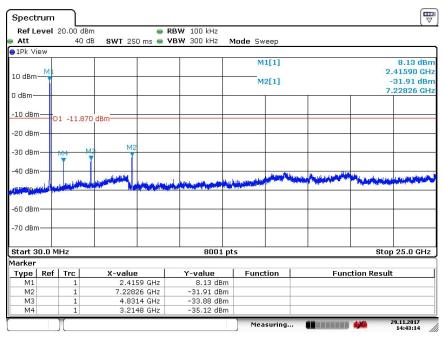


Date: 29.NOV.2017 13:47:53



# **Conducted Spurious**

	, ,			Gerradoted opar roas				
DNB Job Number:	88022	88022				29 Nov 2017	Conformance	
Customer:	Orbit Irriga	tion Pro	ducts Inc.				Standard	
Model Number:	BH1						FCC Part 15	
Description:	WiFi Trans	mitter					Clause	
	802.11n	302.11n					15.247(a,2,d)	
Ambient Tempe	erature		Relative Hur	nidity		Baron	Barometric Pressure	
25 °C			33 %			102.70 kPa		
EUT performed within the requirements of the applicable standard [X] Yes [] No CL					_ Payne			
Channel	Peak Output F	Output Power Reading (dl			Bm) -20dBc (dBm)		Pass/Fall	
Low	9.24 dBn	n	8.13			-11.87	Pass	

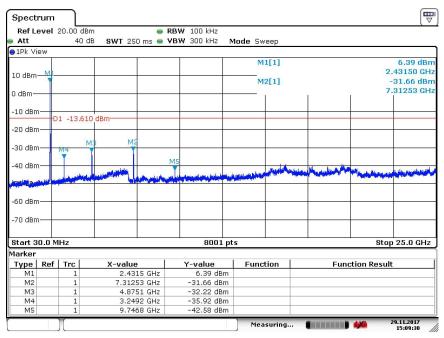


Date: 29.NOV.2017 14:43:15



## **Conducted Spurious**

					00	illudeted 5	parious	
DNB Job Number:	88022	88022 Date: 29 Nov 2017				29 Nov 2017	Conformance	
Customer:	Orbit Irrigation	on Pro	ducts Inc.				Standard	
Model Number:	BH1						FCC Part 15	
Description:	WiFi Transm	nitter					Clause	
	802.11n						15.247(a,2,d)	
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed within the requirements of the applicable standard [X] Yes [] No CL					_ Payne			
Channel	Peak Output Po	t Power Reading (dBm)			-20dBc (dBm)		Pass/Fall	
Middle	9.35 dBm		6.39			-13.61	Pass	

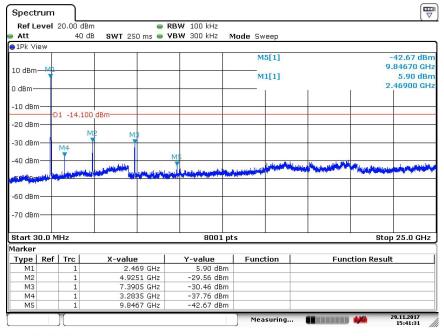


Date: 29.NOV.2017 15:09:30



## **Conducted Spurious**

		17.01 (100) 000 1100			Conducted Spanious			
DNB Job Number:	88022	88022 Date: 29 Nov 2017					Conformance	
Customer:	Orbit Irrigat	ion Pro	ducts Inc.				Standard	
Model Number:	BH1						FCC Part 15	
Description:	WiFi Transr	nitter					Clause	
	802.11n	802.11n					15.247(a,2,d)	
Ambient Temp	erature		Relative Hur	nidity		Baron	netric Pressure	
25 °C			33 %			10	02.70 kPa	
EUT performed within the requirements of the applicable standard [X] Yes [] No CL					_ Payne			
Channel	Peak Output P	Output Power Reading (dB			-20dBc (dBm)		Pass/Fall	
High	9.92 dBm	1	5.90			-14.1	Pass	



Date: 29.NOV.2017 15:41:31

15.247(a,2,e): Power spectral density(PSD).

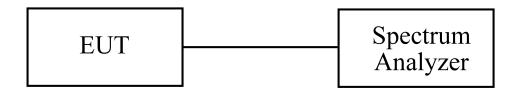
Test Procedure: ANSI C63.10-2013

Clause 11.10.2 Method PKPSD (peak PSD)

The following procedure shall be used if the maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:

- a) Set analyzer center frequency to DTS channel center frequency
- b) Set the span to 1.5 times the DTS bandwidth
- Set the RBW to 3 kHz  $\leq$  RBW  $\leq$  100 kHz
- d) Set the VBW  $\geq$  [ 3 x RBW ]
- e) Detector = peak
- f) Sweep time = auto couple
- g) Trace mode = max hold
- h) Allow trace to fully stabilize
- i) Use the peak marker function to determine the maximum amplitude level within the RBW
- j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz ) and repeat
- k) Submit plots

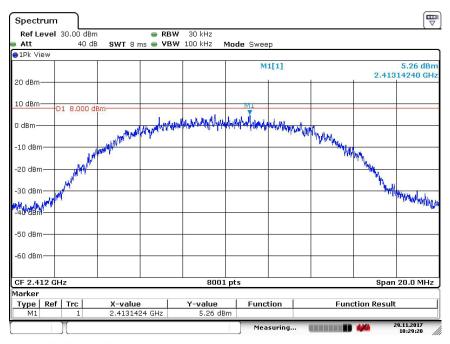
Test Set Up: Same as 15.247 (a,2) 6dB Emission Bandwidth





# **Power Spectral Density**

				· · · · · · · · · · · · · · · · · · ·			
DNB Job Number	88022		Date:	29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Products Inc.			Standard		
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11b	802.11b					
Environmental Conditions							
Ambient T	emperature	Relative I	Humidity	Barometr	netric Pressure		
25	°C	33	%	102.	102.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit Delta (dBm) (dBm)			Pass/Fail		
Low	2412	5.26	8.0	-2.74	Pass		

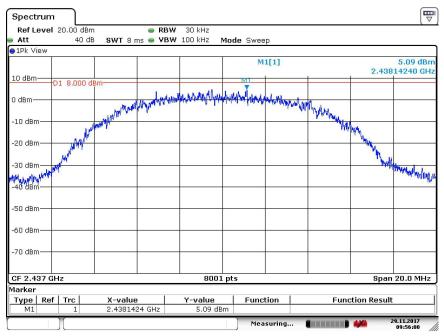


Date: 29.NOV.2017 10:29:20



# Power Spectral Density

		i onoi opooni					
DNB Job Number	: 88022		Date:	29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Products Inc.			Standard		
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11b	802.11b					
	Environmental Conditions						
Ambient T	emperature	Relative I	Humidity	Barometr	netric Pressure		
25	°C	33	%	102.7	102.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit Delta (dBm) (dBm)			Pass/Fail		
Middle	2437	5.09	8.0	-2.91	Pass		

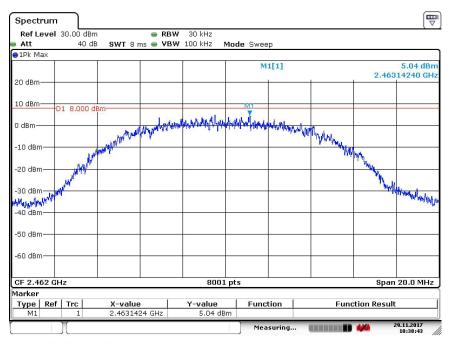


Date: 29.NOV.2017 09:56:00



# Power Spectral Density

			. o. op oot. a. <u>-</u>	opesti ai Berierty			
DNB Job Number	88022		Date:	29 Nov 2017	Conformance Standard		
Customer:	Orbit Irriga	tion Products Inc.					
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11b	802.11b					
	Environmental Conditions						
Ambient T	emperature	Relative I	Humidity	Barometr	netric Pressure		
25	°C	33	%	102.7	102.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit Delta (dBm) (dBm) (dBm)			Pass/Fail		
High	2462	5.04	8.0	-2.96	Pass		

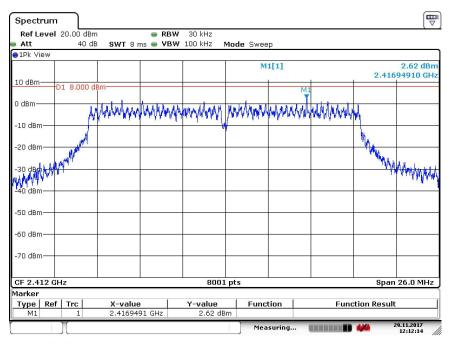


Date: 29.NOV.2017 10:38:43



# **Power Spectral Density**

DNB Job Number	88022		Date:	29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Products Inc.			Standard		
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11g	802.11g					
	Environmental Conditions						
Ambient T	emperature	Relative I	Humidity	Barometri	netric Pressure		
25	°C	33	%	102.7	02.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit (dBm)		Delta (dBm)	Pass/Fail		
Low	2412	2.62	8.0	-5.38	Pass		

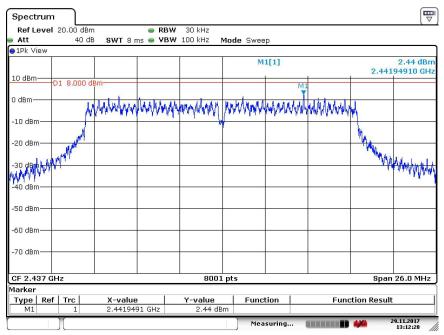


Date: 29.NOV.2017 12:12:14



# Power Spectral Density

DNB Job Number	: 88022		Date:	29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Products Inc.			Standard		
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11g	302.11g					
	Environmental Conditions						
Ambient T	emperature	Relative I	Humidity	Barometr	netric Pressure		
25	°C	33	%	102.7	102.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit Delta (dBm) (dBm)			Pass/Fail		
Middle	2437	2.44	8.0	-5.56	Pass		

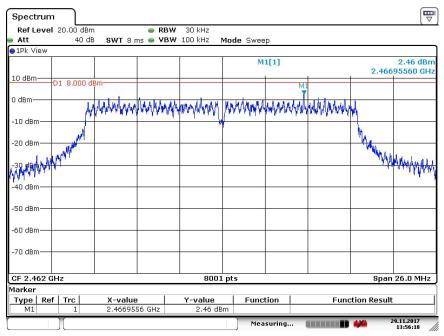


Date: 29.NOV.2017 13:12:28



# Power Spectral Density

			. o. opodi. a. <u>-</u>	r oposti ai Boileity			
DNB Job Number	: 88022		Date:	29 Nov 2017	Conformance Standard		
Customer:	Orbit Irriga	tion Products Inc.					
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11g	B02.11g					
	Environmental Conditions						
Ambient T	emperature	Relative I	Humidity	Barometr	netric Pressure		
25	°C	33	%	102.7	102.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit Delta (dBm) (dBm)			Pass/Fail		
High	2462	2.46	8.0	-5.54	Pass		

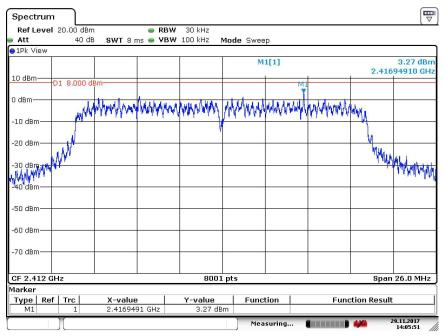


Date: 29.NOV.2017 13:56:18



# **Power Spectral Density**

DNB Job Number	r: 88022		Date:	29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Products Inc.			Standard		
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11n	802.11n					
	Environmental Conditions						
Ambient T	emperature	Relative I	Humidity	Barometri	netric Pressure		
25	°C	33	%	102.7	102.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD (dBm)	Limit (dBm)	Delta (dBm)	Pass/Fail		
Low	2412	3.27	8.0	-4.73	Pass		

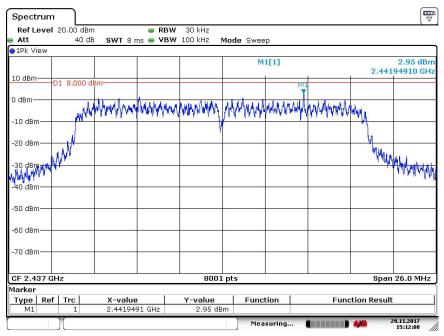


Date: 29.NOV.2017 14:05:51



# **Power Spectral Density**

			- 1	J			
DNB Job Number	: 88022		Date:	29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Products Inc.			Standard		
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11n	802.11n					
Environmental Conditions							
Ambient T	emperature	Relative I	Humidity	Barometr	netric Pressure		
25	°C	33	%	102.	02.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit Delta (dBm) (dBm)			Pass/Fail		
Middle	2437	2.95	8.0	-5.05	Pass		

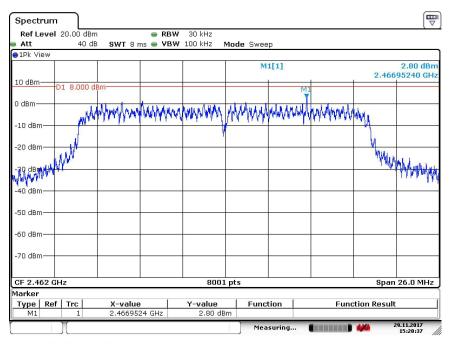


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# **Power Spectral Density**

				· · · · · · · · · · · · · · · · · · ·			
DNB Job Number	r: 88022		Date:	29 Nov 2017	Conformance		
Customer:	Orbit Irriga	tion Products Inc.			Standard		
Model Number:	BH1				FCC Part 15		
Description:	WiFi Trans	mitter			Clause 15.247(d)		
	802.11n	802.11n					
	Environmental Conditions						
Ambient T	emperature	Relative I	Humidity	Barometri	netric Pressure		
25	°C	33	%	102.7	02.70 kPa		
EUT performed w	EUT performed within the requirements of the applicable standard [X] Yes [] No CL Payne						
Channel	Freq MHz	Meas PSD Limit (dBm)		Delta (dBm)	Pass/Fail		
High	2462	2.8	8.0	-5.2	Pass		



Date: 29.NOV.2017 15:20:37

# 2.1033 (b) (7) Equipment Photographs

Supplied separately for confidentiality

# End of Report UT86022C-002