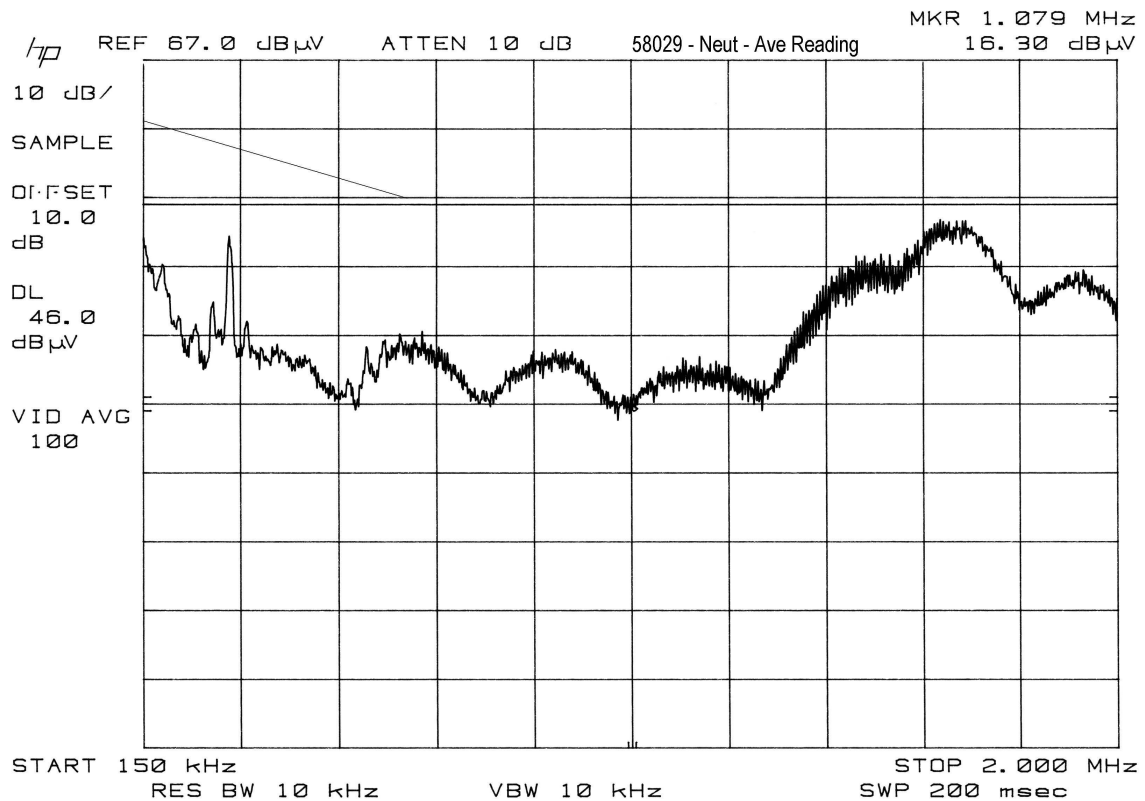




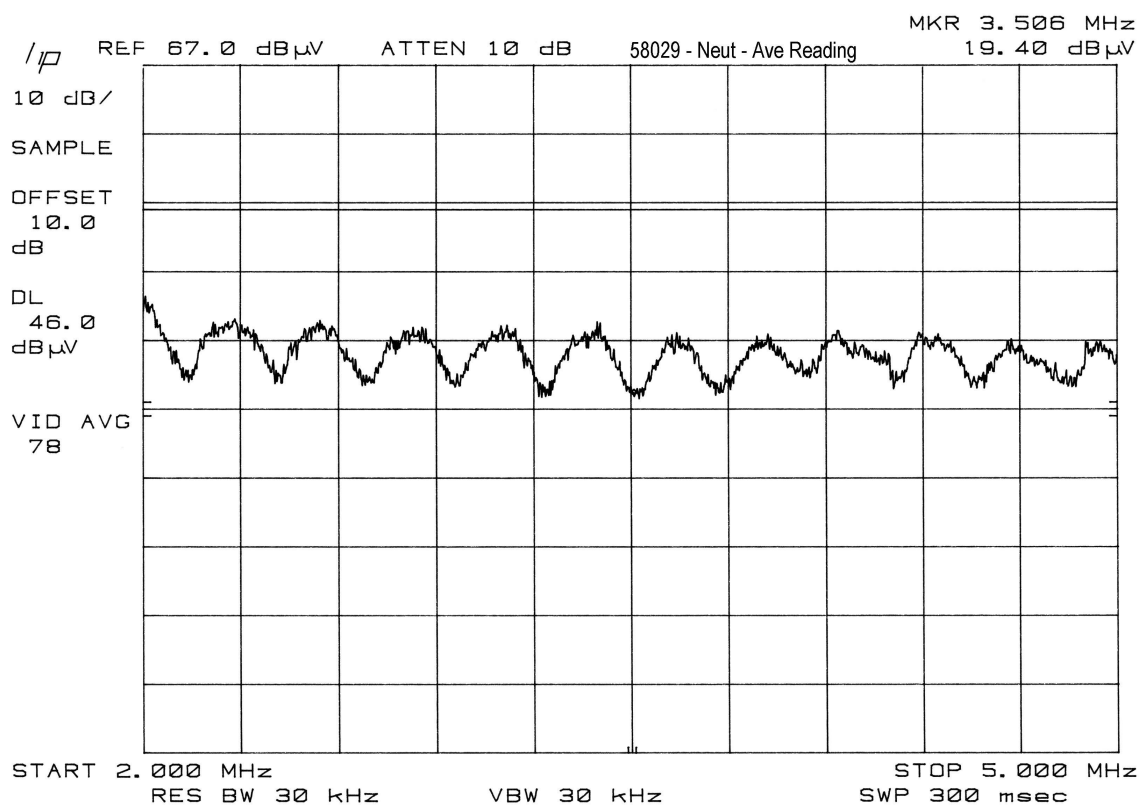
5969 Robinson Avenue
Riverside, CA 92503
(951) 637-2630
FAX (951) 637-2704

Conducted Emissions

DNB Job Number:	58029	Date:	24 Sep 2004	Specification [X] 15.207
Customer:	ConectiSys Corp.			
Model Number:	HNET 5.0 WLAN card	Serial Number:		
Description:	Wireless Power Usage Monitoring System			
	Neutral - Average			



	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Conducted Emissions	
DNB Job Number:	58029	Date:	24 Sep 2004	Specification [X] 15.207
Customer:	ConectiSys Corp.			
Model Number:	HNET 5.0 WLAN card	Serial Number:		
Description:	Wireless Power Usage Monitoring System			
	Neutral - Average			



15.209 Radiated Emissions (General Provisions)

Test Procedure:

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.

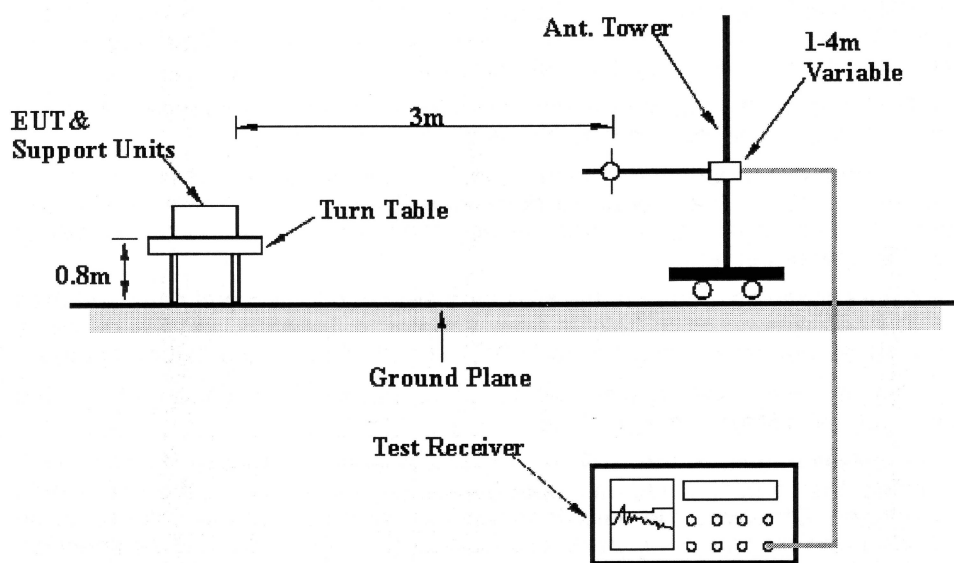
Sufficient precautions shall be taken to ensure that reflections from extraneous objects adjacent to the site do not degrade the measurement results, in particular:

- 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)	$20 * (\text{Log}_{10}(2400/F(\text{kHz})))$	300
0.490 - 1.705	24000/F(kHz)	$20 * (\text{Log}_{10}(24000/F(\text{kHz})))$	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

	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704	Radiated Emissions (Spurious)	
DNB Job Number:	58029	Date: 8 Sep 2004	Specification [X] 15.209
Customer:	ConectiSys Corp.		
Model Number:	HNET 5.0 WLAN card	Serial Number:	
Description:	Wireless Power Usage Monitoring System		
	Test Set Up		



	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Radiated Emissions (Spurious)	
DNB Job Number:	58029	Date: 8 Sep 2004		Specification [X] 15.209
Customer:	ConectiSys Corp.			
Model Number:	HNET 5.0 module	Serial Number:		
Description:	Wireless Power Usage Monitoring System			
Test Set Up - Bicon Antenna				



		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Radiated Emissions (Spurious)	
DNB Job Number: 58029		Date: 8 Sep 2004			
Customer: ConectiSys Corp.					
Model Number: HNET 5.0 module		Serial Number:			
Description: Wireless Power Usage Monitoring System					
Test Set Up - Log Periodic					



		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Radiated Emissions (General)							
DNB Job Number:		58029		Date:		8 Sep 2004		Specification [X] 15.209			
Customer:		ConectiSys Corp.									
Model Number:		HNET 5.0 module		Serial Number:							
Description:		Wireless Power Usage Monitoring System									
EUT is in conformance with FCC 15.209				X	YES		NO	Signed	Tom Elders		
FREQ (Mhz)	Meter	Correction Factors			dBuV/m			Positions			
		Ant	Cbl	Amp	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt
32.314	26.3	12.2	0.6	-24.4	14.7	30	-15.3	PK	158	H	3.05
119.814	23.1	11.1	1.5	-24.2	11.5	30	-18.5	PK	184	H	2.79
221.314	20.3	14.7	2.2	-24.2	13	30	-17	PK	108	H	1.88
227.924	21.5	12.4	2.2	-24.2	11.9	30	-18.1	PK	0	H	1.59
259.748	37.8	12.4	2.4	-24.3	28.3	37	-8.7	PK	97	H	3.81
266.382	29.7	12.5	2.4	-24.4	20.2	37	-16.8	PK	104	H	4.00
269.739	30.1	12.5	2.4	-24.4	20.6	37	-16.4	PK	110	H	4.00
273.068	32.3	12.6	2.4	-24.4	22.9	37	-14.1	PK	110	H	4.00
279.702	37.2	12.8	2.4	-24.4	28	37	-9	PK	101	H	4.00
286.376	33.3	13.2	2.5	-24.4	24.6	37	-12.4	PK	101	H	4.00
293.035	30.4	13.5	2.5	-24.4	22	37	-15	PK	250	H	4.00
345.612	36.2	14.9	2.8	-24.5	29.4	37	-7.6	PK	250	H	4.00
359.635	31.0	15.0	2.9	-24.5	24.4	37	-12.6	PK	271	H	4.00
364.764	37.2	14.9	2.9	-24.5	30.5	37	-6.5	PK	271	H	4.00
32.114	22.3	12.2	0.6	-24.4	10.7	30	-19.3	PK	120	V	1.44
119.314	21.3	11.0	1.5	-24.2	9.6	30	-20.4	PK	120	V	1.44
224.900	21.5	14.8	2.2	-24.2	14.3	30	-15.7	PK	0	V	2.81
229.778	29.6	12.4	2.2	-24.2	20	30	-10	PK	156	V	1.57
259.752	33.2	12.4	2.4	-24.3	23.7	37	-13.3	PK	0	V	1.17
262.416	32.2	12.4	2.4	-24.4	22.6	37	-14.4	PK	10	V	1.00

15.247 (a,1) Channel Separation

Test Procedure:

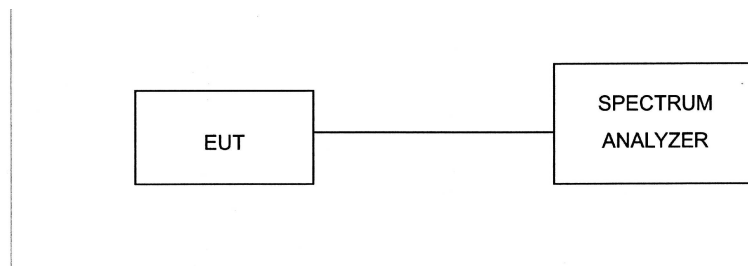
The transmitter output was connected to the spectrum analyzer. The bandwidth of the single hopping channel frequency was measured with a 100kHz RBW and a 100kHz VBW.

Requirement: Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

EUT operating conditions:

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

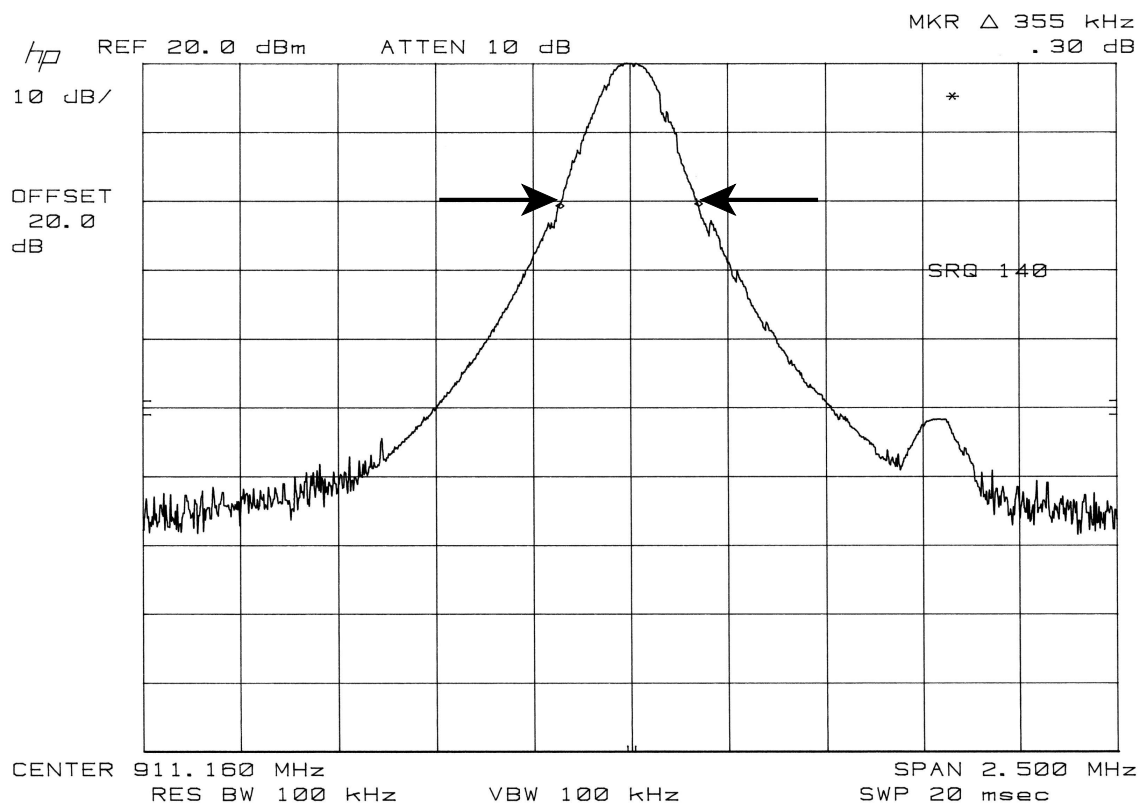
Test Set Up: (Note following set up was used for all antenna conducted measurements)



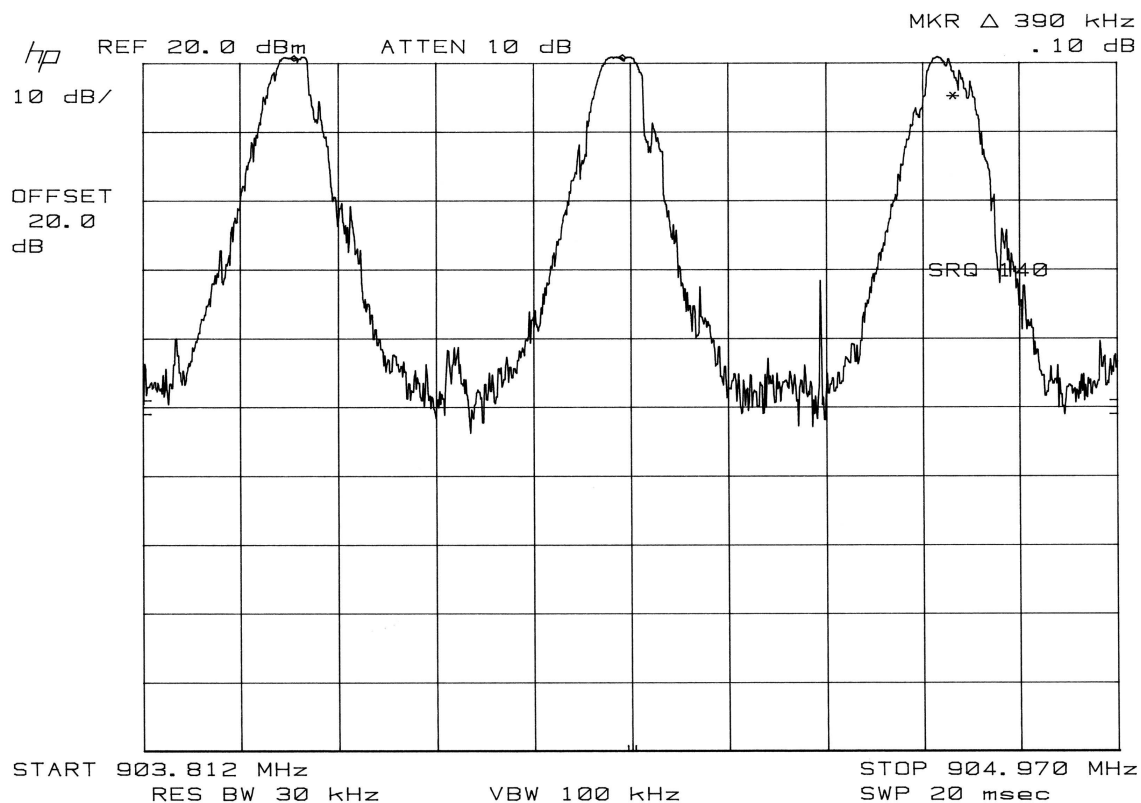
	5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Measurement Test Set Up	
DNB Job Number:	58029	Date:	25 Sep 2004	Conformance Standard FCC Part 15
Customer:	ConectiSys Corp. Inc			
Model Number:	HNET 5.0	Serial Number:	Proto	
Description:	Wireless Power Usage Monitoring System			Clause 15.247
Antenna Conducted Measurement Set Up				



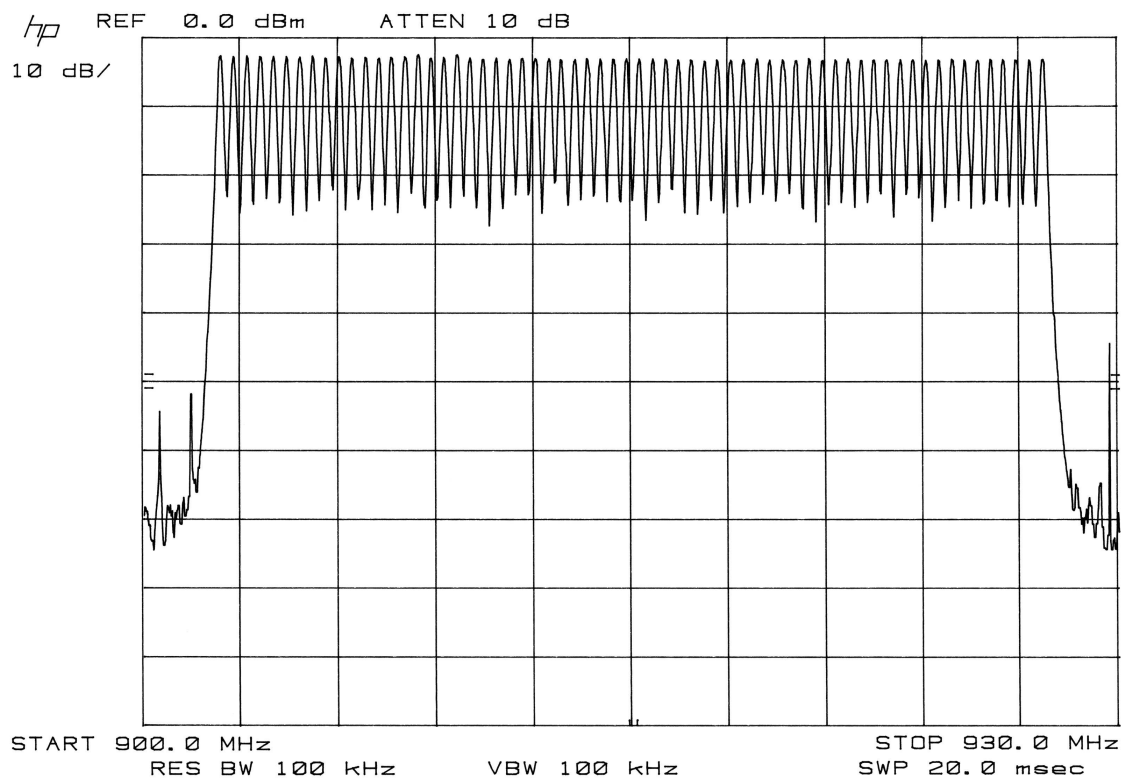
		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		20 dB Single Channel Bandwidth	
DNB Job Number:	58029	Date:	25 Sep 2004	Conformance Standard FCC Part 15 Clause 15.247(a,1)	
Customer:	ConectiSys Corp. Inc				
Model Number:	HNET 5.0	Serial Number:	Proto		
Description:	Wireless Power Usage Monitoring System				
Environmental Conditions					
Ambient Temperature		Relative Humidity		Barometric Pressure	
23 °C		38 %		98.8 kPa	
EUT performed within the requirements of the applicable standard ☒ Yes ☐ No <i>Les Payne</i>					
Chl Freq (MHz)	20dB BW (kHz)	Limit	Pass/Fail		
911.160	355 kHz	500 kHz	Pass		



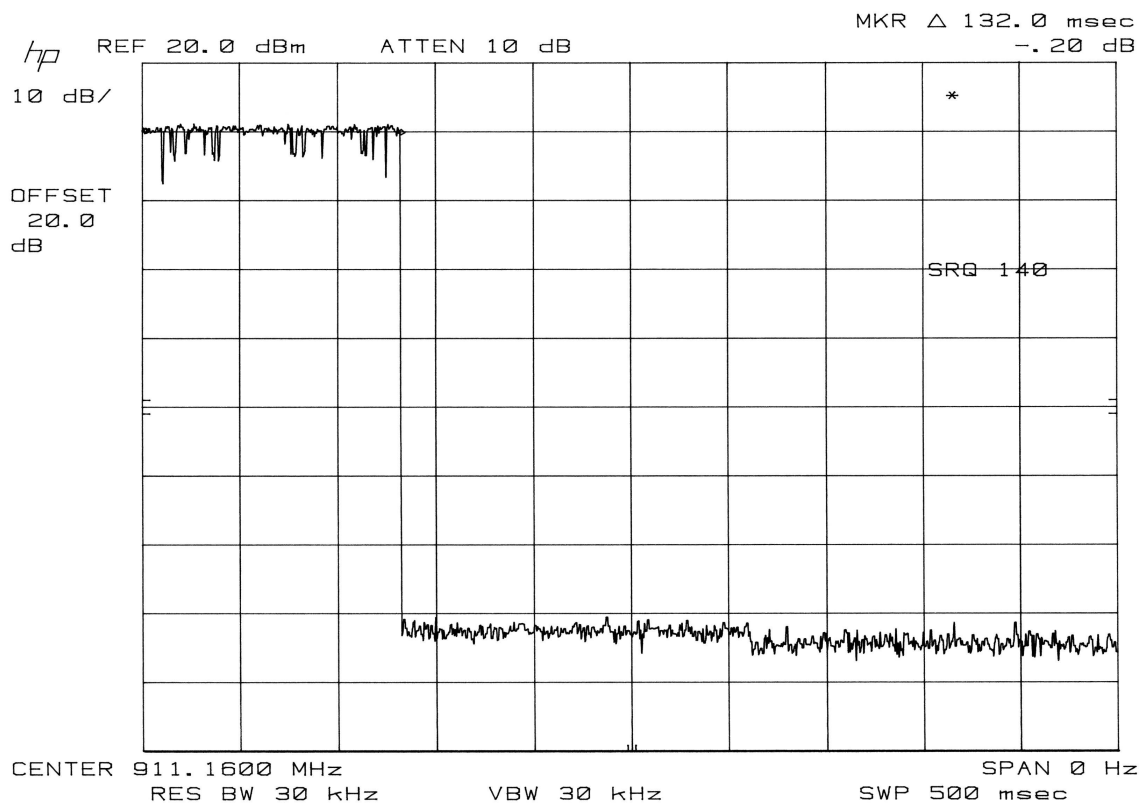
		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Channel Separation	
DNB Job Number:	58029	Date:	25 Sep 2004	Conformance Standard FCC Part 15 Clause 15.247(a,1)	
Customer:	ConectiSys Corp. Inc				
Model Number:	HNET 5.0	Serial Number:	Proto		
Description:	Wireless Power Usage Monitoring System				
Environmental Conditions					
Ambient Temperature		Relative Humidity		Barometric Pressure	
23 °C		38 %		98.8 kPa	
EUT performed within the requirements of the applicable standard ☒ Yes ☐ No <i>Les Payne</i>					
Hopping Channel 1	Hopping Channel 2	Delta	Limit	Pass/Fail	
904.001	904.391	390 kHz	355 kHz	Pass	



		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Hopping Channels	
DNB Job Number:		58029		Date: 25 Sep 2004	
Customer:		ConectiSys Corp. Inc			
Model Number:		HNET 5.0		Serial Number: Proto	
Description:		Wireless Power Usage Monitoring System			
Environmental Conditions					
Ambient Temperature		Relative Humidity		Barometric Pressure	
23 °C		38 %		98.8 kPa	
EUT performed within the requirements of the applicable standard ☒ Yes ☐ No <i>Les Payne</i>					
Center Frequency	Frequency Span	Hopping Channels	Min Limit	Pass/Fail	
915.000 MHz	30.000 MHz	64	25	Pass	



		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Max Time on Channel Freq	
DNB Job Number:	58029	Date:	25 Sep 2004	Conformance Standard FCC Part 15	
Customer:	ConectiSys Corp. Inc				
Model Number:	HNET 5.0	Serial Number:	Proto		
Description:	Wireless Power Usage Monitoring System			Clause 15.247(a,1,i)	
Environmental Conditions					
Ambient Temperature		Relative Humidity		Barometric Pressure	
23 °C		38 %		98.8 kPa	
EUT performed within the requirements of the applicable standard ☒ Yes ☐ No <i>Les Payne</i>					
Center Freq Chl	On Duration	Time to Next Pulse	Allowed On Time	Pass/Fail	
911.160 MHz	0.132 Sec	15.0 Sec	0.4 Sec / 10 Sec	Pass	



15.247 (b,2) Maximum Peak Output Power (Conducted)

Test Procedure:

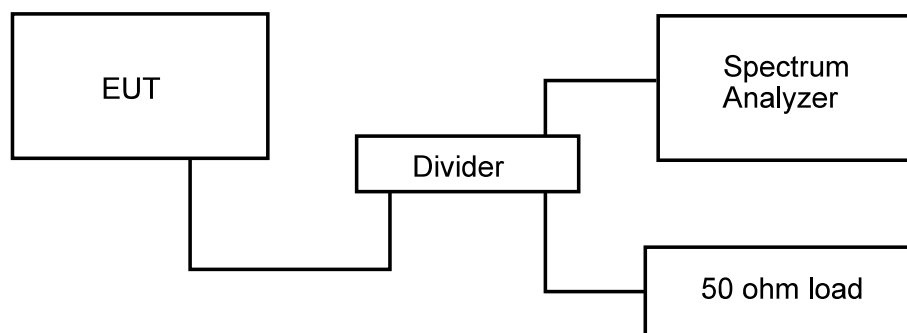
The transmitter output was connected to a spectrum analyzer.

Requirement: The maximum peak output power shall not exceed 1W (30dBm)

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:



		5969 Robinson Avenue Riverside, CA 92503 (951) 637-2630 FAX (951) 637-2704		Peak Output Power (Cond)			
DNB Job Number:		58029		Date: 25 Sep 2004			
Customer:		ConectiSys Corp. Inc					
Model Number:		HNET 5.0		Serial Number: Proto			
Description:		Wireless Power Usage Monitoring System					
		Test Set Up					
Environmental Conditions							
Ambient Temperature		Relative Humidity		Barometric Pressure			
23 °C		38 %		98.8 kPa			
EUT performed within the requirements of the applicable standard ☒ Yes ☐ No <i>Les Payne</i>							
Freq MHz	Meas Peak Pwr (dBm)	Limit (dBm)	Delta (dBm)	Meas Peak Pwr (W)	Limit (W)	Delta (W)	Pass/Fail
911.160	20.0	30.0	-10.0	0.100	1	-0.900	Pass

