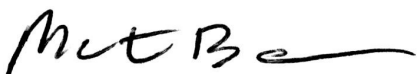
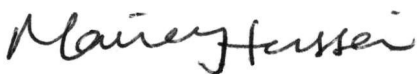




Test Report

CURTIS-STRAUS Curtis-Straus LLC, a wholly owned subsidiary of BV CPS

Report No	EK0102-1
Client	StreetSmart Technology, LLC
Address	245 Town Park Drive, Suite 525 Kennesaw, GA 30144
Phone	404-55-142
Items tested	900MHz PMI System
FCC ID	YAC-PMI900
IC ID	8830A-PMI900
FRN	0019468180
Equipment Type	DSS
Equipment Code	Part 15, Frequency Hopping Spread Spectrum Transmitter
FCC/IC Rule Parts	47 CFR 15.247, RSS 210 issue 7 and RSS GEN issue 2
Test Dates	February 8-10, 2010
Results	As detailed within this report
Prepared by	 Matthew Burman – Test Engineer
Authorized by	 Mairaj Hussain – EMC Supervisor
Issue Date	<u>May 7, 2010</u>
Conditions of Issue	This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 27 of this report.

Curtis-Straus LLC is accredited to ISO/IEC 17025 by A2LA for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation. See our scope of accreditation at the end of this test report. Any opinions or interpretations expressed in this report are outside the scope of our A2LA accreditation as A2LA only accredits testing.

Testing Cert. No. 1627-01

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Form Final Report REV 7-20-07 (DW)

Summary

This test report supports an application for certification of a transmitter operating pursuant to 47 CFR 15.247 and RSS-210. The product is the 900MHz PMI System. It is a transmitter that operates in the range 905-925MHz.

We found that the product met the above requirements with modification (see Modifications Required for Compliance Section). Josh Schadel from StreetSmart Technology was present during the testing. The test sample was received in good condition.

Test Methodology

Radiated emission testing was performed according to the procedures specified in ANSI C63.4 (2003) and RSS-GEN. Radiated Emissions were maximized by rotating the device around three orthogonal axes as well as varying the test antenna's height and polarity. The device antenna cannot be maximized separately.

Conducted emission at the antenna port was performed, as required by rule section.

The transmitter being tested is a modular device that will be placed inside parking meter housings. Depending upon the amount of transmitting parking meters in a location, the client will configure the transmission to either be in the range of 902-915Mhz, or 915-928MHz.

The EUT is battery operated, and testing was performed with fresh batteries.

The following bandwidths were used during radiated spurious and line conducted emissions.

Frequency	RBW	VBW
0.15-30MHz	9kHz	30kHz
30-1000MHz	120kHz	1MHz
1-25GHz	1MHz	3MHz

Release Control Record

Issue No. Reason for change
1 Original Release

Date Issued
June 28, 2010

Product Tested - Configuration Documentation

EUT Configuration										
Work Order: K0102 Company: StreetSmart Technology, LLC. Company Address: 245 Town Park Drive Suite 525 Kennesaw, GA 30144 Contact: Timothy Pierson Person Present: Josh Schnadel										
MN			PN			SN				
EUT: 840-0022-01			---			CASE00339883				
EUT Description: 900MHz PMI System EUT Tx Frequency: 905-925MHz										
Support Equipment:			MN			SN				
Gateway			840-0015-01			Sample 1				
Dell Monitor			E550			MY-07753T-46632-035-2022				
Dell PC			DHM			3FHR011				
Microsoft Mouse			98952			00133885				
Dell Keyboard			SK-8100			MY-09C487-38843-19K-2884				
EUT Ports:										
Port Label	Port Type	No. of ports	No. Populated	Cable Type	Shielded	Ferrites	Length	Max Length	In/Out NEBS Type	Unpopulated Reason
sensor cable	sensor	1	1	24awg	no	none	1m	30ft	outdoor	
Software / Operating Mode Description:										
The product is a system that is installed within a parking meter housing. Parking transaction information is transmitted to a gateway device over a radio link. The radio is in sleep mode unless a data packet needs to be sent. For testing purposes, the information is constantly transmitting, either on discrete frequencies or performing FHSS.										

Statement of Conformity

The 900MHz PMI System has been found to conform to the following parts of 47 CFR and RSS 210 as detailed below:

RSS-GEN	RSS 210	Part 15	Comments
5.3		15.15(b)	There are no controls accessible to the user that varies the output power.
5.2		15.19	The label is shown in the label exhibit.
7.1.5		15.21	Information to the user is shown in the instruction manual exhibit.
		15.27	No special accessories are required for compliance.
4.1		15.31	The EUT was tested in accordance with the measurement standards in this section.
		15.33	Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.
		15.35	The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
7.1.4		15.203	The antenna for this device is hardwired to the PCB.
	2.6	15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209.
	Annex 8	15.247	The unit complies with the requirements of 15.247
4.6.1			Occupied Bandwidth measurements were made.

Modifications Required for Compliance

To comply with the requirements of 15.247(d), that intentional radiated emissions must meet the general emissions limits of 15.209 within the restricted bands in 15.205 the following modifications must be implemented:

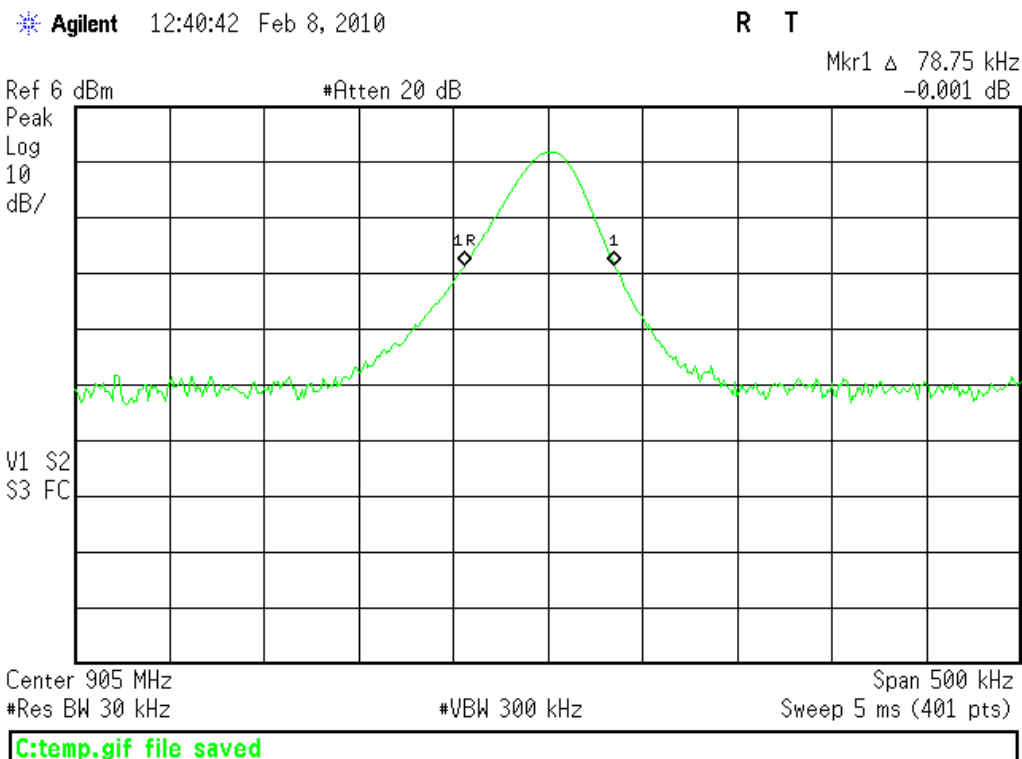
To comply, components L7 was replaced from 10nH to 330 ohm, L10 and L12 were switched from 22uH to 10uH on the power filter to RF amplifier.

Test Results**Bandwidth****LIMIT**

The 20dB bandwidth of the hopping channel is less than 250kHz, the system shall use at least 50 hopping frequencies. [15.247(a) (1) (i)]

MEASUREMENTS / RESULTS

Bandwidth												
Date: 08-Feb-10			Company: Street Smart						Work Order: K0102			
Engineer: Matthew Burman			EUT Desc: Parking Meter						EUT Operating Voltage/Frequency: Battery Powered			
Temp: 16.6°C			Humidity: 25%			Pressure: 1010mBar						
Frequency Range: 902-928MHz						Measurement Distance: Conductive						
Notes: RBW = 30kHz			RBW > 0.1% of 20dB bandwidth			The maximum allowed 20dB bandwidth of the hopping channel is 500kHz						
VBW = 100kHz			if the 20dB bandwidth of the hopping channel is less than 250kHz, the system shall use at least 50 hopping frequencies.									
	Frequency (MHz)	Reading (kHz)					FCC Section 15.247 (a)(i)			Limit (kHz)	Margin (kHz)	Result (Pass/Fail)
	905.0	78.8	---	---	---	---	---	---	---	250.0	-171.3	Pass
	915.0	77.5	---	---	---	---	---	---	---	250.0	-172.5	Pass
	925.0	80.0	---	---	---	---	---	---	---	250.0	-170.0	Pass
Test Site: CEMI04			Cable 1: EMIR-HIGH-06									
Analyzer: Rental #1			Attenuator: PE7019-20									

PLOT**Low Channel**

Mid Channel

Agilent 12:43:05 Feb 8, 2010

R T

Mkr1 Δ 77.50 kHz
0.593 dB

Ref 6 dBm

#Atten 20 dB

Peak
Log
10
dB/V1 S2
S3 FC

Center 915 MHz

#Res BW 30 kHz

#VBW 300 kHz

Span 500 kHz

Sweep 5 ms (401 pts)

C:\temp.gif file saved

High Channel

Agilent 12:45:04 Feb 8, 2010

R T

Mkr1 Δ 80.00 kHz
0.485 dB

Ref 6 dBm

#Atten 20 dB

Peak
Log
10
dB/V1 S2
S3 FC

Center 925 MHz

#Res BW 30 kHz

#VBW 300 kHz

Span 500 kHz

Sweep 5 ms (401 pts)

C:\temp.gif file saved

Frequency Hopping Requirements

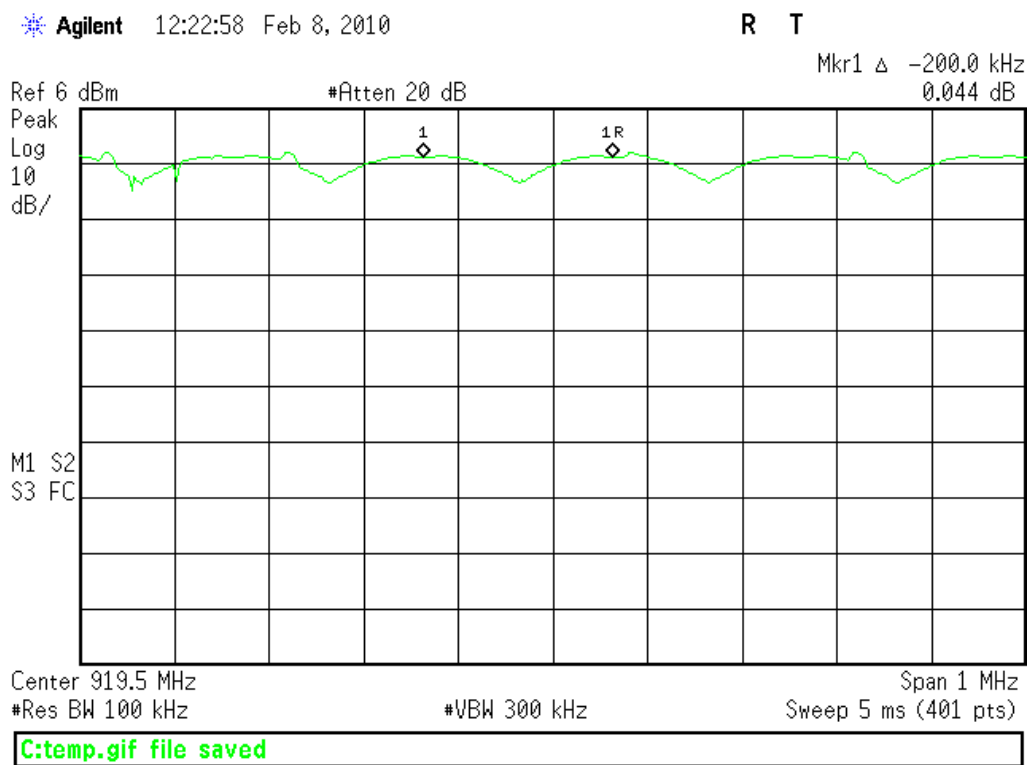
Channel Spacing

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

[15.247 (a) (1)]

Plots

Channel spacing between carrier frequencies of 200kHz > 20dB bandwidth



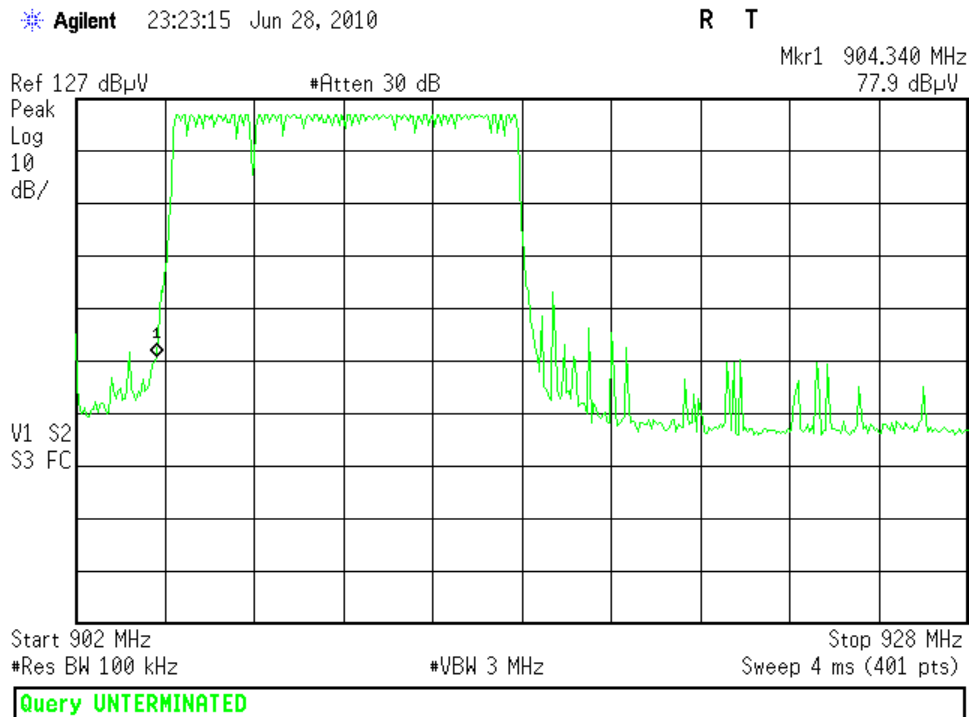
Number of Channels

For frequency hopping systems operating in the 902-928MHz band: if the 20dB bandwidth of the hopping channel is less than 250kHz, the system shall use at least 50 hopping frequencies

[15.247 (a) (1) (i)]

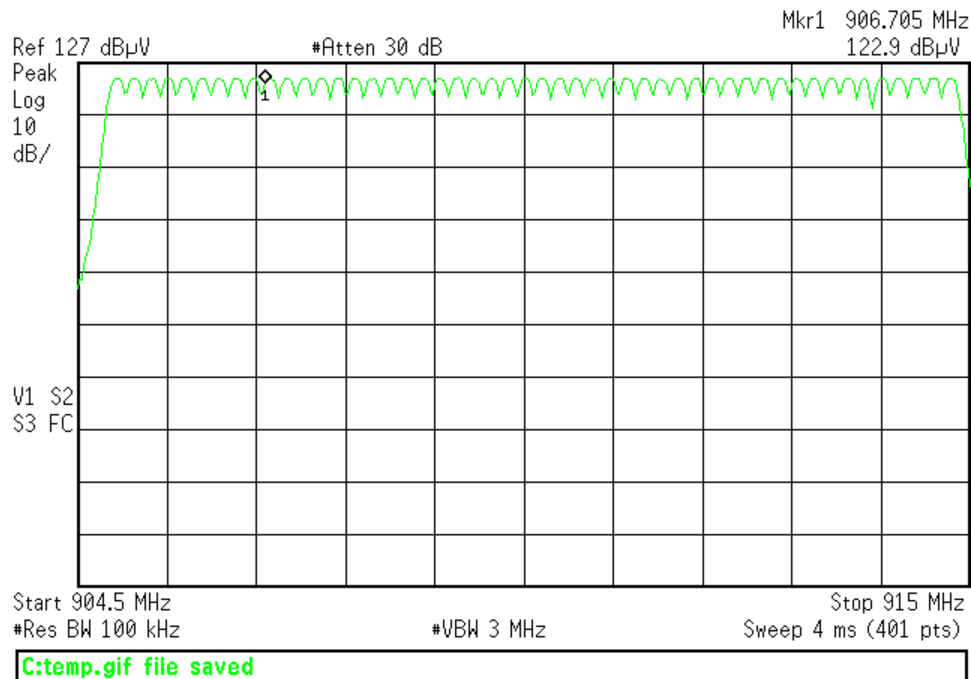
Plots

50 channels – low band



* Agilent 23:28:51 Jun 28, 2010

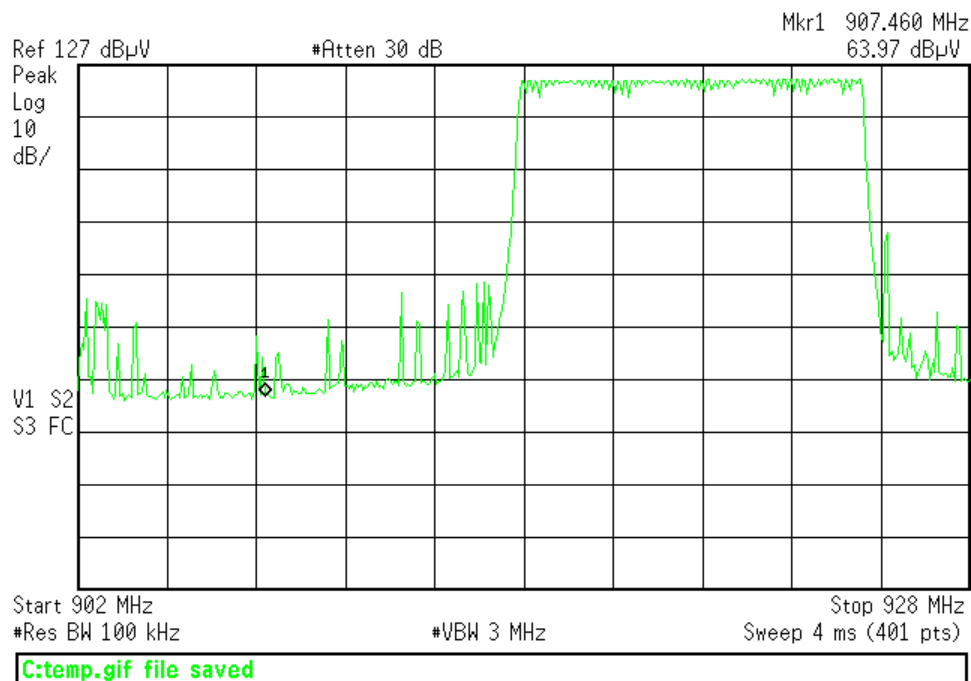
R T



50 channels – high band

* Agilent 23:32:34 Jun 28, 2010

R T



Agilent 23:34:56 Jun 28, 2010

R T

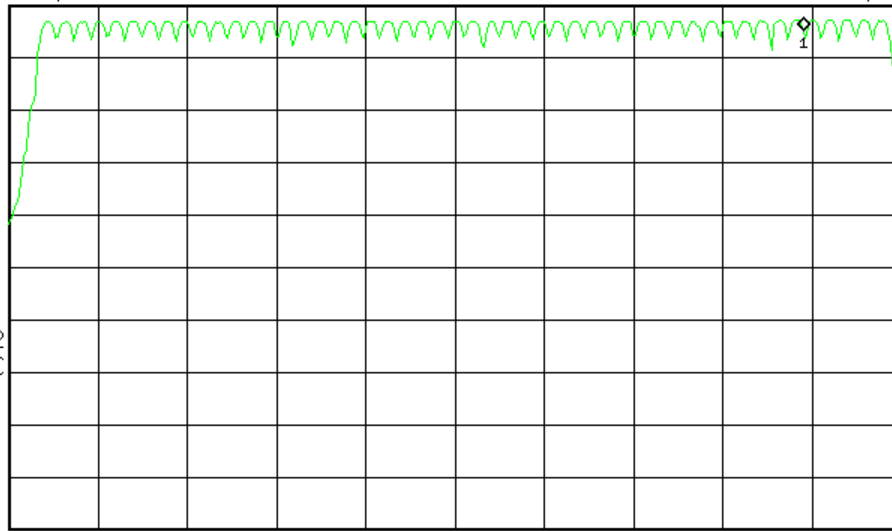
Mkr1 923.845 MHz
122 dBμV

Ref 127 dBμV

#Atten 30 dB

Peak
Log
10
dB/

V1 S2
S3 FC



Start 914.5 MHz

#Res BW 100 kHz

#VBW 3 MHz

Stop 925 MHz
Sweep 4 ms (401 pts)

C:\temp.gif file saved

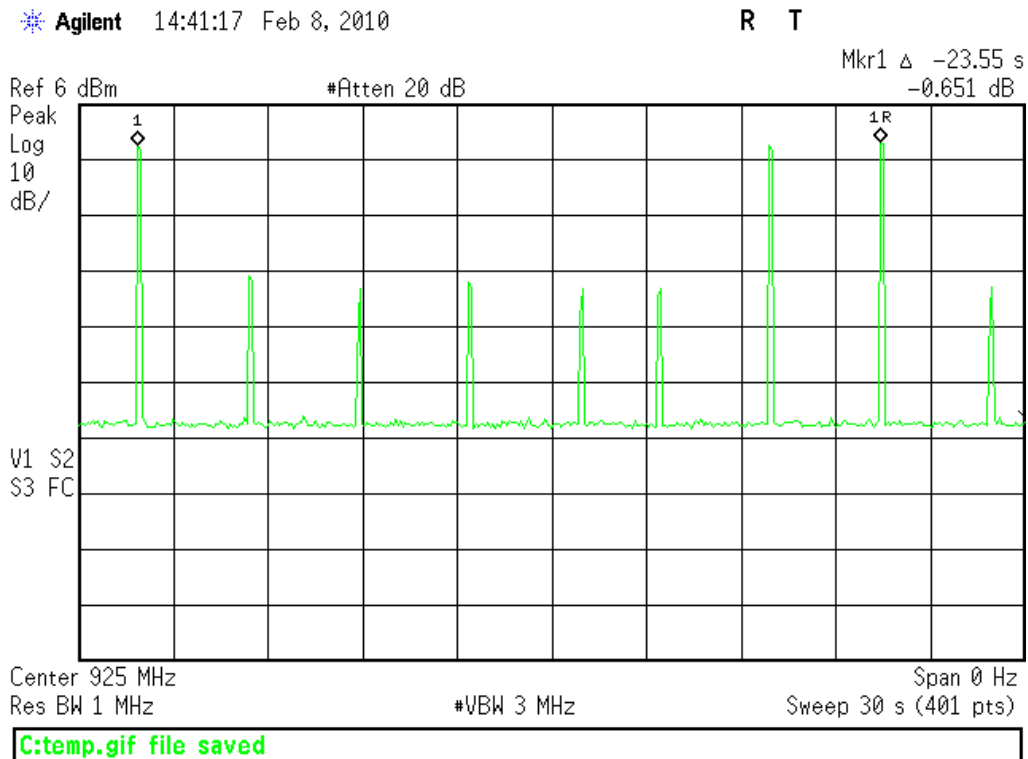
Occupancy Time

For frequency hopping systems operating in the 902-928MHz band:: if the 20dB bandwidth of the hopping channel is less than 250kHz ...the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period;

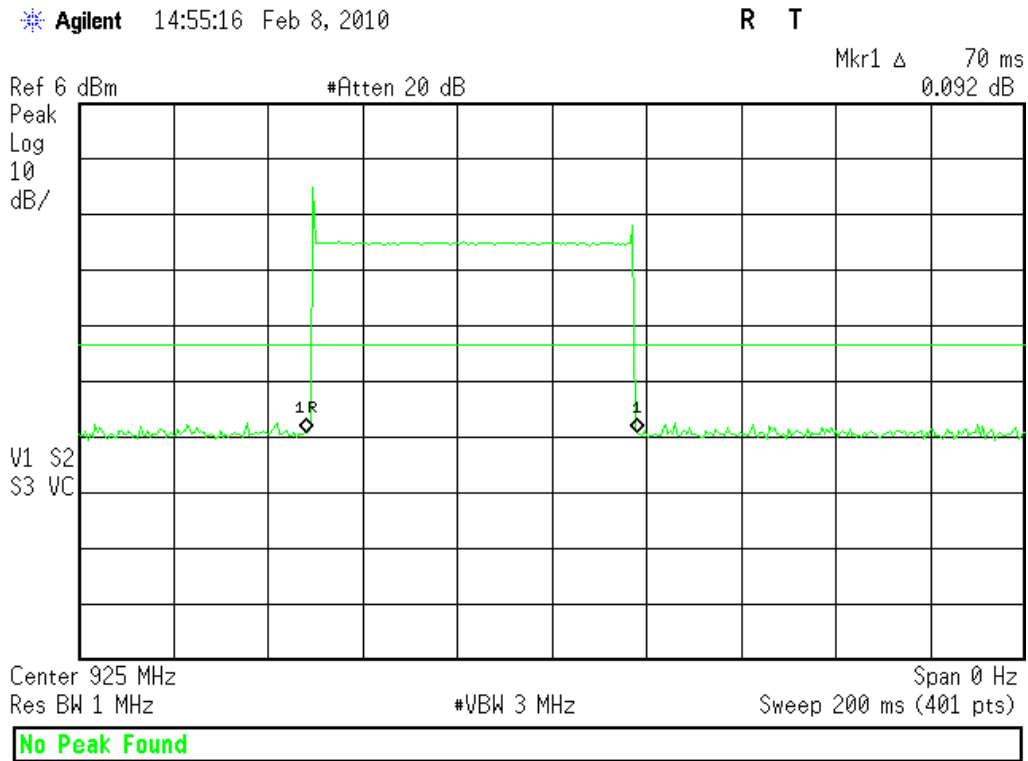
[15.247 (a) (1) (i)]

Plots

Within 20 seconds, carrier frequency was occupied twice.



Time dwelled on a carrier frequency is 0.07 seconds.



Therefore $2 \times 0.07 \text{ seconds} = 0.14 \text{ seconds} < 0.4 \text{ seconds}$

Peak Power**LIMIT**

Conducted Output Power

1 Watt

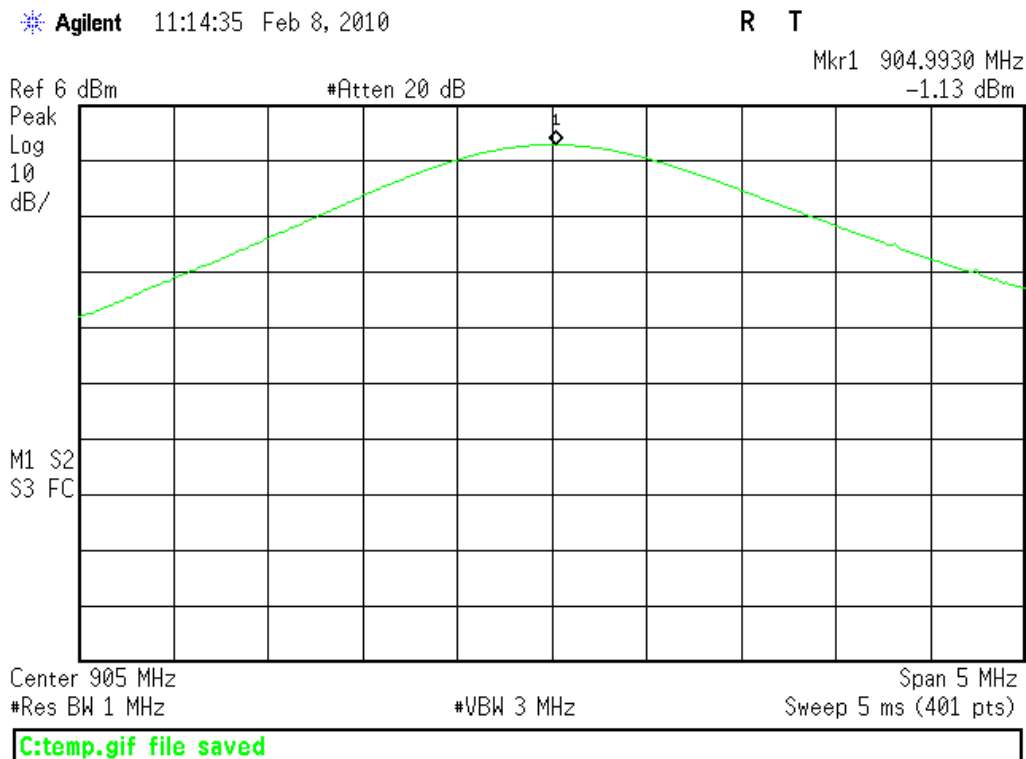
[15.247(b) (2)]

MEASUREMENTS / RESULTS

Peak Output Power												
Date: 08-Feb-10			Company: Street Smart					Work Order: K0102				
Engineer: Matthew Burman			EUT Desc: Parking Meter					EUT Operating Voltage/Frequency: Battery Powered				
Temp: 16.6 °C			Humidity: 25%			Pressure: 1010mBar						
Frequency Range: 902-928MHz						Measurement Distance: Conductive						
Notes: RBW = 1MHz VBW = 3MHz						For FHSS using at least 50 hopping channels the limit shall be 1 watt 1 watt = 30dBm						
	Frequency (MHz)	Reading (dBm)		Attenuator Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBm)	---			FCC Section 15.247 (b(2))		
										Limit (dBm)	Margin (dB)	Result (Pass/Fail)
	904.993	-1.130	---	20.0	1.3	20.2	---	---	---	30.0	-9.8	Pass
	914.963	-0.672	---	20.0	1.4	20.7	---	---	---	30.0	-9.3	Pass
	925.0	-1.080	---	20.0	1.4	20.3	---	---	---	30.0	-9.7	Pass
Test Site: CEMI04			Cable 1: EMIR-HIGH-06									
Analyzer: Rental #1			Attenuator: PE7019-20									

PLOTS

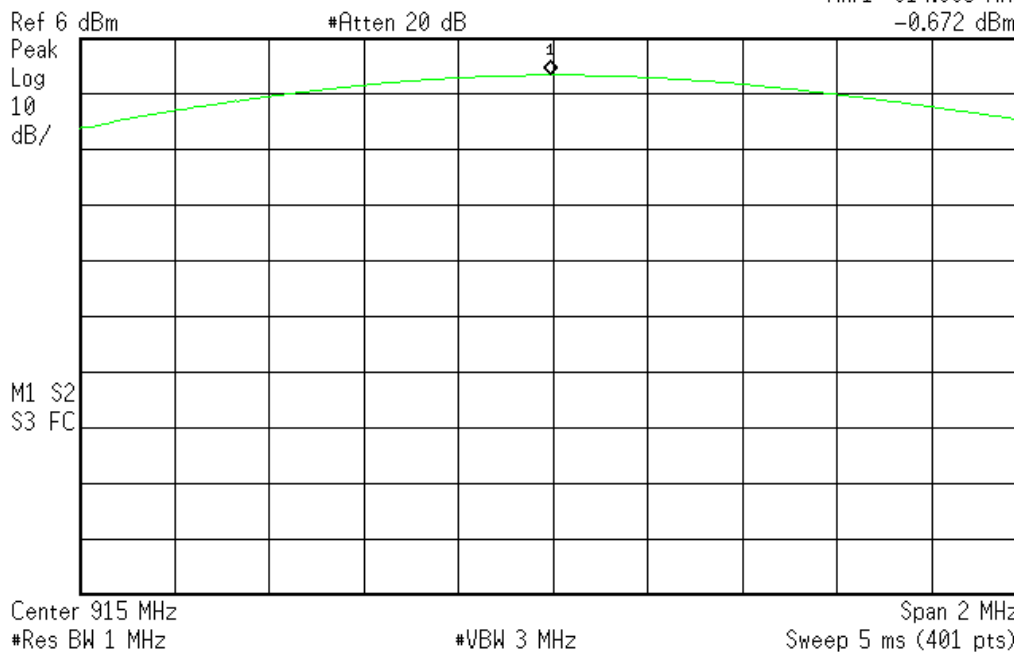
Low Channel



Mid Channel

Agilent 11:09:46 Feb 8, 2010

R T

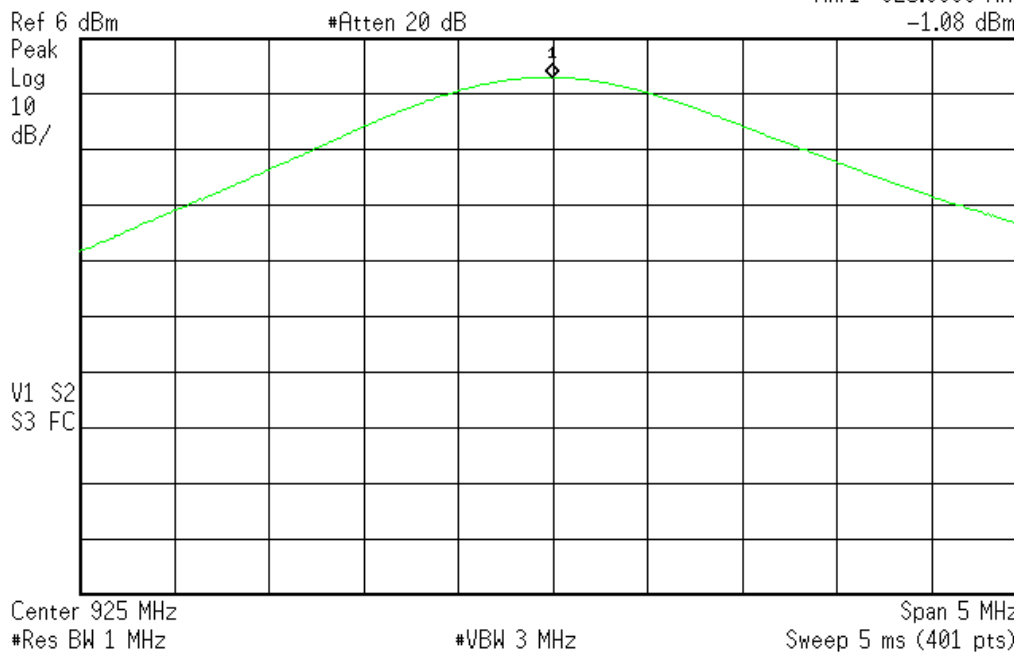
Mkr1 914.963 MHz
-0.672 dBm

C:\temp.gif file saved

High Channel

Agilent 11:18:55 Feb 8, 2010

R T

Mkr1 925.0000 MHz
-1.08 dBm

C:\temp.gif file saved

Band Edge Measurements

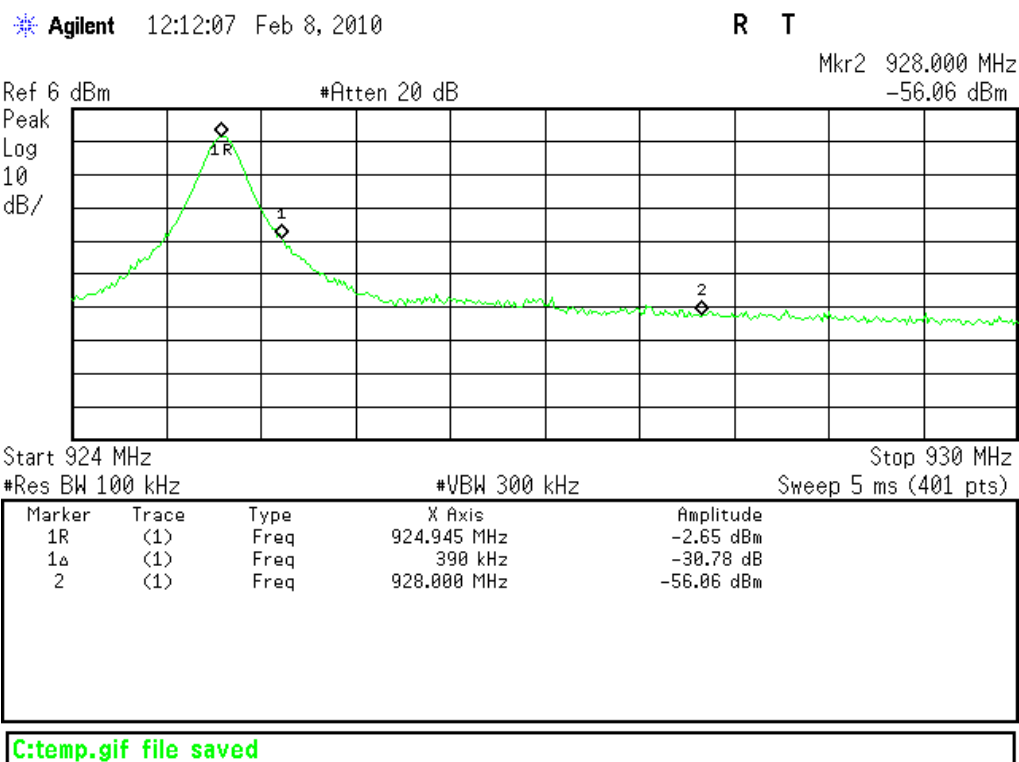
LIMITS

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either a RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

[15.247(d)]

PLOTS

928MHz Edge



902MHz Band Edge

Agilent 12:03:30 Feb 8, 2010

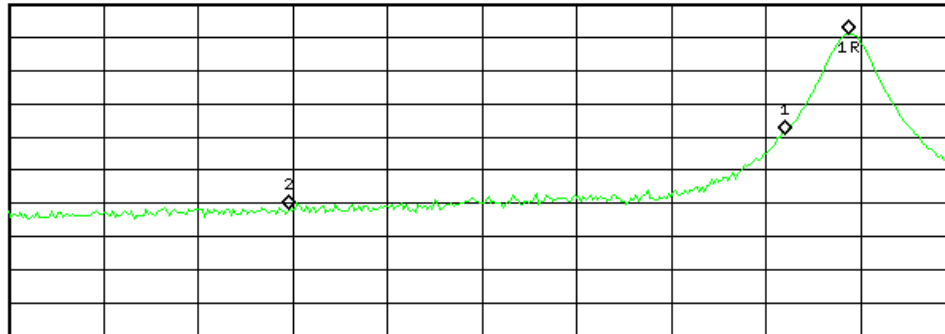
R T

Mkr2 902.0000 MHz
-55.96 dBm

Ref 6 dBm

#Atten 20 dB

Peak
Log
10
dB/



Center 903 MHz

Span 5 MHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 5 ms (401 pts)

Marker	Trace	Type	X Axis	Amplitude
1R	(1)	Freq	904.9600 MHz	-2.972 dBm
1Δ	(1)	Freq	-337.5 kHz	-30.42 dB
2	(1)	Freq	902.0000 MHz	-55.96 dBm

C:\temp.gif file saved

Duty Cycle Correction Calculation

MEASUREMENTS / CALCULATIONS

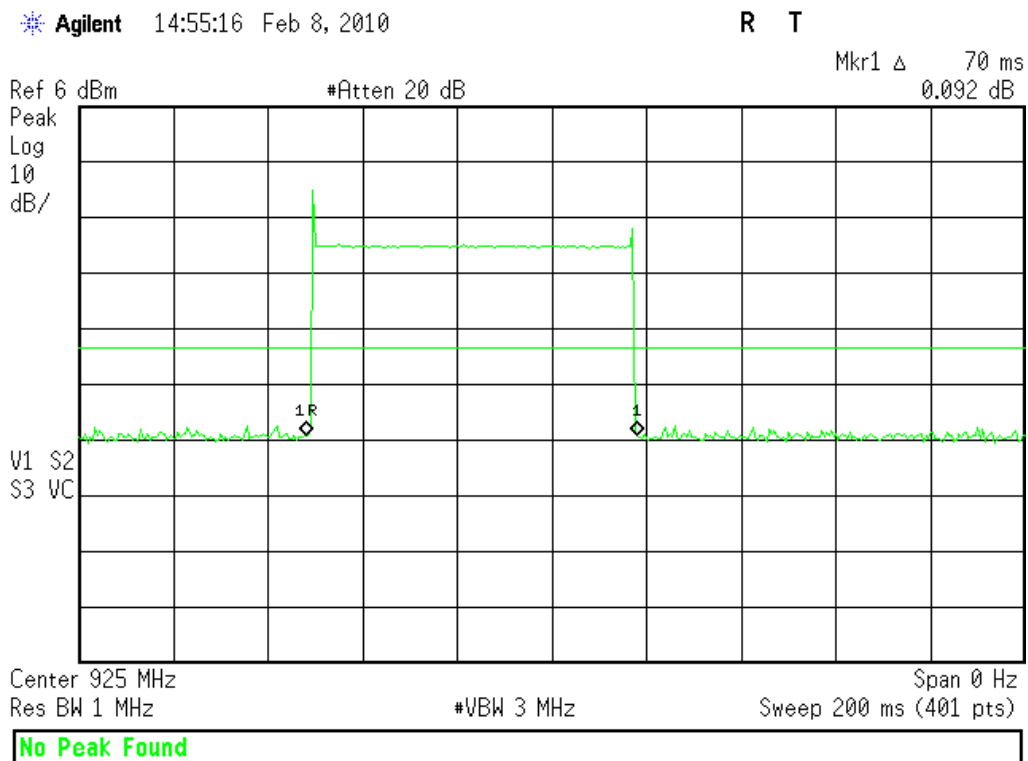
Duty Cycle Correction Factor = $20 \times \text{LOG} (\text{transmit time}/100\text{ms})$

DCCF = $20 \times \text{LOG} (70/100)$

DCCF = -3.1dB

A duty cycle correction factor of 3.1dB was used in calculations.

PLOTS



Radiated Spurious Emissions

LIMITS

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
[15.247(d)]

Radiated emission measurements were also taken for the digital circuitry for compliance to FCC part 15 class B products.

MEASUREMENTS / RESULTS

Spurious Emissions													
Date: 28-Jun-10			Company: Signal Fire						Work Order: K0102				
Engineer: Matthew Burman			EUT Desc: Parking Meter						EUT Operating Voltage/Frequency: Battery Powered				
Temp: 24.5°C			Humidity: 43%			Pressure: 1008mBar							
Frequency Range: 30-1000MHz								Measurement Distance: 3 m					
Notes: Spurious Emissions Duty Cycle Correction Factor = 3.1dB													
Antenna Polarization (H / V)		Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dBm)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	---			FCC Class B		
								Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
all readings noise floor													
vbb		968.9	34.0	20.6	22.5	2.7	38.6	---	---	---	54.0	-15.4	Pass
vbb		982.0	33.0	20.4	22.5	2.7	37.8	---	---	---	54.0	-16.2	Pass
vbb		991.0	33.0	20.4	22.6	2.7	37.9	---	---	---	54.0	-16.1	Pass
vbb		611.15	21.0	20.6	19.5	2.2	22.1	---	---	---	46.0	-23.9	Pass
vbb		405.0	17.0	21.5	16.9	1.6	14.0	---	---	---	46.0	-32.0	Pass
vbb		331.0	18.0	21.4	14.8	1.4	12.8	---	---	---	46.0	-33.2	Pass
Table Result: Pass by -15.4 dB													
Worst Freq: 968.9 MHz													
Test Site: 1DCC-OATS-3M-I			Cable 1: EMIR-13			Cable 2: ---			Cable 3: ---				
Analyzer: Rental SA#5			Preamp: Red			Antenna: Green			Preselector: ---				

Spurious Emissions															
Date: 28-Jun-10			Company: Signal Fire			Work Order: K0102									
Engineer: Matthew Burman			EUT Desc: Parking Meter			EUT Operating Voltage/Frequency: Battery Powered									
Temp: 24.5°C			Humidity: 43%			Pressure: 1008mBar									
Frequency Range: 1-6GHz										Measurement Distance: 3 m					
Notes: Spurious Emissions Duty Cycle Correction Factor = 3.1dB VBW = 1MHz RBW = 3MHz															
Antenna Polarization (H/V)	Frequency (MHz)	Peak Reading (dBμV)	Average Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Filter Factor (dB)	Adjusted Peak Reading (dBμV/m)	Adjusted Avg Reading (dBμV/m)	FCC Class B High Frequency - Peak			FCC Class B High Frequency - Average		
										Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
fundamental set to 905MHz															
v	2715.0	35.5	32.4	22.4	29.1	1.6	0.6	44.4	41.3	74.0	-29.6	Pass	54.0	-12.7	Pass
v	3620.0	33.3	30.2	21.6	31.5	1.9	0.5	45.6	42.5	74.0	-28.4	Pass	54.0	-11.5	Pass
v	4525.0	30.4	27.3	20.8	32.4	2.2	0.4	44.6	41.5	74.0	-29.4	Pass	54.0	-12.5	Pass
v	5430.0	32.0	28.9	20.5	34.2	2.3	0.6	48.6	45.5	74.0	-25.4	Pass	54.0	-8.5	Pass
Table Result:				Pass	by		-8.5 dB			Worst Freq:			5430.0 MHz		
Test Site: 1DCC-OATS-3M-I				Cable 1: EMIR-HIGH-21				High Pass Filter: Asset #1310				Cable 3: ---			
Analyzer: Rental SA#5				Preamp: Brown				Antenna: Yellow Horn				Preselector: ---			

Spurious Emissions															
Date: 28-Jun-10				Company: Signal Fire				Work Order: K0102							
Engineer: Matthew Burman				EUT Desc: Parking Meter				EUT Operating Voltage/Frequency: Battery Powered							
Temp: 24.5°C				Humidity: 43%				Pressure: 1008mBar							
Frequency Range: 6-10GHz										Measurement Distance: 1 m					
Notes: Spurious Emissions Duty Cycle Correction Factor = 3.1dB															
VBW = 1MHz RBW = 3MHz															
Antenna Polarization (H/V)	Frequency (MHz)	Peak Reading (dBμV)	Average Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Filter Factor (dB)	Adjusted Peak Reading (dBμV/m)	Adjusted Avg Reading (dBμV/m)	FCC Class B High Frequency - Peak			FCC Class B High Frequency - Average		
										Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
fundamental set to 905MHz															
v	7240.0	29.6	26.5	20.3	37.0	2.8	0.5	49.6	46.5	83.5	-33.9	Pass	63.5	-17.0	Pass
v	8145.0	28.8	25.7	20.1	38.4	3.1	0.5	50.7	47.6	83.5	-32.8	Pass	63.5	-15.9	Pass
v	9050.0	29.0	25.9	19.3	39.0	3.3	0.5	52.5	49.4	83.5	-31.0	Pass	63.5	-14.1	Pass
Table Result:				Pass				by -14.1 dB				Worst Freq: 9050.0 MHz			
Test Site: 1DCC-OATS-3M-I				Cable 1: EMIR-HIGH-21				High Pass Filter: Asset #00817				Cable 3: ---			
Analyzer: Rental SA#5				Preamp: Brown				Antenna: Yellow Horn				Preselector: ---			

Receiver Spurious Emissions

EUT was tested in receive mode, and no emission were found. For RSS 210 Section 7.2.3, receiver spurious emissions must meet the limits within table 1.

Spurious Emissions													
Date: 28-Jun-10			Company: Signal Fire				Work Order: K0102						
Engineer: Matthew Burman			EUT Desc: Parking Meter				EUT Operating Voltage/Frequency: Battery Powered						
Temp: 24.5°C			Humidity: 43%				Pressure: 1008mBar						
Frequency Range: 30-1000MHz							Measurement Distance: 3 m						
Notes: Spurious Emissions Duty Cycle Correction Factor = 3.1dB													
Antenna Polarization (H/V)		Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	FCC Class A			FCC Class B		
								Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
all readings noise floor													
vbb	968.9	34.0	20.6	22.5	2.7	38.6	---	---	---	---	54.0	-15.4	Pass
vbb	982.0	33.0	20.4	22.5	2.7	37.8	---	---	---	---	54.0	-16.2	Pass
vbb	991.0	33.0	20.4	22.6	2.7	37.9	---	---	---	---	54.0	-16.1	Pass
vbb	611.15	21.0	20.6	19.5	2.2	22.1	---	---	---	---	46.0	-23.9	Pass
vbb	405.0	17.0	21.5	16.9	1.6	14.0	---	---	---	---	46.0	-32.0	Pass
vbb	331.0	18.0	21.4	14.8	1.4	12.8	---	---	---	---	46.0	-33.2	Pass
Table Result: Pass							by -15.4 dB		Worst Freq: 968.9 MHz				
Test Site: 1DCC-OATS-3M-I			Cable 1: EMIR-13			Cable 2: ---			Cable 3: ---				
Analyzer: Rental SA#5			Preamp: Red			Antenna: Green			Preselector: ---				

Spurious Emissions															
Date: 28-Jun-10			Company: Signal Fire						Work Order: K0102						
Engineer: Matthew Burman			EUT Desc: Parking Meter						EUT Operating Voltage/Frequency: Battery Powered						
Temp: 24.5°C			Humidity: 43%						Pressure: 1008mBar						
Frequency Range: 1-10GHz								Measurement Distance: 1 m							
Notes: Spurious Emissions Duty Cycle Correction Factor = 3.1dB VBW = 1MHz RBW = 3MHz															
Antenna Polarization (H/V)	Frequency (MHz)	Peak Reading (dBμV)	Average Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Filter Factor (dB)	Adjusted Peak Reading (dBμV/m)	Adjusted Avg Reading (dBμV/m)	FCC Class B High Frequency - Peak			FCC Class B High Frequency - Average		
										Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
no emissions found															
Table Result:				--- by --- dB				Worst Freq: --- MHz							
Test Site: 1DCC-OATS-3M-I				Cable 1: EMIR-HIGH-21				High Pass Filter: Asset #1310				Cable 3: ---			
Analyzer: Rental SA#5				Preamp: Brown				Antenna: Yellow Horn				Preselector: ---			

Conducted Spurious Emissions

LIMITS

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth that contains the highest level of desired power...

[15.247(d)]

MEASUREMENTS / RESULTS

Spurious Emissions												
Date: 08-Feb-10			Company: Street Smart						Work Order: K0102			
Engineer: Matthew Burman			EUT Desc: Parking Meter						EUT Operating Voltage/Frequency: Battery Powered			
Temp: 16.6°C			Humidity: 25%			Pressure: 1010mBar						
Frequency Range: 30-10000MHz								Measurement Distance: Conductive				
Notes: RBW = 100kHz EUT transmitting on highest and lowest channel VBW = 300kHz												
Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	---			FCC Section 15.247(d)		
							Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
no emission found												
Test Site: CEMI04			Cable 1: EMIR-HIGH-06									
Analyzer: Rental #1			Attenuator: PE7019-20									

Occupied Bandwidth

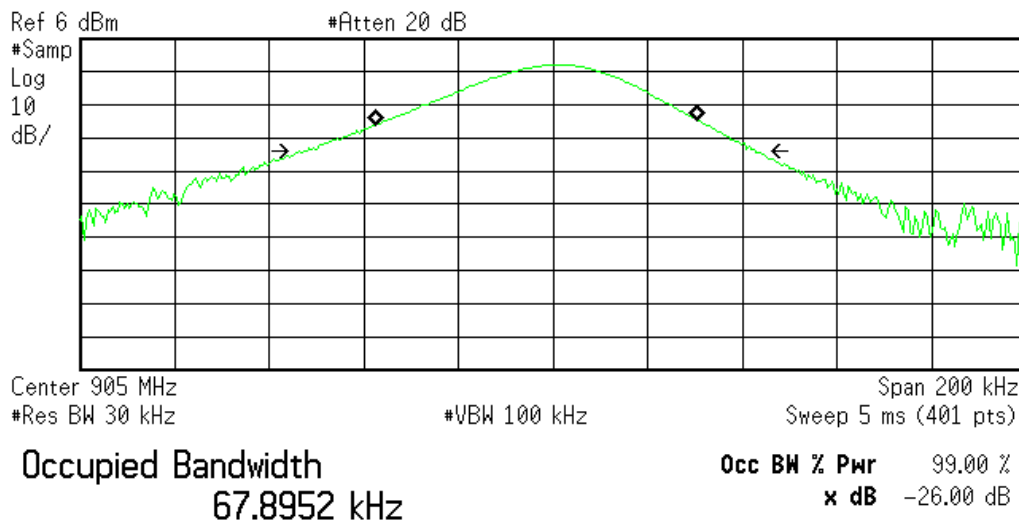
REQUIREMENT

When an occupied bandwidth is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured. [RSS-GEN 4.6.1]

Low Channel

Agilent 12:49:59 Feb 8, 2010

R T



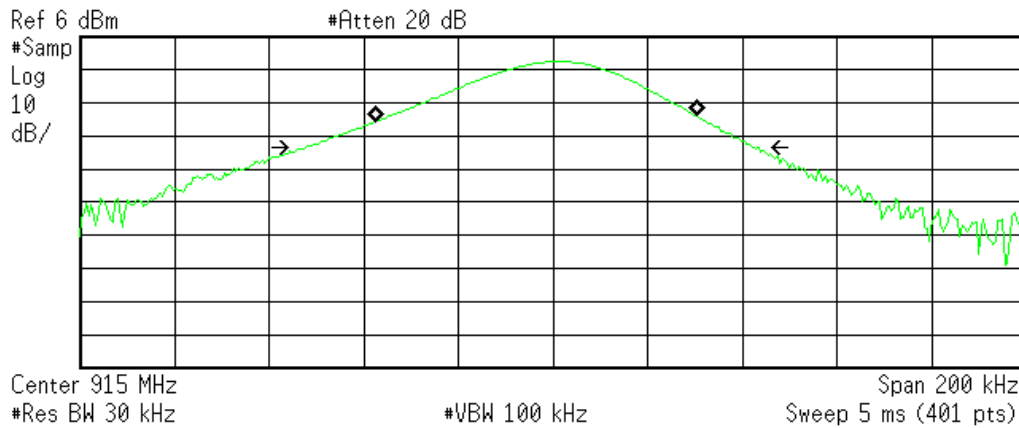
Transmit Freq Error -3.617 kHz
x dB Bandwidth 95.361 kHz*

C:\temp.gif file saved

Mid Channel

Agilent 12:48:17 Feb 8, 2010

R T



Occupied Bandwidth
67.8842 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

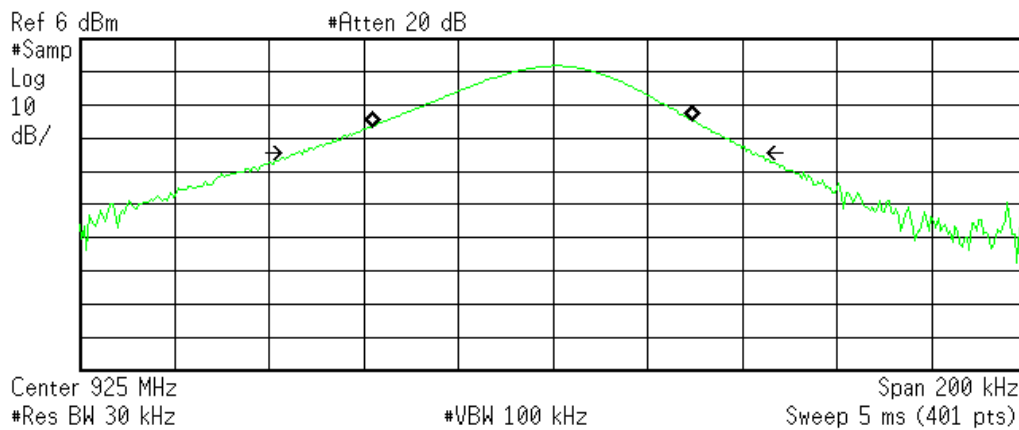
Transmit Freq Error -3.534 kHz
x dB Bandwidth 95.635 kHz*

C:\temp.gif file saved

High Channel

Agilent 12:46:42 Feb 8, 2010

R T



Occupied Bandwidth
67.8322 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -4.241 kHz
x dB Bandwidth 95.498 kHz*

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Test Equipment Used

Rev: 9-Feb-2010

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
SA EMI Chamber (1327)	9kHz-13.2 GHz	E4405B	Agilent	MY45103416	1327	I	6-Mar-2010
Rental SA #1 (Brown)	9kHz-26.5GHz	E4407B	Agilent	SG44210511	1510	I	10-Mar-2010
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code			Cat	Calibration Due
1DCC-OATS-3M-I	719150	2762A-8	R-3109			II	7-Jul-2011
Preamps / Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Red-White	0.009-2000MHz	ZFL-1000-LN	CS	N/A	1258	II	6-Nov-2010
Red-Blue	1-20GHz	PE2-38-218-4R5-17-15-SFF	CS	NA	1257	II	8-May-2010
HF 20dB 50W Attenuator	0.009-18 GHz	PE 7019-20	Pasternack	1	791	II	8-May-2011
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Green-Red Bilog	30-2000MHz	CBL6112B	Chase	2435	990	I	22-Apr-2010
Yellow Horn	1-18GHz	3115	EMCO	9608-4898	37	I	27-May-2011
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due
Temp./Humidity/Atm. Pressure Gauge		7400 Perception II	Davis	N/A	965	I	6-Apr-2011
CEM14 Thermohygrometer		35519-044	Control Company	72457728	1339	II	18-Aug-2011
1DCC-OATS-3M-I Thermohygrometer		35519-044	Control Company	72457635	1334	II	18-Aug-2011

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Product Documentation

The following documentation has been provided by the client for inclusion in this report.

Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS," "MTL," "ACTS," "MTL-ACTS" and "CURTIS-STRAUS" (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only where such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.
13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS

AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.

14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B) NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.\$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

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