



Electromagnetic Compatibility Test Report

Tests Performed on a Kustom Signals, Inc.

Clearcomm Transciever, Model CCDSS

Radiometrics Document RP-5603



Product Detail:

FCC ID: IVQCCBAS, IVQCCRMT

IC: 1293B-CCBAS, 1293B-CCRMT

Equipment type: 900 MHz Spread Spectrum Transmitter

Test Standards:

US CFR Title 47, Chapter I, FCC Part 15 Subpart C

FCC Part 15 CFR Title 47: 2006

Industry Canada RSS-210, Issue 6 as required for Category I Equipment

This report concerns: Original Grant for Certification

FCC Part 15.247

Tests Performed For:

Kustom Signals, Inc.

9325 Pflumm

Lenexa, KS - 66215-3347

Test Facility:

Radiometrics Midwest Corporation

12 East Devonwood

Romeoville, IL 60446

Test Date(s): (Month-Day-Year)

November 2, 3 and 6, 2006

Document RP-5603 Revisions:

Rev.	Issue Date	Affected Pages	Revised By
0	February 1, 2006		

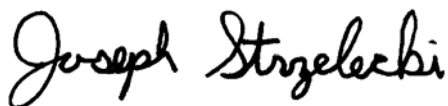
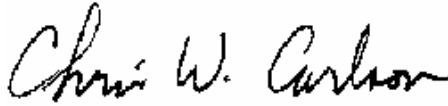
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1 ADMINISTRATIVE DATA

<i>Equipment Under Test:</i> A Kustom Signals, Inc., Clearcomm Model: CCDSS Serial Number: none This will be referred to as the EUT in this Report	
<i>Date EUT Received at Radiometrics: (Month-Day-Year)</i> November 30, 2005	<i>Test Date(s): (Month-Day-Year)</i> November 2, 3 and 6, 2006
<i>Test Report Written By:</i> Joseph Strzelecki Senior EMC Engineer	<i>Test Witnessed By:</i> The tests were not witnessed by Kustom Signals, Inc.
<i>Radiometrics' Personnel Responsible for Test:</i>  <hr/> Joseph Strzelecki Senior EMC Engineer NARTE EMC-000877-NE	<i>Test Report Approved By</i>  <hr/> Chris W. Carlson Director of Engineering NARTE EMC-000921-NE

2 TEST SUMMARY AND RESULTS

The EUT (Equipment Under Test) is a Clearcomm, Model CCDSS, manufactured by Kustom Signals, Inc. The detailed test results are presented in a separate section. The following is a summary of the test results.

Emissions Tests Results

Environmental Phenomena	Frequency Range	Basic Standard	Test Result
RF Radiated Emissions	30-9300 MHz	RSS-210 & FCC Part 15	Pass
Occupied Bandwidth Test	Fundamental Freq.	RSS-210 & FCC Part 15	Pass

Spread Spectrum Transmitter Requirements

Environmental Phenomena	Frequency Range	FCC Section	RSS-210 Section	Test Result
6 dB Bandwidth Test	902-928 MHz	15.247 a	A8.1 (4)	Pass
20 dB Bandwidth Test	902-928 MHz	15.247 a	A8.1 (4)	Pass
Peak Output Power	902-928 MHz	15.247 b	A8.1 (1)	Pass
Band-edge Compliance of RF Conducted Emissions	902-928 MHz	15.247 d	A8.4 (2)	Pass
Spurious RF Conducted Emissions	30-9300 MHz	15.247 d	A8.5	Pass
Spurious Radiated Emissions	30-9300 MHz	15.247 d	A8.5	Pass
Power Spectral Density	902-928 MHz	15.247 e	A8.2 (1)	Pass

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2.1 RF Exposure Compliance Requirements

Since the power output is 10 mW, the EUT meets the FCC and RSS-102 requirement for RF exposure. There are no power level adjustments. The detailed calculations for RF Exposure are presented in a separate document.

3 EQUIPMENT UNDER TEST (EUT) DETAILS

3.1 EUT Description

The EUT is a Clearcomm 900 MHz transmitter, Model CCDSS, manufactured by Kustom Signals, Inc. The EUT was in good working condition during the tests, with no known defects.

3.1.1 FCC Section 15.203 & RSS-GEN Antenna Requirements

The antenna uses a reverse polarity SMA Connector. The connector is not readily available to public. Therefore it meets the 15.203 Requirement.

4 TESTED SYSTEM DETAILS

4.1 Tested System Configuration

The system was configured for testing in a typical fashion. The EUT was placed on an 80-cm high, nonconductive test stand. The testing was performed in conditions as close as possible to installed conditions. Wiring was consistent with manufacturer's recommendations.

The EUT was tested as a stand-alone device. Power was supplied with a 12 Volt DC battery. The identification for all equipment, plus descriptions of all cables used in the tested system, are:

Tested System Configuration List

Item	Description	Type*	Manufacturer	Model Number	Serial Number
1	Clearcomm BASE	E	Kustom Signals, Inc.	CCDSS-BAS	none
2	Clearcomm Remote	E	Kustom Signals, Inc.	CCDSS-REM	none

* Type: E = EUT, S = Support Equipment;

List of System Cables

QTY	Length (m)	Cable Description	Connected to (Item #)	Shielded?
1	1.0	DC Cord	#1 to battery	No
1	1.8	Earphone Cable	#1	

4.2 Special Accessories

No special accessories were used during the tests in order to achieve compliance.

4.3 EUT Modifications

RV1, RV2, and L12 were added
R25, 467, and R68 were changed to 200 ohms

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5 TEST SPECIFICATIONS AND RELATED DOCUMENTS

Document	Date	Title
FCC CFR Title 47	2006	Code of Federal Regulations Title 47, Chapter 1, Federal Communications Commission, Part 15 - Radio Frequency Devices
ANSI C63.4-2003	2003	Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
IC RSS-210 Issue 6	2005	Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands) Category I Equipment
IC RSS-212 Issue 1	1999	Test Methods For Radio Equipment
IC RSS-Gen Issue 1	2005	General Requirements and Information for the Certification of Radiocommunication Equipment (RSS-Gen)
FCC DA 00-705	2000	Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems
FCC 558074	2005	Measurement of Digital Transmission Systems Operating under Section 15.247

The test procedures used are in accordance with the FCC DA 00-705, <or> FCC 558074, Industry Canada RSS-212 and ANSI document C63.4-2003, "Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz". The specific procedures are described herein. Radiated testing was performed at an antenna to EUT distance of 3 meters. The antenna was raised and lowered from 1 to 4 meters.

6 RADIOMETRICS' TEST FACILITIES

The results of these tests were obtained at Radiometrics Midwest Corp. in Romeoville, Illinois, USA. Radiometrics is accredited by A2LA (American Association for Laboratory Accreditation) to conform to ISO/IEC 17025: 1999 "General Requirements for the Competence of Calibration and Testing Laboratories". Radiometrics' Lab Code is 121191 and Certification Number is 1495.01. Radiometrics' scope of accreditation includes all of the test methods listed herein. A copy of the accreditation can be accessed on our web site (www.radiomet.com). Radiometrics accreditation status can be verified at A2LA's web site (www.a2la2.org).

The following is a list of shielded enclosures located in Romeoville, Illinois:

Chamber A: Is an anechoic chamber that measures 24' L X 12' W X 12' H. The walls and ceiling are fully lined with ferrite absorber tiles. The floor has a 10' x 10' section of ferrite absorber tiles located in the center. Panashield of Rowayton, Connecticut manufactured the chamber. The enclosure is NAMAS certified.

Chamber B: Is a shielded enclosure that measures 24' L X 12' W X 8' H. Erik A. Lindgren & Associates of Chicago, Illinois manufactured the enclosure.

Chamber C: Is a shielded enclosure that measures 20' L X 10' W X 8' H. Lindgren RF Enclosures Inc. of Addison, Illinois manufactured the enclosure.

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Chamber D: Is a fully anechoic chamber that measures 22' L X 10' W X 10' H. The walls, ceiling and floor are fully lined with ferrite absorber tiles. Braden Shielding Systems of Tulsa, Oklahoma manufactured the chamber.

Chamber E: Is a custom made anechoic chamber that measures 52' L X 30' W X 18' H. The walls and ceiling are fully lined with RF absorber. Pro-shield of Collinsville, Oklahoma manufactured the chamber.

Test Station F: Is an area that measures 10' D X 12' W X 10' H. The floor and back wall are metal shielded. This area is used for conducted emissions measurements.

A separate ten-foot long, brass plated, steel ground rod attached via a 6 inch copper braid grounds each of the above chambers. Each enclosure is also equipped with low-pass power line filters.

Open Area Test Site (OATS): Is located on 8625 Helmar Road in Newark, Illinois, USA and measures 56' L X 24' W X 17' H. The entire open field test site has a metal ground screen. The FCC has accepted these sites as test site number US1065. The FCC test site Registration Number is 732175. Details of the site characteristics are on file with the Industry Canada as file number IC3124.

A complete list of the test equipment is provided herein. The calibration due dates are indicated on the equipment list. The equipment is calibrated in accordance to ANSI/NCSL Z540-1 with traceability to the National Institute of Standards and Technology (NIST).

7 DEVIATIONS AND EXCLUSIONS FROM THE TEST SPECIFICATIONS

There were no deviations or exclusions from the test specifications.

8 CERTIFICATION

Radiometrics Midwest Corporation certifies that the data contained herein was taken under conditions that meet or exceed the requirements of the test specification. The results relate only to the EUT listed herein. Any modifications made to the EUT subsequent to the indicated test date will invalidate the data and void this certification.

9 TEST EQUIPMENT TABLE

RMC ID	Manufacturer	Description	Model No.	Serial No.	Frequency Range	Cal Period	Cal Date
AMP-05	RMC/Celeritek	Pre-amplifier	MW110G	1001	1.0-12GHz	12 Mo.	12/22/05
AMP-22	Anritsu	Pre-amplifier	MH648A	M23969	0.1-1200MHz	12 Mo.	12/21/05
ANT-13	EMCO	Horn Antenna	3115	2502	1.0-18GHz	24 Mo.	10/24/06
ANT-44	Impossible Machine	Super Log Antenna	SL-20M2G	1002	20-2000MHz	24 Mo.	12/12/05
HPF-01	Solar	High Pass Filter	7930-100	HPF-1	0.15-30MHz	24 Mo.	04/20/05
HPF-03	Mini-Circuits	High Pass Filter	VHP-39	HPF-03	3-10 GHz	12 Mo.	02/08/06
PRE-01	Hewlett Packard	Preselector	85685A	2510A00143	20 Hz-2GHz	12 Mo.	07/05/06
REC-07	Anritsu	Spectrum Analyzer	MS2601A	MT53067	0.01-2200MHz	12 Mo.	01/04/05
REC-08	Hewlett Packard	Spectrum Analyzer	8566B	2648A13481 2209A01436	30Hz-22GHz	12 Mo.	07/05/06
THM-01	Extech Inst.	Temp/Humid Meter	4465CF	001106557	N/A	24 Mo.	03/31/06

Note: All calibrated equipment is subject to periodic checks.

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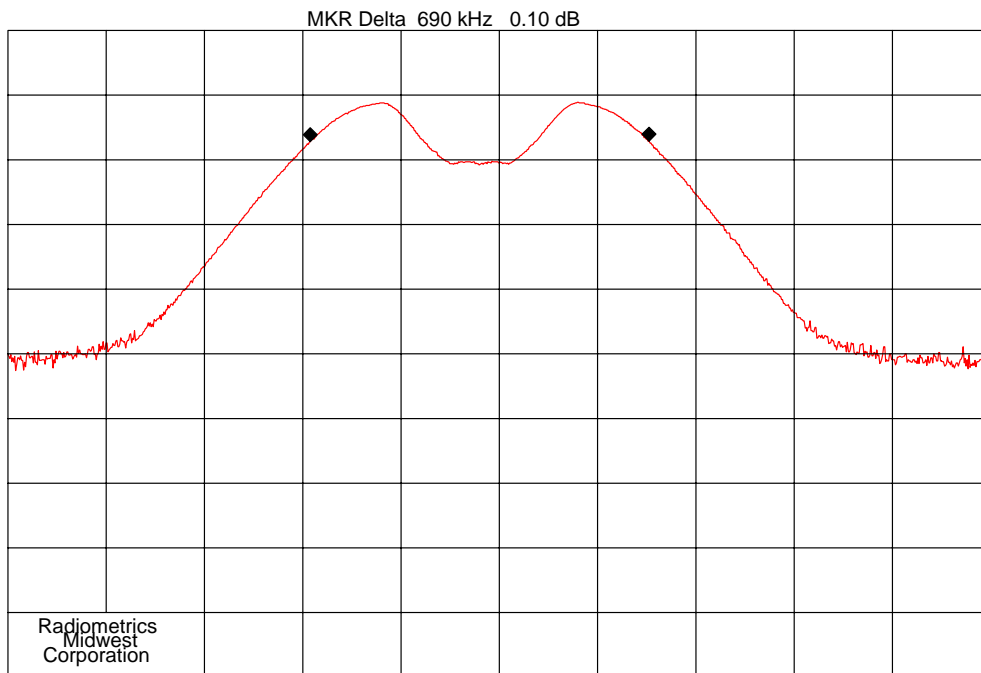
10 TEST SECTIONS

10.1 Occupied Bandwidth

The spectrum analyzer was set to the MAX HOLD mode to record the worst case of the modulation. The EUT was transmitting at its maximum data rate. The trace was allowed to stabilize.

The marker-to-peak function was set to the peak of the emission. Then the marker-delta function was used to measure 6 or 20 dB down one side of the emission. The marker-delta function was reset and then moved 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 or 20 dB bandwidth of the emission. The bandwidth is required to be at least 0.5 MHz.

Channel	Base	Base	Remote	Remote
	6 dB EBW MHz	20 dB EBW MHz	6 dB EBW MHz	20 dB EBW MHz
905	0.690	0.780	0.680	0.765
915	0.704	0.777	0.684	0.772
925	0.706	0.785	0.694	0.773



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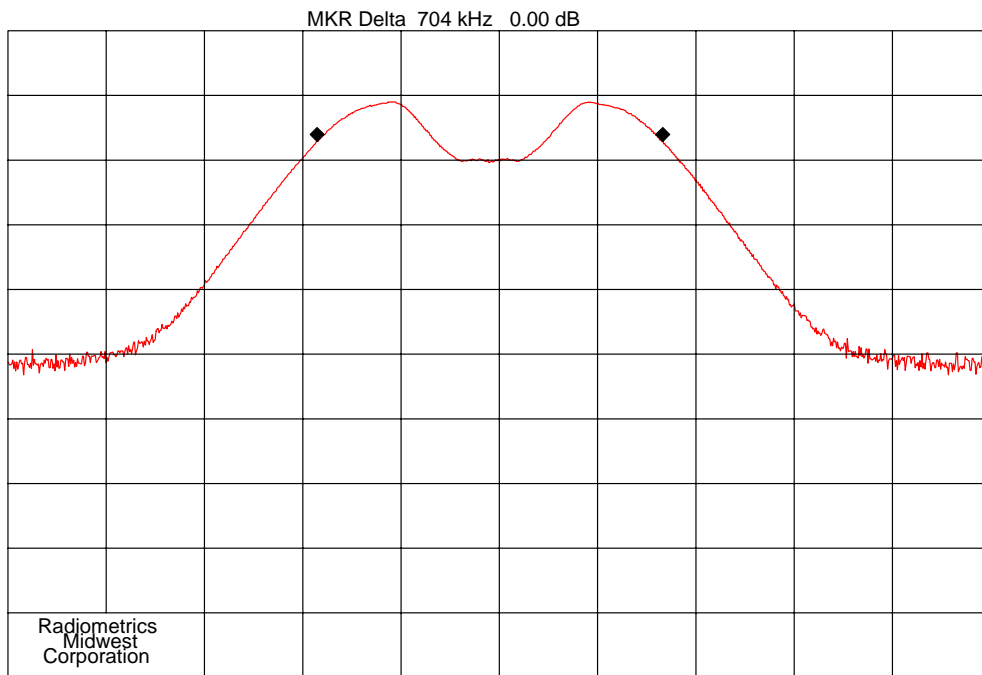
COMPANY : Kustom Signal
CENTER 905.00 MHz
RES BW 100 kHz
10 dB/
NOTES : 6 dB Bandwidth, Low Ch; Base

ITEM : CCDSS
REF 20.0 dBm
VBW 300 kHz
TIME : 13:29

DATE : 11-06-2006
SPAN 2.00 MHz
ATTEN 30 dB
SWP 1.00 sec
bwb1f

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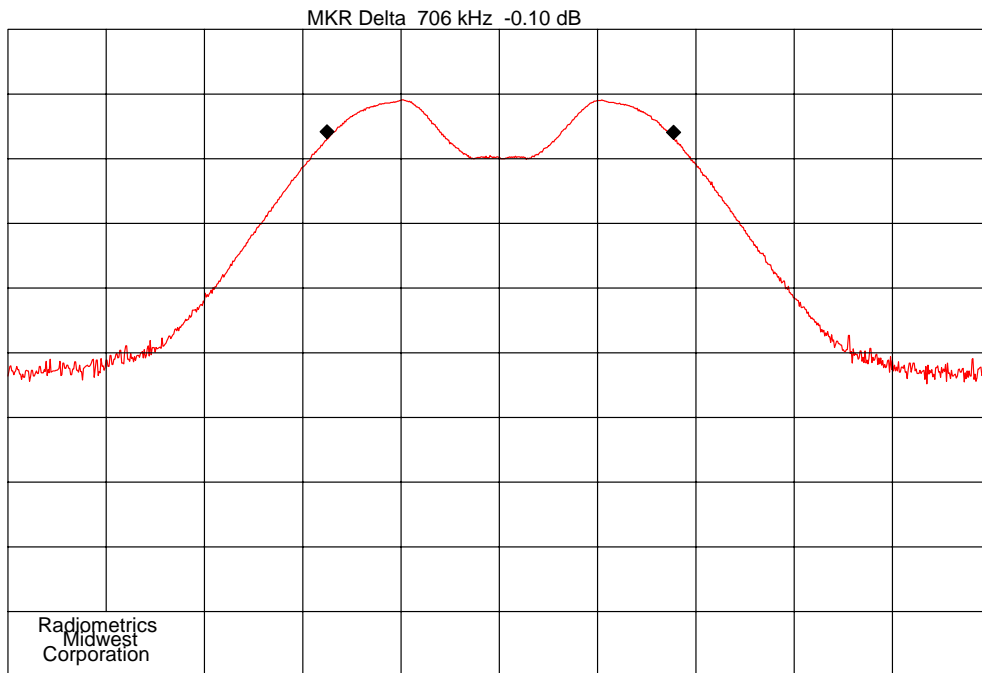
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COMPANY : Kustom Signal
CENTER 915.00 MHz
RES BW 100 kHz
10 dB/
NOTES : 6 dB Bandwidth, Mid Ch; Base

ITEM : CCDSS
REF 20.0 dBm
VBW 300 kHz
TIME : 13:30

DATE : 11-06-2006
SPAN 2.00 MHz
ATTEN 30 dB
SWP 1.00 sec
bwb2f



COMPANY : Kustom Signal
CENTER 925.00 MHz
RES BW 100 kHz
10 dB/
NOTES : 6 dB Bandwidth, High Ch; Base

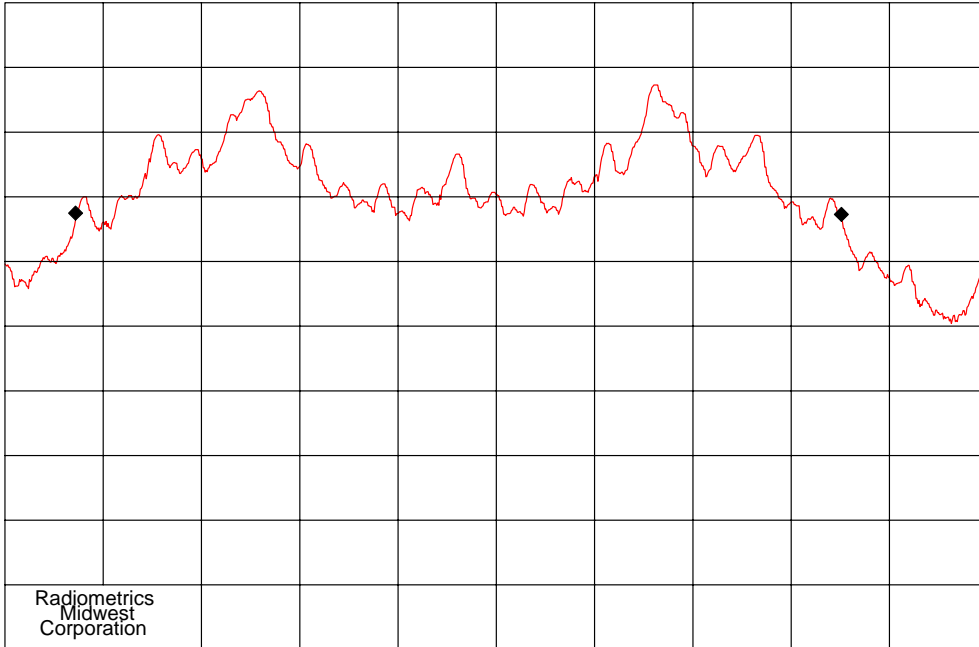
ITEM : CCDSS
REF 20.0 dBm
VBW 300 kHz
TIME : 13:31

DATE : 11-06-2006
SPAN 2.00 MHz
ATTEN 30 dB
SWP 1.00 sec
bwb3f

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MKR Delta 780 kHz -0.20 dB

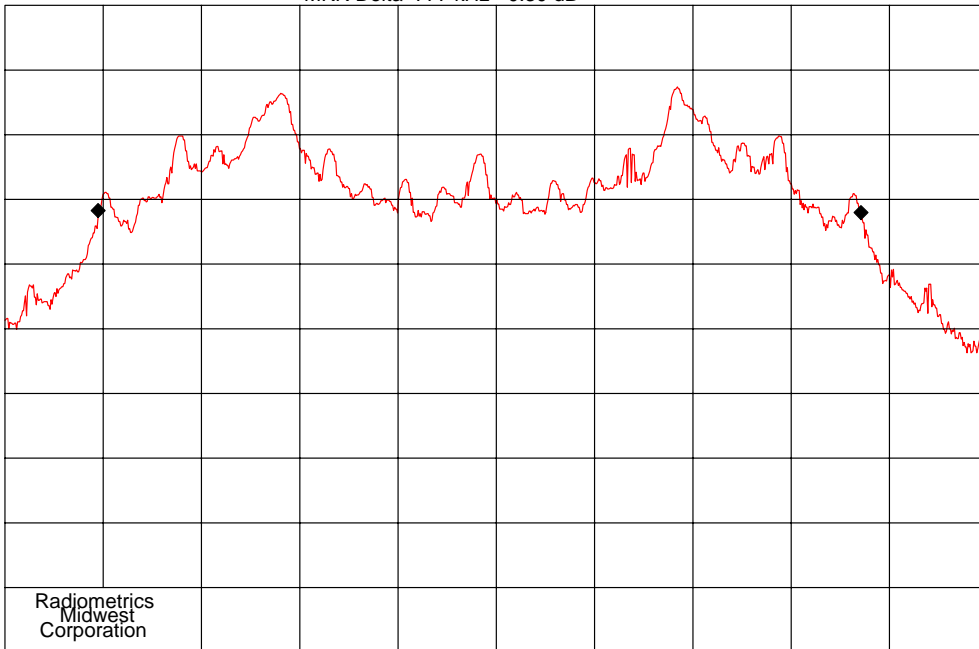


COMPANY : Kustom Signal
CENTER 905.00 MHz
RES BW 10 kHz
10 dB/
NOTES : 20 dB Bandwidth, Low Ch; Base

ITEM : CCDSS
REF 20.0 dBm
VBW 30 kHz
TIME : 13:38

DATE : 11-06-2006
SPAN 1.00 MHz
ATTEN 30 dB
SWP 1.00 sec
bwb1c

MKR Delta 777 kHz -0.30 dB



COMPANY : Kustom Signal
CENTER 915.00 MHz
RES BW 10 kHz
10 dB/
NOTES : 20 dB Bandwidth, Mid Ch; Base

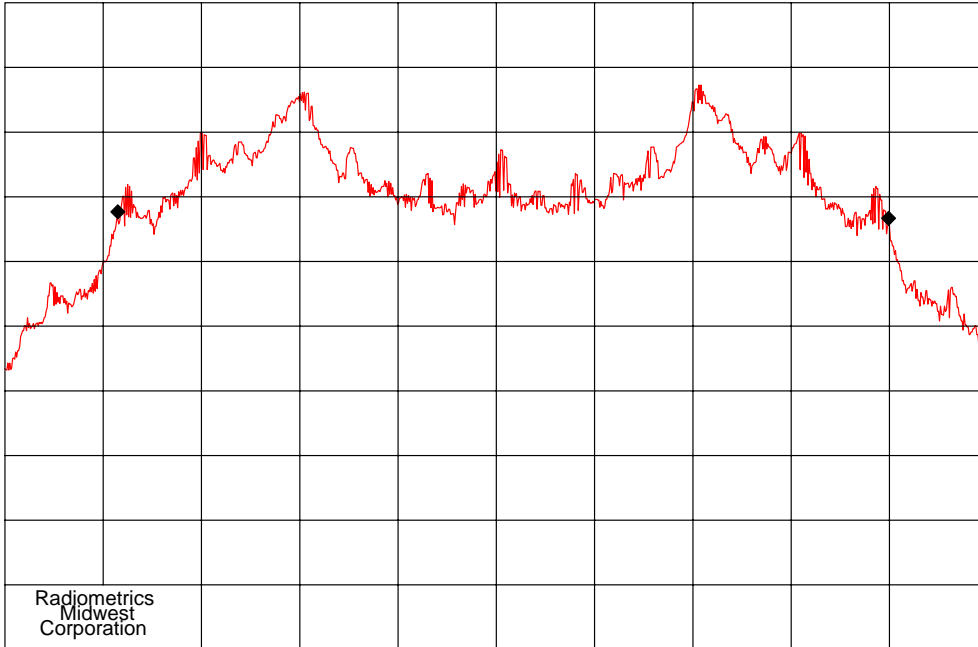
ITEM : CCDSS
REF 20.0 dBm
VBW 30 kHz
TIME : 13:36

DATE : 11-06-2006
SPAN 1.00 MHz
ATTEN 30 dB
SWP 1.00 sec
bwb2c

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MKR Delta 785 kHz -1.00 dB

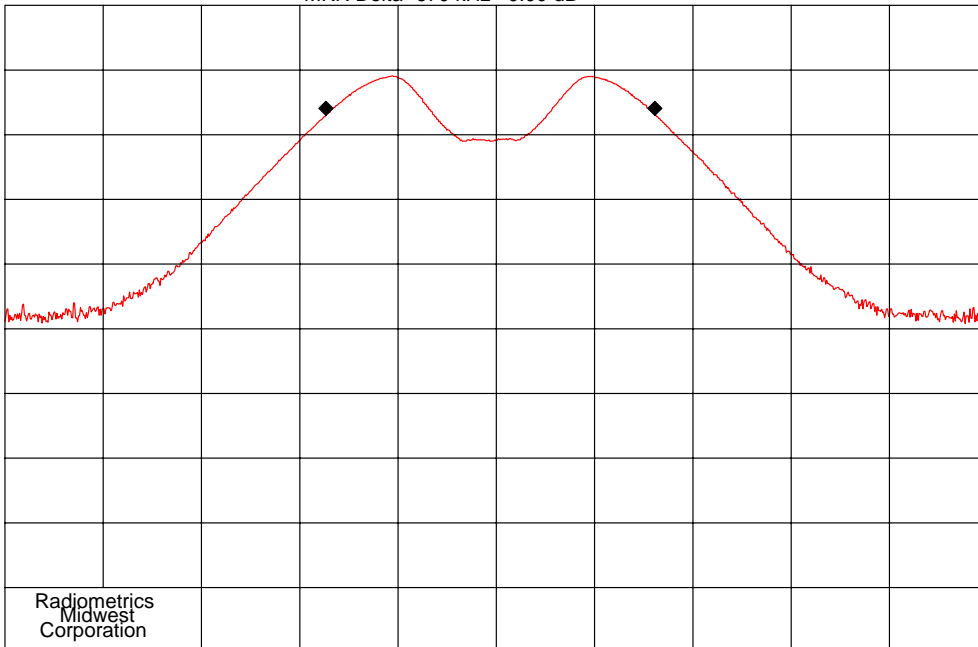


COMPANY : Kustom Signal
CENTER 925.00 MHz
RES BW 10 kHz
10 dB/
NOTES : 20 dB Bandwidth, High Ch; Base

ITEM : CCDSS
REF 20.0 dBm
VBW 30 kHz
TIME : 13:34

DATE : 11-06-2006
SPAN 1.00 MHz
ATTEN 30 dB
SWP 1.00 sec
bwb3c

MKR Delta -670 kHz 0.00 dB



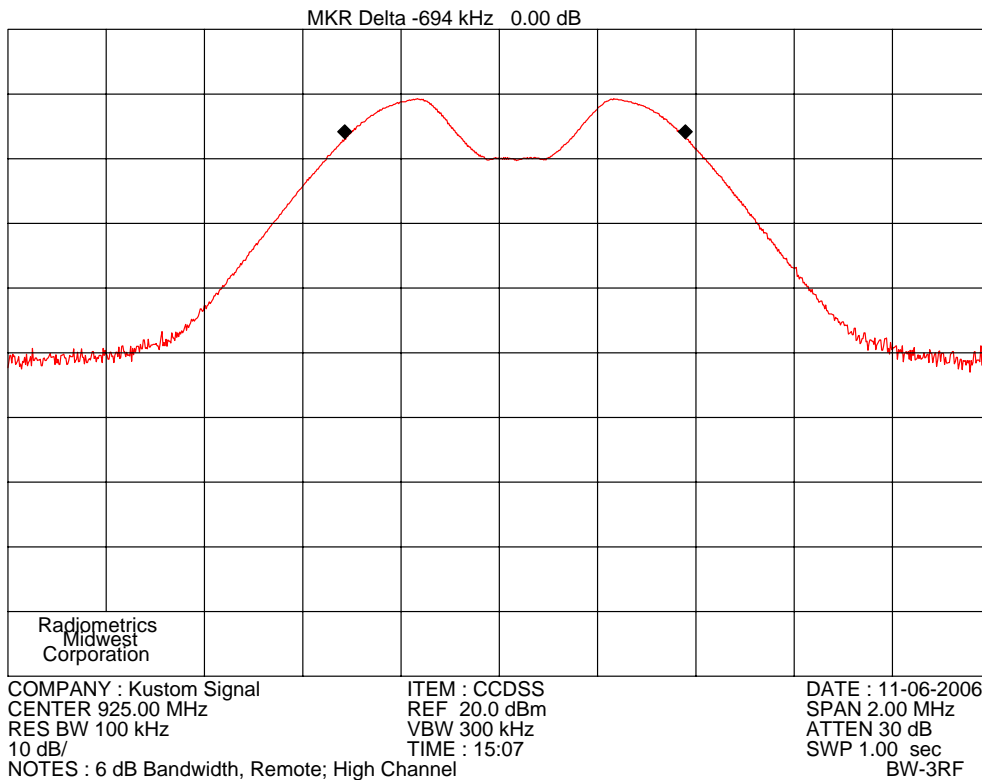
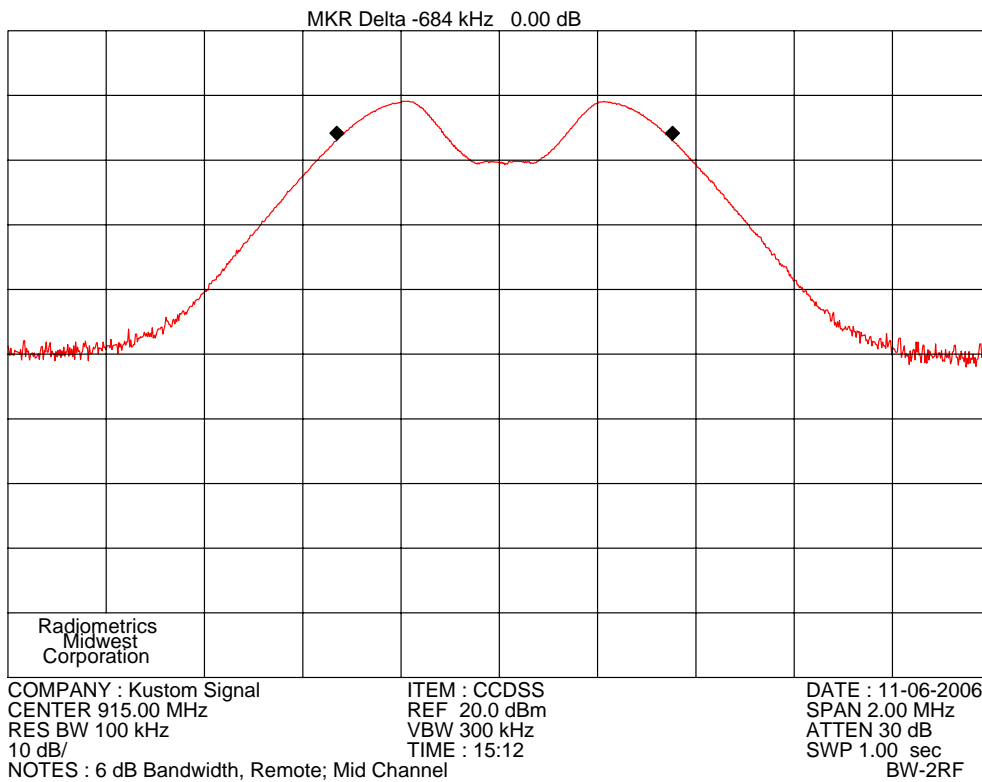
COMPANY : Kustom Signal
CENTER 905.00 MHz
RES BW 100 kHz
10 dB/
NOTES : 6 dB Bandwidth, Remote; Low Channel

ITEM : CCDSS
REF 20.0 dBm
VBW 300 kHz
TIME : 15:20

DATE : 11-06-2006
SPAN 2.00 MHz
ATTEN 30 dB
SWP 1.00 sec
BW-1RF

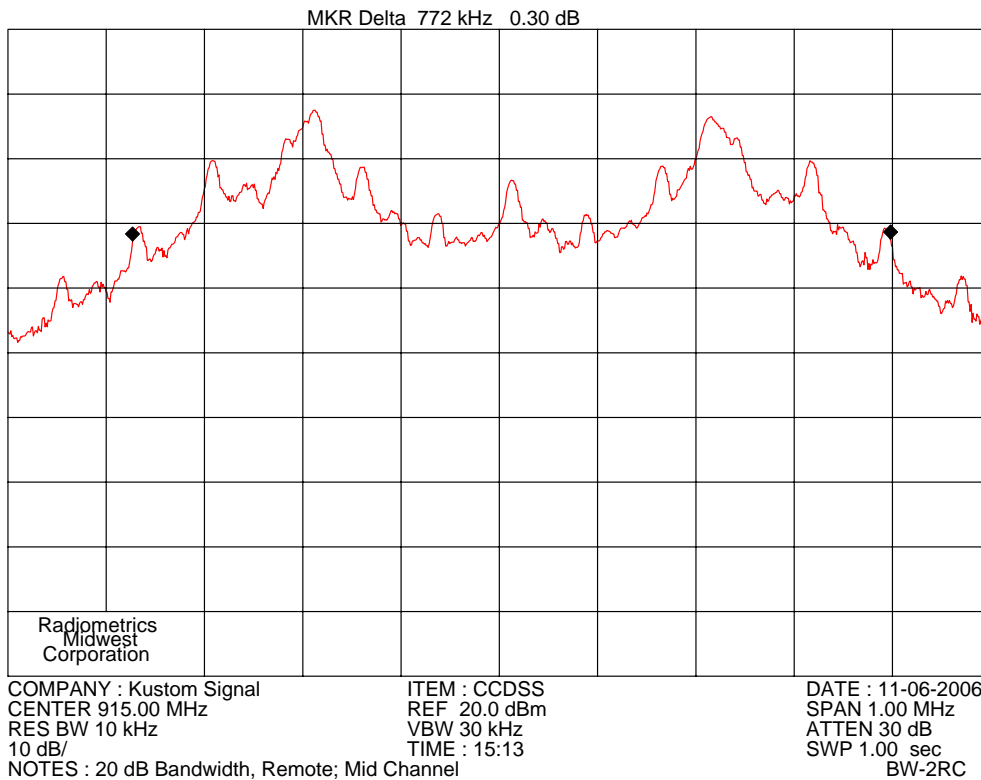
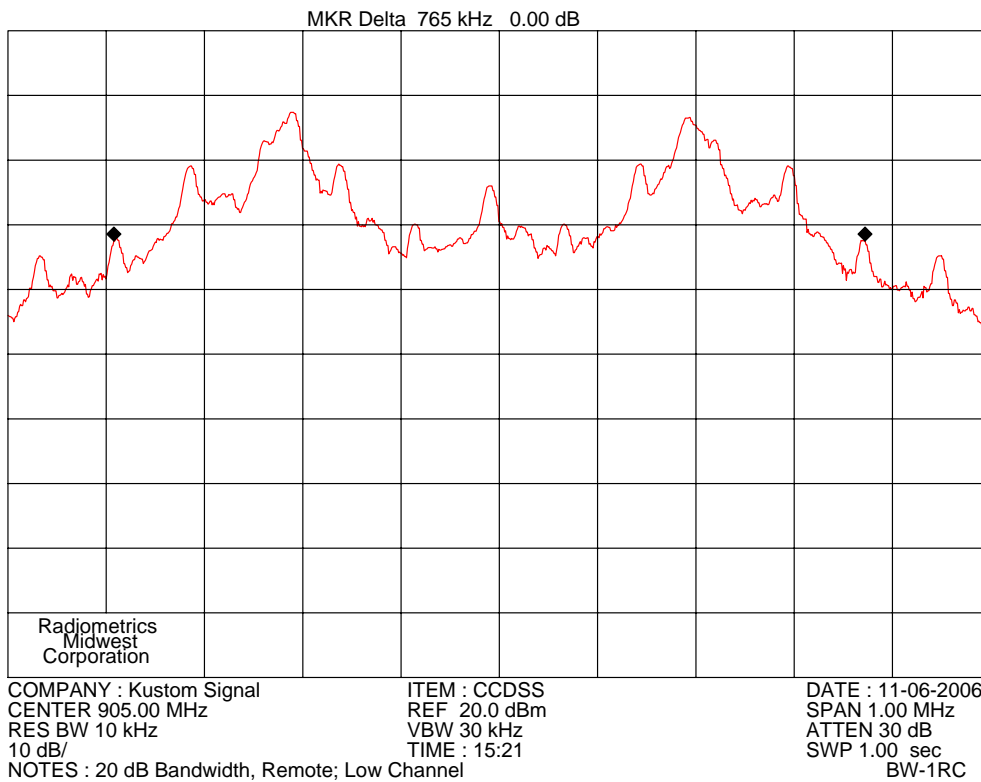
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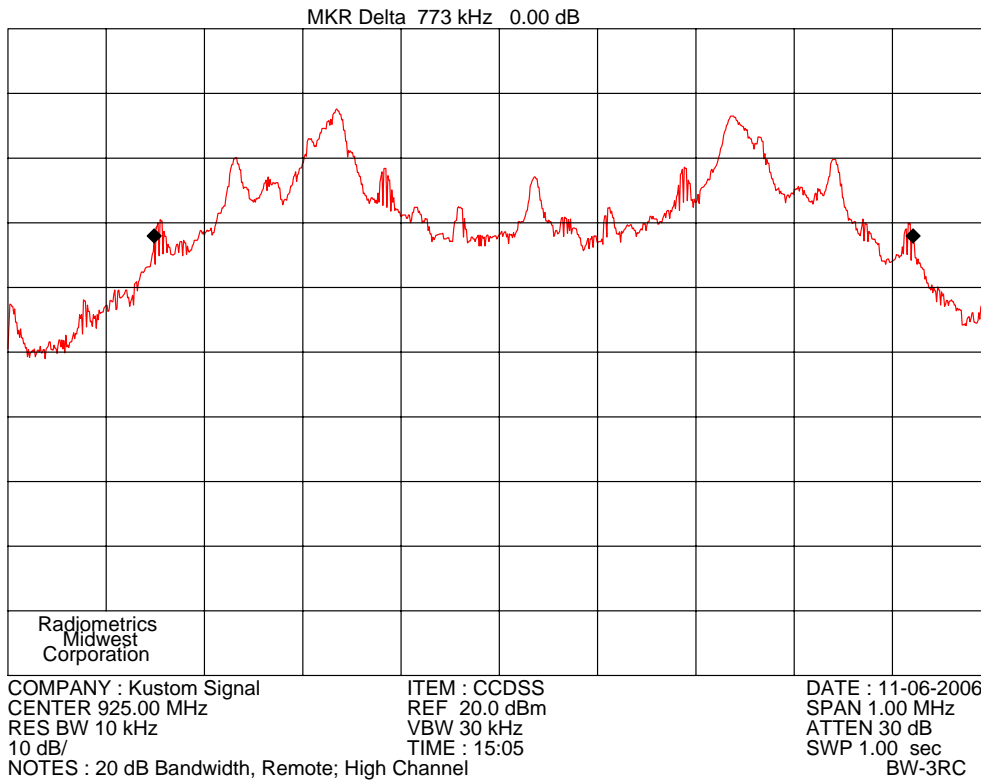
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Judgement: Pass

10.2 Peak Output Power

The power output option 1 from FCC rules 558074 was used for this test. The spectrum analyzer was set to the following settings:

Span = 2 MHz
 RBW = 1 MHz
 VBW = 3 MHz
 Sweep = auto
 Detector function = peak
 Trace = max hold

The trace was allowed to stabilize. The marker-to-peak function was used to measure the peak of the emission. The indicated level is the peak output power. The BW correction factor is $10 \cdot \log(BW)$.
 Note 30 dBm = 1 watt. Since the gain of the antenna is always less than 6dB, the limit is not reduced.

EUT	Frequency (MHz)	Reading (dBm)	Cable Loss (dB)	Total Power (dBm)		Limit (dBm)
				dBm	Watts	
BASE	905	9.0	0.1	9.1	0.00813	30
BASE	915	9.2	0.1	9.3	0.00851	30
BASE	925	9.2	0.1	9.3	0.00851	30
Remote	905	9.3	0.1	9.4	0.00871	30
Remote	915	9.5	0.1	9.6	0.00912	30
Remote	925	9.2	0.1	9.3	0.00851	30

Judgement: Pass by 20.4 dB

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10.3 Power Spectral Density

PSD option 1 was used for this test. No external attenuator was used. The spectrum analyzer was set to the following settings:

Span = 500 kHz

RBW = 3 kHz

VBW = 10 kHz

Sweep = 167 seconds

Detector function = Peak

EUT	Frequency (MHz)	Reading dBm	Cable Loss (dB)	3 kHz Spectral Density (dBm)	Limit (dBm)
Base	905	2.1	0.1	2.2	8.0
Base	915	2.2	0.1	2.3	8.0
Base	925	2.1	0.1	2.2	8.0
Remote	905	2.3	0.1	2.4	8.0
Remote	915	2.6	0.1	2.7	8.0
Remote	925	2.8	0.1	2.9	8.0

Judgement: Pass by 5.1 dB

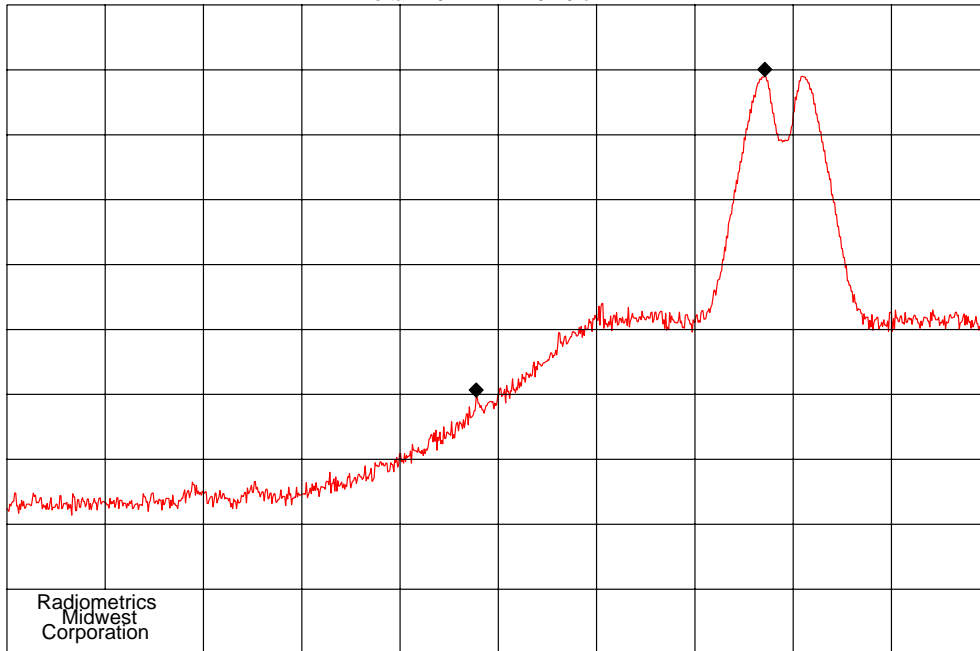
10.4 Band-edge Compliance of RF Conducted Emissions

The spectrum analyzer was set to the MAX HOLD mode to record the worst case of the modulation at the band-edge, with the EUT set to the lowest frequency. The trace was allowed to stabilize. The band edge shall be at least 20 dB from the level of the peak of the carrier.

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MKR Delta -2.94 MHz -49.40 dB



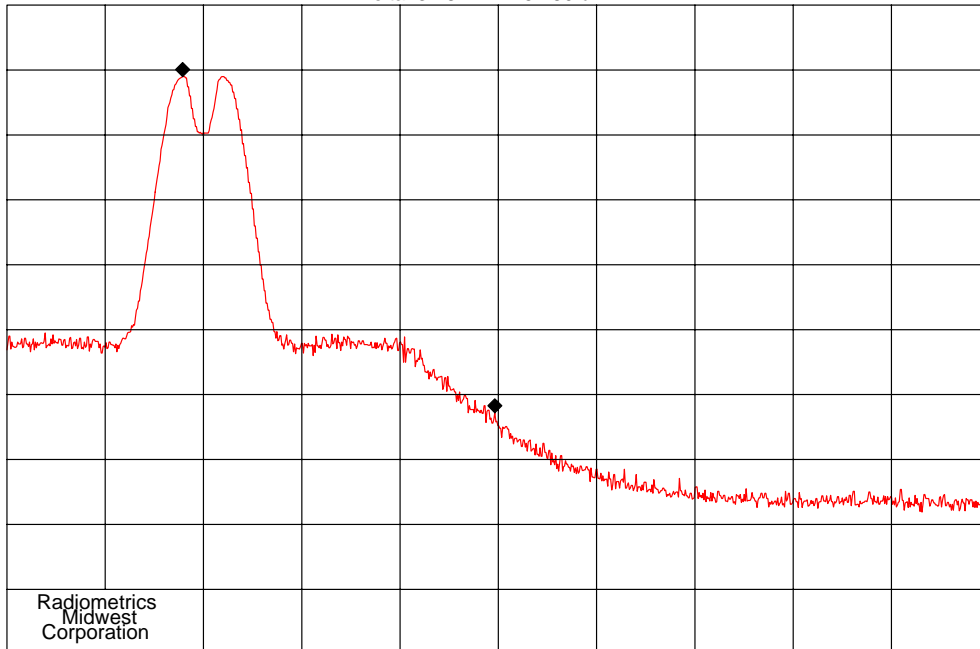
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COMPANY : Kustom Signal
CENTER 902.0 MHz
RES BW 100 kHz
10 dB/
NOTES : Lower Band edge, Remote

ITEM : CCDSS
REF 20.0 dBm
VBW 300 kHz
TIME : 15:24

DATE : 11-06-2006
SPAN 10.0 MHz
ATTEN 30 dB
SWP 1.00 sec
BE-R1

MKR Delta 3.18 MHz -51.80 dB



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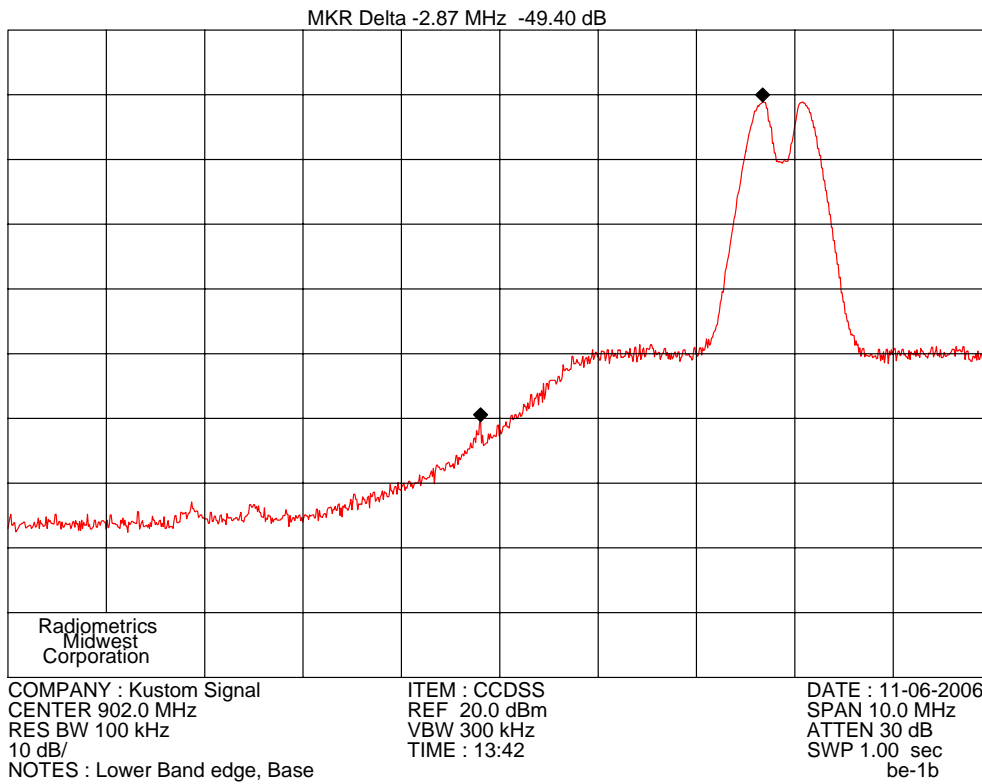
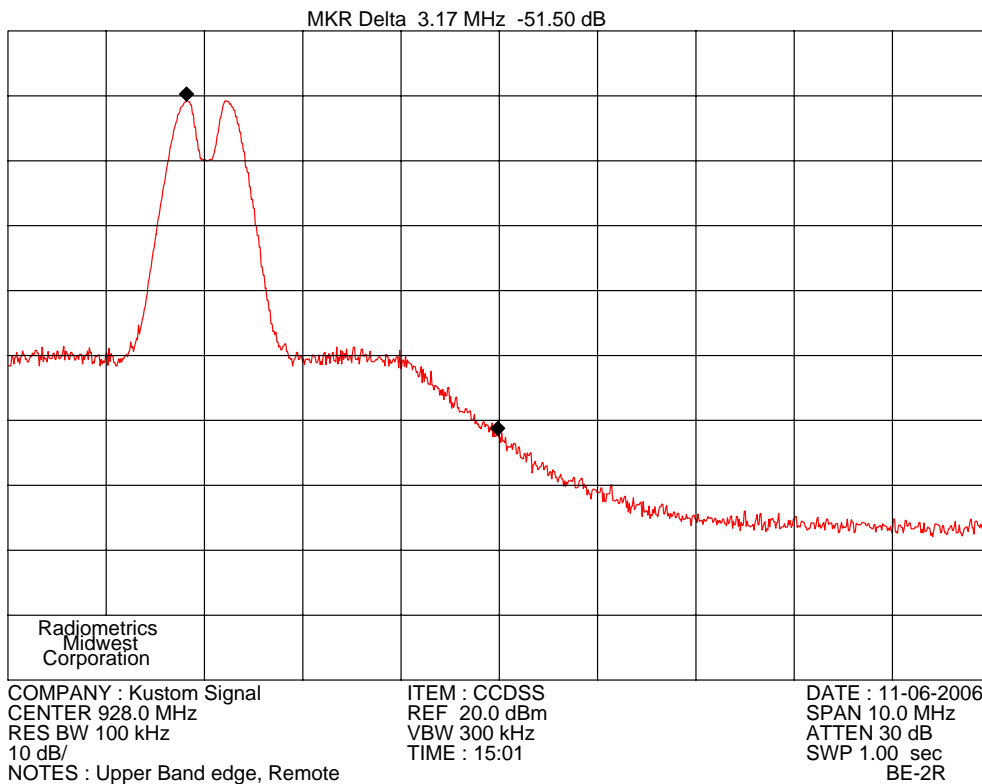
COMPANY : Kustom Signal
CENTER 928.0 MHz
RES BW 100 kHz
10 dB/
NOTES : Upper Band edge, Base

ITEM : CCDSS
REF 20.0 dBm
VBW 300 kHz
TIME : 13:43

DATE : 11-06-2006
SPAN 10.0 MHz
ATTEN 30 dB
SWP 1.00 sec
be-2b

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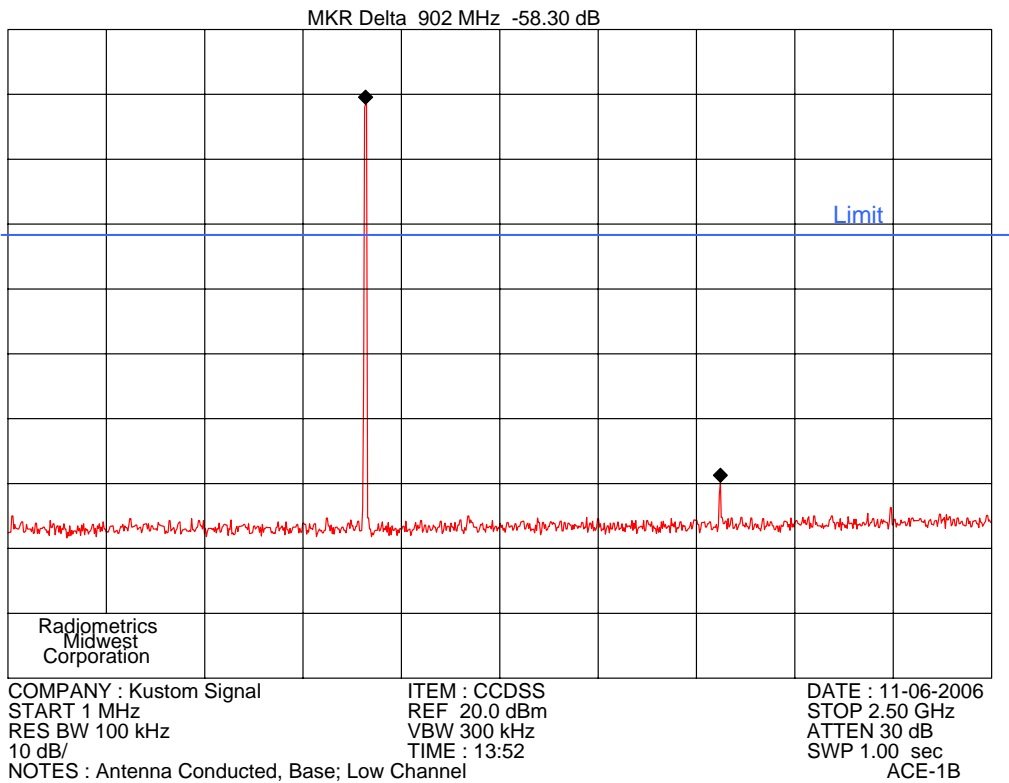
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Pass by 29 dB

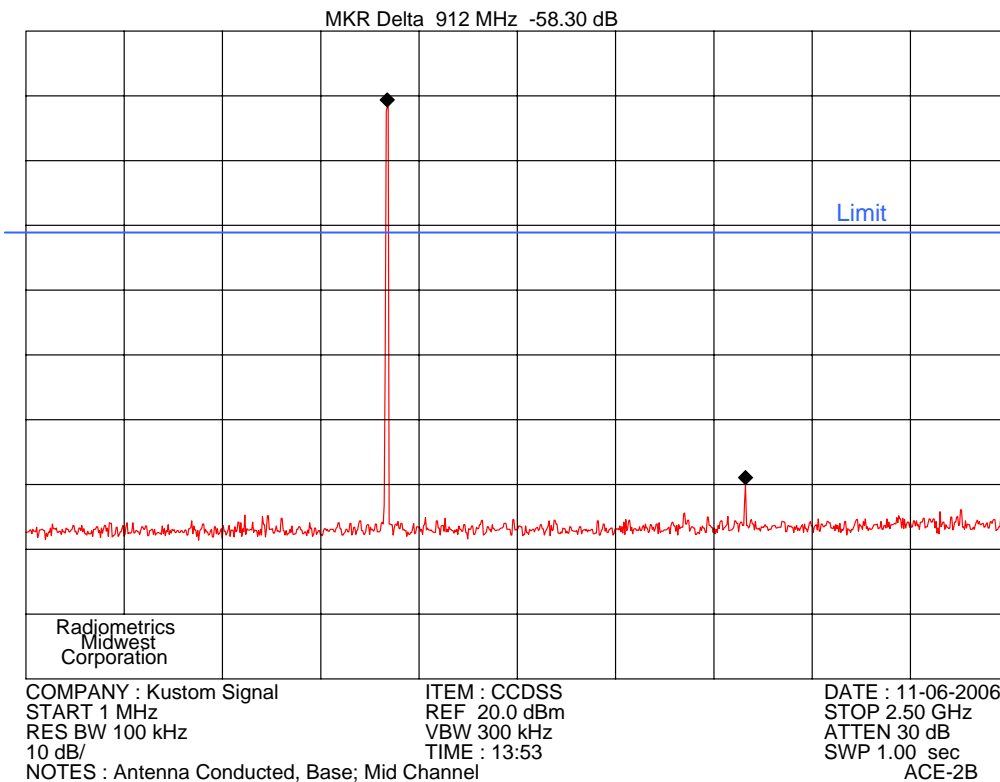
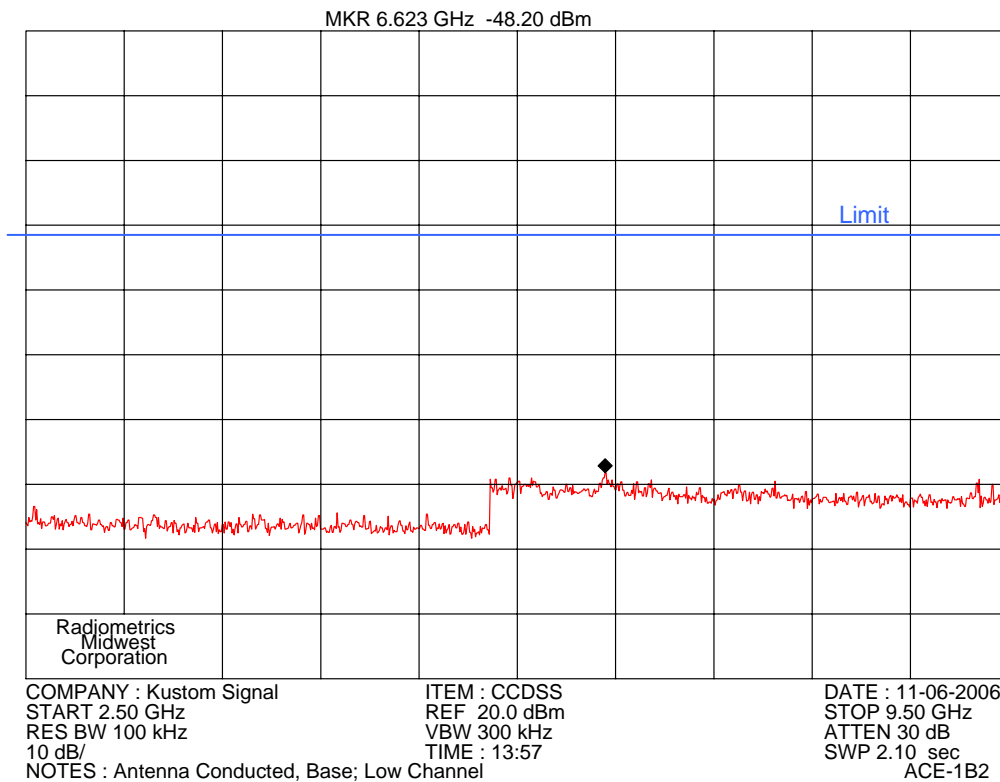
10.5 Spurious RF Conducted Emissions

The spectrum analyzer was set to the MAX HOLD mode to record all spurious emissions from the lowest frequency generated in the EUT up through the 10th harmonic. The trace was allowed to stabilize. The first two plots were made while stepping through three frequencies (Low middle and high). Each frequency was on for 30 seconds.



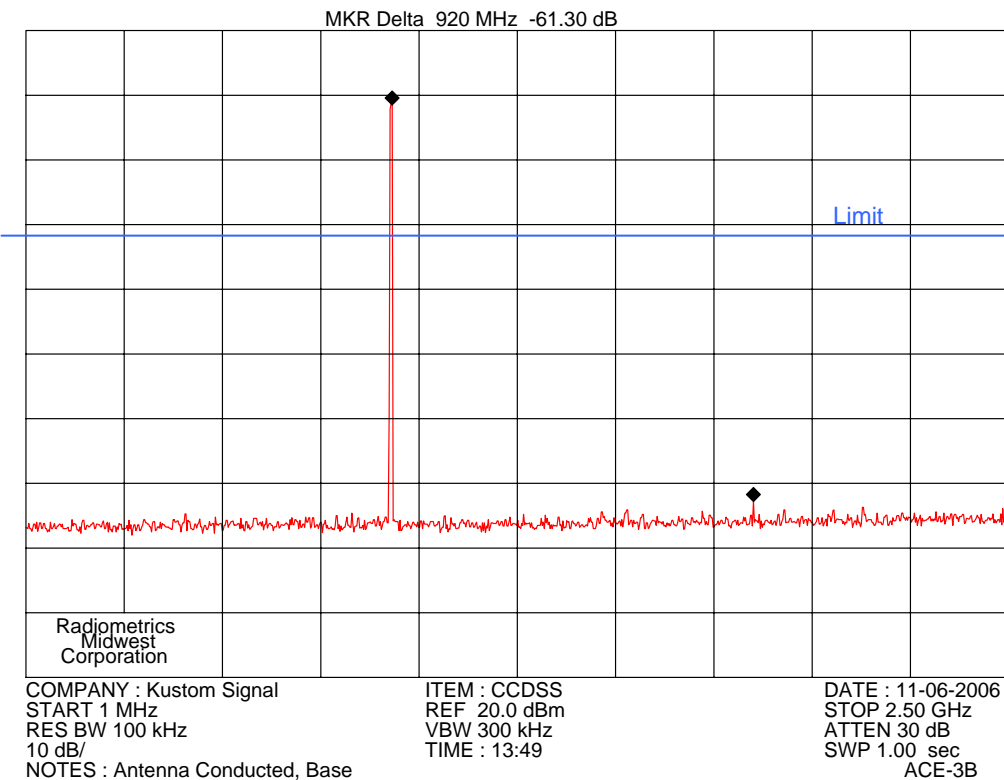
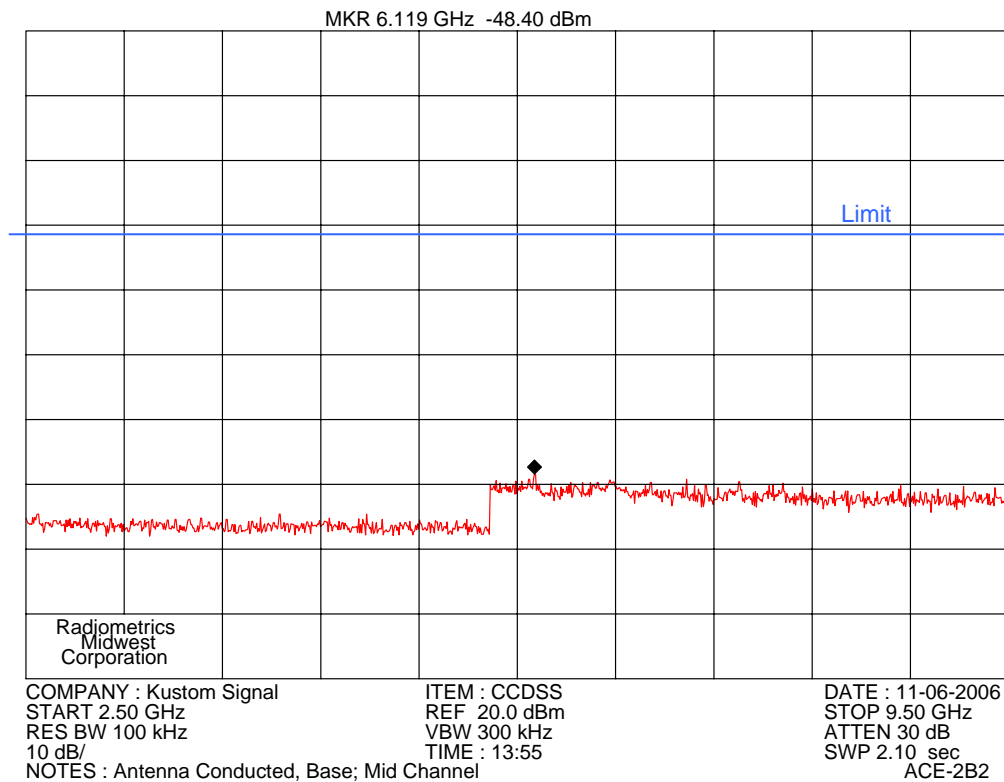
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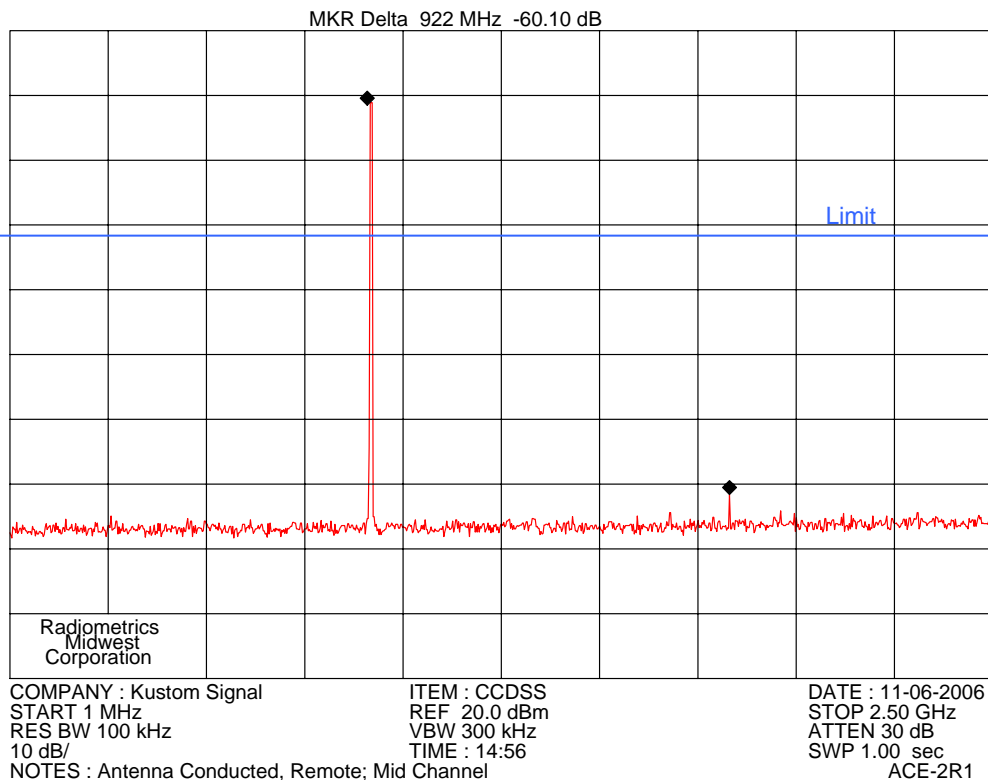
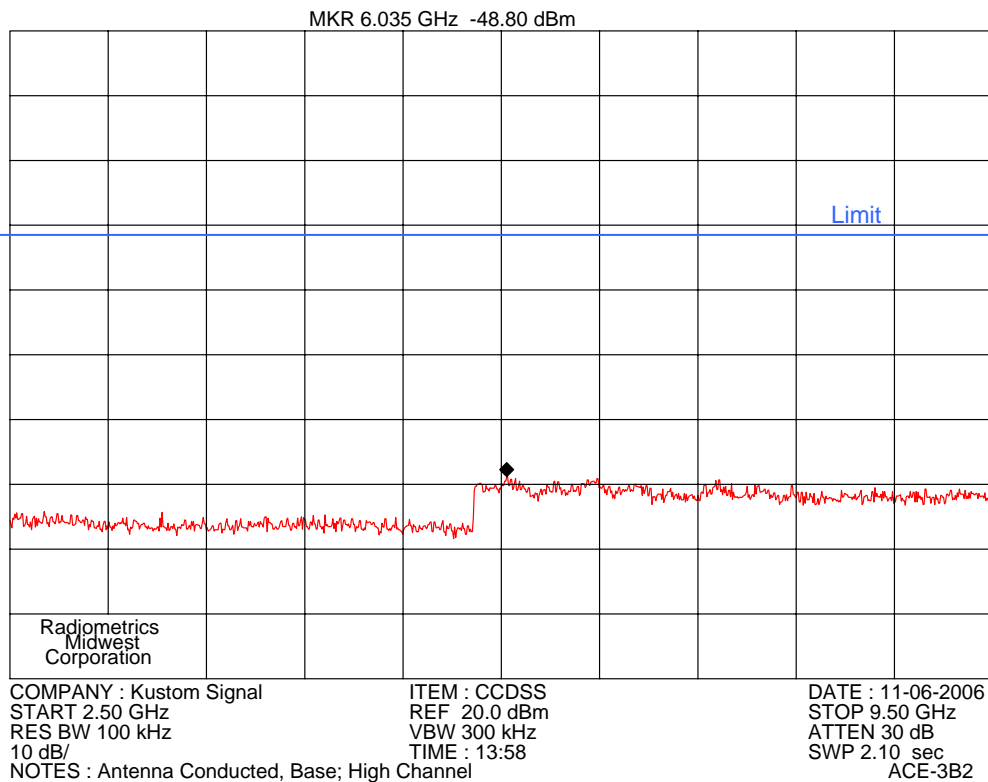
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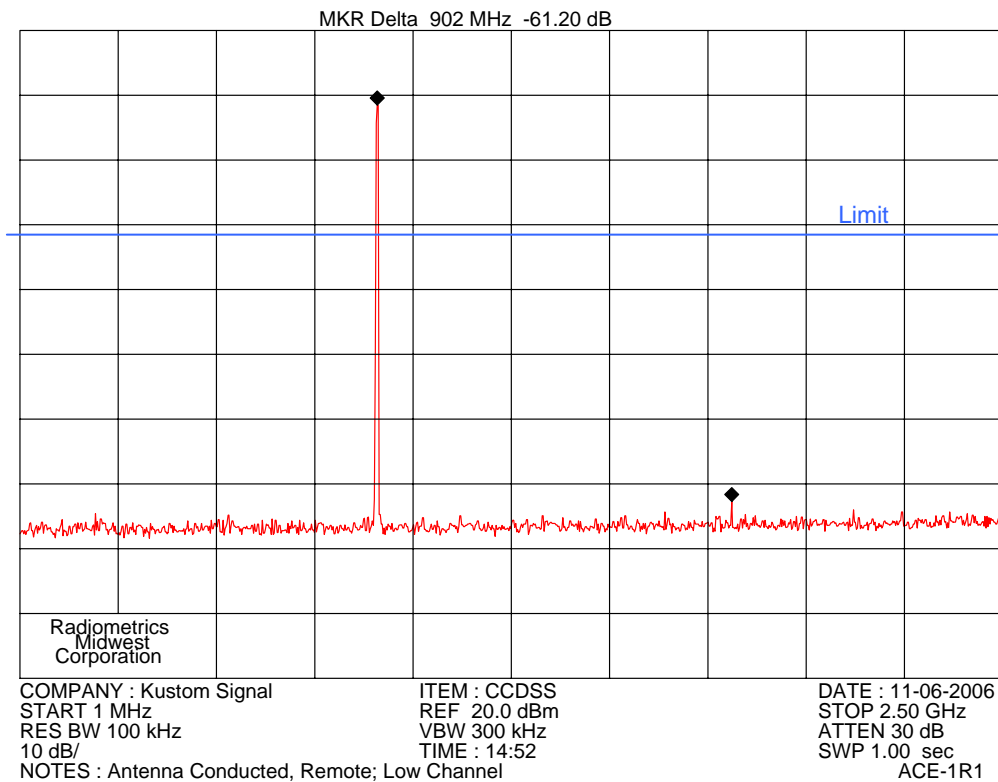
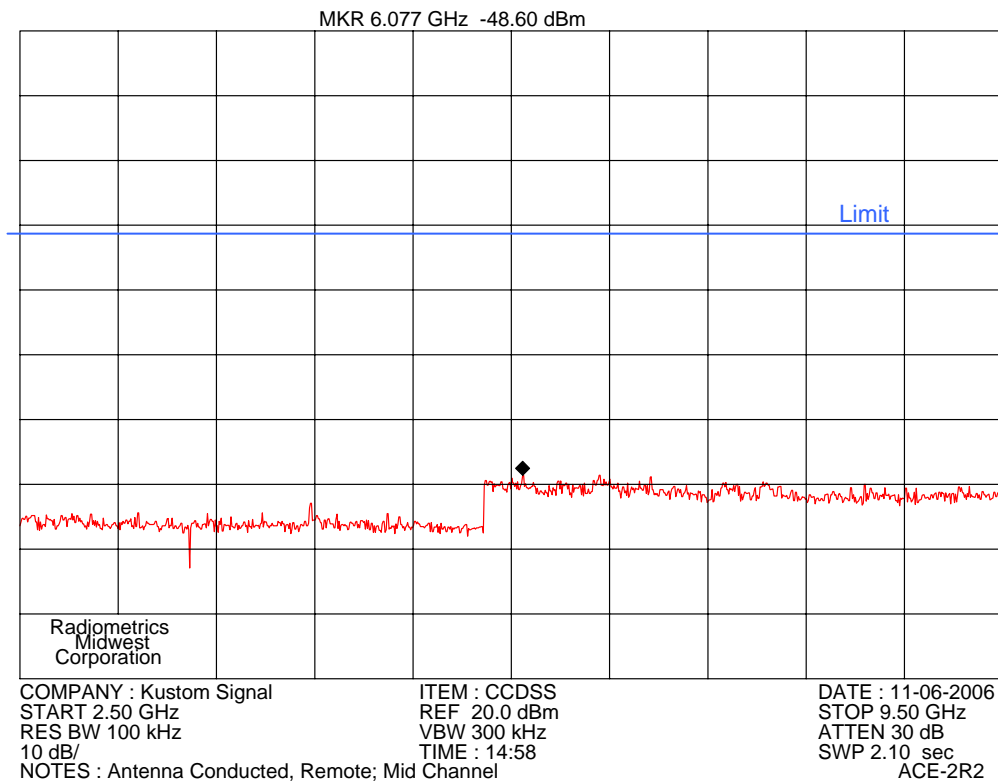
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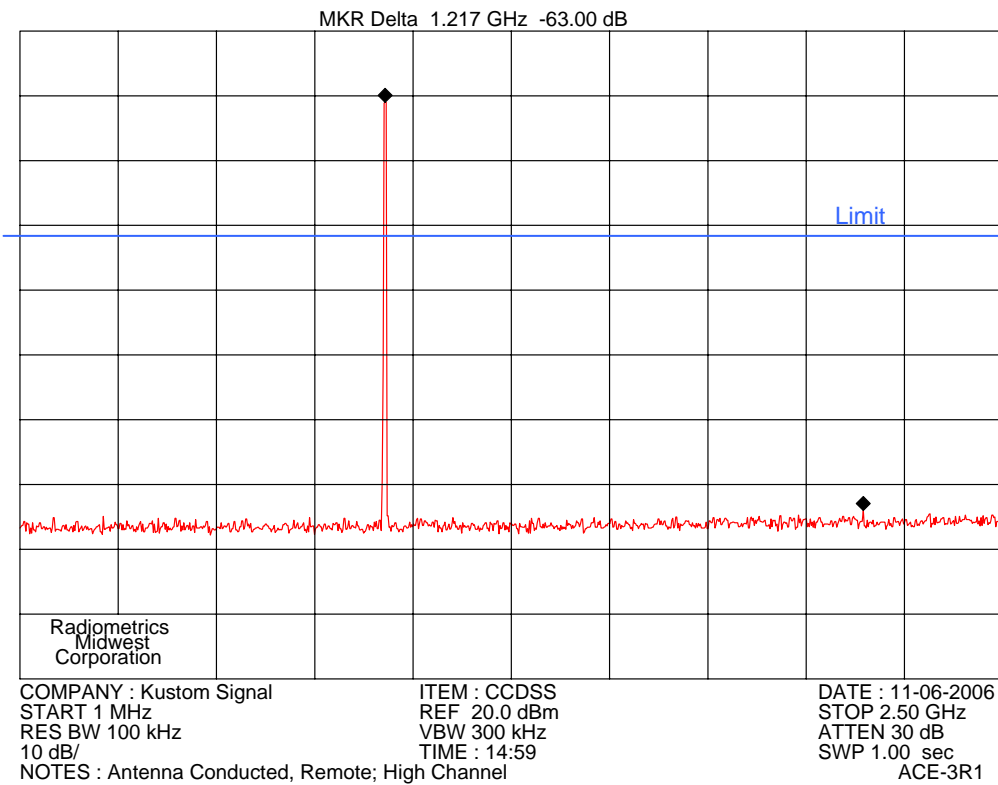
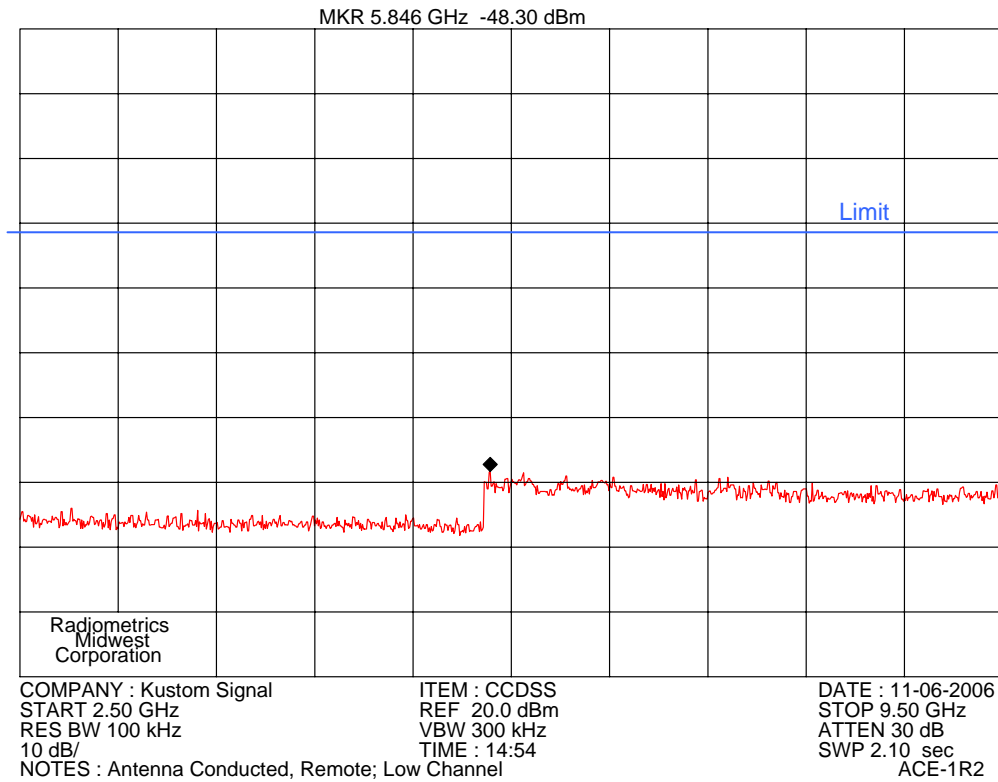
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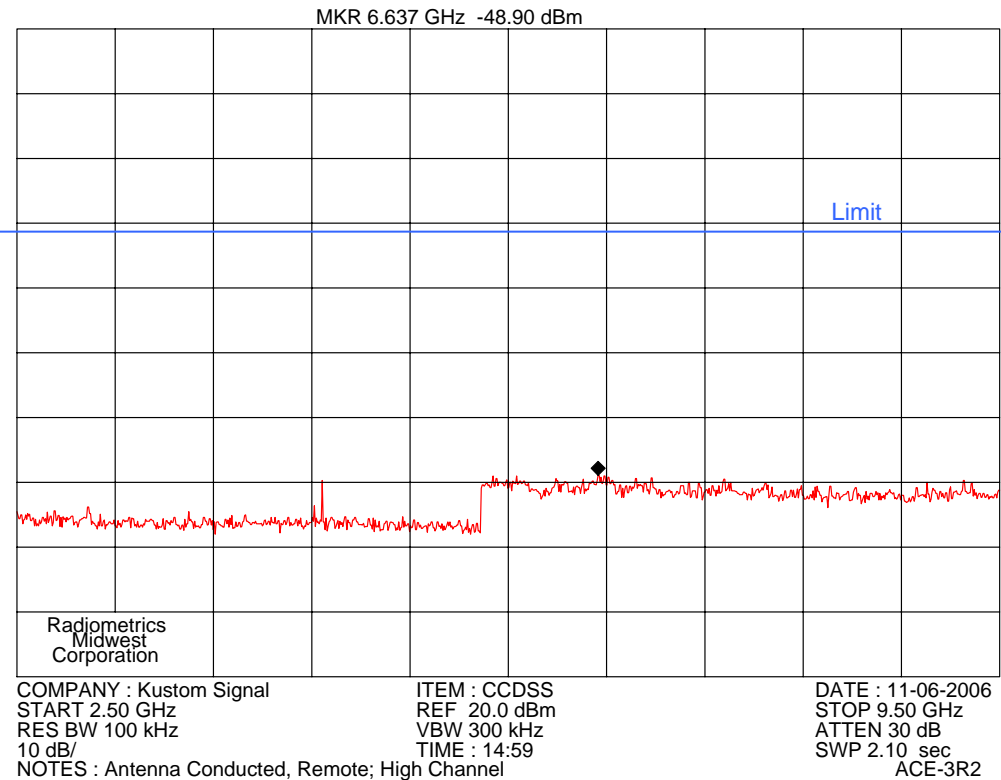
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Judgement: Pass by at least 20 dB

10.6 Spurious Radiated Emissions (Restricted Band)

Radiated emission measurements in the Restricted bands were performed with linearly polarized broadband antennas. The results obtained with these antennas can be correlated with results obtained with a tuned dipole antenna. Below 1 GHz, when a radiated emission is detected approaching the specification limit, the measurement of the emission is repeated using a tuned dipole antenna with a Roberts Balun. A 10 dB linearity check is performed prior to start of testing in order to determine if an overload condition exists. Measurements were performed using two antenna polarizations, (vertical and horizontal). The worst case emissions were recorded.

From 30 to 1000 MHz, an Anritsu Spectrum analyzer and a preamplifier with a 10 dB attenuator connected to the input were used. The out of band emissions and the ambient emissions were below the level of input overload (80 dBuV).

For tests from 1 to 9300 GHz, an HP8566 spectrum analyzer was used with a preamplifier. The out of band emissions and the ambient emissions were below the level of input overload (72 dBuV). In addition, a high pass filter was used to reduce the fundamental emission.

Final radiated emissions measurements were performed in the open area test site at a test distance of 3 meters. The entire frequency range from 30 to 9300 MHz was slowly scanned and the emissions in the restricted frequency bands were recorded. Measurements were performed using the peak detector function. The detected emission levels were maximized by rotating the EUT, adjusting the positions of all cables, and by scanning the measurement antenna from 1 to 4 meters above the ground. The open area test site used to collect the radiated data is located on 8625 Helmar Road in Newark, Illinois. The open field test site has a metal ground screen. All other tests are performed at 12 East Devonwood Ave. Romeoville, Illinois EMI test lab.

The was device was rotated through three orthogonal axis as per 13.1.4.1 of ANSI C63.4 during the prescans and during final radiated tests.

10.6.1 Radiated Emissions Field Strength Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and by subtracting the Amplifier Gain from the measured reading. The basic equation is as follows:

$$FS = RA + AF + CF - AG$$

Where: FS = Field Strength

RA = Receiver Amplitude

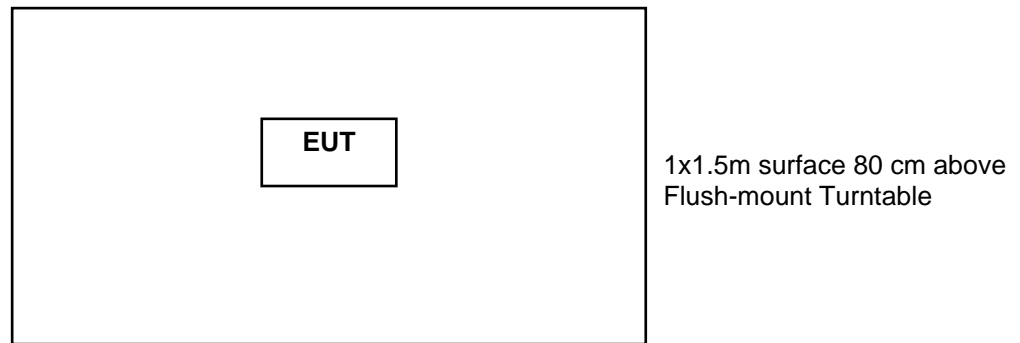
AF = Antenna Factor

CF = Cable Attenuation Factor

AG = Amplifier Gain

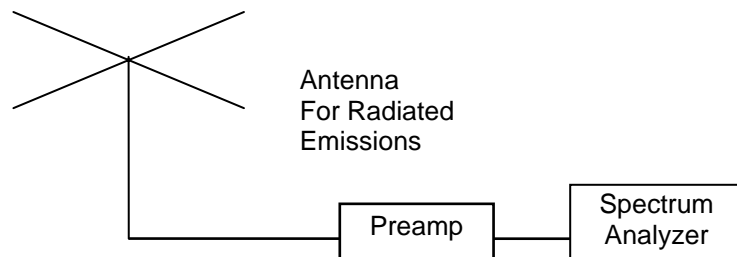
HPF = High pass Filter Loss

Figure 1. Drawing of Radiated Emissions Setup



Notes:

- AC outlet with low-pass filter at the base of the turntable
- Antenna height varied from 1 to 4 meters
- Distance from antenna to tested system is 3 meters
- Not to Scale



10.6.2 Spurious Radiated Emissions Test Results (Restricted Band)

The following spectrum analyzer settings were used.

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

A Video Bandwidth of 10 Hz was used for Average measurements above 1 GHz.

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Manufacturer	Kustom Signals, Inc.	Specification	FCC Part 15 Subpart C & RSS-210
Model	CCDSS	Test Date	November 2 and 3, 2006
Serial Number	none	Test Distance	3 Meters
Abbreviations	Pol = Antenna Polarization; V = Vertical; H = Horizontal; BC = Biconical (ANT-3); LP = Log-Periodic (ANT-6); HN = Horn (ANT-13) P = peak; Q = QP		
Notes	Corr. Factors = Cable Loss – Preamp Gain – Duty Cycle Factor + HP Filter Loss		

Emissions above 1 GHz (BASE)

Hrm #	Tx Freq	Ant Pol.	Base Peak Ave Analyzer RDG dBuV		Corr . Fact. dB	EUT Emission Freq MHz	Field Strength from EUT Peak Ave dBuV/m		Field Strength Limit Peak Ave dBuV/m		Margin Under Limit dB
			Peak	Ave			Peak	Ave	Peak	Ave	
3	905	V	41.7	20.9	5.3	2715	47.0	26.2	74.0	54.0	27.0
3	905	H	41.5	20.4	5.3	2715	46.8	25.7	74.0	54.0	27.2
4	905	V	37.2	20.9	8.0	3620	45.2	28.9	74.0	54.0	25.1
4	905	H	39.6	20.4	8.0	3620	47.6	28.4	74.0	54.0	25.6
5	905	V	36.0	21.0	10.6	4525	46.6	31.6	74.0	54.0	22.4
5	905	H	42.7	24.7	10.6	4525	53.3	35.3	74.0	54.0	18.7
6	905	V	37.0	20.4	11.5	5430	48.5	31.9	74.0	54.0	22.1
6	905	H	35.0	20.2	11.5	5430	46.5	31.7	74.0	54.0	22.3
3	915	V	46.2	27.5	5.1	2745	51.3	32.6	74.0	54.0	21.4
3	915	H	46.1	27.9	5.1	2745	51.2	33.0	74.0	54.0	21.0
4	915	V	54.1	35.3	8.1	3660	62.2	43.4	74.0	54.0	10.6
4	915	H	49.8	31.2	8.1	3660	57.9	39.3	74.0	54.0	14.7
5	915	V	40.4	20.5	10.6	4575	51.0	31.1	74.0	54.0	22.9
5	915	H	48.3	30.1	10.6	4575	58.9	40.7	74.0	54.0	13.3
6	915	V	35.7	20.8	11.7	5490	47.4	32.5	74.0	54.0	21.5
6	915	H	42.1	20.2	11.7	5490	53.8	31.9	74.0	54.0	20.2
7	915	V	34.2	20.7	12.5	6405	46.7	33.2	74.0	54.0	20.8
7	915	H	34.0	20.6	12.5	6405	46.5	33.1	74.0	54.0	20.9
3	925	V	45.5	26.6	4.8	2775	50.3	31.4	74.0	54.0	22.6
3	925	H	43.1	25.0	4.8	2775	47.9	29.8	74.0	54.0	24.2
4	925	V	41.3	20.5	8.2	3700	49.5	28.7	74.0	54.0	24.5
4	925	H	42.9	24.1	8.2	3700	51.1	32.3	74.0	54.0	21.7
5	925	V	40.4	20.4	10.5	4625	50.9	30.9	74.0	54.0	23.1
5	925	H	39.6	20.8	10.5	4625	50.1	31.3	74.0	54.0	22.7
6	925	V	36.0	20.8	11.7	5550	47.7	32.5	74.0	54.0	21.5
6	925	H	36.0	20.2	11.7	5550	47.7	31.9	74.0	54.0	22.1

Judgement Pass by 10.6 dB

- Notes: 1. hrm = Harmonic; BE = Band Edge emissions; V = Vertical; H = Horizontal
2. The margin (last column) is the worst case margin under the peak or average limits for that row.
3. Corr. Factors = Cable Loss – Preamp Gain + Antenna Factor

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Emissions above 1 GHz (REMOTE)

Hrm #	Tx Freq	Ant Pol.	Remote Peak Ave Analyzer RDG dBuV		Corr . Fact. dB	EUT Emission Freq MHz	Field Strength from EUT Peak Ave dBuV/m		Field Strength Limit Peak Ave dBuV/m		Margin Under Limit dB
			Peak	Ave			Peak	Ave	Peak	Ave	
3	905	V	51.2	44.7	5.3	2715	56.5	50.0	74.0	54.0	4.0
3	905	H	43.1	36.6	5.3	2715	48.4	41.9	74.0	54.0	12.1
4	905	V	42.0	35.5	8.0	3620	50.0	43.5	74.0	54.0	10.5
4	905	H	41.2	35.0	8.0	3620	49.2	43.0	74.0	54.0	11.0
5	905	V	41.8	35.4	10.6	4525	52.4	46.0	74.0	54.0	8.0
5	905	H	41.2	35.3	10.6	4525	51.8	45.9	74.0	54.0	8.1
6	905	V	36.0	29.6	11.5	5430	47.5	41.1	74.0	54.0	12.9
6	905	H	35.0	28.9	11.5	5430	46.5	40.4	74.0	54.0	13.6
7	905	V	36.0	30.0	12.8	6335	48.8	42.8	74.0	54.0	11.2
7	905	H	38.6	32.3	12.8	6335	51.4	45.1	74.0	54.0	8.9
3	915	V	46.1	40.0	5.1	2745	48.6	45.1	74.0	54.0	8.9
3	915	H	41.2	34.6	5.1	2745	45.7	39.7	74.0	54.0	14.3
4	915	V	44.9	39.0	8.1	3660	52.2	47.1	74.0	54.0	6.9
4	915	H	43.5	36.9	8.1	3660	49.7	45.0	74.0	54.0	9.0
5	915	V	44.7	38.6	10.6	4575	53.8	49.2	74.0	54.0	4.8
5	915	H	44.8	38.2	10.6	4575	55.4	48.8	74.0	54.0	5.2
6	915	V	38.5	32.6	11.7	5490	49.2	44.3	74.0	54.0	9.7
6	915	H	36.0	29.3	11.7	5490	46.7	41.0	74.0	54.0	13.0
7	915	V	38.9	32.3	12.5	6405	51.4	44.8	74.0	54.0	9.2
7	915	H	34.0	28.3	12.5	6405	46.5	40.8	74.0	54.0	13.2
3	925	V	51.5	45.4	4.8	2775	51.9	50.2	74.0	54.0	3.8
3	925	H	44.3	38.0	4.8	2775	48.0	42.8	74.0	54.0	11.2
4	925	V	45.9	39.3	8.2	3700	54.1	47.5	74.0	54.0	6.5
4	925	H	43.1	36.9	8.2	3700	50.5	45.1	74.0	54.0	8.9
5	925	V	43.9	38.1	10.5	4625	54.4	48.6	74.0	54.0	5.4
5	925	H	46.1	39.9	10.5	4625	56.6	50.4	74.0	54.0	3.6
6	925	V	36.0	29.6	11.7	5550	45.7	41.3	74.0	54.0	12.7
6	925	H	37.2	31.1	11.7	5550	48.9	42.8	74.0	54.0	11.2

Judgement Pass by 3.6 dB

Emissions Below 1 GHz (Base)

Freq. MHz	Meter Reading (dBuV)	Antenna		Corr. Factors (dB)	Field Strength (dBuV/m)		Margin Under Limit (dB)
		Factor (dB)	Pol/ Type		EUT	Limit	
48.0	29.1 P	17.1	H/44	-17.4	28.9	40.0	11.1
143.6	42.0 P	6.8	H/44	-16.2	32.6	43.5	10.9
171.4	31.8 P	9.0	H/44	-15.9	24.9	43.5	18.6
194.2	34.4 P	10.4	H/44	-15.7	29.1	43.5	14.4
249.9	32.8 P	12.9	H/44	-15.3	30.4	46.0	15.6
256.5	30.9 P	12.5	H/44	-15.3	28.1	46.0	17.9
263.3	32.6 P	13.0	H/44	-15.2	30.4	46.0	15.6
276.3	31.6 P	13.7	H/44	-15.2	30.1	46.0	15.9
278.7	33.8 P	13.8	H/44	-15.2	32.4	46.0	13.6

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Freq. MHz	Meter Reading (dBuV)	Antenna		Corr. Factors (dB)	Field Strength (dBuV/m)		Margin Under Limit (dB)
		Factor (dB)	Pol/ Type		EUT	Limit	
296.1	30.5 P	14.2	H/44	-15.0	29.7	46.0	16.3
325.4	28.8 P	14.2	H/44	-14.8	28.2	46.0	17.8
375.8	27.8 P	15.9	H/44	-14.6	29.1	46.0	16.9
37.7	31.0 P	15.6	V/44	-17.6	29.0	40.0	11.0
48.0	31.7 P	14.5	V/44	-17.4	28.8	40.0	11.2
127.6	32.9 P	10.3	V/44	-16.3	26.9	43.5	16.6
131.9	33.1 P	10.1	V/44	-16.2	26.9	43.5	16.6
132.6	35.3 P	10.1	V/44	-16.2	29.2	43.5	14.3
137.8	38.3 P	8.9	V/44	-16.2	30.9	43.5	12.6
143.8	43.6 Q	6.9	V/44	-16.2	34.4	43.5	9.1
146.4	44.6 P	6.7	V/44	-16.1	35.1	43.5	8.4
147.8	46.6 P	7.0	V/44	-16.1	37.4	43.5	6.1
164.0	38.6 P	12.5	V/44	-16.0	35.1	43.5	8.4
172.2	41.5 P	10.5	V/44	-15.9	36.1	43.5	7.4
185.2	34.7 P	9.8	V/44	-15.8	28.7	43.5	14.8
189.0	38.0 P	9.9	V/44	-15.8	32.2	43.5	11.3
199.4	37.4 P	10.5	V/44	-15.7	32.2	43.5	11.3
204.7	36.6 P	10.5	V/44	-15.7	31.4	43.5	12.1
212.0	36.3 P	11.2	V/44	-15.6	31.9	43.5	11.6
273.9	34.7 P	13.0	V/44	-15.2	32.5	46.0	13.5
284.9	34.5 P	12.7	V/44	-15.1	32.0	46.0	14.0
289.1	34.2 P	12.9	V/44	-15.1	32.0	46.0	14.0
309.7	31.2 P	14.0	V/44	-14.9	30.3	46.0	15.7

Judgment: Passed by 6.1 dB

Emissions Below 1 GHz (Remote)

Freq. MHz	Meter Reading (dBuV)	Antenna		Corr. Factors (dB)	Field Strength (dBuV/m)		Margin Under Limit (dB)
		Factor (dB)	Pol/ Type		EUT	Limit	
186.8	34.7 P	10.0	H/44	-15.8	28.9	43.5	14.6
294.0	35.8 P	14.1	H/44	-15.0	34.8	46.0	11.2
94.0	31.7 P	8.9	V/44	-16.7	23.9	43.5	19.6
211.6	33.0 P	11.1	V/44	-15.6	28.5	43.5	15.0
216.4	31.9 P	11.5	V/44	-15.6	27.8	46.0	18.2
289.2	31.7 P	12.9	V/44	-15.1	29.5	46.0	16.5

Judgment: Passed by 11.2 dB

No other emissions were detected in the restricted bands.