RADIATED SPURIOUS EMISSIONS PORTIONS OF FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

DUAL BAND CDMA WITH BLUETOOTH

MODEL NUMBER: SCP3810

FCC ID: V65SCP-3810

REPORT NUMBER: 09U12612-1

ISSUE DATE: JUNE 01, 2009

Prepared for
KYOCERA-SANYO TELECOM, INC.
6800 COLLEGE BLVD. #620
OVERLAND PARK, KS 66211

Prepared by
COMPLIANCE CERTIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	06/01/09	Initial Issue	T. Chan

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA-SANYO TELECOM, INC.
6800 COLLEGE BLVD. #620
OVERLAND PARK, KS 66211

EUT DESCRIPTION: DUAL BAND CDMA CELL PHONE WITH BLUETOOTH

MODEL: SCP3810

SERIAL NUMBER: 3810E017

DATE TESTED: MAY 27 - 29, 2009

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
Radiated emissions portions of CFR 47 Part 15 Subpart C	Pass

Compliance Certification Services, Inc. (CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For CCS By:

THU CHAN
EMC MANAGER
COMPLIANCE CERTIFICATION SERVICES

Tested By:

VIEN TRAN
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2, and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a dual band CDMA cell phone with Bluetooth. The radio module is manufactured by Sanyo Co.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an internal antenna, with a maximum gain of -0.5dBi.

5.3. SOFTWARE AND FIRMWARE

The EUT driver and utility software installed in the host support equipment during testing was StarGraphitePassThru, rev. 1.0.0.1 and CSR Blue Suite (BtCliCtrl), rev. 2.0.0.0.

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT has been evaluated at X, Y, Z-axis, and AC/DC adapter. The highest measured output power was at X-Axis with AC/DC adapter and flip open condition.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC/DC Adapter	Sanyo	SCP-20ADT	N/A	DoC
Earphone	N/A	N/A	N/A	N/A

I/O CABLES

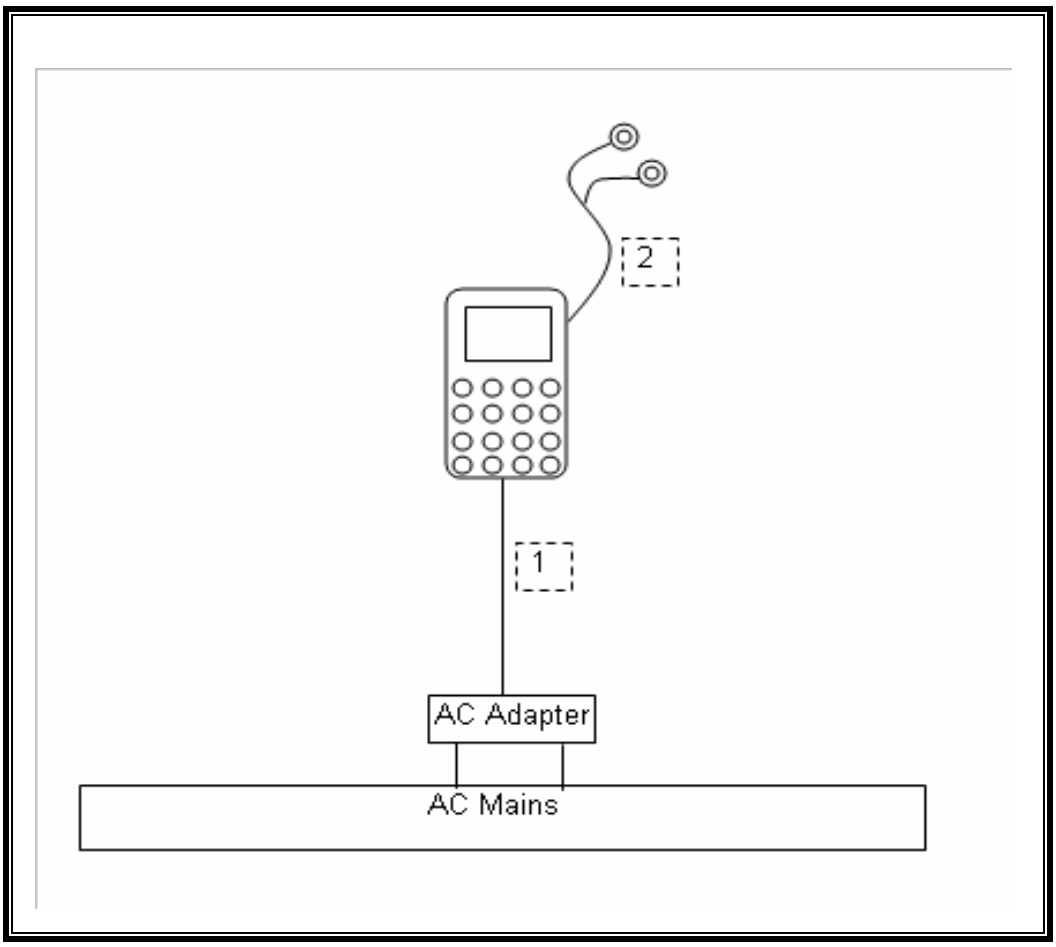
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US115	Un-Shielded	2.0 m	N/A
2	Jack	1	Earphone	Un-shielded	1.0m	N/A

TEST SETUP

EUT is tested as standalone device.

.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

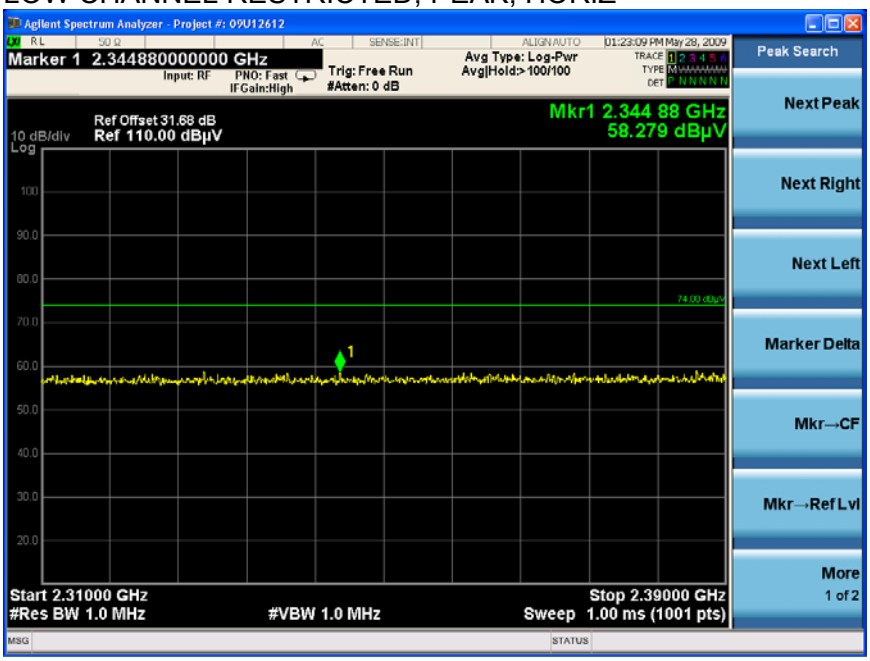
TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer 26.5 GHz	Agilent / HP	N9020A	C01179	10/23/09
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	01/05/10
Antenna, Horn, 18 GHz	EMCO	3115	C00945	04/22/10
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	02/04/10
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	01/14/10
Highpass Filter, 4.0 GHz	Micro-Tronics	HPM13351	N02706	CNR
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	N02481	10/29/09
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	10/29/09
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/06/09
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00885	12/16/09

7. RADIATED TEST RESULTS

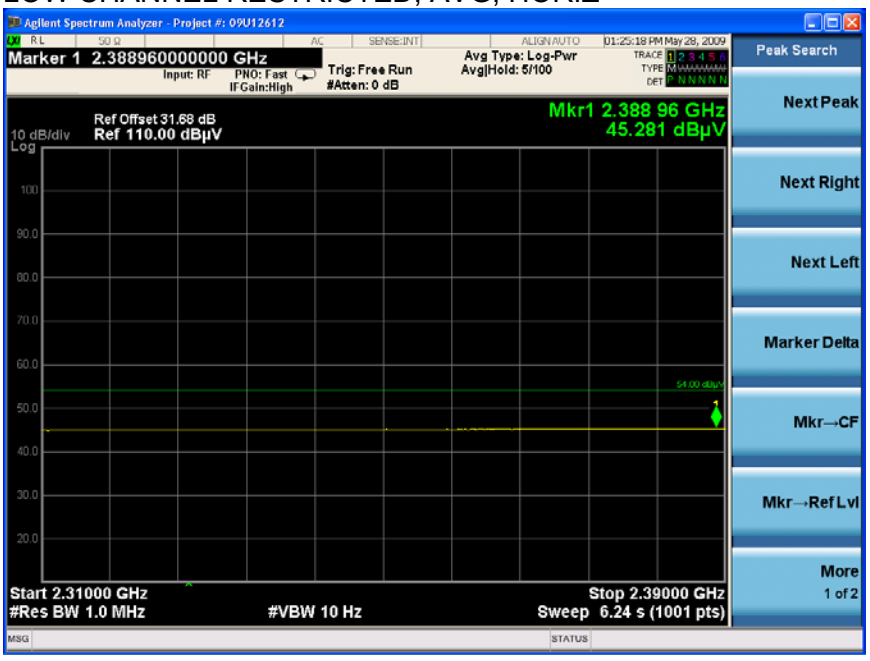
7.1. TRANSMITTER ABOVE 1 GHz

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

LOW CHANNEL RESTRICTED, PEAK, HORIZ

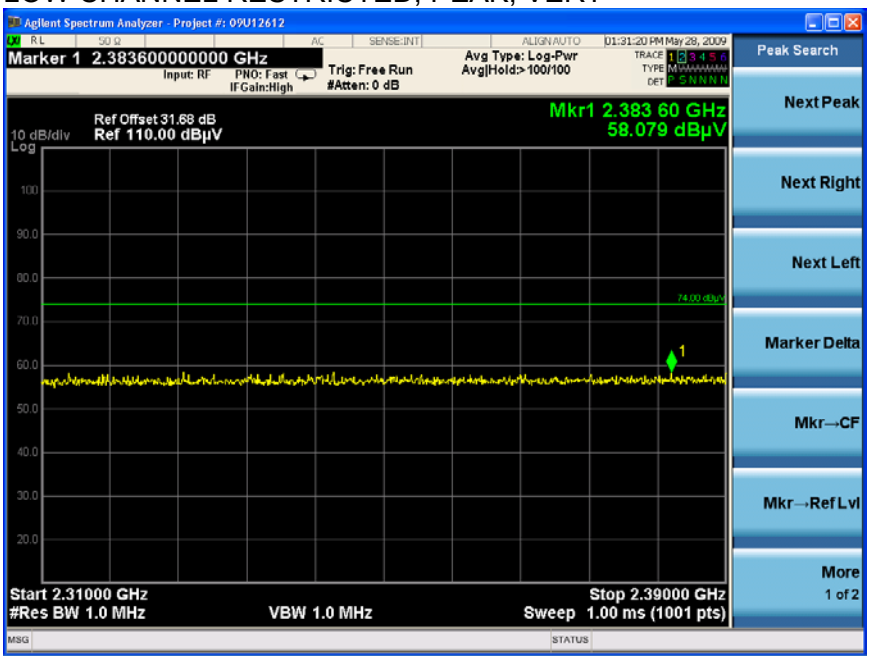


LOW CHANNEL RESTRICTED, AVG, HORIZ

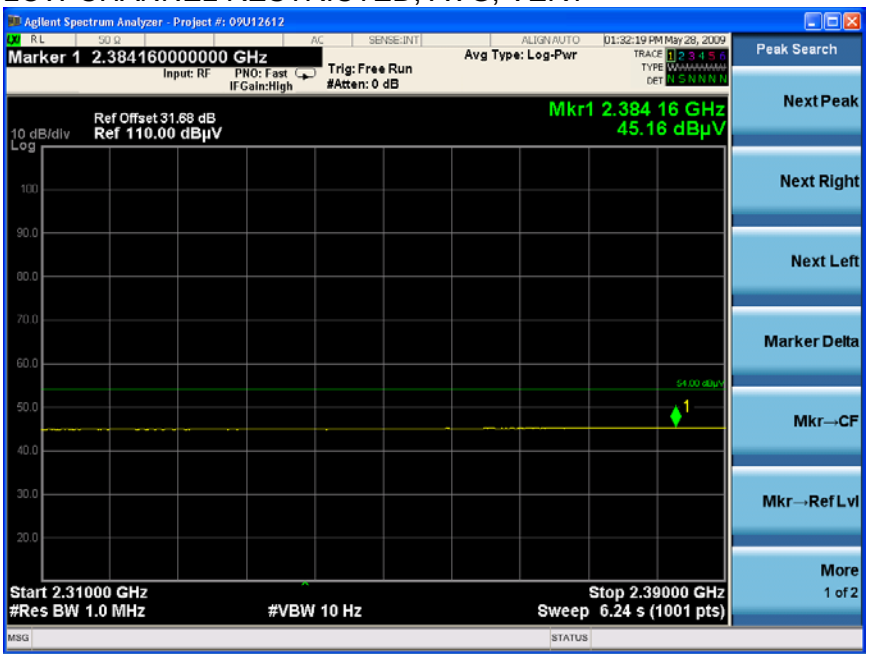


RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

LOW CHANNEL RESTRICTED, PEAK, VERT

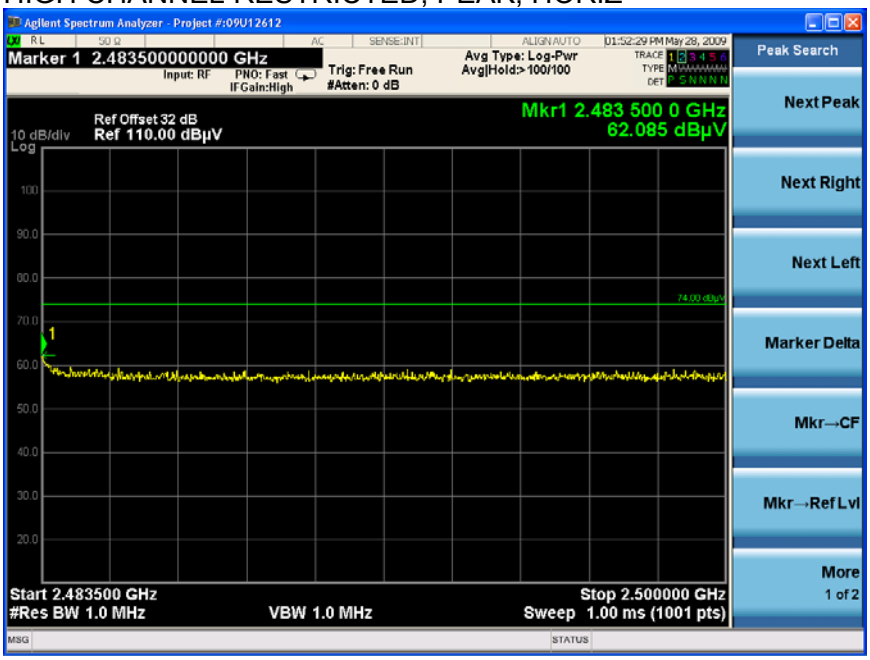


LOW CHANNEL RESTRICTED, AVG, VERT

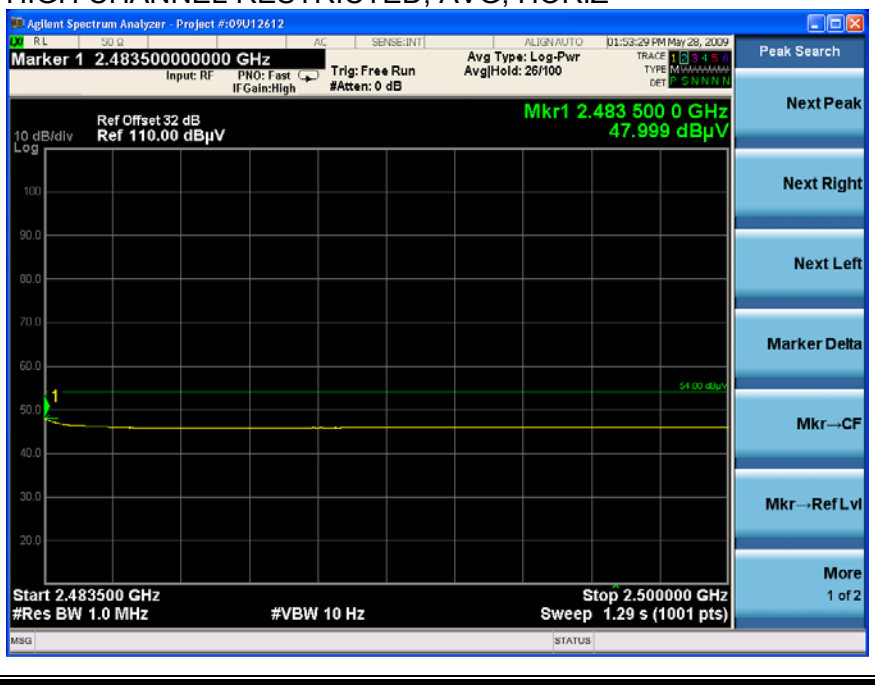


RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

HIGH CHANNEL RESTRICTED, PEAK, HORIZ

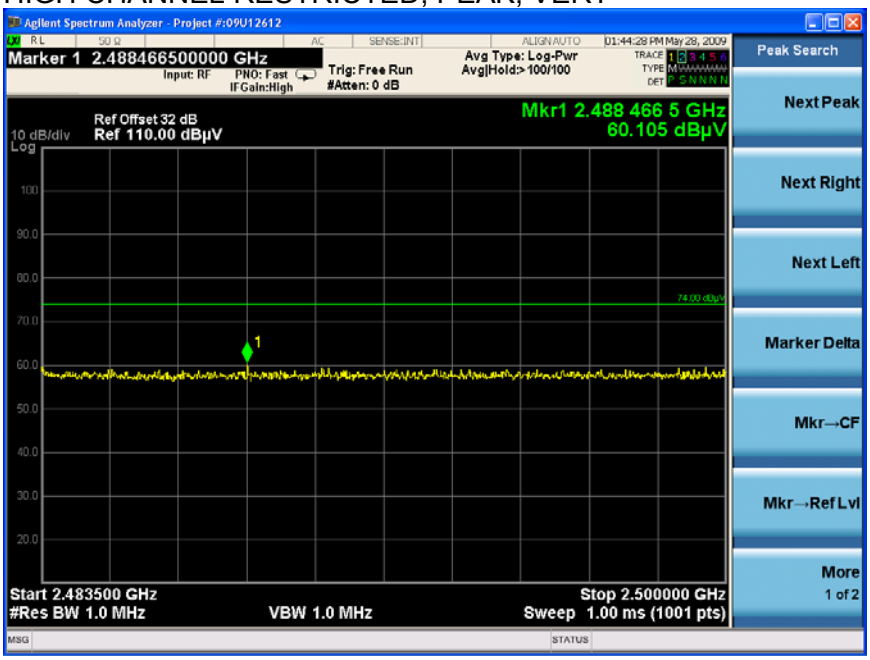


HIGH CHANNEL RESTRICTED, AVG, HORIZ

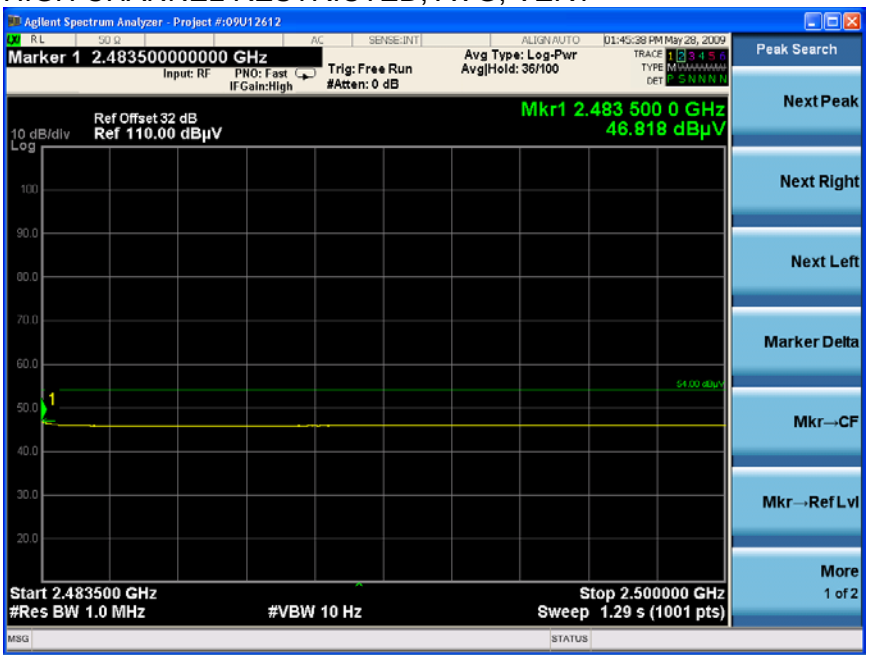


RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

HIGH CHANNEL RESTRICTED, PEAK, VERT



HIGH CHANNEL RESTRICTED, AVG, VERT



HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Company: CompTest Services LLC
Project #: 09U12612
Date: 5/28/2009
Test Engineer: Vien Tran
Configuration: EUT with AC Adapter
Mode: TX GFSK

Test Equipment:

Horn 1-18GHz	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T144 Miteq 3008A00931			FCC 15.205

Hi Frequency Cables

3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter
3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF_4.6GHz	

Peak Measurements
RBW=VBW=1MHz
Average Measurements
RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Channel, 2402MHz															
4.804	3.0	45.7	32.3	33.0	5.8	-36.5	0.0	2.4	50.4	37.0	74	54	-23.6	-17.0	Vertical
4.804	3.0	42.1	29.9	33.0	5.8	-36.5	0.0	2.4	46.8	34.6	74	54	-27.2	-19.4	Horizontal
Mid Channel, 2441MHz															
4.882	3.0	46.3	33.1	33.1	5.8	-36.5	0.0	2.5	51.3	38.1	74	54	-22.7	-15.9	Vertical
4.882	3.0	42.8	30.5	33.1	5.8	-36.5	0.0	2.5	47.8	35.5	74	54	-26.2	-18.5	Horizontal
High Channel, 2480MHz															
4.960	3.0	47.6	33.4	33.2	5.9	-36.5	0.0	2.5	52.8	38.6	74	54	-21.2	-15.4	Vertical
4.960	3.0	43.1	31.1	33.2	5.9	-36.5	0.0	2.5	48.2	36.3	74	54	-25.8	-17.7	Horizontal
		No other emissios were detected above system noise floor													

Rev. 03.03.09

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.2. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

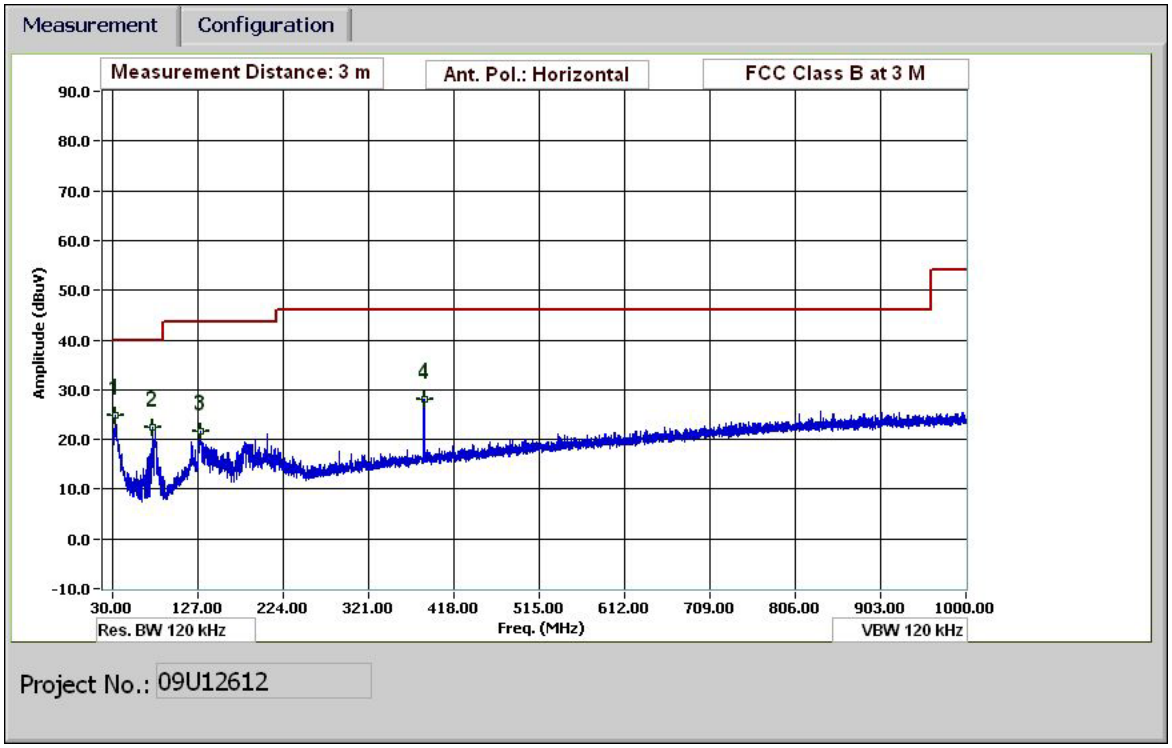
HORIZONTAL DATA & PLOT

30-1000MHz Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr:	**Vien Tran**
Date:	**05/28/09**
Project #:	**09U12612**
Company:	**CompTest Services LLC**
EUT Description:	**Dual Band CDMA with Bluetooth**
EUT M/N:	**SCP3810**
Test Target:	**FCC Class B**
Mode Oper:	**Tx GFSK**

f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters		
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Pad dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
Horizontal													
33.24	3.0	34.0	18.7	0.5	28.4	0.0	0.0	24.9	40.0	-15.1	H	P	
75.962	3.0	42.3	7.6	0.8	28.3	0.0	0.0	22.3	40.0	-17.7	H	P	
129.724	3.0	35.3	13.5	1.1	28.3	0.0	0.0	21.7	43.5	-21.8	H	P	
384.015	3.0	39.7	14.7	1.8	28.1	0.0	0.0	28.0	46.0	-18.0	H	P	



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

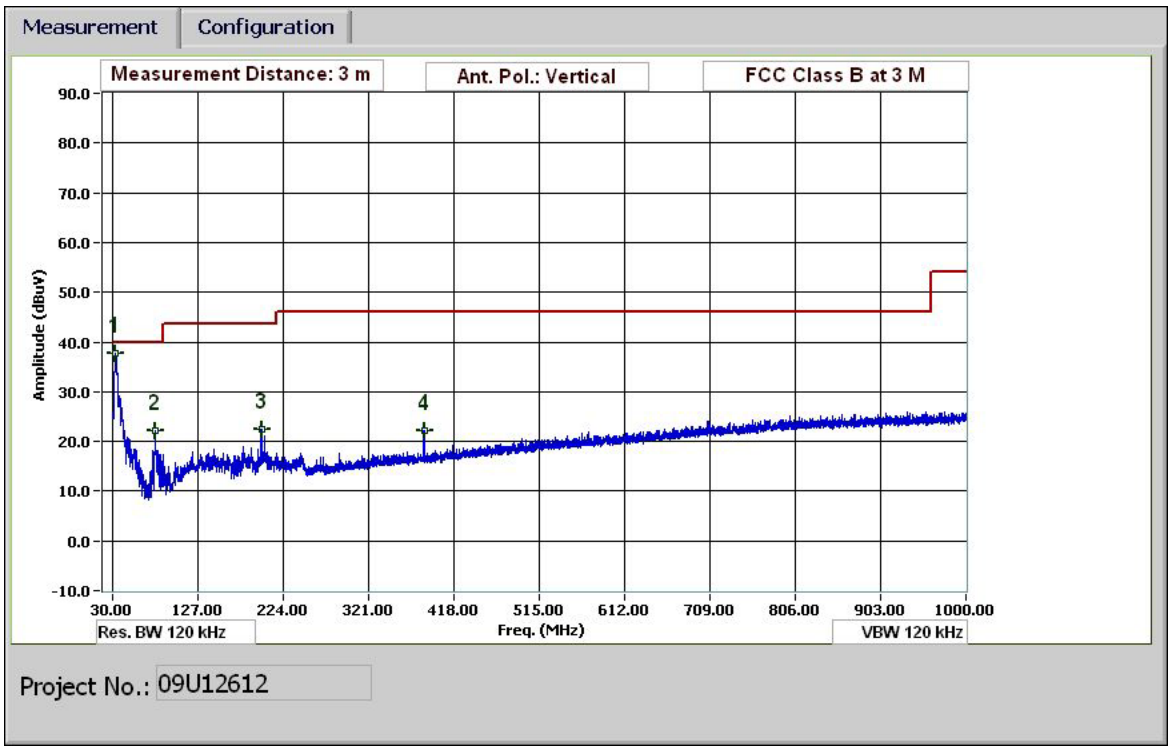
VERTICAL DATA & PLOT

30-1000MHz Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr:	**Vien Tran**
Date:	**05/28/09**
Project #:	**09U12612**
Company:	**CompTest Services LLC**
EUT Description:	**Dual Band CDMA with Bluetooth**
EUT M/N:	**SCP3810**
Test Target:	**FCC Class B**
Mode Oper:	**Tx GFSK**

f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters		
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Pad dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
Vertical													
33.48	3.0	47.0	18.6	0.5	28.4	0.0	0.0	37.7	40.0	-2.3	V	P	
33.48	3.0	41.2	18.6	0.5	28.4	0.0	0.0	31.9	40.0	-8.1	V	QP	
78.842	3.0	42.3	7.4	0.8	28.3	0.0	0.0	22.1	40.0	-17.9	V	P	
199.087	3.0	37.6	11.9	1.2	28.2	0.0	0.0	22.6	43.5	-20.9	V	P	
384.015	3.0	33.8	14.7	1.8	28.1	0.0	0.0	22.1	46.0	-23.9	V	P	



8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

RESULTS

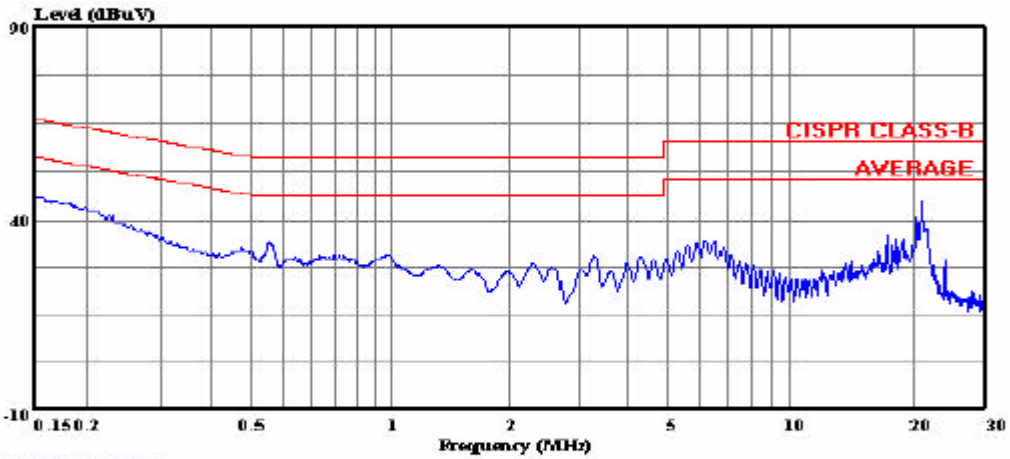
6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	FCC_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.16	43.79	--	--	0.00	65.73	55.73	-21.94	-11.94	L1
0.56	33.47	--	--	0.00	56.00	46.00	-22.53	-12.53	L1
20.92	44.61	--	--	0.00	60.00	50.00	-15.39	-5.39	L1
0.16	42.86	--	--	0.00	65.73	55.73	-22.87	-12.87	L2
0.56	30.72	--	--	0.00	56.00	46.00	-25.28	-15.28	L2
20.92	40.59	--	--	0.00	60.00	50.00	-19.41	-9.41	L2
6 Worst Data									

LINE 1 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 52 File#: CompTest_09U12612.EMI
Date: 05-29-2009 Time: 11:08:35



(Line Conduction)

Trace: Ref Trace:

Condition: CISPR CLASS-B
Test Operator: : Vien Tran
Project #: : 09U12612
Company: : CompTest Services LLC
EUT Description:: Dual Band CDMA with Bluetooth
Mode: : EUT with AC Adapter
Target: : FCC Class B
Voltage: : 115VAC / 60Hz
: L1: Peak (Blue)

LINE 2 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 53 File#: CompTest_09U12612.EMI
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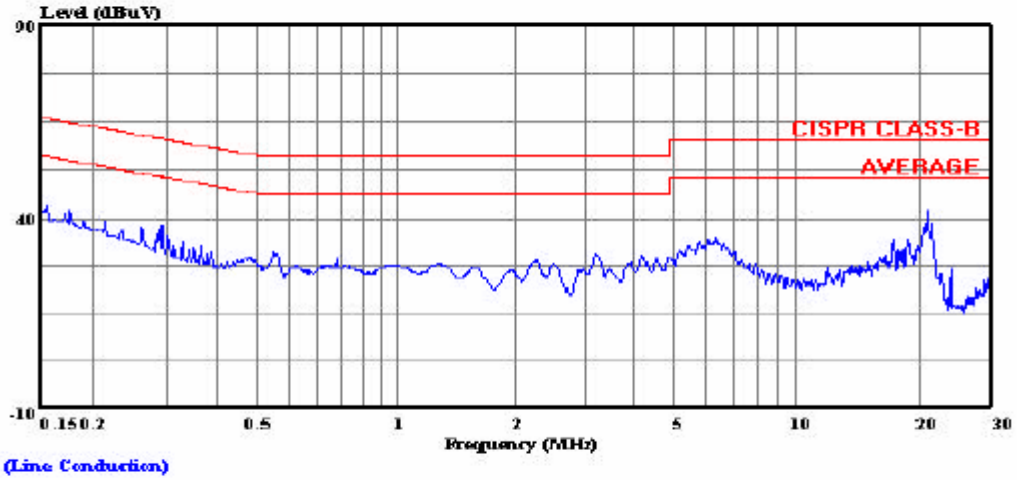

(Line Conduction)

Trace: Ref Trace:

Condition: CISPR CLASS-B
Test Operator: : Vien Tran
Project #: : 09U12612
Company: : CompTest Services LLC
EUT Description:: Dual Band CDMA with Bluetooth
Mode: : EUT with AC Adapter
Target: : FCC Class B
Voltage: : 115VAC / 60Hz
: L2: Peak (Blue)