



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

DUAL BAND 1X RTT CDMA PHONE WITH BLUETOOTH

MODEL NUMBER: SCP-2700

FCC ID: V65SCP-27H

REPORT NUMBER: 08U12291-3

ISSUE DATE: DECEMBER 22, 2008

Prepared for
KYOCERA SANYO TELECOM, INC.
6800 COLLEGE BLVD. SUITE 620
OVERLAND PARK, KANSAS 66211, U.S.A.

Prepared by
COMPLIANCE CERTIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888



NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	12/22/08	Initial Issue	T. Chan

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA SANYO TELECOM, INC.
6800 COLLEGE BLVD. SUITE 620
OVERLAND PARK, KANSAS 66211, U.S.A.

EUT DESCRIPTION: DUAL BAND 1xRTT CDMA PHONE WITH BLUETOOTH

MODEL: SCP-2700

SERIAL NUMBER: A00000012FDC422

DATE TESTED: DECEMBER 18-19, 2008

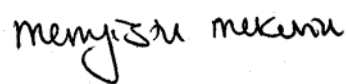
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass (Radiated only)

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. 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. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

MENGISTU MEKURIA
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, 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. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Power Line Conducted Emission	+/- 2.3 dB
Radiated Emission	+/- 3.4 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 1xRTT CDMA Phone with bluetooth that manufactures by Kyocera Sanyo Telecom, Inc.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an Internal antenna, with a maximum gain of 2.00 dBi.

5.3. SOFTWARE AND FIRMWARE

The EUT driver and utility software installed in the host support equipment during testing was StartGraphite PassThru and BlueSuite 1.19.

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.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	SANYO	SCP-19ADT	4808B	DoC
Earphone	N/A	N/A	N/A	N/A

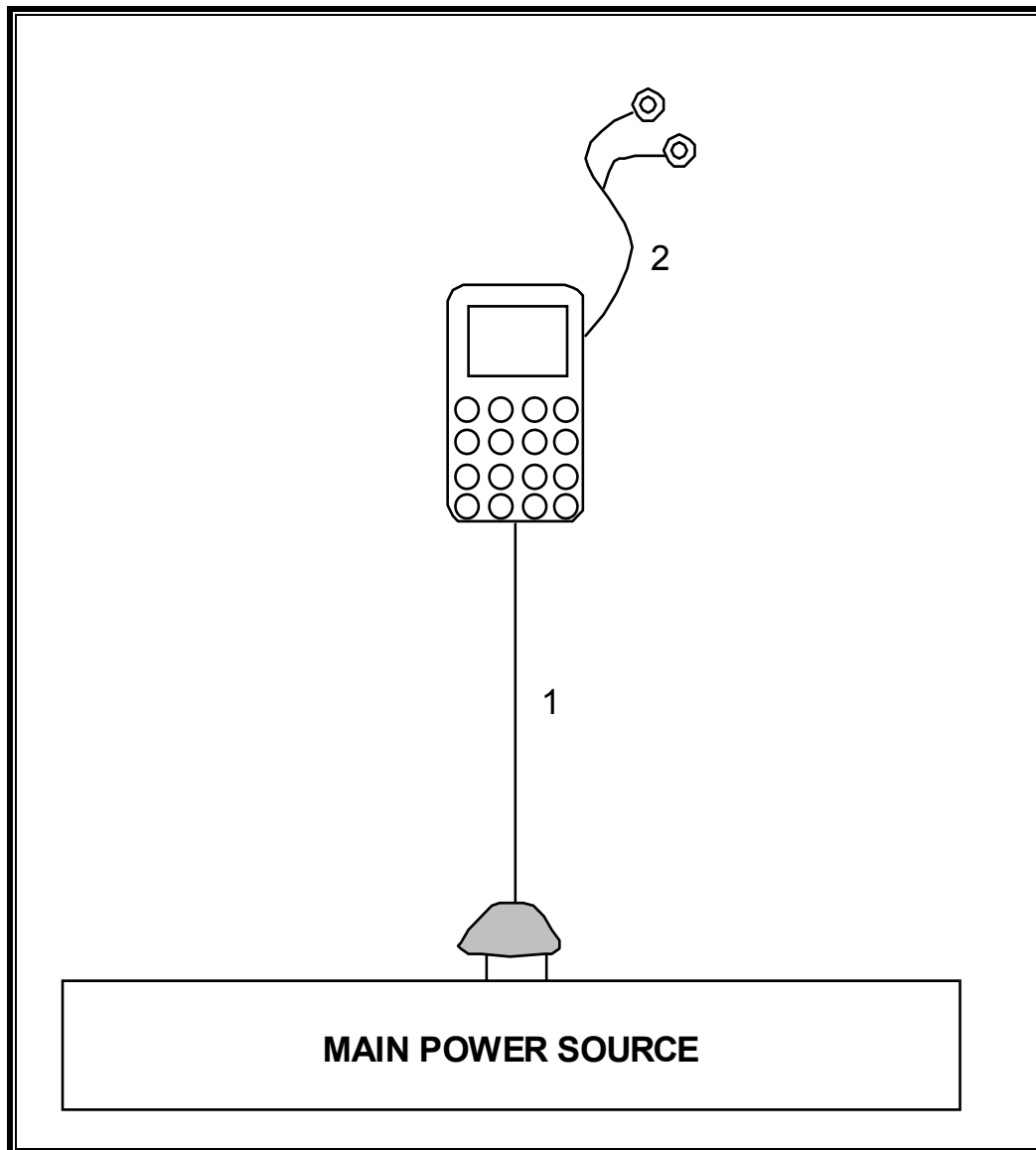
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Input	1	Mini USB	Un-Shielded	2.0 m	N/A
2	Jack	1	Audio	Un-Shielded	0.8 m	N/A

TEST SETUP

The EUT is a bluetooth featured CDMA phone and-is tested as a standalone configuration

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

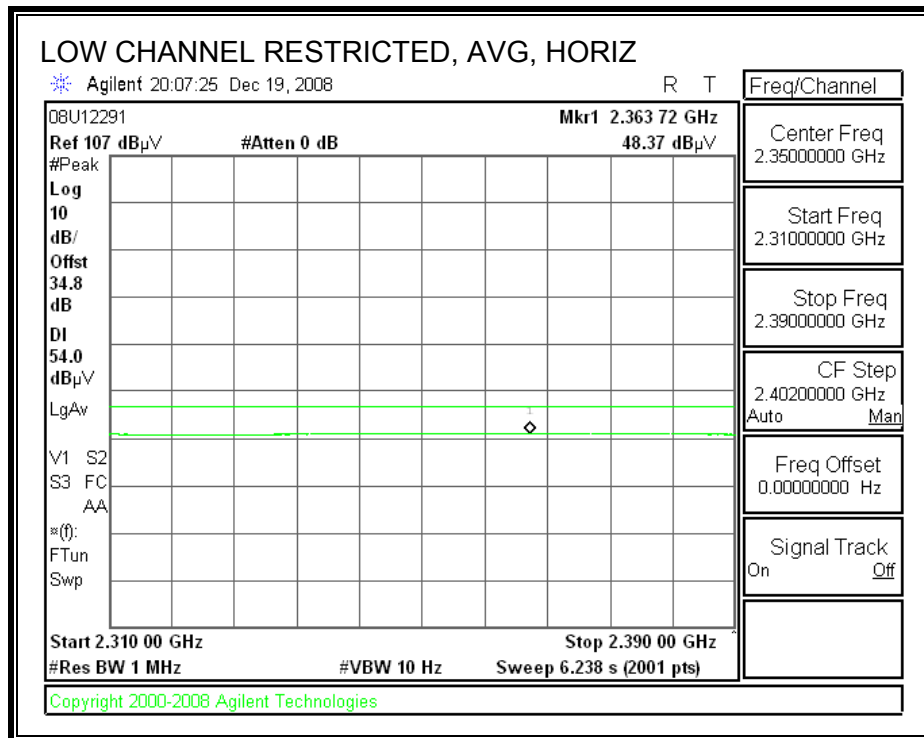
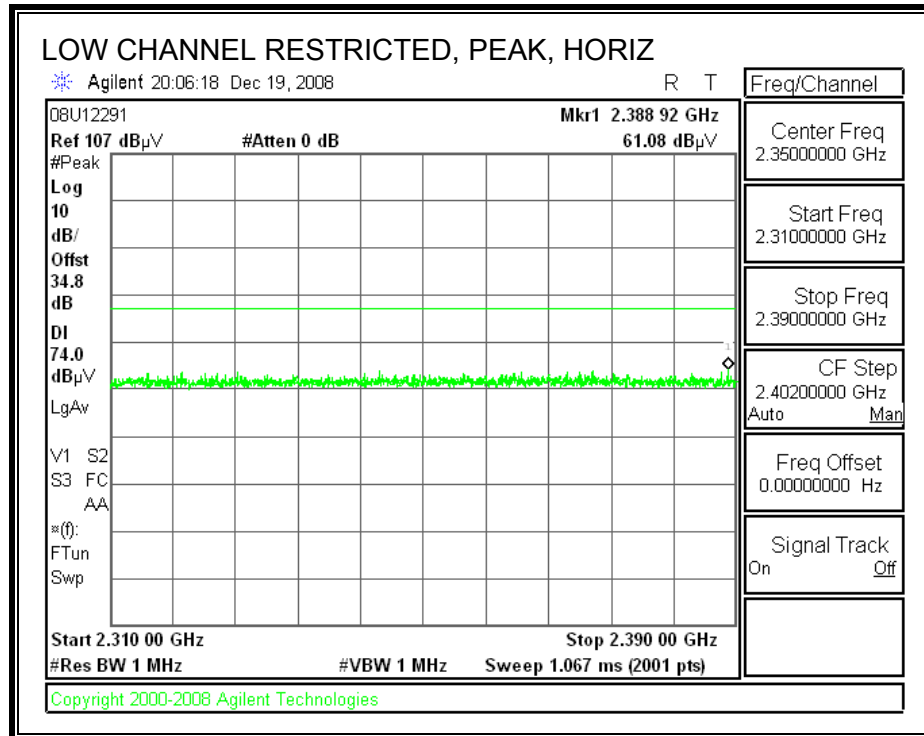
The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	05/30/09
Bilog Antenna	Sunol Sciences	JB1	C01016	10/13/09
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C00749	09/27/09
Preamplifier, 1300 MHz	Agilent / HP	8447D	C01064	05/09/09
RF Filter Section, 2.9 GHz	Agilent / HP	85420E	C00958	06/12/09
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	01/27/09
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	N02481	09/15/09
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	09/15/09
Antenna, Horn, 18 GHz	ETS	3117	C01005	04/15/09

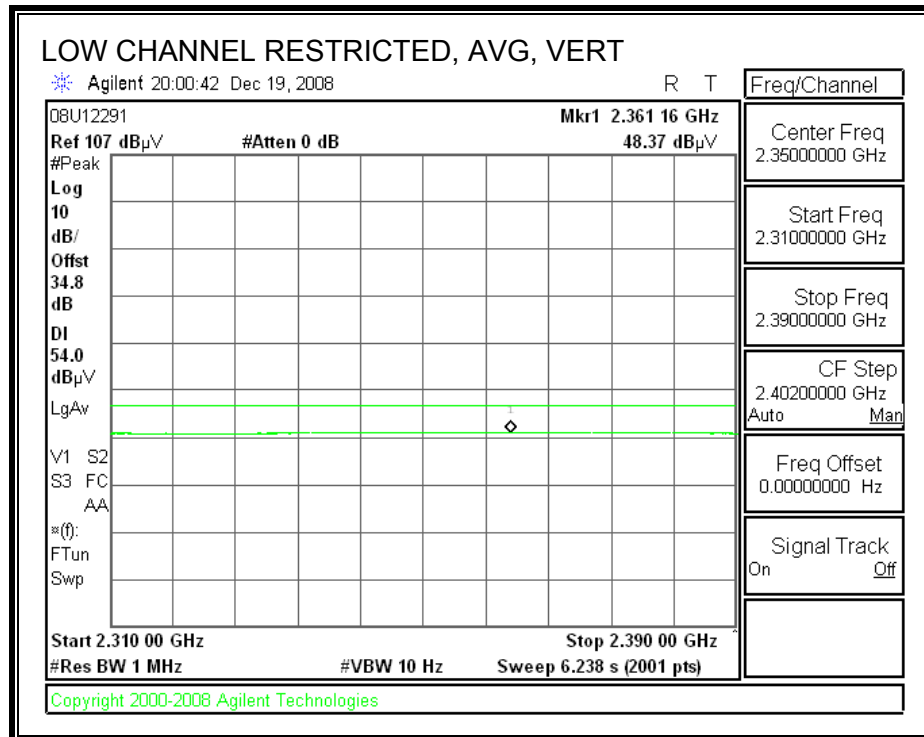
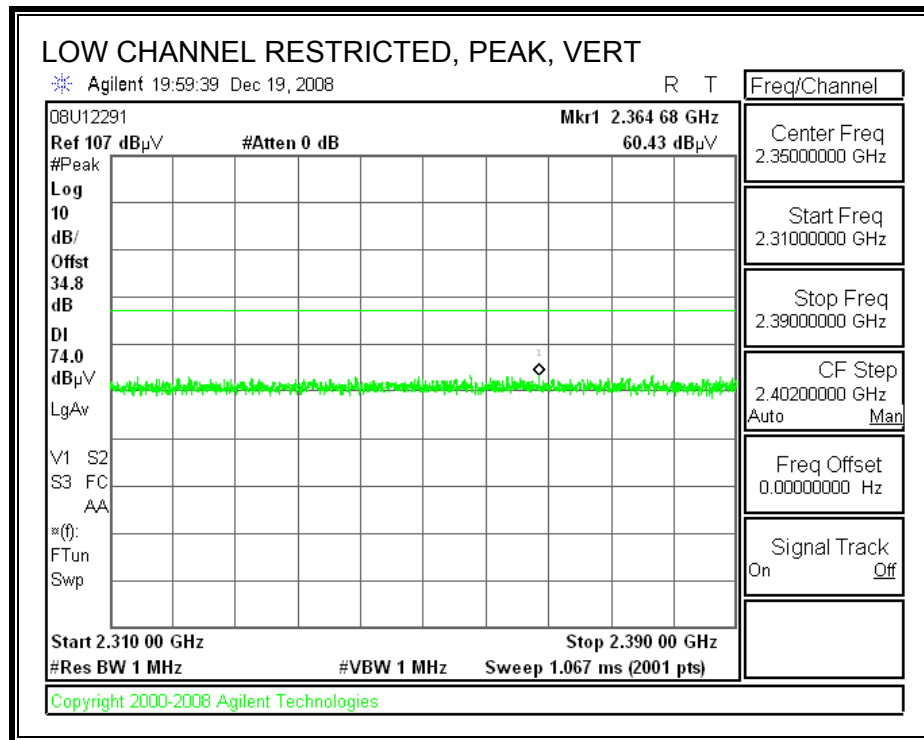
7. RADIATED TEST RESULTS

7.1. WORST CASE TRANSMITTER ABOVE 1 GHz

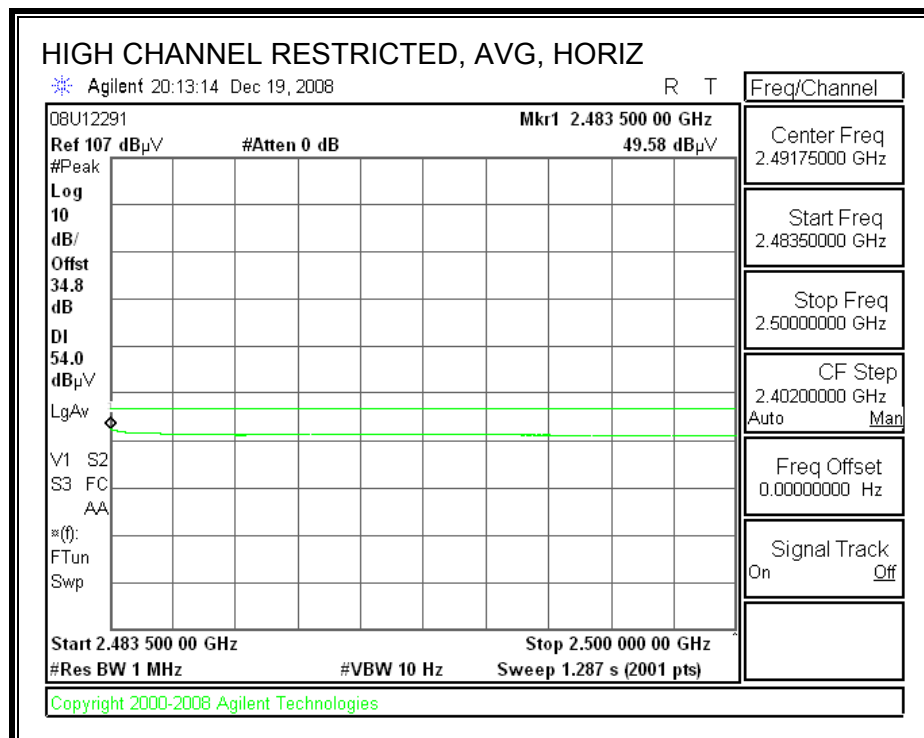
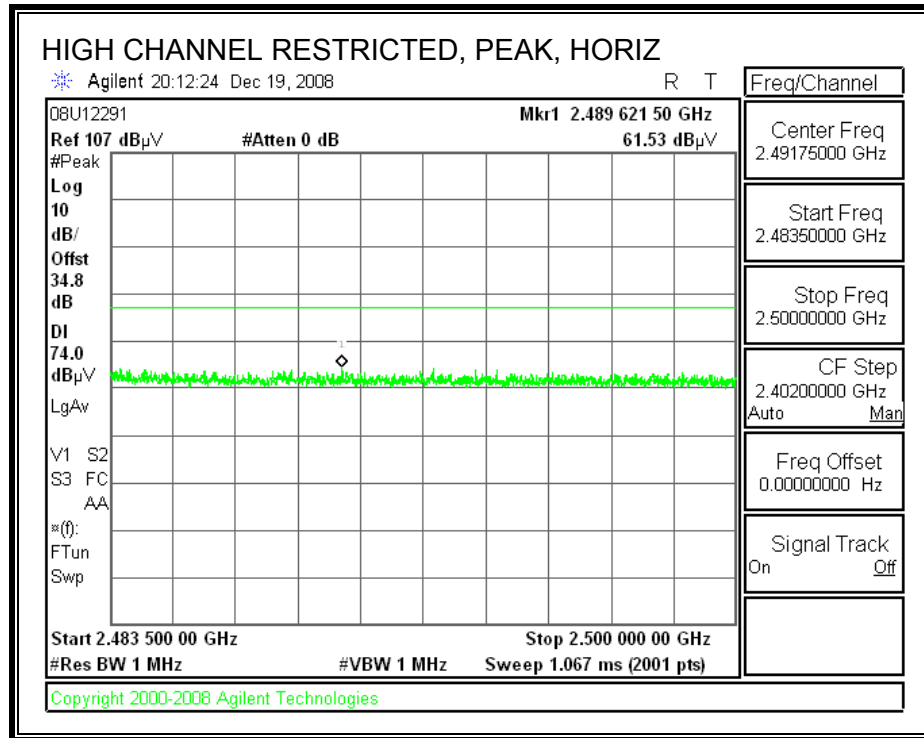
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



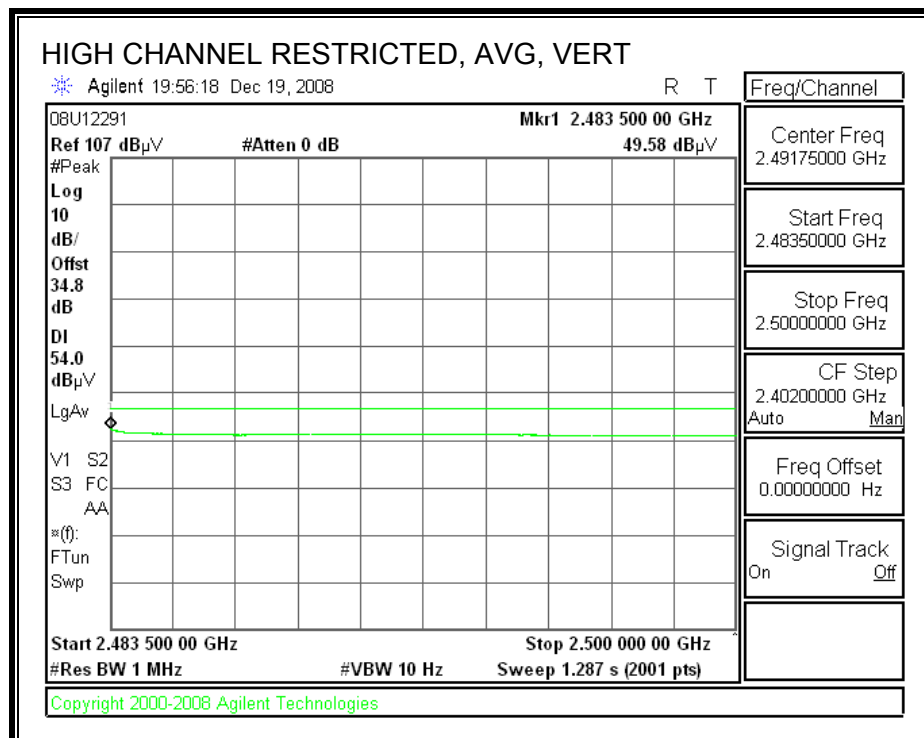
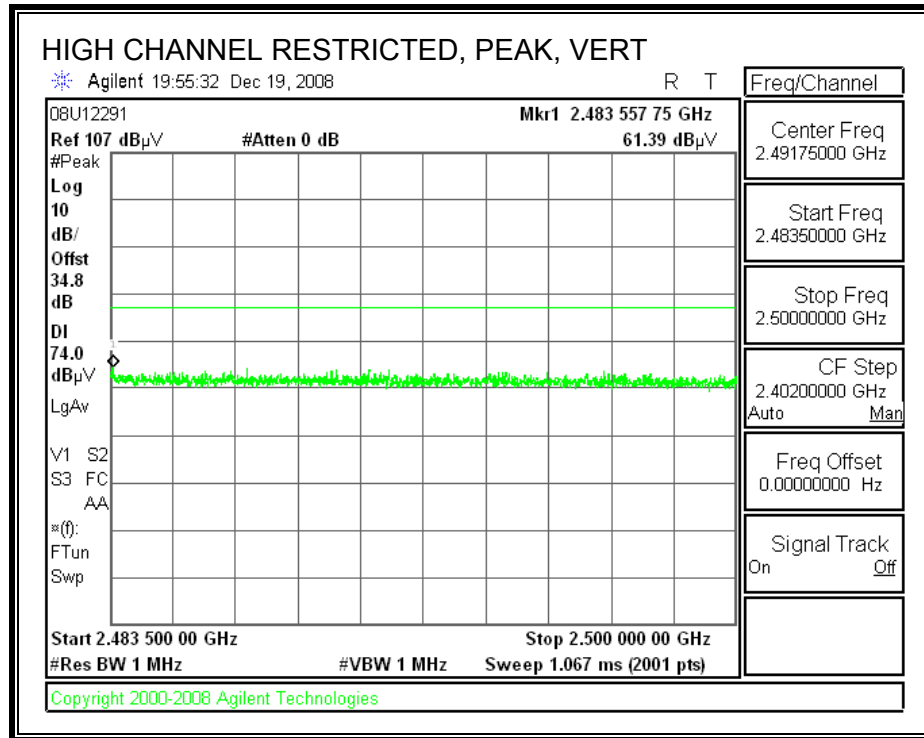
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement																			
Compliance Certification Services, Fremont 5m Chamber																			
Company:		KYOCERA SANYO TELECOM, INC.																	
Project #:		08U12291																	
Date:		12/19/2008																	
Test Engineer:		MENGISTU MEKURIA																	
Configuration:		EUT WITH HEADSET AND AC ADAPTER																	
Mode:		TX WORST CASE																	
Test Equipment:																			
Horn 1-18GHz				Pre-amplifier 1-26GHz				Pre-amplifier 26-40GHz				Horn > 18GHz				Limit			
T119; S/N: 29301 @3m				T34 HP 8449B												FCC 15.209			
Hi Frequency Cables																			
3' cable 22807700				12' cable 22807600				20' cable 22807500				HPF				Reject Filter			
3' cable 22807700				12' cable 22807600				20' cable 22807500								R_001			
<div style="display: flex; justify-content: space-between;"> <div> Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz </div> </div>																			
f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr 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 Ch (2402 MHz)																			
4.804	3.0	45.2	37.2	33.5	5.8	-34.8	0.0	0.0	49.7	41.7	74	54	-24.3	-12.3	H				
4.804	3.0	48.7	41.7	33.5	5.8	-34.8	0.0	0.0	53.1	46.2	74	54	-20.9	-7.8	V				
Mid Ch (2441 MHz)																			
4.882	3.0	45.5	37.2	33.6	5.8	-34.8	0.0	0.0	50.2	41.9	74	54	-23.8	-12.1	H				
4.882	3.0	49.5	42.1	33.6	5.8	-34.8	0.0	0.0	54.1	46.8	74	54	-19.9	-7.2	V				
Hi Ch (2480 MHz)																			
4.960	3.0	45.9	37.6	33.7	5.9	-34.8	0.0	0.0	50.7	42.4	74	54	-23.3	-11.6	H				
4.960	3.0	50.6	43.2	33.7	5.9	-34.8	0.0	0.0	55.5	48.0	74	54	-18.5	-6.0	V				
Other Spurious Emissions, Please see Part 22 and 24 Report.																			
Rev. 11.10.08																			
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

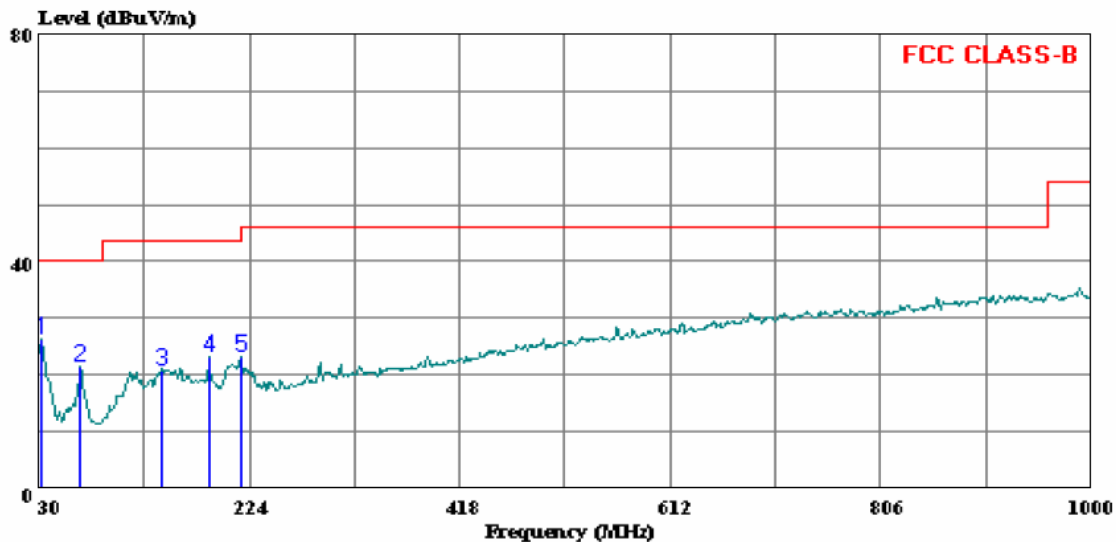
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL



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

Data#: 12 File#: 08U12291_EMI.EMI Date: 12-19-2008 Time: 20:52:37



Trace: 11

Ref Trace:

Condition: HORIZONTAL
Test Operator:: Mengistu Mekuria
Project #: 08U12291
Company: Kyocera Wireless
Configuration: EUT With Headset and AC Adapter
Mode : TX Worst Case
Target: FCC Class B

Page: 1

	Freq	Read		Limit	Over	
	MHz	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB
1	31.940	34.48	-8.30	26.18	40.00	-13.82 Peak
2	67.830	40.80	-19.18	21.62	40.00	-18.38 Peak
3	142.520	34.30	-13.61	20.69	43.50	-22.81 Peak
4	187.140	37.04	-13.94	23.10	43.50	-20.40 Peak
5	216.240	36.19	-13.09	23.10	46.00	-22.90 Peak

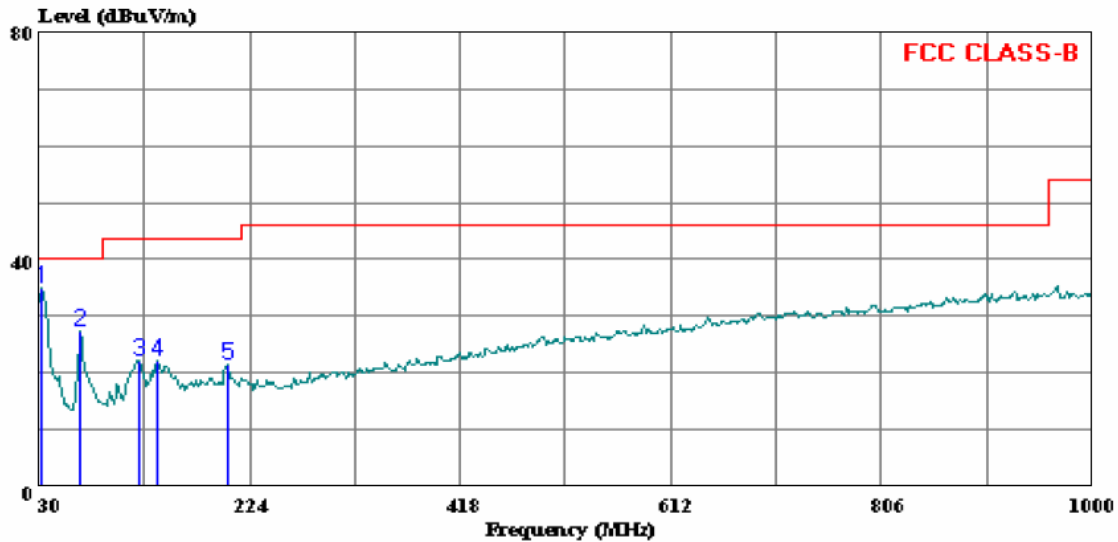
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL



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

Data#: 14 File#: 08U12291_EMI.EMI Date: 12-19-2008 Time: 21:00:39



Trace: 13

Ref Trace:

Condition: VERTICAL
Test Operator:: Mengistu Mekuria
Project #: 08U12291
Company: Kyocera Wireless
Configuration: EUT With Headset and AC Adapter
Mode: TX Worst Case
Target: FCC Class B

Page: 1

	Freq	Read		Level	Limit	Over	
	MHz	Level	Factor	dBuV/m	Line	Limit	Remark
		dBuV	dB		dBuV/m	dB	
1	31.940	43.18	-8.30	34.88	40.00	-5.12	Peak
2	67.830	46.67	-19.18	27.49	40.00	-12.51	Peak
3	121.180	34.93	-12.80	22.13	43.50	-21.37	Peak
4	138.640	35.70	-13.49	22.21	43.50	-21.29	Peak
5	203.630	34.34	-13.02	21.32	43.50	-22.18	Peak

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

6 WORST EMISSIONS

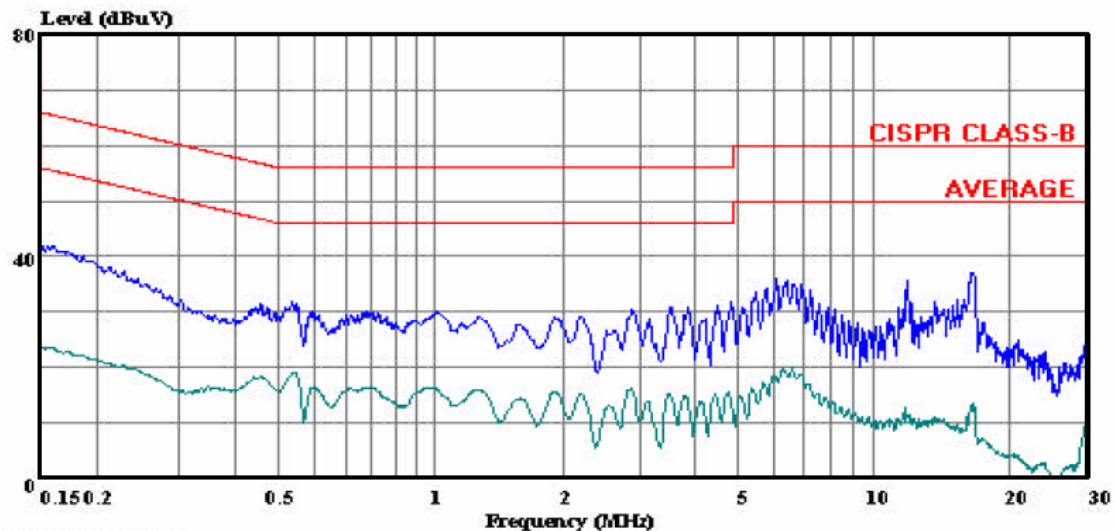
CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
6.22	36.11	--	19.96	0.00	60.00	50.00	-23.89	-30.04	L1
12.00	35.63	--	12.07	0.00	60.00	50.00	-24.37	-37.93	L1
16.60	37.22	--	13.40	0.00	60.00	50.00	-22.78	-36.60	L1
0.15	42.18	--	24.94	0.00	65.89	55.89	-23.71	-30.95	L2
6.42	35.18	--	23.84	0.00	60.00	50.00	-24.82	-26.16	L2
16.75	37.29	--	17.64	0.00	60.00	50.00	-22.71	-32.36	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#: 35 File#: 08U12291_LC.EMI Date: 12-19-2008 Time: 21:17:11



(Line Conduction)

Trace: 33

Ref Trace:

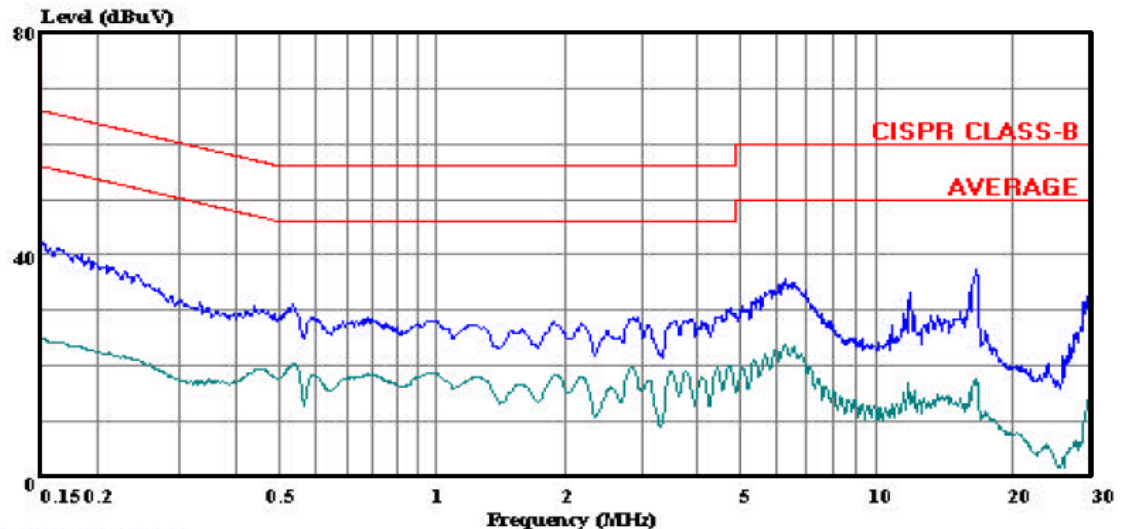
Condition: CISPR CLASS-B
Test Operator:: Mengsitu Mekuria
Project #: 08U12291
Company: Kyocera Sanyo Telecom, Inc.
Configuration:: EUT With Headset and AC Adapter
Mode: TX Worst Case
Target: FCC Class B
Voltage: 115VAC / 60Hz
: L1: Peak (Blue), Average (Green)

LINE 2 RESULTS



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

Data#: 42 File#: 08U12291_LC.EMI Date: 12-19-2008 Time: 21:26:42



(Line Conduction)

Trace: 40

Ref Trace:

Condition: CISPR CLASS-B
Test Operator:: Mengsitu Mekuria
Project #: : 08U12291
Company: : Kyocera Sanyo Telecom, Inc.
Configuration:: EUT With Headset and AC Adapter
Mode: : TX Worst Case
Target: : FCC Class B
Voltage: : 115VAC / 60Hz
: L2: Peak (Blue), Average (Green)