

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T820318835092F820318835169 email thrukang@kornet.net

Test Report

Product Name: CB TRANSCEIVER

MODEL NO: PR0100

FCC ID: N95PR0100

Applicant:

Nextron Co., Ltd.

ACE-TECHNO TOWER 1ST 10TH FLOOR, 197-17,

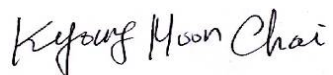
GURO-DONG, GURO-GU, SEOUL, KOREA

Date Receipt: 07/11/2008

Date Tested: 07/28/2008

Date Issued: 08/01/2008

Tested by Kyoung M. Choi



Approved by K.T. Kang



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GENERAL INFORMATION REQUIRED FOR CERTIFICATION

- 2.1033(c)(1)(2) Nextron Co., Ltd. will manufacture
the FCCID: N95PR0100 CB TRANSCEIVER TRANSCEIVER
in quantity, for use under FCC RULES PART 95A&B.
Nextron Co., Ltd.
ACE TECHNO TOWER 1ST 10TH LOOR, 197-17,
GURO-DING, GURO-GU, SEOUL, KOREA
- 2.1033 (c) TECHNICAL DESCRIPTION
- 2.1033 (c)(3) Instruction book. A draft copy of the instruction
manual is included as EXHIBIT 7.
- 2.1033(c)(4) Type of Emission : 8K0A3E
Authorized Bandwidth : 8.0kHz
- 2.1033(c)(5) Frequency Range : 26.965 ~ 27.405MHz
- 2.1033(c)(6) Power Range and Controls : There are NO user Power
Controls.
- 2.1033(c)(7) Maximum Output Power Rating as defined in the rules:
4.0 Watts into a 50 ohm resistive load.
- 2.1033(c)(8) DC Voltage and Current into Final Amplifier :

FINAL AMPLIFIER ONLY:
VCE = 13.8 VDC
ICE = 0.61 A

PIN = 8.418 Watts
- 2.1033(c)(9) Tune-up procedure. The tune-up procedure is included
as EXHIBIT # 9.
- 2.1033(c)(10) Complete Circuit Diagrams: The circuit diagram is
included as EXHIBIT 6 of this report. The block
diagrams are included as EXHIBIT 5 of this report.
- 2.1033(c)(11) A photograph or a drawing of the equipment
identification label is included as exhibit No. 1.
- 2.1033(c)(12) Photographs(8"X10") of the equipment of sufficient
clarity to reveal equipment construction and layout,
including meters, labels for controls, including any
view under shields. See exhibits 3-4.
- 2.1033(c)(13) Digital modulation is not allowed.
- 2.1033(c)(14) The data required by 2.1046 through 2.1057 is
submitted below.

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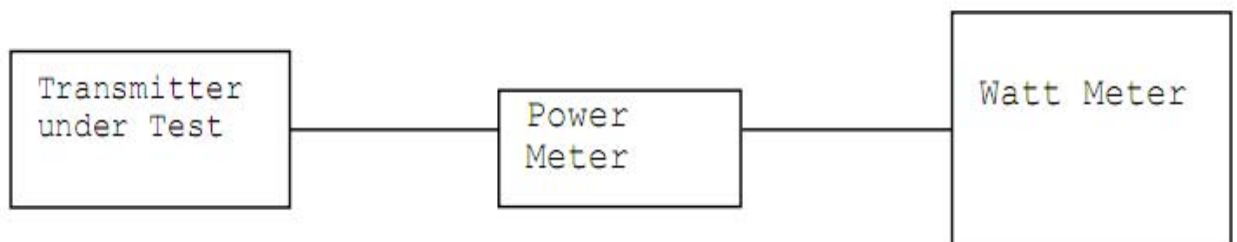
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2.1046(a)

RF power output

RF power is measured by connecting a 50-ohm, resistive wattmeter to the RF output connector. With a nominal battery voltage, and the transmitter properly adjusted the RF output measures:

OUTPUT POWER : 4 WATTS



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2.1047 (a) (b)

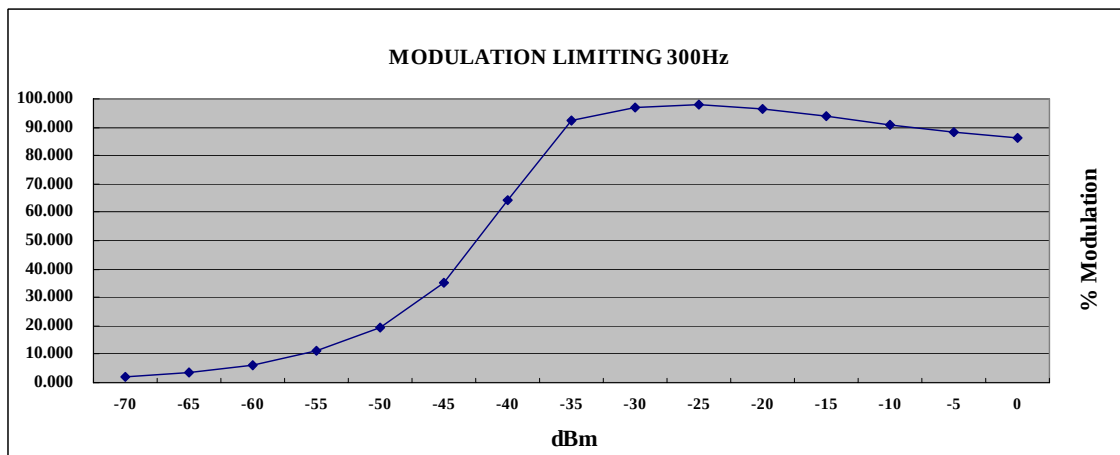
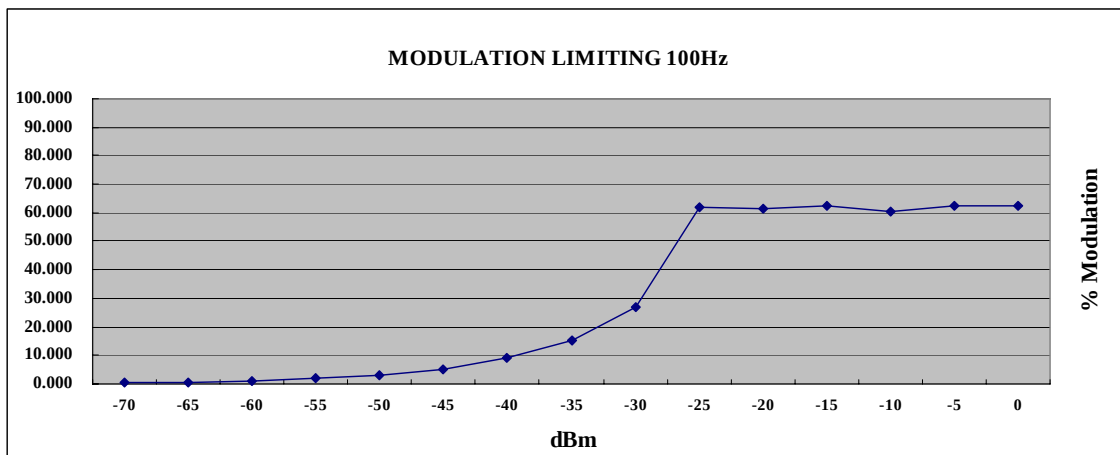
Modulation characteristics :

2.1047 (b)

Audio input versus modulation

The audio input level needed for a particular percentage of modulation was measured in accordance with EIA/TIA-382-A Standard. The audio input curves versus modulation are on the following pages. Curves are provided for audio input frequencies of 100, 300, 500, 1000, 2500, 3000 and 5000 Hz.

See Pages 4 and 5 of report.



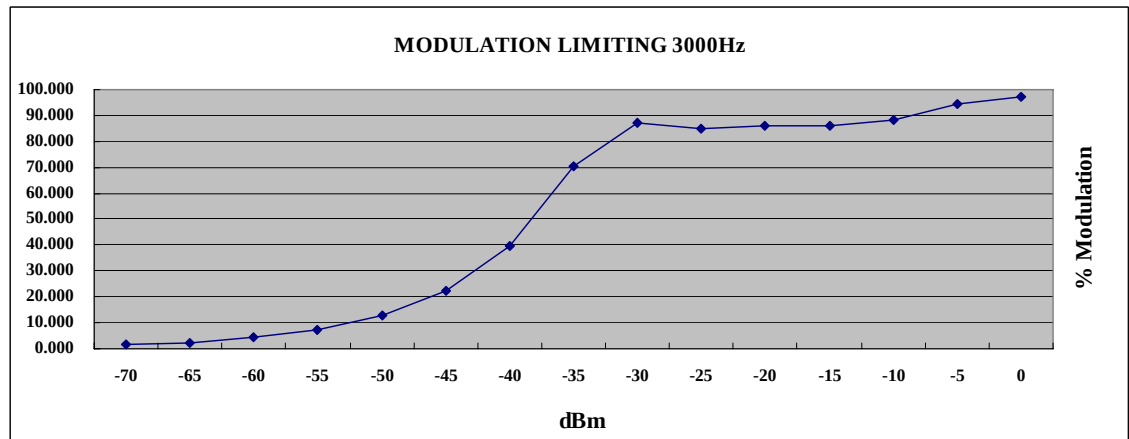
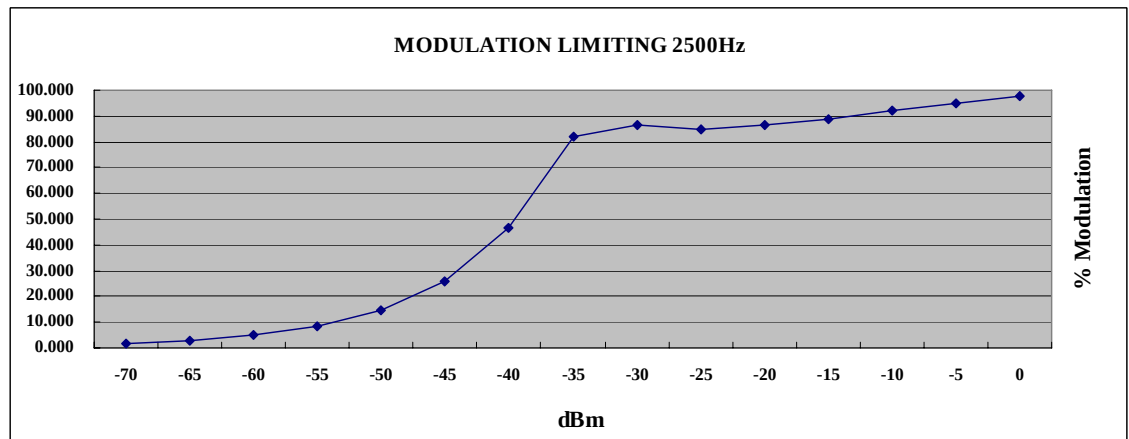
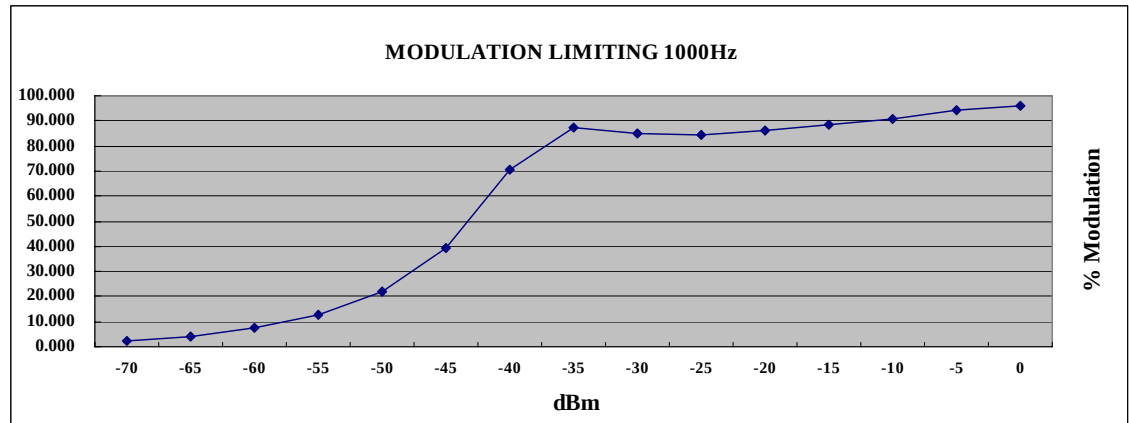
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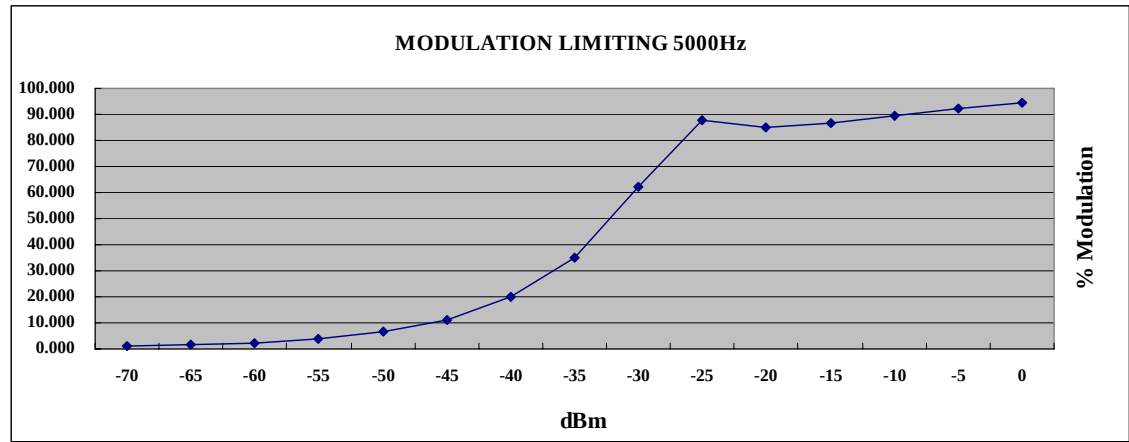
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Kyunggi-Do, 469-803, Korea
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2.1047

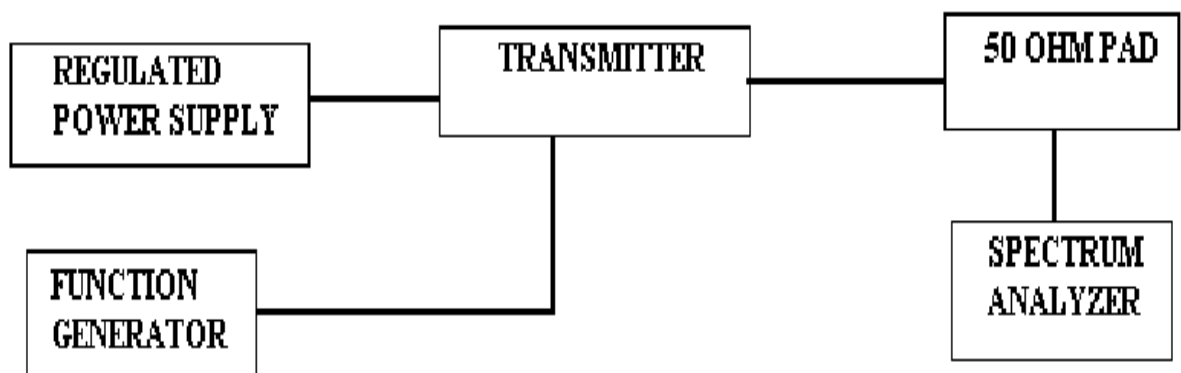
OVER MODULATION TRANSIENT RESPONSE

95.637 (d)

A. MEASUREMENT PROCEDURE

1. Set audio modulating signal at 2500HZ, at a level 16dB Greater than required for 50% modulation at audio frequency Of maximum response. This signal is pulsed at one(1) P.P.S. with a pulse width of 0.5sec.
2. Tune the Spectrum Analyzer to the channel on which channel on which the transmitter is set and adjust the settings as for the measurement of occupied bandwidth.
3. Then tune the Spectrum analyzer to the adjacent channe(+,-10kHz) to that on which the transmitter is set, place it in the "ZERO-SCAN", then observe the transients caused by the pulsed modulation.
4. The transients must have a duration of less than 100 milliseconds and be attenuated by at least 26dB.

B. TEST SET UP



C. TEST Data

See a next page

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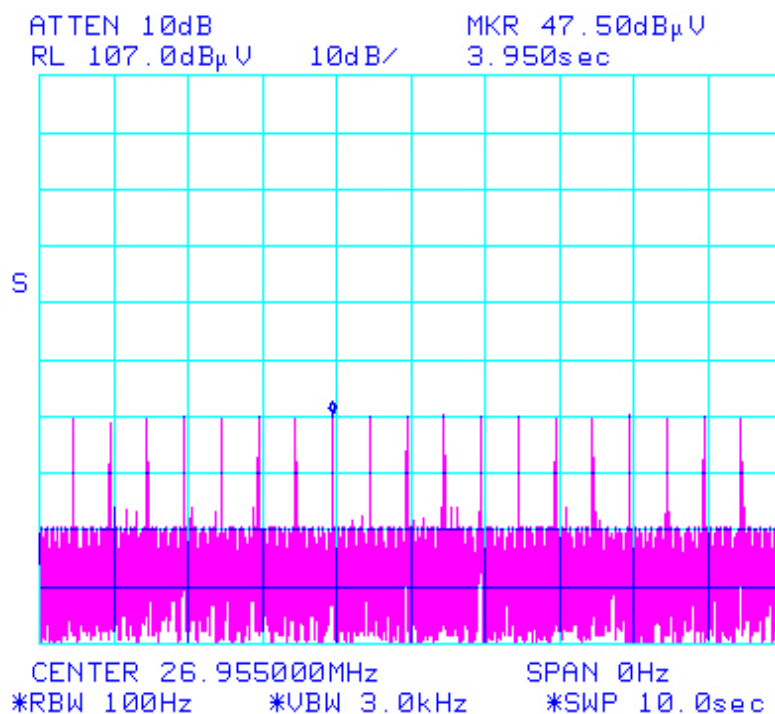
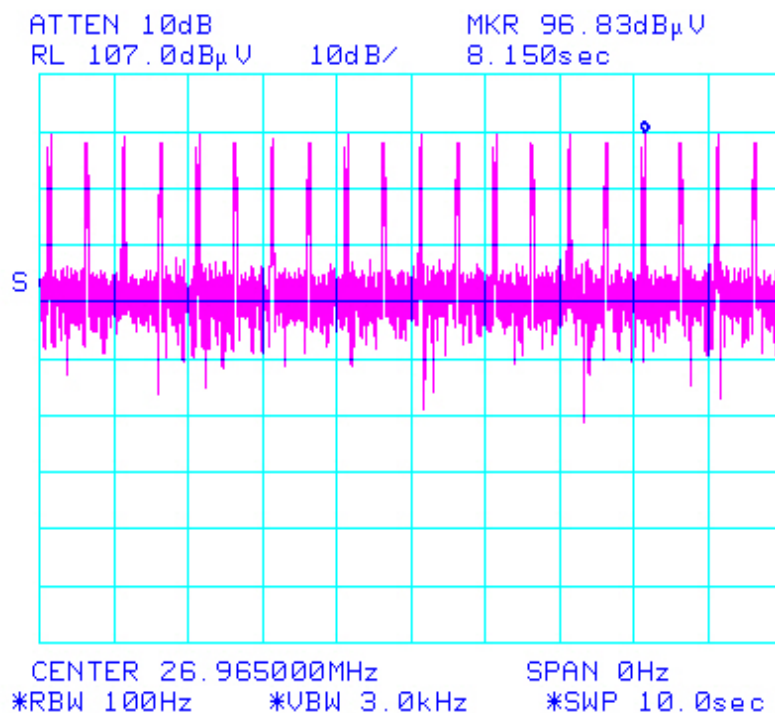
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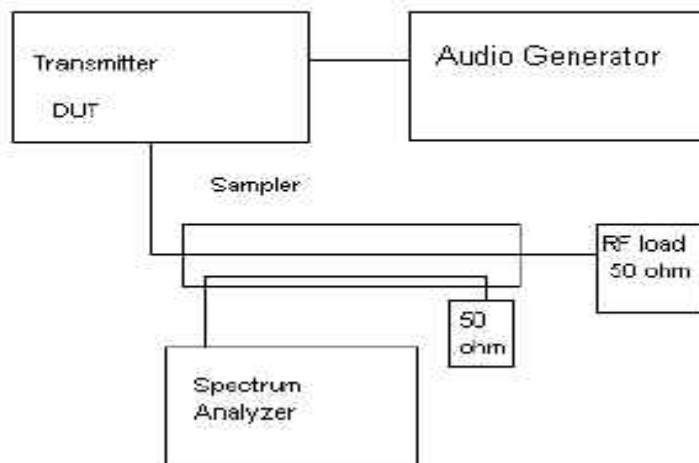
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2.1049 Occupied bandwidth :

95.635 (b)(1)(3)(8)(c)

Data in the plots shows that the sidebands from greater than 50% to 100% of the authorized bandwidth must be attenuated by at least 25dB and from 100 to 250% the sidebands must be attenuated by at least 35dB. Beyond 250% the sidebands must be attenuated by at least $53 + \log_{10}(TP)$. The transmitter was modulated with 2500Hz, adjusted for 50% modulation plus 16dB. Spectrum analyzer was set with the un-modulated carrier at the top of the screen. The test procedure diagram and occupied bandwidth photographs follow.

Occupied BW Test Equipment Setup



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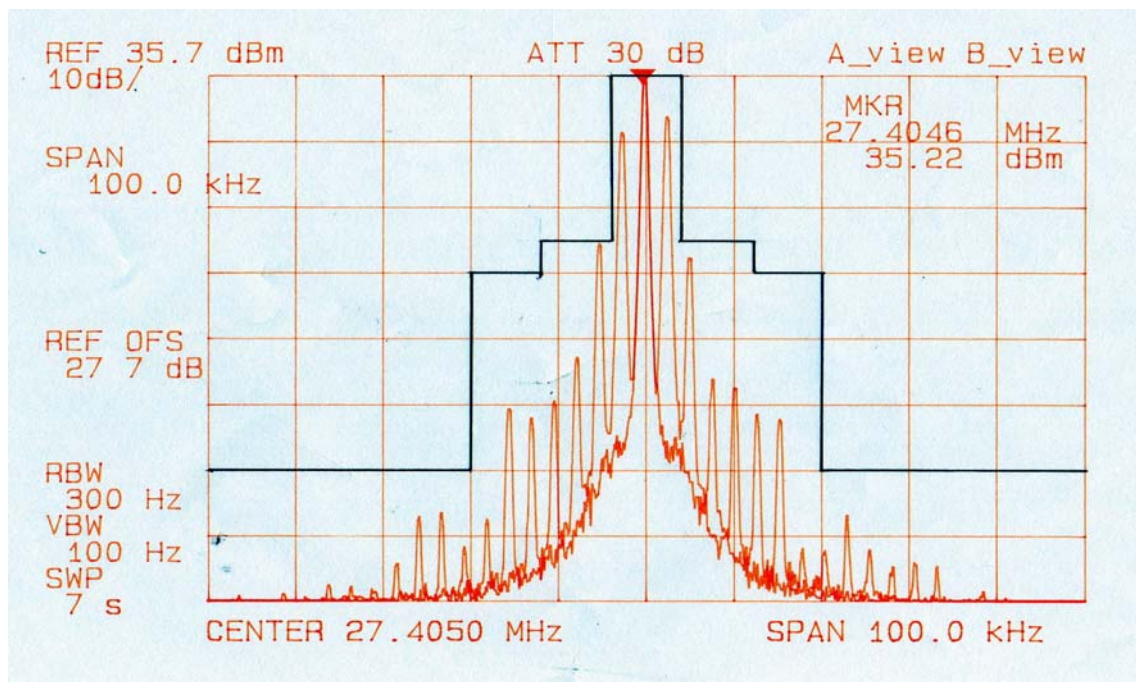
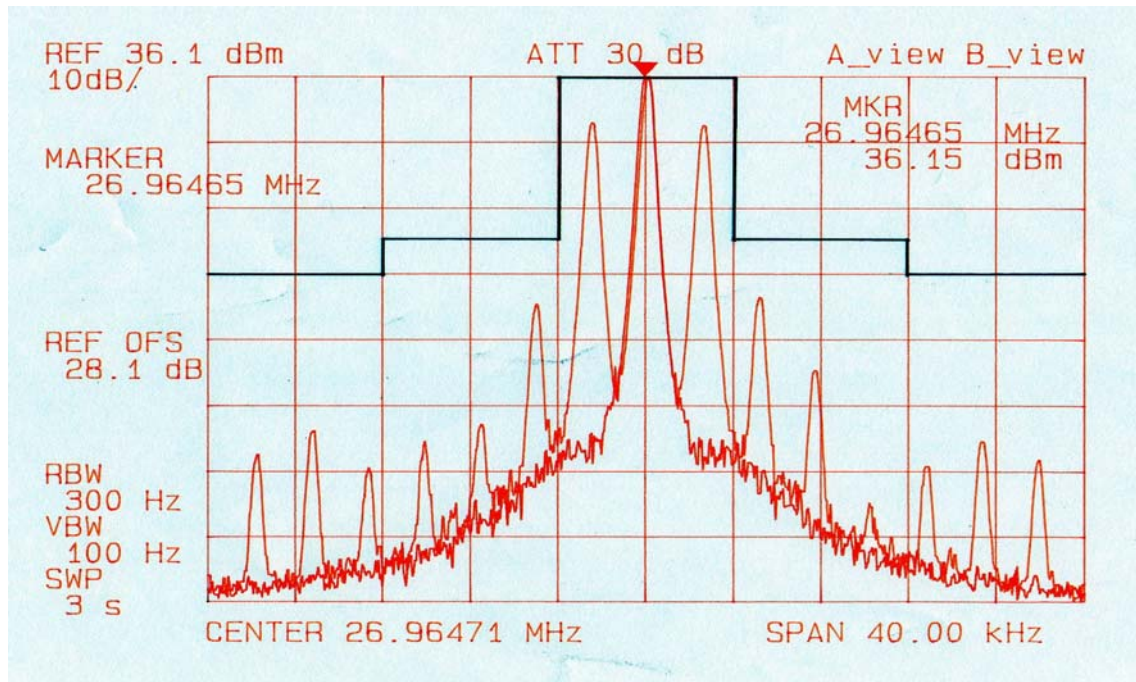
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1ch



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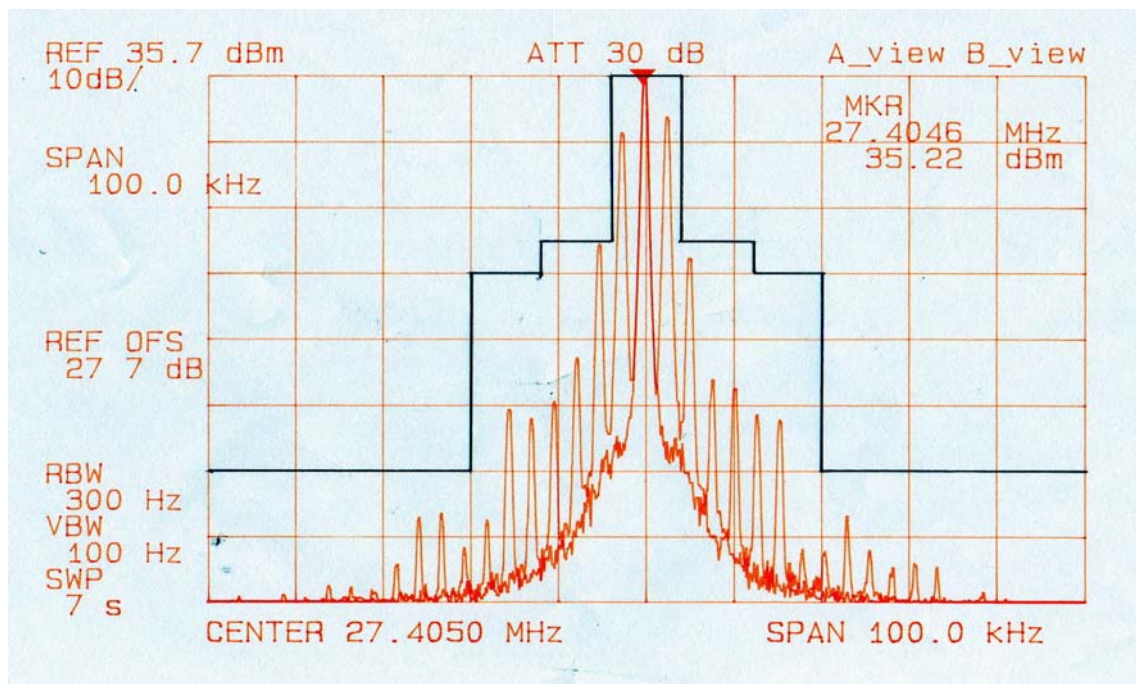
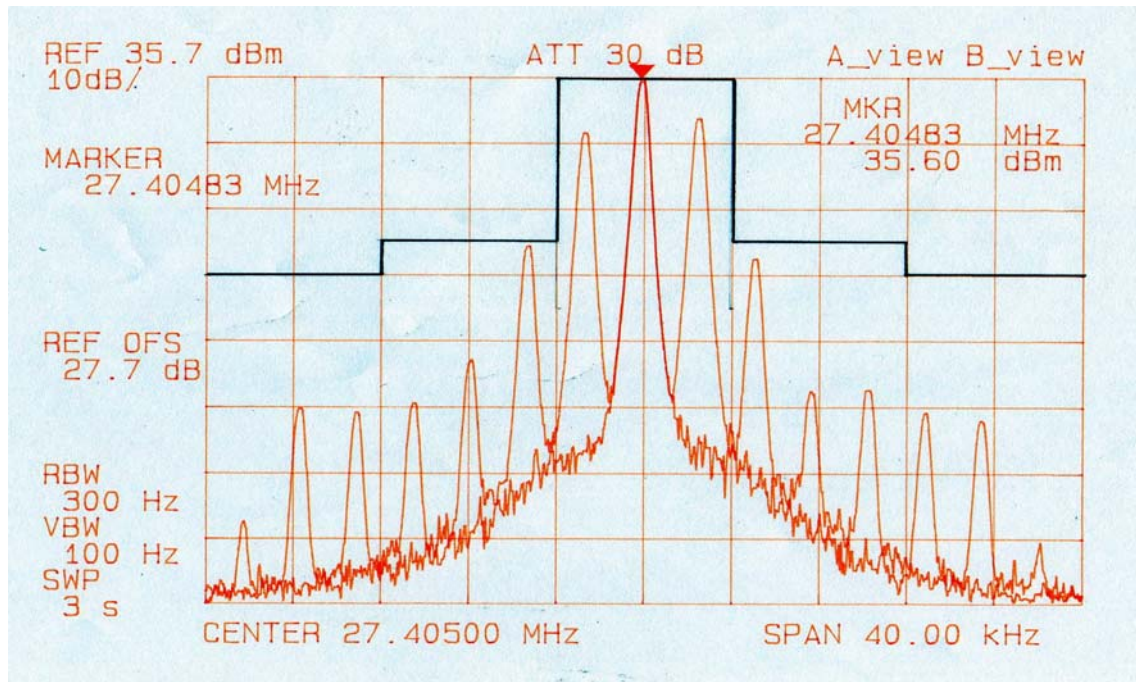
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40ch



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2.1051(a) Spurious emissions at antenna terminals (conducted):

NAME OF TEST: SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Data below shows the level of conducted spurious responses. The carrier was modulated 100% using a 2500Hz tone. The spectrum was scanned from 0.4 to at least the 10th harmonic of the fundamental. The measurements were made in accordance with standard TIA/EIA-603.

FCC Limit : At least 60dB on any frequency twice of greater than twice the fundamental.

Test Data :

1ch

Frequency(MHz)	Reading Value	dBc
26.965	36.000	
53.930	-24.700	60.700
80.895	-33.150	69.150
107.860	-36.800	72.800
134.825	-41.070	77.070
161.790	-40.950	76.950
188.755	-35.550	71.550
215.720	-31.270	67.270
242.685	-31.250	67.250
269.650	-27.600	63.600

40ch

Frequency(MHz)	Reading Value	dBc
27.405	36.000	
54.810	-24.000	60.000
82.215	-34.170	70.170
109.620	-39.370	75.370
137.025	-38.520	74.520
164.430	-40.670	76.670
191.835	-40.300	76.300
219.240	-37.450	73.450
246.645	-32.700	68.700
274.050	-28.470	64.470

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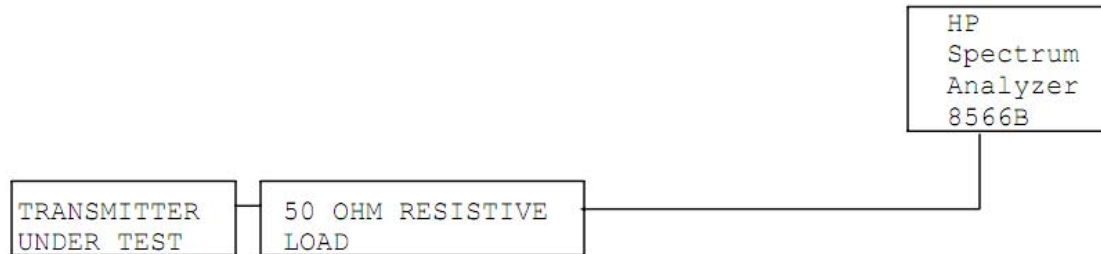
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Method of Measuring Conducted Spurious Emission



METHOD OF MEASUREMENT : The procedure used was TIA/EIA-603 STANDARD without exceptions. The Measurements were made at ThruLab & ENGINEERING. located at 477-6, Hager-Ri, Yoju-Up, Yoju-Gun, Kyunggi-Do, 469-803, Korea

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2.1053

Field strength of spurious emissions:

NAME OF TEST :

RADIATED SPURIOUS EMISSIONS

REQUIREMENTS:

The FCC Limits for radiated emissions are the same as previously stated for conducted emission.

Test Data :

1ch, 26.965MHz

Frequency	Ant. Polarity	S/G Reading (dBm)	Cable Loss	Substitution Ant. (dBd)	dBc
26.965	H	36.000			
53.930	H	-38.600	1.100	-3.279	76.779
80.895	H	-40.200	1.400	2.138	72.662
107.860	H	-46.800	1.700	1.655	79.445
134.825	H	-44.100	2.000	1.182	76.918
161.790	H	-41.800	2.200	-0.441	76.041
188.755	H	-44.200	2.400	2.166	75.634
215.720	H	-41.400	2.700	7.905	66.795
242.685	H	-38.600	3.000	8.436	63.164
269.650	H	-35.400	3.000	8.089	60.311

Frequency	Ant. Polarity	S/G Reading (dBm)	Cable Loss	Substitution Ant. (dBd)	dBc
26.965	V	36.000			
53.930	V	-41.900	1.100	-3.279	80.079
80.895	V	-41.200	1.400	2.138	73.662
107.860	V	-47.100	1.700	1.655	79.745
134.825	V	-43.300	2.000	1.182	76.118
161.790	V	-32.400	2.200	-0.441	66.641
188.755	V	-40.700	2.400	2.166	72.134
215.720	V	-41.500	2.700	7.905	66.895
242.685	V	-36.300	3.000	8.436	60.864
269.650	V	-35.800	3.000	8.089	60.711

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40ch, 27.405MHz

Frequency	Ant. Polarity	S/G Reading (dBm)	Cable Loss	Substitution Ant. (dBd)	dBc
27.405	H	36.000			
54.810	H	-40.500	1.100	-3.139	78.539
82.215	H	-45.800	1.400	2.279	78.121
109.620	H	-48.500	1.700	1.796	81.004
137.025	H	-40.700	2.000	1.323	73.377
164.430	H	-36.500	2.200	-0.300	70.600
191.835	H	-47.900	2.400	2.307	79.193
219.240	H	-41.700	2.700	8.045	66.955
246.645	H	-38.700	3.000	8.577	63.123
274.050	H	-36.200	3.000	8.229	60.971

Frequency	Ant. Polarity	S/G Reading (dBm)	Cable Loss	Substitution Ant. (dBd)	dBc
27.405	V	36.000			
54.810	V	-39.500	1.100	-3.139	77.539
82.215	V	-39.900	1.400	2.279	72.221
109.620	V	-41.400	1.700	1.796	73.904
137.025	V	-39.700	2.000	1.323	72.377
164.430	V	-31.700	2.200	-0.300	65.800
191.835	V	-43.600	2.400	2.307	74.893
219.240	V	-44.600	2.700	8.045	69.855
246.645	V	-35.800	3.000	8.577	60.223
274.050	V	-35.500	3.000	8.229	60.271

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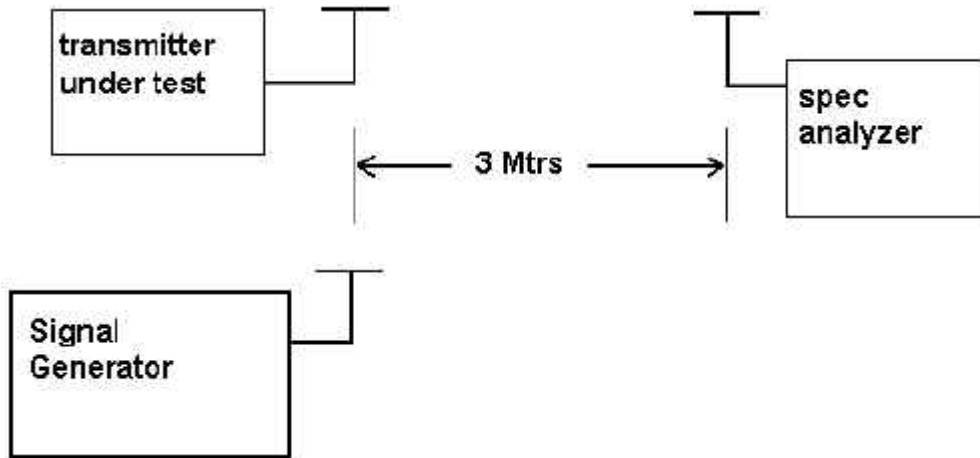
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Method of Measuring Radiated Spurious Emissions



METHOD OF MEASUREMENT : The tabulated data shows the results of the radiated field strength emissions test. The spectrum was scanned from 30 MHz to at least the tenth harmonic of the fundamental. This test was conducted per TIA/EIA STANDARD 603 using the substitution method. Measurements were made at the open field test site of ThruLab & ENGINEERING. located at 477-6, Hager-Ri, Yoji-Up, Yoji-Gun, Kyunggi-Do, 469-803, Korea

Equipment placed 80 cm above ground

on a rotatable platform.

* Appropriate antenna raised from 1 to 4 M.

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2.1055 (a) (b) (d)

Frequency stability

Temperature and voltage tests were performed to verify that the frequency remains within the 0.0005%, 5 ppm specification limit. The test was conducted as follows : The transmitter was placed in the temperature chamber at 25 degrees C and allowed to stabilize for one hour. The transmitter was keyed ON for one minute during which four frequency readings were recorded at 15 second intervals. The worse case number was taken for temperature plotting. The assigned channel frequency was considered to be the reference frequency. The temperature was then reduced to - 30 degrees C after which the transmitter was again allowed to stabilize for one hour. The transmitter was keyed ON for one minute, and again frequency readings were noted at 15 second intervals. The worst case number was recorded for temperature plotting. This procedure was repeated in 10 degree increments up to + 50 degrees C.

MEASUREMENT DATA:

REFERENCE VOTAGE (V DC)	13.8V	REFERENCE FREQUENCY (MHz)	27.305000
TEMPERATURE	FREQUENCY(MHz)	PPM	LIMIT(ppm)
-30	27.304972	-1.03	50.0
-20	27.305047	1.72	50.0
-10	27.305060	2.20	50.0
0	27.305038	1.39	50.0
10	27.304980	-0.73	50.0
20	27.304867	-4.87	50.0
30	27.304865	-4.94	50.0
40	27.304801	-7.29	50.0
50	27.304788	-7.76	50.0
+15% Voltaage : 15.87V	27.304947	-1.94	50.0
-15% Voltaage : 11.73V	27.304915	-3.11	50.0

Note: This EUT meets the frequency stability requirement for a FRS: +/-2.5ppm over temp range of -20 degrees C to + 50 degrees C. It also meets the GMRS frequency stability requirements : +/- 5ppm over the temp range -30 degrees C to +50 degrees C.

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TEST EQUIPMENT LIST

No	Description	Manufacturer	Model No.	Serial No.	Due Cal.	Used
1	Test Receiver	Rohde & Schwarz	ESHS 10	862970/018	2009.05.13	☐
2	Test Receiver	Rohde & Schwarz	ESVS 10	826008/014	2009.06.20	☐
3	Spectrum Analyzer	Hewlett Packard	8566B	2311A02394	2009.06.10	☒
4	Spectrum Analyzer	Advantest Corp.	R3261C	61720208	2008.06.10	☐
5	Modulation Analyzer	Hewlett Packard	8901B	3438A05094	2009.05.29	☒
6	Audio analyzer	Hewlett Packard	8903B	3011A12915	2009.05.29	☒
7	Preamplifier	Hewlett Packard	8447F	2805A02570	2009.05.26	☐
8	Preamplifier	A.H. Systems	PAM-0118	164	2009.04.27	☐
9	Signal Generator	Hewlett Packard	8673D	2708A00448	2009.06.10	☒
10	Power Meter	Hewlett Packard	437B	312U24787	2009.04.29	☒
11	Power Sensor	Hewlett Packard	8482B	3318A06943	2009.06.29	☒
12	Loop Antenna	Rohde & Schwarz	HFH2-Z2.335.4711.52	826532/006	2009.01.31	☐
13	Dipole Antenna	Rohde & Schwarz	VHAP	574	2010.07.07	☐
14	Dipole Antenna	Rohde & Schwarz	VHAP	575	2010.07.17	☐
15	Dipole Antenna	Rohde & Schwarz	UHAP	546	2010.07.07	☐
16	Dipole Antenna	Rohde & Schwarz	UHAP	547	2010.07.07	☐
17	Biconical Antenna	Eaton Corp.	94455-1	0977	2010.07.03	☒
18	Biconical Antenna	EMCO	3104C	9111-2468	2010.07.03	☒
19	Log Periodic Antenna	EMCO	3146	2051	2010.06.05	☐
20	Log Periodic Antenna	EMCO	3146	8901-2320	2010.07.03	☐
21	Horn Antenna	A.H. Systems	SAS-571	414	2009.03.17	☐
22	LISN	EMCO	3825/2	9111-1912	2008.12.12	☐
23	LISN	Kyoritsu	KNW-242	8-923-2	2009.05.23	☐
24	Waveform Generator	Hewlett Packard	33120A	US34001190	2009.05.29	☐
25	Digital Oscilloscope	Tektronix	TDS 340A	B012287	2009.06.10	☐
26	Dummy Load	Bird Electronics	8251	11511	2009.02.02	☒

APPLICANT : Nextron Co., Ltd.

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