STANDARD TEST CONDITIONS and ENGINEERING PRACTICES

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-1992, section 6.1.9, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst case measurements.

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NAME OF TEST: Carrier Output Power (Conducted)

SPECIFICATION: 47 CFR 2.1046(a)

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the unmodulated output power was measured by means of an R. F. Power Meter.
2. Measurement accuracy is ±3%.

MEASUREMENT RESULTS, CONDUCTED

NOMINAL, MHz		CHANNEL	R. F. POWER, WATTS	
			Lo	Hi
AMPS MODE	824.040	991	0.003	0.263
	836.400	380	0.003	0.354
	848.970	799	0.003	0.295
CDMA MODE	825.290	995	0.0006	0.251
	836.400	380	0.0006	0.281
	847.720	795	0.0006	0.223

MEASURED VALUES, RADIATED

TUNED MHz	EMISSION MHz	LEVEL dBuV/m	@ m	C.F. dB	CALC dBuV/m	@ m	EIRP dBm		ERP dBm	ERP Watts
AMPS LOW										
824.04	824.038	73.2	3	30.7	103.9	3	8.7	P	6.55	0.00450
836.40	836.398	74.4	3	30.7	105.1	3	9.9	P	7.75	0.00575
848.97	848.973	74.4	3	30.7	105.2	3	9.9	P	7.75	0.00575
AMPS HIGH										
824.04	824.040	93.4	3	30.7	124.1	3	28.9	P	26.75	0.460
836.40	836.400	94.6	3	30.7	125.3	3	30.0	P	27.85	0.580
848.97	848.943	94.5	3	30.7	125.3	3	30.0	P	27.85	0.580
CDMA LOW										
824.04	824.040	43.6	3	30.7	74.2	3	-21.0	P	-23.15	0.0046
836.40	836.400	44.3	3	30.7	75.5	3	-20.2	P	-22.35	0.0055
848.97	848.830	43.7	3	30.7	74.4	3	-20.8	P	-22.95	0.0048
CDMA HIGH										
824.04	824.040	93.8	3	30.7	124.5	3	29.3	P	27.15	0.520
836.40	834.400	94.2	3	30.7	124.9	3	29.7	P	27.55	0.555
848.97	848.850	93.7	3	30.7	124.4	3	29.2	P	27.05	0.500

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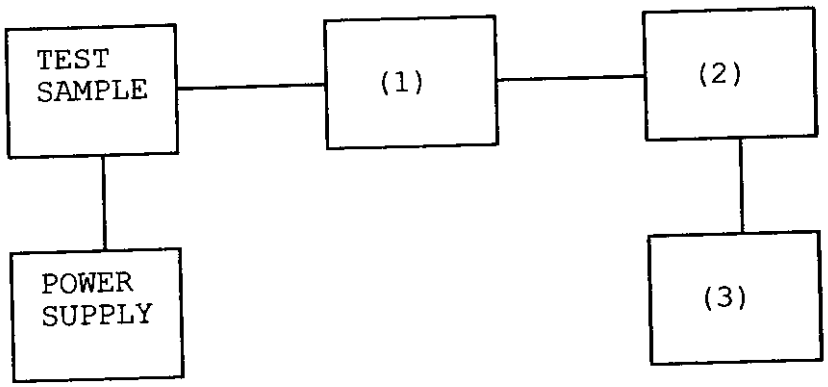
TRANSMITTER POWER CONDUCTED MEASUREMENTS

TEST 1: R. F. POWER OUTPUT
TEST 2: FREQUENCY STABILITY



	Asset	Description	s/n
(1)		COAXIAL ATTENUATOR	
___	i00122	Narda 766-10	7802
___	i00123	Narda 766-10	7802A
___	i00069	Bird 8329 (30 dB)	1006
x	i00113	Sierra 661A-3D	1059
(2)		POWER METERS	
___	i00014	HP 435A	1733A05836
x	i00039	HP 436A	2709A26776
x	i00020	HP 8901A POWER MODE	2105A01087
(3)		FREQUENCY COUNTER	
___	i00042	HP 5383A	1628A00959
x	i00019	HP 5334B	2704A00347
x	i00020	HP 8901A FREQUENCY MODE	2105A01087

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NAME OF TEST: Audio Frequency Response

SPECIFICATION: 47 CFR 2.1047(a)

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page.

2. The audio signal generator was connected to the audio input circuit/microphone of the EUT.

3. The audio signal input was adjusted to obtain 20% modulation at 1 kHz, and this point was taken as the 0 dB reference level.

4. With input levels held constant and below limiting at all frequencies, the audio signal generator was varied from 100 Hz to 50 kHz.

5. The response in dB relative to 1 kHz was then measured, using the HP 8901A Modulation Analyzer.

6. MEASUREMENT RESULTS: ATTACHED

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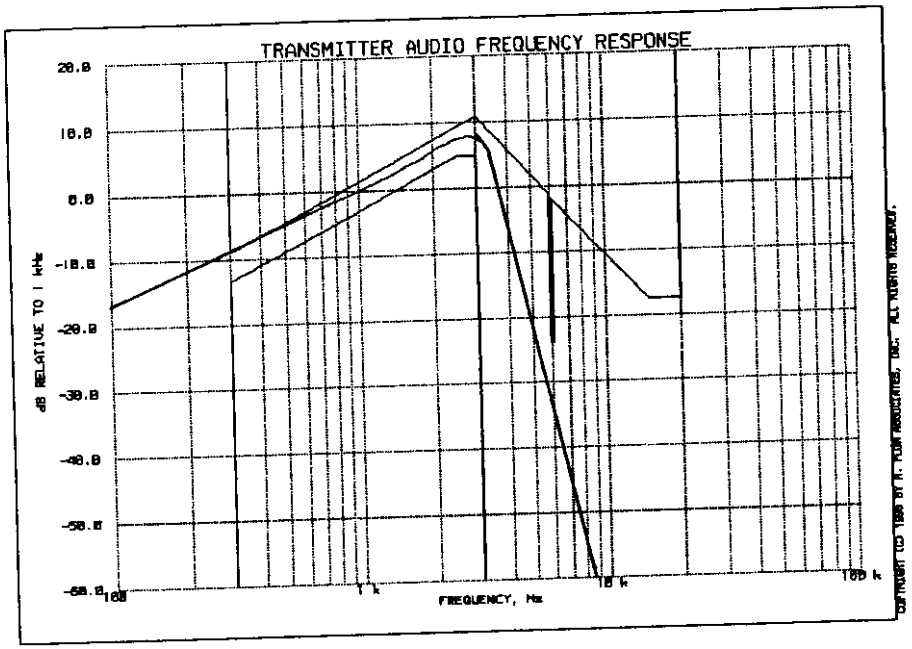
NAME OF TEST: Audio Frequency Response
g98b0012: 1998-Nov-11 Wed 11:16:00
STATE: 0:General



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NAME OF TEST: Audio Low Pass Filter (Voice Input)

SPECIFICATION: 47 CFR 2.1047(a)

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up such that the audio input was connected at the input to the modulation limiter, and the modulated stage.

2. The audio output was connected at the output to the modulated stage.

3. MEASUREMENT RESULTS: ATTACHED

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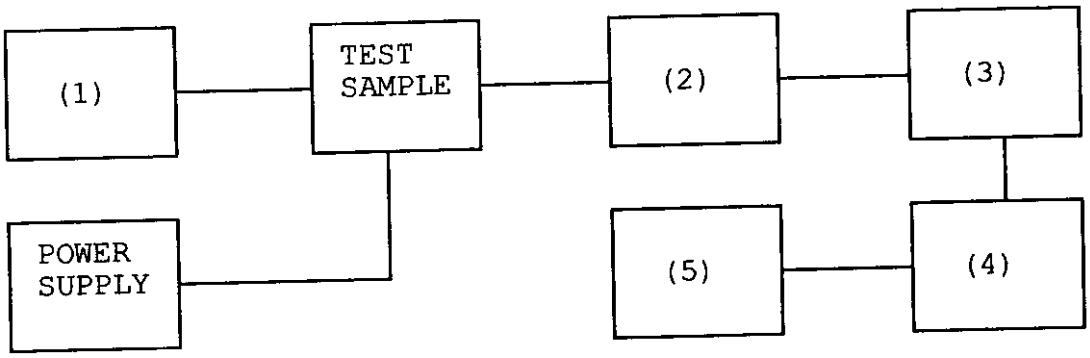
TRANSMITTER TEST SET-UP

TEST A. MODULATION CAPABILITY/DISTORTION
TEST B. AUDIO FREQUENCY RESPONSE
TEST C. HUM AND NOISE LEVEL
TEST D. RESPONSE OF LOW PASS FILTER
TEST E. MODULATION LIMITING



	Asset	Description	s/n
(1)		LINE IMPEDANCE STABILIZATION NETWORK	
___	i00010	HP 204D	1105A04683
x	i00017	HP 8903A	2216A01753
x	i00118	HP 33120A	US36002064
(2)		COAXIAL ATTENUATOR	
___	i00122	NARDA 766-10	7802
___	i00123	NARDA 766-10	7802A
x	i00113	SIERRA 661A-3D	1059
___	i00069	BIRD 8329 (30 dB)	10066
(3)		MODULATION ANALYZER	
x	i00020	HP 8901A	2105A01087
(4)		AUDIO ANALYZER	
x	i00017	HP 8903A	2216A01753
(5)		SCOPE	
___	i00058	HP 1741A	2215A09356
___	i00071	Tektronix 935	1935-B011343

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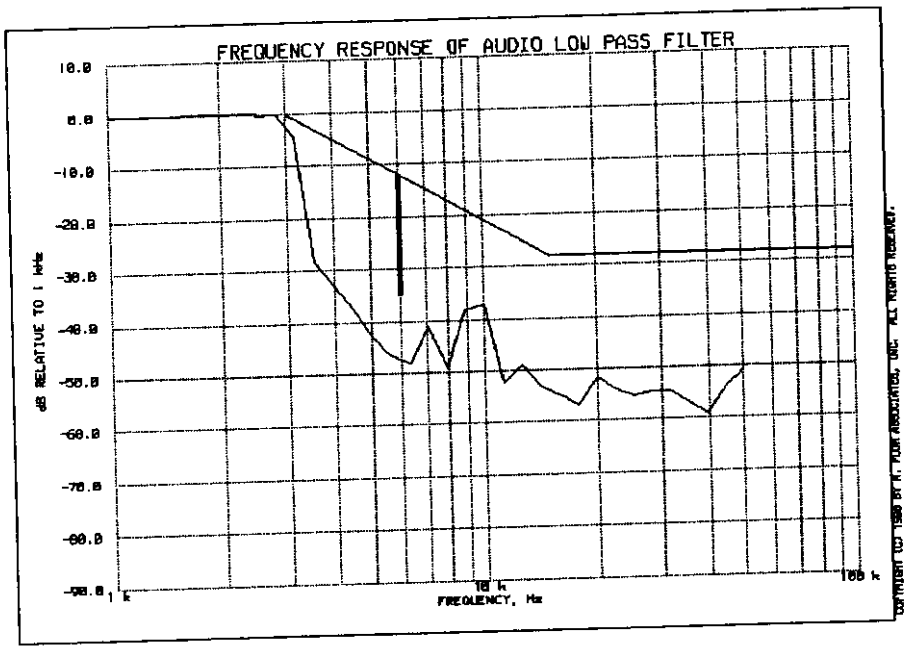
NAME OF TEST: Audio Low Pass Filter (Voice Input)
g98b0011: 1998-Nov-11 Wed 11:12:00
STATE: 0:General



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NAME OF TEST: Modulation Limiting

SPECIFICATION: 47 CFR 2.1047(b)

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The audio signal generator was connected to the audio input circuit/microphone of the EUT as for Frequency Response of the Audio Modulating Circuit.

2. The modulation response was measured for each of three tones (one of which was the frequency of maximum response), and the input voltage was varied and was observed on an HP 8901A Modulation Analyzer.

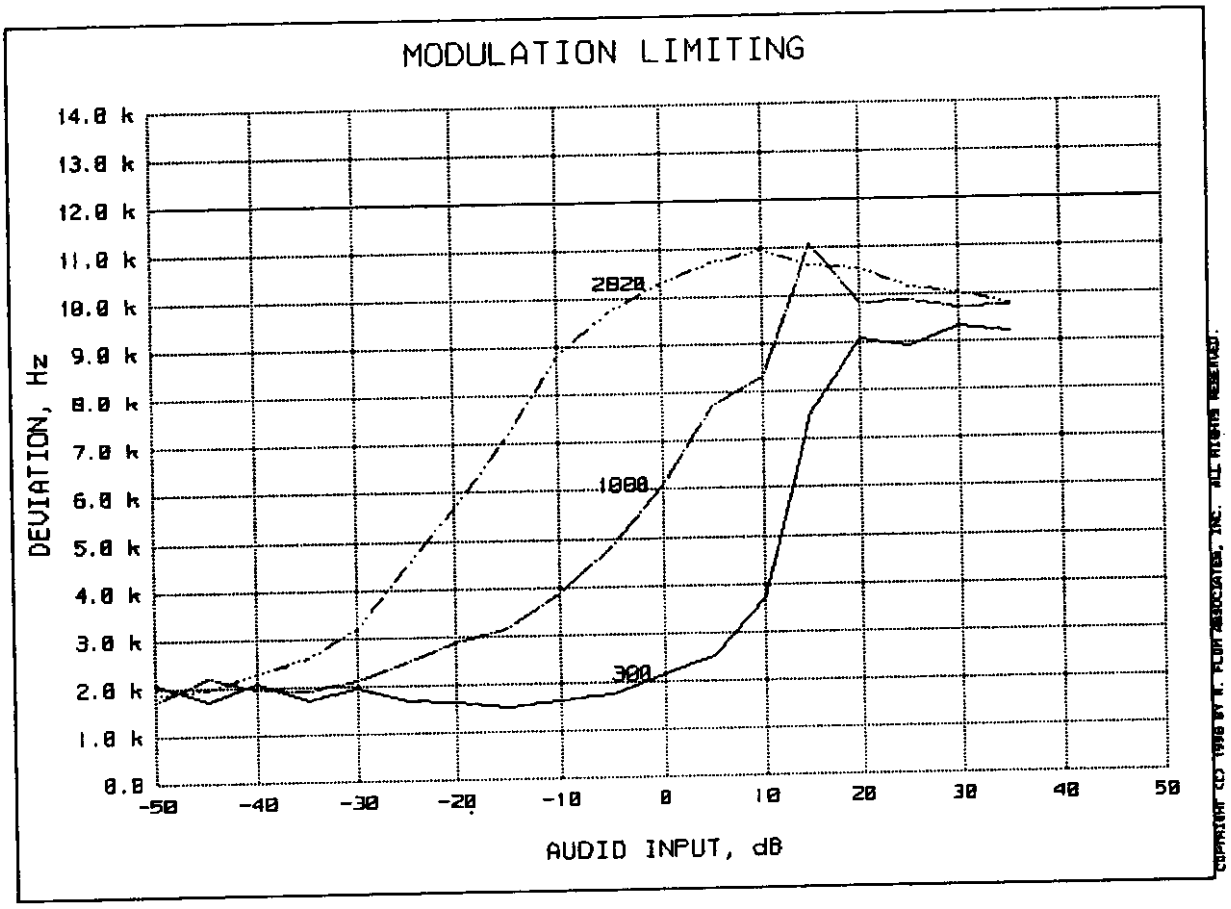
3. The audio input level was varied from 30% modulation (±3.6 kHz deviation) to at least 20 dB higher than the saturation point.

4. Measurements were performed for both negative and positive modulation and the respective results were recorded.

5. MEASUREMENT RESULTS ATTACHED FOR:

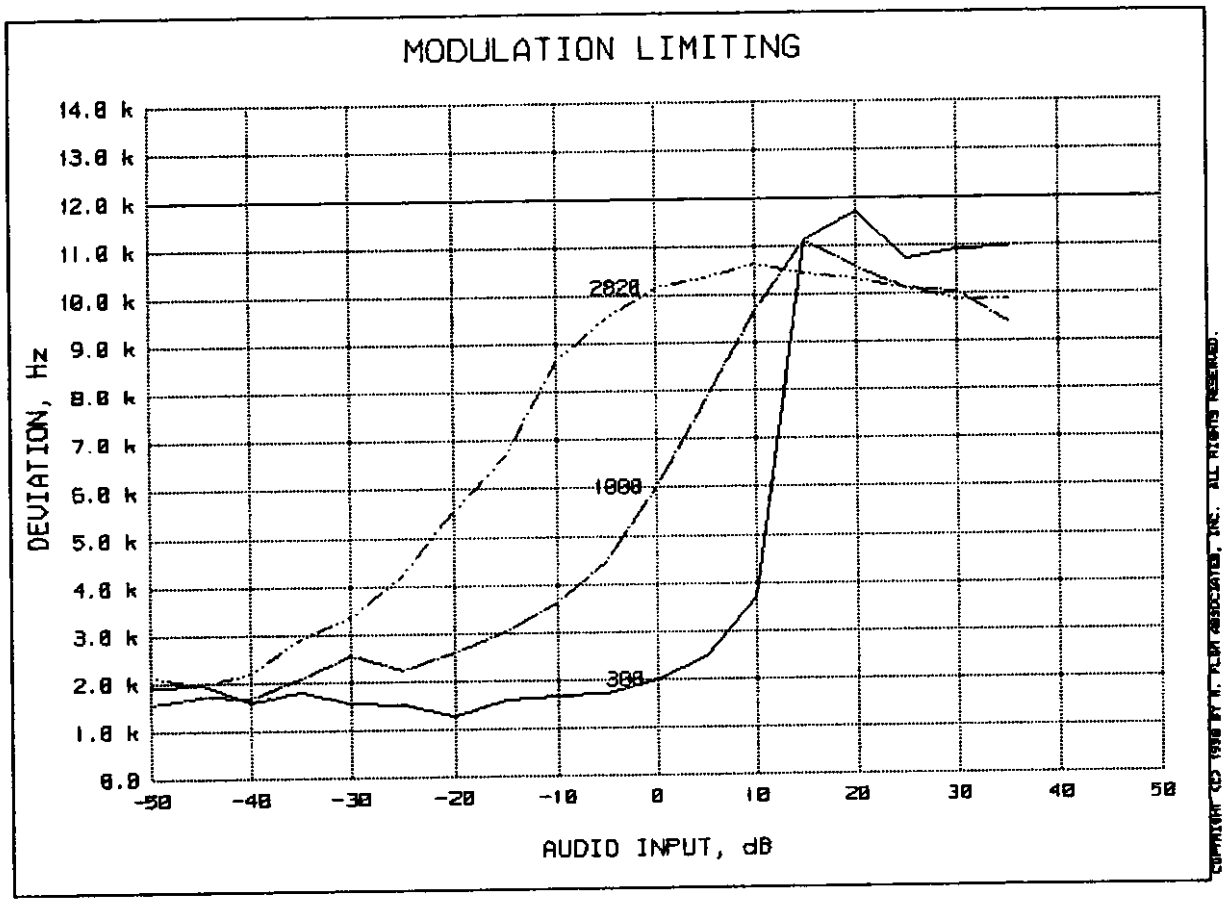
COMPANDER ON:
x VOICE
x VOICE + SAT

MODULATION LIMITING
NOKIA, 5180
1998-NOV-11, 11:25



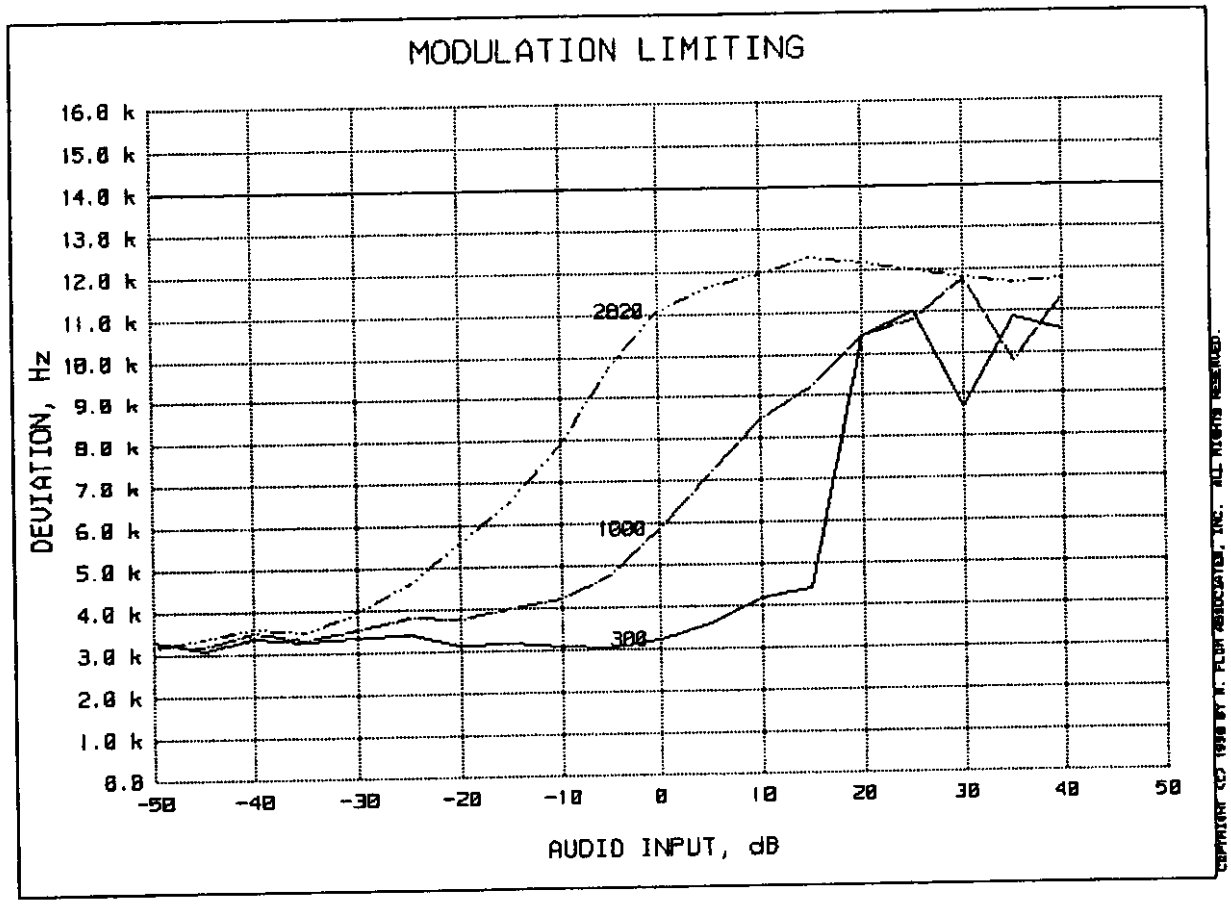
COMMENT	= VOICE ONLY
REFERENCE DEVIATION, kHz	= 6
REFERENCE MODULATION, Hz	= 1000
PEAKS	= POSITIVE
AUDIO AMPLITUDE, mV	= 94.21

MODULATION LIMITING
NOKIA, 5180
1998-NOV-11, 11:25



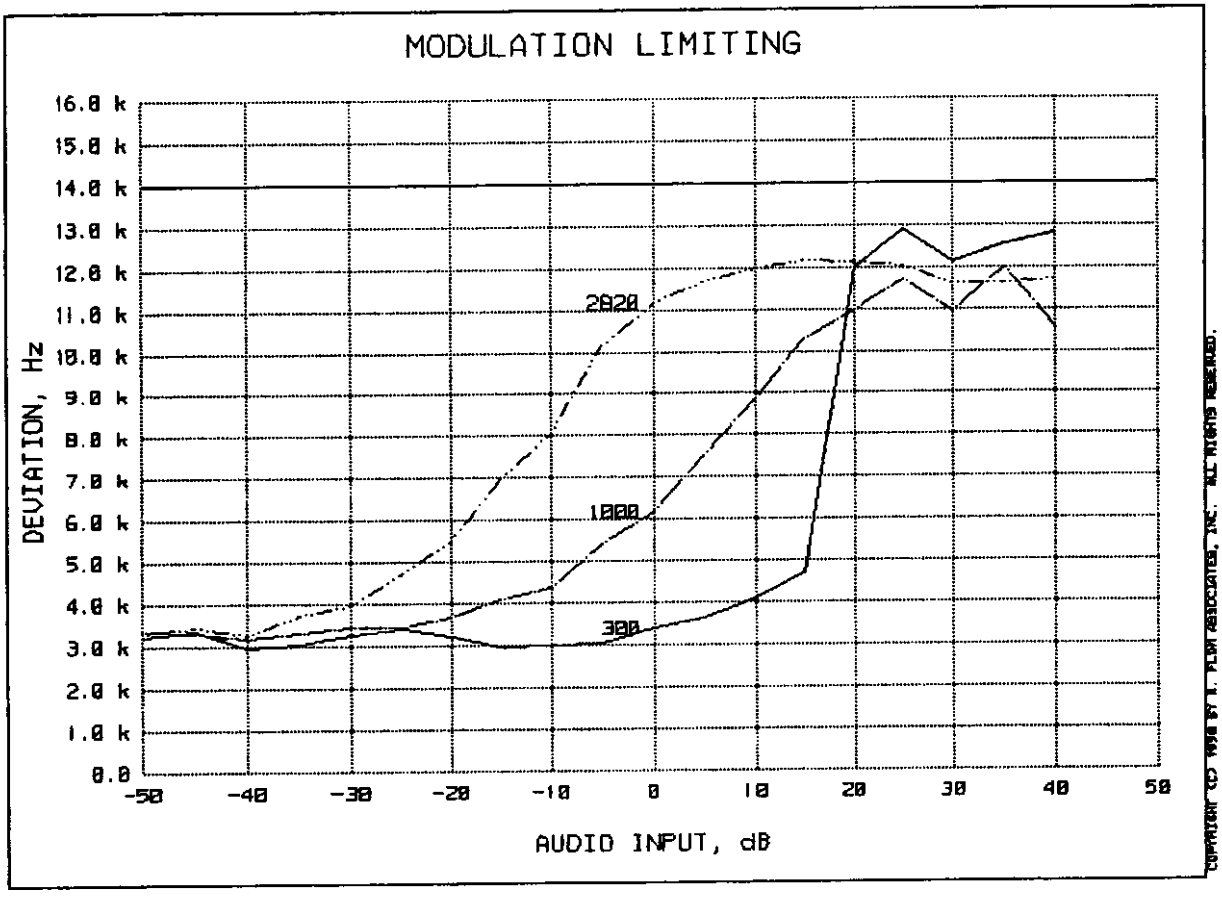
COMMENT	= VOICE ONLY
REFERENCE DEVIATION, kHz	= 6
REFERENCE MODULATION, Hz	= 1000
PEAKS	= NEGATIVE
AUDIO AMPLITUDE, mV	= 94.21

MODULATION LIMITING
NOKIA, 5180
1998-NOV-11, 11:37



COMMENT	= VOICE + SAT
REFERENCE DEVIATION, kHz	= 6
REFERENCE MODULATION, Hz	= 1000
PEAKS	= POSITIVE
AUDIO AMPLITUDE, mV	= 43.56

MODULATION LIMITING
NOKIA, 5180
1998-NOV-11, 11:37



COMMENT = VOICE + SAT
REFERENCE DEVIATION, kHz = 6

REFERENCE MODULATION, Hz = 1000

PEAKS = NEGATIVE

AUDIO AMPLITUDE, mV = 49.44

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NAME OF TEST: Measurement Of Maximum Deviation

SPECIFICATION:

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The presentation of tones was obtained by attaching the HP 8903A Oscilloscope to the Modulation Output of the HP 8901 Modulation Analyzer.

2. The EUT was modulated by an HP 8903 Audio Analyzer and/or internally generated signals.

3. Oscilligraphic presentations and maximum deviation measurements were recorded for the various configurations.

4. MEASUREMENT RESULTS: ATTACHED SUMMARY FOR DEVIATION

5. MEASUREMENT RESULTS: ATTACHED PLOTS FOR TONES

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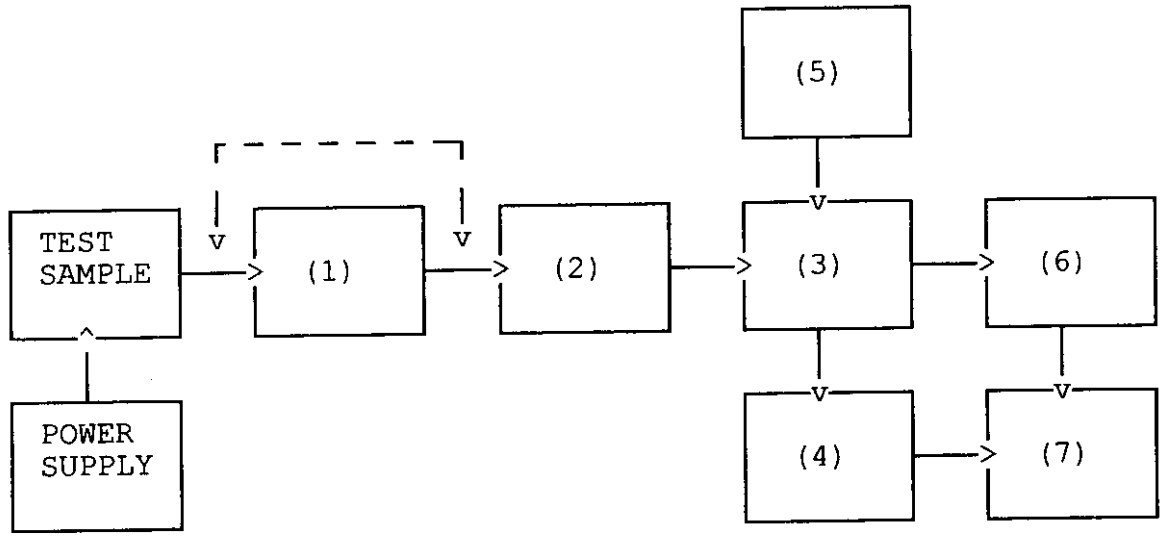
Measurement Of Maximum Deviation



	Asset	Description		s/n
(1)	AUDIO OSCILLATOR/GENERATOR			
	i00010	HP 204D		1105A04683
x	i00017	HP 8903A		2216A01753
(2)	COAXIAL ATTENUATOR			
x	i00122	Narda 766-10		7802
x	i00123	Narda 766-10		7802A
	i00113	Sierra 661A-3D		1059
(3)	FILTERS; NOTCH, HP, LP, BP			
x	i00126	Eagle TNF-1		100-250
x	i00125	Eagle TNF-1		50-60
x	i00124	Eagle TNF-1		250-850
(4)	SPECTRUM ANALYZER			
x	i00048	HP 8566B		2511A01467
	i00029		HP 8563E	3213A00104
(5)	SCOPE			
x	i00030	HP 54502A		2927A00209

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MEASUREMENT SUMMARY: Measurement Of Maximum Deviation

	MODULATION	DEVIATION, kHz
(a)	Voice	10.8
(b)	Wideband Data	7.8
(c)	SAT	2.2
(d)	ST	8.2
(e)	SAT + VOICE	N/A
(f)	SAT + DTMF	N/A
(g)	CDMA	N/A
(h)	TDMA	N/A
(i)	NAMPS VOICE	N/A
(j)	NAMPS DSAT	N/A
(k)	NAMPS ST	N/A
(l)	NAMPS VOICE	N/A

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NAME OF TEST:	Emission Masks (Occupied Bandwidth)
SPECIFICATION:	47 CFR 2.1049(c)(1)
GUIDE:	EIA/IS-19-B-1988 TIA/EIA/IS-137-A-1996
TEST EQUIPMENT:	As per previous page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page, with the Spectrum Analyzer connected.

2. For EUTs supporting audio modulation, the audio signal generator was adjusted to the frequency of maximum response and with output level set for ±2.5 kHz deviation (or 50% modulation). With level constant, the signal level was increased 16 dB.

3. For EUTs supporting digital modulation, the digital modulation mode was operated to its maximum extent.

4. The Occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.

5. MEASUREMENT RESULTS: ATTACHED

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MEASUREMENT SUMMARY: Emission Masks (Occupied Bandwidth)

MODULATION	MEASURED DEVIATION ±kHz (HP 8901A)	LIMIT ±kHz	B/W @-26 dB PLOTS, kHz
NONE	0.0	0.0	0.0
VOICE	10.8	12.0	-26
WIDEBAND DATA	7.8	8.0	-24
SAT + VOICE	N/A	N/A	-27
SAT + DTMF	N/A	N/A	-20
CDMA	N/A	N/A	-19
TDMA	N/A	N/A	N/A
NAMPS	N/A	N/A	N/A

FOR ALL OCCUPIED BANDWIDTH PLOTS:

1. 0 dB REFERNCE LEVEL = TOP
2. HORIZONTAL = AS INDICATED
3. VERTICAL = AS INDICATED
4. I.F. BANDWIDTH = AS INDICATED
5. VIDEO BANDWIDTH = OFF
6. POWER OUTPUT = AS PER PAGE 2.
7. WORST CHANNEL = 380
8. WORST CASE = VOICE + SAT

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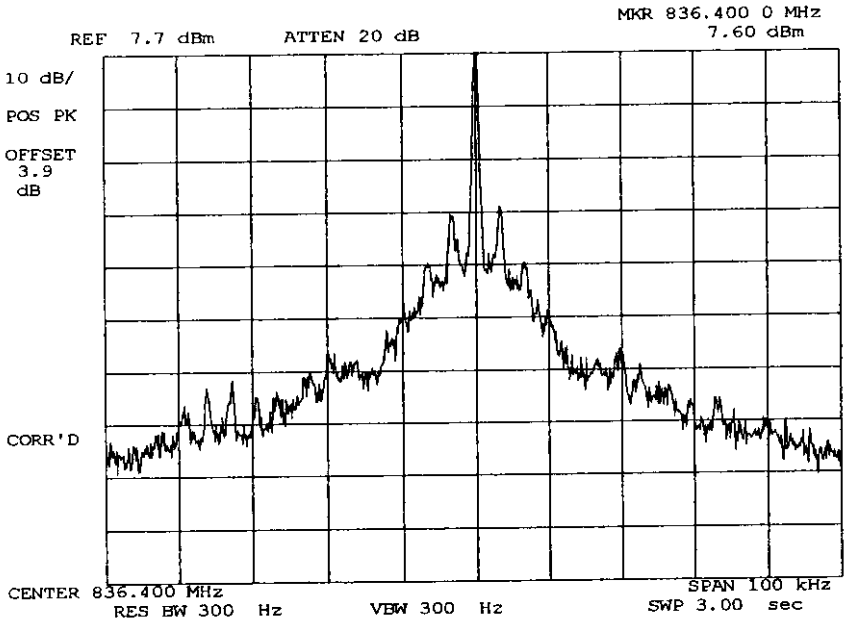
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0052: 1998-Nov-11 Wed 11:59:00
STATE: 1:Low Power



POWER: LOW
MODULATION: NONE

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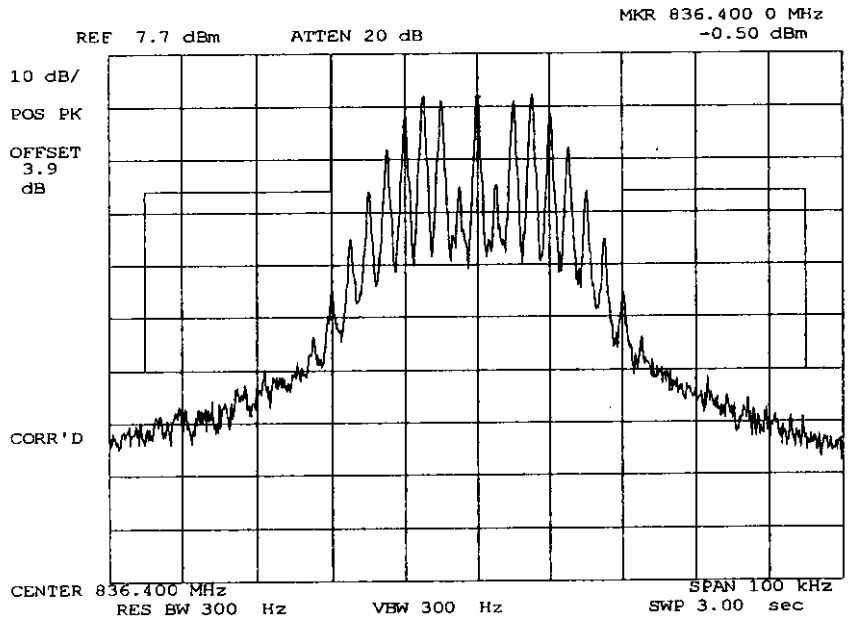
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0057: 1998-Nov-11 Wed 12:35:00
STATE: 1:Low Power



POWER: LOW
MODULATION: VOICE: 2500 Hz SINE WAVE
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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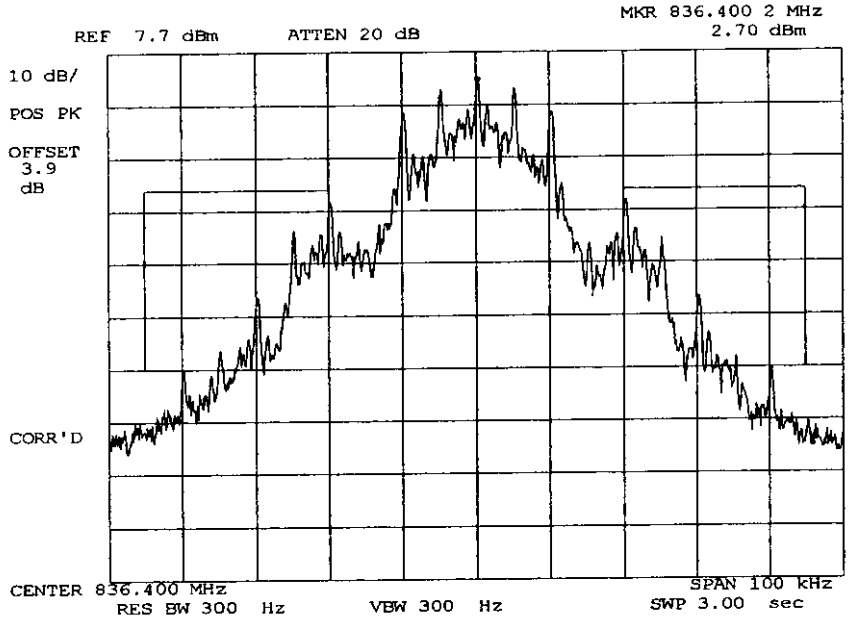
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0060: 1998-Nov-11 Wed 13:26:00
STATE: 1:Low Power



POWER: LOW
MODULATION: WBD
MASK: AMPS CELLULAR, F3E/F3D w/LPF

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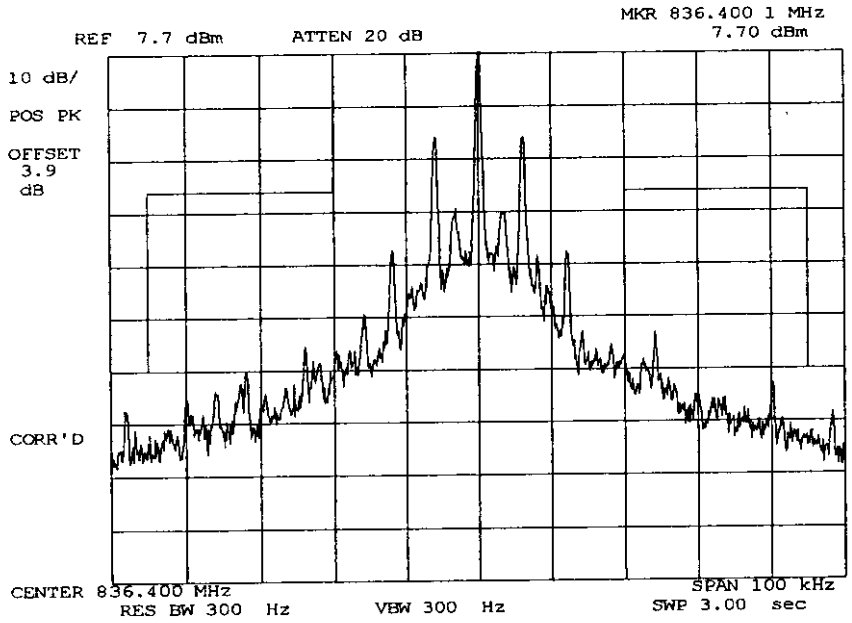
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0065: 1998-Nov-11 Wed 13:35:00
STATE: 1:Low Power



POWER: LOW
MODULATION: SAT
MASK: AMPS CELLULAR, F3E/F3D w/LPF

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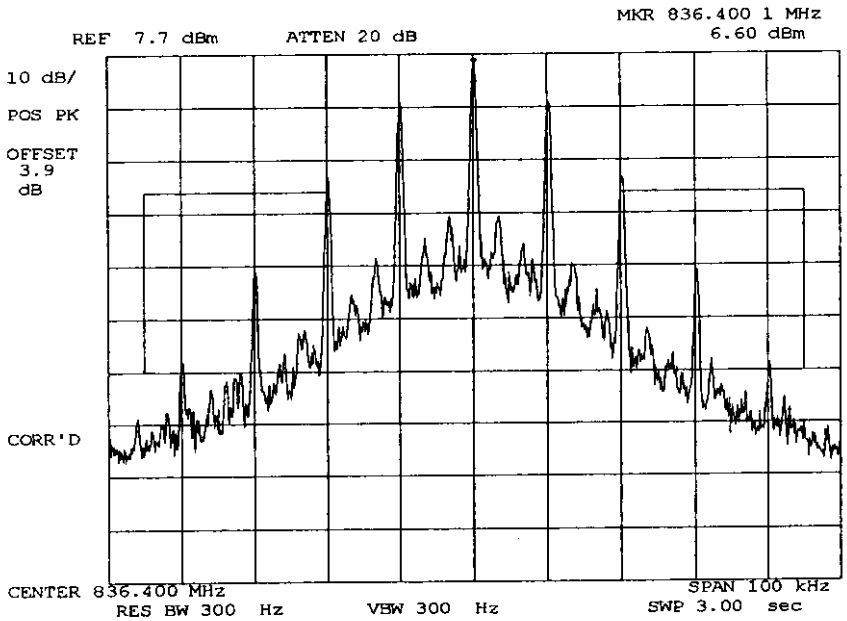
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0063: 1998-Nov-11 Wed 13:32:00
STATE: 1:Low Power



POWER: LOW
MODULATION: ST
MASK: AMPS CELLULAR, F3E/F3D w/LPF

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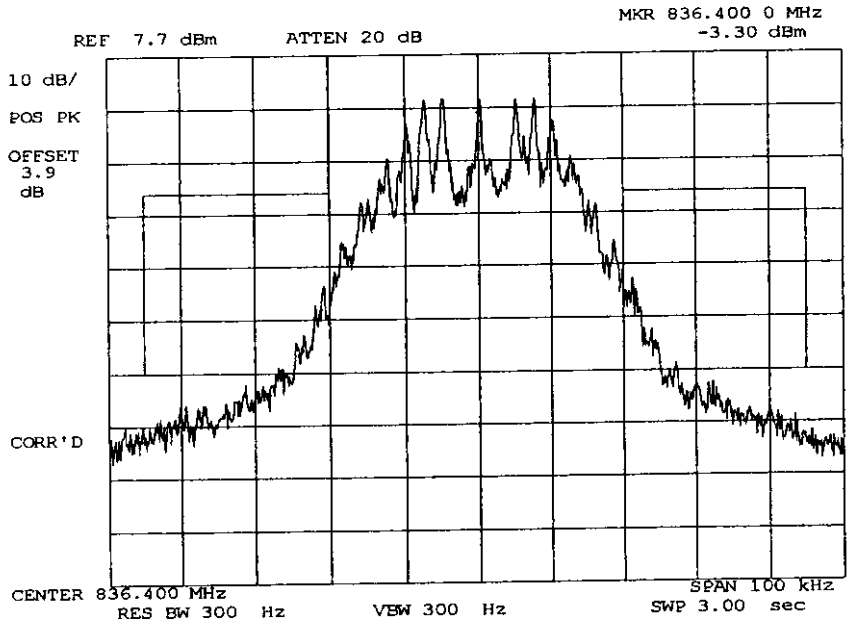
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0059: 1998-Nov-11 Wed 13:23:00
STATE: 1:Low Power



POWER: LOW
MODULATION: SAT+VOICE
MASK: AMPS CELLULAR, F3E/F3D w/LPF

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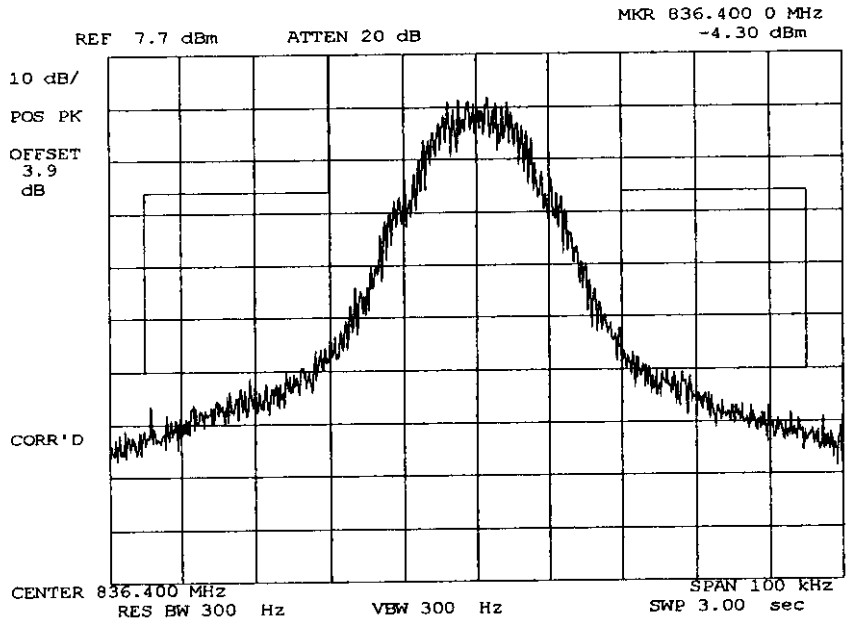
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0067: 1998-Nov-11 Wed 13:43:00
STATE: 1:Low Power



POWER: LOW
MODULATION: SAT+DTMF
MASK: AMPS CELLULAR, F3E/F3D w/LPF

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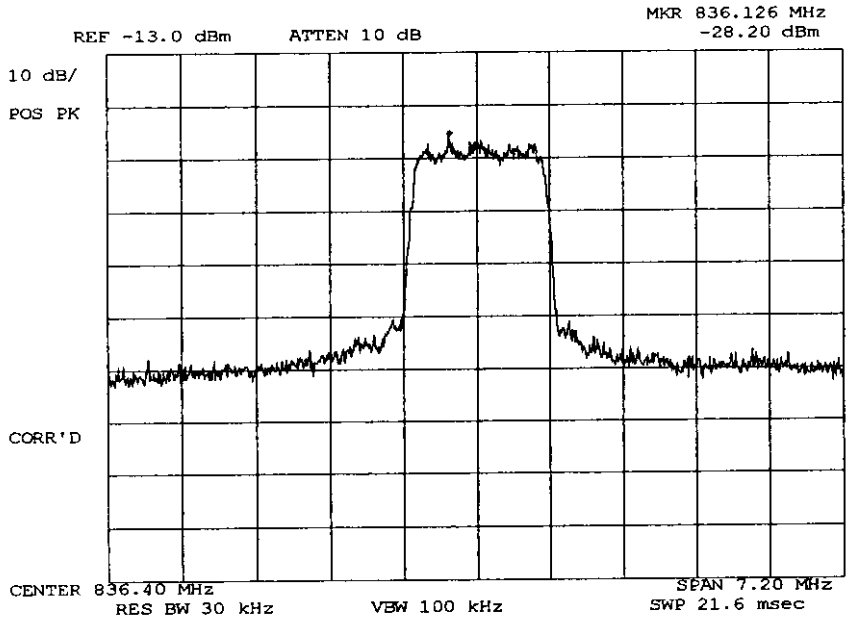
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0055: 1998-Nov-11 Wed 12:23:00
STATE: 1:Low Power



POWER: LOW
MODULATION: CDMA

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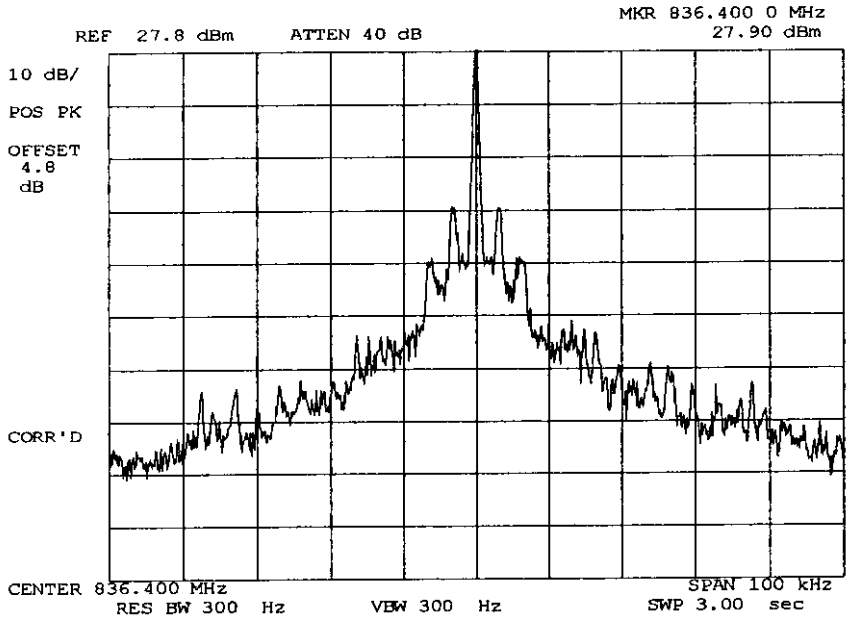
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0051: 1998-Nov-11 Wed 11:56:00
STATE: 2:High Power



POWER: HIGH
MODULATION: NONE

SUPERVISED BY: Morton Flom, P. Eng.

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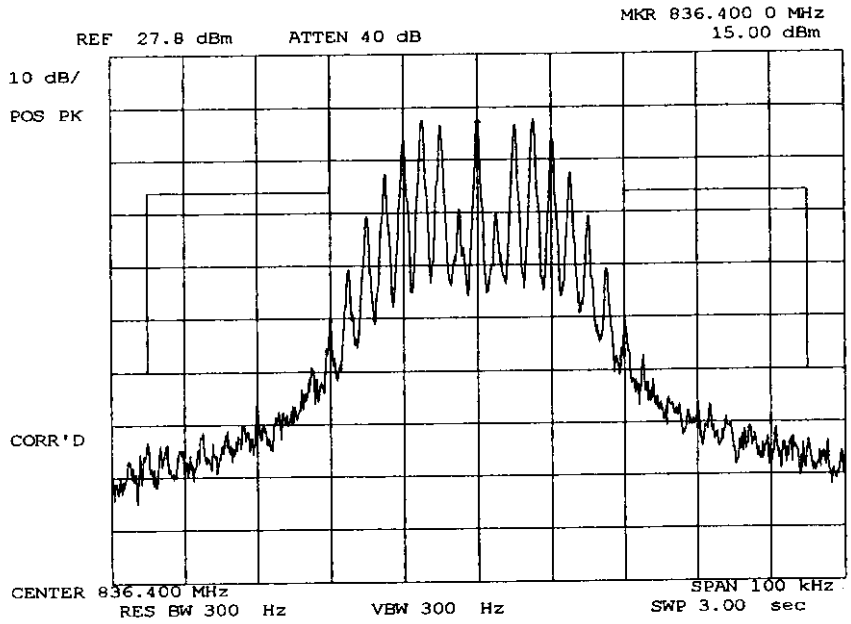
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0056: 1998-Nov-11 Wed 12:34:00
STATE: 2:High Power



POWER: HIGH
MODULATION: VOICE: 2500 Hz SINE WAVE
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

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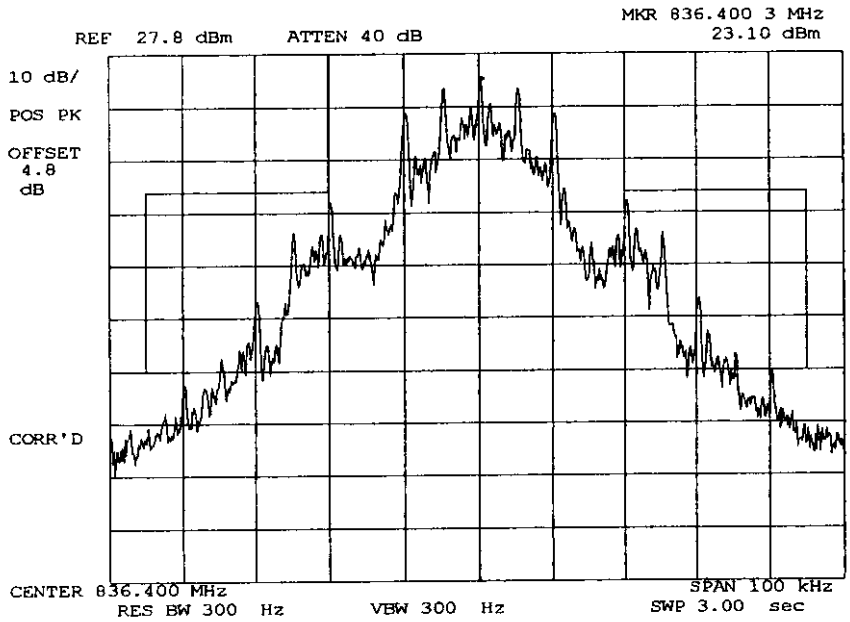
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0061: 1998-Nov-11 Wed 13:28:00
STATE: 2:High Power



POWER: HIGH
MODULATION: WBD
MASK: AMPS CELLULAR, F3E/F3D w/LPF

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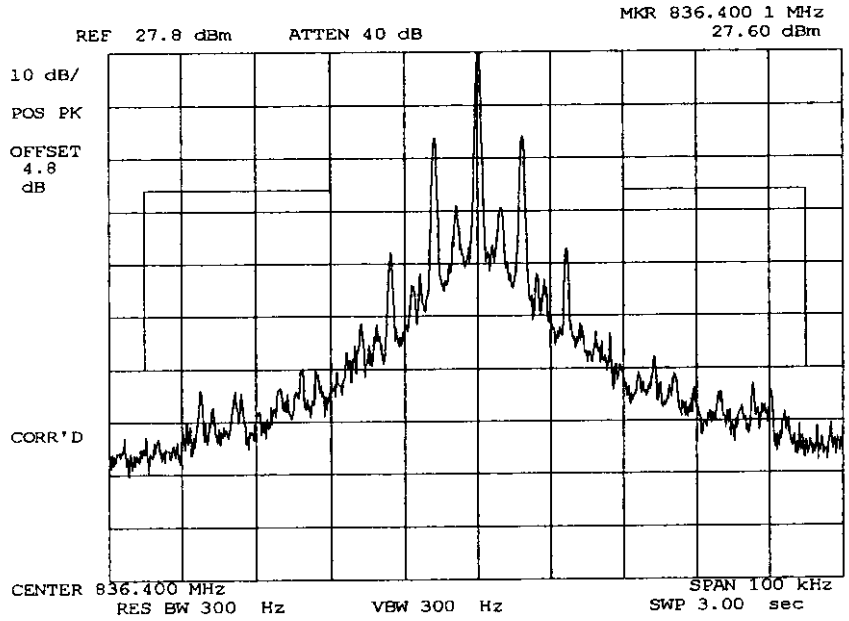
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0064: 1998-Nov-11 Wed 13:34:00
STATE: 2:High Power



POWER: HIGH
MODULATION: SAT
MASK: AMPS CELLULAR, F3E/F3D w/LPF

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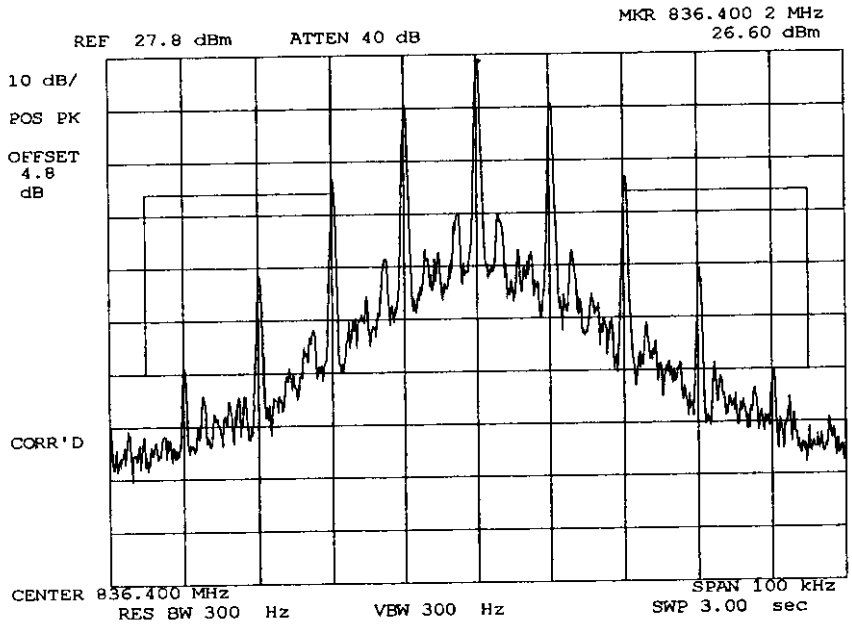
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0062: 1998-Nov-11 Wed 13:31:00
STATE: 2:High Power

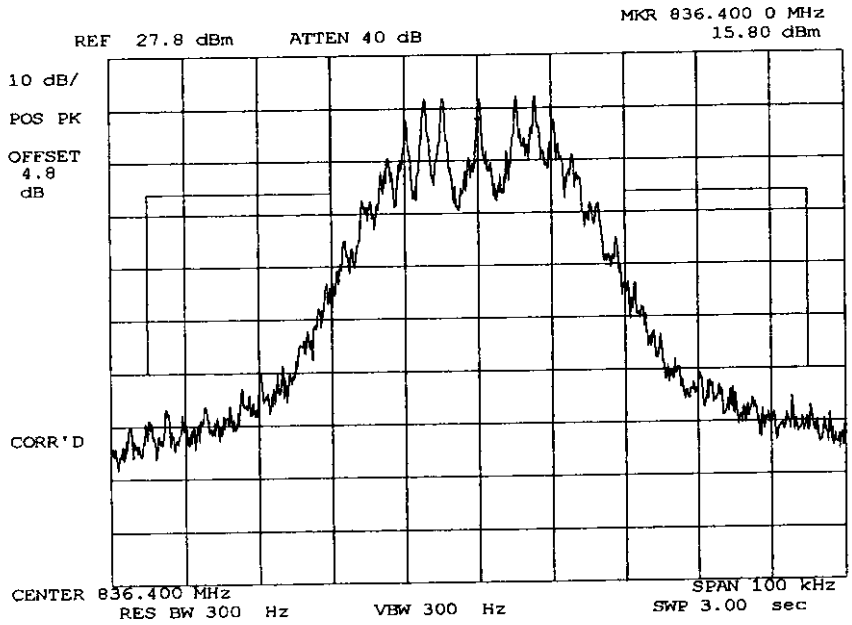


POWER: HIGH
MODULATION: ST
MASK: AMPS CELLULAR, F3E/F3D w/LPF

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 37 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0058: 1998-Nov-11 Wed 13:22:00
STATE: 2:High Power

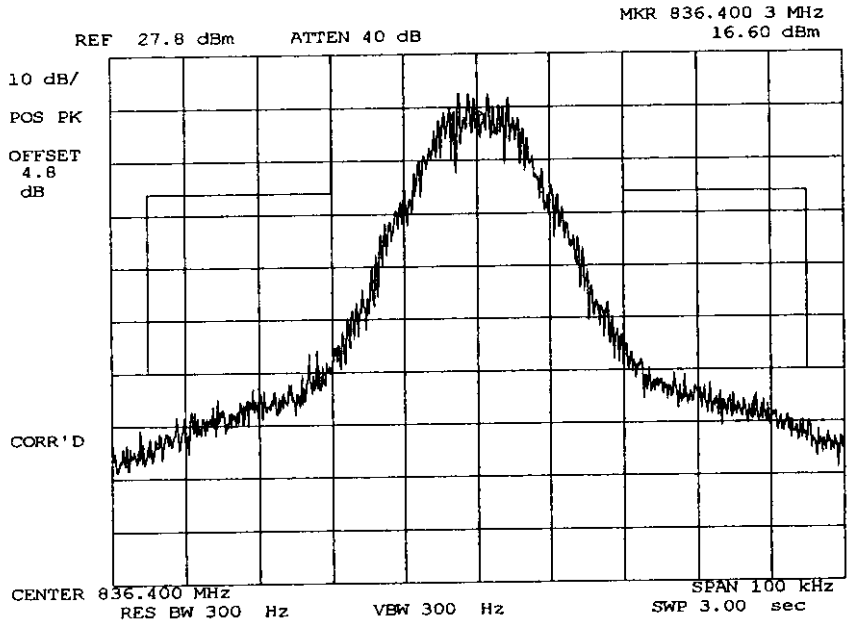


POWER: HIGH
MODULATION: SAT+VOICE
MASK: AMPS CELLULAR, F3E/F3D w/LPF

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 38 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0109: 1998-Nov-11 Wed 13:41:00
STATE: 2:High Power

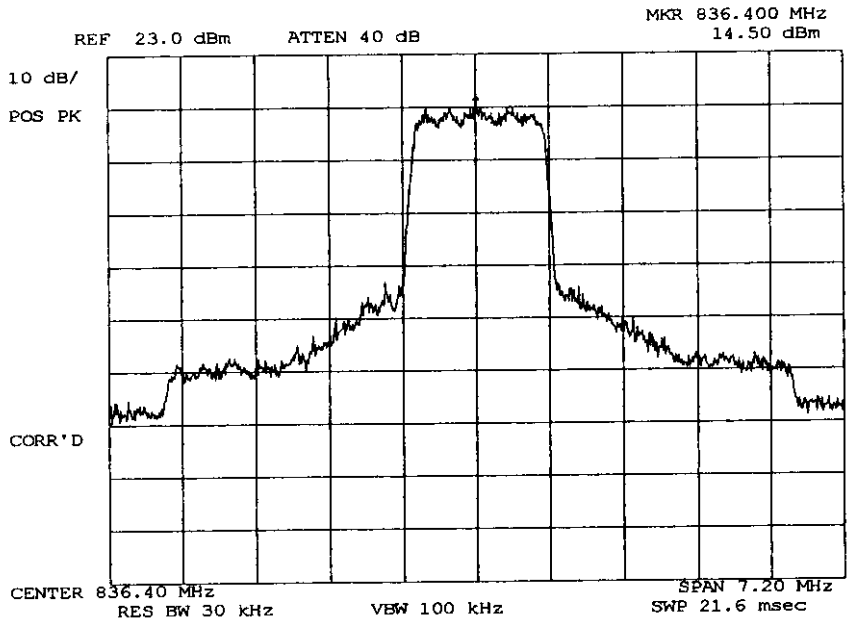


POWER: HIGH
MODULATION: SAT+DTMF
MASK: AMPS CELLULAR,
F3E/F3D w/LPF

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 39 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0053: 1998-Nov-11 Wed 12:18:00
STATE: 2:High Power



POWER: HIGH
MODULATION: CDMA

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 40 of 57.

NAME OF TEST: Emission Requirements - Worst Case Modulation & Wideband Data

SPECIFICATION: 47 CFR 22.917

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT was connected to a coaxial attenuator and then to a spectrum analyzer. The unmodulated carrier was set for 0 dB reference level.

2. A notch filter was introduced to reduce or eliminate any spectrum analyzer internally generated spurious for measurements of the harmonics and the carrier level.

3. Spectrum analyzer bandwidth was set to section 22.917(h) as applicable.

4. Measurements were made on channels 380, 799 and 991. The equipment was first modulated for the Worst Case Modulation, then for Wideband Data (F8W, F1D).

5. All other spurious emissions over the range of 0 the beyond the 10^{th} harmonic (10 GHz) were 20 dB or more below the limit

6. The data presented here is for the Worst Case.

7. MEASUREMENT RESULTS: ATTACHED

PAGE NO. 41 of 57.

MEASUREMENT SUMMARY: Emission Requirements - Worst Case Modulation

WORST CASE MODULATION = VOICE +_SAT

EMISSION, MHz/HARM.	LIMIT, dBc	SPURIOUS EMISSIONS, dBc Lo	Hi
Fo + (F0 + 20 kHz) to F0 + 45 kHz	≤-26	≤-57	≤-58
Fo + (F0 + 45 kHz) to F0 + 90 kHz	≤-45 (≤-13 dBm)	≤-72	≤-74
2nd to 10th	≤-51 (≤-13 dBm)	≤-72	≤-68

MEASUREMENT RESULTS = ATTACHED OFFSET PLOTS

EMISSION IN THE RECEIVER CRITICAL BAND

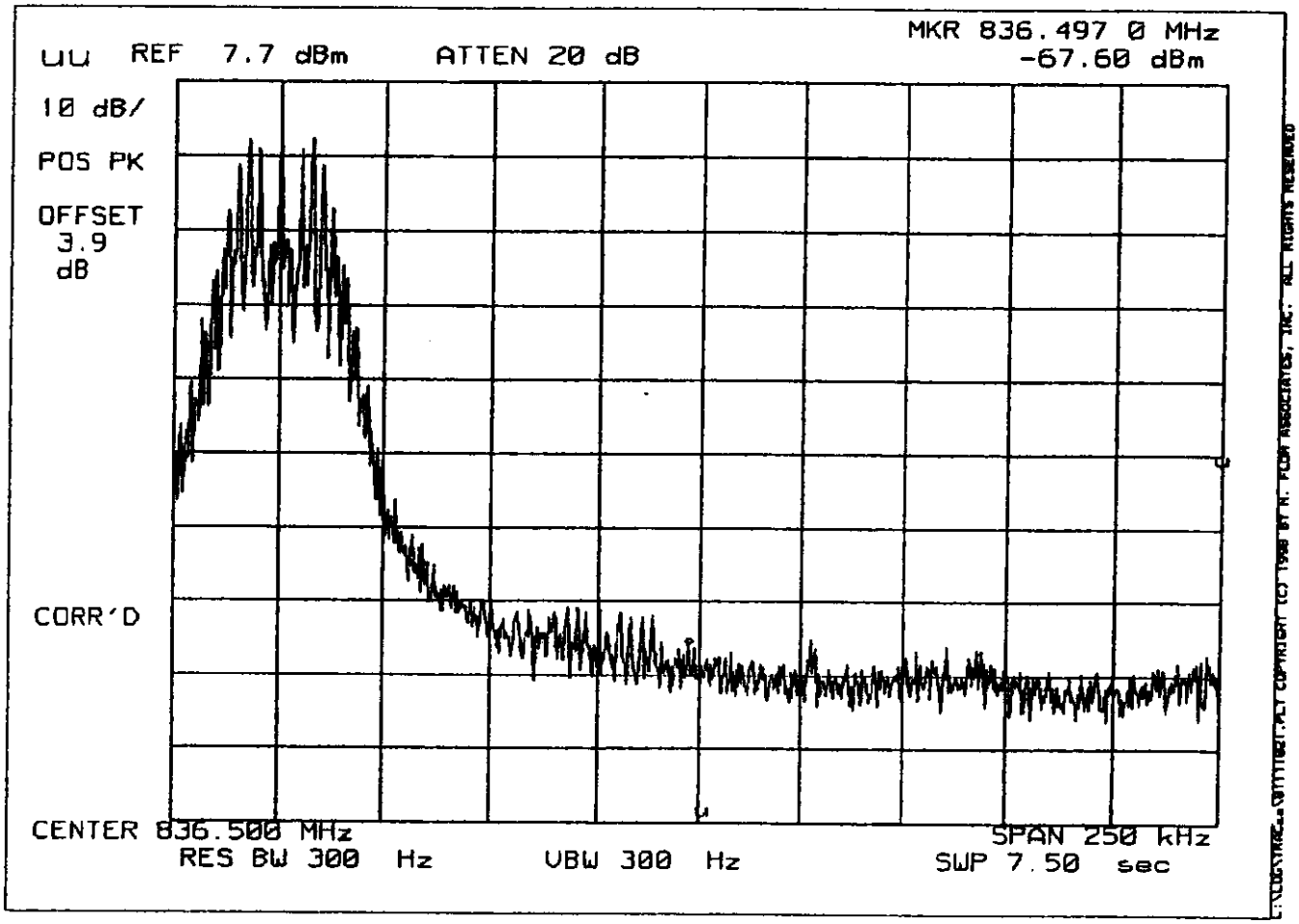
EMISSION, MHz/HARM.	LIMIT, dBm	SPURIOUS EMISSIONS, dBm Lo	Hi
869 to 894	≤-80	≤-87	≤-86

MEASUREMENT RESULTS = ATTACHED PLOTS

SUPERVISED BY: Morton Flom, P. Eng.

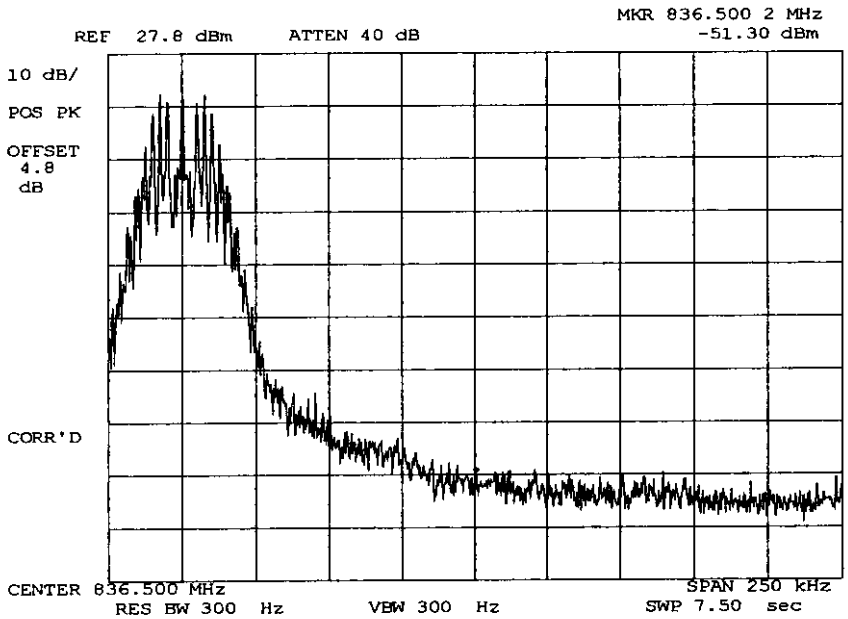
SPECTRUM ANALYZER PRESENTATION
NOKIA, 5180
1998-NOV-11, 13:52, WED

POWER: LOW
MODULATION: SAT+VOICE
REMARK: OFFSET OCCUPIED BANDWIDTH



PAGE NO. 43 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0071: 1998-Nov-11 Wed 13:55:00
STATE: 2:High Power

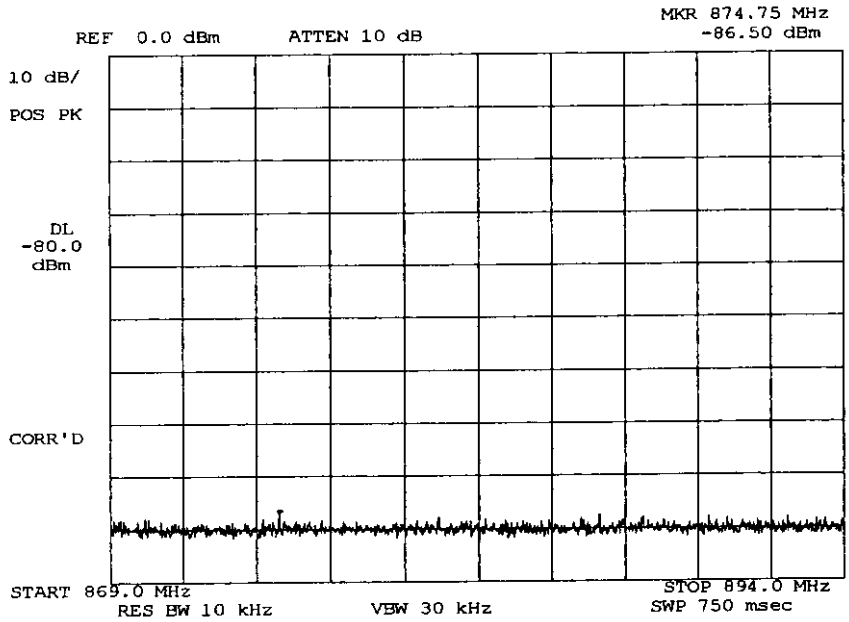


POWER: HIGH
MODULATION: SAT+VOICE
OFFSET OCCUPIED BANDWIDTH

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 44 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0073: 1998-Nov-11 Wed 14:01:00
STATE: 1:Low Power

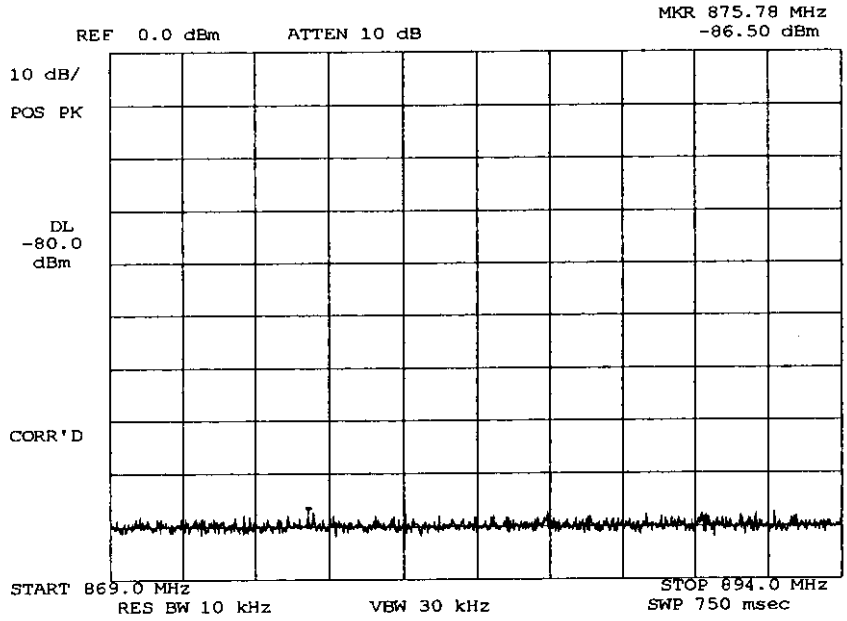


POWER: LOW
MODULATION: ANY
TX SPURS IN RX CRITICAL BAND

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 45 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0072: 1998-Nov-11 Wed 14:00:00
STATE: 2:High Power



POWER: HIGH
MODULATION: ANY
TX SPURS IN RX CRITICAL BAND

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 46 of 57.

MEASUREMENT SUMMARY: Emission Requirements - Wideband Data (F9D, 10 kb/s)

EMISSION, MHz/HARM.	LIMIT, dBc	SPURIOUS EMISSIONS, dBc Lo	Hi
Fo + (F0 + 20 kHz) to F0 + 45 kHz	≤-26	≤-37	≤-38
Fo + (F0 + 45 kHz) to F0 + 90 kHz	≤-45	≤-68	≤-70
Fo + (F0 + 90 kHz) to 2nd Harmonic	≤-60 (≤-13 dBm)	≤-66	≤-63
2nd to 10th	≤-51 (≤-13 dBm)	≤-72	≤-68

MEASUREMENT RESULTS = ATTACHED OFFSET PLOTS

EMISSION IN THE RECEIVER CRITICAL BAND

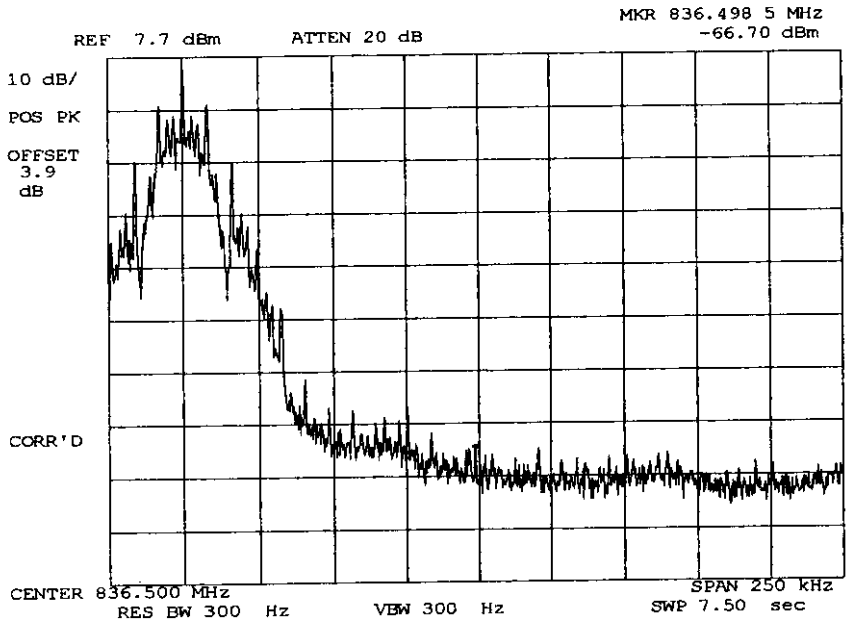
EMISSION, MHz/HARM.	LIMIT, dBm	SPURIOUS EMISSIONS, dBm Lo	Hi
869 to 894	≤-80	≤-87	≤-86

MEASUREMENT RESULTS = ATTACHED PLOTS

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 47 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0075: 1998-Nov-11 Wed 14:06:00
STATE: 1:Low Power

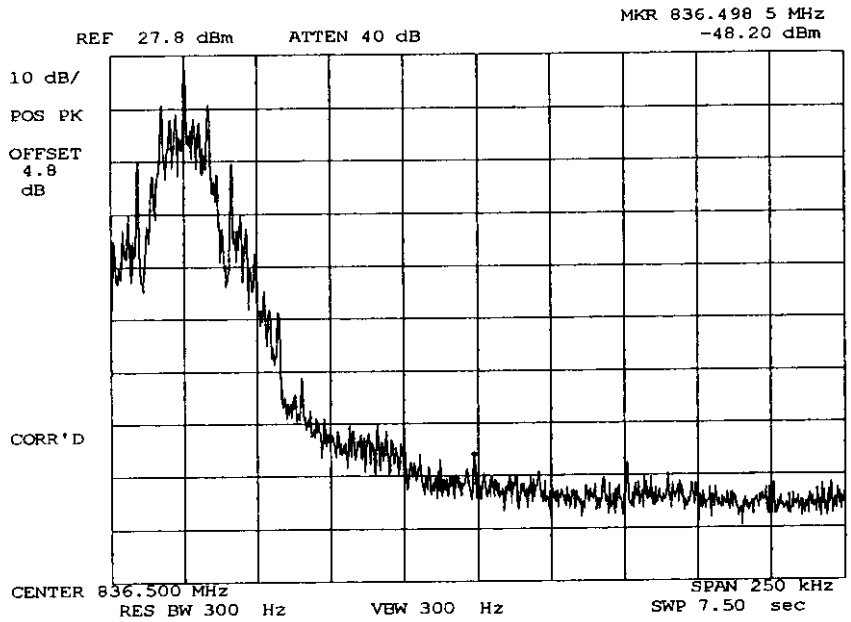


POWER: LOW
MODULATION: WBD
OFFSET OCCUPIED BANDWIDTH

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 48 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0074: 1998-Nov-11 Wed 14:04:00
STATE: 2:High Power

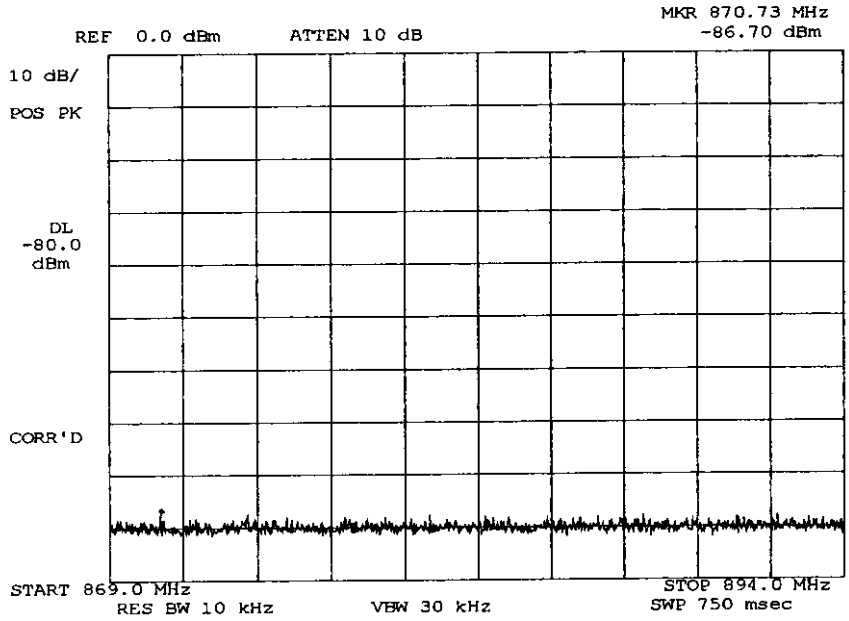


POWER: HIGH
MODULATION: WBD
OFFSET OCCUPIED BANDWIDTH

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 49 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0076: 1998-Nov-11 Wed 14:09:00
STATE: 1:Low Power

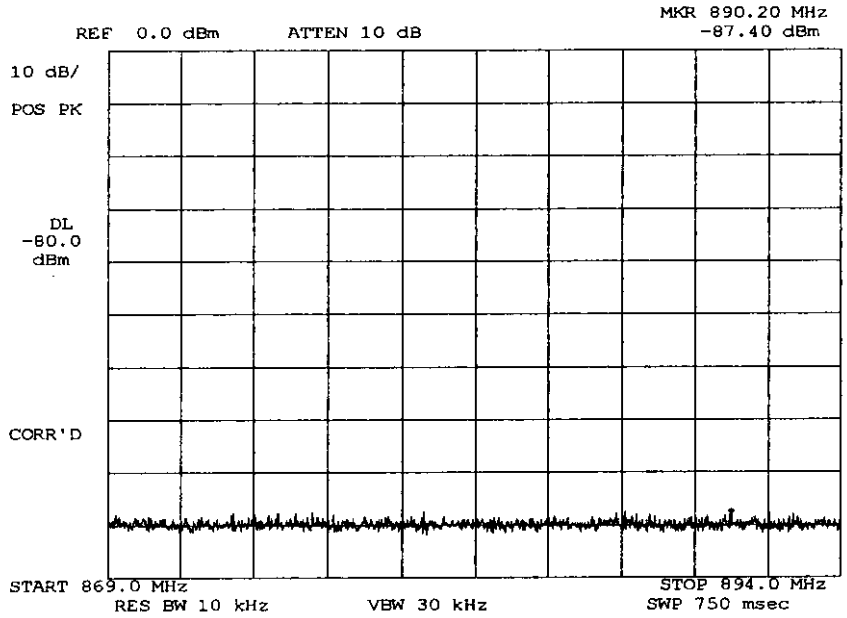


POWER: LOW
MODULATION: ANY
TX SPURS IN RX CRITICAL BAND

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 50 of 57.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0077: 1998-Nov-11 Wed 14:10:00
STATE: 2:High Power



POWER: HIGH
MODULATION: ANY
TX SPURS IN RX CRITICAL BAND

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 51 of 57.

NAME OF TEST: Spurious Emissions at Antenna Terminals

SPECIFICATION: 47 CFR 2.1051, 22.917

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT was connected to a coaxial attenuator and then to a Spectrum Analyzer.

2. A notch filter was introduced to reduce or eliminate spurious emission which could be generated internally in the spectrum analyzer.

3. Measurements were made over the range from 45 kHz to 10 GHz for the worst case modulation so both the highest and lowest R.F. power settings.

4. All other emissions were 20 dB or more below the limit.

5. Spectrum analyzer bandwidth was set to section 22.917(h) as applicable.

6. MEASUREMENT RESULTS: ATTACHED

PAGE NO. 52 of 57.

NAME OF TEST: Unwanted Emissions (Transmitter Conducted)
g98b0082: 1998-Nov-11 Wed 14:27:00
STATE: 1: Low Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
836.400000	1672.823000	-55.9	-63.6	-42.9
836.400000	2508.967000	-71.8	-79.5	-58.8
836.400000	3346.018000	-71.9	-79.6	-58.9
836.400000	4182.078000	-72.4	-80.1	-59.4
836.400000	5018.563000	-71.1	-78.8	-58.1
836.400000	5854.510000	-65.2	-72.9	-52.2
836.400000	6690.878000	-66.5	-74.2	-53.5
836.400000	7527.104000	-65.5	-73.2	-52.5
836.400000	8363.501000	-66.7	-74.4	-53.7
836.400000	9200.820000	-66.1	-73.8	-53.1
836.400000	10037.135000	-65.6	-73.3	-52.6
836.400000	10872.990000	-65.2	-72.9	-52.2
836.400000	11709.669000	-66.3	-74	-53.3
836.400000	12545.736000	-60.4	-68.1	-47.4

PAGE NO. 53 of 57.

NAME OF TEST: Unwanted Emissions (Transmitter Conducted)
g98b0085: 1998-Nov-11 Wed 14:37:00
STATE: 2:High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
836.400000	1672.795000	-50.2	-73.2	-37.2
836.400000	2509.026000	-54.4	-77.4	-41.4
836.400000	3345.767000	-55.9	-78.9	-42.9
836.400000	4181.579000	-54.6	-77.6	-41.6
836.400000	5018.720000	-55.6	-78.6	-42.6
836.400000	5854.546000	-50	-73	-37
836.400000	6691.458000	-49.9	-72.9	-36.9
836.400000	7527.209000	-50.2	-73.2	-37.2
836.400000	8364.009000	-50.2	-73.2	-37.2
836.400000	9200.040000	-50.2	-73.2	-37.2
836.400000	10036.745000	-50.3	-73.3	-37.3
836.400000	10872.833000	-49.7	-72.7	-36.7
836.400000	11709.853000	-49.5	-72.5	-36.5
836.400000	12545.708000	-44.5	-67.5	-31.5

PAGE NO. 54 of 57.

NAME OF TEST: Frequency Stability (Temperature Variation)

SPECIFICATION: 47 CFR 2.1055(a)(1)

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST CONDITIONS: As Indicated

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page.

2. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.

3. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.

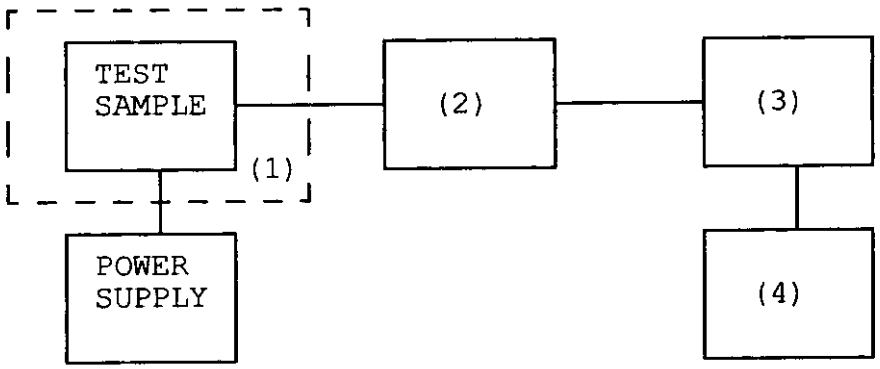
4. The temperature tests were performed for the worst case.

5. MEASUREMENT RESULTS: ATTACHED

PAGE NO. 55 of 57.

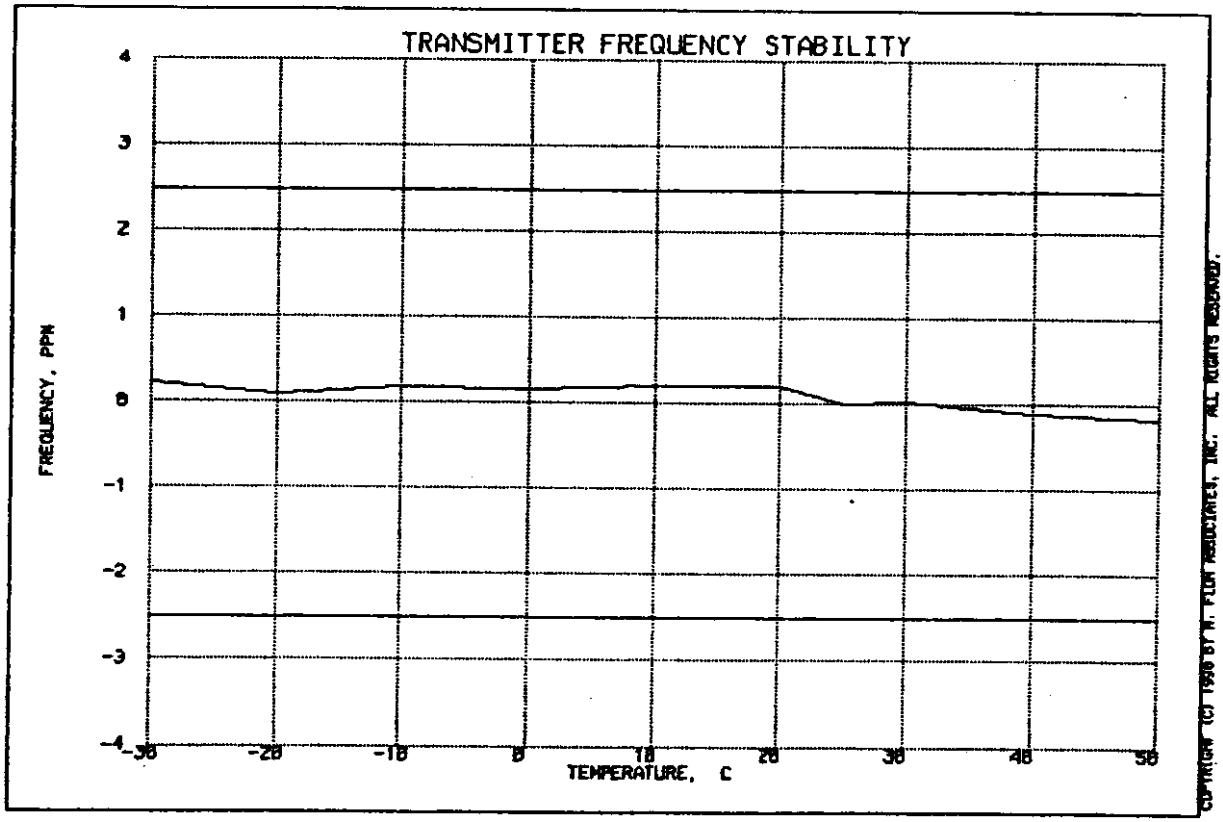
TRANSMITTER TEST SET-UP

TEST A. OPERATIONAL STABILITY
TEST B. CARRIER FREQUENCY STABILITY
TEST C. OPERATIONAL PERFORMANCE STABILITY
TEST D. HUMIDITY
TEST E. VIBRATION
TEST F. ENVIRONMENTAL TEMPERATURE
TEST G. FREQUENCY STABILITY: TEMPERATURE VARIATION
TEST H. FREQUENCY STABILITY: VOLTAGE VARIATION



	Asset	Description	s/n
(1)		TEMPERATURE, HUMIDITY, VIBRATION	
x	i00027	Tenny Temp. Chamber	9083-765-234
___	i00	Weber Humidity Chamber	
___	i00	L.A.B. RVH 18-100	
(2)		COAXIAL ATTENUATOR	
x	i00122	NARDA 766-10	7802
___	i00123	NARDA 766-10	7802A
___	i00113	SIERRA 661A-3D	1059
___	i00069	BIRD 8329 (30 dB)	10066
(3)		R.F. POWER	
___	i00014	HP 435A POWER METER	1733A05839
x	i00039	HP 436A POWER METER	2709A26776
x	i00020	HP 8901A POWER MODE	2105A01087
(4)		FREQUENCY COUNTER	
___	i00042	HP 5383A	1628A00959
___	i00019	HP 5334B	2704A00347
x	i00020	HP 8901A	2105A01087

TRANSMITTER FREQUENCY STABILITY
NOKIA, 180
11 NOV 1998, 16:27



FREQUENCY OF CARRIER, MHz = 836.39983

LIMIT, ppm = 2.5

LIMIT, Hz = 2091

PAGE NO. 57 of 57.

NAME OF TEST: Frequency Stability (Voltage Variation)

SPECIFICATION: 47 CFR 2.1055 (b)(1)

GUIDE: EIA/IS-19-B-1988
TIA/EIA/IS-137-A-1996

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT was placed in a temperature chamber at 25±5°C and connected as for "Frequency Stability - Temperature Variation" test.

2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.

3. The variation in frequency was measured for the worst case.

RESULTS: Frequency Stability (Voltage Variation)
g98b0050: 1998-Nov-11 Wed 11:48:35
STATE: 0:General

LIMIT, ppm = 2.5
LIMIT, Hz = 2091
BATTERY END POINT (Voltage) = 3.3

% of STV	Voltage	Frequency, MHz	Change, Hz	Change, ppm
85	3.31	836.399970	-30	-0.04
100	3.9	836.400000	0	0.00
115	4.48	836.399990	-10	-0.01
85	3.3	836.399950	-50	-0.06

SUPERVISED BY: Morton Flom, P. Eng.

NOKIA MOBILE PHONES, INC.

FCC ID: GMLNSD-1GX

REFERENCE: S.A.R. TEST RESULTS

SEE "CONFIDENTIALITY" ENVELOPE FOR FULL S.A.R. REPORT

(METHODOLOGY ONLY)

NOKIA

NOKIA MOBILE PHONES INC.
9605 Scranton Road
Suite 150
San Diego, CA 92121
Tel. (619) 587 5500

07 January, 1999

Federal Communications Commission,
Authorisation & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD 21046

Attention: Equipment Authorisation Branch

We hereby certify that the transceiver FCC ID:GMLNSD-1GX complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz.

Compliance was determined by testing appropriate parameters according to standard.

NOKIA MOBILE PHONES INC.

Jari Niemelä
Product Project Manager, Product Development, San Diego

NOKIA

07 Jan 99

NOKIA MOBILE PHONES INC.
9605 Scranton Road
Suite 150
San Diego, CA 92121
Tel. (619) 587 5500

Federal Communications Commission,
Authorisation & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD 21046

Attention: Equipment Authorisation Branch

Addendum to the SAR report of 5180

Output power levels of Nokia 5180 are measured in production as well as in all testing cases at the external antenna connector and are set to be within the limits of the attached tuning document.

In the attached SAR TEST REPORT only the AMPS-mode is measured. In 800MHz CDMA mode the SAR values are much lower due to the 1.0dB lower output power. In an another product Nokia 6185 (FCCID: GMLNSD-3AX) the measured max. SAR values were 1.53mW/g in AMPS mode (Po=25.5dBm) and 1.07mW/g in CDMA mode (Po=24.0dBm). Nokia 5180 is basically the same phone as 6185 but without 1900MHz CDMA mode and 5180 is also thicker lowering the SAR values further.

NOKIA MOBILE PHONES INC.

Jari Niemelä
Product Project Manager, Product Development, San Diego

5.5 Results of SAR for 1g.

Appendix: 10

The plots in Appendix 10 are a graphical representation of the SAR values over the whole area being scanned.

Appendix 10, page 4 (nr:4), has sketch of the phone added on the plot for clarifying the position of the phone with respect to the measured SAR values.

The size of the area being scanned is sufficiently large to ensure that all possible regions of peak SAR are measured. This is indicated by the fact that the position of peak SAR is in the measured area, and the value of SAR reduces asymptotically in the x- and y- directions as the probe is moved towards the border of the measured area.

Analog mode AMPS

meas nr:	Phone position	Frequency MHz / channel	Power [dBm]	SAR (1g) [mW/g]
1	90°	824.0 / 991	25.1	0.92
2	90°	836.0 / 383	25.2	1.28
3	90°	849.0 / 799	25.5	1.09
FCC ID: GMLNSD-1GX MEASURED: 17.12.1998 / NMP		FCC limit		1.60 [mW/g] (ANSI/IEEE)

Jari Talle

TESTIMONIAL AND STATEMENT OF CERTIFICATION

THIS IS TO CERTIFY THAT:

1. THAT the application was prepared either by, or under the direct supervision of, the undersigned.

2. THAT the technical data supplied with the application was taken under my direction and supervision.

3. THAT the data was obtained on representative units, randomly selected.

4. THAT, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

CERTIFYING ENGINEER: Morton Flom, P. Eng.

STATEMENT OF QUALIFICATIONS

EDUCATION:

1. B. ENG. in ENGINEERING PHYSICS, 1949, McGill University, Montreal, Canada.

2. Post Graduate Studies, McGill University & Sir George Williams University, Montreal.

PROFESSIONAL AFFILIATIONS:

1. ARIZONA SOCIETY OF PROFESSIONAL ENGINEERS (NSPE), #026 031 821.

2. ORDER OF ENGINEERS (QUEBEC) 1949. #4534.

3. ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOPHYSICISTS & GEOLOGISTS OF ALBERTA #5916.

4. REGISTERED ENGINEERING CONSULTANT – GOVERNMENT OF CANADA, DEPARTMENT OF COMMUNICATIONS. Radio Equipment Approvals.

5. IEEE, Lifetime Member No. 0417204 (member since 1947).

EXPERIENCE:

1. Research/Development/Senior Project Engineer, R.C.A. LIMITED (4 years).

2. Owner/Chief Engineer of Electronics. Design/Manufacturing & Cable TV Companies (10 years).

3. CONSULTING ENGINEER (over 25 years).

M. Flom P. Eng.

MORTON FLOM, P. Eng.

NOKIA

NOKIA MOBILE PHONES INC.
9605 Scranton Road
Suite 150
San Diego, CA 92121
Tel. (619) 587 5500

07 January, 1999

Federal Communications Commission,
Authorisation & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD 21046

Attention: Equipment Authorisation Branch

We hereby certify that the transceiver FCC ID:GMLNSD-1GX complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz.

Compliance was determined by testing appropriate parameters according to standard.

NOKIA MOBILE PHONES INC.

Jari Niemelä
Product Project Manager, Product Development, San Diego

NOKIA

07 Jan 99

NOKIA MOBILE PHONES INC.
9605 Scranton Road
Suite 150
San Diego, CA 92121
Tel. (619) 587 5500

Federal Communications Commission,
Authorisation & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD 21046

Attention: Equipment Authorisation Branch

Addendum to the SAR report of 5180

Output power levels of Nokia 5180 are measured in production as well as in all testing cases at the external antenna connector and are set to be within the limits of the attached tuning document.

In the attached SAR TEST REPORT only the AMPS-mode is measured. In 800MHz CDMA mode the SAR values are much lower due to the 1.0dB lower output power. In an another product Nokia 6185 (FCCID: GMLNSD-3AX) the measured max. SAR values were 1.53mW/g in AMPS mode (Po=25.5dBm) and 1.07mW/g in CDMA mode (Po=24.0dBm). Nokia 5180 is basically the same phone as 6185 but without 1900MHz CDMA mode and 5180 is also thicker lowering the SAR values further.

NOKIA MOBILE PHONES INC.

Jari Niemelä
Product Project Manager, Product Development, San Diego

NOKIA

NOKIA MOBILE PHONES INC.
9605 Scranton Road
Suite 150
San Diego, CA 92121
Tel. (619) 587 5500

22 December 1998

Federal Communications Commission,
Authorisation & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD 21046

Attention: Equipment Authorisation Branch

PER: 47 CFR 22.919

RE: FCC ID: GMLNSD-1GX

The Electronic Serial Number (ESN) for each transceiver is unique.
The ESN host component is permanently attached to a main circuit board of the mobile transmitter and the integrity of the unit's operating software is not alterable. The ESN is isolated from fraudulent contact and tampering.

- ☐ The host component does not contain other information, it is not removable and its electrical connections are not accessible.
- ☑ The host component does contain other information, and the ESN information is encoded using:
  - ☑ (1) Multiplication or division by a polynomial.
  - ☐ (2) Cyclic coding.
  - ☐ (3) The spreading of ESN bits over various non-sequential memory locations.

The ESN is factory set and is not alterable, transferable, removable, or otherwise able to be manipulated. Cellular mobile equipment is designed such that any attempt to remove, tamper with, or change the ESN chip, its logic system, or firmware originally programmed by the manufacturer will render the mobile transmitter inoperative.

NOKIA MOBILE PHONES INC.

Jari Niemelä
Product Project Manager, Product Development, San Diego

NOKIA

NOKIA MOBILE PHONES INC.
9605 Scranton Road
Suite 150
San Diego, CA 92121
Tel. (619) 587 5500

22 December 1998

Federal Communications Commission,
Authorisation & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD 21046

Attention: Equipment Authorisation Branch

We hereby certify that the tranceiver FCC ID: GMLNSD-1GX complies with OET Bulletin No. 53 as referenced in Section 22.915 of the Commission's rules and with TIA/EIA/IS-95-A Mobile Station-Base Station Compatibility Standard for Dual-Mode Wideband Spread Spectrum Cellular System.

Compliance was determined by testing appropriate parameters according to standards. Extensive field testing has been performed in several locations in the USA to verify the compatibility against different systems.

NOKIA MOBILE PHONES INC.

Jari Niemelä
Product Project Manager, Product Development, San Diego

0201294 UF4 17 SANTRA SINGLE CELL v08 23.9.1998

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1422881 CHIPRES 1W 0R22 J          1218                                  1.0
        R   316 B
1430144 CHIPRES JUMPER 0R0         0603                                  1.0
        R   720 T
1430690 CHIPRES JUMPER 0R0         0402                                 12.0
        R   116 B 129 T 131 B 133 B 134 B 202 B 222 T 322 T 323 T 513 T
        R   719 T 721 T
1430695 CHIPRES 0W06 6R8 J         0402                                  1.0
        R   704 T
1430700 CHIPRES 0W06 10R J         0402                                  5.0
        R   302 B 501 T 502 T 508 T 621 T
1430710 CHIPRES 0W06 22R  J        0402                                  1.0
        R   221 T
1430718 CHIPRES 0W06 47R  J        0402                                  8.0
        R   147 T 148 T 149 B 150 B 209 T 210 T 214 T 619 T
1430720 CHIPRES 0W06 56R  J        0402                                  2.0
        R   533 T 536 B
1430722 CHIPRES 0W06 68R  J        0402                                  1.0
        R   701 T
1430726 CHIPRES 0W06 100R J        0402                                  6.0
        R   104 T 120 B 521 B 525 B 542 B 605 B
1430740 CHIPRES 0W06 330R J        0402                                  5.0
        R   211 T 507 B 530 T 535 T 614 B
1430742 CHIPRES 0W06 390R J        0402                                  1.0
        R   527 B
1430744 CHIPRES 0W06 470R J        0402                                  4.0
        R   144 T 145 T 146 T 539 T
1430748 CHIPRES 0W06 680R J        0402                                  1.0
        R   612 B
1430754 CHIPRES 0W06 1K0  J        0402                                 11.0
        R   102 T 111 B 113 B 115 T 119 B 216 T 217 B 512 T 522 B 534 B
        R   602 T
1430756 CHIPRES 0W06 1K2  J        0402                                  1.0
        R   640 B
1430762 CHIPRES 0W06 2K2  J        0402                                 13.0
        R   110 B 132 B 142 B 206 T 207 T 208 T 511 B 523 B 540 B 546 T
        R   606 B 708 B 709 B
1430764 CHIPRES 0W06 3K3  J        0402                                  5.0
        R   201 T 526 B 529 B 537 T 711 T
1430770 CHIPRES 0W06 4K7  J        0402                                  3.0
        R   107 B 121 B 545 T
1430778 CHIPRES 0W06 10K  J        0402                                 17.0
        R   101 T 106 B 117 T 123 B 126 T 127 T 310 T 315 T 321 B 325 T
        R   326 B 327 B 503 T 509 B 528 T 613 B 624 B
1430784 CHIPRES 0W06 15K  J        0402                                  1.0
        R   622 B
1430786 CHIPRES 0W06 18K  J        0402                                  2.0
        R   112 T 707 B
1430788 CHIPRES 0W06 22K  J        0402                                  2.0
        R   218 T 531 T
1430792 CHIPRES 0W06 33K J         0402                                  2.0
        R   601 B 610 B
1430796 CHIPRES 0W06 47K  J        0402                                 11.0
        R   103 T 114 B 124 B 204 T 205 T 213 B 215 T 304 T 306 B 314 T
        R   532 B
1430804 CHIPRES 0W06 100K J        0402                                  9.0
        R   203 T 313 B 317 T 318 B 328 T 504 T 515 B 607 B 620 T
1430812 CHIPRES 0W06 220K J        0402                                  3.0
        R   105 B 212 B 219 B
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1430826 CHIPRES 0W06 680K J          0402                                  1.0
        R   305 T
1430830 CHIPRES 0W06 1M0  J          0402                                  3.0
        R   309 B 311 B 312 B
1430832 CHIPRES 0W06 2K7  J          0402                                  1.0
        R   706 T
1430853 CHIPRES 0W06 2M2 J           0402                                  1.0
        R   303 T
1620031 RES NETWORK 0W06 2X1K0 J     0404                                  2.0
        R   122 B 139 B
1620101 RES NETWORK 0W06 2X470R J    0404                                  1.0
        R   514 T
1820024 NTC RES 0W2 47K J B=4050+-3% 0805                                  1.0
        R   611 T
1825005 CHIP VARISTOR VWM14V VC30V   0805                                  1.0
        R   308 B
2310003 CHIPCAP X5R 470N K 16V       0805                                  9.0
        C   202 T 203 T 206 T 223 T 228 T 235 T 308 B 312 B 333 T
2312296 CHIPCAP Y5V 10U Z 16V        1210                                  5.0
        C   230 T 248 T 610 T 659 T 663 T
2312401 CHIPCAP X5R 1U0 K 10V        0805                                 14.0
        C   229 T 305 B 306 T 310 B 311 B 314 T 315 T 316 T 319 B 320 T
        C   322 T 325 B 328 T 335 B
2320131 CHIPCAP X7R 33N K 16V        0603                                 24.0
        C   106 T 107 B 108 T 109 B 112 T 115 T 120 T 123 B 201 T 204 T
        C   207 T 208 T 209 T 210 T 211 B 213 T 214 B 222 T 224 T 227 T
        C   323 B 334 T 529 B 621 B
2320520 CHIPCAP NP0 2P2 C 50V        0402                                  2.0
        C   309 T 515 B
2320524 CHIPCAP NP0 3P3 C 50V        0402                                  1.0
        C   703 T
2320532 CHIPCAP NP0 6P8 C 50V        0402                                  3.0
        C   511 B 581 B 672 T
2320534 CHIPCAP NP0 8P2 C 50V        0402                                  2.0
        C   570 T 576 T
2320536 CHIPCAP NP0 10P J 50V        0402                                  2.0
        C   508 T 577 T
2320538 CHIPCAP NP0 12P J 50V        0402                                  1.0
        C   682 T
2320540 CHIPCAP NP0 15P J 50V        0402                                  3.0
        C   553 B 559 B 572 T
2320544 CHIPCAP NP0 22P J 50V        0402                                 16.0
        C   122 T 124 T 125 B 302 T 307 T 313 B 531 T 556 B 601 B 634 B
        C   635 B 676 T 721 B 730 B 733 B 746 B
2320546 CHIPCAP NP0 27P J 50V        0402                                  1.0
        C   502 T
2320548 CHIPCAP NP0 33P J 50V        0402                                  3.0
        C   301 T 519 B 544 T
2320550 CHIPCAP NP0 39P J 50V        0402                                  1.0
        C   516 B
2320552 CHIPCAP NP0 47P J 50V        0402                                 20.0
        C   514 B 533 T 555 B 642 T 643 T 645 T 646 T 647 T 649 T 657 T
        C   660 T 674 T 688 T 704 B 705 B 710 B 725 B 727 B 735 B 737 B
2320560 CHIPCAP NP0 100P J 50V       0402                                 10.0
        C   103 T 231 T 232 T 238 T 505 B 518 B 545 B 552 T 638 T 651 T
2320562 CHIPCAP NP0 120P J 50V       0402                                  2.0
        C   652 T 667 T
2320568 CHIPCAP X7R 220P J 50V       0402                                  1.0
        C   119 T
2320572 CHIPCAP X7R 330P J 50V       0402                                  1.0
        C   668 T
2320576 CHIPCAP X7R 470P J 50V       0402                                  3.0
        C   239 T 522 B 534 B
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2320584	CHIPCAP X7R 1N0 J 50V	0402	43.0
	C 111 T 130 T 234 T 237 T 324 B 337 T 501 B 507 T 520 T 535 B		
	C 536 T 539 T 540 T 541 T 557 B 562 T 579 T 607 B 611 B 616 T		
	C 620 B 625 B 628 T 636 T 641 T 644 B 648 B 650 B 654 T 655 T		
	C 658 T 678 B 701 B 708 T 713 T 715 B 717 B 724 B 726 T 731 B		
	C 734 B 738 T 740 T		
2320586	CHIPCAP X7R 1N2 J 50V	0402	3.0
	C 743 T 753 B 754 B		
2320590	CHIPCAP X7R 1N8 J 50V	0402	1.0
	C 661 T		
2320604	CHIPCAP NP0 18P J 50V	0402	7.0
	C 218 T 219 T 233 B 236 T 245 T 741 T 742 T		
2320618	CHIPCAP X7R 4N7 J 25V	0402	8.0
	C 216 B 217 B 550 B 564 B 574 B 722 B 723 B 736 B		
2320620	CHIPCAP X7R 10N J 16V	0402	9.0
	C 110 B 121 B 131 T 567 B 640 T 694 B 732 B 744 T 745 T		
2320764	CHIPCAP X7R 6N8 K 25V	0402	2.0
	C 215 T 528 B		
2320778	CHIPCAP X7R 10N K 16V	0402	13.0
	C 101 T 102 T 104 B 105 B 113 T 114 T 116 B 117 B 118 B 129 T		
	C 132 T 338 B 624 B		
2320779	CHIPCAP X7R 100N K 16V	0603	9.0
	C 220 T 221 T 242 T 246 T 317 B 318 B 329 T 336 B 549 B		
2420015	CHIPCAP PPS 47N J 16V	1206	1.0
	C 583 T		
2610003	CHIPTCAP 10U M 10V	3.2X1.6X1.6	5.0
	C 321 T 504 T 525 T 551 T 584 T		
2610005	CHIPTCAP 10U M 16V	3.5X2.8X1.9	1.0
	C 304 T		
2610100	CHIPTCAP 1U M 10V	2.0X1.3X1.2	6.0
	C 326 T 327 T 330 T 331 T 332 T 566 T		
2610200	CHIPTCAP 2U2 M 6V3	2.0X1.3X1.2	8.0
	C 205 T 225 T 226 T 526 B 527 B 547 B 561 T 568 B		
2611668	CHIPTCAP 4U7 M 10V	3.2X1.6X1.6	1.0
	C 303 T		
3203705	FERRITE BEAD 0.015R 42R/100M	0805	2.0
	L 301 B 302 B		
3203709	FERRITE BEAD 0.5R 120R/100M	0402	4.0
	L 201 T 502 B 503 B 504 T		
3640059	CHIP COIL 56N J Q8/100MHZ	0603	2.0
	L 609 T 610 T		
3641601	CHIP COIL 150NH G Q35/100MHZ	0805	1.0
	L 720 T		
3641622	CHIP COIL 220N J Q30/100MHZ	0805	2.0
	L 703 T 709 T		
3643067	CHIP COIL 100UH J Q15/796KHZ	1008	1.0
	L 702 T		
3645157	CHIP COIL 100N K Q12/100MHZ	0603	4.0
	L 607 B 608 B 705 B 713 B		
3645163	CHIP COIL 22N K Q12/100MHZ	0603	1.0
	L 617 T		
3645185	CHIP COIL 10N J Q12/100MHZ	0603	2.0
	L 505 B 619 B		
3645201	CHIP COIL 56NH J Q38/200MHZ	0603	1.0
	L 718 B		
3645203	CHIP COIL 180NH K Q15/25MHZ	0603	1.0
	L 701 B		
3645213	CHIP COIL 22N J Q38/250MHZ	0603	3.0
	L 605 B 612 B 704 B		
3645217	CHIP COIL 15N J Q35/250MHZ	0603	2.0
	L 506 B 508 B		
3645219	CHIP COIL 10N J Q31/250MHZ	0603	1.0
	L 509 T		

3645221 CHIP COIL 27N J Q40/250MHZ 0603 L 707 B 717 B	2.0
364M192 CHIP COIL 6N8 K Q27/250MHZ 0603 L 618 T	1.0
364M201 USE CODE 3645227 L 714 T 716 T	2.0
364W043 USE CODE 3645225 L 706 T	1.0
4110008 SCH DI HSMS2825 8V 1A/1US SOT143 V 601 B	1.0
4110026 CAP.DI 1SV229 15/6PF 2/10V SOD323 V 505 B	1.0
4110027 CAP.DI1SV239 4.3/1.8PF2/10VSOD323 V 501 T	1.0
4110067 SCH DI MBR0520L 20V 0.5A SOD123 V 302 B	1.0
4113651 TVS DI QUAD 6V ESDA6V1SC5 SOT23-5 V 401 T 403 T	2.0
411J052 CAP.DI HVU355 4/1V 3.3/6.4PF URP V 504 T	1.0
411J300 PINDIX2 BAR63-05W 50V 3GHZ SOT323 V 605 B	1.0
411J361 SCHDIX2 RB425D VF<0.34V@10MA SC59 V 703 T	1.0
411X011 DI 1SS371 30V 0.1A 1PF R<0R9 SSC V 503 B	1.0
4210052 TR DTC114EE N RB=RBE=10K EM3 V 509 T	1.0
4210066 TR BFR93AW N 12V 35MA 5GHZ SOT323 V 506 B 508 T	2.0
4210100 TR BC848W N 30V 0.1A100MHZ SOT323 V 507 T	1.0
4210102 TR BC858W P 30V 100MA 200MWSOT323 V 301 T	1.0
4211391 MFET P FDC6323L SWITCH 3-8V TSOP6 V 602 T	1.0
421J011 TRX2+RX4 N 50V 0.1A RX=10K SOT363 V 701 T 702 T	2.0
421J012 TRX2+RX4 UMC3N N&P 50V 0.05A UM5 N 304 B 603 T	2.0
4340126 TC7S00F 1XNAND 2INPUT CMOS SSO5 D 105 B	1.0
4340247 MC33765 REG 2.8V TSSOP16 N 303 T	1.0
4340295 FLASH 1MX16 120NS 2.7V UBGA D 103 T	1.0
4340335 TK11228AM REG2.8V+-80MV180MA SSO6 N 305 B	1.0
4340499 SRAM 256KX8 100N 2.7-3.3V STSOP32 D 102 B	1.0
4340527 EEPROM 32KX8 2.7-5.5V CHIP D 104 T	1.0
434L099 MB15S70 PLL SYNTH 300MHZ 3V SSOP8 N 502 B	1.0
434M018 LMX2330L 2XSYNT2.5G/510MHZ SSOP20 N 501 B	1.0
435X062 VCO 990-1030MHZ 2.8V 20MA CDMA G 503 T	1.0
4370165 CHAPS CHARGER CONTROL SO16 N 301 T	1.0
437C010 CDMA RECEIVER IF IC RIF TQFP32 N 702 B	1.0
437C011 CDMA TRANSMITTER IF IC TIF TQFP32	1.0

	N 604 B	
437C013	VOYAGER CDMA RF-IC 800MHZ QSOP28	1.0
	N 703 B	
437L119	CCONT 2F DCT3 BB POWER ASIC UBGA	1.0
	N 302 T	
437L178	CAFE_D ASIC FOR CDMA TQFP100	1.0
	D 201 T	
437L216	MAD4_V2 ROM2 F721855 C10 TQFP176	1.0
	D 101 B	
437L217	ODYSSEY_3 RF ASIC CDMA QSOP24	1.0
	N 602 T	
437X035	SHARK2 PW AMP 824-849MHZ SSOP16	1.0
	N 605 T	
4510003	SMCRYSTAL 32.768KHZ +-20PPM 8X3.8	1.0
	B 301 T	
4510091	SAW FILT 836.5+-12.5MHZ 4X4	2.0
	Z 603 T 606 T	
4510119	ISOLATOR 836.5+-12.5MHZ 13DB 7X7	1.0
	Z 605 T	
4510121	SAW FILT 881.5+-12.5MHZ/3.5DB 4X4	1.0
	Z 705 B	
4510211	SAW FILT 128.1+-0.615MHZ 19.2X6.7	1.0
	Z 704 B	
451H143	DUPL 824-849/869-894MHZ 9.5X7.5	1.0
	Z 701 T	
451X105	VCTCXO 19.2MHZ+-1.5PPM 2.8V	1.0
	G 501 T	
451X116	XTAL FILTER 128.55MHZ+-15KHZ AMPS	1.0
	Z 702 T	
4550019	CER.FILT 450+-14KHZ 12X7.5	1.0
	Z 706 T	
5429007	SM COAX CONN M SW 50R 0.4-2GHZ	1.0
	X 702 B	
5460021	SM CONN 2X14M SPRING P1.0 PCB/PCB	1.0
	X 402 T	
5469061	SM SYSTEM CONN 6AF+3DC+MIC+JACK	1.0
	X 401 B	
5469069	SM BATT CONN 2POL SPR P3.5 100V2A	2.0
	X 403 B 404 B	
9517031	PA SHIELD ASSY DMC01501 HD983	1.0
	A 605 T	
9517032	VCO SHIELD ASSY DMC01502 HD983	1.0
	A 500 T	
9854235	PCB UF4 123.25X41.0X1.0 M8 4/PA	1.0

The amount of the parts is 470.
The amount of the parts on the top site (T) : 262,
on the bottom site (B) : 207,
on unspecified site (X) : 1.