1. Description Of General Information

1.1 Applicant {2.983(a)}

Mitsubishi Electric Corp.
Marunouchi 2-Chome
Chiyoda-Ku
Tokyo 100, JAPAN

Mailing Address:
Mitsubishi Consumer Electronics America, Inc.
1240 West Northwest HWY
Palatine, IL 60067-1897

1.2 Manufacturer

Mitsubishi Consumer Electronics America, Inc.
CMT Group
2001 Cherry Drive
Braselton, GA 30517

1.3 Equipment {2.983(b)}

Mobile Telephone, Class IV, Cellular/PCS Mobile Telephone
Type: MT-2531F0R6A
Type: MT-2533F0R6A

1.4 Identification Of The Equipment

FCC ID: BGBMT253XFOR6A

1.5 Service

47 CFR 22 Subpart K
Domestic Public Cellular Radio
Telecommunications Service

47 CFR 24 Subpart E
Broadband PCS
Personal Communications Service

1.6 Quantity Production {2.983(c)}

Quantity production is planned.

6. Measurement Procedures

6.1 Radio Frequency Power Output Measurement Data {2.985(a)}

(800MHz Analog,800MHz Digital,1900MHz Digital)

6.1.1 Radio Frequency Power Output Measurement Data

6.1.2 Radio Frequency Power Output with Voltage Variation Measurement Data

6.2 Modulation Characteristics {2.987(a)(d)}

6.2.1 Transmitter Audio Frequency Response (800MHz Analog)

6.2.3 Modulation Limiting (800MHz Analog)

6.3 Occupied Bandwidth Measurement Data {2.989 (c) (h)}

(800MHz Analog,800MHz Digital,1900MHz Digital)

6.4 Spurious Emissions at Antenna Terminal Measurement Data {2.991}

(800MHz Analog,800MHz Digital,1900MHz Digital)

6.5 Field Strength of Spurious Emissions Measurement Data {2.993}

(800MHz Analog,800MHz Digital,1900MHz Digital)

6.6 Frequency Stability Measurement Data {2.995}

(800MHz Analog,800MHz Digital,1900MHz Digital)

6.6.1 Frequency Stability with Voltage Variation Measurement Data

6.6.2 Frequency Stability with Temperature Variation Measurement Data

6.7 Test Equipment

6.8 SAR Measurements

6 Measurement Procedures

6.1 Radio Frequency Power Output Measurement Data {2.985(a)}
(800MHz Analog,800MHz Digital,1900MHz Digital)

6.1.1 Radio Frequency Power Output Measurement Data

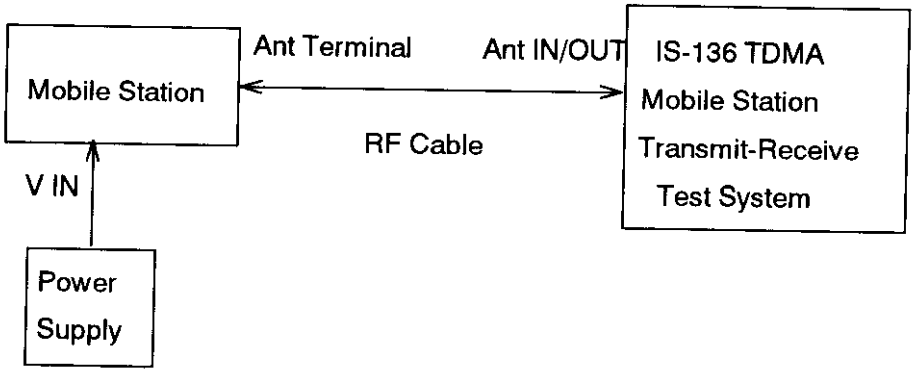

Figure 6.1.1.1 Test System of Radio Frequency Power Output

Radio frequency power output was measured with the test system as shown in Figure 6.1.1.1. The measurement data includes the loss of RF cable. Details of the test equipment are listed in Table 6.7.1.

Parameters:

Power Supply Voltage :4.8V

Temperature : +25 degree C

RF Power Level : 0 to 7 (800MHz Analog), 0 to 10 (800MHz Digital, 1900MHz Digital)

RF channel : 991, 384, 799 (800MHz Analog, 800MHz Digital)

2,1001,1998 (1900MHz Digital)

Modulation : unmodulated (800MHz Analog)

: 48.6kbps Pseudo-random Data (800MHz Digital,1900MHz Digital)

6.1.2 Radio Frequency Power Output with Voltage Variation Measurement Data

Radio frequency power output was measured with the test system as shown in Figure 6.1.1.1. The measurement data includes the loss of RF cable. Details of the test equipment are listed in Table 6.7.1.

Parameters:

Power Supply Voltage :4.2V to 6.5V (0.2V step)

Temperature : +25 degree C

RF Power Level : 0

RF channel : 384 (800MHz Analog, 800MHz Digital), 1001 (1900MHz Digital)

Modulation : unmodulated (800MHz Analog)

: 48.6kbps Pseudo-random Data (800MHz Digital,1900MHz Digital)

6.2 Modulation Characteristics {2.987(a)(d)}

6.2.1 Transmitter Audio Frequency Response (800MHz Analog)

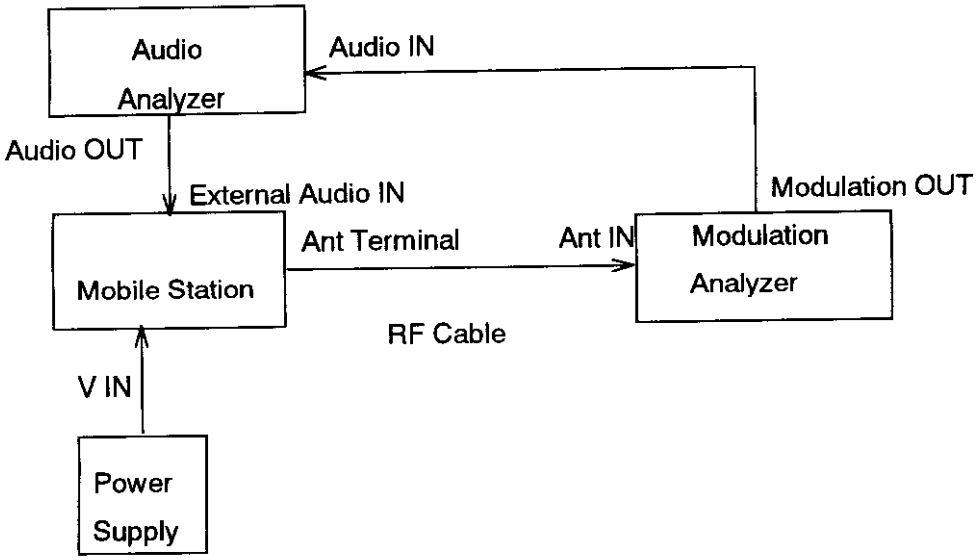

Figure 6.2.1.1 Test System of Transmitter Audio Frequency Response

Transmit audio frequency response was measured with the test system as shown in Figure 6.2.1.1. Details of the Test equipment are listed in Table 6.7.1. The measurement were made per TIA/EIA/IS-137-A.

(a) Transmit frequency response of audio modulation circuits

Parameters:

Audio Analyzer Audio Output Frequency : 200Hz to 4000Hz

Audio Analyzer Audio Output Level : -30.2dBV

(This Level produces 2.9kHz deviation at 1kHz audio frequency)

Power Supply Voltage :4.8V

Temperature : +25 degree C

RF Power Level : 0

RF channel : 384

Modulation : Audio

(b) Transmit frequency response of audio low pass filter

Parameters:

Audio Analyzer Audio Output Frequency : 3000Hz to 30,000Hz

Audio Analyzer Audio Output Level : -2.2dBV

(This Level is maximum input audio level which mobile station permits)

Power Supply Voltage :4.8V

Temperature : +25 degree C

RF Power Level : 0

RF channel : 384

Modulation : Audio

6.2.3 Modulation Limiting (800MHz Analog)

Modulation limiting was measured with the test system as shown in Figure 6.2.1.1. Details of the test equipment are listed in Table 6.7.1. The measurement were made per TIA/EIA/IS-137-A.

Parameters:

Audio Analyzer Audio Output Frequency : 300Hz, 1000Hz, 3000Hz

Audio Analyzer Audio Output Level : -40dBV to 10dBV step 2.5dB

Power Supply Voltage :4.8V

Temperature : +25 degree C

RF Power Level : 0

RF channel : 384

Modulation : Audio

6.3 Occupied Bandwidth Measurement Data {2.989 (c) (h)}

(800MHz Analog,800MHz Digital,1900MHz Digital)

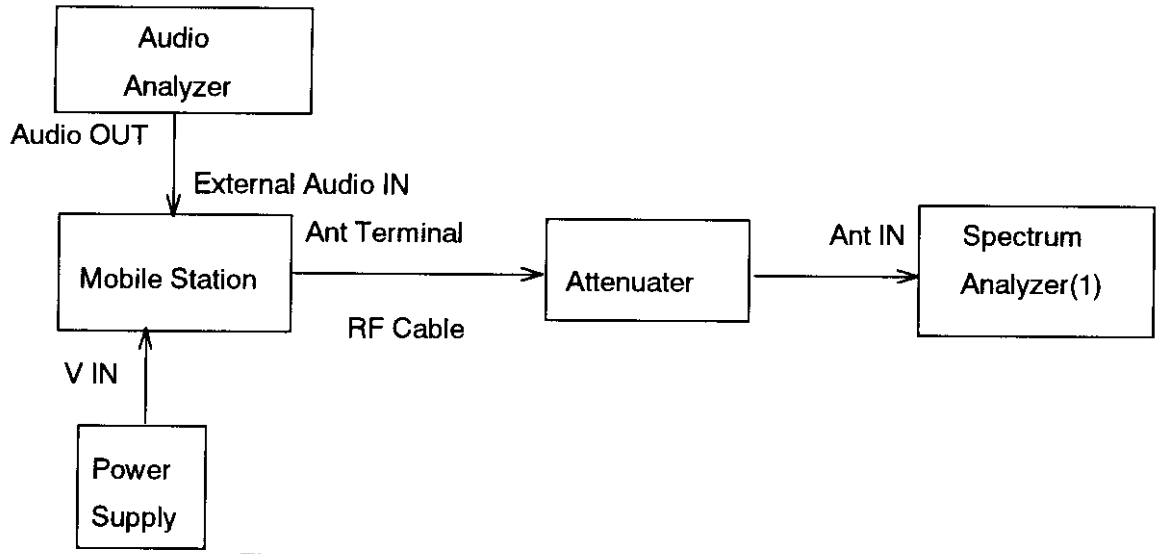

Figure 6.3.1 Test System of Occupied Bandwidth

Occupied Bandwidth was measured with the test system as shown in Figure 6.3.1. Details of the test equipment are listed in Table 6.7.1.

Parameters:

Audio Analyzer Audio Output Frequency : 2500Hz

Audio Analyzer Audio Output Level : -7.9dBV

(This Level is 16dB greater than the level which produces 6kHz deviation)

Power Supply Voltage :4.8V

Temperature : +25 degree C

RF Power Level : 0

RF channel : 384 (800MHz Analog, 800MHz Digital), 1001(1900MHz Digital)

Modulation : unmodulated (800MHz Analog)

: Audio (800MHz Analog)

: Signaling Tone (800MHz Analog)

: SAT (6000Hz) (800MHz Analog)

: Audio + SAT (6000Hz) (800MHz Analog)

: Wideband Data (800MHz Analog)

: DTMF (Key5) + SAT (6000Hz) (800MHz Analog)

: 48.6kbps Pseudo-random Data (800MHz Digital,1900MHz Digital)

6.4 Spurious Emissions at Antenna Terminal Measurement Data {2.991}

(800MHz Analog,800MHz Digital,1900MHz Digital)

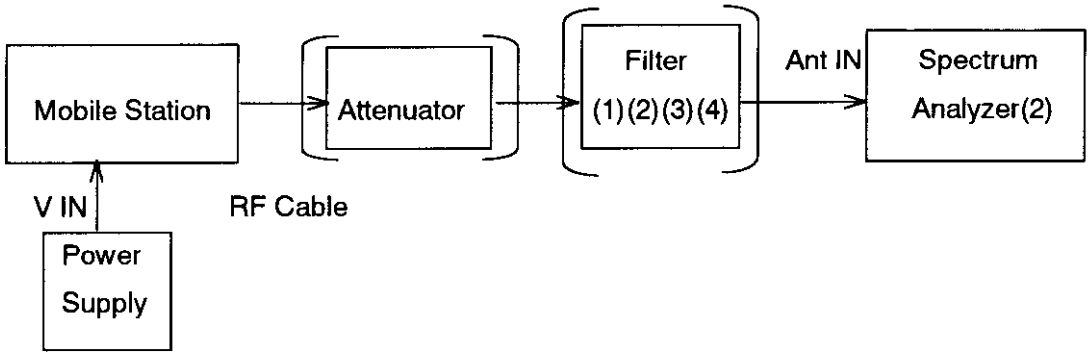

Figure 6.4.1 Test System of Spurious Emissions at Antenna Terminal

Spurious emissions at antenna terminal was measured with the test system as shown in Figure 6.4.1. The measurement were made per TIA/EIA/IS-137-A.

(a) 800MHz Analog, 800MHz Digital

1. Put Attenuator and Filter(1) between mobile station and spectrum analyzer, and measure the 2nd to 10th harmonics level.
2. Put off Filter(1), and measure the carrier output power level and other spurious emissions level from 19.44MHz to 8490MHz.
3. Put off Attenuator and put Filter(3) between mobile station and spectrum analyzer, and measure the spurious emissions level in Rx band (869MHz to 894MHz).

(b) 1900MHz Digital

1. Put Attenuator and Filter(2) between mobile station and spectrum analyzer, and measure the 2nd to 10th harmonics level.
2. Put off Filter(2), and measure the carrier output power level and other spurious emissions level from 19.44MHz to 19100MHz.
3. Put off Attenuator and put Filter(4) between mobile station and spectrum analyzer, and measure the spurious emissions level in Rx band (1930MHz to 1990MHz).

The measurement data includes the loss and attenuation of RF Cable, Attenuator, Filter(1)(2)(3)(4). Details of the test equipment are listed in Table 6.7.1.

Parameters:

Power Supply Voltage :4.8V

Temperature : +25 degree C

RF Power Level : 0

RF channel : 799, 384, 991 (800MHz Analog, 800MHz Digital),
2, 1001, 1998 (1900MHz Digital)

Modulation : Wideband Data (800MHz Analog)
: 48.6kbps Pseudo-random Data (800MHz Digital,1900MHz Digital)

6.5 Field Strength of Spurious Emissions Measurement Data {2.993}
(800MHz Analog,800MHz Digital,1900MHz Digital)

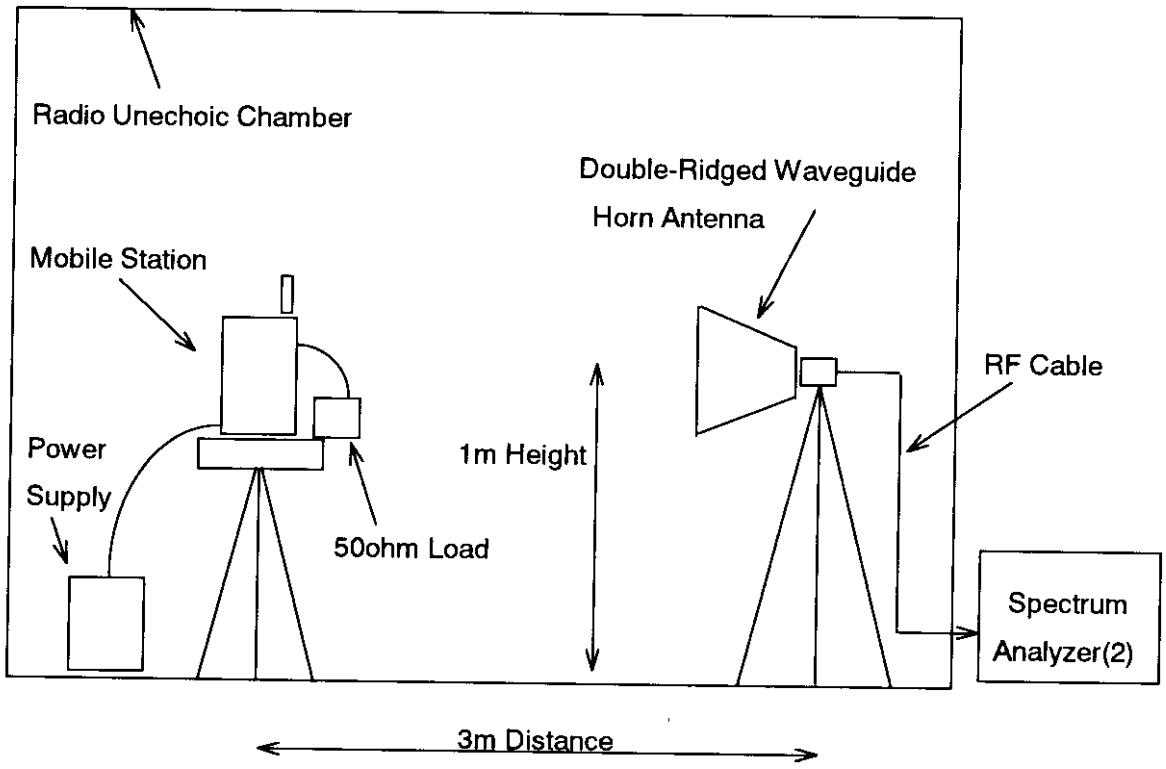

Figure 6.5.1 Test System of Field Strength of Spurious Emissions

Field strength of spurious emissions was measured with the test system as shown in Figure 6.5.1. Details of the test equipment are listed in Table 6.7.1. The measurement were made per TIA/EIA/IS-137-A.

(a) Procedure of Measurement

1. Set the mobile station, horn antenna and other equipment as shown as figure 6.5.1. Terminate the antenna connector of the mobile station in 50ohm load.
2. Adjust the center frequency of spectrum analyzer to 2nd harmonics frequency.
3. Rotate the mobile station manually, and read the maximum value monitored by spectrum analyzer at specified frequency.
4. Repeat 2. and 3. Procedure to 10th harmonics.
5. Search spurious emissions from 19.44MHz to 8490MHz (800MHz Analog, 800MHz Digital), 19.44MHz to 19100MHz (1900MHz Digital).
6. If spurious or harmonics emissions is found, rotate the mobile station manually, and read

the maximum value monitored by spectrum analyzer at specified frequency.

(b) Calculation of Emission Limits

Per Section 2.993 of the FCC Rules, the relative radiated power of each spurious emission must be referenced to the rated power output of the transmitter, assuming all emissions are radiated from half-wave dipole antennas. The reference level relative to the transmitter output power is determined by applying the following equation:

$ERP = \{ (30 * P * G)^{1/2} / d \}$ [V/m]

where: P = rated output power in Watts (= 0.6Watts)

G = gain of a half-wave dipole antenna (=1.64)

d = distance from the transmitter to the receive antenna in meters (=3m)

Therefore: $ERP = \{ (30 * 0.6 * 1.64)^{1/2} / 3 \} = 1.81$ [V/m] = 125.2 [dBuV/m]

Per Section 3.4.3 of the IS-137-A all spurious emissions must be attenuated below the transmitter power by at least :

43 + 10 * log(P) [dB] (800MHz Analog)

45 [dB] (800MHz Digital, 1900MHz Digital) .

This results in a spurious emission limit of:

125.2 - { 43 + 10 * log(0.6) } = 84.4 [dBuV/m] (800MHz Analog)

125.2 - 45 = 80.2 [dBuV/m] (800MHz Digital, 1900MHz Digital)

(c) Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss. The field strength is calculated by applying the following equation.

FS = RR + AF + CL

where: FS = Field Strength [dBuV/m]

RR = Receiver Reading [dBuV]

AF = Antenna Factor [dB]

CL = Cable Loss [dB]

The actual value of these parameter is shown in Table 5.5.1, 5.5.2, 5.5.3. The antenna factor is supplied by the manufacturer.

Parameters:

Power Supply Voltage :4.8V

Temperature : +25 degree C

RF Power Level : 0

RF channel : 799, 384, 991 (800MHz Analog, 800MHz Digital),

2, 1001, 1998 (1900MHz Digital)

Modulation : Wideband Data (800MHz Analog)

: 48.6kbps Pseudo-random Data (800MHz Digital,1900MHz Digital)

6.6 Frequency Stability Measurement Data {2.995}

(800MHz Analog,800MHz Digital,1900MHz Digital)

6.6.1 Frequency Stability with Voltage Variation Measurement Data

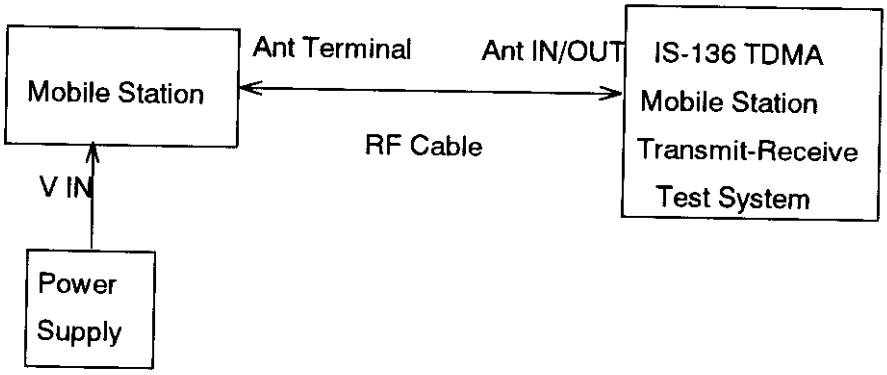

Figure 6.6.1.1 Test System of Frequency Stability with Voltage Variation

Frequency stability with voltage variation was measured with the test system as shown in Figure 6.6.1.1. Details of the test equipment are listed in Table 6.7.1. The measurement were made per TIA/EIA/IS-137-A.

Parameters:

Power Supply Voltage :4.2V to 6.5V (0.2V step)

Temperature : +25 degree C

RF Power Level : 0

RF channel : 384 (800MHz Analog, 800MHz Digital), 1001 (1900MHz Digital)

Modulation : unmodulated (800MHz Analog)

: 48.6kbps Pseudo-random Data (800MHz Digital,1900MHz Digital)

6.6.2 Frequency Stability with Temperature Variation Measurement Data

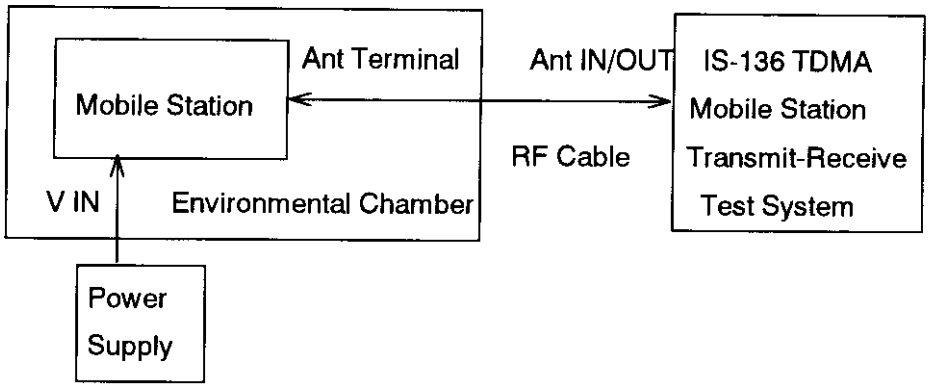

Figure 6.6.2.1 Test System of Frequency Stability with Temperature Variation

Frequency stability with voltage variation was measured with the test system as shown in Figure 6.6.2.1. Details of the test equipment are listed in Table 6.7.1. The measurement were made per TIA/EIA/IS-137-A.

Parameters:

Power Supply Voltage :4.8V

Temperature : -30 degree C to +60 degree C (10 degree C step)

RF Power Level : 0

RF channel : 384 (800MHz Analog, 800MHz Digital), 1001 (1900MHz Digital)

Modulation : unmodulated (800MHz Analog)

: 48.6kbps Pseudo-random Data (800MHz Digital,1900MHz Digital)

6.7 Test Equipment

Type	Model Number	Manufacturer
IS-136 TDMA Mobile Station Transmit-Receive Test System,	Block Diagram of system is as shown as Figure 6.7.1	HEWLETT PACKARD
Power Supply	PMC35-2A	KIKUSUI
Spectrum Analyzer (1) (2)	 TR4173 8593E	 ADVANTEST HEWLETT PACKARD
Environmental Chamber	MC-710	TABAI
Audio Analyzer	8903B	HEWLETT PACKARD
Modulation Analyzer	8901B	HEWLETT PACKARD
Attenuator	8498A 30dB Attenuate	HEWLETT PACKARD
Filter (1) (2) (3) (4)	 TR1401 900MHz Rejection Filter 2.3GHz High-Pass Filter DFC5R881P025BFDI 852MHz Band-Pass Filter EZFZBPCT 1960MHz Band-Pass Filter	 ADVANTEST TAMAGAWA DENSHI MURATA MATSUSHITA
Double-Ridged Waveguide Horn Antenna	3115	HEWLETT PACKARD

Table 6.7.1 Test Equipment list

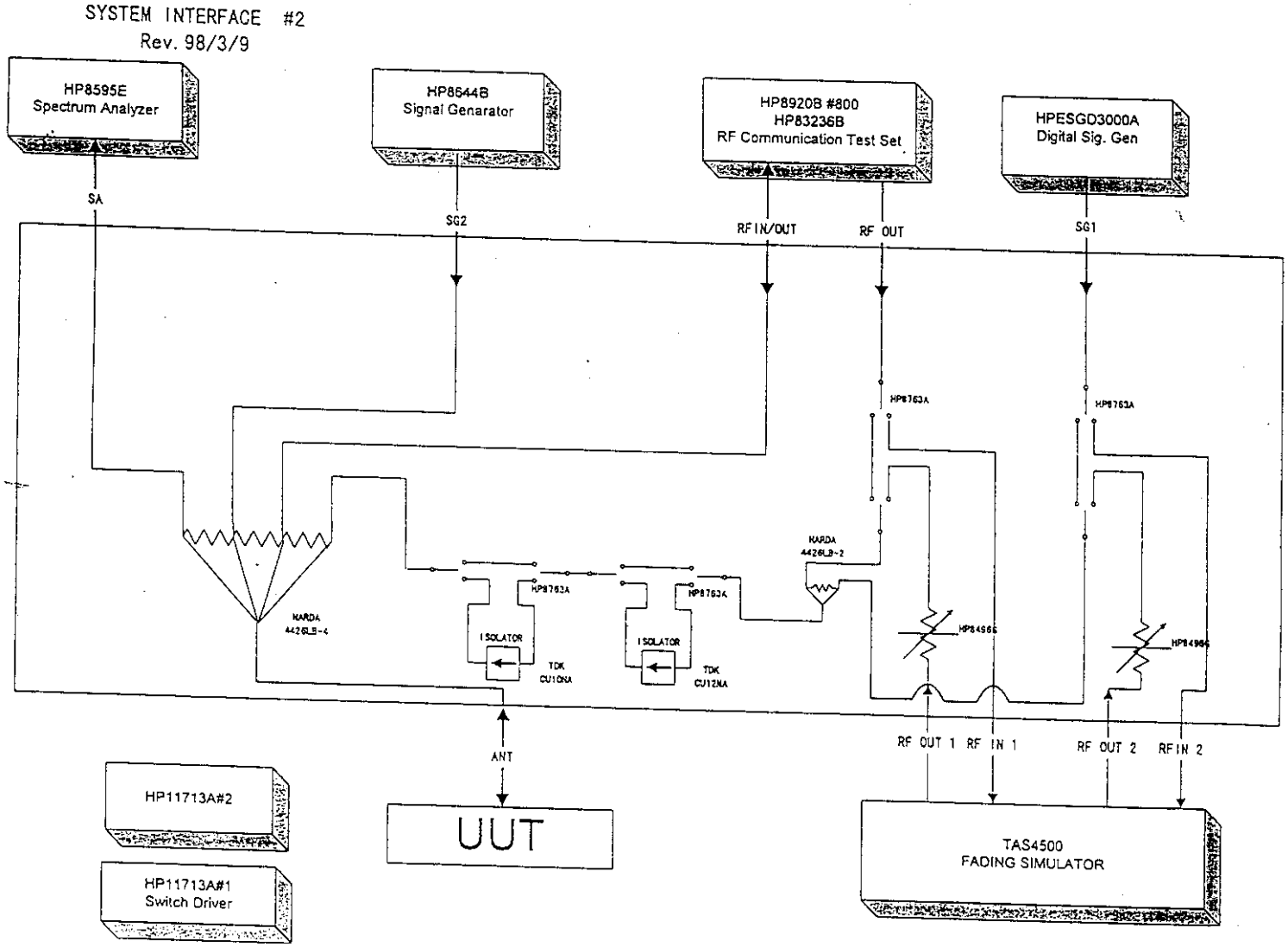

Figure 6.7.1 Block Diagram of IS-136 TDMA Mobile Station Transmit-Receive Test System

6.8 SAR Measurements

SAR was measured using the DASY3 System shown in Fig. 5.7.1 of Exhibit 5.

Parameters:

Power Supply Voltage	: 4.8V
Temperature	: 22 Deg. C
RF Power Level	: 0 @ 800 MHz Analog 0 @ 800 MHz Digital 0 @ 1900 Mhz Digital
RF Channel	: 991, 384, 799 (800 MHz Analog, 800, 800 MHz Digital) 2, 1001, 1998 (1900 MHz Digital)
Modulation	: Unmodulated (800 MHz analog) 48.6 Kbps Pseudo - random Data (800 MHz Digital, 1900 MHz Digital)

6.8.1 Simulated Tissue

Medium	900 MHz Brain	1800 MHz Brain
Water	40.16 %	53.93
Cellulose	1.00%	1.00
Salt	0.69%	-
Prevento 1	0.11%	0.10
Sugar	58.04%	44.97

6.8.2 Test Procedure

1. Set the Device Holder Position (Left Hand or Right Hand.)
2. Set the Antenna Position (Extended or Retracted) of the Mobile Station.
3. Adjust the RF Channel and the RF Power Level of the Mobile Station.
4. Put the Mobile Station on the Device Holder under the Phantom.
   The center of the ear piece of the Mobile Station is placed at the entry of the auditory canal.
5. Adjust the sliding carriages of the Device Holder to intended use position (80 degrees and 65 degrees.)
6. Start the Application DASY3 on PC.
7. Measure SAR.
8. Confirm the RF Power Level.

2. Technical Description {2.983(d)}

2.1 Type of Emission {2.983(d)(1)}

800MHz: 40K0F8W, 40K0F1D, 40K0GXW
1900MHz: 40K0GXW

2.2 Frequency Range {2.983(d)(2)}

824 MHz to 849 MHz, 1850 MHz to 1910 MHz

2.3 Power Rating {2.983(d)(3-5)}

	800MHz	1900MHz
(1) Input Power for Final Amplifier	4 dBm	0 dBm
(2) Input Voltage for Final Amplifier	4.8 V	4.8 V
(3) Input Current for Final Amplifier	600 mA	710 mA
(4) Rated Output Power	0.6 Watts	0.6 Watts

2.4 Functions of All Active Devices {2.983(d)(6)}

Table 2.4-1 Active Devices of Transceiver Unit

Symbol	Part Number	Manufacture	Function
D 103	RB491D-T146	ROHM	DIODE
D 107	RB491D-T146	ROHM	DIODE
D 108	1SR154-400-TE25	ROHM	DIODE
D 110	RB520S-30TE61	ROHM	DIODE
D 112	UDZTE-175.1B	ROHM	DIODE
D 122	UDZTE-175.1B	ROHM	DIODE
D 123	HZU2.0BTRF	HITACHI	DIODE
D 124	RB521S-30TE61	ROHM	DIODE
D 125	RB520S-30TE61	ROHM	DIODE
D 126	1SS400TE61/MA2S111-T	ROHM	DIODE
D 127	UDZTE-173.3B	ROHM	DIODE
D 860	HVC202ATRU	HITACHI	DIODE
D 880	HVC202ATRU	HITACHI	DIODE
D 940	1SS295-TE85L	TOSHIBA	DIODE
D 970	1SS295-TE85L	TOSHIBA	DIODE
FL 700	LMS30K1880H103	MURATA	SWITCH&LPF
FL 710	MDR131A-T	SOSHIN	BPF
FL 720	MDR132A-T	SOSHIN	BPF
FL 730	DFYGR836CR881NHA-TA2	MURATA	DUPLEXER
FL 740	TQS-776A-7R	TOYOCOM	FILTER-SAW
FL 750	TS3-D8A01-138.15MHZ	TOYOCOM	FILTER-XTAL
FL 760	CFUXC450B101H-TC01	MURATA	FILTER-CER
FL 780	MLF-KR36D-450	NP-TOTO	FILTER-CER
FL 840	GSF606-SEP1021	SOSHIN	DUPLEXER
FL 920	FAR-F6CE-1G8800-L2XA	FUJITSU	FILTER-SAW

FL	930	FAR-F6CE-1G8800-L2XZ	FUJITSU	FILTER-SAW
FL	950	TQS-775A-7R	TOYOCOM	FILTER-SAW
FL	960	TQS-775A-7R	TOYOCOM	FILTER-SAW
FL	990	LFDP25N0013A	MURATA	DUPLEXER
IC	101	TA75S393F-TE85R	TOSHIBA	IC
IC	106	RN5RG33AA-TR	RICOH	IC
IC	108	TK11333BMCL	TOKO	IC
IC	109	RN5RL32AA-TR	RICOH	IC
IC	110	RN5VD18CA-TR	RICOH	IC
IC	201	PCI3601	PRAIRIECOMM	IC
IC	202	PCI3602	PRAIRIECOMM	IC
IC	203	TE28F400B3T120	INTEL	IC
IC	204	TC55V1001AST1LT(I)	TOSHIBA	IC
IC	205	X25642S8-2.7T4	XICOR	IC
IC	206	NJM2135V-TE2	JRC(SHIN)	IC
IC	207	NJM2135V-TE2	JRC(SHIN)	IC
IC	210	TC4W53FU-TE12L	TOSHIBA	IC
IC	600	TK11233BMCL	TOKO	IC
IC	610	TK11238BMCL	TOKO	IC
IC	620	TK11238BMCL	TOKO	IC
IC	710	CXG1013N-T4	SONY	IC
IC	740	NJG1551F-TE1	JRC(SHIN)	IC
IC	750	SPM3252-MBS-TL	SANYO	IC
IC	760	TA31136FN-EL	TOSHIBA	IC
IC	780	AD607ARS	ANALOG DEVICES	IC
IC	810	LMX2331LTMX	NS	IC
IC	820	MQE911-1035-T7	MURATA	VCO
IC	821	TC7S66FU-TE85R	TOSHIBA	IC
IC	840	SPM3252-MBS-TL	SANYO	IC
IC	860	MB15S91PFV-G-BND-ER	FUJITSU	IC
IC	870	MB15S91PFV-G-BND-ER	FUJITSU	IC
IC	900	ATTW2013CBY-TR	AT&T	IC
IC	910	SPM3252-MBS-TL	SANYO	IC
IC	920	FMM5022MUT	FUJITSU	IC
IC	930	CMM1333-AK-00TT	CELERITEK	IC
IC	950	FMM5020MUT	FUJITSU	IC
IC	960	MRFIC0913R2	MOTOROLA	IC
IC	970	TC4W53FU-TE12L	TOSHIBA	IC
IC	980	M62261FP-600D	MITSUBISHI ELE	IC
IC	981	TA75S01F-TE85R	TOSHIBA	IC
TR	101	UMH2N-TN	ROHM	TR
TR	102	UMH2N-TN	ROHM	TR
TR	103	UMH2N-TN	ROHM	TR
TR	105	UMH2N-TN	ROHM	TR
TR	107	UMH2N-TN	ROHM	TR
TR	108	UMH2N-TN	ROHM	TR
TR	111	2SB1205-R.S-TL	SANYO	TR
TR	112	2SA1362-GR-TE85R	TOSHIBA	TR

Exibit 2-2

TR	113 2SC4617-TR	ROHM	TR
TR	114 2SB798-T2	NEC	TR
TR	120 2SB1205-R.S-TL	SANYO	TR
TR	123 UMC4N-TR	ROHM	TR
TR	124 2SC4617-TR	ROHM	TR
TR	125 UMC4N-TR	ROHM	TR
TR	126 UMW1N-TR	ROHM	TR
TR	127 DTB123TK-T146	ROHM	TR
TR	128 2SC4617-TR	ROHM	TR
TR	201 UMH2N-TN	ROHM	TR
TR	202 IMD9A-T108	ROHM	TR
TR	203 IMD9A-T108	ROHM	TR
TR	204 IMD16A-T108	ROHM	TR
TR	600 UMC4N-TR	ROHM	TR
TR	601 UMC4N-TR	ROHM	TR
TR	602 UMC4N-TR	ROHM	TR
TR	603 2SJ347-TE85L	TOSHIBA	TR
TR	610 IMD10A-T108	ROHM	TR
TR	611 IMD10A-T108	ROHM	TR
TR	710 UMC4N-TR	ROHM	TR
TR	730 UMC4N-TR	ROHM	TR
TR	731 3SK309XV-TL	HITACHI	TR
TR	750 2SC4619-TR-SP.SQ	ROHM	TR
TR	800 2SJ347-TE85L	TOSHIBA	TR
TR	802 2SC4619-TR-SP.SQ	ROHM	TR
TR	830 2SC4784-TR	HITACHI	TR
TR	840 3SK309XV-TL	HITACHI	TR
TR	860 UMX5N-TR	ROHM	TR
TR	880 UMX5N-TR	ROHM	TR
TR	881 UMC4N-TR	ROHM	TR
TR	930 UMH11N-TN	ROHM	TR
TR	931 HAT1031T-EL	HITACHI	TR
TR	960 UMH11N-TN	ROHM	TR
TR	980 UMC4N-TR	ROHM	TR

2.5 Schematic Diagrams {2.983(d)(7)}

Refer to Exhibit 10

2.6 Instruction Book {2.983(d)(8)}

As the instruction book is not yet available, a set of draft instructions is attached at the back of this application. The complete instruction book will be submitted as soon as available.

2.7 Tune-Up Procedure {2.983(d)(9)}

2.7.1 Set Up

Connect the RF terminal to the power meter.

Power on MS and enter test mode.

2.7.2 Analog Mode Power adjustment

Issue following test commands pushing ten Key.

402 SEND :	enter analog mode
832 SEND :	APC ON
01 SEND :	Carrier ON

In the case of Power Level X adjustment :

9X SEND :	Set Power Level X (See following table)
983 SEND :	Set Reference Power level Adjust the RF power to 28.8+/-1.0 dBm by Up/Down Key. After adjustment, Push END Key and store the value.
62 SEND :	Set Initial APC level

Adjust each RF power levels within the tolerance as Table 2.7-1

Table 2.7-1 Power adjustment for Analog mode

Power Level	Test Command	Output Power
0	90 SEND	28.8 +/-1.0dBm
1	91 SEND	27.8 +/-1.0dBm
2	92 SEND	25.8 +/-1.0dBm
3	93 SEND	23.8+/-1.0dBm
4	94 SEND	19.8+/-1.0dBm
5	95 SEND	15.8+/-1.0dBm
6	96 SEND	11.8+/-1.0dBm
7	97 SEND	7.8+/-1.0dBm

2.7.3 Digital Mode Power adjustment

Issue following test commands pushing ten Key.

401 SEND : enter cellular band digital mode
(In the case of PCS band, Issue 400 SEND instead of 401 SEND)
832 SEND : APC ON
405 SEND : Asynchronous Transmission mode
408 SEND : Normal Burst transmission
01 SEND : Transmit ON

In the case of Power Level X adjustment :

9X SEND : Set Power Level X (See following table)
983 SEND : Set Reference Power level
Adjust the RF power to 28.8+/-1.0 dBm by Up/Down Key.
After adjustment, Push END Key and store the value.
62 SEND : Set Initial APC level

Adjust each RF power levels within the tolerance as Table 2.7-2

Table 2.7-2 Power adjustment for Digital mode

Power Level	Test Command	Output Power
0	90 SEND	28.8 +/-1.0dBm
1	91 SEND	27.8 +/-1.0dBm
2	92 SEND	25.8 +/-1.0dBm
3	93 SEND	23.8+/-1.0dBm
4	94 SEND	19.8+/-1.0dBm
5	95 SEND	15.8+/-1.0dBm
6	96 SEND	11.8+/-1.0dBm
7	97 SEND	7.8+/-1.0dBm
8	958 SEND	2.8+/-1.0dBm
9	959 SEND	-1.8+/-1.0dBm
10	960 SEND	-6.8+/-1.0dBm

2.8 Description of Oscillator and Synthesizer Circuits {2.983(d)(10)}

The transmitter output frequency of this equipment is produced by the synthesizer circuits and its stability is determined by the voltage controlled temperature compensated crystal oscillator (VC-TCXO) located in the synthesizer circuits on the RF/BB board.

2.8.1 Oscillator Circuits

The VC-TCXO is made by TOYO COMMUNICATION EQUIPMENT CO., LTD. This specification is shown in Table 2.8-1. TCXO Specifications.

The schematic diagram of this temperature compensated crystal oscillator element is shown in Figure 2.8-1 TCXO Oscillator. This oscillator circuits, in which the frequency adopted with a Colpitts type oscillator as the oscillator system.

Table 2.8-1 TCXO Specifications

1.	Output Frequency	19.44MHz
2.	Supply voltage	DC +3.0V +/- 5%
3.	Current drain	2.0mA max.
4.	Output level	0.8 V p-p min. / Clipped sine wave (DC-cut)
5.	Harmonics	-5 dBc max.
6.	Load	(10 k ohm //10pF) +/- 10%
7.	Operating Temperature	-30 degrees C to +75 degrees C
8.	Storage temperature	-30 degrees C to +85 degrees C
9.	Frequency stability	
9.1	vs. Temperature	+/- 2.5ppm max. /-30 degrees C to +75 degrees C(Referenced to + 25 degrees C)
9.2	vs. Supply voltage	+/- 0.3 ppm max. / DC + 3.0V +/- 5%
9.3	vs. Load	+/- 0.3 ppm max. / (10k ohm // 10pF) +/- 10%
9.4	vs. Aging	+/- 1.0 ppm max. / year
10.	Vibration	5 to 150 Hz, 2G
11.	Shock	30G
12.	Humidity	90 to 95 % at 40 degrees C 24 hours
13.	Dimension	9.0 mm

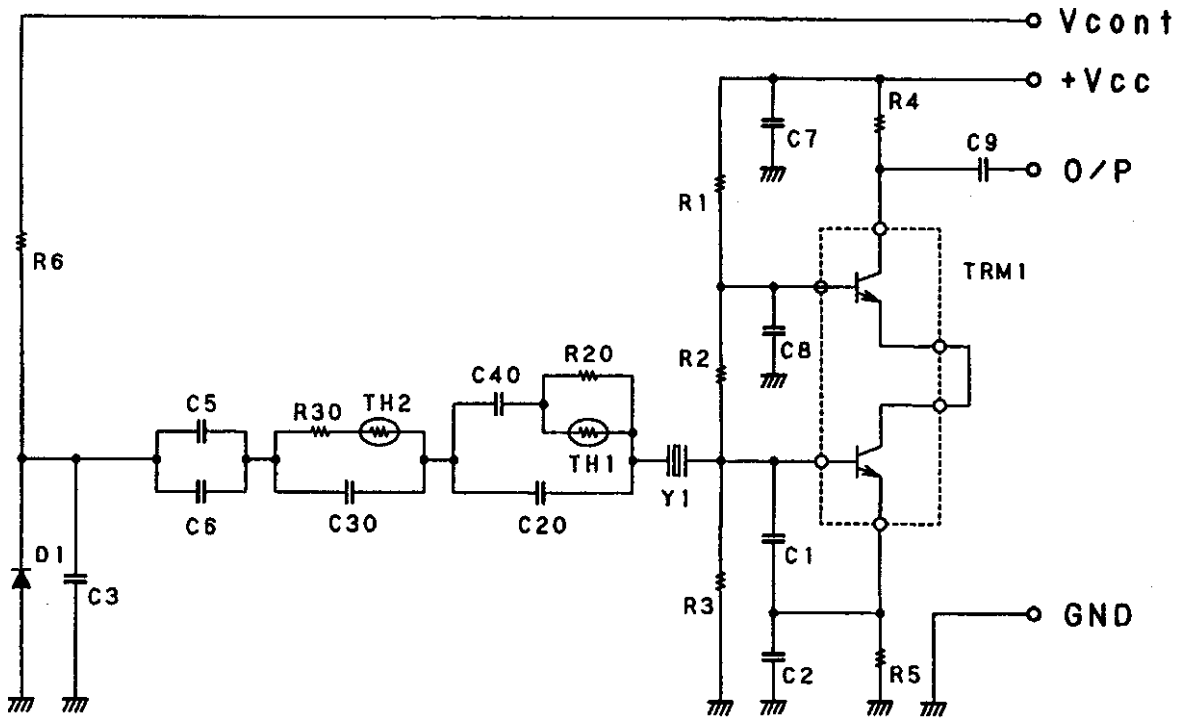

Figure 2.8-1 TCXO Oscillator Schematic Diagram

2.8.2 Synthesizer Circuits

There are three PLL synthesizers; UHF, TX_IF_Lo and RX_1st_Lo synthesizers. UHF and TX_IF_Lo synthesizers are programmable via three wire-serial bus. RX_1st-Lo synthesizer is fixed frequency and divide ratio is preset on chip, therefore programming is not necessary. All synthesizers operate with reference frequency of 19.44MHz master clock generated by the VC-TCXO (X800).

In the low band operation, the RF PLL synthesizer operates at the frequency band of 1007.19MHz to 1032.12MHz and the output signal of the PLL synthesizer is fed to the receiver as RX_1st_Lo signal and transmitter as TX_RF_Lo signal. The RF VCO use micro strip line/varactor tuning, and operates at the frequency band of 1007.19MHz to 1032.12MHz.

Output signal of the RF VCO double by TR830 and passes through band separate filter(FL840). The low port of band separate filter (FL840) output (1007.19MHz to 1032.12MHz) is fed to the receiver as RX_1st_Lo signal and transmitter as TX_RF_Lo signal. The high port of band separate filter (FL840) output (2014.38MHz to 2064.24MHz) is divided by the 128/129 dual modulus prescaler, the programmable counter and the swallow counter in IC800.

In the high band operation, the RF PLL synthesizer operates at the frequency band of 2064.42 MHz to 2124.30 MHz for the transmitter section and the output signal of the PLL synthesizer is fed to transmitter as TX_RF_Lo signal. And for the receiver section, the RF PLL synthesizer operates at the frequency band of 2068.23MHz to 2128.11MHz and the output signal of the PLL synthesizer is fed to the receiver as RX_1st_Lo signal.

The RF VCO operates at the frequency band of 1032.21MHz to 1064.055MHz. Output signal of the RF VCO double by TR830 and passes through band separate filter(FL840). The high port of band separate filter (FL840) output (2064.42MHz to 2124.30MHz) is fed to the receiver as RX_1st_Lo signal and transmitter as TX_RF_Lo signal. Output signal of the high port is divided by the 128/129 dual modulus prescaler, the programmable counter and the swallow counter in IC800.

The output signal of the VC-TCXO is divided by the reference counter (1/648) so that reference frequency is set at 30KHz.
The TX_IF_Lo synthesizer operates at the frequency of 183.15MHzfor low band, 214.38 MHz for high band respectively and is used as an FM modulator in the analog operation. The output signal of the PLL synthesizer is fed to the transmitter as TX_IF_Lo signal. The TX_IF VCO use inductor/varactor tuning, and operates at frequency of 183.15MHzfor low band, 214.38 MHz for high band by switching varactor. Output signal of the TX_IF VCO is divided by the 16/17 dual modulus prescaler, the programmable counter and the swallow counter in IC800.
The output signal of the VC-TCXO is divided by the reference counter (1/216) so that reference frequency is set at 90KHz.

The RX_2nd_Lo synthesizer operates at the frequency of 137.7MHz. The output signal of the PLL synthesizer is fed to the receiver as RX_2nd_local signal. The RX_2nd_Lo VCO use inductor/varactor tuning, and operates at a fixed frequency of 137.7MHz. Output signal of the RX_2nd_Lo VCO is divided by the 16/17 dual modulus prescaler, the programmable counter and the swallow counter in IC800.
The output signal of the VC-TCXO is divided by the reference counter (1/72) so that reference frequency is set at 270KHz.

The setting data of the divide ratio for UHF PLL is calculated as follows:

Reference counter ; $(19.44 \times 10^6)/(30 \times 10^3)=648$
Programmable counter ; Integer part of $(F/(30 \times 10^3)/128)$
Swallow counter ; Modulo of $(F/(30 \times 10^3)/128)$

For Low band RX 1st Lo, TX RF Lo
$F=2x(0.030N+1008.150)x10^6$ [Hz] $(1 \leq N \leq 799)$
$F=2x(0.030(N-1023)+1008.150)x10^6$ [Hz] $(990 \leq N \leq 1023)$
For High band RX 1st Lo
$F=(0.030N+2068.170)x10^6$ [Hz] $(1 \leq N \leq 1999)$
For High band TX RF Lo
$F=(0.030N+2064.360)x10^6$ [Hz] $(1 \leq N \leq 1999)$
N: Channel number.

The setting data of the divide ratio for TX_IF_Lo PLL is calculated as follows:

Reference counter ; $(19.44 \times 10^6)/(90 \times 10^3)=216$
Programmable counter ; Integer part of $(F/(90 \times 10^3)/16)$
Swallow counter ; Modulo of $(F/(90 \times 10^3)/16)$
$F=183.150 \times 10^6$ [Hz] for low band
$F=214.380 \times 10^6$ [Hz] for high band

The setting data of the divide ratio for RX_2nd_Lo PLL is calculated as follows:

Reference counter ; $(19.44 \times 10^6)/(270 \times 10^3)=72$
Programmable counter ; Integer part of $(F/(270 \times 10^3)/16)$
Swallow counter ; Modulo of $(F/(270 \times 10^3)/16)$
$F=137.700 \times 10^6$ [Hz]

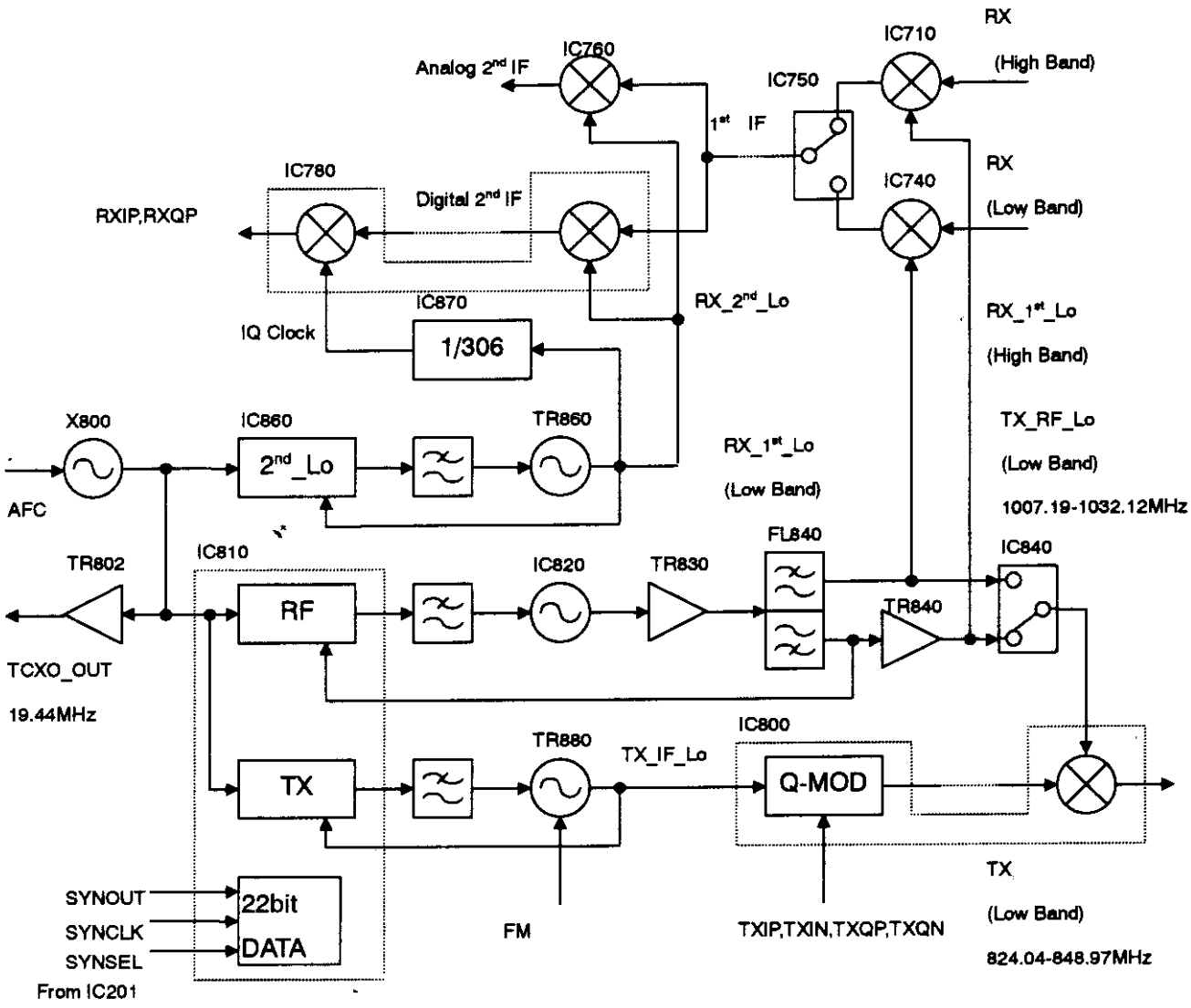

Figure 2.8-2 Synthesizer Circuits

2.9 Method of Suppression of Spurious Radiation and Limiting Power {2.983(d)(11)}

The PA stage amplifies the signal from the frequencysynthesizer circuits to appropriate output power and employs no multiplier.

2.9.1 Suppression of Spurious Components in the Synthesizer

Band pass filters eliminates the output harmonics and spurious. FL950 and FL 960 are for 800MHz band (FL950 and FL960 are same), and FL920 and FL930 are for 1900MHz band Their frequency characteristics are shown in Figure 2.9-1 (FL950, FL960), Figure 2.9-2 (FL920) and Figure2.9-3 (FL930).

2.9.2 Duplex Filter

Duplex filter FL730 of the transceiver units is provided toeliminate the outband noise fall into receiver frequency band and spurious or harmonics from transmitter.

The frequency characteristics of the duplex filter are shown in Figure 2.9-4.

2.9.3 Suppression of Spurious falling in the Receiver Frequency Band

The band pass filters FL950 and FL960 in the TX circuit sufficiently suppress the spurious falling within the receiver frequency band (869MHz to 894MHz).

The band pass filters FL920 and FL930 in the TX circuit sufficiently suppress the spurious falling within the receiver frequency band (1930MHz to 1990MHz).

The total attenuation of these filters is more than 60dB.

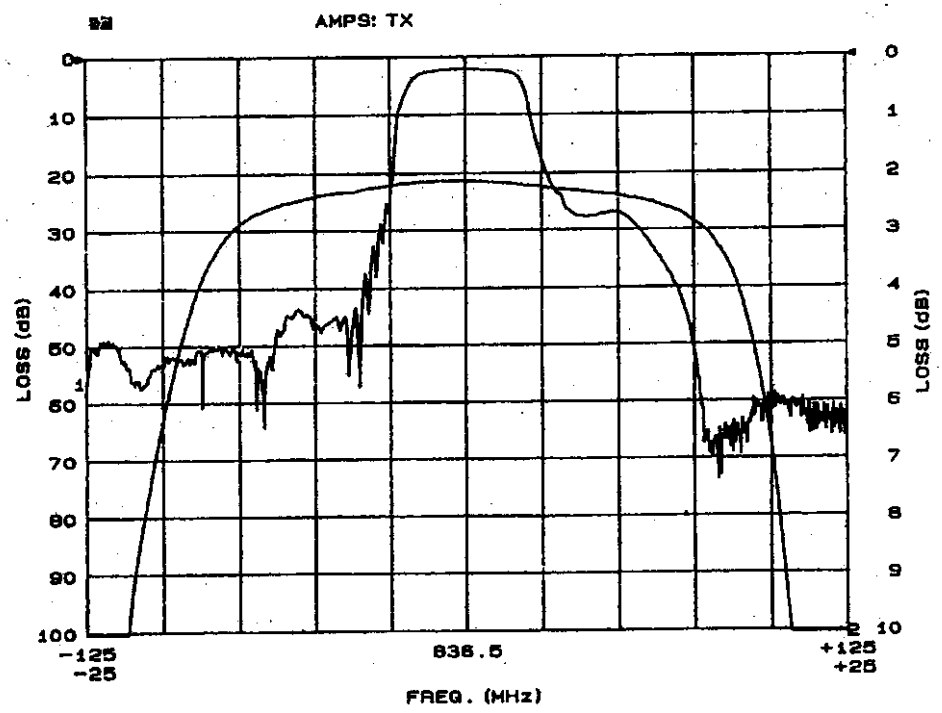

Figure 2.9-1 Band Pass Filter Response Characteristic (FL950, FL960)

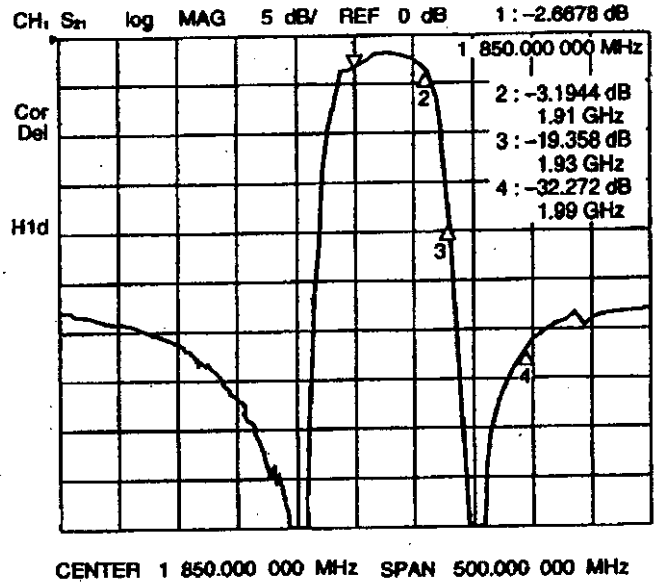

Figure 2.9-2 Band Pass Filter Response Characteristic (FL920)
Exibit 2-14

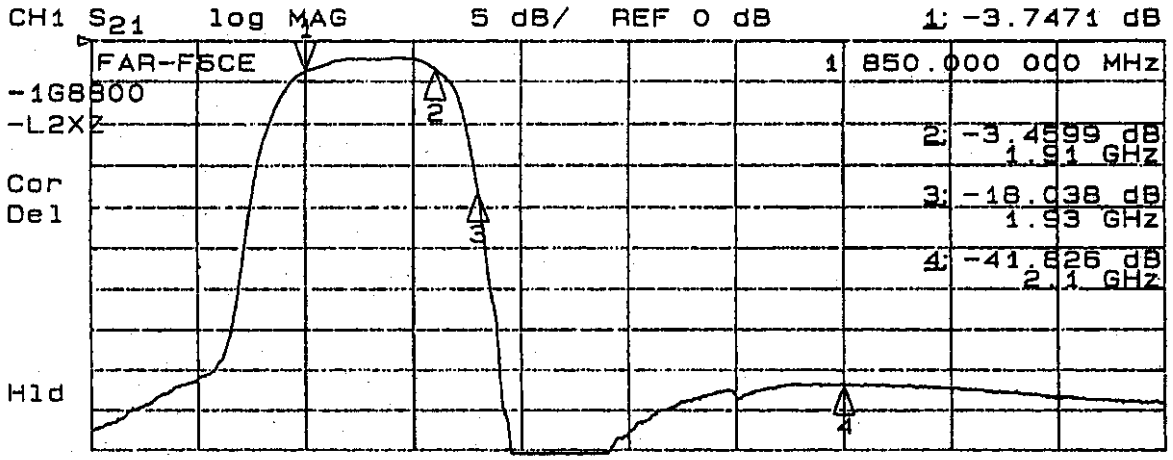

Figure 2.9-3 Band Pass Filter Response Characteristic (FL930)

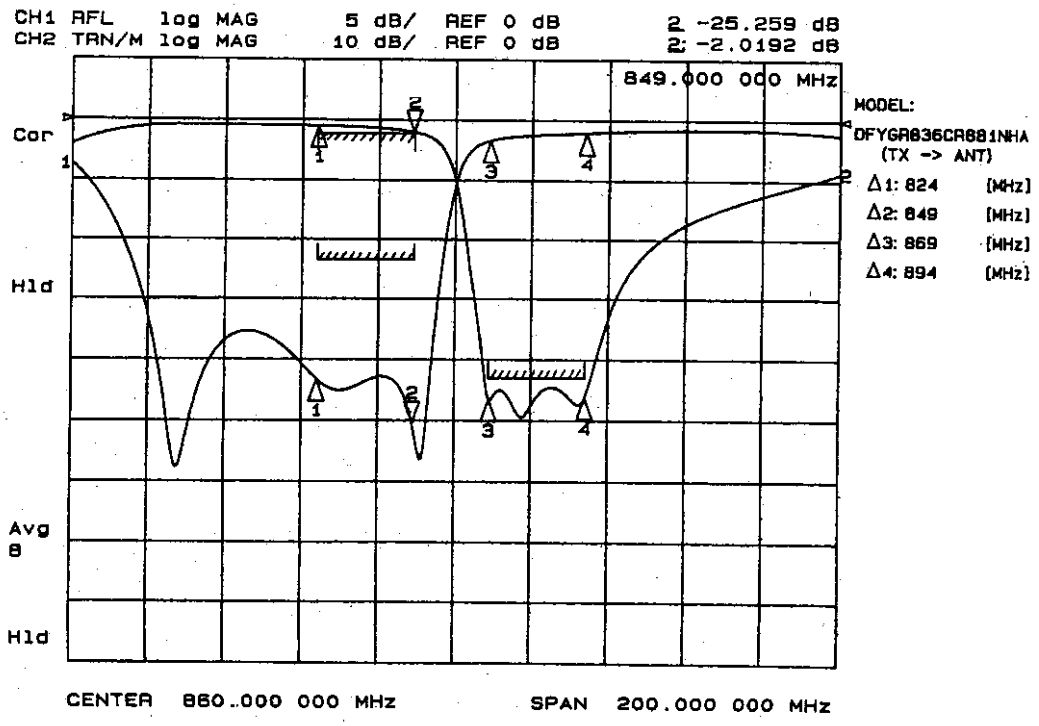

Figure 2.9-4 Frequency Characteristic of Duplex Filter

2.9.4 Suppression of Spurious Emission by Cabinet

The spurious emissions radiated from devices are suppressed using appropriate shielding techniques.

Each high frequency device is covered with a shield.

Each connection between the printed circuit board an the interface connector terminals at the bottom of the transceiver are protected with the necessary capacitors.

2.9.5 Method of Output Power Control

Part of the RF output is coupled and rectified to provide a DC level called TXPOW. This is proportional to the actual RF output power and the signal is used to maintain the RF output power at the level commanded from the base station. The RF output power is controlled by valuable gain Amp.(IC900) which gain is settled by DAC output (APC). The CPU calculate RF output power by using TXPOW and write the APC DAC to keep TXPOW level constant

2.9.6 Abnormal Transmit Countermeasure

The transmit power is continuously monitored by the microprocessor (IC201) through A/D converter in IC 202. The RF transmit power is output only in case of the processor command (TXON) is active and the output frequency of the synthesizer is locked. At any moment when any of the above-mentioned conditions are not met, the transmitter is disabled by turning off the transistor TR931 .

2.10 Description of Modulation System {2.983(d)(12)}

2.10.1 Low band digital operation

The TX_IF_Lo signal (183.15MHz) from synthesizer enters into the Q-MOD (IC900).
A double balanced IQ signal (24.3KHz pai/4-DQPSK) enter into the Q-MOD (IC900) from the MIXED SIGNAL ASIC (IC202).

The modulated IF signal (183.15MHz) is amplified by the valuable gain Amp.(IC900) which can control the gain over 40dB

The IF signal (183.15MHz) and TX_RF_Lo signal (1007.19-1032.12MHz) is mixed in UP Converter (IC900) to change the RF signal to the final operating frequency of (824.04-848.97MHz), and output level is -50 to -10dBm.

The RF switch (IC910) connects the UP converter(IC900) output to the band pass filter (FL950) at the low band operation.

The RF signal passes through the band pass filter (FL950) which attenuates 3dB and attenuates 3dB by discrete attenuater.

The RF signal passes through the RF amp (IC950) with a gain of 32dB.

The RF signal passes through the band pass filter (FL960) which attenuates 3dB and then is amplified by RF power amp (IC960) by 24dB.

The RF signal passes through the isolator (Z960) and duplex filter (FL730)

2.10.2 High band digital operation

The TX_IF_Lo signal (214.38MHz) from synthesizer enters into the Q-MOD (IC900).

A double balanced IQ signal (24.3KHz pai/4-DQPSK) enter into the Q-MOD (IC900) from the MIXED SIGNAL ASIC (IC202).

The modulated IF signal (214.38MHz) is amplified by the valuable gain Amp.(IC900) which can control the gain over 40dB

The IF signal (214.38MHz) and TX_RF_Lo signal (2064.42–2124.30MHz) is mixed in UP Converter (IC900) to change the RF signal to the final operating frequency of (1850.04-1909.92MHz), and output level is -55 to - 15dBm.

The RF switch (IC910) connects the UP converter(IC900) output to the band pass filter (FL920) at the high band operation.

The RF signal passes through the band pass filter (FL920) which attenuates 3dB and attenuates 2dB by discrete attenuater.

The RF signal passes through the RF amp (IC930) with a gain of 31dB.

The RF signal passes through the band pass filter (FL930) which attenuates 4dB and then is amplified by RF power amp (IC930) by 27dB.

The RF signal passes through the isolator (Z930) and antenna switch (FL700)

3. Certification{2.909}

Certification of Measurement Data of Transceiver

Type MT-253XF0R6A Handheld Cellular Personal Radio System

I certify that the data contained in this technical data was collected under my supervision and at my request. To the best of my knowledge and belief, the facts set forth herein are true and correct.

Akira Andoh

Akira Andoh

Manager

Radio Terminal Engineering Department

North America Radio Terminal Business Department

Mobile Communication Business Division

Mitsubishi Electric Corporation

I certify that the data contained in this technical data was measured and listed by me. To the best of my knowledge and belief, the facts set forth herein are true and correct.

Yushi Nagatoshi

Yushi Nagatoshi

Radio Terminal Engineering Department

North America Radio Terminal Business Department

Mobile Communication Business Division

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Born:	June 19, 1955
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Name:	Yushi Nagatoshi
Born:	January 19, 1972
Education:	Master of Engineering
Experience:	3 years

5. Measurement Data For Transmitter {2.983(e)}

5.1 Radio Frequency Power Output Measurement Data {2.985(a)}

(800MHz Analog,800MHz Digital,1900MHz Digital)

5.1.1 Radio Frequency Power Output Measurement Data

5.1.2 Radio Frequency Power Output with Voltage Variation Measurement Data

5.2 Modulation Characteristics {2.987(a)(d)}

5.2.1 Transmitter Audio Frequency Response (800MHz Analog)

5.2.2 Post Limiter Filter Attenuation (800MHz Analog)

5.2.3 Modulation Limiting (800MHz Analog)

5.3 Occupied Bandwidth Measurement Data {2.989 (c) (h)}

(800MHz Analog,800MHz Digital,1900MHz Digital)

5.4 Spurious Emissions at Antenna Terminal Measurement Data {2.991}

(800MHz Analog,800MHz Digital,1900MHz Digital)

5.5 Field Strength of Spurious Emissions Measurement Data {2.993}

(800MHz Analog,800MHz Digital,1900MHz Digital)

5.6 Frequency Stability Measurement Data {2.995}

(800MHz Analog,800MHz Digital,1900MHz Digital)

5.6.1 Frequency Stability with Voltage Variation Measurement Data

5.6.2 Frequency Stability with Temperature Variation Measurement Data

5.7 Measurement Data for Transmitter {SAR}

5. Measurement Data For Transmitter {2.983(e)}

5.1 Radio Frequency Power Output Measurement Data {2.985(a)}
(800MHz Analog,800MHz Digital,1900MHz Digital)

5.1.1 Radio Frequency Power Output Measurement Data

Power Level	Limit		Measured Peak Output Power [dBm]		
	Nominal Peak Output Power [dBm]	Tolerance [dB]	991ch 824.04MHz	384ch 836.52MHz	799ch 848.97MHz
0	27.78	+2 / -4	25.2	25.3	24.3
1	27.78	+2 / -4	25.2	25.3	24.3
2	27.78	+2 / -4	25.2	25.3	24.3
3	23.78	+2 / -4	25.1	24.6	23.4
4	19.78	+2 / -4	20.7	20.3	19.3
5	15.78	+2 / -4	16.3	16.0	14.8
6	11.78	+2 / -4	11.4	11.1	10.3
7	7.78	+2 / -4	8.9	8.6	7.9

Table 5.1.1.1 Radio Frequency Power Output Measurement Data (800MHz Analog)

Power Level	Limit		Measured Peak Output Power [dBm]		
	Nominal Peak Output Power [dBm]	Tolerance [dB]	991ch 824.04MHz	384ch 836.52MHz	799ch 848.97MHz
0	27.78	+2 / -4	27.4	26.9	26.2
1	27.78	+2 / -4	27.4	26.9	26.2
2	27.78	+2 / -4	27.4	26.9	26.2
3	23.78	+2 / -4	24.7	24.4	23.7
4	19.78	+2 / -4	20.3	19.9	19.4
5	15.78	+2 / -4	16.1	15.8	15.2
6	11.78	+2 / -4	12.5	12.3	11.7
7	7.78	+2 / -4	8.3	7.8	7.4
8	2.78	+2 / -6	3.1	2.8	2.2
9	-2.22	+2 / -6	-1.3	-1.5	-2.1
10	-7.22	+2 / -6	-6.4	-6.8	-7.3

Table 5.1.1.2 Radio Frequency Power Output Measurement Data (800MHz Digital)

Power Level	Limit		Measured Peak Output Power [dBm]		
	Nominal Peak Output Power [dBm]	Tolerance [dB]	2ch 1850.04MHz	1001ch 1880.01MHz	1998ch 1909.92MHz
0	27.78	+2 / -4	24.9	24.9	25.1
1	27.78	+2 / -4	24.9	25.0	25.1
2	27.78	+2 / -4	24.9	25.0	25.1
3	23.78	+2 / -4	22.0	21.9	22.2
4	19.78	+2 / -4	18.1	18.0	18.3
5	15.78	+2 / -4	15.7	15.7	15.9
6	11.78	+2 / -4	12.1	11.9	12.0
7	7.78	+2 / -4	7.8	7.5	7.7
8	1.78	+2 / -6	2.7	2.4	2.6
9	-3.22	+2 / -6	-2.1	-2.4	-2.0
10	-8.22	+2 / -6	-7.0	-6.8	-6.6

Table 5.1.1.3 Radio Frequency Power Output Measurement Data (1900MHz Digital Mode)

5.1.2 Radio Frequency Power Output with Voltage Variation Measurement Data

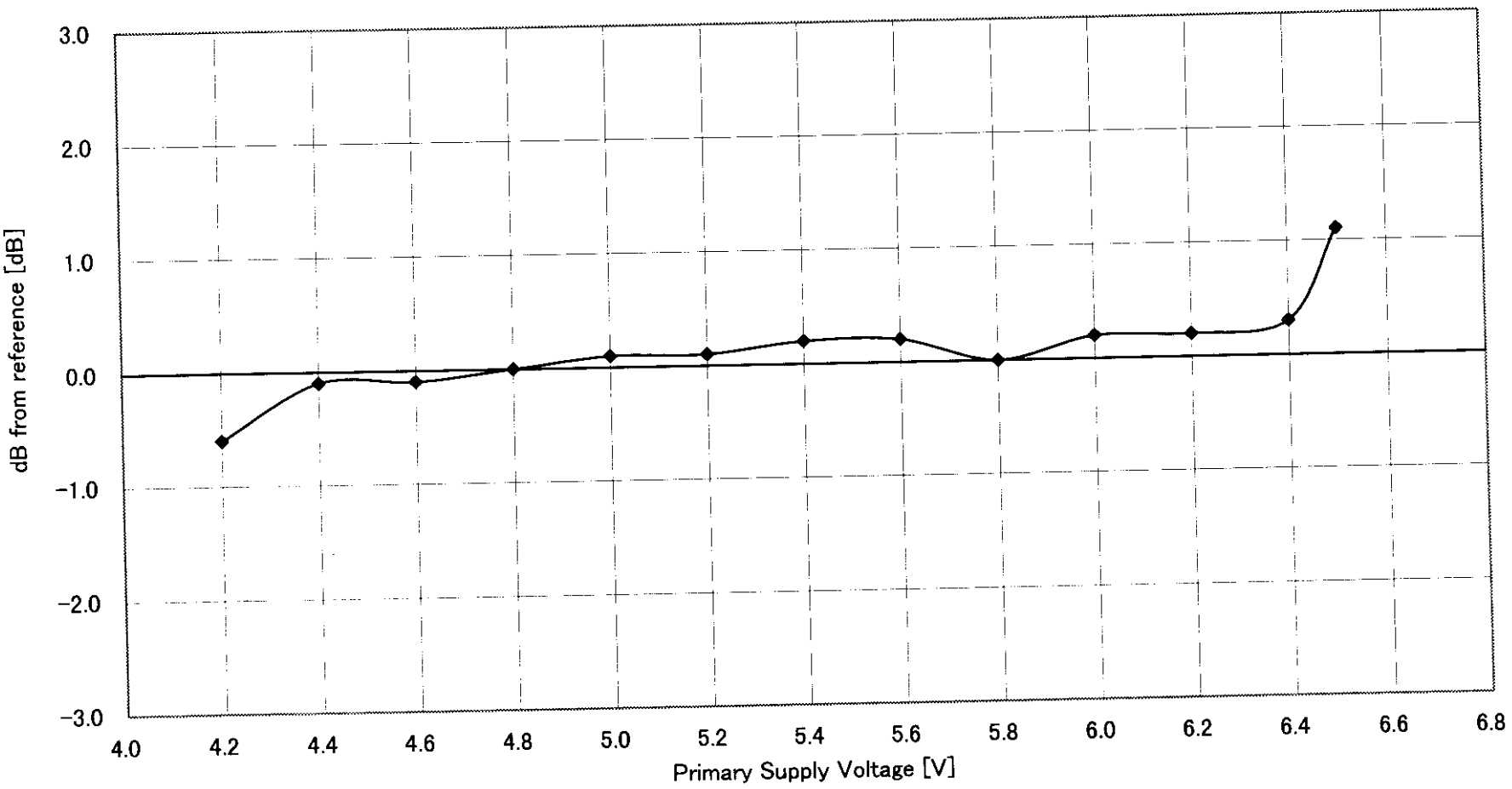

Figure 5.1.2.1 Radio Frequency Power Output with Voltage Variation (800MHz Analog)
Power Level 0, 384ch

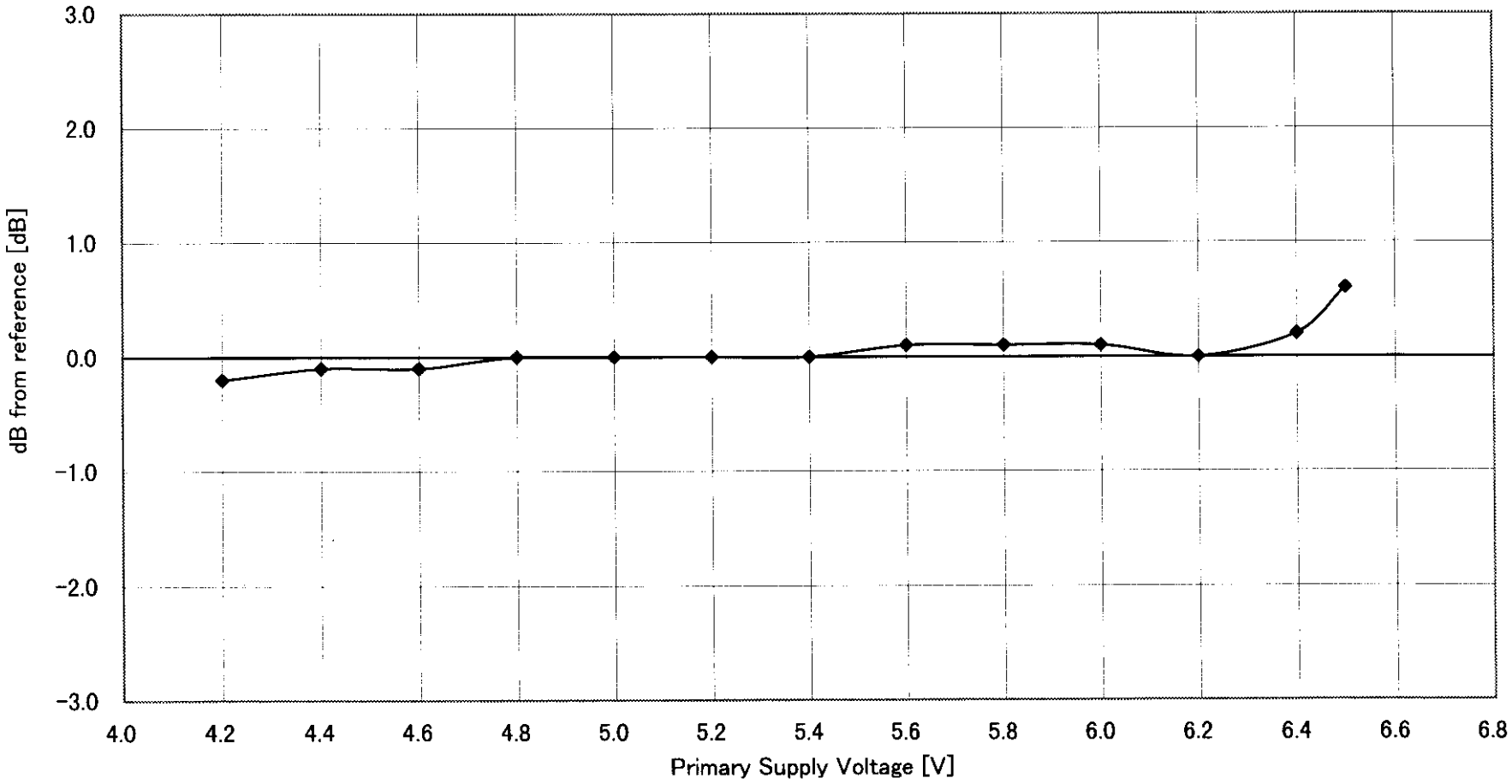

Figure 5.1.2.2 Radio Frequency Power Output with Voltage Variation (800MHz Digital)
Power Level 0, 384ch

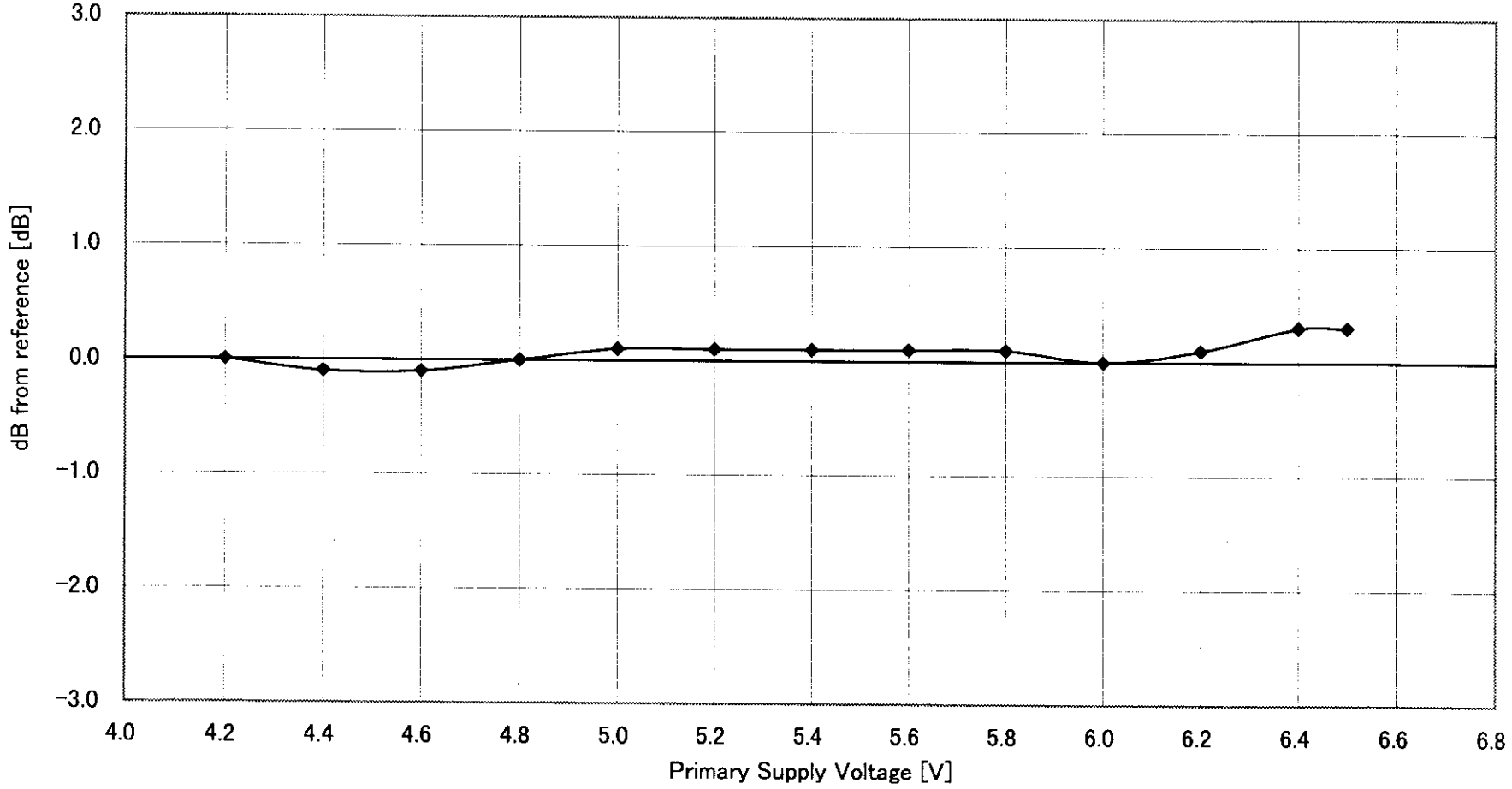

Figure 5.1.2.3 Radio Frequency Power Output with Voltage Variation (1900MHz Digital)
Power Level 0, 1001ch

5.2 Modulation Characteristics {2.987(a)(d)}

5.2.1 Transmitter Audio Frequency Response (800MHz Analog)

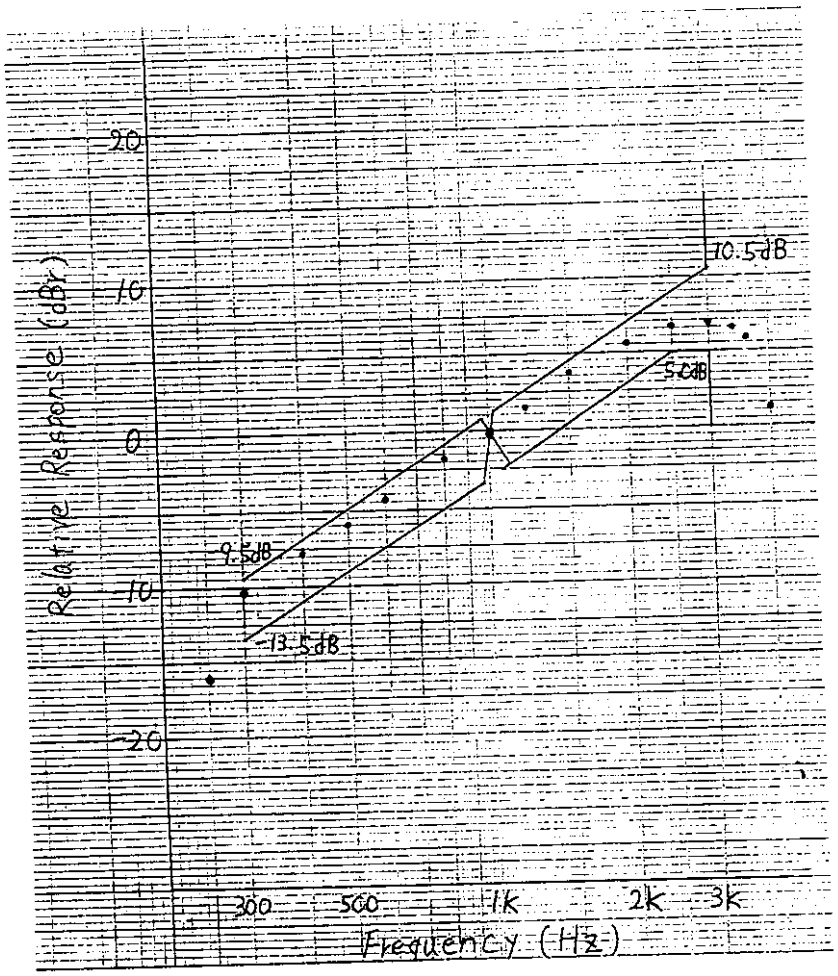

Figure 5.2.1.1 Transmitter Frequency Response of Audio Modulation Circuits Measurement Data (800MHzAnalog Mode)

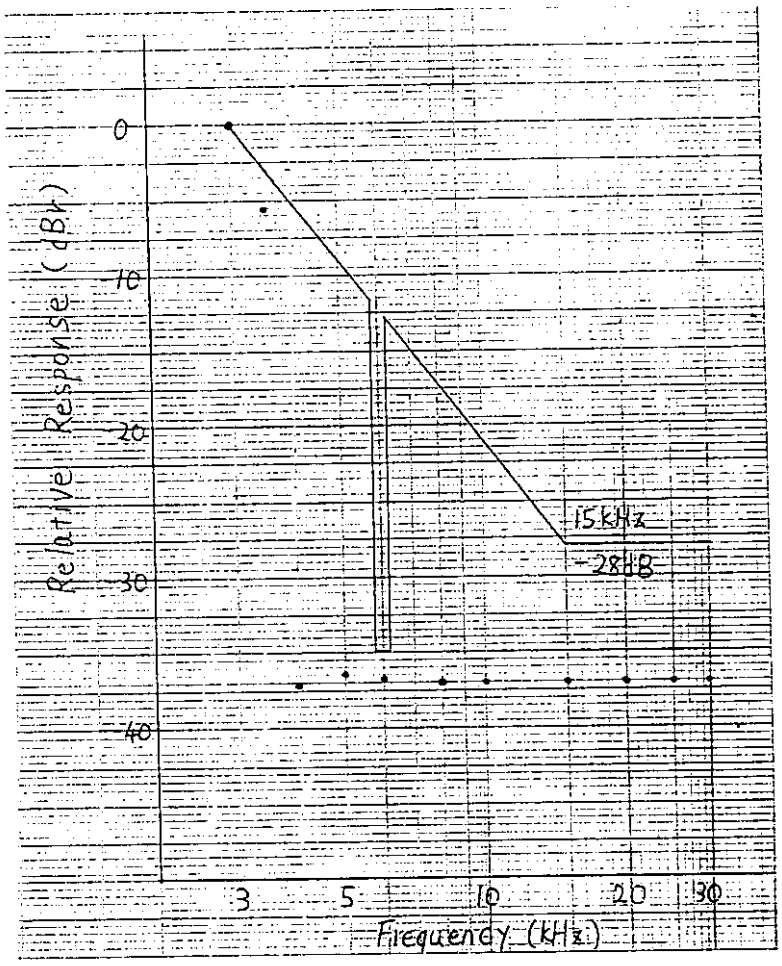

Figure 5.2.1.2 Transmitter Frequency Response of Audio Low Pass Filter Measurement Data (800MHzAnalog Mode)

5.2.2 Post Limiter Filter Attenuation (800MHz Analog)

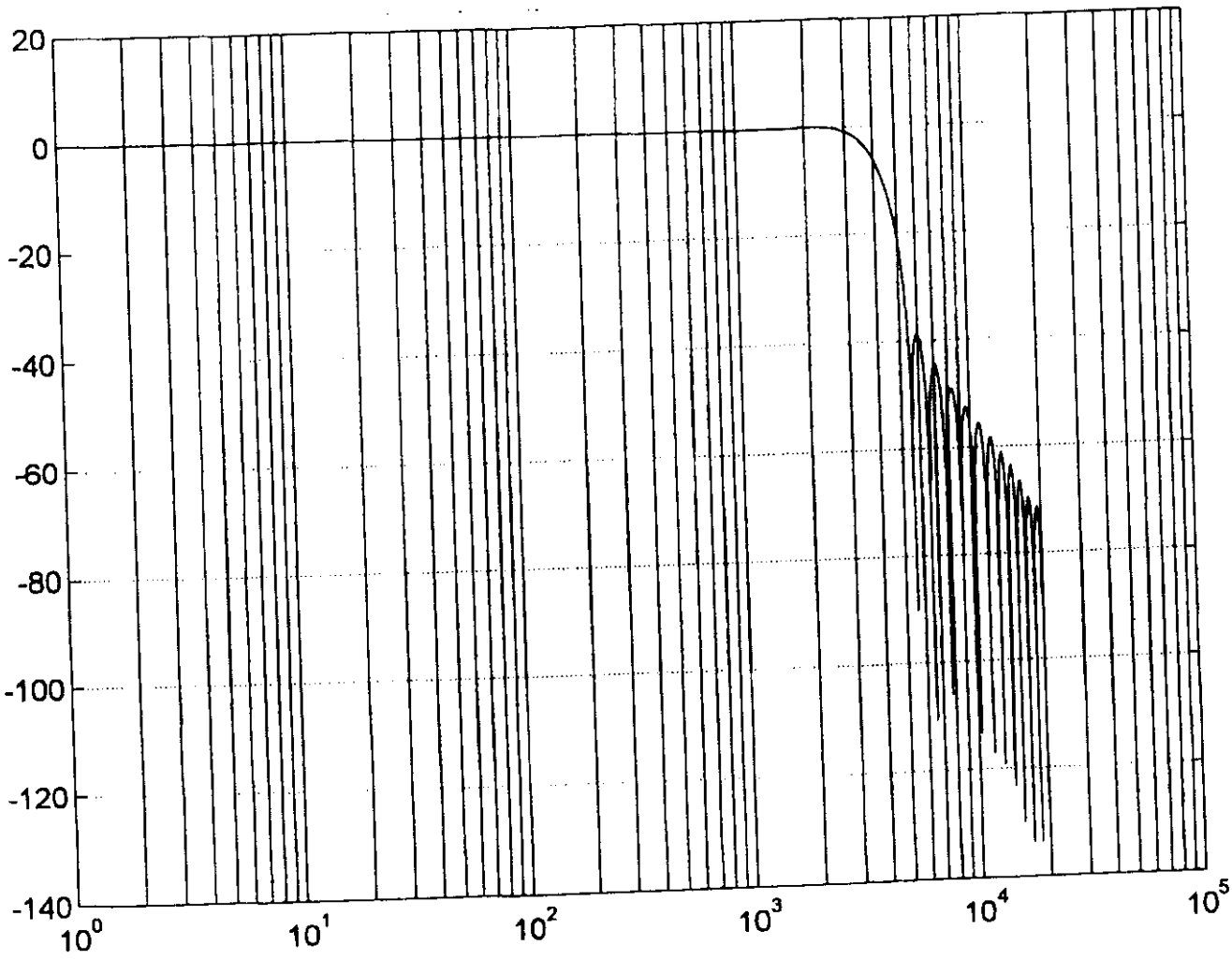

Figure 5.2.2.1 Frequency Response of Post Limiter Filter

5.2.3 Modulation Limiting (800MHz Analog)

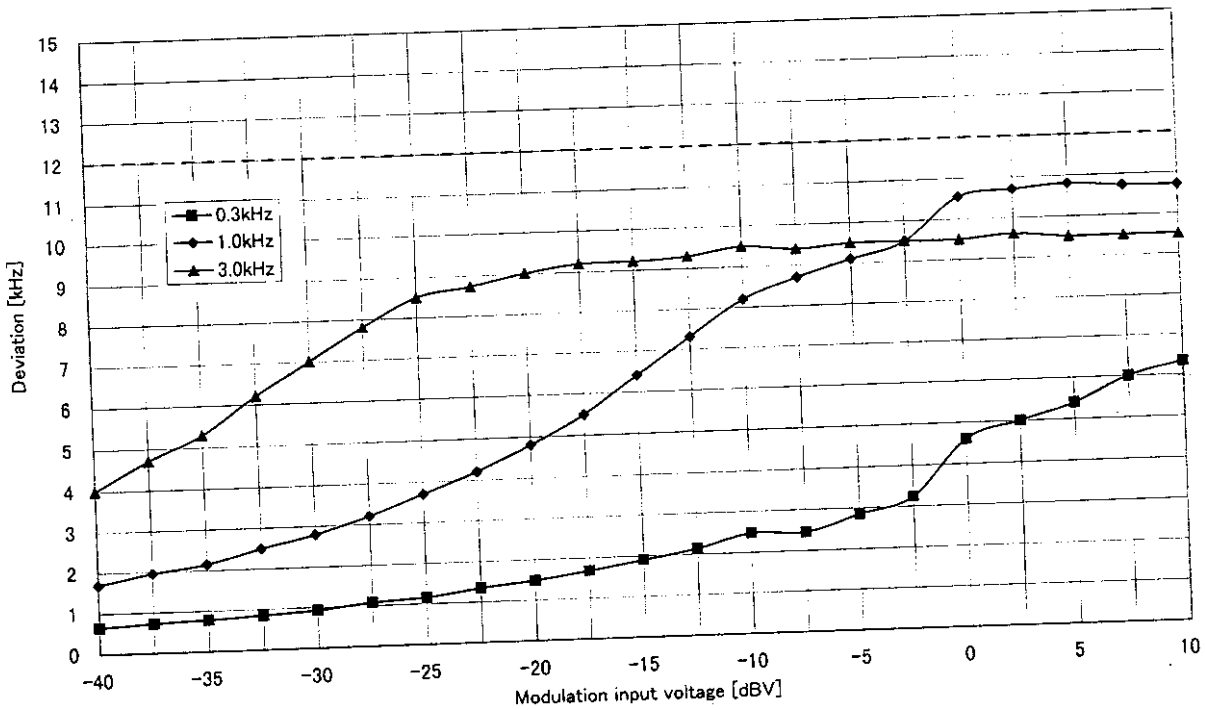

Figure 5.2.3 Modulation Limiting (800MHz Analog)

5.3 Occupied Bandwidth Measurement Data {2.989 (c) (h)}
(800MHz Analog,800MHz Digital,1900MHz Digital)

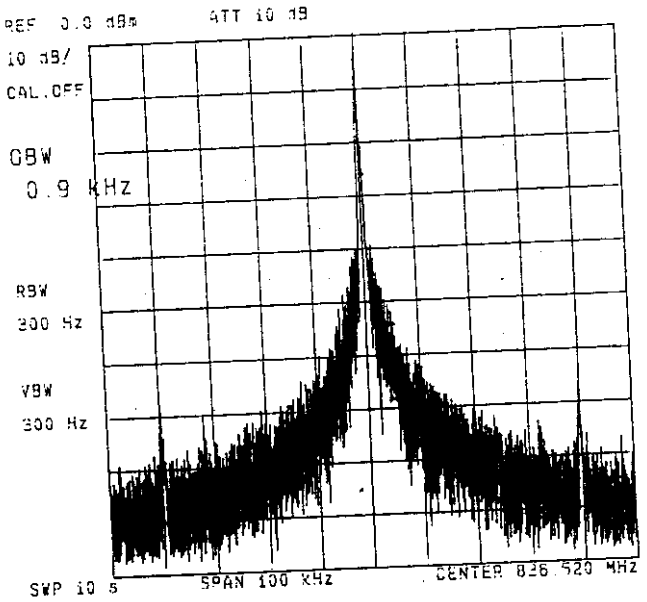

Figure 5.3.1 Occupied Bandwidth Measurement Data (800MHz Analog Mode)
Unmodulated Carrier (384ch, Power Level 0)

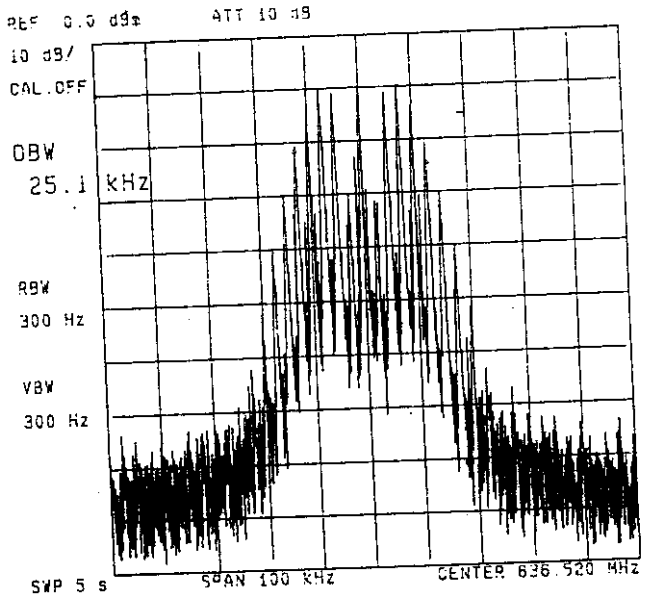

Figure 5.3.2 Occupied Bandwidth Measurement Data (800MHz Analog Mode)
Audio Frequency 16dB greater than 50% Modulation (384ch, Power Level 0)

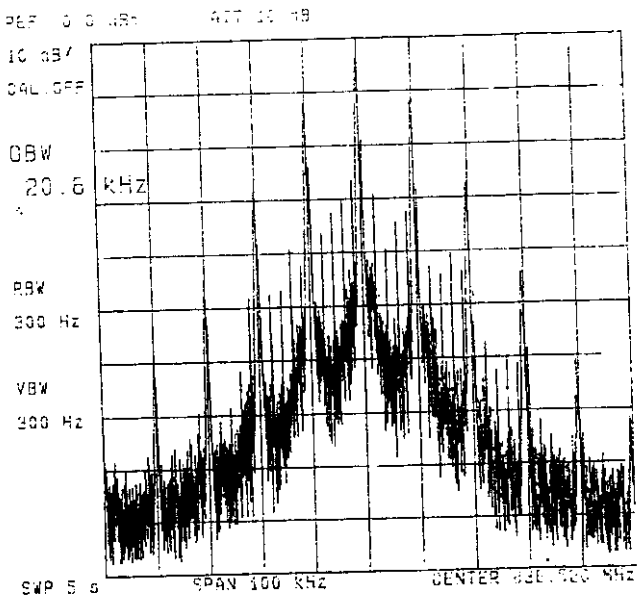

Figure 5.3.3 Occupied Bandwidth Measurement Data (800MHz Analog Mode)
Signaling Tone with +7.66kHz/-7.51kHz Deviation (384ch, Power Level 0)

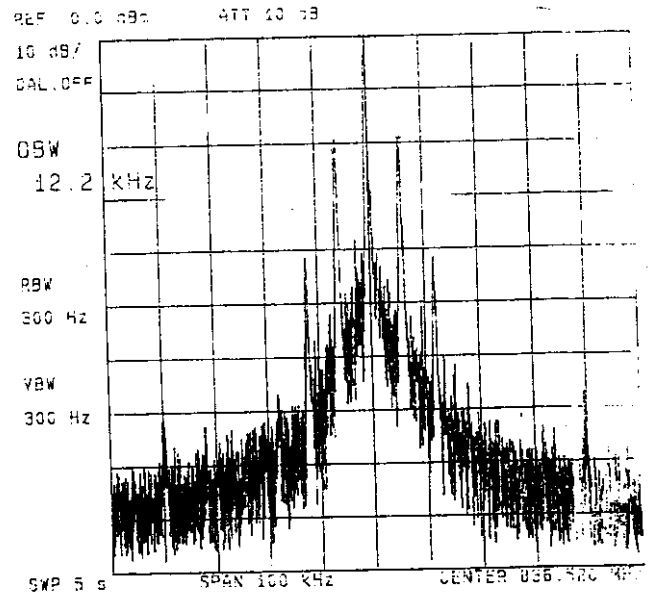

Figure 5.3.4 Occupied Bandwidth Measurement Data (800MHz Analog Mode)
SAT 6000Hz with +1.86kHz/-1.86kHz Deviation (384ch, Power Level 0)

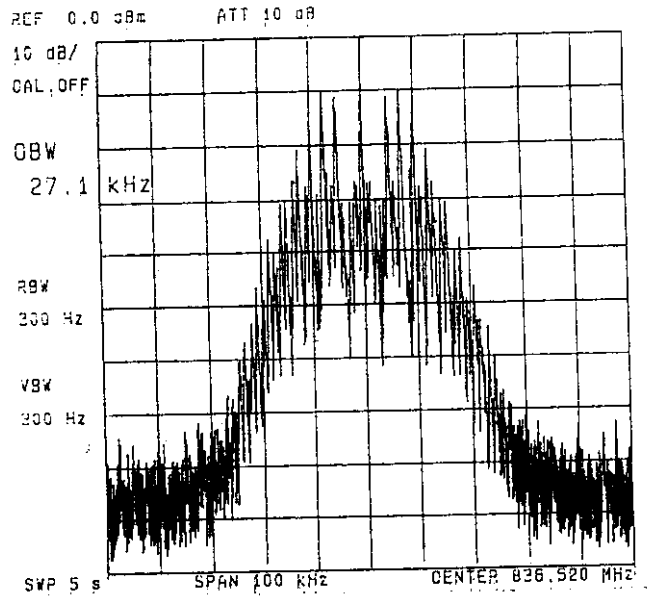

Figure 5.3.5 Occupied Bandwidth Measurement Data (800MHz Analog Mode)
Audio Frequency 16dB greater than 50% Modulation
+ SAT 6000Hz with +1.86kHz/-1.86kHz Deviation (384ch, Power Level 0)

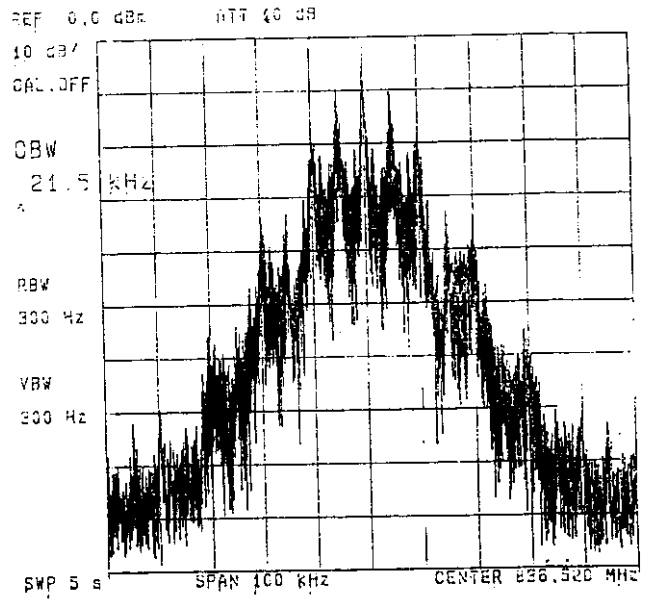

Figure 5.3.6 Occupied Bandwidth Measurement Data (800MHz Analog Mode)
Wideband Data with +7.34kHz/-7.30kHz Deviation (384ch, Power Level 0)

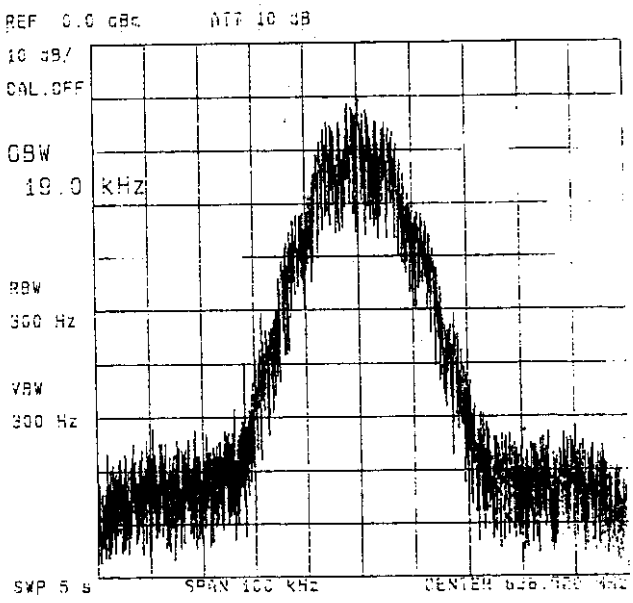

Figure 5.3.7 Occupied Bandwidth Measurement Data (800MHz Analog Mode)
DTMF (Key5) + SAT 6000Hz with +1.86kHz/-1.86kHz Deviation (384ch, Power Level 0)

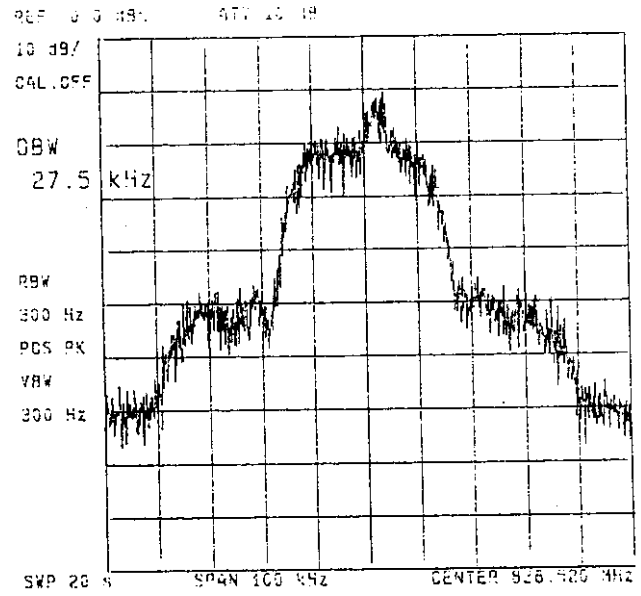

Figure 5.3.8 Occupied Bandwidth Measurement Data (800MHz Digital Mode)
Modulated with a 48.6kbps Pseudo-random Data sequence (384ch, Power Level 0)

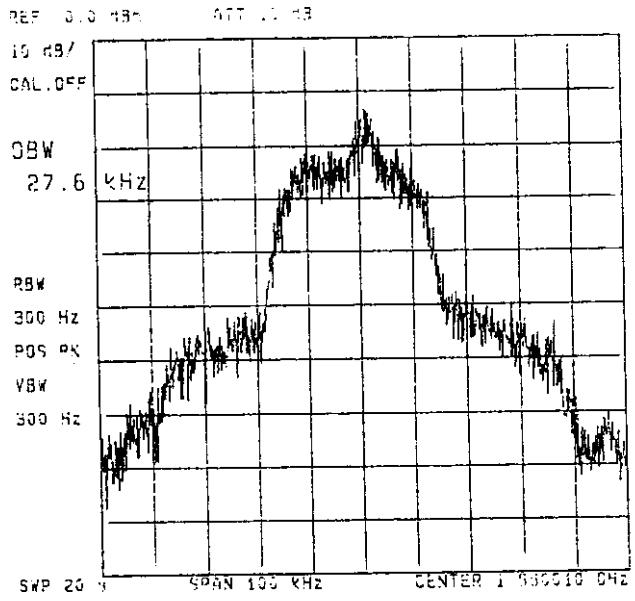

Figure 5.3.9 Occupied Bandwidth Measurement Data (1900MHz Digital Mode) Modulated with a 48.6kbps Pseudo-random Data sequence (1001ch, Power Level 0)

5.4 Spurious Emissions at Antenna Terminal Measurement Data {2.991}

(800MHz Analog,800MHz Digital,1900MHz Digital)

FCC Spurious Emission at Antenna Terminal 1998.10.27

800A(WBD)

991ch(824.04MHz)

		Freq. [MHz]	Reading [dBm]	Attenuator +Cable Loss [dB]	Filter Attenuation [dB]	Net [dBm]	Limit [dBm]	Margin [dB]	
Tx		824.04	-5.04	30.4		25.4	---		
Harmonics	2nd	1648.08	-81.20	30.6	2.3	-48.3	-15.4	-32.9	
	3rd	2472.12	-98.43	30.9	2.1	-65.4	-15.4	-50.0	
	4th	3296.16	-96.44	30.9	5.5	-60.0	-15.4	-44.6	
	5th	4120.20	-84.98	30.6	2.8	-51.6	-15.4	-36.2	
	6th	4944.24	-101.34	32.3	8.7	-60.3	-15.4	-44.9	
	7th	5768.28	-101.26	33.2	2.3	-65.8	-15.4	-50.4	
	8th	6592.32	-94.95	32.3	3.5	-59.2	-15.4	-43.7	*
	9th	7416.36	-94.16	31.7	13.9	-48.6	-15.4	-33.1	*
	10th	8240.40	-93.35	31.8	7.0	-54.6	-15.4	-39.1	*
Others		99.40	-85.80	30.4		-55.4	-15.4	-40.0	
		2014.38	-70.19	30.8		-39.4	-15.4	-24.0	
		4028.76	-83.83	30.6		-53.2	-15.4	-37.8	
		4863.65	-83.34	32.3		-51.0	-15.4	-35.6	
		5035.96	-81.82	32.3		-49.5	-15.4	-34.1	
		5870.85	-74.80	33.2		-41.6	-15.4	-26.2	

384ch(836.52MHz)

Tx		836.52	-5.06	30.4		25.3	---		
Harmonics	2nd	1673.04	-88.57	30.6	2.3	-55.7	-15.4	-40.2	
	3rd	2509.56	-102.22	30.9	2.1	-69.2	-15.4	-53.7	
	4th	3346.08	-100.54	30.9	5.5	-64.1	-15.4	-48.7	*
	5th	4182.60	-92.57	30.6	2.8	-59.2	-15.4	-43.7	
	6th	5019.12	-102.84	32.3	8.7	-61.8	-15.4	-46.4	*
	7th	5855.64	-101.75	33.2	2.3	-66.3	-15.4	-50.9	*
	8th	6692.16	-94.28	32.3	3.5	-58.5	-15.4	-43.0	*
	9th	7528.68	-93.51	31.7	13.9	-47.9	-15.4	-32.5	*
	10th	8365.20	-93.58	31.8	7.0	-54.8	-15.4	-39.3	*
Others		130.60	-88.48	30.4		-58.1	-15.4	-42.6	
		2039.34	-72.19	30.8		-41.4	-15.4	-26.0	
		4078.69	-80.42	30.6		-49.8	-15.4	-34.4	
		4848.34	-83.47	32.3		-51.2	-15.4	-35.7	
		5098.35	-81.66	32.3		-49.4	-15.4	-33.9	
		5868.08	-72.58	33.2		-39.4	-15.4	-23.9	

799ch(848.97MHz)

Tx		848.97	-6.45	30.4		24.0	---		
Harmonics	2nd	1697.94	-89.46	30.6	2.3	-58.9	-16.8	-42.0	
	3rd	2546.91	-102.42	30.9	2.1	-71.5	-16.8	-54.7	
	4th	3395.88	-98.24	30.9	5.5	-65.0	-16.8	-48.2	
	5th	4244.85	-86.58	30.6	2.8	-53.8	-16.8	-37.0	
	6th	5093.82	-100.01	32.3	8.7	-62.2	-16.8	-45.4	
	7th	5942.79	-100.80	33.2	2.3	-64.8	-16.8	-48.0	
	8th	6791.76	-94.72	32.3	3.5	-53.7	-16.8	-36.9	*
	9th	7640.73	-93.14	31.7	13.9	-59.2	-16.8	-42.4	*
	10th	8489.70	-93.73	31.8	7.0	-58.4	-16.8	-41.6	*
Others		2064.25	-71.08	30.8		-26.4	-16.8	-9.6	
		3096.37	-85.36	30.9		-47.5	-16.8	-30.6	
		4128.48	-80.80	30.6		-50.2	-16.8	-33.4	
		4833.28	-86.05	32.3		-53.8	-16.8	-36.9	
		5160.60	-88.16	32.3		-55.9	-16.8	-39.0	
		5865.36	-71.53	33.2		-38.3	-16.8	-21.5	

* : Measuring equipment noise-floor measurements at these frequencies.

Table 5.4.1 Spurious Emissions at Antenna Terminal Measurement Data
(800MHz Analog Mode)
Modulated with Wideband Data, Power Level 0

FCC Spurious Emission at Antenna Terminal 1998.10.27

800D

991ch(824.04MHz)

		Freq. [MHz]	Reading [dBm]	Attenuator +Cable Loss [dB]	Filter Attenuation [dB]	Net [dBm]	Limit [dBm]	Margin [dB]	
Tx		824.04	-1.37	30.4		29.0	---		
Harmonics	2nd	1648.08	-83.52	30.6	2.3	-50.6	-16.0	-34.7	
	3rd	2472.12	-88.69	30.9	2.1	-55.7	-16.0	-39.7	
	4th	3296.16	-95.36	30.9	5.5	-59.0	-16.0	-43.0	
	5th	4120.20	-89.96	30.6	2.8	-56.6	-16.0	-40.6	
	6th	4944.24	-94.07	32.3	8.7	-53.1	-16.0	-37.1	
	7th	5768.28	-100.75	33.2	2.3	-65.3	-16.0	-49.3	
	8th	6592.32	-93.98	32.3	3.5	-58.2	-16.0	-42.2	*
	9th	7416.36	-93.43	31.7	13.9	-47.8	-16.0	-31.9	*
	10th	8240.40	-93.12	31.8	7.0	-54.3	-16.0	-38.4	*
Others		99.40	-81.92	30.4		-51.5	-16.0	-35.6	
		823.65	-64.04	30.4		-33.6	-16.0	-17.7	
		824.43	-63.64	30.4		-33.2	-16.0	-17.3	
		1007.20	-93.22	30.4		-62.8	-16.0	-46.9	
		2014.44	-69.63	30.8		-38.8	-16.0	-22.9	
		4028.76	-83.83	30.6		-53.2	-16.0	-37.3	
		4872.60	-84.51	32.3		-52.2	-16.0	-36.2	
		5035.95	-85.07	32.3		-52.8	-16.0	-36.8	
		5879.73	-77.54	33.2		-44.3	-16.0	-28.4	

384ch(836.52MHz)

Tx		836.52	-1.94	30.4		28.5	---		
Harmonics	2nd	1673.04	-83.84	30.6	2.3	-50.9	-16.5	-34.4	
	3rd	2509.56	-86.84	30.9	2.1	-53.8	-16.5	-37.3	
	4th	3346.08	-99.24	30.9	5.5	-62.8	-16.5	-46.3	
	5th	4182.60	-84.18	30.6	2.8	-50.8	-16.5	-34.2	
	6th	5019.12	-101.54	32.3	8.7	-60.5	-16.5	-44.0	
	7th	5855.64	-101.49	33.2	2.3	-66.0	-16.5	-49.5	*
	8th	6692.16	-92.24	32.3	3.5	-56.4	-16.5	-39.9	
	9th	7528.68	-92.24	31.7	13.9	-46.6	-16.5	-30.1	*
	10th	8365.20	-92.90	31.8	7.0	-54.1	-16.5	-37.6	*
Others		130.60	-81.05	30.4		-50.7	-16.5	-34.1	
		836.13	-65.40	30.4		-35.0	-16.5	-18.5	
		836.91	-65.12	30.4		-34.7	-16.5	-18.2	
		2039.34	-69.92	30.8		-39.1	-16.5	-22.6	
		4078.69	-80.14	30.6		-49.5	-16.5	-33.0	
		4848.92	-89.51	32.3		-57.2	-16.5	-40.7	
		4851.19	-88.62	32.3		-56.3	-16.5	-39.8	
		4854.56	-80.60	32.3		-48.3	-16.5	-31.8	
		5868.70	-85.08	33.2		-51.9	-16.5	-35.3	
		5870.95	-75.44	33.2		-42.2	-16.5	-25.7	
		5874.45	-72.68	33.2		-39.5	-16.5	-22.9	

* : Measuring equipment noise-floor measurements at these frequencies.

Table 5.4.2(a) Spurious Emissions at Antenna Terminal Measurement Data (800MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

FCC Spurious Emission at Antenna Terminal 1998.10.27

800D

799ch(848.97MHz)

		Freq. [MHz]	Reading [dBm]	Attenuator +Cable Loss [dB]	Filter Attenuation [dB]	Net [dBm]	Limit [dBm]	Margin [dB]	
Tx		848.97	-3.12	30.4		27.3	---		
Harmonics	2nd	9697.84	-83.26	30.6	2.3	-52.7	-17.7	-34.9	
	3rd	14546.76	-90.92	30.9	2.1	-60.0	-17.7	-42.3	
	4th	19395.68	-85.12	30.9	5.5	-51.9	-17.7	-34.2	
	5th	24244.60	-77.95	30.6	2.8	-45.2	-17.7	-27.5	
	6th	29093.52	-98.14	32.3	8.7	-60.3	-17.7	-42.6	
	7th	33942.44	-99.83	33.2	2.3	-63.8	-17.7	-46.1	
	8th	38791.36	-88.04	32.3	3.5	-47.0	-17.7	-29.3	
	9th	43640.28	-93.36	31.7	13.9	-59.4	-17.7	-41.7	*
	10th	48489.20	-93.49	31.8	7.0	-58.2	-17.7	-40.5	*
Others		161.74	-85.90	30.4		-41.6	-17.7	-23.9	
		1010.79	-94.52	30.4		-57.1	-17.7	-39.4	
		1032.13	-95.81	30.4		-65.4	-17.7	-47.7	
		2064.24	-70.64	30.8		-39.8	-17.7	-22.1	
		3096.36	-84.87	30.9		-54.0	-17.7	-36.3	
		4128.48	-79.82	30.6		-49.2	-17.7	-31.5	
		4835.09	-84.39	32.3		-52.1	-17.7	-34.4	
		4836.44	-84.11	32.3		-51.8	-17.7	-34.1	
		4838.55	-84.53	32.3		-52.2	-17.7	-34.5	
		5160.60	-88.92	32.3		-56.6	-17.7	-38.9	
		5870.59	-71.35	33.2		-38.2	-17.7	-20.4	

* : Measuring equipment noise-floor measurements at these frequencies.

Table 5.4.2(b) Spurious Emissions at Antenna Terminal Measurement Data
(800MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

FCC Spurious Emission at Antenna Terminal 1998.10.27

1.9D

		Freq. [MHz]	Reading [dBm]	Attenuator +Cable Loss [dB]	Filter Attenuation [dB]	Net [dBm]	Limit [dBm]	Margin [dB]	
2ch(1850.04MHz)									
Tx		1850.04	-5.39	30.8		25.4	---		
Harmonics	2nd	3700.08	-61.29	30.8	0.5	-30.0	-19.6	-10.4	
	3rd	5550.12	-82.09	33.7	1.1	-47.2	-19.6	-27.6	
	4th	7400.16	-92.68	31.7	0.1	-60.9	-19.6	-41.3	
	5th	9250.20	-88.07	32.4	0.3	-55.4	-19.6	-35.7	
	6th	11100.24	-89.89	32.4	0.2	-57.3	-19.6	-37.7	
	7th	12950.28	-90.07	32.2	1.2	-56.7	-19.6	-37.0	*
	8th	14800.32	-90.26	32.3	1.0	-57.0	-19.6	-37.3	*
	9th	16650.36	-90.10	32.3	8.1	-49.7	-19.6	-30.1	*
	10th	18500.40	-89.23	32.5	2.9	-53.9	-19.6	-34.2	*
Others		469.14	-96.06	30.4		-65.7	-19.6	-46.1	
		814.36	-57.72	30.4		-27.4	-19.6	-7.7	
		1407.42	-96.20	30.6		-65.6	-19.6	-46.0	
		1635.67	-87.60	30.6		-57.0	-19.6	-37.4	
		1849.66	-67.01	30.8		-36.2	-19.6	-16.6	
		1850.44	-67.59	30.8		-36.8	-19.6	-17.2	
		2064.42	-68.28	30.8		-37.5	-19.6	-17.9	
		2068.23	-67.78	30.8		-37.0	-19.6	-17.3	
		2278.80	-92.68	30.9		-61.8	-19.6	-42.1	
		3096.63	-84.91	30.9		-54.0	-19.6	-34.4	
		3102.34	-84.12	30.9		-53.2	-19.6	-33.6	
		4128.84	-80.91	30.6		-50.3	-19.6	-30.7	
		4136.46	-80.12	30.6		-49.5	-19.6	-29.9	
		6193.26	-89.73	33.2		-56.5	-19.6	-36.9	
		6204.69	-87.45	33.2		-54.3	-19.6	-34.6	
		6407.64	-94.20	32.3		-61.9	-19.6	-42.3	
		7828.94	-83.88	31.7		-52.2	-19.6	-32.5	

1001ch(1880.01MHz)									
Tx		1880.01	-6.00	30.8		24.8	---		
Harmonics	2nd	3760.02	-56.08	30.8	0.5	-24.8	-20.3	-4.5	
	3rd	5640.03	-86.73	33.7	1.1	-51.9	-20.3	-31.6	
	4th	7520.04	-90.92	31.7	0.1	-59.2	-20.3	-38.9	
	5th	9400.05	-90.63	32.4	0.3	-57.9	-20.3	-37.7	
	6th	11280.06	-89.61	32.4	0.2	-57.0	-20.3	-36.8	
	7th	13160.07	-90.38	32.2	1.2	-57.0	-20.3	-36.7	*
	8th	15040.08	-90.22	32.3	1.0	-56.9	-20.3	-36.7	*
	9th	16920.09	-88.53	32.3	8.1	-48.1	-20.3	-27.9	*
	10th	18800.10	-88.55	32.5	2.9	-53.2	-20.3	-32.9	*
Others		859.32	-57.04	30.4		-26.6	-20.3	-6.4	
		1665.63	-80.55	30.6		-50.0	-20.3	-29.7	
		1879.63	-66.62	30.8		-35.8	-20.3	-15.6	
		1880.41	-67.19	30.8		-36.4	-20.3	-16.1	
		2094.99	-69.97	30.8		-39.2	-20.3	-18.9	
		2098.20	-71.68	30.8		-40.9	-20.3	-20.6	
		3141.58	-77.63	30.9		-46.7	-20.3	-26.5	
		3147.30	-77.91	30.9		-47.0	-20.3	-26.8	
		3974.40	-92.20	30.6		-61.6	-20.3	-41.4	
		4188.78	-91.65	30.6		-61.1	-20.3	-40.8	
		4196.40	-90.02	30.6		-59.4	-20.3	-39.2	

* : Measuring equipment noise-floor measurements at these frequencies.

Table 5.4.3(a) Spurious Emissions at Antenna Terminal Measurement Data
(1900MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

1.9D

		Freq. [MHz]	Reading [dBm]	Attenuator +Cable Loss [dB]	Filter Attenuation [dB]	Net [dBm]	Limit [dBm]	Margin [dB]	
1998ch(1909.92MHz)									
Tx		1909.92	-6.40	30.8		24.4	---		
Harmonics	2nd	3819.84	-55.09	30.8	0.5	-24.3	-20.7	-3.7	
	3rd	5729.76	-88.65	33.7	1.1	-54.9	-20.7	-34.3	
	4th	7639.68	-79.76	31.7	0.1	-48.1	-20.7	-27.4	
	5th	9549.60	-93.90	32.4	0.3	-61.5	-20.7	-40.9	*
	6th	11459.52	-91.54	32.4	0.2	-59.1	-20.7	-38.5	*
	7th	13369.44	-90.05	32.2	1.2	-57.8	-20.7	-37.2	*
	8th	15279.36	-90.22	32.3	1.0	-58.0	-20.7	-37.3	*
	9th	17189.28	-87.90	32.3	8.1	-55.6	-20.7	-34.9	*
	10th	19099.20	-89.07	32.5	2.9	-56.6	-20.7	-36.0	*
Others		904.18	-59.07	30.4		-28.7	-20.7	-8.0	
		1481.17	-94.48	30.6		-63.9	-20.7	-43.2	
		1695.54	-92.63	30.6		-62.0	-20.7	-41.4	
		1909.54	-66.54	30.8		-35.7	-20.7	-15.1	
		1910.31	-68.99	30.8		-38.2	-20.7	-17.5	
		2124.30	-67.22	30.9		-36.3	-20.7	-15.7	
		2128.11	-74.64	30.9		-43.7	-20.7	-23.1	
		3186.45	-69.73	30.9		-38.8	-20.7	-18.2	
		3192.17	-69.99	30.9		-39.1	-20.7	-18.4	
		4034.23	-83.72	30.6		-53.1	-20.7	-32.5	
		4248.60	-80.20	30.6		-49.6	-20.7	-29.0	
		4256.22	-78.10	30.6		-47.5	-20.7	-26.9	
		4462.98	-91.50	30.6		-60.9	-20.7	-40.3	
		5729.68	-85.79	33.2		-52.6	-20.7	-31.9	
		6158.52	-87.47	33.2		-54.3	-20.7	-33.6	
		6372.90	-78.84	32.3		-46.5	-20.7	-25.9	
		6384.33	-76.70	32.3		-44.4	-20.7	-23.8	
		7425.32	-83.04	31.7		-51.3	-20.7	-30.7	

In Rx Band (1930MHz to 1990MHz), harmonics and spurious : below -80dBm
* : Measuring equipment noise-floor measurements at these frequencies.

Table 5.4.3(b) Spurious Emissions at Antenna Terminal Measurement Data
(1900MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

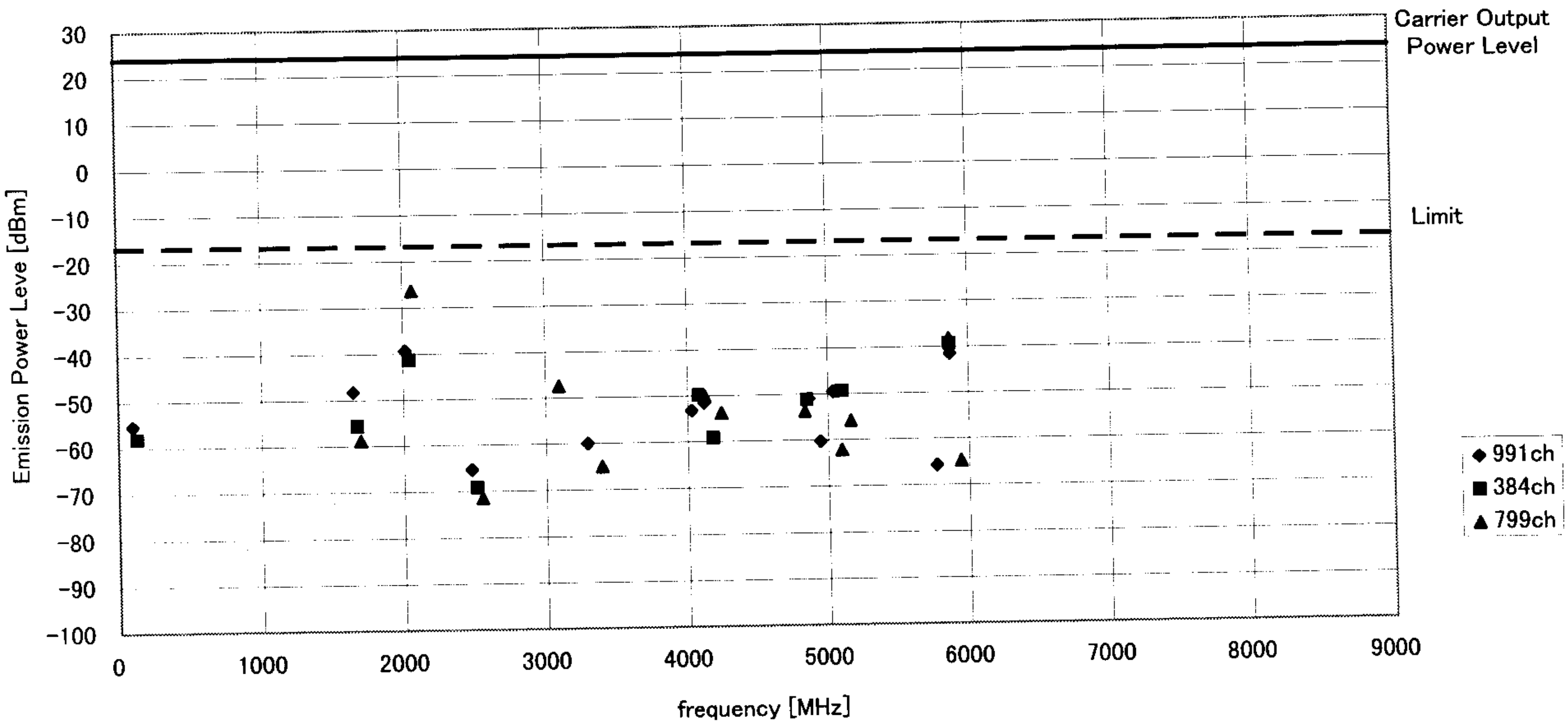

Figure 5.4.1 Spurious Emission at Antenna Terminal (800MHz Analog Mode)
Modulated with Wideband Data, Power Level 0

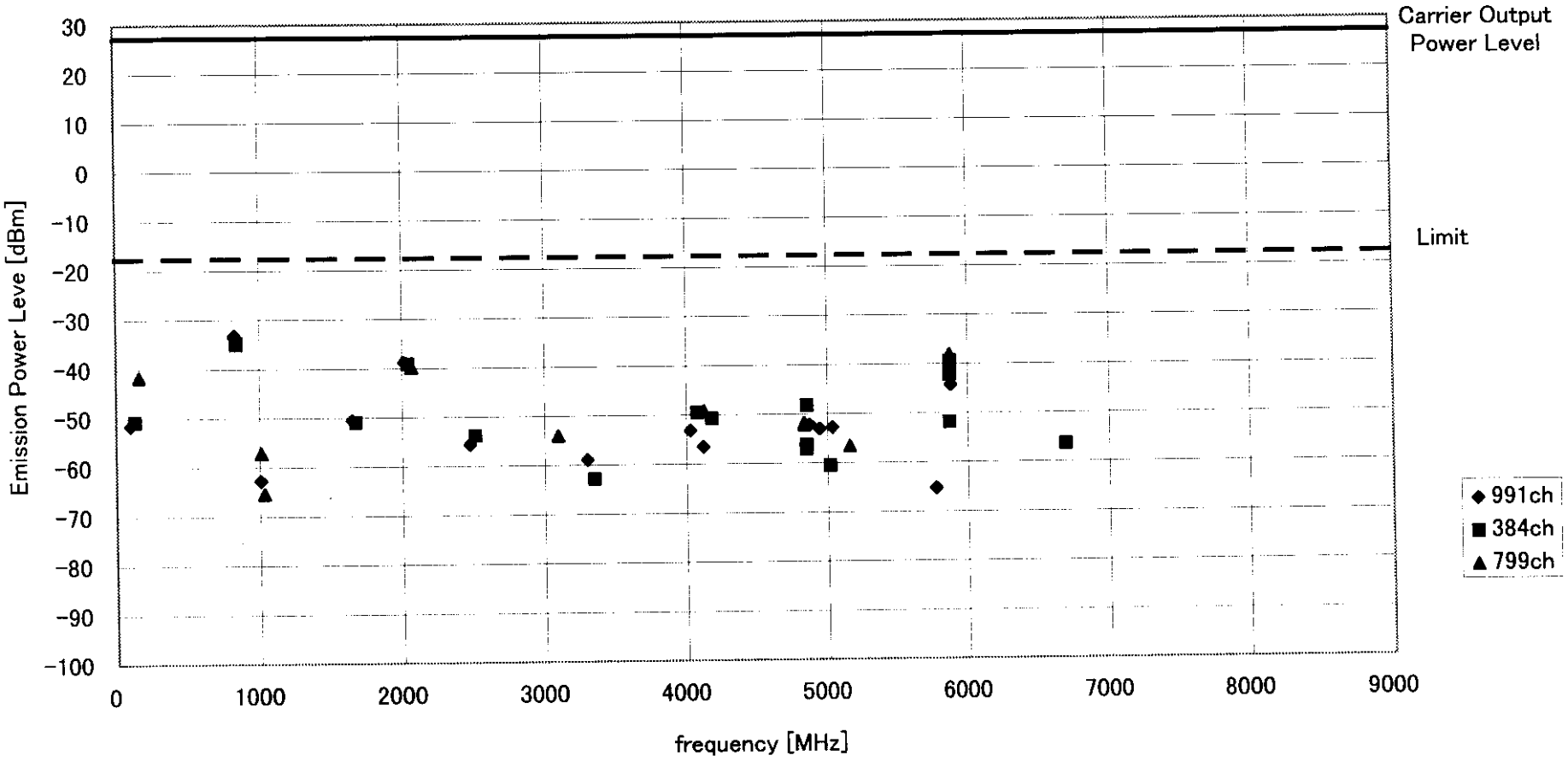

Figure 5.4.2 Spurious Emission at Antenna Terminal (800MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

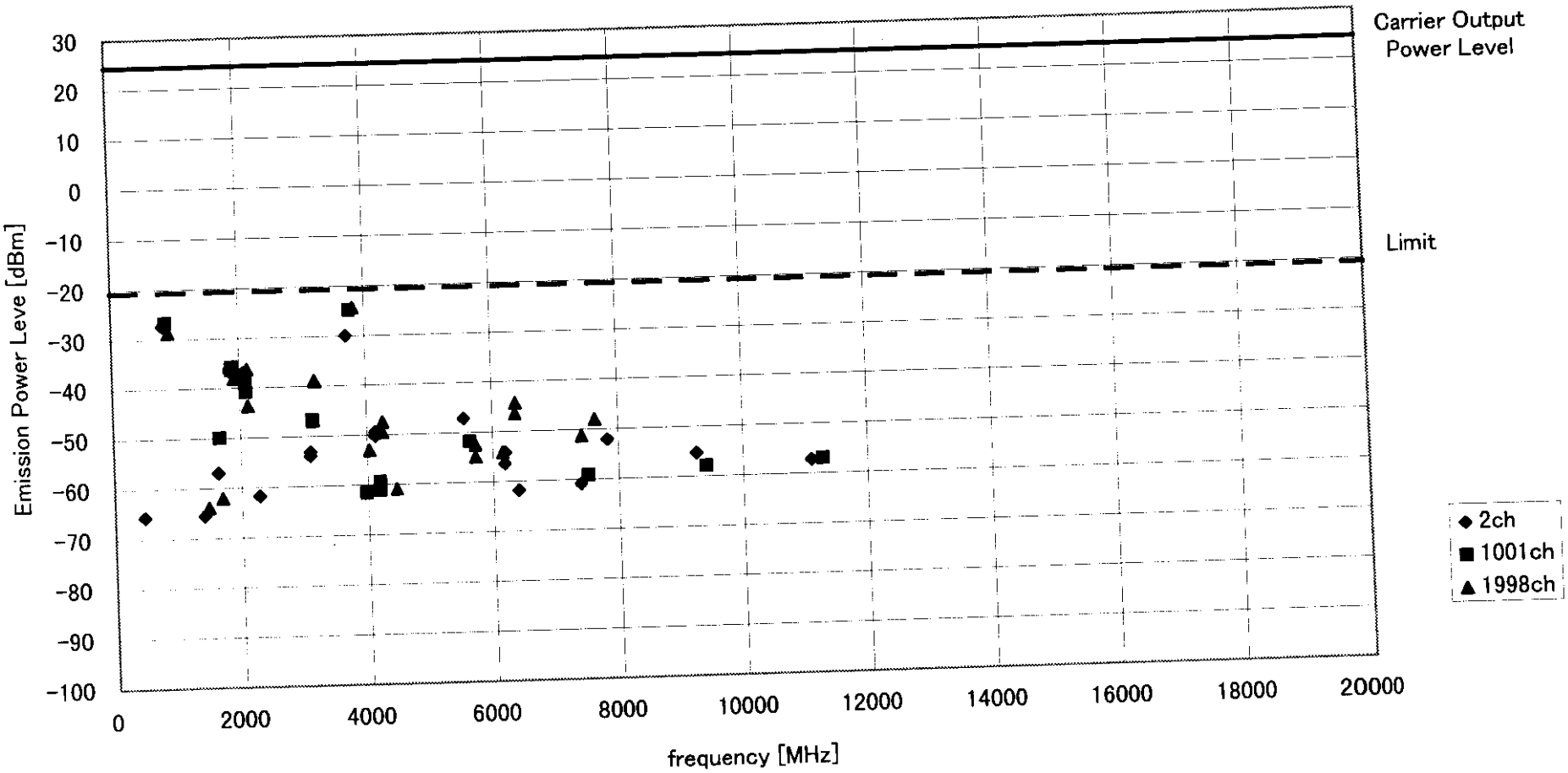

Figure 5.4.3 Spurious Emission at Antenna Terminal (1900MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

5.5 Field Strength of Spurious Emissions Measurement Data {2.993}
(800MHz Analog,800MHz Digital,1900MHz Digital)

FCC Field Strength of Spurious Emission 1998.10.23

800A(WBD)

		Freq. [MHz]	Reading [dBμv]	Antenna Factor [dB]	Cable Loss [dB]	Net [dBμv/m]	Limit [dBμv/m]	Margin [dB]	
991ch(824.04MHz)									
Tx		824.04	90.96	24.2	1.6	116.8	---		
Harmonics	2nd	1648.08	14.67	25.0	2.2	41.9	84.4	-42.5	
	3rd	2472.12	18.15	28.8	2.7	49.7	84.4	-34.8	
	4th	3296.16	5.96	33.0	3.1	42.1	84.4	-42.3	
	5th	4120.20	6.47	32.1	3.2	41.8	84.4	-42.6	
	6th	4944.24	4.36	33.8	2.7	40.9	84.4	-43.5	*
	7th	5768.28	5.17	35.2	4.9	45.3	84.4	-39.1	
	8th	6592.32	11.65	35.1	4.5	51.3	84.4	-33.2	*
	9th	7416.36	12.09	37.0	5.0	54.1	84.4	-30.3	*
	10th	8240.40	12.79	37.2	6.1	56.1	84.4	-28.3	*
Others		2014.38	31.20	27.3	2.7	61.2	84.4	-23.2	
		4861.61	11.36	33.8	2.7	47.9	84.4	-36.5	
		5035.96	16.82	33.8	2.7	53.3	84.4	-31.1	
		5868.83	19.19	35.2	4.9	59.3	84.4	-25.1	
384ch(836.52MHz)									
Tx		836.52	84.86	24.2	1.6	110.7	---		
Harmonics	2nd	1673.04	13.09	25.0	2.2	40.3	84.4	-44.1	
	3rd	2509.56	20.79	28.8	2.7	52.3	84.4	-32.1	
	4th	3346.08	11.70	33.0	3.1	47.8	84.4	-36.6	
	5th	4182.60	11.84	32.1	3.2	47.1	84.4	-37.3	
	6th	5019.12	5.33	33.8	2.7	41.8	84.4	-42.6	
	7th	5855.64	4.45	35.2	4.9	44.6	84.4	-39.9	*
	8th	6692.16	11.59	35.1	4.5	51.2	84.4	-33.2	*
	9th	7528.68	12.19	37.0	5.0	54.2	84.4	-30.2	*
	10th	8365.20	12.78	38.1	6.1	57.0	84.4	-27.4	*
Others		2039.35	36.27	27.3	2.3	65.9	84.4	-18.5	
		5864.42	16.03	35.2	4.9	56.1	84.4	-28.3	
799ch(848.97MHz)									
Tx		848.97	83.98	24.2	1.6	109.8	---		
Harmonics	2nd	1697.94	9.46	25.0	2.2	36.7	84.4	-47.7	
	3rd	2546.91	18.91	28.8	2.7	50.4	84.4	-34.0	
	4th	3395.88	5.15	33.0	3.1	41.3	84.4	-43.2	
	5th	4244.85	14.18	32.1	3.2	49.5	84.4	-34.9	
	6th	5093.82	5.80	33.8	2.7	42.3	84.4	-42.1	
	7th	5942.79	7.24	35.2	4.9	47.3	84.4	-37.1	
	8th	6791.76	11.04	36.1	4.5	51.6	84.4	-32.8	*
	9th	7640.73	12.08	37.0	5.0	54.1	84.4	-30.3	*
	10th	8489.70	12.33	38.1	6.1	56.5	84.4	-27.9	*
Others		2064.25	35.21	27.3	2.3	64.8	84.4	-19.6	
		3096.37	13.90	30.8	3.1	47.8	84.4	-36.6	
		5861.22	19.56	35.2	4.9	59.7	84.4	-24.7	

* : Measuring equipment noise-floor measurements at these frequencies at a distance of 3m.

Table 5.5.1 Field Strength of Spurious Emissions Measurement Data
(800MHz Analog Mode)
Modulated with Wideband Data, Power Level 0

FCC Field Strength of Spurious Emission 1998.10.23

800D

991ch(824.04MHz)

		Freq. [MHz]	Reading [dBμv]	Antenna Factor [dB]	Cable Loss [dB]	Net [dBμv/m]	Limit [dBμv/m]	Margin [dB]	
Tx		824.04	100.20	24.2	1.6	126.0	---		
Harmonics	2nd	1648.08	11.48	25.0	2.2	38.7	80.2	-41.5	
	3rd	2472.12	32.45	28.8	2.7	64.0	80.2	-16.3	
	4th	3296.16	14.66	33.0	3.1	50.8	80.2	-29.4	
	5th	4120.20	19.99	32.1	3.2	55.3	80.2	-24.9	
	6th	4944.24	10.70	33.8	2.7	47.2	80.2	-33.0	
	7th	5768.28	5.22	35.2	4.9	45.3	80.2	-34.9	
	8th	6592.32	11.73	35.1	4.5	51.3	80.2	-28.9	*
	9th	7416.36	12.48	37.0	5.0	54.5	80.2	-25.7	*
	10th	8240.40	12.32	37.2	6.1	55.6	80.2	-24.6	*
Others		823.66	8.33	24.2	1.6	34.1	80.2	-46.1	
		824.44	9.02	24.2	1.6	34.8	80.2	-45.4	
		2014.39	13.92	27.3	2.3	43.5	80.2	-36.7	
		5035.96	19.91	33.8	2.7	56.4	80.2	-23.8	
		5870.70	12.12	35.2	4.9	52.2	80.2	-28.0	
		5874.89	11.27	35.2	4.9	51.4	80.2	-28.8	

384ch(836.52MHz)

Tx		836.52	99.20	24.2	1.6	125.0	---		
Harmonics	2nd	1673.04	2.81	25.0	2.2	30.0	80.2	-50.2	
	3rd	2509.56	28.49	28.8	2.7	60.0	80.2	-20.2	
	4th	3346.08	20.60	33.0	3.1	56.7	80.2	-23.5	
	5th	4182.60	15.63	32.1	3.2	50.9	80.2	-29.3	
	6th	5019.12	7.69	33.8	2.7	44.2	80.2	-36.0	
	7th	5855.64	5.86	35.2	4.9	46.0	80.2	-34.2	*
	8th	6692.16	11.85	35.1	4.5	51.5	80.2	-28.8	*
	9th	7528.68	11.85	37.0	5.0	53.9	80.2	-26.4	*
	10th	8365.20	12.75	38.1	6.1	57.0	80.2	-23.3	*
Others		836.14	8.14	24.2	1.6	33.9	80.2	-46.3	
		836.91	7.63	24.2	1.6	33.4	80.2	-46.8	
		2039.35	30.79	27.3	2.3	60.4	80.2	-19.8	
		4078.68	13.42	32.1	3.2	48.7	80.2	-31.5	
		4854.07	9.05	33.8	2.7	45.6	80.2	-34.7	
		5098.31	18.86	33.8	2.7	55.4	80.2	-24.8	
		5867.92	12.23	35.2	4.9	52.3	80.2	-27.9	
		5870.29	20.26	35.2	4.9	60.4	80.2	-19.8	
		5873.65	23.83	35.2	4.9	63.9	80.2	-16.3	

799ch(848.97MHz)

Tx		848.97	97.45	24.2	1.6	123.3	---		
Harmonics	2nd	1697.94	12.78	25.0	2.2	40.0	80.2	-40.2	
	3rd	2546.91	17.33	28.8	2.7	48.8	80.2	-31.4	
	4th	3395.88	19.31	33.0	3.1	55.4	80.2	-24.8	
	5th	4244.85	18.39	32.1	3.2	53.7	80.2	-26.5	
	6th	5093.82	5.39	33.8	2.7	41.9	80.2	-38.3	*
	7th	5942.79	5.20	35.2	4.9	45.3	80.2	-34.9	*
	8th	6791.76	11.04	36.1	4.5	51.6	80.2	-28.6	*
	9th	7640.73	12.08	37.0	5.0	54.1	80.2	-26.1	*
	10th	8489.70	12.33	38.1	6.1	56.5	80.2	-23.7	*
Others		848.59	6.58	24.2	1.6	32.4	80.2	-47.8	
		849.37	6.44	24.2	1.6	32.2	80.2	-48.0	
		2064.24	25.57	27.3	2.3	55.2	80.2	-25.0	
		4836.79	14.69	33.8	2.7	51.2	80.2	-29.0	
		5866.94	17.94	35.2	4.9	58.0	80.2	-22.2	

* : Measuring equipment noise-floor measurements at these frequencies at a distance of 3m.

Table 5.5.2 Field Strength of Spurious Emissions Measurement Data
(800MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

FCC Field Strength of Spurious Emission 1998.10.23

1.9D

2ch(1850.04MHz)

		Freq. [MHz]	Reading [dBμv]	Antenna Factor [dB]	Cable Loss [dB]	Net [dBμv/m]	Limit [dBμv/m]	Margin [dB]	
Tx		1850.04	92.65	27.3	2.3	122.3	---		
Harmonics	2nd	3700.08	33.53	33.0	3.4	69.9	80.2	-10.2	
	3rd	5550.12	27.37	34.7	6.2	68.3	80.2	-11.9	
	4th	7400.16	21.01	37.0	4.9	62.9	80.2	-17.3	
	5th	9250.20	15.77	38.8	7.4	62.0	80.2	-18.2	
	6th	11100.24	14.08	38.9	7.2	60.2	80.2	-20.0	*
	7th	12950.28	15.98	40.5	8.0	64.5	80.2	-15.7	*
	8th	14800.32	15.90	39.9	7.5	63.3	80.2	-16.9	*
	9th	16650.36	17.38	40.9	8.2	66.5	80.2	-13.7	*
	10th	18500.40	17.82	49.9	8.3	76.0	80.2	-4.1	*
Others		1849.65	18.99	27.3	2.3	48.6	80.2	-31.6	
		1850.43	19.28	27.3	2.3	48.9	80.2	-31.3	
		1889.78	17.34	27.3	2.3	46.9	80.2	-33.2	
		2064.50	16.42	27.3	2.3	46.0	80.2	-34.1	
		2068.35	13.73	27.3	2.3	43.3	80.2	-36.8	
		3096.69	18.62	30.8	3.1	52.5	80.2	-27.6	
		3102.24	20.70	30.8	3.1	54.6	80.2	-25.6	
		4128.93	17.72	32.1	3.2	53.0	80.2	-27.1	
		4136.58	14.44	32.1	3.2	49.7	80.2	-30.4	
		5161.05	14.94	33.8	3.6	52.3	80.2	-27.8	
		5170.65	13.99	33.8	3.6	51.4	80.2	-28.8	
		6193.32	12.48	35.2	2.3	50.0	80.2	-30.2	
		6204.47	13.12	35.2	2.9	51.2	80.2	-28.9	

1001ch(1880.01MHz)

Tx		1880.01	94.55	27.3	2.3	124.2	---		
Harmonics	2nd	3760.02	35.67	32.1	3.4	71.2	80.2	-9.0	
	3rd	5640.03	30.39	34.7	6.2	71.3	80.2	-8.9	
	4th	7520.04	19.37	37.0	4.9	61.3	80.2	-18.9	
	5th	9400.05	15.20	38.7	7.4	61.3	80.2	-18.9	
	6th	11280.06	13.67	39.4	7.2	60.3	80.2	-19.9	*
	7th	13160.07	16.33	40.5	8.0	64.8	80.2	-15.3	*
	8th	15040.08	16.20	39.9	7.5	63.6	80.2	-16.6	*
	9th	16920.09	17.73	43.1	8.2	69.0	80.2	-11.1	*
	10th	18800.10	17.64	51.2	8.3	77.1	80.2	-3.0	*
Others		1665.64	22.71	25.0	2.2	49.9	80.2	-30.3	
		1879.63	22.45	27.3	2.3	52.1	80.2	-28.1	
		1880.41	21.14	27.3	2.3	50.7	80.2	-29.4	
		2094.40	22.77	27.3	2.3	52.4	80.2	-27.8	
		3147.31	24.02	30.8	3.1	57.9	80.2	-22.2	
		4188.85	15.09	32.1	3.2	50.4	80.2	-29.8	
		4196.41	16.85	32.1	3.2	52.2	80.2	-28.0	
		6283.25	17.03	35.1	4.5	56.6	80.2	-23.5	
		6294.61	15.84	35.1	4.5	55.4	80.2	-24.7	

* : Measuring equipment noise-floor measurements at these frequencies at a distance of 3m.

Table 5.5.3(a) Field Strength of Spurious Emissions Measurement Data
(1900MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

FCC Field Strength of Spurious Emission 1998.10.23

1.9D

1998ch(1909.92MHz)

		Freq. [MHz]	Reading [dBμv]	Antenna Factor [dB]	Cable Loss [dB]	Net [dBμv/m]	Limit [dBμv/m]	Margin [dB]	
Tx		1909.92	93.06	27.3	2.3	122.7	---		
Harmonics	2nd	3819.84	36.34	32.1	3.4	71.8	80.2	-8.3	
	3rd	5729.76	31.28	34.7	6.2	72.2	80.2	-8.0	
	4th	7639.68	19.89	37.0	4.9	61.8	80.2	-18.4	
	5th	9549.60	13.43	38.7	7.4	59.5	80.2	-20.6	
	6th	11459.52	13.52	39.4	7.2	60.1	80.2	-20.0	*
	7th	13369.44	16.76	40.9	8.0	65.7	80.2	-14.5	*
	8th	15279.36	16.39	38.5	7.5	62.4	80.2	-17.8	*
	9th	17189.28	18.20	43.1	8.2	69.5	80.2	-10.7	*
	10th	19099.20	17.85	52.5	8.3	78.7	80.2	-1.5	*
Others		1909.54	22.67	27.3	2.3	52.3	80.2	-27.9	
		1910.31	22.18	27.3	2.3	51.8	80.2	-28.4	
		1919.66	16.63	27.3	2.3	46.2	80.2	-33.9	
		2124.30	18.64	27.3	2.3	48.2	80.2	-31.9	
		3186.50	25.17	30.8	3.1	59.1	80.2	-21.1	
		3192.25	23.81	30.8	3.1	57.7	80.2	-22.5	
		4248.65	21.65	32.1	3.2	57.0	80.2	-23.2	
		4256.35	20.58	32.2	3.2	56.0	80.2	-24.2	
		6158.63	15.44	32.2	3.2	50.8	81.2	-30.3	
		6372.95	21.11	32.2	3.2	56.5	82.2	-25.7	
		6384.50	16.17	35.1	6.2	57.5	80.2	-22.7	

* : Measuring equipment noise-floor measurements at these frequencies at a distance of 3m.

Table 5.5.3(b) Field Strength of Spurious Emissions Measurement Data
(1900MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

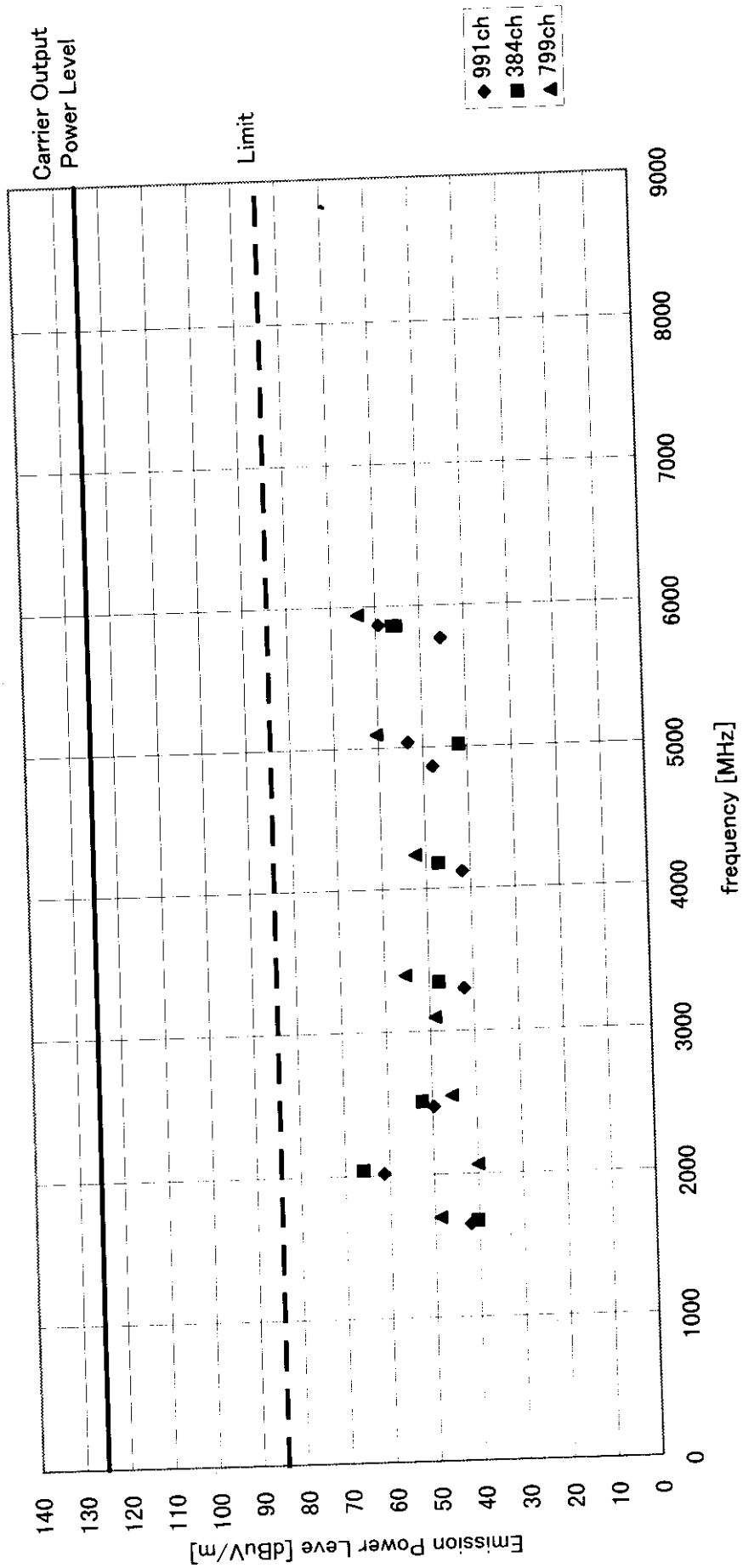

Figure 5.5.1 Field Strength of Spurious Emissions (800MHz Analog Mode)
Modulated with Wideband Data, Power Level 0

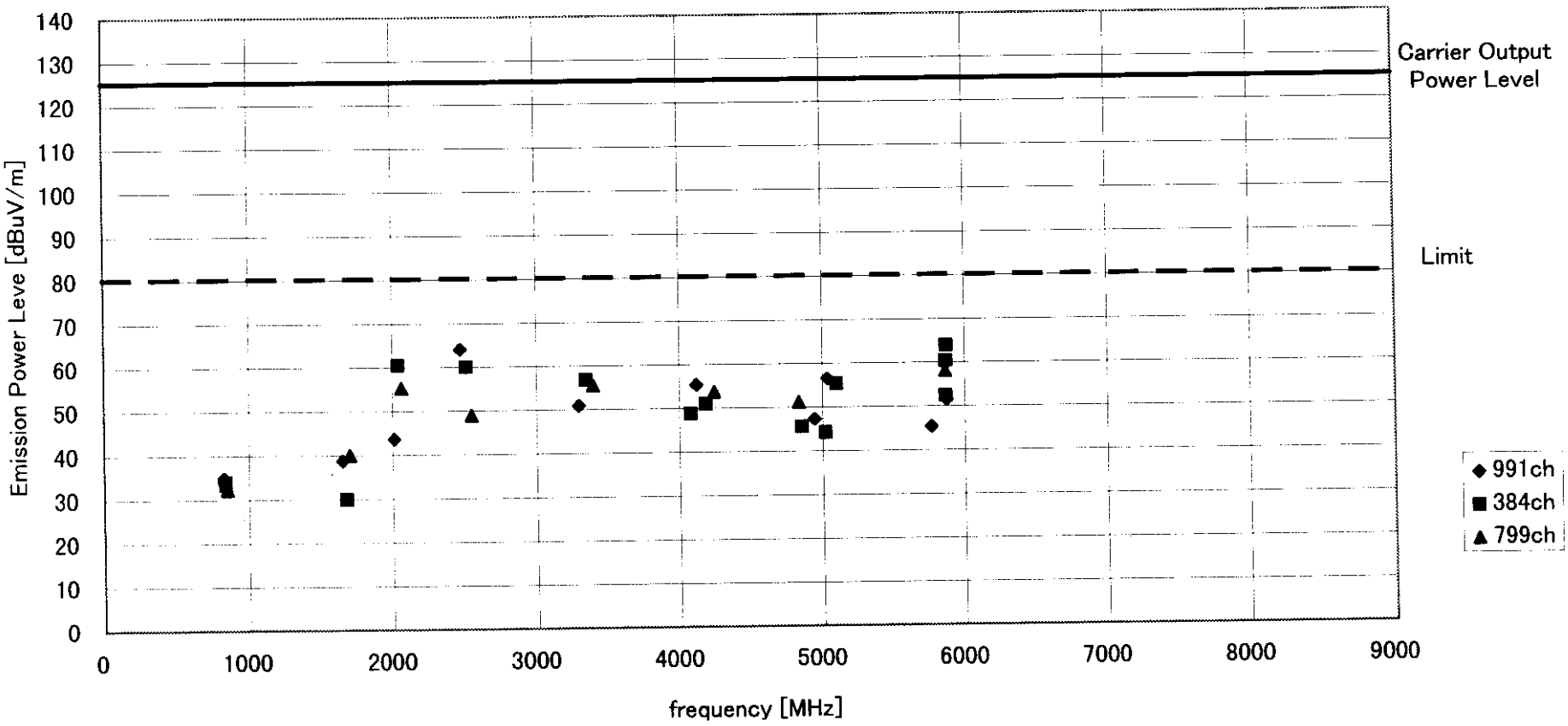

Figure 5.5.2 Field Strength of Spurious Emissions (800MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

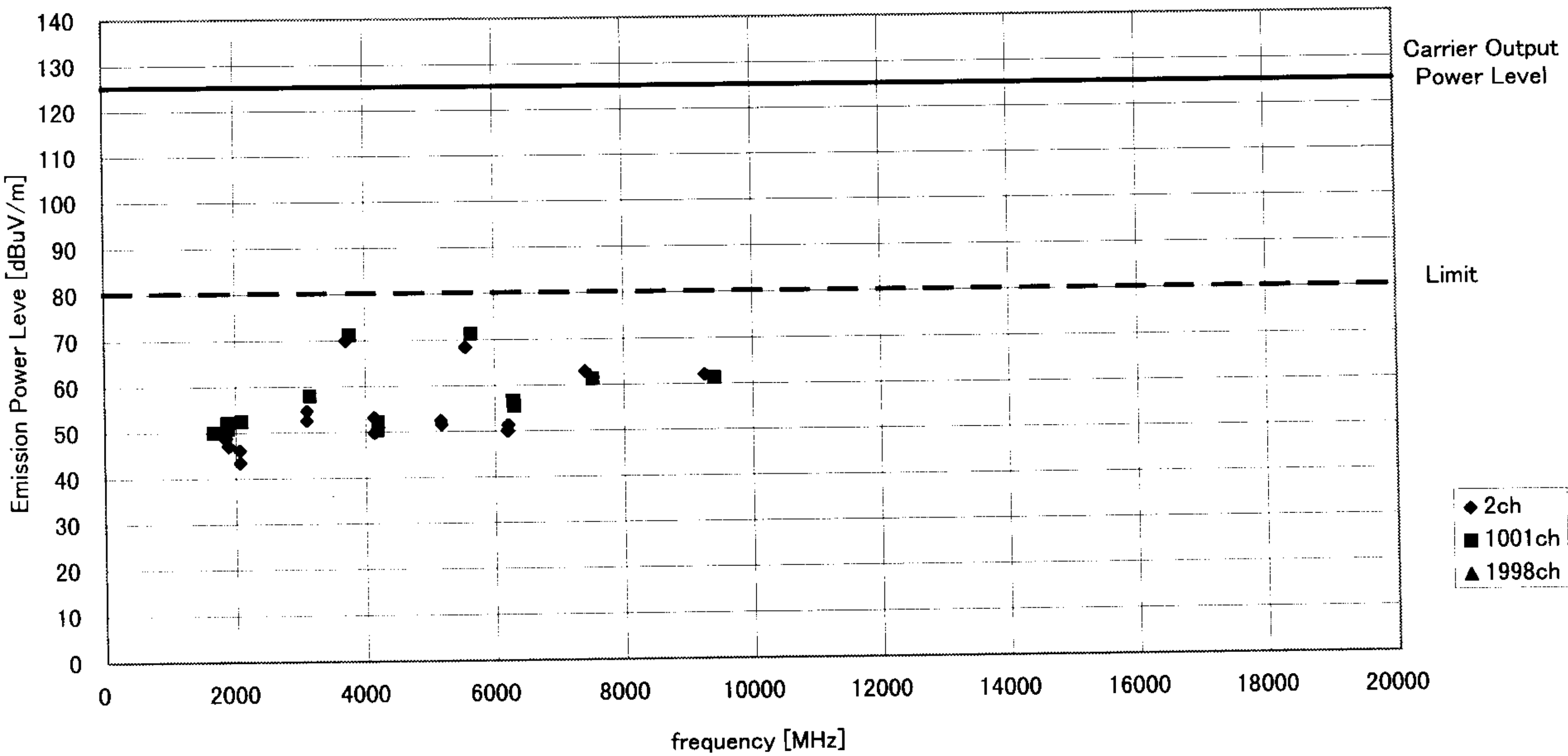

Figure 5.5.3 Field Strength of Spurious Emissions (1900MHz Digital Mode)
Modulated with 48.6kbps Pseudo-random Data Sequence, Power Level 0

5.6 Frequency Stability Measurement Data {2.995}
(800MHz Analog,800MHz Digital,1900MHz Digital)

5.6.1 Frequency Stability with Voltage Variation Measurement Data

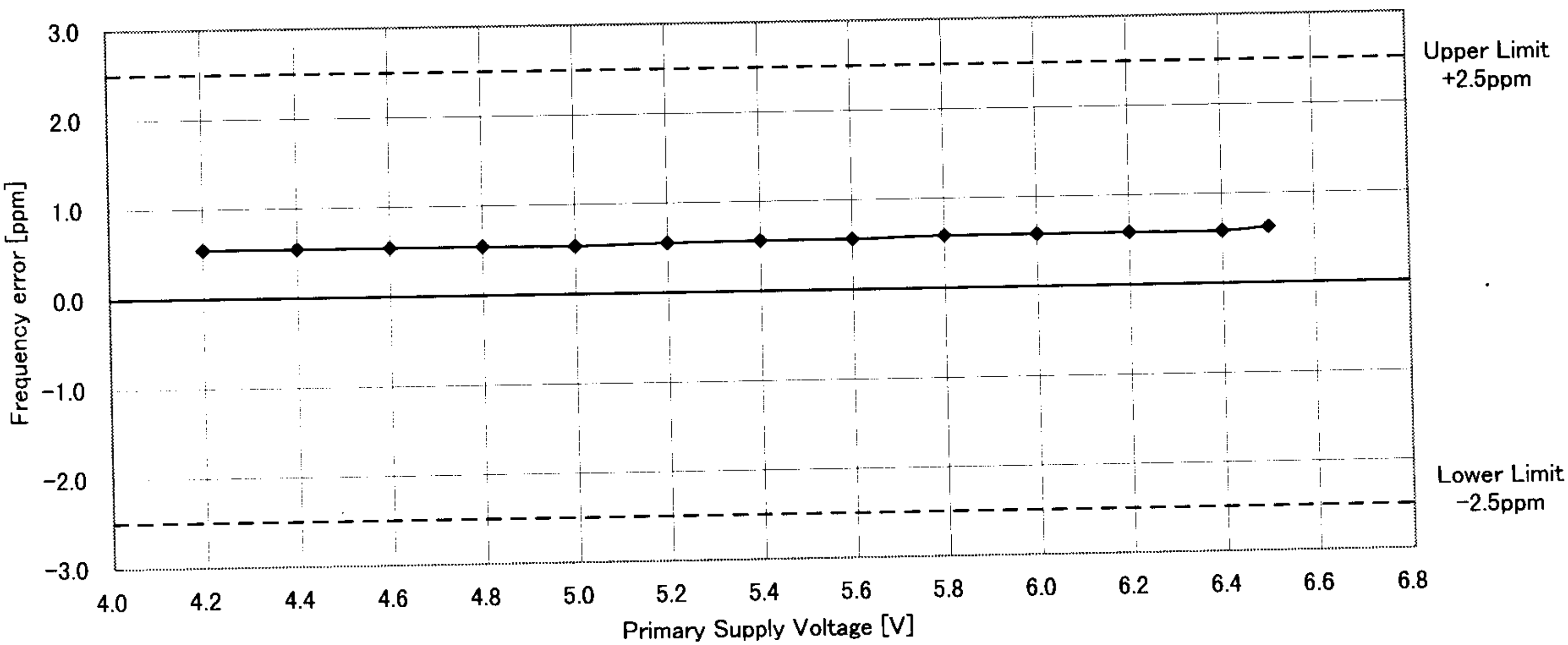

Figure 5.6.1.1 Frequency Stability with Voltage Variation (800MHz Analog Mode)

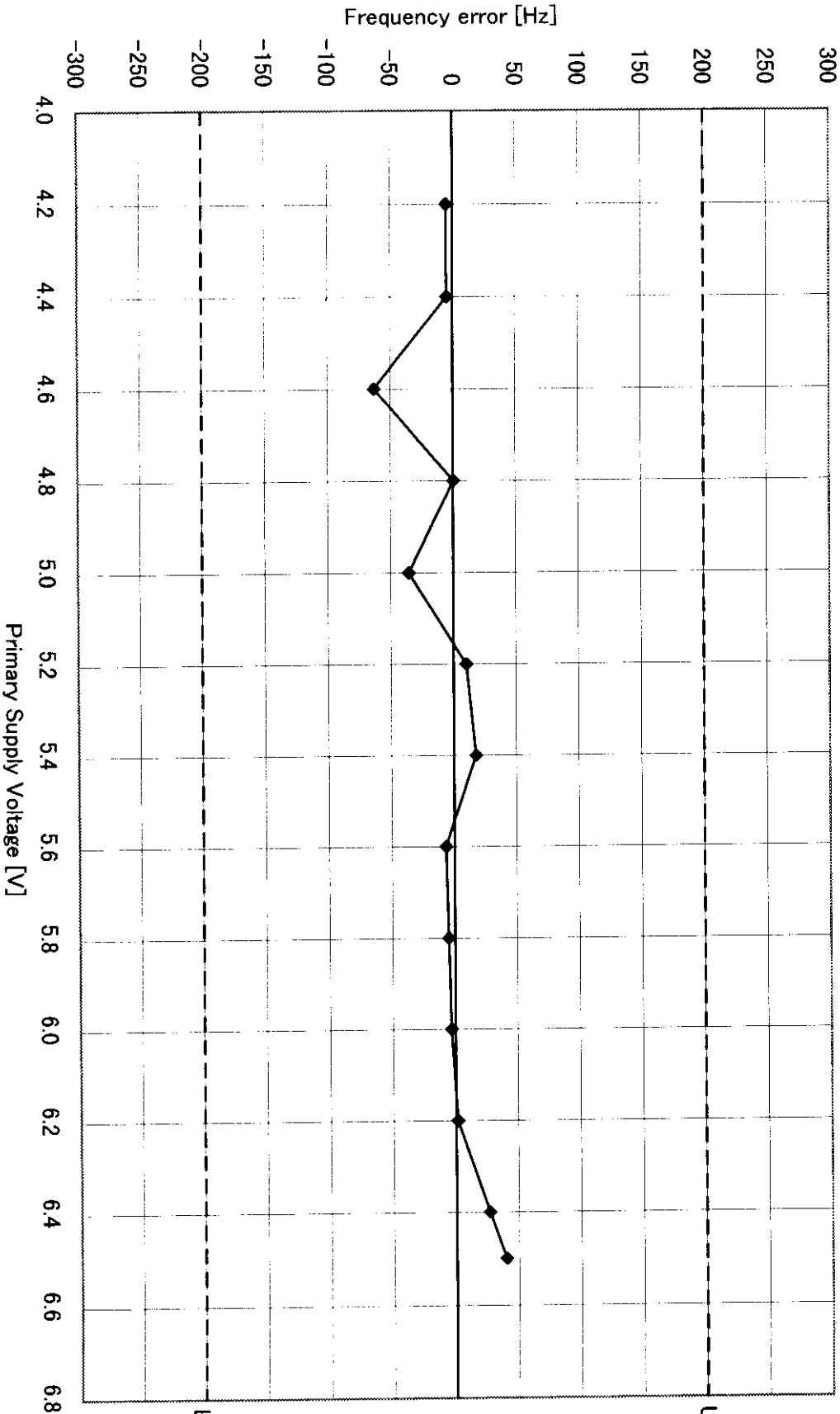

Figure 5.6.1.2 Frequency Stability with Voltage Variation (800MHz Digital Mode)

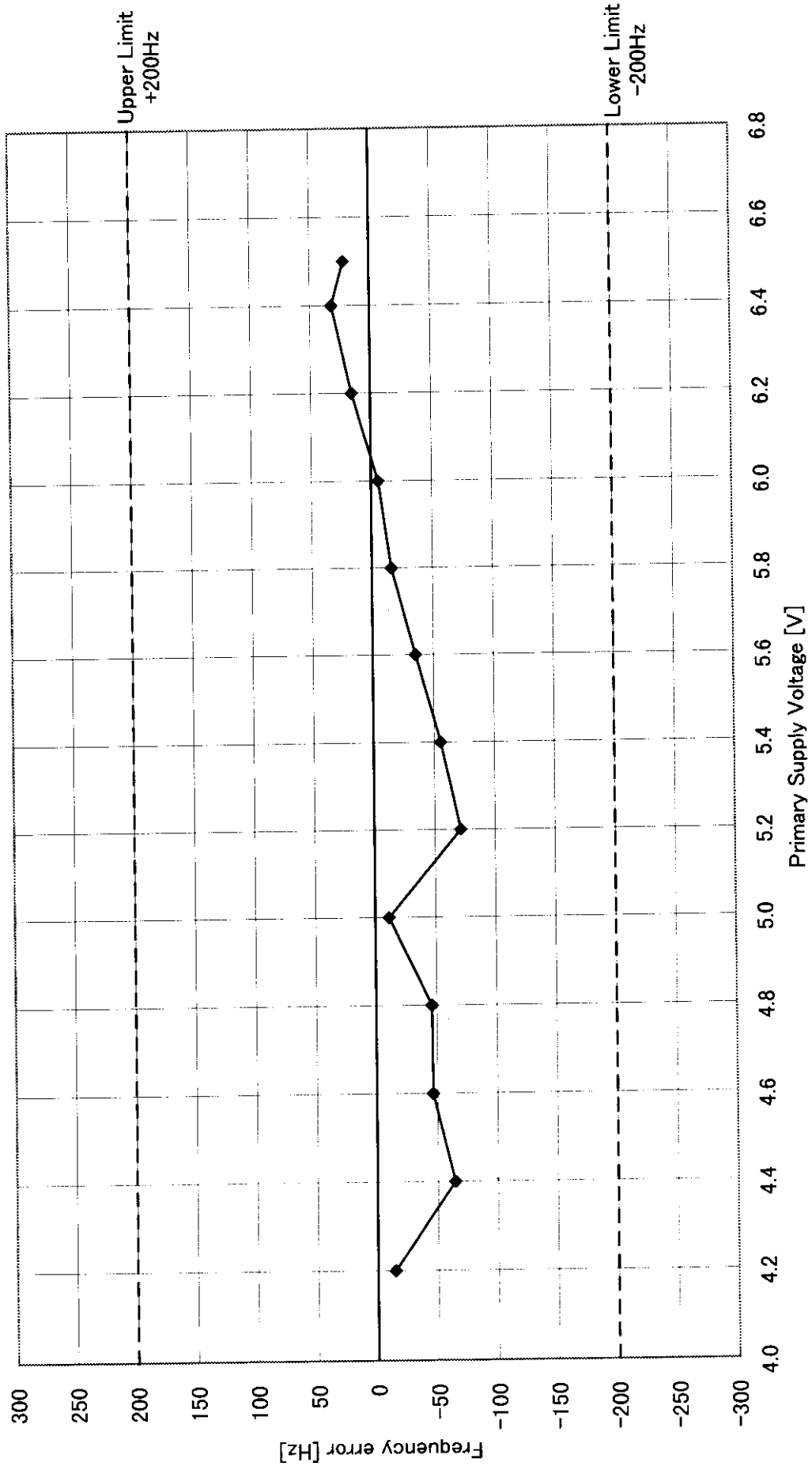

Figure 5.6.1.3 Frequency Stability with Voltage Variation (1900MHz Digital Mode)

5.6.2 Frequency Stability with Temperature Variation Measurement Data

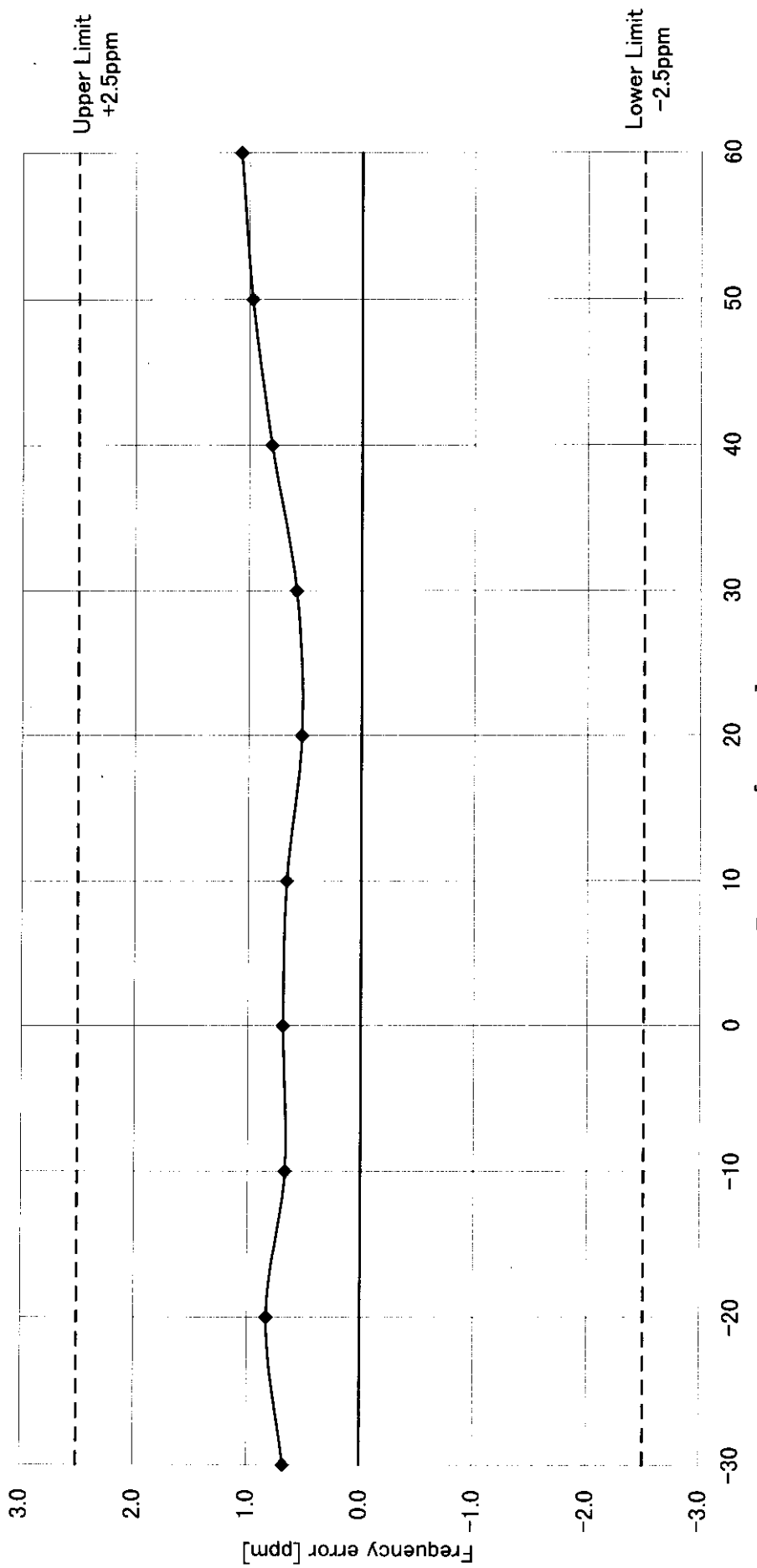

Figure 5.6.2.1 Frequency Stability with Temperature Variation
(800MHz Analog Mode)

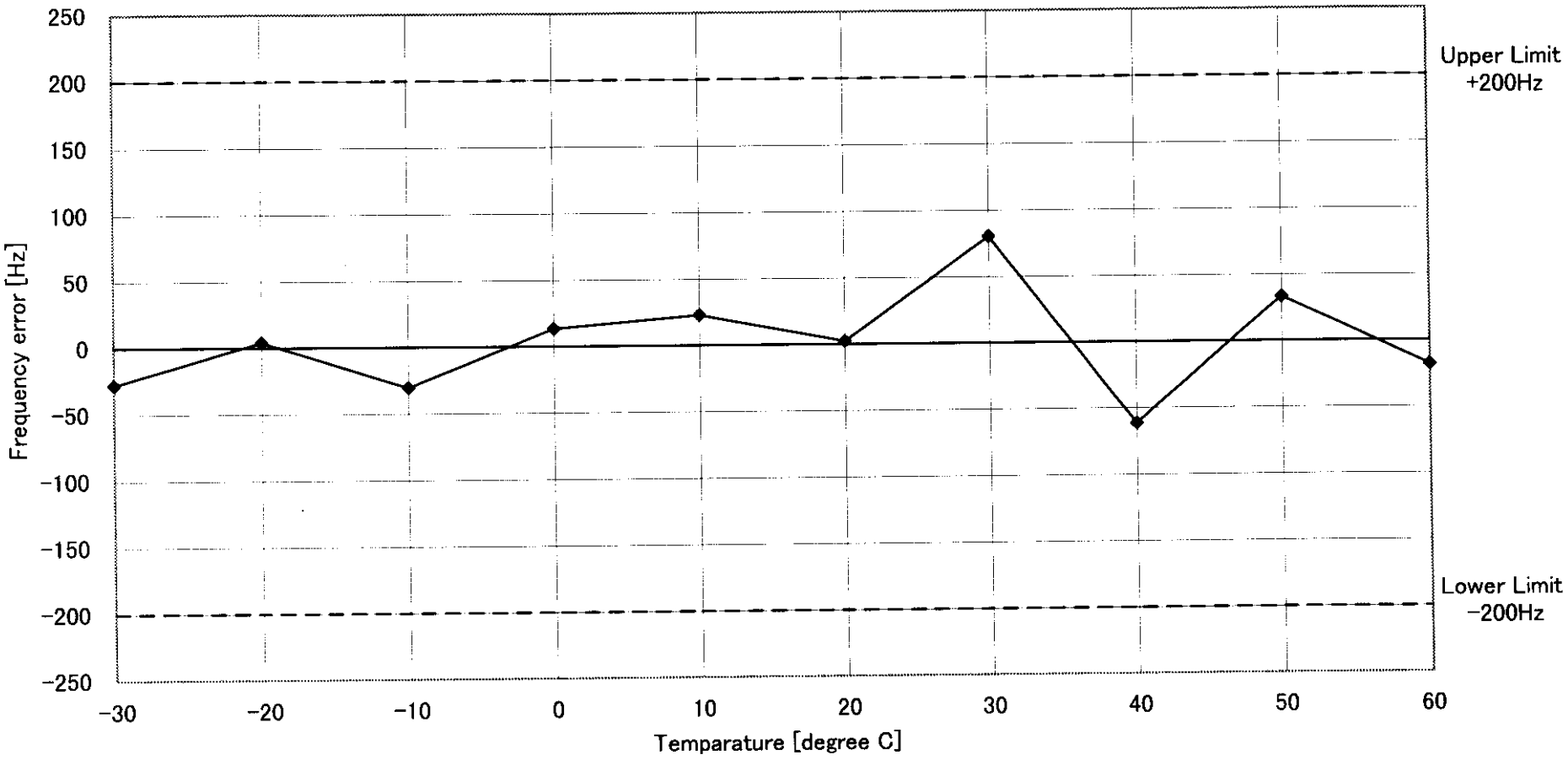

Figure 5.6.2.2 Frequency Stability with Temperature Variation
(800MHz Digital Mode)

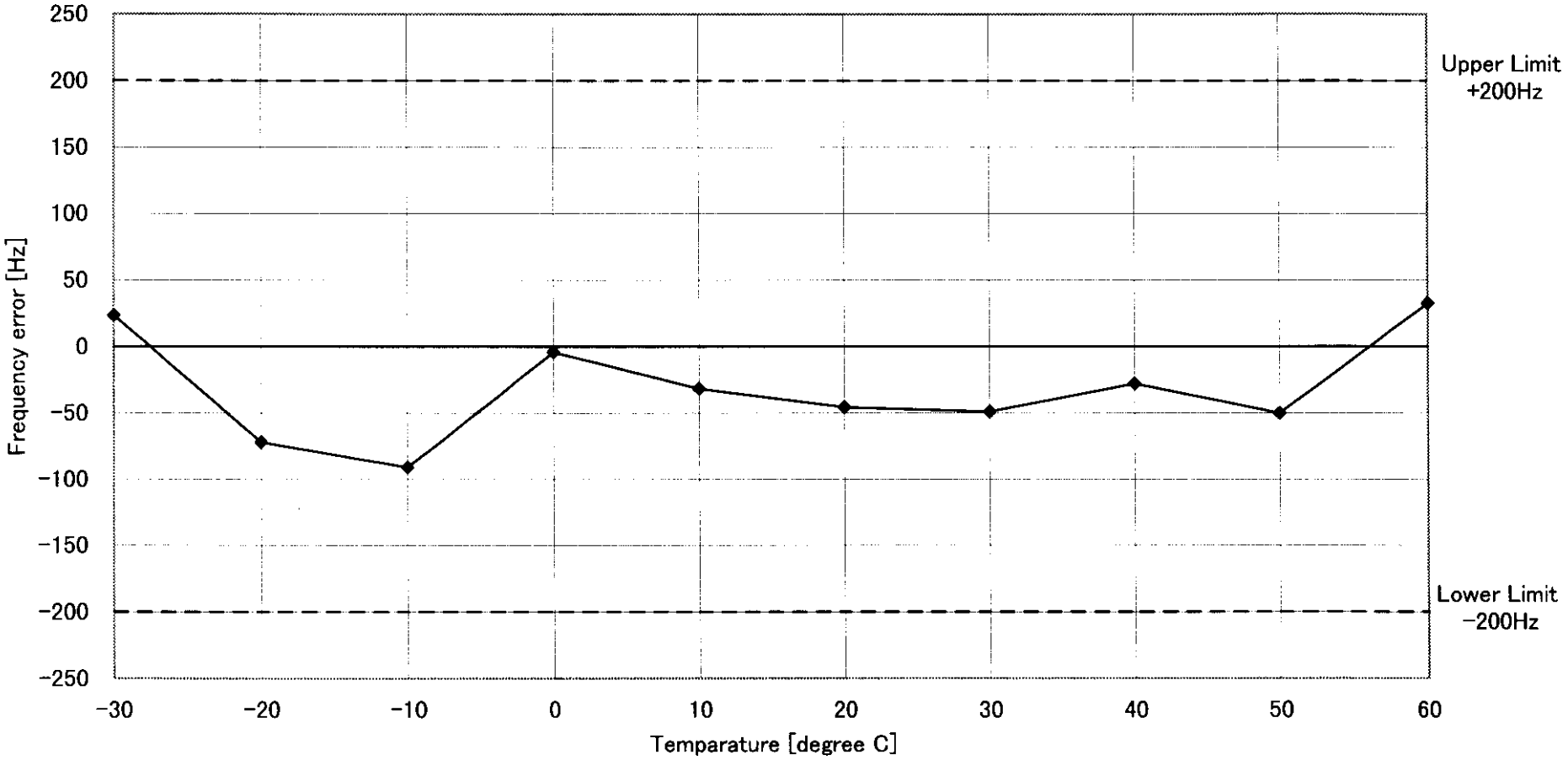

Figure 5.6.2.3 Frequency Stability with Temperature Variation
(1900MHz Digital Mode)

5.7 Measurement Data for Transmitter{SAR}

SAR was measured with the DASY3 system show in Figure 5.7.1.

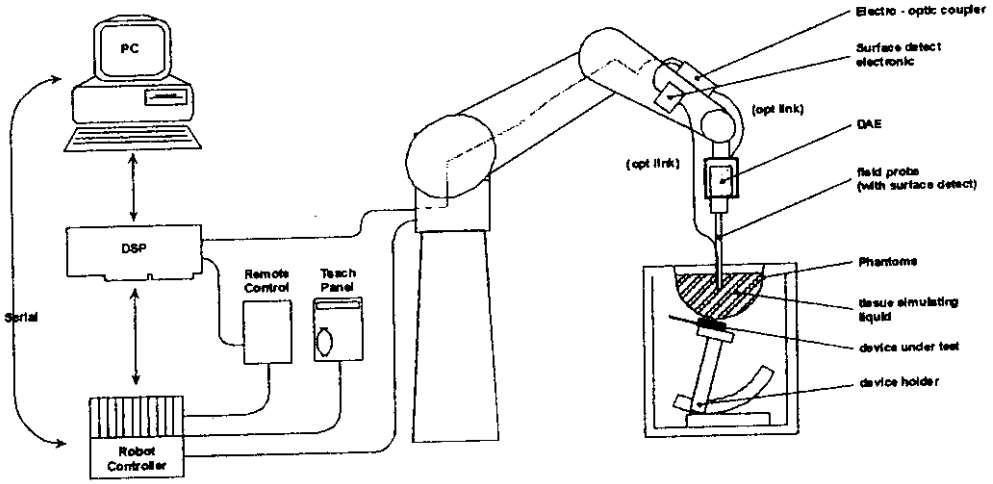

Figure 5.7.1 DASY3 system

Probe: ET3DV5-SN1331
Data Acquisition: DAE3SN340
Medium: Brain 900MHz
Device: MT253XF0R6A
Phantom: Generic Twin

Frequency(MHz)	824	836	849
ε r	40.1	40.1	39.96
σ (mho/m)	0.77	0.78	0.8

Probe: ET3DV5-SN1331
Data Acquisition: DAE3SN340
Medium: Brain 1800MHz
Device: MT253XF0R6A
Phantom: Generic Twin

Frequency(MHz)	1850	1880	1910
ε r	38.93	38.85	38.3
σ (mho/m)	1.73	1.76	1.77

Test Result

Mode:800MHz Analog

Frequency	<Left position>		<Right position>	
	Extended	Retracted	Extended	Retracted
824MHz	1.06 mW/g	1.28 mW/g	1.01 mW/g	1.22 mW/g
836MHz	0.985 mW/g	1.28 mW/g	0.906 mW/g	1.21 mW/g
849MHz	0.747 mW/g	1.33 mW/g	0.699 mW/g	1.28 mW/g

Mode:800MHz Digital

Frequency	<Left position>		<Right position>	
	Extended	Retracted	Extended	Retracted
824MHz	0.756 mW/g	0.916 mW/g	0.734 mW/g	0.896 mW/g
836MHz	0.692 mW/g	0.926 mW/g	0.644 mW/g	0.858 mW/g
849MHz	0.496 mW/g	0.877 mW/g	0.468 mW/g	0.815 mW/g

Mode:1900MHz Digital

Frequency	<Left position>		<Right position>	
	Extended	Retracted	Extended	Retracted
1850MHz	0.926 mW/g	0.967 mW/g	0.799 mW/g	0.924 mW/g
1880MHz	0.9 mW/g	1.07 mW/g	0.861 mW/g	0.984 mW/g
1910MHz	0.848 mW/g	0.919 mW/g	0.812 mW/g	0.928 mW/g

Temperature:22 degrees C

Mode:800MHz Analog

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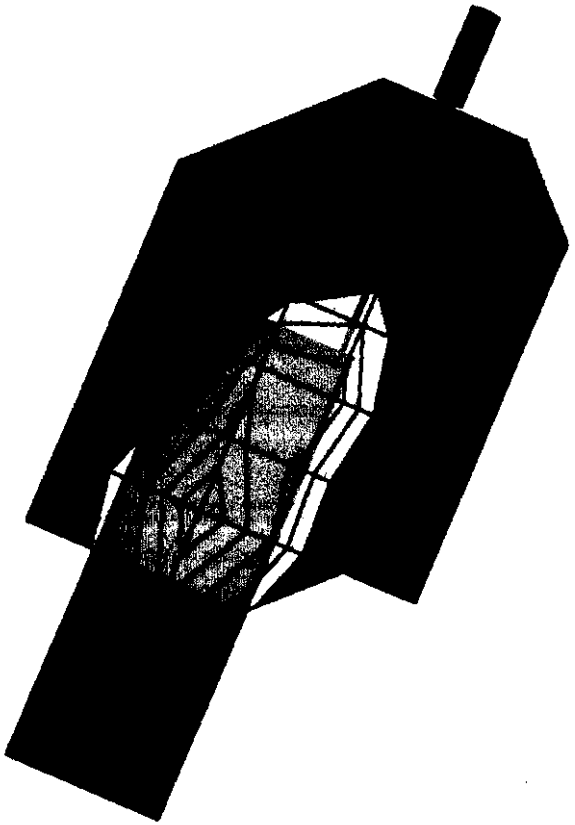
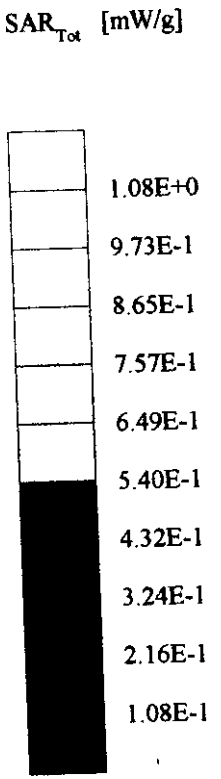
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:824[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.06 [mW/g], SAR (10g): 0.775 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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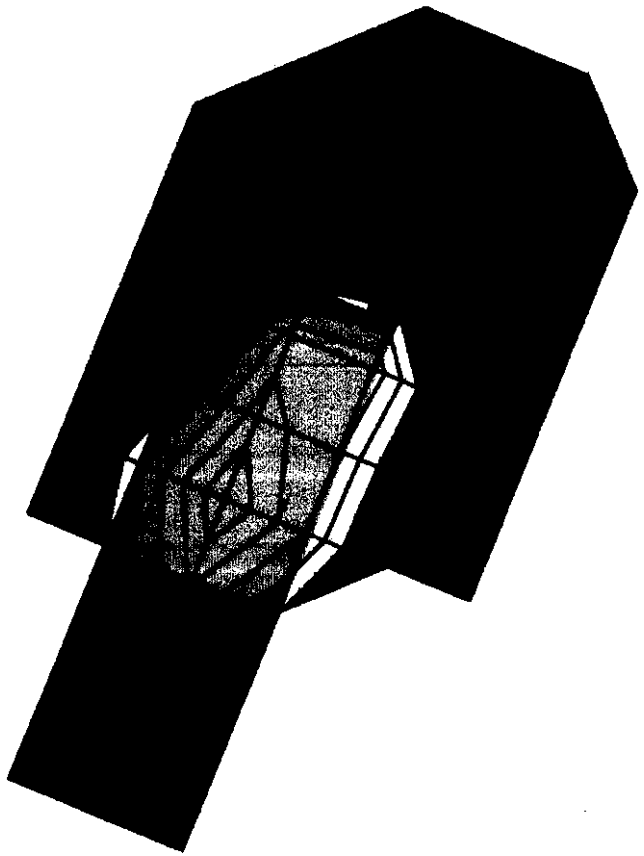
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:824[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)); Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.28 [mW/g], SAR (10g): 0.945 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0



SAR_{Tot} [mW/g]

1.34E+0
1.20E+0
1.07E+0
9.36E-1
8.02E-1
6.68E-1
5.35E-1
4.01E-1
2.67E-1
1.34E-1

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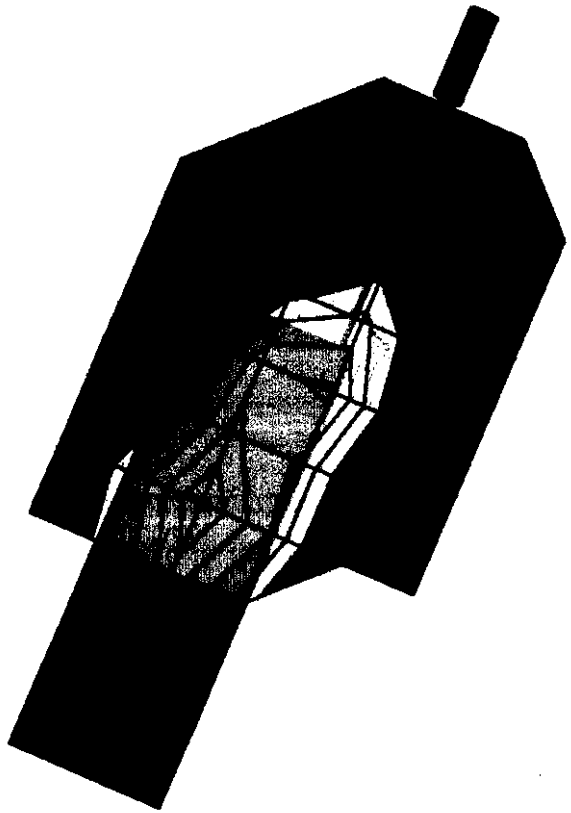
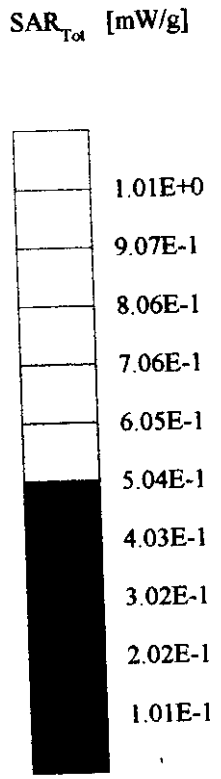
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:836[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 0.985 [mW/g], SAR (10g): 0.726 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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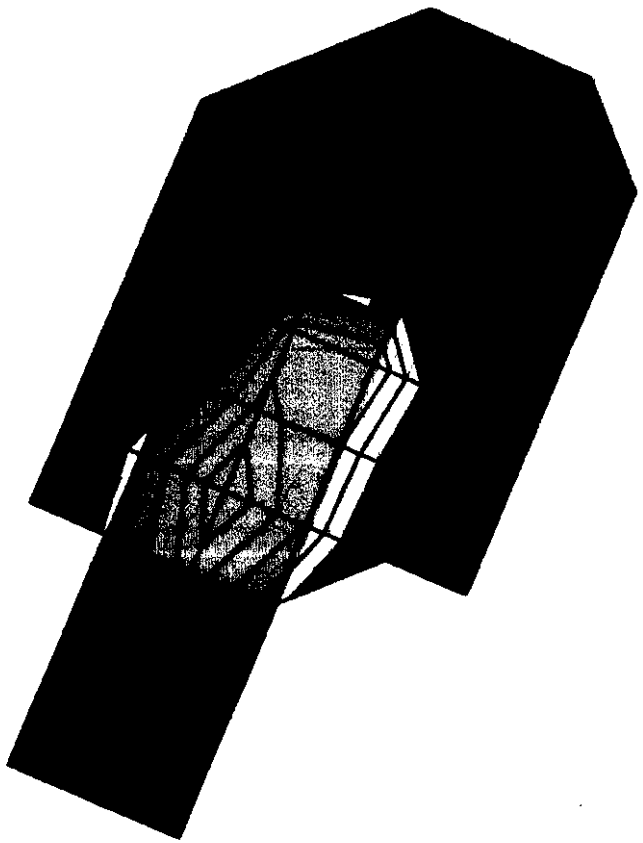
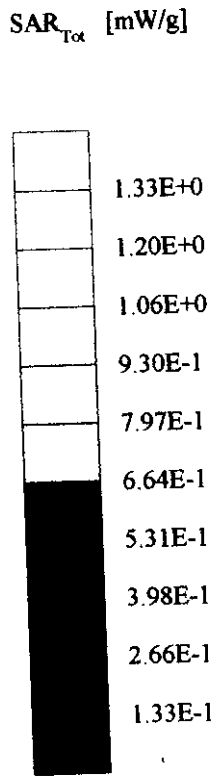
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:836[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)); Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.28 [mW/g], SAR (10g): 0.943 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0





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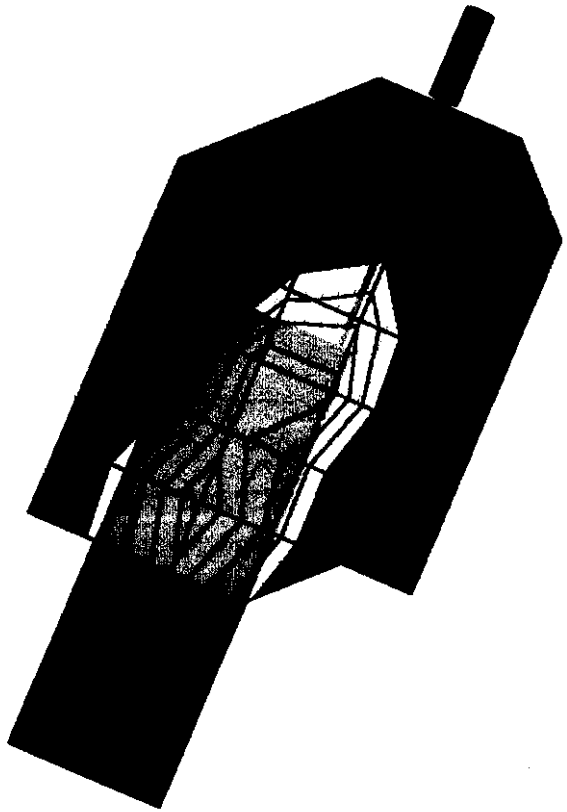
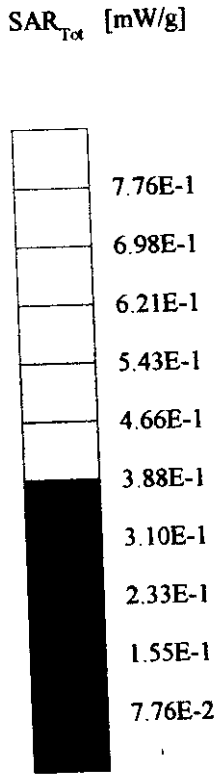
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:849[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)); Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 0.747 [mW/g], SAR (10g): 0.548 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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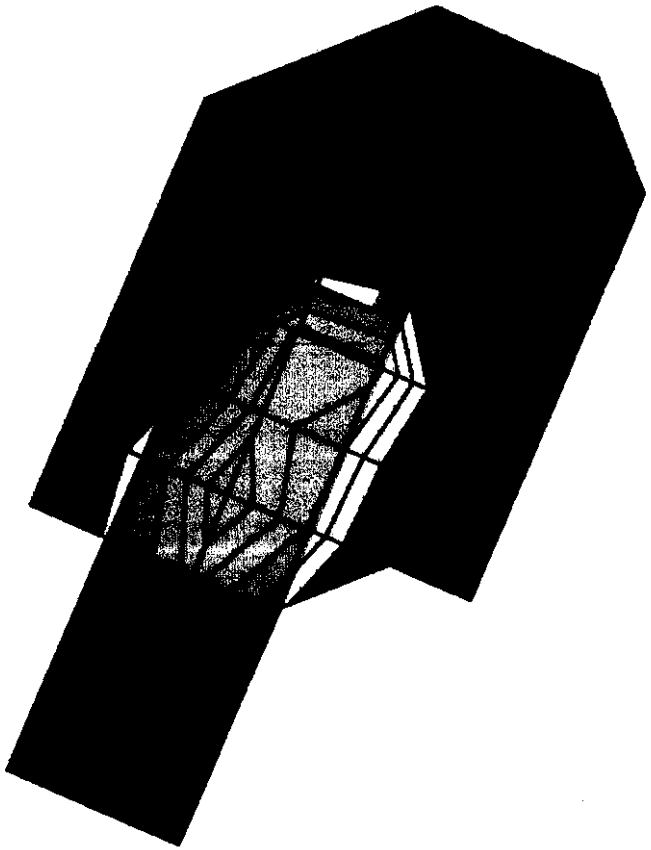
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:849[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)); Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.33 [mW/g], SAR (10g): 0.978 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0



SAR_{Tot} [mW/g]

1.40E+0
1.26E+0
1.12E+0
9.77E-1
8.38E-1
6.98E-1
5.58E-1
4.19E-1
2.79E-1
1.40E-1

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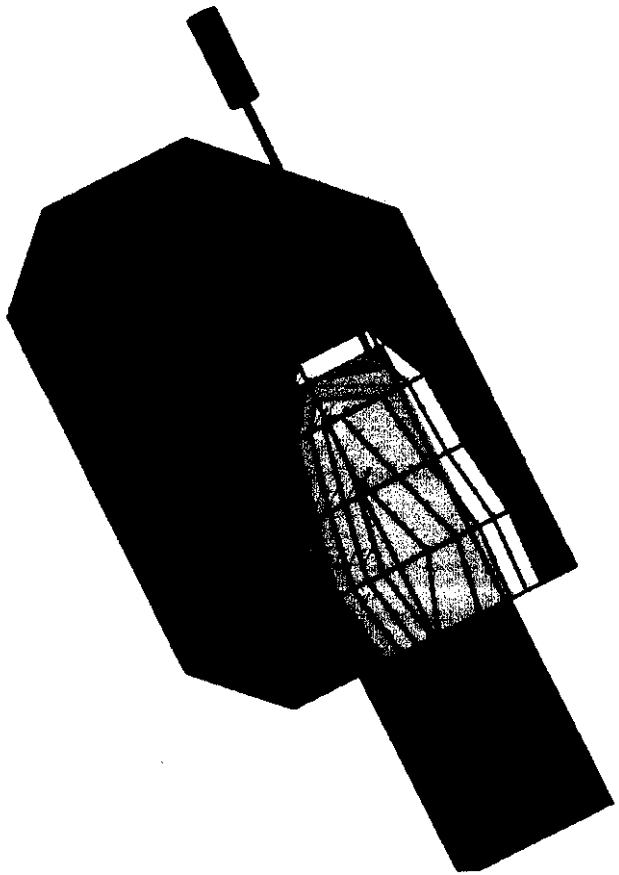
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:824[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)); Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.01 [mW/g], SAR (10g): 0.745 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0



SAR_{Tot} [mW/g]

1.01E+0
9.08E-1
8.07E-1
7.06E-1
6.05E-1
5.05E-1
4.04E-1
3.03E-1
2.02E-1
1.01E-1

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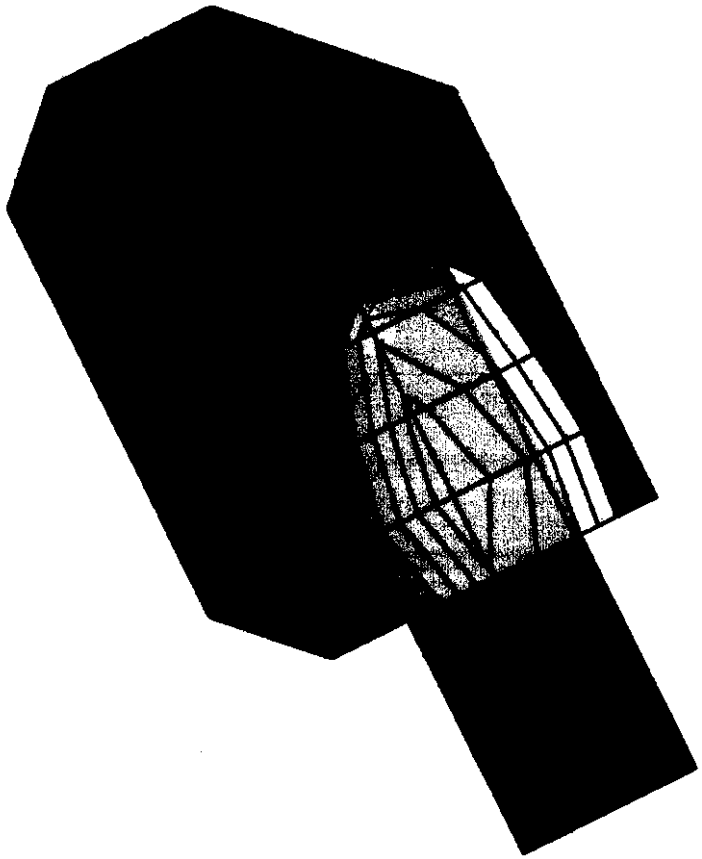
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:824[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.22 [mW/g], SAR (10g): 0.910 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0



SAR_{Tot} [mW/g]

1.22E+0
1.10E+0
9.76E-1
8.54E-1
7.32E-1
6.10E-1
4.88E-1
3.66E-1
2.44E-1
1.22E-1

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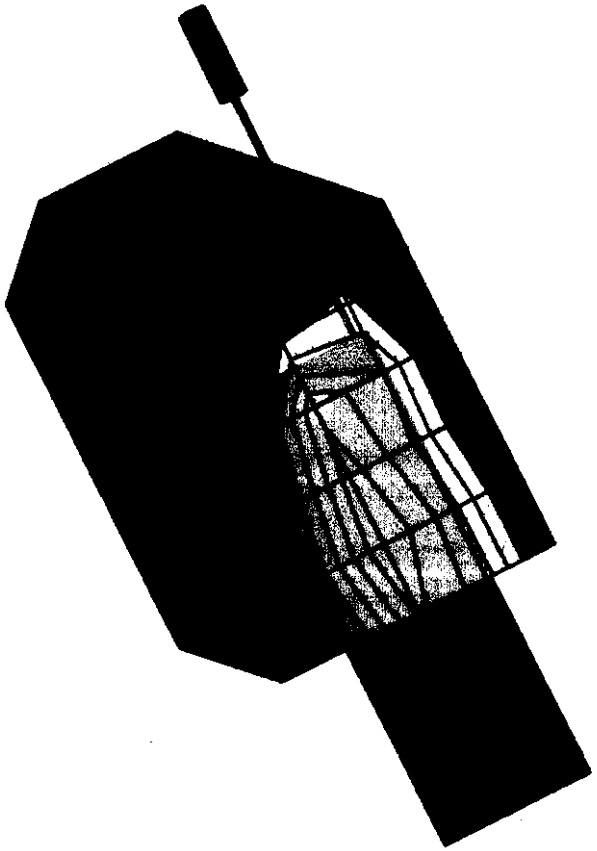
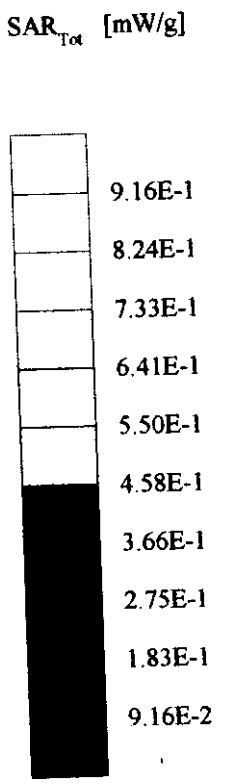
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:836[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 0.906 [mW/g], SAR (10g): 0.676 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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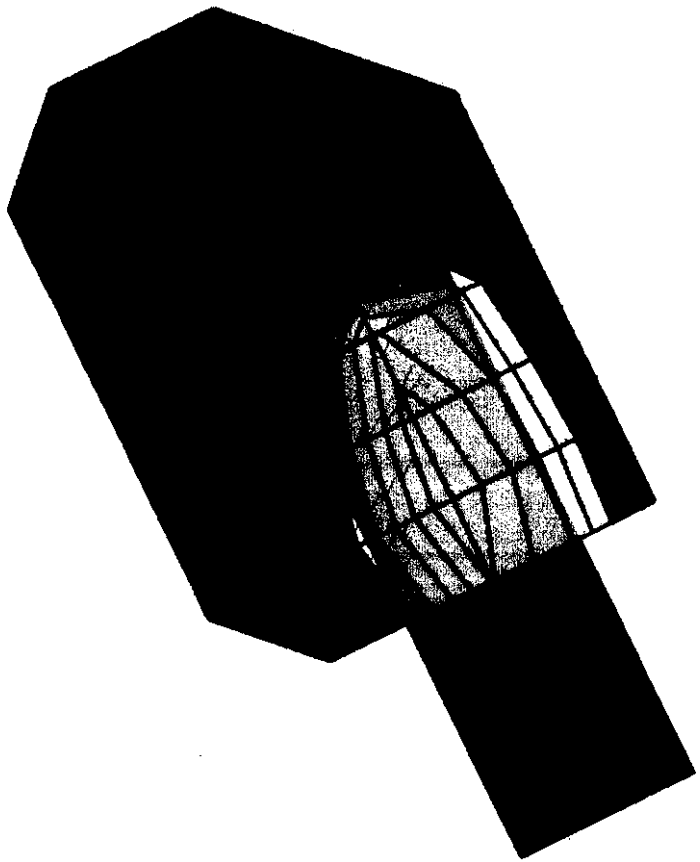
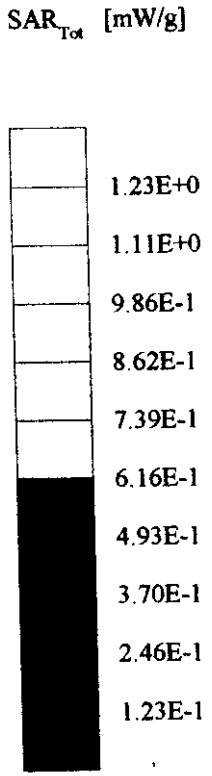
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:836[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)); Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.21 [mW/g], SAR (10g): 0.907 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0





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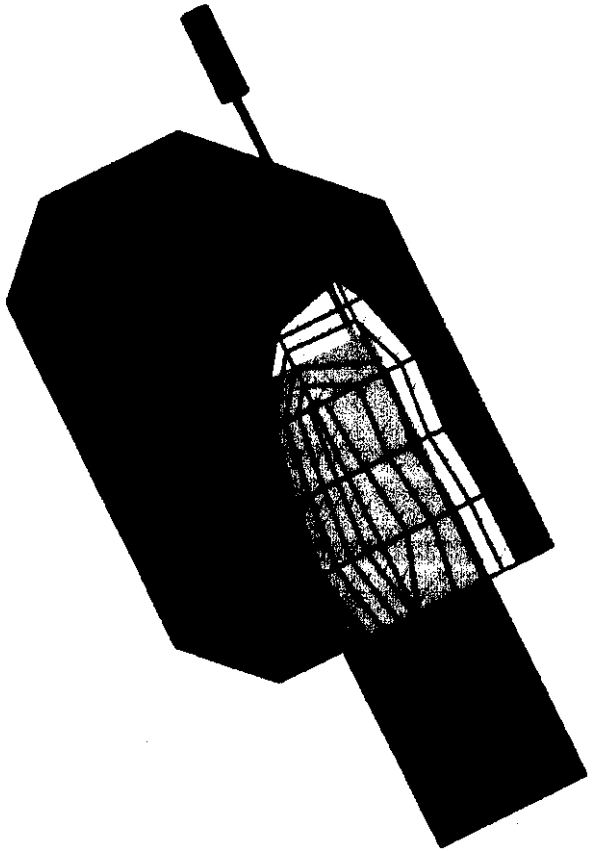
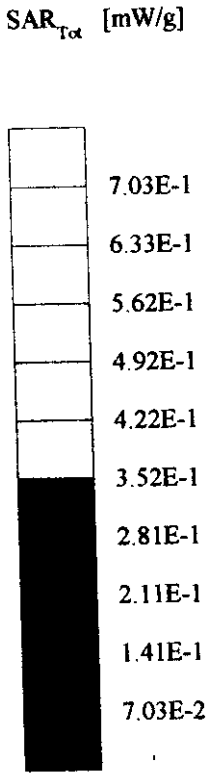
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:849[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 0.699 [mW/g], SAR (10g): 0.519 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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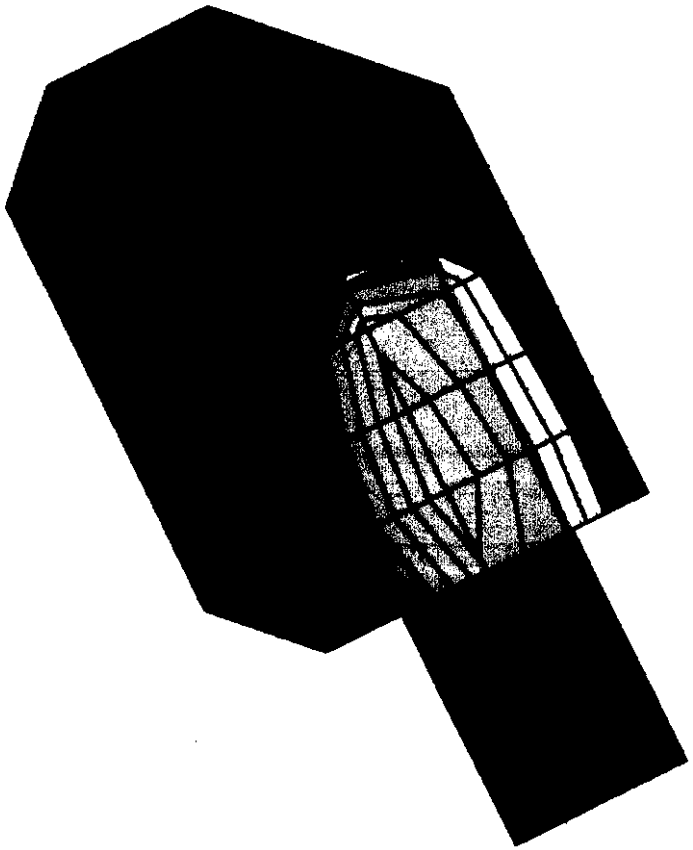
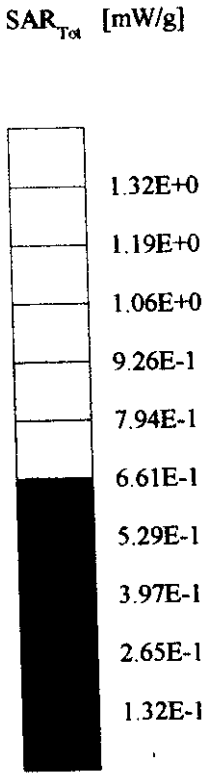
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:849[MHz]Analog;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 1.0;Cube 5x5x7:
SAR (1g): 1.28 [mW/g], SAR (10g): 0.961 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0

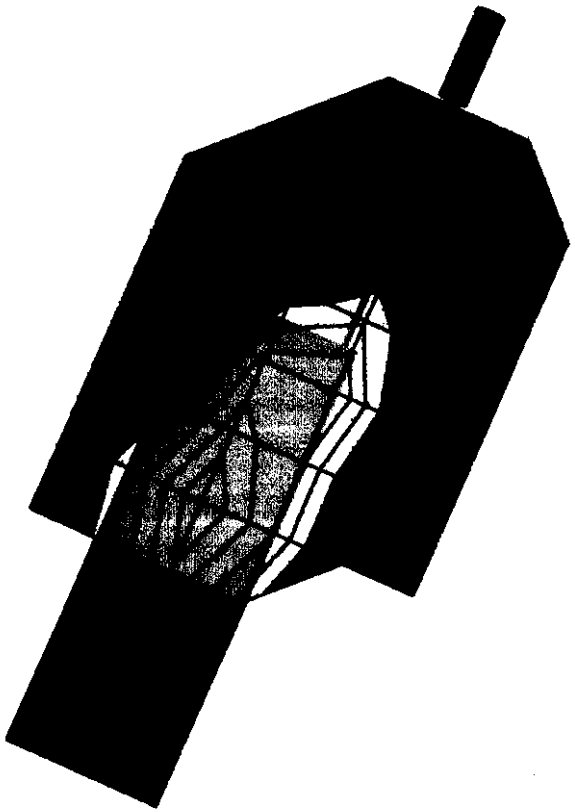


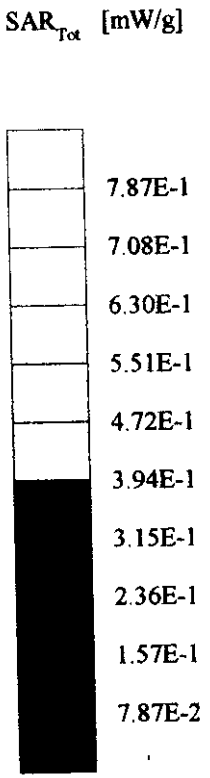


Mode:800MHz Digital

MT253x

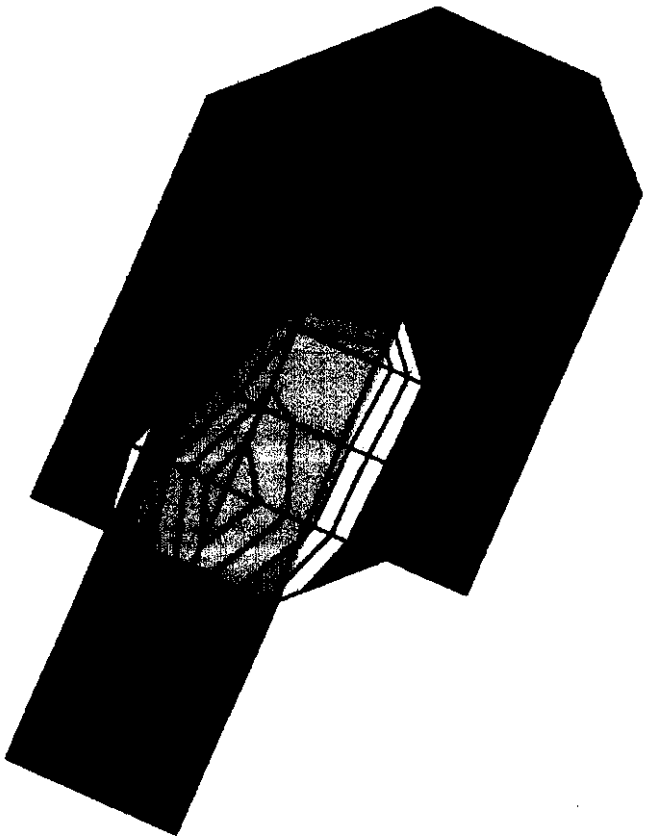
Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:824[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93); Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.756 [mW/g], SAR (10g): 0.556 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0

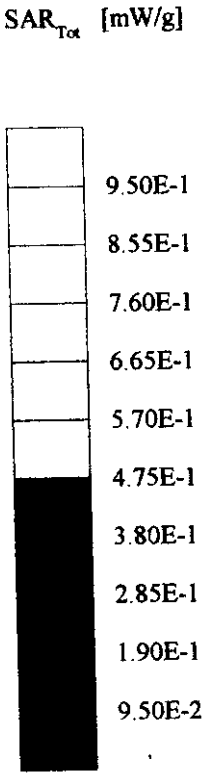




MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:824[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.916 [mW/g], SAR (10g): 0.671 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0





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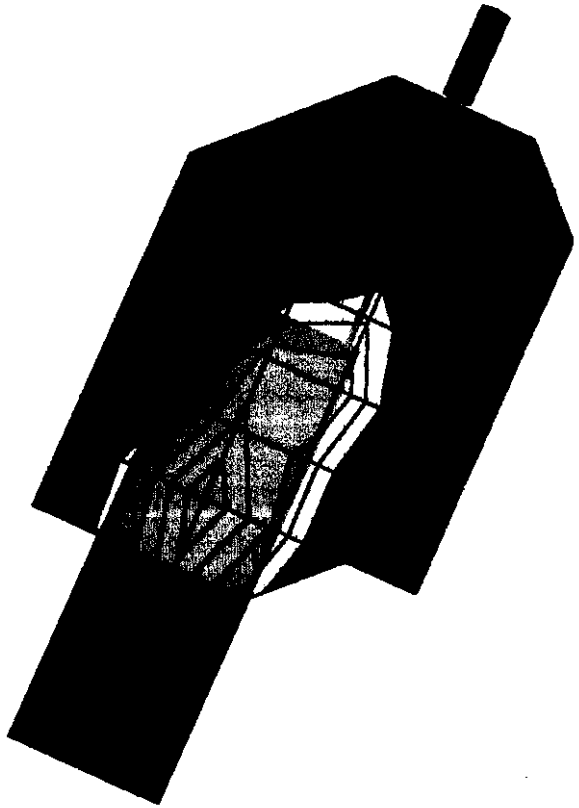
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:836[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.692 [mW/g], SAR (10g): 0.505 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0



SAR_{Tot} [mW/g]

7.22E-1
6.50E-1
5.78E-1
5.05E-1
4.33E-1
3.61E-1
2.89E-1
2.17E-1
1.44E-1
7.22E-2

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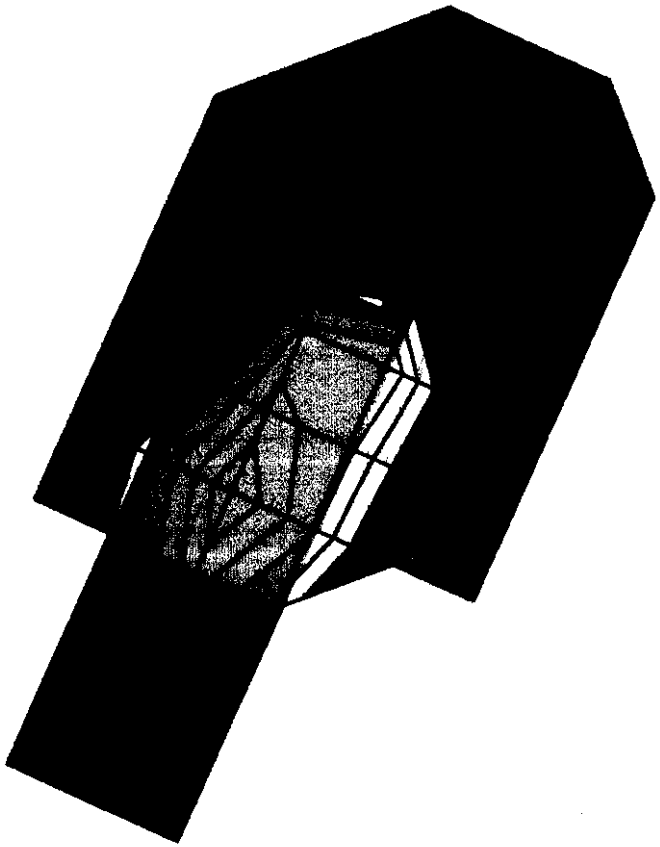
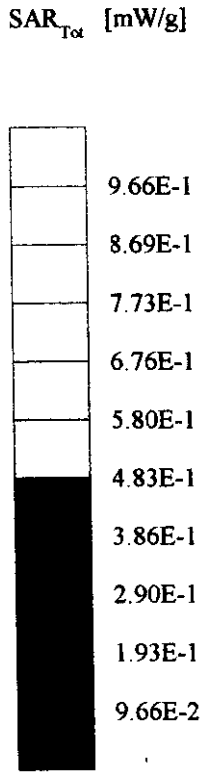
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:836[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.926 [mW/g], SAR (10g): 0.680 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0





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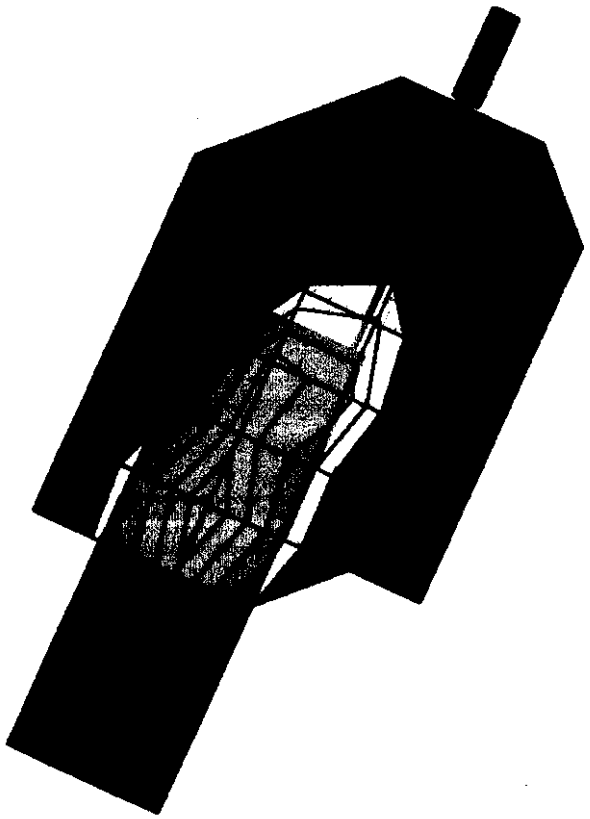
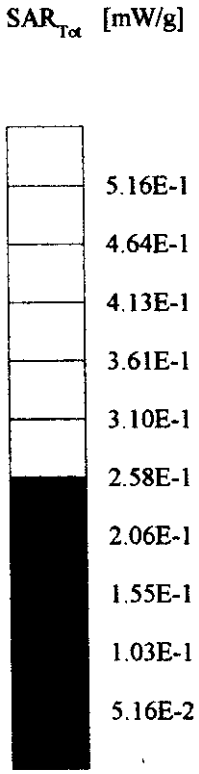
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:849[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.496 [mW/g], SAR (10g): 0.362 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





BGBMT253XF0R6A

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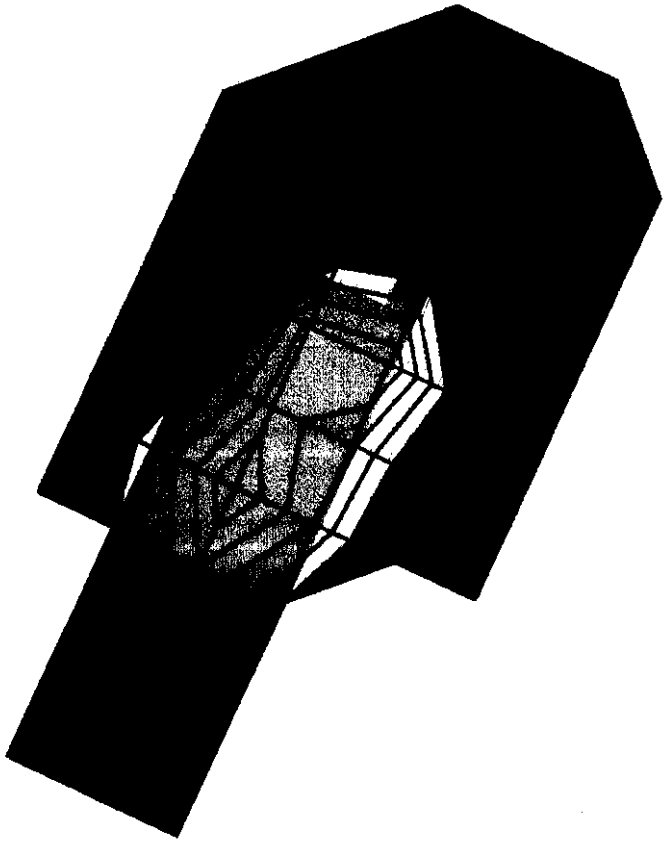
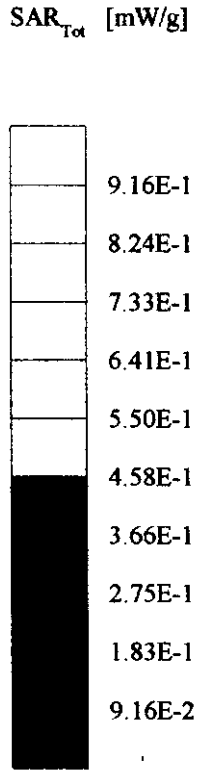
10/21/08

MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:849[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.877 [mW/g], SAR (10g): 0.644 [mW/g], (Worst-case extrapolation)
Antenna in: Dx = 20.0, Dy = 20.0, Dz = 10.0



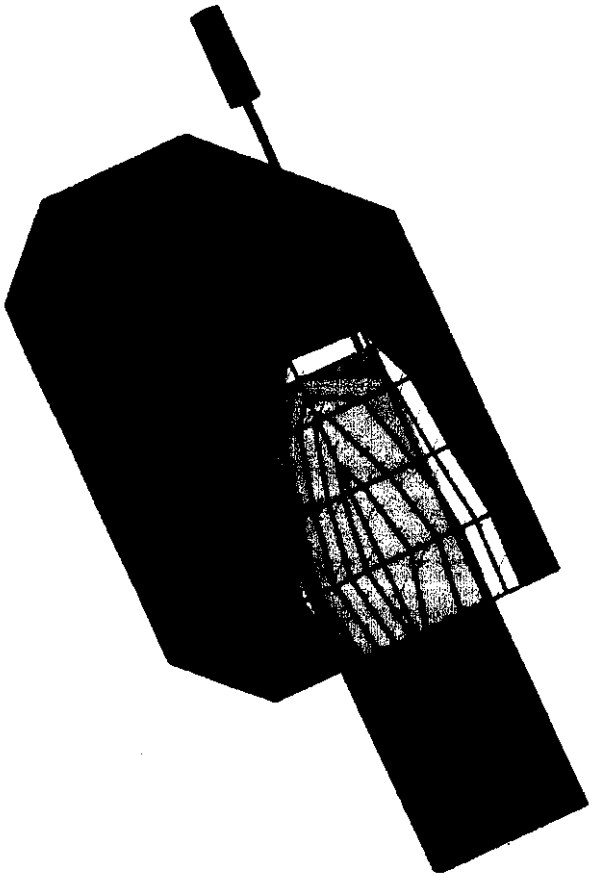


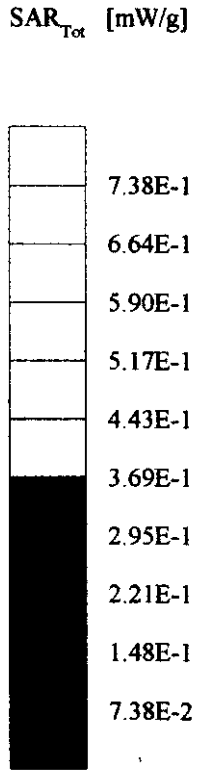
BGBMT253XF0R6A

MITSUBISHI

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:824[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.734 [mW/g], SAR (10g): 0.546 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0



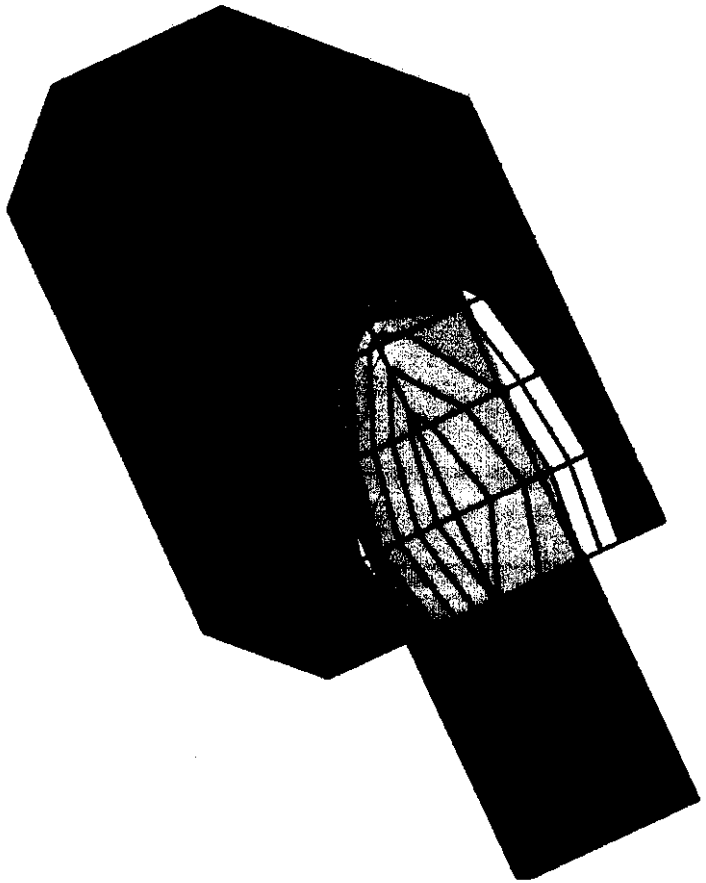


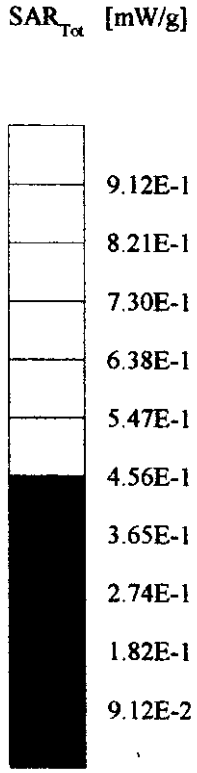
BGBMT253XF0R6A

MITSUBISHI

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:824[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)]; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.896 [mW/g], SAR (10g): 0.672 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0

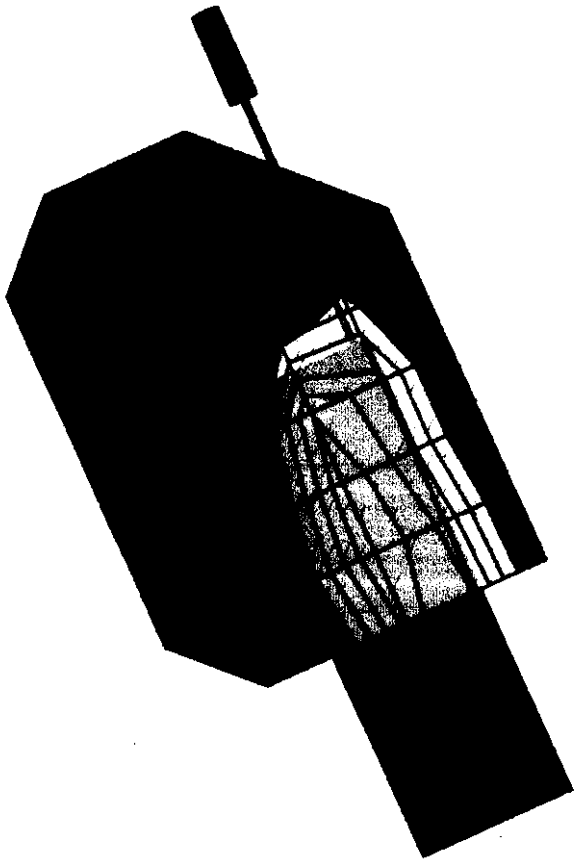




10/21/08

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:836[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.644 [mW/g], SAR (10g): 0.473 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0



SAR_{Tot} [mW/g]

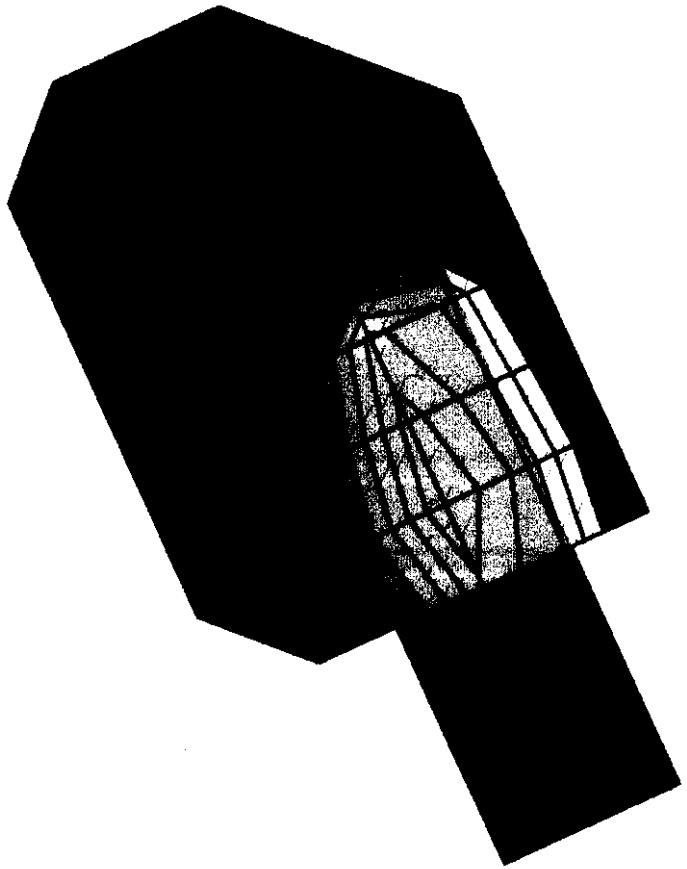
6.38E-1
5.74E-1
5.10E-1
4.47E-1
3.83E-1
3.19E-1
2.55E-1
1.91E-1
1.28E-1
6.38E-2

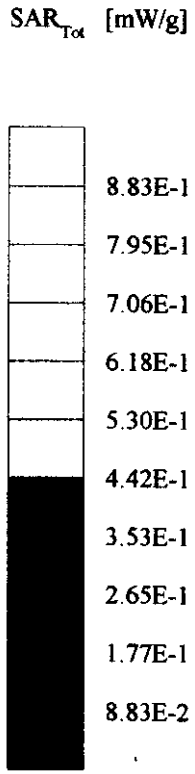
BGBMT253XF0R6A

MITSUBISHI

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:836[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.858 [mW/g], SAR (10g): 0.643 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0

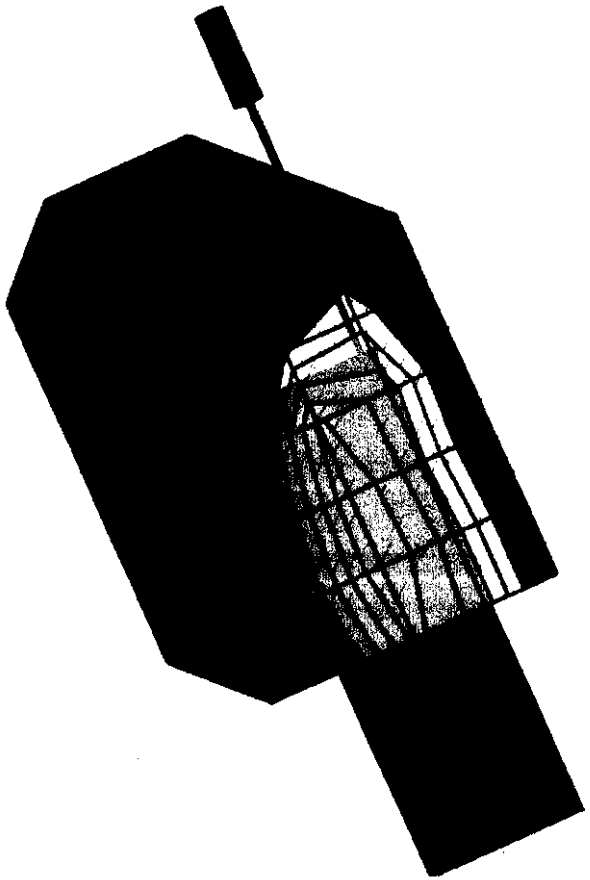


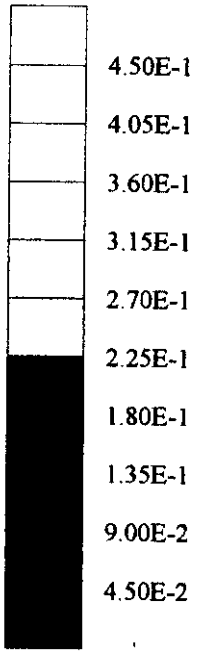


10/21/08

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:849[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.468 [mW/g], SAR (10g): 0.323 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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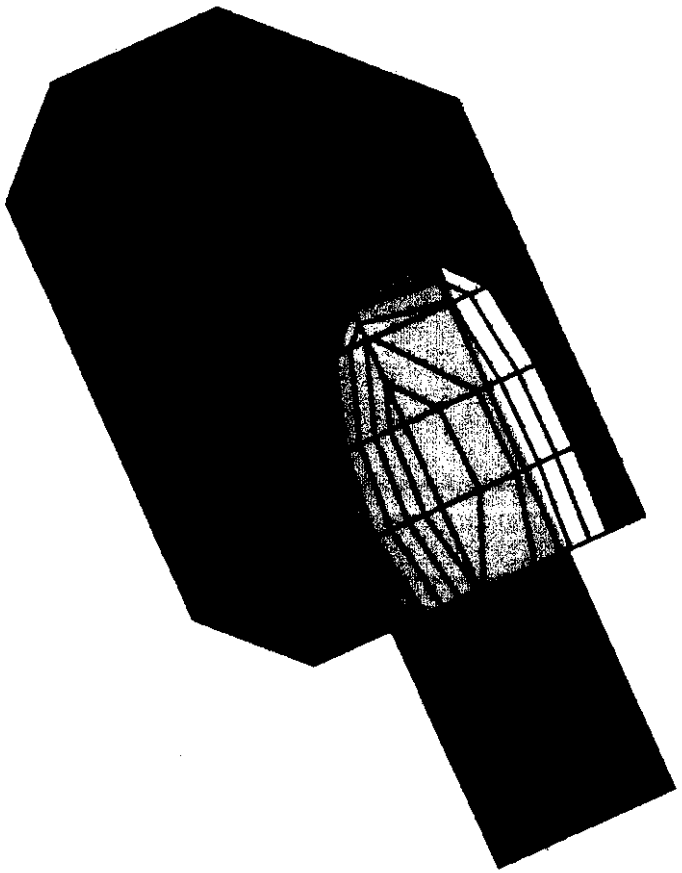
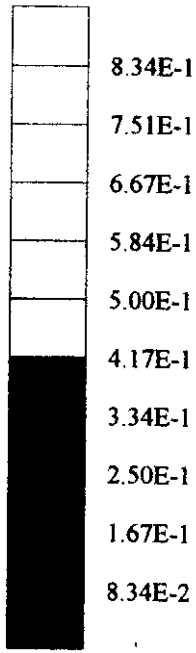
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:849[MHz]Digital;
Probe: ET3DV5 - SN1331; ConvF(4.93,4.93,4.93)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.815 [mW/g] * , SAR (10g): 0.614 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0





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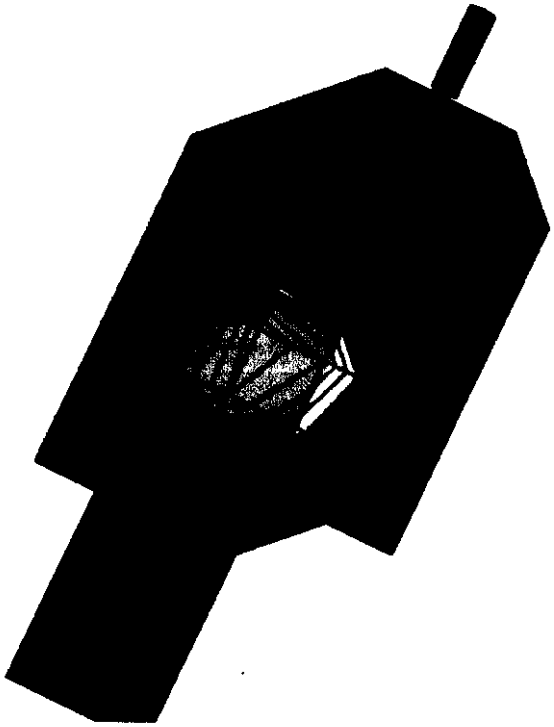
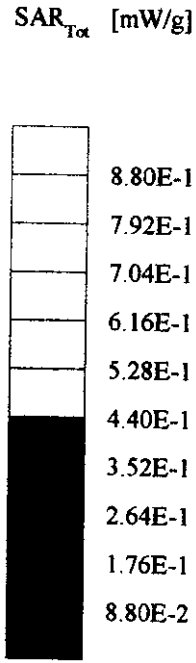
MITSUBISHI

Mode:1900MHz Digital

MT253x

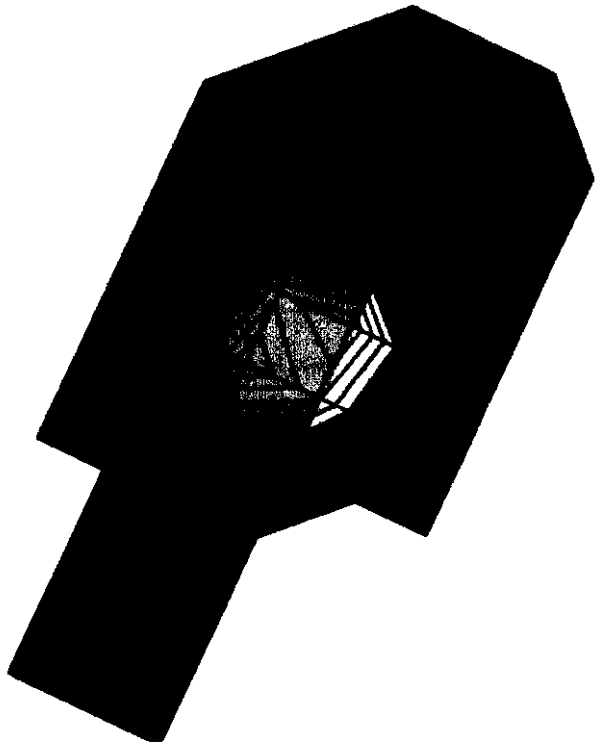
Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:1850 [MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22); Crest factor: 3.0;
σ = 1.73 [mho/m] ε_r = 38.9 ρ = 1.00 [g/cm^3];Cube 5x5x7:
SAR (1g): 0.926 [mW/g], SAR (10g): 0.547 [mW/g] * Max outside, (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0

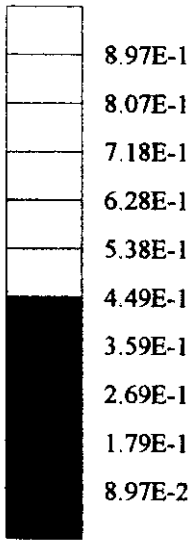




MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:1850 [MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)]; Crest factor: 3.0;
σ = 1.73 [mho/m] ε_r = 38.9 ρ = 1.00 [g/cm^3];Cube 5x5x7:
SAR (1g): 0.967 [mW/g], SAR (10g): 0.547 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0

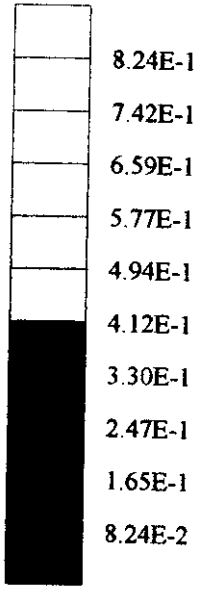




10/22/08

MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:1880 [MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)]; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.900 [mW/g], SAR (10g): 0.506 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0



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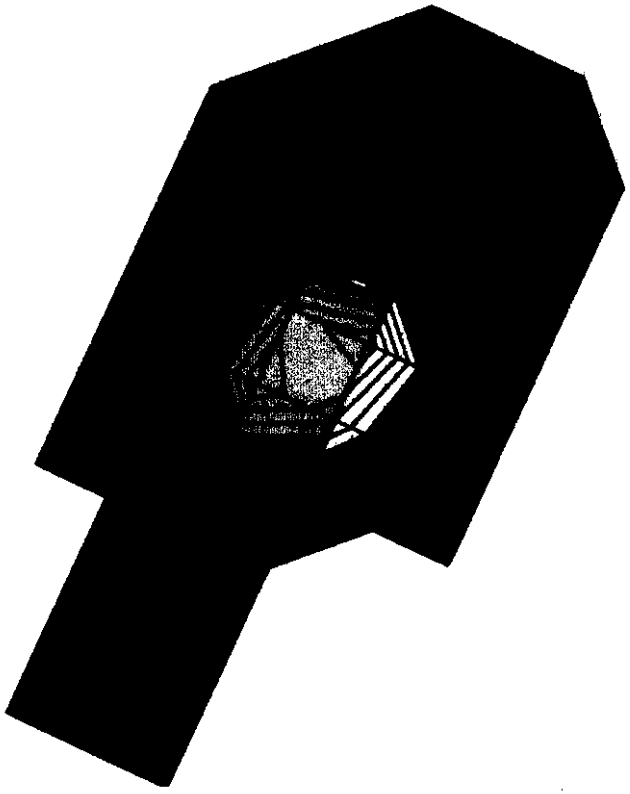
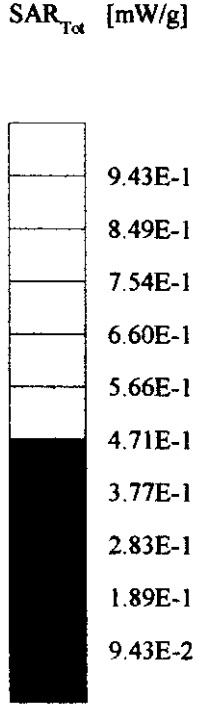
MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:1880 [MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 1.07 [mW/g], SAR (10g): 0.595 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0

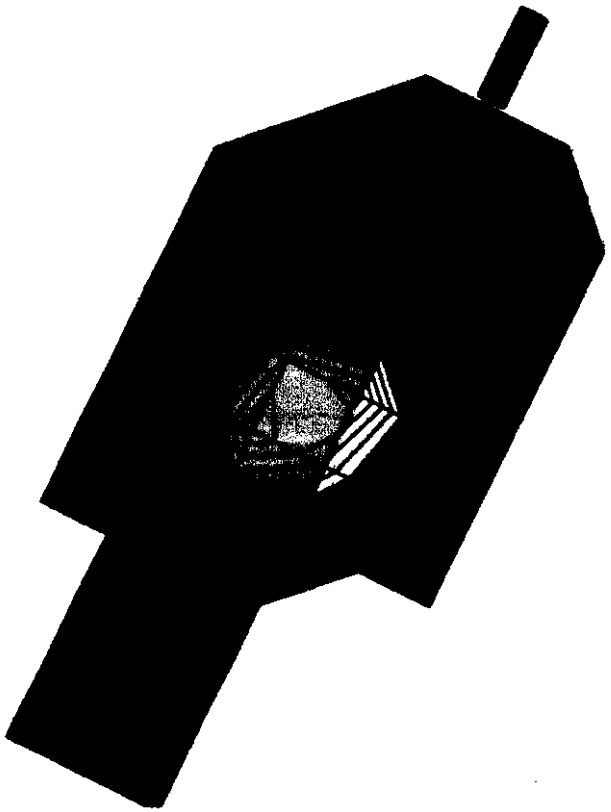


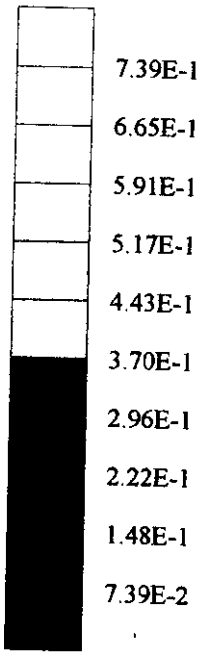


10/22/08

MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:1910[MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)); Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.848 [mW/g], SAR (10g): 0.467 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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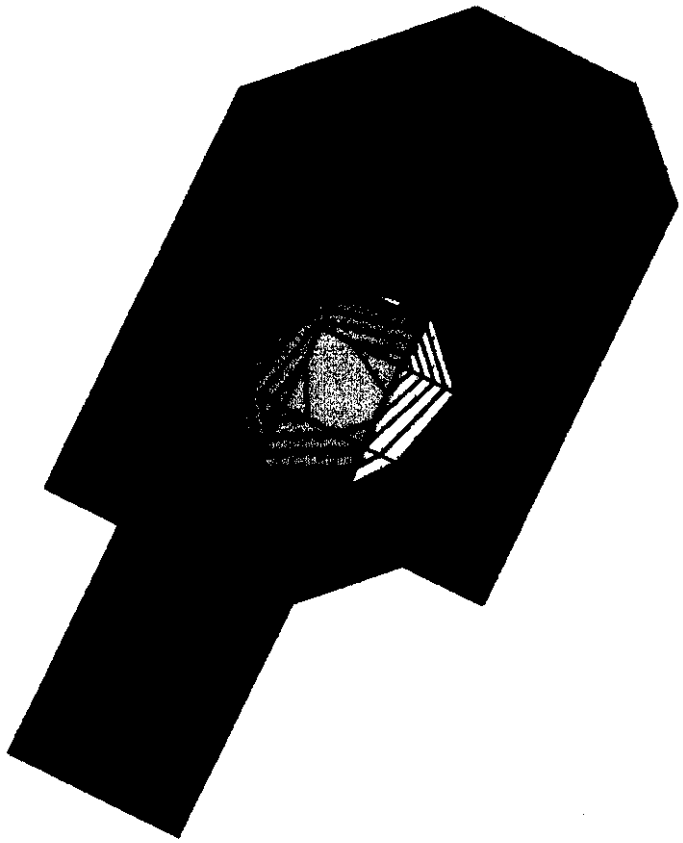
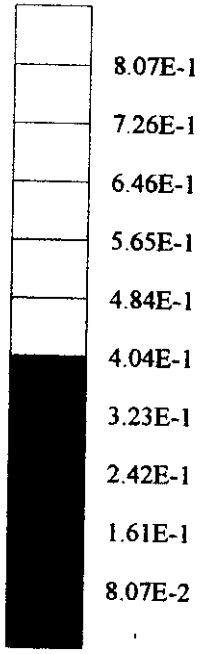
MITSUBISHI

10/22/08

MT253x

Generic Twin Phantom; Left Hand Section; Position: (80° ,65°); Frequency:1910[MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)]; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.919 [mW/g], SAR (10g): 0.507 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0





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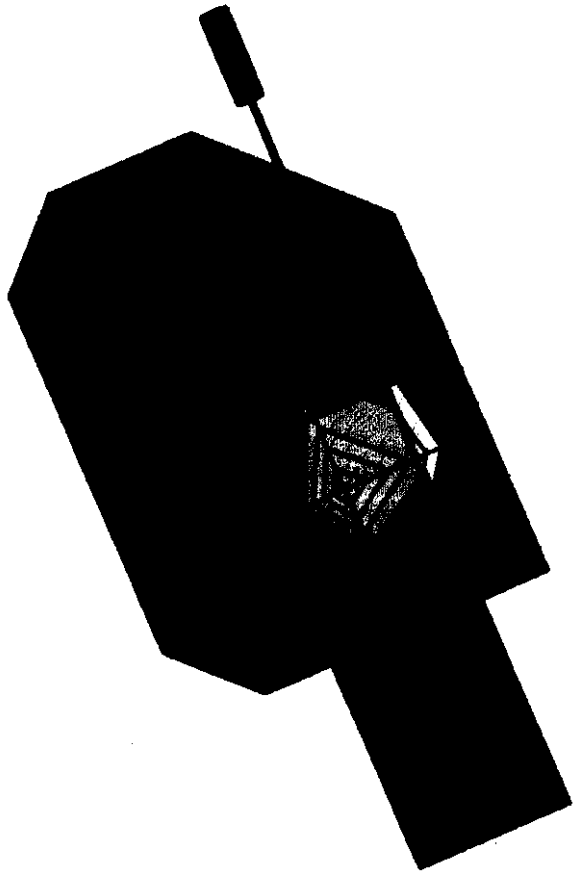
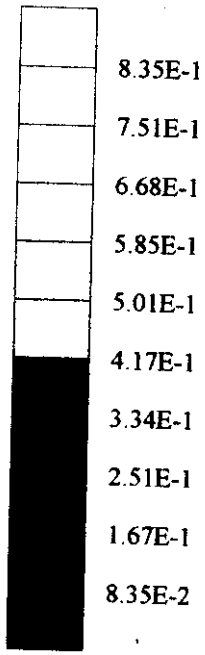
MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:1850[MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.799 [mW/g], SAR (10g): 0.452 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0

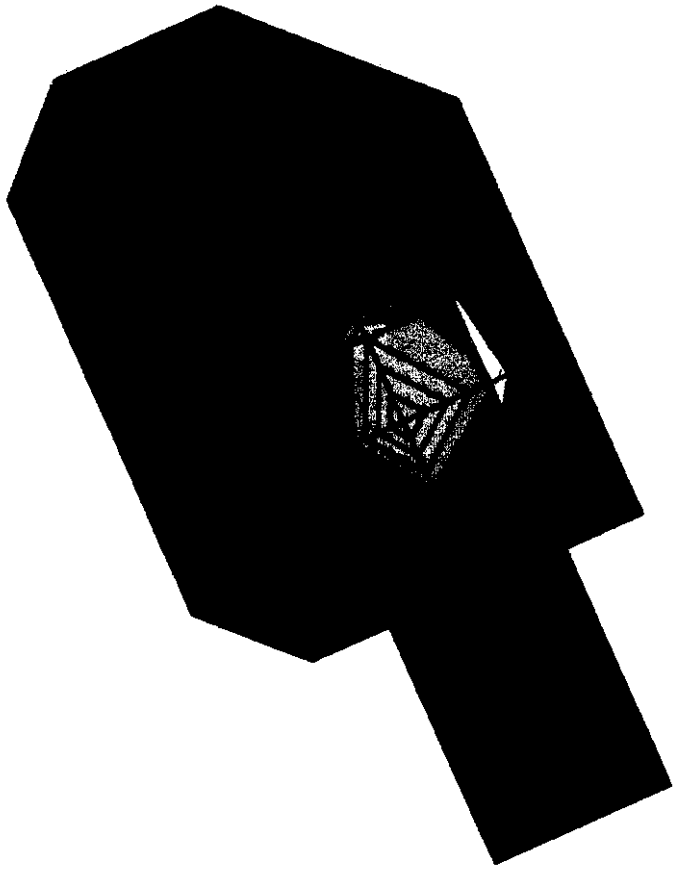




10/22/08

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:1850[MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.924 [mW/g], SAR (10g): 0.527 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0



SAR_{Tot} [mW/g]

9.57E-1
8.61E-1
7.66E-1
6.70E-1
5.74E-1
4.79E-1
3.83E-1
2.87E-1
1.91E-1
9.57E-2

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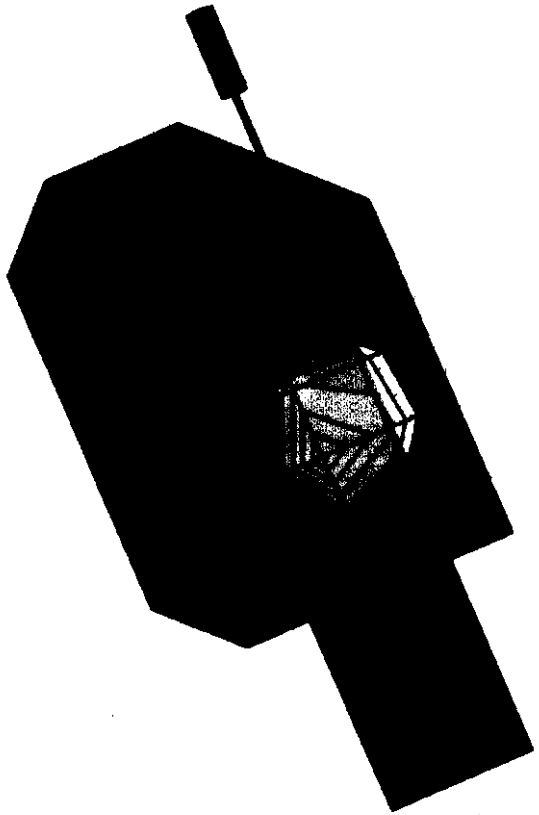
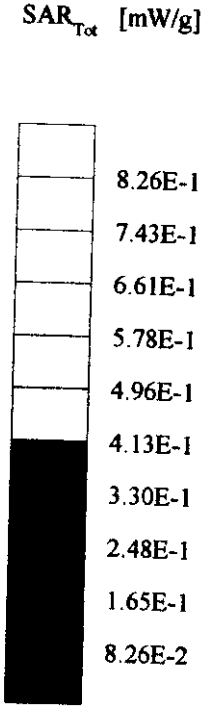
10/22/08

BGBMT253XF0R6A

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:1880 [MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.861 [mW/g], SAR (10g): 0.486 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0

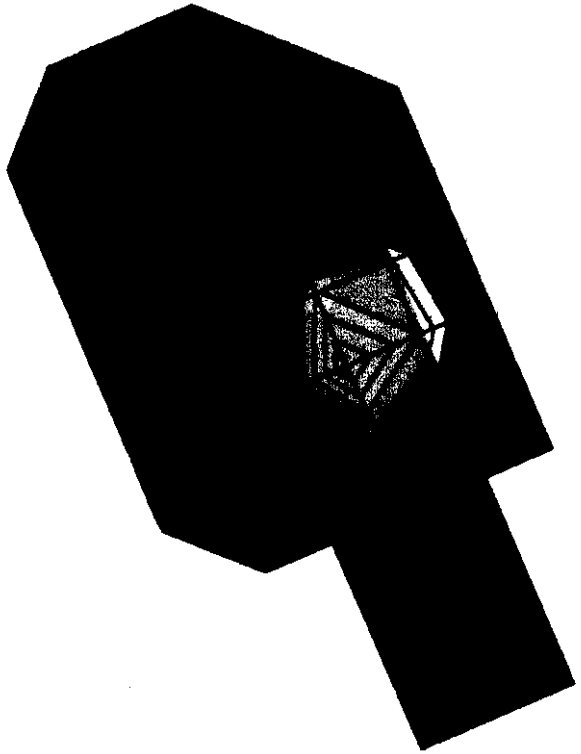


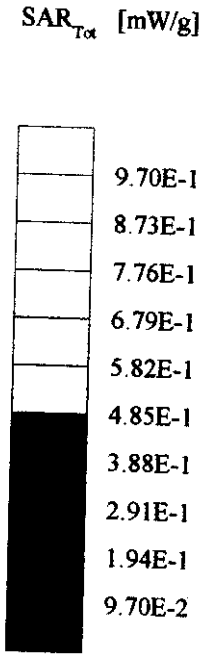


MITSUBISHI

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:1880[MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)]; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.984 [mW/g], SAR (10g): 0.555 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0

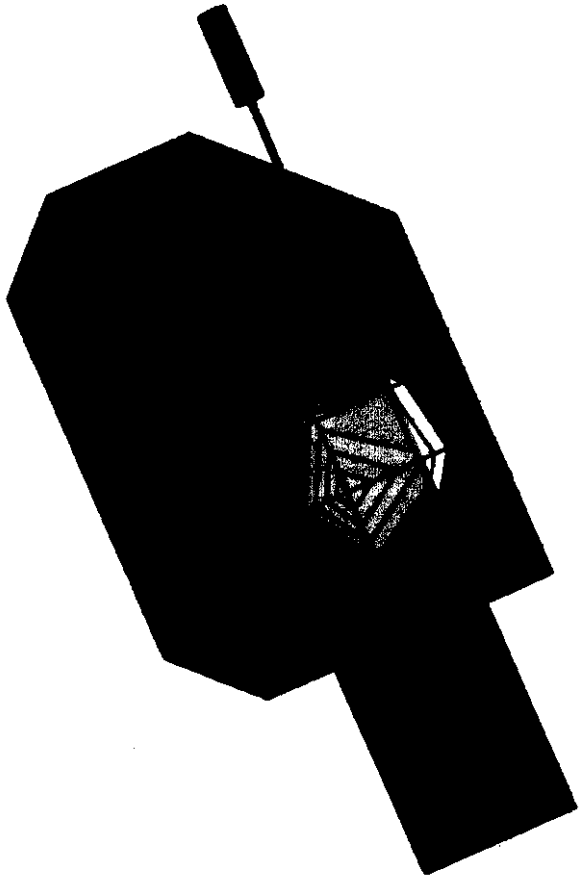


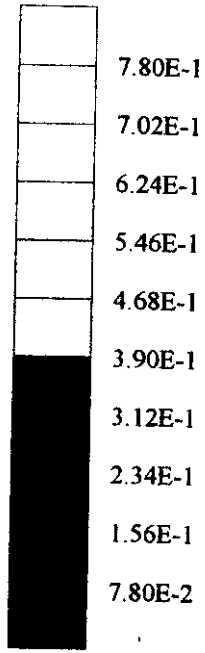


10/22/08

MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:1910[MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.812 [mW/g], SAR (10g): 0.453 [mW/g], (Worst-case extrapolation)
Antenna out: Dx = 20.0, Dy = 20.0, Dz = 10.0





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MT253x

Generic Twin Phantom; Right Hand Section; Position: (80° ,65°); Frequency:1910[MHz];
Probe: ET3DV5 - SN1331; ConvF(4.22,4.22,4.22)}; Crest factor: 3.0;Cube 5x5x7:
SAR (1g): 0.928 [mW/g], SAR (10g): 0.521 [mW/g], (Worst-case extrapolation)
Antenna In: Dx = 20.0, Dy = 20.0, Dz = 10.0