

TEST DATA FOR FCC CERTIFICATION APPLICATION

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TYPE OF EQUIPMENT: 900MHz ISM BAND cordless telephone (Analog)
FCC ID: AA04300794
MODEL NO(S).: 43-1099(XX)

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EXHIBIT - 1

GENERAL INFORMATION

General Information in accordance with the Federal Communications Commission Rules and Regulations, Volume II, Part 2.

Section 2.1033(b)(1) Applicant:

RadioShack, A Division of Tandy Corporation
100 Throckmorton St Ste 1300
Fort Worth, TX 76102-2802
Mr. Dwayne Campbell, Manager, Regulatory Affairs

Section 2.1033(b)(2) FCC Identifier: FCC ID: AA04300794
MODEL NO(S): 43-1099(XX)

Section 2.1033(b)(3) Instruction Manual: Refer to EXHIBIT-2

Section 2.1033(b)(4) Circuit Description: Refer to EXHIBIT-3

Section 2.1033(b)(5) Circuit & Block Diagrams: Refer to
EXHIBIT-4

Section 2.1033(b)(6) Measurement Data: Refer to EXHIBIT-5

Standard Test Conditions:

The following conditions and procedures were followed during testing of the equipment.

Room Temperature: 23 - 27 Degrees Celsius
Room Humidity: 40 - 60 %
Power Supply: 120V AC for Base unit
Ni-cd Battery for Handset

Section 2.1033(b)(7) Photographs & Equipment Identification:

External photographs of the unit as well as internal photos of the printed circuit boards are found in EXHIBIT-6.

A drawing of the equipment's Identification Label and its intended location are as shown in EXHIBIT-6 and EXHIBIT-7.

Section 2.1033(b)(8) Peripheral or Accessory Device:

Not used

Section 2.1033(b)(9) Transition provisions in section 15.37
Rules:

This equipment complies with the new Part 15
of FCC Rules and is not affected by Section
15.37.

Section 2.1033(b)(10) Decoding the Emergency Broadcast System
Attention Signal: Not Applicable

Section 2.1033(b)(11) Direct Sequence Spread Spectrum
Transmitter:

Not Applicable

Section 15.214(d)(3) Digital Security Code Information:

Refer to EXHIBIT-3

EXHIBIT - 2

DRAFT COPY OF THE INSTRUCTION MANUAL

[APPENDIX] 43-1099 TEST MODE AND OPERATION FREQUENCY

TEST MODE

This cordless telephone has test mode function which enable to perform TX/RX testing.

Test Mode for Base Unit

To enter the test mode, connect the AC Adapter to the unit while pressing the PAGE button. When test mode is set up, and the LINE LED lights. The unit is set for CH 19 (926.893873 MHz) Transmitting mode.

To change the transmitting frequency, change the TONE/PULSE switch position to TONE side and then press the PAGE button during the unit is set the TX Test mode, so that the channel is changed from CH 19 to CH 20. Every pressing the CHANNEL key, channel is changed as below.

19 20 21 40 1 2 3 - - - 39 40 1 2 3 4 ---

To cancel the test mode, place the Handset in the Base Unit, so that the CHARGE LED lights and the equipment is set for normal operation mode (Standby mode).

Or, disconnect the AC Adapter and connect it again, so that the test mode is easily canceled.

Test Mode for Handset

First, disconnect the battery pack. Then, connect the battery pack again while pressing # and * keys. When test mode is set up, long beep tone is heard and the TALK LED lights. The unit is set for CH 21 Transmitting mode. Every pressing the CHANNEL key, channel is changed as below.

21 20 19 40 1 2 3 - - - 39 40 1 2 3 4 ---

To cancel the test mode, press the TALK key.

FREQUENCY TABLE

| CH | Portable (TX Frequency) | Base (TX Frequency) |
|----|-------------------------|---------------------|
| 1 | 902.080435MHz | 925.989636MHz |
| 2 | 902.130671MHz | 926.039871MHz |
| 3 | 902.180906MHz | 926.090107MHz |
| 4 | 902.231142MHz | 926.140342MHz |
| 5 | 902.281377MHz | 926.190577MHz |
| 6 | 902.331613MHz | 926.240813MHz |
| 7 | 902.381849MHz | 926.291048MHz |
| 8 | 902.432084MHz | 926.341284MHz |
| 9 | 902.482320MHz | 926.391519MHz |
| 10 | 902.532555MHz | 926.441755MHz |
| 11 | 902.582791MHz | 926.491990MHz |
| 12 | 902.633026MHz | 926.542225MHz |
| 13 | 902.683262MHz | 926.592461MHz |
| 14 | 902.733498MHz | 926.642696MHz |
| 15 | 902.783733MHz | 926.692932MHz |
| 16 | 902.833969MHz | 926.743167MHz |
| 17 | 902.884204MHz | 926.793403MHz |
| 18 | 902.934440MHz | 926.843638MHz |
| 19 | 902.984676MHz | 926.893873MHz |
| 20 | 903.034911MHz | 926.944109MHz |
| 21 | 903.085147MHz | 927.994344MHz |
| 22 | 903.135382MHz | 927.044580MHz |
| 23 | 903.185618MHz | 927.094815MHz |
| 24 | 903.235853MHz | 927.145051MHz |
| 25 | 903.286089MHz | 927.195286MHz |
| 26 | 903.336325MHz | 927.245521MHz |
| 27 | 903.386560MHz | 927.295757MHz |
| 28 | 903.436796MHz | 927.345992MHz |
| 29 | 903.487031MHz | 927.396228MHz |
| 30 | 903.537267MHz | 927.446463MHz |
| 31 | 903.587503MHz | 927.496699MHz |
| 32 | 903.637738MHz | 927.546934MHz |
| 33 | 903.687974MHz | 927.597169MHz |
| 34 | 903.738209MHz | 927.647405MHz |
| 35 | 903.788445MHz | 927.697640MHz |
| 36 | 903.838681MHz | 927.747876MHz |
| 37 | 903.888916MHz | 927.798111MHz |
| 38 | 903.939152MHz | 927.848347MHz |
| 39 | 903.989387MHz | 927.898582MHz |
| 40 | 904.039623MHz | 927.948817MHz |

EXHIBIT - 4

SCHEMATIC DIAGRAMS AND BLOCK DIAGRAMS

EXHIBIT - 5

MEASUREMENT PROCEDURE AND TEST RESULTS

| MEASUREMENT ITEMS | Section No. |
|--|---------------------------------|
| 5-1 Field Strength of Radiated Emissions | 15.249(a)(b) 15.205 / 15.209 |
| 5-2 Power Line Conducted Emissions | 15.207 |
| SUPPLEMENT DATA - BAND EDGE EMISSIONS | |

5-1 Field Strength of Radiated Emissions 15.249(a)(b)
15.205 / 15.209

The measurements were performed in accordance with the ANSI C63.4-1992. Field Strength measurements of radiated spurious emissions were made at the open test site of a 3 meter range maintained by Uniden Corporation in Japan. Complete description and measurement data of this test site have been placed on file with the Commission.

The radio frequency spectrum was scanned in the range of 30 MHz to 10 GHz in accordance with the section 15.33(b) of the FCC Rules.

For radiation measurement below 1 GHz, initially frequency band of 30 - 1000MHz was scanned by ADVANTEST R3265 Spectrum Analyzer with "BW: 3MHz, VBW: 30kHz, SWP: 30mS" to observe higher emissions. Then, these higher emissions are re-measured by using CISPR quasi-peak detector (BW: 120kHz) Spectrum Analyzer in accordance with the sections 15.33(a) and 15.35(a).

The frequency above 1 GHz, the measurement was carried out by using the Hewlett Packard 8566B Spectrum Analyzer (BW: 1MHz) in accordance with the section 15.35(b).

A bilog antenna CBL6111 was used to cover the range from 30 MHz to 1000 MHz. Narrow band tuned dipole antennas were used over the entire 25 to 1000 MHz range for precision Measurements of field strength. Above 1000 MHz, a horn antenna EMCO 3115 was used.

For each spurious or harmonic frequency, the antenna was raised and lowered to obtain a maximum reading on the Spectrum Analyzer with antenna horizontally polarized. Then the turntable, on which the equipment under test was placed, was rotated a minimum of 360 degrees to further increase the reading on the Spectrum Analyzer. This procedure was repeated with the antenna vertically polarized. The equipment under test was placed in its normal operating position on a turntable approximately 1 meter in height.

In order to convert the measured emission levels into field strength in dBuV/m, the actual field strength (Ef) is determined by algebraically adding the measured emission level (Em) and the antenna correction factor (ACF) including the cable loss at the appropriate frequency. $E_f \text{ [dBuV/m]} = E_m \text{ [dBuV/m]} + ACF \text{ [dB]}$

FCC Limits:

- a) Fundamental emission: 94 dBuV/m (50,000 uV/m)
- b) Spurious emissions:

| | | |
|---------------|-------------|------------|
| 30 - 88 MHz | 40 dBuV/m | (100 uV/m) |
| 88 - 216 MHz | 43.5 dBuV/m | (150 uV/m) |
| 216 - 960 MHz | 46 dBuV/m | (200 uV/m) |
| Above 960 MHz | 54 dBuV/m | (500 uV/m) |

Test Results: Refer to the attached test reports. All emissions not reported were more than 20 dB below the limits.

NOTE:

For measurement of the handset, all of the testing were made with the internal battery that is fully charged.

For measurement of base unit, all of the testing were made with the AC Adapter which connected to a standard voltage source.

5-2 Power Line Conducted Emissions

15.207

The measurements were performed in accordance with the ANSI C63.4-1992. During the measurements, a standard voltage source is fed into the unit under test through a power line impedance stabilization network.

FCC Limits:

The radio frequency voltage that is conducted back into the AC power line on any frequencies within the band from 450kHz to 30MHz shall not exceed 250uV (48 dBuV).

Test Results: Refer to the attached test reports. All emissions not reported were more than 20 dB below the limits.

NOTE:

Regarding the Handset, this FCC requirement is not applicable to it since the Handset is intended to use the battery only.

SUPPLEMENT DATA - BAND EDGE EMISSION

Attached data show the handset's transmission on lowest channel (902.080435MHz) and base unit's transmission on highest channel (927.946617MHz).

At the frequency on 902 and 928MHz, emissions are well reduced as much as -70dB below the operational channel frequency of the units.

TEST CONDITIONS:

Max. Deviation: +/-13 kHz Dev.
Modulation : 1,000 Hz

5-1 Field Strength of Radiated Emissions

Test Result

a) Handset: Fundamental Emissions

| Emission (MHz) | Measured Level | | ACF (dB) | Field Strength (dBuV/m) | FCC Limit (dBuV/m) | Margin (dB) |
|-------------------|----------------|-------|-------------|----------------------------|-----------------------|----------------|
| | (dBuV) | (V/H) | | | | |
| 902.080435 | 64.8 | H | 26.5 | 91.3 | 94.0 | 2.7 |
| 904.039623 | 64.0 | H | 26.5 | 90.5 | 94.0 | 3.5 |

b) Handset: Spurious Emissions

| Transmitting Frequency: 903.34911MHz | | | | | | |
|--------------------------------------|----------------|-------|-------------|----------------------------|-----------------------|----------------|
| Emission (MHz) | Measured Level | | ACF (dB) | Field Strength (dBuV/m) | FCC Limit (dBuV/m) | Margin (dB) |
| | (dBuV) | (V/H) | | | | |
| 451.517 | 11.5 | H | 19.5 | 31.0 | 46.0 | 15.0 |
| 941.3 | 8.7 | H | 28.3 | 37.0 | 46.0 | 9.0 |
| 1886.0 | 6.0 | H | 34.5 | 40.5 | 54.0 | 13.5 |

c) Base unit: Fundamental Emissions

| Emission (MHz) | Measured Level | | ACF (dB) | Field Strength (dBuV/m) | FCC Limit (dBuV/m) | Margin (dB) |
|-------------------|----------------|-------|-------------|----------------------------|-----------------------|----------------|
| | (dBuV) | (V/H) | | | | |
| 925.989636 | 64.8 | H | 27.0 | 91.8 | 94.0 | 2.2 |
| 927.948817 | 64.8 | H | 27.0 | 91.8 | 94.0 | 2.2 |

d) Base unit: Spurious Emissions

| Transmitting Frequency: 926.944109MHz | | | | | | |
|---------------------------------------|----------------|-------|-------------|----------------------------|-----------------------|----------------|
| Emission (MHz) | Measured Level | | ACF (dB) | Field Strength (dBuV/m) | FCC Limit (dBuV/m) | Margin (dB) |
| | (dBuV) | (V/H) | | | | |
| 463.472 | 8.0 | V | 19.5 | 27.5 | 46.0 | 18.5 |
| 888.715 | 4.5 | V | 25.5 | 30.0 | 46.0 | 16.0 |
| 1777.320 | 8.5 | V | 33.5 | 42.0 | 54.0 | 12.0 |

NOTE: All emissions not reported were more than 20 dB below the FCC limit.

5-2 Power Line Conducted Emissions

15.207

Test Result

| <u>Transmitting frequency</u> | <u>Emissions Frequency</u> | <u>Measured Level</u> |
|-------------------------------|---|-----------------------|
| 926.944109MHz | NO EMISSIONS EXCEEDS 20dB BELOW THE FCC LIMIT. | |

All emissions not reported were more than 20 dB below the FCC limit.
(See attached graphs as an example.)

Handset:

The FCC requirement do not apply to the handset
since the handset is designed to operate with internal battery only.

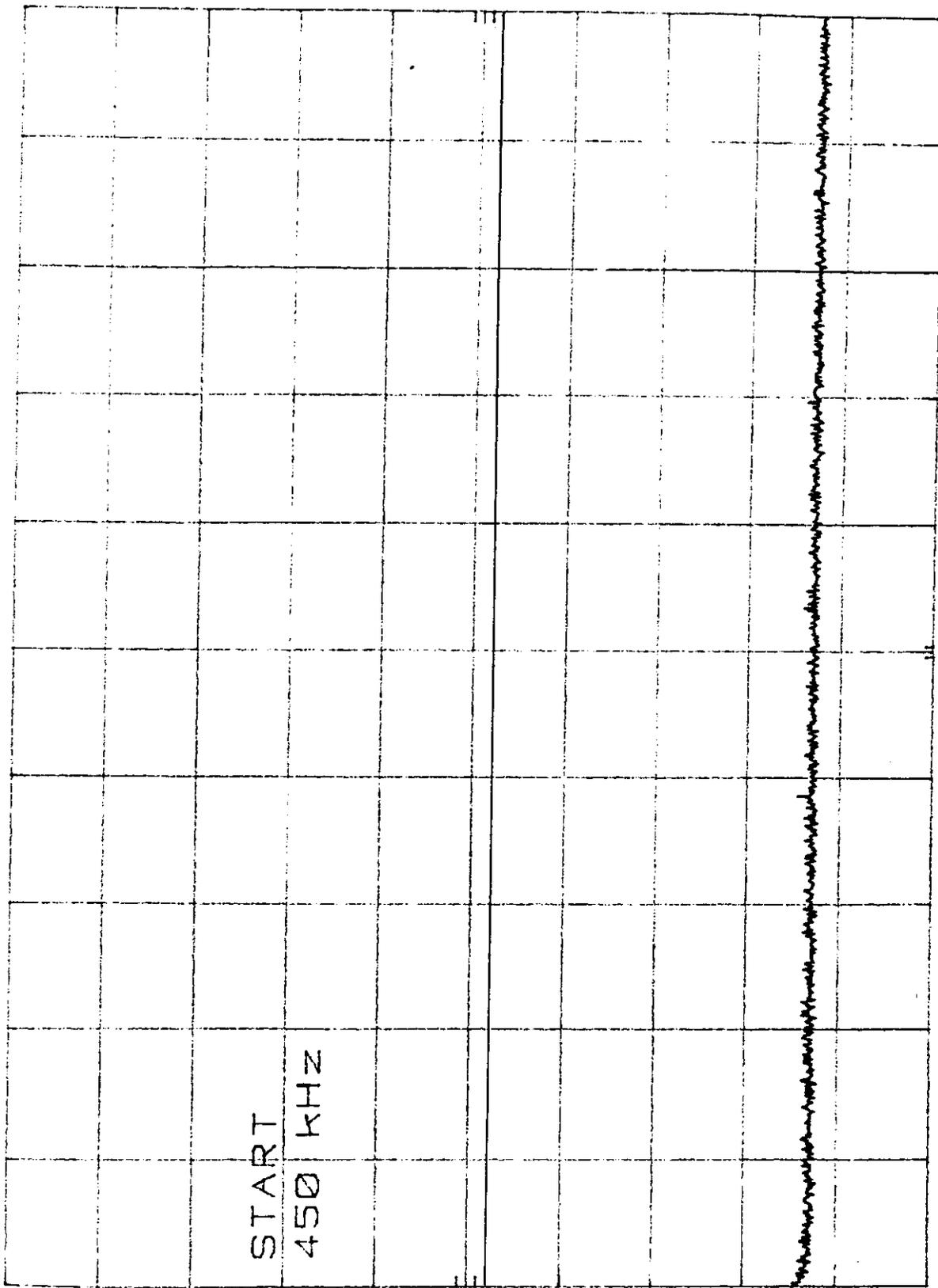
41C-2012 LINE CONDUCTED EMISSIONS

770 REF 100.0 dBμV ATTEN 10 dB

10 dB/

START
450 KHZ

48dBμV →



START 450 KHZ RES. BW 30 KHZ VBW 300 Hz STOP 30.0 MHz SWP 10.0 sec

REF 0.0 dBm
10dB/

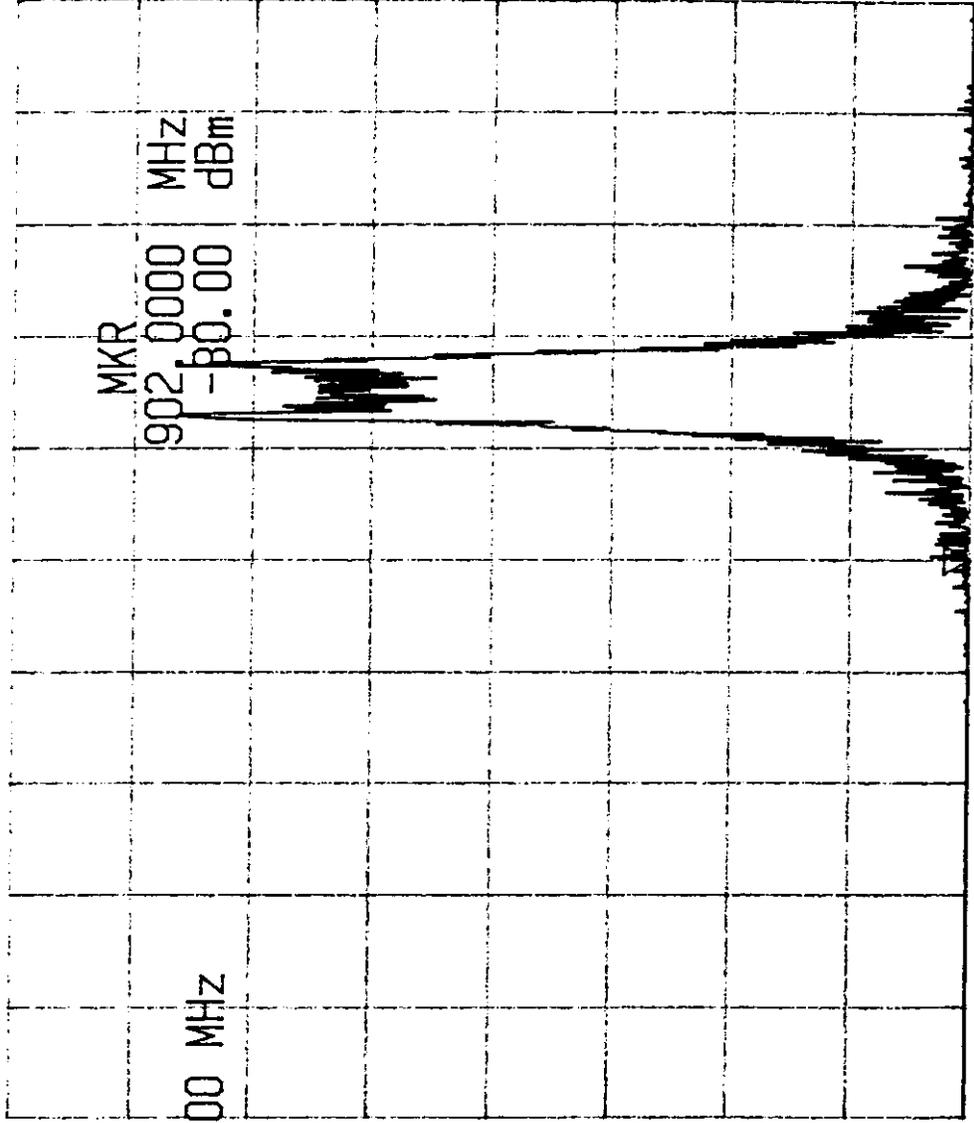
ATT 10 dB

A_write B_blank

MARKER
902.0000 MHz

MKR
902.0000 MHz
-80.00 dBm

RBW 1 kHz
VBW 1 kHz
SWP 1.0 s



MCZ01Z

H/S POWER SPECTRUM

CH1

TOTAL PWR: -7 dBm
MAX DEVIATION: ±13 kHz
at 1 kHz

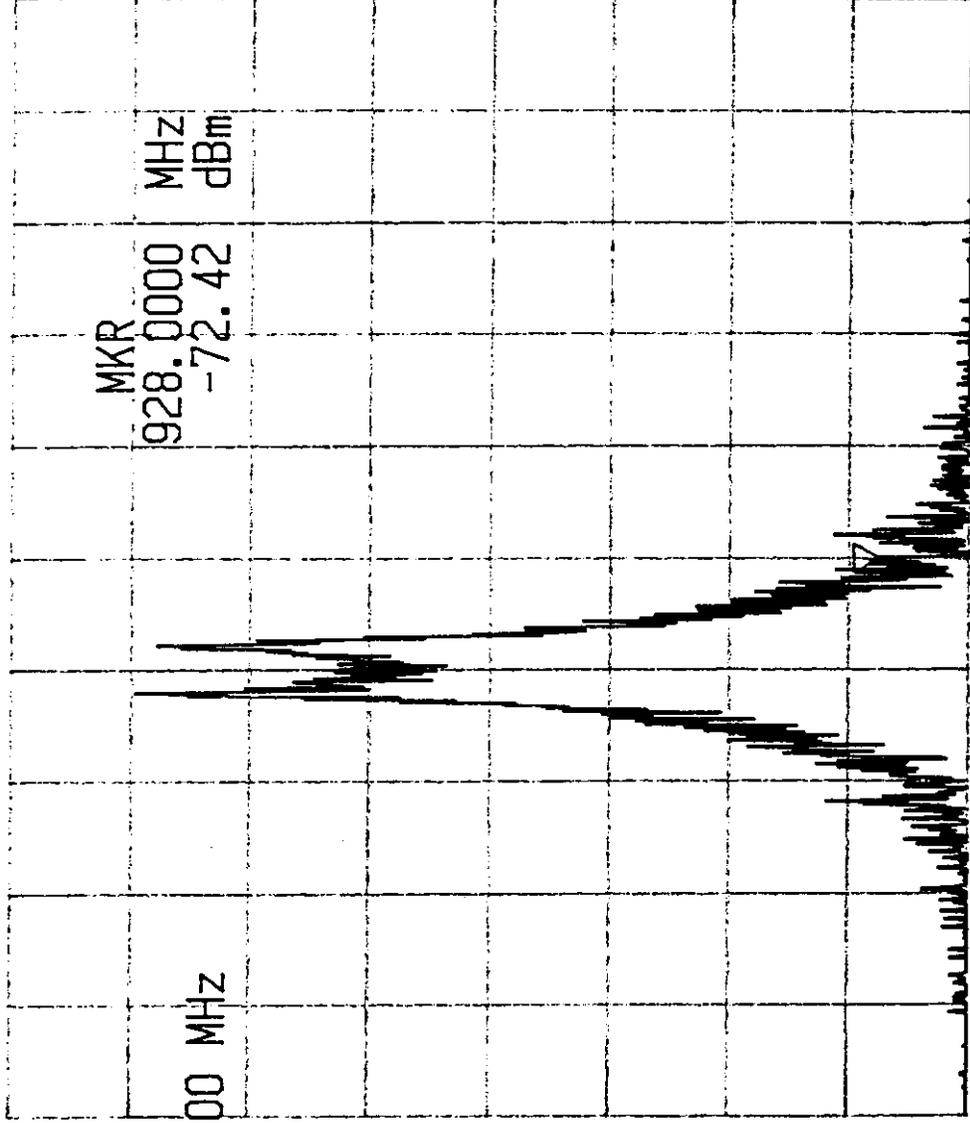
ENG - 0211
198.4.11

REF 0.0 dBm
10dB/

CENTER
928.0000 MHz

ATT 10 dB

A_write B_blank



RBW 1 kHz
VBW 1 kHz
SWP 1.0 s

CENTER 928.0000 MHz

SPAN 0.500 MHz

WC201Z

BASE POWER SPECTRUM

CH140

TOTAL PWR: -6.5 dBm
MAX DEVIATION: ±13 kHz
at 1 kHz

DFEN9-0211

'98.4.11

LIST OF MEASUREMENT EQUIPMENTS

| ENG-NO | TEST EQUIPMENT | TYPE | MFR | SERIAL NO. | CATEGORY | CODE |
|--------|-------------------|----------------|-----------|------------|----------|------|
| 1287 | AMPLIFIER | AFS30010040020 | MITEQ | 138315 | 2171 | D |
| 1294 | ANTENNA (BILLOG) | CBL6111 | CHASE | 1057 | 2121 | D |
| 1602 | ANTENNA (DIPOLE) | 3120-B1 | EMCO | 0075 | | D |
| 1603 | ANTENNA (DIPOLE) | 3120-B2 | EMCO | 0076 | | D |
| 1604 | ANTENNA (DIPOLE) | 3120-B3 | EMCO | 0076 | | D |
| 1560 | ANTENNA (HORN) | 3115 | EMCO | 2167 | | D |
| 1388 | LISN | KNW407 | KYOURITSU | 8-833-21 | | 4 |
| 0682 | POWER SUPPLY | AA300 | TAKASAGO | 31783013 | 2171 | 4 |
| 1305 | SPECTRUM ANALYZER | 8566B | HP | 2504A01433 | 2171 | D |
| 0205 | SPECTRUM ANALYZER | R3265 | ADVANTEST | 25060158 | 2171 | 4 |