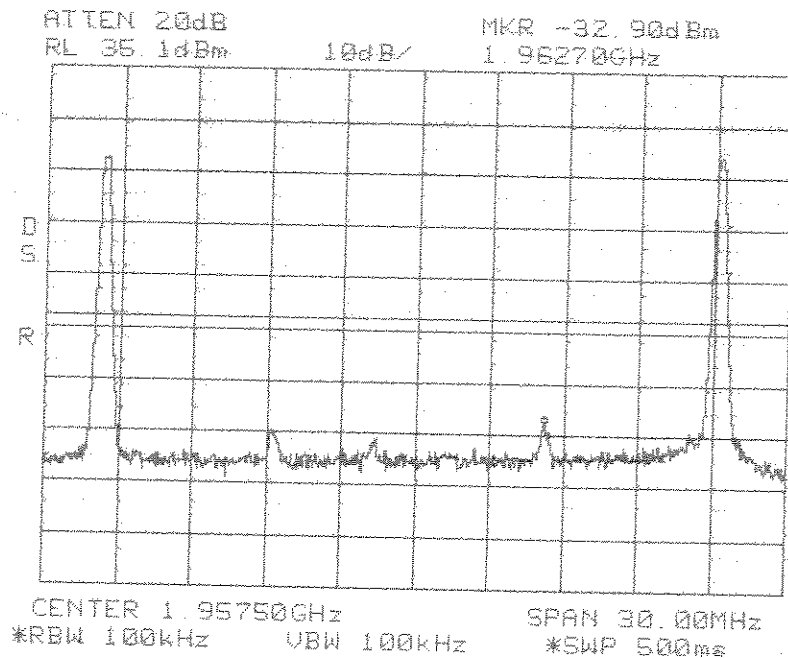
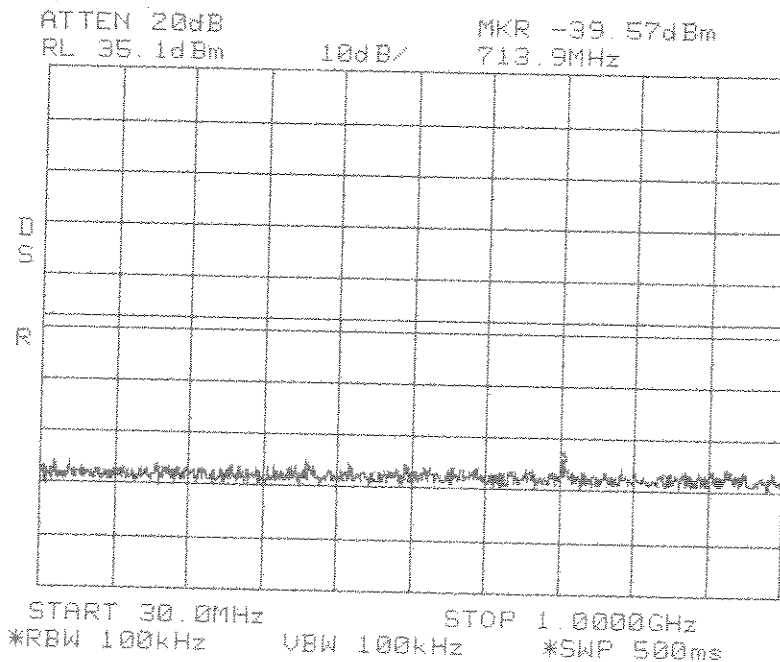


Center: 1957.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



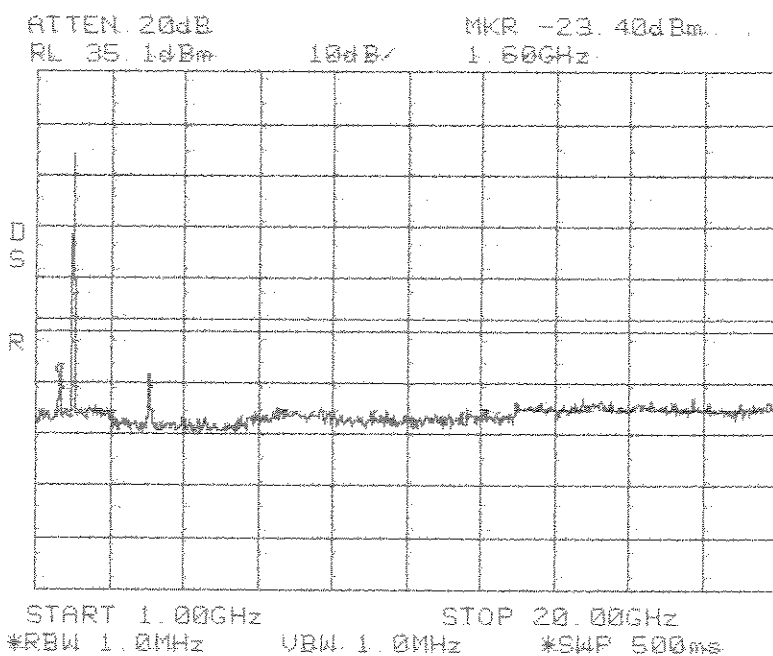
**Intermodulation
Apart
GSM
PCS 1900 MHz
DBE Band**



**Intermodulation
Apart
GSM
PCS 1900 MHz
DBE Band**

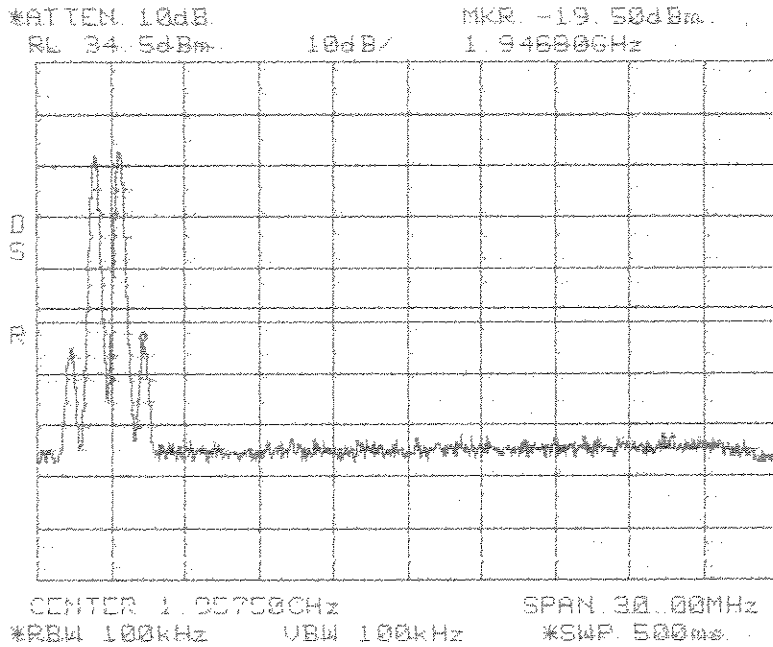
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

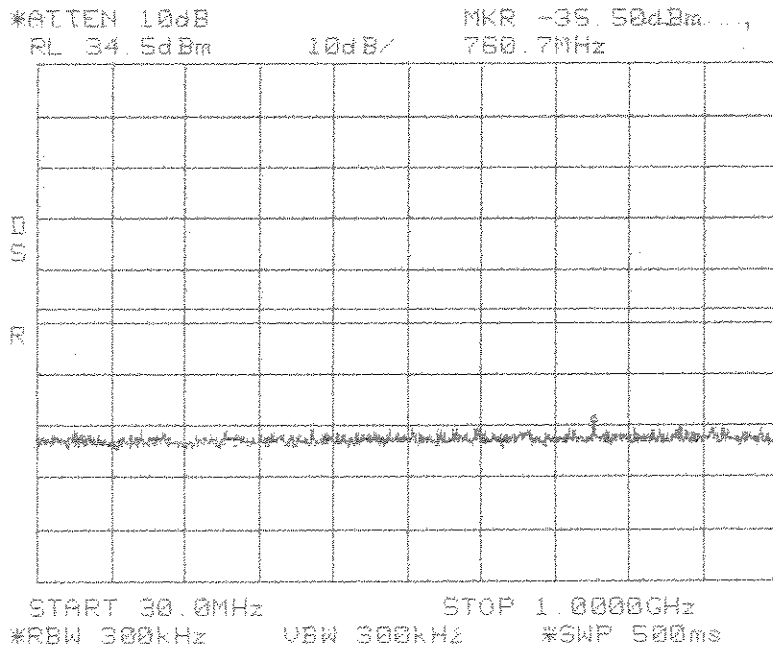


**Intermodulation
Apart
GSM
PCS 1900 MHz
DBE Band**

Center: 1957.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



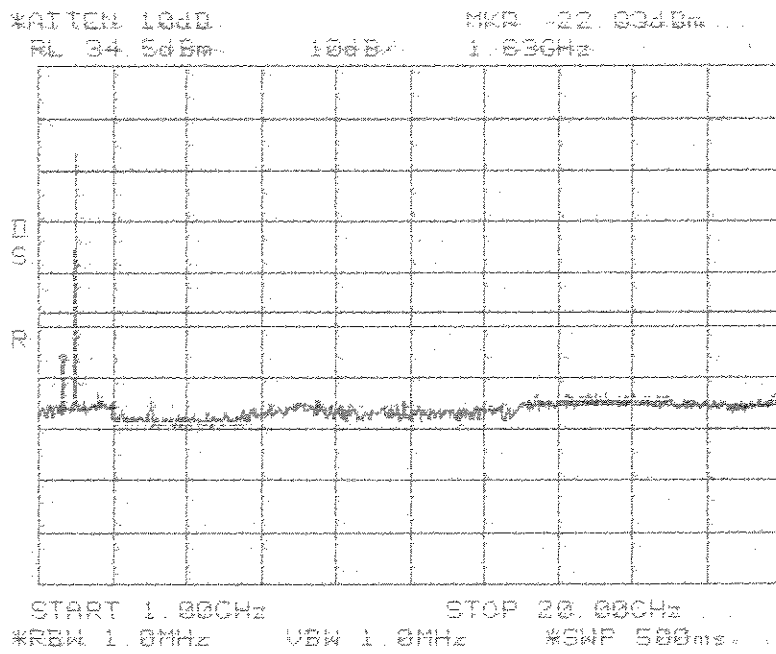
**Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
DBE Band**



**Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
DBE Band**

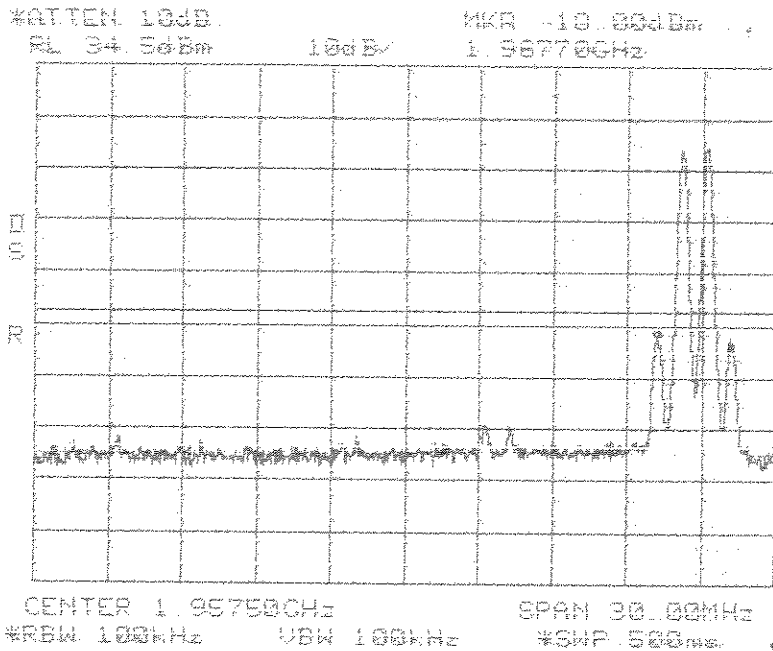
Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

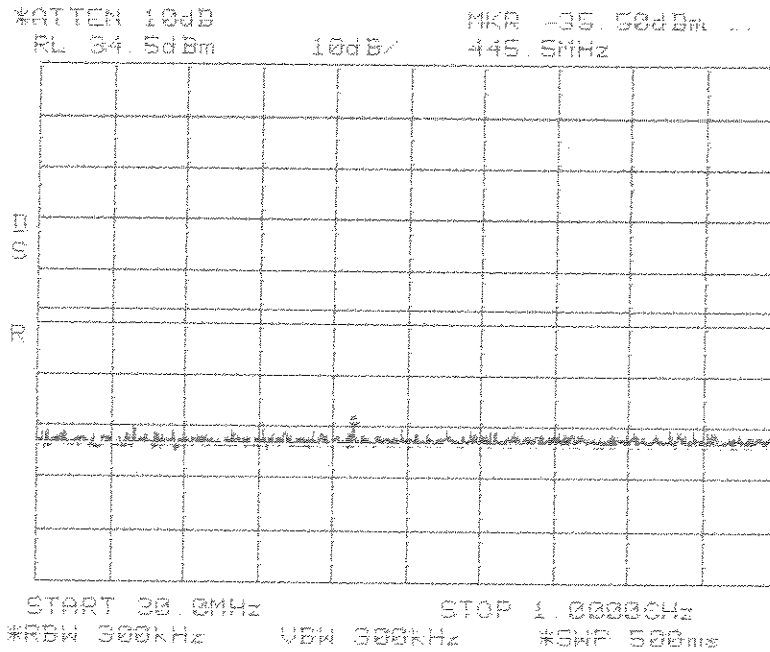


Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
DBE Band

Center: 1957.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



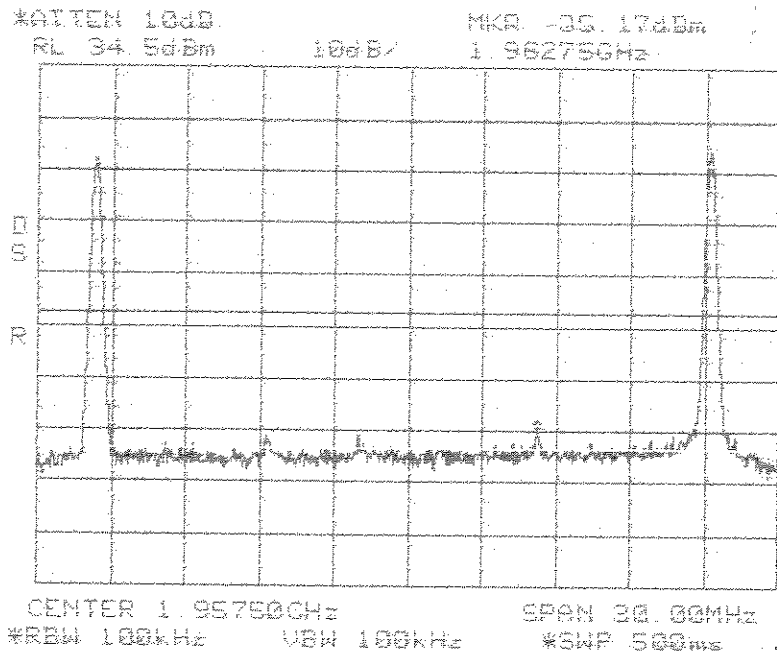
**Intermodulation
Close
Upper
EDGE
PCS 1900 MHz
DBE Band**



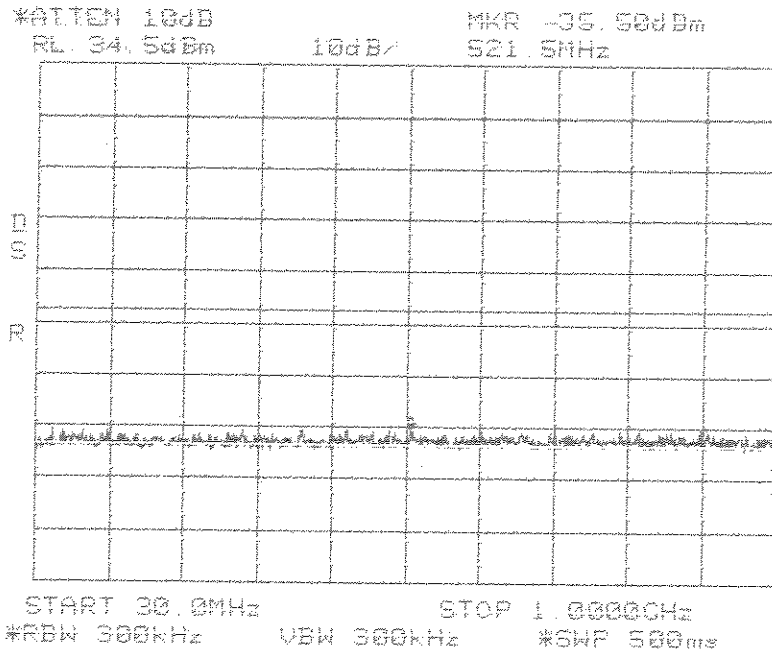
**Intermodulation
Close
Upper
EDGE
PCS 1900 MHz
DBE Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Center: 1957.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



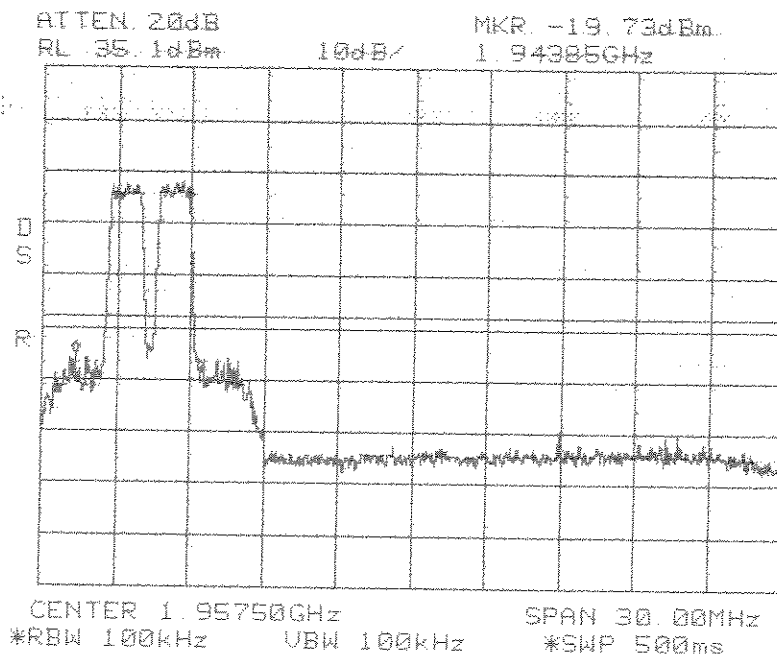
**Intermodulation
Apart
EDGE
PCS 1900 MHz
DBE Band**



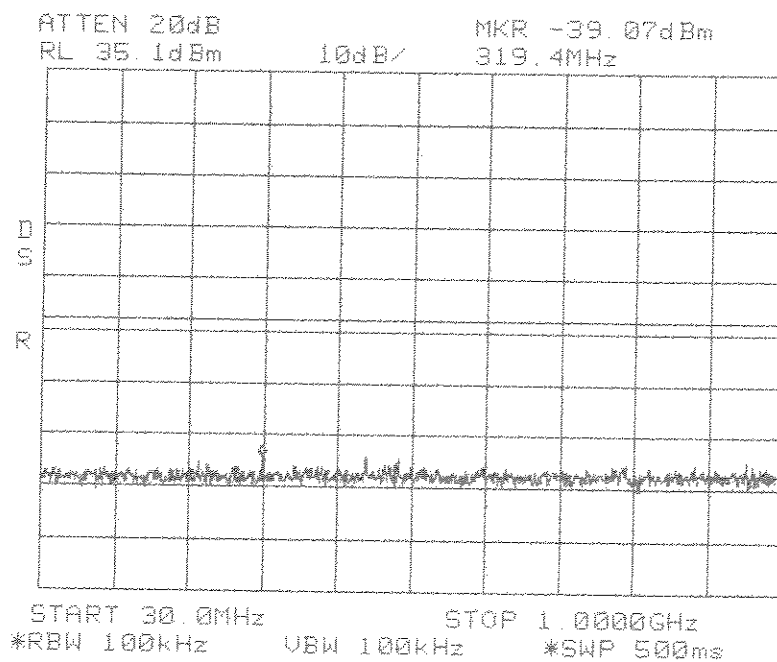
**Intermodulation
Apart
EDGE
PCS 1900 MHz
DBE Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Center: 1957.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



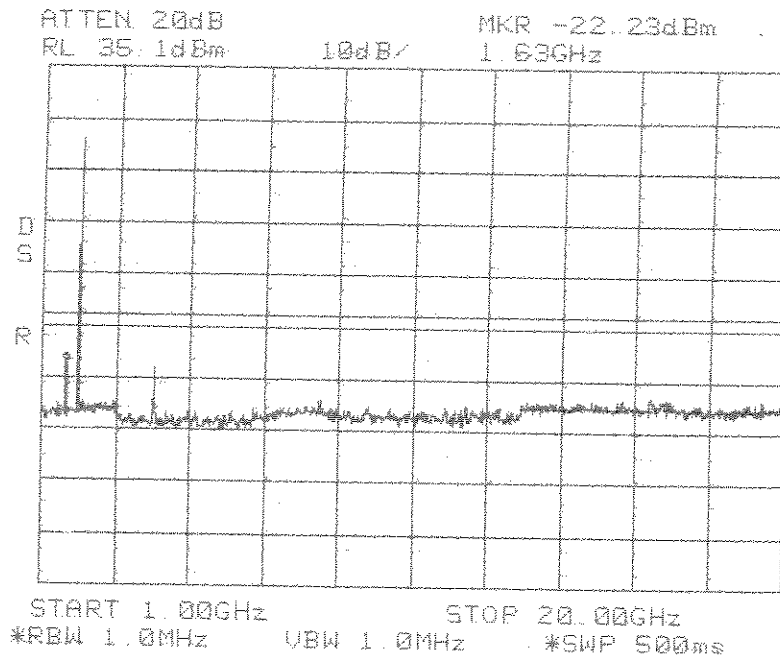
**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
DBE Band**



**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
DBE Band**

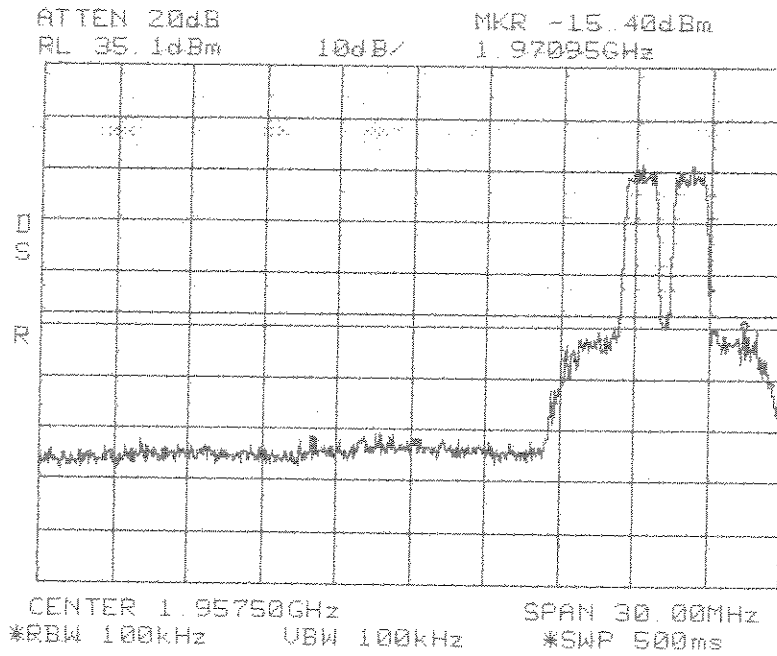
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

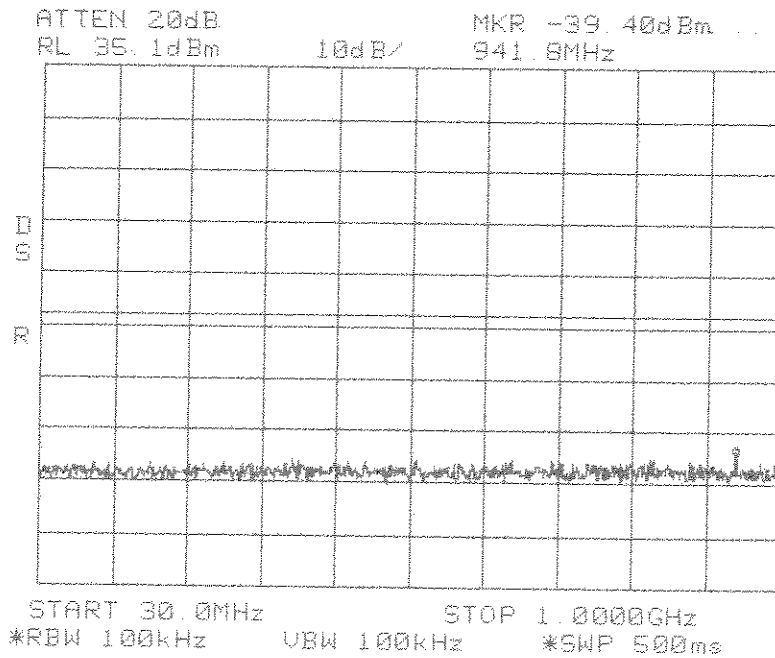


**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
DBE Band**

Center: 1957.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



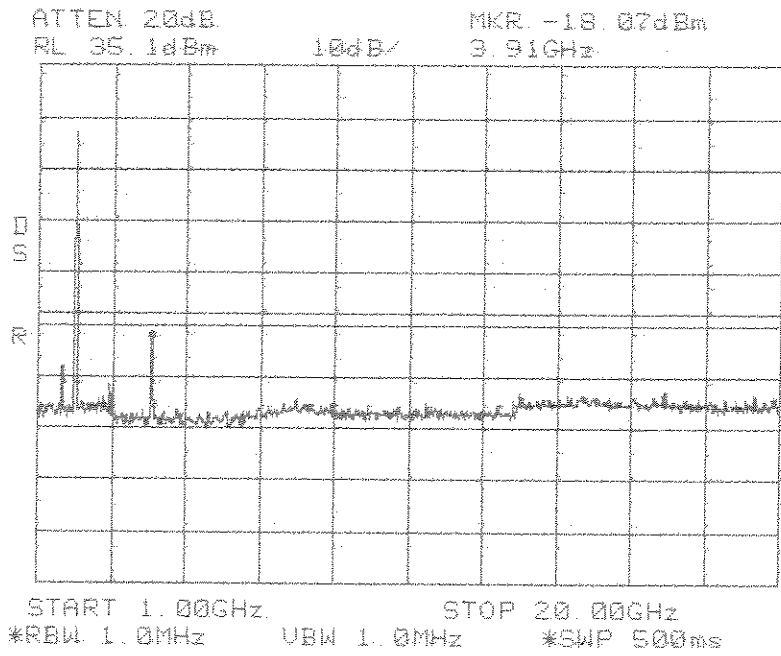
**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
DBE Band**



**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
DBE Band**

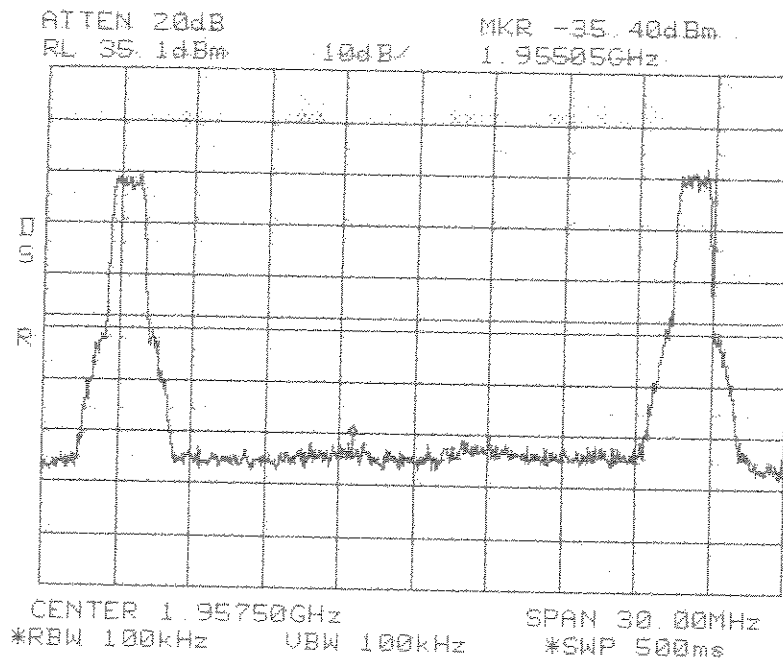
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

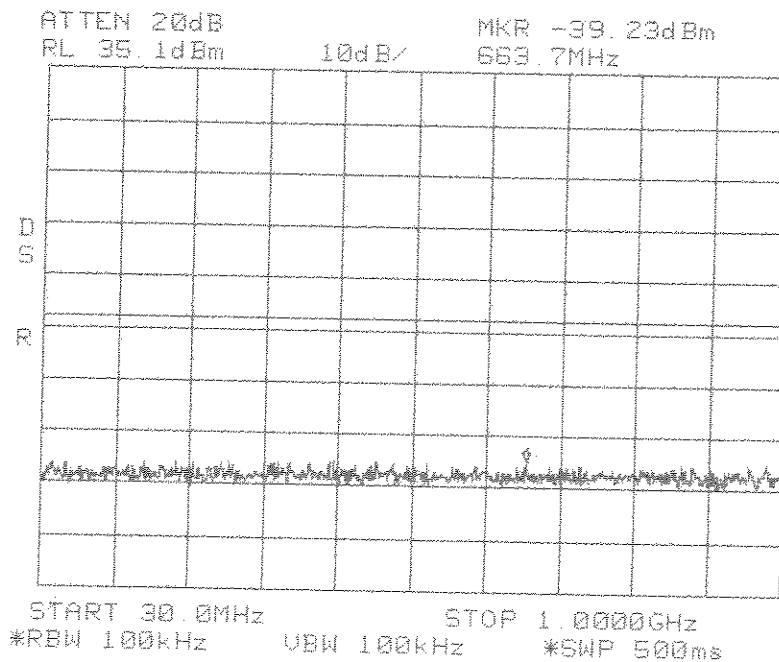


**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
DBE Band**

Center: 1957.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



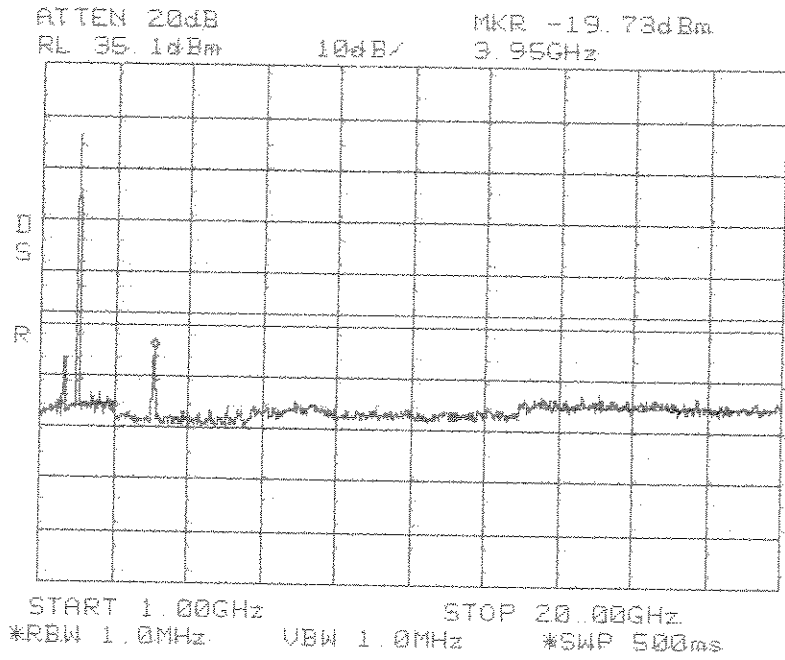
**Intermodulation
Apart
CDMA
PCS 1900 MHz
DBE Band**



**Intermodulation
Apart
CDMA
PCS 1900 MHz
DBE Band**

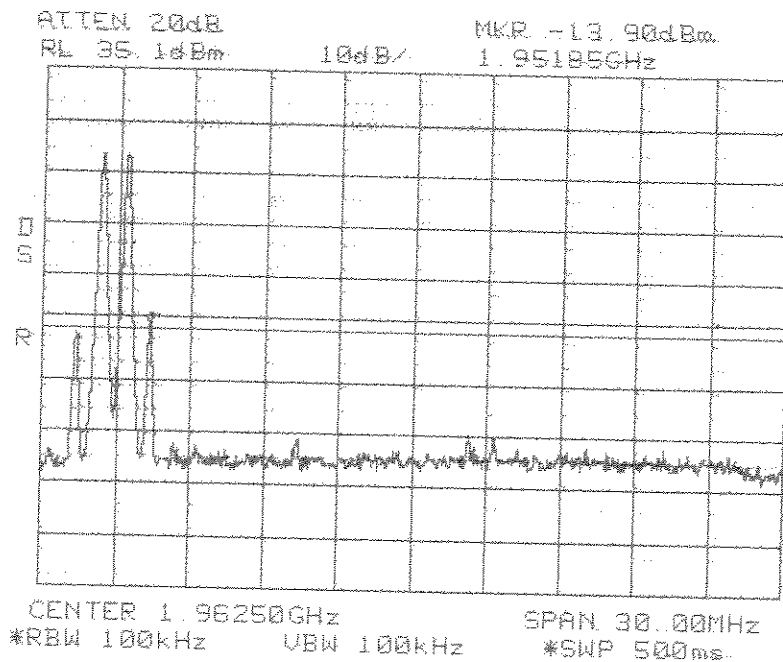
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

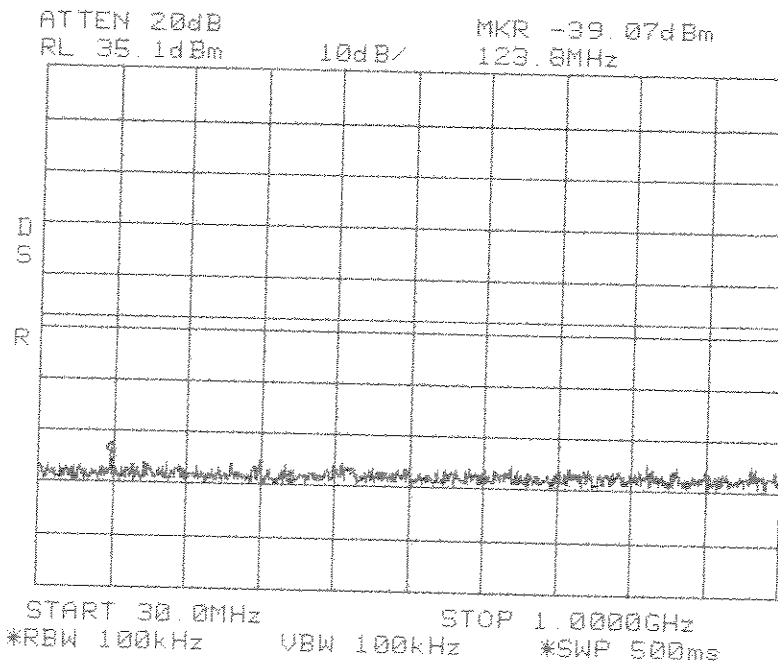


**Intermodulation
Apert
CDMA
PCS 1900 MHz
DBE Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



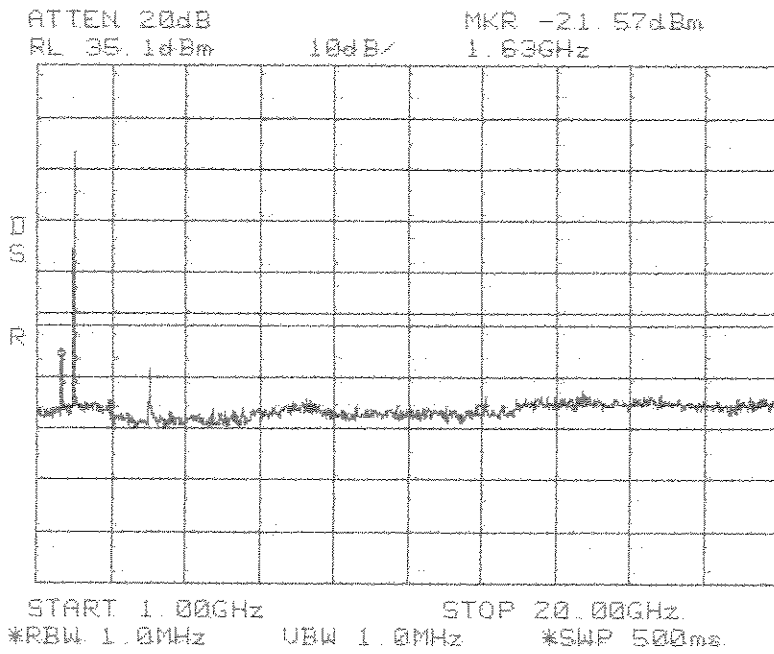
**Intermodulation
Close
Lower
TDMA
PCS 1900 MHz
BEF Band**



**Intermodulation
Close
Lower
TDMA
PCS 1900 MHz
BEF Band**

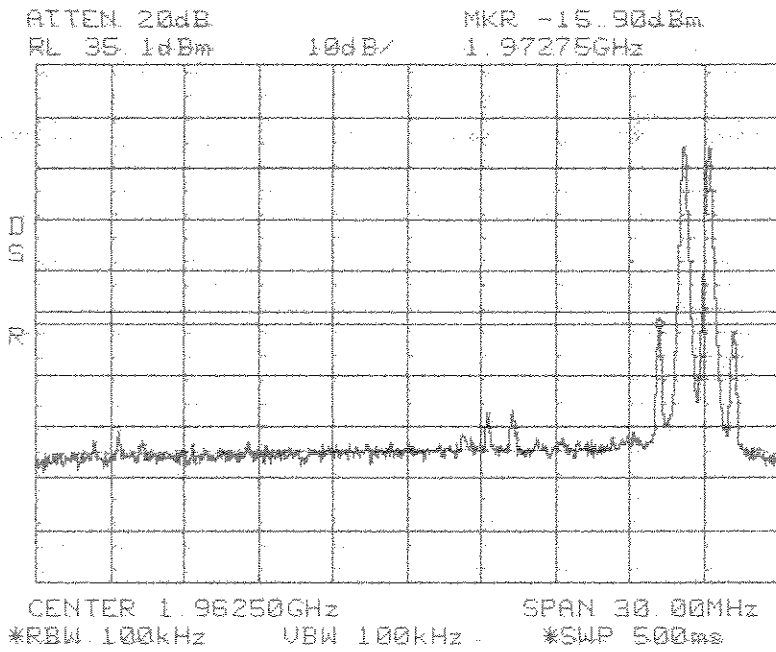
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

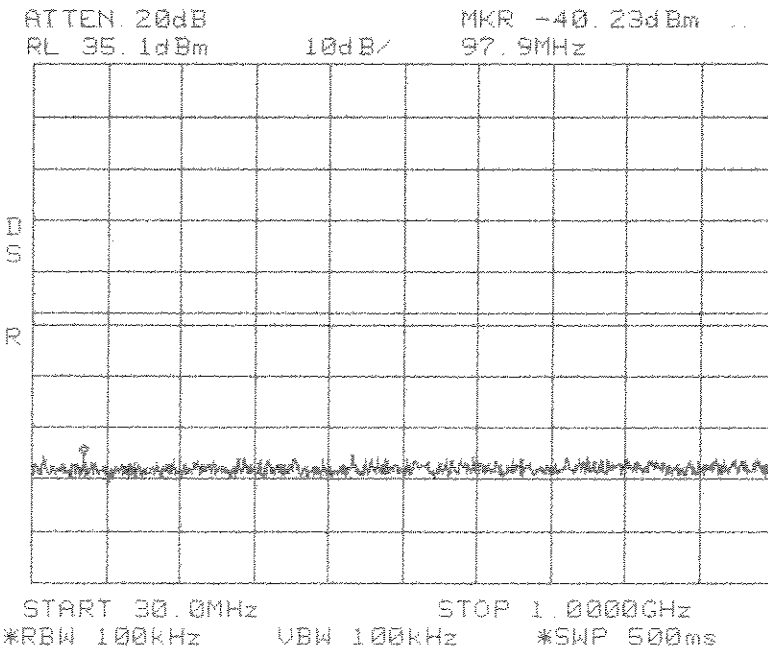


**Intermodulation
Close
Lower
TDMA
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
 Span: 30 MHz
 RBW/VBW: 100 kHz



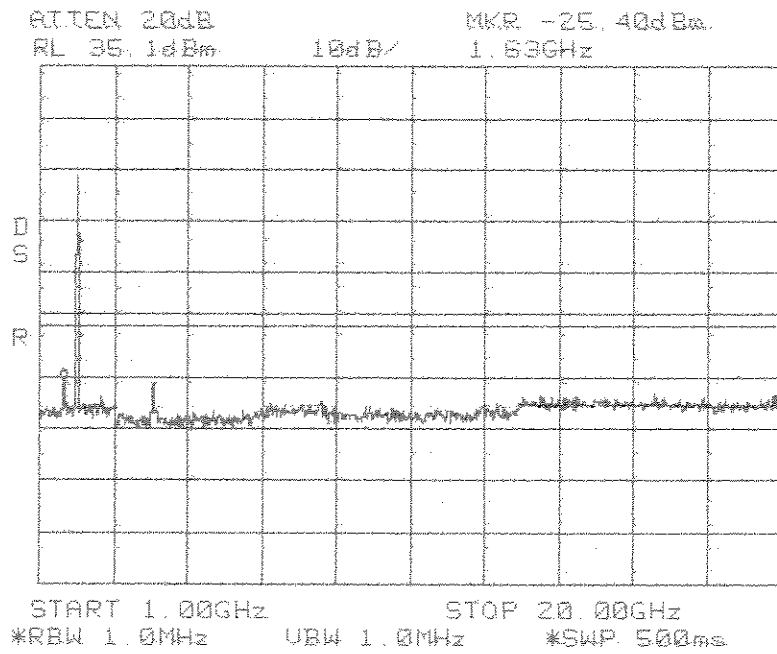
**Intermodulation
 Close
 Upper
 TDMA
 PCS 1900 MHz
 BEF Band**



**Intermodulation
 Close
 Upper
 TDMA
 PCS 1900 MHz
 BEF Band**

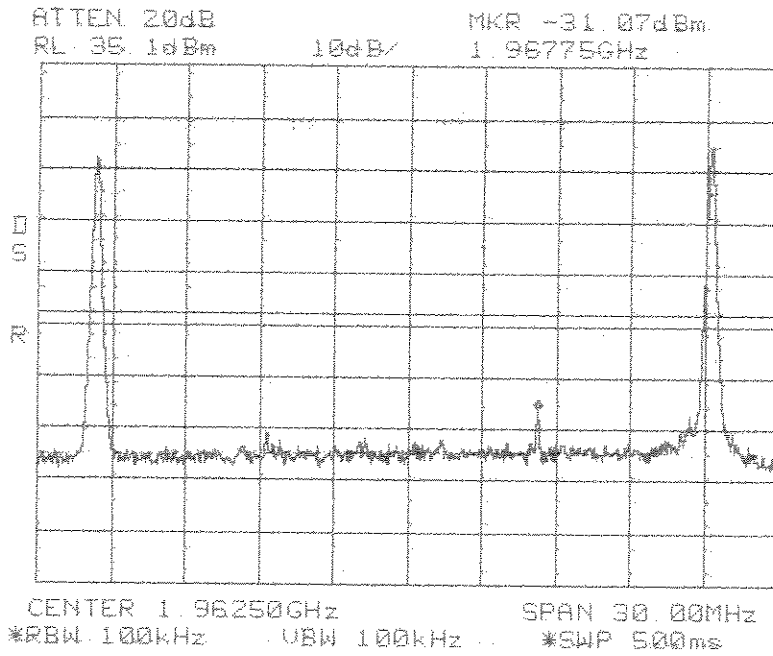
Span: 30 MHz to 1 GHz
 RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

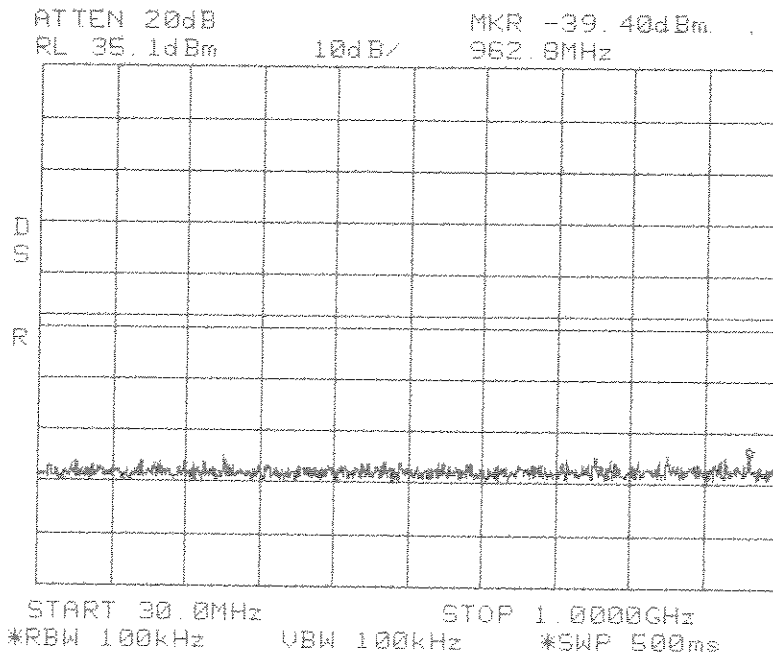


**Intermodulation
Close
Upper
TDMA
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



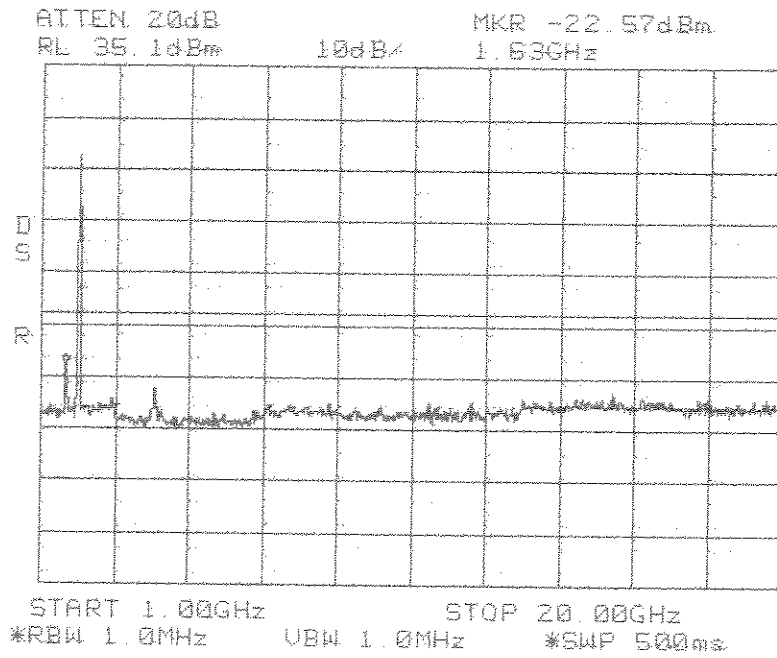
**Intermodulation
Apart
TDMA
PCS 1900 MHz
BEF Band**



**Intermodulation
Apart
TDMA
PCS 1900 MHz
BEF Band**

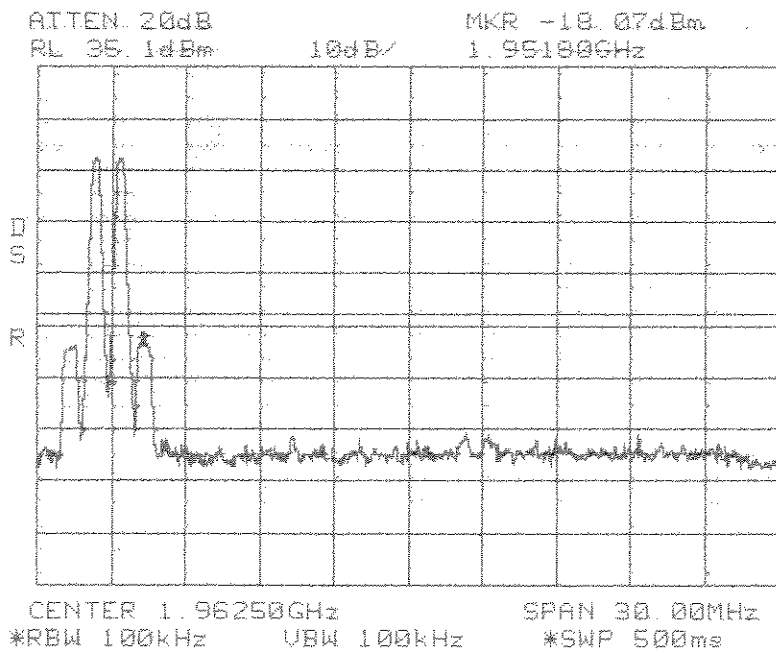
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

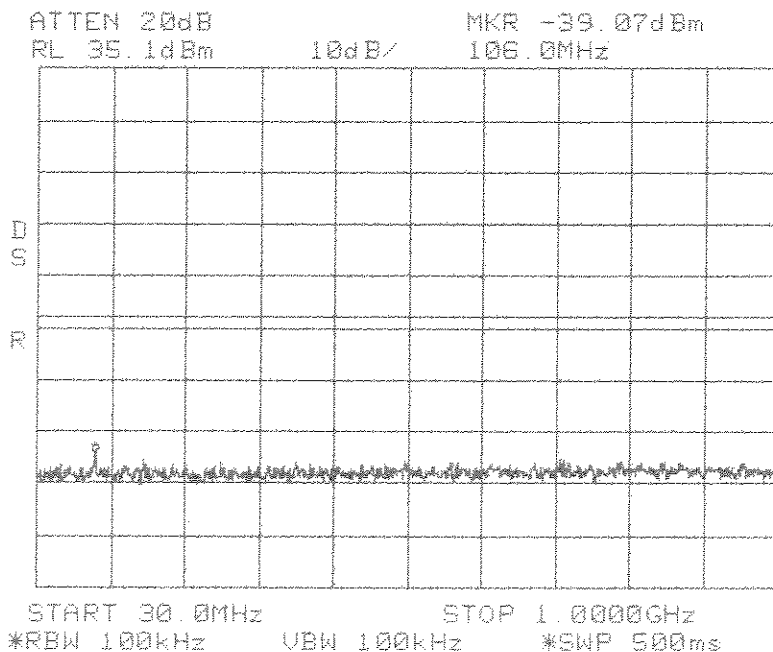


**Intermodulation
Apart
TDMA
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



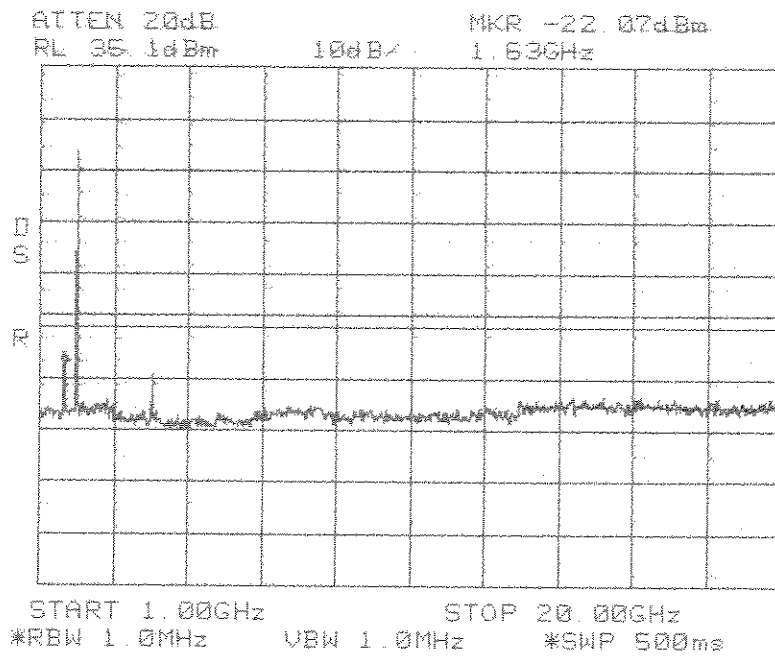
**Intermodulation
Close
Lower
GSM
PCS 1900 MHz
BEF Band**



**Intermodulation
Close
Lower
GSM
PCS 1900 MHz
BEF Band**

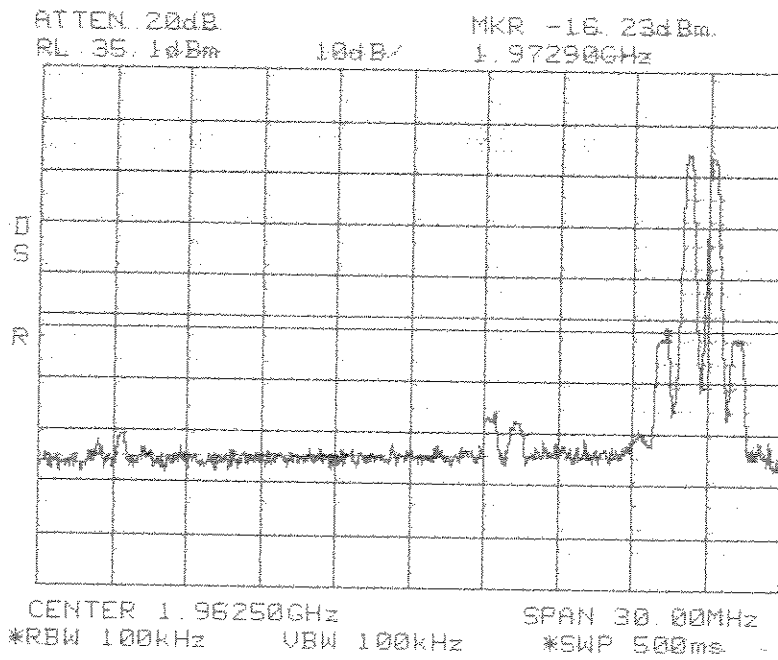
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

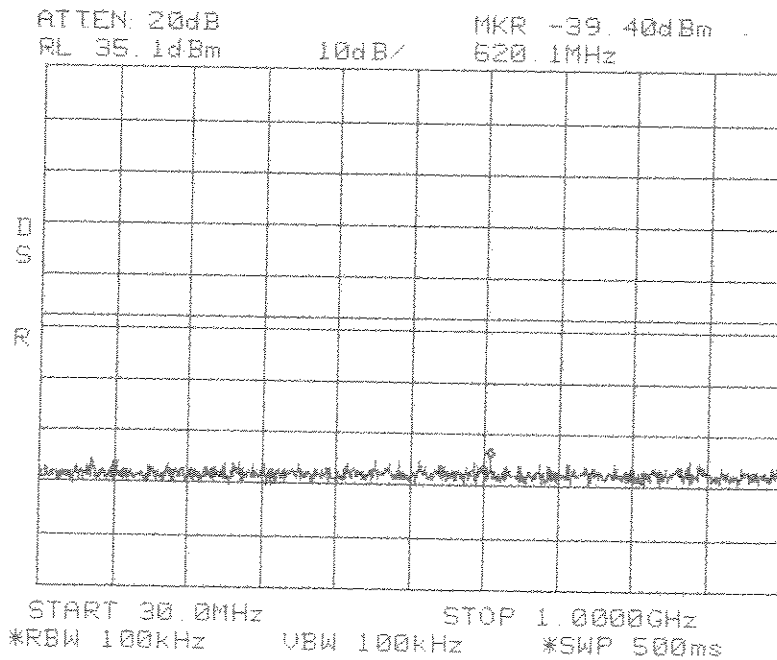


**Intermodulation
Close
Lower
GSM
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



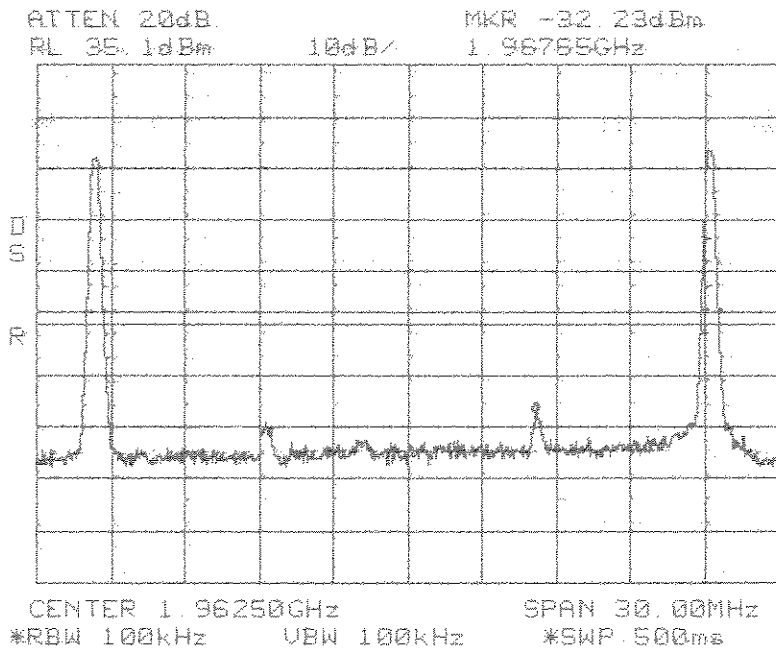
**Intermodulation
Close
Upper
GSM
PCS 1900 MHz
BEF Band**



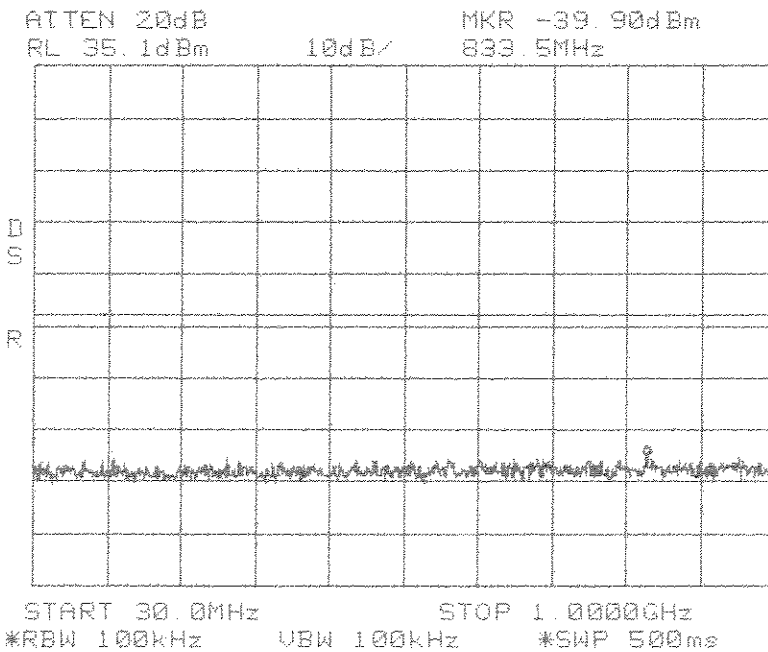
**Intermodulation
Close
Upper
GSM
PCS 1900 MHz
BEF Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



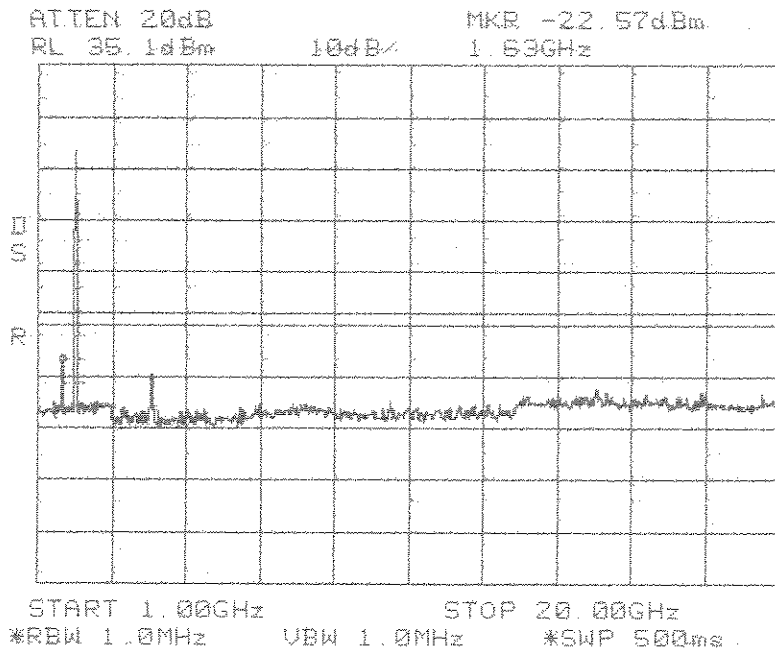
**Intermodulation
Apart
GSM
PCS 1900 MHz
BEF Band**



**Intermodulation
Apart
GSM
PCS 1900 MHz
BEF Band**

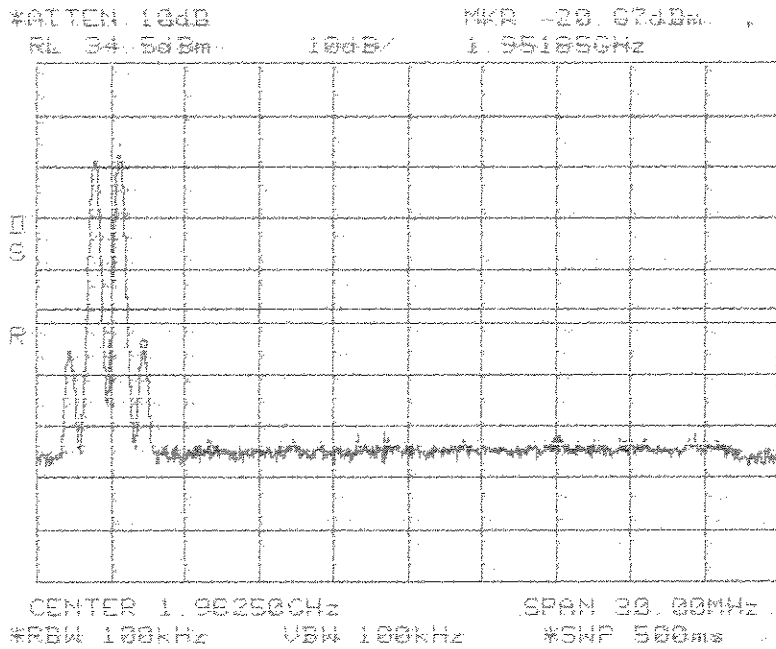
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

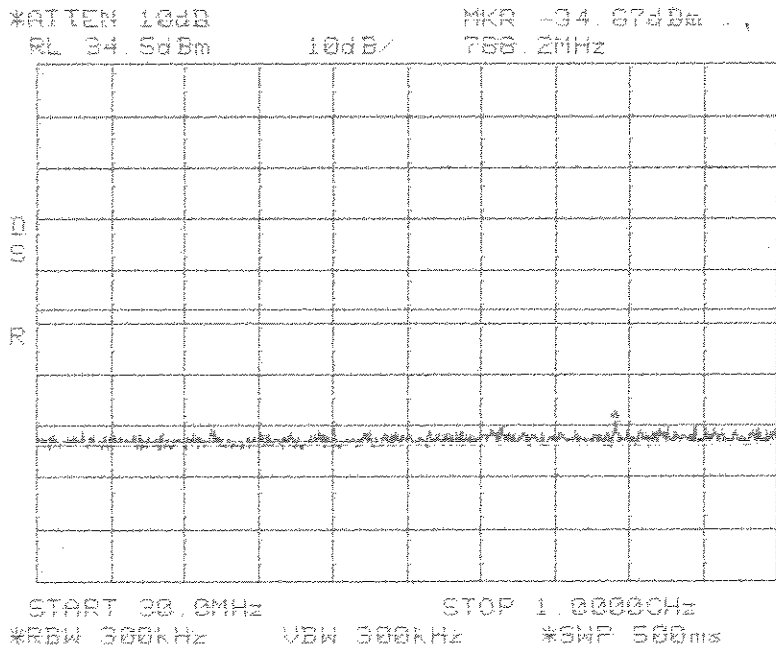


**Intermodulation
Apart
GSM
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



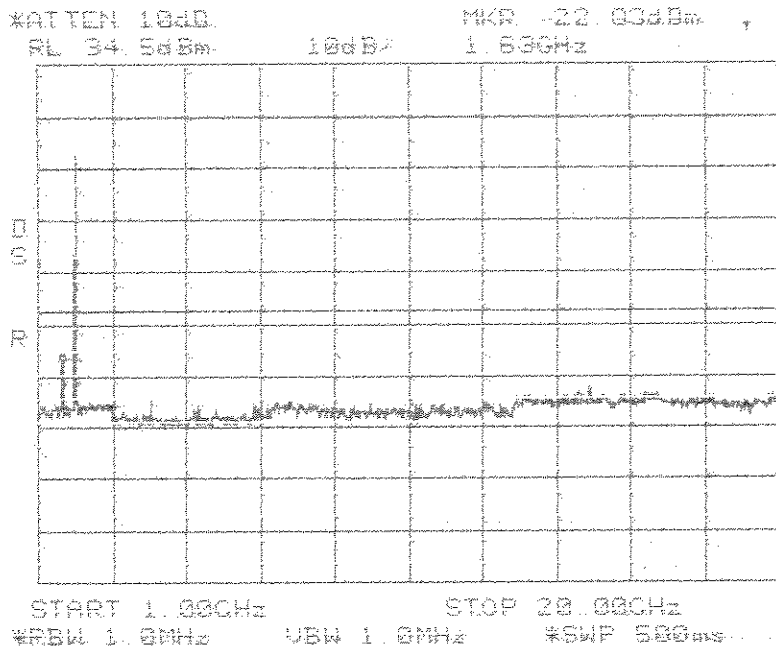
**Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
BEF Band**



**Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
BEF Band**

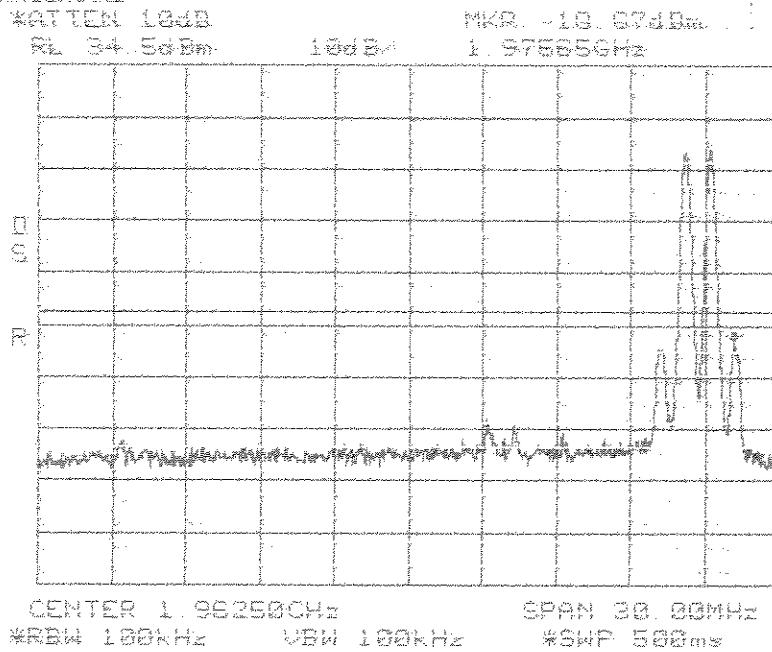
Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

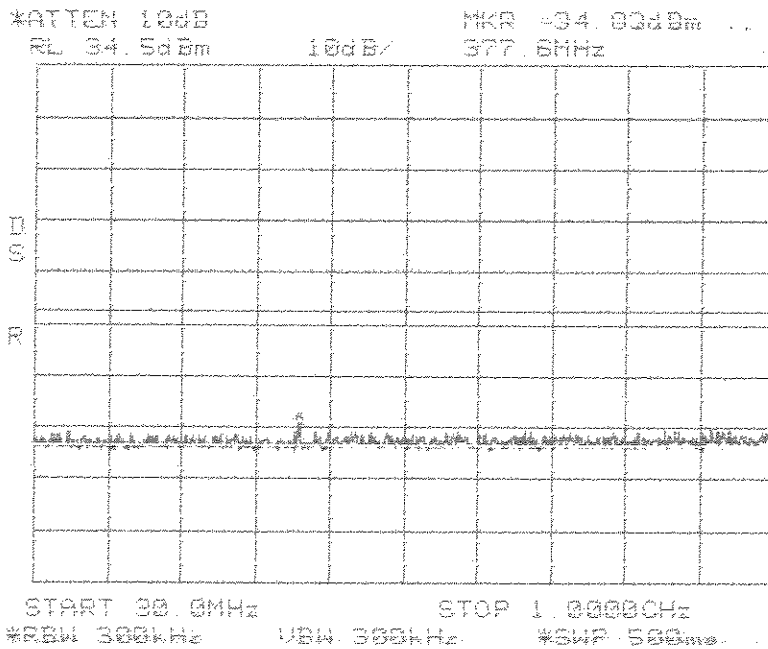


Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
BEF Band

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



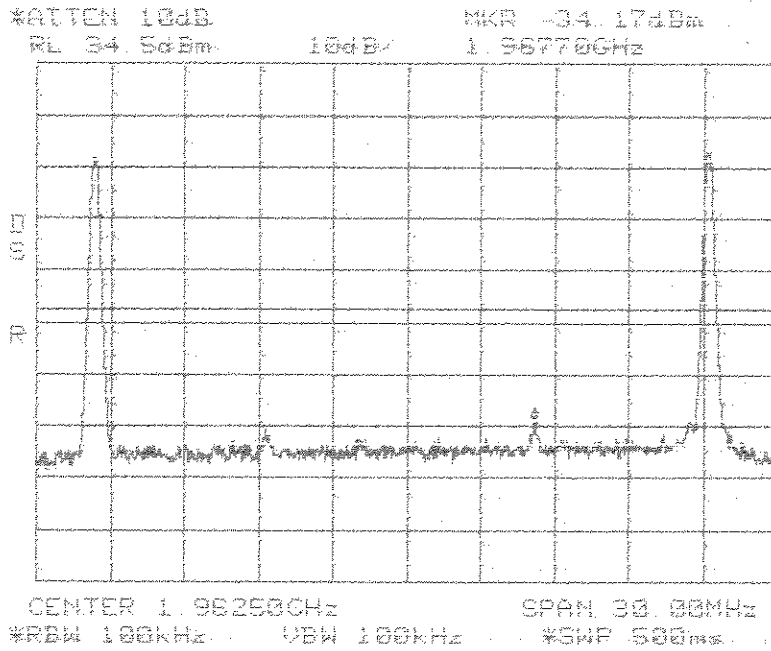
**Intermodulation
Close
Upper
EDGE
PCS 1900 MHz
BEF Band**



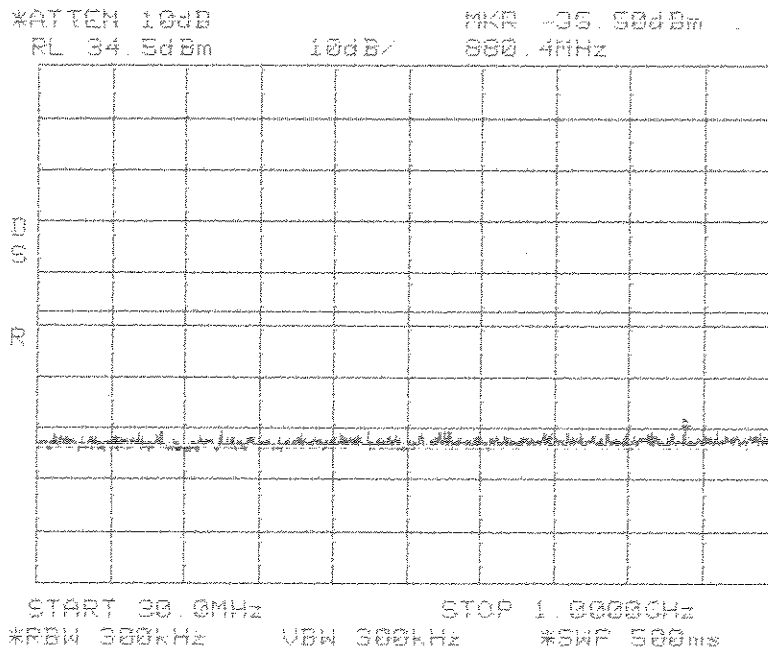
**Intermodulation
Close
Upper
EDGE
PCS 1900 MHz
BEF Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



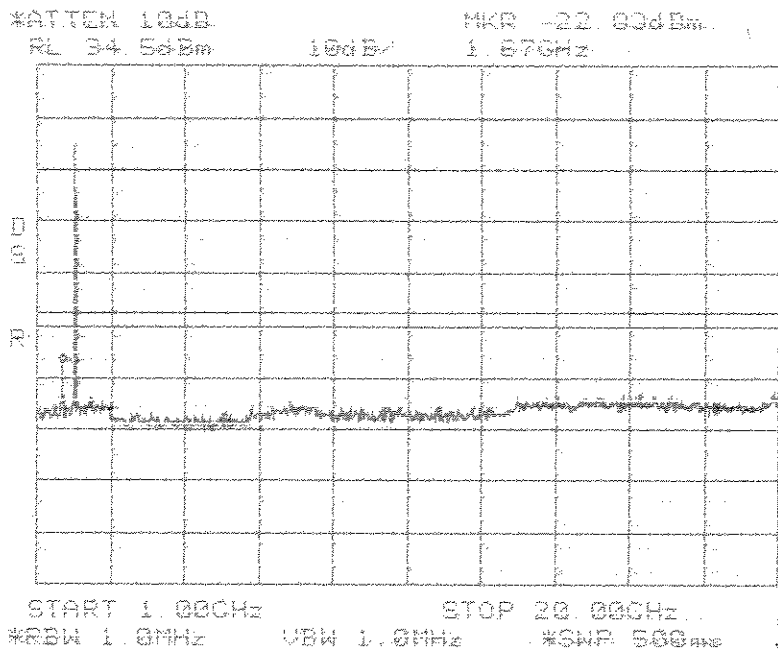
**Intermodulation
Apart
EDGE
PCS 1900 MHz
BEF Band**



**Intermodulation
Apart
EDGE
PCS 1900 MHz
BEF Band**

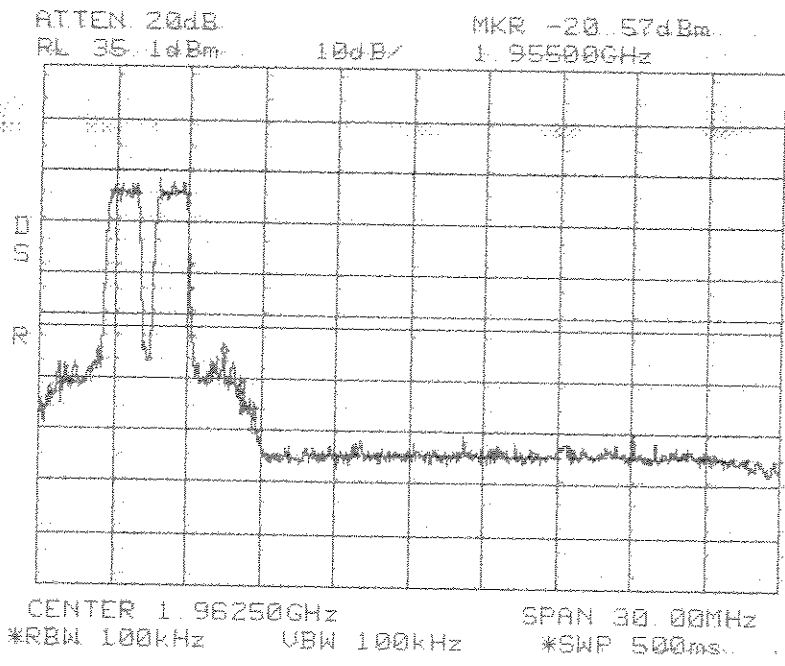
Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

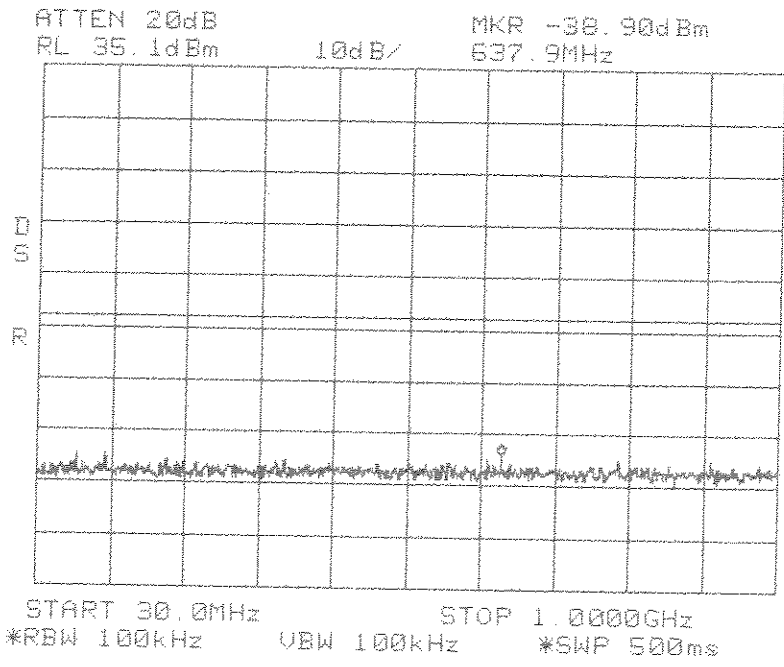


**Intermodulation
Apart
EDGE
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



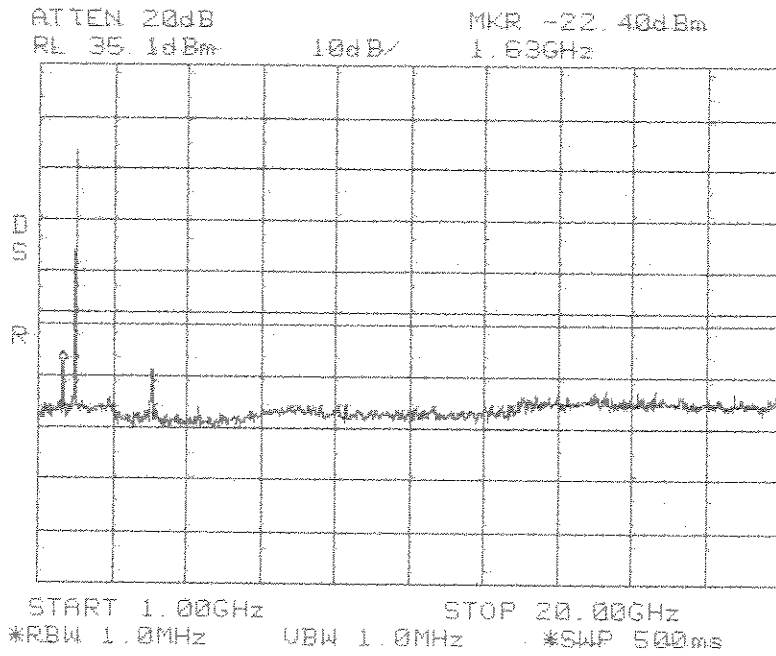
**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
BEF Band**



**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
BEF Band**

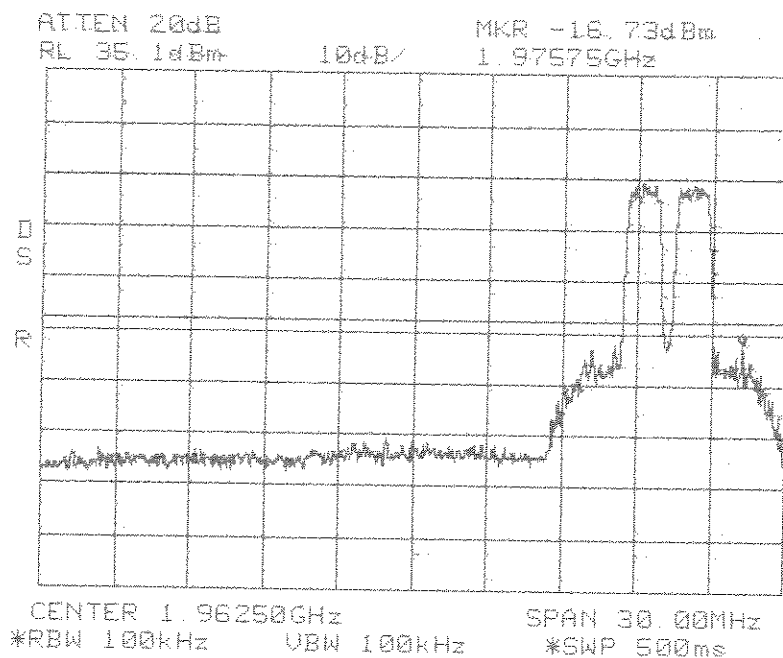
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

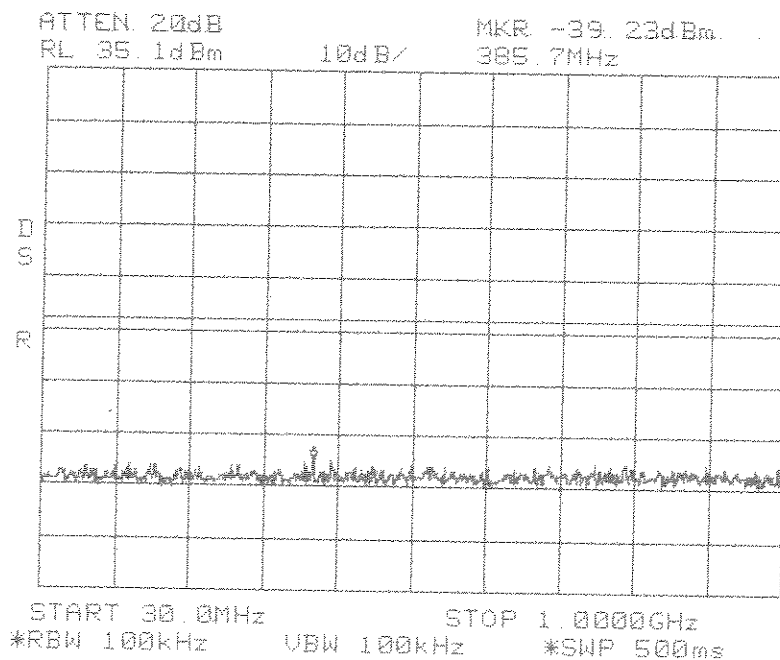


**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



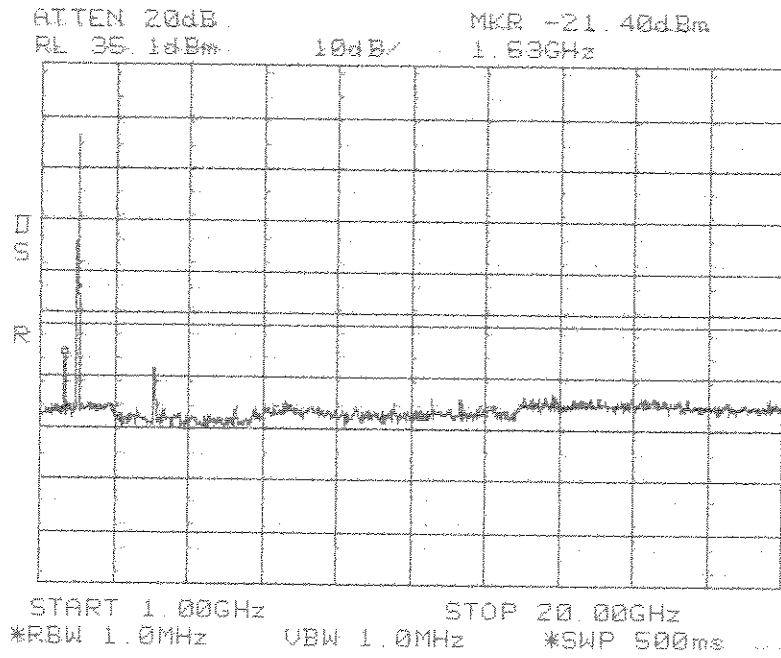
**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
BEF Band**



**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
BEF Band**

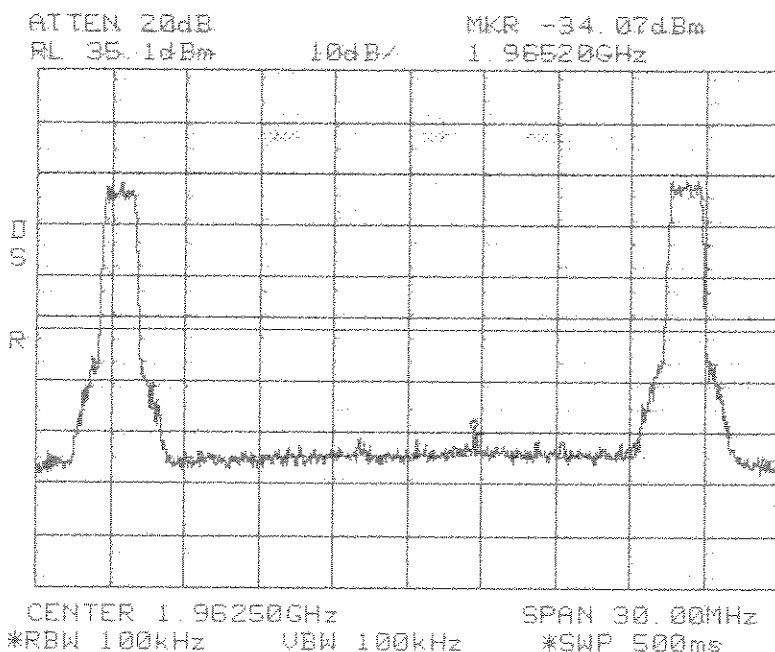
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

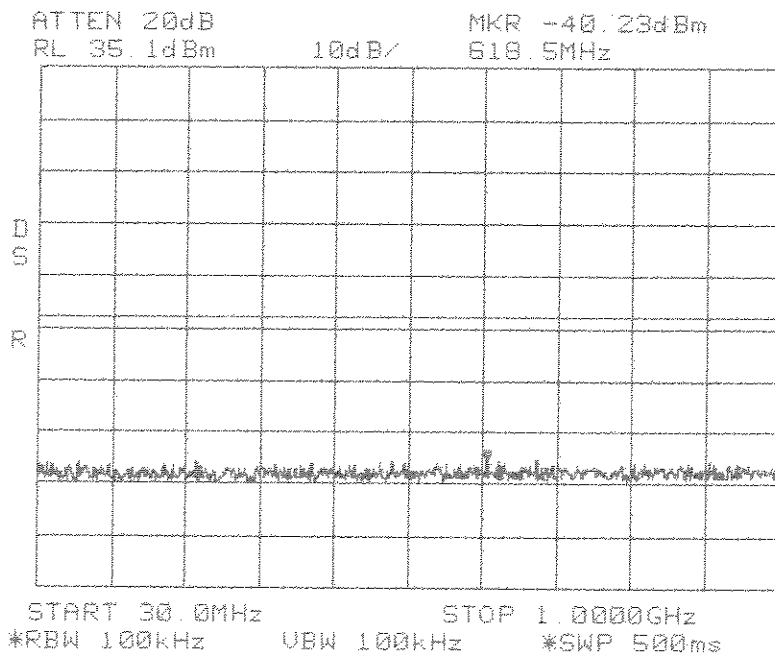


**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
BEF Band**

Center: 1962.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



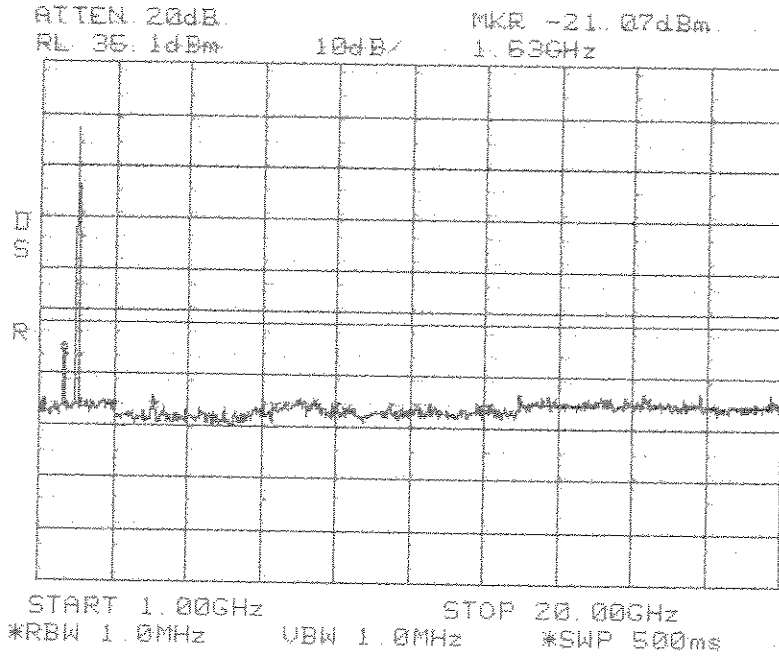
**Intermodulation
Apart
CDMA
PCS 1900 MHz
BEF Band**



**Intermodulation
Apart
CDMA
PCS 1900 MHz
BEF Band**

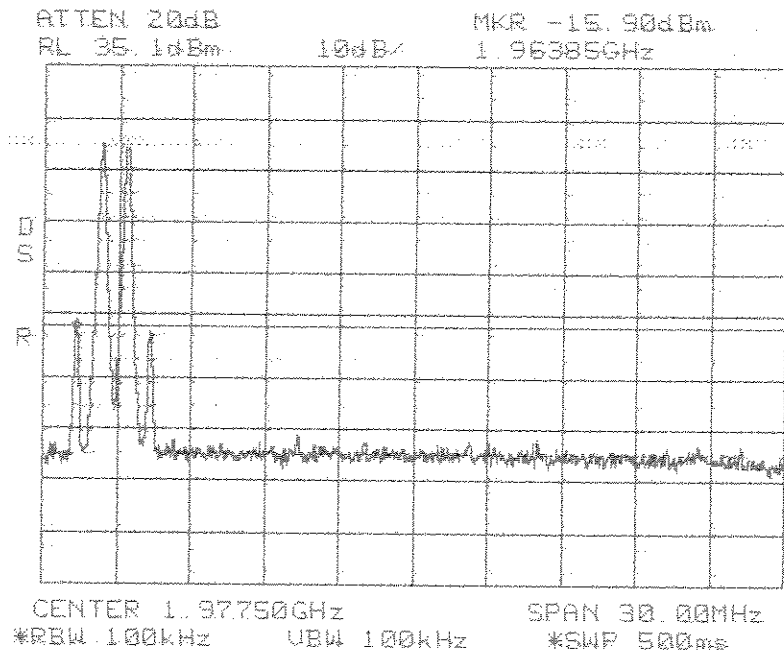
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

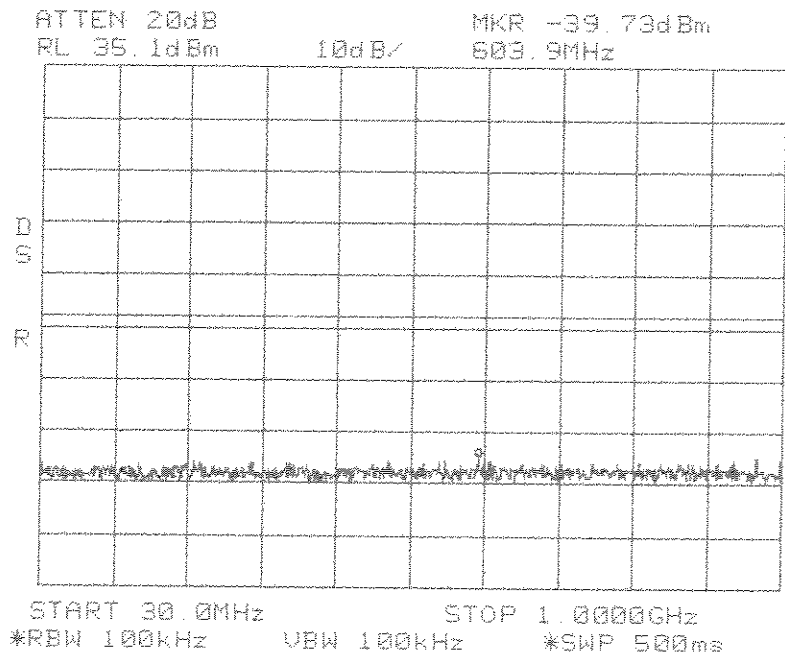


**Intermodulation
Apart
CDMA
PCS 1900 MHz
BEF Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



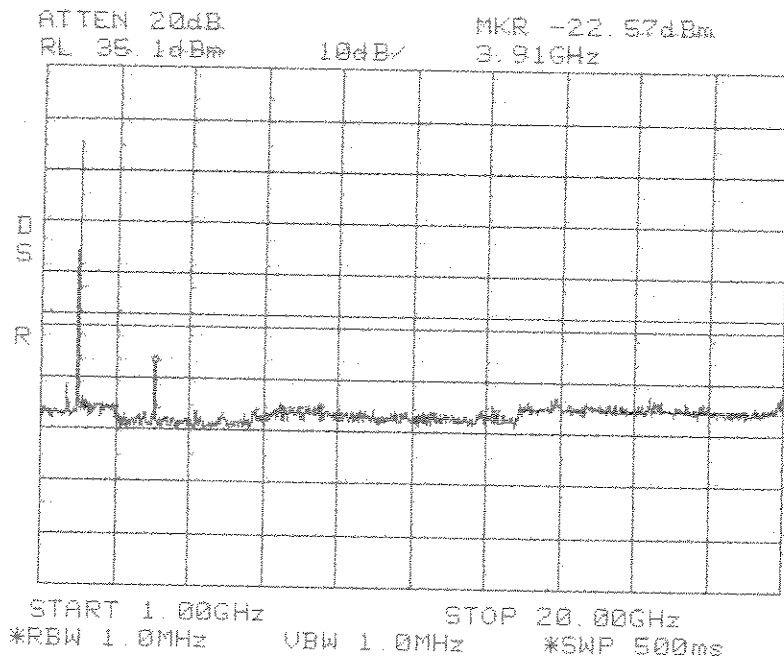
**Intermodulation
Close
Lower
TDMA
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Lower
TDMA
PCS 1900 MHz
EFC Band**

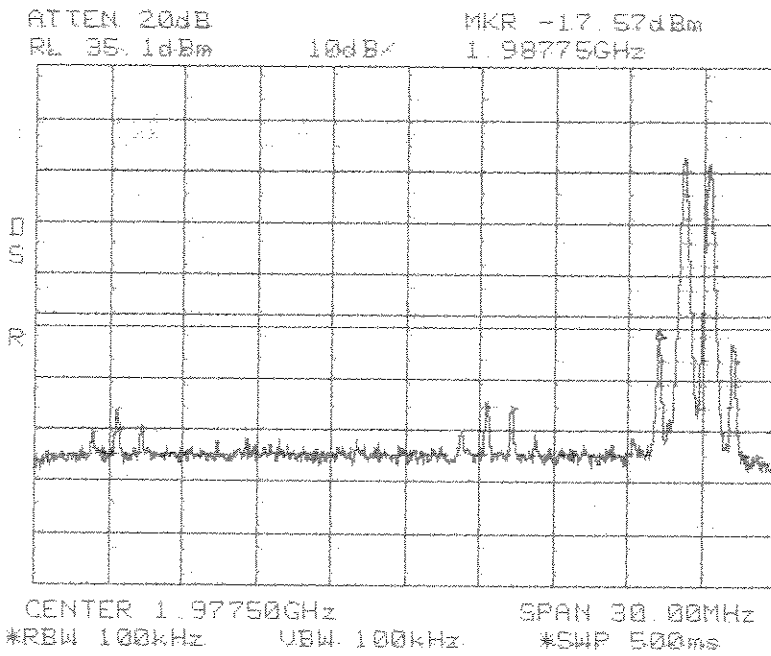
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

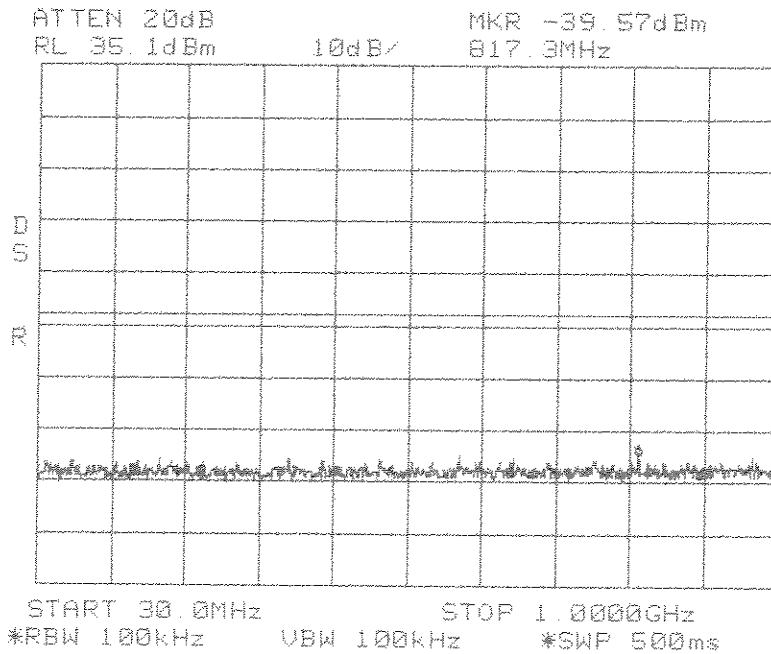


**Intermodulation
Close
Lower
TDMA
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



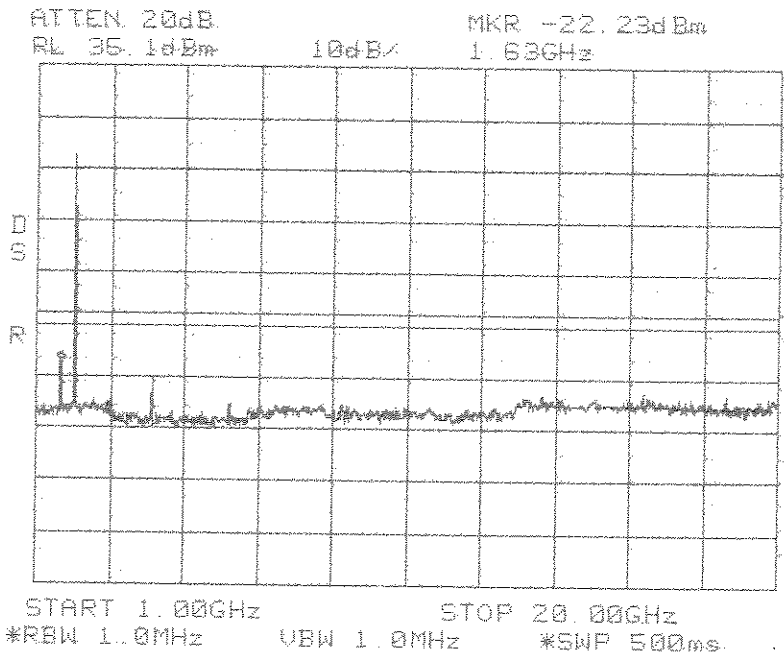
**Intermodulation
Close
Upper
TDMA
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Upper
TDMA
PCS 1900 MHz
EFC Band**

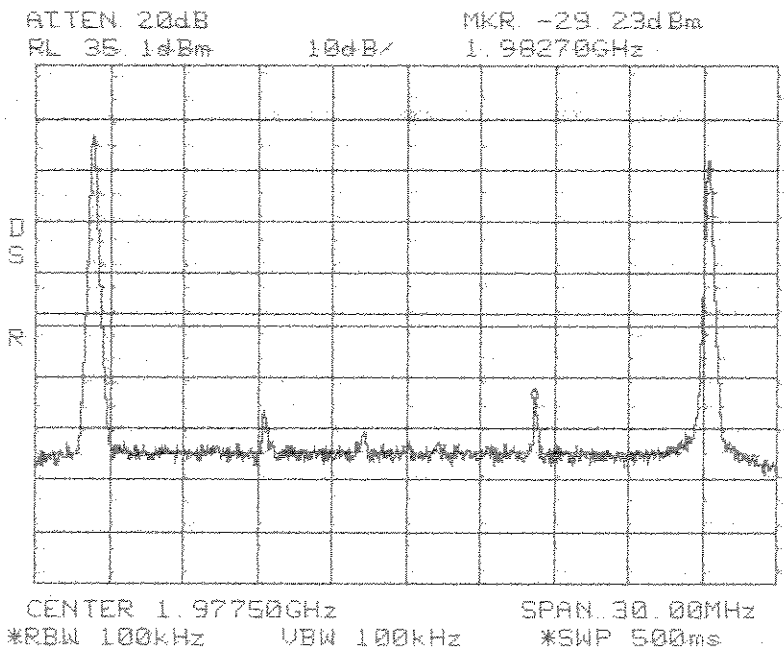
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

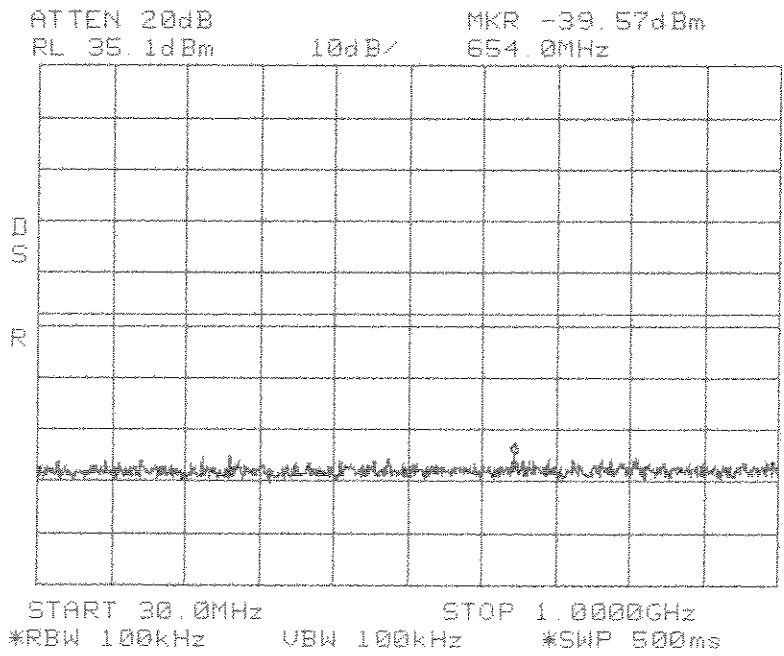


**Intermodulation
Close
Upper
TDMA
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



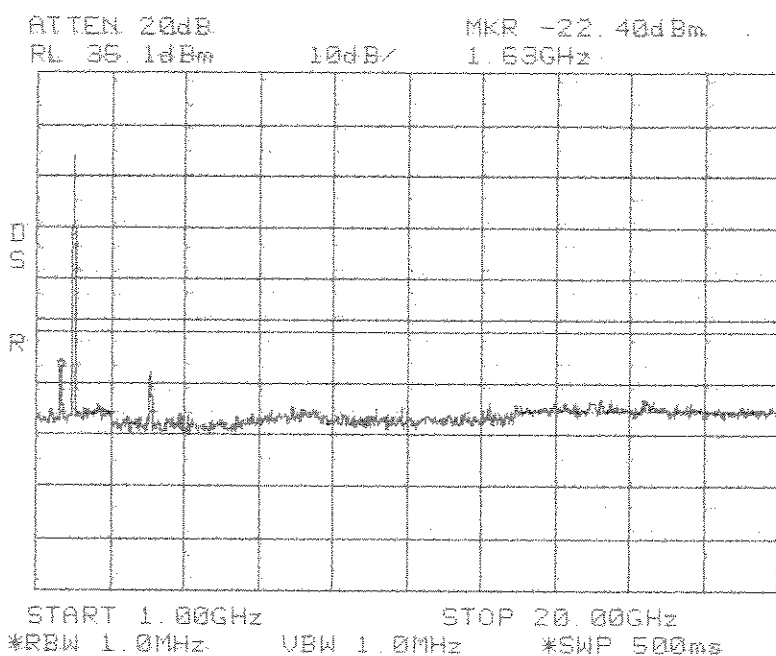
**Intermodulation
Apart
TDMA
PCS 1900 MHz
EFC Band**



**Intermodulation
Apart
TDMA
PCS 1900 MHz
EFC Band**

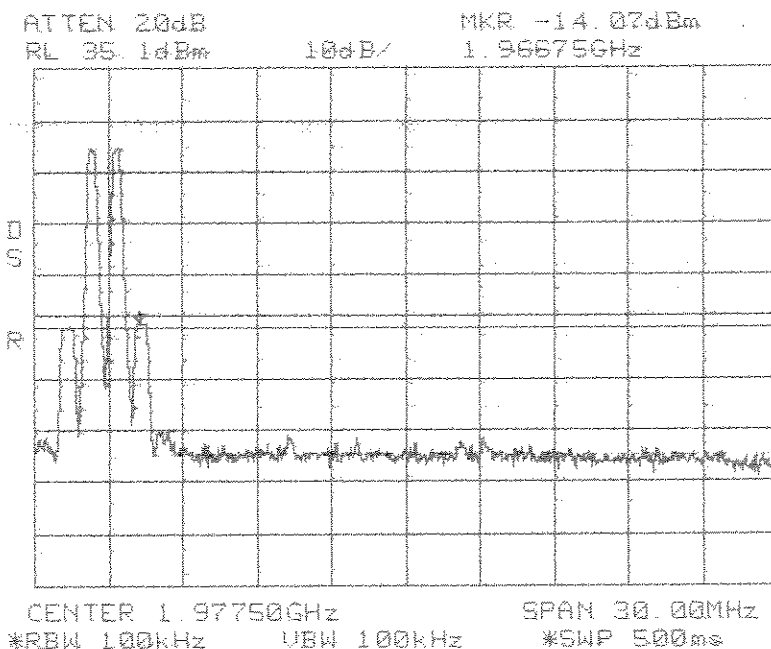
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

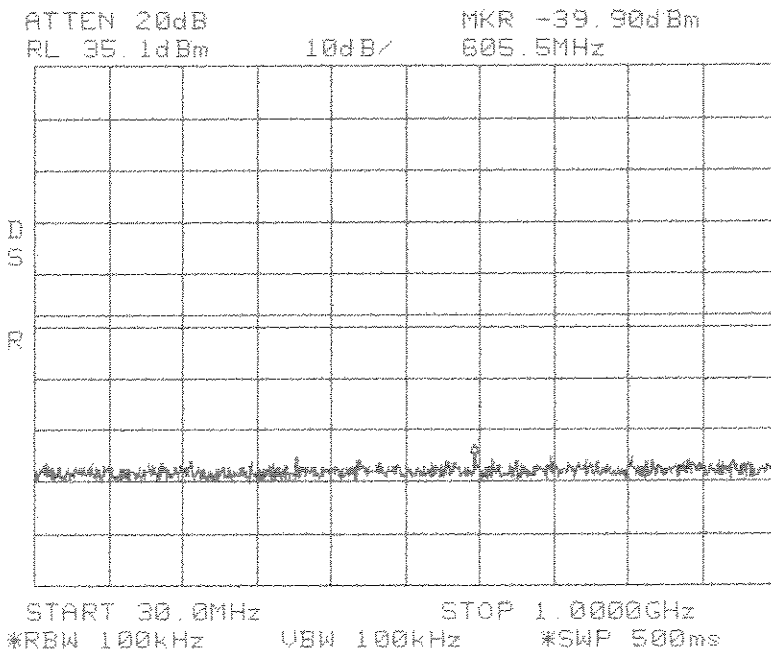


**Intermodulation
Apart
TDMA
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



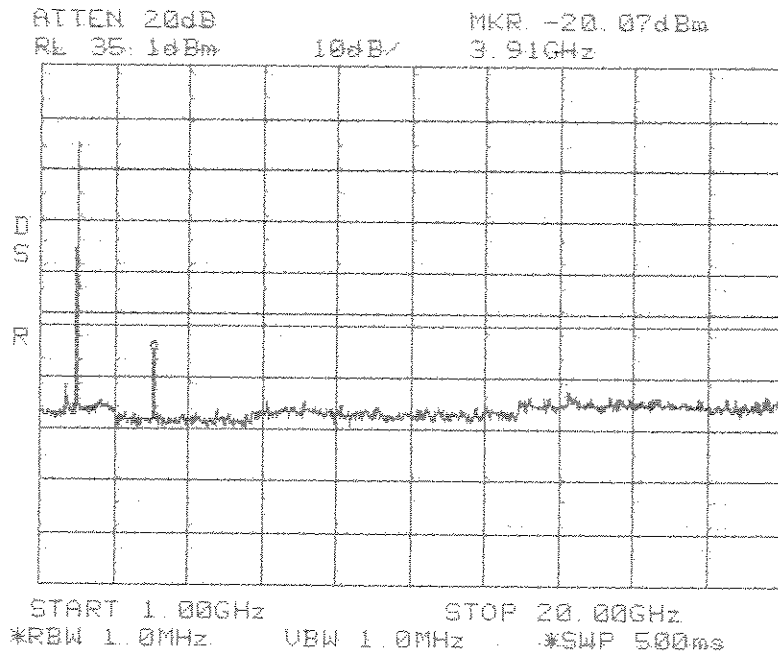
**Intermodulation
Close
Lower
GSM
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Lower
GSM
PCS 1900 MHz
EFC Band**

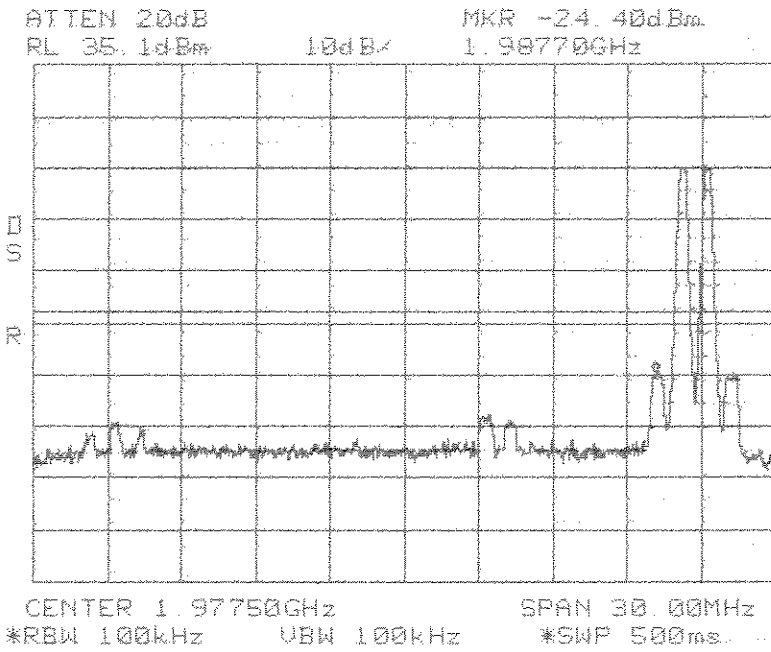
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

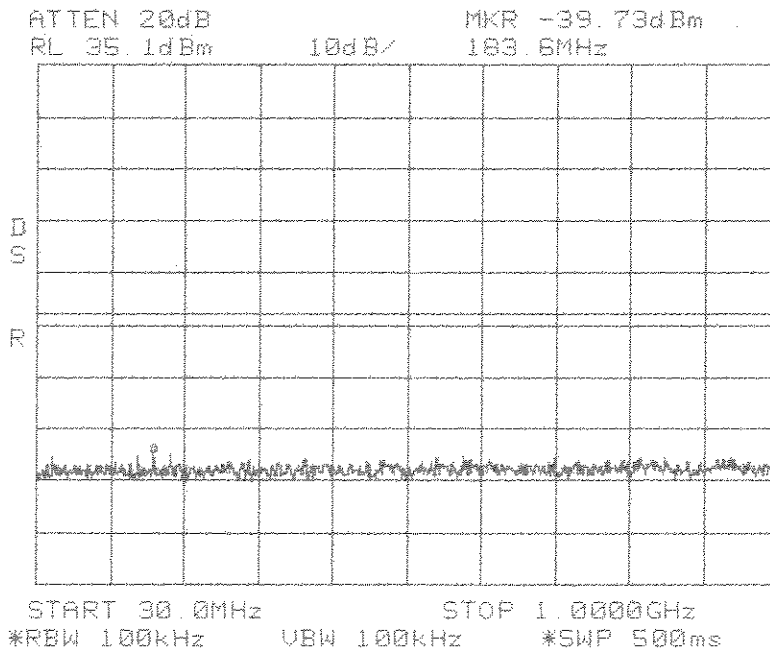


Intermodulation
Close
Lower
GSM
PCS 1900 MHz
EFC Band

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



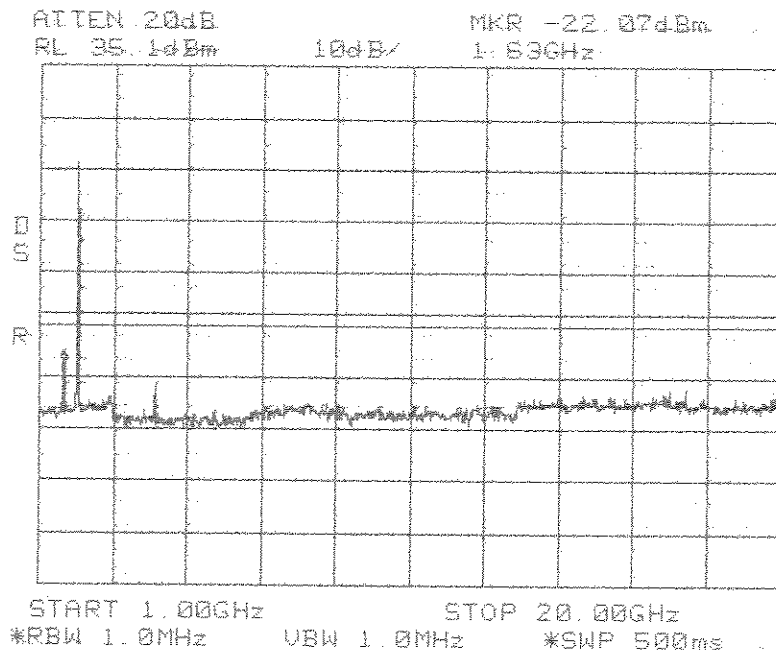
**Intermodulation
Close
Upper
GSM
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Upper
GSM
PCS 1900 MHz
EFC Band**

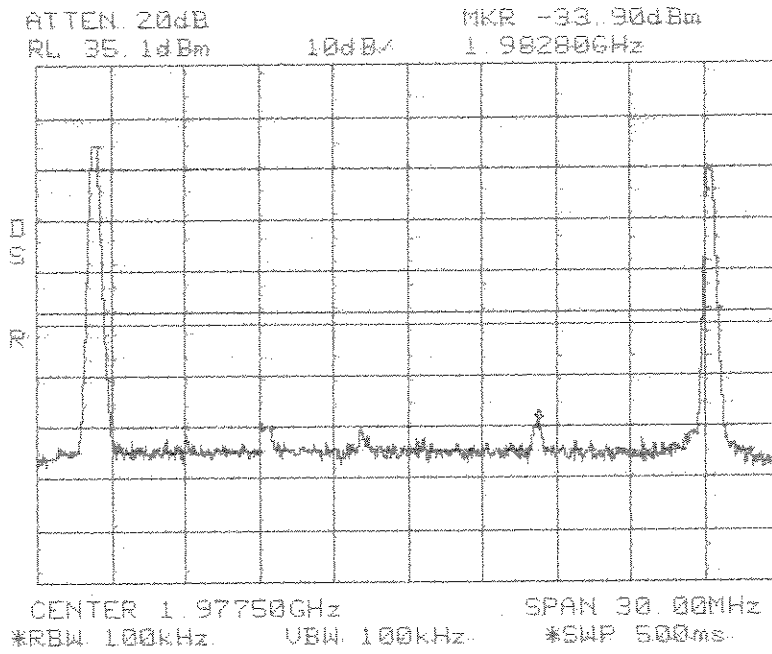
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

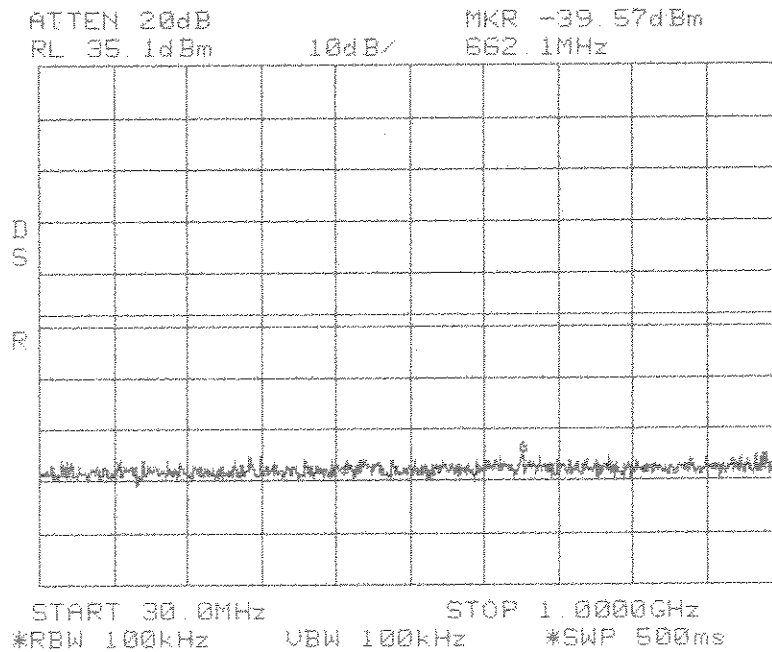


**Intermodulation
Close
Upper
GSM
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



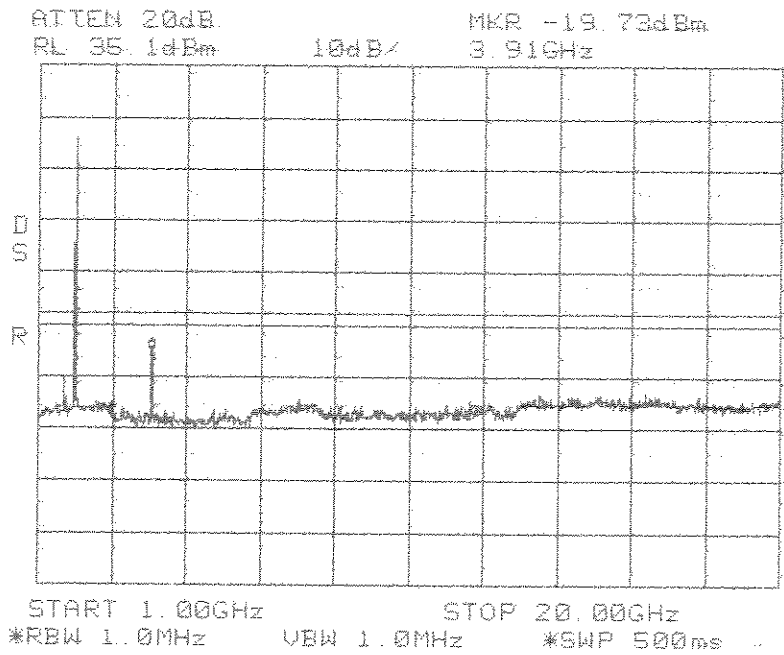
**Intermodulation
Apart
GSM
PCS 1900 MHz
EFC Band**



**Intermodulation
Apart
GSM
PCS 1900 MHz
EFC Band**

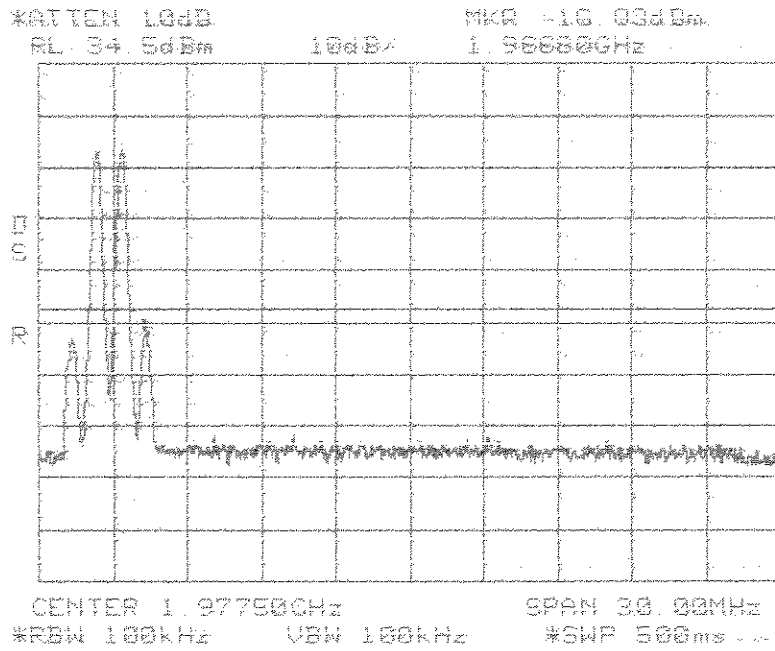
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

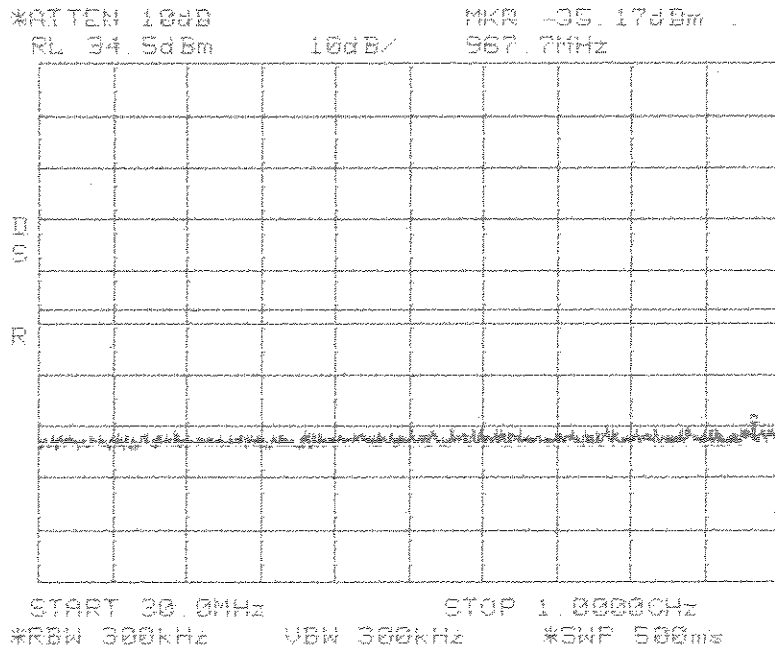


**Intermodulation
Apart
GSM
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



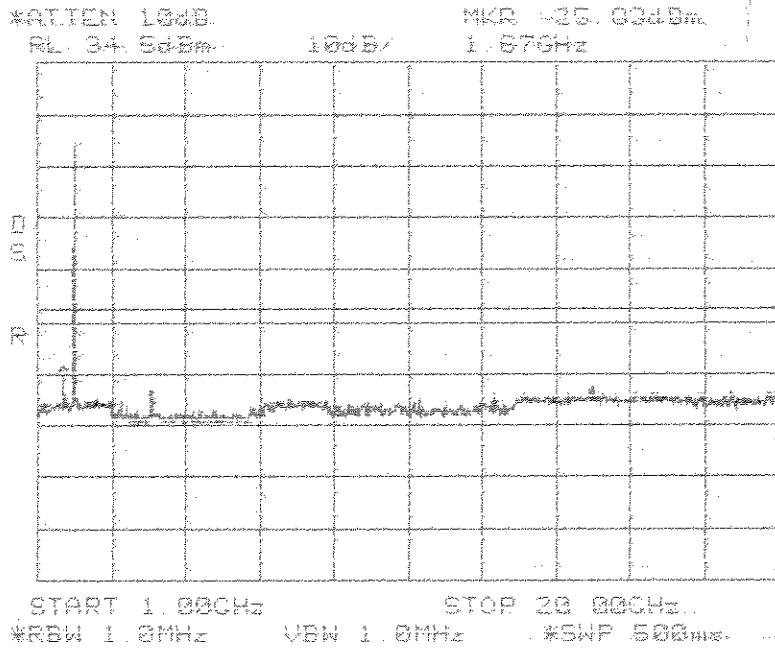
**Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
EFC Band**

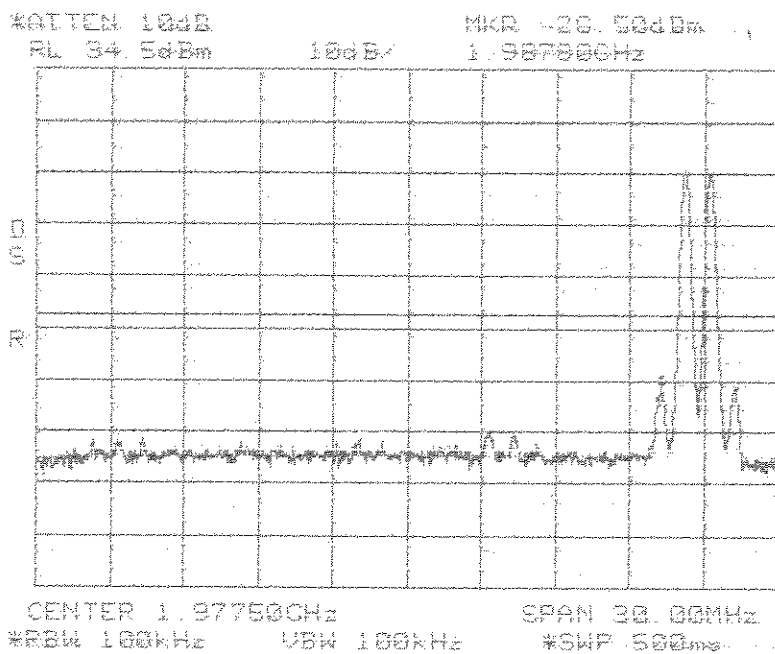
Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

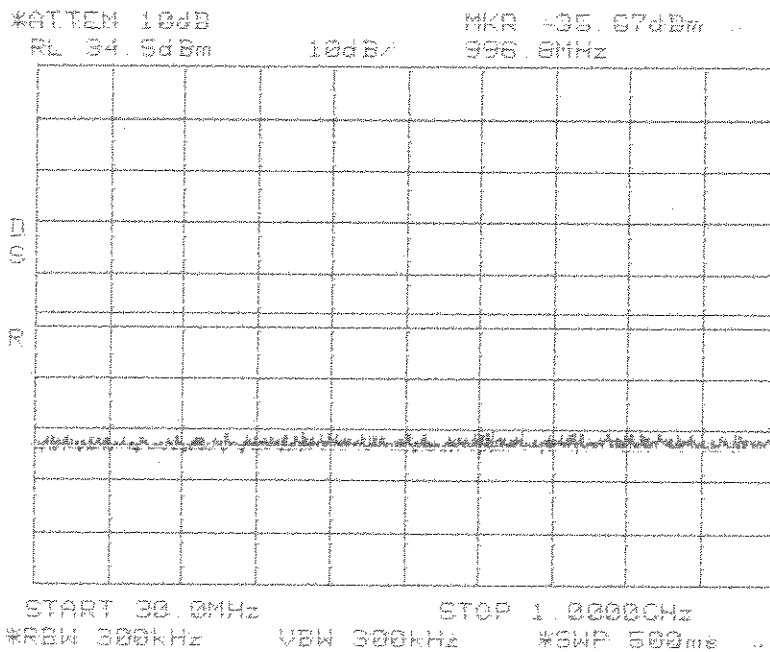


Intermodulation
Close
Lower
EDGE
PCS 1900 MHz
EFC Band

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



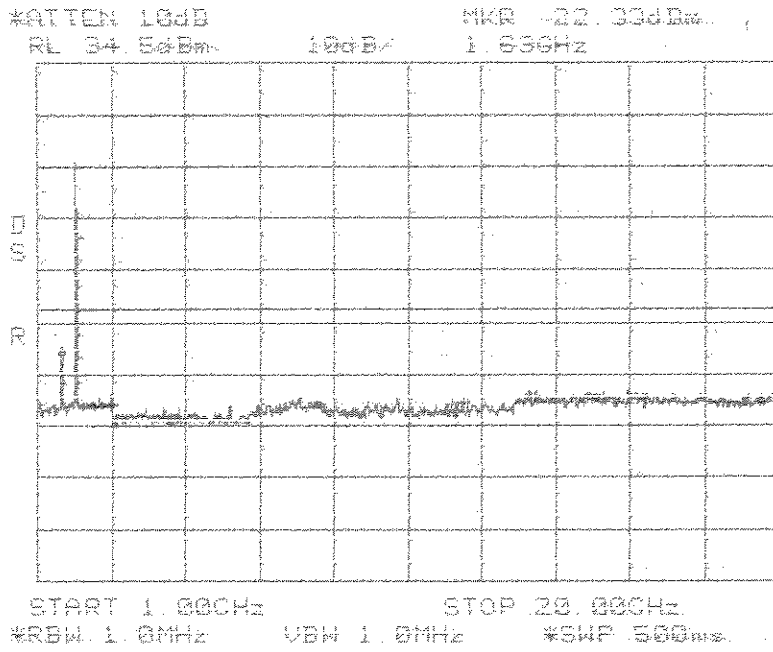
**Intermodulation
Close
Upper
EDGE
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Upper
EDGE
PCS 1900 MHz
EFC Band**

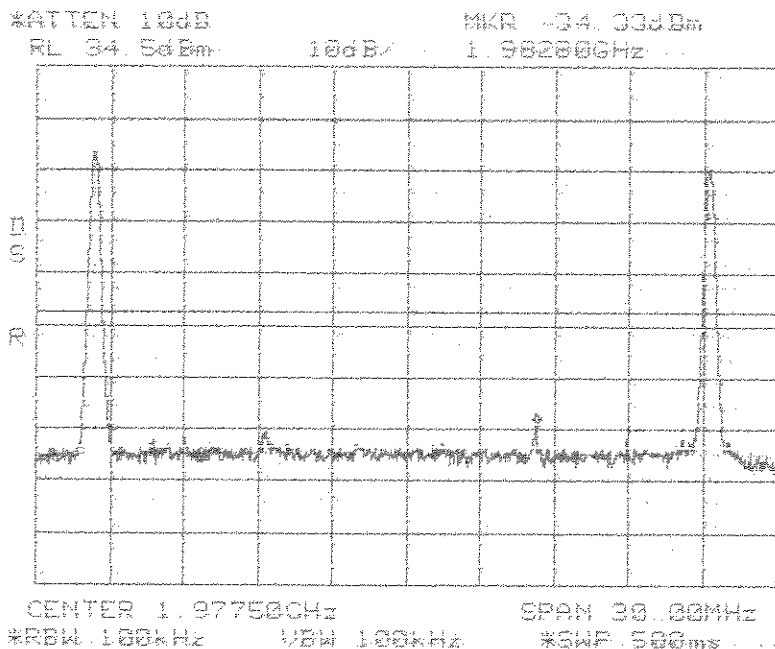
Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

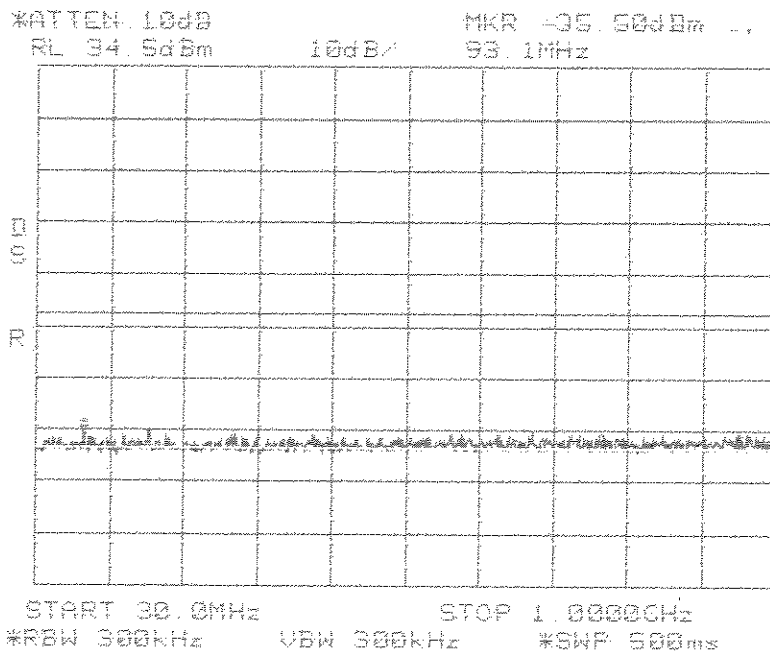


Intermodulation
Close
Upper
EDGE
PCS 1900 MHz
EFC Band

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



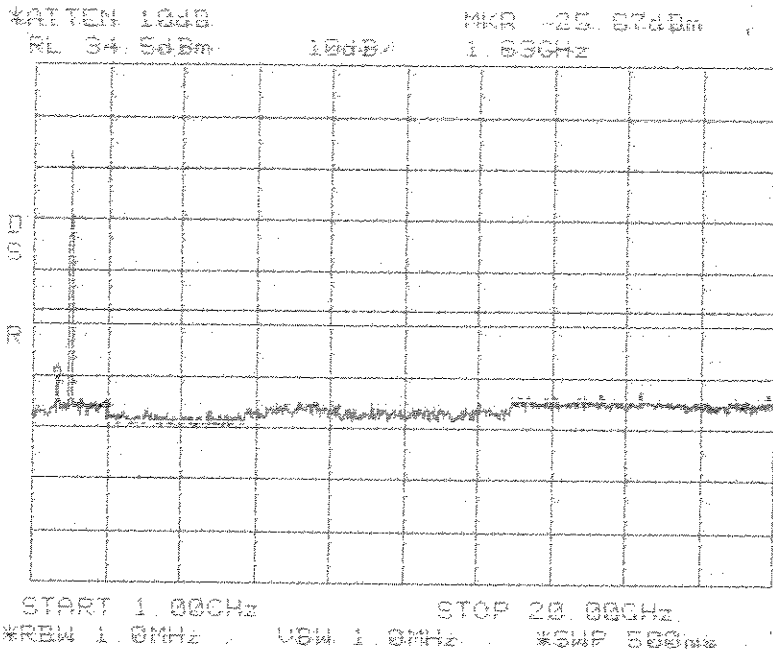
**Intermodulation
Apart
EDGE
PCS 1900 MHz
EFC Band**



**Intermodulation
Apart
EDGE
PCS 1900 MHz
EFC Band**

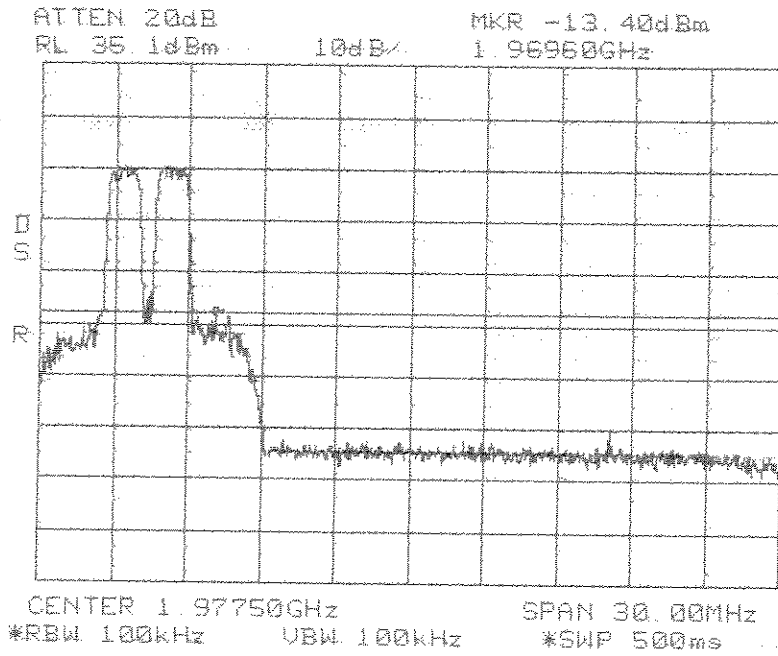
Span: 30 MHz to 1 GHz
RBW/VBW: 300 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

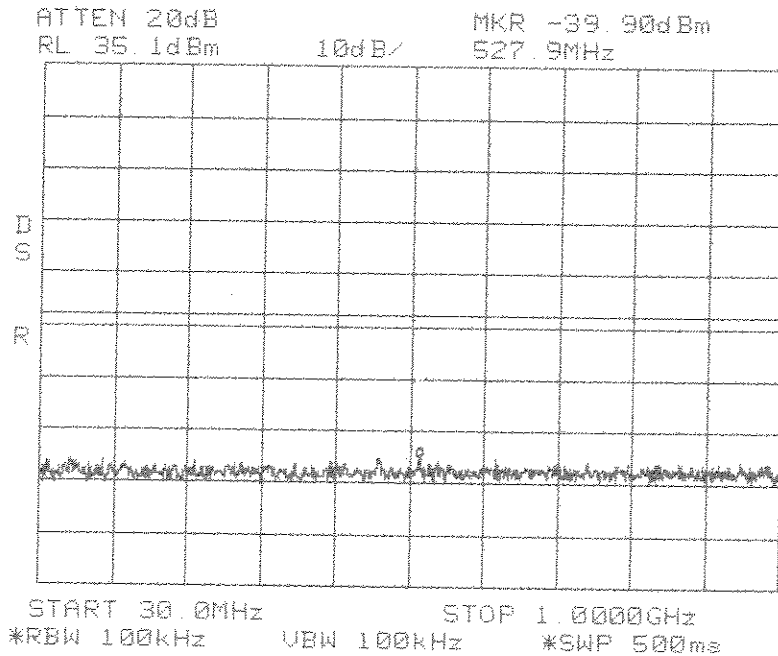


**Intermodulation
Apart
EDGE
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



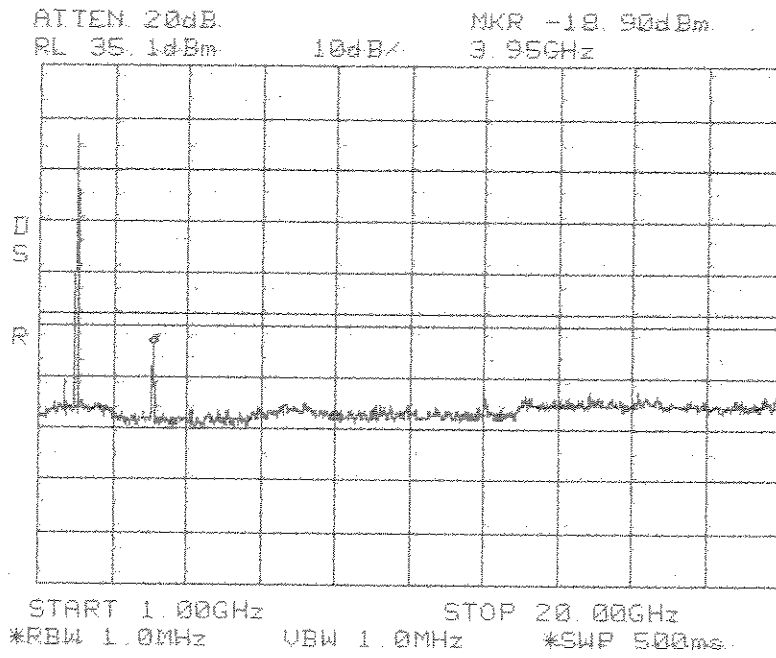
**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
EFC Band**

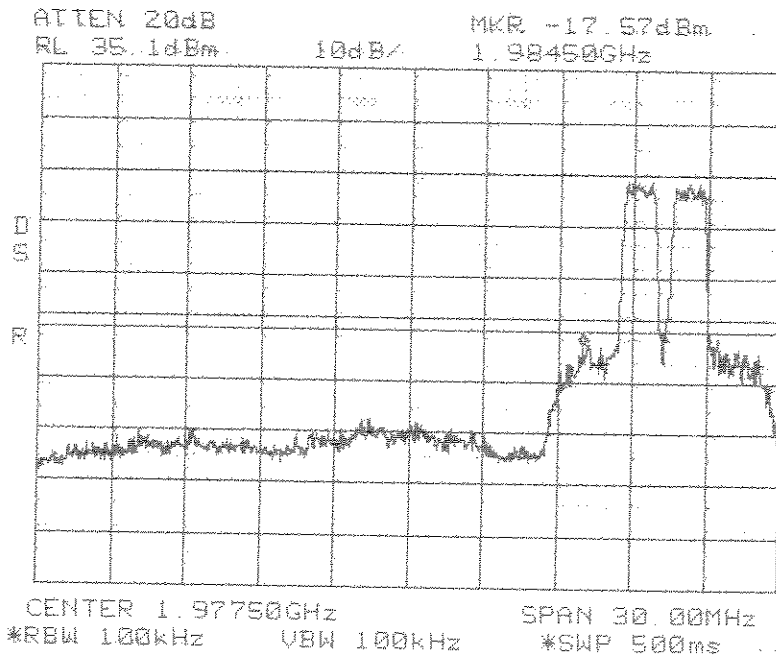
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

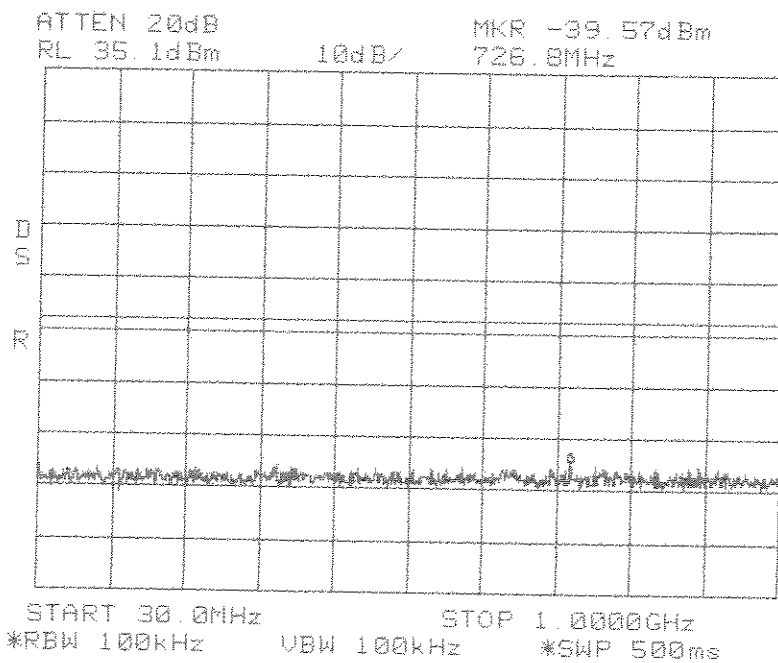


**Intermodulation
Close
Lower
CDMA
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



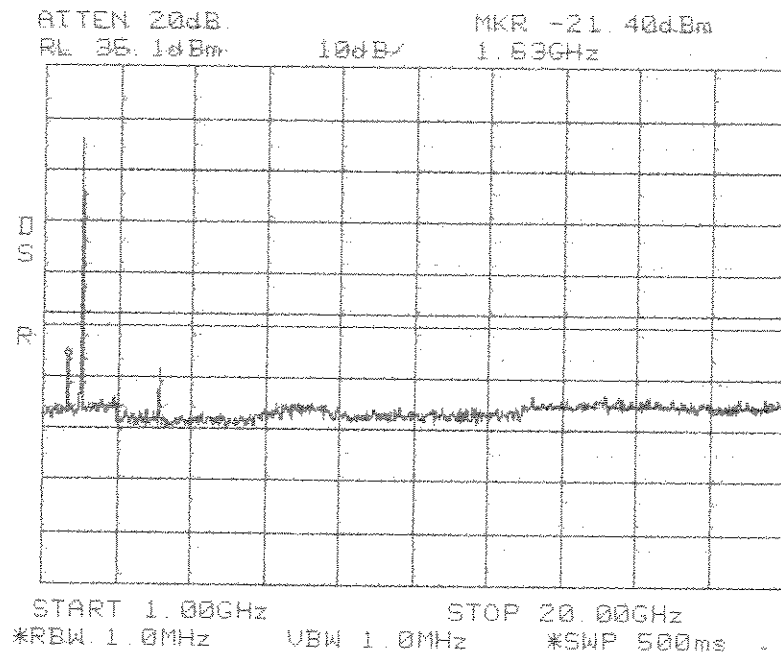
**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
EFC Band**



**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
EFC Band**

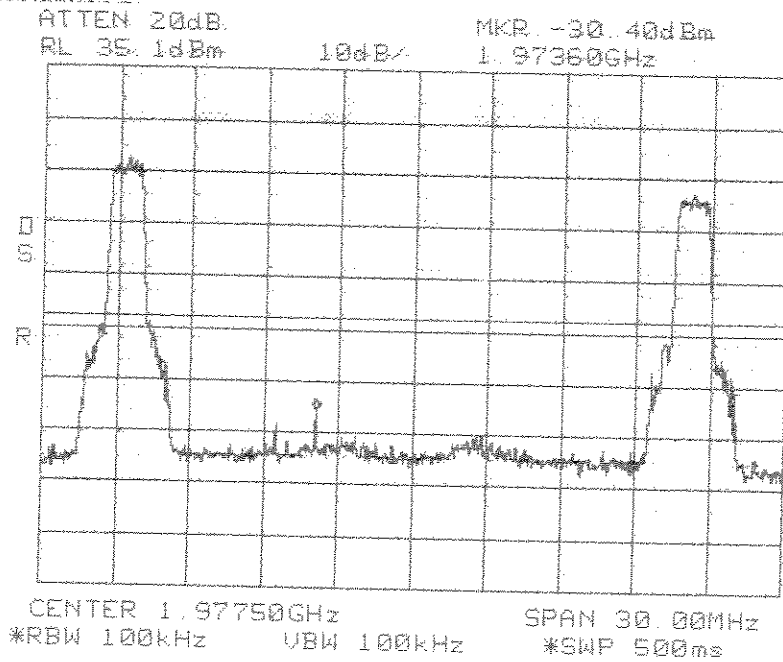
Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz

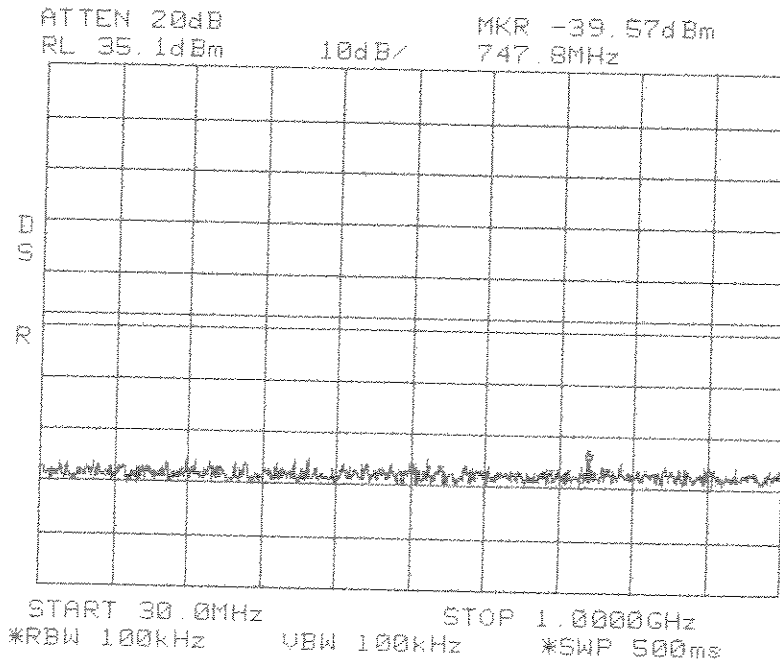


**Intermodulation
Close
Upper
CDMA
PCS 1900 MHz
EFC Band**

Center: 1977.5 MHz
Span: 30 MHz
RBW/VBW: 100 kHz



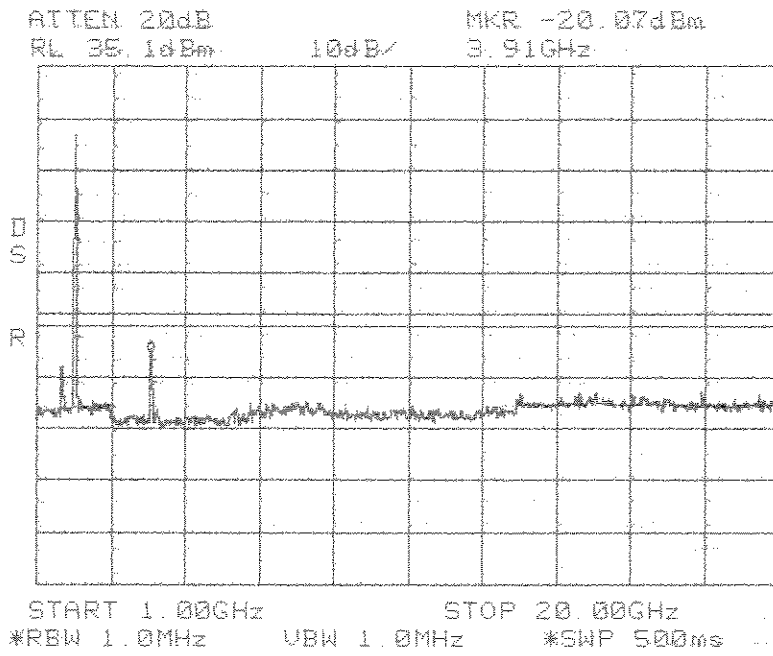
**Intermodulation
Apart
CDMA
PCS 1900 MHz
EFC Band**



**Intermodulation
Apart
CDMA
PCS 1900 MHz
EFC Band**

Span: 30 MHz to 1 GHz
RBW/VBW: 100 kHz

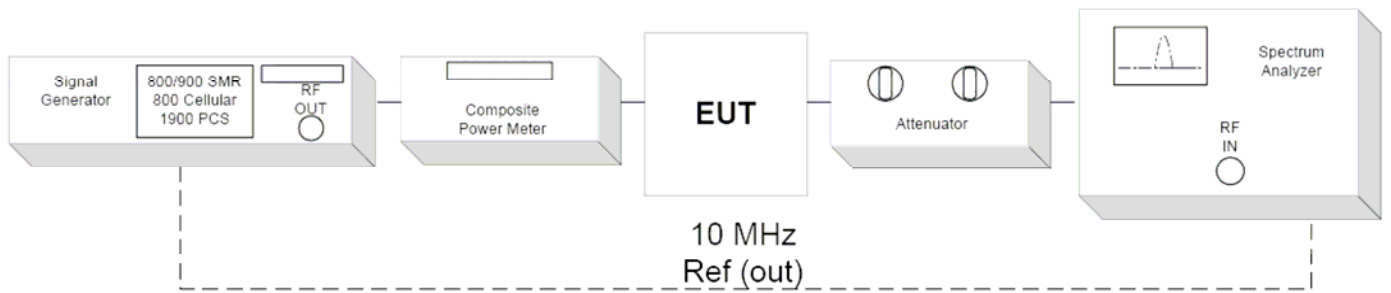
Span: 1 GHz to 20 GHz
RBW/VBW: 1 MHz



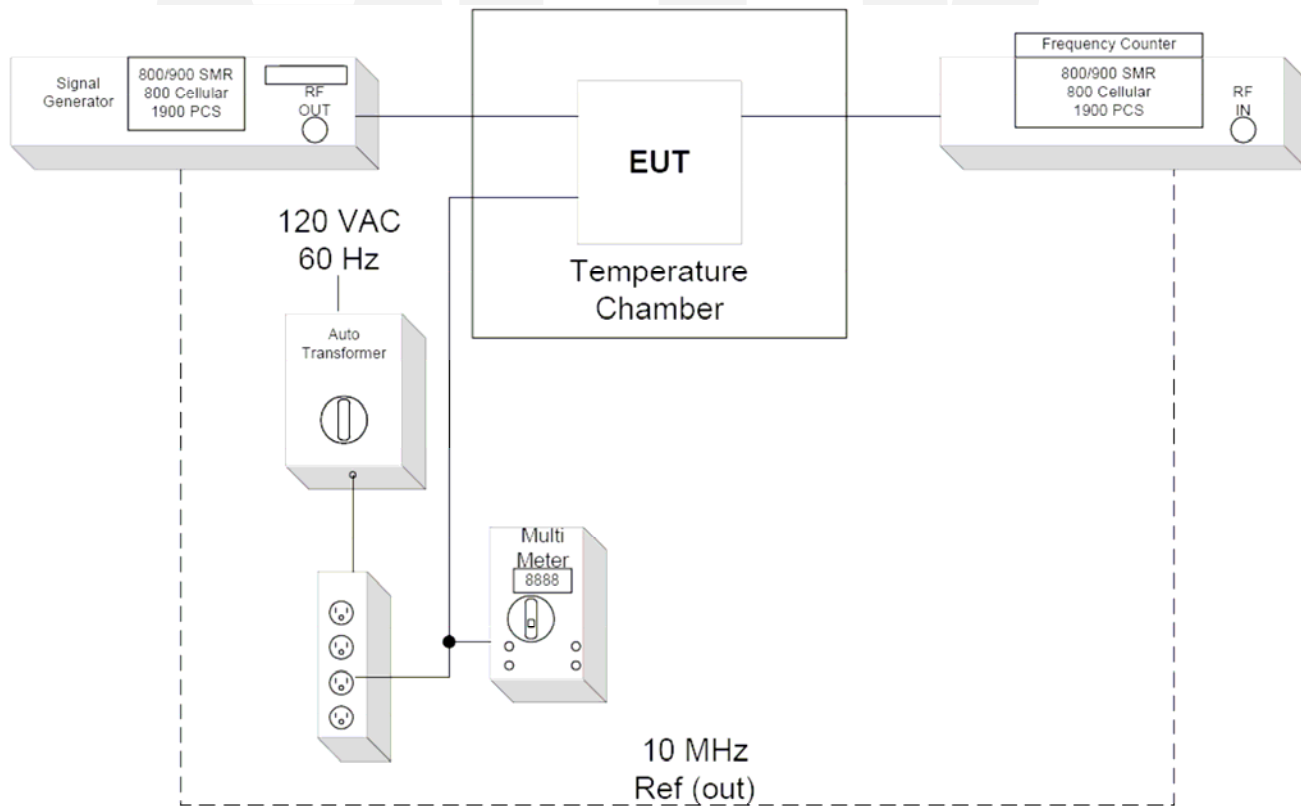
**Intermodulation
Apart
CDMA
PCS 1900 MHz
EFC Band**

Test Set-ups

Conducted Emission Limits, Effective Isotropic Radiated Power Limits, Occupied Bandwidth Modulation

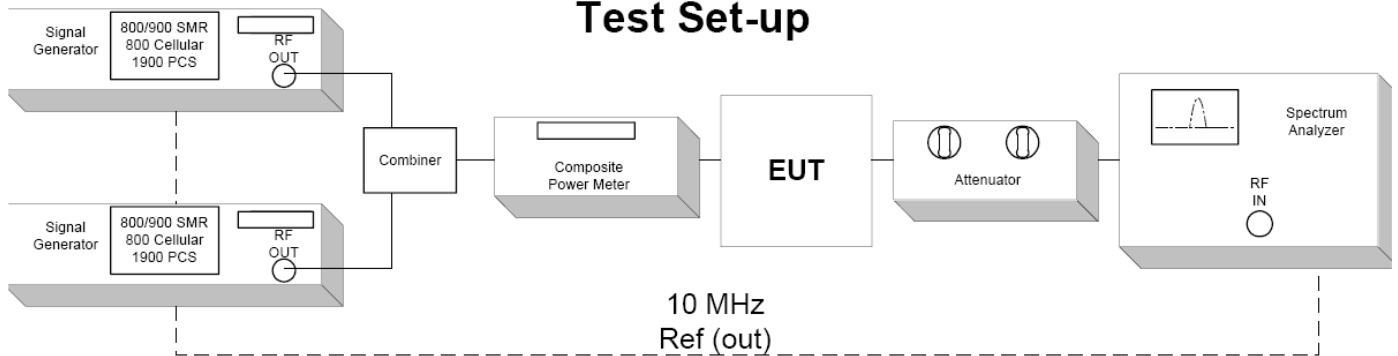


Frequency Tolerance



Inter-Modulation

Test Set-up



Test setup photo, radiated emissions



Test setup photo, radiated emissions



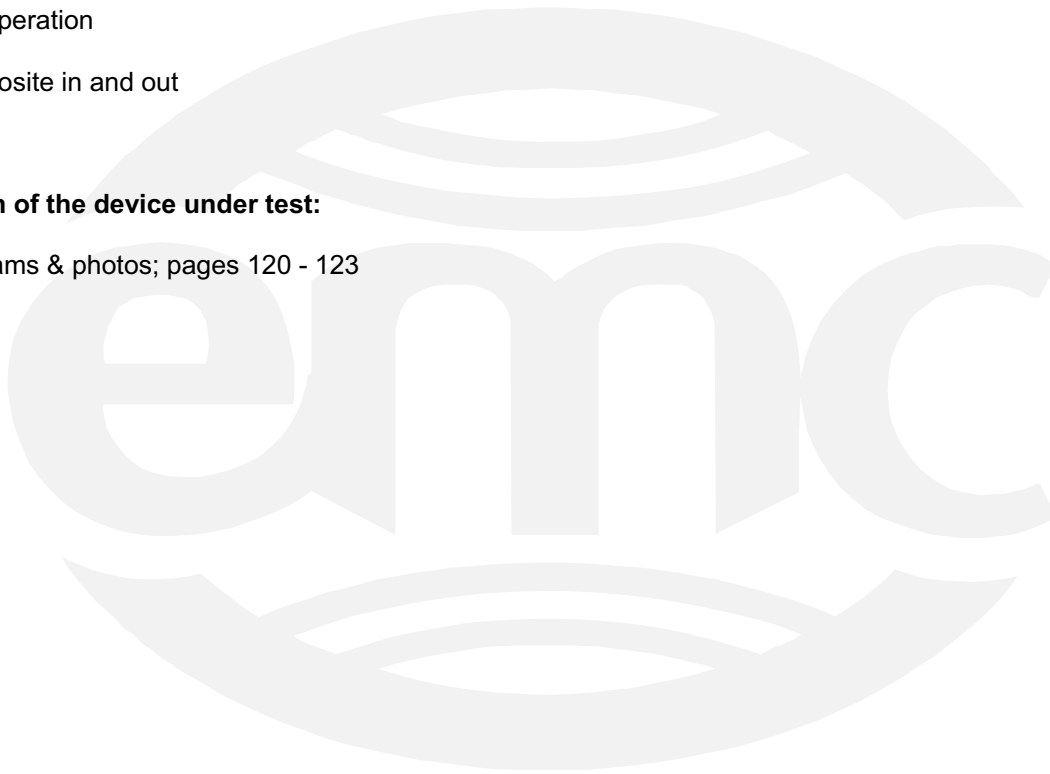
Test Operation Mode:

The device under test was operated under the following conditions during emissions testing:

- Standby
- Test program (H - Pattern)
- Test program (color bar)
- Test program (customer specific)
- Practice operation
- Max composite in and out

Configuration of the device under test:

- See diagrams & photos; pages 120 - 123



DEVIATIONS FROM STANDARD:

None.

GENERAL REMARKS:

Modifications required to pass:

- None
- As indicated on the data sheet(s)

Test Specification Deviations: Additions to or Exclusions from:

- None
- As indicated in the Test Plan

SUMMARY:

The requirements according to the technical regulations are

- met
- **not** met.

The device under test does

- fulfill the general approval requirements mentioned on page 3.
- **not** fulfill the general approval requirements mentioned on page 3.

EUT Received Date: 21 July 2006
Condition of EUT: Normal
Testing Start Date: 21 July 2006
Testing End Date: 26 July 2006

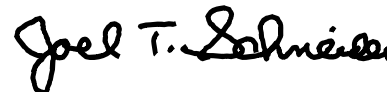
- TÜV AMERICA INC -

Date: 04 August 2006

Location: Taylors Falls MN
USA



Joe C. Sausen
EMC Senior Technician



Joel T. Schneider
Senior EMC Engineer

Appendix A

Constructional Data Form

and

Block Diagrams



EMC Test Plan and Constructional Data Form

PLEASE COMPLETE THIS DOCUMENT IN FULL, ENTERING N/A IF THE FIELD IS NOT APPLICABLE.

Applicant -- NOTE: This information will be input into your test report as shown below.
Press the F1 key at any time to get HELP for the current field selected.

Company: ADC

Address: P.O. Box 1101
Minneapolis, MN 55440-1101

Contact: Mark F. Miska Position: Compliance Engineer

Phone: 952-403-8340 Fax: 952-403-8858

E-mail Address: mark.miska@adc.com

General Equipment Description -- NOTE: This information will be input into your test report as shown below.

EUT Description In-building wireless communication system

EUT Name Digivance® 1900 MHz Indoor Coverage Solution

Model No.: DGVIH3110000000000 and Serial No.: None
DGVIR33000000000000

Product Options: None

Configurations to be tested: Typical Digital Host Unit with Digital Remote Unit

Test Objective

- EMC Directive 89/336/EEC (EMC) FCC: Class A B Part 24
 Std: VCCI: Class A B
- Machinery Directive 89/392/EEC (EMC) BCIQ: Class A B
 Std: Canada: Class A B
- Medical Device Directive 93/42/EEC (EMC) Australia: Class A B
 Std: Other: _____
- Vehicle Directive 72/245/EEC (EMC)
 Std: _____
- FDA Reviewers Guidance for Premarket Notification Submissions (EMC)



EMC Test Plan and Constructional Data Form

TÜV Product Service Certification Requested

- Attestation of Conformity (AoC)
 - Certificate of Conformity (CoC)
 - International EMC Mark (IEM)
 - Compliance Document
 - Protection Class (N/A for vehicles) Class I Class II Class III
- (Press **F1** when field is selected to show additional information on Protection Class.)

Attendance

Test will be: Attended by the customer Unattended by the customer

Failure - Complete this section if testing will not be attended by the customer.

- If a failure occurs, TÜV Product Service should:
- Call contact listed above, if not available then stop testing. (After hrs phone): _____
 - Continue testing to complete test series.
 - Continue testing to define corrective action.
 - Stop testing.

EUT Specifications and Requirements

Length: 12" Width: 17" Height: 4" Weight: 17 LBS

Power Requirements

Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)

Voltage: 115 VAC (If battery powered, make sure battery life is sufficient to complete testing.)

of Phases: 1

Current (Amps/phase(max)): 3 Current (Amps/phase(nominal)): 2

Other _____

Other Special Requirements

none

Typical Installation and/or Operating Environment

(ie. Hospital, Small Business, Industrial/Factory, etc.)
Office Building

EMC Test Plan and Constructional Data Form



EUT Power Cable

| | | | | |
|-----------------------------------------|----|------------------------------------------------|---------------------|---------------|
| <input type="checkbox"/> Permanent | OR | <input checked="" type="checkbox"/> Removable | Length (in meters): | <u>< 3</u> |
| <input type="checkbox"/> Shielded | OR | <input checked="" type="checkbox"/> Unshielded | | |
| <input type="checkbox"/> Not Applicable | | | | |

EMC Test Plan and Constructional Data Form

| EUT Interface Ports and Cables | | | | | | | | | | | | |
|--------------------------------|-------------------------------------|-------------------------------------|-----------|-------------------------------------|-------------------------------------|-----------------|-------------|------------------------|--------------------------|--------------------|-------------------------------------|--------------------------|
| Interface | | | Shielding | | | | | | | | | |
| Type | Analog | Digital | Qty | Yes | No | Type | Termination | Connector Type | Port Termination | Length (in meters) | Removable | Permanent |
| EXAMPLE: RS232 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Foil over braid | Coaxial | Metallized 9-pin D-Sub | Characteristic Impedance | 6 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| RF "N" type | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Braid | Coaxial | N | 50 Ohms | 3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| AC Power | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Not Specified | | | | >3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Fiber | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | N/A | N/A | L/C | | 9 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| DC Power | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Cat 5 | N/A | RJ-45 | | 3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| RF "SMA" type | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Braid | Coaxial | SMA | 50 Ohms | 3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | <input type="checkbox"/> | <input type="checkbox"/> |

EMC Test Plan and Constructional Data Form



EUT Software.

Revision Level: N/A
 Description: N/A

EUT Operating Modes to be Tested -- list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

1. Max composite in and out
- 2.
- 3.

EUT System Components -- List and describe all components which are part of the EUT. For FCC testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc.)

| Description | Model # | Serial # | FCC ID # |
|---------------------|------------------------|----------|----------|
| Digital Host Unit | DGVIH3110000000 000 | None | |
| Digital Remote Unit | DGVIR3300000000 000 | None | |

EMC Test Plan and Constructional Data Form

| Support Equipment -- List and describe all support equipment which is not part of the EUT. (i.e. peripherals, simulators, etc) | | | |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|-----------------|
| <i>Description</i> | <i>Model #</i> | <i>Serial #</i> | <i>FCC ID #</i> |
| Signal Generator | Agilent E4436B | 963739 | |
| Spectrum Analyzer | HP 8563E | MC27690 | |

| Oscillator Frequencies | | | |
|-------------------------------|--------------------------|-------------------------------|---------------------------|
| <i>Frequency</i> | <i>Derived Frequency</i> | <i>Component # / Location</i> | <i>Description of Use</i> |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| Power Supply | | | |
|---------------------|----------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|
| <i>Manufacturer</i> | <i>Model #</i> | <i>Serial #</i> | <i>Type</i> |
| | | | <input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____ |
| | | | <input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____ |

| Power Line Filters | | |
|---------------------------|----------------|------------------------|
| <i>Manufacturer</i> | <i>Model #</i> | <i>Location in EUT</i> |
| None | | |
| | | |

Form

EMC Test Plan and Constructional Data Form



| Critical EMI Components (Capacitors, ferrites, etc.) | | | | |
|-------------------------------------------------------------|---------------------|------------------------|------------|-------------------------------|
| <i>Description</i> | <i>Manufacturer</i> | <i>Part # or Value</i> | <i>Qty</i> | <i>Component # / Location</i> |
| None | | | | |
| | | | | |
| | | | | |
| | | | | |

EMC Critical Detail -- Describe other EMC Design details used to reduce high frequency noise.

None

(PLEASE INSERT "ELECTRONIC SIGNATURE" BELOW IF POSSIBLE)

Authorization Signatures

Customer authorization to perform tests according to this test plan.

Date

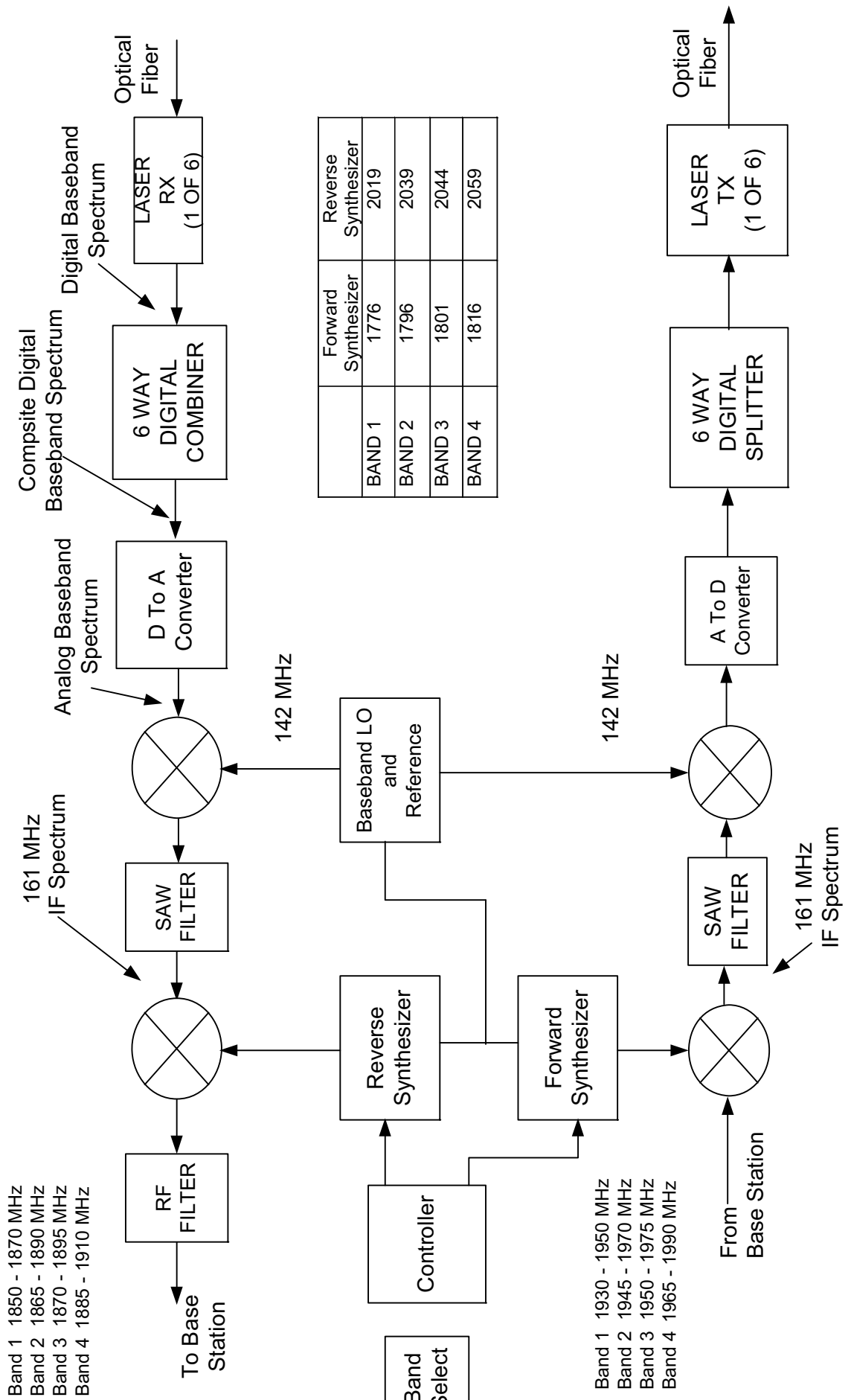
Test Plan/CDF Prepared By (please print)

Date

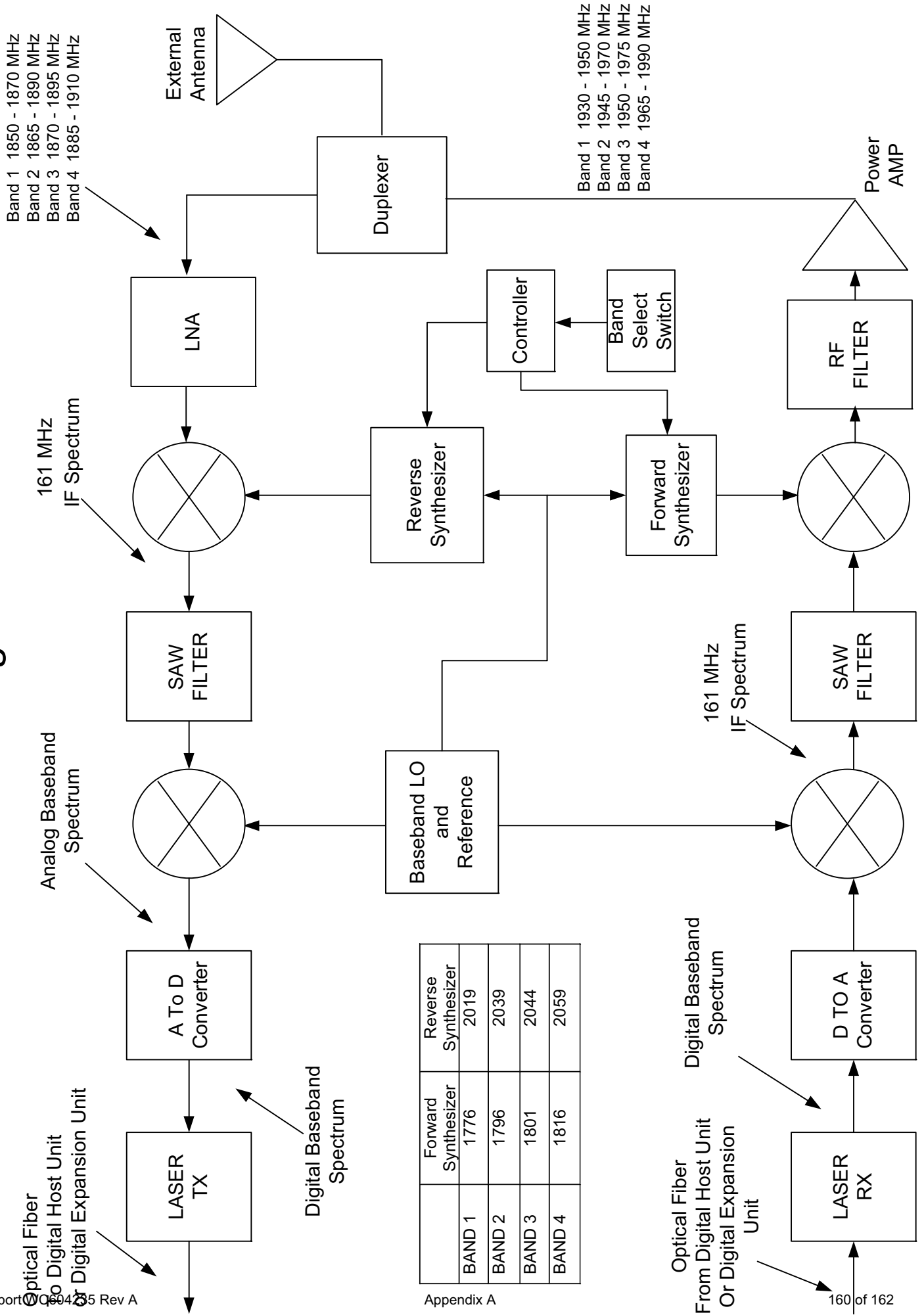
Reviewed by TÜV Product Service Associate

Date

Block Diagram 1900 MHz Digital Host Unit



Block Diagram 1900 MHz Digital Remote Unit



Appendix B

Measurement Protocol



MEASUREMENT PROTOCOL

Test Methodology

Emissions testing is performed according to the procedures in EIA/TIA 603.

Measurement Uncertainty

The test system for conducted emissions is defined as the LISN, tuned receiver or spectrum analyzer, and coaxial cable. The test system has a measurement uncertainty of ± 1.8 dB. The test system for radiated emissions is defined as the antenna, the pre-amplifier, the spectrum analyzer and the coaxial cable. The test system has a measurement uncertainty of ± 4.8 dB. The equipment comprising the test systems is calibrated on an annual basis.

Justification

The Equipment Under Test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral into its characteristic impedance or left unterminated. When appropriate, the cables are manually manipulated with respect to each other to obtain maximum emissions from the unit.

Radiated Emissions

The final level, in $\text{dB}\mu\text{V}/\text{m}$, equals the reading from the spectrum analyzer (Level $\text{dB}\mu\text{V}$), adding the antenna correction factor and cable loss factor (Factor dB) to it, and subtracting the preamp gain (and duty cycle correction factor, if applicable). This result then has the limit subtracted from it to provide the Delta, which gives the tabular data as shown in the data sheets in Attachment A.

Example:

| FREQ (MHz) | LEVEL ($\text{dB}\mu\text{V}$) | CABLE/ANT/PREAMP (dB) (dB/m) (dB) | FINAL ($\text{dB}\mu\text{V}/\text{m}$) | POL/HGT/AZ (m) (deg) | DELTA1 |
|---------------|-------------------------------------|--------------------------------------|----------------------------------------------|-------------------------|--------|
| 60.80 | 42.5Qp + | 1.2 + 10.9 - 25.5 = | 29.1 | V 1.0 0.0 | -10.9 |

Substitution Method

A radiated emission scan was also made, at TUV America's Wild River Lab Large Test Site, with the EUT's antenna replaced with a termination to demonstrate case radiation compliance to the -13 dBm requirement. Radiated emissions from the EUT are measured in the frequency range of 30 to 20000 MHz using a spectrum analyzer and appropriate broadband linearly polarized antennas. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimeters above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna is positioned 3 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT are rotated 360 degrees. The field strength levels were measured per ANSI C63.4. The EUT is then replaced with a tuned dipole antenna (below 1 GHz) or horn antenna (above 1 GHz). The substitute antenna was placed in the same polarization as the test antenna. A signal generator was used to generate a signal level that matched the highest level measured from the EUT. The signal generator level minus the cable loss from the signal generator to the substitute antenna plus the substitute antenna gain equals the spurious power level.

Test Equipment

All measurement instrumentation is traceable to the National Institute of Standards and Technology and is calibrated according to internal procedure.