ANNEX A
TEST DATA Section   Rule Part Number: 2.1033 (c)(14), 2.1091,15.209

All applicable test data according to:
     -Part 2: 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1057, and 2.1091
     -Part 90, Subpart I: 90.209, 90.210, and 90.213
are provided in this section of the Engineering Report, as shown detailed below:

Data Contents	FCC parts
General.	2.1033 (14)
Emission Designator	2.201,2.202, 90.209
Mask compliance and Occupied Bandwidth measurement	2.1049,90.209,90.210
- 4-level increased maximum deviation following a tighter modulation balance production procedure	90.210(d)
- 8- FSK modulations for 12.5kHz channel (mask D)	90.210(d)
- 8-FSK modulations for 25 kHz channel (mask C)	90.210(c)

The following reports have been generated for Class II Permissive Change of FCC certificate EOTBDD4T85-1 granted to Dataradio. The measurements were conducted following the procedures set forth in the TIA/EIA-603 standards.

Transmitter Occupied Bandwidth and Emission Designator Determination

RULE PART NUMBER: 2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041

Necessary Bandwidth Measurement (90.209.(b))

This radiomodem uses digital modulation signals, passing through a pulse shaping DSP implemented low-pass filter to an FM transceiver. The equations for the filter are Nyquist-based being driven by the data symbol rates, they are detailed in modulation source description paragraph. The necessary bandwidth calculation for this type of modulation is not covered by paragraphs (1), (2) or (3) from 2.202(c), the result exceeding by far the real necessary bandwidth obtained through simulations or measurement.

 Therefore, the approach outlined in (2.202(c)(4)) is applicable in this case.

The results of 99% Occupied Bandwidth measurement are:

Bit rate	Symbol rate	Pulse shaping filter equation	Deviation	Occupied Bandwidth	Emission designator
14400 bps	7200 bauds	SRRC4FSK α=0.4	± 2.13 kHz	8000 Hz	8K00
16000 bps	8000 bauds	SRRC4FSK α=0.4	± 1.76kHz	7167 Hz	7K17
21600 bps	7200 bauds	xRC8FSK	± 2.82 kHz	8333 Hz	8K33
24000 bps	8000 bauds	xRC8FSK	± 2.58 kHz	8000 Hz	8K00
43200 bps	14400 bauds	xRC8FSK	± 4.47 kHz	14830 Hz	14K9
48000 bps	16000 bauds	xRC8FSK	± 4.96 kHz	16667 Hz	16K7

The measurement theory and set-up explanations follow.
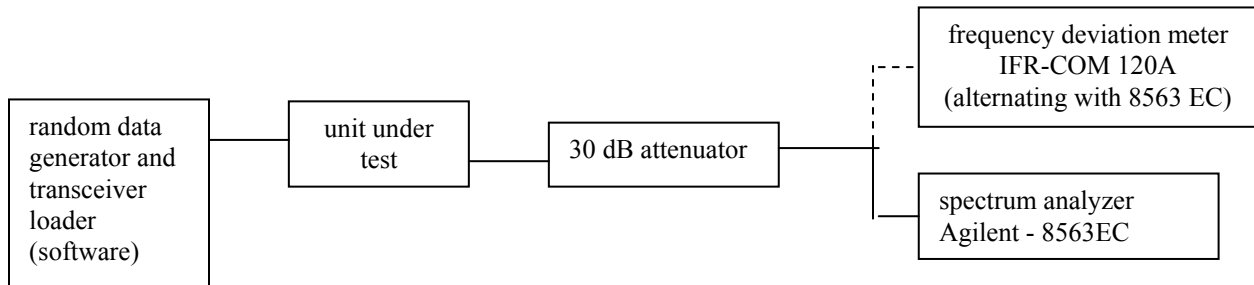
Occupied Bandwidth Measurement
        The Occupied Bandwidth measurement option of the instrument (8563EC spectrum analyzer from Agilent) calculates and provides the values used above for the emission designator.
        The percentage setting of the measurement has been set to 99% following the definition of the ***Occupied Bandwidth*** "the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission" (FCC 2.202)
        The measurement has been performed during the tests for compliance with the mask, the resulting value was recorded as Occupied Bandwidth. When different occupied bandwidth values were found at exciter output(0.85W), 20W and 100W power levels, the highest was recorded for Occupied Bandwidth data.

        The measurement set-up is:

random data generator and transceiver loader (software) → unit under test → 30 dB attenuator → frequency deviation meter IFR-COM 120A (alternating with 8563 EC) / spectrum analyzer Agilent - 8563EC

NAME OF TEST: Transmitter Occupied Bandwidth
                        Paragon/PD Modem at 14400 bps 4 FSK

Mask compliance data in support of Emission Designator **8K00F1D**

RULE PART NUMBER:	2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041, 90.209 (b)(5), 90.210 (d)

MINIMUM STANDARD: Mask D
                                 Sidebands and Spurious [Rule 90.210 (d)]
                                 Authorized Bandwidth = 11.25 kHz [Rule 90.209(b) (5)]

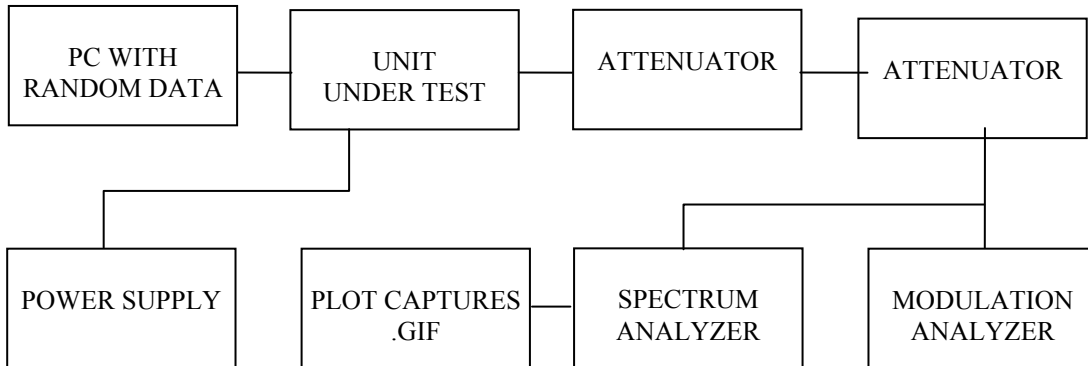|	
Fo to 5.625 kHz	Attenuation = 0 dB
>5.625 kHz to 12.5 kHz	Attenuation= $7.27(f_d - 2.88kHz)$ dB
>12.5kHz	Lesser of $50 + 10*\log(P)$ dB or 70dB
Corner Points:	
Fo to 5.625 kHz	Attenuation = 0 dB
>5.625 kHz to 12.5 kHz	Attenuation=20 dB to 70 dB
>12.5 kHz	Attenuation =70dB (100W)

TEST RESULTS:	Meets minimum standard (see data on the following pages)
TEST CONDITIONS:	Standard Test Conditions, 25 C
TEST EQUIPMENT:	Attenuator, BIRD Model / 100-A-MFN-30 / 30 dB / 100 Watt
	DC Power Supply , Astron Model VS-20M
	IFR COM-120B communication analyzer for deviation meter
	Spectrum Analyzer, Model HP8563E
	HP power meter model#E4418B
	HP Benchlink -software for plot captures.

PERFORMED BY: _____   DATE: 12/30/2002
                              Constantin Pintilei

TEST SET-UP:

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                                                    Paragon/PD Modem at 14400 bps 4 FSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit data pattern is DBA protocol- type of "idle" packets data pattern as it was described in the report for the permissive change EA100894 granted in 07/12/2001. Anyway for this test a higher deviation is achieved due to the fact that the exciter underwent the dual point modulation balance as shown in the production procedure attached.

For 14400 bps rate (4 FSK), the deviation is set to 2.13 kHz. For deviation readings it has been used the IF filter of 15 KHz

NECESSARY BANDWIDTH (Bn) CALCULATION

The corresponding emission designator prefix for necessary bandwidth
          8K00F1D for 14400 bps rate , 2.13 kHz deviation

TEST DATA: Refer to the following graphs:

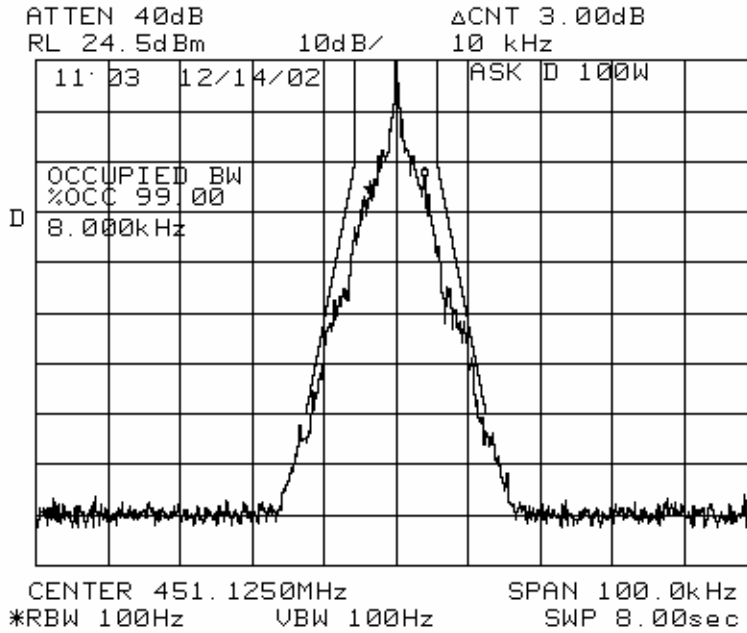MASK: D , 8K00F1D, 0.85 W (exciter output)

SPECTRUM FOR EMISSION **8K00F1D**
OUTPUT POWER: 0.85 Watt
14400 bps, 4 level FSK
PEAK DEVIATION = 2130 Hz
SPAN = 100 KHz
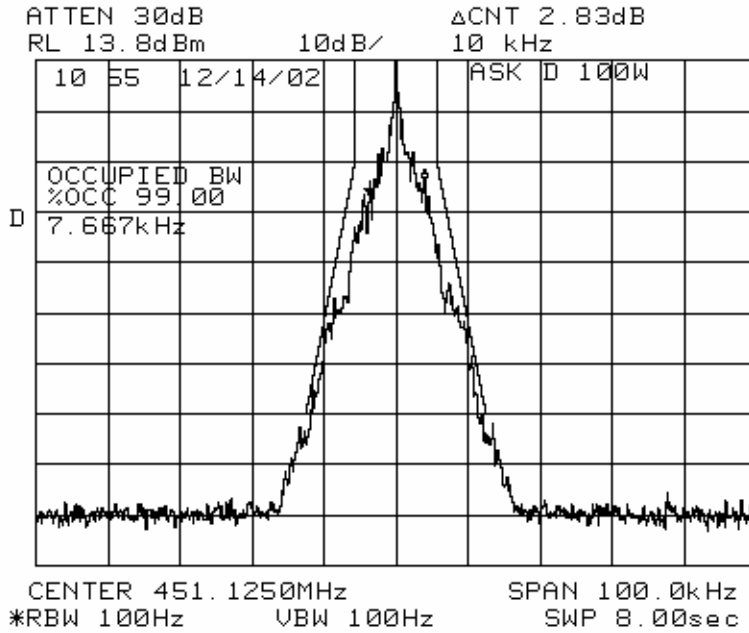
MASK: D , 8K00F1D, 20 W

SPECTRUM FOR EMISSION **8K00F1D**
OUTPUT POWER: 20 Watts
14400 bps, 4 level FSK
PEAK DEVIATION = 2130 Hz
SPAN = 100 KHz
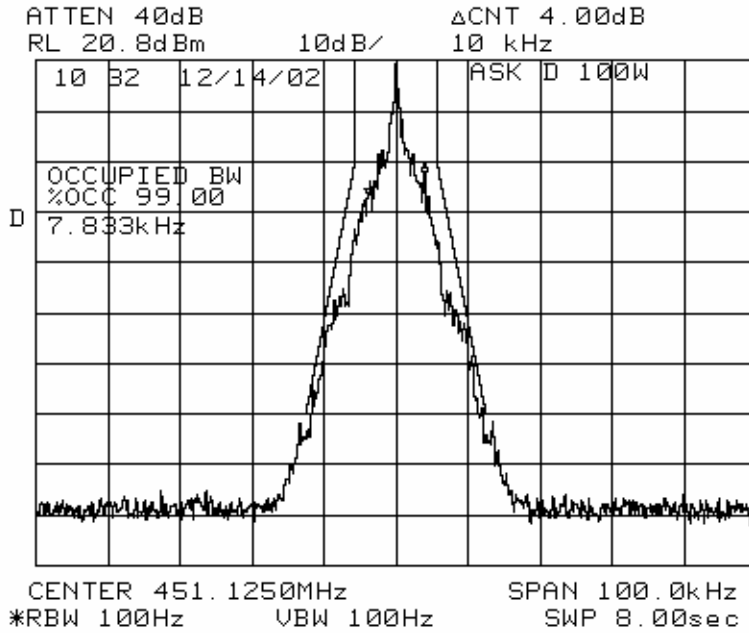
MASK: D , 8K00F1D, 100 W

SPECTRUM FOR EMISSION **8K00F1D**
OUTPUT POWER: 100 Watts
14400 bps, 4 level FSK
PEAK DEVIATION = 2130 Hz
SPAN = 100 KHz

NAME OF TEST: Transmitter Occupied Bandwidth
                       Paragon/PD Modem at 16000 bps 4 FSK

Mask compliance data in support of Emission Designator **7K17F1D**

RULE PART NUMBER: 2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041, 90.209 (b)(5), 90.210 (d)

MINIMUM STANDARD: Mask D
                            Sidebands and Spurious [Rule 90.210 (d)]
                            Authorized Bandwidth = 11.25 kHz [Rule 90.209(b) (5)]
                            Fo to 5.625 kHz   Attenuation = 0 dB
                            >5.625 kHz to 12.5 kHz   Attenuation= $7.27(f_d$ -2.88kHz) dB
                            >12.5kHz   Lesser of 50 + 10*log(P) dB or 70dB
                            Corner Points:
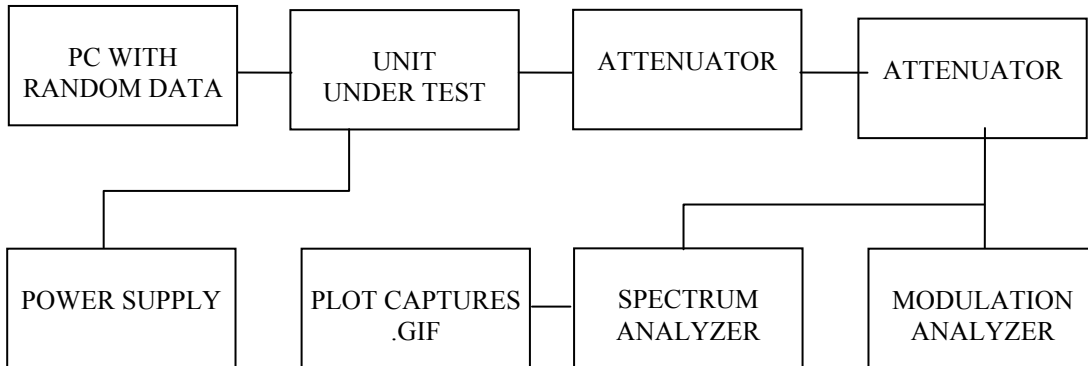   Fo to 5.625 kHz   Attenuation = 0 dB
                            >5.625 kHz to 12.5 kHz   Attenuation=20 dB to 70 dB
                            >12.5 kHz   Attenuation =70dB (100W)

TEST RESULTS: Meets minimum standard (see data on the following pages)
TEST CONDITIONS: Standard Test Conditions, 25 C
TEST EQUIPMENT: Attenuator, BIRD Model / 100-A-MFN-30 / 30 dB / 100 Watt
                            DC Power Supply , Astron Model VS-20M
                            IFR COM-120B communication analyzer for deviation meter
                            Spectrum Analyzer, Model HP8563E
                            HP power meter model#E4418B
                            HP Benchlink -software for plot captures.

PERFORMED BY: _____   DATE: 12/30/2002
                            Constantin Pintilei
TEST SET-UP:

```
┌──────────────┐   ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│  PC WITH     │───│   UNIT       │───│  ATTENUATOR  │───│  ATTENUATOR  │
│ RANDOM DATA  │   │ UNDER TEST   │   │              │   │              │
└──────────────┘   └──────┬───────┘   └──────────────┘   └──────┬───────┘
                          │                                     │
                          │                                     │
   ┌──────────────┐   ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
   │ POWER SUPPLY │   │ PLOT CAPTURES│───│  SPECTRUM    │   │  MODULATION  │
   │              │   │    .GIF      │   │  ANALYZER    │   │  ANALYZER    │
   └──────────────┘   └──────────────┘   └──────────────┘   └──────────────┘
```

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                                                   Paragon/PD Modem at 16000 bps 4 FSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit data pattern is DBA protocol- type of "idle" packets data pattern as it was described in the report for the permissive change EA100894 granted in 07/12/2001. Anyway for this tests a higher deviation is achieved due to the fact that the exciter underwent the dual point modulation balance as shown in the production procedure attached.

For 16000 bps rate (4 FSK), the deviation is set to 1.76 kHz. For deviation readings it has been used the IF filter of 15 KHz

NECESSARY BANDWIDTH (Bn) CALCULATION

The corresponding emission designator prefix for necessary bandwidth
          7K67F1D for 16000 bps rate , 1.76 kHz deviation

TEST DATA: Refer to the following graphs:
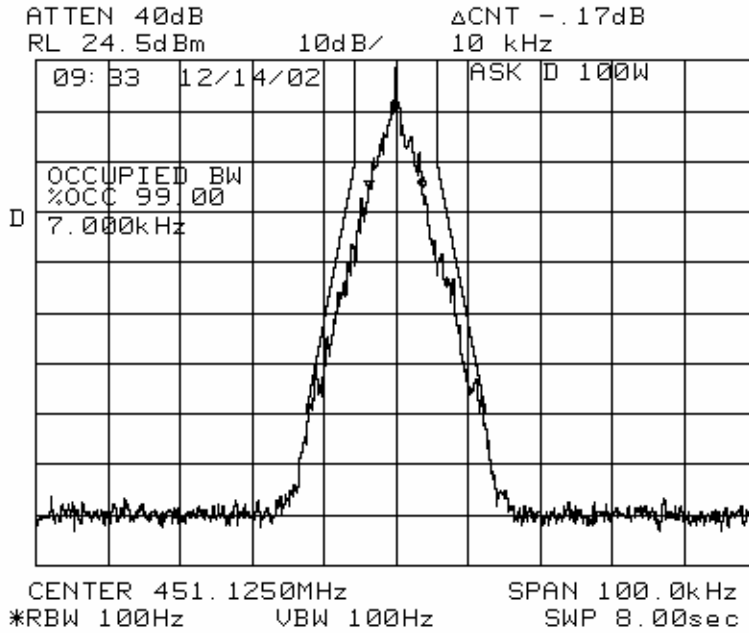
MASK: D , 7K17F1D, 0.85 W (exciter output)

SPECTRUM FOR EMISSION **7K17F1D**
OUTPUT POWER: 0.85 Watt
16000 bps, 4 level FSK
PEAK DEVIATION = 1760 Hz
SPAN = 100 KHz

MASK: D , 7K17F1D, 20 W

SPECTRUM FOR EMISSION **7K17F1D**
OUTPUT POWER: 20 Watts
16000 bps, 4 level FSK
PEAK DEVIATION = 1760 Hz
SPAN = 100 KHz
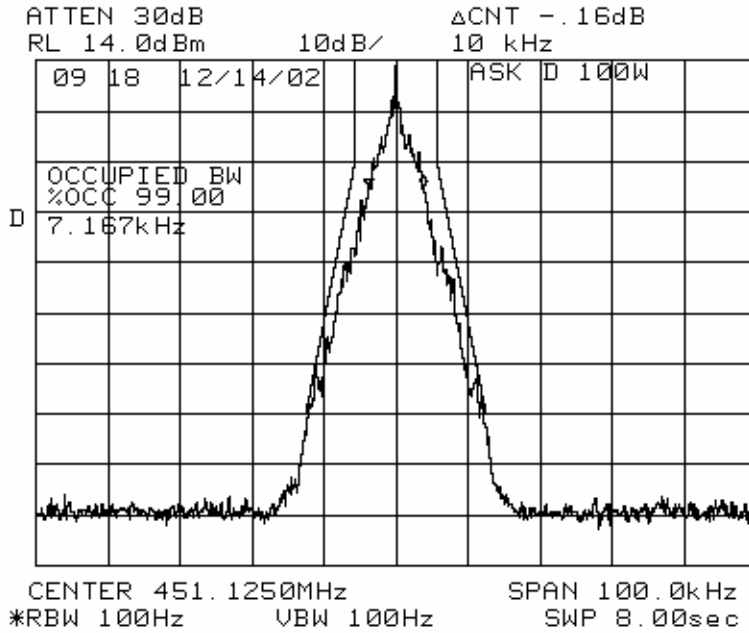
MASK: D , 7K17F1D, 100 W

SPECTRUM FOR EMISSION **7K17F1D**
OUTPUT POWER: 100 Watts
16000 bps, 4 level FSK
PEAK DEVIATION = 1760 Hz
SPAN = 100 KHz

NAME OF TEST: Transmitter Occupied Bandwidth
                        Paragon/PD Modem at 21600 bps 8 FSK

Mask compliance data in support of Emission Designator **8K33F1D**

RULE PART NUMBER: 2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041, 90.209 (b)(5), 90.210 (d)

MINIMUM STANDARD: Mask D
                        Sidebands and Spurious [Rule 90.210 (d)]
                        Authorized Bandwidth = 11.25 kHz [Rule 90.209(b) (5)]
                        Fo to 5.625 kHz   Attenuation = 0 dB
                        >5.625 kHz to 12.5 kHz   Attenuation= $7.27(f_d$ -2.88kHz) dB
                        >12.5kHz   Lesser of 50 + 10*log(P) dB or 70dB
                        Corner Points:
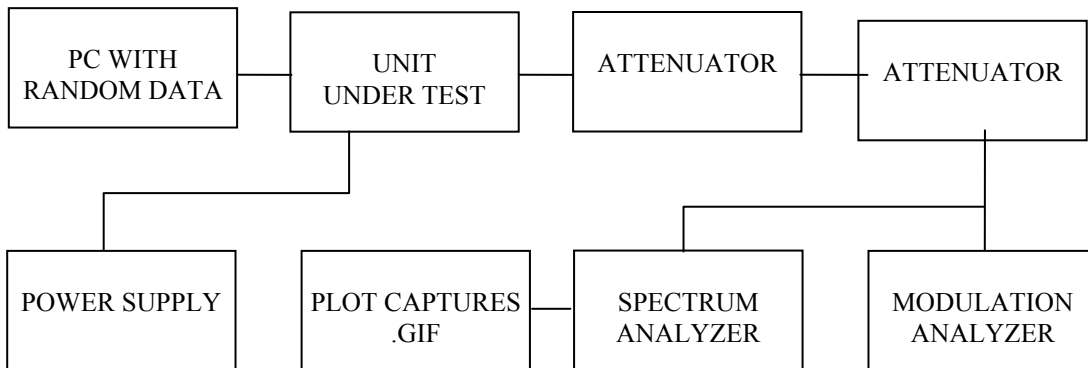   Fo to 5.625 kHz   Attenuation = 0 dB
                        >5.625 kHz to 12.5 kHz   Attenuation=20 dB to 70 dB
                        >12.5 kHz   Attenuation =70dB (100W)
TEST RESULTS: Meets minimum standard (see data on the following pages)
TEST CONDITIONS: Standard Test Conditions, 25 C
TEST EQUIPMENT: Attenuator, BIRD Model / 100-A-MFN-30 / 30 dB / 100 Watt
                        DC Power Supply , Astron Model VS-20M
                        IFR COM-120B communication analyzer for deviation meter
                        Spectrum Analyzer, Model HP8563E
                        HP power meter model#E4418B
                        HP Benchlink -software for plot captures.

PERFORMED BY: _____   DATE: 12/30/2002
                        Constantin Pintilei
TEST SET-UP:

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                                         Paragon/PD Modem at 21600 bps 8 FSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit data pattern is DBA protocol- type of "idle" packets data pattern as described in "Digital Modulation Techniques" paragraph. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 216000 bps rate (8 FSK), the deviation is set to 2.82 kHz. For deviation readings it has been used the IF filter of 15 KHz

NECESSARY BANDWIDTH (Bn) CALCULATION

The corresponding emission designator prefix for necessary bandwidth
        8K33F1D for 21600 bps rate, 2.82 kHz deviation

TEST DATA: Refer to the following graphs:

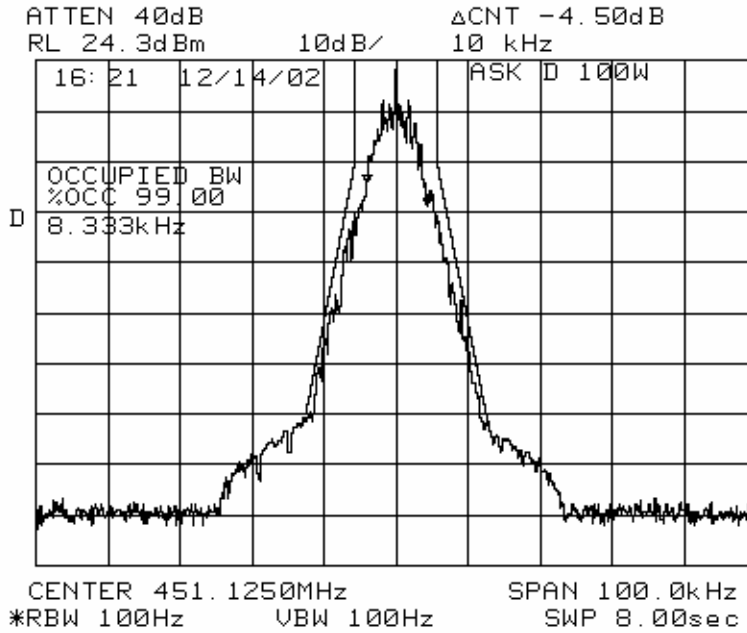MASK: D , 8K33F1D, 0.85 W (exciter output)
SPECTRUM FOR EMISSION **8K33F1D**
OUTPUT POWER: 0.85 Watt
21600 bps, 8 level FSK
PEAK DEVIATION = 2820 Hz
SPAN = 100 KHz

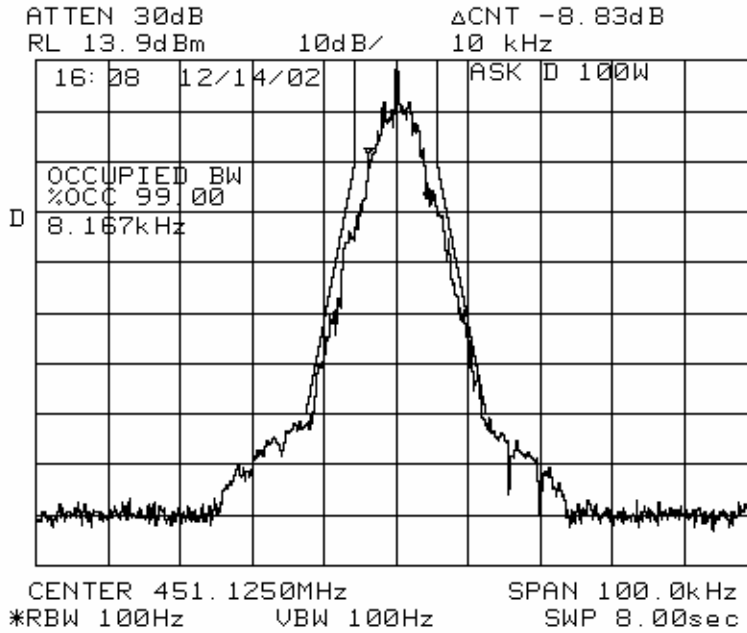## MASK: D , 8K33F1D, 20 W

SPECTRUM FOR EMISSION **8K33F1D**
OUTPUT POWER: 20 Watts
21600 bps, 8 level FSK
PEAK DEVIATION = 2820 Hz
SPAN = 100 KHz
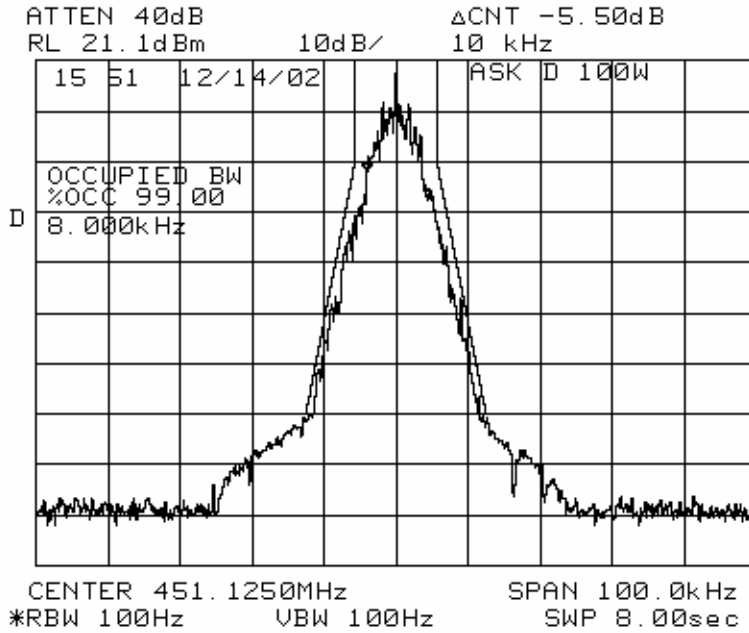
MASK: D , 8K33F1D, 100 W

SPECTRUM FOR EMISSION **8K33F1D**
OUTPUT POWER: 100 Watts
21600 bps, 8 level FSK
PEAK DEVIATION = 2820 Hz
SPAN = 100 KHz

NAME OF TEST: Transmitter Occupied Bandwidth
                       Paragon/PD Modem at 24000 bps 8 FSK

Mask compliance data in support of Emission Designator **8K00F1D**

RULE PART NUMBER: 2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041, 90.209 (b)(5), 90.210 (d)

MINIMUM STANDARD: Mask D
                           Sidebands and Spurious [Rule 90.210 (d)]
                           Authorized Bandwidth = 11.25 kHz [Rule 90.209(b) (5)]
                           Fo to 5.625 kHz   Attenuation = 0 dB
                           >5.625 kHz to 12.5 kHz   Attenuation= $7.27(f_d -2.88kHz)$ dB
                           >12.5kHz   Lesser of 50 + 10*log(P) dB or 70dB
                           Corner Points:
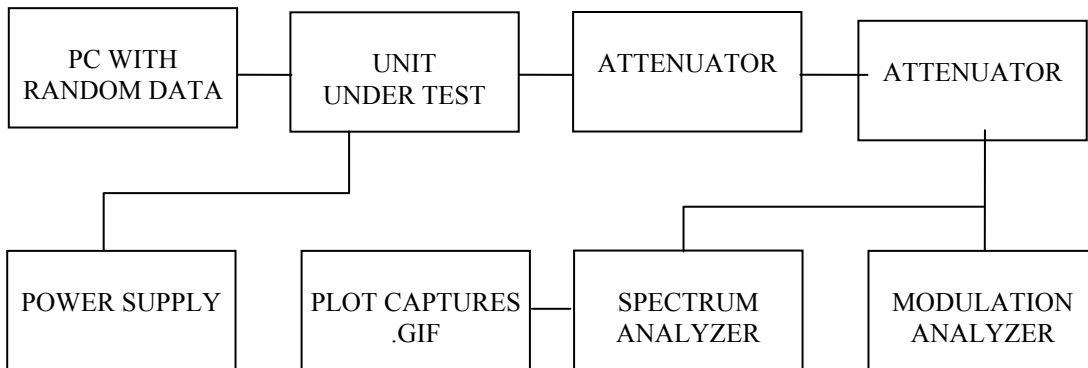   Fo to 5.625 kHz   Attenuation = 0 dB
                           >5.625 kHz to 12.5 kHz   Attenuation=20 dB to 70 dB
                           >12.5 kHz   Attenuation =70dB (100W)

TEST RESULTS: Meets minimum standard (see data on the following pages)
TEST CONDITIONS: Standard Test Conditions, 25 C
TEST EQUIPMENT: Attenuator, BIRD Model / 100-A-MFN-30 / 30 dB / 100 Watt
                       DC Power Supply , Astron Model VS-20M
                       IFR COM-120B communication analyzer for deviation meter
                       Spectrum Analyzer, Model HP8563E
                       HP power meter model#E4418B
                       HP Benchlink -software for plot captures.

PERFORMED BY: _____   DATE: 12/30/2002
                       Constantin Pintilei
TEST SET-UP:

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                                 Paragon/PD Modem at 24000 bps 8 FSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit data pattern is DBA protocol- type of "idle" packets data pattern as described in "Digital Modulation Techniques" paragraph. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 24000 bps rate (8 FSK), the deviation is set to 2.58 kHz. For deviation readings it has been used the IF filter of 15 KHz

NECESSARY BANDWIDTH (Bn) CALCULATION

The corresponding emission designator prefix for necessary bandwidth
        8K00F1D for 24000 bps rate , 2.58 kHz deviation

TEST DATA: Refer to the following graphs:

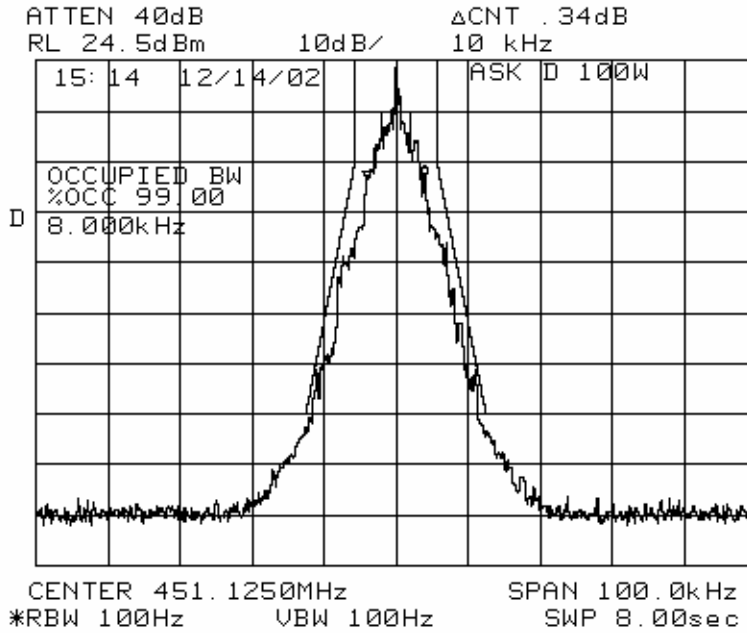MASK: D , 8K00F1D, 0.85 W (exciter output)
SPECTRUM FOR EMISSION **8K00F1D**
OUTPUT POWER: 0.85 Watt
24000 bps, 8 level FSK
PEAK DEVIATION = 2580 Hz
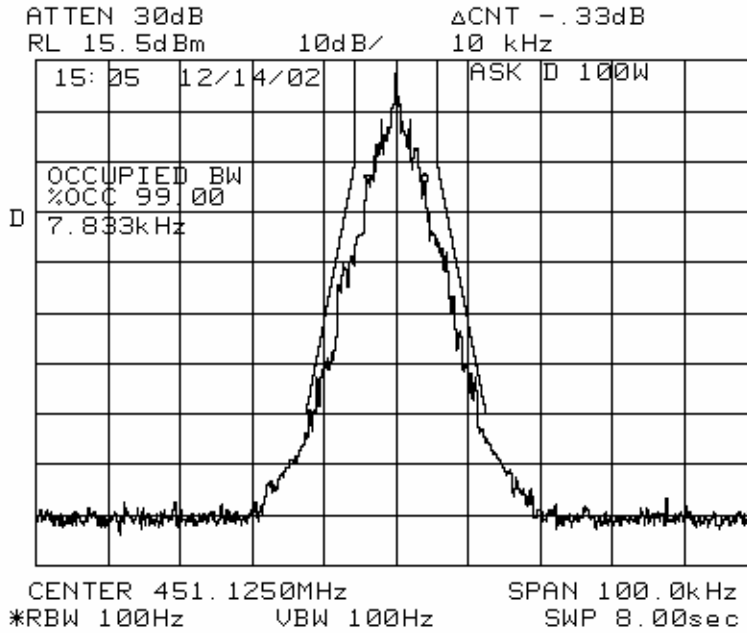SPAN = 100 KHz

MASK: D , 8K00F1D, 20 W

SPECTRUM FOR EMISSION **8K00F1D**
OUTPUT POWER: 20 Watts
24000 bps, 8 level FSK
PEAK DEVIATION = 2580 Hz
SPAN = 100 KHz

```
ATTEN 30dB              ΔCNT -.33dB
RL 15.5dBm      10dB/    10 kHz

  15:05  12/14/02         ASK D 100W




 OCCUPIED BW
 %OCC 99.00
D 7.833kHz




CENTER 451.1250MHz          SPAN 100.0kHz
*RBW 100Hz      VBW 100Hz    SWP 8.00sec
```

MASK: D , 8K00F1D, 100 W

SPECTRUM FOR EMISSION **8K00F1D**
OUTPUT POWER: 100 Watts
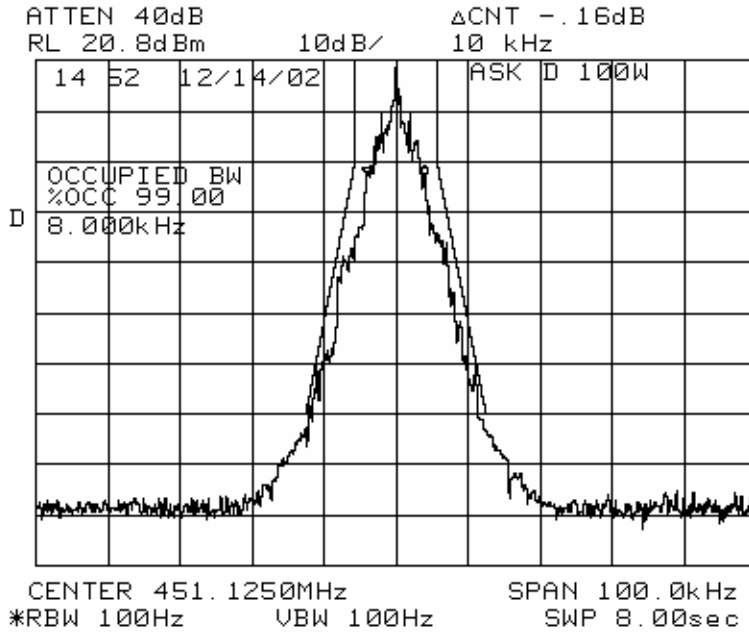24000 bps, 8 level FSK
PEAK DEVIATION = 2580 Hz
SPAN = 100 KHz

```
ATTEN 40dB                    ΔCNT -.16dB
RL 20.8dBm        10dB/       10 kHz
   14 52  12/14/02            ASK D 100W


   OCCUPIED BW
   %OCC 99.00
D  8.000kHz




   CENTER 451.1250MHz          SPAN 100.0kHz
  *RBW 100Hz      VBW 100Hz    SWP 8.00sec
```

NAME OF TEST: Transmitter Occupied Bandwidth
                       Paragon/PD Modem at 43200 bps 8 FSK

Mask compliance data in support of Emission Designator **14K9F1D**

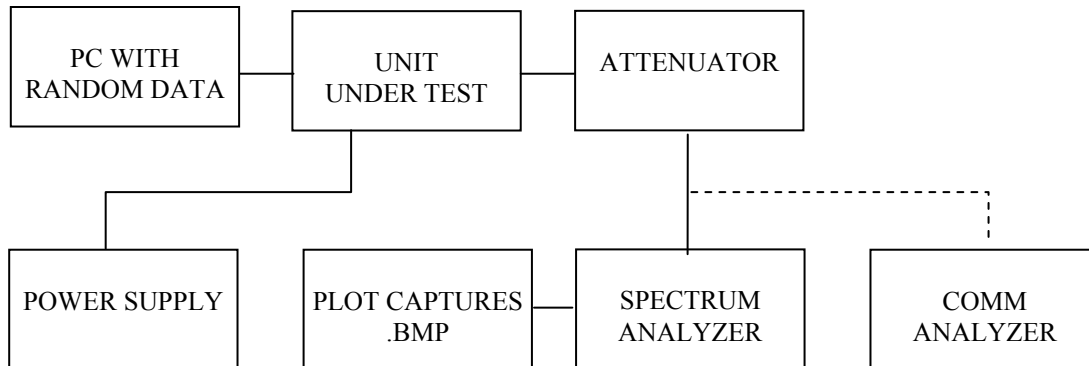RULE PART NUMBER: 2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041, 90.209 (b)(5), 90.210 (c)

MINIMUM STANDARD: Mask C
                           Sidebands and Spurious [Rule 90.210 (c)]
                           Authorized Bandwidth = 20 kHz [Rule 90.209(b) (5)]

Fo to 5.0 kHz	Attenuation = 0 dB
>5.0 kHz to 10.0 kHz	Attenuation= $83*\log(f_d$ KHz /5) dB
>10.0 kHz to 250% Auth BW	Attenuation = Lesser of: 50dB or
	$29 \log (fd2/11)$dB,
250% Auth BW	$43 + 10*\log(P)$

Corner Points:

f_0 to 5.0 kHz	Attenuation = 0 dB
>5.0 kHz to 10.0 kHz	Attenuation= 0 dB to 25 dB
>10.0 kHz to 15.0 KHz	Attenuation = 27.8 dB to 38 dB
>15.0 kHz to 20.0 KHz	Attenuation = 38 dB to 45.2 dB
>20.0 kHz to 24.0 KHz	Attenuation = 45.2 dB to 50 dB
>24.0 kHz to 50.0 KHz	Attenuation = 50 dB
>250% Auth BW	Attenuation = minimum 63 dB (100 W)

TEST RESULTS: Meets minimum standard (see data on the following pages)
TEST CONDITIONS: Standard Test Conditions, 25 C
TEST EQUIPMENT: Attenuator, BIRD Model / 100-A-MFN-30 / 30 dB / 100 Watt
                       DC Power Supply , Astron Model VS-20M
                       IFR COM-120B- communication analyzer used for deviation meter
                       Spectrum analyzer HP E4001B
                       HP power meter model#E4418B
                       HP Benchlink -software for plot captures.

PERFORMED BY: _____   DATE: 12/30/2002
                       Constantin Pintilei

TEST SET-UP:

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                                       Paragon/PD Modem at 25600 bps 4 FSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit data pattern is DBA protocol- type of "idle" packets data pattern as described in "Digital Modulation Techniques" paragraph. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 43200bps bit rate (8 FSK), the deviation is set to 4.47 kHz. For deviation readings it has been used the IF filter of 30 KHz

NECESSARY BANDWIDTH (Bn) CALCULATION

The corresponding emission designator prefix for necessary bandwidth
14K9F1D for 14400 baud rate,43200 bit rate , 4.47 kHz deviation

TEST DATA: Refer to the following graphs:

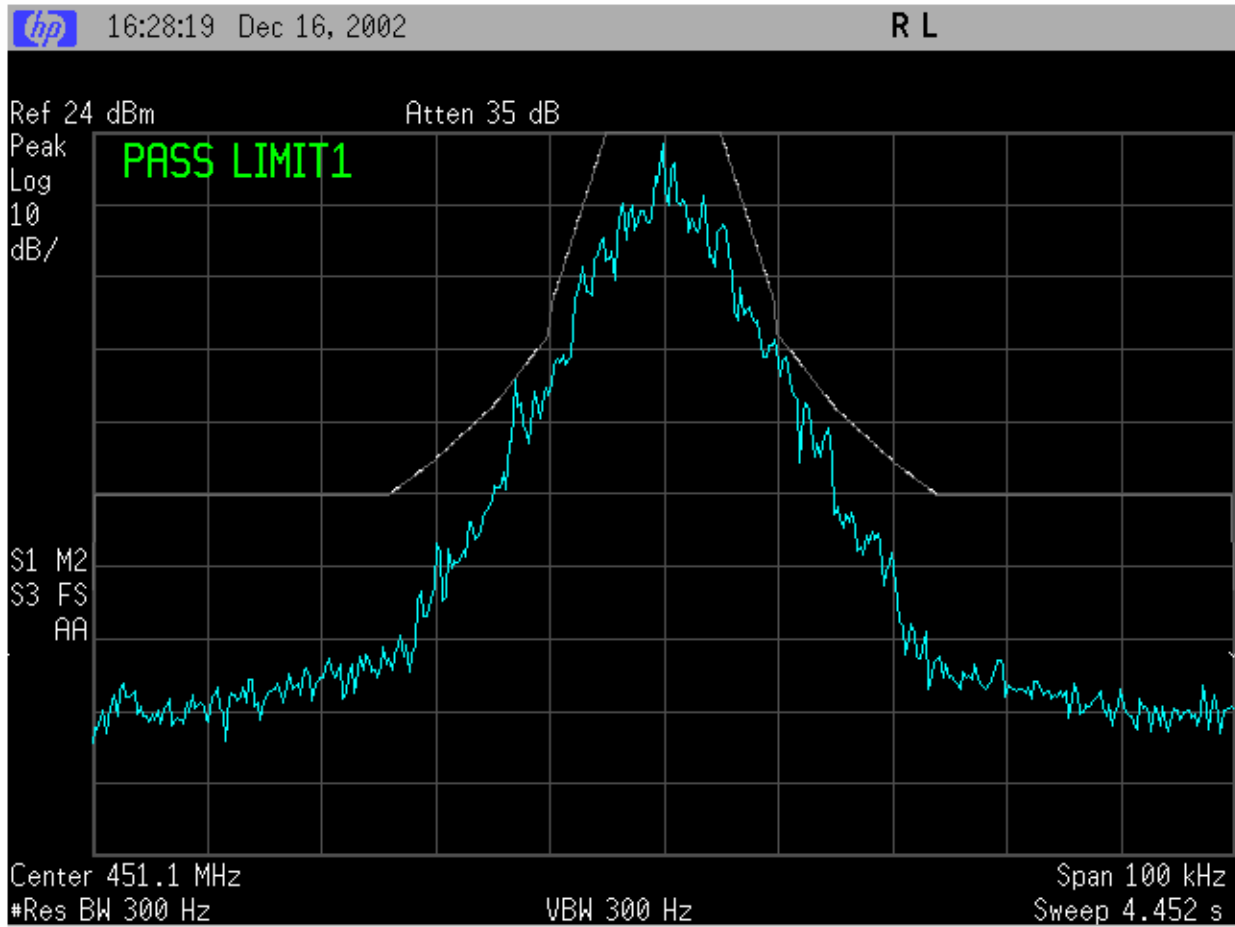MASK: C , 14K9F1D, 0.85 W (exciter output)
SPECTRUM FOR EMISSION **14K9F1D**
OUTPUT POWER: 0.85 Watt
43200 bps, 8 level FSK
PEAK DEVIATION = 4470 Hz
SPAN = 100 kHz
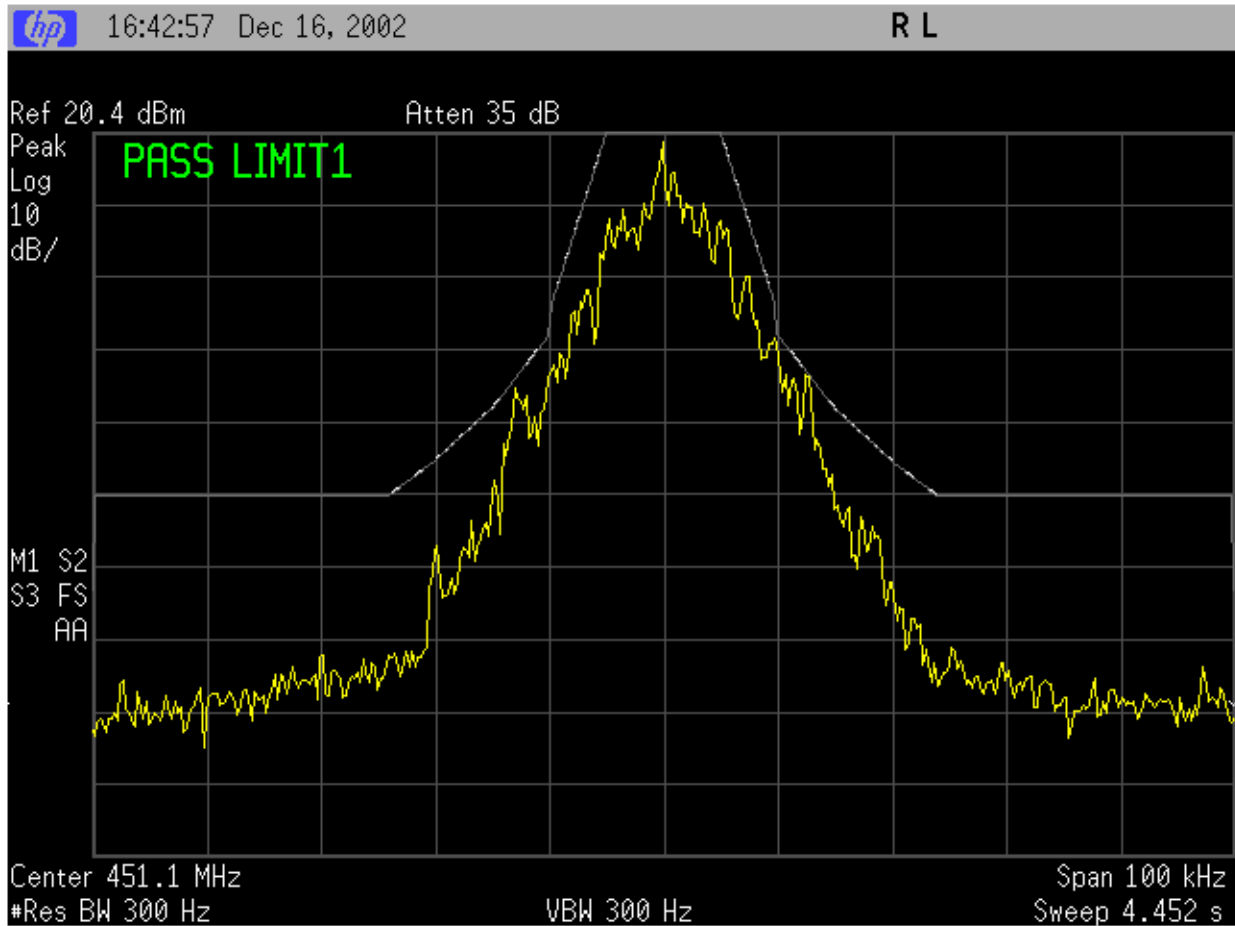
MASK: C , 14K9F1D, 20 W

SPECTRUM FOR EMISSION **14K9F1D**
OUTPUT POWER: 20 Watts
43200 bps, 8 level FSK
PEAK DEVIATION = 4470 Hz
SPAN = 100 kHz
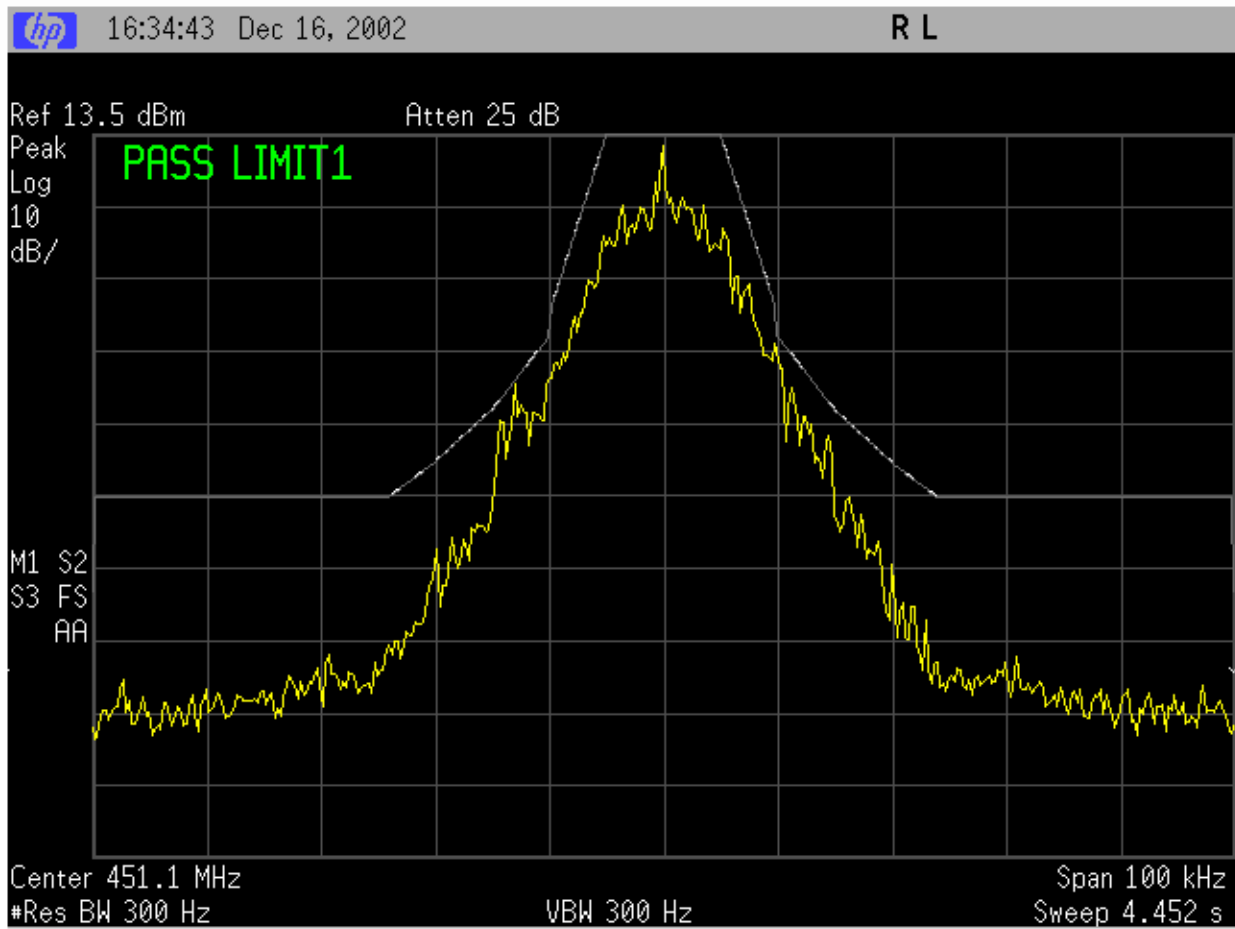
MASK: C , 14K9F1D, 100 W
SPECTRUM FOR EMISSION **14K7F1D**
OUTPUT POWER: 100 Watts
43200 bps, 8 level FSK
PEAK DEVIATION = 4470 Hz
SPAN = 100 kHz

NAME OF TEST: Transmitter Occupied Bandwidth
                              Paragon/PD Modem at 48000 bps 8 FSK

Mask compliance data in support of Emission Designator **16K7F1D**

RULE PART NUMBER: 2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041, 90.209 (b)(5), 90.210 (c)

MINIMUM STANDARD: Mask C
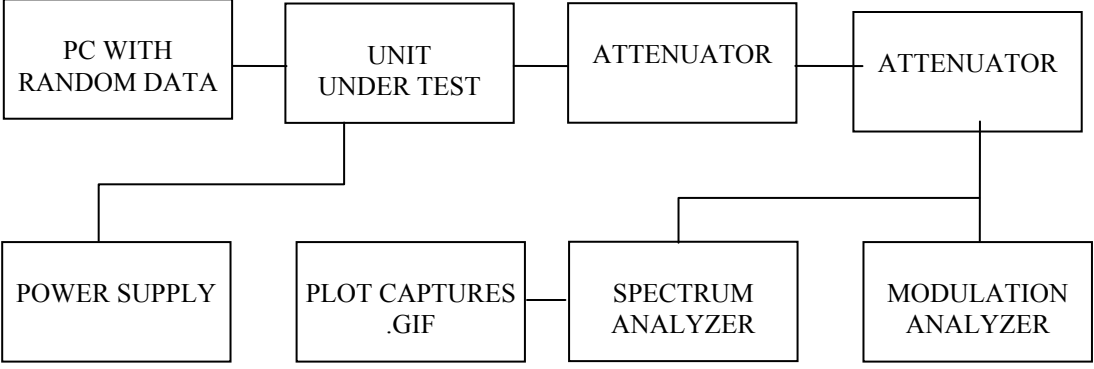   Sidebands and Spurious [Rule 90.210 (c)]
                              Authorized Bandwidth = 20 kHz [Rule 90.209(b) (5)]
                              Fo to 5.0 kHz   Attenuation = 0 dB
                              >5.0 kHz to 10.0 kHz   Attenuation= $83*\log(f_d \text{ KHz} /5)$ dB
                              >10.0 kHz to 250% Auth BW   Attenuation = Lesser of: 50dB or
                                                                              $29 \log (fd2/11)$dB,
                              250% Auth BW $43 + 10*\log(P)$
                              Corner Points:
                              f_0 to 5.0 kHz   Attenuation = 0 dB
                              >5.0 kHz to 10.0 kHz   Attenuation= 0 dB to 25 dB
                              >10.0 kHz to 15.0 KHz   Attenuation = 27.8 dB to 38 dB
                              >15.0 kHz to 20.0 KHz   Attenuation = 38 dB to 45.2 dB
                              >20.0 kHz to 24.0 KHz   Attenuation = 45.2 dB to 50 dB
                              >24.0 kHz to 50.0 KHz   Attenuation = 50 dB
                              >250% Auth BW   Attenuation = minimum 63 dB (100 W)

TEST RESULTS: Meets minimum standard (see data on the following pages)
TEST CONDITIONS: Standard Test Conditions, 25 C
TEST EQUIPMENT: Attenuator, BIRD Model / 100-A-MFN-30 / 30 dB / 100 Watt
                              DC Power Supply , Astron Model VS-20M
                              IFR COM-120B- communication analyzer used for deviation meter
                              Spectrum analyzer HP E4001B
                              HP power meter model#E4418B
                              HP Benchlink -software for plot captures.

PERFORMED BY: _____   DATE: 12/30/2002
                              Constantin Pintilei

TEST SET-UP:

```
┌──────────────┐   ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│  PC WITH     │   │   UNIT       │   │ ATTENUATOR   │   │  ATTENUATOR  │
│ RANDOM DATA  ├───┤ UNDER TEST   ├───┤              ├───┤              │
└──────────────┘   └──────┬───────┘   └──────────────┘   └──────┬───────┘
                          │                                     │
        ┌──────────────┐  │  ┌──────────────┐   ┌──────────────┐│  ┌──────────────┐
        │ POWER SUPPLY │  │  │ PLOT CAPTURES │  │   SPECTRUM   ││  │  MODULATION  │
        │              │  └──┤    .GIF       ├──┤   ANALYZER   │└──┤   ANALYZER   │
        └──────────────┘     └──────────────┘   └──────────────┘   └──────────────┘
```

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                                 Paragon/PD Modem at 48000 bps 8 FSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit data pattern is DBA protocol- type of "idle" packets data pattern as described in "Digital Modulation Techniques" paragraph. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 48000 bps rate (8 FSK), the deviation is set to 4.96 kHz. For deviation readings it has been used the IF filter of 30 KHz

NECESSARY BANDWIDTH (Bn) CALCULATION

The corresponding emission designator prefix for necessary bandwidth
          16K7F1D for 48000 bps rate , 4.96 kHz deviation

TEST DATA: Refer to the following graphs:

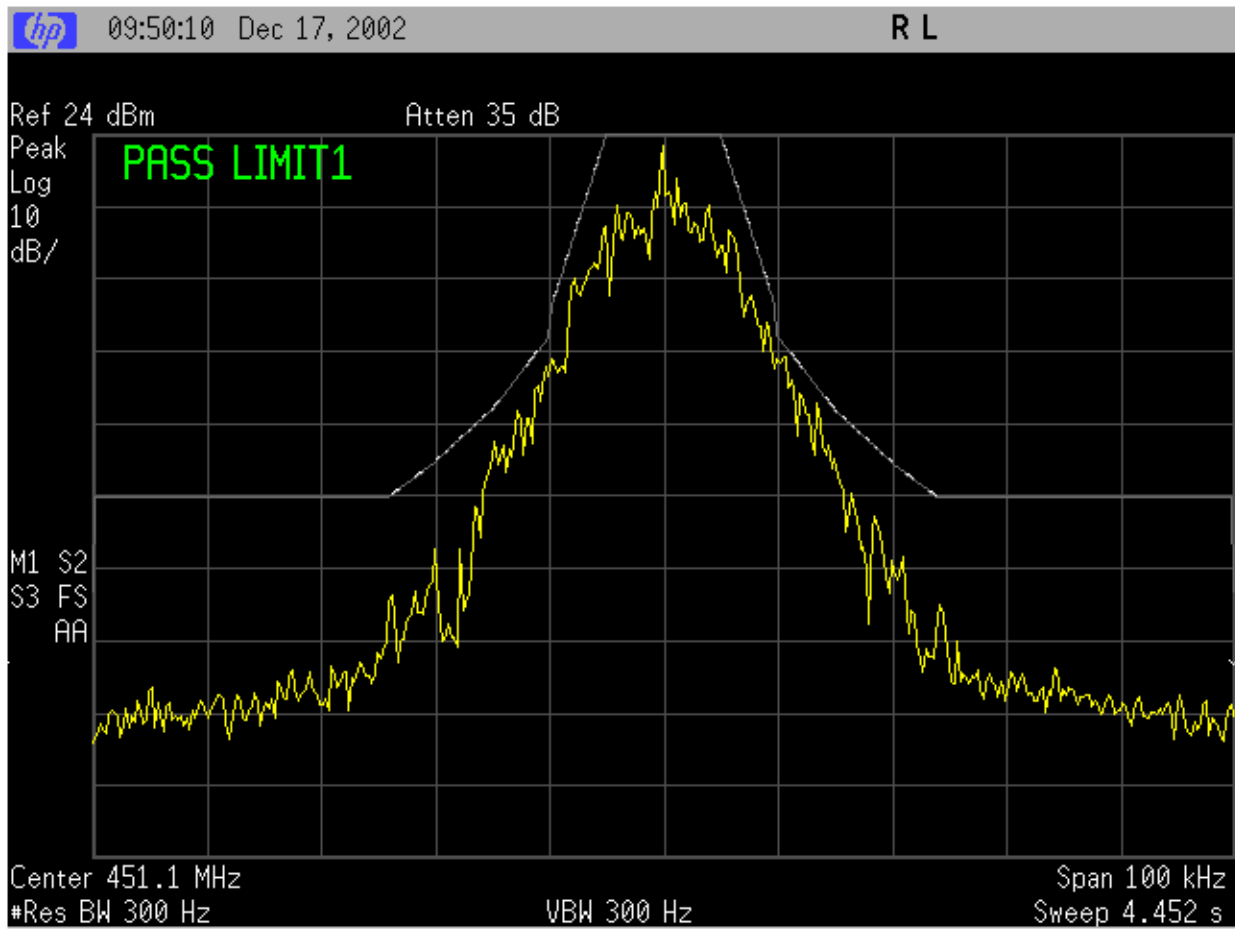MASK: C , 16K7F1D, 0.85 W (exciter output)

SPECTRUM FOR EMISSION **16K7F1D**
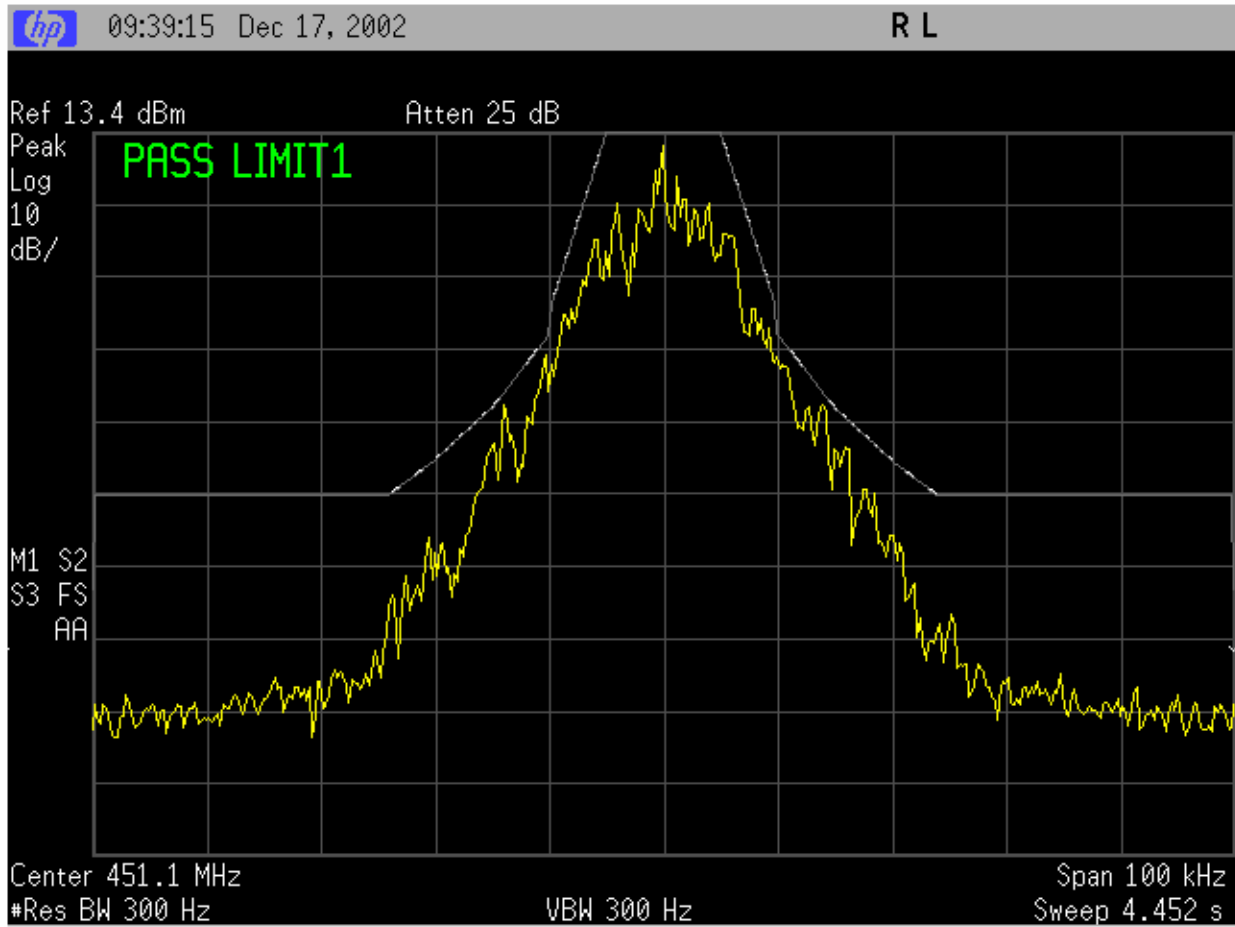OUTPUT POWER: 0.85 Watt
48000 bps, 8 level FSK
PEAK DEVIATION = 4960 Hz
SPAN = 100 kHz

MASK: C , 16K7F1D, 20 W

SPECTRUM FOR EMISSION **16K7F1D**
OUTPUT POWER: 20 Watts
48000 bps, 8 level FSK
PEAK DEVIATION = 4960 Hz
SPAN = 100 kHz

MASK: C , 16K7F1D, 100 W

SPECTRUM FOR EMISSION **16K7F1D**
OUTPUT POWER: 100 Watts
48000 bps, 8 level FSK
PEAK DEVIATION = 4960 Hz
SPAN = 100 kHz