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
        -Part 15:15.207, 15.209
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
- 2-level generic digital modulation GMSK BT.3	90.209 F1D emission designator
- 4- FSK modulations for 12.5kHz channel (mask D)	90.210(d)
- 4-FSK modulatins for 25 kHz channel (mask C)	90.210(c)

The following reports have been generated for Class II Permissive Change of FCC certificate EOTBDD4T83-2 granted to Dataradio. Unless otherwise noted, all of 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, in next page. 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
9600 bps	9600 bauds	differential GMSK BT.3	3.2 kHz data	9333 Hz	9K17
19200 bps	19200 bauds	differential GMSK BT.3	4.7 kHz data	14830 Hz	14K9
14400 bps	7200 bauds	SRRC4FSK α=0.4	± 2.12 kHz	8250 Hz	8K25
16000 bps	8000 bauds	SRRC4FSK α=0.4	± 1.73kHz	7666 Hz	7K67
25600 bps	12800 bauds	SRRC4FSK α=0.4	± 4.12 kHz	14700 Hz	14K7
32000 bps	16000 bauds	RC4FSK α=0.4	± 4.35 kHz	15170 Hz	15K2

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 mask J, the resulting value was recorded as Occupied Bandwidth.

        The measurement set-up is:
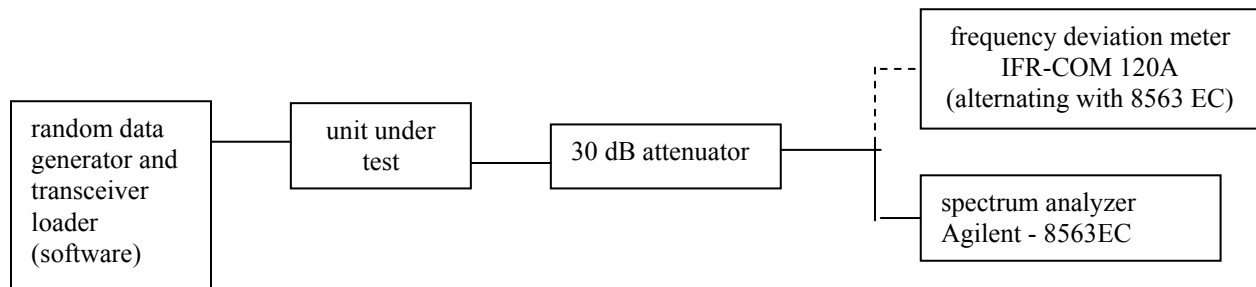
NAME OF TEST: Transmitter Occupied Bandwidth
                      Generic digital modulation 19200bps/25kHz channel of Paragon/PD

Mask compliance data in support of Emission Designator **14K9F1D**
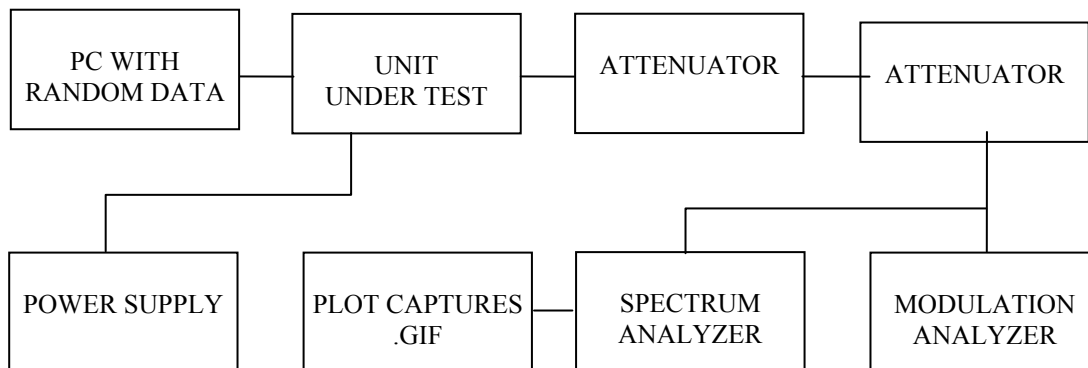RULE PART NUMBER: 2.201, 2.202, 2.1033 c (14), 2.1049 (h), 2.1041, 90.209 (b)(5), 90.210 (c)

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= $83*\log(f_d \text{ KHz} /5)$ 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)

UNIT UNDER TEST   Unit: T837-20-0200 exciter   T839-20-0000 P.A.
                   SN: 706482   422931
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: 09/18/2002
                         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 19200 bps DGMSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit "test data pattern" command produces a 2047 bit pseudo-random pattern. This pattern is generated by the internal software using the polynomial $X^{11}+X^9+1$ form and a 12-bit shift register. Initial value of the register is 111111111110 (FFE hex). The 2047 bit sequence is repeated thereafter as long is necessary to complete the test duration (55 sec).

The pseudo random data pattern is Gaussian pulse shaped to yield the generic digital modulation process, the resulting base band signal feed the modulator's input of the Exciter.

For 19200 bps rate (DGMSK), the deviation is adjusted to 4.75 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 19200 bps rate/25 kHz channel width at ±4.75kHz deviation

TEST DATA: Refer to the following graphs:

MASK: D , 14K9F1D, 0.85 W (exciter output)
SPECTRUM FOR EMISSION **14K9F1D**
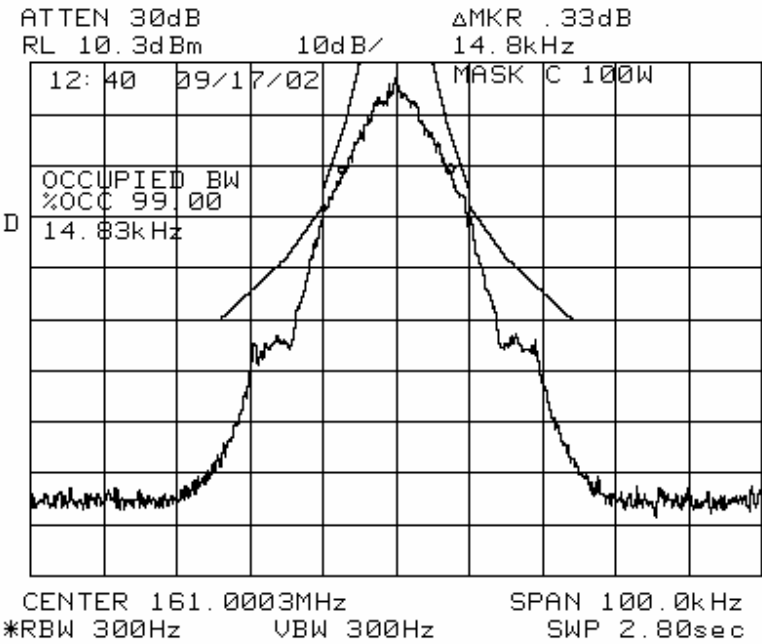OUTPUT POWER: 0.85 Watt
19200bps DGMSK
PEAK DEVIATION = 4750 Hz
SPAN = 100 KHz


```
ATTEN 10dB                    ΔMKR 2.00dB
RL  -4.1dBm       10dB/       14.8kHz

   12:42  09/17/02            MASK C 100W




   OCCUPIED BW
   %OCC 99.00
D  14.83kHz









CENTER 161.0003MHz          SPAN 100.0kHz
*RBW 300Hz      VBW 300Hz    SWP 2.80sec
```
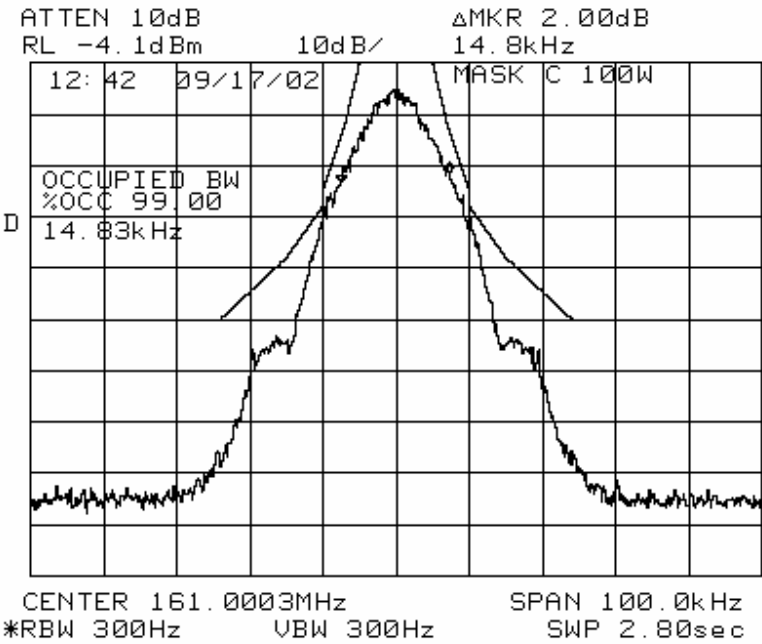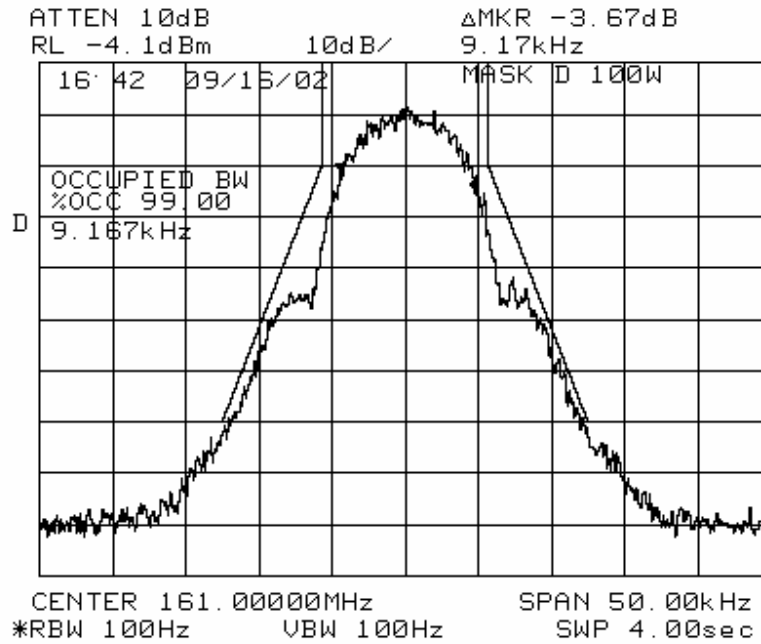
MASK: D , 14K9F1D, 20 W

SPECTRUM FOR EMISSION **14K9F1D**
OUTPUT POWER: 20 Watts
19200bps DGMSK
PEAK DEVIATION = 4750 Hz
SPAN = 100 KHz

MASK: D , 14K9F1D, 100 W

SPECTRUM FOR EMISSION **14K9F1D**
OUTPUT POWER: 100 Watts
19200bps DGMSK
PEAK DEVIATION = 4750 Hz
SPAN = 100 KHz
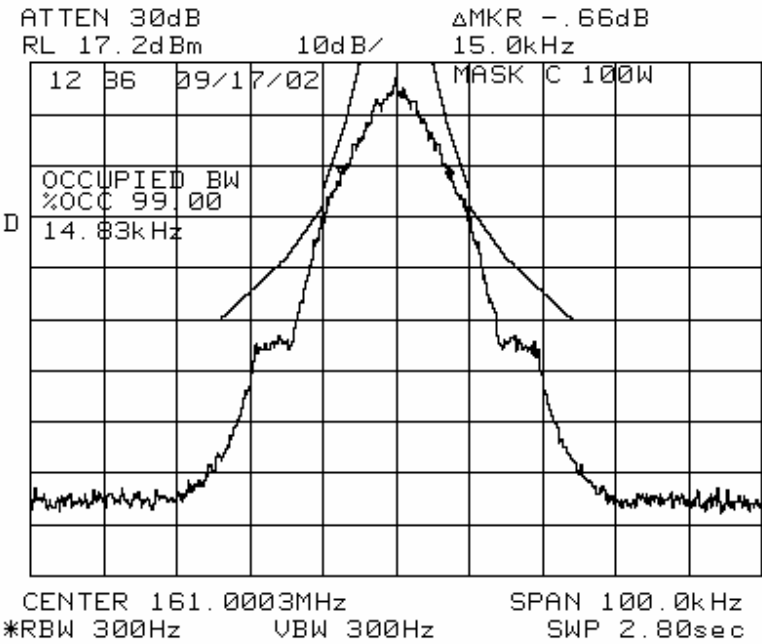
NAME OF TEST: Transmitter Occupied Bandwidth
                      Generic digital modulation 9600bps/12.5kHz channel of Paragon/PD

Mask compliance data in support of Emission Designator **9K17F1D**
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)

UNIT UNDER TEST   Unit: T837-20-0200 exciter   T839-20-0000 P.A.
                   SN: 706482   422931
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: 09/18/2002
                          Constantin Pintilei
TEST SET-UP:

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                                       Paragon/PD Modem at 9600 bps DGMSK

MODULATION SOURCE DESCRIPTION:

TX Data Pattern:

The transmit "test data pattern" command produces a 2047 bit pseudo-random pattern. This pattern is generated by the internal software using the polynomial $X^{11}+X^9+1$ form and a 12-bit shift register. Initial value of the register is 111111111110 (FFE hex). The 2047 bit sequence is repeated thereafter as long is necessary to complete the test duration (55 sec).

The pseudo random data pattern is Gaussian pulse shaped to yield the generic digital modulation process, the resulting base band signal feed the modulator's input of the Exciter.

For 9600 bps rate (DGMSK), the deviation is adjusted to 3.15 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
           9K17F1D for 9600 bps rate/12.5 kHz channel width at ±3.15kHz deviation

TEST DATA: Refer to the following graphs:

MASK: D , 9K17F1D, 0.85 W (exciter output)

SPECTRUM FOR EMISSION **9K17F1D**
OUTPUT POWER: 0.85 Watt
9600bps DGMSK
PEAK DEVIATION = 3150 Hz
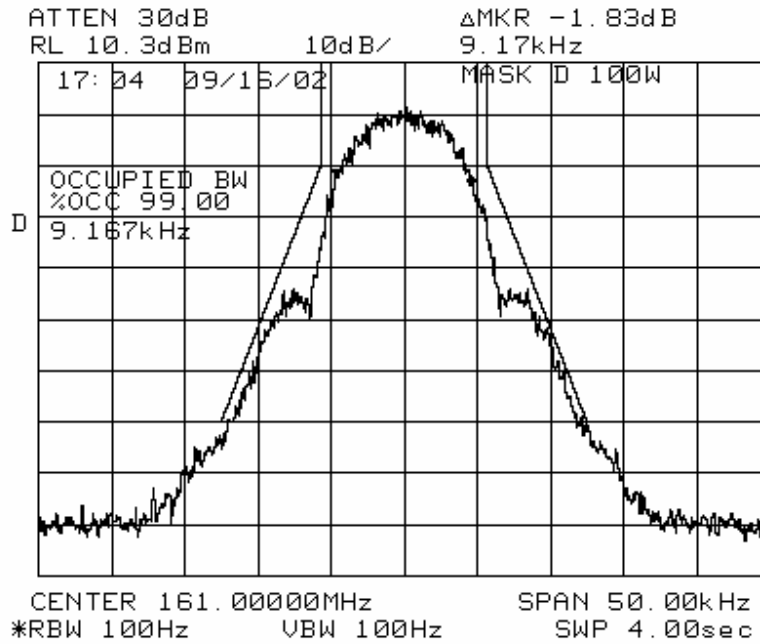SPAN = 50 KHz

MASK: D , 9K17F1D, 20 W

SPECTRUM FOR EMISSION **9K17F1D**
OUTPUT POWER: 20 Watts
9600bps DGMSK
PEAK DEVIATION = 3150 Hz
SPAN = 50 KHz
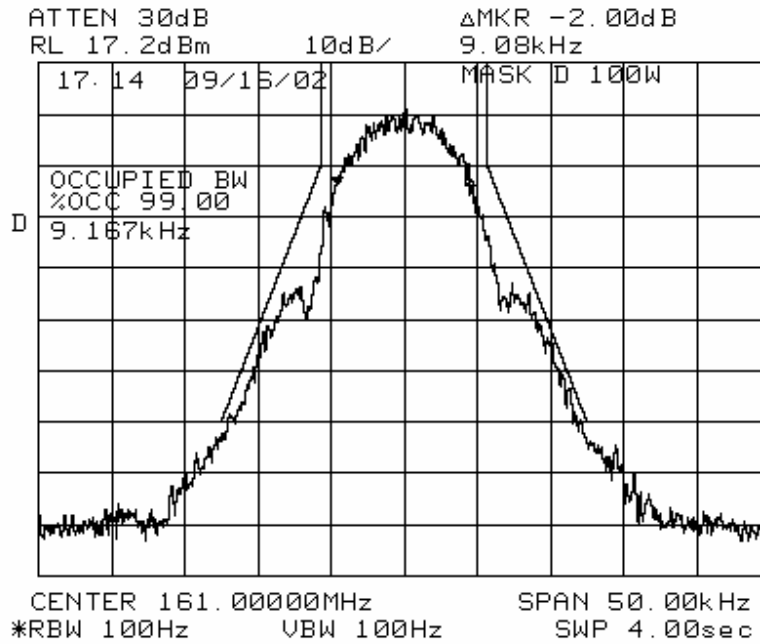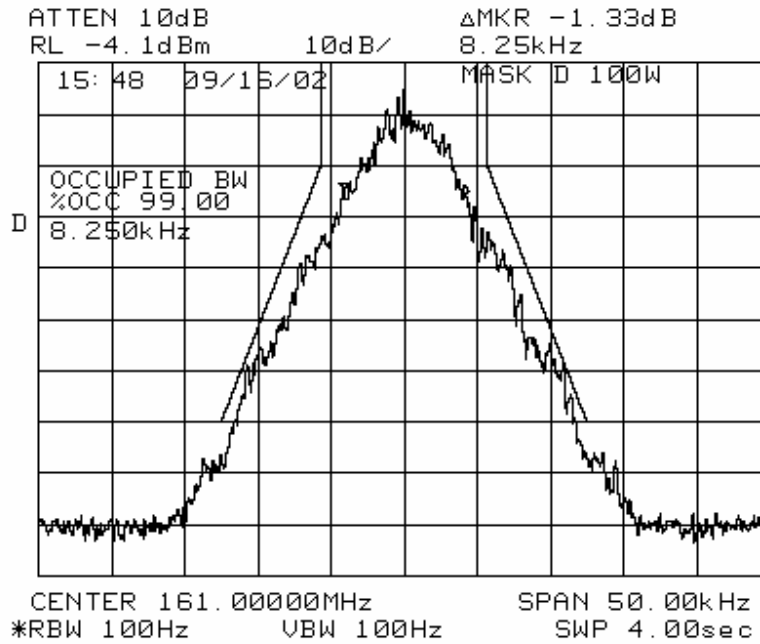
MASK: D , 9K17F1D, 100 W

SPECTRUM FOR EMISSION **9K17F1D**
OUTPUT POWER: 100 Watts
9600bps DGMSK
PEAK DEVIATION = 3150 Hz
SPAN = 50 KHz

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

Mask compliance data in support of Emission Designator **8K25F1D**

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)

UNIT UNDER TEST   Unit: T837-20-0200 exciter   T839-20-0000 P.A.
                   SN: 706482   422931
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: 09/18/2002
                            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 described in "Digital Modulation Techniques" document. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 14400 bps rate (4 FSK), the deviation is set to 2.12 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
        8K25F1D for 14400 bps rate , 2.12 kHz deviation

TEST DATA: Refer to the following graphs:

MASK: D , 8K25F1D, 0.85 W (exciter output)
SPECTRUM FOR EMISSION **8K25F1D**
OUTPUT POWER: 0.85 Watt
14400 bps, 4 level FSK
PEAK DEVIATION = 2120 Hz
SPAN = 50 KHz

MASK: D , 8K25F1D, 20 W

SPECTRUM FOR EMISSION **8K25F1D**
OUTPUT POWER: 20 Watts
14400 bps, 4 level FSK
PEAK DEVIATION = 2120 Hz
SPAN = 50 KHz
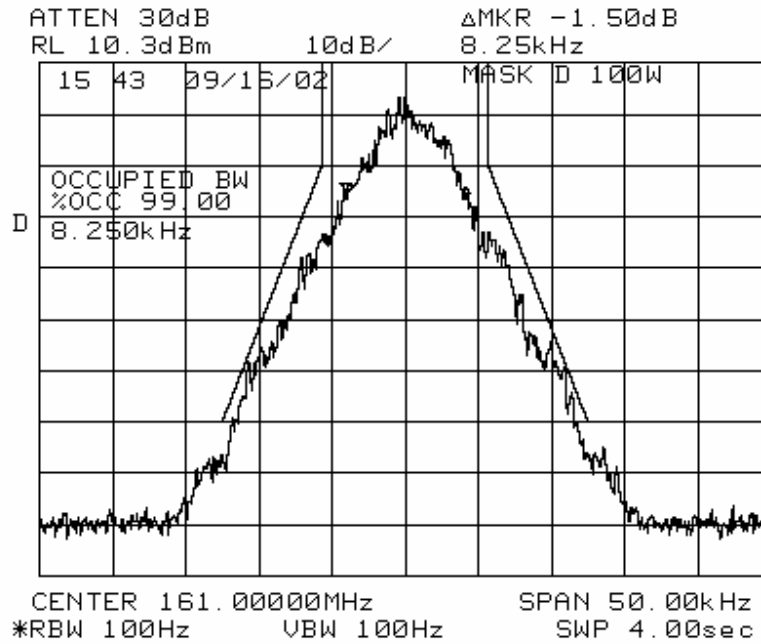
NAME OF TEST: Transmitter Occupied Bandwidth
                     Paragon/PD Modem at 16000 bps 4 FSK
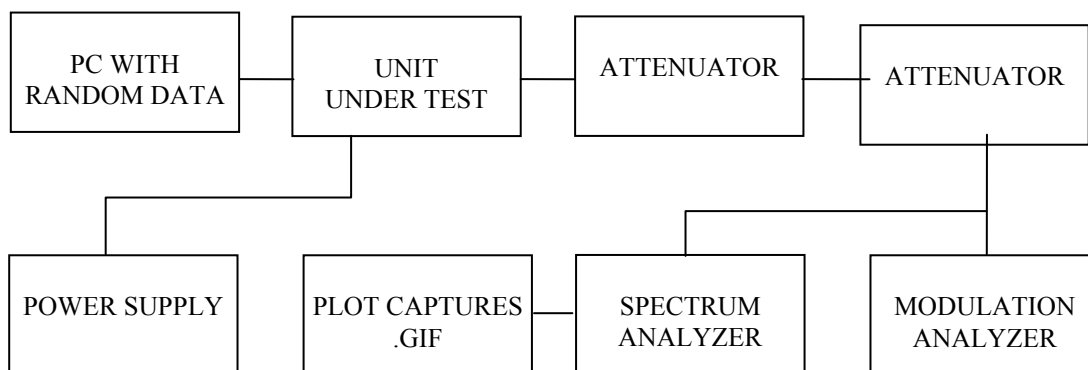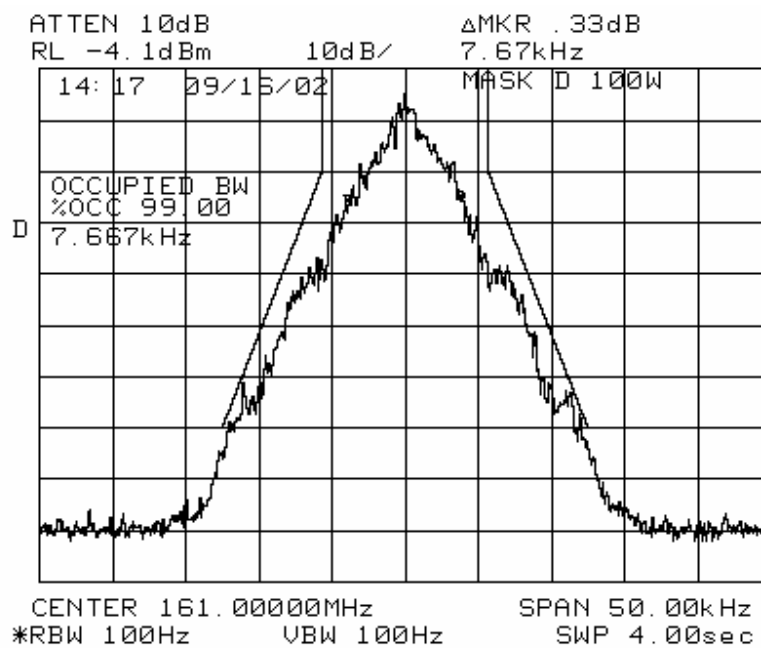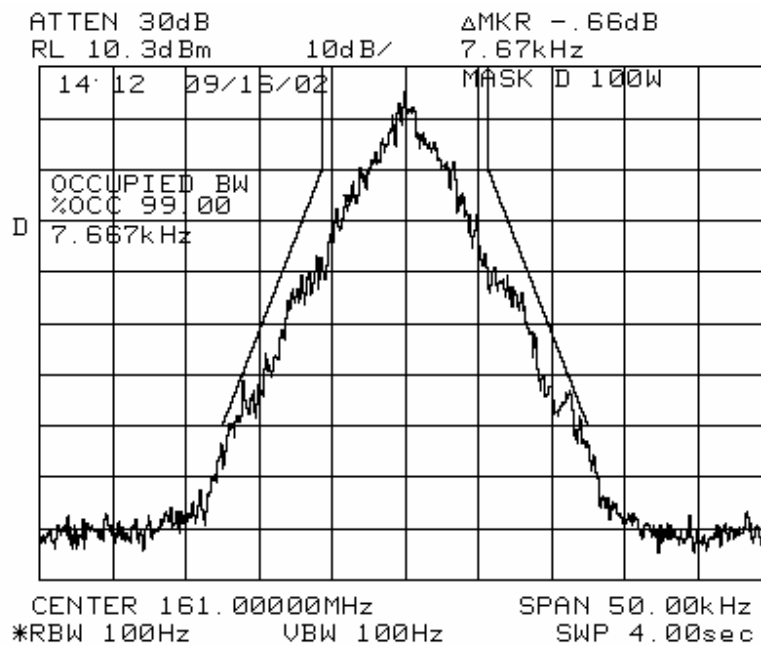
Mask compliance data in support of Emission Designator **7K67F1D**

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)

UNIT UNDER TEST	Unit:	T837-20-0200 exciter T839-20-0000 P.A.
	SN:	706482 422931

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: 09/18/2002
                     Constantin Pintilei

TEST SET-UP:

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 described in "Digital Modulation Techniques" document. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 16000 bps rate (4 FSK), the deviation is set to 1.73 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 , 1.73 kHz deviation

TEST DATA: Refer to the following graphs:

MASK: D , 7K67F1D, 0.85 W (exciter output)

SPECTRUM FOR EMISSION **7K67F1D**
OUTPUT POWER: 0.85 Watt
16000 bps, 4 level FSK
PEAK DEVIATION = 1730 Hz
SPAN = 50 KHz

MASK: D , 7K67F1D, 20 W

SPECTRUM FOR EMISSION **7K67F1D**
OUTPUT POWER: 20 Watts
16000 bps, 4 level FSK
PEAK DEVIATION = 1730 Hz
SPAN = 50 KHz
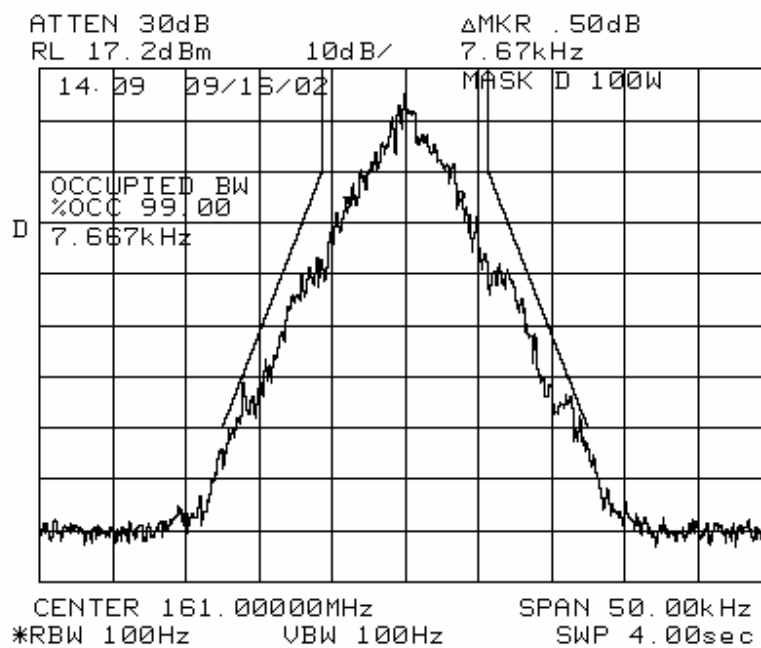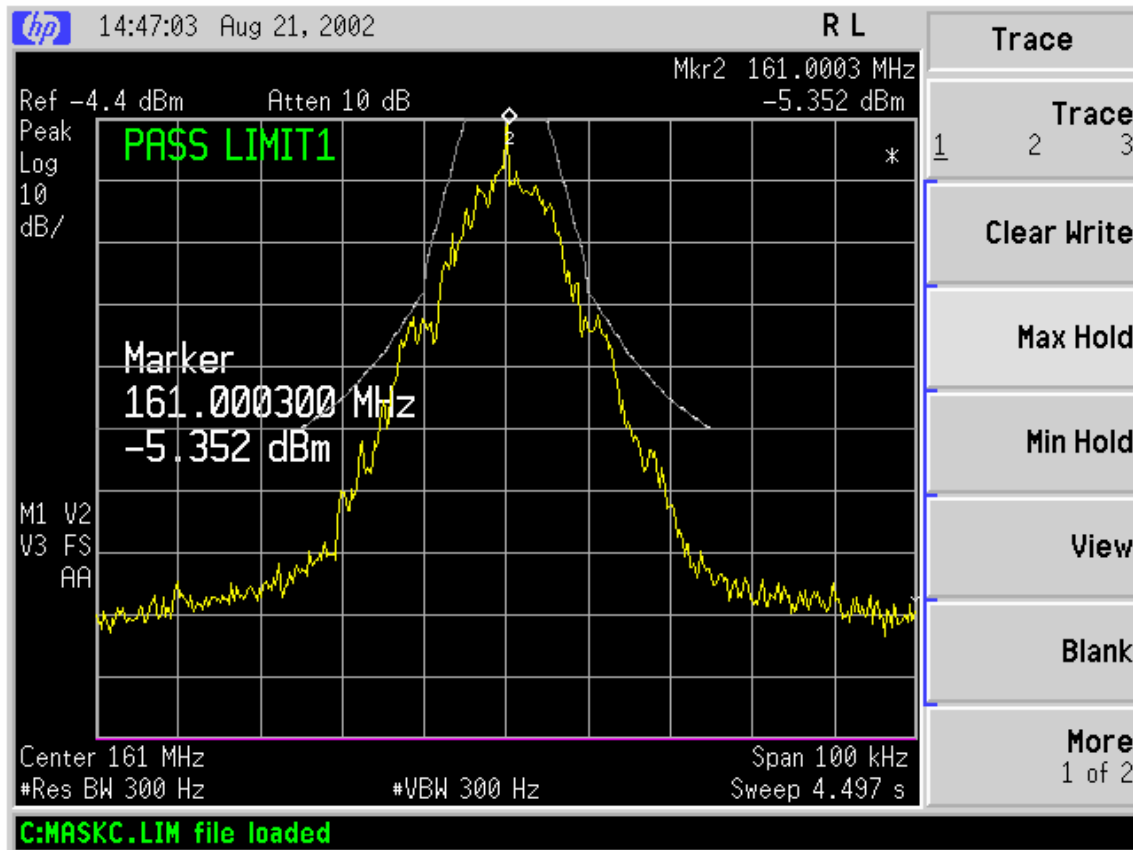
MASK: D , 7K67F1D, 100 W

SPECTRUM FOR EMISSION **7K67F1D**
OUTPUT POWER: 100 Watts
16000 bps, 4 level FSK
PEAK DEVIATION = 1730 Hz
SPAN = 50 KHz

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

Mask compliance data in support of Emission Designator **14K7F1D**

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)

UNIT UNDER TEST	Unit:	T837-20-0200 -exciter	T839-20-0000 - PA
	SN:	706482	422931

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: *Nicolas Savard*   DATE: 08/22/2002
         Nicolas Savard
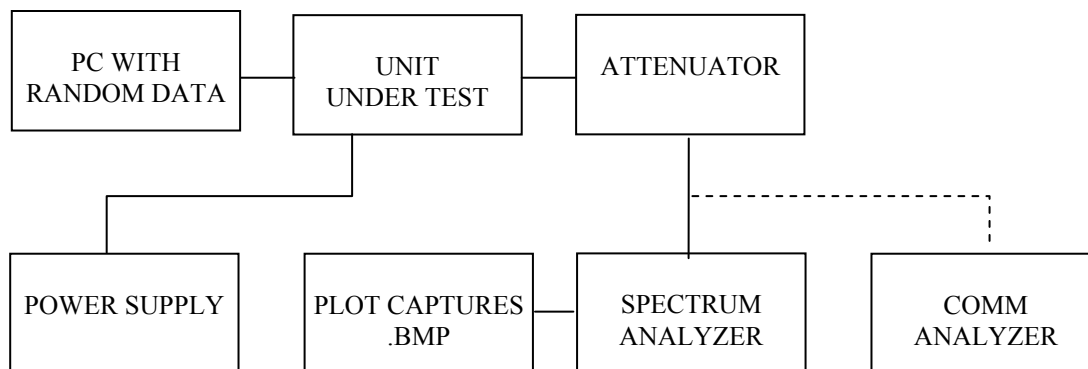
TEST SET-UP:

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" document. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 25600bps bit rate (4 FSK), the deviation is set to 4.12 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
        14K7F1D for 12800 baud rate , 4.12 kHz deviation

TEST DATA: Refer to the following graphs:

MASK: C , 14K7F1D, 0.85 W (exciter output)

SPECTRUM FOR EMISSION **14K7F1D**
OUTPUT POWER: 0.85 Watt
25600 bps, 4 level FSK
PEAK DEVIATION = 4120 Hz
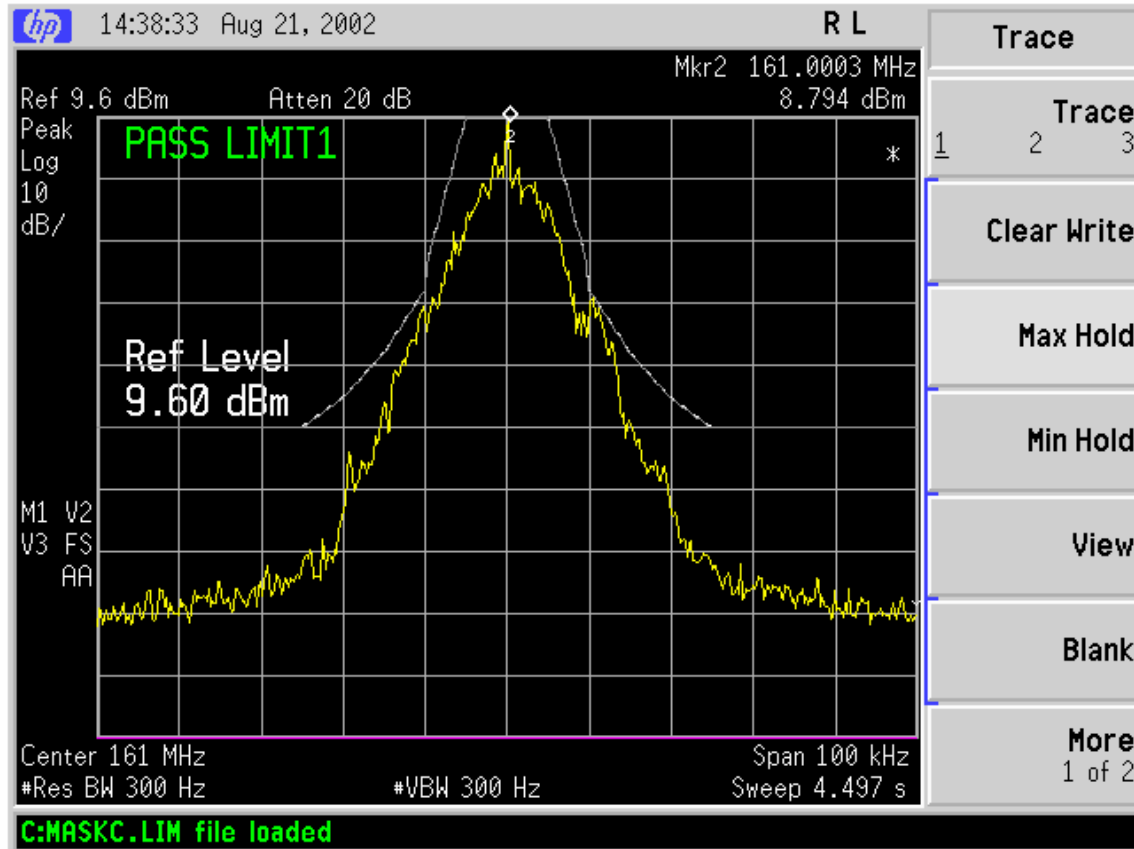SPAN = 100 kHz

MASK: C , 14K7F1D, 20 W

SPECTRUM FOR EMISSION **14K7F1D**
OUTPUT POWER: 20 Watts
25600 bps, 4 level FSK
PEAK DEVIATION = 4120 Hz
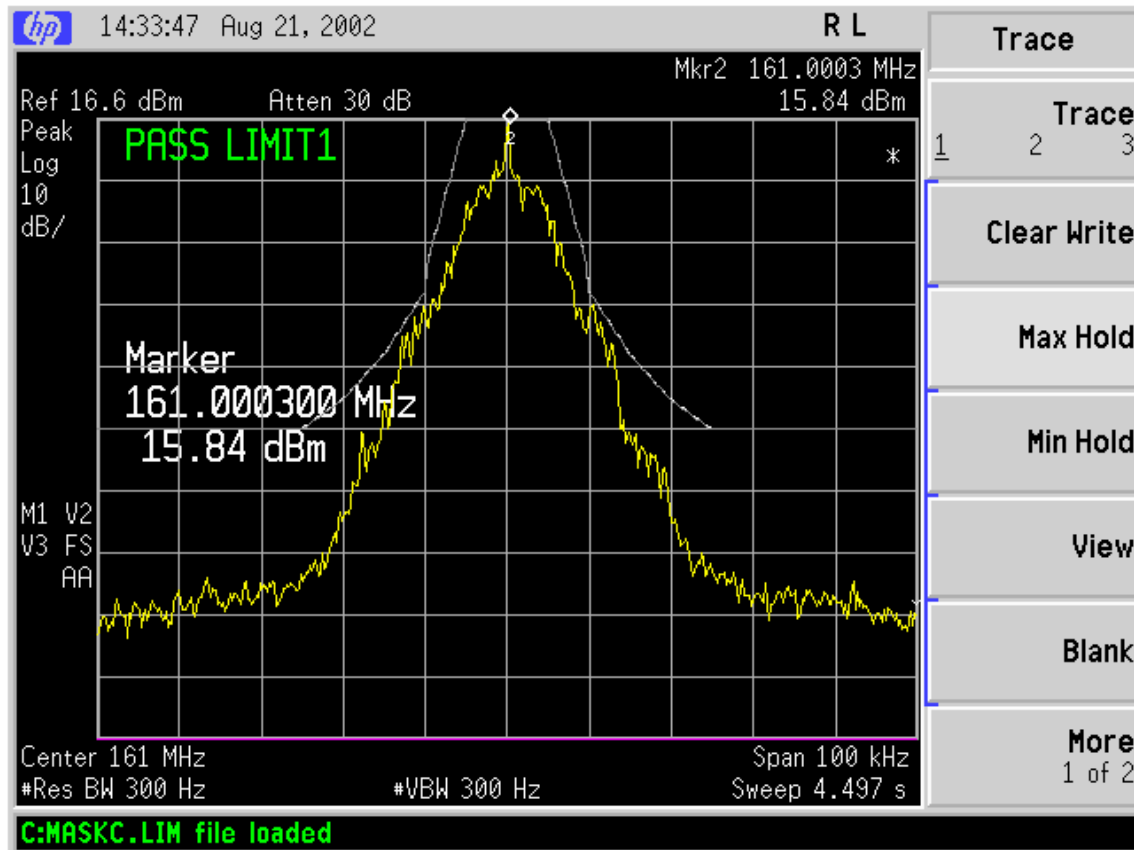SPAN = 100 kHz

MASK: C , 14K7F1D, 100 W

SPECTRUM FOR EMISSION **14K7F1D**
OUTPUT POWER: 100 Watts
25600 bps, 4 level FSK
PEAK DEVIATION = 4120 Hz
SPAN = 100 kHz

NAME OF TEST: Transmitter Occupied Bandwidth
         Paragon/PD Modem at 32000 bps 4 FSK

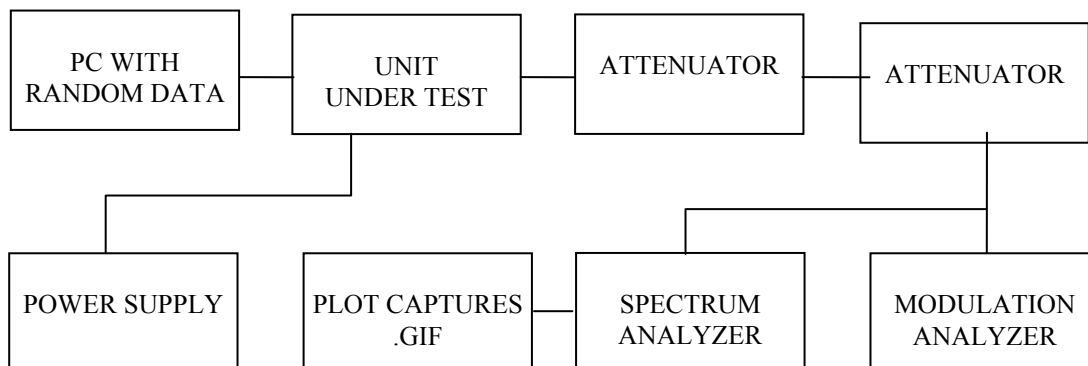## Mask compliance data in support of Emission Designator **15K2F1D**

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)

UNIT UNDER TEST	Unit:	T837-20-0200 -exciter	T839-20-0000 - PA
	SN:	706482	422931

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: 08/22/2002
         Nicolas Savard

TEST SET-UP:

NAME OF TEST: Transmitter Occupied Bandwidth (Continued)
                          Paragon/PD Modem at 32000 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" document. After this data follows the modulation process described, the resulting base band signal feed the modulator's input of the Exciter.

For 32000 bps rate (4 FSK), the deviation is set to 4.35 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
          15K2F1D for 32000 bps rate , 4.35 kHz deviation

TEST DATA: Refer to the following graphs:
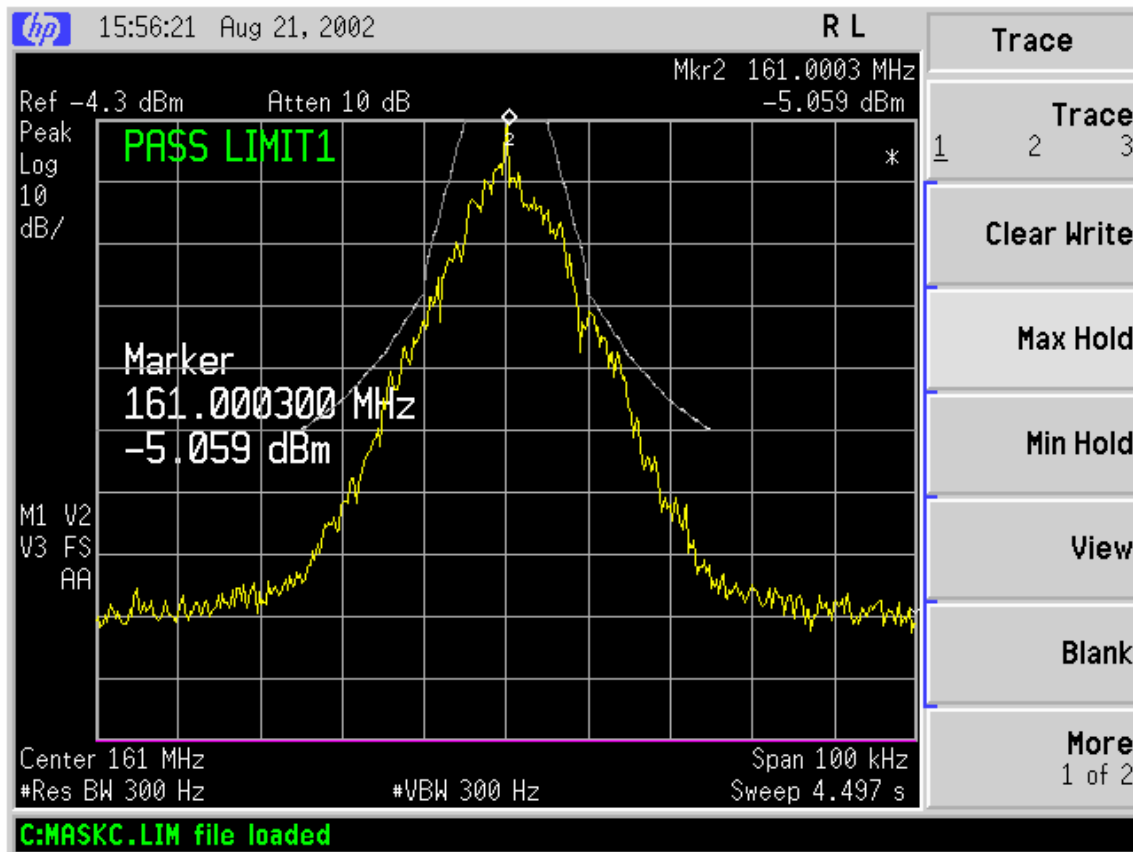
MASK: C , 15K2F1D, 0.85 W (exciter output)

SPECTRUM FOR EMISSION **15K2F1D**
OUTPUT POWER: 0.85 Watt
32000 bps, 4 level FSK
PEAK DEVIATION = 4350 Hz
SPAN = 100 kHz

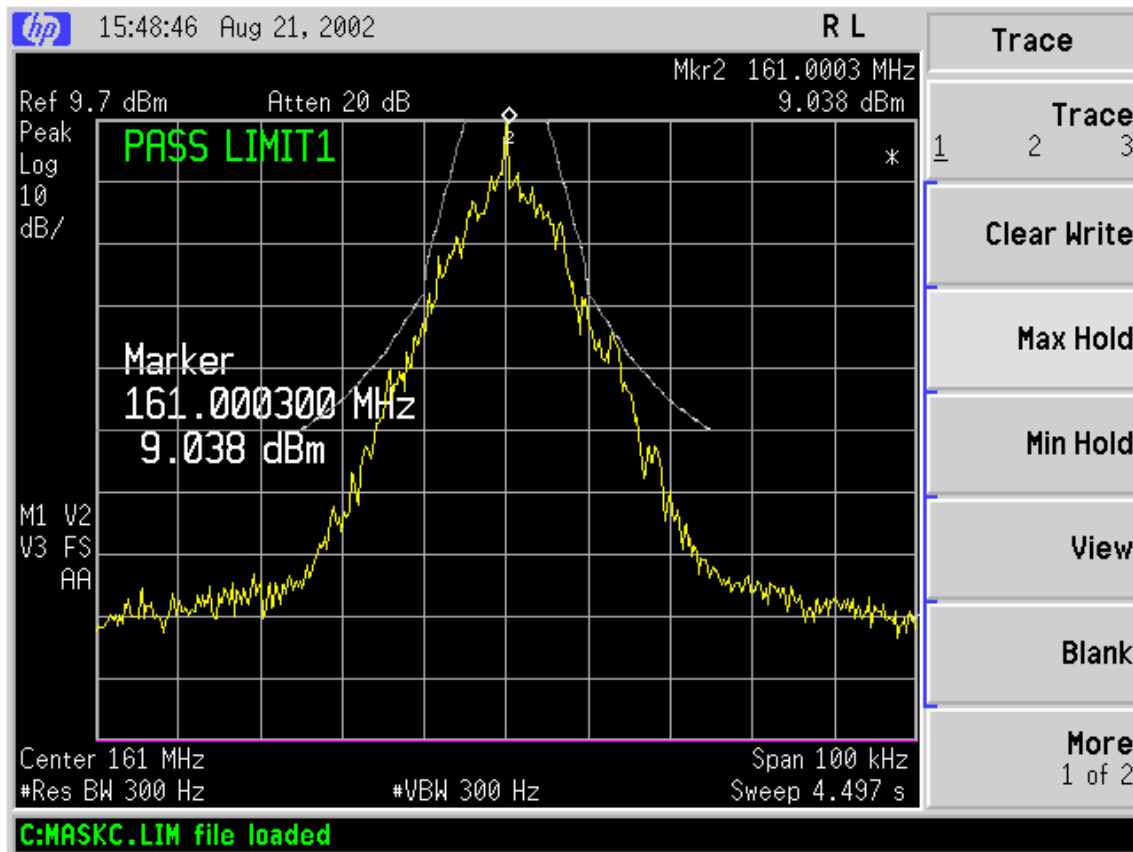MASK: C , 15K2F1D, 20 W

SPECTRUM FOR EMISSION **15K2F1D**
OUTPUT POWER: 20 Watts
32000 bps, 4 level FSK
PEAK DEVIATION = 4350 Hz
SPAN = 100 kHz

MASK: C , 15K2F1D, 100 W

SPECTRUM FOR EMISSION **15K2F1D**
OUTPUT POWER: 100 Watts
32000 bps, 4 level FSK
PEAK DEVIATION = 4350 Hz
SPAN = 100 kHz