6. 6 dB Bandwidth

6.1 Regulation

15.247(a2) For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

6.2 Test Equipment

⇒ Spectrum Analyzer: Hewlett-Packard 8566B, Serial Number 2410A-00168, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

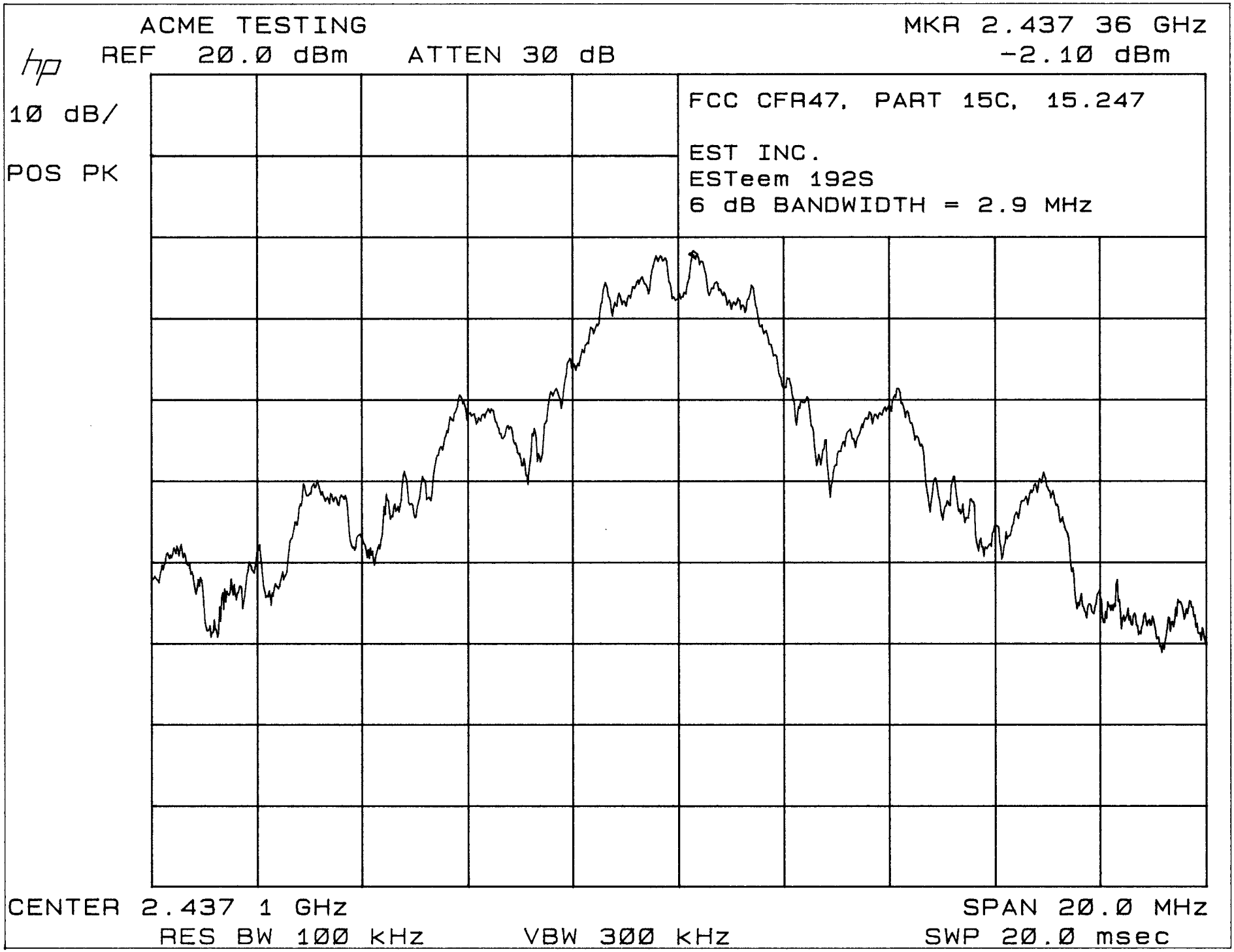
⇒ RF Preselector: Hewlett-Packard 85685, Serial Number 2648A-00519, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

6.3 Test Procedures

The RF output of the EUT is connected to the RF input port of the RF preselector through a 20 dB pad. The following measurements were made with a RBW = 100 kHz and VBW = 300KHz.

6.4 Test Results

The 6 dB bandwidth is 2.9 MHz.


ACME TESTING
MKR 2.437 36 GHz
REF 20.0 dBm
ATTEN 30 dB
-2.10 dBm
10 dB/
POS PK
FCC CFR47, PART 15C, 15.247
EST INC.
ESTeem 192S
6 dB BANDWIDTH = 2.9 MHz
CENTER 2.437 1 GHz
SPAN 20.0 MHz
RES BW 100 kHz
VBW 300 kHz
SWP 20.0 msec

7. Power Output

7.1 Regulation

15.247(b1) The maximum peak output power of the intentional radiator shall not exceed the following: For frequency hopping systems operating in the 2400-2483.5 MHz or 5725-5850 MHz band and for all direct sequence systems: 1 watt.

7.2 Test Equipment

⇒ Spectrum Analyzer: Hewlett-Packard 8566B, Serial Number 2410A-00168, Calibrated: 31 December 1998, Calibration due Date: 31 December 1999

⇒ RF Preselector: Hewlett-Packard 85685, Serial Number 2648A-00519, Calibrated: 31 December 1998, Calibration due Date: 31 December 1999

7.3 Test Procedures

The RF output of the EUT is connected to the RF input port of the RF preselector through a 20 dB pad. The following measurements were made with a RBW = 3 MHz and VBW = 3 MHz.

7.4 Test Results

The measured power output at the antenna terminal was 28.7 dBm or 741.3 mW

8. Antenna gain requirements

8.1 Regulation

15.247(b3) Except as shown below, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the above stated values by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(i) Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(ii) Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter peak output power.

(iii) Fixed, point-to-point operation, as used in paragraphs (b)(3)(i) and (b)(3)(ii) of this section, excludes the use of point-to-multipoint systems, omnidirectional applications, and multiple co-located intentional radiators transmitting the same information. The operator of the spread spectrum intentional radiator or, if the equipment is professionally installed, the installer is responsible for ensuring that the system is used exclusively for fixed, point-to-point operations. The instruction manual furnished with the intentional radiator shall contain language in the installation instructions informing the operator and the installer of this responsibility.