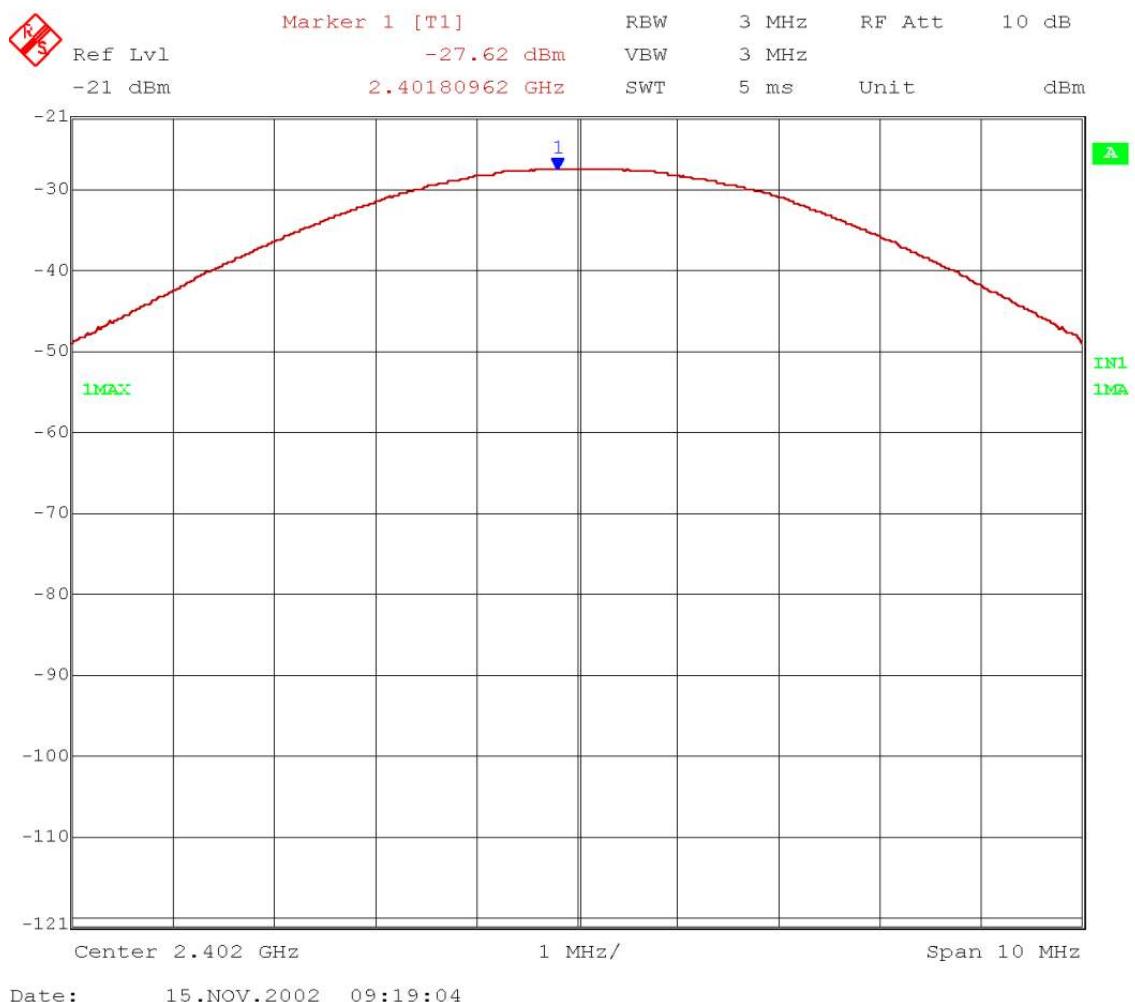


## PEAK OUTPUT POWER (RADIATED).

Lowest Channel: 2402 MHz.

Report No:  
17566RET.101

Date: 2002-12-12

FET45\_00.DOC

Page: 18 of 36

Annex A

## PEAK OUTPUT POWER (RADIATED).

Middle Channel: 2441 MHz.

Report No:  
17566RET.101

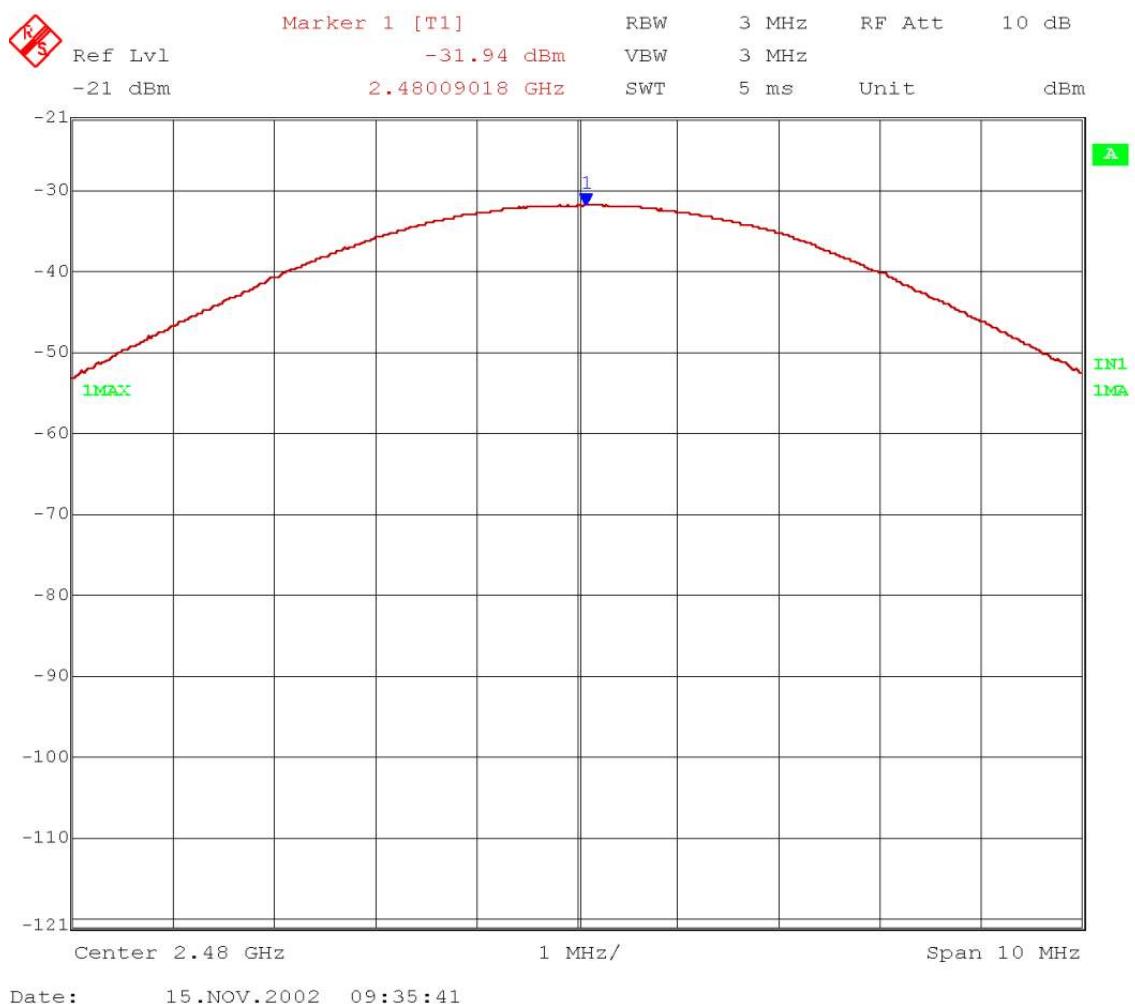
Page: 19 of 36

Date: 2002-12-12

Annex A

PEAK OUTPUT POWER (RADIATED).

Highest Channel: 2480 MHz.



Report No:  
17566RET.101

Page: 20 of 36

Date: 2002-12-12

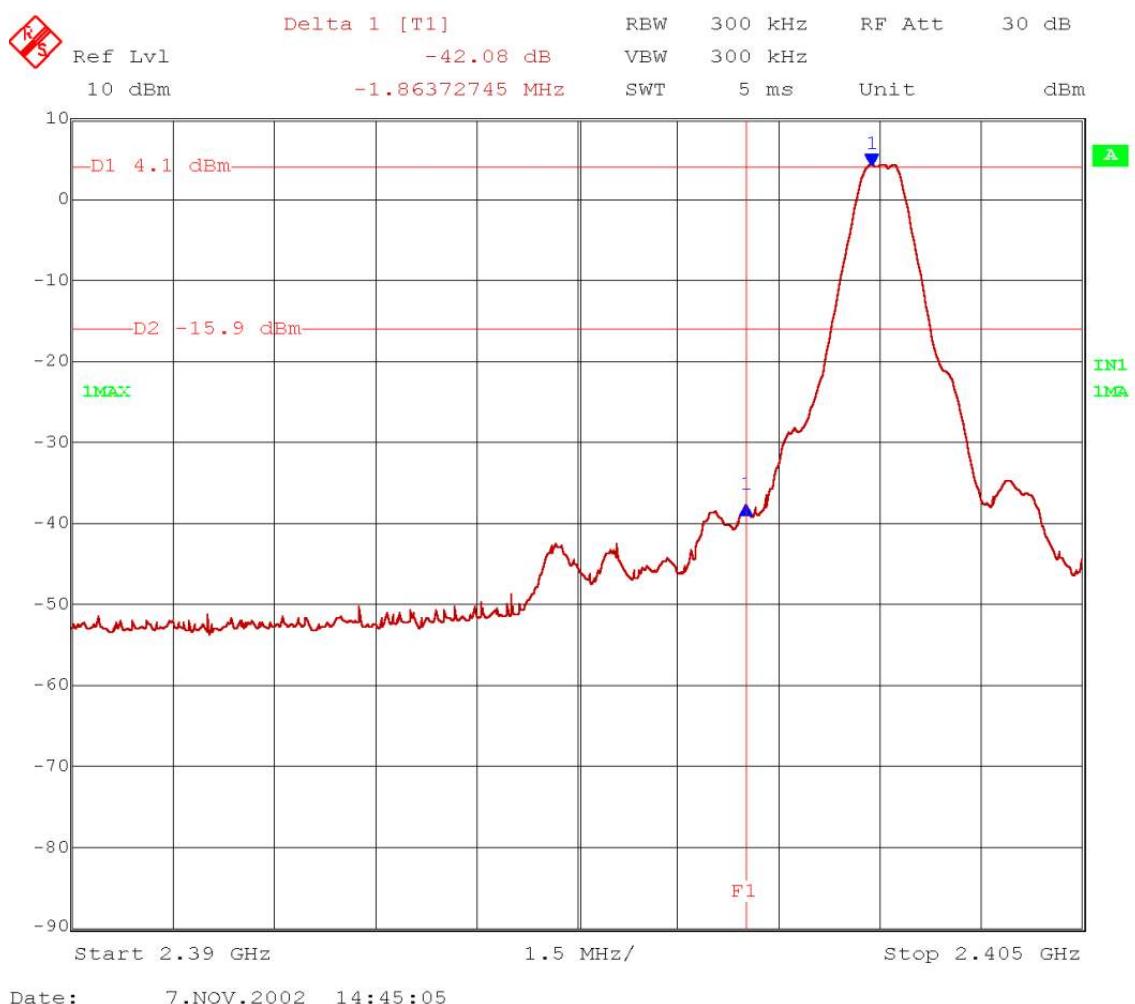
Annex A

**Section 15.247 Subclause (c). Band-edge of conducted emissions (Transmitter)****SPECIFICATION**

Emissions outside the frequency band in which the intentional radiator is operating shall be at least 20dB below the highest level of the desired power.

**RESULTS:**

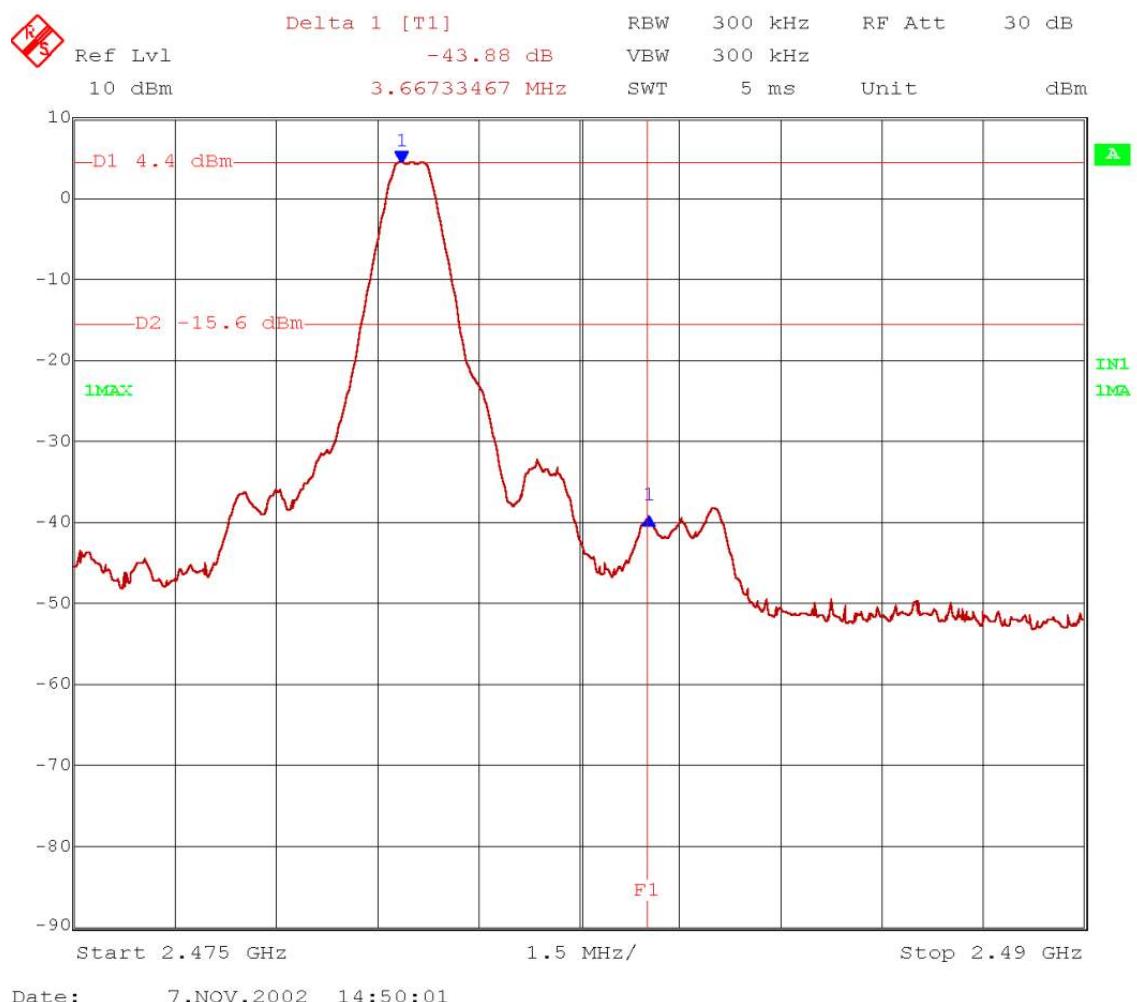
1. LOW FREQUENCY SECTION 2402 MHz (HOPPING OFF). See next plot.



Verdict: PASS

Report No: 17566RET.101		Page: 21 of 36
Date: 2002-12-12 FET45_00.DOC		Annex A

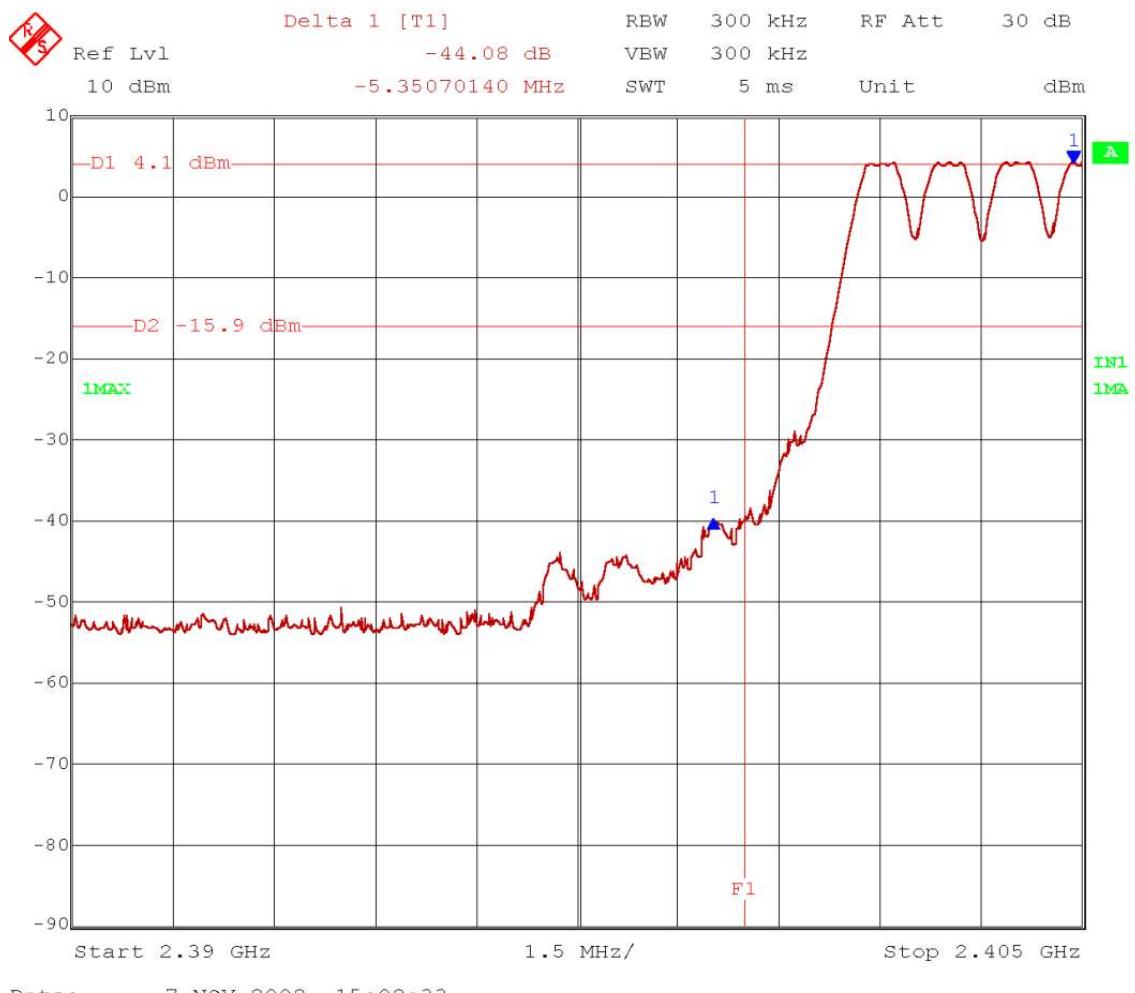
2. HIGH FREQUENCY SECTION 2480 MHz (HOPPING OFF). See next plot.



Verdict: PASS

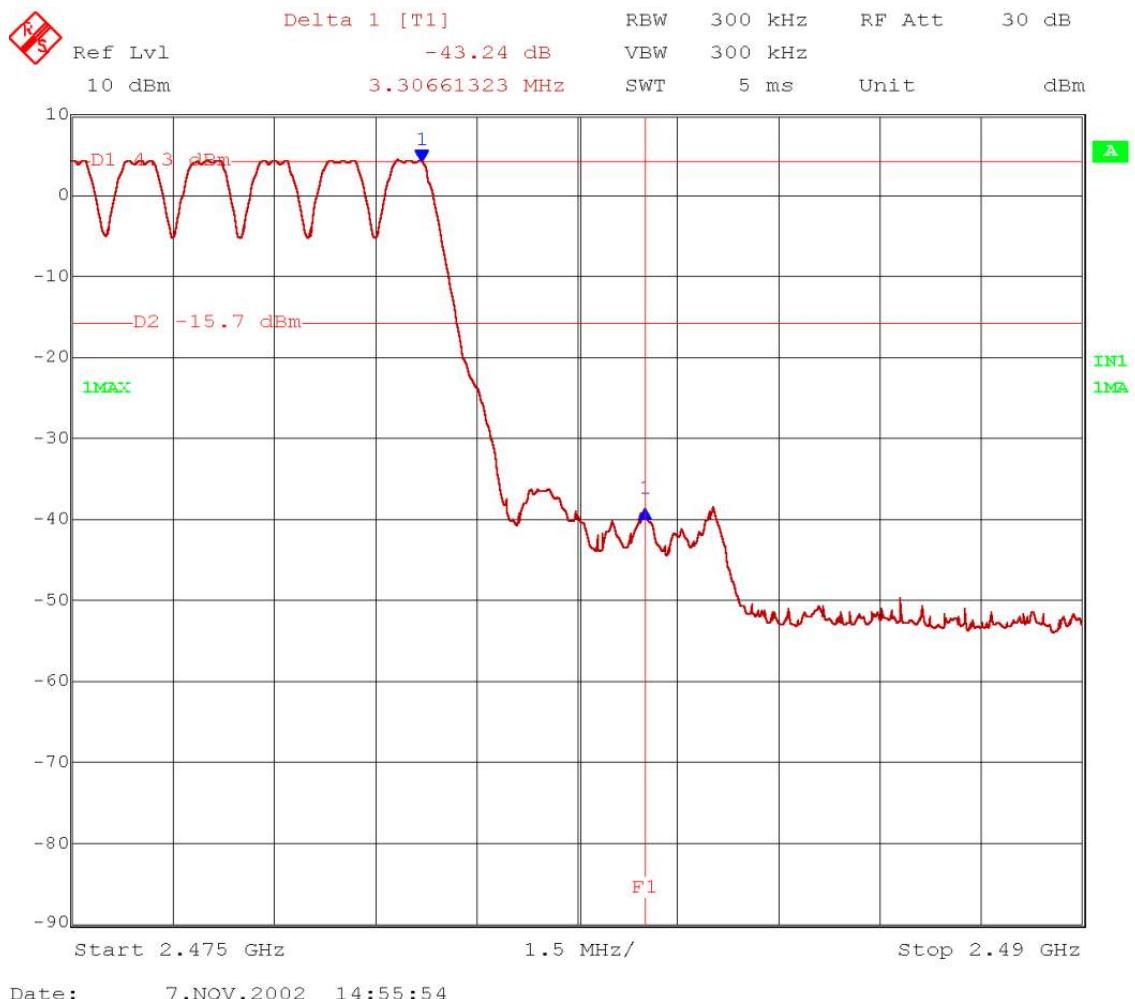
Report No: 17566RET.101		Page: 22 of 36
Date: 2002-12-12		Annex A

3. LOW FREQUENCY SECTION (HOPPING ON). See next plot.



Verdict: PASS

4. HIGH FREQUENCY SECTION (HOPPING ON). See next plot.



Verdict: PASS

Report No: 17566RET.101		Page: 24 of 36
Date: 2002-12-12		Annex A

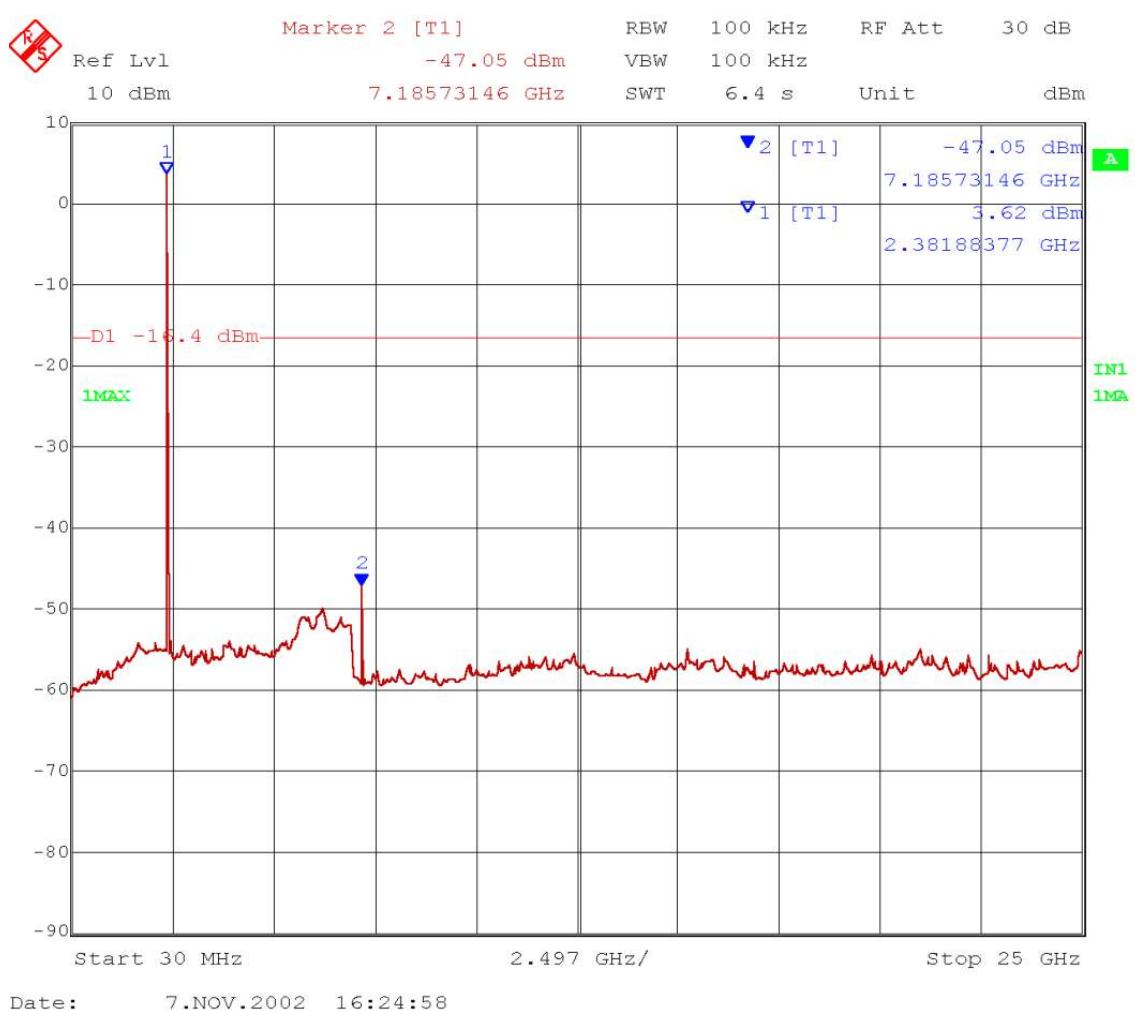
**Section 15.247 Subclause (c). Emission limitations conducted (Transmitter)**

**SPECIFICATION**

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

**RESULTS:**

1. LOWEST CHANNEL (2402 MHz): 30 MHz-25 GHz (see next plot).

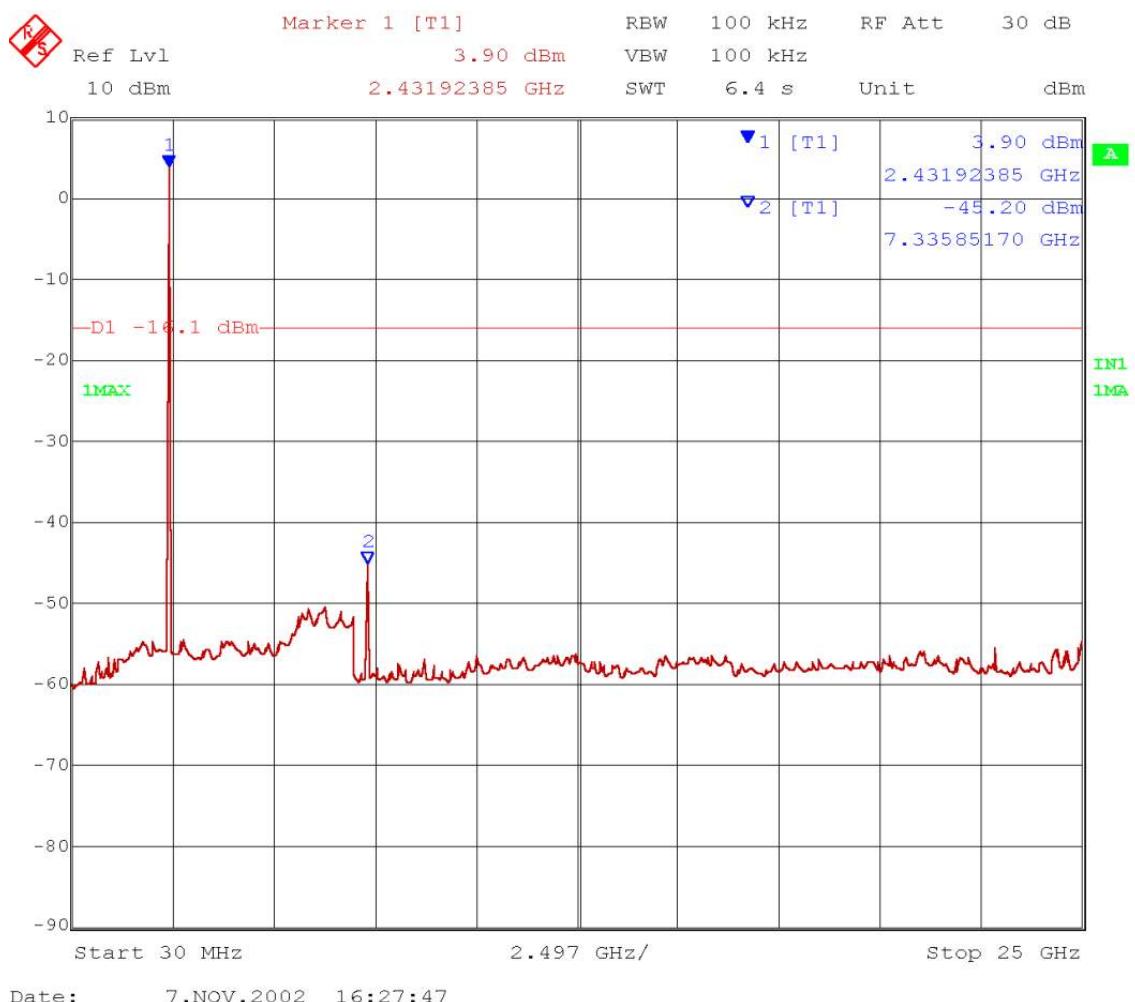


Note: The peak above the limit is the carrier frequency.

Verdict: PASS

Report No: 17566RET.101		Page: 25 of 36
Date: 2002-12-12 FET45_00.DOC		Annex A

2. MIDDLE CHANNEL (2441 MHz): 30 MHz-25 GHz (see next plot).

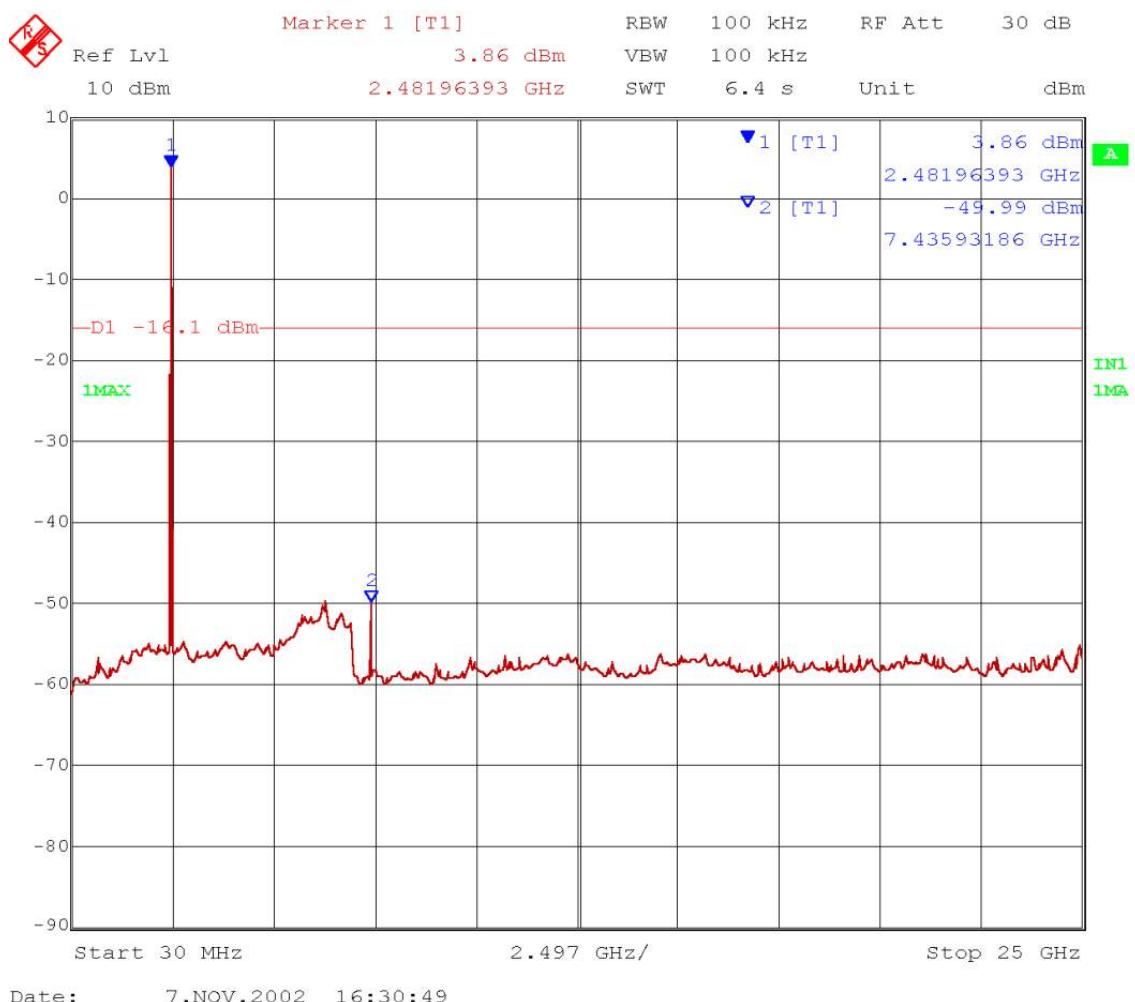


Note: The peak above the limit is the carrier frequency.

Verdict: PASS

Report No: 17566RET.101		Page: 26 of 36
Date: 2002-12-12		Annex A

3. HIGH CHANNEL (2480 MHz): 30 MHz-25 GHz (see next plot).



Note: The peak above the limit is the carrier frequency.

Verdict: PASS

**Section 15.247 Subclause (c). Emission limitations radiated (Transmitter)****SPECIFICATION**

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)):

Frequency Range (MHz)	Field strength ( $\mu$ V/m)	Field strength (dB $\mu$ V/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	300
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 25000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

**RESULTS:**

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

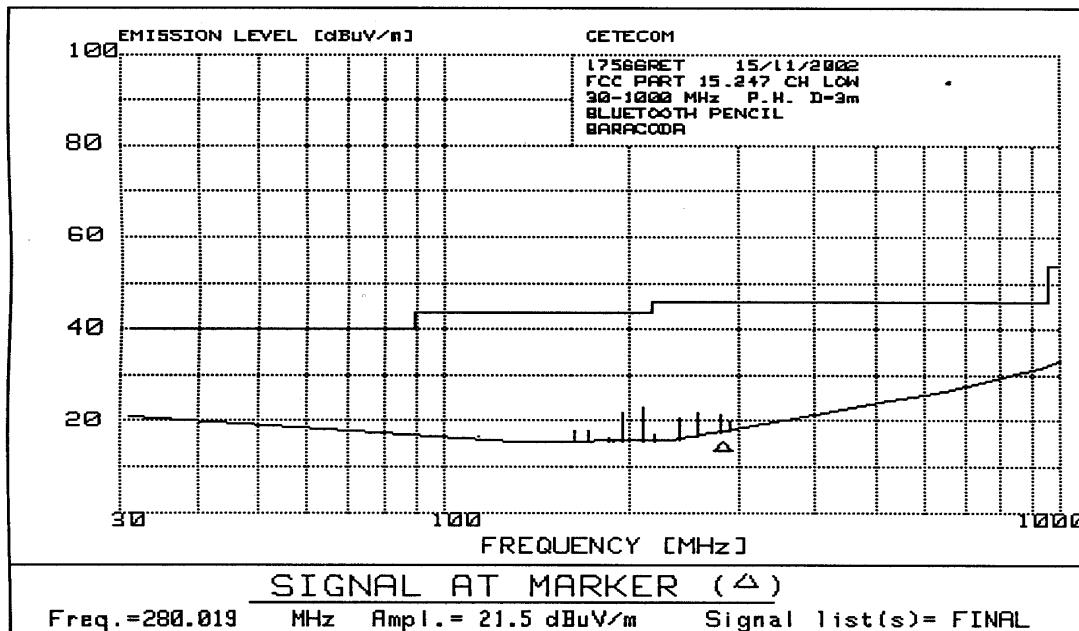
The equipment transmits continuously in the selected channel so it is not necessary a duty cycle correction factor.

Report No: 17566RET.101		Page: 28 of 36
Date: 2002-12-12		Annex A

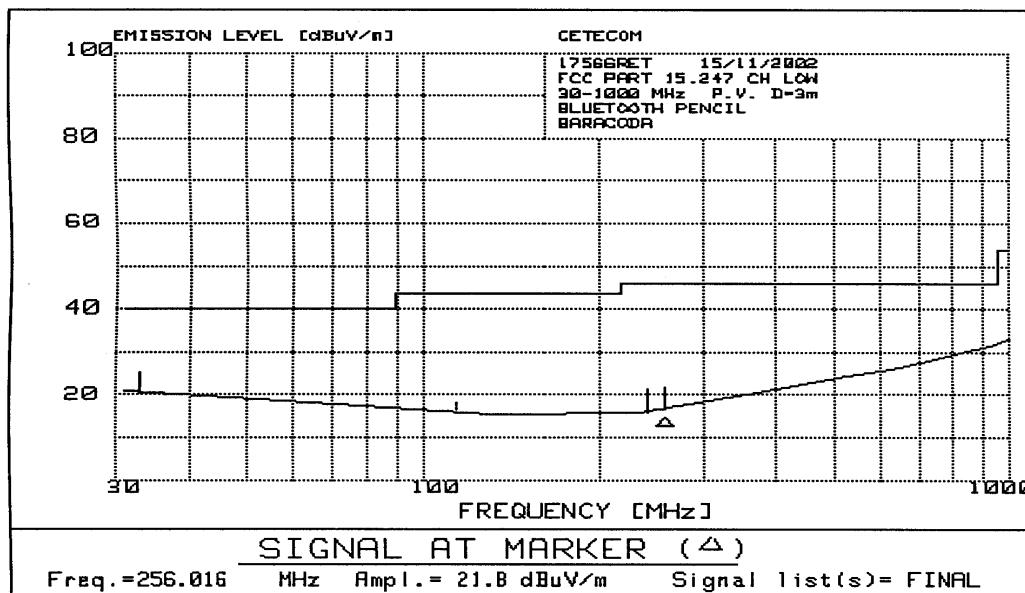
1. TRANSMITTER OPERATING IN CHANNEL: LOWEST (2402 MHz).

Frequency range 30 MHz-1000 MHz.

Polarization: Horizontal.



Polarization: Vertical.



Report No: 17566RET.101		Page: 29 of 36
Date: 2002-12-12		Annex A

Spurious signals that fall inside the restricted bands:

Spurious frequency (MHz)	Polarization	Detector	Emission Level (dB $\mu$ V/m)	Measurement Uncertainty (dB)
111.966	Vertical	Quasi-peak	18.3	$\pm 3.8$
169.192	Horizontal	Quasi-peak	17.8	$\pm 3.8$
255.966	Horizontal	Quasi-peak	21.8	$\pm 3.8$
280.019	Horizontal	Quasi-peak	21.5	$\pm 3.8$

Resolution bandwidth = 100 kHz.

Video bandwidth = 100 kHz.

Frequency range 1 GHz-25 GHz. Spurious signals that fall inside the restricted bands:

Spurious frequency (MHz)	Polarization	Detector	Emission Level (dB $\mu$ V/m)	Measurement Uncertainty (dB)
1200.73	Vertical	Peak	38.6	+1.92 / -1.68
1200.73	Vertical	Average	22.9	+1.92 / -1.68

Resolution bandwidth = 1MHz.

Video bandwidth = 1 MHz.

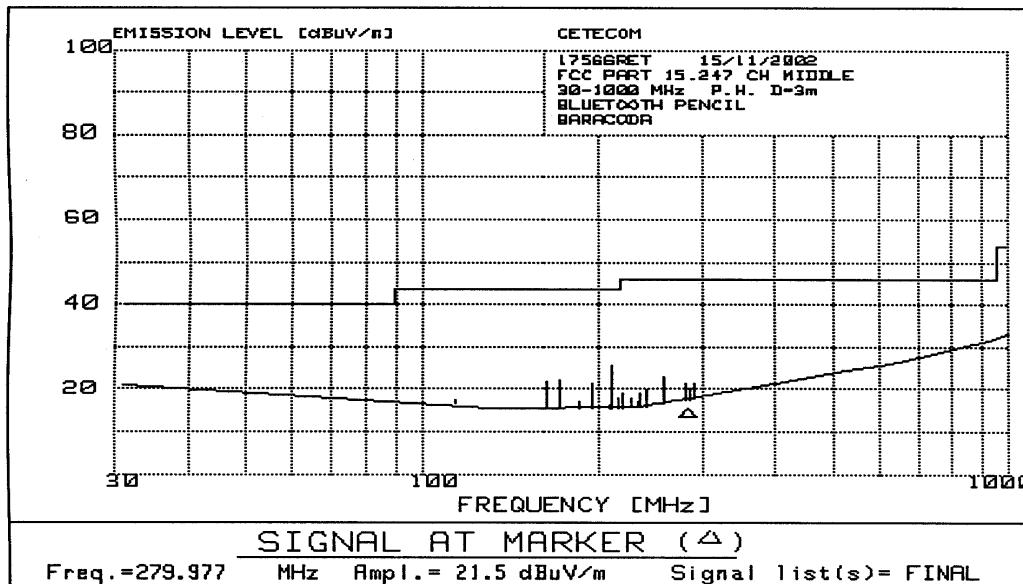
Verdict: PASS.

Report No: 17566RET.101		Page: 30 of 36
Date: 2002-12-12		Annex A

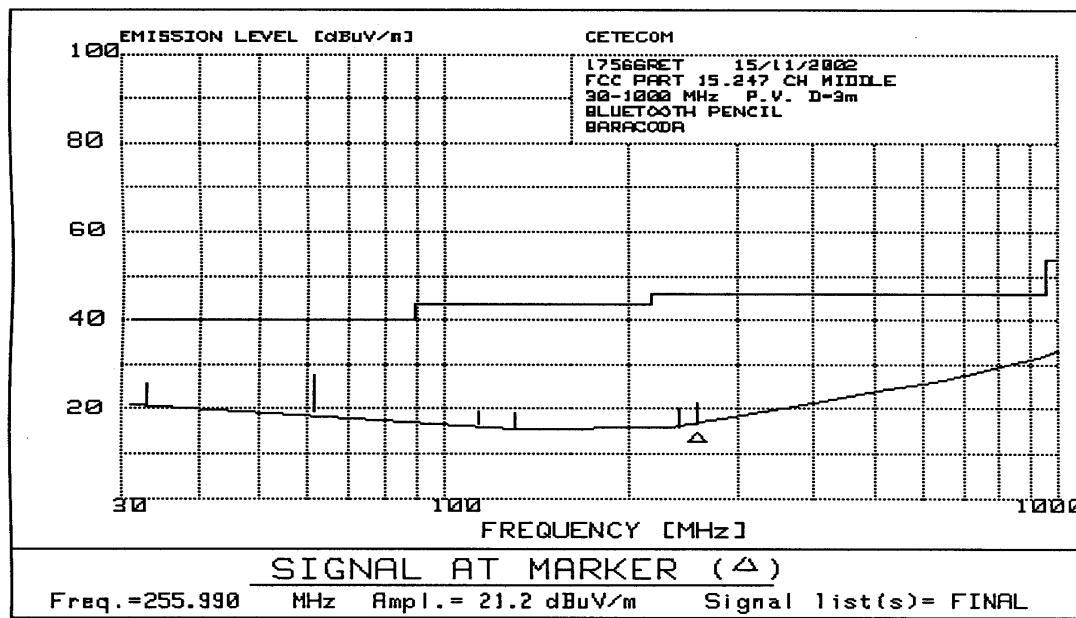
TRANSMITTER OPERATING IN CHANNEL: MIDDLE

Frequency range 30 MHz-1000 MHz.

Polarization: Horizontal.



Polarization: Vertical.



Report No: 17566RET.101		Page: 31 of 36
Date: 2002-12-12		Annex A

Spurious signals that fall inside the restricted bands:

Spurious frequency (MHz)	Polarization	Detector	Emission Level (dB $\mu$ V/m)	Measurement Uncertainty (dB)
112.015	Vertical	Quasi-peak	19.5	$\pm 3.8$
127.995	Vertical	Quasi-peak	19.0	$\pm 3.8$
240.023	Vertical	Quasi-peak	20.2	$\pm 3.8$
255.981	Horizontal	Quasi-peak	22.9	$\pm 3.8$
279.977	Horizontal	Quasi-peak	21.5	$\pm 3.8$
283.444	Horizontal	Quasi-peak	20.1	$\pm 3.8$

Resolution bandwidth = 100 kHz.

Video bandwidth = 100 kHz.

Frequency range 1 GHz-25 GHz. Spurious signals that fall inside the restricted bands:

Spurious frequency (MHz)	Polarization	Detector	Emission Level (dB $\mu$ V/m)	Measurement Uncertainty (dB)
1219.76	Vertical	Peak	35.7	+1.92 / -1.68
1219.76	Vertical	Average	24.9	+1.92 / -1.68

Resolution bandwidth = 1MHz.

Video bandwidth = 1 MHz.

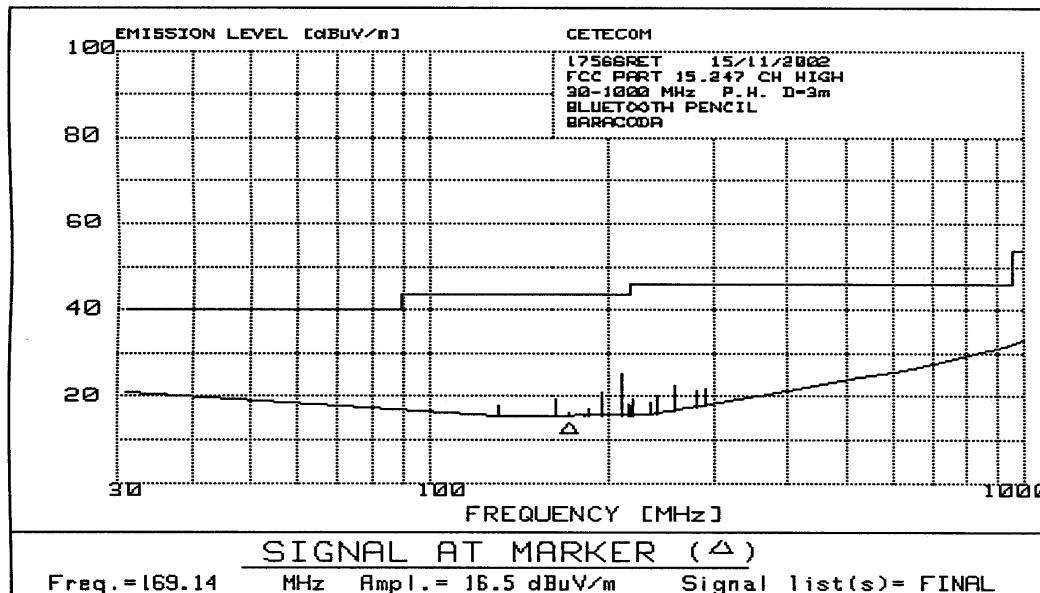
Verdict: PASS.

Report No: 17566RET.101		Page: 32 of 36
Date: 2002-12-12		Annex A

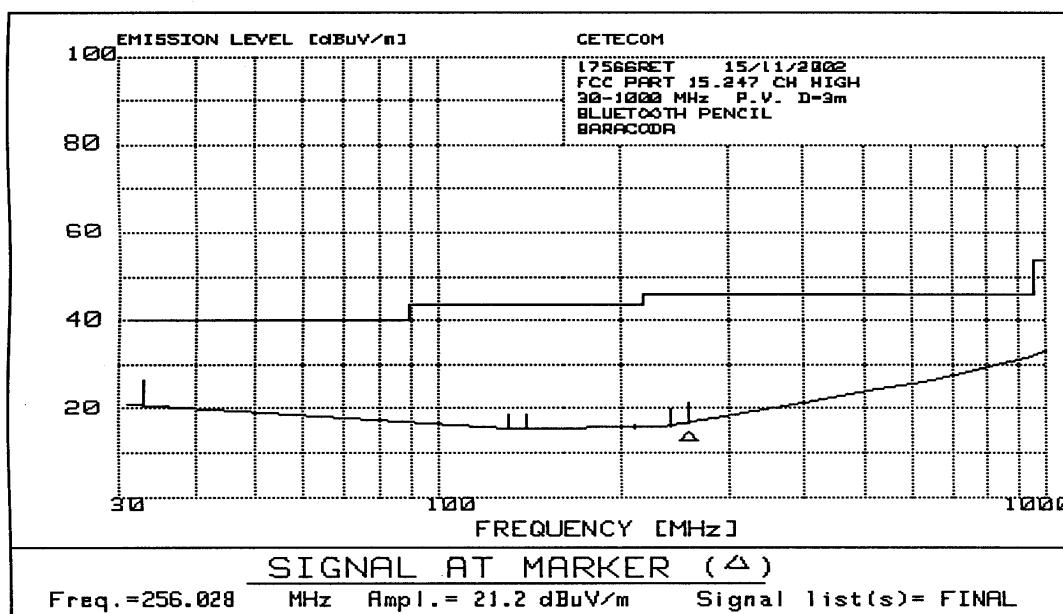
TRANSMITTER OPERATING IN CHANNEL: HIGHEST

Frequency range 30 MHz-1000 MHz.

Polarization: Horizontal.



Polarization: Vertical



Report No: 17566RET.101		Page: 33 of 36
Date: 2002-12-12		Annex A

Spurious signals that fall inside the restricted bands:

Spurious frequency (MHz)	Polarization	Detector	Emission Level (dB $\mu$ V/m)	Measurement Uncertainty (dB)
112.020	Vertical	Quasi-peak	12.9	$\pm 3.8$
127.982	Vertical	Quasi-peak	18.5	$\pm 3.8$
137.164	Vertical	Quasi-peak	18.5	$\pm 3.8$
169.140	Horizontal	Quasi-peak	16.5	$\pm 3.8$
240.045	Vertical	Quasi-peak	19.7	$\pm 3.8$
256.028	Horizontal	Quasi-peak	22.5	$\pm 3.8$
280.007	Horizontal	Quasi-peak	21.4	$\pm 3.8$

Resolution bandwidth = 100 kHz.

Video bandwidth = 100 kHz.

Frequency range 1 GHz-25 GHz. Spurious signals that fall inside the restricted bands:

Spurious frequency (MHz)	Polarization	Detector	Emission Level (dB $\mu$ V/m)	Measurement Uncertainty (dB)
1238.80	Vertical	Peak	36.0	+1.92 / -1.68
1238.80	Vertical	Average	25.2	+1.92 / -1.68

Resolution bandwidth = 1 MHz.

Video bandwidth = 1 MHz.

Verdict: PASS.

Report No: 17566RET.101		Page: 34 of 36
Date: 2002-12-12		Annex A

**Section 15.209. Receiver spurious radiation****SPECIFICATION**

The field strength shall not exceed the following values:

Frequency Range (MHz)	Field strength ( $\mu$ V/m)	Field strength (dB $\mu$ V/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	300
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 25000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

**RESULTS:**

The situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

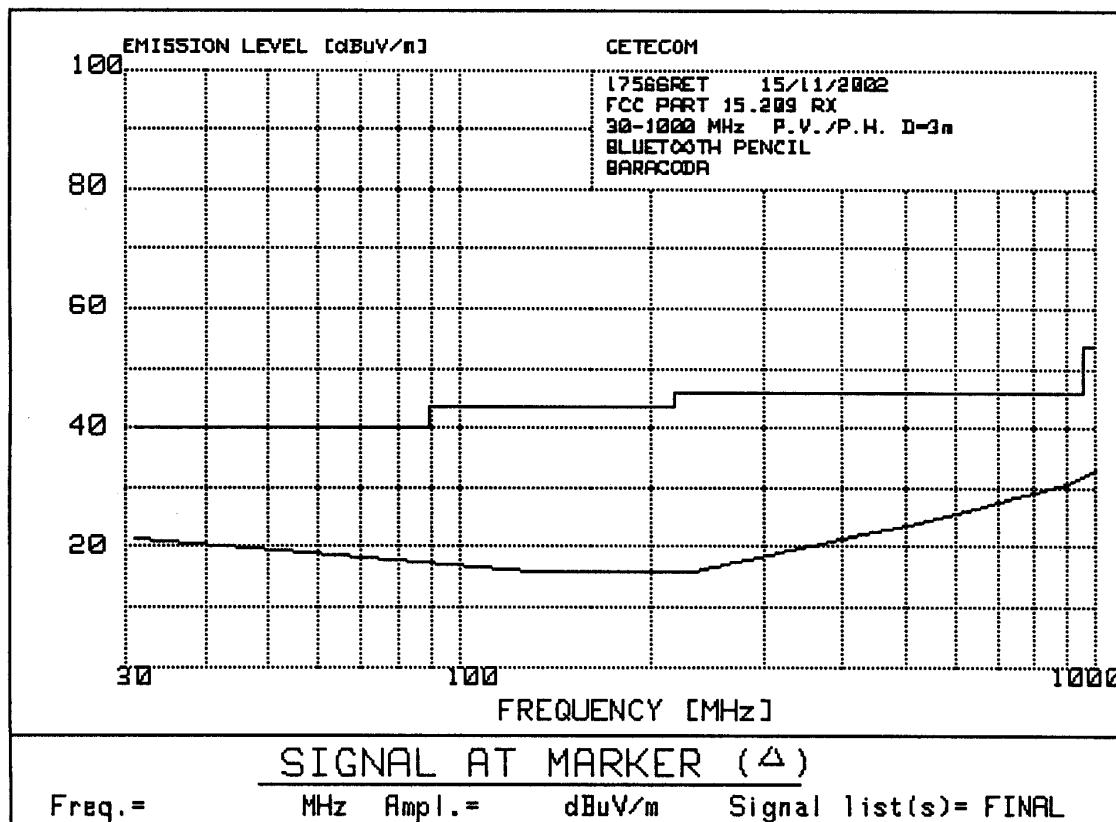
All tests were performed in a semi-anechoic chamber at a distance of 3 m for the frequency range 30 MHz-1000 MHz and at distance of 1m for the frequency range 1 GHz-25 GHz.

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

Report No: 17566RET.101		Page: 35 of 36
Date: 2002-12-12		Annex A

Frequency range 30 MHz-1000 MHz.

No peaks were found for the lowest, middle and highest channel.



(This plot is valid for all three channels).

Resolution bandwidth = 100 kHz.

Video bandwidth = 100 kHz.

Frequency range 1 GHz-25 GHz.

No peaks were found for the lowest, middle and highest channel.

Resolution bandwidth = 1MHz.

Video bandwidth = 1 MHz.

Report No:  
17566RET.101

Page: 36 of 36

Date: 2002-12-12

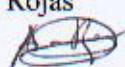
Annex A

## **ANNEX B**

### **PHOTOGRAPHS**

**(Number of photographs: 2)**

**Report No.: 17566RET.101**

	<p>Issued by Date: 2002-12-12 A. Llamas</p>	<p>Reviewed Date: 2002-12-13 A. Rojas </p>	<p>Page: 1 of 3</p>
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1. Host equipment (external view)

Report No.: 17379RET		Page: 2 of 3
Date: 2002-12-12		Annex B

2. Bluetooth module mounted in host PCB (internal view).

Report No.: 17379RET		Page: 3 of 3
Date: 2002-12-12		Annex B