

8 Test Results

FCC CFR 47 Parts 2 and 15			
Section(s)	Test	Page	Result
2.1046(a)	Conducted output power	53	Recorded
2.202(a)	Occupied bandwidth	54	Recorded
15.215(c)	Bandwidth of the emission	64	Test passed
2.201, 2.202	Class of emission	68	Calculated
15.35(c)	Pulse train measurement for pulsed operation	69	Recorded
15.205(a) 15.205(d)(7)	Restricted bands of operation	75 ††	Test passed
15.207	Conducted AC powerline emission 150 kHz to 30 MHz	78	Test passed
15.225(a)-(d)	Spectrum Mask	76	Test passed
15.205(b) 15.209 15.215(b) 15.225(a)(d)	Radiated emission 9 kHz to 30 MHz	81	Test passed
15.205(b) 15.209 15.225(d)	Radiated emission 30 MHz to 1 GHz	106	Test passed
15.225(e)	Carrier frequency stability	115	Test passed

†† See "Spectrum Mask" for the 13.36 to 13.41 MHz band. For all other restricted bands see "Radiated Emission".

IC RSS-Gen Issue 1			
<i>Section(s)</i>	<i>Test</i>	<i>Page</i>	<i>Result</i>
4.6	Transmitter output power (conducted)	53	Recorded
4.4.1	Occupied Bandwidth	54	Recorded
3.2(h), 8	Designation of emissions	68	Calculated
4.3	Pulsed operation	69	Recorded
7.2.2	Transmitter AC power lines conducted emissions 150 kHz to 30 MHz	78	Test passed
5.5	Exposure of Humans to RF Fields	118	Exempted from SAR and RF evaluation

IC RSS-210 Issue 6			
<i>Section(s)</i>	<i>Test</i>	<i>Page</i>	<i>Result</i>
2.2(a)	Restricted bands and unwanted emission frequencies	75 §§	Test passed
A2.6	Spectrum Mask	76	Test passed
2.2(b)(c), 2.6 A2.6	Unwanted emissions 9 kHz to 30 MHz	81	Test passed
2.2(b)(c), 2.6 A2.6	Unwanted emissions 30 MHz to 1 GHz	106	Test passed
A2.6	Carrier frequency stability	115	Test passed

§§ See "Spectrum Mask" and "Unwanted emissions".

8.1 Conducted Output Power

Rules and specifications:	CFR 47 Part 2, section 2.1046(a) IC RSS-Gen Issue 1, section 4.6
Guide:	CFR 47 Part 2, section 2.1046 / IC RSS-Gen Issue 1
Description:	Conducted output power shall be measured at the RF output terminals (e.g. antenna connector if antenna is detachable) when the transmitter is adjusted in accordance with the tune-up procedure, if applicable. The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.
Measurement procedure:	Conducted Output Power (6.1)

Comment:	
Date of test:	23 June 2006
Test site:	Unshielded room

Test Result:	Test passed
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Antenna gain:		dBi					
Mode	Frequency (MHz)	Power Type	Reading (dBm)	Correction (dB)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Polling continuously	0.12	PEP	2.2	0.0	2.2		
Polling continuously	13.56	PEP	7.8	10.0	17.8		

Note 1: If applicable, PEP (peak envelope power) and RMS values are measured using a power meter with appropriate sensor.

Note 2: If applicable, peak or average values are measured using a spectrum analyzer with resolution and video bandwidth set to: RBW =, VBW =

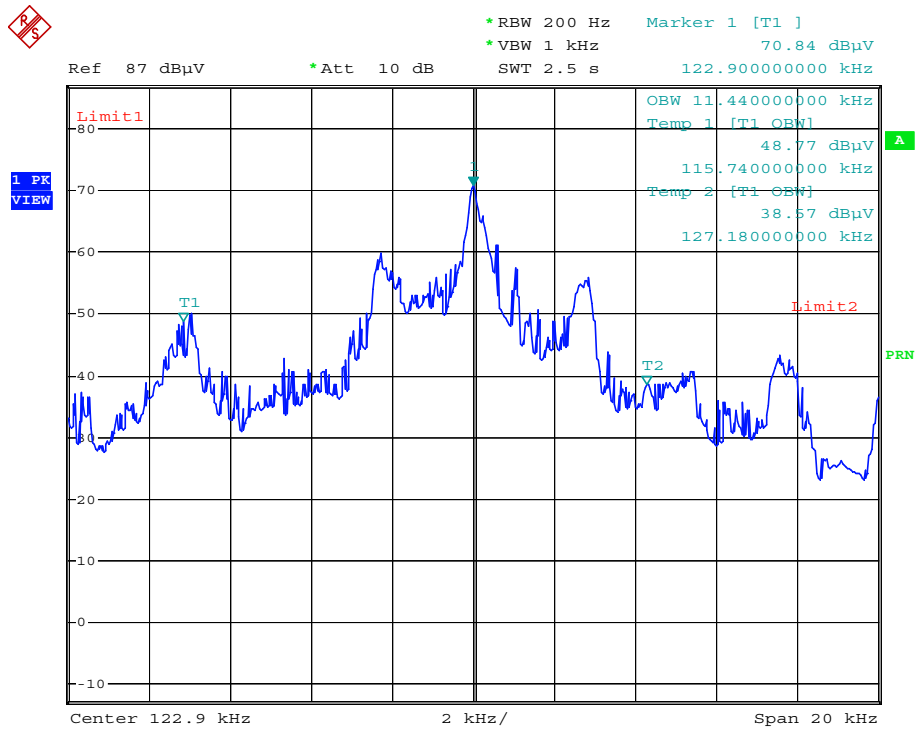
Note 3: If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power limit is reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.2 Occupied Bandwidth

Rules and specifications:	CFR 47 Part 2, section 2.202(a) ANSI C63.4, annex H.6	
Guide:	ANSI C63.4	
Description:	<p>The occupied bandwidth according to CFR 47 Part 2, section 2.202(a), is measured as the 99% emission bandwidth, i.e. below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission.</p> <p>The occupied bandwidth according to ANSI C63.4, annex H.6; is measured as the frequency range defined by the points that are 26 dB down relative to the maximum level of the modulated carrier.</p> <p>The resolution bandwidth of the spectrum analyzer shall be set to a value greater than 5.0% of the allowed bandwidth. If no bandwidth specifications are given, the following guidelines are used:</p>	
	Fundamental frequency	Minimum resolution bandwidth
	9 kHz to 30 MHz	1 kHz
	30 MHz to 1000 MHz	10 kHz
	1000 MHz to 40 GHz	100 kHz
The video bandwidth shall be at least three times greater than the resolution bandwidth.		
Measurement procedure:	Bandwidth Measurements (6.2)	

Comment:	
Date of test:	13 June 2006
Test site:	Fully anechoic room, cabin no. 2

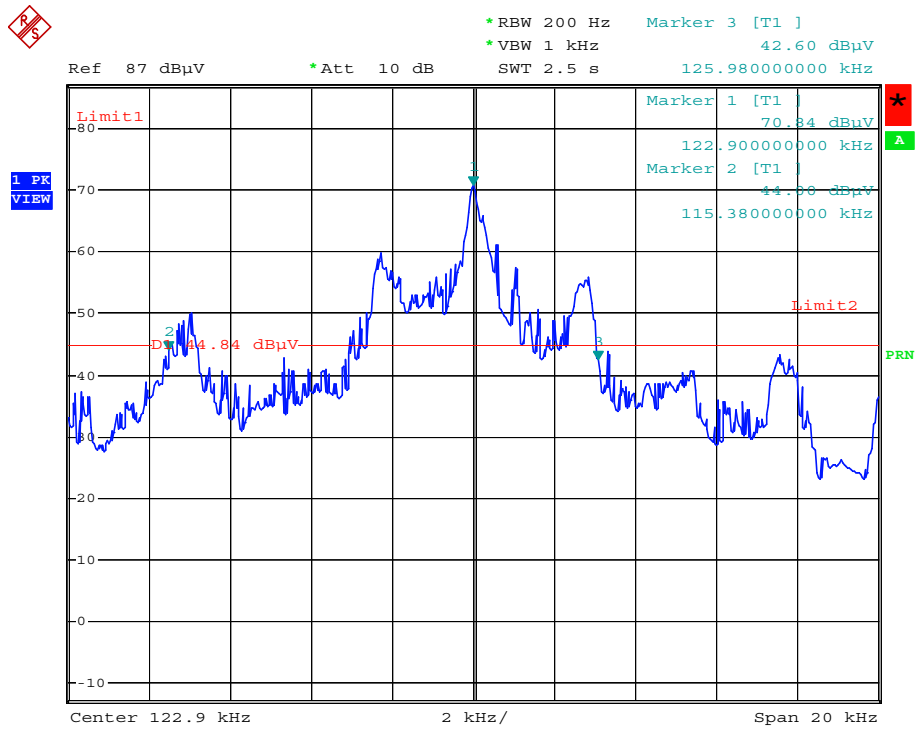
Occupied Bandwidth (99 %):



Comment: Skidata 060354: Occupied Bandwidth
 Date: 13.JUN.2006 19:01:42

Occupied Bandwidth (99 %):	11.44 kHz
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Occupied Bandwidth (-26 dB):



Comment: Skidata 060354: Occupied Bandwidth
 Date: 13.JUN.2006 19:03:37

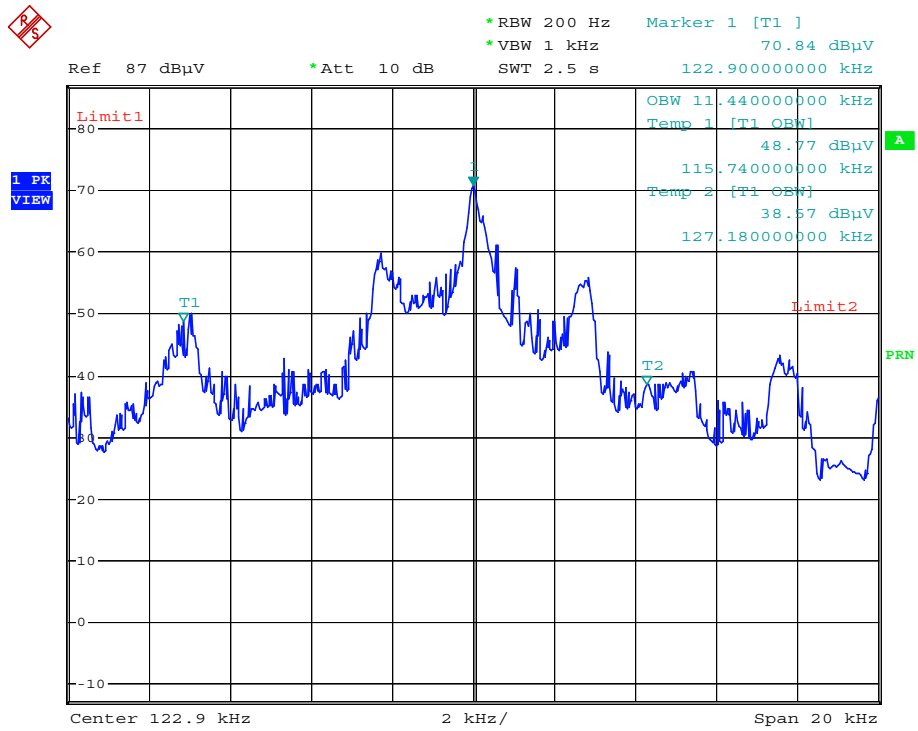
Occupied Bandwidth (-26 dB): **10.6 kHz**

Occupied Bandwidth (continued)

Rules and specifications:	IC RSS-Gen Issue 1, section 4.4.1
Guide:	IC RSS-Gen Issue 1, section 4.4.1
Description:	<p>If not specified in the applicable RSS the occupied bandwidth is measured as the 99% emission bandwidth.</p> <p>The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth.</p> <p>The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is also recorded. The span between the two recorded frequencies is the occupied bandwidth.</p>
Measurement procedure:	Bandwidth Measurements (6.2)

Comment:	
Date of test:	19 June 2006
Test site:	Fully anechoic room, cabin no. 2

Occupied Bandwidth (99 %):



Comment: Skidata 060354: Occupied Bandwidth
 Date: 13.JUN.2006 19:01:59

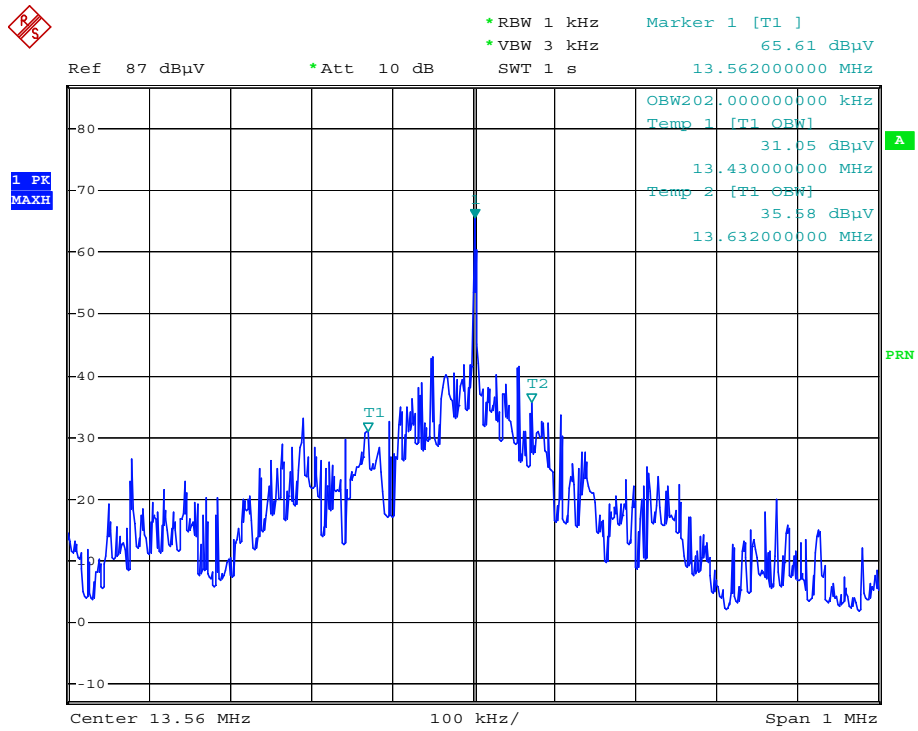
Occupied Bandwidth (99 %):	11.44 kHz
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Occupied Bandwidth (continued)

Rules and specifications:	CFR 47 Part 2, section 2.202(a) ANSI C63.4, annex H.6	
Guide:	ANSI C63.4	
Description:	<p>The occupied bandwidth according to CFR 47 Part 2, section 2.202(a), is measured as the 99% emission bandwidth, i.e. below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission.</p> <p>The occupied bandwidth according to ANSI C63.4, annex H.6; is measured as the frequency range defined by the points that are 26 dB down relative to the maximum level of the modulated carrier.</p> <p>The resolution bandwidth of the spectrum analyzer shall be set to a value greater than 5.0% of the allowed bandwidth. If no bandwidth specifications are given, the following guidelines are used:</p>	
	Fundamental frequency	Minimum resolution bandwidth
	9 kHz to 30 MHz	1 kHz
	30 MHz to 1000 MHz	10 kHz
	1000 MHz to 40 GHz	100 kHz
	The video bandwidth shall be at least three times greater than the resolution bandwidth.	
Measurement procedure:	Bandwidth Measurements (6.2)	

Comment:	
Date of test:	13 June 2006
Test site:	Fully anechoic room, cabin no. 2

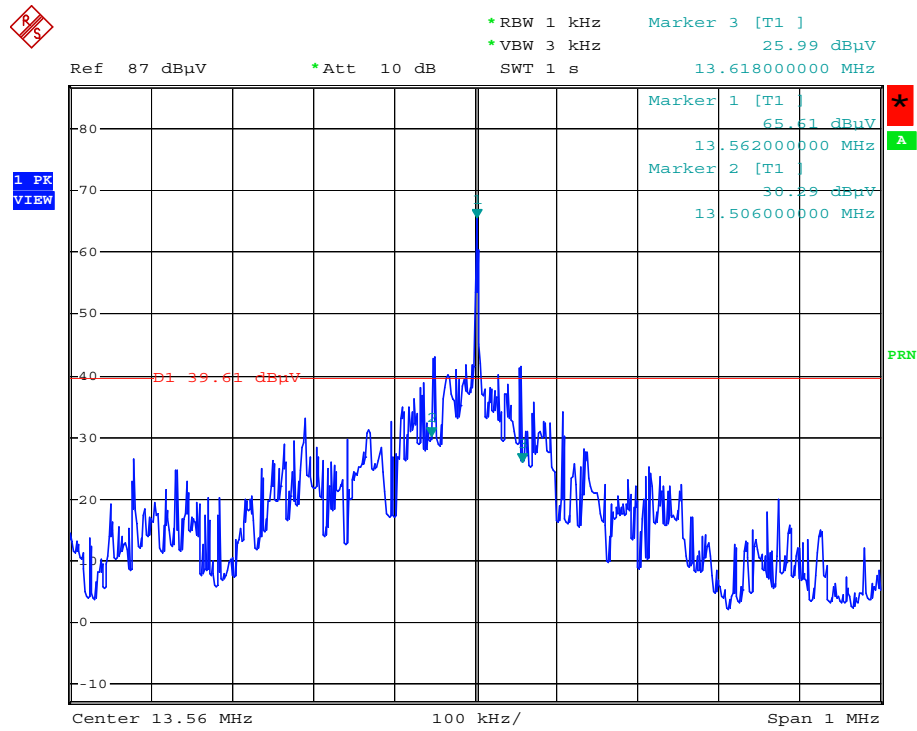
Occupied Bandwidth (99 %):



Comment: Skidata 060354: Occupied Bandwidth
 Date: 13.JUN.2006 19:49:10

Occupied Bandwidth (99 %):	202 kHz
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Occupied Bandwidth (-26 dB):



Comment: Skidata 060354: Occupied Bandwidth
Date: 13.JUN.2006 19:50:21

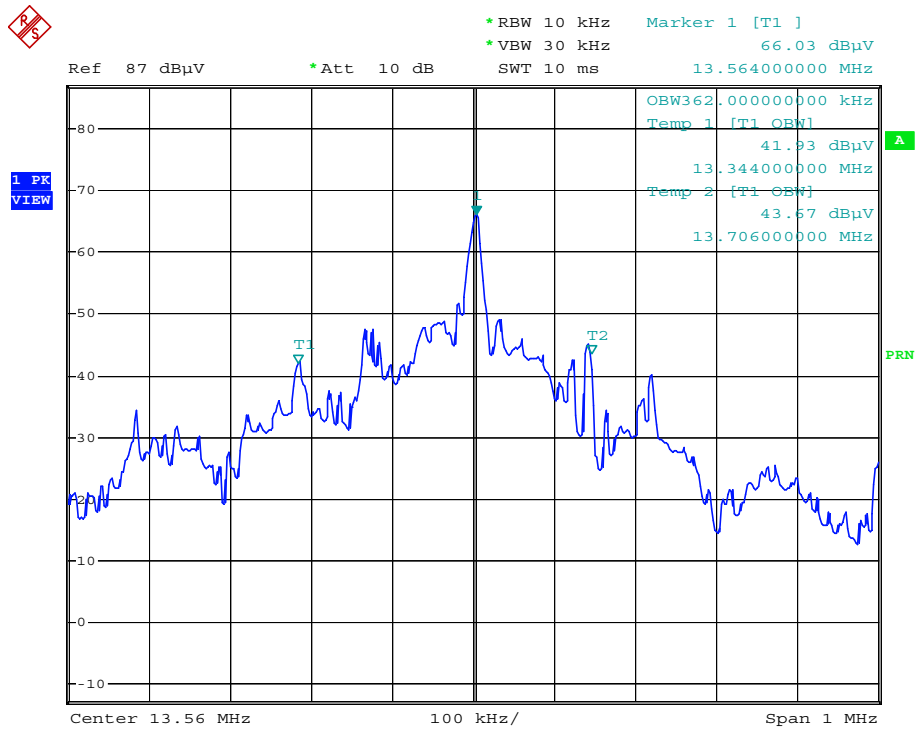
Occupied Bandwidth (-26 dB): **112 kHz**

Occupied Bandwidth (continued)

Rules and specifications:	IC RSS-Gen Issue 1, section 4.4.1
Guide:	IC RSS-Gen Issue 1, section 4.4.1
Description:	<p>If not specified in the applicable RSS the occupied bandwidth is measured as the 99% emission bandwidth.</p> <p>The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth.</p> <p>The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is also recorded. The span between the two recorded frequencies is the occupied bandwidth.</p>
Measurement procedure:	Bandwidth Measurements (6.2)

Comment:	
Date of test:	13 June 2006
Test site:	Fully anechoic room, cabin no. 2

Occupied Bandwidth (99 %):



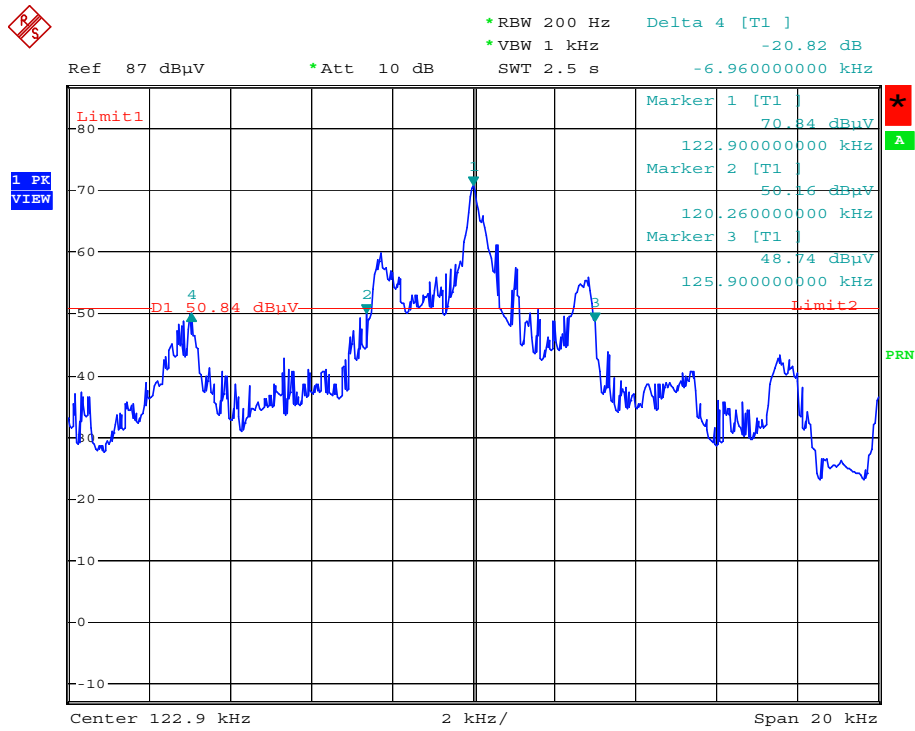
Comment: Skidata 060354: Occupied Bandwidth
 Date: 13.JUN.2006 19:51:58

Occupied Bandwidth (99 %):	362 kHz
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8.3 Bandwidth of the Emission

Rules and specifications:	CFR 47 Part 15, section 15.215(c)		
Guide:	ANSI C63.4		
Description:	<p>The 20 dB bandwidth of the emission is measured as the frequency range defined by the points that are 20 dB down relative to the maximum level of the modulated carrier.</p> <p>For intentional radiators operating under the alternative provisions to the general emission limits the requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.</p> <p>The resolution bandwidth of the spectrum analyzer shall be set to a value greater than 5.0% of the allowed bandwidth. If no bandwidth specifications are given, the following guidelines are used:</p>		
		Fundamental frequency	Minimum resolution bandwidth
		9 kHz to 30 MHz	1 kHz
		30 MHz to 1000 MHz	10 kHz
		1000 MHz to 40 GHz	100 kHz
	The video bandwidth shall be at least three times greater than the resolution bandwidth.		
Measurement procedure:	Bandwidth Measurements (6.2)		

Comment:	
Date of test:	13 June 2006
Test site:	Fully anechoic room, cabin no. 2



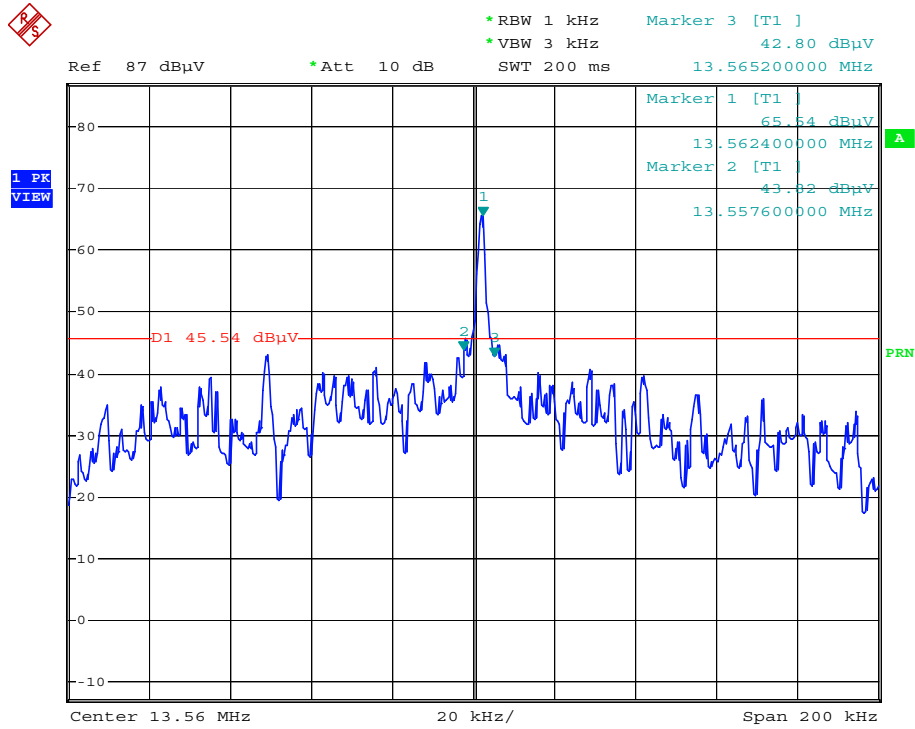
Comment: Skidata 060354: Emission Bandwidth
 Date: 13.JUN.2006 19:05:01

Bandwidth of the emission:	9.96 kHz
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Bandwidth of the Emission (continued)

Rules and specifications:	CFR 47 Part 15, section 15.215(c)		
Guide:	ANSI C63.4		
Description:	<p>The 20 dB bandwidth of the emission is measured as the frequency range defined by the points that are 20 dB down relative to the maximum level of the modulated carrier.</p> <p>For intentional radiators operating under the alternative provisions to the general emission limits the requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.</p> <p>The resolution bandwidth of the spectrum analyzer shall be set to a value greater than 5.0% of the allowed bandwidth. If no bandwidth specifications are given, the following guidelines are used:</p>		
		Fundamental frequency	Minimum resolution bandwidth
		9 kHz to 30 MHz	1 kHz
		30 MHz to 1000 MHz	10 kHz
		1000 MHz to 40 GHz	100 kHz
	The video bandwidth shall be at least three times greater than the resolution bandwidth.		
Measurement procedure:	Bandwidth Measurements (6.2)		

Comment:	
Date of test:	13 June 2006
Test site:	Fully anechoic room, cabin no. 2



Comment: Skidata 060354: Emission Bandwidth
 Date: 13.JUN.2006 19:53:07

Permitted frequency band:	13.553 - 13.567 MHz	
20 dB bandwidth:	7.6 kHz	
Carrier frequency stability:	<input checked="" type="checkbox"/> specified	<input type="checkbox"/> not specified
Maximum frequency tolerances:	+0.120 kHz -0.080 kHz	
Bandwidth of the emission:	7.8 kHz	within permitted frequency band***: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no

Test Result:	Test passed
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*** If a frequency stability is not specified, it is recommended that the fundamental emission is kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

8.4 Designation of Emissions

Rules and specifications:	CFR 47 Part 2, sections 2.201 and 2.202 IC RSS-Gen Issue 1, sections 3.2(h) and 8
Guide:	ANSI C63.4 / TRC-43

Type of modulation:	Amplitude Modulation
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B_n = Necessary Bandwidth	$B_n = 2BK$
B = Modulation rate	$B = 5 \text{ kHz}$
K = Overall numerical factor	$K = 1$
Calculation:	$B_n = 2 \cdot (5 \text{ kHz}) \cdot 1 = 10 \text{ kHz}$

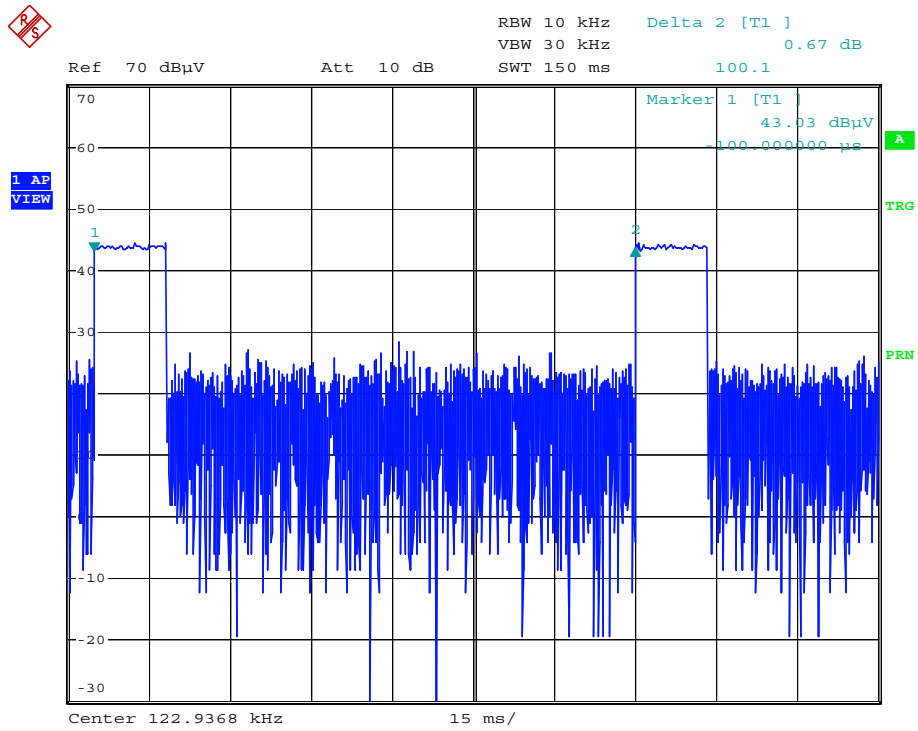
Designation of Emissions:	10K0A1D
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8.5 Pulse Train Measurement

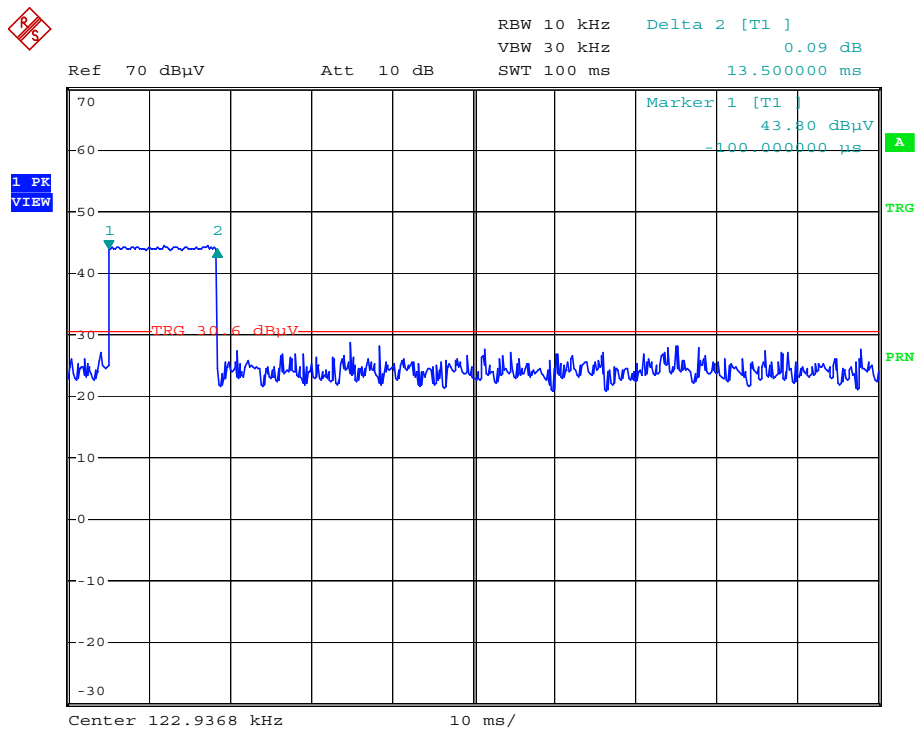
Rules and specifications:	CFR 47 Part 15, section 15.35(c) IC RSS-Gen Issue 1, section 4.3
Guide:	ANSI C63.4
Measurement procedure:	Pulse Train Measurement (6.3)
Comment:	Pulse train measurement was evaluated for 122.9 kHz only.

Mode:	Polling continuously without tag
Date of test:	22 June 2006
Test site:	Fully anechoic room, cabin no. 2

Total Pulse Train:



Worst case 0.1 second interval:



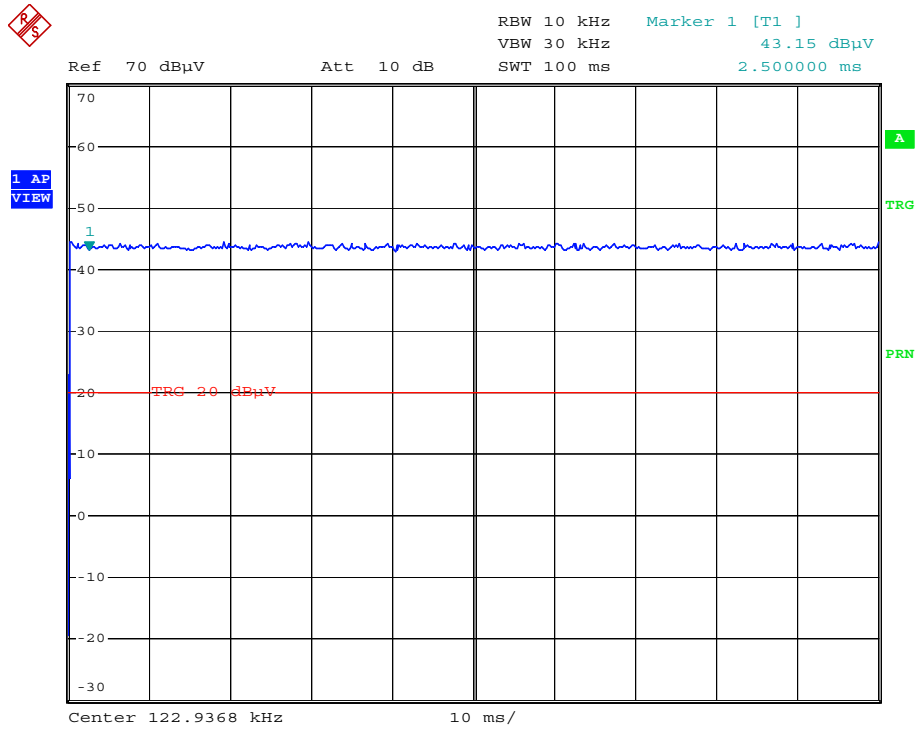
Comment: Skidata 060354: Duty Cycle Correction
 Date: 22.JUN.2006 11:57:19

Calculation of pulse train correction:

TX-On-Time (worst case):	T_{on}	=	13.5 ms
Pulse Train Time:	T_{pt}	=	100.1 ms
Period Time:	T_{period}	=	100 ms
Pulse Train Correction:	C_{pt}	=	$20 \cdot \text{Log}(T_{on} / T_{period})$ dB
		=	-17.4 dB

Mode::	Reading transponder tag continuously (125 kHz)
Date of test:	22 June 2006
Test site:	Fully anechoic room, cabin no. 2

Total Pulse Train:



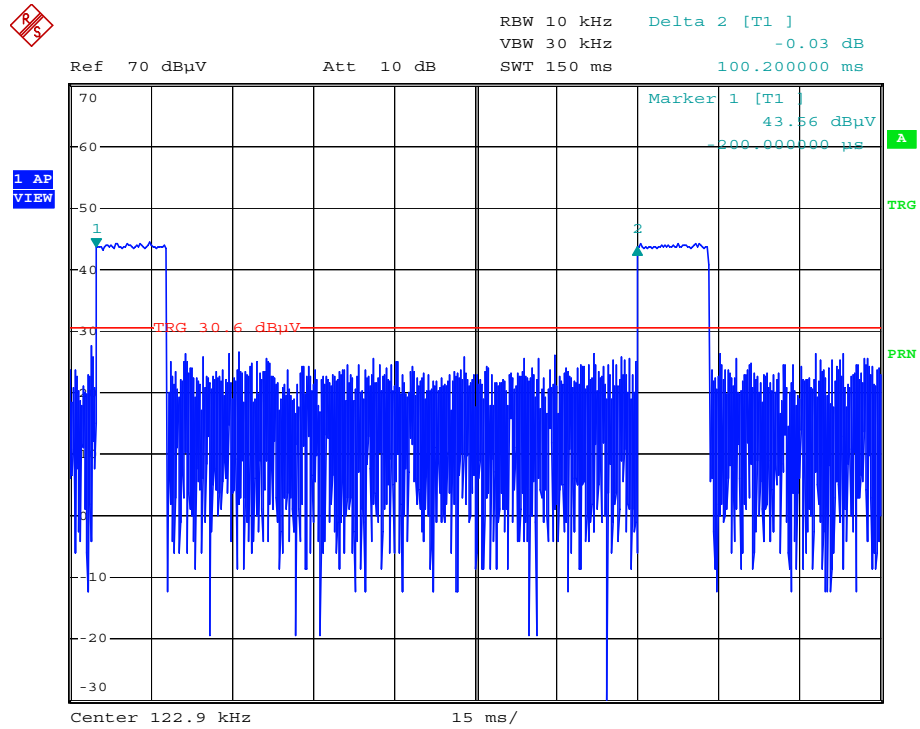
Comment: Skidata 060354: Duty Cycle Correction
 Date: 22.JUN.2006 11:54:15

Calculation of pulse train correction:

TX-On-Time (worst case):	T_{on}	=	100 ms
Pulse Train Time:	T_{pt}	=	100 ms
Period Time:	T_{period}	=	100 ms
Pulse Train Correction:	C_{pt}	=	$20 \cdot \text{Log}(T_{on} / T_{period})$ dB
		=	0 dB

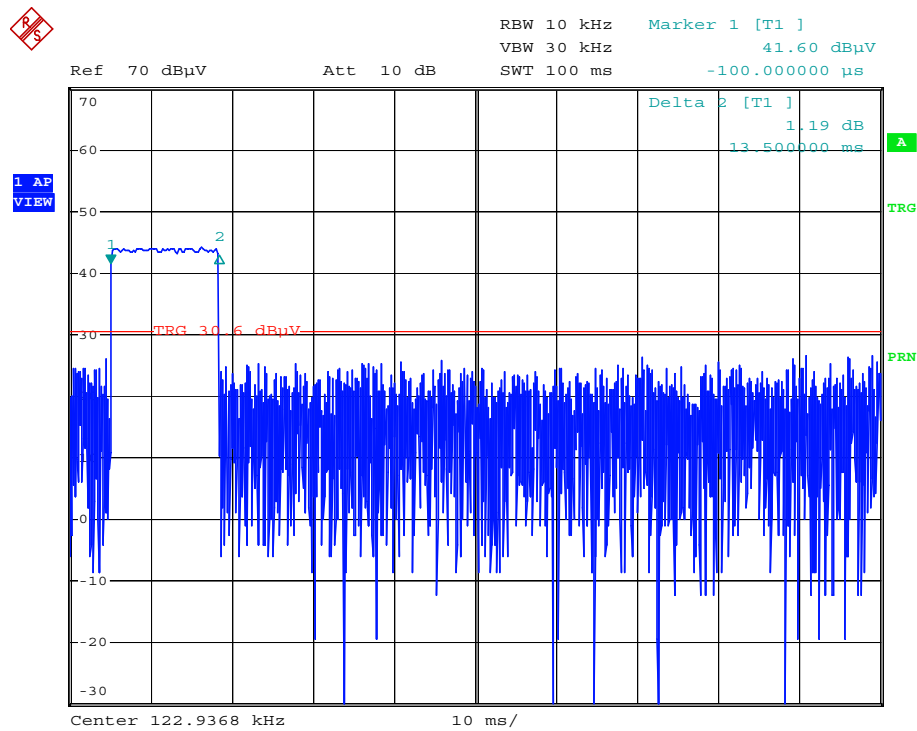
Mode:	Reading transponder card continuously (ISO 15693)
Date of test:	22 June 2006
Test site:	Fully anechoic room, cabin no. 2

Total Pulse Train:



Comment: Skidata 060354: Duty Cycle Correction
Date: 22.JUN.2006 11:59:20

Worst case 0.1 second interval:



Comment: Skidata 060354: Duty Cycle Correction
 Date: 22.JUN.2006 11:58:29

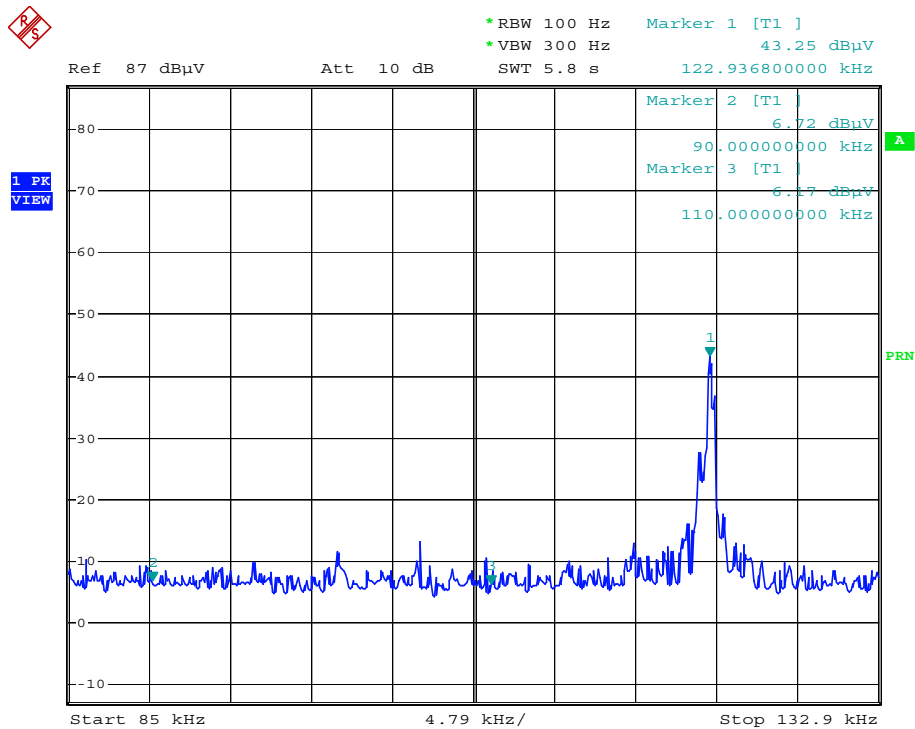
Calculation of pulse train correction:

TX-On-Time (worst case):	T_{on}	=	13.5 ms
Pulse Train Time:	T_{pt}	=	100.2 ms
Period Time:	T_{period}	=	100 ms
Pulse Train Correction:	C_{pt}	=	$20 \cdot \text{Log}(T_{on} / T_{period})$ dB
		=	-17.4 dB

8.6 Restricted Bands of Operation

Rules and specifications:	CFR 47 Part 15, section 15.205(a) IC RSS-210 Issue 6, section 2.2(a)
Guide:	ANSI C63.4
Limit:	Only spurious emissions are permitted in any of the frequency bands listed in CFR 47 Part 15, section 15.205(a) or IC RSS-210 Issue 6, section 2.2(a).
Measurement procedure:	Radiated Emission Measurement 9 kHz to 30 MHz (6.5)

Comment:	
Date of test:	22 June 2006
Test site:	Fully anechoic room, cabin no. 2
Test distance:	8.7 meters



Comment: Skidata 060354: Restricted Bands of Operation
 Date: 22.JUN.2006 11:51:57

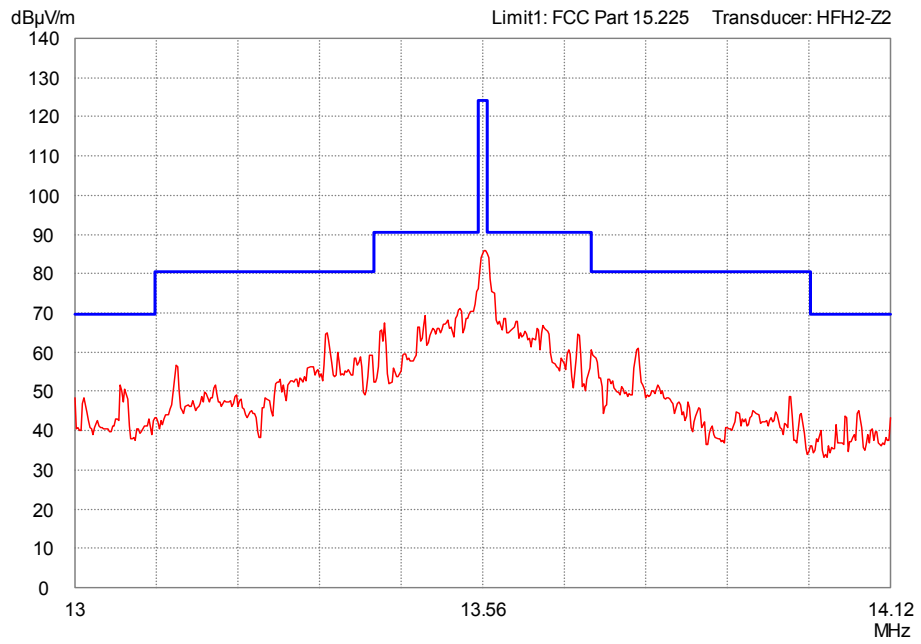
Test Result:	Test passed
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8.7 Spectrum Mask

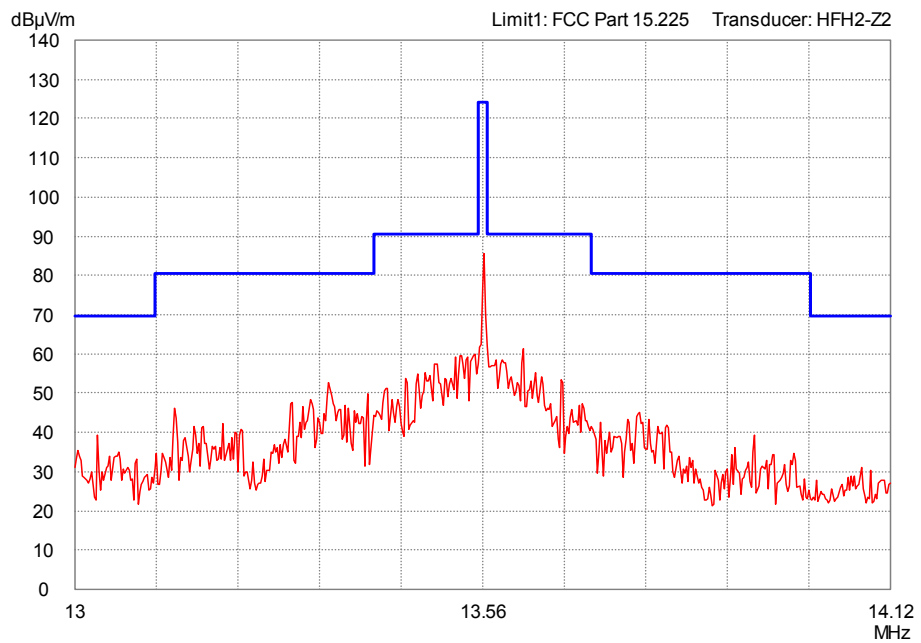
Rules and specifications:	CFR 47 Part 15, section 15.225(a)-(d) IC RSS-210 Issue 6, section A2.6			
Guide:	ANSI C63.4			
Description:	Compliance with the spectrum mask is tested using a spectrum analyzer with resolution bandwidth set to a 1 kHz for the band 13.553 to 13.567 MHz and to 10 kHz outside this band. The video bandwidth shall be at least three times greater than the resolution bandwidth.			
Limit:	Frequency of Emission (MHz)	Field Strength ($\mu\text{V}/\text{m}$)	Field Strength ($\text{dB}\mu\text{V}/\text{m}$)	Measurement Distance d (meters)
	1.705 - 13.110	30	29.5	30
	13.110 - 13.410	106	40.5	30
	13.410 - 13.553	334	50.5	30
	13.553 - 13.567	15848	84.0	30
	13.567 - 13.710	334	50.5	30
	13.710 - 14.010	106	40.5	30
	14.010 - 30.000	30	29.5	30
Measurement procedure:	Radiated Emission Measurement 9 kHz to 30 MHz (6.5)			

Comment:	Test performed with antenna sd682
Date of test:	13 June 2006
Test site:	Fully anechoic room, cabin no. 2
Test distance:	3 meters
Extrapolation Factor:	40 dB/decade

Test Result:	Test passed
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RBW = 10 kHz



RBW = 1 kHz

8.8 Conducted Powerline Emission Measurement 150 kHz to 30 MHz

Rules and specifications:	CFR 47 Part 15, section 15.207 IC RSS-Gen Issue 1, section 7.2.2		
Guide:	ANSI C63.4 / CISPR 22		
Limit:	Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
		Quasi-peak	Average
	0.15 - 0.5	66 to 56	56 to 46
	0.5 - 5	56	46
	5 - 30	60	50
Measurement procedure:	Conducted AC Powerline Emission (6.4)		

Test Result:	Test passed
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Comment:	Test was performed as conducted DC Emissions With dummy load connected to the antenna output terminals
Mode:	One output terminal pair active
Date of test:	22 June 2006
Test site:	Shielded room, cabin no. 4

Test Result:	Test passed
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Tested on:	plus
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Frequency (MHz)	Detector	Reading Value (dBµV)	Correction Factor (dB)	Final Value (dBµV)	Limit (dBµV)	Margin (dB)
13.560	Quasi-Peak	50.0	0.0	50.0	60.0	10.0
13.560	Average	44.7	0.0	44.7	50.0	5.3

Tested on:	minus
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Frequency (MHz)	Detector	Reading Value (dBµV)	Correction Factor (dB)	Final Value (dBµV)	Limit (dBµV)	Margin (dB)
13.560	Quasi-Peak	45.3	0.0	45.3	60.0	14.7
13.560	Average	38.4	0.0	38.4	50.0	11.6

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB)}$$

Comment:	Test was performed as conducted DC Emissions With dummy load connected to the antenna output terminals
Mode:	Both output terminal pairs active
Date of test:	22 June 2006
Test site:	Shielded room, cabin no. 4

Test Result:	Test passed
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Tested on:	plus
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Frequency (MHz)	Detector	Reading Value (dBµV)	Correction Factor (dB)	Final Value (dBµV)	Limit (dBµV)	Margin (dB)
13.560	Quasi-Peak	50.0	0.0	50.0	60.0	10.0
13.560	Average	43.4	0.0	43.4	50.0	6.6

Tested on:	minus
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Frequency (MHz)	Detector	Reading Value (dBµV)	Correction Factor (dB)	Final Value (dBµV)	Limit (dBµV)	Margin (dB)
13.560	Quasi-Peak	45.1	0.0	45.1	60.0	14.9
13.560	Average	39.6	0.0	39.6	50.0	10.4

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB)}$$

8.9 Radiated Emission Measurement 9 kHz to 30 MHz

Rules and specifications:	CFR 47 Part 15, sections 15.205, 15.209, and 15.225(a)-(d) IC RSS-210 Issue 6, sections 2.2, 2.6 and A2.6			
Guide:	ANSI C63.4			
Limit:	Frequency of Emission (MHz)	Field Strength ($\mu\text{V}/\text{m}$)	Field Strength ($\text{dB}\mu\text{V}/\text{m}$)	Measurement Distance d (meters)
	0.009 - 0.490	$2400/F(\text{kHz})$	$67.6 - 20 \cdot \log(F(\text{kHz}))$	300
	0.490 - 1.705	$24000/F(\text{kHz})$	$87.6 - 20 \cdot \log(F(\text{kHz}))$	30
	1.705 - 13.110	30	29.5	30
	13.110 - 13.410	106	40.5	30
	13.410 - 13.553	334	50.5	30
	13.553 - 13.567	15848	84.0	30
	13.567 - 13.710	334	50.5	30
	13.710 - 14.010	106	40.5	30
	14.010 - 30.000	30	29.5	30
Additionally, the level of any unwanted emissions shall not exceed the level of the fundamental emission.				
Measurement procedure:	Radiated Emission Measurement 9 kHz to 30 MHz (6.5)			

Test Result:	Test passed
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Antenna	sd611 (V 1.0)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	66.9	39.0	20.0	-53.4	-78.8		-19.8	25.8	45.6
0.36870	PK		3	300		34.4	20.0	-40.0	-80.0		-25.6	16.3	41.9
13.56000	QP	3	10	30	56.2	46.5	20.0	-18.6	-8.9		57.6	84.0	26.4

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd611 (V 1.0)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	66.5	38.7	20.0	-53.2	-78.5		-19.8	25.8	45.6
0.36870	PK		3	300		34.2	20.0	-40.0	-80.0		-25.8	16.3	42.1

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd611 (V 1.0)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	66.5	39.0	20.0	-52.6	-77.7		-18.7	25.8	44.5
0.36870	PK		3	300		34.1	20.0	-40.0	-80.0		-25.9	16.3	42.2
13.56000	QP	3	10	30	55.6	45.5	20.0	-19.3	-9.2		56.3	84.0	27.7

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd612 (V1.0)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	65.2	36.1	20.0	-55.7	-82.2		-26.1	25.8	51.9
13.56000	QP	3	10	30	52.0	41.5	20.0	-20.1	-9.6		51.9	84.0	32.1

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd612 (V1.0)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	64.2	35.8	20.0	-54.3	-80.2		-24.4	25.8	50.2

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd612 (V1.0)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	65.0	36.0	20.0	-55.5	-81.9		-25.9	25.8	51.7
13.56000	QP	3	10	30	50.2	40.1	20.0	-19.3	-9.2		50.9	84.0	33.1

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd647 (V2.2)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	52.2	25.2	20.0	-51.6	-76.3		-31.1	25.8	56.9
13.56000	QP	3	10	30	53.9	44.9	20.0	-17.2	-8.2		56.7	84.0	27.3

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd647 (V2.2)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	50.8	24.3	20.0	-50.7	-74.9		-30.6	25.8	56.4

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd647 (V2.2)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	52.2	25.4	20.0	-51.3	-75.7		-30.3	25.8	56.1
13.56000	QP	3	10	30	53.0	42.9	20.0	-19.3	-9.2		53.7	84.0	30.3

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd648 (V1.3)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	57.7	27.4	20.0	-57.9	-85.6		-38.2	25.8	64.0
13.56000	QP	3	10	30	60.0	51.5	20.0	-16.3	-7.8		63.7	84.0	20.3

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd648 (V1.3)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	57.7	26.4	20.0	-59.9	-88.4		-42.0	25.8	67.8

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd648 (V1.3)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	57.9	27.7	20.0	-57.8	-85.3		-37.6	25.8	63.4
13.56000	QP	3	10	30	57.9	49.4	20.0	-16.3	-7.8		61.6	84.0	22.4

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd682 (V1.0)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	69.1	40.5	20.0	-54.7	-80.8		-20.3	25.8	46.1
0.36870	PK		3	300		34.9	20.0	-40.0	-80.0		-25.1	16.3	41.4
13.56000	QP	3	10	30	67.2	55.6	20.0	-22.2	-10.6		65.0	84.0	19.0

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd682 (V1.0)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	68.9	40.2	20.0	-54.9	-81.1		-20.9	25.8	46.7
0.36870	PK		3	300		34.7	20.0	-40.0	-80.0		-25.3	16.3	41.6

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd682 (V1.0)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	69.1	40.3	20.0	-55.1	-81.4		-21.1	25.8	46.9
0.36870	PK		3	300		35.1	20.0	-40.0	-80.0		-24.9	16.3	41.2
13.56000	QP	3	10	30	67.0	54.7	20.0	-23.5	-11.2		63.5	84.0	20.5

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd697 (V2.0)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	68.8	40.5	20.0	-54.1	-79.9		-19.4	25.8	45.3
0.36870	PK		3	300		36.6	20.0	-40.0	-80.0		-23.4	16.3	39.7
0.61450	QP		3	30		33.4	20.0	-40.0	-40.0		13.4	31.8	18.4
13.56000	QP	3	10	30	55.4	43.5	20.0	-22.8	-10.9		52.6	84.0	31.4

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd697 (V2.0)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	68.4	40.8	20.0	-52.8	-78.0		-17.2	25.8	43.0
0.36870	PK		3	300		36.3	20.0	-40.0	-80.0		-23.7	16.3	40.0
0.61450	QP		3	30		35.3	20.0	-40.0	-40.0		15.3	31.8	16.5

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd697 (V2.0)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
--------------	-------------

Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	68.8	40.7	20.0	-53.7	-79.4		-18.7	25.8	44.5
0.36870	PK		3	300		36.5	20.0	-40.0	-80.0		-23.5	16.3	39.8
0.61450	QP		3	30		33.5	20.0	-40.0	-40.0		13.5	31.8	18.3
13.56000	QP	3	10	30	54.1	42.0	20.0	-23.1	-11.0		51.0	84.0	33.0

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd697 (V3.0)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
--------------	-------------

Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	78.0	49.9	20.0	-53.7	-79.4		-9.5	25.8	35.3
0.36870	PK		3	300		43.7	20.0	-40.0	-80.0		-16.3	16.3	32.6
13.56000	QP	3	10	30	58.9	46.0	20.0	-24.7	-11.8		54.2	84.0	29.8

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd697 (V3.0)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
--------------	-------------

Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	78.1	50.0	20.0	-53.7	-79.4		-9.4	25.8	35.2
0.36870	PK		3	300		43.7	20.0	-40.0	-80.0		-16.3	16.3	32.6

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd697 (V3.0)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
--------------	-------------

Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	77.9	49.9	20.0	-53.5	-79.1		-9.2	25.8	35.0
0.36870	PK		3	300		43.4	20.0	-40.0	-80.0		-16.6	16.3	32.9
13.56000	QP	3	10	30	57.4	47.6	20.0	-18.7	-8.9		58.7	84.0	25.3

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd733 (V2.2)
Mode:	Polling continuously without tag
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	67.3	39.2	20.0	-53.7	-79.4		-20.2	25.8	46.0
0.36870	PK		3	300		33.6	20.0	-40.0	-80.0		-26.4	16.3	42.7
13.56000	QP	3	10	30	55.5	46.3	20.0	-17.6	-8.4		57.9	84.0	26.1

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd733 (V2.2)
Mode:	Reading tag continuously (125 kHz)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	67.3	39.3	20.0	-53.5	-79.1		-19.8	25.8	45.6
0.36870	PK		3	300		35.8	20.0	-40.0	-80.0		-24.2	16.3	40.5

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

Antenna	sd733 (V2.2)
Mode:	Reading tag continuously (ISO 15693)
Date of test:	14 June 2006
Test site:	Open field test site

Test Result:	Test passed
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Frequency (MHz)	Detector	Distance			Reading Value		Correction Factor (dB/m)	Extrapolation Factor		Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		d1 (m)	d2 (m)	d (m)	d1 (dBµV)	d2 (dBµV)		(dB/dec)	(dB)				
0.12290	PK	3	10	300	67.3	39.3	20.0	-53.5	-79.1		-19.8	25.8	45.6
0.36870	PK		3	300		35.6	20.0	-40.0	-80.0		-24.4	16.3	40.7
13.56000	QP	3	10	30	54.4	45.4	20.0	-17.2	-8.2		57.2	84.0	26.8

Sample calculation of final values:

$$\text{Extrapolation Factor (dB/decade)} = \begin{cases} -40 \text{ (dB/decade)} & \text{if } d_1 = d_2 \\ \frac{\text{Reading Value } d_2 \text{ (dB}\mu\text{V)} - \text{Reading Value } d_1 \text{ (dB}\mu\text{V)}}{\text{Log}(d_2) - \text{Log}(d_1)} & \text{if } d_1 \neq d_2 \end{cases}$$

$$\text{Extrapolation Factor (dB)} = (\text{Log}(d) - \text{Log}(d_2)) \cdot \text{Extrapolation Factor (dB/decade)}$$

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value } d_2 \text{ (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Extrapolation Factor (dB)} + \text{Pulse Train Correction (dB)}$$

Note: Extrapolation factor (dB) and final value (dBµV/m) are relating to distance d.

8.10 Radiated Emission Measurement 30 MHz to 1 GHz

Rules and specifications:	CFR 47 Part 15, sections 15.205(b), 15.209 and 15.225(d) IC RSS-210 Issue 6, sections 2.2(b)(c), 2.6 and A2.6		
Guide:	ANSI C63.4		
Limit:	Frequency of Emission (MHz)	Field Strength ($\mu\text{V}/\text{m}$)	Field Strength ($\text{dB}\mu\text{V}/\text{m}$)
	30 - 88	100	40.0
	88 - 216	150	43.5
	216 - 960	200	46.0
	Above 960	500	54.0
	Additionally, the level of any unwanted emissions shall not exceed the level of the fundamental emission.		
Measurement procedures:	Radiated Emission in Fully or Semi Anechoic Room (6.6) Radiated Emission at Open Field Test Site (6.7)		

Test Result:	Test passed
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Antenna:	sd611 (V1.0)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBμV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
40.690	vertical	Quasi-Peak	22.0	11.8		33.8	40.0	6.2
81.370	horizontal	Quasi-Peak	23.8	9.5		33.3	40.0	6.7
176.310	horizontal	Quasi-Peak	13.1	15.2		28.3	43.5	15.2
203.430	horizontal	Quasi-Peak	8.7	16.7		25.4	43.5	18.1
206.470	horizontal	Quasi-Peak	13.2	16.7		29.9	43.5	13.6
230.560	horizontal	Quasi-Peak	12.1	17.3		29.4	46.0	16.6

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

Antenna:	sd612 (V1.0)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBµV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
40.670	vertical	Quasi-Peak	20.9	11.8		32.7	40.0	7.3
81.370	horizontal	Quasi-Peak	19.4	9.5		28.9	40.0	11.1
203.430	horizontal	Quasi-Peak	14.0	16.7		30.7	43.5	12.8
230.560	horizontal	Quasi-Peak	16.2	17.3		33.5	46.0	12.5
284.800	horizontal	Quasi-Peak	14.1	21.0		35.1	46.0	10.9

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

Antenna:	sd647 (V2.2)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBμV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
108.490	horizontal	Quasi-Peak	17.5	11.3		28.8	43.5	14.7
122.060	horizontal	Quasi-Peak	13.0	12.8		25.8	43.5	17.7

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

Antenna:	sd648 (V1.3)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBμV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
81.370	horizontal	Quasi-Peak	25.5	9.5		35.0	40.0	5.0
189.860	horizontal	Quasi-Peak	14.3	15.9		30.2	43.5	13.3
257.680	horizontal	Quasi-Peak	12.5	18.4		30.9	46.0	15.1

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

Antenna:	sd682 (V1.0)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBμV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
81.370	horizontal	Quasi-Peak	20.3	9.5		29.8	40.0	10.2
94.790	horizontal	Quasi-Peak	21.1	10.3		31.4	43.5	12.1
94.890	vertical	Quasi-Peak	21.0	10.3		31.3	43.5	12.2
149.180	horizontal	Quasi-Peak	15.4	13.9		29.3	43.5	14.2
162.740	horizontal	Quasi-Peak	14.6	14.6		29.2	43.5	14.3
176.300	horizontal	Quasi-Peak	11.5	15.2		26.7	43.5	16.8
203.420	horizontal	Quasi-Peak	14.7	16.7		31.4	43.5	12.1

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

Antenna:	sd697 (V2.0)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBμV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
81.370	horizontal	Quasi-Peak	20.0	9.5		29.5	40.0	10.5
203.430	horizontal	Quasi-Peak	13.9	16.7		30.6	43.5	12.9

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

Antenna:	sd697 (V3.0)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBμV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
81.370	horizontal	Quasi-Peak	27.0	9.5		36.5	40.0	3.5
176.310	horizontal	Quasi-Peak	13.1	15.2		28.3	43.5	15.2
203.430	horizontal	Quasi-Peak	13.7	16.7		30.4	43.5	13.1
230.560	horizontal	Quasi-Peak	15.0	17.3		32.3	46.0	13.7

Sample calculation of final values:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

Antenna:	sd733 (V2.2)
Mode:	Reading transponder continuously (ISO 15693)
Comment:	Final measurement was performed for worst case operating mode only.
Date of test:	20 June 2006
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed
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Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBμV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
40.690	vertical	Quasi-Peak	20.6	11.8		32.4	40.0	7.6
54.240	horizontal	Quasi-Peak	20.0	10.0		30.0	40.0	10.0
67.780	vertical	Quasi-Peak	21.8	9.6		31.4	40.0	8.6
67.800	horizontal	Quasi-Peak	23.3	9.6		32.9	40.0	7.1
149.170	horizontal	Quasi-Peak	14.2	13.9		28.1	43.5	15.4
189.870	horizontal	Quasi-Peak	14.6	15.9		30.5	43.5	13.0
203.430	horizontal	Quasi-Peak	16.3	16.7		33.0	43.5	10.5

Sample calculation of final values:

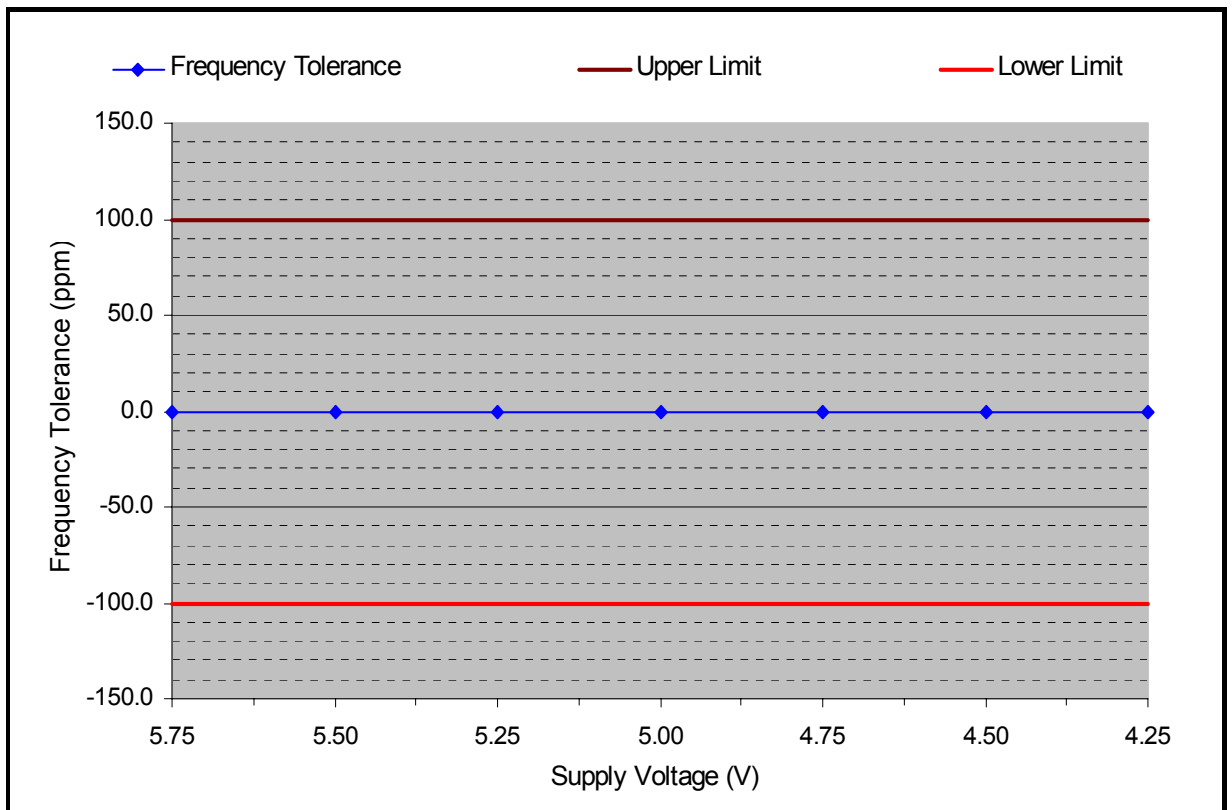
$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + \text{Correction Factor (dB/m)} + \text{Pulse Train Correction (dB)}$$

8.11 Carrier Frequency Stability

Rules and specifications:	CFR 47 Part 15, section 15.225(e) IC RSS-Gen Issue 1, section 4.5 and IC RSS-210 Issue 6, section A2.6
Guide:	ANSI C63.4
Limit:	The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ (± 100 ppm) of the carrier frequency under nominal conditions.
Temperature range:	-20°C to +50°C (at normal supply voltage)
Voltage range:	85% to 115% of the rated supply voltage (at a temperature of +20°C)
Measurement procedure:	Carrier Frequency Stability (6.8)

Comment:	
Date of test:	19 June 2006

8.11.2 Carrier Frequency Stability vs. Supply Voltage



Temperature: +20 °C Battery End Point: Not applicable
 Nominal frequency: 13.562130 MHz

Supply Voltage (V)	Frequency (MHz)	Frequency Tolerance (Hz)	Frequency Tolerance (ppm)	Upper Limit (ppm)	Lower Limit (ppm)	Margin (ppm)
5.75	13.562130	0	0.0	+100.0	-100.0	100.0
5.50	13.562130	0	0.0	+100.0	-100.0	100.0
5.25	13.562130	0	0.0	+100.0	-100.0	100.0
5.00	13.562130	0	0.0	+100.0	-100.0	100.0
4.75	13.562130	0	0.0	+100.0	-100.0	100.0
4.50	13.562130	0	0.0	+100.0	-100.0	100.0
4.25	13.562120	-10	-0.7	+100.0	-100.0	99.3

Test Result: Test passed

8.12 Exposure of Humans to RF Fields

Rules and specifications:	IC RSS-Gen Issue 2, section 3
Guide:	IC RSS-102 Issue 2, section 2.5

Comment:	Evaluation for 122.9 kHz
Date of test:	23 June 2006

Exposure of Humans to RF Fields	Applicable	Declared by applicant	Measured	Exemption
The antenna is				
<input checked="" type="checkbox"/> detachable				
The conducted output power (CP in watts) is measured at the antenna connector: $CP = 3.32 \text{ mW} \text{ ††}$ The effective isotropic radiated power (EIRP in watts) is calculated using <input checked="" type="checkbox"/> the numerical antenna gain: $G = 1$ $EIRP = G \cdot CP \Rightarrow EIRP = 1.66 \text{ mW}$ <input checked="" type="checkbox"/> the field strength ^{†††} in V/m: $FS = 3.16 \text{ mV/m}$ $EIRP = \frac{(FS \cdot D)^2}{30} \Rightarrow EIRP = 33.29 \text{ } \mu\text{W}$ with: Distance between the antennas in m: $D = 10 \text{ m}$			<input checked="" type="checkbox"/>	
<input type="checkbox"/> not detachable				
A field strength measurement is used to determine the effective isotropic radiated power (EIRP in watts) given by ^{†††} : $EIRP = \frac{(FS \cdot D)^2}{30} \Rightarrow EIRP = \dots\dots\dots \text{ W}$ with: Field strength in V/m: $FS = \dots\dots\dots \text{ V/m}$ Distance between the two antennas in m: $D = \dots\dots\dots \text{ m}$				<input type="checkbox"/> <input type="checkbox"/>
Selection of output power				
The output power TP is the higher of the conducted or effective isotropic radiated power (e.i.r.p.): $TP = 1.66 \text{ mW}$				

††† Worst case assumption for parallel use of both channels

††† The conversion formula is valid only for properly matched antennas. In other cases the transmitter output power may have to be measured by a terminated measurement when applying the exemption clauses. If an open area test site is used for field strength measurement, the effect due to the metal ground reflecting plane should be subtracted from the maximum field strength value in order to reference it to free space, before calculating TP.

Exposure of Humans to RF Fields (continued)	Applicable	Declared by applicant	Measured	Exemption
Separation distance between the user and the transmitting device is				
<input type="checkbox"/> less than or equal to 20 cm	<input checked="" type="checkbox"/> greater than 20 cm		<input checked="" type="checkbox"/>	
Transmitting device is				
<input type="checkbox"/> in the vicinity of the human head	<input type="checkbox"/> body-worn		<input checked="" type="checkbox"/>	
SAR evaluation				
SAR evaluation is required if the separation distance between the user and the device is less than or equal to 20 cm.				
<input type="checkbox"/> The device operates from 3 kHz up to 1 GHz inclusively and its source-based time-averaged output power is less than, or equal to 200 mW for General Public Use and 1000 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> The device operates above 1 GHz up to 2.2 GHz inclusively and its source-based time-averaged output power is less than, or equal to 100 mW for General Public Use and 500 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> The device operates above 2.2 GHz up to 3 GHz inclusively and its source-based time-averaged output power is less than, or equal to 20 mW for General Public Use and 100 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> The device operates above 3 GHz up to 6 GHz inclusively and its source-based time-averaged output power) is less than, or equal to 10 mW for General Public Use and 50 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> SAR evaluation is documented in test report no.				
RF exposure evaluation				
RF exposure evaluation is required if the separation distance between the user and the device is greater than 20 cm.				
<input checked="" type="checkbox"/> The device operates below 1.5 GHz and its e.i.r.p. is equal to or less than 2.5 W.				<input type="checkbox"/>
<input type="checkbox"/> The device operates at or above 1.5 GHz and the e.i.r.p. of the device is equal to or less than 5 W.				<input type="checkbox"/>
<input type="checkbox"/> RF exposure evaluation is documented in test report no.				

Comment:	Evaluation for 13.56 MHz
Date of test:	23 June 2006

Exposure of Humans to RF Fields	Applicable	Declared by applicant	Measured	Exemption
The antenna is				
<input checked="" type="checkbox"/> detachable				
The conducted output power (CP in watts) is measured at the antenna connector: $CP = 120.52 \text{ mW} \text{ §§§}$ The effective isotropic radiated power (EIRP in watts) is calculated using <input checked="" type="checkbox"/> the numerical antenna gain: $G = 1$ $EIRP = G \cdot CP \Rightarrow EIRP = 120.52 \text{ mW}$ <input checked="" type="checkbox"/> the field strength**** in V/m: $FS = 6.02 \text{ mV/m}$ $EIRP = \frac{(FS \cdot D)^2}{30} \Rightarrow EIRP = 120.8 \text{ }\mu\text{W}$ with: Distance between the antennas in m: $D = 10 \text{ m}$		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/> not detachable				
A field strength measurement is used to determine the effective isotropic radiated power (EIRP in watts) given by†††: $EIRP = \frac{(FS \cdot D)^2}{30} \Rightarrow EIRP = \dots\dots\dots \text{ W}$ with: Field strength in V/m: $FS = \dots\dots\dots \text{ V/m}$ Distance between the two antennas in m: $D = \dots\dots\dots \text{ m}$			<input type="checkbox"/>	<input type="checkbox"/>
Selection of output power				
The output power TP is the higher of the conducted or effective isotropic radiated power (e.i.r.p.): $TP = 120.5 \text{ mW}$				

§§§ Worst case assumption for parallel use of both channels

**** The conversion formula is valid only for properly matched antennas. In other cases the transmitter output power may have to be measured by a terminated measurement when applying the exemption clauses. If an open area test site is used for field strength measurement, the effect due to the metal ground reflecting plane should be subtracted from the maximum field strength value in order to reference it to free space, before calculating TP.

Exposure of Humans to RF Fields (continued)	Applicable	Declared by applicant	Measured	Exemption
Separation distance between the user and the transmitting device is				
<input type="checkbox"/> less than or equal to 20 cm	<input checked="" type="checkbox"/> greater than 20 cm		<input checked="" type="checkbox"/>	
Transmitting device is				
<input type="checkbox"/> in the vicinity of the human head	<input type="checkbox"/> body-worn		<input checked="" type="checkbox"/>	
SAR evaluation				
SAR evaluation is required if the separation distance between the user and the device is less than or equal to 20 cm.				
<input type="checkbox"/> The device operates from 3 kHz up to 1 GHz inclusively and its source-based time-averaged output power is less than, or equal to 200 mW for General Public Use and 1000 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> The device operates above 1 GHz up to 2.2 GHz inclusively and its source-based time-averaged output power is less than, or equal to 100 mW for General Public Use and 500 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> The device operates above 2.2 GHz up to 3 GHz inclusively and its source-based time-averaged output power is less than, or equal to 20 mW for General Public Use and 100 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> The device operates above 3 GHz up to 6 GHz inclusively and its source-based time-averaged output power) is less than, or equal to 10 mW for General Public Use and 50 mW for Controlled Use.				<input type="checkbox"/>
<input type="checkbox"/> SAR evaluation is documented in test report no.				
RF exposure evaluation				
RF exposure evaluation is required if the separation distance between the user and the device is greater than 20 cm.				
<input checked="" type="checkbox"/> The device operates below 1.5 GHz and its e.i.r.p. is equal to or less than 2.5 W.				<input type="checkbox"/>
<input type="checkbox"/> The device operates at or above 1.5 GHz and the e.i.r.p. of the device is equal to or less than 5 W.				<input type="checkbox"/>
<input type="checkbox"/> RF exposure evaluation is documented in test report no.				

9 Referenced Regulations

All tests were performed with reference to the following regulations and standards:

<input checked="" type="checkbox"/>	CFR 47 Part 2	Code of Federal Regulations Part 2 (Frequency allocation and radio treaty matters; General rules and regulations) of the Federal Communication Commission (FCC)	October 10, 2004
<input checked="" type="checkbox"/>	CFR 47 Part 15	Code of Federal Regulations Part 15 (Radio Frequency Devices) of the Federal Communication Commission (FCC)	September 19, 2005
<input checked="" type="checkbox"/>	ANSI C63.4	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	December 11, 2003 (published on January 30, 2004)
<input checked="" type="checkbox"/>	RSS-Gen	Radio Standards Specification RSS-Gen Issue 1 containing General Requirements and Information for the Certification of Radiocommunication Equipmment, published by Industry Canada	September 2005
<input checked="" type="checkbox"/>	RSS-210	Radio Standards Specification RSS-210 Issue 6 for Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, published by Industry Canada	September 2005
<input type="checkbox"/>	RSS-310	Radio Standards Specification RSS-310 Issue 1 for Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category II Equipment, published by Industry Canada	September 2005
<input checked="" type="checkbox"/>	RSS-102	Radio Standards Specification RSS-102 Issue 2: Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)	November 2005
<input type="checkbox"/>	ICES-003	Interference-Causing Equipment Standard ICES-003 Issue 4 for Digital Apparatus, published by Industry Canada	February 7, 2004
<input checked="" type="checkbox"/>	CISPR 22	Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement"	1997
<input type="checkbox"/>	CAN/CSA-CEI/IEC CISPR 22	Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment	2002
<input checked="" type="checkbox"/>	TRC-43	Notes Regarding Designation of Emission (Including Necessary Bandwidth and Classification), Class of Station and Nature of Service, published by Industry Canada	October 9, 1982

10 Charts taken during testing

Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model:
sd705

Serial no.:
V2.1

Applicant:
SKIDATA AG

Test site:
Shielded room, cabin no. 4

Tested on:
Linecord
plus

Date of test:
06/22/2006

Operator:
M. Steindl

Test performed:
automatically

File name:

Mode:

- DC 5 V power supply

- one antenna connector pair terminated
with 50 Ohms each

Detector:

Peak / Final Results: QP

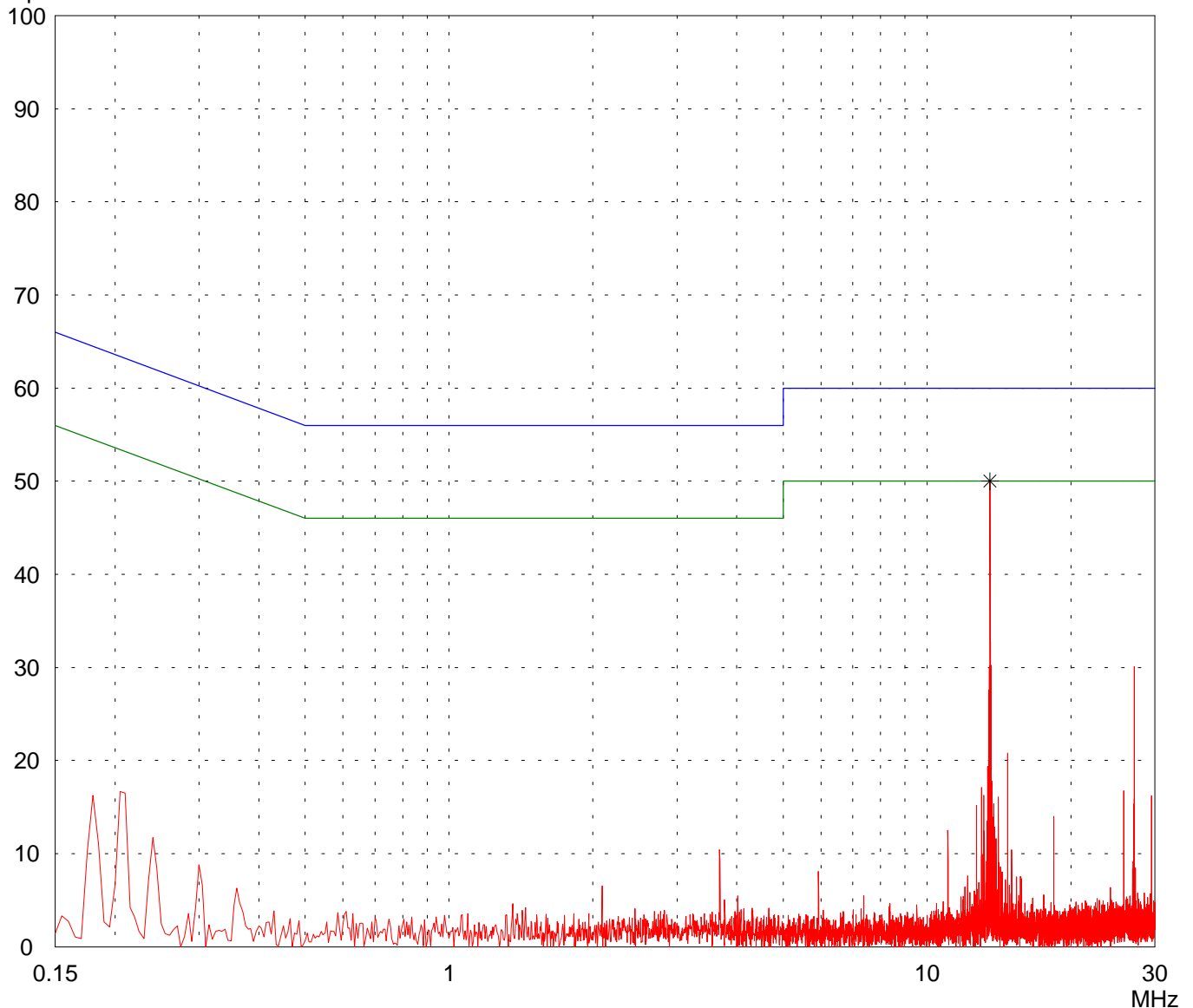
Final results:

20 dB Margin

25 Subranges

dB μ V

Limit1: FCC C / QP Limit2: FCC C / AV



Result:
Limit kept

Project file:
55426-060354

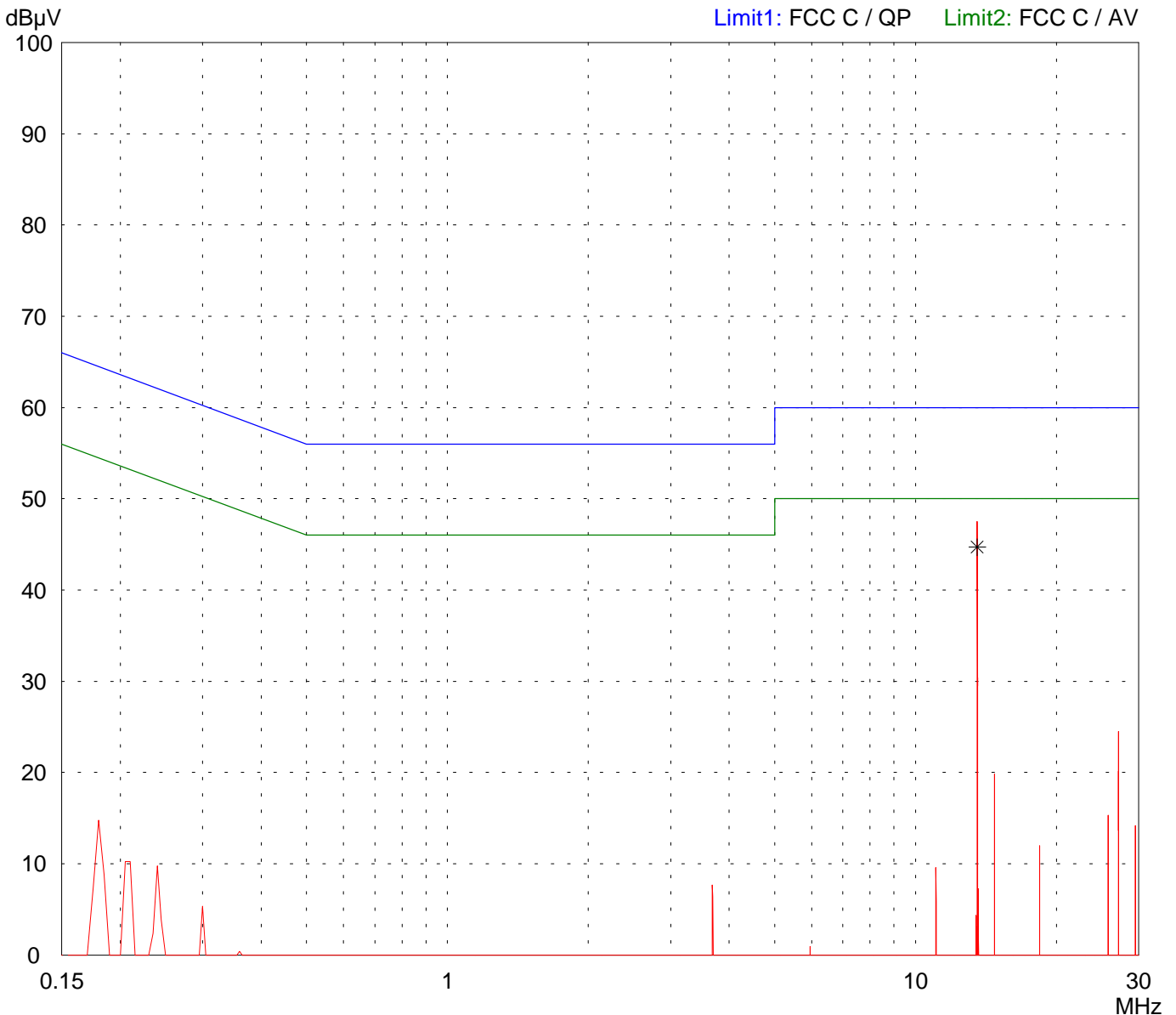
Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model: sd705	
Serial no.: V2.1	
Applicant: SKIDATA AG	
Test site: Shielded room, cabin no. 4	
Tested on: Linecord plus	
Date of test: 06/22/2006	Operator: M. Steindl
Test performed: automatically	File name:

Mode: - DC 5 V power supply - one antenna connector pair terminated with 50 Ohms each

Detector: Average / Final Results: AV
--

Final results: 20 dB Margin	25 Subranges
--------------------------------	--------------



Result: Limit kept

Project file: 55426-060354

Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model:
sd705

Serial no.:
V2.1

Applicant:
SKIDATA AG

Test site:
Shielded room, cabin no. 4

Tested on:
Linecord
minus

Date of test:
06/22/2006

Operator:
M. Steindl

Test performed:
automatically

File name:

Mode:

- DC 5 V power supply

- one antenna connector pair terminated
with 50 Ohms each

Detector:

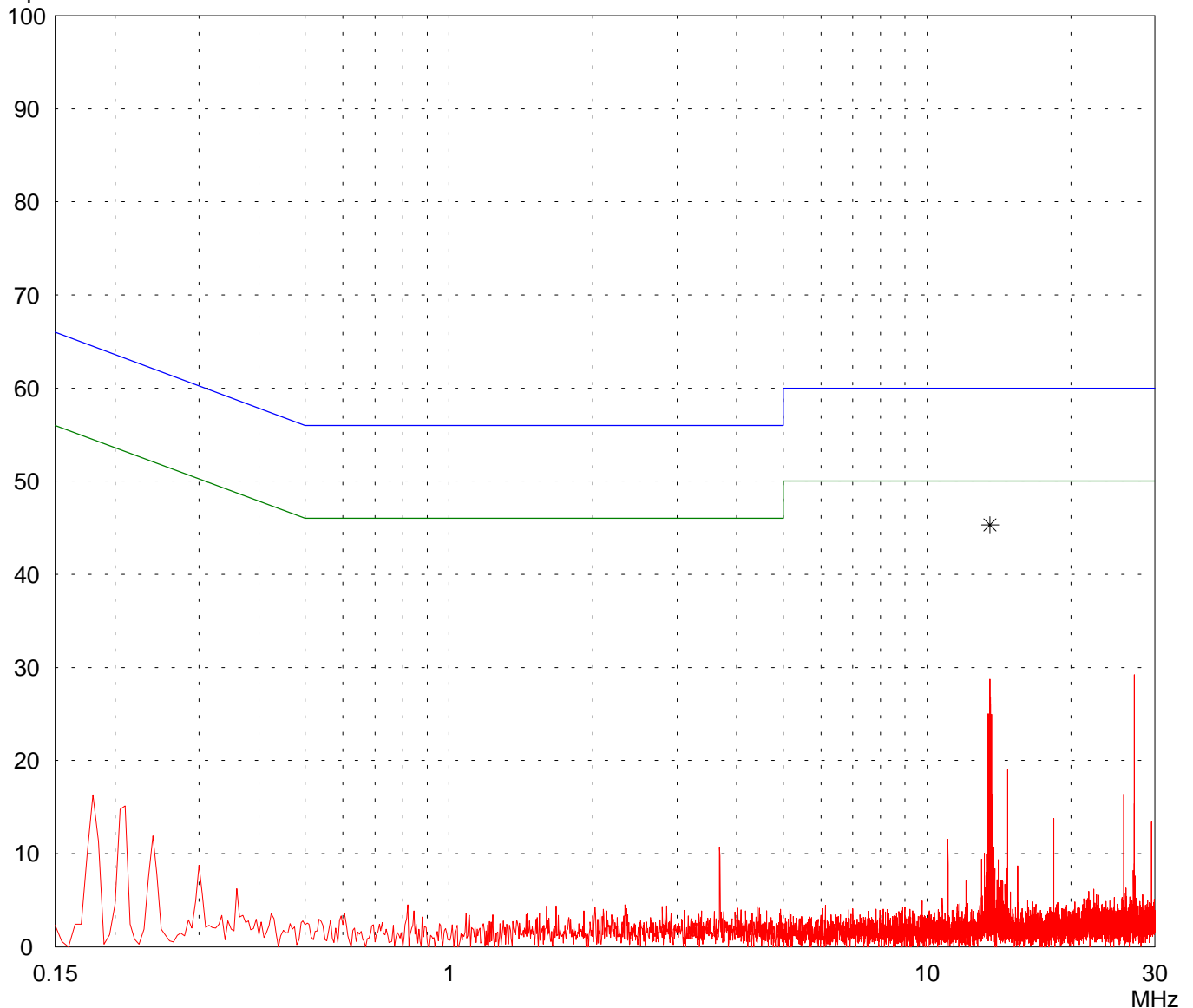
Peak / Final Results: QP

Final results:

Selected by hand

dB μ V

Limit1: FCC C / QP Limit2: FCC C / AV



Result:
Limit kept

Project file:
55426-060354

Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model: sd705	
Serial no.: V2.1	
Applicant: SKIDATA AG	
Test site: Shielded room, cabin no. 4	
Tested on: Linecord minus	
Date of test: 06/22/2006	Operator: M. Steindl
Test performed: automatically	File name:

Mode: - DC 5 V power supply - one antenna connector pair terminated with 50 Ohms each
--

Detector: Average / Final Results: AV
--

Final results: 20 dB Margin	25 Subranges
--------------------------------	--------------



Result: Limit kept

Project file: 55426-060354

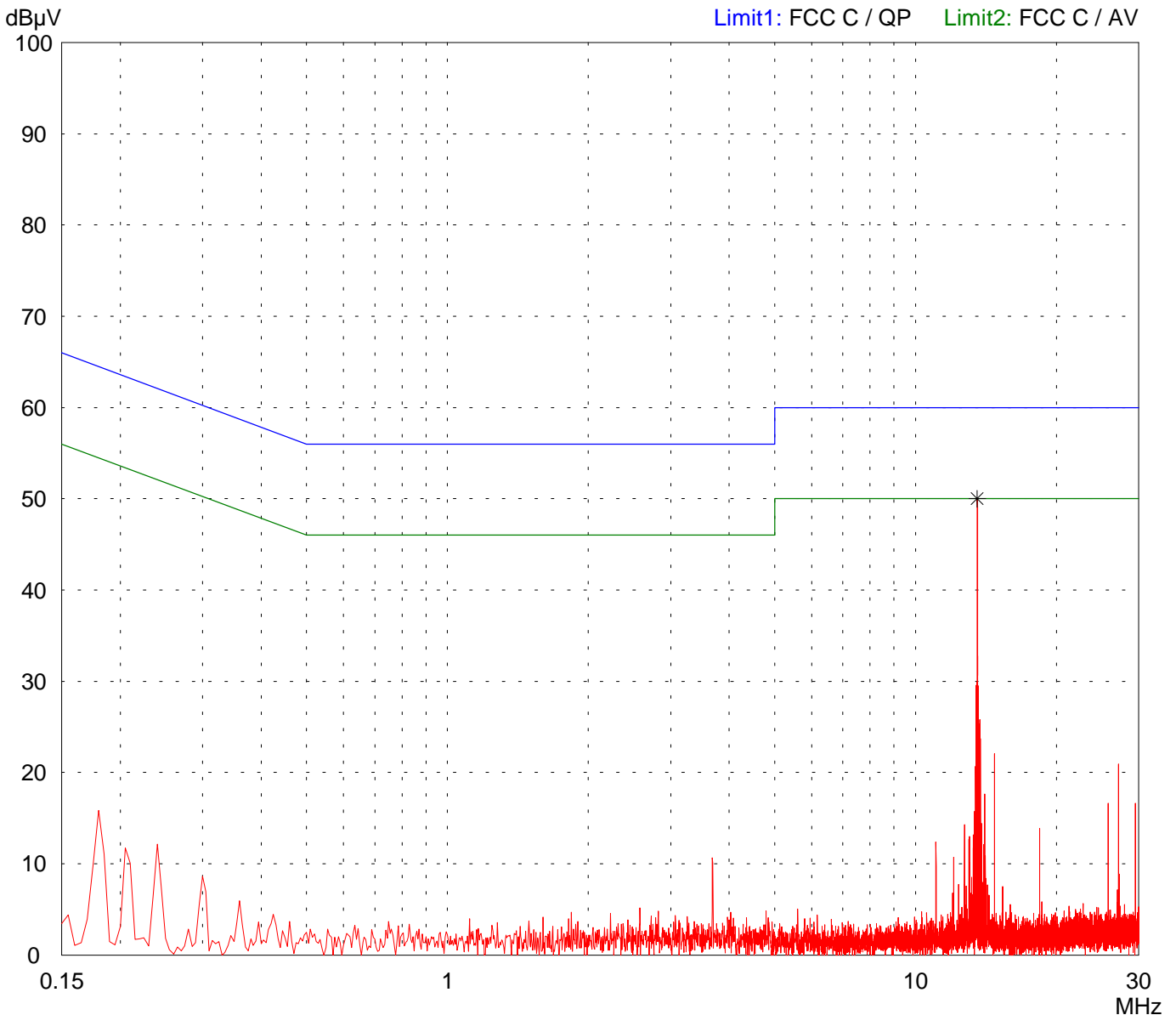
Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model: sd705	
Serial no.: V2.1	
Applicant: SKIDATA AG	
Test site: Shielded room, cabin no. 4	
Tested on: Linecord plus	
Date of test: 06/22/2006	Operator: M. Steindl
Test performed: automatically	File name:

Mode: - DC 5 V power supply - both antenna connector pairs terminated with 50 Ohms each

Detector: Peak / Final Results: QP

Final results: 20 dB Margin	25 Subranges
--------------------------------	--------------



Result: Limit kept

Project file: 55426-060354

Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model: sd705	
Serial no.: V2.1	
Applicant: SKIDATA AG	
Test site: Shielded room, cabin no. 4	
Tested on: Linecord plus	
Date of test: 06/22/2006	Operator: M. Steindl
Test performed: automatically	File name:

Mode: - DC 5 V power supply - both antenna connector pairs terminated with 50 Ohms each

Detector: Average / Final Results: AV
--

Final results: 20 dB Margin	25 Subranges
--------------------------------	--------------



Result: Limit kept

Project file: 55426-060354

Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model:
sd705

Serial no.:
V2.1

Applicant:
SKIDATA AG

Test site:
Shielded room, cabin no. 4

Tested on:
Linecord
minus

Date of test:
06/22/2006

Operator:
M. Steindl

Test performed:
automatically

File name:

Mode:

- DC 5 V power supply

- both antenna connector pairs terminated
with 50 Ohms each

Detector:

Peak / Final Results: QP

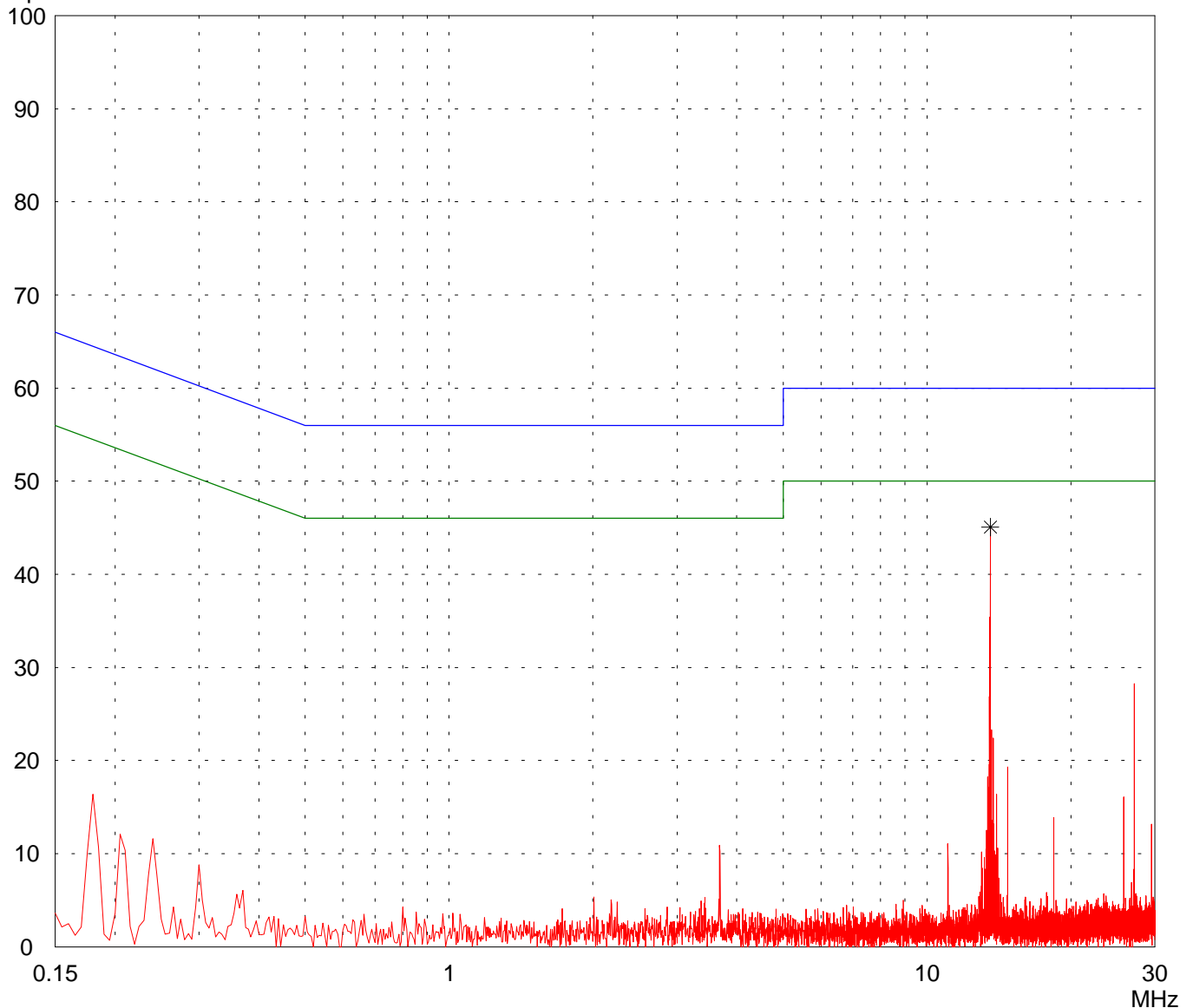
Final results:

20 dB Margin

25 Subranges

dB μ V

Limit1: FCC C / QP Limit2: FCC C / AV



Result:
Limit kept

Project file:
55426-060354

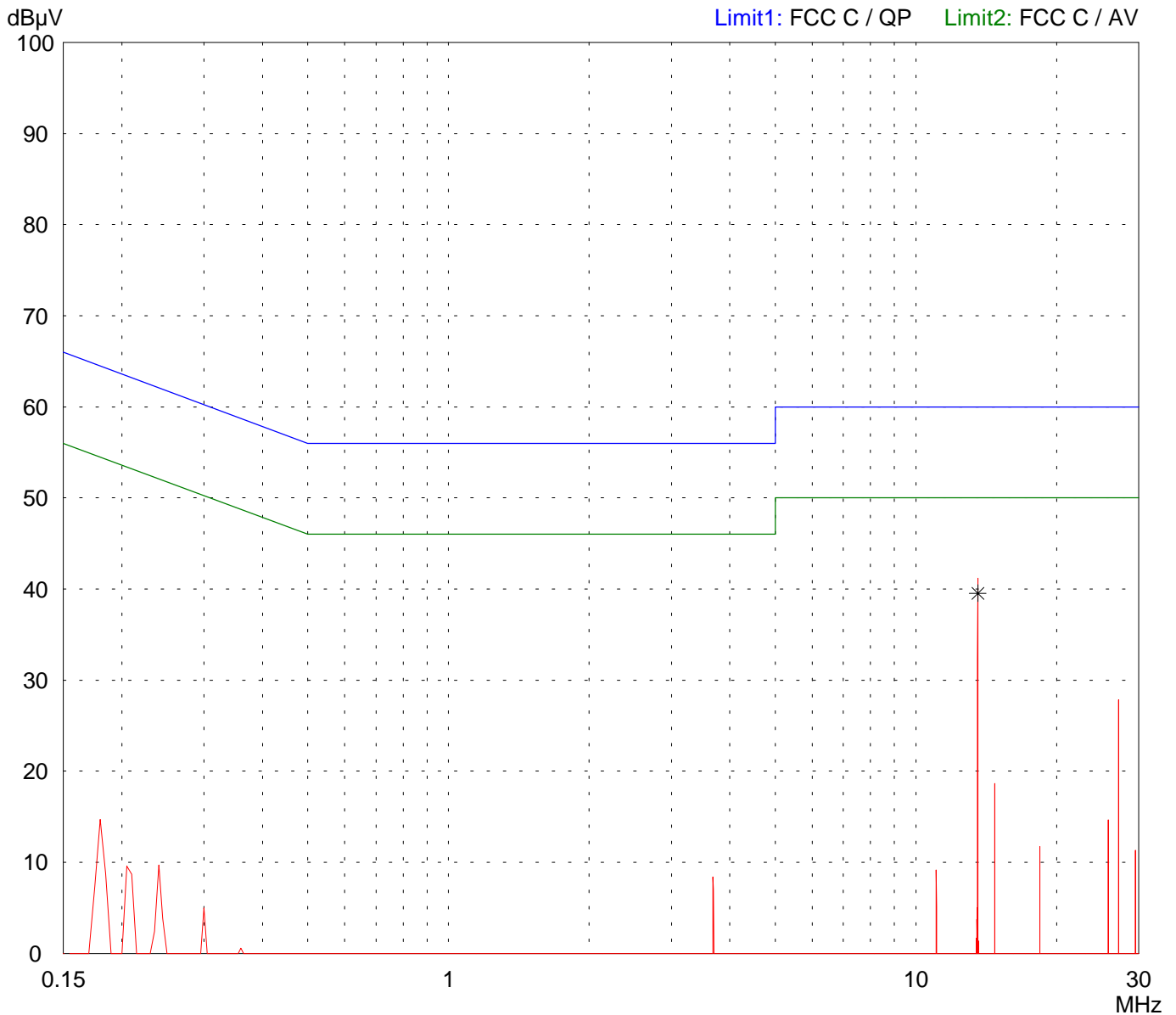
Conducted Emission Test 150 kHz - 30 MHz according to FCC Part 15 Subpart C

Model: sd705	
Serial no.: V2.1	
Applicant: SKIDATA AG	
Test site: Shielded room, cabin no. 4	
Tested on: Linecord minus	
Date of test: 06/22/2006	Operator: M. Steindl
Test performed: automatically	File name:

Mode: - DC 5 V power supply - both antenna connector pairs terminated with 50 Ohms each

Detector: Average / Final Results: AV
--

Final results: 20 dB Margin	25 Subranges
--------------------------------	--------------



Result: Limit kept

Project file: 55426-060354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

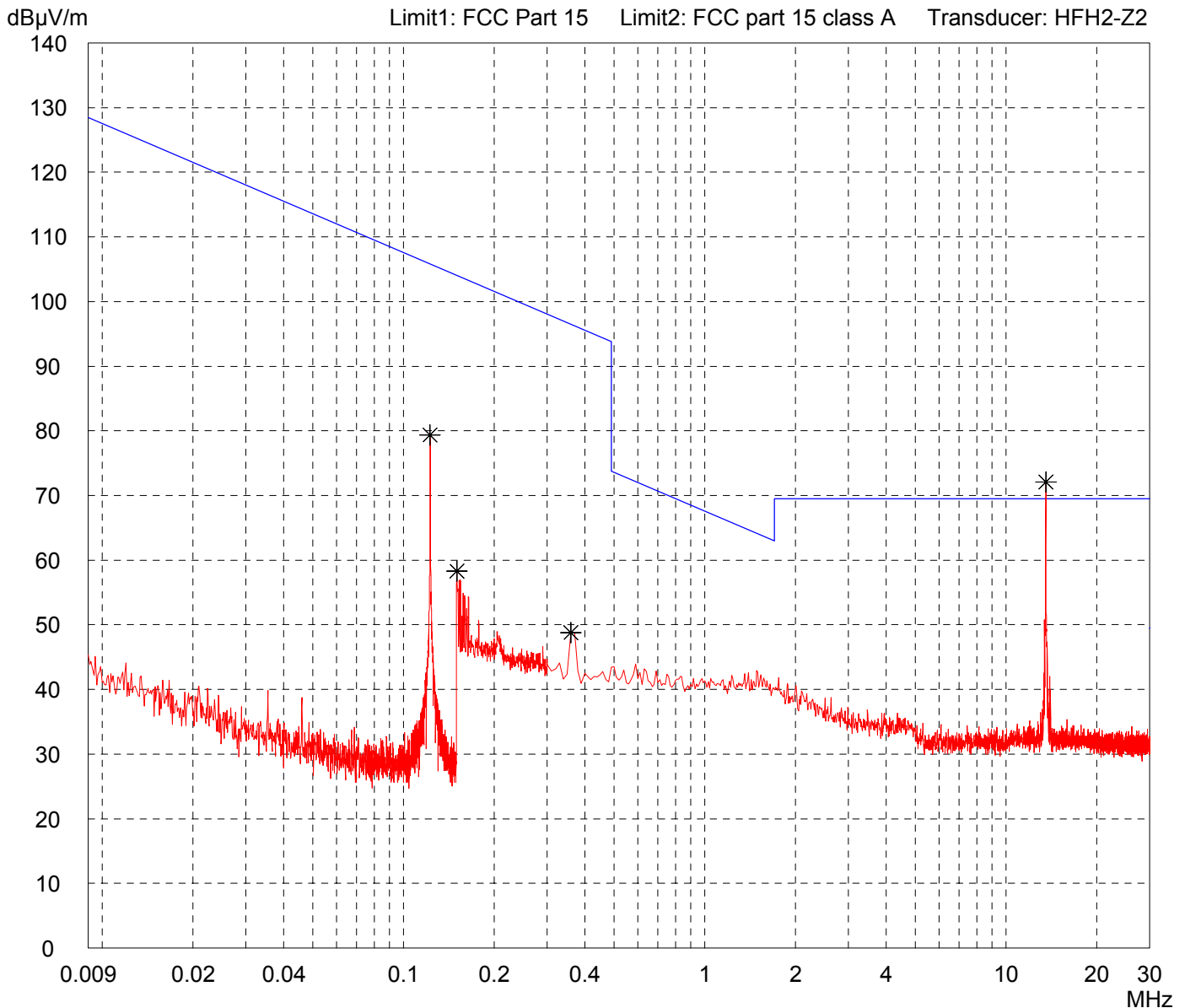
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 611 (V1.0)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

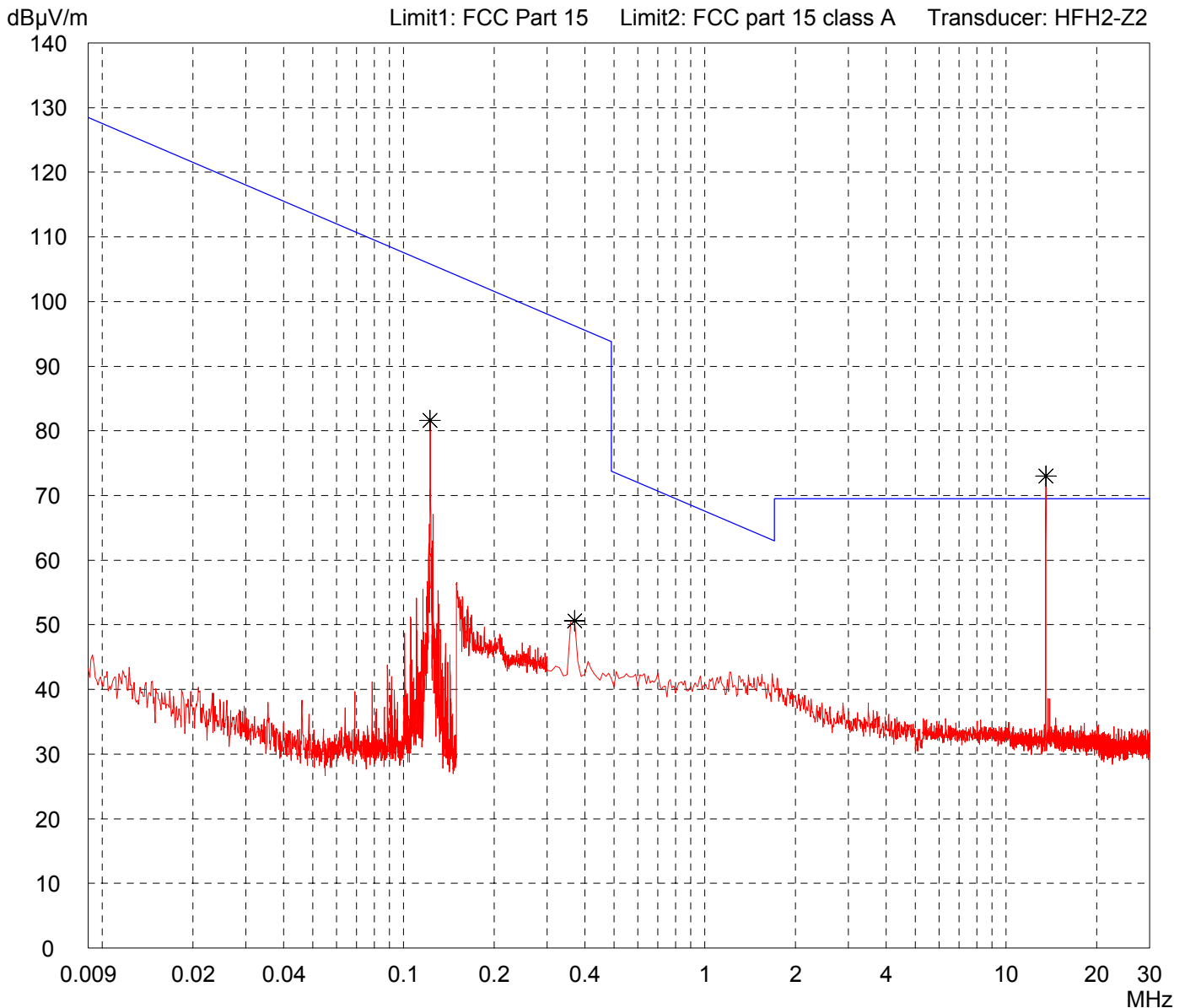
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 611 (V1.0)
- reading transponder card continuously (125 kHz)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

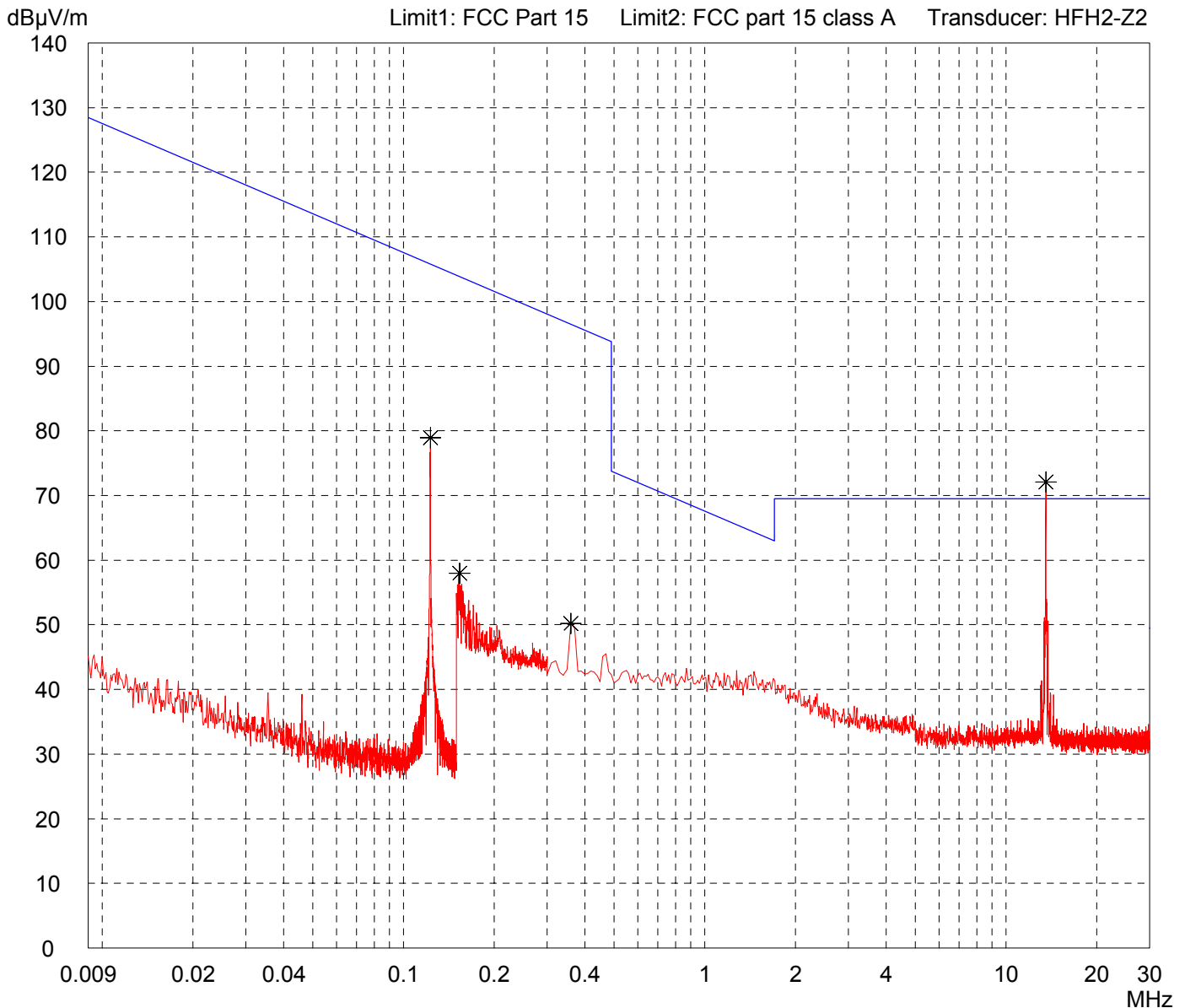
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 611 (V1.0)
- reading transponder card continuously (ISO 15693)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

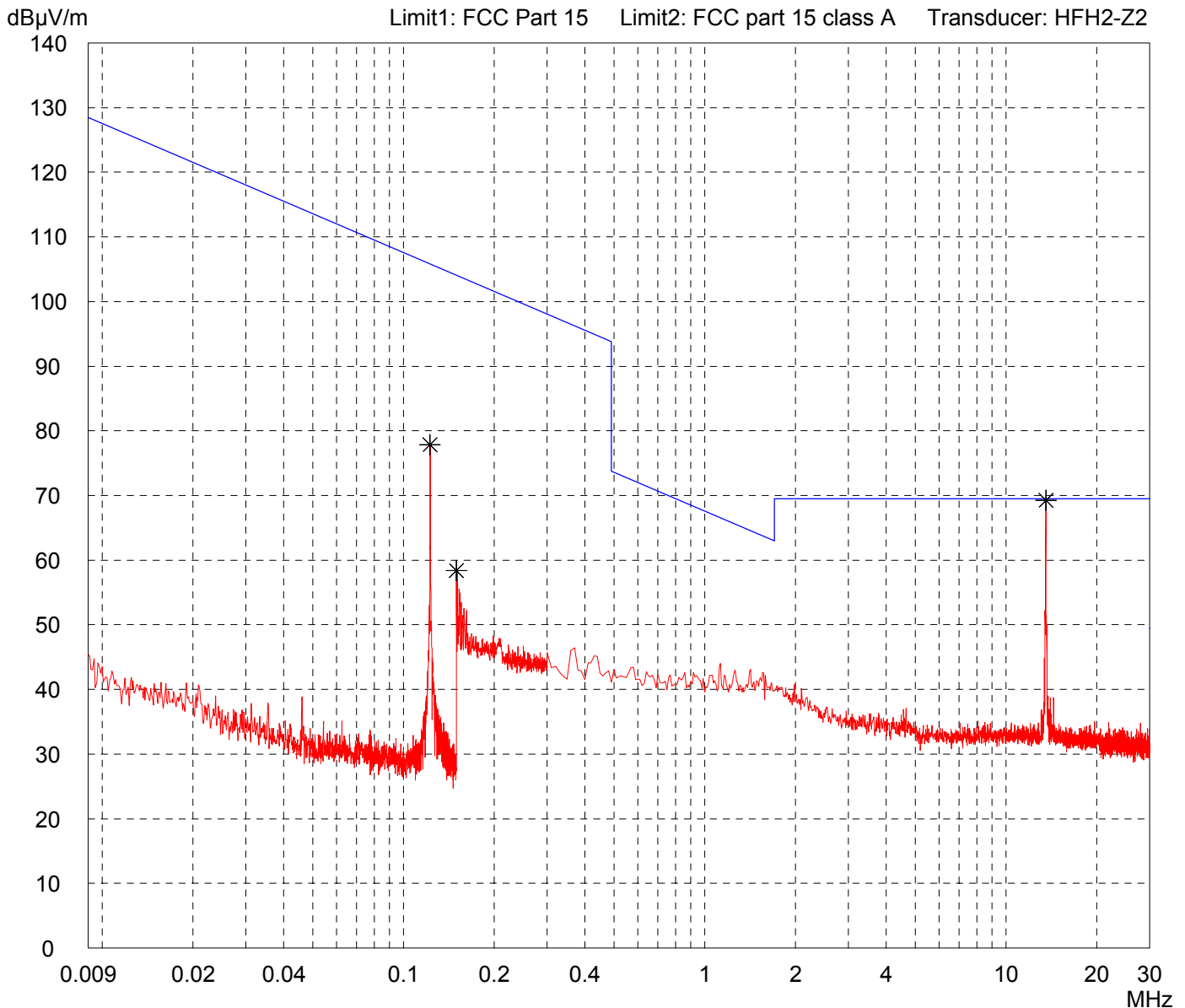
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 612 (V1.0)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

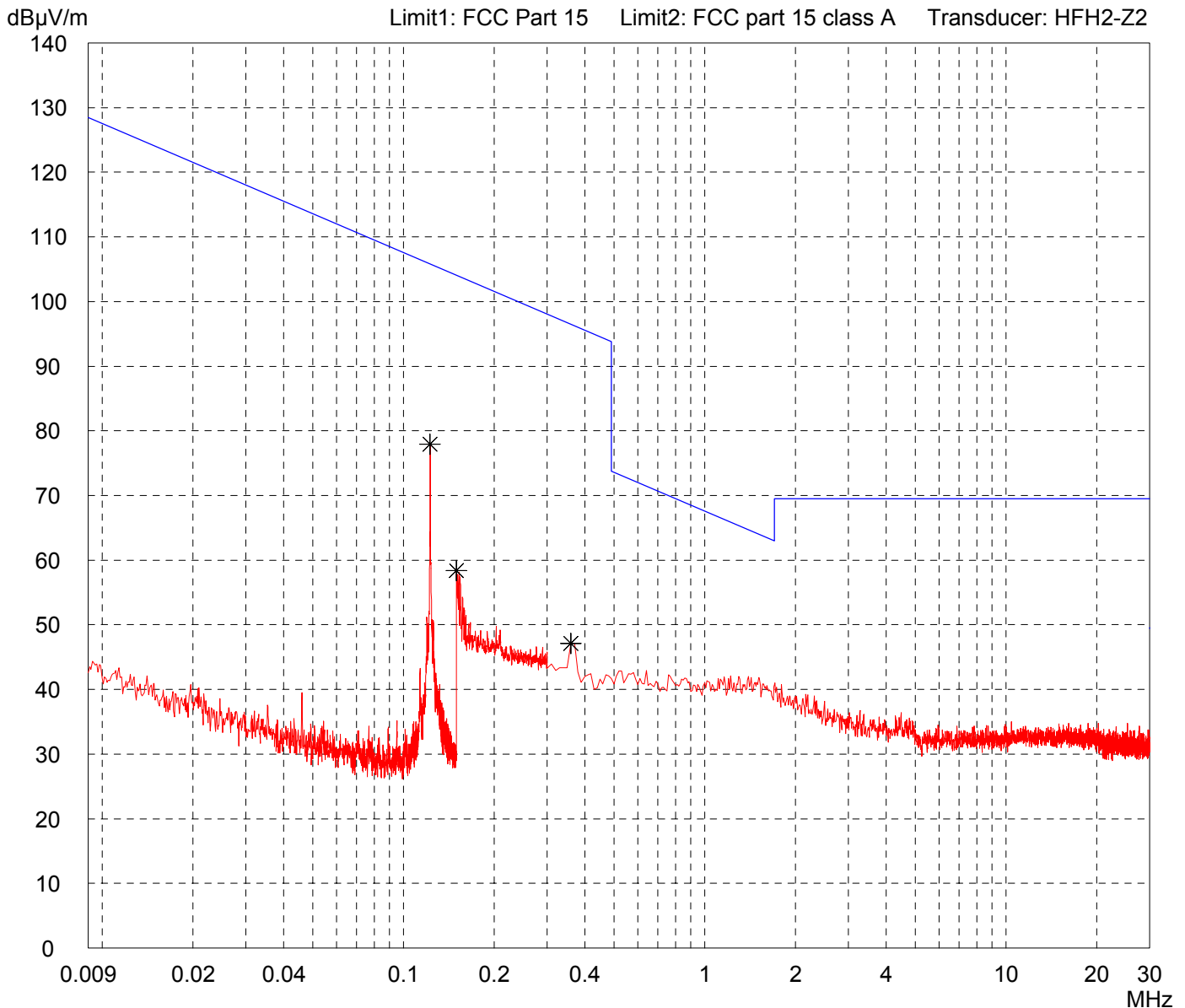
Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model: sd705	
Serial no.: V2.1	
Applicant: Skidata AG	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres	
Date of test: 06/13/2006	Operator: M. Steindl
Test performed: by hand	File name: default.emi

Comment: - DC 5 V power supply - with antenna sd 612 (V1.0) - reading transponder card continuously (125 kHz)
--

Detector: Peak

List of values: Selected by hand



Result: Prescan

Project file: 55426-60354

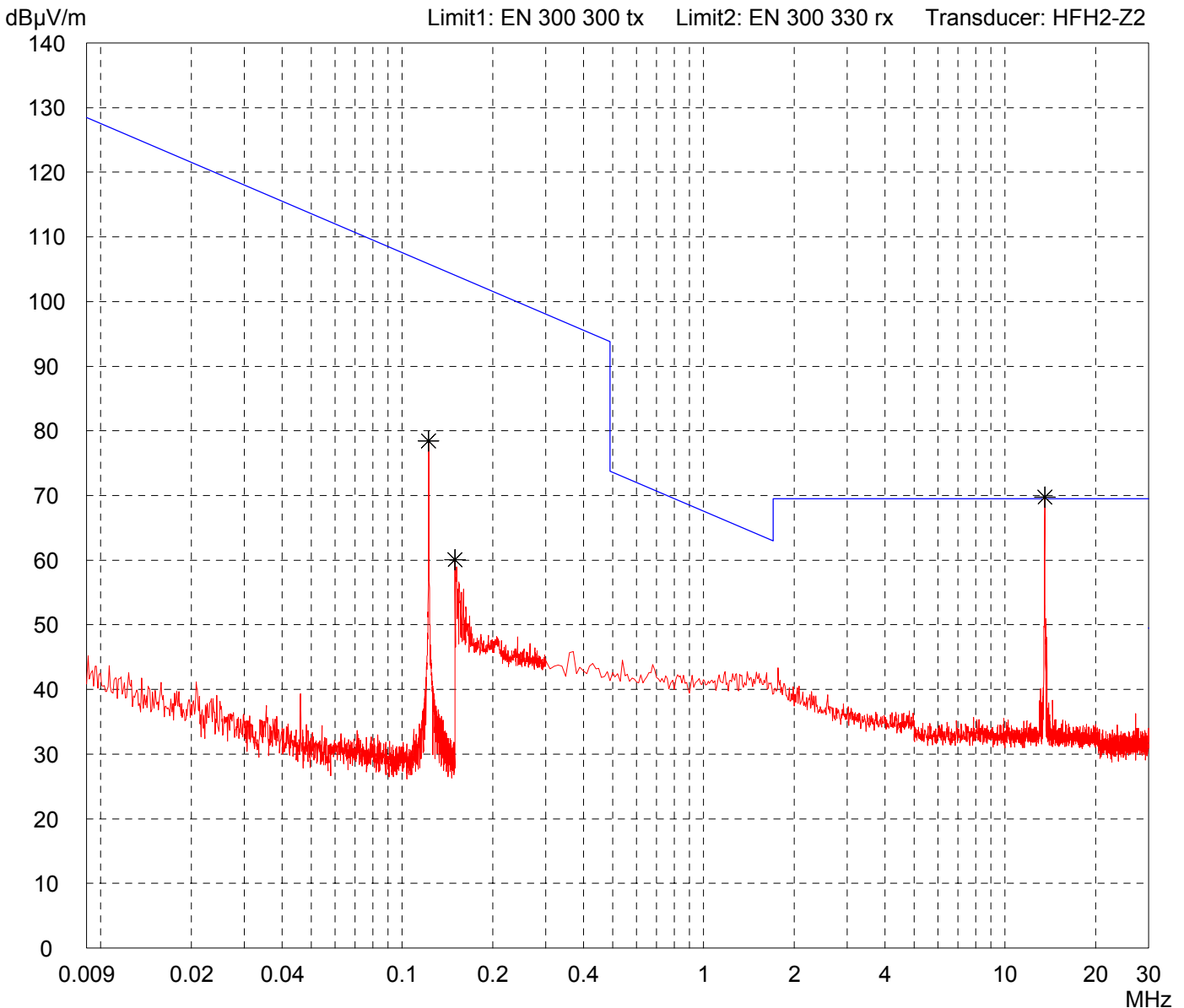
Radiated Emission Test 9 kHz - 30 MHz
acc. to EN 300 330:2001-06

Model: sd705	
Serial no.: V2.1	
Applicant: Skidata AG	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres	
Date of test: 06/13/2006	Operator: M. Steindl
Test performed: by hand	File name: default.emi

Comment: - DC 5 V power supply - with antenna sd 612 (V1.0) - reading transponder card continuously (ISO 15693)
--

Detector: Peak

List of values: Selected by hand



Result: Prescan

Project file: 55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

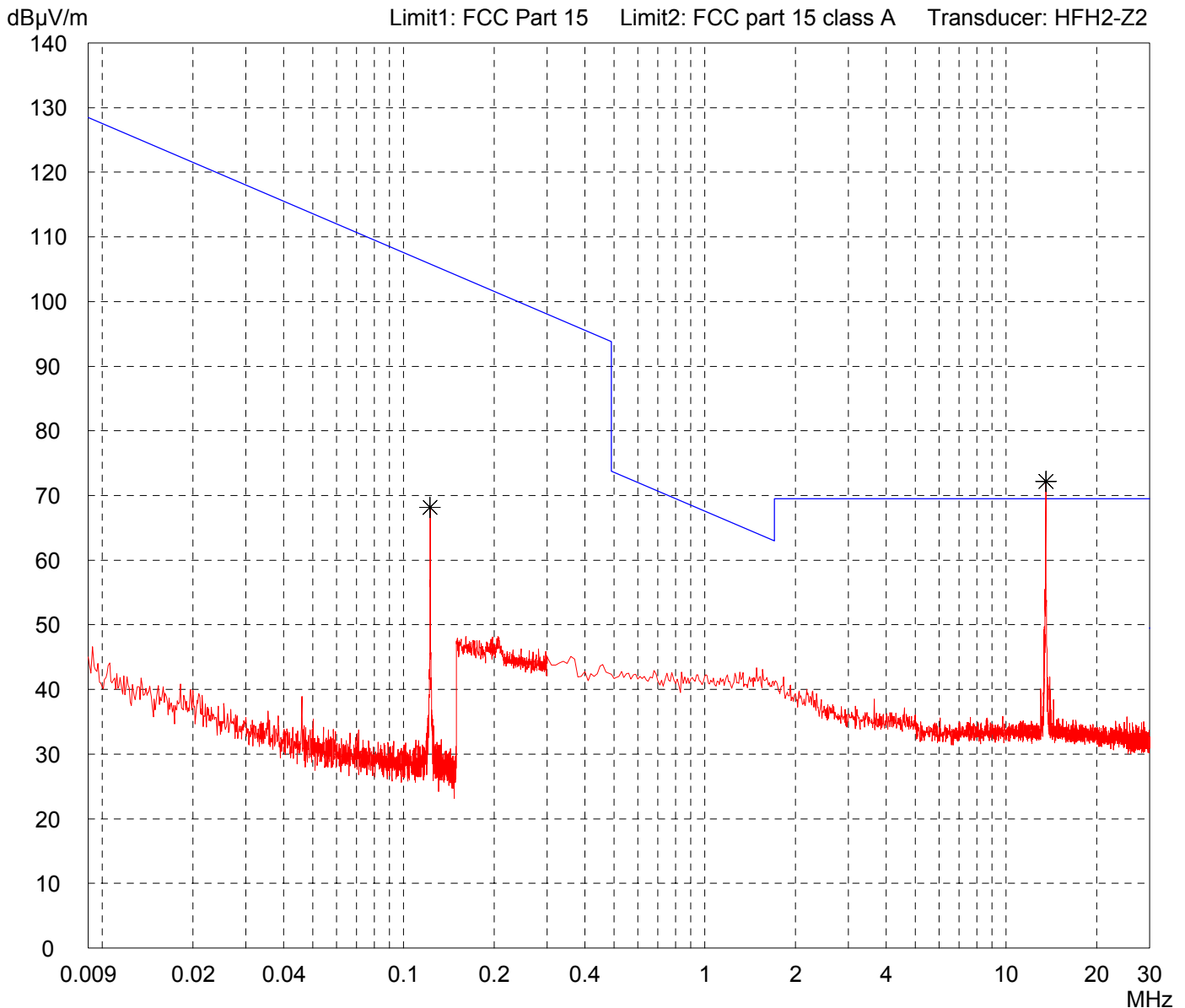
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 647 (V2.2)
- polling without transponder card

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

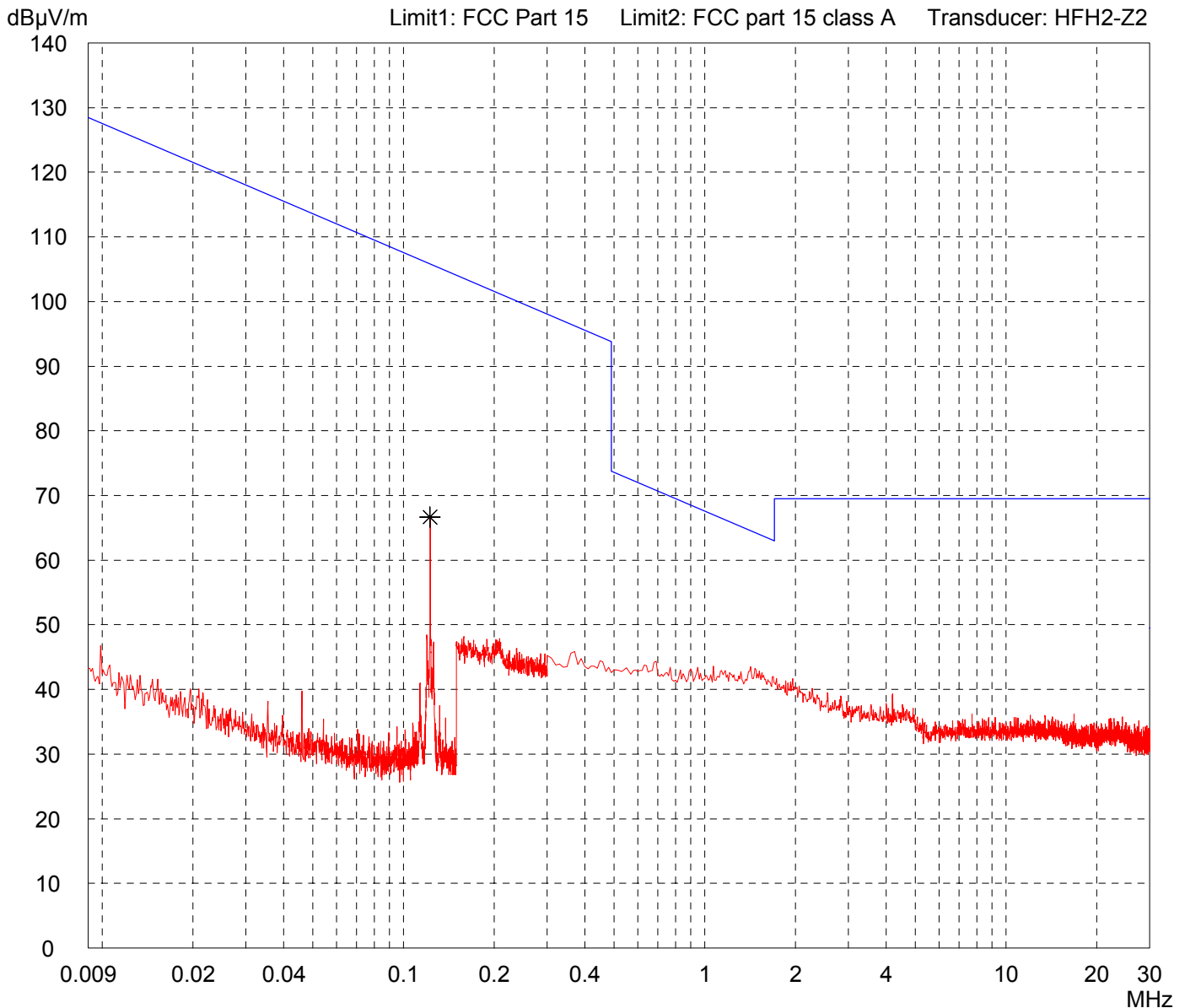
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 647 (V2.2)
- reading transponder card continuously (125 kHz)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

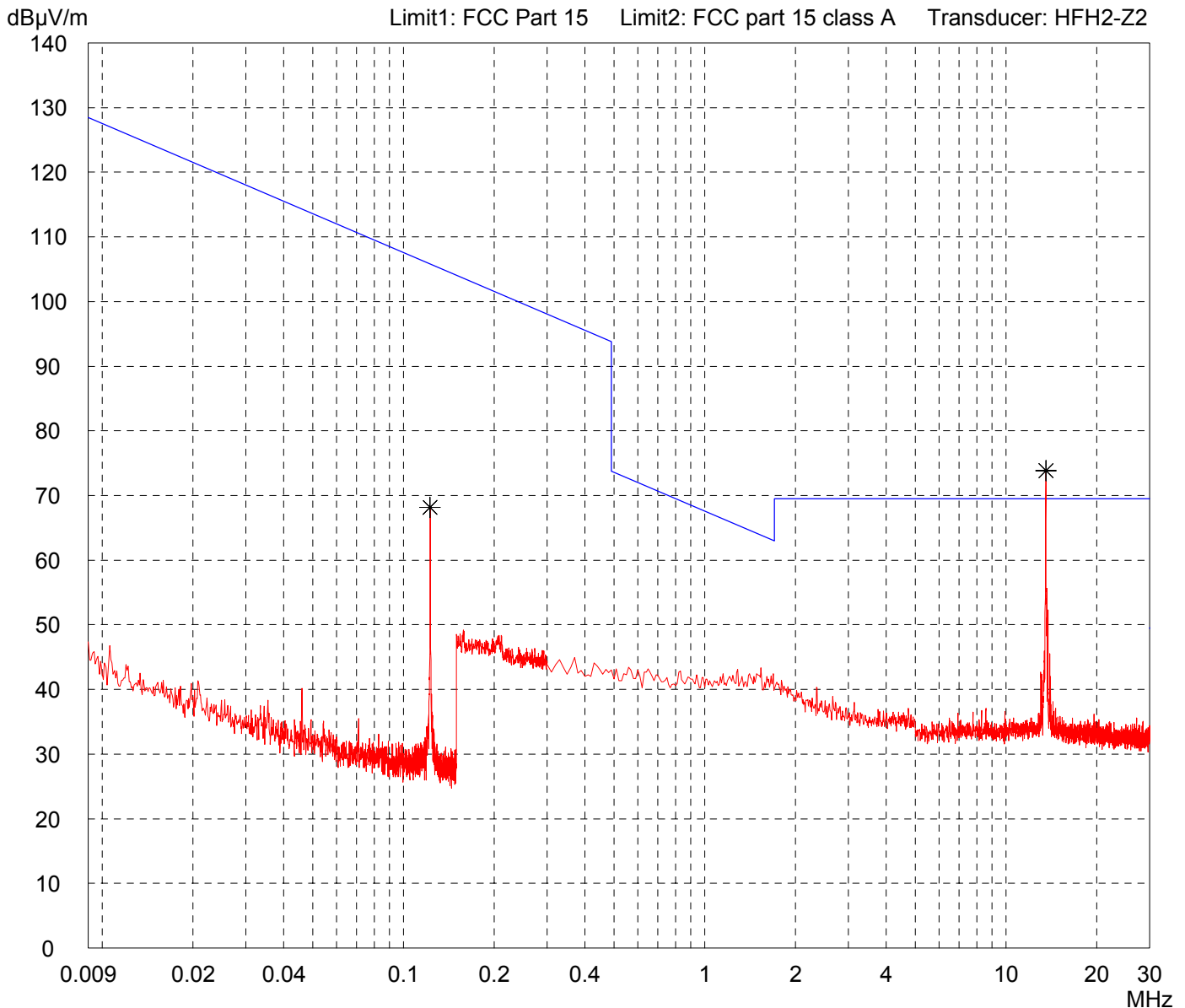
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 647 (V2.2)
- reading transponder card continuously (ISO 15693)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

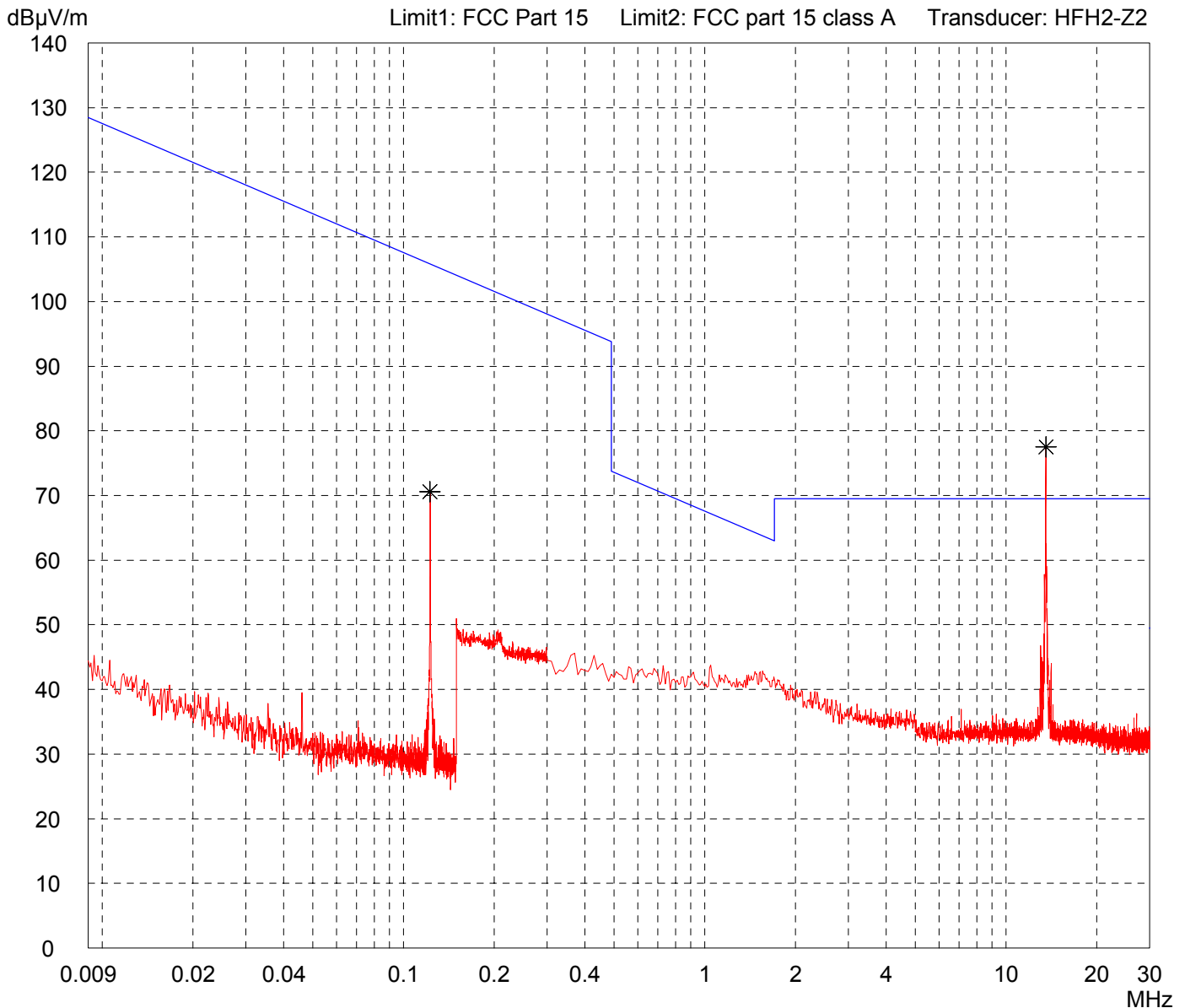
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 648 (V1.3)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

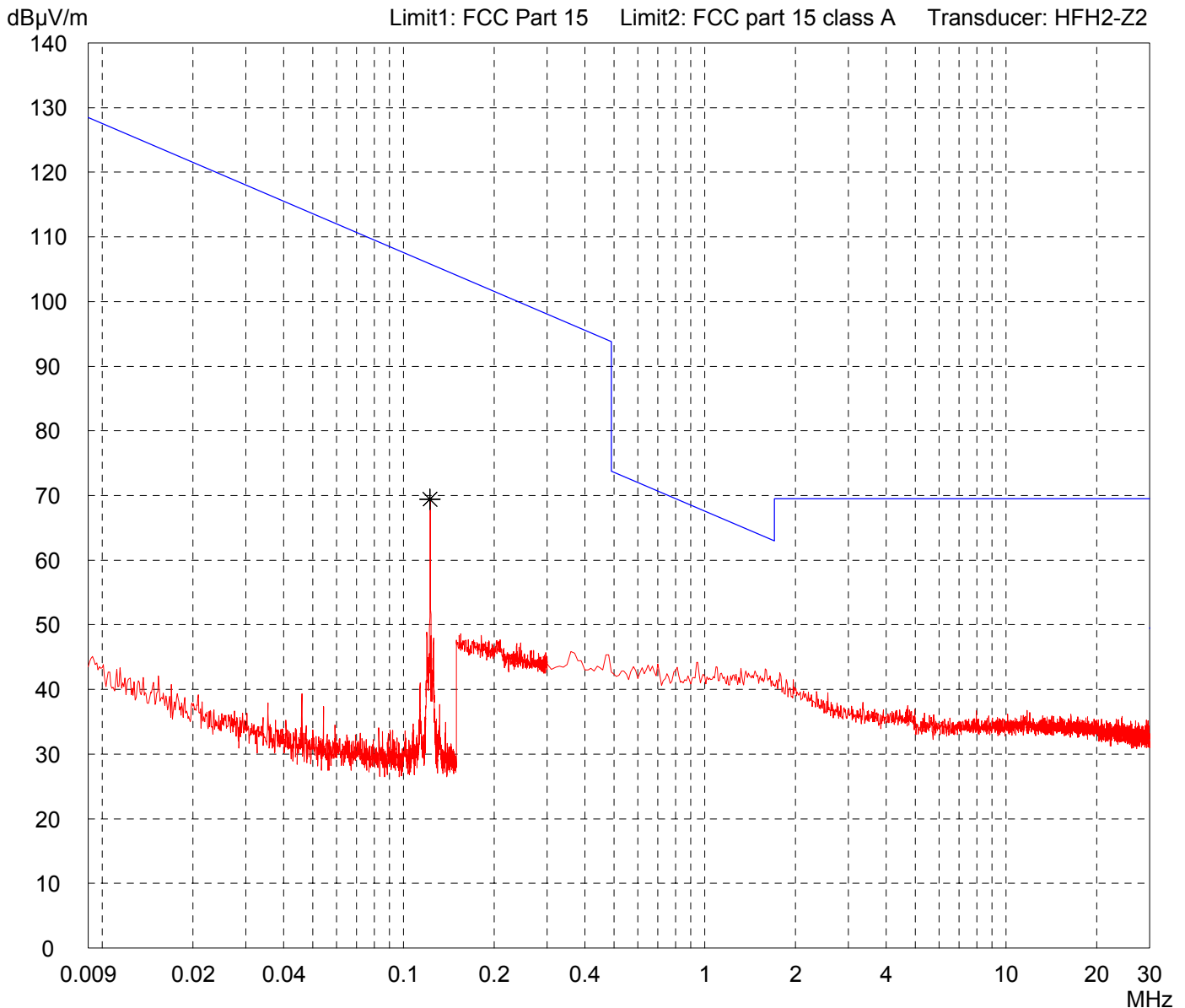
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 648 (V1.3)
- reading transponder card continuously (125 kHz)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

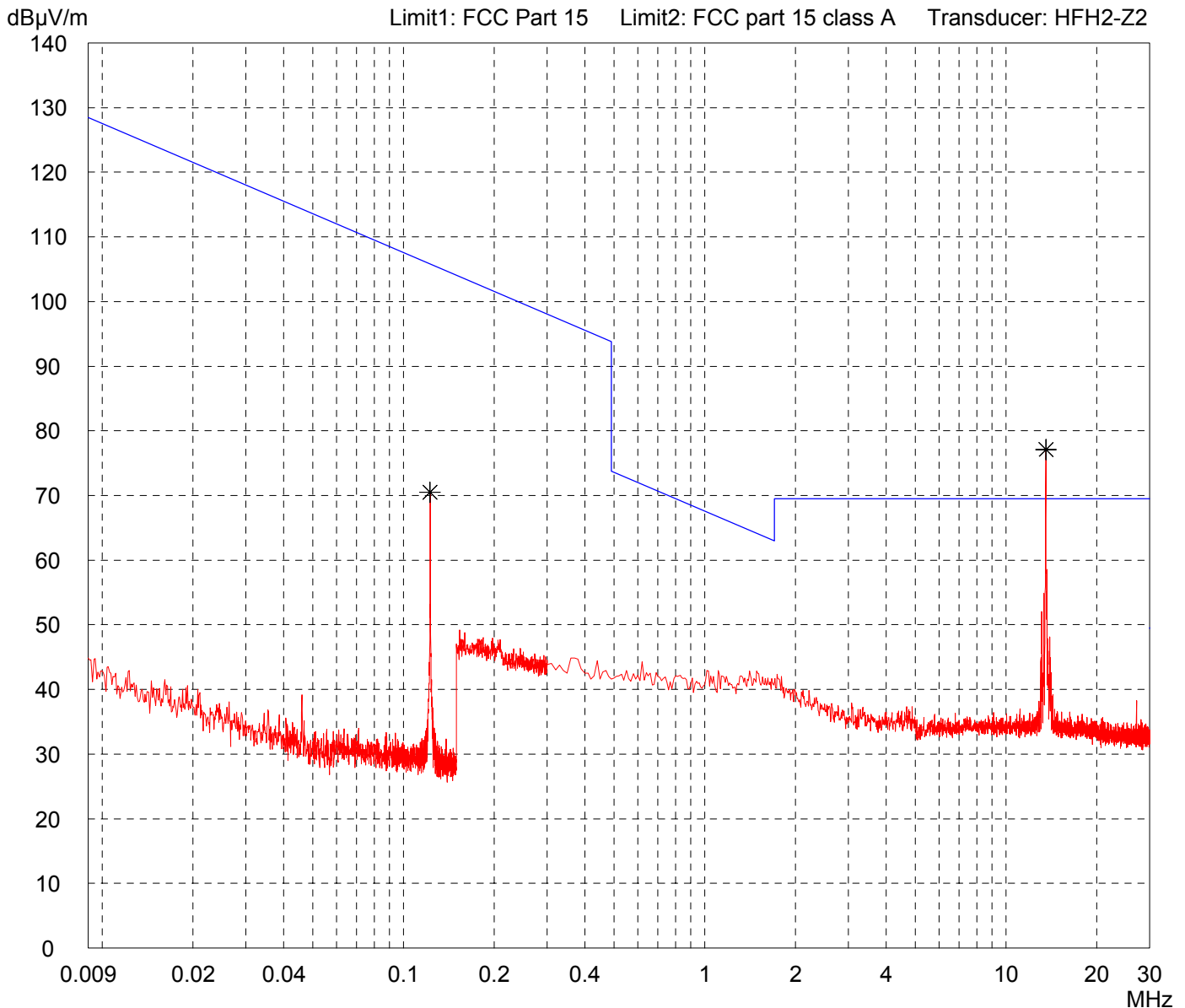
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 648 (V1.3)
- reading transponder card continuously (ISO 15693)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

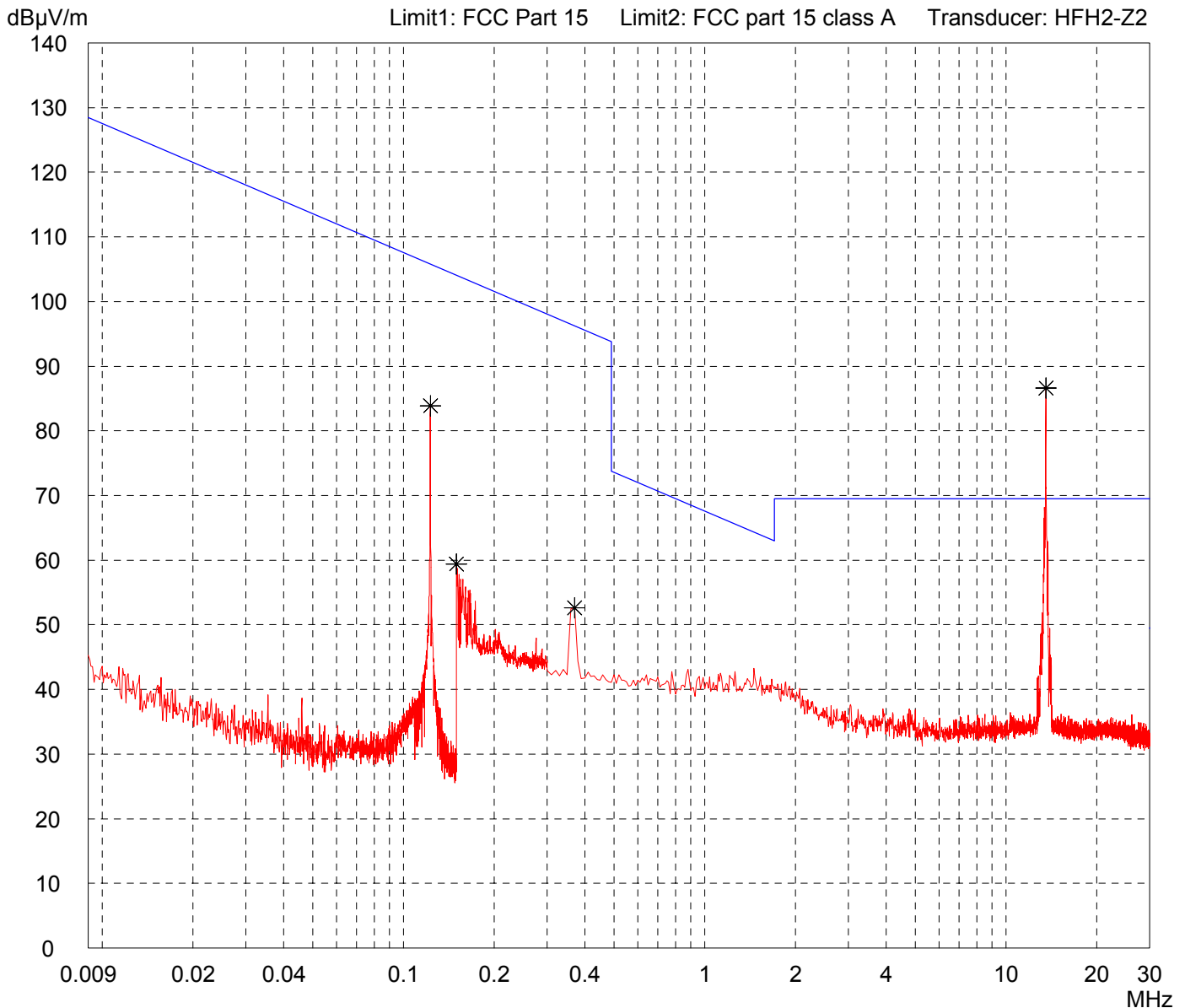
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 682 (V1.0)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

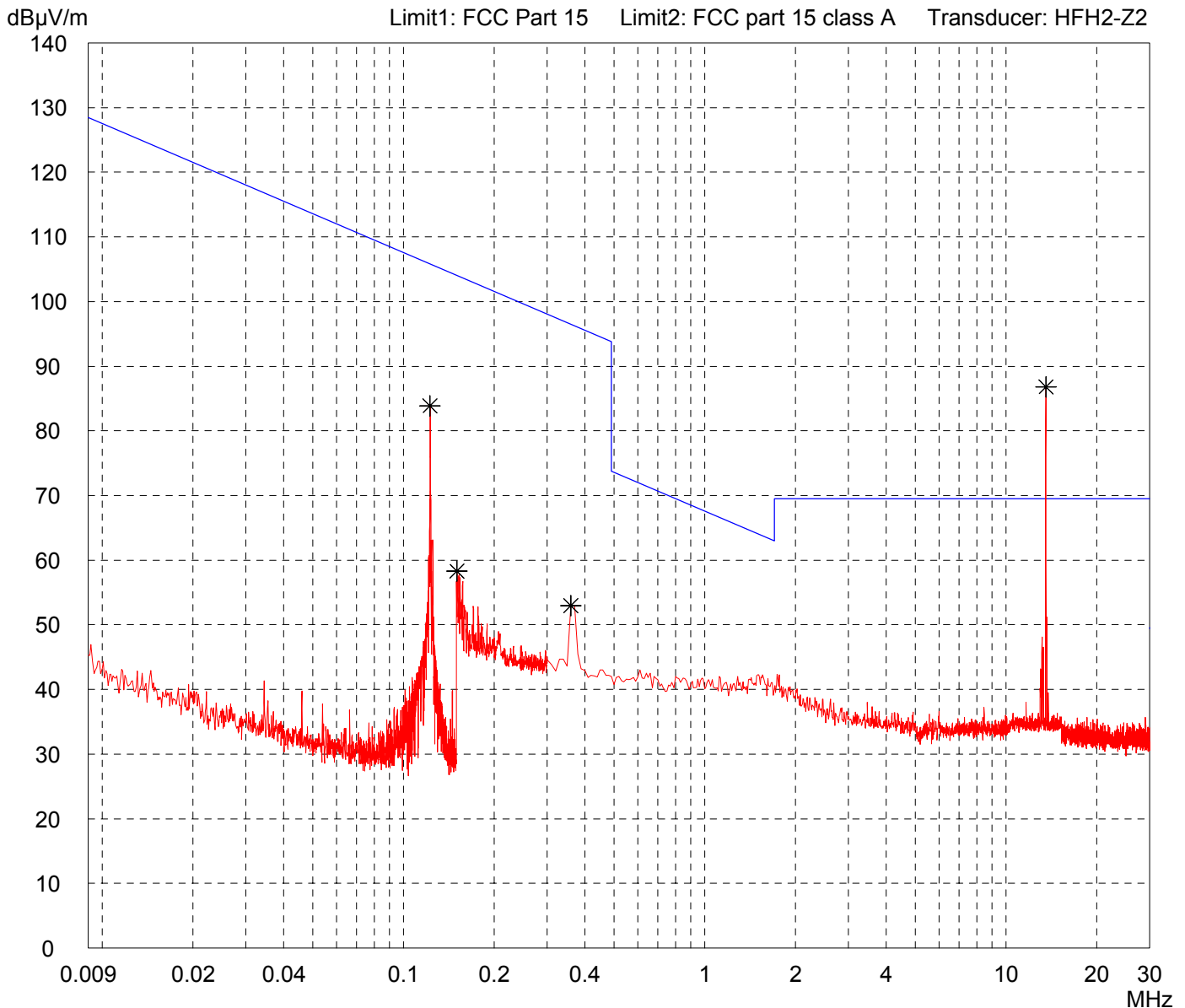
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 682 (V1.0)
- reading transponder card continuously (125 kHz)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

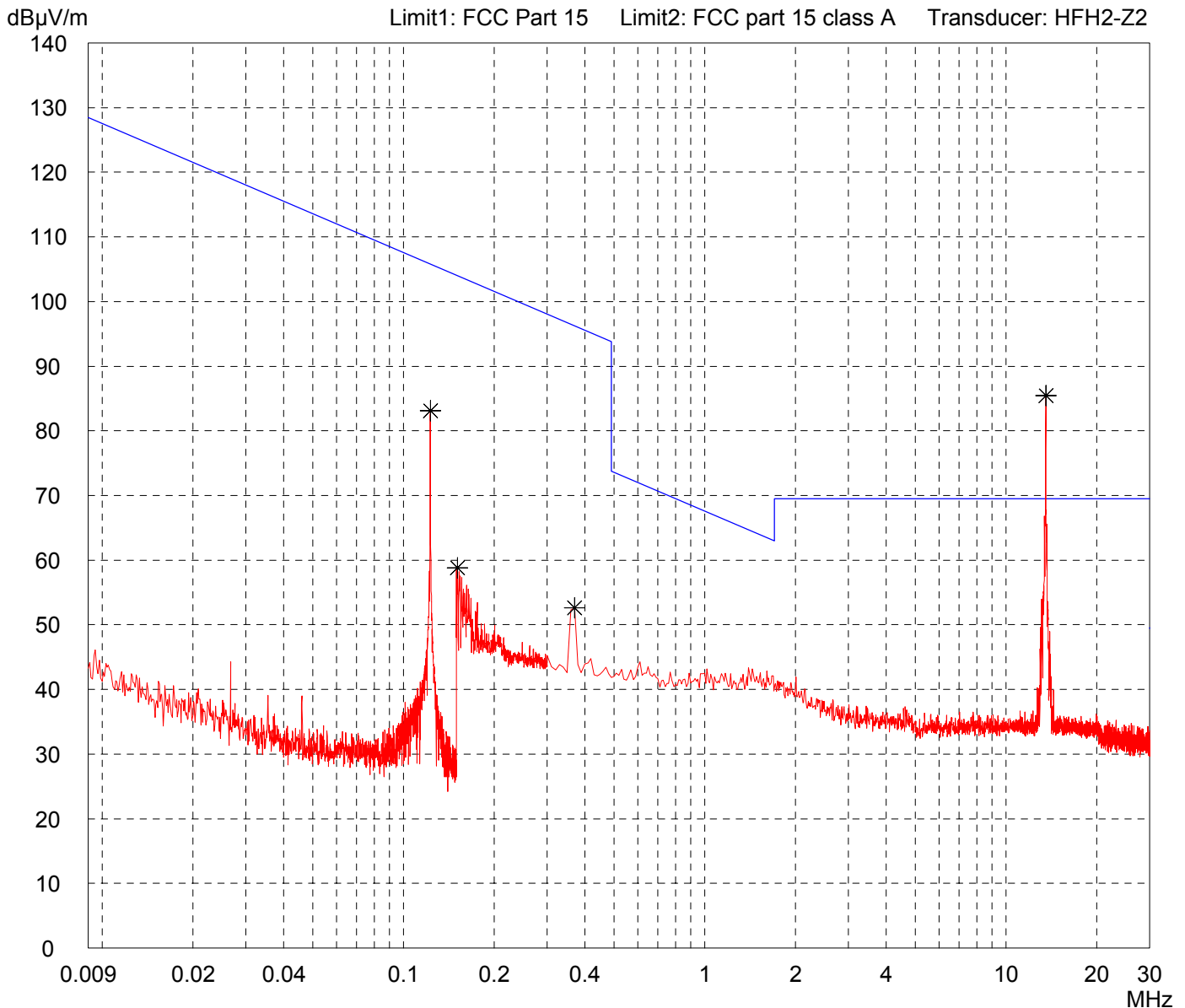
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 682 (V1.0)
- reading transponder card continuously (ISO 15693)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

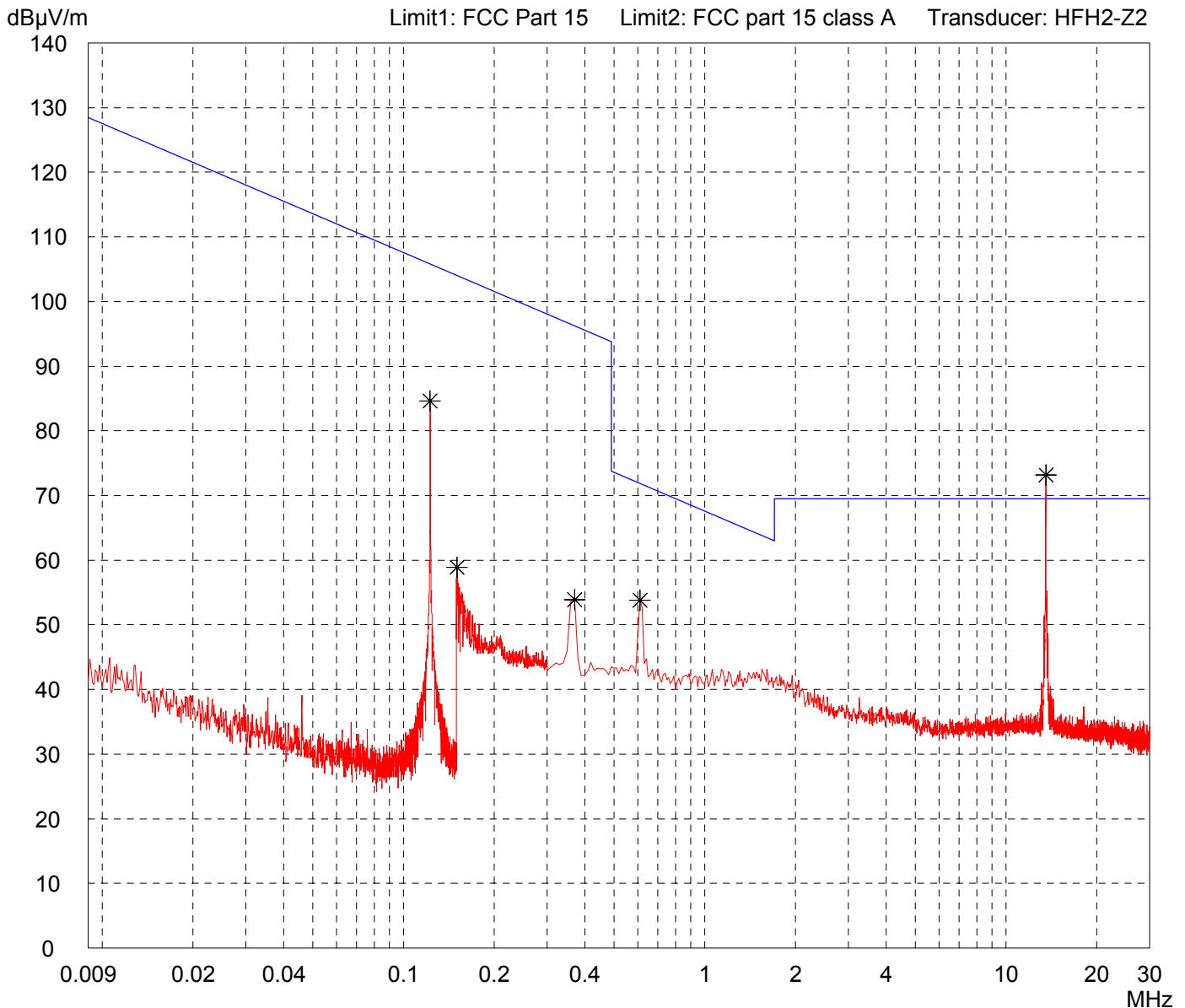
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd697 (V2.0)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

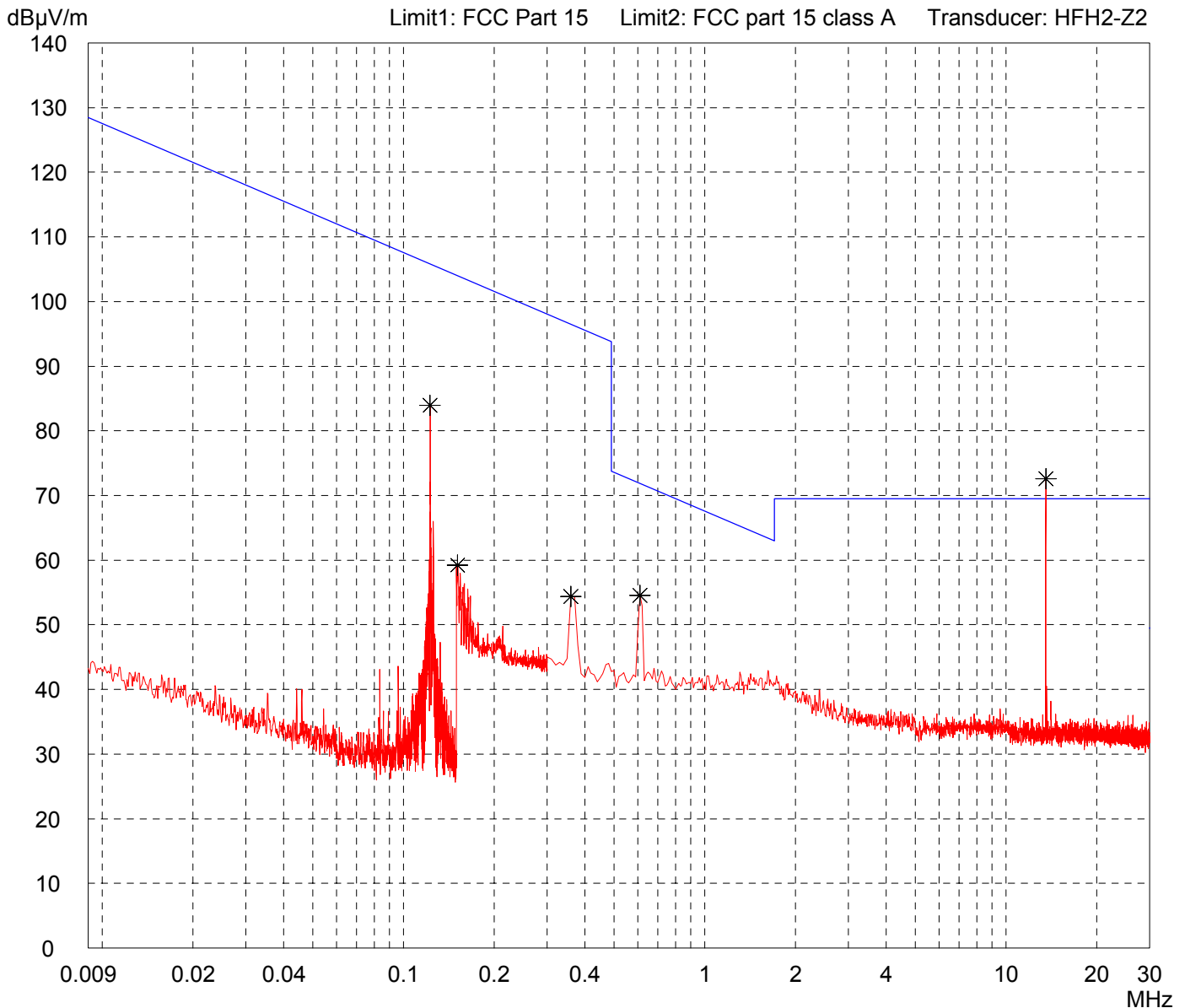
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd697 (V2.0)
- reading transponder card continuously (125 kHz)

Detector:
Peak

List of values:
Selected by hand

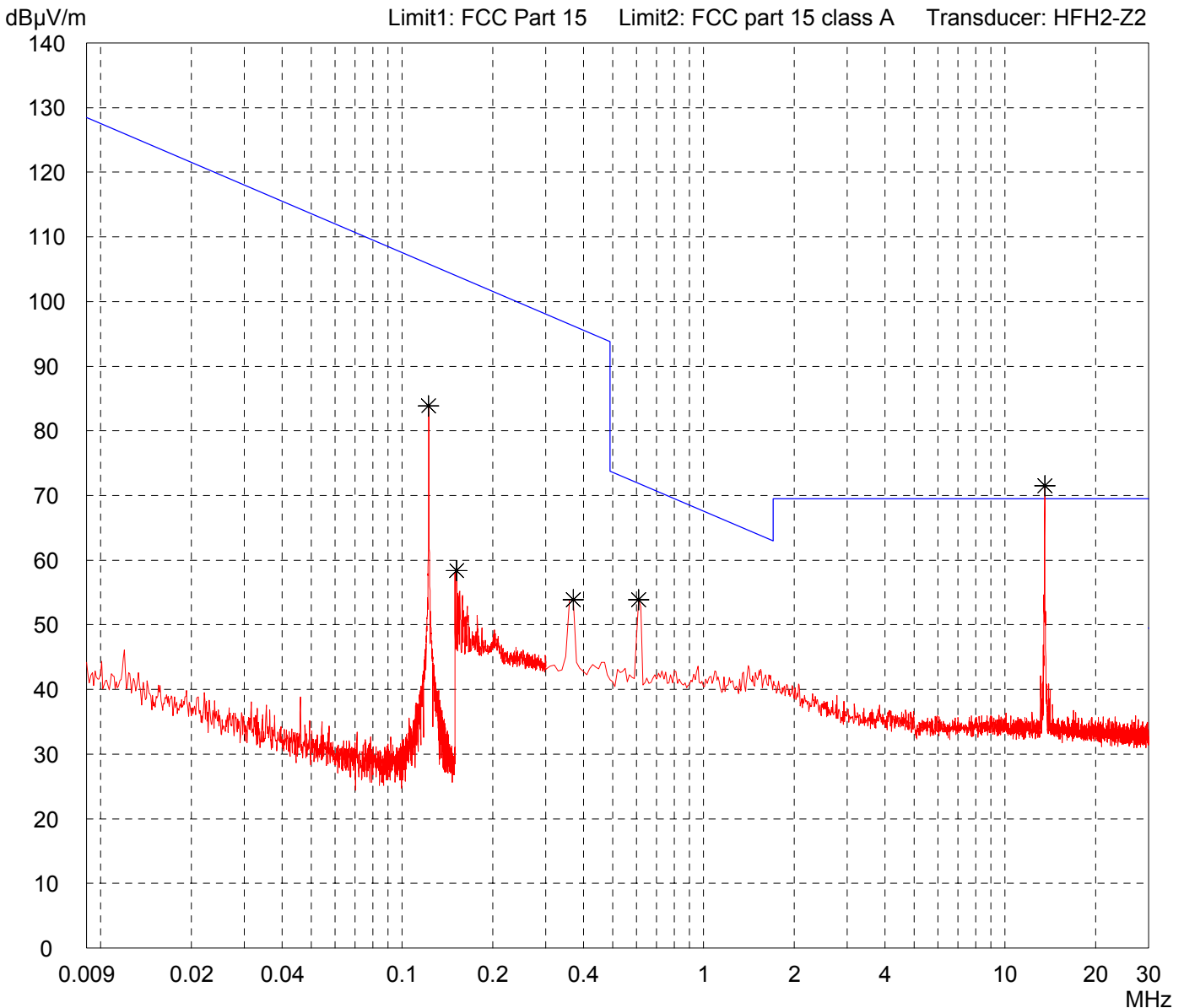


Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

<p>Model: sd705</p> <p>Serial no.: V2.1</p> <p>Applicant: Skidata AG</p> <p>Test site: Fully anechoic room, cabin no. 2</p> <p>Tested on: Test distance 3 metres</p>	<p>Comment:</p> <ul style="list-style-type: none"> - DC 5 V power supply - with antenna sd697 (V2.0) - reading transponder card continuously (ISO 15693)
<p>Date of test: 06/13/2006</p> <p>Operator: M. Steindl</p>	<p>Test performed: by hand</p> <p>File name: default.emi</p>
<p>Detector: Peak</p>	<p>List of values: Selected by hand</p>



<p>Result: Prescan</p>	<p>Project file: 55426-60354</p>
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Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

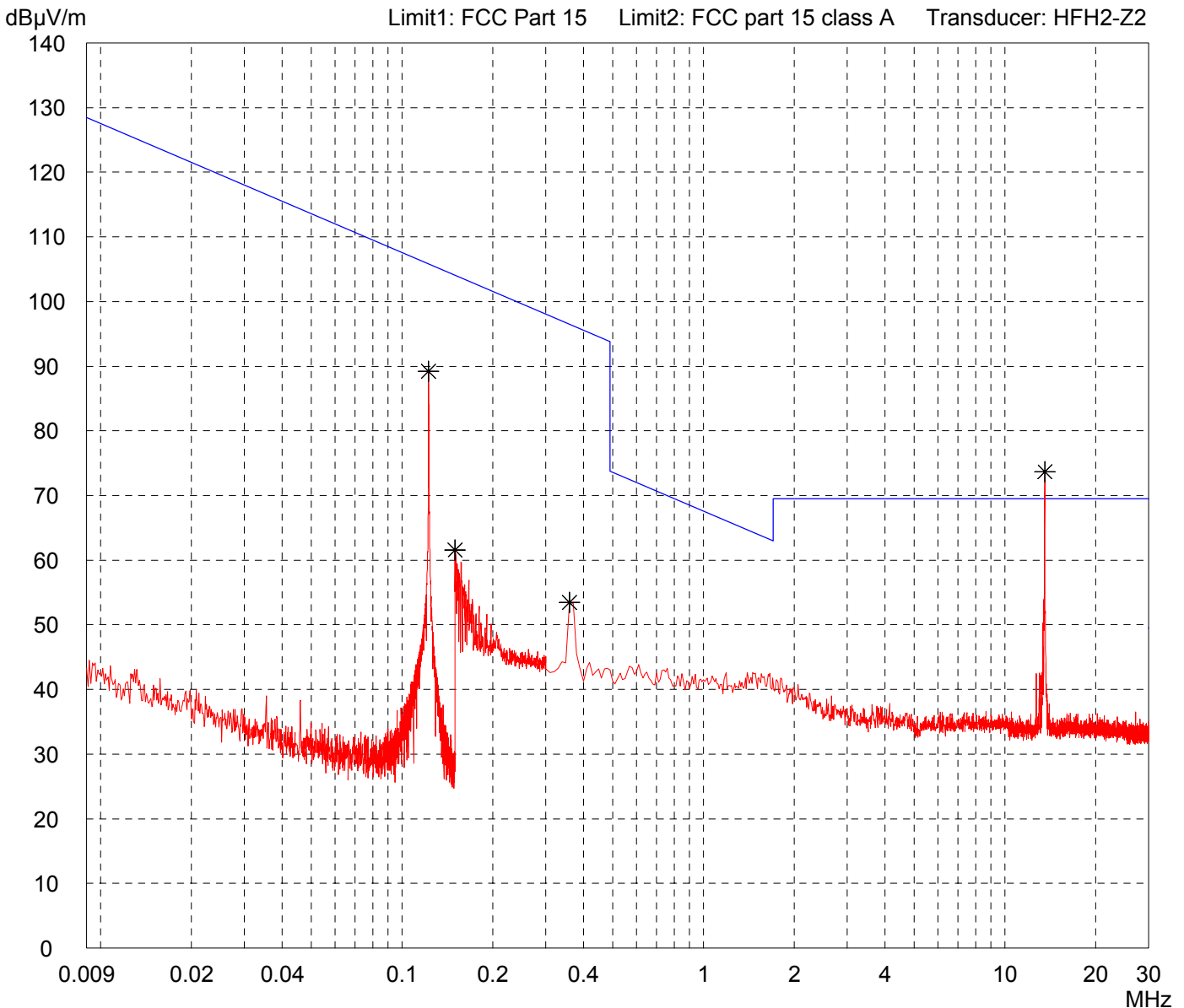
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd697 (V3.0)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

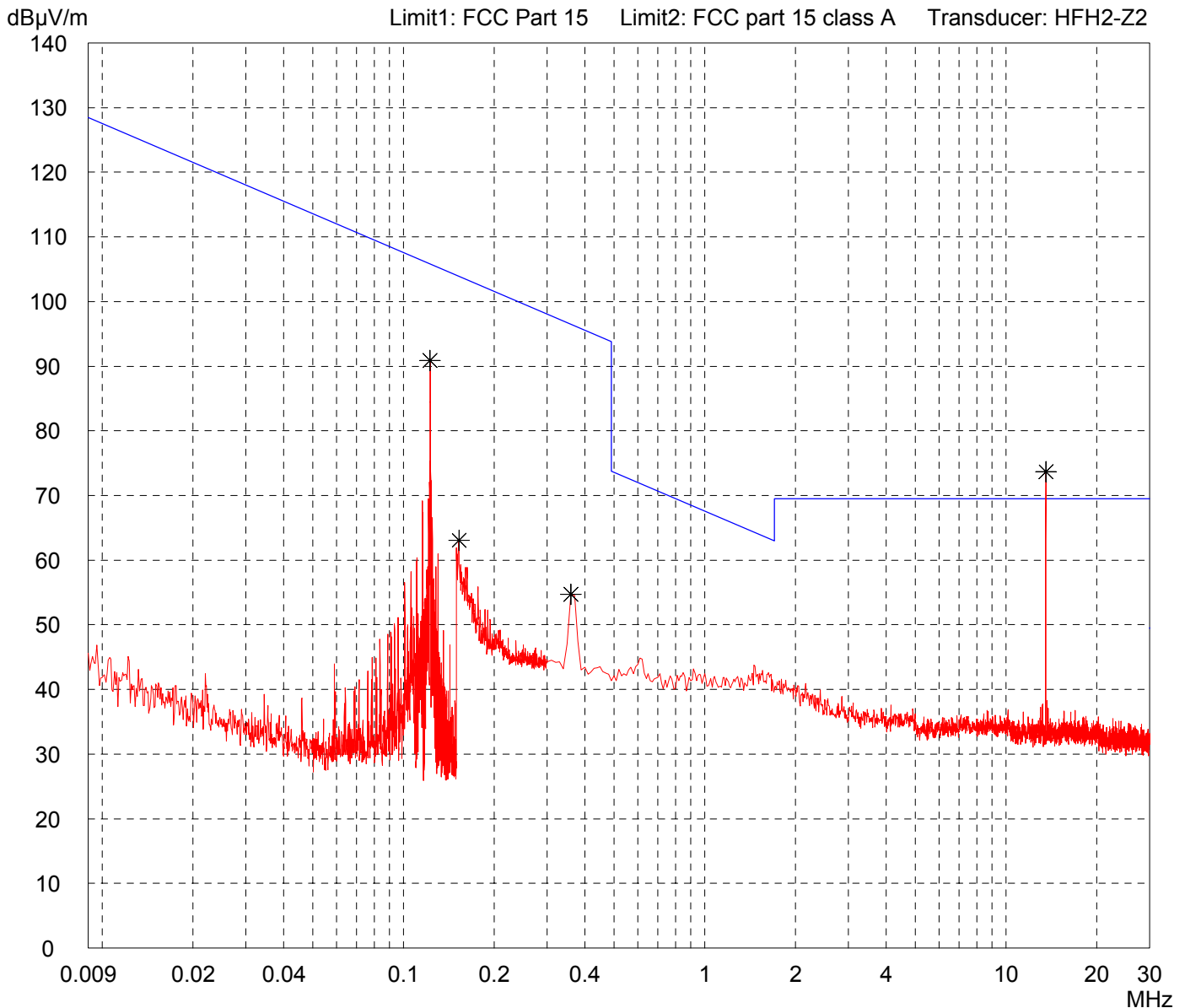
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd697 (V3.0)
- reading transponder card continuously (125 kHz)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

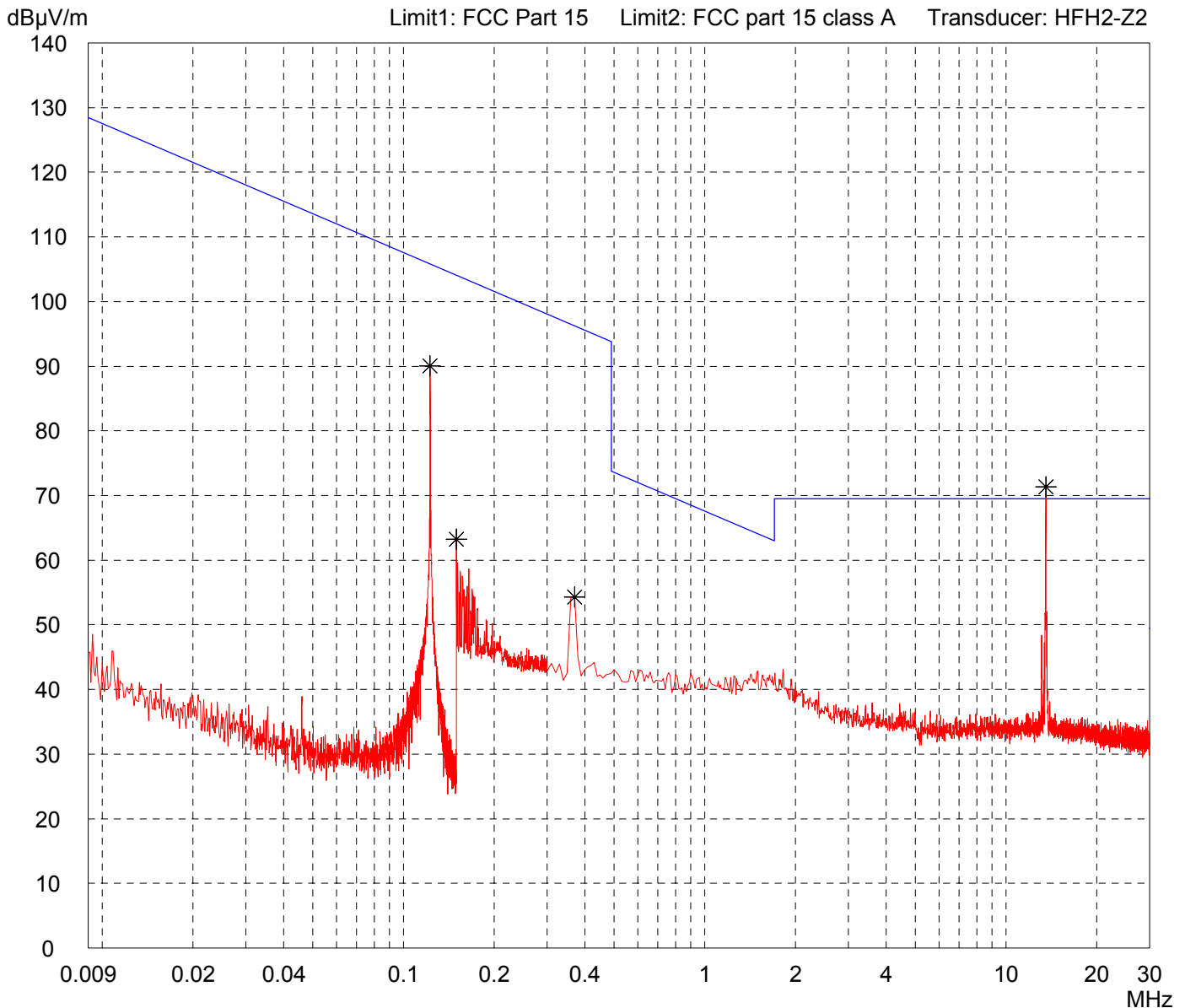
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd697 (V3.0)
- reading transponder card continuously (ISO 15693)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

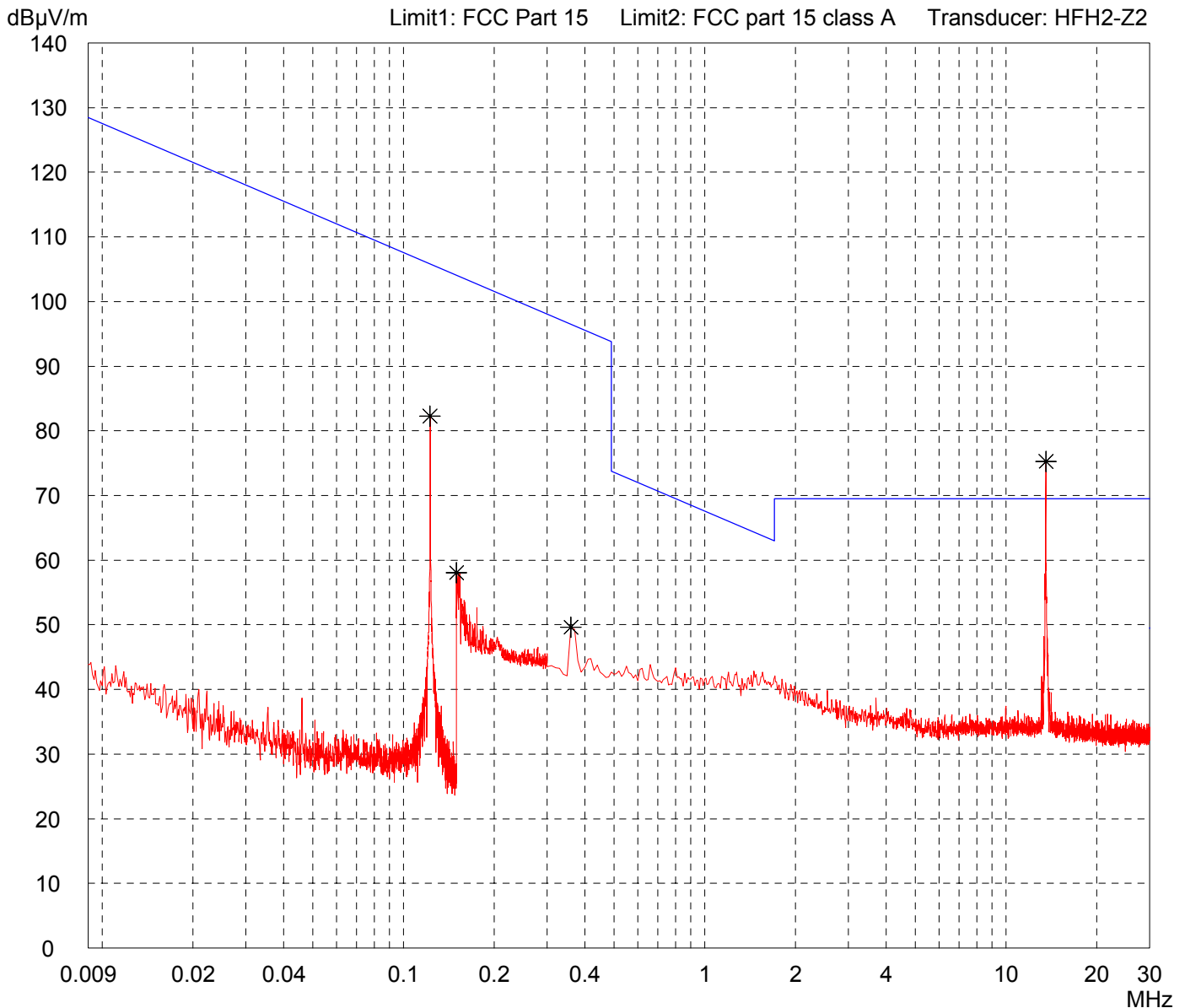
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 733 (V2.2)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

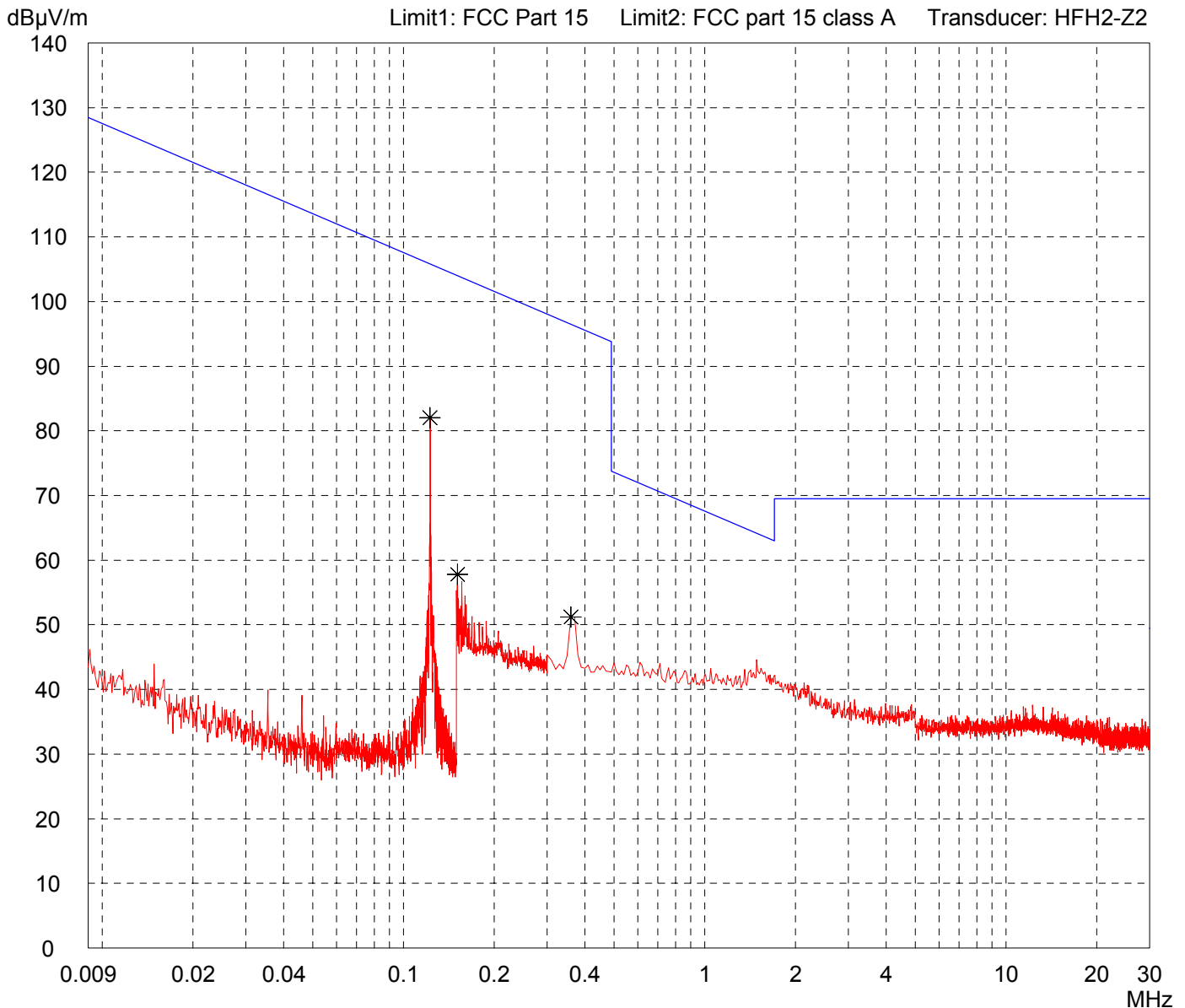
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 733 (V2.2)
- reading transponder card continuously (125 kHz)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

Radiated Emission Test 9 kHz - 30 MHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
by hand

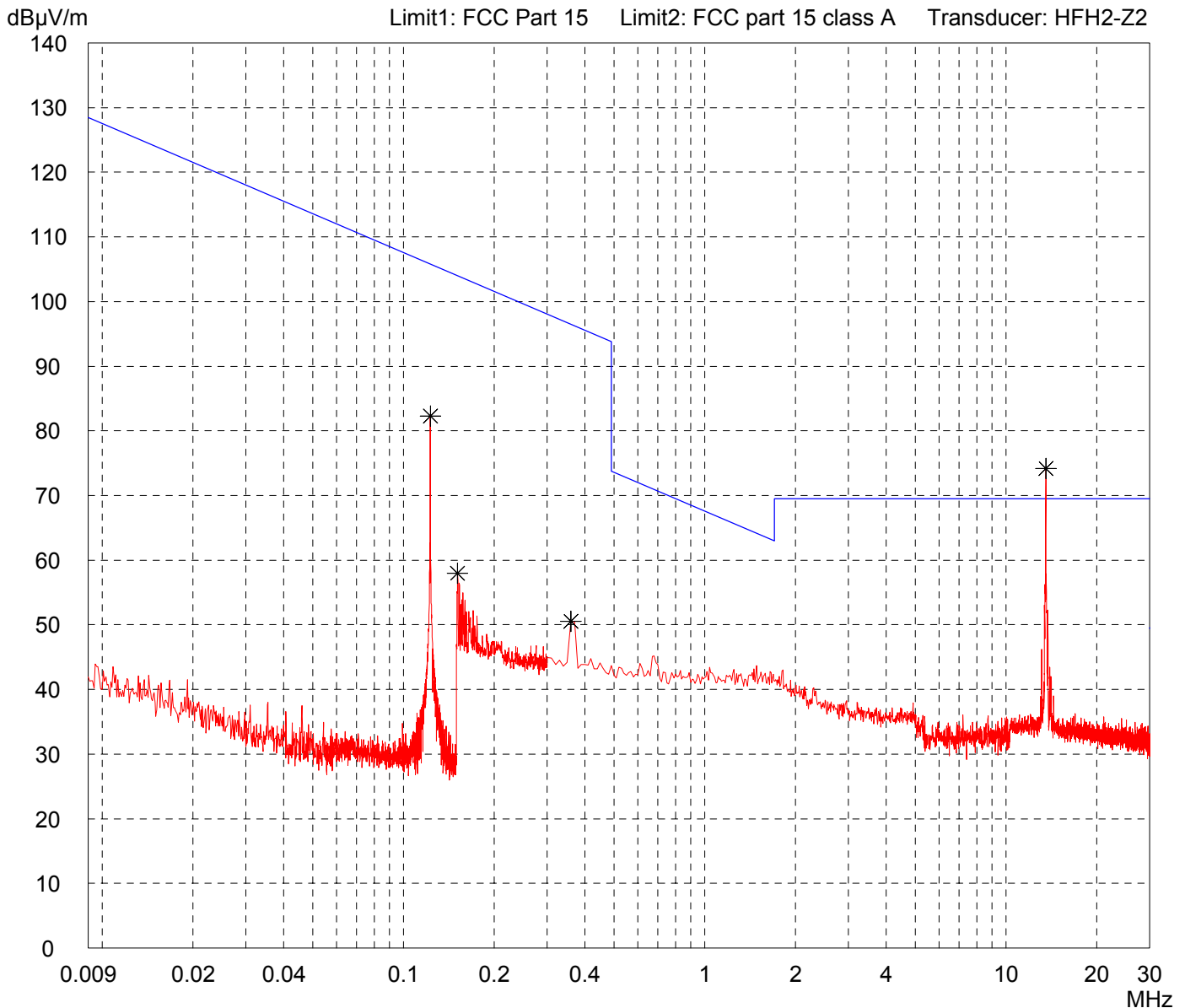
File name:
default.emi

Comment:

- DC 5 V power supply
- with antenna sd 733 (V2.2)
- reading transponder card continuously (ISO 15693)

Detector:
Peak

List of values:
Selected by hand



Result:
Prescan

Project file:
55426-60354

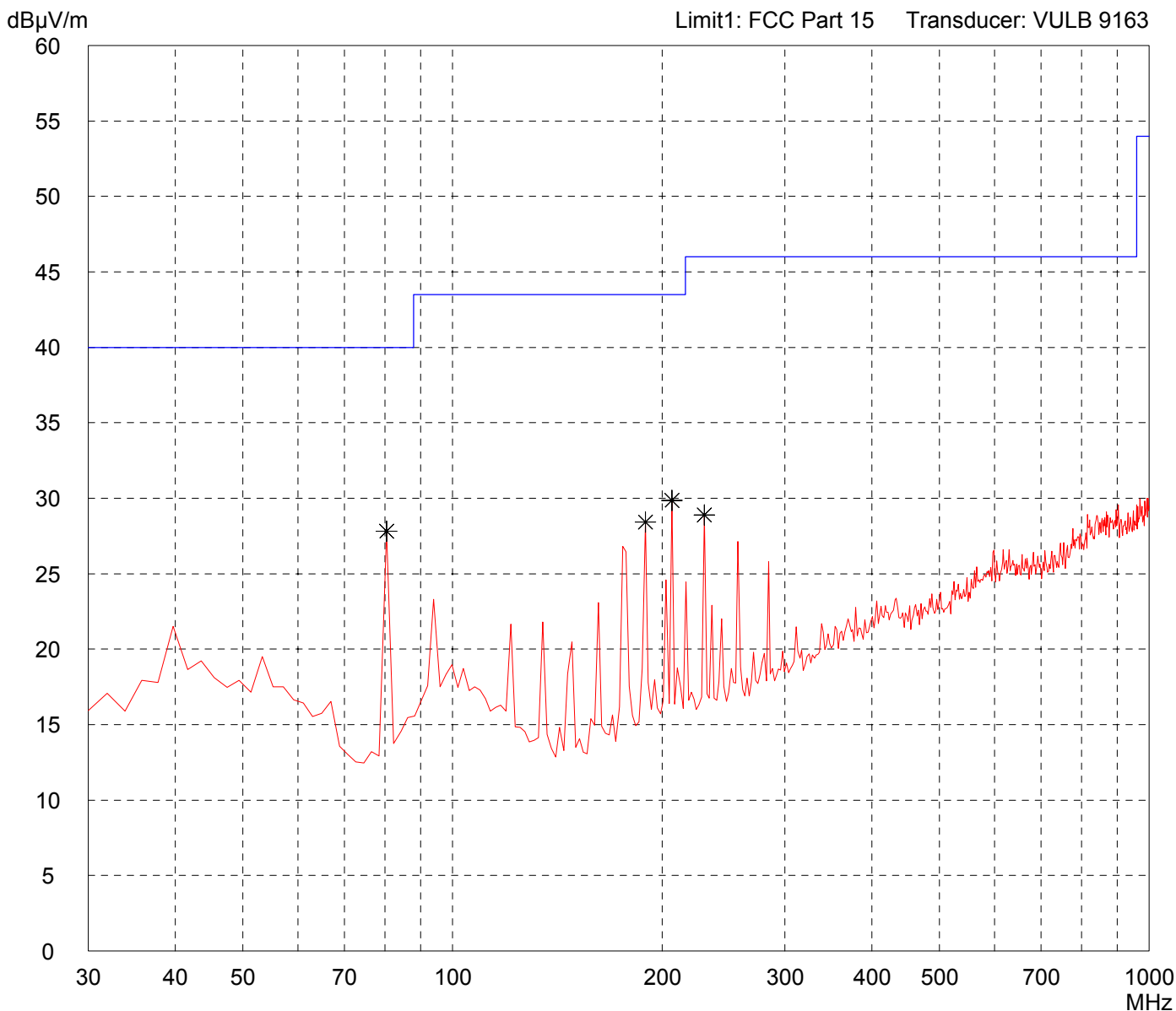
Radiated Emission Test 30 MHz - 1 GHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model: sd705	
Serial no.: V2.1	
Applicant: Skidata AG	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 06/13/2006	Operator: M. Steindl
Test performed: automatically	File name: default.emi

Comment: - DC 5 V power supply - with antenna sd611 (V1.0) - polling continuously without tag
--

Detector: Peak

List of values: Selected by hand



Result: Prescan

Project file: 55426-60354

Radiated Emission Test 30 MHz - 1 GHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model:
sd705

Serial no.:
V2.1

Applicant:
Skidata AG

Test site:
Fully anechoic room, cabin no. 2

Tested on:
Test distance 3 metres
Vertical Polarization

Date of test:
06/13/2006

Operator:
M. Steindl

Test performed:
automatically

File name:
default.emi

Comment:

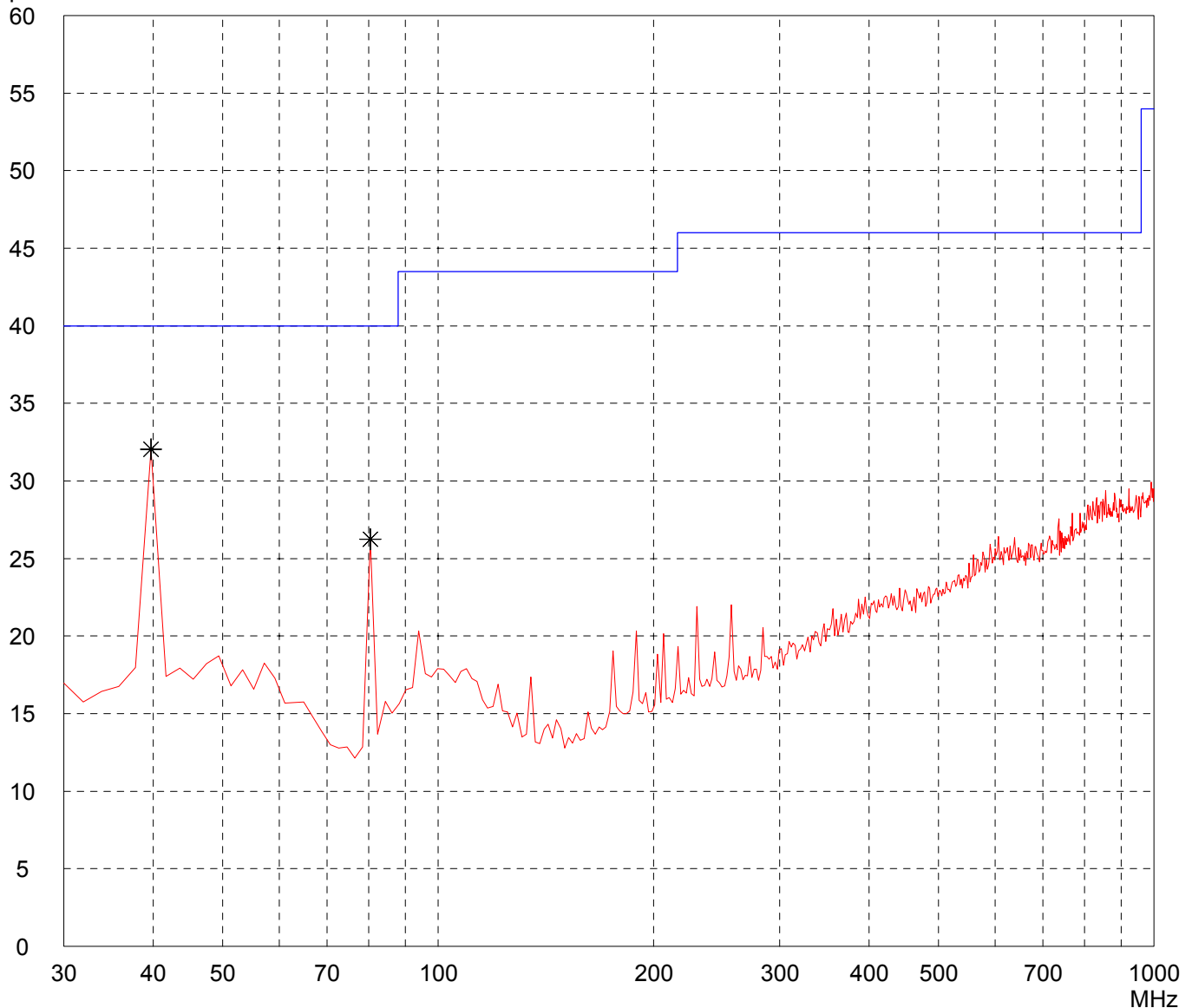
- DC 5 V power supply
- with antenna sd611 (V1.0)
- polling continuously without tag

Detector:
Peak

List of values:
Selected by hand

dB μ V/m

Limit1: FCC Part 15 Transducer: VULB 9163



Result:
Prescan

Project file:
55426-60354

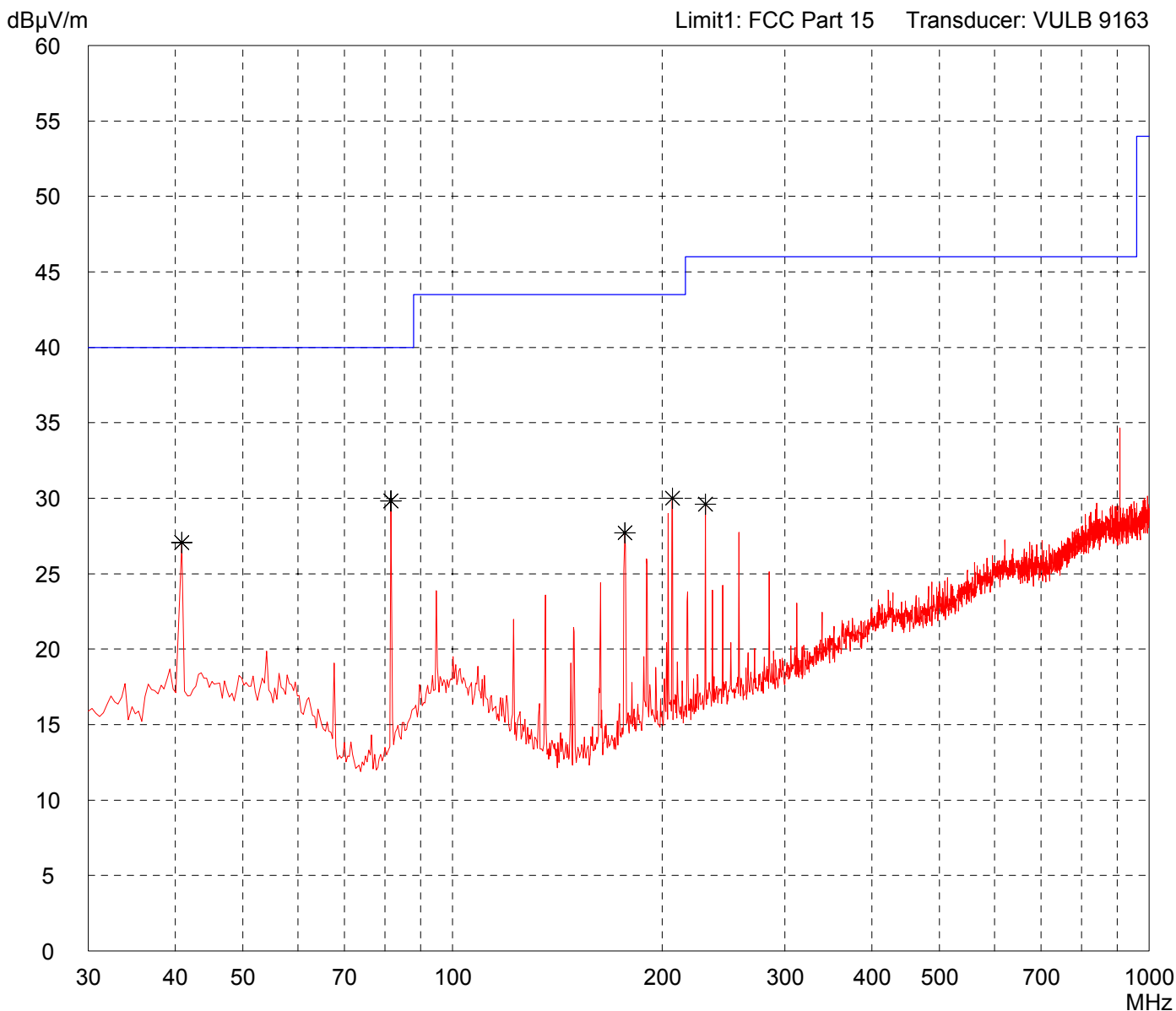
Radiated Emission Test 30 MHz - 1 GHz acc. to FCC Part 15 (Fully Anechoic Chamber)

Model: sd705	
Serial no.: V2.1	
Applicant: Skidata AG	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 06/13/2006	Operator: M. Steindl
Test performed: automatically	File name: default.emi

Comment:
- DC 5 V power supply
- with antenna sd611 (V1.0)
- reading transponder card continuously
(ISO 15693)

Detector: Peak

List of values:
Selected by hand



Result: Prescan

Project file:
55426-60354