7.2.4 Test result (15.209)

Preliminary measurement at 3 m in SAC:

C20151793 05.Nov 15 07:34

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

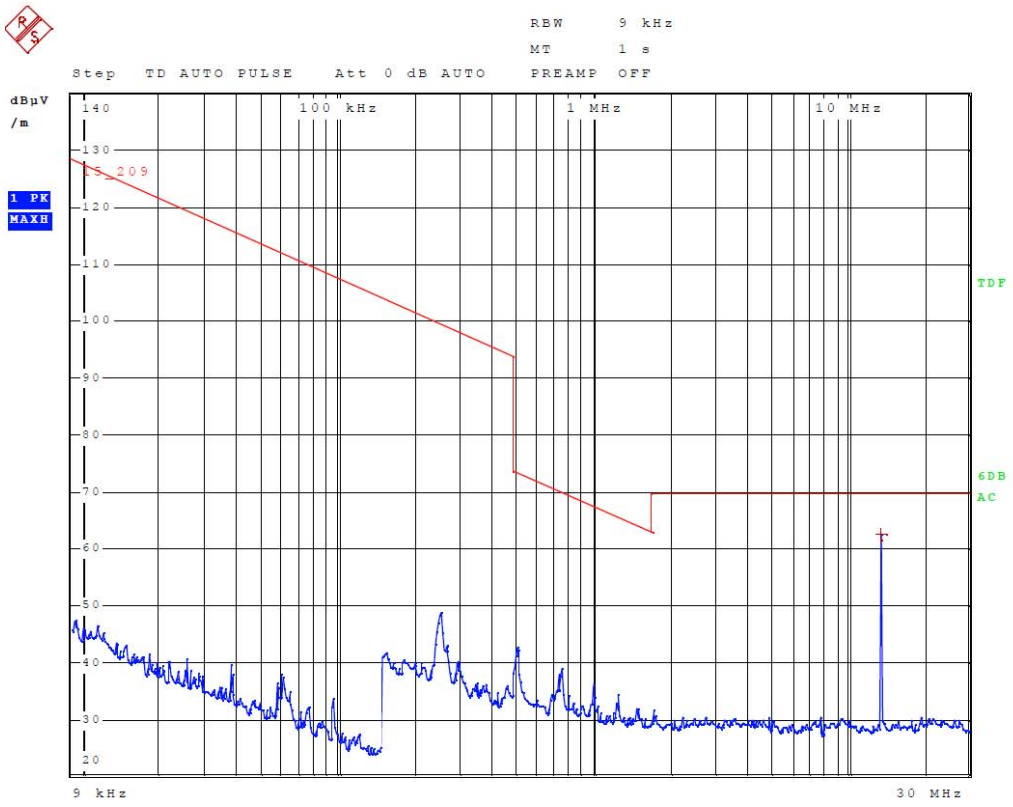
Test Spec

Antenna: 55 deg, Sample: 195 deg

Time Domain Scan (2 Ranges)

Scan Start: 9 kHz
Scan Stop: 30 MHz
Detector: Trace 1: MAX PEAK
Transducer: HFH2-Z2V

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
9.000000 kHz	149.950000 kHz	50.00 Hz	200.00 Hz	300 ms	Auto	0 dB	INPUT2
150.000000 kHz	30.000000 MHz	2.25 kHz	9.00 kHz	30 ms	Auto	0 dB	INPUT2



C20151793

05.Nov 15 07:34

Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Final Measurement

Meas Time:	1 s
Margin:	30 dB
Peaks:	1

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	13.560000000 MHz	62.36	Quasi Peak	-7.14

C20151793

05.Nov 15 07:29

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

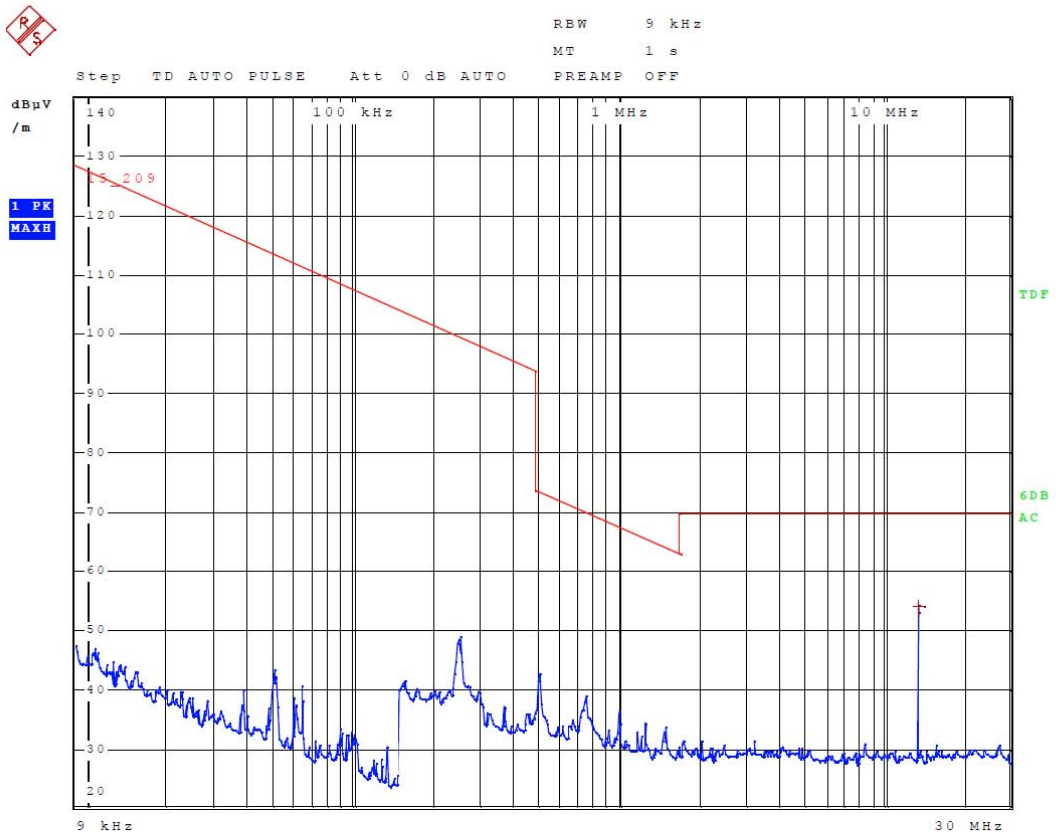
Test Spec

Antenna: 55 deg, Sample: 195 deg

Time Domain Scan (2 Ranges)

Scan Start: 9 kHz
Scan Stop: 30 MHz
Detector: Trace 1: MAX PEAK
Transducer: HFH2-Z2V

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
9.000000 kHz	149.950000 kHz	50.00 Hz	200.00 Hz	300 ms	Auto	0 dB	INPUT2
150.000000 kHz	30.000000 MHz	2.25 kHz	9.00 kHz	30 ms	Auto	0 dB	INPUT2



C20151793

05.Nov 15 07:29

Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Final Measurement

Meas Time:	1 s
Margin:	25 dB
Peaks:	1

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	13.560000000 MHz	53.85	Quasi Peak	-15.65

Final measurement at 10 m in OATS

Results with measuring distance of 10 m				
Operating mode	**Frequency (MHz)**	**Measured value (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Waiting for a tag	13,56	45,44	104,00	- 58,56
Reading a tag	13,56	35,67	104,00	- 68,33

Calculated value from 10 m to 30 m						
Operating mode	**Frequency (MHz)**	**Measured value at 10 m (dBµV/m)**	**Correction factor from 10 m to 30 m (dB)**	**Calculated value at 30 m (dBµV/m)**	**Limit at 30 m (dBµV/m)**	**Margin (dB)**
Waiting for a tag	13,56	45,44	20	25,44	84,00	- 58,56
Reading a tag	13,56	35,67	20	15,67	84,00	- 68,33

NOTE: Antenna factor and cable loss are already included in measurement correction.

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C20151793

23.Nov 15 08:16

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG
Operator	ANDREJ SKOF

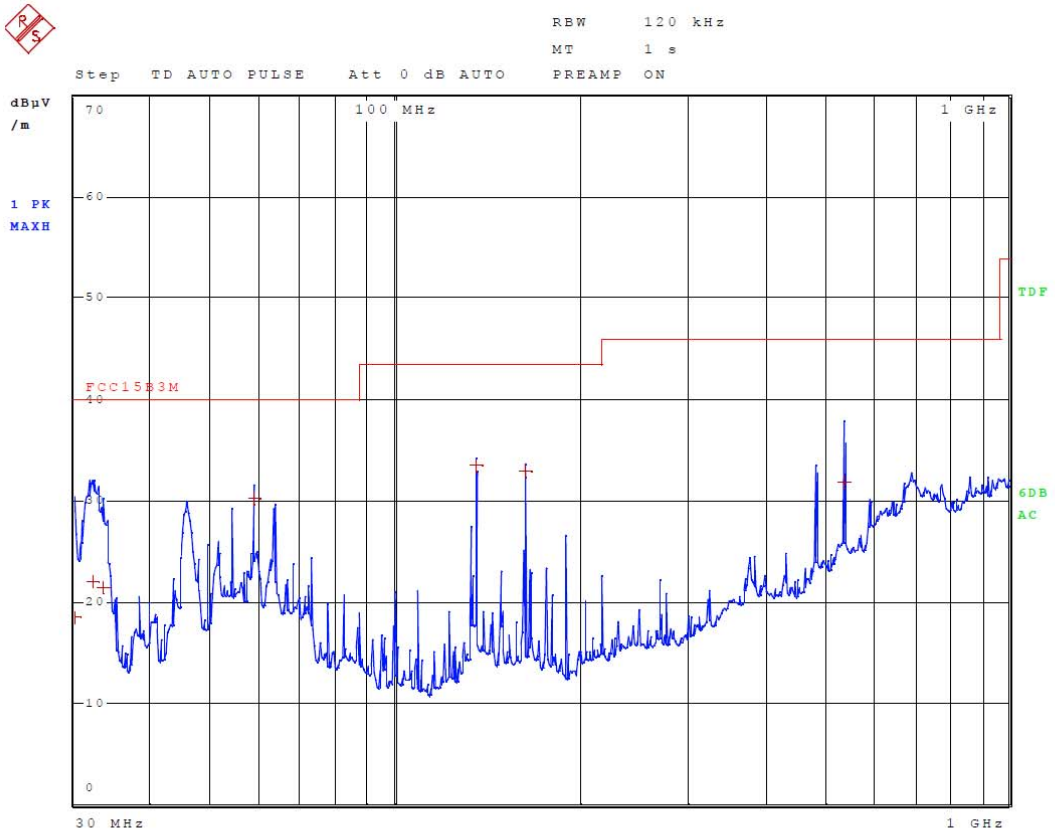
Test Spec

Uin:7,5 V,VERTICAL 100 CM, 0 deg

Time Domain Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: 3142B3m

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	2 ms	Auto	20 dB	INPUT2



ROHDE&SCHWARZ

C20151793

23.Nov 15 08:16

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG
Operator	ANDREJ SKOF

Test Spec

Uin:7,5 V,VERTICAL 100 CM, 0 deg

Final Measurement

Meas Time:	1 s
Margin:	10 dB
Peaks:	7

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	58.800000000 MHz	30.17	Quasi Peak	-9.83
1	135.600000000 MHz	33.42	Quasi Peak	-10.08
1	162.720000000 MHz	32.85	Quasi Peak	-10.65
1	538.770000000 MHz	31.79	Quasi Peak	-14.21
1	32.010000000 MHz	21.94	Quasi Peak	-18.06
1	33.300000000 MHz	21.41	Quasi Peak	-18.59
1	30.000000000 MHz	18.43	Quasi Peak	-21.57

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C20151793

23.Nov 15 08:20

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG
Operator	ANDREJ SKOF

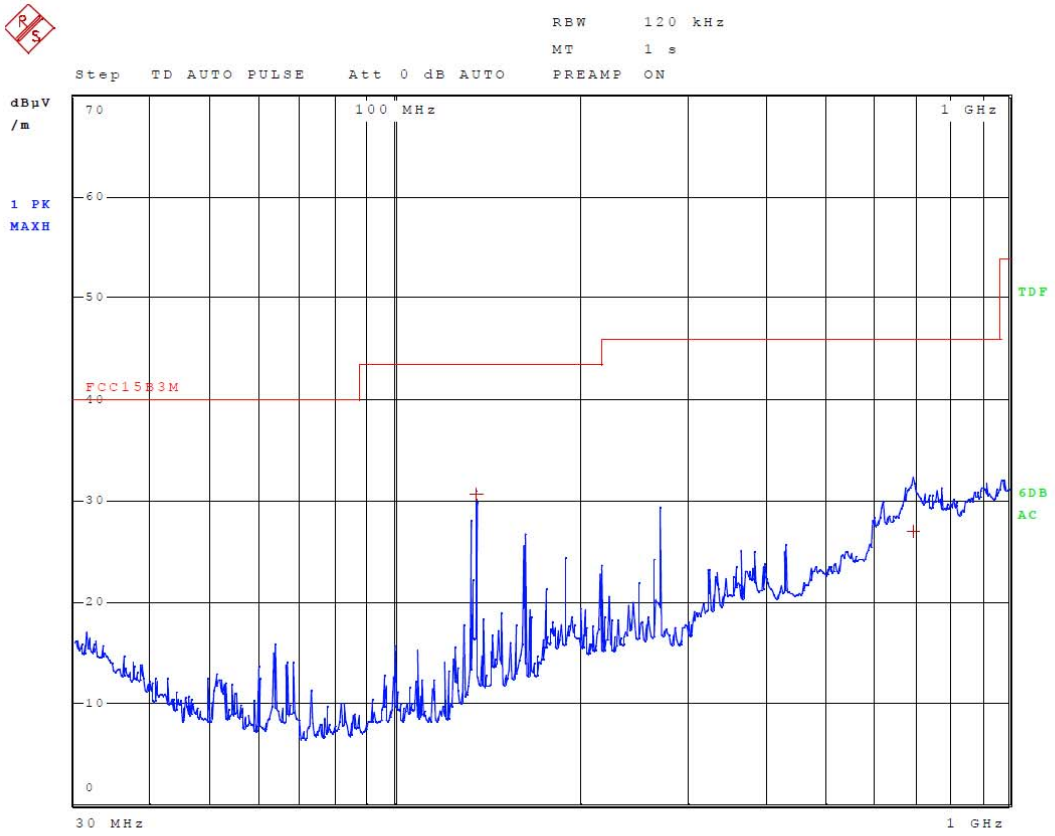
Test Spec

Uin:7,5 V,HORIZONTAL 100 CM, 0 deg

Time Domain Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: 3142B3m

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	2 ms	Auto	20 dB	INPUT2



ROHDE&SCHWARZ

C20151793

23.Nov 15 08:20

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG
Operator	ANDREJ SKOF

Test Spec

Uin:7,5 V,HORIZONTAL 100 CM, 0 deg

Final Measurement

Meas Time:	1 s
Margin:	15 dB
Peaks:	2

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	135.600000000 MHz	30.60	Quasi Peak	-12.90
1	699.000000000 MHz	26.99	Quasi Peak	-19.01

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C20151793

23.Nov 15 08:28

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

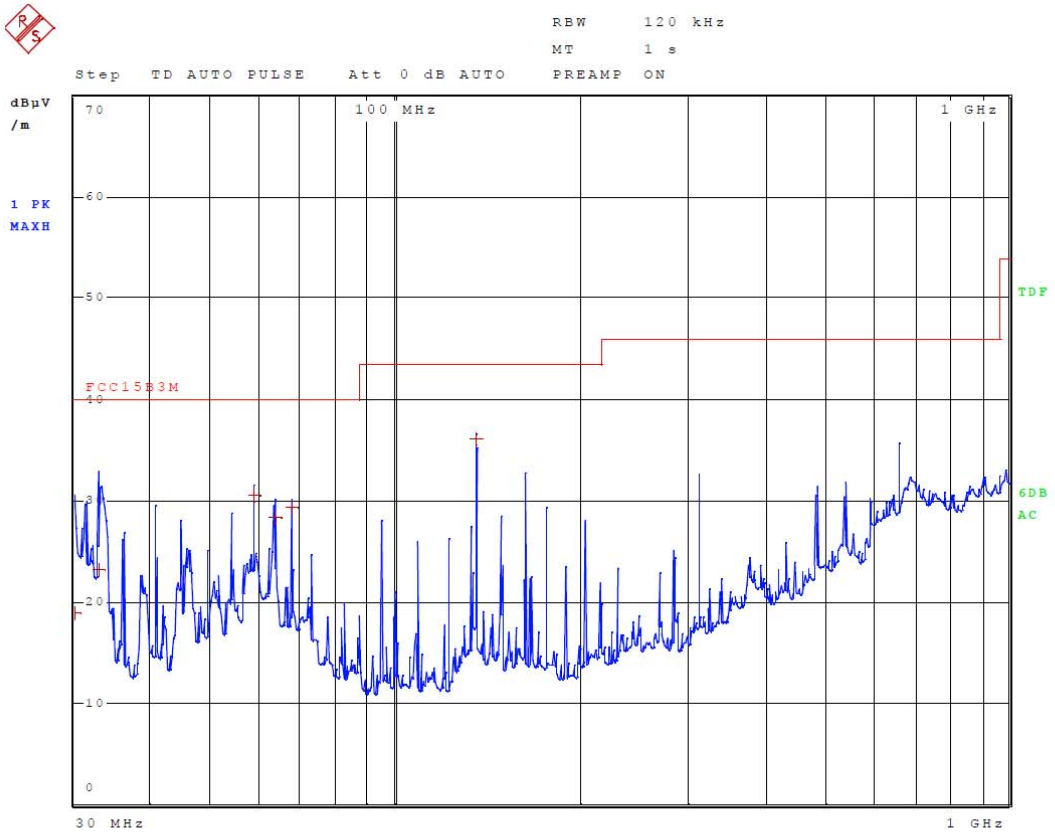
Test Spec

Uin:7,5 V,VERTICAL 100 CM, 0 deg

Time Domain Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: 3142B3m

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	2 ms	Auto	20 dB	INPUT2



ROHDE&SCHWARZ

C20151793

23.Nov 15 08:28

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

Test Spec

Uin:7,5 V,VERTICAL 100 CM, 0 deg

Final Measurement

Meas Time:	1 s
Margin:	10 dB
Peaks:	6

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	135.600000000 MHz	36.14	Quasi Peak	-7.36
1	58.800000000 MHz	30.46	Quasi Peak	-9.54
1	67.800000000 MHz	29.34	Quasi Peak	-10.66
1	63.510000000 MHz	28.33	Quasi Peak	-11.67
1	32.760000000 MHz	23.15	Quasi Peak	-16.85
1	30.000000000 MHz	18.88	Quasi Peak	-21.12

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C20151793

23.Nov 15 08:14

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

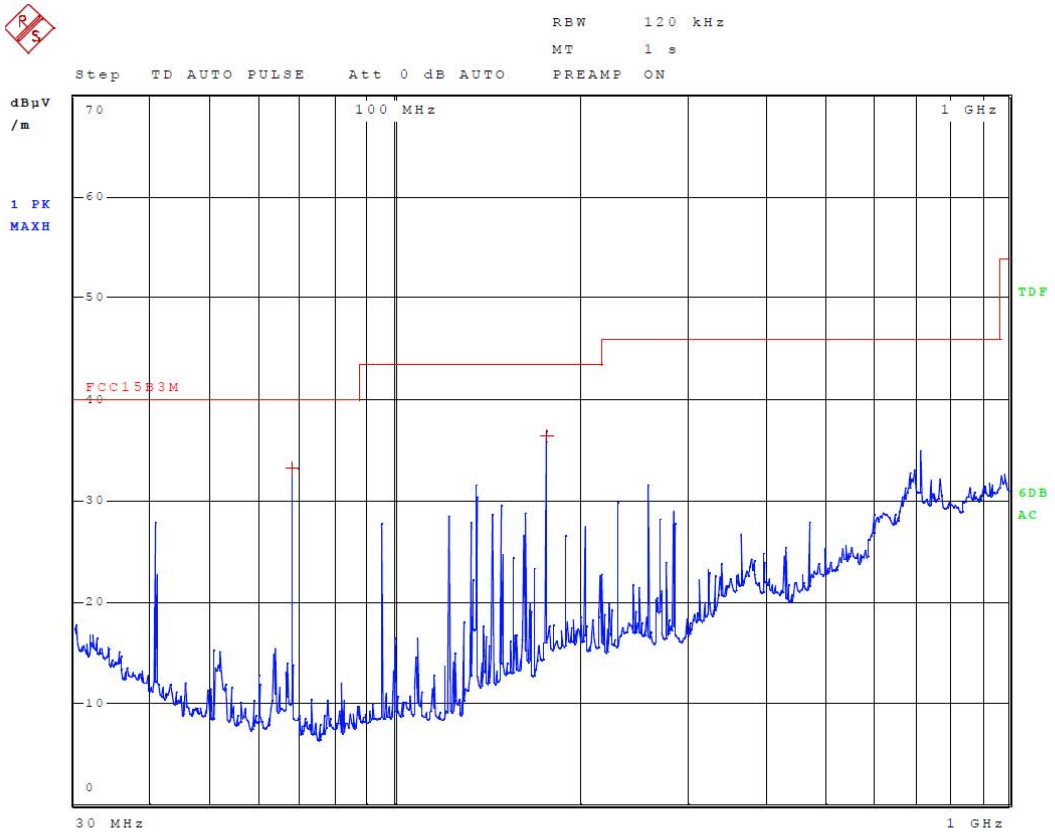
Test Spec

Uin:7,5 V,HORIZONTAL 100 CM, 0 deg

Time Domain Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: 3142B3m

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	2 ms	Auto	20 dB	INPUT2



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C20151793

23.Nov 15 08:14

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

Test Spec

Uin:7,5 V,HORIZONTAL 100 CM, 0 deg

Final Measurement

Meas Time:	1 s
Margin:	10 dB
Peaks:	2

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	67.800000000 MHz	33.14	Quasi Peak	-6.86
1	176.280000000 MHz	36.46	Quasi Peak	-7.04

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C20151793

23.Nov 15 06:32

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

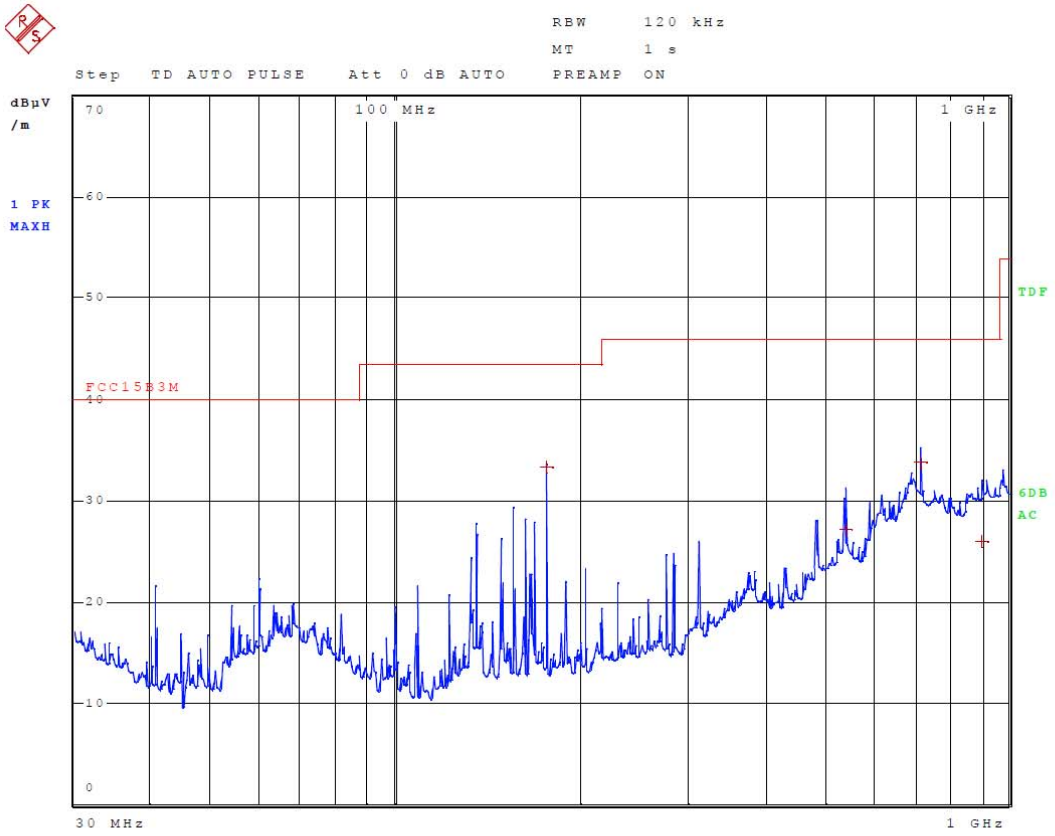
Test Spec

VERTICAL 100 cm, 0 deg

Time Domain Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: 3142B3m

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	2 ms	Auto	20 dB	INPUT2



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C20151793

23.Nov 15 06:32

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

Test Spec

VERTICAL 100 cm, 0 deg

Final Measurement

Meas Time:	1 s
Margin:	15 dB
Subranges:	4

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	176.280000000 MHz	33.27	Quasi Peak	-10.23
1	718.680000000 MHz	33.74	Quasi Peak	-12.26
1	540.900000000 MHz	27.13	Quasi Peak	-18.87
1	903.930000000 MHz	25.92	Quasi Peak	-20.08

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C20151793

23.Nov 15 06:31

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

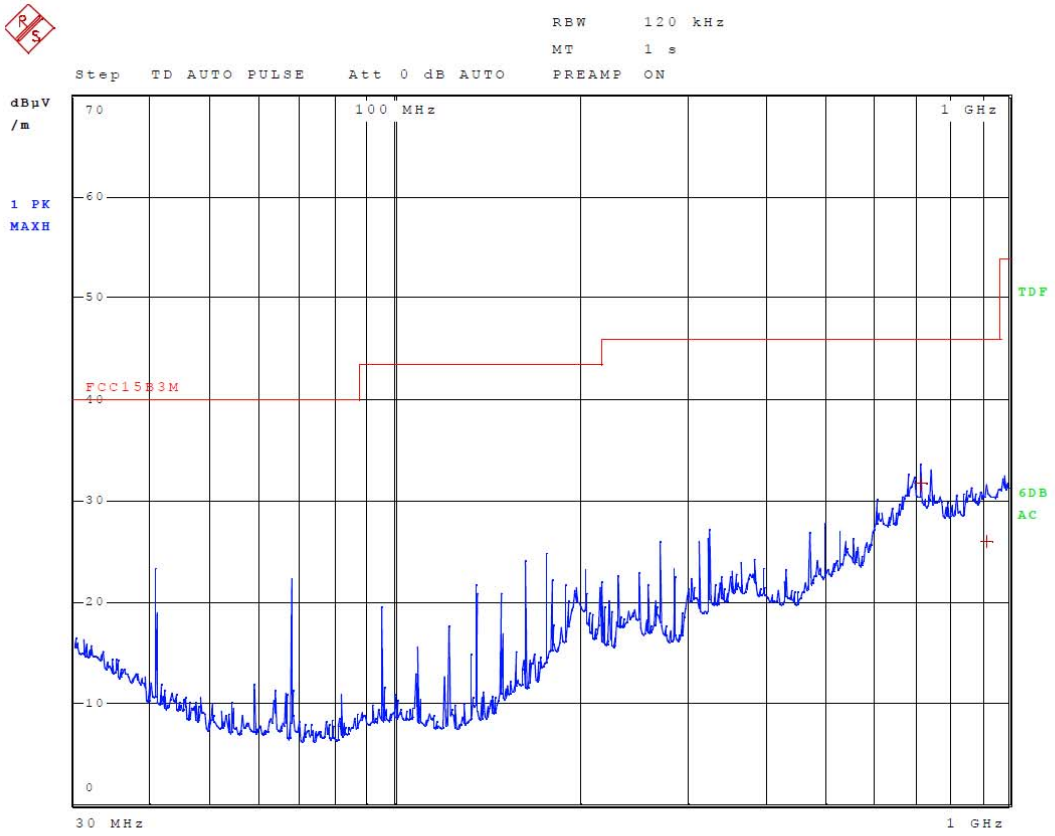
Test Spec

HORIZONTAL 100 cm, 0 deg

Time Domain Scan (1 Range)

Scan Start: 30 MHz
Scan Stop: 1 GHz
Detector: Trace 1: MAX PEAK
Transducer: 3142B3m

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	2 ms	Auto	20 dB	INPUT2



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C20151793

23.Nov 15 06:31

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

Test Spec

HORIZONTAL 100 cm, 0 deg

Final Measurement

Meas Time:	1 s
Margin:	15 dB
Subranges:	2

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	718.680000000 MHz	31.67	Quasi Peak	-14.33
1	921.630000000 MHz	25.98	Quasi Peak	-20.02

Worst case measurements:

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C20151793

23.Nov 15 07:56

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

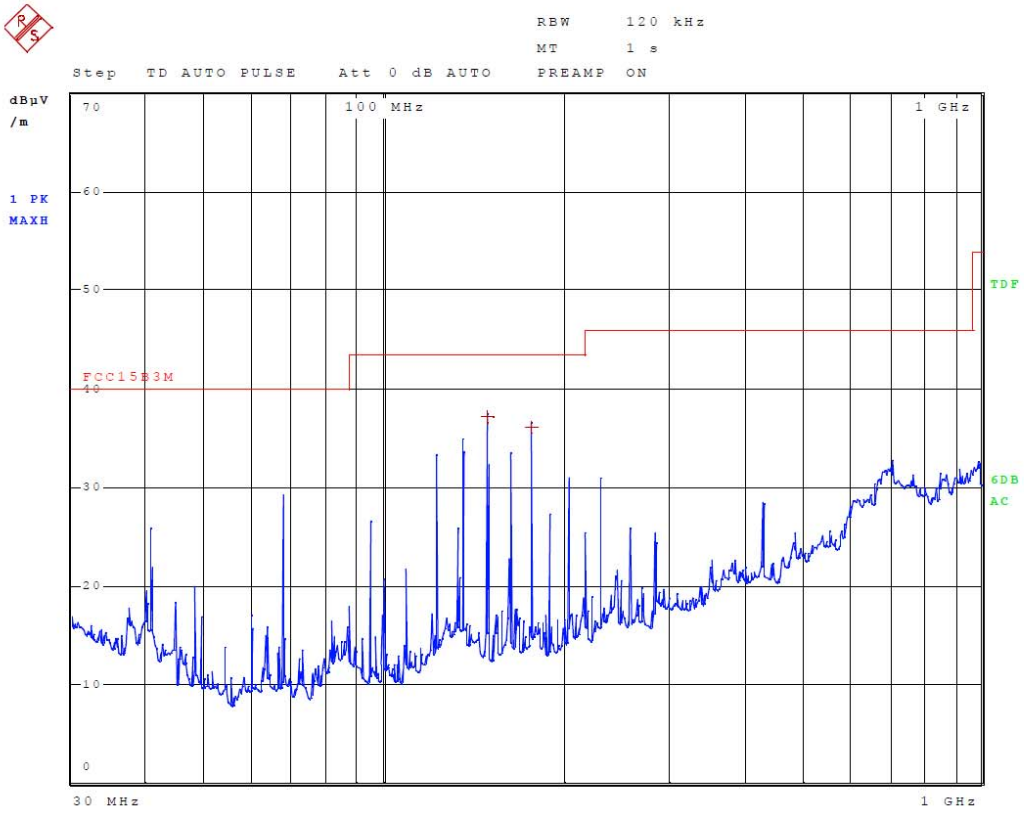
Test Spec

Uin:7,5 V, HORIZONTAL 183 CM, 150 deg

Time Domain Scan (1 Range)

Scan Start:	30 MHz
Scan Stop:	1 GHz
Detector:	Trace 1: MAX PEAK
Transducer:	3142B3m

Start Frequency	Stop Frequency	Step Size	Res BW	Meas Time	RF Atten	Preamp	Input
30.000000 MHz	1.000000 GHz	30.00 kHz	120.00 kHz	2 ms	Auto	20 dB	INPUT2



ROHDE&SCHWARZ

C20151793

23.Nov 15 07:56

Meas Type	RADIATED EMISSION
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG
Operator	ANDREJ SKOF

Test Spec

Uin:7,5 V, HORIZONTAL 183 CM, 150 deg

Final Measurement

Meas Time:	1 s
Margin:	10 dB
Subranges:	2

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	149.160000000 MHz	37.10	Quasi Peak	-6.40
1	176.280000000 MHz	36.15	Quasi Peak	-7.35

7.3 Bandwidth of the emission (intentional radiator)

Section 15.215 Additional provisions to the general radiated emission limitations

7.3.1 Test instruments

Description & Manufacturer	Model No.	SIQ No.	Last calibration	Calibrated until	Calibration period	Used
ETS, Anechoic chamber	3m	103949	2014-11	2016-11	24 months	X
Rohde-Schwarz, RFI receiver	ESU26	106897	2014-01	2016-01	24 months	X
EMCO, Antenna	3142B	06/068	2015-09	2017-09	24 months	
Rohde & Schwarz, Active loop antenna	HFH2-Z2	/	2015-09	2017-09	24 months	X
Heinrich Deisel, Turn table	DS 420.00	103337	NA	NA	NA	X
ETS, Antenna tower	/	/	NA	NA	NA	X
ETS, Controller for turn table and antenna tower	/	/	NA	NA	NA	X

7.3.2 Test procedure

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground in an Anechoic Chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 m away from the interference-receiving antenna.
3. Resolution bandwidth is set to a value greater than 5% of the allowed bandwidth. If no bandwidth specifications are given, the guidelines in Section 1.4 are used

7.3.3 Test results

Device passed the requirements stated in ANSI C63.4, FCC Part 15, Subpart C.

C20151793

05.Nov 15 07:50

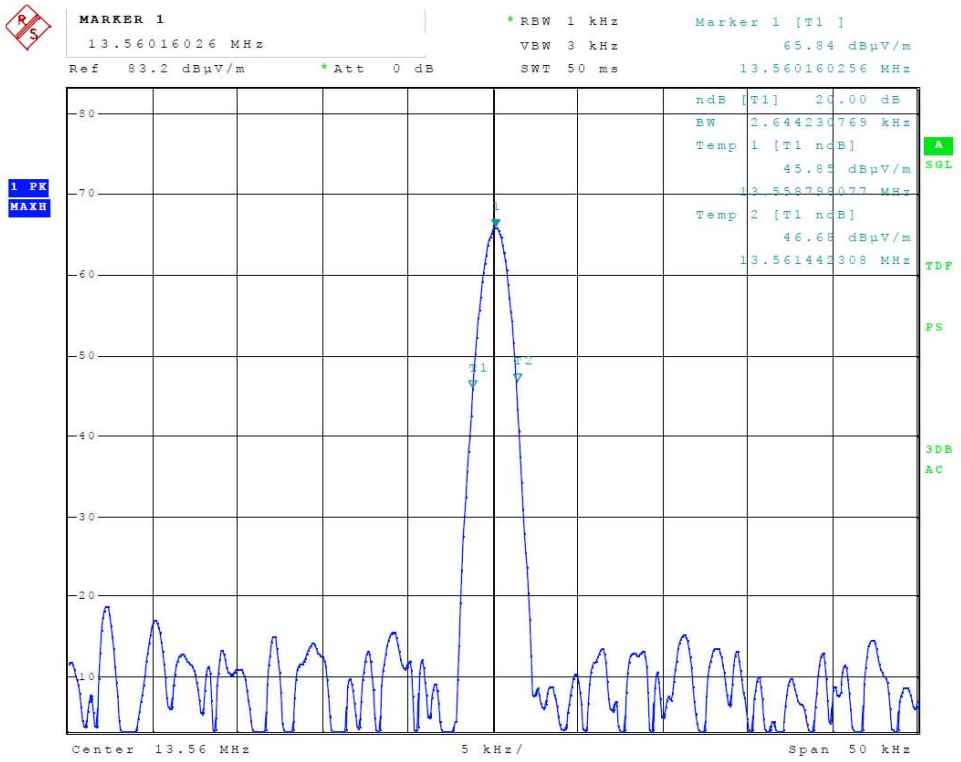
Meas Type	OCCUPIED BANDWIDTH
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	50.000000 kHz	Ref Position	100.000 %
Start Frequency	13.535000 MHz	Level Range	80.000 dB
Stop Frequency	13.585000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	50.00 ms	Y-Axis	LOG



C20151793

05.Nov 15 07:49

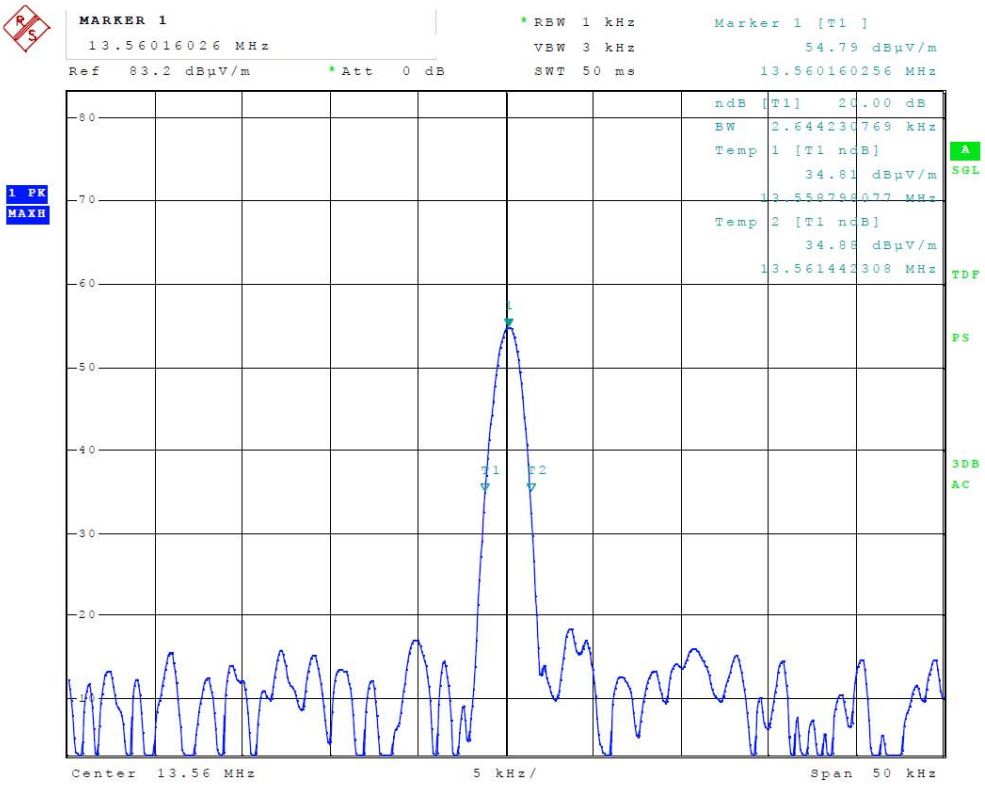
Meas Type	OCCUPIED BANDWIDTH
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	50.000000 kHz	Ref Position	100.000 %
Start Frequency	13.535000 MHz	Level Range	80.000 dB
Stop Frequency	13.585000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	50.00 ms	Y-Axis	LOG



C20151793

05.Nov 15 07:46

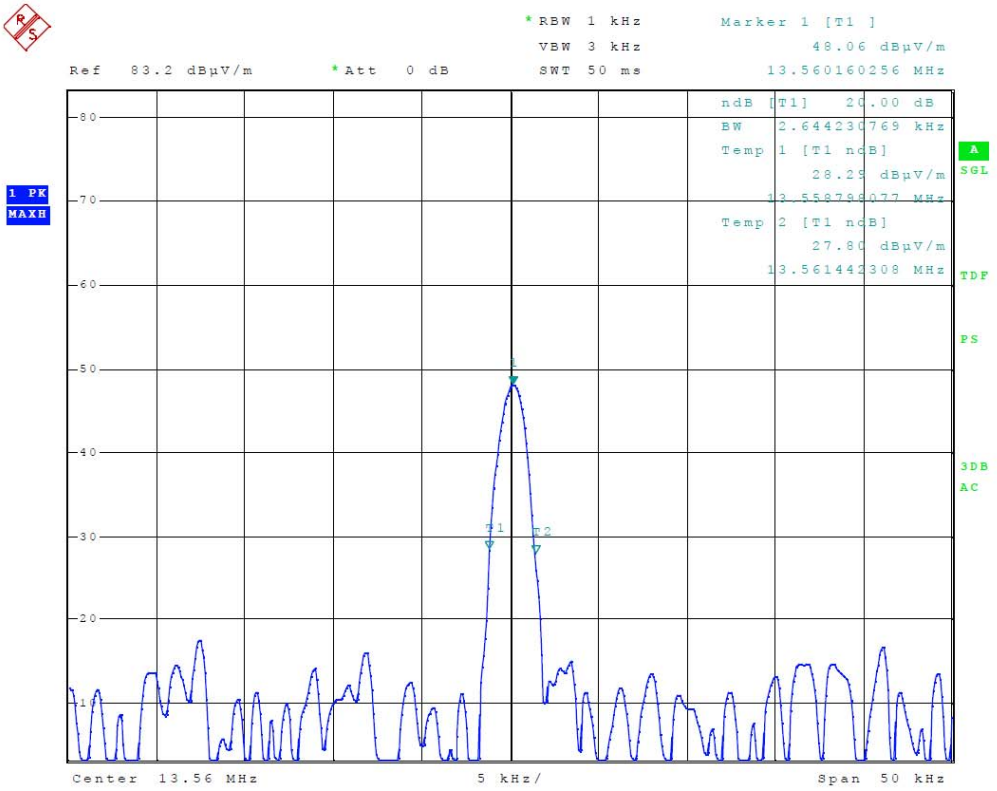
Meas Type	OCCUPIED BANDWIDTH
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG, Uin: 5 VDC via USB
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	50.000000 kHz	Ref Position	100.000 %
Start Frequency	13.535000 MHz	Level Range	80.000 dB
Stop Frequency	13.585000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	50.00 ms	Y-Axis	LOG



C20151793

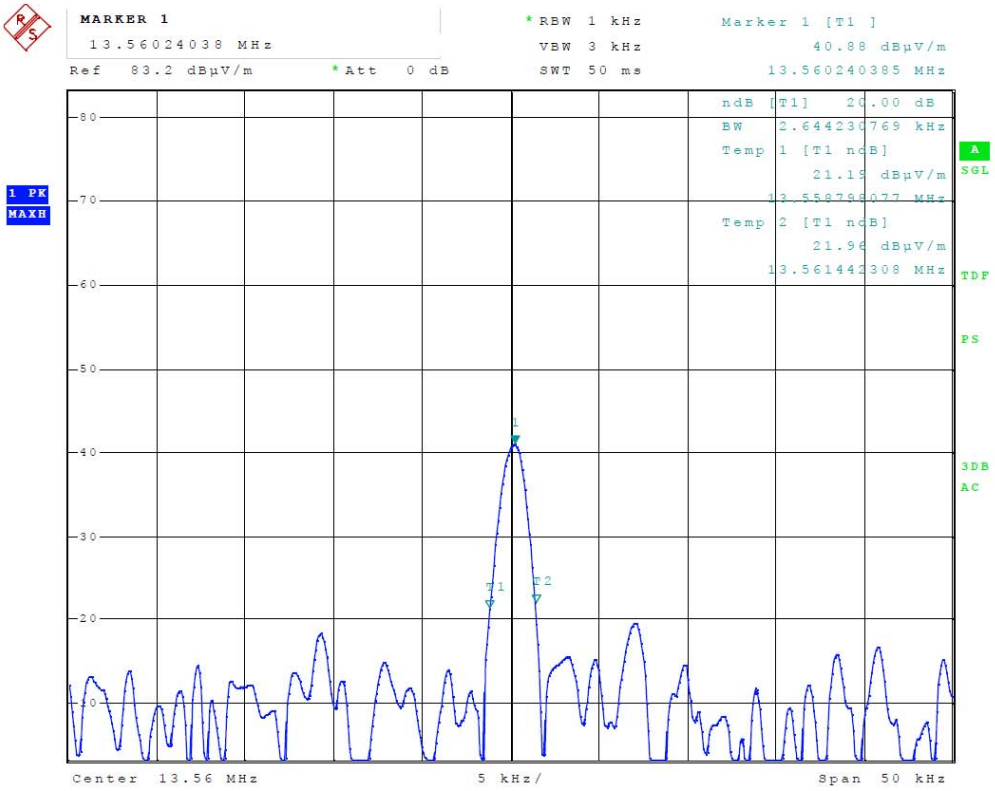
05.Nov 15 07:47

Meas Type	OCCUPIED BANDWIDTH
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG, Uin: 5 VDC via USB
Operator	Andrej Skof
Test Spec	

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	50.000000 kHz	Ref Position	100.000 %
Start Frequency	13.535000 MHz	Level Range	80.000 dB
Stop Frequency	13.585000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	50.00 ms	Y-Axis	LOG



Frequency (MHz)	Permitted frequency band (MHz)	20 dB bandwidth (kHz)	PASS/FAIL
13.56	13.110 – 14.010	2.64	PASS

7.4 Spectrum mask (intentional radiator)

Section 15.225 Operation within the band 13.110 – 14.010 MHz – clause a – clause d

7.4.1 Test instruments

Description & Manufacturer	Model No.	SIQ No.	Last calibration	Calibrated until	Calibration period	Used
ETS, Anechoic chamber	3m	103949	2014-11	2016-11	24 months	X
Rohde-Schwarz, RFI receiver	ESU26	106897	2014-01	2016-01	24 months	X
EMCO, Antenna	3142B	06/068	2015-09	2017-09	24 months	
Rohde & Schwarz, Active loop antenna	HFH2-Z2	/	2015-09	2017-09	24 months	X
Heinrich Deisel, Turn table	DS 420.00	103337	NA	NA	NA	X
ETS, Antenna tower	/	/	NA	NA	NA	X
ETS, Controller for turn table and antenna tower	/	/	NA	NA	NA	X

7.4.2 Test procedure

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground in an Anechoic Chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 m away from the interference-receiving antenna.
3. Frequencies with maximum emission were retested on OATS.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.

7.4.3 Test results

Device passed the requirements stated in ANSI C63.4, FCC Part 15, Subpart C.

C20151793

05.Nov 15 07:39

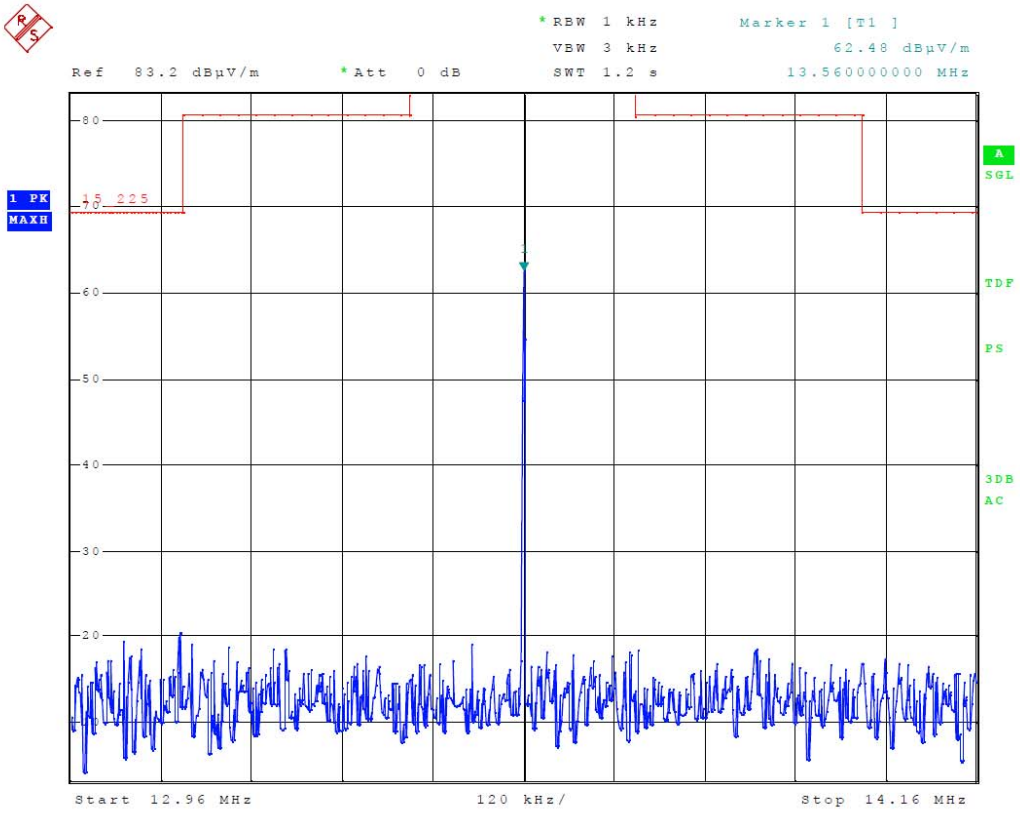
Meas Type	SPECTRUM MASK
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	1.200000 MHz	Ref Position	100.000 %
Start Frequency	12.960000 MHz	Level Range	80.000 dB
Stop Frequency	14.160000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	1.20 s	Y-Axis	LOG



C20151793

05.Nov 15 07:40

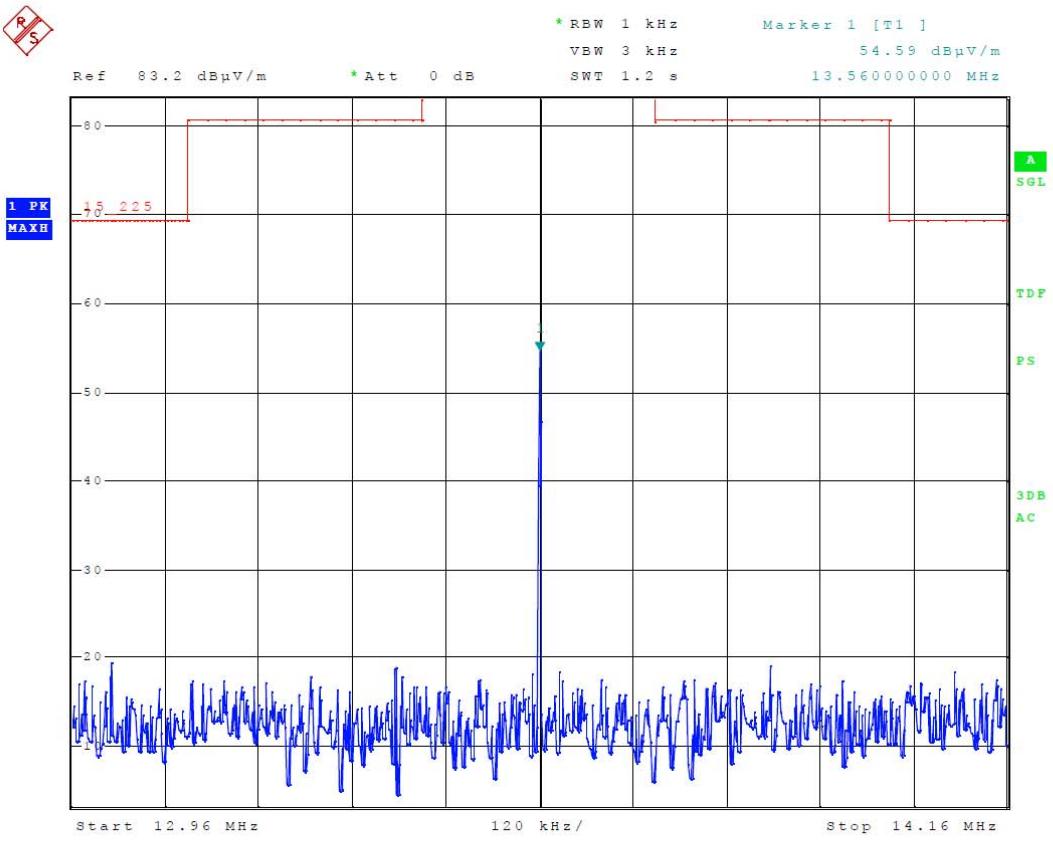
Meas Type	SPECTRUM MASK
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG, Uin: 7,5 VDC
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	1.200000 MHz	Ref Position	100.000 %
Start Frequency	12.960000 MHz	Level Range	80.000 dB
Stop Frequency	14.160000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	1.20 s	Y-Axis	LOG



C20151793

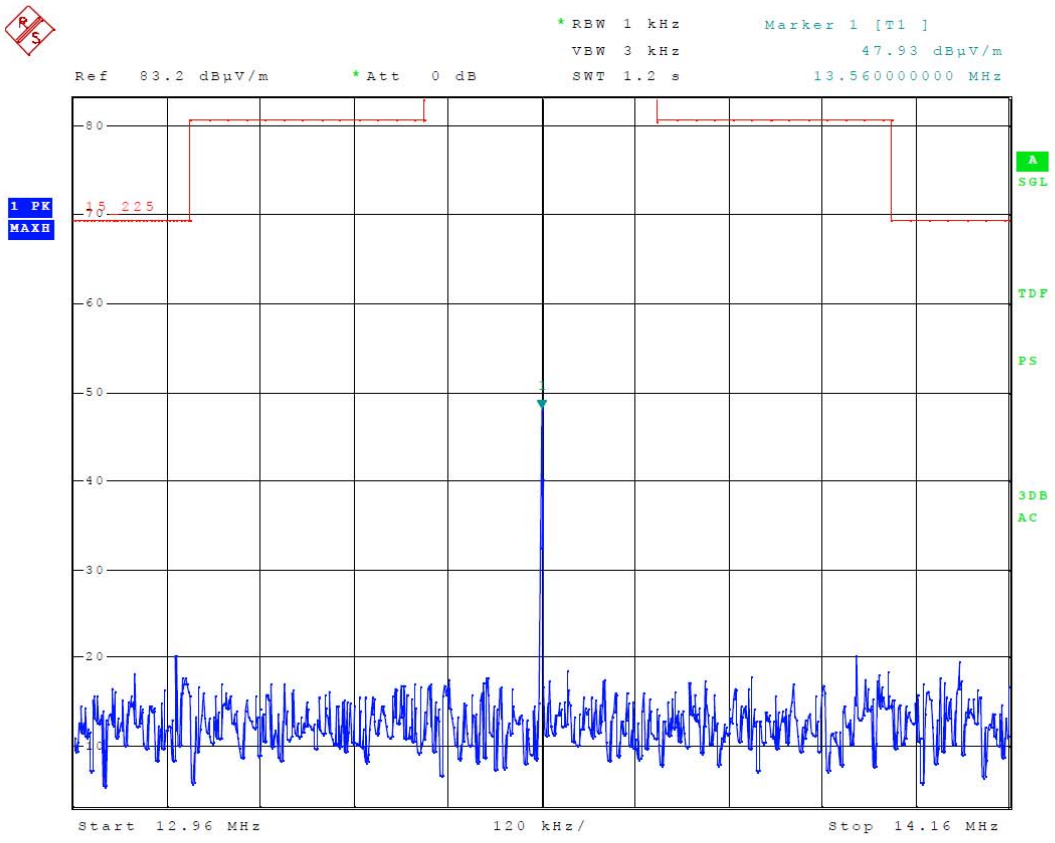
05.Nov 15 07:44

Meas Type	SPECTRUM MASK
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	WAITING A TAG, Uin: 5 VDC via USB
Operator	Andrej Skof
Test Spec	

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	1.200000 MHz	Ref Position	100.000 %
Start Frequency	12.960000 MHz	Level Range	80.000 dB
Stop Frequency	14.160000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	1.20 s	Y-Axis	LOG



C20151793

05.Nov 15 07:44

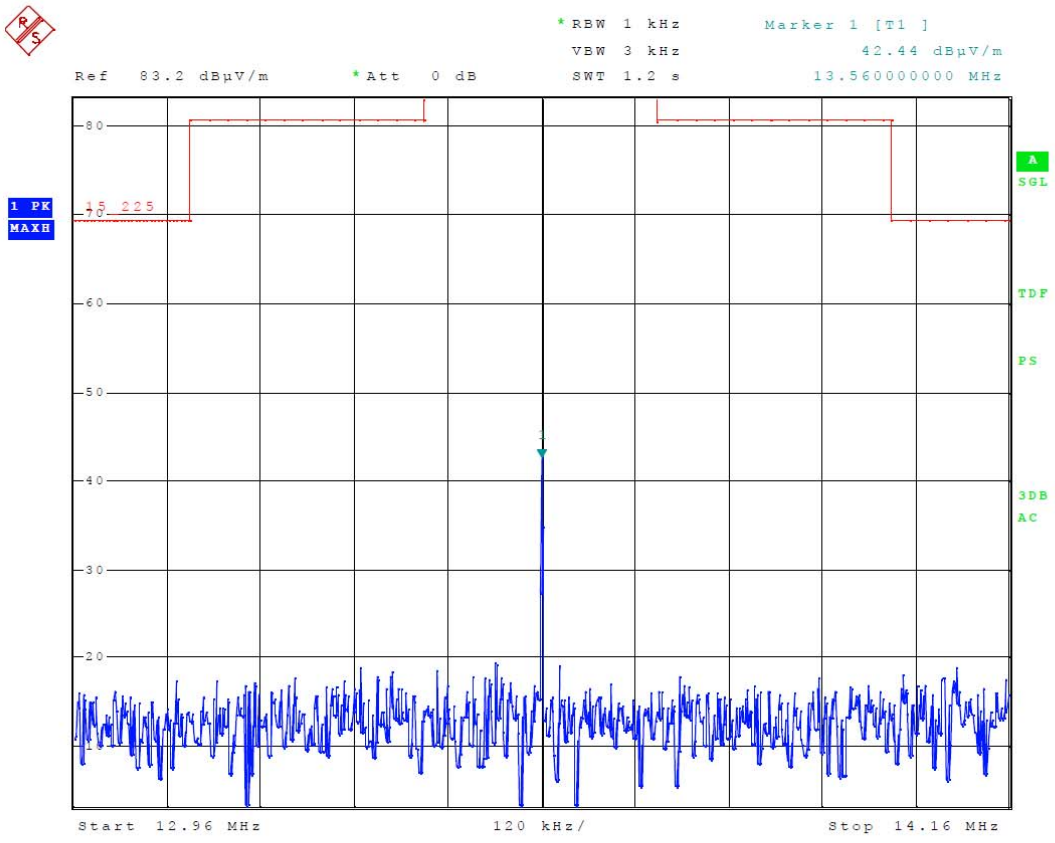
Meas Type	SPECTRUM MASK
Equipment under Test	PNEV5180B
Manufacturer	CETRTA POT, D.O.O.
OP Condition	READING A TAG, Uin: 5 VDC via USB
Operator	Andrej Skof

Test Spec

Antenna: 55 deg, Sample: 195 deg

Sweep Settings Screen A

Center Frequency	13.560000 MHz	Ref Level	83.200 dBµV/m
Frequency Offset	0.000000 Hz	Ref Level Offset	0.000 dB
Span	1.200000 MHz	Ref Position	100.000 %
Start Frequency	12.960000 MHz	Level Range	80.000 dB
Stop Frequency	14.160000 MHz	RF Att	0.000 dB
RBW	1.000000 kHz		
VBW	3.000000 kHz	X-Axis	LIN
Sweep Time	1.20 s	Y-Axis	LOG



Fundamental Frequency (MHz)	Limit at 3 m distance (dBμV/m)	Recalculation to 30 m distance (dBμV/m)
13.553-13.567	112.5	More than 10 dB under the limit
13.410-13.553 and 13.567-13.710	79	More than 10 dB under the limit
13.110-13.410 and 13.710-14.010	69	More than 10 dB under the limit

7.5 Frequency tolerance of the carrier signal

Section 15.225 Operation within the band 13.110 – 14.010 MHz – clause e

7.5.1 Test instruments:

Description & Manufacturer	Model No.	SIQ No.	Last calibration	Calibrated until	Calibration period	Used
Rohde-Schwarz, RFI receiver	ESU26	106897	2014-01	2016-01	24 months	X
Rohde & Schwarz, Active loop antenna	HFH2-Z2	/	2015-09	2017-09	24 months	X
Fluke, Digital Multimeter	179	106728	2015-07	2016-07	12 months	X
Kambič, Temperature chamber	I-190 CK	107298	Na	Na	/	X

7.5.2 Test requirements:

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of –20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

7.5.3 Test results

Device passed the requirements stated in ANSI C63.4, FCC Part 15, Subpart C.

Temperature	Supply voltage (V)	Minutes after switch on	Measured Frequency (MHz)	Allowed tolerance	Measured tolerance	RESULT
40	5,00	0	13,560130000	Fref±1.356 kHz	-0,015	PASS
	5,00	2	13,560116000	Fref±1.356 kHz	-0,029	PASS
	5,00	5	13,560116000	Fref±1.356 kHz	-0,029	PASS
	5,00	10	13,560116000	Fref±1.356 kHz	-0,029	PASS
30	5,00	0	13,560145000	Fref±1.356 kHz	0,000	PASS
	5,00	2	13,560130000	Fref±1.356 kHz	-0,015	PASS
	5,00	5	13,560130000	Fref±1.356 kHz	-0,015	PASS
	5,00	10	13,560130000	Fref±1.356 kHz	-0,015	PASS
20	4,25	0	13,560161859	Fref±1.356 kHz	0,017	PASS
	4,25	2	13,560157051	Fref±1.356 kHz	0,012	PASS
	4,25	5	13,560153385	Fref±1.356 kHz	0,008	PASS
	4,25	10	13,560153846	Fref±1.356 kHz	0,009	PASS
20	5,00	0	13,560159000	Fref±1.356 kHz	0,014	PASS
	5,00	2	13,560159000	Fref±1.356 kHz	0,014	PASS
	5,00	5	13,560145000	Fref±1.356 kHz	0,000	PASS
	5,00	**10**	13,560145000	**Fref**	0,000	
20	5,75	0	13,560160256	Fref±1.356 kHz	0,015	PASS
	5,75	2	13,560152244	Fref±1.356 kHz	0,007	PASS
	5,75	5	13,560149038	Fref±1.356 kHz	0,004	PASS
	5,75	10	13,560147436	Fref±1.356 kHz	0,002	PASS
10	5,00	0	13,560174000	Fref±1.356 kHz	0,029	PASS
	5,00	2	13,560174000	Fref±1.356 kHz	0,029	PASS
	5,00	5	13,560174000	Fref±1.356 kHz	0,029	PASS
	5,00	10	13,560174000	Fref±1.356 kHz	0,029	PASS
0	5,00	0	13,560174000	Fref±1.356 kHz	0,029	PASS
	5,00	2	13,560174000	Fref±1.356 kHz	0,029	PASS
	5,00	5	13,560174000	Fref±1.356 kHz	0,029	PASS
	5,00	10	13,560174000	Fref±1.356 kHz	0,029	PASS
-10	5,00	0	13,560159000	Fref±1.356 kHz	0,012	PASS
	5,00	2	13,560174000	Fref±1.356 kHz	0,027	PASS
	5,00	5	13,560174000	Fref±1.356 kHz	0,027	PASS
	5,00	10	13,560174000	Fref±1.356 kHz	0,027	PASS
-20	5,00	0	13,560116000	Fref±1.356 kHz	-0,058	PASS
	5,00	2	13,560145000	Fref±1.356 kHz	-0,029	PASS
	5,00	5	13,560145000	Fref±1.356 kHz	-0,029	PASS
	5,00	10	13,560159000	Fref±1.356 kHz	-0,015	PASS

Temperature	Supply voltage (V)	Minutes after switch on	Measured Frequency (MHz)	Allowed tolerance	Measured tolerance	RESULT
20	6,37	0	13,560159000	Fref±1.356 kHz	0,032	PASS
	6,37	2	13,560145000	Fref±1.356 kHz	0,018	PASS
	6,37	5	13,560145000	Fref±1.356 kHz	0,018	PASS
	6,37	10	13,560145000	Fref±1.356 kHz	0,018	PASS
20	7,50	0	13,560149038	Fref±1.356 kHz	0,022	PASS
	7,50	2	13,560139423	Fref±1.356 kHz	0,013	PASS
	7,50	5	13,560131410	Fref±1.356 kHz	0,005	PASS
	7,50	**10**	**13,560126603**	**Fref**	**0,000**	
20	8,62	0	13,560159000	Fref±1.356 kHz	0,032	PASS
	8,62	2	13,560159000	Fref±1.356 kHz	0,032	PASS
	8,62	5	13,560145000	Fref±1.356 kHz	0,018	PASS
	8,62	10	13,560145000	Fref±1.356 kHz	0,018	PASS