EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	10.0136 GHz	33.97	-20.00
1 Max Peak	10.7548 GHz	46.66	-27.31
2 Average	11.7364 GHz	35.02	-18.95
1 Max Peak	11.7744 GHz	47.24	-26.73
2 Average	13.0076 GHz	34.76	-19.21
1 Max Peak	13.4016 GHz	47.35	-26.62
2 Average	14.3124 GHz	37.28	-16.69
1 Max Peak	14.5744 GHz	49.48	-24.49
1 Max Peak	14.8224 GHz	47.45	-26.52
2 Average	15.048 GHz	35.16	-18.81
1 Max Peak	17.7436 GHz	55.64	-18.34
2 Average	17.7916 GHz	43.71	-10.26

Segalla 17197713

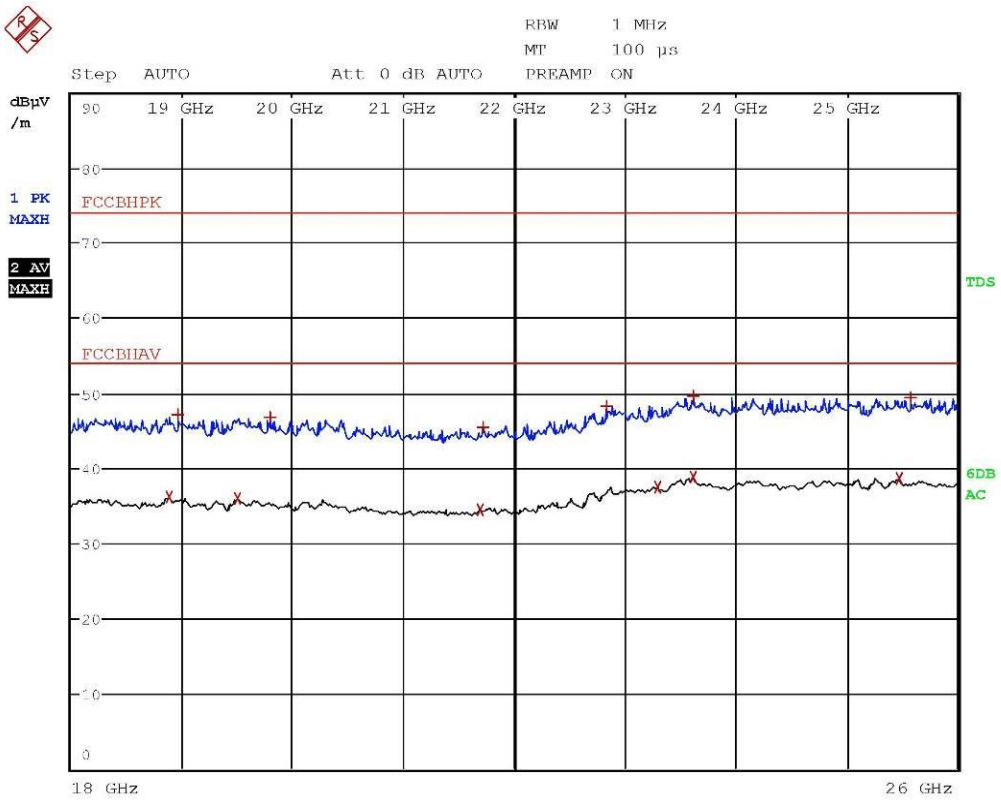
Segalla 17197714

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	10.0164 GHz	33.91	-20.06
1 Max Peak	10.1372 GHz	45.79	-28.18
1 Max Peak	11.696 GHz	47.18	-26.79
2 Average	11.7744 GHz	35.00	-18.97
1 Max Peak	12.5364 GHz	47.34	-26.63
2 Average	13.3656 GHz	34.80	-19.17
2 Average	14.3128 GHz	37.32	-16.65
1 Max Peak	14.3316 GHz	49.03	-24.95
1 Max Peak	15.052 GHz	47.49	-26.48
2 Average	15.062 GHz	35.25	-18.72
2 Average	17.7816 GHz	43.69	-10.28
1 Max Peak	17.7836 GHz	55.71	-18.26

Segalla 17197714



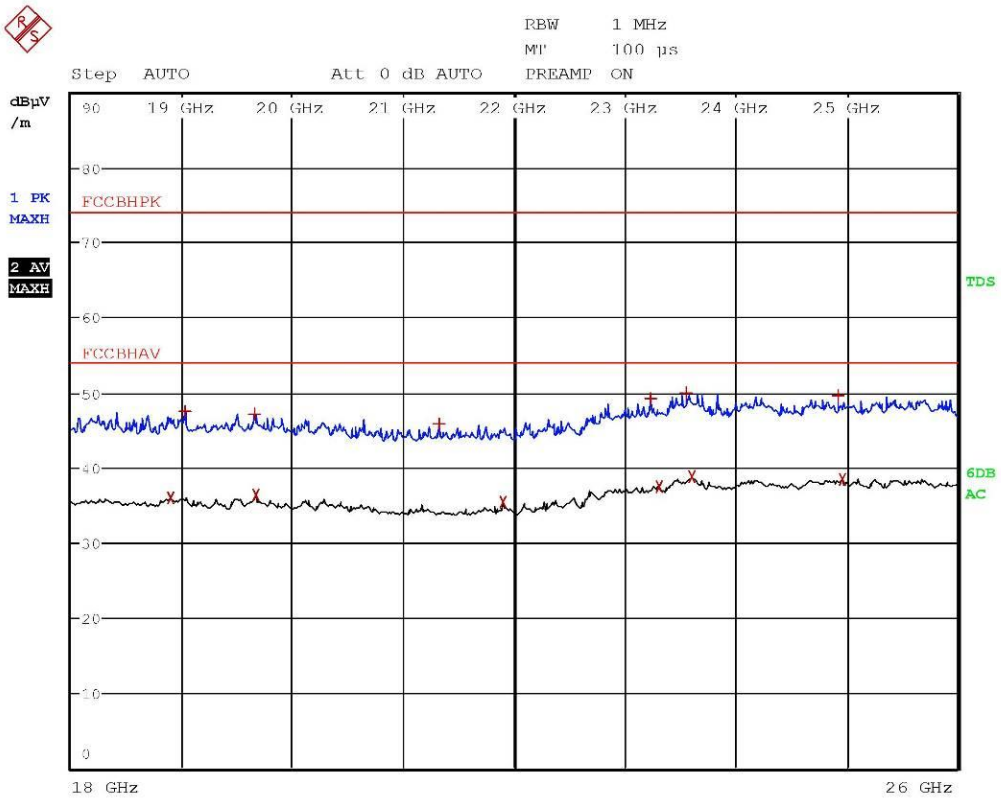
Segalla 17197715

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	18.8872 GHz	36.11	-17.86
1 Max Peak	18.9636 GHz	47.09	-26.88
2 Average	19.5008 GHz	35.95	-18.02
1 Max Peak	19.7928 GHz	46.85	-27.12
2 Average	21.69 GHz	34.44	-19.53
1 Max Peak	21.722 GHz	45.55	-28.42
1 Max Peak	22.836 GHz	48.37	-25.60
2 Average	23.298 GHz	37.58	-16.39
2 Average	23.6104 GHz	38.82	-15.15
1 Max Peak	23.6116 GHz	49.56	-24.41
2 Average	25.4732 GHz	38.61	-15.36
1 Max Peak	25.58 GHz	49.36	-24.61

Segalla 17197715



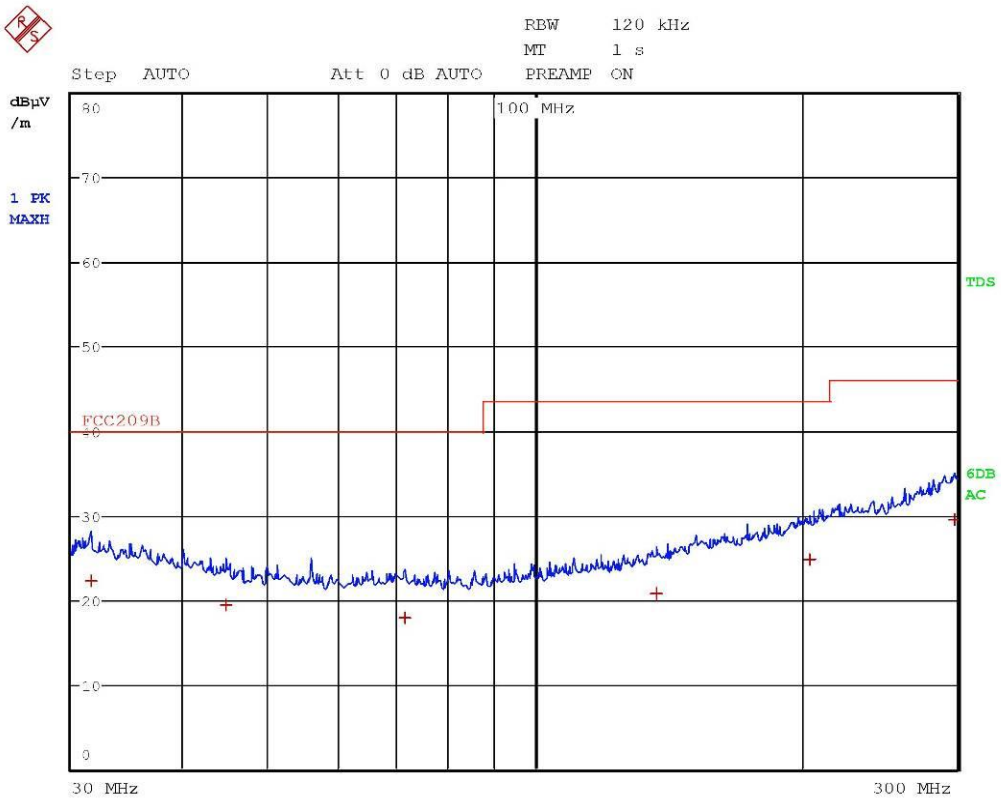
Segalla 17197716

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	18.8932 GHz	36.09	-17.88
1 Max Peak	19.024 GHz	47.57	-26.40
1 Max Peak	19.6504 GHz	47.24	-26.74
2 Average	19.6704 GHz	36.34	-17.63
1 Max Peak	21.324 GHz	45.88	-28.09
2 Average	21.8996 GHz	35.39	-18.58
1 Max Peak	23.2268 GHz	49.26	-24.71
2 Average	23.3052 GHz	37.54	-16.43
1 Max Peak	23.5464 GHz	49.96	-24.01
2 Average	23.6064 GHz	38.89	-15.08
1 Max Peak	24.9288 GHz	49.58	-24.39
2 Average	24.956 GHz	38.56	-15.41

Segalla 17197716



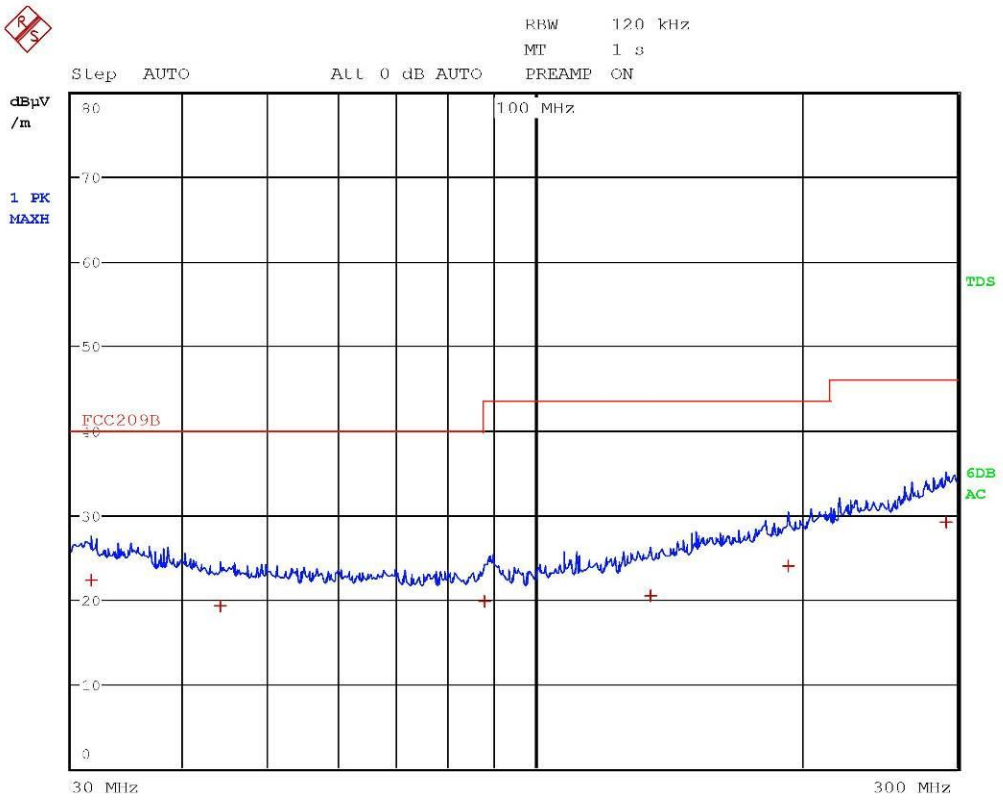
Segalla 17197717

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209B
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	31.56 MHz	22.20	-17.79
1 Quasi Peak	44.88 MHz	19.38	-20.62
1 Quasi Peak	71.36 MHz	17.96	-22.04
1 Quasi Peak	137.2 MHz	20.72	-22.80
1 Quasi Peak	204.2 MHz	24.73	-18.78
1 Quasi Peak	297.24 MHz	29.49	-16.52

Segalla 17197717



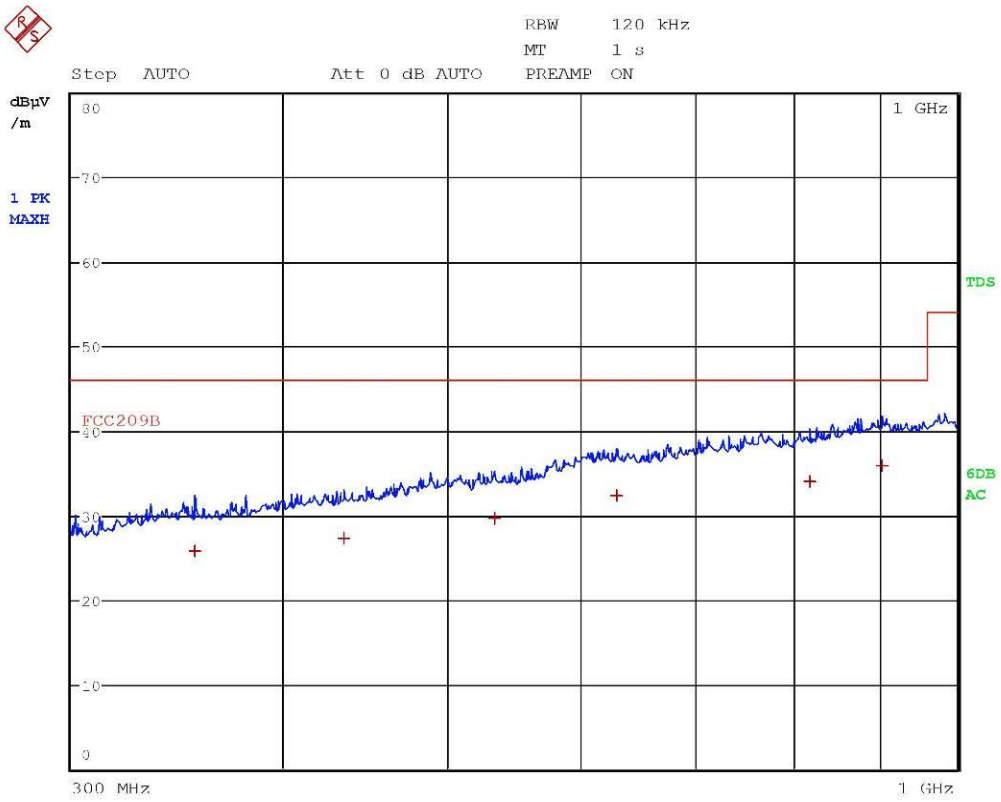
Segalla 17197718

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209B
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	31.56 MHz	22.27	-17.72
1 Quasi Peak	44.08 MHz	19.31	-20.68
1 Quasi Peak	87.68 MHz	19.72	-20.27
1 Quasi Peak	134.96 MHz	20.48	-23.03
1 Quasi Peak	193.48 MHz	23.93	-19.58
1 Quasi Peak	290.96 MHz	29.15	-16.86

Segalla 17197718



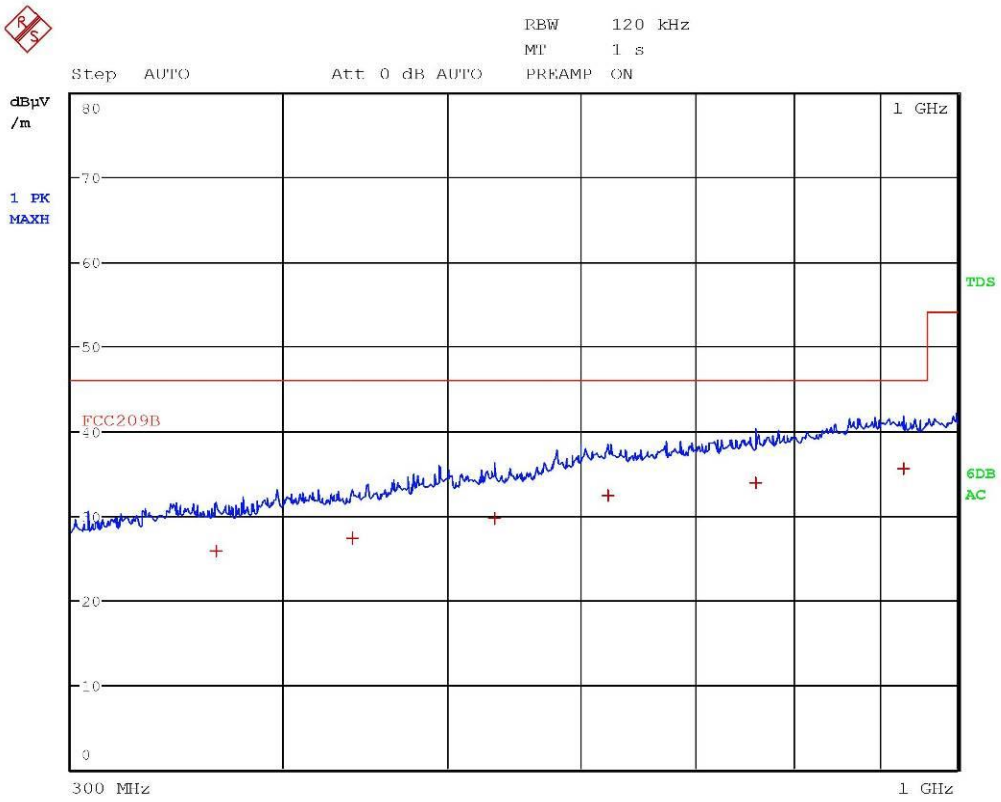
Segalla 17197719

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209B
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	354.6 MHz	25.84	-20.18
1 Quasi Peak	434.4 MHz	27.28	-18.73
1 Quasi Peak	532.72 MHz	29.60	-16.41
1 Quasi Peak	629.04 MHz	32.40	-13.61
1 Quasi Peak	817.84 MHz	34.09	-11.92
1 Quasi Peak	902.56 MHz	35.86	-10.15

Segalla 17197719



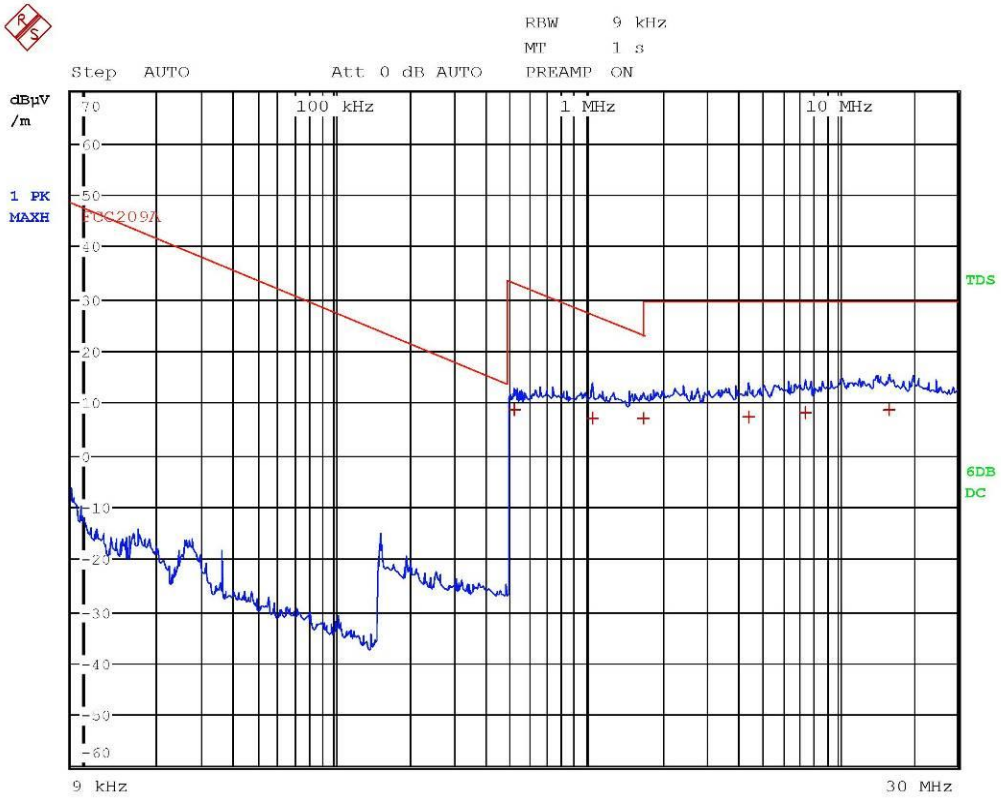
Segalla 17197720

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209B
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	365.04 MHz	25.73	-20.28
1 Quasi Peak	439.36 MHz	27.35	-18.66
1 Quasi Peak	532.8 MHz	29.59	-16.42
1 Quasi Peak	621.56 MHz	32.42	-13.60
1 Quasi Peak	760.92 MHz	33.88	-12.13
1 Quasi Peak	929.24 MHz	35.60	-10.41

Segalla 17197720



Segalla 17197721

EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC209A		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	517.999 kHz	8.62	-24.69
1 Quasi Peak	518 kHz	8.68	-24.63
1 Quasi Peak	1.058 MHz	7.17	-19.94
1 Quasi Peak	1.694 MHz	6.99	-16.03
1 Quasi Peak	4.434 MHz	7.27	-22.26
1 Quasi Peak	7.434 MHz	8.15	-21.39
1 Quasi Peak	16.134 MHz	8.60	-20.93

Segalla 17197721

Result: The requirements are met

11.3 DTS bandwidth

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 (a) (2)
- ANSI C63.10 cl. 11.8
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.2
- Internal procedure PM001
- See clause 4 of this test report
- Test date: May 10th, 2018
- Technician: M. Segalla

Test configuration

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S164
Measurement uncertainty: See clause 7 of this test report

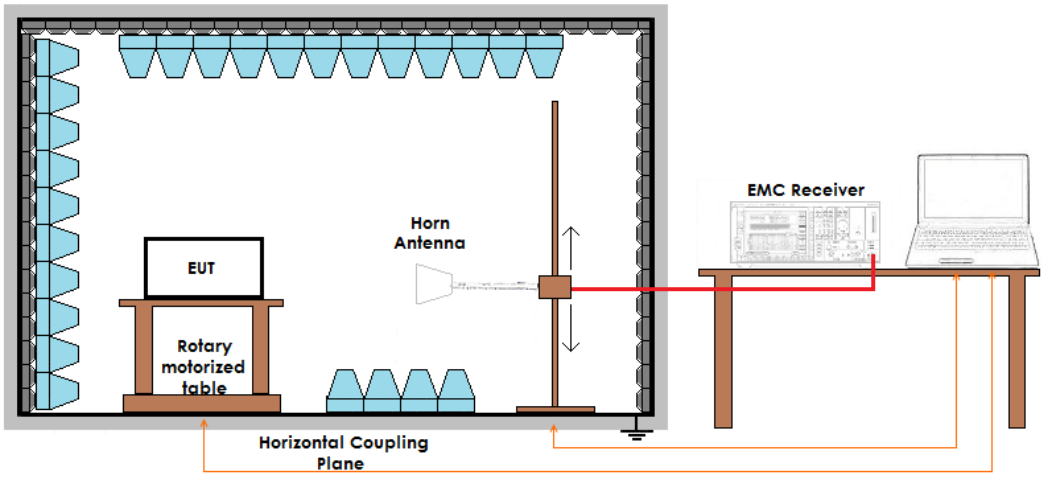
Test specification

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
EUT height about the floor: 150 cm
EUT – Antenna distance: 3 m

Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
22	100	45

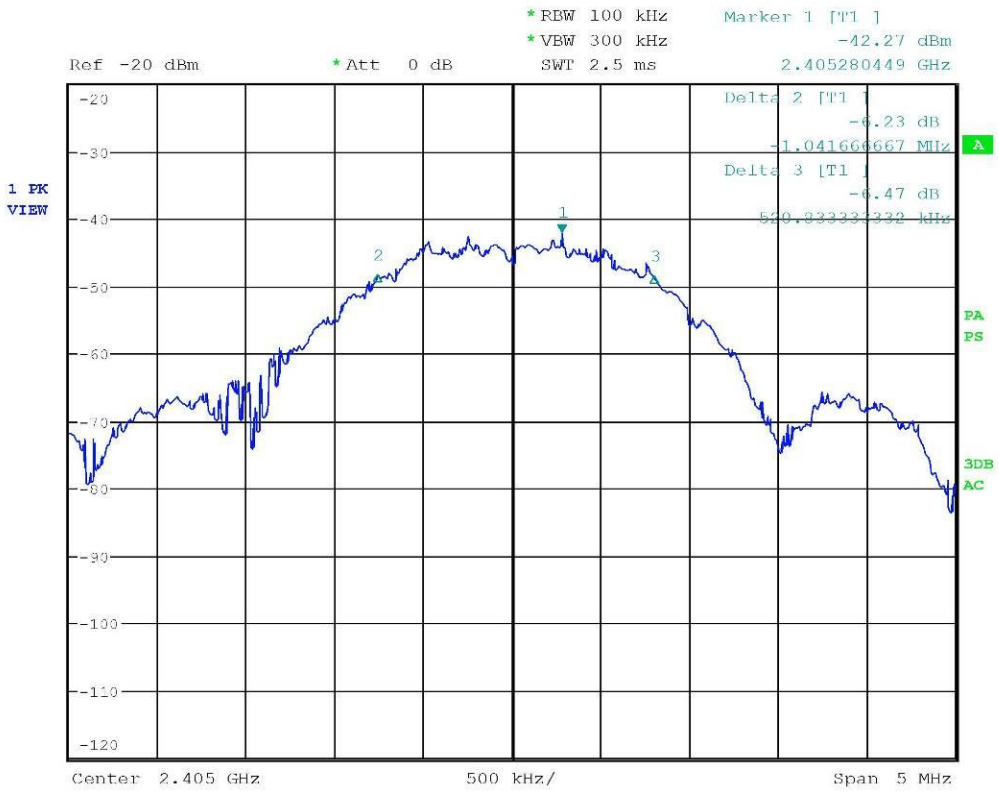
Setup



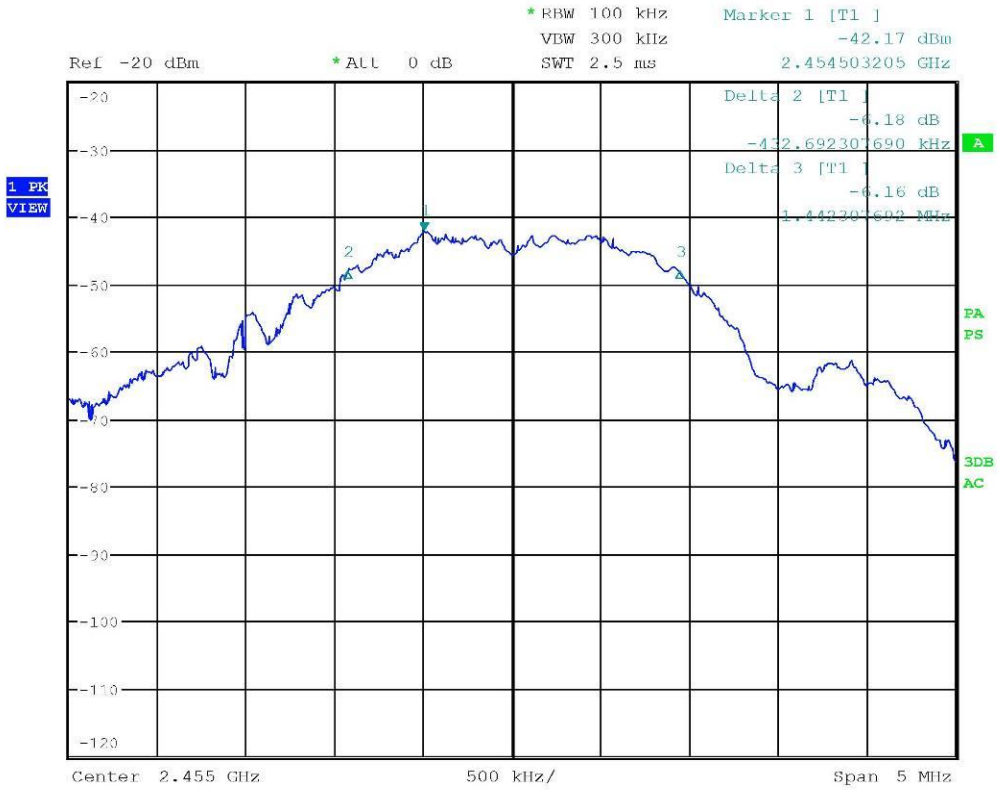
Result

Sample	*Channel*	*Graphs*	*6 dB bandwidth (kHz)*	*Limits (kHz)*	*Results*
Kit #1	Lowest	G17197722	1562,50	At least 500	Complies
Kit #2	Medium	G17197730	1874,99	At least 500	Complies
Kit #3	Highest	G17197735	1826,92	At least 500	Complies

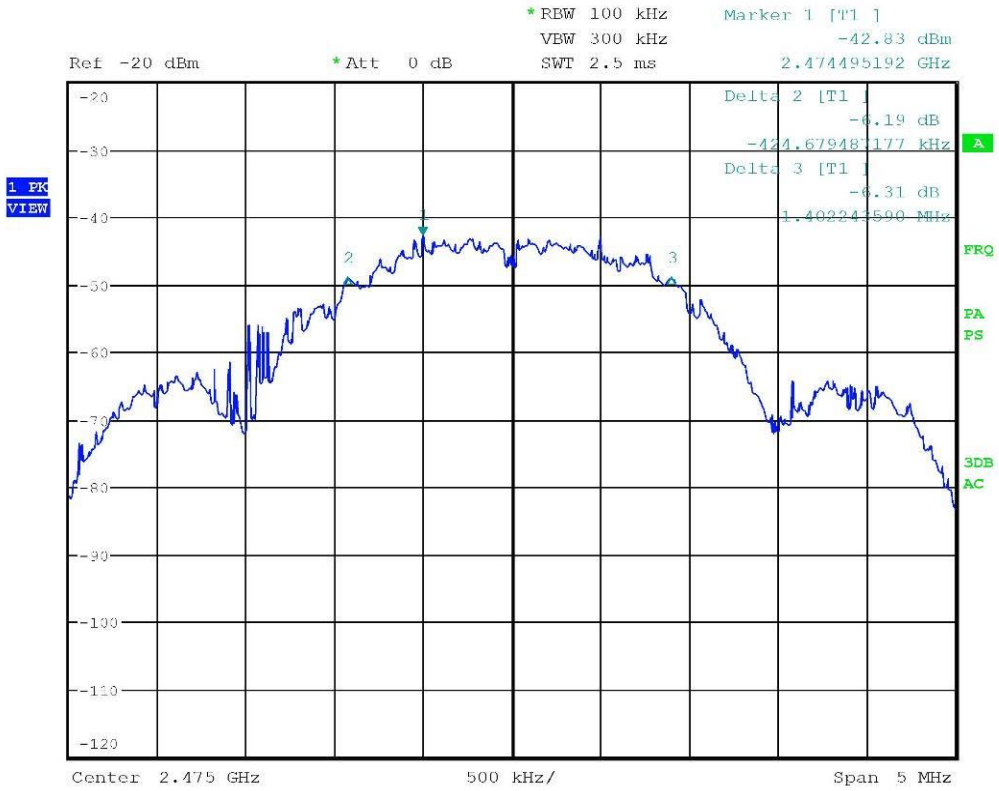
Graphs



Segalla 17197722



Segalla 17197730



Segalla 17197735

Result: The requirements are met

11.4 Band edge

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.205, 15.209, 15.247 (d)
- ANSI C63.10 cl. 11.11.1 and 11.12.1
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.5 and 8.6
- Internal procedure PM001
- See clause 4 of this test report
- Test date: March 26th, 2019
- Technician: M. Segalla

Test configuration

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S164
Measurement uncertainty: See clause 7 of this test report

Test specification

See FCC Part 15.247

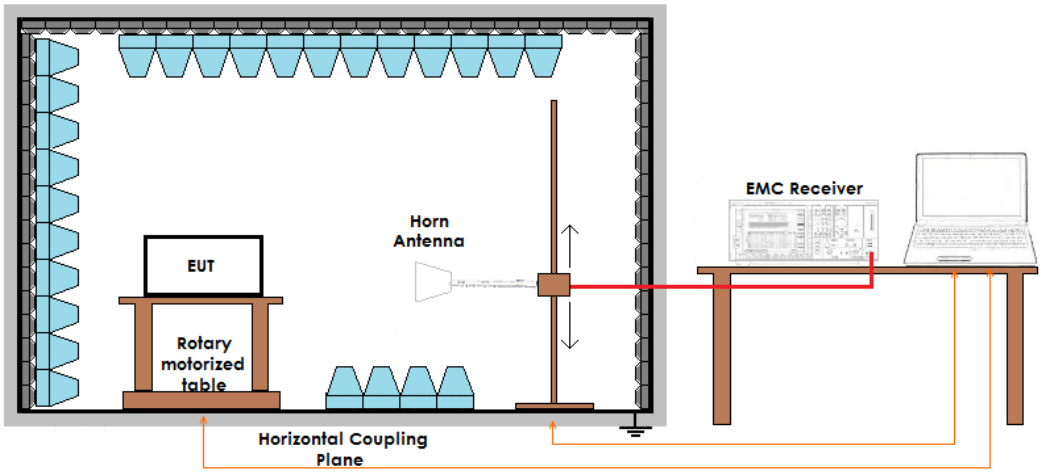
Only for test on lowest channel with 100 kHz bandwidth
EUT height about the floor: 150 cm
EUT – Antenna distance: 3 m

Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
21	100	45

Acceptance limits: operation within the band 2400 – 2483,5 MHz

Setup

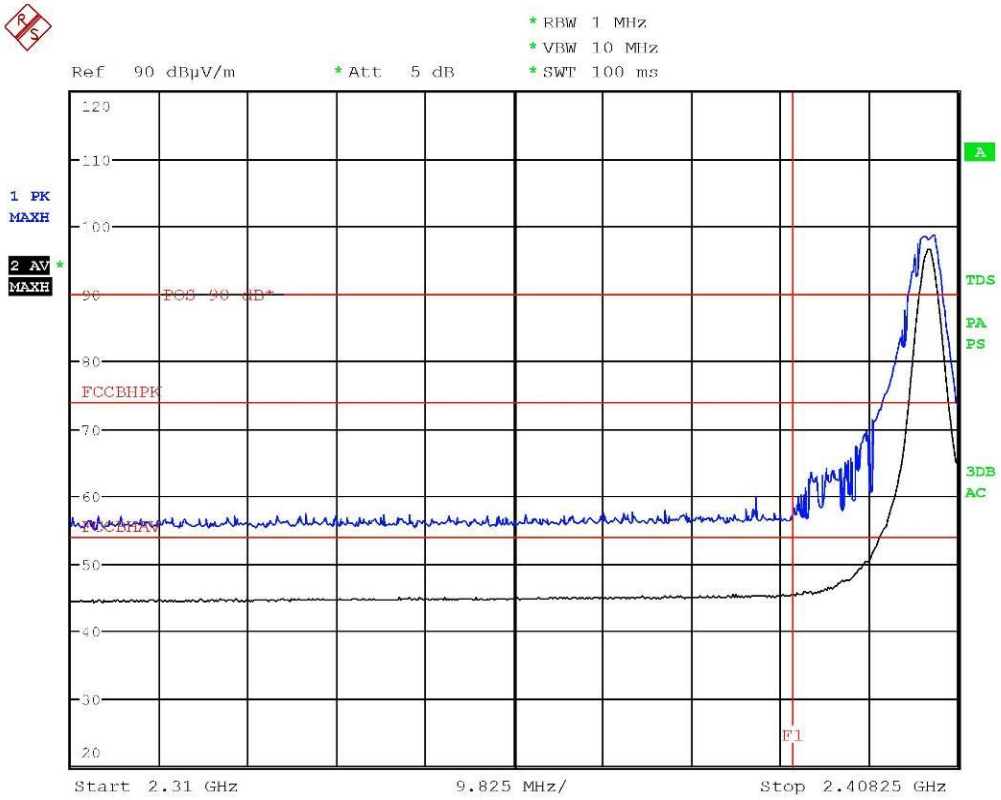


Result

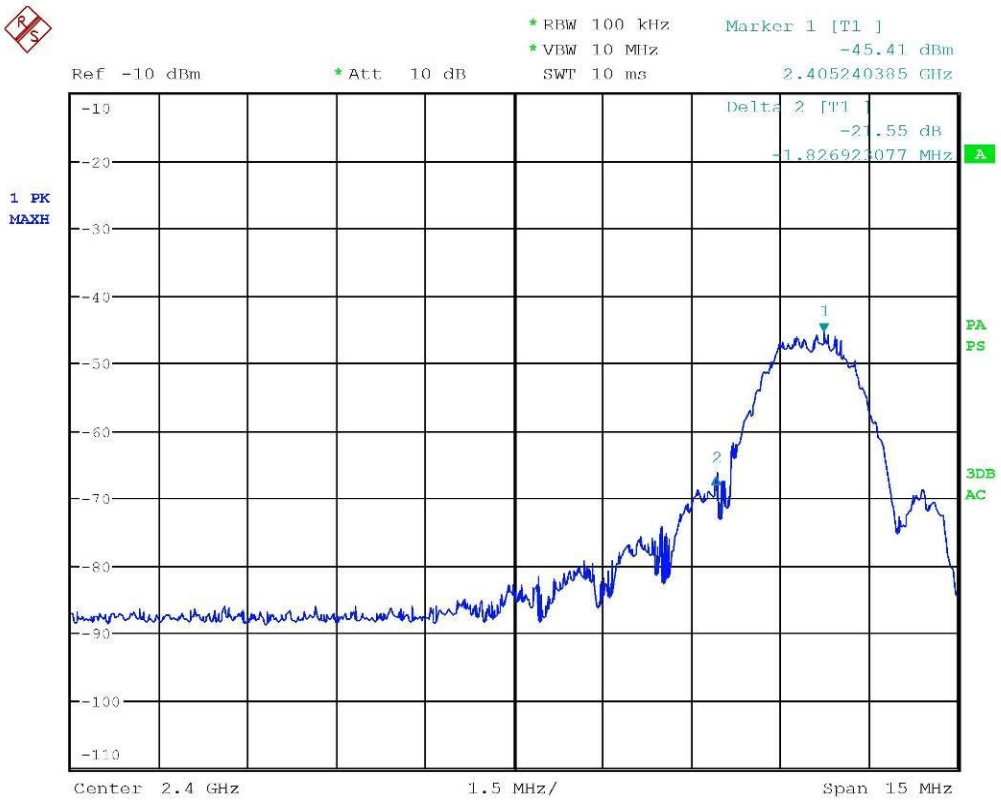
Sample	*Channel*	*Bandwidth*	*Graph(s)*	*Results*	
Kit #1	Lowest	1 MHz	G17197750*	--	Complies
Kit #1	Lowest	100 kHz	G17197751	2403,4131 MHz	Complies
Kit #2	Highest	1 MHz	G17197752	2481,2564 MHz	Complies
Kit #2	Highest	1 MHz	G17197753**	--	Complies

*: this graph shows the emissions in 2310 – 2390 MHz restricted band
**: this graph shows the emissions in 2483,5 – 2500 MHz restricted band

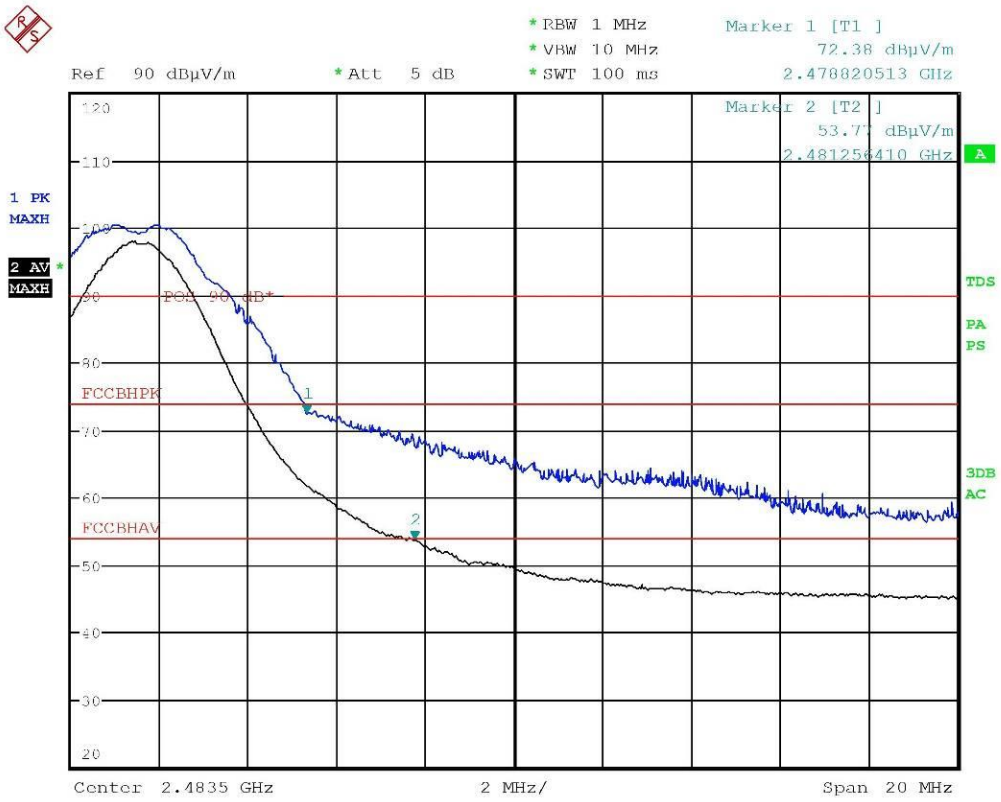
Graphs



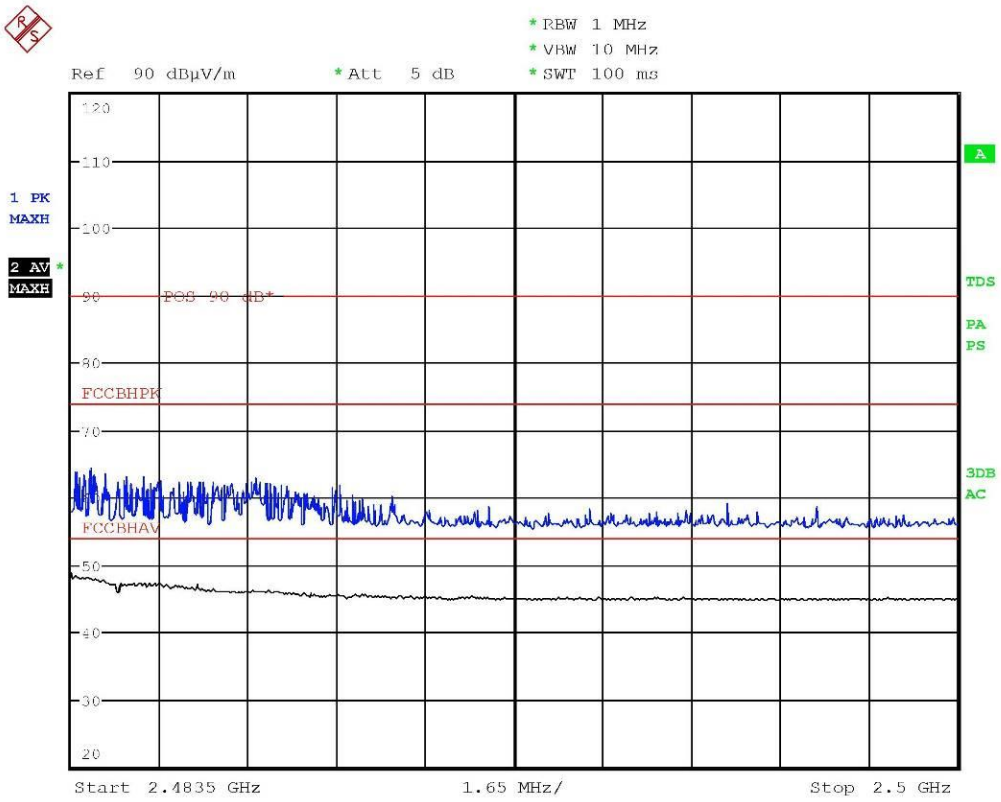
Segalla 17197750



Segalla 17197751



Segalla 17197752



Segalla 17197753

Result: The requirements are met

11.5 Fundamental emission output power

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 (b) (3)
- ANSI C63.10 cl. 11.9.1.1
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.3.1.1
- Internal procedure PM001
- See clause 4 of this test report
- Test date: March 26th, 2019
- Technician: M. Segalla

Test configuration

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S164
Measurement uncertainty: See clause 7 of this test report

Test specification

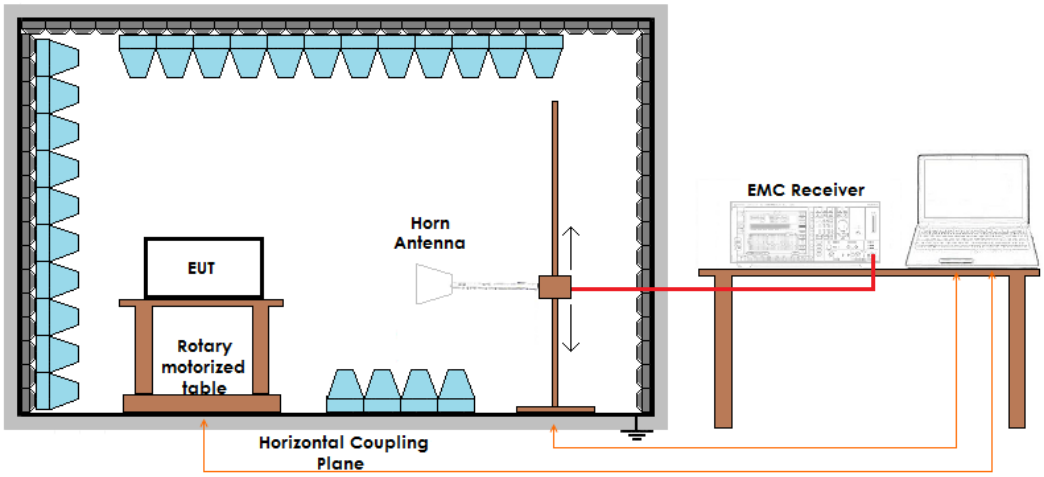
Port: Enclosure
Antenna polarization: Horizontal (H) – Vertical (V)
EUT – Antenna distance: 3 m
EUT height about the floor: 150 cm

Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
22	100	42

Acceptance limits:
For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt

Setup



Result

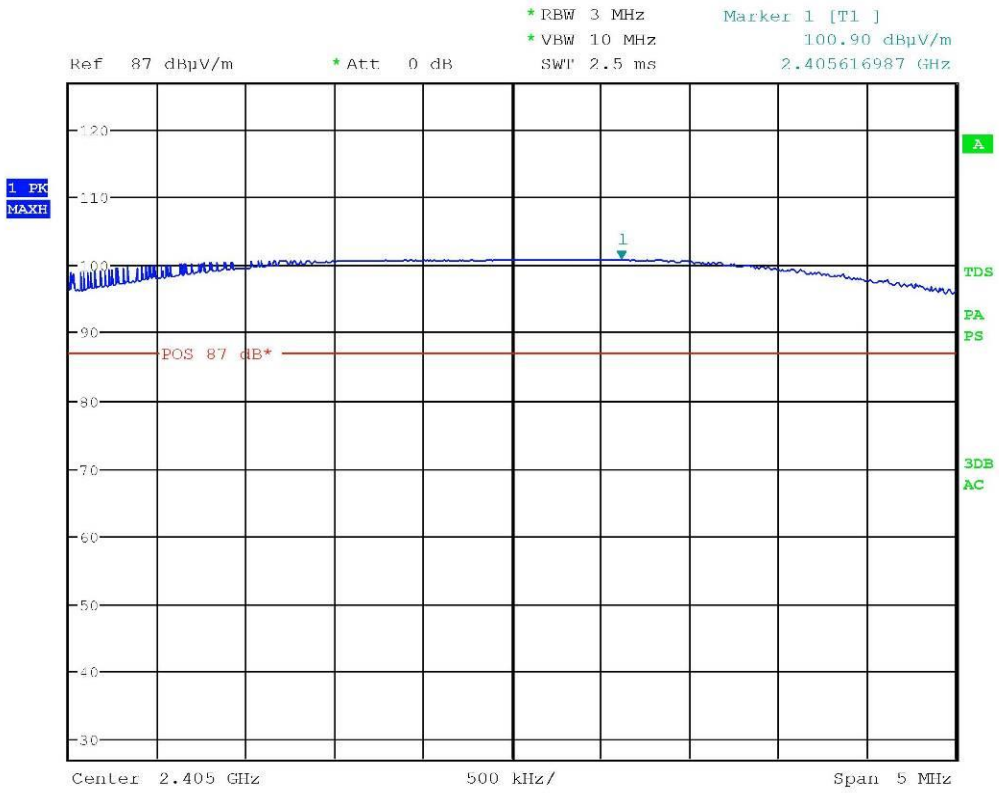
Sample	*Channel*	*Polarization*	*Graphs*	*Measured PK level (dBµV/m)*	*Peak Output Conducted Power (mW)*	*Remarks*
Kit #1	Lowest	Worst case	G17197725	100,90	2,613	--
Kit #2	Medium	Worst case	G17197733	102,40	3,691	--
Kit #3	Highest	Worst case	G17197738	101,90	3,289	--

Remarks: the above table shows the results of radiated measurements, in agreement with cl. 3.0 of KDB 558074 D01 DTS Meas Guidance v05r01.
Conducted measurements are not applicable because the antenna connector is not available.
The following formula, provided in document DA 00-705, has been used for the conversion between radiated to conducted values:

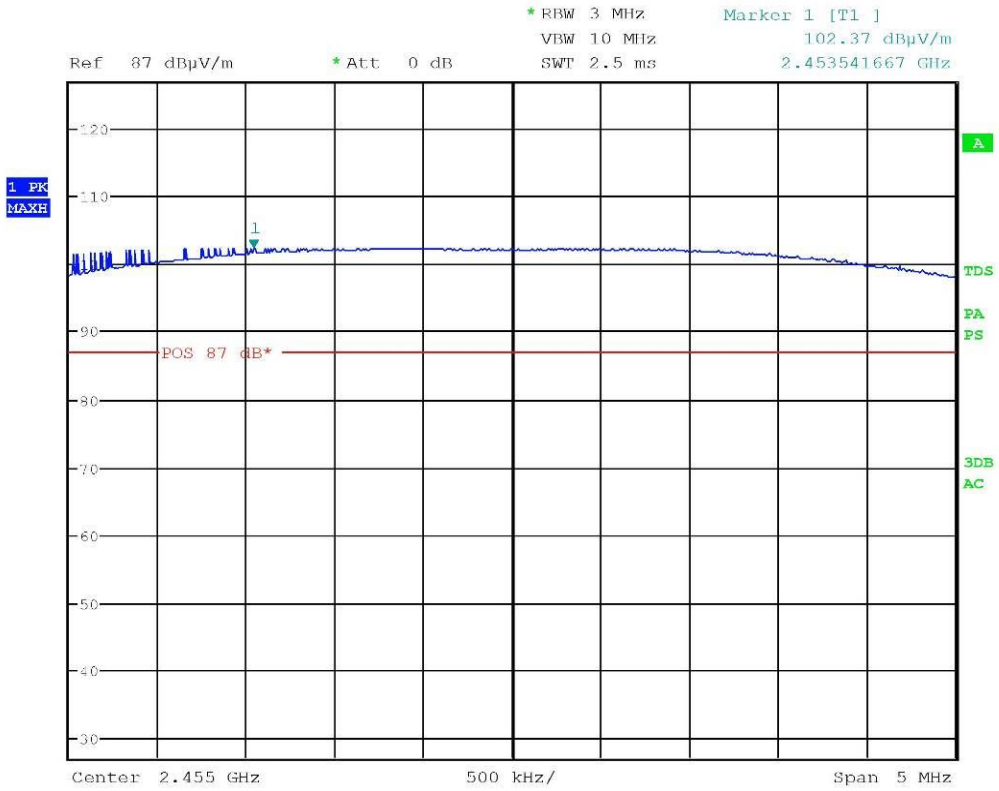
Conducted value = $(E \times d)^2 / (30 \times G)$

Where:
$E = (10^{(dB\mu V/m)/20})/1000000$, the maximum measured fundamental field strength in V/m
$G = 10^{dBi/10}$, the numeric gain of the transmitting antenna: 1,413 (1,5 dBi)
d = the distance in meters from which the field strength was measured (3 m)
P = the power in watts

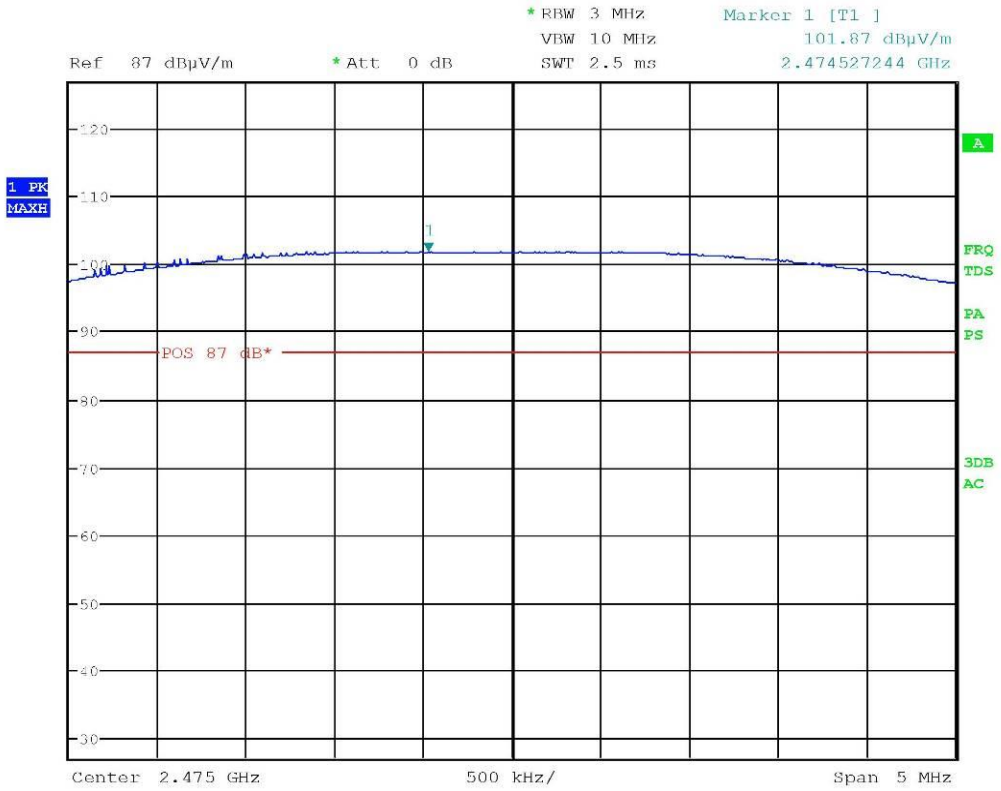
Graphs



Segalla 17197725



Segalla 17197733



Segalla 17197738

Result: The requirements are met

11.6 Maximum power spectral density level in the fundamental emission

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 (e)
- ANSI C63.10 cl. 11.10.2
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.4
- Internal procedure PM001
- See clause 4 of this test report
- Test date: May 10th, 2018
- Technician: M. Segalla

Test configuration

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S164
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
Antenna polarization: Horizontal (H) – Vertical (V)
EUT – Antenna distance: 3 m
EUT height about the floor: 150 cm

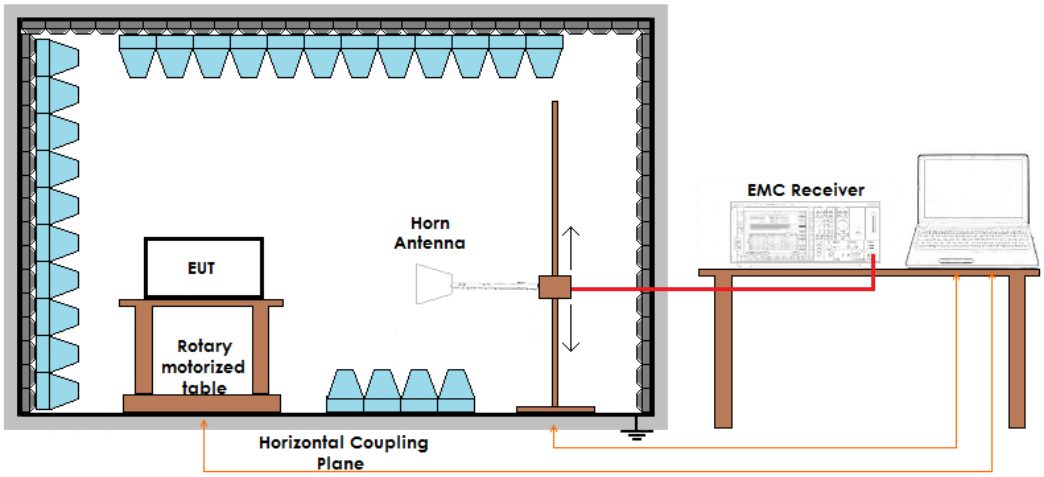
Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
22	100	42

Acceptance limits:

Frequency Range	*Power Spectral Density*
2400 – 2483,5 MHz	8 dBm/3 kHz 6,31 mW/3 kHz

Setup



Result

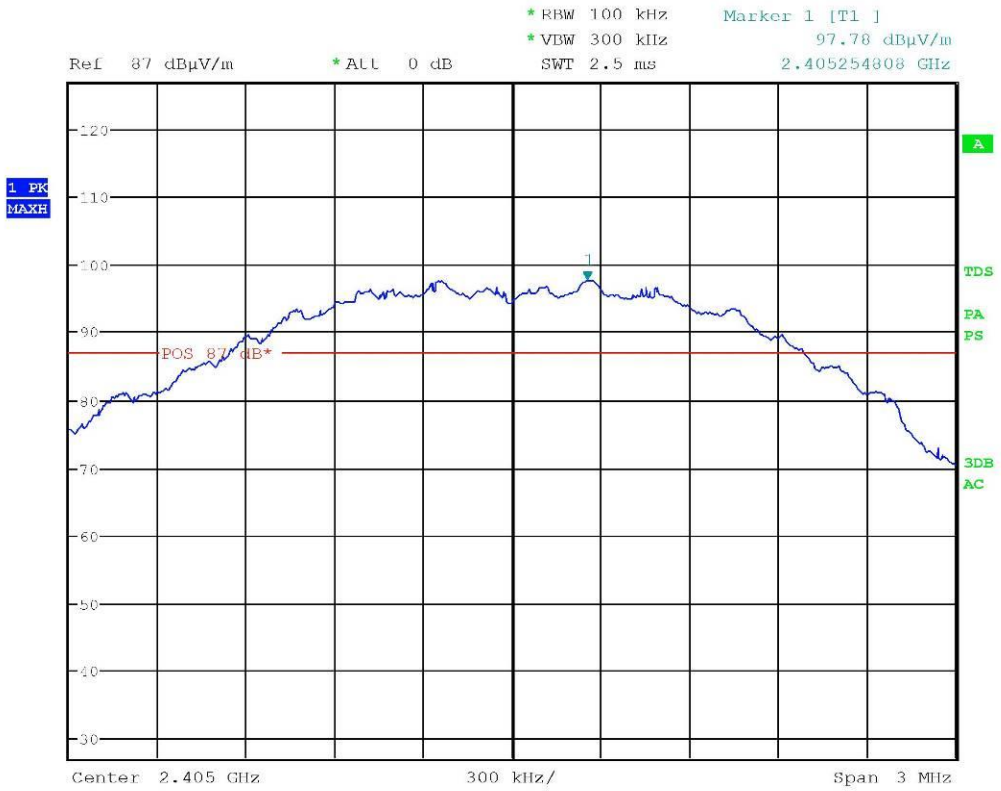
Sample	*Channel*	*Polarization*	*Graphs*	*Measured PK level (dBµV/m)*	*Power Spectral Density (mW)*	*Remarks*
Kit #1	Lowest	Worst case	G17197726	97,78	1,274	--
Kit #2	Medium	Worst case	G17197734	98,04	1,352	--
Kit #3	Highest	Worst case	G17197739	98,26	1,423	--

Remarks: the above table shows the results of radiated measurements, in agreement with cl. 3.0 of KDB 558074 D01 DTS Meas Guidance v05r01.
Conducted measurements are not applicable because the antenna connector is not available.
The following formula, provided in document DA 00-705, has been used for the conversion between radiated to conducted values:

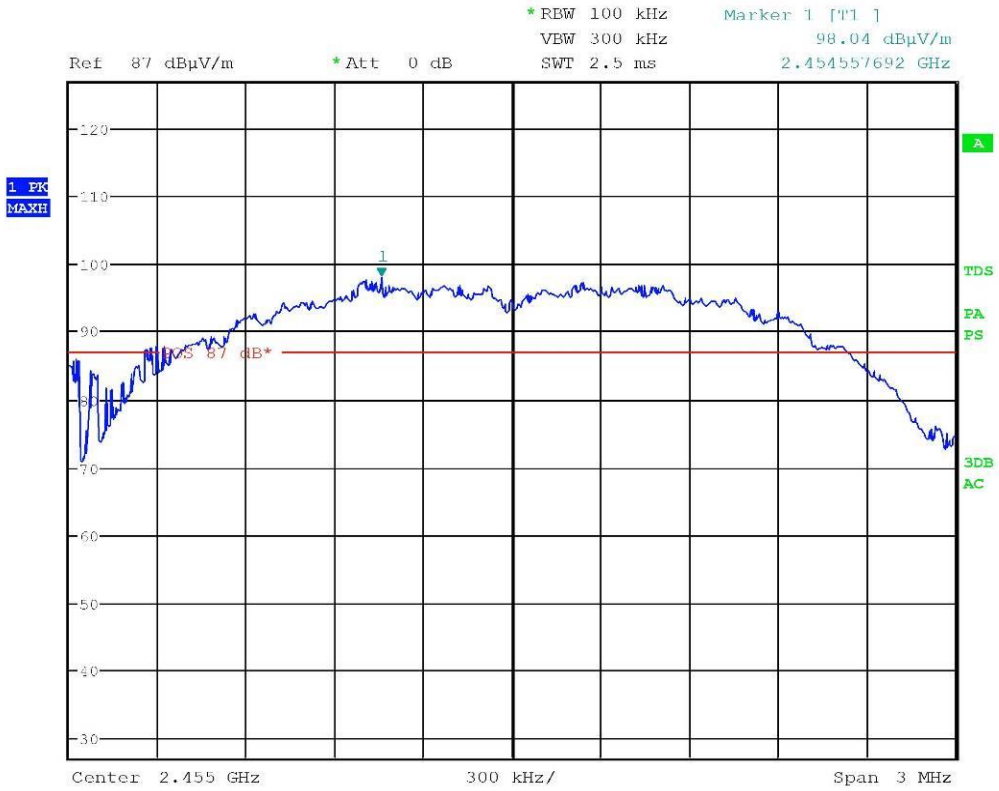
Conducted value = $(E \times d)^2 / (30 \times G)$

Where:
$E = (10^{(dB\mu V/m)/20})/1000000$, the maximum measured fundamental field strength in V/m
$G = 10^{dBi/10}$, the numeric gain of the transmitting antenna: 1,413 (1,5 dBi)
d = the distance in meters from which the field strength was measured (3 m)
P = the power in watts

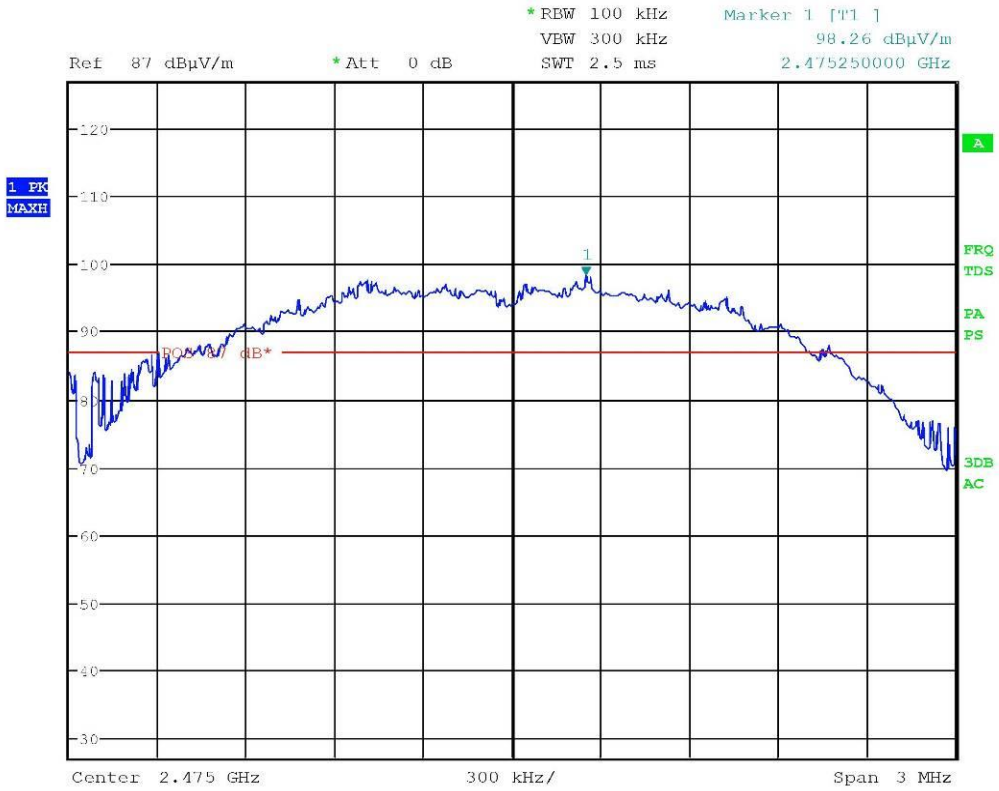
Graphs



Segalla 17197726



Segalla 17197734



Segalla 17197739

Result: The requirements are met

11.7 Spurious Emission

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part. 15.247 (d)
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.5 and 8.6
- ANSI C63.10 cl. 11.11, 11.12.1
- Internal procedure PM001
- See clause 4 of this test report
- Test date: May 10th, 2018
- Technician: M. Segalla

Test configuration

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S136, CMC S164, CMC S290
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
Antenna polarization: Horizontal (H) – Vertical (V)
EUT height about the floor: 150 cm
EUT – Antenna distance: 3 m
Detector AV + Peak

Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
22	100	45

Acceptance limits

Acceptance limits for emissions in restricted frequency bands (according FCC Part 15.209)		
Frequency (MHz)	*AV limits [dB(µV/m)]*	*Peak limits [dB(µV/m)]*
> 1000	54	74

The restricted frequency bands are listed in the following table (according to FCC Part 15.205)

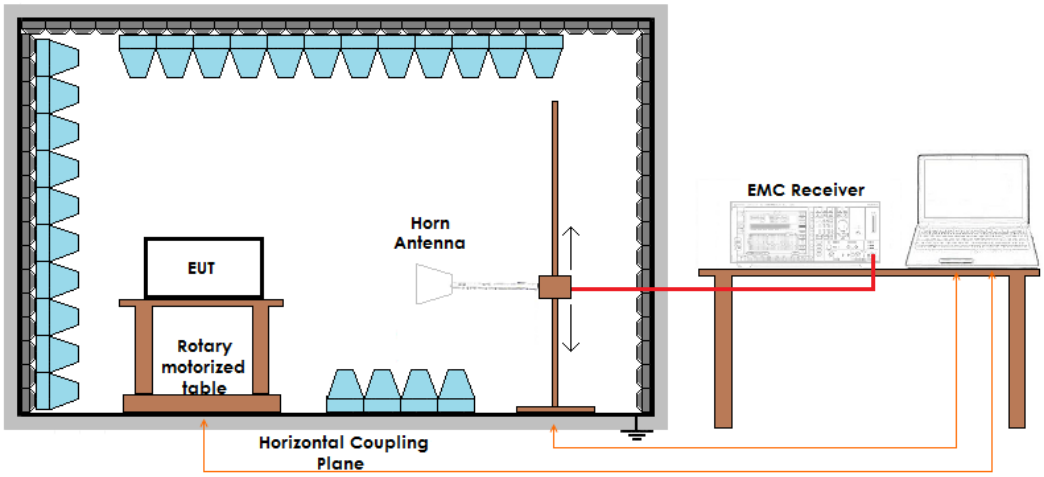
MHz	***MHz***	***MHz***	***GHz***
0,09 – 0,110	16,42 – 16,423	399,9 – 410	4,5 – 5,15
0,495 – 0,505	16,69475 – 16,69525	608 – 614	5,35 – 5,46
2,1735 – 2,1905	16,80425 – 16,80475	960 – 1240	7,25 – 7,75
4,125 – 4,128	25,5 – 25,67	1300 – 1427	8,025 – 8,5
4,17725 – 4,17775	37,5 – 38,25	1435 – 1626,5	9,0 – 9,2
4,20725 – 4,20775	73 – 74,6	1645,5 – 1646,5	9,3 – 9,5
6,215 – 6,218	74,8 – 75,2	1660 – 1710	10,6 – 12,7
6,26775 – 6,26825	108 – 121,94	1718,8 – 1722,2	13,25 – 13,4
6,31175 – 6,31225	123 – 138	2200 – 2300	14,47 – 14,5
8,291 – 8,294	149,9 – 150,05	2310 – 2390	15,35 – 16,2
8,362 – 8,366	156,52475 – 156,52525	2483,5 – 2500	17,7 – 21,4
8,41425 – 8,41475	162,0125 – 167,17	3260 – 3267	23,6 – 24
12,29 – 12,293	167,72 – 173,2	3332 – 3339	31,2 – 31,8
12,57675 – 12,57725	322 – 335,4	3600 – 4400	Above 38,6
13,36 – 13,41			

Acceptance limits for emissions in non-restricted frequency bands (according to ANSI C63.10 cl. 11.11.1)

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

a) If the maximum peak conducted output power procedure was used to demonstrate compliance as described in 9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz
b) If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz.
c) In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required

Setup



Remarks: reference graphs are reported on cl. 11.3 of this Test Report

Result – AV detector

Harmonic	*Lowest channel (Kit #1)*		*Medium channel (Kit #2)*		*Highest channel (Kit #3)*		*Results*
	Level (dBµV/m)	*Limits (dBµV/m)*	*Level (dBµV/m)*	*Limits (dBµV/m)*	*Level (dBµV/m)*	*Limits (dBµV/m)*	
II	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
III	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
IV	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
V	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
VI	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
VII	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
VIII	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
IX	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
X	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies

Remarks: EUT was tested in 3 orthogonal planes. The results in this table show the highest values. No spurious other than harmonics have been found. The results have been extrapolated to the specified distance using an extrapolation factor. For all harmonics it was considered the limit of 54 dBµV/m as a worse case

Result – Peak detector

Harmonic	Lowest channel (Kit #1)		Medium channel (Kit #2)		Highest channel (Kit #3)		Results
	Level (dBµV/m)	Limits (dBµV/m)	Level (dBµV/m)	Limits (dBµV/m)	Level (dBµV/m)	Limits (dBµV/m)	
II	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
III	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
IV	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
V	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
VI	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
VII	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
VIII	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
IX	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
X	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies

Remarks: EUT was tested in 3 orthogonal planes. The results in this table show the highest values. No spurious other than harmonics have been found. The results have been extrapolated to the specified distance using an extrapolation factor. For all harmonics it was considered the limit of 74 dBµV/m as a worse case

Result: The requirements are met