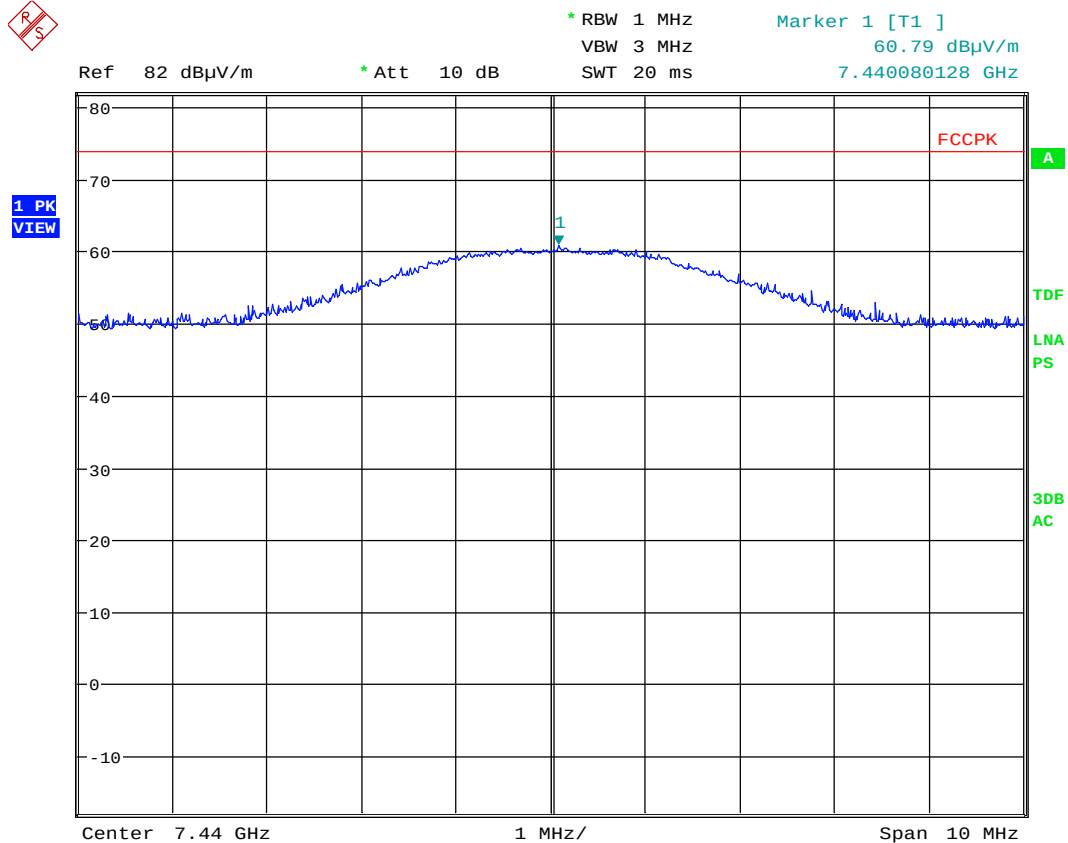
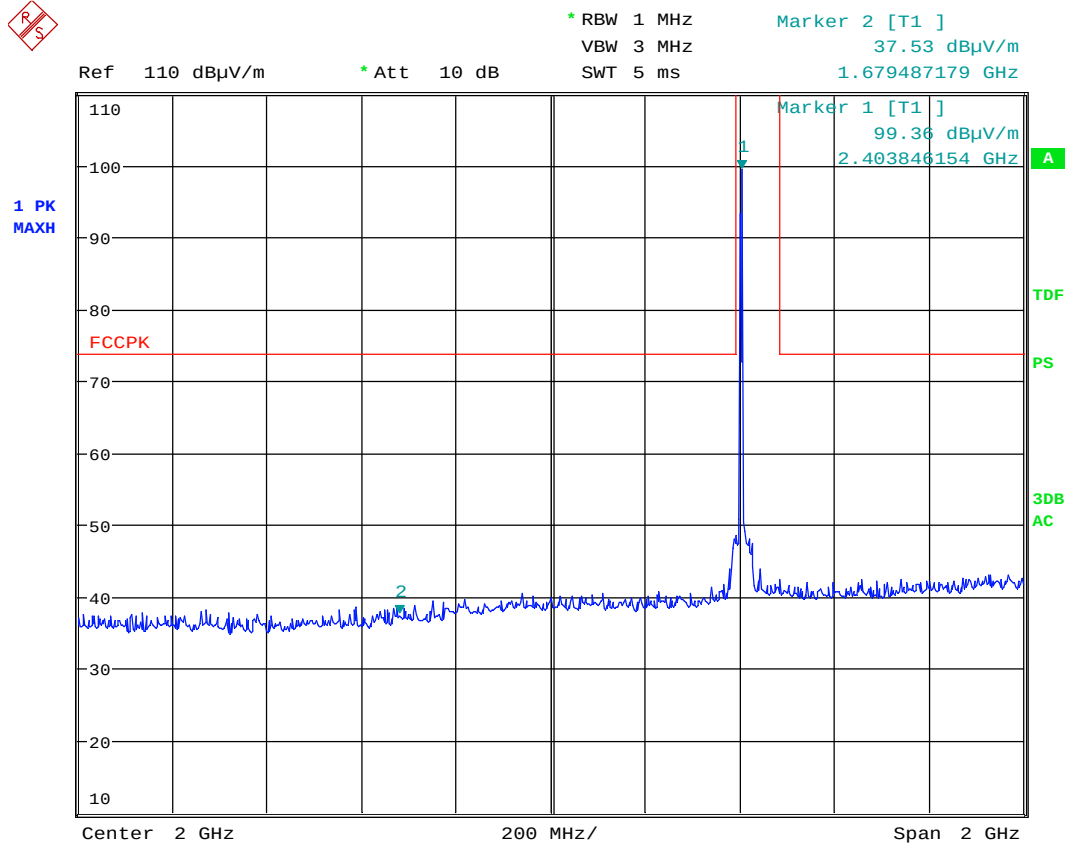




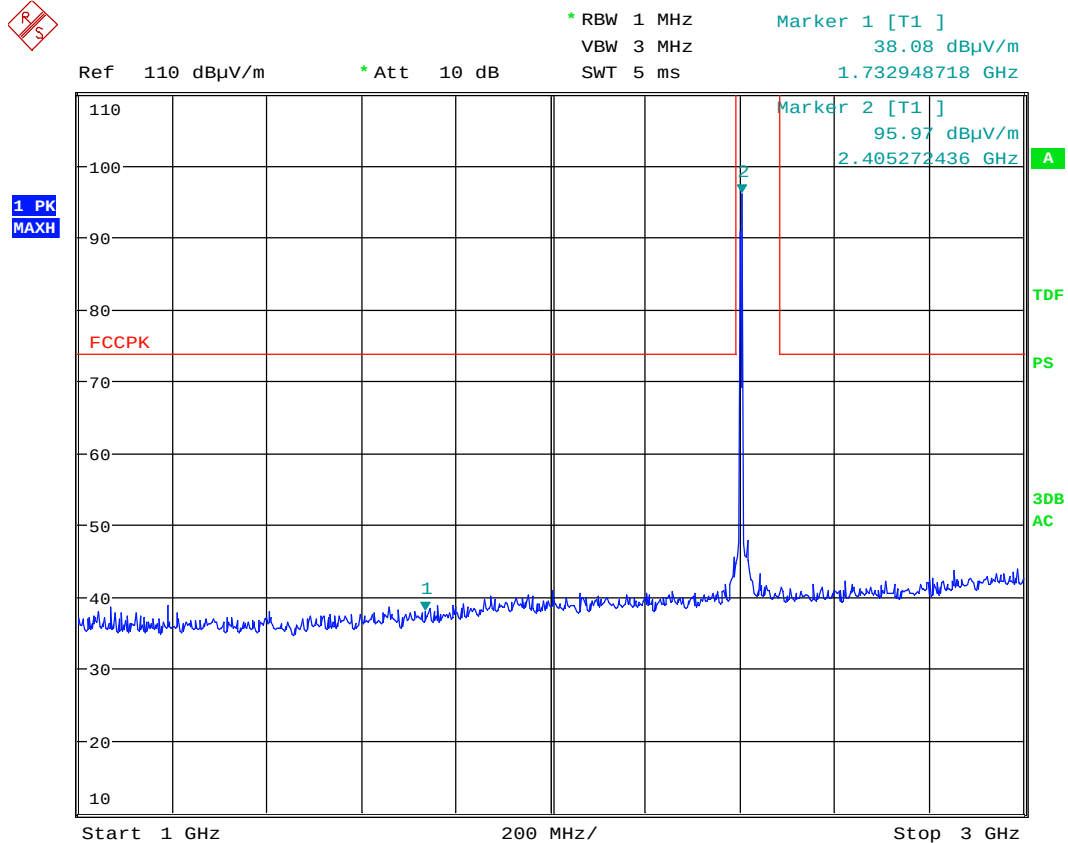
Date: 5.JUN.2019 17:55:07

3rd har, PK, ch2480MHz, 8DPSK – HP



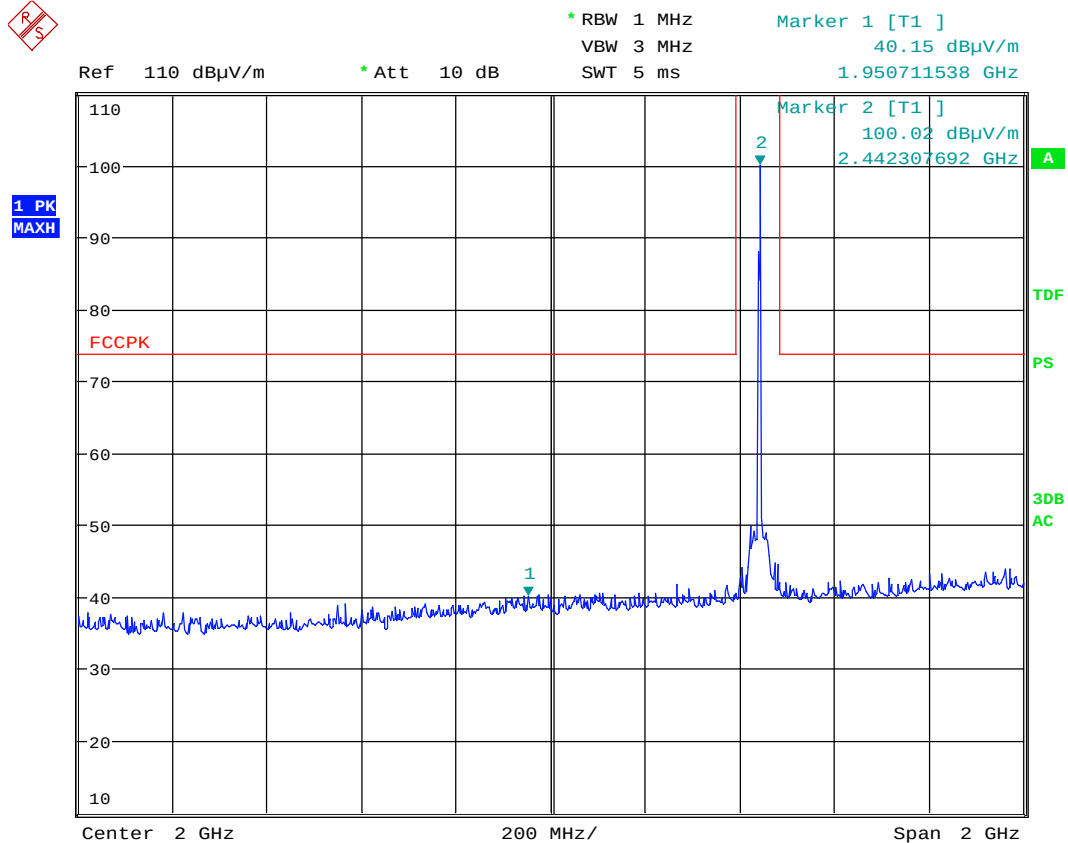
Date: 4.JUN.2019 09:13:53

VP, 1 - 3GHz , 8DPSK, ch2402MHz, PK scan



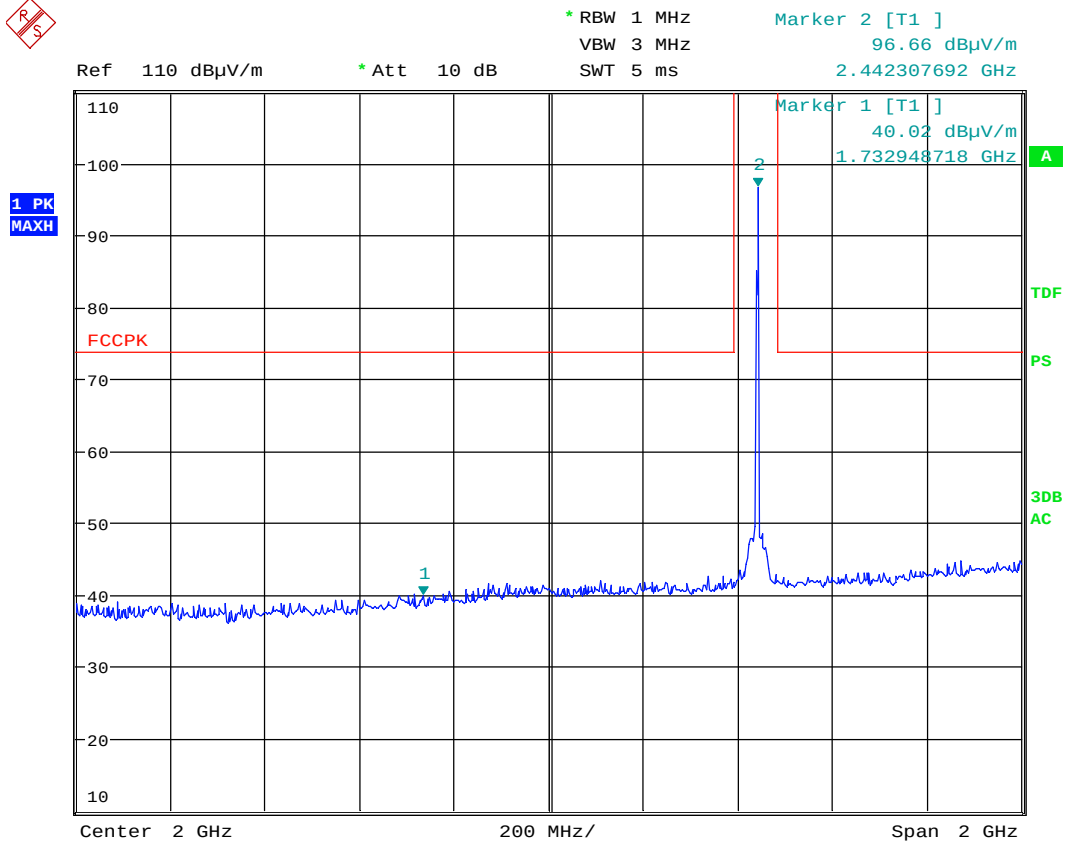
Date: 4.JUN.2019 09:18:41

HP, 1 - 3GHz , 8DPSK, Ch2402MHz, PK scan



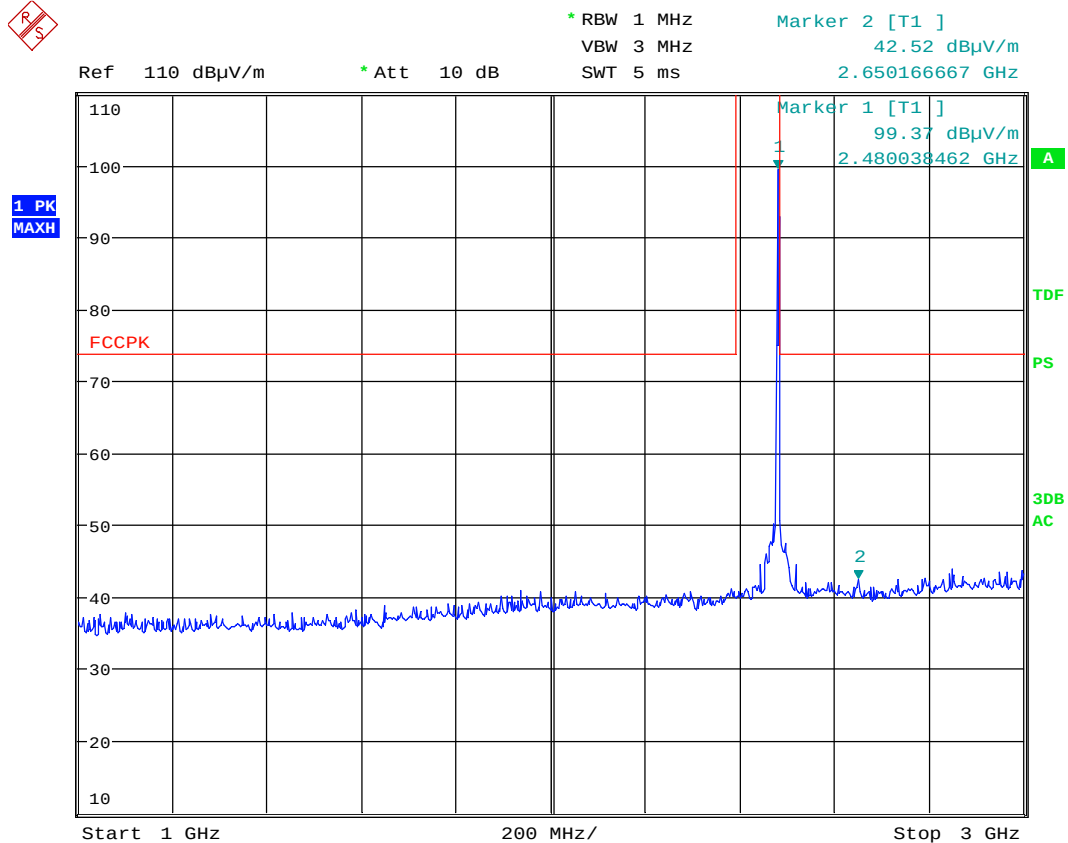
Date: 4.JUN.2019 09:31:01

VP, 1 - 3GHz , 8DPSK, ch2441MHz, PK scan



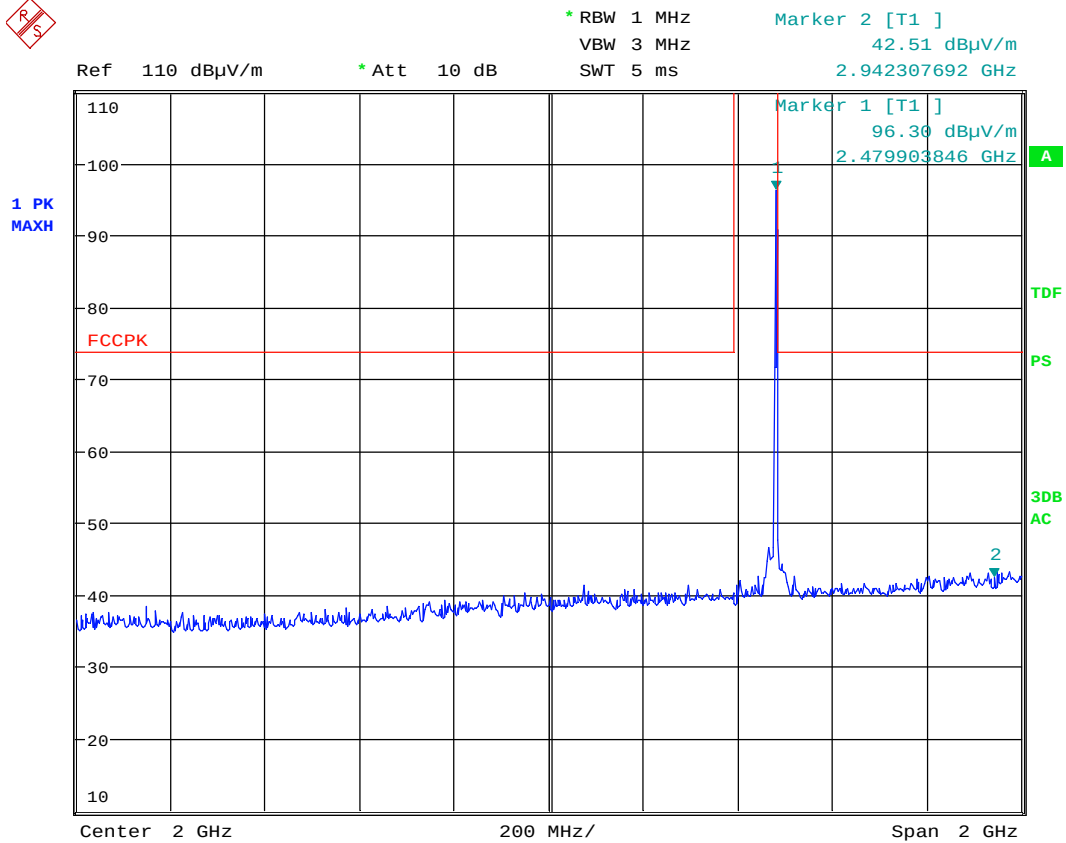
Date: 4.JUN.2019 09:20:00

HP, 1 - 3GHz , 8DPSK, Ch2441MHz, PK scan



Date: 4.JUN.2019 09:36:04

VP, 1 - 3GHz , 8DPSK, ch2480MHz, PK scan



Date: 4.JUN.2019 09:39:51

HP, 1 - 3GHz , 8DPSK, Ch2480MHz, PK scan

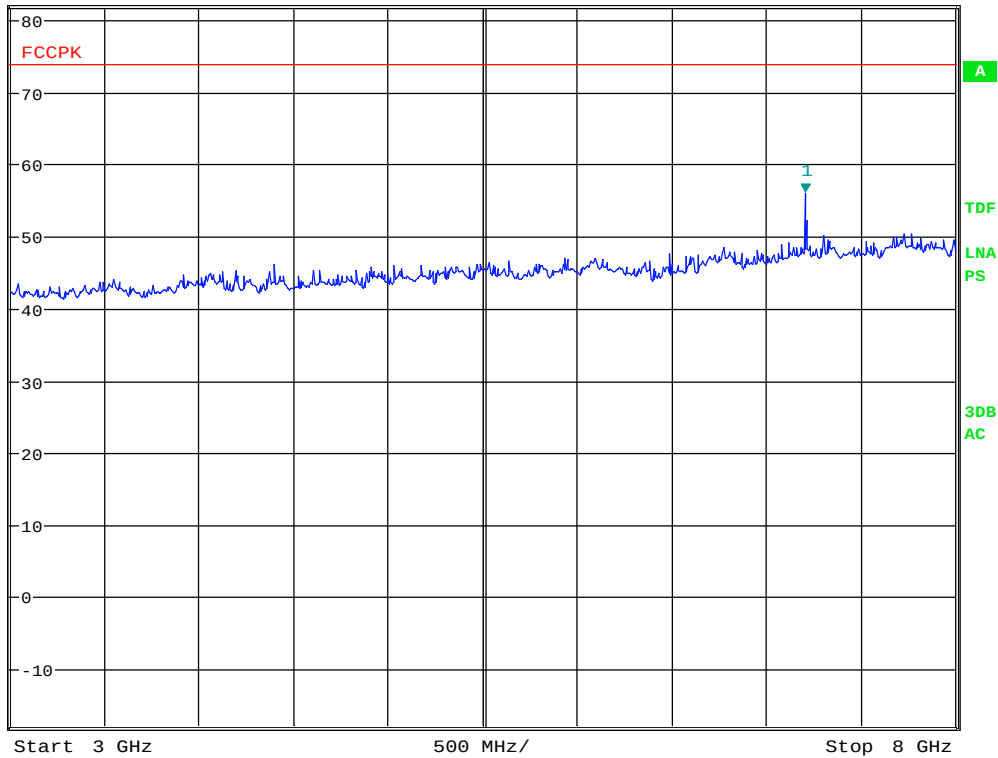


* RBW 1 MHz
VBW 3 MHz
SWT 30 ms
Marker 1 [T1]
56.12 dBμV/m
7.206448718 GHz

Ref 82 dBμV/m

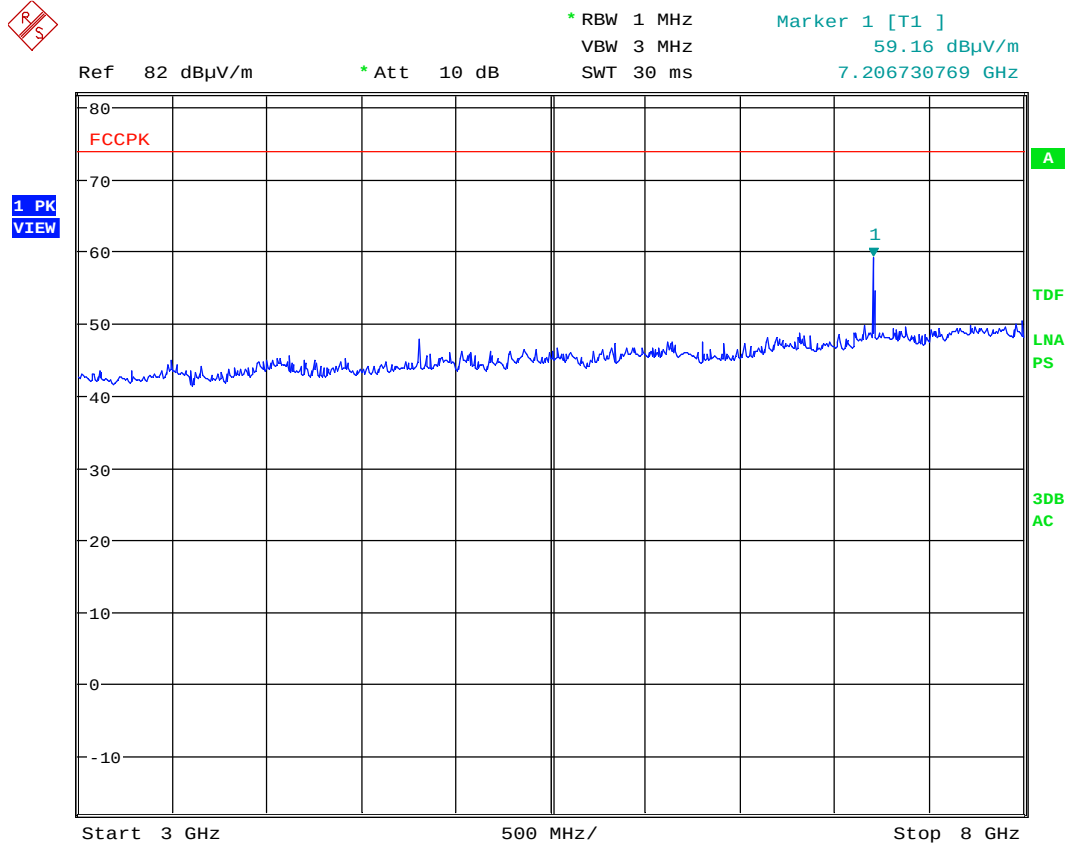
* Att 10 dB

1 PK
VIEW



Date: 5.JUN.2019 17:48:37

VP, 3 - 8GHz , 8DPSK, ch2402MHz, PK scan



Date: 5.JUN.2019 17:46:49

HP, 3 - 8GHz , 8DPSK,ch2402MHz, PK scan



* RBW 1 MHz

Marker 1 [T1]

VBW 3 MHz

53.11 dBμV/m

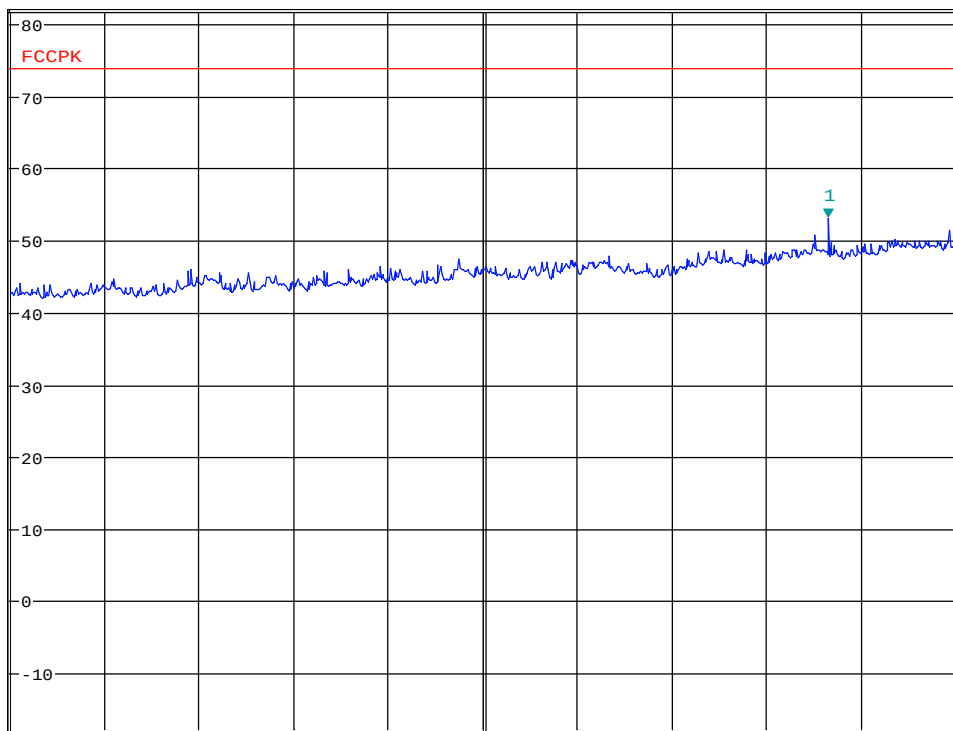
SWT 30 ms

7.326923077 GHz

Ref 82 dBμV/m

* Att 10 dB

1 PK
VIEW



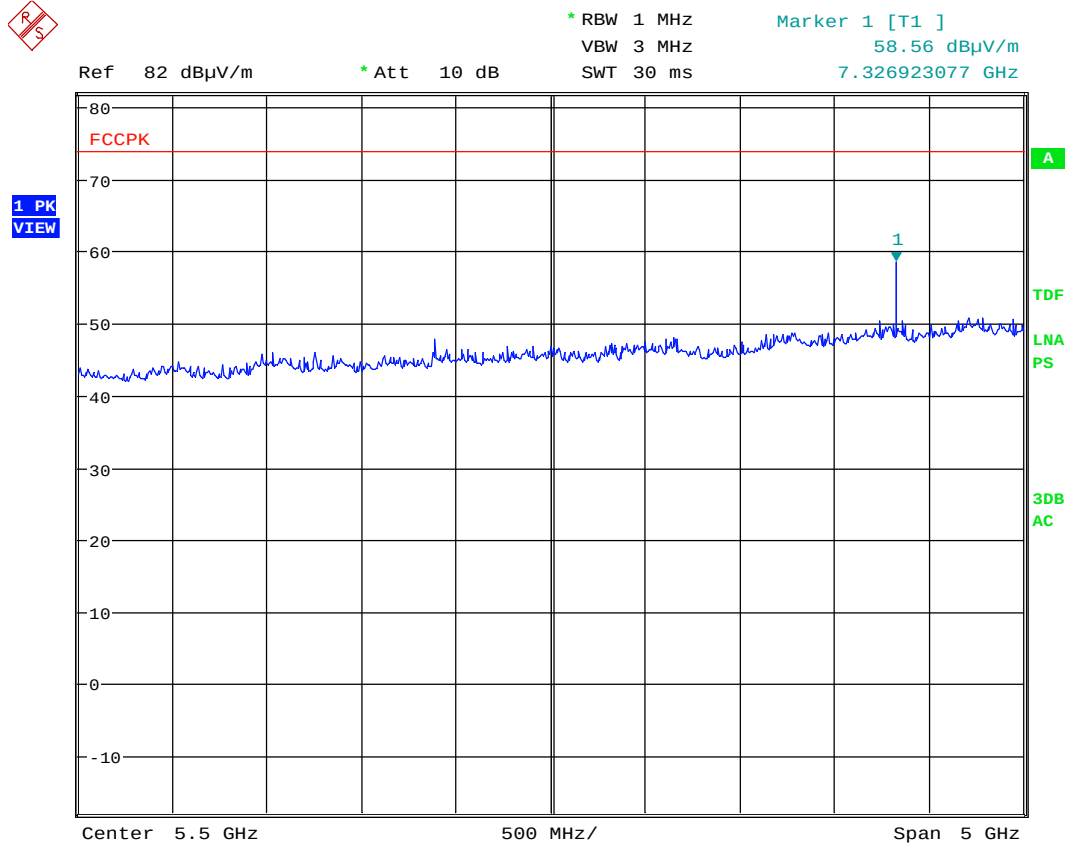
Center 5.5 GHz

500 MHz/

Span 5 GHz

Date: 5.JUN.2019 17:50:03

VP, 3 - 8GHz , 8DPSK, ch2441MHz, PK scan



Date: 5.JUN.2019 17:51:23

HP, 3 - 8GHz , 8DPSK,ch2441MHz, PK scan

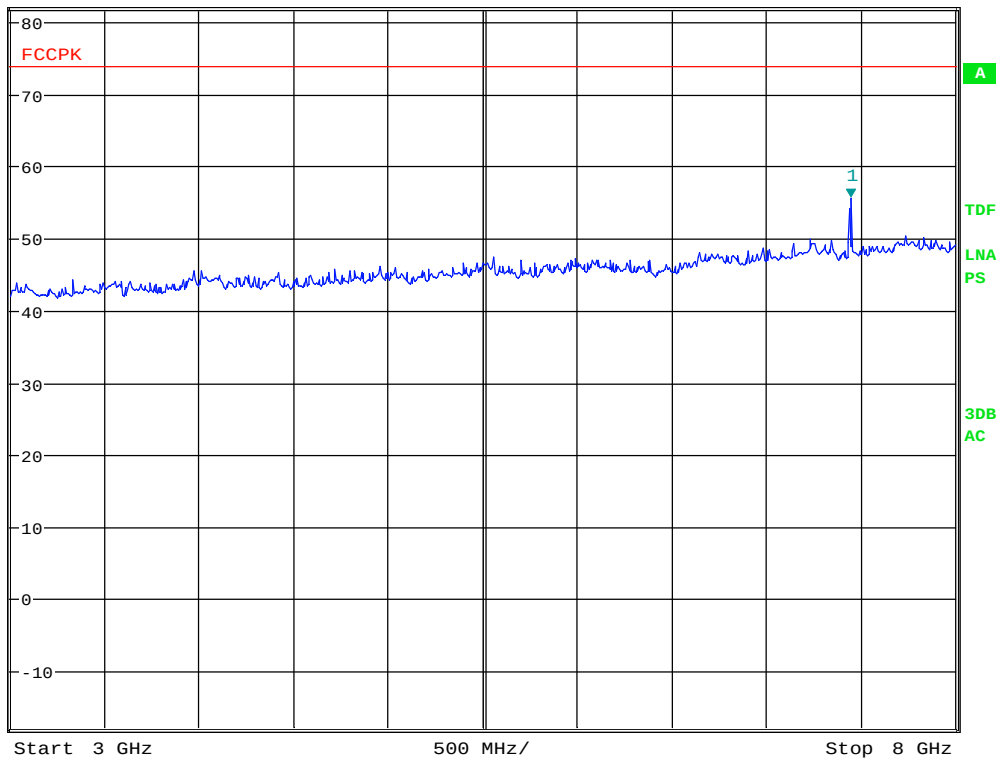


* RBW 1 MHz
VBW 3 MHz
SWT 30 ms
Marker 1 [T1]
55.73 dBμV/m
7.447115385 GHz

Ref 82 dBμV/m

* Att 10 dB

1 PK
VIEW



Date: 5.JUN.2019 17:56:04

VP, 3 - 8GHz , 8DPSK, ch2480MHz, PK scan

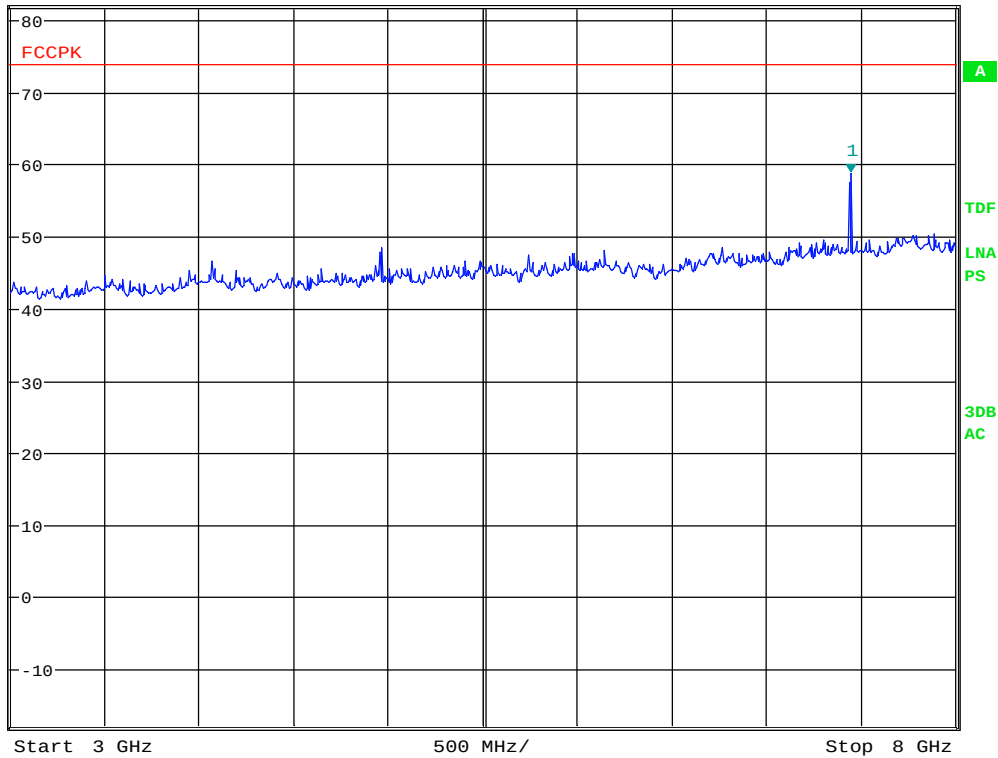


* RBW 1 MHz
VBW 3 MHz
SWT 30 ms
Marker 1 [T1]
58.71 dBμV/m
7.447115385 GHz

Ref 82 dBμV/m

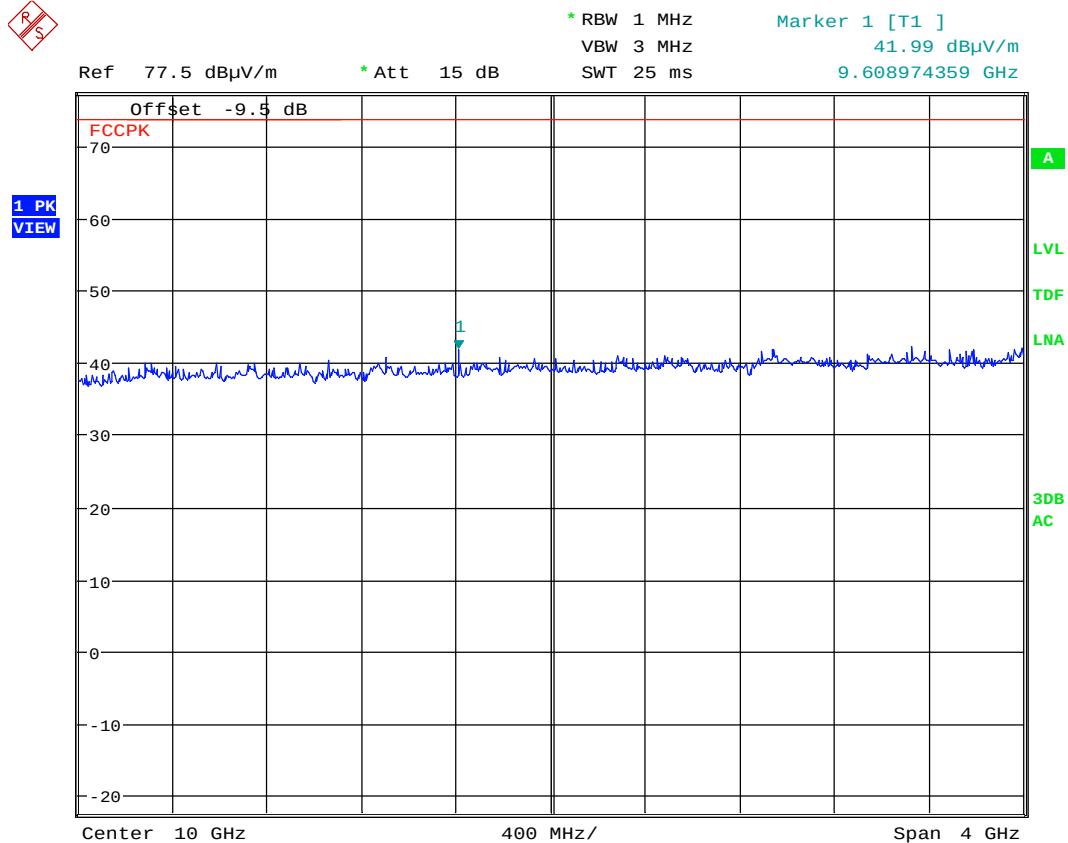
* Att 10 dB

1 PK
VIEW



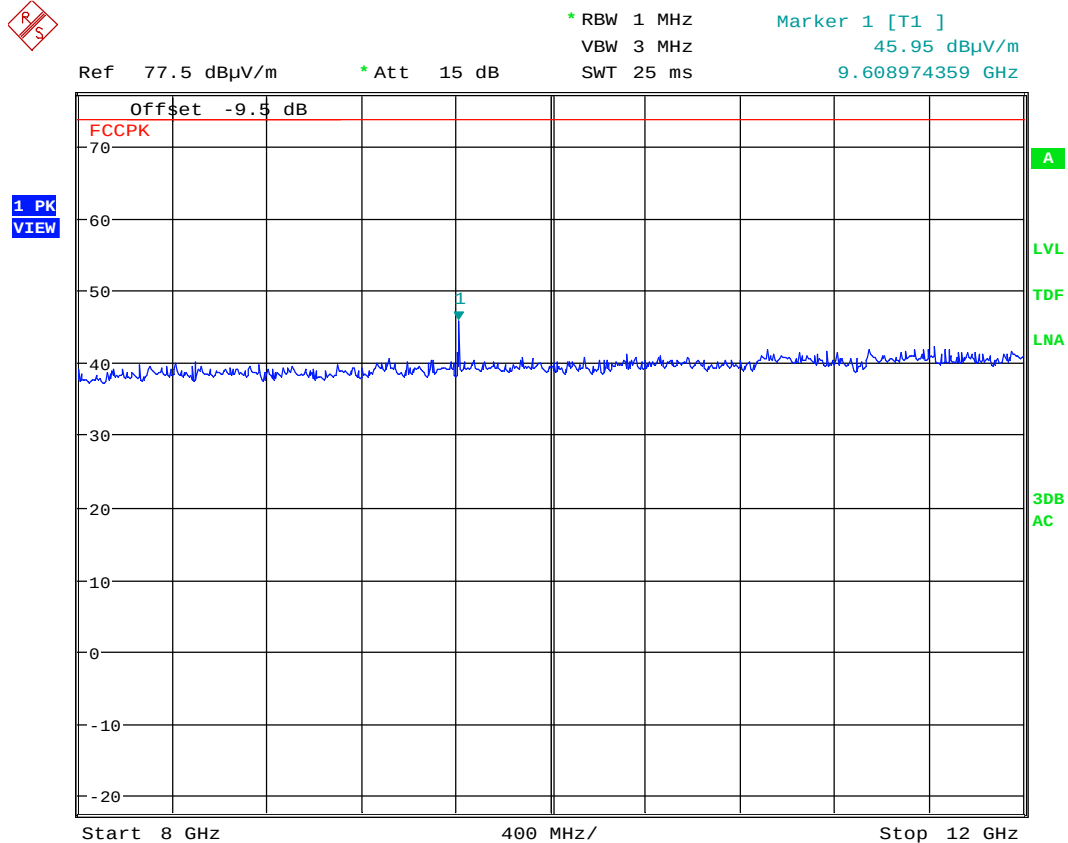
Date: 5.JUN.2019 17:53:57

HP, 3 - 8GHz , 8DPSK,ch2480MHz, PK scan



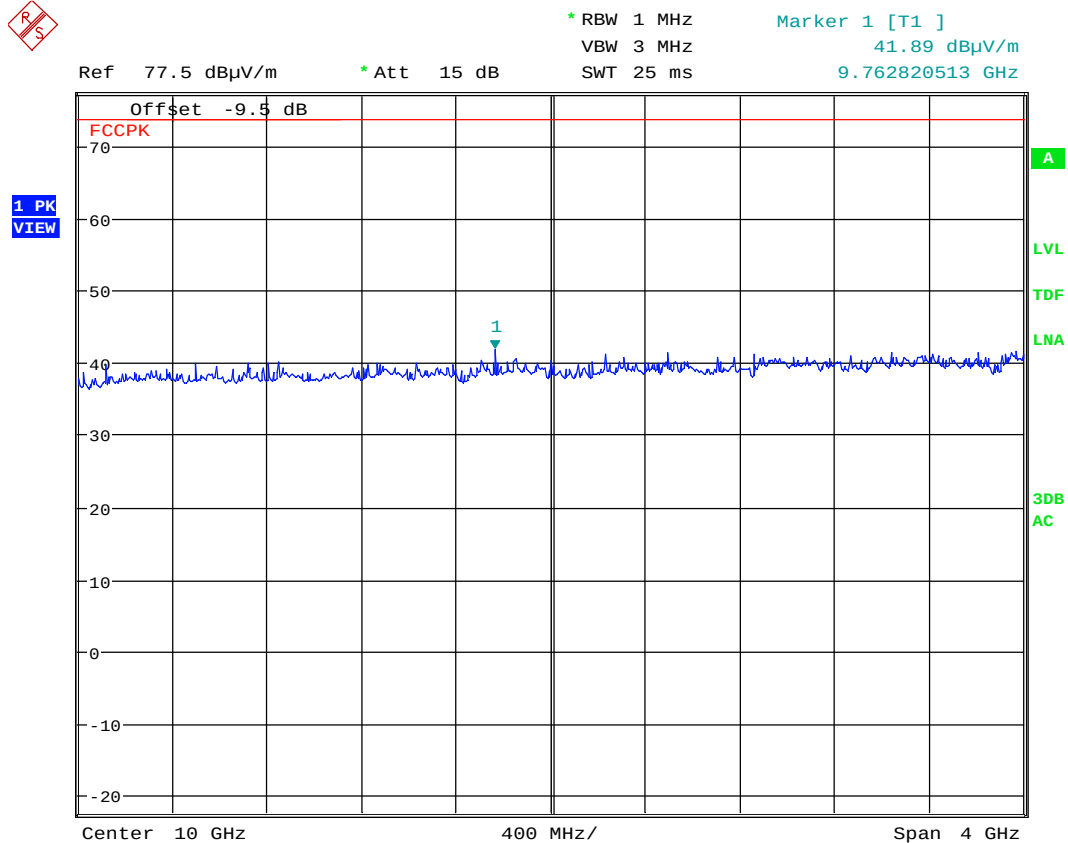
Date: 5.JUN.2019 19:24:50

VP, 8 - 12GHz , 8DPSK,ch2402MHz, PK scan,@ 1m distance



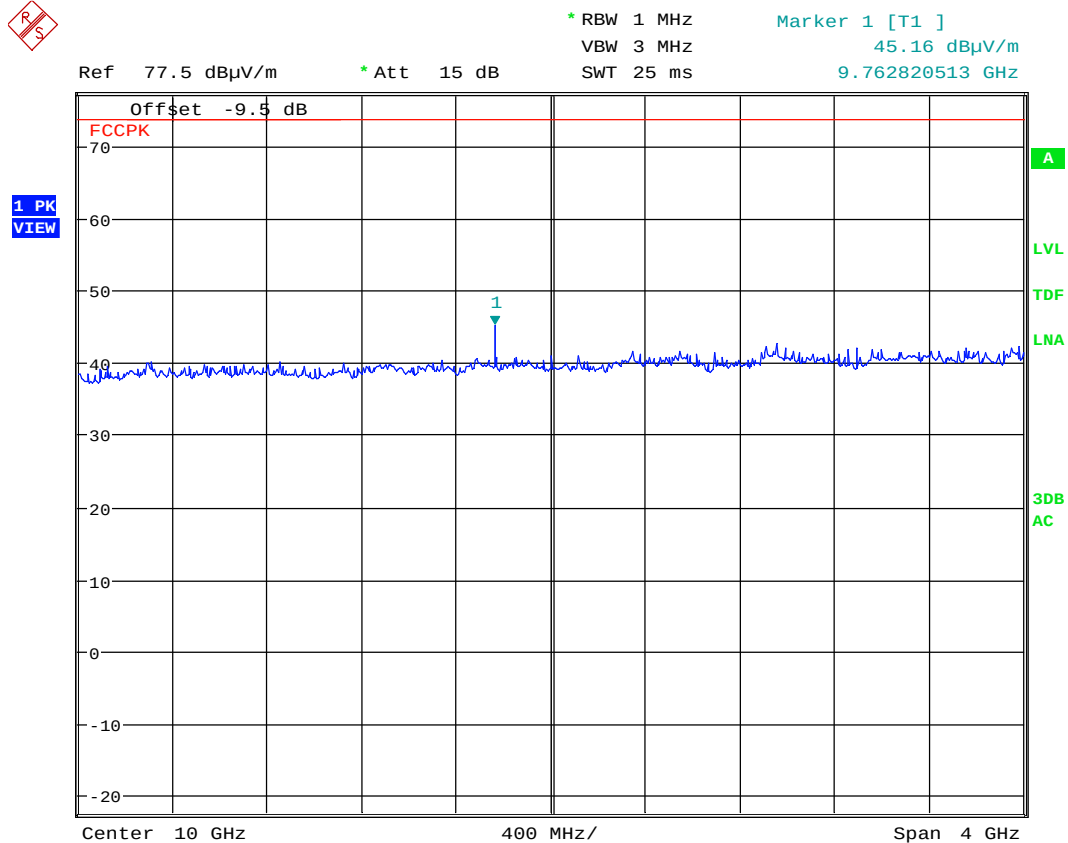
Date: 5.JUN.2019 19:24:18

HP, 8 - 12GHz , 8DPSK,ch2402MHz, PK scan, @ 1m distance



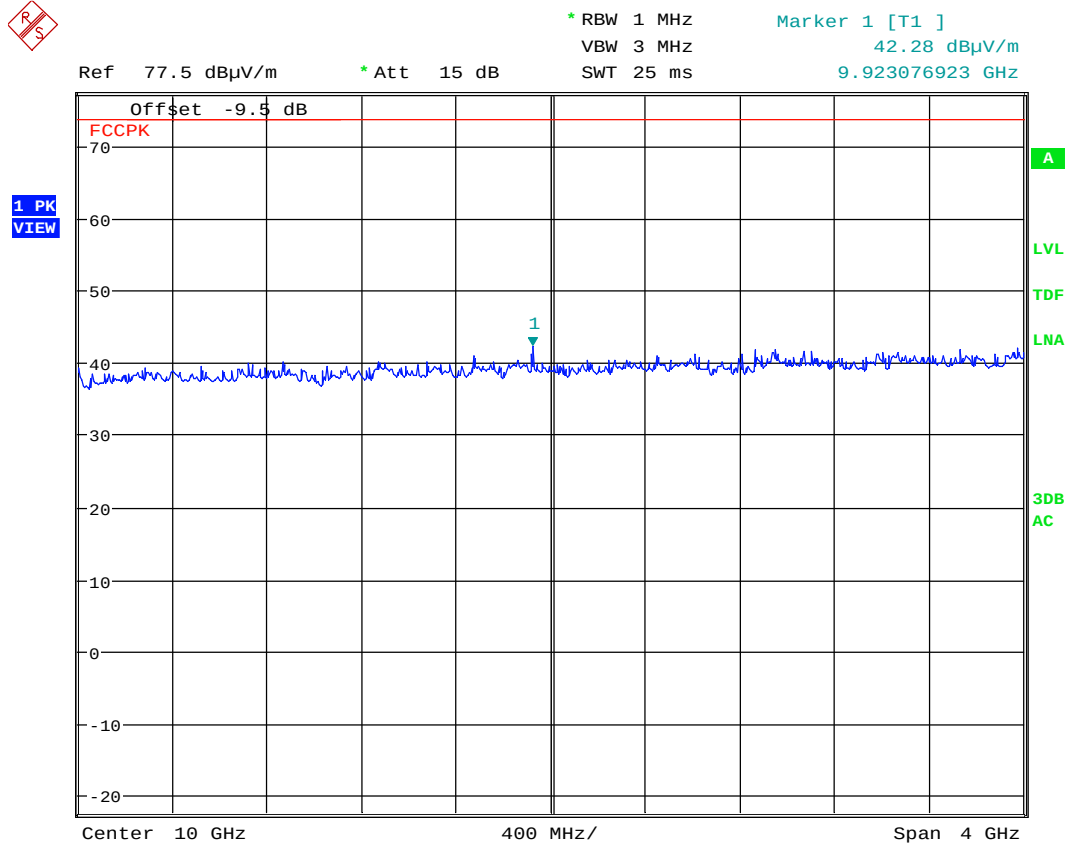
Date: 5.JUN.2019 19:26:43

VP, 8 - 12GHz , 8DPSK,ch2441MHz, PK scan,@ 1m distance



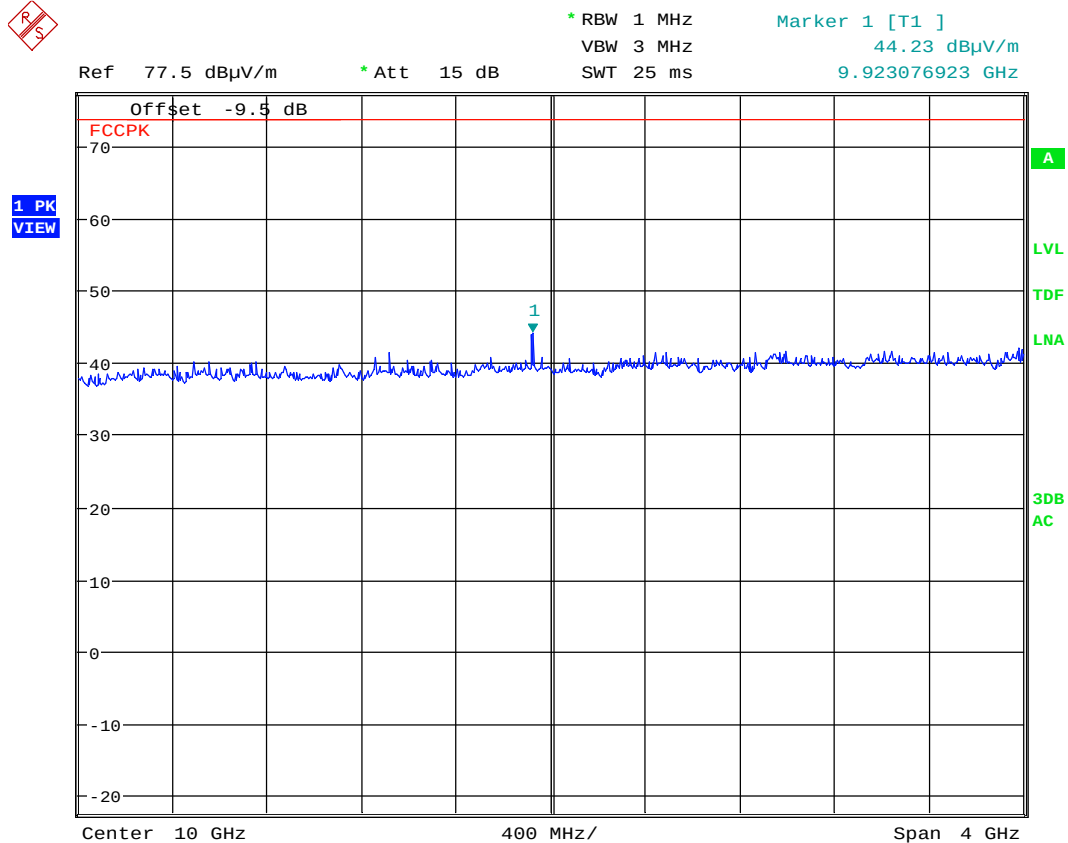
Date: 5.JUN.2019 19:26:19

HP, 8 - 12GHz , 8DPSK,ch2441MHz, PK scan, @ 1m distance



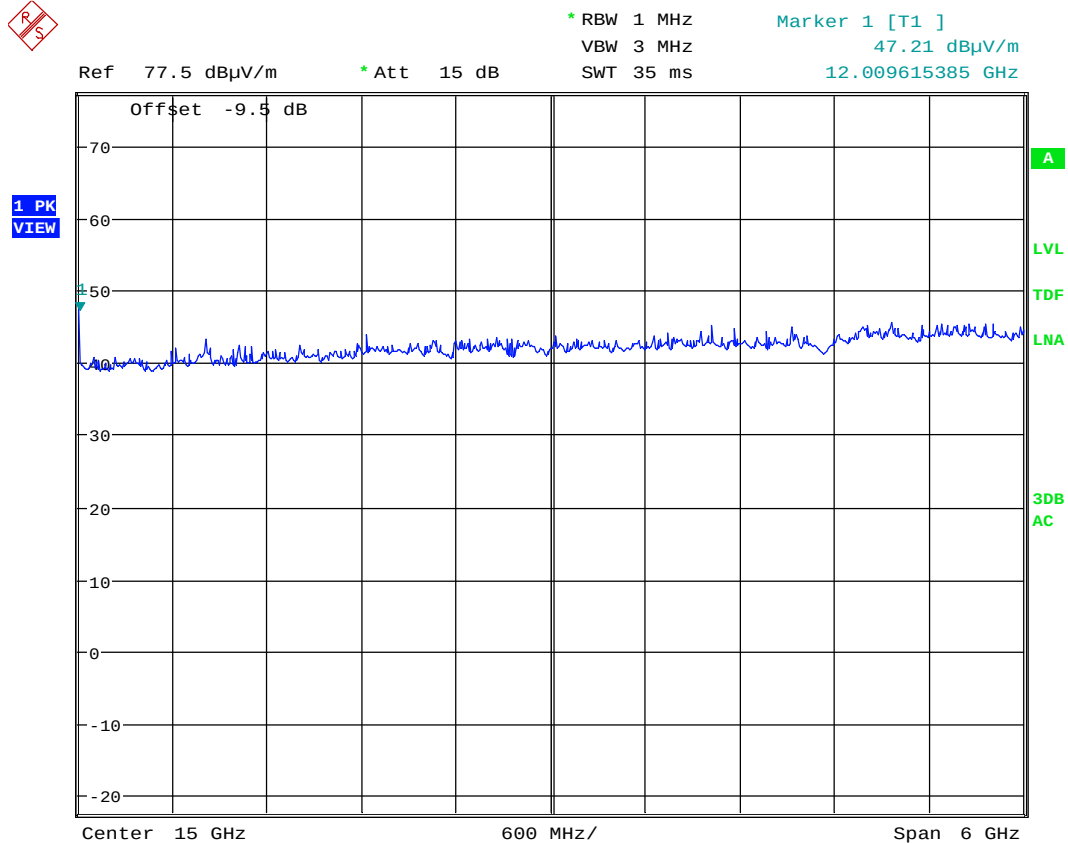
Date: 5.JUN.2019 19:28:04

VP, 8 - 12GHz , 8DPSK,ch2480MHz, PK scan,@ 1m distance



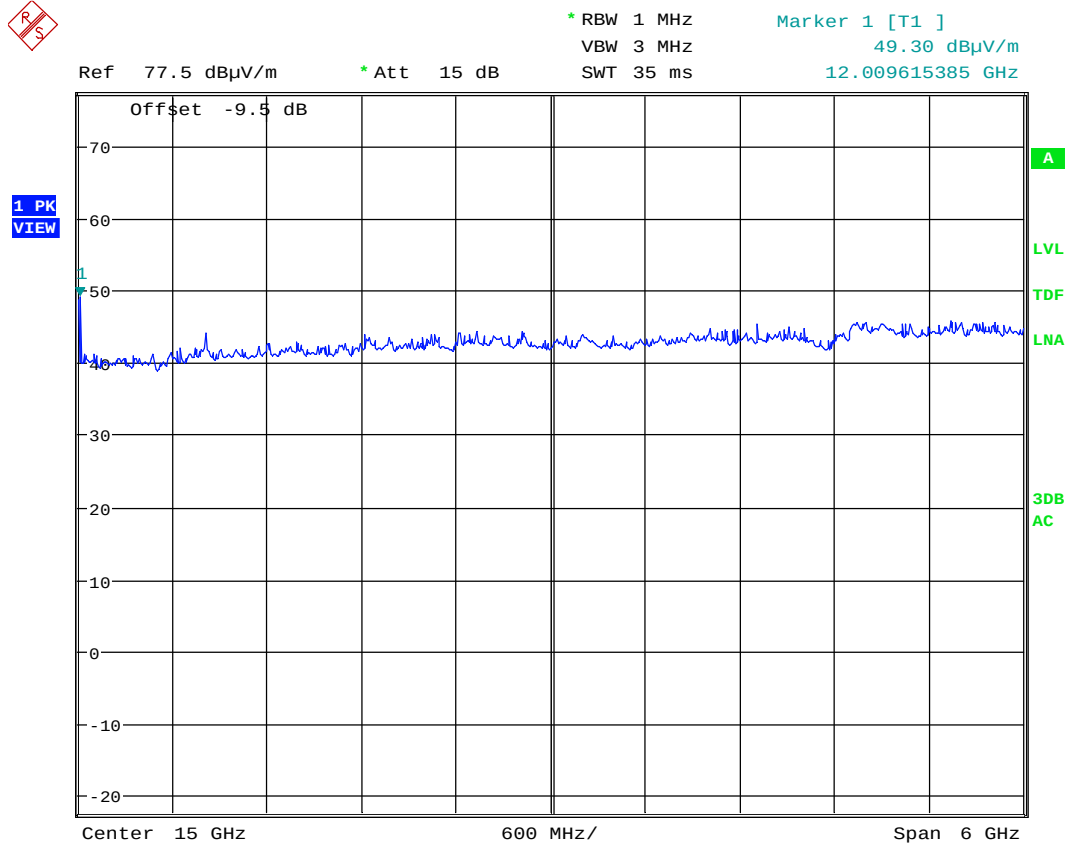
Date: 5.JUN.2019 19:28:40

HP, 8 - 12GHz , 8DPSK,ch2480MHz, PK scan, @ 1m distance



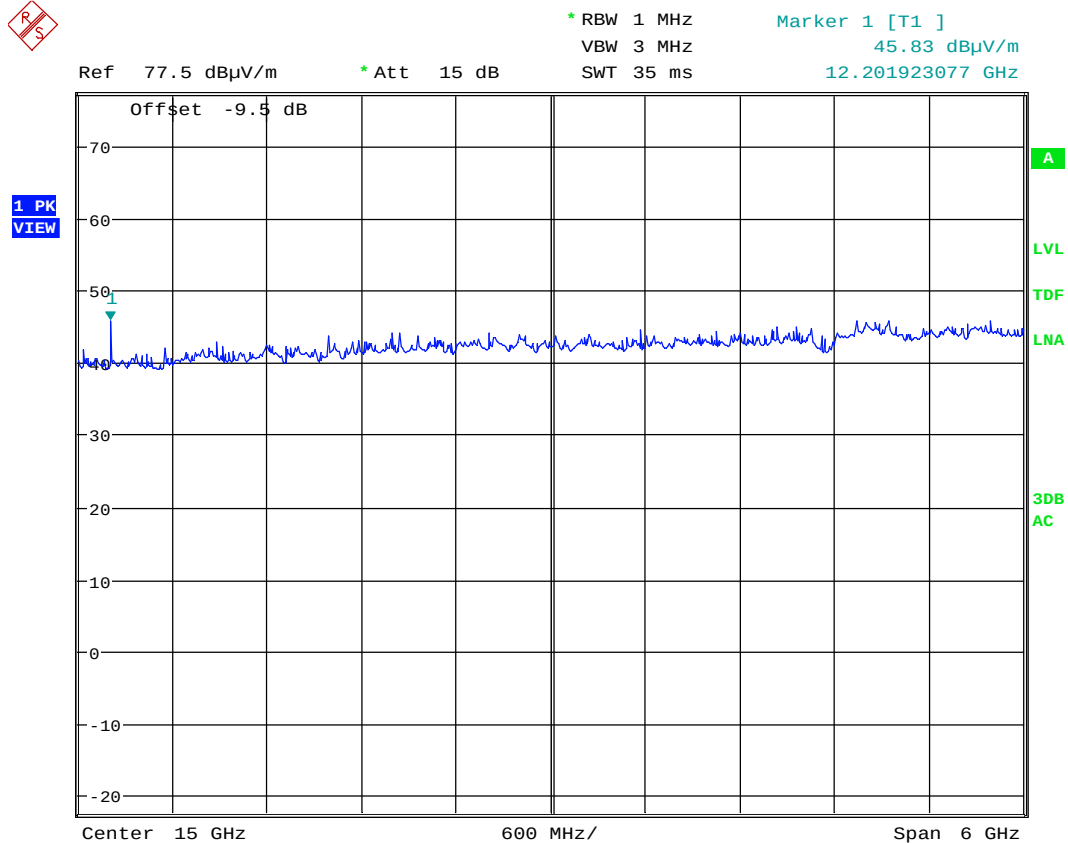
Date: 5.JUN.2019 20:14:36

VP, 12 - 18GHz , 8DPSK,ch2402MHz, PK scan, @ 1m distance



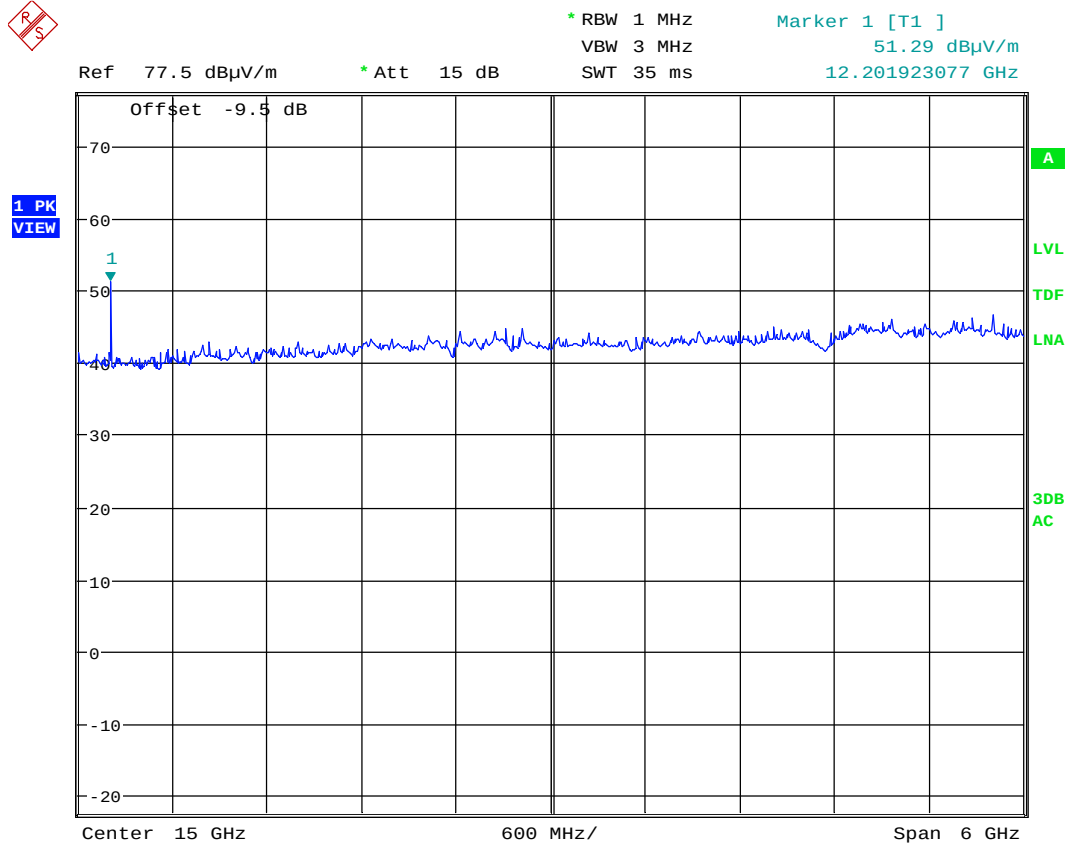
Date: 5.JUN.2019 20:13:37

HP, 12 - 18GHz , 8DPSK,ch2402MHz PK scan, @ 1m distance



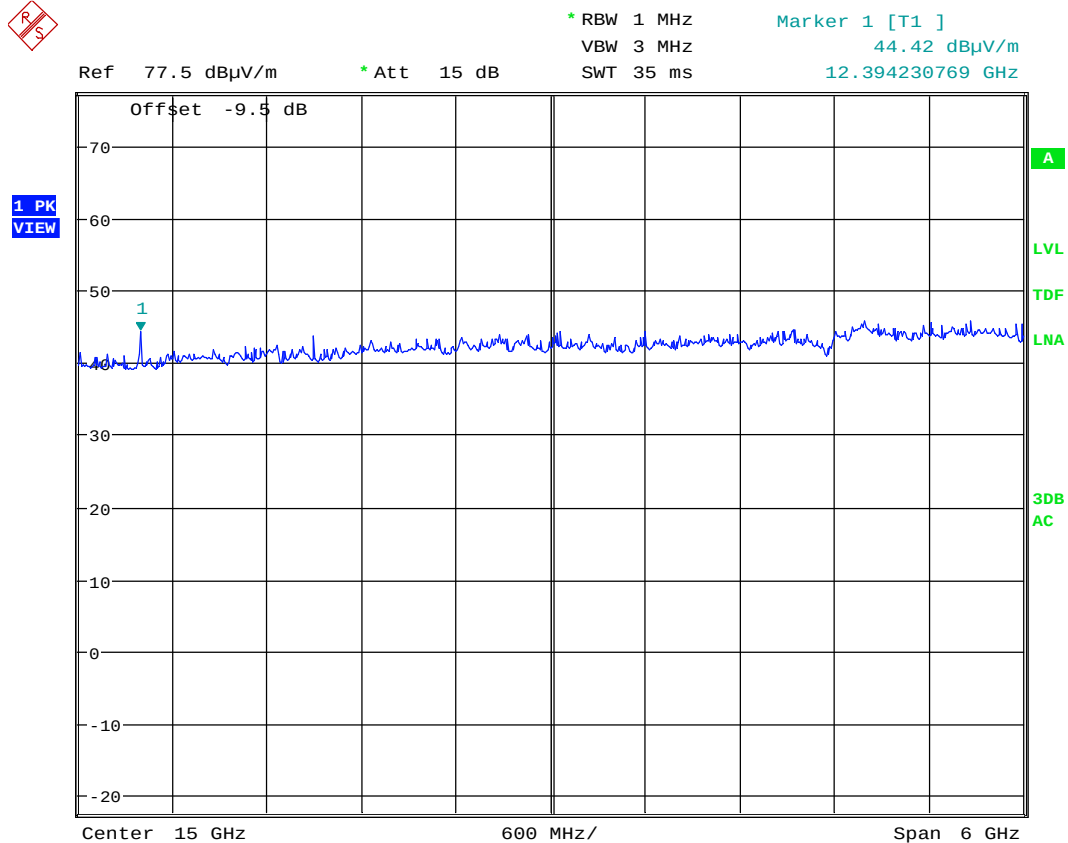
Date: 5.JUN.2019 20:16:24

VP, 12 - 18GHz , 8DPSK,ch2441MHz, PK scan, @ 1m distance



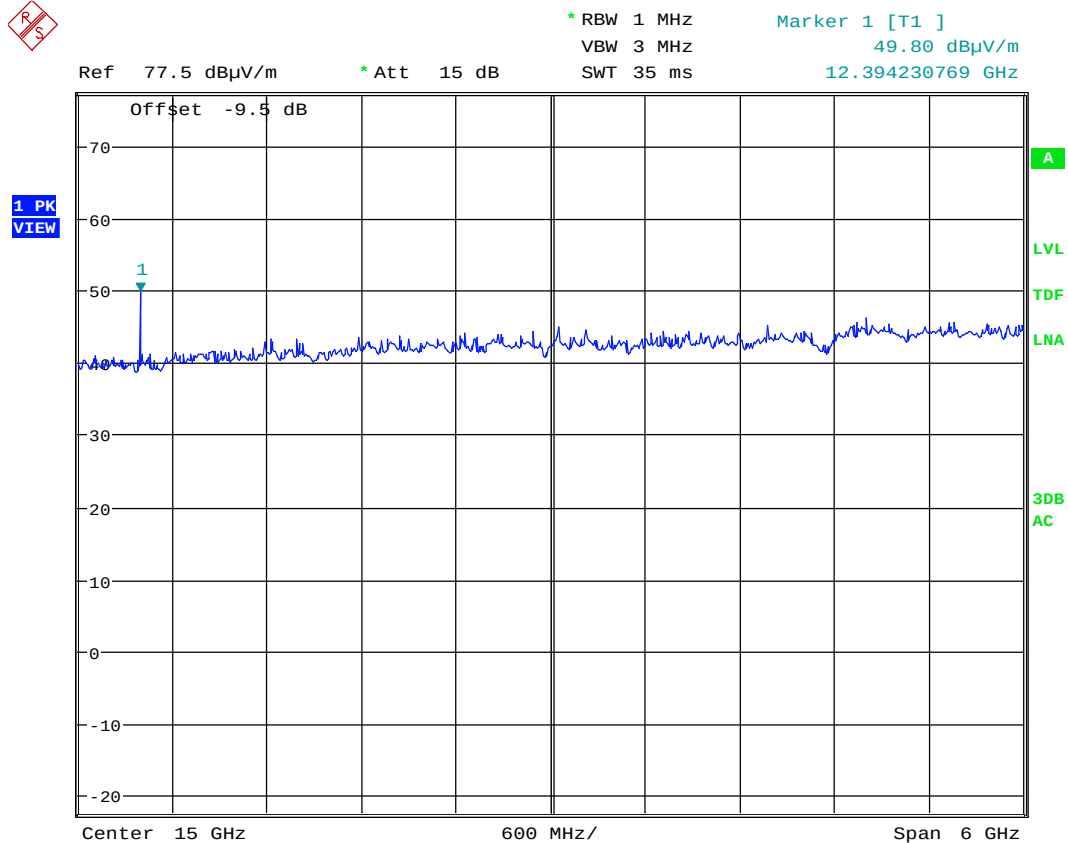
Date: 5.JUN.2019 20:17:02

HP, 12 - 18GHz , 8DPSK,ch2441MHz PK scan, @ 1m distance



Date: 5.JUN.2019 20:18:47

VP, 12 - 18GHz , 8DPSK,ch2480MHz, PK scan, @ 1m distance



Date: 5.JUN.2019 20:18:17

HP, 12 - 18GHz , 8DPSK,ch2480MHz PK scan, @ 1m distance



MARKER 1

24.9775641 GHz

Ref 77.5 dBμV/m

* Att 10 dB

* RBW 1 MHz

VBW 3 MHz

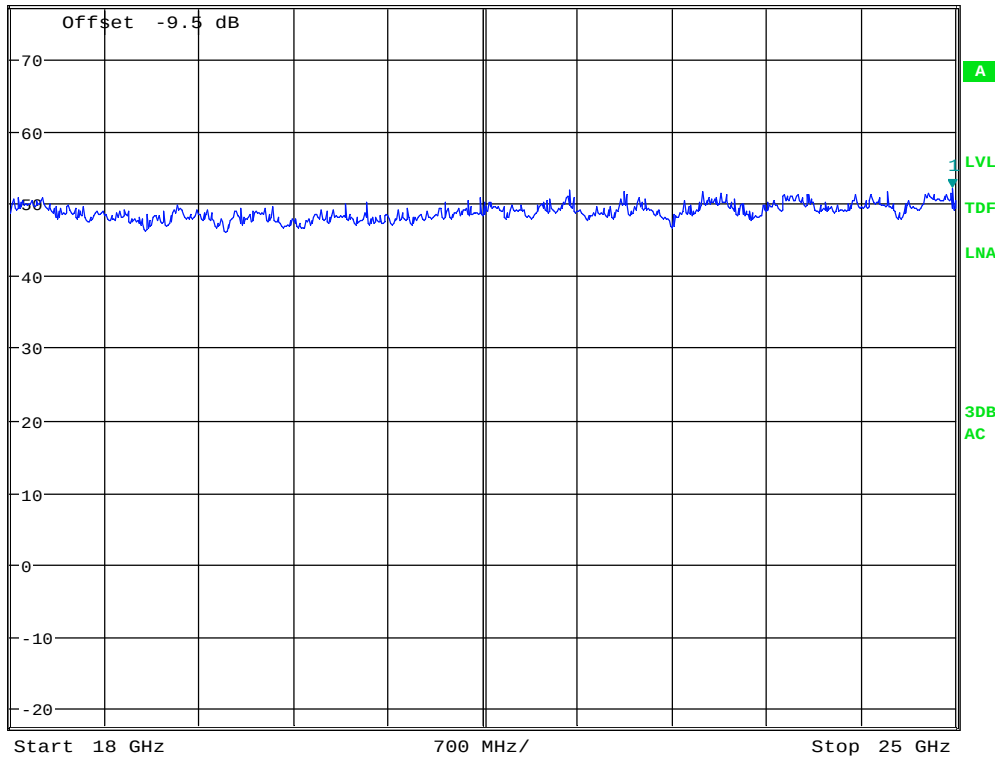
SWT 45 ms

Marker 1 [T1]

52.19 dBμV/m

24.977564103 GHz

1 PK
MAXH



Date: 8.JUN.2019 10:12:06

VP, 18 - 25GHz , 8DPSK PK scan, @ 1m distance



MARKER 1

19.21153846 GHz

Ref 77.5 dBμV/m

* Att 10 dB

* RBW 1 MHz

VBW 3 MHz

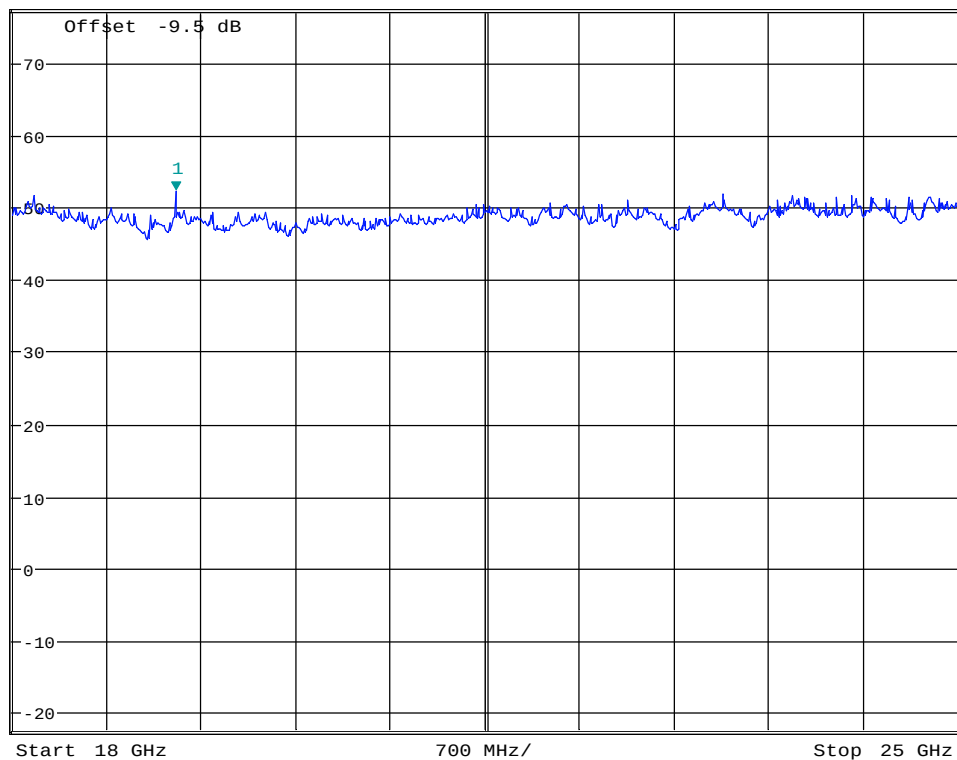
SWT 45 ms

Marker 1 [T1]

52.44 dBμV/m

19.211538462 GHz

1 PK
MAXH



Date: 8.JUN.2019 10:12:42

HP, 18 - 25GHz , 8DPSK PK scan, @ 1m distance

IN 4πDPSK MODE:

Radiated Emissions, 1-25 GHz; Measuring distance:3m (1 – 8 GHz), 1m (8 – 18 GHz); A pre-scan was performed above 18 GHz and no spurious emissions were detected.

Peak Detector:

Modulation scheme	Frequency	Polarization	Dist. corr. factor	Field strength, Peak Detector, 3m	Duty cycle corr. factor	Limit	Margin
	GHz		dB	dBμV/m	dB	dBμV/m	dB
4π8DPSK	4.804	HP	0	/	/	74	/
	4.882	HP	0	/	/	74	/
	4.960	HP	0	/	/	74	/
4π8DPSK	7.206	HP	0	61.61	/	74	12.39
	7.323	HP	0	61.67	/	74	12.33
	7.440	HP	0	61.05	/	74	12.95
4π8DPSK	9.608	HP	*	46.83	/	74	27.17
	9.760	HP	*	44.39	/	74	29.61
	9.920	HP	*	43.93	/	74	30.07
4π8DPSK	12.01	HP	*	49.88	/	74	24.12
	12.205	HP	*	51.62	/	74	22.38
	12.400	HP	*	49.03	/	74	24.97
Other freqs	L,M,H	VP/HP	/	None detected	/	74	>20

*distance correction is included in the plot

Average:

Modulation scheme	Frequency	Polarization	Dist. corr. factor	Field strength, Peak Detector, 3m	Duty cycle corr. factor	Limit	Margin
	MHz		dB	dB μ V/m	dB	dB μ V/m	dB
4 π DPSK	4.804	HP	0	/	20	54	/
	4.882	HP	0	/	20	54	/
	4.960	HP	0	/	20	54	/
4 π DPSK	7.206	HP	0	41.61	20	54	12.39
	7.323	HP	0	41.67	20	54	12.33
	7.440	HP	0	41.05	20	54	12.95
4 π DPSK	9.608	HP	*	/	20	54	/
	9.760	HP	*	/	20	54	/
	9.920	HP	*	/	20	54	/
4 π DPSK	12.01	HP	*	/	20	54	/
	12.205	HP	*	/	20	54	/
	12.400	HP	*	/	20	54	/
Other freqs	L,M,H	VP/HP	/	None detected	20	54	>20

Distance correction for 1m is included in the spectrum analyser.

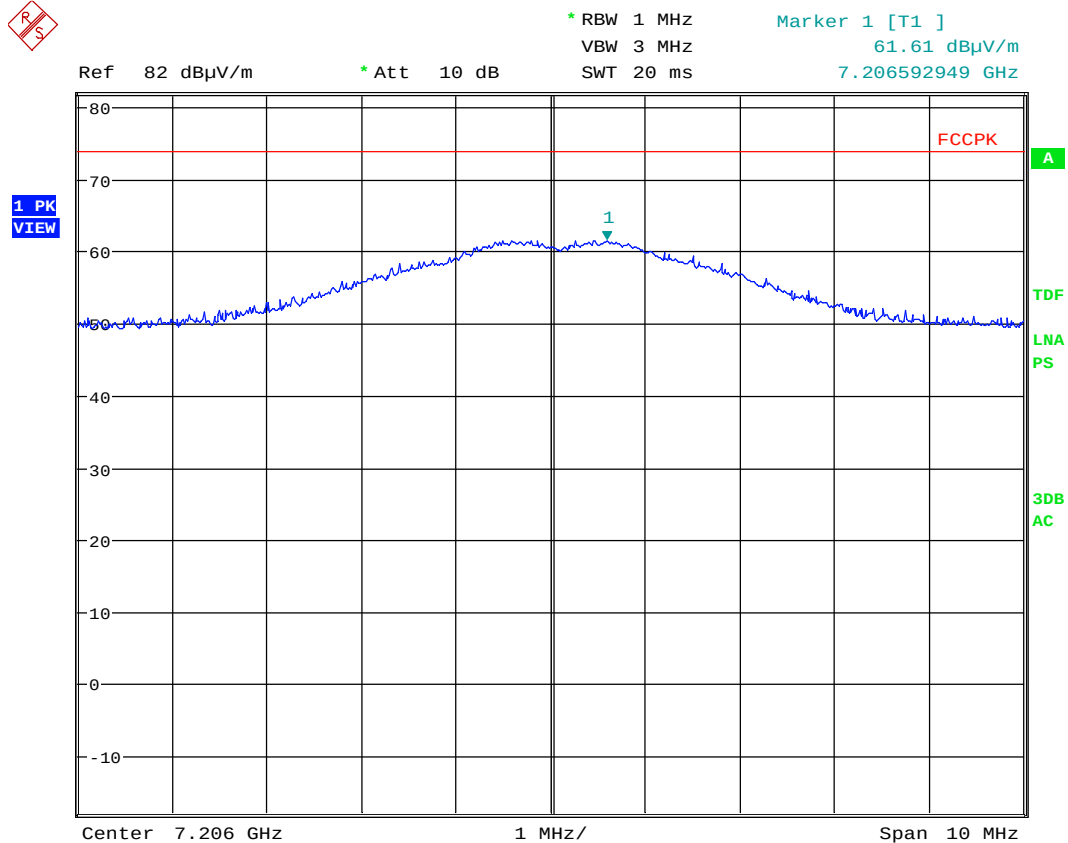
Average Detector values are calculated from Peak values by Duty Cycle Correction Factor.

Antenna factor, amplifier gain and cable loss are included in spectrum analyzer "Transducer factor".

See plots.

Requirements/Limit

FCC	Part 15.209 @ frequencies defined in §15.205	
ISED	RSS-GEN Issue 4, Clause 8.9 @ frequencies defined in clause 8.10	
	Radiated emission limit @3 meters	
Frequency (MHz)	AV (dBμV/m)	Peak (dBμV/m)
Above 1 GHz	54.0	74.0



Date: 5.JUN.2019 17:34:42

3rd har, PK, ch2402MHz, 4πDPSK – HP

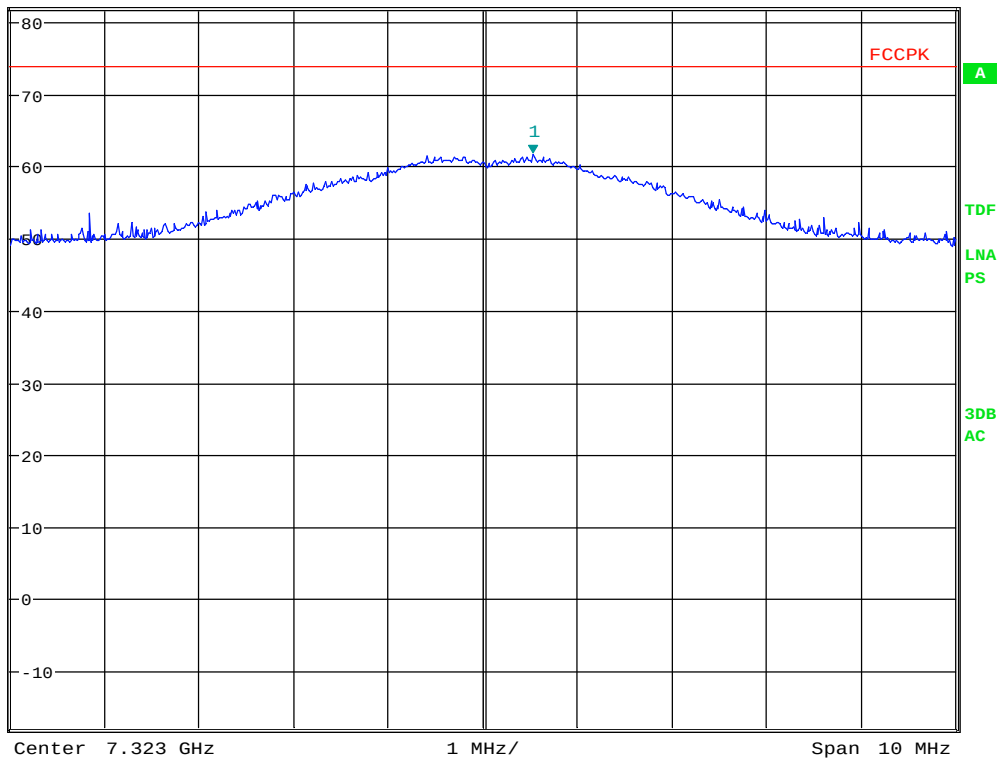


* RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
61.67 dBμV/m
7.323528846 GHz

Ref 82 dBμV/m

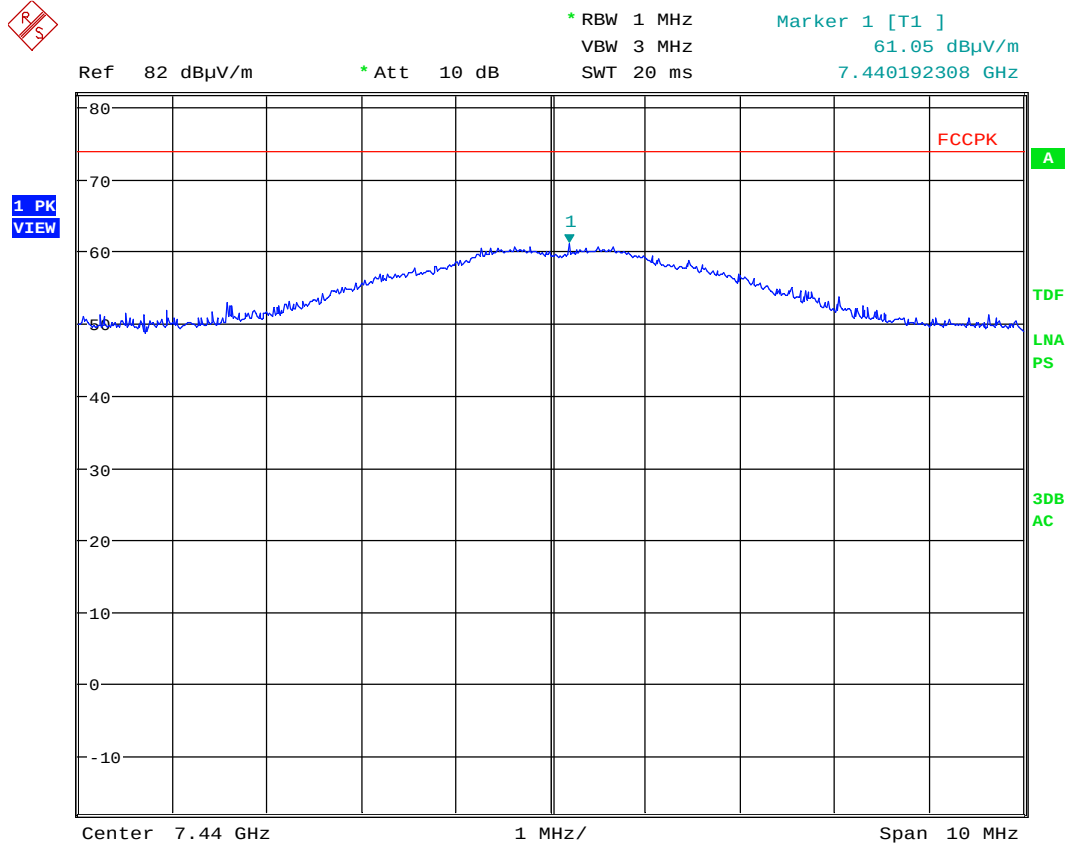
* Att 10 dB

1 PK
VIEW



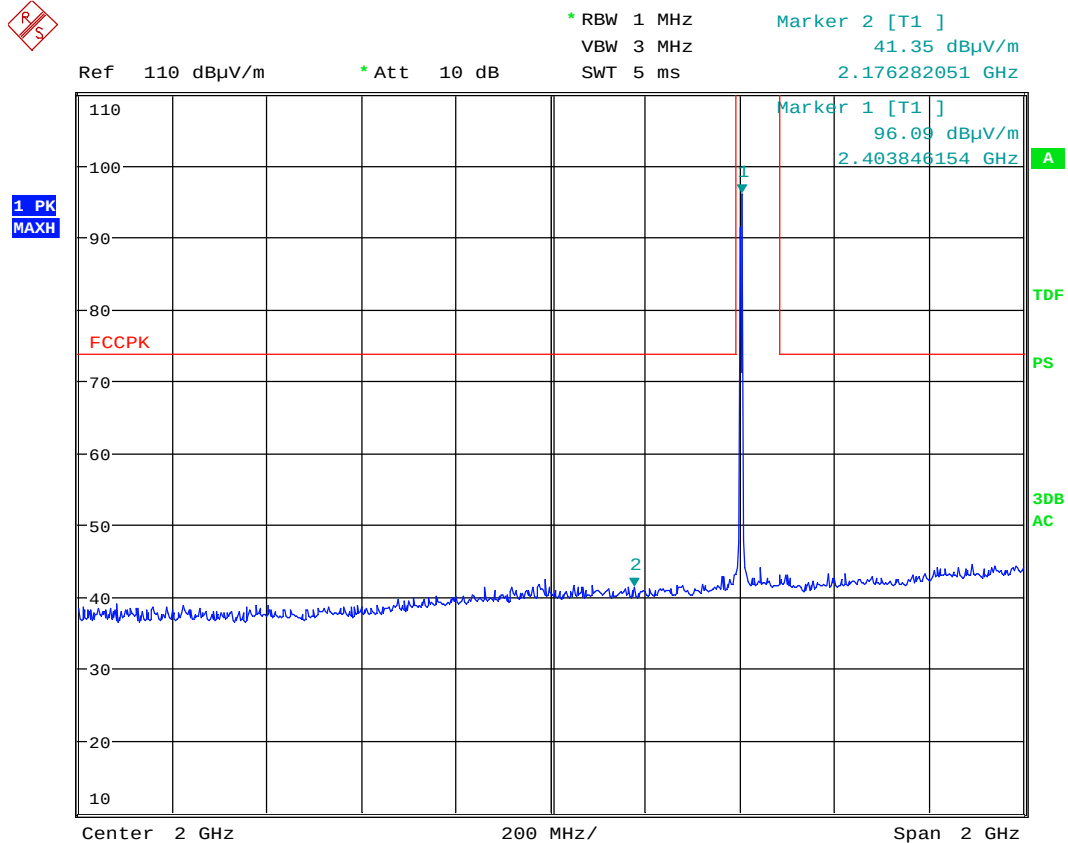
Date: 5.JUN.2019 17:37:41

3rd har, PK, ch2441MHz, 4πDPSK – HP



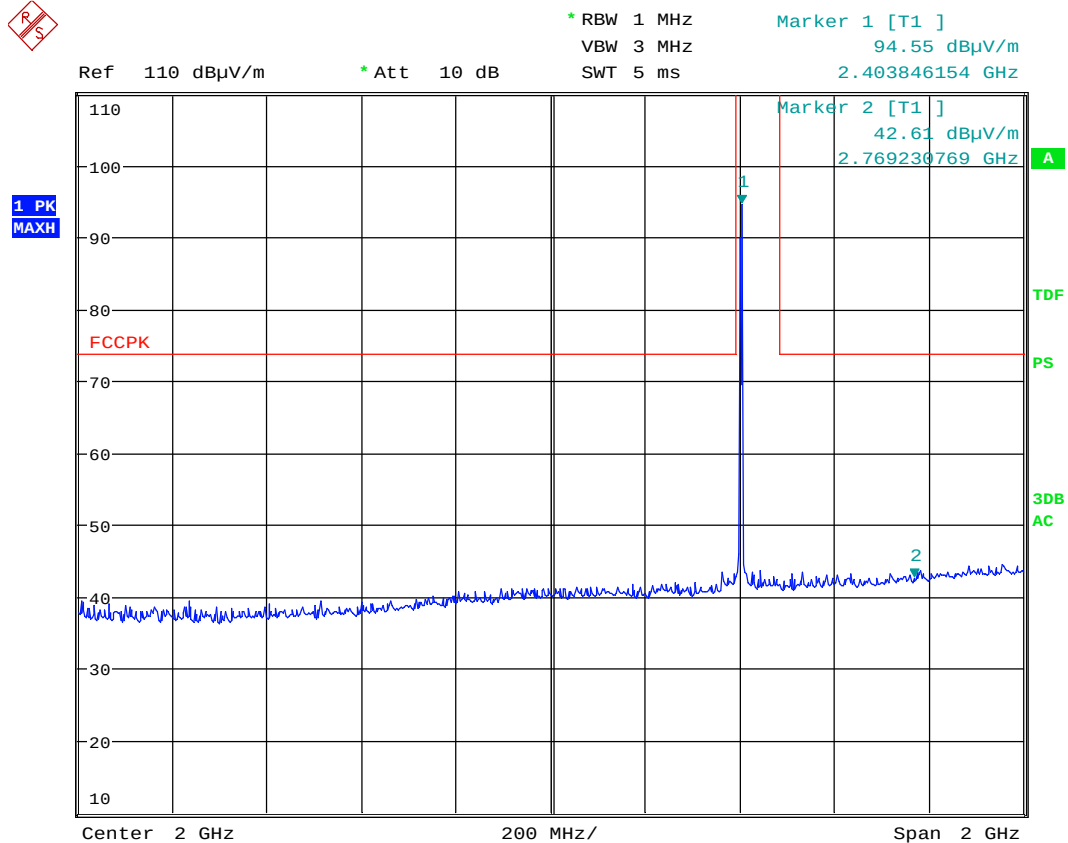
Date: 5.JUN.2019 17:43:55

3rd har, PK, ch2480MHz, 4πDPSK – HP



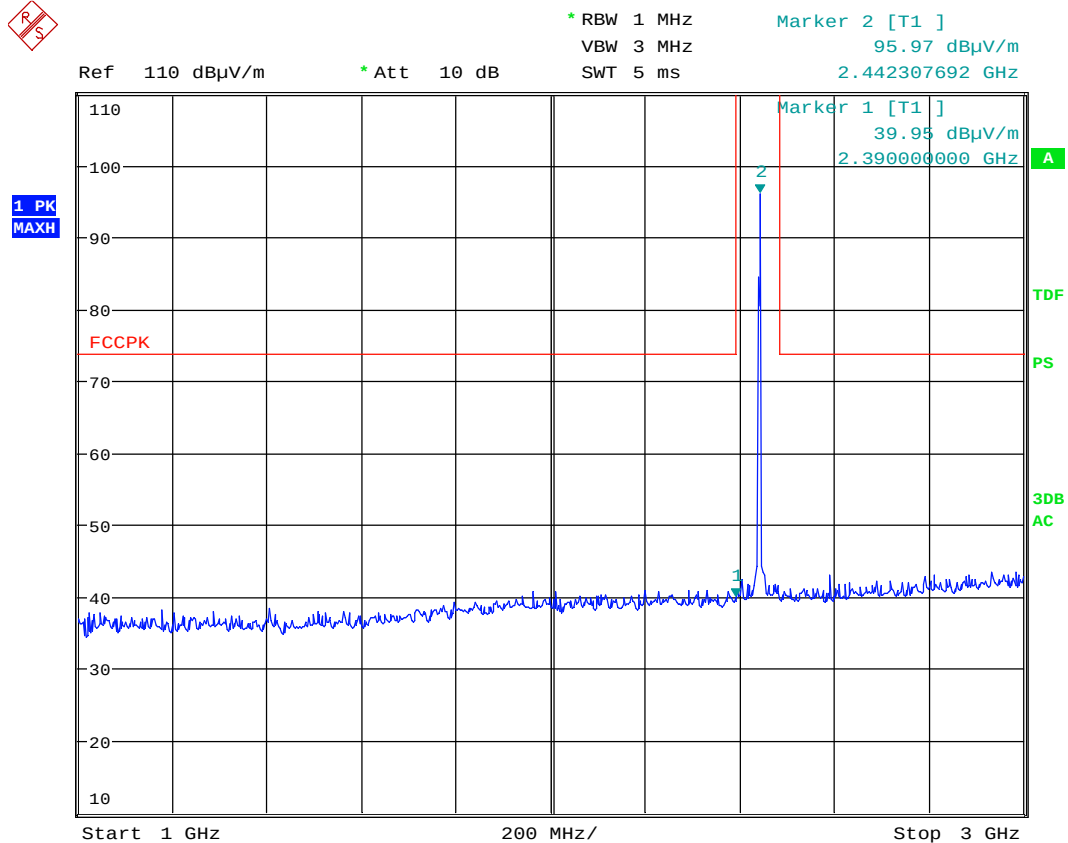
Date: 4.JUN.2019 10:39:11

VP, 1 - 3GHz , 4πDPSK, ch2402MHz, PK scan



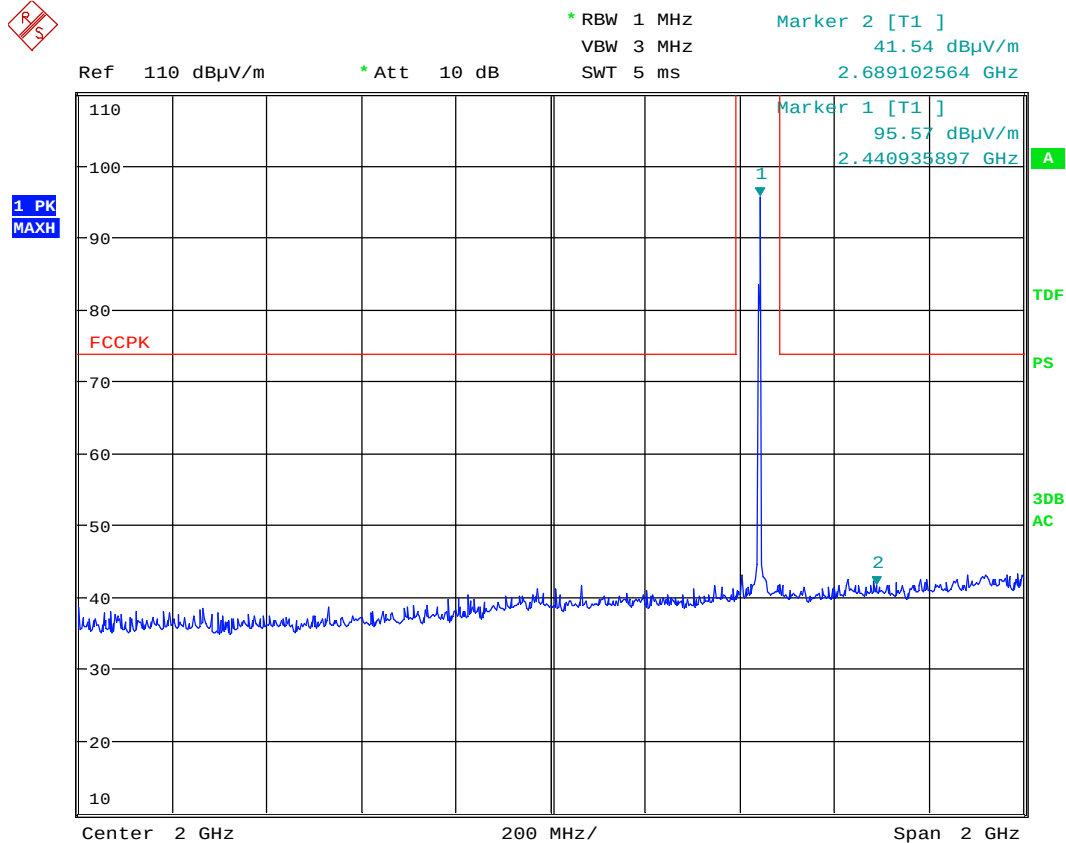
Date: 4.JUN.2019 10:35:35

HP, 1 - 3GHz , 4πDPSK, Ch2402MHz, PK scan



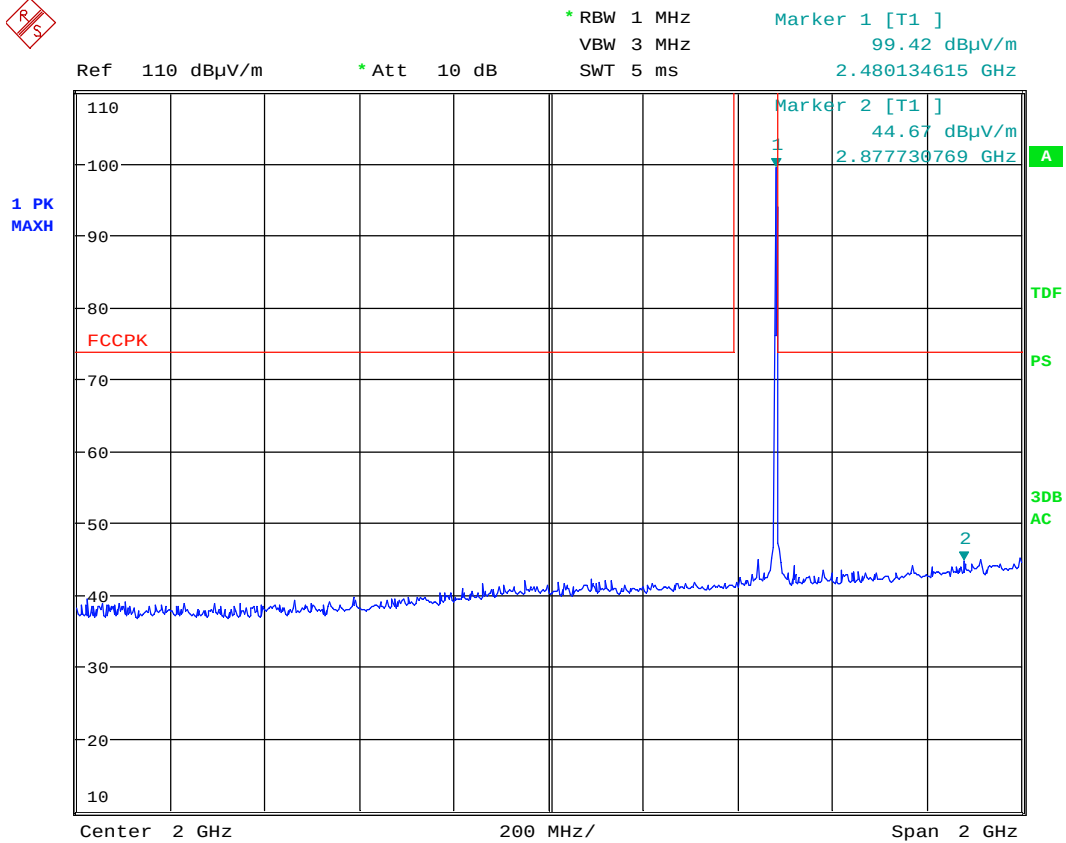
Date: 4.JUN.2019 10:41:49

VP, 1 - 3GHz , 4πDPSK, ch2441MHz, PK scan



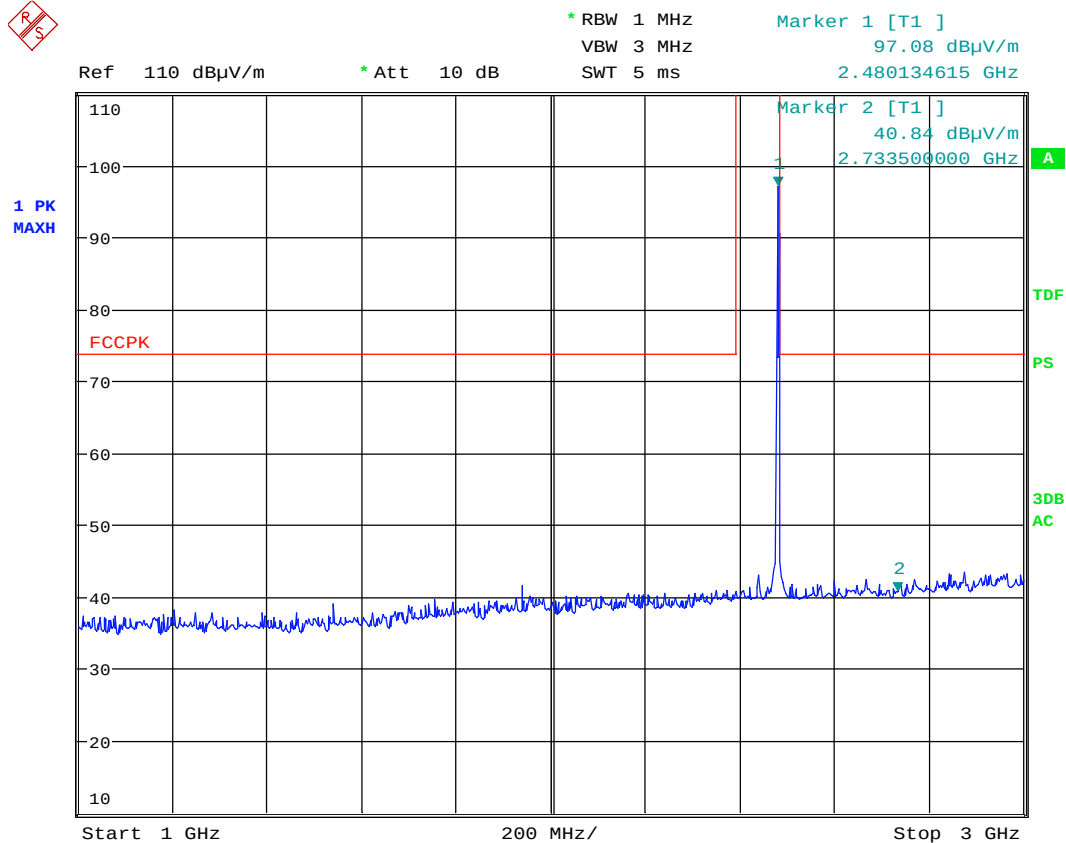
Date: 4.JUN.2019 10:44:00

HP, 1 - 3GHz , 4πDPSK, Ch2441MHz, PK scan



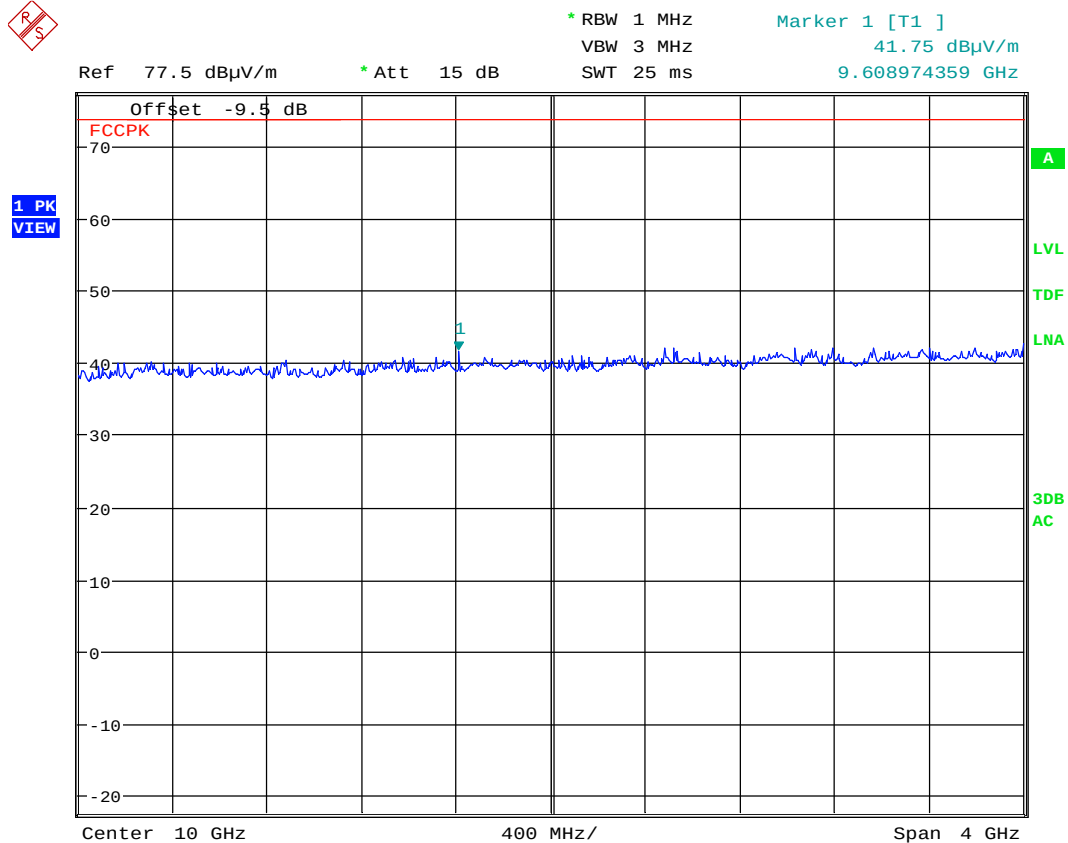
Date: 4.JUN.2019 08:48:27

VP, 1 - 3GHz , 4πDPSK, ch2480MHz, PK scan



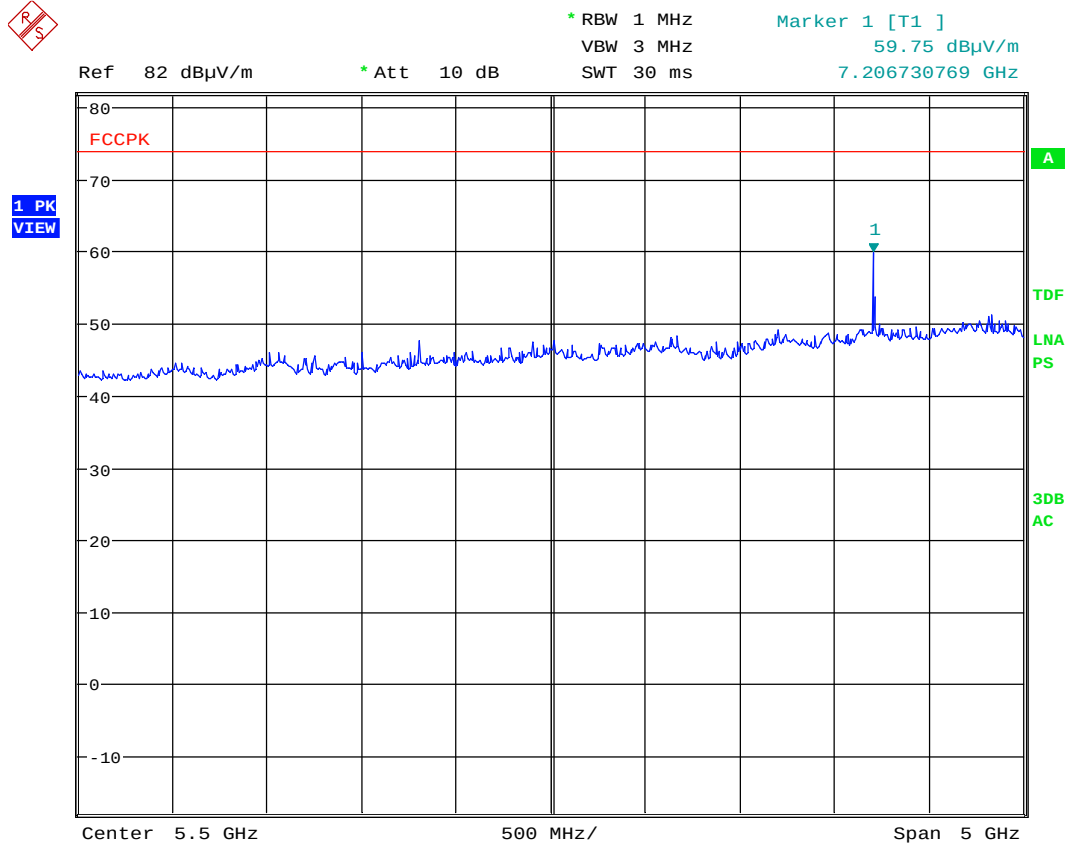
Date: 4.JUN.2019 08:47:12

HP, 1 - 3GHz , 4πDPSK, Ch2480MHz, PK scan



Date: 5.JUN.2019 19:18:33

VP, 3 - 8GHz , 4πDPSK, ch2402MHz, PK scan



Date: 5.JUN.2019 17:33:25

HP, 3 - 8GHz , 4πDPSK,ch2402MHz, PK scan



* RBW 1 MHz

Marker 1 [T1]

VBW 3 MHz

53.09 dBμV/m

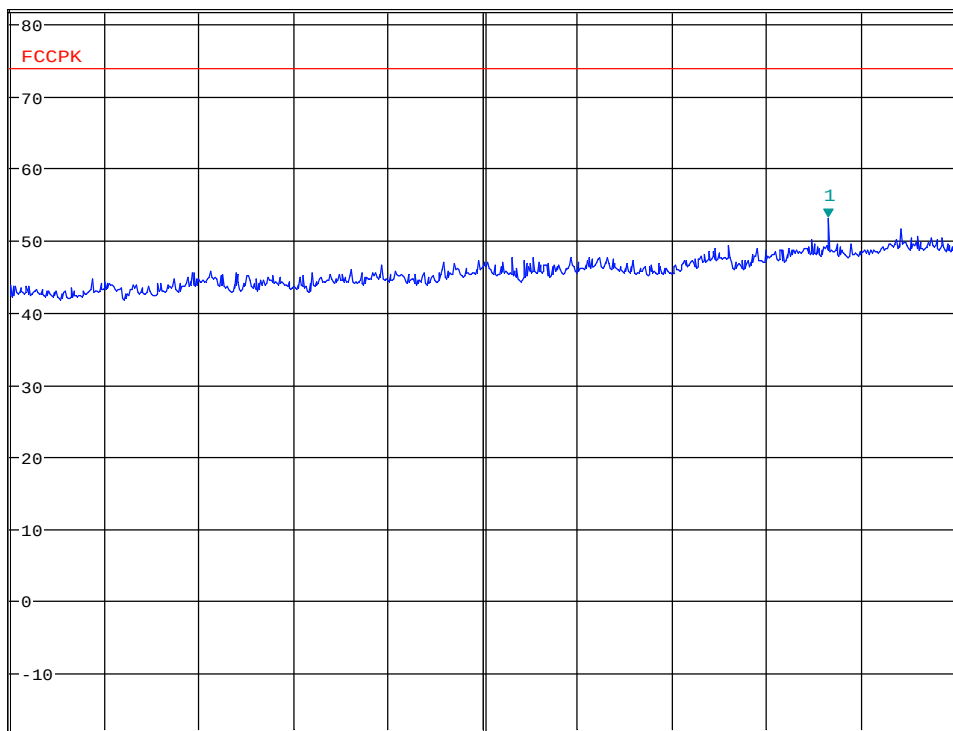
SWT 30 ms

7.323528846 GHz

Ref 82 dBμV/m

* Att 10 dB

1 PK
VIEW



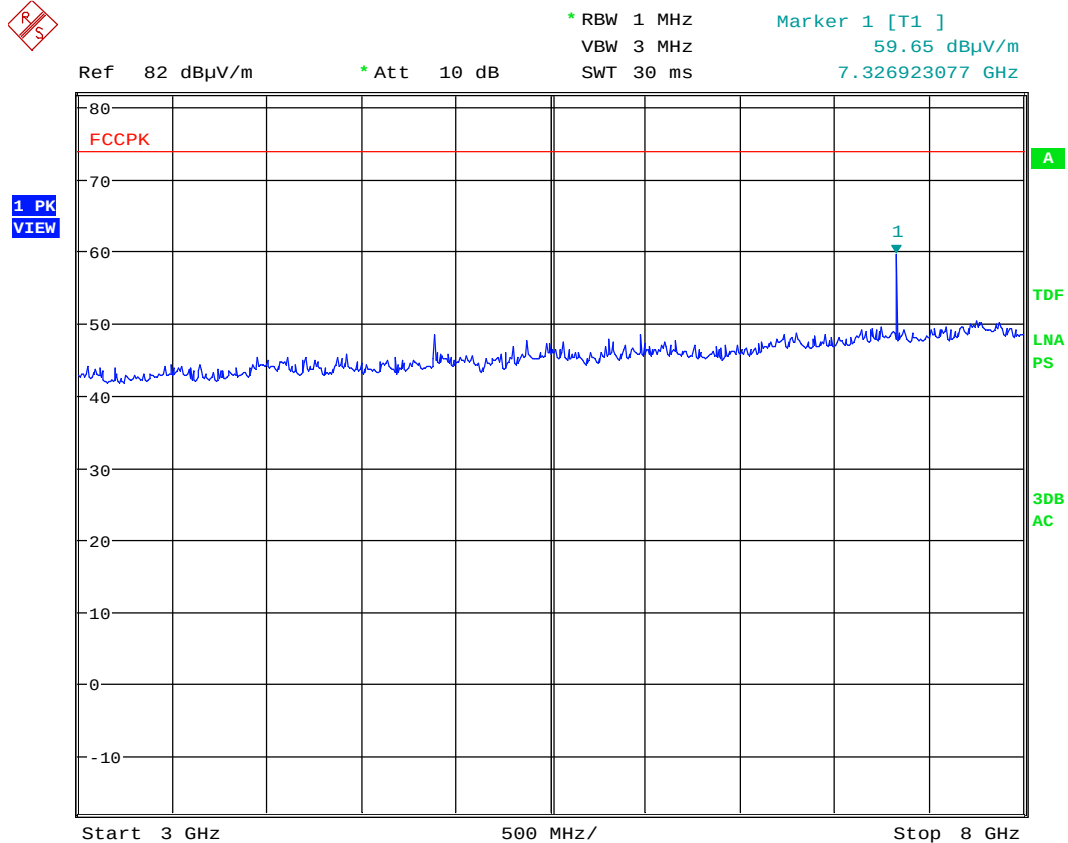
Center 5.5 GHz

500 MHz/

Span 5 GHz

Date: 5.JUN.2019 17:39:44

VP, 3 - 8GHz , 4πDPSK, ch2441MHz, PK scan



Date: 5.JUN.2019 17:36:39

HP, 3 - 8GHz , 4πDPSK,ch2441MHz, PK scan

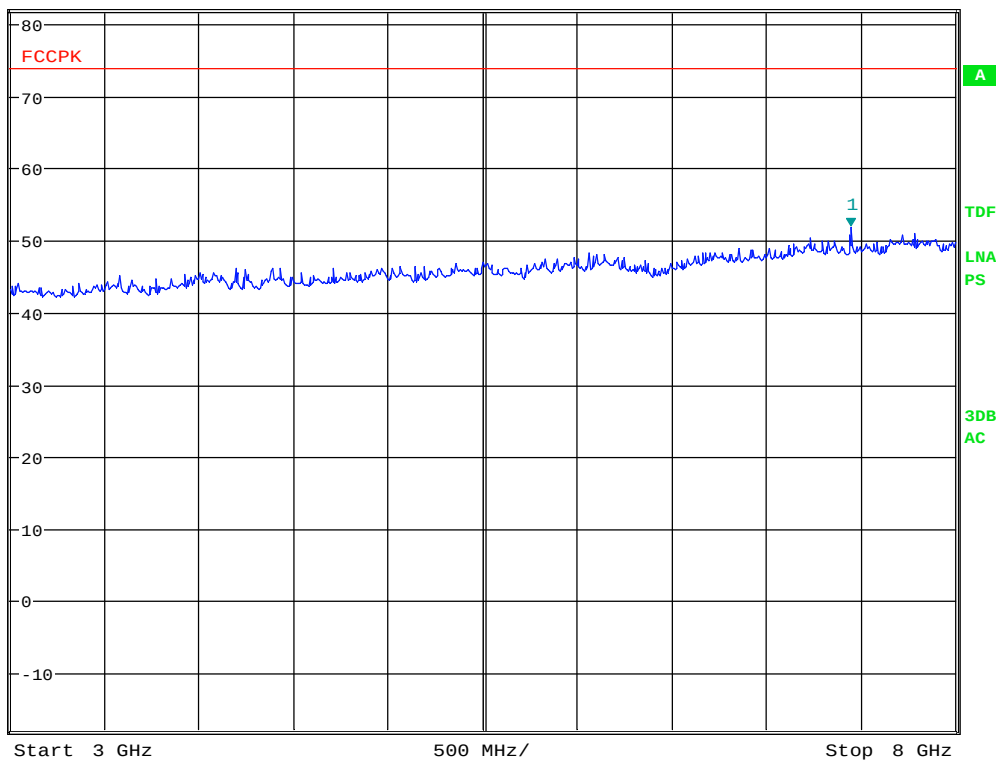


* RBW 1 MHz
VBW 3 MHz
SWT 30 ms
Marker 1 [T1]
51.78 dBμV/m
7.447115385 GHz

Ref 82 dBμV/m

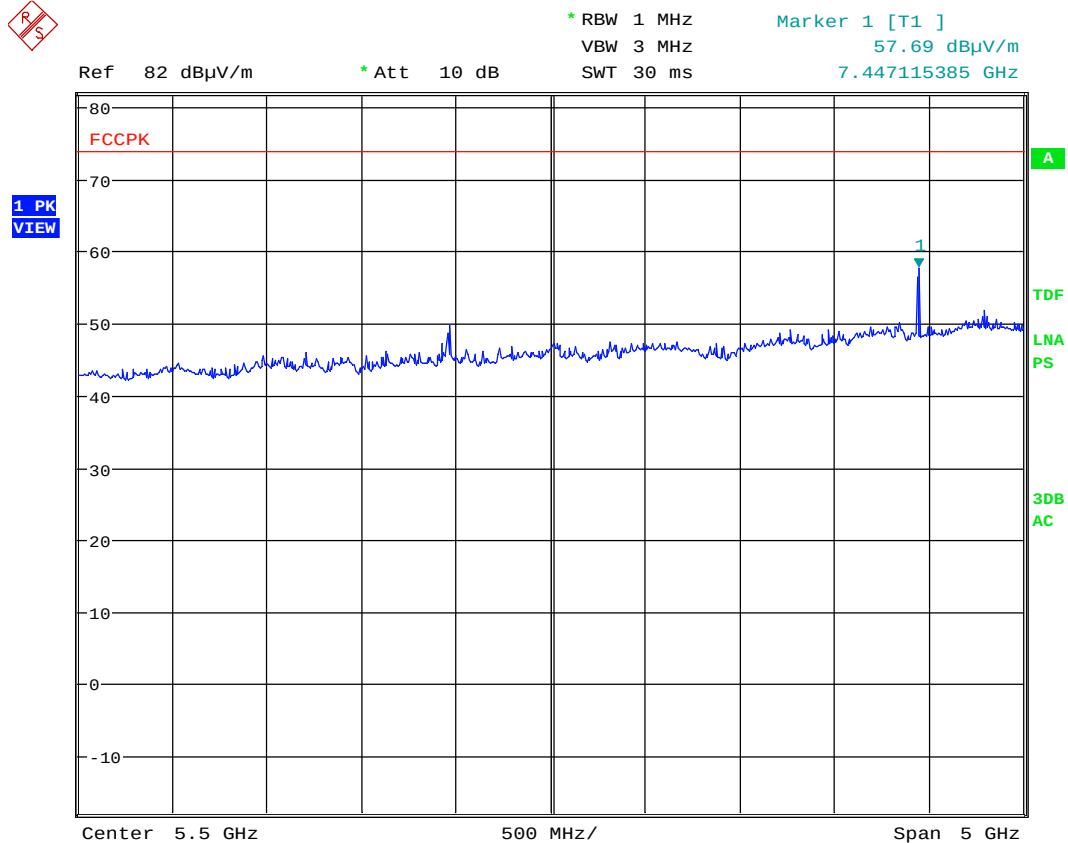
* Att 10 dB

1 PK
VIEW



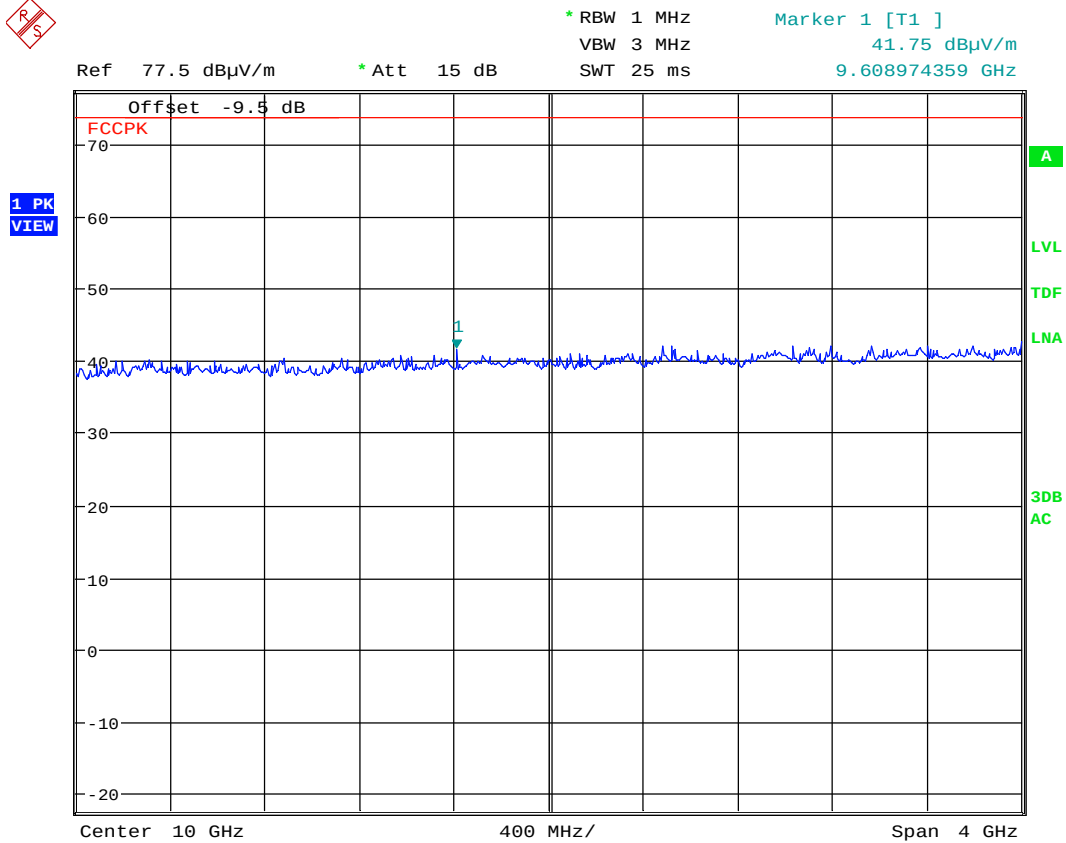
Date: 5.JUN.2019 17:41:44

VP, 3 - 8GHz , 4πDPSK, ch2480MHz, PK scan



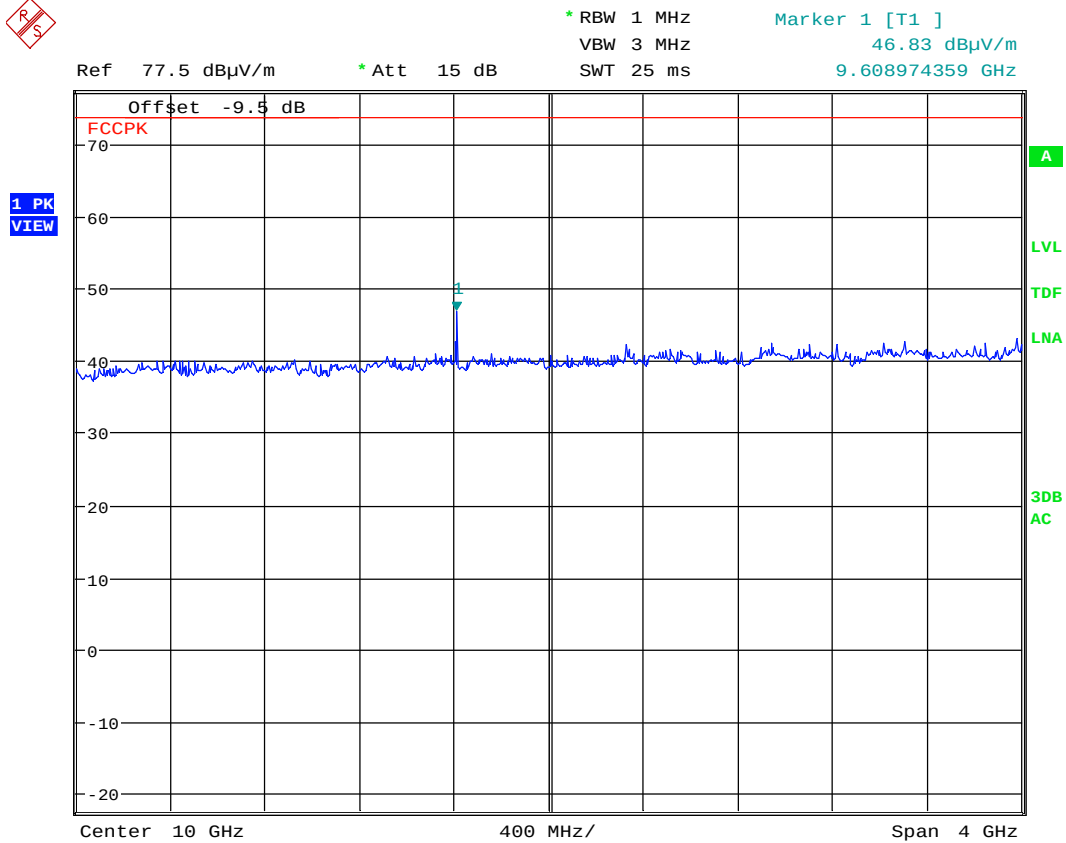
Date: 5.JUN.2019 17:43:06

HP, 3 - 8GHz , 4πDPSK,ch2480MHz, PK scan



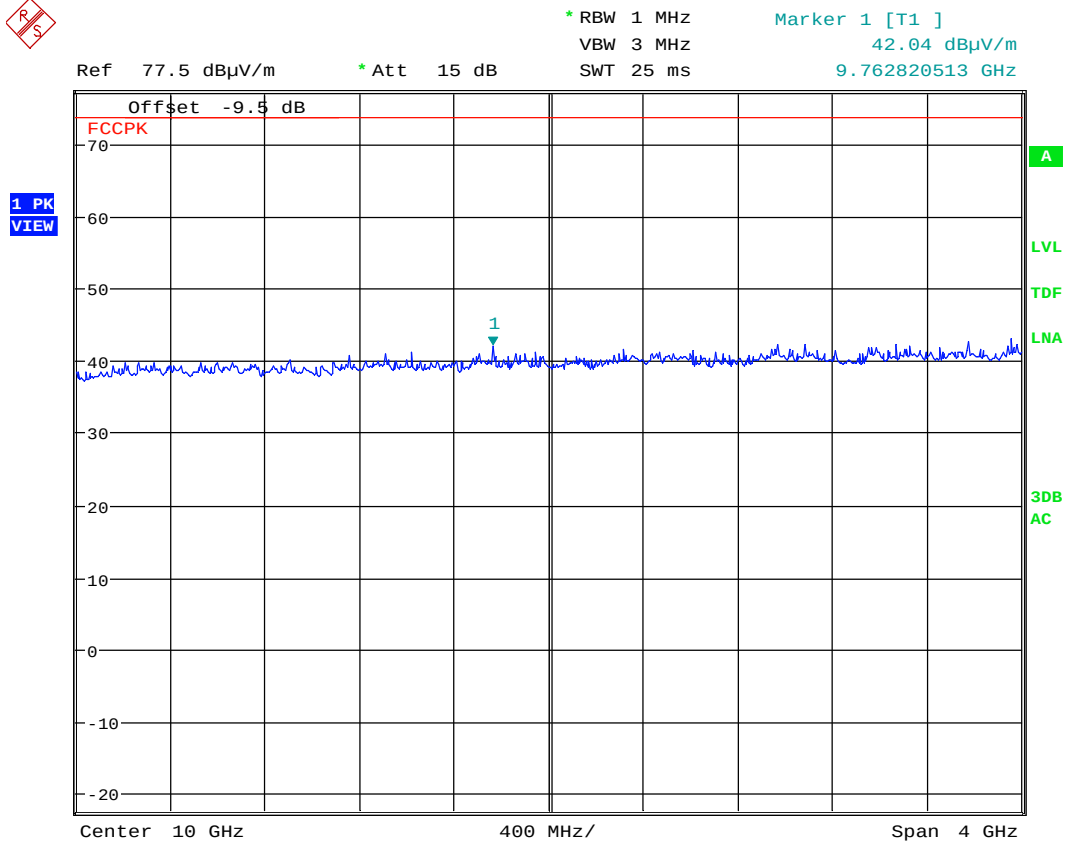
Date: 5.JUN.2019 19:18:33

VP, 8 - 12GHz , 4πDPSK,ch2402MHz, PK scan,@ 1m distance



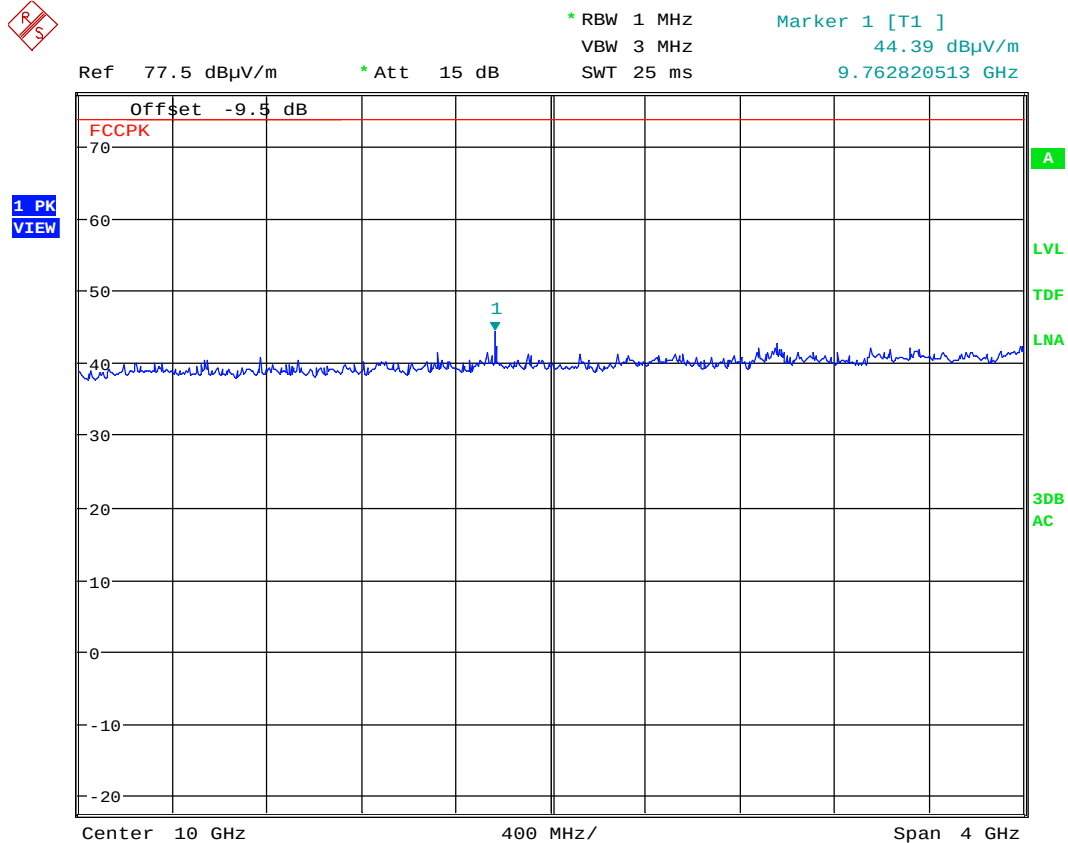
Date: 5.JUN.2019 19:17:03

HP, 8 - 12GHz , 4πDPSK,ch2402MHz, PK scan, @ 1m distance



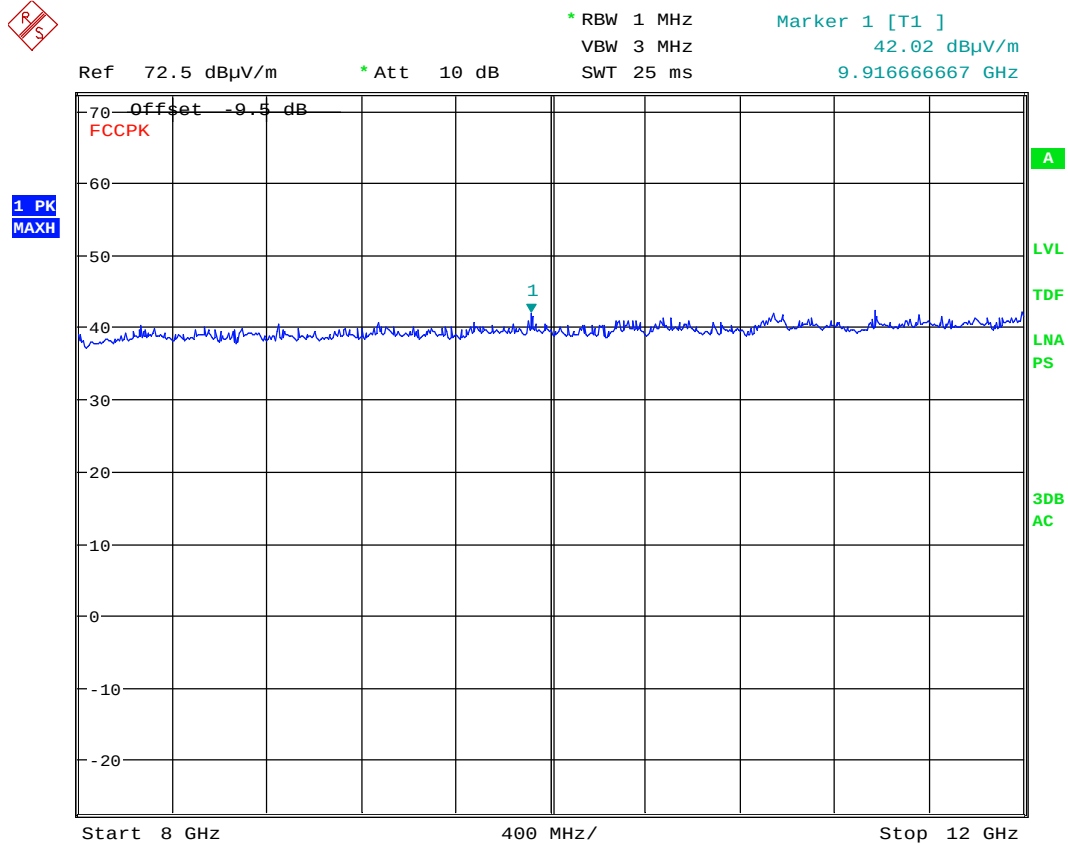
Date: 5.JUN.2019 19:20:25

VP, 8 - 12GHz , 4πDPSK,ch2441MHz, PK scan,@ 1m distance



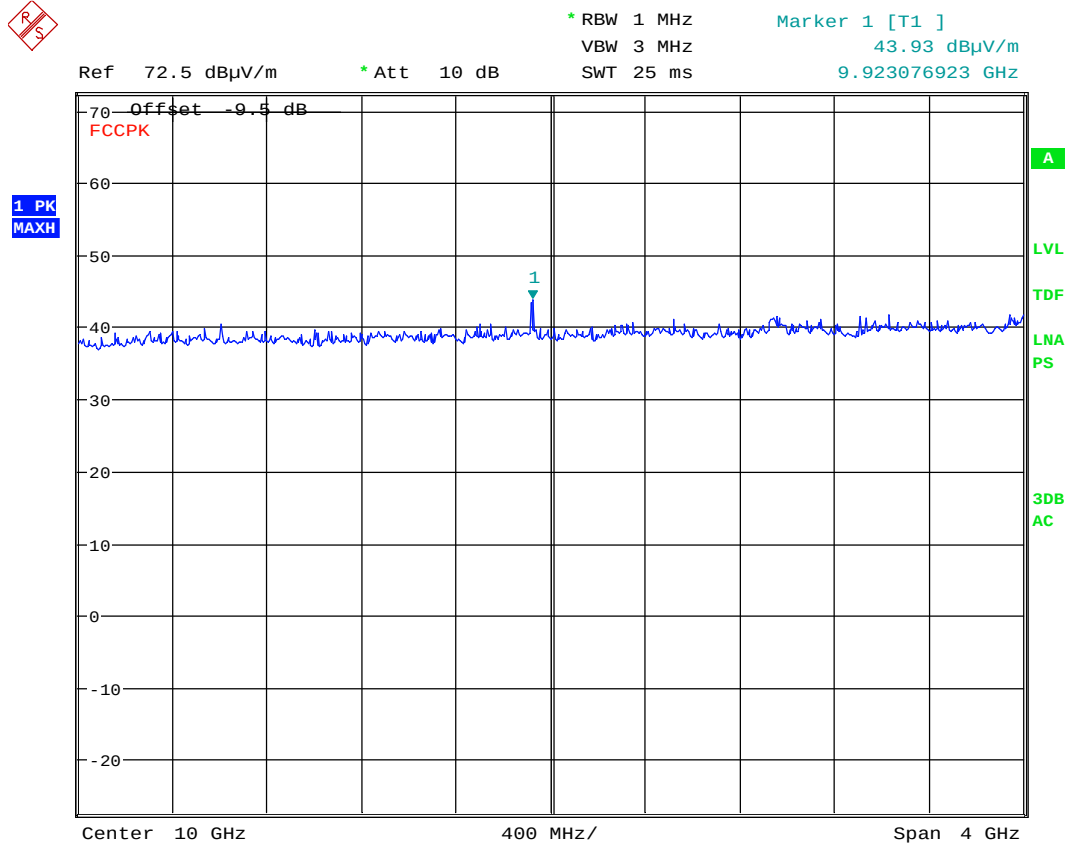
Date: 5.JUN.2019 19:21:47

HP, 8 - 12GHz , 4πDPSK,ch2441MHz, PK scan, @ 1m distance



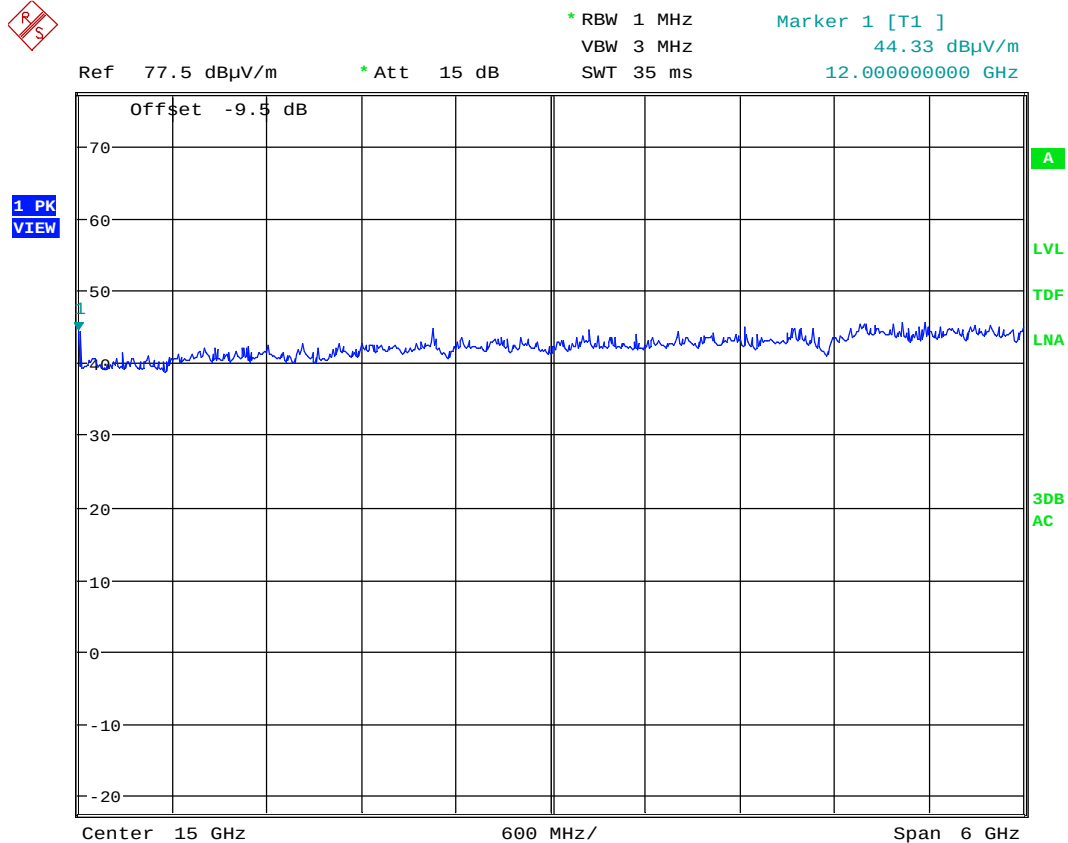
Date: 4.JUN.2019 13:15:03

VP, 8 - 12GHz , 4πDPSK,ch2480MHz, PK scan,@ 1m distance



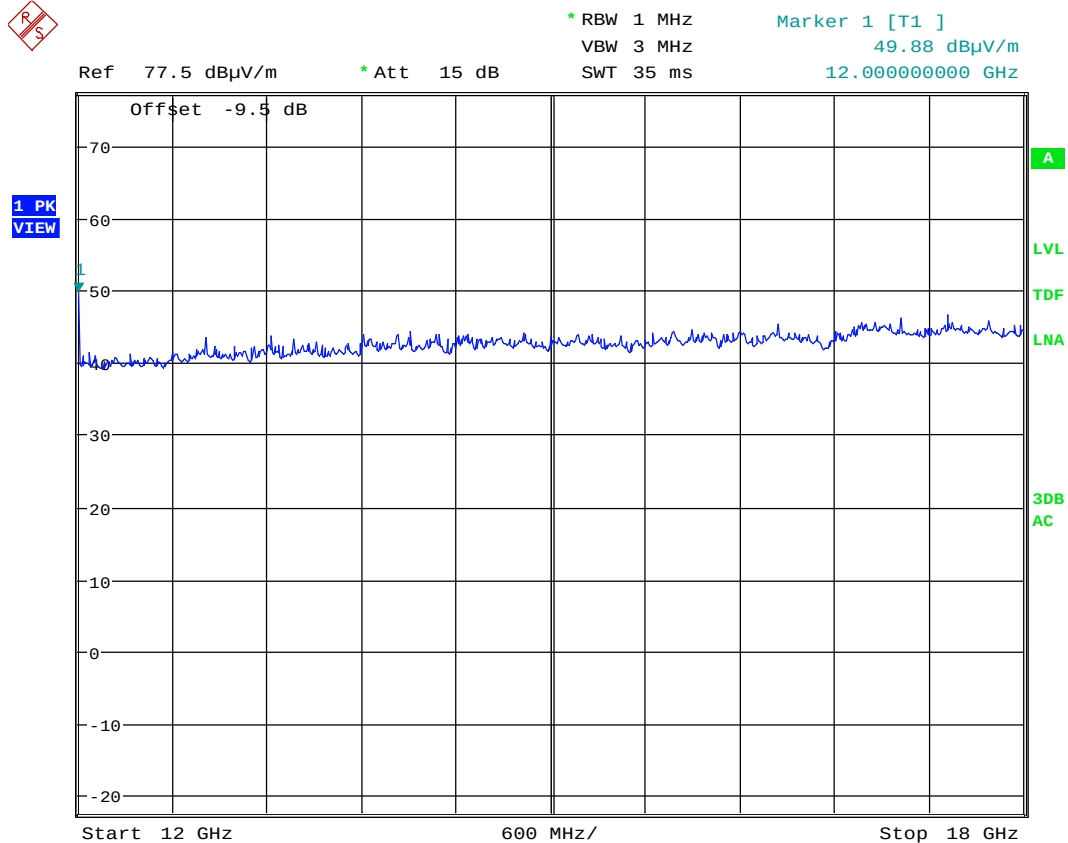
Date: 4.JUN.2019 13:12:16

HP, 8 - 12GHz , 4πDPSK,ch2480MHz, PK scan, @ 1m distance



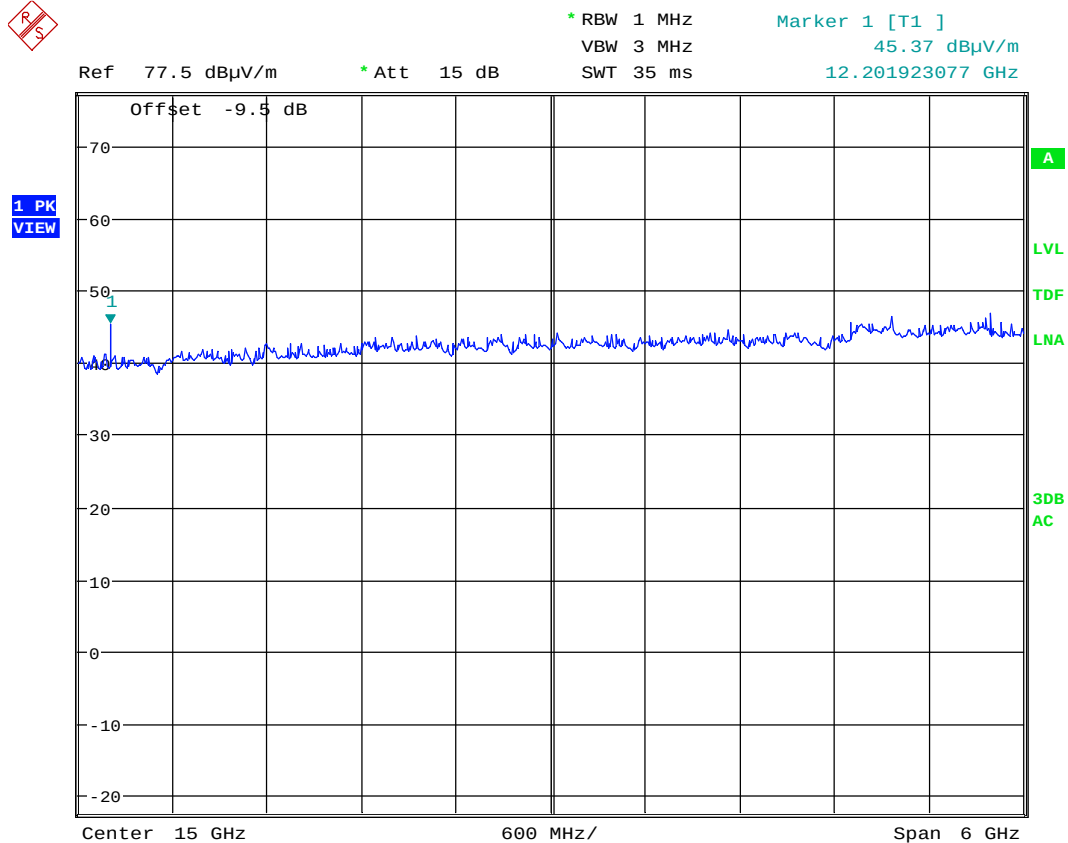
Date: 5.JUN.2019 20:39:46

VP, 12 - 18GHz , 4 π DPSK,ch2402MHz, PK scan, @ 1m distance



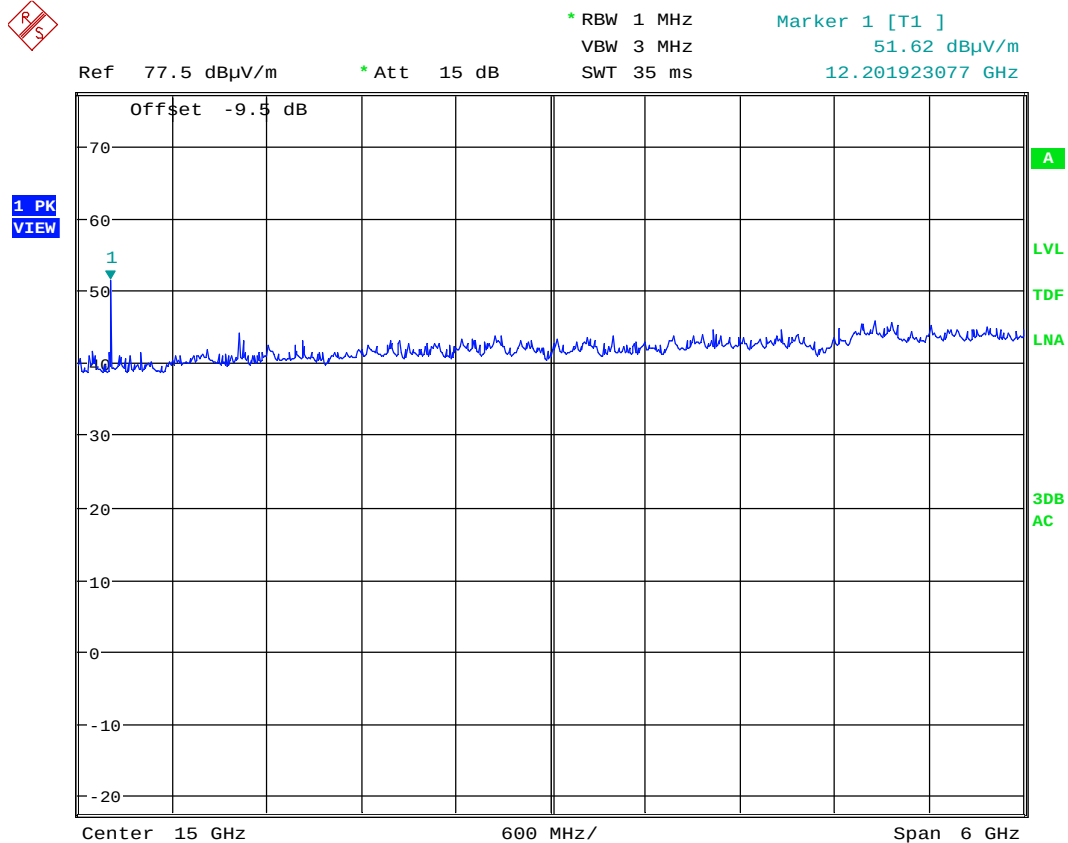
Date: 5.JUN.2019 20:39:12

HP, 12 - 18GHz , 4πDPSK,ch2402MHz PK scan, @ 1m distance



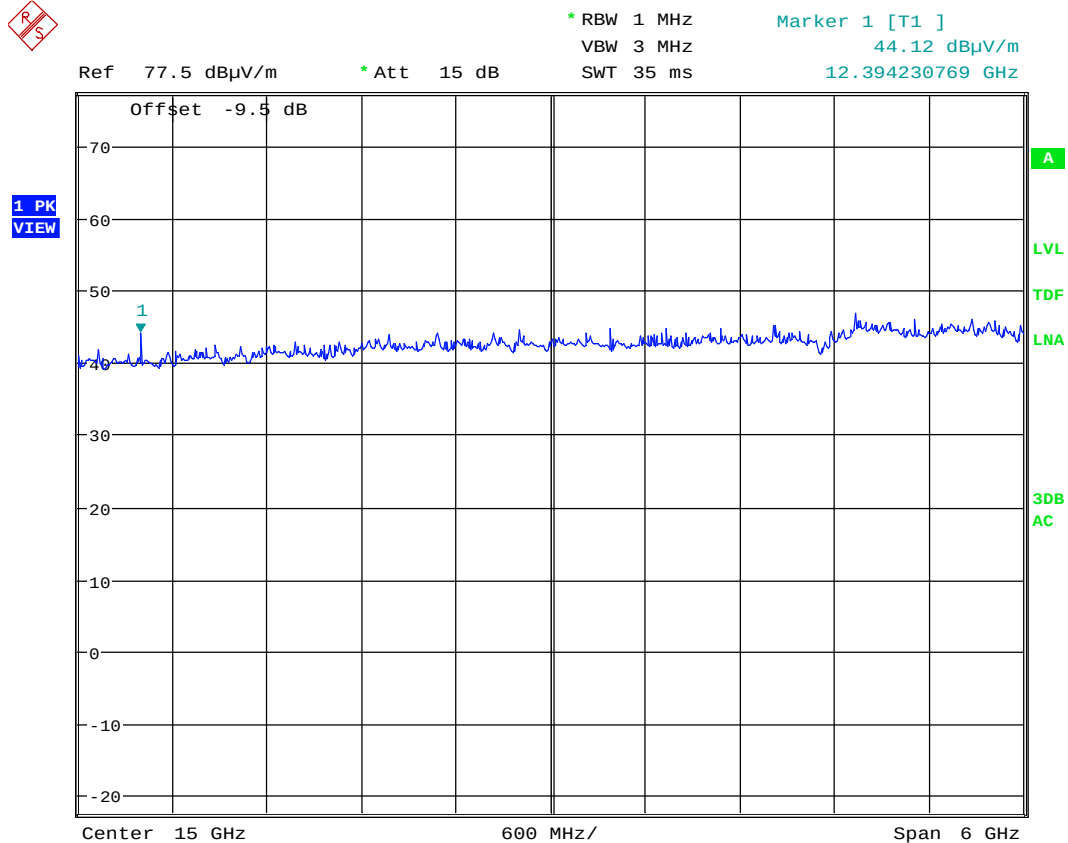
Date: 5.JUN.2019 20:41:01

VP, 12 - 18GHz , 4πDPSK,ch2441MHz, PK scan, @ 1m distance



Date: 5.JUN.2019 20:41:21

HP, 12 - 18GHz , 4 π DPSK,ch2441MHz PK scan, @ 1m distance



Date: 5.JUN.2019 20:43:59

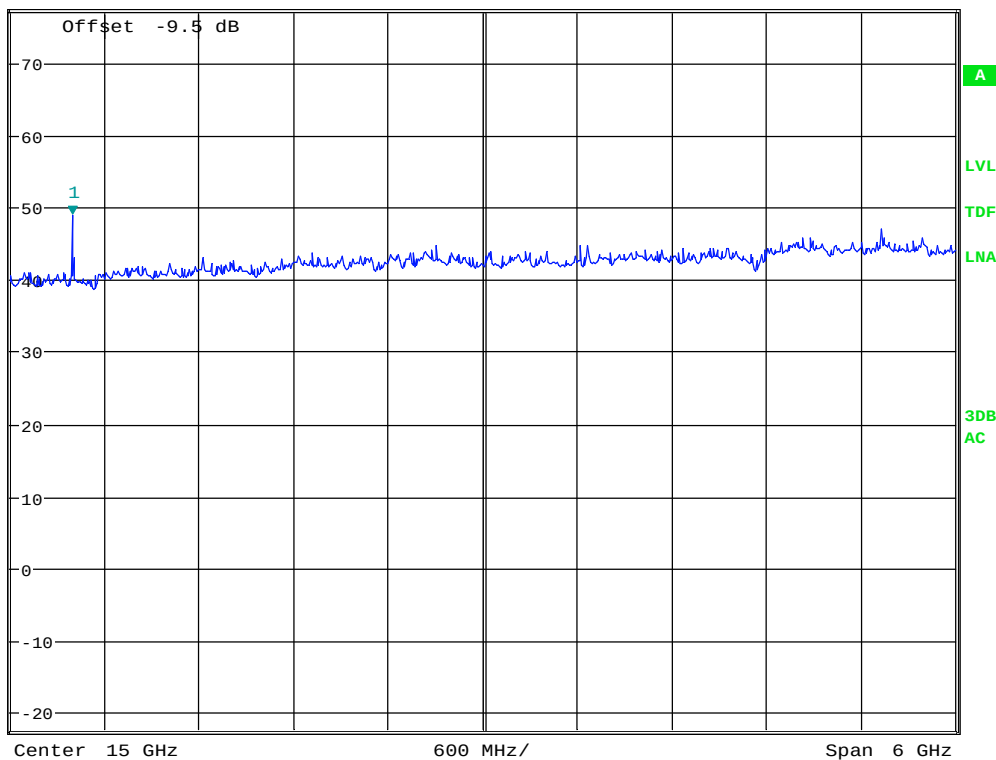
VP, 12 - 18GHz , 4 π DPSK,ch2480MHz, PK scan, @ 1m distance



* RBW 1 MHz
VBW 3 MHz
SWT 35 ms
Marker 1 [T1]
49.03 dBμV/m
12.394230769 GHz

Ref 77.5 dBμV/m * Att 15 dB

1 PK
VIEW



Date: 5.JUN.2019 20:42:48

HP, 12 - 18GHz , 4πDPSK,ch2480MHz PK scan, @ 1m distance



MARKER 1

24.78685897 GHz

Ref 77.5 dBμV/m

* Att 10 dB

* RBW 1 MHz

VBW 3 MHz

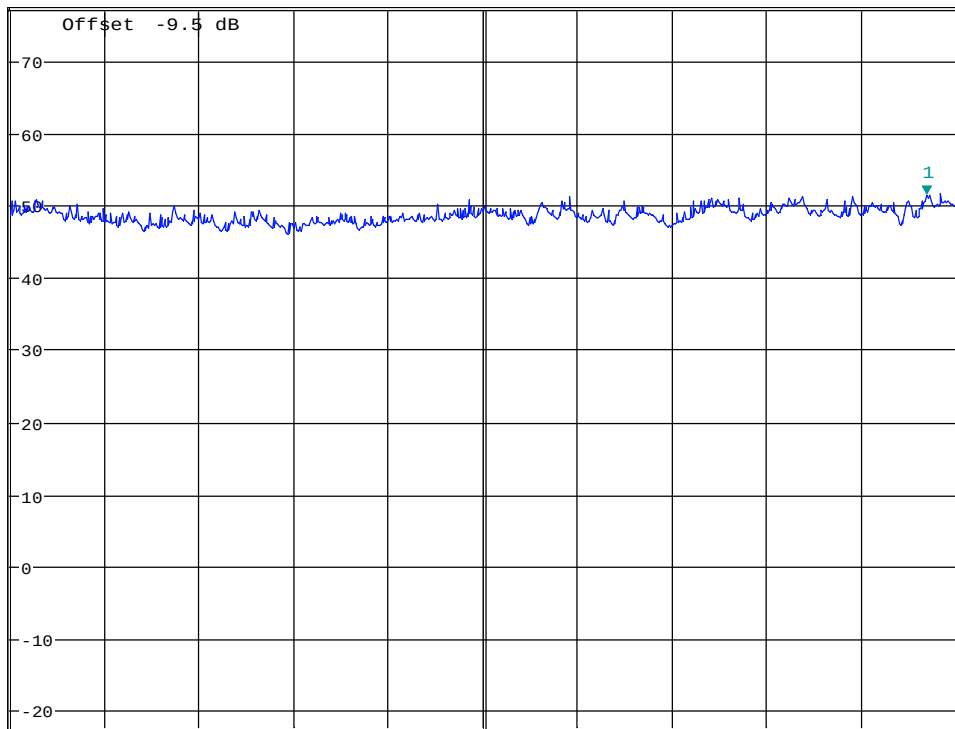
SWT 45 ms

Marker 1 [T1]

51.61 dBμV/m

24.786858974 GHz

1 PK
MAXH



Start 18 GHz

700 MHz/

Stop 25 GHz

Date: 8.JUN.2019 10:13:22

VP, 18 - 25GHz , 4πDPSK PK scan, @ 1m distance



MARKER 1

19.21153846 GHz

Ref 77.5 dB μ V/m

* Att 10 dB

* RBW 1 MHz

VBW 3 MHz

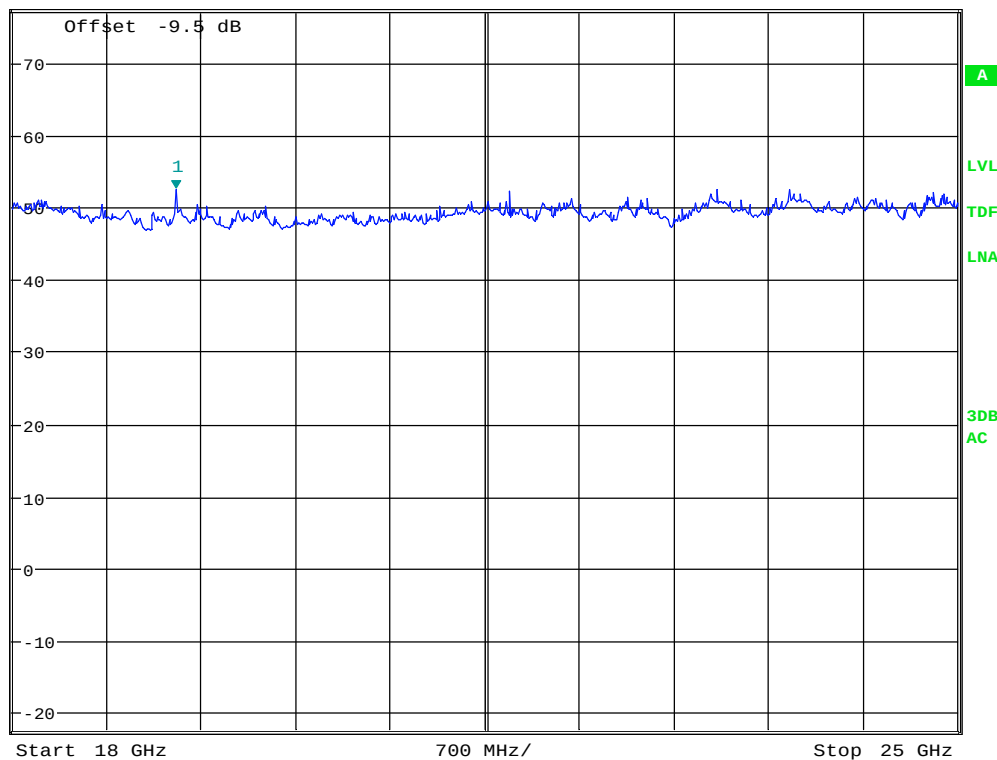
SWT 45 ms

Marker 1 [T1]

52.55 dB μ V/m

19.211538462 GHz

1 PK
MAXH



Date: 8.JUN.2019 10:13:48

HP, 18 - 25GHz , 4 π DPSK PK scan, @ 1m distance

IN hopping MODE:

Radiated Emissions, 1-25 GHz; Measuring distance:3m (1 – 8 GHz), 1m (8 – 18 GHz); A pre-scan was performed above 18 GHz and no spurious emissions were detected.

Peak Detector:

Modulation scheme	Frequency	Polarization	Dist. corr. factor	Field strength, Peak Detector, 3m	Duty cycle corr. factor	Limit	Margin
	GHz		dB	dB μ V/m	dB	dB μ V/m	dB
DH1	/	/	/	/	/	/	/
	7.2 – 7.45	HP	0	60.34	/	74	13.66
	9.72 – 9.81	HP	*	45.39	/	74	28.66
	12.16 – 12.45	HP	*	53.70	/	74	20.30
DH3	/	/	/	/	/	/	/
	7.2 – 7.45	HP	0	61.26	/	74	12.74
	9.72 – 9.81	HP	*	45.10	/	74	28.90
	12.16 – 12.45	HP	*	53.66	/	74	20.34
DH5	/	/	/	/	/	/	/
	7.2 – 7.45	HP	0	60.26	/	74	13.74
	9.72 – 9.81	HP	*	46.54	/	74	27.46
	12.16 – 12.45	HP	*	53.62	/	74	20.38
Other	L,M,H	VP/HP	/	None detected	/	74	>20

*distance correction is included in the plot

Average:

Modulation scheme	Frequency	Polarization	Dist. corr. factor	Field strength, Peak Detector, 3m	Duty cycle corr. factor	Limit	Margin
	MHz		dB	dB μ V/m	dB	dB μ V/m	dB
DH1	/	/	/	/	/	/	/
	7.2 – 7.45	HP	0	40.34	20	54	13.66
	9.72 – 9.81	HP	*	/	20	54	/
	12.16 – 12.45	HP	*	/	20	54	20.30
DH3	/	/	/	/	/	/	/
	7.2 – 7.45	HP	0	41.26	20	54	12.74
	9.72 – 9.81	HP	*	/	20	54	/
	12.16 – 12.45	HP	*	/	20	54	20.34
DH5	/	/	/	/	/	/	/
	7.2 – 7.45	HP	0	40.26	20	54	13.74
	9.72 – 9.81	HP	*	/	20	54	/
	12.16 – 12.45	HP	*	/	20	54	20.38
Other	L,M,H	VP/HP	/	None detected	20	54	>20

*Distance correction for 1m is included in the spectrum analyser.

Average Detector values are calculated from Peak values by Duty Cycle Correction Factor.

Antenna factor, amplifier gain and cable loss are included in spectrum analyzer "Transducer factor".

See plots.

Requirements/Limit

FCC	Part 15.209 @ frequencies defined in §15.205	
ISED	RSS-GEN Issue 4, Clause 8.9 @ frequencies defined in clause 8.10	
	Radiated emission limit @3 meters	
Frequency (MHz)	AV (dBμV/m)	Peak (dBμV/m)
Above 1 GHz	54.0	74.0



* RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
60.34 dBμV/m
7.211618590 GHz

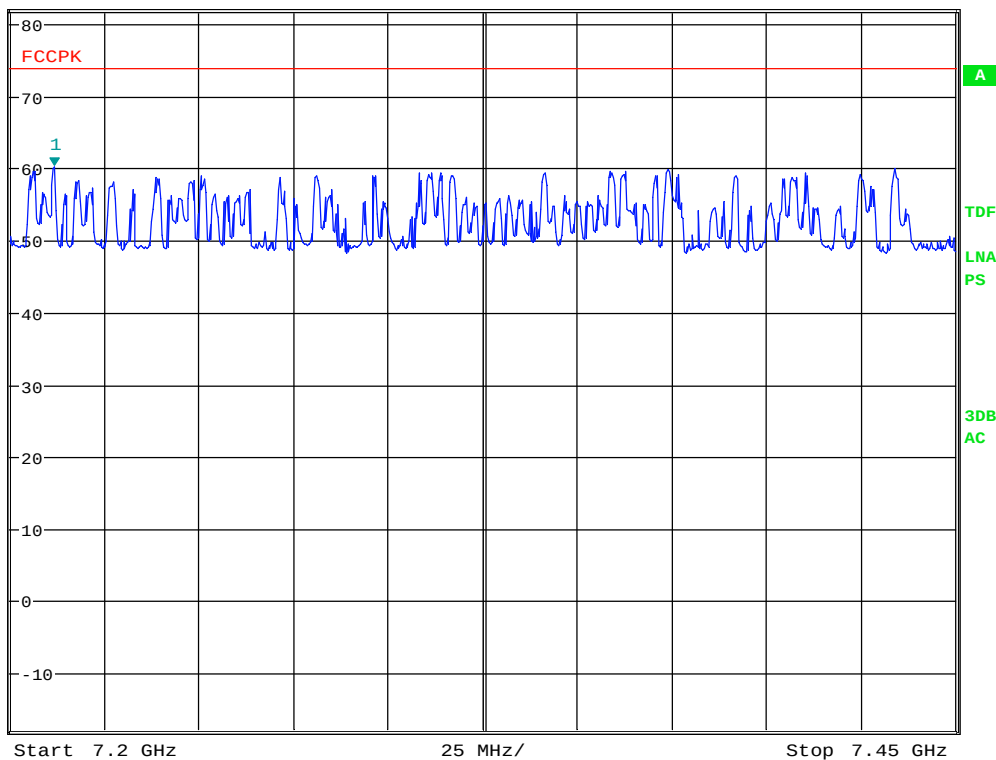
Ref 82 dBμV/m

* Att 10 dB

SWT 20 ms

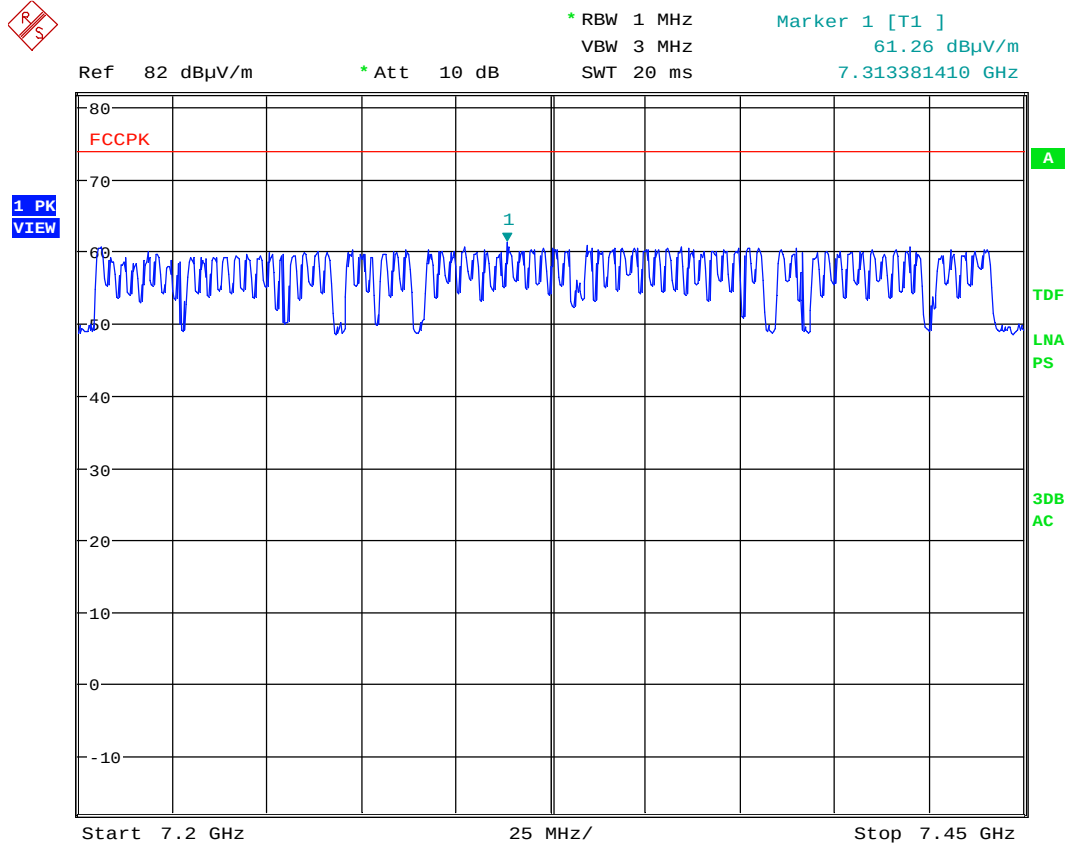
7.211618590 GHz

1 PK
VIEW



Date: 5.JUN.2019 18:03:22

3rd har, PK, hopping mode, DH1 – HP



Date: 5.JUN.2019 18:05:20

3rd har, PK, hopping mode, DH3 – HP

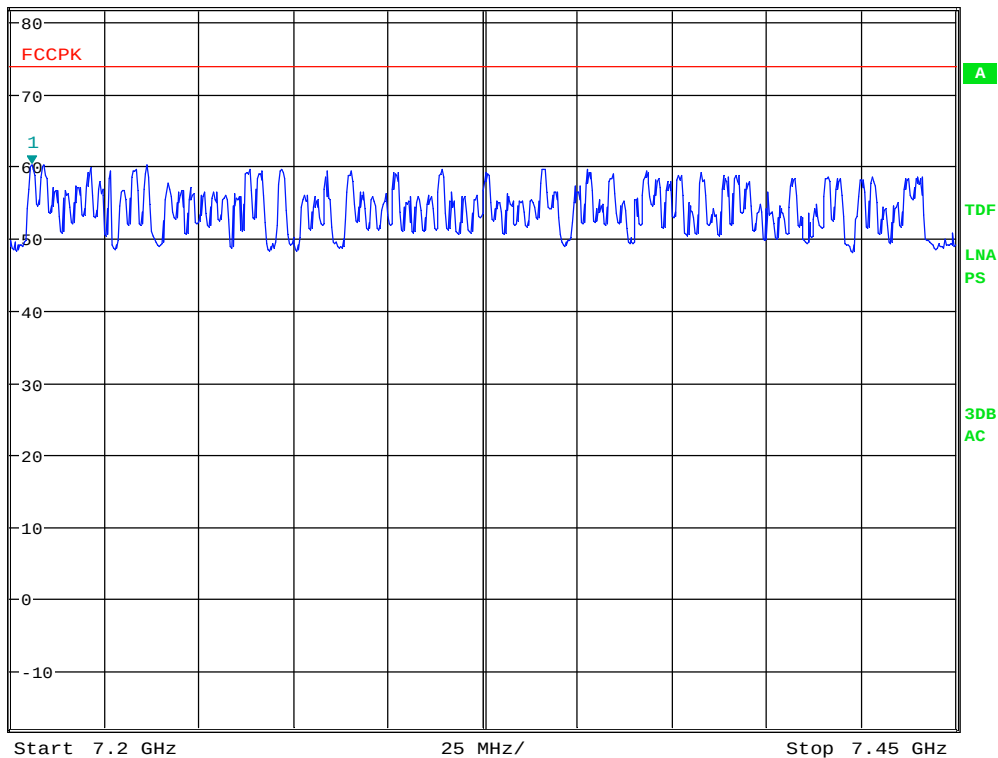


* RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
60.26 dBμV/m
7.205608974 GHz

Ref 82 dBμV/m

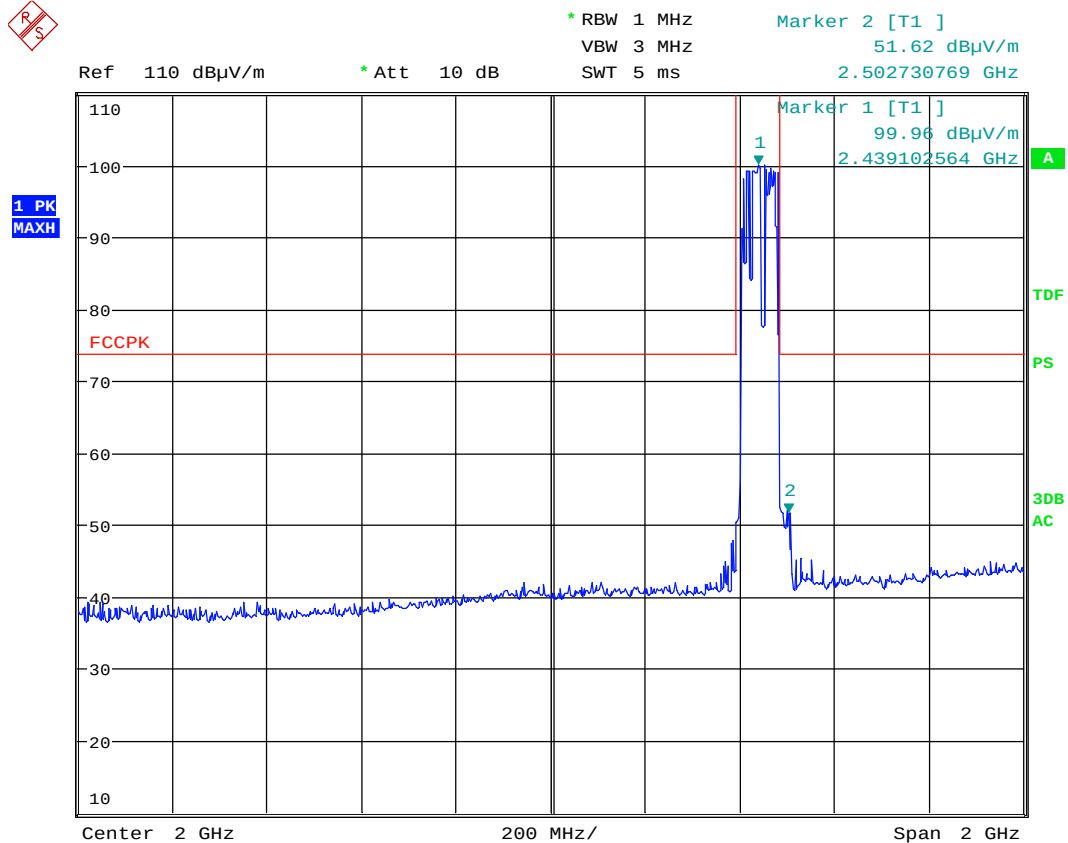
* Att 10 dB

1 PK
VIEW



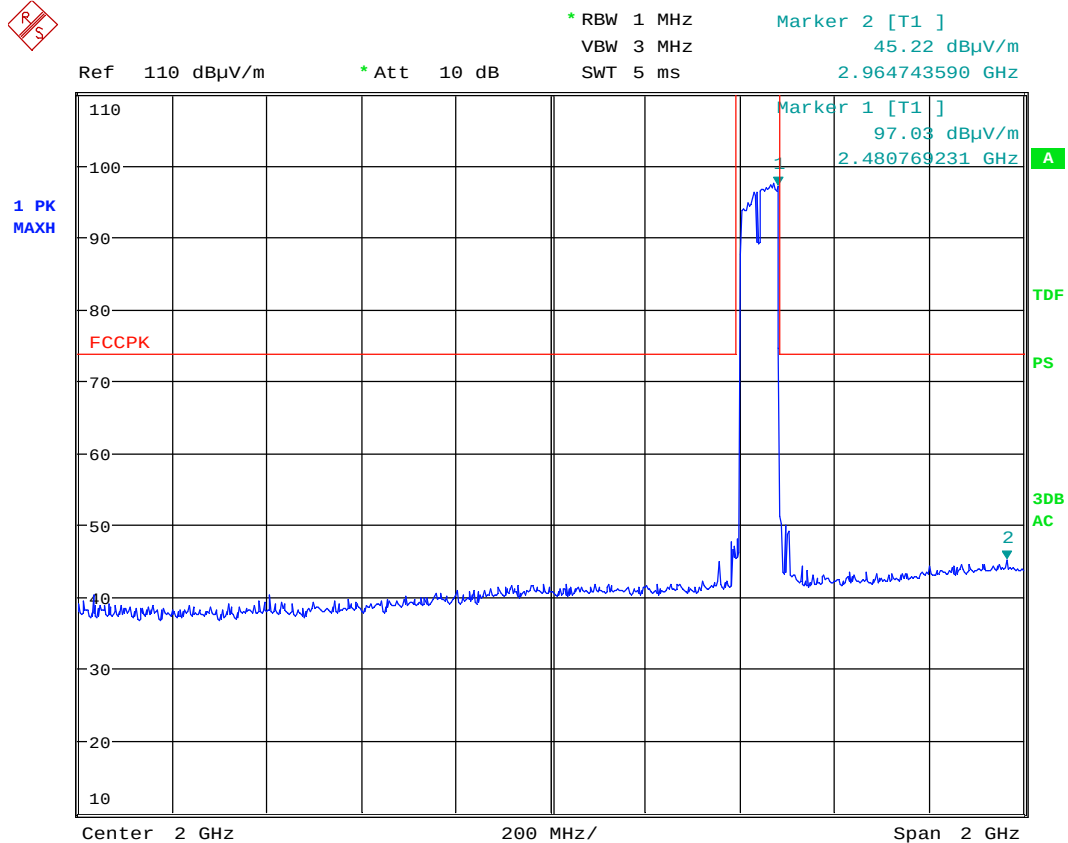
Date: 5.JUN.2019 18:11:26

3rd har, PK, hopping mode, DH5 – HP



Date: 4.JUN.2019 09:52:25

VP, 1 - 3GHz , hopping mode,DH1, PK scan



Date: 4.JUN.2019 09:43:01

HP, 1 - 3GHz , hopping mode,DH1, PK scan



* RBW 1 MHz

Marker 1 [T1]

VBW 3 MHz

52.66 dBμV/m

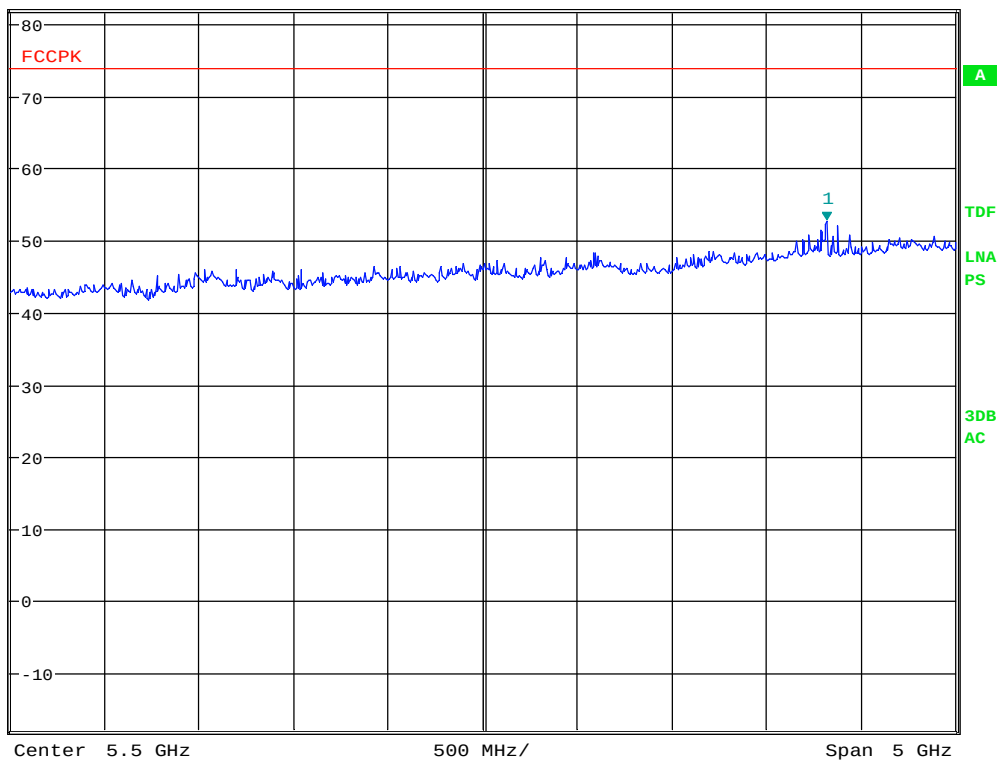
SWT 30 ms

7.318910256 GHz

Ref 82 dBμV/m

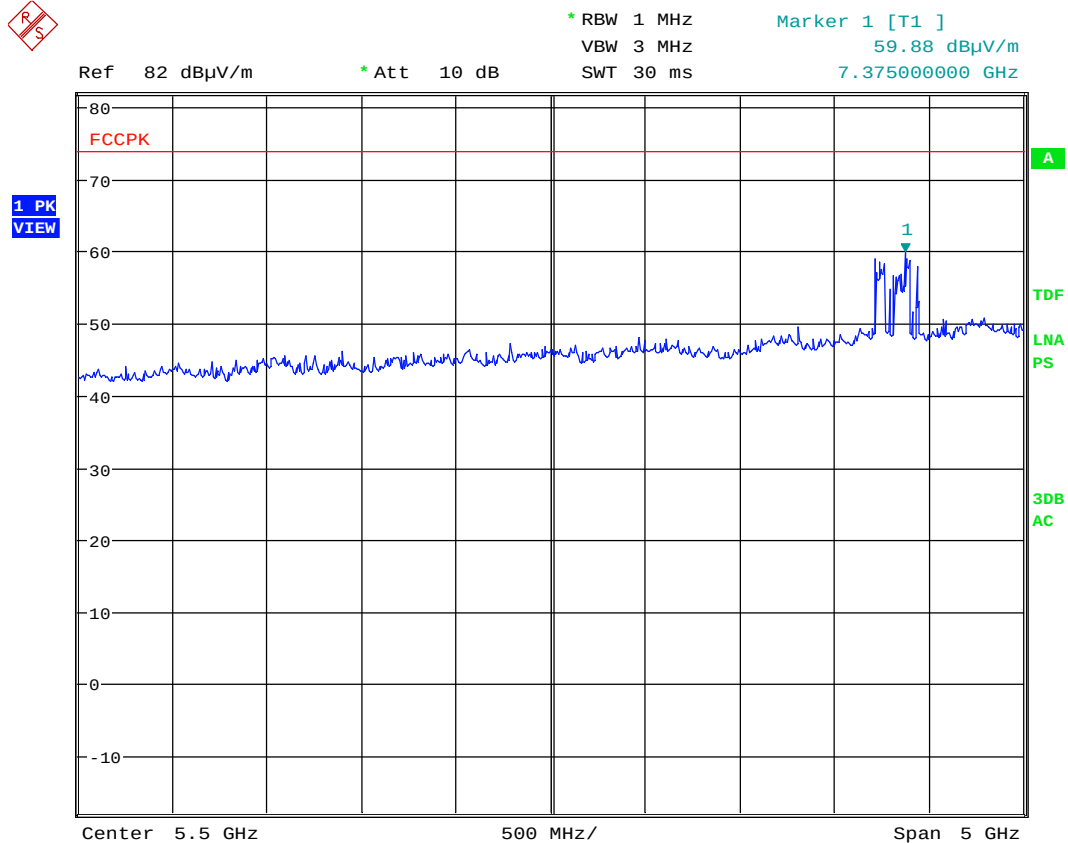
* Att 10 dB

1 PK
VIEW



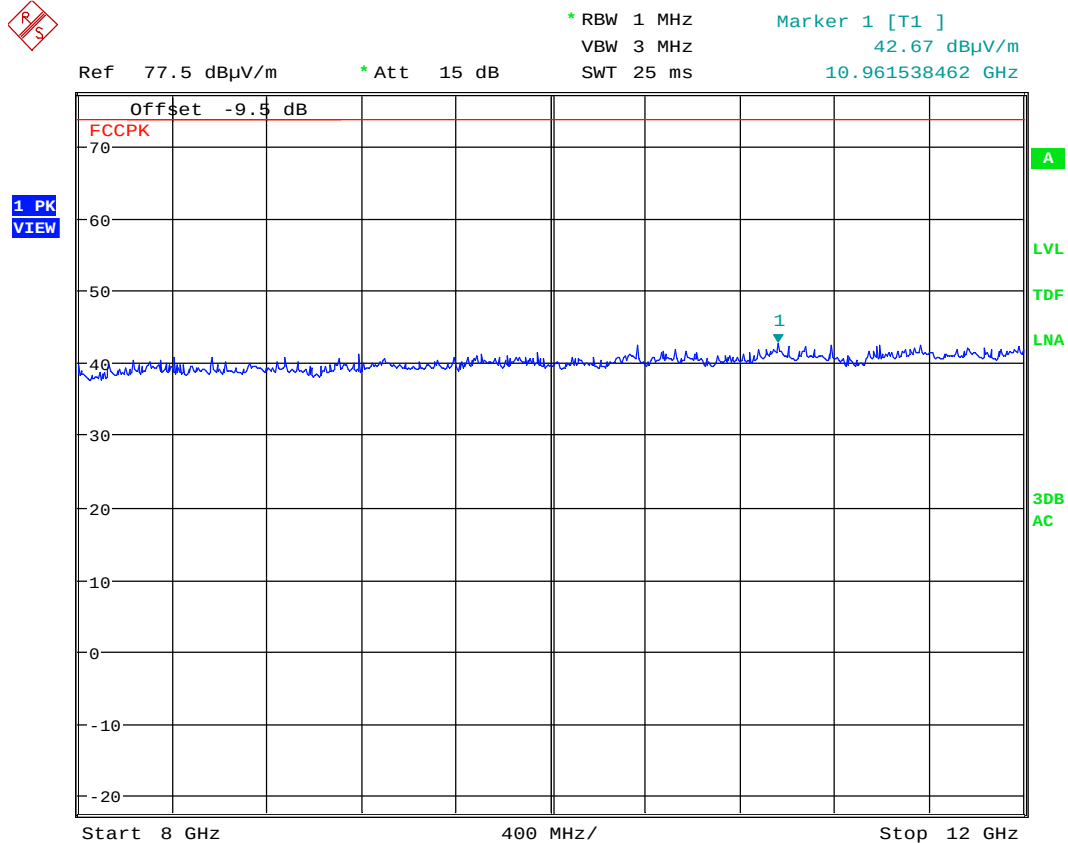
Date: 5.JUN.2019 17:59:20

VP, 3 - 8GHz , hopping mode,DH1, PK scan



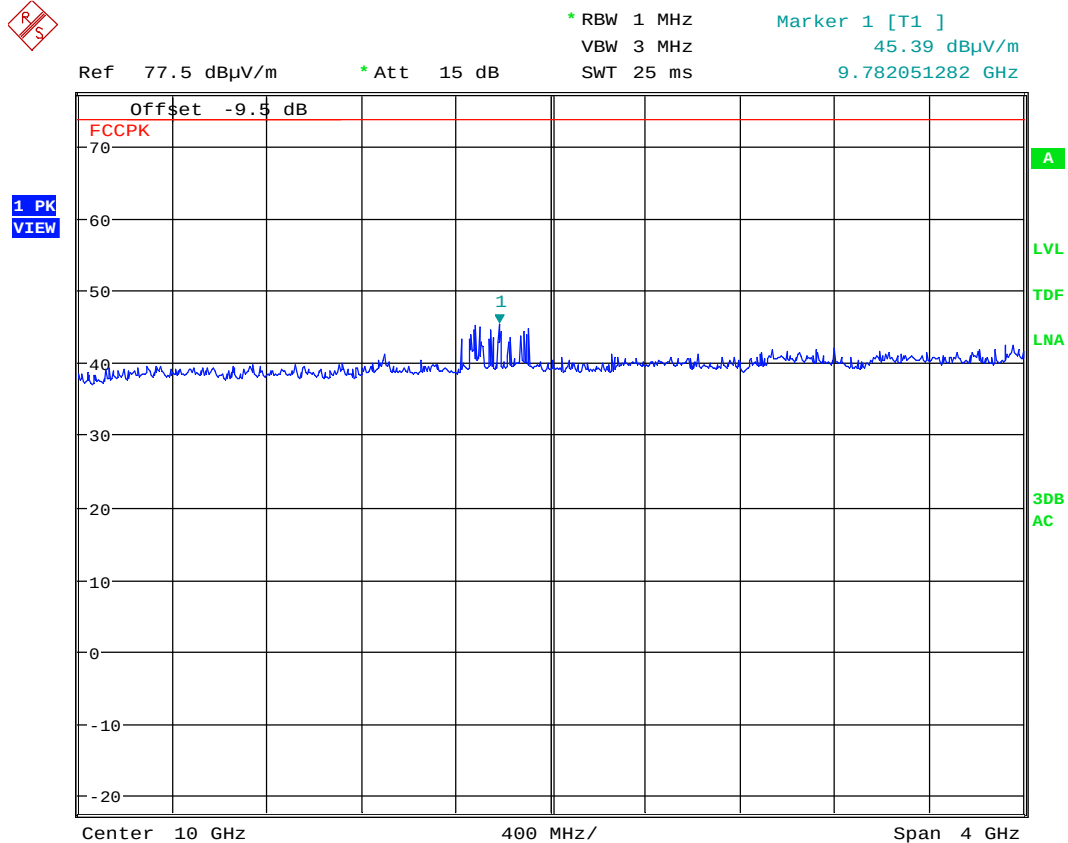
Date: 5.JUN.2019 18:00:38

HP, 3 - 8GHz , hopping mode,DH1, PK scan



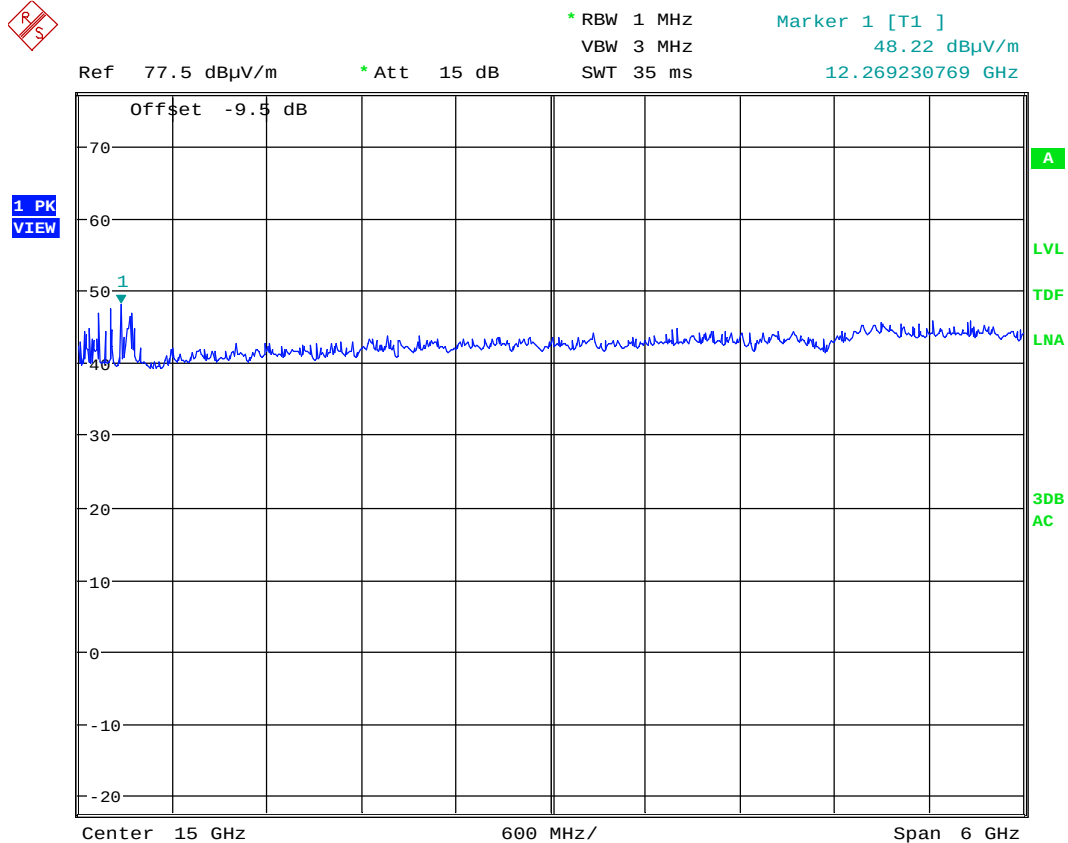
Date: 5.JUN.2019 19:34:58

VP, 8 - 12GHz , hopping mode,DH1, PK scan,@ 1m distance



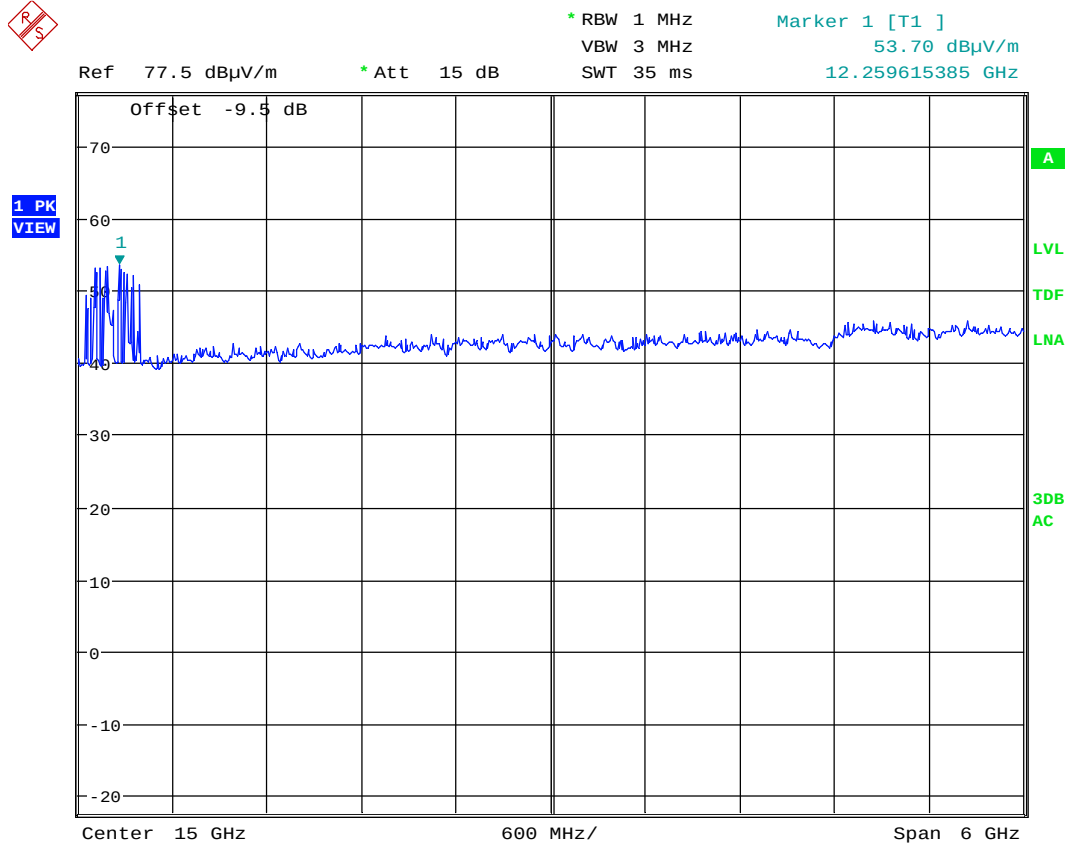
Date: 5.JUN.2019 19:35:57

HP, 8 - 12GHz , hopping mode,DH1, PK scan, @ 1m distance



Date: 5.JUN.2019 20:23:10

VP, 12 - 18GHz , hopping mode,DH1, PK scan, @ 1m distance



Date: 5.JUN.2019 20:23:48

HP, 12 - 18GHz , hopping mode,DH1 PK scan, @ 1m distance



MARKER 1

24.83173077 GHz

Ref 77.5 dBμV/m

* Att 10 dB

* RBW 1 MHz

VBW 3 MHz

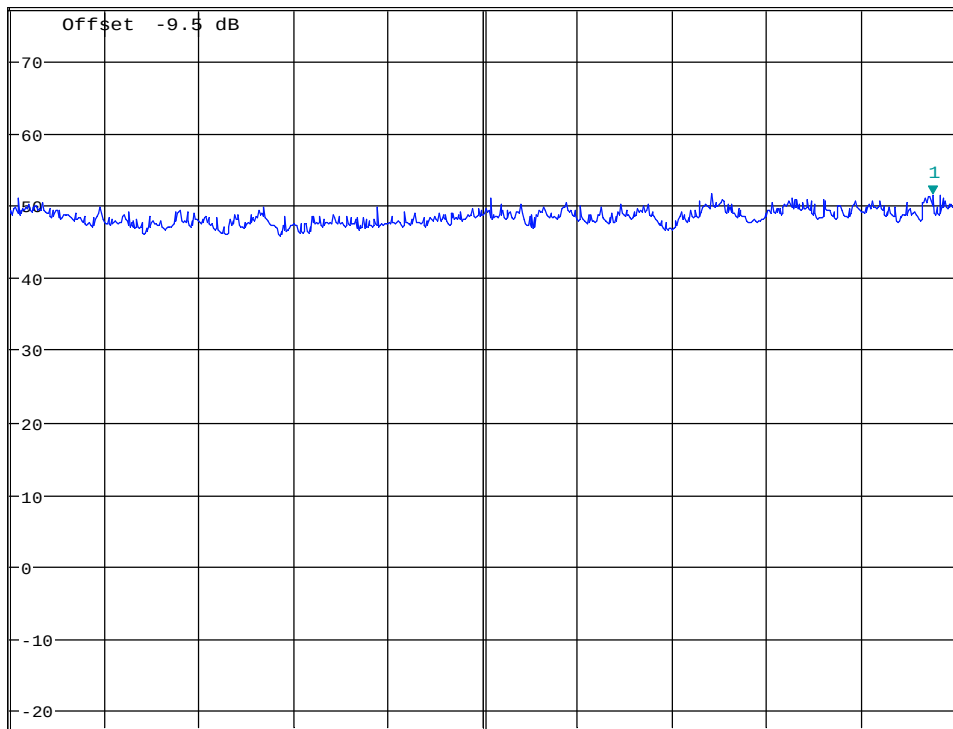
SWT 45 ms

Marker 1 [T1]

51.47 dBμV/m

24.831730769 GHz

1 PK
MAXH



Date: 8.JUN.2019 10:14:54

VP, 18 - 25GHz , hopping mode,DH1 PK scan, @ 1m distance



MARKER 1

24.79807692 GHz

Ref 77.5 dBμV/m * Att 10 dB

* RBW 1 MHz

VBW 3 MHz

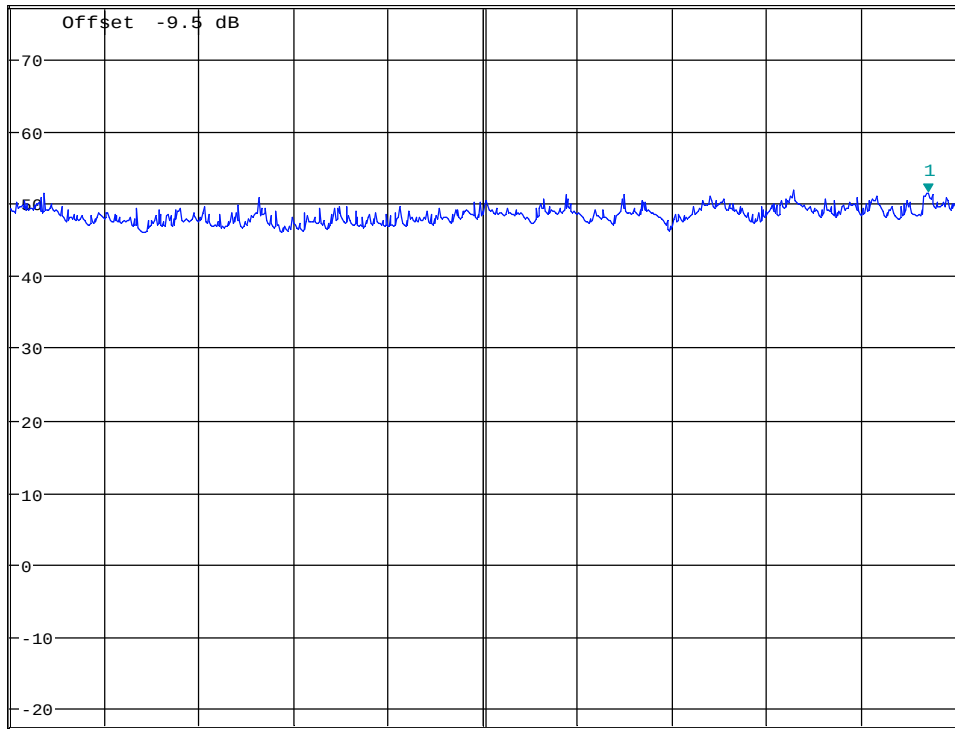
SWT 45 ms

Marker 1 [T1]

51.54 dBμV/m

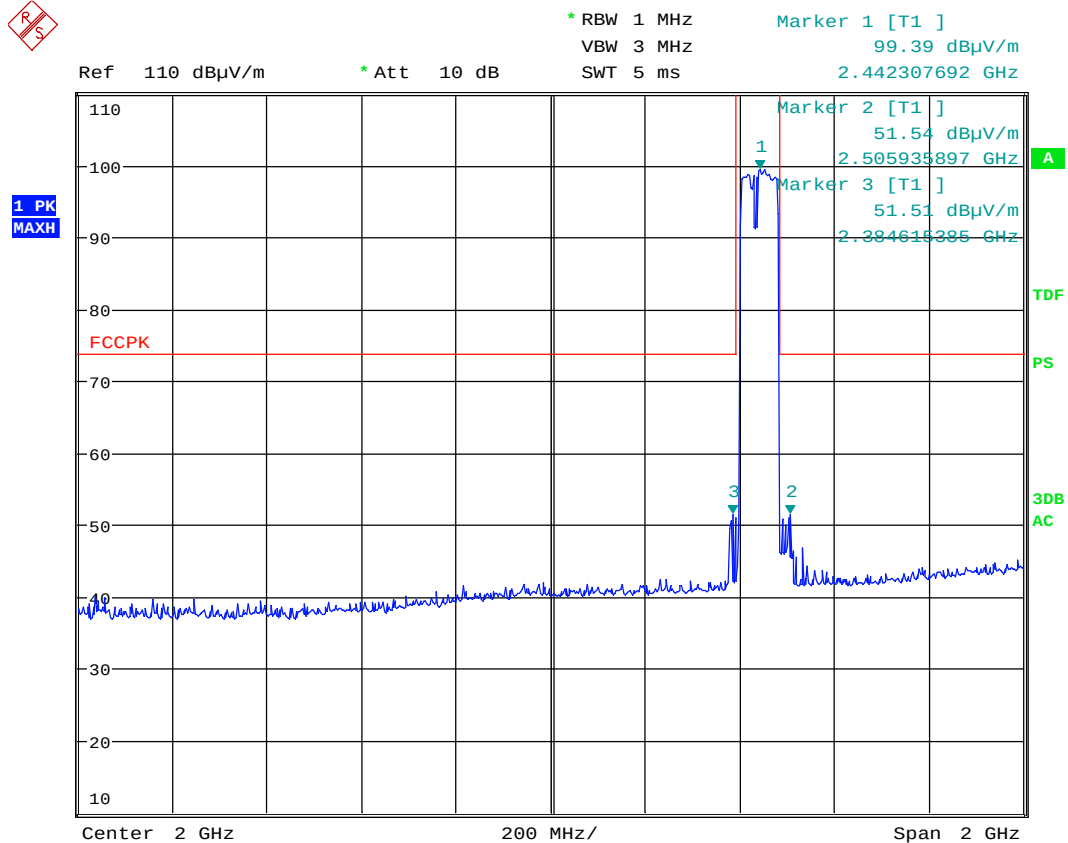
24.798076923 GHz

1 PK
MAXH



Date: 8.JUN.2019 10:14:25

HP, 18 - 25GHz , hopping mode,DH1 PK scan, @ 1m distance



Date: 4.JUN.2019 09:54:10

VP, 1 - 3GHz , hopping mode,DH3, PK scan



Date: 4.JUN.2019 10:02:36

HP, 1 - 3GHz , hopping mode,DH3, PK scan

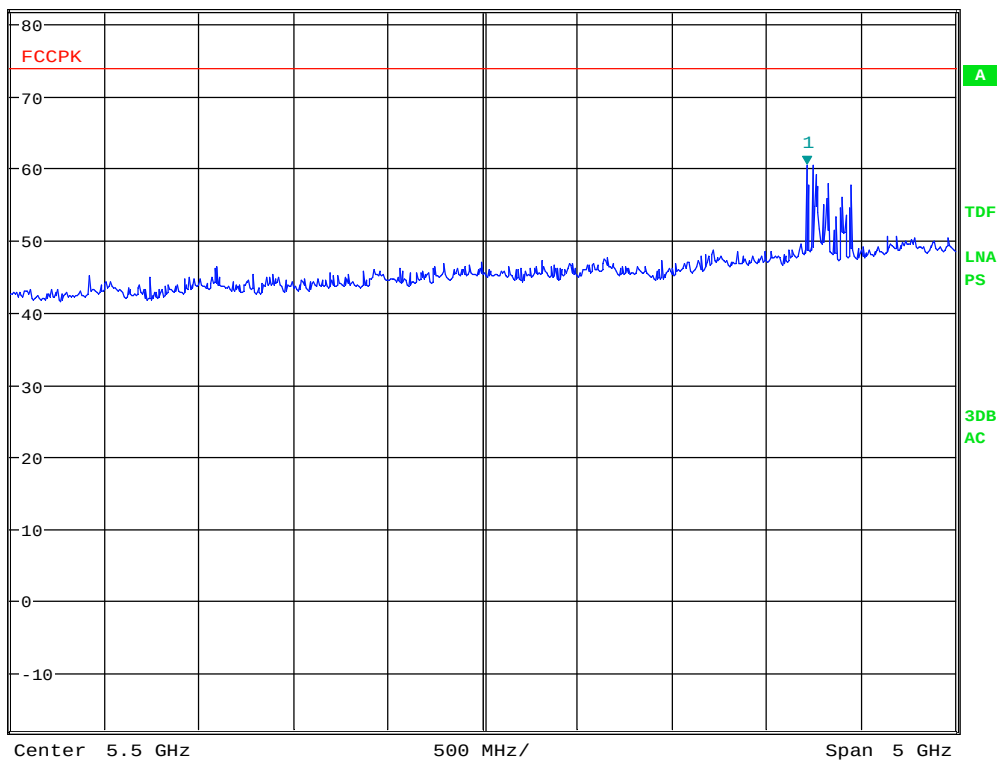


* RBW 1 MHz
VBW 3 MHz
SWT 30 ms
Marker 1 [T1]
60.49 dBμV/m
7.214743590 GHz

Ref 82 dBμV/m

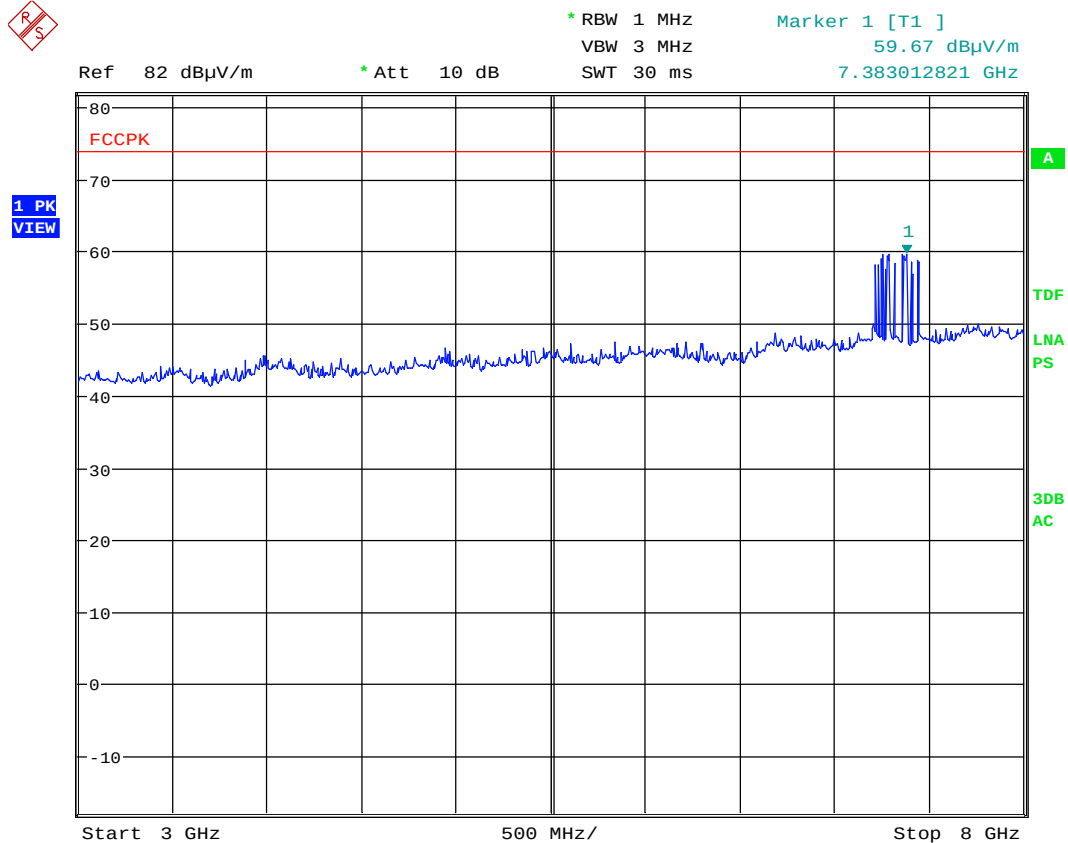
* Att 10 dB

1 PK
VIEW



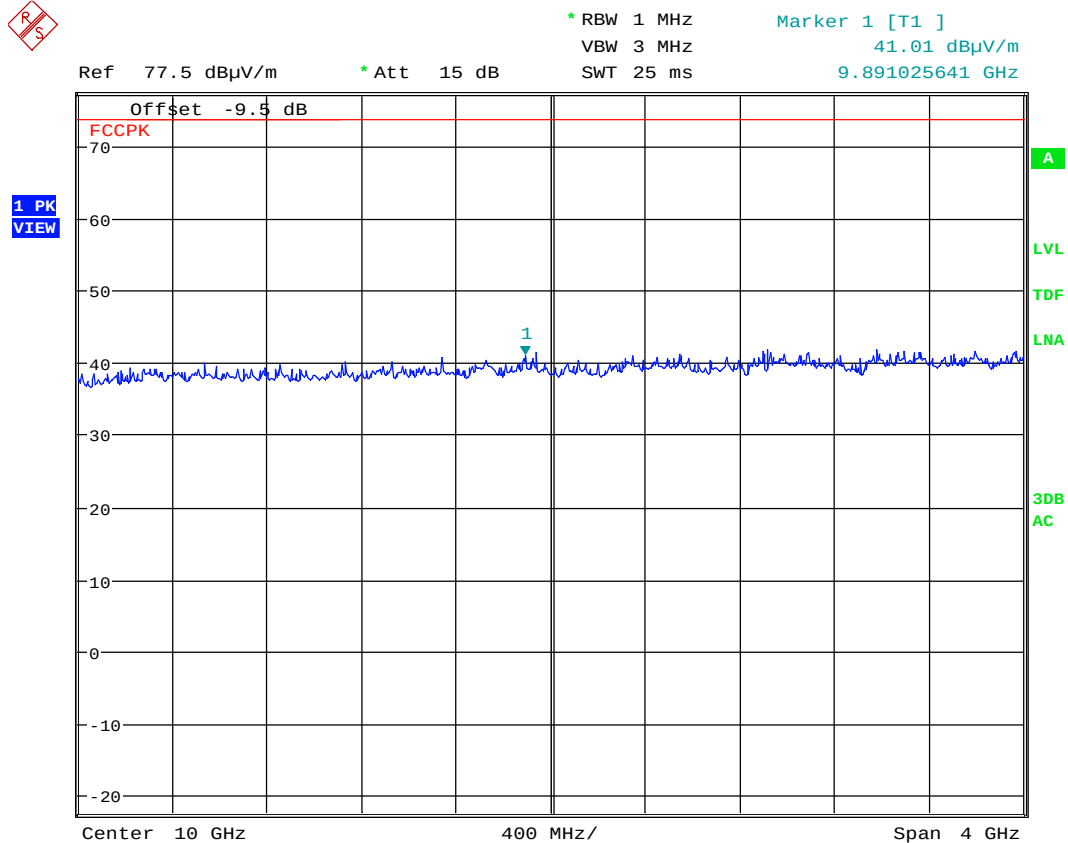
Date: 5.JUN.2019 18:06:45

VP, 3 - 8GHz , hopping mode,DH3, PK scan



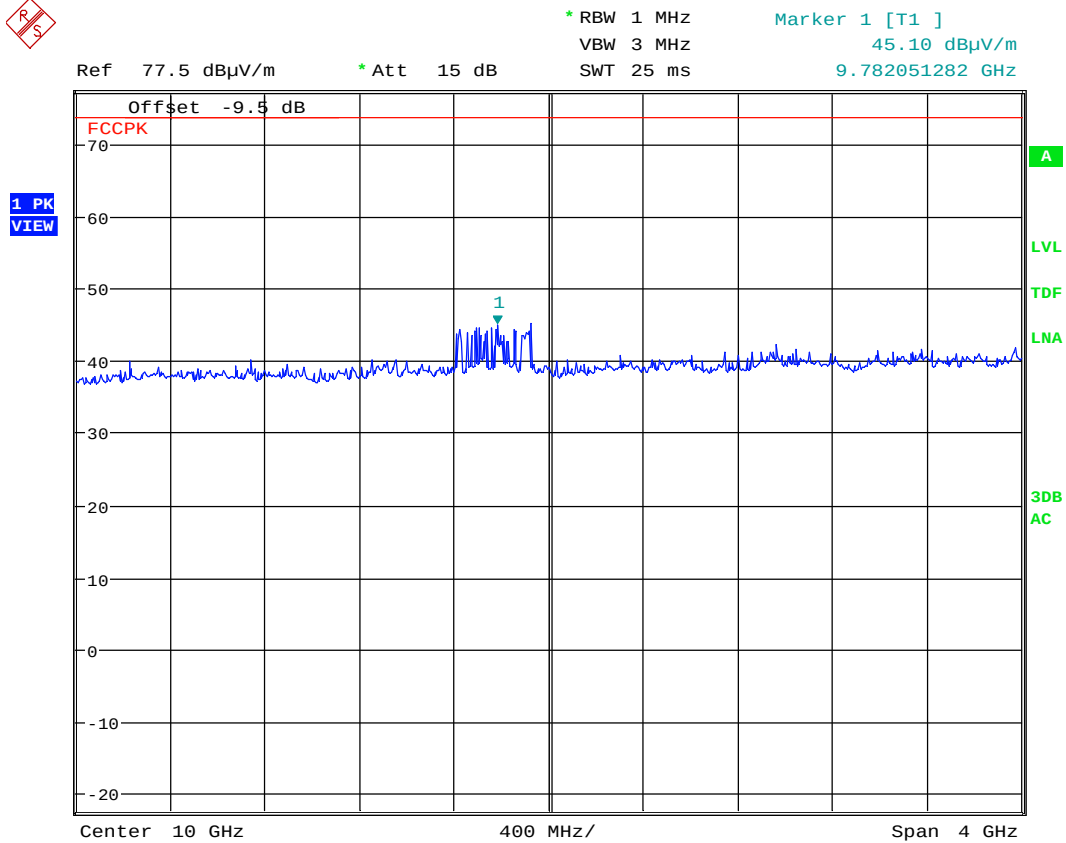
Date: 5.JUN.2019 18:05:55

HP, 3 - 8GHz , hopping mode,DH3, PK scan



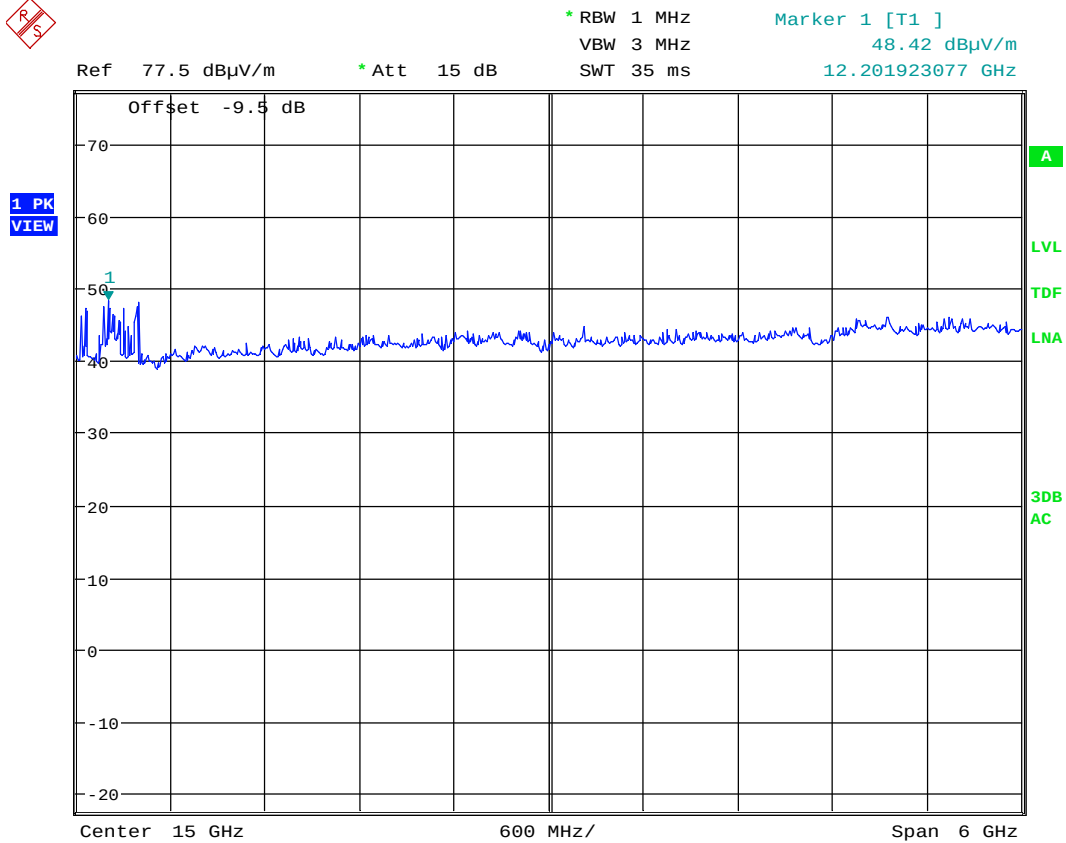
Date: 5.JUN.2019 19:37:47

VP, 8 - 12GHz , hopping mode,DH3, PK scan,@ 1m distance



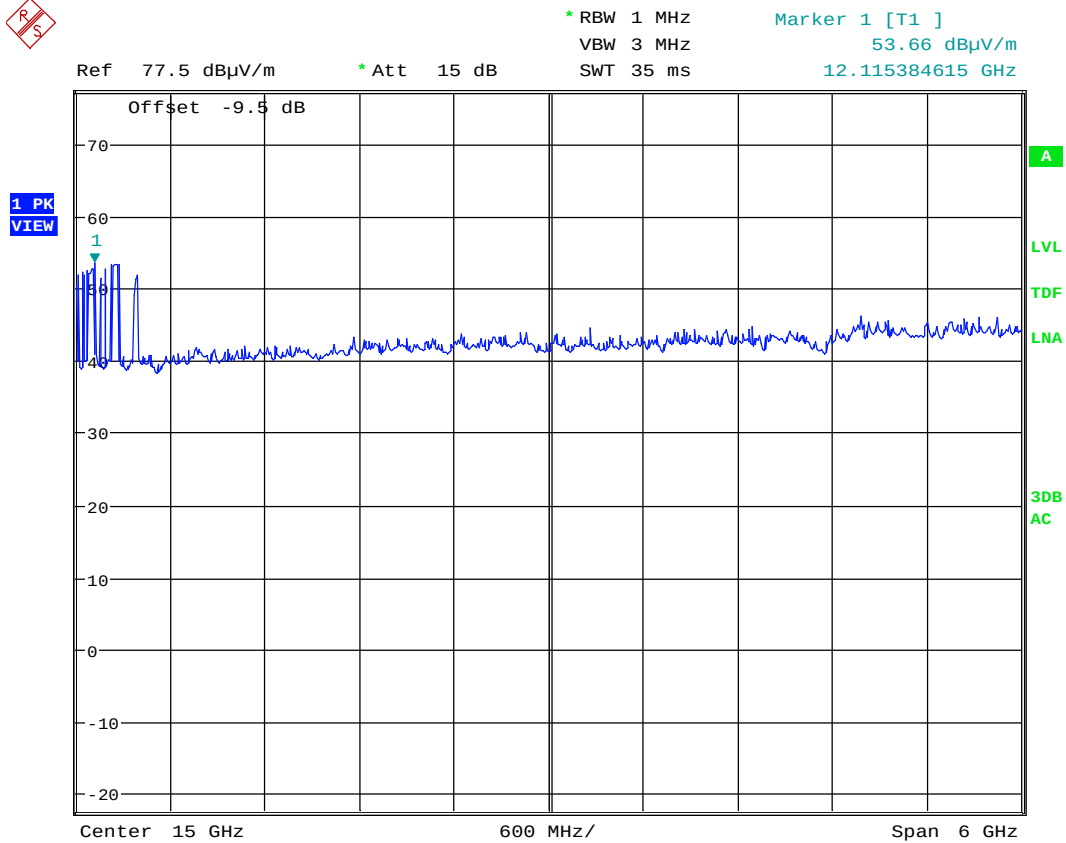
Date: 5.JUN.2019 19:37:10

HP, 8 - 12GHz , hopping mode,DH3, PK scan, @ 1m distance



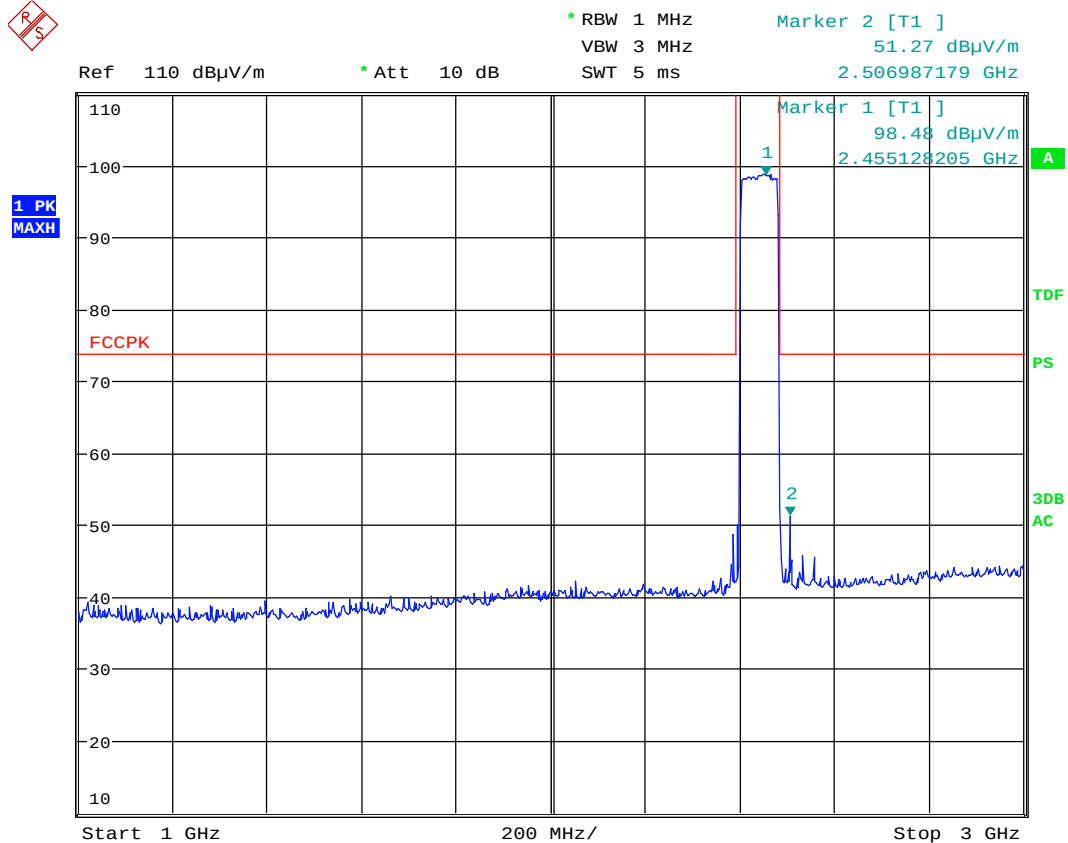
Date: 5.JUN.2019 20:26:09

VP, 12 - 18GHz , hopping mode,DH3, PK scan, @ 1m distance



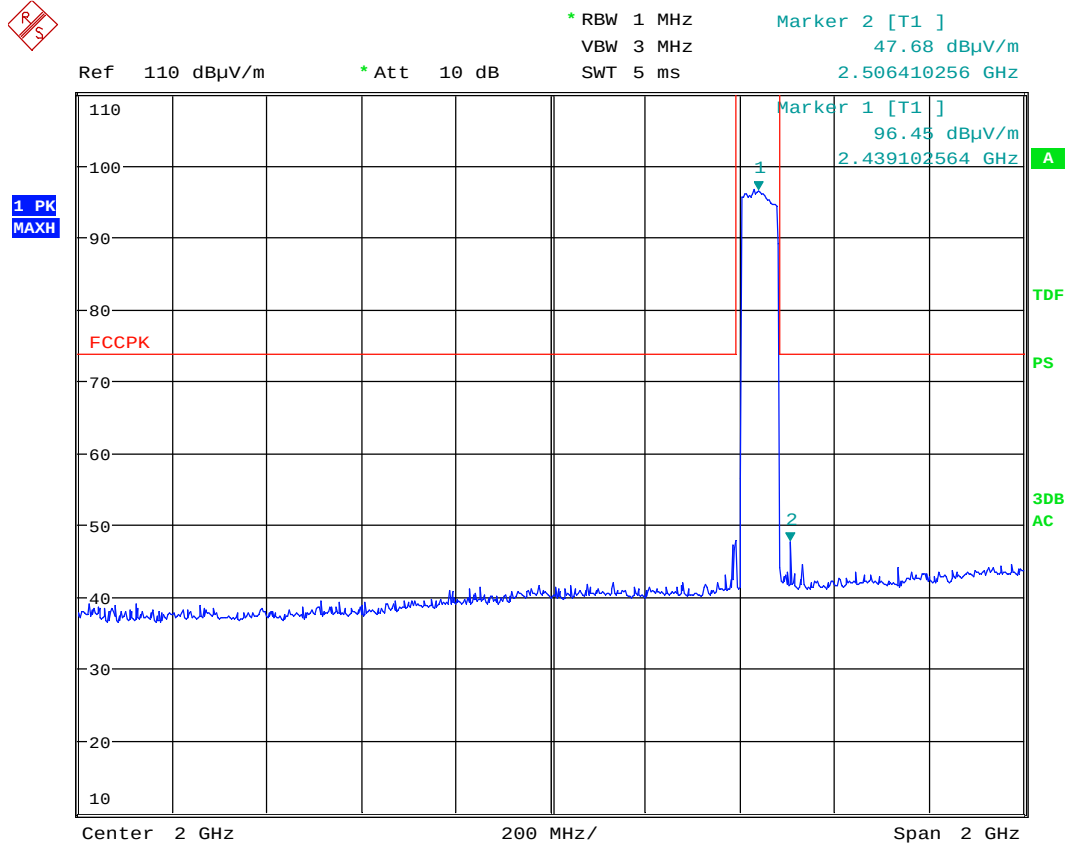
Date: 5.JUN.2019 20:25:16

HP, 12 - 18GHz , hopping mode,DH3 PK scan, @ 1m distance



Date: 4.JUN.2019 10:12:49

VP, 1 - 3GHz , hopping mode,DH5, PK scan



Date: 4.JUN.2019 10:09:27

HP, 1 - 3GHz , hopping mode,DH5, PK scan

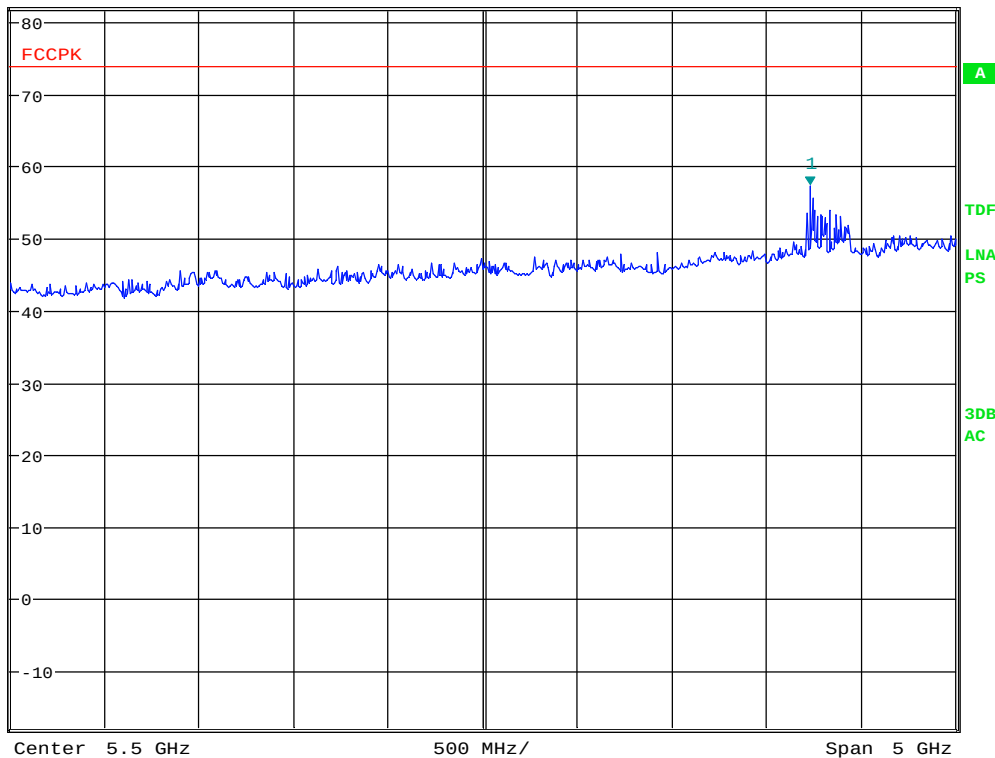


* RBW 1 MHz
VBW 3 MHz
SWT 30 ms
Marker 1 [T1]
57.24 dBμV/m
7.230769231 GHz

Ref 82 dBμV/m

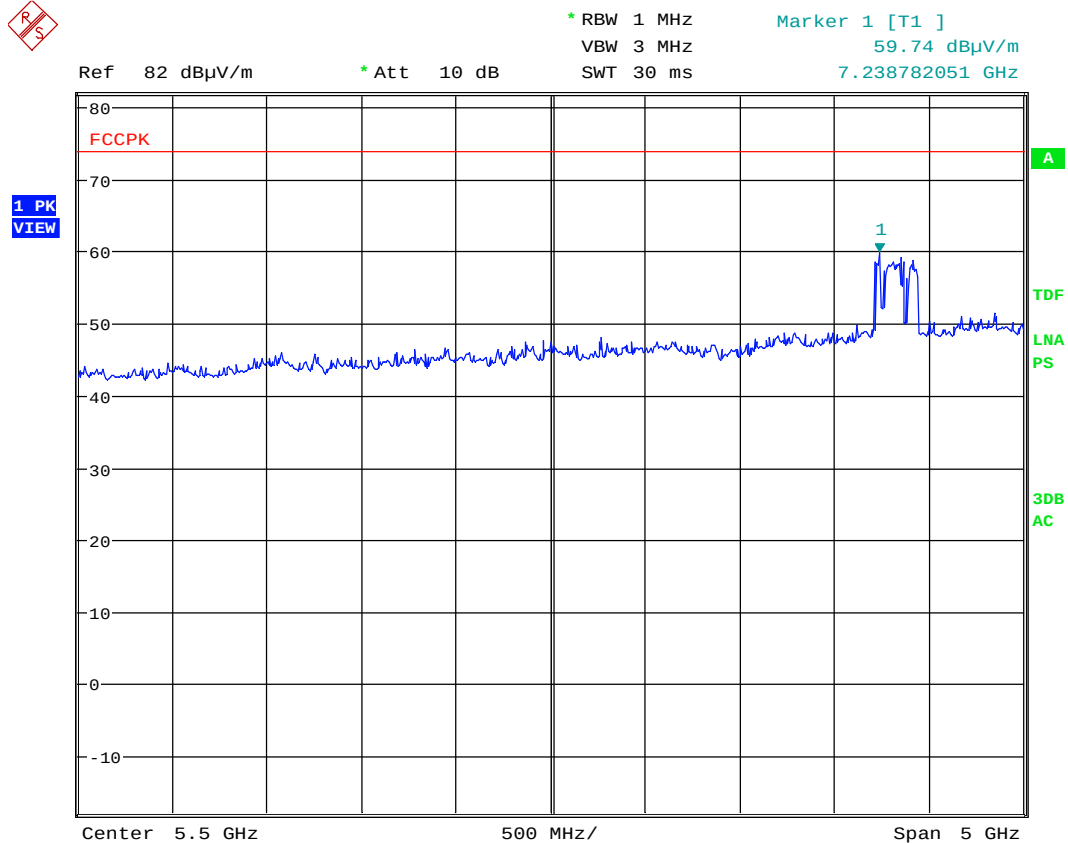
* Att 10 dB

1 PK
VIEW



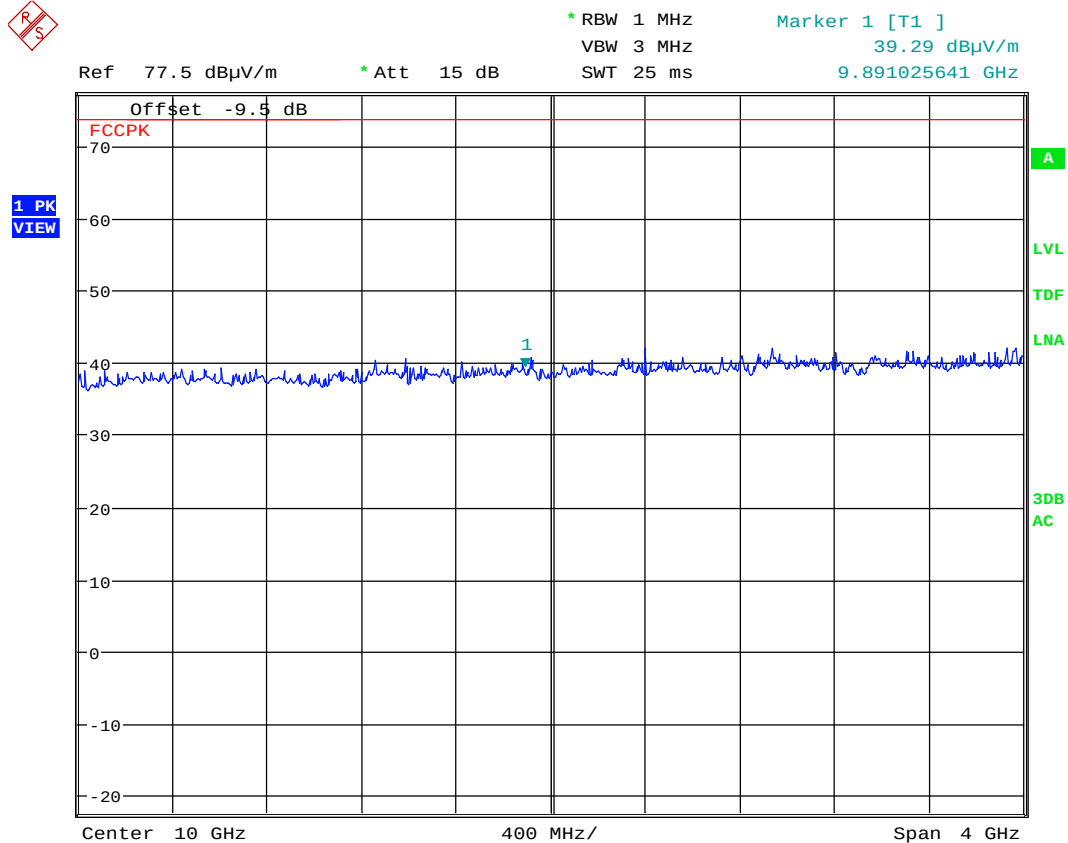
Date: 5.JUN.2019 18:08:13

VP, 3 - 8GHz , hopping mode,DH5, PK scan



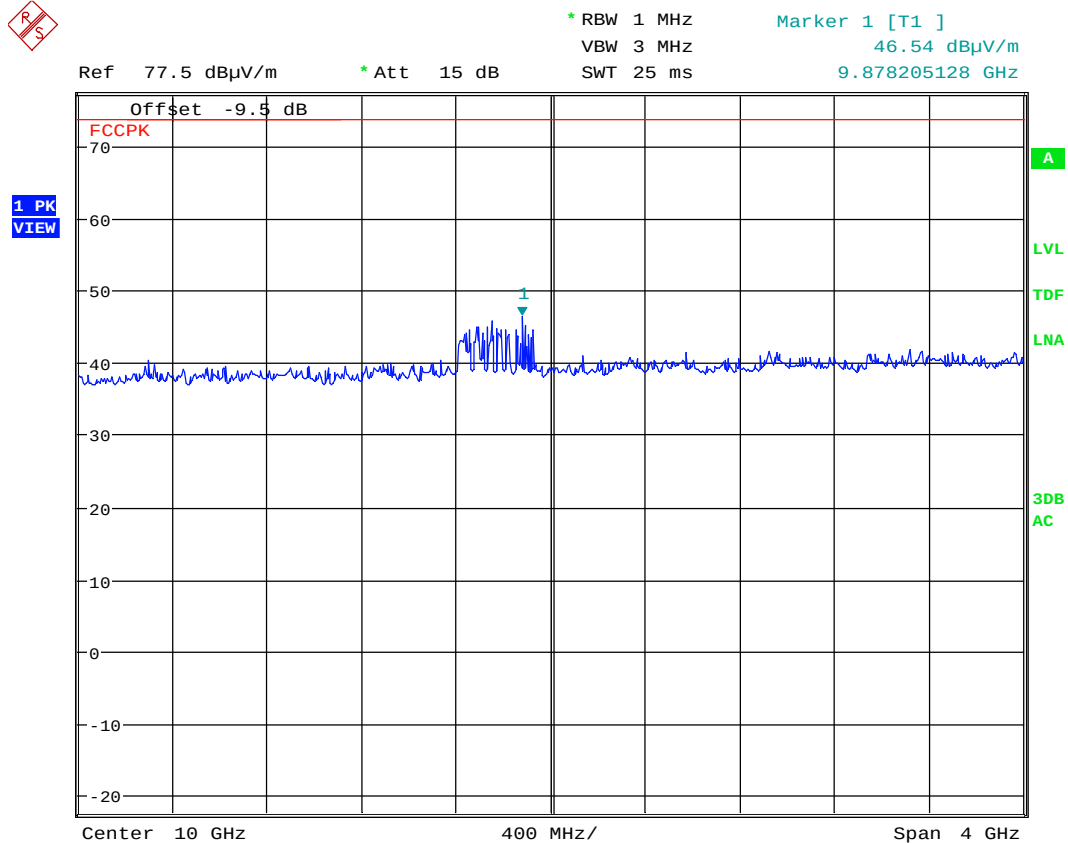
Date: 5.JUN.2019 18:09:45

HP, 3 - 8GHz , hopping mode,DH5, PK scan



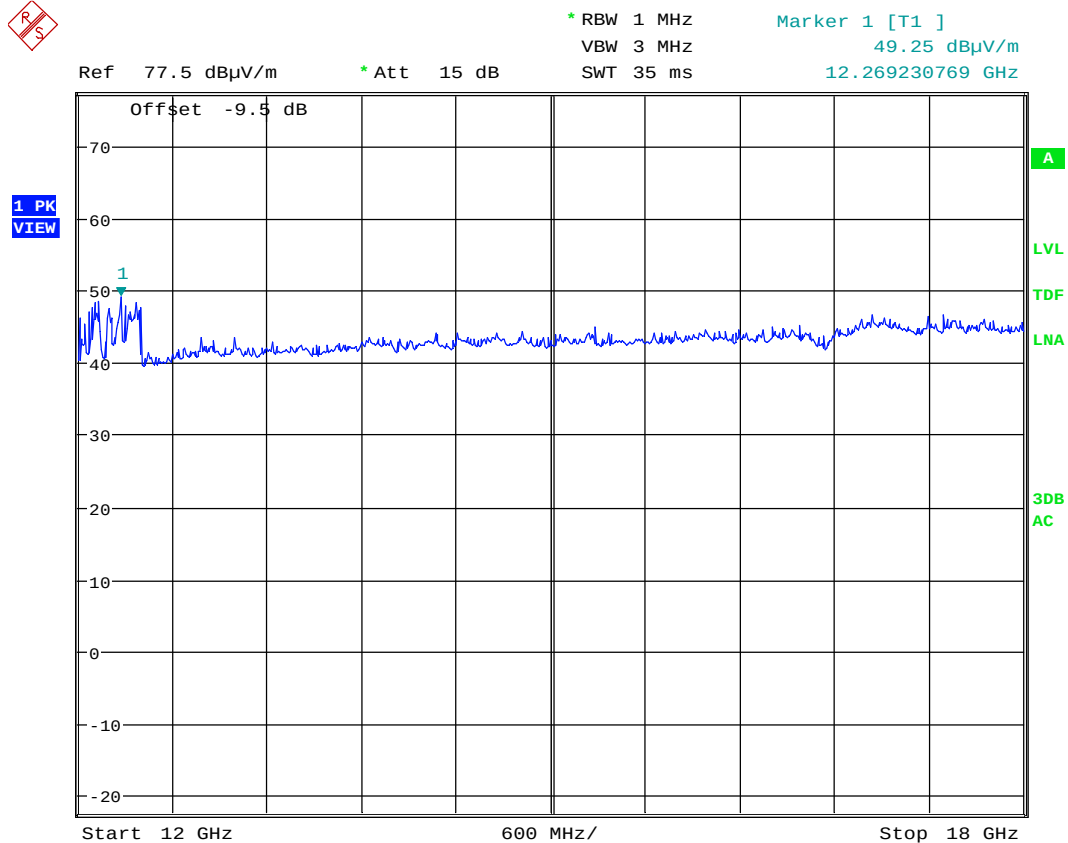
Date: 5.JUN.2019 19:39:01

VP, 8 - 12GHz , hopping mode,DH5, PK scan,@ 1m distance



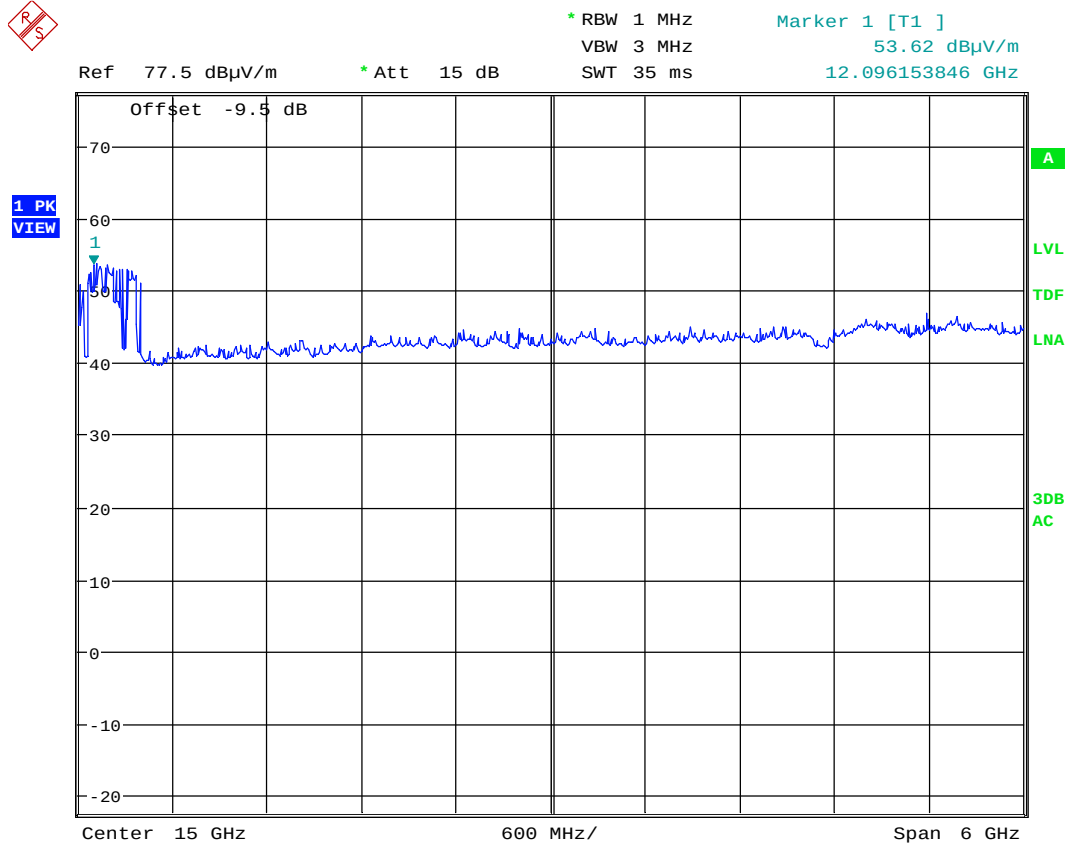
Date: 5.JUN.2019 19:39:32

HP, 8 - 12GHz , hopping mode,DH5, PK scan, @ 1m distance



Date: 5.JUN.2019 19:42:53

VP, 12 - 18GHz , hopping mode,DH5, PK scan, @ 1m distance



Date: 5.JUN.2019 19:44:05

HP, 12 - 18GHz , hopping mode,DH5 PK scan, @ 1m distance

4 Measurement Uncertainty

Measurement Uncertainty Values		
Test Item		Uncertainty
Output Power		±0.5 dB
Power Spectral Density		±0.5 dB
Out of Band Emissions, Conducted	< 3.6 GHz	±0.6 dB
	> 3.6 GHz	±0.9 dB
Spurious Emissions, Radiated	< 1 GHz	±2.5 dB
	> 1 GHz	±2.2 dB
Emission Bandwidth		±4 %
Power Line Conducted Emissions		+2.9 / -4.1 dB
Spectrum Mask Measurements	Frequency	±5 %
	Amplitude	±1.0 dB
Frequency Error		±0.6 ppm
Temperature Uncertainty		±1 °C

All uncertainty values are expanded standard uncertainty to give a confidence level of 95%, based on coverage factor k=2

5 LIST OF TEST EQUIPMENT

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment and ancillaries are identified (numbered) by the Test Laboratory.

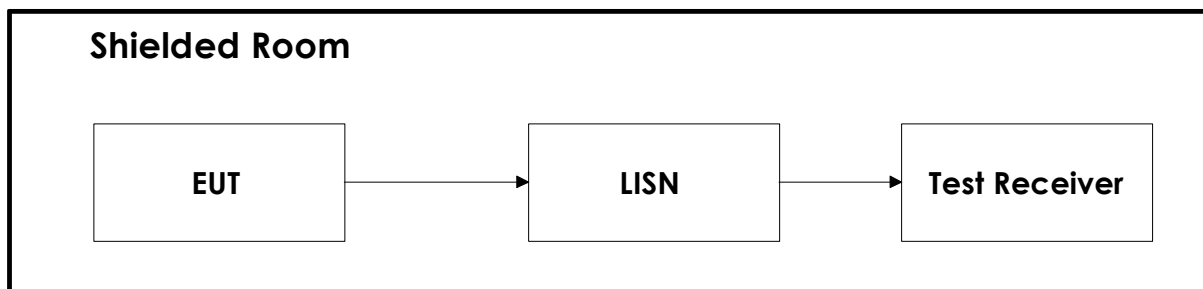
No.	Instrument/ ancillary	Type of instrument/ ancillary	Manufacturer	Ref. no.	Cal. Date	Cal. Due
1.	ESU40	EMI Receiver	Rohde & Schwarz	LR1639	2019.01	2020.01
2.	FSW43	Spectrum analyser	Rohde & Schwarz	LR1690	2019.01	2020.01
3.	HFH2-Z2	Active Loop antenna	Rohde & Schwarz	LR1660	2016.11	2019.11
4.	3115	Antenna horn	EMCO	LR 1330	2016.10	2020.10
5.	PM 320K	Antenna Horn	Sivers	LR 1717	N/A	
6.	DBF-520-20	Antenna Horn	Systron-Donner corp	LR 102	N/A	
7.	638	Antenna Horn	NARDA	LR 1480	N/A	
8.	637	Antenna Horn	NARDA	LR 099	N/A	
9.	ARJB1	Bi-log Hybrid Antenna	Sunol	LR 1734	2018.05	2020.05
10	4768-10	Attenuator	Narda	LR 1356	Cal b4 use	
11	6HC3000/18000	Highpass Filter	Trilithic	LR 1614	Cal b4 use	
12	8449B	Pre-amplifier	Hewlett Packard	LR 1322	2018.07	2019.07
13	310N	Pre-amplifier	Sonoma	LR 1686	2018.07	2019.07
14	Model 45	Multimeter	Fluke	LT 5218	2018.11	2020.11

The software listed below has been used for one or more tests.

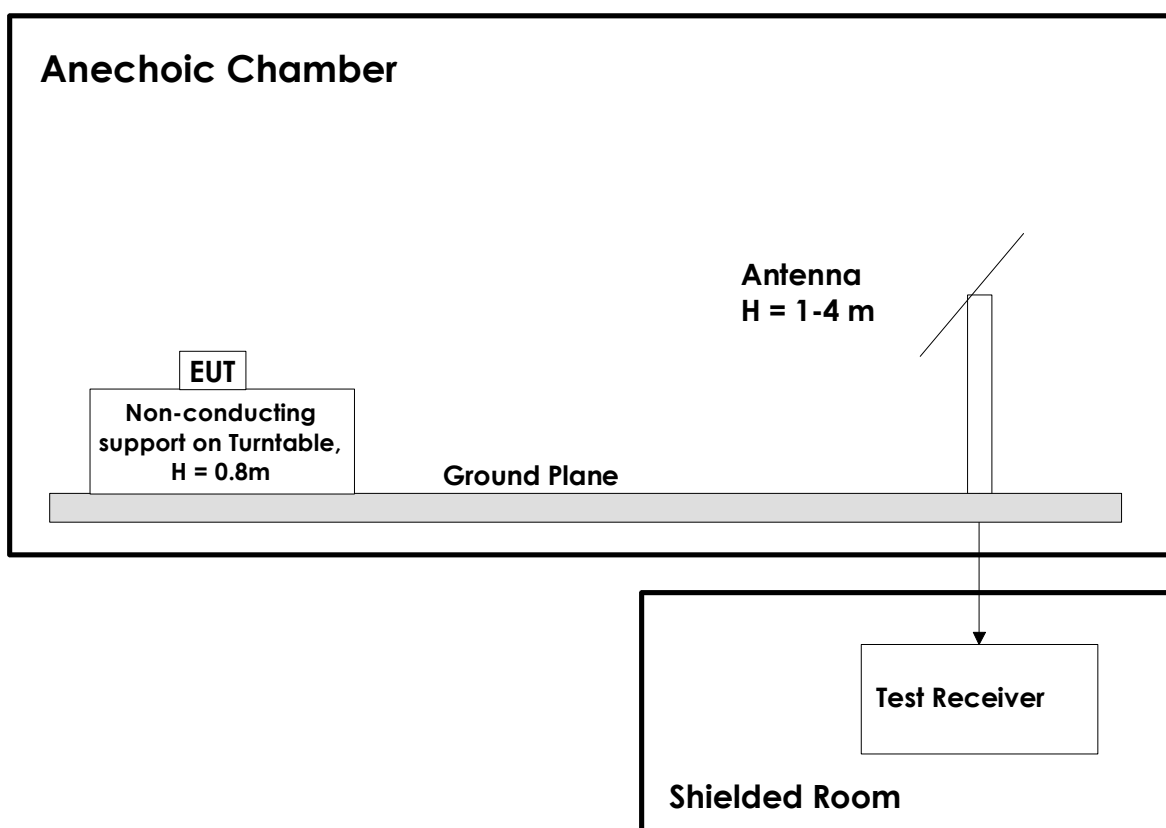
No.	Manufacturer	Name	Version	Comment
1	Rohde & Schwarz	GPBShot	2.7	Screenshots from R&S Spectrum Analyzers
2	Rohde & Schwarz	RScommander	1.9.2 64bit	Versatile Software Tool for R&S Instruments
3	Rohde & Schwarz	EMC 32	10.40.10	Radiated Emission test software

6 BLOCK DIAGRAM

6.1 Power Line Conducted Emission



6.2 Test Site Radiated Emission



This test setup is used for all radiated emissions tests. For frequencies below 30 MHz the measuring distance is 10m, for all other frequencies it is 3m or 1m. Emissions above 1 GHz are measured with a Spectrum Analyzer and Horn Antenna. For measurements above 18 GHz the test receiver is moved inside the anechoic chamber and located next to the antenna to minimize the cable loss. All measurements at 1GHz and above were performed with turntable height 1.5m and with the ground plane covered by absorbers. A pre-amplifier is used for all measurements above 30 MHz, and High-Pass or Band-Pass filter is used for all harmonics.

Revision history

Version	Date	Comment	Sign
00	2019.06.17	First version	gns