



Appendix A: Transmitter Output Power



1 Result Table

1.1 Channel Power, Total

NOTE 1: If applicable, the EIRP [W] = $10^{((\text{Channel Power [dBm]} + \text{Antenna Gain [dBi]}) / 10 - 3)}$, and the ERP [W] = EIRP [W] / 1.64.

NOTE 2: When the EUT is put into service, the practical maximum antenna gain may exceed the value as described below, and if exceed, the combination of the practical output power and the practical antenna gain should NOT exceed the required ERP/EIRP limit.

EUT Conf.	Channel Power [dBm]	Verdict
1L5M_B	19.93	Pass
1L5M_M	19.94	Pass
1L5M_T	19.89	Pass
1L10M_B	19.78	Pass
1L10M_M	19.80	Pass
1L10M_T	19.76	Pass
1L15M_B	19.81	Pass
1L15M_M	19.89	Pass
1L15M_T	19.91	Pass
1L20M_B	19.92	Pass
1L20M_M	19.88	Pass
1L20M_T	19.85	Pass
1U_B	23.01	Pass
1U_M	22.98	Pass
1U_T	22.95	Pass
2U_B	19.92,19.94	Pass
2U_M	19.91,19.87	Pass
2U_T	19.86,19.80	Pass
1U1L5M_B	16.94,16.89	Pass
1U1L5M_M	16.91,16.84	Pass
1U1L5M_T	16.86,16.82	Pass
1U1L10M_B	16.92,16.88	Pass
1U1L10M_M	16.87,16.79	Pass
1U1L10M_T	16.80,16.72	Pass
1U1L15M_B	16.88,16.85	Pass
1U1L15M_M	16.87,16.77	Pass
1U1L15M_T	16.79,16.74	Pass

1.2 Power Spectral Density

NOTE 1: If applicable, the EIRP [W/MHz] = $10^{((\text{Power Spectral Density [dBm/MHz]} + \text{Antenna Gain [dBi]}) / 10 - 3)}$, and the ERP [W/MHz] = EIRP [W/MHz] / 1.64.

NOTE 2: When the EUT is put into service, the practical maximum antenna gain may exceed the value as described below, and if exceed, the combination of the practical output power and the practical antenna gain should NOT exceed the required EIRP limit.

EUT Conf.	Channel Power Spectral Density [dBm/MHz]	Verdict
1L5M_B	13.80	Pass
1L5M_M	13.87	Pass
1L5M_T	13.43	Pass
1U_B	14.73	Pass
1U_M	14.72	Pass
1U_T	14.32	Pass

1.3 Peak-to-Average Ratio

EUT Conf.	Peak-to-Average Ratio [dB]	Verdict
1L5M_B	8.43	Pass
1L5M_M	8.46	Pass
1L5M_T	8.43	Pass
1L20M_B	8.56	Pass
1L20M_M	8.56	Pass
1L20M_T	8.59	Pass
1U_B	7.63	Pass
1U_M	7.47	Pass
1U_T	7.50	Pass

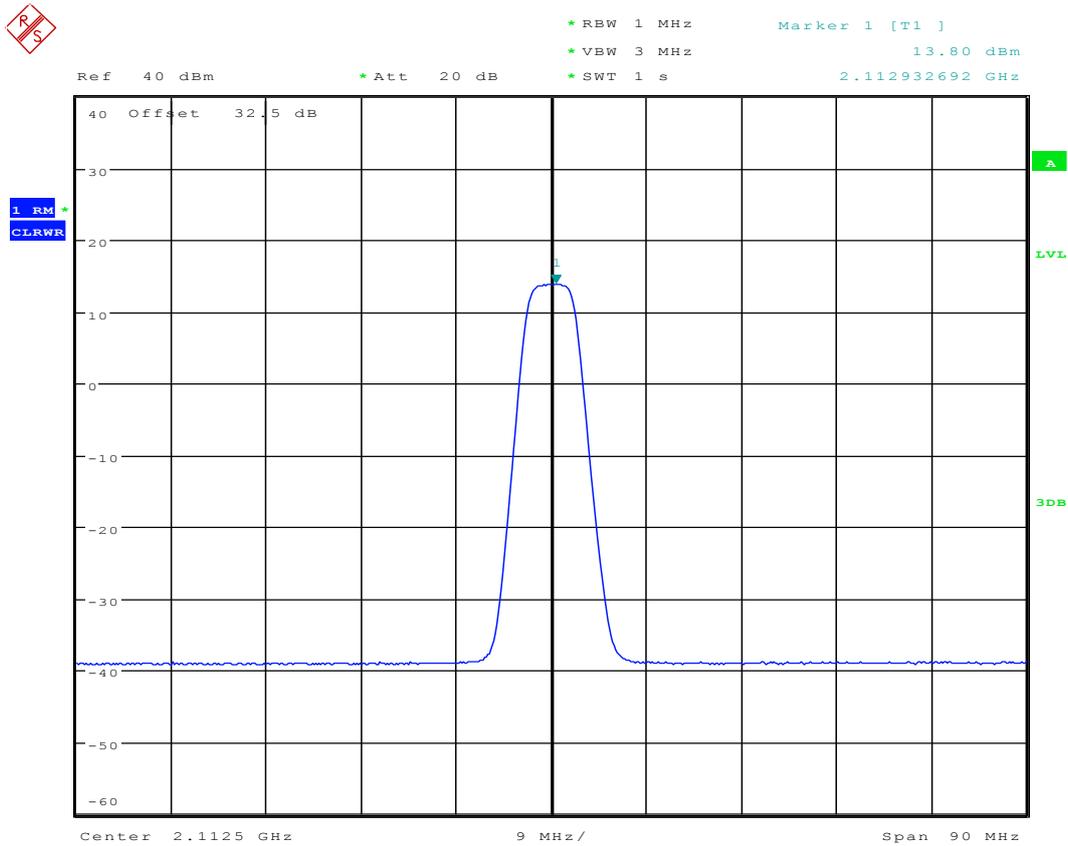


2 Test Plot

NOTE: Only the test plots for the measurements of Spectral Density and Peak-to-Average Ratio are supplied.

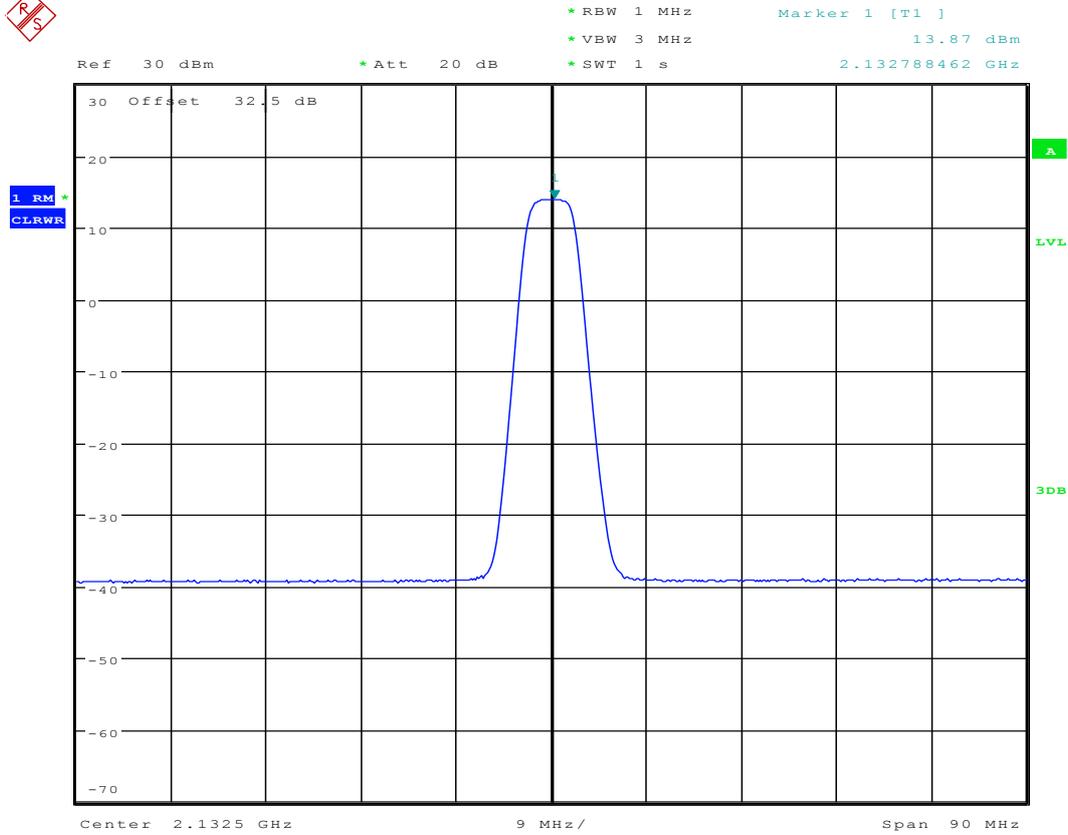
2.1 Power Spectral Density

2.1.1 1L5M_B



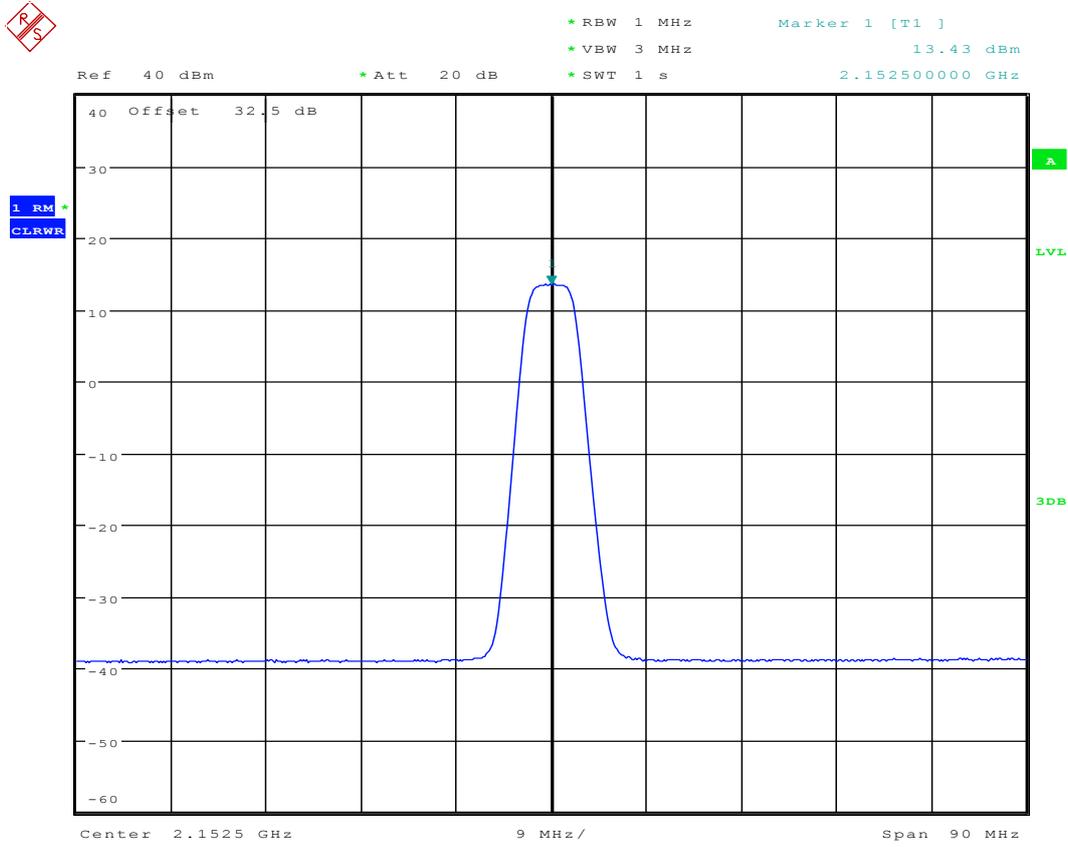
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2.1.2 1L5M_M



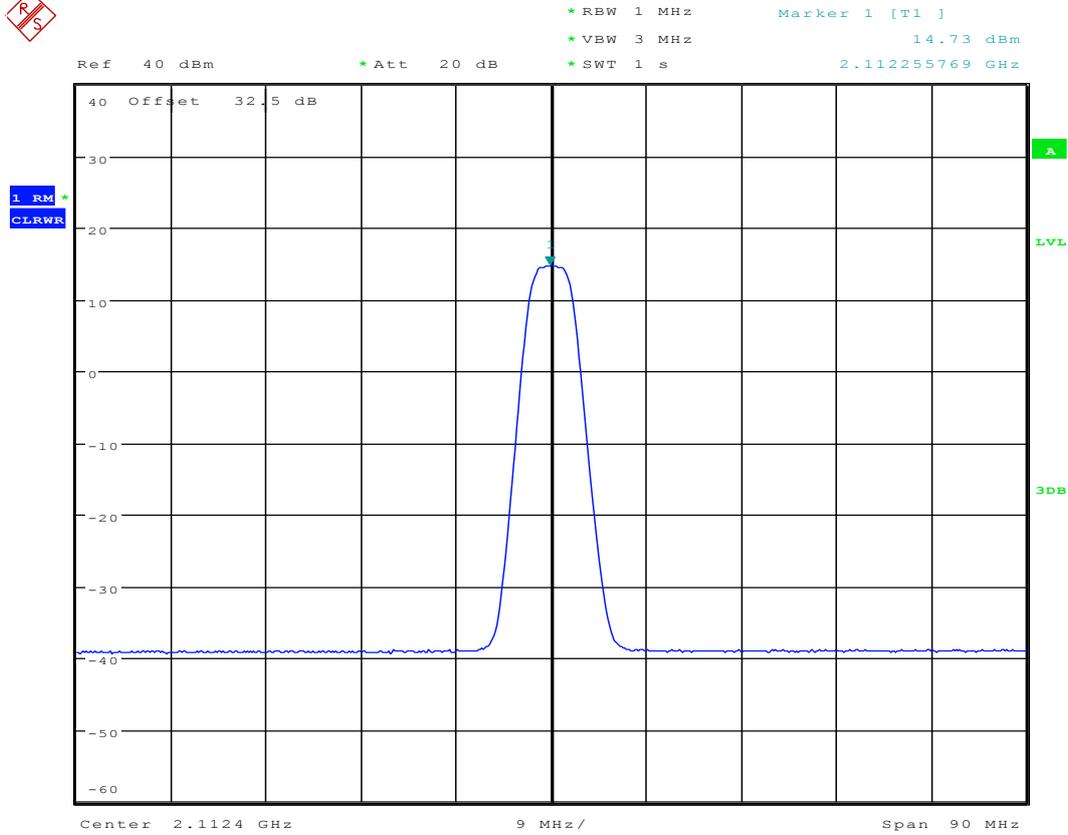
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2.1.3 1L5M_T



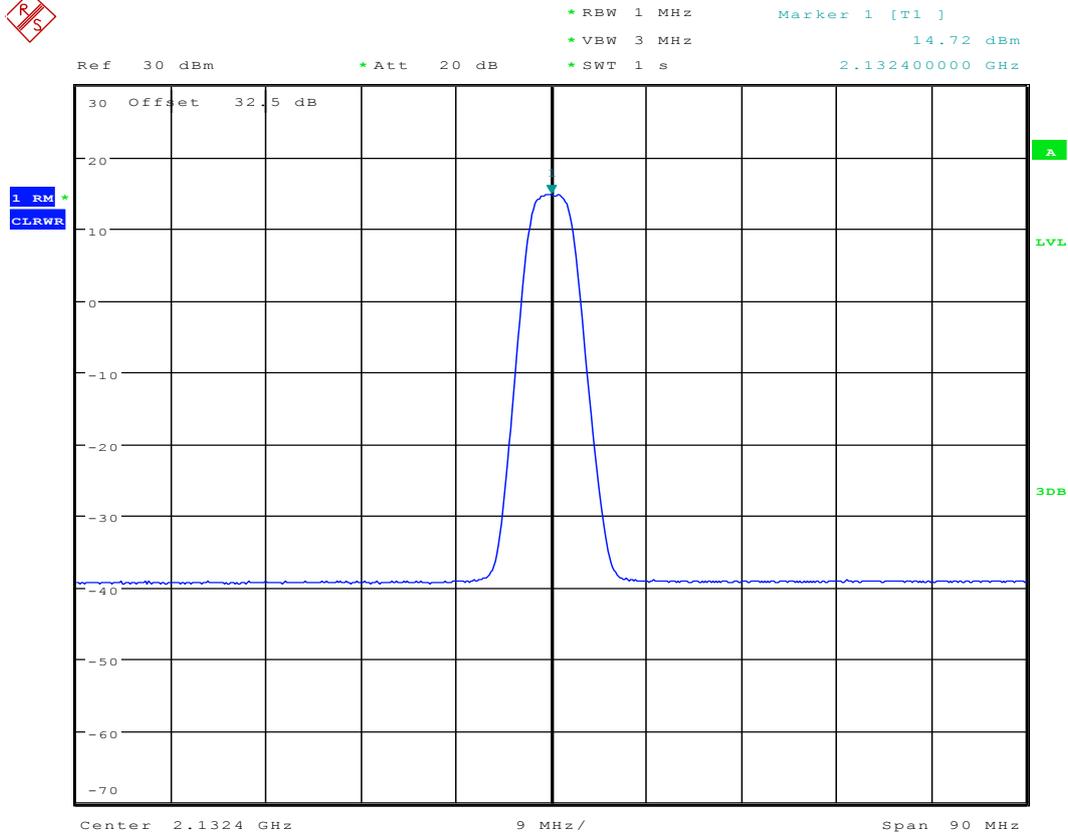
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2.1.4 1U_B



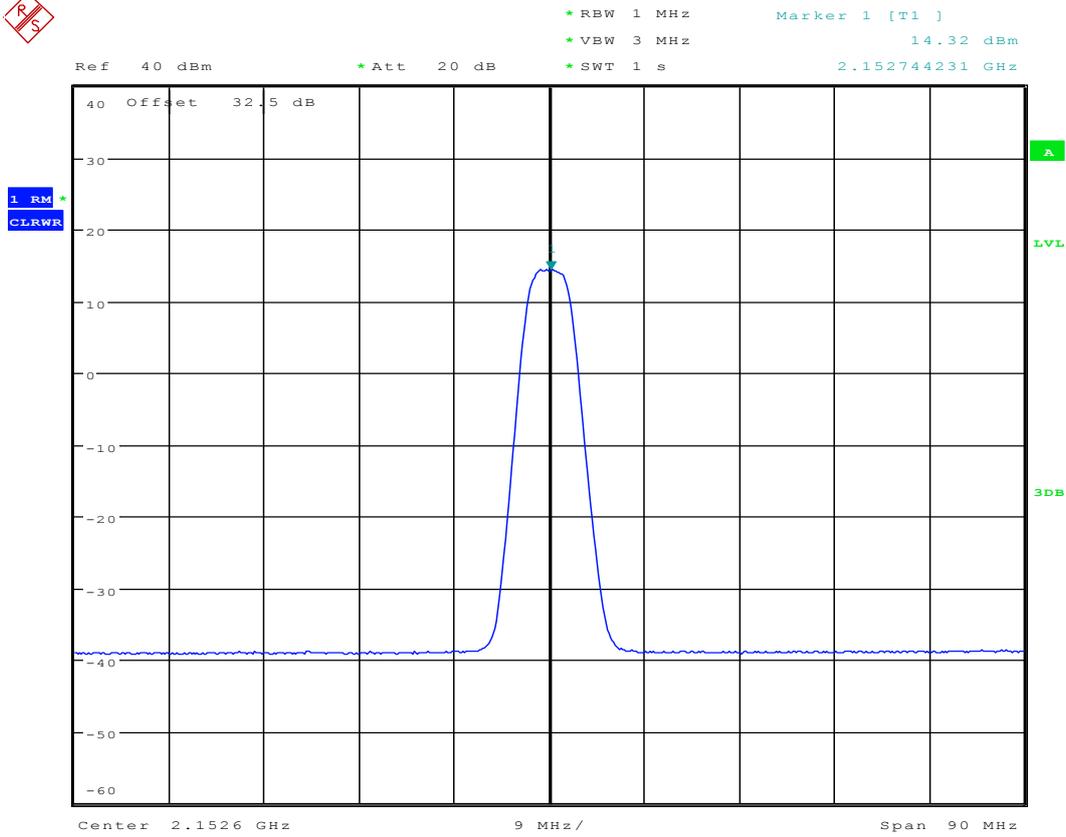
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2.1.5 1U_M



Date: 29.APR.2016 12:11:35

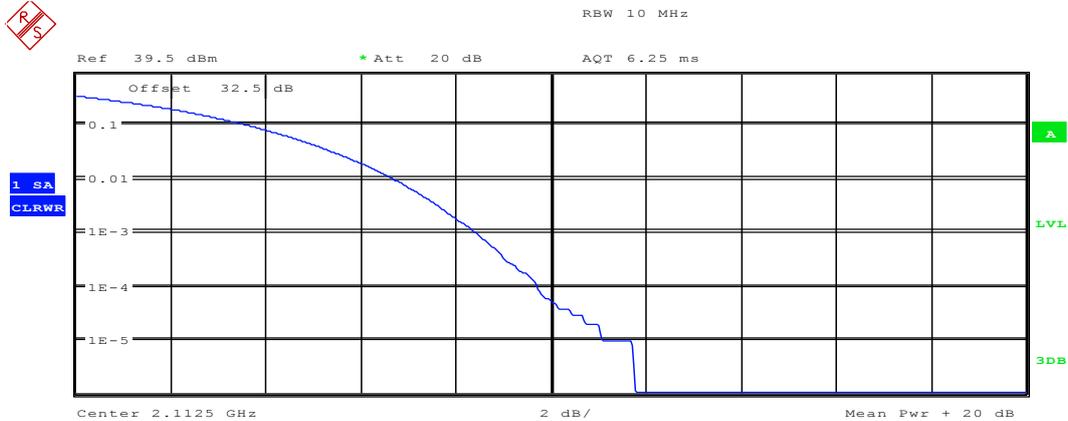
2.1.6 1U_T



Date: 29.APR.2016 12:16:53

2.2 Peak-to-Average Ratio

2.2.1 1L5M_B

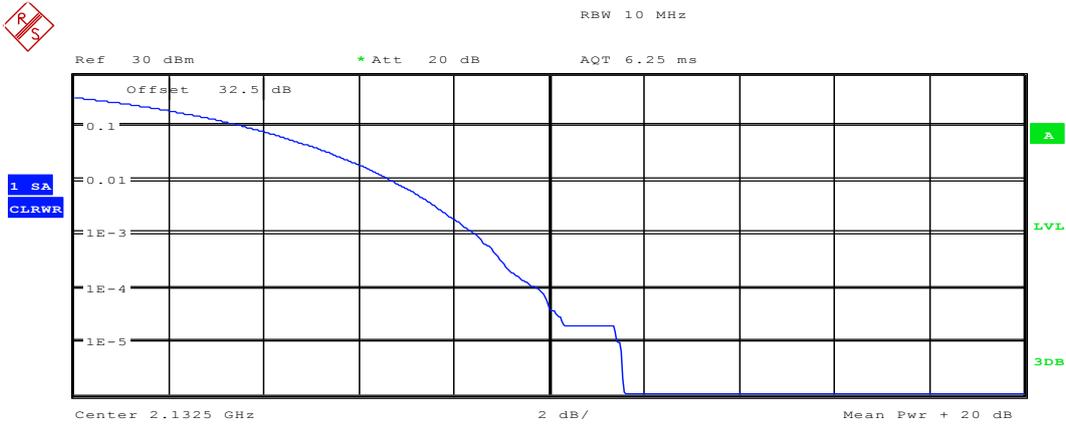


Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	19.83 dBm
Peak	31.60 dBm
Crest	11.77 dB
10 %	3.69 dB
1 %	6.70 dB
.1 %	8.43 dB
.01 %	9.71 dB

Date: 28.APR.2016 21:42:04

2.2.2 1L5M_M

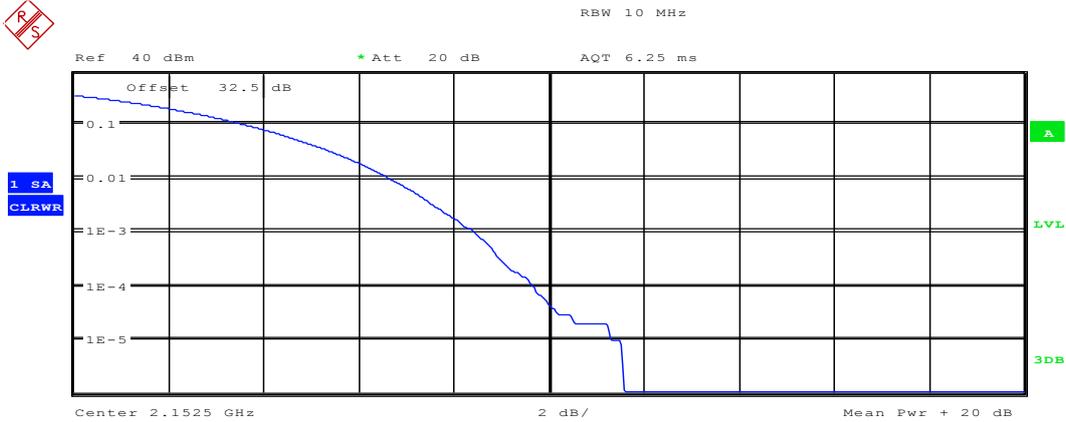


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	19.89 dBm
Peak	31.45 dBm
Crest	11.57 dB
10 %	3.69 dB
1 %	6.70 dB
.1 %	8.46 dB
.01 %	9.74 dB

Date: 28.APR.2016 21:50:26

2.2.3 1L5M_T

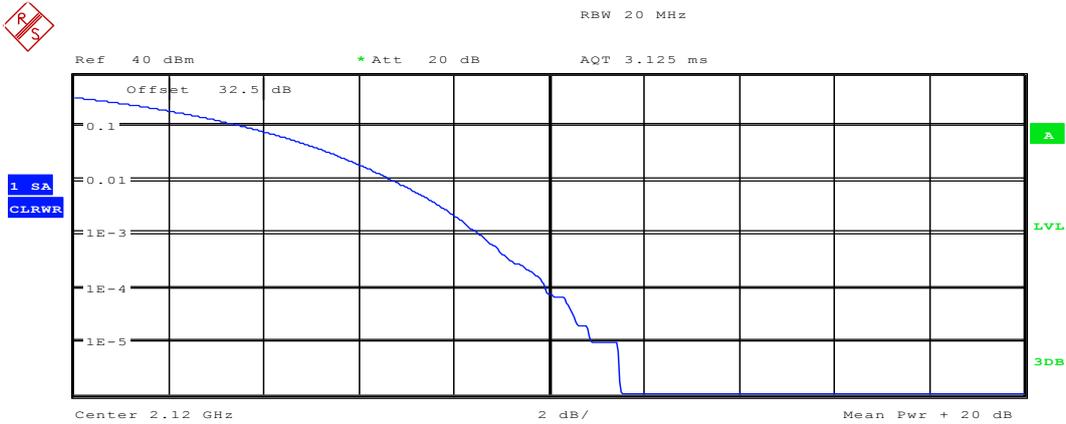


Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1	
Mean	19.52	dBm
Peak	31.10	dBm
Crest	11.57	dB
10 %	3.69	dB
1 %	6.67	dB
.1 %	8.43	dB
.01 %	9.68	dB

Date: 28.APR.2016 22:05:34

2.2.4 1L20M_B



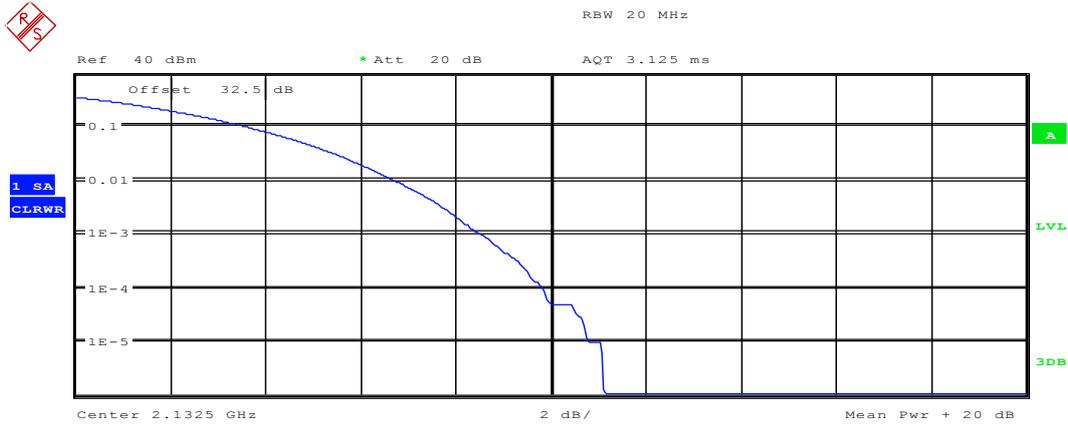
Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

Trace 1

Mean	19.77 dBm
Peak	31.27 dBm
Crest	11.50 dB
10 %	3.65 dB
1 %	6.73 dB
.1 %	8.56 dB
.01 %	9.94 dB

Date: 28.APR.2016 22:36:36

2.2.5 1L20M_M

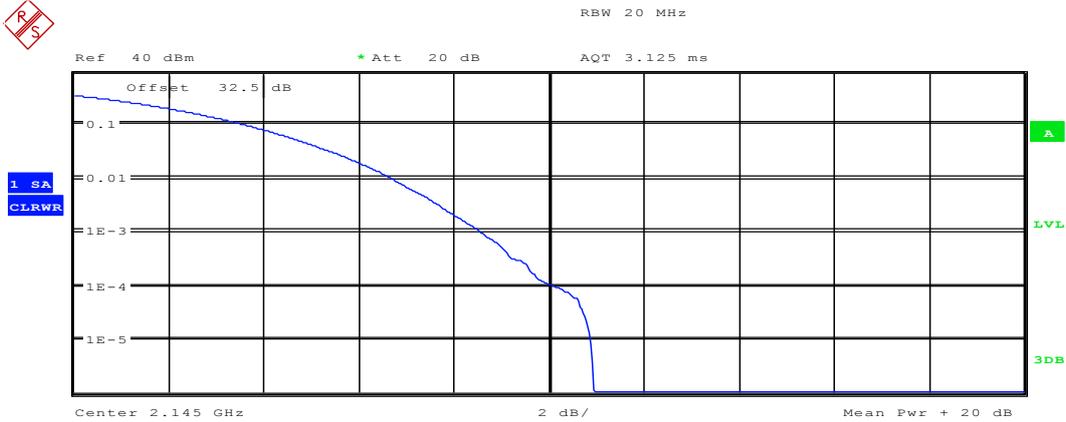


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

Trace 1	
Mean	19.63 dBm
Peak	30.75 dBm
Crest	11.11 dB
10 %	3.65 dB
1 %	6.73 dB
.1 %	8.56 dB
.01 %	9.81 dB

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2.2.6 1L20M_T

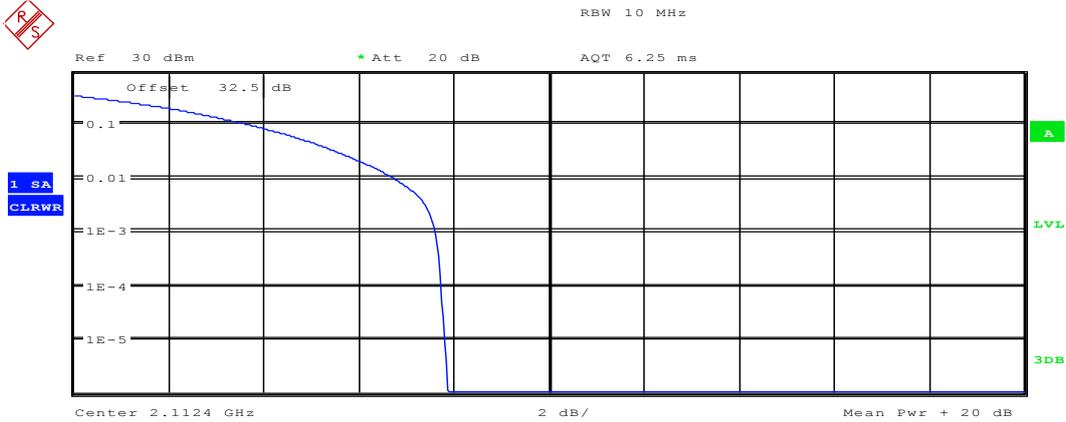


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

Trace 1	
Mean	19.51 dBm
Peak	30.44 dBm
Crest	10.94 dB
10 %	3.65 dB
1 %	6.70 dB
.1 %	8.59 dB
.01 %	10.16 dB

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2.2.7 1U_B

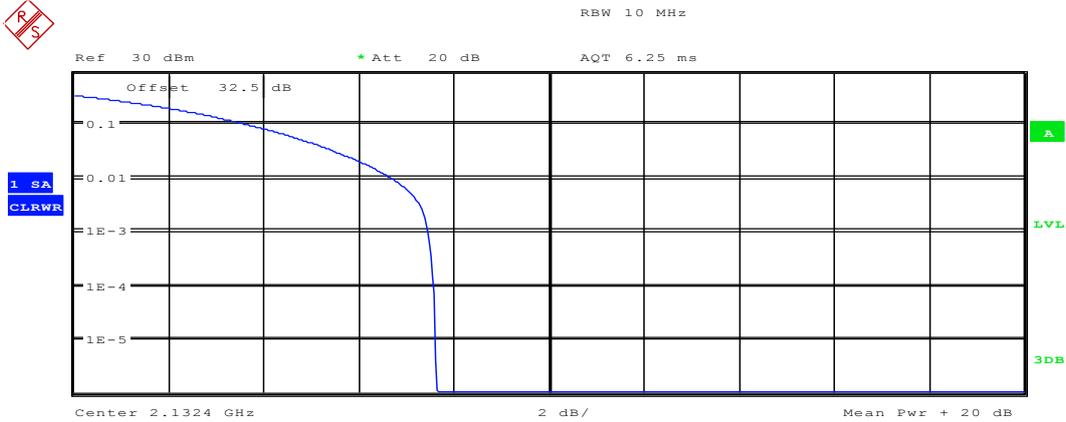


Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	22.62 dBm
Peak	30.49 dBm
Crest	7.87 dB
10 %	3.75 dB
1 %	6.76 dB
.1 %	7.63 dB
.01 %	7.76 dB

Date: 14.MAY.2016 16:21:02

2.2.8 1U_M

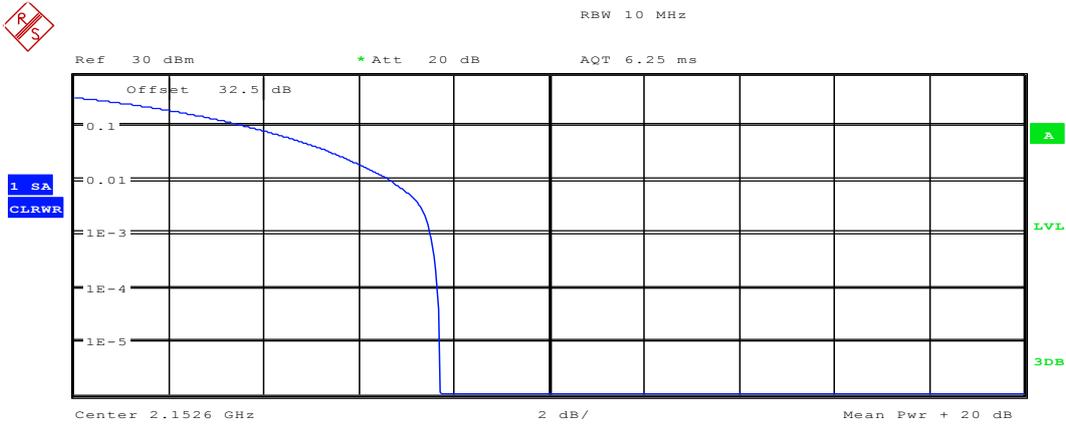


Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	23.18 dBm
Peak	30.80 dBm
Crest	7.62 dB
10 %	3.72 dB
1 %	6.70 dB
.1 %	7.47 dB
.01 %	7.60 dB

Date: 14.MAY.2016 16:40:32

2.2.9 1U_T



Complementary Cumulative Distribution Function EXT
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	22.66 dBm
Peak	30.36 dBm
Crest	7.71 dB
10 %	3.75 dB
1 %	6.67 dB
.1 %	7.50 dB
.01 %	7.66 dB

Date: 14.MAY.2016 16:45:32



Appendix B: Bandwidth



1 Result Table

1.1 Occupied Bandwidth

EUT Conf.	Occupied Bandwidth [MHz]	Verdict
1L5M_B	4.512909000	---
1L5M_M	4.512909000	---
1L5M_T	4.512909000	---
1L10M_B	8.939031288	---
1L10M_M	8.939031288	---
1L10M_T	8.939031288	---
1L15M_B	13.365153577	---
1L15M_M	13.365153577	---
1L15M_T	13.365153577	---
1L20M_B	17.834669221	---
1L20M_M	17.834669221	---
1L20M_T	17.834669221	---
1U_B	4.165762154	---
1U_M	4.165762154	---
1U_T	4.165762154	---

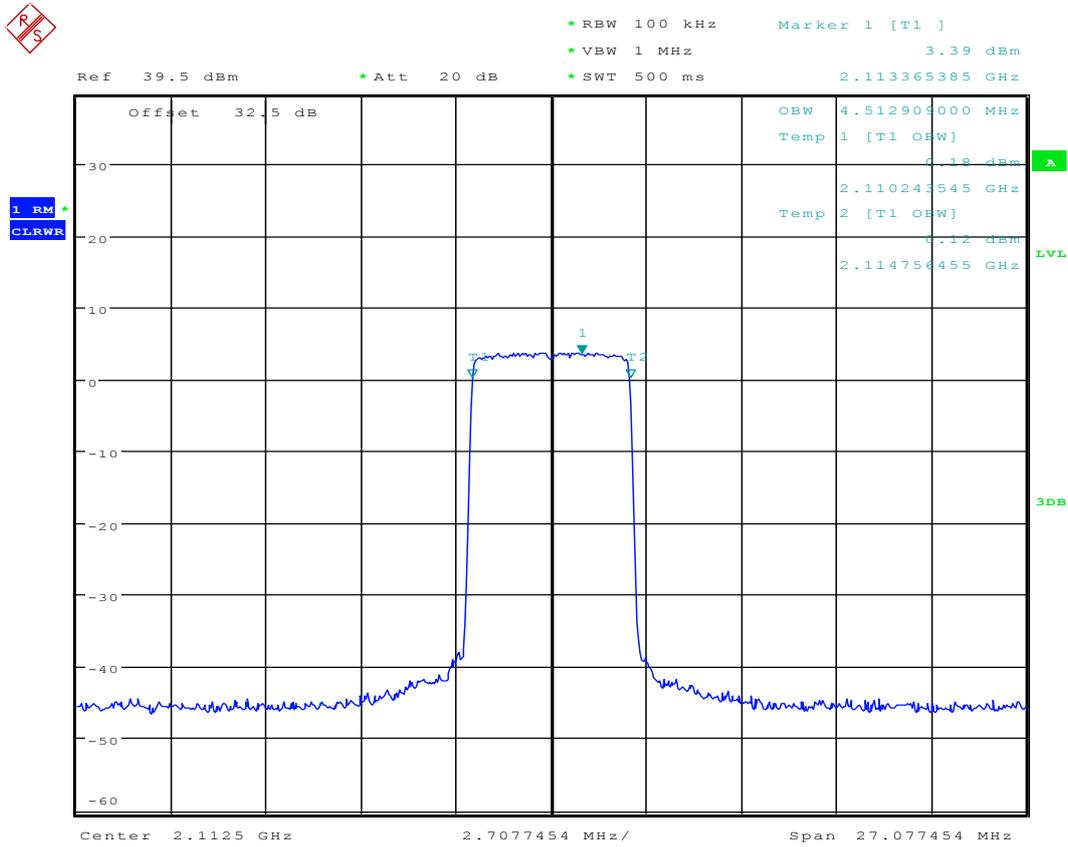
1.2 Emission Bandwidth

EUT Conf.	Emission Bandwidth, -26 dBc [MHz]	Verdict
1L5M_B	4.773269135	---
1L5M_M	4.773269135	---
1L5M_T	4.773269135	---
1L10M_B	9.372964846	---
1L10M_M	9.372964846	---
1L10M_T	9.372964846	---
1L15M_B	13.929267202	---
1L15M_M	13.929267202	---
1L15M_T	13.929267202	---
1L20M_B	18.398782846	---
1L20M_M	18.398782846	---
1L20M_T	18.442176202	---
1U_B	4.686482423	---
1U_M	4.686482423	---
1U_T	4.686482423	---

2 Test Plot

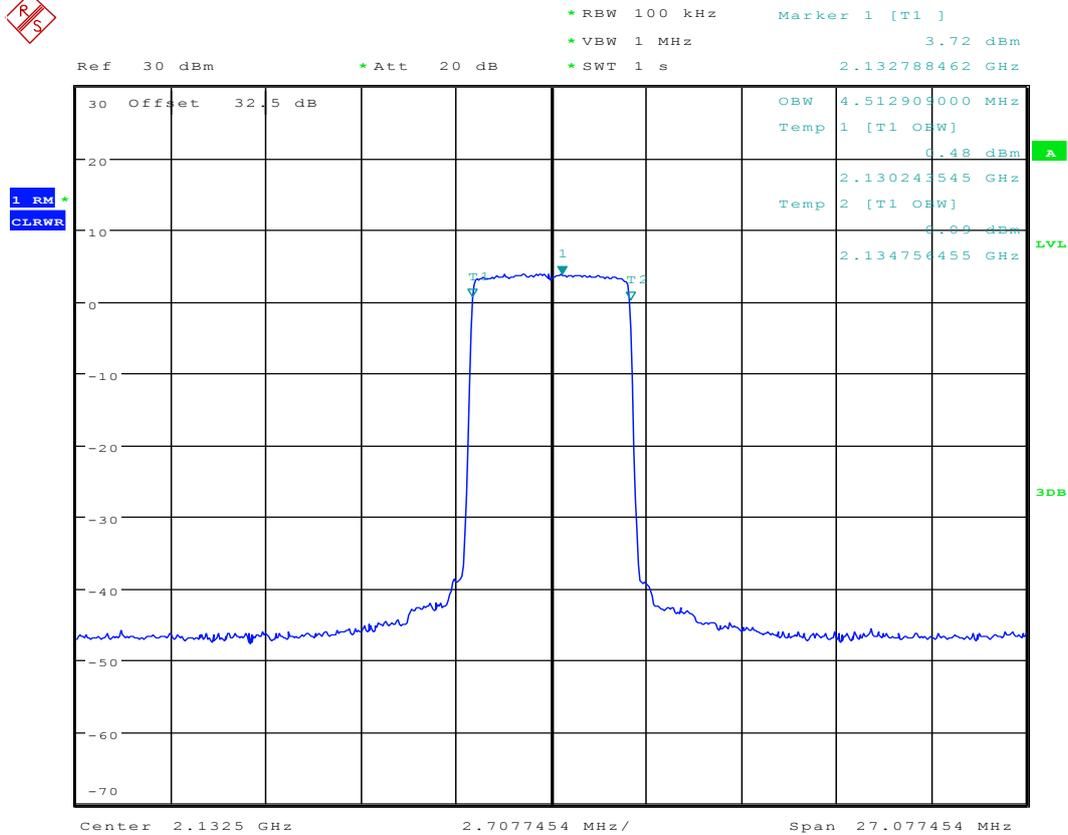
2.1 Occupied Bandwidth

2.1.1 1L5M_B



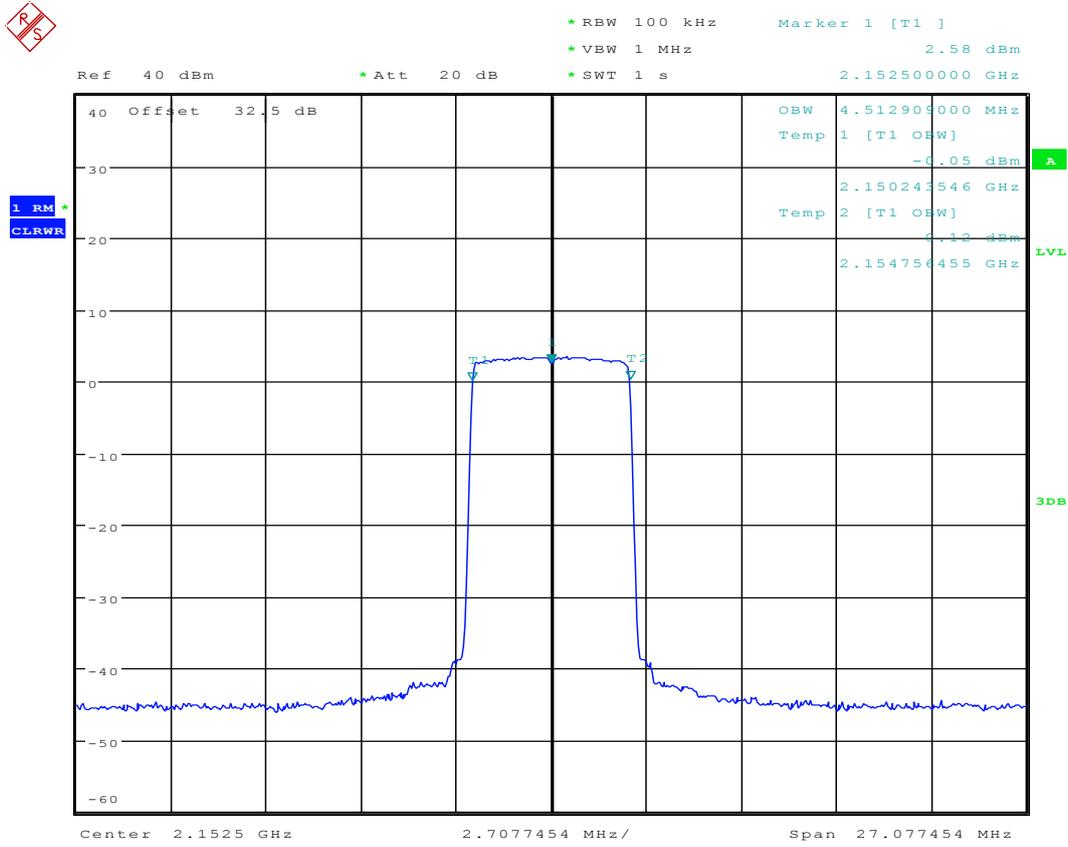
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2.1.2 1L5M_M



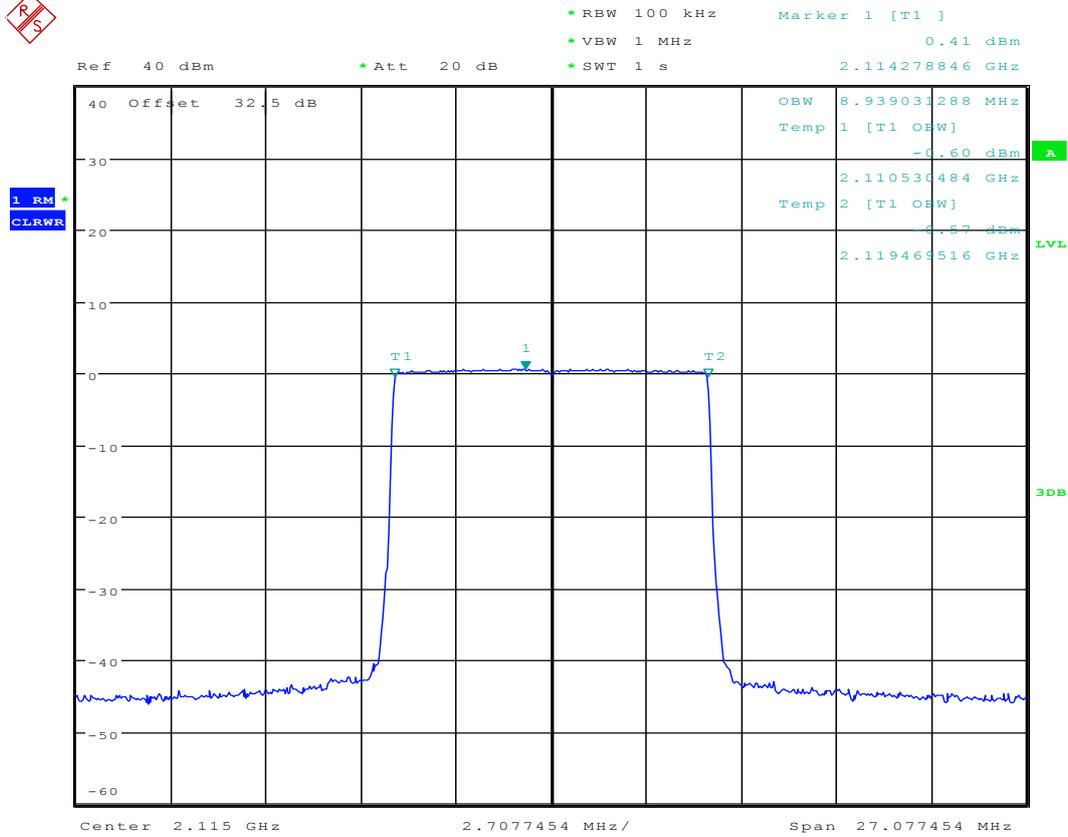
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2.1.3 1L5M_T



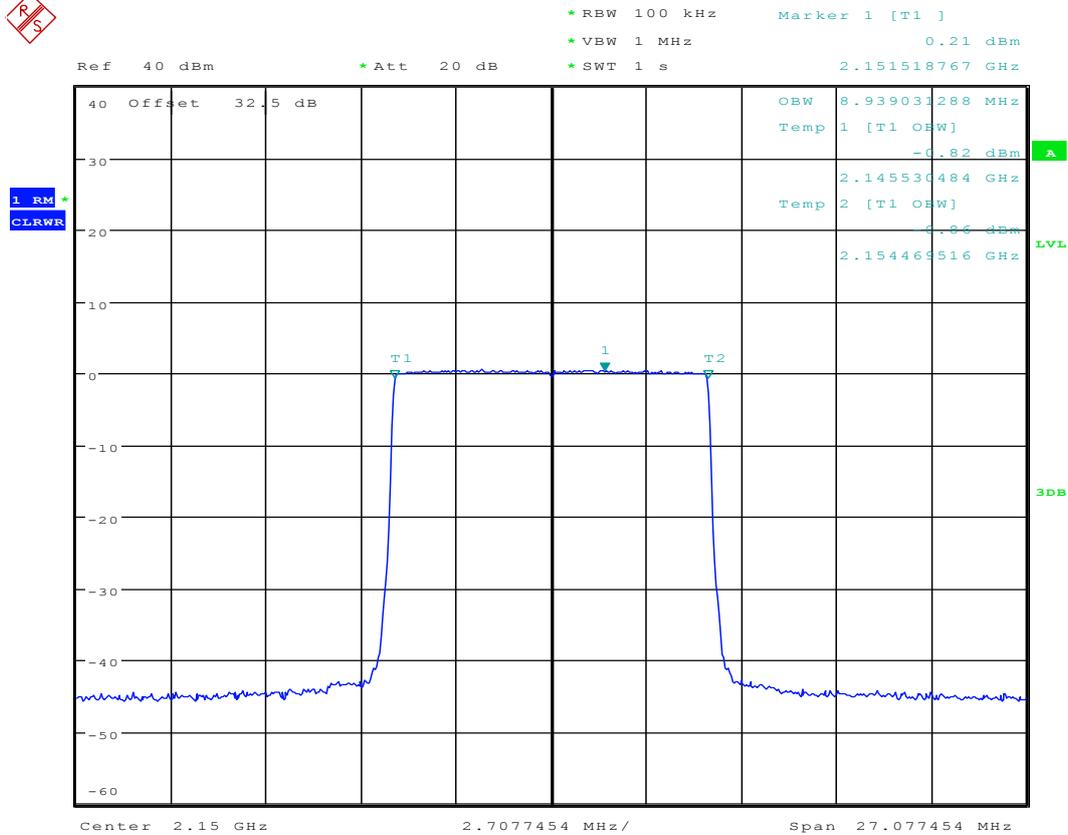
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2.1.4 1L10M_B



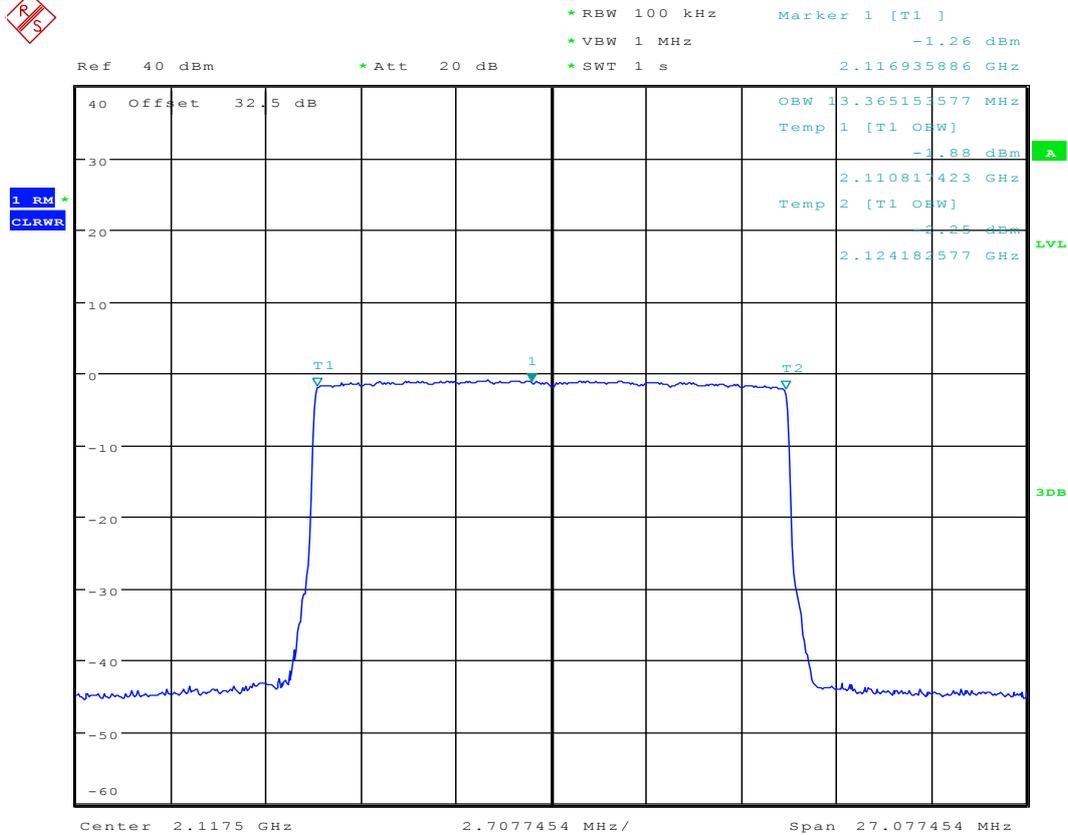
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2.1.6 1L10M_T



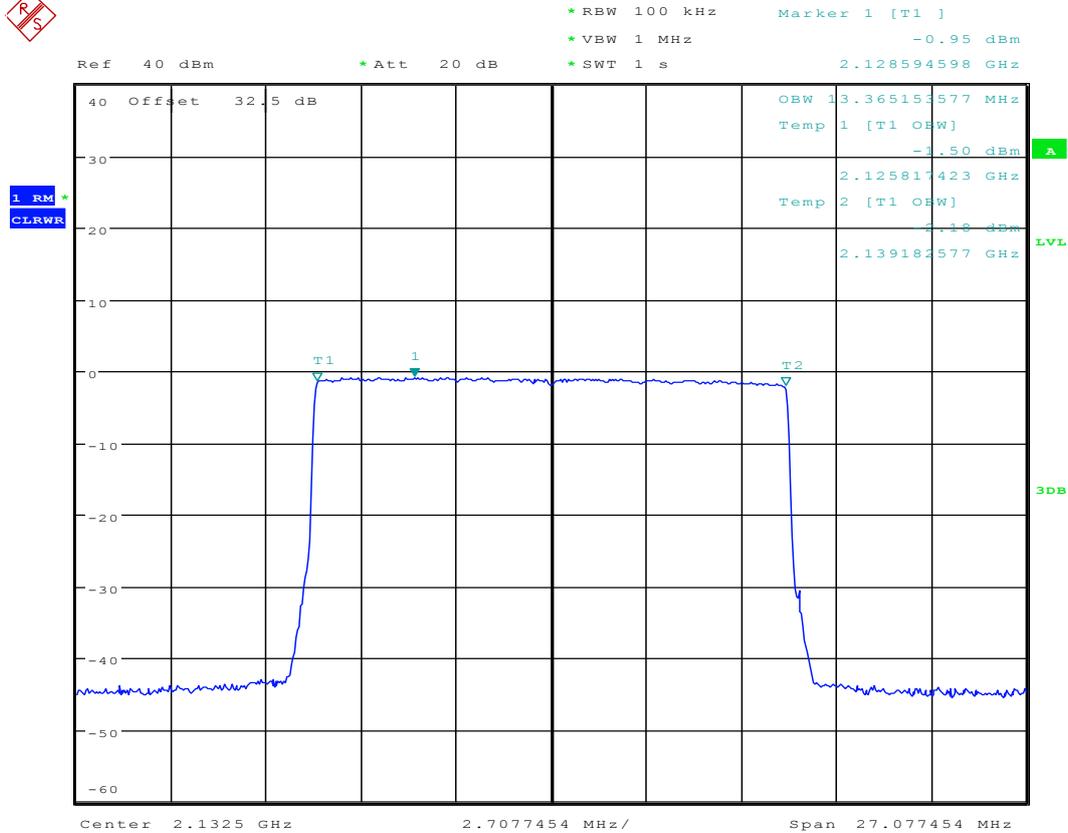
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2.1.7 1L15M_B



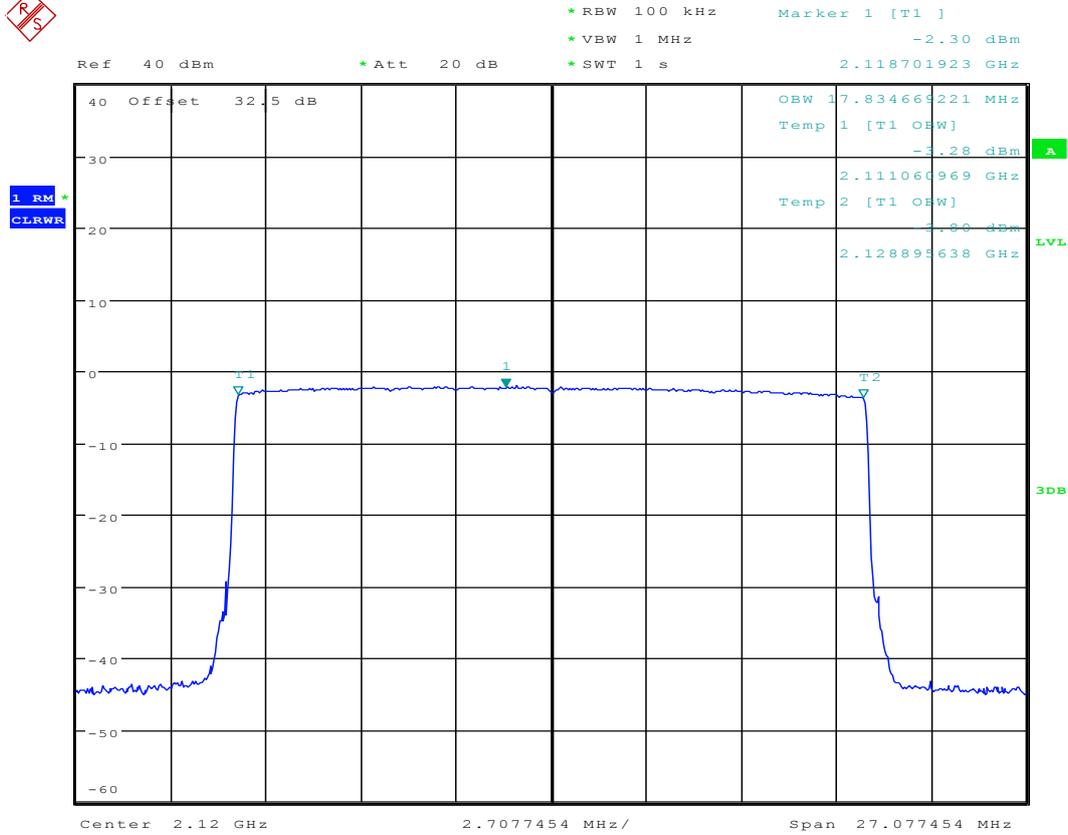
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2.1.8 1L15M_M



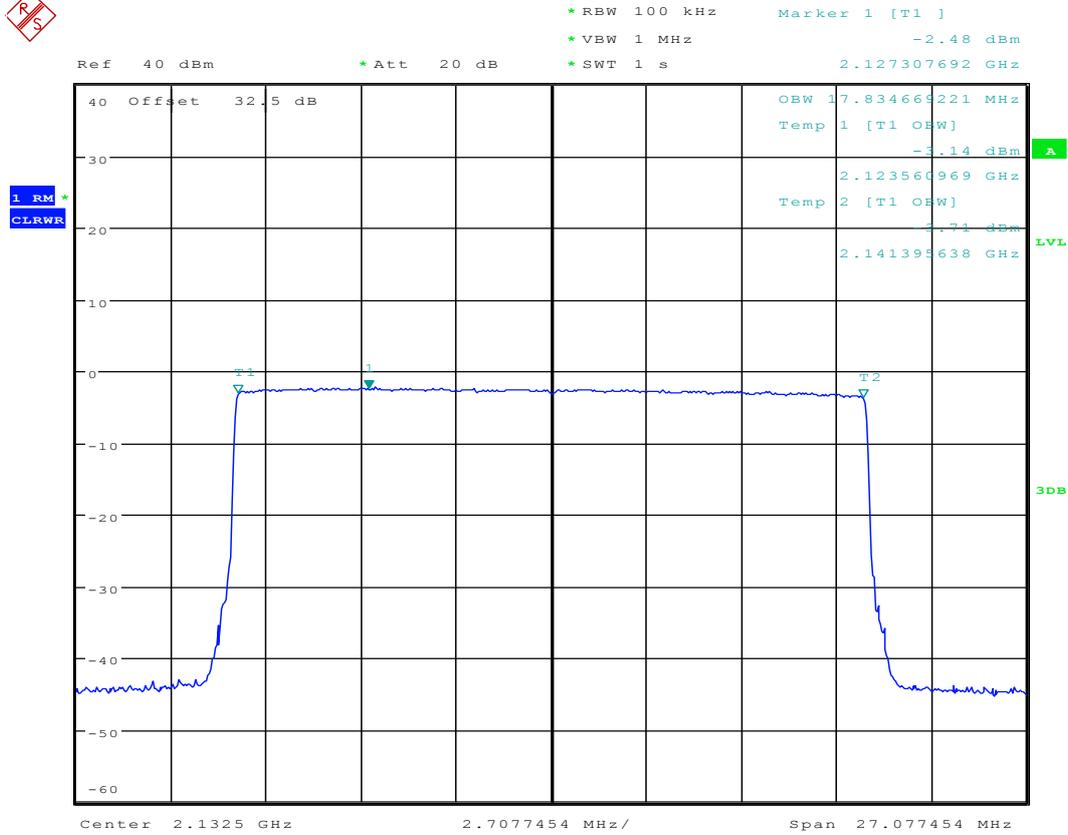
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2.1.10 1L20M_B



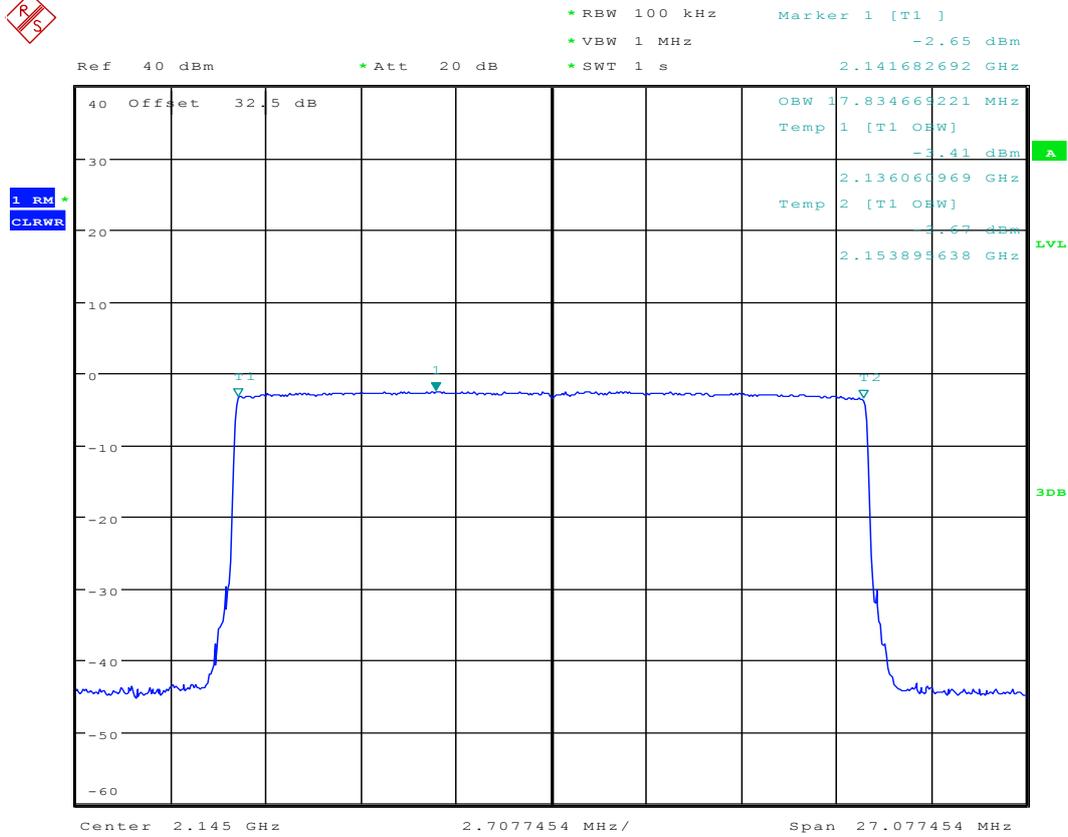
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2.1.11 1L20M_M



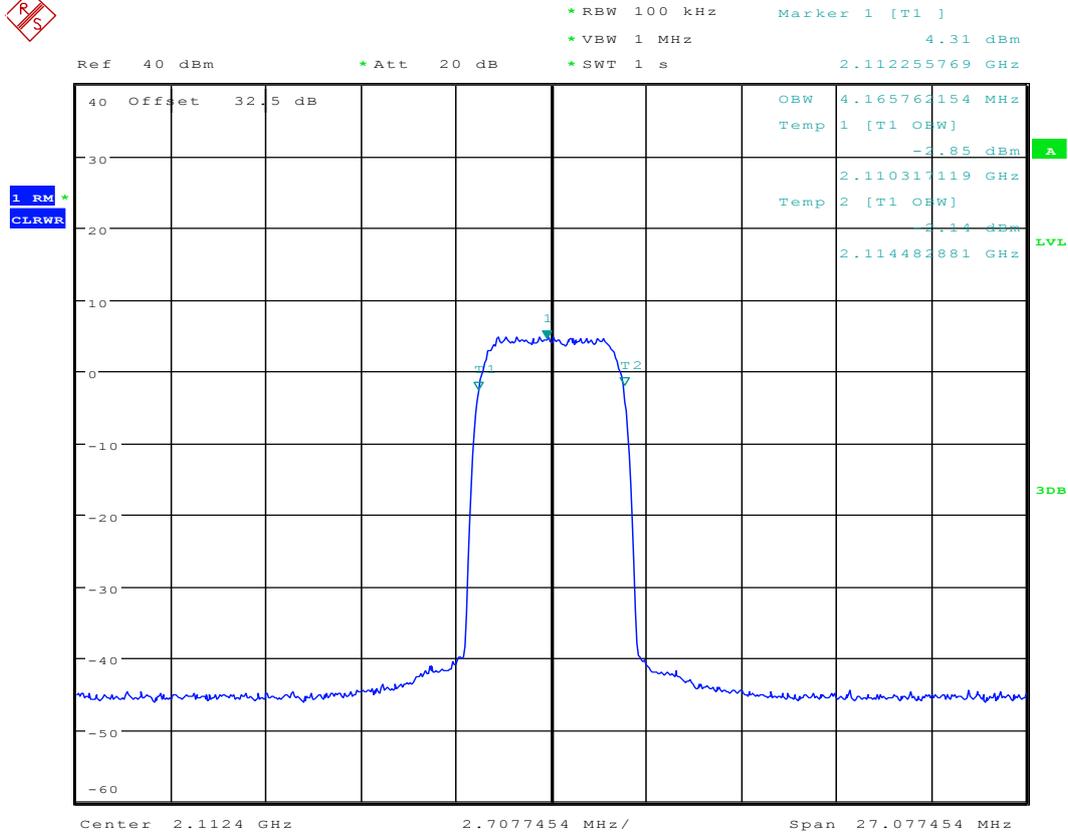
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2.1.12 1L20M_T



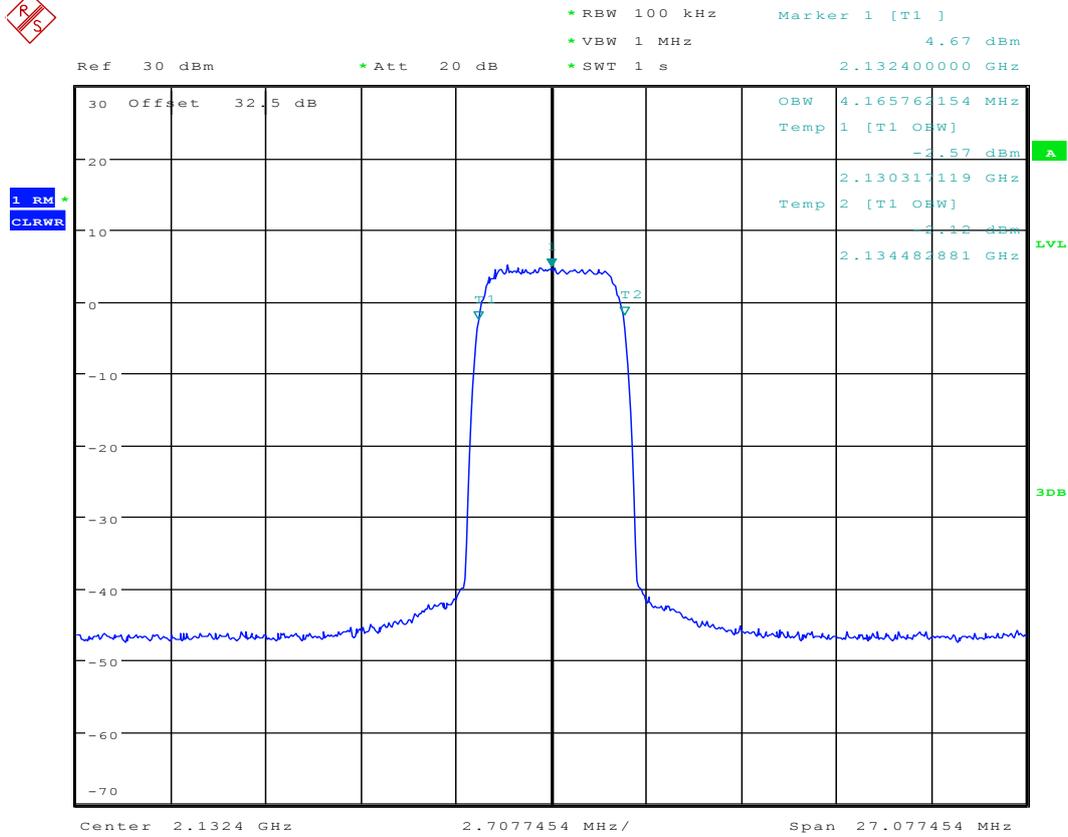
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2.1.13 1U_B



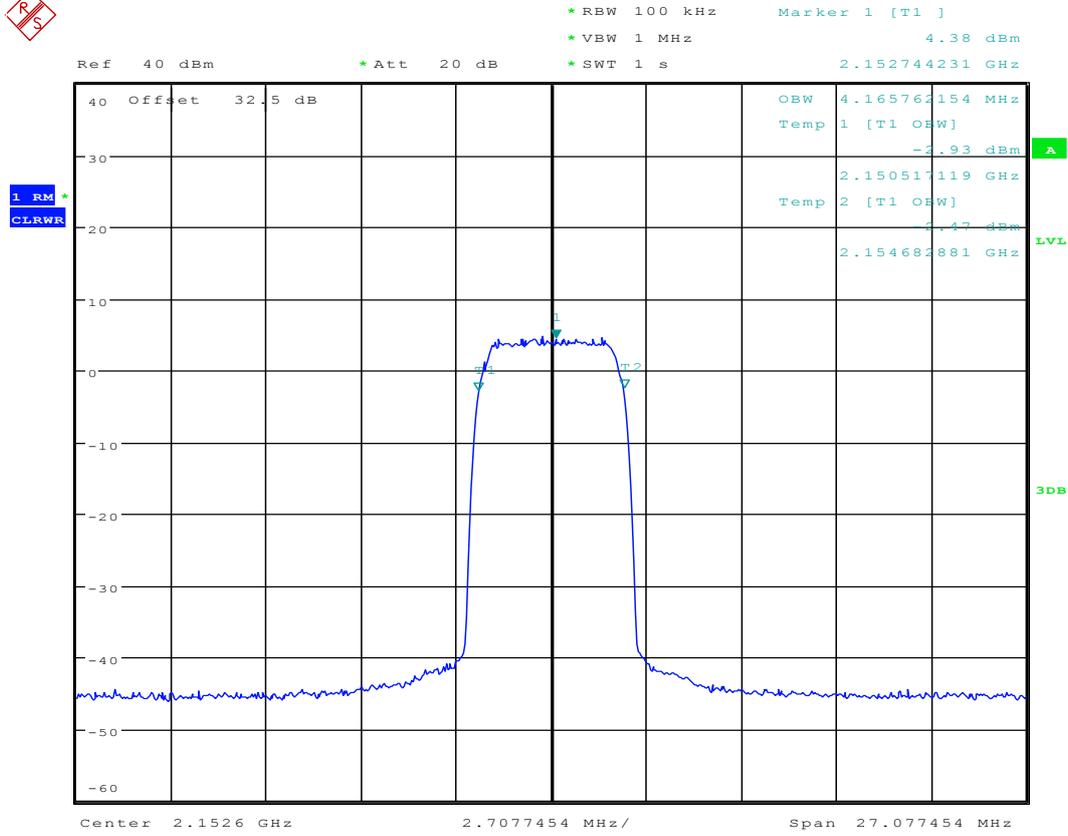
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2.1.14 1U_M



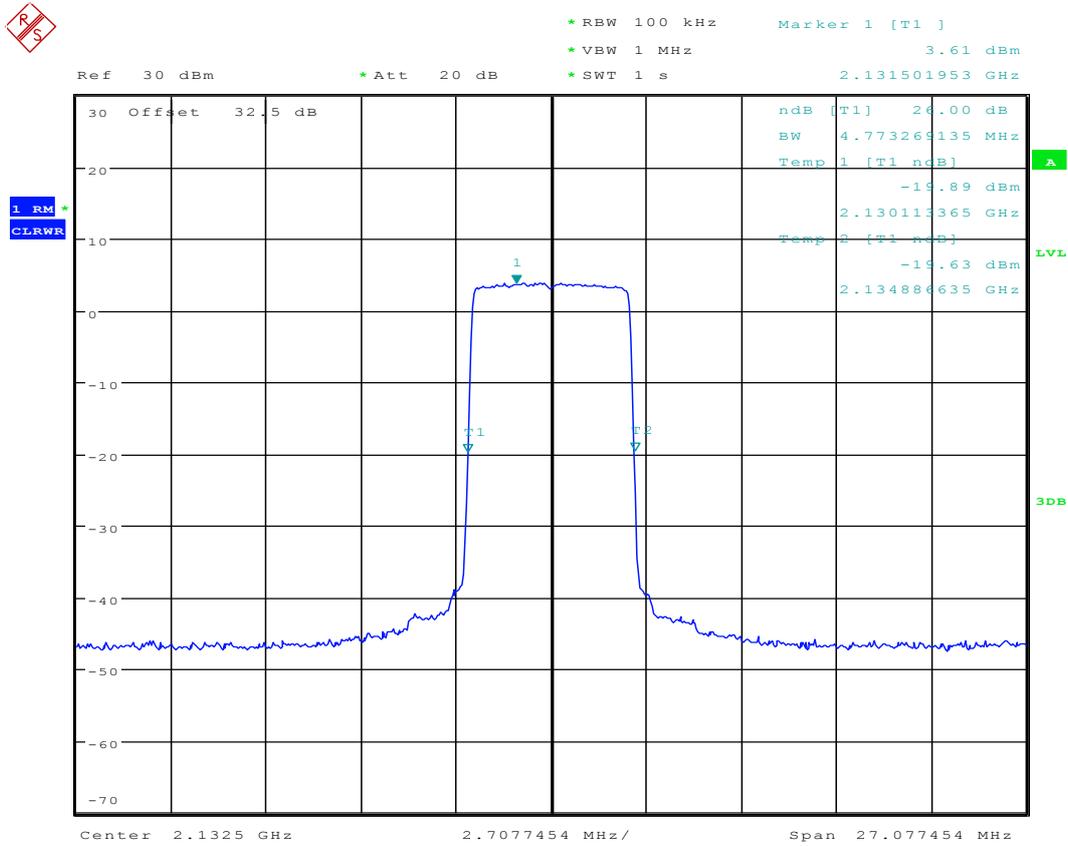
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2.1.15 1U_T



Date: 29.APR.2016 12:17:34

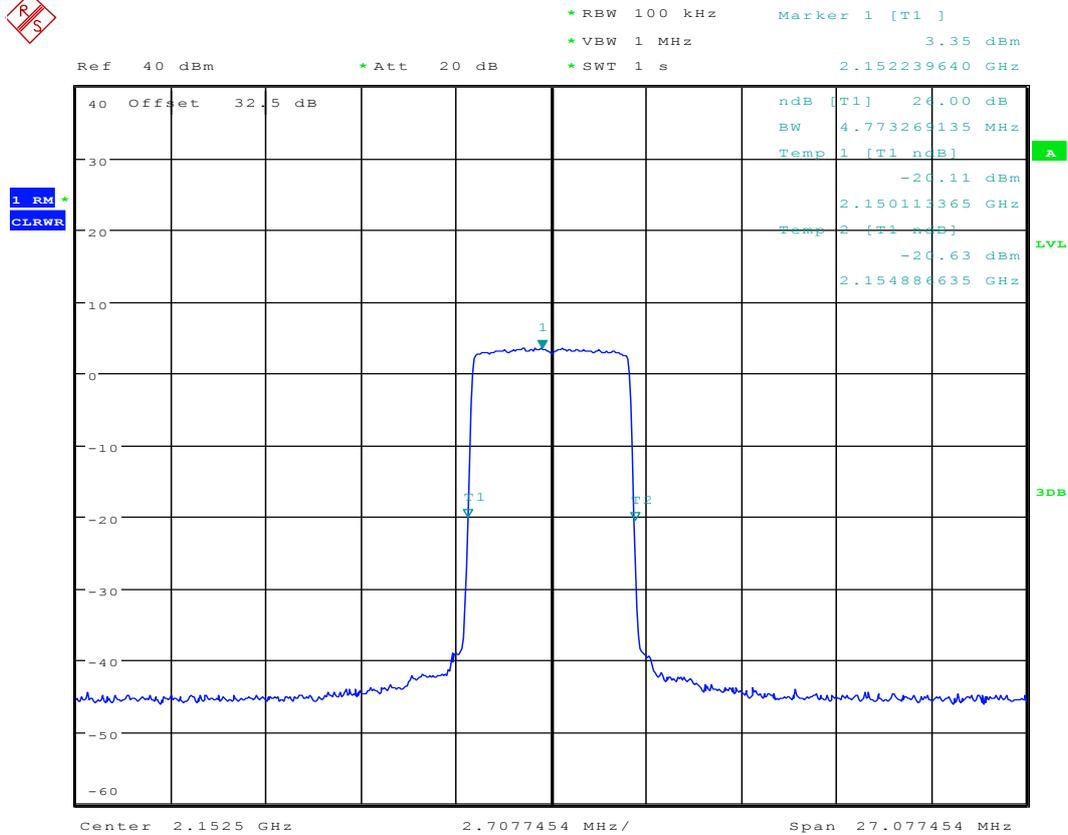
2.2.2 1L5M_M



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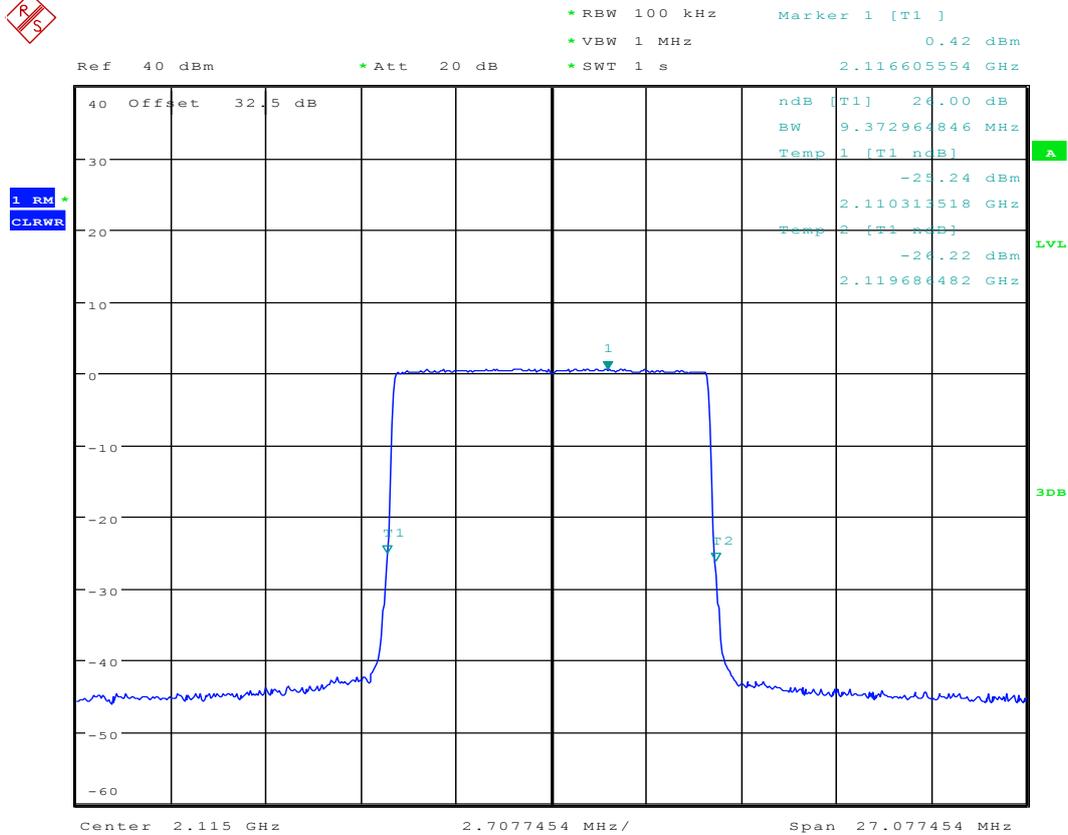


2.2.3 1L5M_T



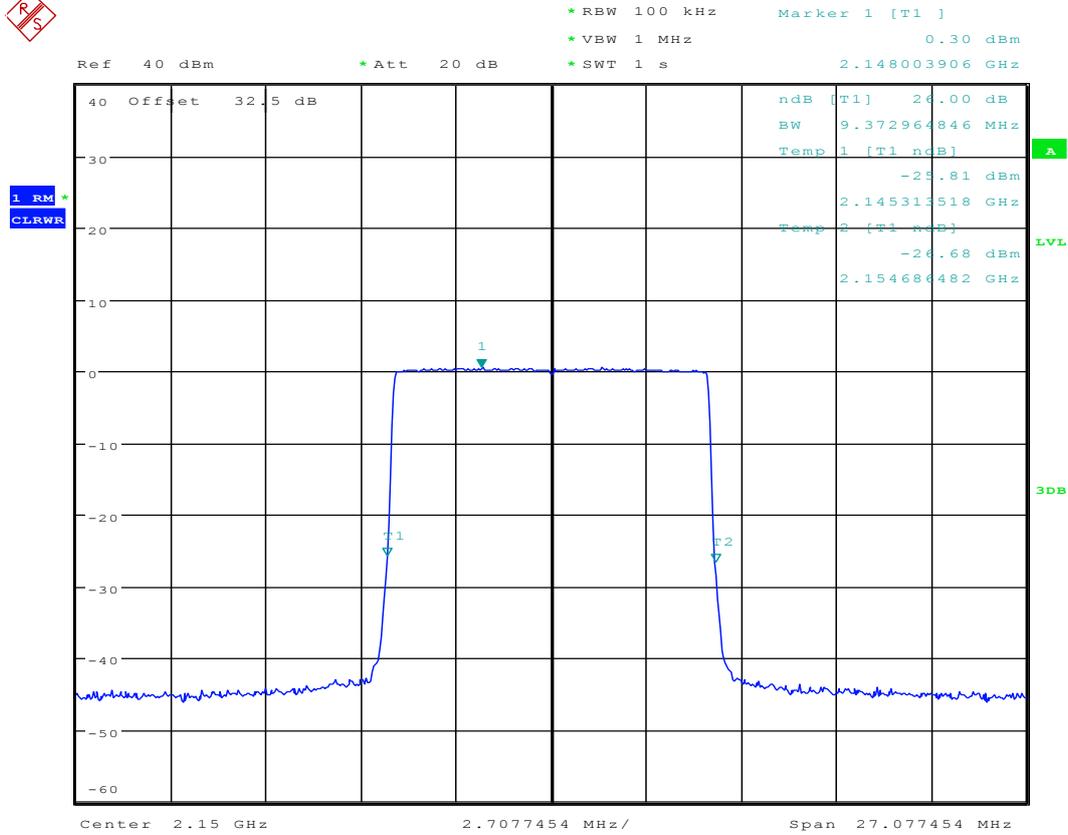
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2.2.4 1L10M_B



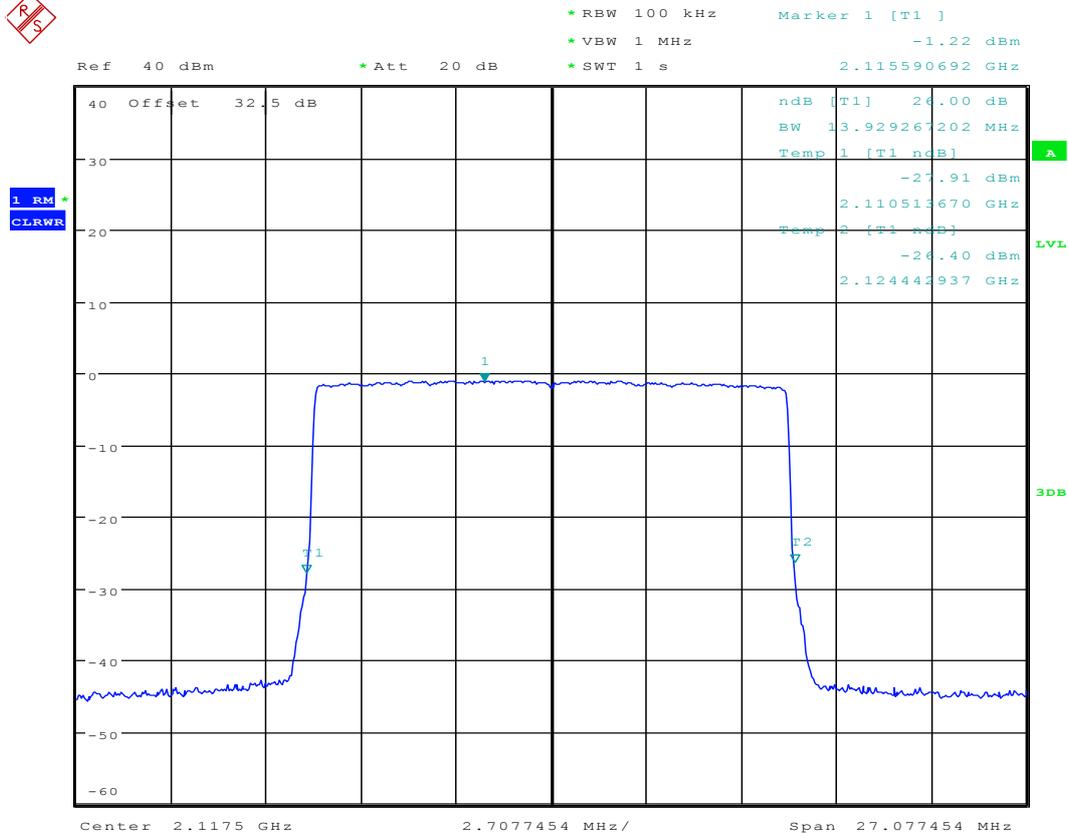
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2.2.6 1L10M_T



Date: 28.APR.2016 22:22:33

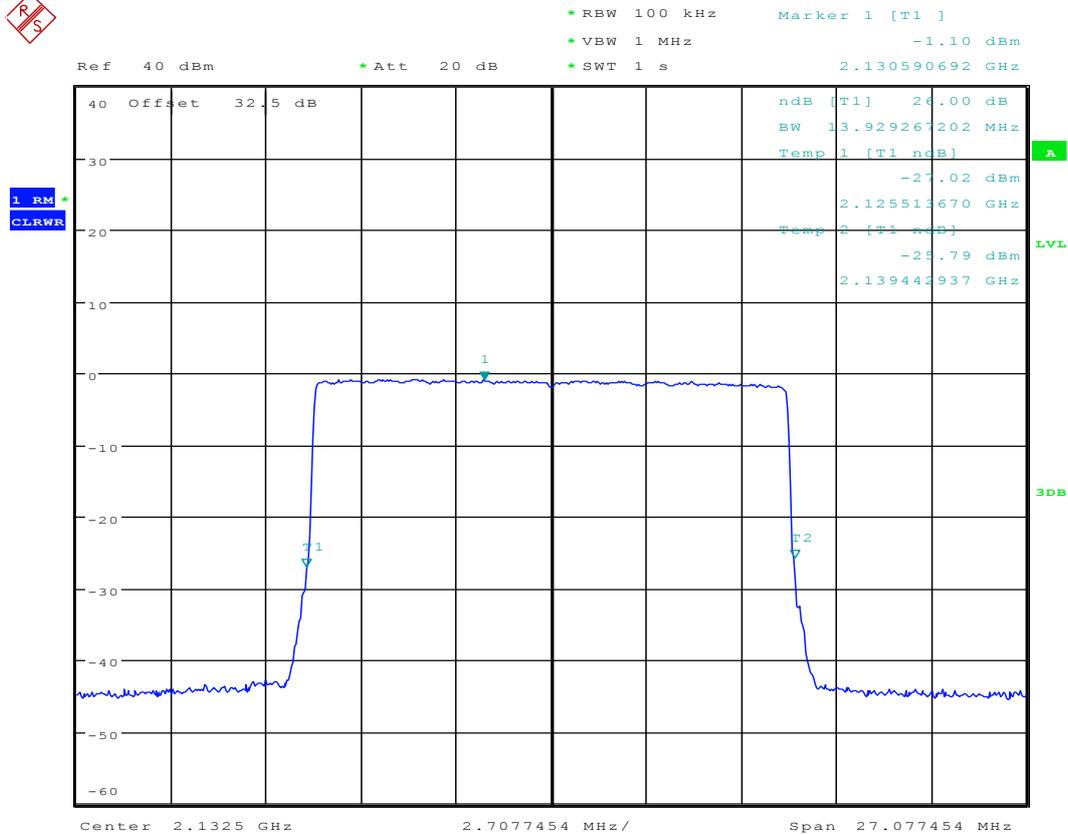
2.2.7 1L15M_B



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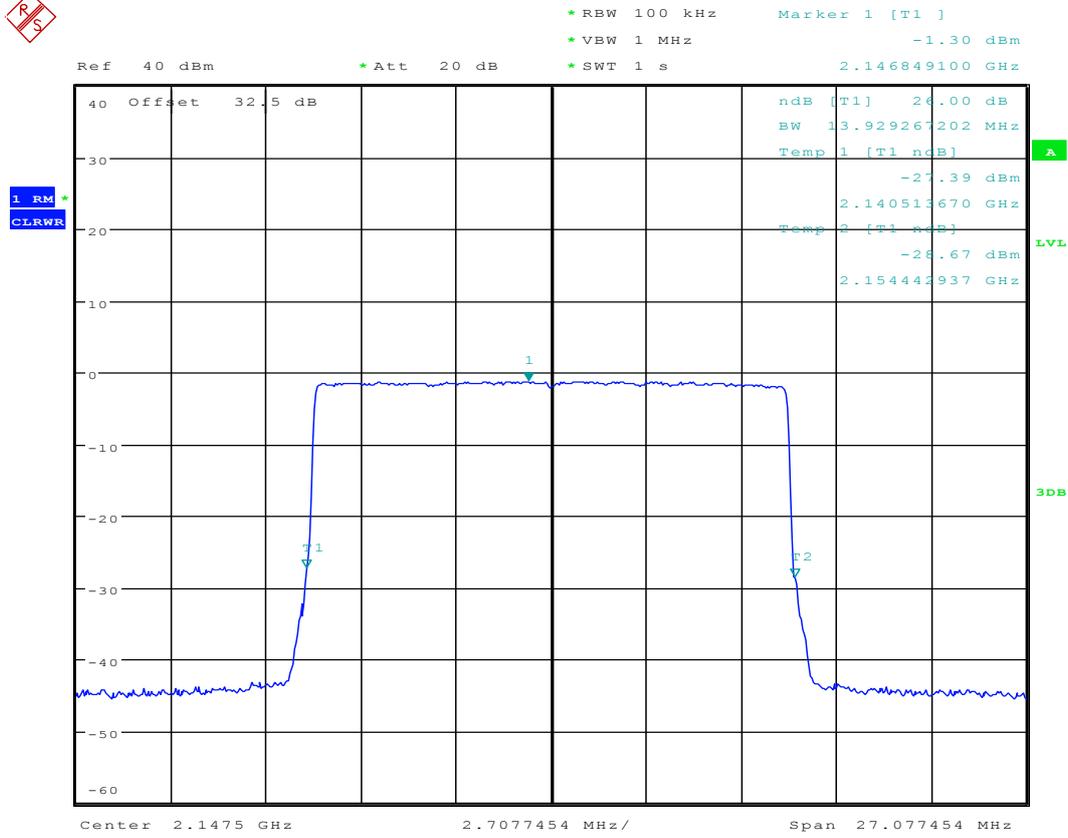


2.2.8 1L15M_M



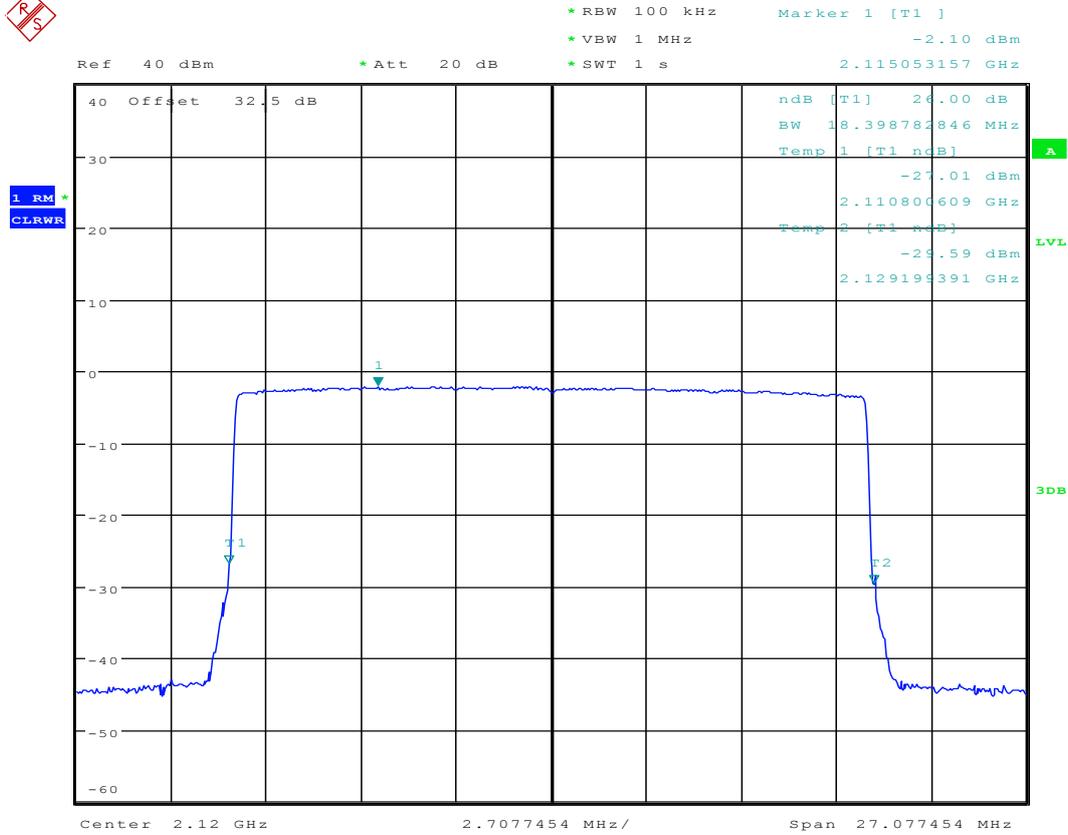
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2.2.9 1L15M_T



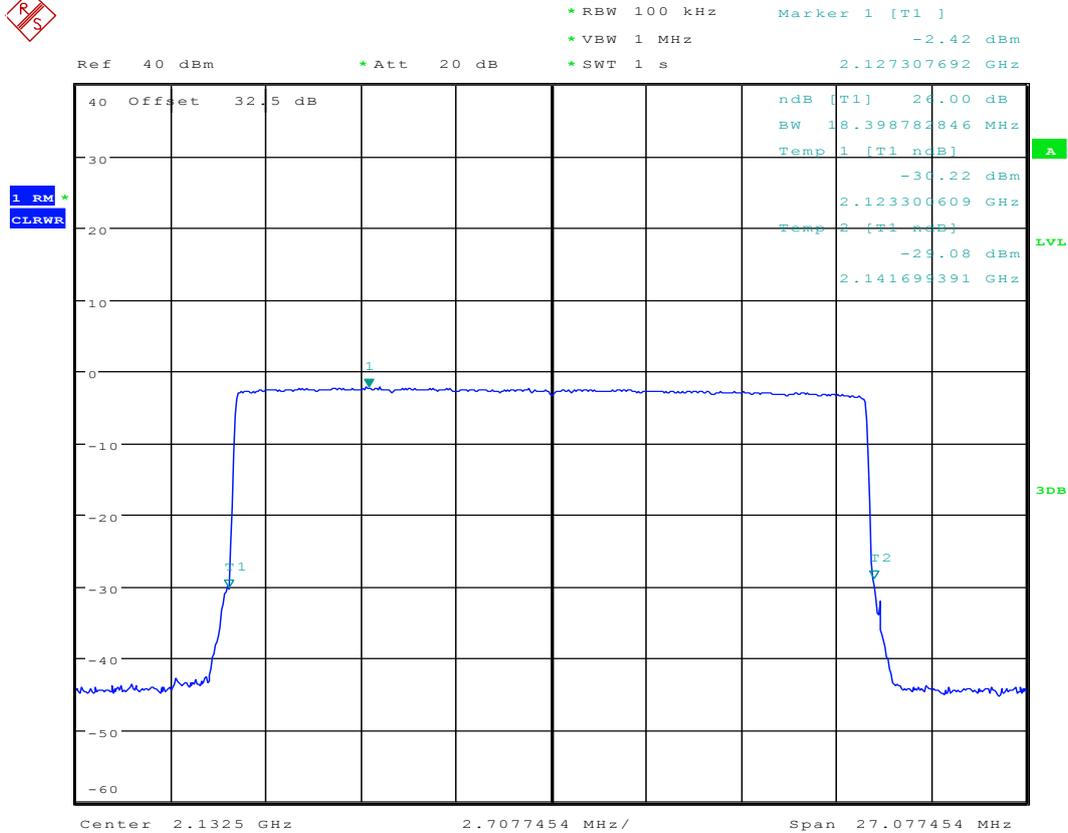
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2.2.10 1L20M_B



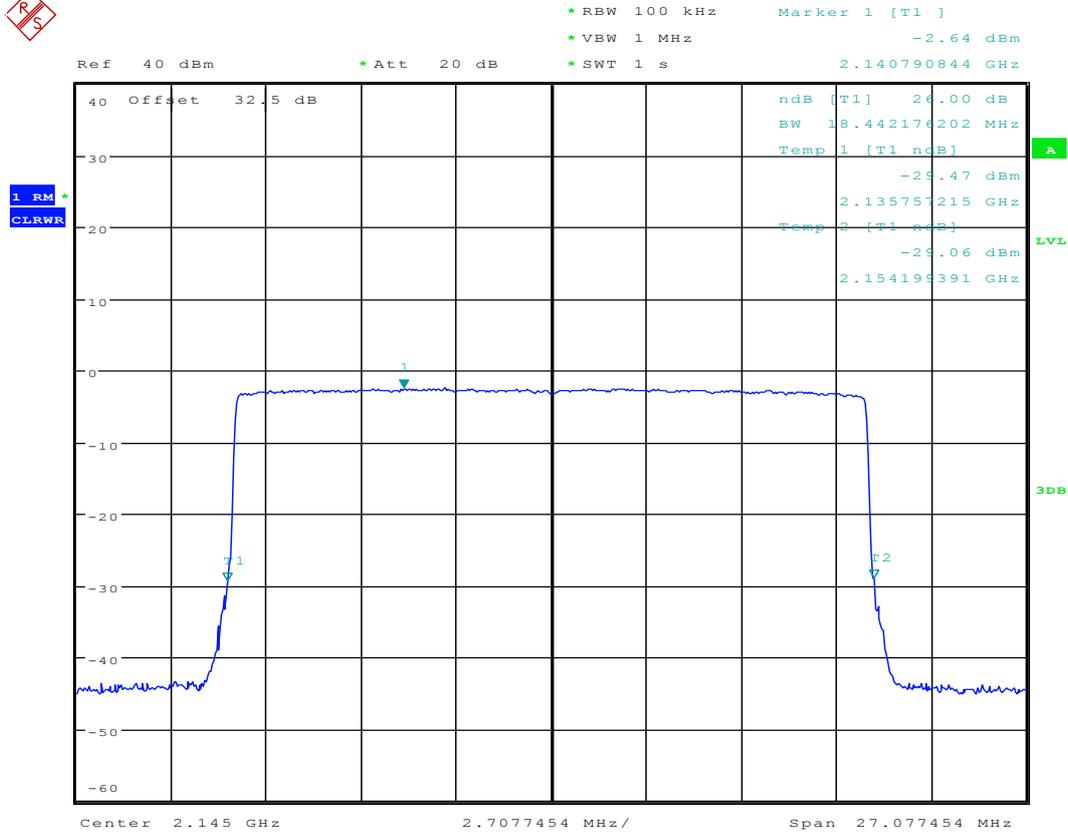
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2.2.11 1L20M_M



Date: 28.APR.2016 22:47:25

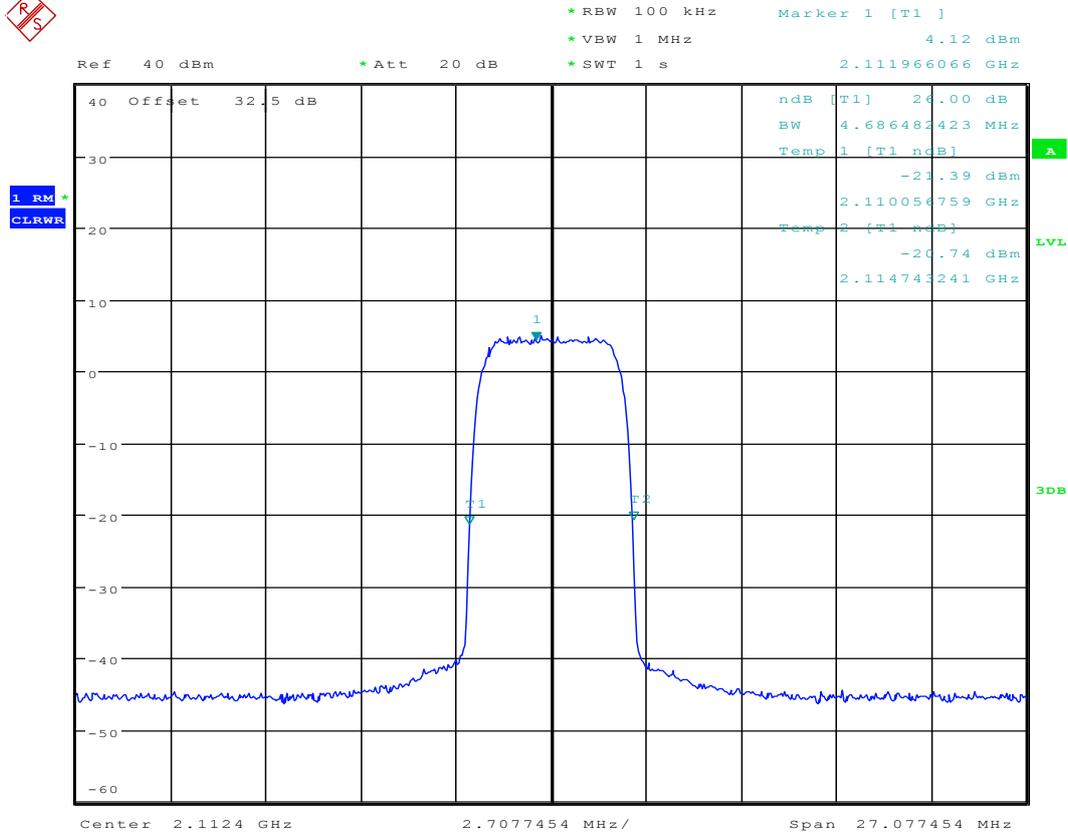
2.2.12 1L20M_T



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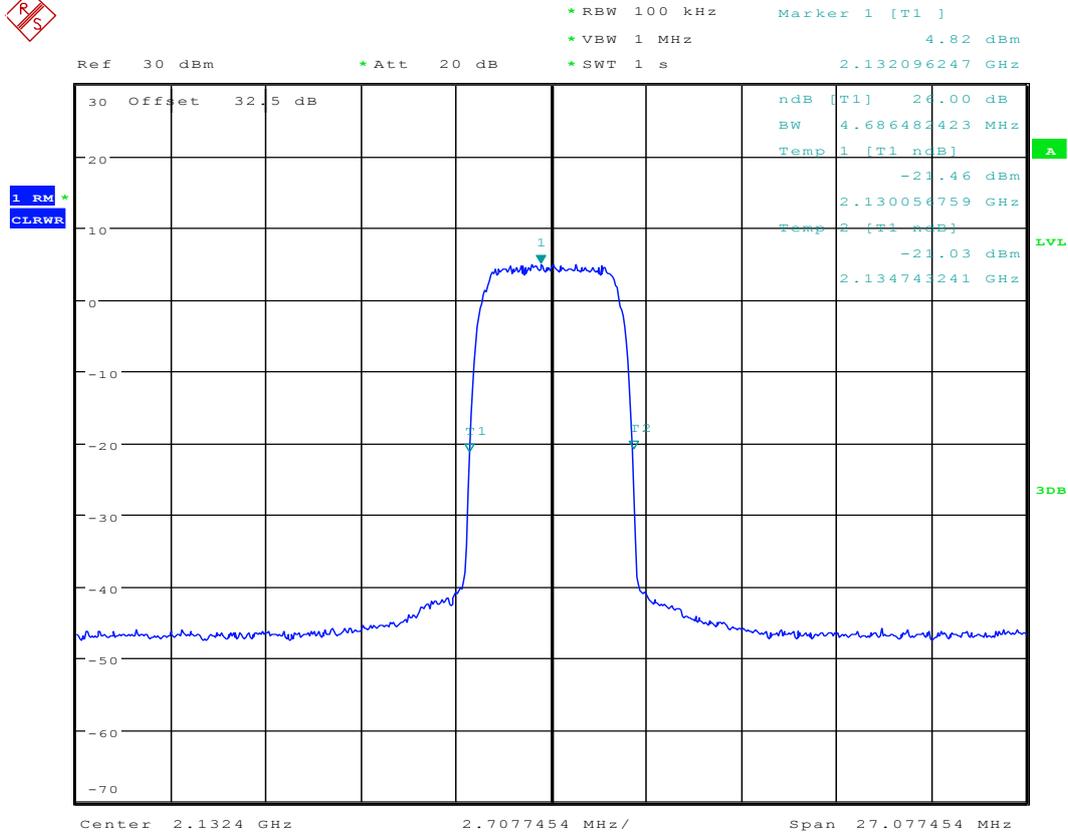
2.2.13 1U_B



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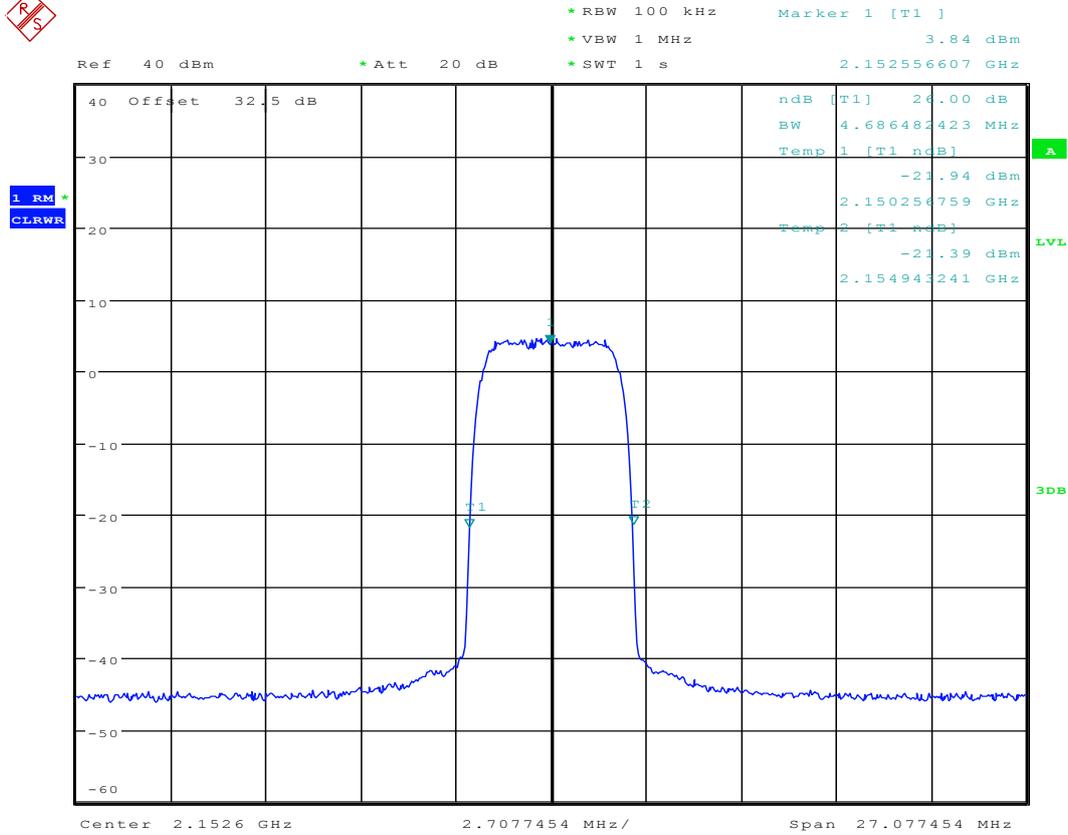
2.2.14 1U_M



Date: 29.APR.2016 12:12:36



2.2.15 1U_T



Date: 29.APR.2016 12:17:54



Appendix C: Band Edges Compliance



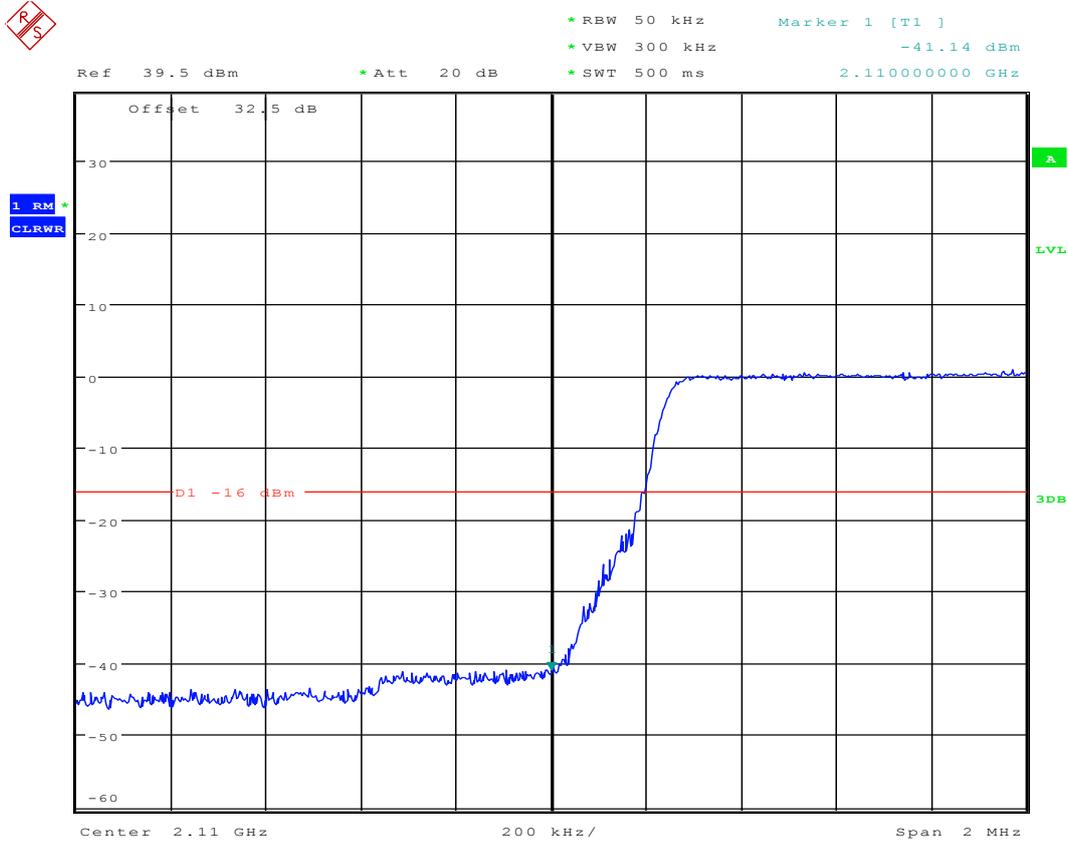
1 Result Table

NOTE: The offset of measurement filter -3dB point may be considered when identifying the maximum emission for e.g. the CDMA, WCDMA, WiMAX, LTE systems.

EUT Conf.	Maximum Emission [dBm]	Verdict
1L5M_B	<-13	Pass
1L5M_T	<-13	Pass
1L20M_B	<-13	Pass
1L20M_T	<-13	Pass
1U_B	<-13	Pass
1U_T	<-13	Pass
1U1L5M_B	<-13	Pass
1U1L5M_T	<-13	Pass

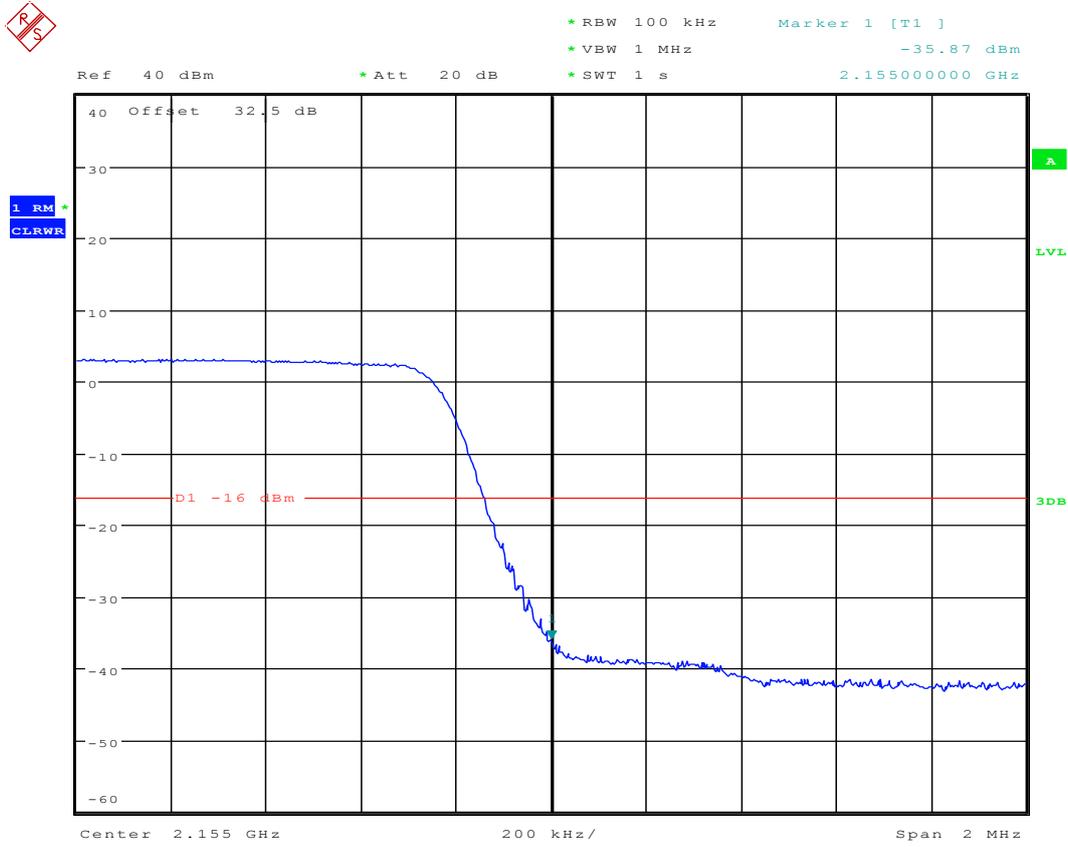
2 Test Plot

2.1 1L5M_B



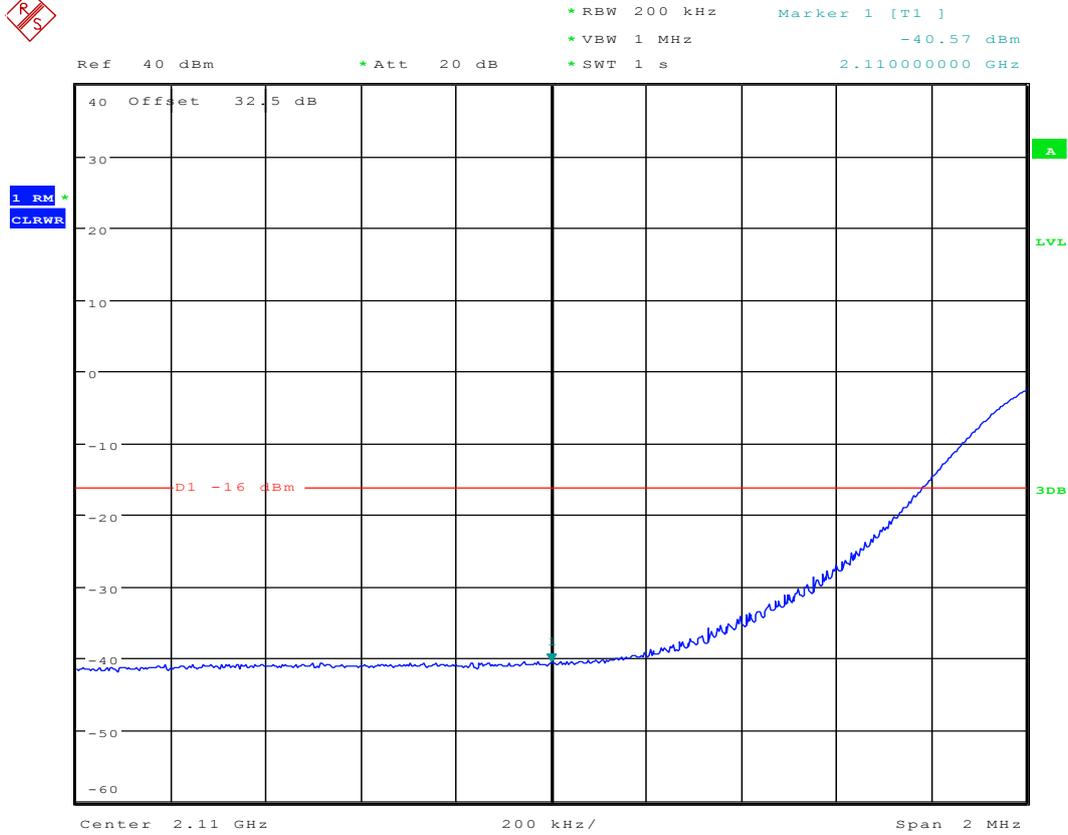
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2.2 1L5M_T



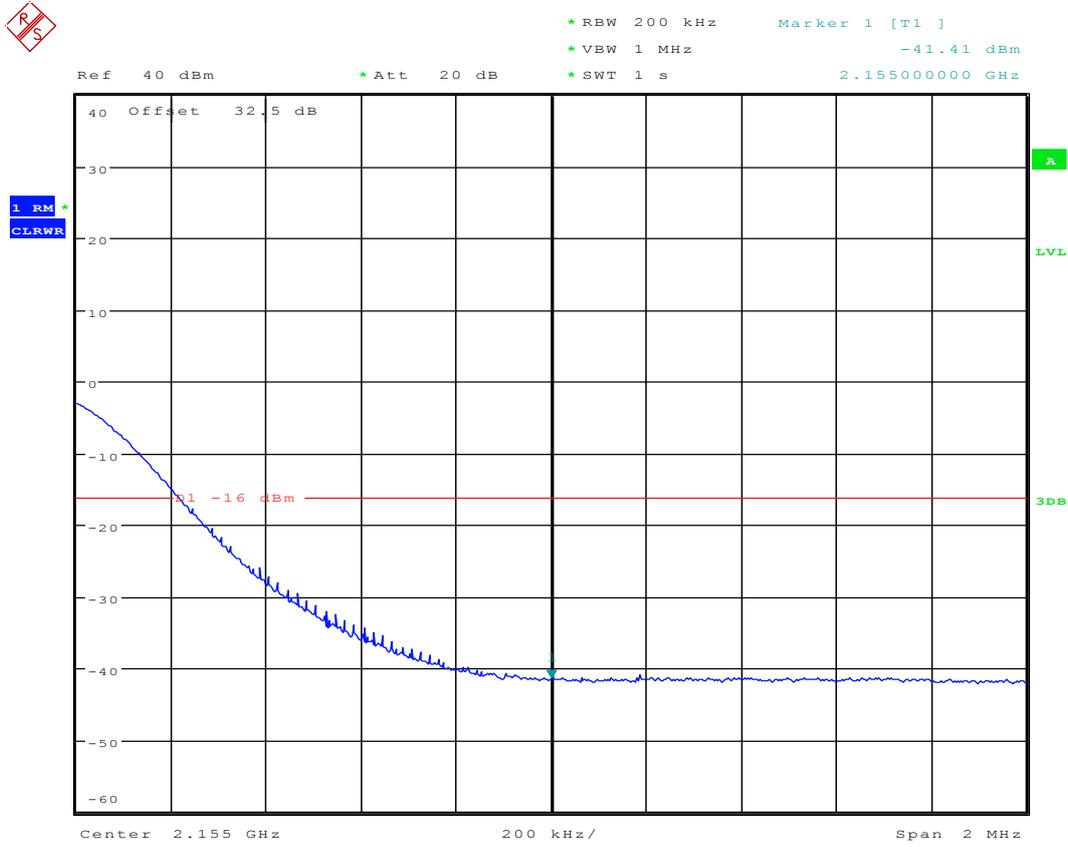
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2.3 1L20M_B



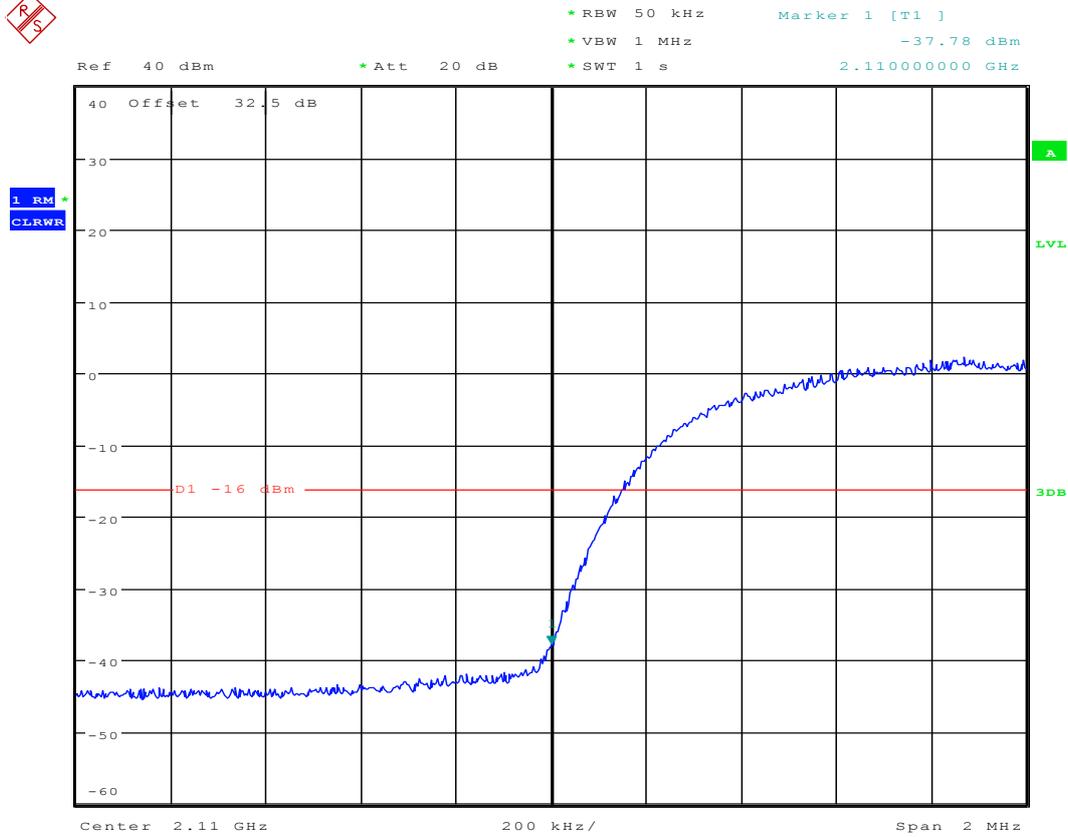
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2.4 1L20M_T



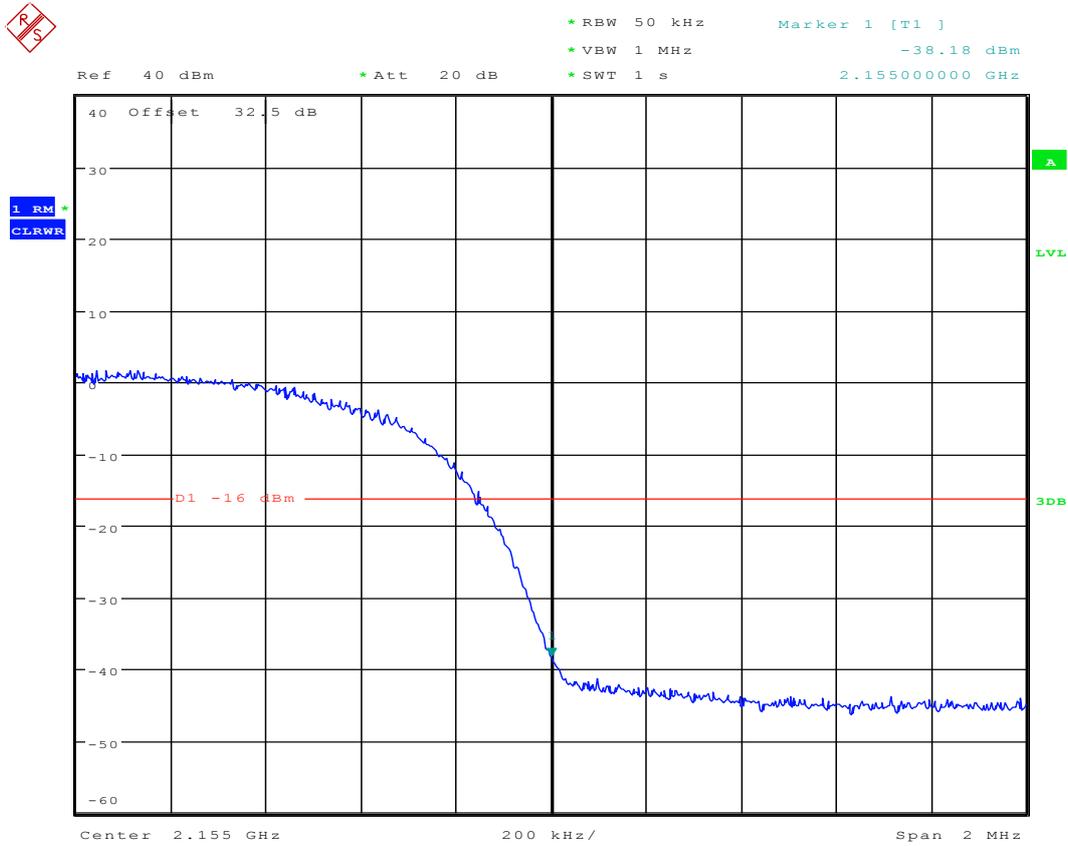
Date: 28.APR.2016 22:52:26

2.5 1U_B



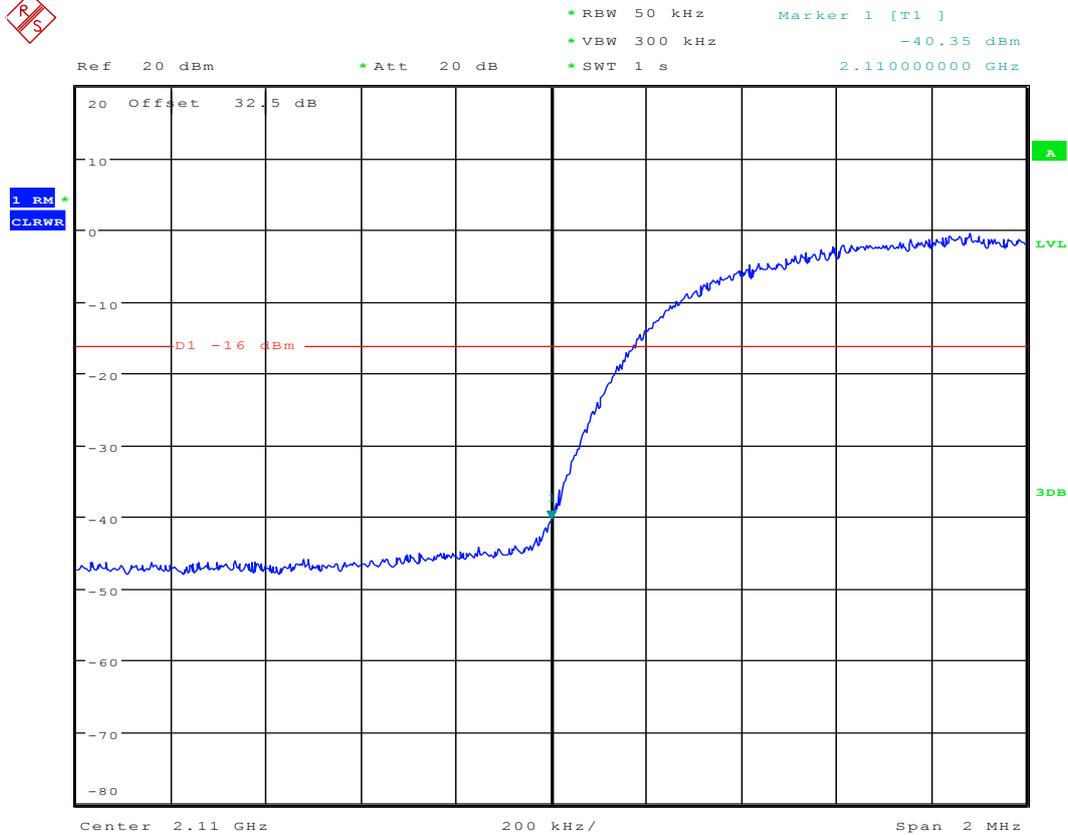
Date: 29.APR.2016 12:05:09

2.6 1U_T



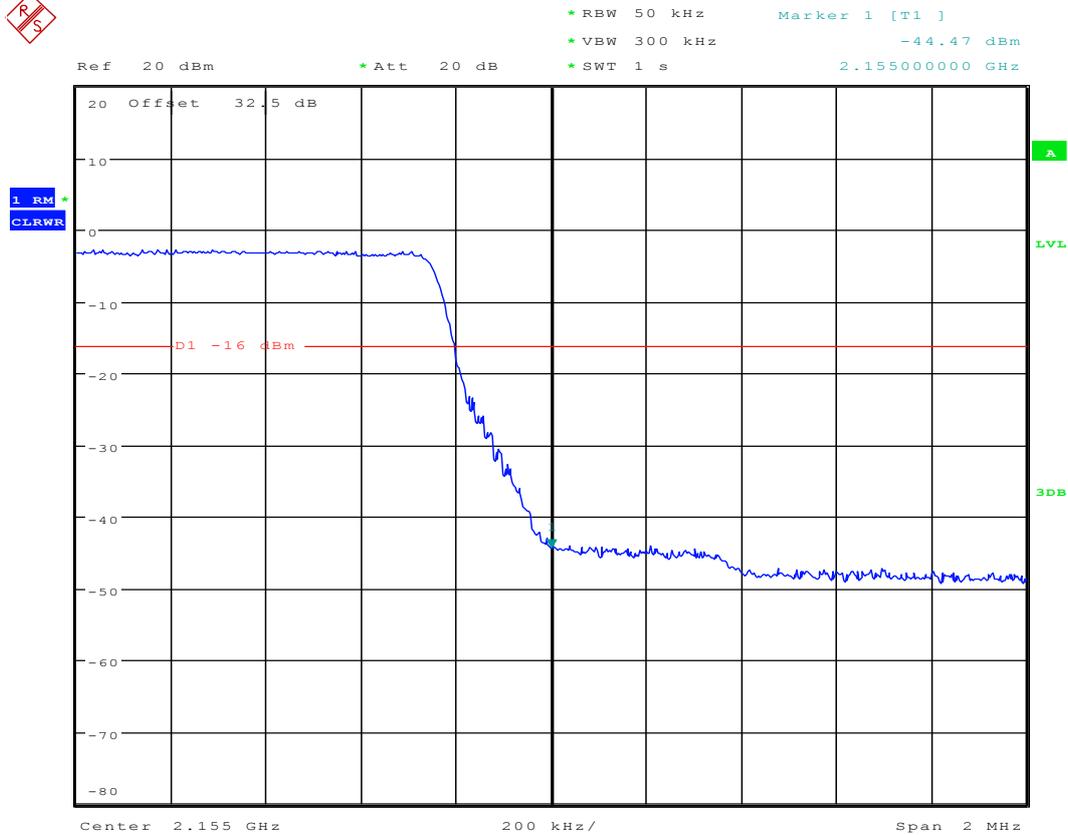
Date: 29.APR.2016 12:18:47

2.7 1U1L5M_B



Date: 29.APR.2016 12:27:32

2.8 1U1L5M_T



Date: 29.APR.2016 12:39:27



Appendix D: Spurious Emission at Antenna Terminals

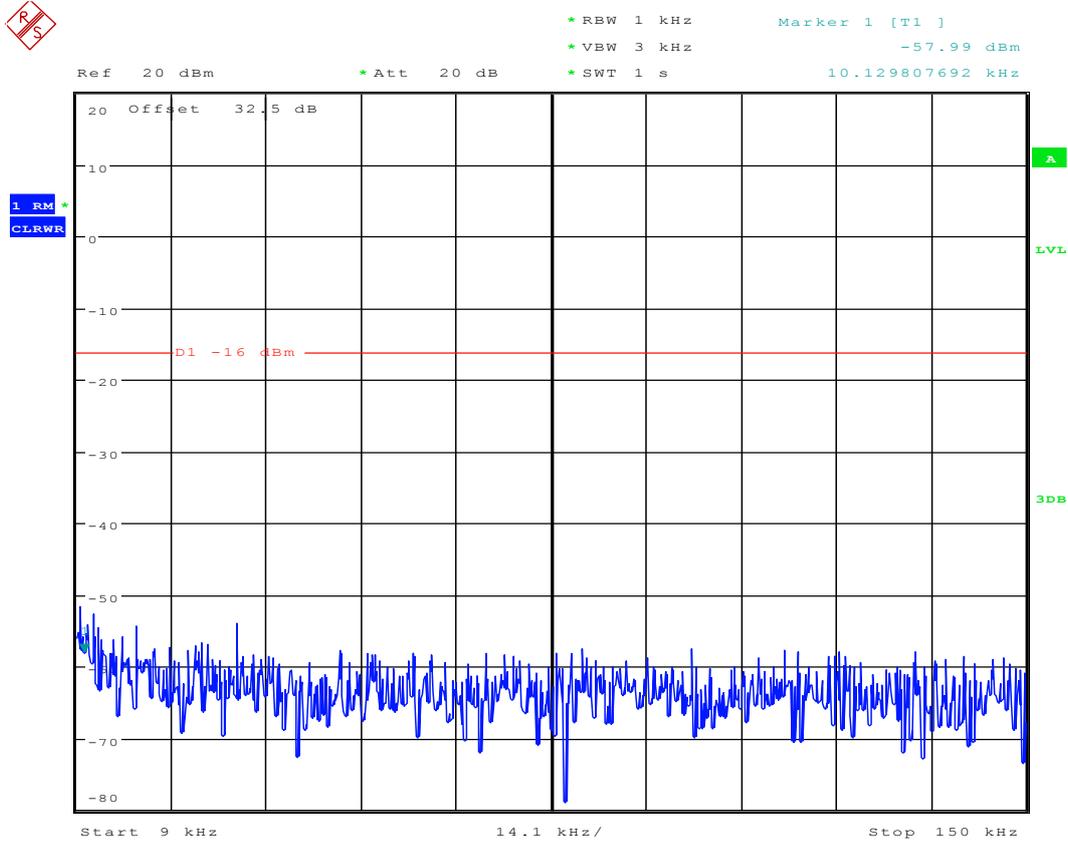


1 Result Table

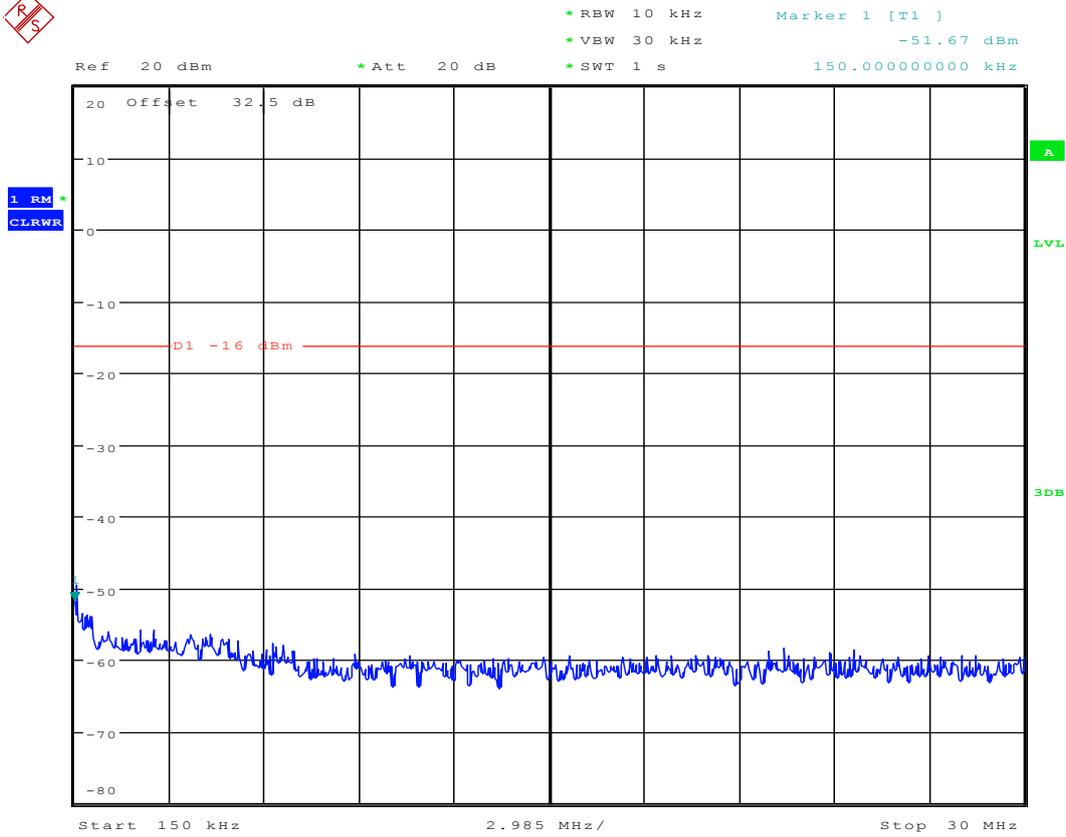
EUT Conf.	Maximum Emission [dBm]	Verdict
1L20M_B	<-13	Pass
1L20M_M	<-13	Pass
1L20M_T	<-13	Pass
1U_B	<-13	Pass
1U_M	<-13	Pass
1U_T	<-13	Pass
1U1L5M_B	<-13	Pass
1U1L5M_M	<-13	Pass
1U1L5M_T	<-13	Pass

2 Test Plot

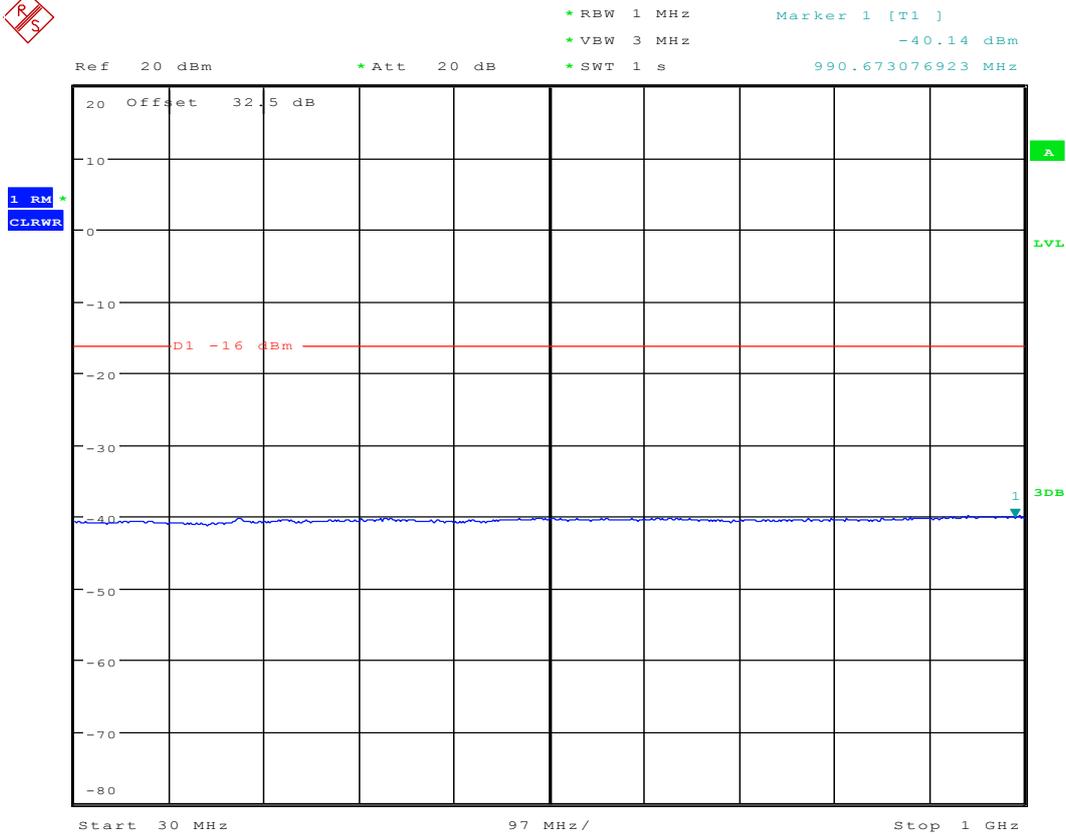
2.1 1L20M_B



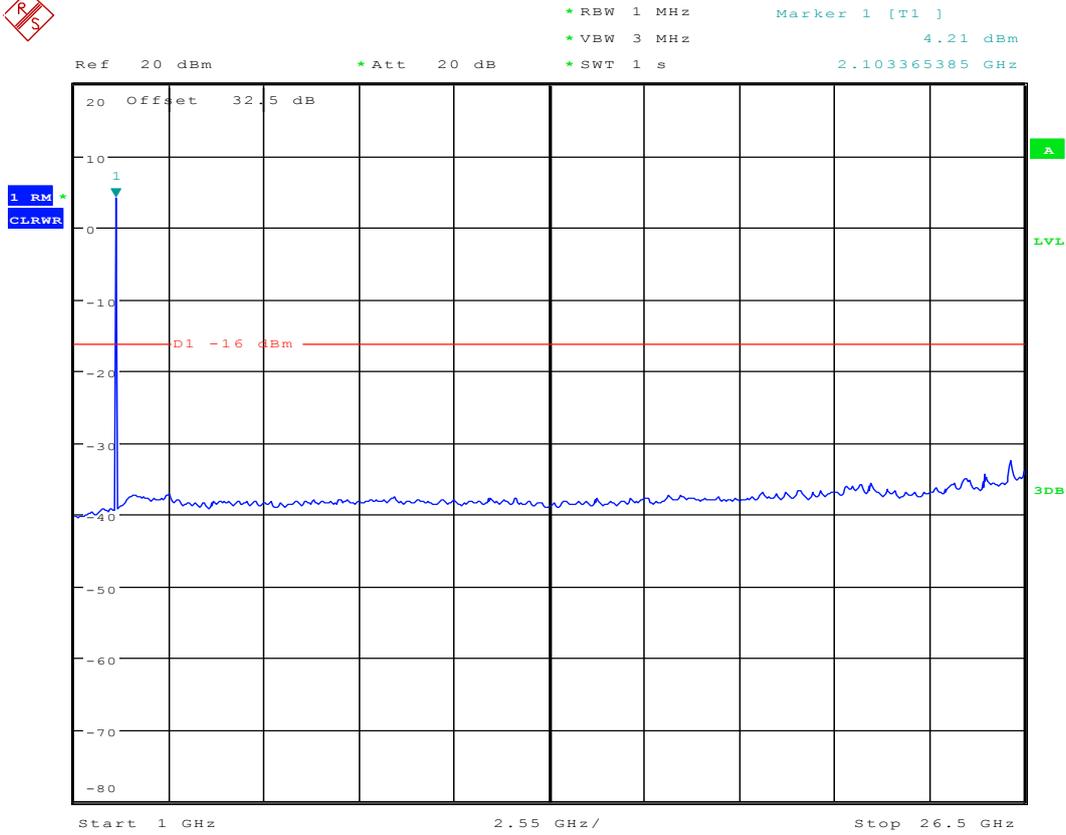
Date: 28.APR.2016 22:39:44



Date: 28.APR.2016 22:40:02

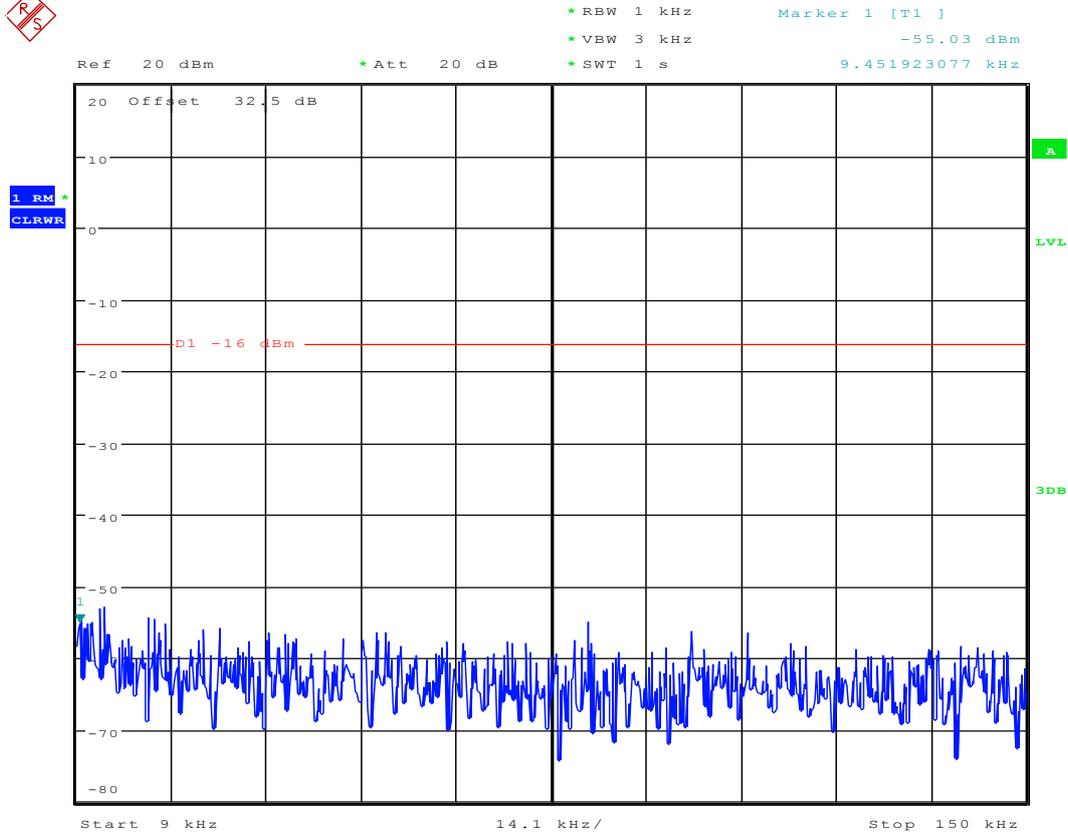


Date: 28.APR.2016 22:40:26

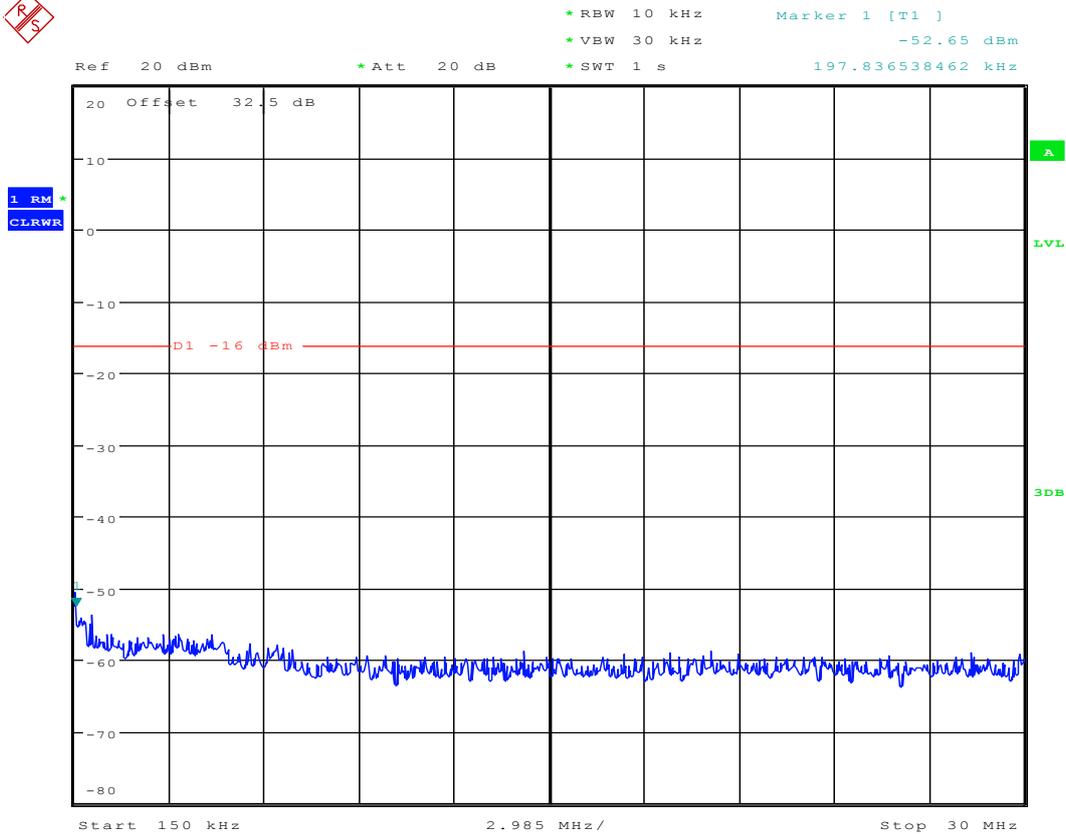


Date: 28.APR.2016 22:40:41

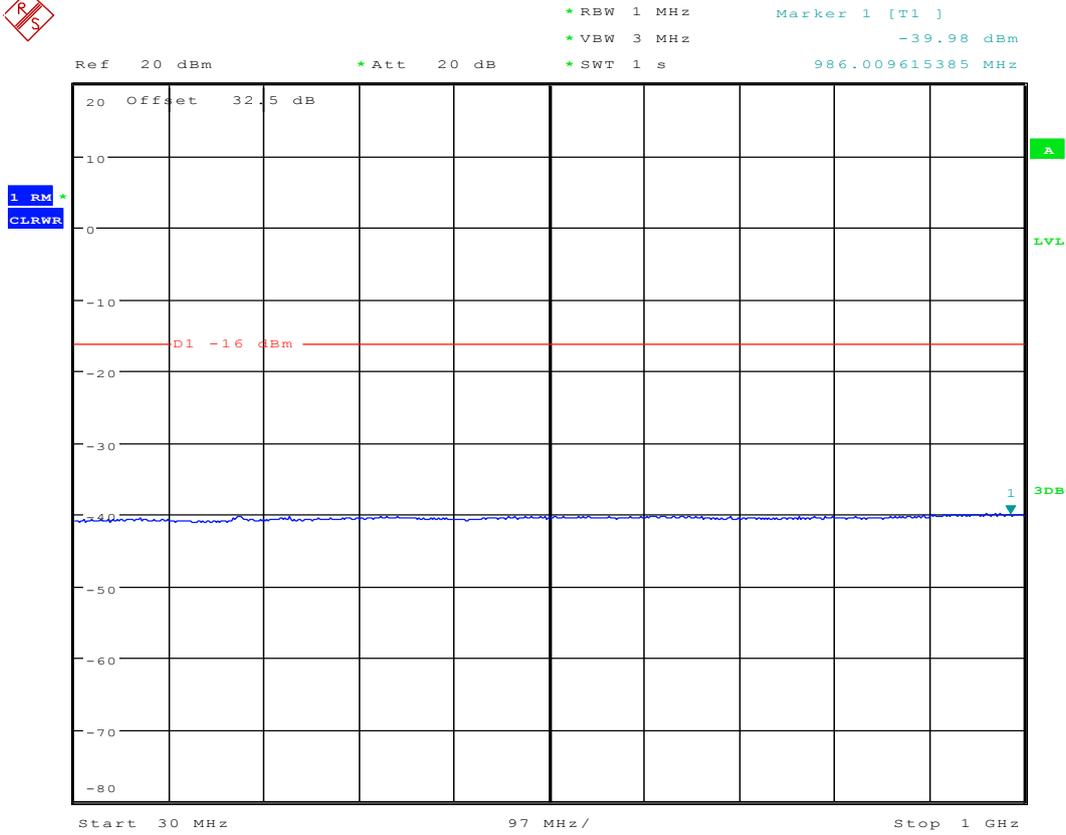
2.2 1L20M_M



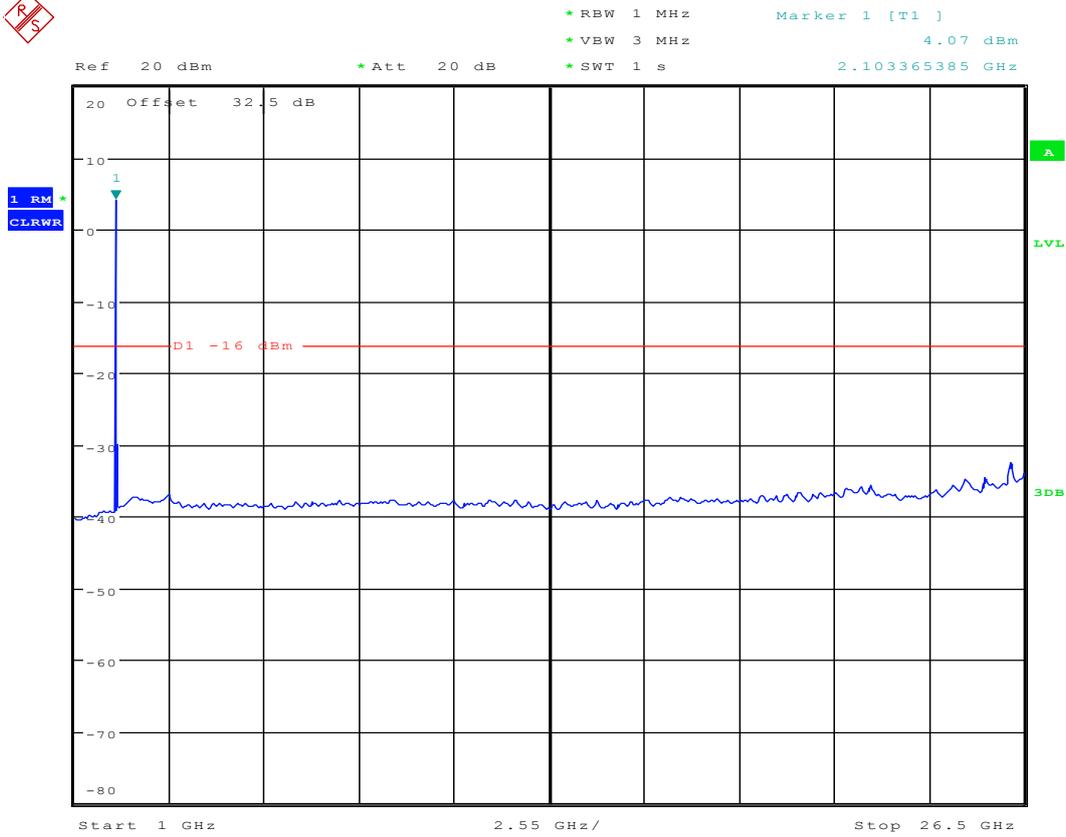
Date: 28.APR.2016 22:48:01



Date: 28.APR.2016 22:48:20

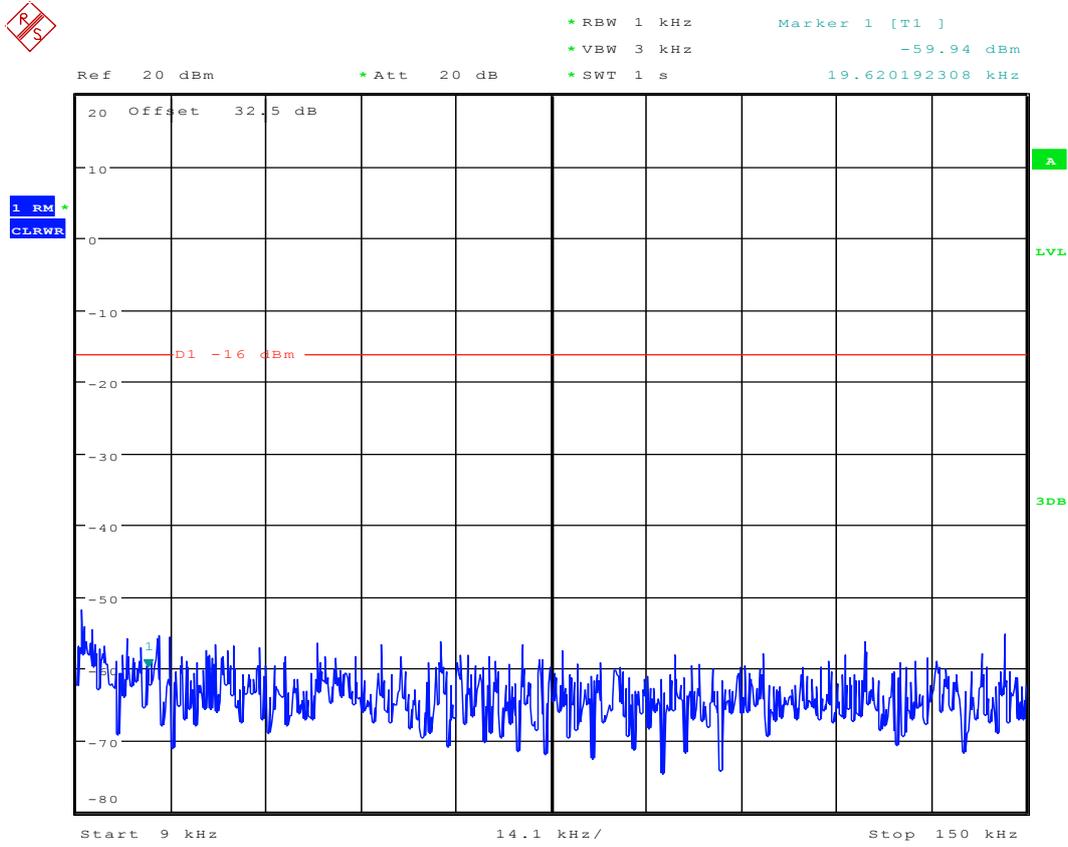


Date: 28.APR.2016 22:48:39

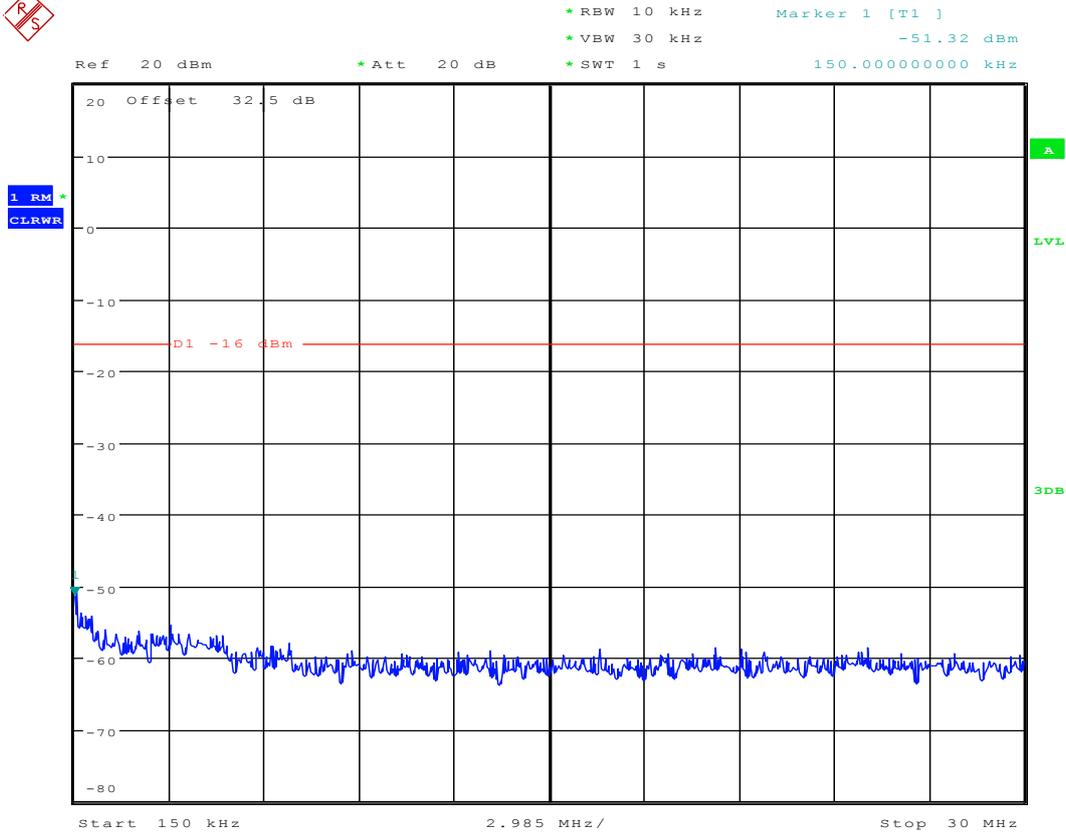


Date: 28.APR.2016 22:49:09

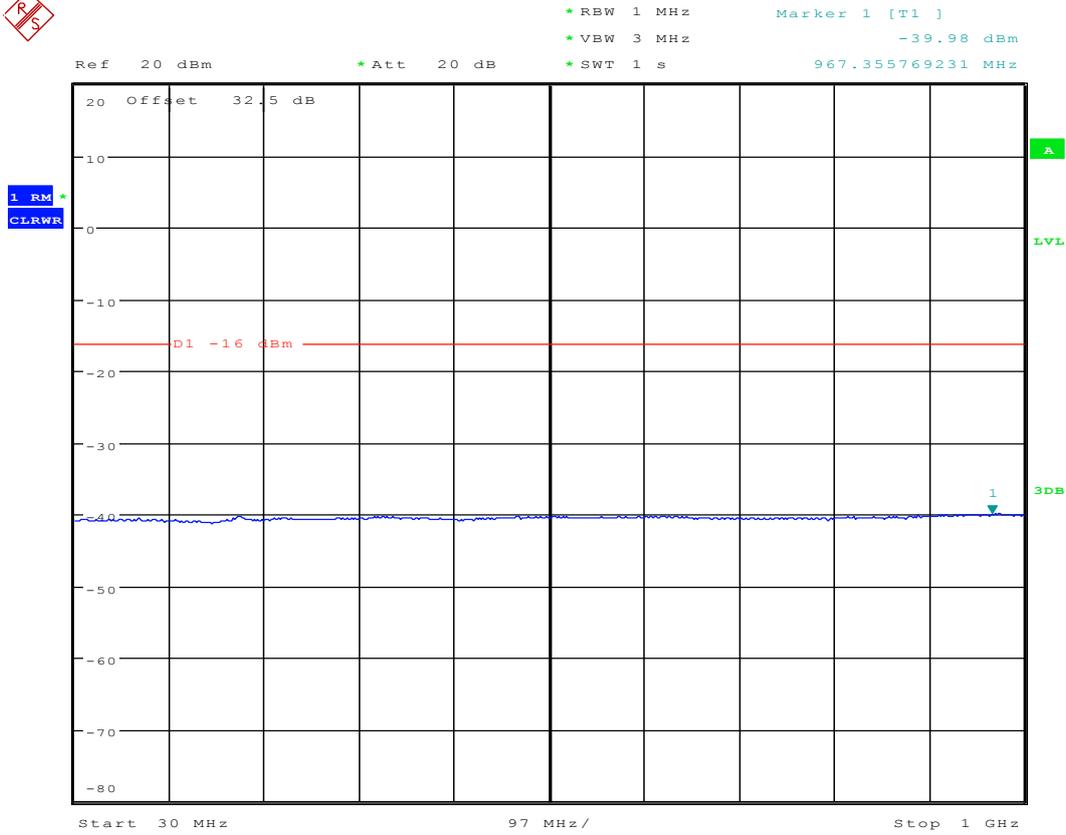
2.3 1L20M_T



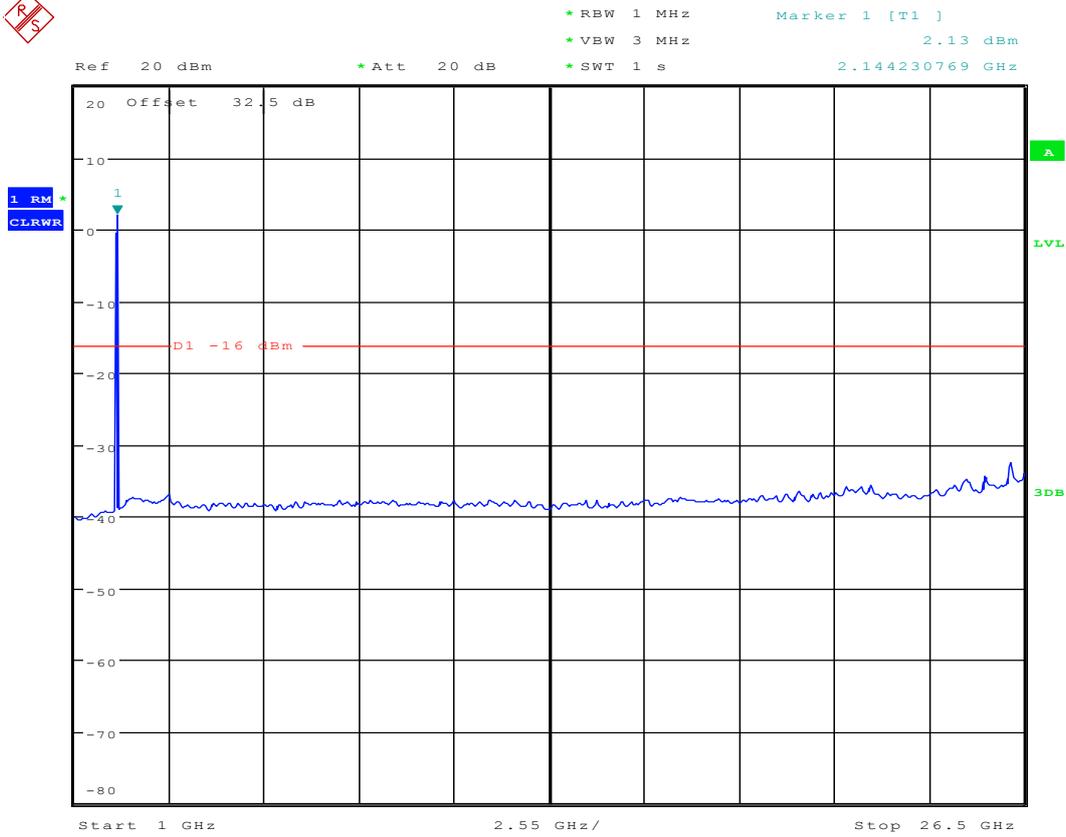
Date: 28.APR.2016 22:53:51



Date: 28.APR.2016 22:54:09

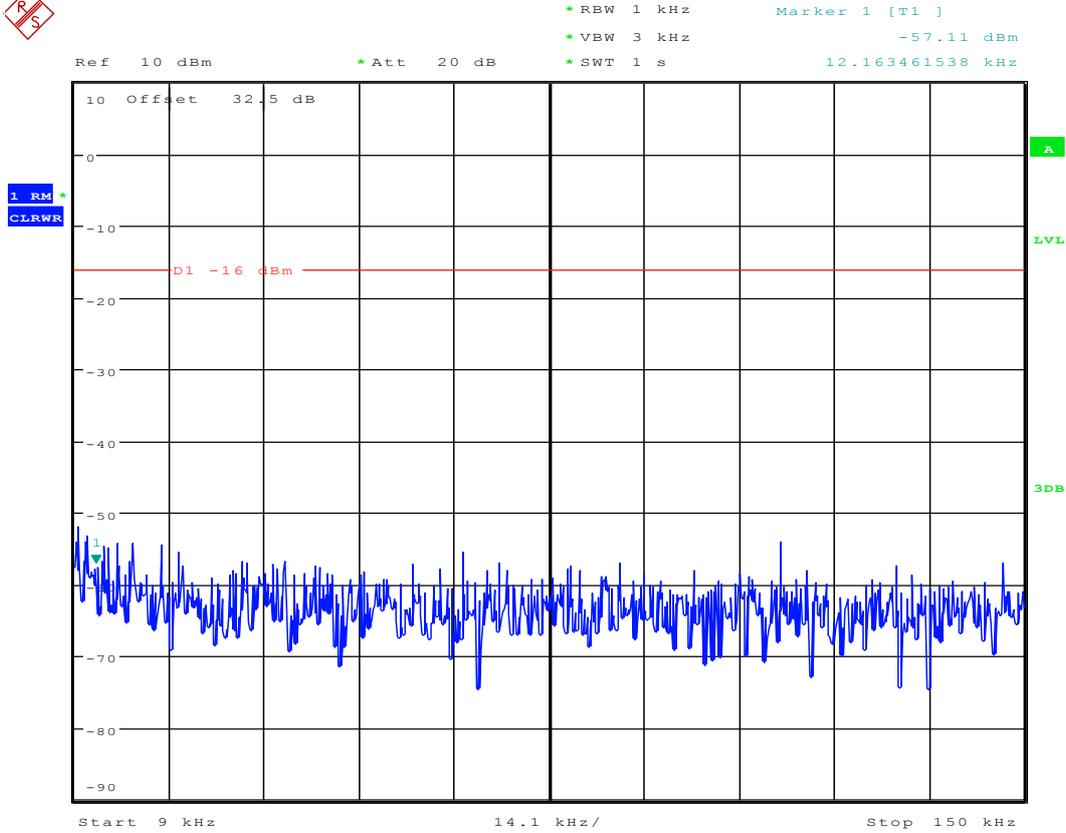


Date: 28.APR.2016 22:54:26

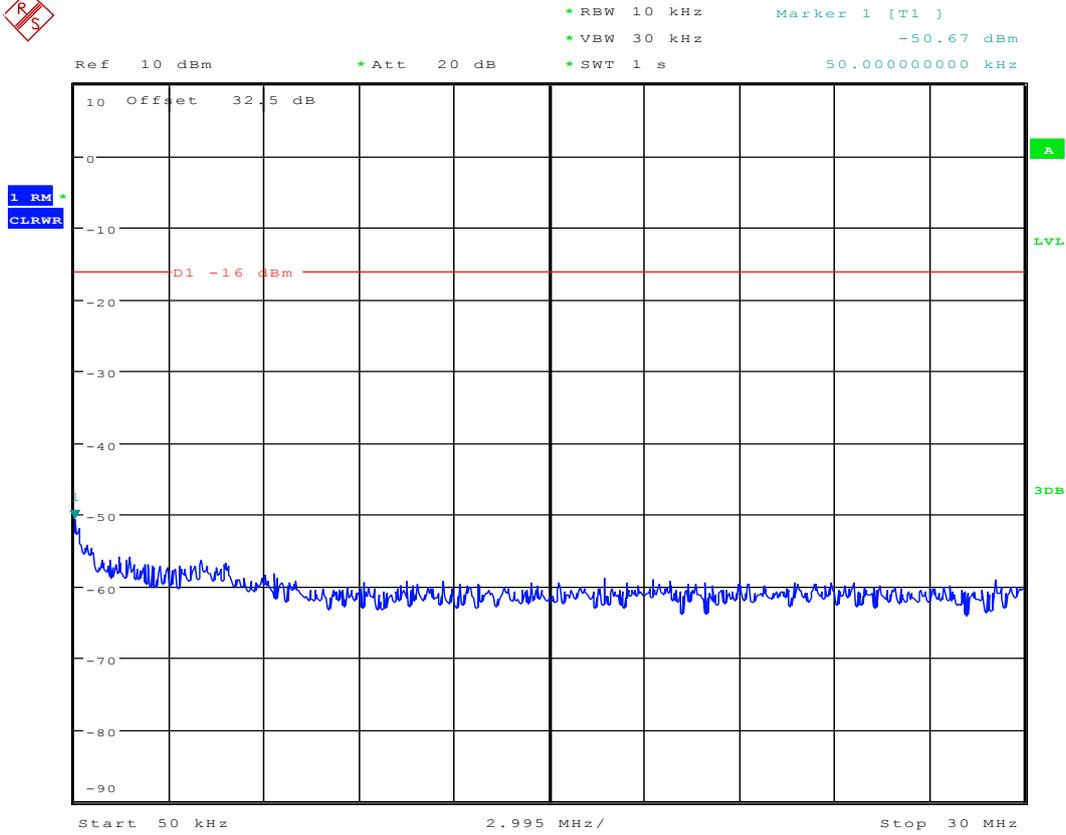


Date: 28.APR.2016 22:54:39

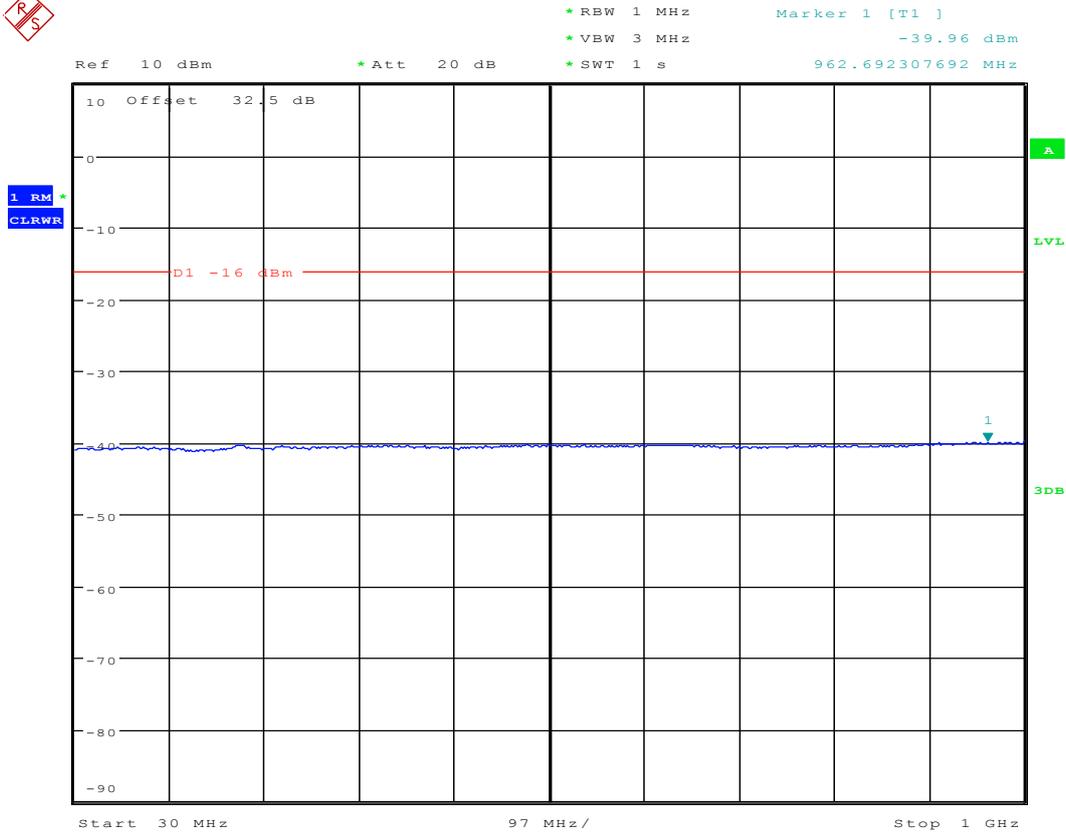
2.4 1U_B



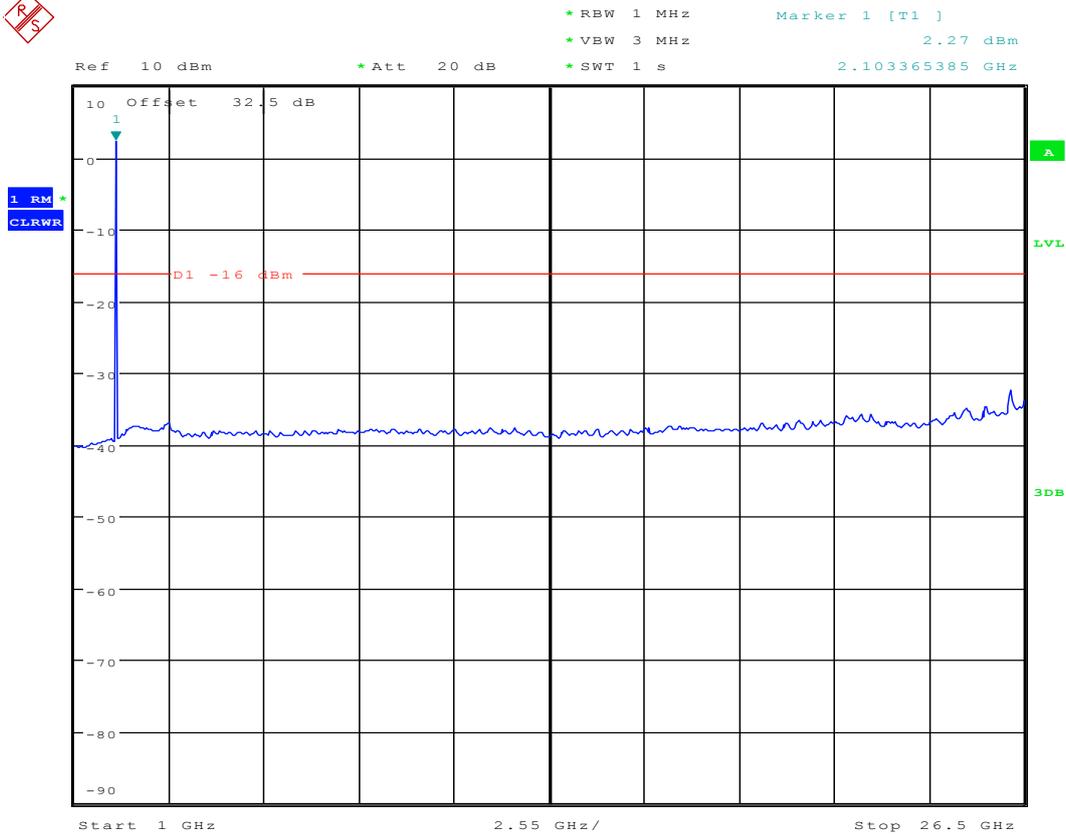
Date: 29.APR.2016 12:08:23



Date: 29.APR.2016 12:08:45



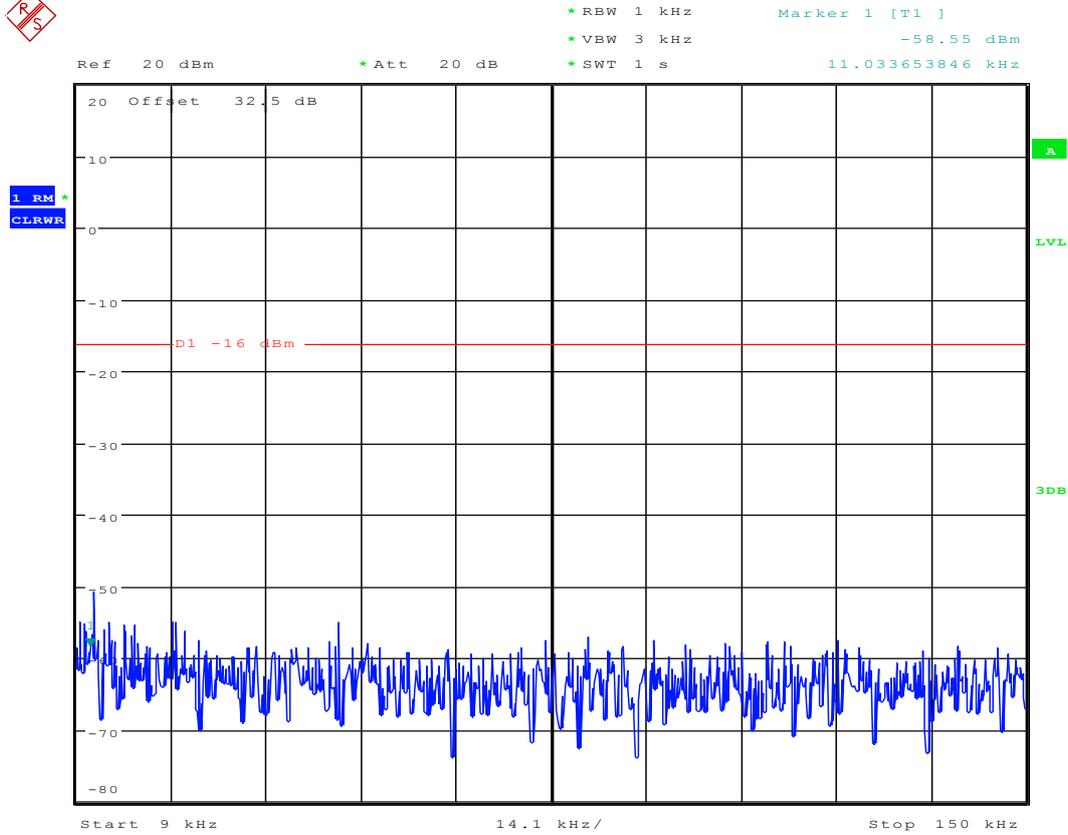
Date: 29.APR.2016 12:09:14



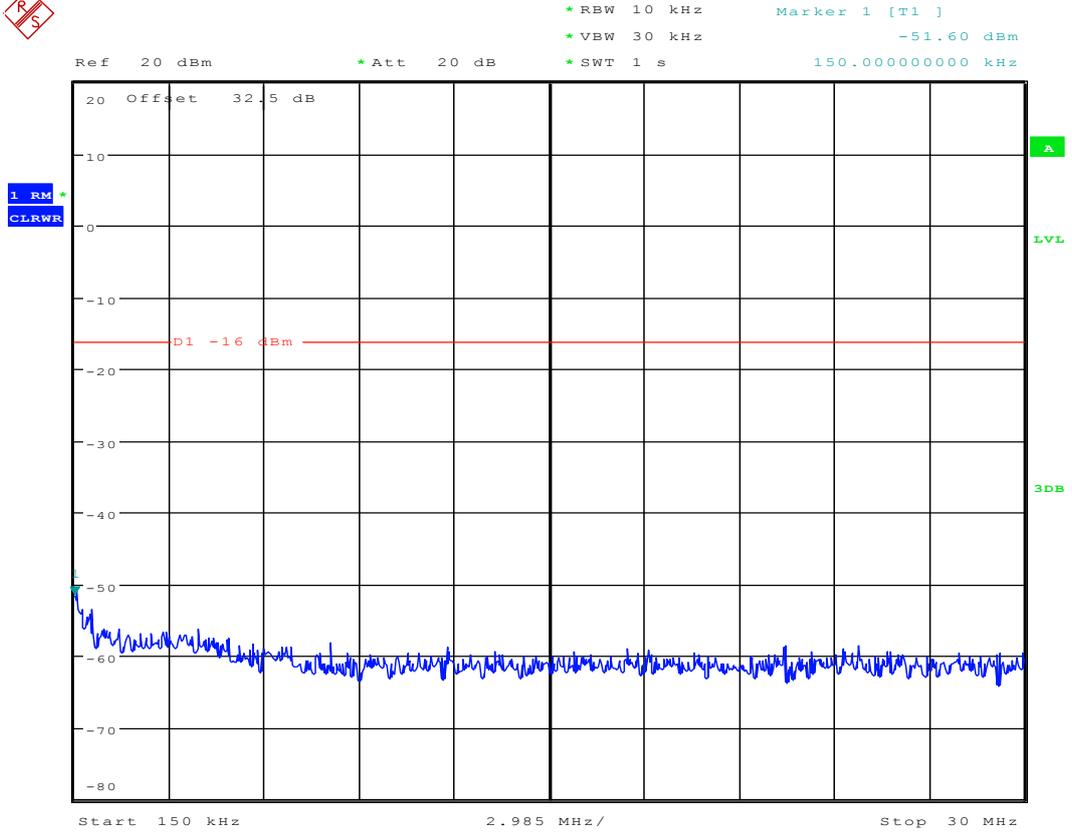
Date: 29.APR.2016 12:09:30



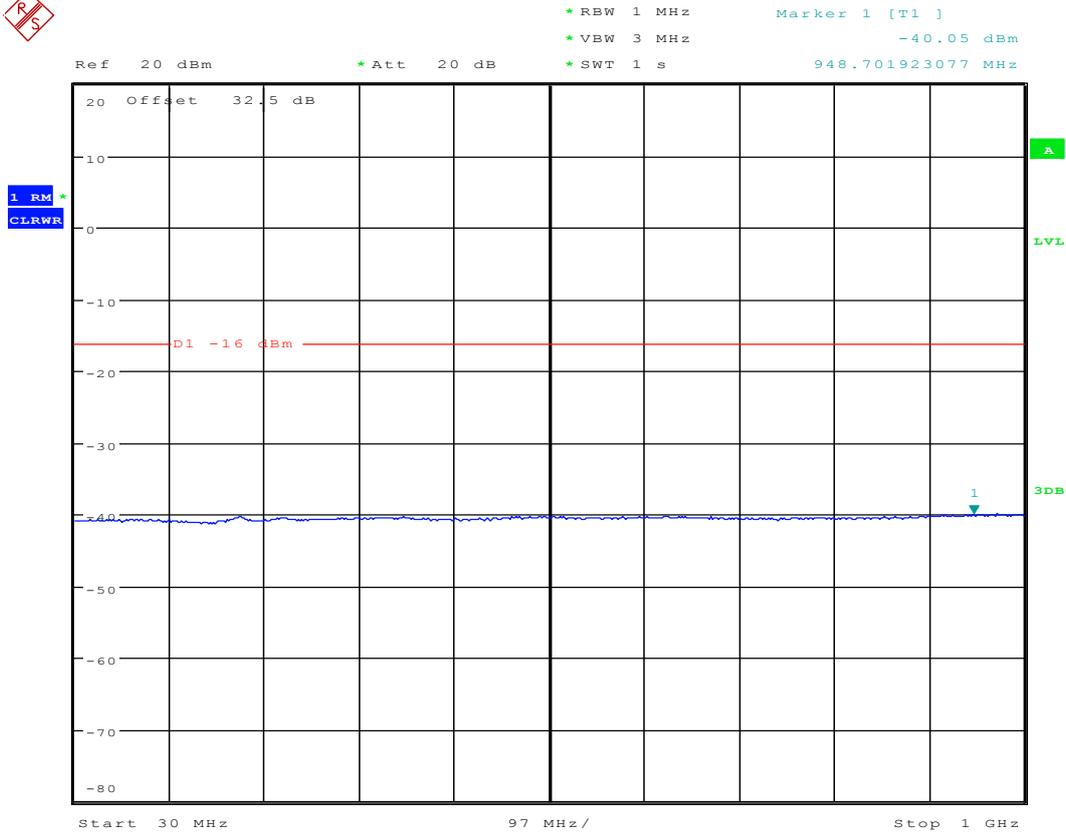
2.5 1U_M



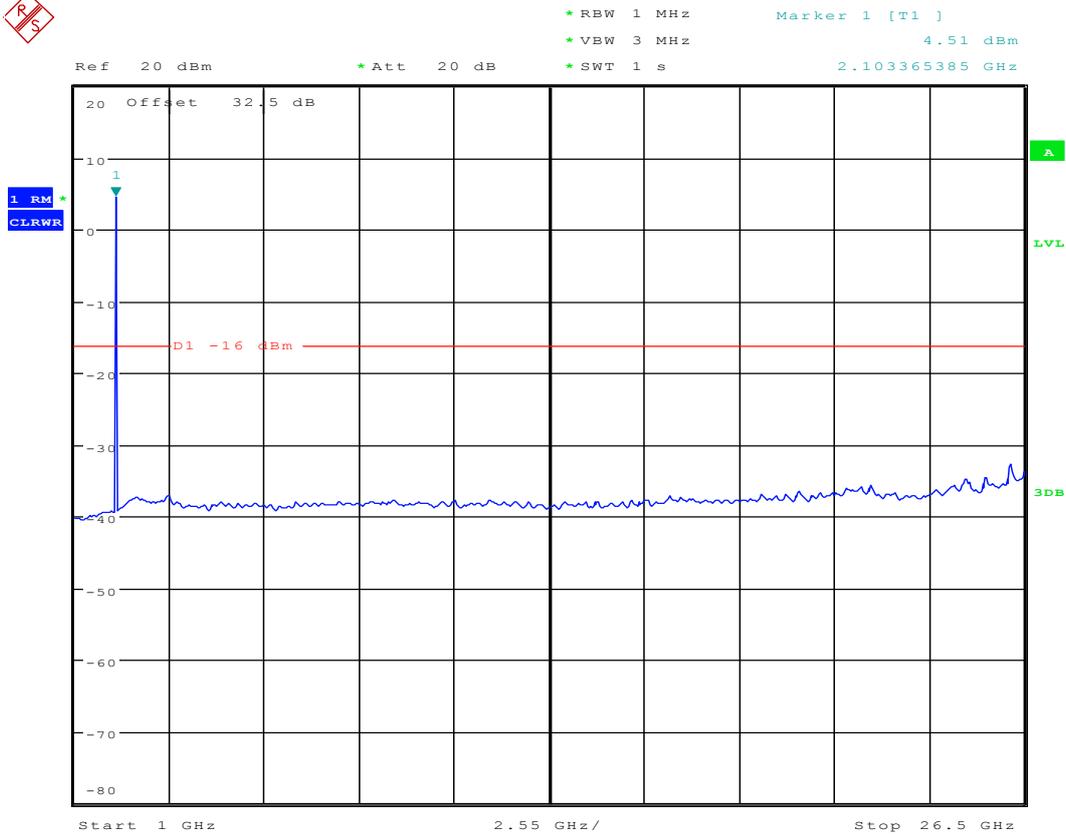
Date: 29.APR.2016 12:13:31



Date: 29.APR.2016 12:13:54

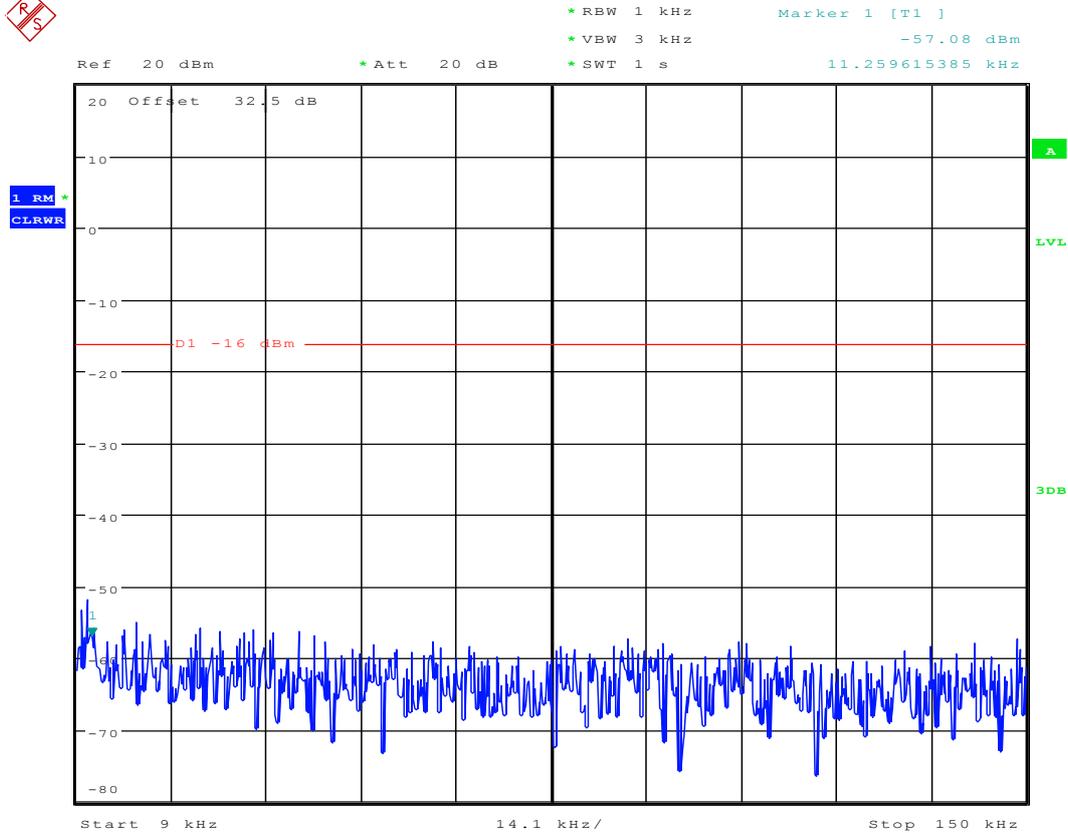


Date: 29.APR.2016 12:14:21

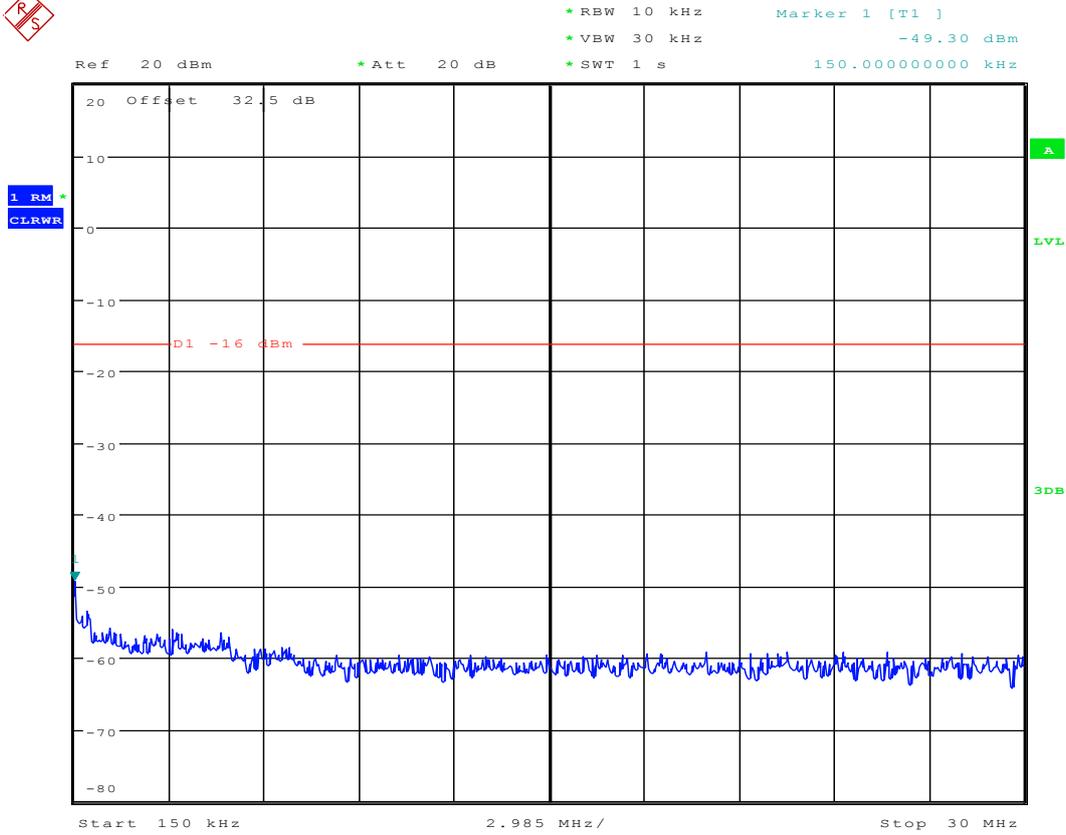


Date: 29.APR.2016 12:14:40

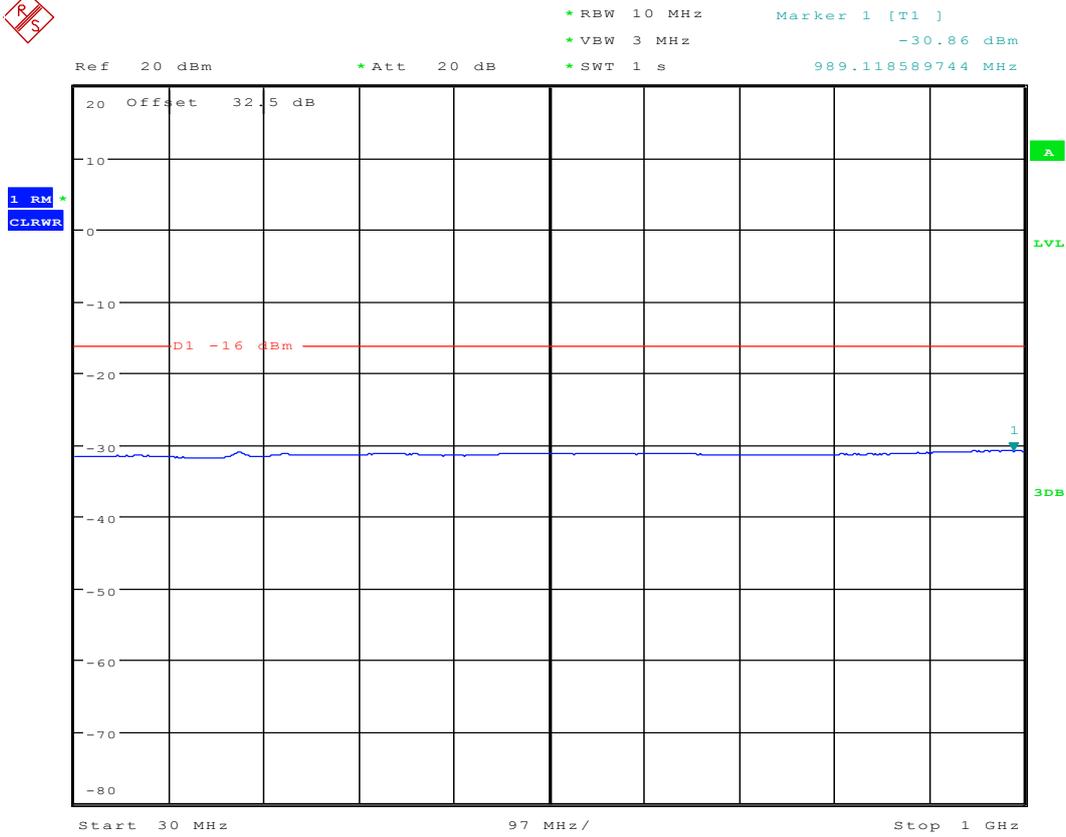
2.6 1U_T



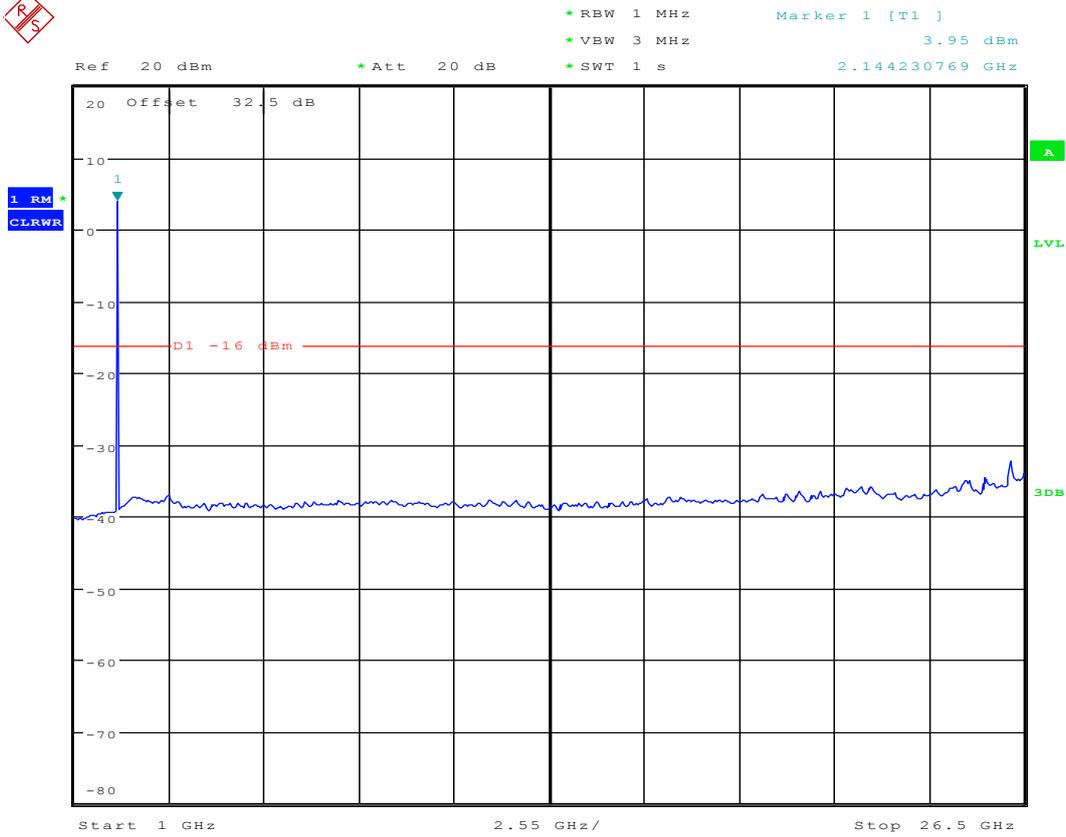
Date: 29.APR.2016 12:19:33



Date: 29.APR.2016 12:20:08

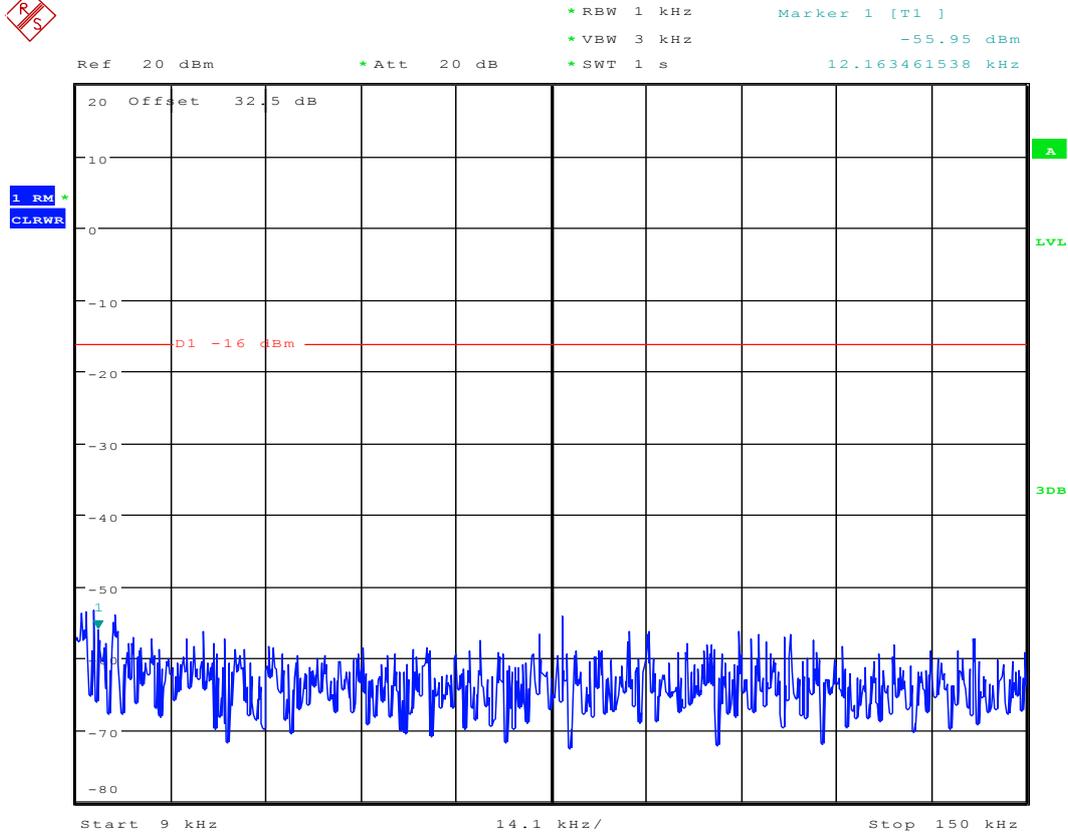


Date: 29.APR.2016 12:20:33

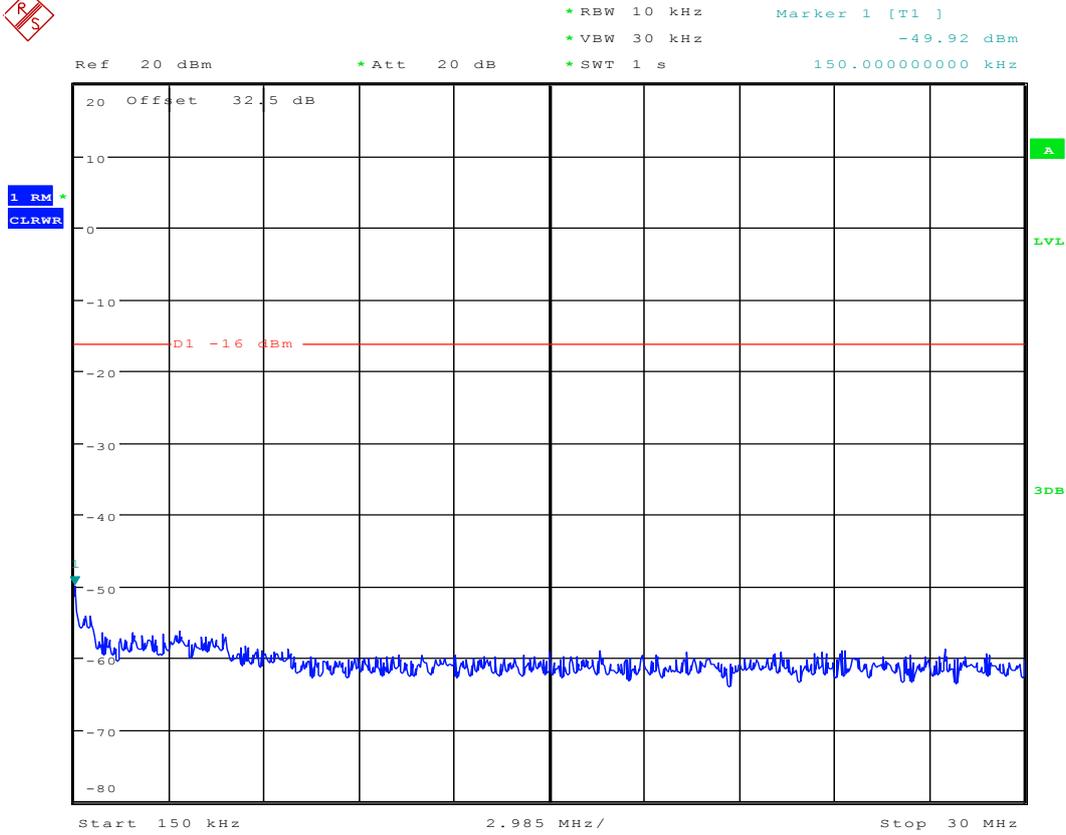


Date: 29.APR.2016 12:21:48

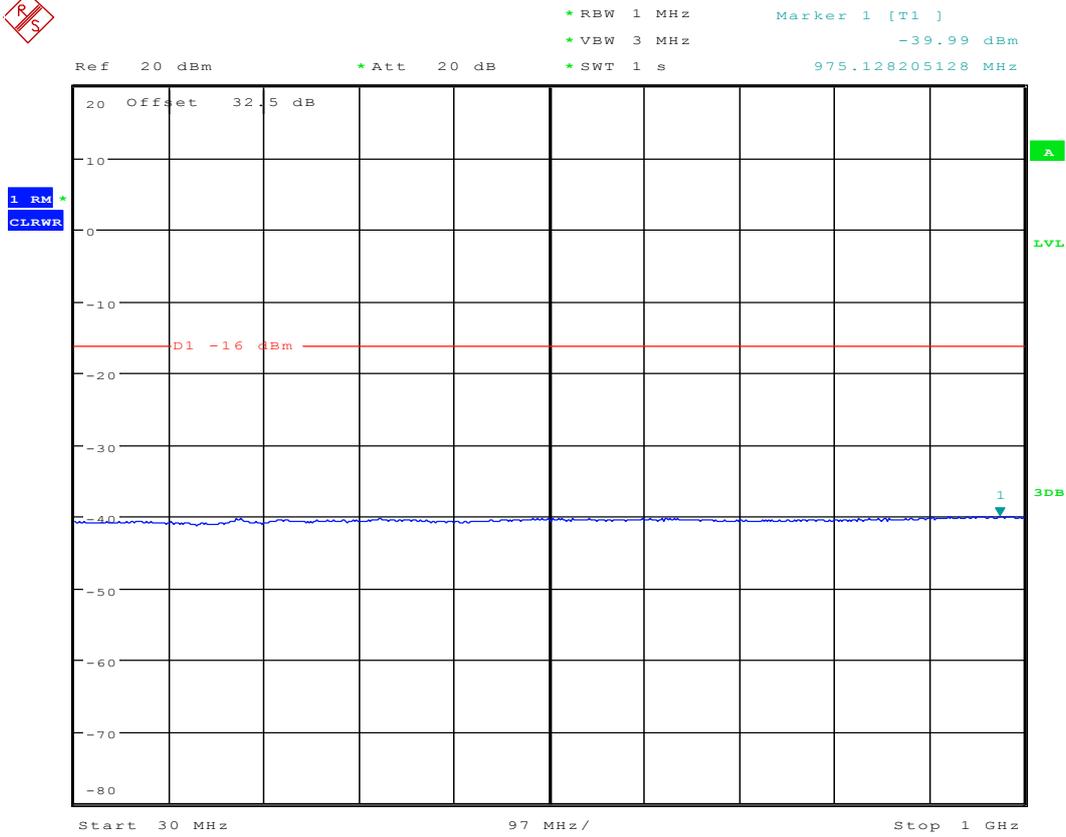
2.7 1U1L5M_B



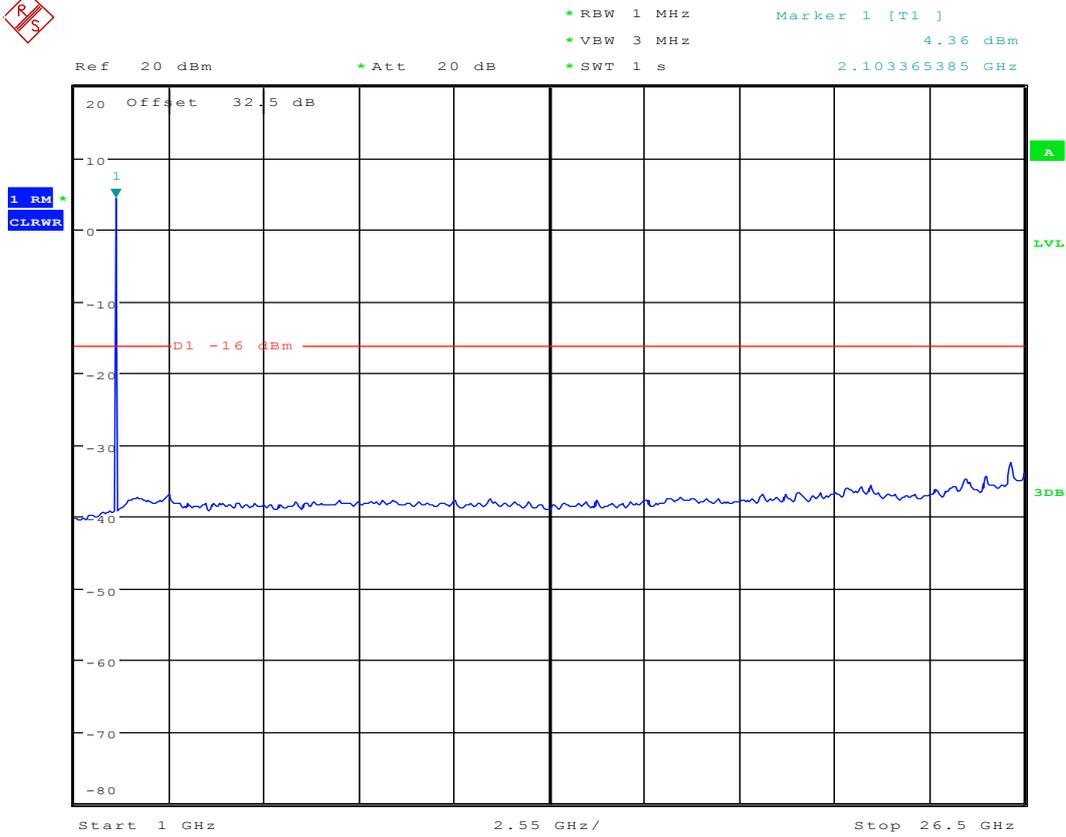
Date: 29.APR.2016 12:28:46



Date: 29.APR.2016 12:29:08

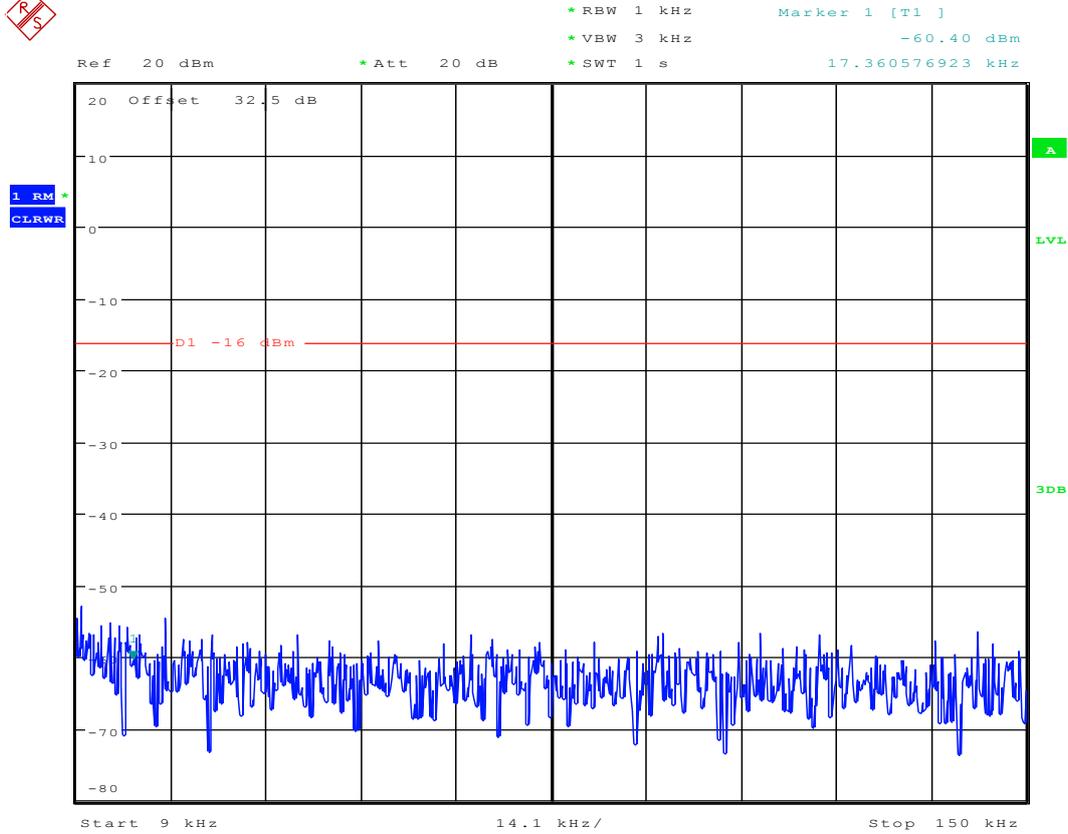


Date: 29.APR.2016 12:29:33

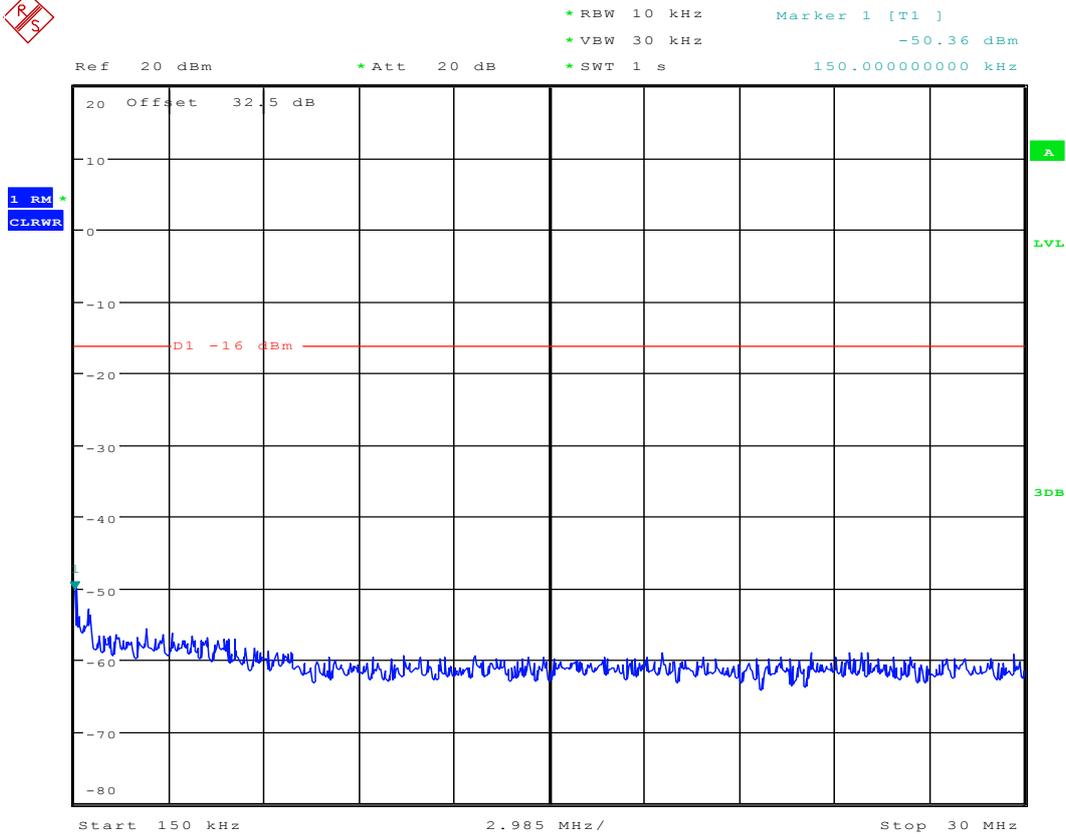


Date: 29.APR.2016 12:29:55

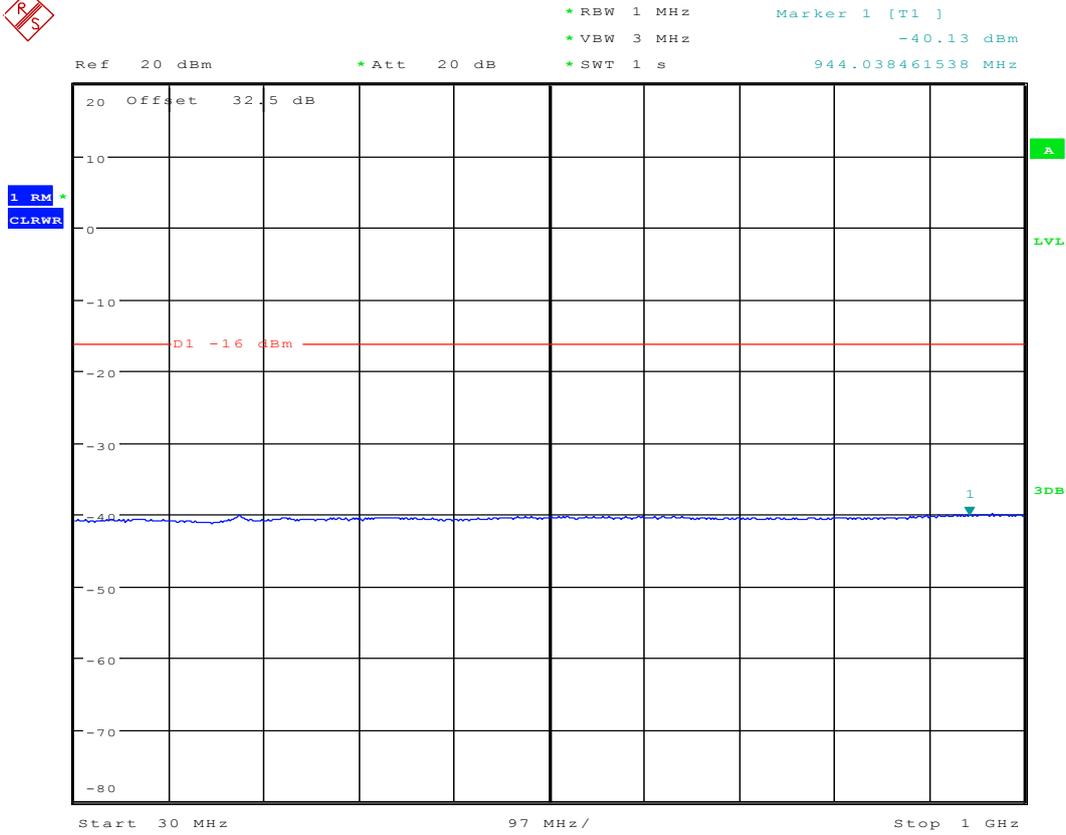
2.8 1U1L5M_M



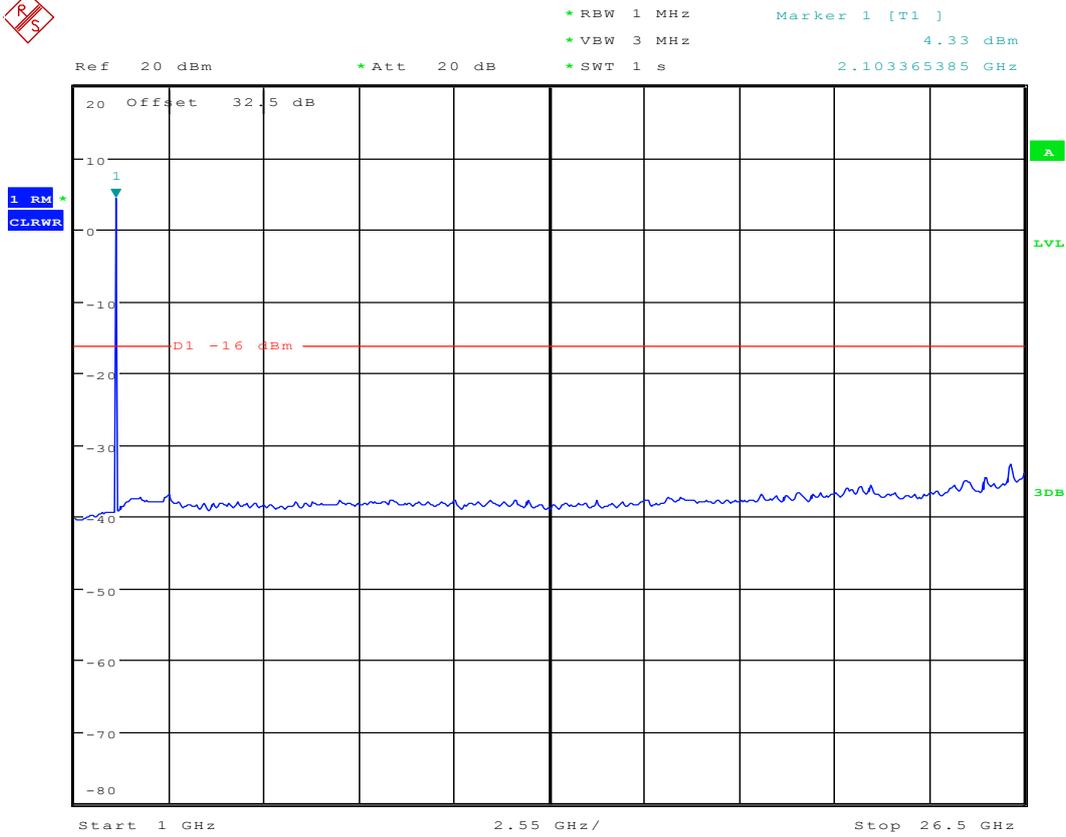
Date: 29.APR.2016 12:34:20



Date: 29.APR.2016 12:34:38



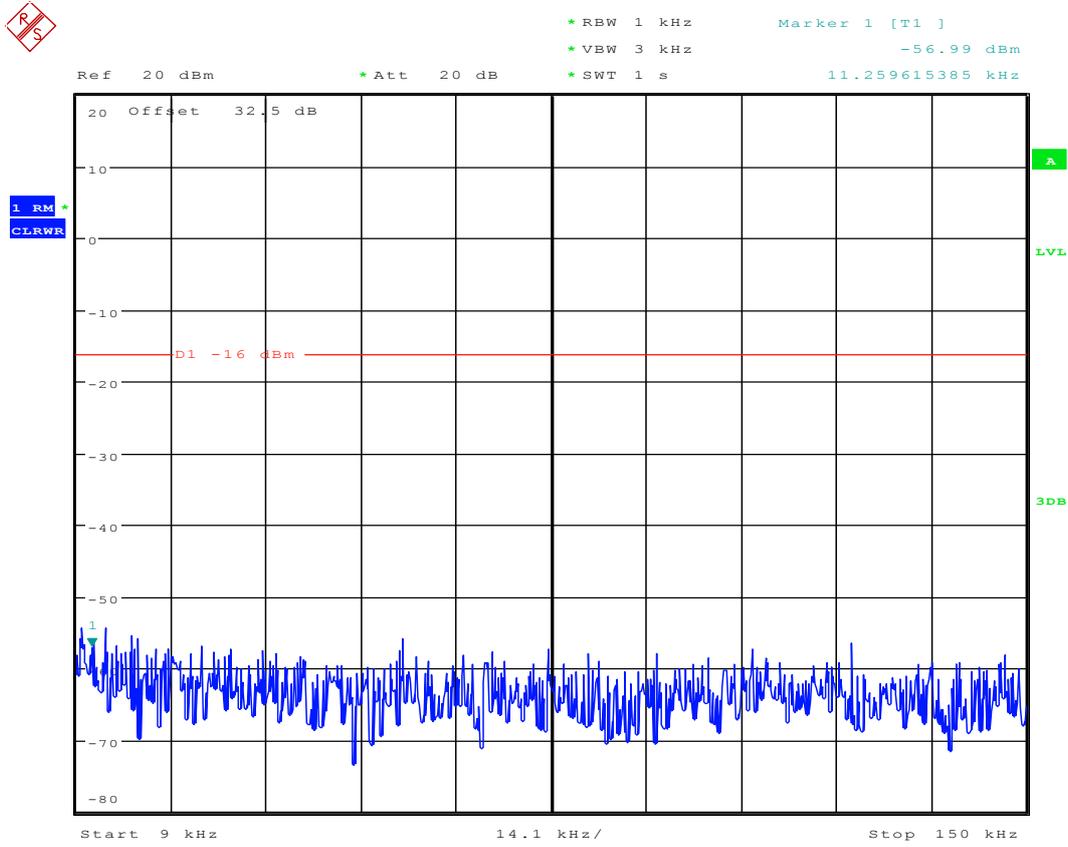
Date: 29.APR.2016 12:34:58



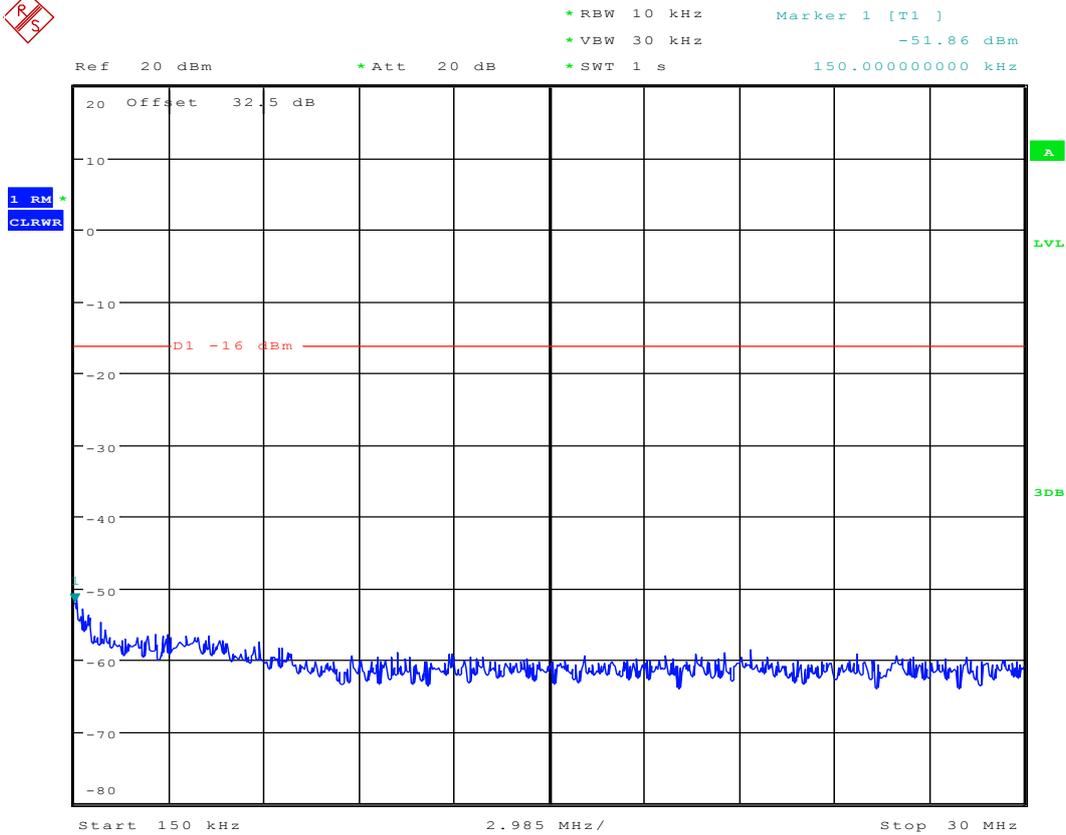
Date: 29.APR.2016 12:35:14



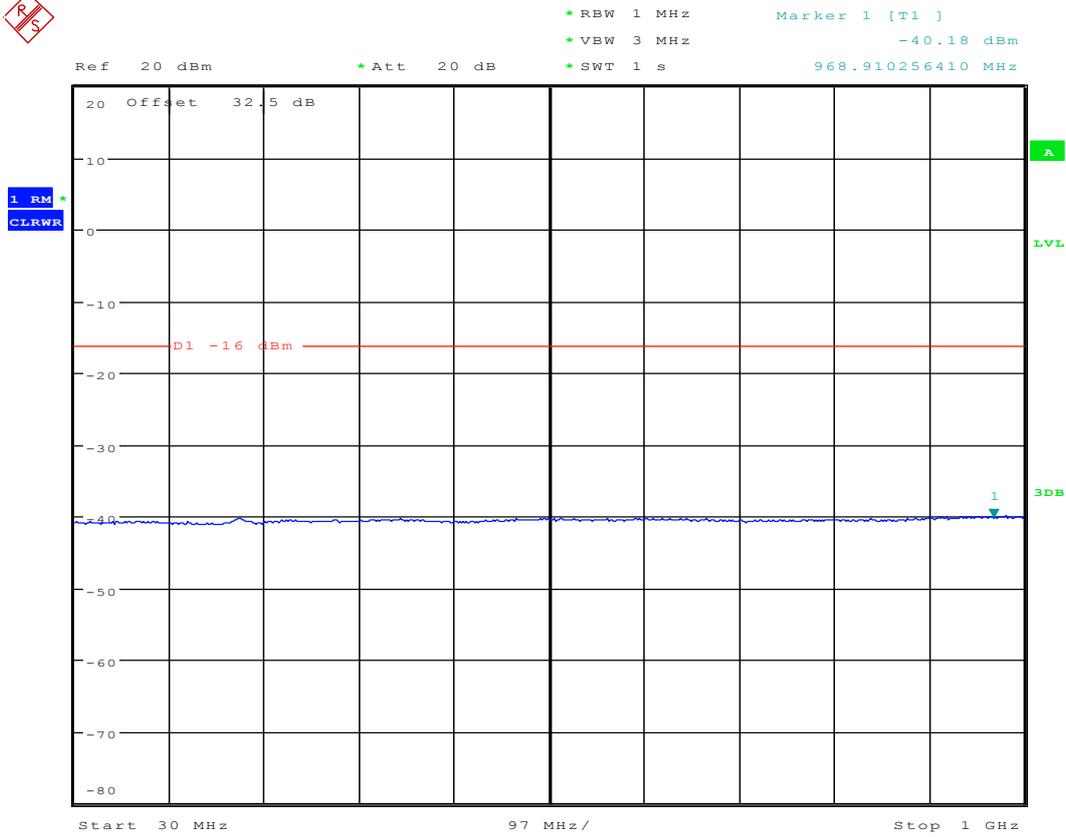
2.9 1U1L5M_T



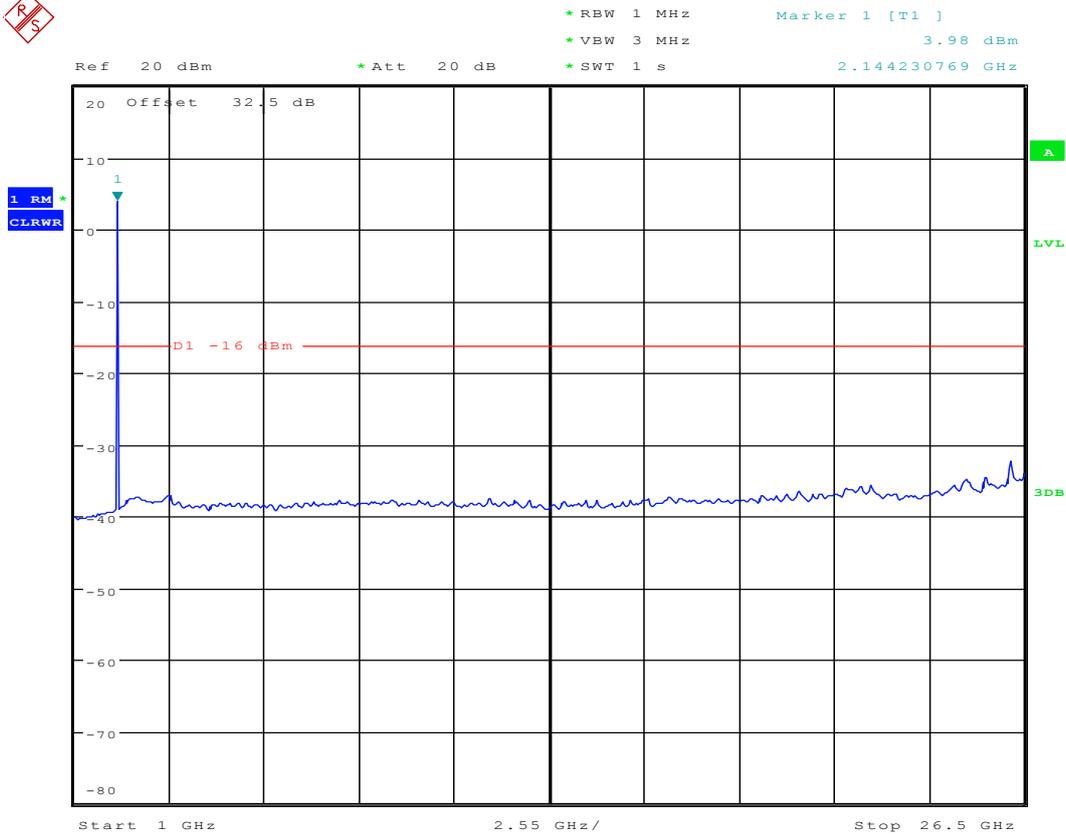
Date: 29.APR.2016 12:40:23



Date: 29.APR.2016 12:40:47



Date: 29.APR.2016 12:41:20



Date: 29.APR.2016 12:41:38



Appendix E: Radiated (Spurious) Emissions



1 Result Table

EUT Conf.	Measured Curve Conformed to the Emission Limit?	Verdict
1U1L5M_M (Worst case)	Yes	Pass

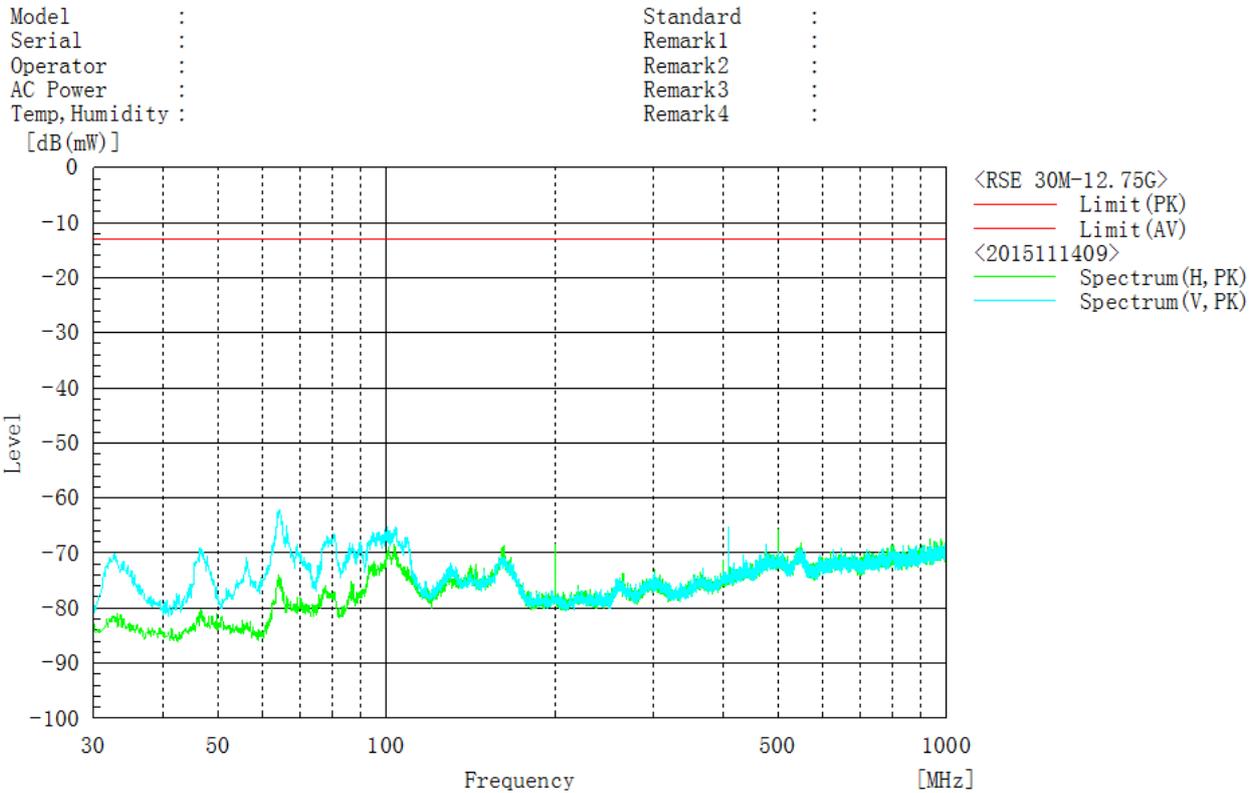
Note: The setting of analyzer is below

Frequency range	RBW	Detector
30MHz to 1GHz	1MHz	Average
1GHz to 18GHz	1MHz	Average
18GHz to 26.5GHz	1MHz	Average

Note: the signal exceeding the limit line is the wanted signal.

2 Test Plot

2.1 30MHz-1GHz

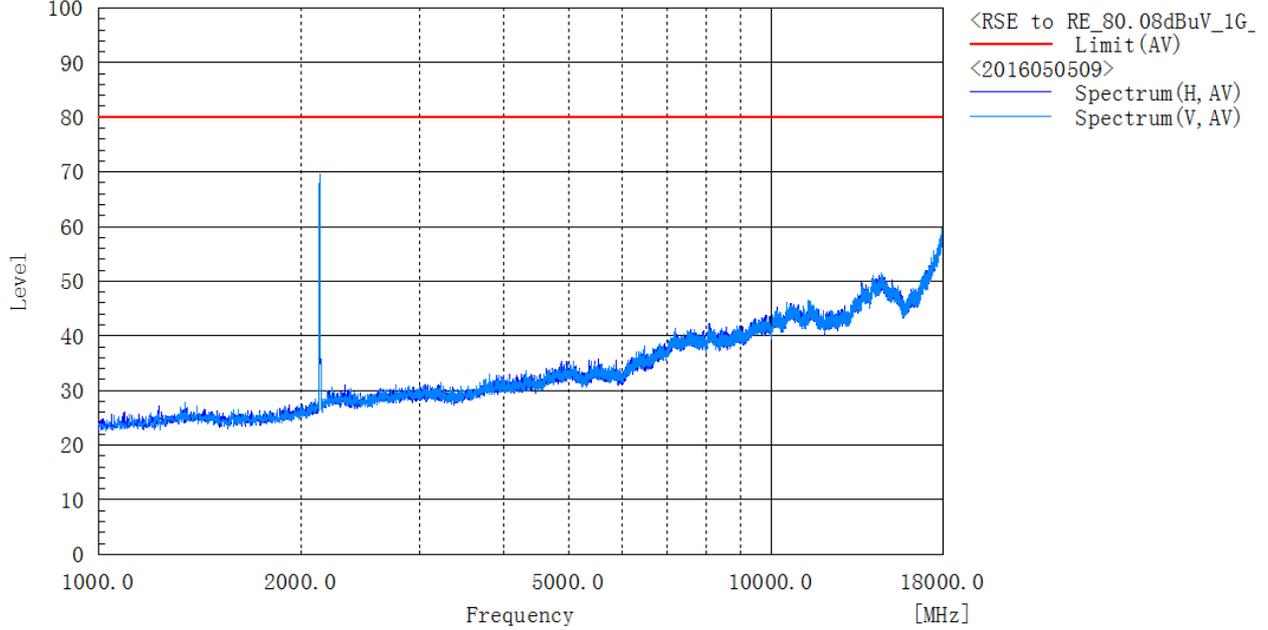




2.2 1GHz-18GHz

Model :
Serial :
Operator :
AC Power :
Temp, Humidity :
Standard : RSE to RE_80.08dBuV_1G_40G.rli
Remark1 :
Remark2 :
Remark3 :
Remark4 :

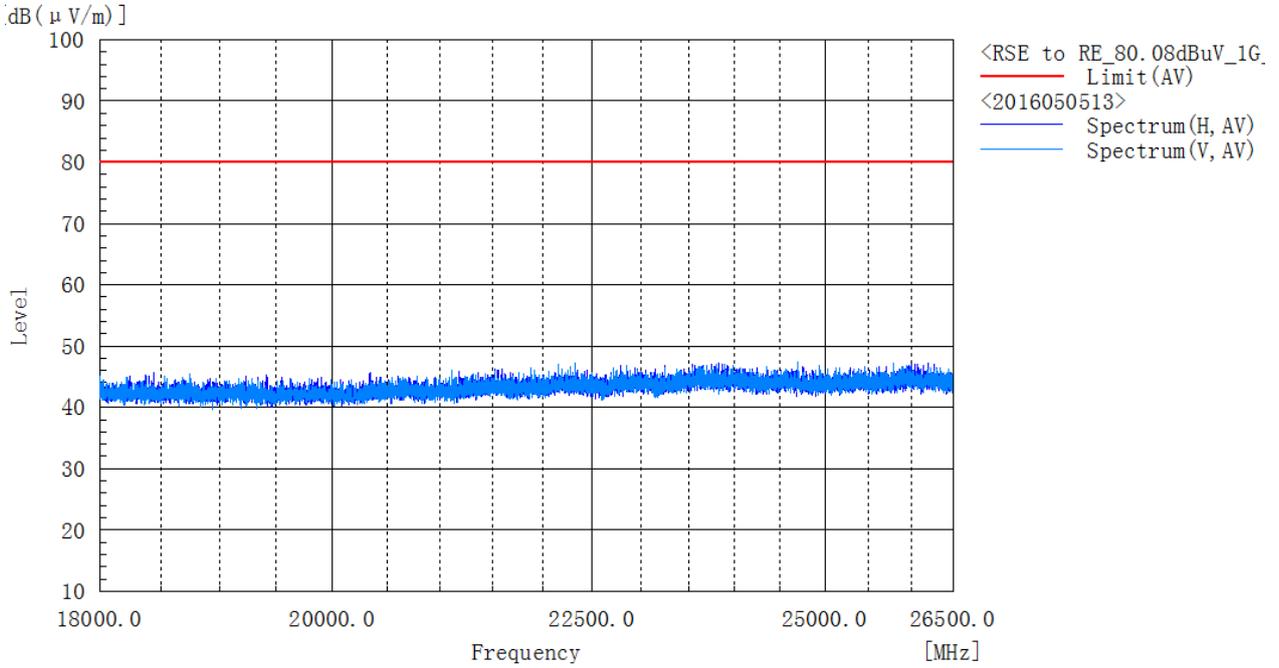
[dB (μV/m)]





2.3 18GHz-26.5GHz

Model : Standard : RSE to RE_80.08dBuV_1G_40G.rli
Serial : Remark1 :
Operator : Remark2 :
AC Power : Remark3 :
Temp, Humidity : Remark4 :





Appendix F: Frequency Stability



1 Result Table

1.1 Frequency Error

(1) Frequency Error vs. Temperature:

EUT Conf.	Voltage	Temperature	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
1L5M_M	100%	-30 °C	-1.98	-0.00093	-0.00035	Pass
		-20 °C	-2.16	-0.00101	-0.00044	Pass
		-10 °C	-1.76	-0.00083	-0.00025	Pass
		0 °C	-1.89	-0.00089	-0.00031	Pass
		+10 °C	-1.64	-0.00077	-0.00019	Pass
		+20 °C	-1.23	-0.00058	---	Pass
		+30 °C	-1.58	-0.00074	-0.00016	Pass
		+40 °C	-1.92	-0.00090	-0.00032	Pass
		+50 °C	-2.45	-0.00115	-0.00057	Pass

(2) Frequency Error vs. Voltage:

EUT Conf.	Temperature	Voltage	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
1L5M_M	+20 °C	85 %	-1.97	-0.00092	-0.00035	Pass
		100 %	-1.23	-0.00058	---	Pass
		115 %	-2.14	-0.00100	-0.00043	Pass

1.2 OBW within frequency block

EUT Conf.	NV, -30°C	NV, +20°C	NV, +50°C	+20°C, -15%*NV	+20°C, +15%*NV	Verdict
1L5M_B	2110.256410	2110.256410	2110.256410	2110.256410	2110.256410	Pass
	2114.743590	2114.743590	2114.743590	2114.743590	2114.743590	Pass
1L5M_T	2150.256410	2150.256410	2150.256410	2150.256410	2150.256410	Pass
	2154.743590	2154.743590	2154.743590	2154.743590	2154.743590	Pass
1L10M_B	2110.544872	2110.512821	2110.512821	2110.512821	2110.544872	Pass
	2119.487179	2119.487179	2119.487179	2119.487179	2119.487179	Pass
1L10M_T	2145.512821	2145.512821	2145.512821	2145.544872	2145.544872	Pass
	2154.487179	2154.455128	2154.487179	2154.455128	2154.455128	Pass
1L15M_B	2110.769231	2110.769231	2110.769231	2110.769231	2110.769231	Pass
	2124.230769	2124.230769	2124.230769	2124.230769	2124.230769	Pass
1L15M_T	2140.769231	2140.769231	2140.769231	2140.769231	2140.769231	Pass
	2154.230769	2154.230769	2154.230769	2154.230769	2154.230769	Pass
1L20M_B	2111.057692	2111.057692	2111.057692	2111.057692	2111.057692	Pass
	2128.942308	2128.942308	2128.942308	2128.942308	2128.942308	Pass



EUT Conf.	NV, -30°C	NV, +20°C	NV, +50°C	+20°C, -15%*NV	+20°C, +15%*NV	Verdict
1L20M_T	2136.057692	2136.105769	2136.105769	2136.105769	2136.057692	Pass
	2153.942308	2153.942308	2153.942308	2153.942308	2153.942308	Pass
1U_B	2110.316667	2110.316667	2110.316667	2110.316667	2110.316667	Pass
	2114.483333	2114.483333	2114.483333	2114.483333	2114.483333	Pass
1U_T	2150.516667	2150.516667	2150.516667	2150.516667	2150.516667	Pass
	2154.683333	2154.683333	2154.683333	2154.683333	2154.683333	Pass



2 Test Plot

NOTE: Only the test plots for the measurements of Frequency Range are supplied.
(Not applicable)



Appendix G: Receiver Spurious Emissions



1 Result Table

(Not applicable)

2 Test Plot

(Not applicable)

END