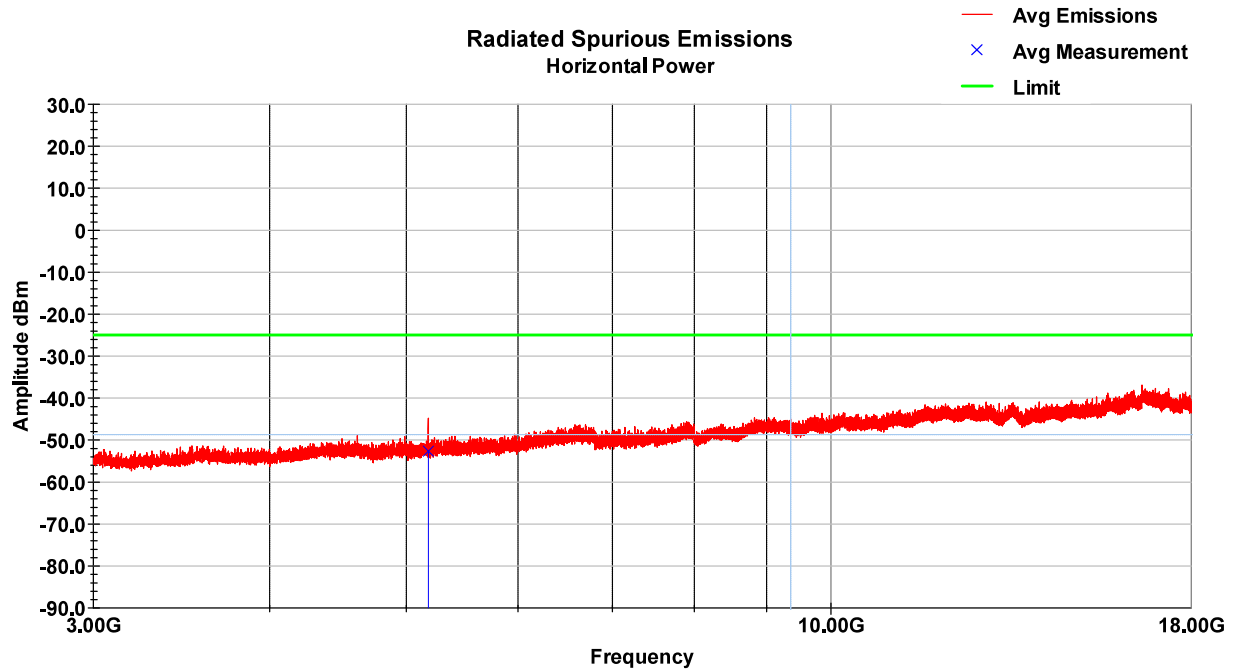


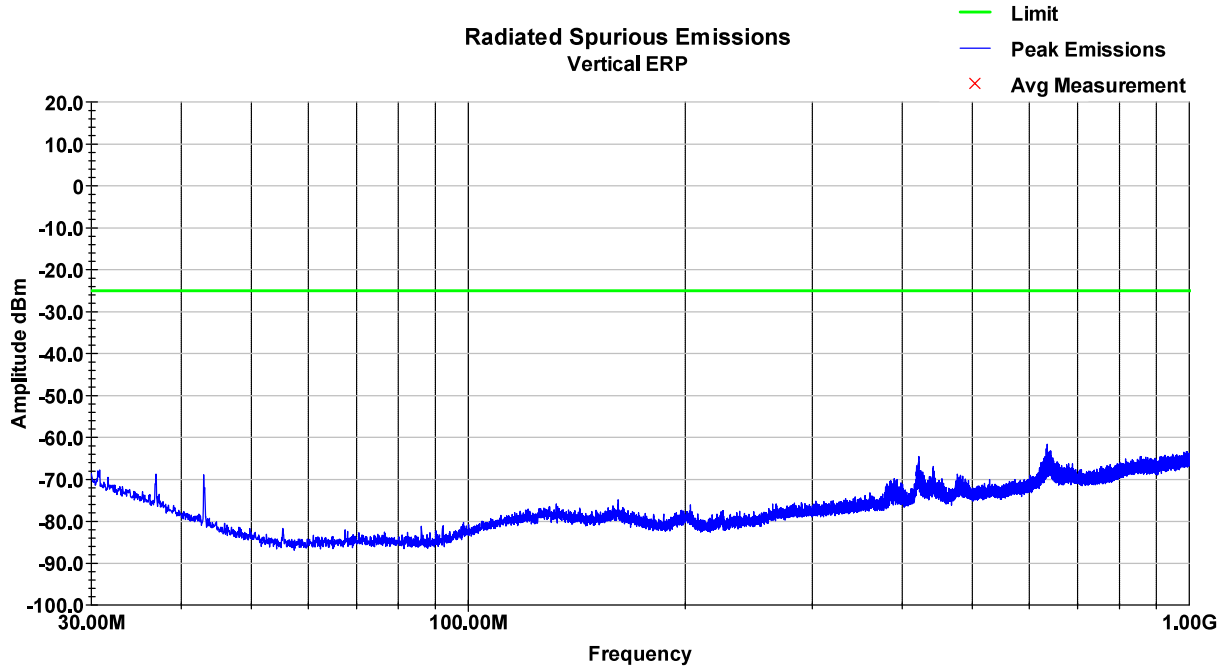
LTE Band 41 – MCH – 3-18GHz – Horizontal



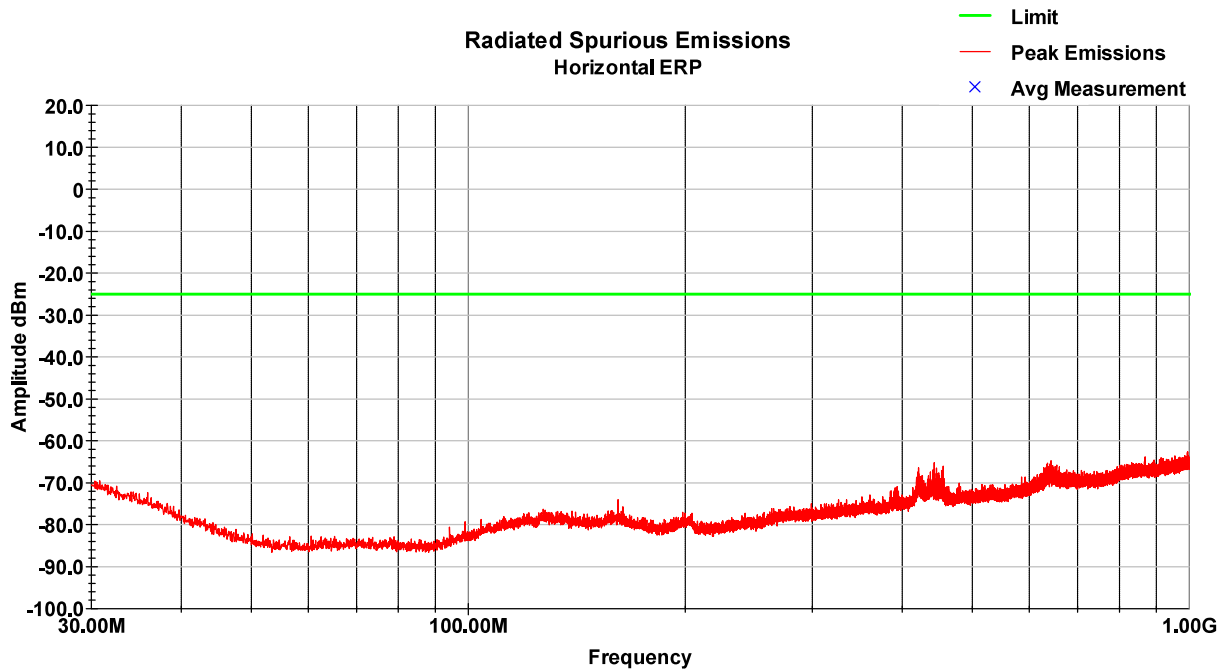
LTE Band 41 – MCH – 3-18GHz – Horizontal – Tabular Data

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
5182.78	-56.8	H	46.0	128.0	34.2	3.5	33.6	-52.8	-25.0	-27.8
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

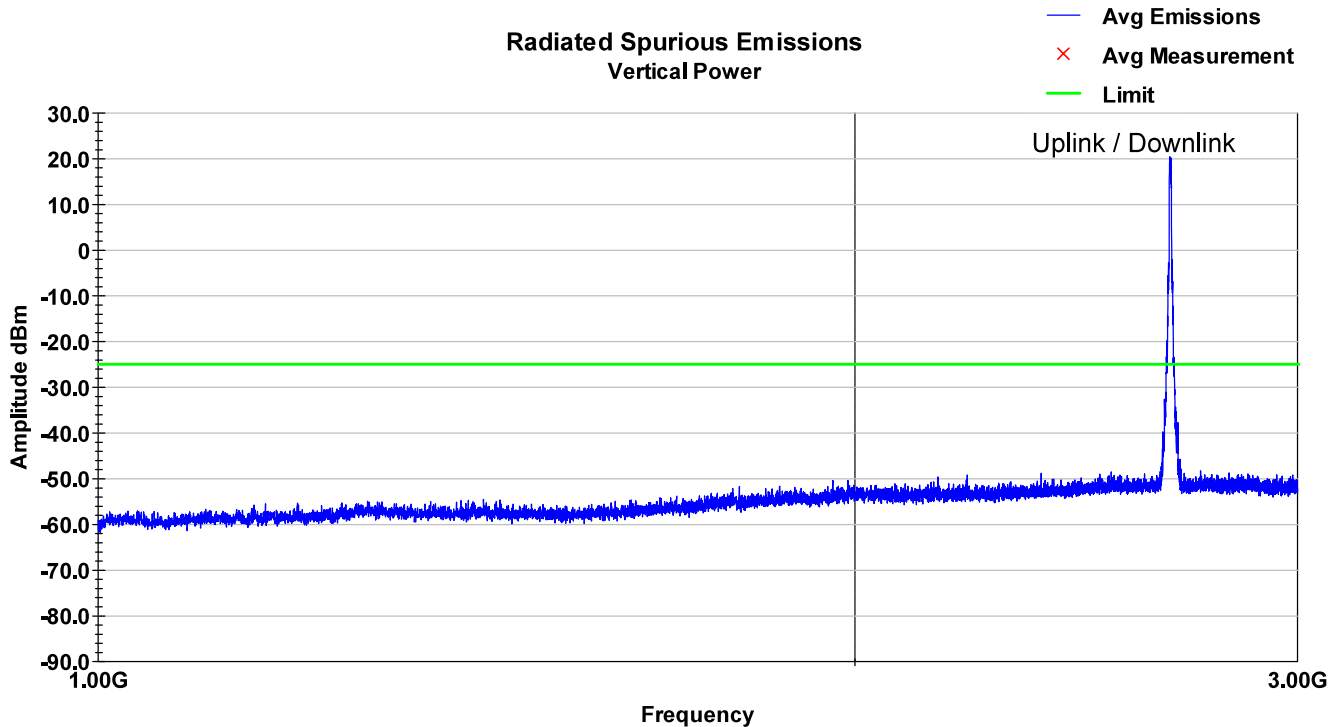
LTE Band 41 – HCH – 30-1000MHz – Vertical



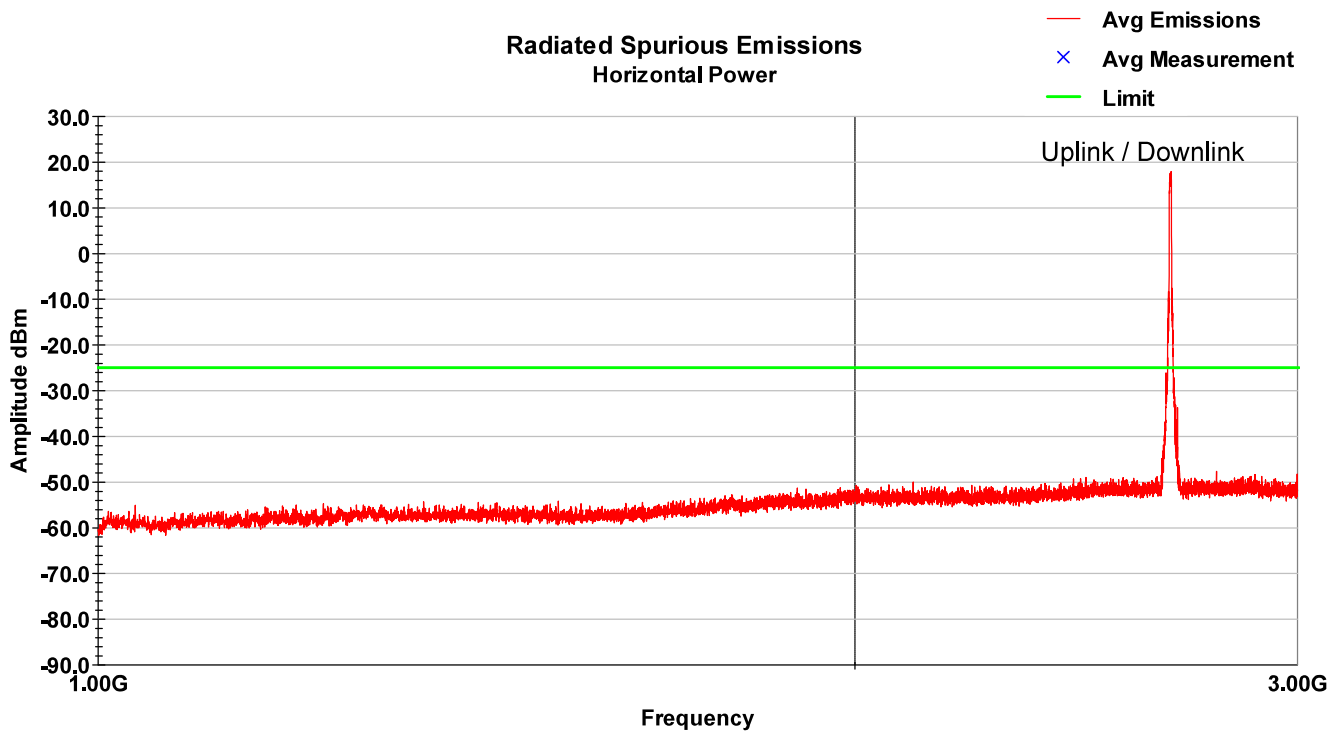
LTE Band 41 – HCH – 30-1000MHz – Horizontal



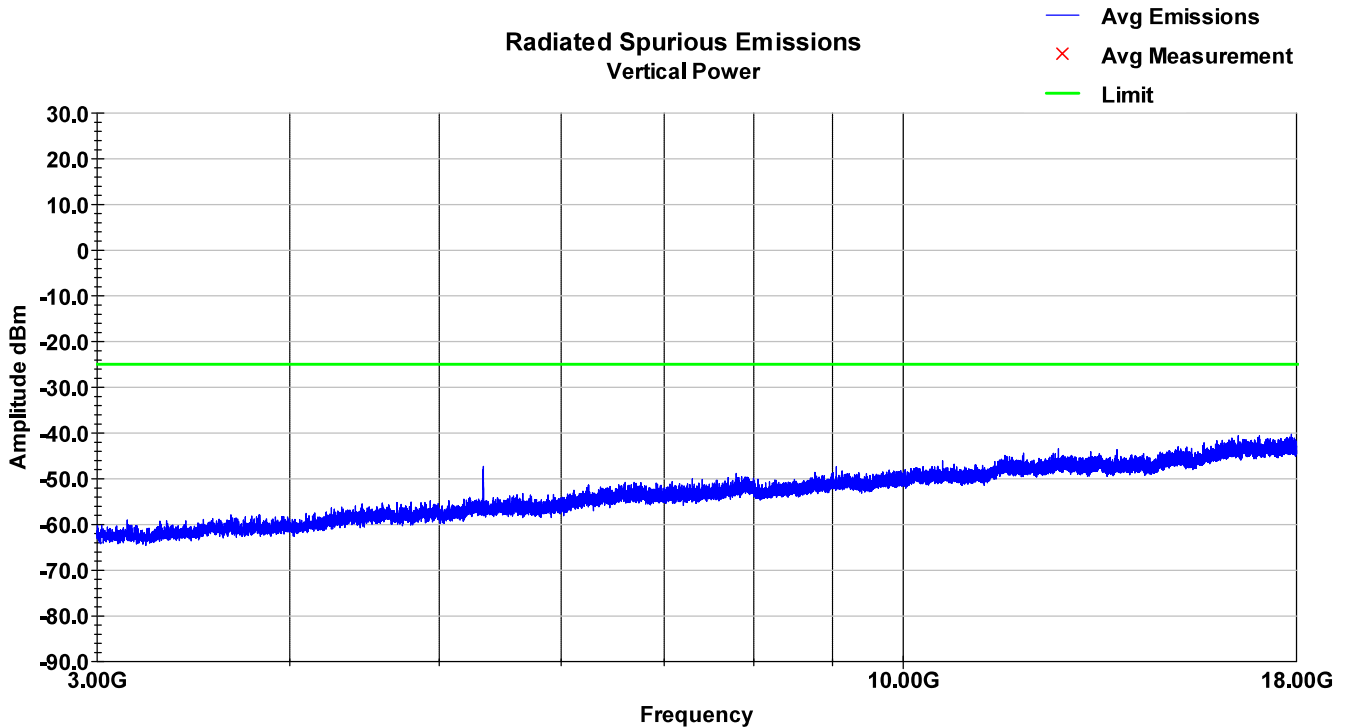
LTE Band 41 – HCH – 1-3GHz – Vertical



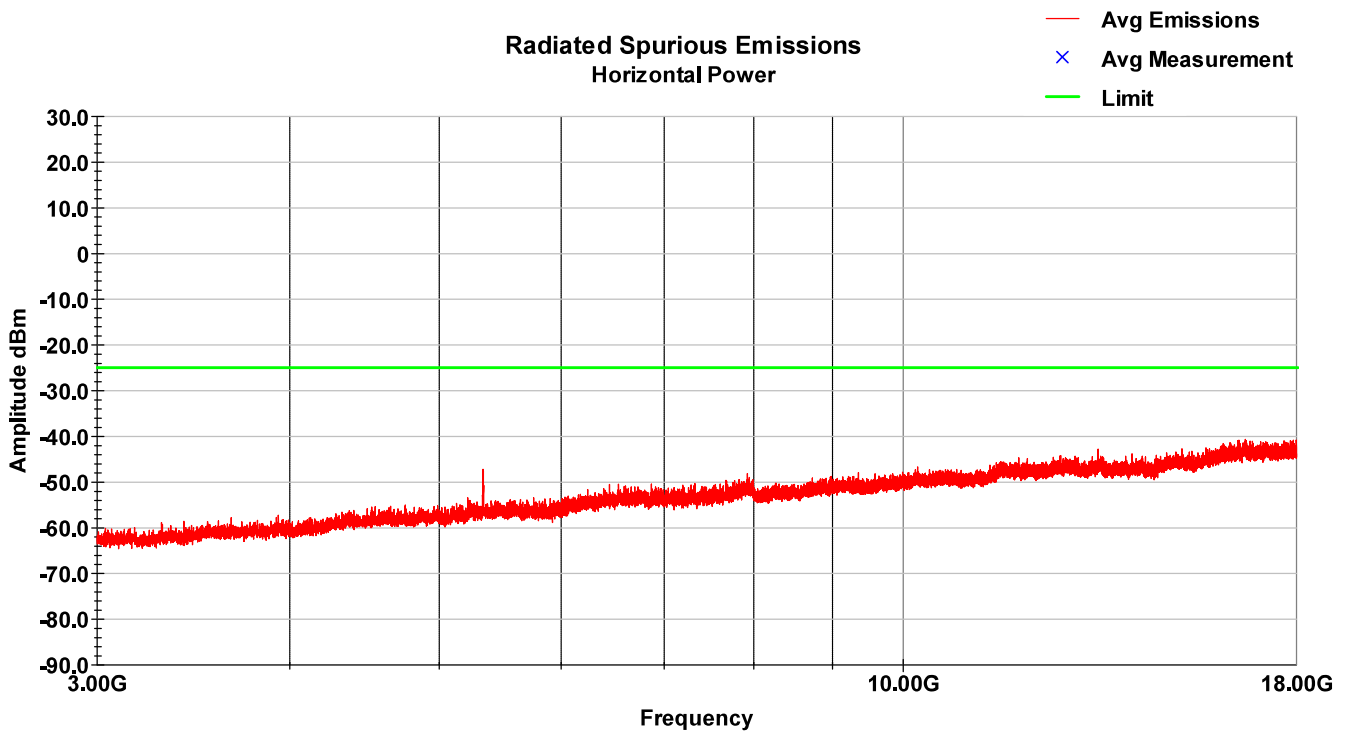
LTE Band 41 – HCH – 1-3GHz – Horizontal



LTE Band 41 – HCH – 3-18GHz – Vertical

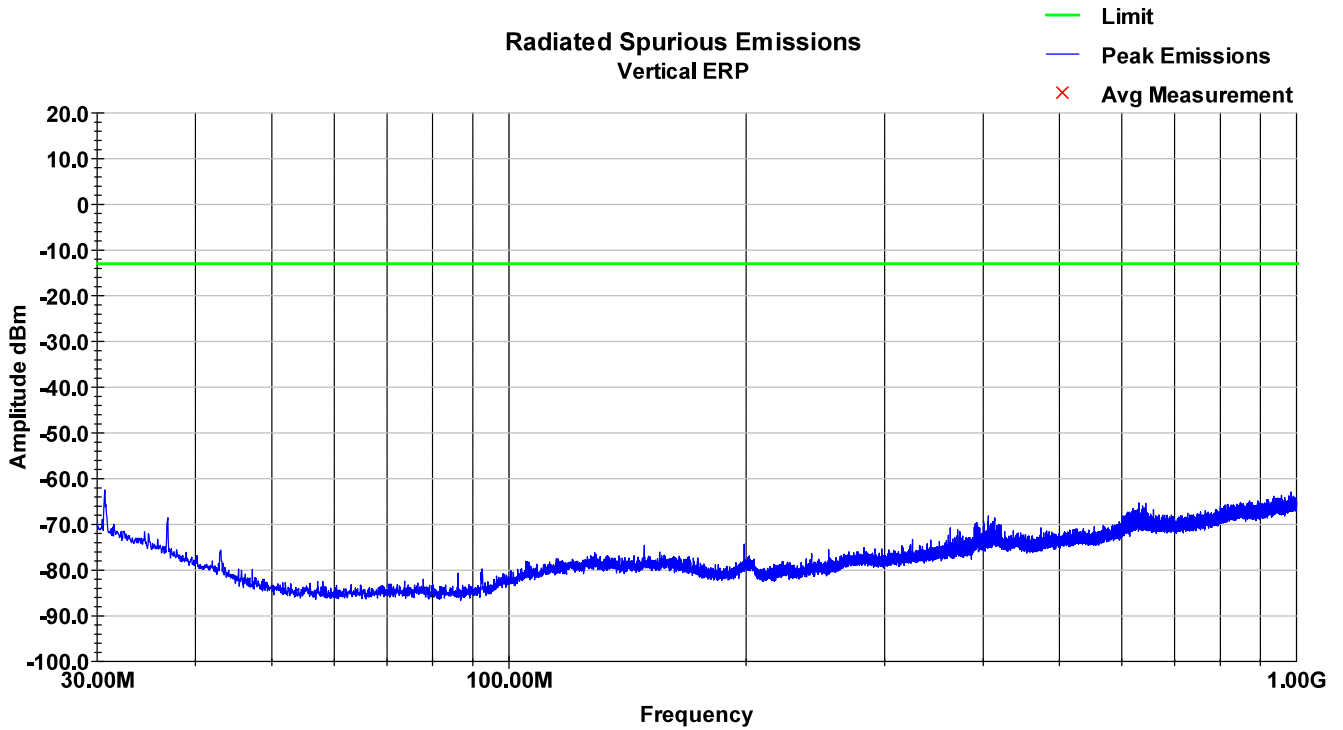


LTE Band 41 – HCH – 3-18GHz – Horizontal

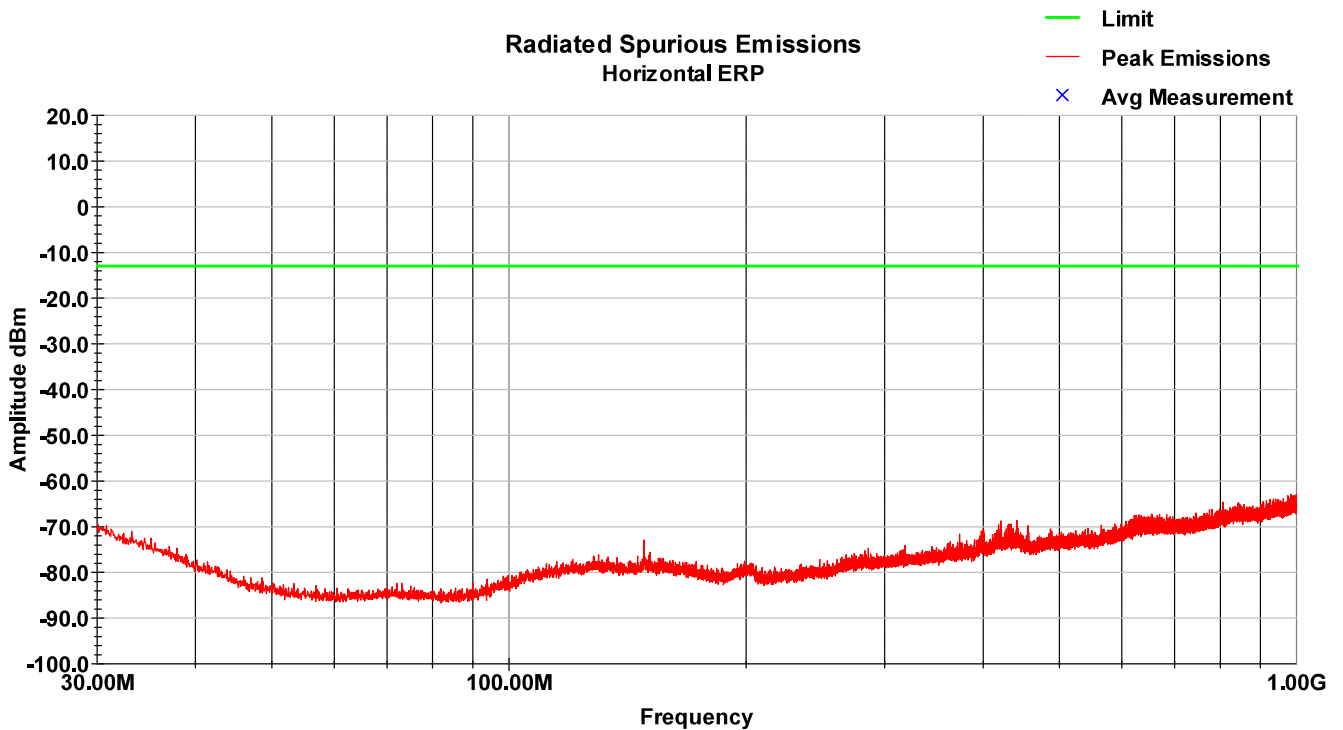


7.14 Test Data – LTE Band 66

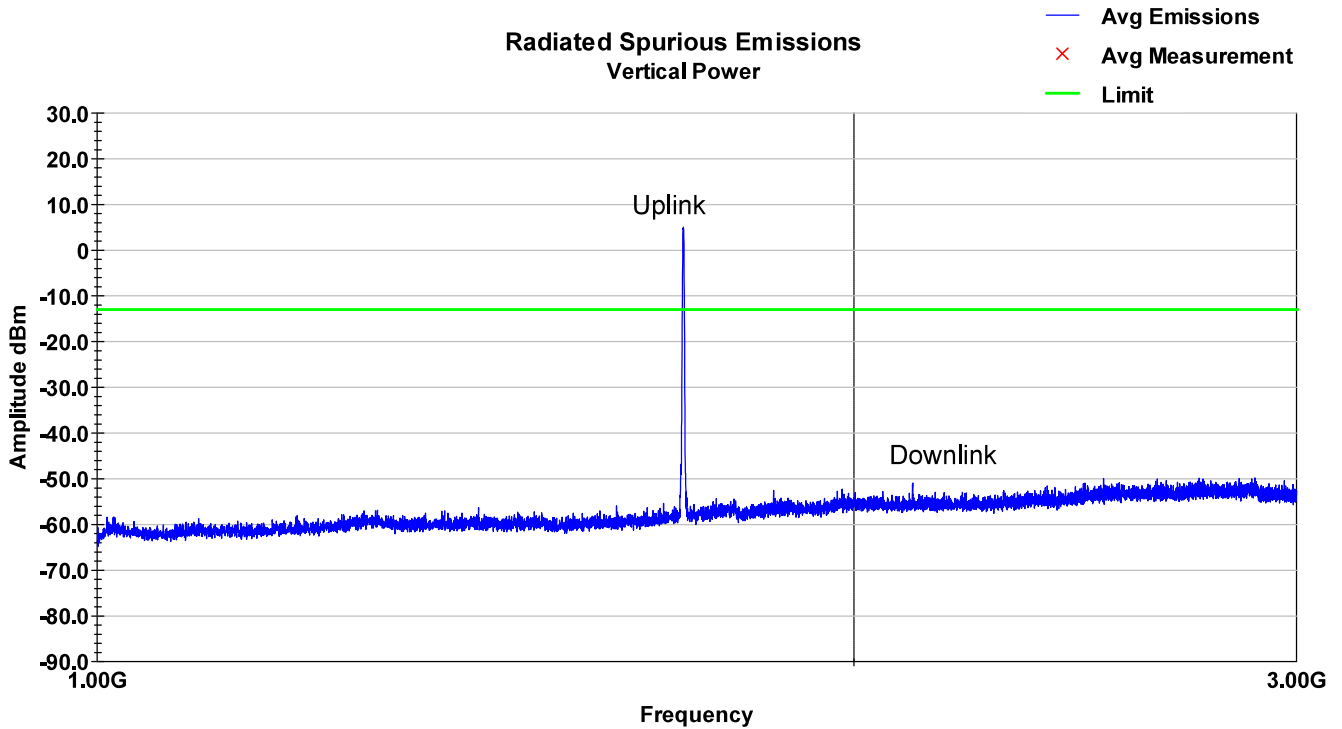
LTE Band 66 – LCH – 30-1000MHz – Vertical



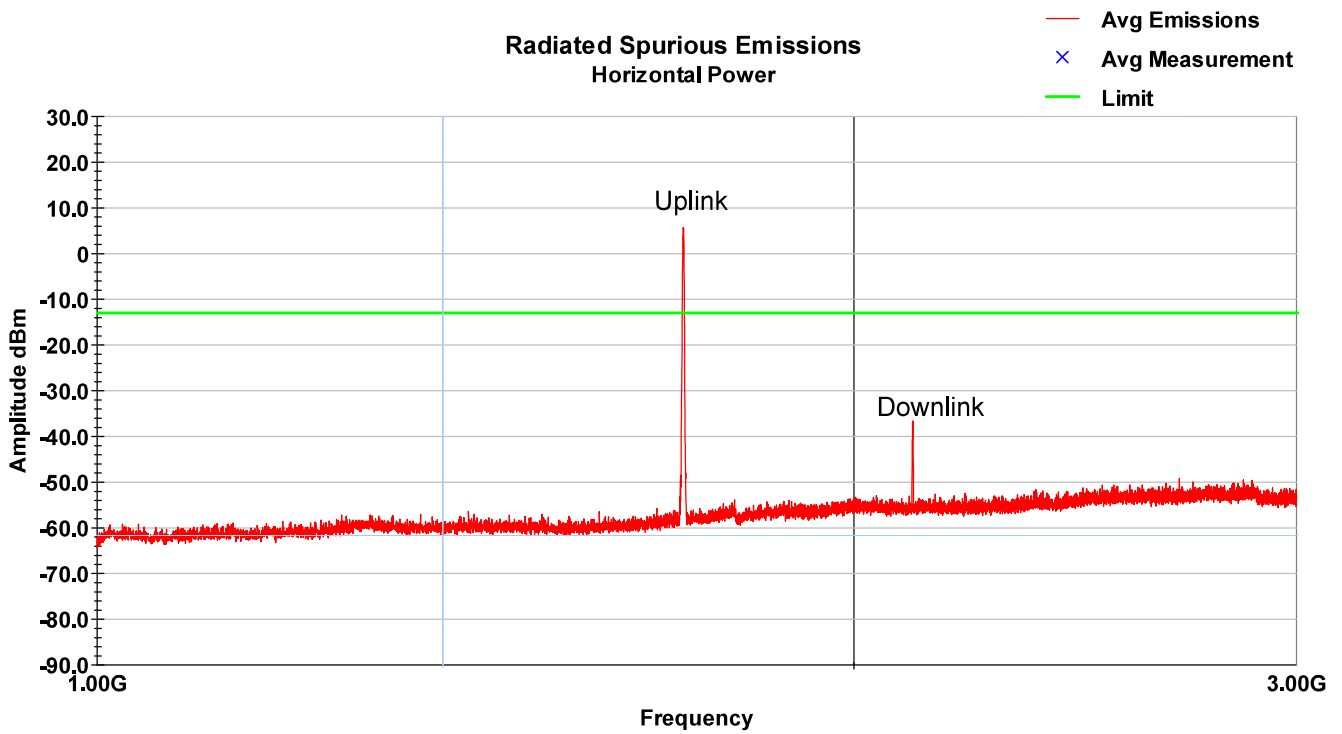
LTE Band 66 – LCH – 30-1000MHz – Horizontal



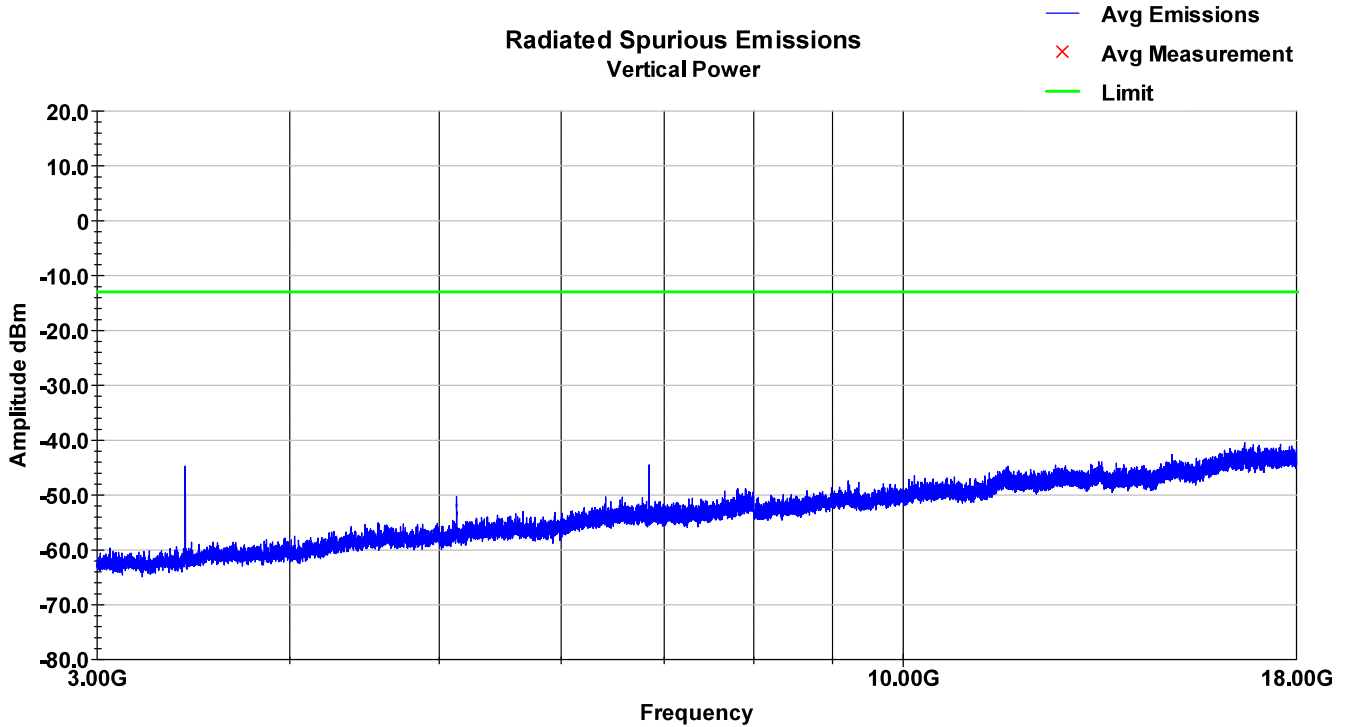
LTE Band 66 – LCH – 1-3GHz – Vertical



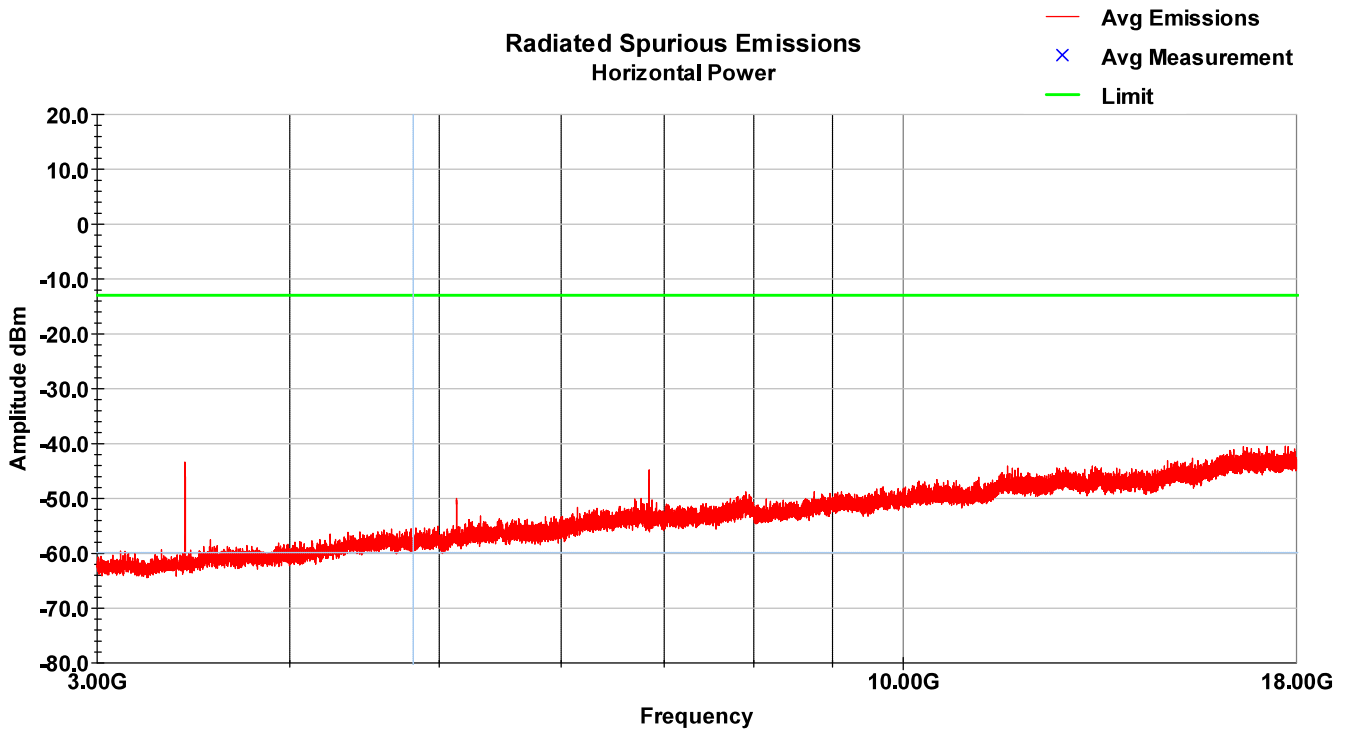
LTE Band 66 – LCH – 1-3GHz – Horizontal



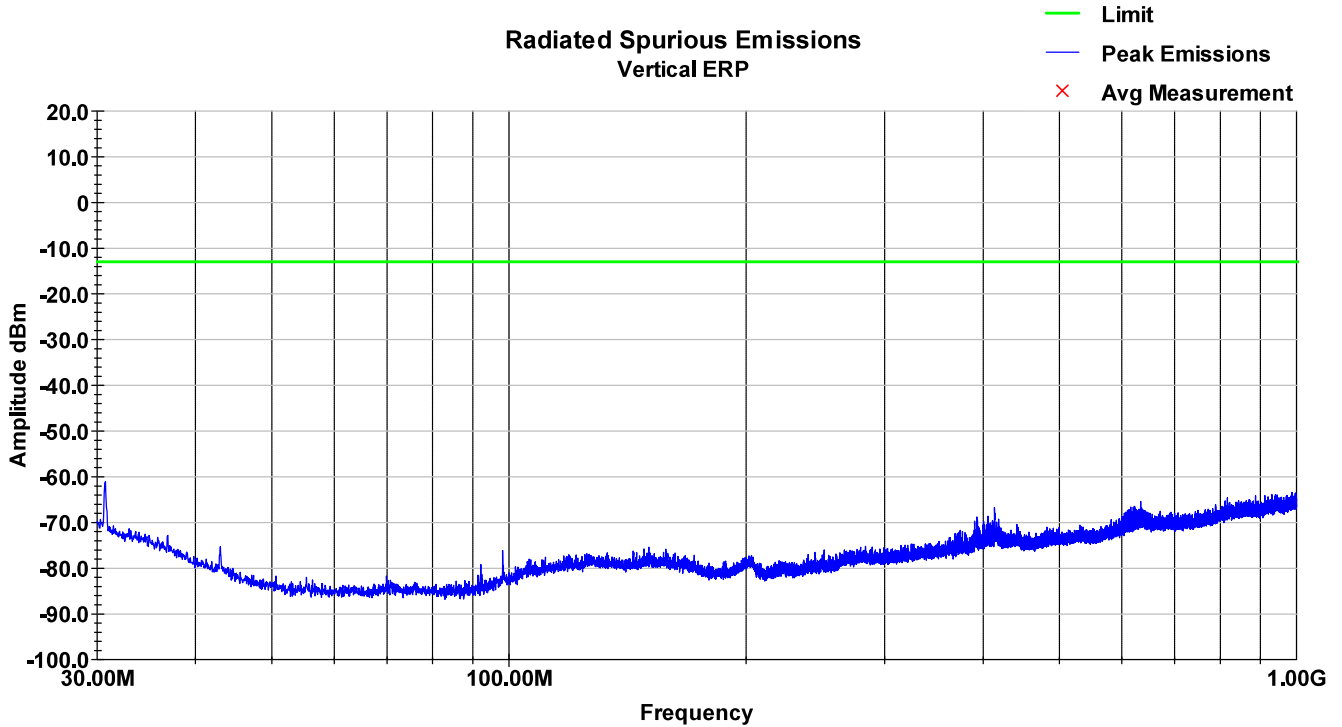
LTE Band 66 – LCH – 3-18GHz – Vertical



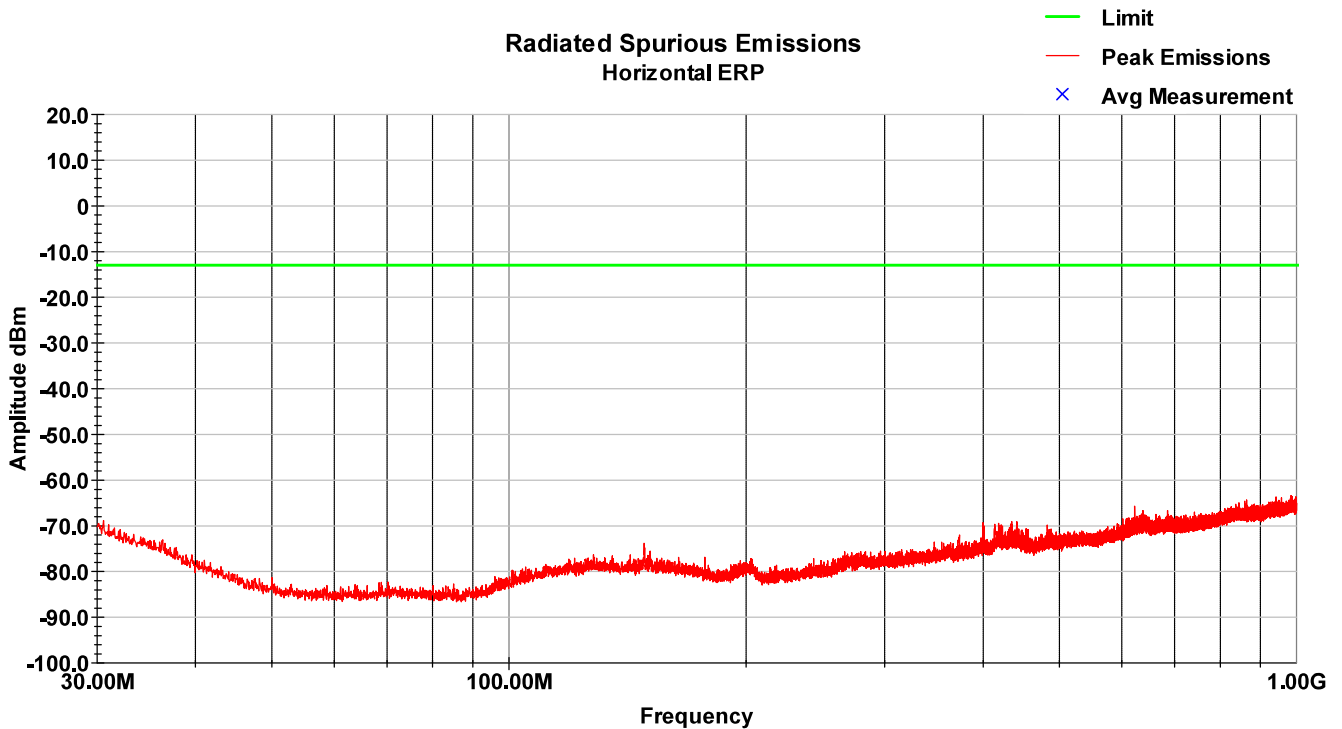
LTE Band 66 – LCH – 3-18GHz – Horizontal



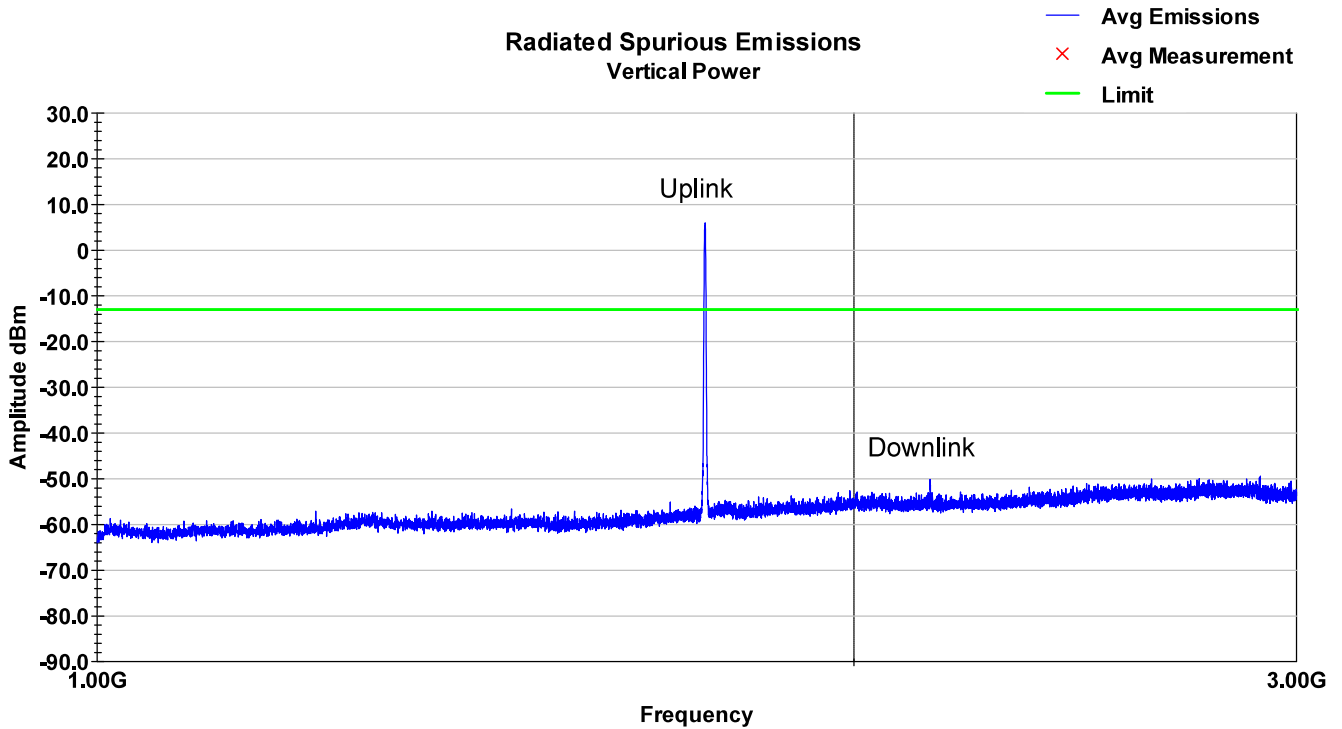
LTE Band 66 – MCH – 30-1000MHz – Vertical



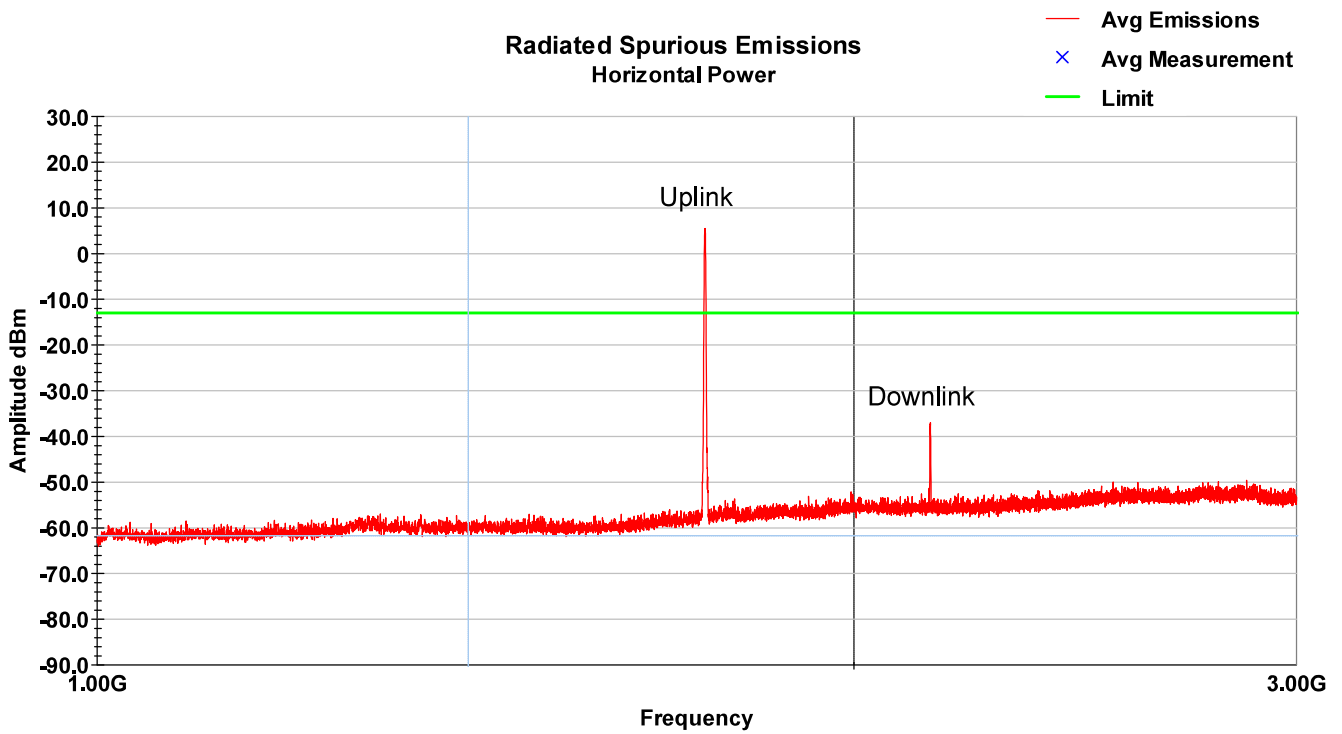
LTE Band 66 – MCH – 30-1000MHz – Horizontal



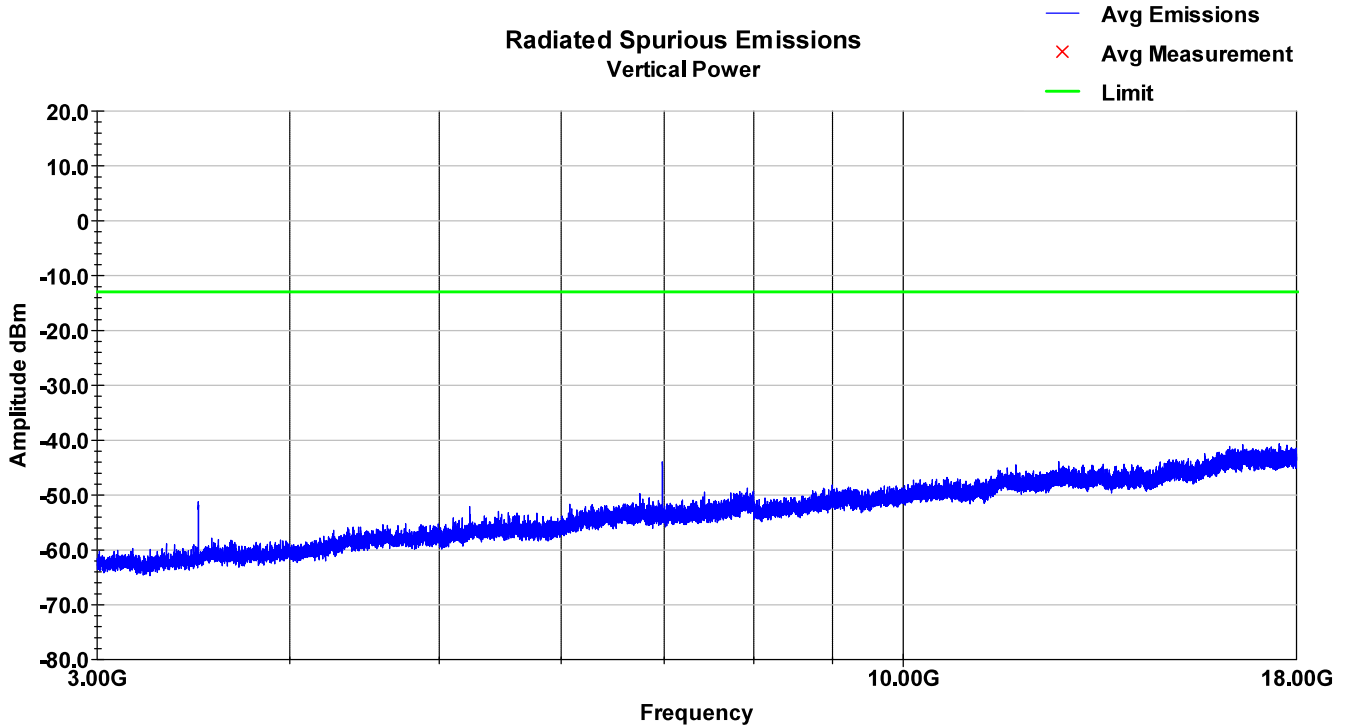
LTE Band 66 – MCH – 1-3GHz – Vertical



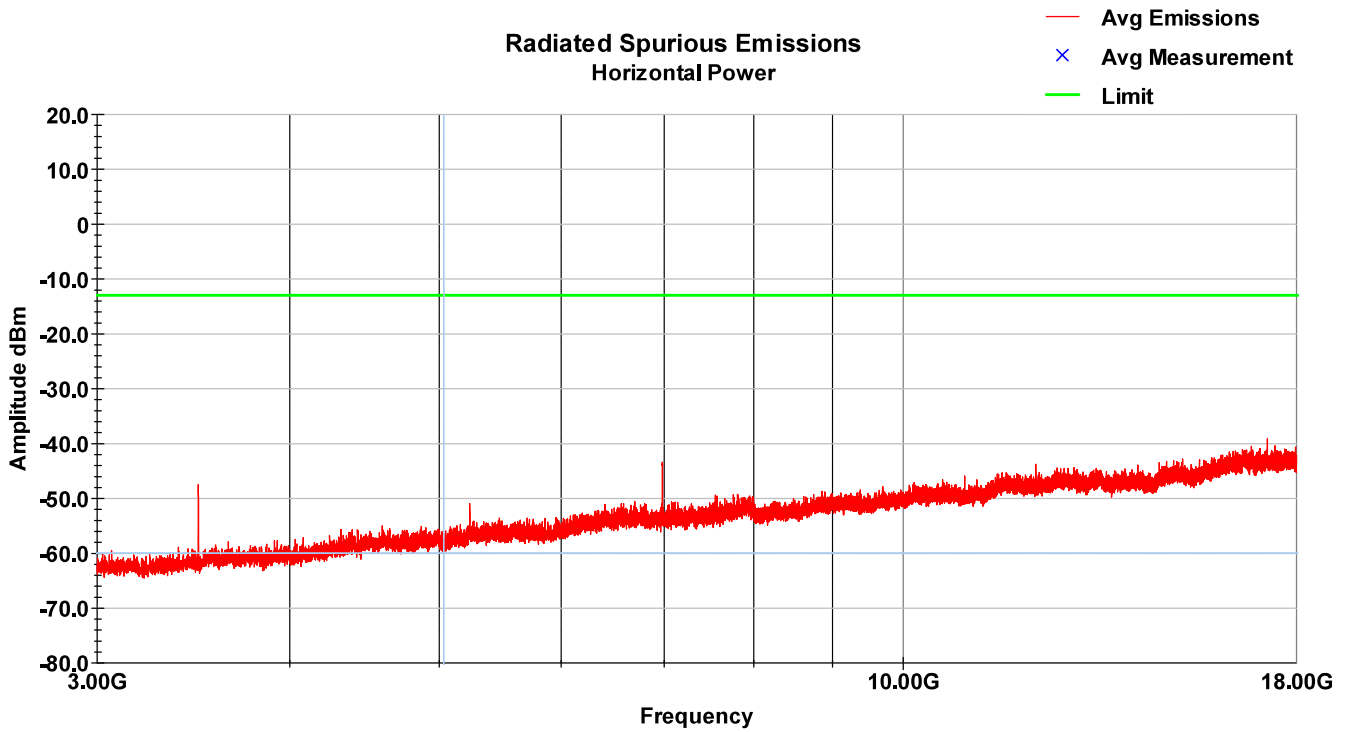
LTE Band 66 – MCH – 1-3GHz – Horizontal



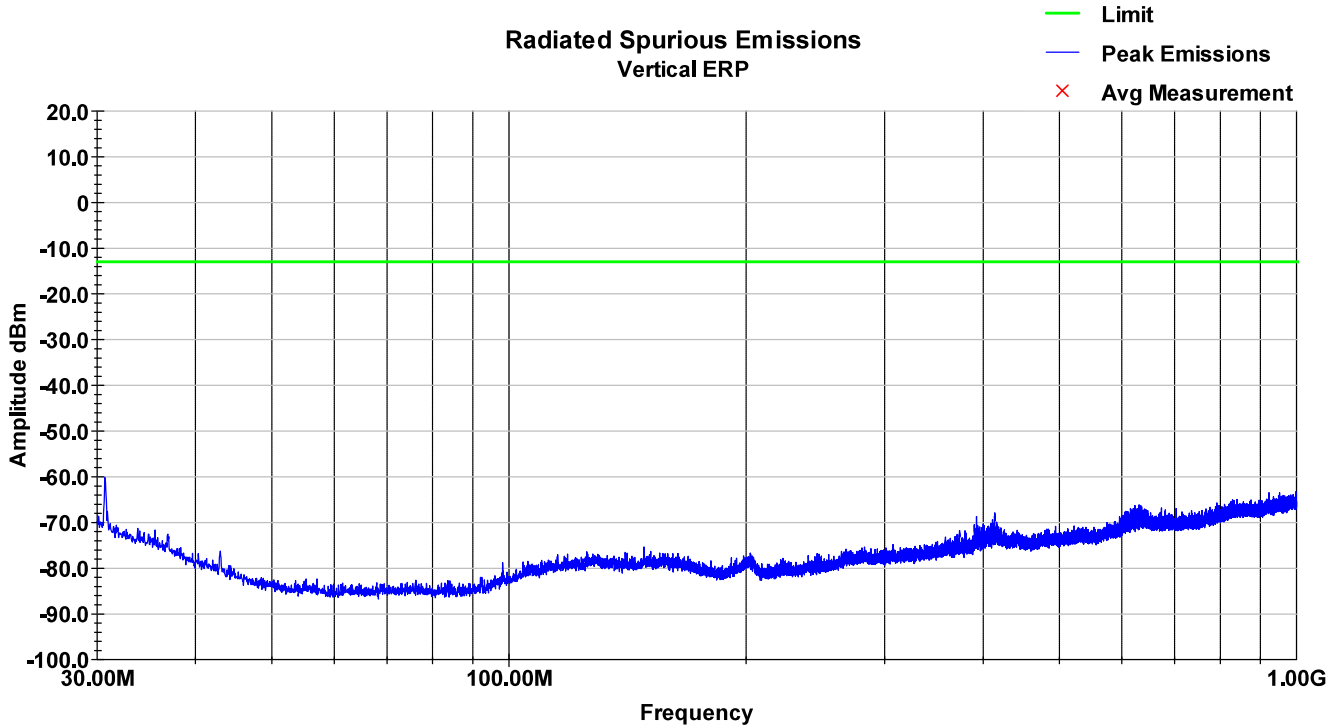
LTE Band 66 – MCH – 3-18GHz – Vertical



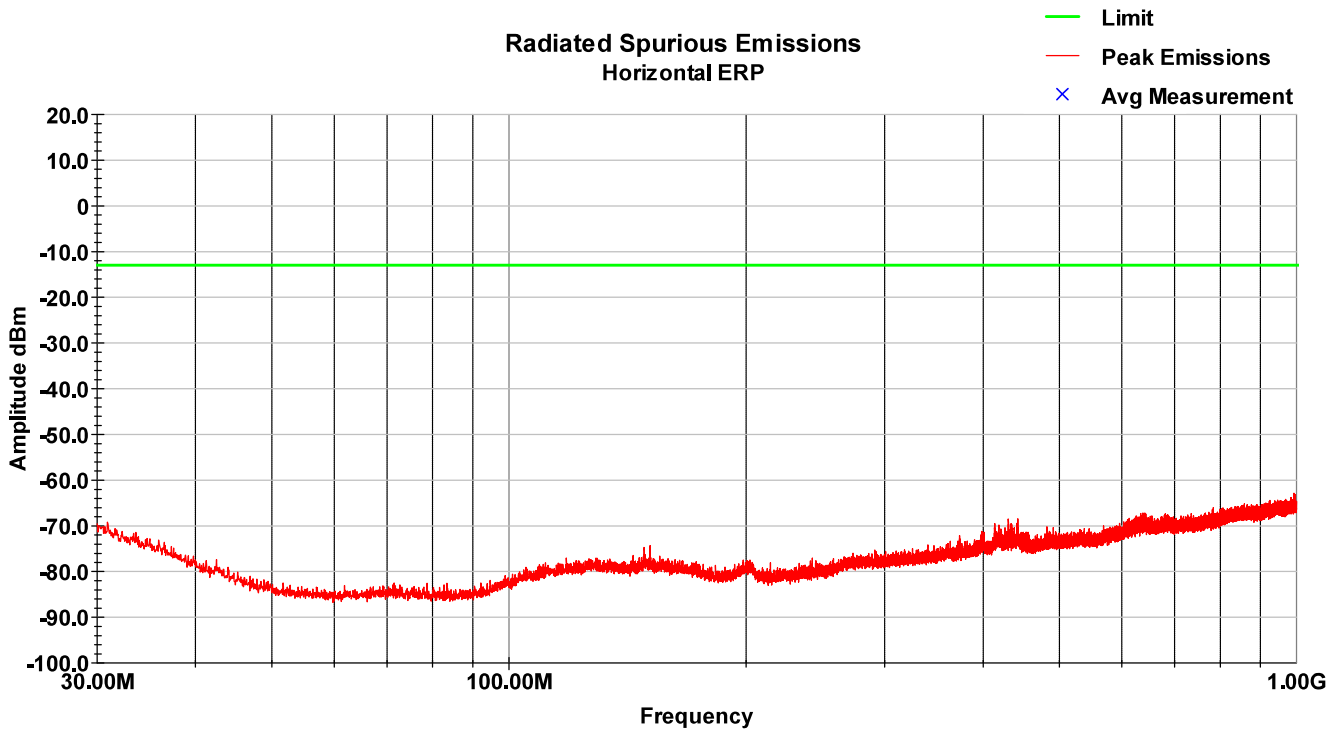
LTE Band 66 – MCH – 3-18GHz – Horizontal



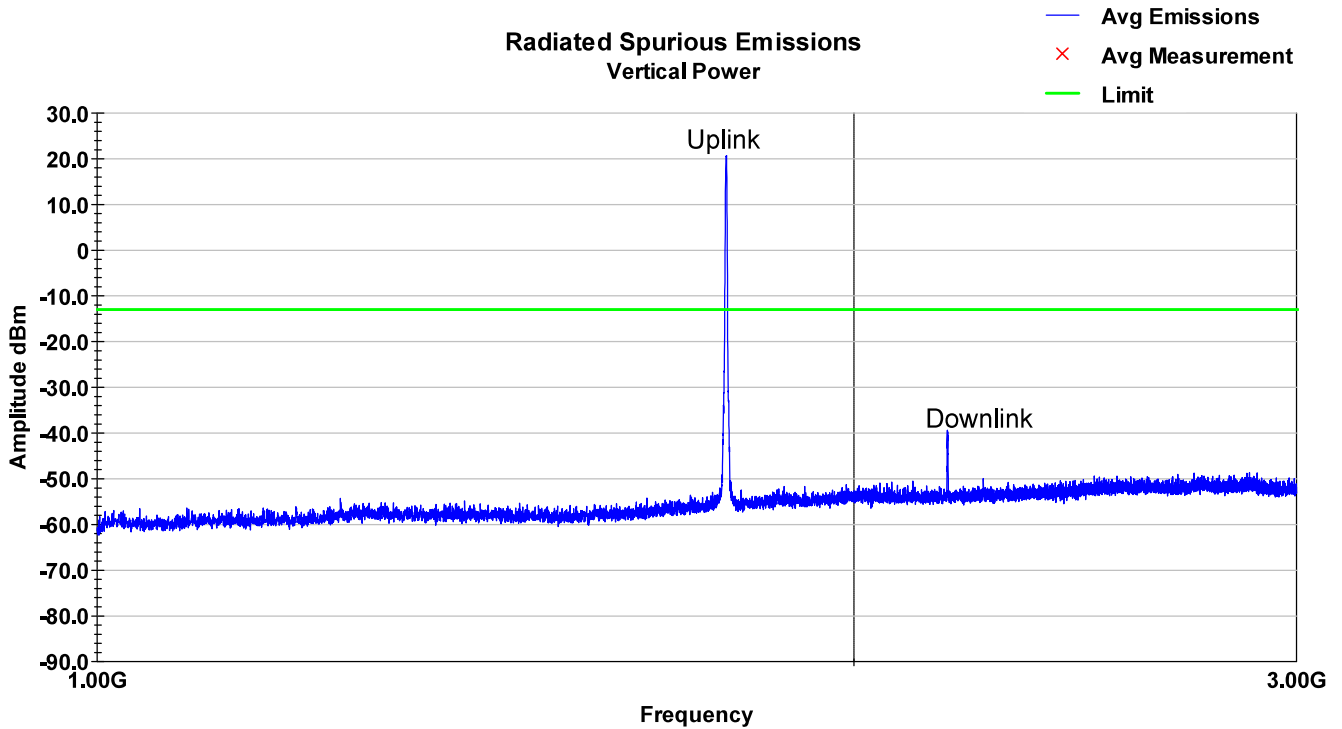
LTE Band 66 – HCH – 30-1000MHz – Vertical



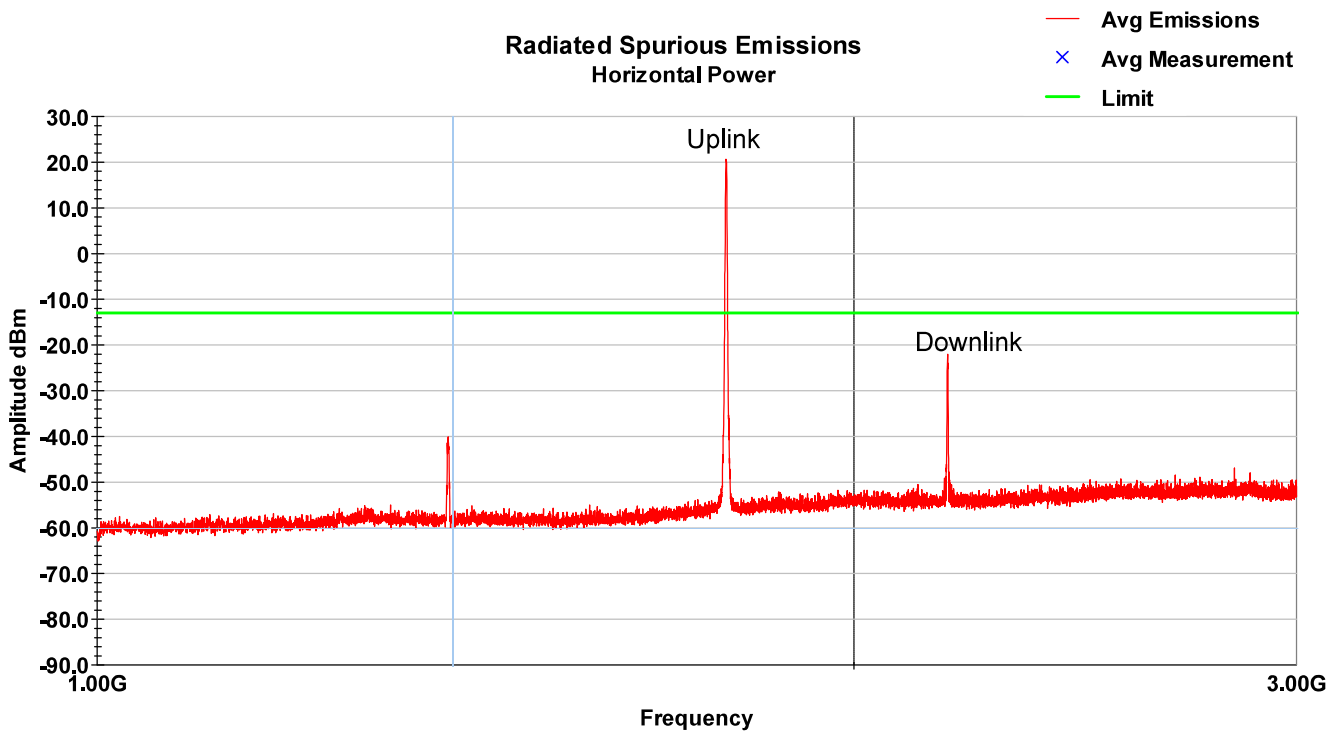
LTE Band 66 – HCH – 30-1000MHz – Horizontal



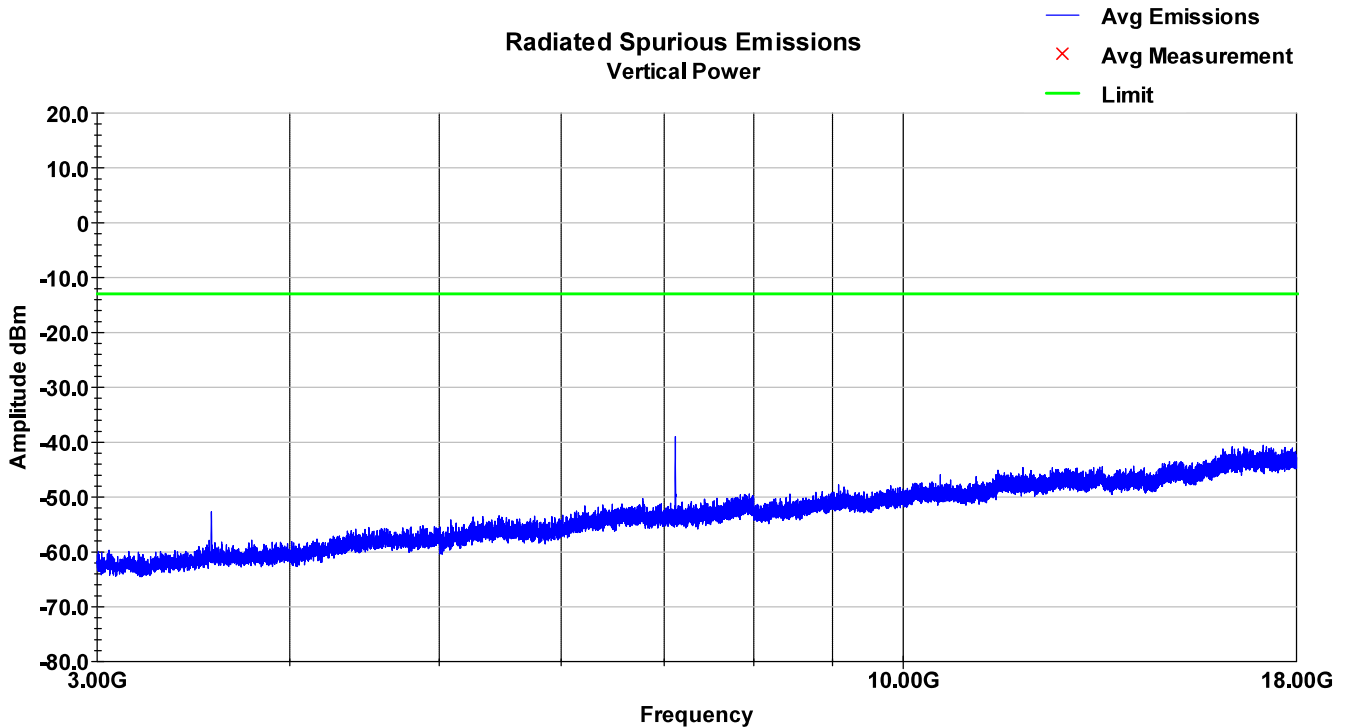
LTE Band 66 – HCH – 1-3GHz – Vertical



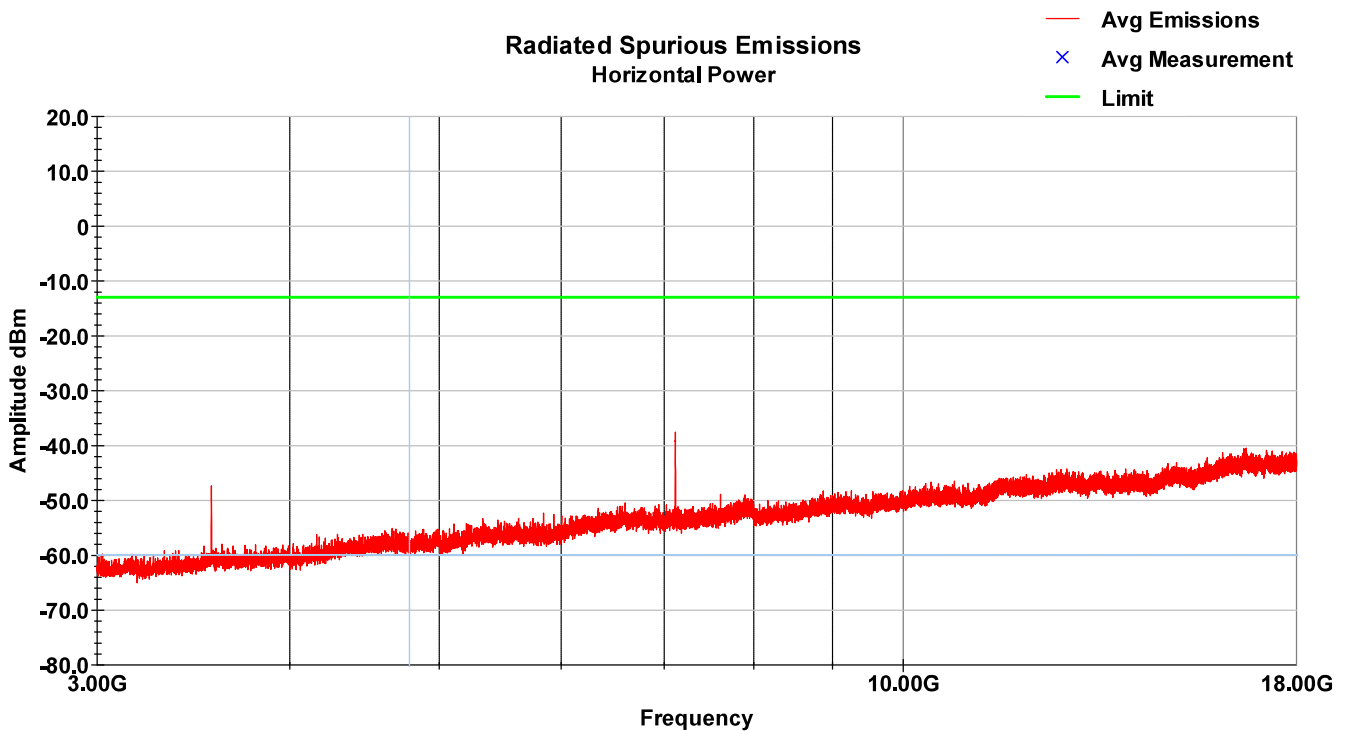
LTE Band 66 – HCH – 1-3GHz – Horizontal



LTE Band 66 – HCH – 3-18GHz – Vertical



LTE Band 66 – HCH – 3-18GHz – Horizontal



8 Frequency Stability

8.1 Test Result

Test Description	Specification		Test Result
	FCC	ISED	
Frequency Stability	2.1055 22.355 24.235 27.54 90.213	RSS-GEN (6.11) RSS-130 (4.5) RSS-132 (5.3) RSS-133 (6.3) RSS-139 (5.4) RSS-199 (4.3)	Compliant

8.2 Test Method

The EUT was placed inside the Environmental Chamber and was left inside chamber to stabilize to set temperature for minimum of thirty minutes before any measurements were made. The EUT was tested at the middle channels of LTE Bands 2, 4, 5, 7, 12, 13, 26, 38, 41, and 66.

8.3 Test Site

SGS EMC Laboratory, Suwanee, GA

8.4 Test Equipment

Test End Date: 1-Dec-2022

Tester: AB

Equipment	Model	Manufacturer	Asset	Cal Date	Cal Due Date
RF CABLE, SMA TO N	LL142	CENTRICRF	19011	16-Mar-2022	16-Mar-2023
WIDEBAND RADIO COMMUNICATION TESTER	CMW500	ROHDE & SCHWARZ	B094874	13-Jan-2021	13-Jan-2023
ENVIRONMENTAL CHAMBER	S 1.20	Thermotron	SAF-ENV-08	22-Nov-2022	22-Nov-2023
MULTIMETER	87V	FLUKE	B079677	16-Aug-2022	16-Aug-2023
TSTPASS SWITCHBOX	SB1	TSTPASS	20168	CNR	CNR

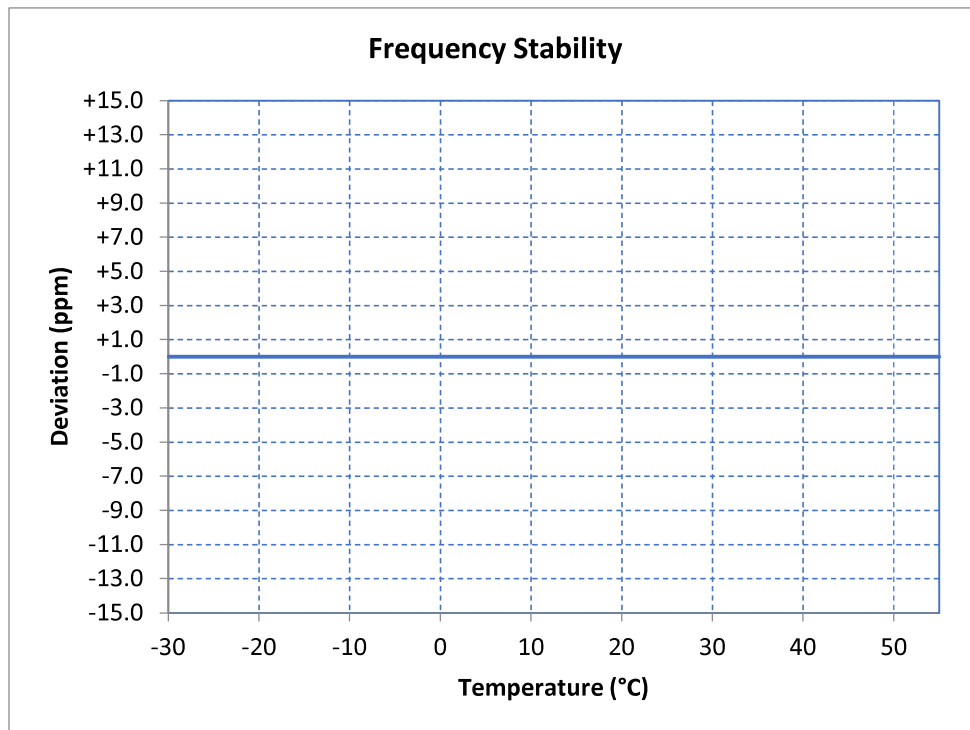
Software Profile:

TESTPass Version: 1.0.0, build: 2020.11.15.01

8.5 Test Data

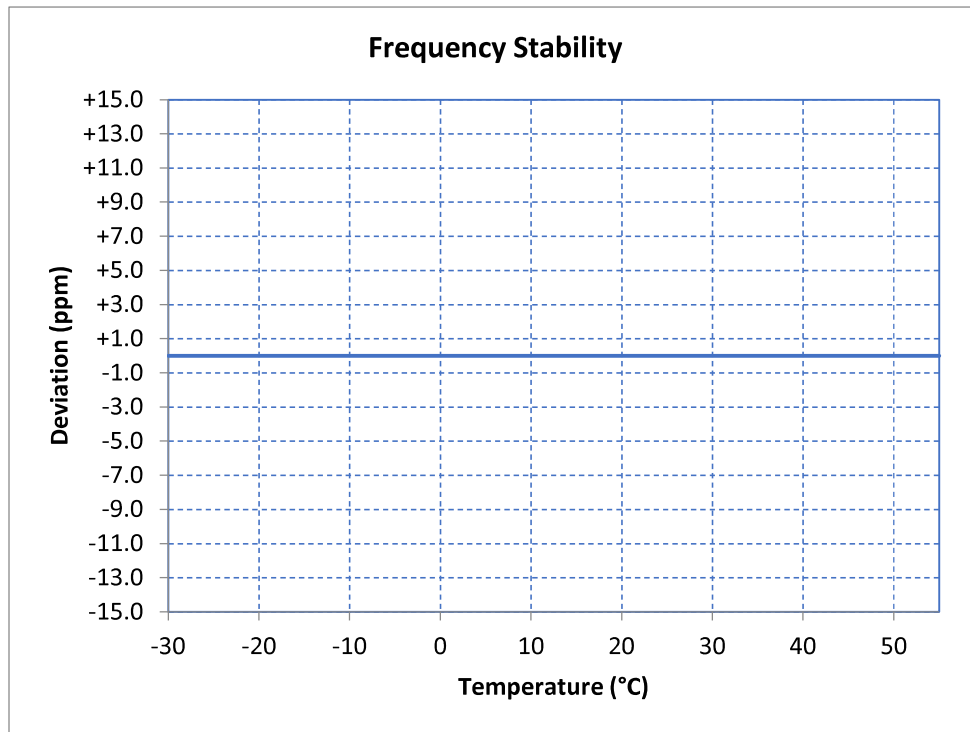
LTE Band 2, Middle Channel

Voltage %	Power V _{DC}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	1,879,999,996	-4	-0.00	-0.000000
100%	12.00	-30	1,879,999,997	-3	-0.00	-0.000000
100%	12.00	-20	1,879,999,997	-3	-0.00	-0.000000
100%	12.00	-10	1,879,999,997	-3	-0.00	-0.000000
100%	12.00	0	1,879,999,997	-3	-0.00	-0.000000
100%	12.00	+10	1,879,999,996	-4	-0.00	-0.000000
100%	12.00	+20	1,879,999,995	-5	-0.00	-0.000000
100%	12.00	+30	1,879,999,995	-5	-0.00	-0.000000
100%	12.00	+40	1,879,999,997	-3	-0.00	-0.000000
100%	12.00	+50	1,879,999,996	-4	-0.00	-0.000000
100%	12.00	+55	1,879,999,996	-4	-0.00	-0.000000
115%	13.80	+20	1,879,999,996	-4	-0.00	-0.000000
85%	10.20	+20	1,879,999,997	-3	-0.00	-0.000000



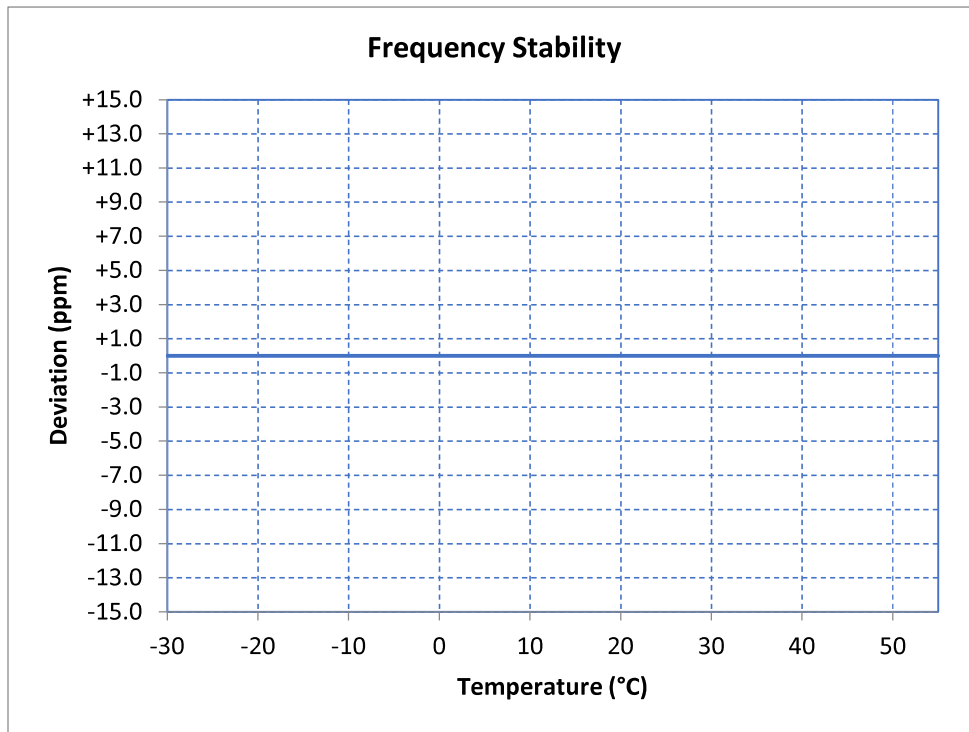
LTE Band 4, Middle Channel

Voltage %	Power V _{DC}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	1,732,500,001	+1	+0.00	+0.000000
100%	12.00	-30	1,732,500,002	+2	+0.00	+0.000000
100%	12.00	-20	1,732,500,003	+3	+0.00	+0.000000
100%	12.00	-10	1,732,500,002	+2	+0.00	+0.000000
100%	12.00	0	1,732,500,002	+2	+0.00	+0.000000
100%	12.00	+10	1,732,500,002	+2	+0.00	+0.000000
100%	12.00	+20	1,732,500,001	+1	+0.00	+0.000000
100%	12.00	+30	1,732,500,002	+2	+0.00	+0.000000
100%	12.00	+40	1,732,500,001	+1	+0.00	+0.000000
100%	12.00	+50	1,732,500,001	+1	+0.00	+0.000000
100%	12.00	+55	1,732,500,001	+1	+0.00	+0.000000
115%	13.80	+20	1,732,500,001	+1	+0.00	+0.000000
85%	10.20	+20	1,732,499,999	-1	-0.00	-0.000000



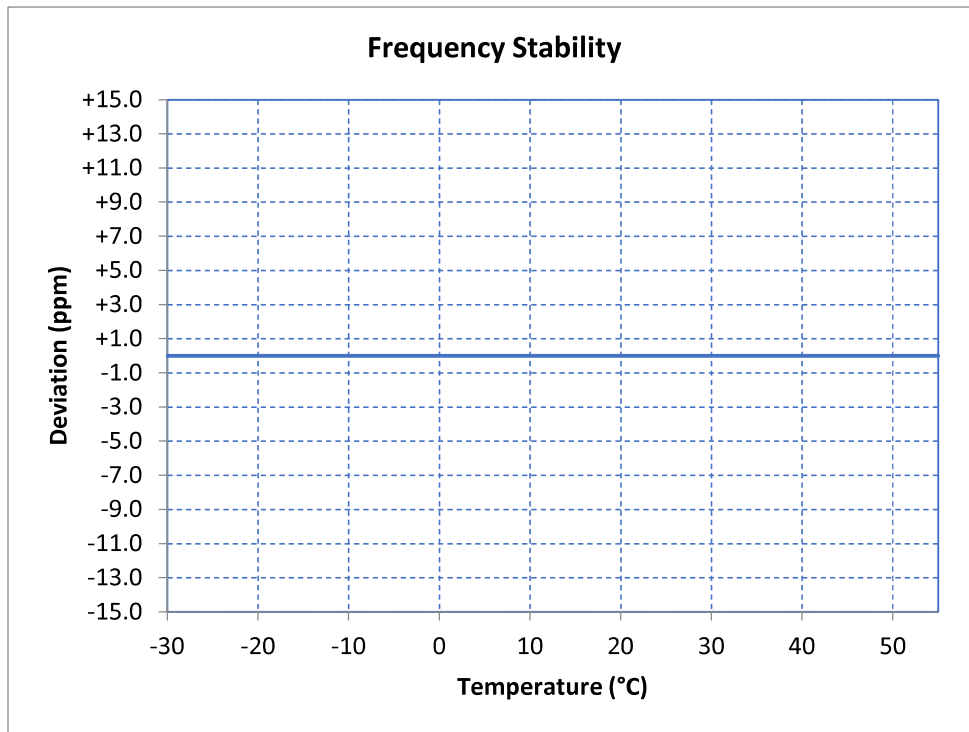
LTE Band 5, Middle Channel

Voltage %	Power VD _C	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	836,499,999	-1	-0.00	-0.000000
100%	12.00	-30	836,500,002	+2	+0.00	+0.000000
100%	12.00	-20	836,500,001	+1	+0.00	+0.000000
100%	12.00	-10	836,500,001	+1	+0.00	+0.000000
100%	12.00	0	836,500,001	+1	+0.00	+0.000000
100%	12.00	+10	836,499,999	-1	-0.00	-0.000000
100%	12.00	+20	836,499,998	-2	-0.00	-0.000000
100%	12.00	+30	836,499,999	-1	-0.00	-0.000000
100%	12.00	+40	836,499,999	-1	-0.00	-0.000000
100%	12.00	+50	836,499,999	-1	-0.00	-0.000000
100%	12.00	+55	836,499,999	-1	-0.00	-0.000000
115%	13.80	+20	836,499,998	-2	-0.00	-0.000000
85%	10.20	+20	836,499,998	-2	-0.00	-0.000000



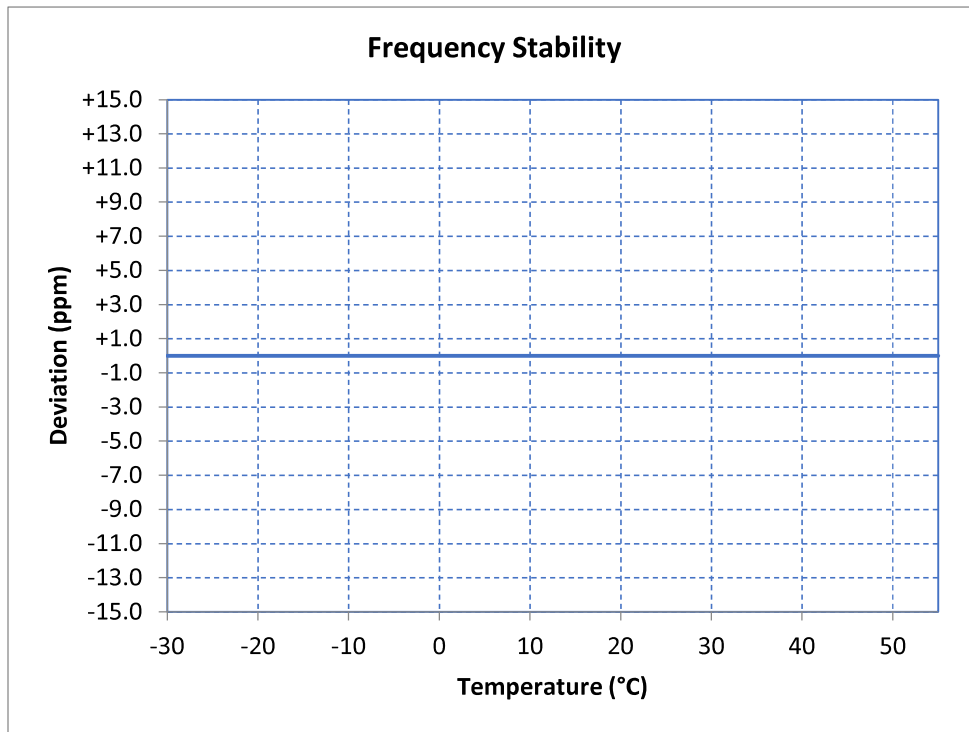
LTE Band 7, Middle Channel

Voltage %	Power V _{DC}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	2,534,999,996	-4	-0.00	-0.000000
100%	12.00	-30	2,534,999,995	-5	-0.00	-0.000000
100%	12.00	-20	2,534,999,998	-2	-0.00	-0.000000
100%	12.00	-10	2,534,999,997	-3	-0.00	-0.000000
100%	12.00	0	2,534,999,998	-2	-0.00	-0.000000
100%	12.00	+10	2,534,999,998	-2	-0.00	-0.000000
100%	12.00	+20	2,534,999,997	-3	-0.00	-0.000000
100%	12.00	+30	2,534,999,996	-4	-0.00	-0.000000
100%	12.00	+40	2,534,999,997	-3	-0.00	-0.000000
100%	12.00	+50	2,534,999,998	-2	-0.00	-0.000000
100%	12.00	+55	2,534,999,995	-5	-0.00	-0.000000
115%	13.80	+20	2,534,999,996	-4	-0.00	-0.000000
85%	10.20	+20	2,534,999,997	-3	-0.00	-0.000000



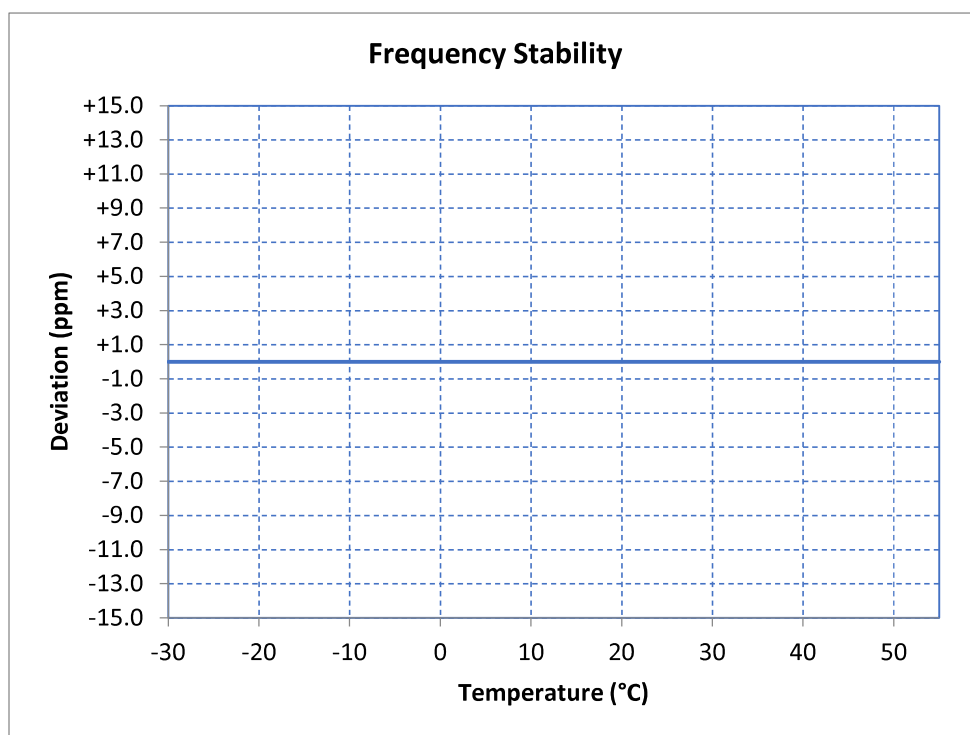
LTE Band 12, Middle Channel

Voltage %	Power V _{DC}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	707,500,001	+1	+0.00	+0.000000
100%	12.00	-30	707,500,000	+0	+0.00	+0.000000
100%	12.00	-20	707,499,999	-1	-0.00	-0.000000
100%	12.00	-10	707,500,002	+2	+0.00	+0.000000
100%	12.00	0	707,500,001	+1	+0.00	+0.000000
100%	12.00	+10	707,500,001	+1	+0.00	+0.000000
100%	12.00	+20	707,499,998	-2	-0.00	-0.000000
100%	12.00	+30	707,499,999	-1	-0.00	-0.000000
100%	12.00	+40	707,499,999	-1	-0.00	-0.000000
100%	12.00	+50	707,499,999	-1	-0.00	-0.000000
100%	12.00	+55	707,499,999	-1	-0.00	-0.000000
115%	13.80	+20	707,500,001	+1	+0.00	+0.000000
85%	10.20	+20	707,499,999	-1	-0.00	-0.000000



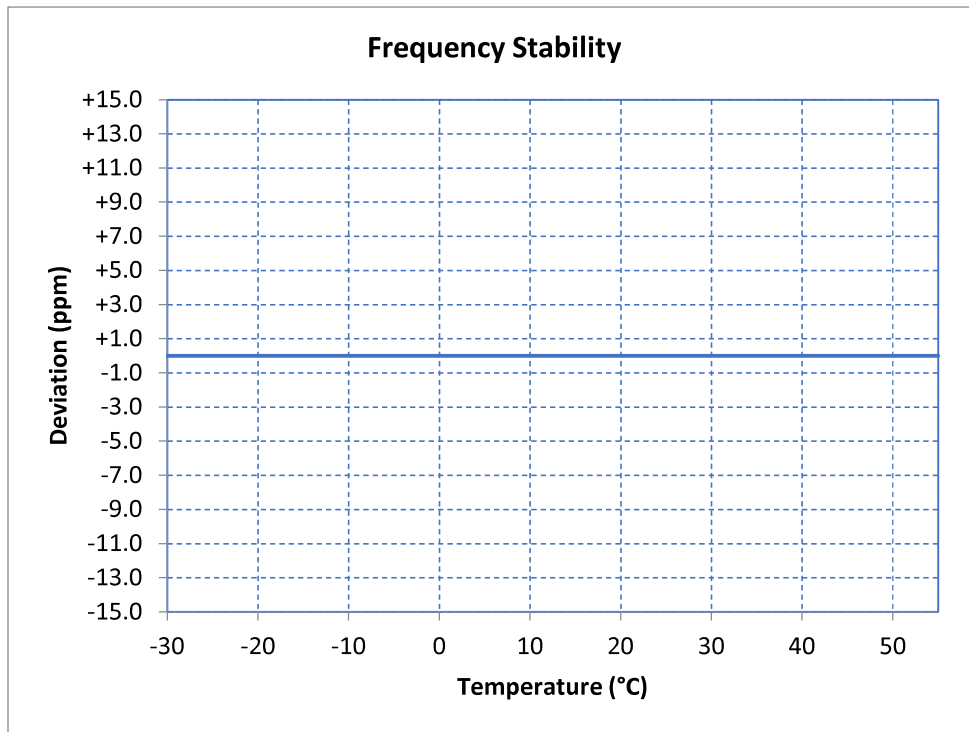
LTE Band 13, Middle Channel

Voltage %	Power V _{DC}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	781,999,999	-1	-0.00	-0.000000
100%	12.00	-30	782,000,001	+1	+0.00	+0.000000
100%	12.00	-20	782,000,001	+1	+0.00	+0.000000
100%	12.00	-10	781,999,999	-1	-0.00	-0.000000
100%	12.00	0	781,999,999	-1	-0.00	-0.000000
100%	12.00	+10	781,999,999	-1	-0.00	-0.000000
100%	12.00	+20	781,999,999	-1	-0.00	-0.000000
100%	12.00	+30	781,999,999	-1	-0.00	-0.000000
100%	12.00	+40	781,999,998	-2	-0.00	-0.000000
100%	12.00	+50	781,999,999	-1	-0.00	-0.000000
100%	12.00	+55	781,999,999	-1	-0.00	-0.000000
115%	13.80	+20	782,000,001	+1	+0.00	+0.000000
85%	10.20	+20	782,000,001	+1	+0.00	+0.000000



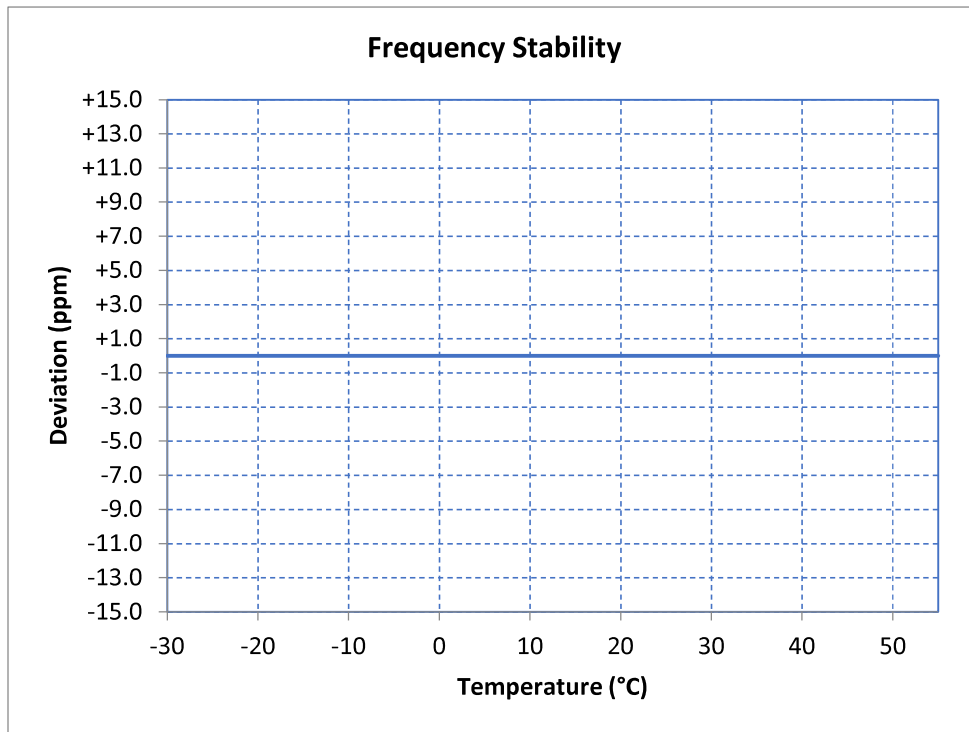
LTE Band 26, Middle Channel

Voltage %	Power V _{Dc}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	818,999,999	-1	-0.00	-0.000000
100%	12.00	-30	818,999,998	-2	-0.00	-0.000000
100%	12.00	-20	818,999,999	-1	-0.00	-0.000000
100%	12.00	-10	818,999,998	-2	-0.00	-0.000000
100%	12.00	0	818,999,999	-1	-0.00	-0.000000
100%	12.00	+10	818,999,999	-1	-0.00	-0.000000
100%	12.00	+20	818,999,997	-3	-0.00	-0.000000
100%	12.00	+30	818,999,998	-2	-0.00	-0.000000
100%	12.00	+40	818,999,996	-4	-0.00	-0.000000
100%	12.00	+50	818,999,998	-2	-0.00	-0.000000
100%	12.00	+55	818,999,998	-2	-0.00	-0.000000
115%	13.80	+20	818,999,999	-1	-0.00	-0.000000
85%	10.20	+20	818,999,999	-1	-0.00	-0.000000



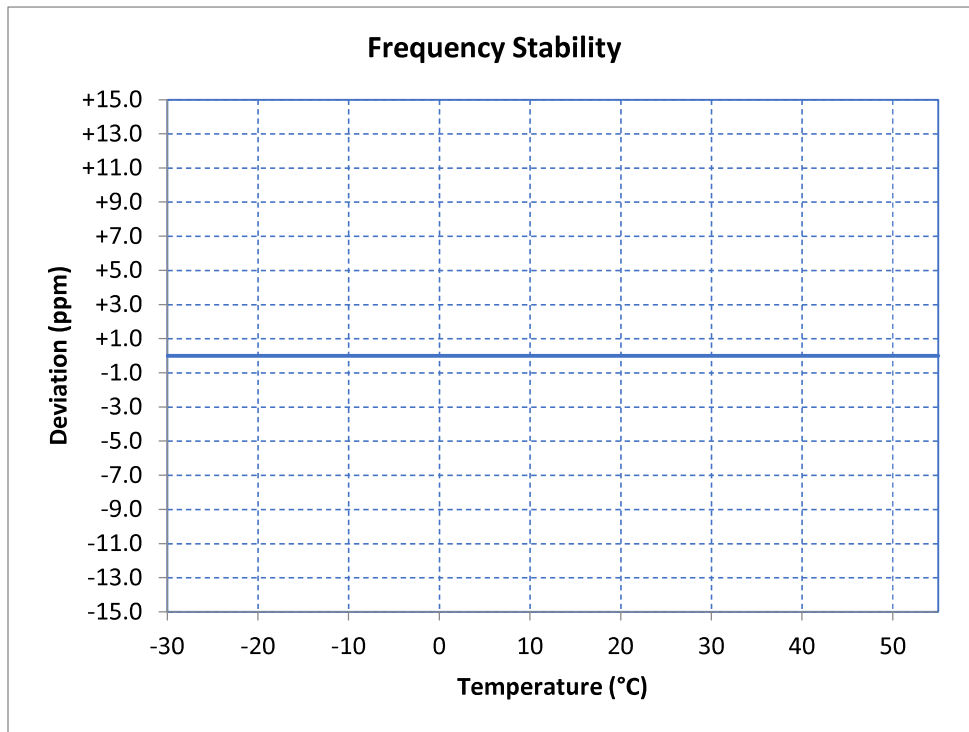
LTE Band 38, Middle Channel

Voltage %	Power V _{Dc}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	2,594,999,991	-9	-0.00	-0.000000
100%	12.00	-30	2,594,999,991	-9	-0.00	-0.000000
100%	12.00	-20	2,594,999,987	-13	-0.01	-0.000001
100%	12.00	-10	2,594,999,989	-11	-0.00	-0.000000
100%	12.00	0	2,594,999,988	-12	-0.00	-0.000000
100%	12.00	+10	2,594,999,990	-10	-0.00	-0.000000
100%	12.00	+20	2,594,999,992	-8	-0.00	-0.000000
100%	12.00	+30	2,594,999,992	-8	-0.00	-0.000000
100%	12.00	+40	2,594,999,989	-11	-0.00	-0.000000
100%	12.00	+50	2,594,999,992	-8	-0.00	-0.000000
100%	12.00	+55	2,595,000,010	+10	+0.00	+0.000000
115%	13.80	+20	2,594,999,990	-10	-0.00	-0.000000
85%	10.20	+20	2,594,999,990	-10	-0.00	-0.000000



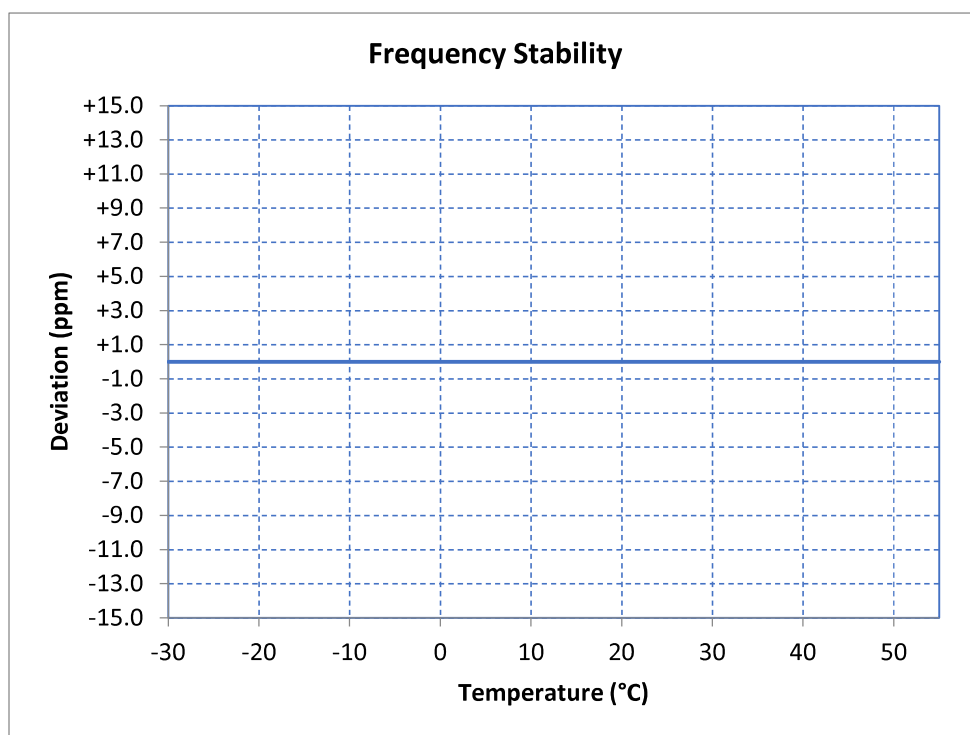
LTE Band 41, Middle Channel

Voltage %	Power V _{DC}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	2,593,000,006	+6	+0.00	+0.000000
100%	12.00	-30	2,592,999,992	-8	-0.00	-0.000000
100%	12.00	-20	2,592,999,991	-9	-0.00	-0.000000
100%	12.00	-10	2,592,999,988	-12	-0.00	-0.000000
100%	12.00	0	2,592,999,993	-7	-0.00	-0.000000
100%	12.00	+10	2,593,000,008	+8	+0.00	+0.000000
100%	12.00	+20	2,593,000,007	+7	+0.00	+0.000000
100%	12.00	+30	2,593,000,007	+7	+0.00	+0.000000
100%	12.00	+40	2,593,000,009	+9	+0.00	+0.000000
100%	12.00	+50	2,593,000,017	+17	+0.01	+0.000001
100%	12.00	+55	2,593,000,016	+16	+0.01	+0.000001
115%	13.80	+20	2,592,999,993	-7	-0.00	-0.000000
85%	10.20	+20	2,593,000,009	+9	+0.00	+0.000000



LTE Band 66, Middle Channel

Voltage %	Power V _{DC}	Temp °C	Frequency Hz	Freq Dev Hz	Freq Dev ppm	Deviation %
100%	12.00	+20 (Ref)	1,744,999,997	-3	-0.00	-0.000000
100%	12.00	-30	1,744,999,996	-4	-0.00	-0.000000
100%	12.00	-20	1,744,999,998	-2	-0.00	-0.000000
100%	12.00	-10	1,744,999,997	-3	-0.00	-0.000000
100%	12.00	0	1,744,999,997	-3	-0.00	-0.000000
100%	12.00	+10	1,744,999,997	-3	-0.00	-0.000000
100%	12.00	+20	1,744,999,996	-4	-0.00	-0.000000
100%	12.00	+30	1,744,999,996	-4	-0.00	-0.000000
100%	12.00	+40	1,744,999,996	-4	-0.00	-0.000000
100%	12.00	+50	1,744,999,997	-3	-0.00	-0.000000
100%	12.00	+55	1,744,999,997	-3	-0.00	-0.000000
115%	13.80	+20	1,744,999,997	-3	-0.00	-0.000000
85%	10.20	+20	1,744,999,998	-2	-0.00	-0.000000



9 Measurement Uncertainty

The measurement uncertainty figures are be calculated in accordance with TR 100 028-1 [2] and correspond to an expansion factor (coverage factor) $k = 2$ (which provide confidence levels of 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Parameter	Expanded Uncertainty for Normal k factor equal to 2	
	Required	Laboratory Actual
Radio Frequency	$\pm 1 \times 10^{-5}$	$\pm 9.8 \times 10^{-8}$
total RF power, conducted	± 1.5 dB	± 1.2 dB
RF power density, conducted	± 3 dB	± 0.7 dB
spurious emissions, conducted	± 3 dB	± 2.1 dB
all emissions, radiated	± 6 dB	± 4.8 dB
temperature	$\pm 1^{\circ}\text{C}$	$\pm 0.5^{\circ}\text{C}$
humidity	± 5 %	± 3.5 %
DC and low frequency voltages	± 3 %	± 0.4 %

10 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	09 December 2022
1	Updated equipment tables	18 January 2023
2	<ul style="list-style-type: none"> - Corrected test dates in section 2.3 - Corrected test voltages in section 8.5 - Corrected company name and address - Updated equipment list to include software and TSTPass 	20 February 2023