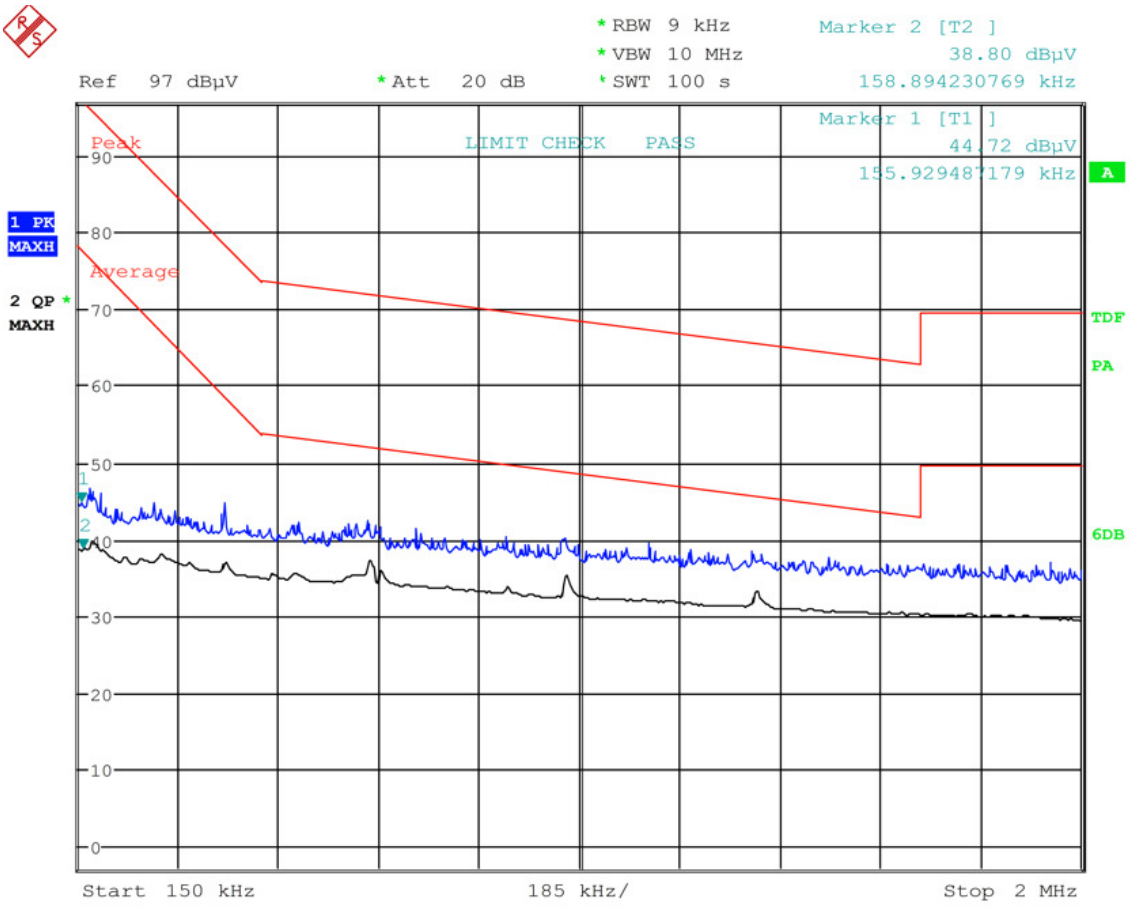
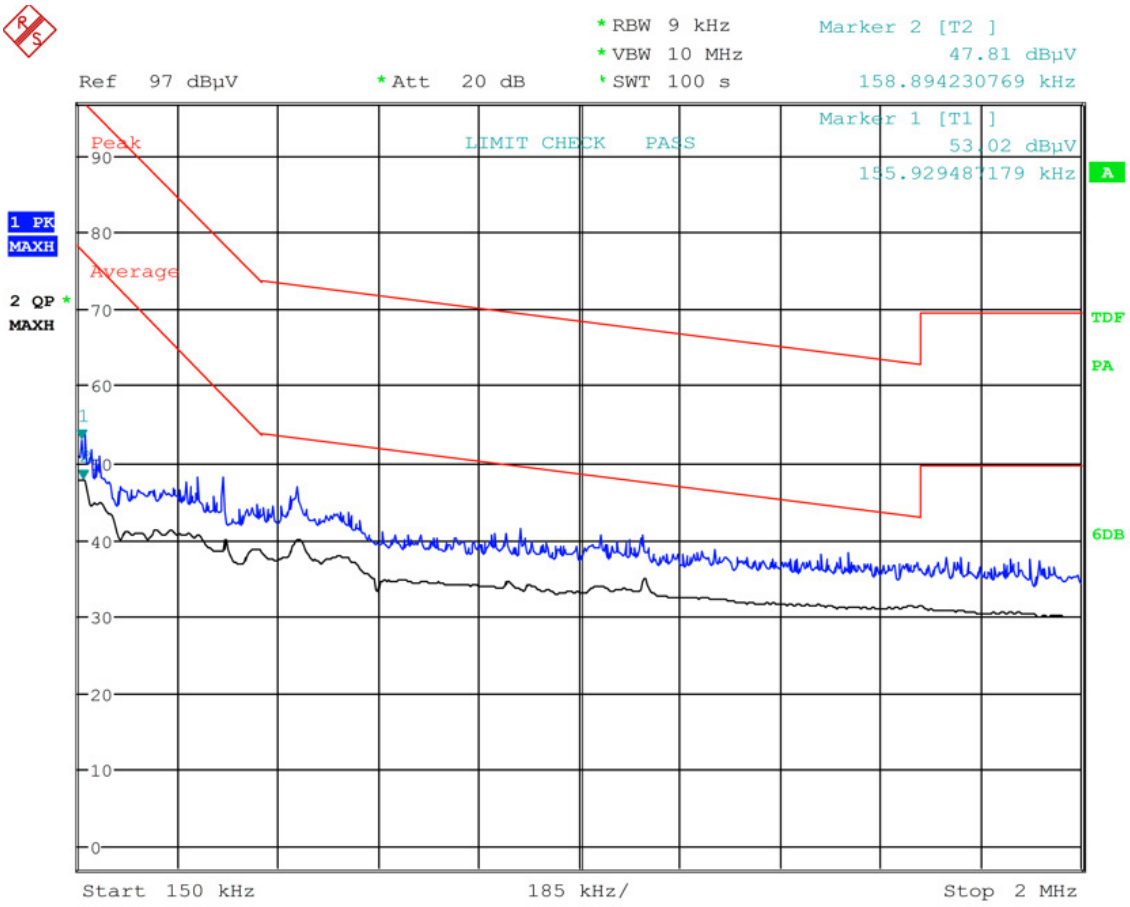
Plot 6-527: Radiated Emissions Transmit – 150 kHz – 2 MHz Horizontal Peak/Average



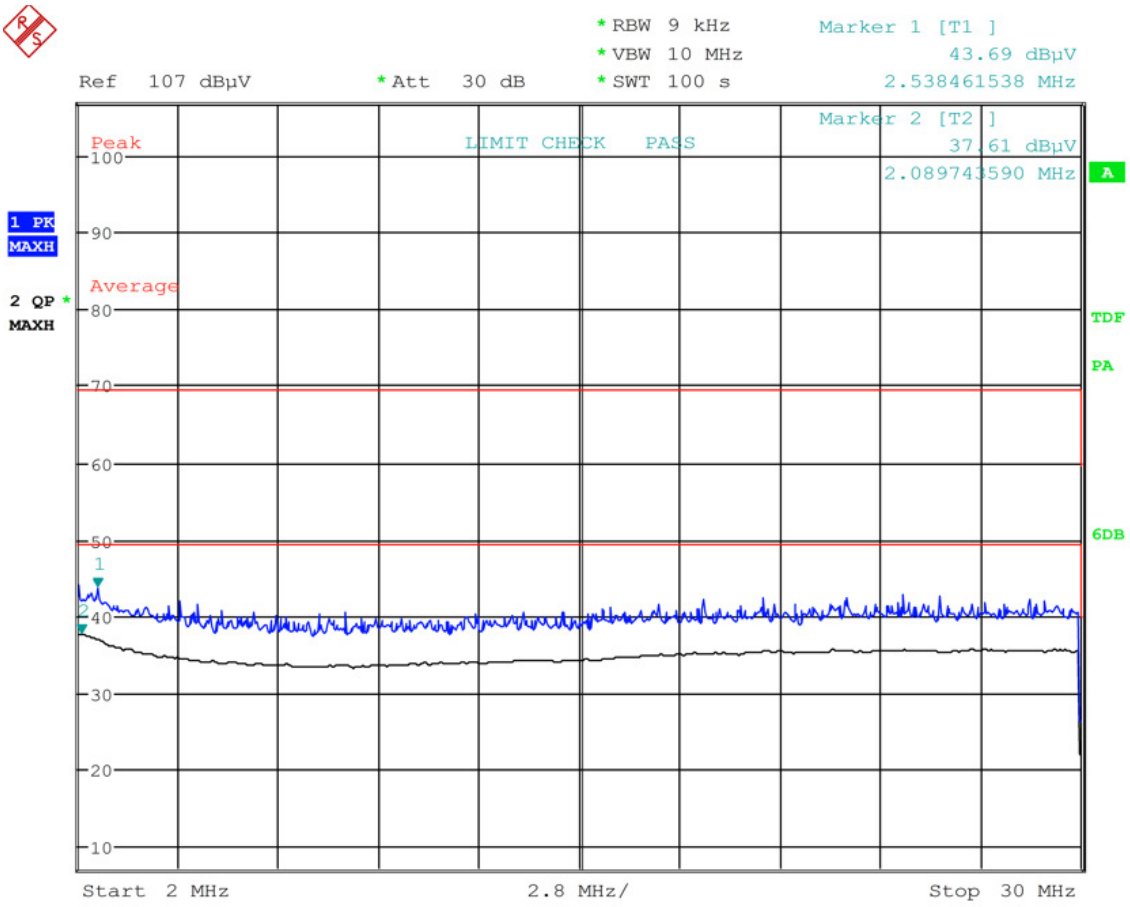
Date: 25.OCT.2015 16:21:10

Plot 6-528: Radiated Emissions Transmit – 150 kHz – 2 MHz Vertical Peak/Average



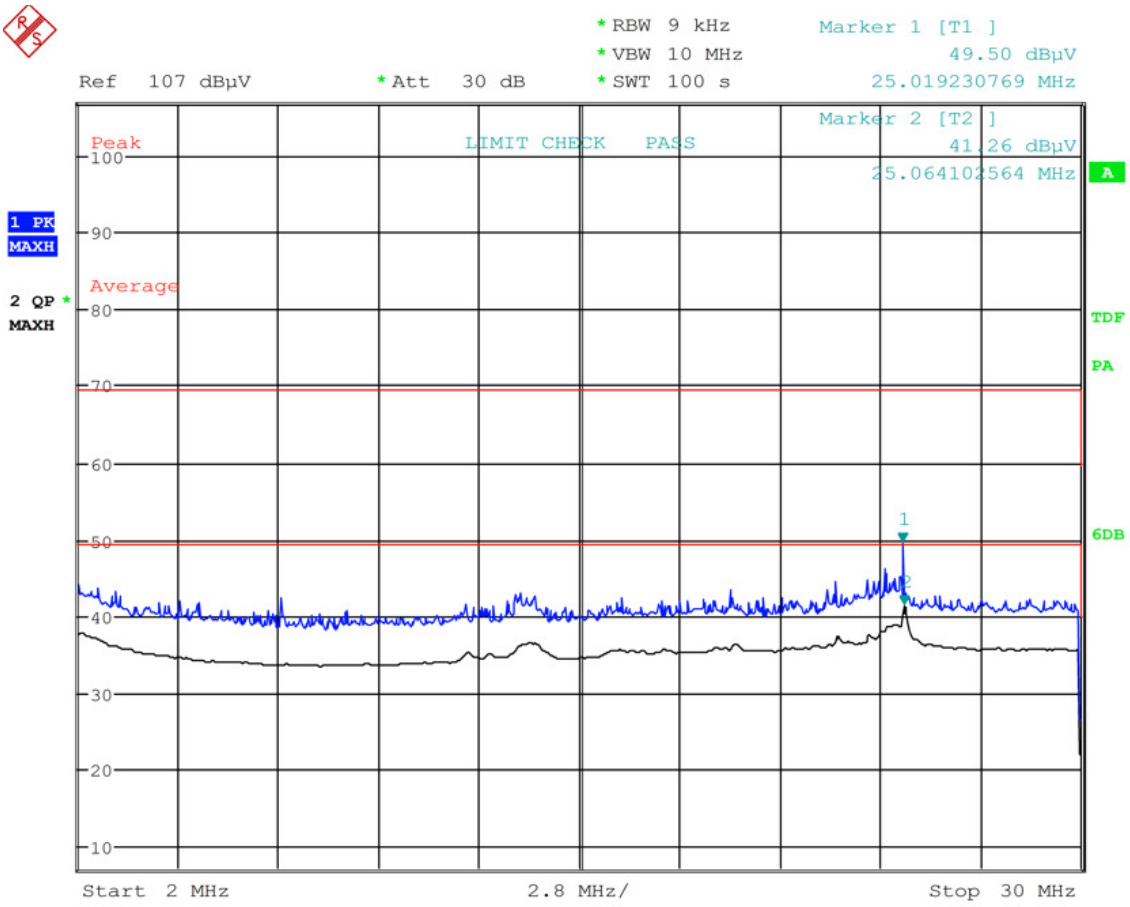
Date: 25.OCT.2015 16:14:38

Plot 6-529: Radiated Emissions Transmit – 2 MHz – 30 MHz Horizontal Peak/Average



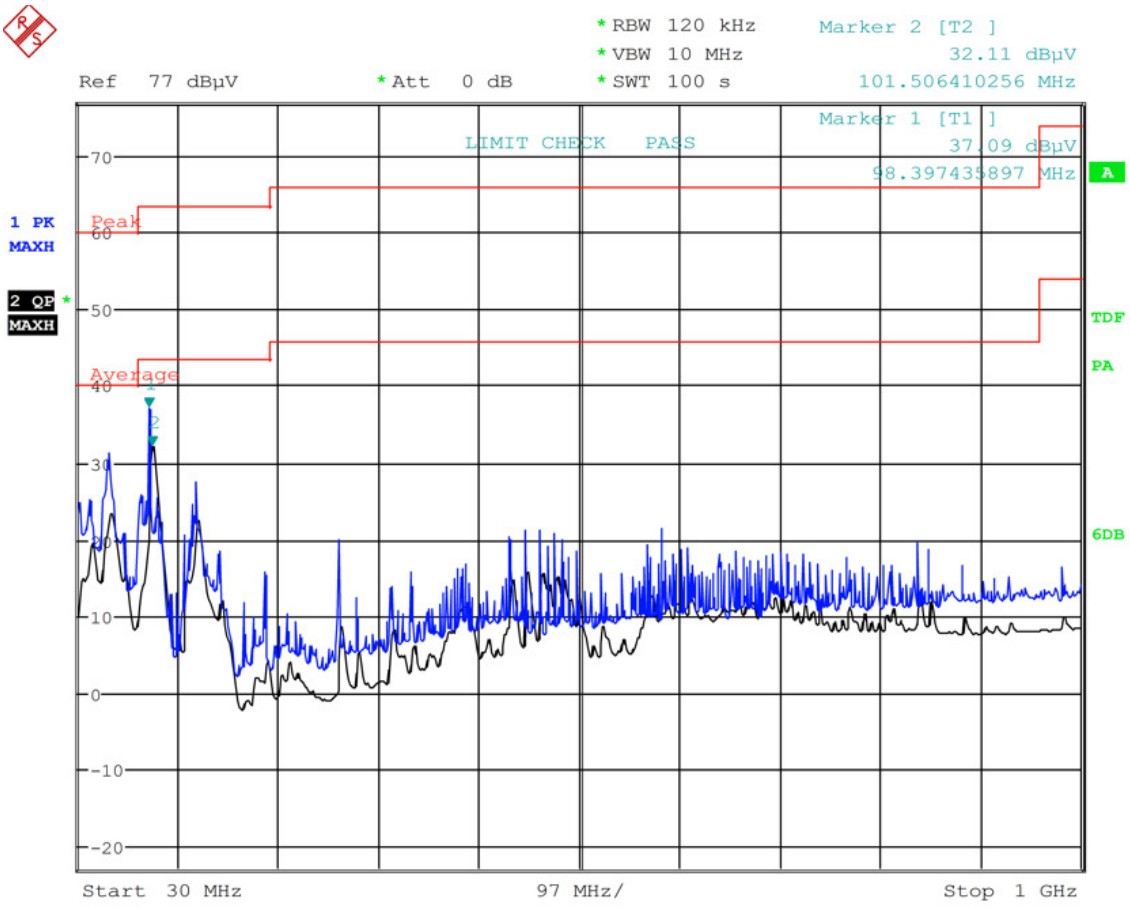
Date: 25.OCT.2015 16:08:00

Plot 6-530: Radiated Emissions Transmit – 2 MHz – 30 MHz Vertical Peak/Average



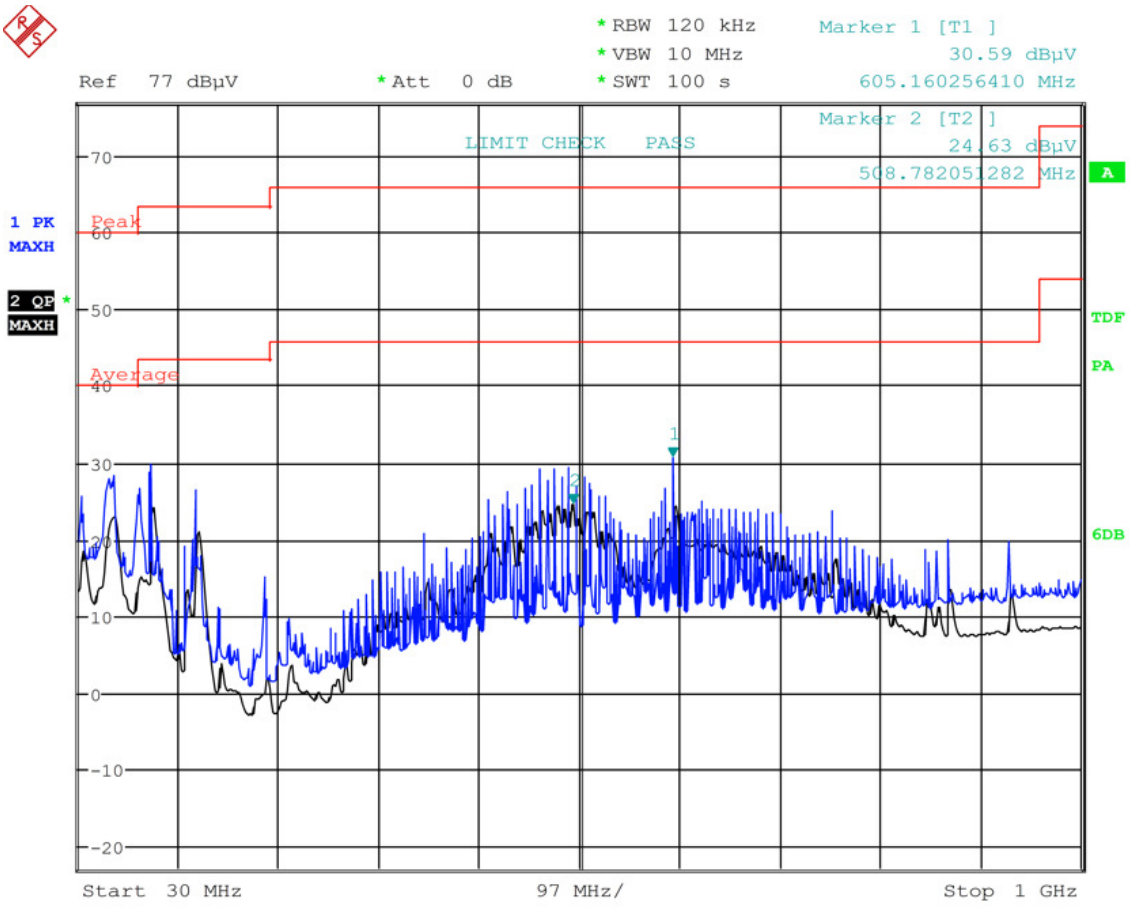
Date: 25.OCT.2015 16:12:01

Plot 6-531: Radiated Emissions Transmit – 30 MHz – 1 GHz Horizontal Peak/Average



Date: 25.OCT.2015 15:59:23

Plot 6-532: Radiated Emissions Transmit – 30 MHz – 1 GHz Vertical Peak/Average

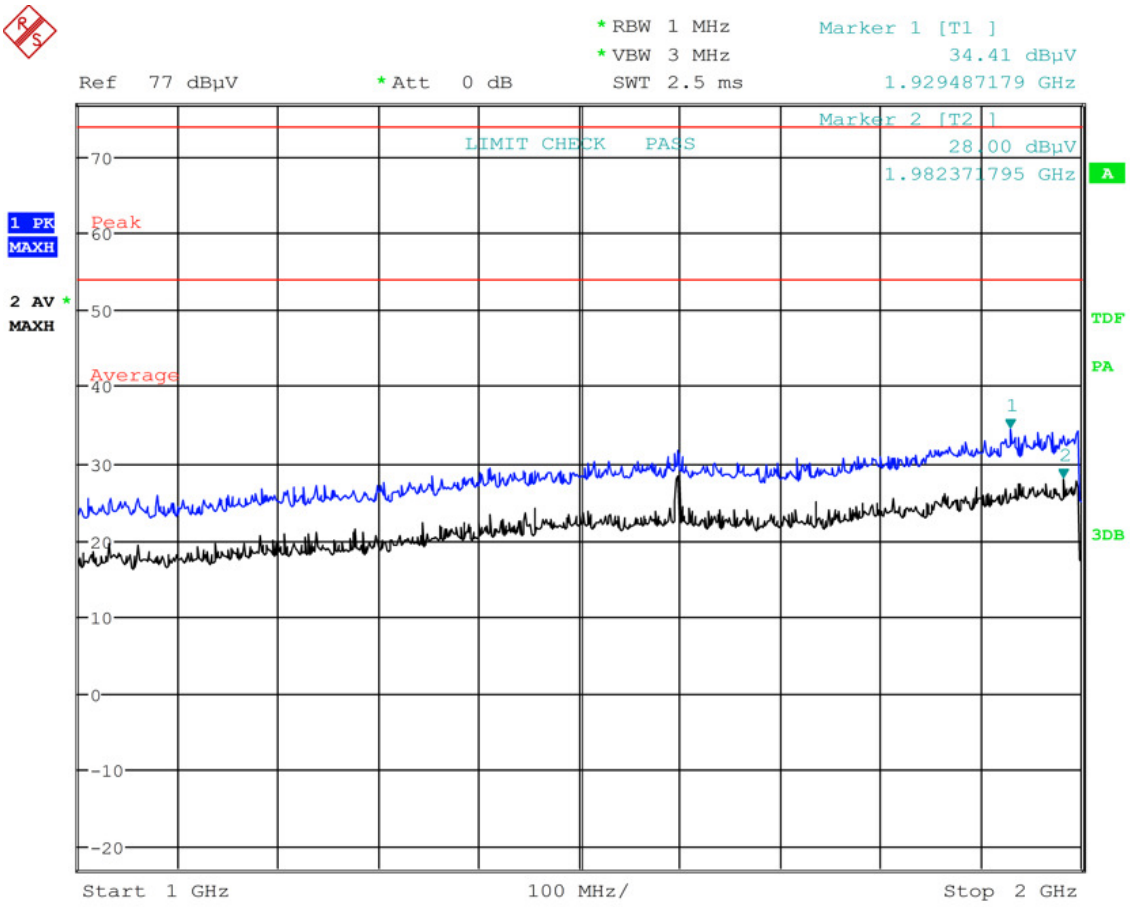


Date: 25.OCT.2015 16:01:19

Note: Unwanted emissions were investigated as a digital device (other than harmonics) as required by 15.33(a)(3).

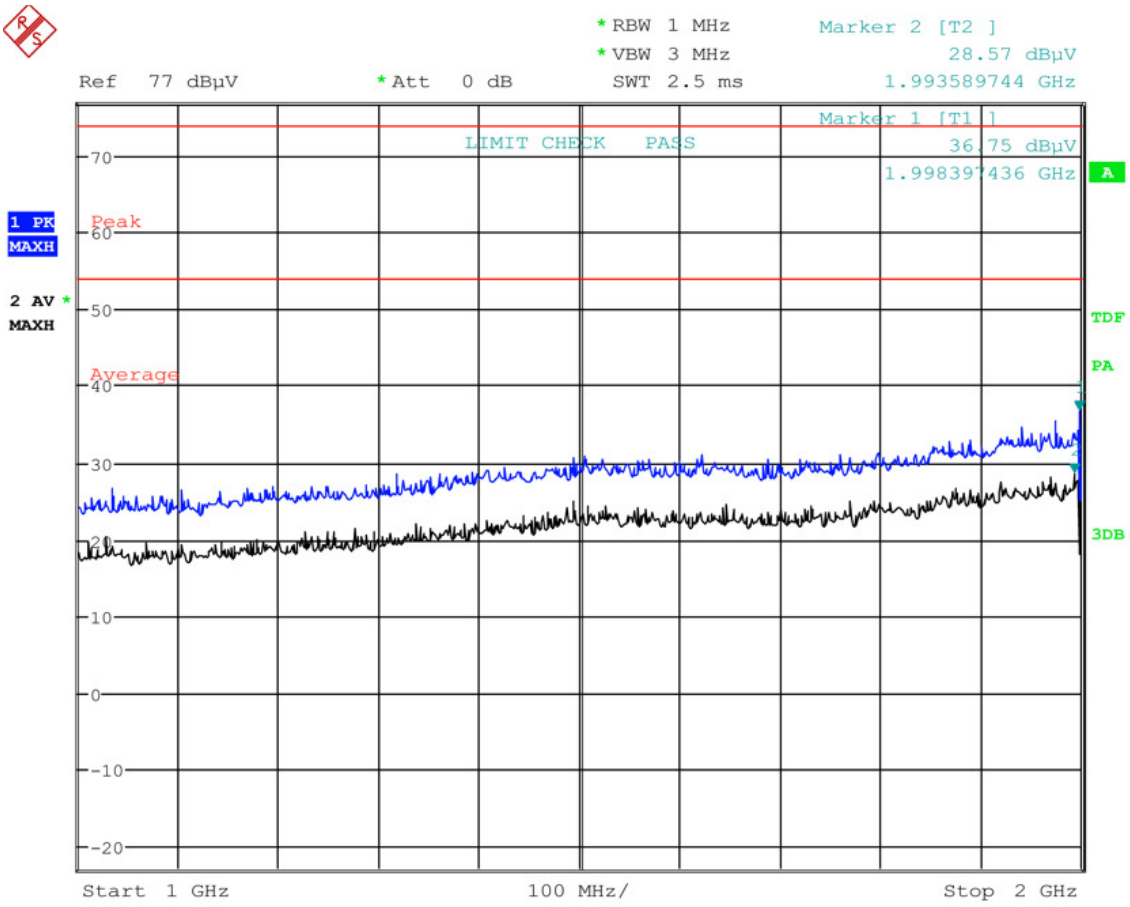
6.3.3.24 Radiated Emissions 1 GHz – 26 GHz Test Data – TC#8 Fiberglass Container

Plot 6-533: Radiated Emissions 1 GHz – 2 GHz Horizontal Peak/Average



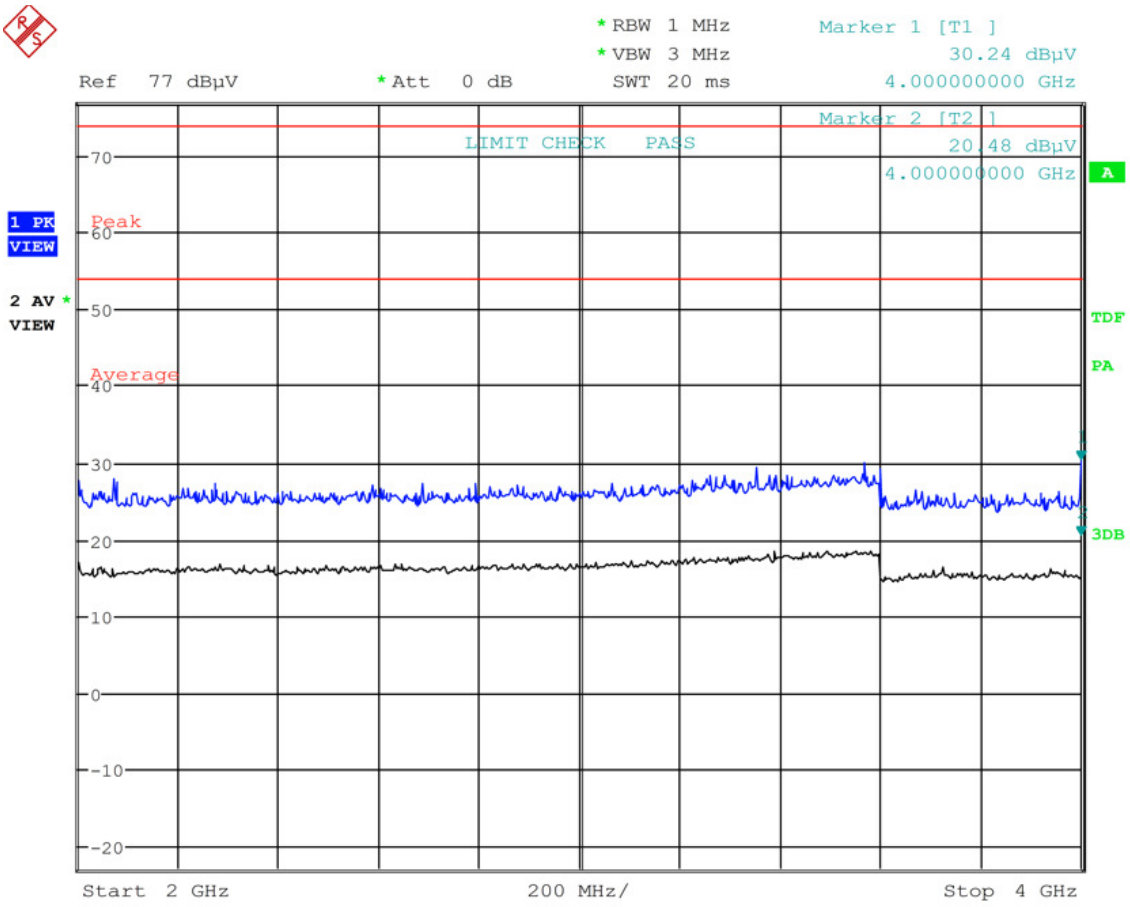
Date: 25.OCT.2015 15:55:49

Plot 6-534: Radiated Emissions 1 GHz – 2 GHz Vertical Peak/Average



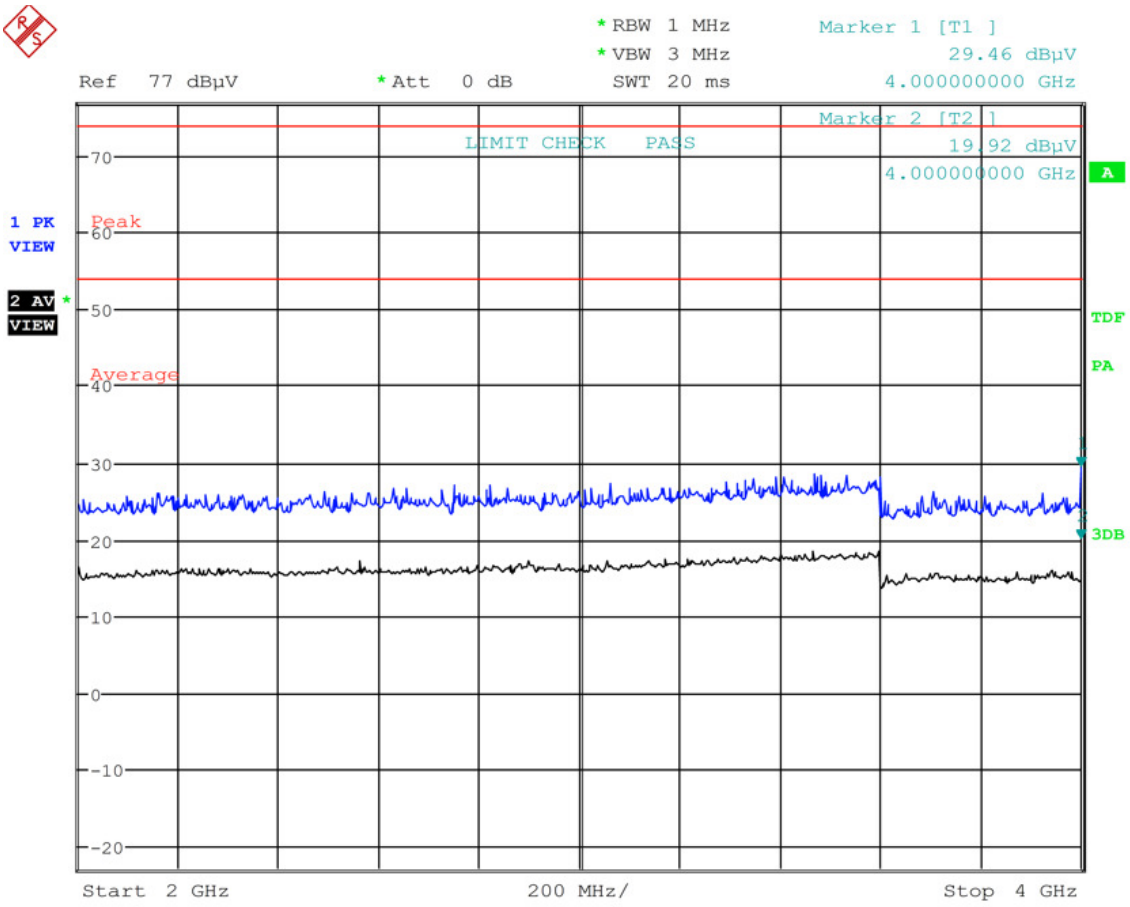
Date: 25.OCT.2015 15:55:30

Plot 6-535: Radiated Emissions 2 GHz – 4 GHz Horizontal Peak/Average



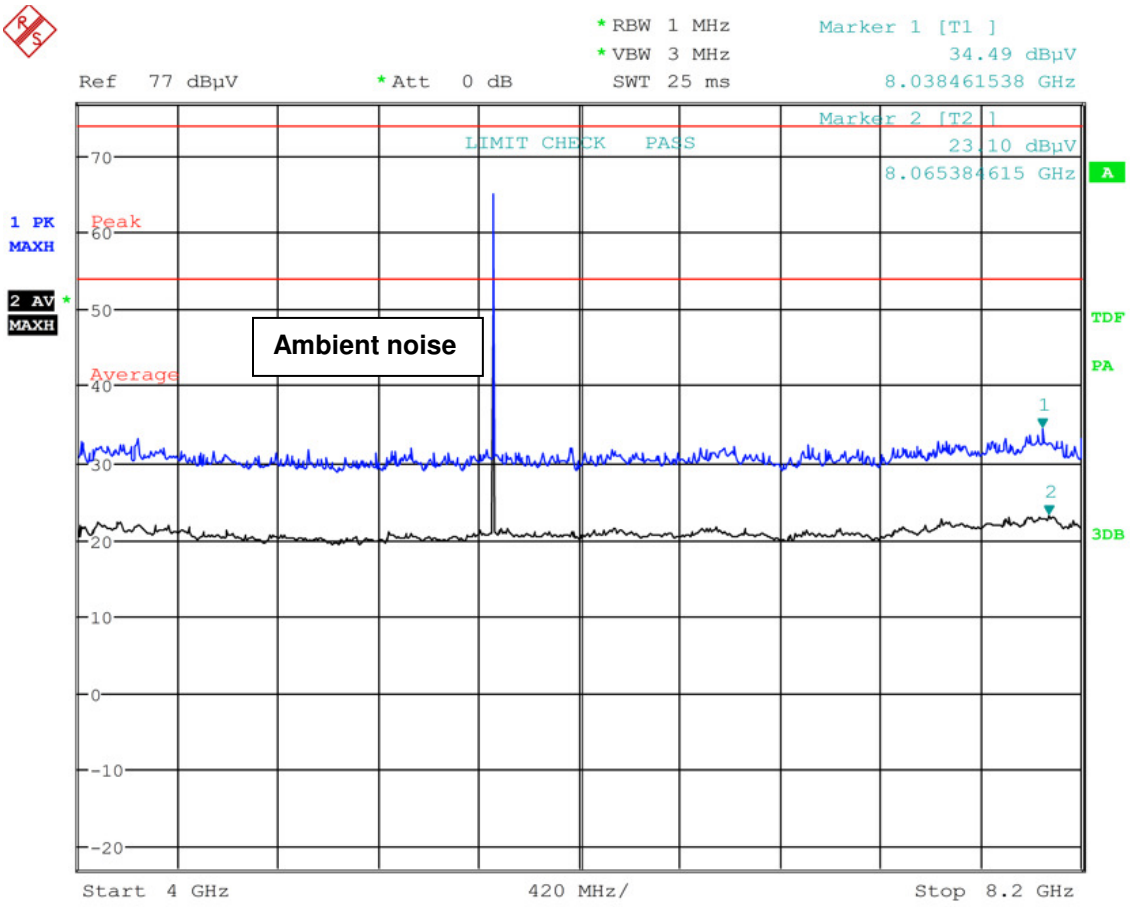
Date: 25.OCT.2015 15:53:43

Plot 6-536: Radiated Emissions 2 GHz – 4 GHz Vertical Peak/Average



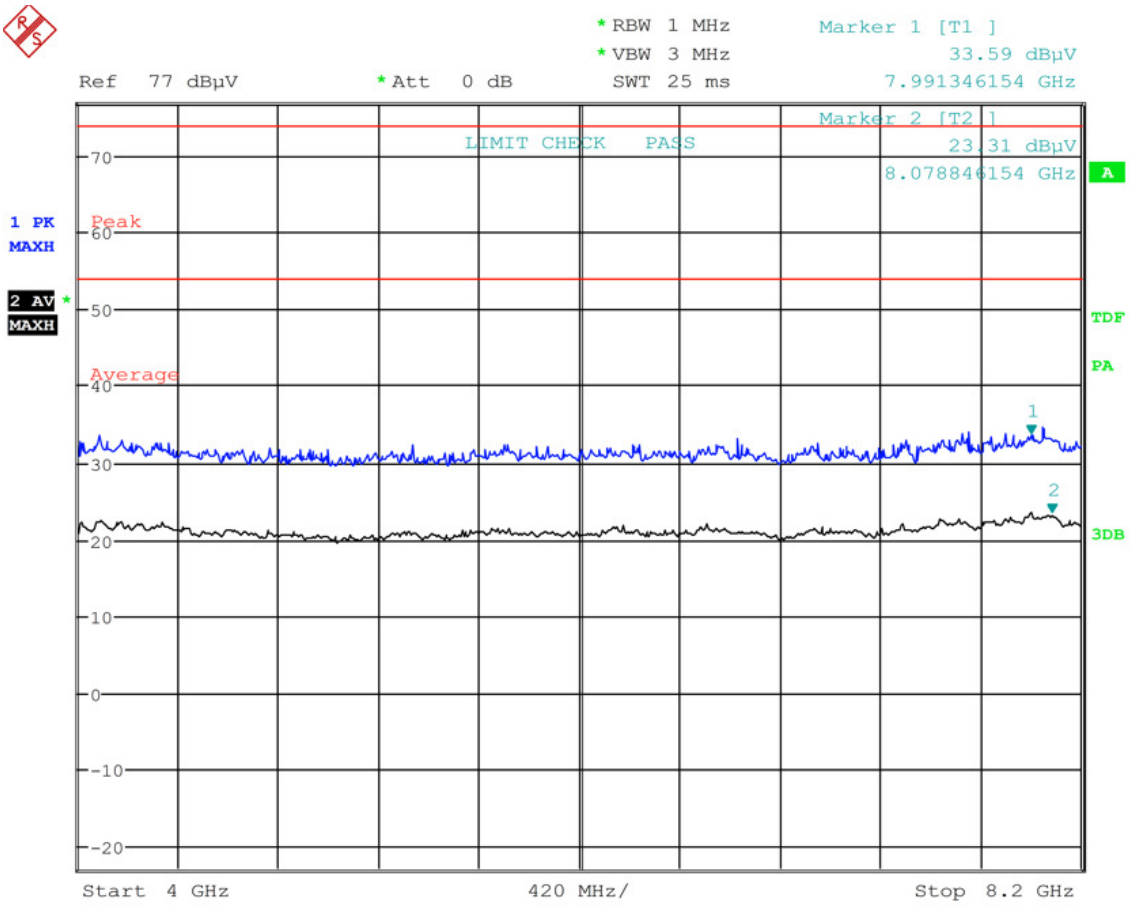
Date: 25.OCT.2015 15:54:13

Plot 6-537: Radiated Emissions 4 GHz – 8 GHz Horizontal Peak/Average



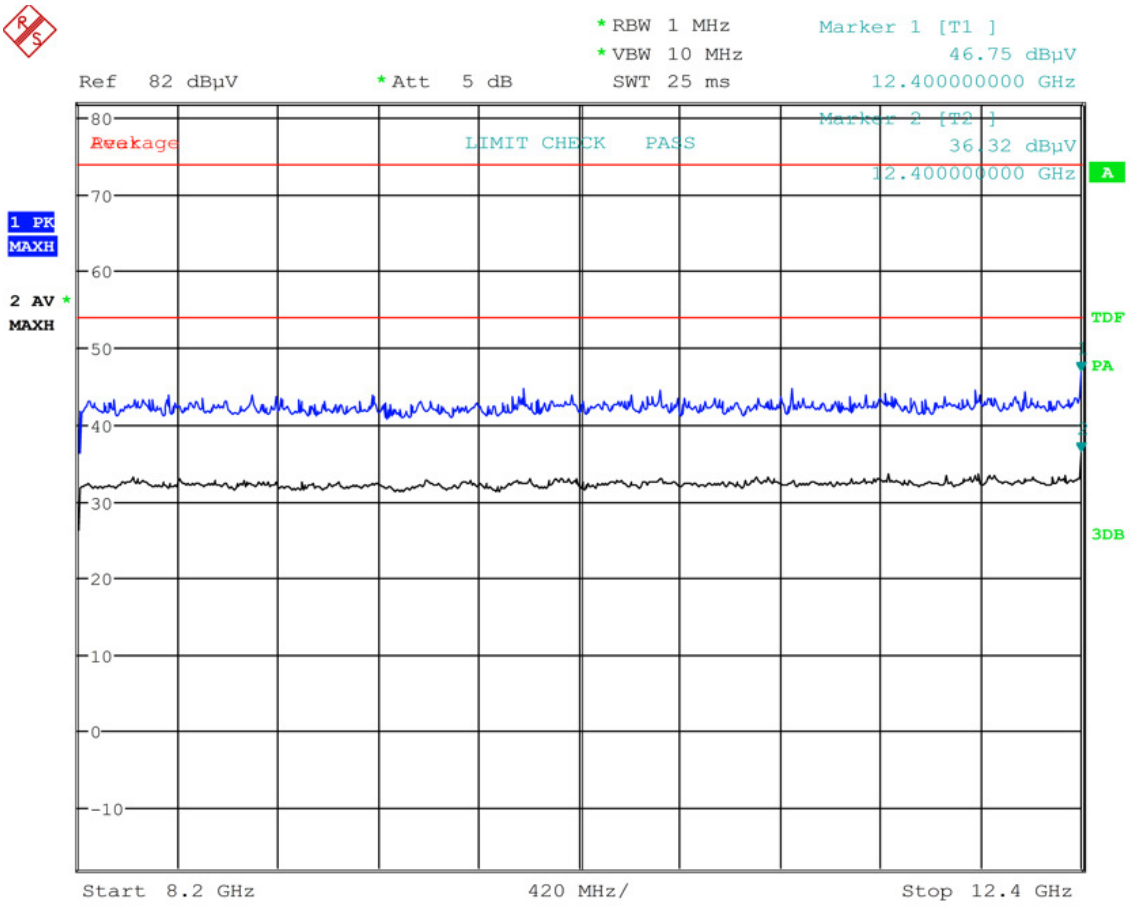
Date: 25.OCT.2015 15:52:41

Plot 6-538: Radiated Emissions 4 GHz – 8 GHz Vertical Peak/Average



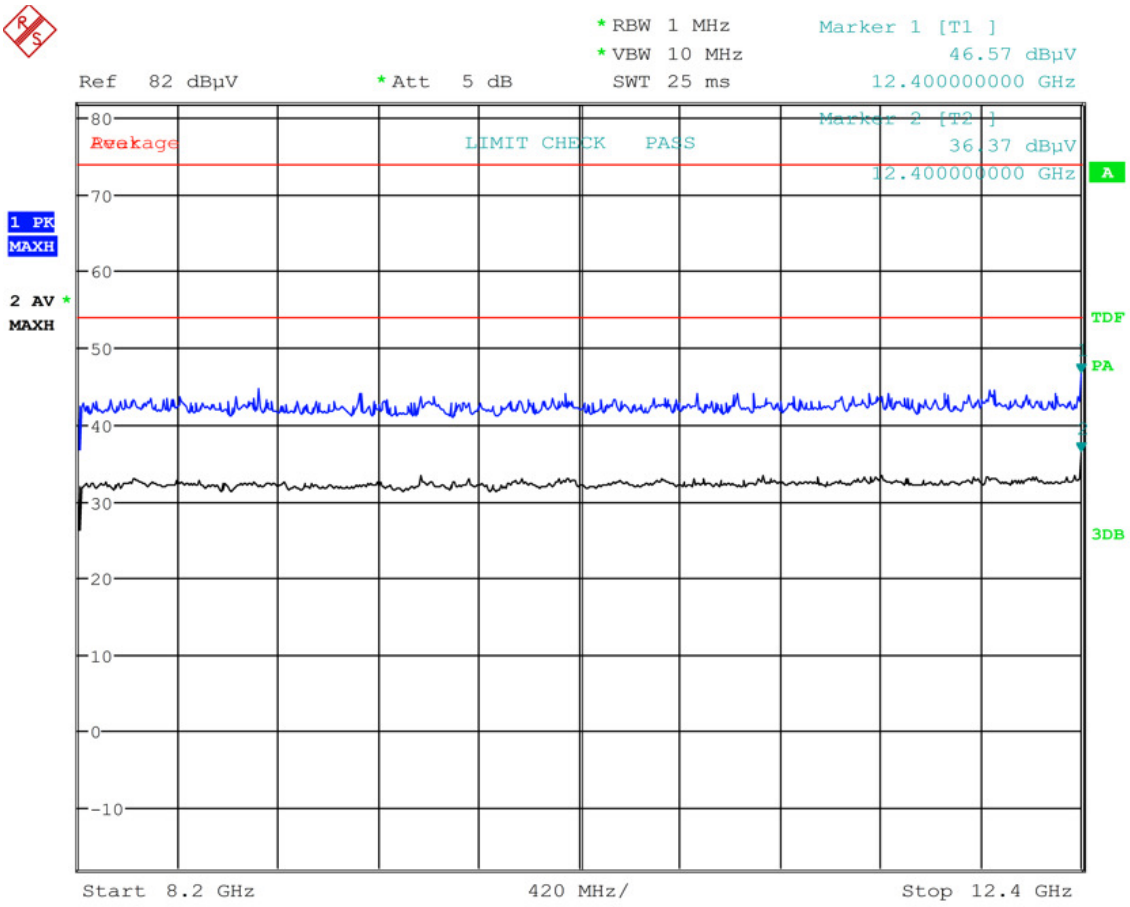
Date: 25.OCT.2015 15:52:22

Plot 6-539: Radiated Emissions 8 GHz – 12 GHz Horizontal Peak/Average



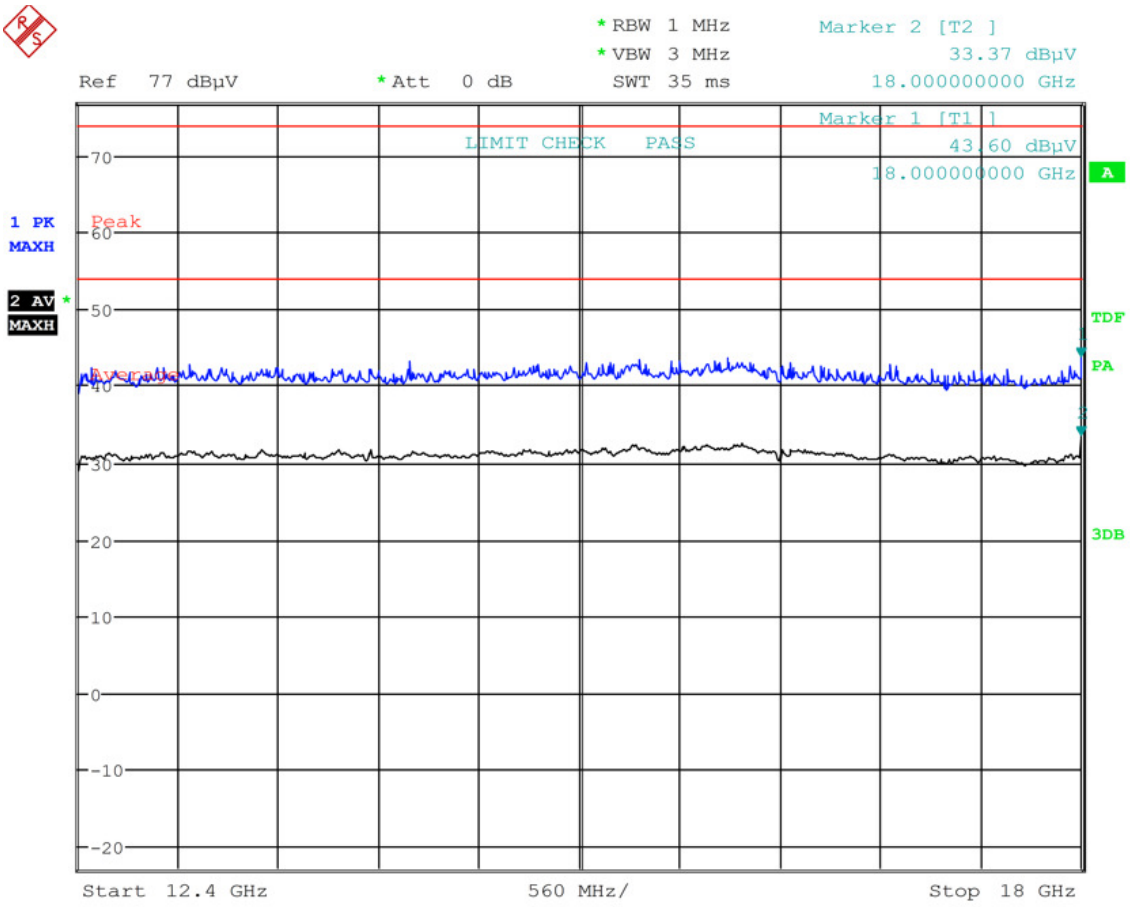
Date: 25.OCT.2015 15:31:37

Plot 6-540: Radiated Emissions 8 GHz – 12 GHz Vertical Peak/Average



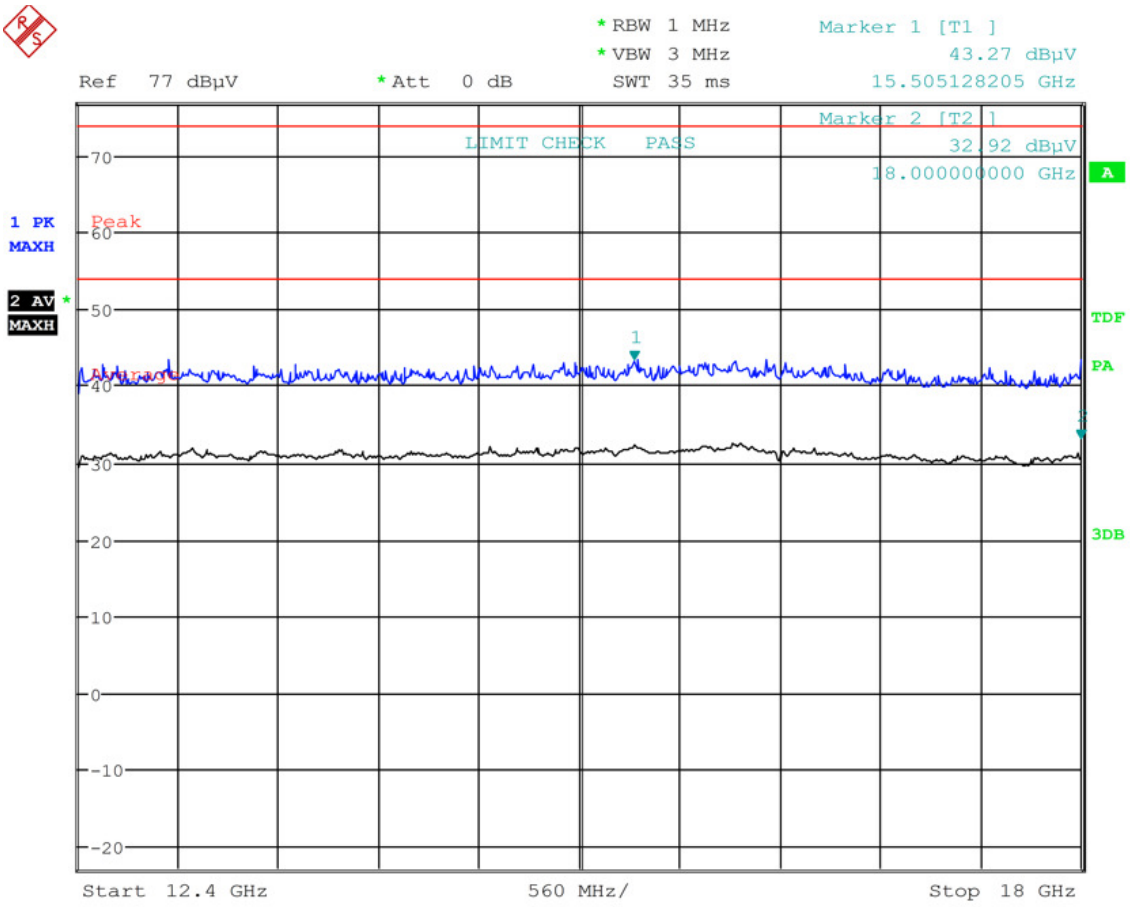
Date: 25.OCT.2015 15:31:19

Plot 6-541: Radiated Emissions 12 GHz – 18 GHz Horizontal Peak/Average



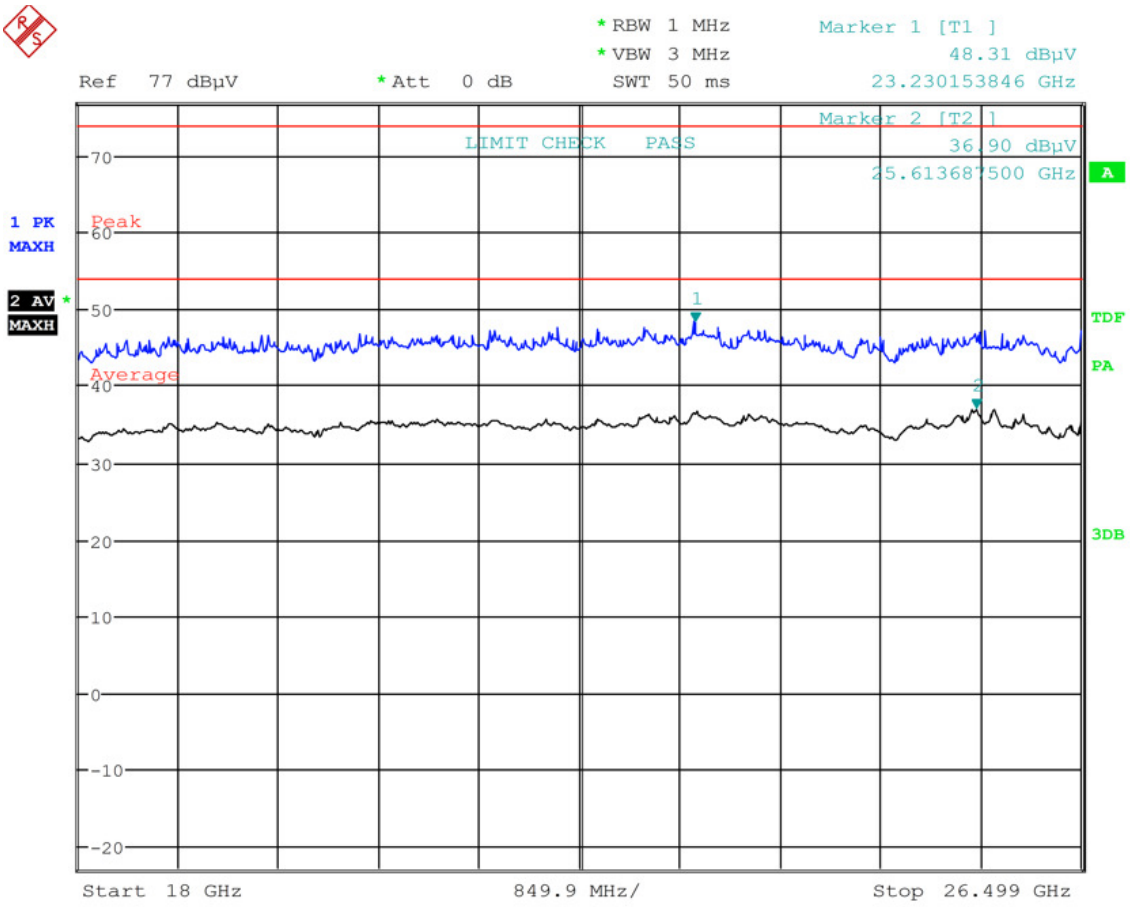
Date: 25.OCT.2015 15:49:46

Plot 6-542: Radiated Emissions 12 GHz – 18 GHz Vertical Peak/Average



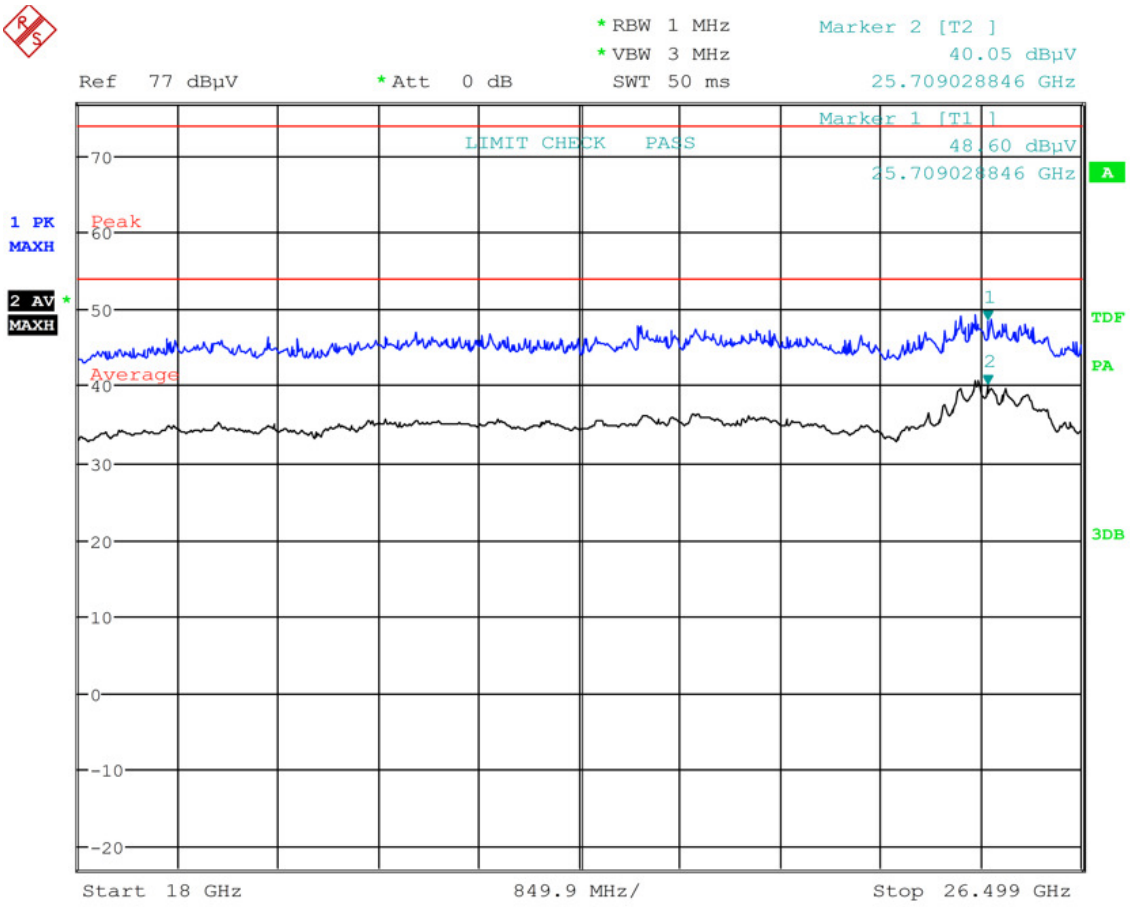
Date: 25.OCT.2015 15:49:24

Plot 6-543: Radiated Emissions 18 GHz – 26 GHz Horizontal Peak/Average



Date: 25.OCT.2015 15:48:07

Plot 6-544: Radiated Emissions 18 GHz – 26 GHz Vertical Peak/Average



Date: 25.OCT.2015 15:48:25

6.3.3.25 Radiated Emissions Carrier Test Data - TC#9 Fiberglass Container

Plot 6-545: Radiated Emissions of Carrier - TC #9 Fiberglass Container

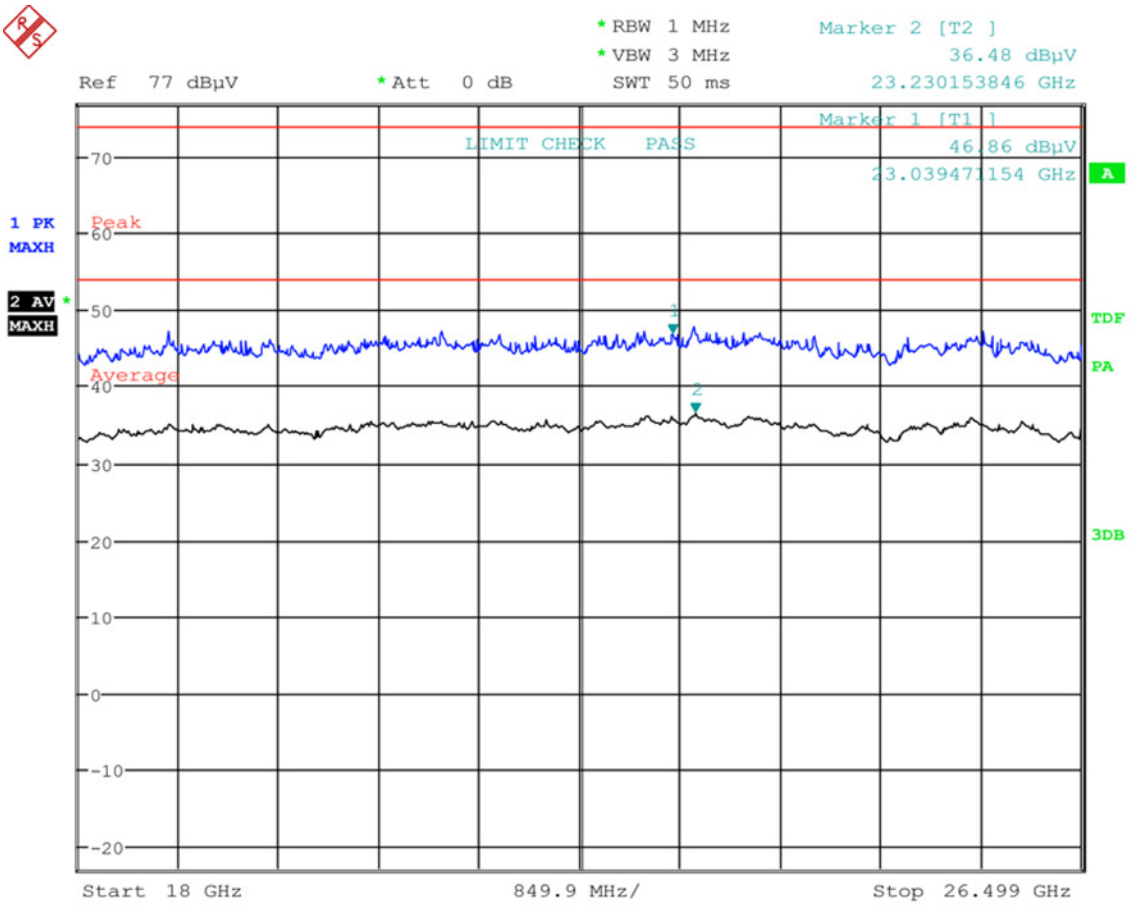
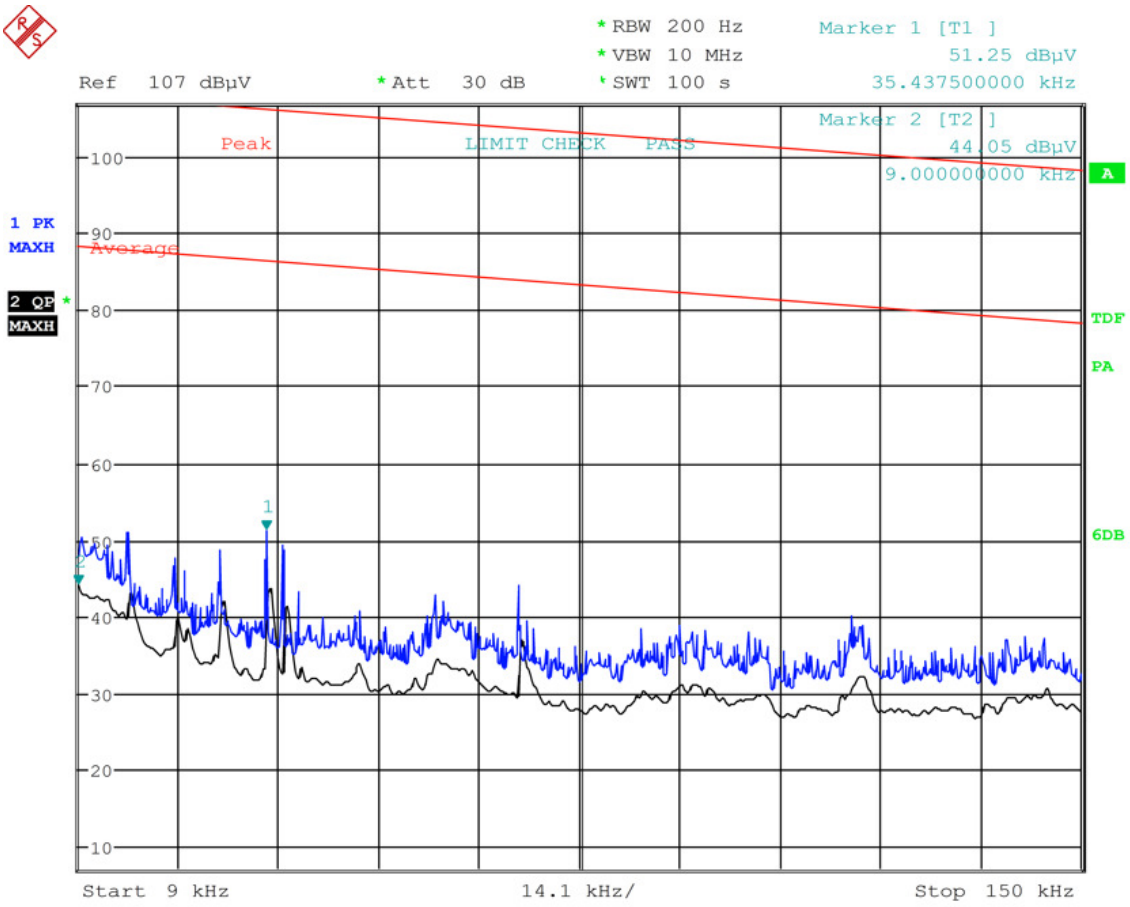


Table 6-27: Radiated Emissions of Carrier – TC #9 Fiberglass Container

Frequency (GHz)	Detector	Test Antenna Pol	Corrected Spectrum Analyzer Level (dBuV/m)	FCC Limit (dBuV)	Margin (dB)	Corrected Spectrum Analyzer Level (dBm/MHz)	IC Limit (dBm/MHz)	Margin (dBm)
22.8251	Peak	V	46.9	74.0	-27.1	NA		
22.8351	Average	V	36.5	54.0	-17.5	-58.7	41.3	17.4

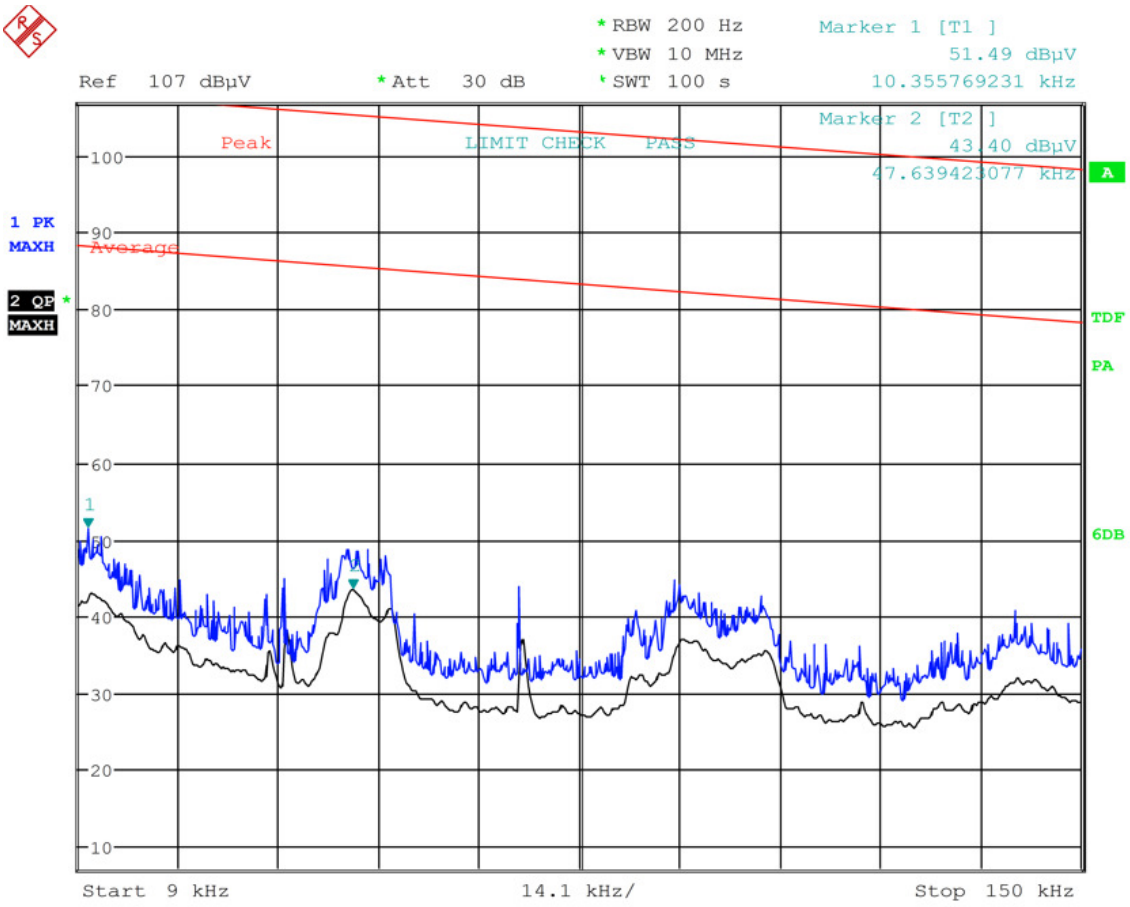
6.3.3.26 Radiated Emissions Below 1 GHz Test Data – TC#9 Fiberglass Container

Plot 6-546: Radiated Emissions Transmit – 9 kHz – 150 kHz Horizontal Peak/Average



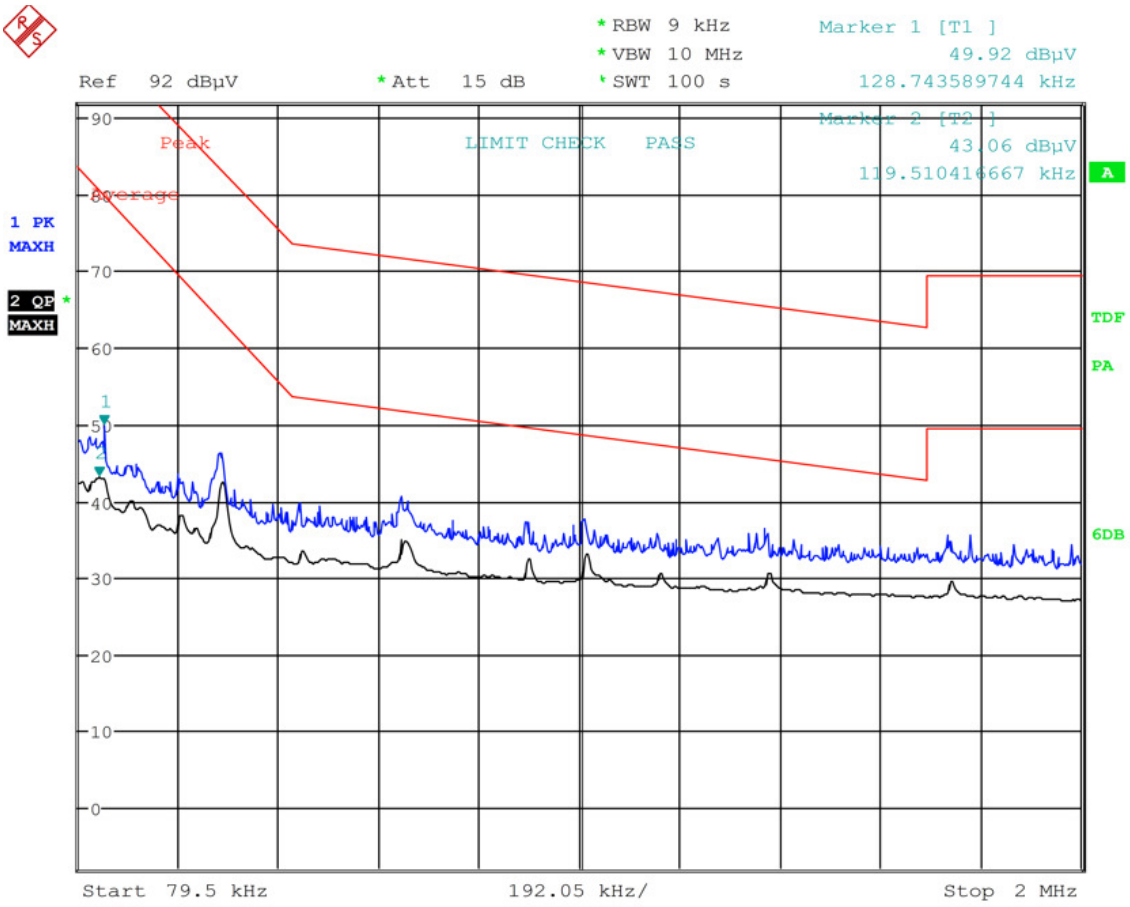
Date: 29.OCT.2015 11:31:19

Plot 6-547: Radiated Emissions Transmit – 9 kHz – 150 kHz Vertical Peak/Average



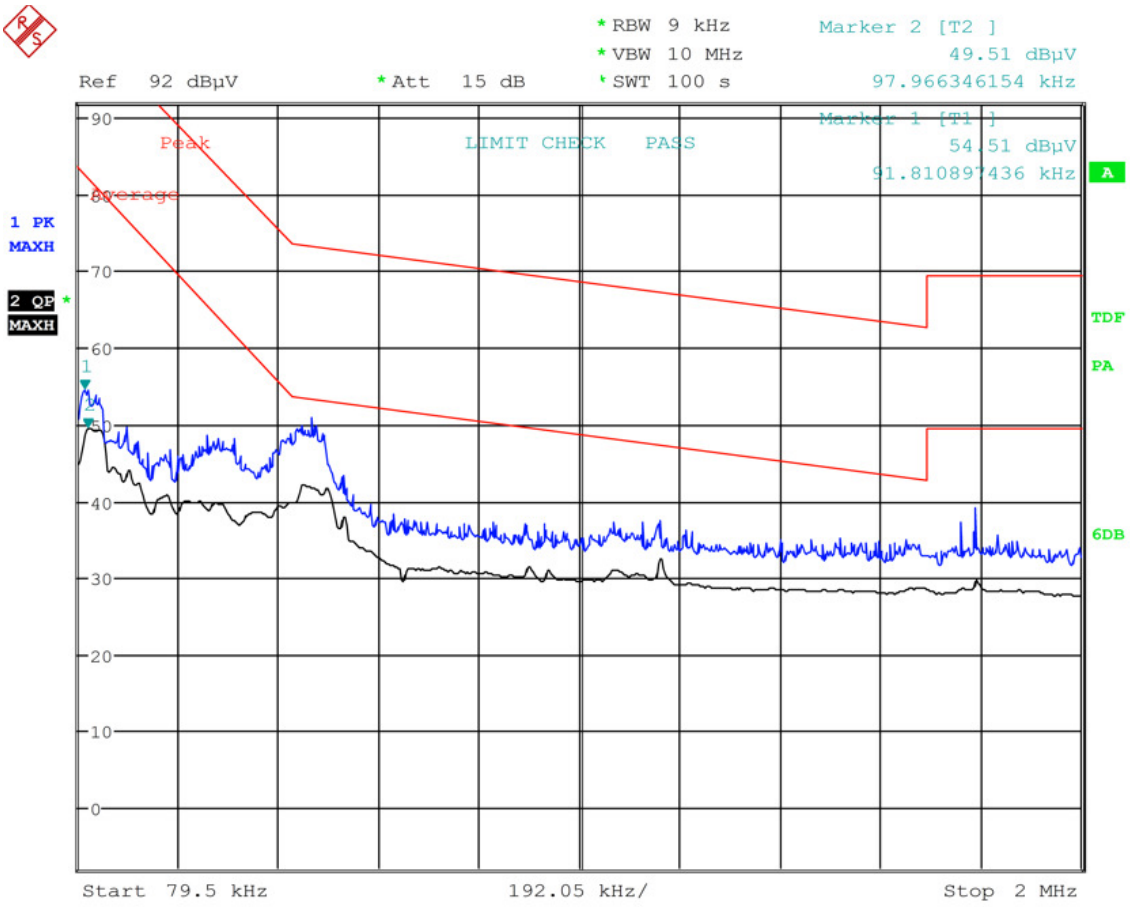
Date: 29.OCT.2015 11:33:31

Plot 6-548: Radiated Emissions Transmit – 150 kHz – 2 MHz Horizontal Peak/Average



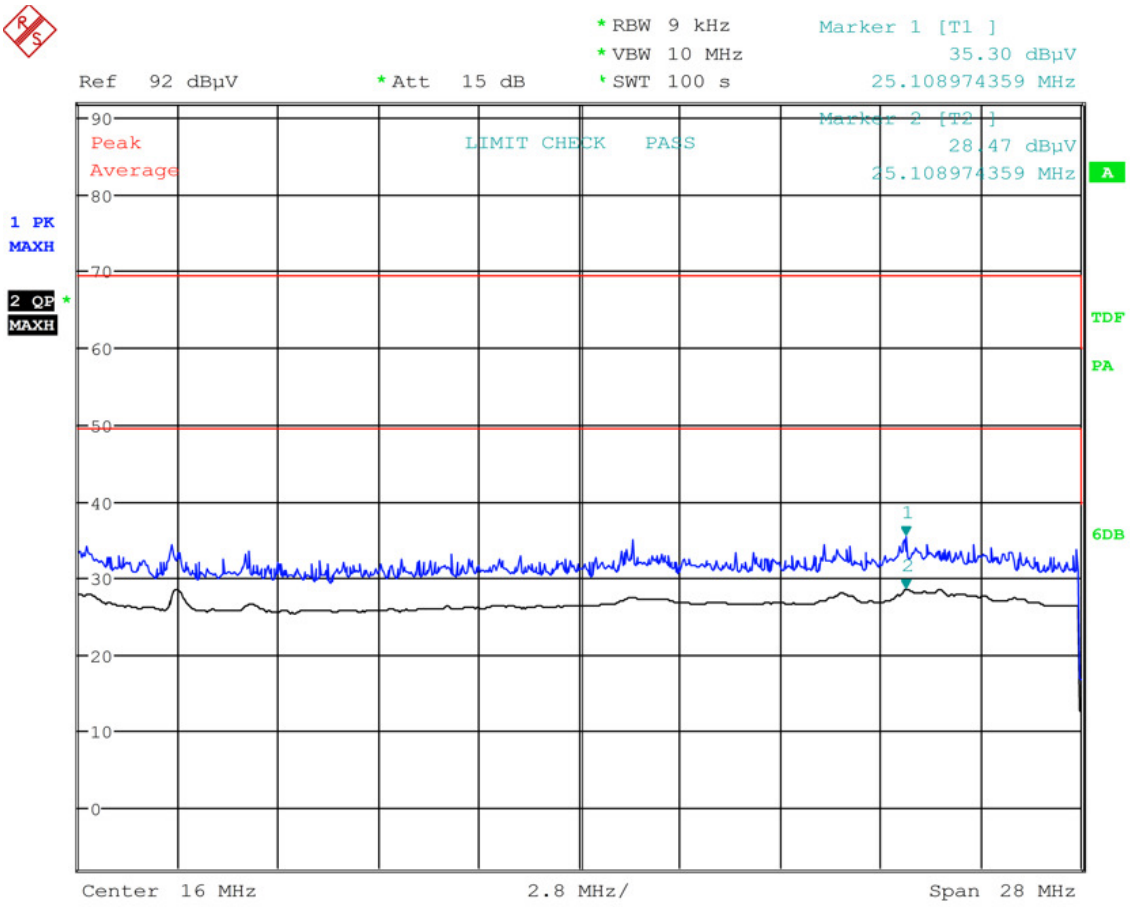
Date: 29.OCT.2015 11:43:06

Plot 6-549: Radiated Emissions Transmit – 150 kHz – 2 MHz Vertical Peak/Average



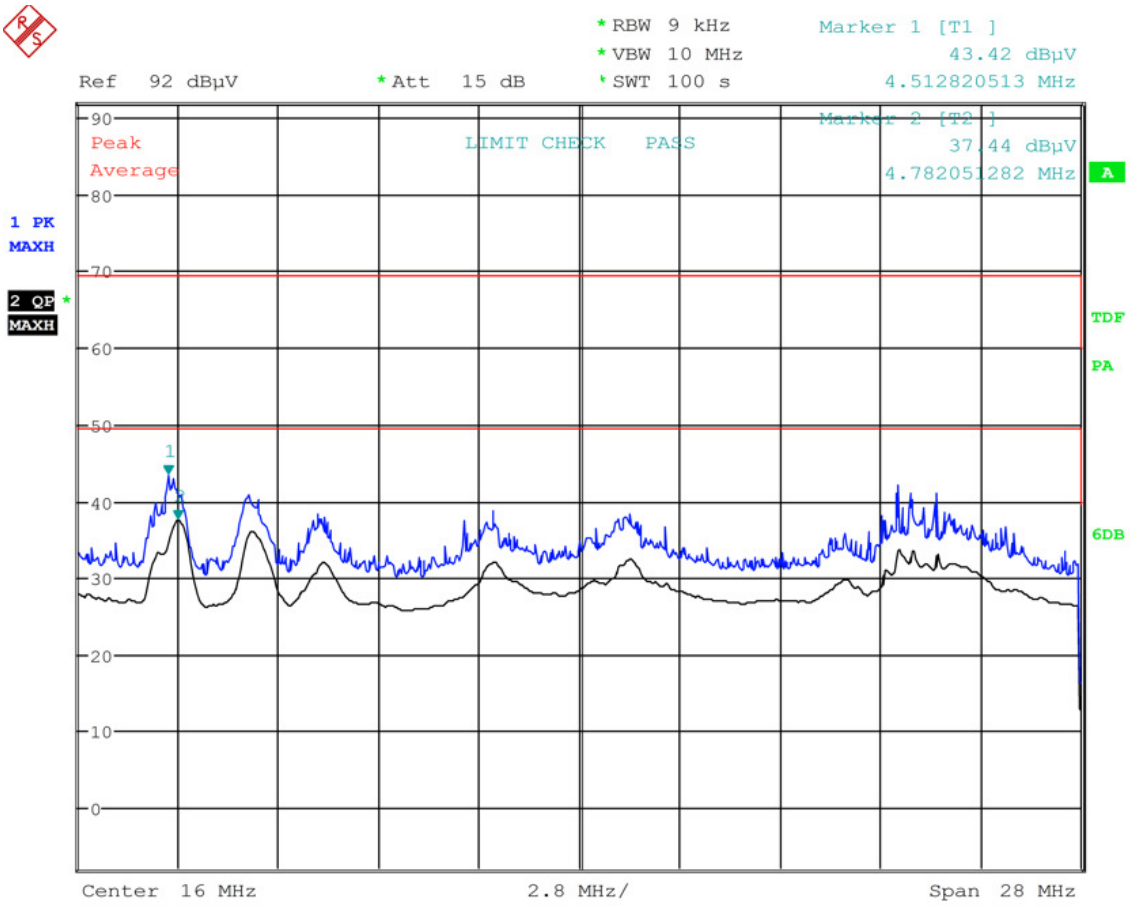
Date: 29.OCT.2015 11:41:02

Plot 6-550: Radiated Emissions Transmit – 2 MHz – 30 MHz Horizontal Peak/Average



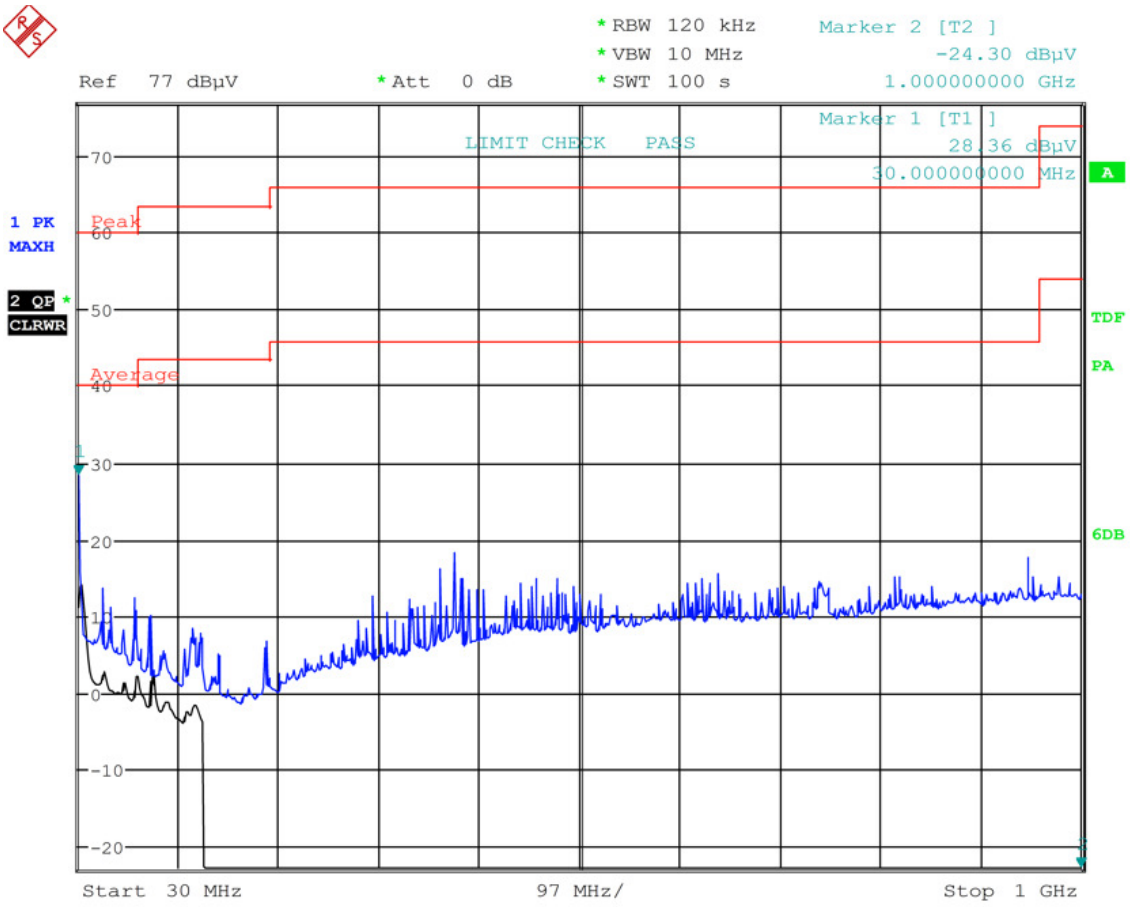
Date: 29.OCT.2015 11:28:37

Plot 6-551: Radiated Emissions Transmit – 2 MHz – 30 MHz Vertical Peak/Average



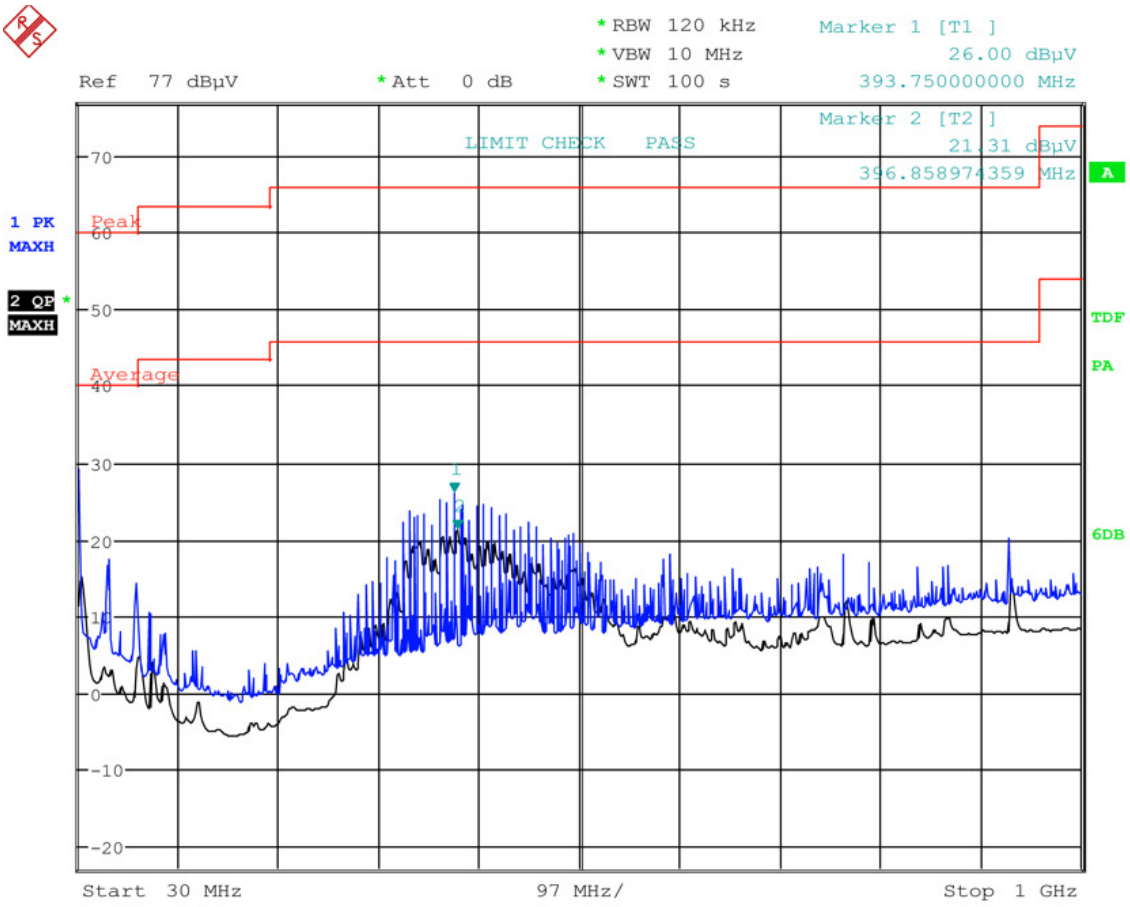
Date: 29.OCT.2015 11:26:34

Plot 6-552: Radiated Emissions Transmit – 30 MHz – 1 GHz Horizontal Peak/Average



Date: 29.OCT.2015 11:16:49

Plot 6-553: Radiated Emissions Transmit – 30 MHz – 1 GHz Vertical Peak/Average

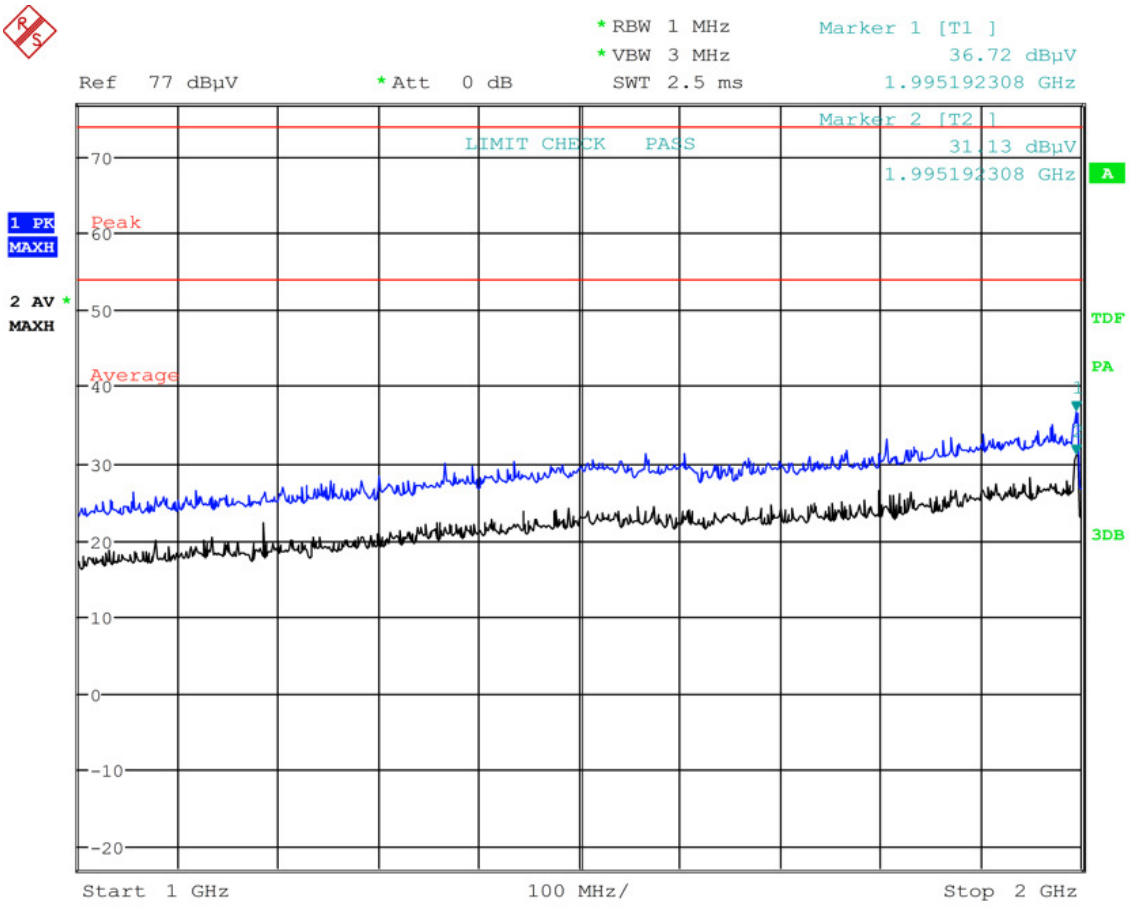


Date: 29.OCT.2015 11:18:58

Note: Unwanted emissions were investigated as a digital device (other than harmonics) as required by 15.33(a)(3).

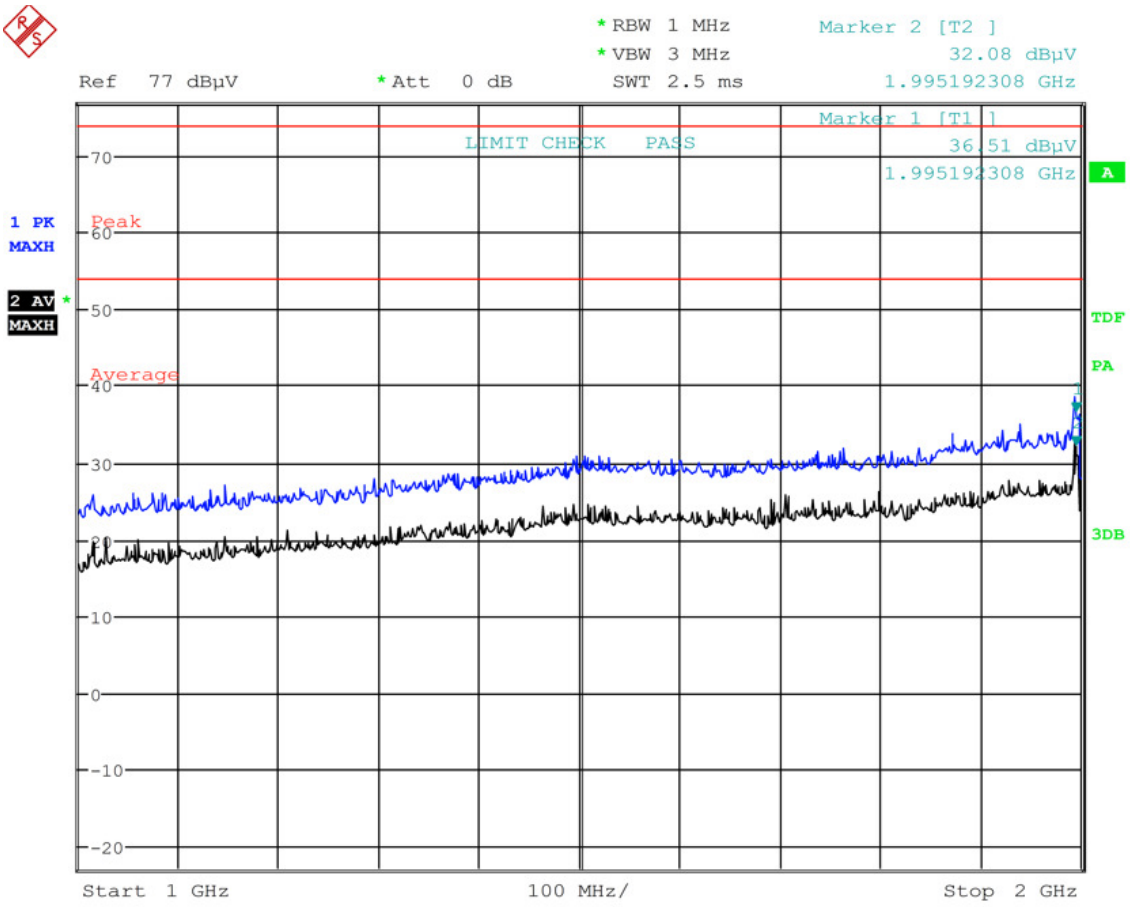
6.3.3.27 Radiated Emissions 1 GHz – 26 GHz Test Data – TC#9 Fiberglass Container

Plot 6-554: Radiated Emissions 1 GHz – 2 GHz Horizontal Peak/Average



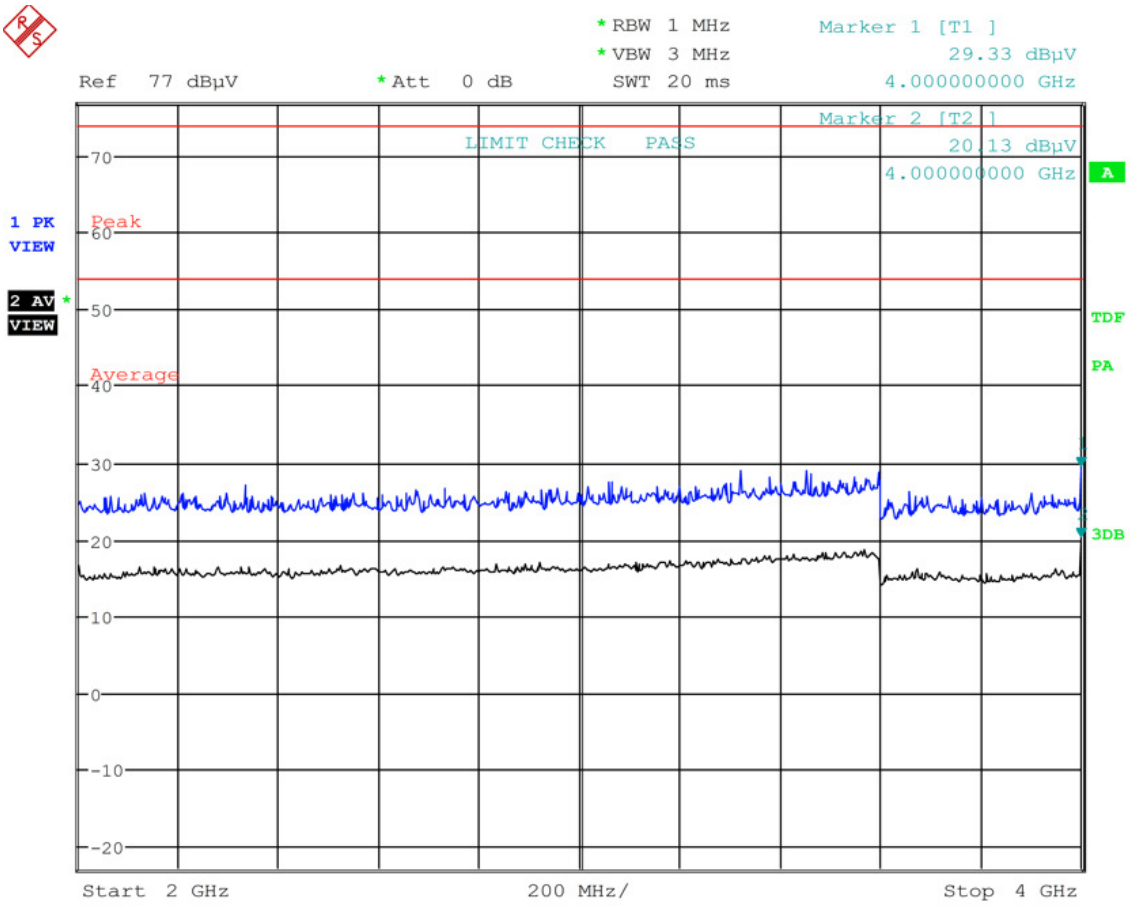
Date: 29.OCT.2015 11:05:08

Plot 6-555: Radiated Emissions 1 GHz – 2 GHz Vertical Peak/Average



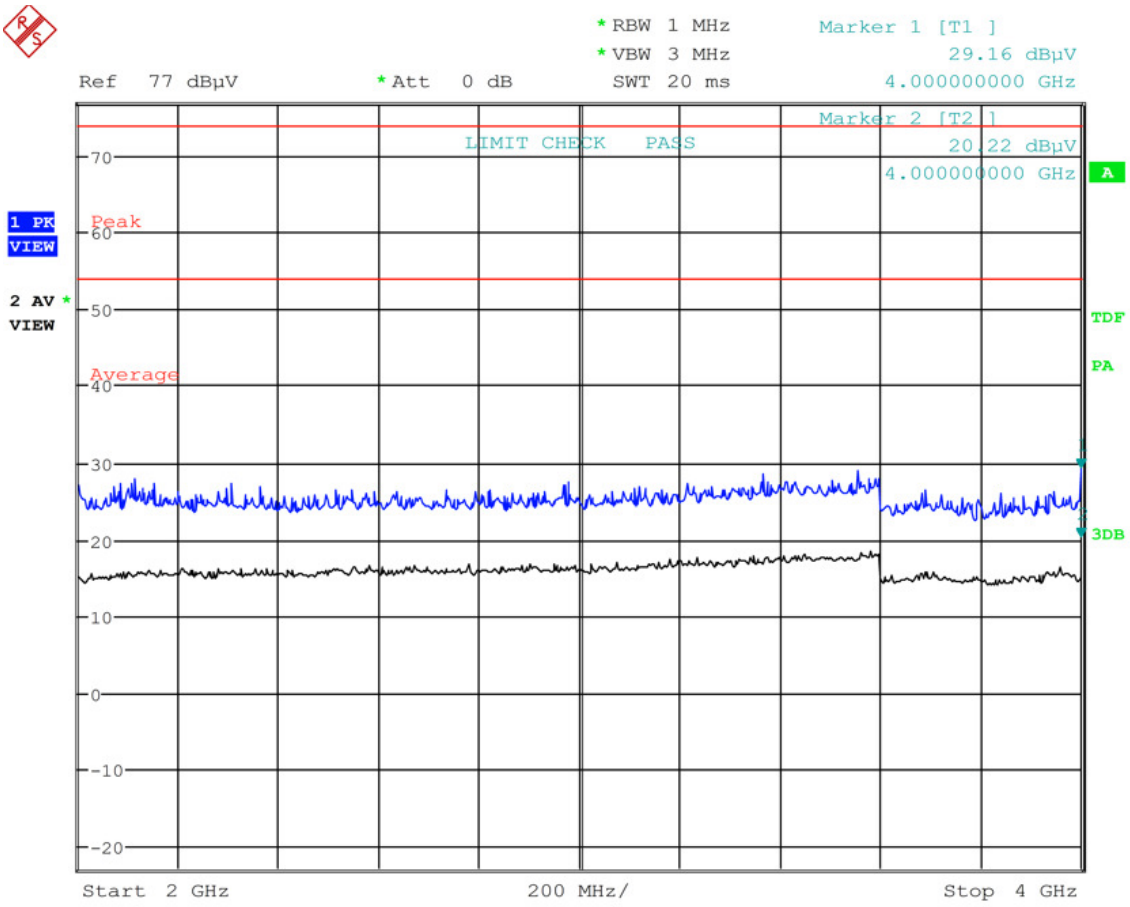
Date: 29.OCT.2015 11:03:50

Plot 6-556: Radiated Emissions 2 GHz – 4 GHz Horizontal Peak/Average



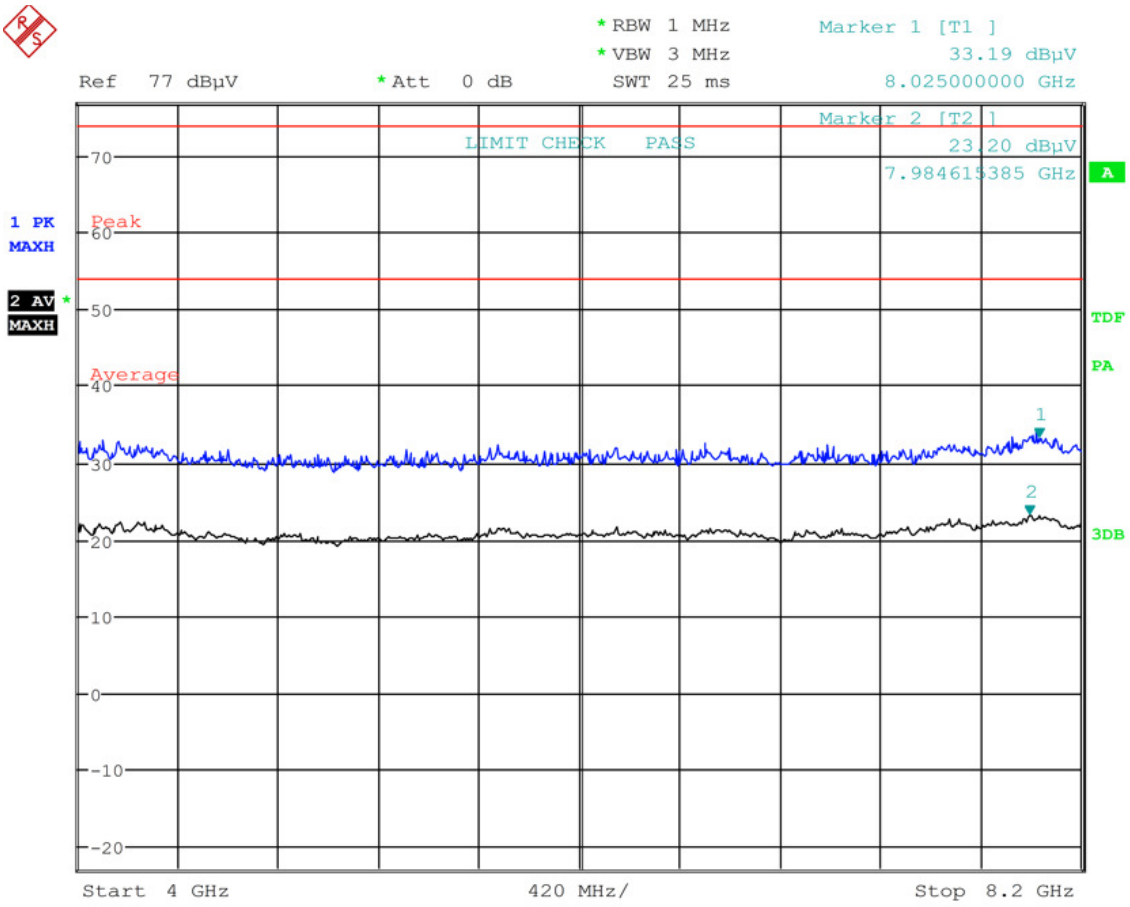
Date: 29.OCT.2015 11:00:07

Plot 6-557: Radiated Emissions 2 GHz – 4 GHz Vertical Peak/Average



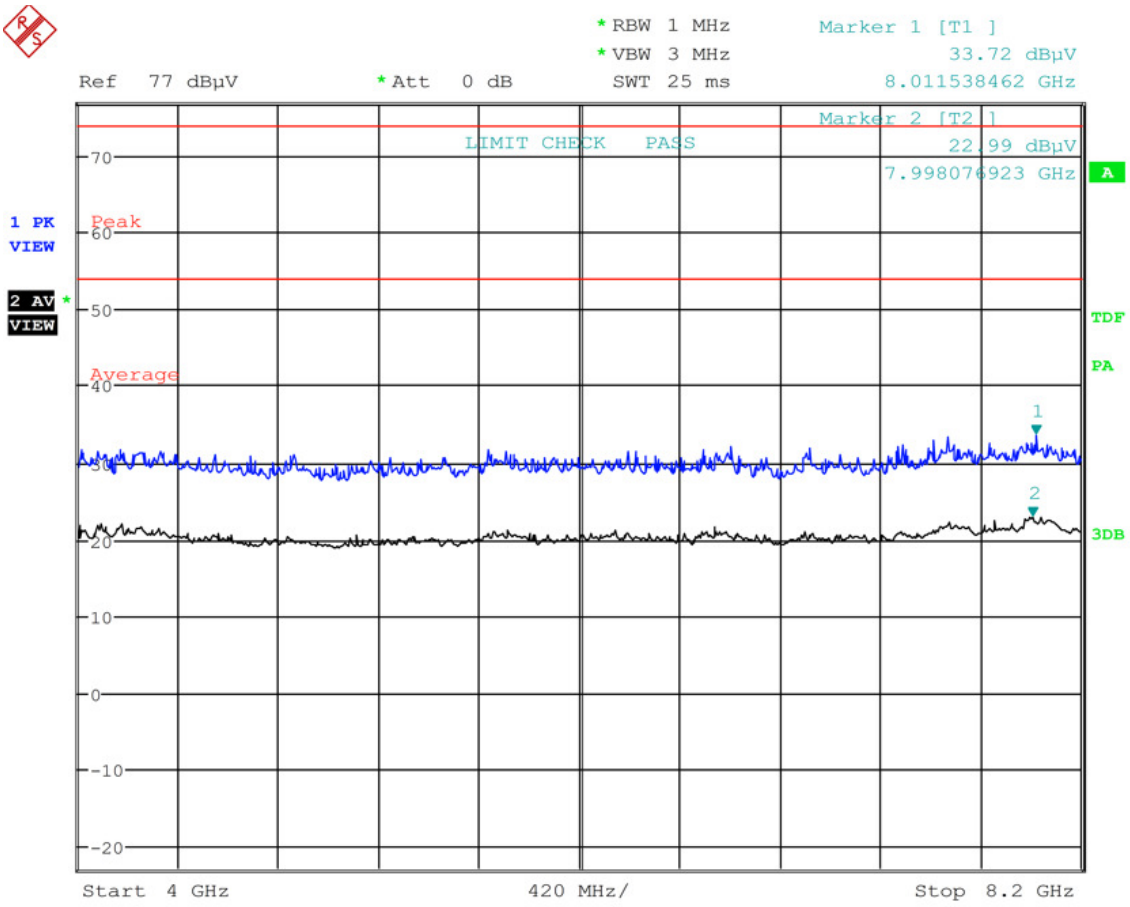
Date: 29.OCT.2015 11:00:41

Plot 6-558: Radiated Emissions 4 GHz – 8 GHz Horizontal Peak/Average



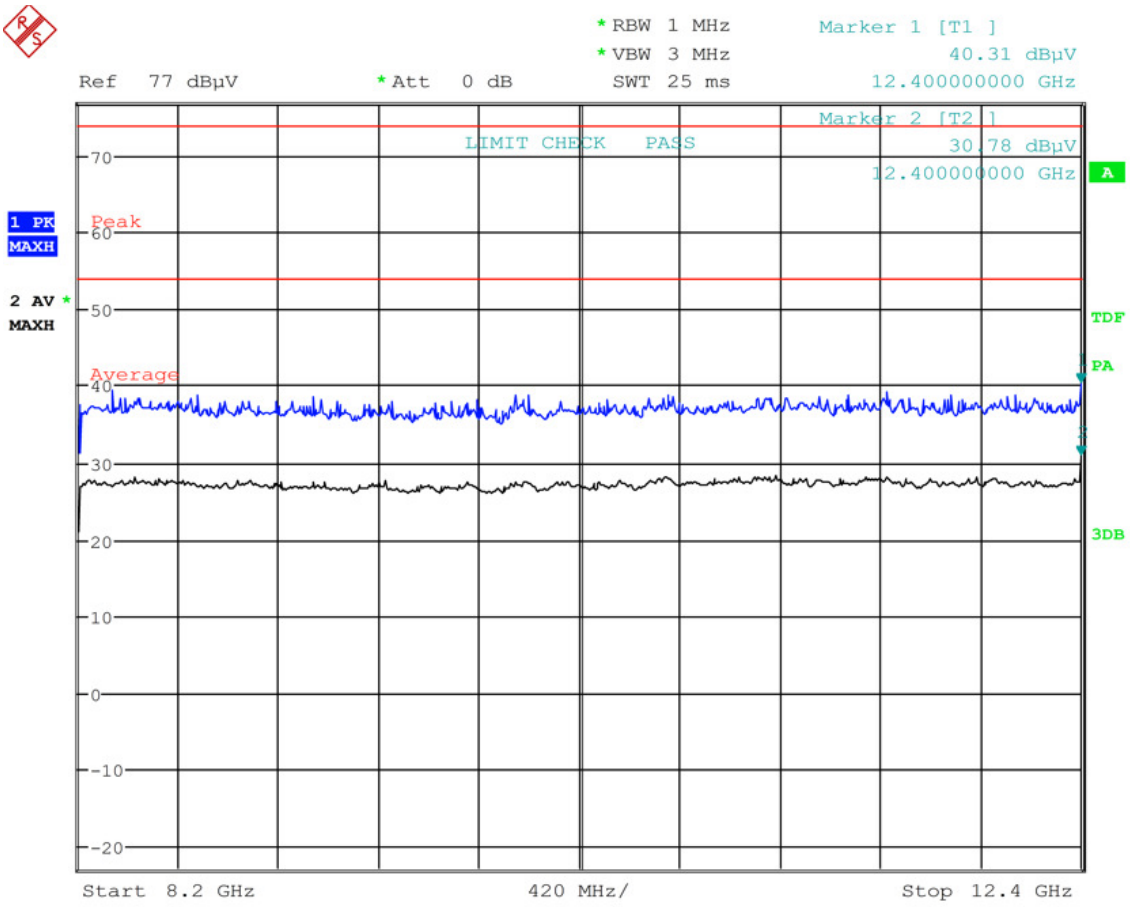
Date: 29.OCT.2015 10:07:55

Plot 6-559: Radiated Emissions 4 GHz – 8 GHz Vertical Peak/Average



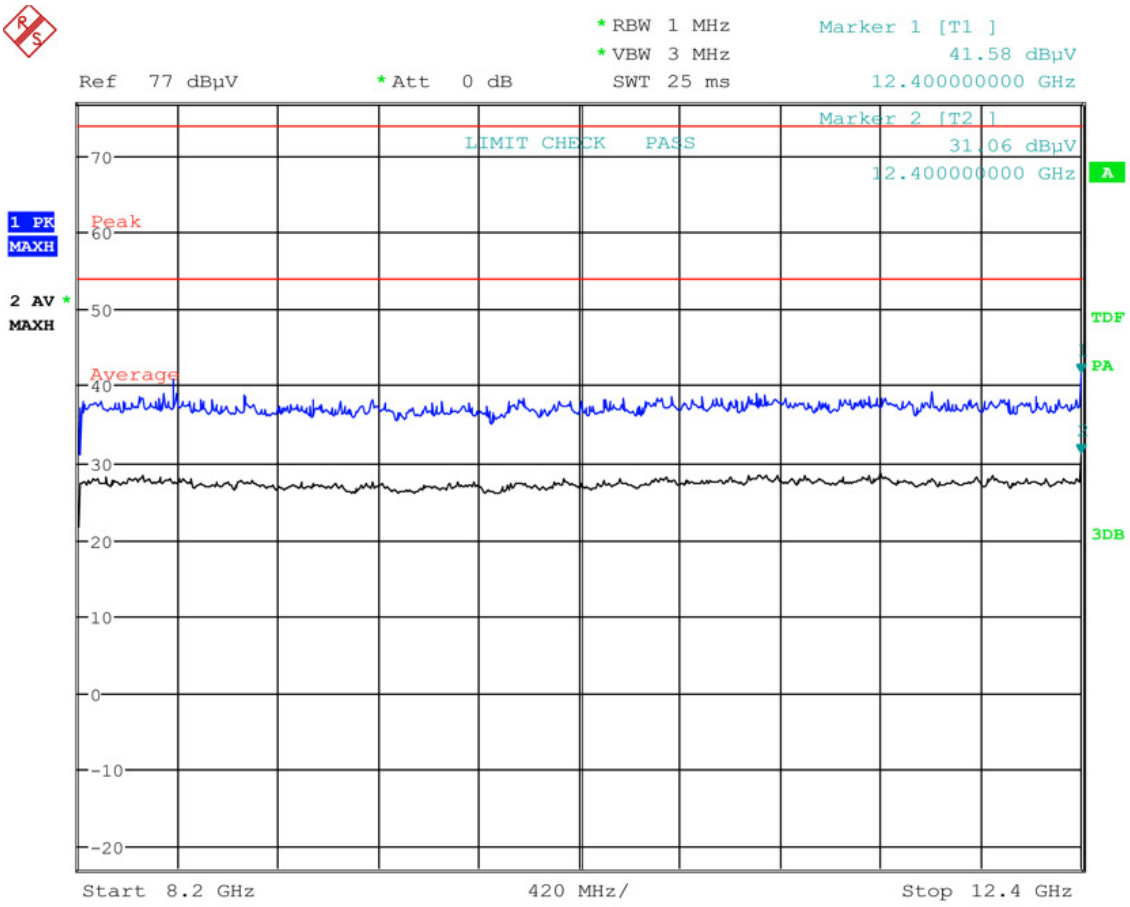
Date: 29.OCT.2015 10:09:16

Plot 6-560: Radiated Emissions 8 GHz – 12 GHz Horizontal Peak/Average



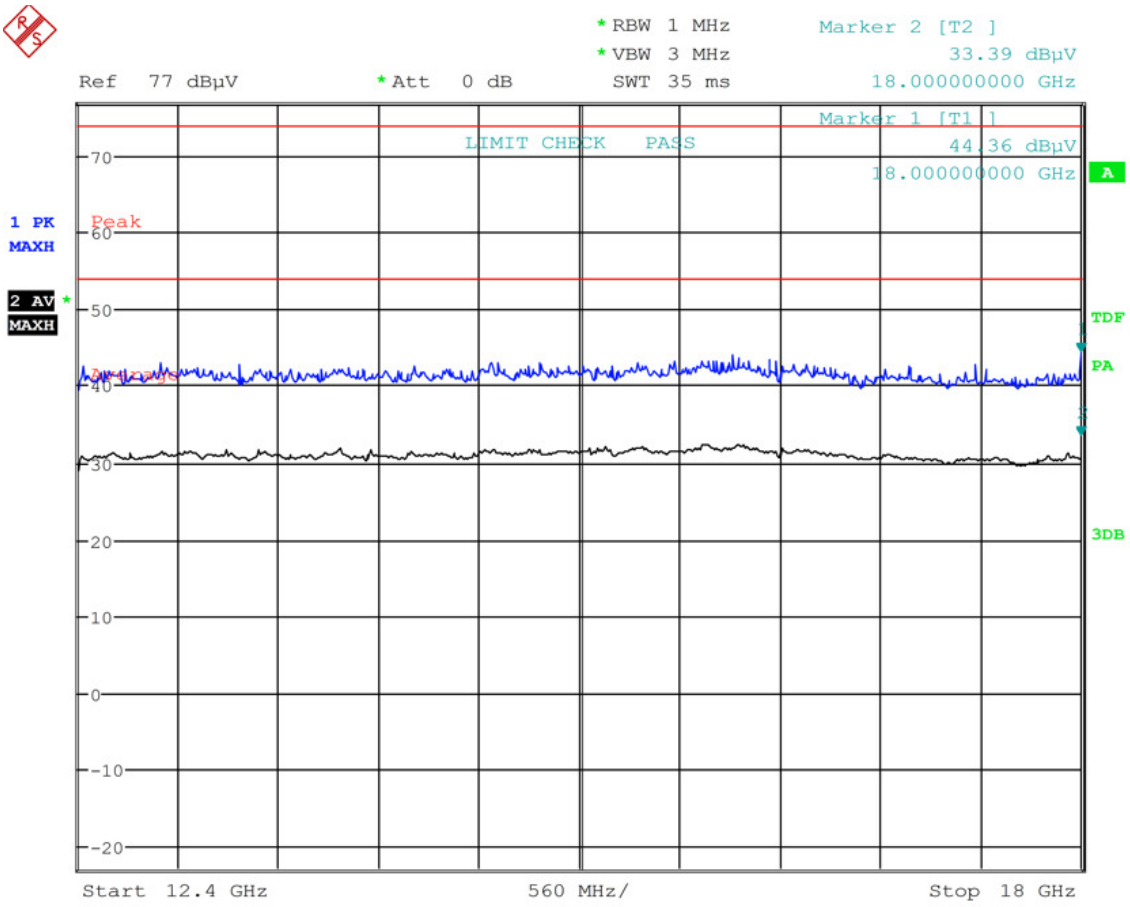
Date: 29.OCT.2015 10:58:46

Plot 6-561: Radiated Emissions 8 GHz – 12 GHz Vertical Peak/Average



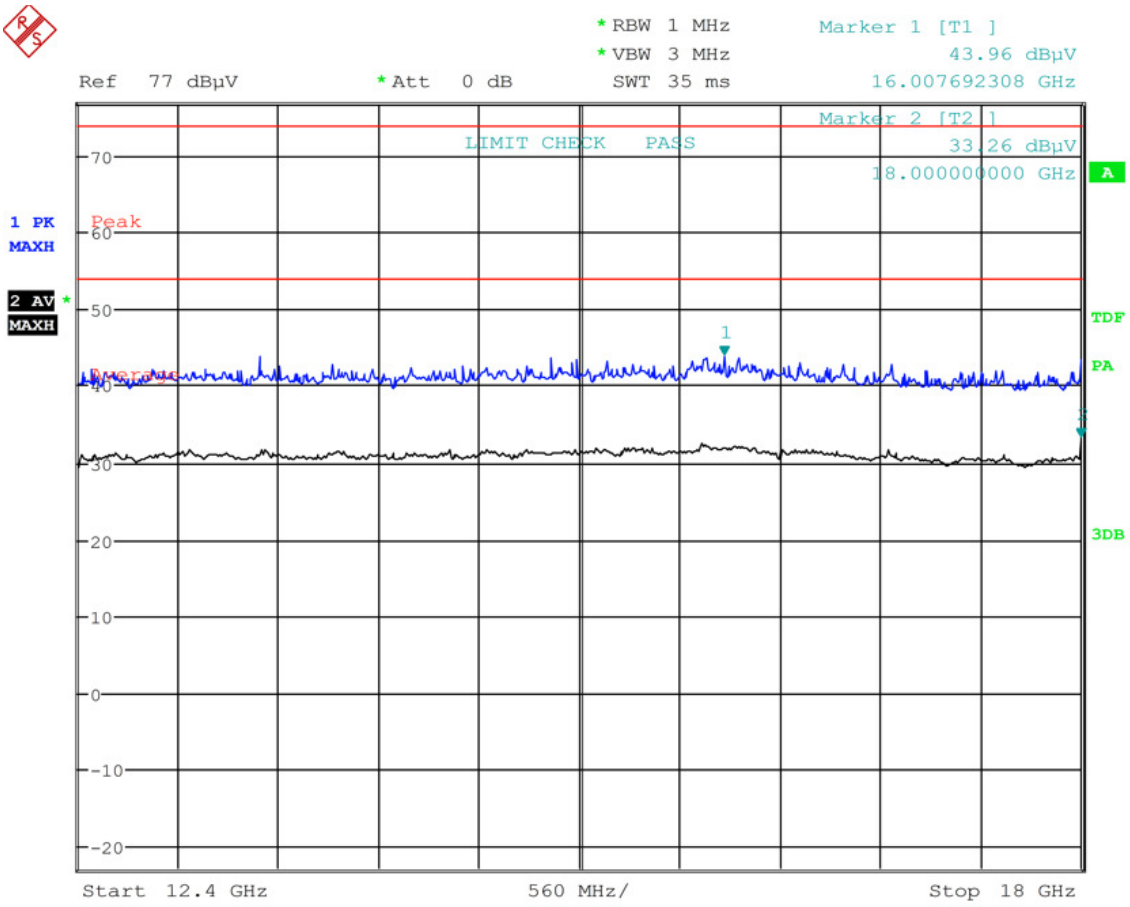
Date: 29.OCT.2015 10:58:31

Plot 6-562: Radiated Emissions 12 GHz – 18 GHz Horizontal Peak/Average



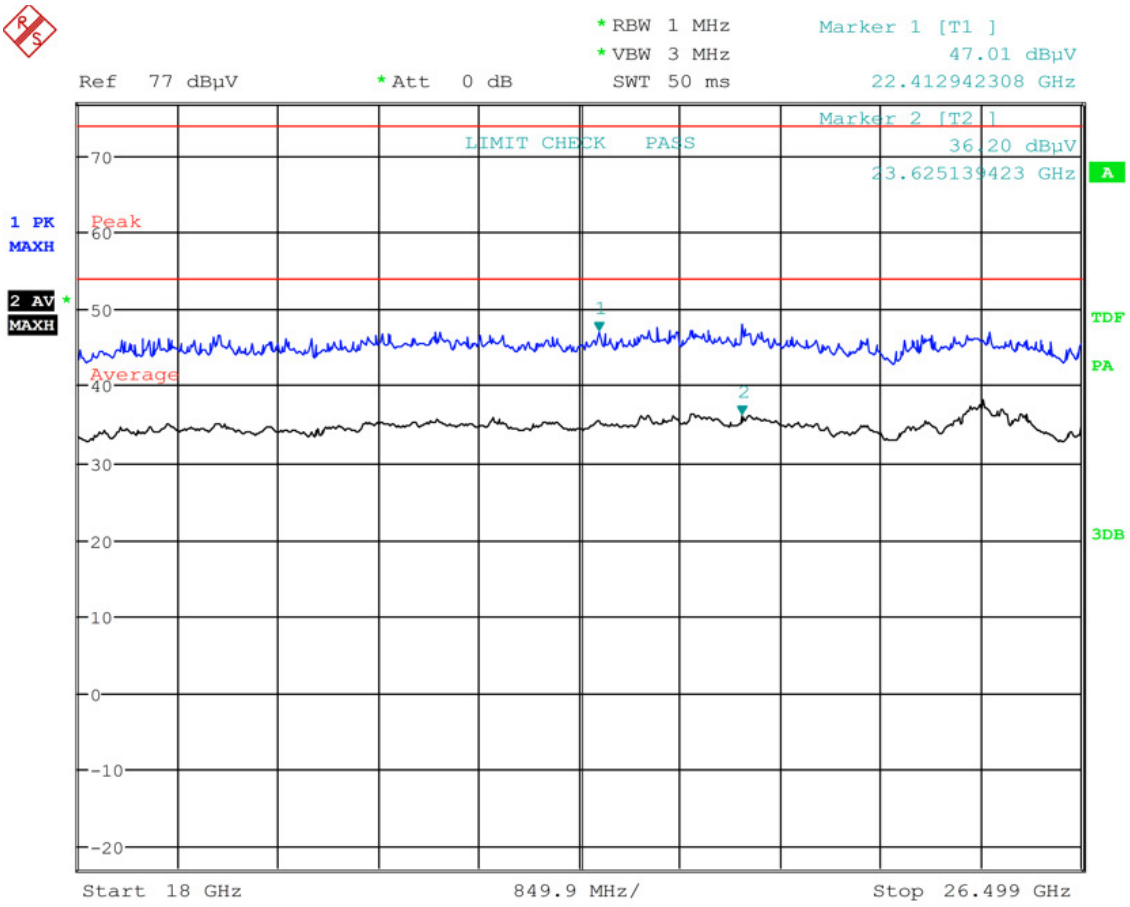
Date: 29.OCT.2015 10:04:05

Plot 6-563: Radiated Emissions 12 GHz – 18 GHz Vertical Peak/Average



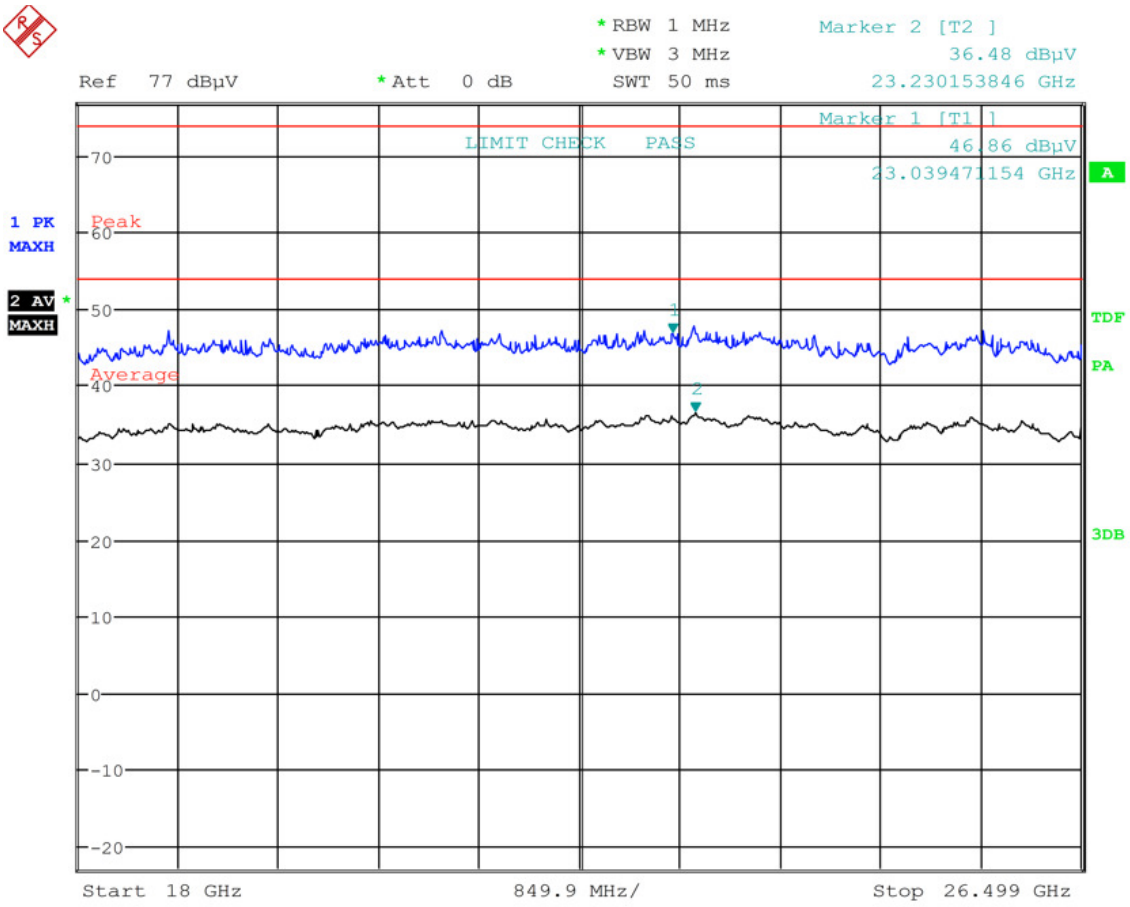
Date: 29.OCT.2015 10:04:26

Plot 6-564: Radiated Emissions 18 GHz – 26 GHz Horizontal Peak/Average



Date: 29.OCT.2015 10:02:34

Plot 6-565: Radiated Emissions 18 GHz – 26 GHz Vertical Peak/Average



Date: 29.OCT.2015 10:02:54

Test Personnel:

Daniel W. Baltzell	Daniel W. Baltzell	October 23 - November 4, 2015
Test Engineer	Signature	Dates of Test

Table 6-28: Radiated Emissions Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901592	Insulated Wire Inc.	KPS-1503-3600-KPR	SMK RF Cables 20'	NA	12/3/15
901593	Insulated Wire Inc.	KPS-1503-360-KPR	SMK RF Cables 36"	NA	12/3/15
901594	Insulated Wire Inc.	KPS-1503-360-KPR	SMK RF Cables 36"	NA	12/3/15
900932	Hewlett Packard	8449B OPT H02	Preamplifier (1 - 26.5 GHz)	3008A00505	12/5/15
900151	Rohde and Schwarz	HFH2-Z2	Loop Antenna, (9 kHz - 30 MHz)	827525/019	12/4/17
900717	Hewlett Packard	11970U	Harmonic Mixer (40 – 60 GHz)	2332A01110	4/20/17
901639	Wiltron	35WR19F	Waveguide (40 – 50 GHz)	N/A	12/18/15
901640	Rohde & Schwarz	FS-Z110	Mixer (75 – 110 GHz)	100010	4/02/17
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	12/13/15
901586	Rohde & Schwarz	FS-Z75	Harmonic Mixer (50 – 75 GHz)	100098	1/23/17
901256	ATM	19-443-6R	Horn Antenna (40-60 GHz, WR-19)	8041704-01	1/23/16
901303	EMCO	3160-10	Horn Antenna (26.5-40.0 GHz) WR-28	960452-007	12/19/15
901161	ATM	28-25K-6	Waveguide (26.5 – 40 GHz)	B082304	Not required
900711	ATM	10-443-6R	Horn Antenna (75 - 110 GHz)	8051905-1	12/5/15
900712	ATM	15-443-6R	Horn Antenna (50 - 75 GHz)	8051805-1	3/16/16
900724	Antenna Research Associates, Inc.	LPB-2520	BiLog Antenna (25 - 2000 MHz)	1037	4/19/17
901629	Teledyne Cougar	A4C2123	Amplifier	003-003	9/5/16
900772	EMCO	3161-02	Horn Antenna (2 - 4 GHz)	9804-1044	4/20/17
900321	EMCO	3161-03	Horn Antenna (4.0 - 8.2 GHz)	9508-1020	4/20/17
901587	Radiometer Physics GMBH	SAM-220	140-220 GHz Mixer	20005	2/13/17
900713	ATM	05-443-6R	Horn Antenna, 140-220	S0685	12/20/15
900323	EMCO	3160-07	Horn Antenna (8.2 - 12.4 GHz)	9605-1054	4/20/17
900356	EMCO	3160-08	Horn Antenna (12.4 - 18 GHz)	9607-1044	4/20/17
901218	EMCO	3160-09	Horn Antenna (18 - 26.5 GHz)	960281-003	4/19/17
900874	Continental Microwave & Tool	RA42-K-F-4B-C	Waveguide (18 - 26.5 GHz)	990706-002	1/23/16

7 Conclusion

The data in this measurement report shows that the Vega Grieshaber KG, Inc., Model PS60K, FCC ID: O6QPS60XK2, IC: 3892A-PS60XK2, complies with all the requirements of Parts 2 and 15 of the FCC Rules and Regulations and ISED RSS-211.

The EUT complied with FCC's and ISED limits in all configurations (steel, concrete and fiberglass tanks) with the worst-case radiated emissions occurring in configurations TC #7 steel tank, TC #9 concrete tank, and TC#1 fiberglass tank were tested with the main beam pointing perpendicularly downwards within the enclosed steel and concrete containers.

A swivel attached to the EUT housing and installed inside the enclosed steel tank (TC #2), the enclosed concrete (TC #2) tank, and the enclosed fiberglass (TC #2) tank were also investigated and tested. There were no radiated emissions detected with the swivel attached to the EUT in configurations TC #2 steel tank, TC # 2 concrete tank, and TC #2 fiberglass tank. The worst-case radiated emissions remained the same for all three configurations.