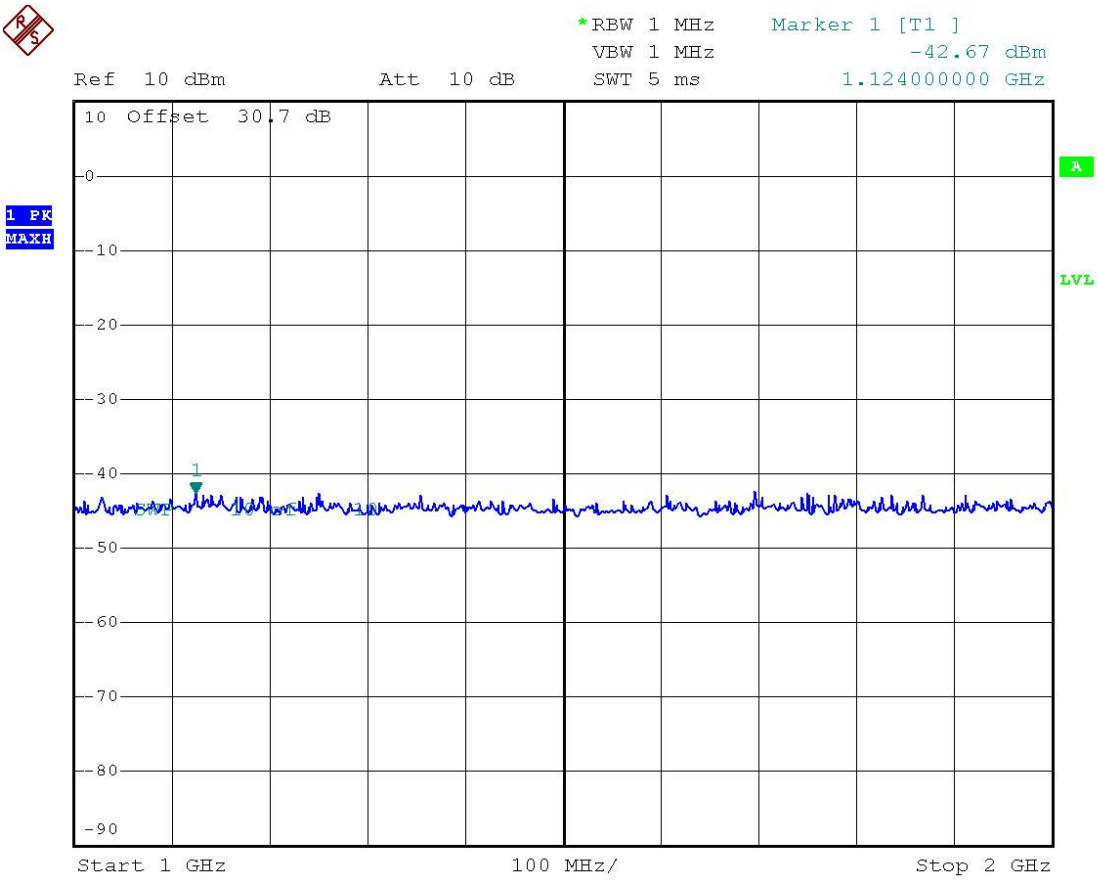
5.6.8.9.2 1 GHz ~ 2 GHz

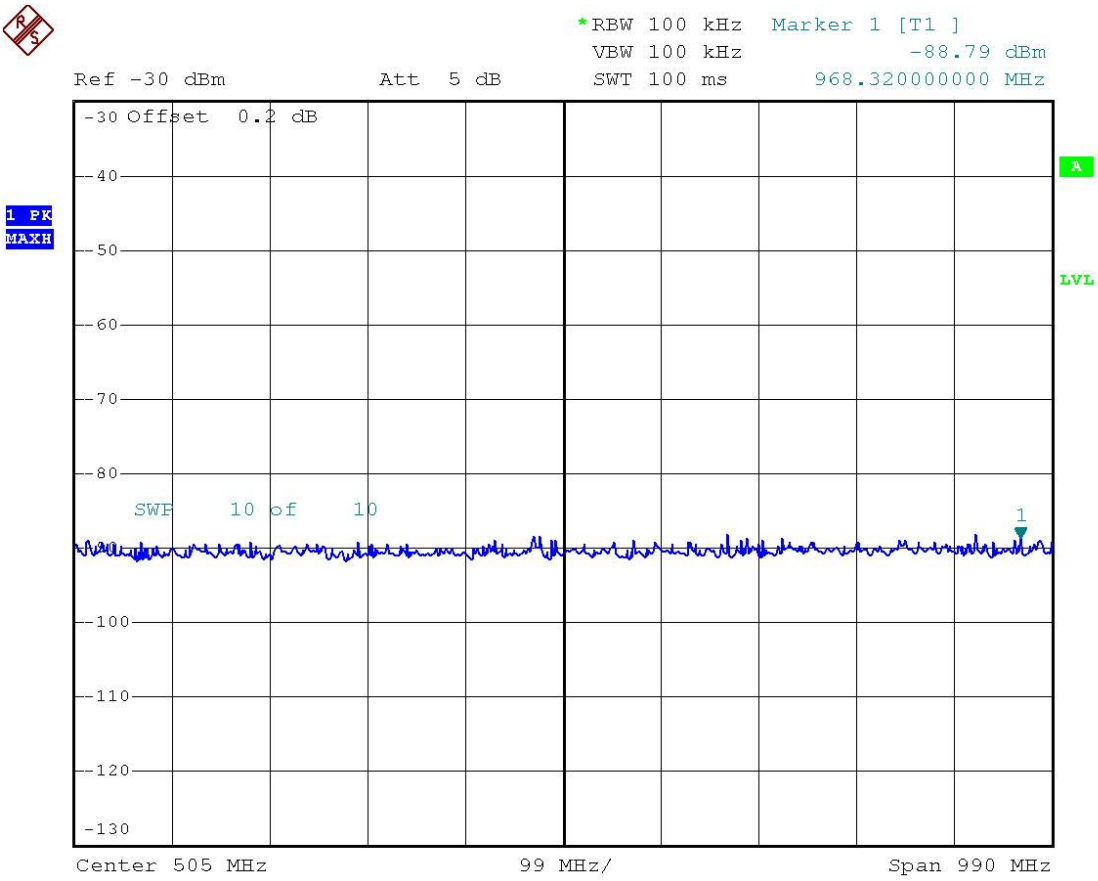


Date: 20.AUG.2009 17:10:14

5.6.8.10 1st Channel

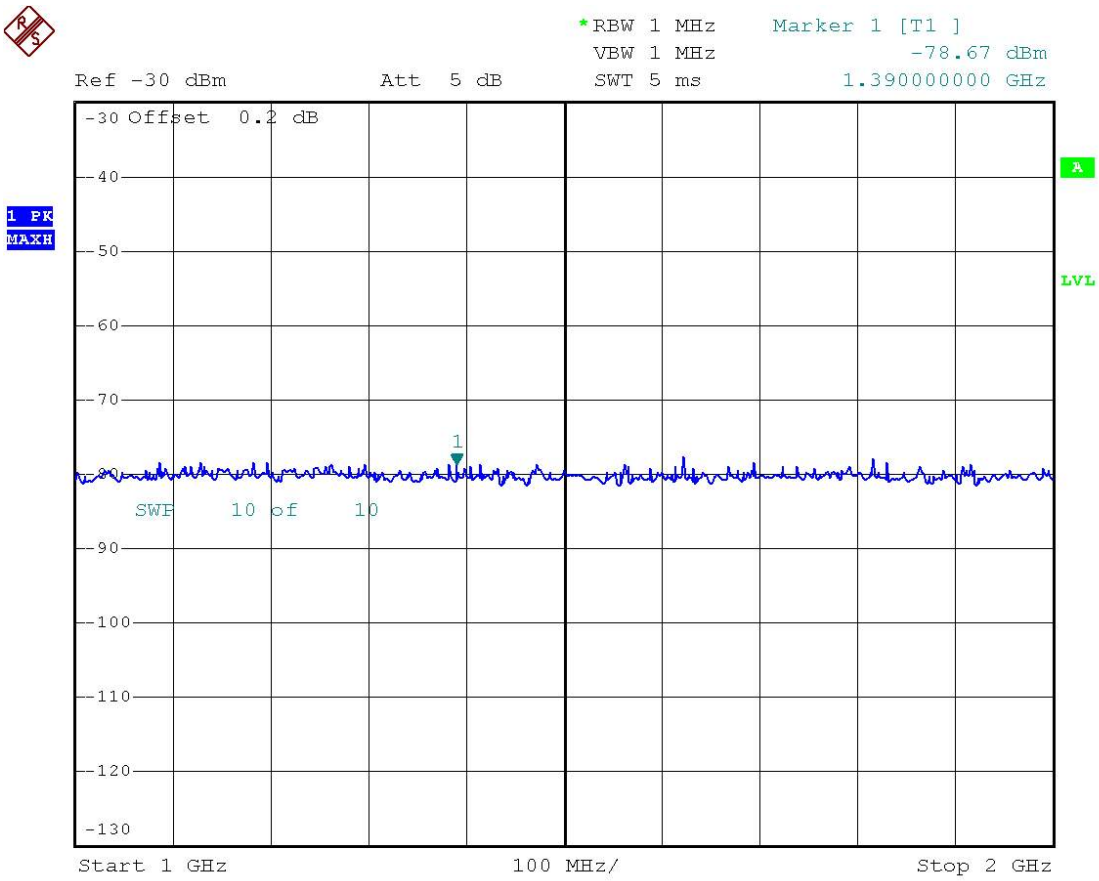
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	Stand-By
Channel Spacing :	NarrowBand
Reference Voltage :	13.8 VDC

5.6.8.10.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:17:02

5.6.8.10.2 1 GHz ~ 2 GHz

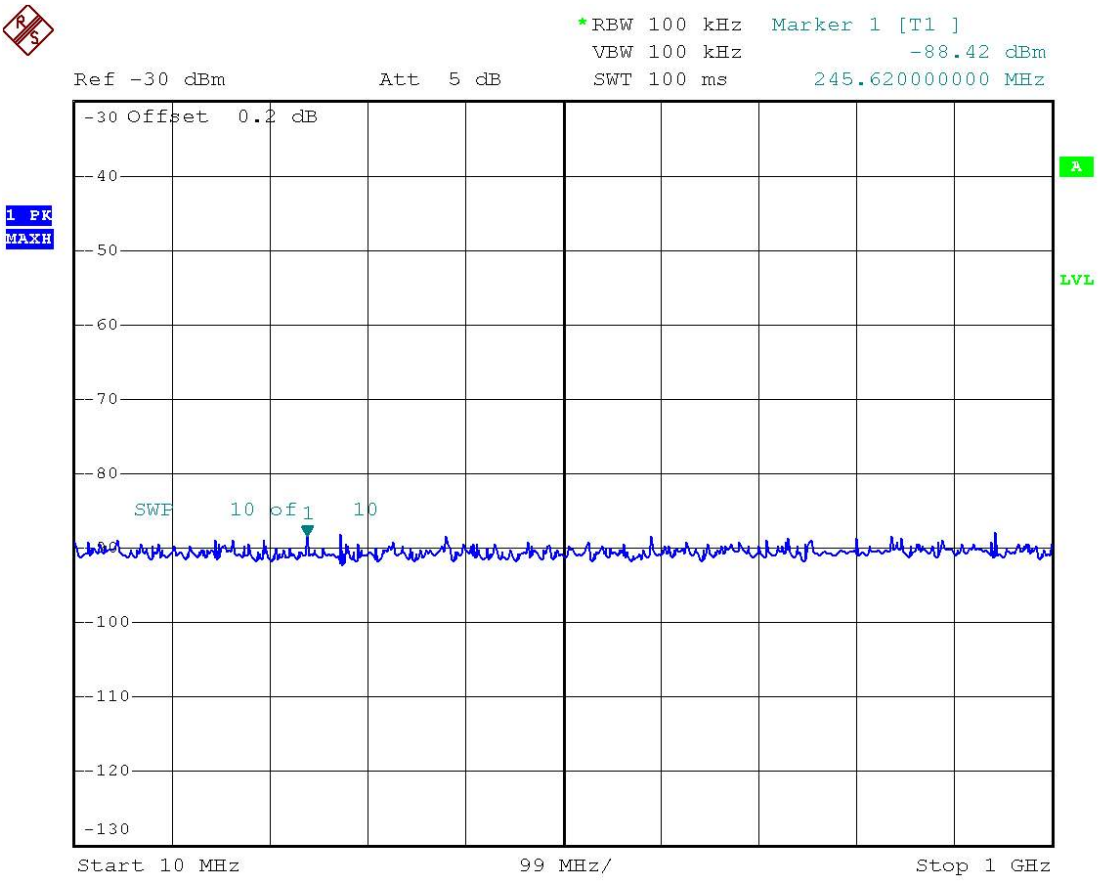


Date: 20.AUG.2009 17:17:27

5.6.8.11 2nd Channel

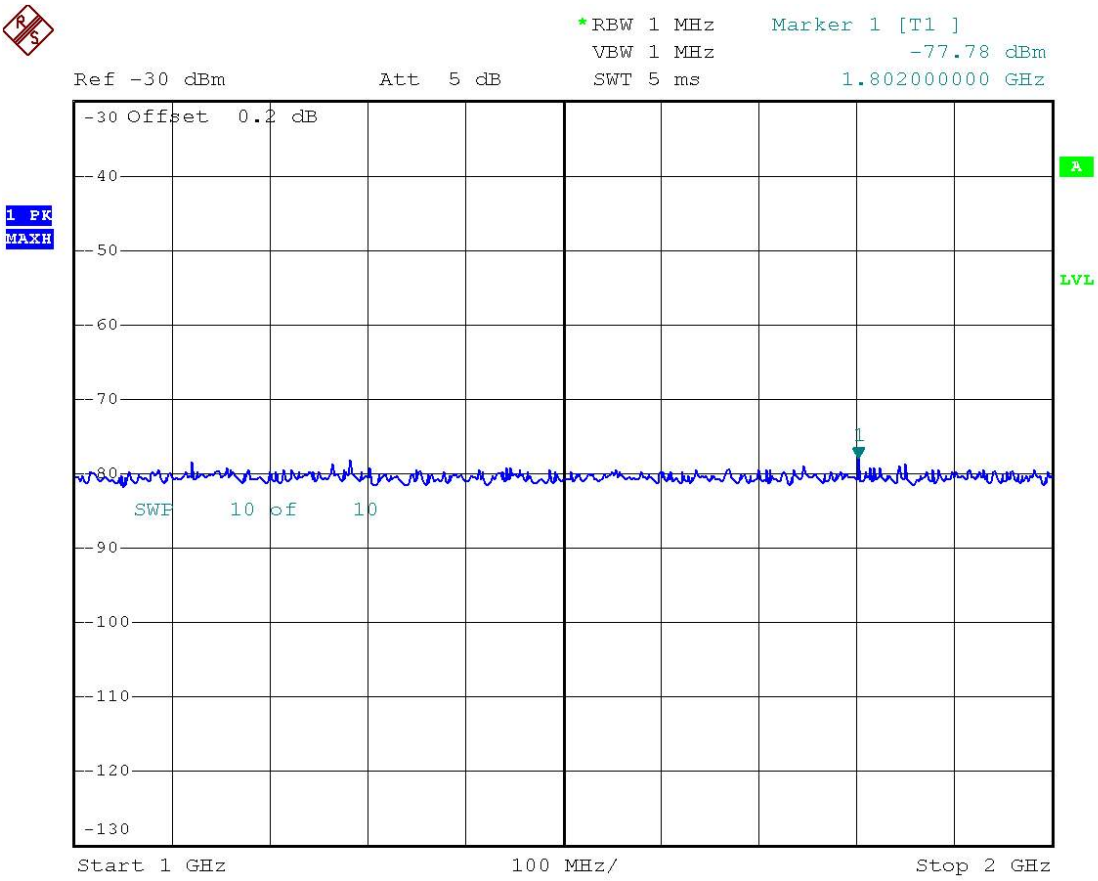
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	Stand-By
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC

5.6.8.11.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:17:47

5.6.8.11.2 1 GHz ~ 2 GHz

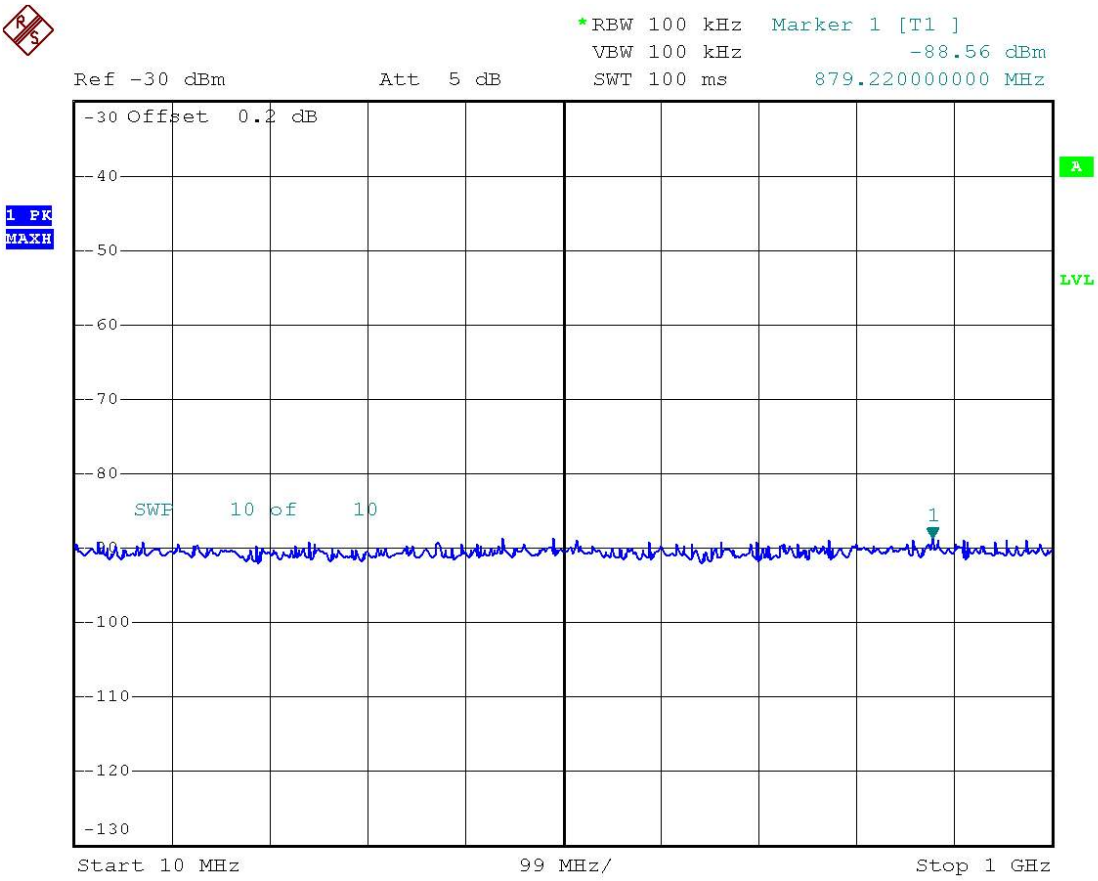


Date: 20.AUG.2009 17:18:05

5.6.8.12 3rd Channel

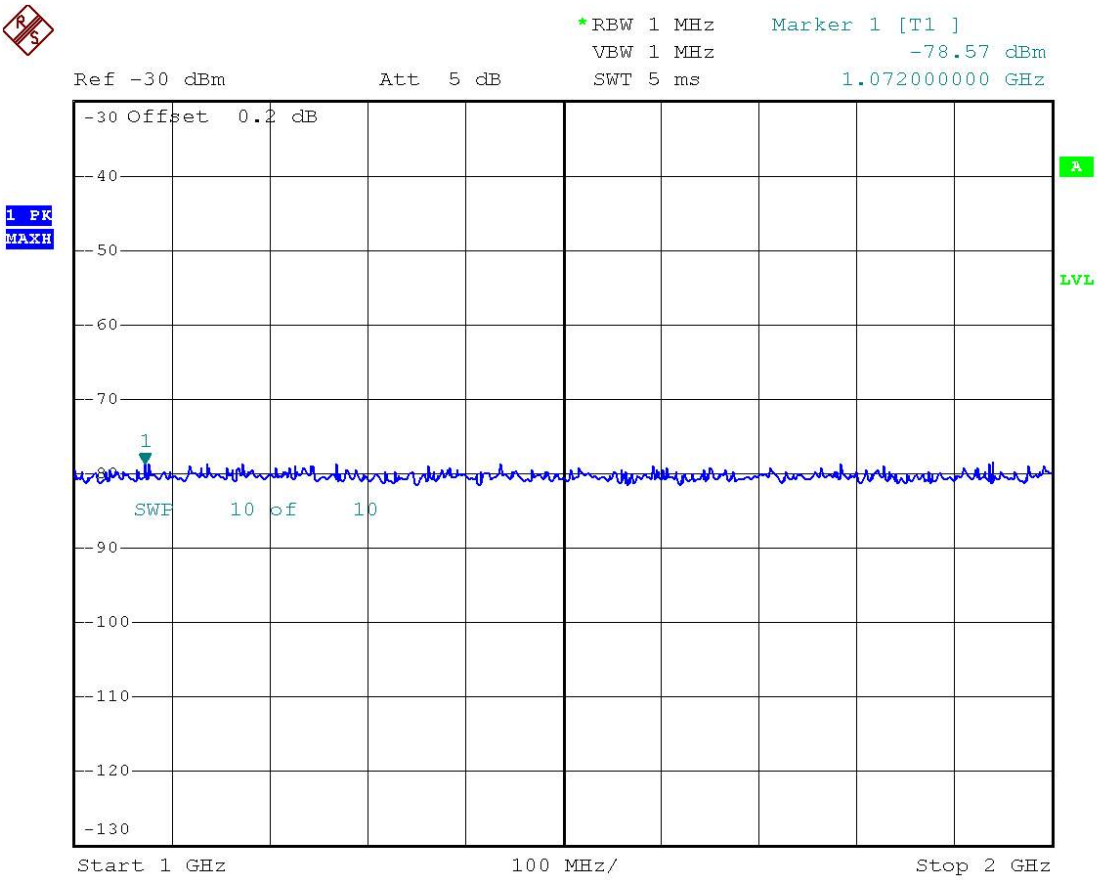
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	Stand-By
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC

5.6.8.12.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:18:25

5.6.8.12.2 1 GHz ~ 2 GHz



Date: 20.AUG.2009 17:18:47

5.6.9 Data(5W Low Power , 25kHz bandwidth)

Test Mode (TX/RX)		Spurious Emissions			
		Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)
148.025MHz	TX	295.12	-39.22	-13	26.22
	RX	1550.00	-77.13	-53	24.13
161.025MHz	TX	322.84	-52.48	-13	39.48
	RX	1880.00	-77.56	-53	24.56
173.975MHz	TX	348.58	-43.50	-13	30.50
	RX	1952.00	-77.65	-53	24.65

5.6.10 Data(5W Low Power , 12.5kHz bandwidth)

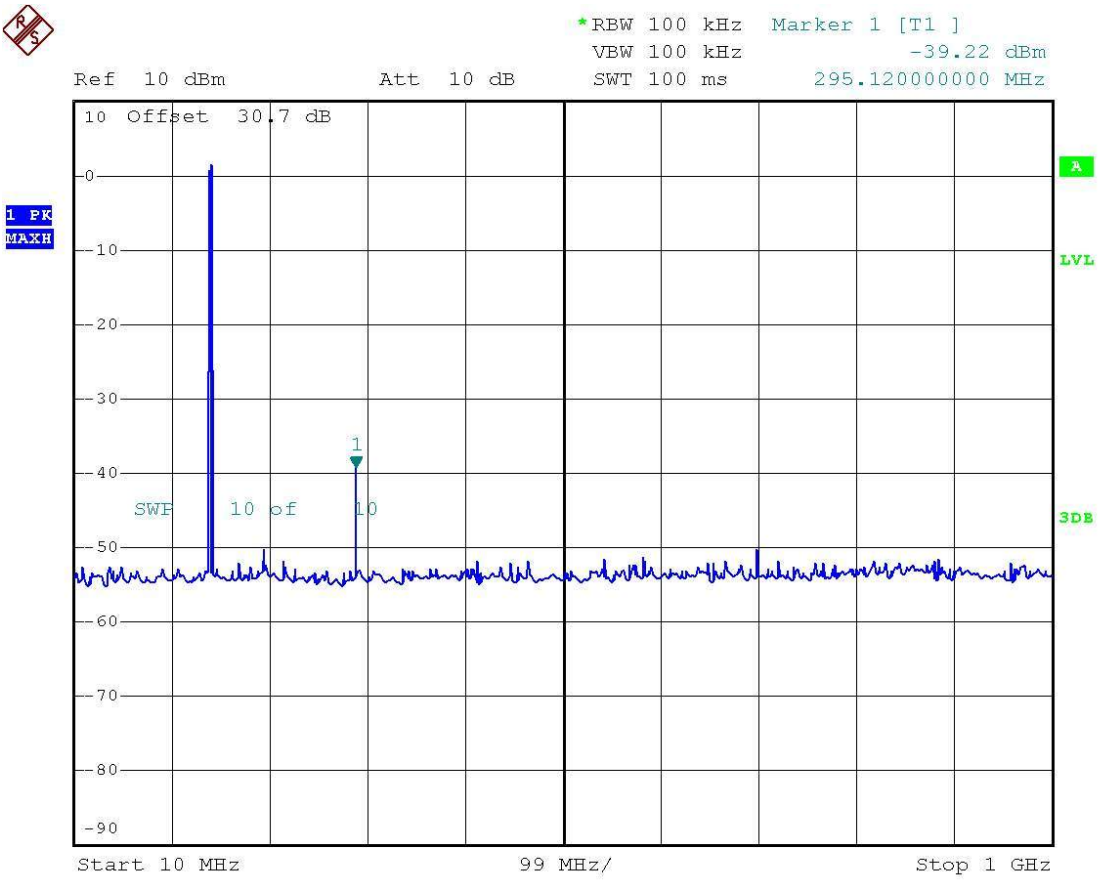
Test Mode (TX/RX)		Spurious Emissions			
		Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)
148.025MHz	TX	295.12	-38.04	-20	18.04
		443.62	-50.65	-20	30.65
	RX	1744.00	-78.42	-53	25.42
161.025MHz	TX	322.84	-49.85	-20	29.85
		457.48	-52.01	-20	32.01
	RX	1574.00	-78.76	-53	25.76
173.975MHz	TX	348.16	-42.83	-20	22.83
	RX	1080.00	-78.88	-53	25.88

5.6.11 Plots

5.6.11.1 1st Channel

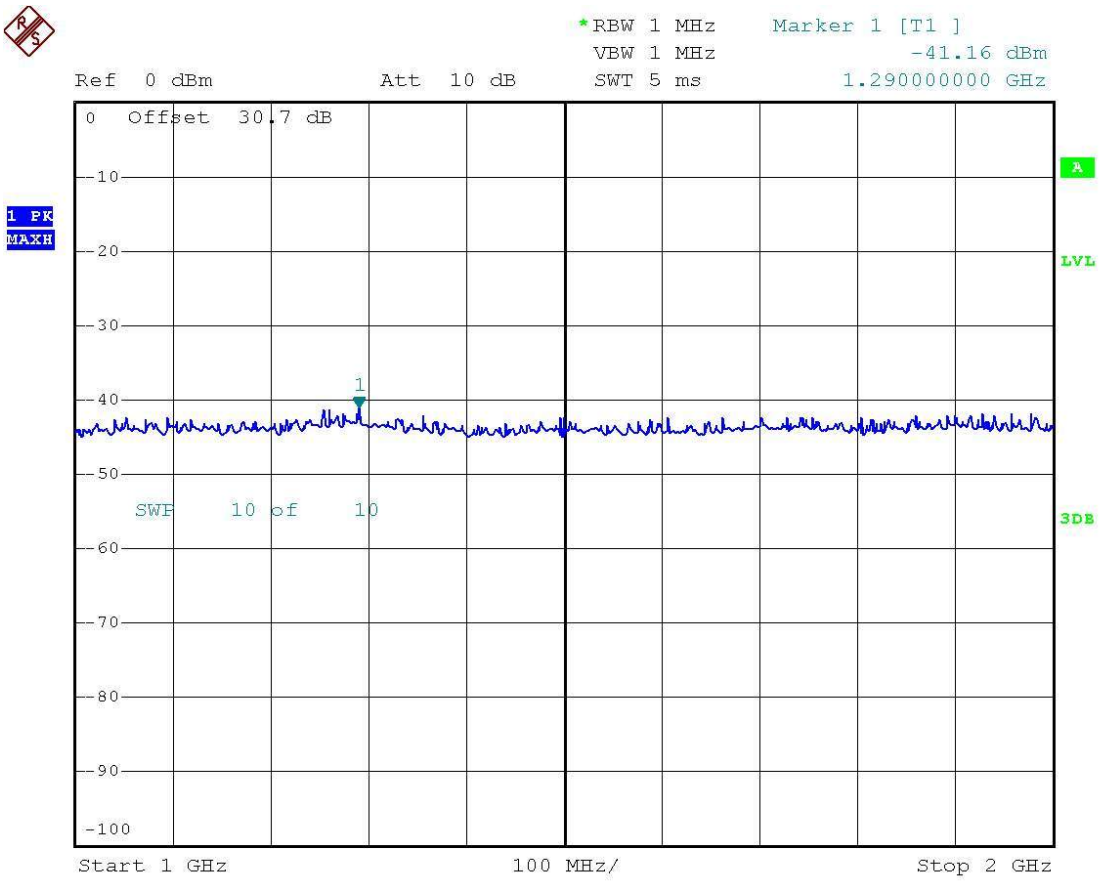
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	5 Watts
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC
Limit :	43 + 10log$_{10}$P (-13dBm)

5.6.11.1.1 10 MHz ~ 1 GHz



Date: 28.JUL.2009 05:23:30

5.6.11.1.2 1 GHz ~ 2 GHz

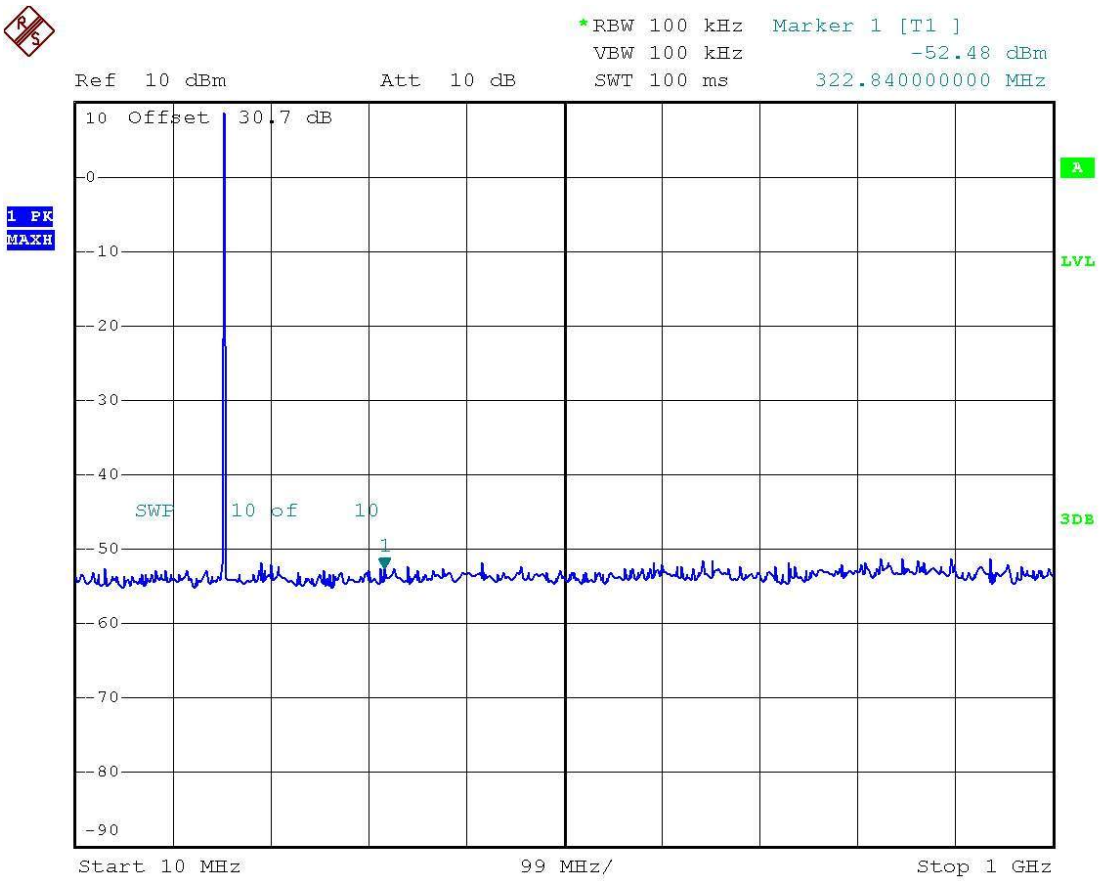


Date: 28.JUL.2009 05:23:55

5.6.11.2 2nd Channel

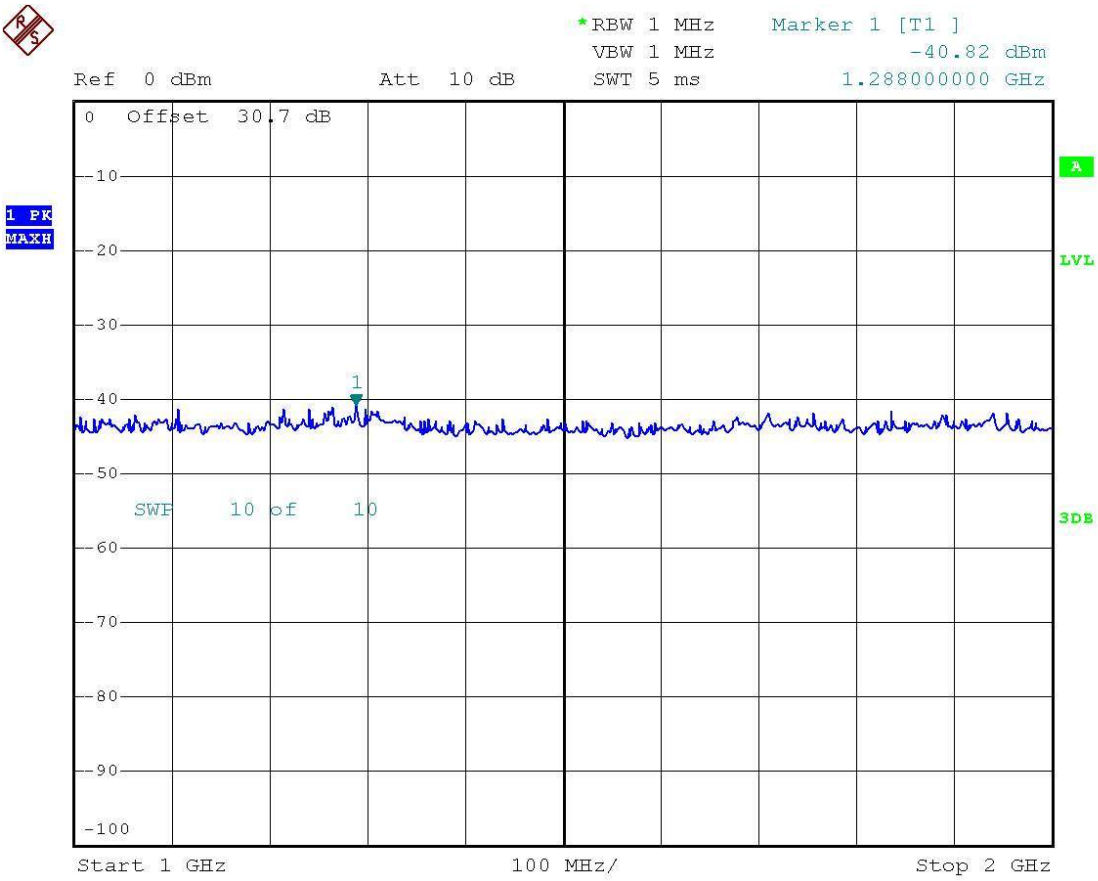
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	5 Watts
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC
Limit :	43 + 10log$_{10}$P (-13dBm)

5.6.11.2.1 10 MHz ~ 1 GHz



Date: 28.JUL.2009 05:24:36

5.6.11.2.2 1 GHz ~ 2 GHz

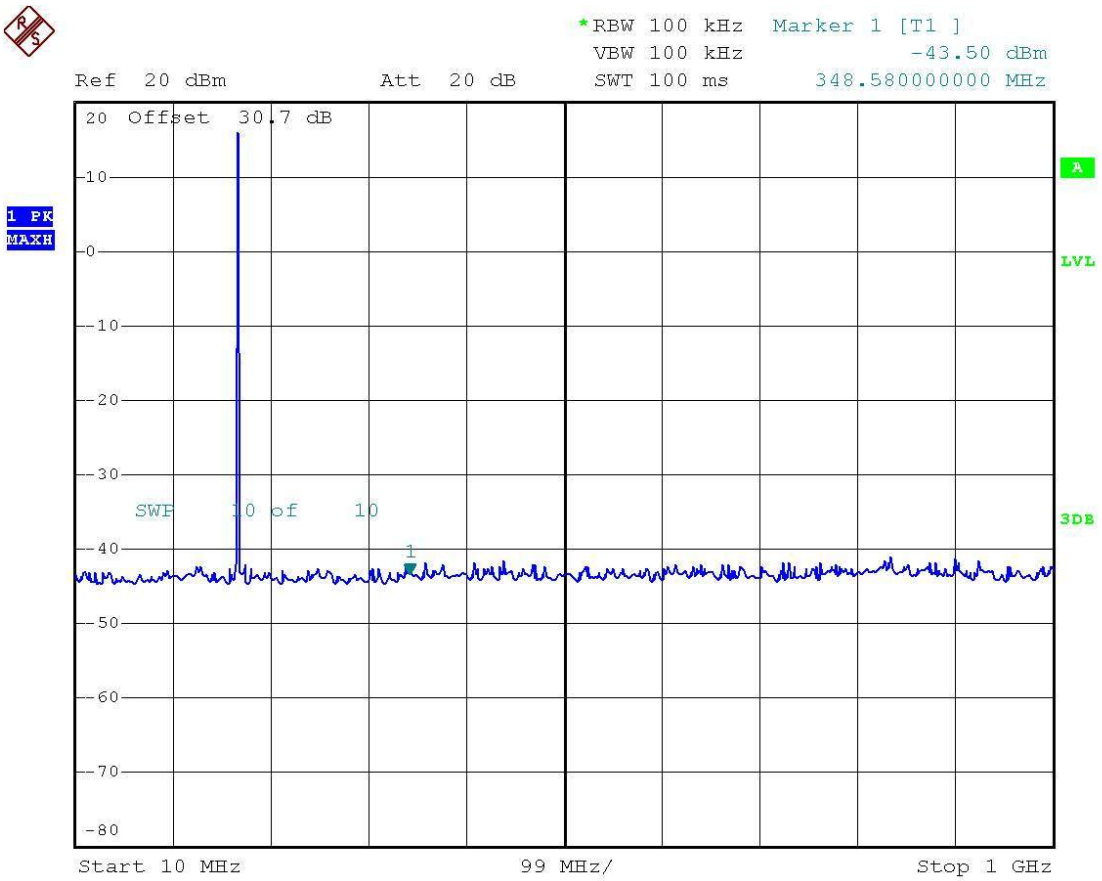


Date: 28.JUL.2009 05:25:04

5.6.11.3 3rd Channel

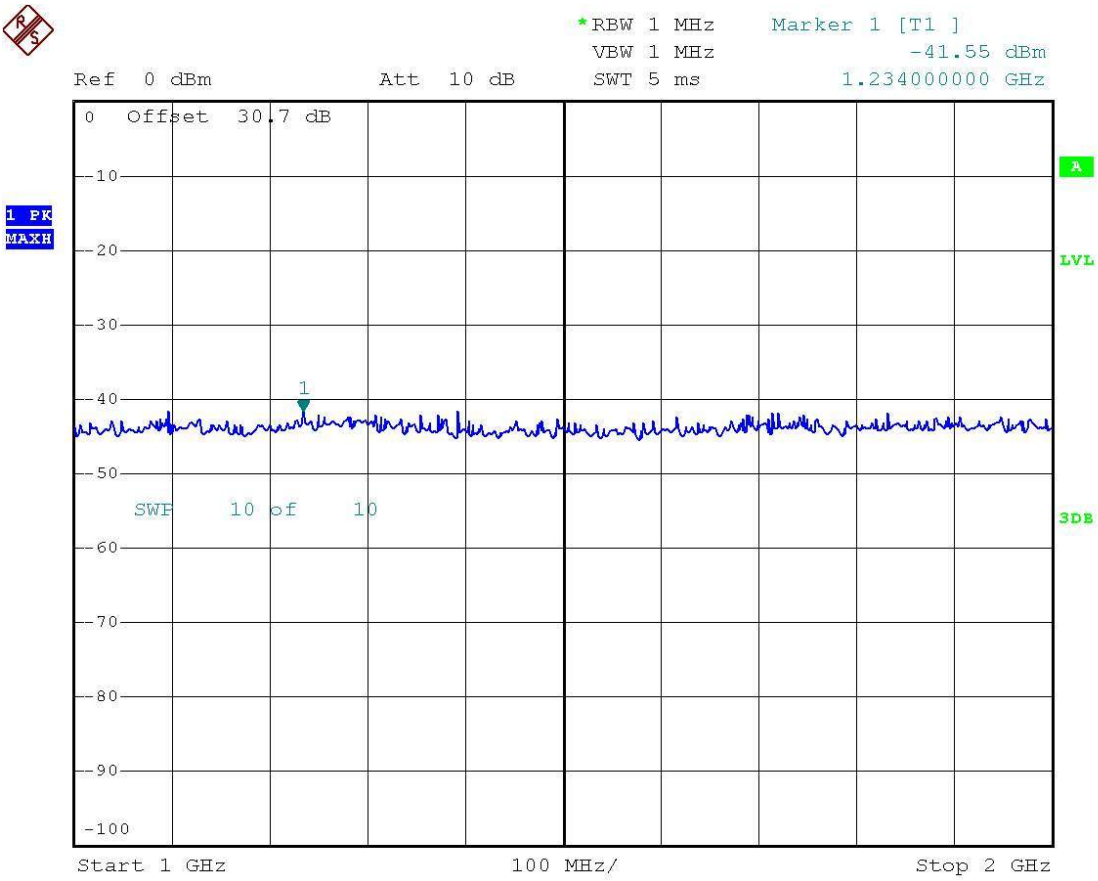
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	5 Watts
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC
Limit :	43 + 10log$_{10}$P (-13dBm)

5.6.11.3.1 10 MHz ~ 1 GHz



Date: 28.JUL.2009 05:25:54

5.6.11.3.2 1 GHz ~ 2 GHz

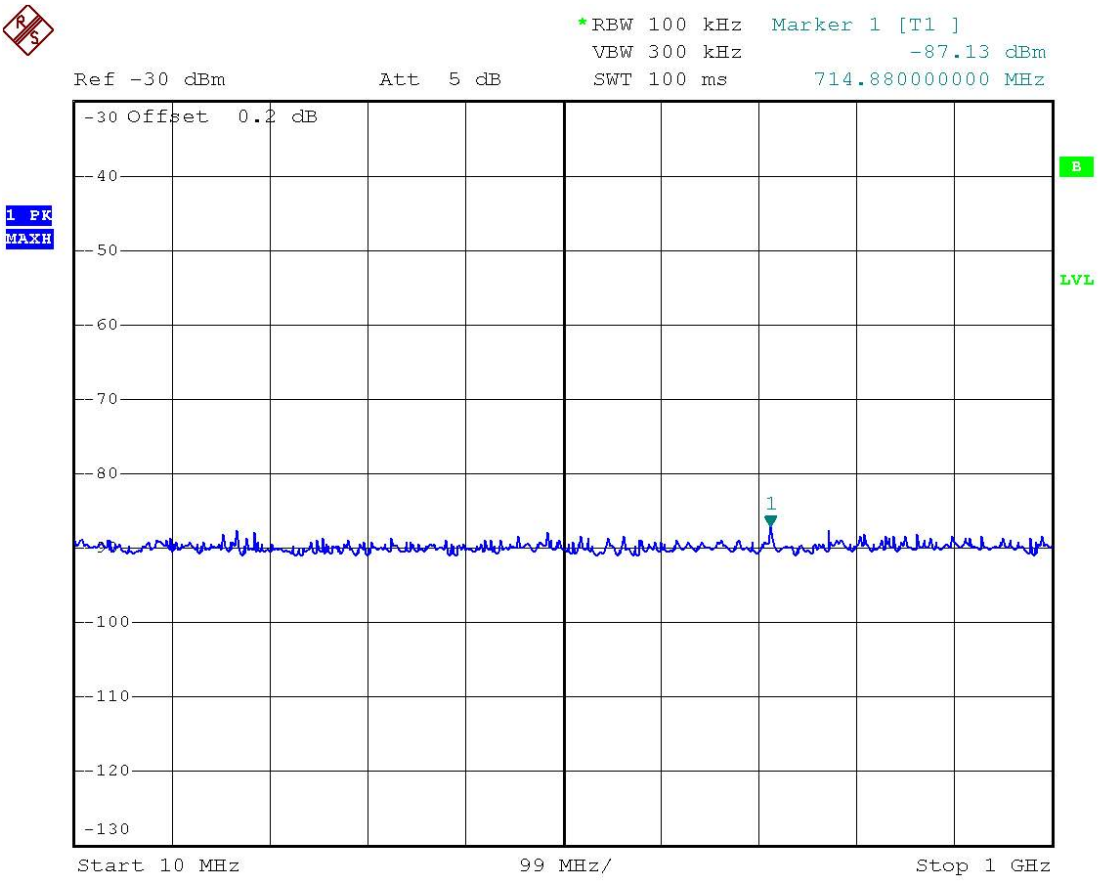


Date: 28.JUL.2009 05:26:22

5.6.11.4 1st Channel

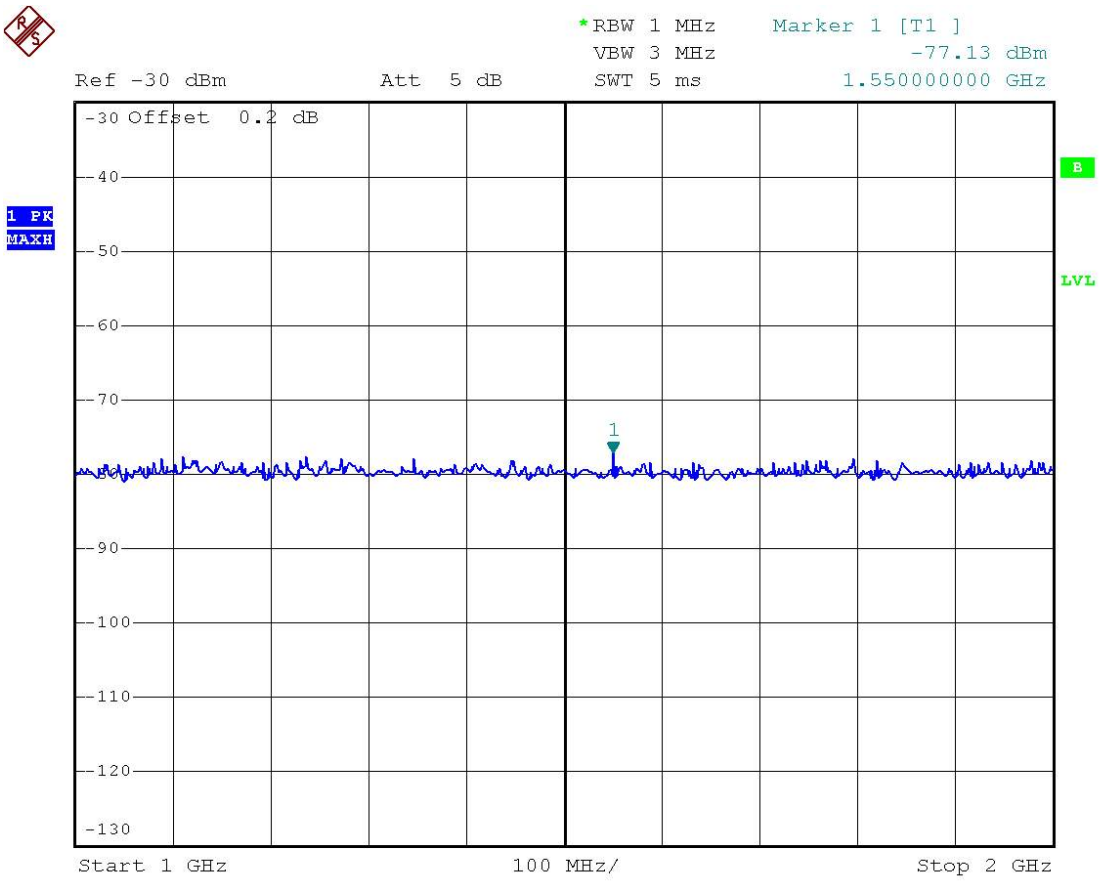
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	Stand-By
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC

5.6.11.4.1 10 MHz ~ 1 GHz



Date: 29.JUL.2009 14:22:01

5.6.11.4.2 1 GHz ~ 2 GHz

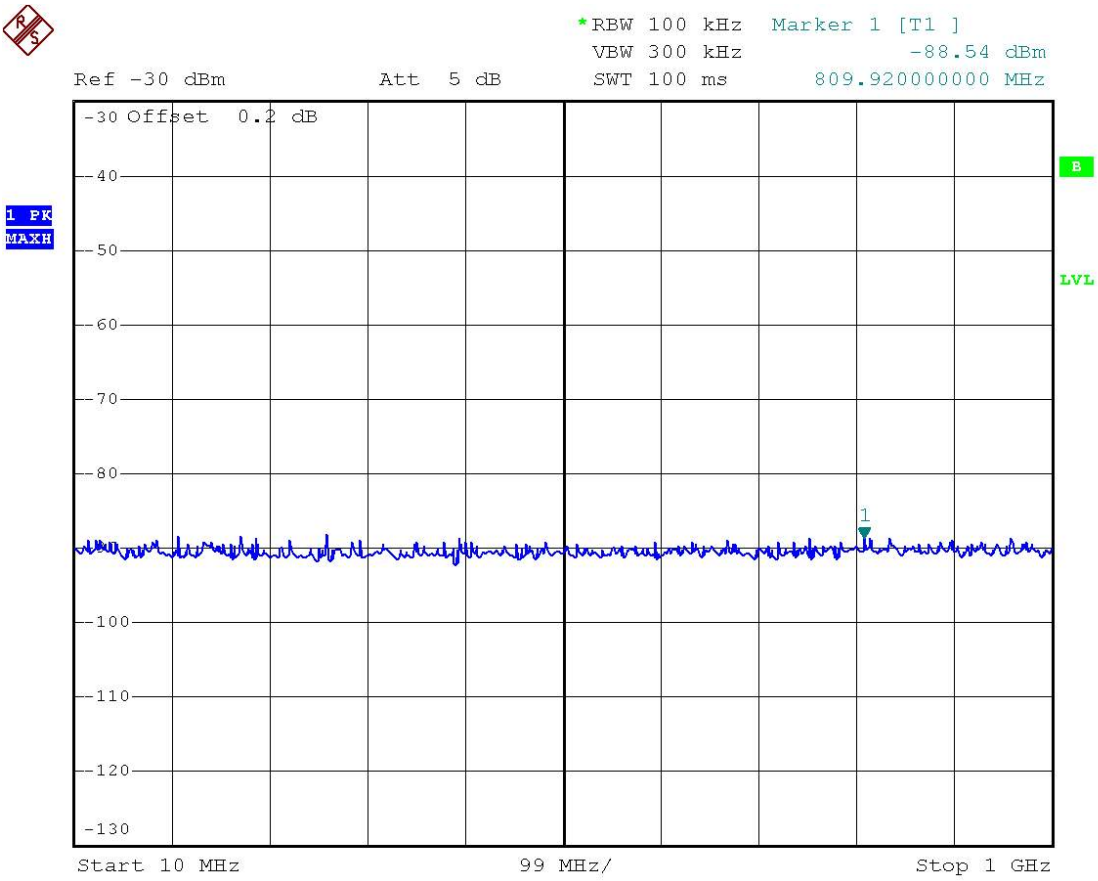


Date: 29.JUL.2009 14:22:21

5.6.9.5 2nd Channel

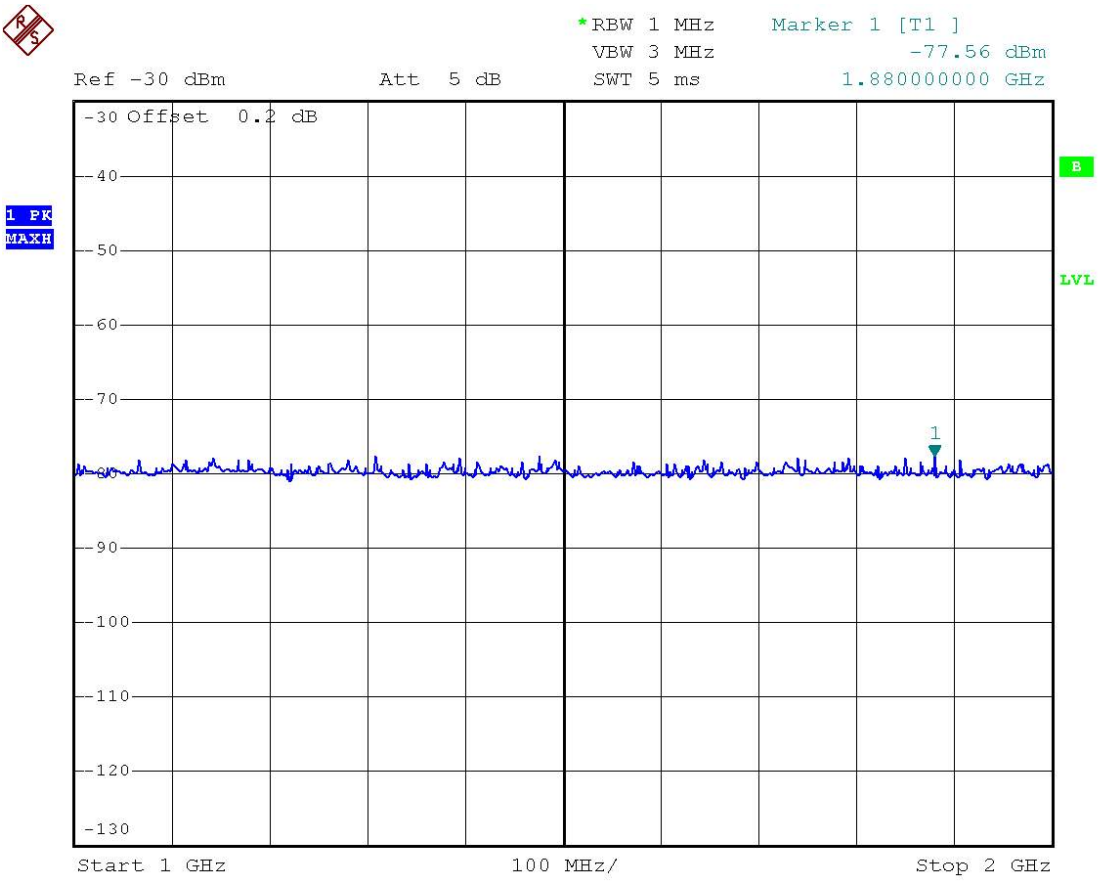
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	Stand-By
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC

5.6.11.5.1 10 MHz ~ 1 GHz



Date: 29.JUL.2009 14:22:55

5.6.11.5.2 1 GHz ~ 2 GHz

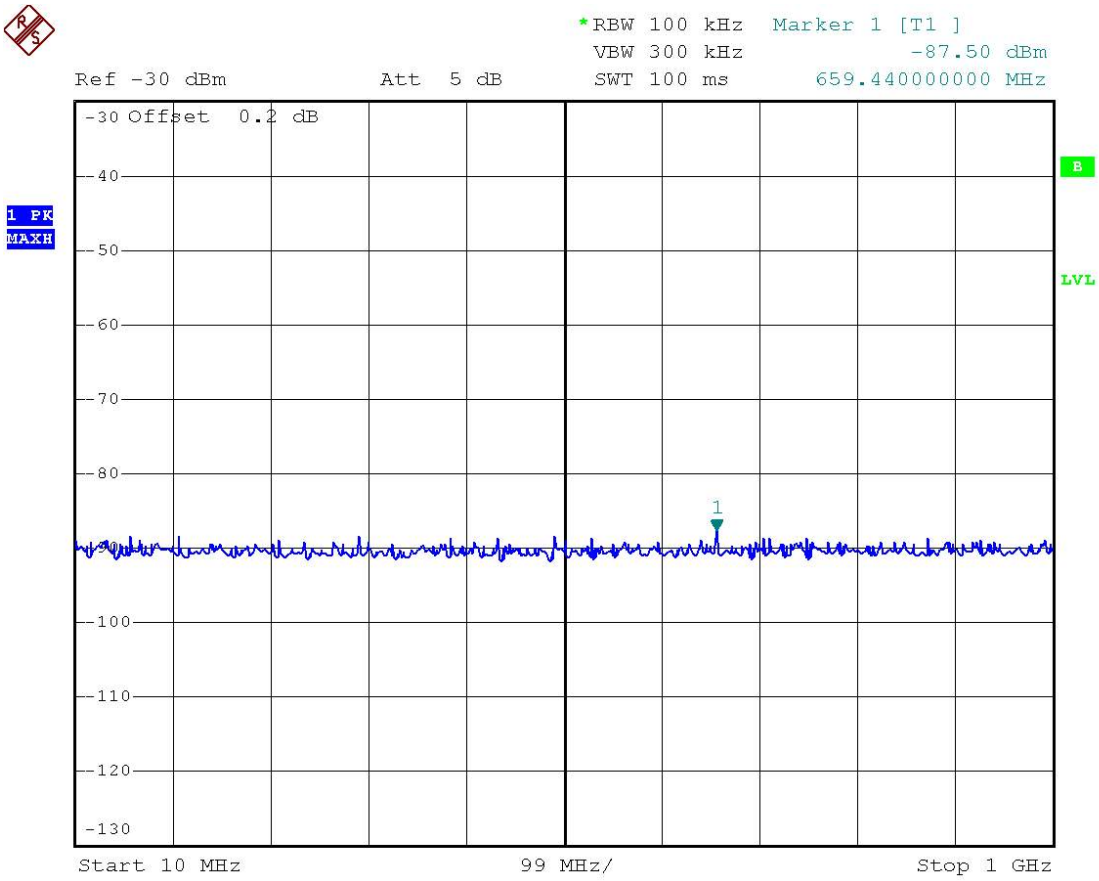


Date: 29.JUL.2009 14:22:39

5.6.11.6 3rd Channel

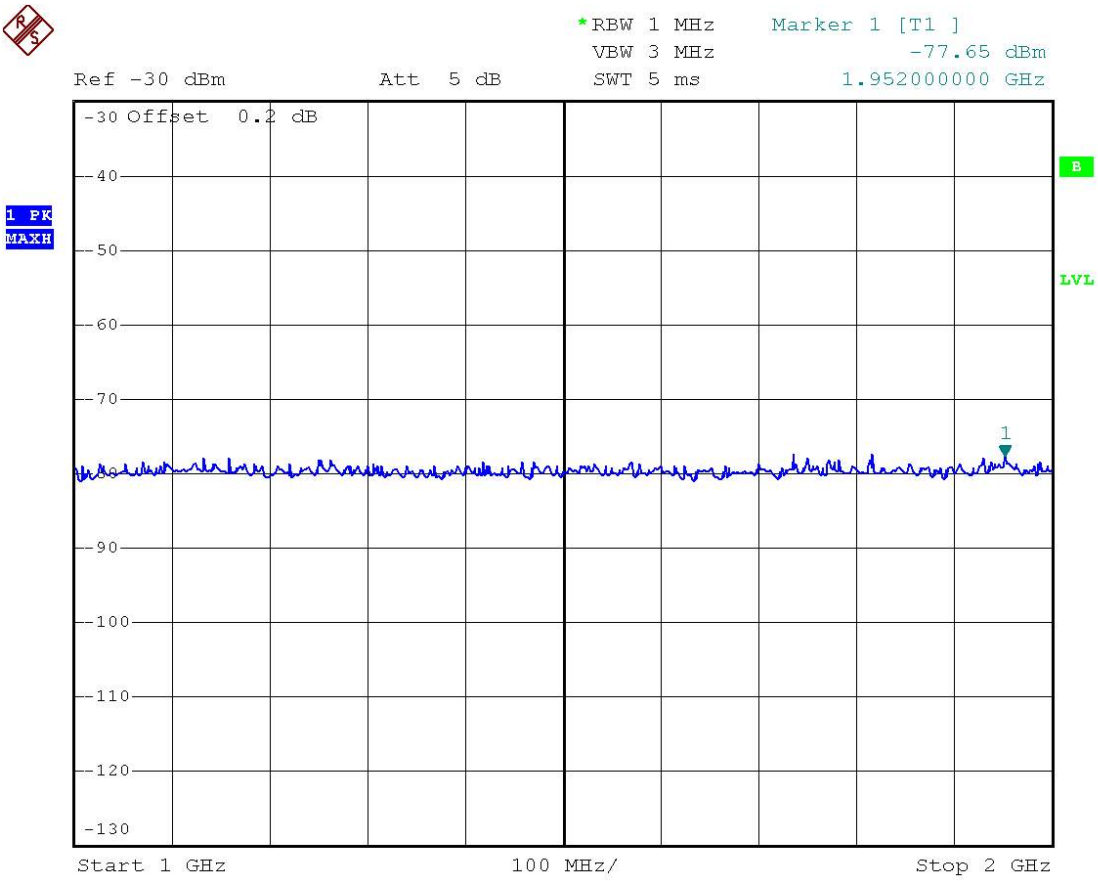
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	Stand-By
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC

5.6.11.6.1 10 MHz ~ 1 GHz



Date: 29.JUL.2009 14:23:15

5.6.11.6.2 1 GHz ~ 2 GHz

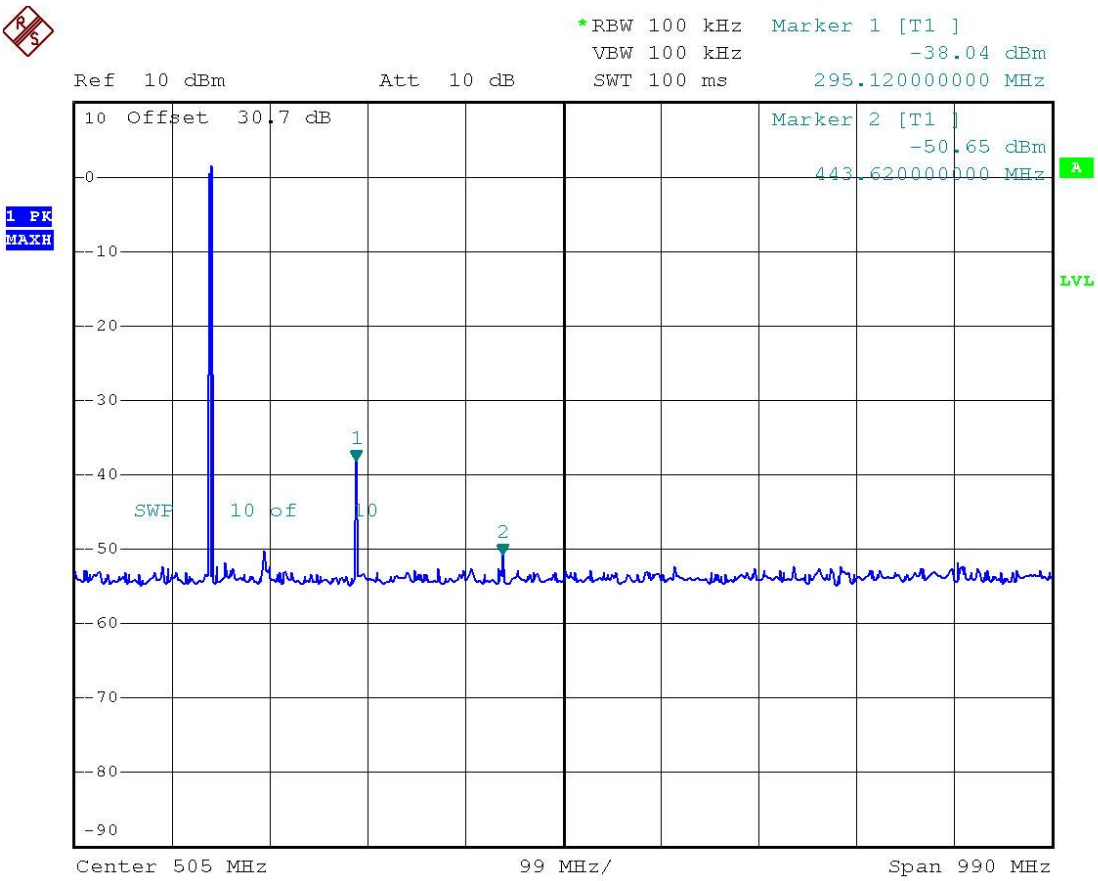


Date: 29.JUL.2009 14:23:33

5.6.11.7 1st Channel

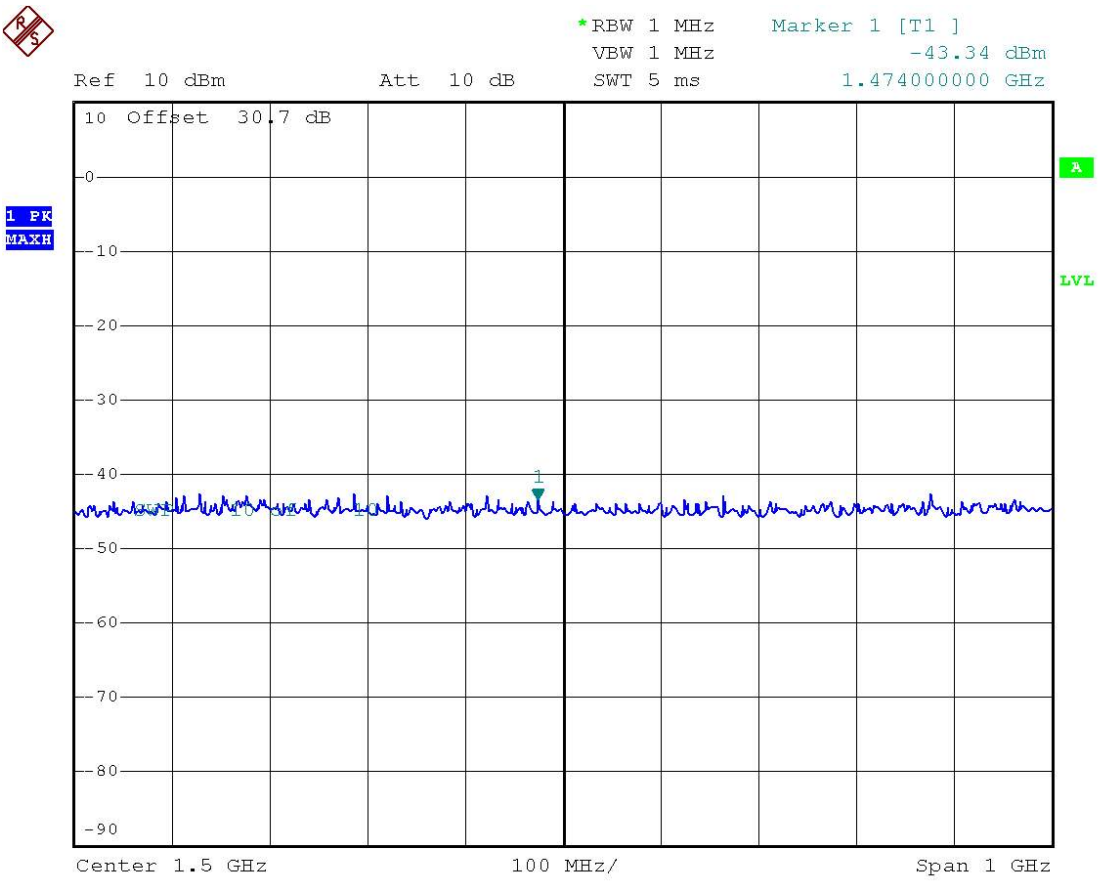
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	5 Watts
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC
Limit :	50 + 10log$_{10}$P (-20dBm)

5.6.11.7.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:21:31

5.6.11.7.2 1 GHz ~ 2 GHz

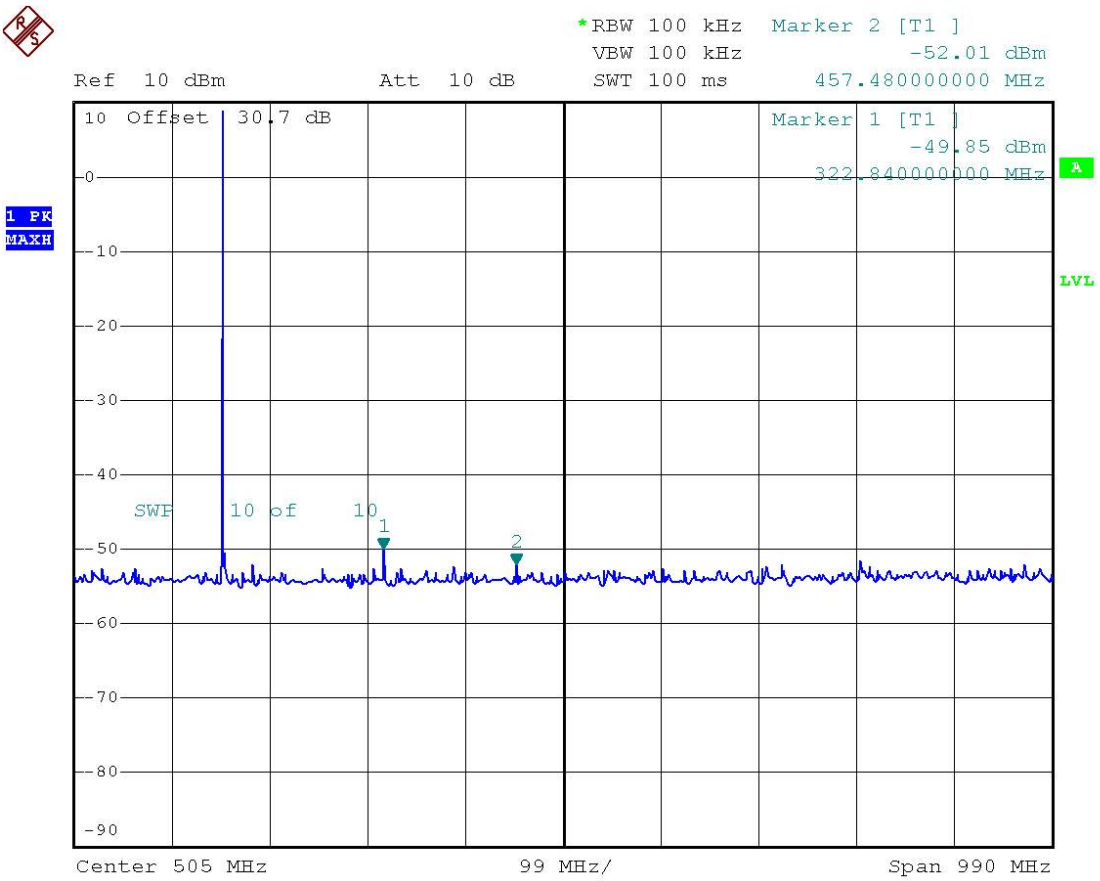


Date: 20.AUG.2009 17:04:52

5.6.11.8 2nd Channel

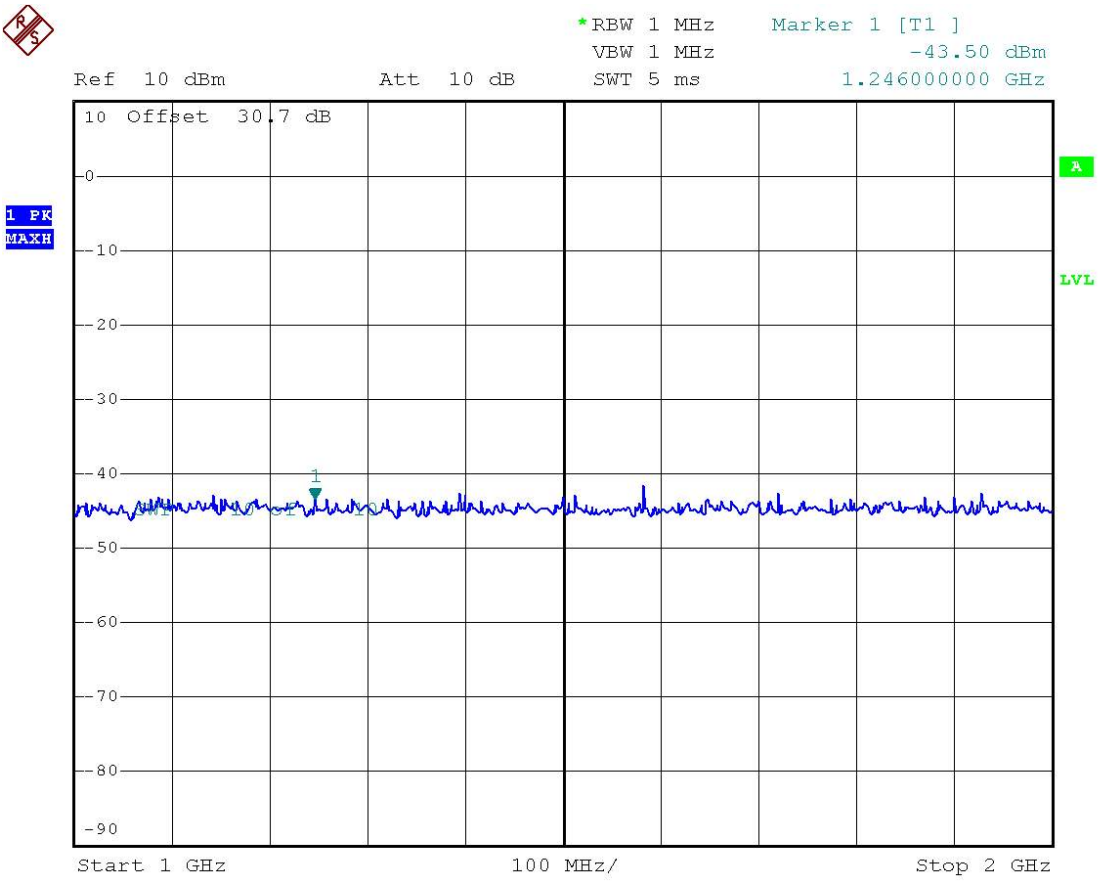
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	5 Watts
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC
Limit :	50 + 10log$_{10}$P (-20dBm)

5.6.11.8.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:23:02

5.6.11.8.2 1 GHz ~ 2 GHz

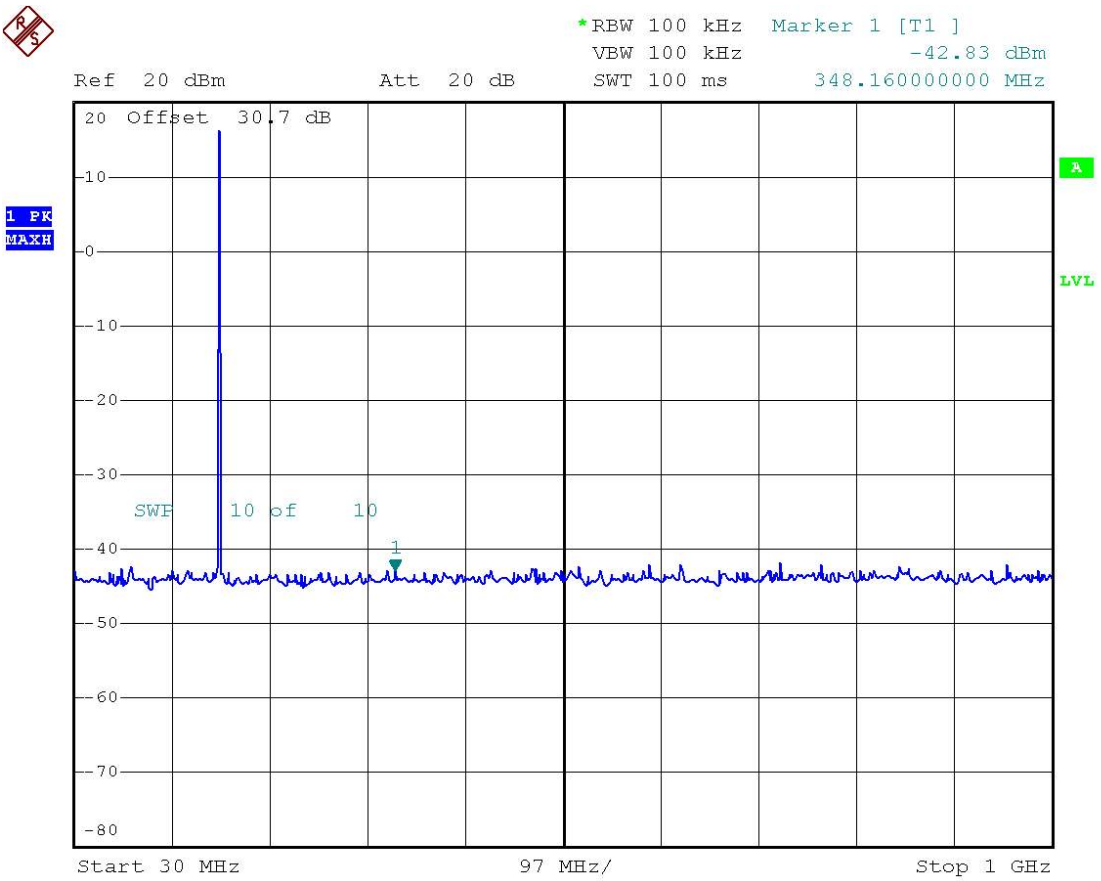


Date: 20.AUG.2009 17:06:41

5.6.11.9 3rd Channel

FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	5 Watts
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC
Limit :	50 + 10log$_{10}$P (-20dBm)

5.6.11.9.1 10 MHz ~ 1 GHz



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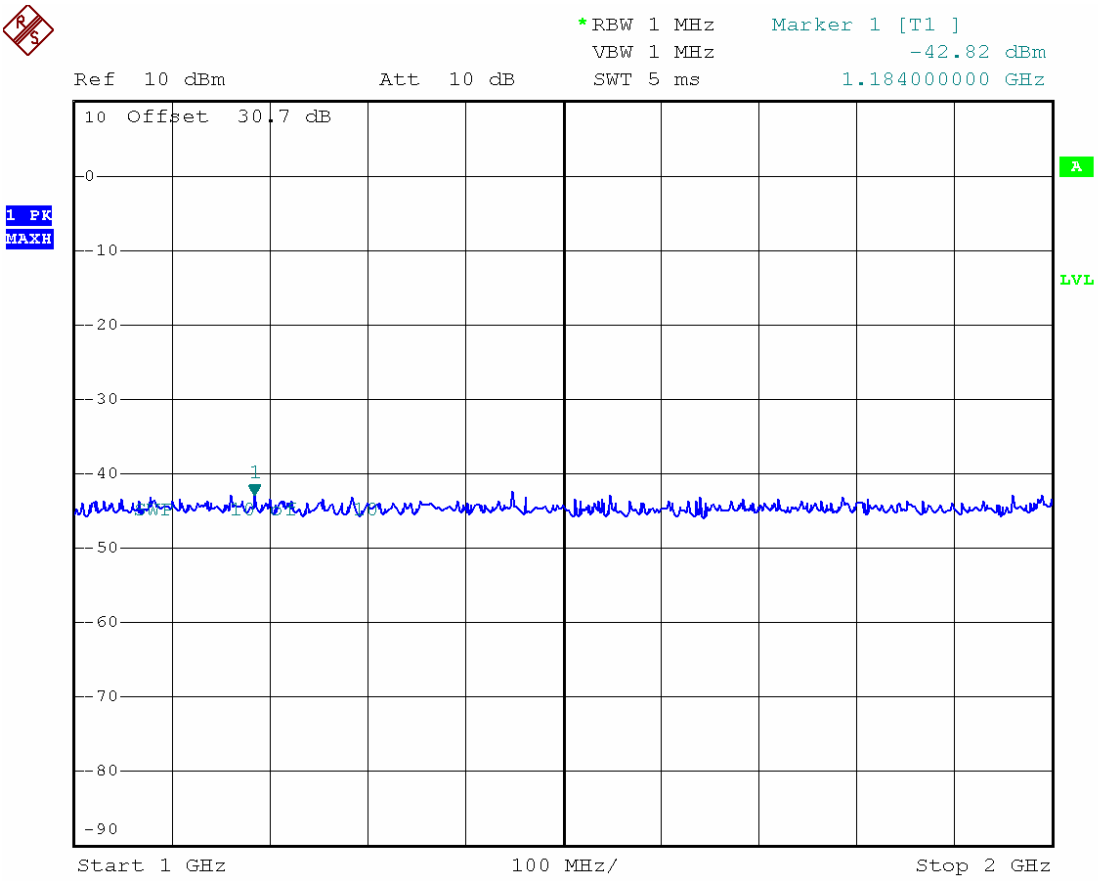
5.6.11.9.2 1 GHz ~ 2 GHz

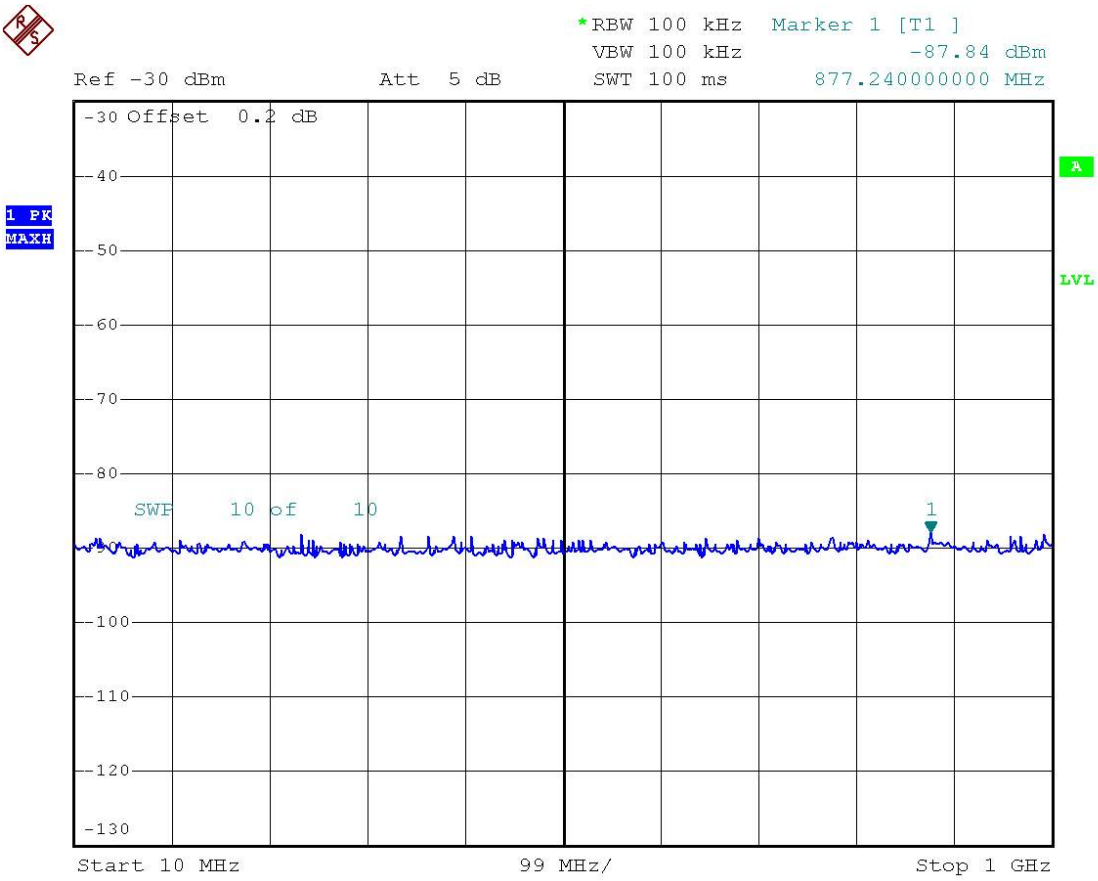


Date: 20.AUG.2009 18:26:03

5.6.11.10 1st Channel

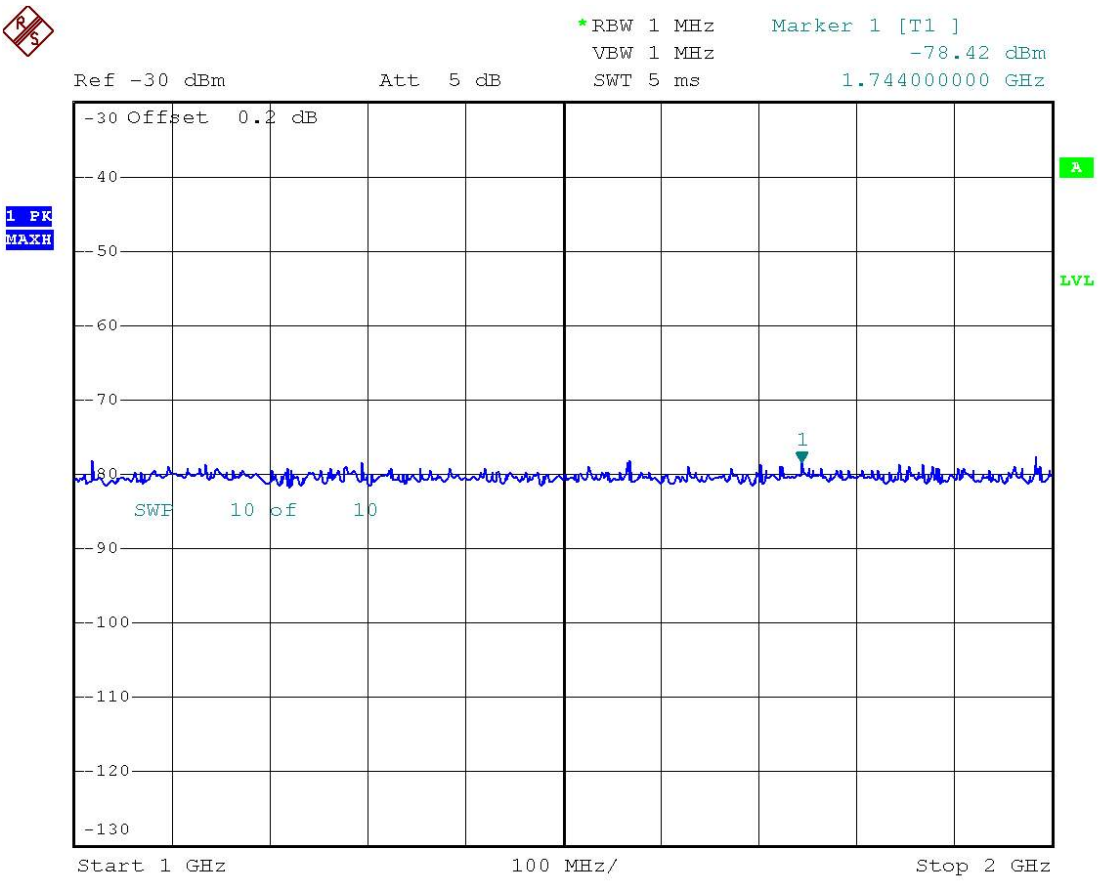
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	Stand-By
Channel Spacing :	NarrowBand
Reference Voltage :	13.8 VDC

5.6.11.10.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:14:53

5.6.11.10.2 1 GHz ~ 2 GHz

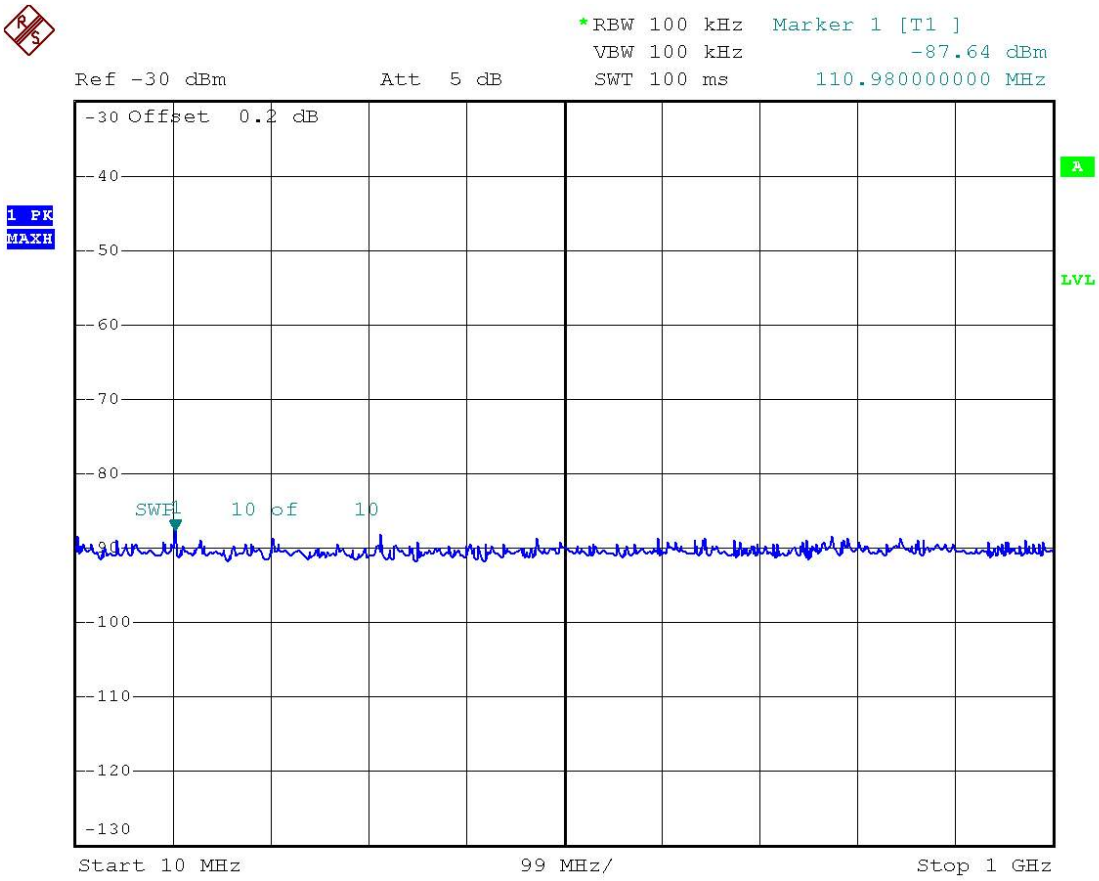


Date: 20.AUG.2009 17:15:14

5.6.11.11 2nd Channel

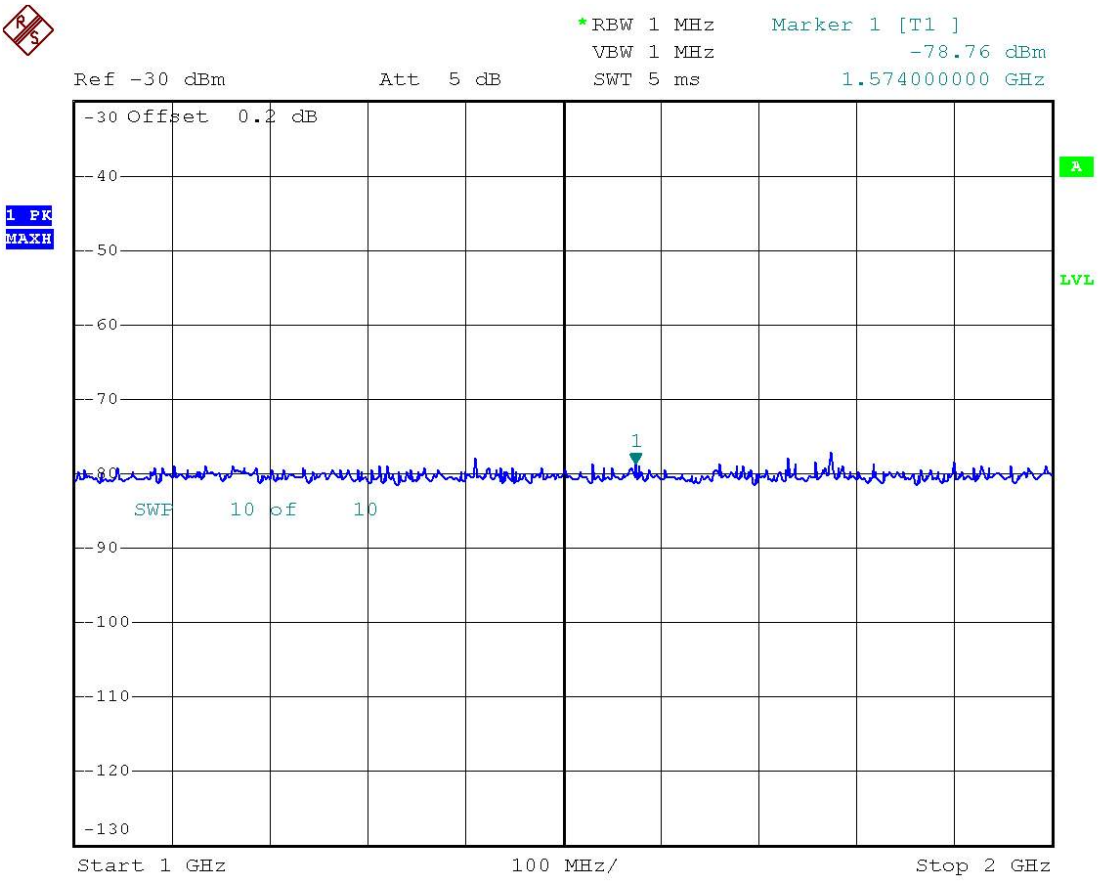
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	Stand-By
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC

5.6.11.11.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:15:38

5.6.11.11.2 1 GHz ~ 2 GHz

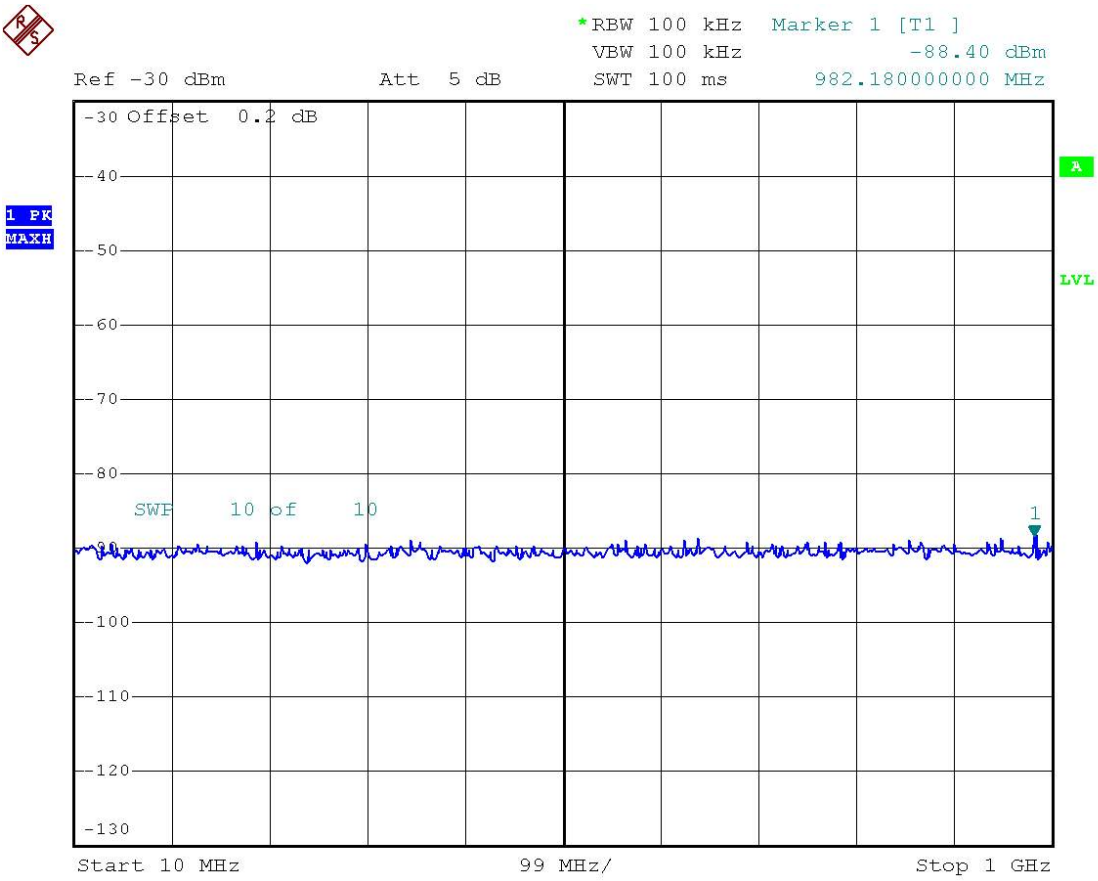


Date: 20.AUG.2009 17:15:57

5.6.11.12 3rd Channel

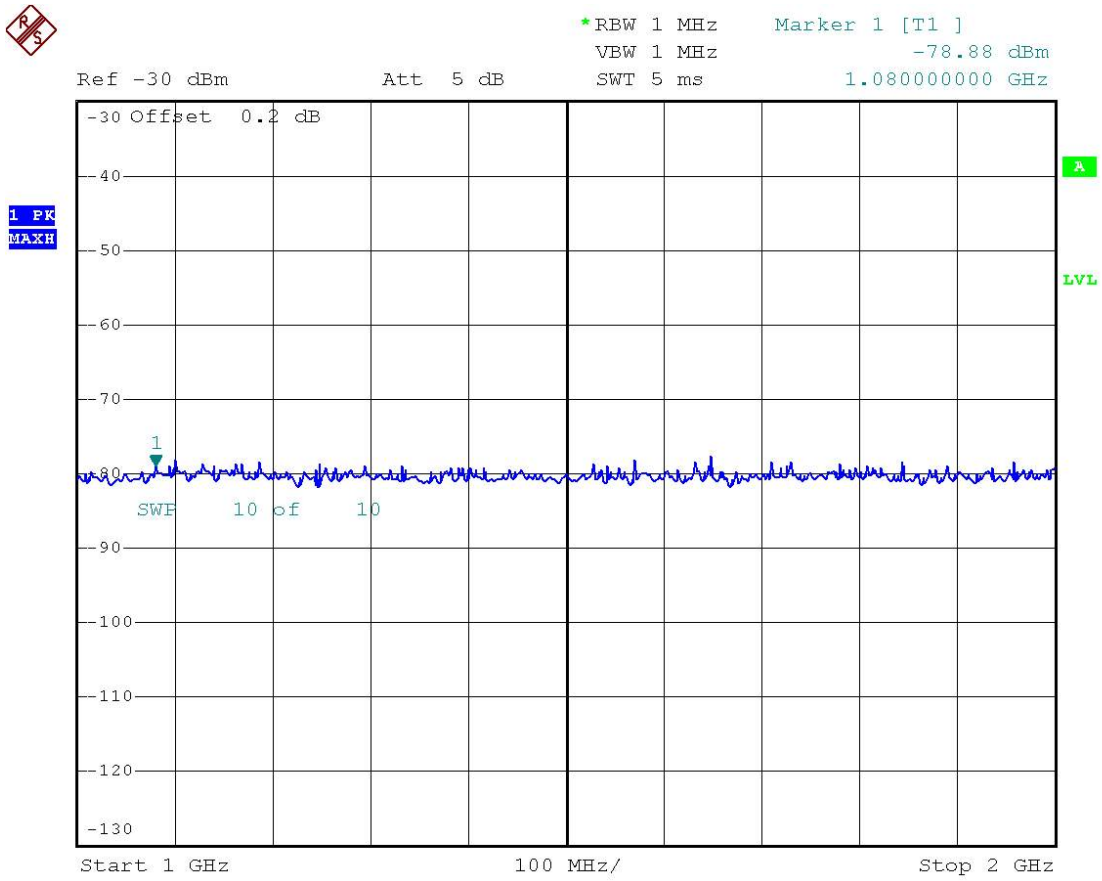
FCC Rules :	Part 2 §2.1051 & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	Stand-By
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC

5.6.11.12.1 10 MHz ~ 1 GHz



Date: 20.AUG.2009 17:16:18

5.6.11.12.2 1 GHz ~ 2 GHz



Date: 20.AUG.2009 17:16:38

5.7 Field Strength of Spurious Radiation

Radiated spurious emissions are emissions from the equipment when transmitting load on frequency or frequencies which are outside of band sufficient to ensure transmission or information of required quality for the class of communication desired.

5.7.1 Specification

FCC Rules Part 2, Section 2.1053(a)
FCC Rules Part 90, Section 90.210
Industry Canada, RSS-119 Issue 9 Section 5.8

5.7.2 Method of Measurement

ANSI/TIA-603-B-2002 Section 2.2.12

5.7.3 Measurement Set-Up

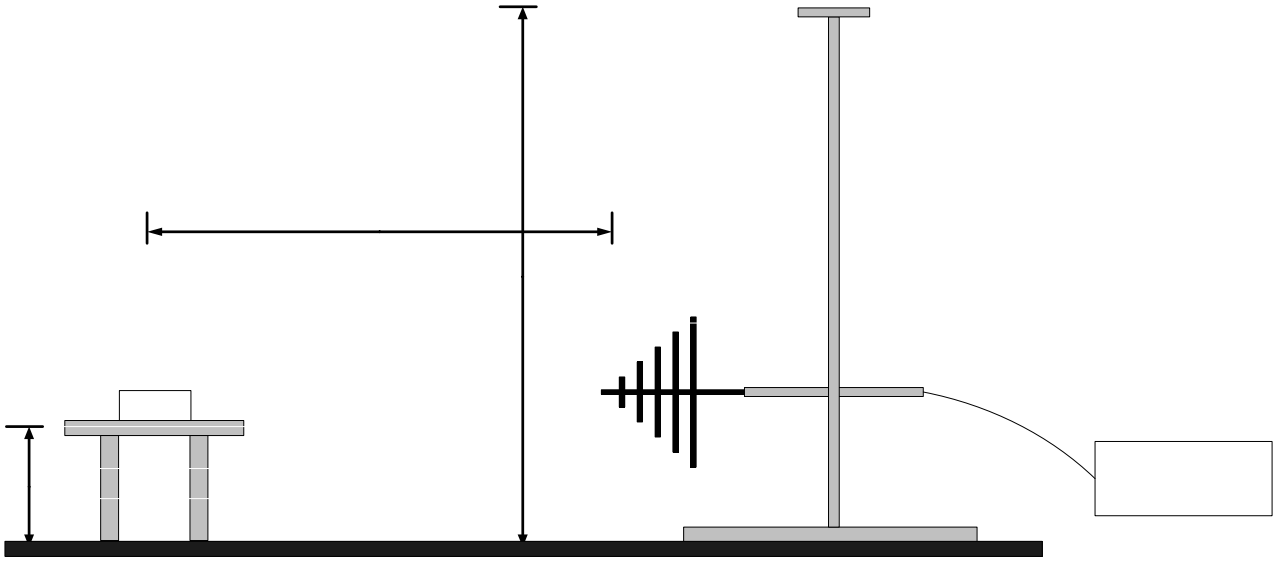


Fig.7

5.7.4 Test Equipment List

Equipment	Model Name	Manufacturer
EUT	SM5102	Maxon CIC Corp.
Power Supply	6206-60	CHROMA
Audio Analyzer	8903B	Agilent
Spectrum Analyzer	E7403A	Agilent
Bilog Antenna	VULB9160	SWALZBECK
Horn Antenna	BBHA 9120 D	SWALZBECK

5.7.5 Test Data

FCC Rules :	Part 2 §2.1053(a) & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Power Output :	50 Watts
Reference Voltage :	13.8 VDC
Channel Spacing :	WideBand
Limit :	50 + 10log$_{10}$P (-20dBm)

Frequency [MHz]	Spectrum Reading [dBuV/m]	Ant. Pol. [H/V]	S.G Level [dBm]	Ant. Gain [dBi]	Loss [dB]	Emission Level [dBm]	Limit [dBm]	Margin [dB]
1st channel : 148.025 MHz								
295.8	46.26	V	-38.6	6.7	3.8	-28.1	-20	8.1
444.2	48.03	V	-50.4	6.6	4.77	-39.03		19.03
591.6	35.06	V	-61.2	6.6	5.8	-48.8		28.8
740.0	42.72	V	-52.9	6.4	6.5	-40.0		20.0
1184	36.51	-	-68.5	5.44	7.84	-55.22		35.22
2nd channel : 161.025 MHz								
322.0	40.52	V	-48.6	6.9	3.88	-37.82	-20	17.82
483.0	43.74	V	-52.5	6.6	4.95	-40.95		20.95
644.0	33.75	V	-64.4	6.4	6.15	-51.85		31.85
3rd channel : 173.975 MHz								
348.2	37.08	V	-58.9	6.9	3.88	-48.12	-20	28.12
521.8	40.42	H	-52.8	6.6	5.8	-40.4		20.4
870.0	28.56	H	-71.6	6.1	6.9	-58.6		38.6
696.4	37.30	V	-63.2	6.4	6.15	-50.65		30.65

Note :

1. The spectrum bandwidth was set to RBW 100 kHz (freq. up to 1GHz) and RBW 1 MHz (freq above 1GHz).
2. Transmitter was set to the high power output (50 Watts) condition.
3. The spectrum was checked from 30 MHz up to the 10th harmonic of the carrier frequency.
4. All emission not reported were found to be more than 20dB below the limit.
5. The EUT was positioned through 3 orthogonal axis and worst-case are reported.
6. Transmitter was set to the high power output (50 Watts) condition because the high power setting is the worst case emission condition.
7. The measurement has been made both narrow and wide band but the attached plots are for narrowband. There is no difference in the test result for the bandwidth setting.
8. ERP measurements were performed using the standard battery with full charged condition.
9. The limit was applied according to the section 90.210(d) 50+10logP or –20dBm or 70dBc whichever is less.

5.7.6 Test Data

FCC Rules :	Part 2 §2.1053(a) & §90.210
IC Rules :	RSS-119 Issue 9 Section 5.8
Power Output :	5 Watts
Reference Voltage :	13.8 VDC
Channel Spacing :	WideBand
Limit :	50 + 10log$_{10}$P (-20dBm)

Frequency [MHz]	Spectrum Reading [dBuV/m]	Ant. Pol. [H/V]	S.G Level [dBm]	Ant. Gain [dBi]	Loss [dB]	Emission Level [dBm]	Limit [dBm]	Margin [dB]
1st channel : 148.025 MHz								
208.5	30.19	V	-58.5	6.7	3.8	-48.0	-20	28.0
295.8	27.54	H	-64.2	6.7	3.8	-53.7		33.7
444.2	28.58	V	-66.8	6.6	4.77	-55.43		35.43
2nd channel : 161.025 MHz								
322.0	27.23	H	-61.6	6.9	3.88	-50.82	-20	30.82
1289.0	36.90	-	-65.9	5.44	7.57	-52.89		32.89
3rd channel : 173.975 MHz								
348.2	27.56	H	-60.3	6.4	3.88	-50.02	-20	30.02

Note :

1. The spectrum bandwidth was set to RBW 100 kHz (freq. up to 1GHz) and RBW 1 MHz (freq above 1GHz).
2. Transmitter was set to the high power output (5 Watts) condition.
3. The spectrum was checked from 30 MHz up to the 10th harmonic of the carrier frequency.
4. All emission not reported were found to be more than 20dB below the limit.
5. The EUT was positioned through 3 orthogonal axis and worst-case are reported.
6. Transmitter was set to the high power output (5 Watts) condition because the high power setting is the worst case emission condition.
7. The measurement has been made both narrow and wide band but the attached plots are for narrowband. There is no difference in the test result for the bandwidth setting.
8. ERP measurements were performed using the standard battery with full charged condition.
9. The limit was applied according to the section 90.210(d) 50+10logP or –20dBm or 70dBc whichever is less.

5.8 Frequency Stability / Temperature Variation

5.8.1 Specification

FCC Rules Part 2, Section 2.1055
FCC Rules Part 90, Section 90.231
Industry Canada, RSS-119 Issue 9 Section 5.3

5.8.2 Method of Measurement

ANSI/TIA-603-B-2002 Section 2.2.2

5.8.3 Measurement Set-Up

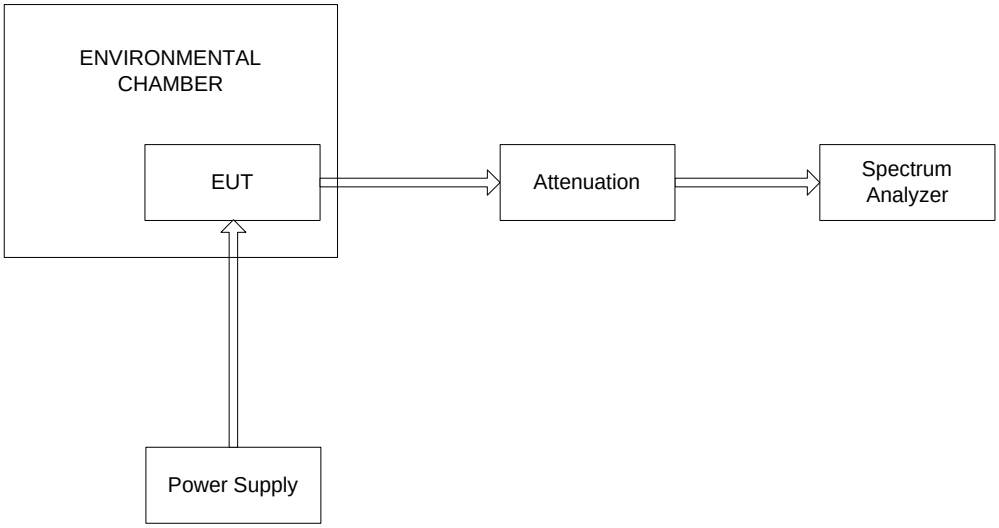


Fig.8

5.8.4 Test Equipment List

Equipment	Model Name	Manufacturer
EUT	SM5102	Maxon CIC Corp.
Power Supply	6206-60	CHROMA
Attenuator	RFA500NMF30	
Spectrum Analyzer	FSP7	Rohde & Shwarz
Environmental Chamber	EN-GLMP-54	ENEX

5.8.5 Test Procedure

-. The unit was turn-up in accordance with the alignment procedure stated in the FIG. 8 , and was loaded into a 50 ohm resistive termination.
-. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.
-. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
-. The temperature tests were performed for the worst case.
-. FCC Limits (according to part 90.213) : 2.5 x 10^{-6} x Frequency

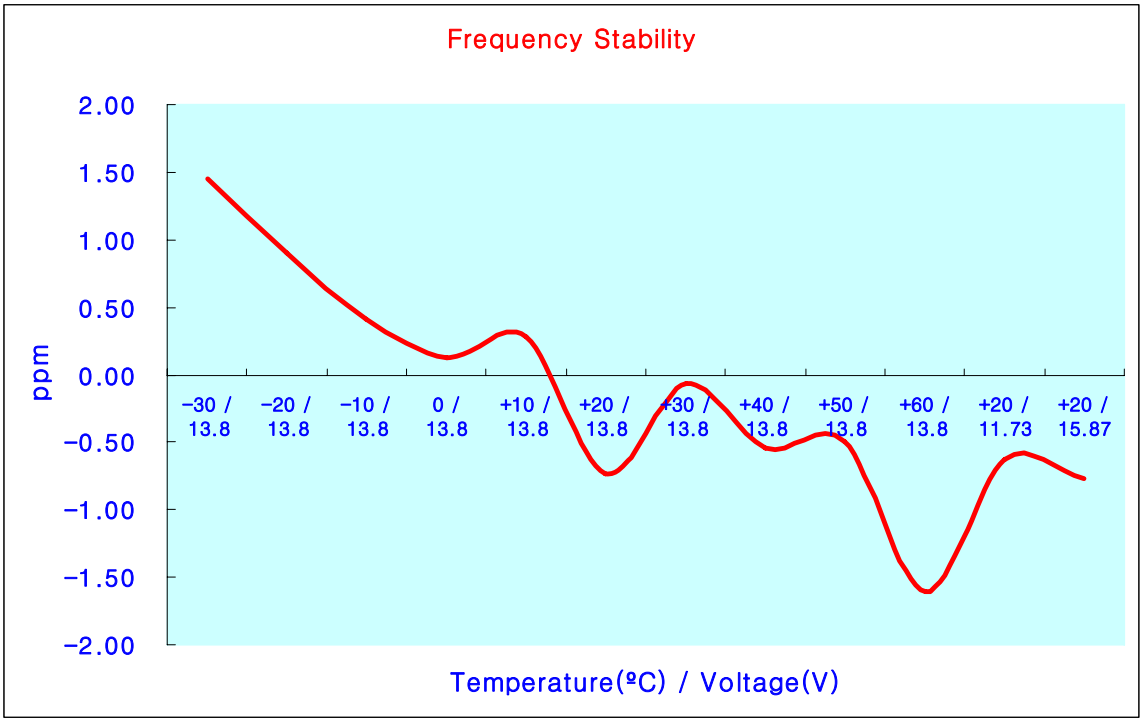
5.8.6 Test Result 1

FCC Rules :	Part 2 §2.1055 & §90.231
IC Rules :	RSS-119 Issue 9 Section 5.3
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	50 Watts
Modulation :	Non-Modulation
Reference Voltage :	13.8 VDC

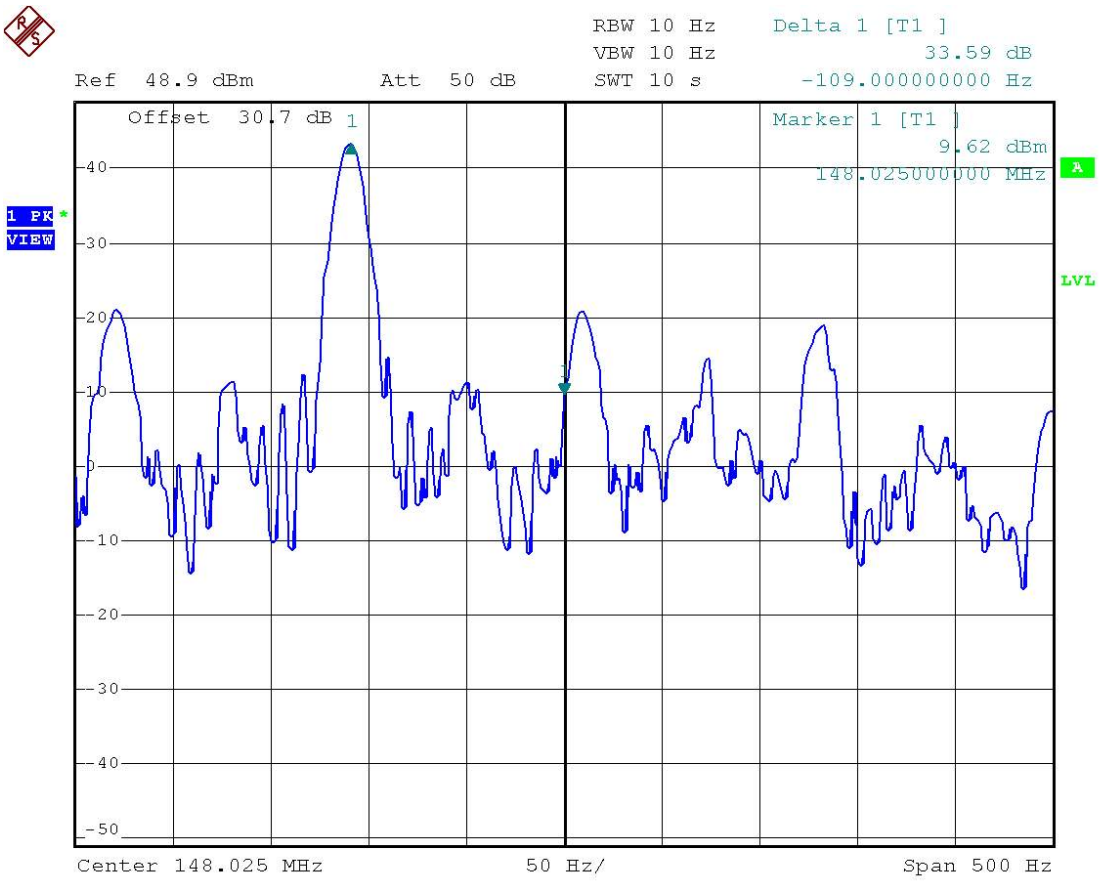
5.8.6.1 Data

Voltage (%)	Power Supply (Vdc)	Temperature (ºC)	Frequency (Hz)	Deviation (ppm)	Limit (ppm)
100 %	13.8	-30	148025215	1.45	2.5
100 %	13.8	-20	148025133	0.9	2.5
100 %	13.8	-10	148025061	0.41	2.5
100 %	13.8	0	148025019	0.13	2.5
100 %	13.8	+10	148025042	0.28	2.5
100 %	13.8	+20 (ref)	148024891	-0.74	2.5
100 %	13.8	+30	148024931	-0.06	2.5
100 %	13.8	+40	148024920	-0.54	2.5
100 %	13.8	+50	148024926	-0.5	2.5
100 %	13.8	+60	148024763	-1.6	2.5
85 %	11.73	+20	148024908	-0.62	2.5
115 %	15.87	+20	148024886	-0.77	2.5

5.8.6.2 Graph



5.8.6.3 Plot (20℃, 13.8Vdc) : normal condition



Date: 30.JUL.2009 10:49:07

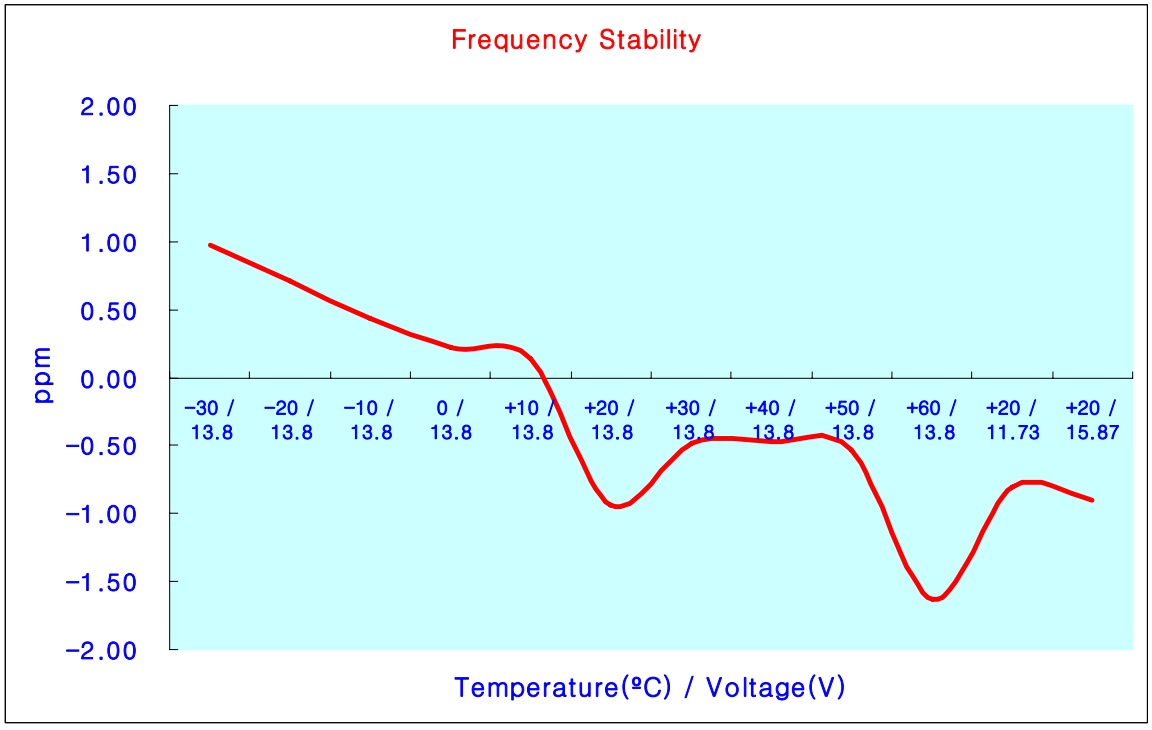
5.8.7 Test Result 2

FCC Rules :	Part 2 §2.1055 & §90.231
IC Rules :	RSS-119 Issue 9 Section 5.3
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	50 Watts
Modulation :	Non-Modulation
Reference Voltage :	13.8 VDC

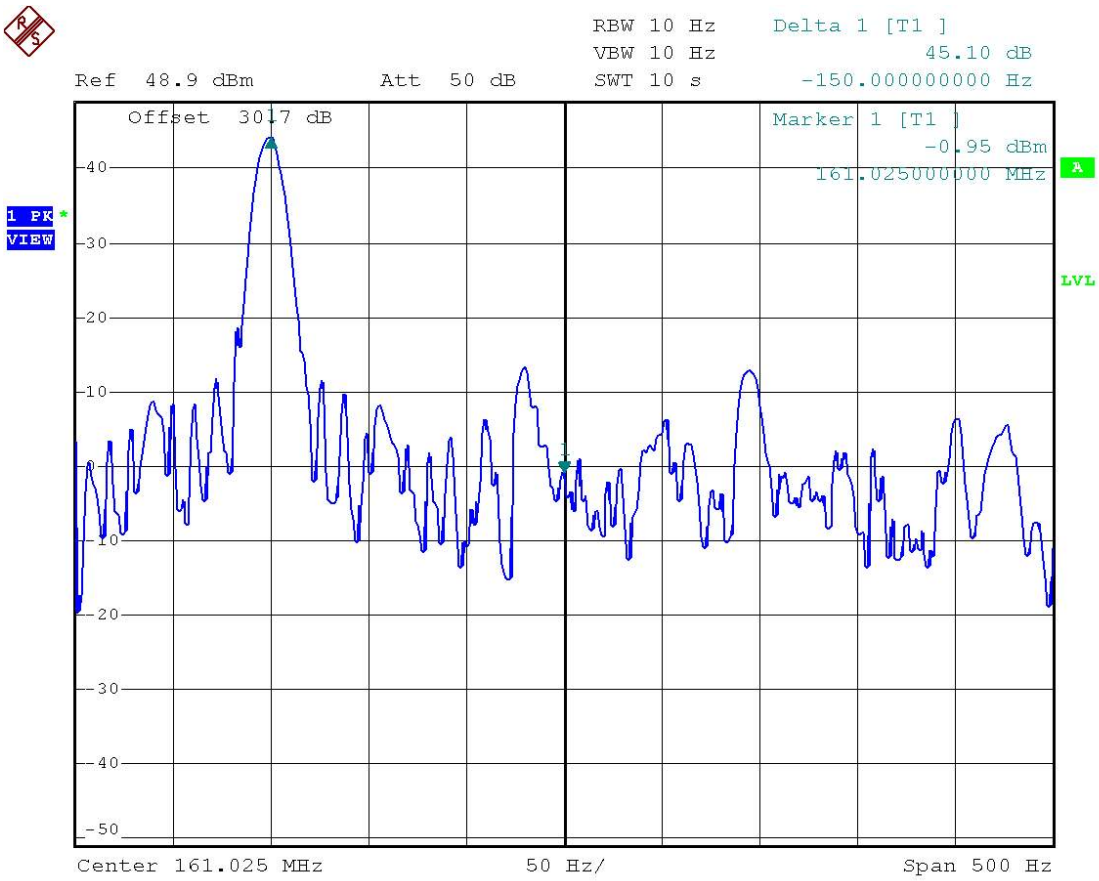
5.8.7.1 Data

Voltage (%)	Power Supply (Vdc)	Temperature (ºC)	Frequency (Hz)	Deviation (ppm)	Limit (ppm)
100 %	13.8	-30	161025156	0.97	2.5
100 %	13.8	-20	161025115	0.71	2.5
100 %	13.8	-10	161025070.2	0.44	2.5
100 %	13.8	0	161025034.8	0.22	2.5
100 %	13.8	+10	161025022.6	0.14	2.5
100 %	13.8	+20 (ref)	161024850	-0.93	2.5
100 %	13.8	+30	161024922	-0.48	2.5
100 %	13.8	+40	161024924	-0.47	2.5
100 %	13.8	+50	161024914	-0.53	2.5
100 %	13.8	+60	161024738	-1.63	2.5
85 %	11.73	+20	161024871	-0.8	2.5
115 %	15.87	+20	161024854	-0.91	2.5

5.8.7.2 Graph



5.8.7.3 Plot (20℃, 13.8Vdc) : normal condition



Date: 30.JUL.2009 10:52:49

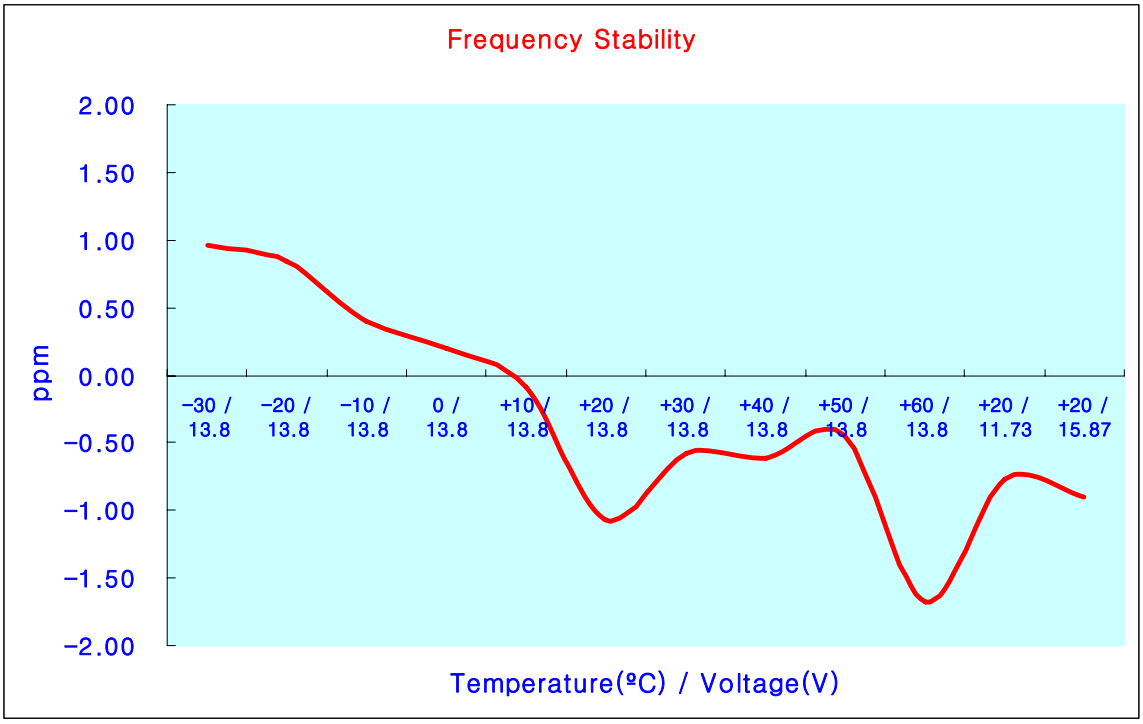
5.8.8 Test Result 3

FCC Rules :	Part 2 §2.1055 & §90.231
IC Rules :	RSS-119 Issue 9 Section 5.3
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	50 Watts
Modulation :	Non-Modulation
Reference Voltage :	13.8 VDC

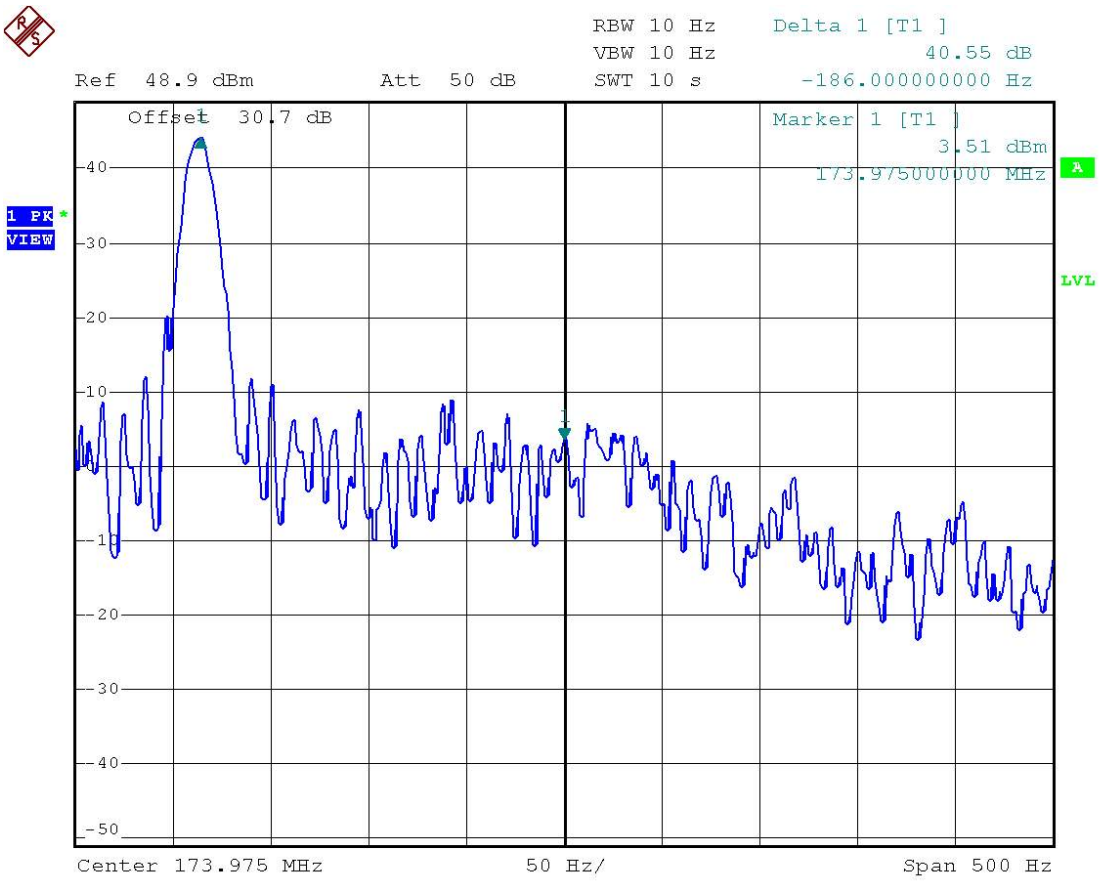
5.8.8.1 Data

Voltage (%)	Power Supply (Vdc)	Temperature (ºC)	Frequency (Hz)	Deviation (ppm)	Limit (ppm)
100 %	13.8	-30	173975168	0.97	2.5
100 %	13.8	-20	173975146	0.84	2.5
100 %	13.8	-10	173975069.4	0.4	2.5
100 %	13.8	0	173975034.6	0.2	2.5
100 %	13.8	+10	173974985.3	-0.08	2.5
100 %	13.8	+20 (ref)	173974814	-1.07	2.5
100 %	13.8	+30	173974900	-0.57	2.5
100 %	13.8	+40	173974894	-0.61	2.5
100 %	13.8	+50	173974923	-0.44	2.5
100 %	13.8	+60	173974709	-1.67	2.5
85 %	11.73	+20	173974866	-0.77	2.5
115 %	15.87	+20	173974844	-0.9	2.5

5.8.8.2 Graph



5.8.8.3 Plot (20℃, 13.8Vdc) : normal condition



Date: 30.JUL.2009 10:55:18

5.9 Transient Frequency Behavior

5.9.1 Specification

FCC Rules Part 90, Section 90.214
Industry Canada, RSS-119 Issue 9 Section 5.9

5.9.2 Method of Measurement

ANSI/TIA-603-B-2002 Section 2.2.19

5.9.3 Measurement Set-Up

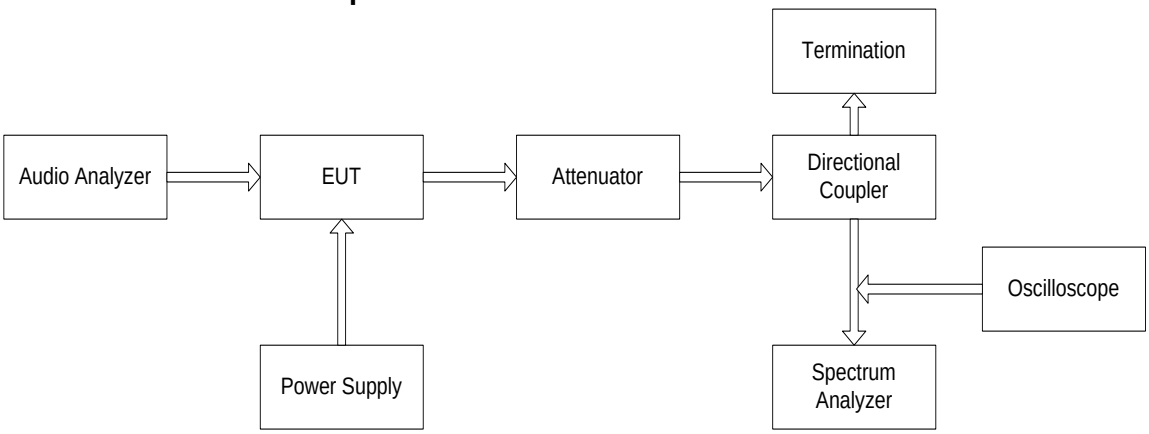


Fig.9

5.9.4 Test Equipment List

Equipment	Model Name	Manufacturer
EUT	SM5102	Maxon CIC Corp.
Power Supply	6206-60	CHROMA
Audio Analyzer	8903B	Agilent
Attenuator	RFA500NMF30	
Directional Coupler	778D	Agilent
Termination	8173	Bird
Oscilloscope	TDS3032	Tektronix
Spectrum Analyzer	FSP7	Rohde & Shwarz

5.9.5 Test Procedure

-. The unit was turn-up in accordance with the alignment procedure stated in the FIG. 9, and was loaded into a 50 ohm resistive termination.
-. Using the variable attenuator the transmitter level was set to 40 dB below the test receivers maximum input level, then the transmitter was turned off.
-. With the transmitter off the signal generator was set 20dB below the level of the transmitter in the above step, this level will be maintained with the signal generator through-out the test.
-. Reduce the attenuation between the transmitter and the RF detector by 30 dB.
-. With the levels set as above the transient frequency behavior was observed & recorded.
-. Requirements

5.9.6 Limit

Transient Frequency Difference Limits

Time Interval	Max. Permitted Frequency Difference for 25 and 30 kHz Channel Spacing (in kHz)	Max. Permitted Frequency Difference for 12.5 and 15 kHz Channel Spacing (in kHz)
t1 or t3	25	12.5
t2	12.5	6.25

Transient Duration Limits

Time Intervals	Frequency Ranges (MHz)		
	30 to 174	406 to 512	806 to 940
t1	5.0 ms	10.0 ms	20.0 ms
t2	20.0 ms	25.0 ms	50.0 ms
t3	5.0 ms	10.0 ms	10.0 ms

The transient frequency behaviour of the transmitter is the variation in time of the transmitter frequency difference from the nominal frequency of the transmitter when the RF output power is switched on and off.

ton: according to the method of measurement described the switch-on instant ton of a transmitter is defined by the condition when the output power, measured at the antenna terminal, exceeds 0,1 % of the nominal power.

t1: period of time starting at ton and finishing.

t2: period of time starting at the end of t1 and finishing.

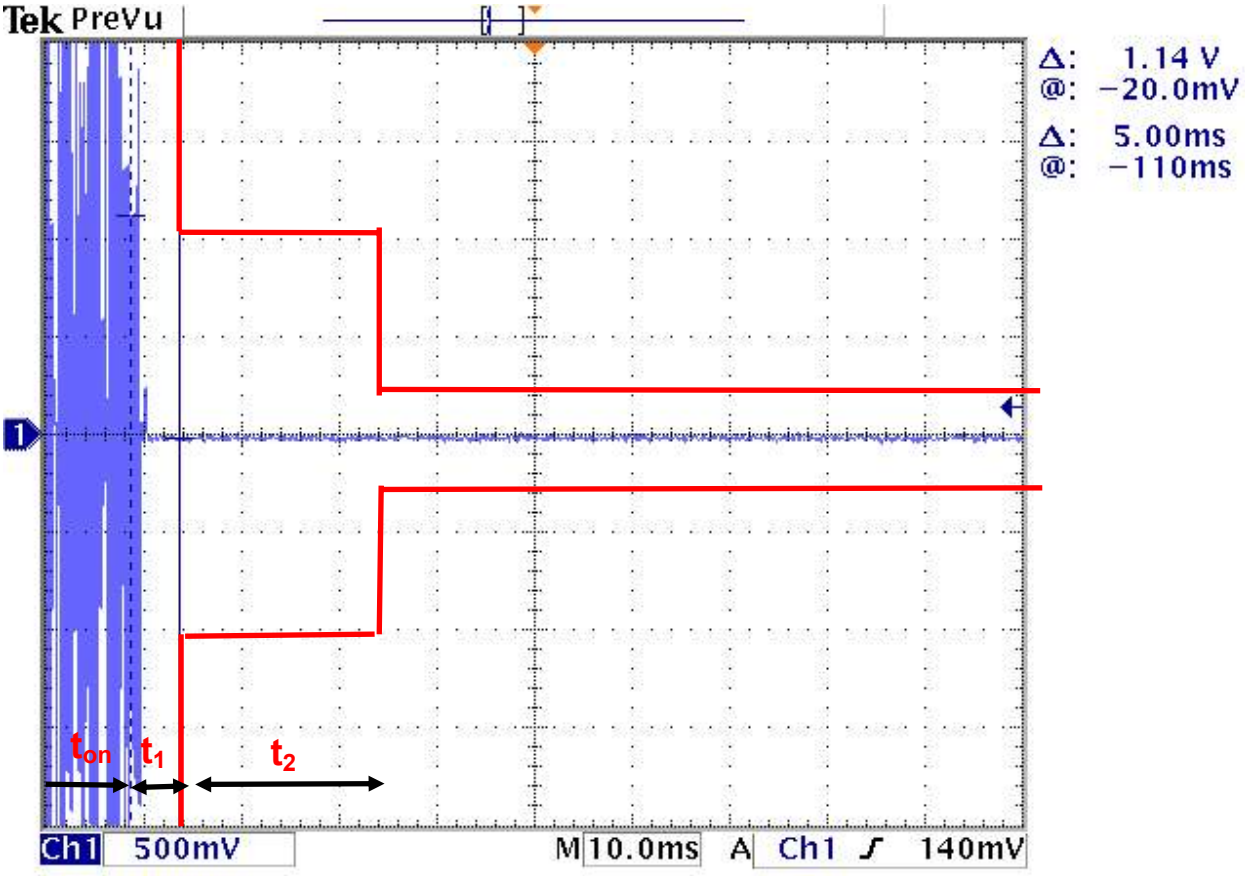
toff: switch-off instant defined by the condition when the nominal power falls below 0,1 % of the nominal power.

t3: period of time that finishing at toff and starting.

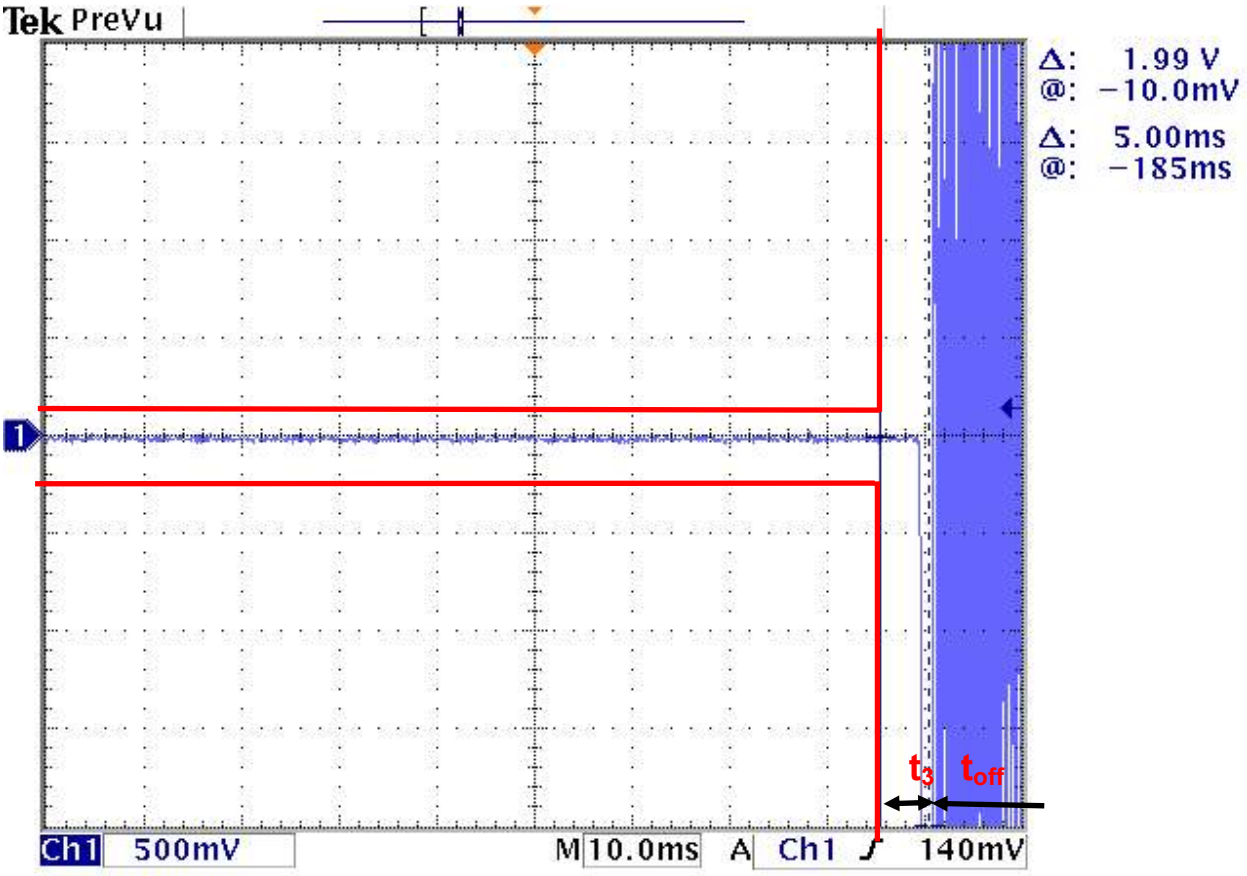
5.9.7 Test Plot 1

FCC Rules :	Part 90 §90.231
IC Rules :	RSS-119 Issue 9 Section 5.9
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	50 Watts
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC

5.9.7.1 Switch on condition t_{on}, t_1 and t_2



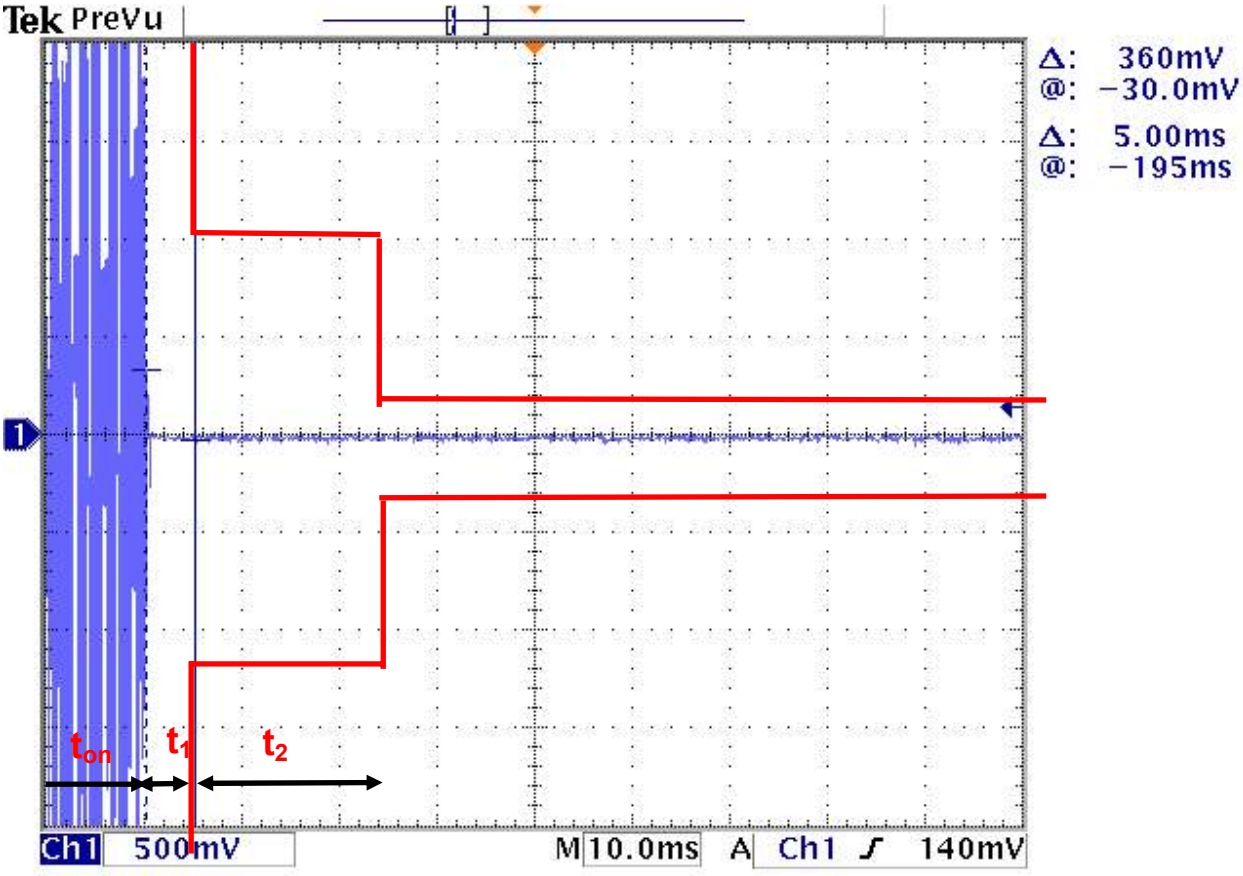
5.9.7.2 Switch off condition t3, t_{off}



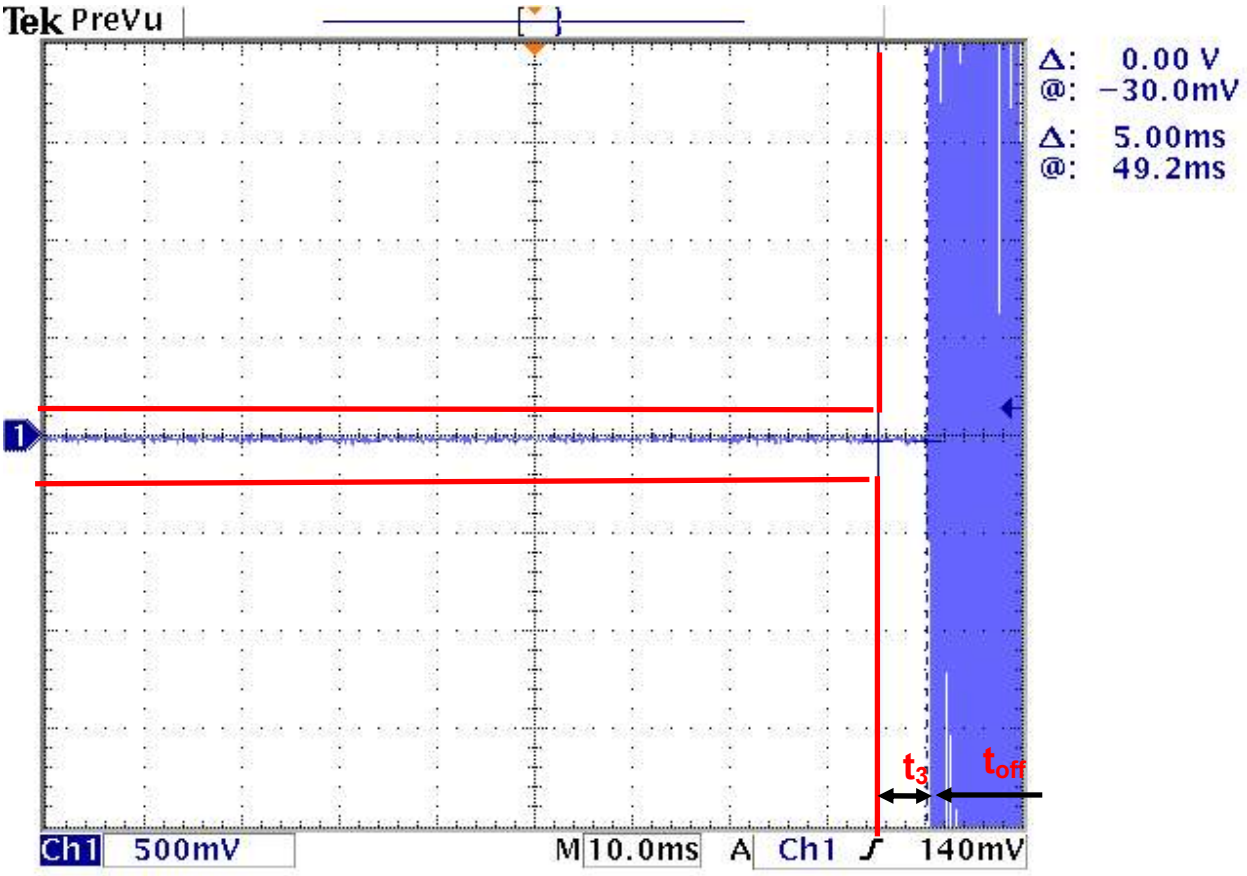
5.9.8 Test Plot 2

FCC Rules :	Part 90 §90.231
IC Rules :	RSS-119 Issue 9 Section 5.9
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	50 Watts
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC

5.9.8.1 Switch on condition t_{on}, t_1 and t_2



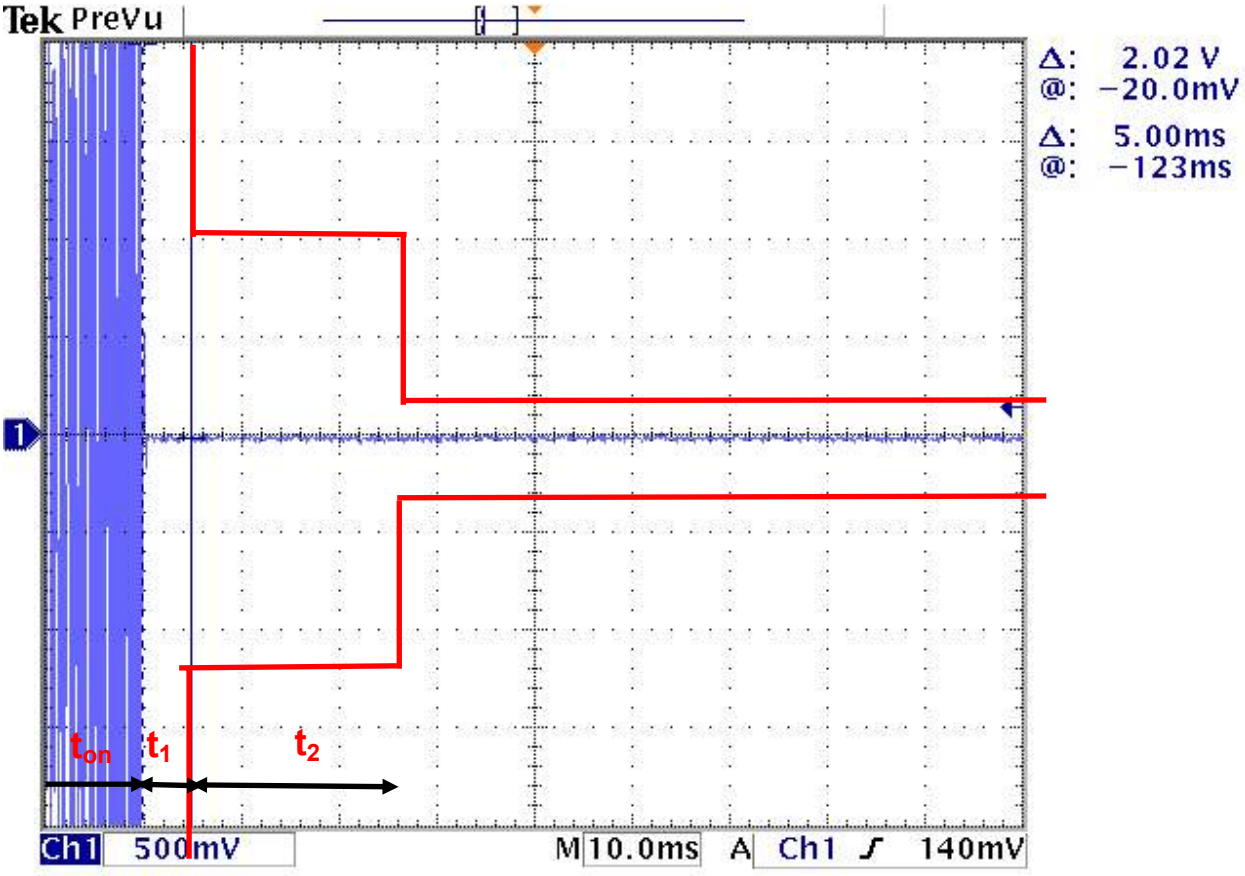
5.9.8.2 Switch off condition t3, t_{off}



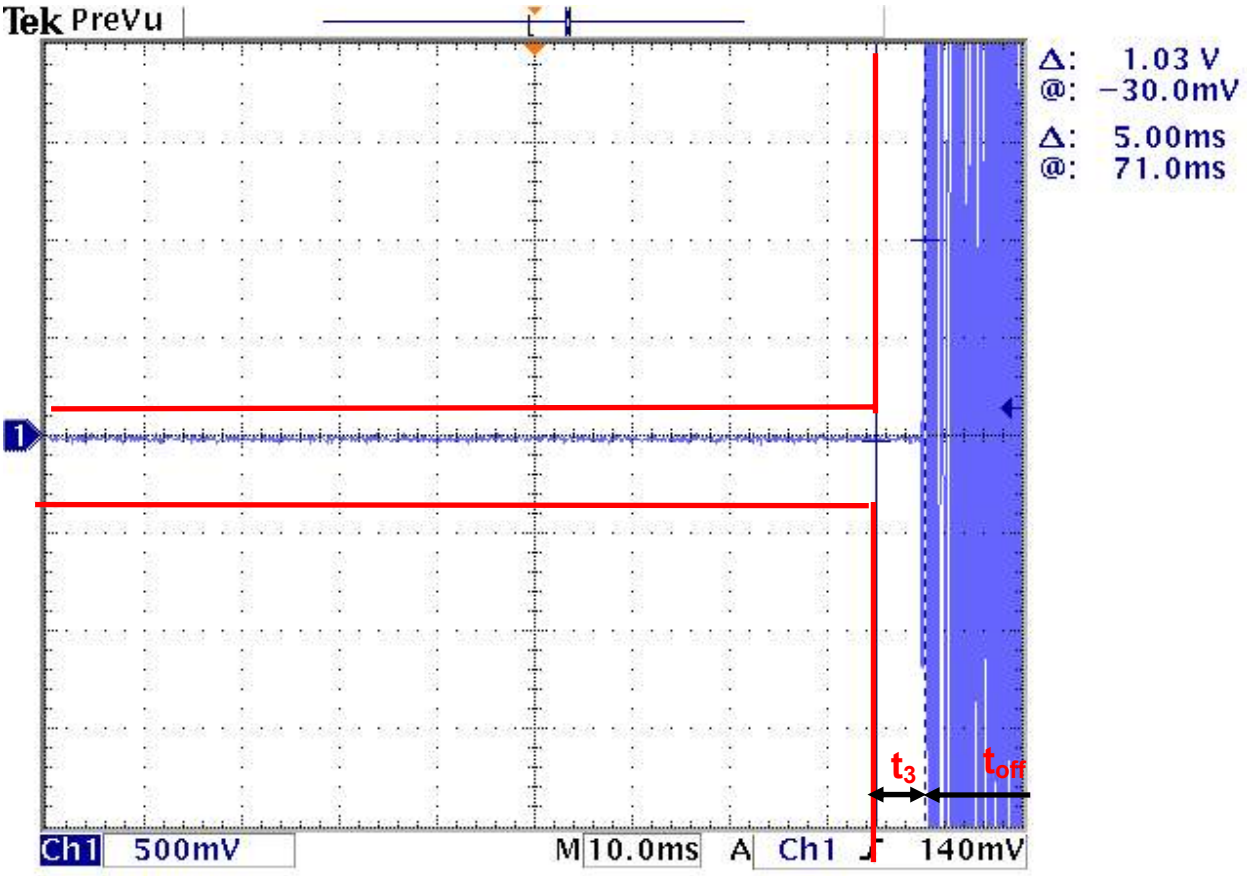
5.9.9 Test Plot 3

FCC Rules :	Part 90 §90.231
IC Rules :	RSS-119 Issue 9 Section 5.9
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	50 Watts
Channel Spacing :	Narrow Band
Reference Voltage :	13.8 VDC

5.9.9.1 Switch on condition t_{on}, t_1 and t_2



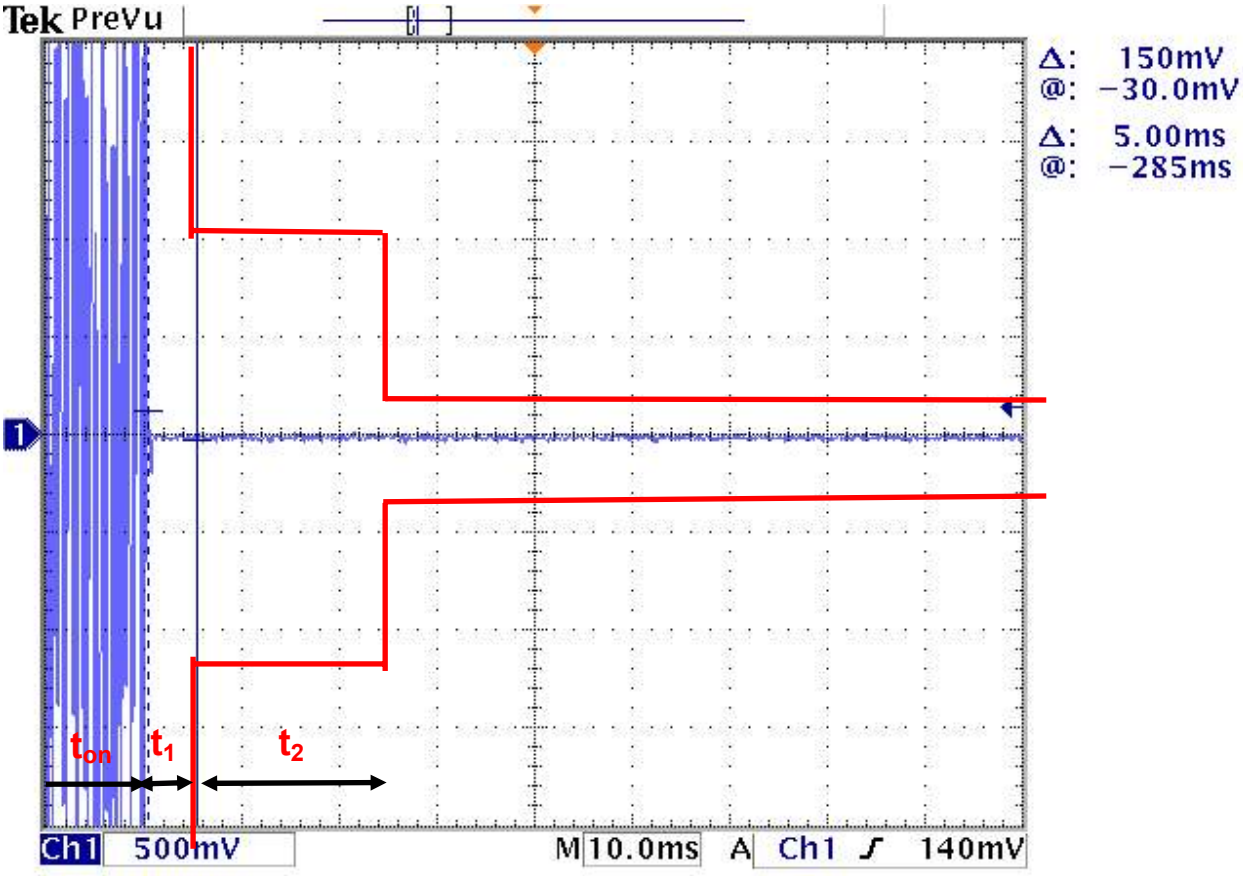
5.9.9.2 Switch off condition t3, t_{off}



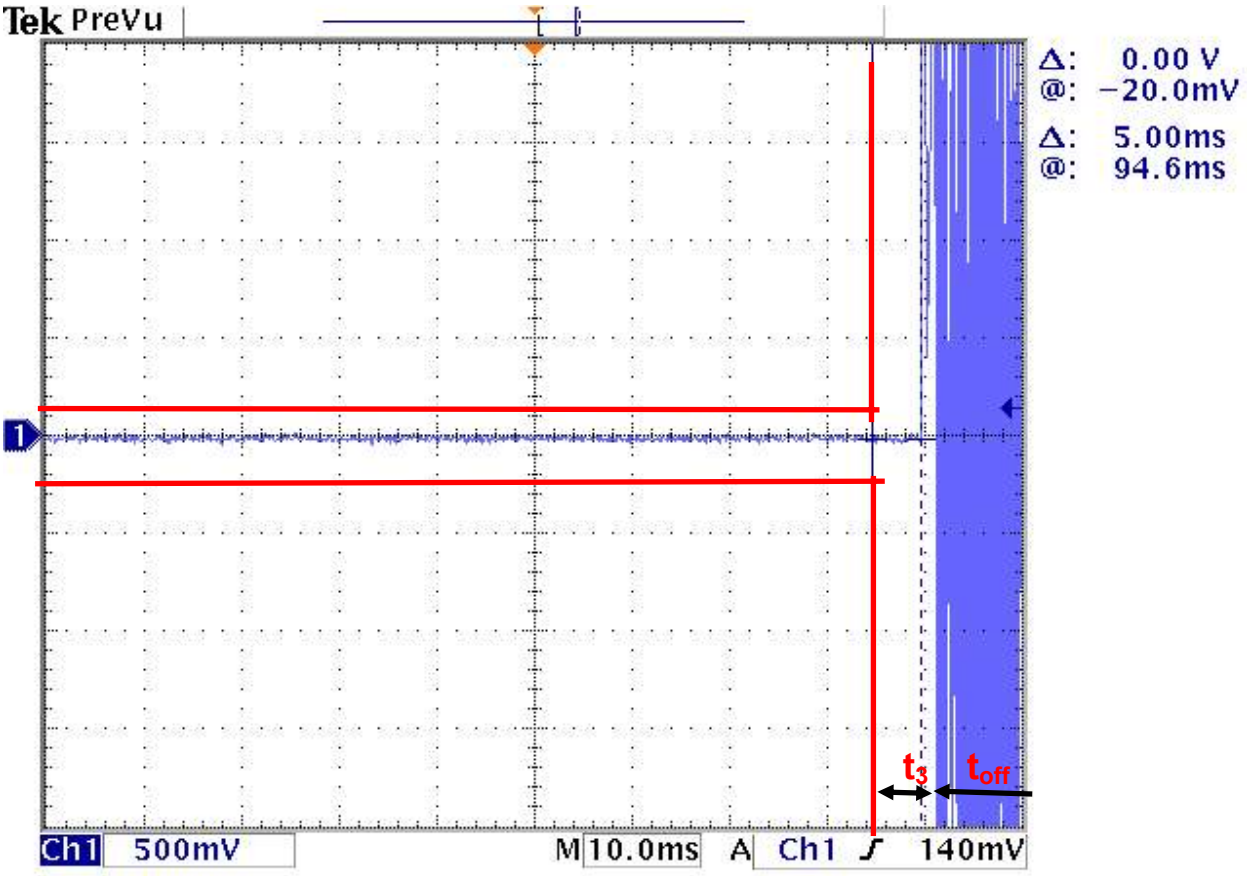
5.9.10 Test Plot 4

FCC Rules :	Part 90 §90.231
IC Rules :	RSS-119 Issue 9 Section 5.9
Operating Frequency :	148.025 MHz
Channel :	1st Channel
Power Output :	50 Watts
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC

5.9.10.1 Switch on condition t_{on}, t_1 and t_2



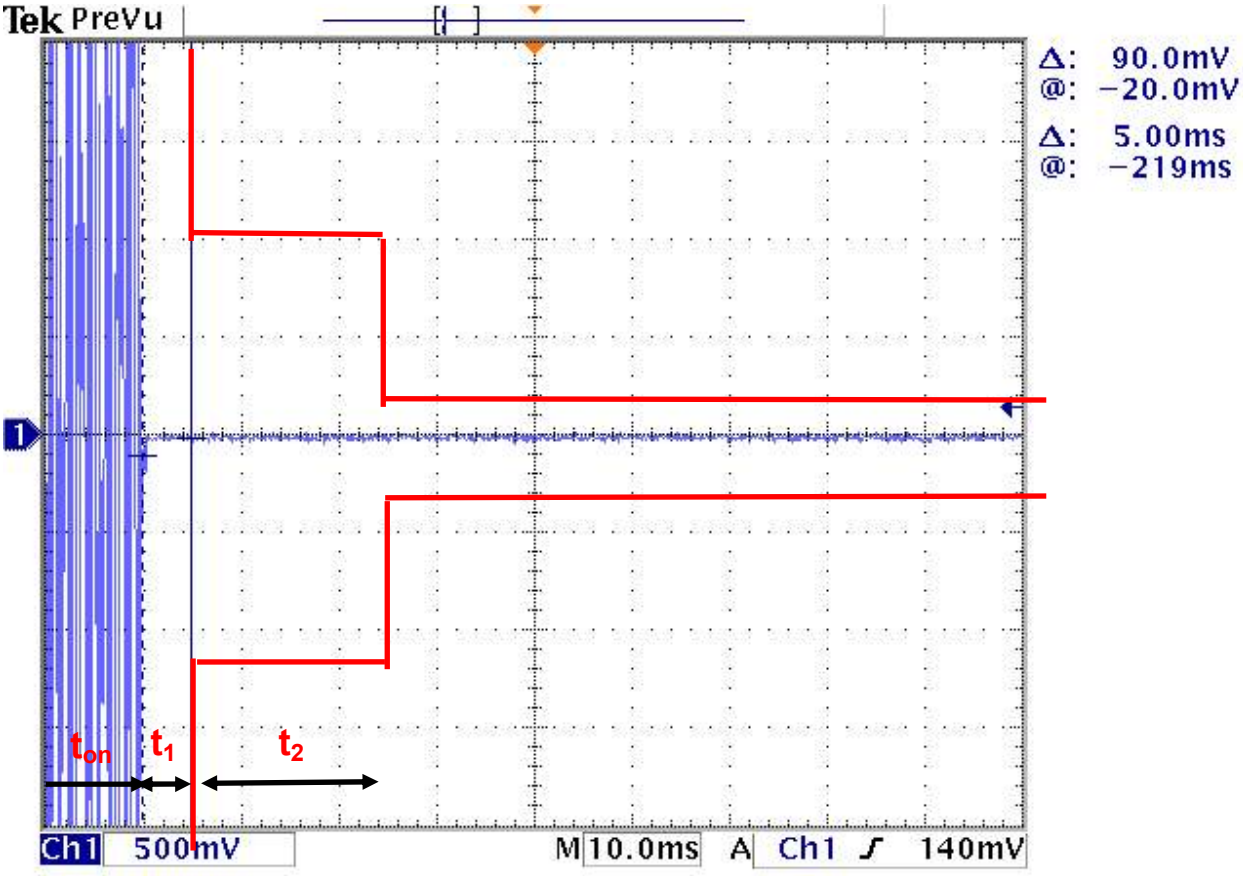
5.9.10.2 Switch off condition t3, t_{off}



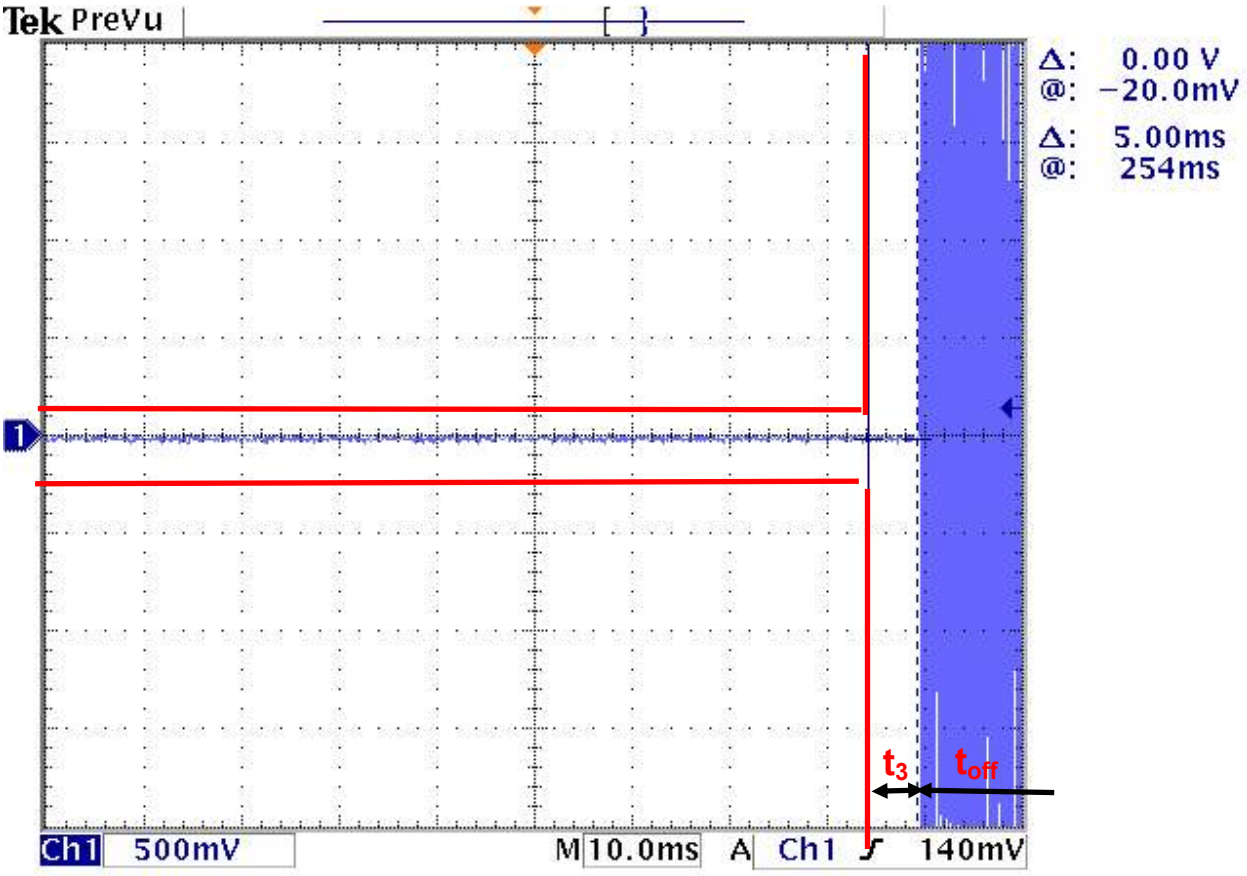
5.9.11 Test Plot 5

FCC Rules :	Part 90 §90.231
IC Rules :	RSS-119 Issue 9 Section 5.9
Operating Frequency :	161.025 MHz
Channel :	2nd Channel
Power Output :	50 Watts
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC

5.9.12.1 Switch on condition t_{on}, t_1 and t_2



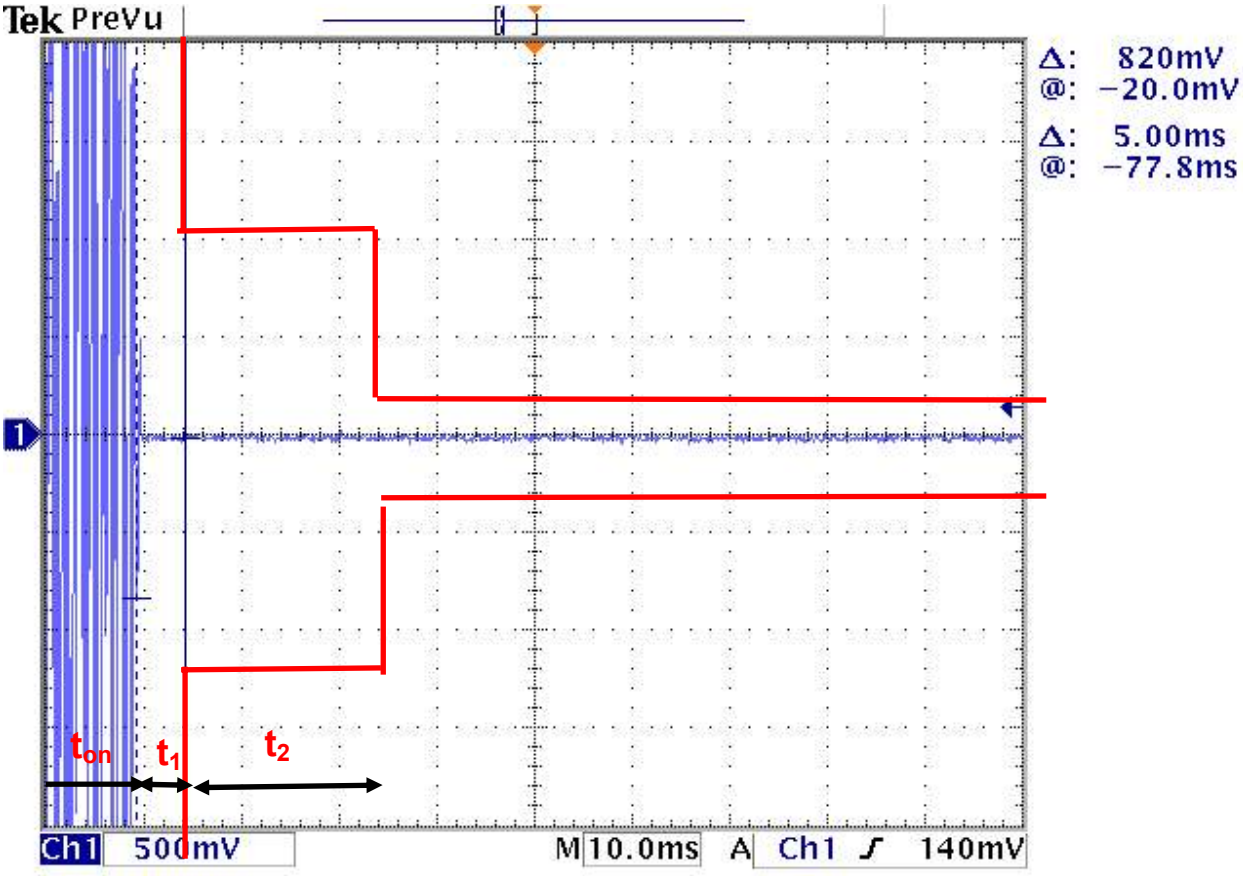
5.9.11.2 Switch off condition t3, t_{off}



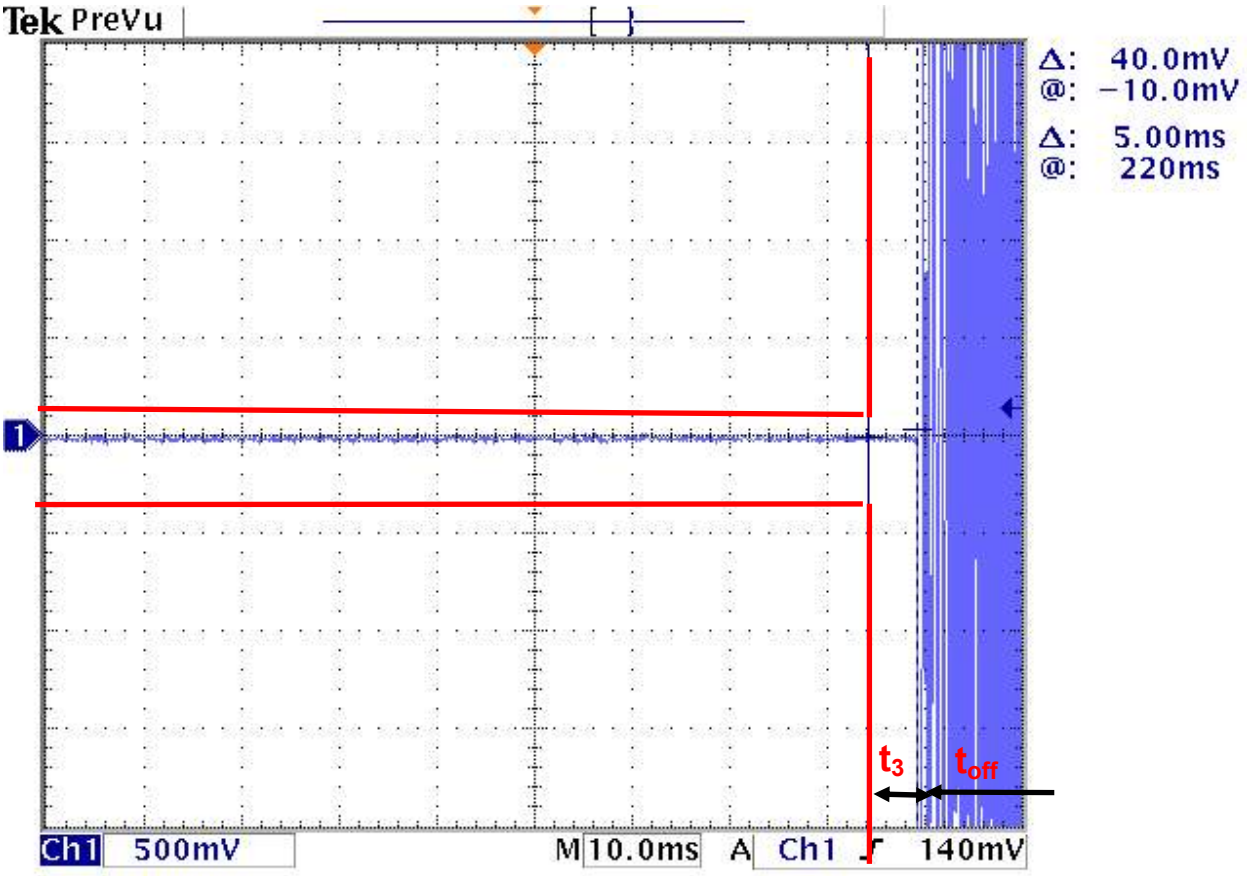
5.9.12 Test Plot 6

FCC Rules :	Part 90 §90.231
IC Rules :	RSS-119 Issue 9 Section 5.9
Operating Frequency :	173.975 MHz
Channel :	3rd Channel
Power Output :	50 Watts
Channel Spacing :	WideBand
Reference Voltage :	13.8 VDC

5.9.12.1 Switch on condition t_{on}, t_1 and t_2



5.9.12.2 Switch off condition t3, t_{off}



6. TEST EQUIPMENTS LIST

EQUIPMENT		MODEL	MANUFACTURE	SERIAL NUMBER	Calibration Due date
1	Receiver	ESVN 30	Rohde & Schwarz	832854/010	07/25/10
2	Spectrum analyzer	FSP7	Rohde & Schwarz	100001	10/30/09
3	Signal Generator	E4432B	Agilent	US40053157	02/04/10
4	Signal Generator	GT9000	Gigatronics	9604010	10/30/09
6	Modulation Analyzer	8901B	Agilent	3028A03124	10/30/09
7	Audio Analyzer	8903B	Agilent	3011A09344	10/30/09
8	Digital Oscilloscope	TDS3032	Tektronix	B019436	10/30/09
9	Frequency Counter	R5372	Advantest	41855204	10/29/09
10	Shield Room (7m x 4m x 3m)	N/A	SJEMC	0004	N/A
11	Turn Table	OSC-30	N/A	BWS-01	N/A
12	Antenna Mast	JAC-3	Dail EMC	N/A	N/A
13	Temperature & Humidity chanber	EN-GLMP-54	Enex	N/A	01/30/10
14	Bilog Antenna	VULB9160	Schwarzbeck	VULB9160-3122	01/24/10
15	Bilog Antenna	VULB9161	Schwarzbeck	VULB9161-4067	11/19/09
16	Bilog Antenna	VULB9161	Schwarzbeck	VULB9161-4068	12/11/09
17	Attenuator	RFA500NMF30		9522	10/30/09
18	Horn Antenna	BBHA 9120 D	Schwarzbeck	BBHA 9120 D517	12/18/2010
19	Horn Antenna	BBHA 9120 D	Schwarzbeck	BBHA 9120 D234	03/16/2011
20	Power Meter	E4418A	Agilent	GB38272621	10/29/09
21	Power Sensor	E9301B	Agilent	US40010238	10/29/09
22	Power supply	6206-60	CHROMA	13359	08/25/09
23	Directional Coupler	778D	Agilent	1144A08477	10/29/09
24	Power Divider/Combiner	11636A	Agilent	05774	02/05/10
25	Power Divider/Combiner	11636A	Agilent	05870	02/05/10