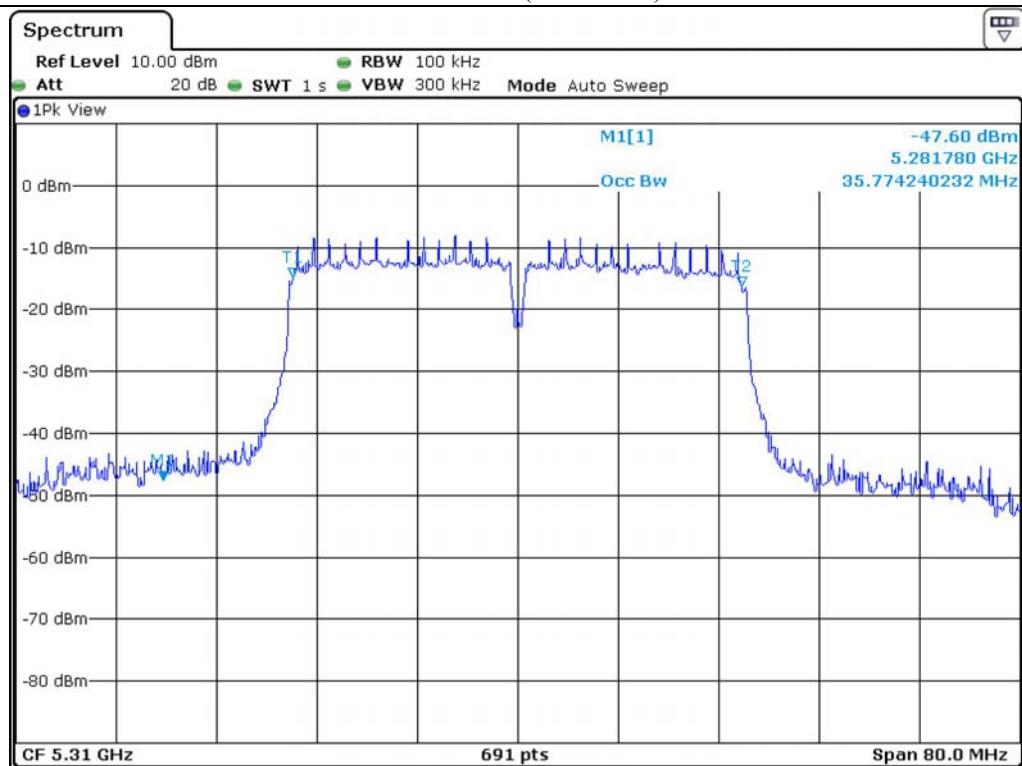
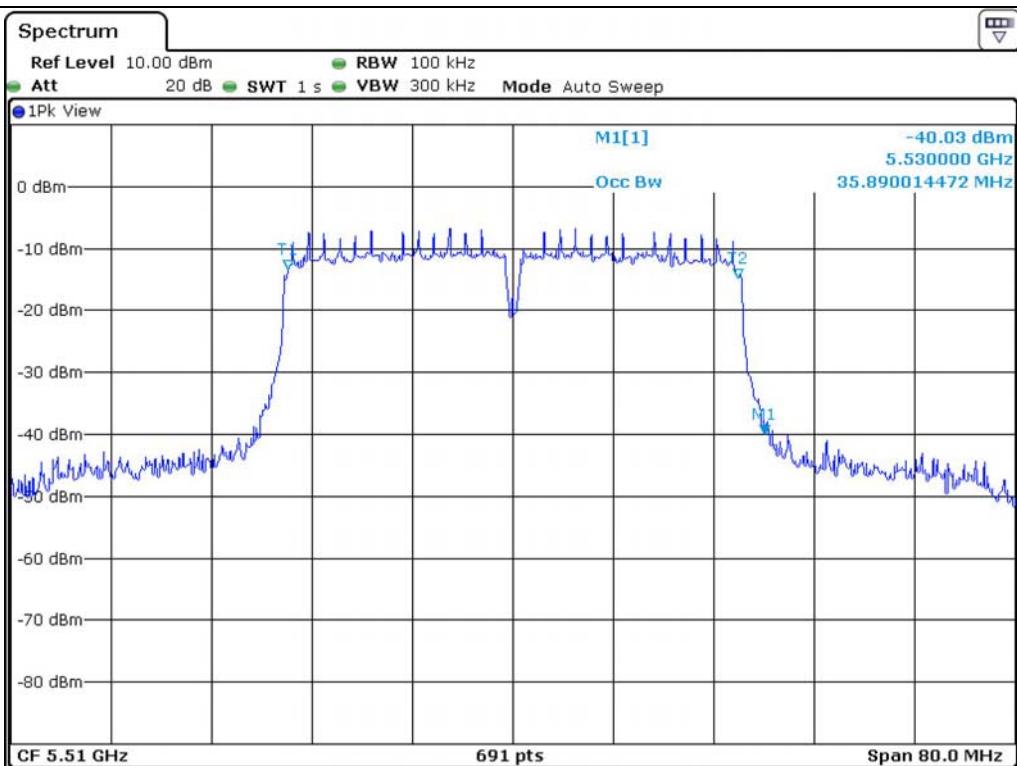


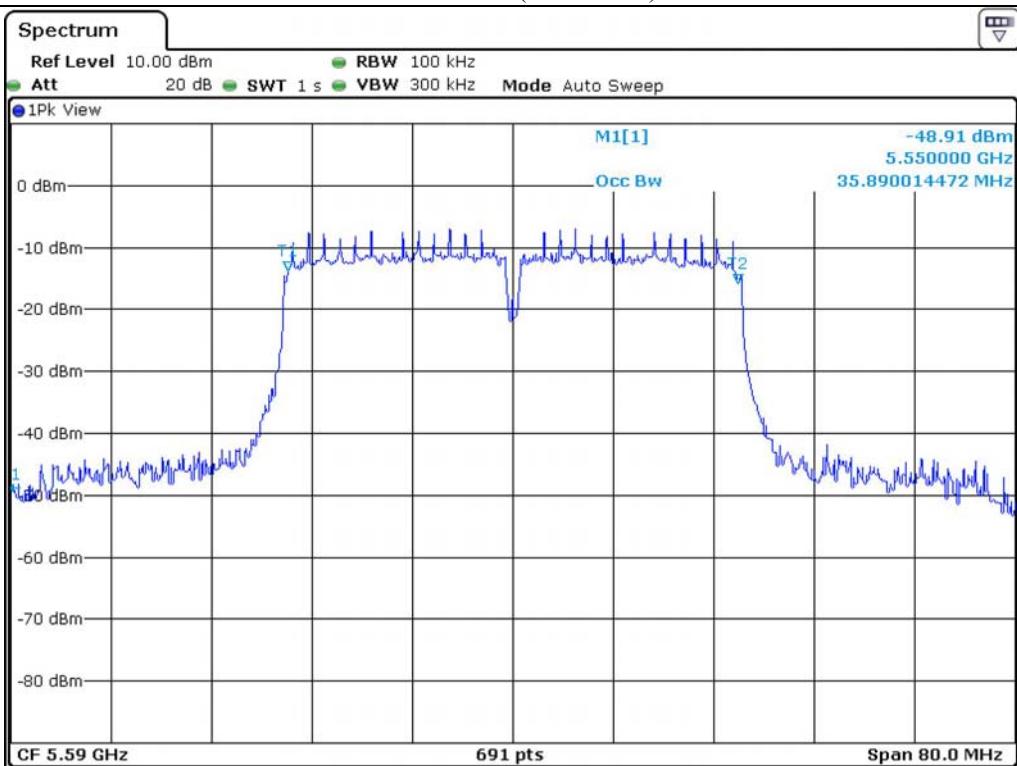
Low Channel (5.270 MHz)



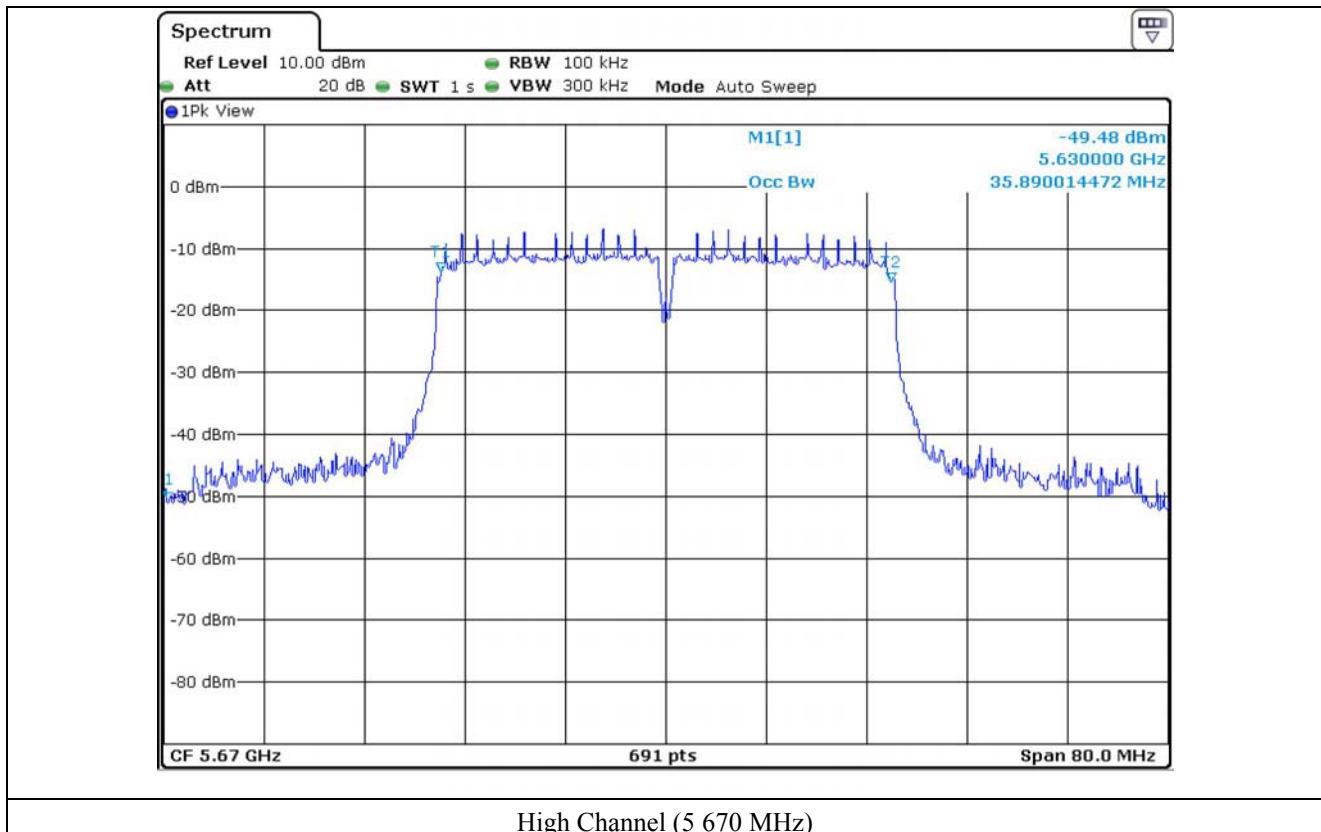
High Channel (5.310 MHz)



Low Channel (5 510 MHz)



Middle Channel (5 590 MHz)



8. MAXIMUM PEAK OUTPUT POWER

8.1 Operating environment

Temperature : 24°C

Relative humidity : 43 % R.H.

8.2 Test set-up

The maximum peak output power was measured with the spectrum analyzer connected to the antenna output of the EUT. The spectrum analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99 % bandwidth. The EUT was operating in transmit mode at the appropriate center frequency.



8.3 Test equipment used

Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ - FSV30	R/S	Spectrum Analyzer	101372	May 20, 2013

All test equipment used is calibrated on a regular basis.

8.4 Test data for 802.11a RLAN Mode

8.4.1 Test data for Antenna 0

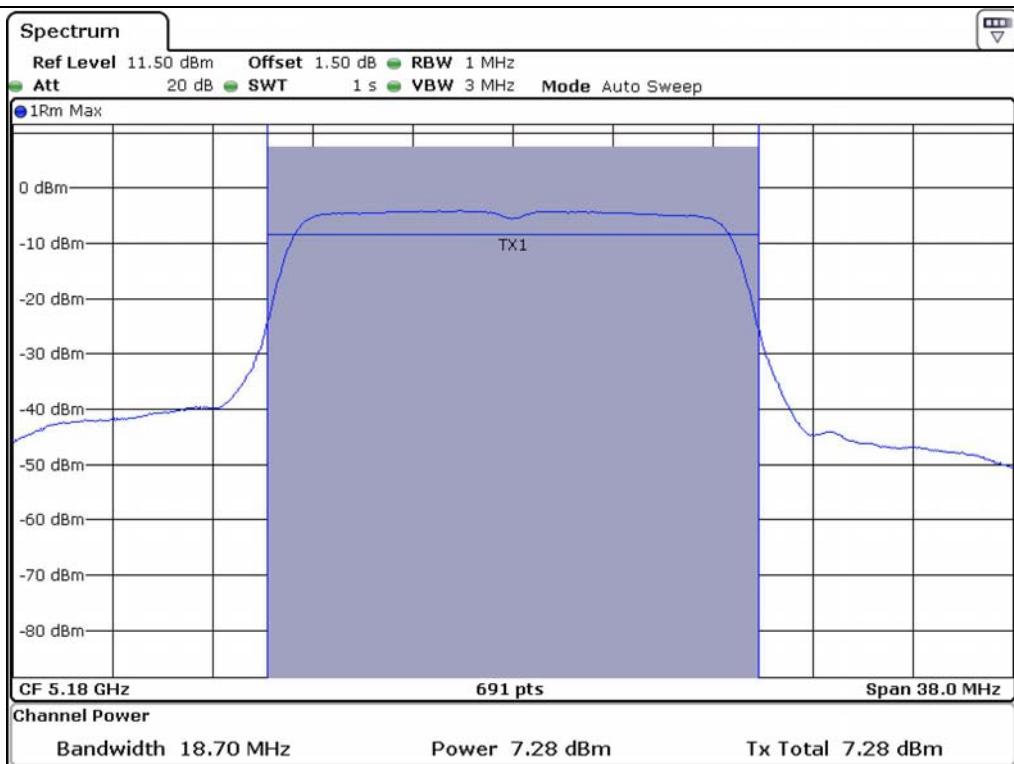
- Test Date : December 16, 2013
- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	18.70	7.28	16.72	9.44
	Middle	5 200	18.70	7.28	16.72	9.44
	High	5 240	18.70	8.82	16.72	7.90
5 250 ~ 5 350	Low	5 260	18.47	8.54	23.66	15.12
	Middle	5 300	18.47	8.18	23.66	15.48
	High	5 320	18.47	7.49	23.66	16.17
5 470 ~ 5 725	Low	5 500	18.47	7.89	23.66	15.77
	Middle	5 600	18.47	7.11	23.66	16.55
	High	5 700	18.47	8.27	23.66	15.39

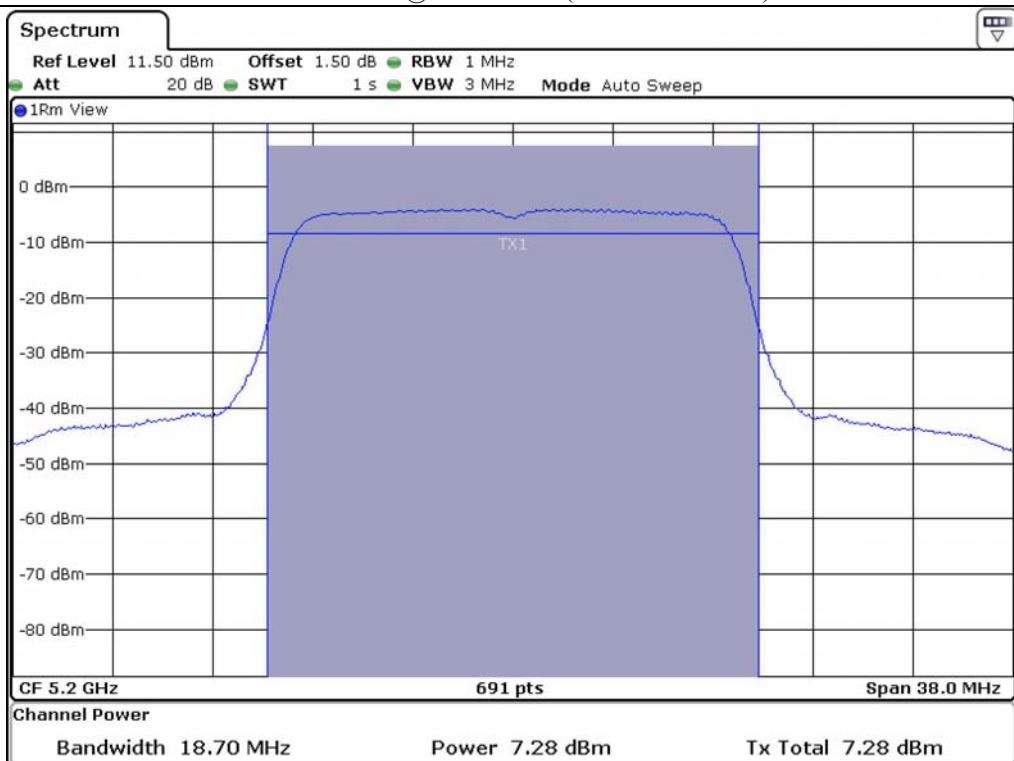
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	99 % bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	16.38	6.81	16.14	9.33
	Middle	5 200	16.38	6.92	16.14	9.22
	High	5 240	16.38	7.88	16.14	8.26
5 250 ~ 5 350	Low	5 260	16.38	8.31	23.14	14.83
	Middle	5 300	16.38	8.20	23.14	14.94
	High	5 320	16.38	7.40	23.14	15.74
5 470 ~ 5 725	Low	5 500	16.38	7.24	23.14	15.90
	Middle	5 600	16.38	6.64	23.14	16.50
	High	5 700	16.38	8.22	23.14	14.92

Remark: See next page for measurement data.

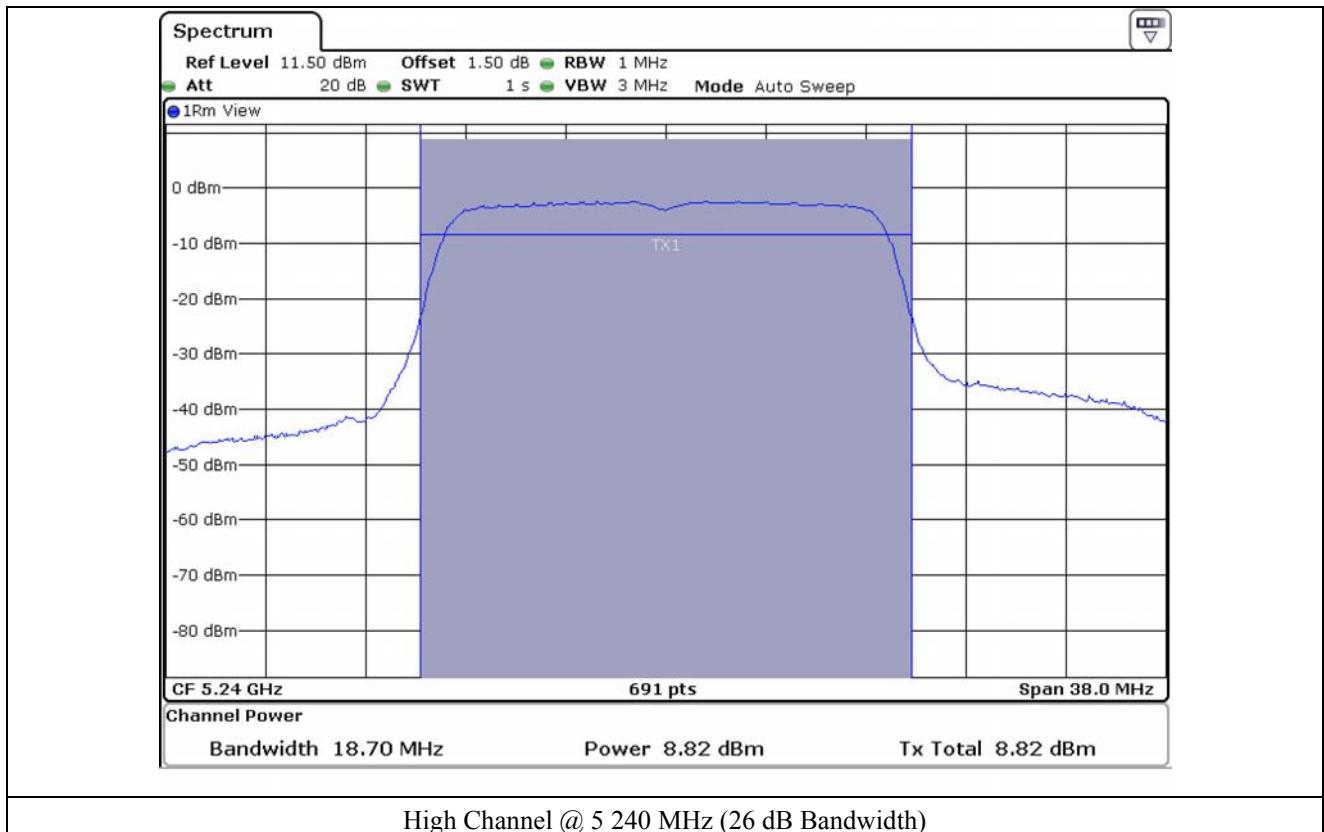
Tested by: Hong-Kyu, Lee/ Engineer

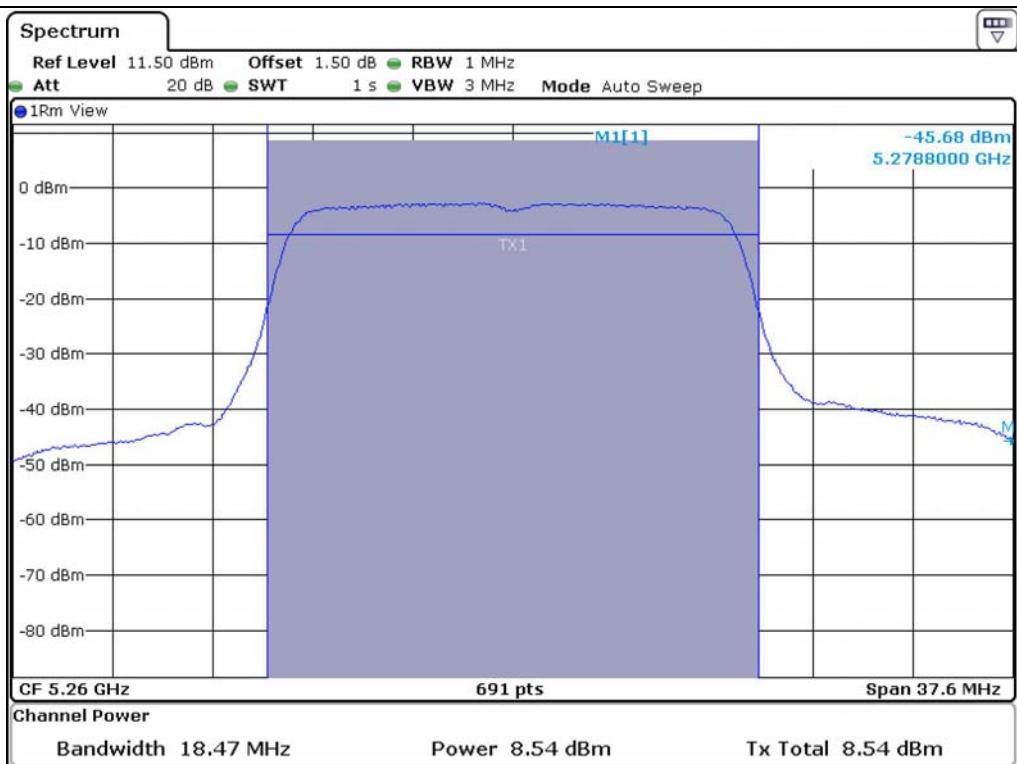


Low Channel @ 5 180 MHz (26 dB Bandwidth)

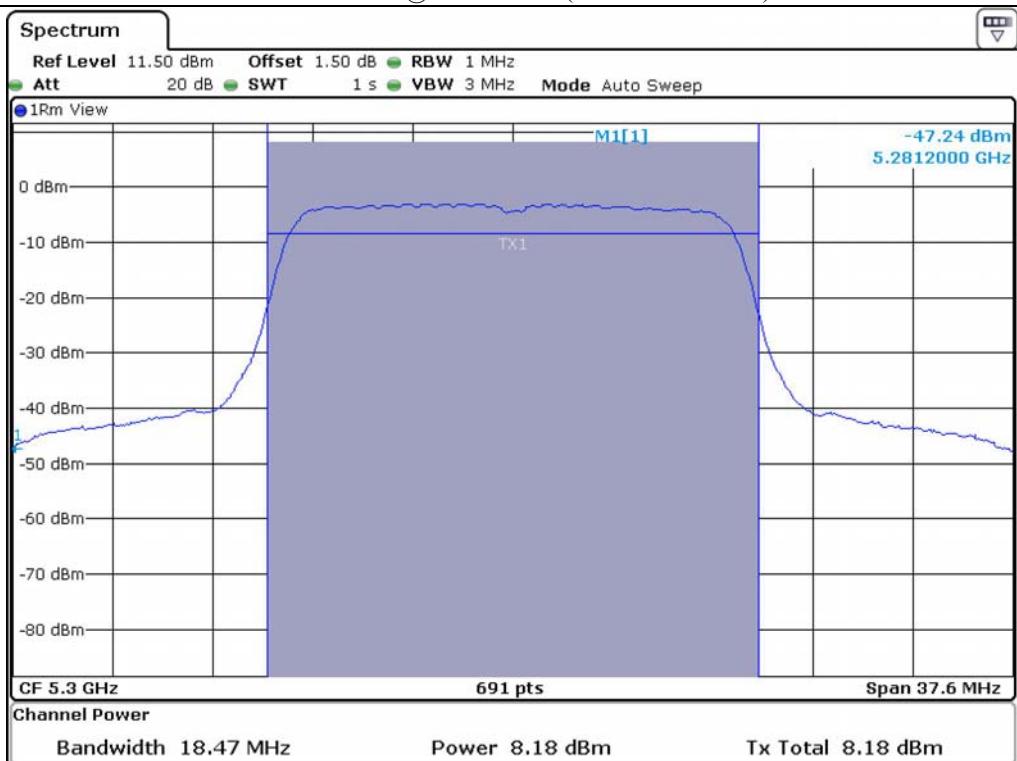


Middle Channel @ 5 200 MHz (26 dB Bandwidth)

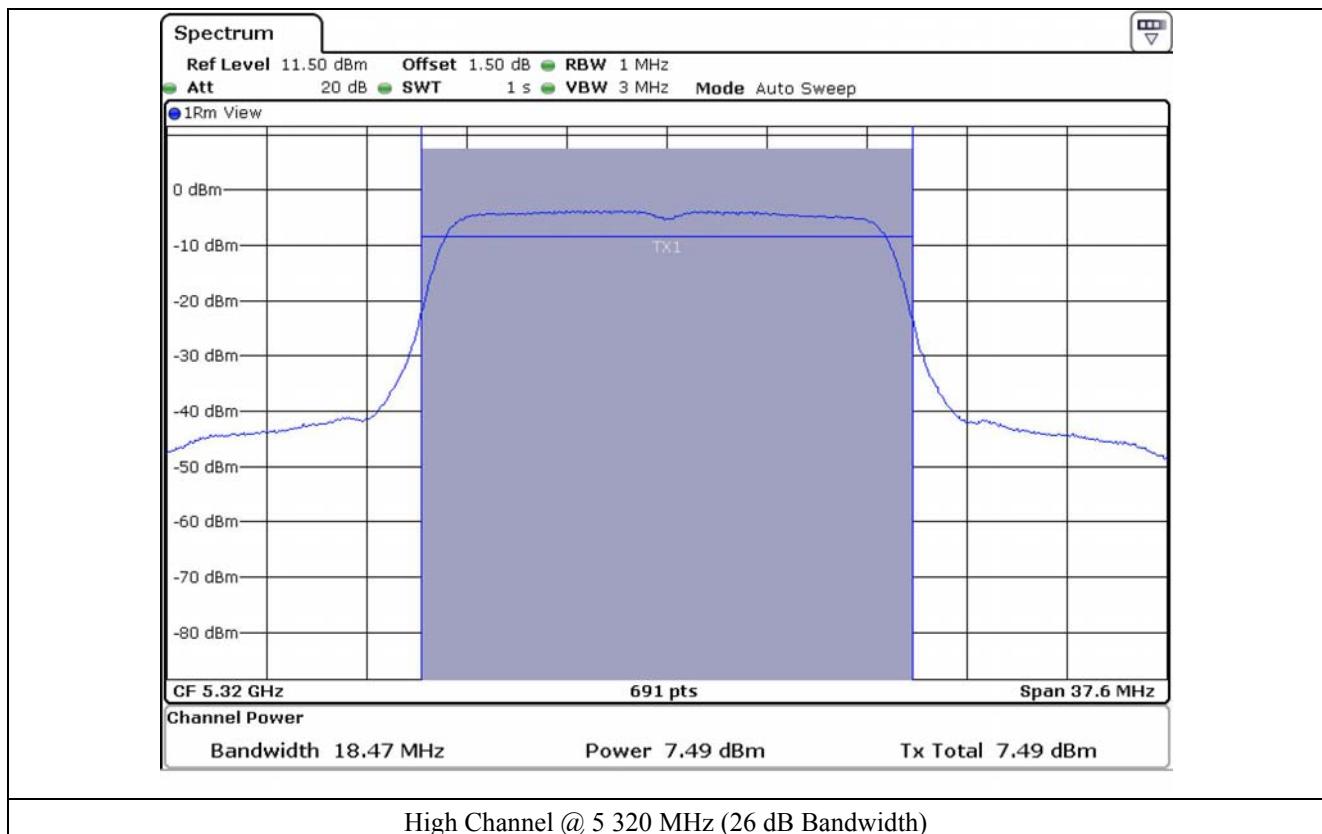


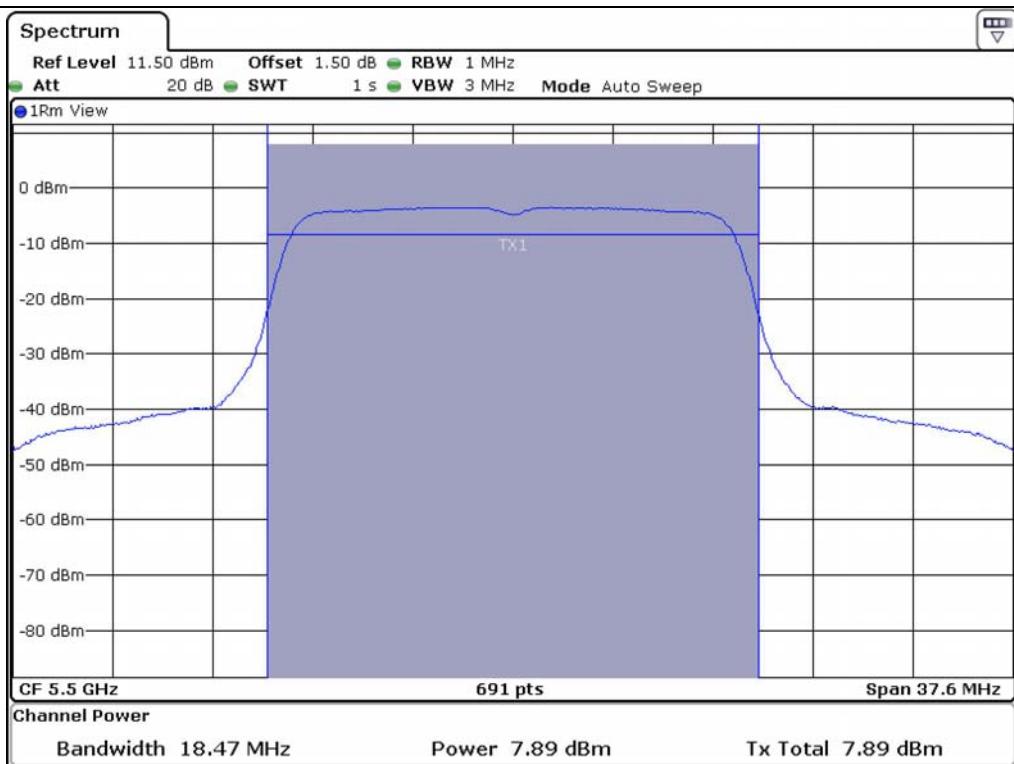


Low Channel @ 5.260 MHz (26 dB Bandwidth)

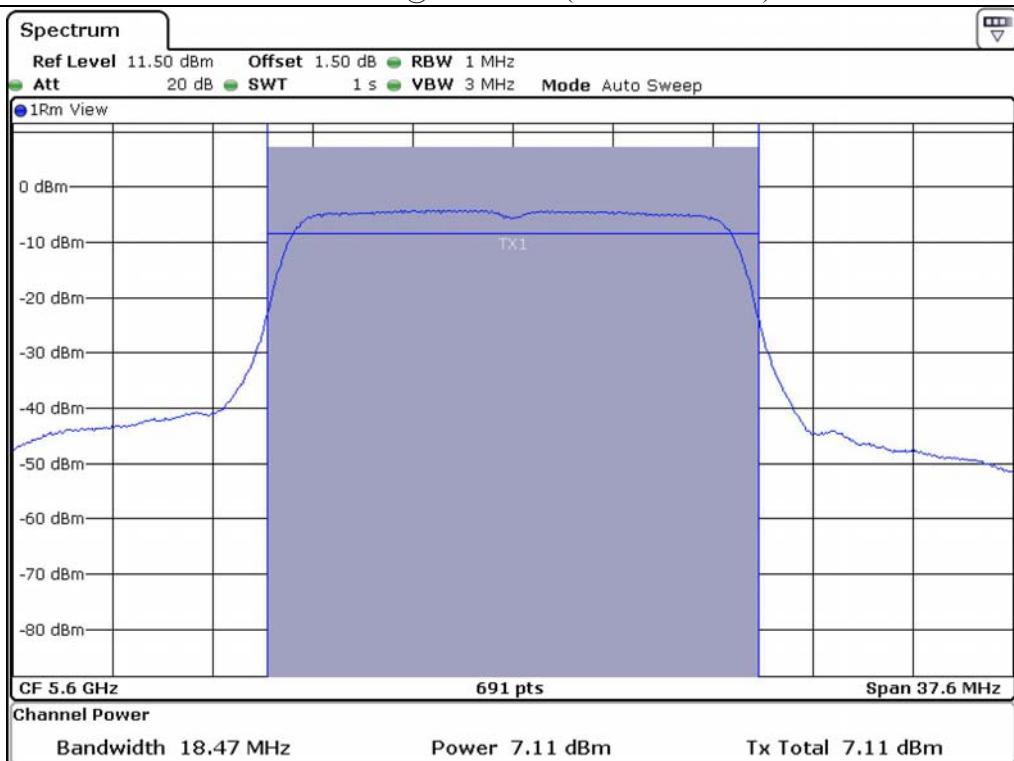


Middle Channel @ 5.300 MHz (26 dB Bandwidth)

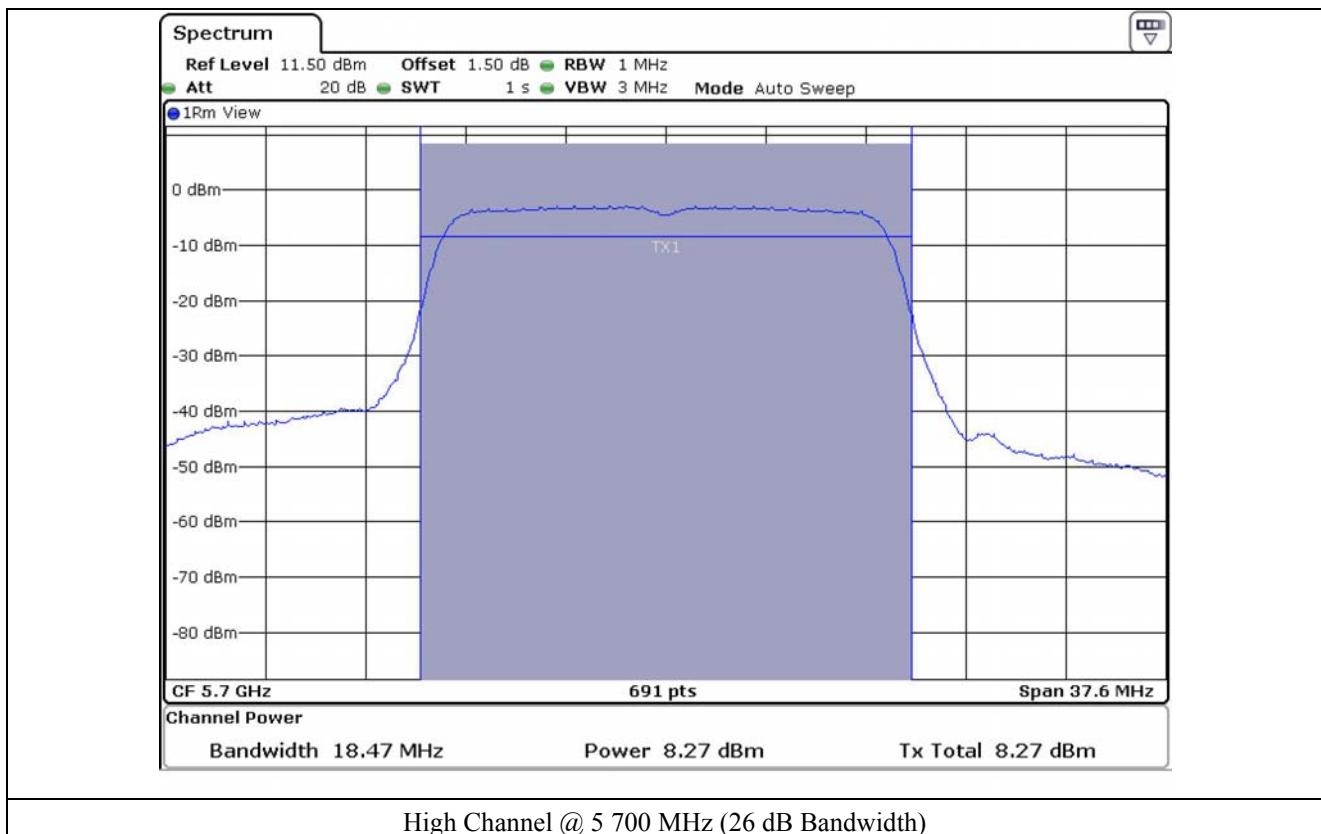


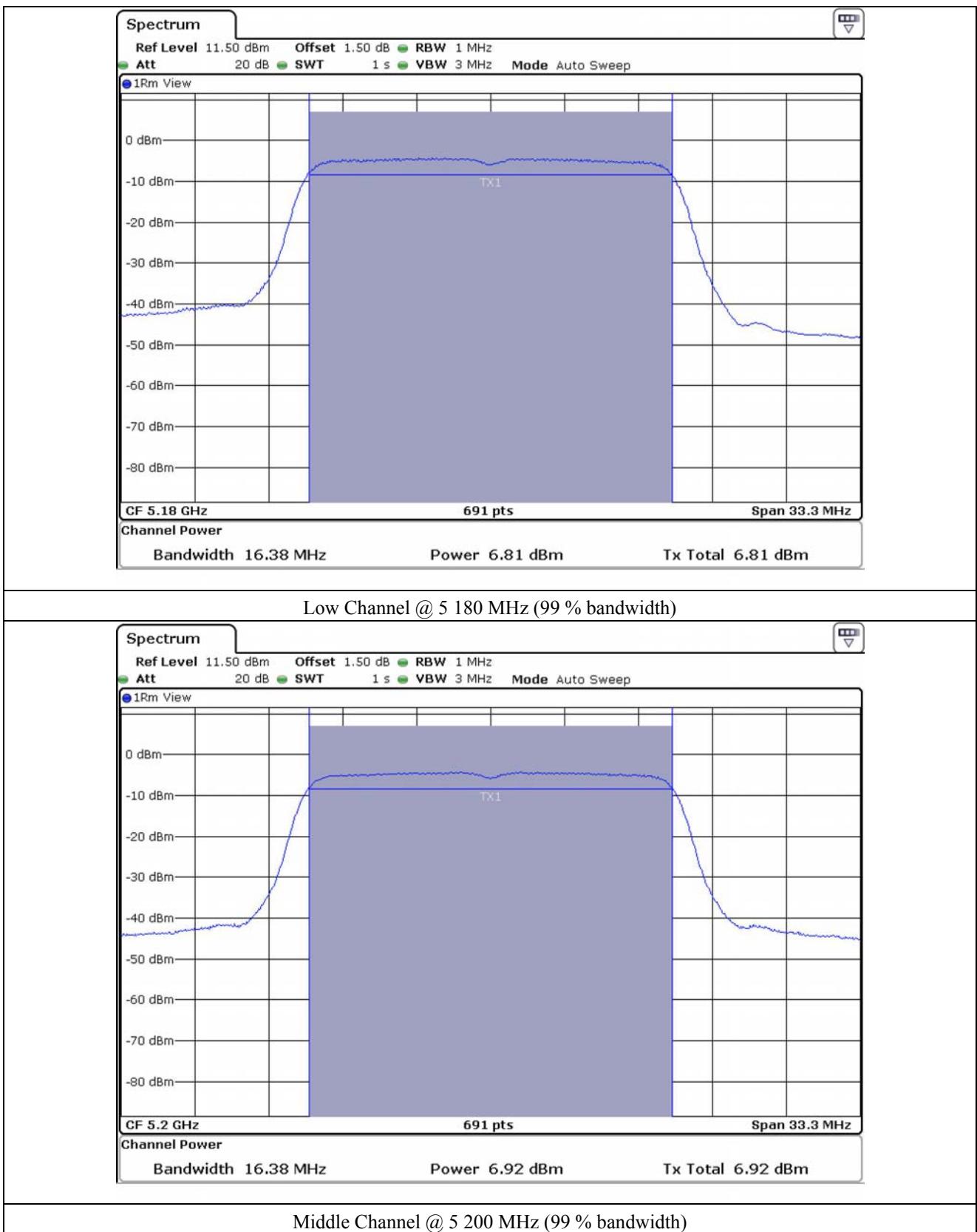


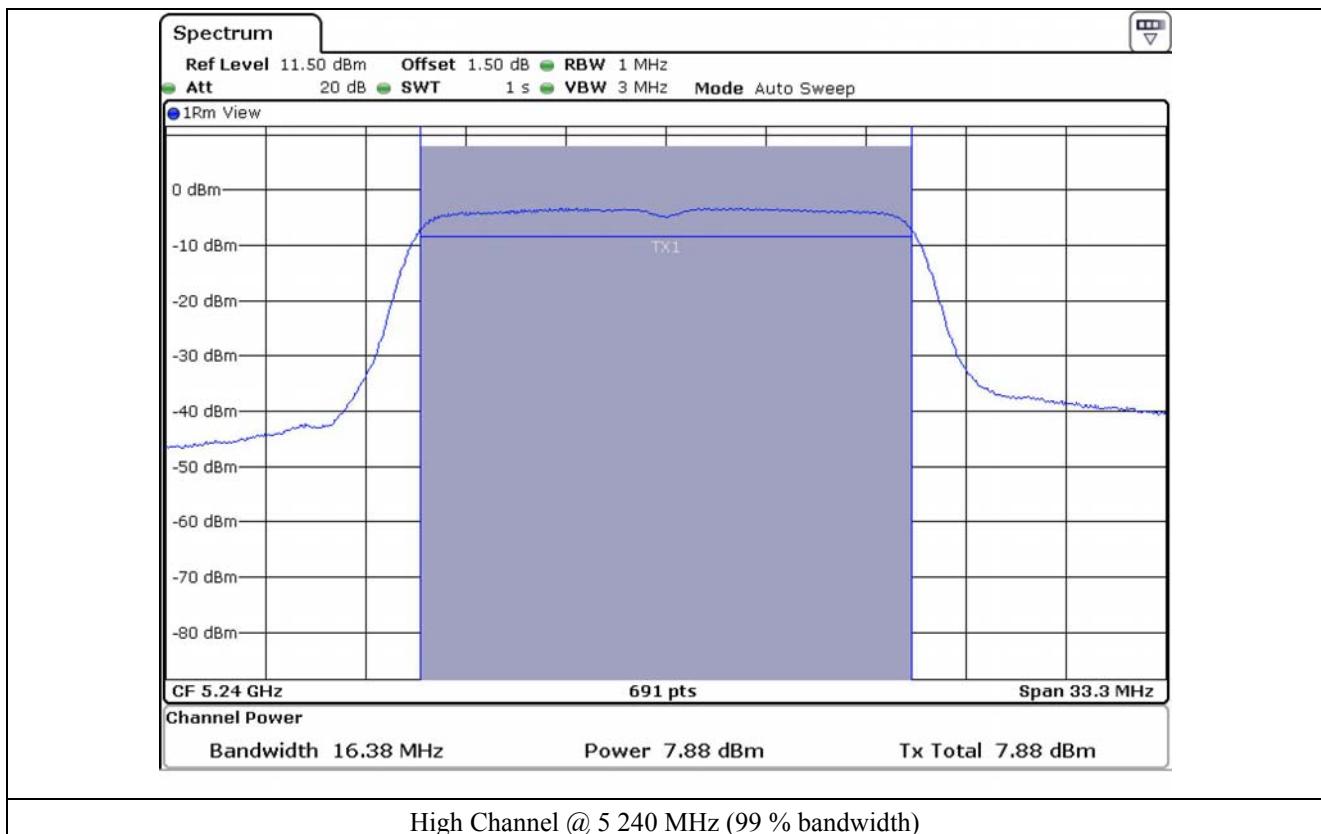
Low Channel @ 5 500 MHz (26 dB Bandwidth)

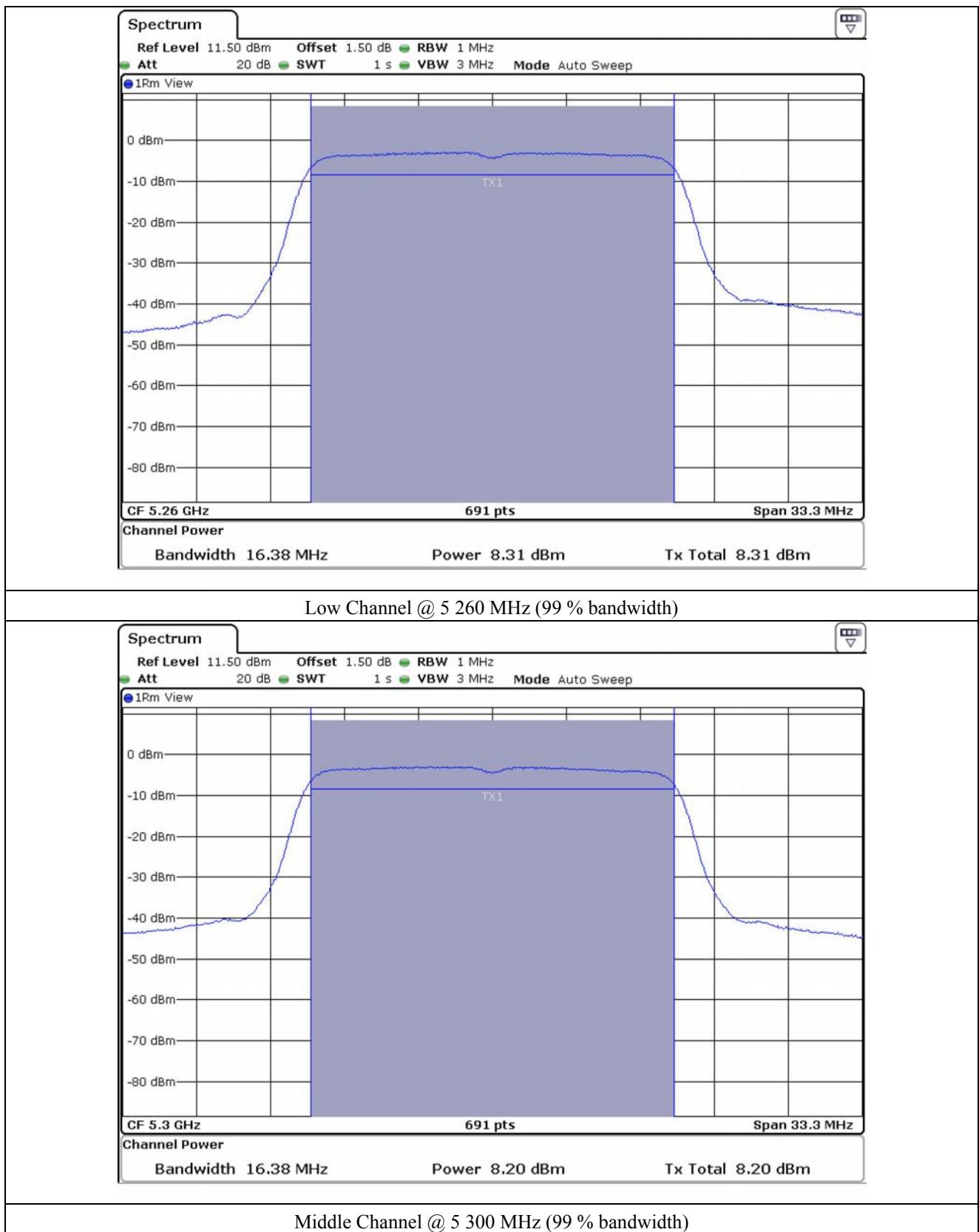


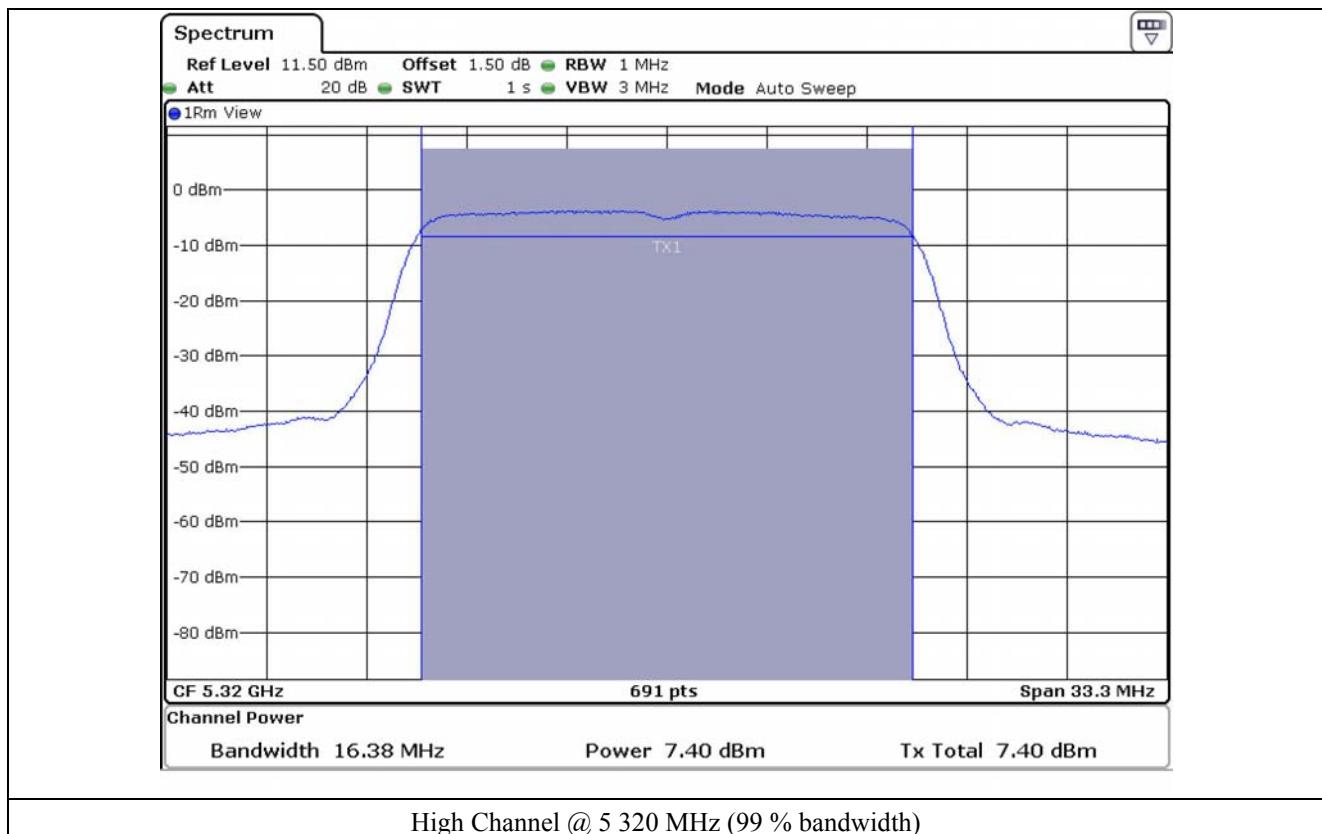
Middle Channel @ 5 600 MHz (26 dB Bandwidth)

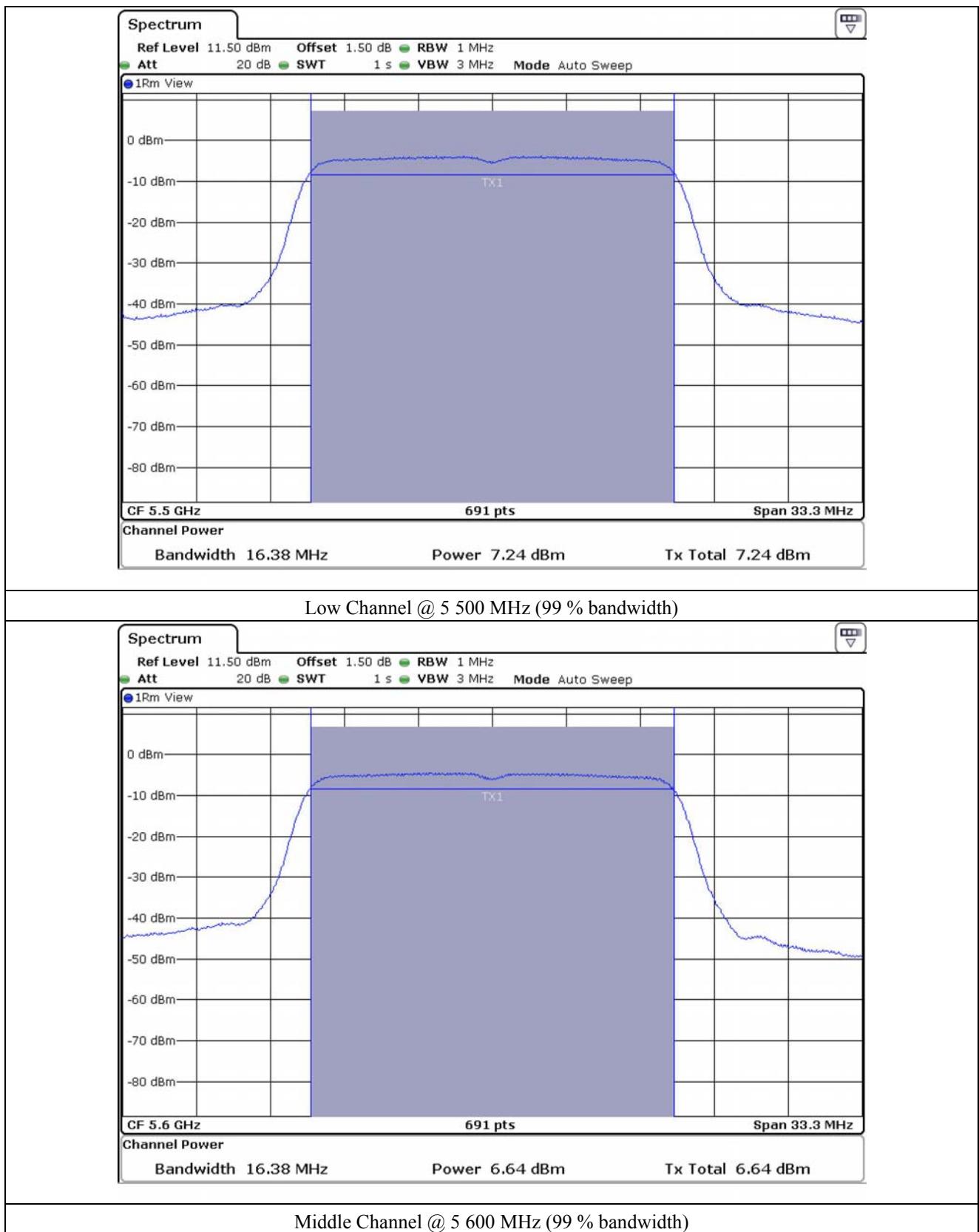


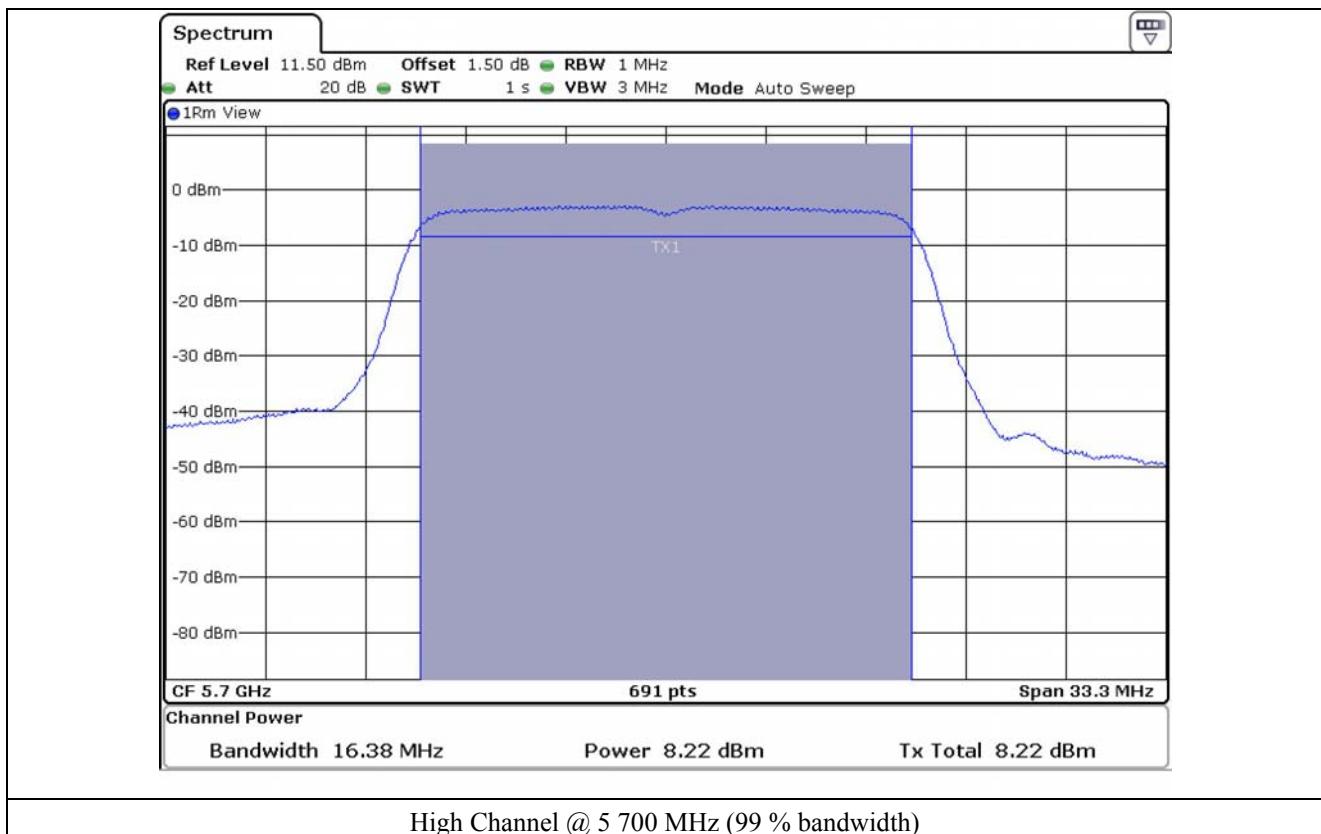












8.4.2 Test data for Antenna 1

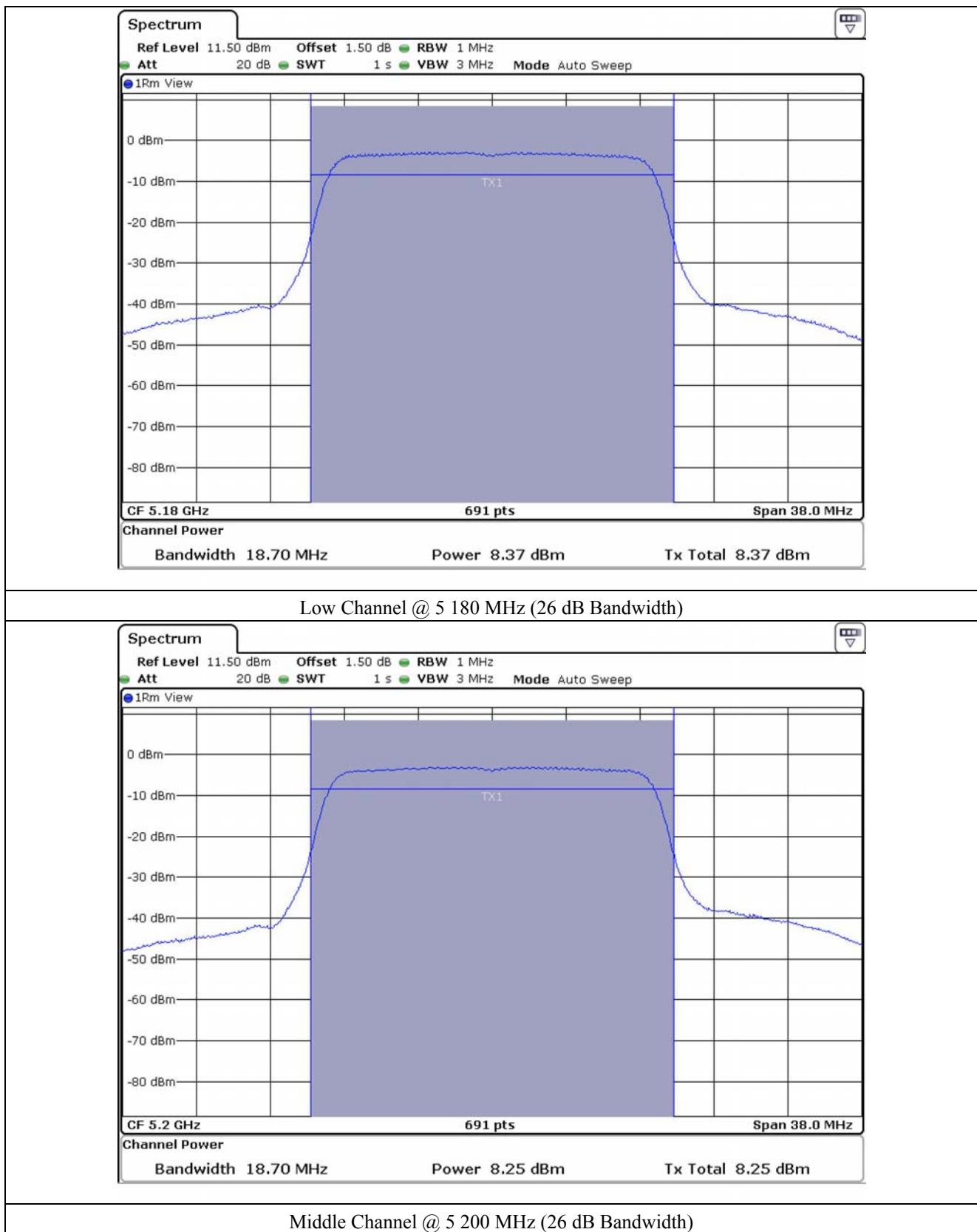
- Test Date : December 16, 2013
 - Test Result : Pass

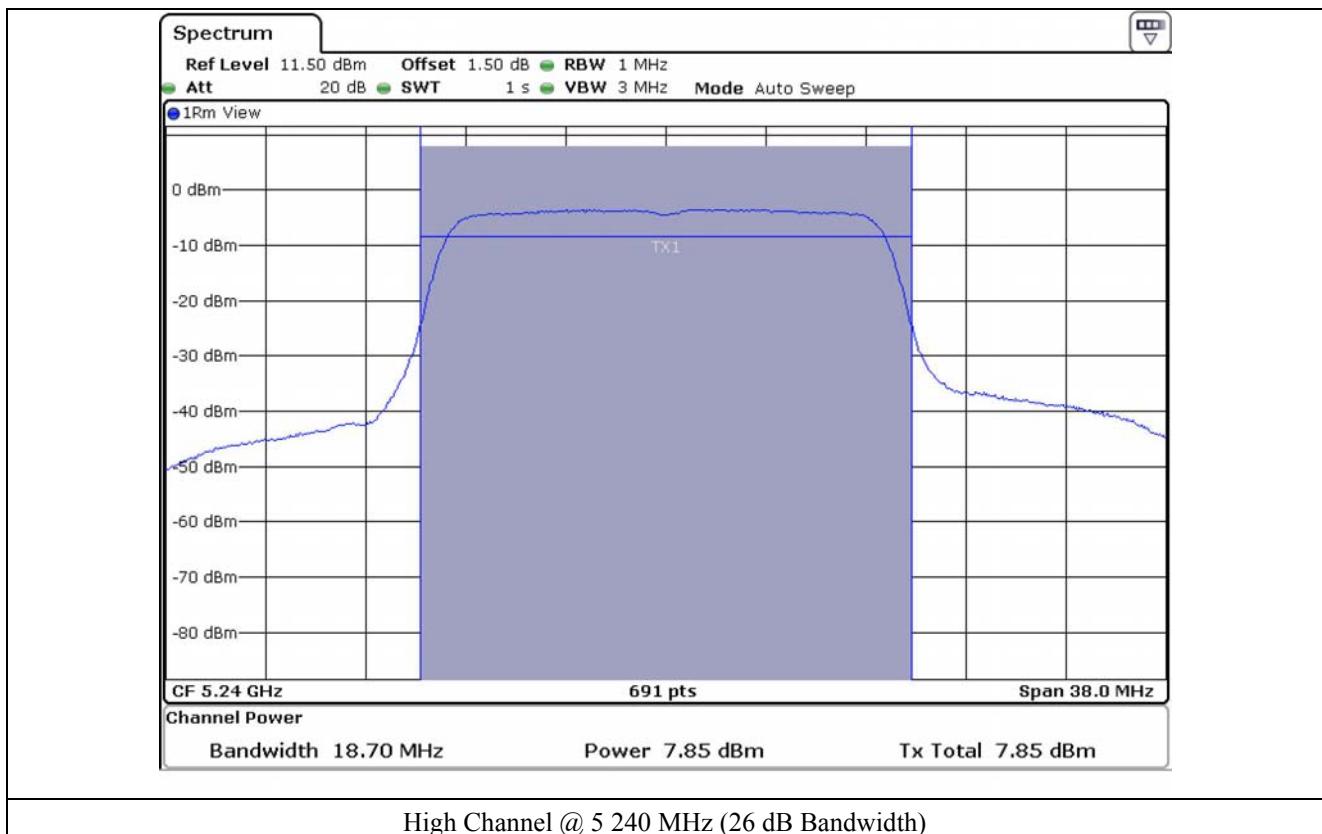
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	18.70	8.37	16.72	8.35
	Middle	5 200	18.70	8.25	16.72	8.47
	High	5 240	18.70	7.85	16.72	8.87
5 250 ~ 5 350	Low	5 260	18.47	8.41	23.66	15.25
	Middle	5 300	18.47	8.92	23.66	14.74
	High	5 320	18.47	8.76	23.66	14.90
5 470 ~ 5 725	Low	5 500	18.47	8.55	23.66	15.11
	Middle	5 600	18.47	8.43	23.66	15.23
	High	5 700	18.47	8.88	23.66	14.78

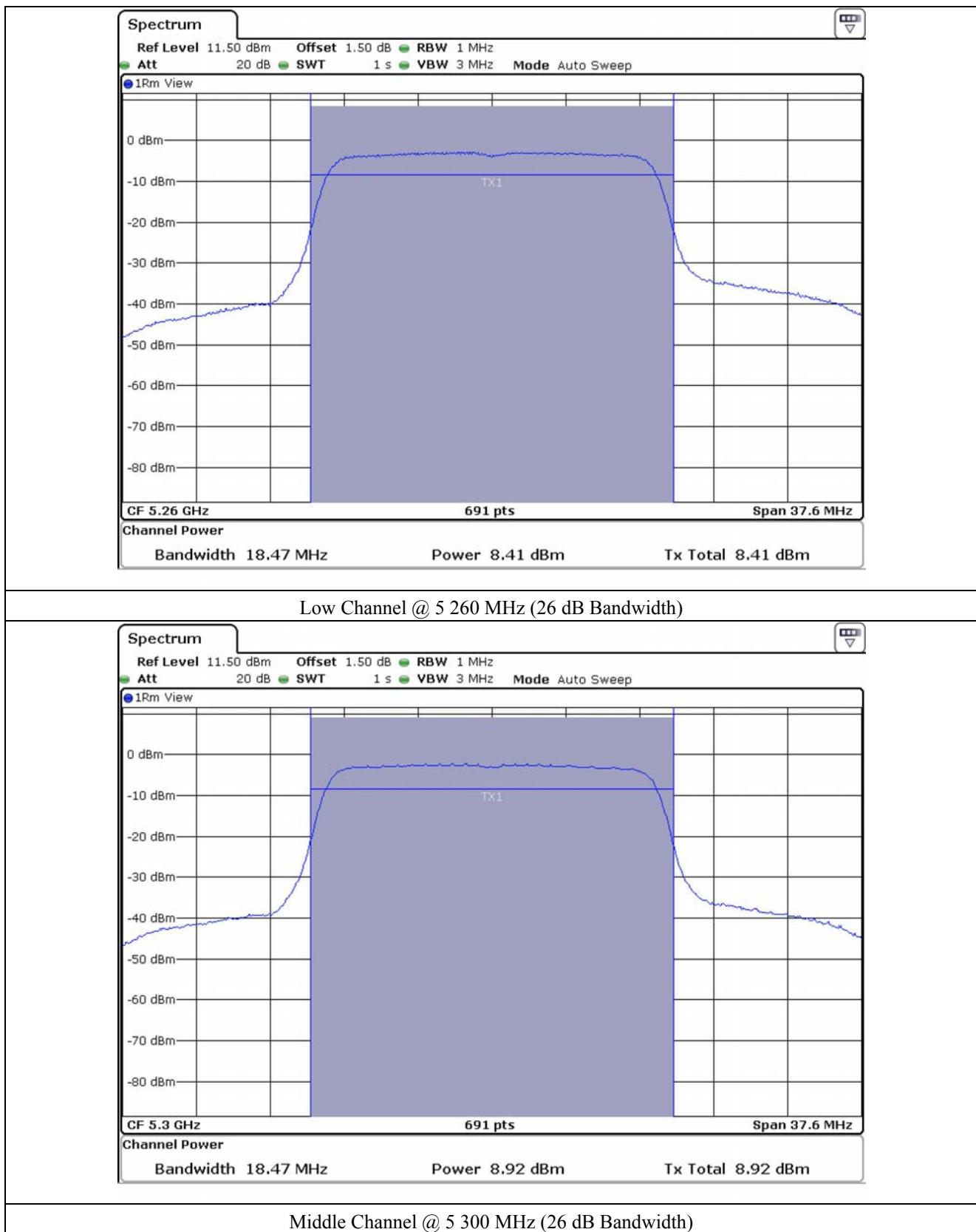
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	99 % bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	16.38	7.63	16.14	8.51
	Middle	5 200	16.38	7.33	16.14	8.81
	High	5 240	16.38	7.78	16.14	8.36
5 250 ~ 5 350	Low	5 260	16.38	8.96	23.14	14.18
	Middle	5 300	16.38	8.93	23.14	14.21
	High	5 320	16.38	8.56	23.14	14.58
5 470 ~ 5 725	Low	5 500	16.38	8.30	23.14	14.84
	Middle	5 600	16.38	8.33	23.14	14.81
	High	5 700	16.38	8.80	23.14	14.34

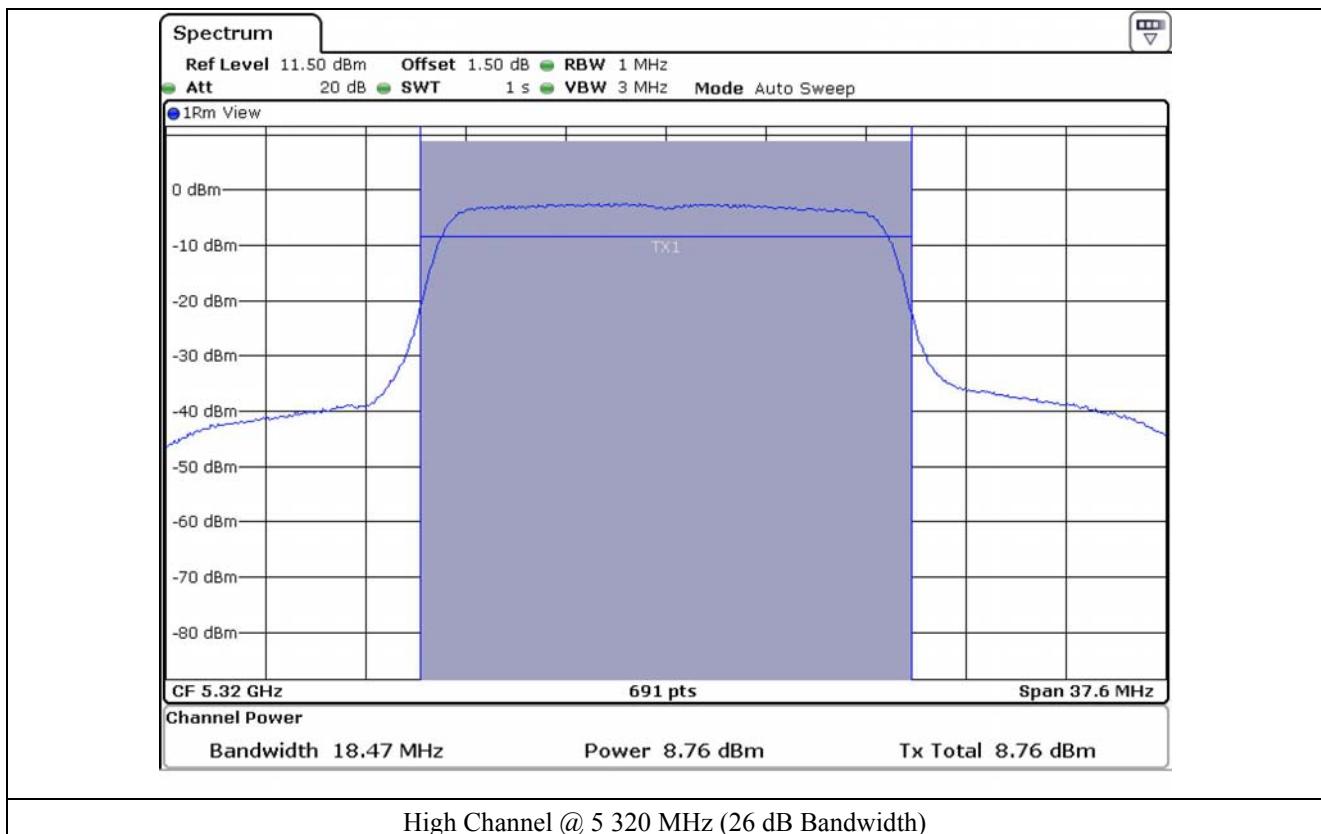
Remark: See next page for measurement data.

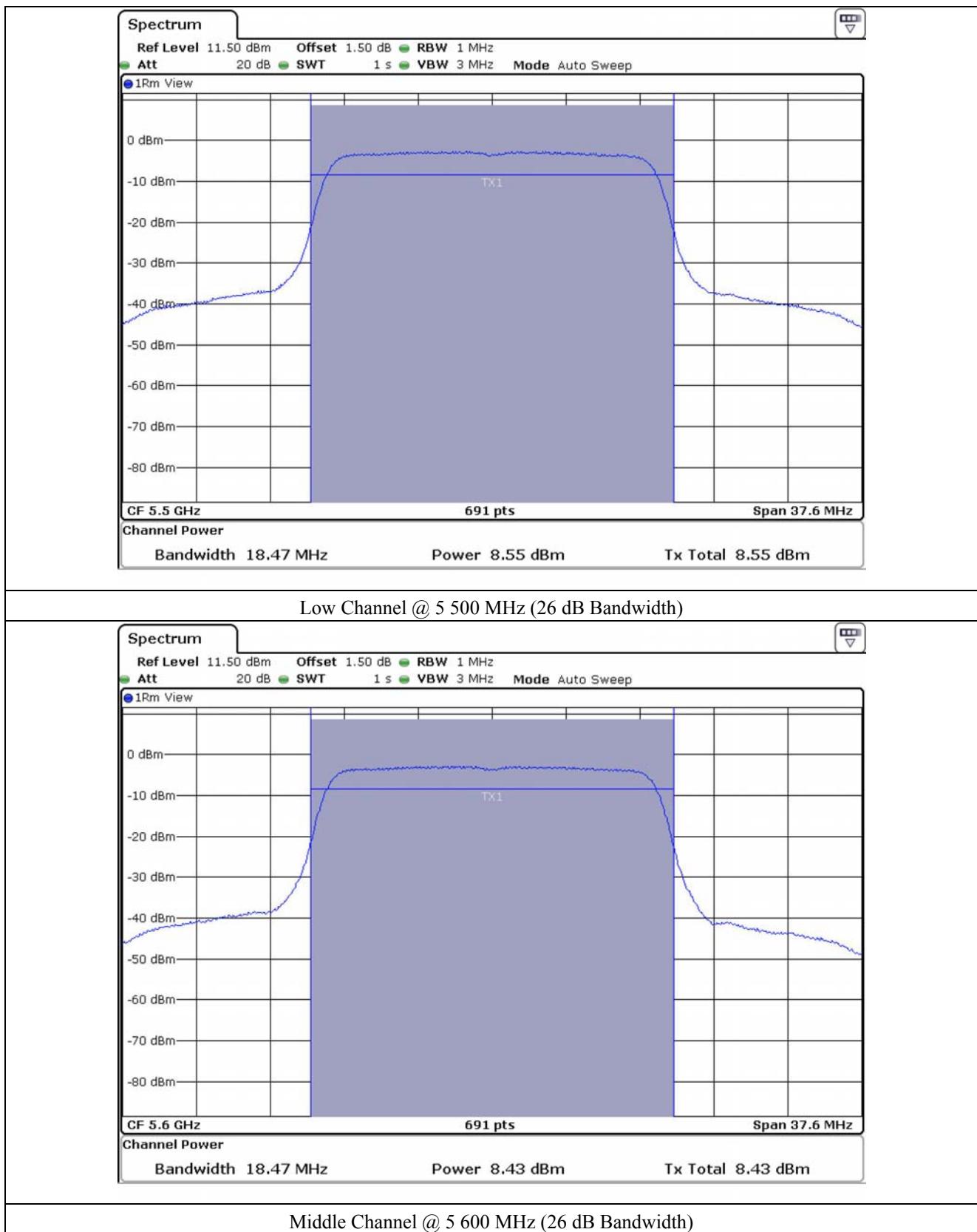
Tested by: Hong-Kyu, Lee/ Engineer

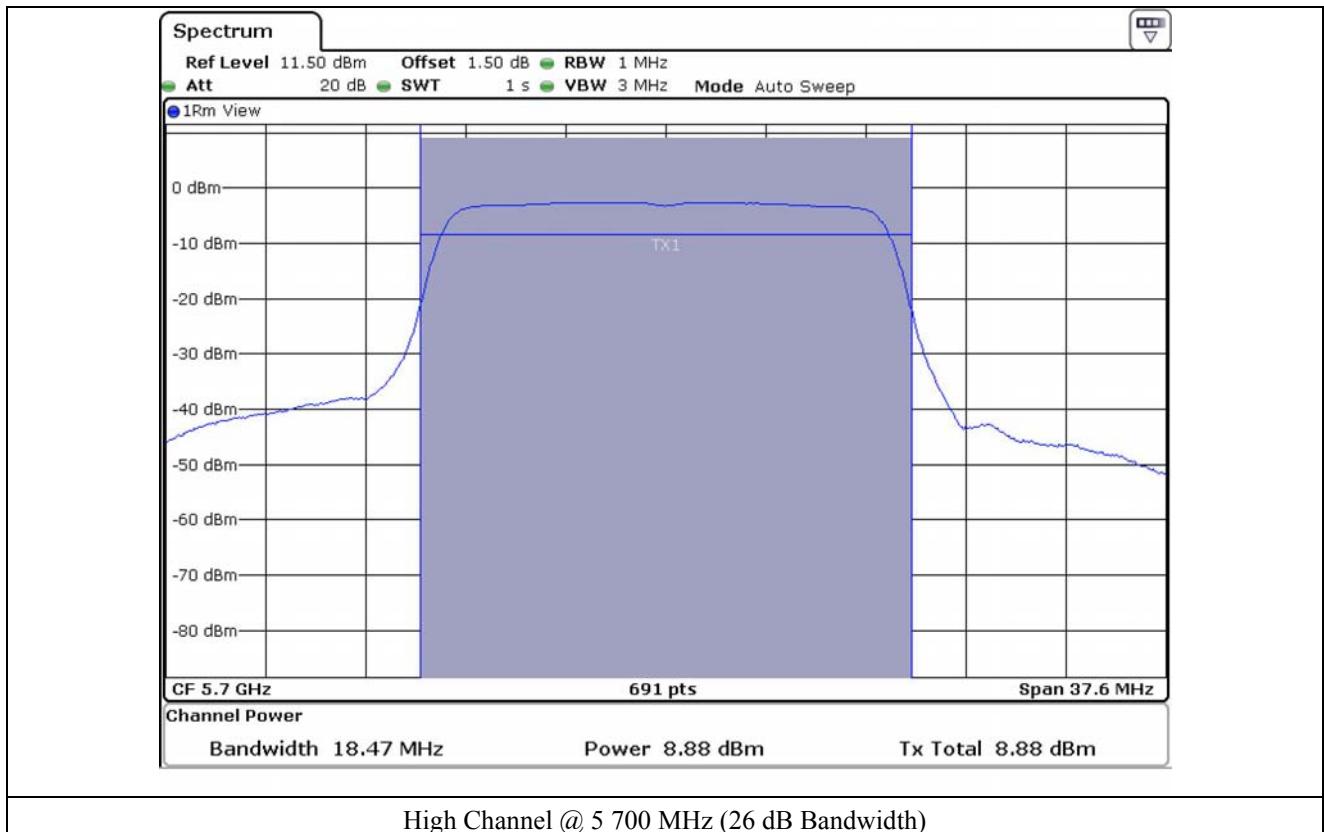


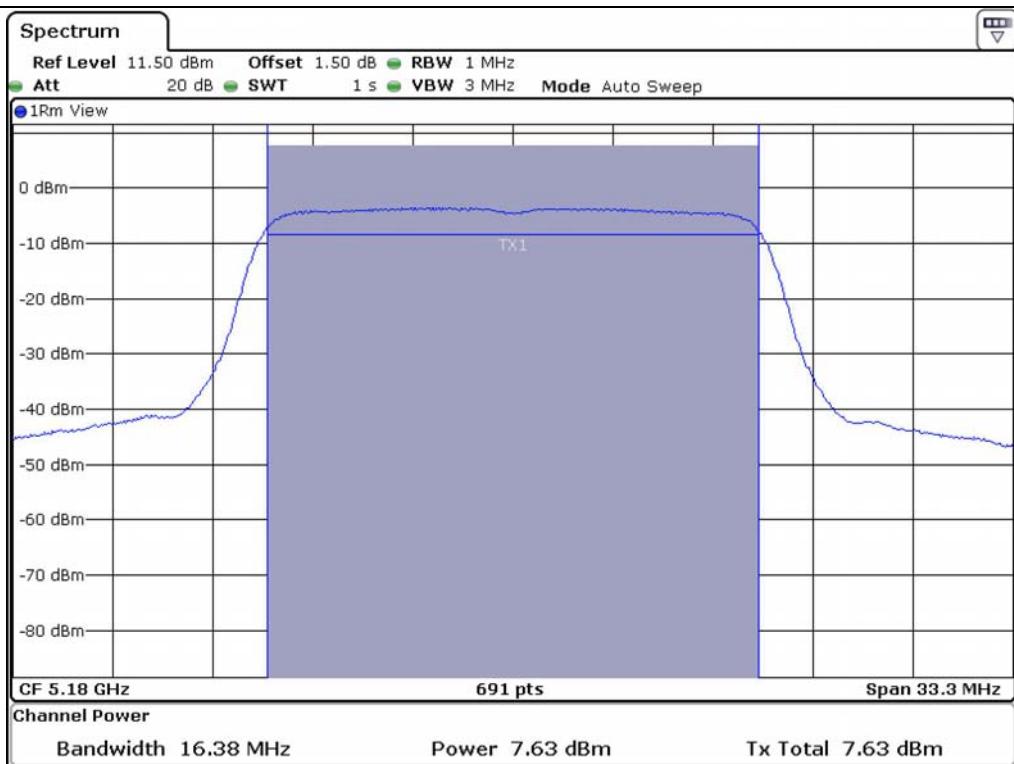




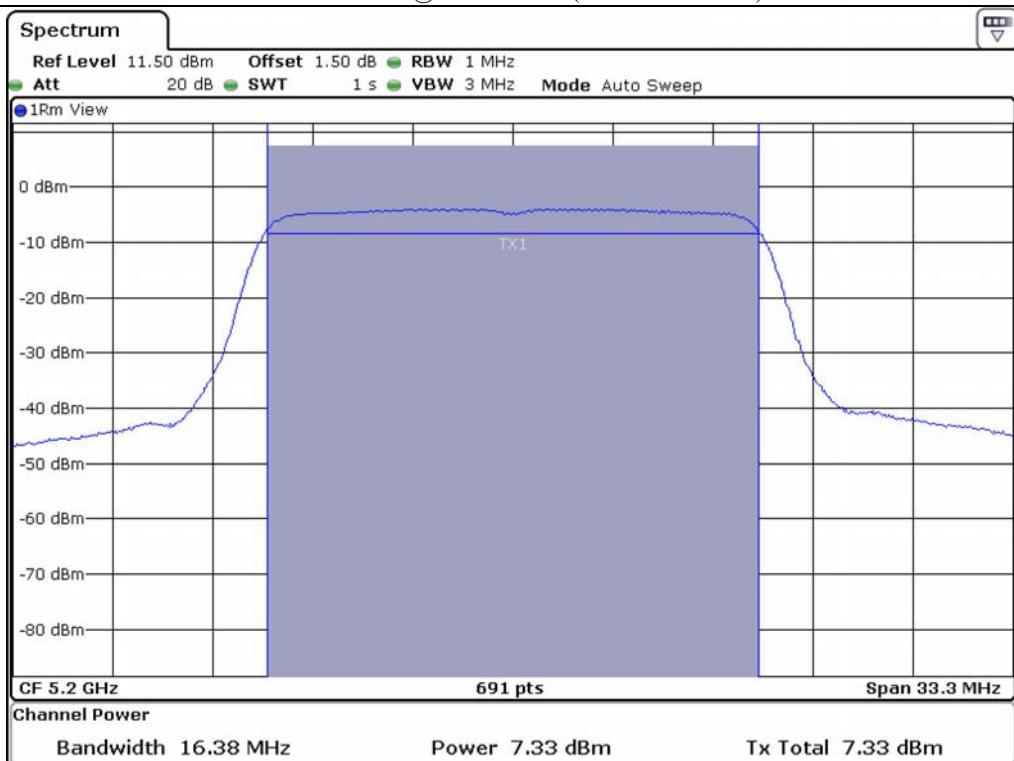




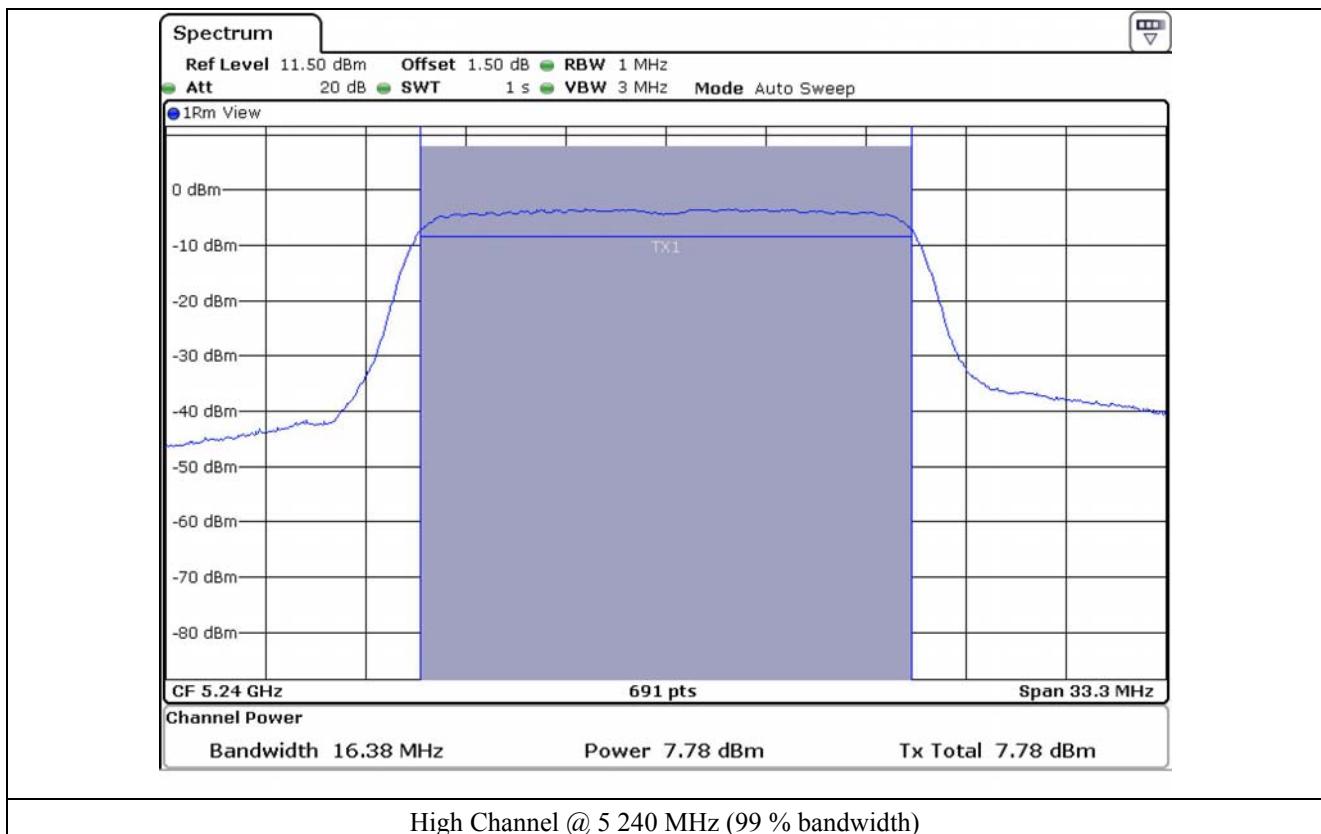


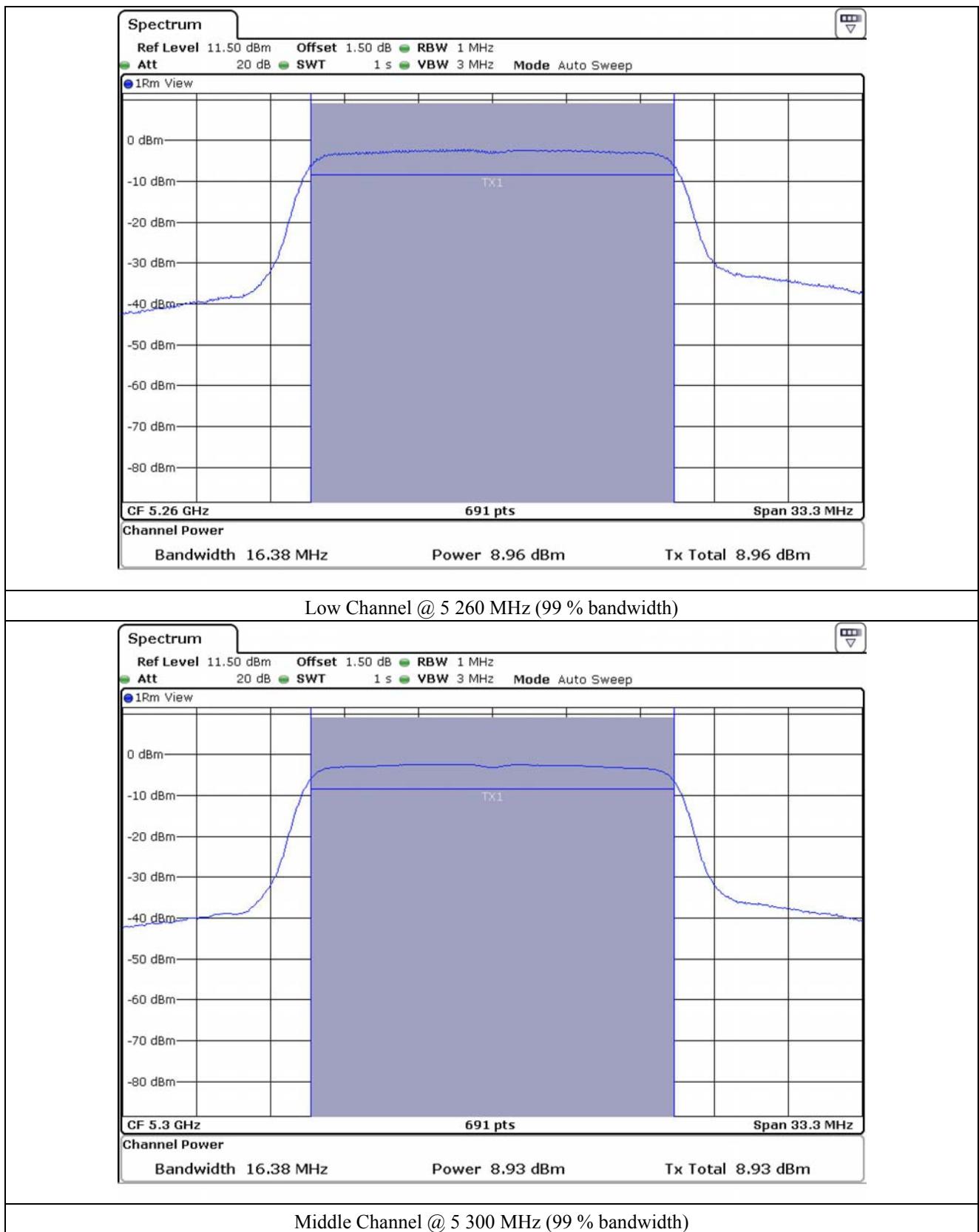


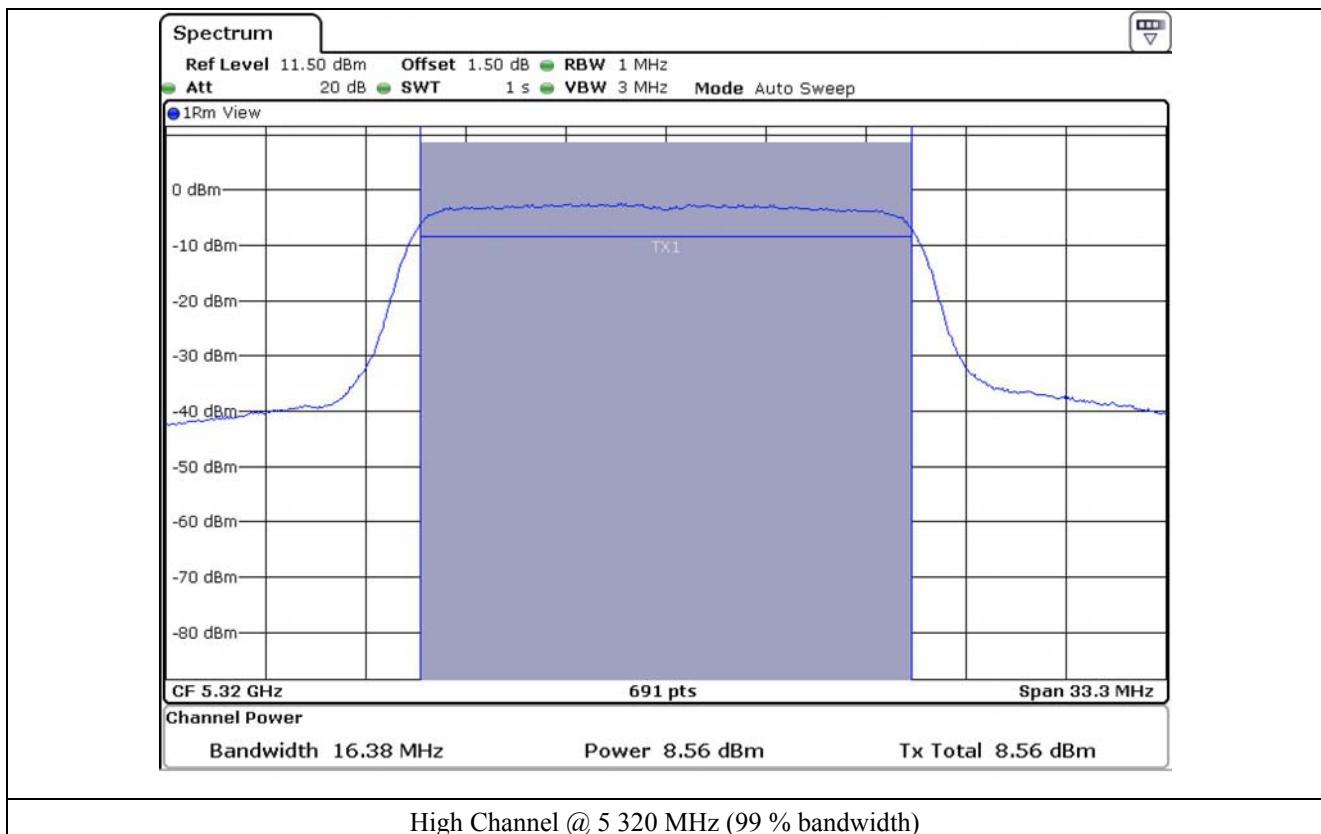
Low Channel @ 5 180 MHz (99 % bandwidth)

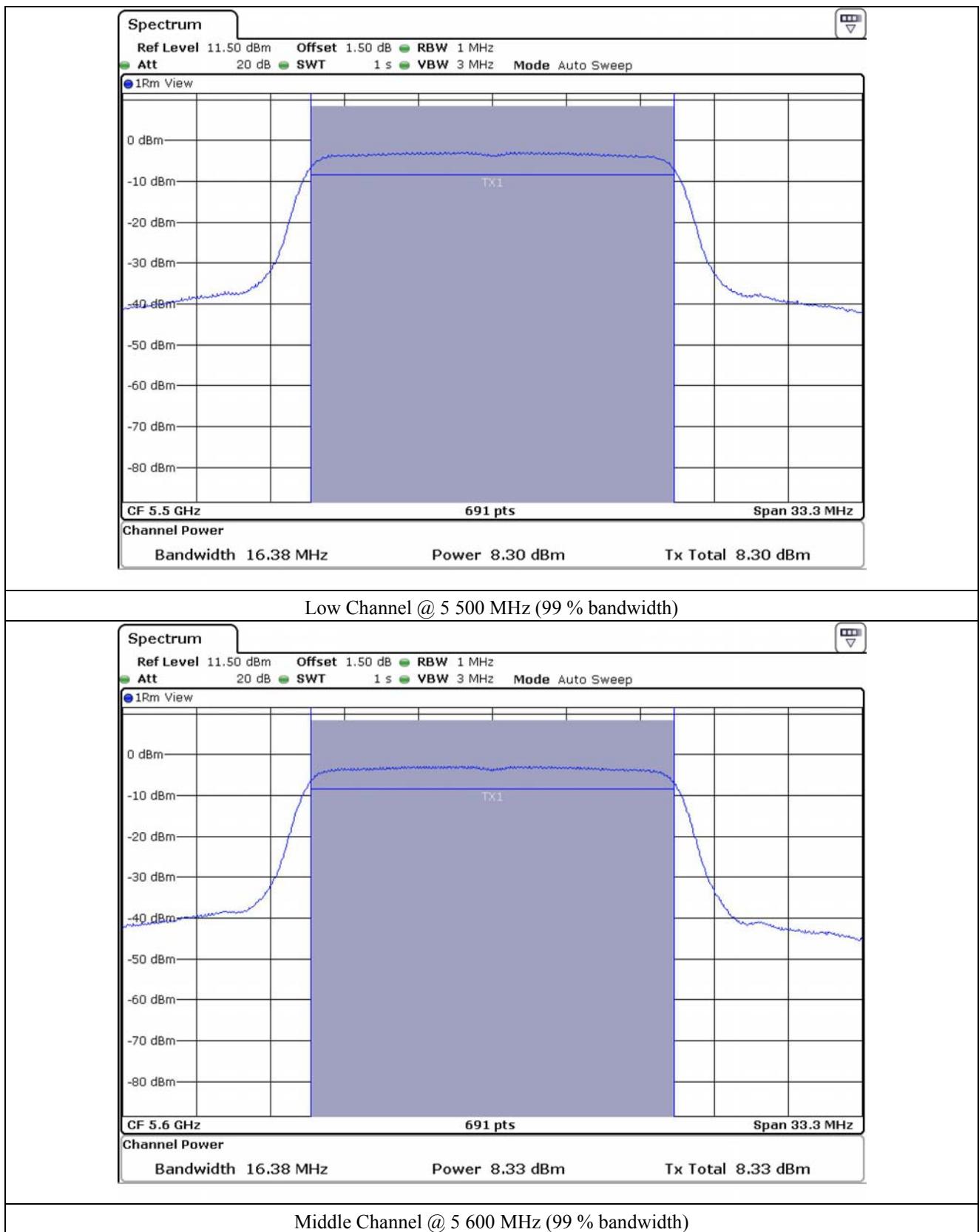


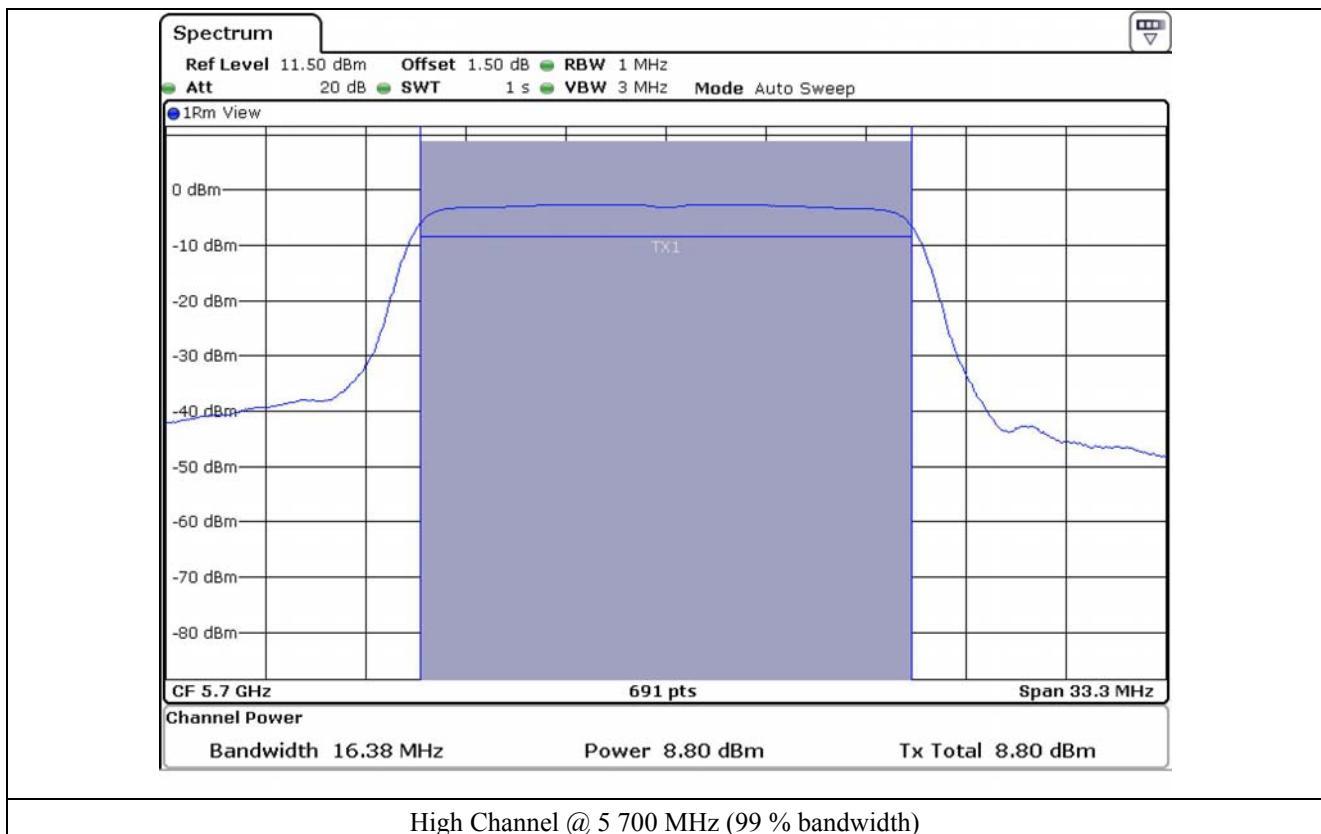
Middle Channel @ 5 200 MHz (99 % bandwidth)











8.5 Test data for 802.11n_HT20 RLAN Mode

8.5.1 Test data for Antenna 0

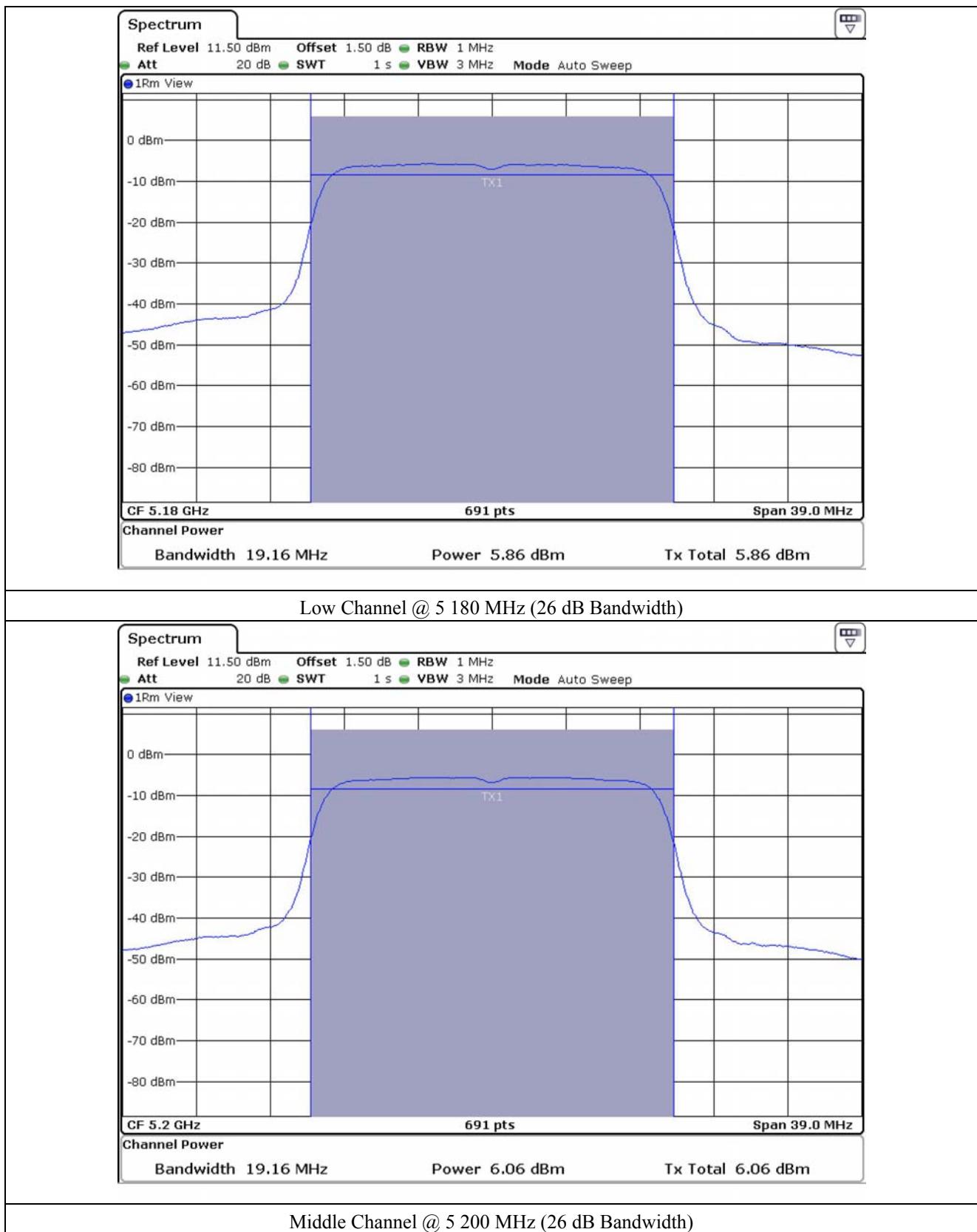
- Test Date : December 16, 2013
- Test Result : Pass

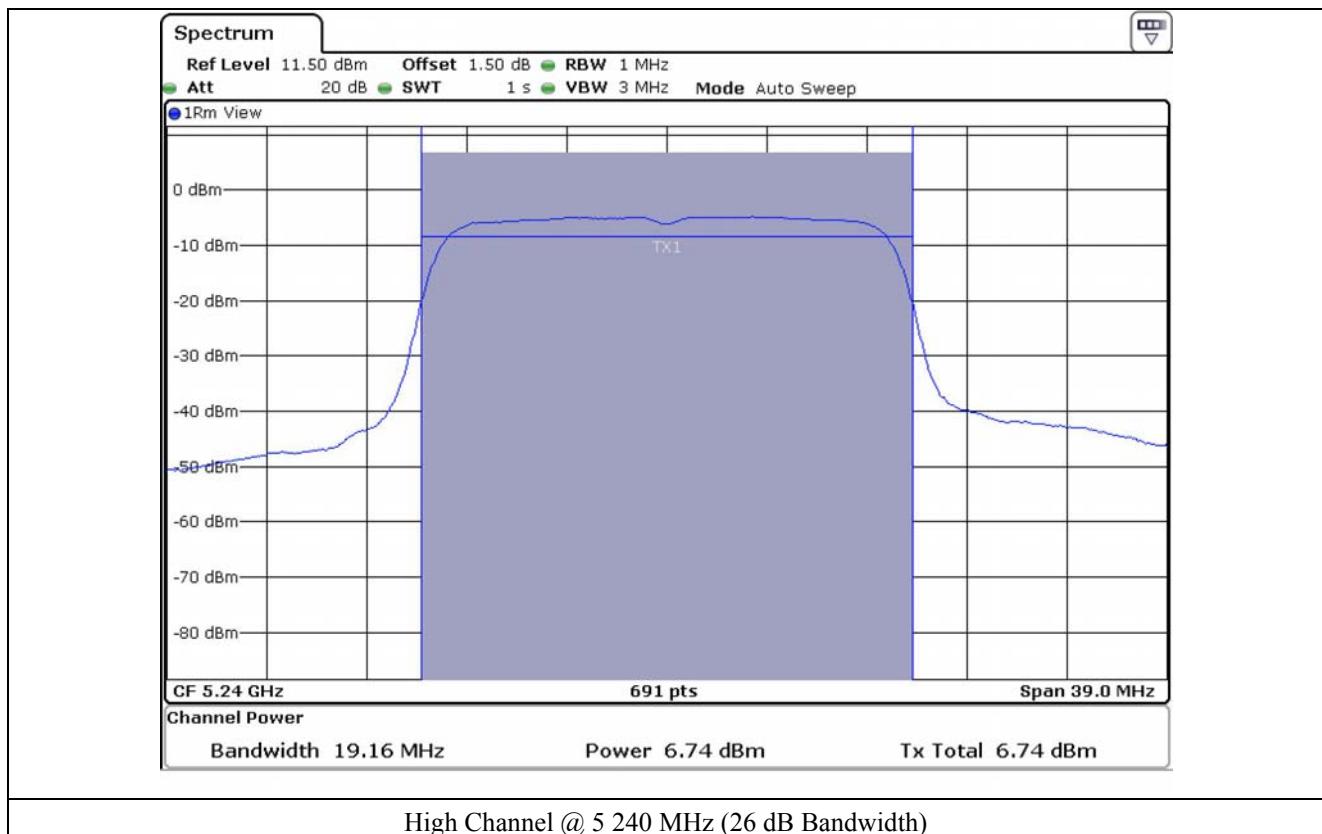
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	19.16	5.86	16.82	10.96
	Middle	5 200	19.16	6.06	16.82	10.76
	High	5 240	19.16	6.74	16.82	10.08
5 250 ~ 5 350	Low	5 260	19.10	7.16	23.81	16.65
	Middle	5 300	19.10	6.85	23.81	16.96
	High	5 320	19.10	6.09	23.81	17.72
5 470 ~ 5 725	Low	5 500	19.10	6.08	23.81	17.73
	Middle	5 600	19.10	5.25	23.81	18.56
	High	5 700	19.10	6.82	23.81	16.99

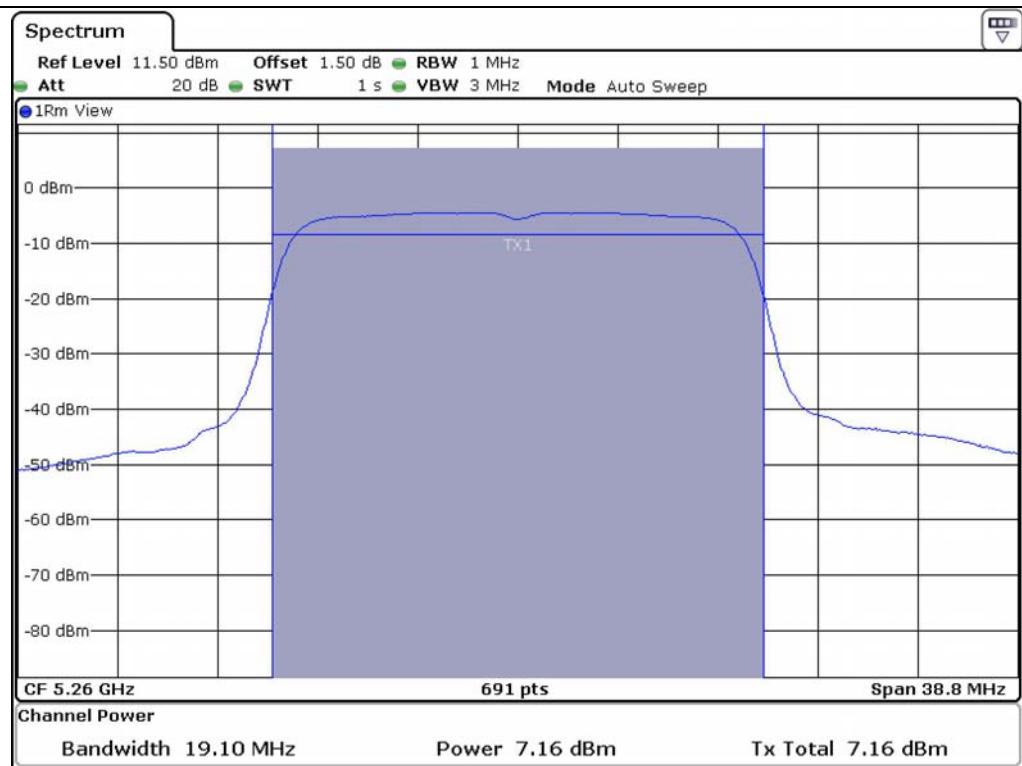
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	99 % bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	17.42	5.42	16.41	10.99
	Middle	5 200	17.42	5.62	16.41	10.79
	High	5 240	17.42	6.71	16.41	9.70
5 250 ~ 5 350	Low	5 260	17.42	7.09	23.41	16.32
	Middle	5 300	17.42	6.79	23.41	16.62
	High	5 320	17.42	6.11	23.41	17.30
5 470 ~ 5 725	Low	5 500	17.42	5.64	23.41	17.77
	Middle	5 600	17.42	4.92	23.41	18.49
	High	5 700	17.42	6.18	23.41	17.23

Remark: See next page for measurement data.

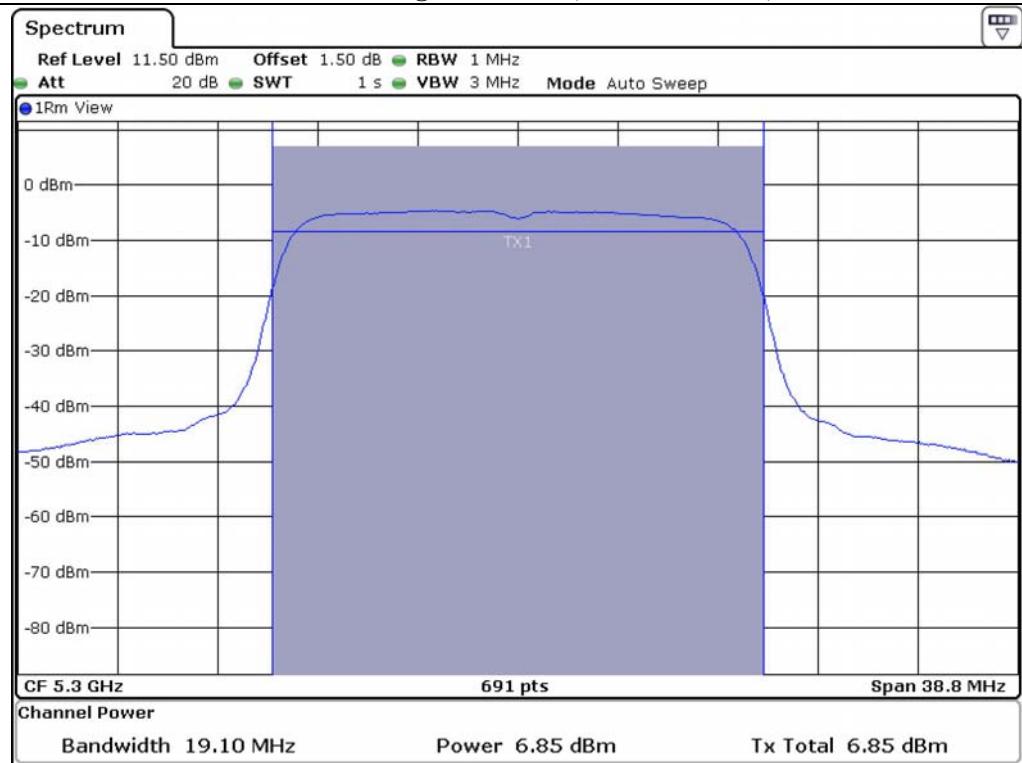
Tested by: Hong-Kyu, Lee/ Engineer



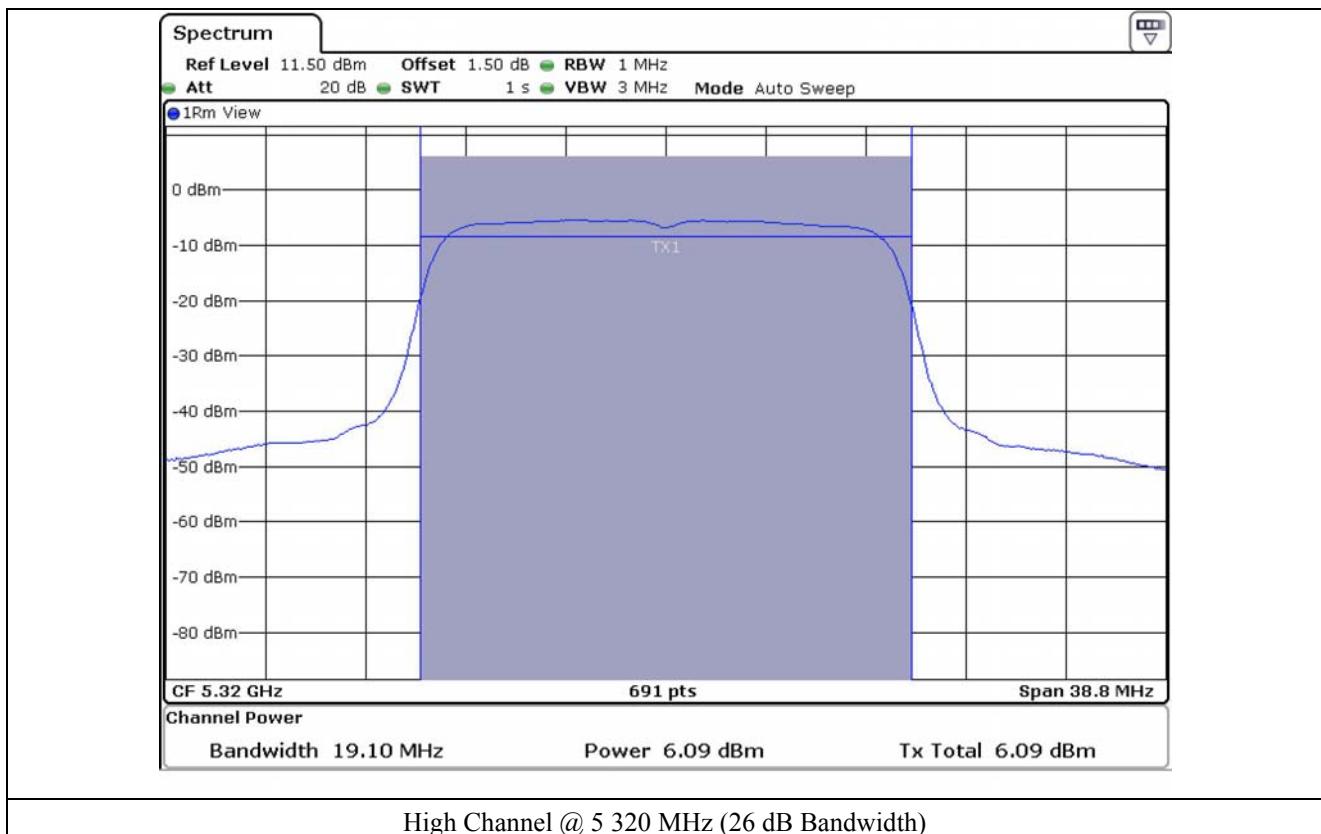


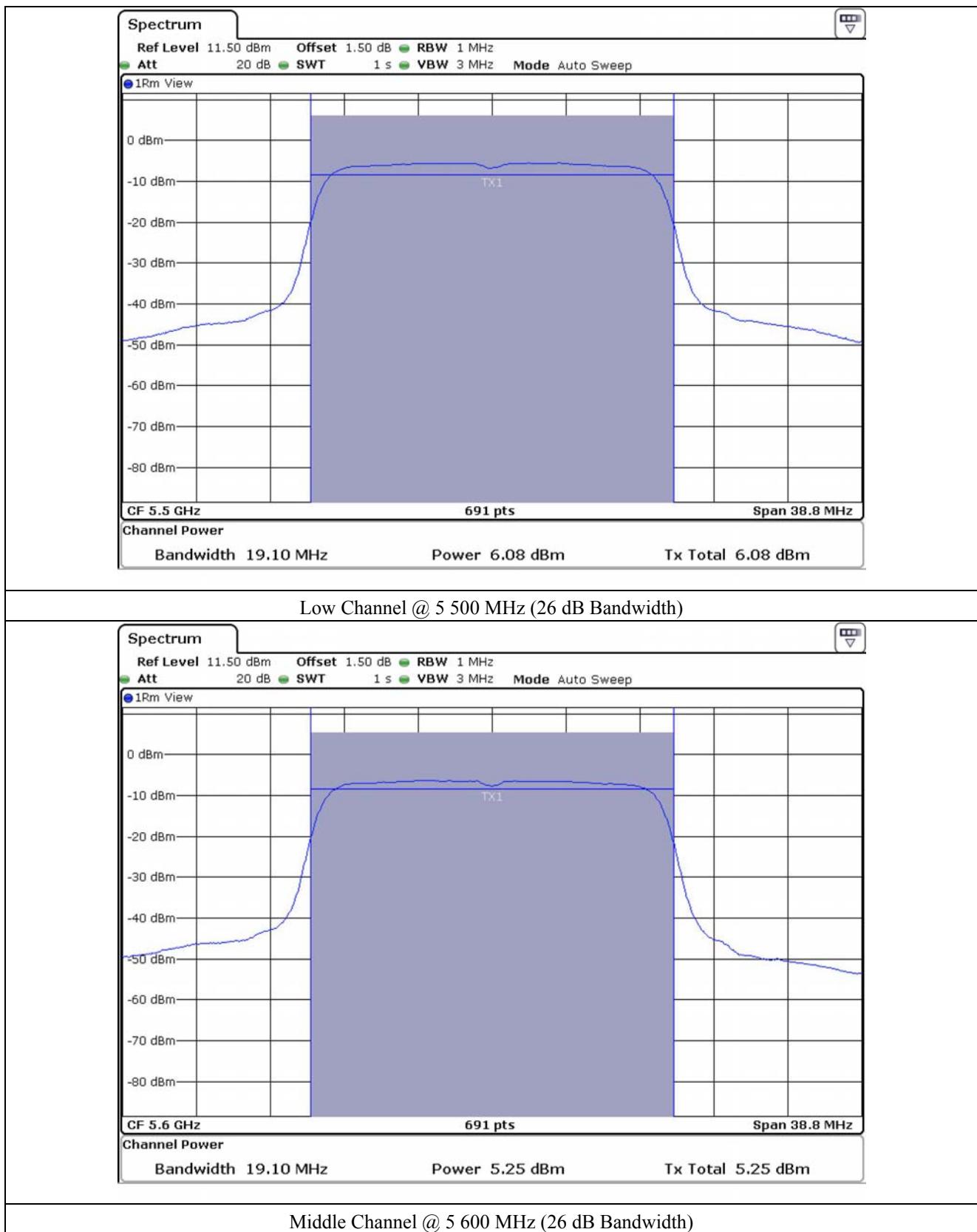


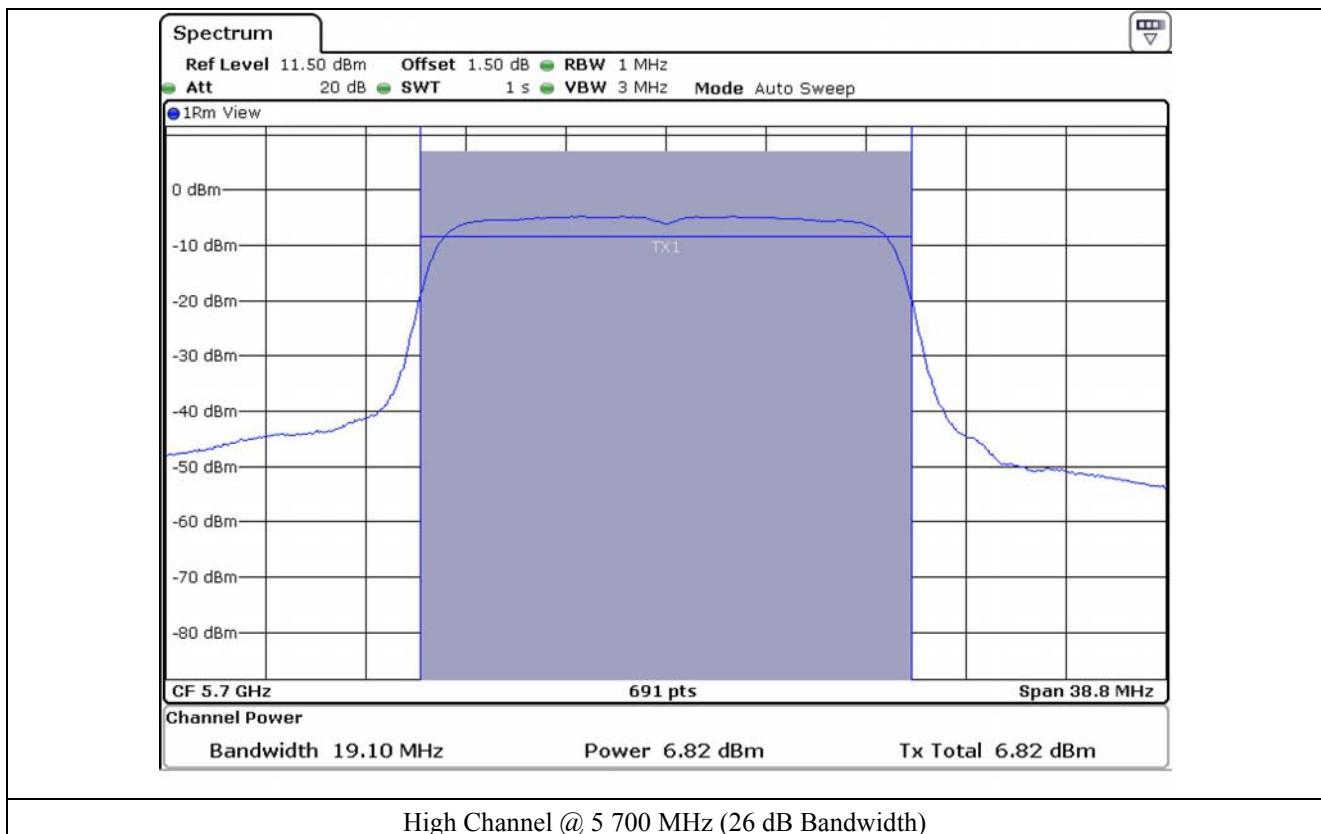
Low Channel @ 5 260 MHz (26 dB Bandwidth)

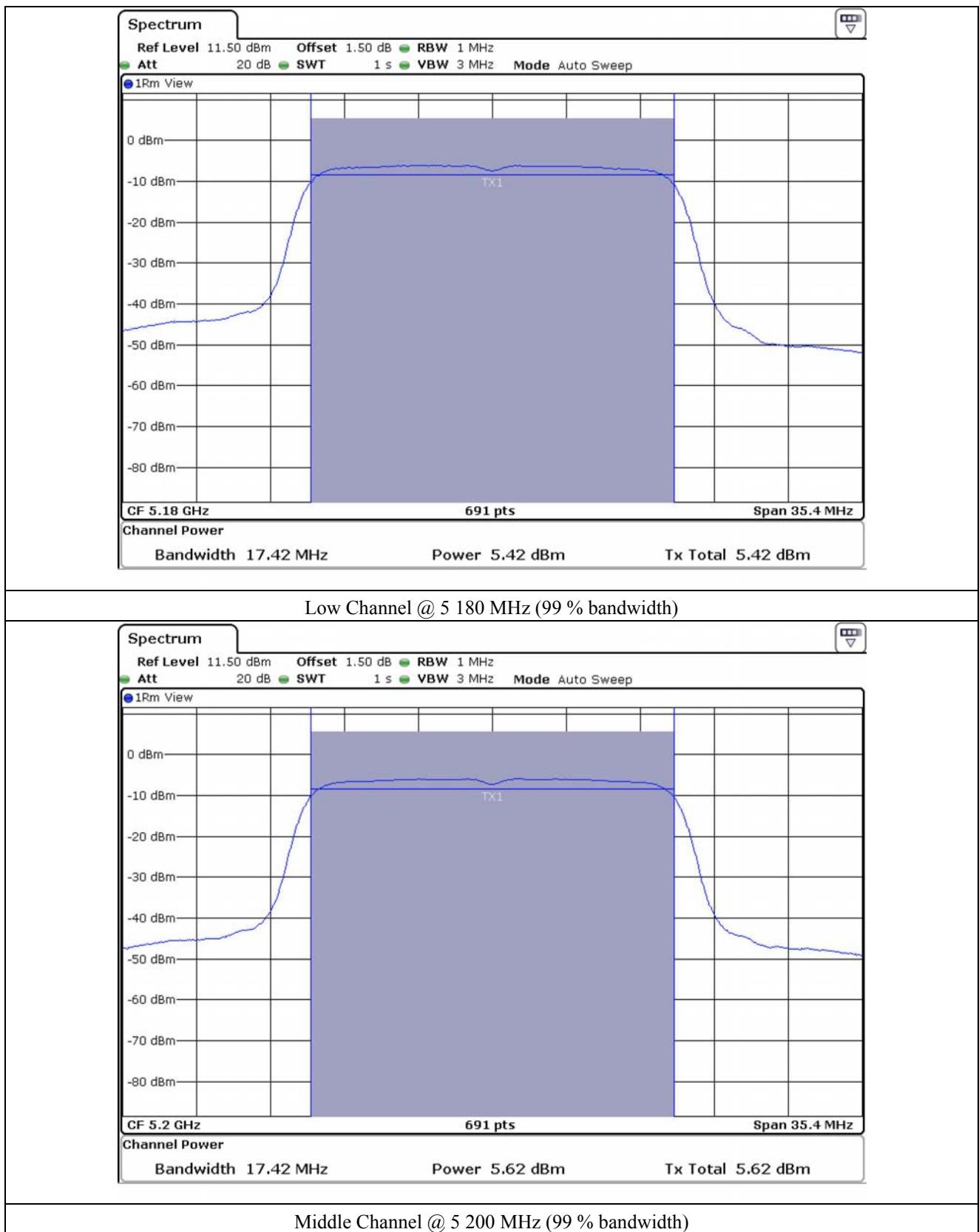


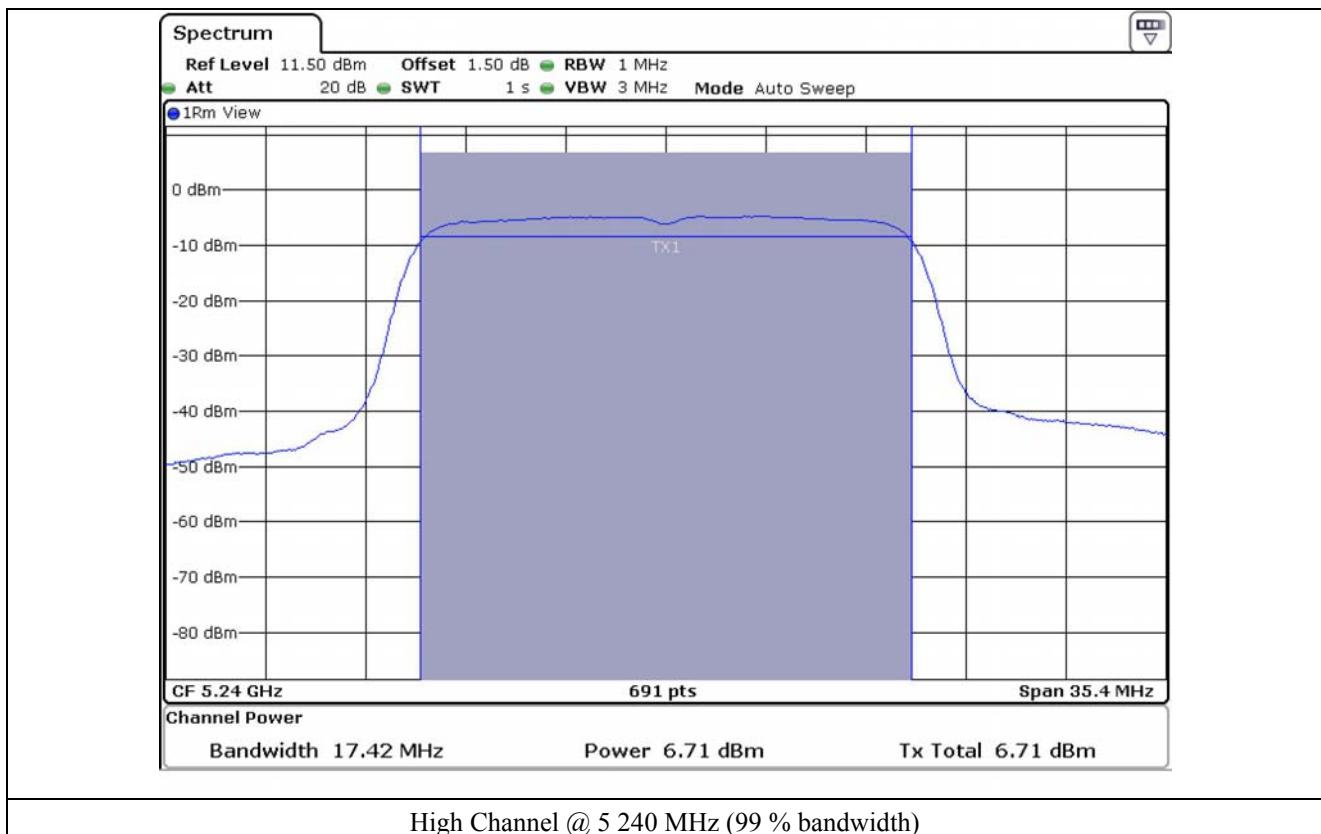
Middle Channel @ 5 300 MHz (26 dB Bandwidth)

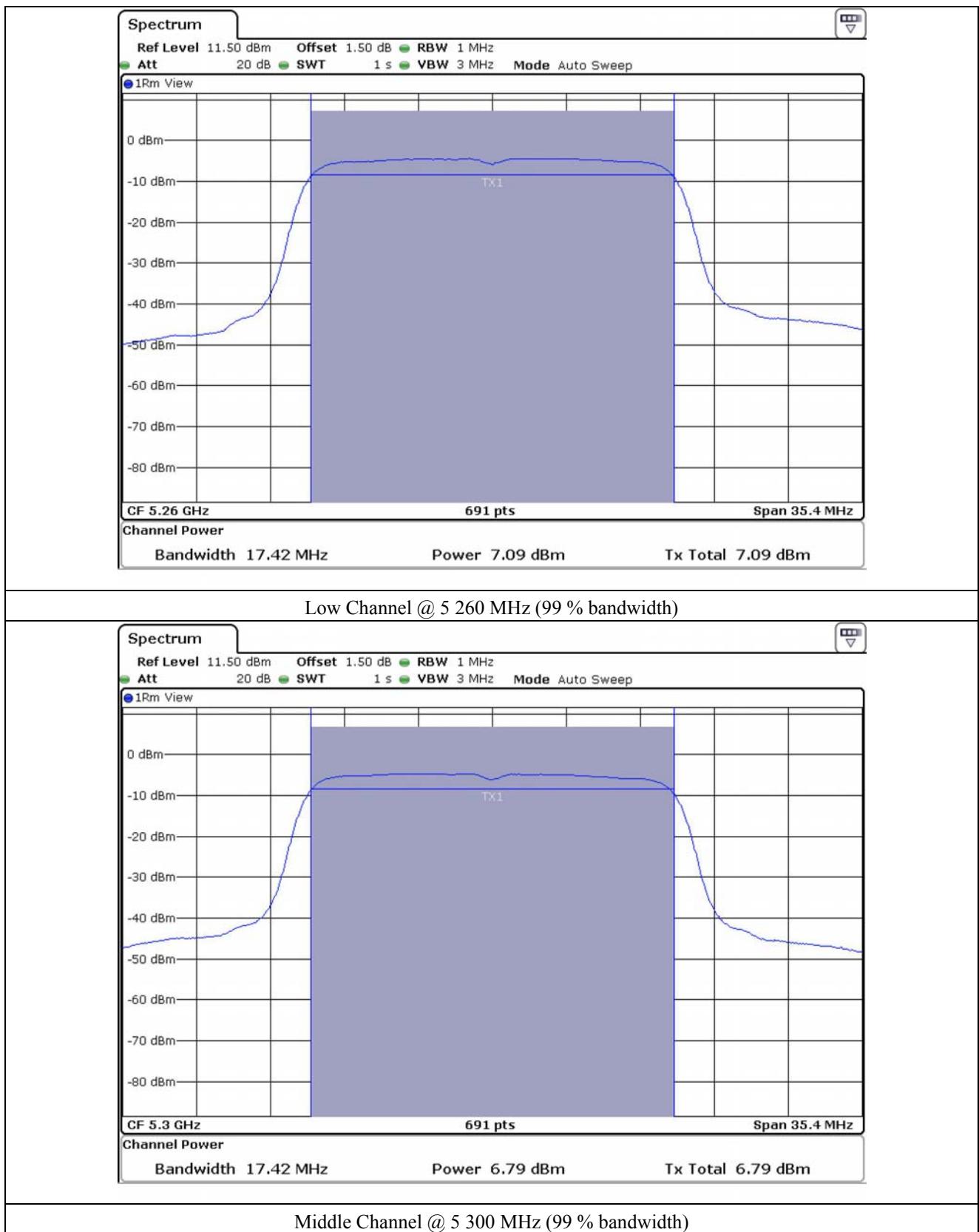


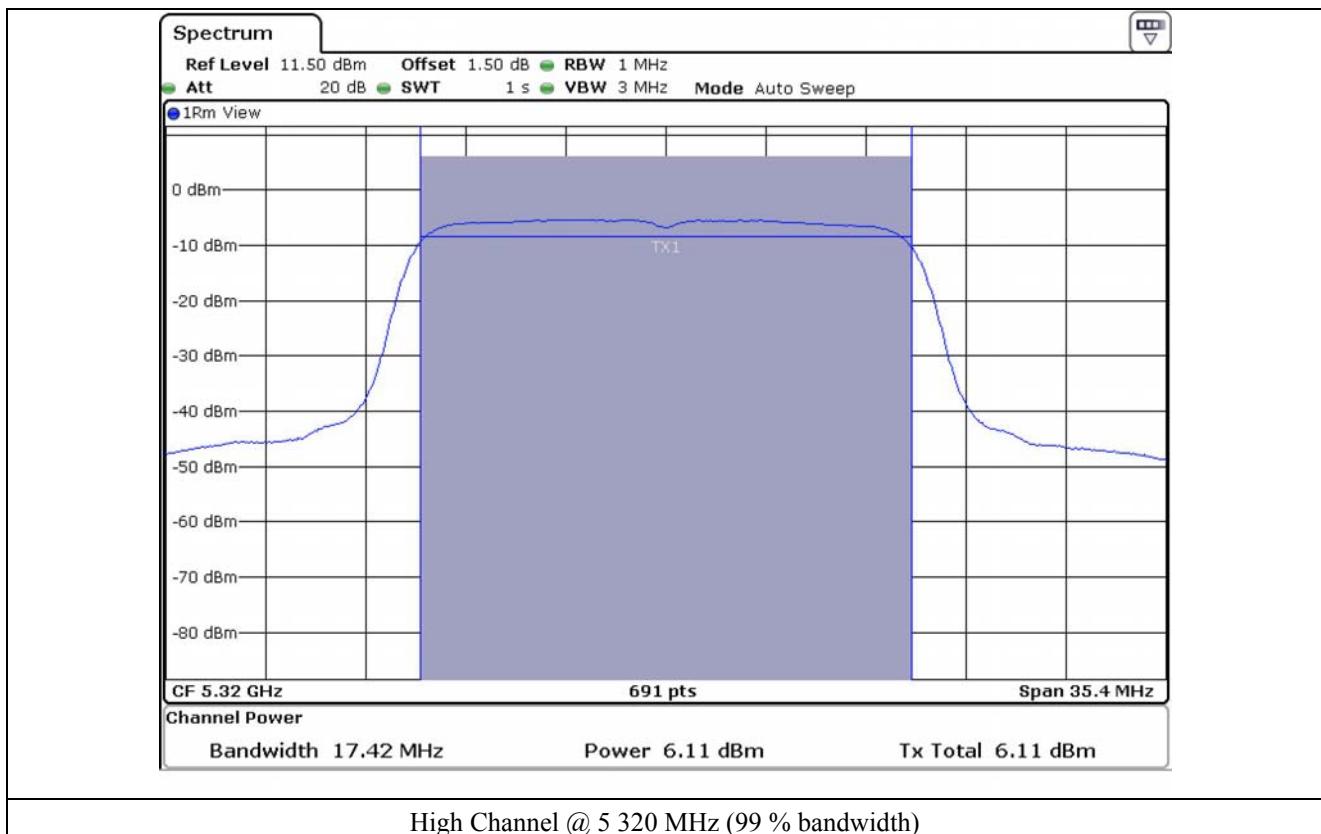


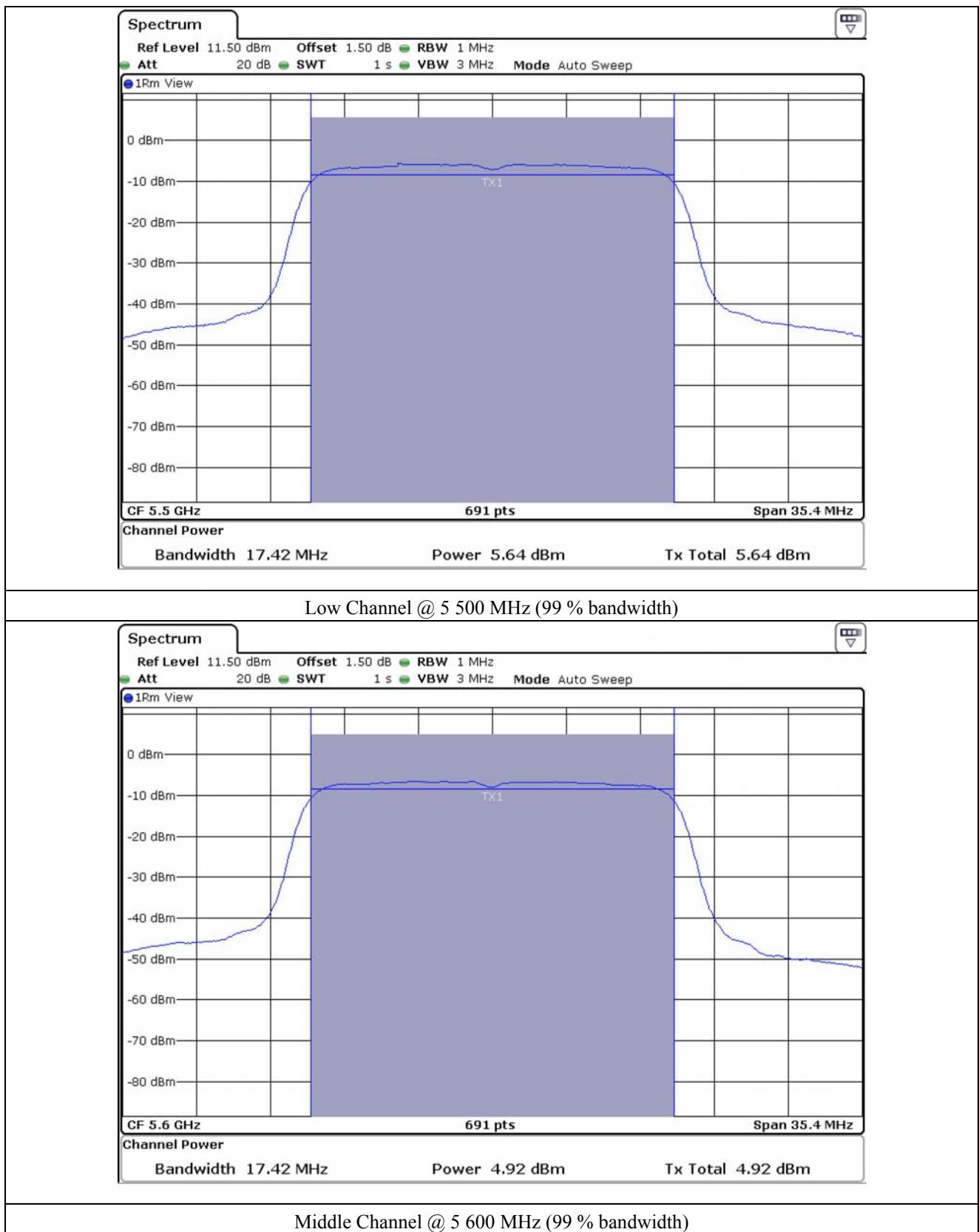


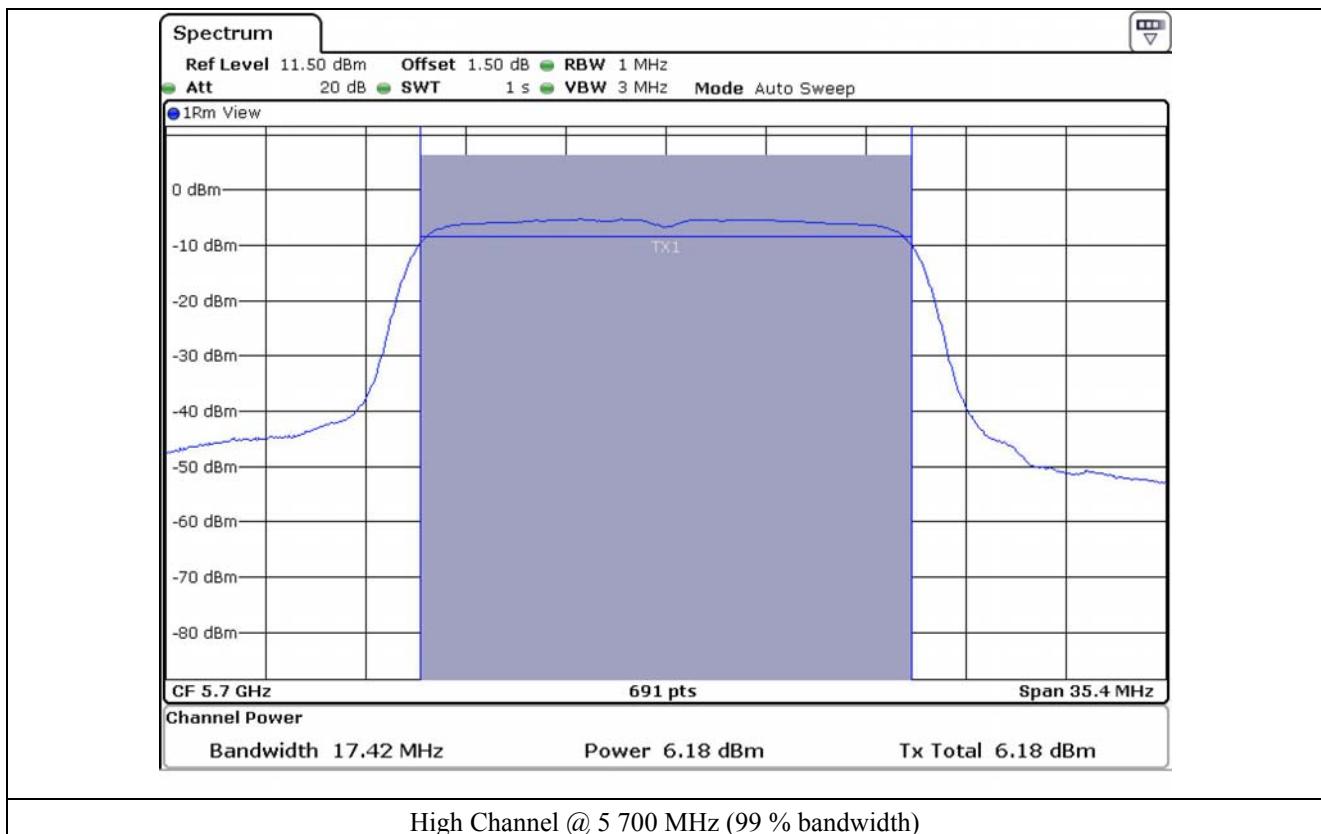












8.5.2 Test data for Antenna 1

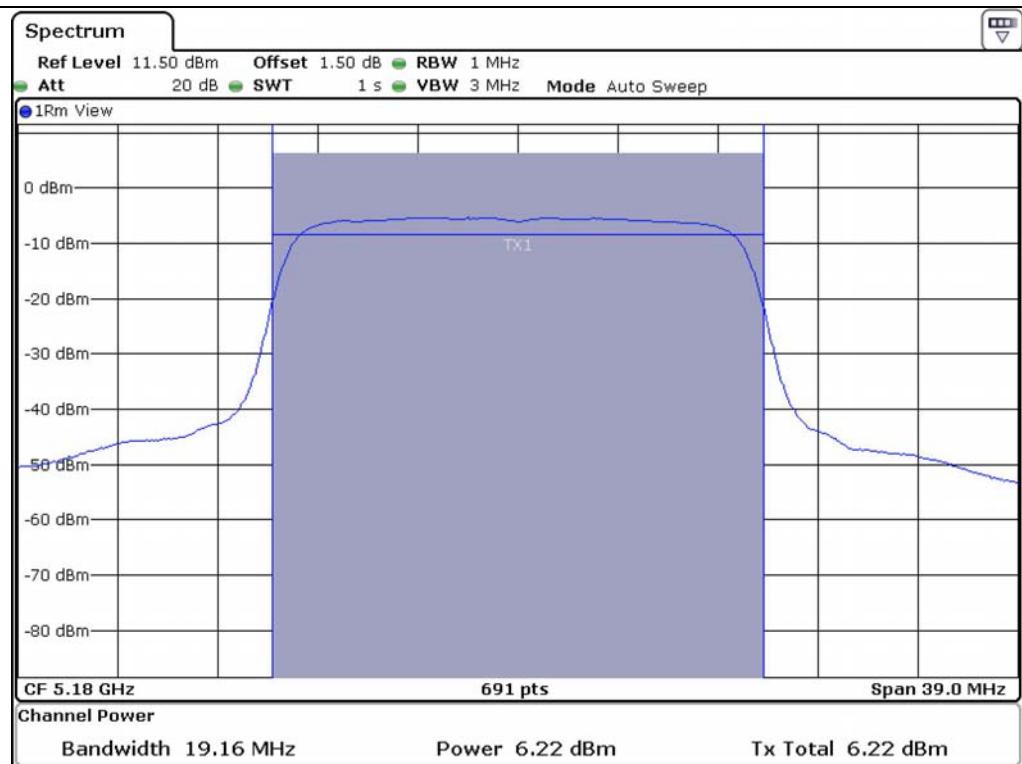
- Test Date : December 16, 2013
- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	19.16	6.22	16.82	10.60
	Middle	5 200	19.16	6.04	16.82	10.78
	High	5 240	19.16	6.63	16.82	10.19
5 250 ~ 5 350	Low	5 260	19.10	7.84	23.81	15.97
	Middle	5 300	19.10	7.90	23.81	15.91
	High	5 320	19.10	7.51	23.81	16.30
5 470 ~ 5 725	Low	5 500	19.10	7.27	23.81	16.54
	Middle	5 600	19.10	7.03	23.81	16.78
	High	5 700	19.10	7.78	23.81	16.03

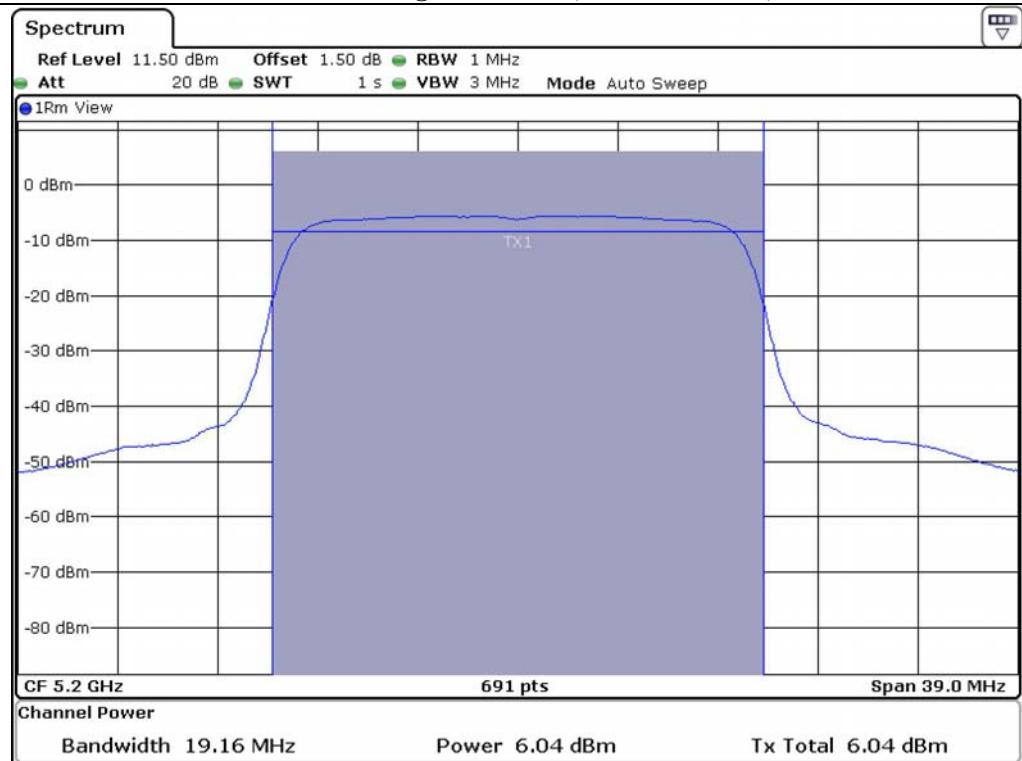
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	99 % bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	17.42	6.27	16.41	10.14
	Middle	5 200	17.42	6.03	16.41	10.38
	High	5 240	17.42	6.58	16.41	9.83
5 250 ~ 5 350	Low	5 260	17.42	7.77	23.41	15.64
	Middle	5 300	17.42	8.01	23.41	15.40
	High	5 320	17.42	7.43	23.41	15.98
5 470 ~ 5 725	Low	5 500	17.42	6.02	23.41	17.39
	Middle	5 600	17.42	5.64	23.41	17.77
	High	5 700	17.42	6.27	23.41	17.14

Remark: See next page for measurement data.

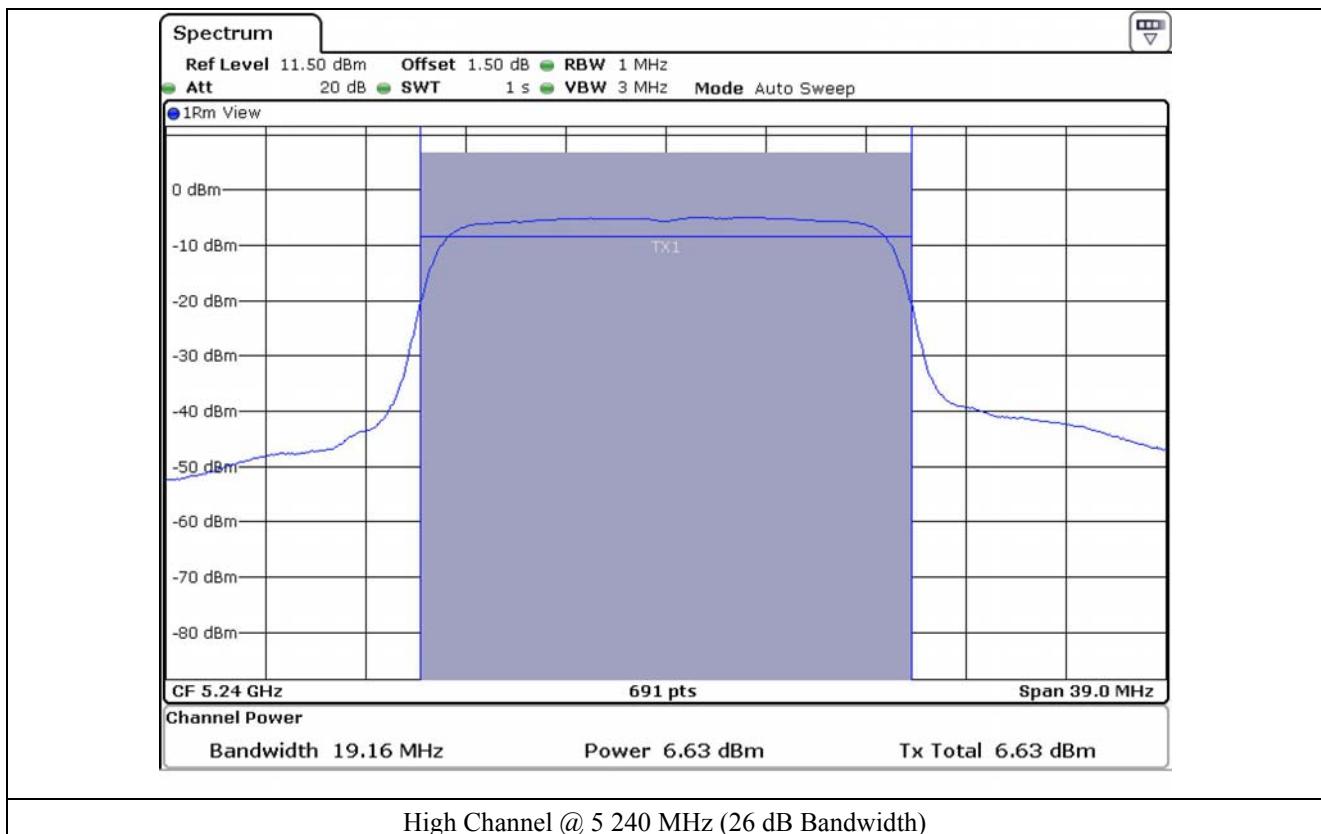
Tested by: Hong-Kyu, Lee/ Engineer

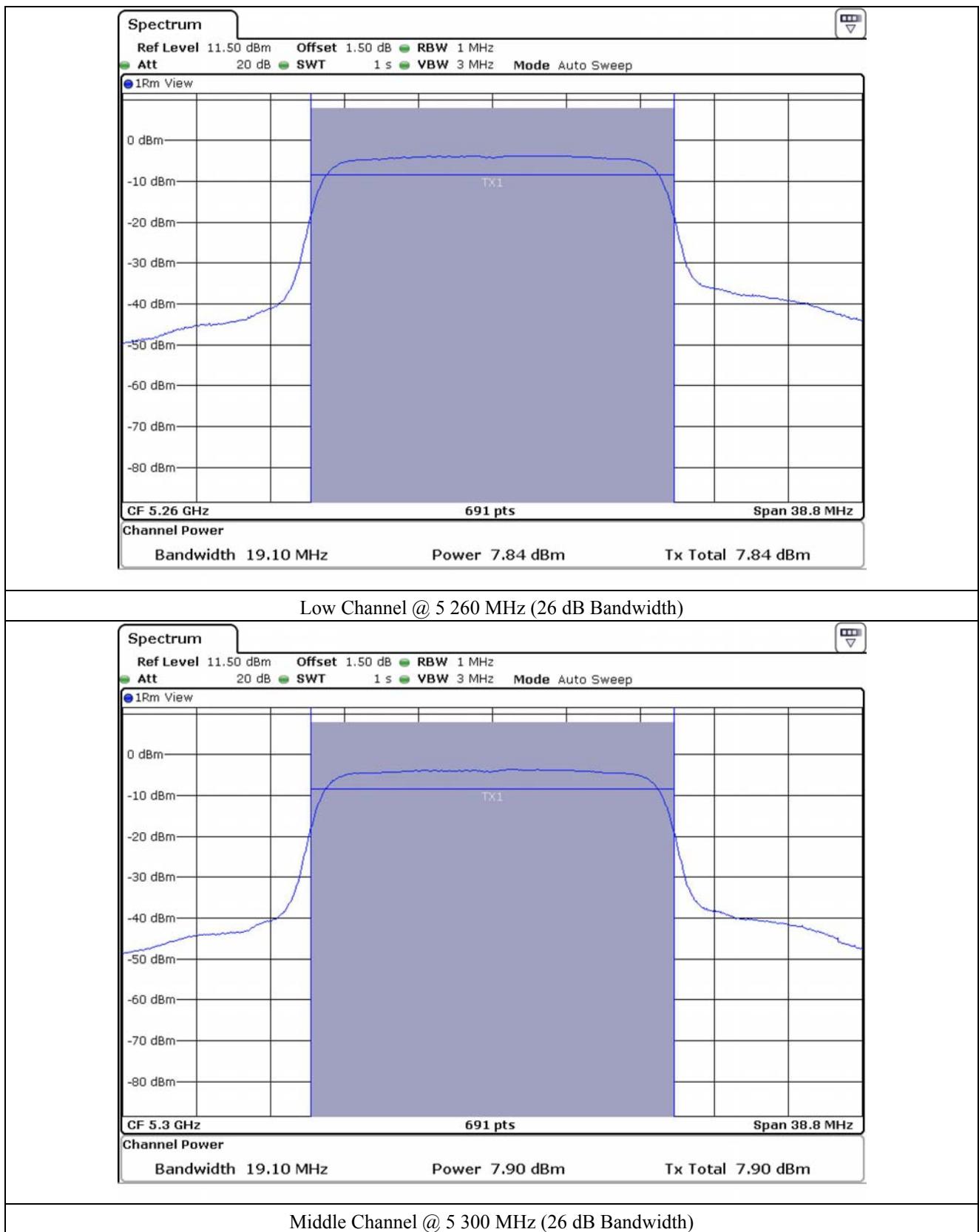


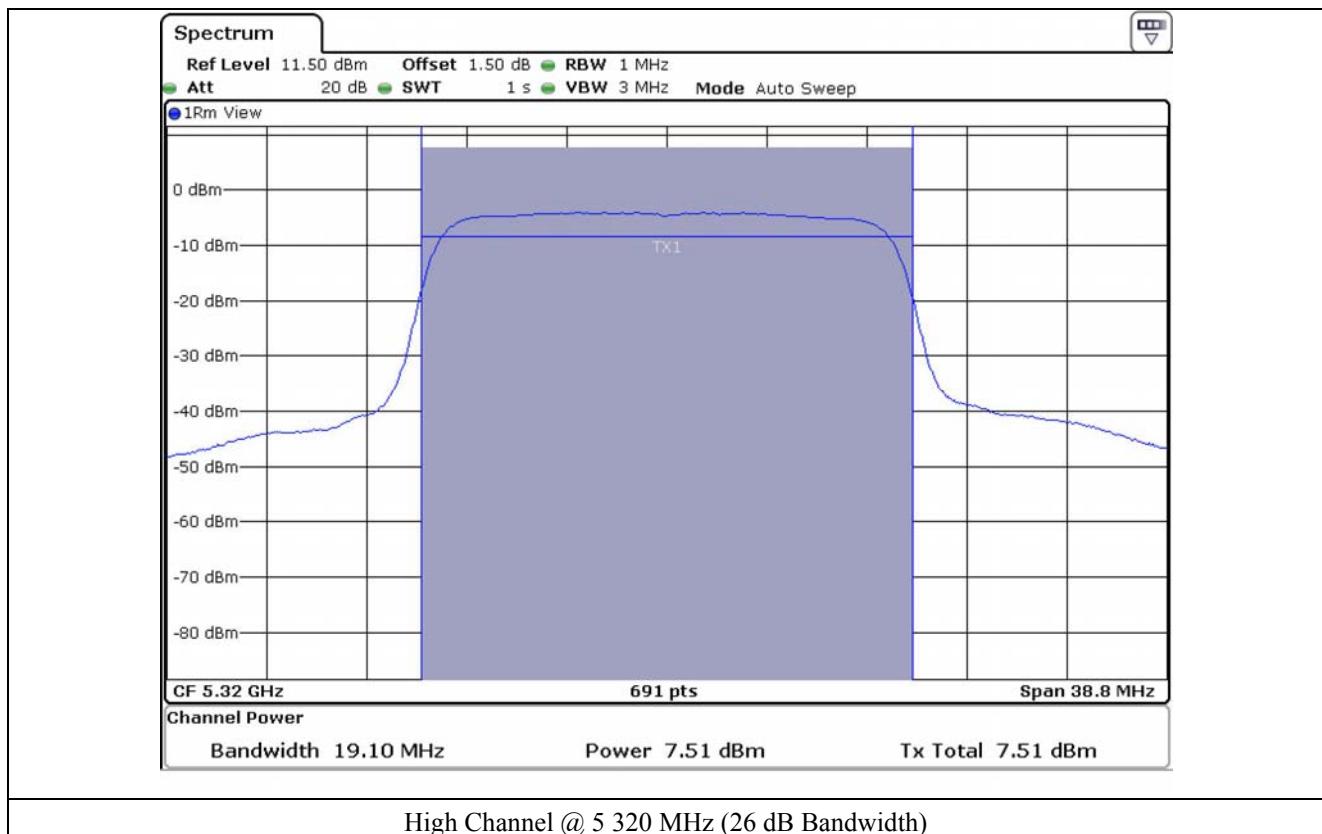
Low Channel @ 5 180 MHz (26 dB Bandwidth)

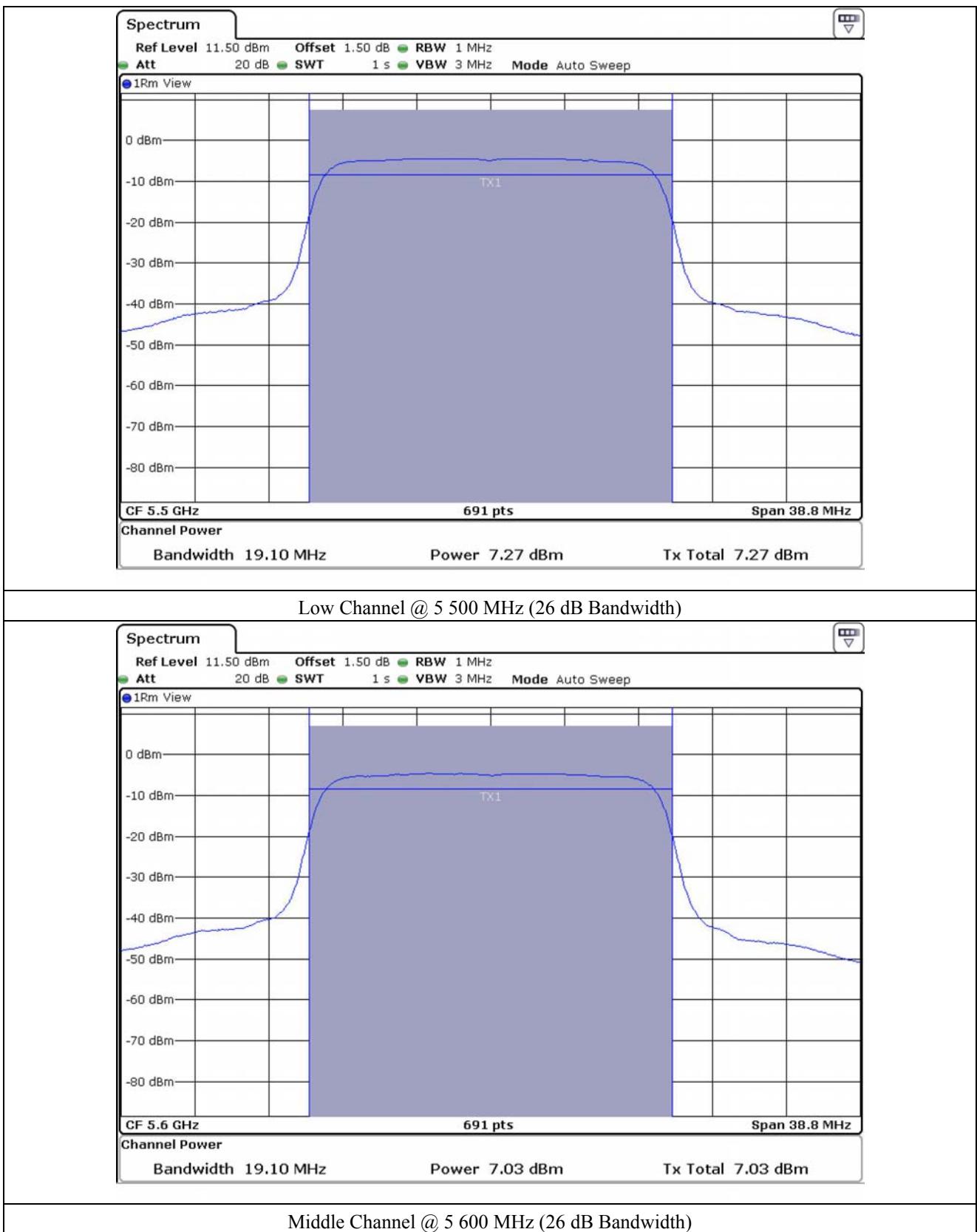


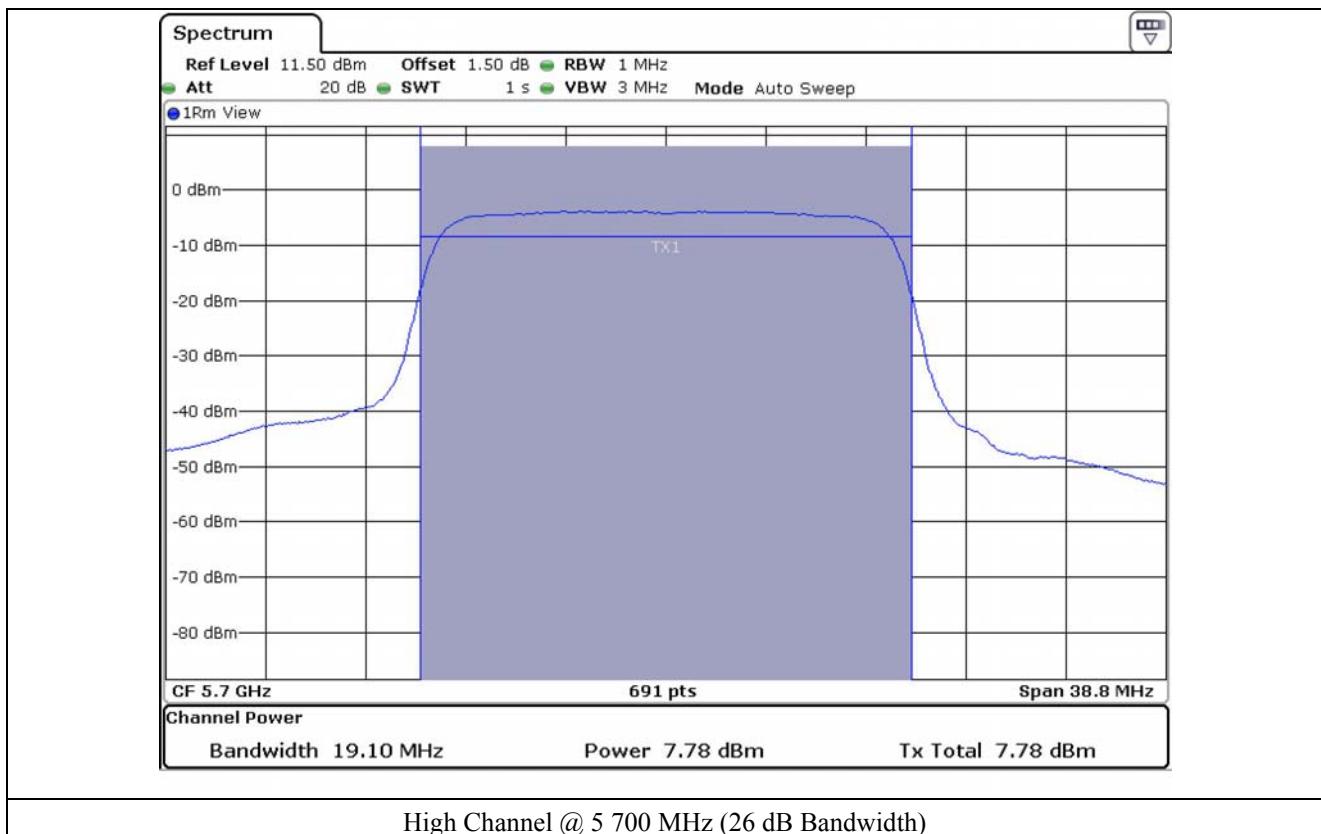
Middle Channel @ 5 200 MHz (26 dB Bandwidth)

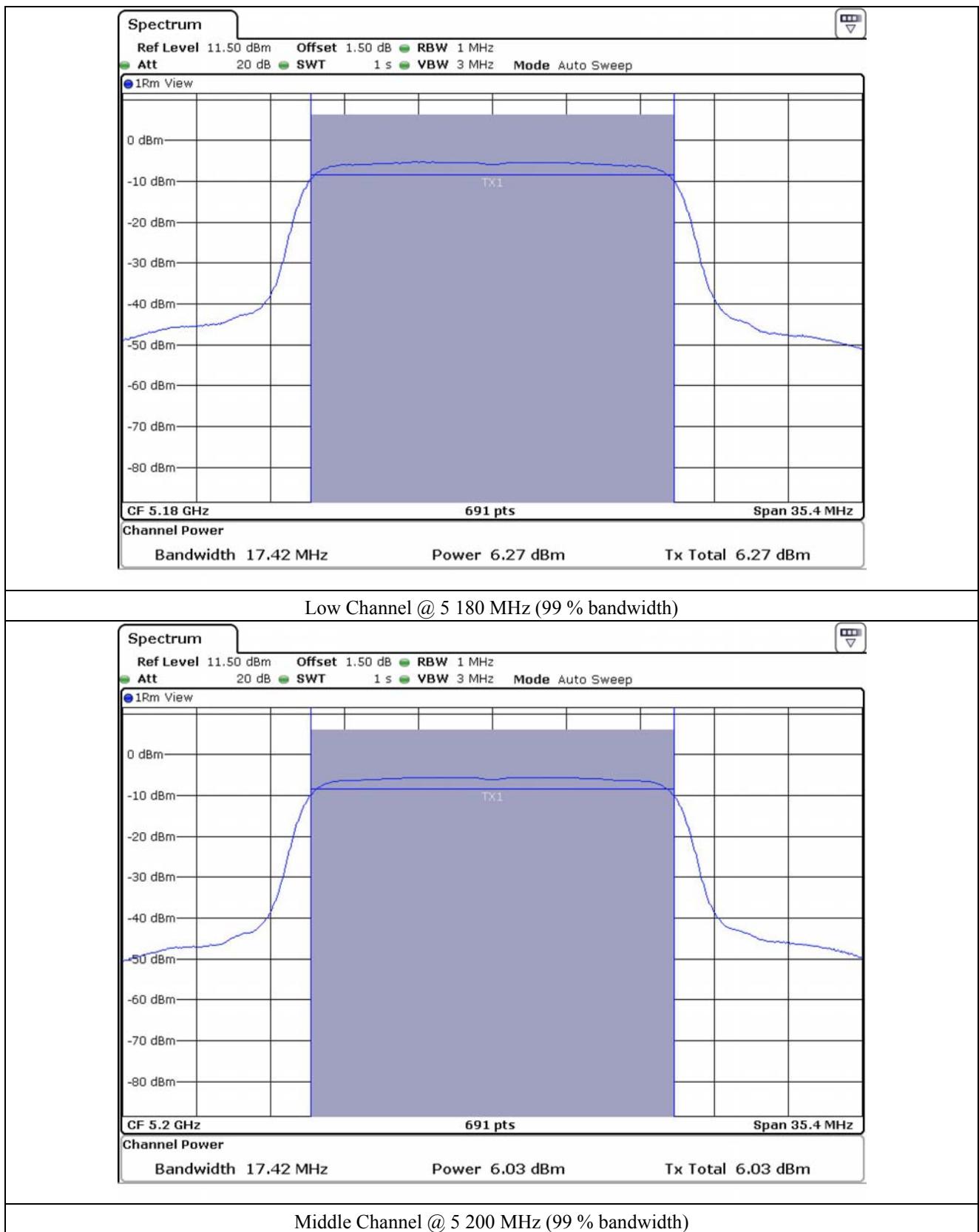


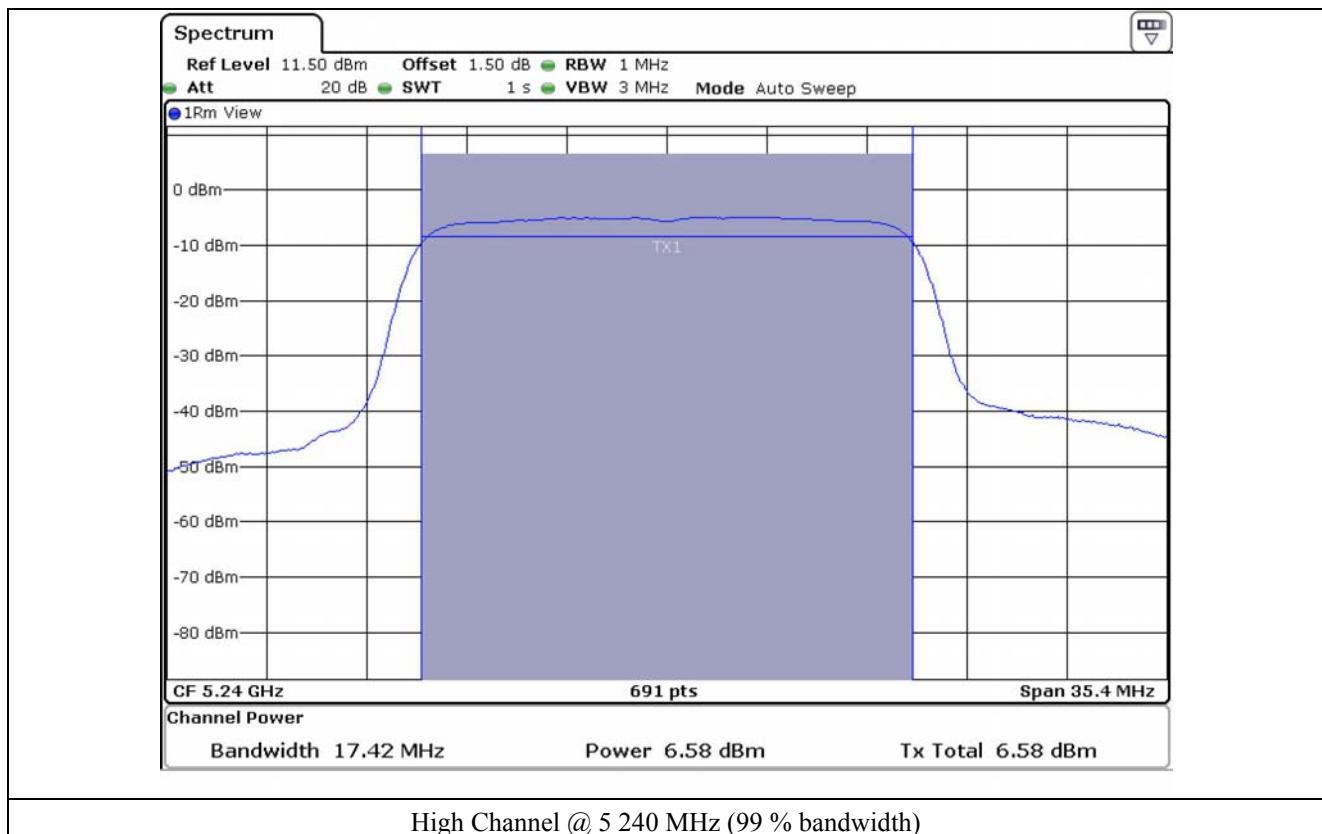




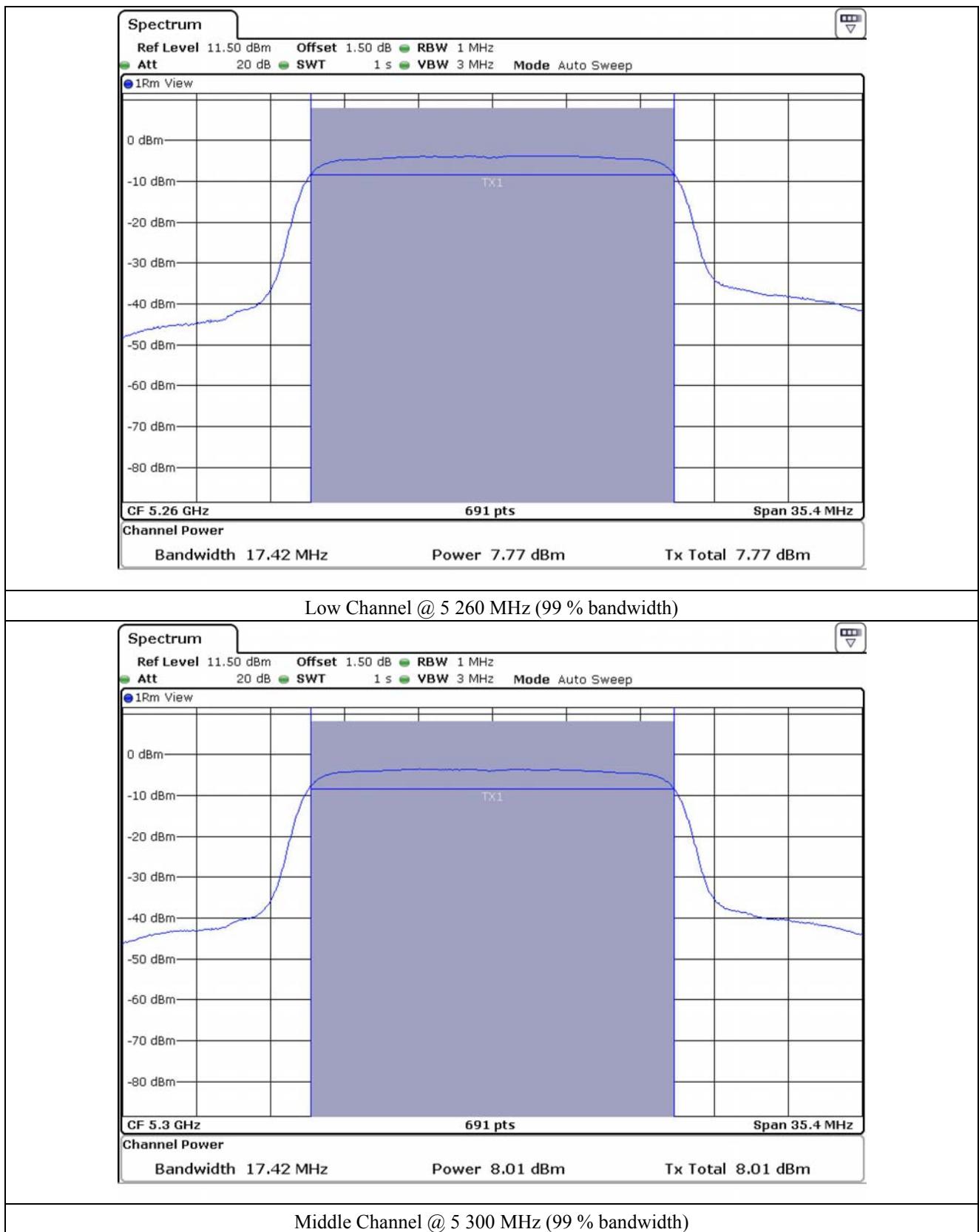


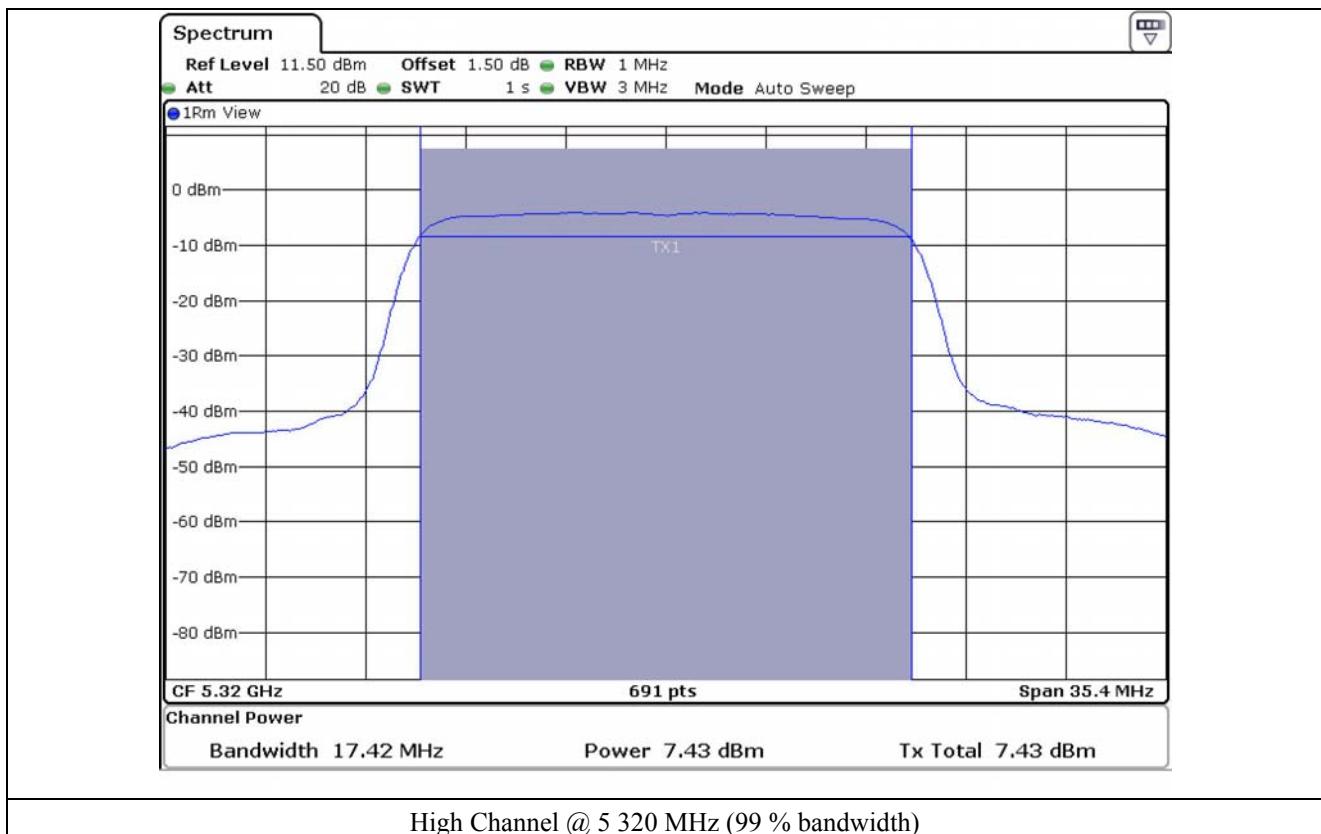


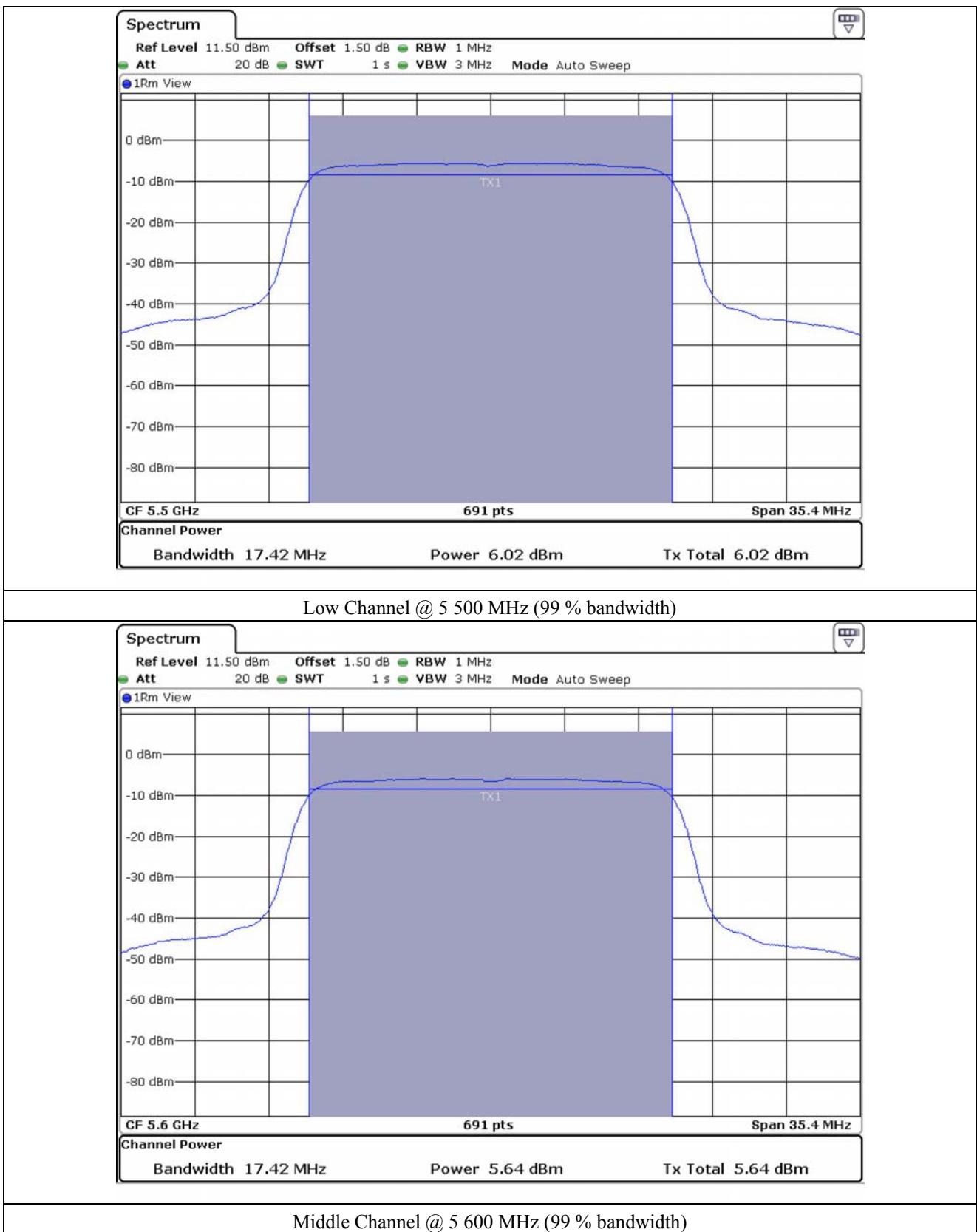


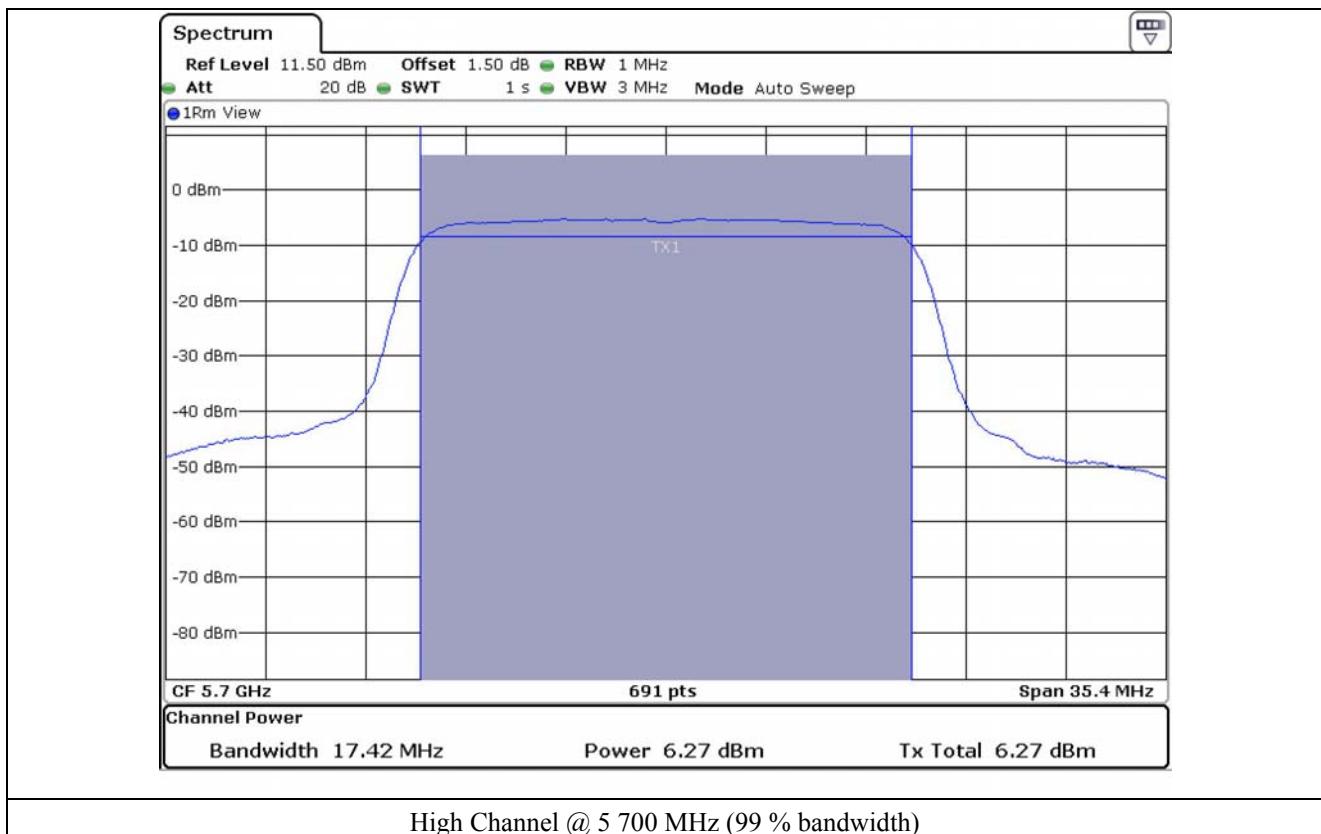


High Channel @ 5 240 MHz (99 % bandwidth)









8.5.3 Test data for Multiple transmit

- Test Date : December 16, 2013

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)	CALCULATE D OUTPUT POWER (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	19.16	9.05	16.82	7.77
	Middle	5 200	19.16	9.06	16.82	7.76
	High	5 240	19.16	9.70	16.82	7.13
5 250 ~ 5 350	Low	5 260	19.10	10.52	23.81	13.29
	Middle	5 300	19.10	10.42	23.81	13.39
	High	5 320	19.10	9.87	23.81	13.94
5 470 ~ 5 725	Low	5 500	19.10	9.73	23.81	14.08
	Middle	5 600	19.10	9.24	23.81	14.57
	High	5 700	19.10	10.34	23.81	13.47

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	99 % bandwidth (MHz)	CALCULATE D OUTPUT POWER (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180	17.42	8.88	16.41	7.53
	Middle	5 200	17.42	8.84	16.41	7.57
	High	5 240	17.42	9.66	16.41	6.75
5 250 ~ 5 350	Low	5 260	17.42	10.45	23.41	12.96
	Middle	5 300	17.42	10.45	23.41	12.96
	High	5 320	17.42	9.83	23.41	13.58
5 470 ~ 5 725	Low	5 500	17.42	8.84	23.41	14.57
	Middle	5 600	17.42	8.31	23.41	15.10
	High	5 700	17.42	9.24	23.41	14.17

Remark 1 : Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)

Remark 2 : Calculated Output Power= $10\log(10^{(\text{Antenna1 Output Power}/10)}+10^{(\text{Antenna2 Output Power}/10)})$

0 | 30 31

Tested by: Hong-Kyu, Lee/ Engineer

It should not be reproduced except in full, without the written approval of ONETECH.

EMC-003 (Rev.1)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

8.6 Test data for 802.11n_HT40 RLAN Mode

8.6.1 Test data for Antenna 0

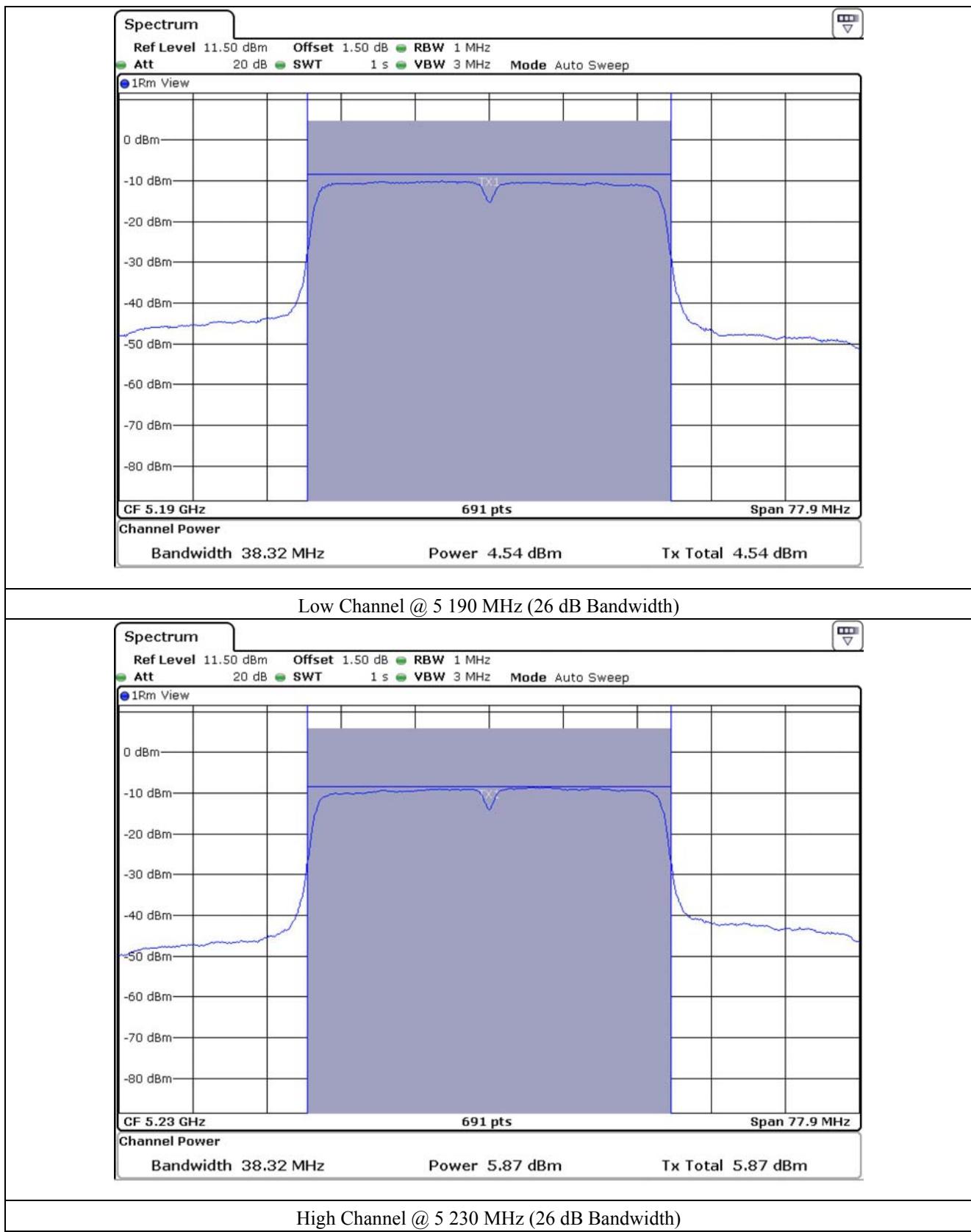
- Test Date : December 16, 2013
- Test Result : Pass

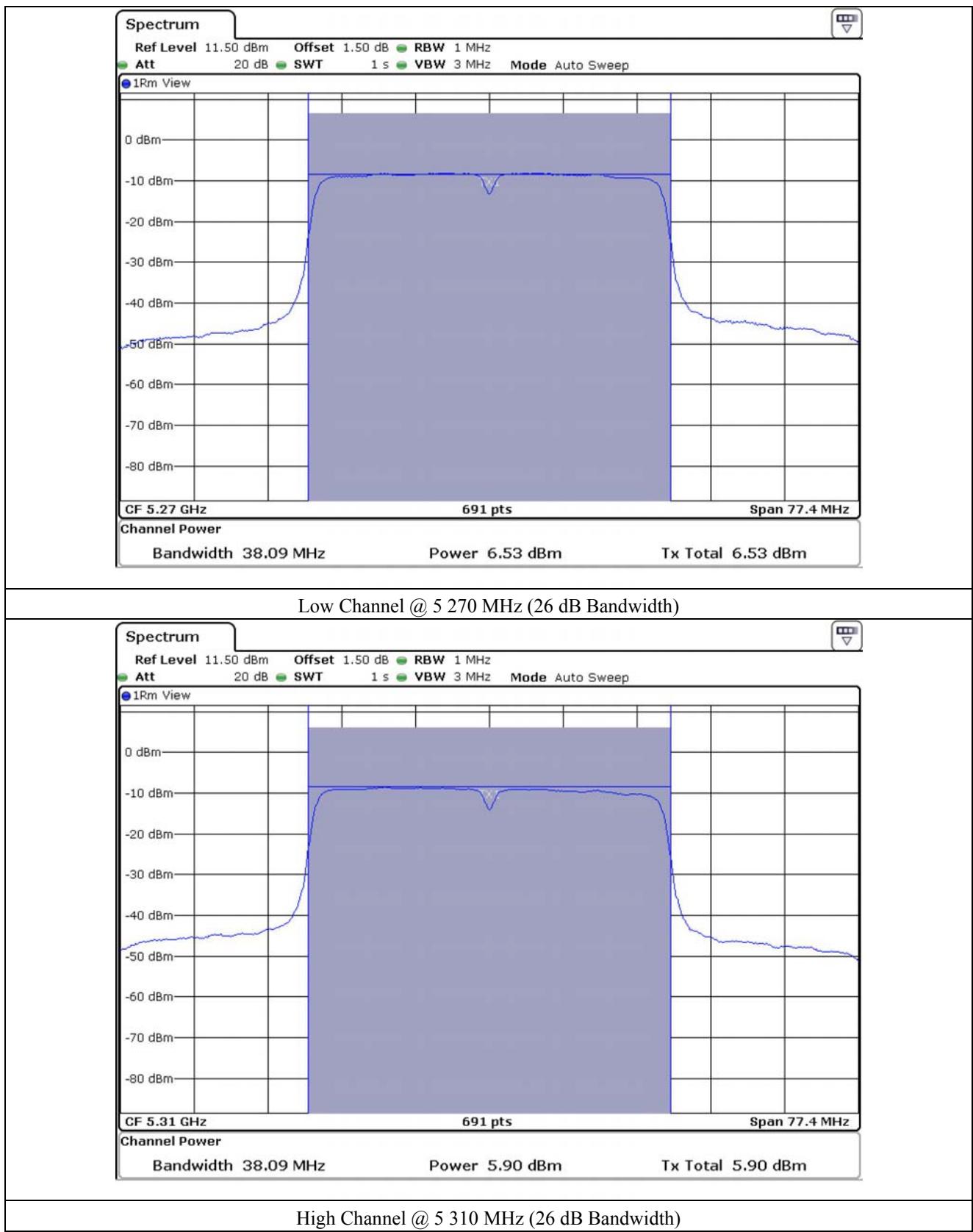
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190	38.32	4.54	17.00	12.46
	High	5 230	38.32	5.87	17.00	11.13
5 150 ~ 5 250	Low	5 270	38.09	6.53	24.00	17.47
	High	5 310	38.09	5.90	24.00	18.10
5 470 ~ 5 725	Low	5 510	38.21	4.81	24.00	19.19
	Middle	5 590	38.21	4.85	24.00	19.15
	High	5 670	38.21	5.85	24.00	18.15

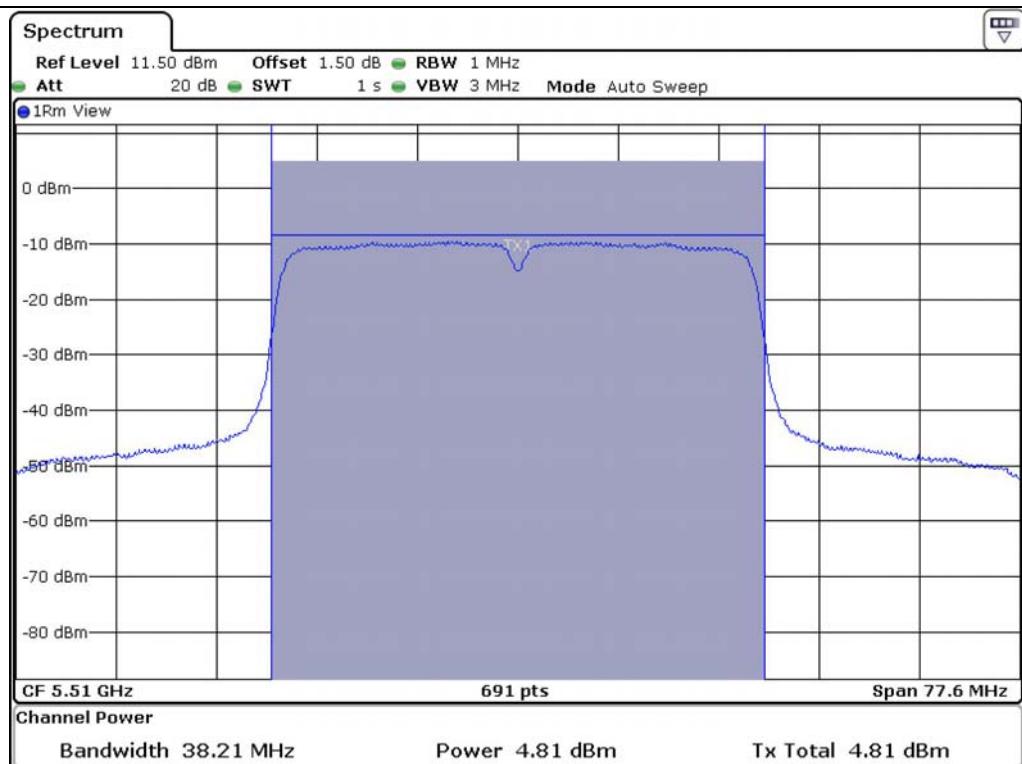
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	99 % bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190	35.89	4.77	17.00	12.23
	High	5 230	35.89	5.82	17.00	11.18
5 150 ~ 5 250	Low	5 270	35.77	6.37	24.00	17.63
	High	5 310	35.77	5.69	24.00	18.31
5 470 ~ 5 725	Low	5 510	35.89	4.86	24.00	19.14
	Middle	5 590	35.89	4.79	24.00	19.21
	High	5 670	35.89	5.99	24.00	18.01

Remark: See next page for measurement data.

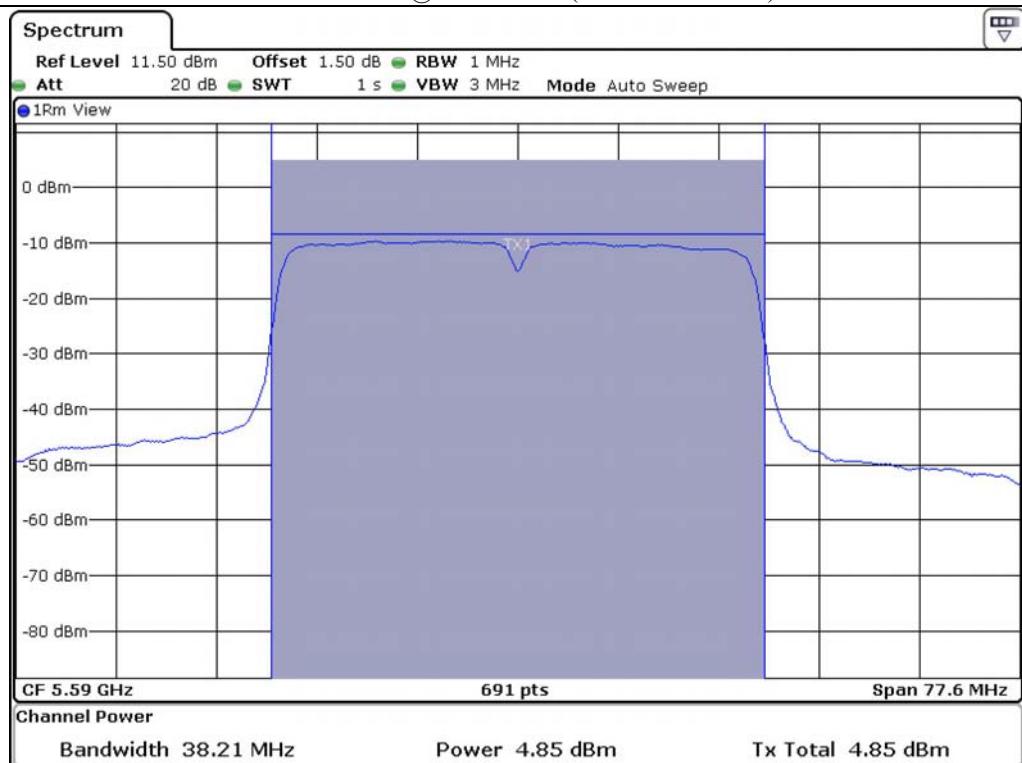
Tested by: Hong-Kyu, Lee/ Engineer



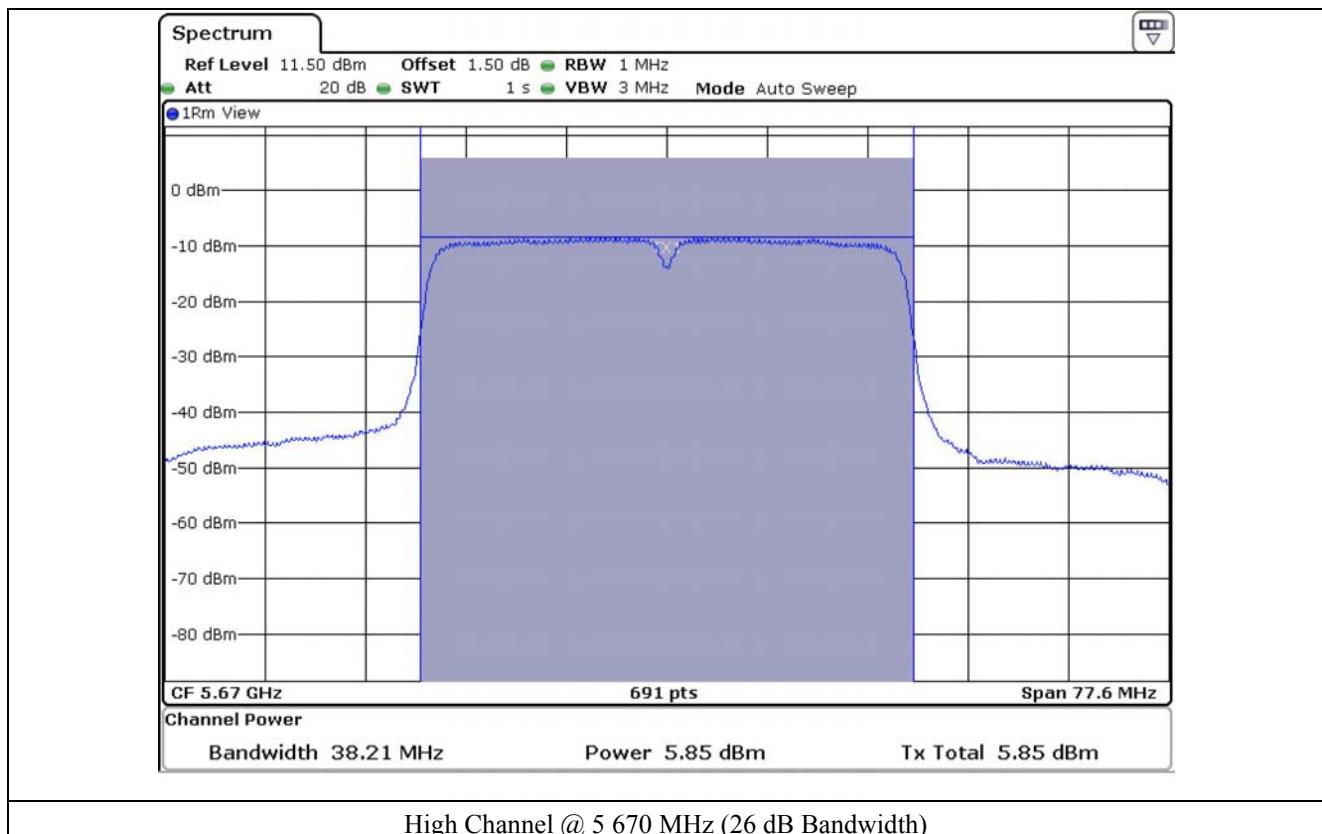


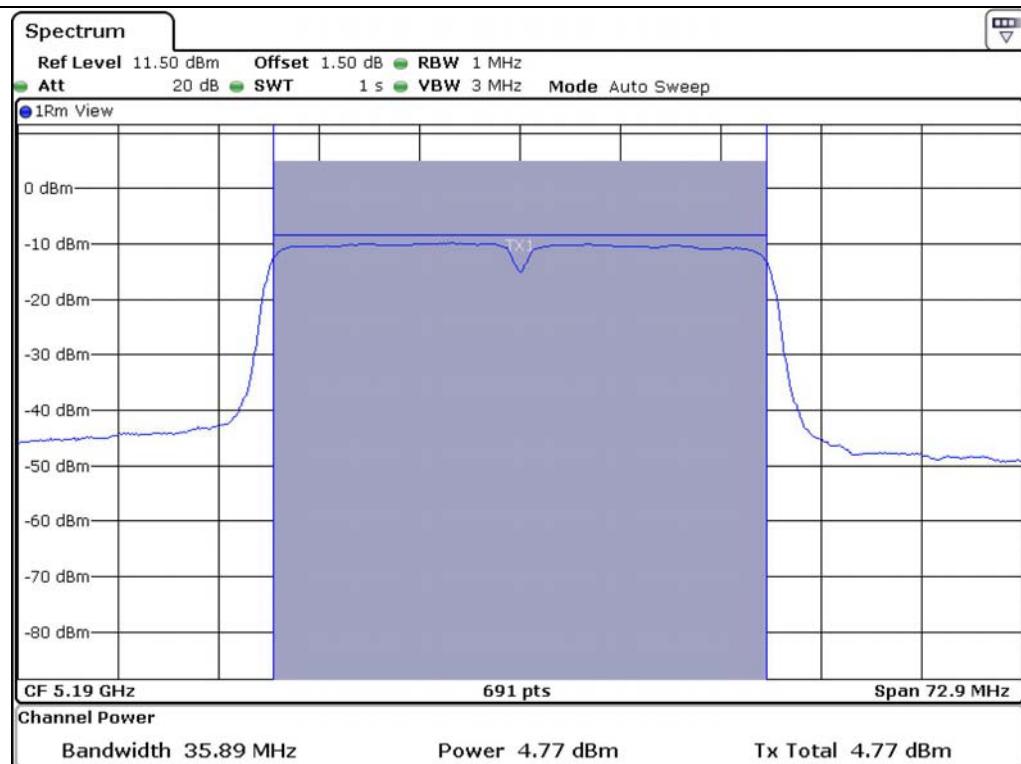


Low Channel @ 5 510 MHz (26 dB Bandwidth)

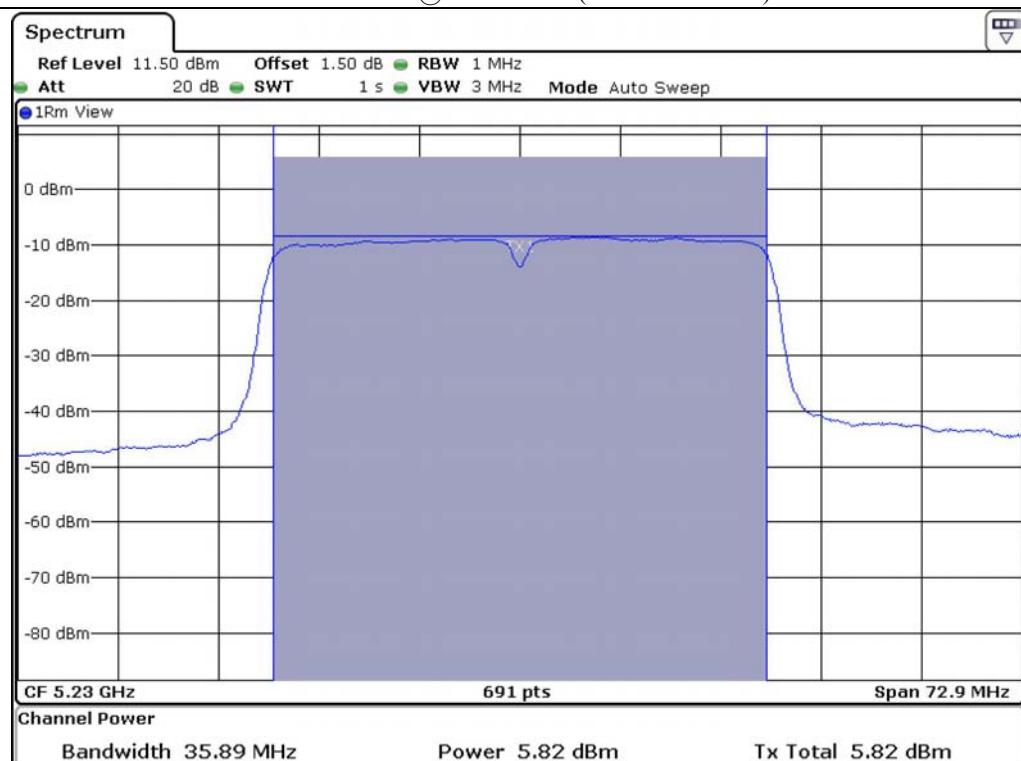


Middle Channel @ 5 590 MHz (26 dB Bandwidth)

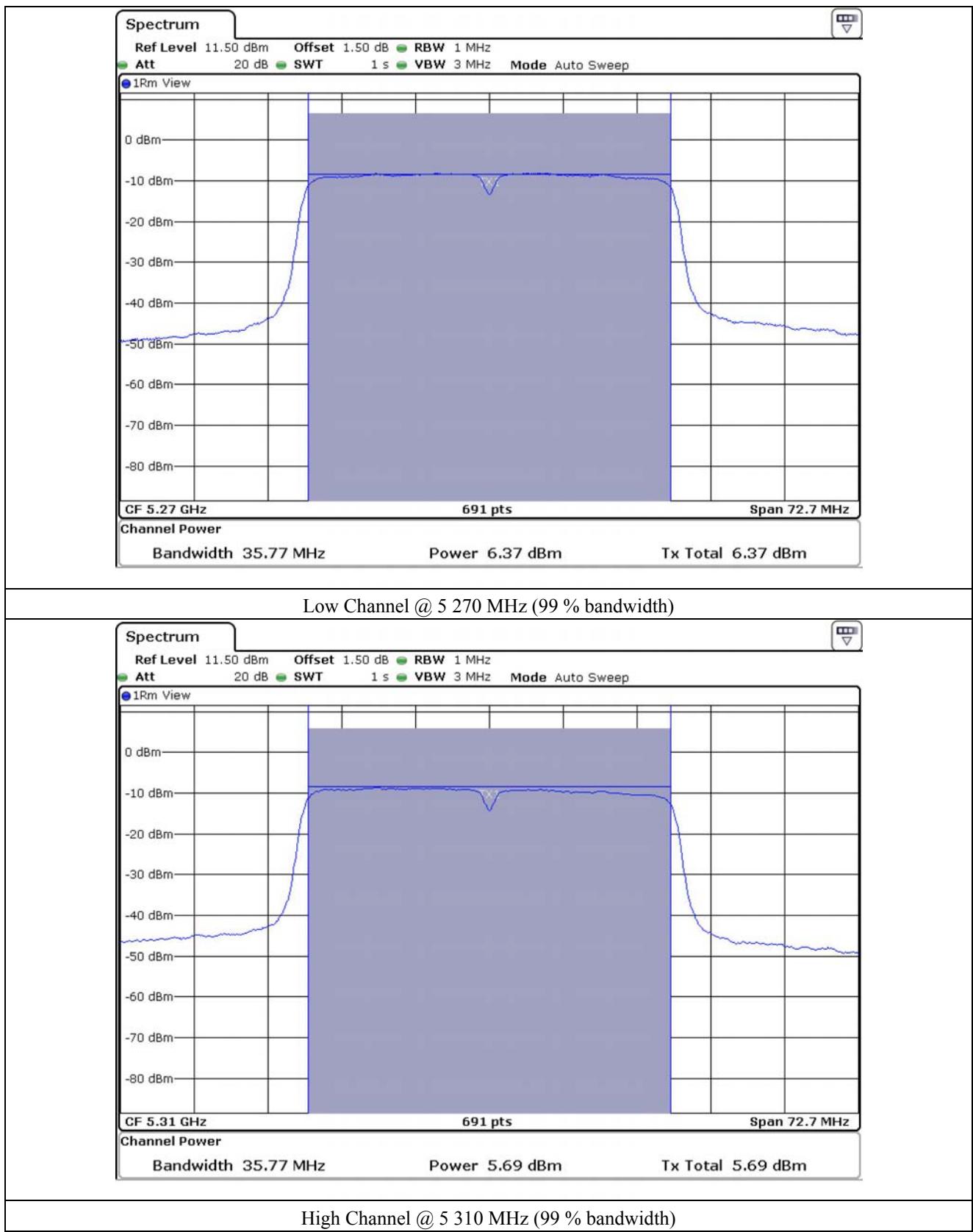


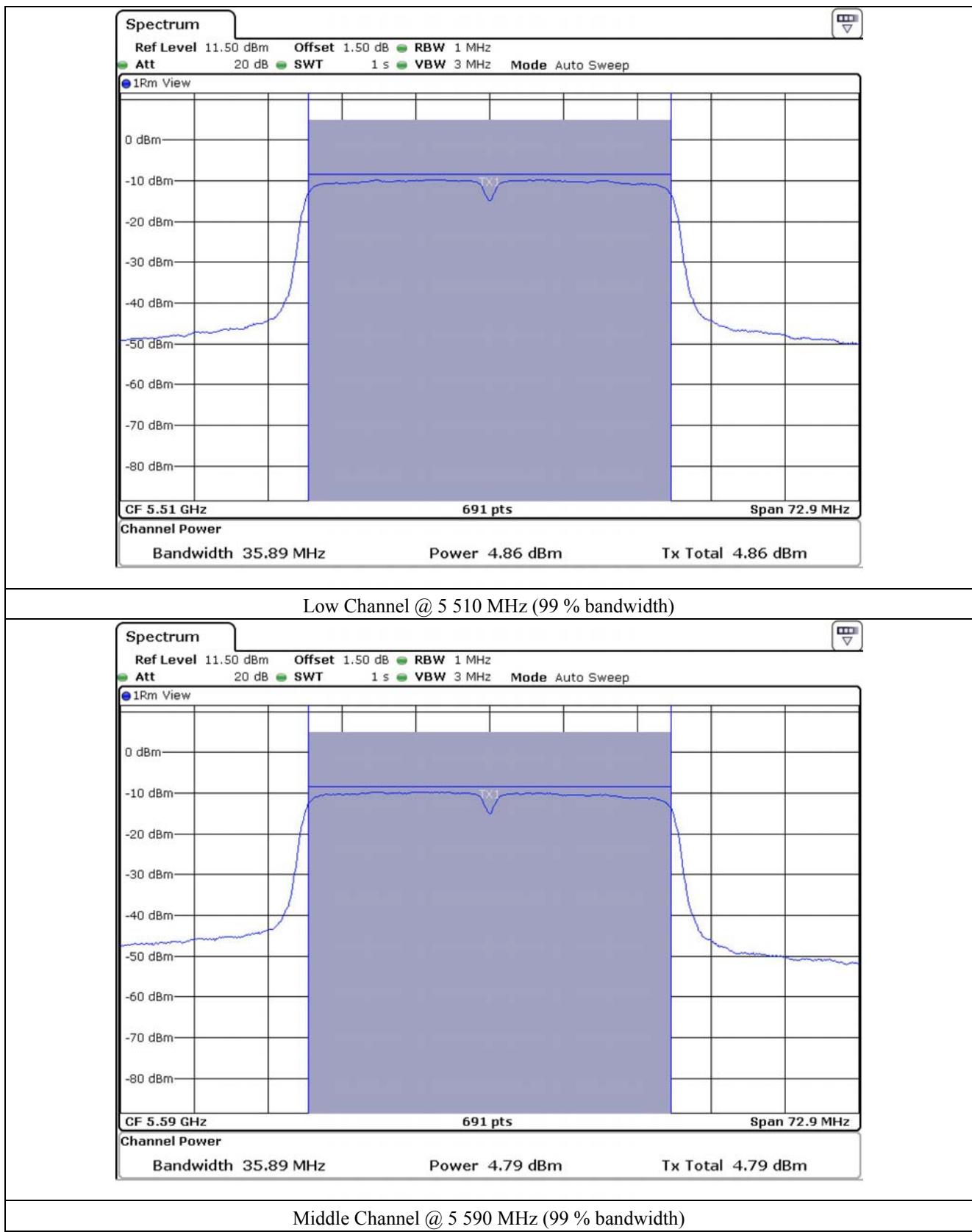


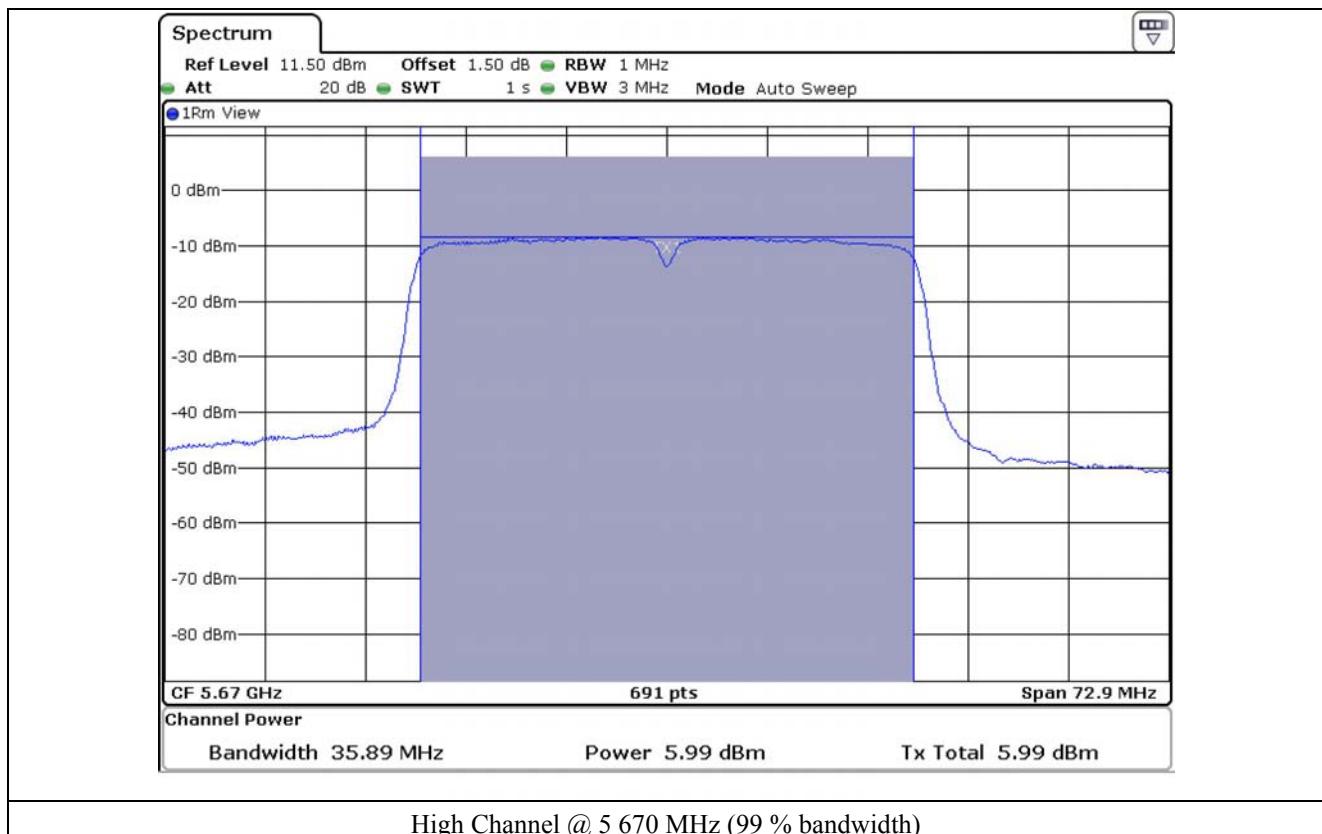
Low Channel @ 5 190 MHz (99 % bandwidth)



High Channel @ 5 230 MHz (99 % bandwidth)







8.6.2 Test data for Antenna 1

- Test Date : December 16, 2013

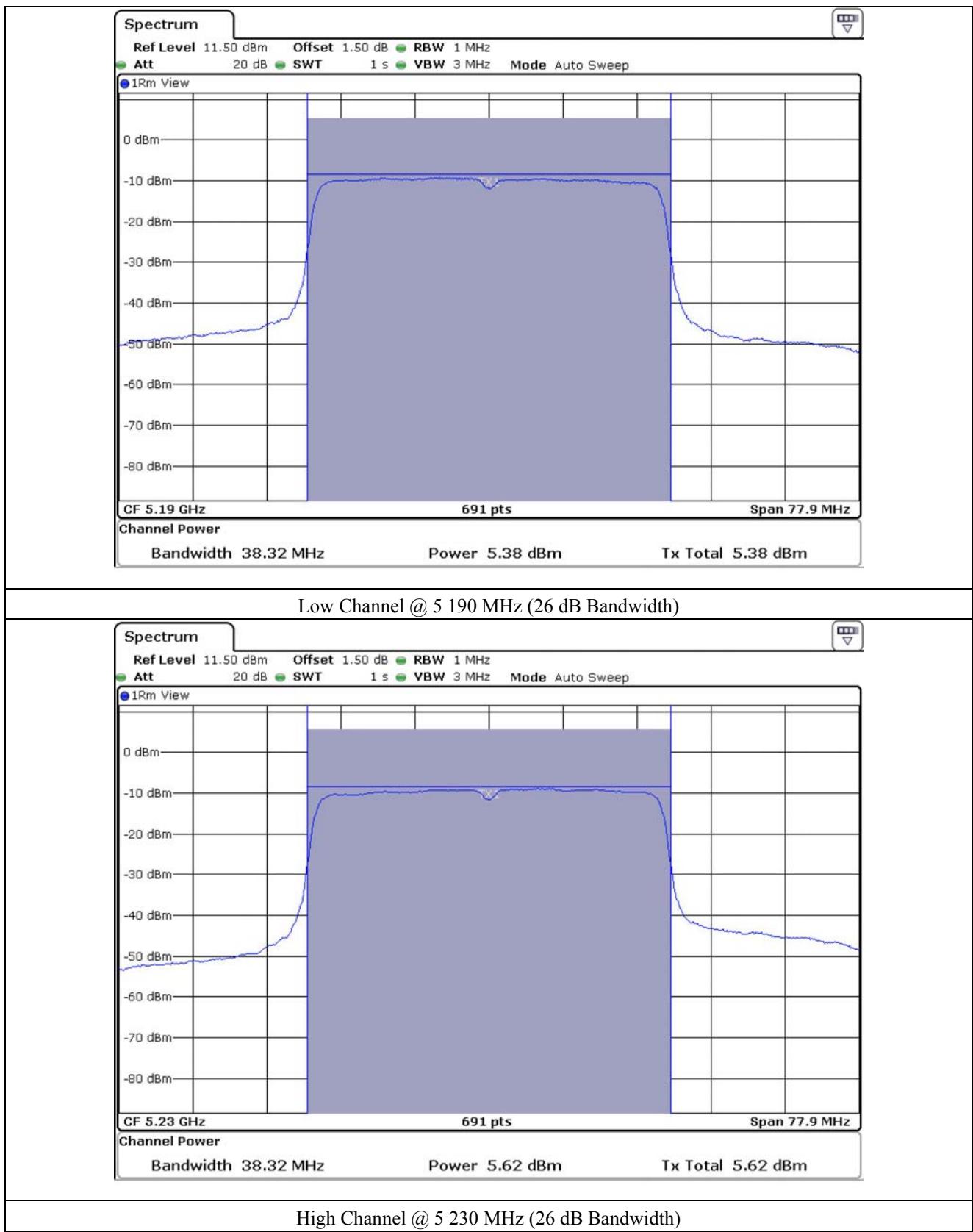
- Test Result : Pass

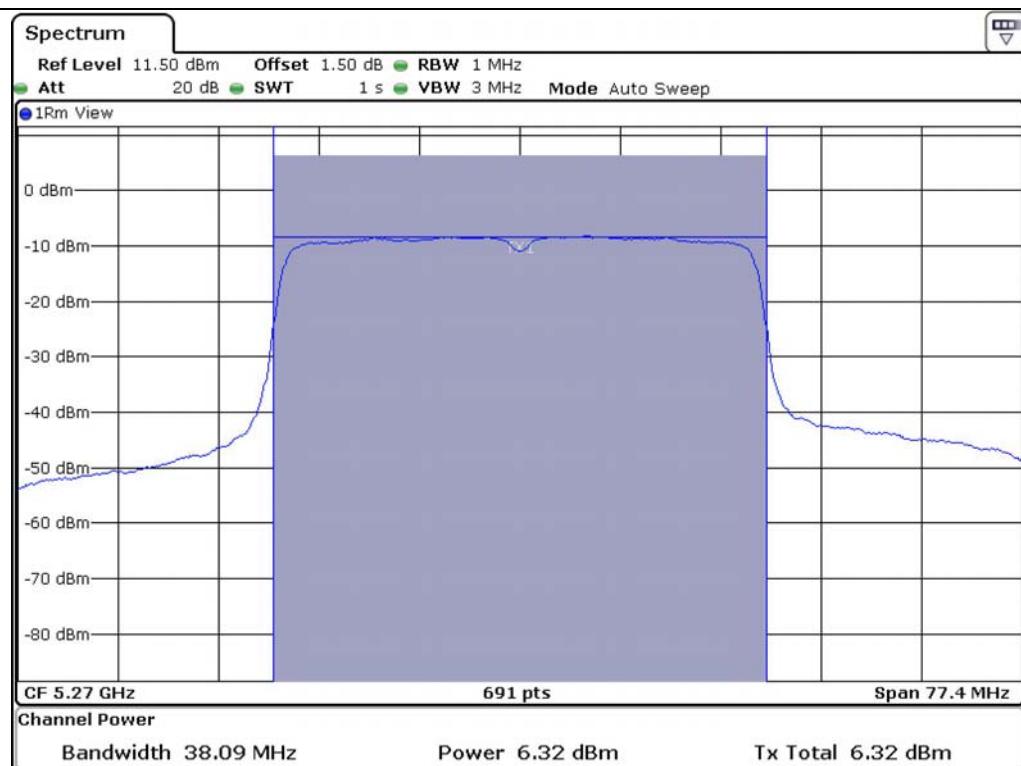
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190	38.32	5.38	17.00	11.62
	High	5 230	38.32	5.62	17.00	11.38
5 150 ~ 5 250	Low	5 270	38.09	6.32	24.00	17.68
	High	5 270	38.09	6.87	24.00	17.13
5 470 ~ 5 725	Low	5 510	38.21	5.87	24.00	18.13
	Middle	5 590	38.21	5.25	24.00	18.75
	High	5 670	38.21	6.31	24.00	17.69

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	99 % bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190	35.89	5.46	17.00	11.54
	High	5 230	35.89	5.73	17.00	11.27
5 150 ~ 5 250	Low	5 270	35.77	6.34	24.00	17.66
	High	5 270	35.77	6.83	24.00	17.17
5 470 ~ 5 725	Low	5 510	35.89	5.33	24.00	18.67
	Middle	5 590	35.89	5.26	24.00	18.74
	High	5 670	35.89	6.26	24.00	17.74

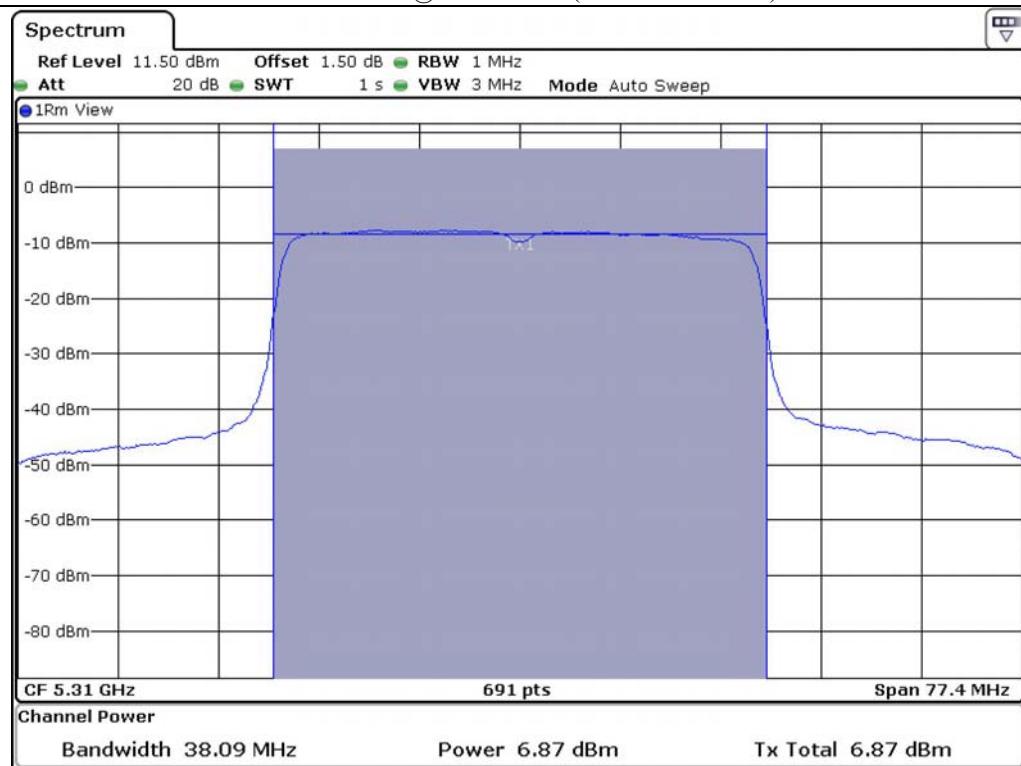
Remark: See next page for measurement data.

Tested by: Hong-Kyu, Lee/ Engineer

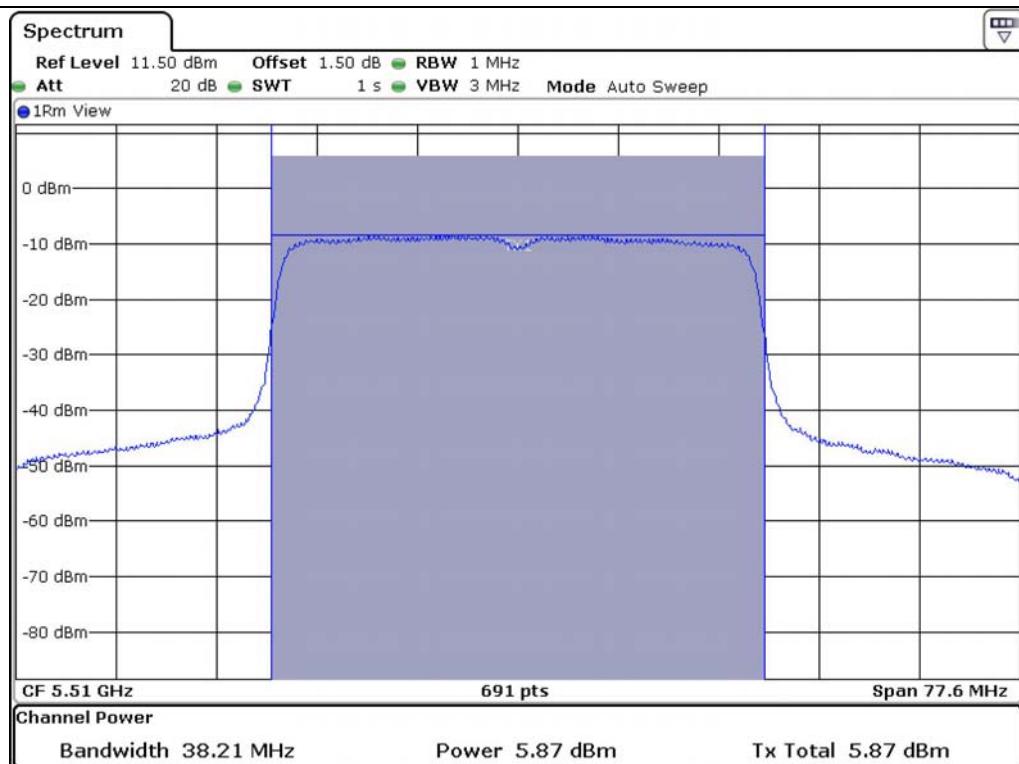




Low Channel @ 5 270 MHz (26 dB Bandwidth)



High Channel @ 5 310 MHz (26 dB Bandwidth)



Low Channel @ 5 510 MHz (26 dB Bandwidth)



Middle Channel @ 5 590 MHz (26 dB Bandwidth)

