

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz CH 151 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11509.40	34.92	54.00	-19.08	26.29	5.12	38.79	35.28	Average	100	288	HORIZONTAL
2	11514.80	45.80	74.00	-28.20	37.18	5.12	38.79	35.29	Peak	100	288	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11503.60	48.08	74.00	-25.92	39.45	5.12	38.79	35.28	Peak	100	13	VERTICAL
2	11512.60	36.07	54.00	-17.93	27.44	5.12	38.79	35.28	Average	100	13	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz CH 159 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

#### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11595.00	35.68	54.00	-18.32	27.01	5.14	38.83	35.30	Average	100	21	HORIZONTAL
2	11607.40	46.72	74.00	-27.28	38.03	5.15	38.84	35.30	Peak	100	21	HORIZONTAL

#### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11575.00	49.79	74.00	-24.21	41.12	5.14	38.83	35.30	Peak	100	223	VERTICAL
2	11591.20	36.20	54.00	-17.80	27.53	5.14	38.83	35.30	Average	100	223	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 149 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11504.50	36.29	54.00	-17.71	27.66	5.12	38.79	35.28	Average	100	200	HORIZONTAL
2	11507.10	48.79	74.00	-25.21	40.16	5.12	38.79	35.28	Peak	100	200	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11501.80	48.80	74.00	-25.20	40.17	5.12	38.79	35.28	Peak	100	168	VERTICAL
2	11504.80	38.51	54.00	-15.49	29.88	5.12	38.79	35.28	Average	100	168	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 157 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11582.40	37.05	54.00	-16.95	28.38	5.14	38.83	35.30	Average	100	161	HORIZONTAL
2	11605.30	48.00	74.00	-26.00	39.31	5.15	38.84	35.30	Peak	100	161	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11578.80	48.50	74.00	-25.50	39.83	5.14	38.83	35.30	Peak	100	342	VERTICAL
2	11581.70	39.36	54.00	-14.64	30.69	5.14	38.83	35.30	Average	100	342	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 165 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11661.70	36.41	54.00	-17.59	27.69	5.16	38.86	35.30	Average	100	73	HORIZONTAL
2	11661.90	47.95	74.00	-26.05	39.23	5.16	38.86	35.30	Peak	100	73	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11662.20	48.84	74.00	-25.16	40.12	5.16	38.86	35.30	Peak	100	267	VERTICAL
2	11662.40	38.51	54.00	-15.49	29.79	5.16	38.86	35.30	Average	100	267	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 149 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg
1	11497.20	47.87	74.00	-26.13	39.25	5.12	38.78	35.28	Peak	100	308 HORIZONTAL
2	11509.00	35.28	54.00	-18.72	26.65	5.12	38.79	35.28	Average	100	308 HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg
1	11504.50	48.08	74.00	-25.92	39.45	5.12	38.79	35.28	Peak	100	151 VERTICAL
2	11505.70	37.29	54.00	-16.71	28.66	5.12	38.79	35.28	Average	100	151 VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 157 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11582.10	36.18	54.00	-17.82	27.51	5.14	38.83	35.30	Average	100	336	HORIZONTAL
2	11594.50	48.86	74.00	-25.14	40.19	5.14	38.83	35.30	Peak	100	336	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11577.00	37.96	54.00	-16.04	29.29	5.14	38.83	35.30	Average	100	103	VERTICAL
2	11601.90	48.60	74.00	-25.40	39.91	5.15	38.84	35.30	Peak	100	103	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 165 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	11663.80	48.22	74.00	-25.78	39.50	5.16	38.86	35.30	Peak	100	84 HORIZONTAL
2	11667.10	36.69	54.00	-17.31	27.97	5.16	38.86	35.30	Average	100	84 HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	11663.00	49.40	74.00	-24.60	40.68	5.16	38.86	35.30	Peak	100	119 VERTICAL
2	11666.90	38.35	54.00	-15.65	29.63	5.16	38.86	35.30	Average	100	119 VERTICAL



Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 151 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11504.90	47.73	74.00	-26.27	39.10	5.12	38.79	35.28	Peak	100	209	HORIZONTAL
2	11523.10	35.30	54.00	-18.70	26.66	5.13	38.80	35.29	Average	100	209	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11522.70	47.85	74.00	-26.15	39.21	5.13	38.80	35.29	Peak	100	96	VERTICAL
2	11523.60	36.24	54.00	-17.76	27.60	5.13	38.80	35.29	Average	100	96	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 159 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11597.70	36.05	54.00	-17.95	27.37	5.15	38.83	35.30	Average	100	98	HORIZONTAL
2	11614.60	49.12	74.00	-24.88	40.43	5.15	38.84	35.30	Peak	100	98	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11573.90	48.48	74.00	-25.52	39.81	5.14	38.83	35.30	Peak	100	284	VERTICAL
2	11583.70	37.16	54.00	-16.84	28.49	5.14	38.83	35.30	Average	100	284	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz CH 151 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss Factor	Factor	Remark	cm	deg	Pol/Phase
1	11506.60	48.44	74.00	-25.56	39.81	5.12	38.79	35.28 Peak	100	131	HORIZONTAL
2	11522.50	35.29	54.00	-18.71	26.65	5.13	38.80	35.29 Average	100	131	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss Factor	Factor	Remark	cm	deg	Pol/Phase
1	11513.70	48.26	74.00	-25.74	39.63	5.12	38.79	35.28 Peak	100	19	VERTICAL
2	11522.40	36.05	54.00	-17.95	27.41	5.13	38.80	35.29 Average	100	19	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz CH 159 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11597.70	35.93	54.00	-18.07	27.25	5.15	38.83	35.30	Average	100	98	HORIZONTAL
2	11614.60	49.12	74.00	-24.88	40.43	5.15	38.84	35.30	Peak	100	98	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11567.10	49.14	74.00	-24.86	40.49	5.13	38.82	35.30	Peak	100	322	VERTICAL
2	11589.30	36.83	54.00	-17.17	28.16	5.14	38.83	35.30	Average	100	322	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 1 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.94	37.10	54.00	-16.90	35.76	3.31	33.06	35.03	Average	107	298	HORIZONTAL
2	4824.02	42.99	74.00	-31.01	41.65	3.31	33.06	35.03	Peak	107	298	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.94	35.15	54.00	-18.85	33.81	3.31	33.06	35.03	Average	100	290	VERTICAL
2	4823.98	43.17	74.00	-30.83	41.83	3.31	33.06	35.03	Peak	100	290	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 6 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4873.88	47.43	74.00	-26.57	45.97	3.33	33.16	35.03	Peak	100	12	HORIZONTAL
2	4873.96	44.70	54.00	-9.30	43.24	3.33	33.16	35.03	Average	100	12	HORIZONTAL
3	7309.10	46.80	74.00	-27.20	42.18	4.06	35.96	35.40	Peak	100	360	HORIZONTAL
4	7311.80	41.28	54.00	-12.72	36.66	4.06	35.96	35.40	Average	100	360	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4873.94	40.52	54.00	-13.48	39.06	3.33	33.16	35.03	Average	100	330	VERTICAL
2	4873.98	44.76	74.00	-29.24	43.30	3.33	33.16	35.03	Peak	100	330	VERTICAL
3	7309.20	41.14	54.00	-12.86	36.52	4.06	35.96	35.40	Average	100	0	VERTICAL
4	7310.70	47.74	74.00	-26.26	43.12	4.06	35.96	35.40	Peak	100	0	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 11 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4923.86	42.77	74.00	-31.23	41.17	3.35	33.26	35.01	Peak	100	8	HORIZONTAL
2	4923.96	36.16	54.00	-17.84	34.56	3.35	33.26	35.01	Average	100	8	HORIZONTAL
3	7387.04	45.27	74.00	-28.73	40.52	4.06	36.09	35.40	Peak	100	242	HORIZONTAL
4	7392.80	31.85	54.00	-22.15	27.06	4.06	36.13	35.40	Average	100	242	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4924.00	32.97	54.00	-21.03	31.37	3.35	33.26	35.01	Average	100	328	VERTICAL
2	4924.06	41.74	74.00	-32.26	40.14	3.35	33.26	35.01	Peak	100	328	VERTICAL
3	7382.80	32.97	54.00	-21.03	28.22	4.06	36.09	35.40	Average	100	120	VERTICAL
4	7395.36	44.56	74.00	-29.44	39.77	4.06	36.13	35.40	Peak	100	120	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 1 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4824.87	29.52	54.00	-24.48	28.18	3.31	33.06	35.03	Average	100	277	HORIZONTAL
2	4826.84	39.61	74.00	-34.39	38.27	3.31	33.06	35.03	Peak	100	277	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4824.95	33.83	54.00	-20.17	32.49	3.31	33.06	35.03	Average	100	206	VERTICAL
2	4825.92	42.64	74.00	-31.36	41.30	3.31	33.06	35.03	Peak	100	206	VERTICAL



Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 6 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4873.81	29.60	54.00	-24.40	28.14	3.33	33.16	35.03	Average	100	340	HORIZONTAL
2	4874.35	37.93	74.00	-36.07	36.47	3.33	33.16	35.03	Peak	100	340	HORIZONTAL
3	7310.49	41.54	74.00	-32.46	36.92	4.06	35.96	35.40	Peak	100	124	HORIZONTAL
4	7311.48	31.29	54.00	-22.71	26.67	4.06	35.96	35.40	Average	100	124	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4873.97	41.20	74.00	-32.80	39.74	3.33	33.16	35.03	Peak	100	202	VERTICAL
2	4873.99	33.62	54.00	-20.38	32.16	3.33	33.16	35.03	Average	100	202	VERTICAL
3	7311.48	43.30	74.00	-30.70	38.68	4.06	35.96	35.40	Peak	100	168	VERTICAL
4	7311.80	33.89	54.00	-20.11	29.27	4.06	35.96	35.40	Average	100	168	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 11 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4923.74	40.47	74.00	-33.53	38.87	3.35	33.26	35.01	Peak	100	340	HORIZONTAL
2	4923.94	30.25	54.00	-23.75	28.65	3.35	33.26	35.01	Average	100	340	HORIZONTAL
3	7385.68	42.90	74.00	-31.10	38.15	4.06	36.09	35.40	Peak	100	189	HORIZONTAL
4	7385.77	31.85	54.00	-22.15	27.10	4.06	36.09	35.40	Average	100	189	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4923.91	41.20	74.00	-32.80	39.60	3.35	33.26	35.01	Peak	100	61	VERTICAL
2	4923.97	32.81	54.00	-21.19	31.21	3.35	33.26	35.01	Average	100	61	VERTICAL
3	7383.50	31.58	54.00	-22.42	26.83	4.06	36.09	35.40	Average	100	98	VERTICAL
4	7383.79	43.06	74.00	-30.94	38.31	4.06	36.09	35.40	Peak	100	98	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 1 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4823.94	45.45	74.00	-28.55	44.11	3.31	33.06	35.03	Peak	100	358	HORIZONTAL
2	4823.97	42.78	54.00	-11.22	41.44	3.31	33.06	35.03	Average	100	358	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4823.97	44.81	74.00	-29.19	43.47	3.31	33.06	35.03	Peak	100	17	VERTICAL
2	4823.98	42.15	54.00	-11.85	40.81	3.31	33.06	35.03	Average	100	17	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 6 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4873.86	47.35	74.00	-26.65	45.89	3.33	33.16	35.03	Peak	111	18	HORIZONTAL
2	4873.94	44.14	54.00	-9.86	42.68	3.33	33.16	35.03	Average	111	18	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	4873.93	42.19	54.00	-11.81	40.73	3.33	33.16	35.03	Average	139	313	VERTICAL
2	4873.95	46.57	74.00	-27.43	45.11	3.33	33.16	35.03	Peak	139	313	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11b CH 11 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4924.00	40.29	54.00	-13.71	38.69	3.35	33.26	35.01	Average	137	10	HORIZONTAL
2	4924.08	44.81	74.00	-29.19	43.21	3.35	33.26	35.01	Peak	137	10	HORIZONTAL

### Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4923.82	44.09	74.00	-29.91	42.49	3.35	33.26	35.01	Peak	100	101	VERTICAL
2	4923.97	39.02	54.00	-14.98	37.42	3.35	33.26	35.01	Average	100	101	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a CH 149 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

*Horizontal*

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11427.80	36.13	54.00	-17.87	27.57	5.10	38.72	35.26	Average	100	141	HORIZONTAL
2	11430.60	48.61	74.00	-25.39	40.05	5.10	38.72	35.26	Peak	100	141	HORIZONTAL

*Vertical*

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11473.00	36.36	54.00	-17.64	27.76	5.11	38.77	35.28	Average	100	334	VERTICAL
2	11501.00	48.76	74.00	-25.24	40.13	5.12	38.79	35.28	Peak	100	334	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a CH 157 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11575.60	34.64	54.00	-19.36	25.97	5.14	38.83	35.30	Average	100	291	HORIZONTAL
2	11593.80	47.94	74.00	-26.06	39.27	5.14	38.83	35.30	Peak	100	292	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11568.80	47.00	74.00	-27.00	38.34	5.13	38.83	35.30	Peak	100	78	VERTICAL
2	11575.40	34.90	54.00	-19.10	26.23	5.14	38.83	35.30	Average	100	78	VERTICAL

Temperature	25.6°C	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a CH 165 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

### Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11617.40	48.05	74.00	-25.95	39.36	5.15	38.84	35.30	Peak	100	4	HORIZONTAL
2	11632.40	35.27	54.00	-18.73	26.56	5.16	38.85	35.30	Average	100	4	HORIZONTAL

### Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11620.00	35.51	54.00	-18.49	26.81	5.15	38.85	35.30	Average	100	119	VERTICAL
2	11630.60	47.67	74.00	-26.33	38.96	5.16	38.85	35.30	Peak	100	119	VERTICAL

### Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



## 4.6. Band Edge Emissions Measurement

### 4.6.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

### 4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (Emission in restricted band)	1MHz / 3MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100 KHz / 300 KHz for Peak

### 4.6.3. Test Procedures

- The test procedure is the same as section 4.5.3, only the frequency range investigated is limited to 100MHz around bandedges.

### 4.6.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.5.4.

### 4.6.5. Test Deviation

There is no deviation with the original standard.

### 4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

#### 4.6.7. Test Result of Band Edge and Fundamental Emissions

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS0 20MHz Ch 1, 6, 11 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

##### Channel 1

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	
1	2389.80	69.25	74.00	-4.75	38.86	2.22	28.17	0.00	Peak	100	352	VERTICAL
2	2390.00	53.89	54.00	-0.11	23.50	2.22	28.17	0.00	Average	100	352	VERTICAL
3	2406.00	104.48				2.22	28.21	0.00	Average	100	352	VERTICAL
4	2413.20	116.09				2.22	28.21	0.00	Peak	100	352	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

##### Channel 6

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	
1	2387.20	53.02	54.00	-0.98	22.64	2.21	28.17	0.00	Average	100	347	VERTICAL
2	2387.60	65.97	74.00	-8.03	35.59	2.21	28.17	0.00	Peak	100	347	VERTICAL
3	2438.60	109.16				2.23	28.29	0.00	Average	100	347	VERTICAL
4	2439.40	120.09				2.23	28.29	0.00	Peak	100	347	VERTICAL
5	2485.10	63.94	74.00	-10.06	33.27	2.26	28.41	0.00	Peak	100	347	VERTICAL
6	2491.10	51.85	54.00	-2.15	21.18	2.26	28.41	0.00	Average	100	347	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

##### Channel 11

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	cm	deg	
1	2456.80	104.61				2.24	28.33	0.00	Average	100	351	VERTICAL
2	2465.20	116.83				2.24	28.33	0.00	Peak	100	351	VERTICAL
3	2483.50	53.85	54.00	-0.15	23.22	2.26	28.37	0.00	Average	100	351	VERTICAL
4	2483.70	73.01	74.00	-0.99	42.38	2.26	28.37	0.00	Peak	100	351	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS8 20MHz Ch 1, 6, 11 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2389.80	66.14	74.00	-7.86	35.75	2.22	28.17	0.00	Peak	100	335	VERTICAL
2	2390.00	53.80	54.00	-0.20	23.41	2.22	28.17	0.00	Average	100	335	VERTICAL
3	2404.40	115.33				2.22	28.21	0.00	Peak	100	335	VERTICAL
4	2408.60	103.36				2.22	28.21	0.00	Average	100	335	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2385.60	65.90	74.00	-8.10	35.52	2.21	28.17	0.00	Peak	123	337	VERTICAL
2	2388.40	52.78	54.00	-1.22	22.40	2.21	28.17	0.00	Average	123	337	VERTICAL
3	2436.60	119.57				2.23	28.29	0.00	Peak	123	337	VERTICAL
4	2438.60	106.91				2.23	28.29	0.00	Average	123	337	VERTICAL
5	2483.50	51.91	54.00	-2.09	21.28	2.26	28.37	0.00	Average	123	337	VERTICAL
6	2483.90	64.40	74.00	-9.60	33.77	2.26	28.37	0.00	Peak	123	337	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

#### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2457.60	102.94				2.24	28.33	0.00	Average	119	333	VERTICAL
2	2460.20	116.60				2.24	28.33	0.00	Peak	119	333	VERTICAL
3	2483.50	53.91	54.00	-0.09	23.28	2.26	28.37	0.00	Average	119	333	VERTICAL
4	2483.50	69.77	74.00	-4.23	39.14	2.26	28.37	0.00	Peak	119	333	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

### Channel 3

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2390.00	53.79	54.00	-0.21	23.40	2.22	28.17	0.00	Average	120	345 VERTICAL
2	2390.00	70.79	74.00	-3.21	40.40	2.22	28.17	0.00	Peak	120	345 VERTICAL
3	2425.60	109.60				2.23	28.25	0.00	Peak	120	345 VERTICAL
4	2426.00	96.97				2.23	28.25	0.00	Average	120	345 VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

### Channel 6

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2384.80	65.71	74.00	-8.29	35.33	2.21	28.17	0.00	Peak	119	344 VERTICAL
2	2388.80	52.66	54.00	-1.34	22.28	2.21	28.17	0.00	Average	119	344 VERTICAL
3	2425.80	113.48				2.23	28.25	0.00	Peak	119	344 VERTICAL
4	2446.20	101.69				2.24	28.29	0.00	Average	119	344 VERTICAL
5	2483.50	53.36	54.00	-0.64	22.73	2.26	28.37	0.00	Average	119	344 VERTICAL
6	2483.50	71.34	74.00	-2.66	40.71	2.26	28.37	0.00	Peak	119	344 VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

### Channel 9

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2446.80	110.25				2.24	28.29	0.00	Peak	100	339 VERTICAL
2	2448.80	98.00				2.24	28.29	0.00	Average	100	339 VERTICAL
3	2483.50	53.75	54.00	-0.25	23.12	2.26	28.37	0.00	Average	100	339 VERTICAL
4	2483.50	71.53	74.00	-2.47	40.90	2.26	28.37	0.00	Peak	100	339 VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS8 40MHz Ch 3, 6, 9 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

### Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	2389.60	70.88	74.00	-3.12	40.50	2.21	28.17	0.00	102	339	VERTICAL
2	2390.00	53.66	54.00	-0.34	23.27	2.22	28.17	0.00	102	339	VERTICAL
3	2405.60	96.06				2.22	28.21	0.00	102	339	VERTICAL
4	2406.80	108.91				2.22	28.21	0.00	102	339	VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	2385.60	54.98	74.00	-19.02	24.60	2.21	28.17	0.00	118	43	HORIZONTAL
2	2390.00	43.30	54.00	-10.70	12.91	2.22	28.17	0.00	118	43	HORIZONTAL
3	2445.80	82.48				2.24	28.29	0.00	118	43	HORIZONTAL
4	2449.80	95.26				2.24	28.29	0.00	118	43	HORIZONTAL
5	2483.50	43.72	54.00	-10.28	13.08	2.26	28.38	0.00	118	43	HORIZONTAL
6	2489.10	55.14	74.00	-18.86	24.46	2.26	28.42	0.00	118	43	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

### Channel 9

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	2386.40	63.65	74.00	-10.35	33.27	2.21	28.17	0.00	100	335	VERTICAL
2	2437.60	109.02				2.23	28.29	0.00	100	335	VERTICAL
3	2440.80	95.53				2.24	28.29	0.00	100	335	VERTICAL
4	2483.50	53.64	54.00	-0.36	23.01	2.26	28.37	0.00	100	335	VERTICAL

Item 2, 3 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS0 20MHz Ch 1, 6, 11 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg
1	2389.68	67.98	74.00	-6.02	37.60	2.21	28.17	0.00	Peak	100	264
2	2389.84	53.17	54.00	-0.83	22.78	2.22	28.17	0.00	Average	100	264
3	2408.80	105.19				2.22	28.21	0.00	Average	100	264
4	2414.24	116.43				2.22	28.21	0.00	Peak	100	264

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2363.72	66.38	74.00	-7.62	36.09	2.19	28.10	0.00	Peak	100	239	VERTICAL
2	2366.92	53.46	54.00	-0.54	23.12	2.21	28.13	0.00	Average	100	239	VERTICAL
3	2435.08	110.04				2.23	28.29	0.00	Average	100	239	VERTICAL
4	2435.40	120.70				2.23	28.29	0.00	Peak	100	239	VERTICAL
5	2483.50	53.18	54.00	-0.82	22.55	2.26	28.37	0.00	Average	100	239	VERTICAL
6	2484.46	68.63	74.00	-5.37	38.00	2.26	28.37	0.00	Peak	100	239	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

#### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	2459.60	104.39				2.24	28.33	0.00 Average	100	303	VERTICAL
2	2461.04	114.88				2.24	28.33	0.00 Peak	100	303	VERTICAL
3	2483.50	53.89	54.00	-0.11	23.26	2.26	28.37	0.00 Average	100	303	VERTICAL
4	2483.98	71.91	74.00	-2.09	41.28	2.26	28.37	0.00 Peak	100	303	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.



Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS8 20MHz Ch 1, 6, 11 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg
1	2390.00	53.74	54.00	-0.26	23.35	2.22	28.17	0.00 Average	101	258	VERTICAL
2	2390.00	70.72	74.00	-3.28	40.33	2.22	28.17	0.00 Peak	101	258	VERTICAL
3	2410.72	104.75				2.22	28.21	0.00 Average	101	258	VERTICAL
4	2410.72	116.98				2.22	28.21	0.00 Peak	101	258	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg
1	2348.65	53.23	54.00	-0.77	22.98	2.19	28.06	0.00 Average	101	155	VERTICAL
2	2363.72	66.92	74.00	-7.08	36.63	2.19	28.10	0.00 Peak	101	155	VERTICAL
3	2433.47	106.30				2.23	28.25	0.00 Average	101	155	VERTICAL
4	2434.12	118.58				2.23	28.29	0.00 Peak	101	155	VERTICAL
5	2484.14	52.07	54.00	-1.93	21.44	2.26	28.37	0.00 Average	101	155	VERTICAL
6	2485.10	63.83	74.00	-10.17	33.16	2.26	28.41	0.00 Peak	101	155	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

#### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg
1	2460.88	114.53				2.24	28.33	0.00 Peak	100	299	VERTICAL
2	2463.28	101.96				2.24	28.33	0.00 Average	100	299	VERTICAL
3	2483.50	53.80	54.00	-0.20	23.17	2.26	28.37	0.00 Average	100	299	VERTICAL
4	2483.66	68.83	74.00	-5.17	38.20	2.26	28.37	0.00 Peak	100	299	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

### Channel 3

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2386.15	72.92	74.00	-1.08	42.54	2.21	28.17	0.00	Peak	101	254 VERTICAL
2	2390.00	53.46	54.00	-0.54	23.07	2.22	28.17	0.00	Average	101	254 VERTICAL
3	2413.03	98.00				2.22	28.21	0.00	Average	101	254 VERTICAL
4	2413.35	110.99				2.22	28.21	0.00	Peak	101	254 VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

### Channel 6

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2386.47	64.57	74.00	-9.43	34.19	2.21	28.17	0.00	Peak	100	212 VERTICAL
2	2390.00	51.91	54.00	-2.09	21.52	2.22	28.17	0.00	Average	100	212 VERTICAL
3	2427.06	100.09				2.23	28.25	0.00	Average	100	212 VERTICAL
4	2439.56	111.94				2.23	28.29	0.00	Peak	100	212 VERTICAL
5	2483.50	68.34	74.00	-5.66	37.71	2.26	28.37	0.00	Peak	100	212 VERTICAL
6	2483.82	53.69	54.00	-0.31	23.06	2.26	28.37	0.00	Average	100	212 VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

### Channel 9

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2446.55	97.24				2.24	28.29	0.00	Average	109	288 VERTICAL
2	2448.15	109.17				2.24	28.29	0.00	Peak	109	288 VERTICAL
3	2483.50	53.87	54.00	-0.13	23.24	2.26	28.37	0.00	Average	109	288 VERTICAL
4	2483.50	73.36	74.00	-0.64	42.73	2.26	28.37	0.00	Peak	109	288 VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.



Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS8 40MHz Ch 3, 6, 9 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

### Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2389.68	68.38	74.00	-5.62	38.00	2.21	28.17	0.00	Peak	100	246	VERTICAL
2	2390.00	53.20	54.00	-0.80	22.81	2.22	28.17	0.00	Average	100	246	VERTICAL
3	2412.71	110.94				2.22	28.21	0.00	Peak	100	246	VERTICAL
4	2413.35	97.44				2.22	28.21	0.00	Average	100	246	VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2389.04	64.51	74.00	-9.49	34.13	2.21	28.17	0.00	Peak	100	246	VERTICAL
2	2390.00	52.33	54.00	-1.67	21.94	2.22	28.17	0.00	Average	100	246	VERTICAL
3	2420.97	111.29				2.23	28.25	0.00	Peak	100	246	VERTICAL
4	2421.62	99.12				2.23	28.25	0.00	Average	100	246	VERTICAL
5	2483.50	53.48	54.00	-0.52	22.85	2.26	28.37	0.00	Average	100	246	VERTICAL
6	2483.82	67.68	74.00	-6.32	37.05	2.26	28.37	0.00	Peak	100	246	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

### Channel 9

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2446.87	95.68				2.24	28.29	0.00	Average	119	286	VERTICAL
2	2448.80	108.06				2.24	28.29	0.00	Peak	119	286	VERTICAL
3	2483.50	53.65	54.00	-0.35	23.02	2.26	28.37	0.00	Average	119	286	VERTICAL
4	2484.46	68.74	74.00	-5.26	38.11	2.26	28.37	0.00	Peak	119	286	VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS0 20MHz Ch 1, 6, 11 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2390.00	53.12	54.00	-0.88	22.73	2.22	28.17	0.00	Average	140	311 VERTICAL
2	2390.00	73.20	74.00	-0.80	42.81	2.22	28.17	0.00	Peak	140	311 VERTICAL
3	2404.60	102.35				2.22	28.21	0.00	Average	140	311 VERTICAL
4	2412.00	114.67				2.22	28.21	0.00	Peak	140	311 VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2390.00	53.18	54.00	-0.82	22.79	2.22	28.17	0.00	Average	159	347 VERTICAL
2	2390.00	65.62	74.00	-8.38	35.23	2.22	28.17	0.00	Peak	159	347 VERTICAL
3	2430.20	106.33				2.23	28.25	0.00	Average	159	347 VERTICAL
4	2433.80	119.49				2.23	28.25	0.00	Peak	159	347 VERTICAL
5	2483.50	52.94	54.00	-1.06	22.31	2.26	28.37	0.00	Average	159	347 VERTICAL
6	2487.10	65.64	74.00	-8.36	34.97	2.26	28.41	0.00	Peak	159	347 VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

#### Channel 11

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2458.20	102.12				2.24	28.33	0.00	Average	161	334 VERTICAL
2	2461.00	113.99				2.24	28.33	0.00	Peak	161	334 VERTICAL
3	2483.50	53.96	54.00	-0.04	23.33	2.26	28.37	0.00	Average	161	334 VERTICAL
4	2483.50	72.38	74.00	-1.62	41.75	2.26	28.37	0.00	Peak	161	334 VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS8 20MHz Ch 1, 6, 11 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2390.00	53.69	54.00	-0.31	23.30	2.22	28.17	0.00	Average	140	332 VERTICAL
2	2390.00	71.84	74.00	-2.16	41.45	2.22	28.17	0.00	Peak	140	332 VERTICAL
3	2409.40	101.98				2.22	28.21	0.00	Average	140	332 VERTICAL
4	2412.20	114.93				2.22	28.21	0.00	Peak	140	332 VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2388.80	65.37	74.00	-8.63	34.99	2.21	28.17	0.00	Peak	137	331 VERTICAL
2	2390.00	53.05	54.00	-0.95	22.66	2.22	28.17	0.00	Average	137	331 VERTICAL
3	2434.20	105.28				2.23	28.29	0.00	Average	137	331 VERTICAL
4	2434.20	118.02				2.23	28.29	0.00	Peak	137	331 VERTICAL
5	2483.50	52.00	54.00	-2.00	21.37	2.26	28.37	0.00	Average	137	331 VERTICAL
6	2483.50	65.17	74.00	-8.83	34.54	2.26	28.37	0.00	Peak	137	331 VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

#### Channel 11

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2457.60	112.81				2.24	28.33	0.00	Peak	167	335 VERTICAL
2	2459.60	100.87				2.24	28.33	0.00	Average	167	335 VERTICAL
3	2483.50	53.37	54.00	-0.63	22.74	2.26	28.37	0.00	Average	167	335 VERTICAL
4	2483.90	67.63	74.00	-6.37	37.00	2.26	28.37	0.00	Peak	167	335 VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

### Channel 3

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2388.80	73.72	74.00	-0.28	43.34	2.21	28.17	0.00	Peak	152	325 VERTICAL
2	2390.00	52.91	54.00	-1.09	22.52	2.22	28.17	0.00	Average	152	325 VERTICAL
3	2407.60	95.21				2.22	28.21	0.00	Average	152	325 VERTICAL
4	2408.00	107.94				2.22	28.21	0.00	Peak	152	325 VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

### Channel 6

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2389.20	72.53	74.00	-1.47	42.15	2.21	28.17	0.00	Peak	115	323 VERTICAL
2	2390.00	50.76	54.00	-3.24	20.37	2.22	28.17	0.00	Average	115	323 VERTICAL
3	2431.00	113.44				2.23	28.25	0.00	Peak	115	323 VERTICAL
4	2434.20	99.28				2.23	28.29	0.00	Average	115	323 VERTICAL
5	2483.90	53.59	54.00	-0.41	22.96	2.26	28.37	0.00	Average	115	323 VERTICAL
6	2487.50	73.78	74.00	-0.22	43.11	2.26	28.41	0.00	Peak	115	323 VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

### Channel 9

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2455.60	107.85				2.24	28.33	0.00	Peak	159	328 VERTICAL
2	2469.20	95.52				2.26	28.37	0.00	Average	159	328 VERTICAL
3	2484.30	53.68	54.00	-0.32	23.05	2.26	28.37	0.00	Average	159	328 VERTICAL
4	2485.10	72.70	74.00	-1.30	42.03	2.26	28.41	0.00	Peak	159	328 VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11n MCS8 40MHz Ch 3, 6, 9 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

### Channel 3

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2390.00	53.02	54.00	-0.98	22.63	2.22	28.17	0.00	Average	146	315 VERTICAL
2	2390.00	69.22	74.00	-4.78	38.83	2.22	28.17	0.00	Peak	146	315 VERTICAL
3	2409.20	107.83				2.22	28.21	0.00	Peak	146	315 VERTICAL
4	2414.00	95.67				2.22	28.21	0.00	Average	146	315 VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

### Channel 6

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2390.00	53.14	54.00	-0.86	22.75	2.22	28.17	0.00	Average	143	318 VERTICAL
2	2390.00	66.04	74.00	-7.96	35.65	2.22	28.17	0.00	Peak	143	318 VERTICAL
3	2433.80	110.46				2.23	28.25	0.00	Peak	143	318 VERTICAL
4	2434.20	97.67				2.23	28.29	0.00	Average	143	318 VERTICAL
5	2483.50	53.99	54.00	-0.01	23.36	2.26	28.37	0.00	Average	143	318 VERTICAL
6	2485.10	69.98	74.00	-4.02	39.31	2.26	28.41	0.00	Peak	143	318 VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

### Channel 9

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2458.00	94.57				2.24	28.33	0.00	Average	162	327 VERTICAL
2	2458.40	107.30				2.24	28.33	0.00	Peak	162	327 VERTICAL
3	2484.30	53.78	54.00	-0.22	23.15	2.26	28.37	0.00	Average	162	327 VERTICAL
4	2487.50	69.57	74.00	-4.43	38.90	2.26	28.41	0.00	Peak	162	327 VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11b CH 1, 6, 11 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2386.80	53.67	54.00	-0.33	23.29	2.21	28.17	0.00	Average	100	335 HORIZONTAL
2	2386.80	64.42	74.00	-9.58	34.04	2.21	28.17	0.00	Peak	100	335 HORIZONTAL
3	2409.60	116.69				2.22	28.21	0.00	Average	100	335 HORIZONTAL
4	2411.00	121.61				2.22	28.21	0.00	Peak	100	335 HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2385.60	65.68	74.00	-8.32	35.30	2.21	28.17	0.00	Peak	100	334 VERTICAL
2	2388.80	53.68	54.00	-0.32	23.30	2.21	28.17	0.00	Average	100	334 VERTICAL
3	2435.80	120.47				2.23	28.29	0.00	Average	100	334 VERTICAL
4	2436.20	124.79				2.23	28.29	0.00	Peak	100	334 VERTICAL
5	2484.70	52.82	54.00	-1.18	22.19	2.26	28.37	0.00	Average	100	334 VERTICAL
6	2485.50	64.33	74.00	-9.67	33.66	2.26	28.41	0.00	Peak	100	334 VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

#### Channel 11

	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
			dBuV/m	dB	dBuV	dB	dB/m	dB			Pol/Phase
1	2463.00	119.71				2.24	28.33	0.00	Peak	122	356 VERTICAL
2	2463.20	115.18				2.24	28.33	0.00	Average	122	356 VERTICAL
3	2487.50	53.60	54.00	-0.40	22.93	2.26	28.41	0.00	Average	122	356 VERTICAL
4	2487.70	62.88	74.00	-11.12	32.21	2.26	28.41	0.00	Peak	122	356 VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.



Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11g CH 1, 6, 11 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg
1	2389.60	68.14	74.00	-5.86	37.76	2.21	28.17	0.00	Peak	147	355
2	2390.00	53.85	54.00	-0.15	23.46	2.22	28.17	0.00	Average	147	355
3	2413.60	106.16				2.22	28.21	0.00	Average	147	355
4	2414.20	118.85				2.22	28.21	0.00	Peak	147	355

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2387.20	65.39	74.00	-8.61	35.01	2.21	28.17	0.00	Peak	100	352	VERTICAL
2	2388.80	53.03	54.00	-0.97	22.65	2.21	28.17	0.00	Average	100	352	VERTICAL
3	2435.40	109.82				2.23	28.29	0.00	Average	100	352	VERTICAL
4	2438.20	120.34				2.23	28.29	0.00	Peak	100	352	VERTICAL
5	2490.30	52.32	54.00	-1.68	21.65	2.26	28.41	0.00	Average	100	352	VERTICAL
6	2500.70	65.07	74.00	-8.93	34.39	2.27	28.41	0.00	Peak	100	352	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

#### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2459.60	117.84				2.24	28.33	0.00	Peak	100	349	VERTICAL
2	2463.60	105.54				2.24	28.33	0.00	Average	100	349	VERTICAL
3	2483.50	53.57	54.00	-0.43	22.94	2.26	28.37	0.00	Average	100	349	VERTICAL
4	2483.90	69.38	74.00	-4.62	38.75	2.26	28.37	0.00	Peak	100	349	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11b CH 1, 6, 11 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	2389.20	63.42	74.00	-10.58	33.04	2.21	28.17	0.00	Peak	102	274	VERTICAL
2	2389.36	53.88	54.00	-0.12	23.50	2.21	28.17	0.00	Average	102	274	VERTICAL
3	2411.04	121.54				2.22	28.21	0.00	Peak	102	274	VERTICAL
4	2411.20	117.57				2.22	28.21	0.00	Average	102	274	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	2387.76	61.45	74.00	-12.55	31.07	2.21	28.17	0.00	Peak	100	299	VERTICAL
2	2389.06	50.52	54.00	-3.48	20.14	2.21	28.17	0.00	Average	100	299	VERTICAL
3	2436.04	120.96				2.23	28.29	0.00	Peak	100	299	VERTICAL
4	2436.36	117.14				2.23	28.29	0.00	Average	100	299	VERTICAL
5	2484.78	61.77	74.00	-12.23	31.14	2.26	28.37	0.00	Peak	100	299	VERTICAL
6	2484.88	53.14	54.00	-0.86	22.51	2.26	28.37	0.00	Average	100	299	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

#### Channel 11

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	2461.20	115.17				2.24	28.33	0.00	Average	100	310	VERTICAL
2	2462.96	119.19				2.24	28.33	0.00	Peak	100	310	VERTICAL
3	2487.83	53.90	54.00	-0.10	23.23	2.26	28.41	0.00	Average	100	310	VERTICAL
4	2488.15	64.59	74.00	-9.41	33.92	2.26	28.41	0.00	Peak	100	310	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.



Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11g CH 1, 6, 11 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2390.00	53.02	54.00	-0.98	22.63	2.22	28.17	0.00	Average	100	266	VERTICAL
2	2390.00	68.98	74.00	-5.02	38.59	2.22	28.17	0.00	Peak	100	266	VERTICAL
3	2410.24	118.66				2.22	28.21	0.00	Peak	100	266	VERTICAL
4	2412.48	106.60				2.22	28.21	0.00	Average	100	266	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2352.18	66.37	74.00	-7.63	36.08	2.19	28.10	0.00	Peak	102	246	VERTICAL
2	2367.56	53.50	54.00	-0.50	23.16	2.21	28.13	0.00	Average	102	246	VERTICAL
3	2433.47	109.70				2.23	28.25	0.00	Average	102	246	VERTICAL
4	2433.80	120.67				2.23	28.25	0.00	Peak	102	246	VERTICAL
5	2484.78	52.56	54.00	-1.44	21.93	2.26	28.37	0.00	Average	102	246	VERTICAL
6	2487.67	64.64	74.00	-9.36	33.97	2.26	28.41	0.00	Peak	102	246	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

#### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2460.72	115.93				2.24	28.33	0.00	Peak	123	305	VERTICAL
2	2462.80	104.92				2.24	28.33	0.00	Average	123	305	VERTICAL
3	2483.50	53.58	54.00	-0.42	22.95	2.26	28.37	0.00	Average	123	305	VERTICAL
4	2483.66	70.54	74.00	-3.46	39.91	2.26	28.37	0.00	Peak	123	305	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11b CH 1, 6, 11 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	2386.00	62.41	74.00	-11.59	32.03	2.21	28.17	0.00	Peak	138	348 VERTICAL
2	2386.20	52.52	54.00	-1.48	22.14	2.21	28.17	0.00	Average	138	348 VERTICAL
3	2410.80	114.55				2.22	28.21	0.00	Average	138	348 VERTICAL
4	2411.20	118.84				2.22	28.21	0.00	Peak	138	348 VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	2388.80	52.77	54.00	-1.23	22.39	2.21	28.17	0.00	Average	163	1 VERTICAL
2	2389.20	64.37	74.00	-9.63	33.99	2.21	28.17	0.00	Peak	163	1 VERTICAL
3	2434.20	116.55				2.23	28.29	0.00	Average	163	1 VERTICAL
4	2434.60	121.06				2.23	28.29	0.00	Peak	163	1 VERTICAL
5	2484.70	52.76	54.00	-1.24	22.13	2.26	28.37	0.00	Average	163	1 VERTICAL
6	2485.50	63.16	74.00	-10.84	32.49	2.26	28.41	0.00	Peak	163	1 VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

#### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	2462.80	114.29				2.24	28.33	0.00	Average	166	10 VERTICAL
2	2463.00	118.69				2.24	28.33	0.00	Peak	166	10 VERTICAL
3	2487.50	62.92	74.00	-11.08	32.25	2.26	28.41	0.00	Peak	166	10 VERTICAL
4	2488.10	53.98	54.00	-0.02	23.31	2.26	28.41	0.00	Average	166	10 VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	David Tseng	Configurations	IEEE 802.11g CH 1, 6, 11 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test date	Sep. 07, 2012		

#### Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2390.00	53.50	54.00	-0.50	23.11	2.22	28.17	0.00	Average	147	344	VERTICAL
2	2390.00	69.74	74.00	-4.26	39.35	2.22	28.17	0.00	Peak	147	344	VERTICAL
3	2409.00	115.59				2.22	28.21	0.00	Peak	147	344	VERTICAL
4	2411.00	103.55				2.22	28.21	0.00	Average	147	344	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

#### Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2390.00	53.63	54.00	-0.37	23.24	2.22	28.17	0.00	Average	166	0	VERTICAL
2	2390.00	66.08	74.00	-7.92	35.69	2.22	28.17	0.00	Peak	166	0	VERTICAL
3	2434.60	118.38				2.23	28.29	0.00	Peak	166	0	VERTICAL
4	2435.00	105.32				2.23	28.29	0.00	Average	166	0	VERTICAL
5	2483.50	51.55	54.00	-2.45	20.92	2.26	28.37	0.00	Average	166	0	VERTICAL
6	2486.70	64.61	74.00	-9.39	33.94	2.26	28.41	0.00	Peak	166	0	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

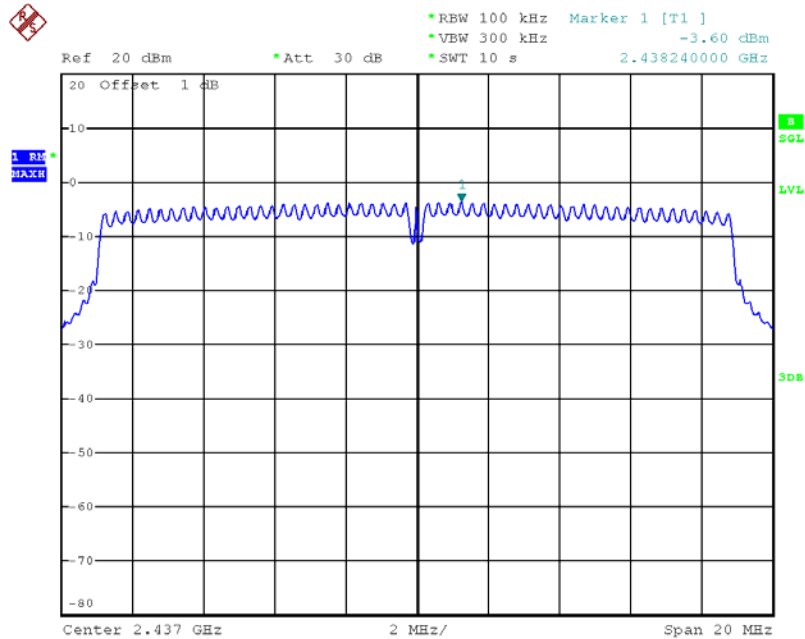
#### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2466.80	102.47				2.26	28.33	0.00	Average	150	6	VERTICAL
2	2467.00	115.31				2.26	28.33	0.00	Peak	150	6	VERTICAL
3	2483.70	53.85	54.00	-0.15	23.22	2.26	28.37	0.00	Average	150	6	VERTICAL
4	2484.70	72.25	74.00	-1.75	41.62	2.26	28.37	0.00	Peak	150	6	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

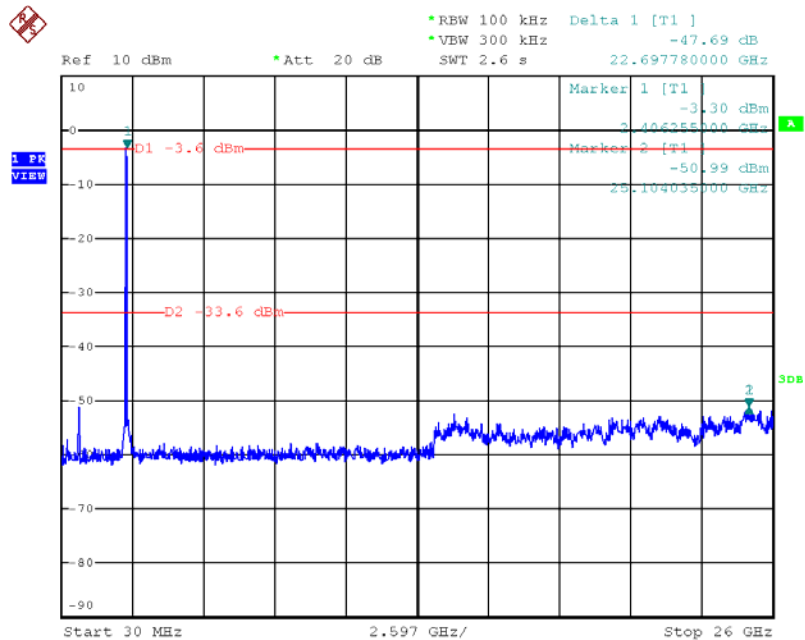
# For Emission not in Restricted Band

## Plot on Configuration IEEE 802.11n MCS0 20MHz / Reference Level / Ant. 1: Chain. 3



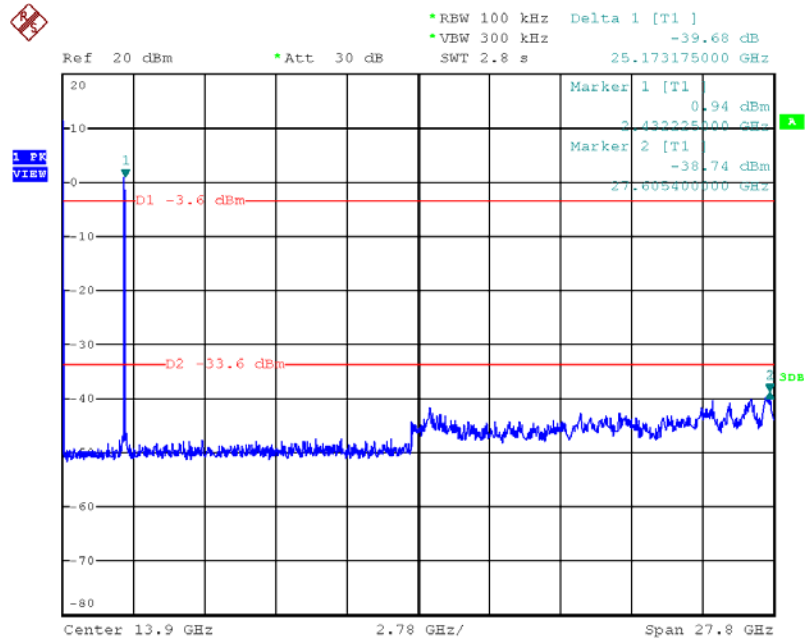
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## Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 1 (down 30dBc) / Ant. 1: Chain. 3



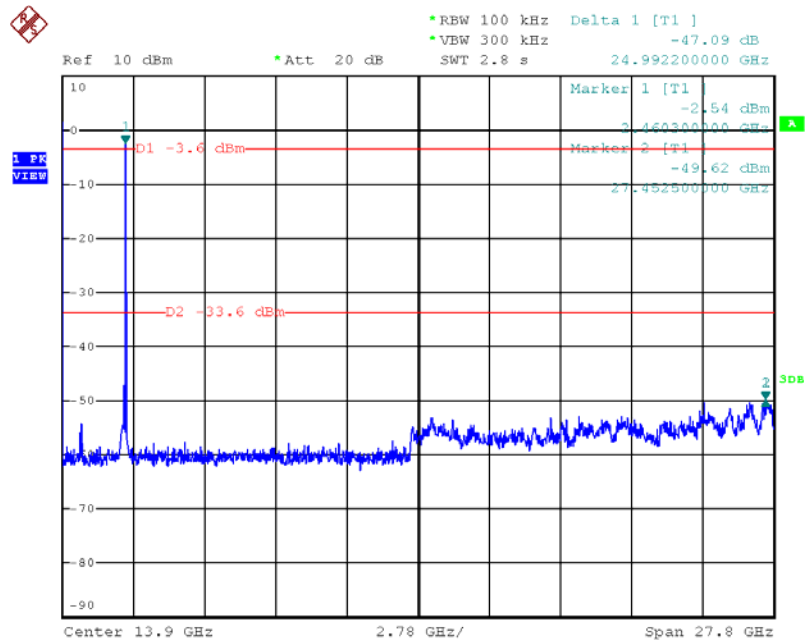
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### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 6 (down 30dBc) / Ant. 1: Chain. 3



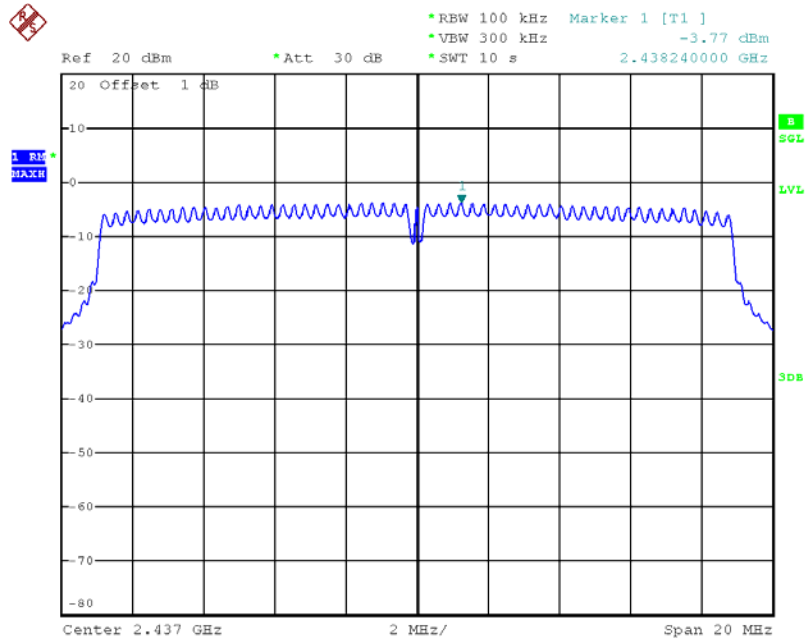
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### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 11 (down 30dBc) / Ant. 1: Chain. 3



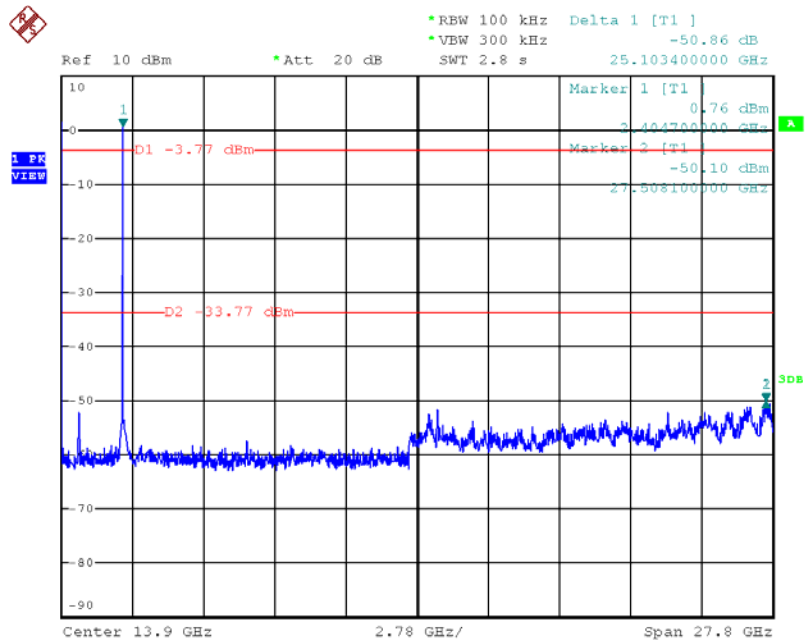
Date: 19.SEP.2012 00:34:00

### Plot on Configuration IEEE 802.11n MCS8 20MHz / Reference Level / Ant. 1: Chain. 3



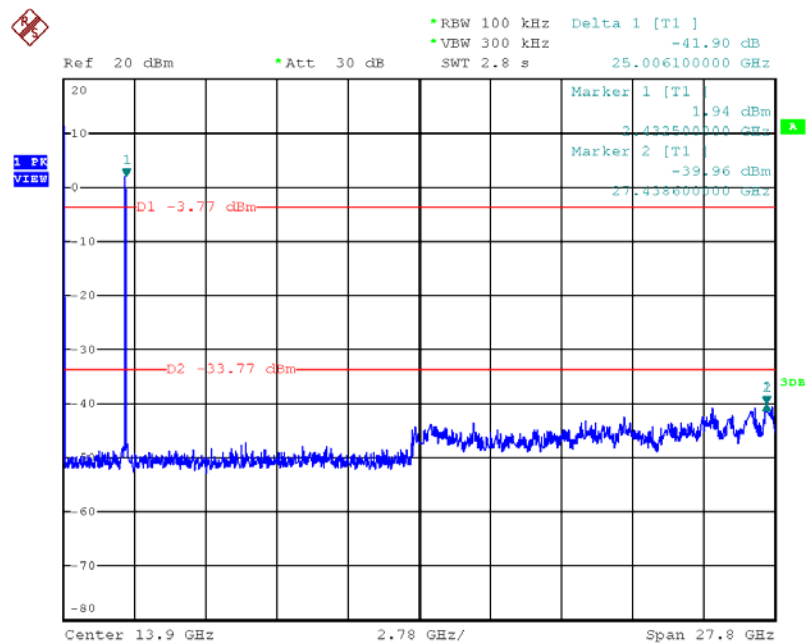
Date: 18.SEP.2012 16:57:18

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 1 (down 30dBc) / Ant. 1: Chain. 3



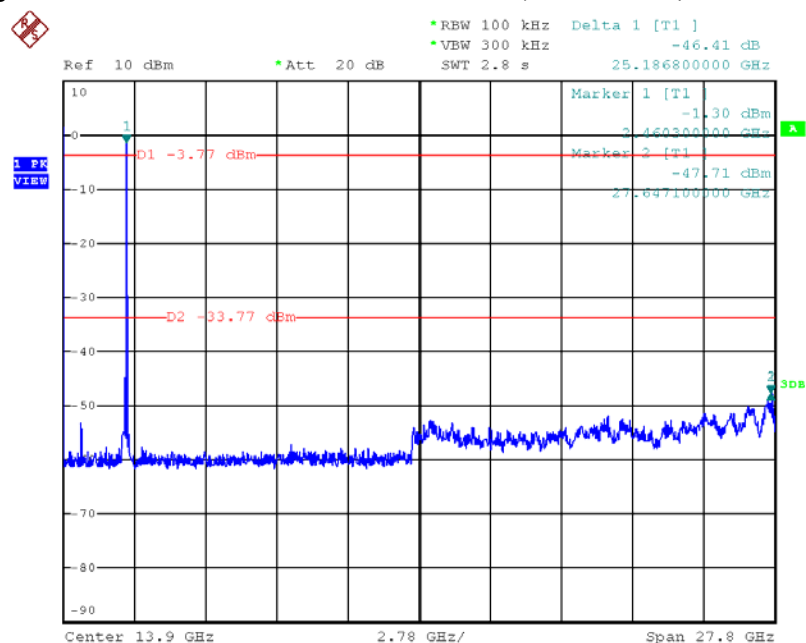
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### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 6 (down 30dBc) / Ant. 1: Chain. 3



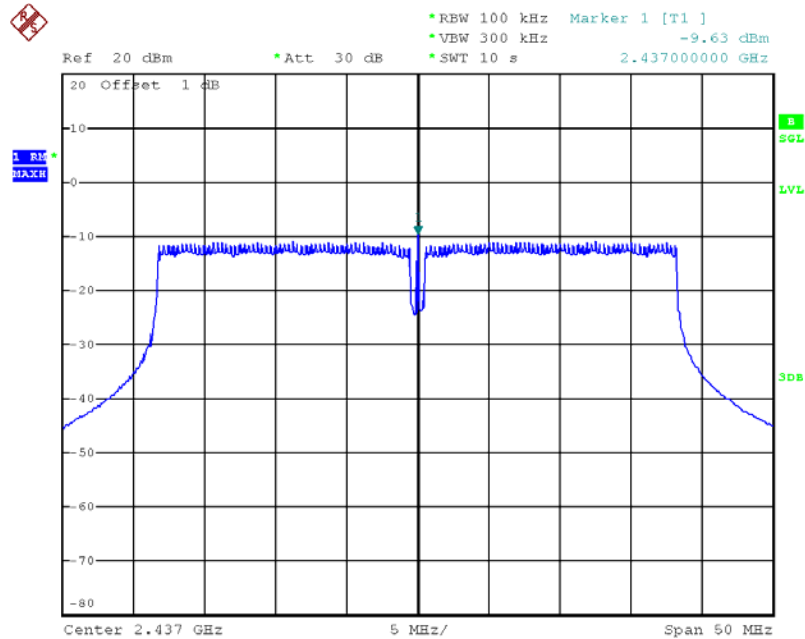
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### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 11 (down 30dBc) / Ant. 1: Chain. 3



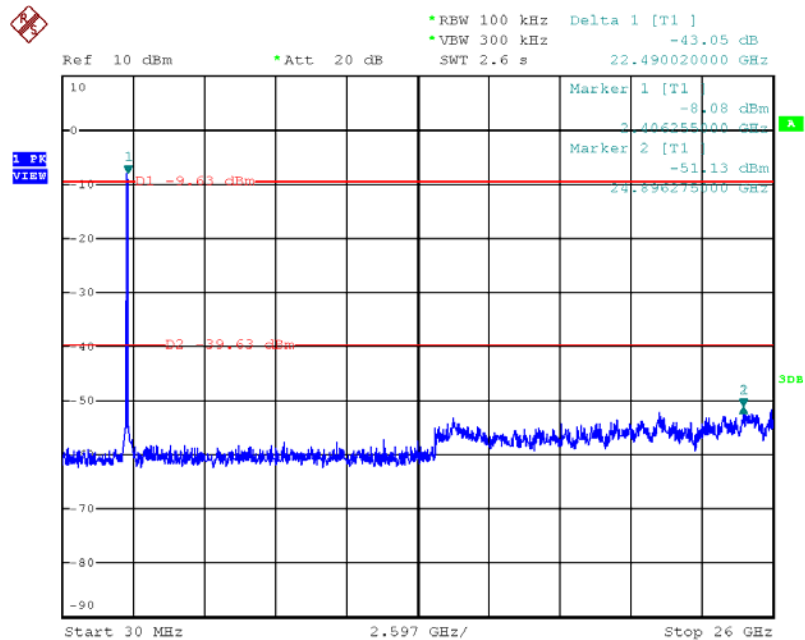
Date: 19.SEP.2012 00:35:03

### Plot on Configuration IEEE 802.11n MCS0 40MHz / Reference Level / Ant. 1: Chain. 3



Date: 18.SEP.2012 17:14:37

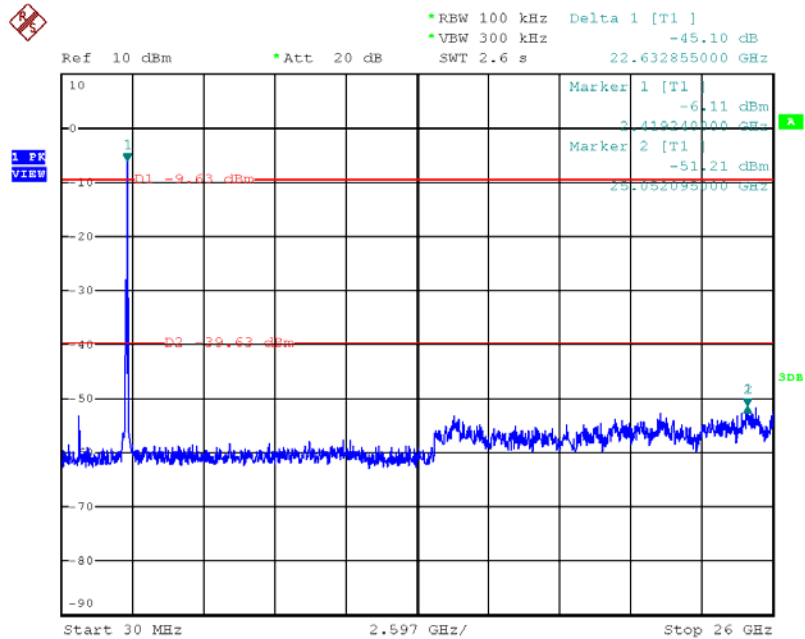
### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 3 (down 30dBc) / Ant. 1: Chain. 3



Date: 19.SEP.2012 00:29:59

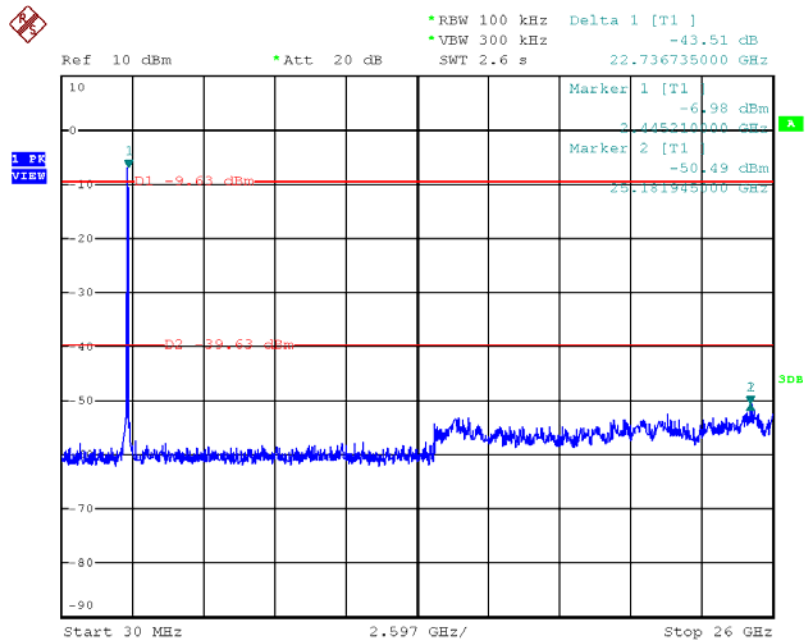


### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 6 (down 30dBc) / Ant. 1: Chain. 3



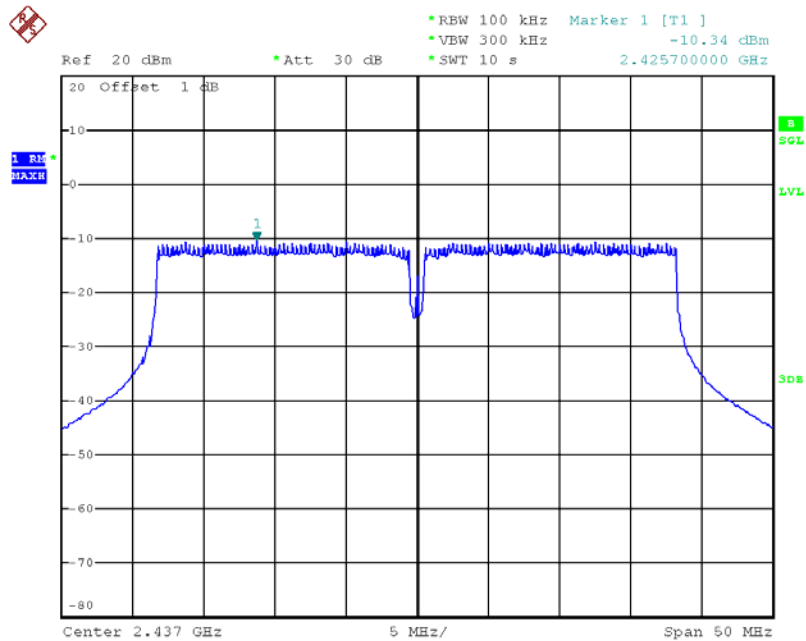
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### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 9 (down 30dBc) / Ant. 1: Chain. 3



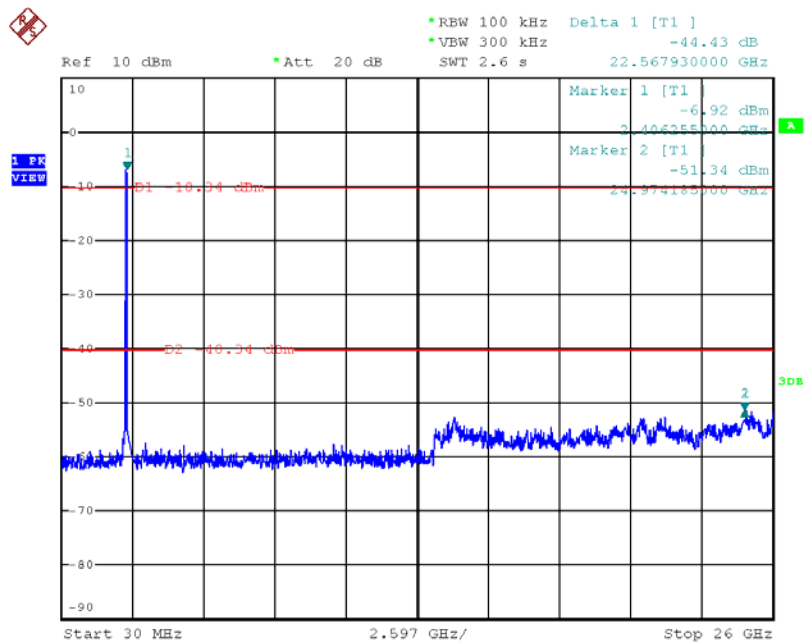
Date: 19.SEP.2012 00:28:44

### Plot on Configuration IEEE 802.11n MCS8 40MHz / Reference Level / Ant. 1: Chain. 3



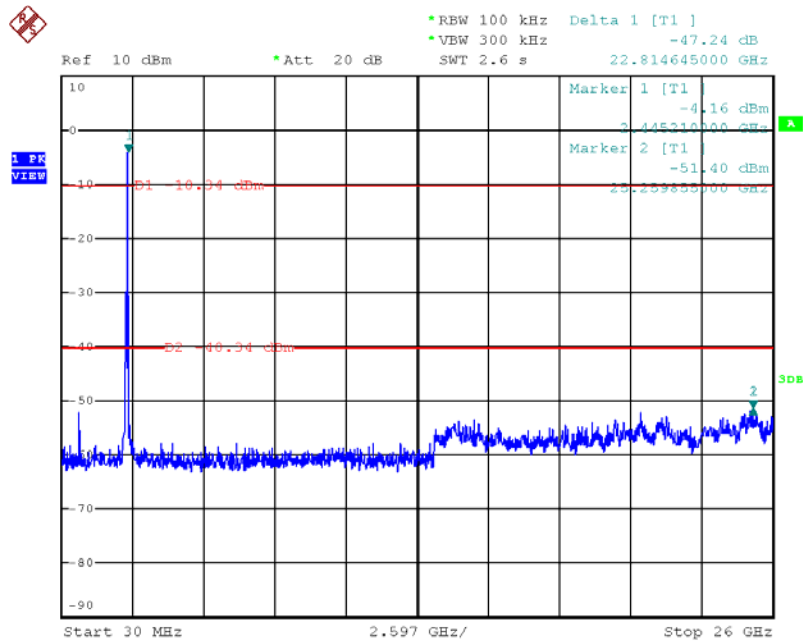
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### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 3 (down 30dBc) / Ant. 1: Chain. 3



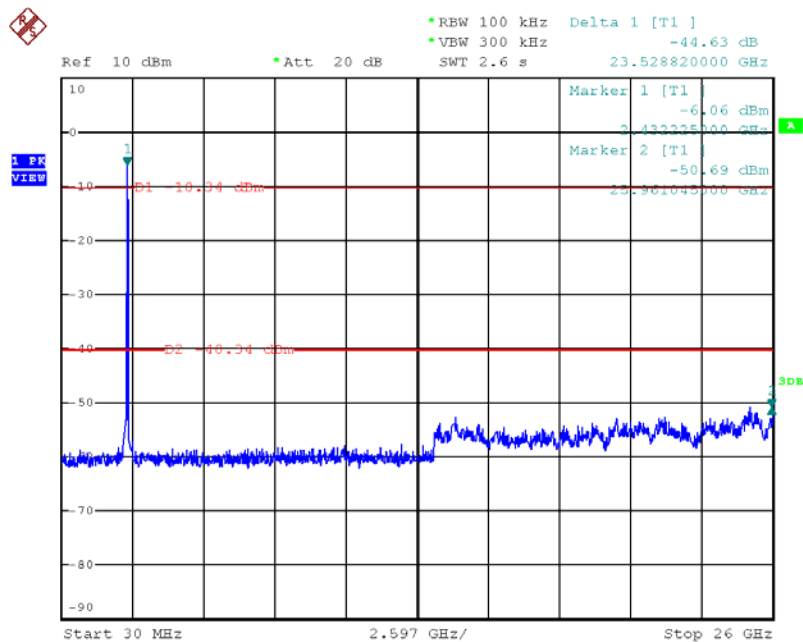
Date: 19.SEP.2012 00:26:05

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 6 (down 30dBc) / Ant. 1: Chain. 3



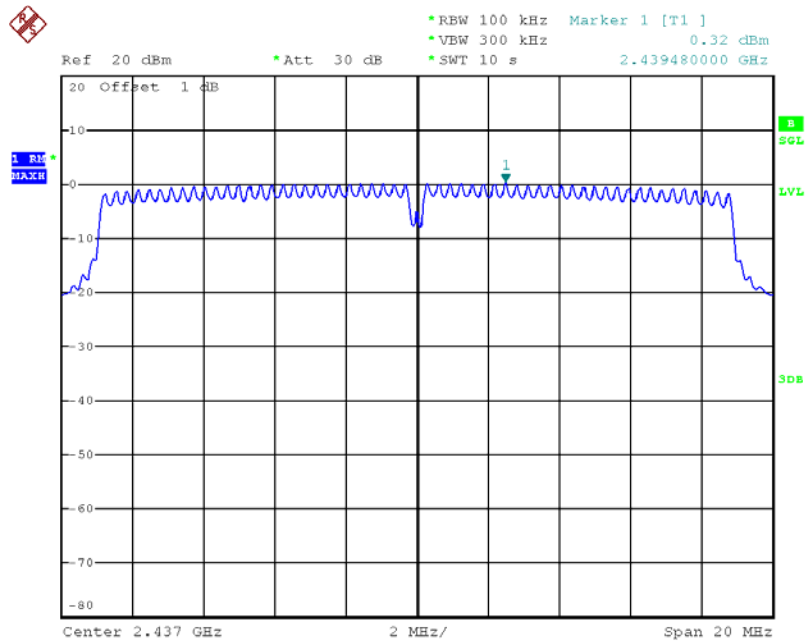
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### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 9 (down 30dBc) / Ant. 1: Chain. 3



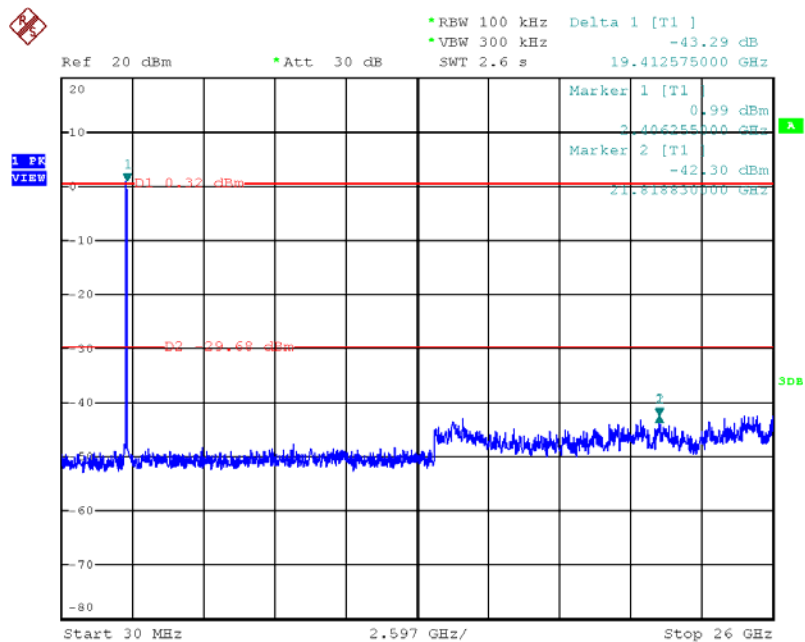
Date: 19.SEP.2012 00:27:31

### Plot on Configuration IEEE 802.11n MCS0 20MHz / Reference Level / Ant. 2: Chain. 3



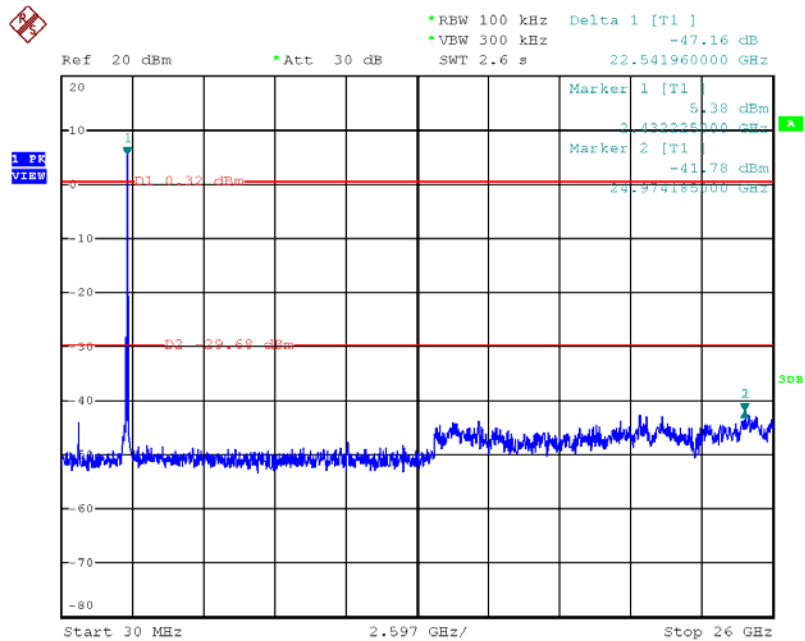
Date: 18.SEP.2012 19:50:00

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 1 (down 30dBc) / Ant. 2: Chain. 3



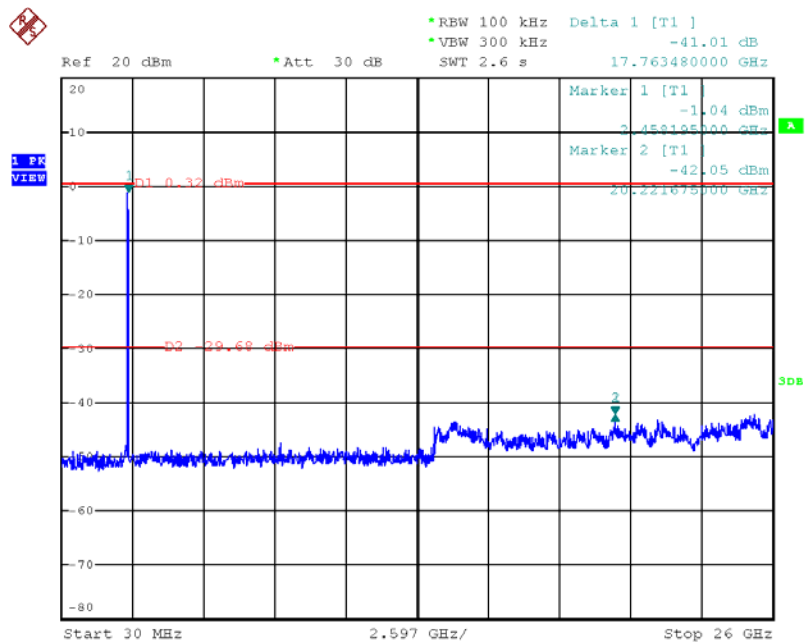
Date: 19.SEP.2012 00:12:51

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 6 (down 30dBc) / Ant. 2: Chain. 3



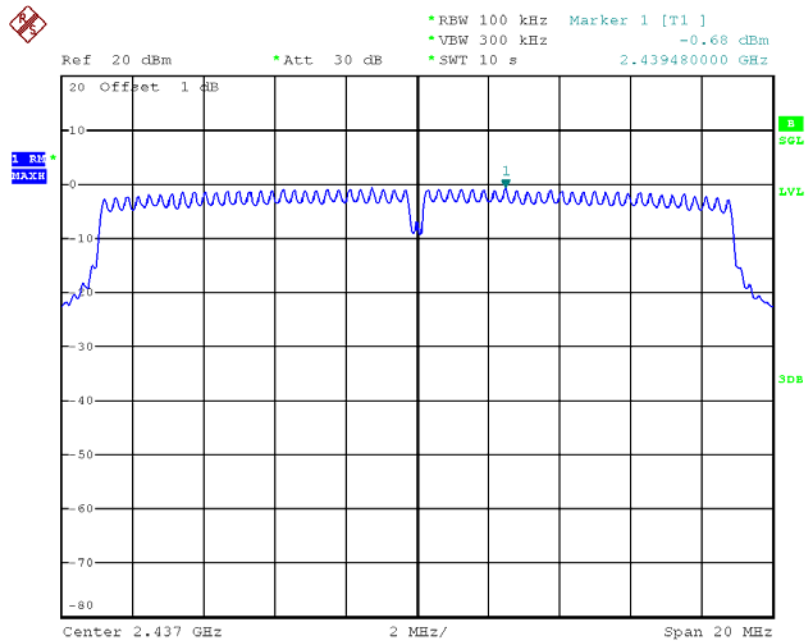
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### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 11 (down 30dBc) / Ant. 2: Chain. 3



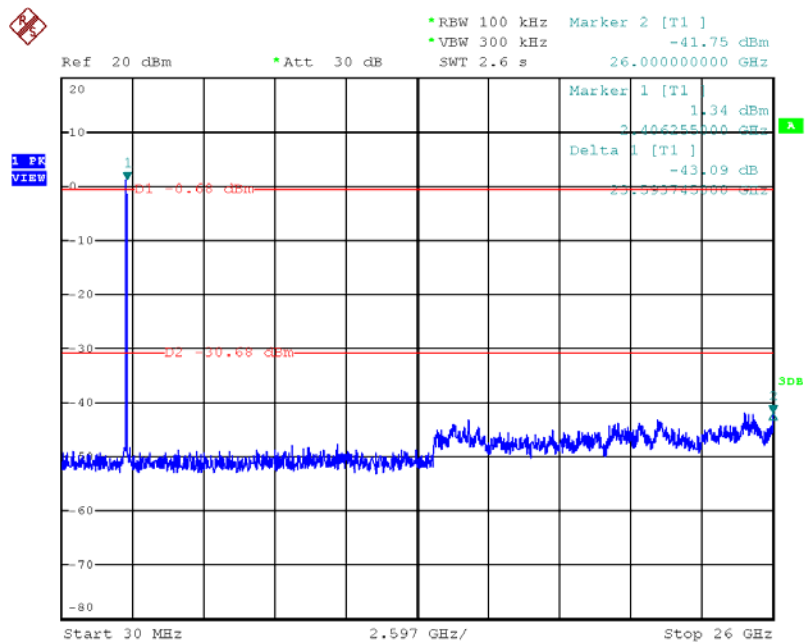
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### Plot on Configuration IEEE 802.11n MCS8 20MHz / Reference Level / Ant. 2: Chain. 3



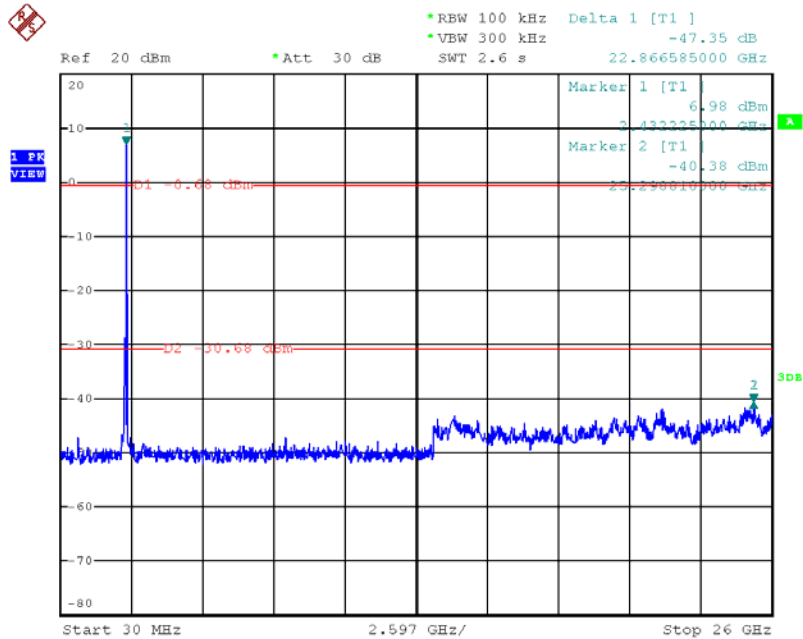
Date: 18.SEP.2012 19:58:39

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 1 (down 30dBc) / Ant. 2: Chain. 3



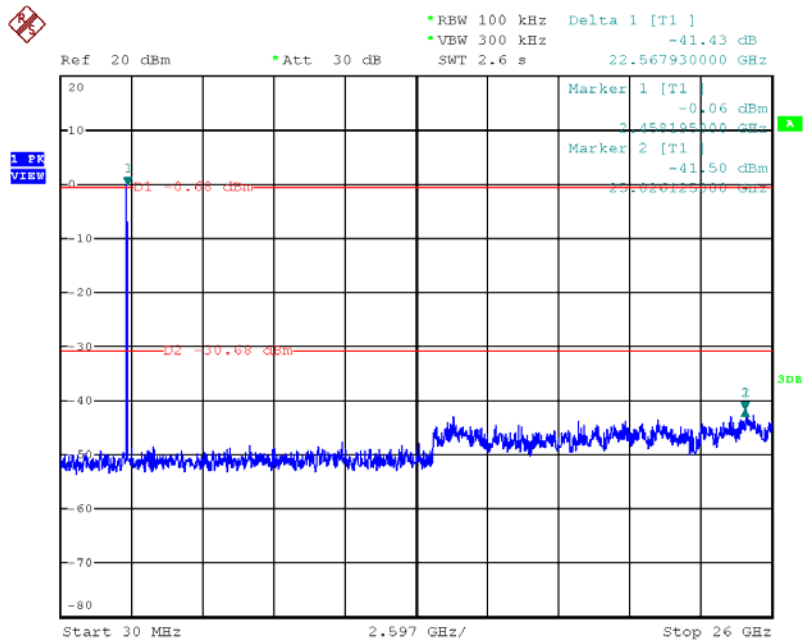
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### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 6 (down 30dBc) / Ant. 2: Chain. 3



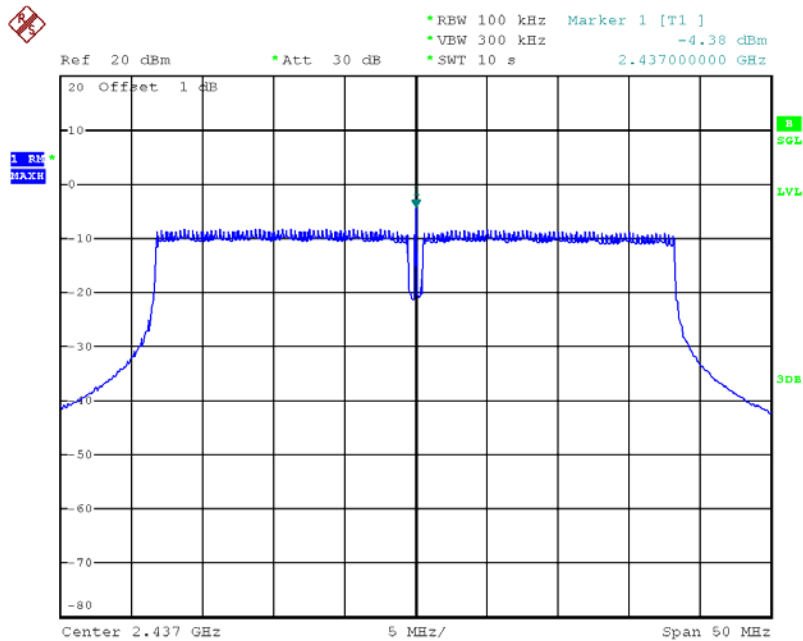
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### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 11 (down 30dBc) / Ant. 2: Chain. 3



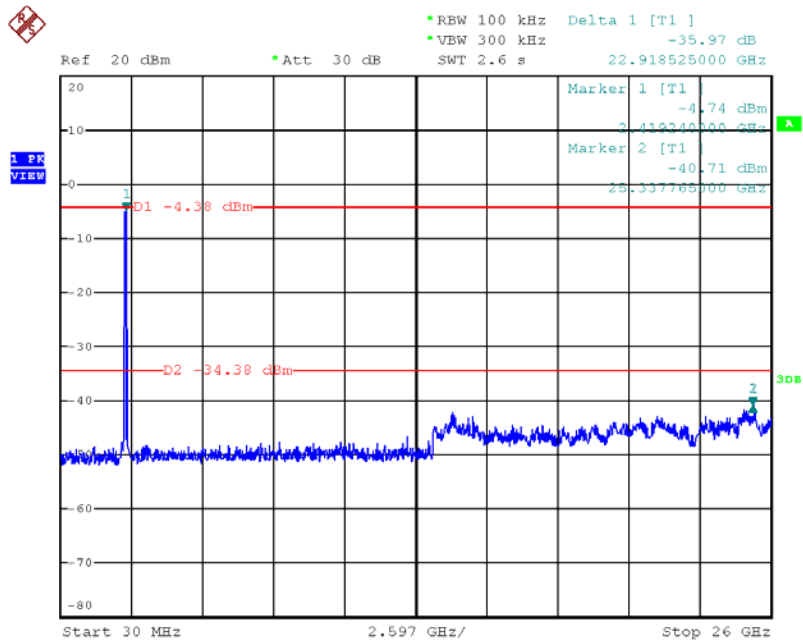
Date: 19.SEP.2012 00:16:46

### Plot on Configuration IEEE 802.11n MCS0 40MHz / Reference Level / Ant. 2: Chain. 3



Date: 18.SEP.2012 20:27:58

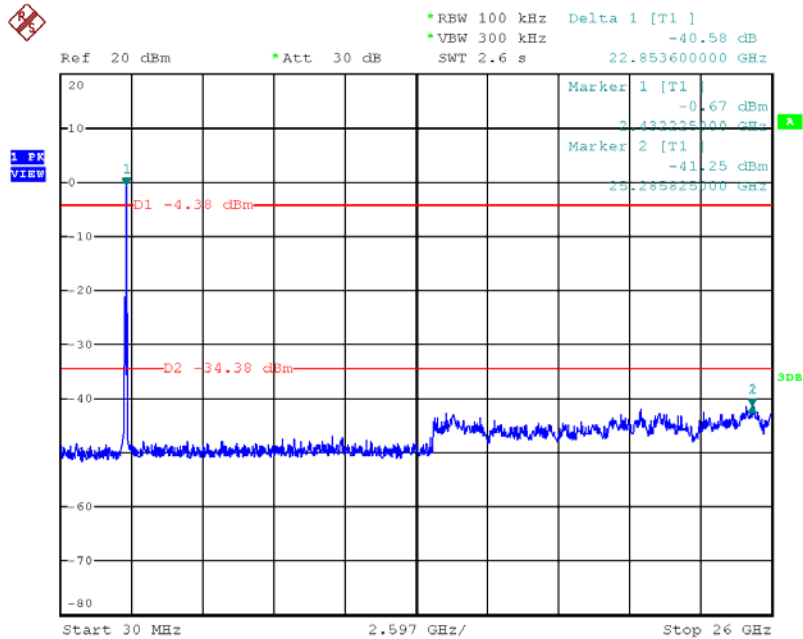
### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 3 (down 30dBc) / Ant. 2: Chain. 3



Date: 19.SEP.2012 00:18:00

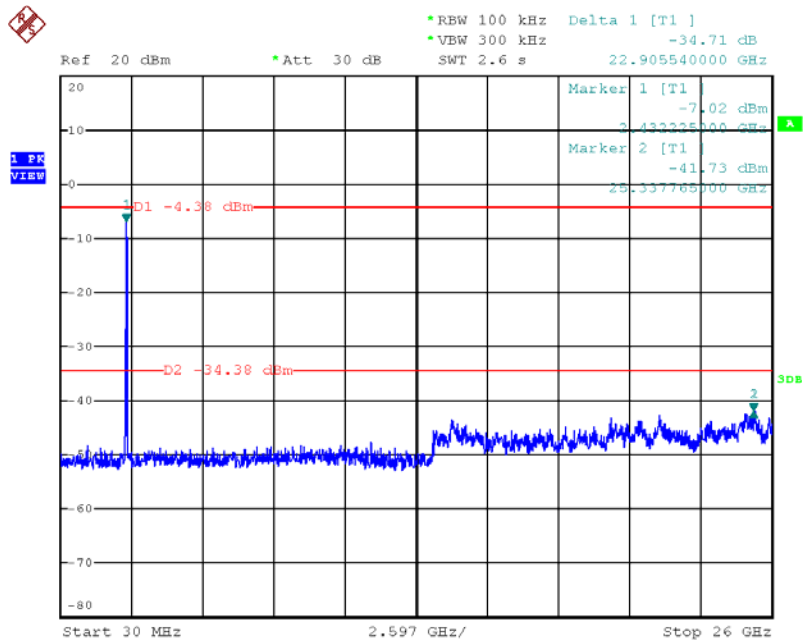


### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 6 (down 30dBc) / Ant. 2: Chain. 3



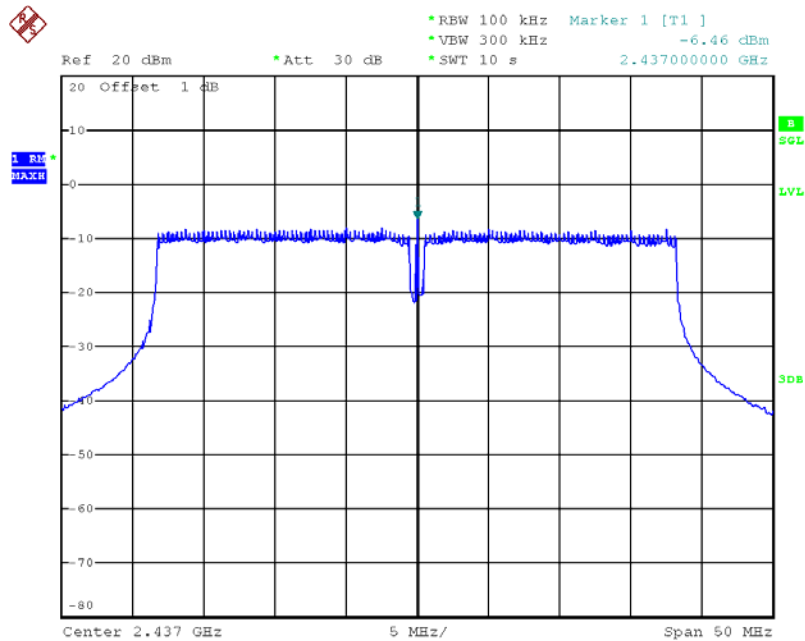
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### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 9 (down 30dBc) / Ant. 2: Chain. 3



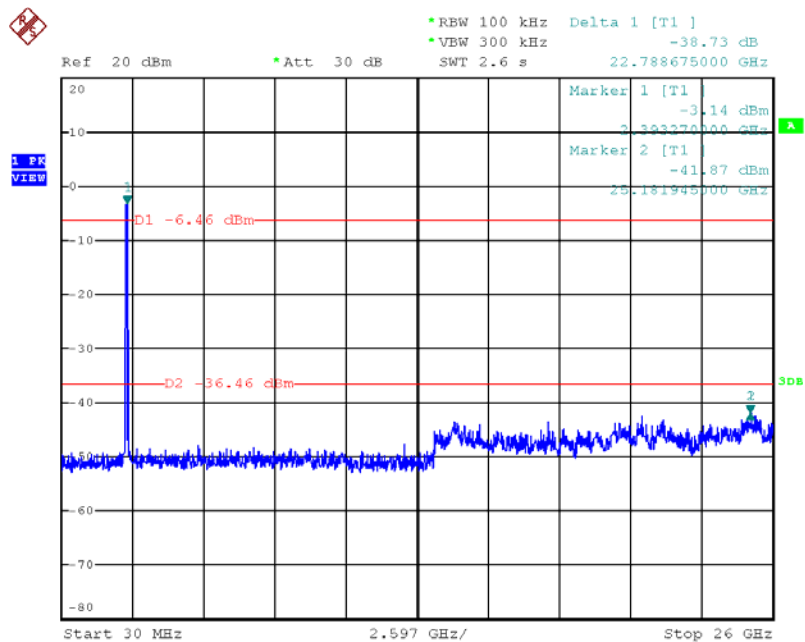
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### Plot on Configuration IEEE 802.11n MCS8 40MHz / Reference Level / Ant. 2: Chain. 3



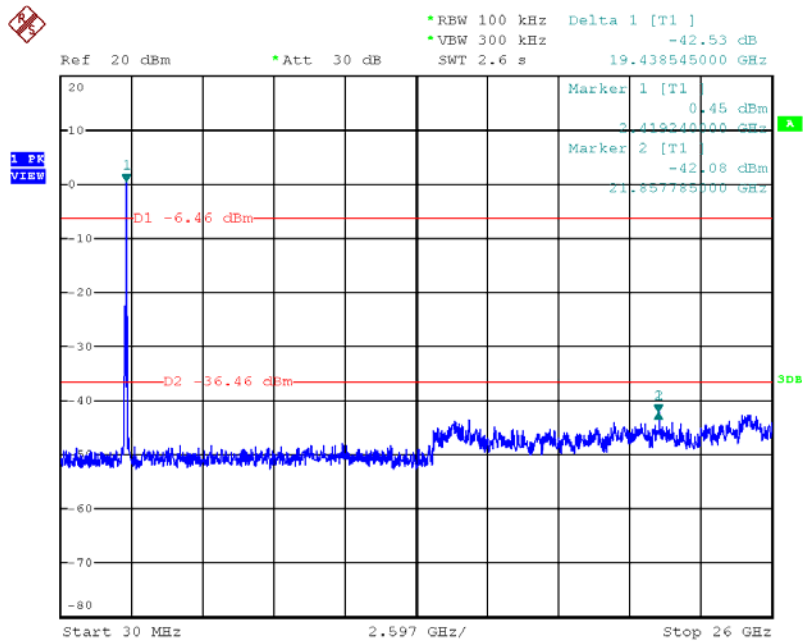
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### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 3 (down 30dBc) / Ant. 2: Chain. 3



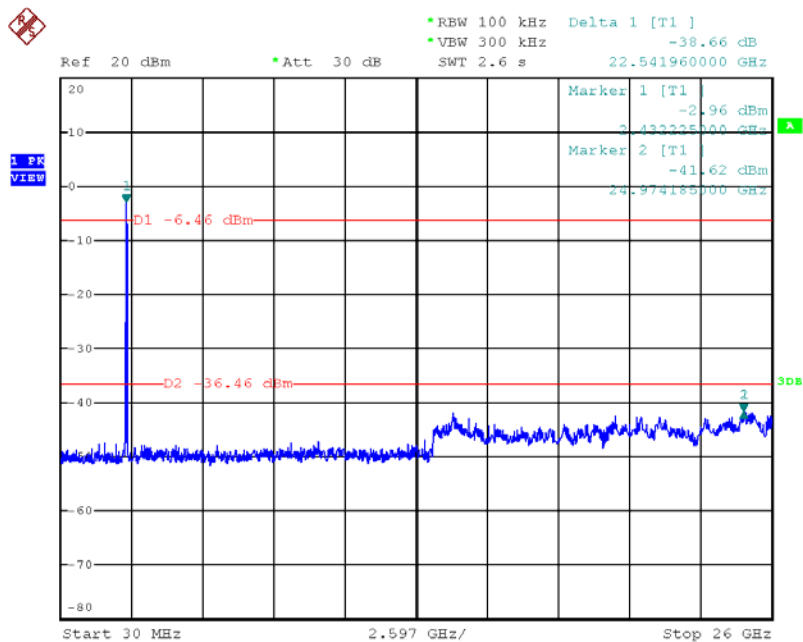
Date: 19.SEP.2012 00:23:45

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 6 (down 30dBc) / Ant. 2: Chain. 3



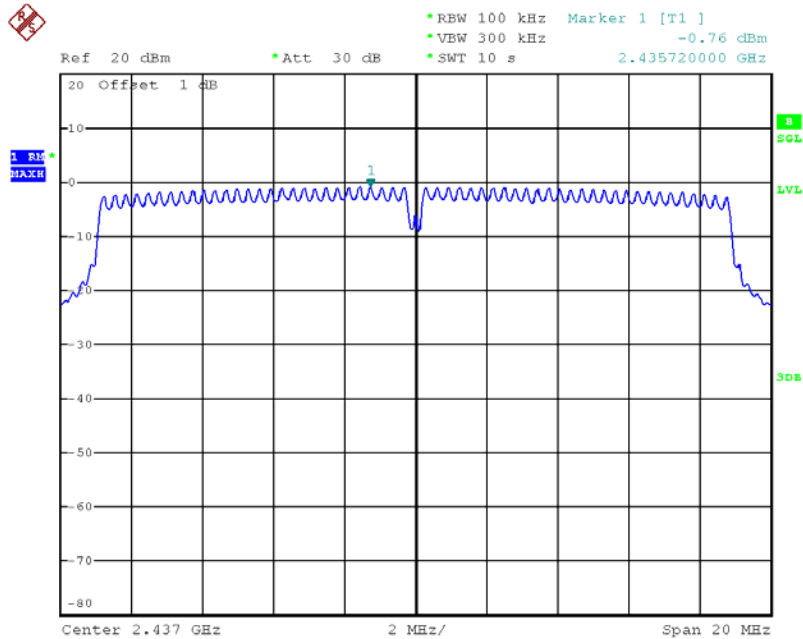
Date: 19.SEP.2012 00:23:04

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 9 (down 30dBc) / Ant. 2: Chain. 3



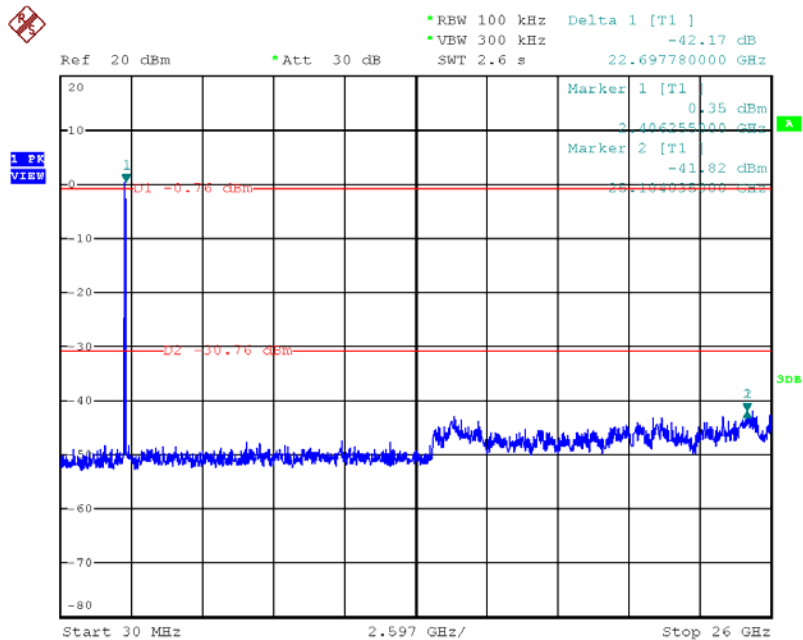
Date: 19.SEP.2012 00:21:56

### Plot on Configuration IEEE 802.11n MCS0 20MHz / Reference Level / Ant. 3: Chain. 3



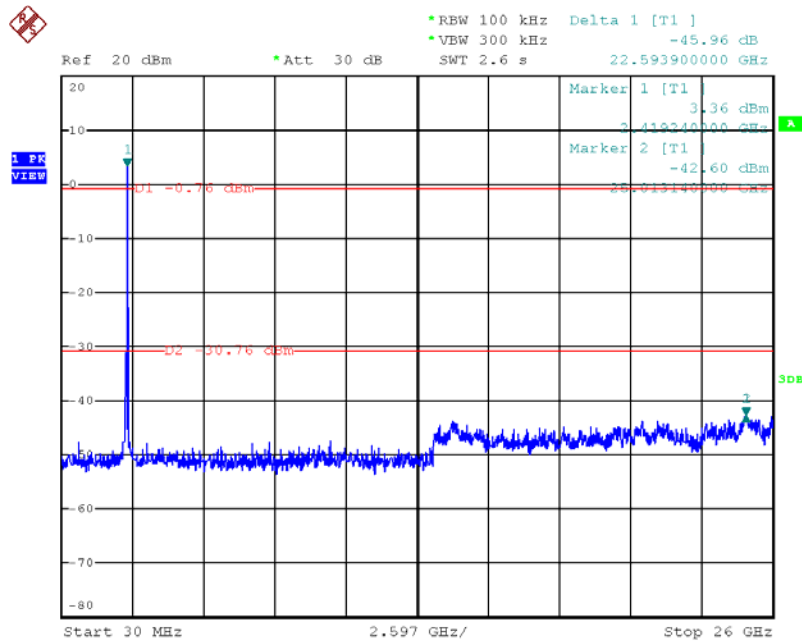
Date: 18.SEP.2012 19:50:54

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 1 (down 30dBc) / Ant. 3: Chain. 3



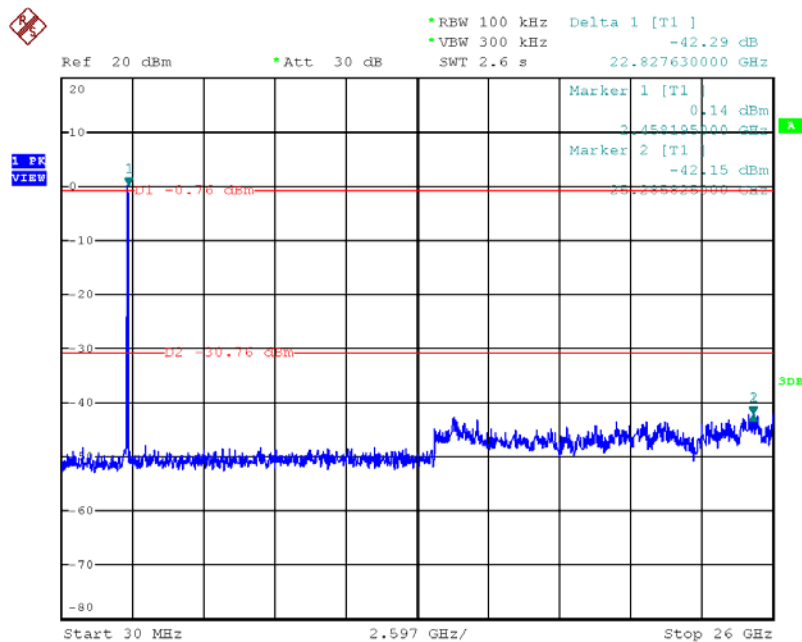
Date: 18.SEP.2012 23:43:31

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 6 (down 30dBc) / Ant. 3: Chain. 3



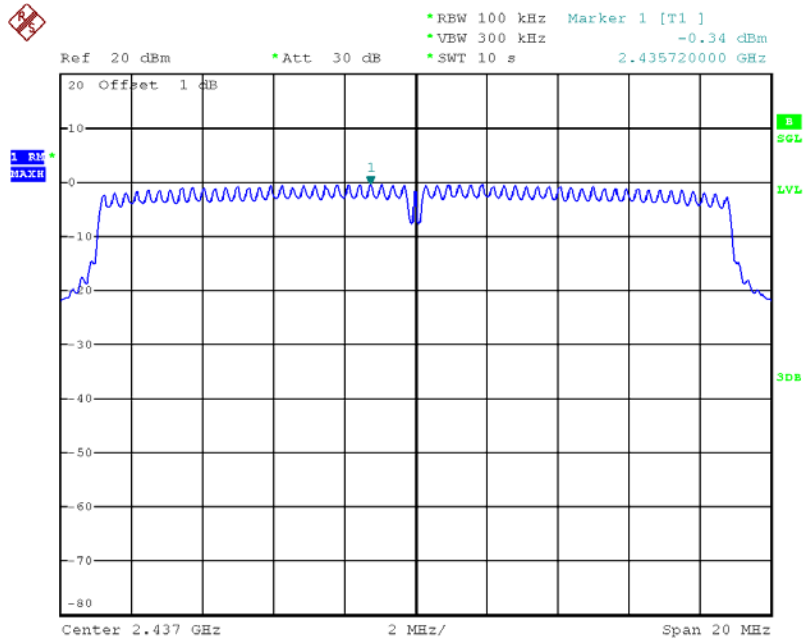
Date: 18.SEP.2012 23:44:29

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 11 (down 30dBc) / Ant. 3: Chain. 3



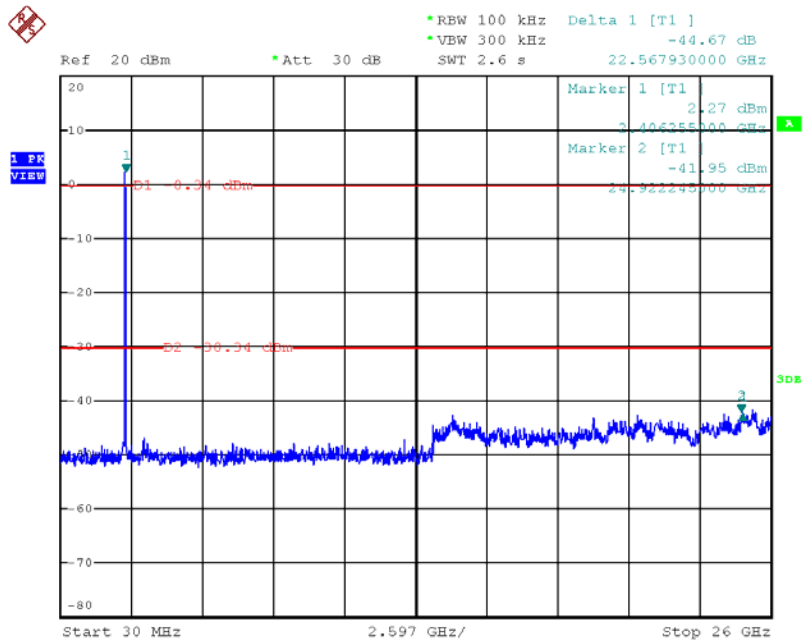
Date: 18.SEP.2012 23:45:27

### Plot on Configuration IEEE 802.11n MCS8 20MHz / Reference Level / Ant. 3: Chain. 3



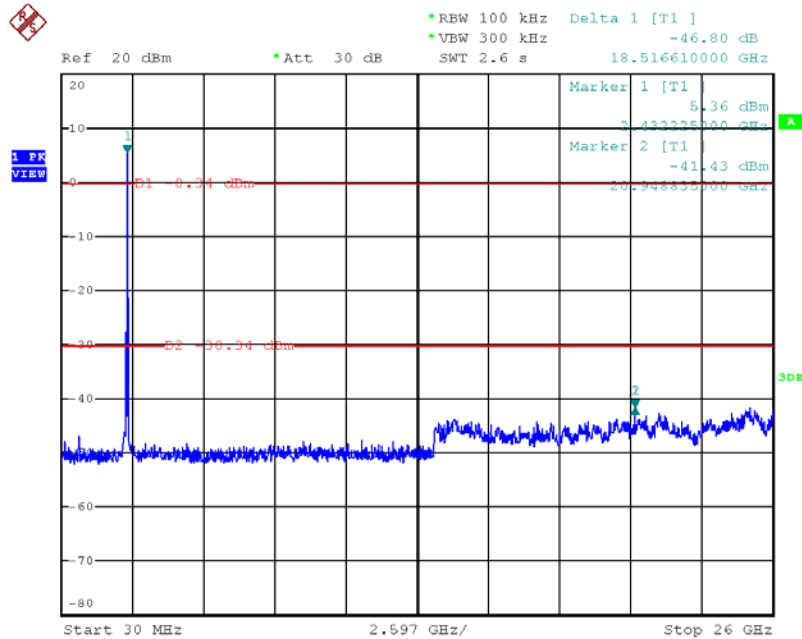
Date: 18.SEP.2012 20:00:49

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 1 (down 30dBc) / Ant. 3: Chain. 3



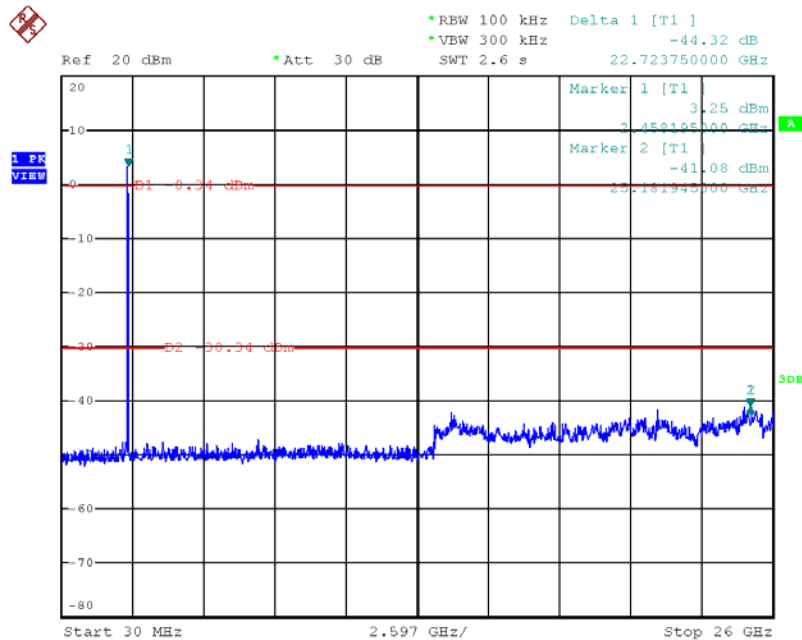
Date: 18.SEP.2012 23:42:20

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 6 (down 30dBc) / Ant. 3: Chain. 3



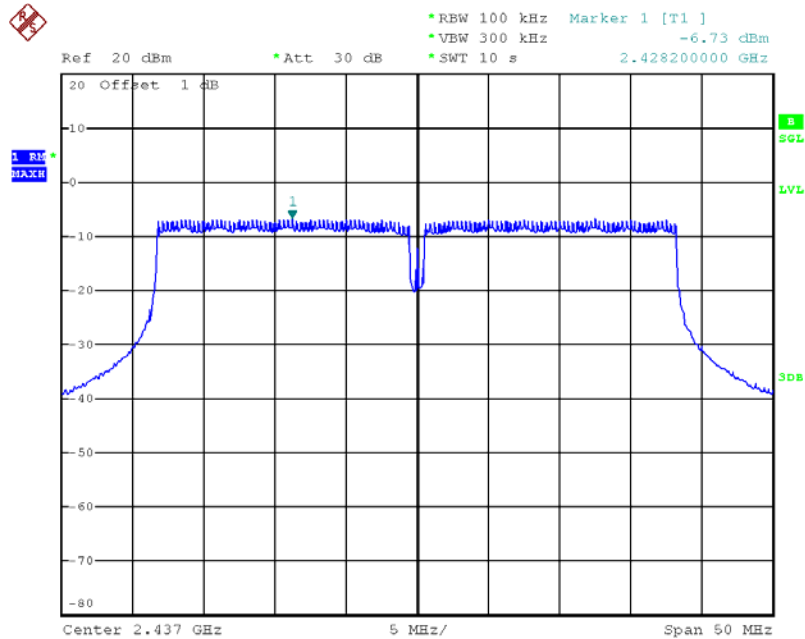
Date: 18.SEP.2012 23:41:41

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 11 (down 30dBc) / Ant. 3: Chain. 3



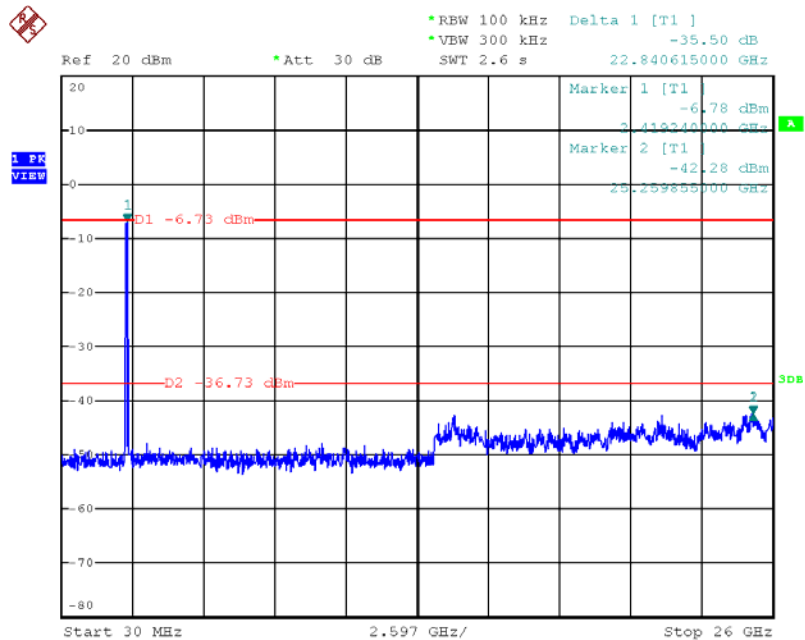
Date: 18.SEP.2012 23:39:52

### Plot on Configuration IEEE 802.11n MCS0 40MHz / Reference Level / Ant. 3: Chain. 3



Date: 18.SEP.2012 20:30:07

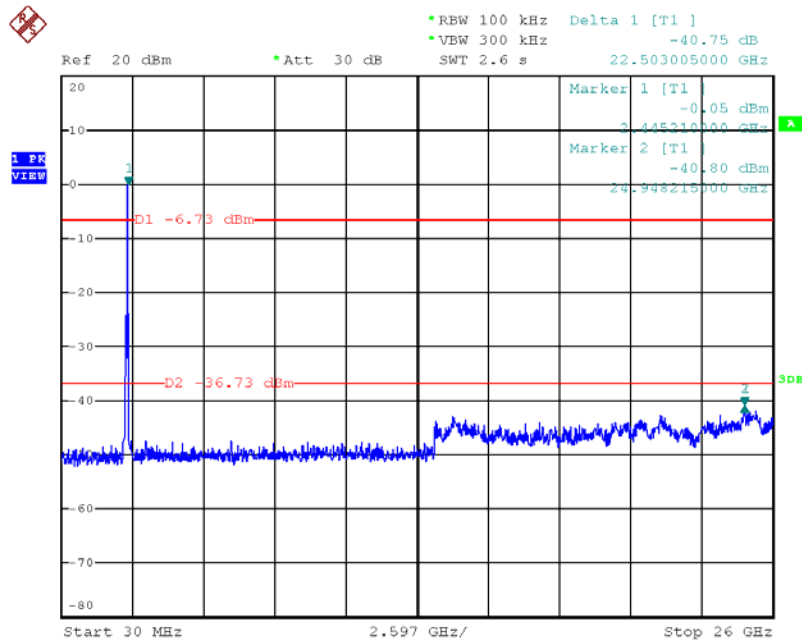
### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 3 (down 30dBc) / Ant. 3: Chain. 3



Date: 18.SEP.2012 23:35:31

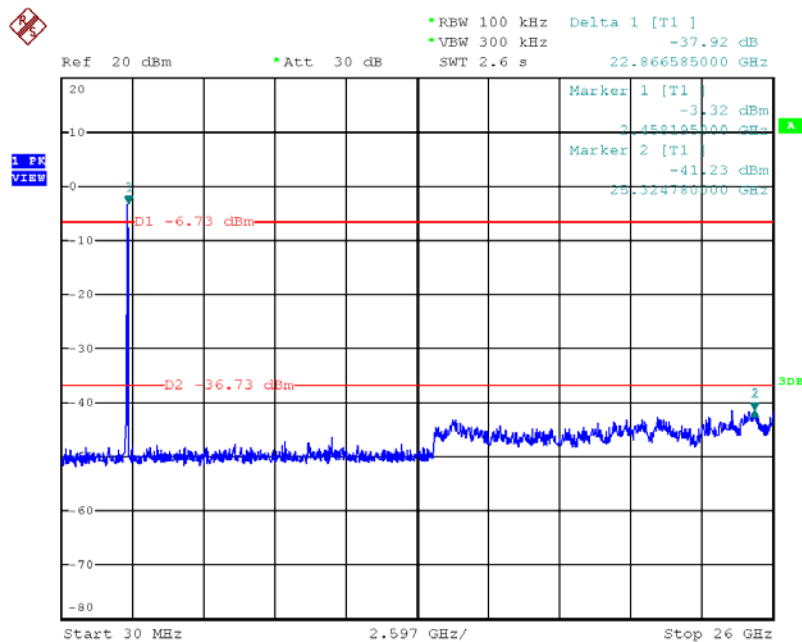


### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 6 (down 30dBc) / Ant. 3: Chain. 3



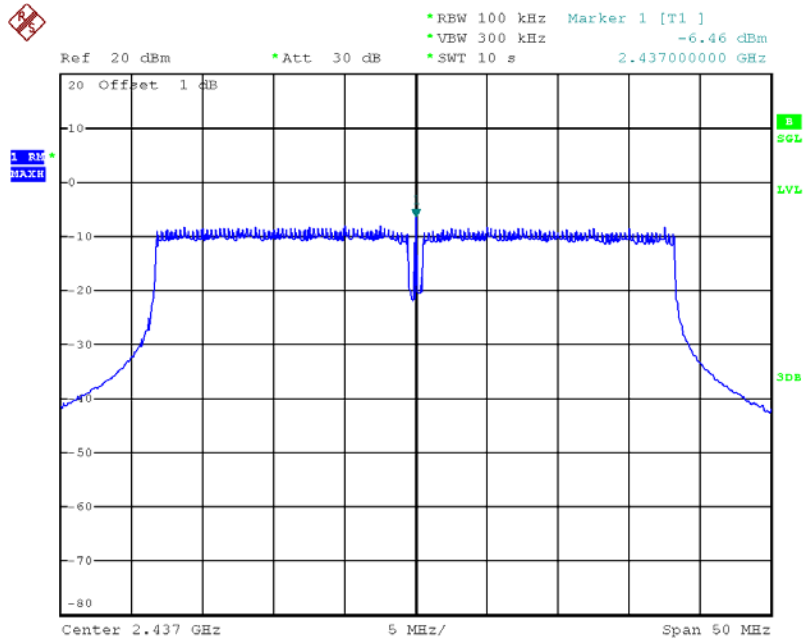
Date: 18.SEP.2012 23:33:38

### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 9 (down 30dBc) / Ant. 3: Chain. 3



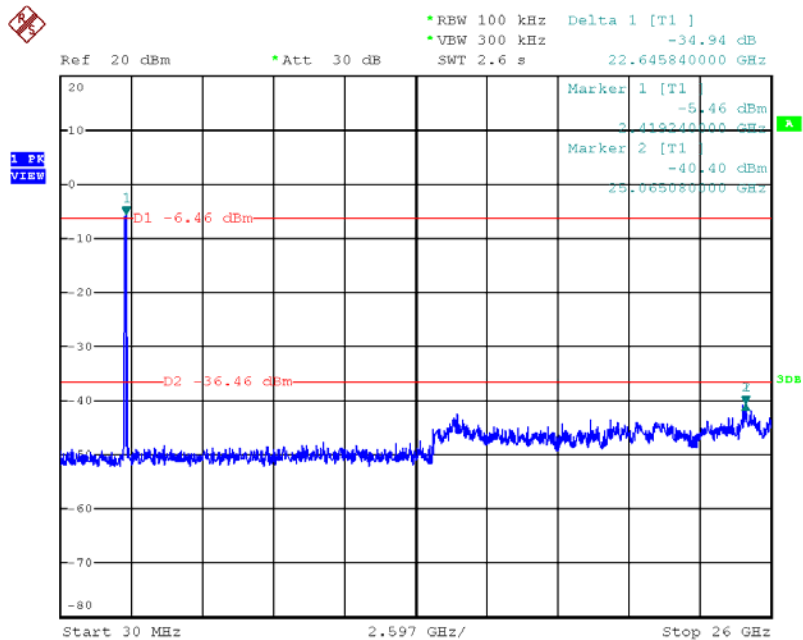
Date: 18.SEP.2012 23:32:47

### Plot on Configuration IEEE 802.11n MCS8 40MHz / Reference Level / Ant. 3: Chain. 3



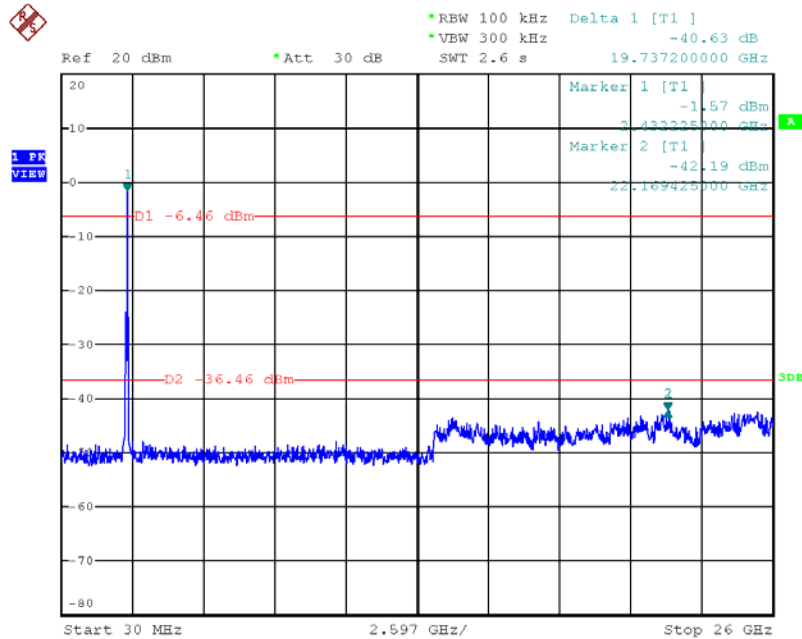
Date: 18.SEP.2012 20:07:32

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 3 (down 30dBc) / Ant. 3: Chain. 3



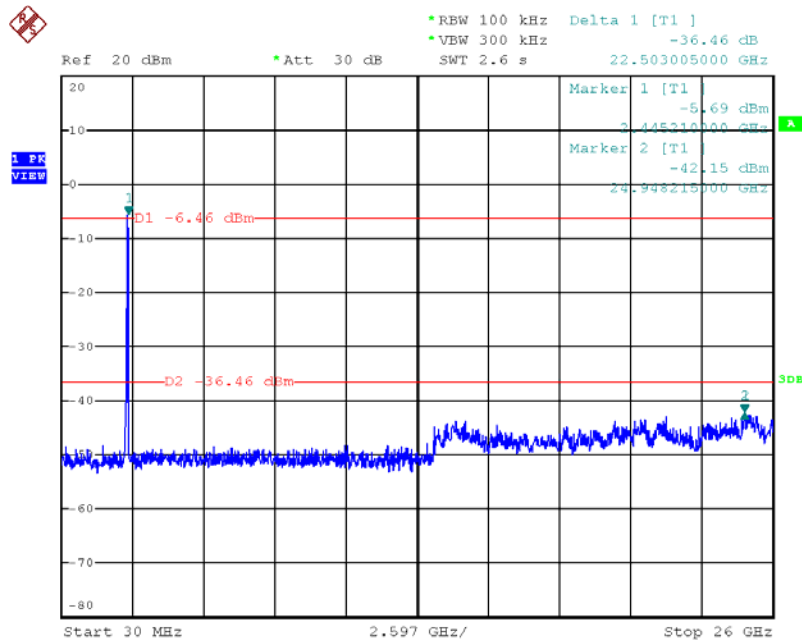
Date: 18.SEP.2012 23:36:32

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 6 (down 30dBc) / Ant. 3: Chain. 3



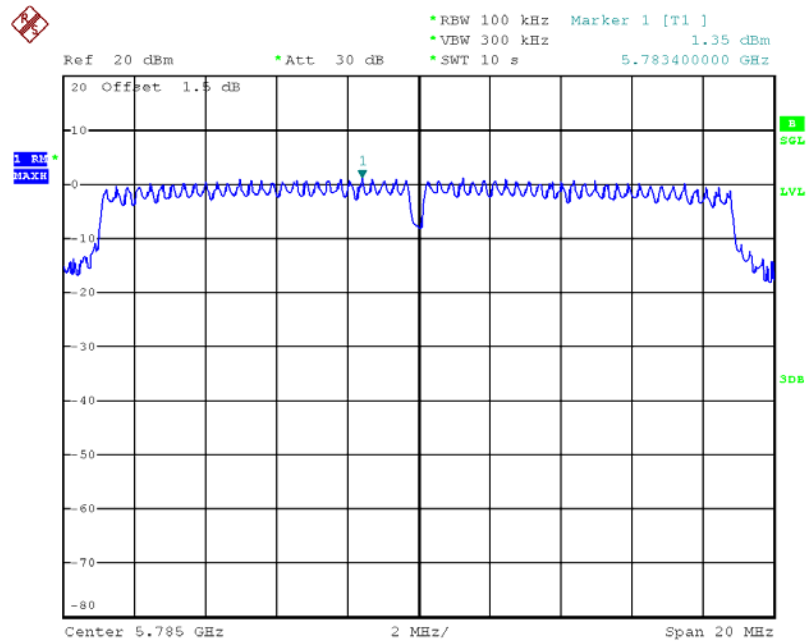
Date: 18.SEP.2012 23:37:26

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 9 (down 30dBc) / Ant. 3: Chain. 3



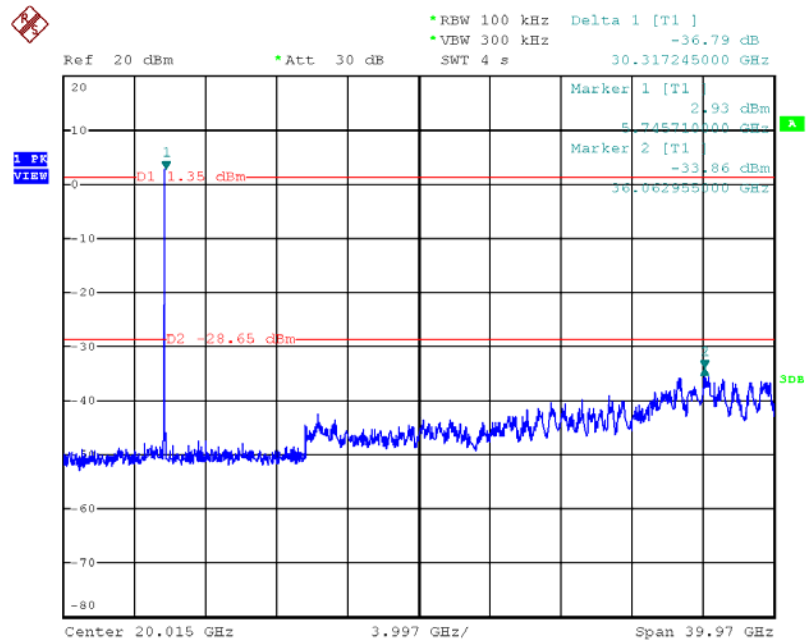
Date: 18.SEP.2012 23:38:29

### Plot on Configuration IEEE 802.11n MCS0 20MHz / Reference Level / Ant. 4: Chain. 3



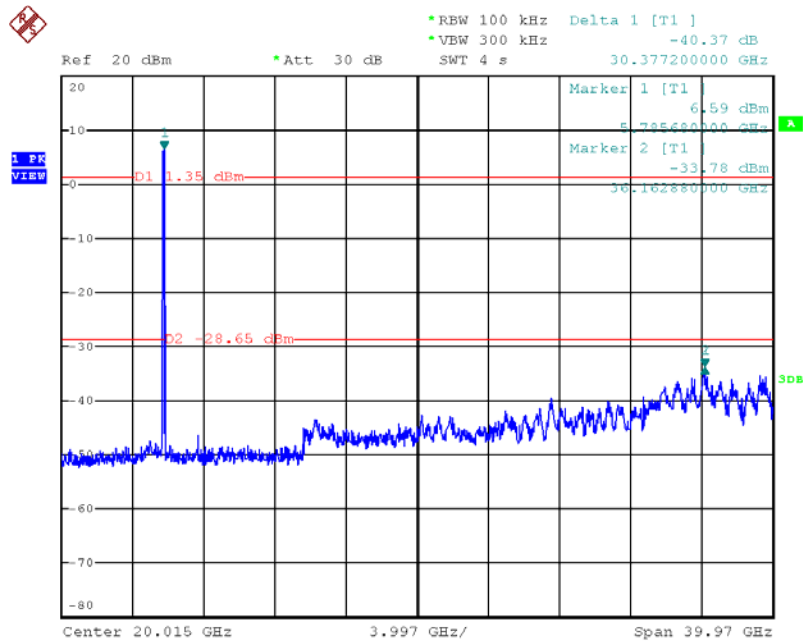
Date: 19.SEP.2012 16:10:49

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 149 (down 30dBc) / Ant. 4: Chain. 3



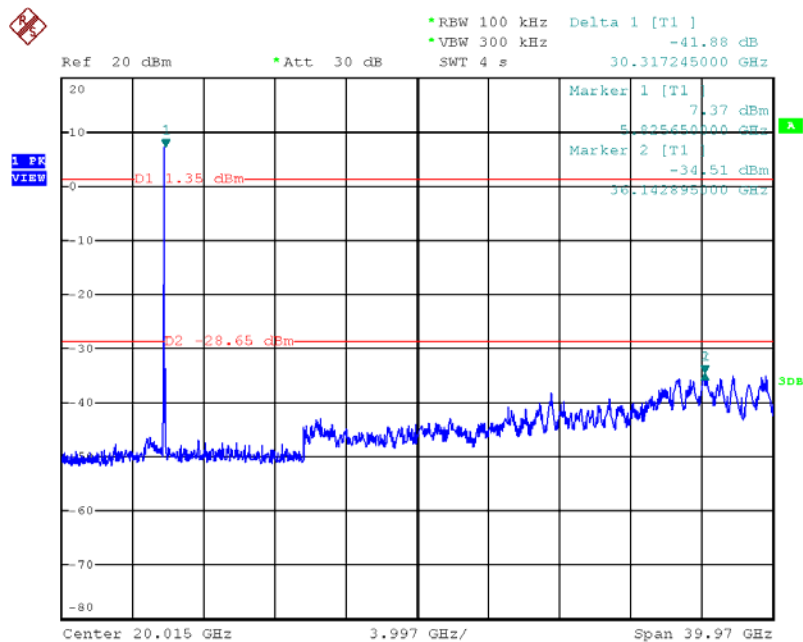
Date: 20.SEP.2012 23:41:35

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 157 (down 30dBc) / Ant. 4: Chain. 3

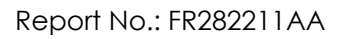


Date: 20.SEP.2012 23:40:50

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 165 (down 30dBc) / Ant. 4: Chain. 3



Date: 20.SEP.2012 23:40:06



Ref 20 dBm      \*Att 30 dB      \*RBW 100 kHz      Marker 1 [T1]      1.45 dBm  
 \*VBW 300 kHz      \*SWT 10 s      5.783720000 GHz

20 Offset 1.5 dB

1. RMS  
MAX#

1

Center 5.785 GHz      2 MHz/      Span 20 MHz

\*RBW 100 kHz Delta 1 [T1]  
 \*VBW 300 kHz -38.26 dB  
 Ref 20 dBm \*Att 30 dB SWT 4 s 28.89831000 GHz

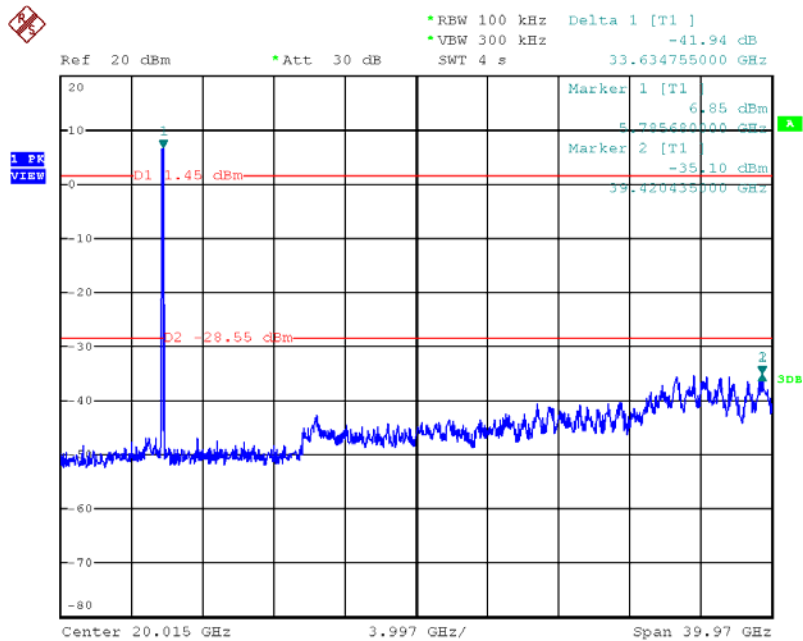
Marker 1 [T1] 3.82 dBm  
 5.72572500 GHz  
 Marker 2 [T1] -34.44 dBm  
 34.62403500 GHz

D1 1.45 dBm  
 D2 -28.55 dBm

Center 20.015 GHz 3.997 GHz/  
 Span 39.97 GHz

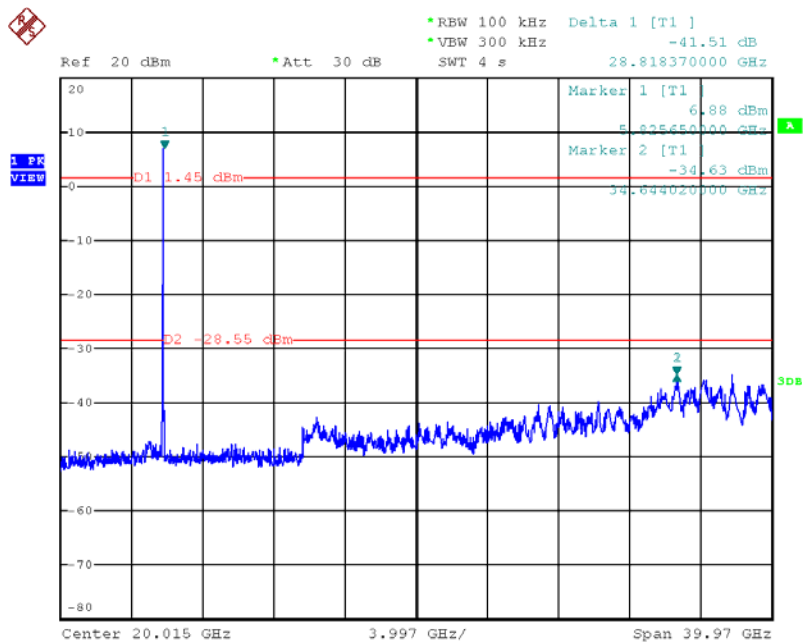
Issued Date : Nov. 23, 2012

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 157 (down 30dBc) / Ant. 4: Chain. 3



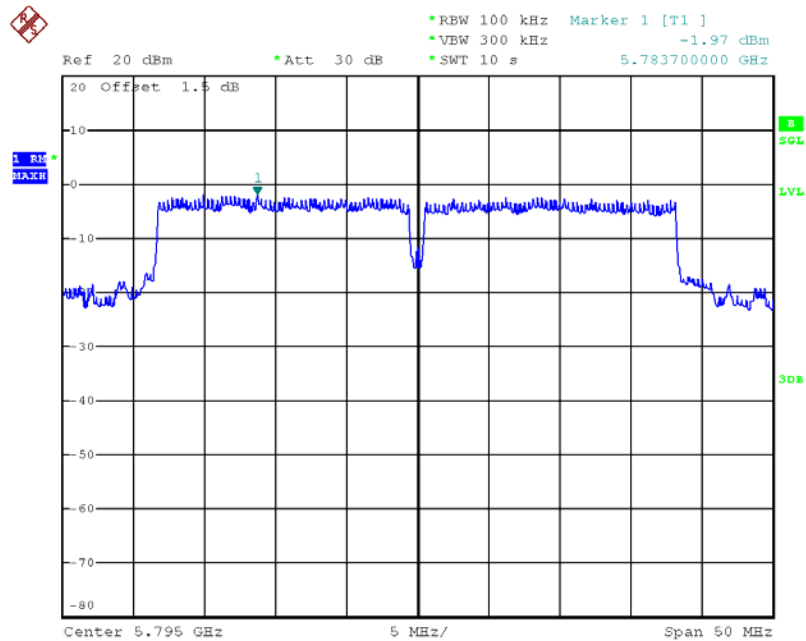
Date: 20.SEP.2012 23:46:19

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 165 (down 30dBc) / Ant. 4: Chain. 3



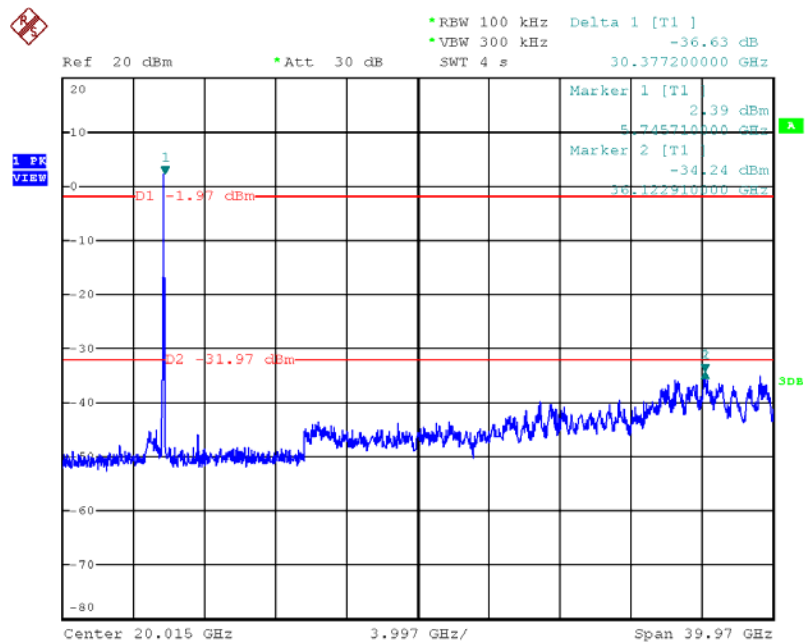
Date: 20.SEP.2012 23:46:52

### Plot on Configuration IEEE 802.11n MCS0 40MHz / Reference Level / Ant. 4: Chain. 3



Date: 19.SEP.2012 16:35:18

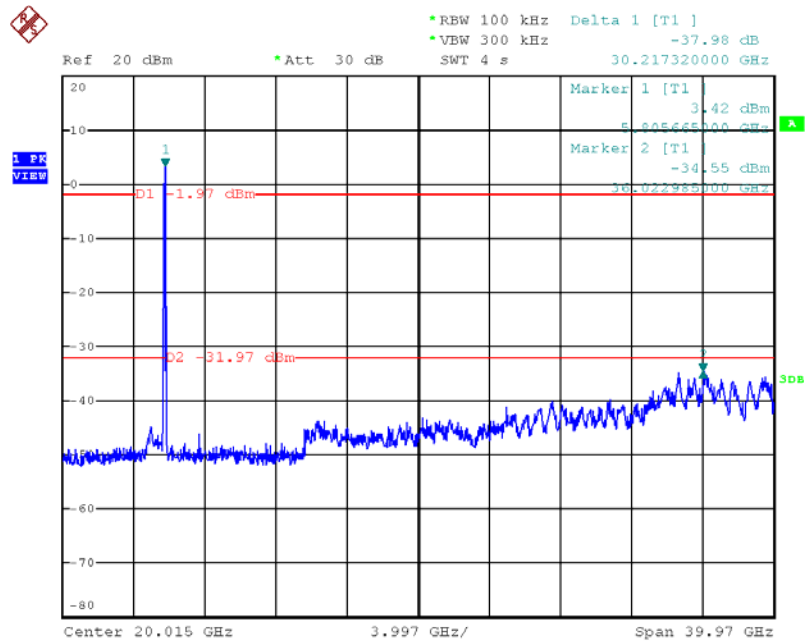
### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 151 (down 30dBc) / Ant. 4: Chain. 3



Date: 20.SEP.2012 23:51:08

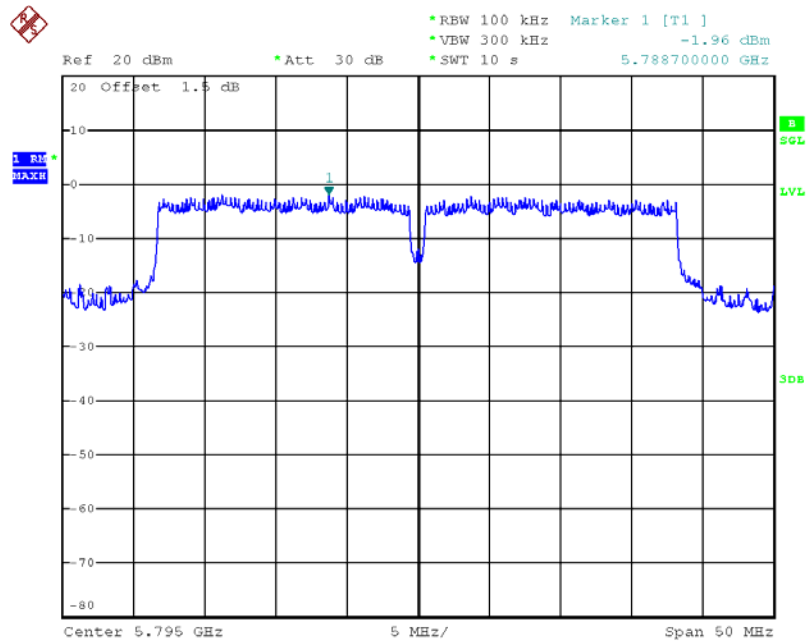


# Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 159 (down 30dBc) / Ant. 4: Chain. 3



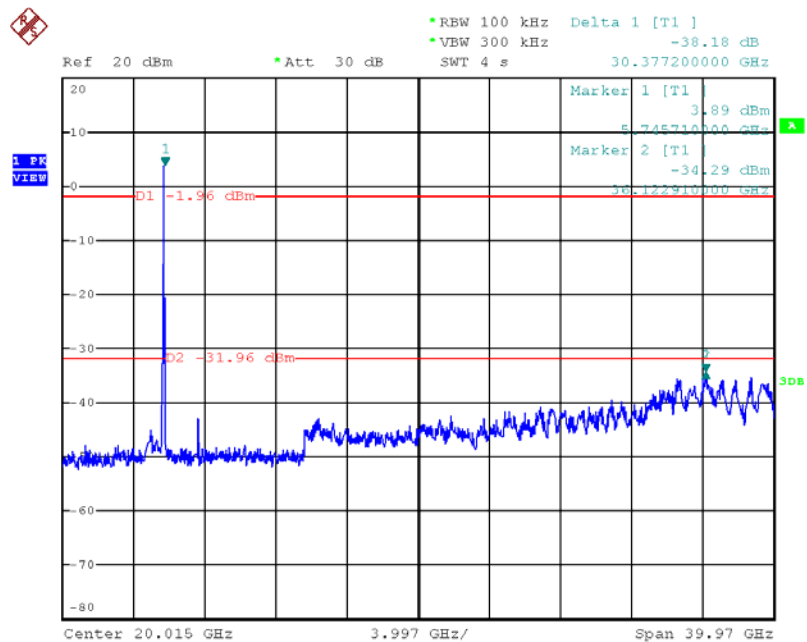
Date: 20.SEP.2012 23:52:05

### Plot on Configuration IEEE 802.11n MCS8 40MHz / Reference Level / Ant. 4: Chain. 3



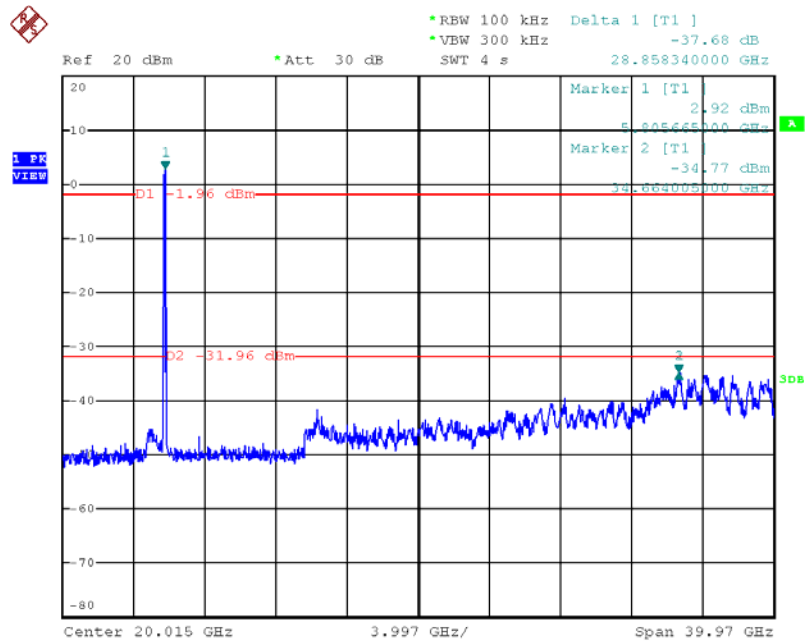
Date: 19.SEP.2012 16:41:14

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 151 (down 30dBc) / Ant. 4: Chain. 3



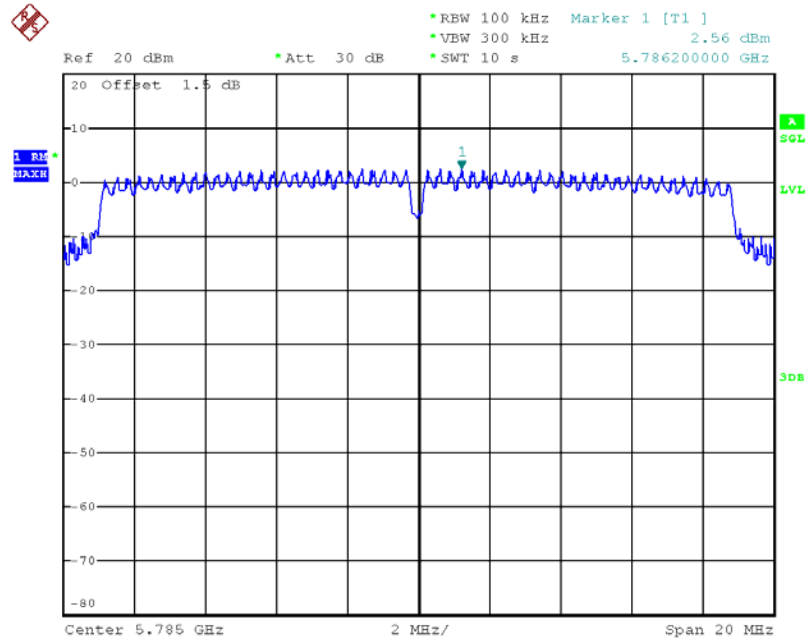
Date: 20.SEP.2012 23:49:54

# Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 159 (down 30dBc) / Ant. 4: Chain. 3



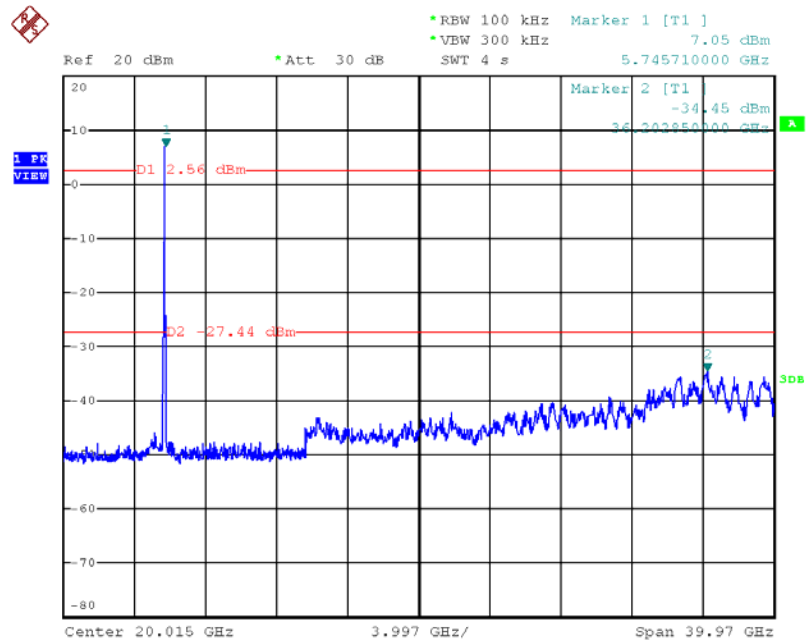
Date: 20.SEP.2012 23:48:55

### Plot on Configuration IEEE 802.11n MCS0 20MHz / Reference Level / Ant. 5: Chain. 1



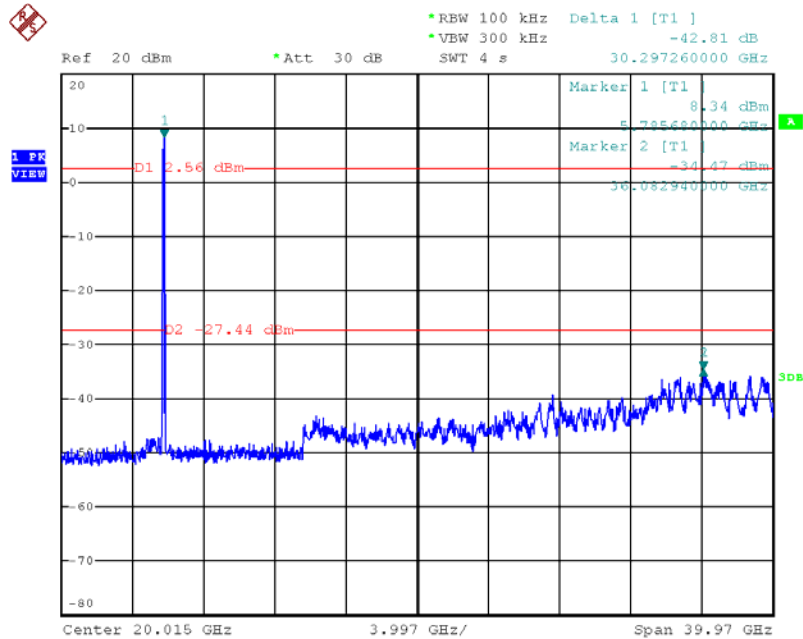
Date: 20.SEP.2012 15:48:12

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 149 (down 30dBc) / Ant. 5: Chain. 1



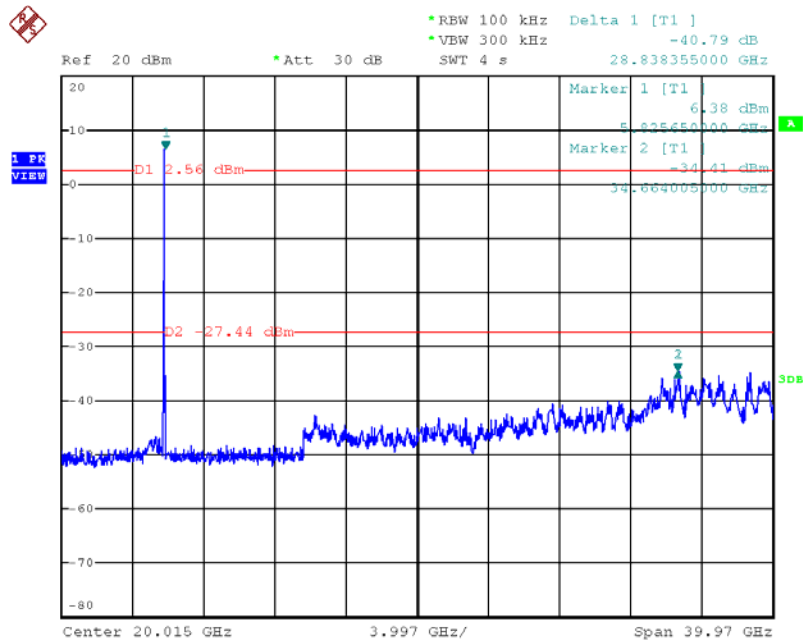
Date: 20.SEP.2012 23:26:29

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 157 (down 30dBc) / Ant. 5: Chain. 1



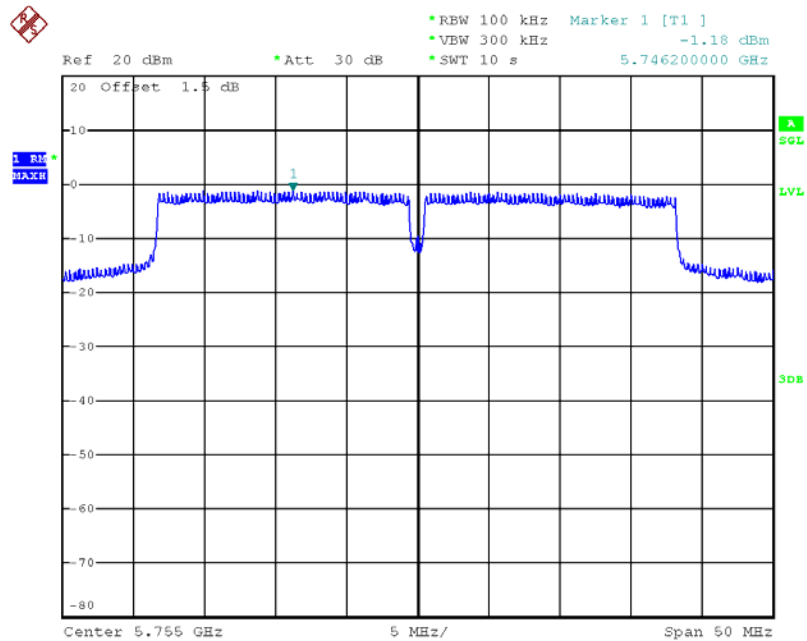
Date: 20.SEP.2012 23:28:02

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 165 (down 30dBc) / Ant. 5: Chain. 1



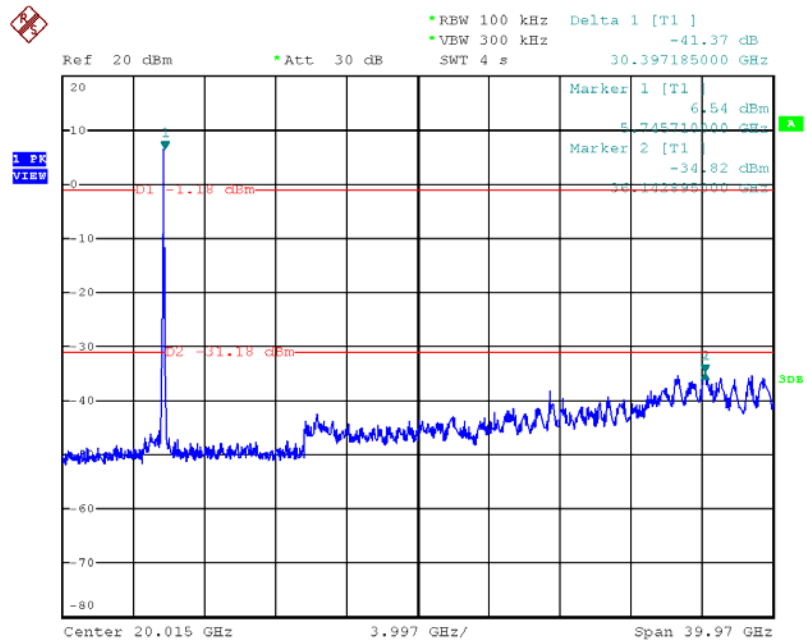
Date: 20.SEP.2012 23:28:46

### Plot on Configuration IEEE 802.11n MCS0 40MHz / Reference Level / Ant. 5: Chain. 1



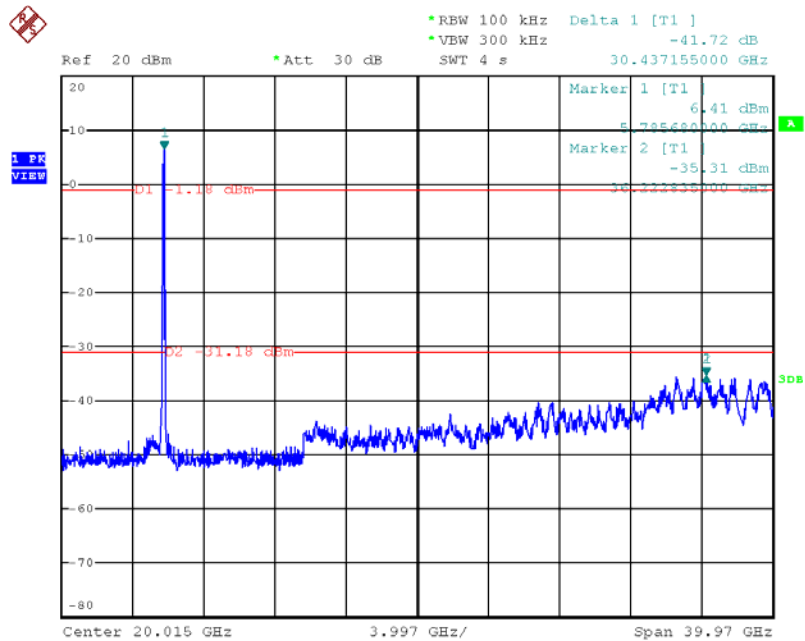
Date: 20.SEP.2012 15:50:00

### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 151 (down 30dBc) / Ant. 5: Chain. 1



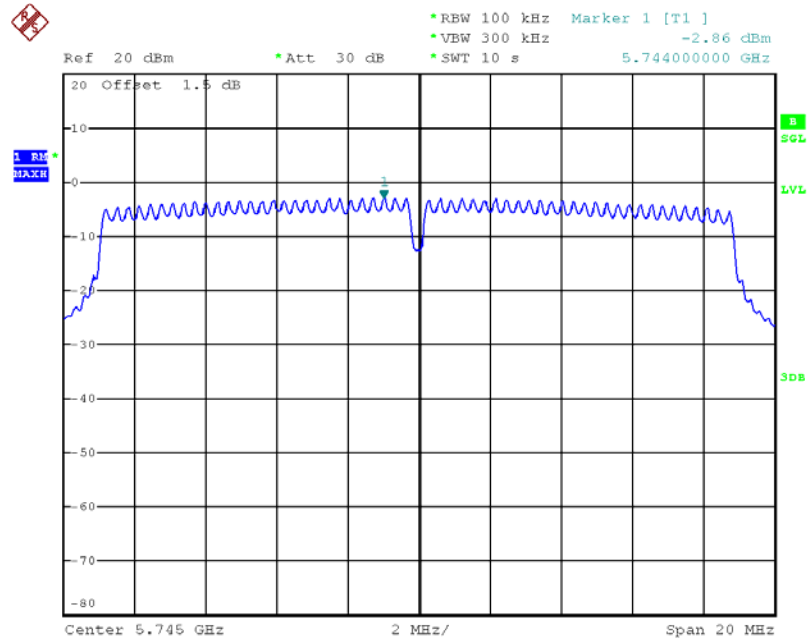
Date: 20.SEP.2012 23:31:02

# Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 159 (down 30dBc) / Ant. 5: Chain. 1



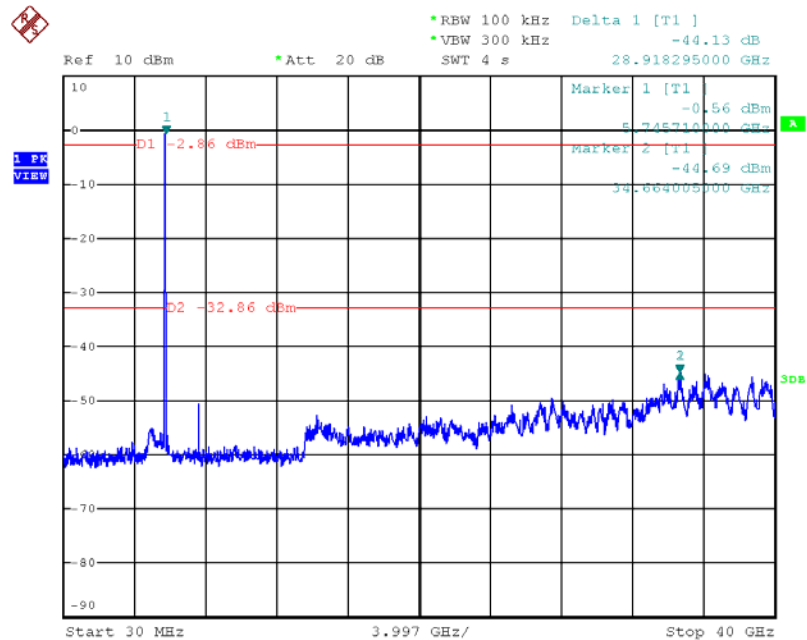
Date: 20.SEP.2012 23:30:02

### Plot on Configuration IEEE 802.11n MCS0 20MHz / Reference Level / Ant. 6: Chain. 3



Date: 19.SEP.2012 16:08:34

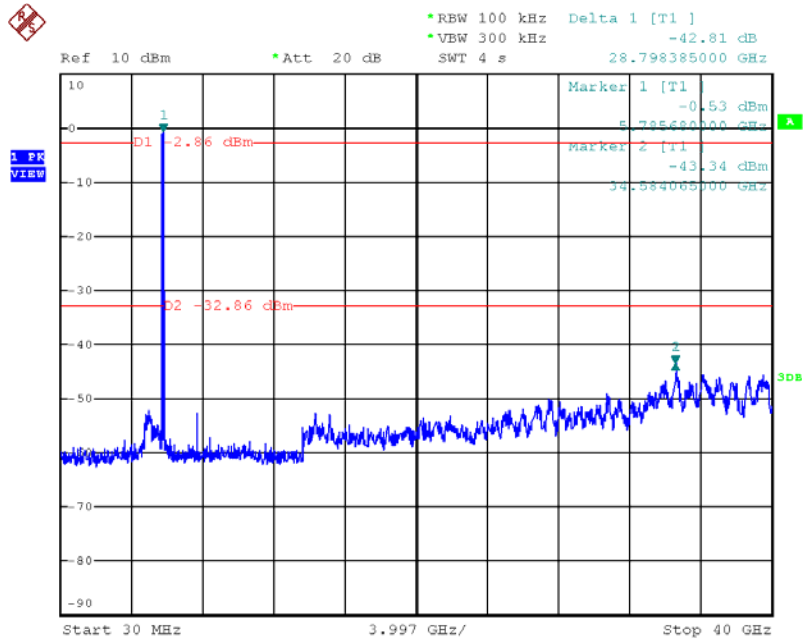
### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 149 (down 30dBc) / Ant. 6: Chain. 3



Date: 21.SEP.2012 00:08:35

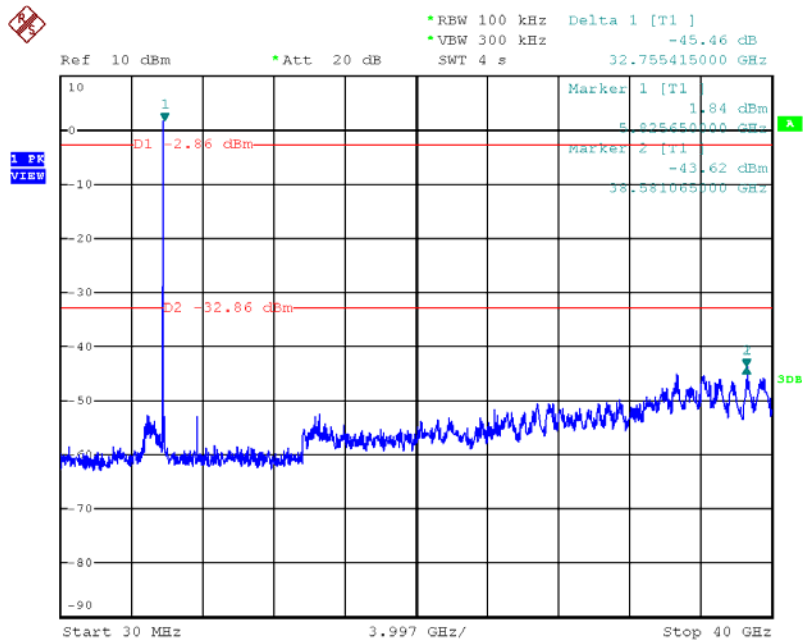


### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 157 (down 30dBc) / Ant. 6: Chain. 3



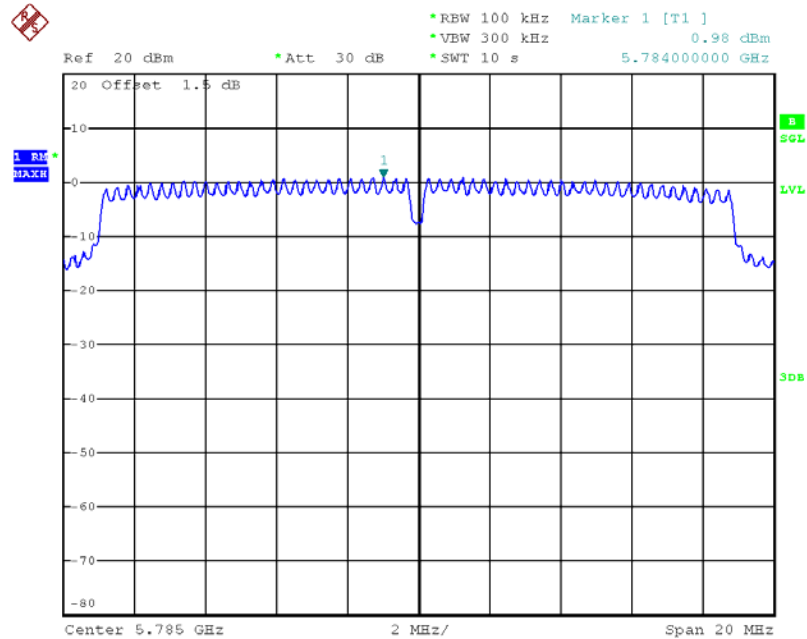
Date: 21.SEP.2012 00:09:16

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 165 (down 30dBc) / Ant. 6: Chain. 3



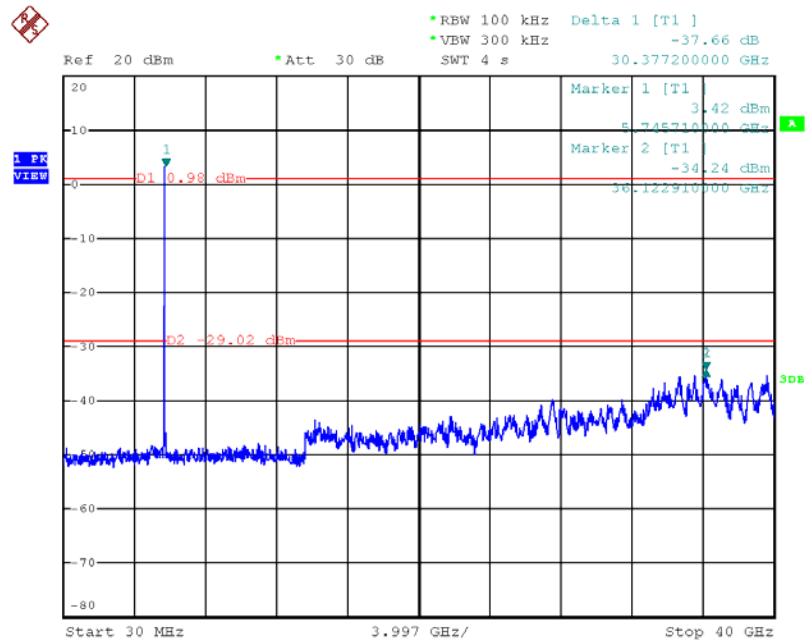
Date: 21.SEP.2012 00:09:48

### Plot on Configuration IEEE 802.11n MCS8 20MHz / Reference Level / Ant. 6: Chain. 3



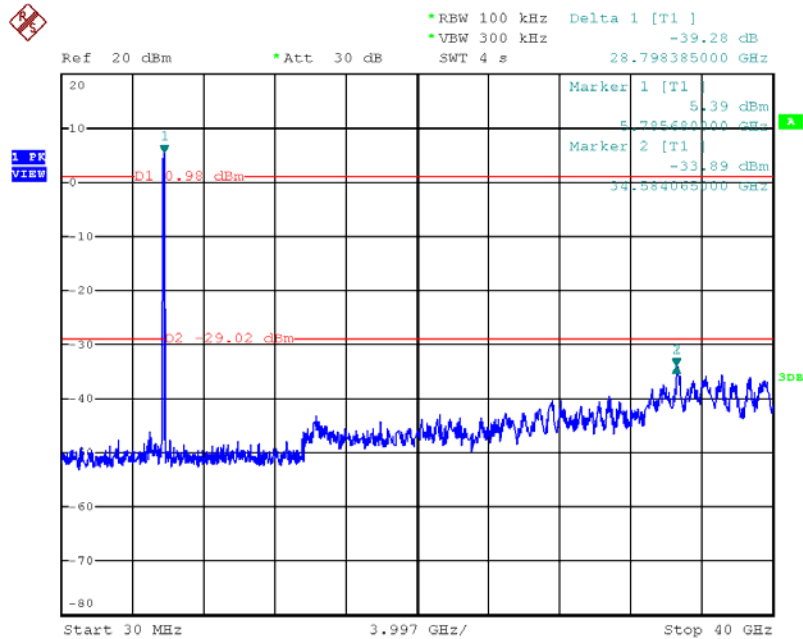
Date: 19.SEP.2012 15:57:02

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 149 (down 30dBc) / Ant. 6: Chain. 3



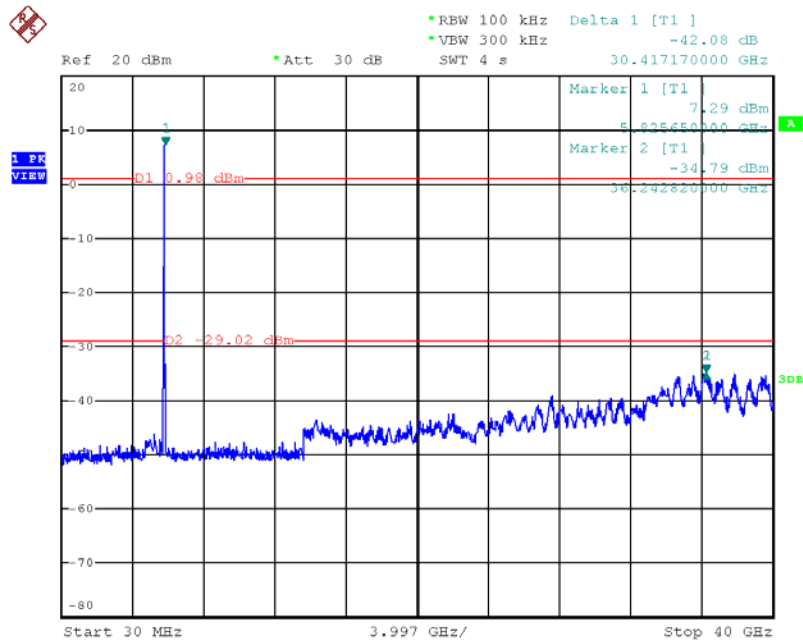
Date: 21.SEP.2012 00:06:40

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 157 (down 30dBc) / Ant. 6: Chain. 3



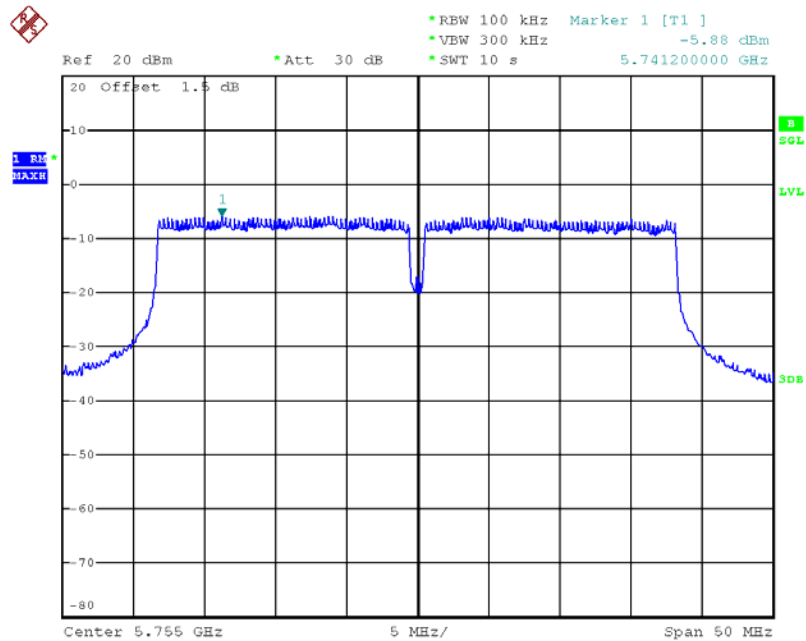
Date: 21.SEP.2012 00:06:12

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 165 (down 30dBc) / Ant. 6: Chain. 3



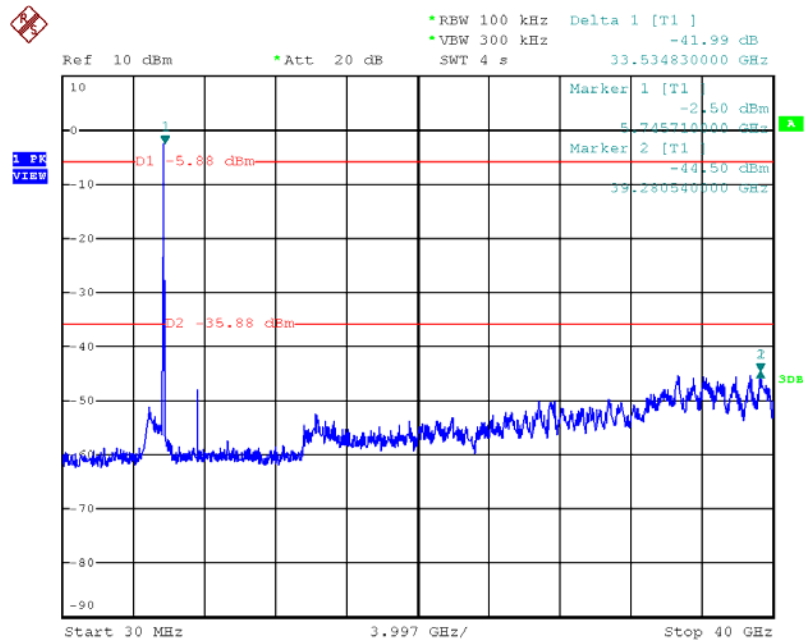
Date: 21.SEP.2012 00:05:22

### Plot on Configuration IEEE 802.11n MCS0 40MHz / Reference Level / Ant. 6: Chain. 3



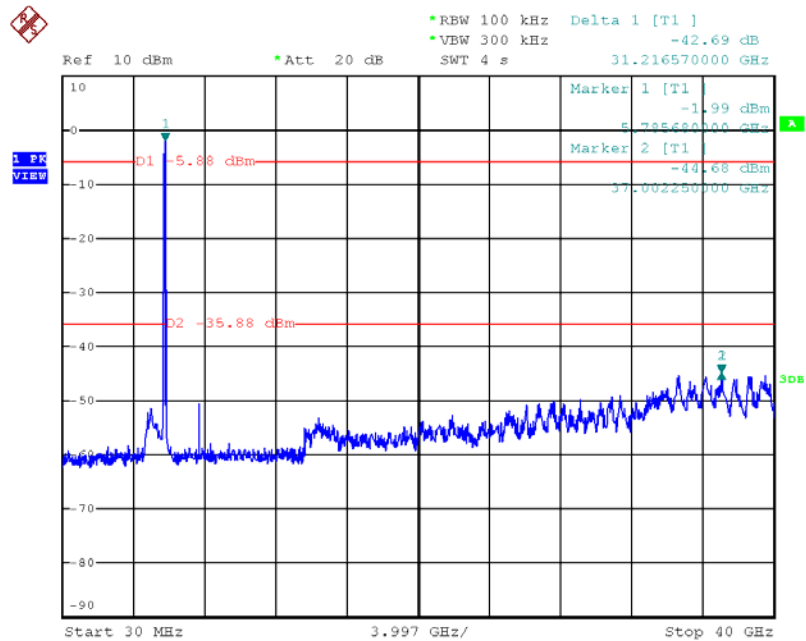
Date: 19.SEP.2012 16:33:16

### Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 151 (down 30dBc) / Ant. 6: Chain. 3



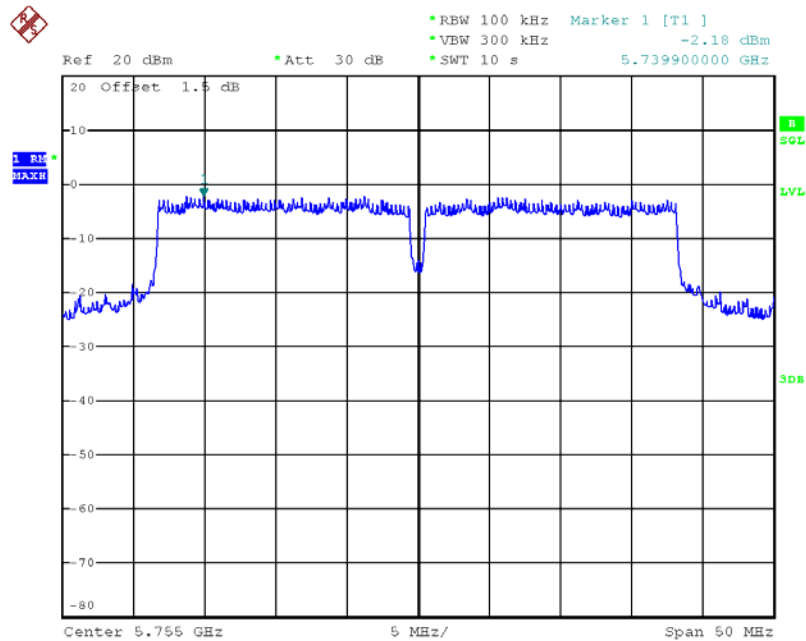
Date: 20.SEP.2012 23:59:39

# Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 159 (down 30dBc) / Ant. 6: Chain. 3



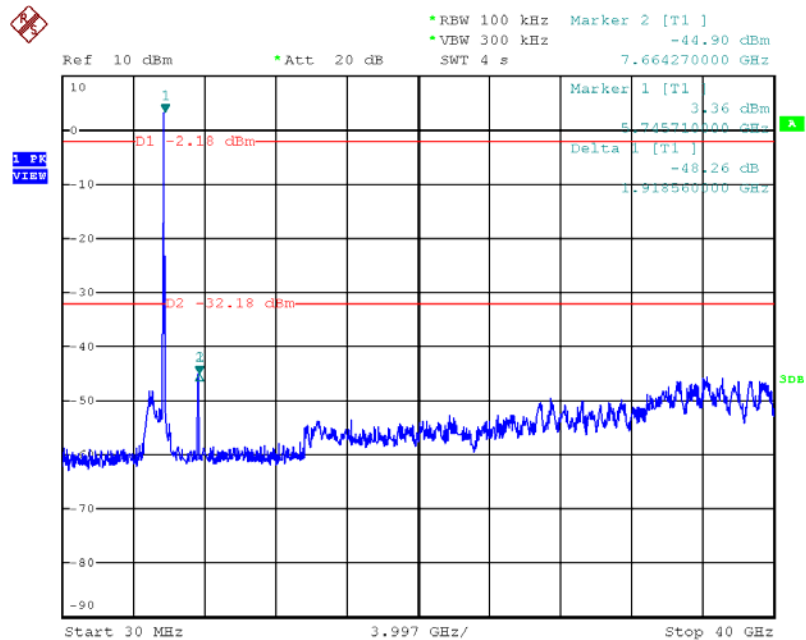
Date: 20.SEP.2012 23:58:58

### Plot on Configuration IEEE 802.11n MCS8 40MHz / Reference Level / Ant. 6: Chain. 3



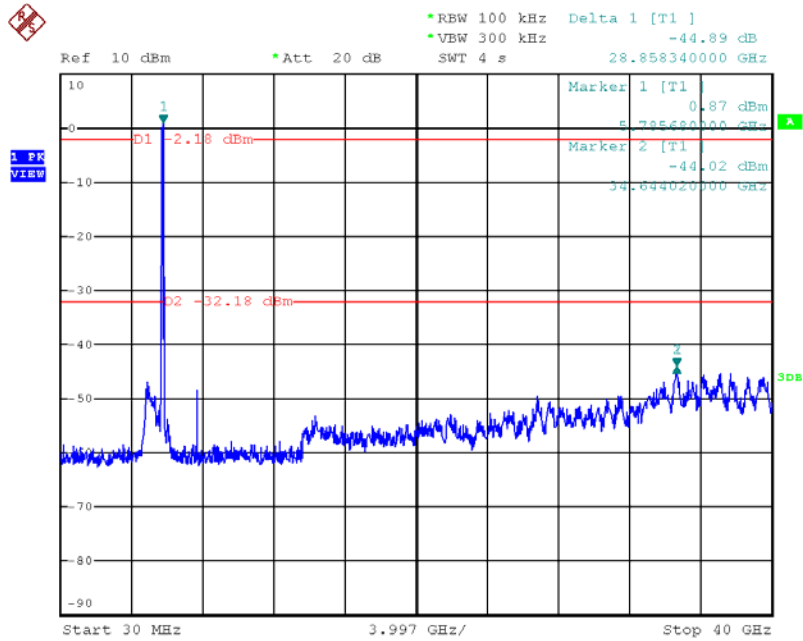
Date: 19.SEP.2012 16:40:07

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 151 (down 30dBc) / Ant. 6: Chain. 3



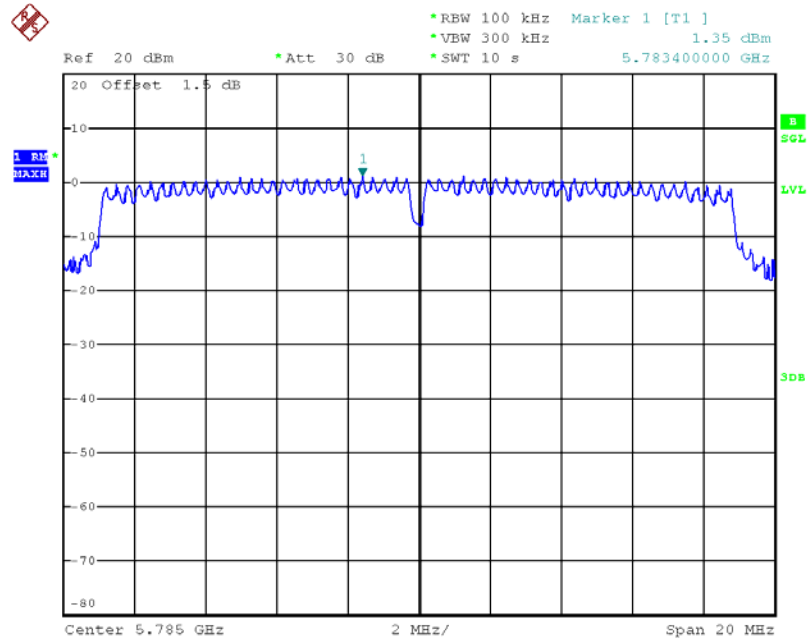
Date: 21.SEP.2012 00:01:25

# Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 159 (down 30dBc) / Ant. 6: Chain. 3



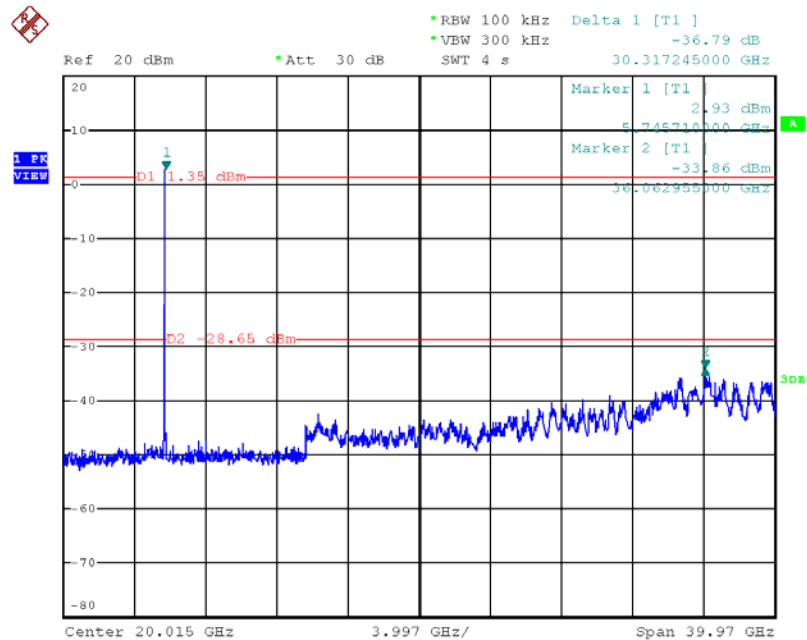
Date: 21.SEP.2012 00:02:56

### Plot on Configuration IEEE 802.11n MCS0 20MHz / Reference Level / Ant. 10: Chain. 3



Date: 19.SEP.2012 16:10:49

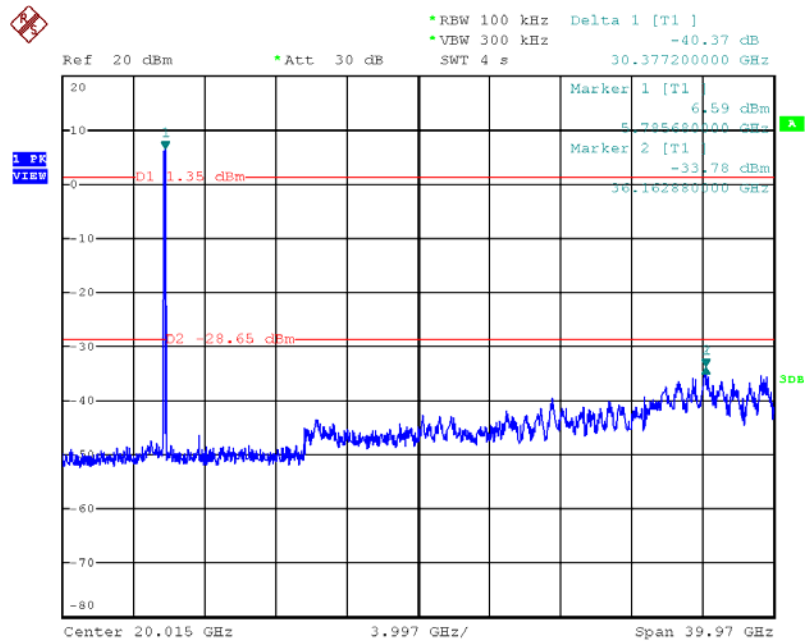
### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 149 (down 30dBc) / Ant. 10: Chain. 3



Date: 20.SEP.2012 23:41:35

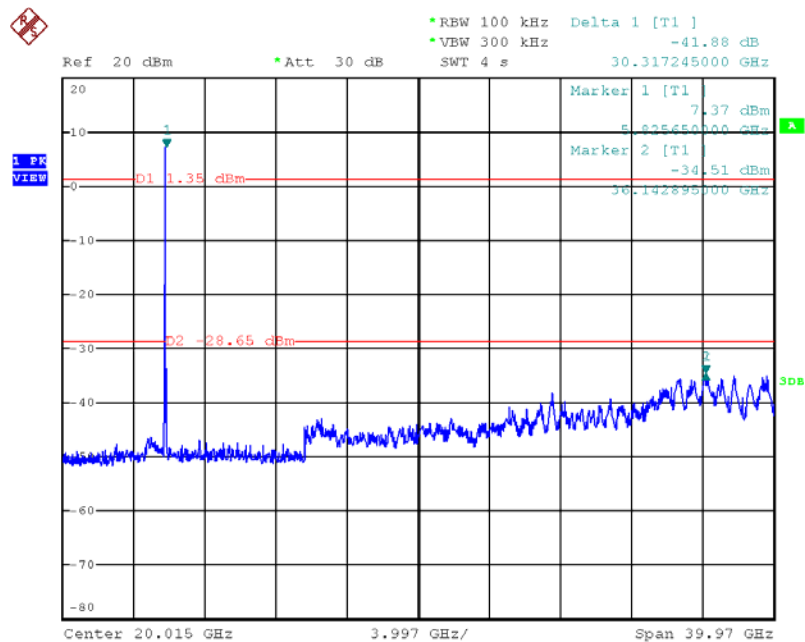


### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 157 (down 30dBc) / Ant. 10: Chain. 3



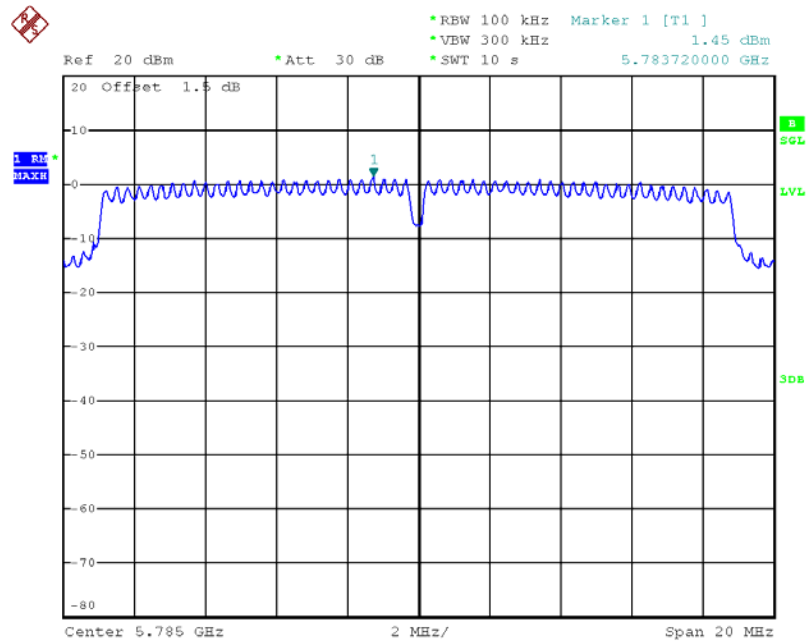
Date: 20.SEP.2012 23:40:50

### Plot on Configuration IEEE 802.11n MCS0 20MHz / CH 165 (down 30dBc) / Ant. 10: Chain. 3



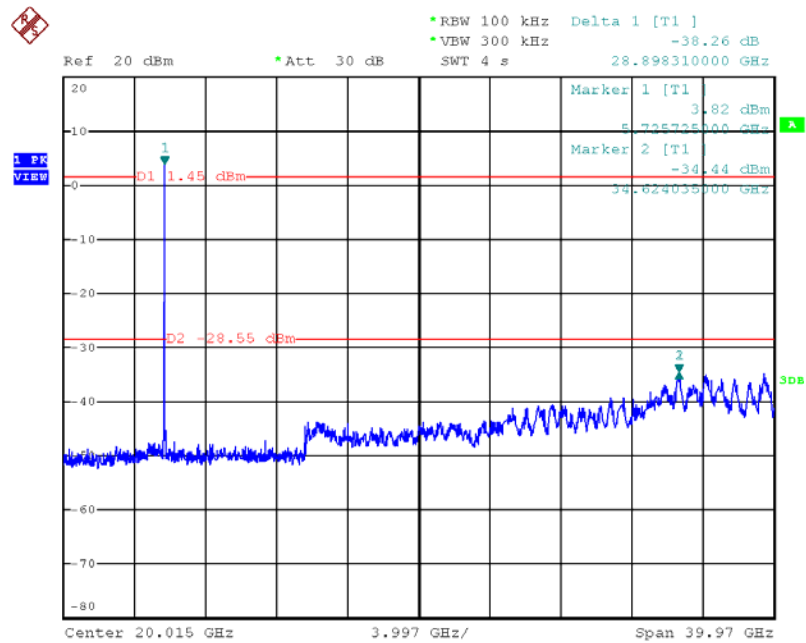
Date: 20.SEP.2012 23:40:06

### Plot on Configuration IEEE 802.11n MCS8 20MHz / Reference Level / Ant. 10: Chain. 3



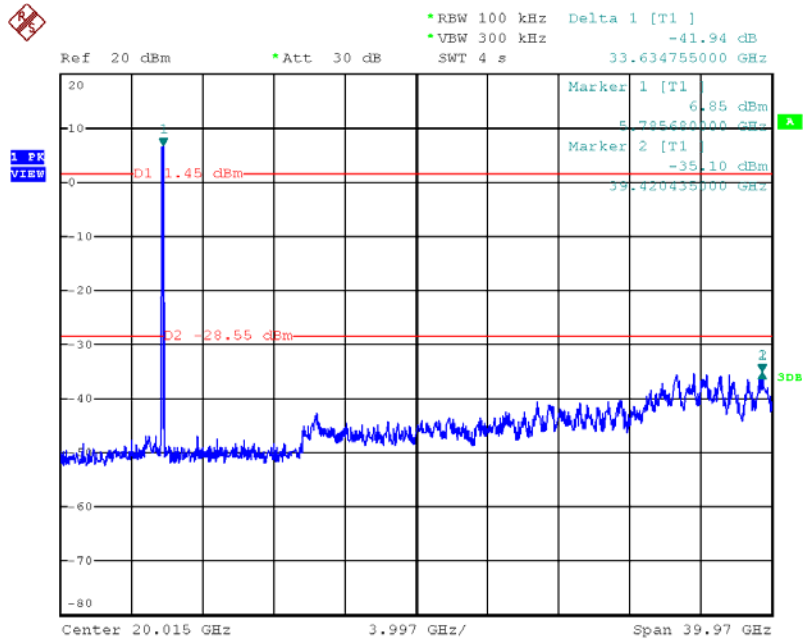
Date: 19.SEP.2012 15:53:12

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 149 (down 30dBc) / Ant. 10: Chain. 3



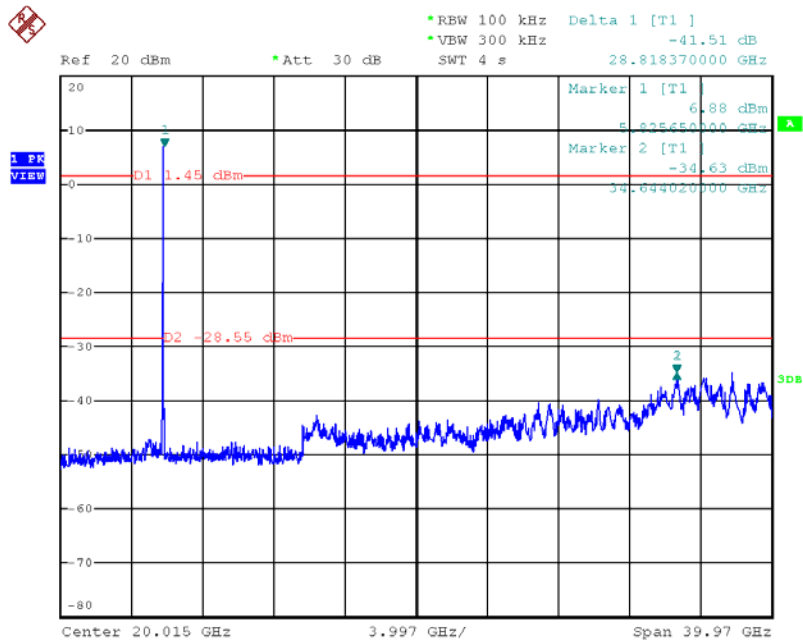
Date: 20.SEP.2012 23:44:11

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 157 (down 30dBc) / Ant. 10: Chain. 3

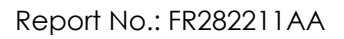


Date: 20.SEP.2012 23:46:19

### Plot on Configuration IEEE 802.11n MCS8 20MHz / CH 165 (down 30dBc) / Ant. 10: Chain. 3



Date: 20.SEP.2012 23:46:52



Ref 20 dBm      \*Att 30 dB      \*RBW 100 kHz      VBW 300 kHz      Marker 1 [T1]      -1.97 dBm  
 \*SWT 10 s      5.783700000 GHz

20 Offset 1.5 dB

1 RBW  
 MAX4

Center 5.796 GHz      5 MHz/      Span 50 MHz

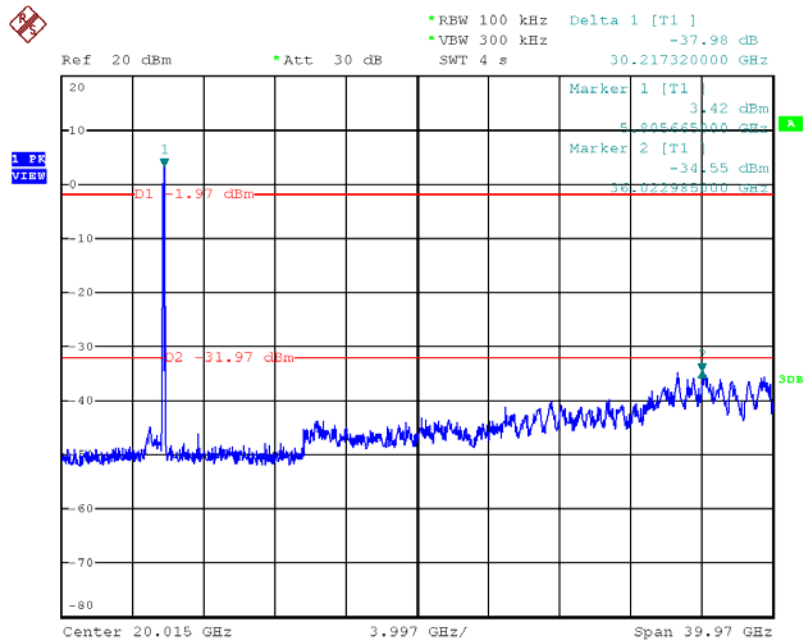
\*RBW 100 kHz Delta 1 [T1]  
 \*VBW 300 kHz -36.63 dB  
 Ref 20 dBm \*Att 30 dB SWT 4 s 30.37720000 GHz

Marker 1 [T1] 20.015 GHz -1.97 dBm  
 Marker 2 [T1] 20.0397 GHz -31.97 dBm

Center 20.015 GHz 3.997 GHz / Span 39.97 GHz

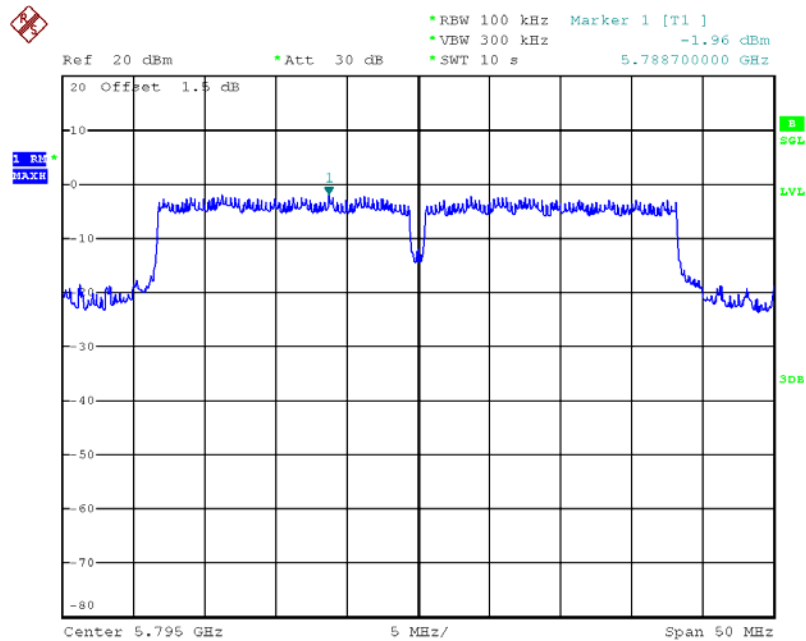
Issued Date : Nov. 23, 2012

# Plot on Configuration IEEE 802.11n MCS0 40MHz / CH 159 (down 30dBc) / Ant. 10: Chain. 3



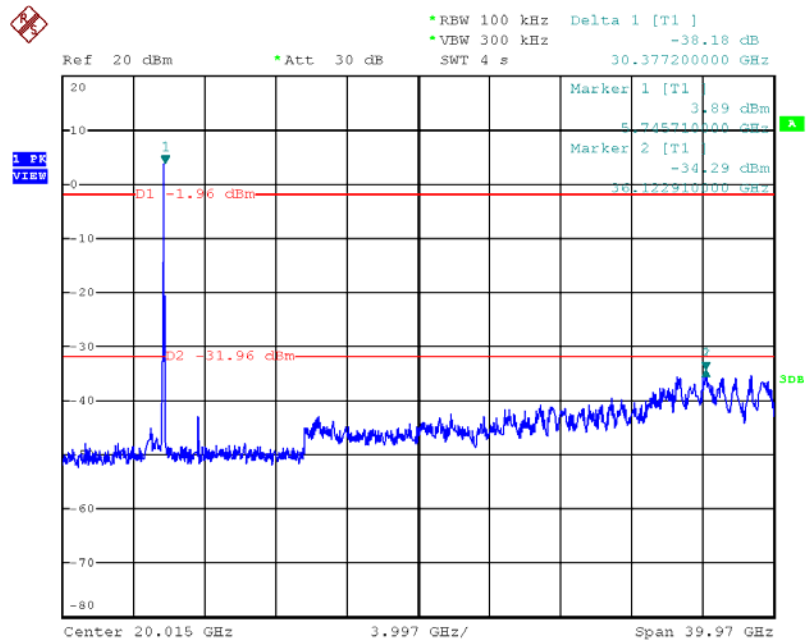
Date: 20.SEP.2012 23:52:05

### Plot on Configuration IEEE 802.11n MCS8 40MHz / Reference Level / Ant. 10: Chain. 3



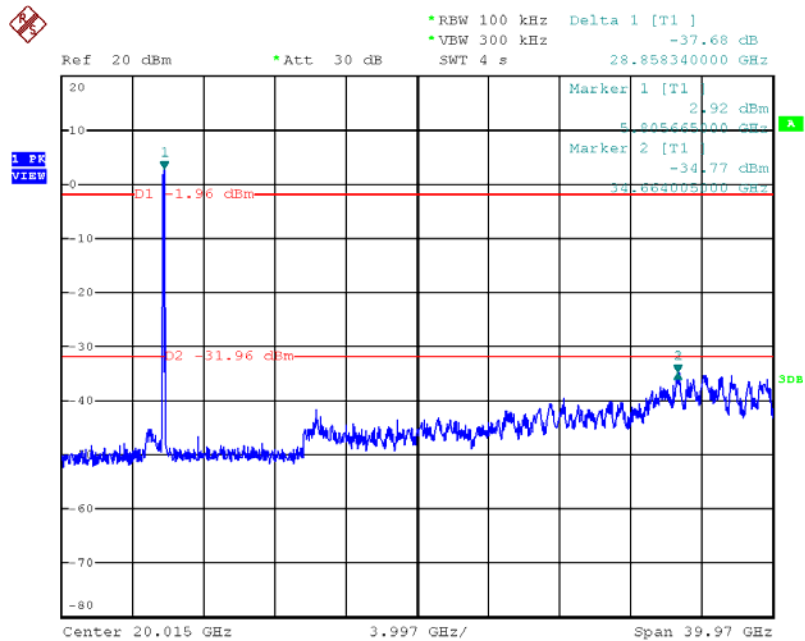
Date: 19.SEP.2012 16:41:14

### Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 151 (down 30dBc) / Ant. 10: Chain. 3



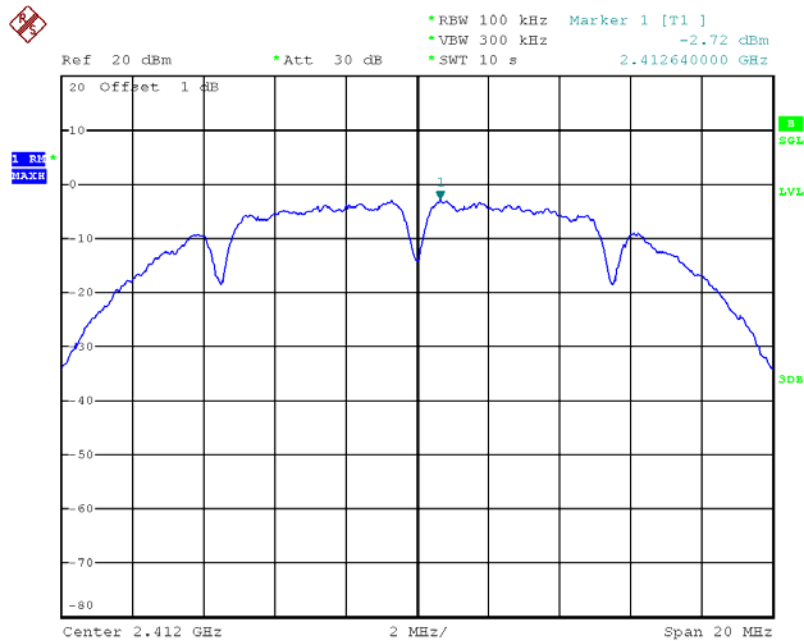
Date: 20.SEP.2012 23:49:54

# Plot on Configuration IEEE 802.11n MCS8 40MHz / CH 159 (down 30dBc) / Ant. 10: Chain. 3



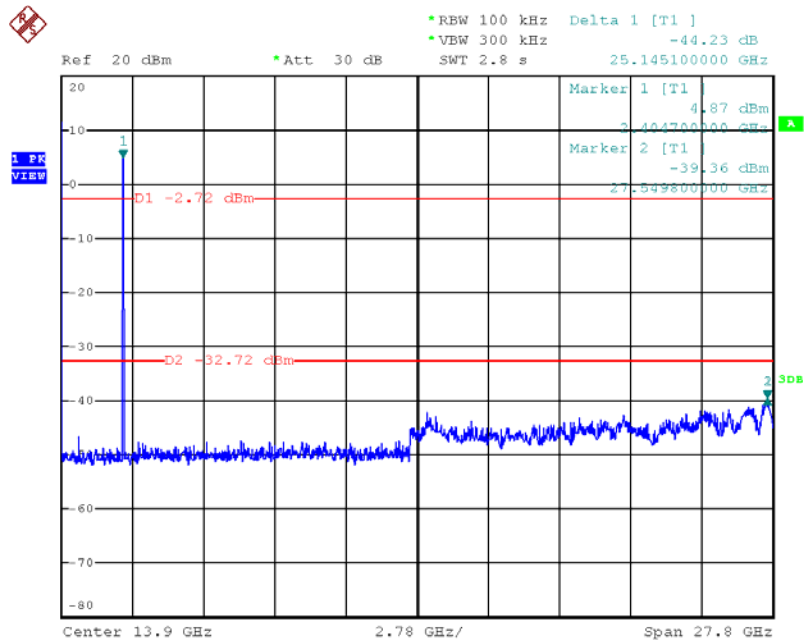
Date: 20.SEP.2012 23:48:55

### Plot on Configuration IEEE 802.11b / Reference Level / Ant. 1: Chain. 3



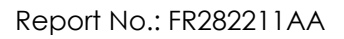
Date: 18.SEP.2012 16:39:37

### Plot on Configuration IEEE 802.11b / CH 1 (down 30dBc) / Ant. 1: Chain. 3



Date: 19.SEP.2012 00:38:47





Ref 20 dBm \*Att 30 dB RBW 100 kHz Delta 1 [T1] -41.66 dB  
SWT 2.8 s VBW 300 kHz 24.366700000 GHz

1 PF VIEW

Marker 1 [T1] 1.46 dBm  
Marker 2 [T1] -40.20 dBm

D1 -2.72 dBm D2 -32.72 dBm

Center 13.9 GHz 2.78 GHz/ Span 27.8 GHz

Ref 20 dBm \*Att 30 dB

\*RBW 100 kHz Delta 1 [T1]  
 \*VBW 300 kHz -40.90 dB  
 SWT 2.8 s 24.992200000 GHz

Marker 1 [T1] 0.97 dBm  
 2.460300000 GHz

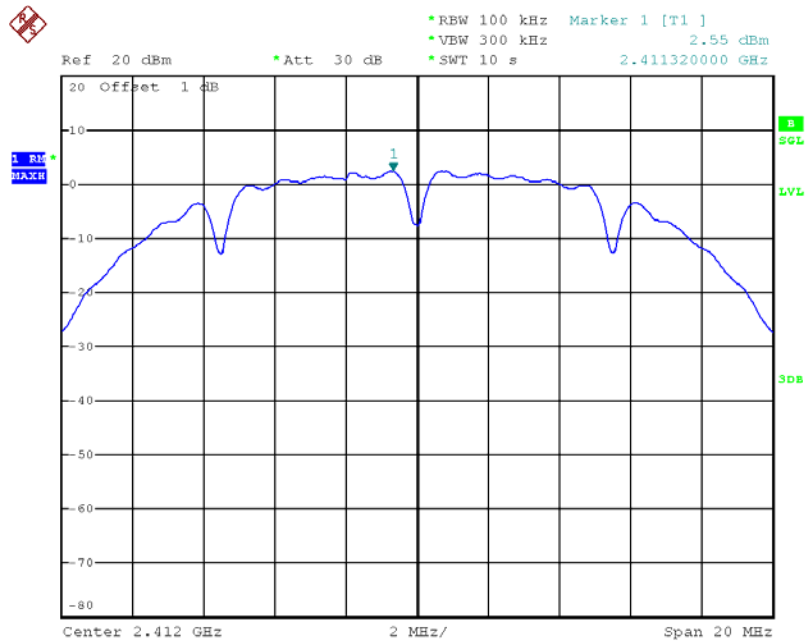
Marker 2 [T1] -39.93 dBm  
 27.452500000 GHz

D1 -2.72 dBm  
 D2 -32.72 dBm

Center 13.9 GHz 2.78 GHz/ Span 27.8 GHz

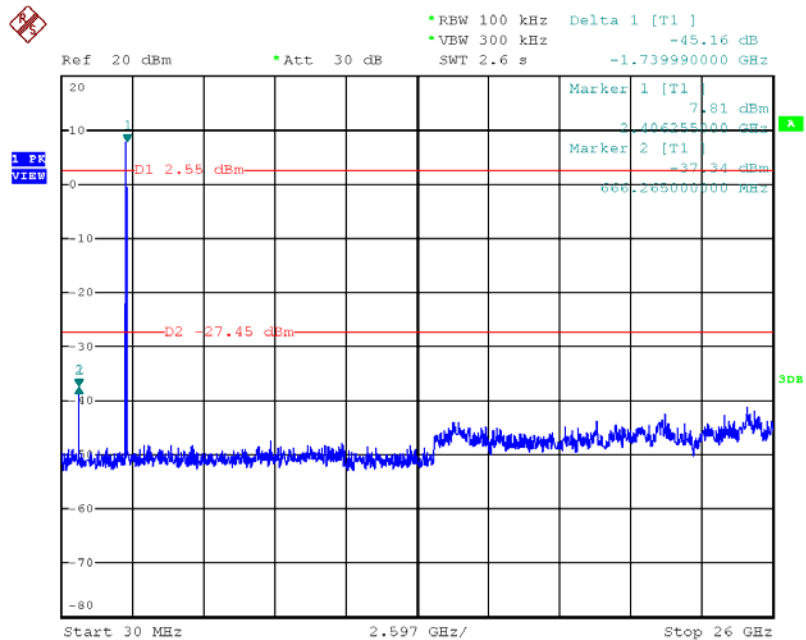
Issued Date : Nov. 23, 2012

### Plot on Configuration IEEE 802.11b / Reference Level / Ant. 2: Chain. 3



Date: 18.SEP.2012 19:30:47

### Plot on Configuration IEEE 802.11b / CH 1 (down 30dBc) / Ant. 2: Chain. 3



Date: 19.SEP.2012 00:08:09



Ref 20 dBm      \*Att 30 dB      RBW 100 kHz      Delta 1 [T1]      -46.48 dB  
 VBW 300 kHz      SWT 2.6 s      -1.739990000 GHz

Marker 1 [T1] 8.23 dBm  
 Marker 2 [T1] -38.25 dBm

D1 2.55 dBm  
 D2 -27.45 dBm

Start 30 MHz      2.597 GHz/      Stop 26 GHz

\*RBW 100 kHz Delta 1 [T1]  
 \*VBW 300 kHz -45.89 dB  
 SWT 2.6 s  
 Ref 20 dBm \*Att 30 dB  
 -1.739990000 GHz

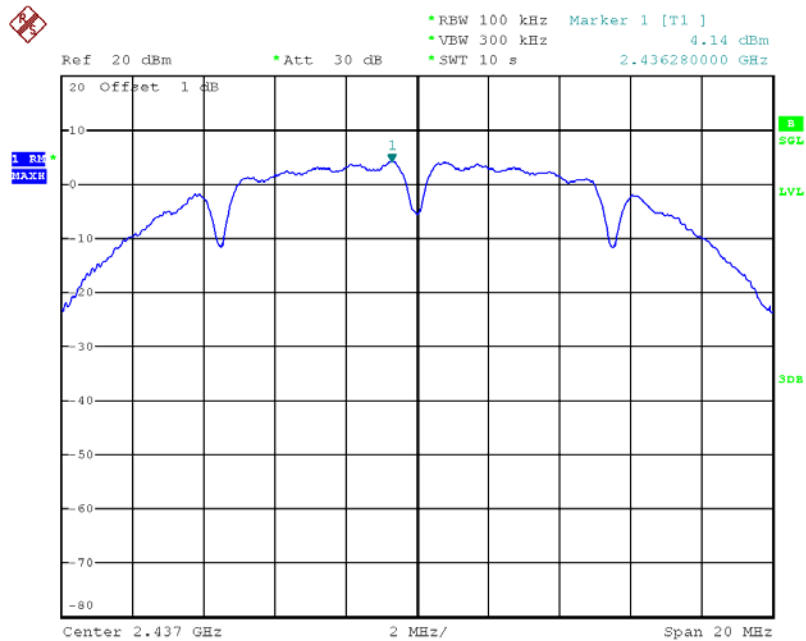
Marker 1 [T1] 8.69 dBm  
 Marker 2 [T1] -37.20 dBm  
 718.205000100 MHz

D1 2.55 dBm  
 D2 -27.45 dBm

Start 30 MHz 2.597 GHz/ Stop 26 GHz

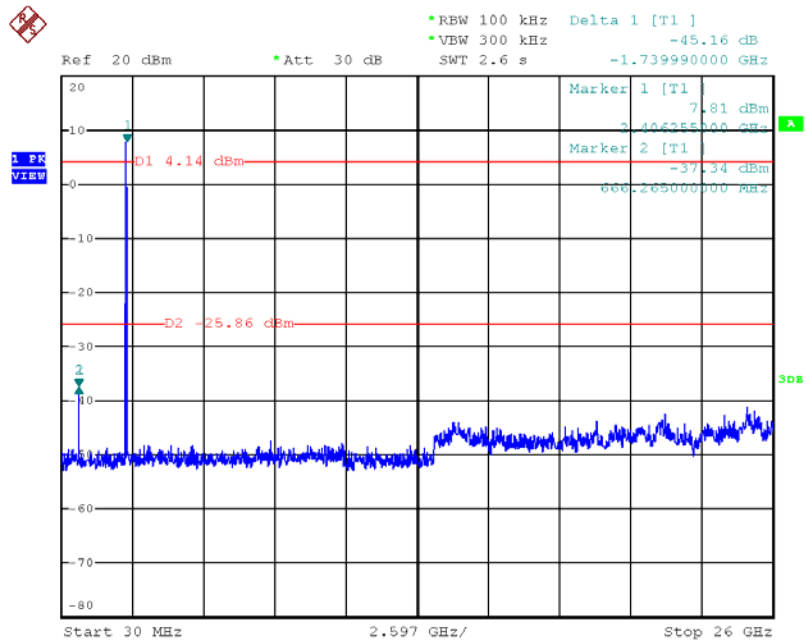
Issued Date : Nov. 23, 2012

### Plot on Configuration IEEE 802.11b / Reference Level / Ant. 2: Chain. 3



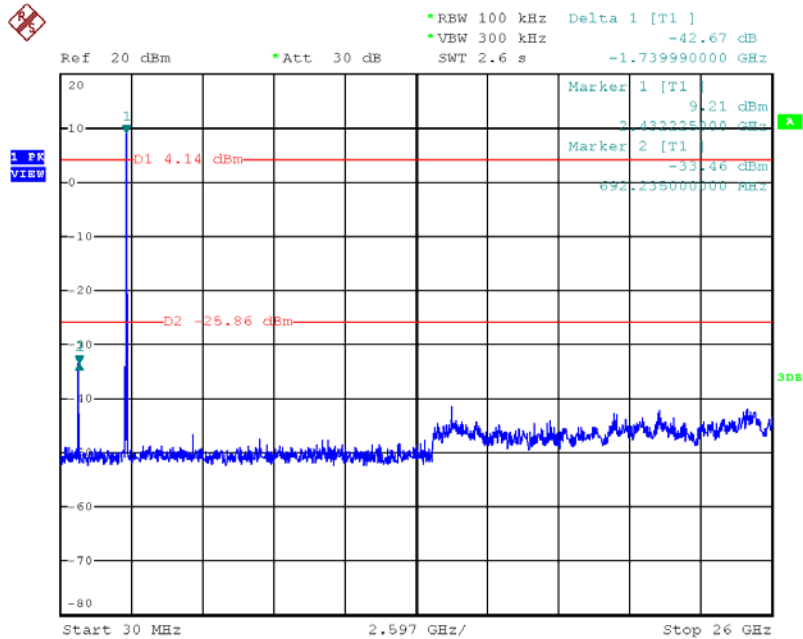
Date: 18.SEP.2012 19:42:45

### Plot on Configuration IEEE 802.11b / CH 1 (down 30dBc) / Ant. 2: Chain. 3



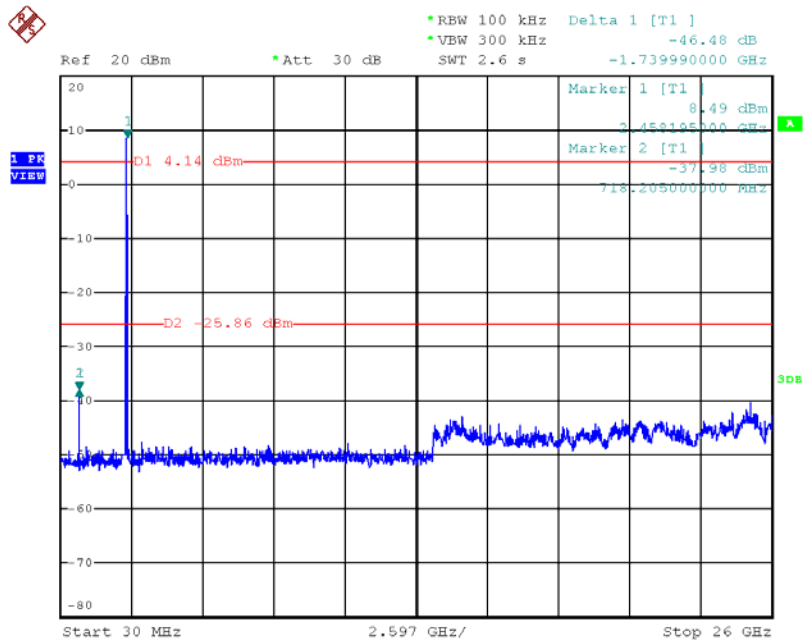
Date: 18.SEP.2012 23:53:11

### Plot on Configuration IEEE 802.11b / CH 6 (down 30dBc) / Ant. 3: Chain. 3



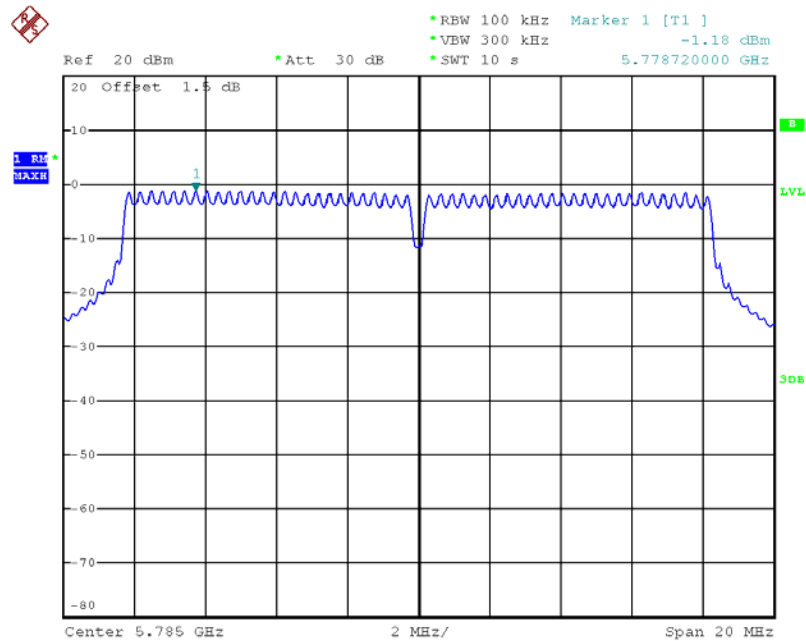
Date: 18.SEP.2012 23:50:57

### Plot on Configuration IEEE 802.11b / CH 11 (down 30dBc) / Ant. 3: Chain. 3



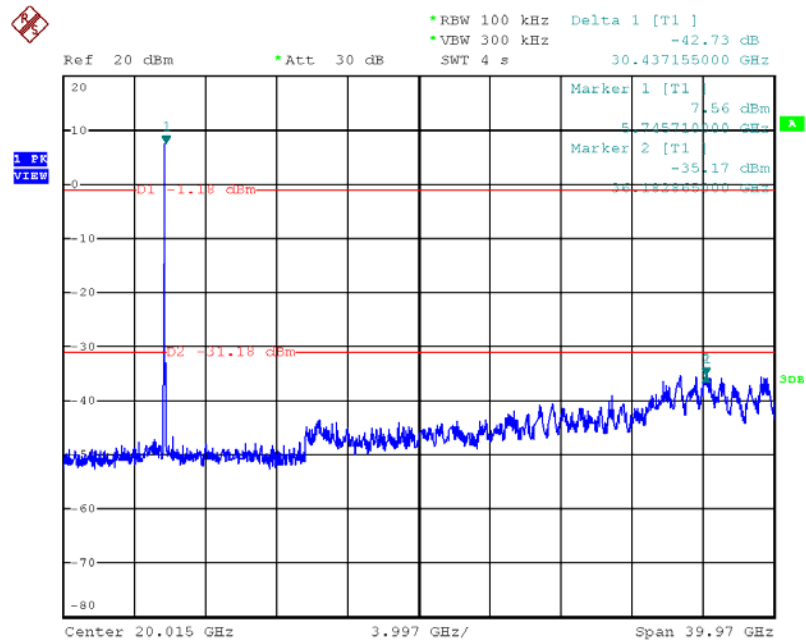
Date: 18.SEP.2012 23:49:57

### Plot on Configuration IEEE 802.11a / Reference Level / Ant. 5: Chain. 1



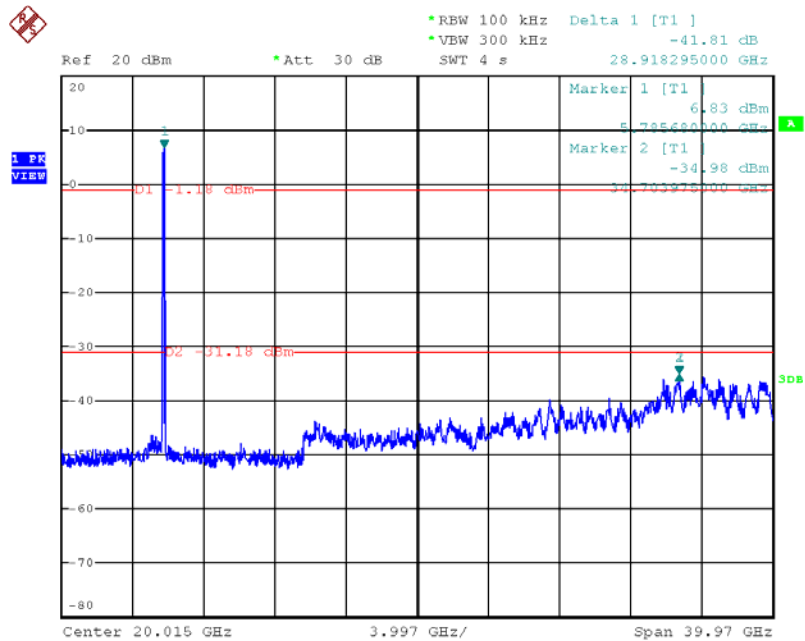
Date: 25.OCT.2012 17:17:35

### Plot on Configuration IEEE 802.11a / CH 149 (down 30dBc) / Ant. 5: Chain. 1



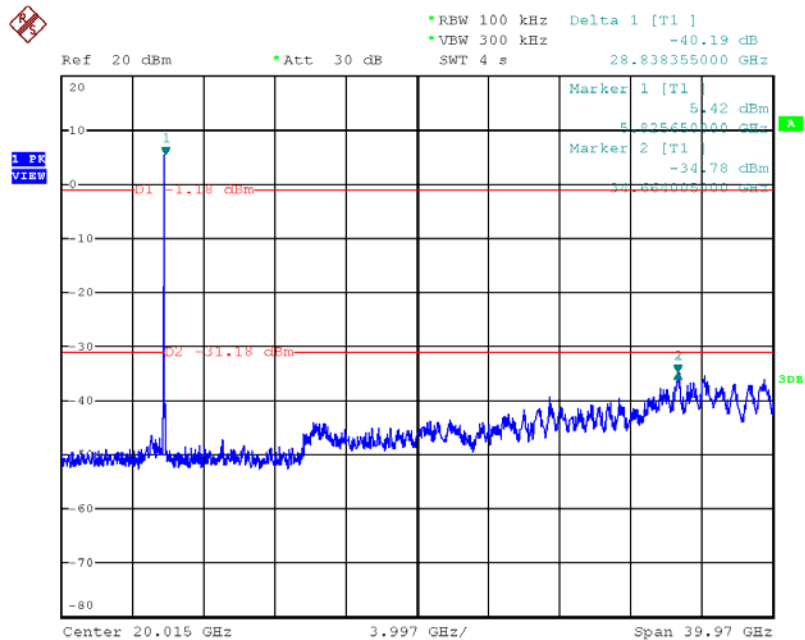
Date: 20.SEP.2012 23:32:12

### Plot on Configuration IEEE 802.11a / CH 157 (down 30dBc) / Ant. 5: Chain. 1



Date: 20.SEP.2012 23:33:14

### Plot on Configuration IEEE 802.11a / CH 165 (down 30dBc) / Ant. 5: Chain. 1



Date: 20.SEP.2012 23:33:47

## **4.7. Antenna Requirements**

### **4.7.1. Limit**

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

### **4.7.2. Antenna Connector Construction**

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.



## 5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100377	9kHz ~ 2.75GHz	Sep. 14, 2012	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	4083	150kHz ~ 100MHz	Nov. 14, 2011	Conduction (CO01-CB)
V- LISN	Schwarzbeck	NSLK 8127	8127-478	9K ~ 30MHz	Jun. 22, 2012	Conduction (CO01-CB)
PULSE LIMITER	R&S	ESH3-Z2	100430	9K~30MHz	Feb. 03, 2012	Conduction (CO01-CB)
COND Cable	Woken	Cable	1	0.15MHz~30MHz	Dec. 4, 2011	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	Jan. 11, 2012	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz~18GHz	Nov. 25, 2011	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBEAK	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Nov. 22, 2011	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Nov. 29, 2011	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26.5GHz ~ 40GHz	Jul. 31, 2012	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100056	9KHz~40GHz	Nov. 03, 2011	Radiation (05CH01-CB)
EMI Test Receiver	R&S	ESCS 30	100355	9KHz ~ 2.75GHz	Mar. 20, 2012	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9 kHz - 30 MHz	Sep. 09, 2012*	Radiation (03CH01-CB)
Turn Table	INN CO	CO 2000	N/A	0 ~ 360 degree	N/A	Radiation (03CH01-CB)
Antenna Mast	INN CO	CO2000	N/A	1 m - 4 m	N/A	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz - 1 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-1	N/A	1 GHz - 26.5 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-2	N/A	1 GHz - 26.5 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-3	N/A	1 GHz - 40 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-4	N/A	1 GHz - 40 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
Signal analyzer	R&S	FSV40	100979	9KHz~40GHz	Sep. 26, 2012	Conducted (TH01-CB)
Signal analyzer	R&S	FSV40	100979	9KHz~40GHz	Sep. 26, 2012	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 05, 2012	Conducted (TH01-CB)
Thermo-Hygro Meter	N/A	HC 520	#1	15~70 degree	Nov. 02, 2011	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Signal Generator	R&S	SMR40	100302	10MHz-40GHz	Nov. 22, 2011	Conducted (TH01-CB)
RF Power Divider	HP	11636A	00306	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
RF Power Splitter	Anaren	44100	1839	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
RF Power Splitter	Anaren	42100	17930	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
Signal generator	R&S	SMU200A	102782	10MHz-40GHz	Jun. 07, 2012	Conducted (TH01-CB)
Horn Antenna	COM-POWER	AH-118	071187	1GHz – 18GHz	May 09, 2012	Conducted (TH01-CB)
Horn Antenna	COM-POWER	AH-118	071042	1GHz – 18GHz	Nov. 01, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-7	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-8	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-9	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-10	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-11	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-12	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-13	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	0917223	300MHz~40GHz	Nov. 01, 2011	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Nov. 01, 2011	Conducted (TH01-CB)


Note: Calibration Interval of instruments listed above is one year.

Note: “\*” Calibration Interval of instruments listed above is two years.

## 6. TEST LOCATION

SHIJR	ADD : 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C. TEL : 886-2-2696-2468 FAX : 886-2-2696-2255
HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
LINKOU	ADD : No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C TEL : 886-2-2601-1640 FAX : 886-2-2601-1695
DUNGHU	ADD : No. 3, Lane 238, Kangle St., Neihs Chiu, Taipei, Taiwan 114, R.O.C. TEL : 886-2-2631-4739 FAX : 886-2-2631-9740
JUNGHE	ADD : 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C. TEL : 886-2-8227-2020 FAX : 886-2-8227-2626
NEIHU	ADD : 4Fl., No. 339, Hsin Hu 2 <sup>nd</sup> Rd., Taipei 114, Taiwan, R.O.C. TEL : 886-2-2794-8886 FAX : 886-2-2794-9777
JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

## 7. TAF CERTIFICATE OF ACCREDITATION



Certificate No. : L1190-110702

財團法人全國認證基金會  
Taiwan Accreditation Foundation


### Certificate of Accreditation

This is to certify that

**Sporton International Inc.**  
**EMC & Wireless Communications Laboratory**  
No.52, Hwa Ya 1st Road, Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien,  
Taiwan, R.O.C.

**is accredited in respect of laboratory**

<b>Accreditation Criteria</b>	: ISO/IEC 17025:2005
<b>Accreditation Number</b>	: 1190
<b>Originally Accredited</b>	: December 15, 2003
<b>Effective Period</b>	: January 10, 2010 to January 09, 2013
<b>Accredited Scope</b>	: Testing Field, see described in the Appendix
<b>Specific Accreditation Program</b>	: Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities



Jay-San Chen  
President, Taiwan Accreditation Foundation  
Date : July 02, 2011

P1, total 22 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix