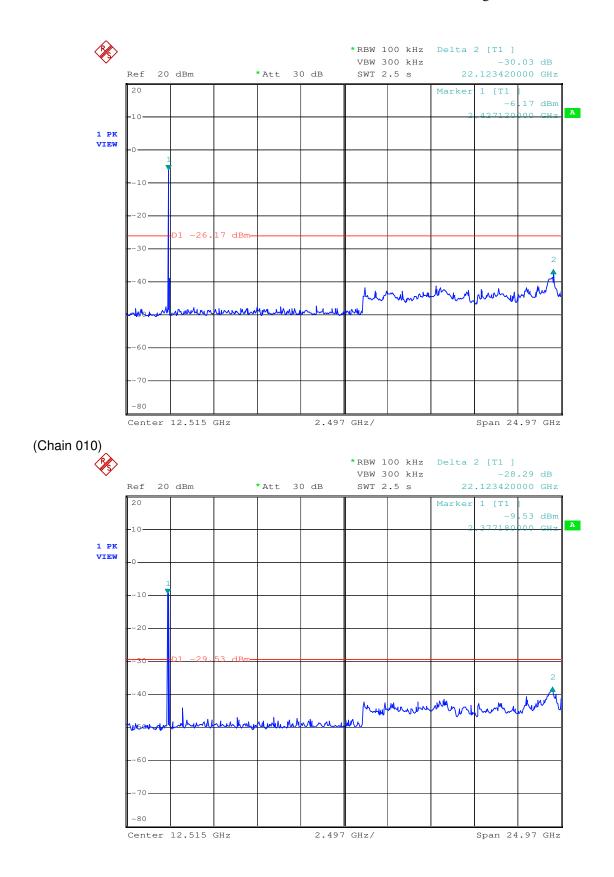


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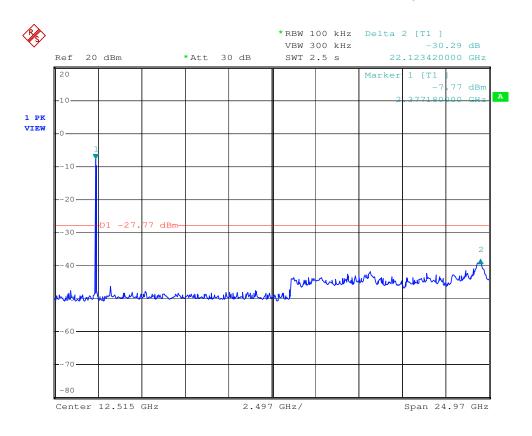


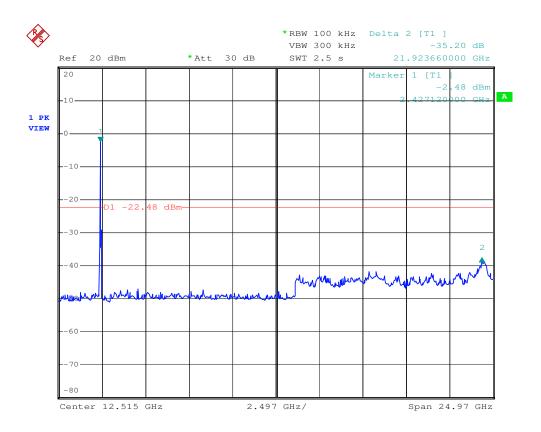


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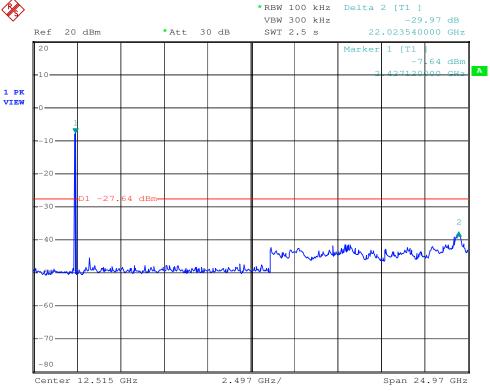


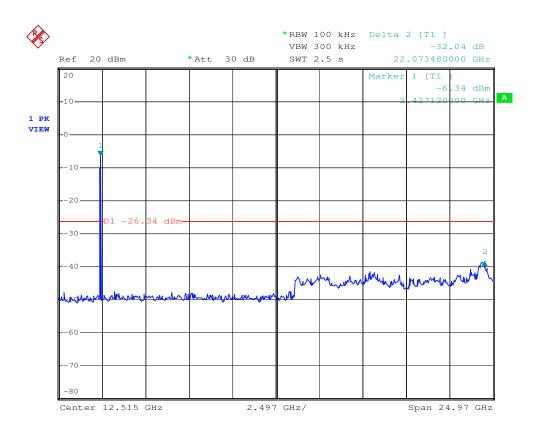
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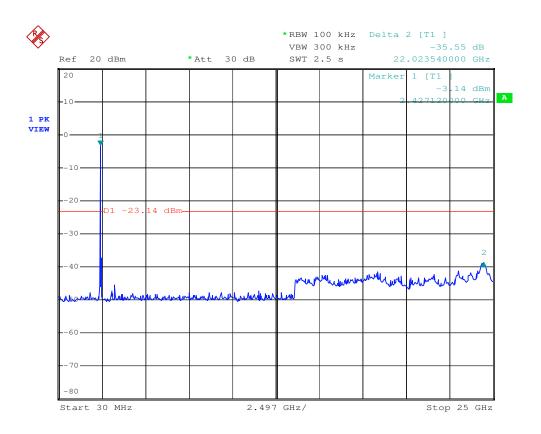




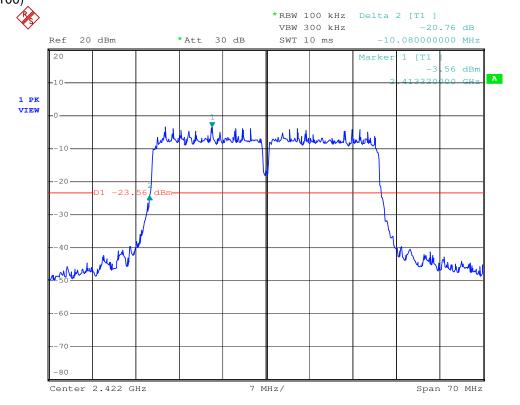
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# Band Edge (Conducted Mode) (Chain 100)

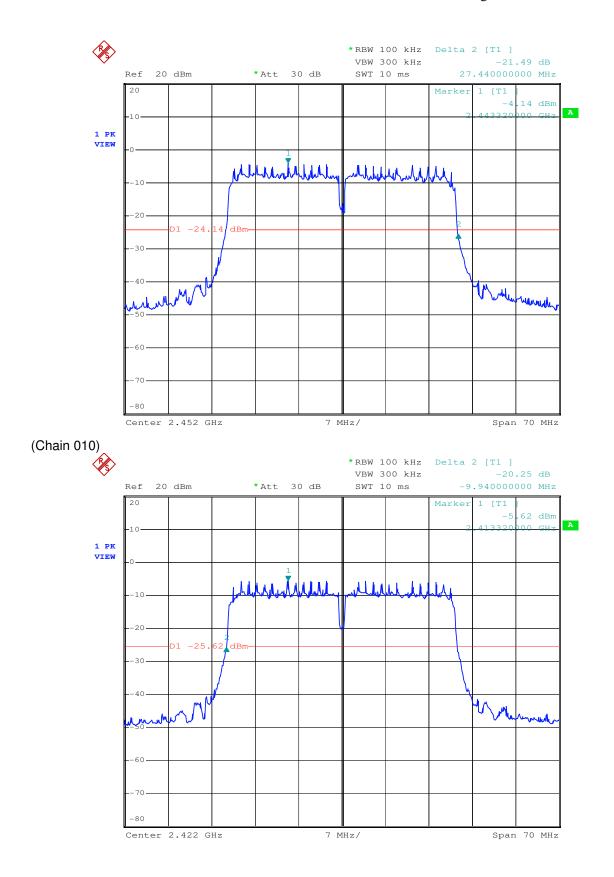




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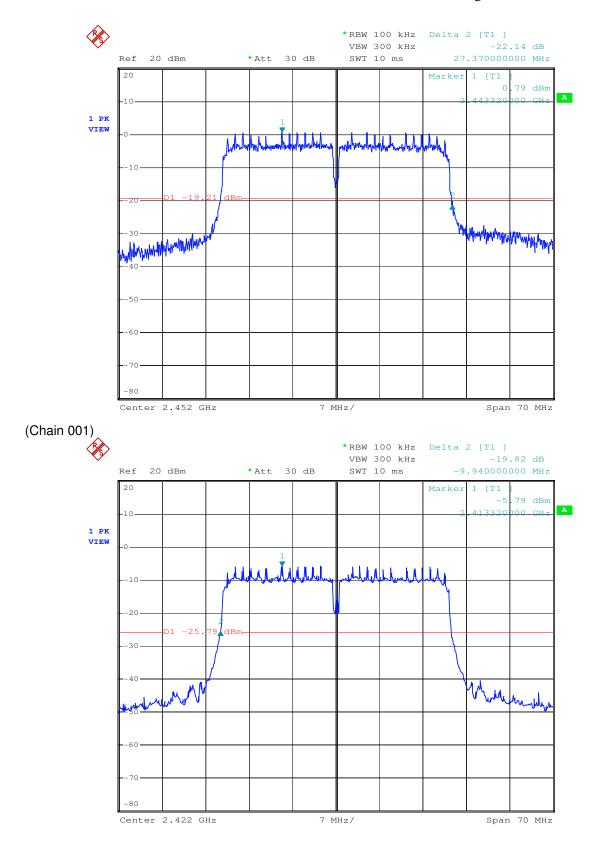




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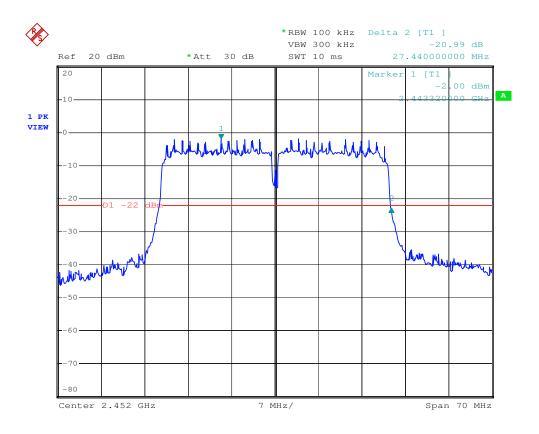




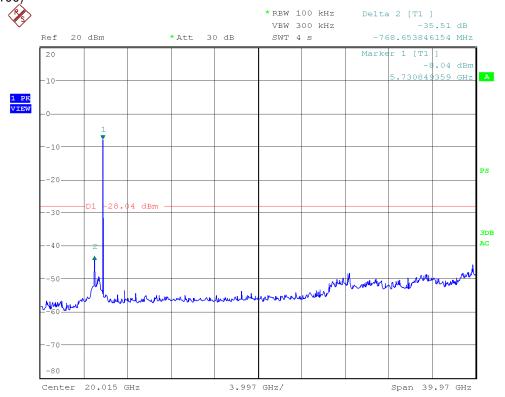
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# 802.11a 6.5Mbps 30MHz-40GHz (Chain 100)

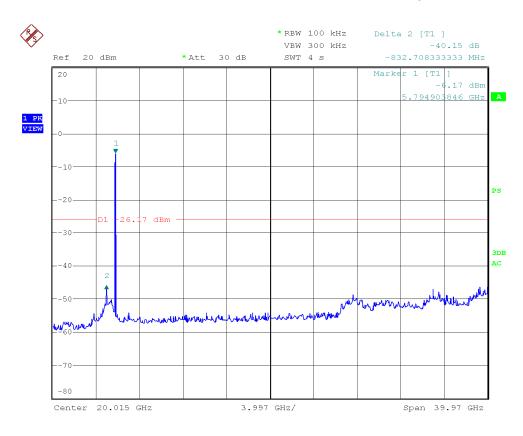


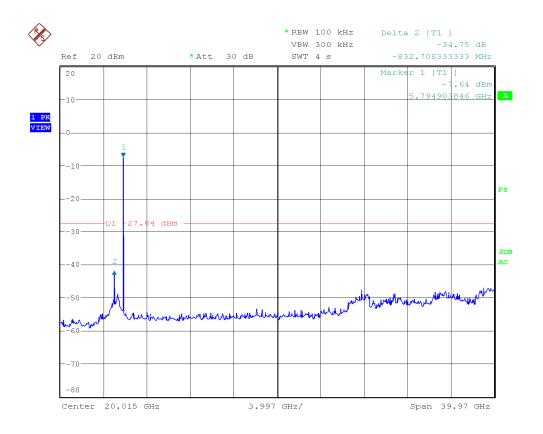


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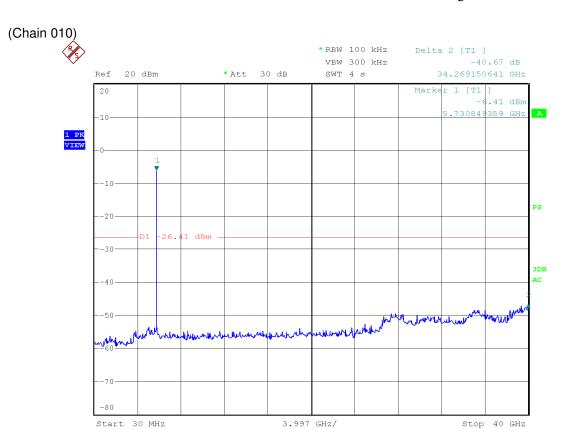


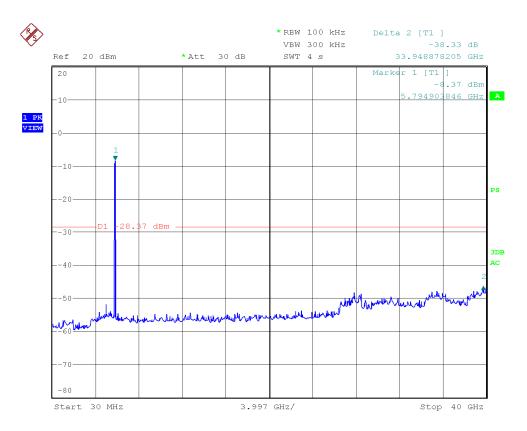


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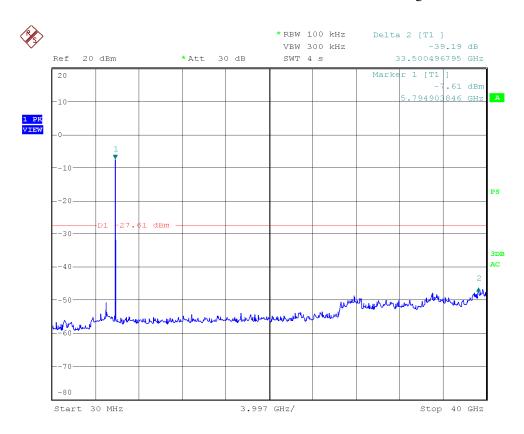
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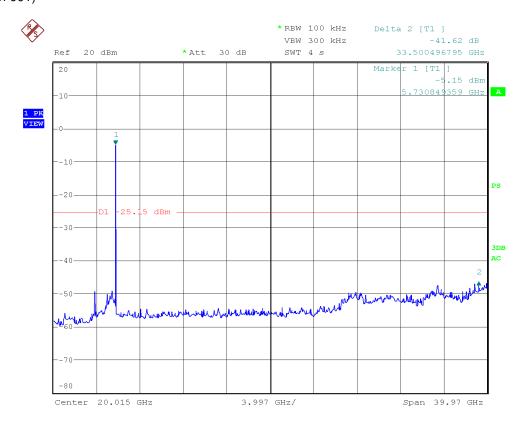
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(Chain 001)

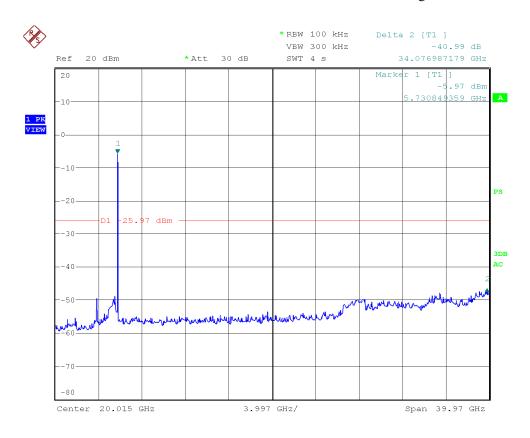


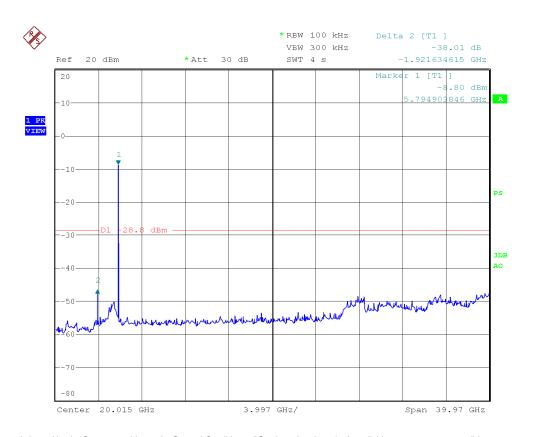


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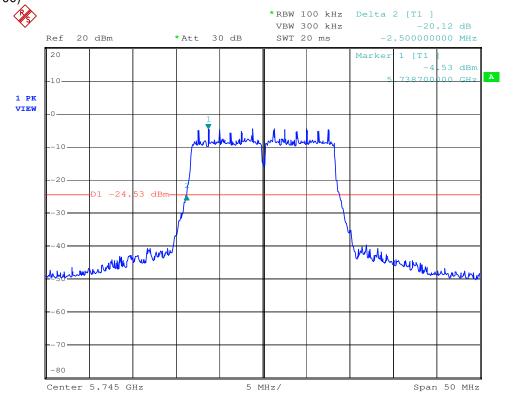


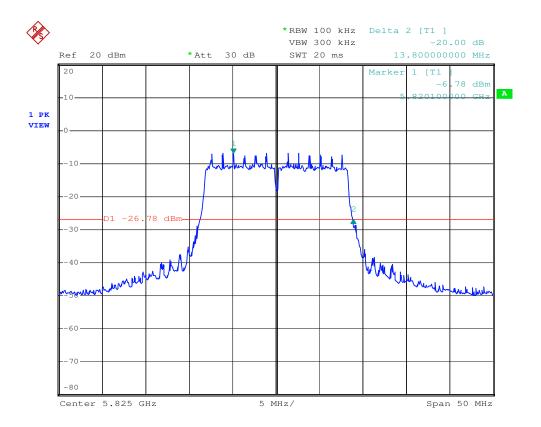
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Band Edge (Conducted Mode) (Chain 100)



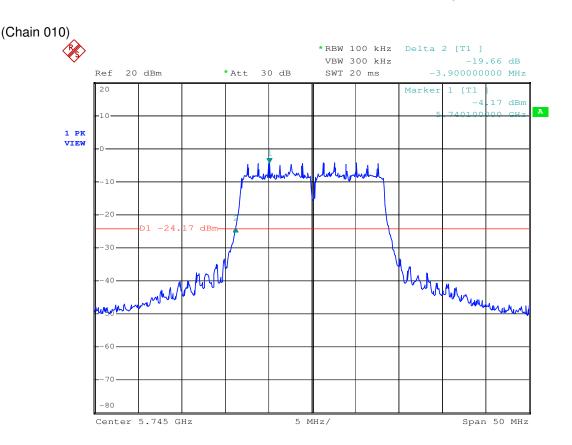


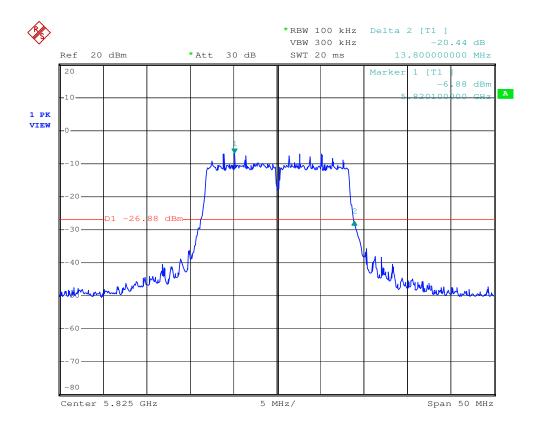


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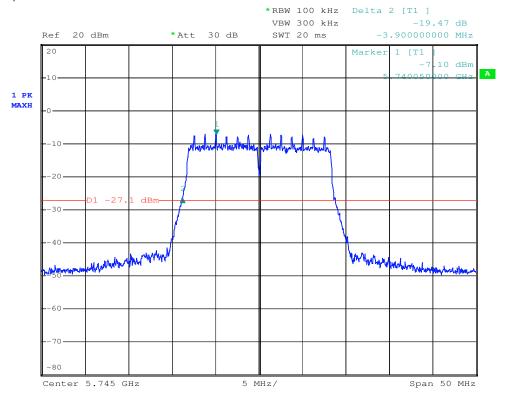


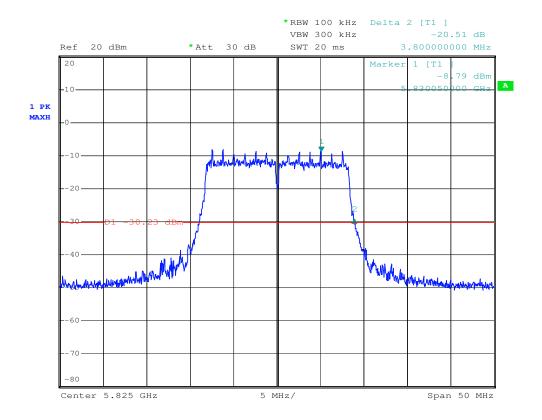
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(Chain 001)





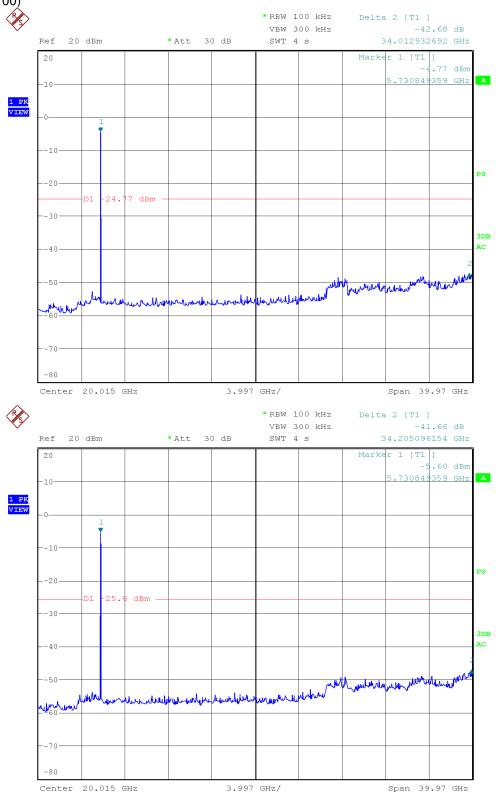


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802.11n 5G Band (20MHz BW) 6.5Mbps 30MHz-40GHz (Chain 100)

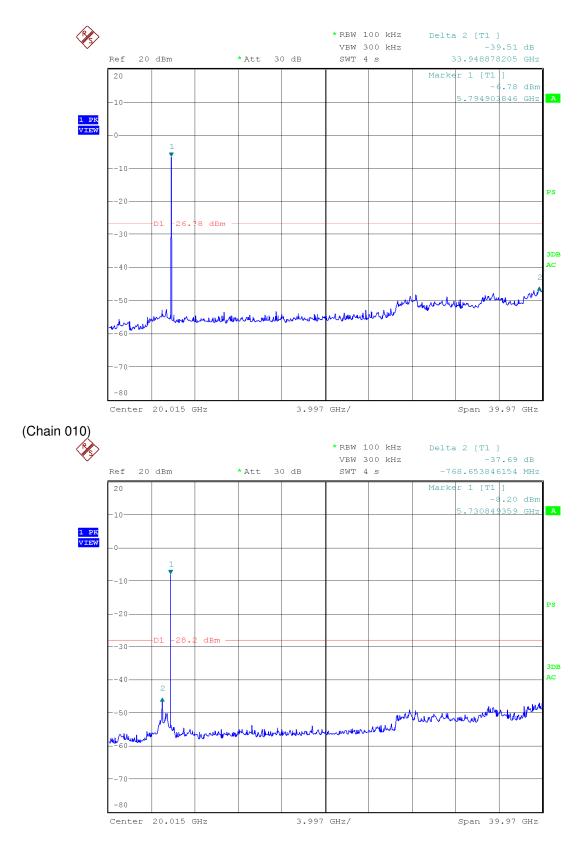




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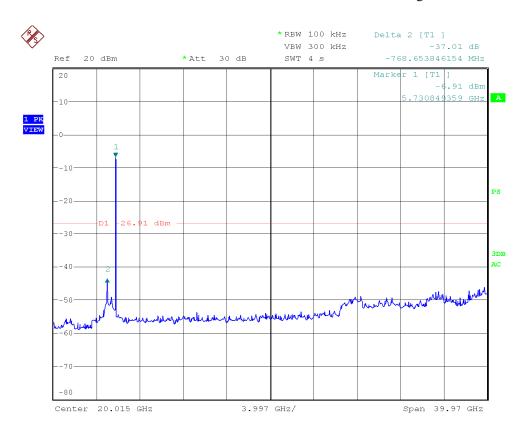


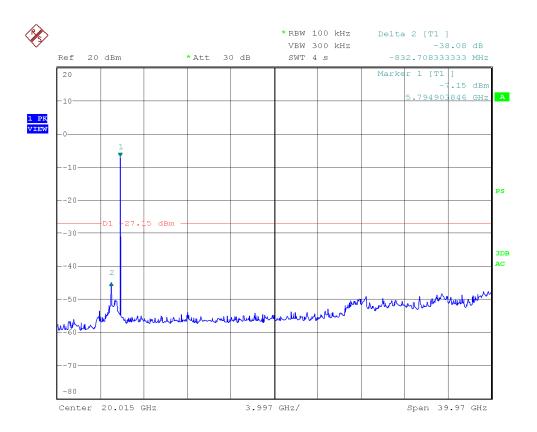


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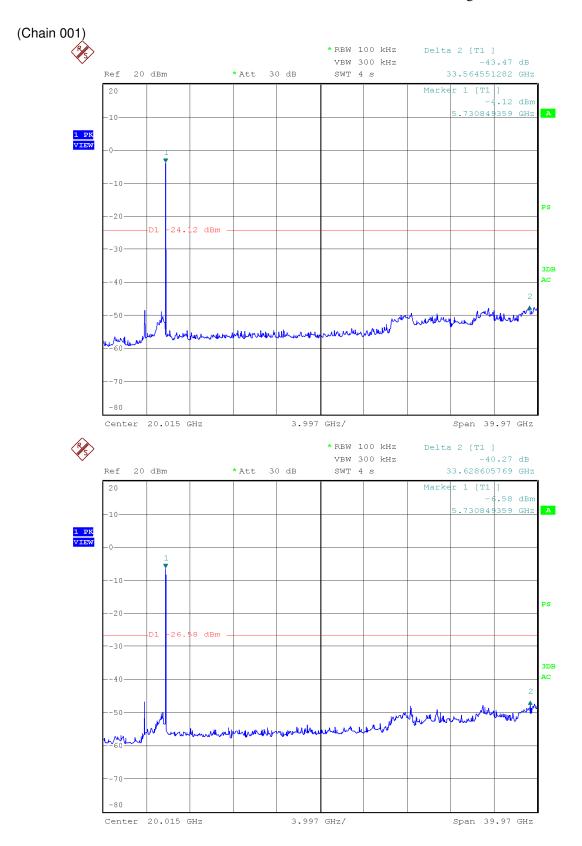




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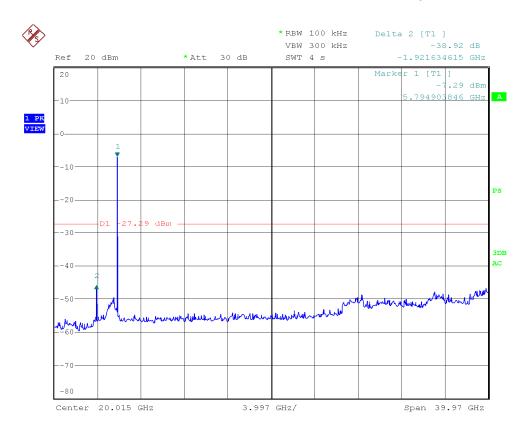




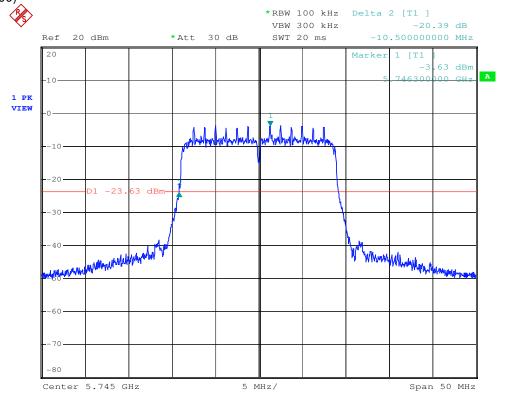
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# Band Edge (Conducted Mode) (Chain 100)





-80

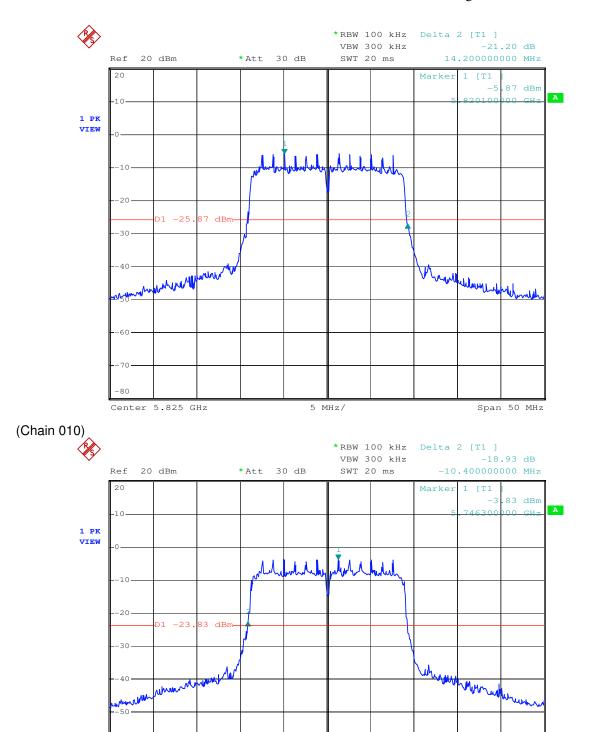
Center 5.745 GHz

## SGS-CSTC Standards Technical Services (Shanghai)Co., Ltd.

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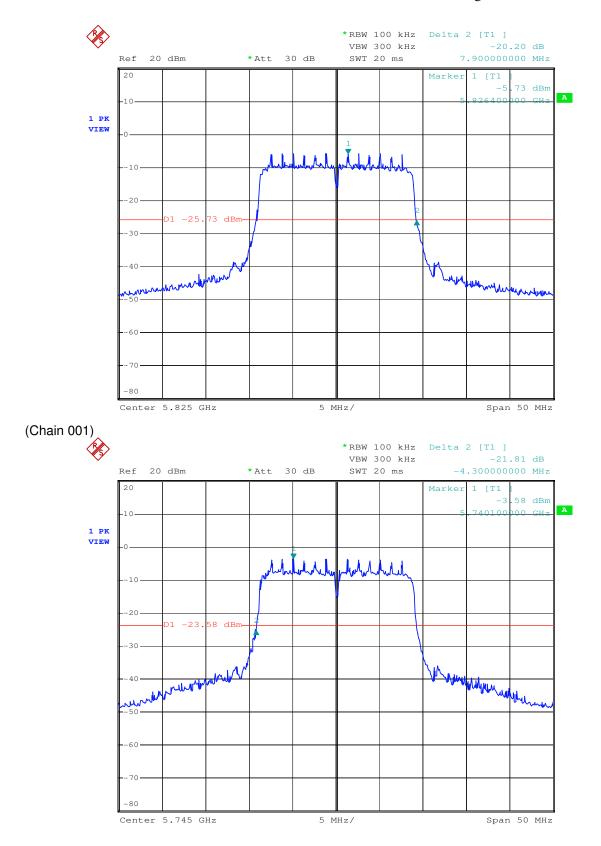




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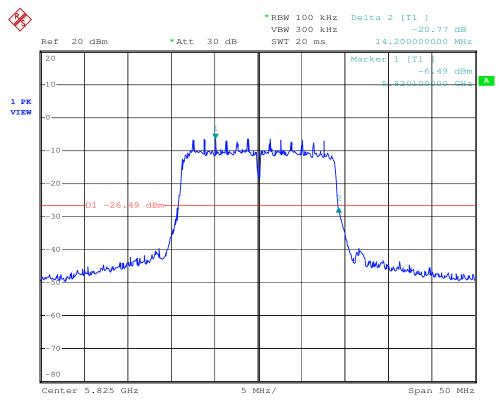




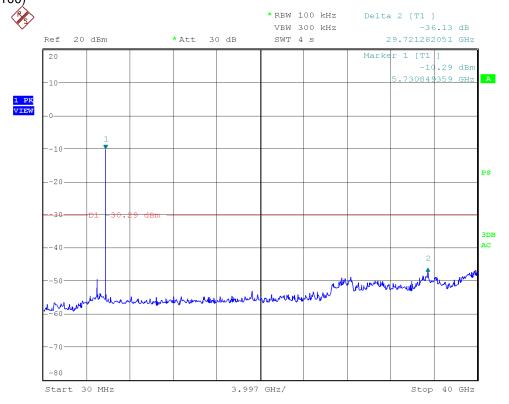
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802.11n 5G Band (40MHz BW) 6.5Mbps 30MHz-40GHz (Chain 100)

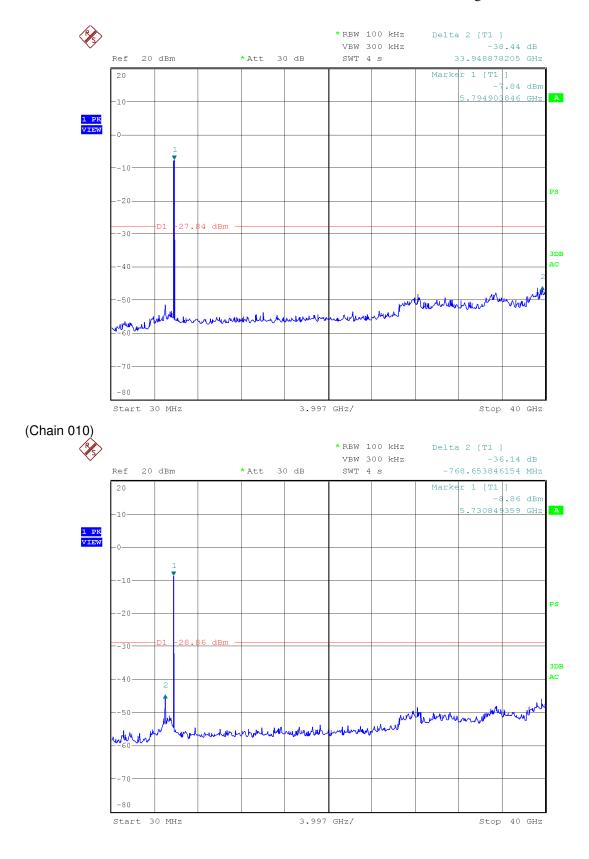




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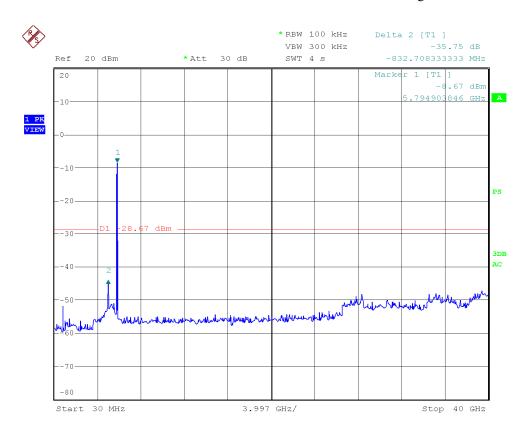


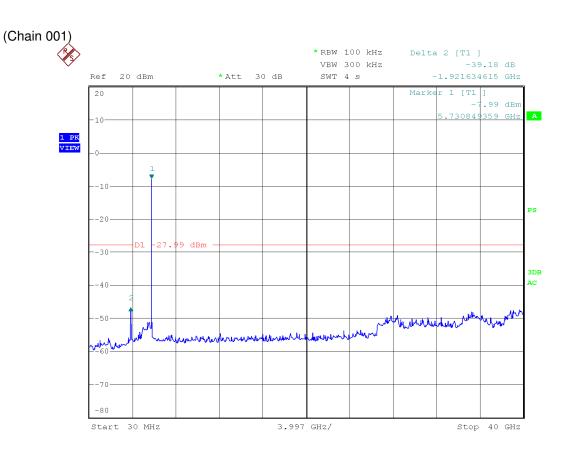


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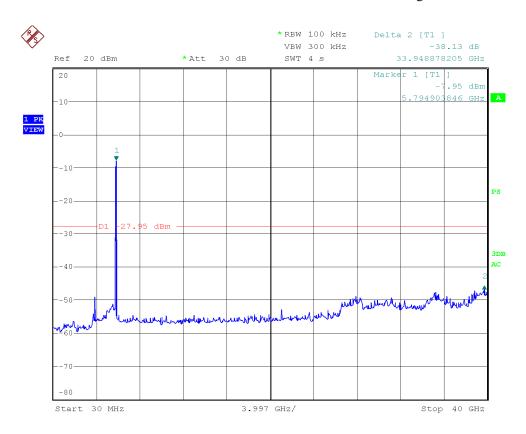




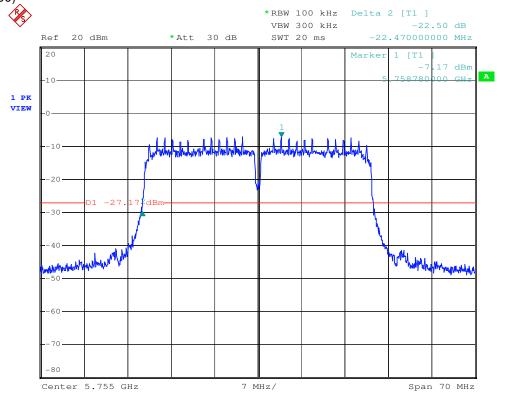
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Band Edge (Conducted Mode) (Chain 100)





-80

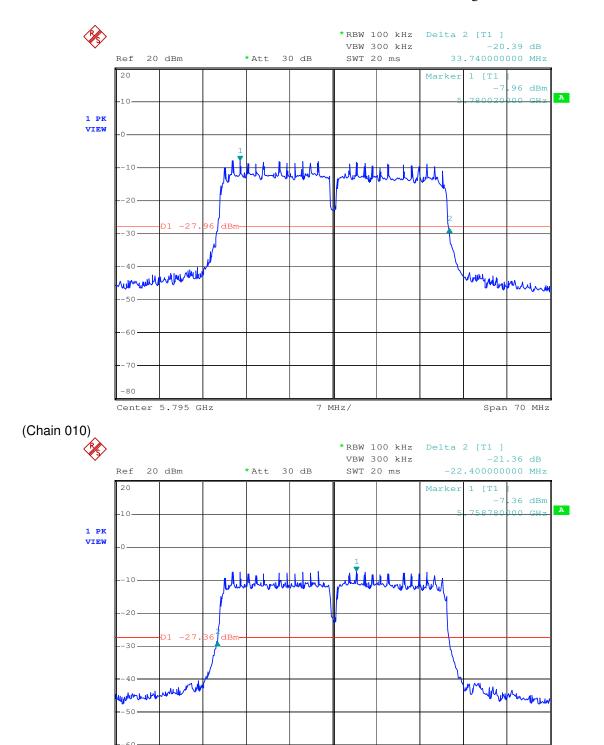
Center 5.755 GHz

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-80

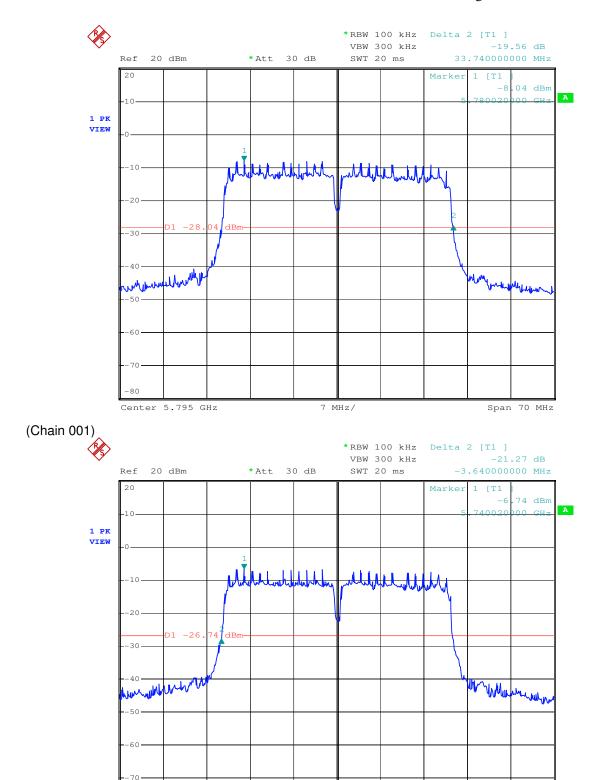
Center 5.755 GHz

## SGS-CSTC Standards Technical Services (Shanghai)Co., Ltd.

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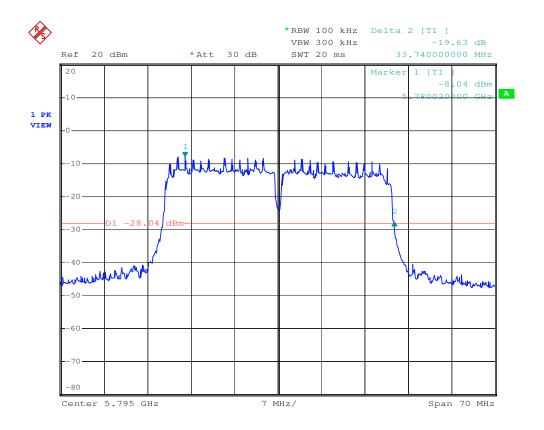




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#### 7.3.6 Radiated Emission Test

**Test Requirement:** FCC Part15 247(c)

**Test date:** April 12,2012 to April 16,2012

Standard Applicable: According to section 15.247(c), all other emissions outside these

bands shall not exceed the general radiated emission limits specified in section15.209(a). And according to section 15.33(a)(1), for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the

highest fundamental frequency or to 40GHz, which is lower.

Frequencies (MHz)	Field strength (microvolts/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

#### Measurement Procedure:

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.

Test instrumentation resolution bandwidth 120 kHz and Quasi-Peak detector applies (30 MHz - 1000 MHz). 1MHz resolution bandwidth and Peak detector apply (1000 MHz – 25GHz) Above 1GHz

- (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
- (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until all frequency measured were complete.
- 7. The field strength of spurious emission was measured in the following position antenna lie-down position (X, Y axis). The worst emission was found in 802.11b 1Mbps and 802.11g 6Mbps and 802.11a, 802.11n 6.5Mbps and the wrost case was recored.

#### NOTE:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

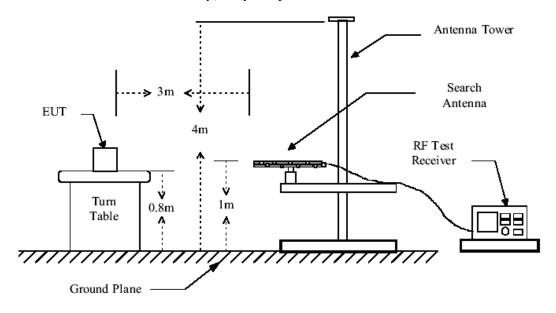


#### FCC ID: RFHWIFI-RT3593-DB

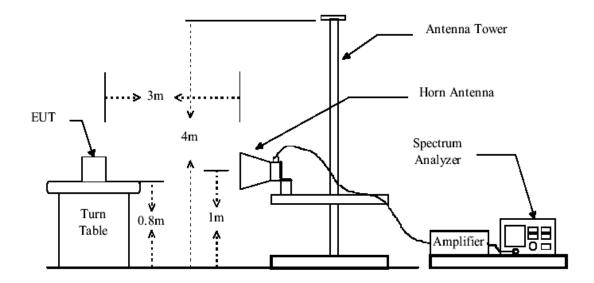
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#### Radiated Test Set-up: Radiated Emission Test Set-up, Frequency Below 1000MHz



#### Radiated Emission Test Set-up Frequency Over 1GHz





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#### 4.3.6.1 TEST RESULTS (With Dipole Antenna)

BELOW 1GHz WORST-CASE DATA: 802.11n (20MHz) 6.5Mbps OFDM MODULATION

30MHz~1GHz Spurious Emissions .Quasi-Peak Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
60.9984	40.8	-10.2	30.6	40.0	-9.4	Horizontal
79.6192	43.6	-13.2	30.4	40.0	-9.6	Horizontal
85.5408	40.7	-13.2	27.5	40.0	-12.5	Horizontal
200.0141	50.4	-10.0	40.4	43.5	-3.1	Horizontal
294.9186	53.5	-8.8	44.7	46.0	-1.3	Horizontal
899.9864	38.9	2.5	41.4	46.0	-4.6	Horizontal
60.6969	40.3	-10.2	30.1	40.0	-9.9	Vertical
67.6091	37.2	-11.4	25.8	40.0	-14.2	Vertical
112.0840	37.3	-11.1	26.2	43.5	-17.3	Vertical
200.0160	46.2	-12.0	34.2	43.5	-9.3	Vertical
700.0347	40.5	-0.2	40.3	46.0	-5.7	Vertical
900.0190	37.1	2.5	39.6	46.0	-6.4	Vertical

#### **REMARKS:**

- 1. Emission level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
- 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission level Limit value.

# ABOVE 1GHz WORST-CASE DATA: 802.11b 1Mbps DSSS MODULATION (Chain 100)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.78	-14.9	44.88	74.0	-29.12	Horizontal
4824.00	45.88	-5.8	40.08	74.0	-33.92	Horizontal
1299.63	63.73	-14.9	48.83	74.0	-25.17	Vertical
4824.00	47.00	-5.8	41.20	74.0	-32.80	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.02	-14.9	40.12	54.0	-13.88	Horizontal
4824.00	43.03	-5.8	37.23	54.0	-16.77	Horizontal
1299.63	57.99	-14.9	43.09	54.0	-10.91	Vertical
4824.00	43.95	-5.8	38.15	54.0	-15.85	Vertical

#### Channel 6 2437MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.17	-14.9	45.27	74.0	-28.73	Horizontal
4874.00	46.93	-5.8	41.13	74.0	-32.87	Horizontal
1299.63	60.99	-14.9	46.09	74.0	-27.91	Vertical
4874.00	47.99	-5.8	42.19	74.0	-31.81	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Tariz~ZJariz C	Tanz-23anz opunous Emissions : Average Detector Measurement							
Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization		
1299.63	57.58	-14.9	42.68	54.0	-11.32	Horizontal		
4874.00	44.39	-5.8	38.59	54.0	-15.41	Horizontal		
1299.63	58.71	-14.9	43.81	54.0	-10.19	Vertical		
4874.00	45.56	-5.8	39.76	54.0	-14.24	Vertical		

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.13	-14.9	45.23	74.0	-28.77	Horizontal
4924.00	46.12	-5.8	40.32	74.0	-33.68	Horizontal
1299.63	62.93	-14.9	48.03	74.0	-25.97	Vertical
4924.00	47.59	-5.8	41.79	74.0	-32.21	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	58.08	-14.9	43.18	54.0	-10.82	Horizontal
4924.00	43.55	-5.8	37.75	54.0	-16.25	Horizontal
1299.63	61.36	-14.9	46.46	54.0	-7.54	Vertical
4924.00	45.48	-5.8	39.68	54.0	-14.32	Vertical

#### (Chain 010)

#### Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.82	-14.9	45.92	74.0	-28.08	Horizontal
4824.00	47.59	-5.8	41.79	74.0	-32.21	Horizontal
1299.63	62.29	-14.9	47.39	74.0	-26.61	Vertical
4824.00	47.99	-5.8	42.19	74.0	-31.81	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.64	-14.9	42.74	54.0	-11.26	Horizontal
4824.00	43.96	-5.8	38.16	54.0	-15.84	Horizontal
1299.63	59.18	-14.9	44.28	54.0	-9.72	Vertical
4824.00	44.53	-5.8	38.73	54.0	-15.27	Vertical



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#### Channel 6 2437MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	61.05	-14.9	46.15	74.0	-27.85	Horizontal
4874.00	48.18	-5.8	42.38	74.0	-31.62	Horizontal
1299.63	60.39	-14.9	45.49	74.0	-28.51	Vertical
4874.00	49.07	-5.8	43.27	74.0	-30.73	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	58.17	-14.9	43.27	54.0	-10.73	Horizontal
4874.00	44.95	-5.8	39.15	54.0	-14.85	Horizontal
1299.63	56.98	-14.9	42.08	54.0	-11.92	Vertical
4874.00	47.06	-5.8	41.26	54.0	-12.74	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	61.71	-14.9	46.81	74.0	-27.19	Horizontal
4924.00	47.09	-5.8	41.29	74.0	-32.71	Horizontal
1299.63	59.04	-14.9	44.14	74.0	-29.86	Vertical
4924.00	52.09	-5.8	46.29	74.0	-27.71	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.03	-14.9	44.13	54.0	-9.87	Horizontal
4924.00	44.54	-5.8	38.74	54.0	-15.26	Horizontal
1299.63	55.11	-14.9	40.21	54.0	-13.79	Vertical
4924.00	48.37	-5.8	42.57	54.0	-11.43	Vertical



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(Chain 001) Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	61.97	-14.9	47.07	74.0	-26.93	Horizontal
4824.00	48.11	-5.8	42.31	74.0	-31.69	Horizontal
1299.63	60.10	-14.9	45.20	74.0	-28.80	Vertical
4824.00	49.43	-5.8	43.63	74.0	-30.37	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.29	-14.9	44.39	54.0	-9.61	Horizontal
4824.00	46.08	-5.8	40.28	54.0	-13.72	Horizontal
1299.63	58.30	-14.9	43.40	54.0	-10.60	Vertical
4824.00	46.37	-5.8	40.57	54.0	-13.43	Vertical

#### Channel 6 2437MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	63.02	-14.9	48.12	74.0	-25.88	Horizontal
4874.00	48.25	-5.8	42.45	74.0	-31.55	Horizontal
1299.63	61.09	-14.9	46.19	74.0	-27.81	Vertical
4874.00	48.58	-5.8	42.78	74.0	-31.22	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.76	-14.9	45.86	54.0	-8.14	Horizontal
4874.00	45.03	-5.8	39.23	54.0	-14.77	Horizontal
1299.63	56.97	-14.9	42.07	54.0	-11.93	Vertical
4874.00	45.30	-5.8	39.50	54.0	-14.50	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	62.71	-14.9	47.81	74.0	-26.19	Horizontal
4924.00	49.07	-5.8	43.27	74.0	-30.73	Horizontal
1299.63	60.20	-14.9	45.30	74.0	-28.70	Vertical
4924.00	48.96	-5.8	43.16	74.0	-30.84	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.65	-14.9	44.75	54.0	-9.25	Horizontal
4924.00	46.33	-5.8	40.53	54.0	-13.47	Horizontal
1299.63	57.51	-14.9	42.61	54.0	-11.39	Vertical
4924.00	46.63	-5.8	40.83	54.0	-13.17	Vertical



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# ABOVE 1GHz WORST-CASE DATA: 802.11g 6Mbps OFDM MODULATION (Chain 100)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.78	-14.9	44.88	74.0	-29.12	Horizontal
4824.00	46.05	-5.8	40.25	74.0	-33.75	Horizontal
1499.38	61.97	-13.6	48.37	74.0	-25.63	Vertical
4824.00	47.43	-5.8	41.63	74.0	-32.37	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	56.42	-14.9	41.52	54.0	-12.48	Horizontal
4824.00	42.97	-5.8	37.17	54.0	-16.83	Horizontal
1299.63	59.28	-14.9	44.38	54.0	-9.62	Vertical
4824.00	44.32	-5.8	38.52	54.0	-15.48	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.41	-14.9	45.51	74.0	-28.49	Horizontal
4874.00	47.18	-5.8	41.38	74.0	-32.62	Horizontal
1299.63	63.77	-14.9	48.87	74.0	-25.13	Vertical
4874.00	48.10	-5.8	42.30	74.0	-31.70	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.27	-14.9	42.37	54.0	-11.63	Horizontal
4874.00	43.95	-5.8	38.15	54.0	-15.85	Horizontal
1299.63	60.13	-14.9	45.23	54.0	-8.77	Vertical
4874.00	44.96	-5.8	39.16	54.0	-14.84	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.17	-14.9	44.27	74.0	-29.73	Horizontal
4924.00	45.99	-5.8	40.19	74.0	-33.81	Horizontal
1299.63	63.35	-14.9	48.45	74.0	-25.55	Vertical
4924.00	47.32	-5.8	41.52	74.0	-32.48	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	56.33	-14.9	41.43	54.0	-12.57	Horizontal
4924.00	42.83	-5.8	37.03	54.0	-16.97	Horizontal
1299.63	60.11	-14.9	45.21	54.0	-8.79	Vertical
4924.00	43.98	-5.8	38.18	54.0	-15.82	Vertical



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(Chain 010) Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.03	-14.9	45.13	74.0	-28.87	Horizontal
4824.00	46.82	-5.8	41.02	74.0	-32.98	Horizontal
1299.63	63.47	-14.9	48.57	74.0	-25.43	Vertical
4824.00	46.67	-5.8	40.87	74.0	-33.13	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.10	-14.9	42.20	54.0	-11.80	Horizontal
4824.00	43.98	-5.8	38.18	54.0	-15.82	Horizontal
1299.63	60.15	-14.9	45.25	54.0	-8.75	Vertical
4824.00	42.99	-5.8	37.19	54.0	-16.81	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.18	-14.9	45.28	74.0	-28.72	Horizontal
4874.00	47.73	-5.8	41.93	74.0	-32.07	Horizontal
1299.63	63.44	-14.9	48.54	74.0	-25.46	Vertical
4874.00	46.96	-5.8	41.16	74.0	-32.84	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.09	-14.9	42.19	54.0	-11.81	Horizontal
4874.00	44.65	-5.8	38.85	54.0	-15.15	Horizontal
1299.63	60.18	-14.9	45.28	54.0	-8.72	Vertical
4874.00	44.00	-5.8	38.20	54.0	-15.80	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.08	-14.9	45.18	74.0	-28.82	Horizontal
4924.00	46.77	-5.8	40.97.	74.0	-33.03	Horizontal
1299.63	62.86	-14.9	47.96	74.0	-26.04	Vertical
4924.00	47.73	-5.8	41.93	74.0	-32.07	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.63	-14.9	42.73	54.0	-11.27	Horizontal
4924.00	43.39	-5.8	37.59	54.0	-16.41	Horizontal
1299.63	59.58	-14.9	44.68	54.0	-9.32	Vertical
4924.00	43.92	-5.8	38.12	54.0	-15.88	Vertical



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(Chain 001) Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.07	-14.9	45.17	74.0	-28.83	Horizontal
4824.00	46.31	-5.8	40.51	74.0	-33.49	Horizontal
1299.63	63.83	-14.9	48.93	74.0	-25.07	Vertical
4824.00	47.06	-5.8	41.26	74.0	-32.74	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.63	-14.9	42.73	54.0	-11.27	Horizontal
4824.00	43.32	-5.8	37.52	54.0	-16.48	Horizontal
1299.63	60.09	-14.9	45.19	54.0	-8.81	Vertical
4824.00	44.00	-5.8	38.20	54.0	-15.80	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.61	-14.9	45.71	74.0	-28.29	Horizontal
4874.00	47.78	-5.8	41.98	74.0	-32.02	Horizontal
1299.63	63.47	-14.9	48.57	74.0	-25.43	Vertical
4874.00	46.93	-5.8	41.13	74.0	-32.87	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.53	-14.9	42.63	54.0	-11.37	Horizontal
4874.00	44.56	-5.8	38.76	54.0	-15.24	Horizontal
1299.63	60.39	-14.9	45.49	54.0	-8.51	Vertical
4874.00	44.07	-5.8	38.27	54.0	-15.73	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	61.02	-14.9	46.12	74.0	-27.88	Horizontal
4924.00	47.31	-5.8	41.51	74.0	-32.49	Horizontal
1299.63	63.44	-14.9	48.54	74.0	-25.46	Vertical
4924.00	47.76	-5.8	41.96	74.0	-32.04	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	58.22	-14.9	43.32	54.0	-10.68	Horizontal
4924.00	44.73	-5.8	38.93	54.0	-15.07	Horizontal
1299.63	60.13	-14.9	45.23	54.0	-8.77	Vertical
4924.00	44.40	-5.8	38.60	54.0	-15.40	Vertical



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## ABOVE 1GHz WORST-CASE DATA: 802.11n 2.4G (20MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

IGHZ~25GHZ S	TGHZ~25GHZ Spurious Emissions .Peak Detector Measurement								
Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization			
1299.63	60.27	-14.9	45.37	74.0	-28.63	Horizontal			
4824.00	45.83	-5.8	40.03	74.0	-33.97	Horizontal			
1299.63	63.81	-14.9	48.91	74.0	-25.09	Vertical			
4824.00	47.07	-5.8	41.27	74.0	-32.73	Vertical			

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.06	-14.9	42.16	54.0	-11.84	Horizontal
4824.00	43.35	-5.8	37.55	54.0	-16.45	Horizontal
1299.63	59.93	-14.9	45.03	54.0	-8.97	Vertical
4824.00	44.09	-5.8	38.29	54.0	-15.71	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.95	-14.9	45.05	74.0	-28.95	Horizontal
4874.00	46.22	-5.8	40.42	74.0	-33.58	Horizontal
1299.63	62.99	-14.9	48.09	74.0	-25.91	Vertical
4874.00	48.30	-5.8	42.50	74.0	-31.50	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.03	-14.9	42.13	54.0	-11.87	Horizontal
4874.00	43.49	-5.8	37.69	54.0	-16.31	Horizontal
1299.63	59.75	-14.9	44.85	54.0	-9.15	Vertical
4874.00	45.21	-5.8	39.41	54.0	-14.59	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.92	-14.9	45.02	74.0	-28.98	Horizontal
4924.00	46.87	-5.8	41.07	74.0	-32.93	Horizontal
1299.63	63.35	-14.9	48.45	74.0	-25.55	Vertical
4924.00	46.01	-5.8	40.21	74.0	-33.79	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.68	-14.9	42.78	54.0	-11.22	Horizontal
4924.00	43.97	-5.8	38.17	54.0	-15.83	Horizontal
1299.63	60.22	-14.9	45.32	54.0	-8.68	Vertical
4924.00	43.20	-5.8	37.40	54.0	-16.60	Vertical



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## ABOVE 1GHz WORST-CASE DATA: 802.11n 2.4G (40MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 1 2422MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

IGHZ~ZSGHZ S	TGnz~25Gnz Spurious Emissions .Peak Detector Measurement								
Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization			
1499.38	62.99	-13.6	49.39	74.0	-24.61	Horizontal			
4844.00	46.82	-5.8	41.02	74.0	-32.98	Horizontal			
1499.38	62.89	-13.6	49.29	74.0	-24.71	Vertical			
4824.00	46.18	-5.8	40.38	74.0	-33.62	Vertical			

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	61.53	-14.9	46.63	54.0	-7.37	Horizontal
4824.00	43.21	-5.8	37.41	54.0	-16.59	Horizontal
1299.63	61.47	-14.9	46.57	54.0	-7.43	Vertical
4824.00	42.75	-5.8	36.95	54.0	-17.05	Vertical

#### Channel 4 2437MHz

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	64.29	-14.9	49.39	74.0	-24.61	Horizontal
4874.00	45.61	-5.8	39.81	74.0	-34.19	Horizontal
1299.63	66.90	-14.9	52.00	74.0	-22.00	Vertical
4874.00	47.36	-5.8	41.56	74.0	-32.44	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	61.07	-14.9	46.17	54.0	-7.83	Horizontal
4874.00	41.08	-5.8	35.28	54.0	-18.72	Horizontal
1299.63	63.06	-14.9	48.16	54.0	-5.84	Vertical
4874.00	43.15	-5.8	37.35	54.0	-16.65	Vertical

#### Channel 7 2452MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.05	-14.9	45.15	74.0	-28.85	Horizontal
4924.00	46.06	-5.8	40.26	74.0	-33.74	Horizontal
1499.38	62.55	-13.6	48.95	74.0	-25.05	Vertical
4924.00	46.08	-5.8	40.28	74.0	-33.72	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.63	-14.9	42.73	54.0	-11.27	Horizontal
4924.00	42.31	-5.8	36.51	54.0	-17.49	Horizontal
1299.63	60.58	-14.9	45.68	54.0	-8.32	Vertical
4924.00	42.02	-5.8	36.22	54.0	-17.78	Vertical



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# ABOVE 1GHz WORST-CASE DATA: 802.11a 6.5Mbps OFDM MODULATION (Chain 111)

Channel 149 5745MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	55.74	-13.6	42.14	74.0	-31.86	Horizontal
11490.00	43.62	6.7	50.32	74.0	-23.68	Horizontal
1899.30	60.18	-13.1	47.08	74.0	-26.92	Vertical
11490.00	43.75	6.7	50.45	74.0	-23.55	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	50.68	-13.6	37.08	54.0	-16.92	Horizontal
11490.00	32.51	6.7	39.21	54.0	-14.79	Horizontal
1899.30	55.47	-13.1	42.37	54.0	-11.63	Vertical
11490.00	32.42	6.7	39.12	54.0	-14.88	Vertical

#### Channel 157 5785MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	55.99	-13.6	42.39	74.0	-31.61	Horizontal
11570.00	43.58	6.7	50.28	74.0	-23.72	Horizontal
1899.30	60.25	-13.1	47.15	74.0	-26.85	Vertical
11570.00	44.11	6.7	50.81	74.0	-23.19	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	50.87	-13.6	37.27	54.0	-16.73	Horizontal
11570.00	33.45	6.7	40.15	54.0	-13.85	Horizontal
1899.30	56.36	-13.1	43.26	54.0	-10.74	Vertical
11570.00	32.64	6.7	39.34	54.0	-14.66	Vertical

#### Channel 165 5825MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	56.81	-13.6	43.21	74.0	-30.79	Horizontal
11570.00	43.76	6.7	50.46	74.0	-23.54	Horizontal
1899.30	60.93	-13.1	47.83	74.0	-26.17	Vertical
11570.00	43.55	6.7	50.25	74.0	-23.75	Vertical

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	49.75	-13.6	36.15	54.0	-17.85	Horizontal
11570.00	33.06	6.7	39.76	54.0	-14.24	Horizontal
1899.30	55.24	-13.1	42.14	54.0	-11.86	Vertical
11570.00	31.55	6.7	38.25	54.0	-15.75	Vertical



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## ABOVE 1GHz WORST-CASE DATA: 802.11n 5G (20MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 149 5745MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

IGHZ~25GHZ S	IGHZ~25GHZ Spurious Emissions .Peak Detector Measurement								
Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization			
1499.80	57.77	-13.6	44.17	74.0	-29.83	Horizontal			
11490.00	44.62	6.7	51.32	74.0	-22.68	Horizontal			
1899.30	60.22	-13.1	47.12	74.0	-26.88	Vertical			
11490.00	43.76	6.7	50.46	74.0	-23.54	Vertical			

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	49.83	-13.6	36.23	54.0	-17.77	Horizontal
11490.00	32.99	6.7	39.69	54.0	-14.31	Horizontal
1899.30	54.62	-13.1	41.52	54.0	-12.48	Vertical
11490.00	30.44	6.7	37.14	54.0	-16.86	Vertical

#### Channel 157 5785MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	58.62	-13.6	45.02	74.0	-28.98	Horizontal
11570.00	43.44	6.7	50.14	74.0	-23.86	Horizontal
1899.30	60.15	-13.1	47.05	74.0	-26.95	Vertical
11570.00	44.81	6.7	51.51	74.0	-22.49	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	50.78	-13.6	37.18	54.0	-16.82	Horizontal
11570.00	32.44	6.7	39.14	54.0	-14.86	Horizontal
1899.30	53.52	-13.1	40.42	54.0	-13.58	Vertical
11570.00	32.15	6.7	38.85	54.0	-15.15	Vertical

#### Channel 165 5825MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	58.70	-13.6	45.10	74.0	-28.90	Horizontal
11650.00	43.98	6.7	50.68	74.0	-23.32	Horizontal
1899.30	60.36	-13.1	47.26	74.0	-26.74	Vertical
11650.00	45.24	6.7	51.94	74.0	-22.06	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	51.29	-13.6	37.69	54.0	-16.31	Horizontal
11650.00	32.54	6.7	39.24	54.0	-14.76	Horizontal
1899.30	53.77	-13.1	40.67	54.0	-13.33	Vertical
11650.00	31.83	6.7	38.53	54.0	-15.47	Vertical



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## ABOVE 1GHz WORST-CASE DATA: 802.11n 5G (40MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 151 5755MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.18	-14.9	44.28	74.0	-29.72	Horizontal
11510.00	44.57	6.7	51.27	74.0	-22.73	Horizontal
1299.63	61.73	-14.9	46.83	74.0	-27.17	Vertical
11510.00	43.97	6.7	50.67	74.0	-23.33	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	50.31	-14.9	35.41	54.0	-18.59	Horizontal
11510.00	33.45	6.7	40.15	54.0	-13.85	Horizontal
1299.63	52.16	-14.9	37.26	54.0	-16.74	Vertical
11510.00	32.57	6.7	39.27	54.0	-14.73	Vertical

#### Channel 159 5795MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	58.18	-14.9	43.28	74.0	-30.72	Horizontal
11590.00	45.76	6.7	52.46	74.0	-21.54	Horizontal
1299.63	61.53	-14.9	46.63	74.0	-27.37	Vertical
11590.00	45.04	6.7	51.74	74.0	-22.26	Vertical



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Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	47.15	-14.9	32.25	54.0	-21.75	Horizontal
11590.00	32.02	6.7	38.72	54.0	-15.28	Horizontal
1299.63	50.19	-14.9	35.29	54.0	-18.71	Vertical
11590.00	33.17	6.7	39.87	54.0	-14.13	Vertical



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#### 4.3.6.2 TEST RESULTS (With PCB Antenna)

BELOW 1GHz WORST-CASE DATA: 802.11n (20MHz) 6.5Mbps OFDM MODULATION

30MHz~1GHz Spurious Emissions .Quasi-Peak Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
63.9259	40.3	-10.2	30.1	40.0	-9.9	Horizontal
81.7421	42.1	-13.2	28.9	40.0	-11.1	Horizontal
86.2154	41.3	-13.2	28.1	40.0	-11.9	Horizontal
201.7529	53.2	-10.0	43.2	43.5	-0.3	Horizontal
301.5274	51.7	-8.8	42.9	46.0	-3.1	Horizontal
842.9464	37.2	2.5	39.7	46.0	-6.3	Horizontal
62.4215	41.5	-10.2	31.3	40.0	-8.7	Vertical
80.5346	37.2	-11.4	25.8	40.0	-14.2	Vertical
113.7593	37.9	-11.1	26.8	43.5	-16.7	Vertical
203.0447	45.1	-12.0	33.1	43.5	-10.4	Vertical
705.7418	40.7	-0.2	40.5	46.0	-5.5	Vertical
799.6483	38.7	2.5	41.2	46.0	-4.8	Vertical

#### **REMARKS:**

- 1. Emission level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
- 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission level Limit value.



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# ABOVE 1GHz WORST-CASE DATA: 802.11b DSSS MODULATION (Chain 100)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.62	-14.9	45.72	74.0	-28.28	Horizontal
4824.00	46.10	-5.8	40.30	74.0	-33.70	Horizontal
1299.63	64.07	-14.9	49.17	74.0	-24.83	Vertical
4824.00	46.08	-5.8	40.28	74.0	-33.72	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	54.13	-14.9	39.23	54.0	-14.77	Horizontal
4824.00	40.94	-5.8	35.14	54.0	-18.86	Horizontal
1299.63	58.24	-14.9	43.34	54.0	-10.66	Vertical
4824.00	41.09	-5.8	35.29	54.0	-18.71	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.06	-14.9	44.16	74.0	-29.84	Horizontal
4874.00	46.31	-5.8	40.51	74.0	-33.49	Horizontal
1299.63	60.52	-14.9	45.62	74.0	-28.38	Vertical
4874.00	47.38	-5.8	41.58	74.0	-32.42	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	56.75	-14.9	41.85	54.0	-12.15	Horizontal
4874.00	41.96	-5.8	36.16	54.0	-17.84	Horizontal
1299.63	57.04	-14.9	42.14	54.0	-11.86	Vertical
4874.00	43.20	-5.8	37.40	54.0	-16.60	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.00	-14.9	45.10	74.0	-28.90	Horizontal
4924.00	45.09	-5.8	39.29	74.0	-34.71	Horizontal
1299.63	62.71	-14.9	47.81	74.0	-26.19	Vertical
4924.00	44.96	-5.8	39.16	74.0	-34.84	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	56.97	-14.9	42.07	54.0	-11.93	Horizontal
4924.00	40.92	-5.8	35.12	54.0	-18.88	Horizontal
1299.63	58.74	-14.9	43.84	54.0	-10.16	Vertical
4924.00	40.86	-5.8	35.06	54.0	-18.94	Vertical



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# ABOVE 1GHz WORST-CASE DATA: 802.11b DSSS MODULATION (Chain 010)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	58.06	-14.9	43.16	74.0	-30.84	Horizontal
4824.00	44.03	-5.8	38.23	74.0	-35.77	Horizontal
1299.63	61.96	-14.9	47.06	74.0	-26.94	Vertical
4824.00	45.96	-5.8	40.16	74.0	-33.84	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	52.42	-14.9	37.52	54.0	-16.48	Horizontal
4824.00	39.97	-5.8	34.17	54.0	-19.83	Horizontal
1299.63	58.18	-14.9	43.28	54.0	-10.72	Vertical
4824.00	41.29	-5.8	35.49	54.0	-18.51	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.76	-14.9	44.86	74.0	-29.14	Horizontal
4874.00	46.59	-5.8	40.79	74.0	-33.21	Horizontal
1299.63	60.11	-14.9	45.21	74.0	-28.79	Vertical
4874.00	47.15	-5.8	41.35	74.0	-32.65	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	56.13	-14.9	41.23	54.0	-12.77	Horizontal
4874.00	42.12	-5.8	36.32	54.0	-17.68	Horizontal
1299.63	57.66	-14.9	42.76	54.0	-11.24	Vertical
4874.00	42.33	-5.8	36.53	54.0	-17.47	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.07	-14.9	44.17	74.0	-29.83	Horizontal
4924.00	42.94	-5.8	37.14	74.0	-36.86	Horizontal
1299.63	60.18	-14.9	45.28	74.0	-28.72	Vertical
4924.00	50.16	-5.8	44.36	74.0	-29.64	Vertical

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	54.98	-14.9	40.08	54.0	-13.92	Horizontal
4924.00	38.31	-5.8	32.51	54.0	-21.49	Horizontal
1299.63	55.09	-14.9	40.19	54.0	-13.81	Vertical
4924.00	45.05	-5.8	39.25	54.0	-14.75	Vertical



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# ABOVE 1GHz WORST-CASE DATA: 802.11b DSSS MODULATION (Chain 001)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	58.15	-14.9	43.25	74.0	-30.75	Horizontal
4824.00	45.67	-5.8	39.87	74.0	-34.13	Horizontal
1299.63	62.59	-14.9	47.69	74.0	-26.31	Vertical
4824.00	50.41	-5.8	44.61	74.0	-29.39	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	53.85	-14.9	38.95	54.0	-15.05	Horizontal
4824.00	40.96	-5.8	35.16	54.0	-18.84	Horizontal
1299.63	58.02	-14.9	43.12	54.0	-10.88	Vertical
4824.00	45.29	-5.8	39.49	54.0	-14.51	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.43	-14.9	44.53	74.0	-29.47	Horizontal
4874.00	46.18	-5.8	40.38	74.0	-33.62	Horizontal
1299.63	62.27	-14.9	47.37	74.0	-26.63	Vertical
4874.00	47.42	-5.8	41.62	74.0	-32.38	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.17	-14.9	40.27	54.0	-13.73	Horizontal
4874.00	41.26	-5.8	35.46	54.0	-18.54	Horizontal
1299.63	58.07	-14.9	43.17	54.0	-10.83	Vertical
4874.00	41.99	-5.8	36.19	54.0	-17.81	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.96	-14.9	46.06	74.0	-27.94	Horizontal
4924.00	45.97	-5.8	40.17	74.0	-33.83	Horizontal
1299.63	63.06	-14.9	48.16	74.0	-25.84	Vertical
4924.00	46.07	-5.8	40.27	74.0	-33.73	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.96	-14.9	41.06	54.0	-12.94	Horizontal
4924.00	41.07	-5.8	35.27	54.0	-18.73	Horizontal
1299.63	58.54	-14.9	43.64	54.0	-10.36	Vertical
4924.00	41.37	-5.8	35.57	54.0	-18.43	Vertical



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# ABOVE 1GHz WORST-CASE DATA: 802.11g OFDM MODULATION (Chain 100)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.93	-14.9	45.03	74.0	-28.97	Horizontal
4824.00	44.92	-5.8	39.12	74.0	-34.88	Horizontal
1299.63	62.11	-14.9	47.21	74.0	-26.79	Vertical
4824.00	46.58	-5.8	40.78	74.0	-33.22	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	54.96	-14.9	40.06	54.0	-13.94	Horizontal
4824.00	40.96	-5.8	35.16	54.0	-18.84	Horizontal
1299.63	57.74	-14.9	42.84	54.0	-11.16	Vertical
4824.00	42.01	-5.8	36.21	54.0	-17.79	Vertical

#### Channel 6 2437MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.21	-14.9	44.31	74.0	-29.69	Horizontal
4874.00	46.32	-5.8	40.52	74.0	-33.48	Horizontal
1299.63	61.06	-14.9	46.16	74.0	-27.84	Vertical
4874.00	47.59	-5.8	41.79	74.0	-32.21	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.06	-14.9	40.16	54.0	-13.84	Horizontal
4874.00	41.01	-5.8	35.21	54.0	-18.79	Horizontal
1299.63	57.28	-14.9	42.38	54.0	-11.62	Vertical
4874.00	43.04	-5.8	37.24	54.0	-16.76	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.13	-14.9	44.23	74.0	-29.77	Horizontal
4924.00	44.97	-5.8	39.17	74.0	-34.83	Horizontal
1299.63	61.15	-14.9	46.25	74.0	-27.75	Vertical
4924.00	46.68	-5.8	40.88	74.0	-33.12	Vertical

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.15	-14.9	40.25	54.0	-13.75	Horizontal
4924.00	41.31	-5.8	35.51	54.0	-18.49	Horizontal
1299.63	56.93	-14.9	42.03	54.0	-11.97	Vertical
4924.00	39.95	-5.8	34.15	54.0	-19.85	Vertical



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(Chain 010) Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.48	-14.9	44.58	74.0	-29.42	Horizontal
4824.00	47.06	-5.8	41.26	74.0	-32.74	Horizontal
1299.63	62.49	-14.9	47.59	74.0	-26.41	Vertical
4824.00	46.67	-5.8	40.87	74.0	-33.13	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dB <sub>µ</sub> V)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	64.63	-14.9	49.73	54.0	-4.27	Horizontal
4824.00	42.34	-5.8	36.54	54.0	-17.46	Horizontal
1299.63	57.53	-14.9	42.63	54.0	-11.37	Vertical
4824.00	42.06	-5.8	36.26	54.0	-17.74	Vertical

#### Channel 6 2437MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.06	-14.9	45.16	74.0	-28.84	Horizontal
4874.00	46.67	-5.8	40.87	74.0	-33.13	Horizontal
1299.63	62.04	-14.9	47.14	74.0	-26.86	Vertical
4874.00	48.27	-5.8	42.47	74.0	-31.53	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	56.17	-14.9	41.27	54.0	-12.73	Horizontal
4874.00	40.83	-5.8	35.03	54.0	-18.97	Horizontal
1299.63	57.06	-14.9	42.16	54.0	-11.84	Vertical
4874.00	43.38	-5.8	37.58	54.0	-16.42	Vertical



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#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.00	-14.9	45.10	74.0	-28.90	Horizontal
4924.00	44.96	-5.8	39.16	74.0	-34.84	Horizontal
1299.63	62.76	-14.9	47.86	74.0	-26.14	Vertical
4924.00	45.86	-5.8	40.06	74.0	-33.94	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.65	-14.9	40.75	54.0	-13.25	Horizontal
4924.00	40.19	-5.8	34.39	54.0	-19.61	Horizontal
1299.63	57.16	-14.9	42.26	54.0	-11.74	Vertical
4924.00	41.01	-5.8	35.21	54.0	-18.79	Vertical

(Chain 001)

#### Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.04	-14.9	45.14	74.0	-28.86	Horizontal
4824.00	46.06	-5.8	40.26	74.0	-33.74	Horizontal
1299.63	63.19	-14.9	48.29	74.0	-25.71	Vertical
4824.00	46.85	-5.8	41.05	74.0	-32.95	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.38	-14.9	40.48	54.0	-13.52	Horizontal
4824.00	40.96	-5.8	35.16	54.0	-18.84	Horizontal
1299.63	58.03	-14.9	43.13	54.0	-10.87	Vertical
4824.00	42.56	-5.8	36.76	54.0	-17.24	Vertical



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#### Channel 6 2437MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.43	-14.9	44.53	74.0	-29.47	Horizontal
4874.00	46.71	-5.8	40.91	74.0	-33.09	Horizontal
1299.63	62.16	-14.9	47.26	74.0	-26.74	Vertical
4874.00	47.27	-5.8	41.47	74.0	-32.53	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	54.16	-14.9	39.26	54.0	-14.74	Horizontal
4874.00	40.55	-5.8	34.75	54.0	-19.25	Horizontal
1299.63	57.01	-14.9	42.11	54.0	-11.89	Vertical
4874.00	42.34	-5.8	36.54	54.0	-17.46	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.08	-14.9	45.18	74.0	-28.82	Horizontal
4924.00	46.25	-5.8	40.45	74.0	-33.55	Horizontal
1299.63	63.52	-14.9	48.62	74.0	-25.38	Vertical
4924.00	47.67	-5.8	41.87	74.0	-32.13	Vertical

Frequency (MHz)	Reading Value (dB <sub>µ</sub> V)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	57.46	-14.9	42.56	54.0	-11.44	Horizontal
4924.00	41.04	-5.8	35.24	54.0	-18.76	Horizontal
1299.63	59.44	-14.9	44.54	54.0	-9.46	Vertical
4924.00	42.99	-5.8	37.19	54.0	-16.81	Vertical



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## ABOVE 1GHz WORST-CASE DATA: 802.11n 2.4G (20MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 1 2412MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

TGHZ~Z3GHZ S	purious Emissi	ions .reak Dete	ector measuremen	ι		
Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.62	-14.9	45.72	74.0	-28.28	Horizontal
4824.00	46.11	-5.8	40.31	74.0	-33.69	Horizontal
1299.63	63.44	-14.9	48.54	74.0	-25.46	Vertical
4824.00	46.17	-5.8	40.37	74.0	-33.63	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.13	-14.9	40.23	54.0	-13.77	Horizontal
4824.00	41.97	-5.8	36.17	54.0	-17.83	Horizontal
1299.63	58.16	-14.9	43.26	54.0	-10.74	Vertical
4824.00	42.27	-5.8	36.47	54.0	-17.53	Vertical

#### Channel 6 2437MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.55	-14.9	45.65	74.0	-28.35	Horizontal
4874.00	47.04	-5.8	41.24	74.0	-32.76	Horizontal
1299.63	61.49	-14.9	46.59	74.0	-27.41	Vertical
4874.00	47.81	-5.8	42.01	74.0	-31.99	Vertical

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.24	-14.9	40.34	54.0	-13.66	Horizontal
4874.00	43.54	-5.8	37.74	54.0	-16.26	Horizontal



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1299.63	57.05	-14.9	42.15	54.0	-11.85	Vertical
4874.00	43.06	-5.8	37.26	54.0	-16.74	Vertical

#### Channel 11 2462MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.63	-14.9	45.73	74.0	-28.27	Horizontal
4924.00	45.95	-5.8	40.15	74.0	-33.85	Horizontal
1299.63	62.77	-14.9	47.87	74.0	-26.13	Vertical
4924.00	47.28	-5.8	41.48	74.0	-32.52	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	54.95	-14.9	40.05	54.0	-13.95	Horizontal
4924.00	41.37	-5.8	35.57	54.0	-18.43	Horizontal
1299.63	56.14	-14.9	41.24	54.0	-12.76	Vertical
4924.00	43.18	-5.8	37.38	54.0	-16.62	Vertical

# ABOVE 1GHz WORST-CASE DATA: 802.11n 2.4G (40MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 1 2422MHz

Frequency (MHz)	Reading Value (dB <sub>µ</sub> V)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.14	-14.9	45.24	74.0	-28.76	Horizontal
4844.00	47.05	-5.8	41.25	74.0	-32.75	Horizontal
1299.63	62.86	-14.9	47.96	74.0	-26.04	Vertical
4844.00	47.42	-5.8	41.62	74.0	-32.38	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	54.96	-14.9	40.06	54.0	-13.94	Horizontal
4844.00	43.38	-5.8	37.58	54.0	-16.42	Horizontal
1299.63	57.07	-14.9	42.17	54.0	-11.83	Vertical
4844.00	42.05	-5.8	36.25	54.0	-17.75	Vertical

#### Channel 4 2437MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	60.53	-14.9	45.63	74.0	-28.37	Horizontal
4874.00	47.72	-5.8	41.92	74.0	-32.08	Horizontal
1299.63	61.64	-14.9	46.74	74.0	-27.26	Vertical
4874.00	48.63	-5.8	42.83	74.0	-31.17	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	56.49	-14.9	41.59	54.0	-12.41	Horizontal
4874.00	41.97	-5.8	36.17	54.0	-17.83	Horizontal
1299.63	56.69	-14.9	41.79	54.0	-12.21	Vertical
4874.00	43.37	-5.8	37.57	54.0	-16.43	Vertical

#### Channel 7 2452MHz

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.06	-14.9	44.16	74.0	-29.84	Horizontal
4910.00	46.58	-5.8	40.78	74.0	-33.22	Horizontal
1299.63	63.05	-14.9	48.15	74.0	-25.85	Vertical
4910.00	47.33	-5.8	41.53	74.0	-32.47	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	55.15	-14.9	40.25	54.0	-13.75	Horizontal
4910.00	42.14	-5.8	36.34	54.0	-17.66	Horizontal
1299.63	56.49	-14.9	41.59	54.0	-12.41	Vertical
4910.00	43.12	-5.8	37.32	54.0	-16.68	Vertical

# ABOVE 1GHz WORST-CASE DATA: 802.11a 6.5Mbps OFDM MODULATION (Chain 111)

Channel 149 5745MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	55.74	-13.6	42.14	74.0	-31.86	Horizontal
11490.00	43.62	6.7	50.32	74.0	-23.68	Horizontal
1899.30	60.18	-13.1	47.08	74.0	-26.92	Vertical
11490.00	43.75	6.7	50.45	74.0	-23.55	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	50.68	-13.6	37.08	54.0	-16.92	Horizontal
11490.00	32.51	6.7	39.21	54.0	-14.79	Horizontal
1899.30	55.47	-13.1	42.37	54.0	-11.63	Vertical
11490.00	32.42	6.7	39.12	54.0	-14.88	Vertical



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#### Channel 157 5785MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	55.99	-13.6	42.39	74.0	-31.61	Horizontal
11570.00	43.58	6.7	50.28	74.0	-23.72	Horizontal
1899.30	60.25	-13.1	47.15	74.0	-26.85	Vertical
11570.00	44.11	6.7	50.81	74.0	-23.19	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	50.87	-13.6	37.27	54.0	-16.73	Horizontal
11570.00	33.45	6.7	40.15	54.0	-13.85	Horizontal
1899.30	56.36	-13.1	43.26	54.0	-10.74	Vertical
11570.00	32.64	6.7	39.34	54.0	-14.66	Vertical

#### Channel 165 5825MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	56.81	-13.6	43.21	74.0	-30.79	Horizontal
11570.00	43.76	6.7	50.46	74.0	-23.54	Horizontal
1899.30	60.93	-13.1	47.83	74.0	-26.17	Vertical
11570.00	43.55	6.7	50.25	74.0	-23.75	Vertical

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	49.75	-13.6	36.15	54.0	-17.85	Horizontal
11570.00	33.06	6.7	39.76	54.0	-14.24	Horizontal
1899.30	55.24	-13.1	42.14	54.0	-11.86	Vertical
11570.00	31.55	6.7	38.25	54.0	-15.75	Vertical



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## ABOVE 1GHz WORST-CASE DATA: 802.11n 5G (20MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 149 5745MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

IGHZ~25GHZ Spurious Emissions .Peak Detector Measurement								
Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization		
1499.80	58.81	-13.6	45.21	74.0	-28.79	Horizontal		
11490.00	56.25	-5.8	50.45	74.0	-23.55	Horizontal		
1899.30	59.96	-13.1	46.86	74.0	-27.14	Vertical		
11490.00	57.07	-5.8	51.27	74.0	-22.73	Vertical		

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	47.76	-13.6	34.16	54.0	-19.84	Horizontal
11490.00	44.09	-5.8	38.29	54.0	-15.71	Horizontal
1899.30	50.91	-13.1	37.81	54.0	-16.19	Vertical
11490.00	45.08	-5.8	39.28	54.0	-14.72	Vertical

#### Channel 157 5785MHz

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	58.86	-13.6	45.26	74.0	-28.74	Horizontal
11570.00	55.16	-5.8	49.36	74.0	-24.64	Horizontal
1899.30	61.23	-13.1	48.13	74.0	-25.87	Vertical
11570.00	56.33	-5.8	50.53	74.0	-23.47	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	50.23	-13.6	36.63	54.0	-17.37	Horizontal
11570.00	45.05	-5.8	39.25	54.0	-14.75	Horizontal
1899.30	52.98	-13.1	39.88	54.0	-14.12	Vertical
11570.00	45.30	-5.8	39.50	54.0	-14.50	Vertical

#### Channel 165 5825MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	59.67	-13.6	46.07	74.0	-27.93	Horizontal
11650.00	56.06	-5.8	50.26	74.0	-23.74	Horizontal
1899.30	60.85	-13.1	47.75	74.0	-26.25	Vertical
11650.00	56.06	-5.8	50.26	74.0	-23.74	Vertical

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1499.80	51.74	-13.6	38.14	54.0	-15.86	Horizontal
11650.00	47.39	-5.8	41.59	54.0	-12.41	Horizontal
1899.30	52.35	-13.1	39.25	54.0	-14.75	Vertical
11650.00	45.21	-5.8	39.41	54.0	-14.59	Vertical



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## ABOVE 1GHz WORST-CASE DATA: 802.11n 5G (40MHz BW) Band OFDM MODULATION

(Chain 111)

Channel 151 5755MHz

1GHz~25GHz Spurious Emissions .Peak Detector Measurement

Frequency (MHz)	Reading Value (dBμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	61.48	-14.9	46.58	74.0	-27.42	Horizontal
11510.00	58.23	-5.8	52.43	74.0	-21.57	Horizontal
1299.63	60.09	-14.9	45.19	74.0	-28.81	Vertical
11510.00	57.29	-5.8	51.49	74.0	-22.51	Vertical

1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	51.15	-14.9	36.25	54.0	-17.75	Horizontal
11510.00	47.53	-5.8	41.73	54.0	-12.27	Horizontal
1299.63	51.74	-14.9	36.84	54.0	-17.16	Vertical
11510.00	46.88	-5.8	41.08	54.0	-12.92	Vertical

#### Channel 159 5795MHz

Frequency (MHz)	Reading Value (dΒμV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	59.06	-14.9	44.16	74.0	-29.84	Horizontal
11590.00	57.03	-5.8	51.23	74.0	-22.77	Horizontal
1299.63	60.76	-14.9	45.86	74.0	-28.14	Vertical
11590.00	56.74	-5.8	50.94	74.0	-23.06	Vertical



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1GHz~25GHz Spurious Emissions . Average Detector Measurement

Frequency (MHz)	Reading Value (dBµV)	Correction Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna Polarization
1299.63	48.06	-14.9	33.16	54.0	-20.84	Horizontal
11590.00	46.76	-5.8	40.96	54.0	-13.04	Horizontal
1299.63	50.63	-14.9	35.73	54.0	-18.27	Vertical
11590.00	44.98	-5.8	39.18	54.0	-14.82	Vertical



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### 7.3.7 Peak Power Spectral Density

**Test Requirement:** FCC Part15 247(e) **Test date:** March. 27, 2011

Standard Applicable: According to section 15.247(e), For digitally modulated

systems,the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dB in any 3KHz band during any time in terval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph(b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

power shall be used to determine the powr spectral density.

Measurement Procedure: The EUT was tested according to ANSI C63.10,2009 for

compliance to FCC 47CFR 15.247 requiremnts.

Set RBW=3KHz,Set VBW=10KHz,Span=100KHz,Sweep

time=34s,Set detector=Peak detector.

#### Measurement Result:

The test was performed with 802.11b, the data was shown the worst case 802.11b 1Mbps.

(Chain 100)

	Frequency	Reading	Cable Loss	RF Power	Limit		
CH	(MHz)	(dBm)	(dB)	Density (dBm)	(dBm)	Result	
01	2412	-0.78	1.5	0.72	8	PASS	
06	2437	-0.67	1.5	0.83	8	PASS	
11	2462	-0.87	1.5	0.63	8	PASS	

(Chain 010)

Chairoto	)					
СН	Frequency (MHz)	Reading (dBm)	Cable Loss (dB)	RF Power Density (dBm)	Limit (dBm)	Result
01	2412	-0.18	1.5	1.32	8	PASS
06	2437	-0.38	1.5	1.12	8	PASS
11	2462	0.10	1.5	1.60	8	PASS

(Chain 001)

СН	Frequency (MHz)	Reading (dBm)	Cable Loss (dB)	RF Power Density (dBm)	Limit (dBm)	Result
01	2412	-0.61	1.5	0.89	8	PASS
06	2437	-0.76	1.5	0.74	8	PASS
11	2462	-0.89	1.5	0.61	8	PASS



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The test was performed with 802.11g, the data was shown the worst case 802.11g 6Mbps.

(Chain 100)

СН	Frequency (MHz)	Reading (dBm)	Cable Loss (dB)	RF Power Density (dBm)	Limit (dBm)	Result
01	2412	-17.78	1.5	-16.28	8	PASS
06	2437	-18.46	1.5	-16.96	8	PASS
11	2462	-19.53	1.5	-18.03	8	PASS

(Chain 010)

1 /						
СН	Frequency (MHz)	Reading (dBm)	Cable Loss (dB)	RF Power Density (dBm)	Limit (dBm)	Result
01	2412	-17.55	1.5	-16.05	8	PASS
06	2437	-17.21	1.5	-15.71	8	PASS
11	2462	-17.88	1.5	-16.38	8	PASS

(Chain 001)

СН	Frequency (MHz)	Reading (dBm)	Cable Loss (dB)	RF Power Density (dBm)	Limit (dBm)	Result
01	2412	-17.13	1.5	-15.63	8	PASS
06	2437	-18.06	1.5	-16.56	8	PASS
11	2462	-16.80	1.5	-15.30	8	PASS

The test was performed with 802.11n, the data was shown the worst case 802.11 n 2.4G Band (20MHz) 6.5Mbps.

(Chain 111)

CH Frequency (MHz)	RF Power Level IN 3kHz BW (dBm)			Cable	Total RF Power	Limit	Doorth	
		Chain (100)	Chain (010)	Chain (001)	Loss (dB)	Density (dBm)	(dBm)	Result
01	2412	-18.38	-17.74	-17.16	1.5	-11.46	8	PASS
06	2437	-14.84	-17.82	-16.95	1.5	-10.08	8	PASS
11	2462	-15.73	-17.60	-16.35	1.5	-10.22	8	PASS

The test was performed with 802.11n, the data was shown the worst case 802.11 n 2.4G Band (40MHz) 6.5Mbps.

(Chain 111)

Onan	,							
CH F	Frequency	RF Power Level IN 3kHz BW (dBm)				Total RF Power	Limit	Daguit
	(MHz)	Chain (100)	Chain (010)	Chain (001)	Loss (dB)	Density (dBm)	(dBm)	Result
01	2422	-18.92	-20.56	-19.86	1.5	10.10	8	PASS
01	2422	-10.32	-20.50	-13.00	1.5	-13.46	U	1 700
06	2437	-19.67	-20.88	-20.57	1.5	-14.07	8	PASS
11	2452	-19.62	-14.60	-17.64	1.5	-10.52	8	PASS



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The test was performed with 802.11a, the data was shown the worst case 802.11 a 6.5Mbps. (Chain 111)

CII	Frequency	RF Power Level IN 3kHz BW (dBm)			Cable	Total RF Power	Limit	Decult
СН	(MHz)	Chain	Chain	Chain	Loss (dB)	Density (dBm)	(dBm)	Result
		(100)	(010)	(001)				
149	5745	-19.83	-19.92	-20.83	1.5	-13.90	8	PASS
157	5785	-20.46	-20.87	-21.48	1.5	-14.65	8	PASS
165	5825	-21.72	-21.55	-23.00	1.5	-15.77	8	PASS

The test was performed with 802.11n, the data was shown the worst case 802.11 n 5G Band (20MHz) 6.5Mbps.

(Chain 111)

(Chair	1 111)							
	Frequency	RF Power Level IN 3kHz BW (dBm)			Cable	Total RF Power	Limit	Doorth
	(MHz)	Chain (100)	Chain (010)	Chain (001)	Loss (dB)	Density (dBm)	(dBm)	Result
149	5745	-19.81	-18.23	-19.09	1.5	-12.72	8	PASS
157	5785	-18.97	-19.37	-18.97	1.5	-12.83	8	PASS
165	5825	-20.88	-20.31	-22.51	1.5	-14.87	8	PASS

The test was performed with 802.11n, the data was shown the worst case 802.11 n 5G Band (40MHz) 6.5Mbps.

(Chain 111)

	Frequency	RF Power	Level IN 3 (dBm)	kHz BW	Cable Loss (dB)	Total RF Power	Limit	Decult
	(MHz)	Chain (100)	Chain (010)	Chain (001)		Density (dBm)	(dBm)	Result
151	5755	-21.49	-22.59	-23.13	1.5	-16.08	8	PASS
159	5795	-23.64	-23.45	-23.18	1.5	-17.15	8	PASS

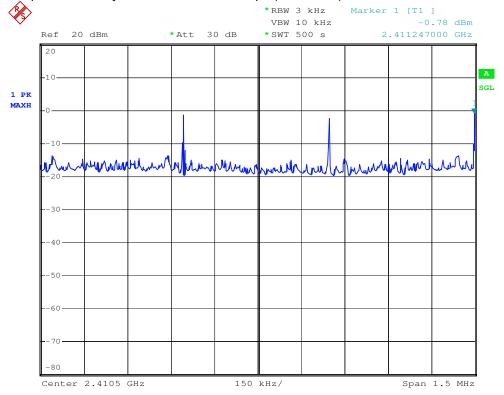


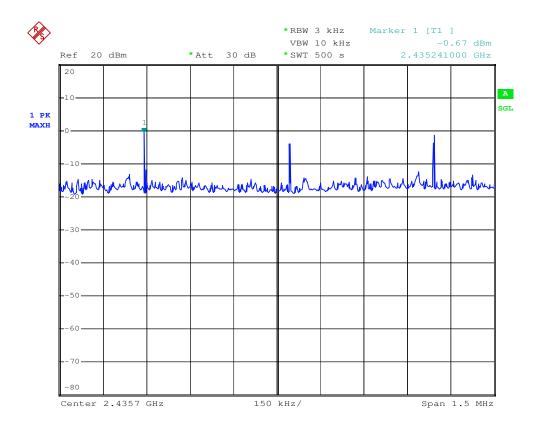
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#### Peak Power Spectral Density Test Plot 802.11b 1Mbps (Chain 100)



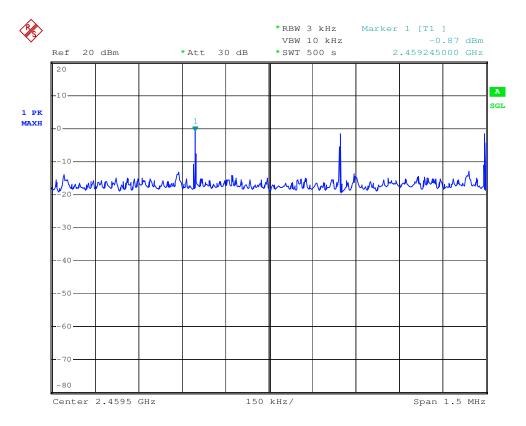




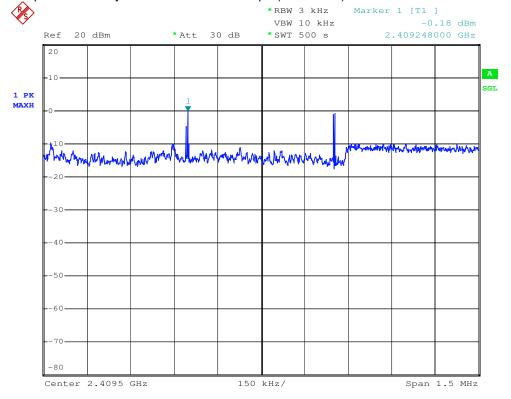
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#### Peak Power Spectral Density Test Plot 802.11b 1Mbps (Chain 010)

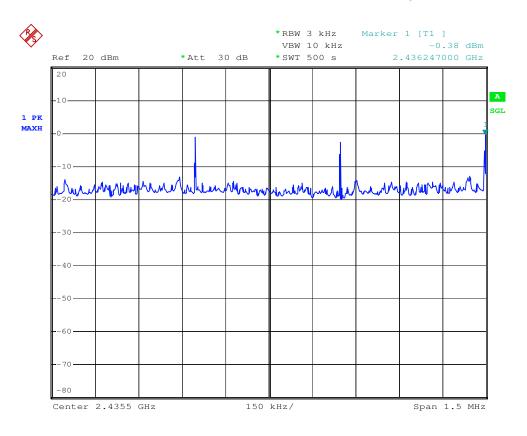


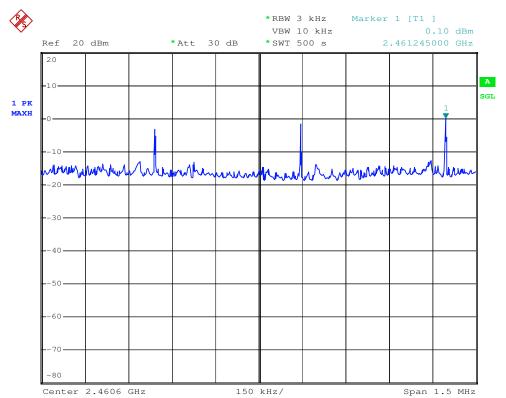


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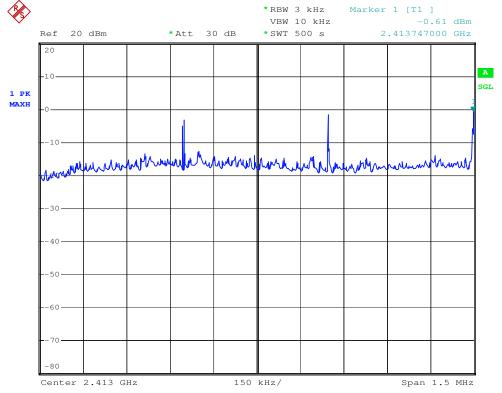


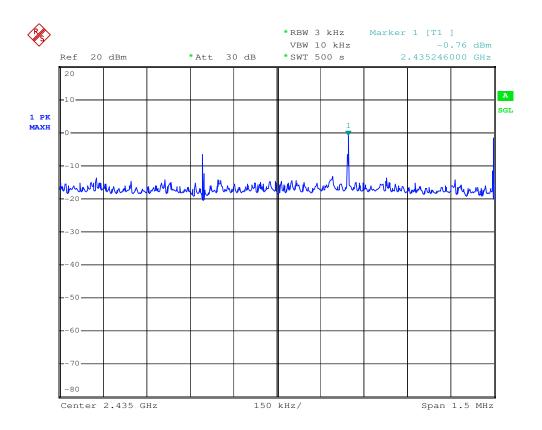
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#### Peak Power Spectral Density Test Plot 802.11b 1Mbps (Chain 001)



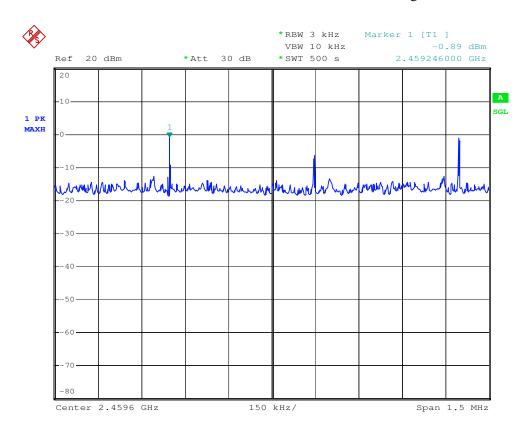




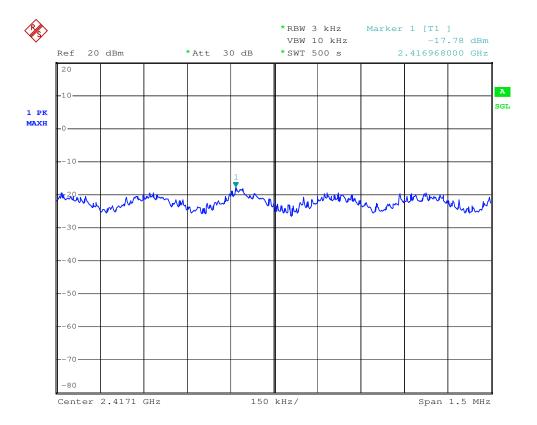


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### Peak Power Spectral Density Test Plot 802.11g 6Mbps (Chain 100)

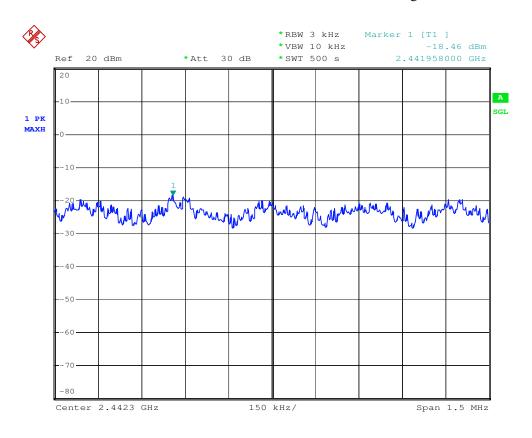


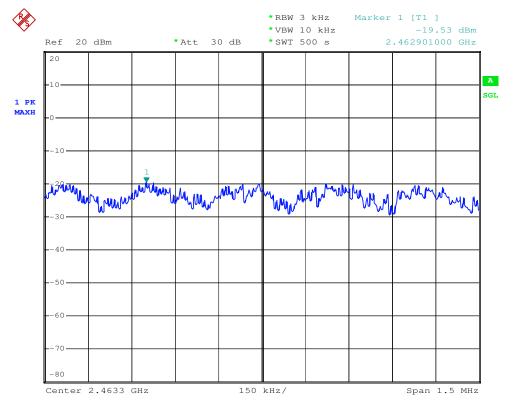


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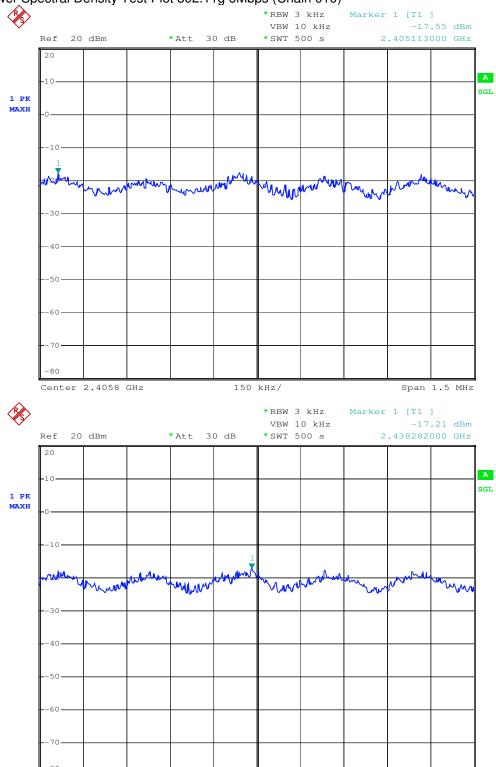


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### Peak Power Spectral Density Test Plot 802.11g 6Mbps (Chain 010)



150 kHz/

Span 1.5 MHz

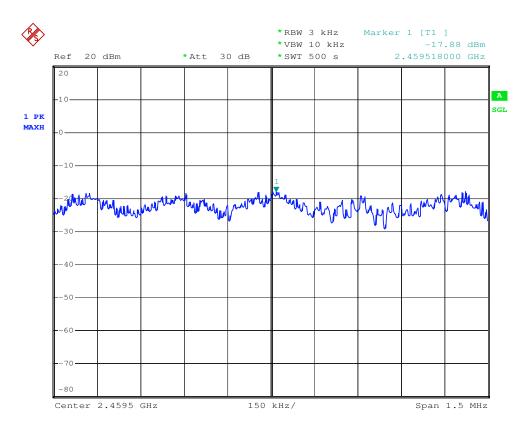
Center 2.4383 GHz



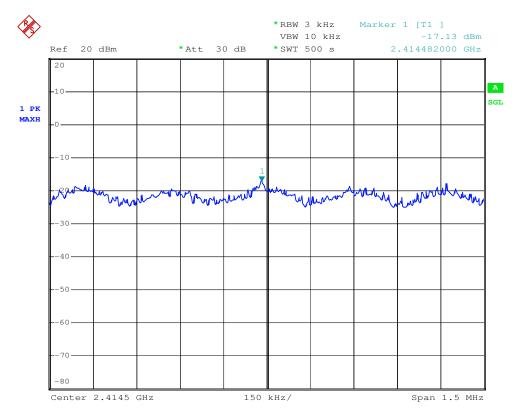
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### Peak Power Spectral Density Test Plot 802.11g 6Mbps (Chain 001)



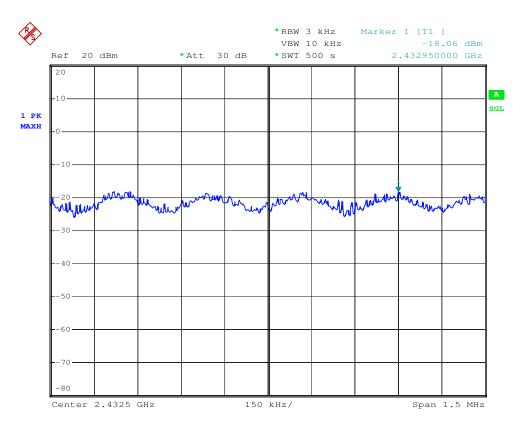
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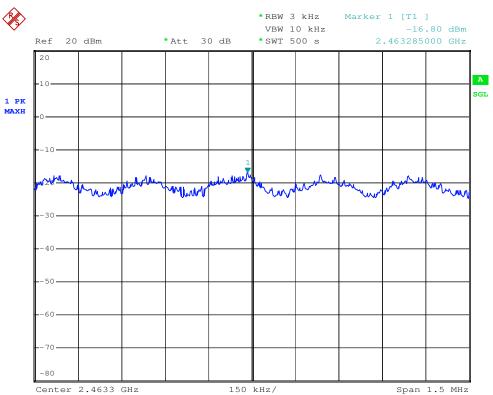


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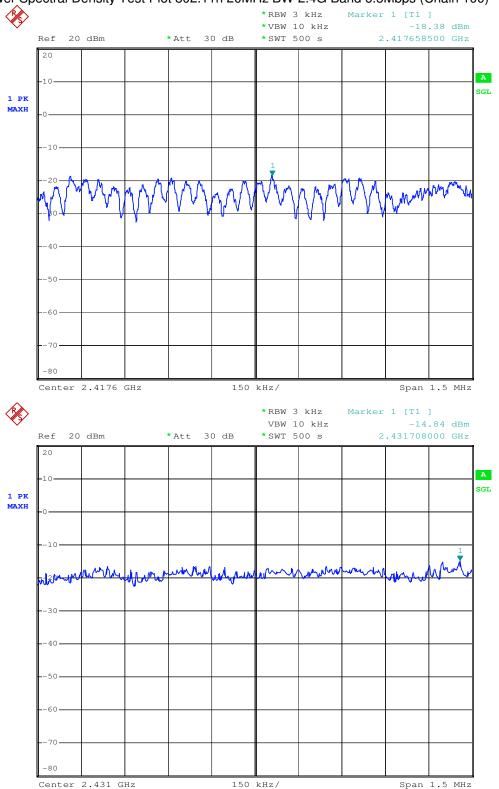


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#### Peak Power Spectral Density Test Plot 802.11n 20MHz BW 2.4G Band 6.5Mbps (Chain 100)

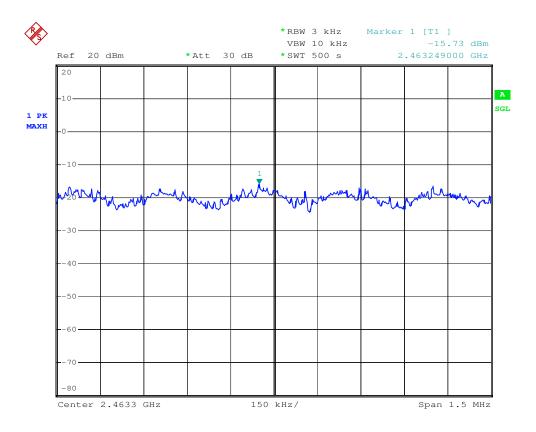




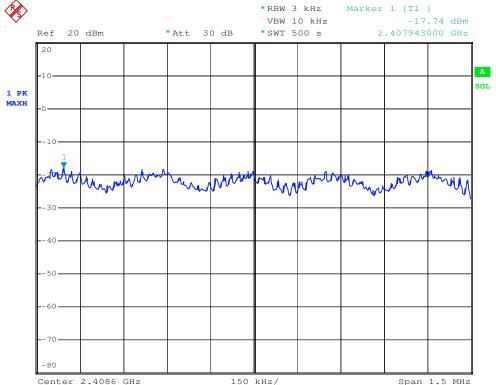
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### Peak Power Spectral Density Test Plot 802.11n 20MHz BW 2.4G Band 6.5Mbps (Chain 010)

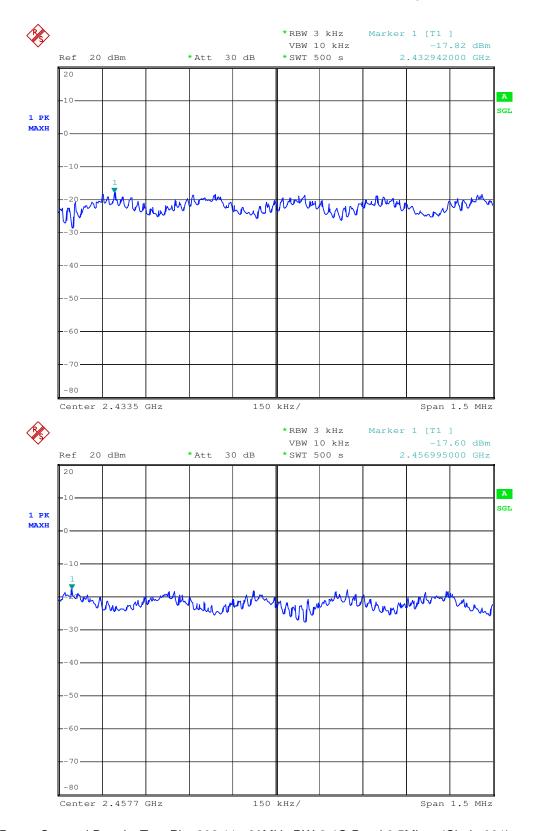




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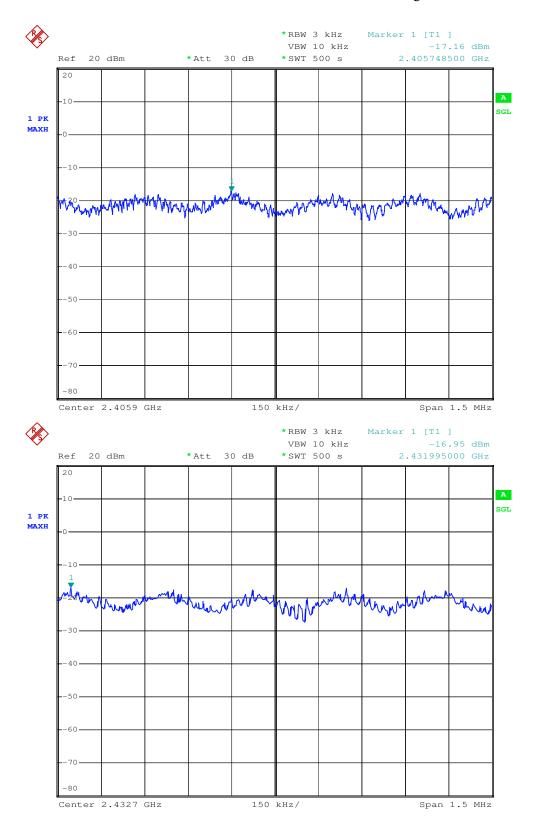
Peak Power Spectral Density Test Plot 802.11n 20MHz BW 2.4G Band 6.5Mbps (Chain 001)



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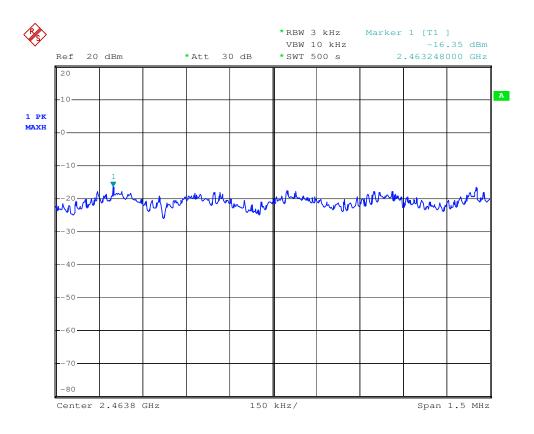




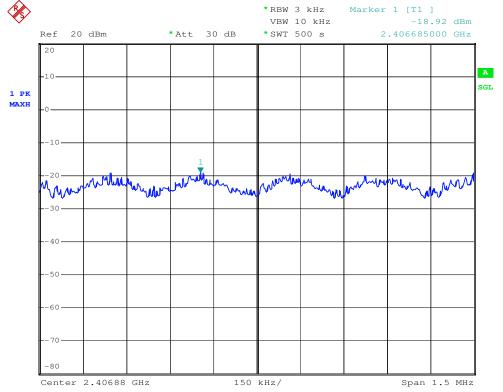
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### Peak Power Spectral Density Test Plot 802.11n 40MHz BW 2.4G Band 6.5Mbps (Chain 100)

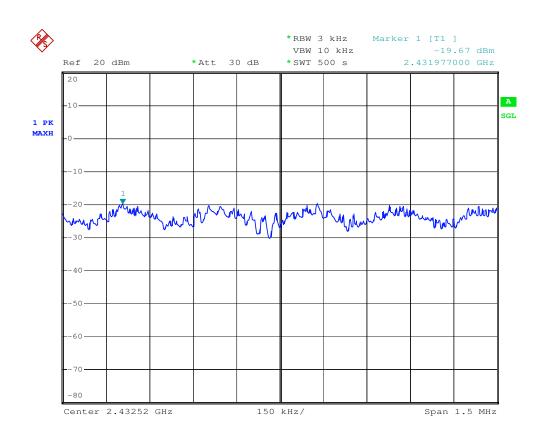


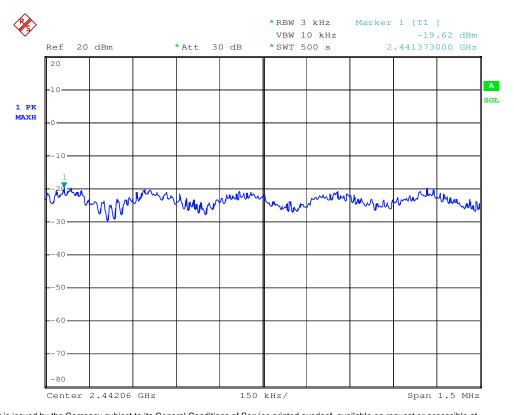


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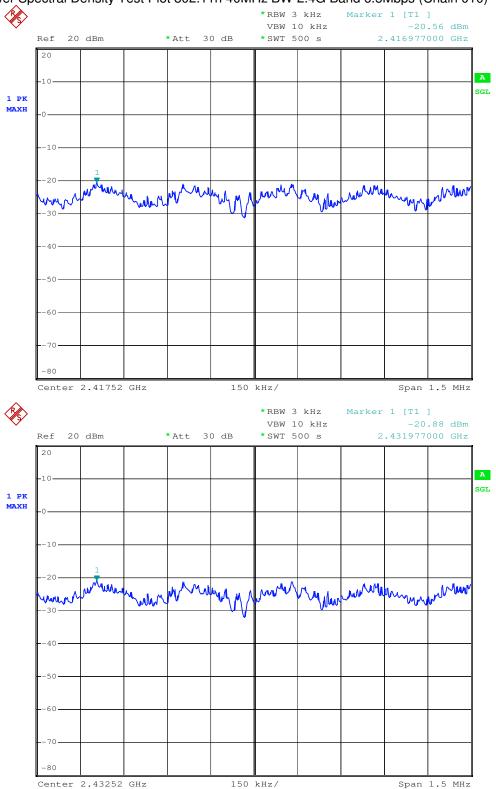


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#### Peak Power Spectral Density Test Plot 802.11n 40MHz BW 2.4G Band 6.5Mbps (Chain 010)

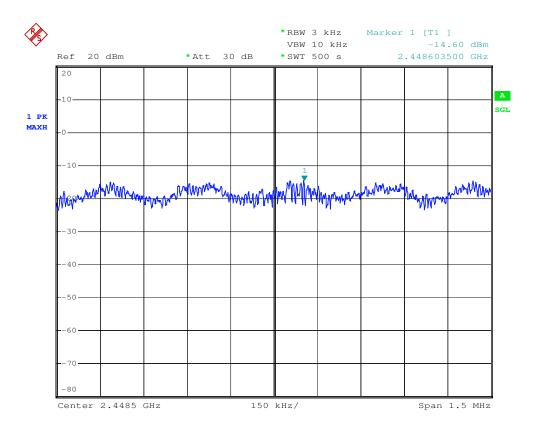




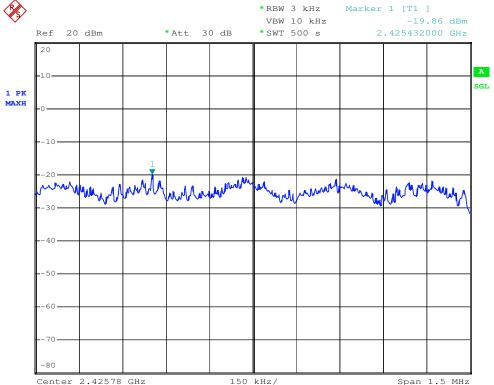
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### Peak Power Spectral Density Test Plot 802.11a 6.5Mbps (Chain 001)

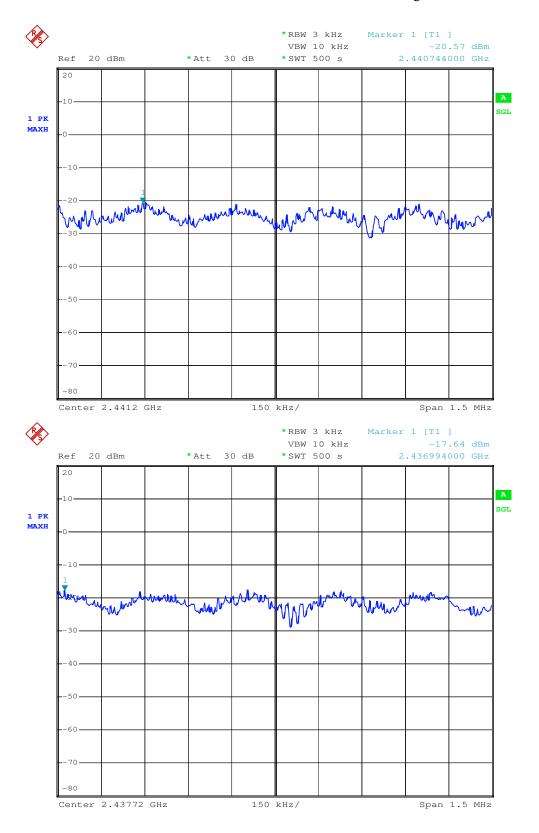




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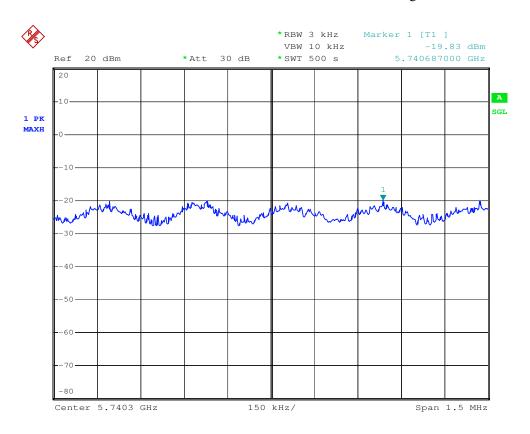
Peak Power Spectral Density Test Plot 802.11a 6.5Mbps (Chain 100)

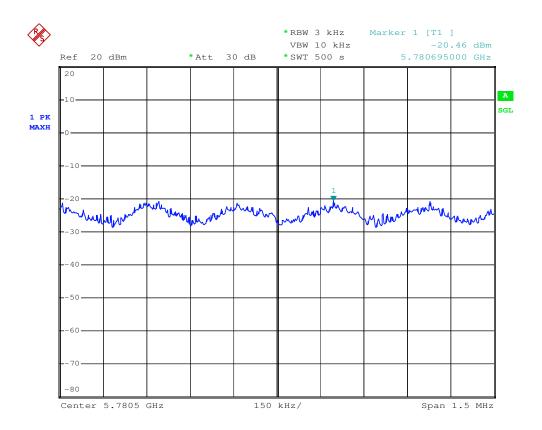


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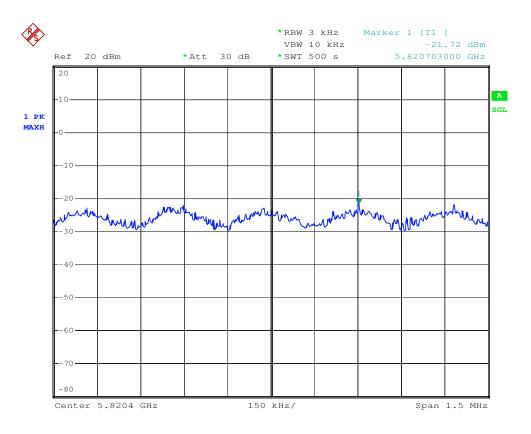




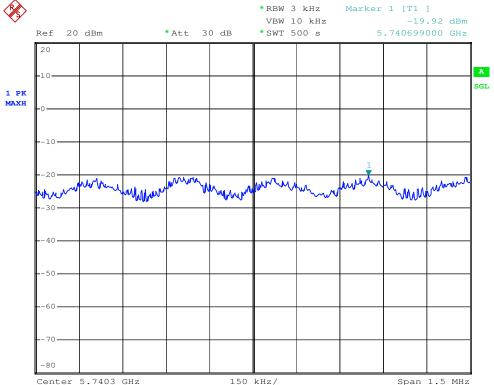
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### Peak Power Spectral Density Test Plot 802.11a 6.5Mbps (Chain 010)

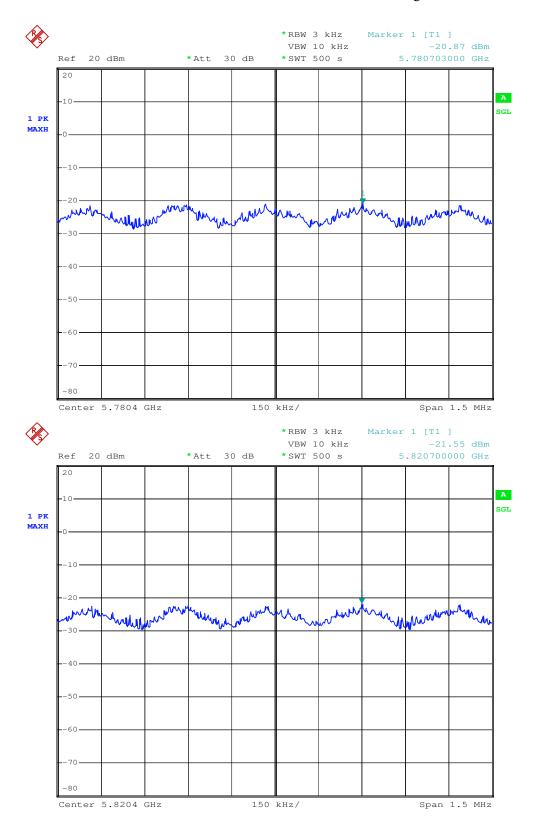






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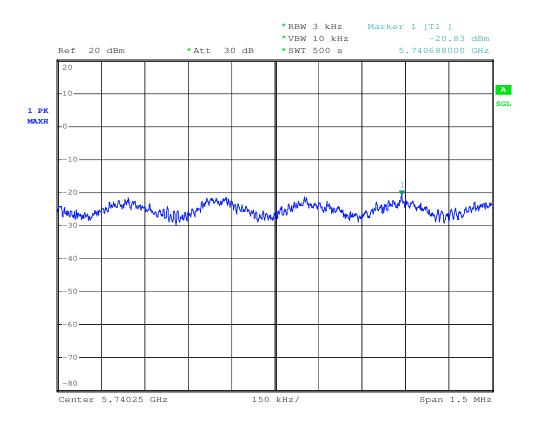
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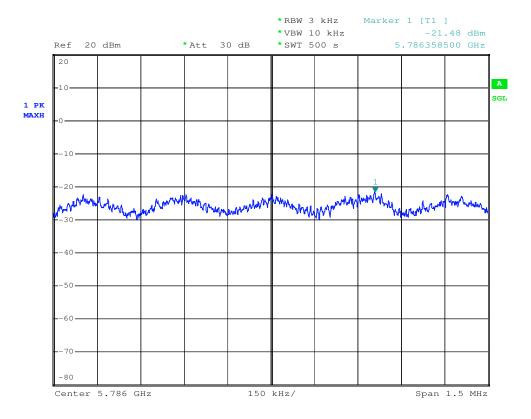


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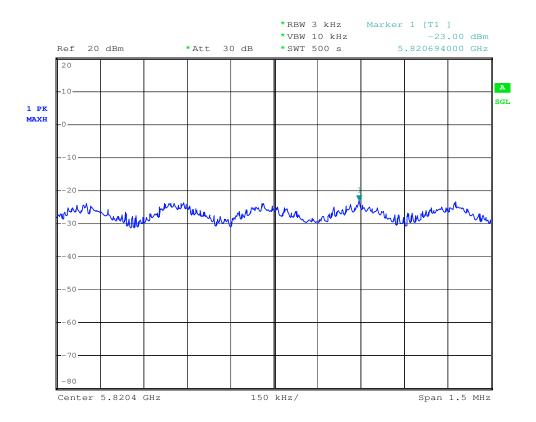




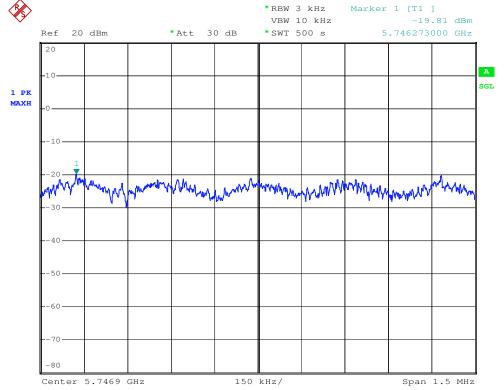
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### Peak Power Spectral Density Test Plot 802.11n 20MHz BW 5G Band 6.5Mbps (Chain 100)

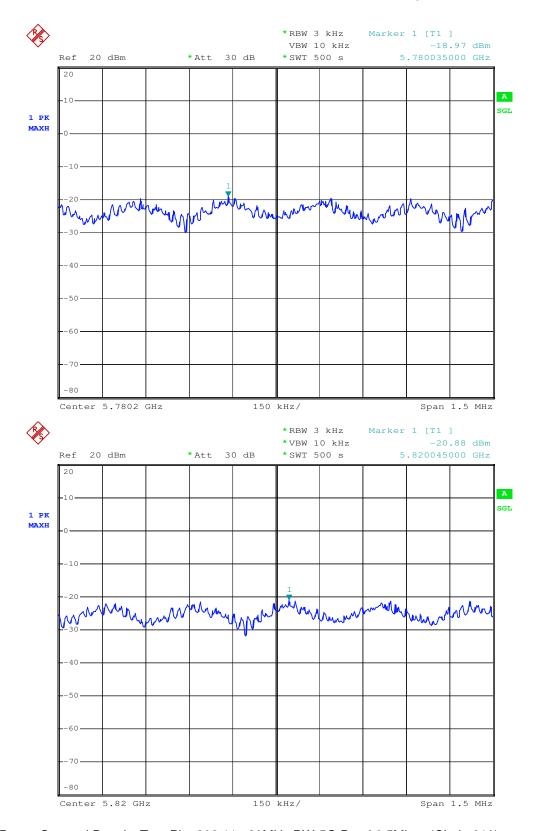






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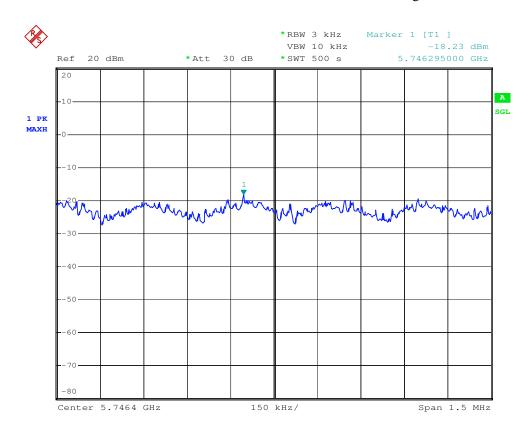
Peak Power Spectral Density Test Plot 802.11n 20MHz BW 5G Band 6.5Mbps (Chain 010)

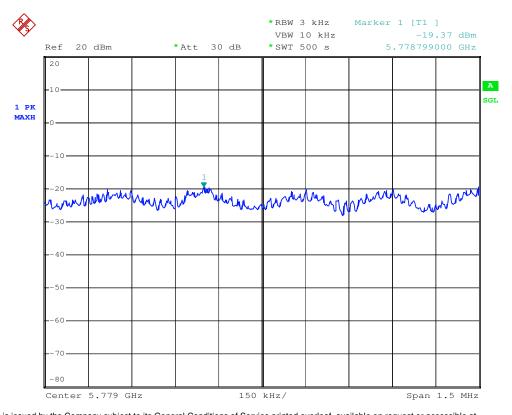


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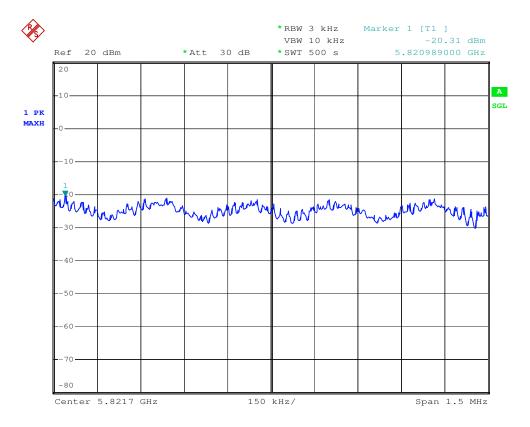




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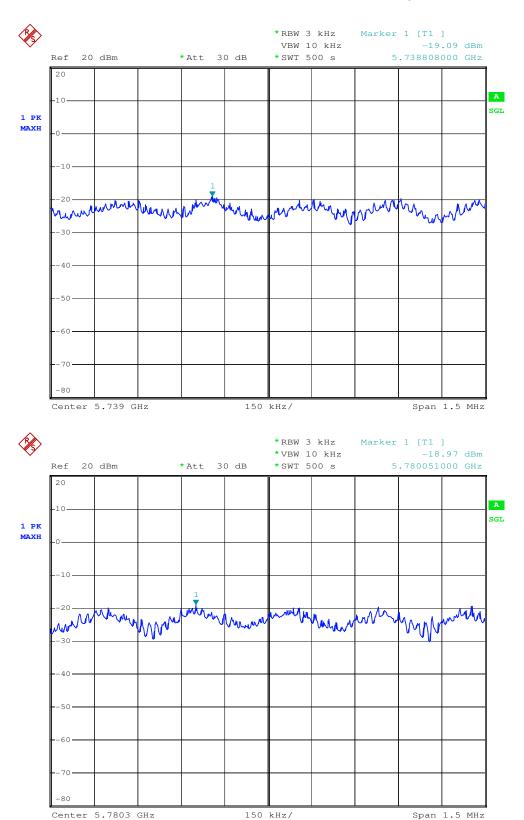
Peak Power Spectral Density Test Plot 802.11n 20MHz BW 5G Band 6.5Mbps (Chain 001)



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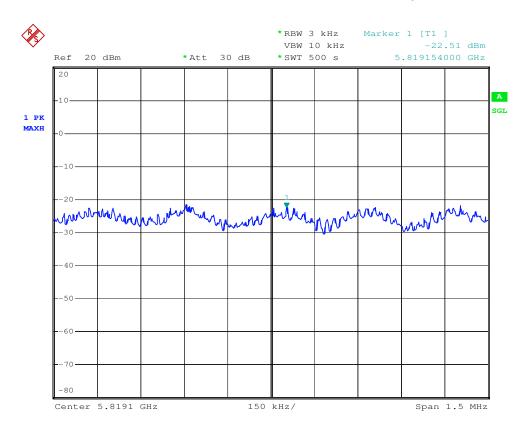




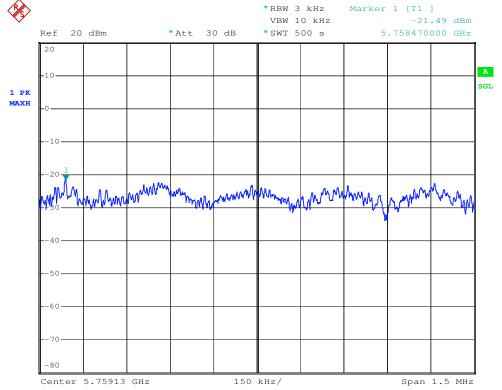
FCC ID: RFHWIFI-RT3593-DB

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### Peak Power Spectral Density Test Plot 802.11n 40MHz BW 5G Band 6.5Mbps (Chain 100)

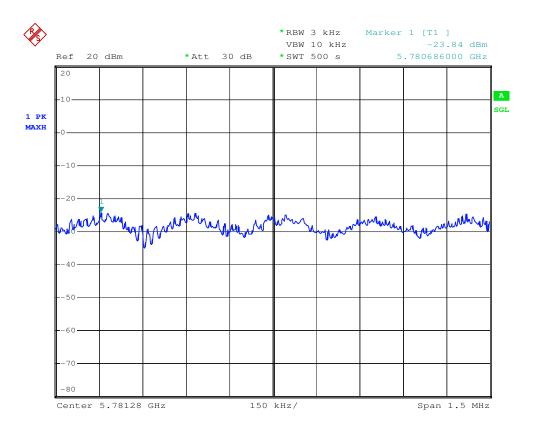




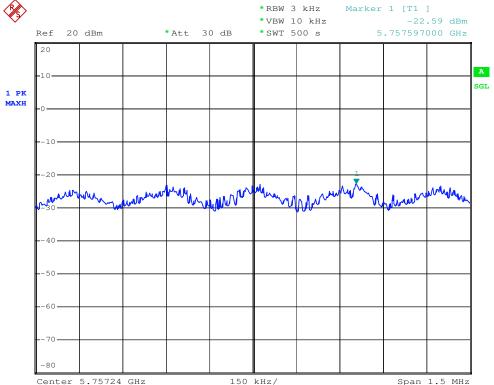
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### Peak Power Spectral Density Test Plot 802.11n 40MHz BW 5G Band 6.5Mbps (Chain 010)

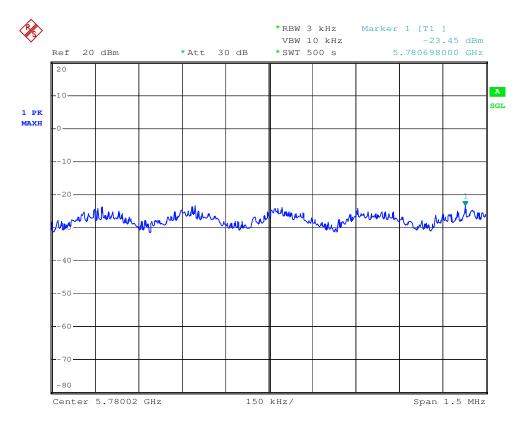




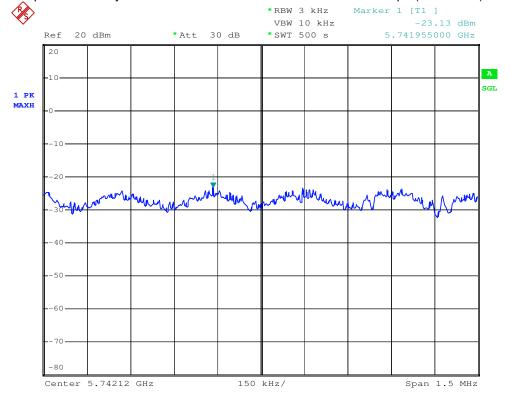
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#### Peak Power Spectral Density Test Plot 802.11n 40MHz BW 5G Band 6.5Mbps (Chain 001)

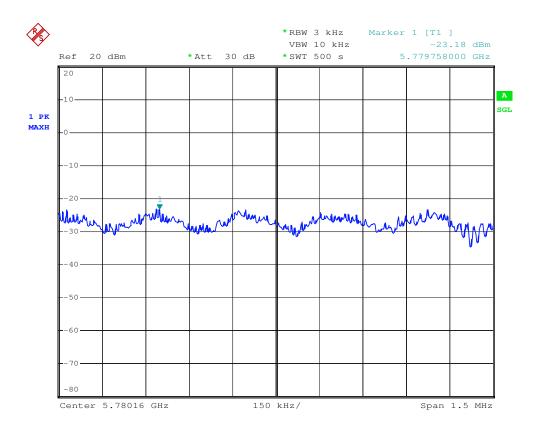




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### 7.3.8 Antenna Requirement

Test Requirement: FCC Part15 15.203

### 5.3.7.1 Standard Requirement

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 a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### 5.3.7.2 Antenna Connected Construction

Antenna connector is IPEX or Reverse SMA not a standard connector. Please see the EUT photo for details.

### 5.3.7.3 Result

It comply with the standard requirement.

### **End of the Report**