



5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

5.1 RADIATED EMISSION MEASUREMENT

5.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



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5.1.2 TEST INSTRUMENTS

Same as item 4.1.2.

5.1.3 TEST PROCEDURES

Same as item 4.1.3.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP

Same as item 4.1.5.

5.1.6 EUT OPERATING CONDITIONS

Same as item 4.1.6.



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5.1.7 TEST RESULTS

TEST MODE A

ABOVE 1GHz DATA:

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	76.3 PK	86.3	-10.0	1.00 H	7	70.00	6.30
2	#5725.00	65.7 AV	75.7	-10.0	1.00 H	7	59.40	6.30
3	*5745.00	106.3 PK			1.00 H	7	66.10	40.20
4	*5745.00	95.7 AV			1.00 H	7	55.50	40.20
5	11490.00	59.3 PK	74.0	-14.7	1.06 H	230	41.20	18.10
6	11490.00	47.4 AV	54.0	-6.6	1.06 H	230	29.30	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	82.3 PK	92.3	-10.0	1.00 V	214	76.00	6.30
2	#5725.00	71.7 AV	81.7	-10.0	1.00 V	214	65.40	6.30
3	*5745.00	112.3 PK			1.00 V	214	72.10	40.20
4	*5745.00	101.7 AV			1.00 V	214	61.50	40.20
5	11490.00	59.4 PK	74.0	-14.6	1.18 V	157	41.30	18.10
6	11490.00	47.5 AV	54.0	-6.5	1.18 V	157	29.40	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	106.7 PK			1.00 H	12	66.40	40.30
2	*5785.00	95.9 AV			1.00 H	12	55.60	40.30
3	11570.00	59.6 PK	74.0	-14.4	1.15 H	80	41.40	18.20
4	11570.00	47.5 AV	54.0	-6.5	1.15 H	80	29.30	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	112.9 PK			1.00 V	257	72.60	40.30
2	*5785.00	102.1 AV			1.00 V	257	61.80	40.30
3	11570.00	59.8 PK	74.0	-14.2	1.13 V	196	41.60	18.20
4	11570.00	47.7 AV	54.0	-6.3	1.13 V	196	29.50	18.20

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	105.3 PK			1.00 H	13	65.00	40.30
2	*5825.00	95.2 AV			1.00 H	13	54.90	40.30
3	#5850.00	63.3 PK	85.3	-22.0	1.00 H	13	56.70	6.60
4	#5850.00	53.2 AV	75.2	-22.0	1.00 H	13	46.60	6.60
5	11650.00	59.5 PK	74.0	-14.5	1.24 H	153	41.40	18.10
6	11650.00	47.6 AV	54.0	-6.4	1.24 H	153	29.50	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	111.7 PK			1.00 V	213	71.40	40.30
2	*5825.00	101.6 AV			1.00 V	213	61.30	40.30
3	#5850.00	69.7 PK	91.7	-22.0	1.00 V	213	63.10	6.60
4	#5850.00	59.6 AV	81.6	-22.0	1.00 V	213	53.00	6.60
5	11650.00	59.6 PK	74.0	-14.4	1.05 V	171	41.50	18.10
6	11650.00	47.8 AV	54.0	-6.2	1.05 V	171	29.70	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



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802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	76.1 PK	86.1	-10.0	1.00 H	3	69.80	6.30
2	#5725.00	65.5 AV	75.5	-10.0	1.00 H	3	59.20	6.30
3	*5745.00	106.1 PK			1.00 H	3	65.90	40.20
4	*5745.00	95.5 AV			1.00 H	3	55.30	40.20
5	11490.00	59.5 PK	74.0	-14.5	1.24 H	269	41.40	18.10
6	11490.00	47.4 AV	54.0	-6.6	1.24 H	269	29.30	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	82.2 PK	92.2	-10.0	1.00 V	233	75.90	6.30
2	#5725.00	71.7 AV	81.7	-10.0	1.00 V	233	65.40	6.30
3	*5745.00	112.2 PK			1.00 V	233	72.00	40.20
4	*5745.00	101.7 AV			1.00 V	233	61.50	40.20
5	11490.00	59.7 PK	74.0	-14.3	1.15 V	163	41.60	18.10
6	11490.00	47.7 AV	54.0	-6.3	1.15 V	163	29.60	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	106.4 PK			1.00 H	23	66.10	40.30
2	*5785.00	95.6 AV			1.00 H	23	55.30	40.30
3	11570.00	59.4 PK	74.0	-14.6	1.24 H	186	41.20	18.20
4	11570.00	47.5 AV	54.0	-6.5	1.24 H	186	29.30	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	112.8 PK			1.00 V	243	72.50	40.30
2	*5785.00	101.9 AV			1.00 V	243	61.60	40.30
3	11570.00	59.5 PK	74.0	-14.5	1.26 V	315	41.30	18.20
4	11570.00	47.6 AV	54.0	-6.4	1.26 V	315	29.40	18.20

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	105.0 PK			1.00 H	9	64.70	40.30
2	*5825.00	94.8 AV			1.00 H	9	54.50	40.30
3	#5850.00	63.0 PK	85.0	-22.0	1.00 H	9	56.40	6.60
4	#5850.00	52.8 AV	74.8	-22.0	1.00 H	9	46.20	6.60
5	11650.00	59.4 PK	74.0	-14.6	1.38 H	160	41.30	18.10
6	11650.00	47.6 AV	54.0	-6.4	1.38 H	160	29.50	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	111.3 PK			1.00 V	225	71.00	40.30
2	*5825.00	101.1 AV			1.00 V	225	60.80	40.30
3	#5850.00	69.3 PK	91.3	-22.0	1.00 V	267	62.70	6.60
4	#5850.00	59.1 AV	81.1	-22.0	1.00 V	267	52.50	6.60
5	11650.00	59.7 PK	74.0	-14.3	1.42 V	57	41.60	18.10
6	11650.00	47.8 AV	54.0	-6.2	1.42 V	57	29.70	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



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802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	77.5 PK	82.5	-5.0	1.00 H	7	71.20	6.30
2	#5725.00	67.2 AV	72.2	-5.0	1.00 H	7	60.90	6.30
3	*5755.00	102.5 PK			1.00 H	7	62.30	40.20
4	*5755.00	92.2 AV			1.00 H	7	52.00	40.20
5	11510.00	59.1 PK	74.0	-14.9	1.06 H	256	41.00	18.10
6	11510.00	47.6 AV	54.0	-6.4	1.06 H	256	29.50	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	83.8 PK	88.8	-5.0	1.00 V	201	77.50	6.30
2	#5725.00	73.5 AV	78.5	-5.0	1.00 V	201	67.20	6.30
3	*5755.00	108.8 PK			1.00 V	201	68.60	40.20
4	*5755.00	98.5 AV			1.00 V	201	58.30	40.20
5	11510.00	59.2 PK	74.0	-14.8	1.22 V	128	41.10	18.10
6	11510.00	47.8 AV	54.0	-6.2	1.22 V	128	29.70	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	103.1 PK			1.00 H	30	62.80	40.30
2	*5795.00	93.4 AV			1.00 H	30	53.10	40.30
3	#5850.00	60.1 PK	83.1	-23.0	1.00 H	30	53.50	6.60
4	#5850.00	50.4 AV	73.4	-23.0	1.00 H	30	43.80	6.60
5	11590.00	59.2 PK	74.0	-14.8	1.25 H	14	41.10	18.10
6	11590.00	47.6 AV	54.0	-6.4	1.25 H	14	29.50	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	110.1 PK			1.00 V	215	69.80	40.30
2	*5795.00	100.4 AV			1.00 V	215	60.10	40.30
3	#5850.00	67.1 PK	90.1	-23.0	1.00 V	215	60.50	6.60
4	#5850.00	57.4 AV	80.4	-23.0	1.00 V	215	50.80	6.60
5	11590.00	59.3 PK	74.0	-14.7	1.11 V	217	41.20	18.10
6	11590.00	47.8 AV	54.0	-6.2	1.11 V	217	29.70	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



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802.11ac (VHT80)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 155	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Jones Chang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	67.5 PK	78.5	-11.0	1.51 H	206	61.20	6.30
2	#5725.00	57.0 AV	68.0	-11.0	1.51 H	206	50.70	6.30
3	*5775.00	98.5 PK			1.51 H	206	58.30	40.20
4	*5775.00	88.0 AV			1.51 H	206	47.80	40.20
5	#5850.00	63.5 PK	78.5	-15.0	1.51 H	206	56.90	6.60
6	#5850.00	63.0 AV	68.0	-5.0	1.51 H	206	56.40	6.60
7	11550.00	58.8 PK	74.0	-15.2	1.00 H	359	40.70	18.10
8	11550.00	47.0 AV	54.0	-7.0	1.00 H	359	28.90	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	74.7 PK	85.7	-11.0	1.48 V	14	68.40	6.30
2	#5725.00	64.2 AV	75.2	-11.0	1.48 V	14	57.90	6.30
3	*5775.00	105.7 PK			1.48 V	14	65.50	40.20
4	*5775.00	95.2 AV			1.48 V	14	55.00	40.20
5	#5850.00	70.7 PK	85.7	-15.0	1.48 V	14	64.10	6.60
6	#5850.00	60.2 AV	75.2	-15.0	1.48 V	14	53.60	6.60
7	11550.00	59.1 PK	74.0	-14.9	1.03 V	320	41.00	18.10
8	11550.00	48.0 AV	54.0	-6.0	1.03 V	320	29.90	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



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TEST MODE B

ABOVE 1GHz DATA:

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	73.5 PK	86.5	-13.0	1.00 H	10	67.20	6.30
2	#5725.00	62.8 AV	75.8	-13.0	1.00 H	10	56.50	6.30
3	*5745.00	106.5 PK			1.00 H	10	66.30	40.20
4	*5745.00	95.8 AV			1.00 H	10	55.60	40.20
5	11490.00	59.5 PK	74.0	-14.5	1.15 H	80	41.40	18.10
6	11490.00	47.7 AV	54.0	-6.3	1.15 H	80	29.60	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	79.5 PK	92.5	-13.0	1.42 V	214	73.20	6.30
2	#5725.00	68.8 AV	81.8	-13.0	1.42 V	214	62.50	6.30
3	*5745.00	112.5 PK			1.42 V	214	72.30	40.20
4	*5745.00	101.8 AV			1.42 V	214	61.60	40.20
5	11490.00	59.6 PK	74.0	-14.4	1.03 V	66	41.50	18.10
6	11490.00	47.9 AV	54.0	-6.1	1.03 V	66	29.80	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	106.6 PK			1.00 H	31	66.30	40.30
2	*5785.00	95.7 AV			1.00 H	31	55.40	40.30
3	11570.00	59.6 PK	74.0	-14.4	1.05 H	182	41.40	18.20
4	11570.00	47.8 AV	54.0	-6.2	1.05 H	182	29.60	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	112.4 PK			1.55 V	231	72.10	40.30
2	*5785.00	101.7 AV			1.55 V	231	61.40	40.30
3	11570.00	59.9 PK	74.0	-14.1	1.24 V	120	41.70	18.20
4	11570.00	48.1 AV	54.0	-5.9	1.24 V	120	29.90	18.20

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	106.6 PK			1.00 H	22	66.30	40.30
2	*5825.00	95.8 AV			1.00 H	22	55.50	40.30
3	#5850.00	65.6 PK	86.6	-21.0	1.00 H	22	59.00	6.60
4	#5850.00	54.8 AV	75.8	-21.0	1.00 H	22	48.20	6.60
5	11650.00	59.7 PK	74.0	-14.3	1.07 H	156	41.60	18.10
6	11650.00	47.9 AV	54.0	-6.1	1.07 H	156	29.80	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	112.6 PK			1.47 V	199	72.30	40.30
2	*5825.00	101.8 AV			1.47 V	199	61.50	40.30
3	#5850.00	71.6 PK	92.6	-21.0	1.47 V	199	65.00	6.60
4	#5850.00	60.8 AV	81.8	-21.0	1.47 V	199	54.20	6.60
5	11650.00	59.9 PK	74.0	-14.1	1.26 V	80	41.80	18.10
6	11650.00	48.0 AV	54.0	-6.0	1.26 V	80	29.90	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



A D T

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	75.2 PK	86.2	-11.0	1.00 H	14	68.90	6.30
2	#5725.00	65.2 AV	76.2	-11.0	1.00 H	14	58.90	6.30
3	*5745.00	106.2 PK			1.00 H	14	66.00	40.20
4	*5745.00	96.2 AV			1.00 H	14	56.00	40.20
5	11490.00	59.8 PK	74.0	-14.2	1.22 H	80	41.70	18.10
6	11490.00	47.7 AV	54.0	-6.3	1.22 H	80	29.60	18.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	81.2 PK	92.2	-11.0	1.53 V	231	74.90	6.30
2	#5725.00	71.2 AV	82.2	-11.0	1.53 V	231	64.90	6.30
3	*5745.00	112.2 PK			1.53 V	231	72.00	40.20
4	*5745.00	102.2 AV			1.53 V	231	62.00	40.20
5	11490.00	60.0 PK	74.0	-14.0	1.23 V	155	41.90	18.10
6	11490.00	48.1 AV	54.0	-5.9	1.23 V	155	30.00	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	106.9 PK			1.00 H	20	66.60	40.30
2	*5785.00	96.4 AV			1.00 H	20	56.10	40.30
3	11570.00	60.0 PK	74.0	-14.0	1.13 H	127	41.80	18.20
4	11570.00	47.8 AV	54.0	-6.2	1.13 H	127	29.60	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	113.2 PK			1.53 V	228	72.90	40.30
2	*5785.00	102.6 AV			1.53 V	228	62.30	40.30
3	11570.00	60.1 PK	74.0	-13.9	1.28 V	95	41.90	18.20
4	11570.00	47.9 AV	54.0	-6.1	1.28 V	95	29.70	18.20

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	106.5 PK			1.00 H	19	66.20	40.30
2	*5825.00	95.7 AV			1.00 H	19	55.40	40.30
3	#5850.00	65.5 PK	86.5	-21.0	1.00 H	19	58.90	6.60
4	#5850.00	54.7 AV	75.7	-21.0	1.00 H	19	48.10	6.60
5	11650.00	59.6 PK	74.0	-14.4	1.12 H	174	41.50	18.10
6	11650.00	47.9 AV	54.0	-6.1	1.12 H	174	29.80	18.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	112.7 PK			1.39 V	320	72.40	40.30
2	*5825.00	101.9 AV			1.39 V	320	61.60	40.30
3	#5850.00	71.7 PK	92.7	-21.0	1.39 V	320	65.10	6.60
4	#5850.00	60.9 AV	81.9	-21.0	1.39 V	320	54.30	6.60
5	11650.00	59.8 PK	74.0	-14.2	1.24 V	85	41.70	18.10
6	11650.00	48.1 AV	54.0	-5.9	1.24 V	85	30.00	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



A D T

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	70.3 PK	81.3	-11.0	1.00 H	27	64.00	6.30
2	#5725.00	60.0 AV	71.0	-11.0	1.00 H	27	53.70	6.30
3	*5755.00	101.3 PK			1.00 H	27	61.10	40.20
4	*5755.00	91.0 AV			1.00 H	27	50.80	40.20
5	11510.00	59.3 PK	74.0	-14.7	1.13 H	263	41.20	18.10
6	11510.00	47.6 AV	54.0	-6.4	1.13 H	263	29.50	18.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	76.6 PK	87.6	-11.0	1.00 V	156	70.30	6.30
2	#5725.00	66.3 AV	77.3	-11.0	1.00 V	156	60.00	6.30
3	*5755.00	107.6 PK			1.00 V	156	67.40	40.20
4	*5755.00	97.3 AV			1.00 V	156	57.10	40.20
5	11510.00	59.5 PK	74.0	-14.5	1.07 V	245	41.40	18.10
6	11510.00	47.8 AV	54.0	-6.2	1.07 V	245	29.70	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	103.0 PK			1.00 H	50	62.70	40.30
2	*5795.00	92.9 AV			1.00 H	50	52.60	40.30
3	#5850.00	55.0 PK	83.0	-28.0	1.00 H	50	48.40	6.60
4	#5850.00	44.9 AV	72.9	-28.0	1.00 H	50	38.30	6.60
5	11590.00	59.4 PK	74.0	-14.6	1.42 H	218	41.30	18.10
6	11590.00	47.8 AV	54.0	-6.2	1.42 H	218	29.70	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	109.0 PK			1.48 V	146	68.70	40.30
2	*5795.00	98.9 AV			1.48 V	146	58.60	40.30
3	#5850.00	61.0 PK	89.0	-28.0	1.48 V	146	54.40	6.60
4	#5850.00	50.9 AV	78.9	-28.0	1.48 V	146	44.30	6.60
5	11590.00	59.6 PK	74.0	-14.4	1.06 V	296	41.50	18.10
6	11590.00	47.9 AV	54.0	-6.1	1.06 V	296	29.80	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. The limit value is defined as per 15.247.
7. “#”:The radiated frequency is out the restricted band.



A D T

802.11ac (VHT80)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 155	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	73.0 PK	81.0	-8.0	1.00 H	8	66.70	6.30
2	#5725.00	62.6 AV	70.6	-8.0	1.00 H	8	56.30	6.30
3	*5775.00	101.0 PK			1.00 H	8	60.80	40.20
4	*5775.00	90.6 AV			1.00 H	8	50.40	40.20
5	#5850.00	69.0 PK	81.0	-12.0	1.00 H	8	62.40	6.60
6	#5850.00	58.6 AV	70.6	-12.0	1.00 H	8	52.00	6.60
7	11550.00	59.1 PK	74.0	-14.9	1.12 H	40	41.00	18.10
8	11550.00	47.6 AV	54.0	-6.4	1.12 H	40	29.50	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	79.1 PK	87.1	-8.0	1.39 V	140	72.80	6.30
2	#5725.00	68.7 AV	76.7	-8.0	1.39 V	140	62.40	6.30
3	*5775.00	107.1 PK			1.39 V	140	66.90	40.20
4	*5775.00	96.7 AV			1.39 V	140	56.50	40.20
5	#5850.00	75.1 PK	87.1	-12.0	1.39 V	140	68.50	6.60
6	#5850.00	64.7 AV	76.7	-12.0	1.39 V	140	58.10	6.60
7	11550.00	59.2 PK	74.0	-14.8	1.03 V	320	41.10	18.10
8	11550.00	47.8 AV	54.0	-6.2	1.03 V	320	29.70	18.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.



A D T

TEST MODE A

BELOW 1GHz WORST-CASE DATA: 802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	111.40	42.2 QP	43.5	-1.3	1.25 H	28	59.30	-17.10
2	249.17	42.6 QP	46.0	-3.4	1.49 H	94	57.10	-14.50
3	499.48	34.9 QP	46.0	-11.1	2.00 H	54	43.90	-9.00
4	600.38	38.3 QP	46.0	-7.7	1.00 H	101	45.30	-7.00
5	701.28	40.0 QP	46.0	-6.0	1.00 H	307	45.40	-5.40
6	800.24	38.5 QP	46.0	-7.5	1.00 H	230	41.60	-3.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	35.72	34.5 QP	40.0	-5.5	1.01 V	67	49.20	-14.70
2	111.40	42.2 QP	43.5	-1.3	1.25 V	8	59.30	-17.10
3	249.17	32.4 QP	46.0	-13.6	1.01 V	327	46.90	-14.50
4	499.48	30.9 QP	46.0	-15.1	1.50 V	123	39.90	-9.00
5	600.38	33.6 QP	46.0	-12.4	2.00 V	120	40.60	-7.00
6	701.28	35.4 QP	46.0	-10.6	2.00 V	10	40.80	-5.40

REMARKS:

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



A D T

TEST MODE B

BELOW 1GHz WORST-CASE DATA: 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 69%RH	TESTED BY	Brad Tung

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	113.34	42.2 QP	43.5	-1.3	1.50 H	37	59.40	-17.20
2	249.17	42.9 QP	46.0	-3.1	1.50 H	92	57.40	-14.50
3	499.48	34.8 QP	46.0	-11.2	2.00 H	75	43.80	-9.00
4	600.38	38.7 QP	46.0	-7.3	1.50 H	103	45.70	-7.00
5	701.28	39.7 QP	46.0	-6.3	1.01 H	242	45.10	-5.40
6	800.24	39.1 QP	46.0	-6.9	1.01 H	133	42.20	-3.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	35.72	36.7 QP	40.0	-3.3	1.00 V	156	51.40	-14.70
2	113.34	42.2 QP	43.5	-1.3	1.25 V	8	59.40	-17.20
3	249.17	31.9 QP	46.0	-14.1	1.50 V	327	46.40	-14.50
4	600.38	34.1 QP	46.0	-11.9	1.00 V	243	41.10	-7.00
5	701.28	35.9 QP	46.0	-10.1	2.00 V	32	41.30	-5.40
6	800.24	35.4 QP	46.0	-10.6	1.50 V	65	38.50	-3.10

REMARKS:

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



A D T

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.2.2 TEST INSTRUMENTS

Same as item 4.2.2.

5.2.3 TEST PROCEDURES

Same as item 4.2.3.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 TEST SETUP

Same as item 4.2.5.

5.2.6 EUT OPERATING CONDITIONS

Same as item 4.1.6.

5.2.7 TEST RESULTS

TEST MODE A

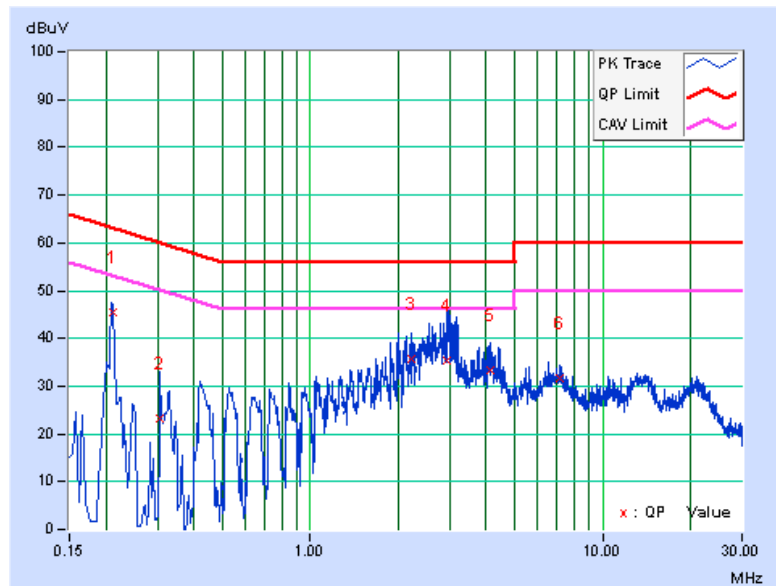
CONDUCTED WORST-CASE DATA: 802.11n (40MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.21053	0.16	45.46	31.01	45.62	31.17	63.18	53.18	-17.56	-22.01
2	0.30640	0.20	22.95	4.62	23.15	4.82	60.07	50.07	-36.92	-45.25
3	2.22230	0.30	35.47	24.45	35.77	24.75	56.00	46.00	-20.23	-21.25
4	2.94174	0.34	34.85	23.16	35.19	23.50	56.00	46.00	-20.81	-22.50
5	4.11474	0.41	32.91	23.46	33.32	23.87	56.00	46.00	-22.68	-22.13
6	7.16845	0.57	31.02	25.51	31.59	26.08	60.00	50.00	-28.41	-23.92

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value





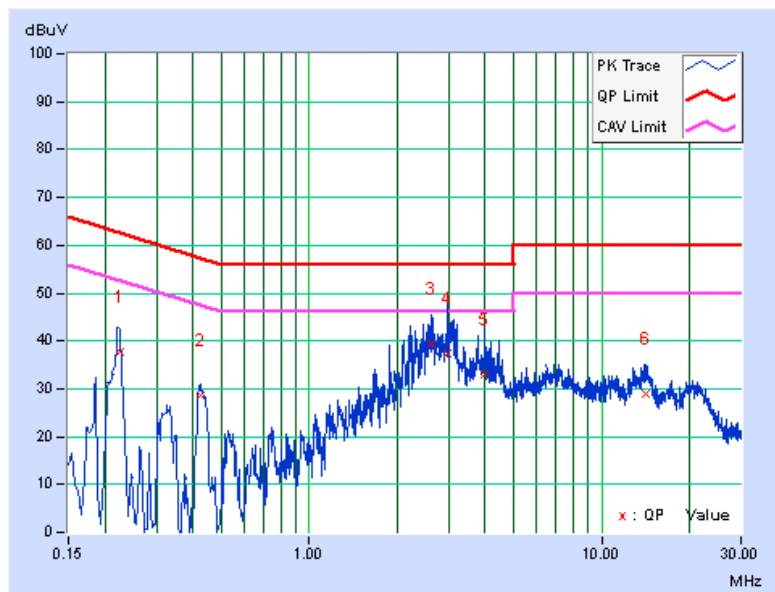
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PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.22429	0.18	37.45	19.85	37.63	20.03	62.66	52.66	-25.03	-32.63
2	0.42334	0.24	28.34	23.12	28.58	23.36	57.38	47.38	-28.80	-24.02
3	2.61330	0.31	39.08	24.89	39.39	25.20	56.00	46.00	-16.61	-20.80
4	2.96129	0.33	37.13	26.69	37.46	27.02	56.00	46.00	-18.54	-18.98
5	4.00135	0.38	32.53	23.65	32.91	24.03	56.00	46.00	-23.09	-21.97
6	14.21036	0.73	28.35	22.07	29.08	22.80	60.00	50.00	-30.92	-27.20

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



TEST MODE B

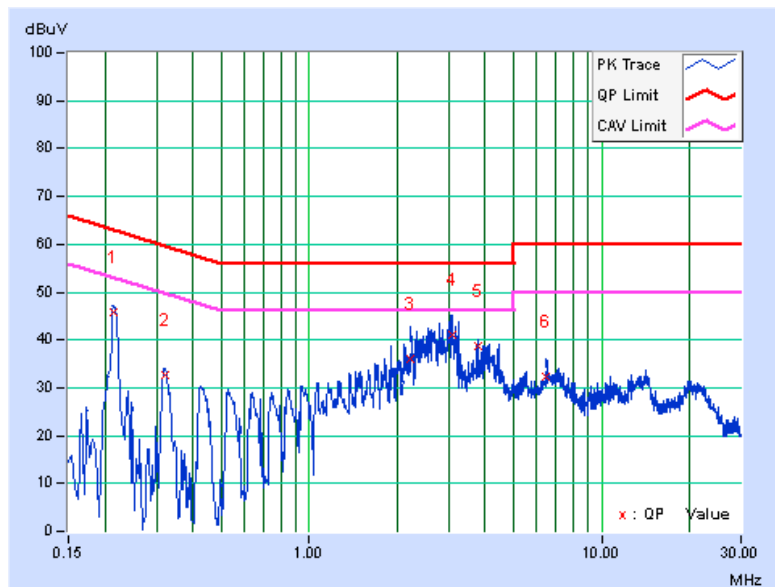
CONDUCTED WORST-CASE DATA: 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.21282	0.16	45.70	32.20	45.86	32.36	63.09	53.09	-17.23	-20.73
2	0.32204	0.20	32.52	23.26	32.72	23.46	59.65	49.65	-26.93	-26.19
3	2.23012	0.30	35.62	24.75	35.92	25.05	56.00	46.00	-20.08	-20.95
4	3.08641	0.35	40.60	26.10	40.95	26.45	56.00	46.00	-15.05	-19.55
5	3.76119	0.39	38.29	34.63	38.68	35.02	56.00	46.00	-17.32	-10.98
6	6.48811	0.53	31.64	26.07	32.17	26.60	60.00	50.00	-27.83	-23.40

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value





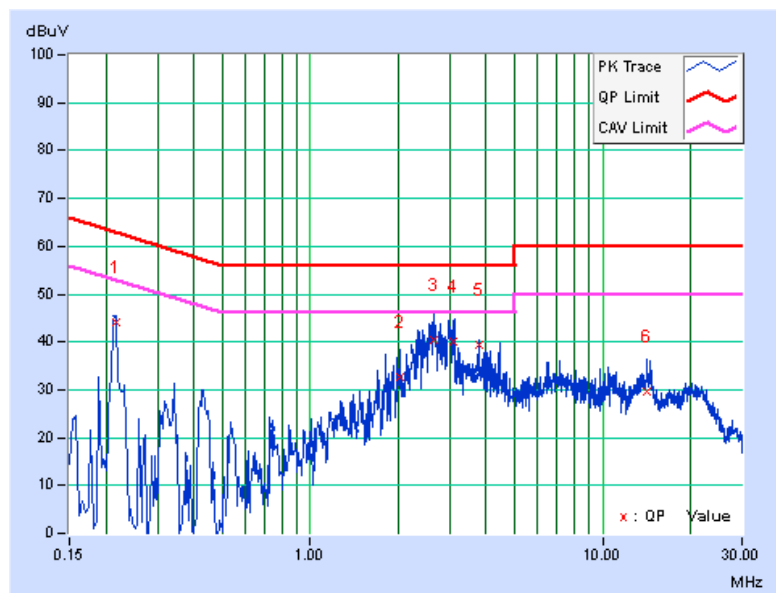
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PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.21647	0.18	43.89	33.24	44.07	33.42	62.95	52.95	-18.89	-19.54
2	2.02289	0.28	32.36	21.57	32.64	21.85	56.00	46.00	-23.36	-24.15
3	2.64458	0.31	40.10	25.68	40.41	25.99	56.00	46.00	-15.59	-20.01
4	3.10205	0.34	39.87	27.27	40.21	27.61	56.00	46.00	-15.79	-18.39
5	3.75893	0.37	39.18	35.99	39.55	36.36	56.00	46.00	-16.45	-9.64
6	14.24946	0.74	28.76	21.69	29.50	22.43	60.00	50.00	-30.50	-27.57

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value





A D T

5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST SETUP

Same as item 4.3.2.

5.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.3.4 TEST PROCEDURE

Same as item 4.3.4.

5.3.5 DEVIATION FROM TEST STANDARD

No deviation.

5.3.6 EUT OPERATING CONDITIONS

Same as item 4.3.6.



A D T

5.3.7 TEST RESULTS

TEST MODE A

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	16.43	16.39	16.40	0.5	PASS
157	5785	16.41	16.42	16.41	0.5	PASS
165	5825	16.41	16.40	16.43	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	17.60	17.63	17.63	0.5	PASS
157	5785	17.62	17.65	17.62	0.5	PASS
165	5825	17.60	17.63	17.64	0.5	PASS

802.11n (40MHz)

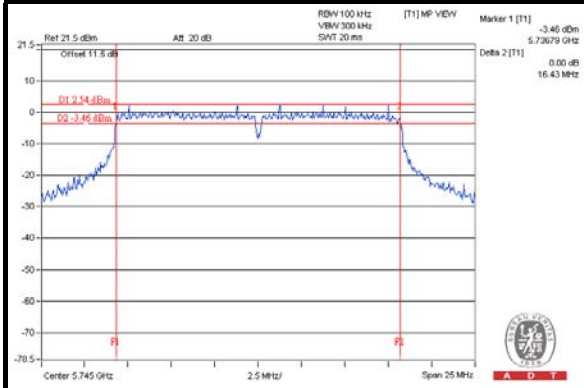
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	36.09	36.44	36.45	0.5	PASS
159	5795	36.44	36.40	36.53	0.5	PASS

802.11ac (VHT80)

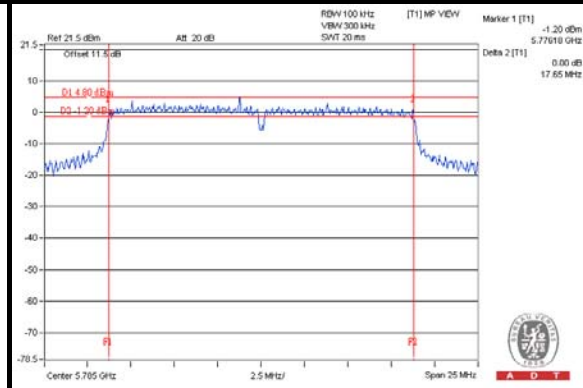
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
155	5775	75.68	76.53	75.83	0.5	PASS

SPECTRUM PLOT OF WORST VALUE

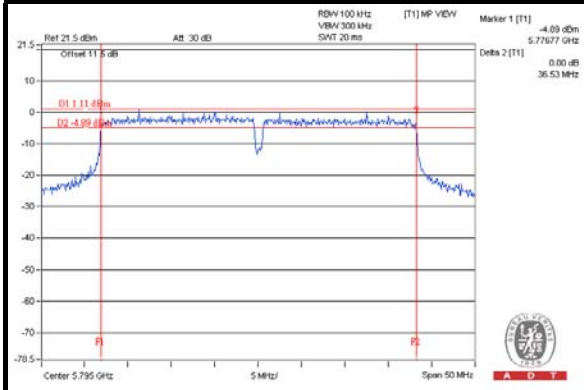
802.11a



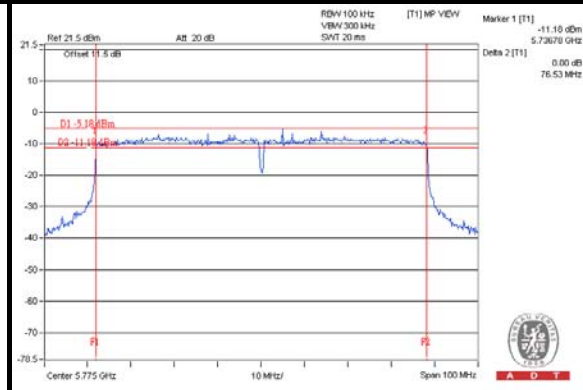
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)





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TEST MODE B

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	16.45	16.45	16.42	0.5	PASS
157	5785	16.41	16.45	16.42	0.5	PASS
165	5825	16.45	16.46	16.44	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	17.64	17.60	17.61	0.5	PASS
157	5785	17.68	17.67	17.68	0.5	PASS
165	5825	17.63	17.65	17.64	0.5	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	36.44	36.25	36.45	0.5	PASS
159	5795	36.59	36.56	36.44	0.5	PASS

802.11ac (VHT80)

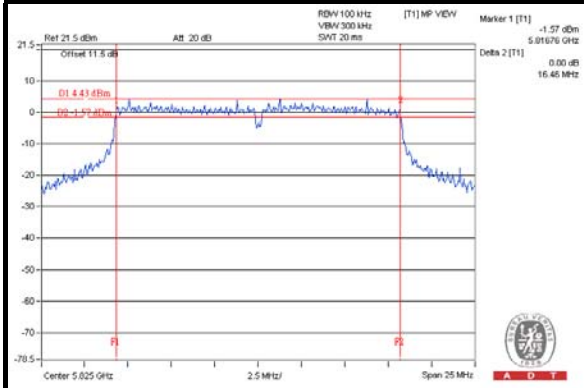
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
155	5775	73.68	75.67	76.65	0.5	PASS



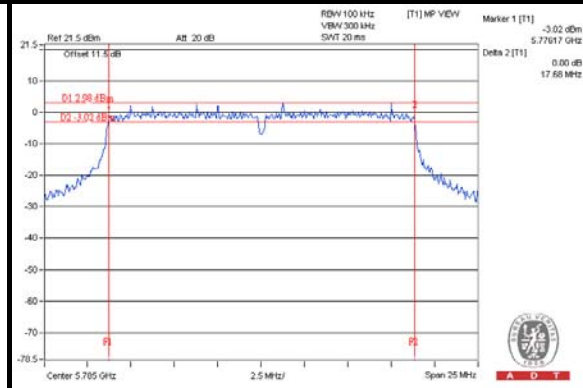
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SPECTRUM PLOT OF WORST VALUE

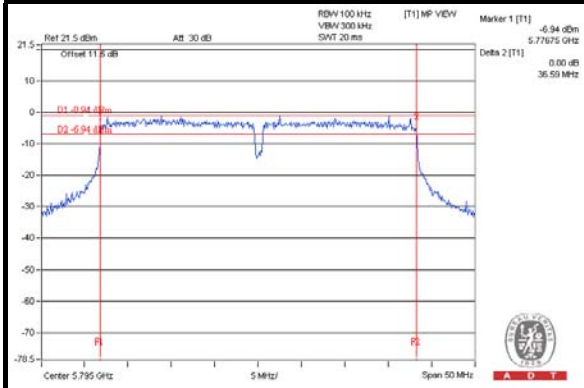
802.11a



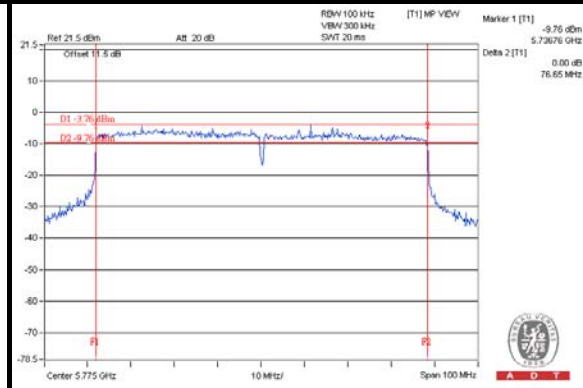
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)





A D T

5.4 CONDUCTED OUTPUT POWER

5.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 5725 –5850 MHz bands: 1 Watt (30dBm)

Per KDB 662911 D01 Multiple Transmitter Output v02r01 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $NANT \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any NANT;

Array Gain = $5 \log(NANT/NSS)$ dB or 3 dB, whichever is less for 20-MHz channel widths with $NANT \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(NANT/NSS)$ dB.

5.4.2 TEST SETUP

Same as Item 4.4.2.

5.4.3 INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.4.4 TEST PROCEDURES

Same as Item 4.4.4.

5.4.5 DEVIATION FROM TEST STANDARD

No deviation.

5.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.



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5.4.7 TEST RESULTS

FOR PEAK POWER

TEST MODE A

802.11a

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	19.31	19.88	19.66	275.055	24.39	30	PASS
157	5785	19.56	19.92	19.62	280.162	24.47	30	PASS
165	5825	19.45	20.03	19.69	281.909	24.50	30	PASS

802.11n (20MHz)

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	19.13	19.82	19.57	268.359	24.29	30	PASS
157	5785	19.41	20.03	19.62	279.612	24.47	30	PASS
165	5825	19.21	20.03	19.62	275.683	24.40	30	PASS

802.11n (40MHz)

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
151	5755	19.54	19.47	19.57	269.035	24.30	30	PASS
159	5795	19.71	19.88	19.66	283.286	24.52	30	PASS

802.11ac (VHT80)

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
155	5775	18.72	18.52	18.92	223.577	23.49	30	PASS

**TEST MODE B****802.11a**

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	19.62	20.14	19.77	289.740	24.62	30	PASS
157	5785	19.42	20.17	19.82	287.430	24.59	30	PASS
165	5825	19.38	20.19	19.79	286.448	24.57	30	PASS

802.11n (20MHz)

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	19.23	19.88	19.83	277.189	24.43	30	PASS
157	5785	19.31	19.99	19.53	274.823	24.39	30	PASS
165	5825	19.11	20.16	19.58	276.005	24.41	30	PASS

802.11n (40MHz)

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
151	5755	19.32	19.96	19.82	280.530	24.48	30	PASS
159	5795	19.42	19.86	19.68	277.223	24.43	30	PASS

802.11ac (VHT80)

CHAN.	FREQ. (MHz)	PEAK POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
155	5775	18.72	18.88	18.99	230.991	23.64	30	PASS



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FOR AVERAGE POWER

TEST MODE A

802.11a

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	14.11	15.42	15.34	94.795	19.77
157	5785	14.62	16.11	15.62	106.280	20.26
165	5825	14.71	16.32	15.72	109.760	20.40

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	14.11	15.51	15.33	95.445	19.80
157	5785	14.52	16.12	15.71	106.479	20.27
165	5825	14.11	16.02	15.44	100.752	20.03

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	14.66	14.41	15.00	88.471	19.47
159	5795	15.33	15.79	15.92	111.134	20.46

802.11ac (VHT80)

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
155	5775	14.12	14.22	14.82	82.586	19.17



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TEST MODE B

802.11a

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	14.96	16.23	15.26	106.883	20.29
157	5785	15.12	16.06	15.11	105.308	20.22
165	5825	14.77	16.33	14.82	103.285	20.14

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	14.32	15.83	15.26	98.896	19.95
157	5785	14.72	16.03	14.52	98.049	19.91
165	5825	14.28	15.94	14.42	93.725	19.72

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	14.55	15.26	15.26	95.658	19.81
159	5795	15.11	15.21	14.98	97.100	19.87

802.11ac (VHT80)

CHANNEL	FREQUENCY (MHz)	AVG. POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)
		CHAIN 0	CHAIN 1	CHAIN 2		
155	5775	14.51	14.69	14.52	86.007	19.35



A D T

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST SETUP

Same as item 4.5.2.

5.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.5.4 TEST PROCEDURE.

Same as item 4.5.4.

5.5.5 DEVIATION FROM TEST STANDARD

No deviation.

5.5.6 EUT OPERATING CONDITION

Same as item 4.3.6.



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5.5.7 TEST RESULTS

TEST MODE A

802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-11.91	4.77	-7.14	3.26	PASS
	157	5785	-11.66	4.77	-6.89	3.26	PASS
	165	5825	-10.38	4.77	-5.61	3.26	PASS
1	149	5745	-9.58	4.77	-4.81	3.26	PASS
	157	5785	-9.77	4.77	-5.00	3.26	PASS
	165	5825	-9.20	4.77	-4.43	3.26	PASS
2	149	5745	-8.46	4.77	-3.69	3.26	PASS
	157	5785	-4.66	4.77	0.11	3.26	PASS
	165	5825	-9.78	4.77	-5.01	3.26	PASS

NOTE: Directional gain = $5.97\text{dBi} + 10\log(3) = 10.74\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8-(10.74-6) = 3.26\text{dBm}$.

802.11n (20MHz)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-10.91	4.77	-6.14	8.00	PASS
	157	5785	-11.26	4.77	-6.49	8.00	PASS
	165	5825	-12.12	4.77	-7.35	8.00	PASS
1	149	5745	-11.00	4.77	-6.23	8.00	PASS
	157	5785	-10.34	4.77	-5.57	8.00	PASS
	165	5825	-10.67	4.77	-5.90	8.00	PASS
2	149	5745	-10.97	4.77	-6.20	8.00	PASS
	157	5785	-9.89	4.77	-5.12	8.00	PASS
	165	5825	-10.67	4.77	-5.90	8.00	PASS

NOTE: IEEE 802.11n, MCS = 16-23, NSS = 3,
Directional gain = $5.97\text{dBi} + 10\log(3/3) = 5.97\text{dBi} < 6\text{dBi}$, so the limit no need to reduced.



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802.11n (40MHz)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	151	5755	-14.89	4.77	-10.12	8.00	PASS
	159	5795	-13.85	4.77	-9.08	8.00	PASS
1	151	5755	-14.52	4.77	-9.75	8.00	PASS
	159	5795	-13.05	4.77	-8.28	8.00	PASS
2	151	5755	-13.20	4.77	-8.43	8.00	PASS
	159	5795	-12.98	4.77	-8.21	8.00	PASS

NOTE: IEEE 802.11n, MCS = 16-23, NSS = 3,
Directional gain = 5.97dBi + 10log(3/3) = 5.97dBi < 6dBi, so the limit no need to reduced.

802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	155	5775	-18.31	4.77	-13.54	3.26	PASS
1	155	5775	-18.02	4.77	-13.25	3.26	PASS
2	155	5775	-16.24	4.77	-11.47	3.26	PASS

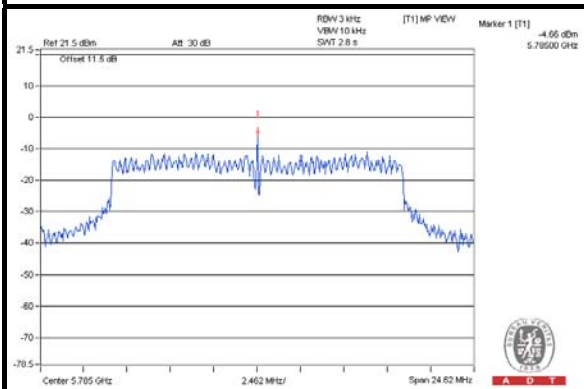
NOTE: Directional gain = 5.97dBi + 10log(3) = 10.74dBi > 6dBi , so the power density limit shall be reduced to 8-(10.74-6) = 3.26dBm.



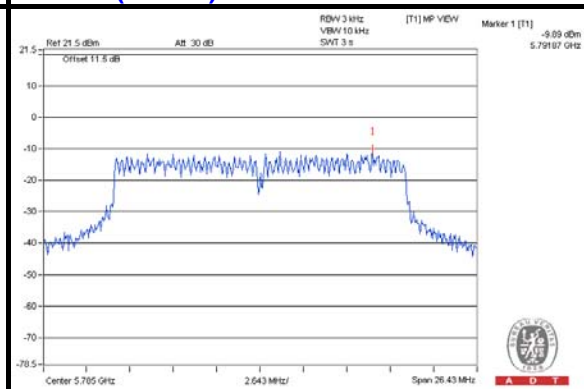
A D T

SPECTRUM PLOT OF WORST VALUE

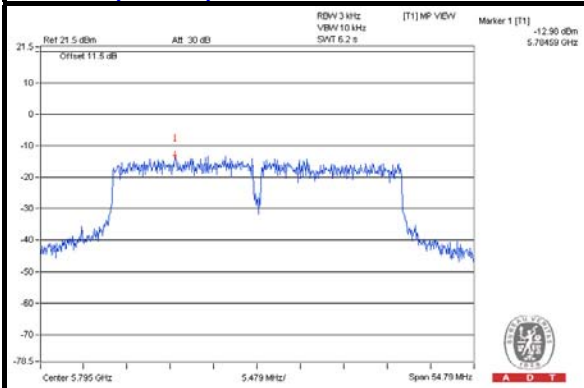
802.11a



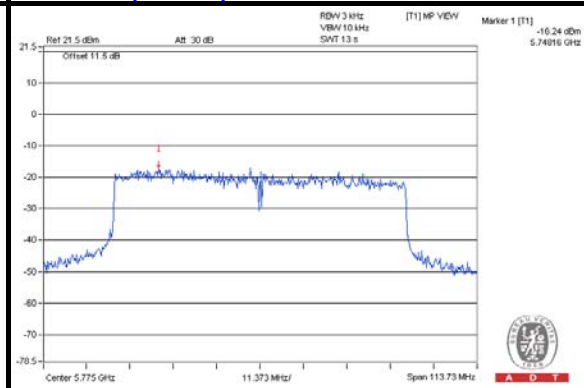
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)





TEST MODE B

802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-11.80	4.77	-7.03	3.26	PASS
	157	5785	-11.00	4.77	-6.23	3.26	PASS
	165	5825	-10.79	4.77	-6.02	3.26	PASS
1	149	5745	-8.78	4.77	-4.01	3.26	PASS
	157	5785	-9.59	4.77	-4.82	3.26	PASS
	165	5825	-8.29	4.77	-3.52	3.26	PASS
2	149	5745	-9.87	4.77	-5.10	3.26	PASS
	157	5785	-10.03	4.77	-5.26	3.26	PASS
	165	5825	-10.62	4.77	-5.85	3.26	PASS

NOTE: Directional gain = 5.97dBi + 10log(3) = 10.74dBi > 6dBi , so the power density limit shall be reduced to 8-(10.74-6) = 3.26dBm.

802.11n (20MHz)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	-10.56	4.77	-5.79	8.00	PASS
	157	5785	-11.64	4.77	-6.87	8.00	PASS
	165	5825	-11.64	4.77	-6.87	8.00	PASS
1	149	5745	-10.13	4.77	-5.36	8.00	PASS
	157	5785	-9.21	4.77	-4.44	8.00	PASS
	165	5825	-10.36	4.77	-5.59	8.00	PASS
2	149	5745	-10.89	4.77	-6.12	8.00	PASS
	157	5785	-12.25	4.77	-7.48	8.00	PASS
	165	5825	-9.22	4.77	-4.45	8.00	PASS

NOTE: IEEE 802.11n, MCS = 16-23, NSS = 3,
Directional gain = 5.97dBi + 10log(3/3) = 5.97dBi < 6dBi, so the limit no need to reduced.



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802.11n (40MHz)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	151	5755	-14.53	4.77	-9.76	8.00	PASS
	159	5795	-13.91	4.77	-9.14	8.00	PASS
1	151	5755	-10.95	4.77	-6.18	8.00	PASS
	159	5795	-14.02	4.77	-9.25	8.00	PASS
2	151	5755	-13.63	4.77	-8.86	8.00	PASS
	159	5795	-14.34	4.77	-9.57	8.00	PASS

NOTE: IEEE 802.11n, MCS = 16-23, NSS = 3,
Directional gain = 5.97dBi + 10log(3/3) = 5.97dBi < 6dBi, so the limit no need to reduced.

802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	155	5775	-18.11	4.77	-13.34	3.26	PASS
1	155	5775	-17.38	4.77	-12.61	3.26	PASS
2	155	5775	-17.60	4.77	-12.83	3.26	PASS

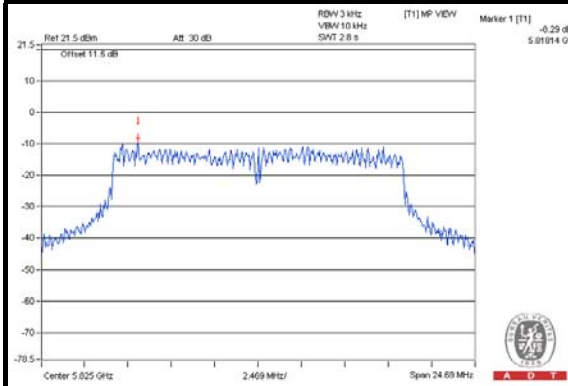
NOTE: Directional gain = 5.97dBi + 10log(3) = 10.74dBi > 6dBi , so the power density limit shall be reduced to 8-(10.74-6) = 3.26dBm.



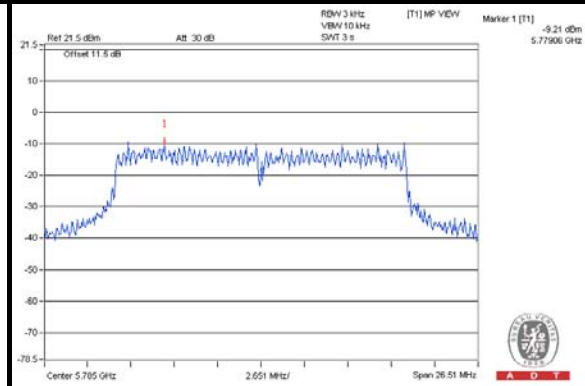
A D T

SPECTRUM PLOT OF WORST VALUE

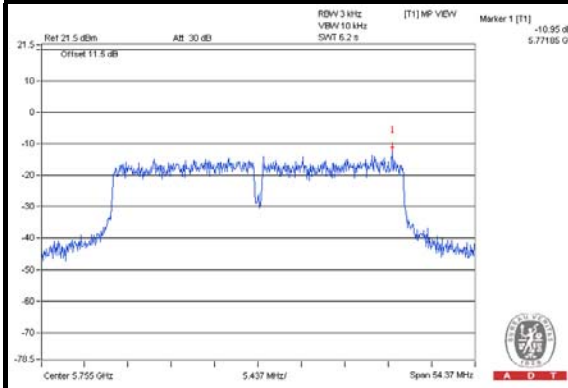
802.11a



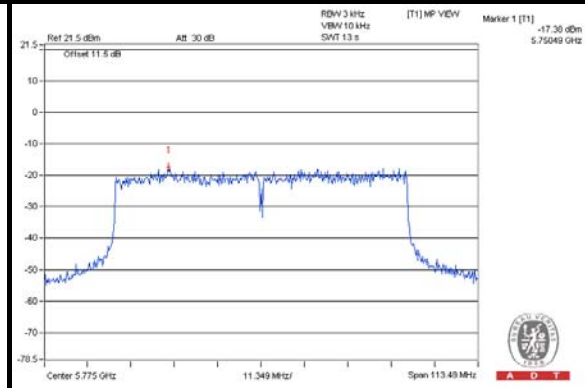
802.11n (20MHz)



802.11n (40MHz)



802.11ac (VHT80)





A D T

5.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.6.2 TEST SETUP

Same as Item 4.6.2

5.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.6.4 TEST PROCEDURE

Same as Item 4.6.4

5.6.5 DEVIATION FROM TEST STANDARD

No deviation.

5.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

5.6.7 TEST RESULTS

The conducted emission test is performed on each TX port of operating mode without summing or adding $10\log(N)$ since the limit is relative emission limit.

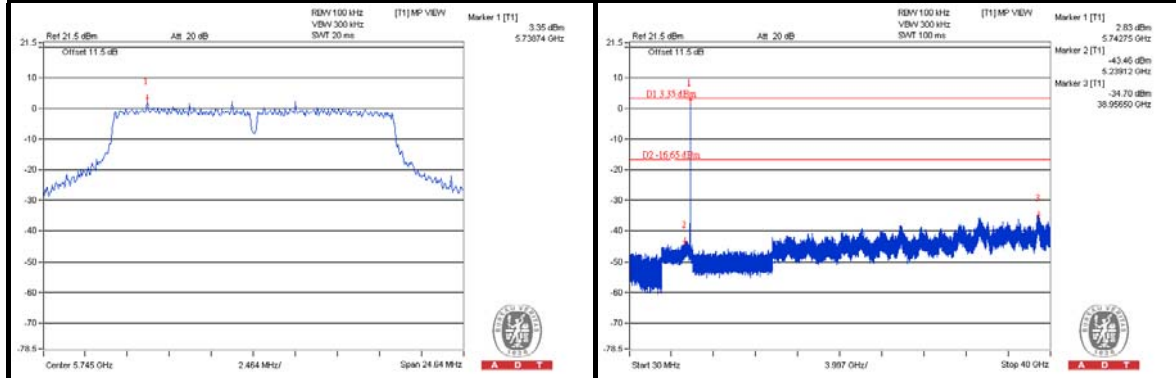
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



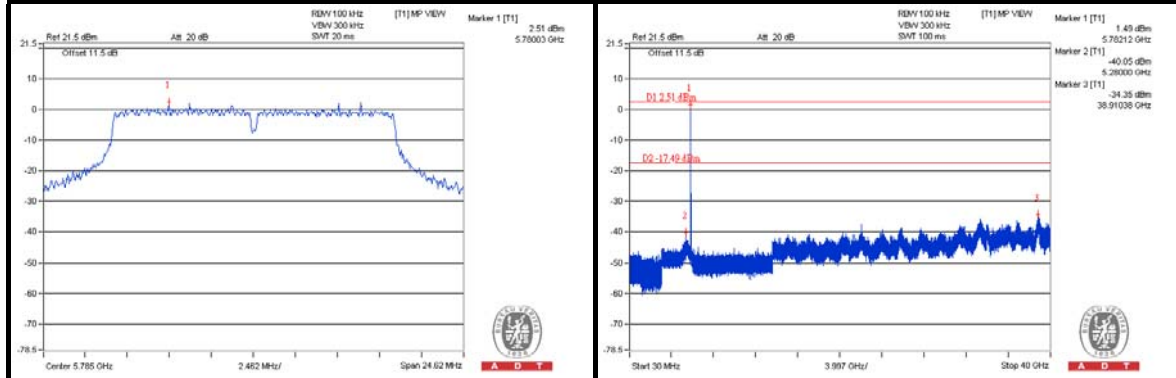
A D T

TEST MODE A
802.11a
CHAIN 0

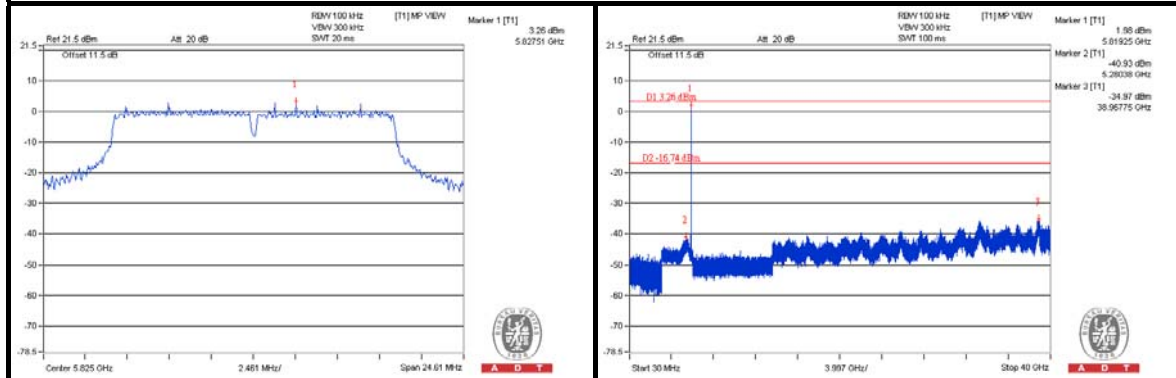
CH 149



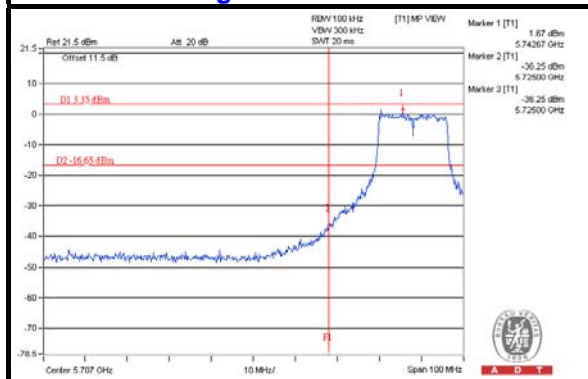
CH 157



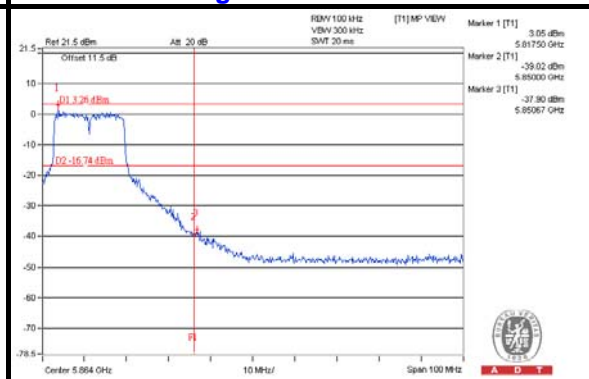
CH 165



CH 149 Band edge



CH 165 Band edge

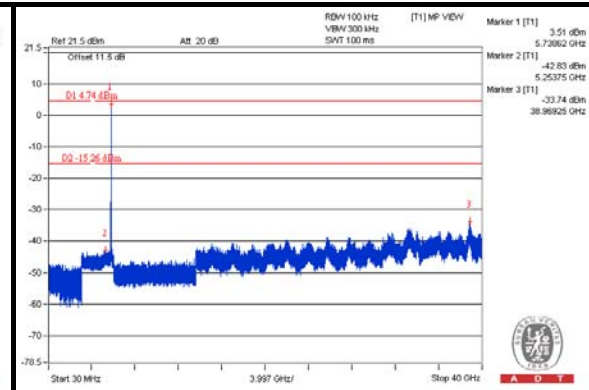
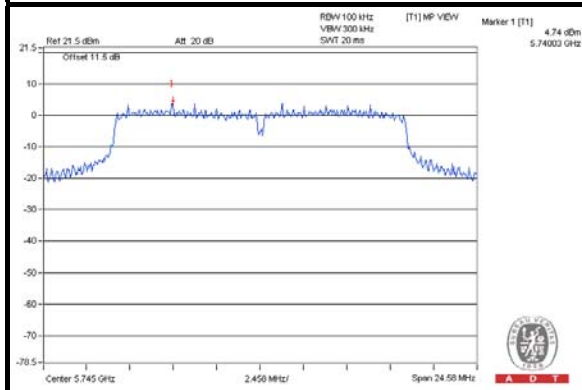




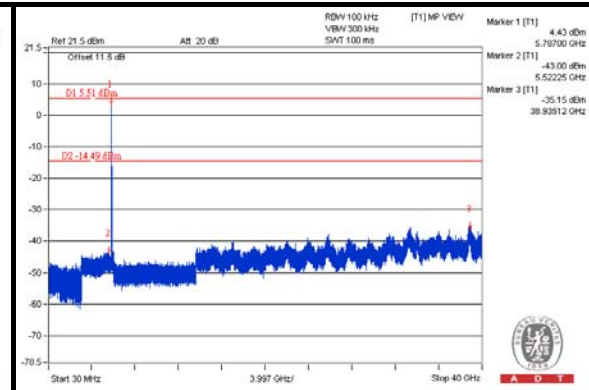
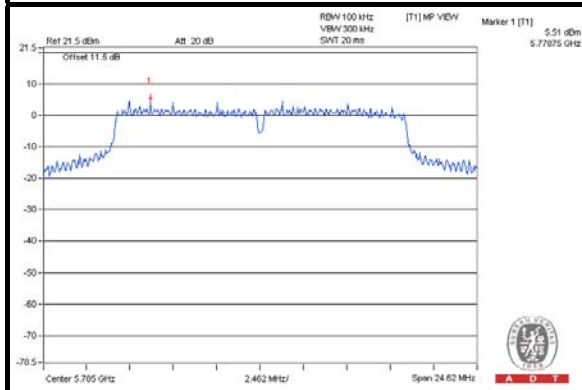
A D T

CHAIN 1

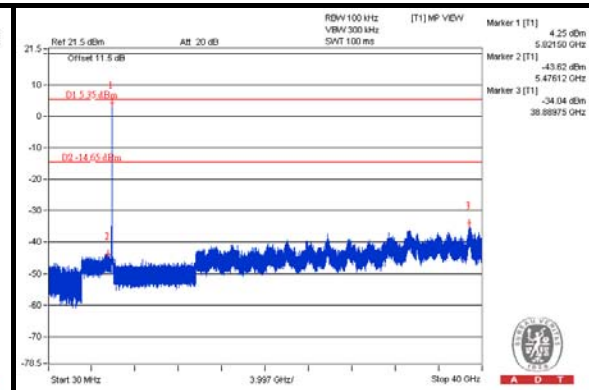
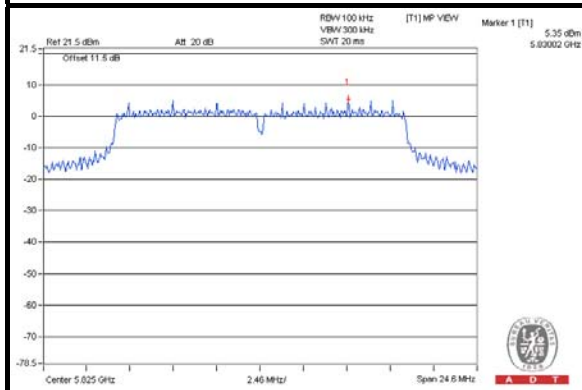
CH 149



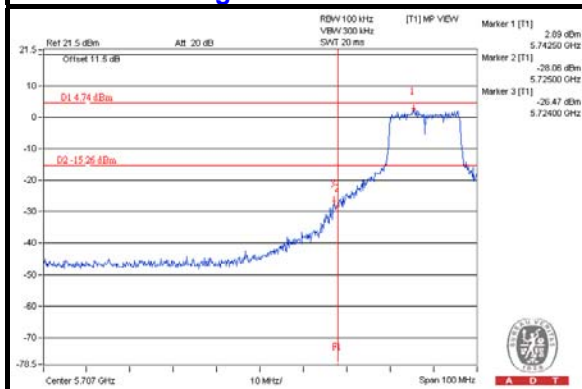
CH 157



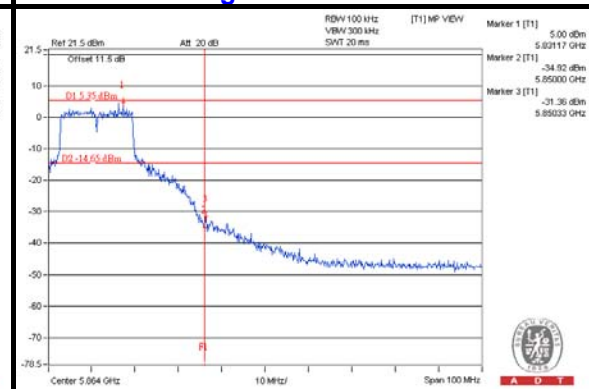
CH 165



CH 149 Band edge



CH 165 Band edge

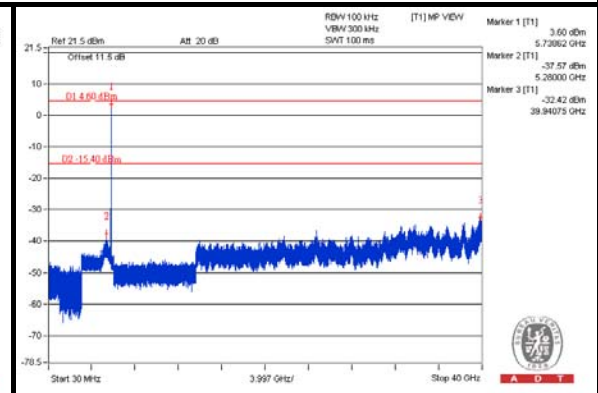
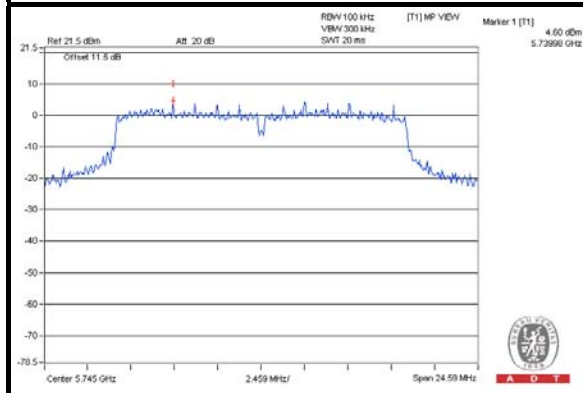




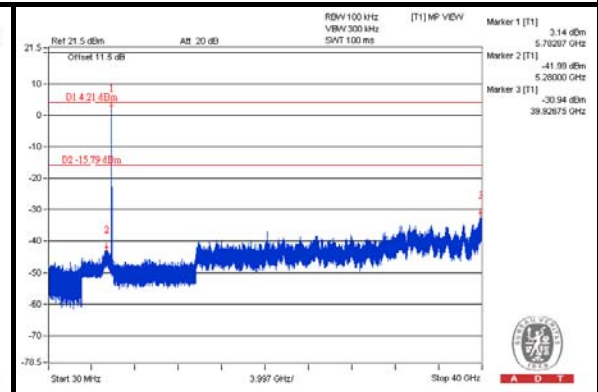
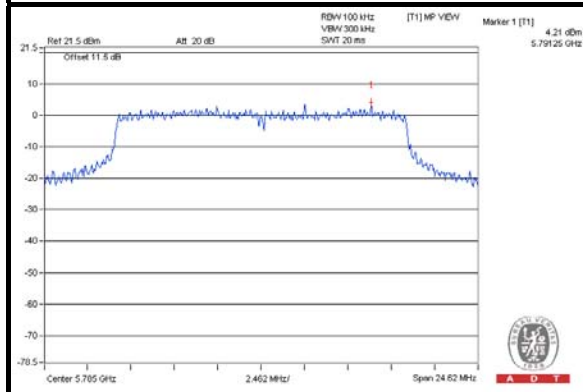
A D T

CHAIN 2

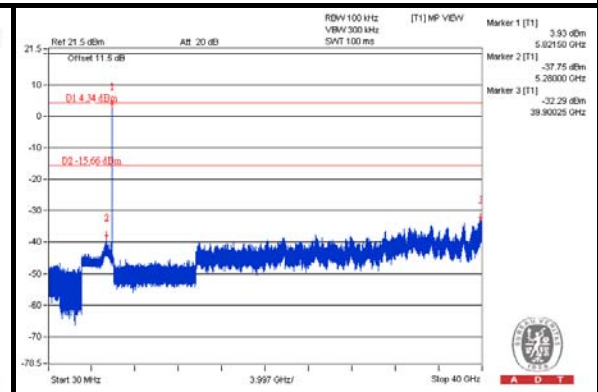
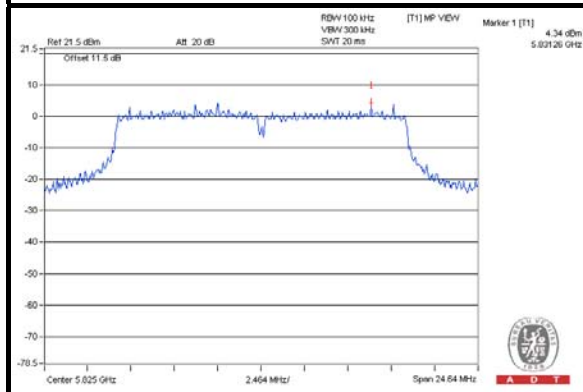
CH 149



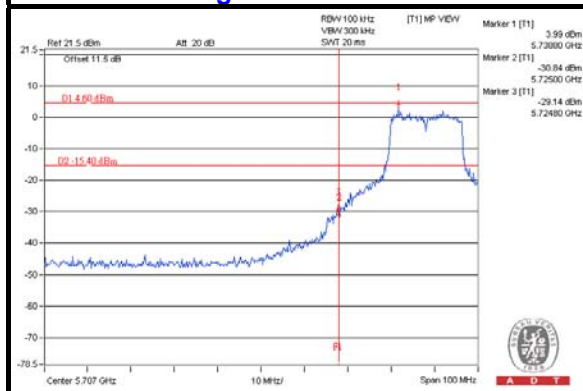
CH 157



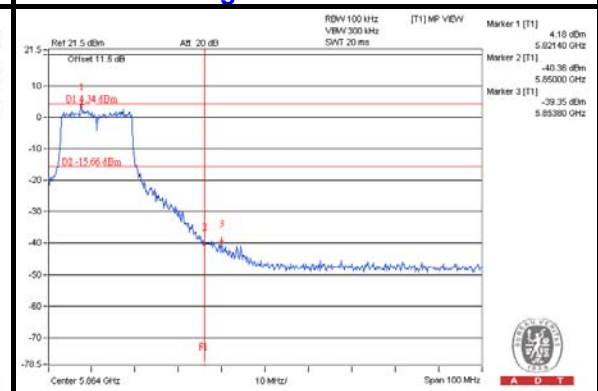
CH 165



CH 149 Band edge



CH 165 Band edge



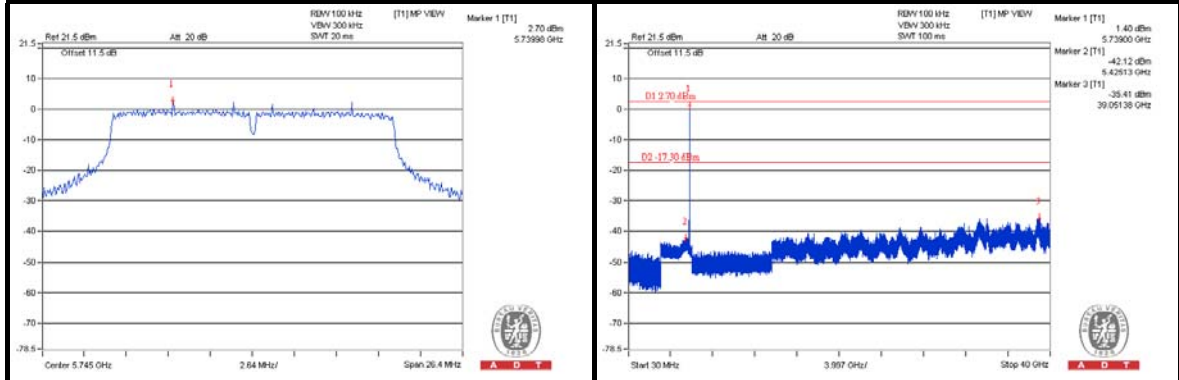


A D T

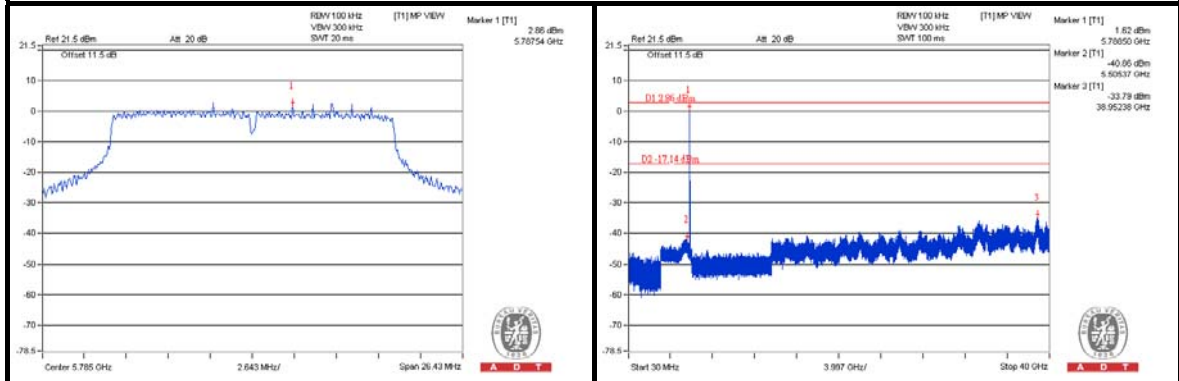
802.11n (20MHz)

CHAIN 0

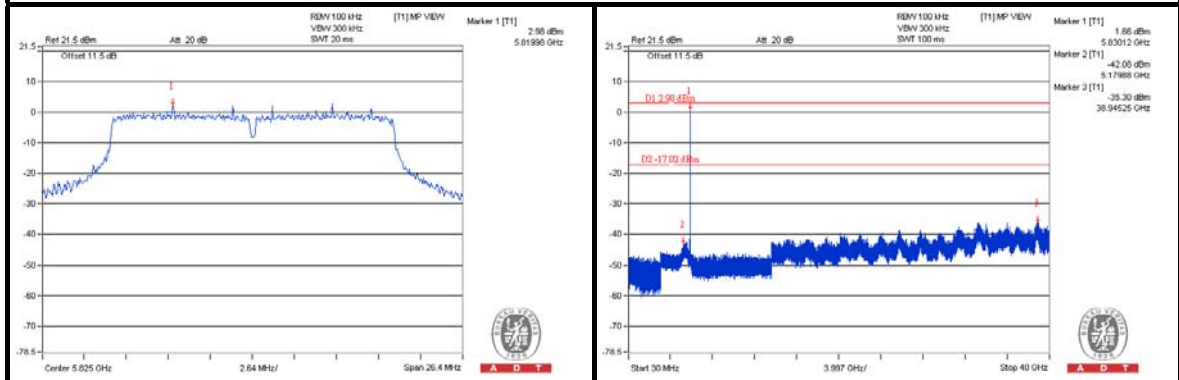
CH 149



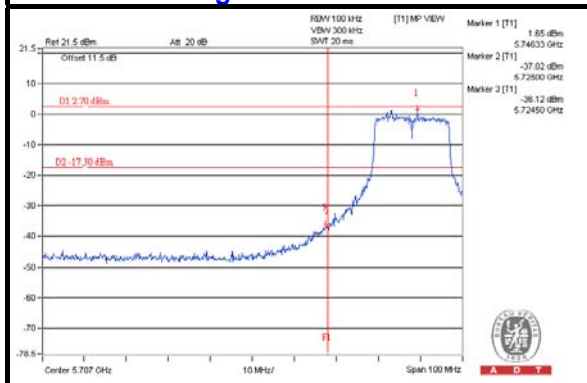
CH 157



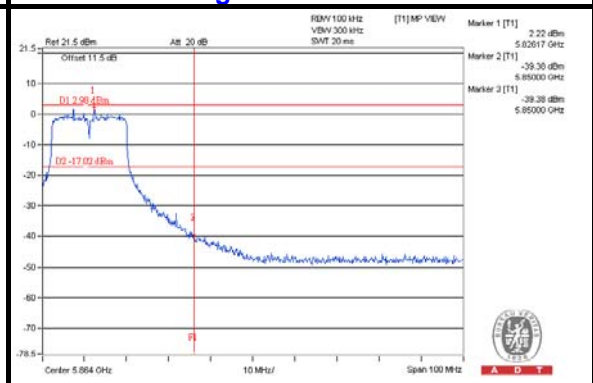
CH 165



CH 149 Band edge



CH 165 Band edge

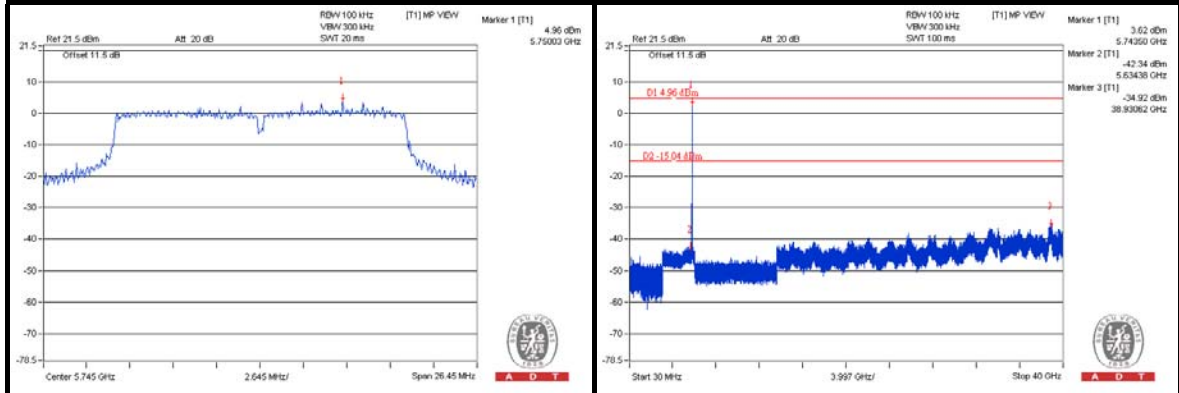




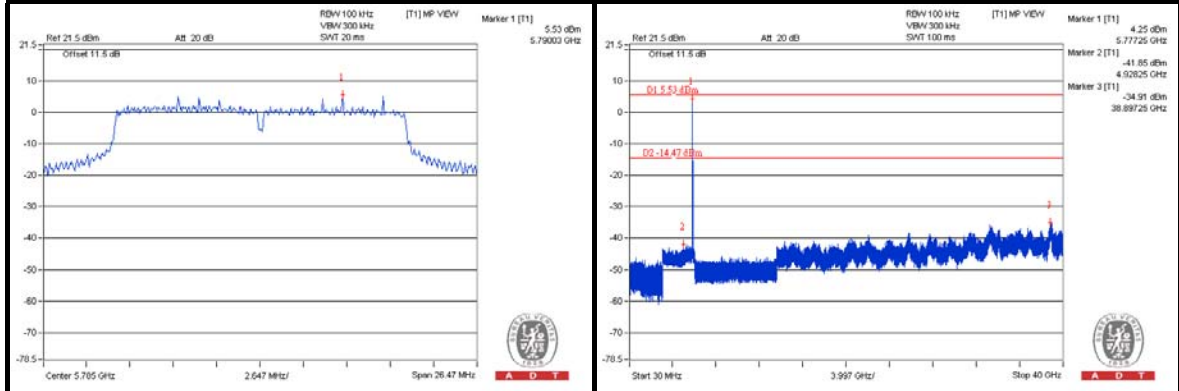
A D T

CHAIN 1

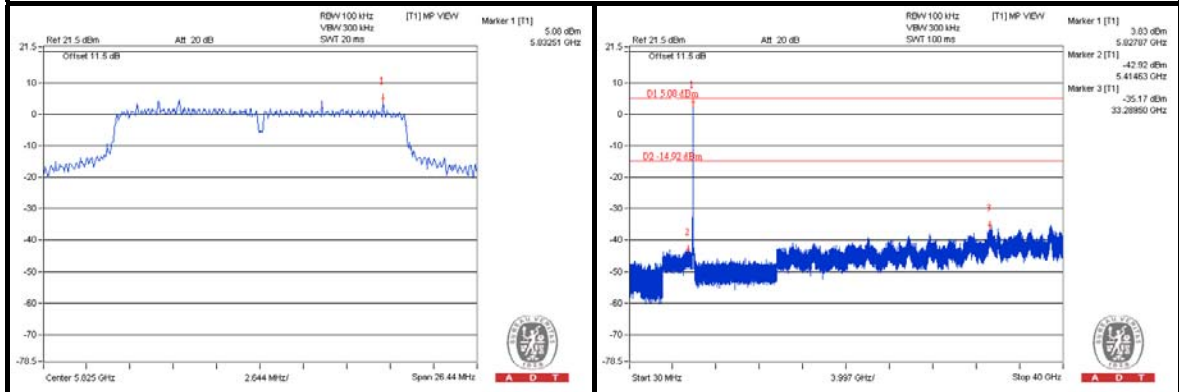
CH 149



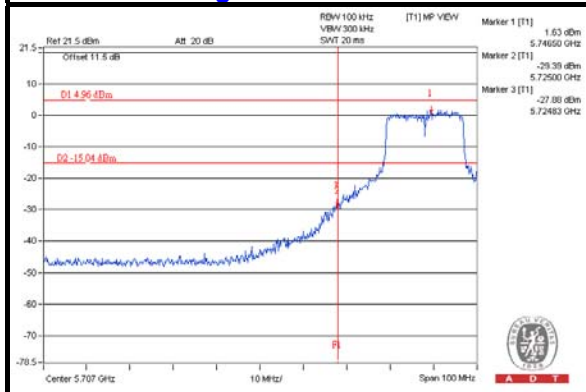
CH 157



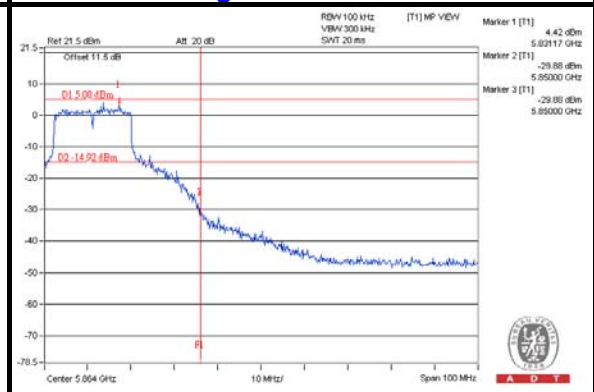
CH 165



CH 149 Band edge



CH 165 Band edge

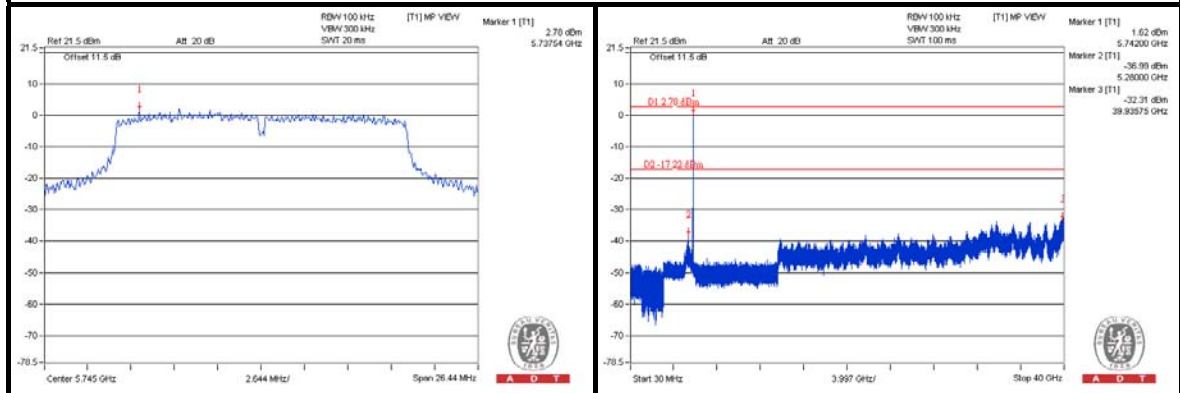




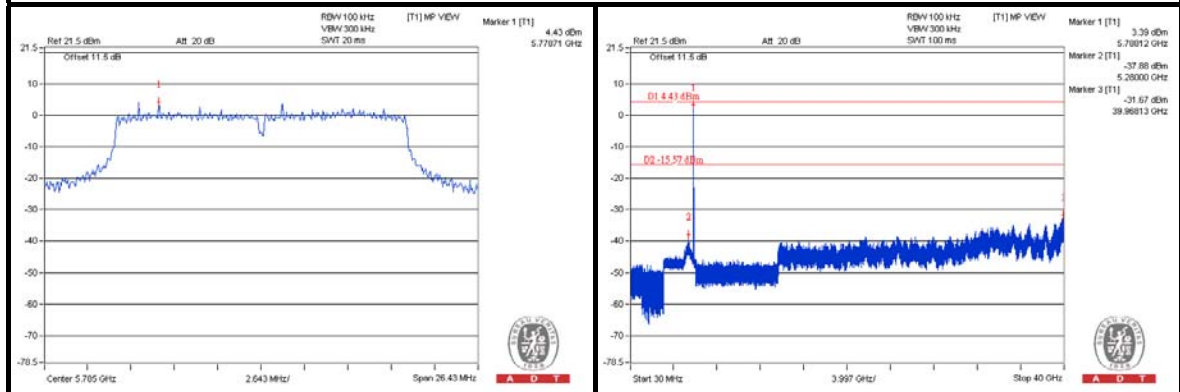
A D T

CHAIN 2

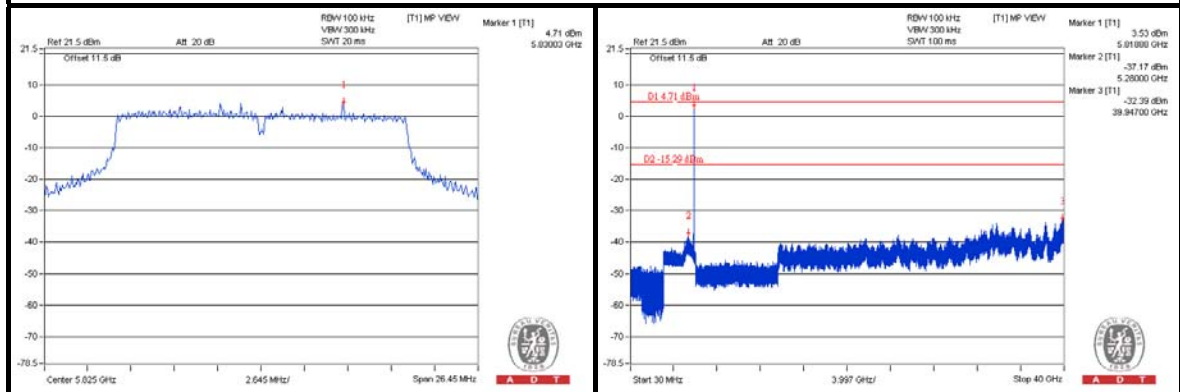
CH 149



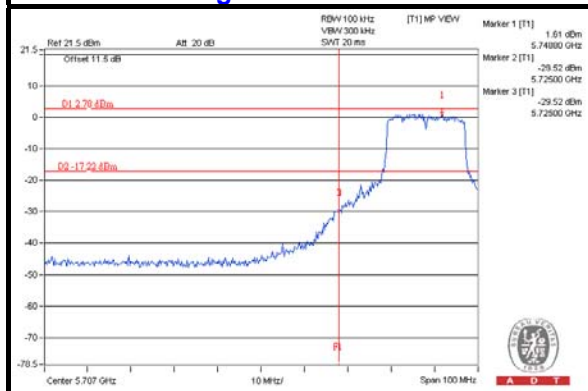
CH 157



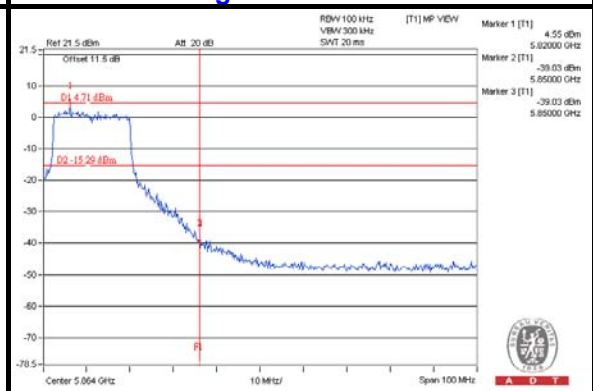
CH 165



CH 149 Band edge



CH 165 Band edge



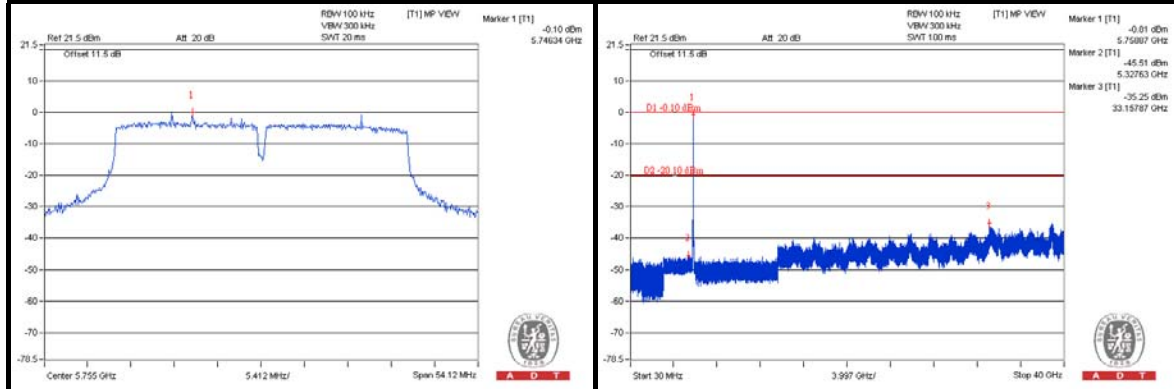


A D T

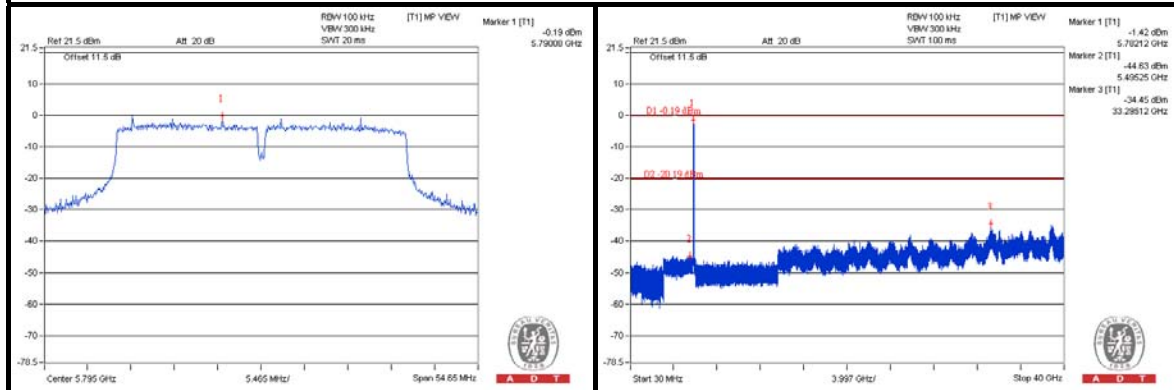
802.11n (40MHz)

CHAIN 0

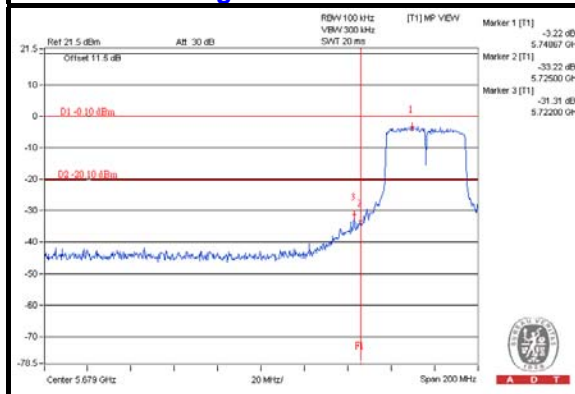
CH 151



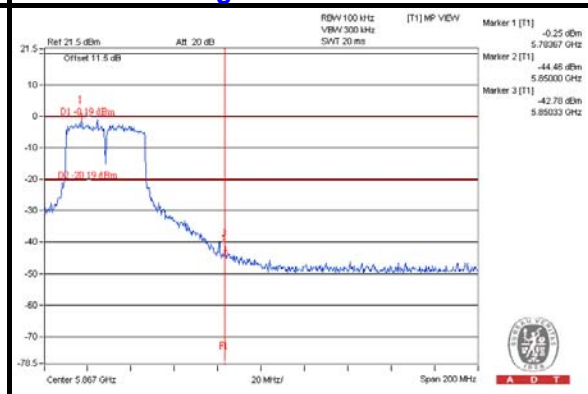
CH 159



CH 151 Band edge



CH 159 Band edge

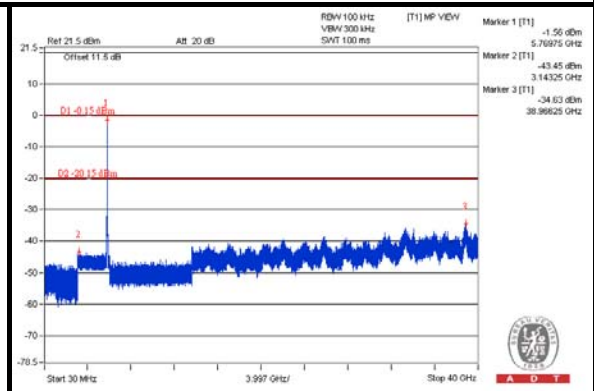
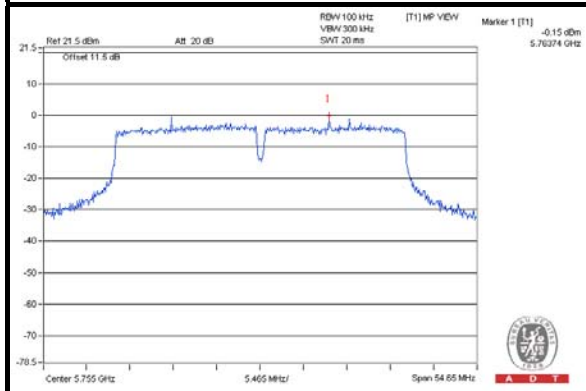




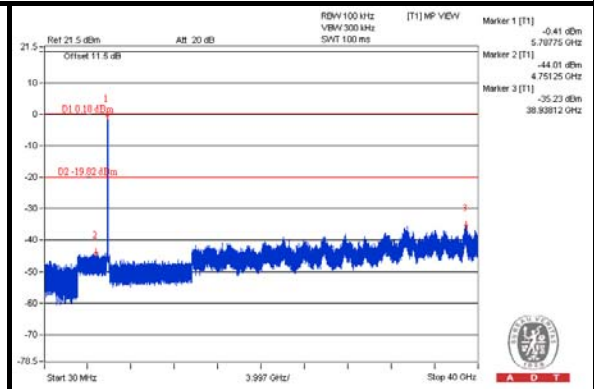
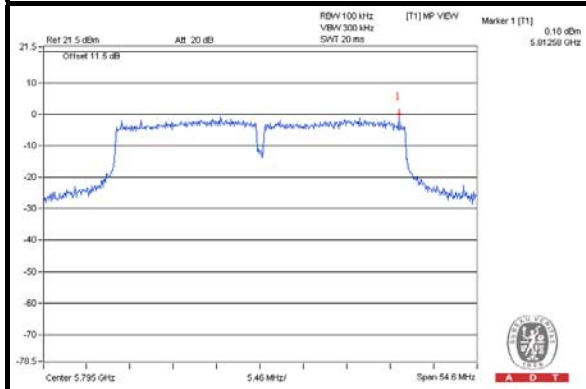
A D T

CHAIN 1

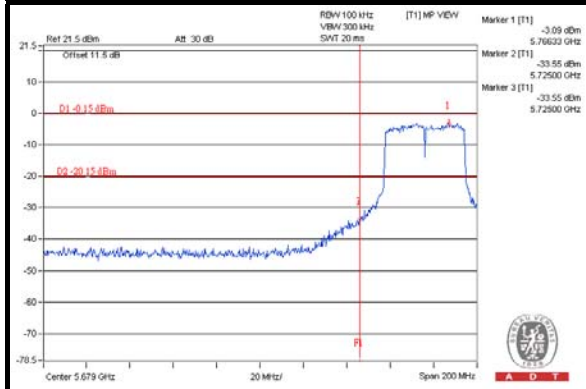
CH 151



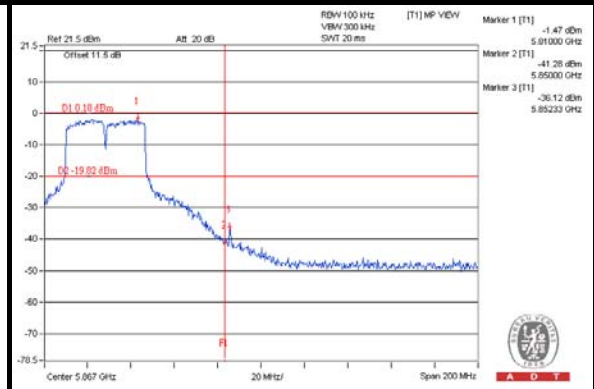
CH 159



CH 151 Band edge



CH 159 Band edge

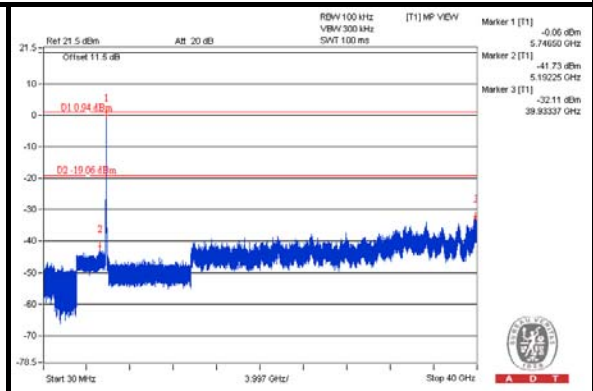
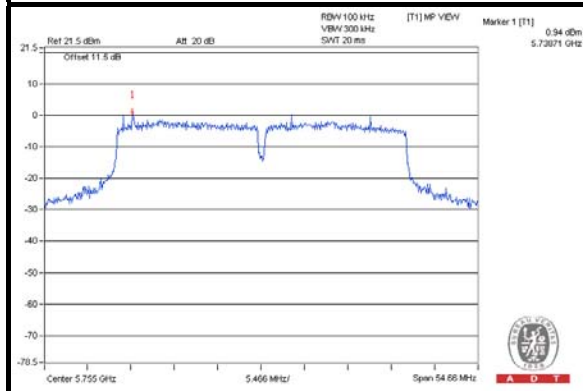




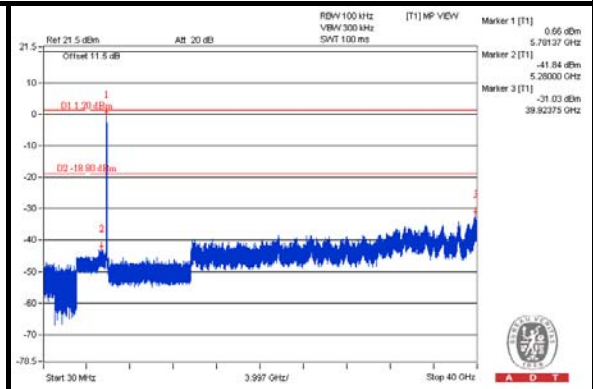
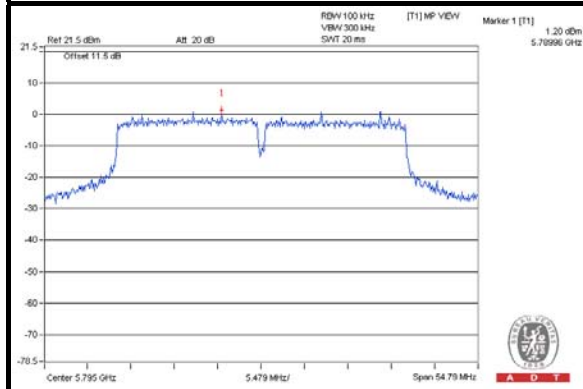
A D T

CHAIN 2

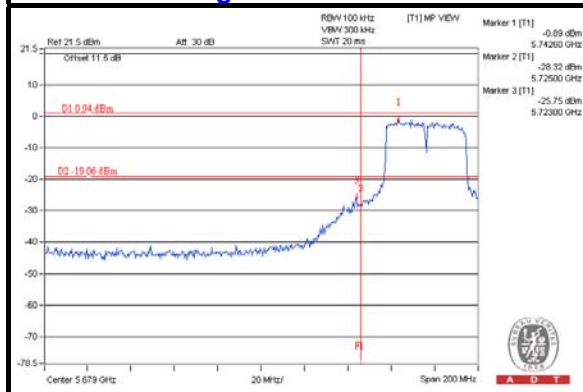
CH 151



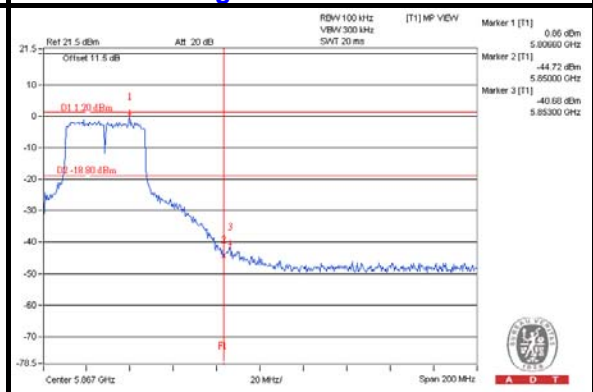
CH 159



CH 151 Band edge



CH 159 Band edge

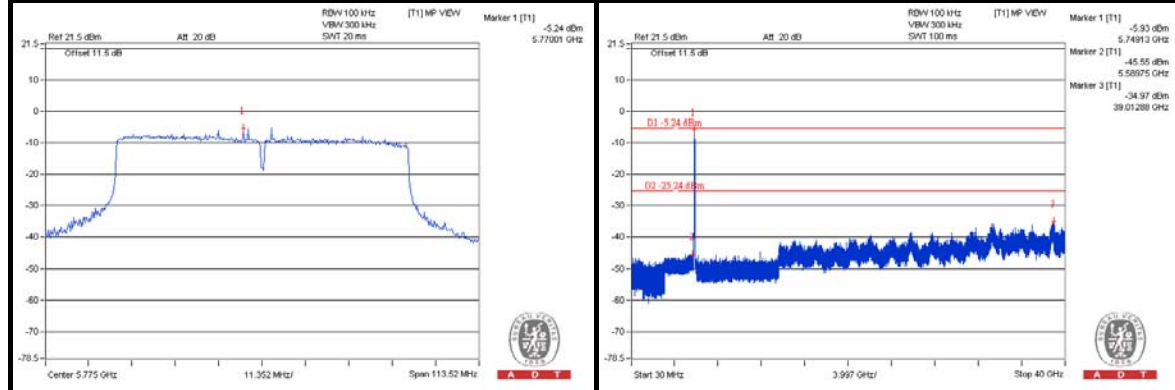




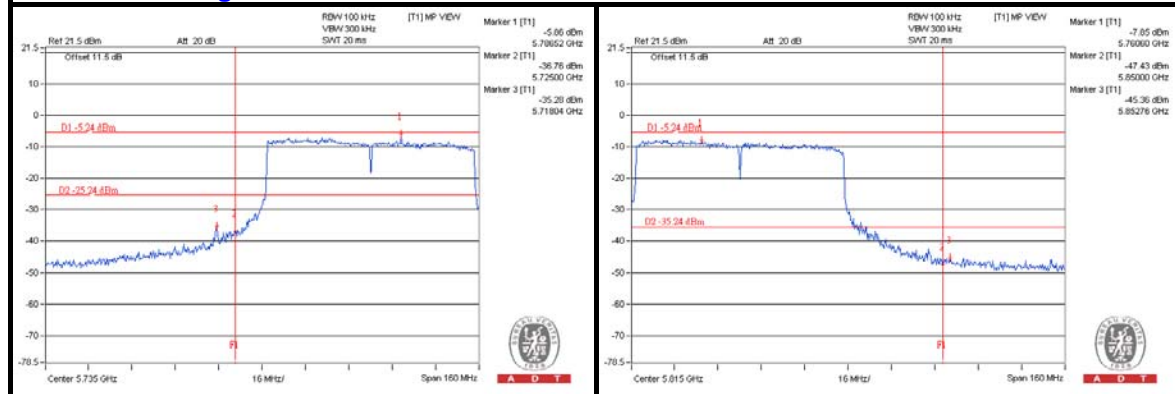
A D T

802.11ac (VHT80) CHAIN 0

CH 155



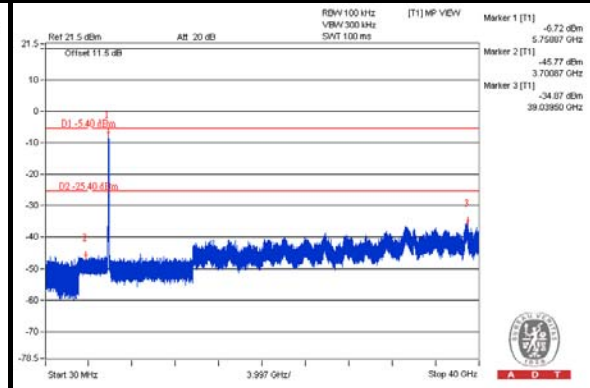
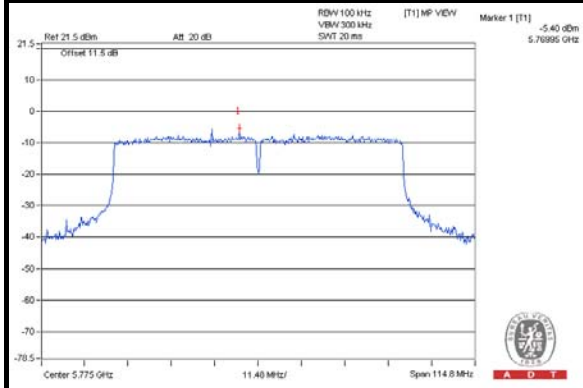
CH 155 Band edge



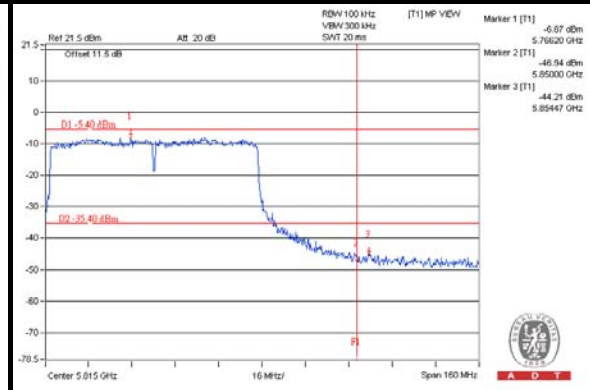
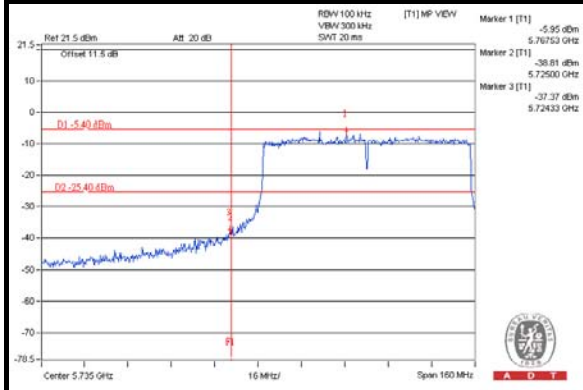


A D T

CHAIN 1 CH 155



CH 155 Band edge

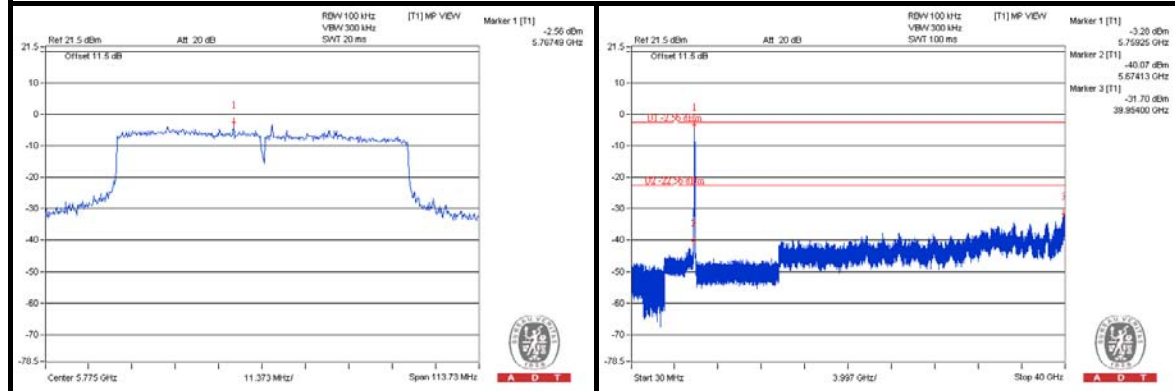




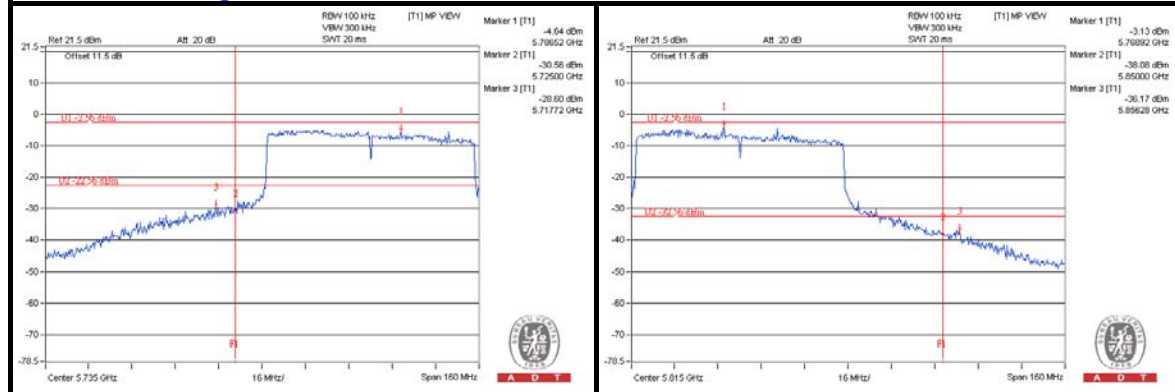
A D T

CHAIN 2

CH 155



CH 155 Band edge

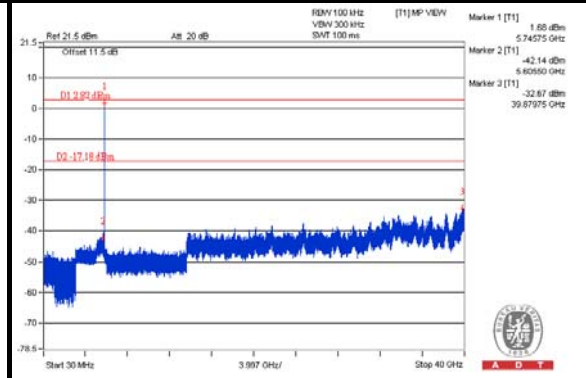
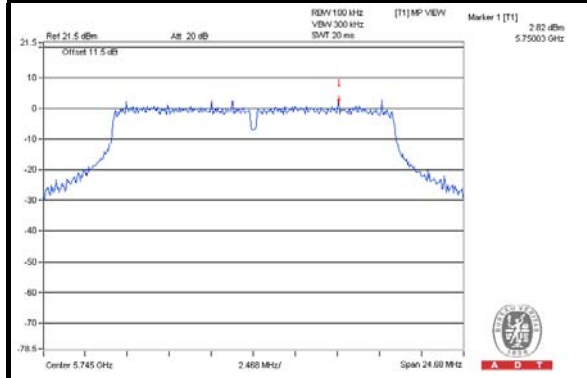




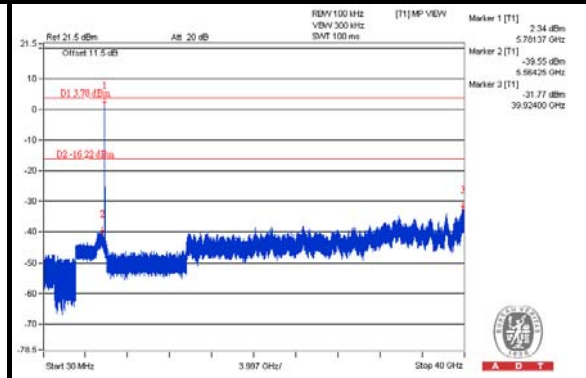
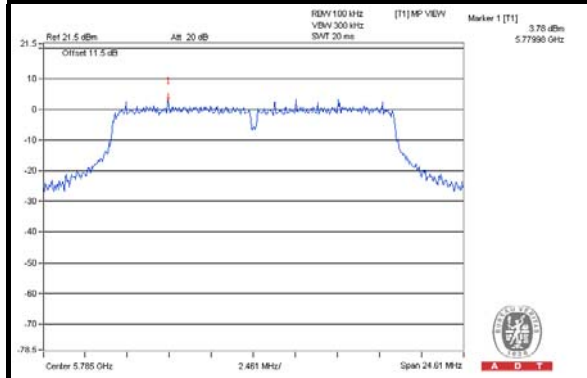
A D T

TEST MODE B 802.11a CHAIN 0

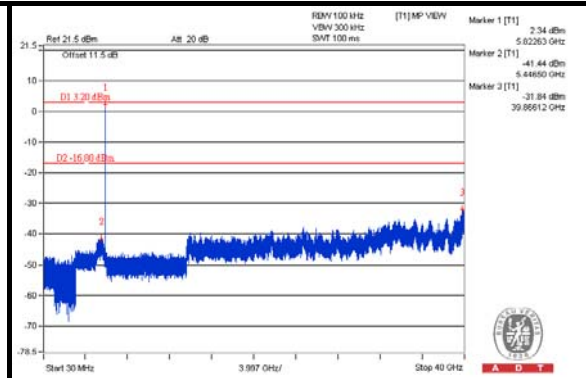
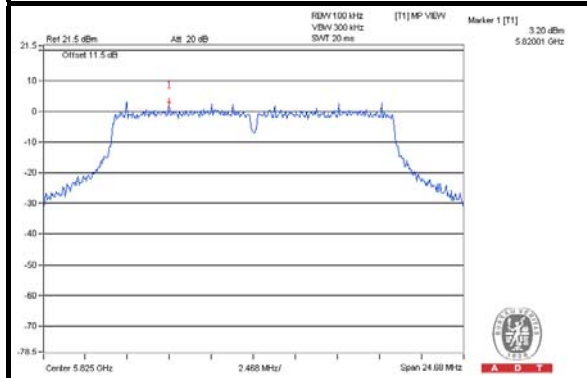
CH 149



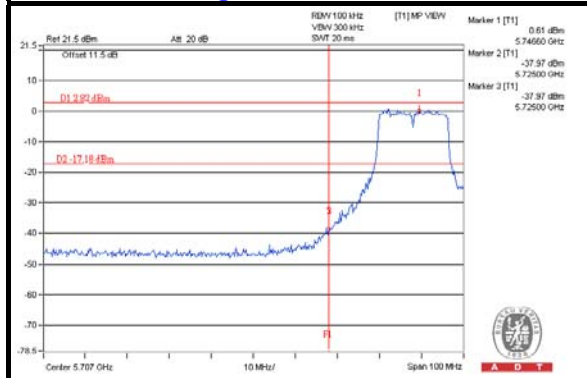
CH 157



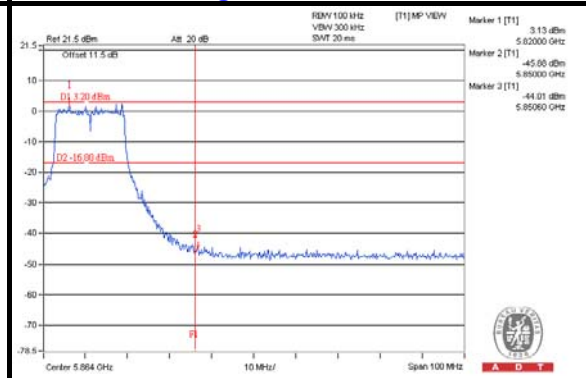
CH 165



CH 149 Band edge



CH 165 Band edge

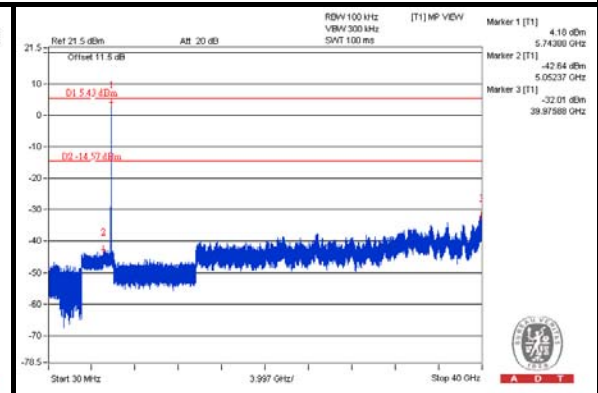
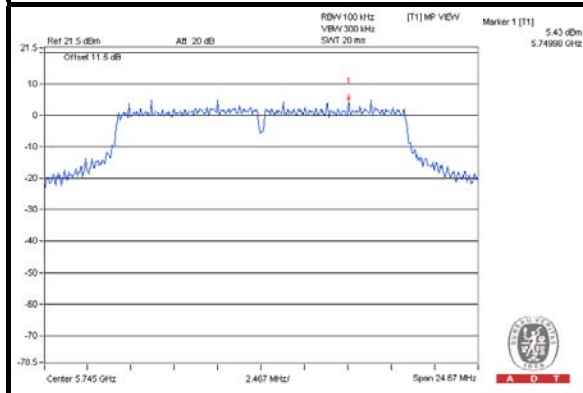




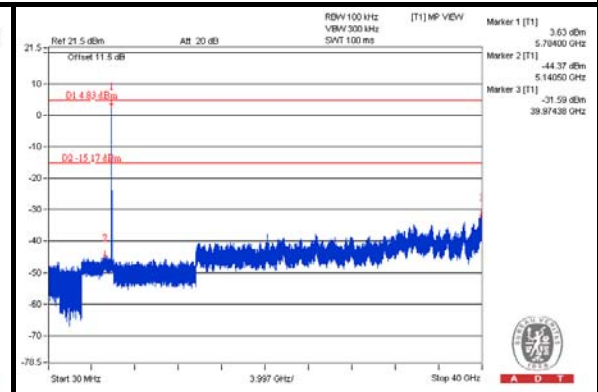
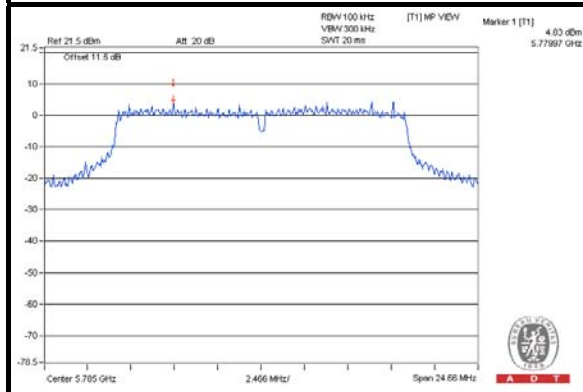
A D T

CHAIN 1

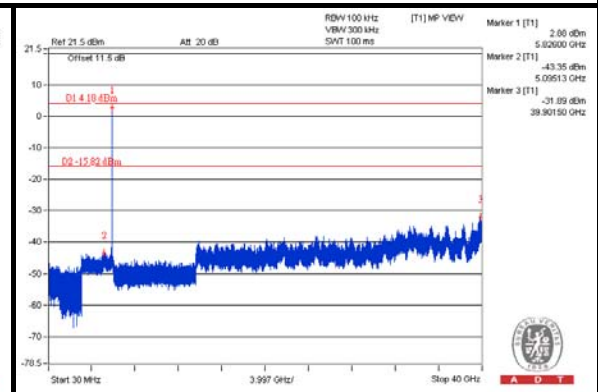
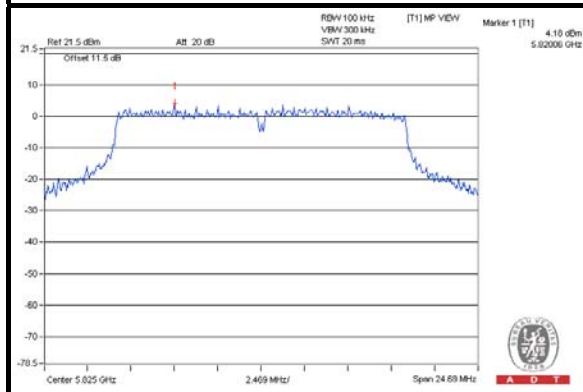
CH 149



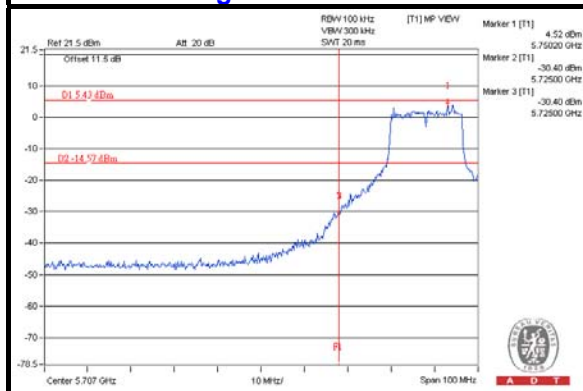
CH 157



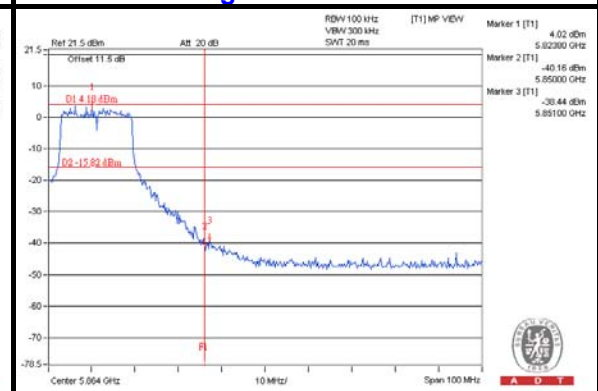
CH 165



CH 149 Band edge



CH 165 Band edge

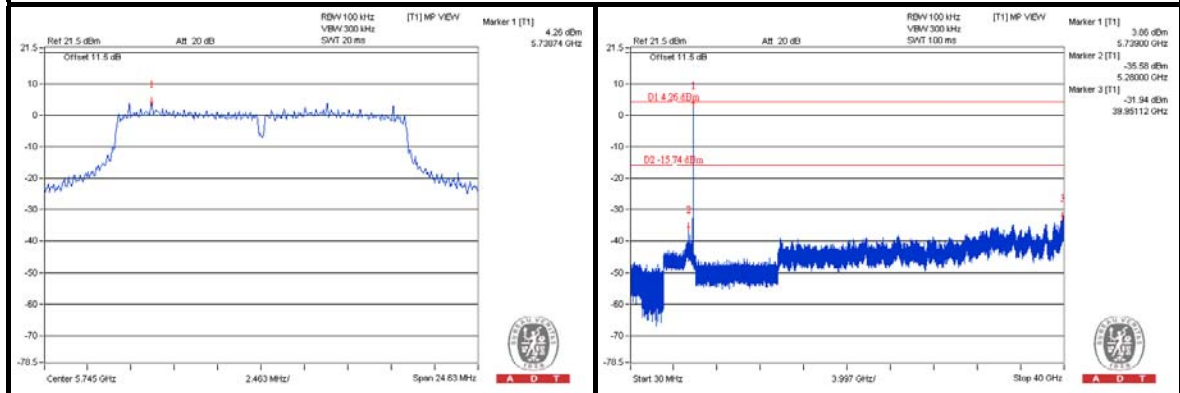




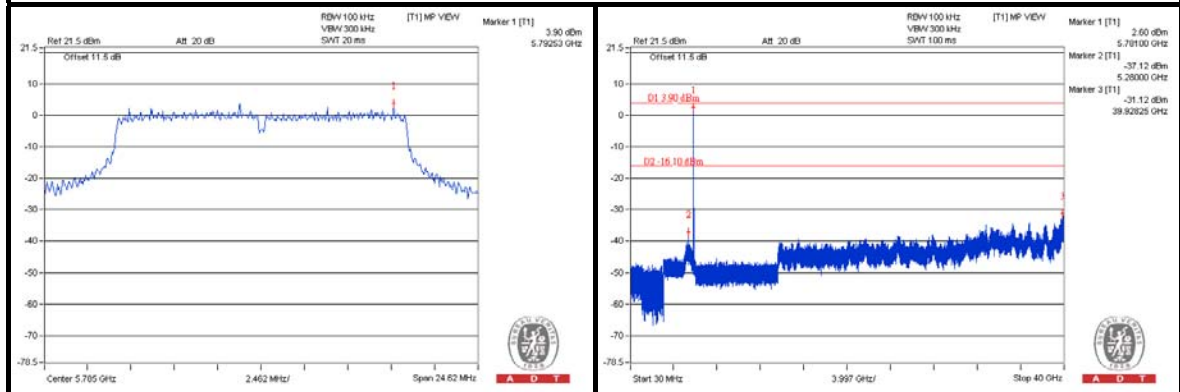
A D T

CHAIN 2

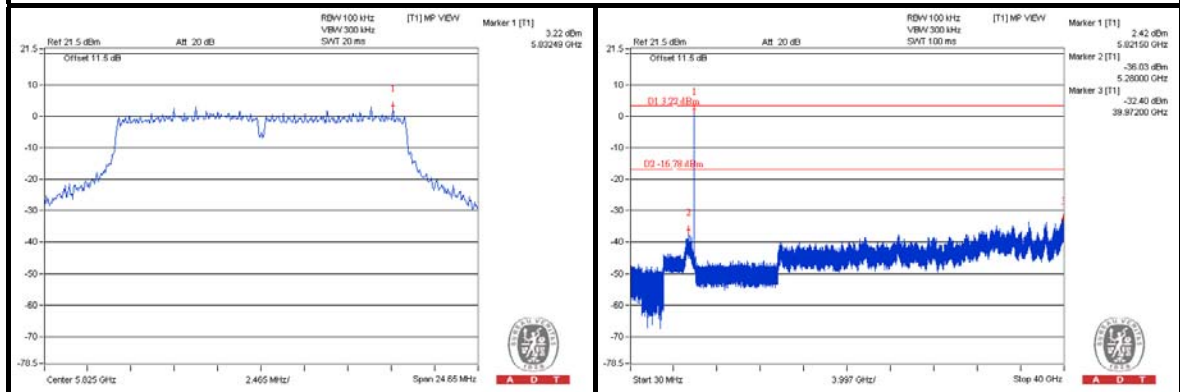
CH 149



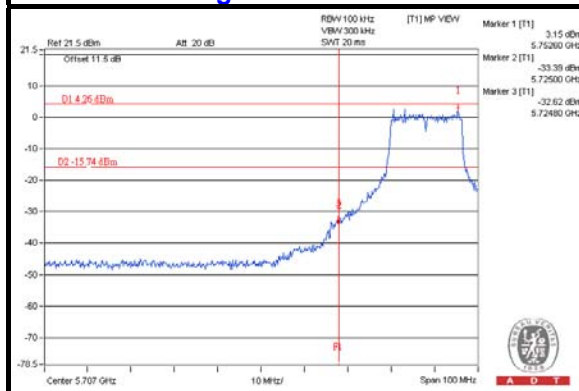
CH 157



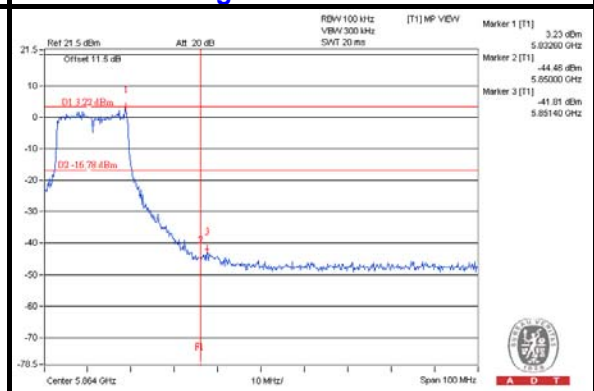
CH 165



CH 149 Band edge



CH 165 Band edge



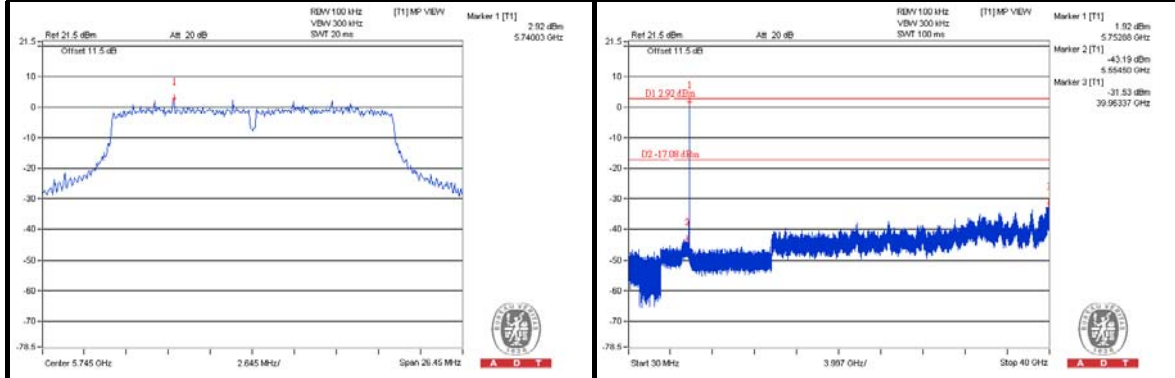


A D T

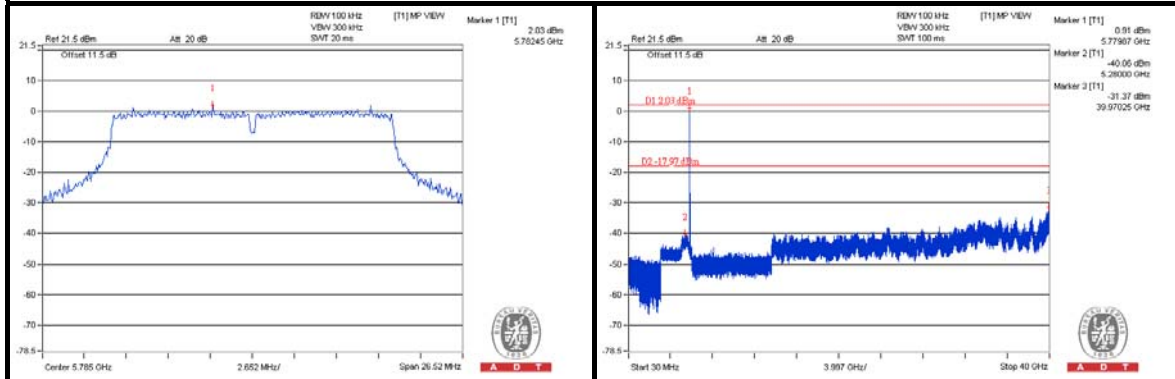
802.11n (20MHz)

CHAIN 0

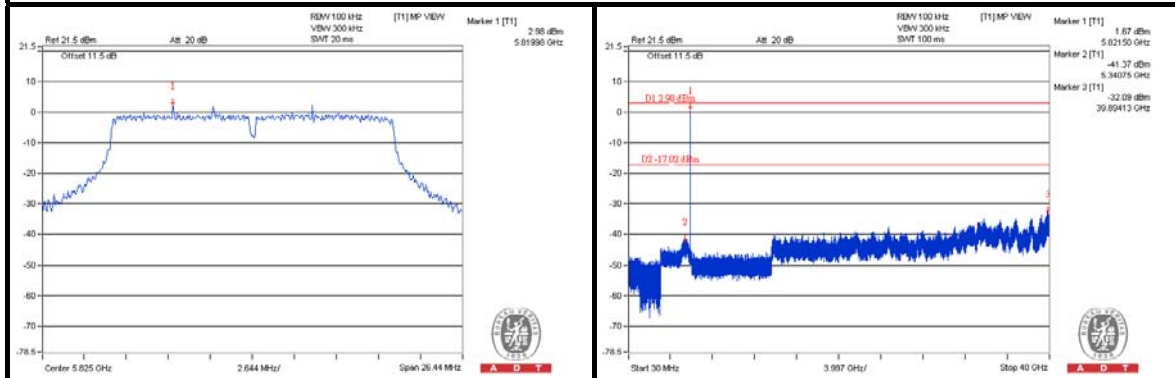
CH 149



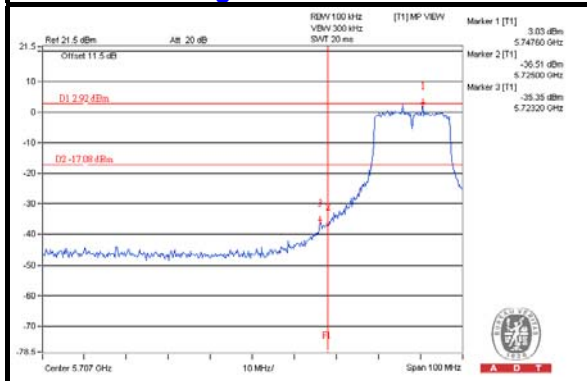
CH 157



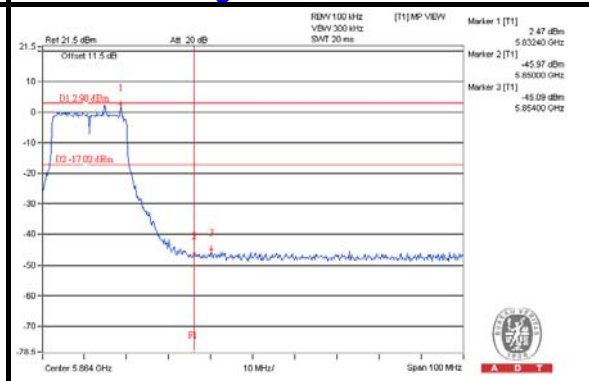
CH 165



CH 149 Band edge



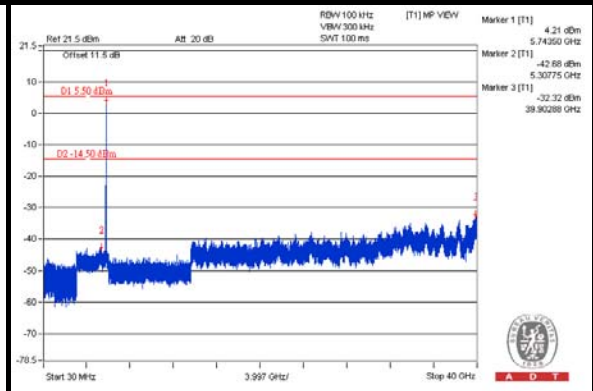
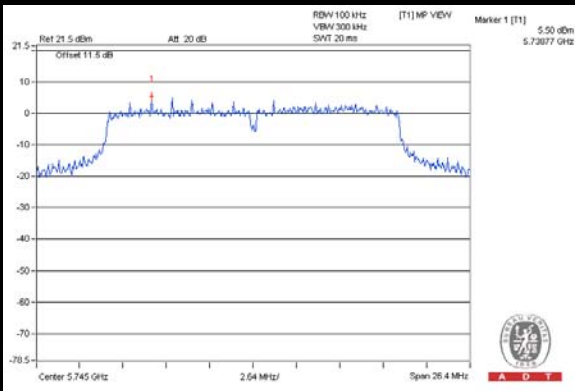
CH 165 Band edge



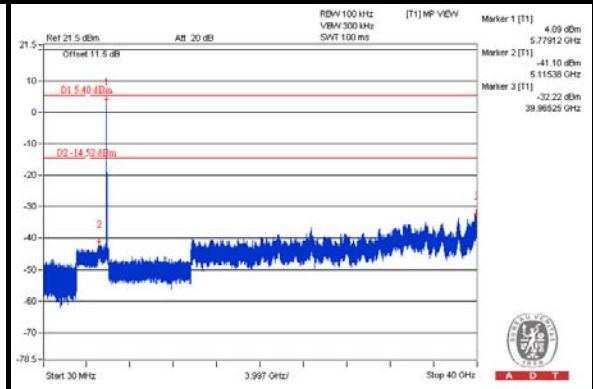
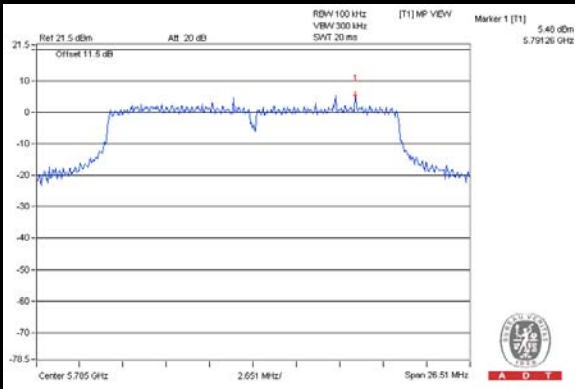


A D T

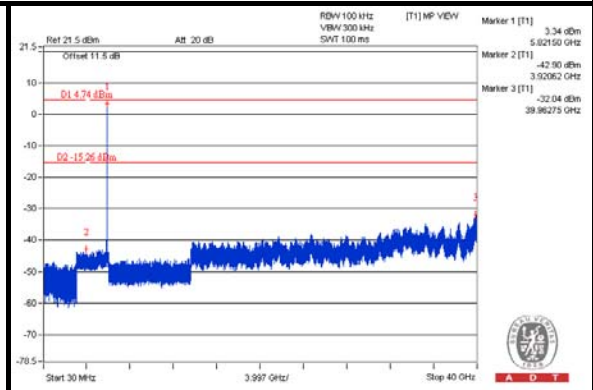
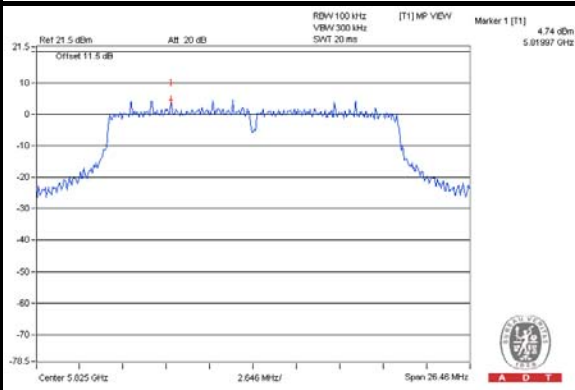
CHAIN 1 CH 149



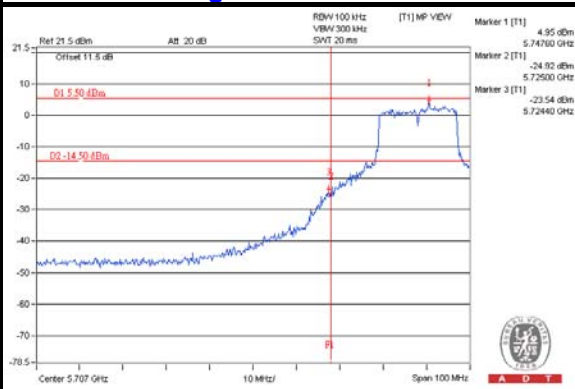
CH 157



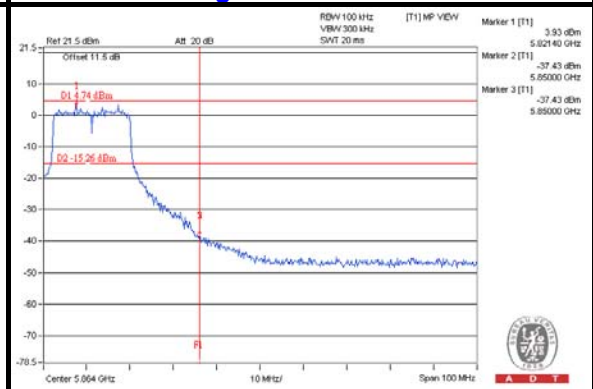
CH 165



CH 149 Band edge



CH 165 Band edge

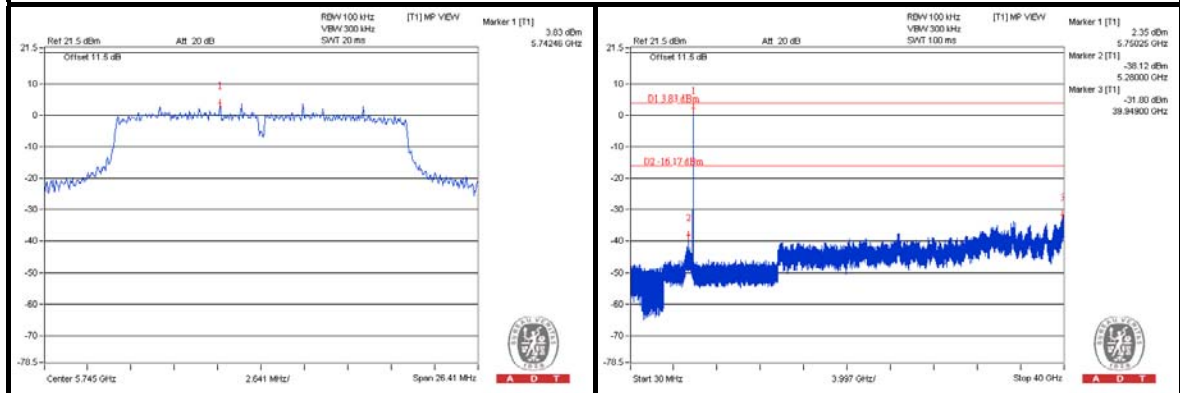




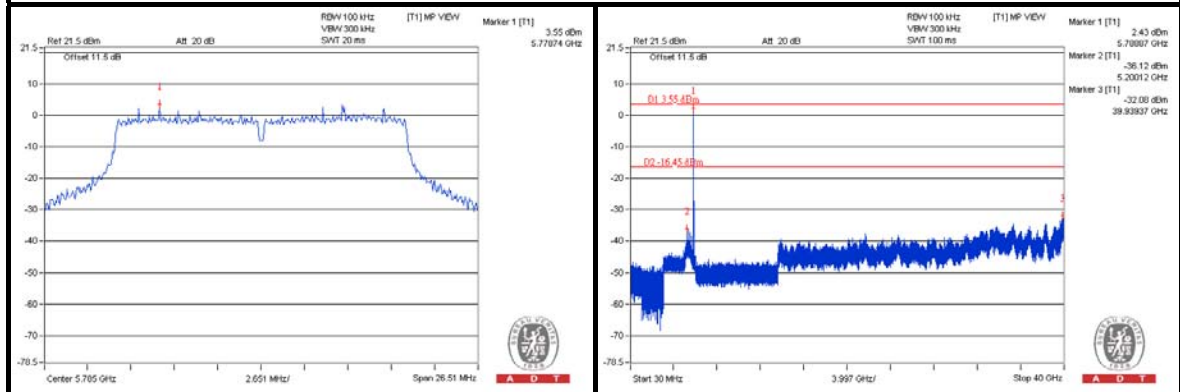
A D T

CHAIN 2

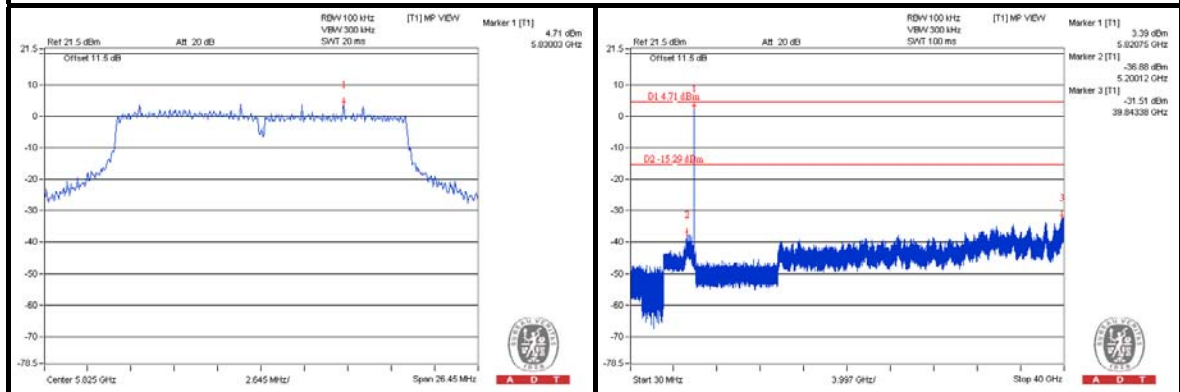
CH 149



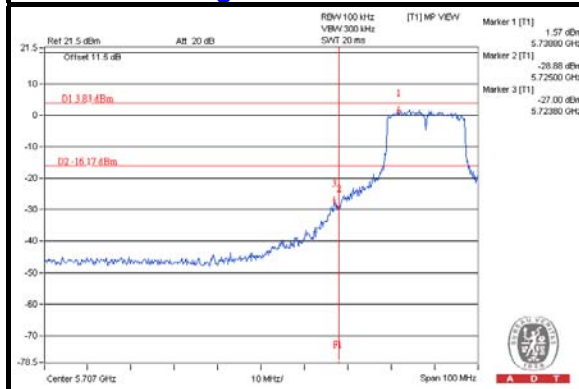
CH 157



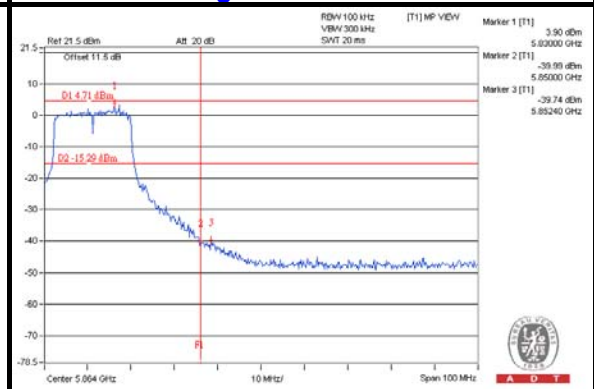
CH 165



CH 149 Band edge



CH 165 Band edge



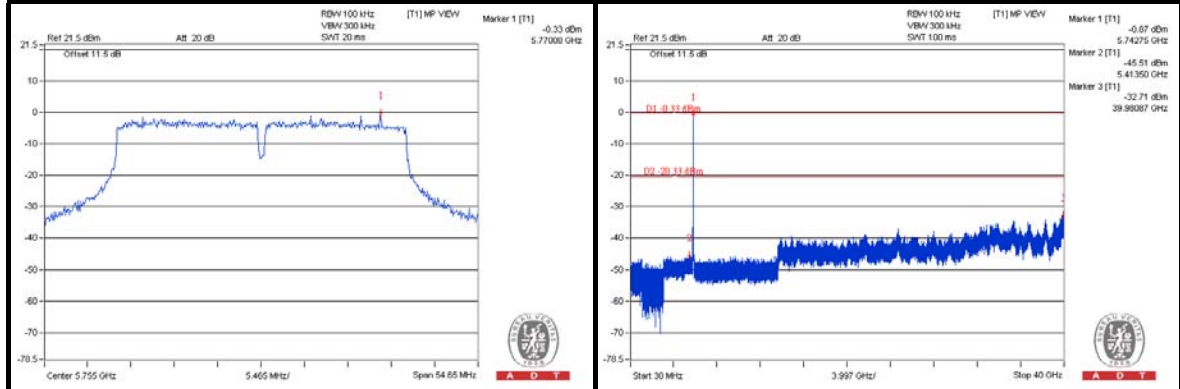


A D T

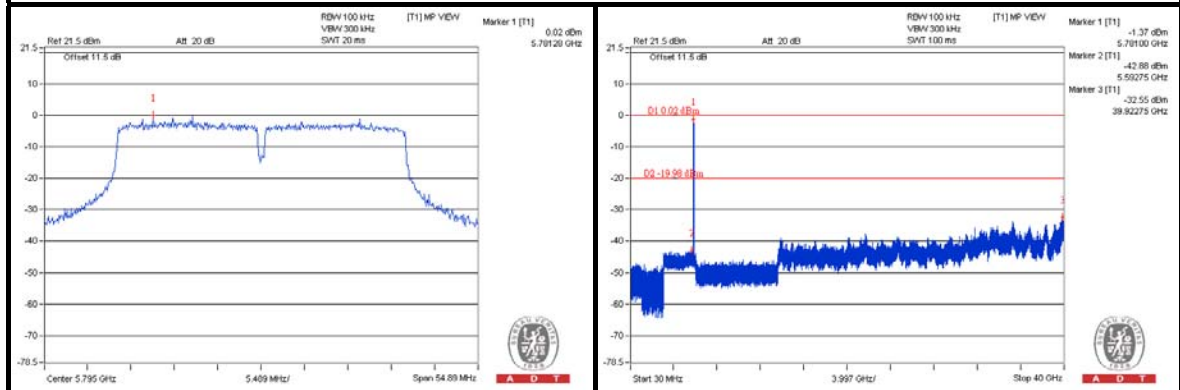
802.11n (40MHz)

CHAIN 0

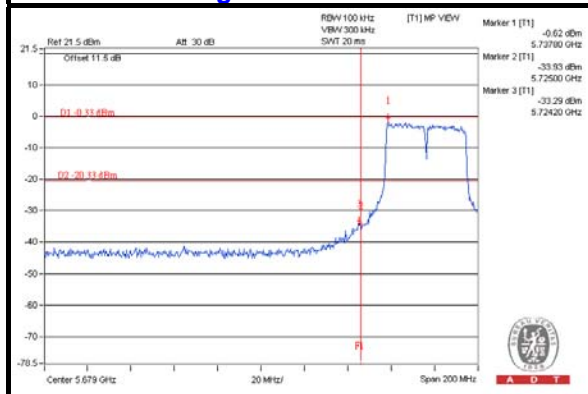
CH 151



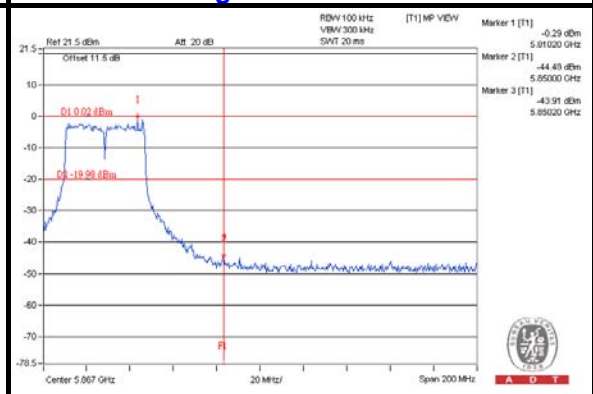
CH 159



CH 151 Band edge



CH 159 Band edge

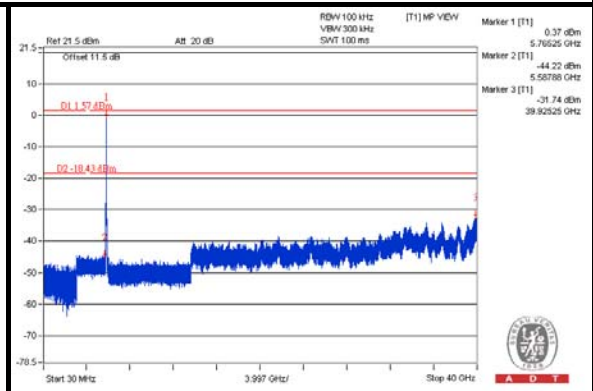
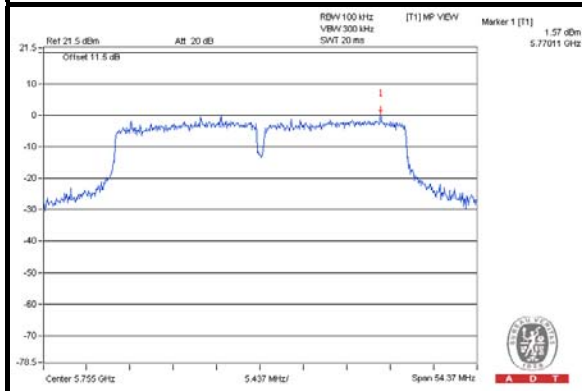




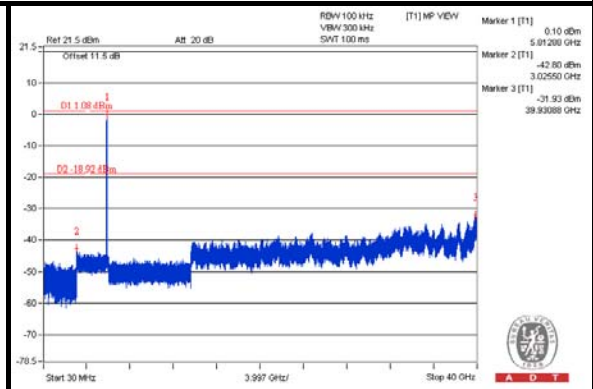
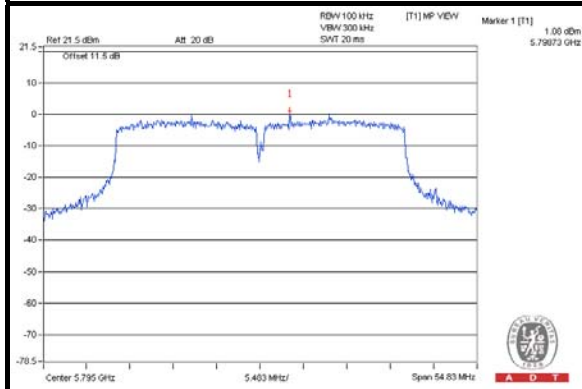
A D T

CHAIN 1

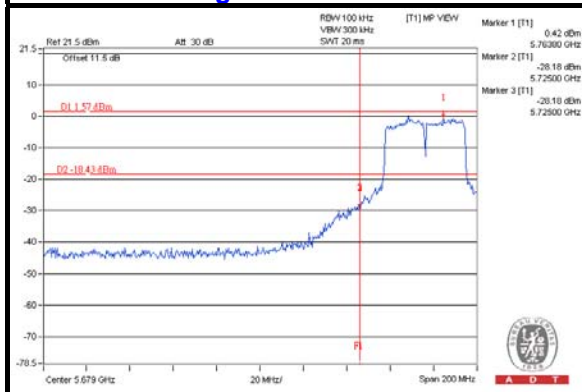
CH 151



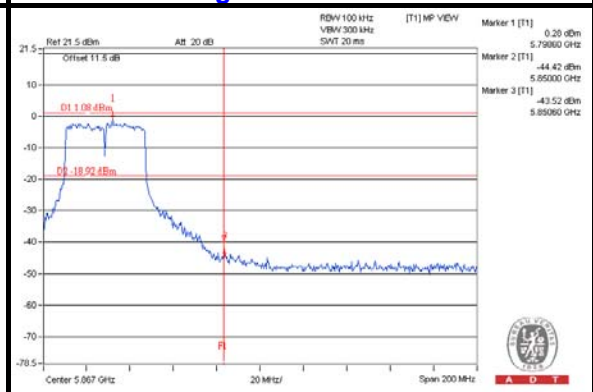
CH 159



CH 151 Band edge



CH 159 Band edge

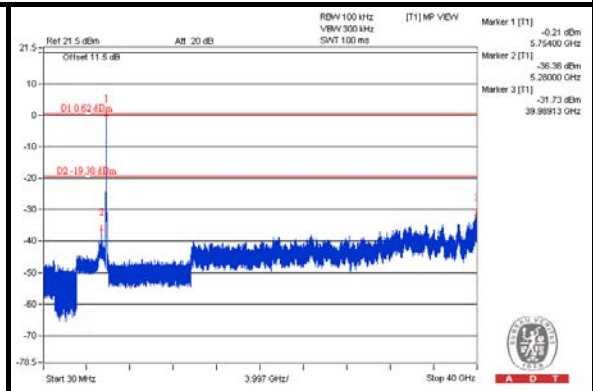
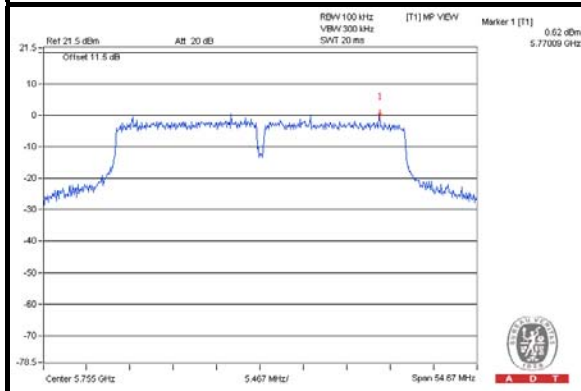




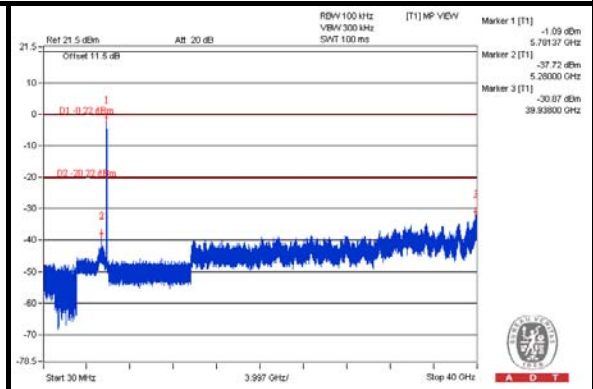
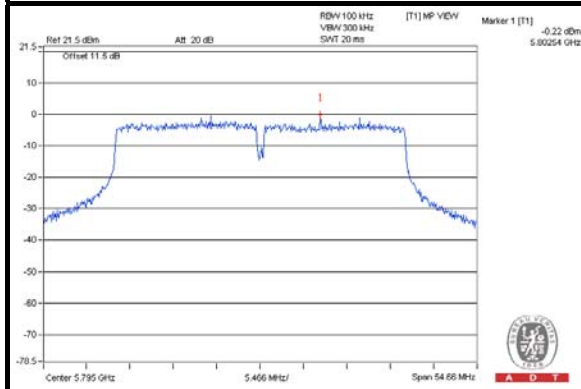
A D T

CHAIN 2

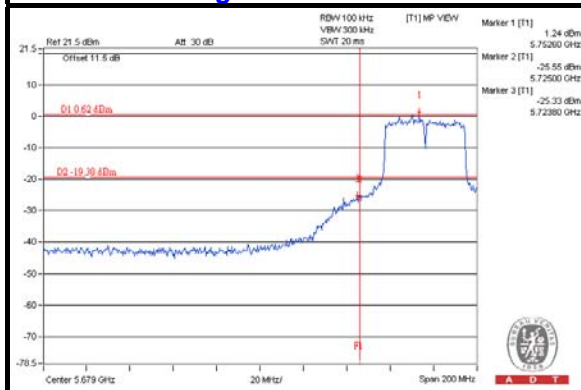
CH 151



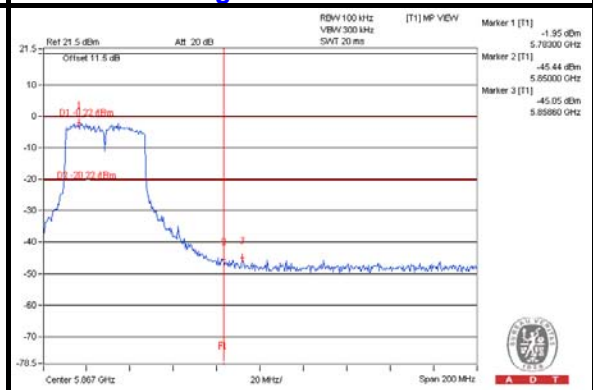
CH 159



CH 151 Band edge



CH 159 Band edge

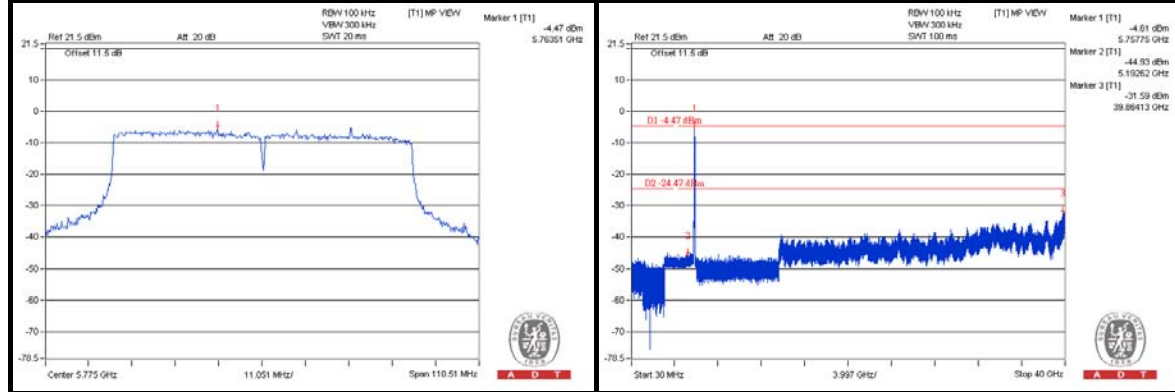




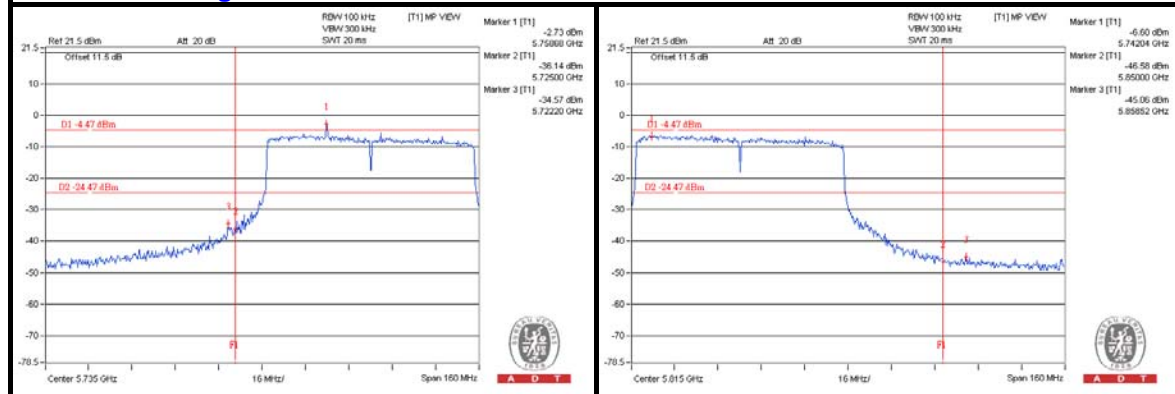
A D T

802.11ac (VHT80) CHAIN 0

CH 155



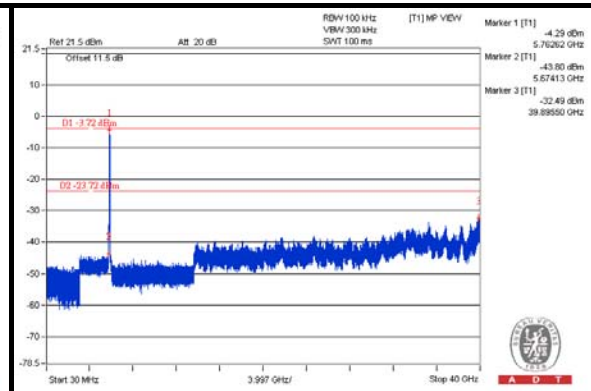
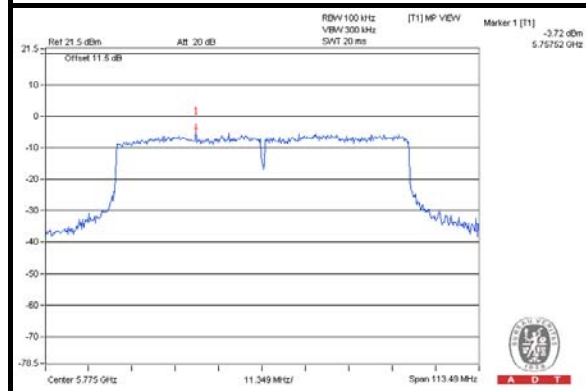
CH 155 Band edge



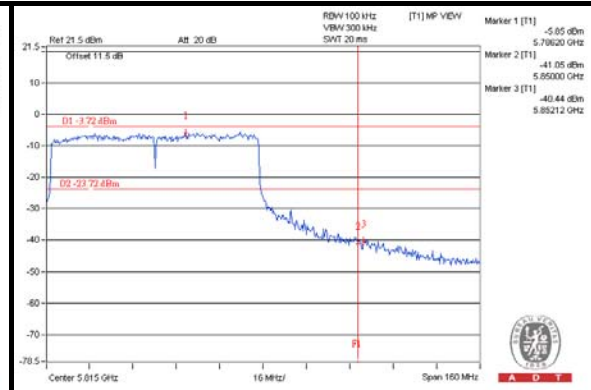
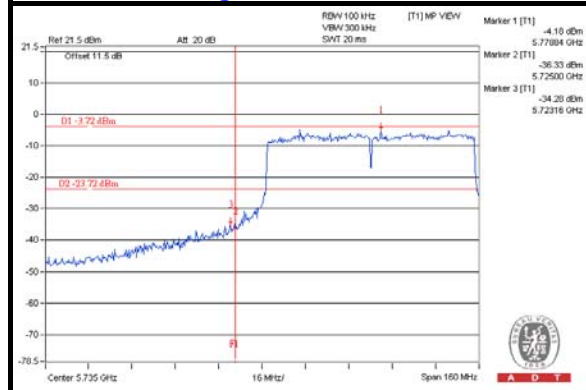


A D T

CHAIN 1 CH 155



CH 155 Band edge

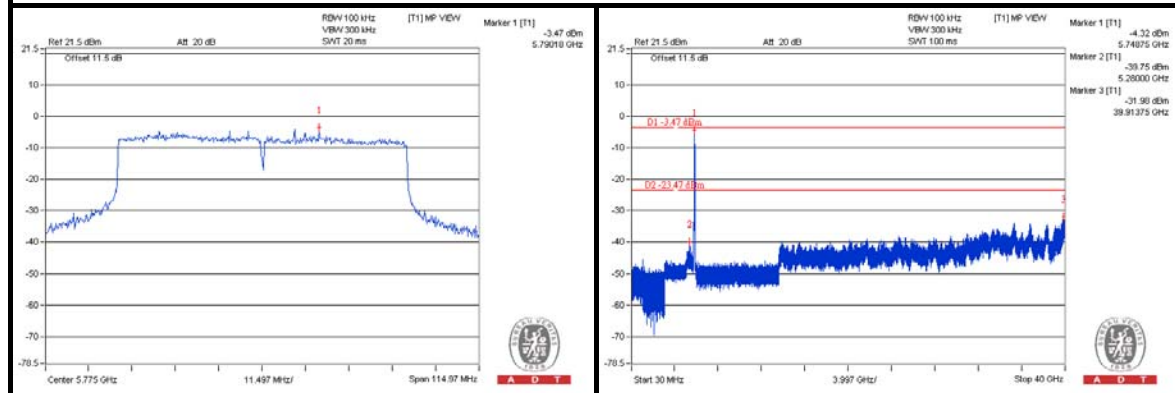




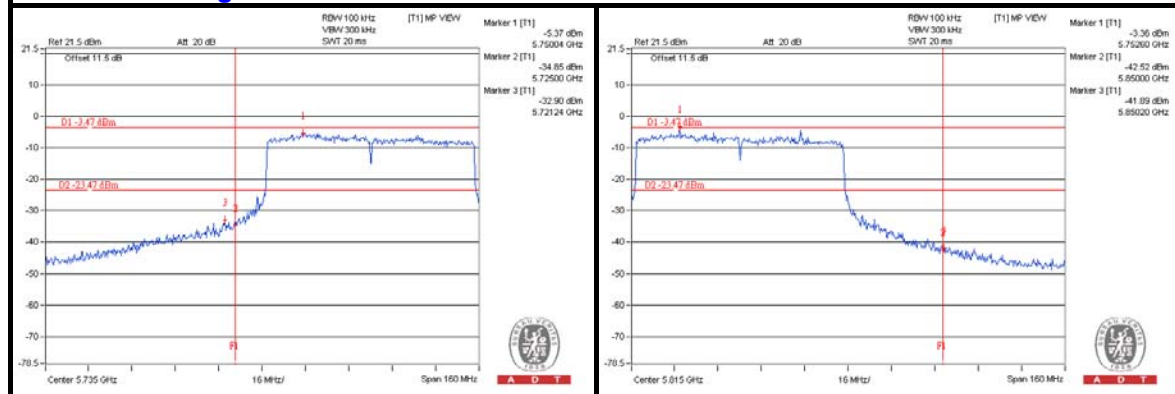
A D T

CHAIN 2

CH 155



CH 155 Band edge





A D T

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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7. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.



A D T

8. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

---END---