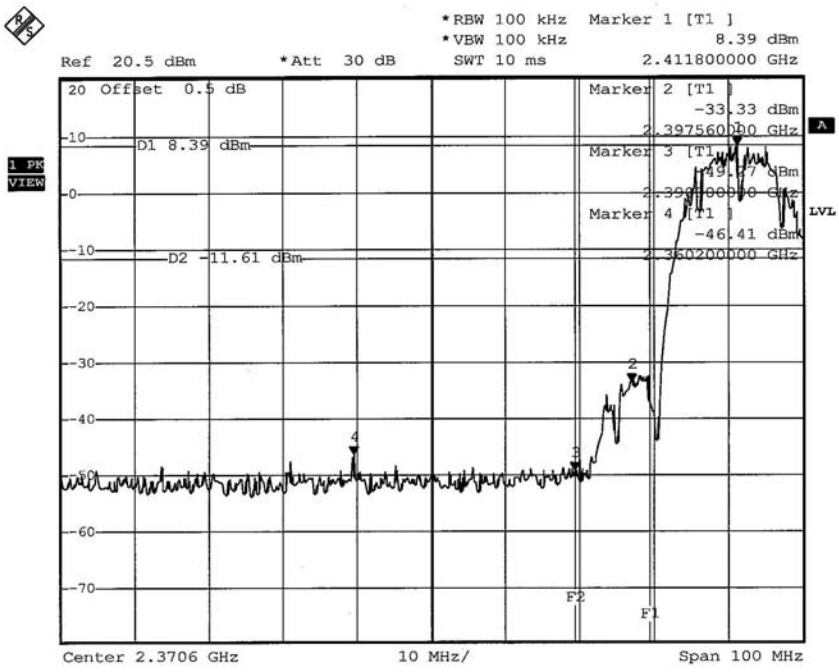
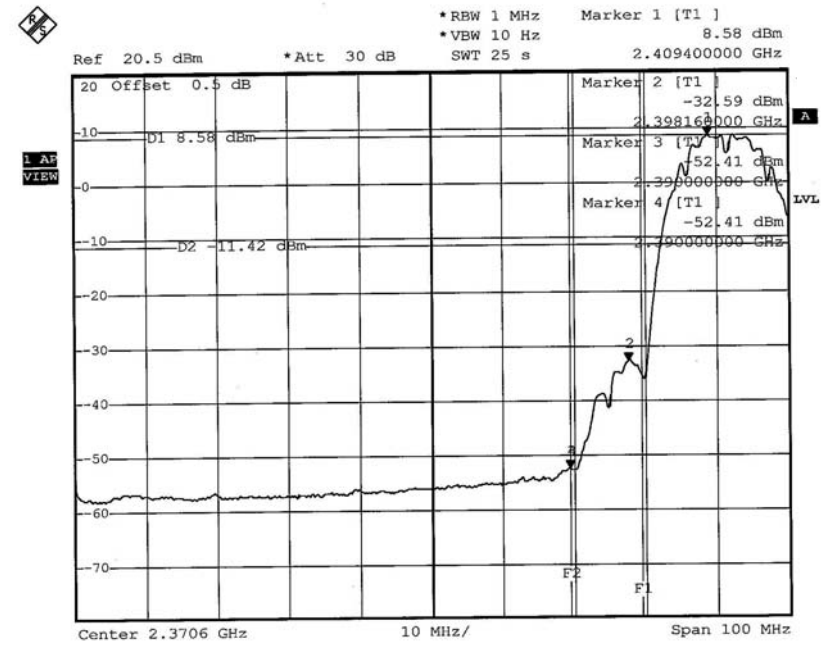
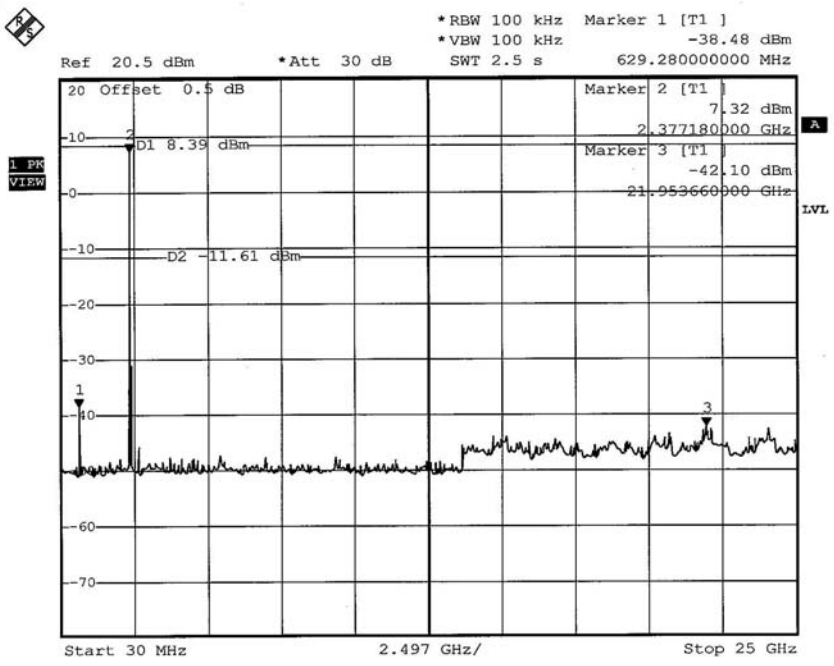
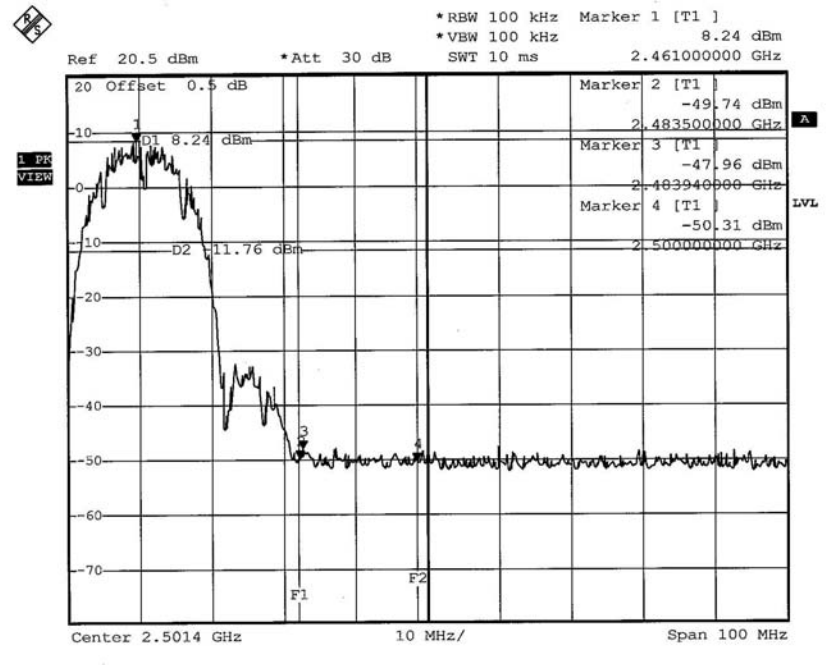
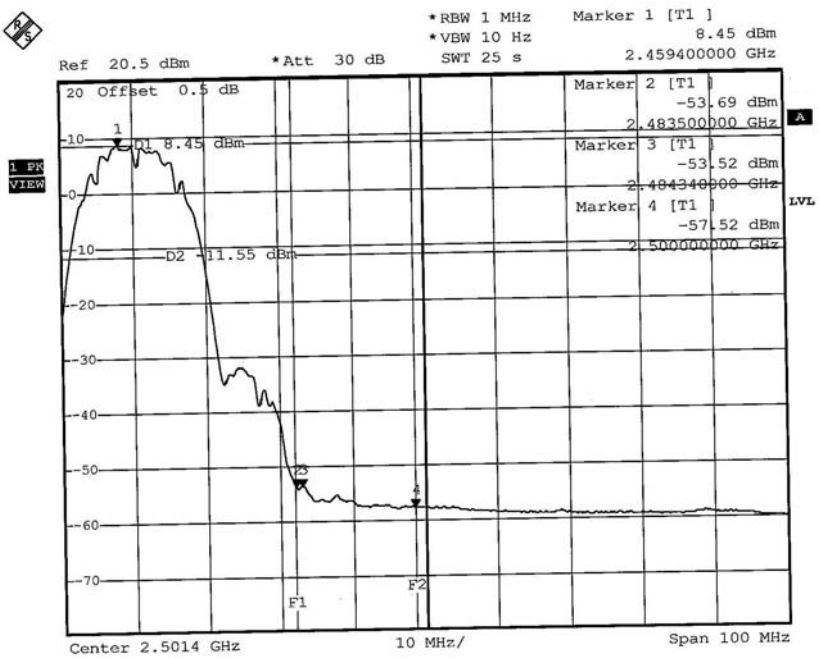
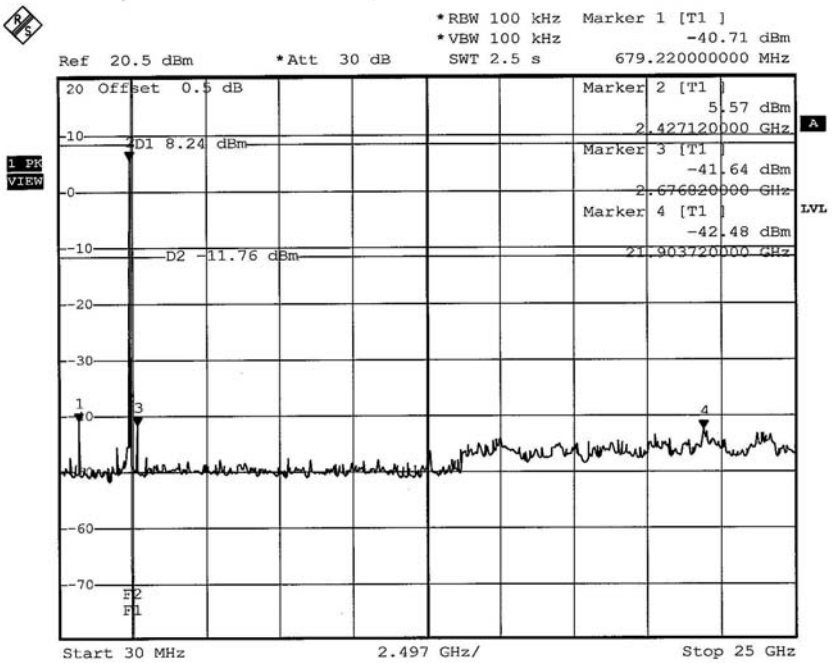

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
8.39 dBm
2.411800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
D1 8.39 dBm
D2 -11.61 dBm
Marker 2 [T1]
-33.33 dBm
Marker 3 [T1]
Marker 4 [T1]
-46.41 dBm
1 PK
VIEW
A
LVL
F2
F1
Center 2.3706 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
8.58 dBm
2.409400000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
D1 8.58 dBm
D2 -11.42 dBm
Marker 2 [T1]
-32.59 dBm
Marker 3 [T1]
-52.41 dBm
Marker 4 [T1]
-52.41 dBm
1 AP
VIEW
A
LVL
F2
F1
Center 2.3706 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-38.48 dBm
629.280000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
7.32 dBm
2.377180000 GHz
Marker 3 [T1]
-42.10 dBm
21.953660000 GHz
D1 8.39 dBm
D2 -11.61 dBm
1 PK VIEW
A
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
8.24 dBm
2.461000000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-49.74 dBm
2.483500000 GHz
Marker 3 [T1]
-47.96 dBm
2.483940000 GHz
Marker 4 [T1]
-50.31 dBm
2.500000000 GHz
D1 8.24 dBm
D2 -11.76 dBm
1 PK VIEW
A
LVL
F1
F2
Center 2.5014 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
8.45 dBm
2.459400000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-53.69 dBm
2.483500000 GHz
Marker 3 [T1]
-53.52 dBm
2.484340000 GHz
Marker 4 [T1]
-57.52 dBm
2.500000000 GHz
D1 8.45 dBm
D2 -11.55 dBm
1 PK
VIEW
A
LVL
F1
F2
Center 2.5014 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-40.71 dBm
679.220000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
5.57 dBm
2.427120000 GHz
Marker 3 [T1]
-41.64 dBm
2.676020000 GHz
Marker 4 [T1]
-42.48 dBm
21.903720000 GHz
D1 8.24 dBm
D2 -11.76 dBm
1 PK
VIEW
A
LVL
F2
F1
Start 30 MHz
2.497 GHz/
Stop 25 GHz

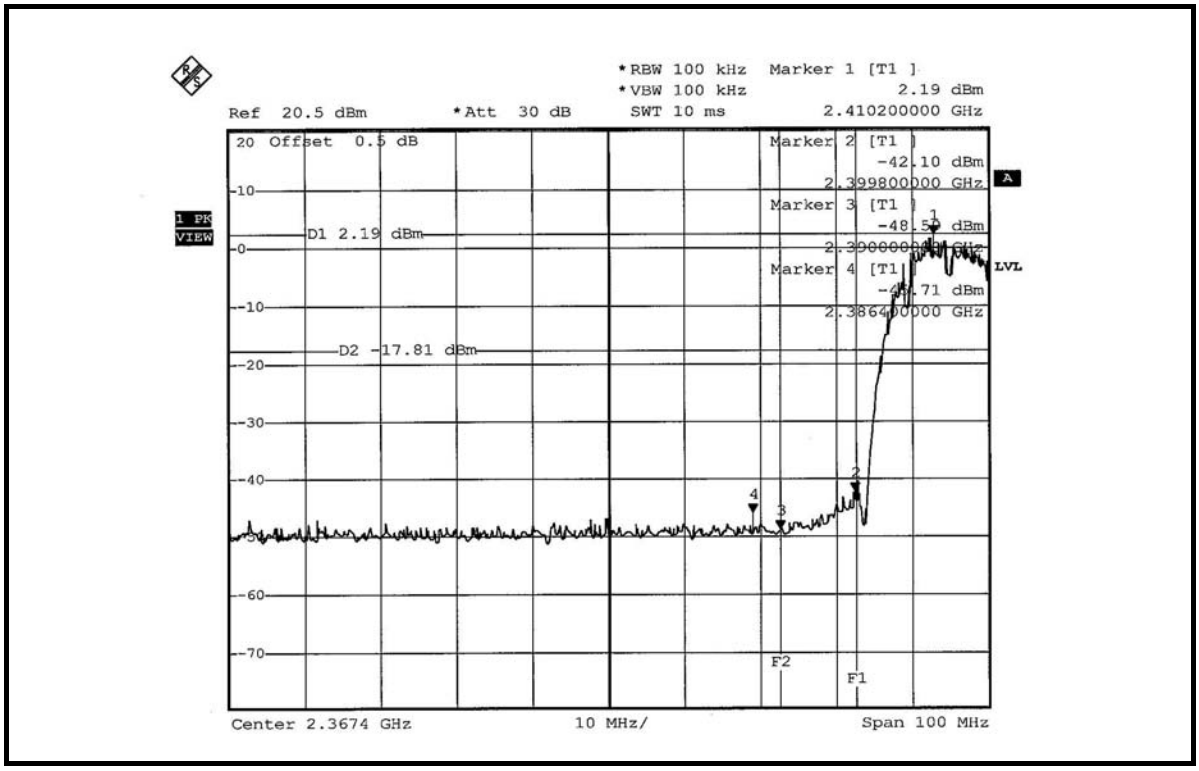
FOR ANTENNA ITEM 5 (13.9dBi gain)

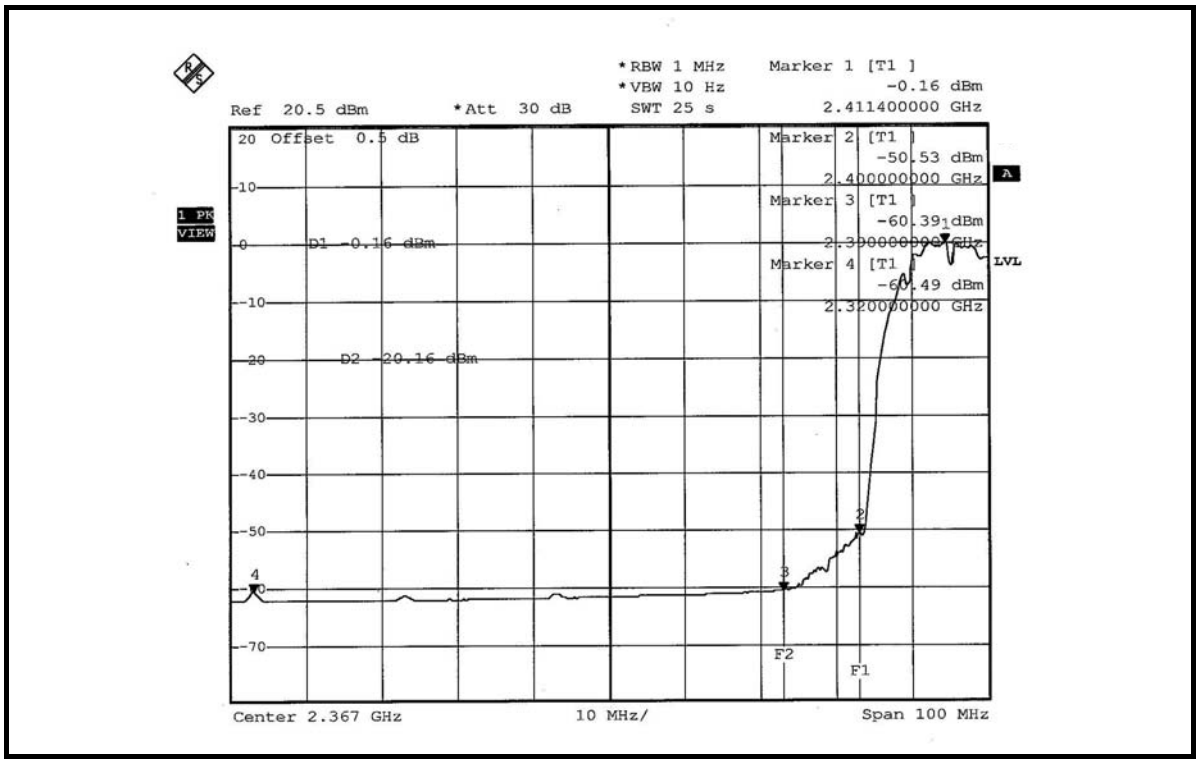
NOTE 1: The band edge emission plot on the next page shows 47.90dBc between carrier maximum power and local maximum emission in restrict band (2.38640GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 114.40dBuV/m (Peak), so the maximum field strength in restrict band is 114.40-47.90=66.50dBuV/m which is under 74dBuV/m limit..

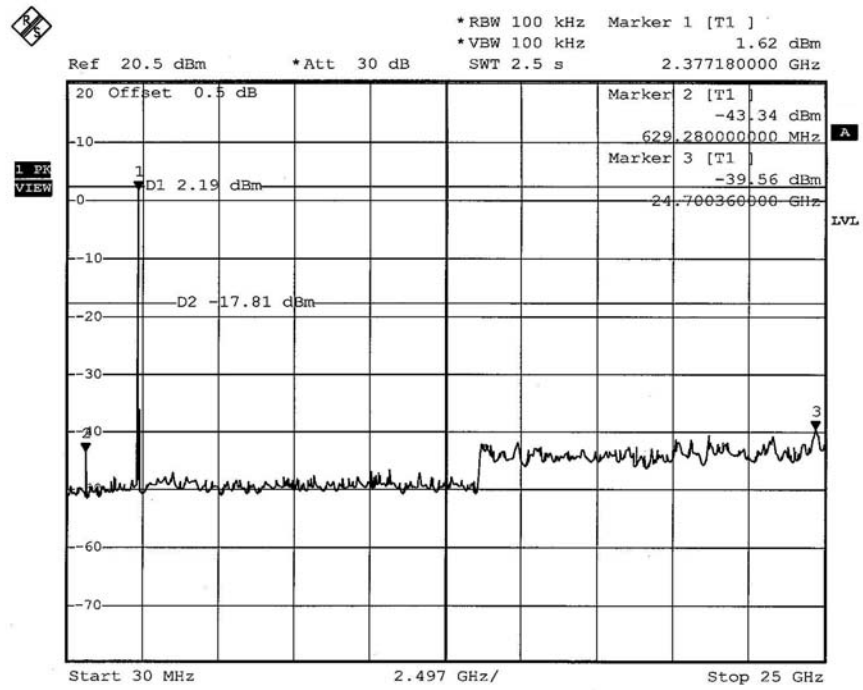
The band edge emission plot of on the next page shows 60.23dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 110.10dBuV/m (Average), so the maximum field strength in restrict band is 110.10-60.23=49.87dBuV/m which is under 54dBuV/m limit.

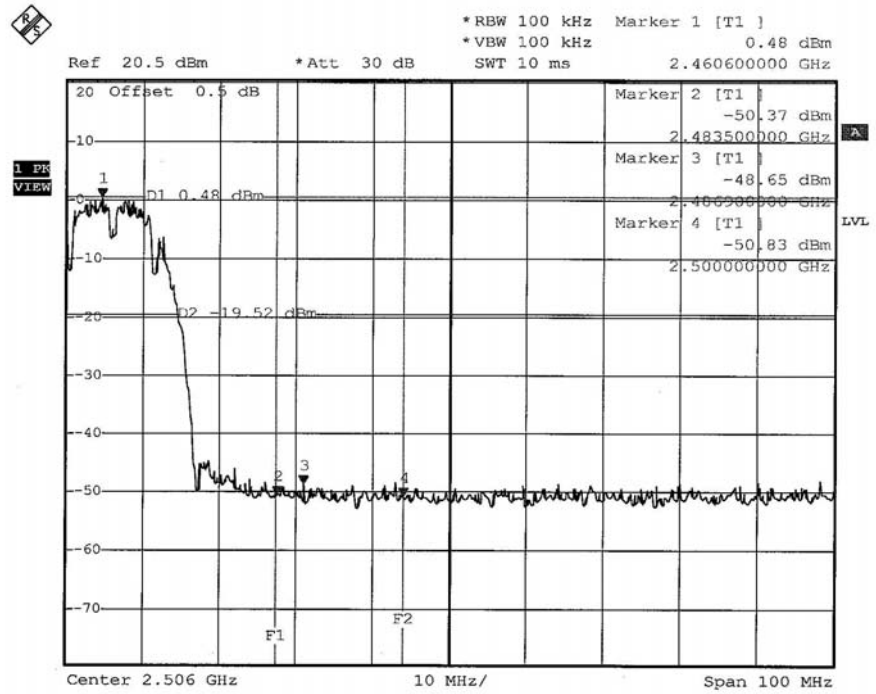
NOTE 2: The band edge emission plot on the next second page shows 49.13dBc between carrier maximum power and local maximum emission in restrict band (2.48690GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 112.65dBuV/m (Peak), so the maximum field strength in restrict band is 112.65-49.13=63.52dBuV/m which is under 74dBuV/m limit.

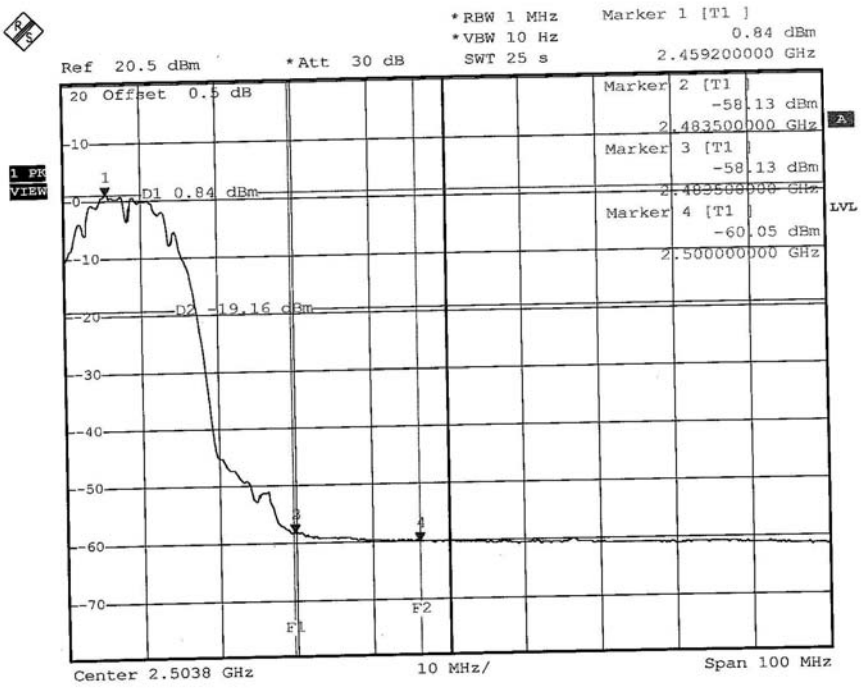
The band edge emission plot on the next third page shows 58.97dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 108.96dBuV/m (Average), so the maximum field strength in restrict band is 108.96-58.97=49.99dBuV/m which is under 54dBuV/m limit.

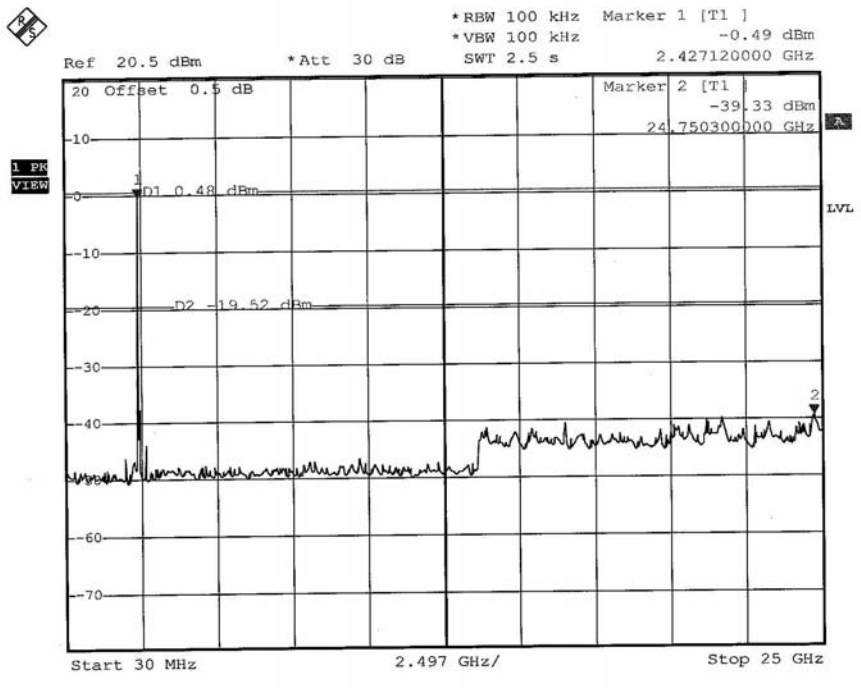

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
2.19 dBm
2.410200000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-42.10 dBm
2.399800000 GHz
Marker 3 [T1]
-48.52 dBm
Marker 4 [T1]
-47.71 dBm
2.386400000 GHz
1 PK
VIEW
D1 2.19 dBm
D2 -17.81 dBm
A
LVL
F2
F1
Center 2.3674 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
-0.16 dBm
2.411400000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-50.53 dBm
2.400000000 GHz
Marker 3 [T1]
-60.39 dBm
Marker 4 [T1]
-60.49 dBm
2.320000000 GHz
1 PK
VIEW
D1 -0.16 dBm
D2 -20.16 dBm
A
LVL
F2
F1
Center 2.367 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
1.62 dBm
2.377180000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-43.34 dBm
629.280000000 MHz
Marker 3 [T1]
-39.56 dBm
24.700360000 GHz
1 PK VIEW
D1 2.19 dBm
D2 -17.81 dBm
A
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
0.48 dBm
2.460600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-50.37 dBm
2.483500000 GHz
Marker 3 [T1]
-48.65 dBm
Marker 4 [T1]
-50.83 dBm
2.500000000 GHz
1 PK VIEW
D1 0.48 dBm
D2 -19.52 dBm
A
LVL
F1
F2
Center 2.506 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
0.84 dBm
2.459200000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-58.13 dBm
2.483500000 GHz
Marker 3 [T1]
-58.13 dBm
2.483500000 GHz
Marker 4 [T1]
-60.05 dBm
2.500000000 GHz
1 PK VIEW
D1 0.84 dBm
D2 -19.16 dBm
LVL
F1
F2
Center 2.5038 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-0.49 dBm
2.427120000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-39.33 dBm
24.750300000 GHz
1 PK VIEW
D1 0.48 dBm
D2 -19.52 dBm
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g OFDM MODULATION

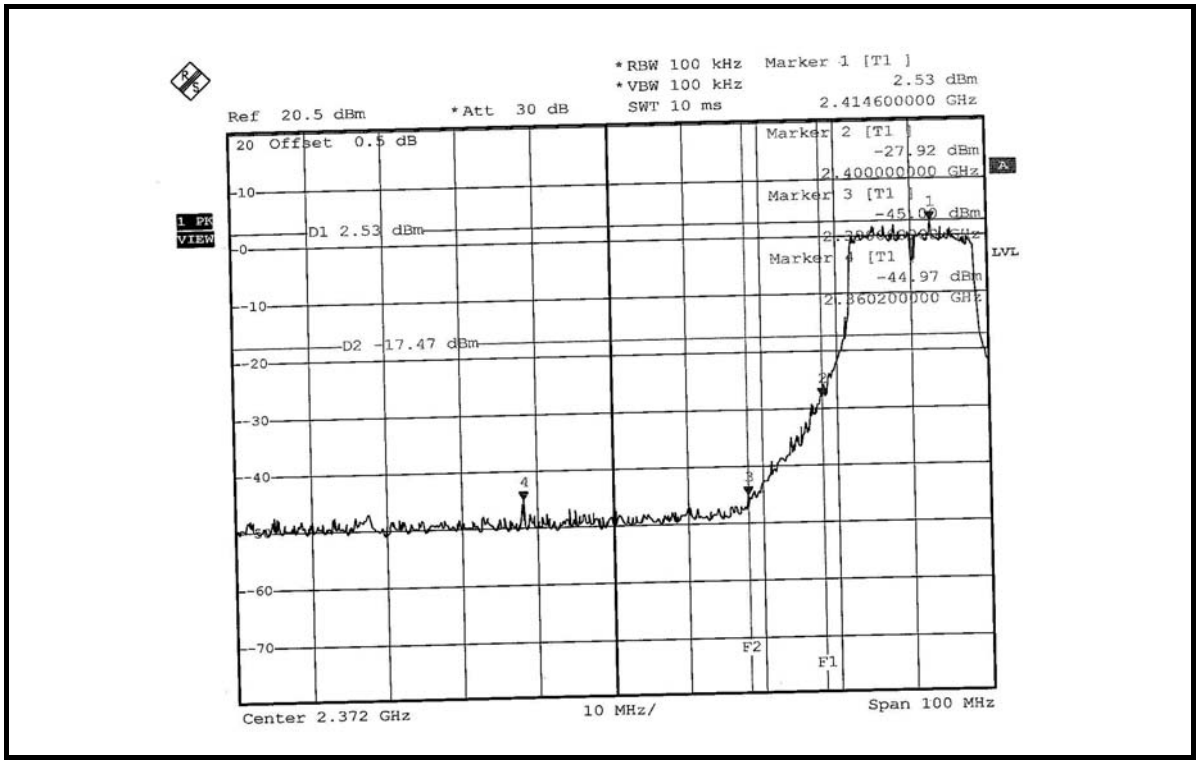
FOR ANTENNA ITEM 1 (3.5dBi gain)

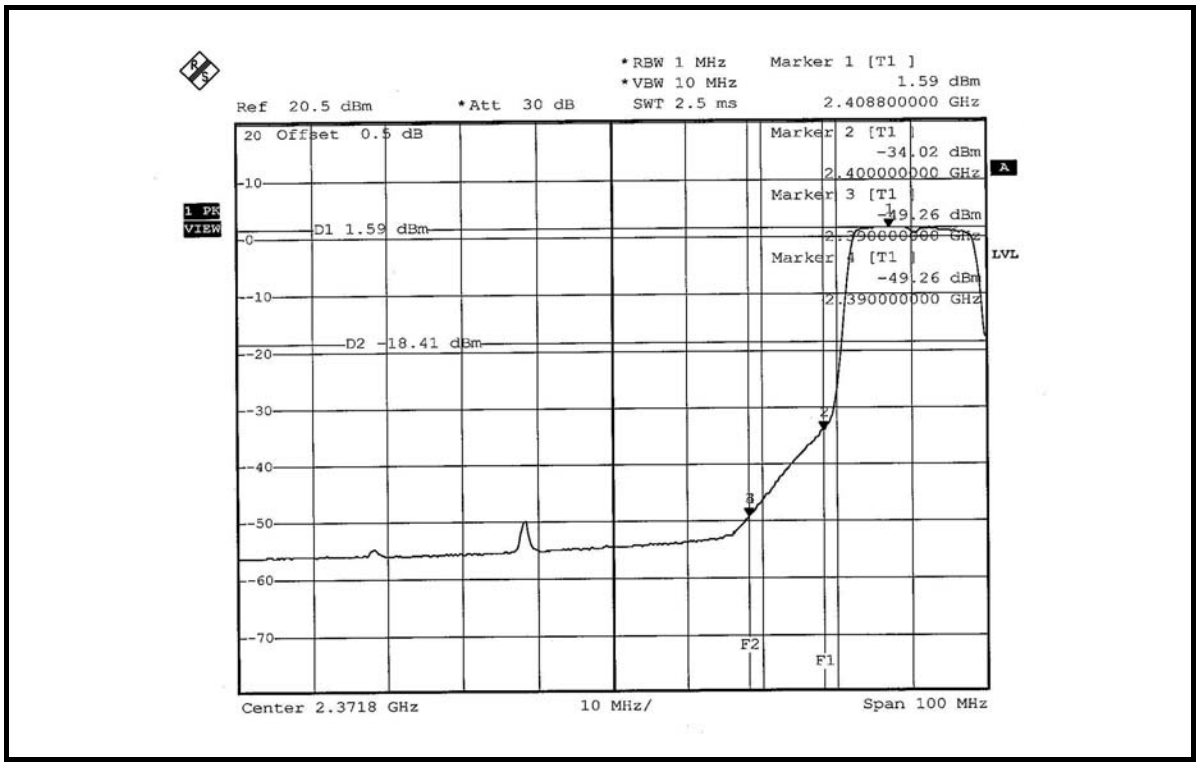
NOTE 1: The band edge emission plot on the next page shows 47.50dBc between carrier maximum power and local maximum emission in restrict band (2.36020GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 110.53dBuV/m (Peak), so the maximum field strength in restrict band is 110.53-47.50=63.03dBuV/m which is under 74dBuV/m limit.

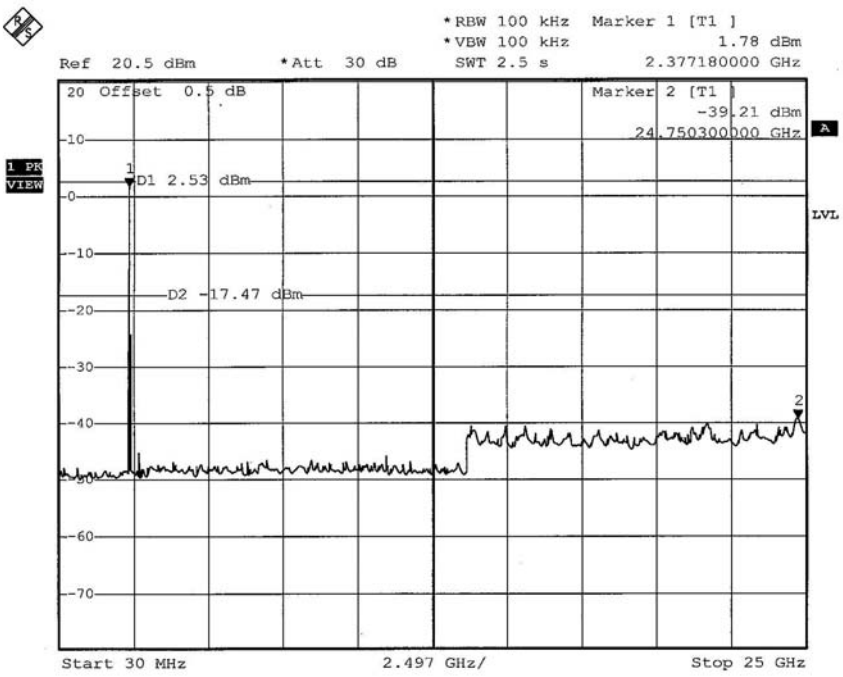
The band edge emission plot of on the next page shows 50.85dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 101.98dBuV/m (Average), so the maximum field strength in restrict band is 101.98-50.85=51.13dBuV/m which is under 54dBuV/m limit.

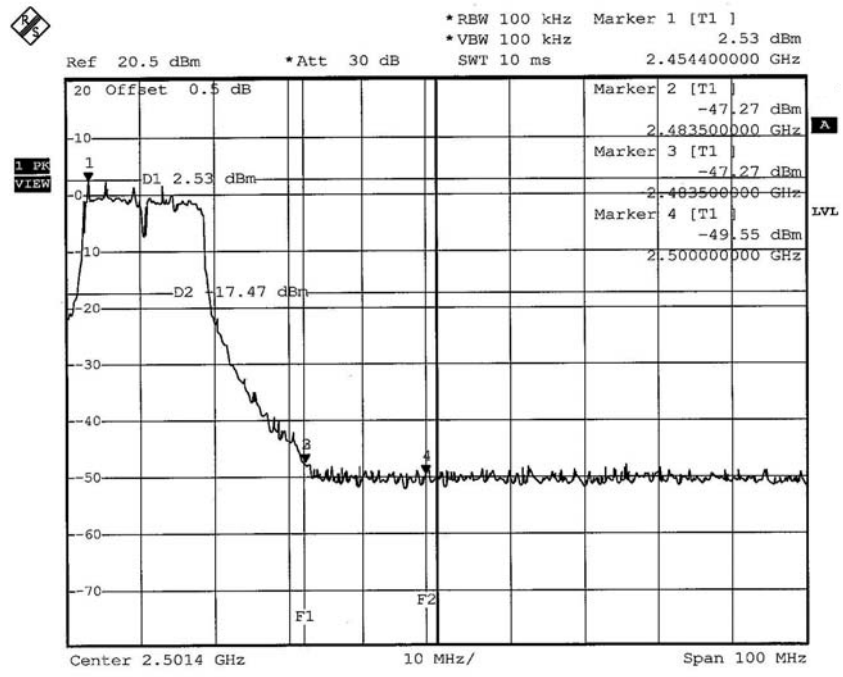
NOTE 2: The band edge emission plot on the next second page shows 49.80dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 108.78dBuV/m (Peak), so the maximum field strength in restrict band is 108.78-49.80=58.98dBuV/m which is under 74dBuV/m limit.

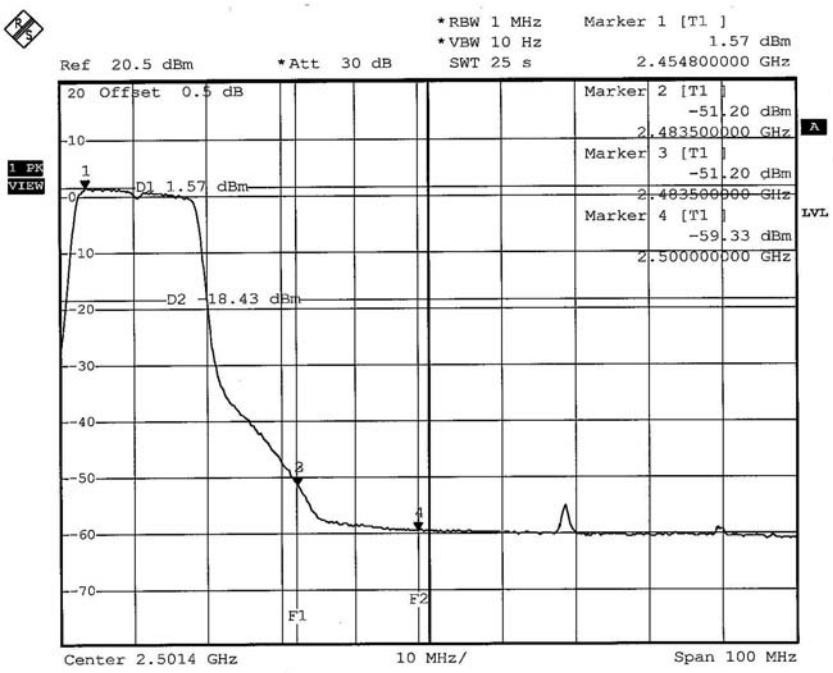
The band edge emission plot on the next third page shows 52.77dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 100.10dBuV/m (Average), so the maximum field strength in restrict band is 100.10-52.77=47.33dBuV/m which is under 54dBuV/m limit.

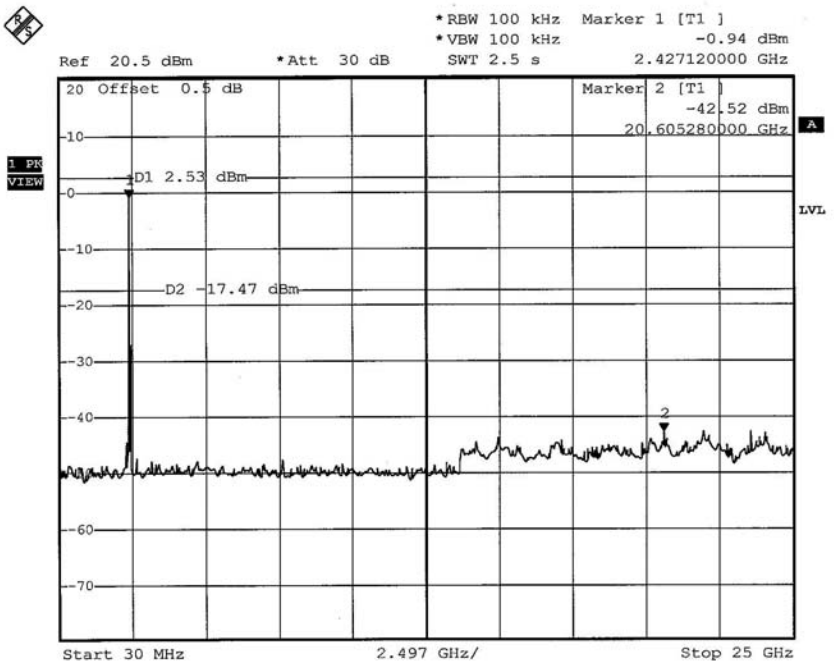

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
2.53 dBm
2.414600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-27.92 dBm
2.400000000 GHz
Marker 3 [T1]
-45.09 dBm
Marker 4 [T1]
-44.97 dBm
2.360200000 GHz
1 PK VIEW
D1 2.53 dBm
D2 -17.47 dBm
A
LVL
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 MHz
SWT 2.5 ms
Marker 1 [T1]
1.59 dBm
2.408800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-34.02 dBm
2.400000000 GHz
Marker 3 [T1]
-49.26 dBm
Marker 4 [T1]
-49.26 dBm
2.390000000 GHz
1 PK VIEW
D1 1.59 dBm
D2 -18.41 dBm
A
LVL
F2
F1
Center 2.3718 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
1.78 dBm
2.377180000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-39.21 dBm
24.750300000 GHz
1 PK VIEW
D1 2.53 dBm
D2 -17.47 dBm
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
2.53 dBm
2.454400000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-47.27 dBm
2.483500000 GHz
Marker 3 [T1]
-47.27 dBm
2.483500000 GHz
Marker 4 [T1]
-49.55 dBm
2.500000000 GHz
1 PK VIEW
D1 2.53 dBm
D2 -17.47 dBm
LVL
F1
F2
Center 2.5014 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
1.57 dBm
2.454800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-51.20 dBm
2.483500000 GHz
Marker 3 [T1]
-51.20 dBm
2.483500000 GHz
Marker 4 [T1]
-59.33 dBm
2.500000000 GHz
1 PK
VIEW
D1 1.57 dBm
D2 -18.43 dBm
A
LVL
F1
F2
Center 2.5014 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-0.94 dBm
2.427120000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-42.52 dBm
20.605280000 GHz
1 PK
VIEW
D1 2.53 dBm
D2 -17.47 dBm
A
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz

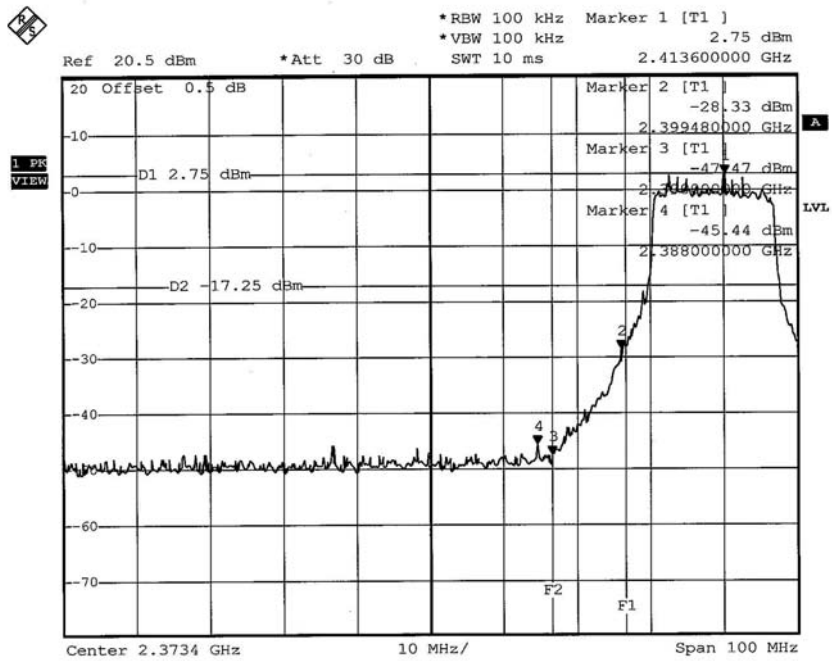
FOR ANTENNA ITEM 2 (3.3dBi gain)

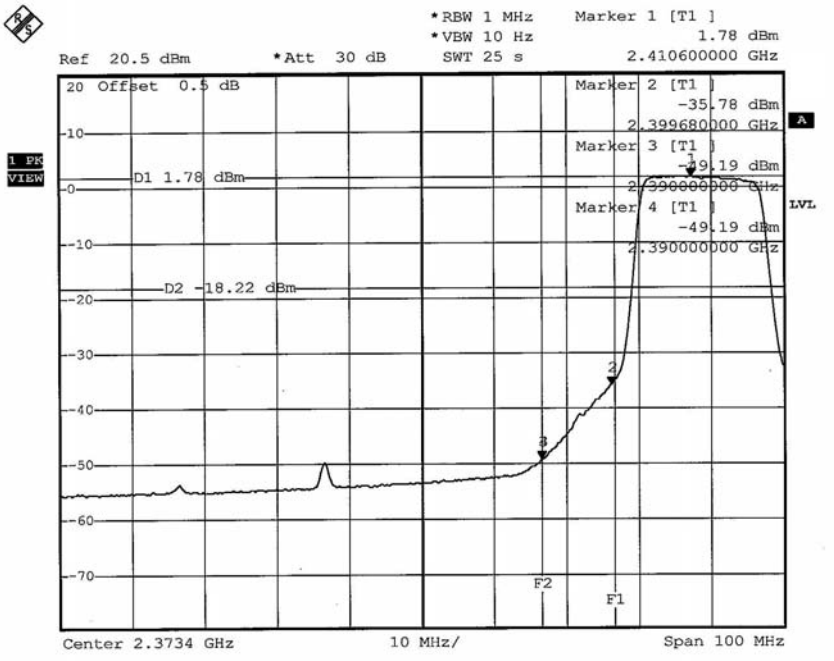
NOTE 1: The band edge emission plot on the next page shows 48.19dBc between carrier maximum power and local maximum emission in restrict band (2.38800GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 110.89dBuV/m (Peak), so the maximum field strength in restrict band is 110.89-48.19=62.70dBuV/m which is under 74dBuV/m limit..

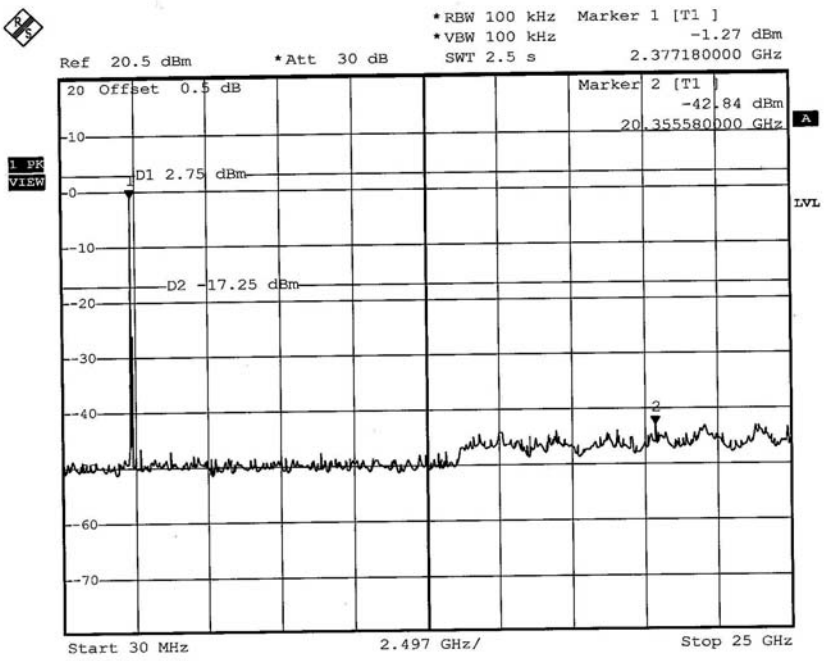
The band edge emission plot of on the next page shows 50.97dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 100.68dBuV/m (Average), so the maximum field strength in restrict band is 100.68-50.97=49.71dBuV/m which is under 54dBuV/m limit.

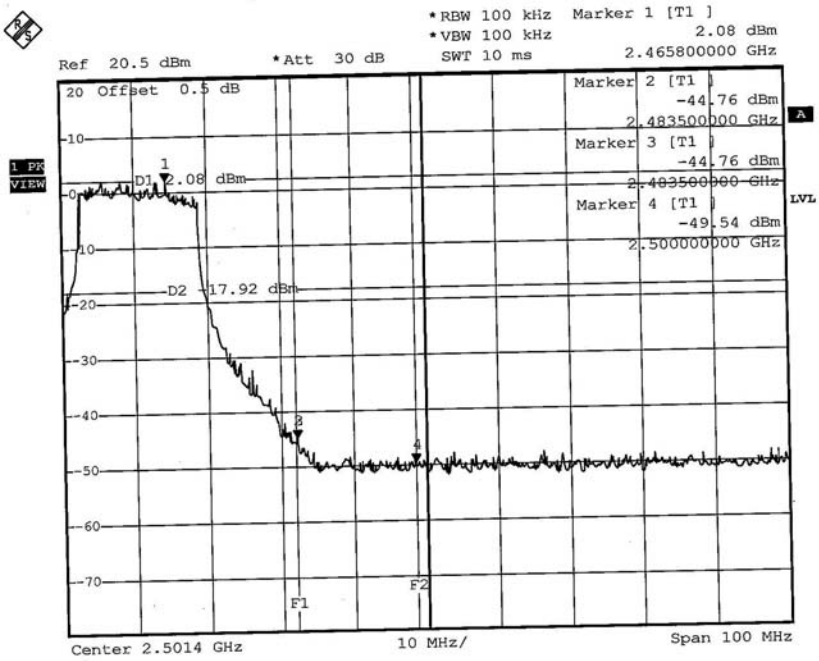
NOTE 2: The band edge emission plot on the next second page shows 46.84dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 110.28dBuV/m (Peak), so the maximum field strength in restrict band is 110.28-46.84=63.44dBuV/m which is under 74dBuV/m limit.

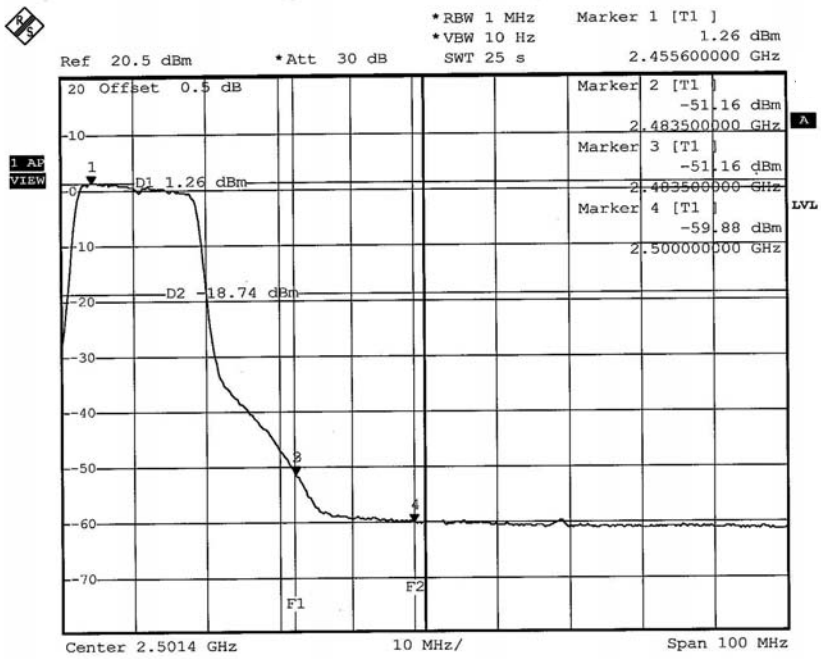
The band edge emission plot on the next third page shows 52.42dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 100.21dBuV/m (Average), so the maximum field strength in restrict band is 100.21-52.42=47.79dBuV/m which is under 54dBuV/m limit.

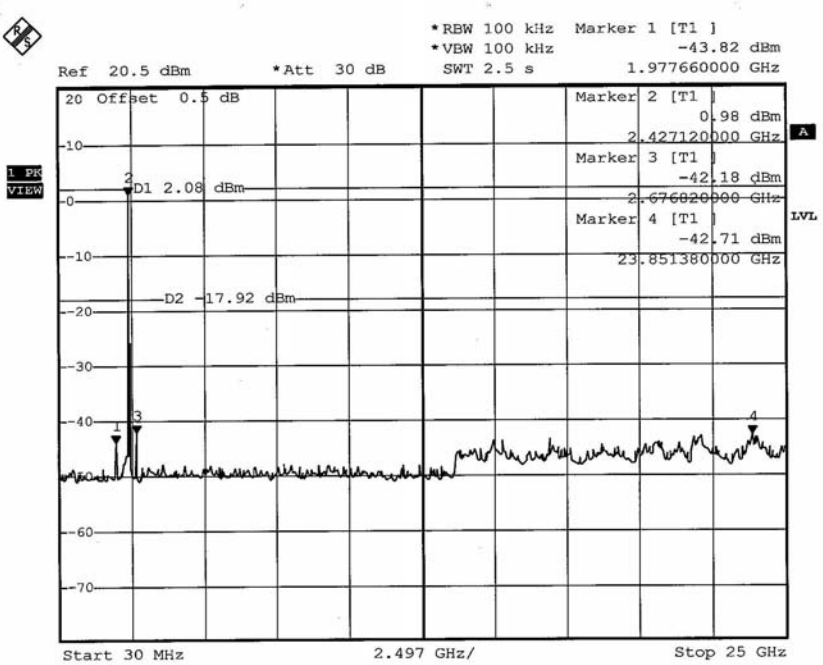

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
2.75 dBm
2.413600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-28.33 dBm
2.399480000 GHz
Marker 3 [T1]
-47.47 dBm
Marker 4 [T1]
-45.44 dBm
2.388000000 GHz
1 PK VIEW
D1 2.75 dBm
D2 -17.25 dBm
A
LVL
F2
F1
Center 2.3734 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
1.78 dBm
2.410600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-35.78 dBm
2.399680000 GHz
Marker 3 [T1]
-49.19 dBm
Marker 4 [T1]
-49.19 dBm
2.390000000 GHz
1 PK VIEW
D1 1.78 dBm
D2 -18.22 dBm
A
LVL
F2
F1
Center 2.3734 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-1.27 dBm
2.377180000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-42.84 dBm
20.355580000 GHz
1 PK
VIEW
D1 2.75 dBm
D2 -17.25 dBm
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
2.08 dBm
2.465800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-44.76 dBm
2.483500000 GHz
Marker 3 [T1]
-44.76 dBm
2.483500000 GHz
Marker 4 [T1]
-49.54 dBm
2.500000000 GHz
1 PK
VIEW
D1 2.08 dBm
D2 -17.92 dBm
LVL
F1
F2
Center 2.5014 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
1.26 dBm
2.455600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-51.16 dBm
2.483500000 GHz
Marker 3 [T1]
-51.16 dBm
2.483500000 GHz
Marker 4 [T1]
-59.88 dBm
2.500000000 GHz
1 AP
VIEW
D1 1.26 dBm
D2 -18.74 dBm
F1
F2
Center 2.5014 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-43.82 dBm
1.977660000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
0.98 dBm
2.427120000 GHz
Marker 3 [T1]
-42.18 dBm
2.676020000 GHz
Marker 4 [T1]
-42.71 dBm
23.851380000 GHz
1 PK
VIEW
D1 2.08 dBm
D2 -17.92 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

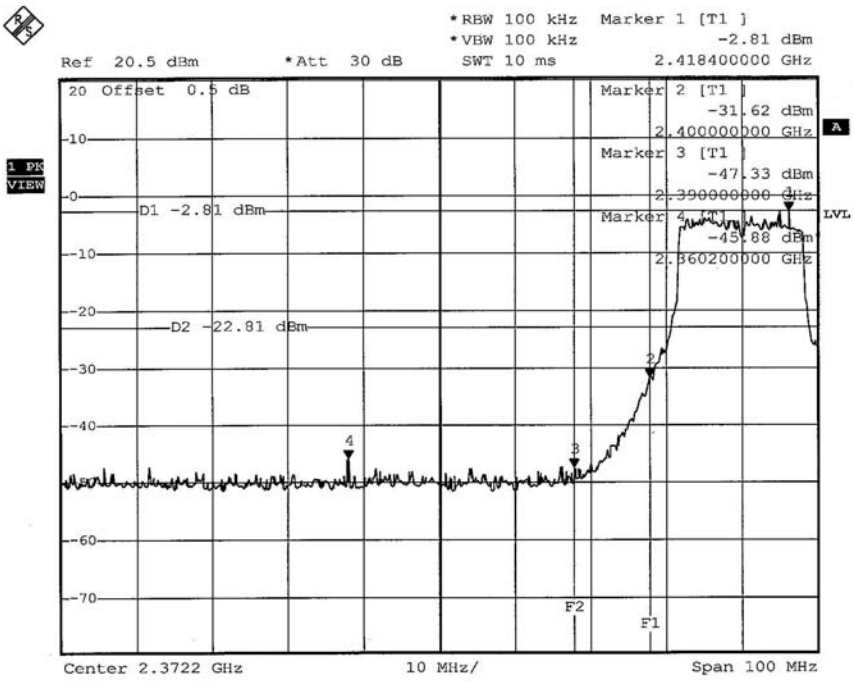
FOR ANTENNA ITEM 5 (13.9dBi gain)

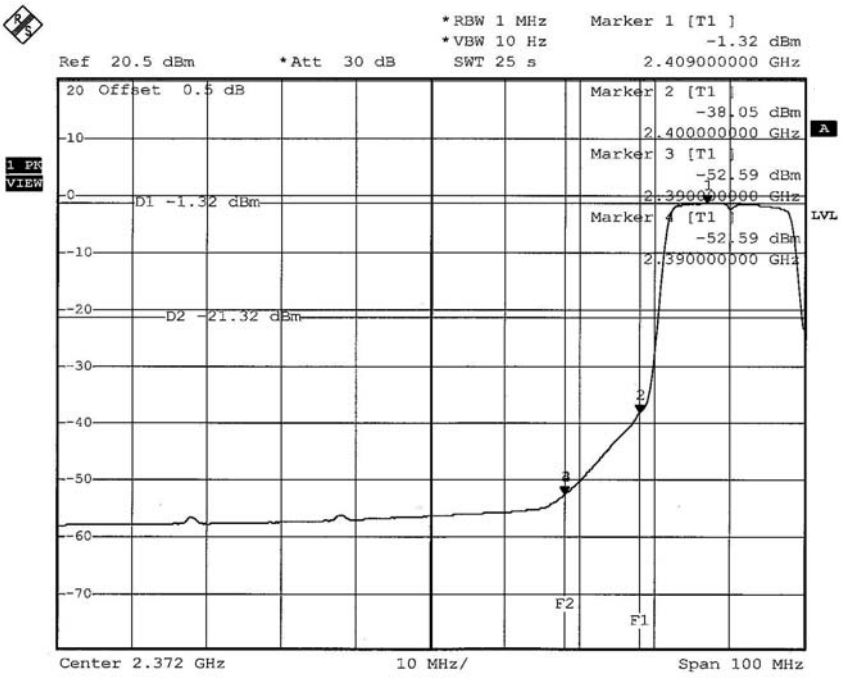
NOTE 1: The band edge emission plot on the next page shows 43.07dBc between carrier maximum power and local maximum emission in restrict band (2.36020GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 114.62dBuV/m (Peak), so the maximum field strength in restrict band is 114.62-43.07=71.55dBuV/m which is under 74dBuV/m limit..

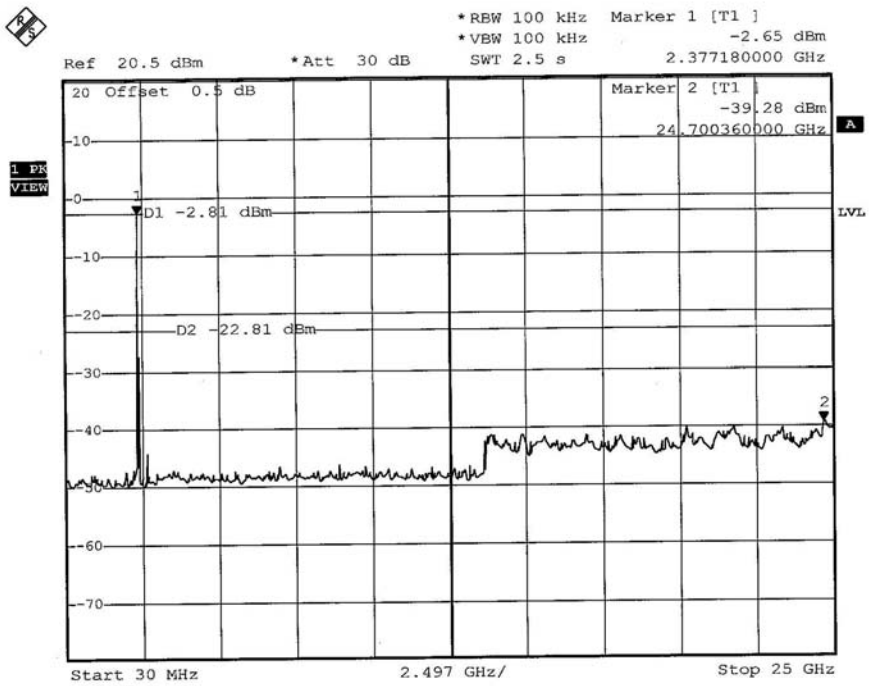
The band edge emission plot of on the next page shows 51.27dBc between carrier maximum power and local maximum emission in restrict band (2.39000GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 104.02dBuV/m (Average), so the maximum field strength in restrict band is 104.02-51.27=52.75dBuV/m which is under 54dBuV/m limit.

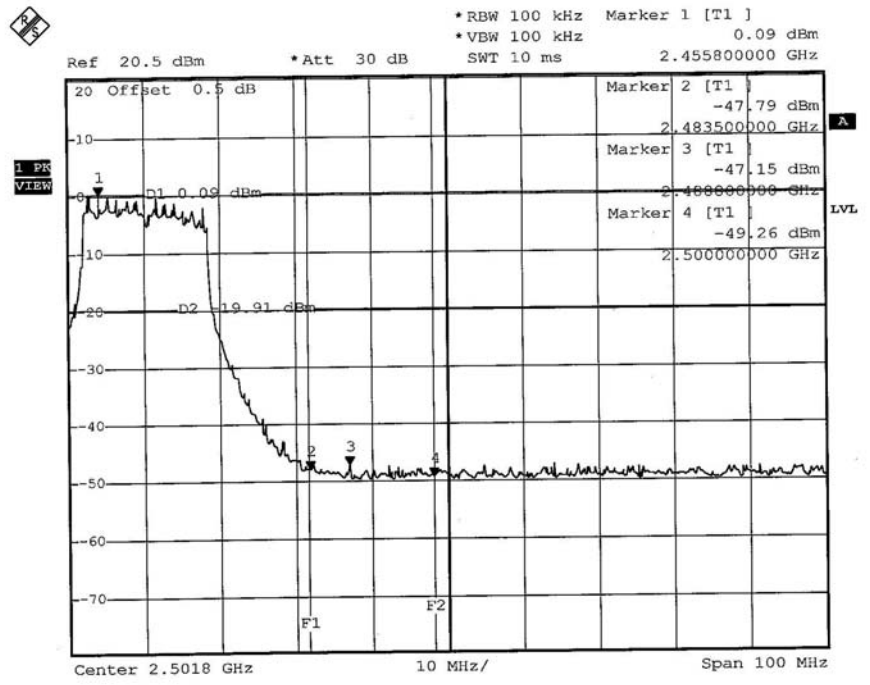
NOTE 2: The band edge emission plot on the next second page shows 47.24dBc between carrier maximum power and local maximum emission in restrict band (2.48880GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 116.80dBuV/m (Peak), so the maximum field strength in restrict band is 116.80-47.24=69.56dBuV/m which is under 74dBuV/m limit.

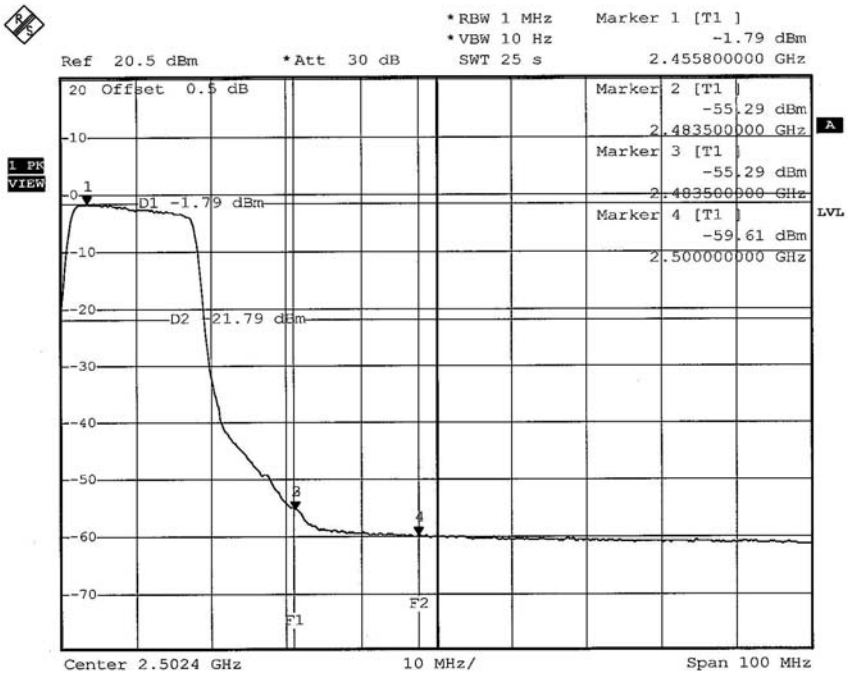
The band edge emission plot on the next third page shows 53.50dBc between carrier maximum power and local maximum emission in restrict band (2.48350GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 106.32dBuV/m (Average), so the maximum field strength in restrict band is 106.32-53.50=52.82dBuV/m which is under 54dBuV/m limit.

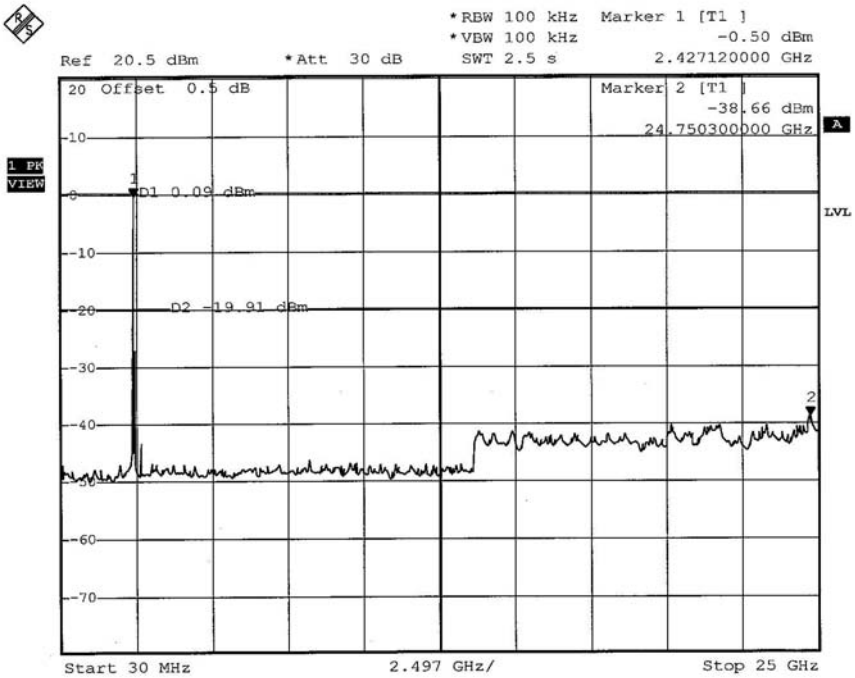

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
-2.81 dBm
2.418400000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-31.62 dBm
2.400000000 GHz
Marker 3 [T1]
-47.33 dBm
2.390000000 GHz
Marker 4 [T1]
-45.88 dBm
2.360200000 GHz
1 PK
VIEW
A
LVL
D1 -2.81 dBm
D2 -22.81 dBm
F2
F1
Center 2.3722 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
-1.32 dBm
2.409000000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-38.05 dBm
2.400000000 GHz
Marker 3 [T1]
-52.59 dBm
2.390000000 GHz
Marker 4 [T1]
-52.59 dBm
2.390000000 GHz
1 PK
VIEW
A
LVL
D1 -1.32 dBm
D2 -21.32 dBm
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-2.65 dBm
2.377180000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-39.28 dBm
24.700360000 GHz
1 PK
VIEW
D1 -2.81 dBm
D2 -22.81 dBm
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
0.09 dBm
2.455800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-47.79 dBm
2.483500000 GHz
Marker 3 [T1]
-47.15 dBm
2.488000000 GHz
Marker 4 [T1]
-49.26 dBm
2.500000000 GHz
1 PK
VIEW
D1 0.09 dBm
D2 -19.91 dBm
LVL
F1
F2
Center 2.5018 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
-1.79 dBm
2.455800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-55.29 dBm
2.483500000 GHz
Marker 3 [T1]
-55.29 dBm
2.483500000 GHz
Marker 4 [T1]
-59.61 dBm
2.500000000 GHz
1 PK
VIEW
D1 -1.79 dBm
D2 -21.79 dBm
LVL
Center 2.5024 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-0.50 dBm
2.427120000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-38.66 dBm
24.750300000 GHz
1 PK
VIEW
D1 0.09 dBm
D2 -19.91 dBm
LVL
Start 30 MHz
2.497 GHz/
Stop 25 GHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The following antennas had been used in this product. The maximum Gain of the antenna is 13.9dBi.

Item	Antenna Type	Model	Gain (dBi)		Antenna connector
			2.4G	5G	
1	Panel	ML-2499-SD3-01	3.5	-	RP-BNC FEMALE
2	Omin collinear	ML-2499-HPA3-01	3.3	-	RP-BNC FEMALE
3	**Yagi**	**ML-2499-BYGA2-02**	**13.9**	**-**	**Type N-Female**

5. TEST TYPES AND RESULTS (802.11a 5725~5850MHz Band)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE: 1. The lower limit shall apply at the transition frequencies.
1. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
2. 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.

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 11, 2006
RF signal cable Woken	5D-FB	Cable-HYC01-01	Jan. 06, 2007
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Feb. 15, 2007
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Feb. 07, 2007
Software ADT	ADT_Cond_V3	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Shielded Room 1.

3. The VCCI Site Registration No. is C-2040.

5.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

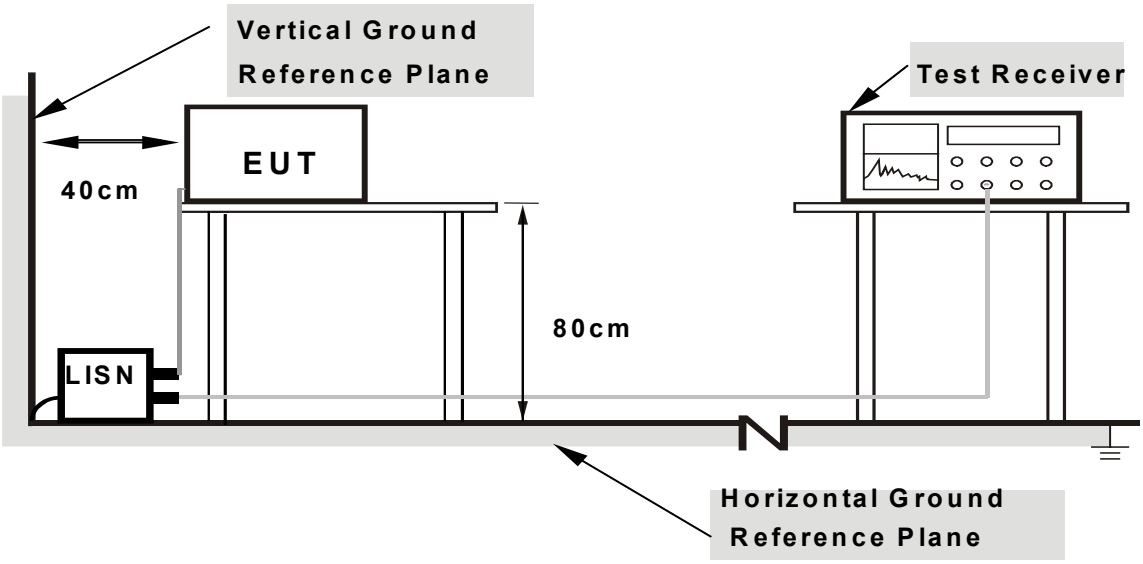
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) was not recorded.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.1.7 TEST RESULTS

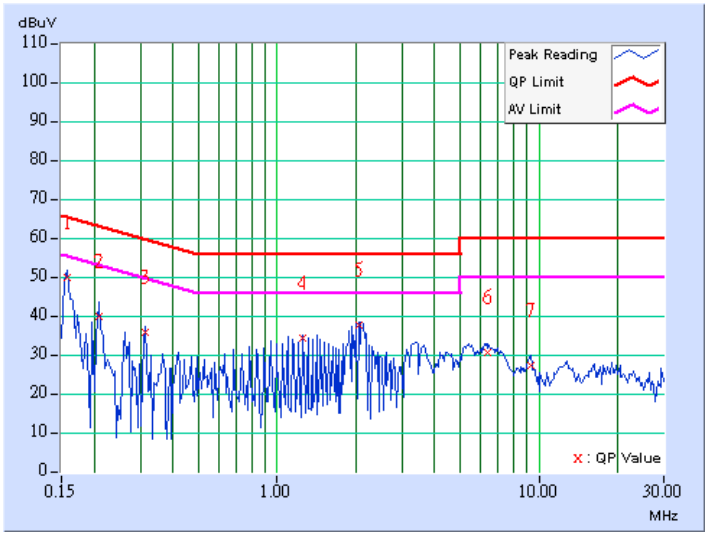
CONDUCTED WORST-CASE DATA

FOR ANTENNA ITEM 3 (5.0dBi gain)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	**PHASE**	Line 1
MODULATION TYPE	BPSK	**6dB BANDWIDTH**	9 kHz
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	23deg. C, 65%RH, 991hPa
TESTED BY	Whisky Chang	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		**Factor**	**[dB (uV)]**		**[dB (uV)]**		**[dB (uV)]**		**(dB)**	
	[MHz]	**(dB)**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.158	0.10	49.47	-	49.57	-	65.58	55.58	-16.01	-
2	0.209	0.10	39.49	-	39.59	-	63.26	53.26	-23.67	-
3	0.314	0.10	35.51	-	35.61	-	59.86	49.86	-24.25	-
4	1.258	0.20	34.13	-	34.33	-	56.00	46.00	-21.67	-
5	2.043	0.21	37.32	-	37.53	-	56.00	46.00	-18.47	-
6	6.391	0.47	30.45	-	30.92	-	60.00	50.00	-29.08	-
7	9.328	0.46	26.77	-	27.23	-	60.00	50.00	-32.77	-

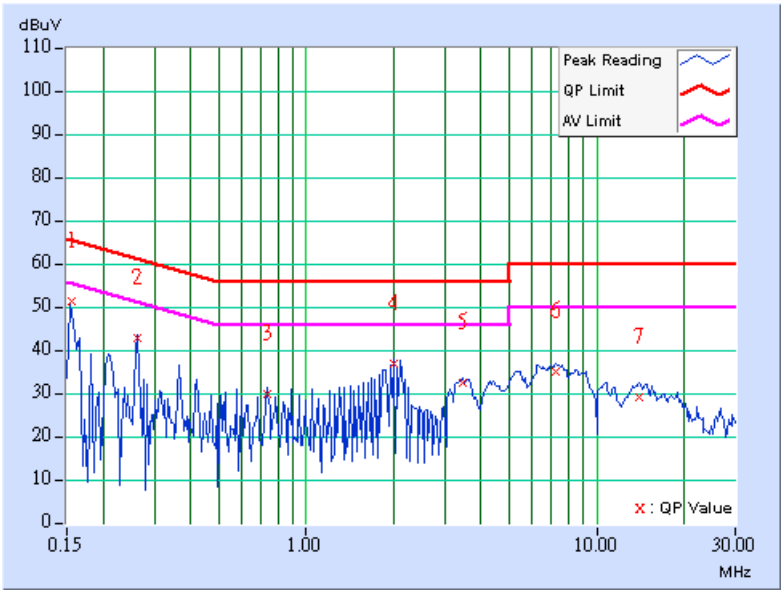
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 991hPa
TESTED BY	Whisky Chang	INPUT POWER (SYSTEM)	120Vac, 60 Hz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.156	0.10	51.01	-	51.11	-	65.65	55.65	-14.54	-
2	0.263	0.10	42.33	-	42.43	-	61.33	51.33	-18.90	-
3	0.732	0.10	29.66	-	29.76	-	56.00	46.00	-26.24	-
4	1.992	0.20	36.49	-	36.69	-	56.00	46.00	-19.31	-
5	3.457	0.32	32.07	-	32.39	-	56.00	46.00	-23.61	-
6	7.230	0.42	34.54	-	34.96	-	60.00	50.00	-25.04	-
7	14.043	0.52	28.66	-	29.18	-	60.00	50.00	-30.82	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.

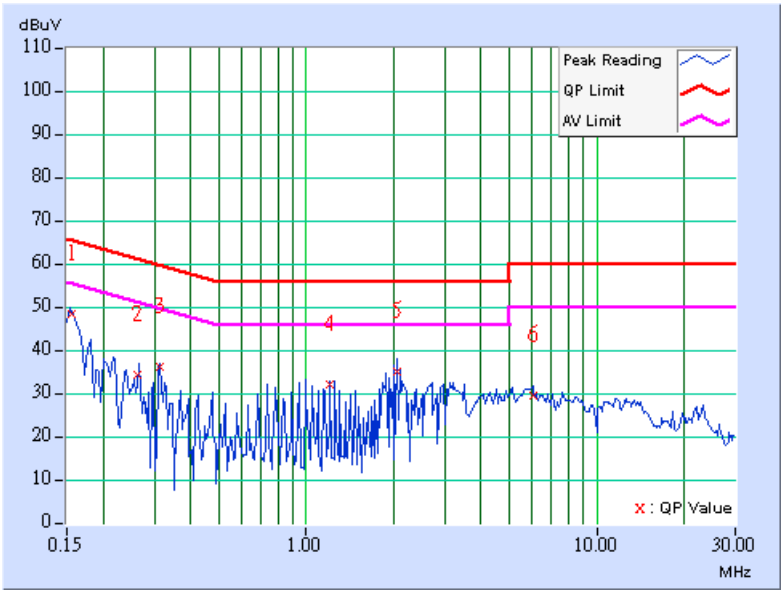


FOR ANTENNA ITEM 4 (13.0dBi gain)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	PHASE	Line 1
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 991hPa
TESTED BY	Whisky Chang	INPUT POWER (SYSTEM)	120Vac, 60 Hz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.157	0.10	48.13	-	48.23	-	65.64	55.64	-17.41	-
2	0.262	0.10	33.89	-	33.99	-	61.36	51.36	-27.37	-
3	0.314	0.10	35.80	-	35.90	-	59.86	49.86	-23.96	-
4	1.207	0.20	31.64	-	31.84	-	56.00	46.00	-24.16	-
5	2.043	0.21	34.87	-	35.08	-	56.00	46.00	-20.92	-
6	6.031	0.47	29.00	-	29.47	-	60.00	50.00	-30.53	-

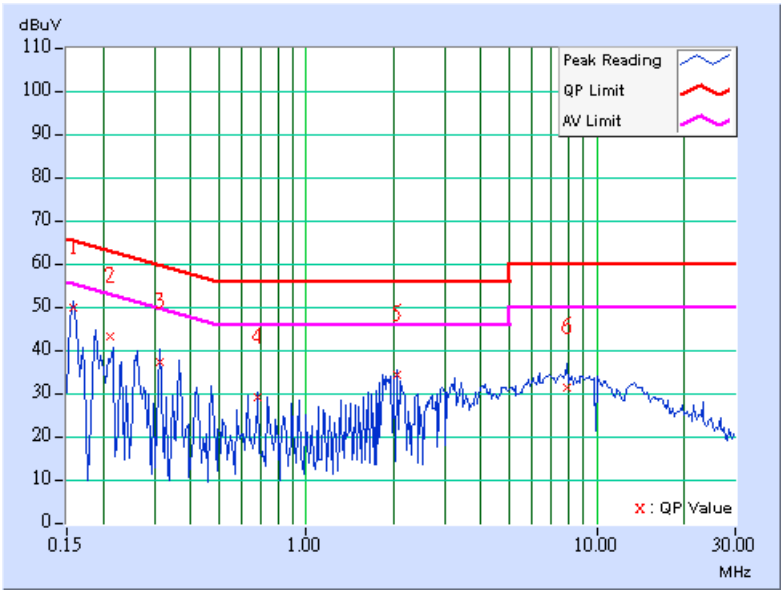
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	PHASE	Line 2
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	23deg. C, 65%RH, 991hPa
TESTED BY	Whisky Chang	INPUT POWER (SYSTEM)	120Vac, 60 Hz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.10	49.60	-	49.70	-	65.58	55.58	-15.88	-
2	0.211	0.10	43.03	-	43.13	-	63.18	53.18	-20.05	-
3	0.314	0.10	37.08	-	37.18	-	59.86	49.86	-22.68	-
4	0.681	0.10	28.76	-	28.86	-	56.00	46.00	-27.14	-
5	2.043	0.20	34.03	-	34.23	-	56.00	46.00	-21.77	-
6	7.918	0.43	31.04	-	31.47	-	60.00	50.00	-28.53	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

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. As shown in 15.35(b), 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.

5.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Jan. 01, 2007
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 04, 2006
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 15, 2007
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Jan. 01, 2007
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 19, 2007
Preamplifier Agilent	8449B	3008A01960	Nov. 09, 2006
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	219268/4	Dec. 20, 2006
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	230129/4	Dec. 20, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA
Turn Table ADT.	TT100.	TT93021704	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA

NOTE:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The IC Site Registration No. is IC4924-4.

5.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak method or average method as specified and then reported in data sheet.

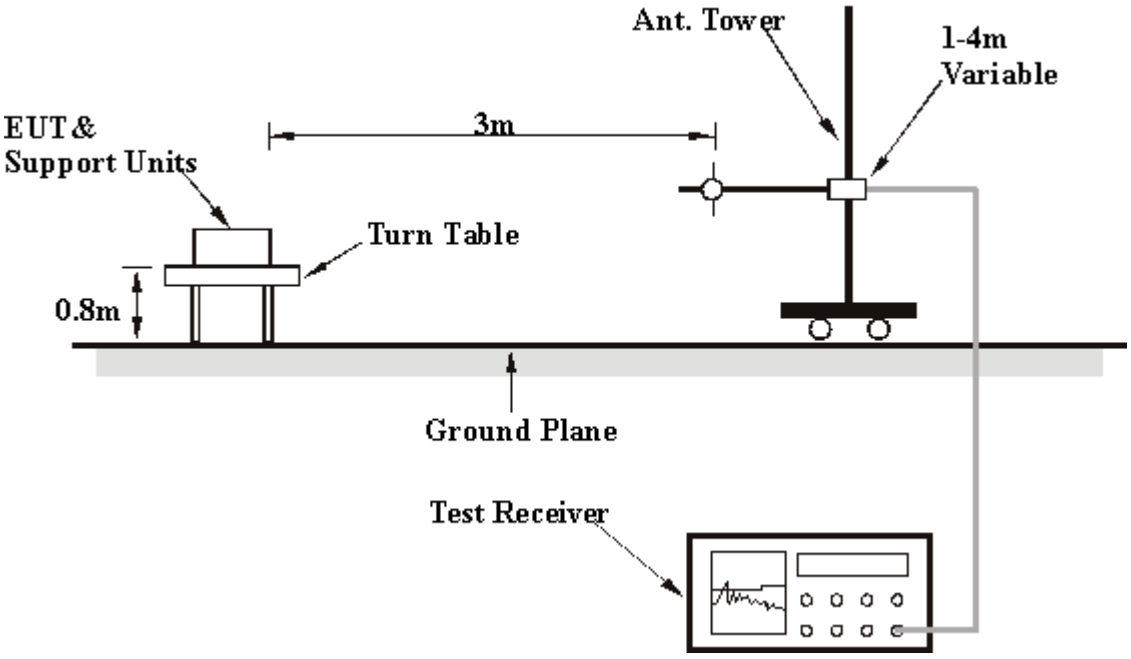
NOTE:

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 and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection 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.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation

5.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

RADIATED WORST-CASE DATA: BELOW 1GHz

FOR ANTENNA ITEM 3 (5.0dBi gain)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**DETECTOR FUNCTION**	Quasi-Peak
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

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	249.66	35.96 QP	46.00	-10.04	1.00 H	94	23.53	12.43
2	269.10	35.80 QP	46.00	-10.20	1.25 H	145	21.84	13.96
3	360.46	37.27 QP	46.00	-8.73	1.00 H	187	20.80	16.47
4	539.30	34.45 QP	46.00	-11.55	1.25 H	142	13.67	20.78
5	624.83	35.68 QP	46.00	-10.32	1.25 H	115	12.85	22.83
6	751.18	42.83 QP	46.00	-3.17	1.50 H	217	17.03	25.79

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	43.61	34.03 QP	40.00	-5.97	1.00 V	25	19.02	15.01
2	249.66	30.96 QP	46.00	-15.04	1.00 V	73	18.53	12.43
3	269.10	36.20 QP	46.00	-9.80	1.50 V	55	22.24	13.96
4	500.42	35.42 QP	46.00	-10.58	1.00 V	298	15.47	19.95
5	624.83	33.63 QP	46.00	-12.37	1.00 V	247	10.80	22.83
6	751.18	40.11 QP	46.00	-5.89	1.00 V	316	14.32	25.79

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

FOR ANTENNA ITEM 4 (13.0dBi gain)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**DETECTOR FUNCTION**	Quasi-Peak
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

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	269.10	36.51 QP	46.00	-9.49	1.00 H	208	22.55	13.96
2	360.46	34.68 QP	46.00	-11.32	1.00 H	175	18.22	16.47
3	500.42	34.30 QP	46.00	-11.70	1.50 H	280	14.35	19.95
4	630.66	35.51 QP	46.00	-10.49	1.25 H	181	12.61	22.90
5	720.08	40.38 QP	46.00	-5.62	1.50 H	37	15.58	24.80
6	751.18	42.64 QP	46.00	-3.36	1.50 H	37	16.85	25.79

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	43.61	34.43 QP	40.00	-5.57	1.00 V	340	19.43	15.01
2	269.10	31.67 QP	46.00	-14.33	1.25 V	346	17.71	13.96
3	360.46	28.90 QP	46.00	-17.10	1.25 V	94	12.44	16.47
4	500.42	34.66 QP	46.00	-11.34	1.25 V	268	14.70	19.95
5	624.83	33.51 QP	46.00	-12.49	1.00 V	106	10.68	22.83
6	751.18	40.33 QP	46.00	-5.67	1.00 V	289	14.53	25.79

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

802.11a OFDM MODULATION

FOR ANTENNA ITEM 3 (5.0dBi gain)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TESTED BY	Morgan Chen	INPUT POWER (SYSTEM)	120Vac, 60 Hz

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	74.65 PK	82.52	-7.88	1.05 H	233	35.62	39.03
2	5725.00	58.25 AV	71.32	-13.07	1.05 H	233	19.22	39.03
3	*5745.00	102.52 PK			1.05 H	223	63.47	39.05
4	*5745.00	91.32 AV			1.05 H	223	52.27	39.05
5	#11490.00	65.15 PK	74.00	-8.85	1.05 H	233	15.09	50.06
6	#11490.00	49.85 AV	54.00	-4.15	1.05 H	233	-0.21	50.06

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	85.51 PK	93.65	-8.14	1.06 V	251	46.48	39.03
2	5725.00	69.45 AV	82.52	-13.07	1.06 V	251	30.42	39.03
3	*5745.00	113.65 PK			1.05 V	265	74.60	39.05
4	*5745.00	102.52 AV			1.05 V	265	63.47	39.05
5	#11490.00	67.35 PK	74.00	-6.65	1.05 V	322	17.29	50.06
6	#11490.00	51.98 AV	54.00	-2.02	1.05 V	322	1.92	50.06

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	25deg. C, 68%RH, 991hPa
TESTED BY	Morgan Chen	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

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	102.35 PK			1.13 H	233	63.26	39.09
2	*5785.00	91.18 AV			1.13 H	233	52.09	39.09
3	#11570.00	64.75 PK	74.00	-9.25	1.18 H	212	15.09	49.66
4	#11570.00	49.32 AV	54.00	-4.68	1.18 H	212	-0.34	49.66

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	113.18 PK			1.06 V	255	74.09	39.09
2	*5785.00	102.40 AV			1.06 V	255	63.31	39.09
3	#11570.00	67.01 PK	74.00	-6.99	1.02 V	202	17.35	49.66
4	#11570.00	51.62 AV	54.00	-2.38	1.02 V	202	1.96	49.66

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 5	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	25deg. C, 68%RH, 991hPa
TESTED BY	Morgan Chen	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

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	101.02 PK			1.15 H	232	61.88	39.14
2	*5825.00	89.65 AV			1.15 H	232	50.51	39.14
3	5850.00	64.21 PK	74.00	-9.79	1.02 H	312	25.03	39.17
4	5850.00	48.75 AV	54.00	-5.25	1.02 H	312	9.58	39.17
5	#11650.00	65.02 PK	74.00	-8.98	1.08 H	212	15.62	49.40
6	#11650.00	49.71 AV	54.00	-4.29	1.08 H	212	0.31	49.40

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	112.01 PK			1.06 V	252	72.87	39.14
2	*5825.00	101.05 AV			1.06 V	252	61.91	39.14
3	5850.00	75.21 PK	74.00	1.21	1.02 V	32	36.03	39.17
4	5850.00	59.61 AV	54.00	5.61	1.02 V	32	20.44	39.17
5	#11650.00	66.98 PK	74.00	-7.02	1.02 V	154	17.59	49.40
6	#11650.00	51.51 AV	54.00	-2.49	1.02 V	154	2.11	49.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247

FOR ANTENNA ITEM 4 (13.0dBi gain)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	25deg. C, 64%RH, 991hPa
TESTED BY	Brad Wu	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

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	81.08 PK	87.89	-6.81	1.10 H	11	42.05	39.03
2	5725.00	63.24 AV	77.01	-13.77	1.10 H	11	24.21	39.03
3	*5745.00	107.89 PK			1.10 H	11	68.84	39.05
4	*5745.00	97.01 AV			1.10 H	11	57.96	39.05
5	#11490.00	60.45 PK	74.00	-13.55	1.05 H	179	10.39	50.06
6	#11490.00	47.52 AV	54.00	-6.48	1.05 H	179	-2.54	50.06

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	89.21 PK	98.95	-9.74	1.27 V	355	50.18	39.03
2	5725.00	72.51 AV	88.30	-15.79	1.27 V	355	33.48	39.03
3	*5745.00	118.95 PK			1.27 V	355	79.90	39.05
4	*5745.00	108.30 AV			1.27 V	355	69.25	39.05
5	#11490.00	61.41 PK	74.00	-12.59	1.06 V	181	11.35	50.06
6	#11490.00	48.65 AV	54.00	-5.35	1.06 V	181	-1.41	50.06

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	25deg. C, 64%RH, 991hPa
TESTED BY	Brad Wu	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

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	107.59 PK			1.13 H	8	68.50	39.09
2	*5785.00	96.89 AV			1.13 H	8	57.80	39.09
3	#11570.00	60.15 PK	74.00	-13.85	1.01 H	173	10.49	49.66
4	#11570.00	47.25 AV	54.00	-6.75	1.01 H	173	-2.41	49.66

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	118.62 PK			1.24 V	349	79.53	39.09
2	*5785.00	108.02 AV			1.24 V	349	68.93	39.09
3	#11570.00	61.39 PK	74.00	-12.61	1.04 V	178	11.73	49.66
4	#11570.00	48.45 AV	54.00	-5.55	1.04 V	178	-1.21	49.66

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 5	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
TRANSFER RATE	6Mbps	**ENVIRONMENTAL CONDITIONS**	25deg. C, 64%RH, 991hPa
TESTED BY	Brad Wu	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz

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	107.51 PK			1.15 H	5	68.37	39.14
2	*5825.00	96.62 AV			1.15 H	5	57.48	39.14
3	5850.00	67.71 PK	87.51	-19.80	1.05 H	135	28.53	39.17
4	5850.00	54.02 AV	76.62	-22.60	1.05 H	135	14.84	39.17
5	#11650.00	60.05 PK	74.00	-13.95	1.05 H	135	10.65	49.40
6	#11650.00	47.12 AV	54.00	-6.88	1.05 H	135	-2.28	49.40

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	118.50 PK			1.17 V	329	79.36	39.14
2	*5825.00	102.92 AV			1.17 V	329	63.78	39.14
3	5850.00	77.52 PK	98.50	-20.98	1.17 V	329	38.34	39.17
4	5850.00	63.62 AV	82.92	-19.30	1.17 V	329	24.45	39.17
5	#11650.00	61.12 PK	74.00	-12.88	1.04 V	172	11.72	49.40
6	#11650.00	48.29 AV	54.00	-5.71	1.04 V	172	-1.11	49.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * " : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.
7. The limit value is defined as per 15.247

5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK 30	100049	Aug. 14, 2006

NOTES: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

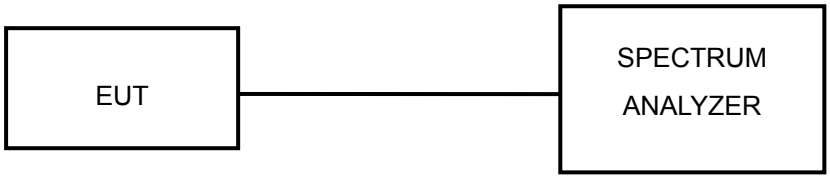
5.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.3.7 TEST RESULTS

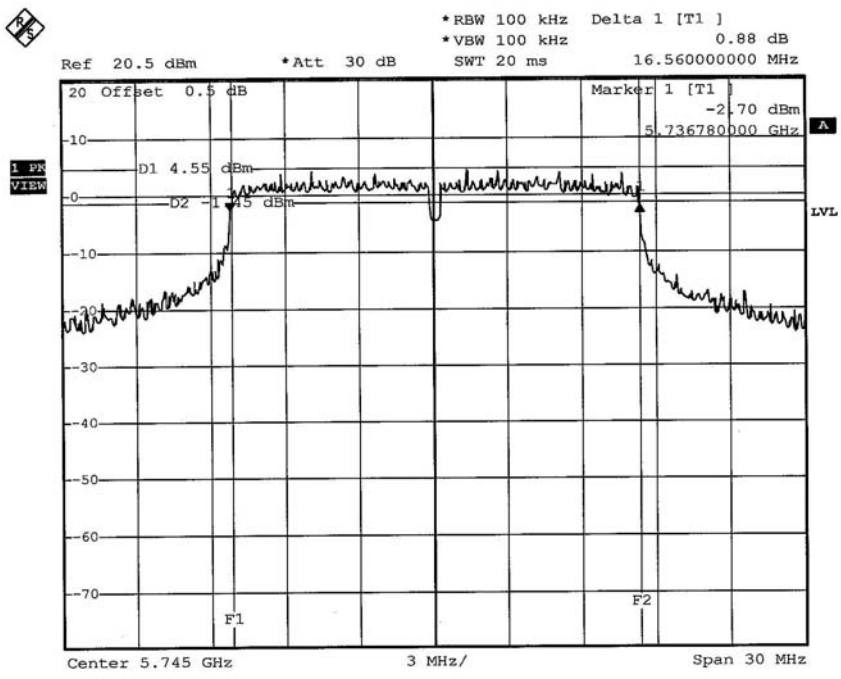
802.11a OFDM MODULATION

FOR ANTENNA ITEM 3 (5.0dBi gain)

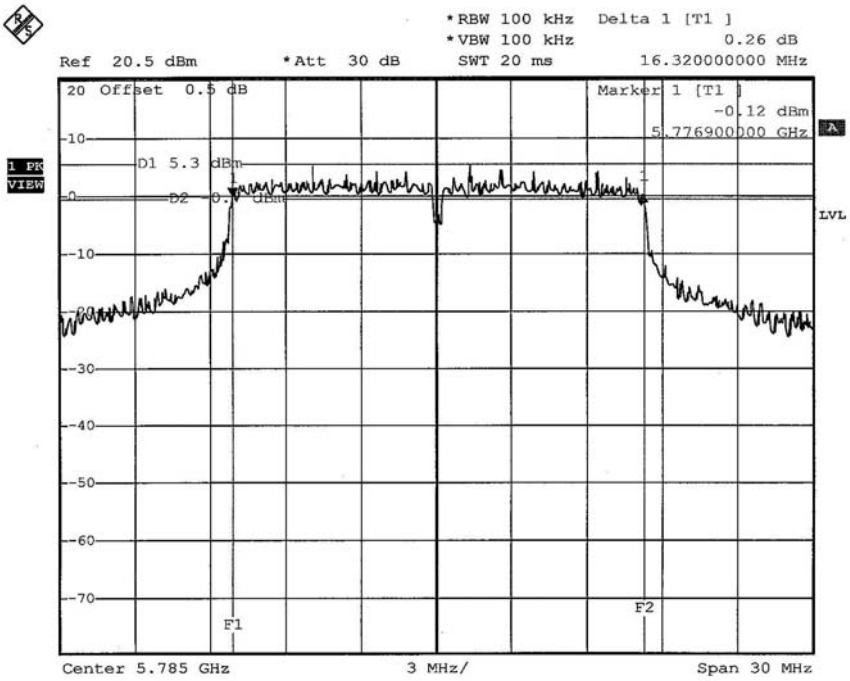
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	5745	16.56	0.5	PASS
3	5785	16.32	0.5	PASS
5	5825	16.56	0.5	PASS

CH 1



CH 3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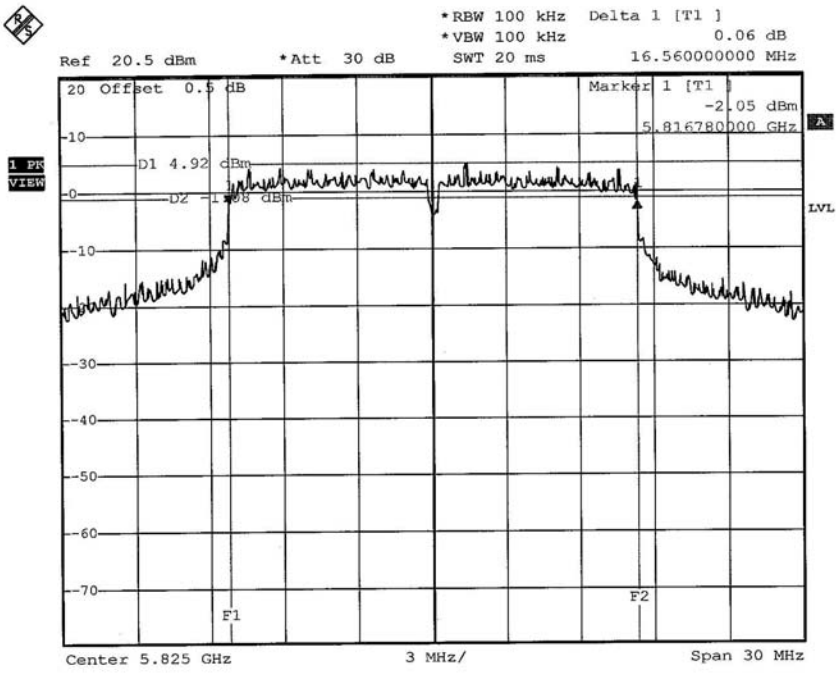
*VBW 100 kHz
Delta 1 [T1]
0.26 dB
Ref 20.5 dBm
*Att 30 dB
SWT 20 ms
16.320000000 MHz
20 Offset 0.5 dB
Marker 1 [T1]
-0.12 dBm
5.776900000 GHz
D1 5.3 dBm
D2 0.
LVL
F1
F2
Center 5.785 GHz
3 MHz/
Span 30 MHz

CH 5

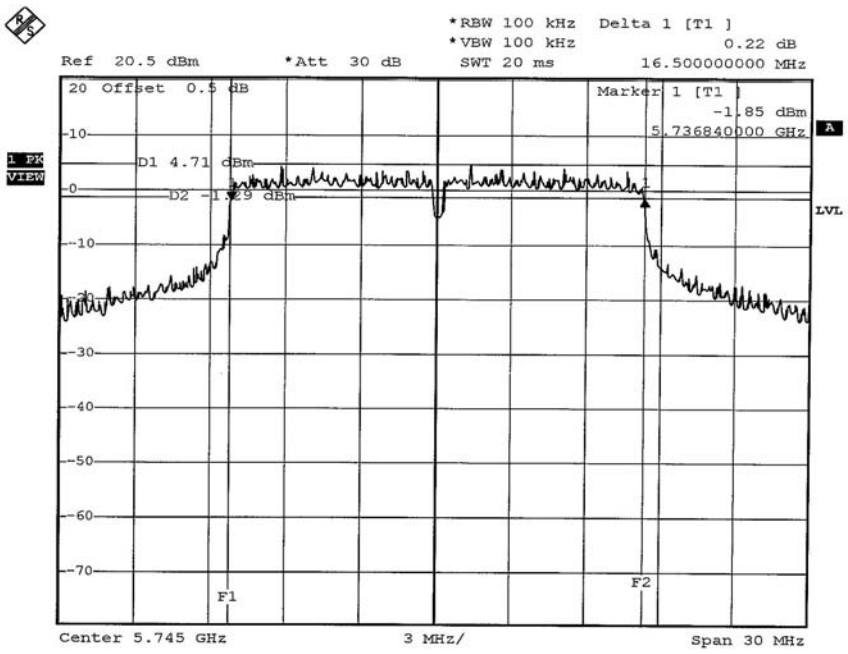

*RBW 100 kHz
*VBW 100 kHz
Delta 1 [T1]
0.06 dB
Ref 20.5 dBm
*Att 30 dB
SWT 20 ms
16.560000000 MHz
20 Offset 0.5 dB
Marker 1 [T1]
-2.05 dBm
5.816780000 GHz
D1 4.92 dBm
LVL
F1
F2
Center 5.825 GHz
3 MHz/
Span 30 MHz

FOR ANTENNA ITEM 4 (13.0dBi gain)

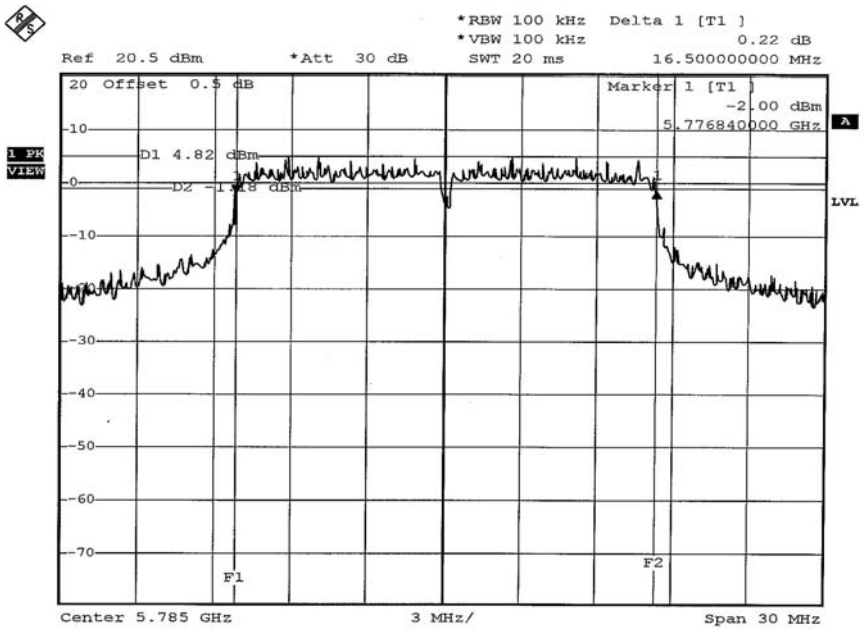
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	5745	16.50	0.5	PASS
3	5785	16.50	0.5	PASS
5	5825	16.56	0.5	PASS

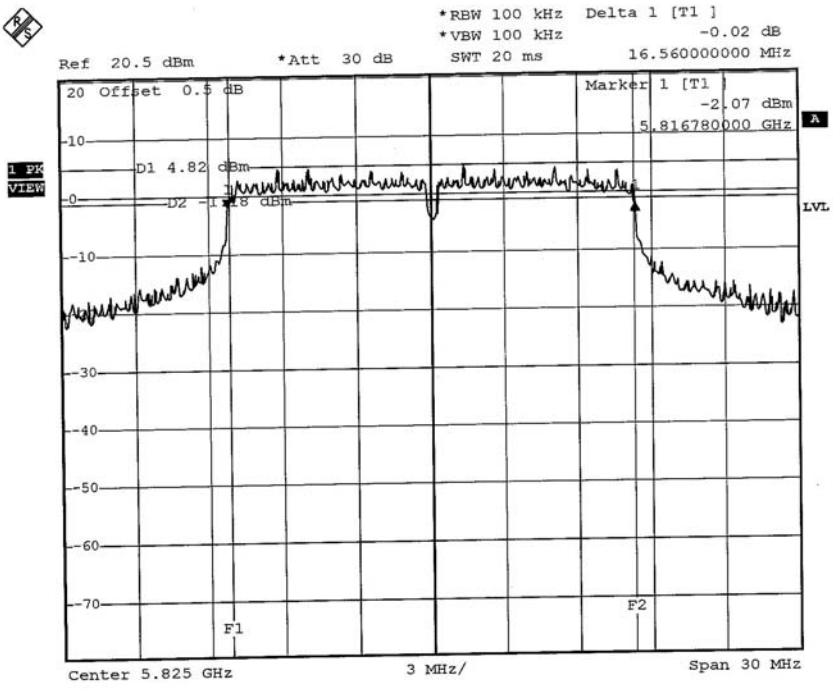
CH 1



CH 3


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
0.22 dB
16.500000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-2.00 dBm
5.776840000 GHz
1 PK
VIEW
D1 4.82 dBm
D2 -1.18 dBm
LVL
F1
F2
Center 5.785 GHz
3 MHz/
Span 30 MHz

CH 5


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
-0.02 dB
16.560000000 MHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-2.07 dBm
5.816780000 GHz
1 PK
VIEW
D1 4.82 dBm
D2 -1.18 dBm
LVL
F1
F2
Center 5.825 GHz
3 MHz/
Span 30 MHz

5.4 MAXIMUM PEAK OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 14, 2006
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 07, 2006
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Nov. 28, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP

5.4.6 EUT OPERATING CONDITIONS

Same as Item 5.3.6

5.4.7 TEST RESULTS

802.11a OFDM MODULATION

FOR ANTENNA ITEM 3 (5.0dBi gain)

MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	5745	82.035	19.14	30	PASS
3	5785	82.224	19.15	30	PASS
5	5825	82.224	19.15	30	PASS

FOR ANTENNA ITEM 4 (13.0dBi gain)

MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	5745	82.604	19.17	23	PASS
3	5785	82.794	19.18	23	PASS
5	5825	82.794	19.18	23	PASS

NOTE: According to 15.247 (b) (4), the maximum antenna gain 13dBi is higher than 6dBi, so the limit of peak power shall be reduced by 7dB.

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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK 30	100049	Aug. 14, 2006

NOTES:
The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

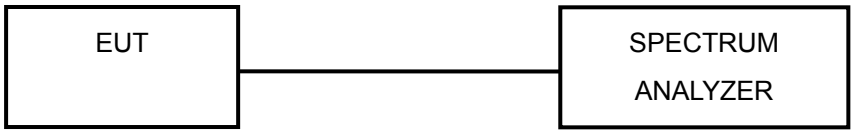
5.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

Same as Item 5.3.6

5.5.7 TEST RESULTS

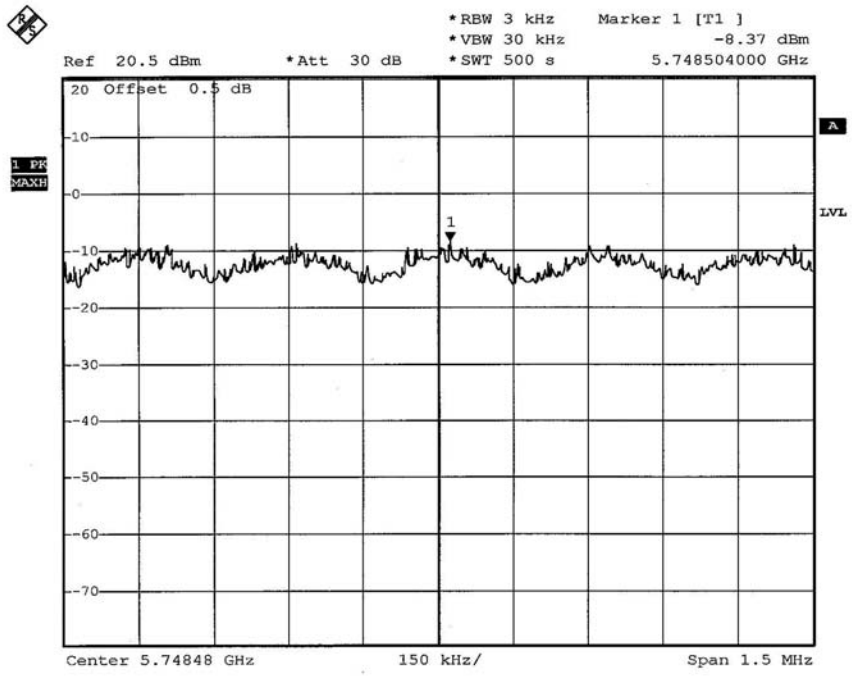
802.11a OFDM MODULATION

FOR ANTENNA ITEM 3 (5.0dBi gain)

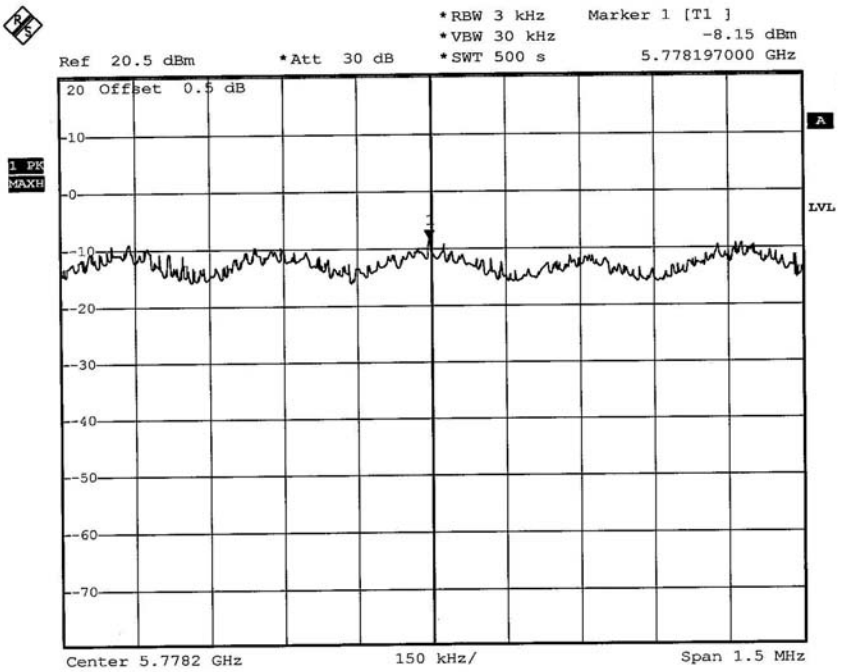
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5745	-8.37	8	PASS
3	5785	-8.15	8	PASS
5	5825	-8.15	8	PASS

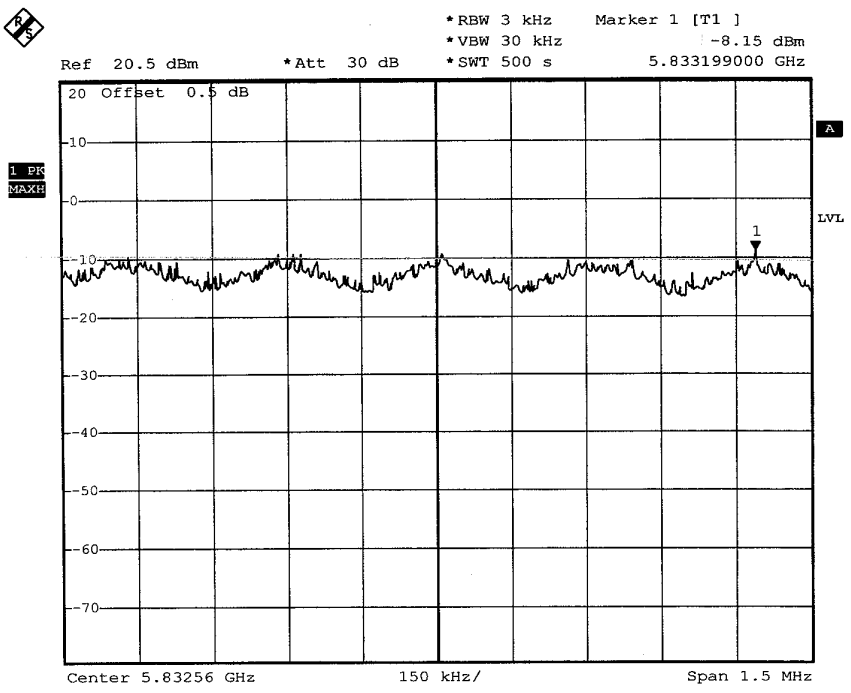
CH1



CH3


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-8.15 dBm
5.778197000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.7782 GHz
150 kHz/
Span 1.5 MHz

CH5

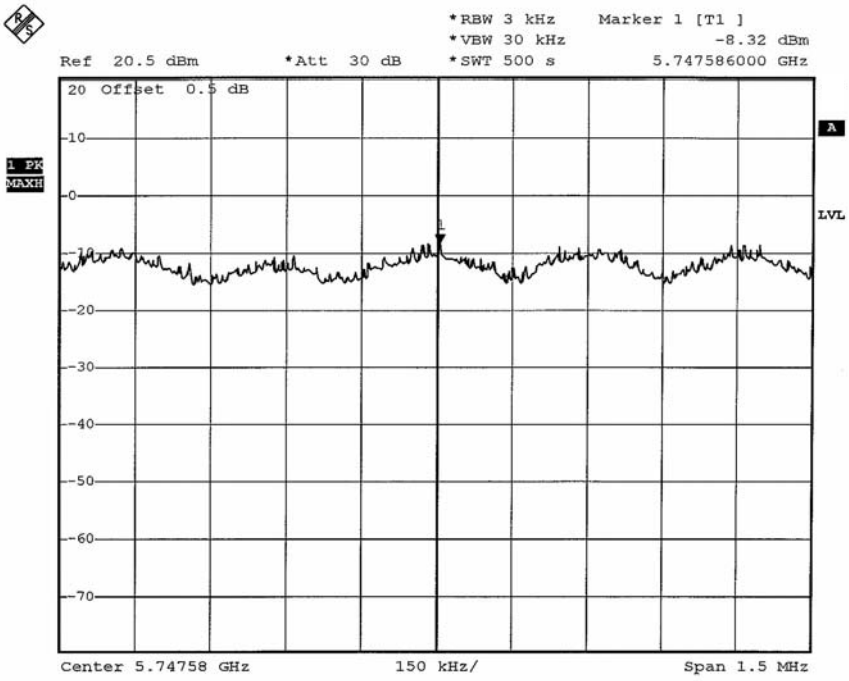

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-8.15 dBm
5.833199000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
1
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.83256 GHz
150 kHz/
Span 1.5 MHz

FOR ANTENNA ITEM 4 (13.0dBi gain)

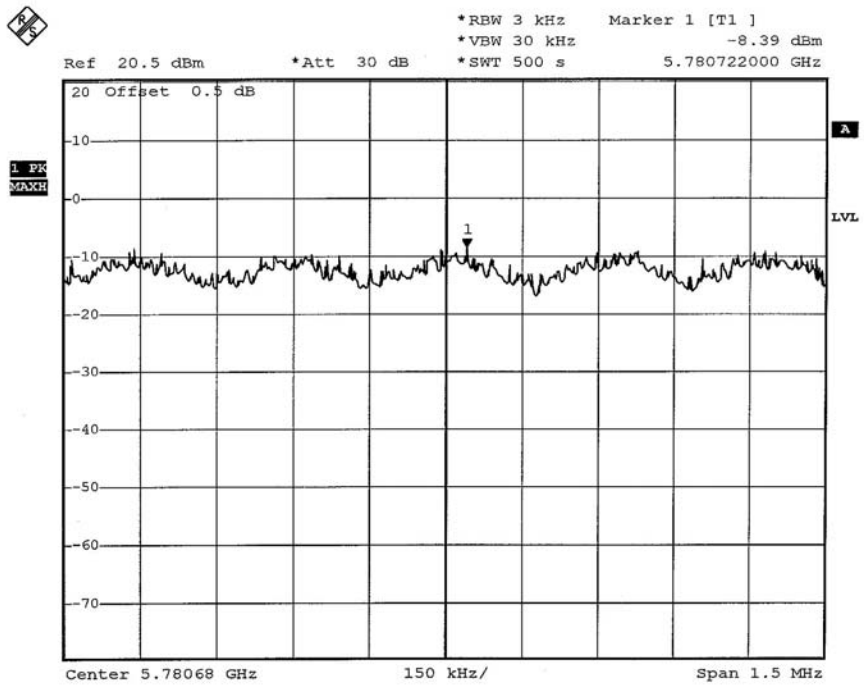
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg. C, 63%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5745	-8.32	8	PASS
3	5785	-8.39	8	PASS
5	5825	-8.22	8	PASS

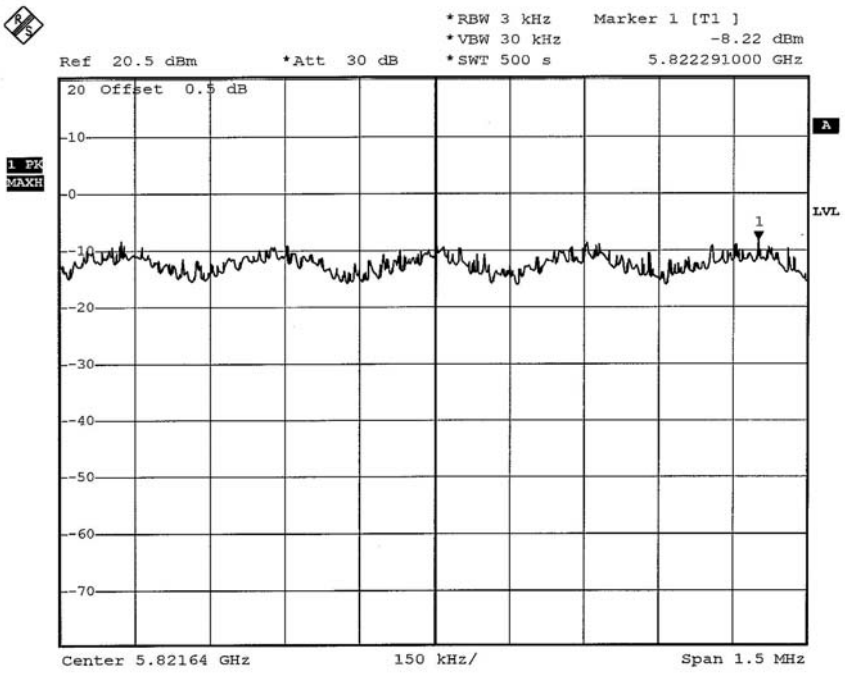
CH1



CH3


*RBW 3 kHz
Marker 1 [T1]
*VBW 30 kHz
-8.39 dBm
Ref 20.5 dBm
*Att 30 dB
*SWT 500 s
5.780722000 GHz
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
1
Center 5.78068 GHz
150 kHz/
Span 1.5 MHz

CH5


*RBW 3 kHz
Marker 1 [T1]
*VBW 30 kHz
-8.22 dBm
Ref 20.5 dBm
*Att 30 dB
*SWT 500 s
5.822291000 GHz
20 Offset 0.5 dB
1 PK
MAXH
A
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
1
Center 5.82164 GHz
150 kHz/
Span 1.5 MHz

5.6 BAND EDGES MEASUREMENT

5.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK 30	100049	Aug. 14, 2006

NOTES:
The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 EUT OPERATING CONDITION

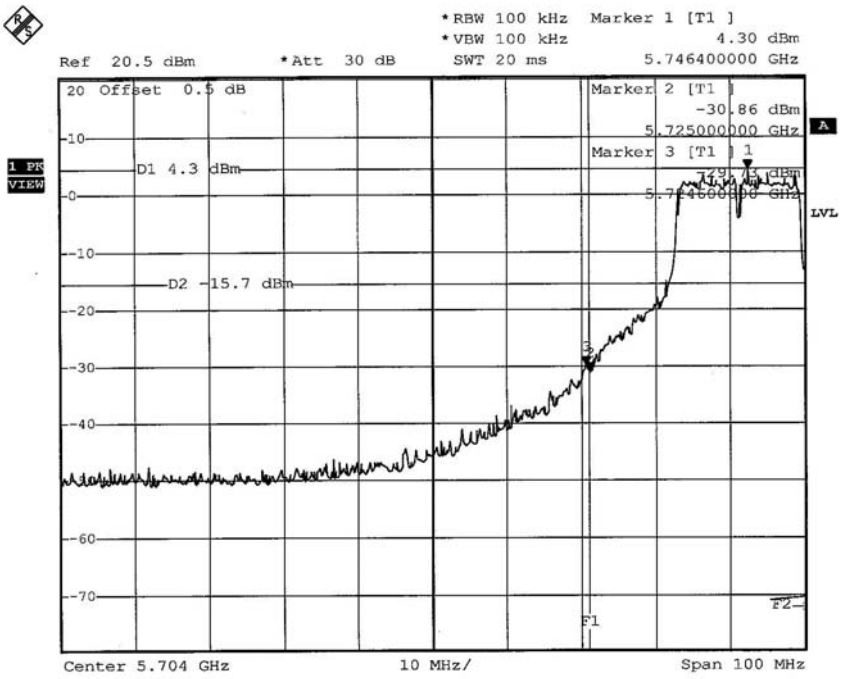
Same as Item 5.3.6

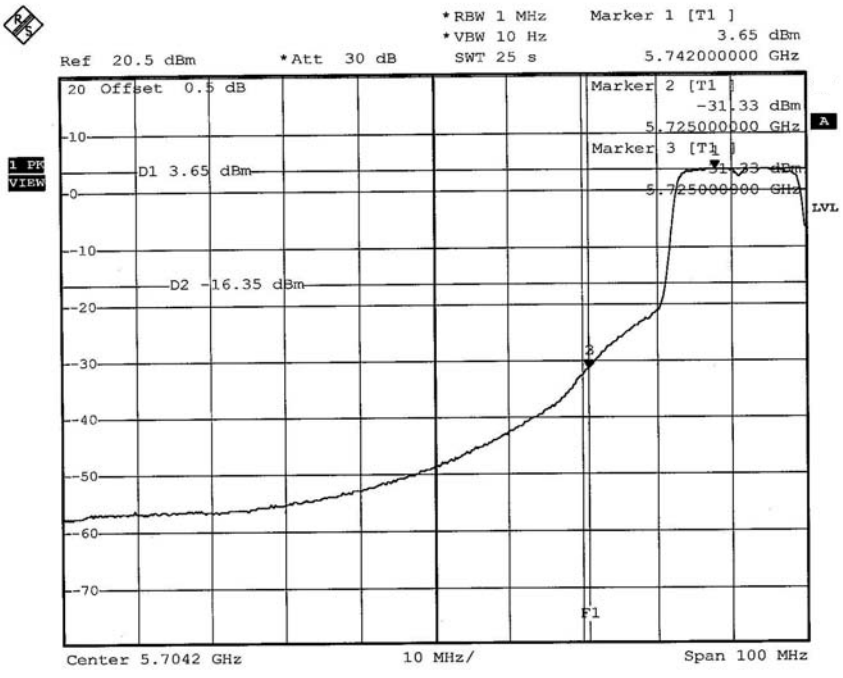
5.6.6 TEST RESULTS

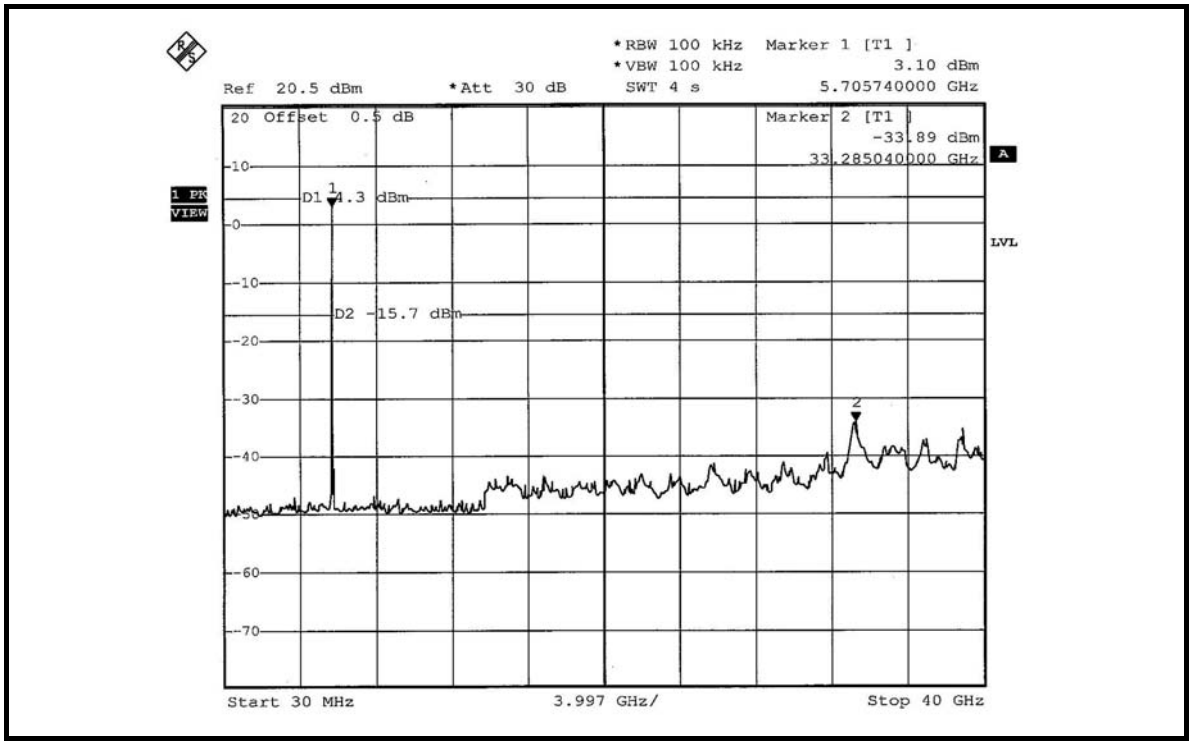
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

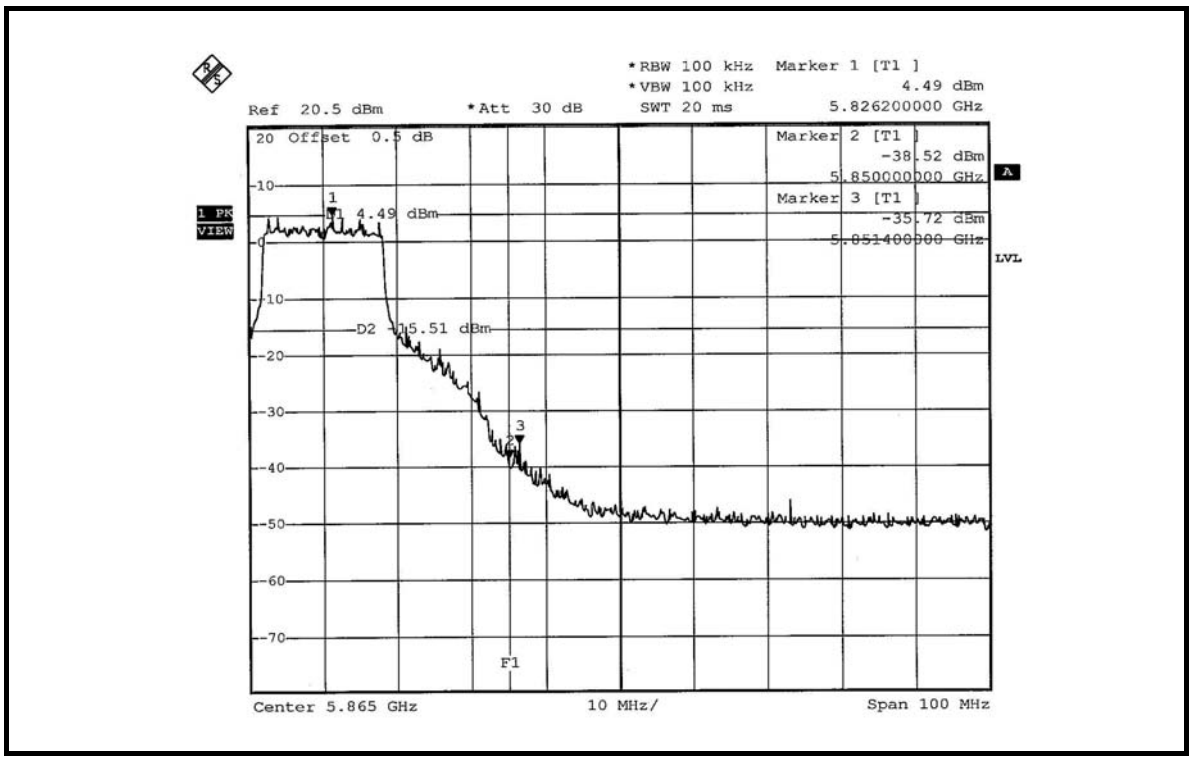
802.11a OFDM MODULATION

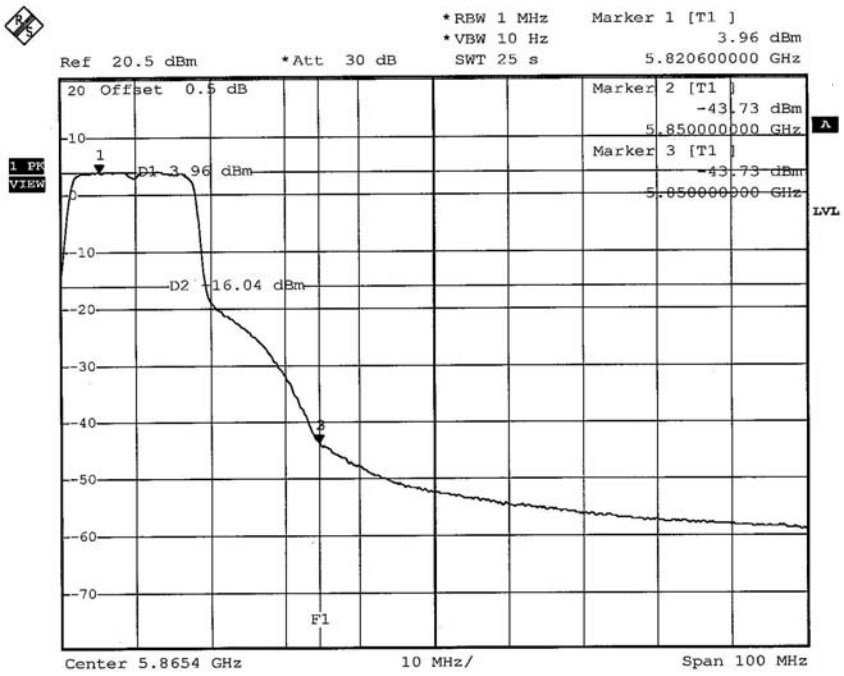
FOR ANTENNA ITEM 3 (5.0dBi gain)

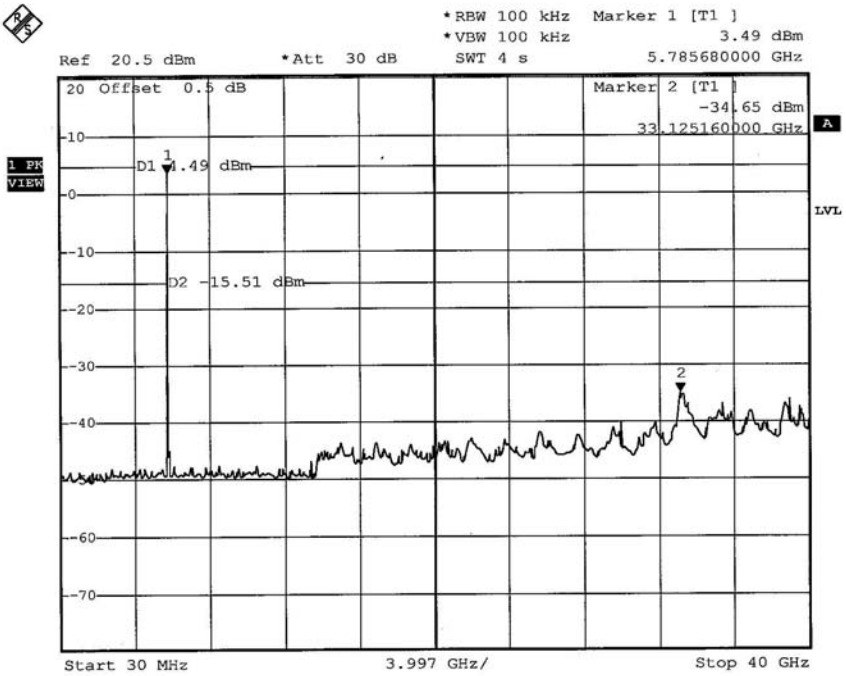




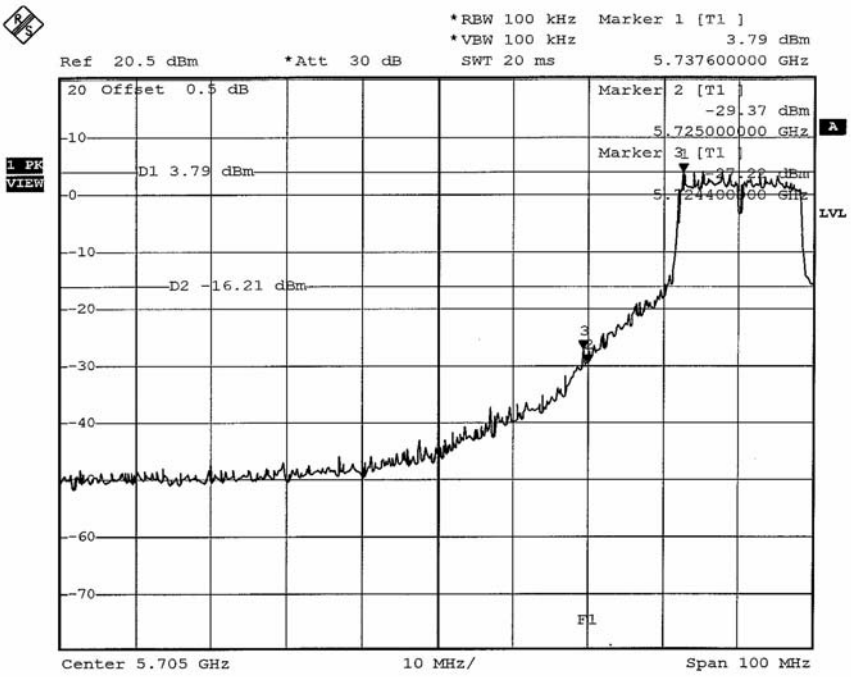

*RBW 100 kHz
*VBW 100 kHz
SWT 4 s
Marker 1 [T1]
3.10 dBm
5.705740000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-33.89 dBm
33.285040000 GHz
1 PK
VIEW
D1 4.3 dBm
D2 -15.7 dBm
LVL
Start 30 MHz
3.997 GHz/
Stop 40 GHz

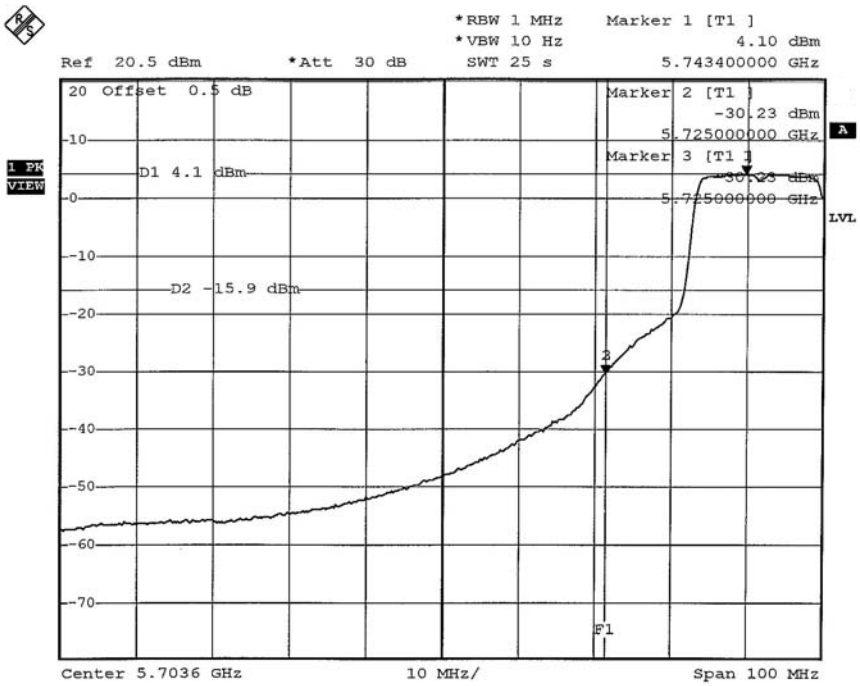

*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
4.49 dBm
5.826200000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-38.52 dBm
5.850000000 GHz
Marker 3 [T1]
-35.72 dBm
5.851400000 GHz
1 PK
VIEW
D1 4.49 dBm
D2 -15.51 dBm
LVL
F1
Center 5.865 GHz
10 MHz/
Span 100 MHz

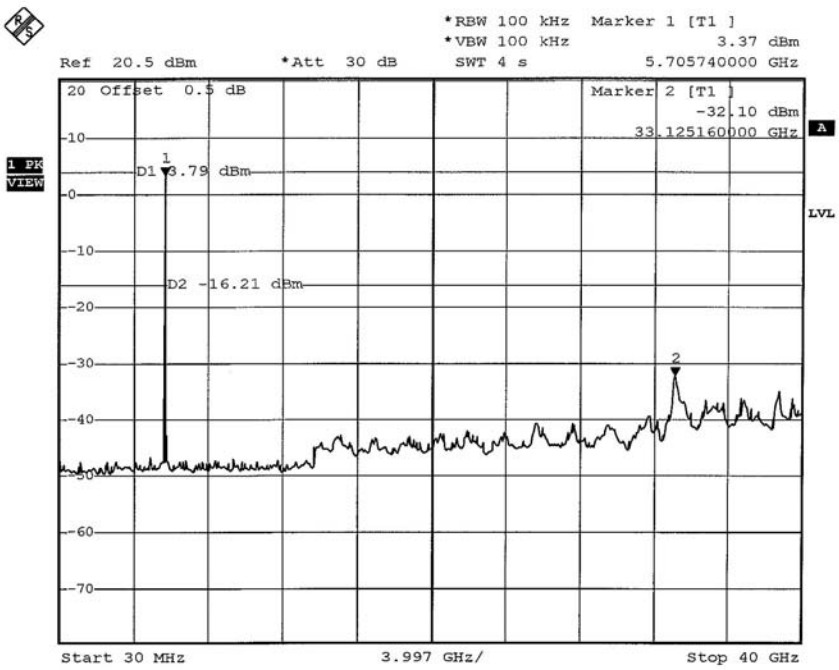

*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
3.96 dBm
5.820600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-43.73 dBm
5.850000000 GHz
Marker 3 [T1]
-43.73 dBm
5.850000000 GHz
1 PK
VIEW
D1 3.96 dBm
D2 -16.04 dBm
F1
LVL
Center 5.8654 GHz
10 MHz/
Span 100 MHz

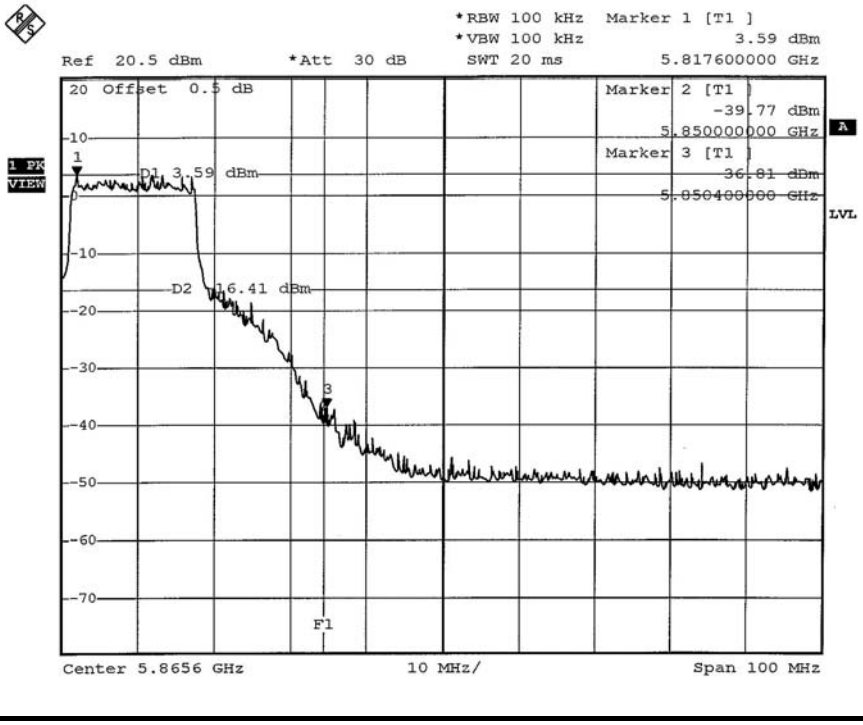

*RBW 100 kHz
*VBW 100 kHz
SWT 4 s
Marker 1 [T1]
3.49 dBm
5.785680000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-34.65 dBm
33.125160000 GHz
1 PK
VIEW
D1 1.49 dBm
D2 -15.51 dBm
LVL
Start 30 MHz
3.997 GHz/
Stop 40 GHz

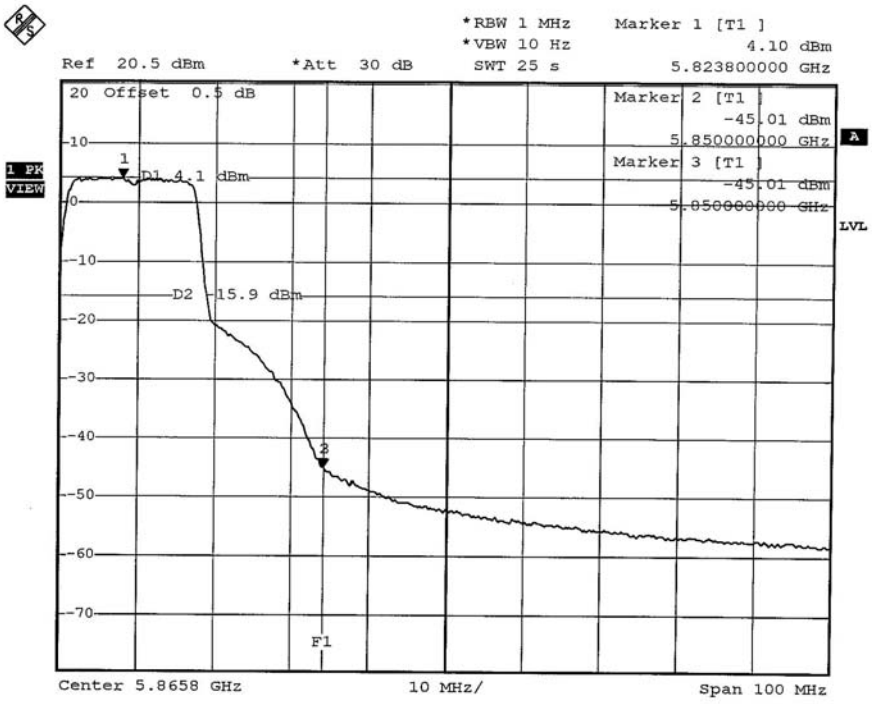
FOR ANTENNA ITEM 4 (13.0dBi gain)

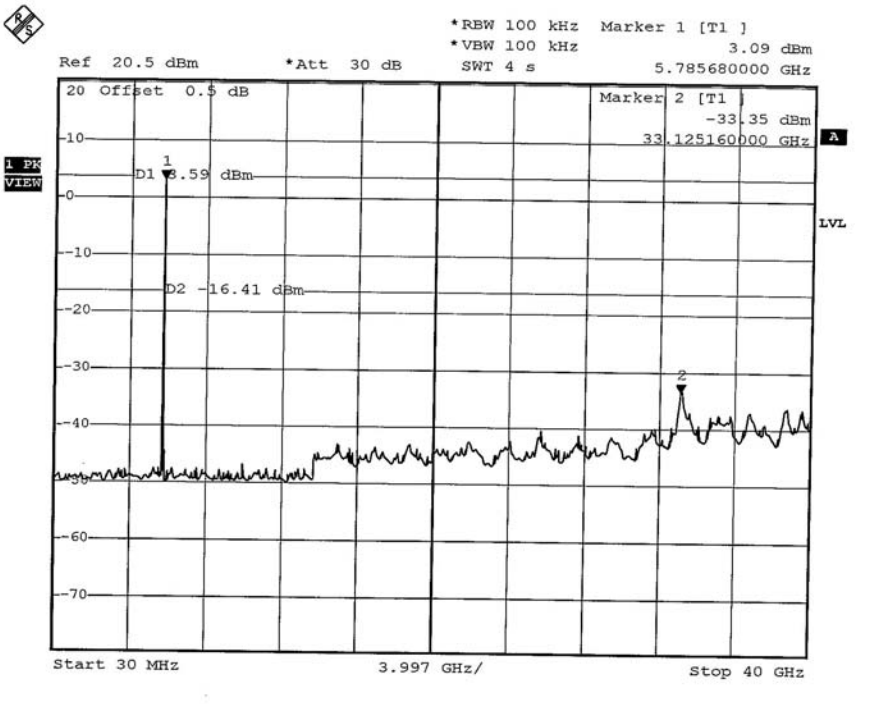





*RBW 100 kHz
*VBW 100 kHz
SWT 4 s
Marker 1 [T1]
3.37 dBm
5.705740000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-32.10 dBm
33.125160000 GHz
1 PK VIEW
D1 3.79 dBm
D2 -16.21 dBm
LVL
Start 30 MHz
3.997 GHz/
Stop 40 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
3.59 dBm
5.817600000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-39.77 dBm
5.850000000 GHz
Marker 3 [T1]
36.81 dBm
5.850400000 GHz
1 PK VIEW
D1 3.59 dBm
D2 16.41 dBm
LVL
F1
Center 5.8656 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
4.10 dBm
5.823800000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-45.01 dBm
5.850000000 GHz
Marker 3 [T1]
-45.01 dBm
5.850000000 GHz
1 PK
VIEW
D1 4.1 dBm
D2 -15.9 dBm
F1
LVL
Center 5.8658 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 4 s
Marker 1 [T1]
3.09 dBm
5.785680000 GHz
Ref 20.5 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-33.35 dBm
33.125160000 GHz
1 PK
VIEW
D1 3.59 dBm
D2 -16.41 dBm
LVL
Start 30 MHz
3.997 GHz/
Stop 40 GHz

5.7 ANTENNA REQUIREMENT

5.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, 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.

And according to FCC 47 CFR Section 15.247(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.7.2 ANTENNA CONNECTED CONSTRUCTION

The following antennas had been used in this product. The maximum Gain of the antenna is 13.0dBi.

Item	Antenna Type	Model	Gain (dBi)		Antenna connector
			2.4G	5G	
1	Omin collinear	ML-5299-HPA1-01	-	5.0	RP-SMA FEMALE
2	**Patch**	**ML-5299-WPNA1-01**	**-**	**13.0**	**RP-SMA FEMALE**

6. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. 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: 886-3-3185050

Web Site: www.adt.com.tw

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

APPENDIX-A

MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.