Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5500 ~ 5700MHz / CH High	**Test Date:**	May 7, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3758.000	49.75	1.00	50.75	74.00	-23.25	peak	V
N/A							
2792.000	50.07	-2.64	47.43	74.00	-26.57	peak	H
N/A							

Remark:

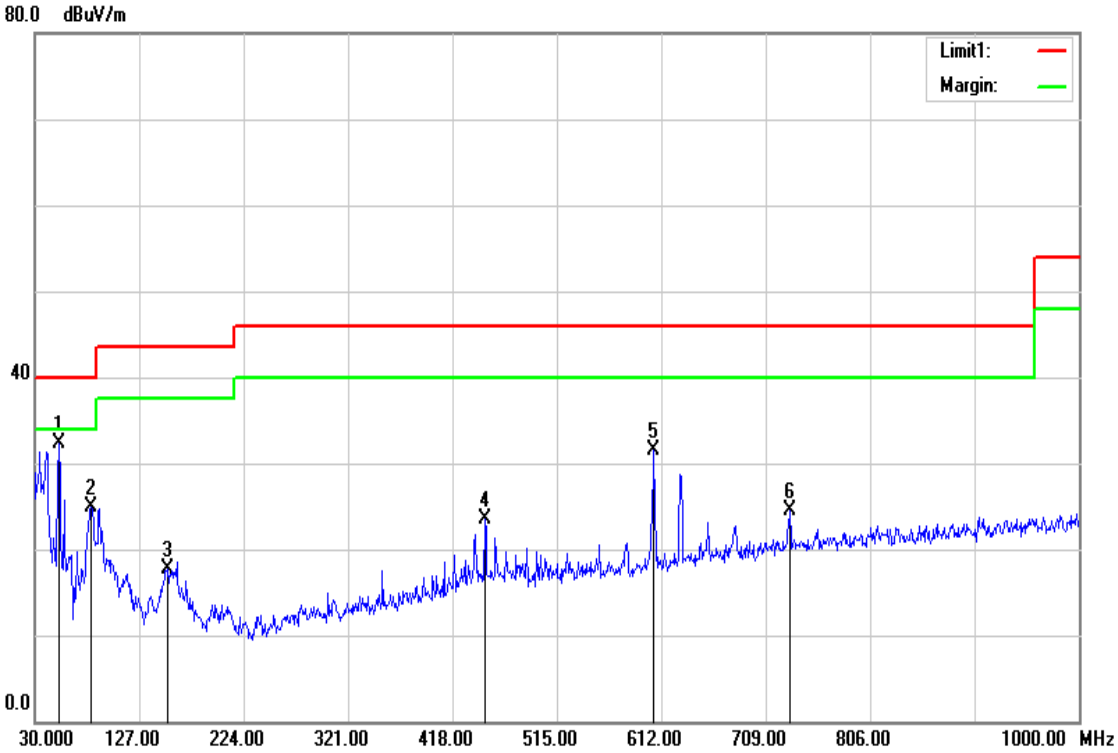
1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

For Round Antenna
Below 1 GHz

Operation Mode: Normal Link **Test Date:** May 17, 2014

Temperature: 27°C **Tested by:** David Shu

Humidity: 53% RH **Polarity:** Ver.



Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
52.3100	55.41	-23.14	32.27	40.00	-7.73	Peak	V
82.3800	47.98	-23.14	24.84	40.00	-15.16	Peak	V
153.1900	35.72	-18.07	17.65	43.50	-25.85	Peak	V
448.0700	36.22	-12.71	23.51	46.00	-22.49	Peak	V
605.2100	41.79	-10.38	31.41	46.00	-14.59	Peak	V
731.3100	32.64	-8.22	24.42	46.00	-21.58	Peak	V

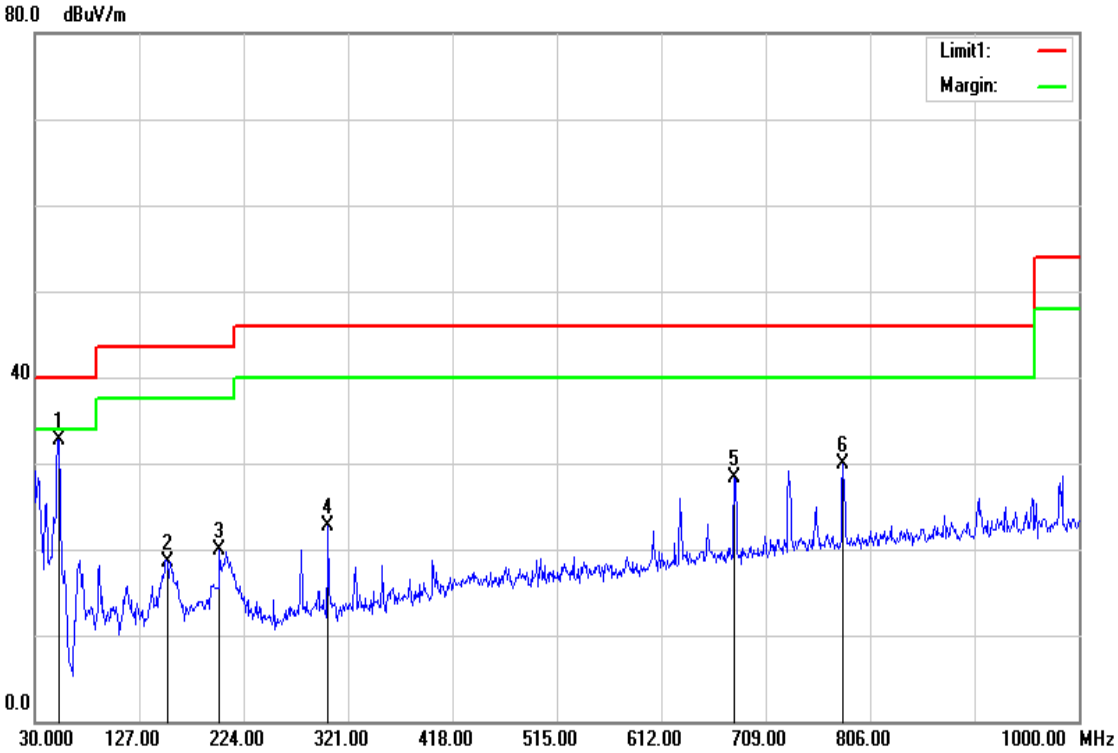
Remark:

1. *No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).*
2. *Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.*
3. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit or as required by the applicant.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Margin (dB) = Remark result (dBuV/m) – Quasi-peak limit (dBuV/m).*

Operation Mode: Normal Link **Test Date:** May 17, 2014

Temperature: 27°C **Tested by:** David Shu

Humidity: 53% RH **Polarity:** Hor.



Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
52.3100	55.92	-23.14	32.78	40.00	-7.22	peak	H
153.1900	36.58	-18.07	18.51	43.50	-24.99	peak	H
201.6900	37.64	-17.65	19.99	43.50	-23.51	peak	H
302.5700	38.98	-16.35	22.63	46.00	-23.37	peak	H
679.9000	37.36	-9.00	28.36	46.00	-17.64	peak	H
780.7800	37.53	-7.57	29.96	46.00	-16.04	peak	H

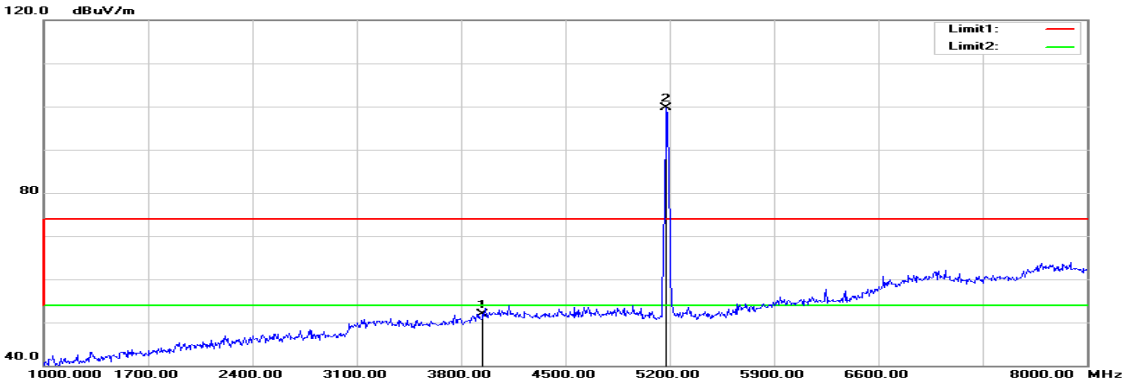
Remark:

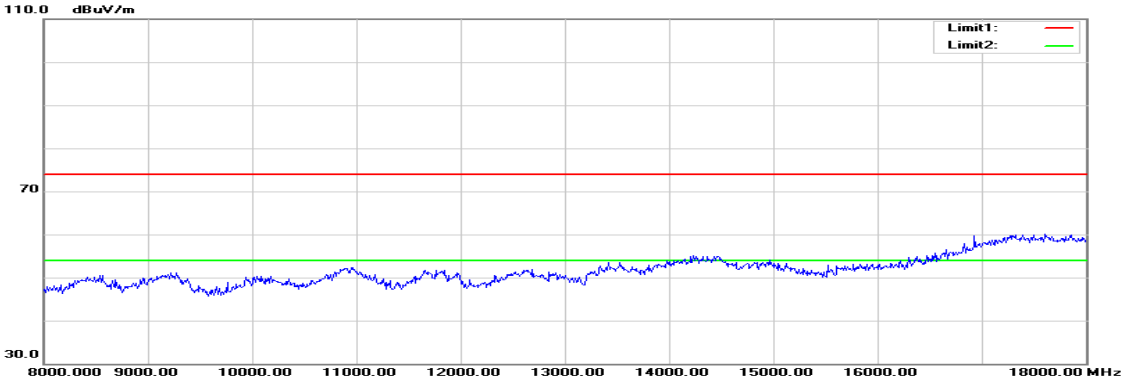
1. *No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).*
2. *Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.*
3. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit or as required by the applicant.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Margin (dB) = Remark result (dBuV/m) – Quasi-peak limit (dBuV/m).*

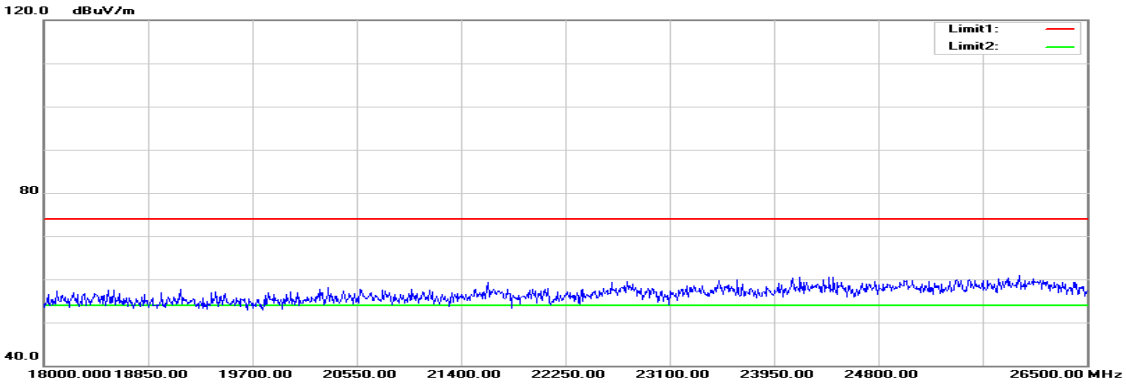
Above 1 GHz

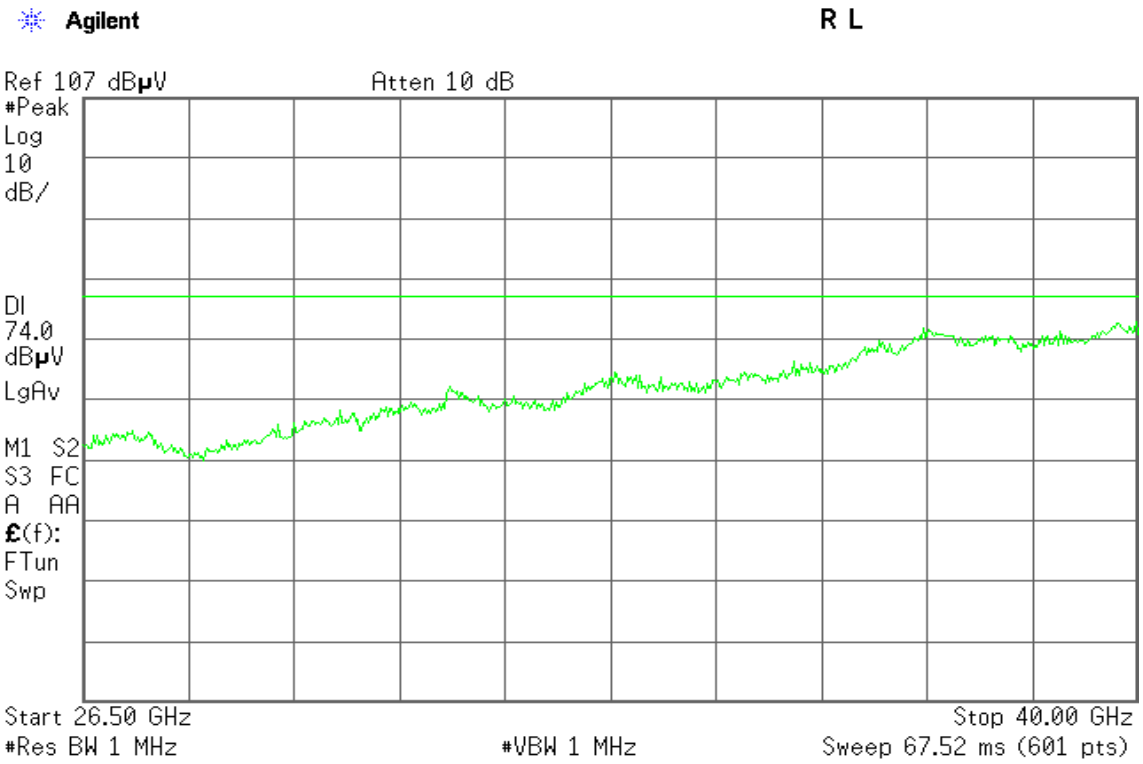
Tx / IEEE 802.11a mode / Low

Polarity: Vertical

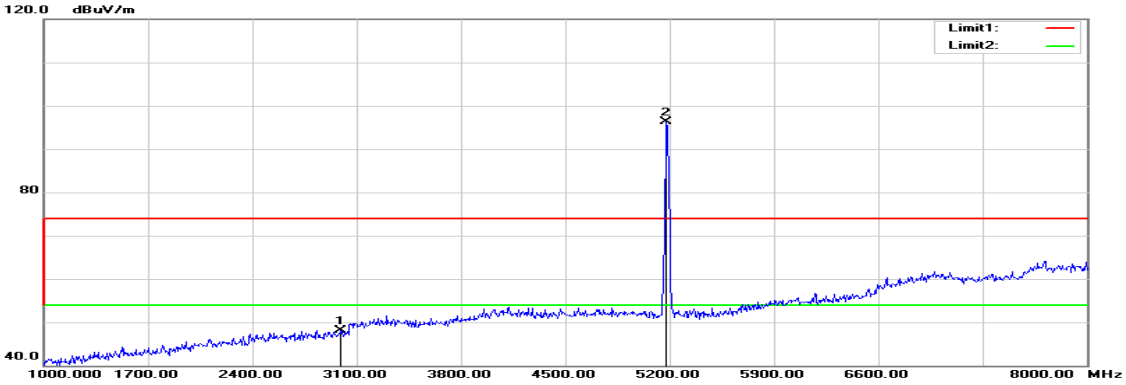


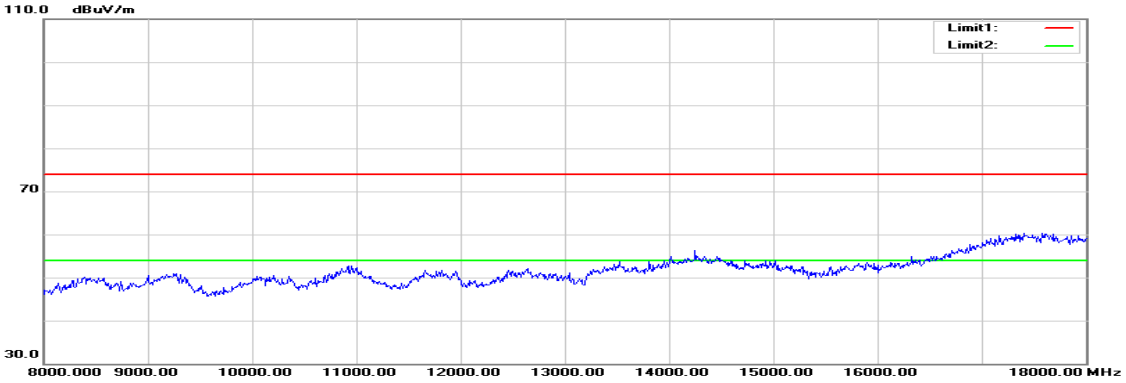


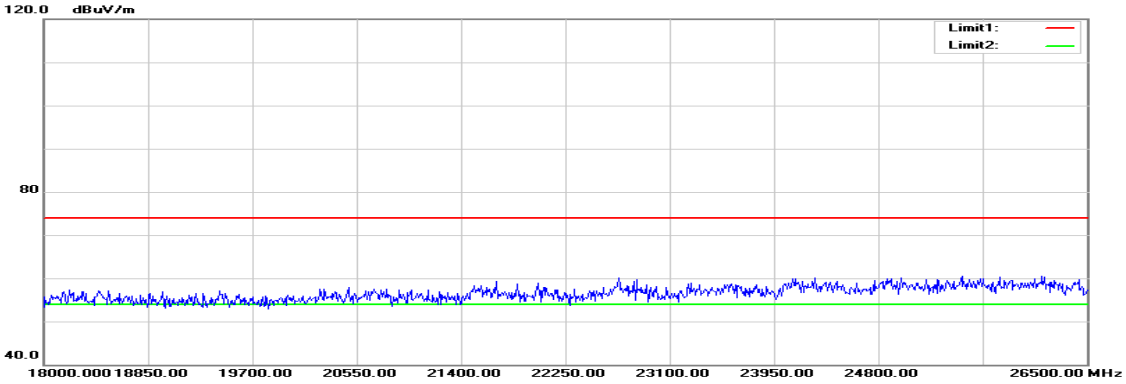


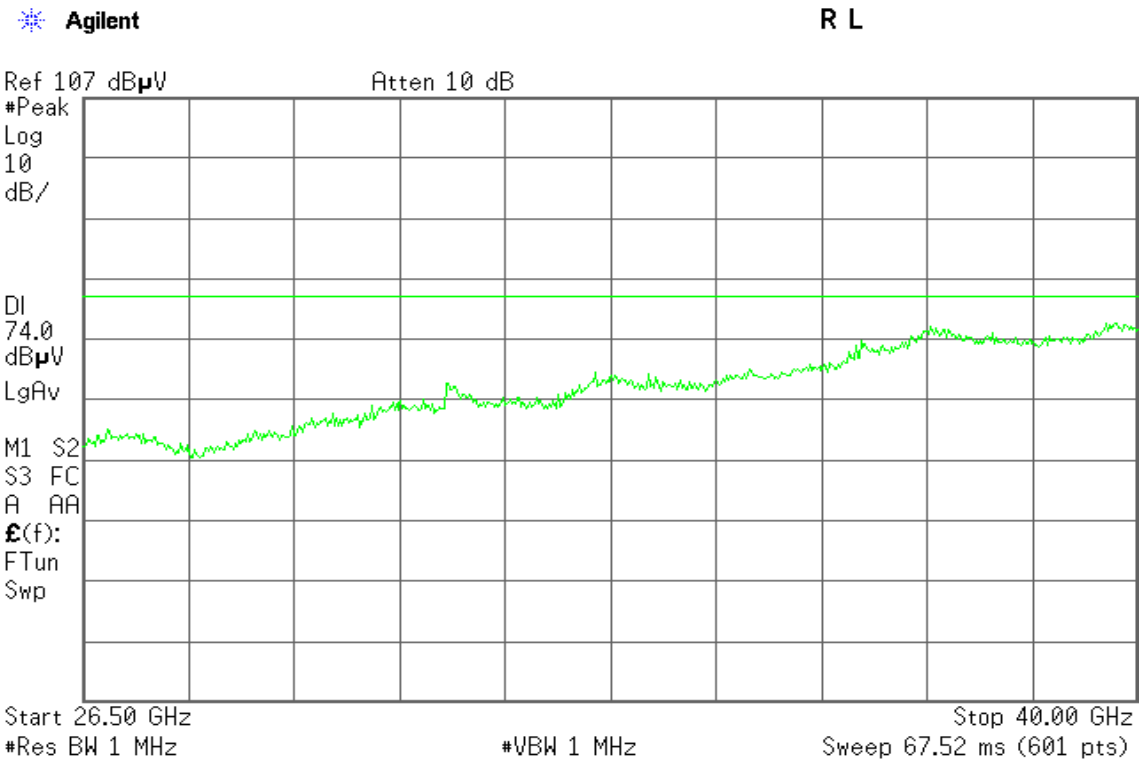

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Above 1 GHz

Operation Mode:	Tx / IEEE 802.11a mode / 5180 ~ 5240MHz / CH Low	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

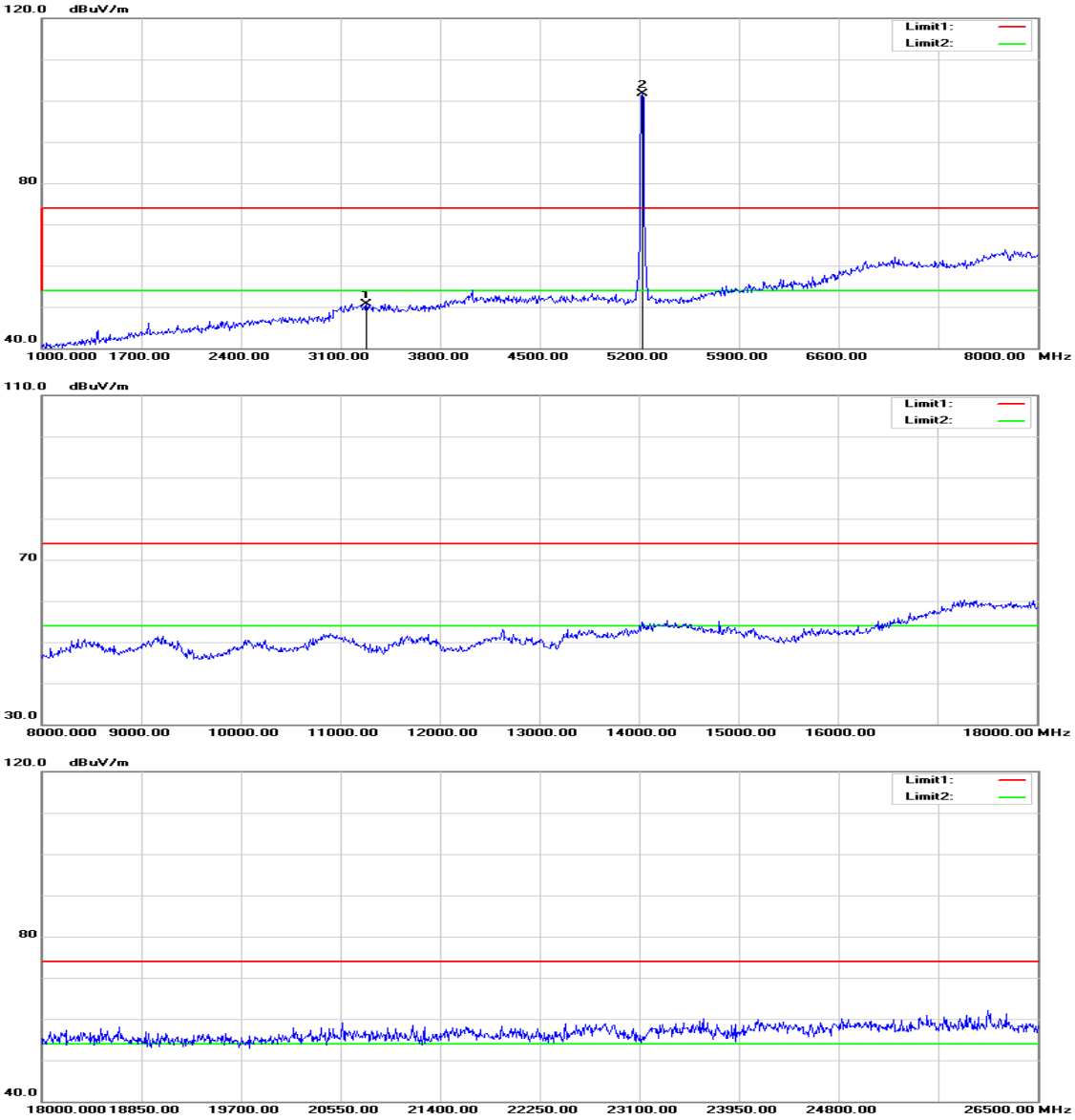
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3947.000	49.82	2.16	51.98	74.00	-22.02	peak	V
N/A							
2995.000	50.27	-2.22	48.05	74.00	-25.95	peak	H
N/A							

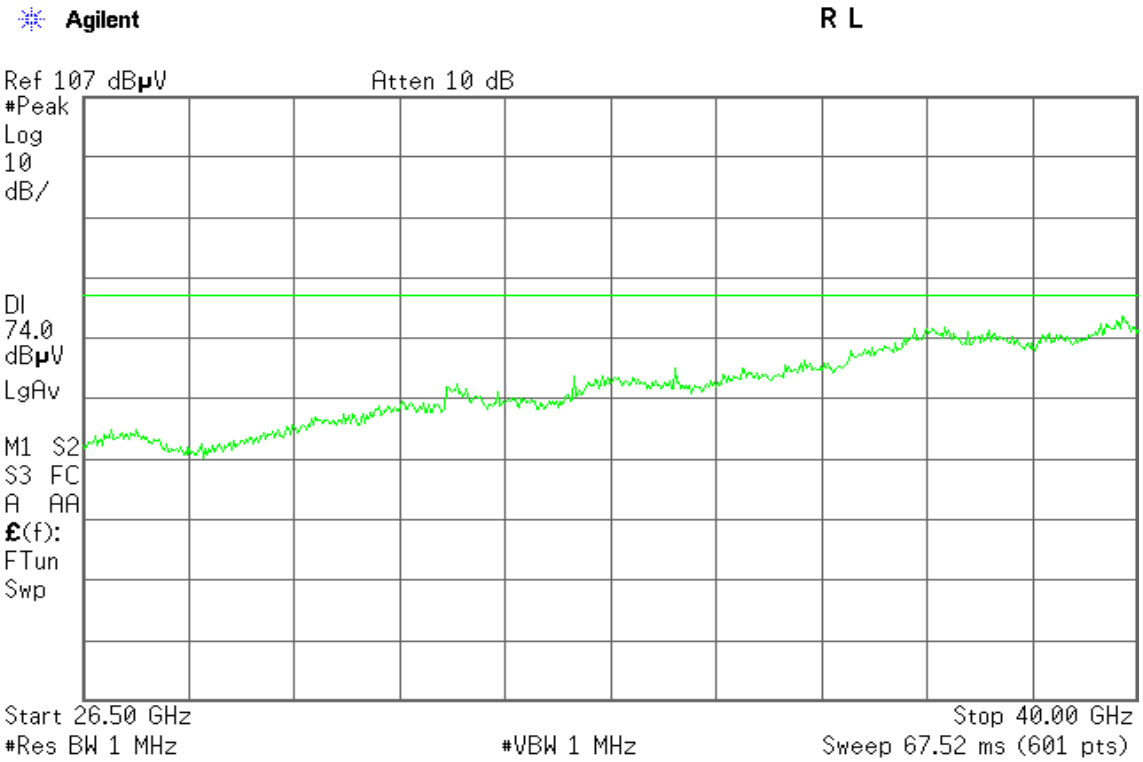
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

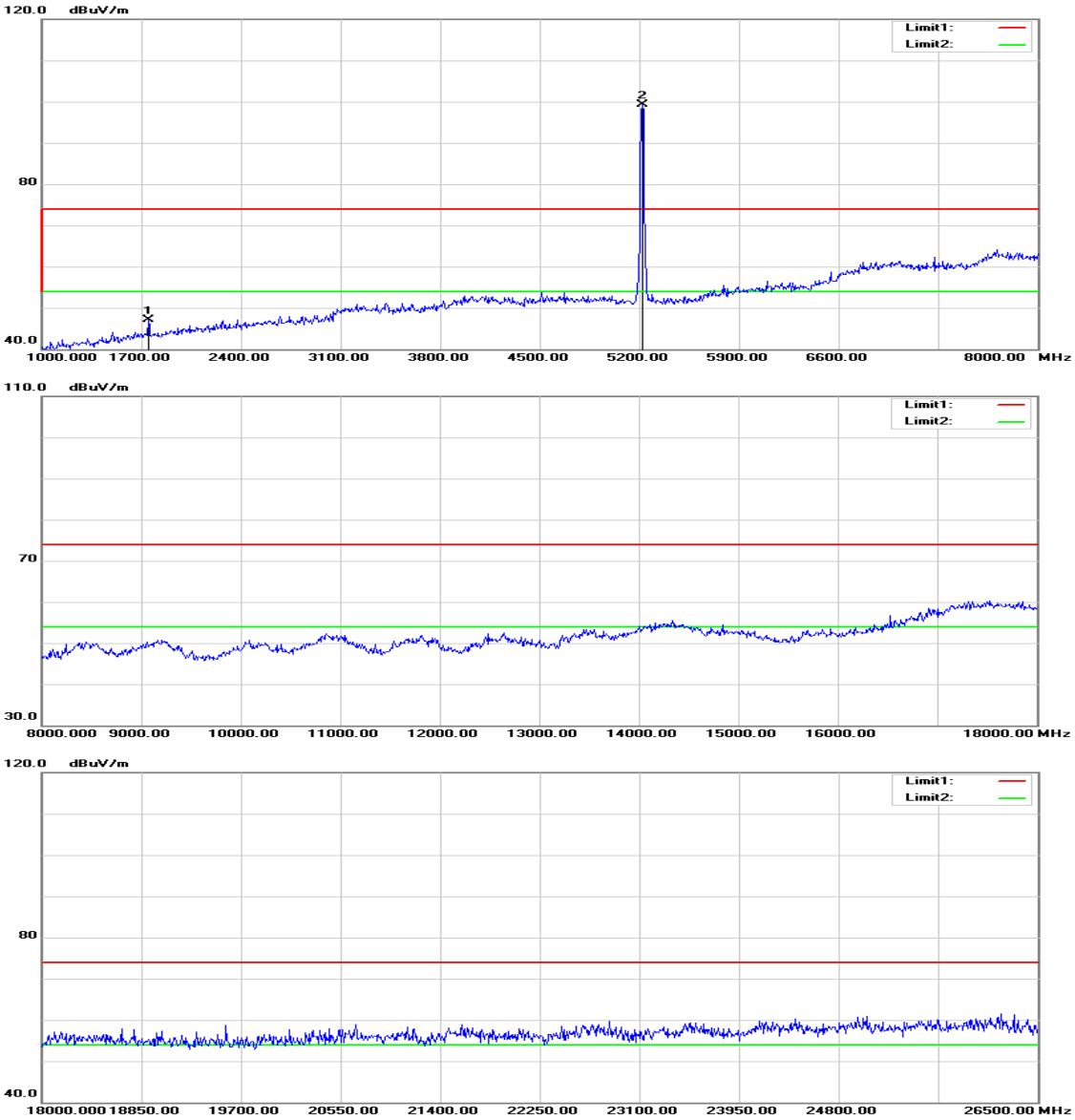
Tx / IEEE 802.11a mode / Mid

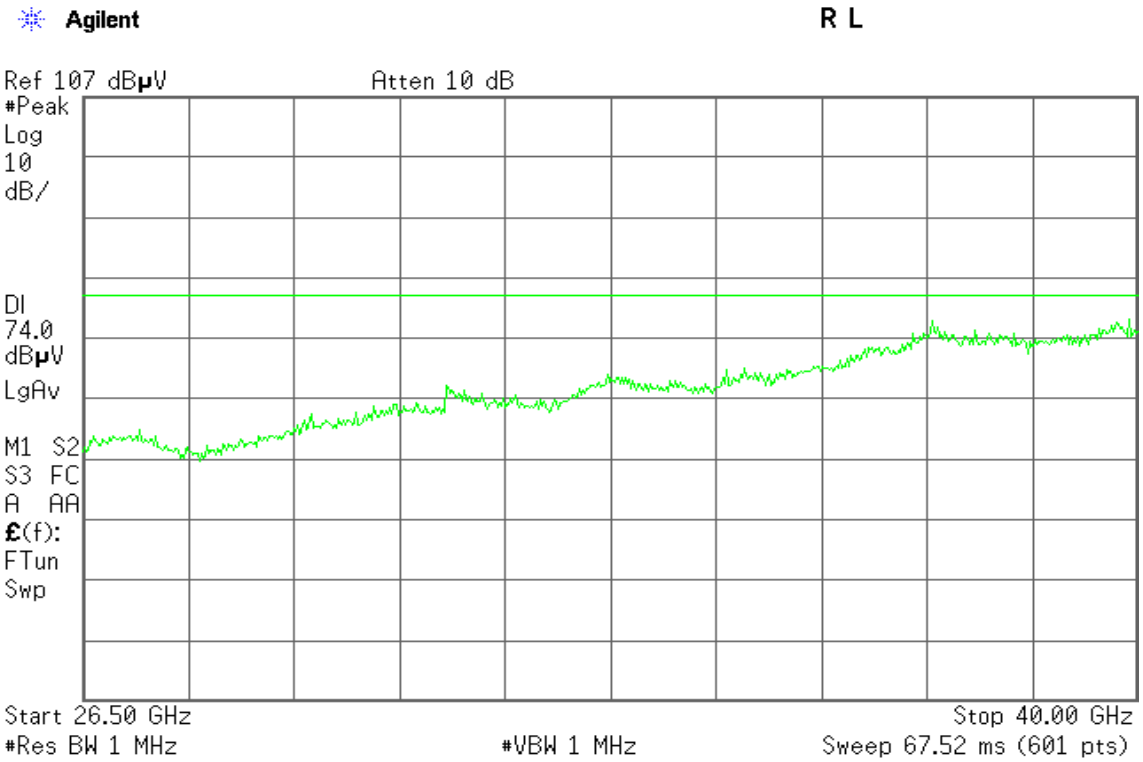
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5180 ~ 5240MHz / CH Mid	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

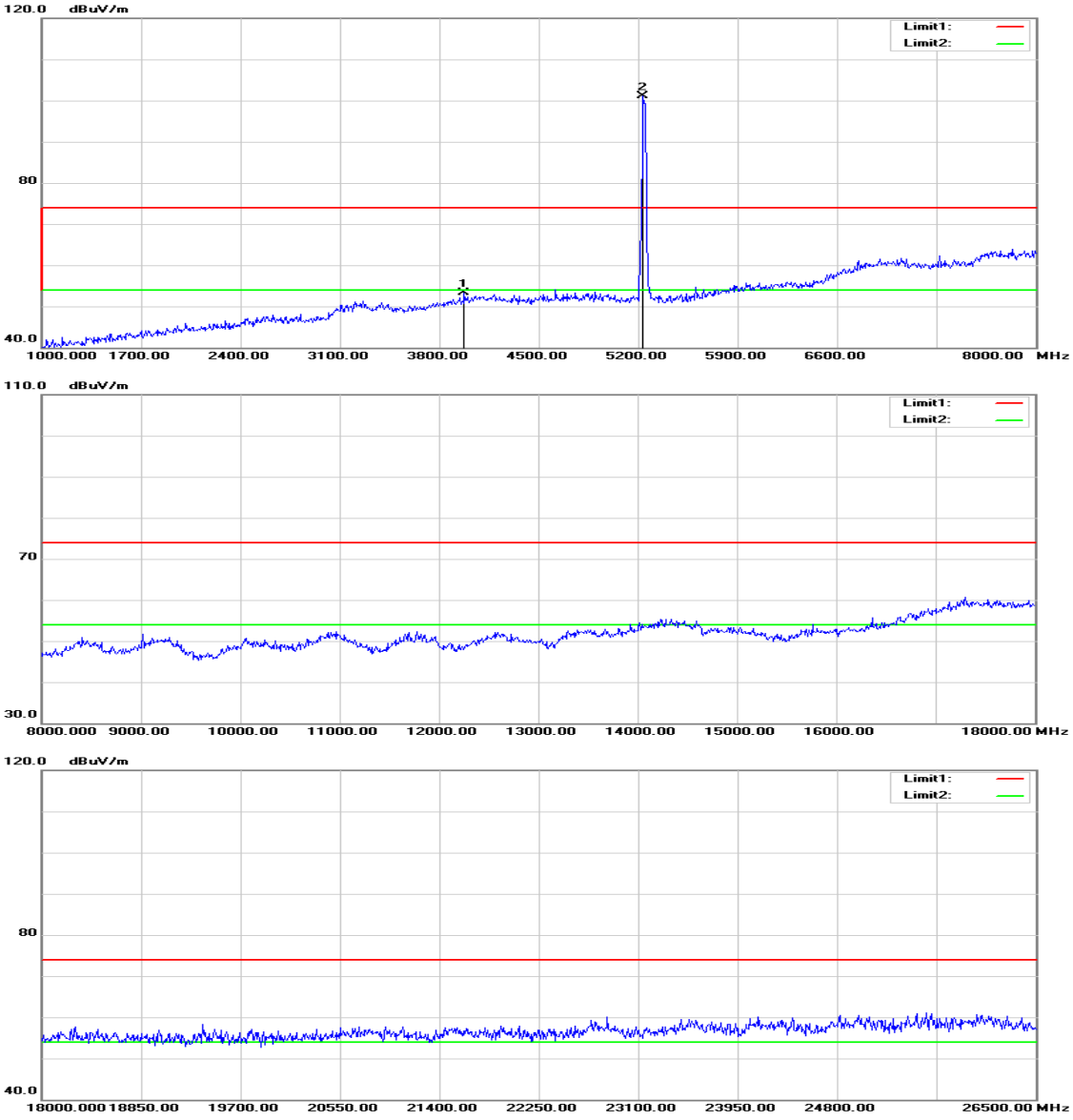
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3282.000	52.07	-1.30	50.77	74.00	-23.23	peak	V
N/A							
1749.000	53.61	-6.53	47.08	74.00	-26.92	peak	H
N/A							

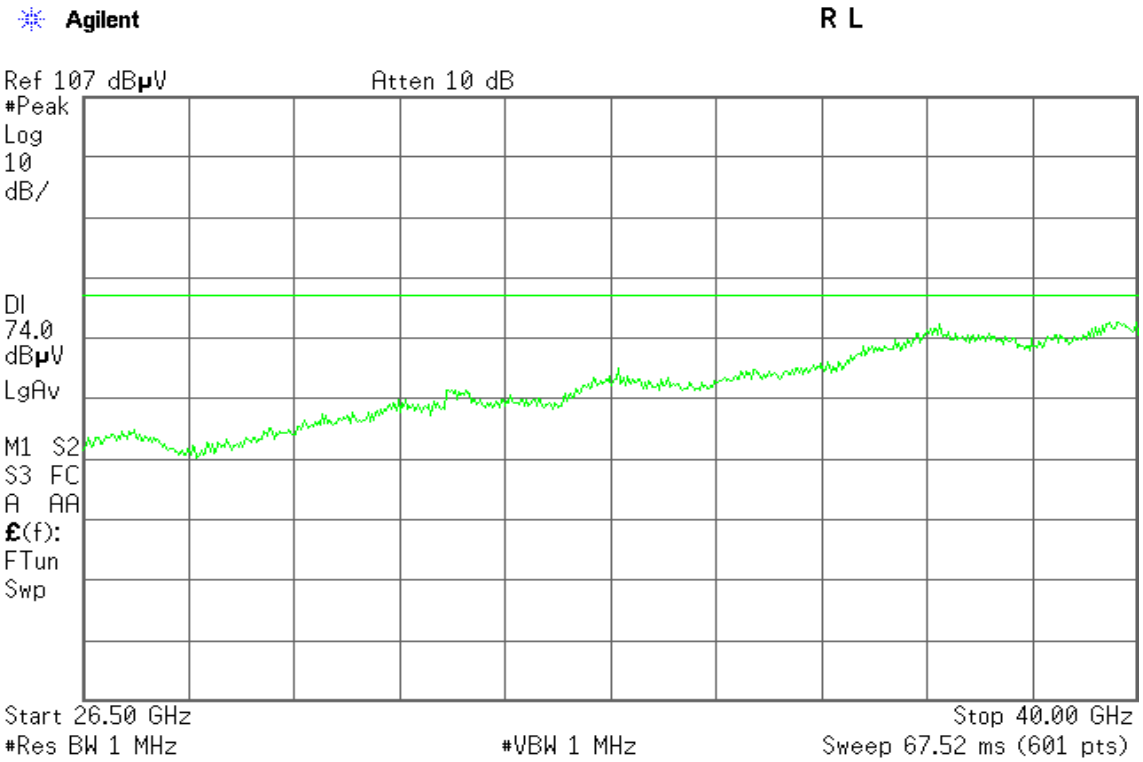
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

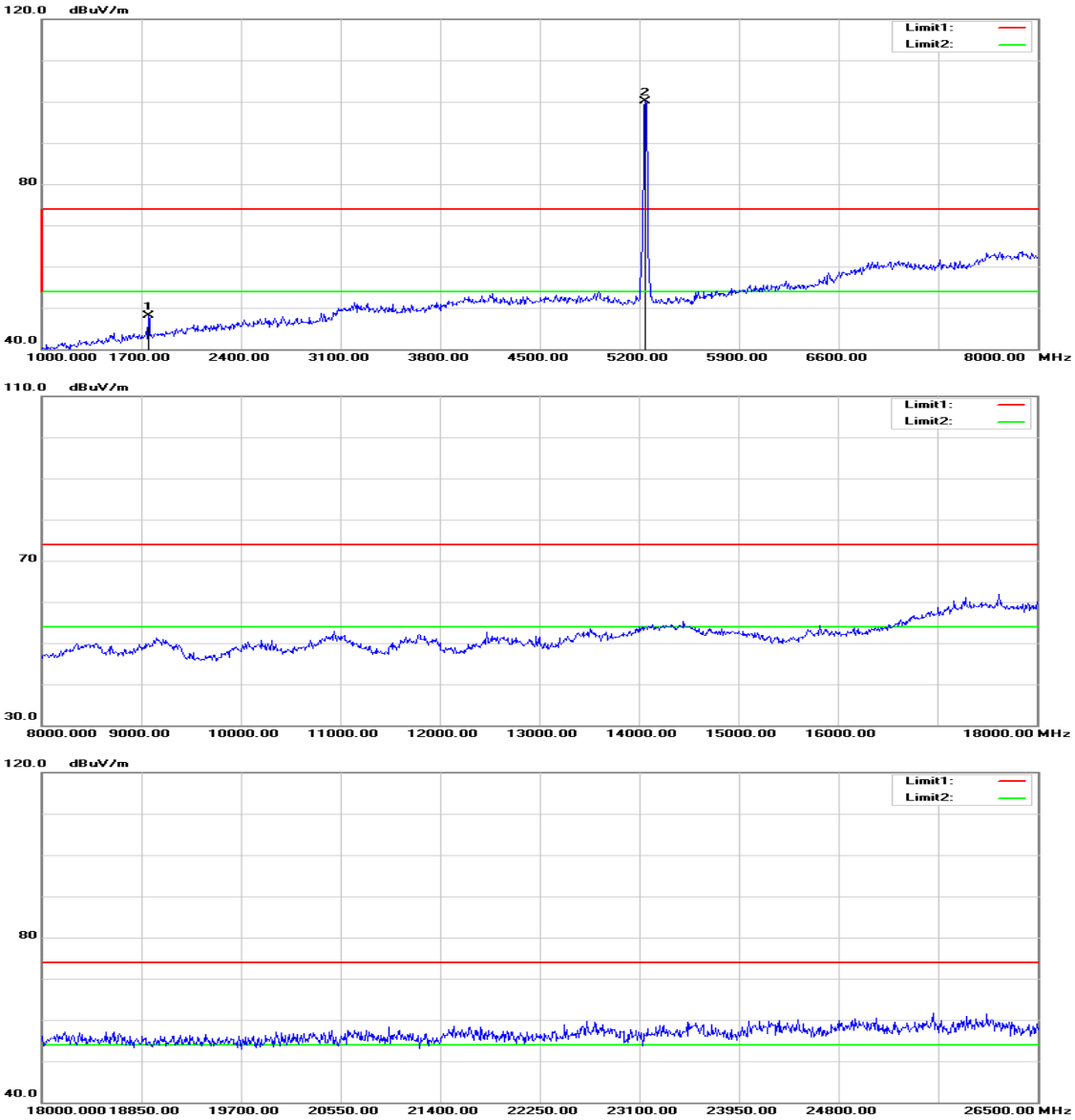
Tx / IEEE 802.11a mode / High

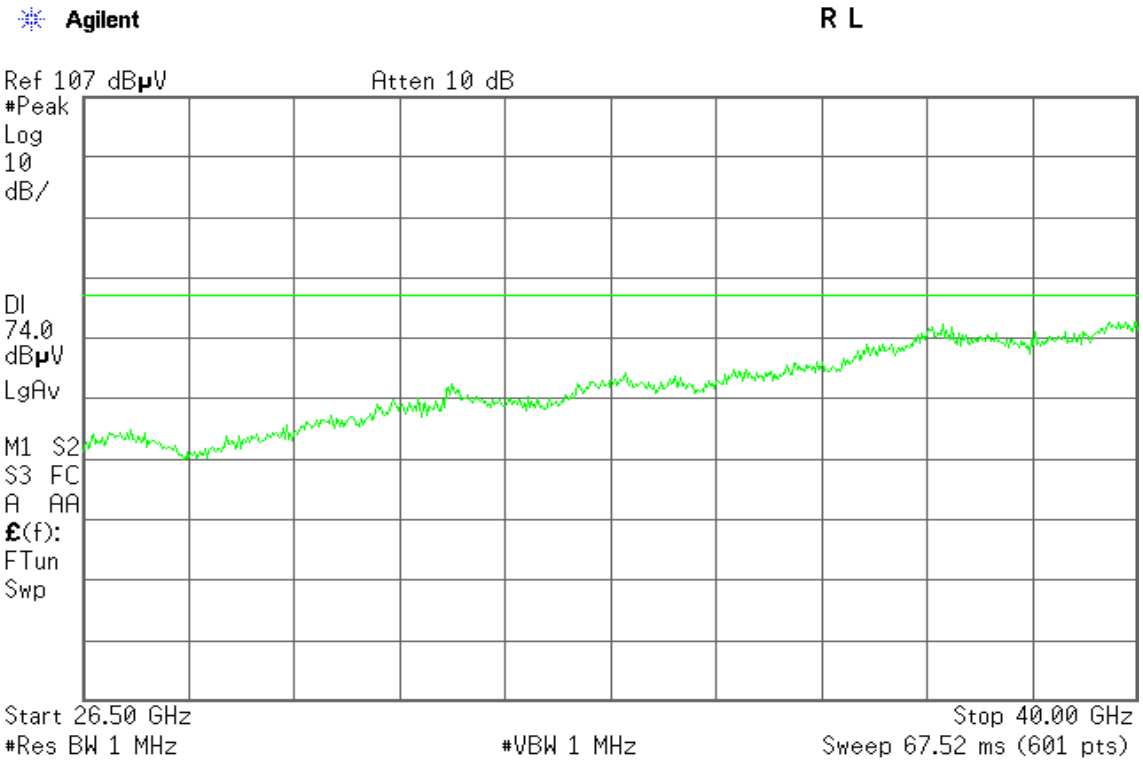
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5180 ~ 5240MHz / CH High	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

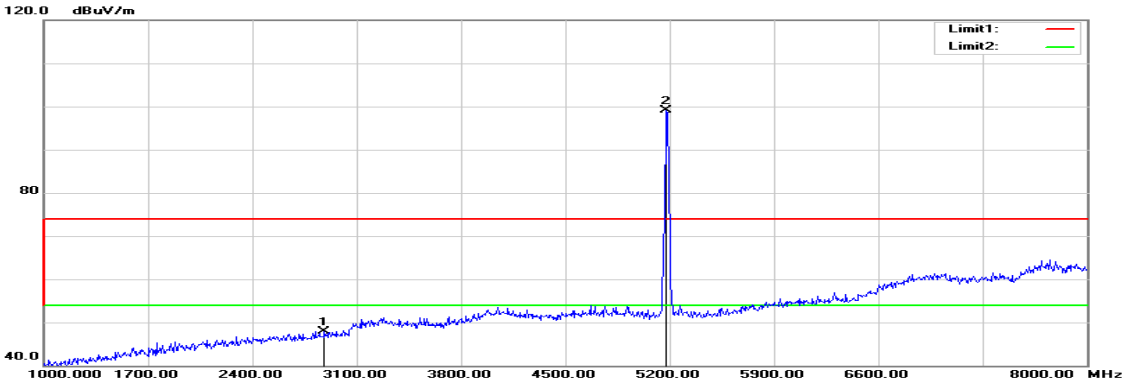
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3975.000	51.02	2.34	53.36	74.00	-20.64	peak	V
N/A							
1749.000	54.58	-6.53	48.05	74.00	-25.95	peak	H
N/A							

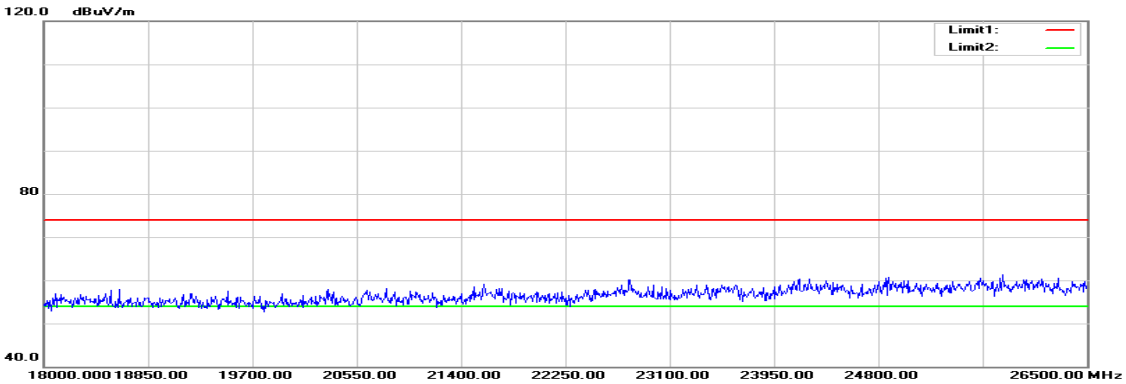
Remark:

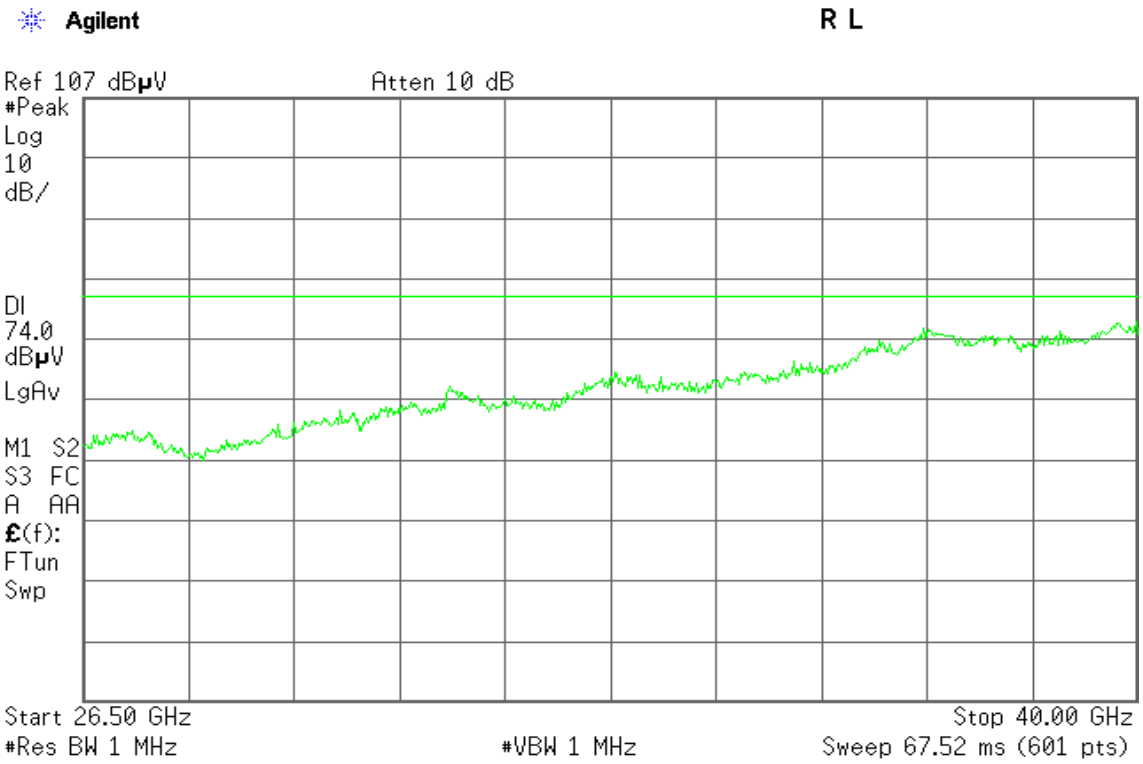
1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Tx / IEEE 802.11n HT 20 MHz / Low

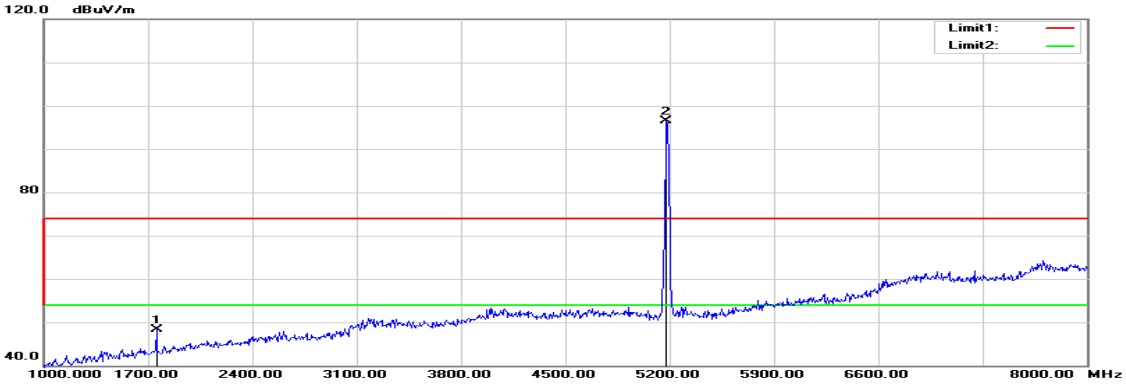
Polarity: Vertical

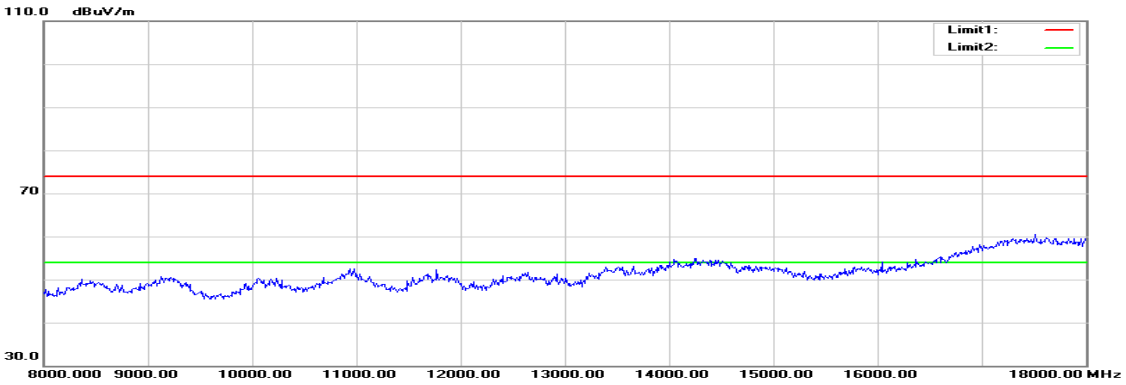


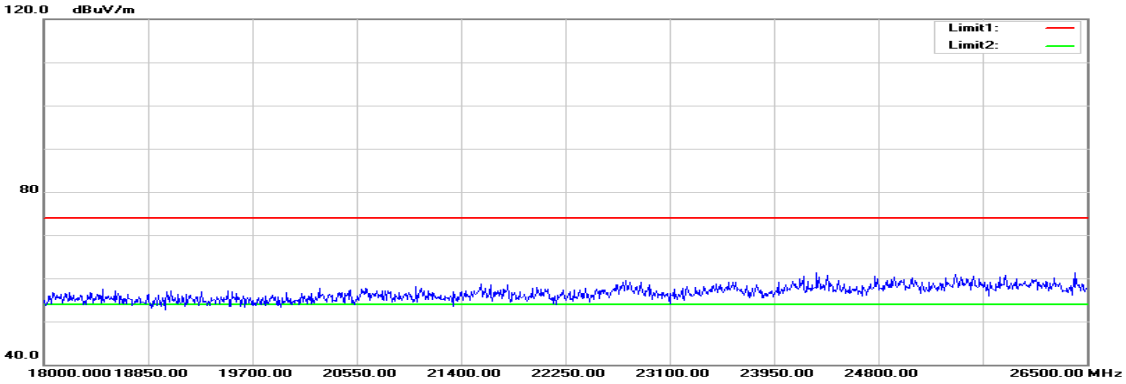


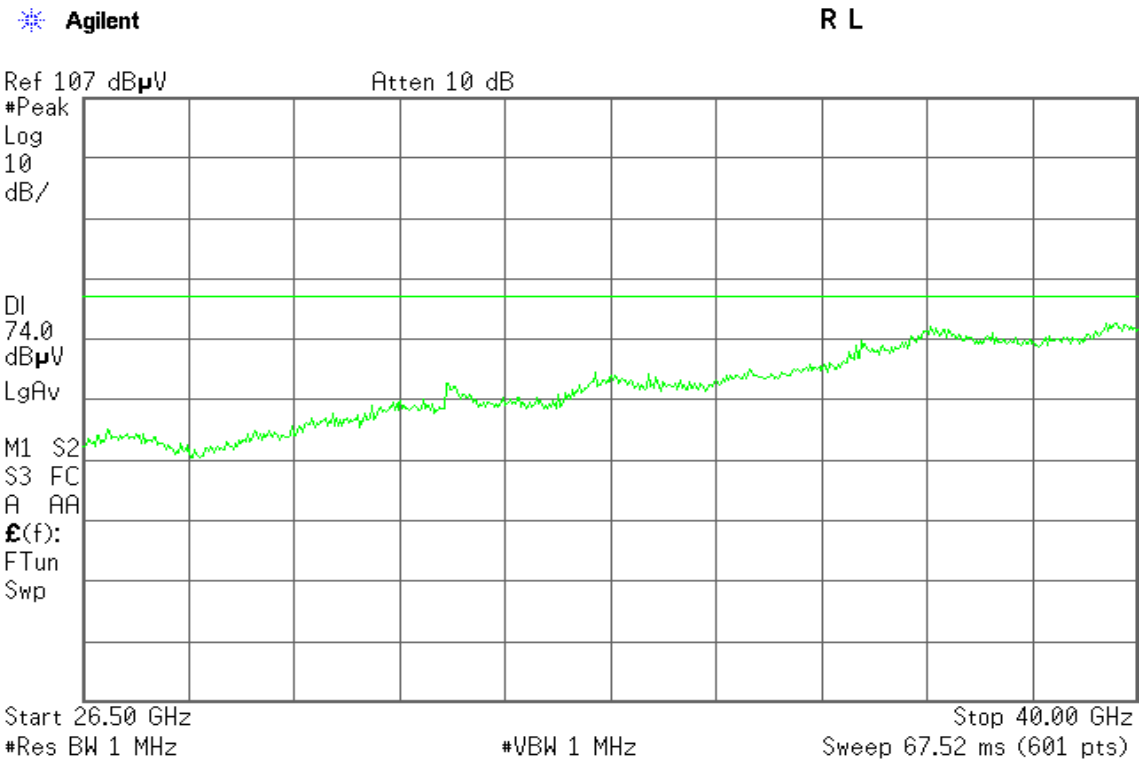

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5180 ~ 5240MHz / CH Low	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

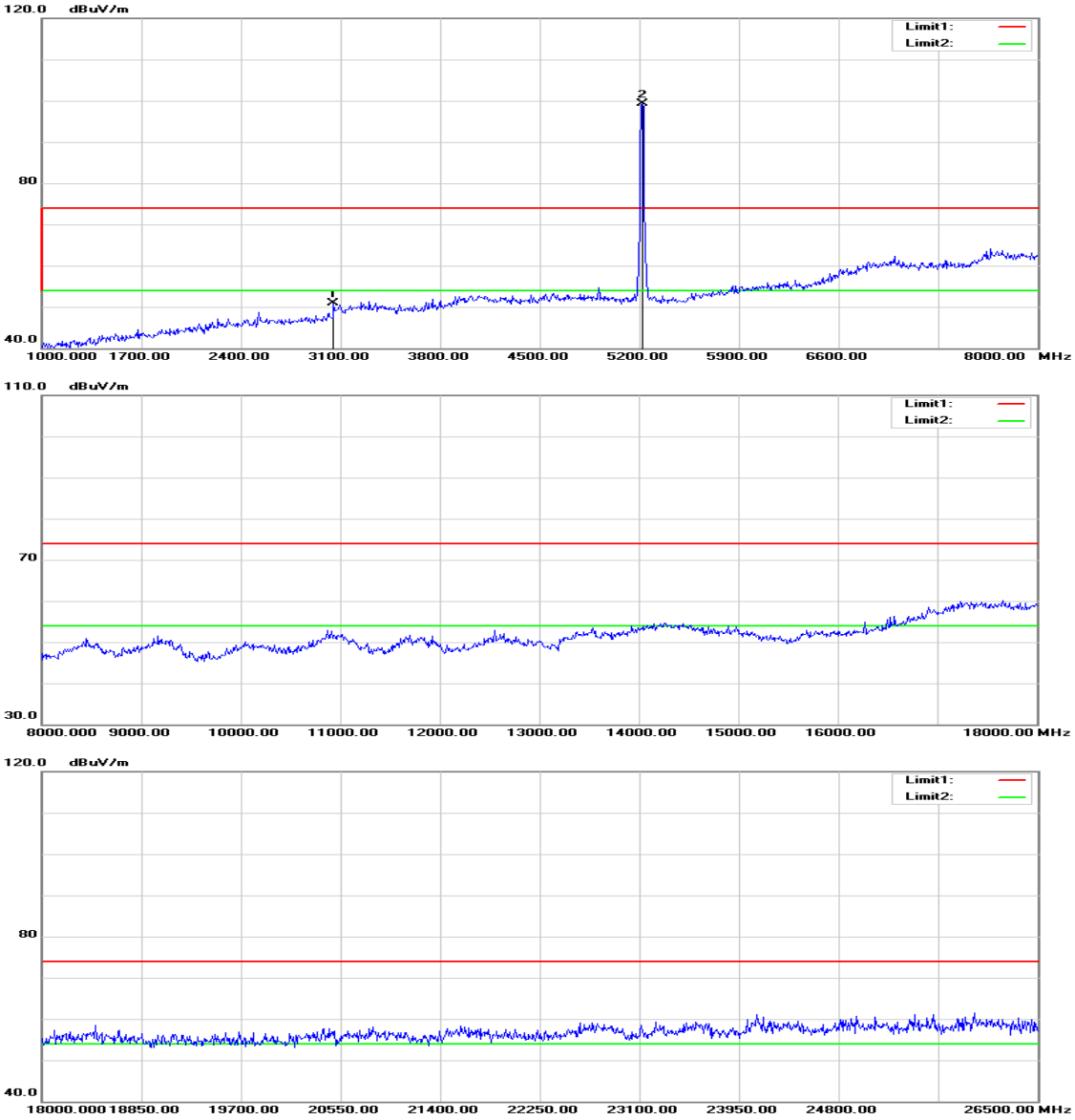
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
2883.000	50.40	-2.45	47.95	74.00	-26.05	peak	V
N/A							
1756.000	54.83	-6.49	48.34	74.00	-25.66	peak	H
N/A							

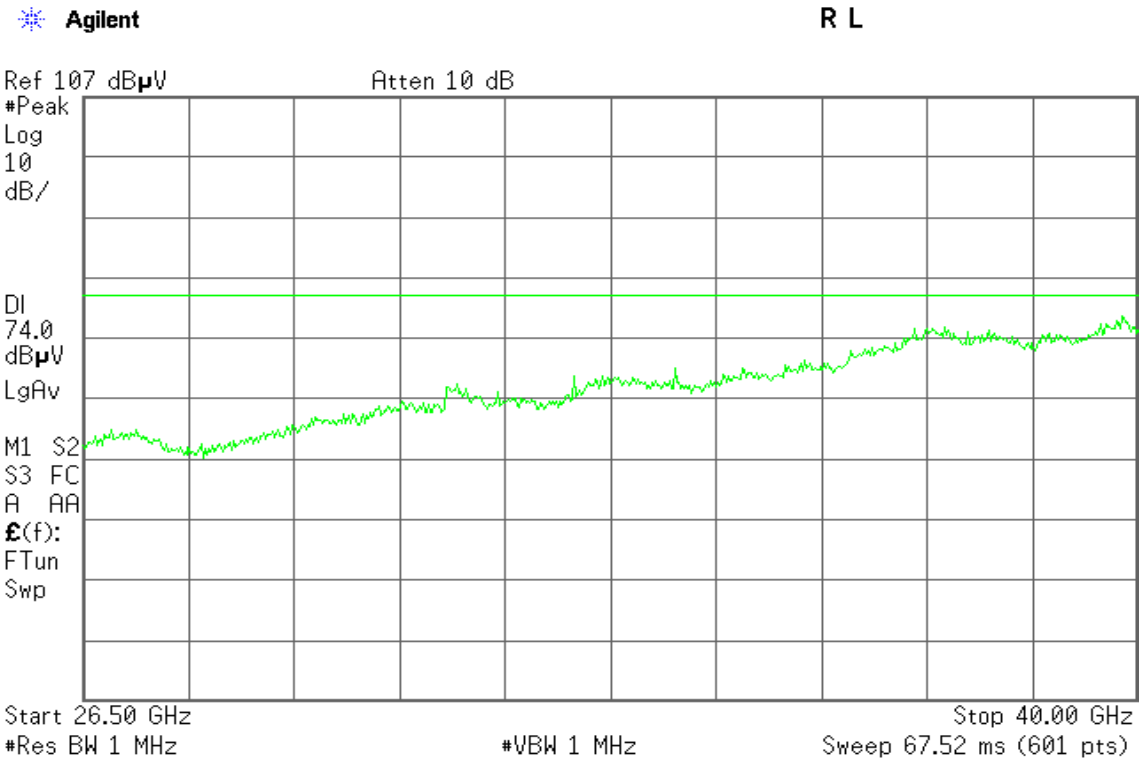
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

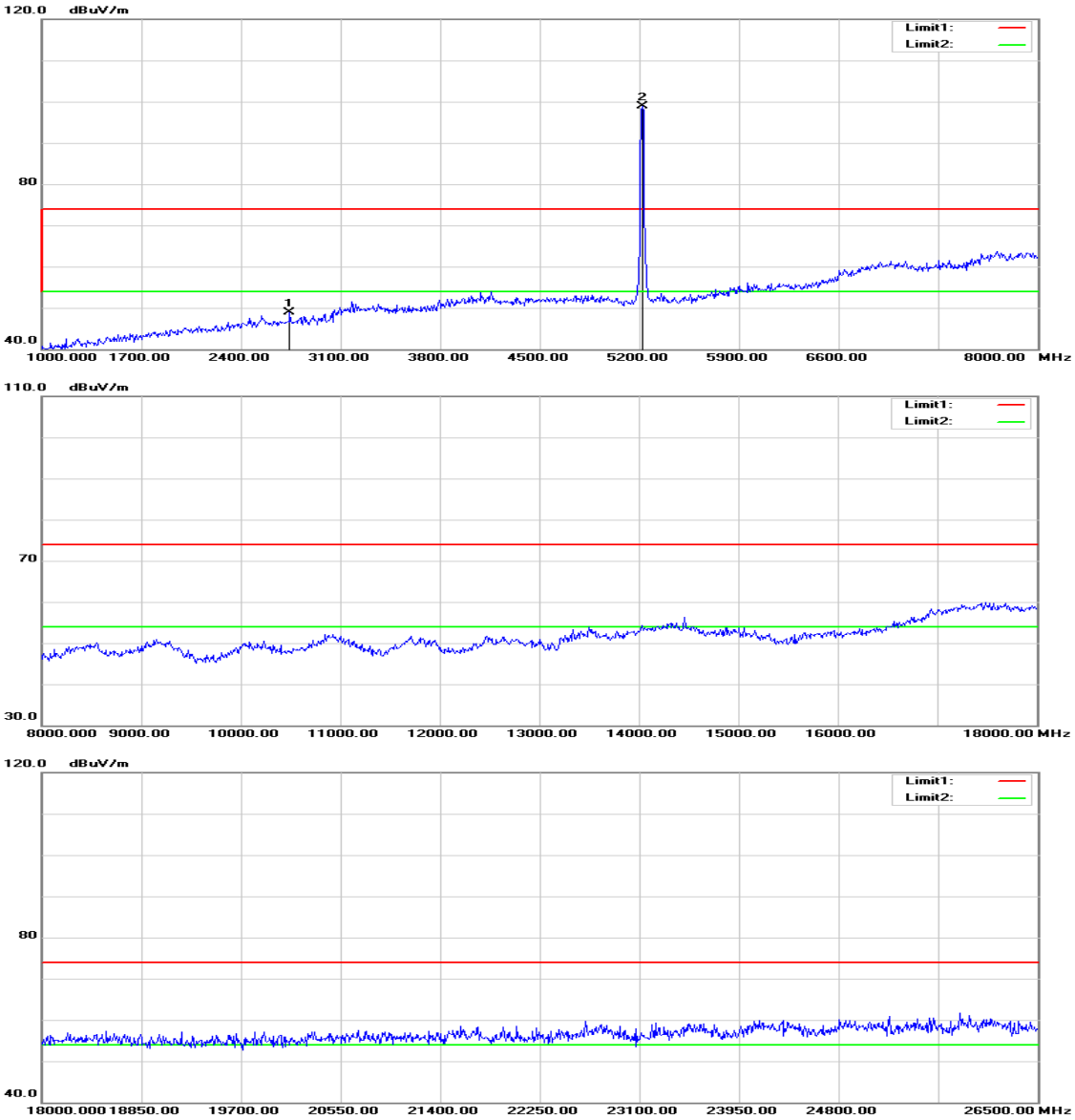
Tx / IEEE 802.11n HT 20 MHz / Mid

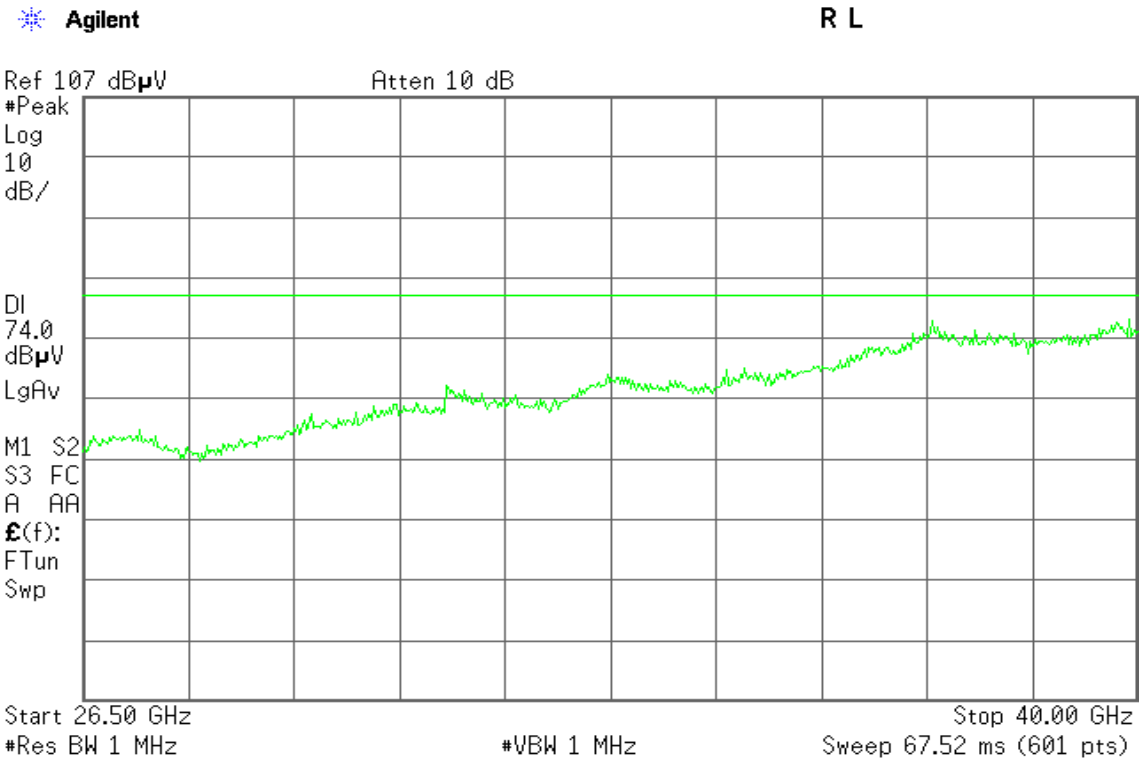
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5180 ~ 5240MHz / CH Mid	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

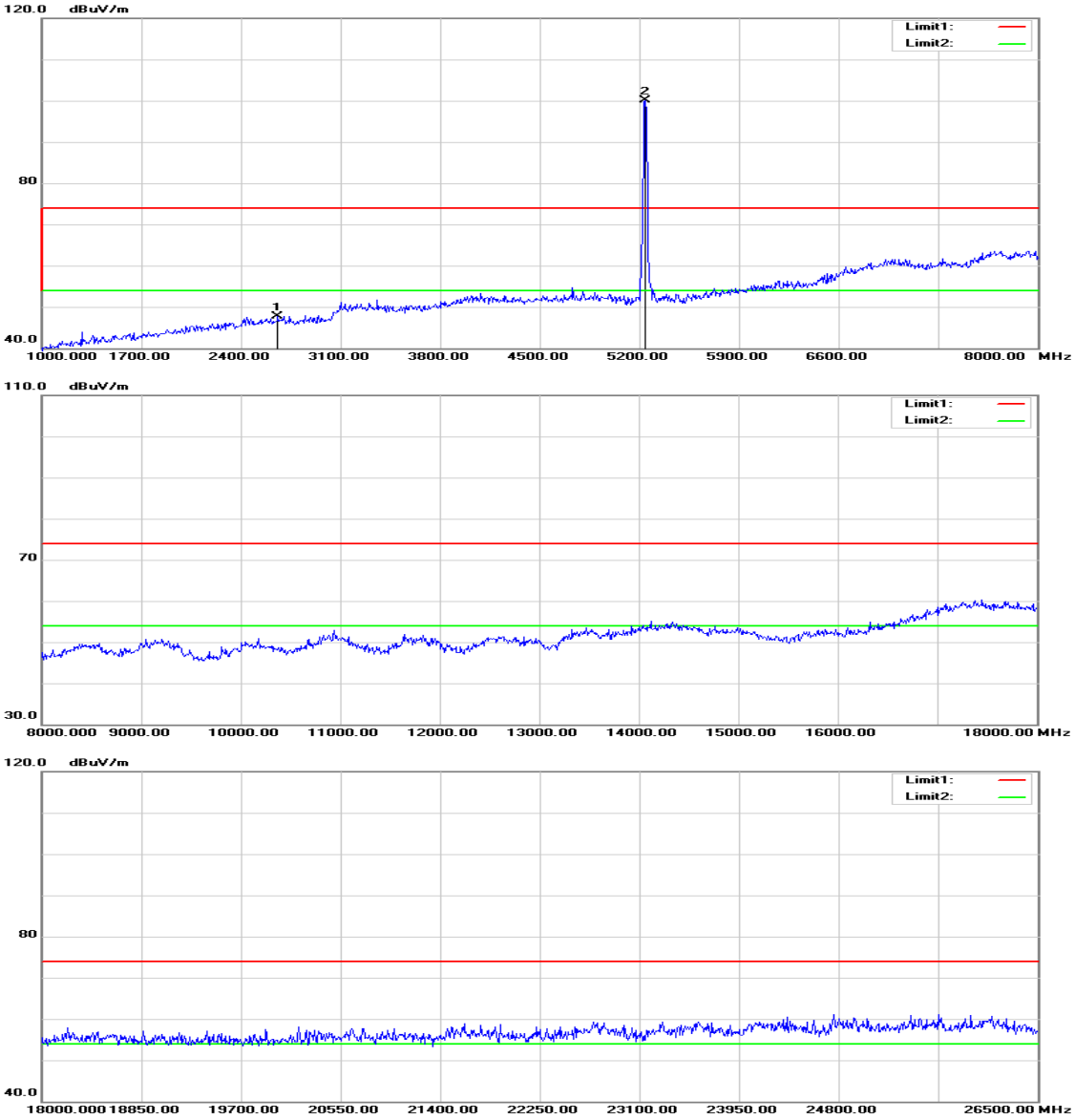
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3051.000	53.03	-2.04	50.99	74.00	-23.01	peak	V
N/A							
2743.000	51.58	-2.74	48.84	74.00	-25.16	peak	H
N/A							

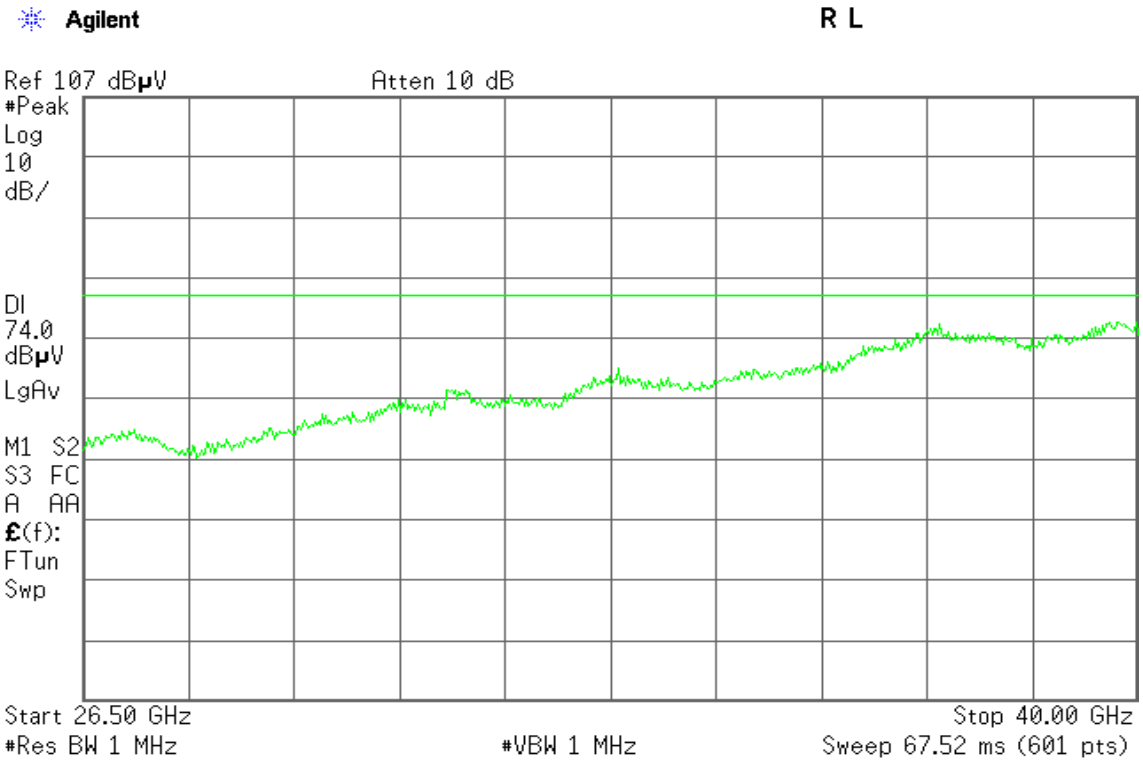
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

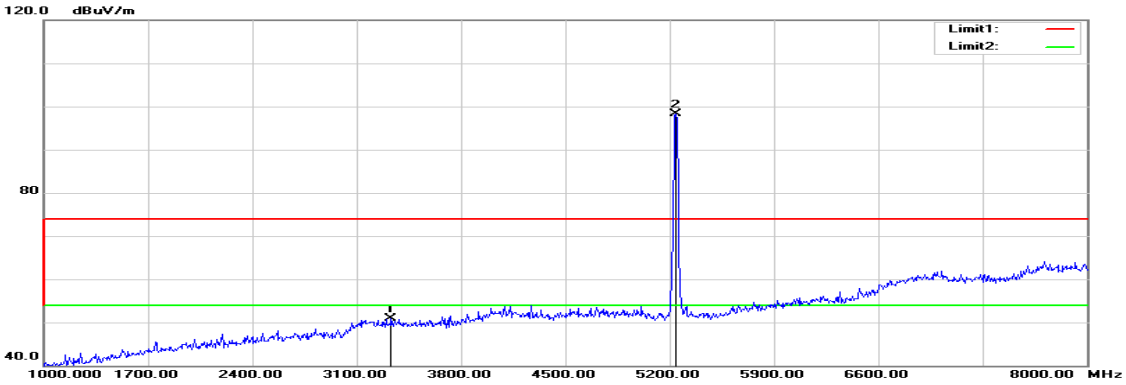
Tx / IEEE 802.11n HT 20 MHz / High

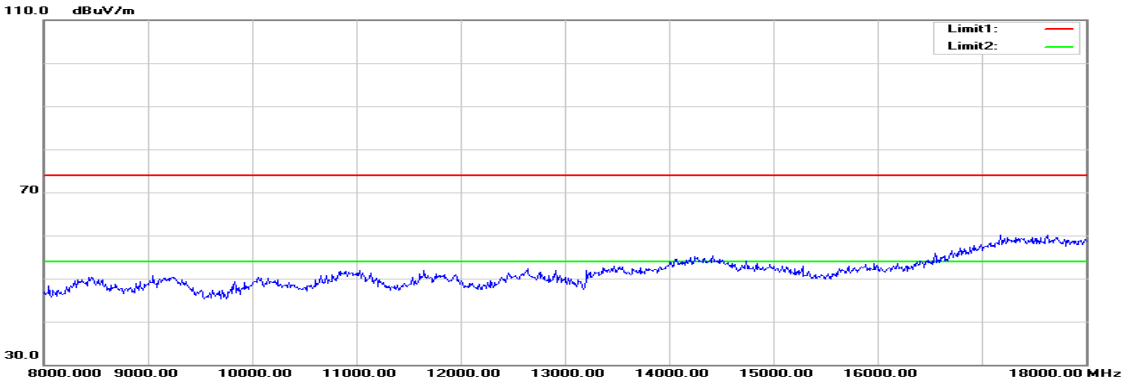
Polarity: Vertical

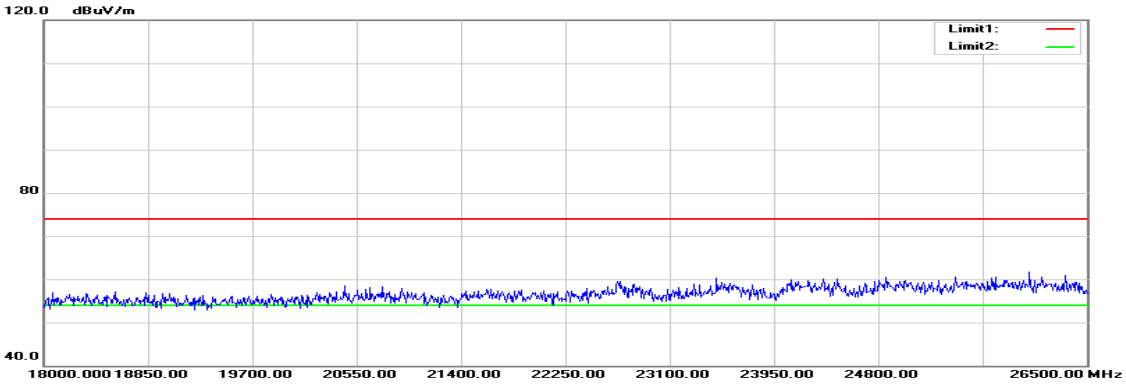


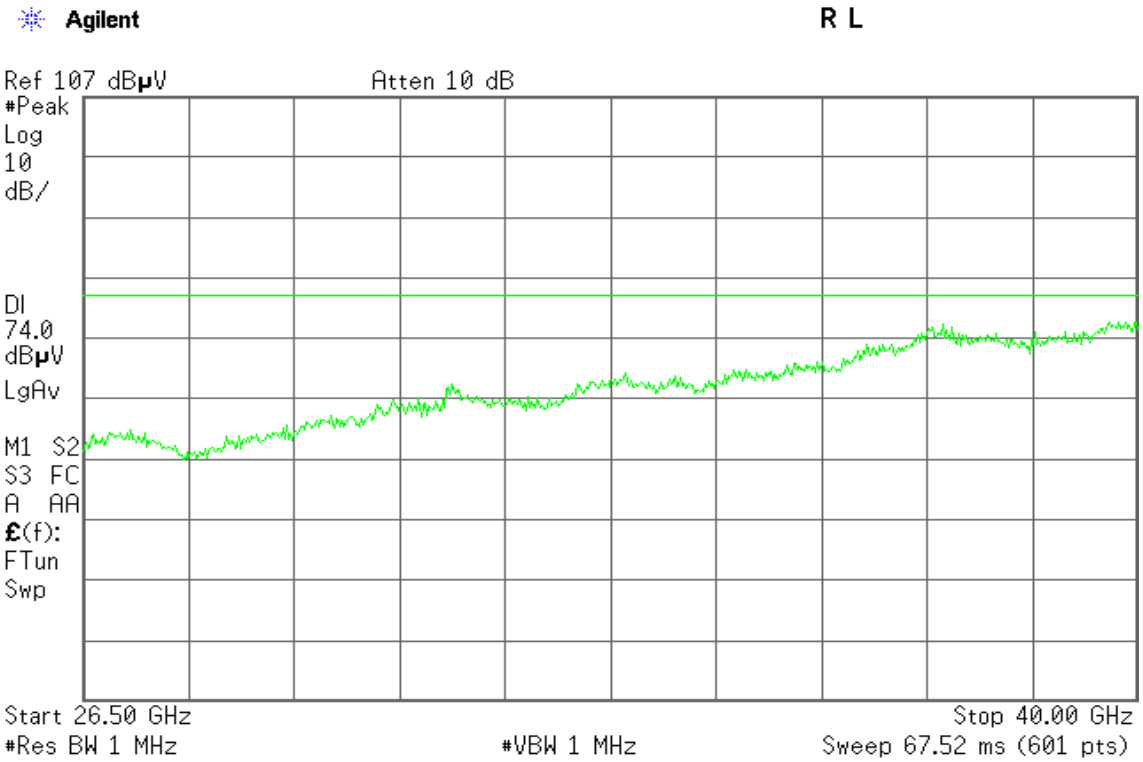

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5180 ~ 5240MHz / CH High	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

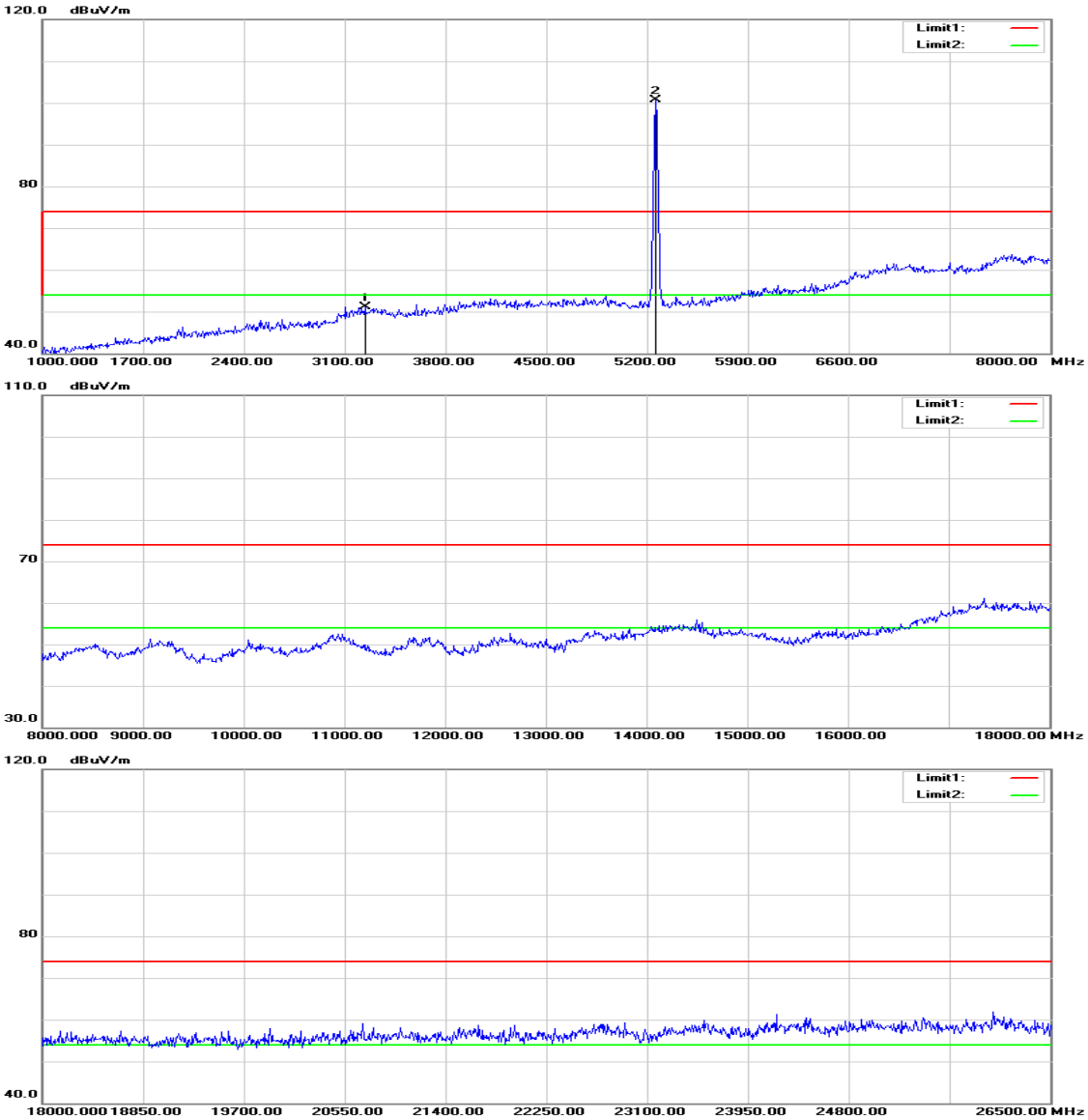
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
2659.000	50.59	-2.92	47.67	74.00	-26.33	peak	V
N/A							
3331.000	51.97	-1.14	50.83	74.00	-23.17	peak	H
N/A							

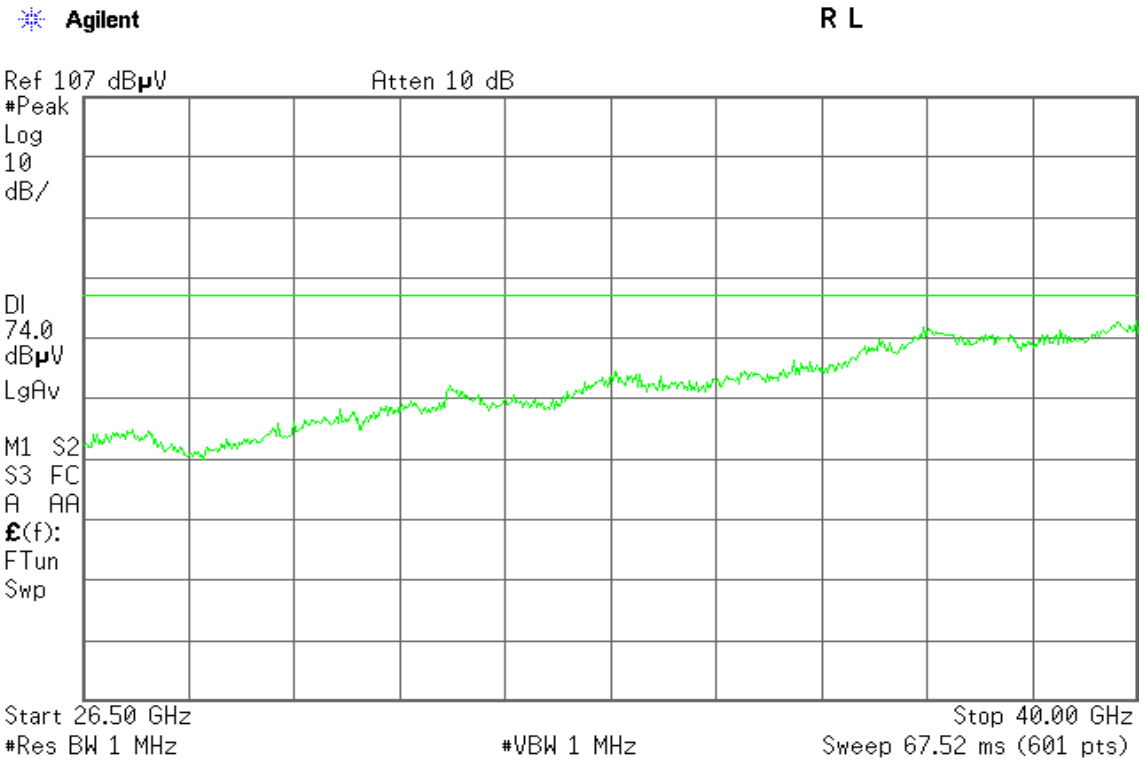
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

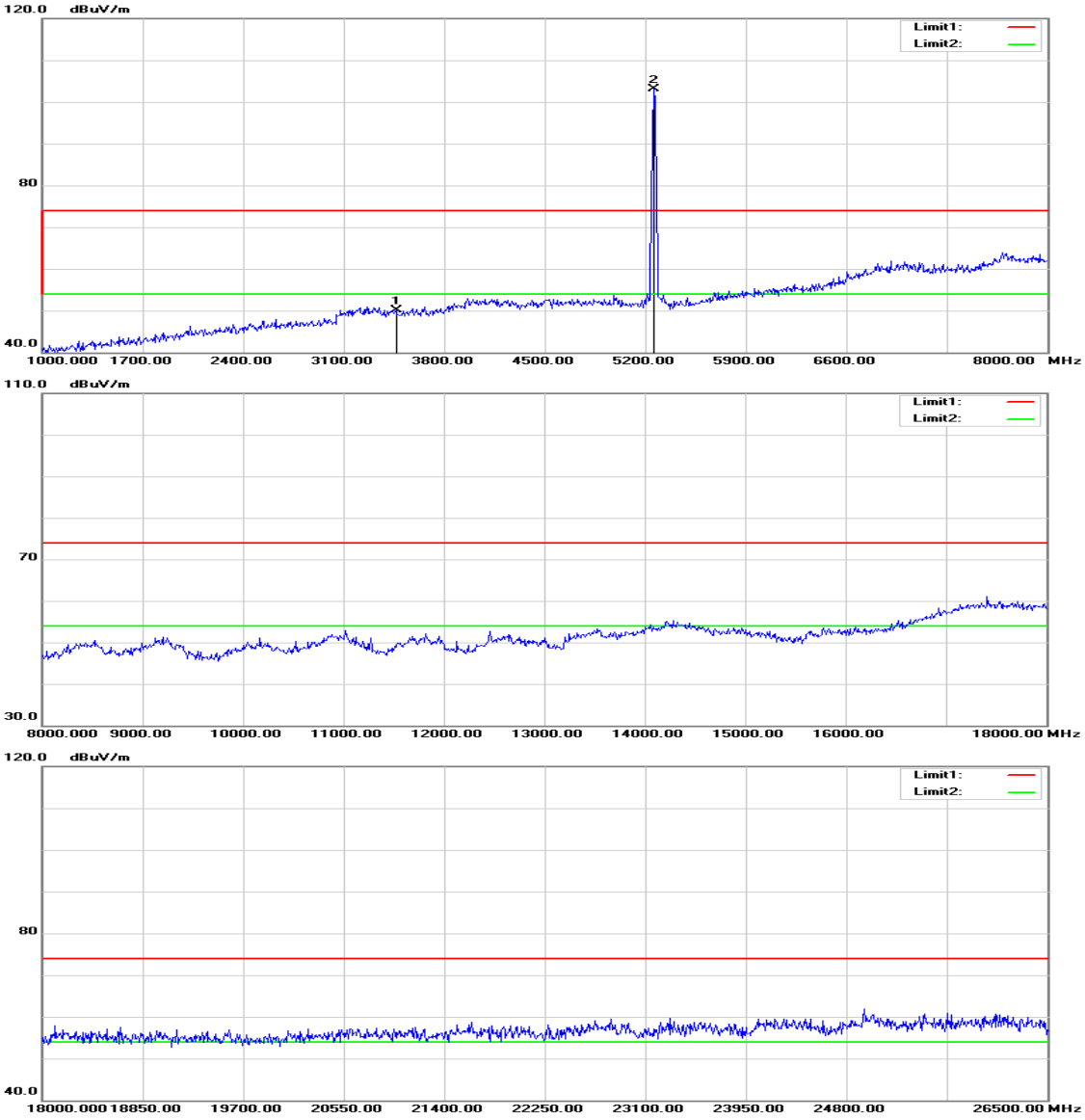
Tx / IEEE 802.11a mode / Low

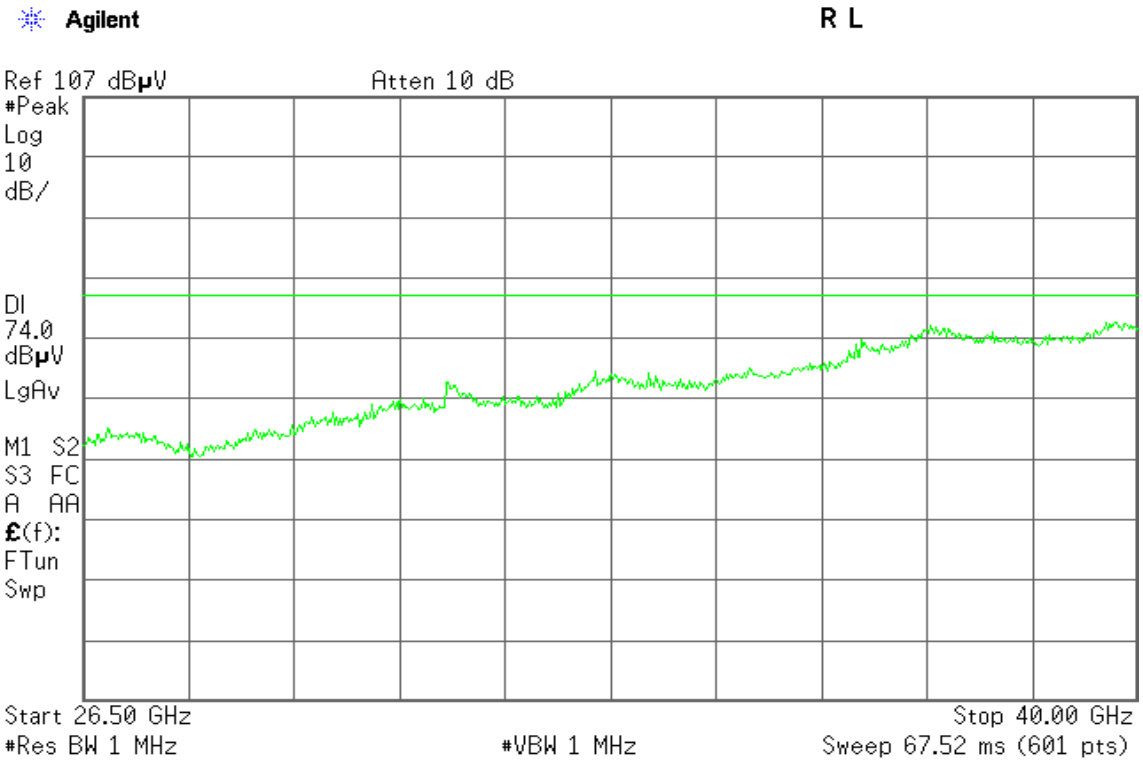
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5260 ~ 5320MHz / CH Low	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

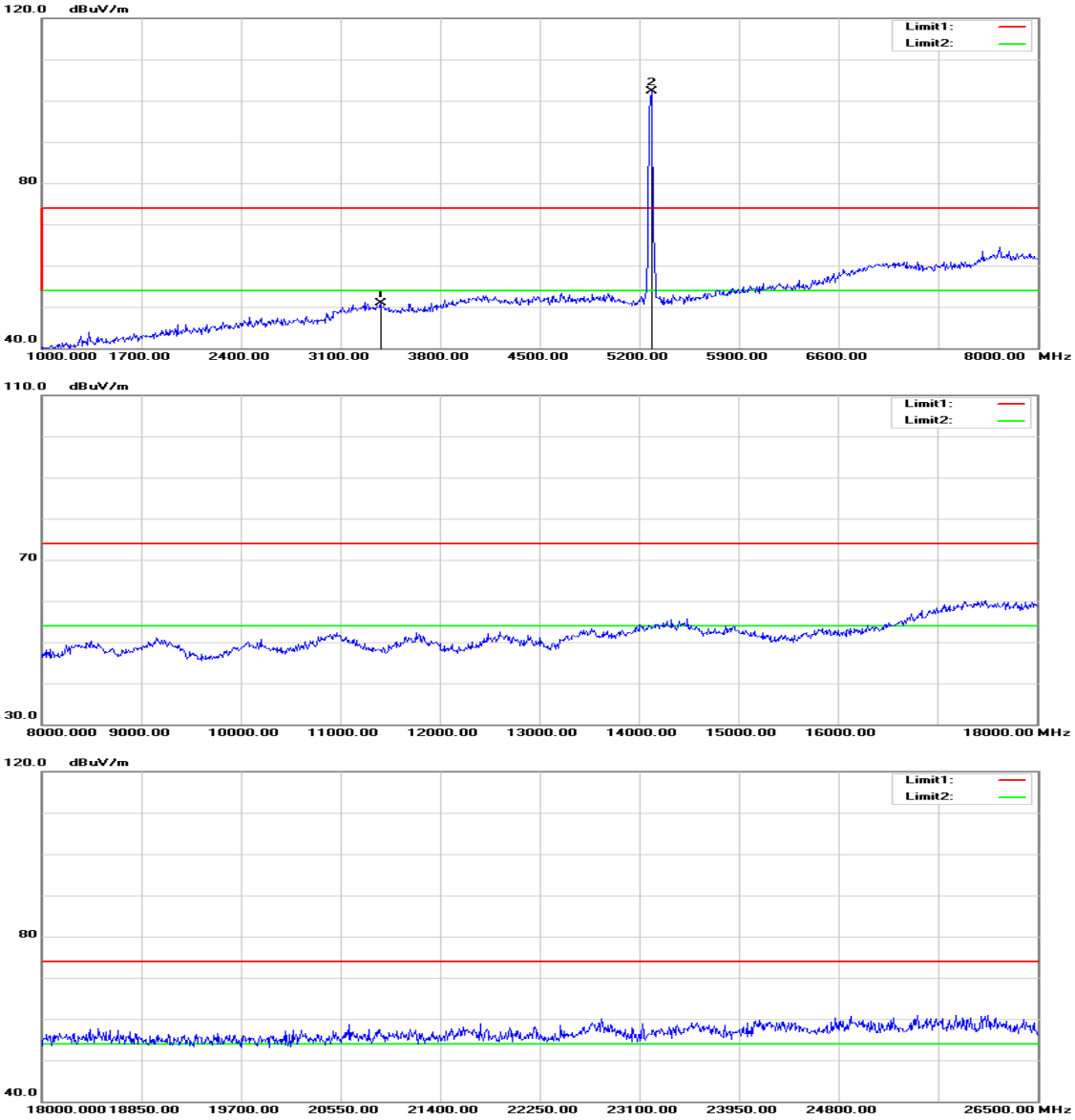
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3240.000	52.51	-1.43	51.08	74.00	-22.92	peak	V
N/A							
3464.000	50.88	-0.71	50.17	74.00	-23.83	peak	H
N/A							

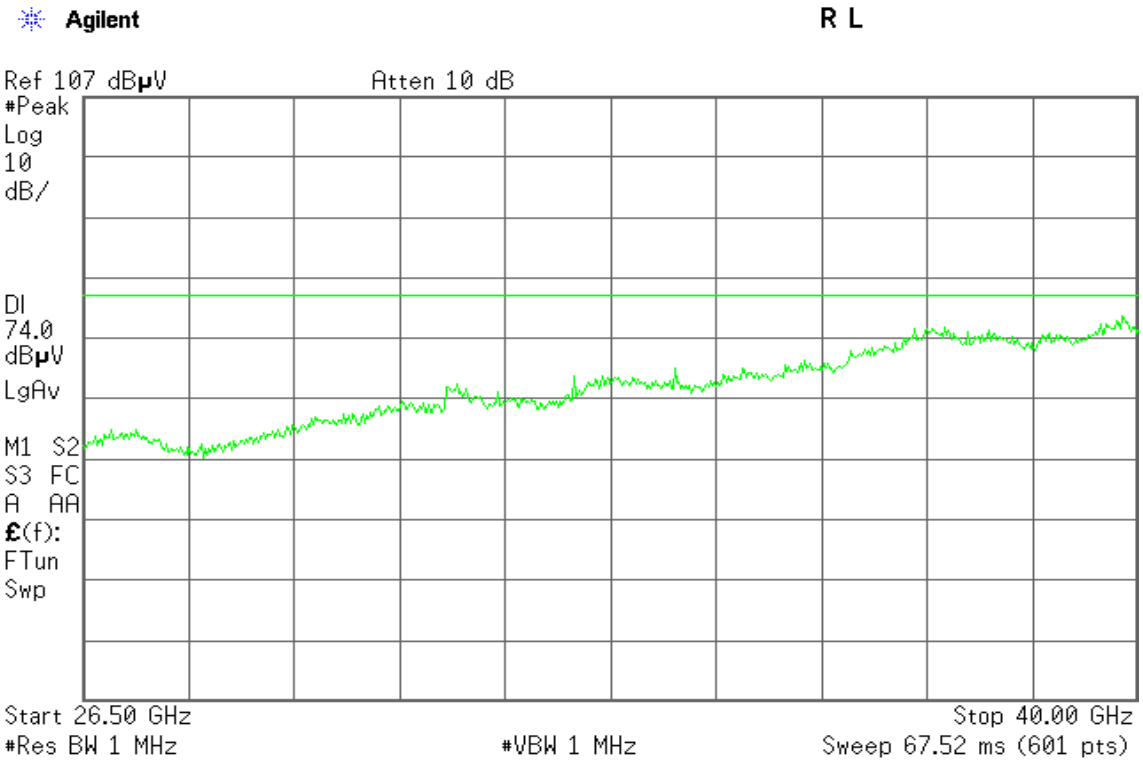
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

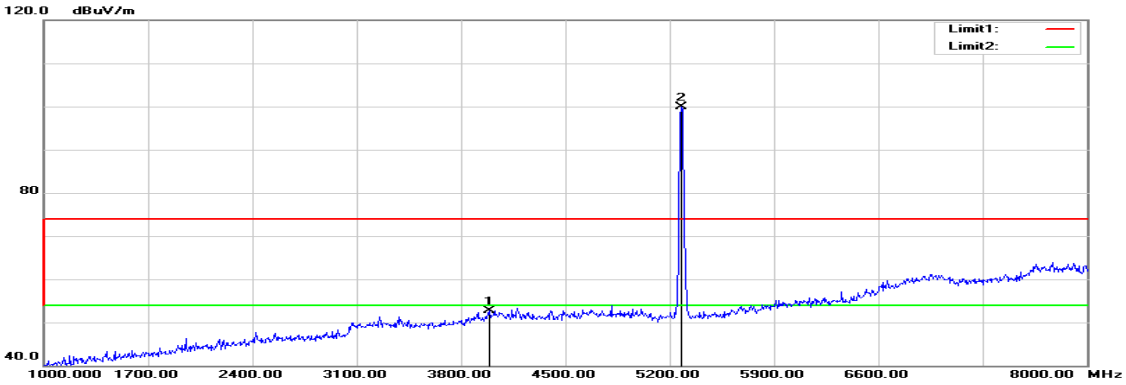
Tx / IEEE 802.11a mode / Mid

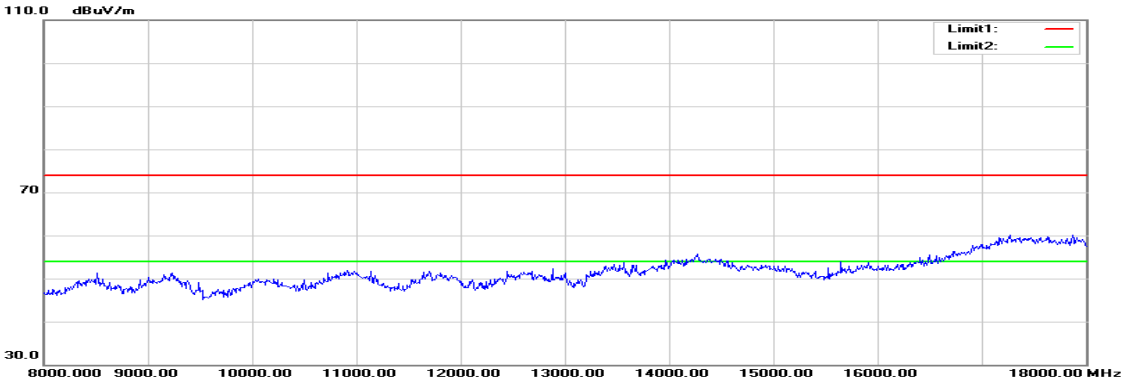
Polarity: Vertical

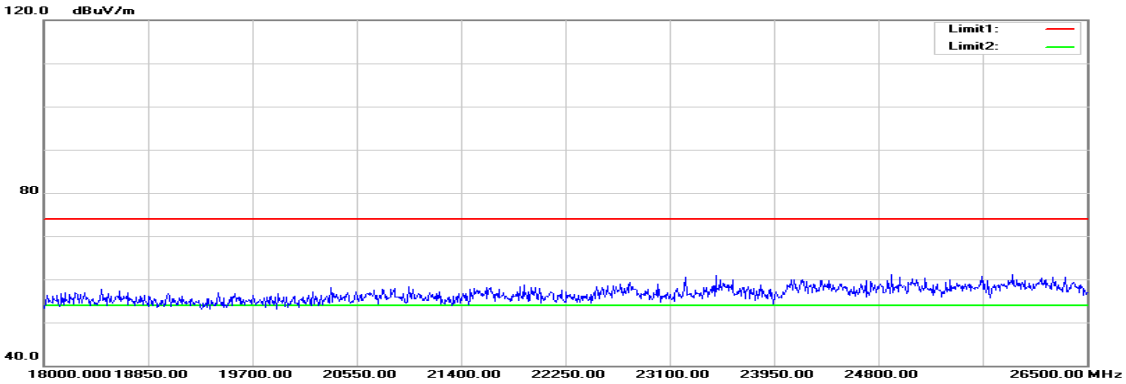


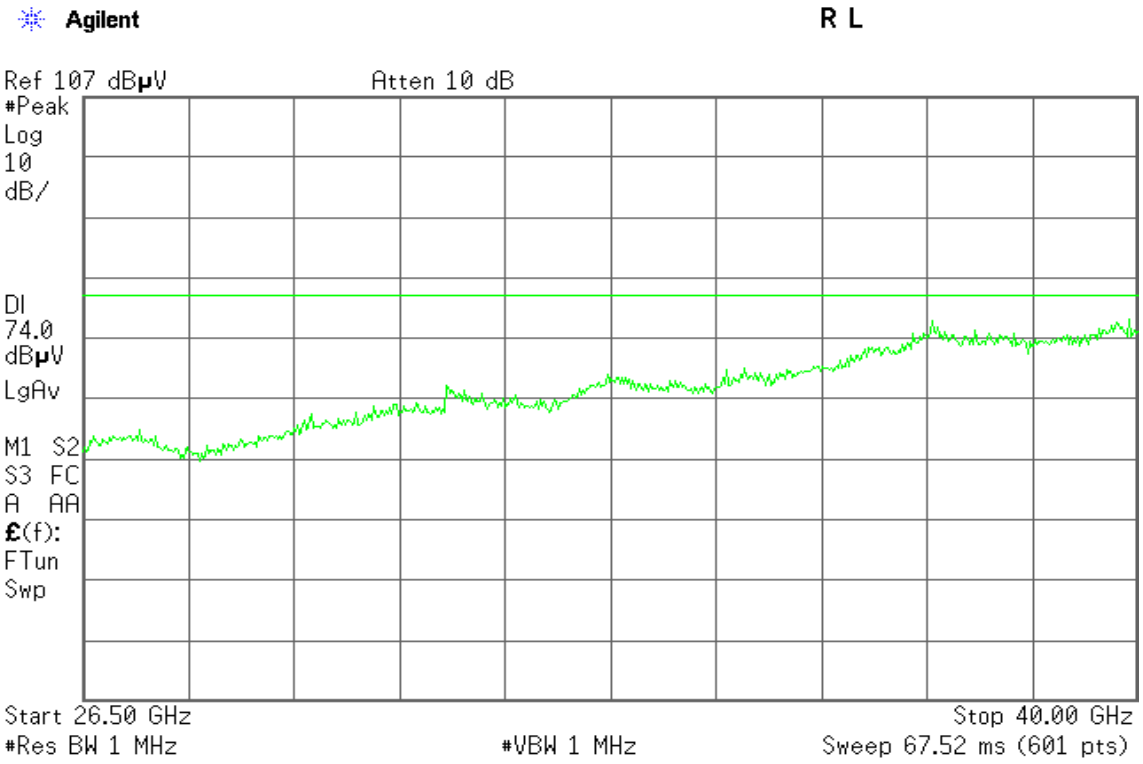

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5260 ~ 5320MHz / CH Mid	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

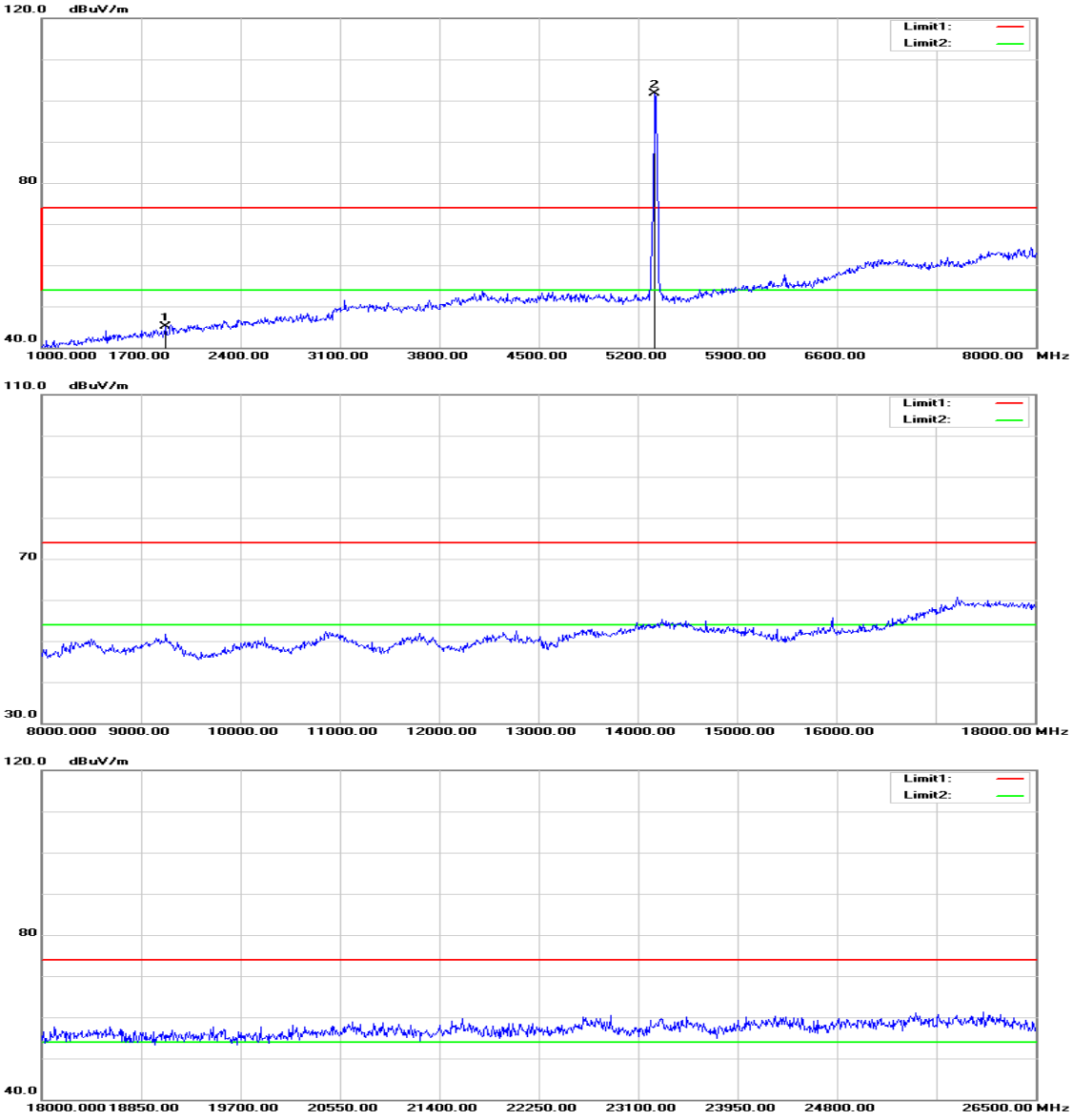
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3380.000	51.98	-0.98	51.00	74.00	-23.00	peak	V
N/A							
3989.000	50.35	2.42	52.77	74.00	-21.23	peak	H
N/A							

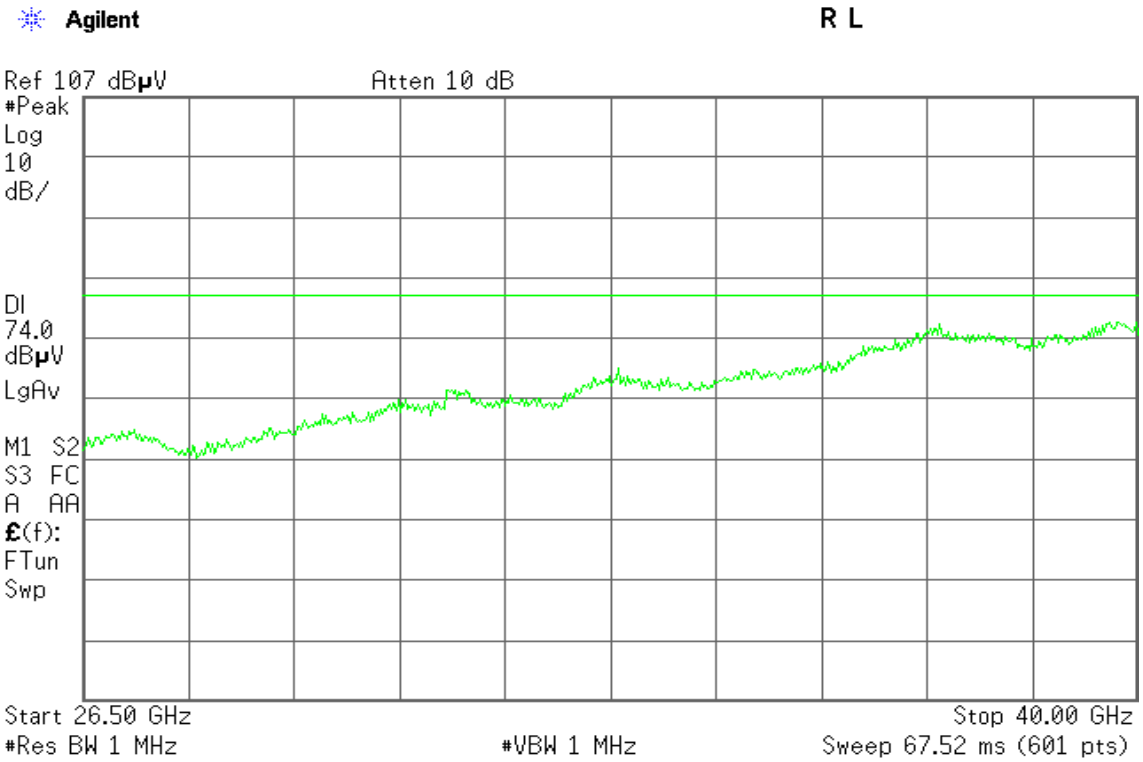
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

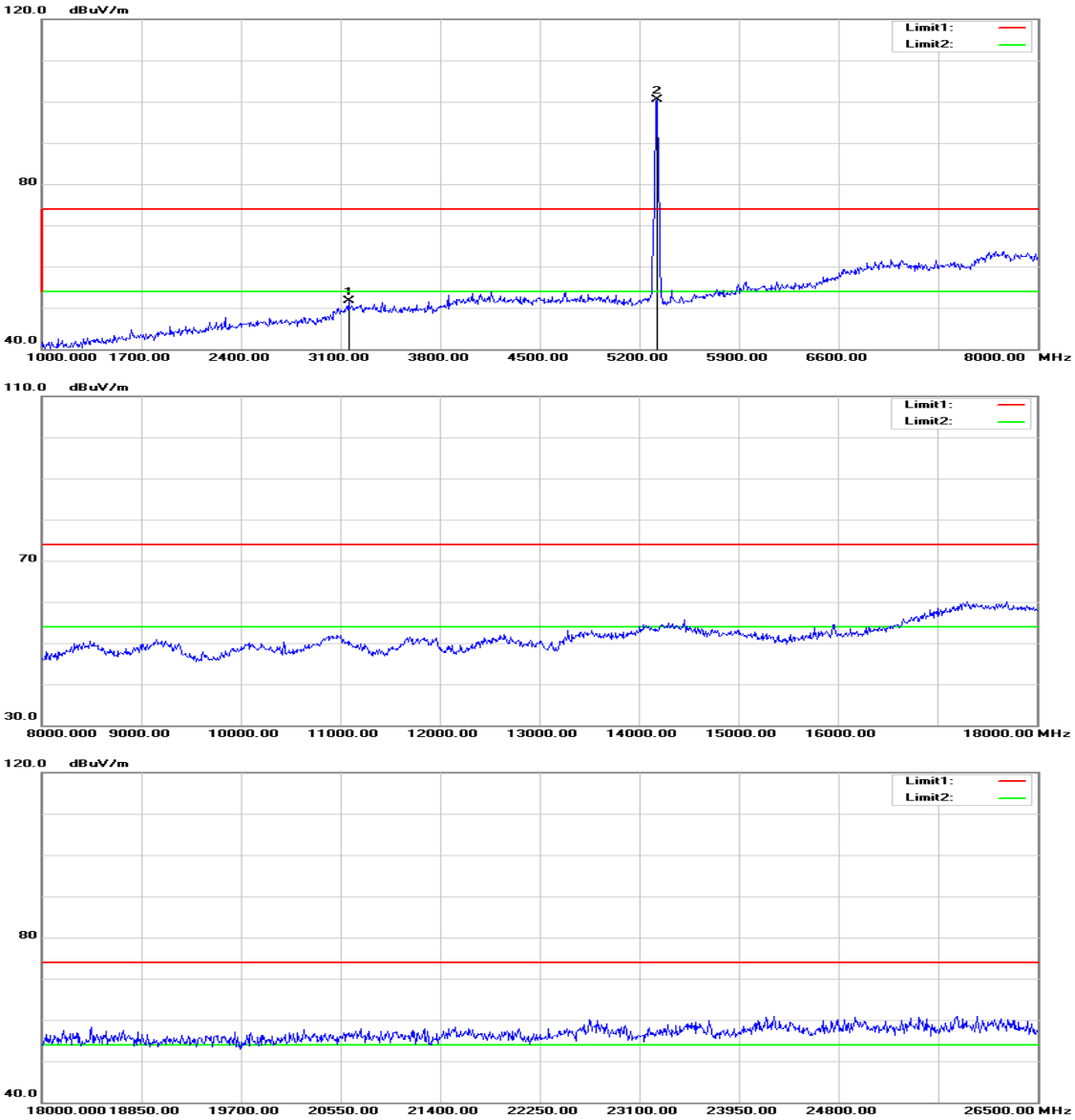
Tx / IEEE 802.11a mode / High

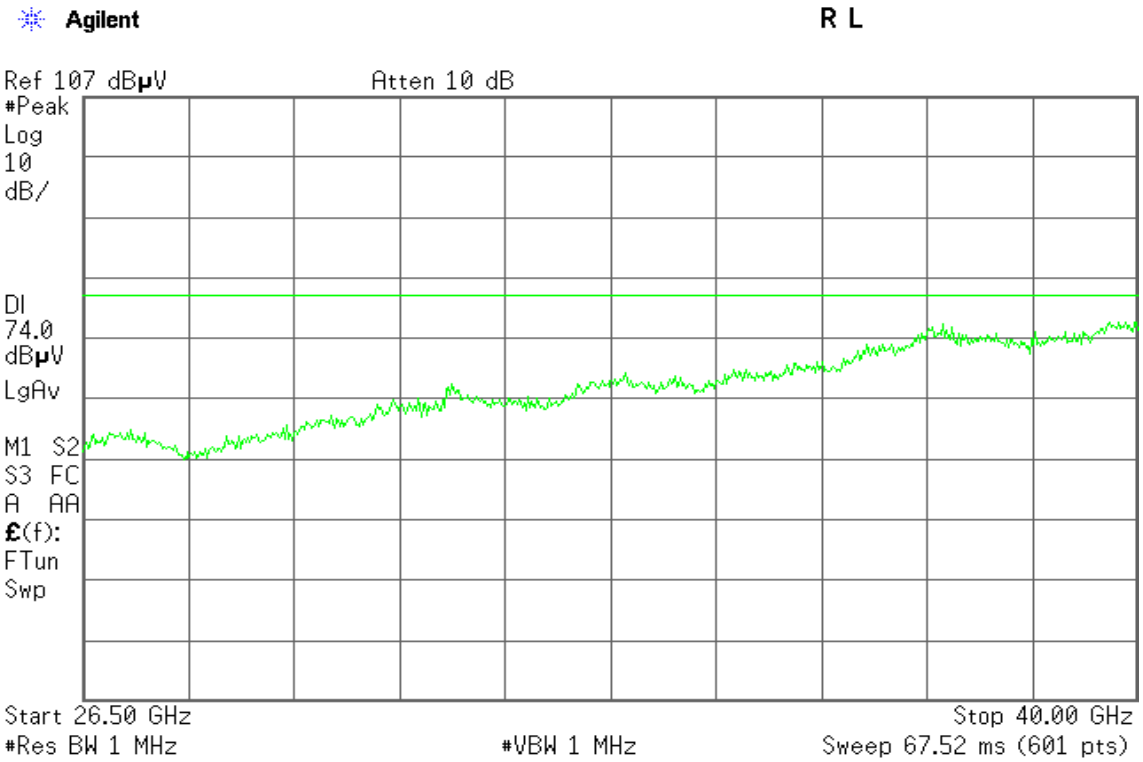
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5260 ~ 5320MHz / CH High	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

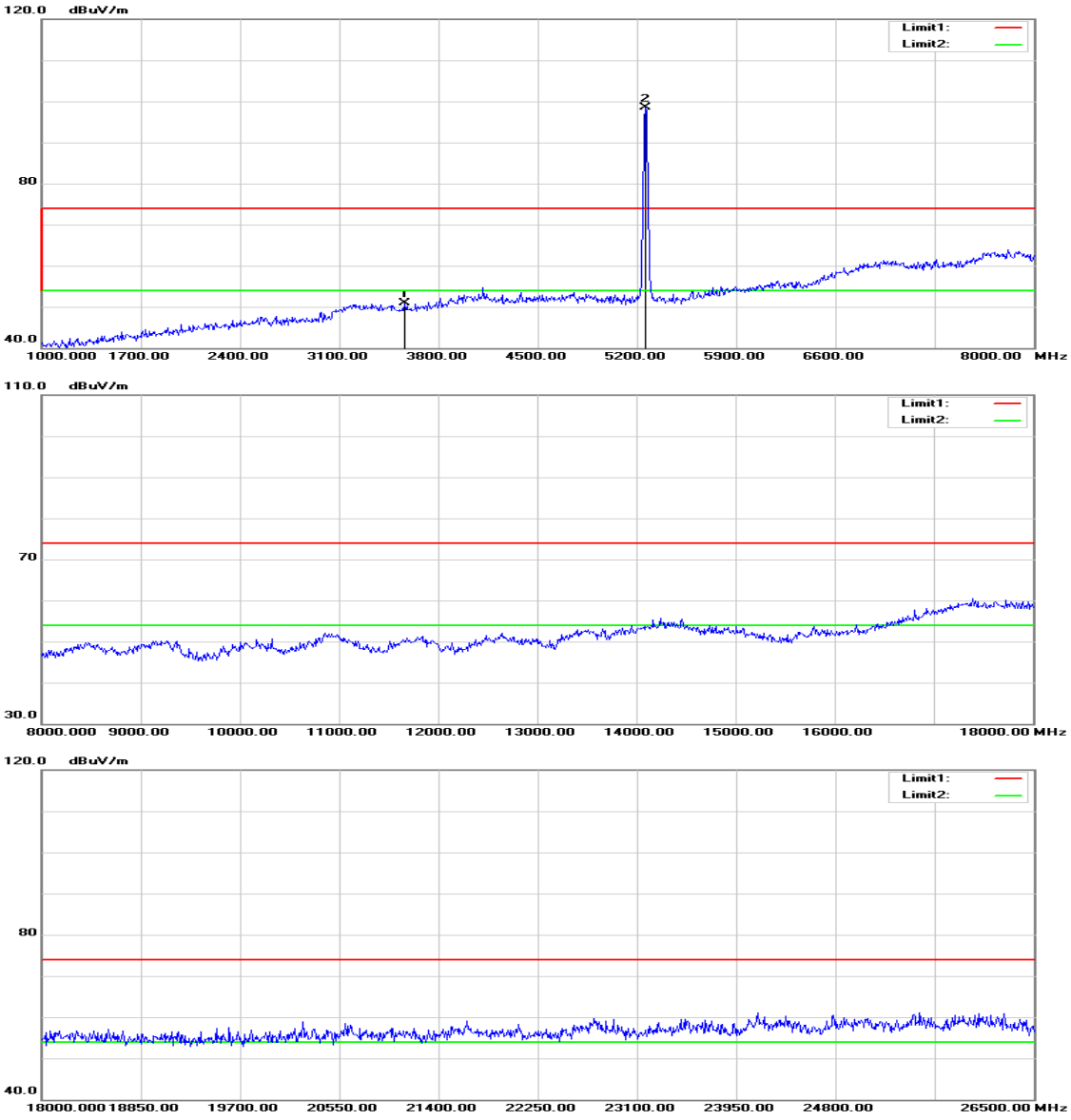
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
1875.000	50.87	-5.76	45.11	74.00	-28.89	peak	V
N/A							
3156.000	53.50	-1.70	51.80	74.00	-22.20	peak	H
N/A							

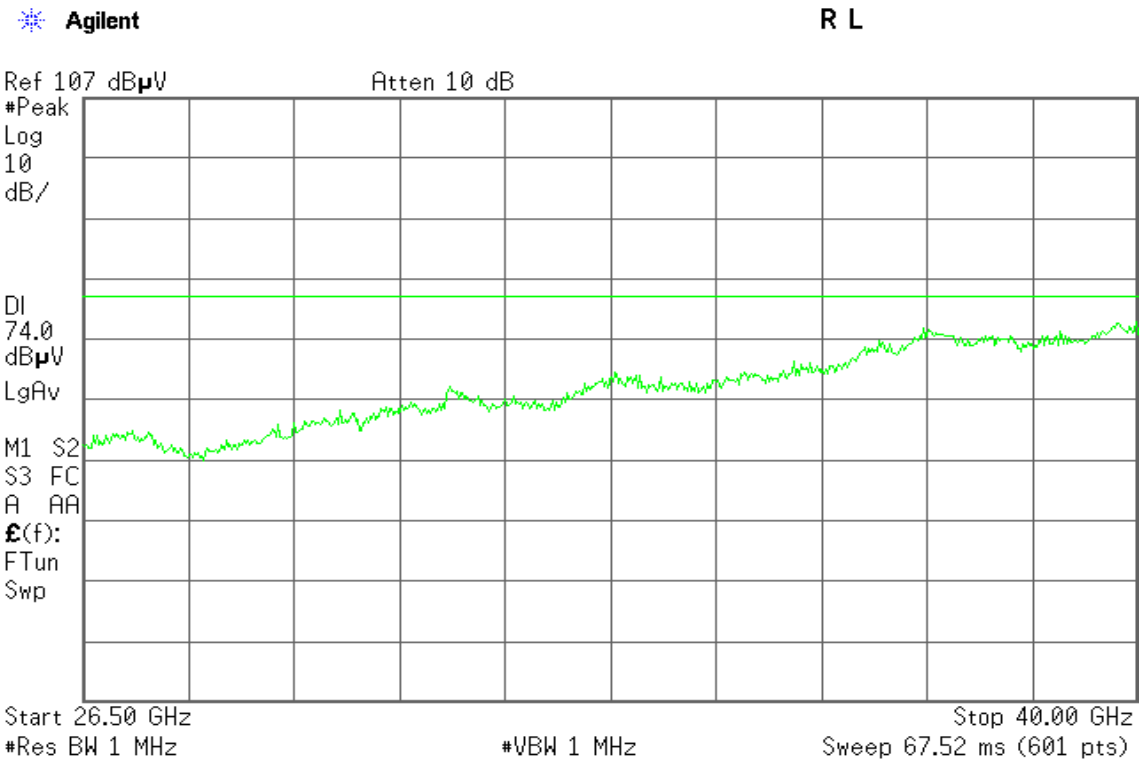
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

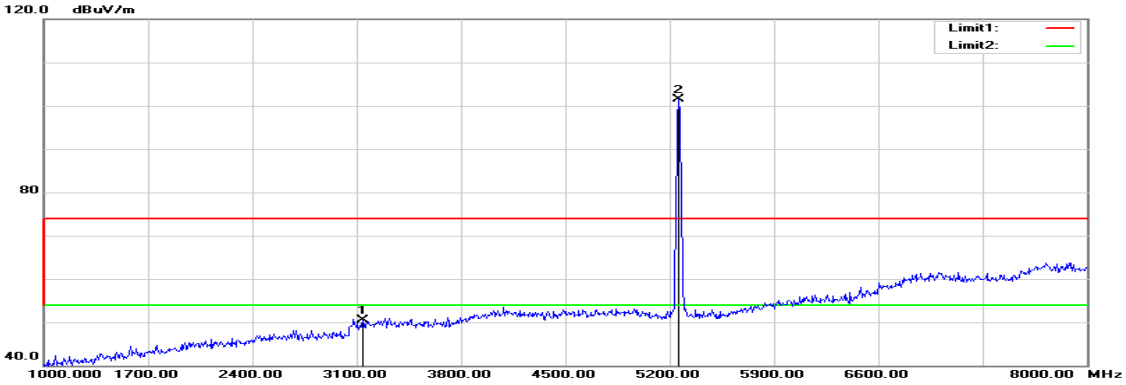
Tx / IEEE 802.11n HT 20 MHz / Low

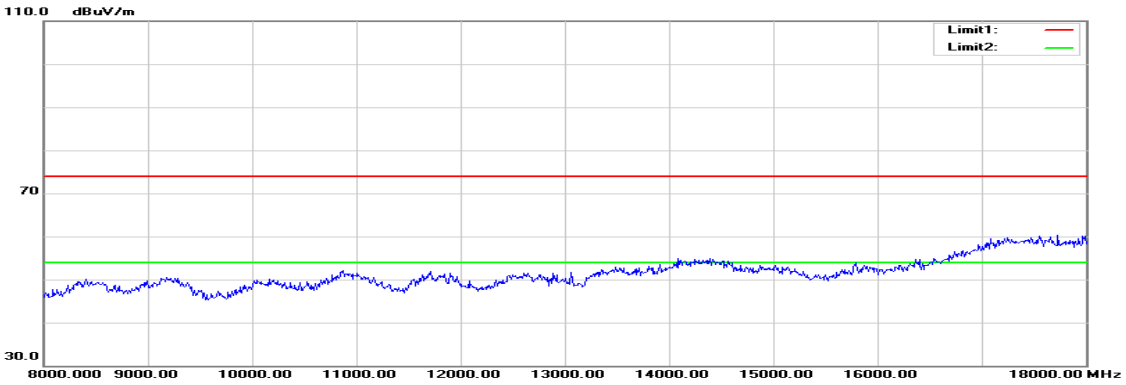
Polarity: Vertical

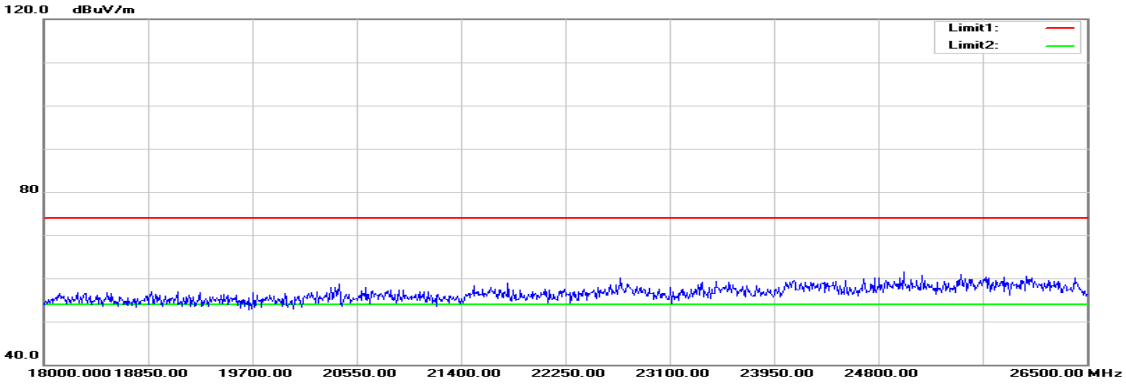


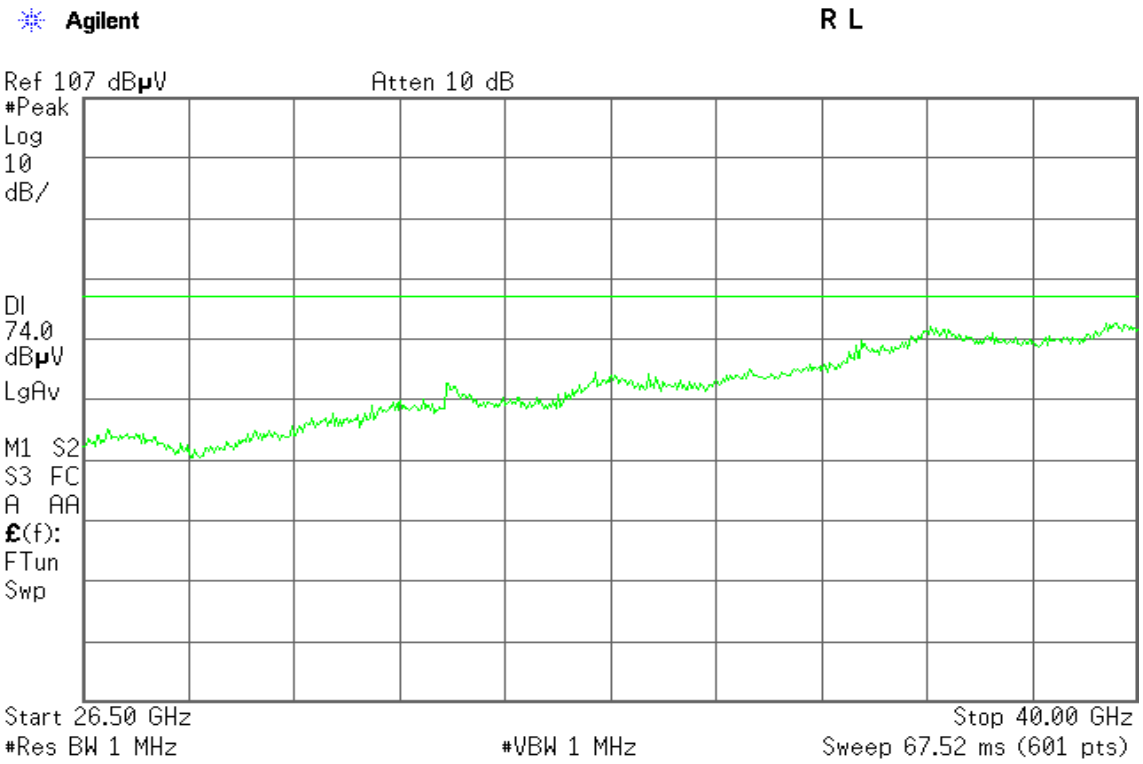

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5260 ~ 5320MHz / CH Low	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

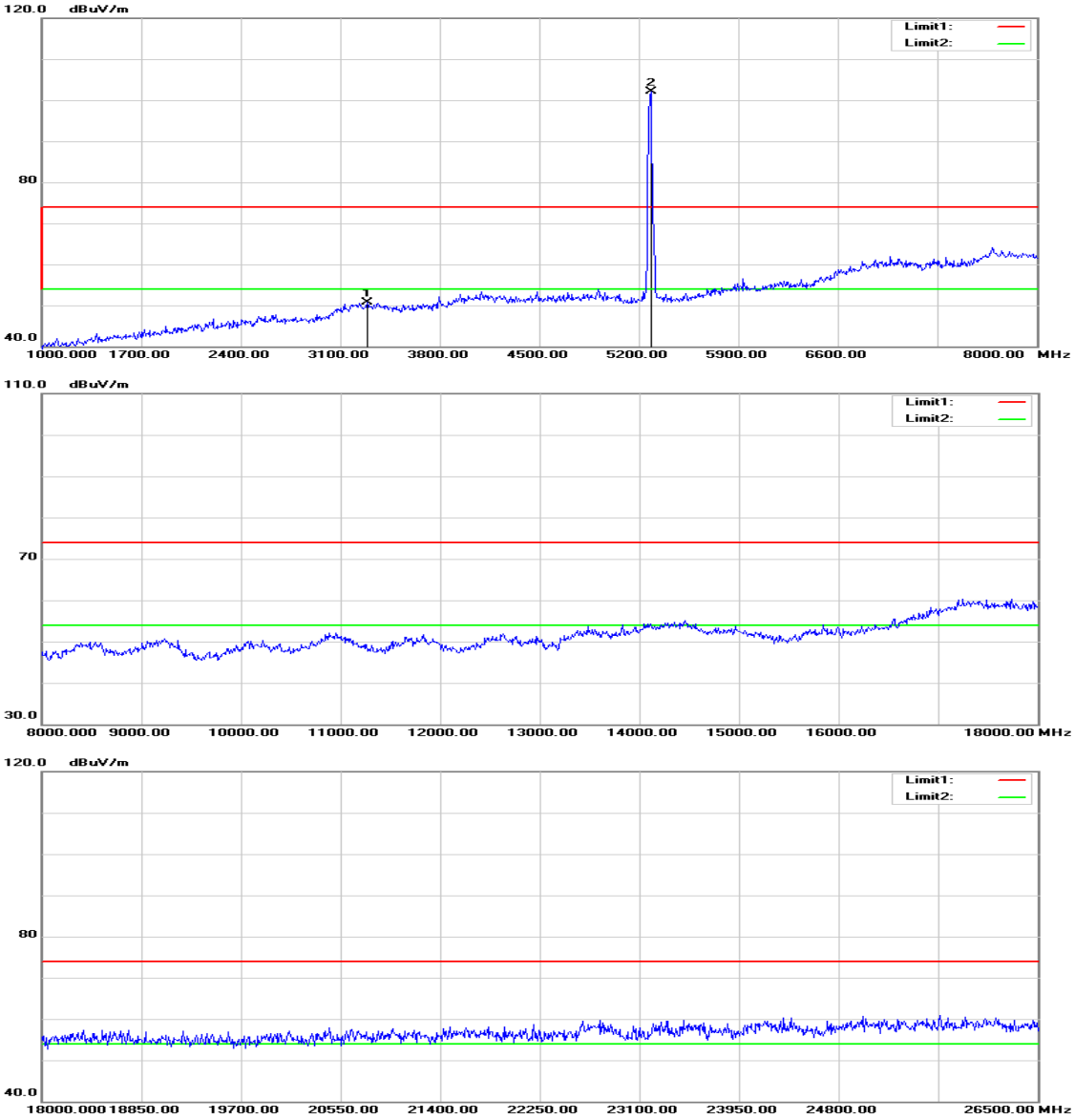
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3562.000	51.12	-0.21	50.91	74.00	-23.09	peak	V
N/A							
3142.000	52.21	-1.75	50.46	74.00	-23.54	peak	H
N/A							

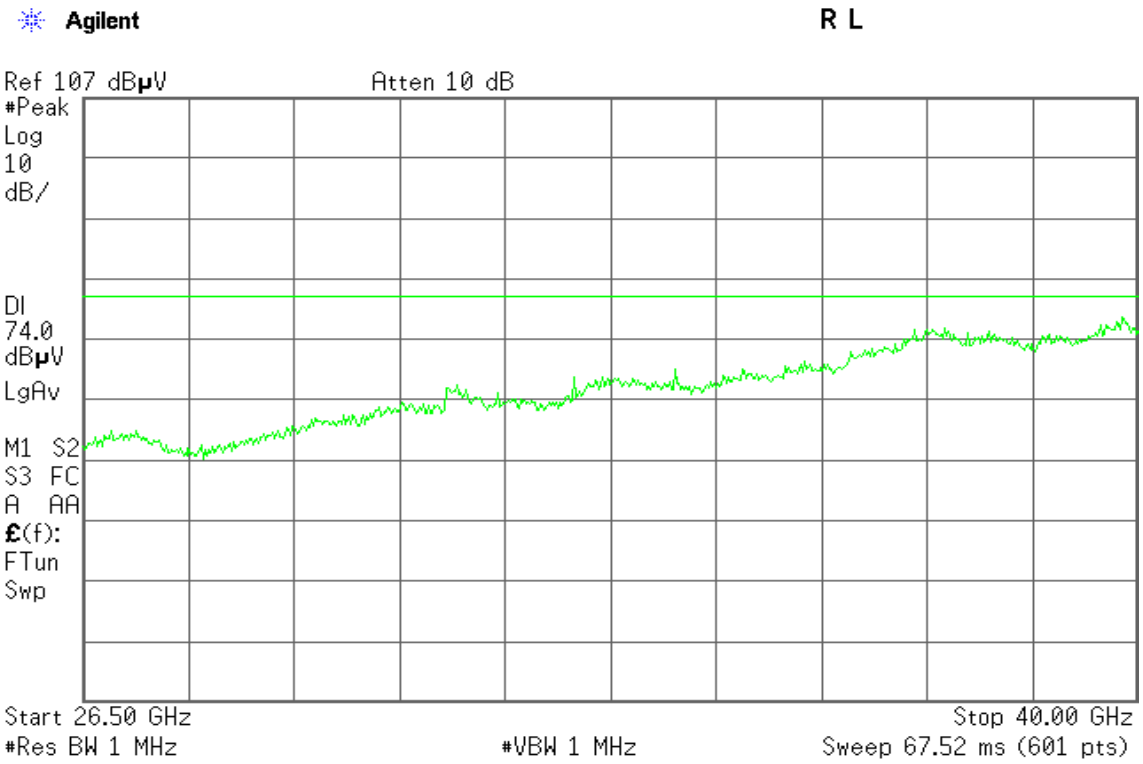
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

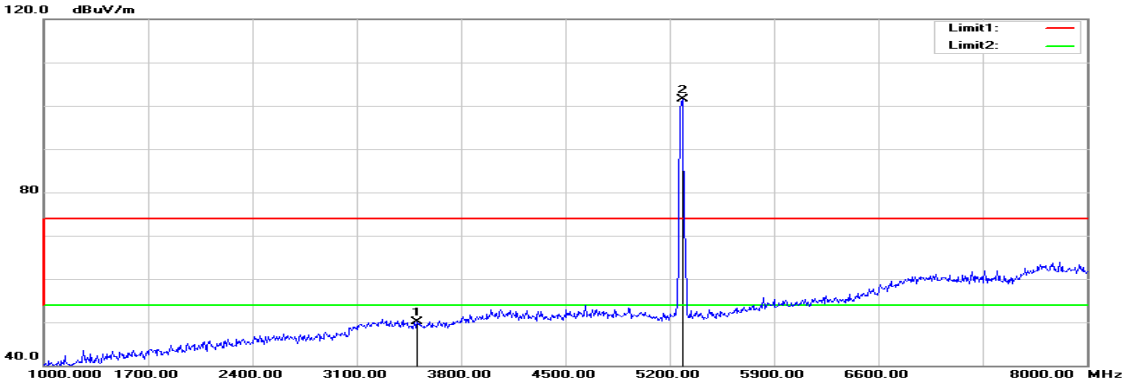
Tx / IEEE 802.11n HT 20 MHz / Mid

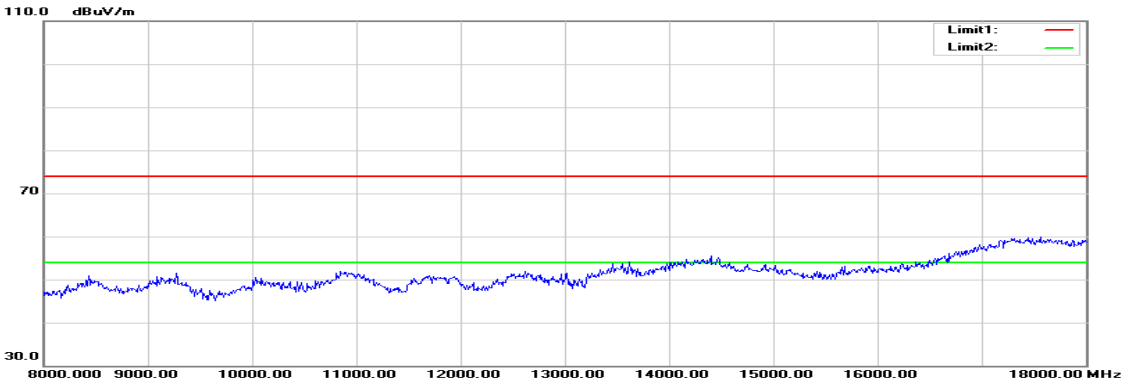
Polarity: Vertical

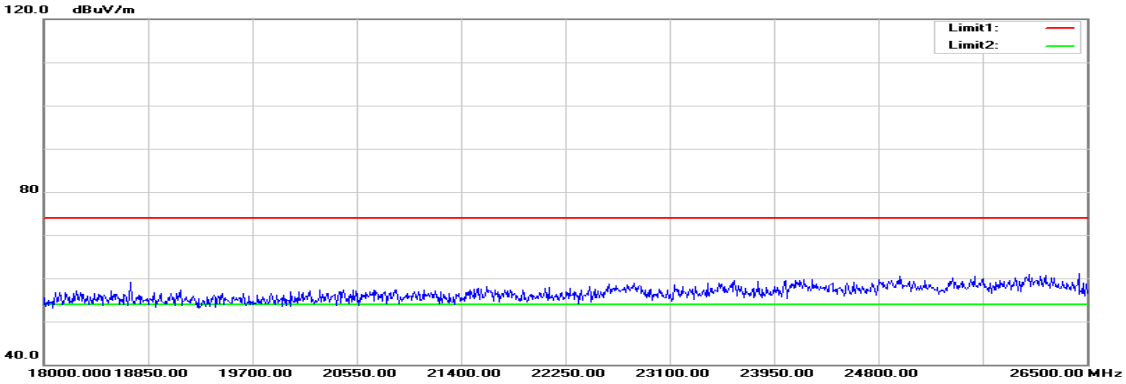


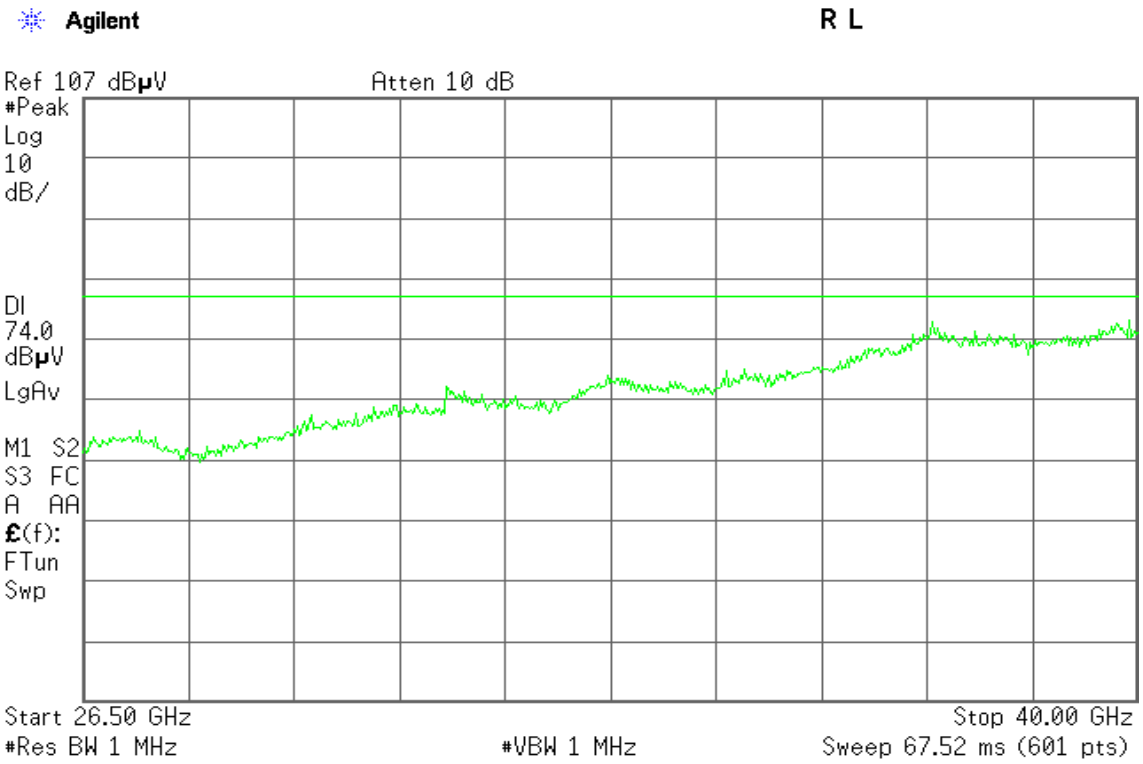

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5260 ~ 5320MHz / CH Mid	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

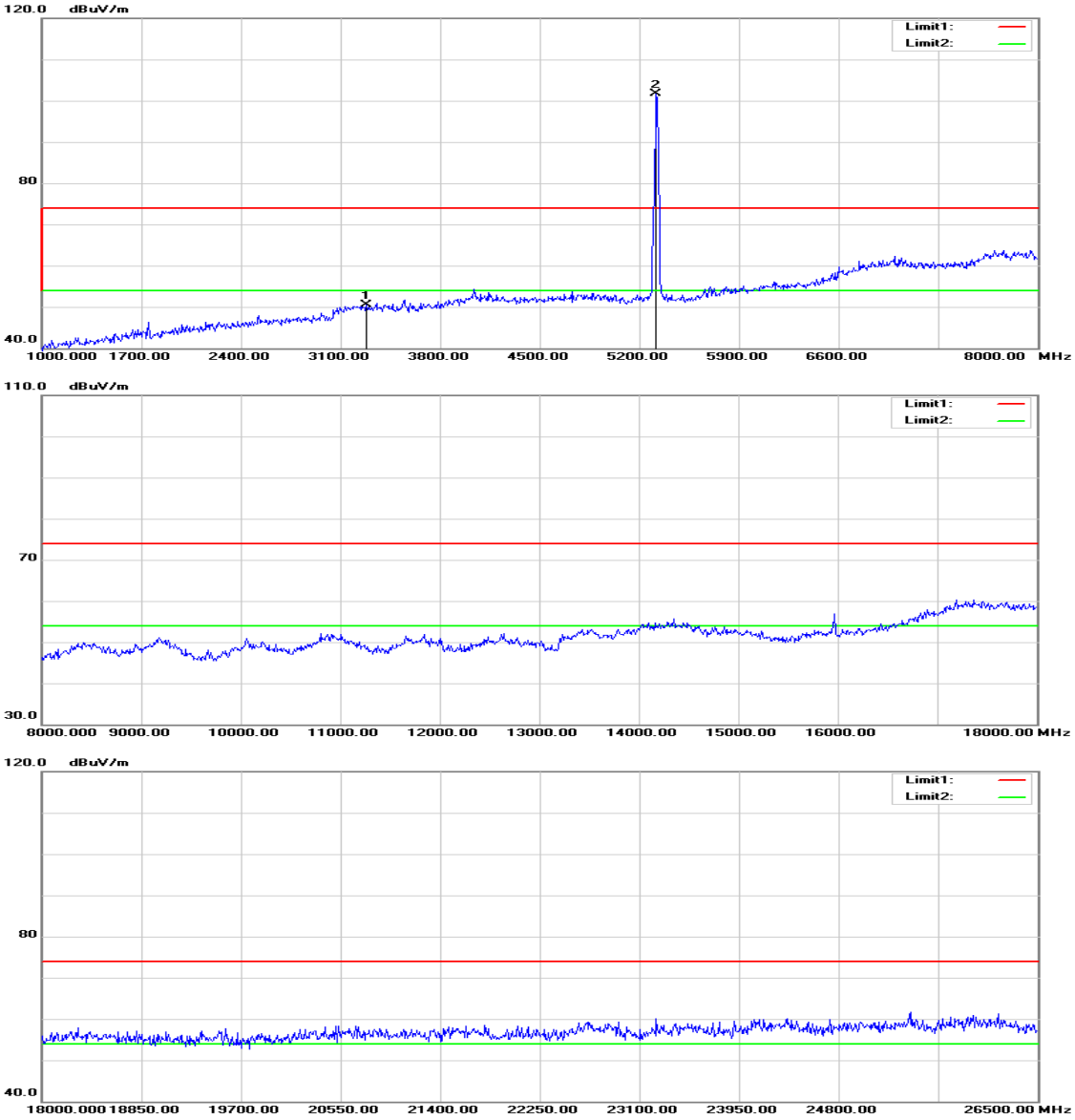
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3289.000	52.07	-1.27	50.80	74.00	-23.20	peak	V
N/A							
3506.000	50.70	-0.55	50.15	74.00	-23.85	peak	H
N/A							

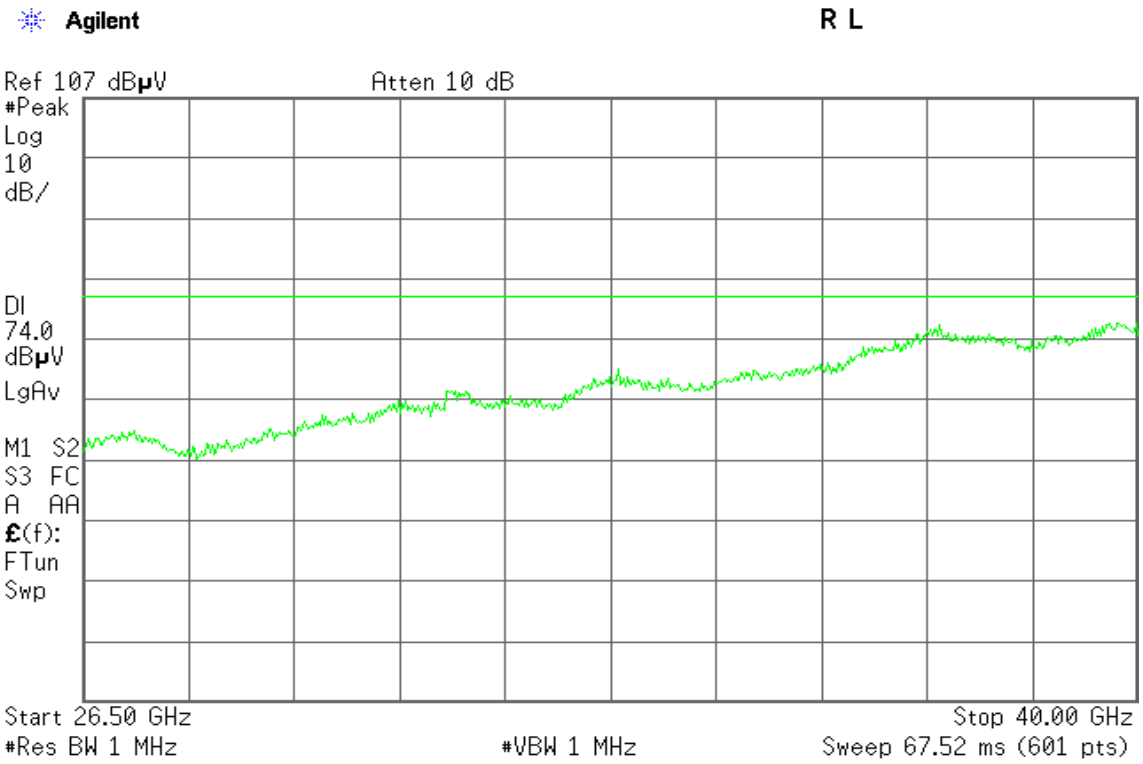
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

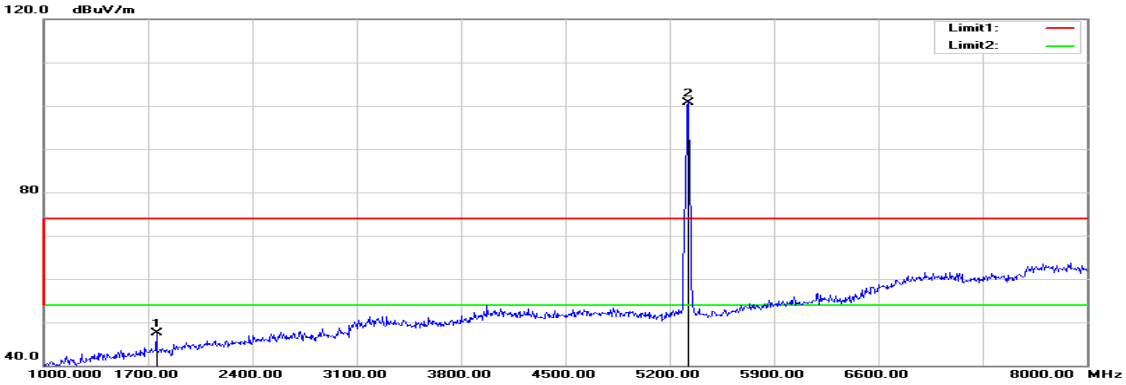
Tx / IEEE 802.11n HT 20 MHz / High

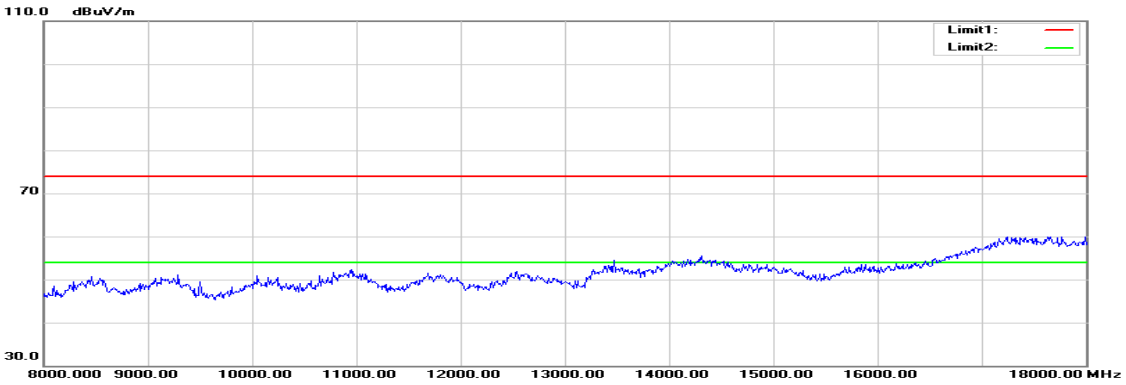
Polarity: Vertical

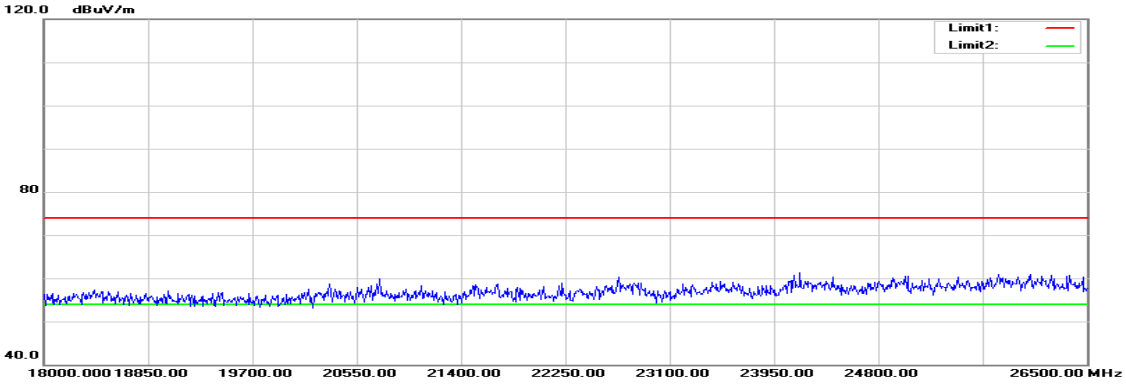


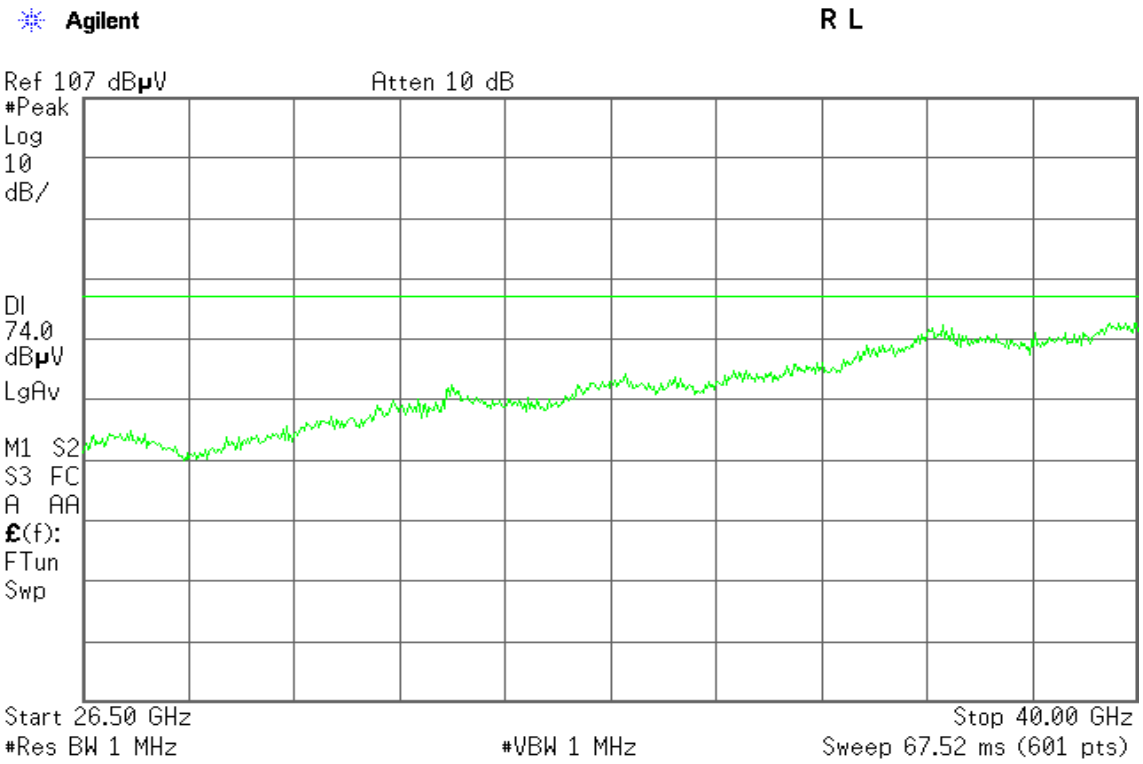

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5260 ~ 5320MHz / CH High	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

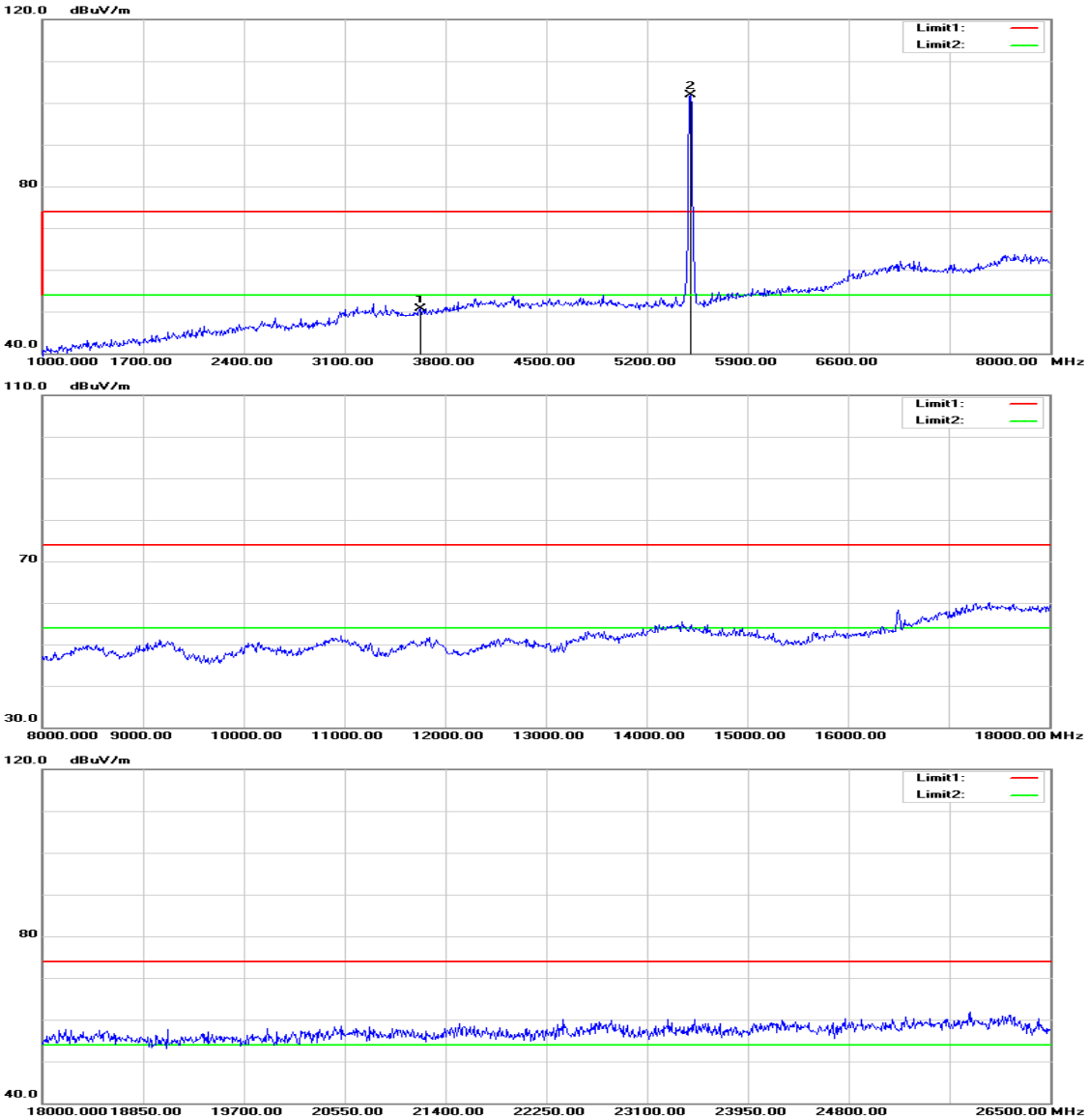
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3282.000	51.78	-1.30	50.48	74.00	-23.52	peak	V
N/A							
1756.000	53.93	-6.49	47.44	74.00	-26.56	peak	H
N/A							

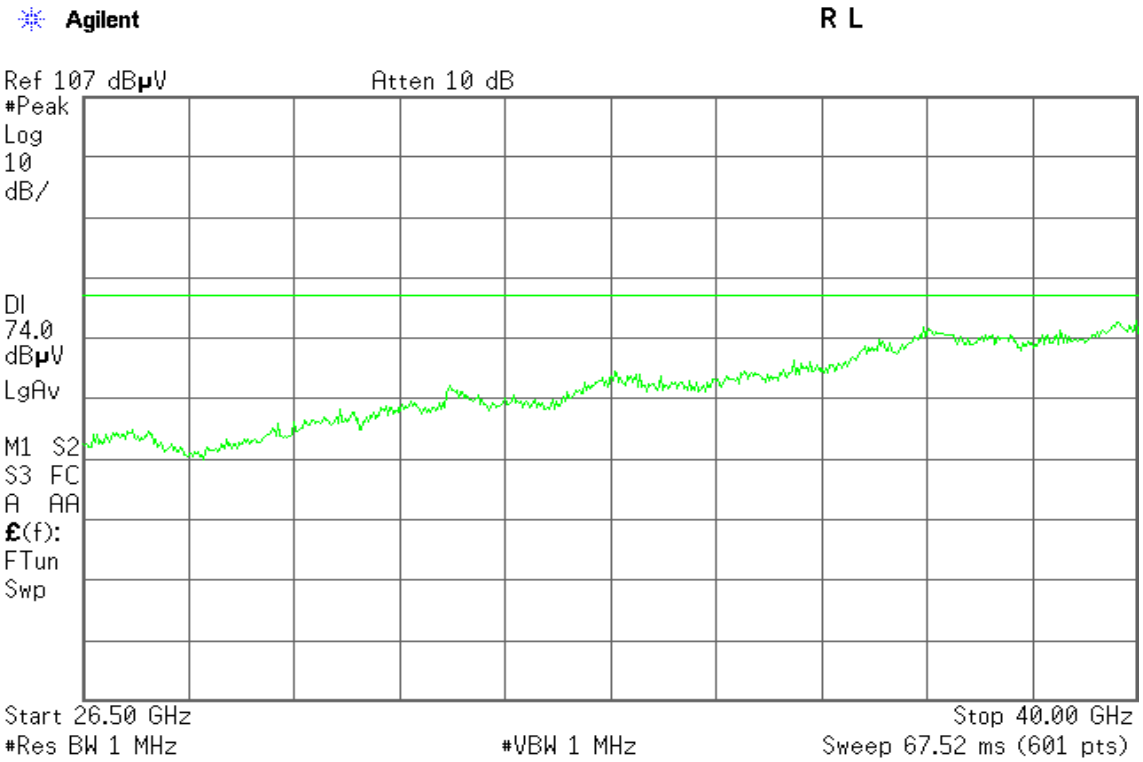
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

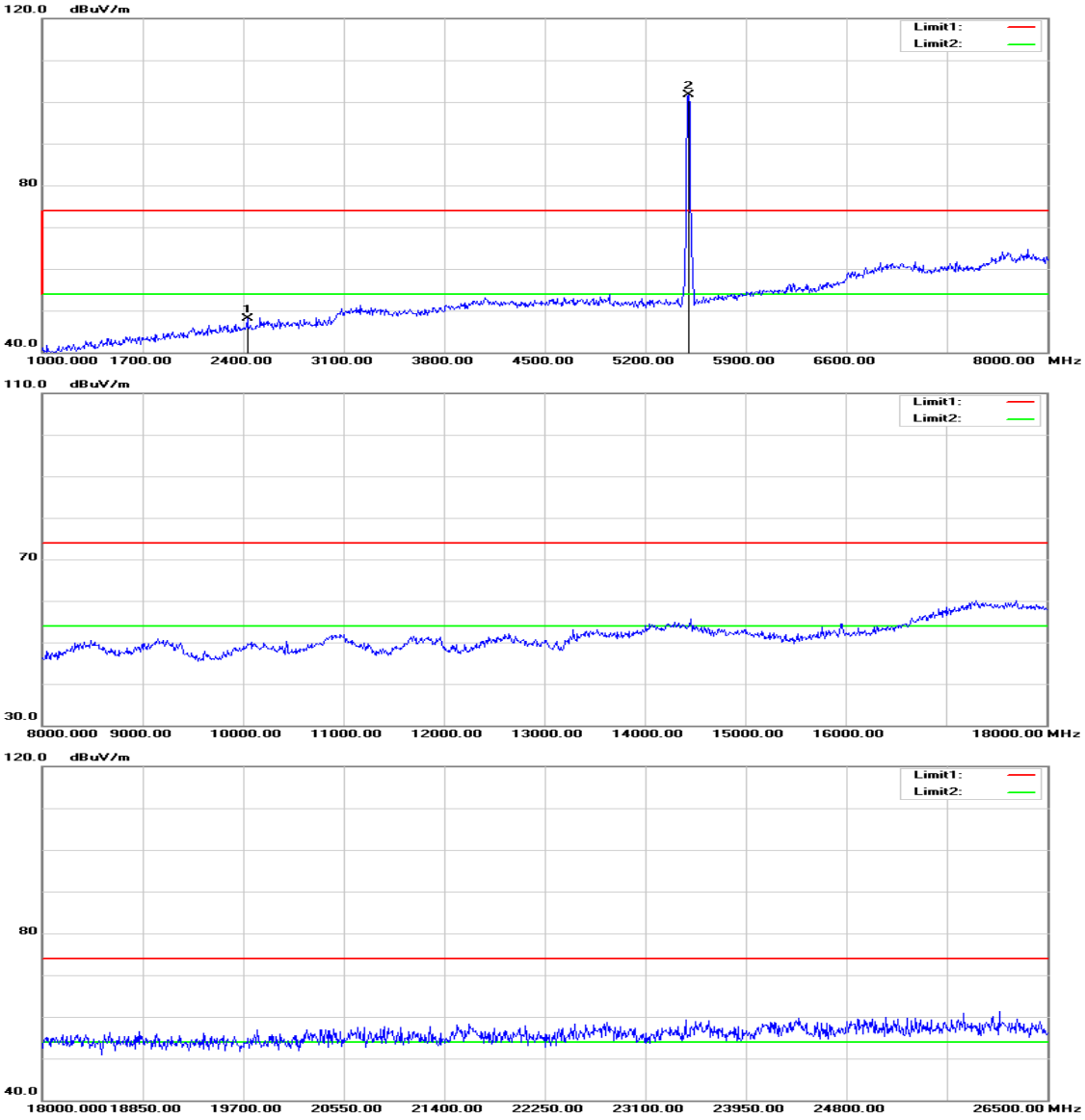
Tx / IEEE 802.11a mode / Low

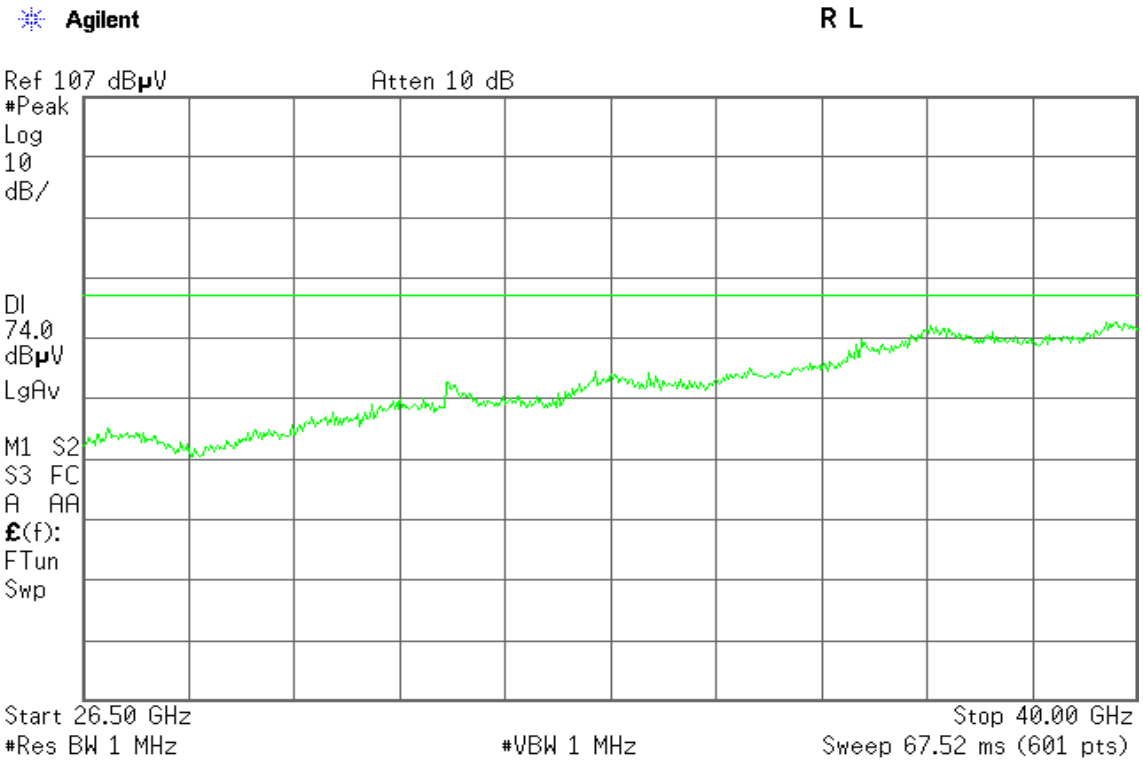
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5500 ~ 5700MHz / CH Low	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

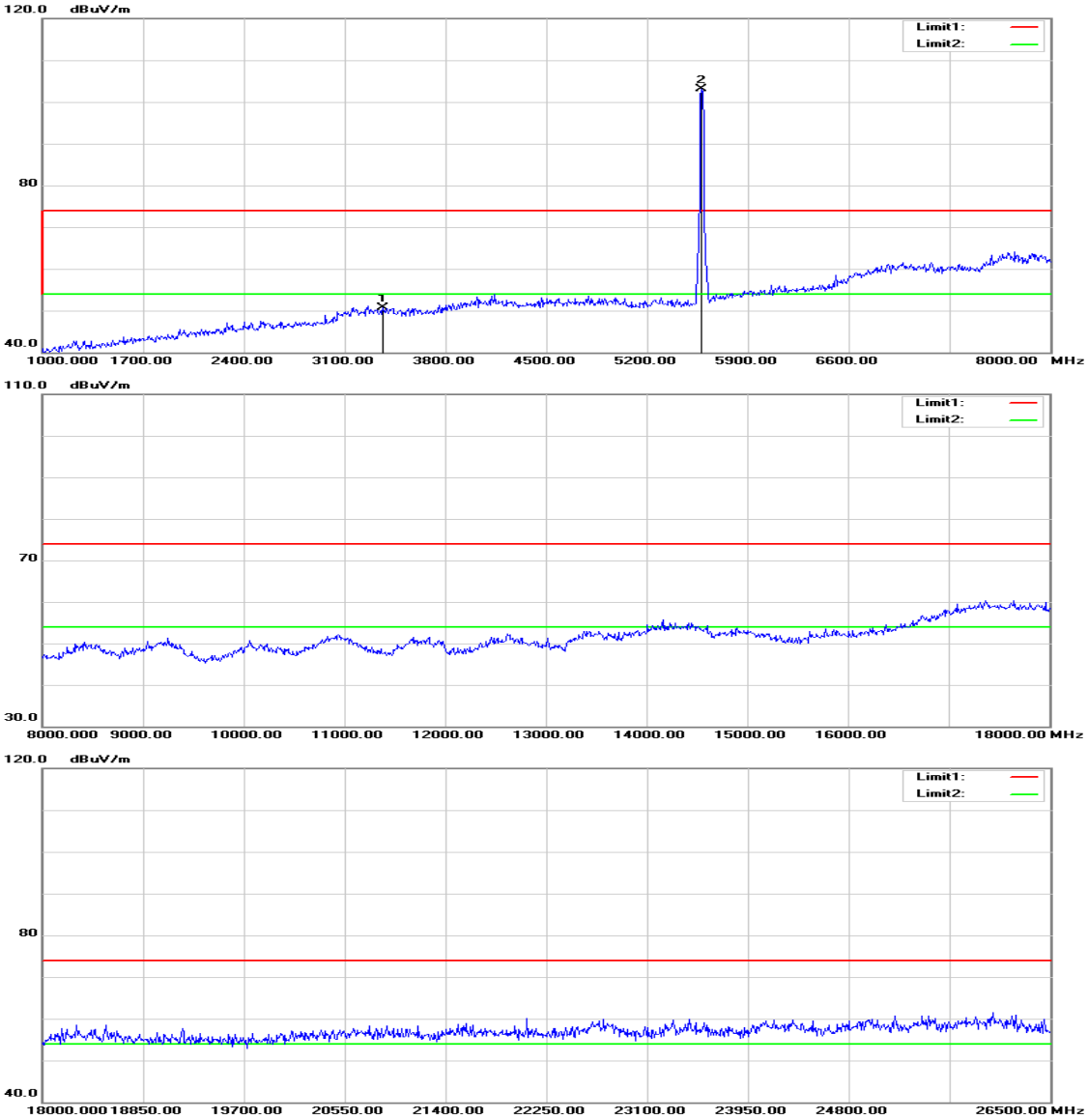
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3625.000	50.60	0.18	50.78	74.00	-23.22	peak	V
N/A							
2428.000	51.71	-3.64	48.07	74.00	-25.93	peak	H
N/A							

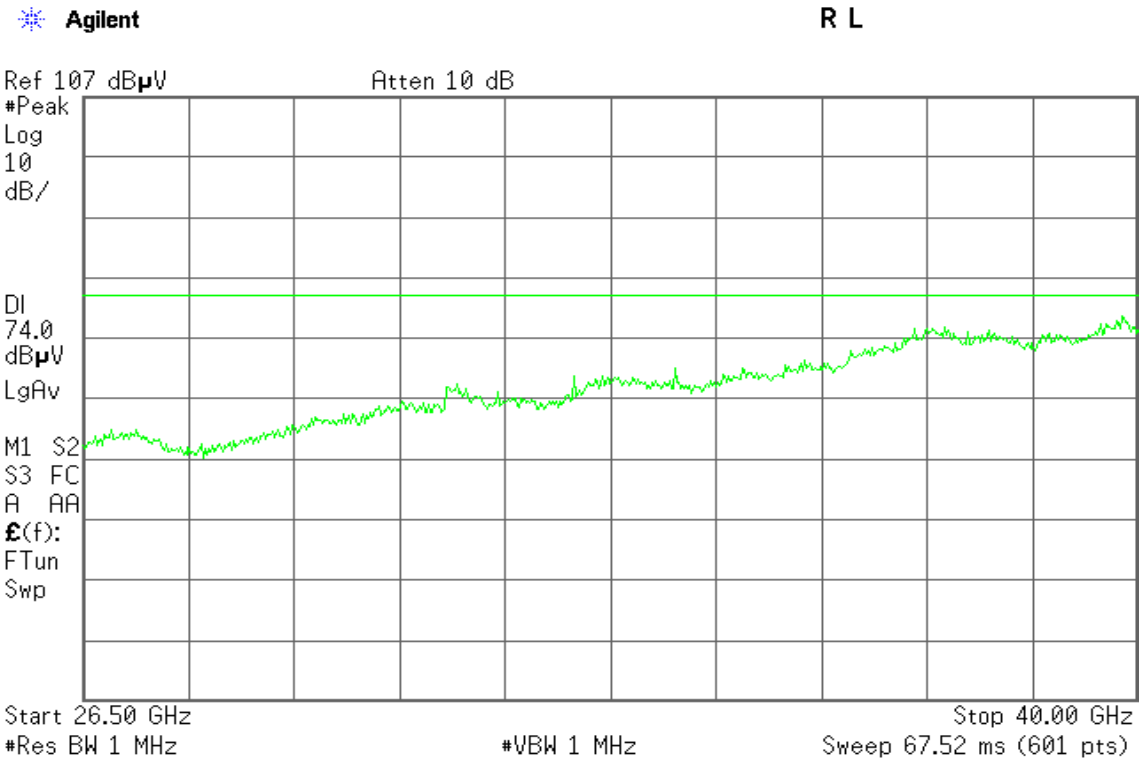
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

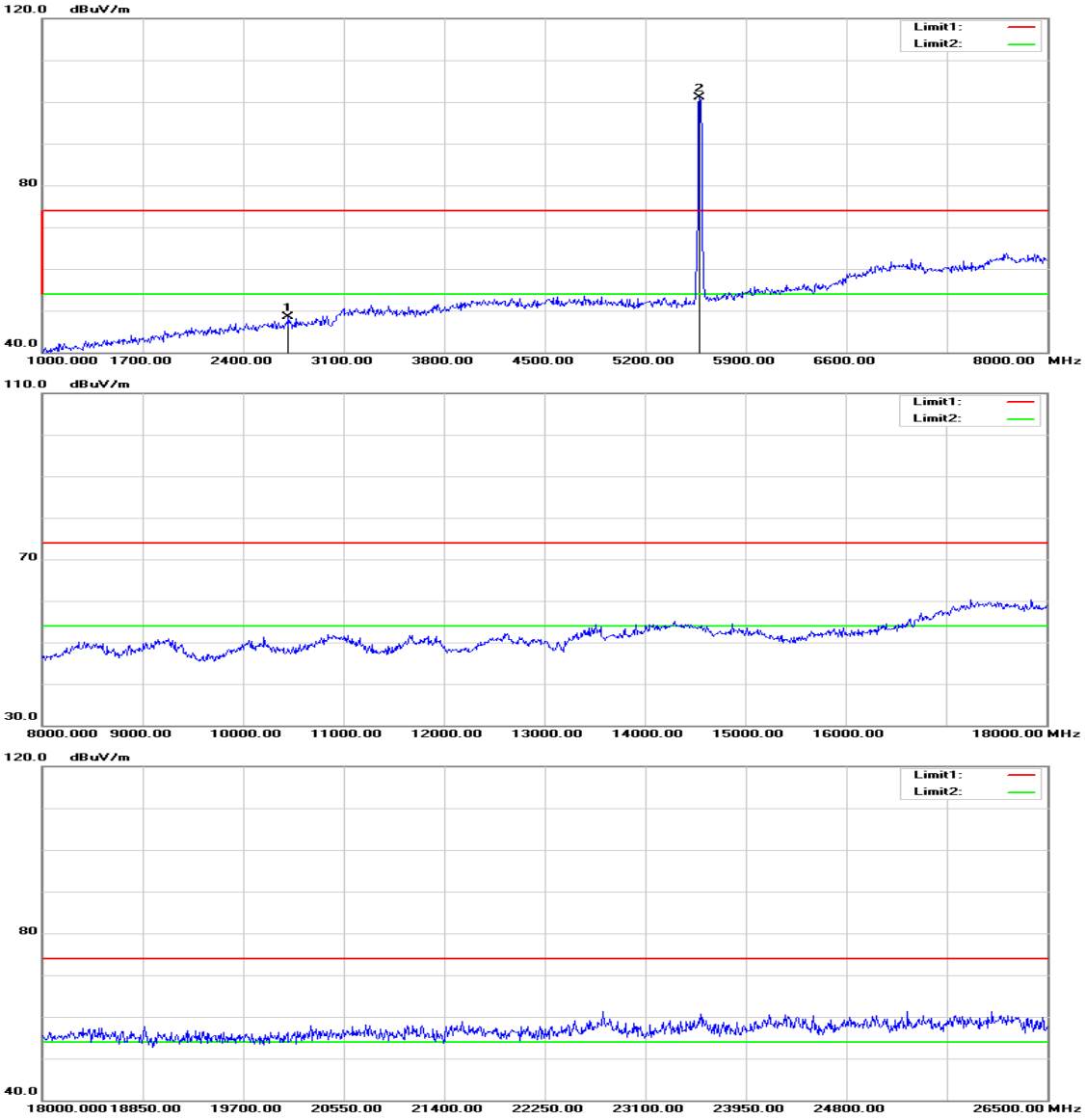
Tx / IEEE 802.11a mode / Mid

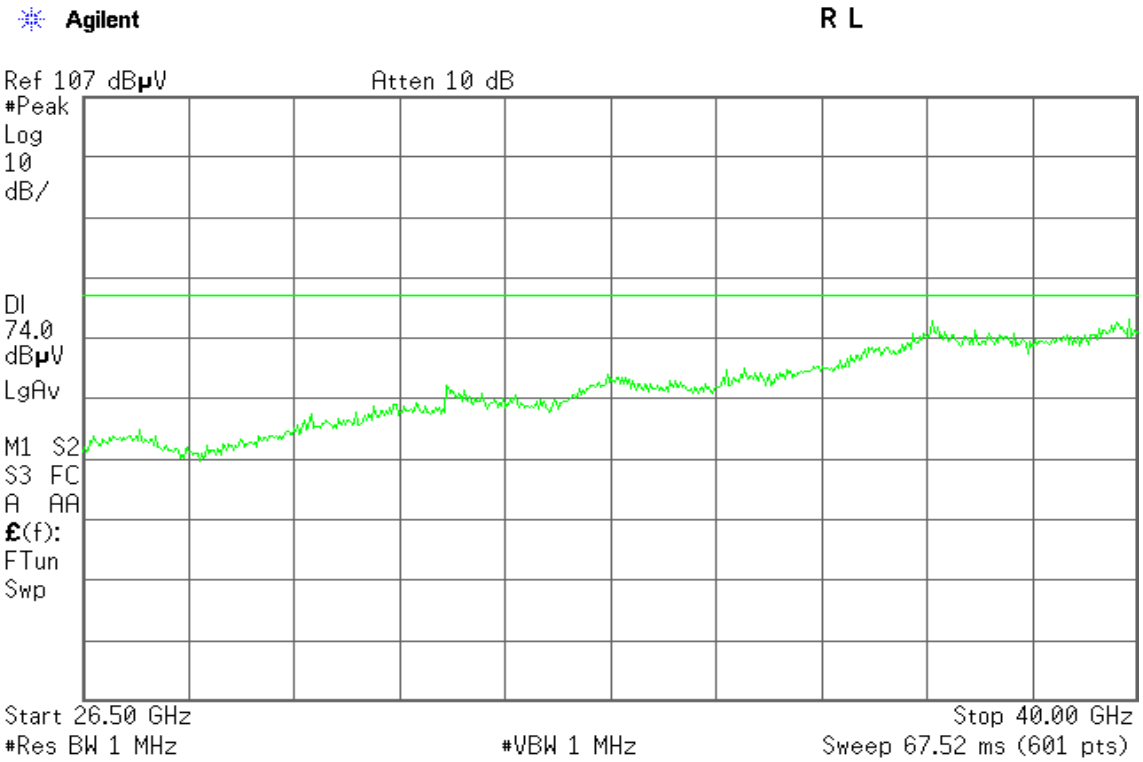
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5500 ~ 5700MHz /CH Mid	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

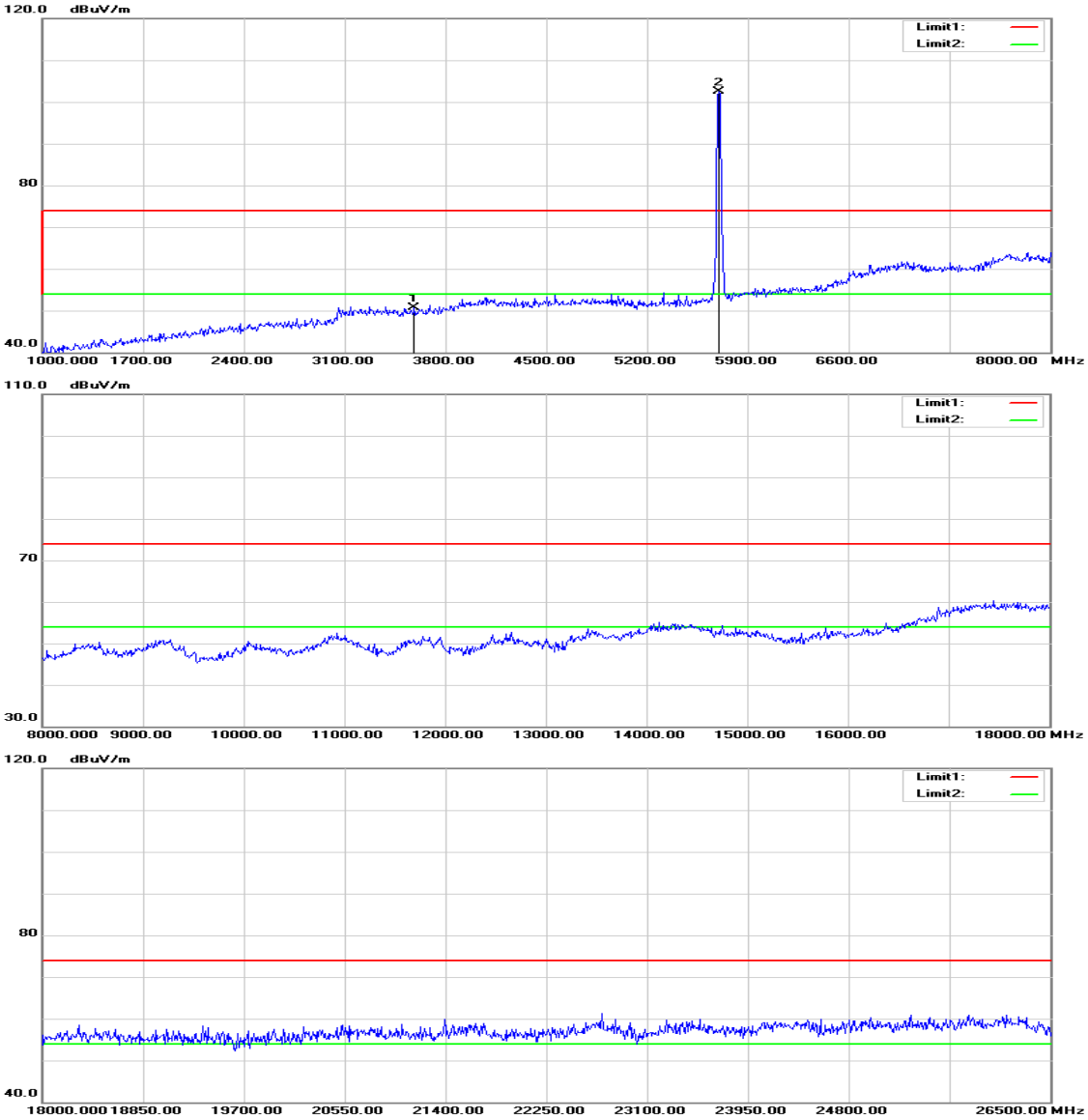
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3366.000	51.75	-1.02	50.73	74.00	-23.27	peak	V
N/A							
2715.000	51.25	-2.80	48.45	74.00	-25.55	peak	H
N/A							

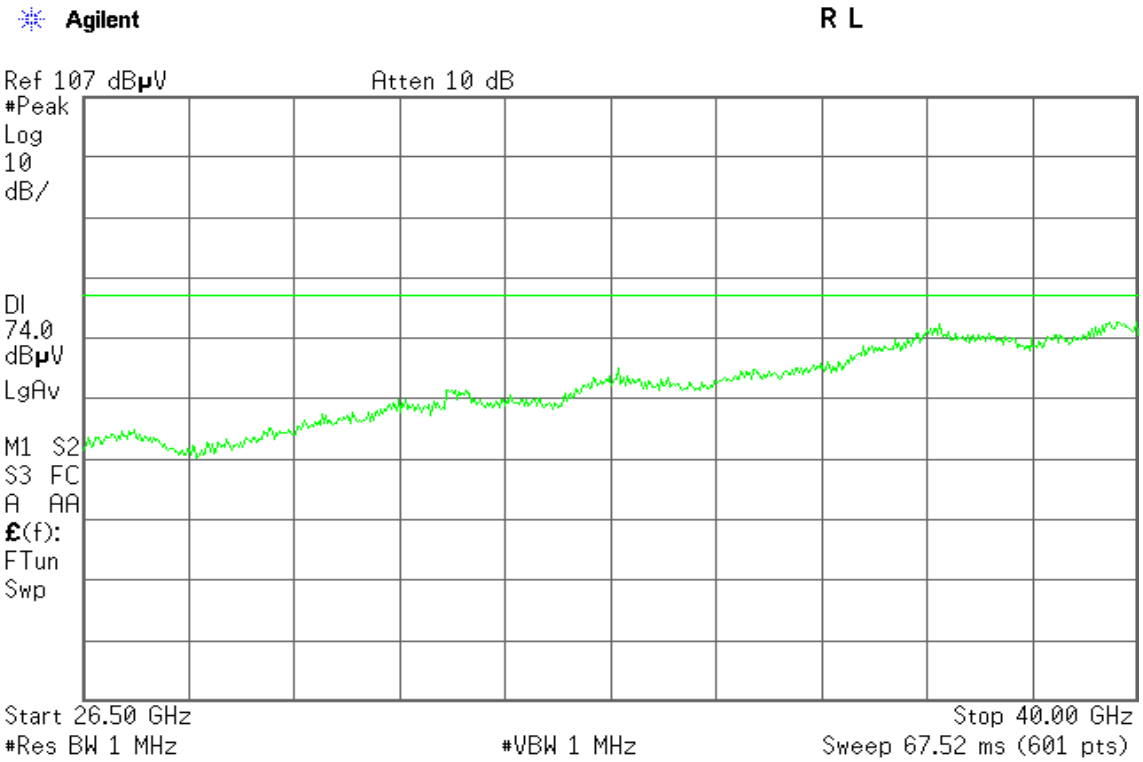
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

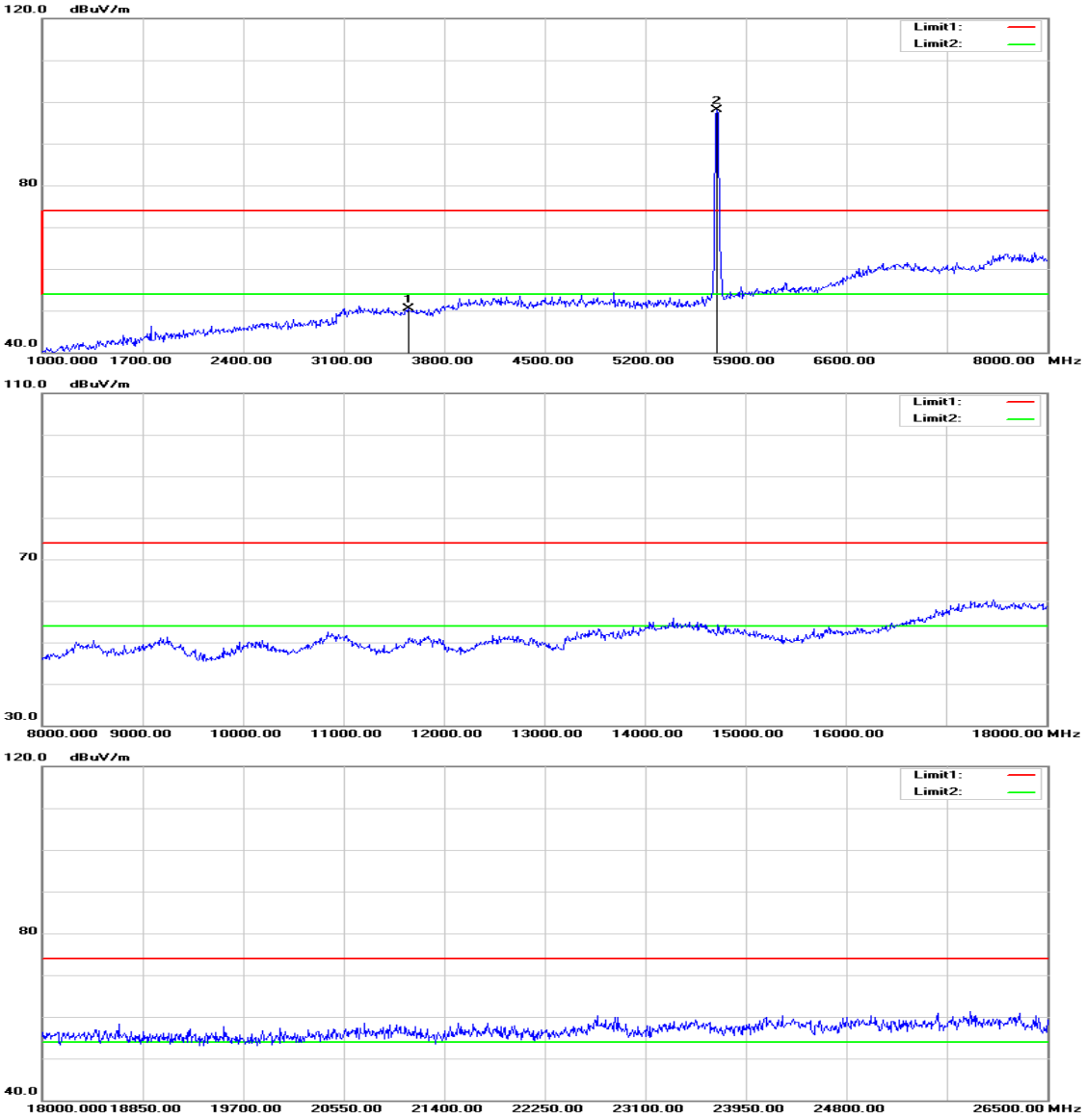
Tx / IEEE 802.11a mode / High

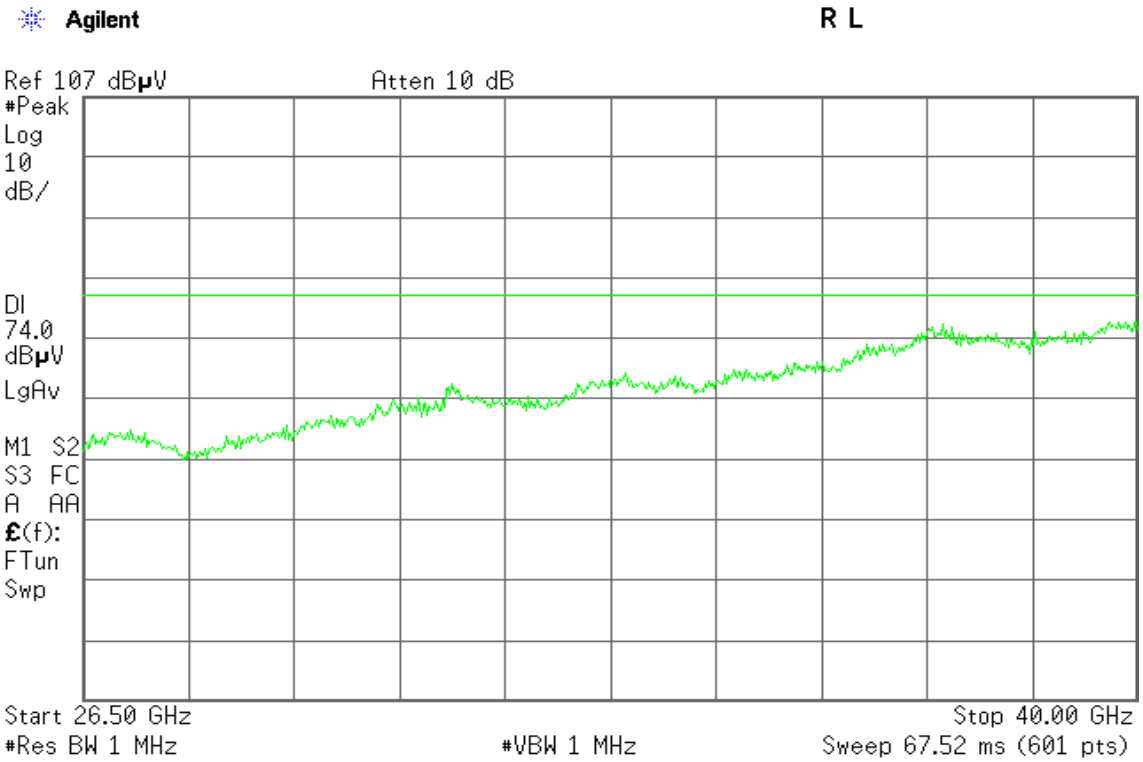
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11a mode / 5500 ~ 5700MHz / CH High	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

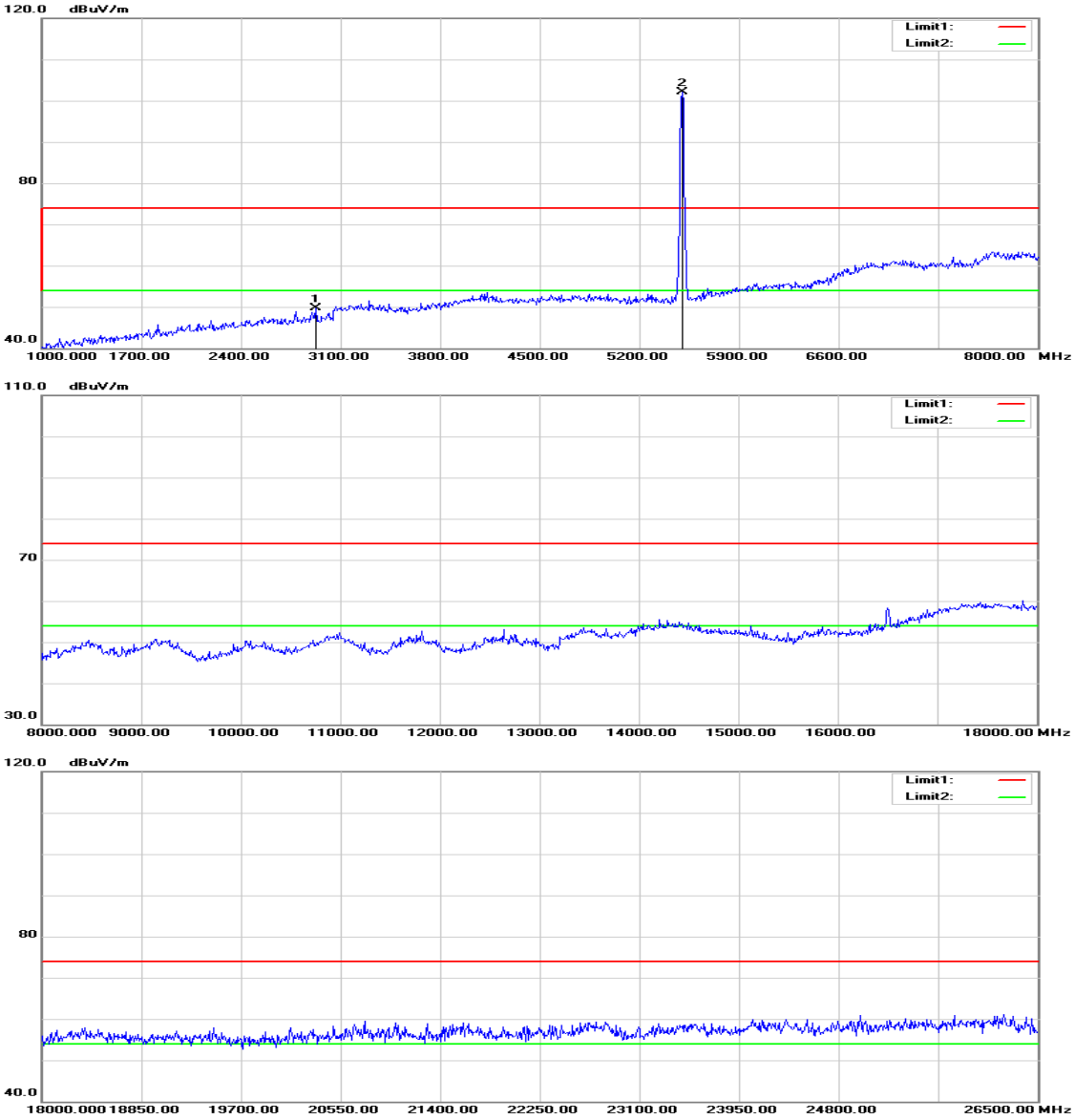
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3583.000	50.70	-0.08	50.62	74.00	-23.38	peak	V
N/A							
3548.000	50.87	-0.29	50.58	74.00	-23.42	peak	H
N/A							

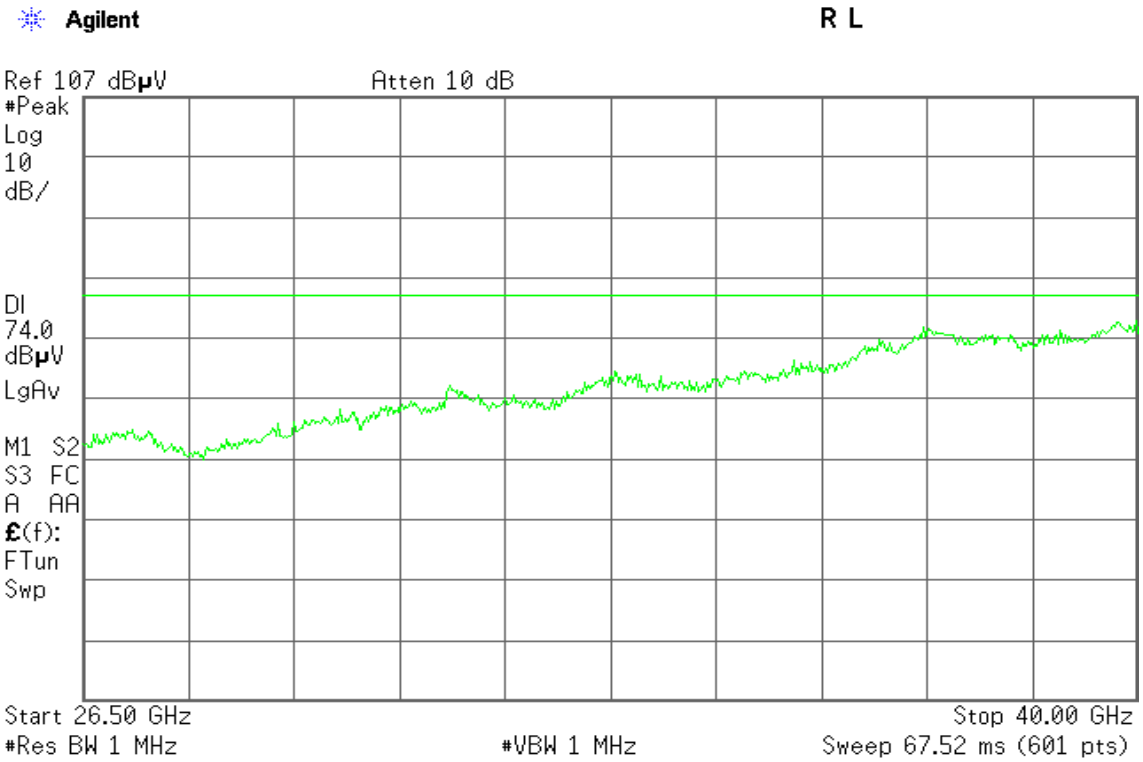
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

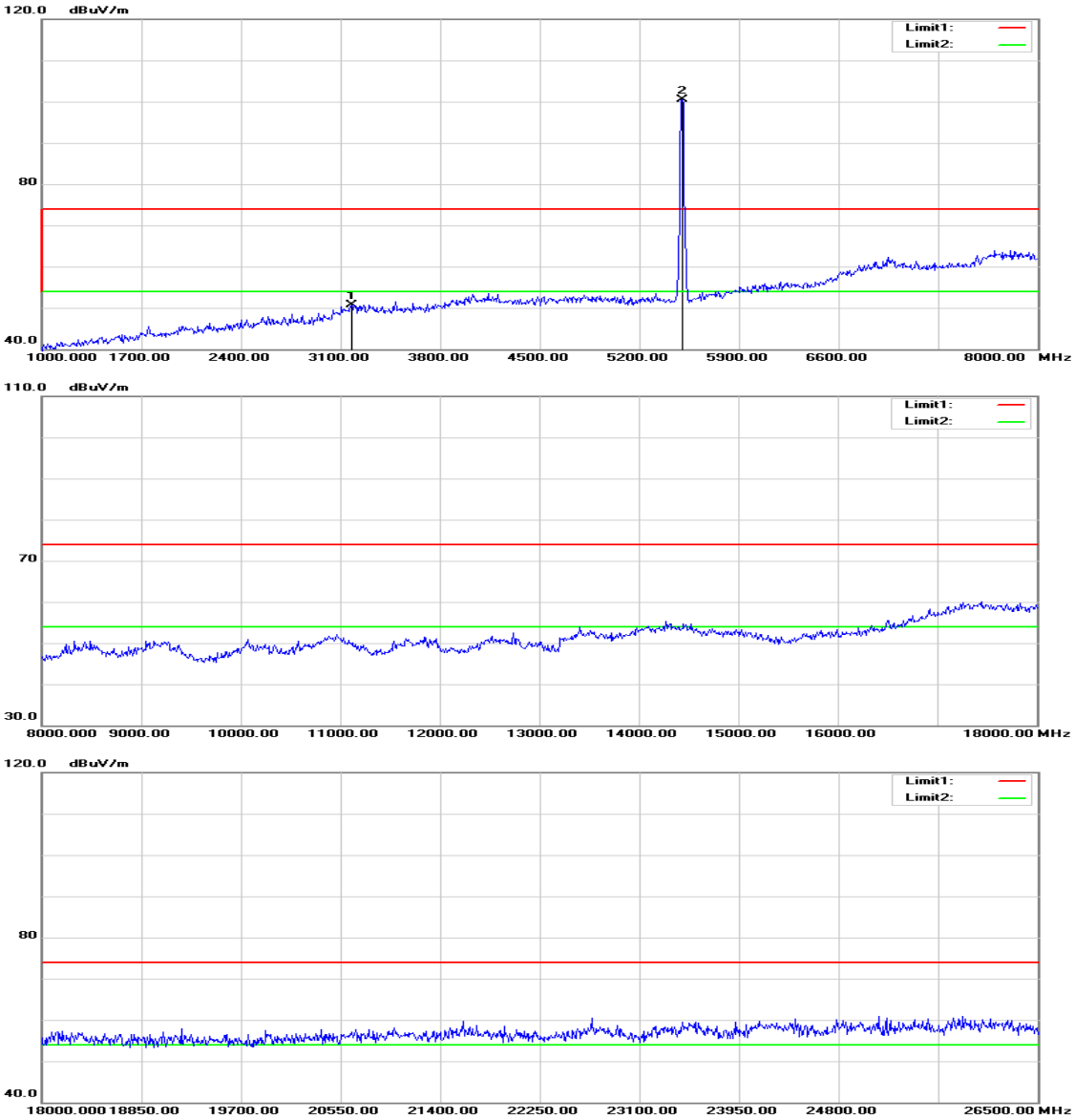
Tx / IEEE 802.11n HT 20 MHz / Low

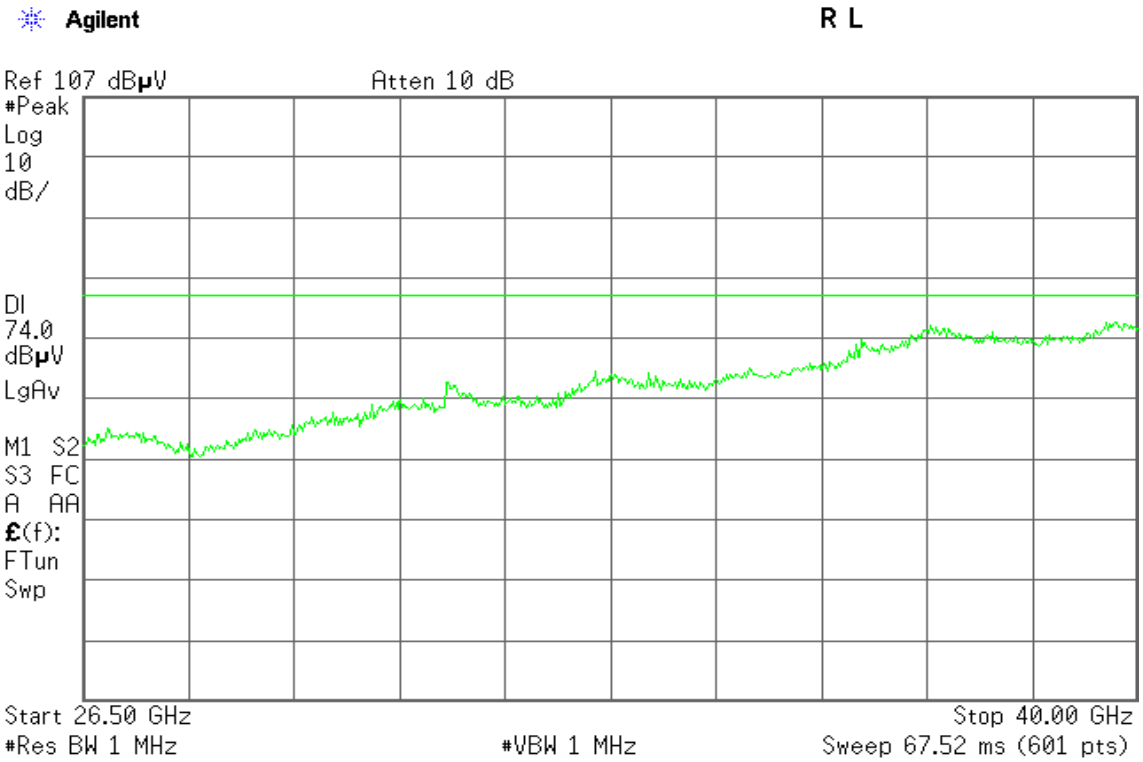
Polarity: Vertical




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal




Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5500 ~ 5700MHz / CH Low	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

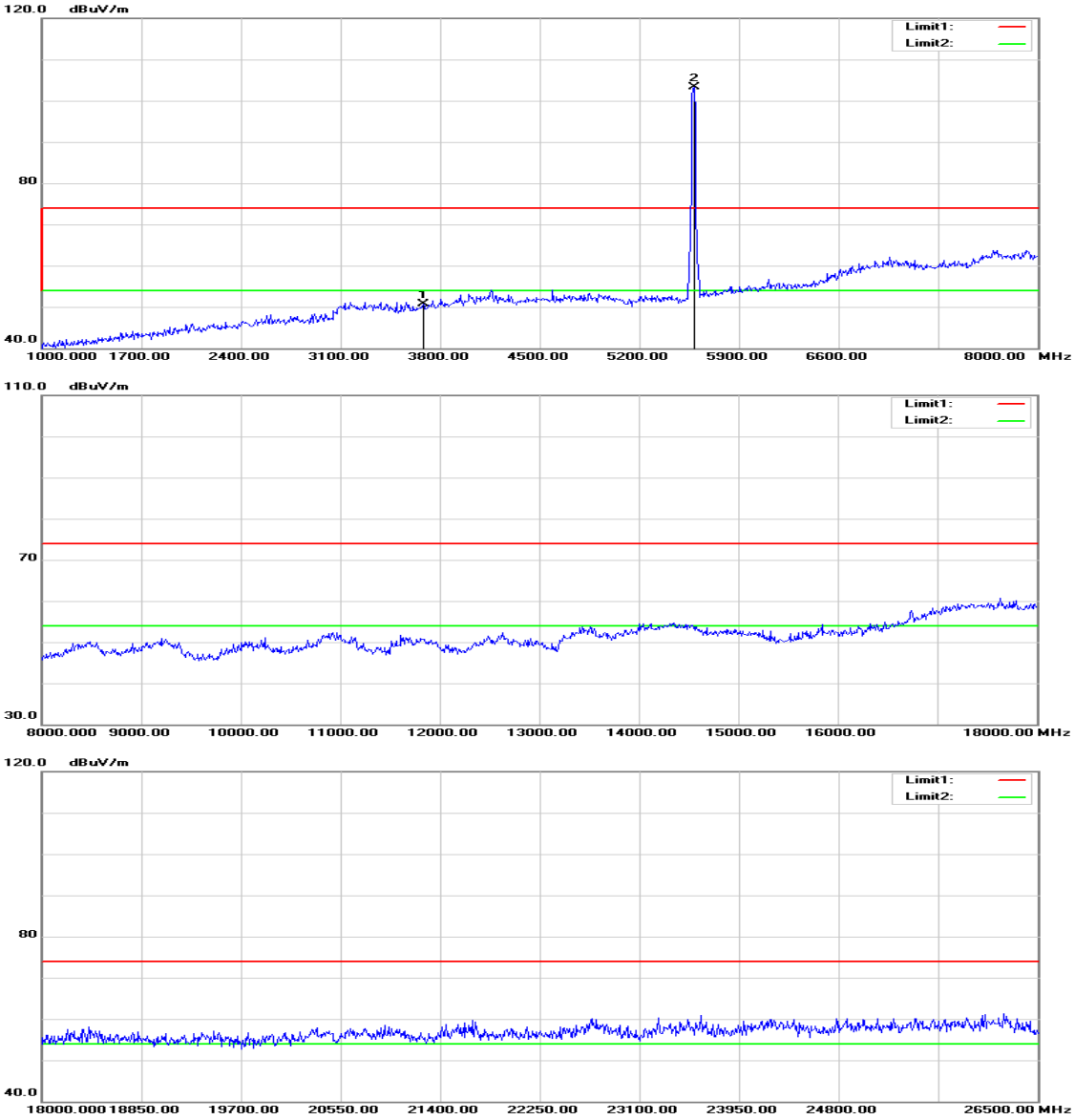
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
2925.000	51.98	-2.37	49.61	74.00	-24.39	peak	V
N/A							
3177.000	52.36	-1.64	50.72	74.00	-23.28	peak	H
N/A							

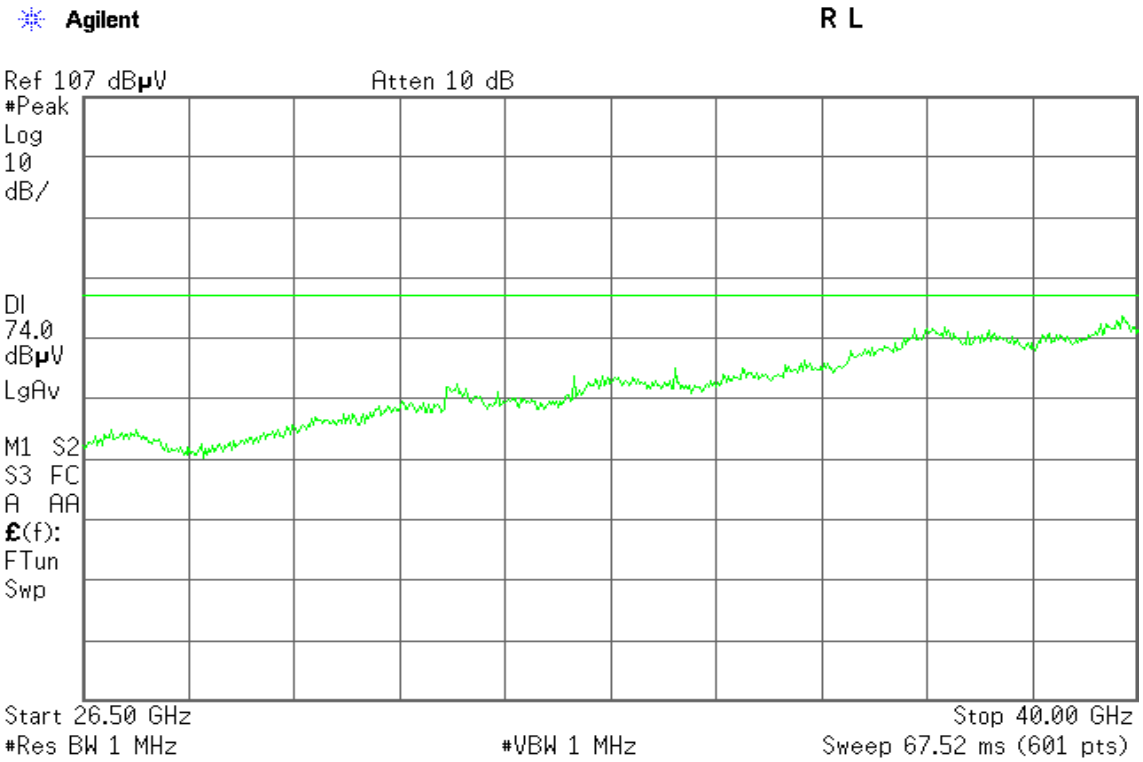
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

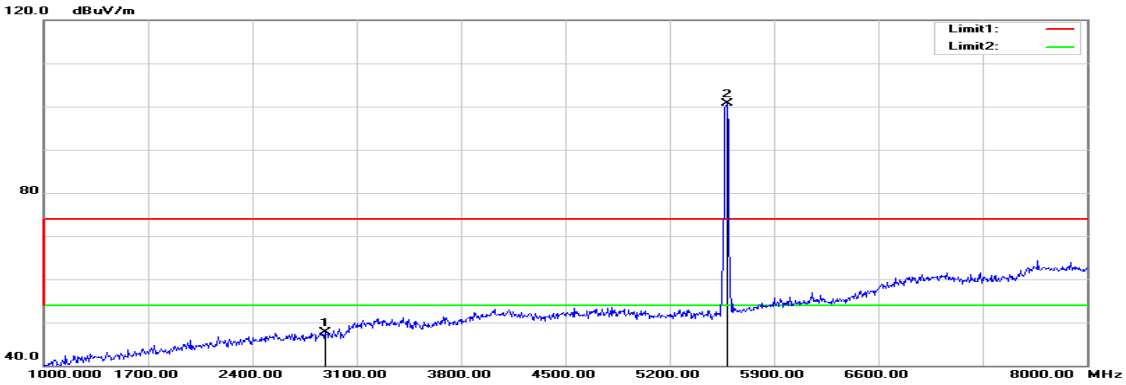
Tx / IEEE 802.11n HT 20 MHz / Mid

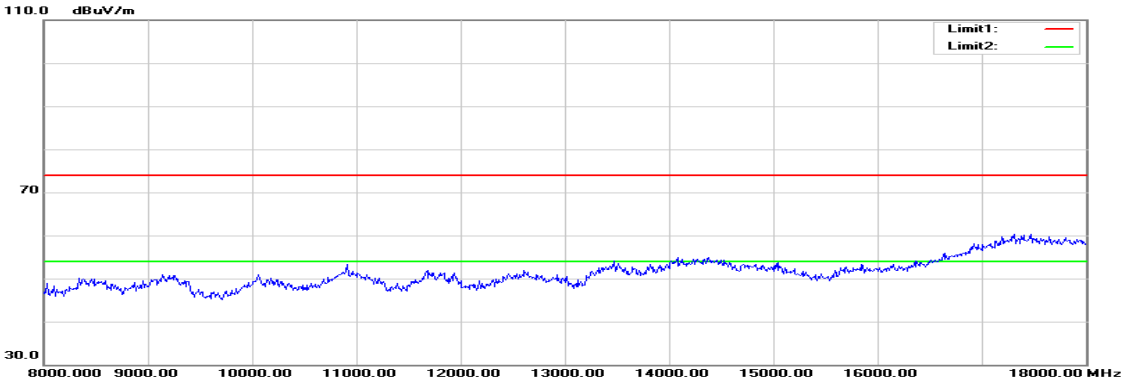
Polarity: Vertical

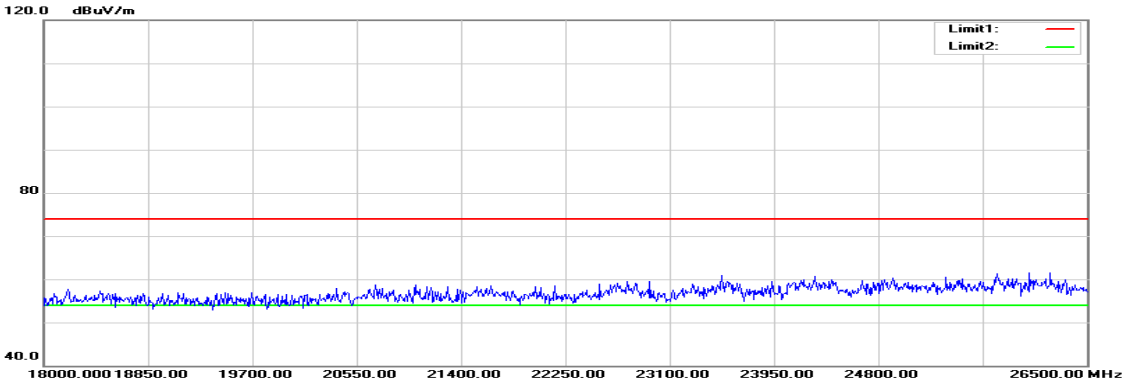


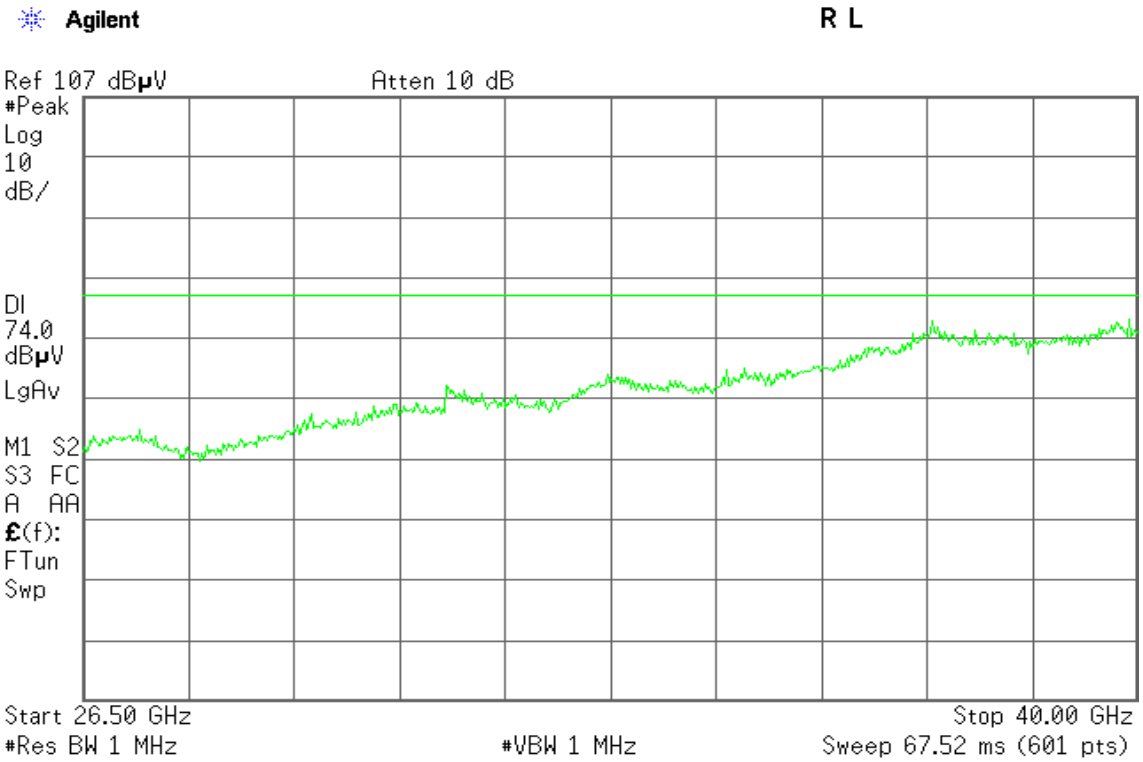

Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal








Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5500 ~ 5700MHz / CH Mid	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

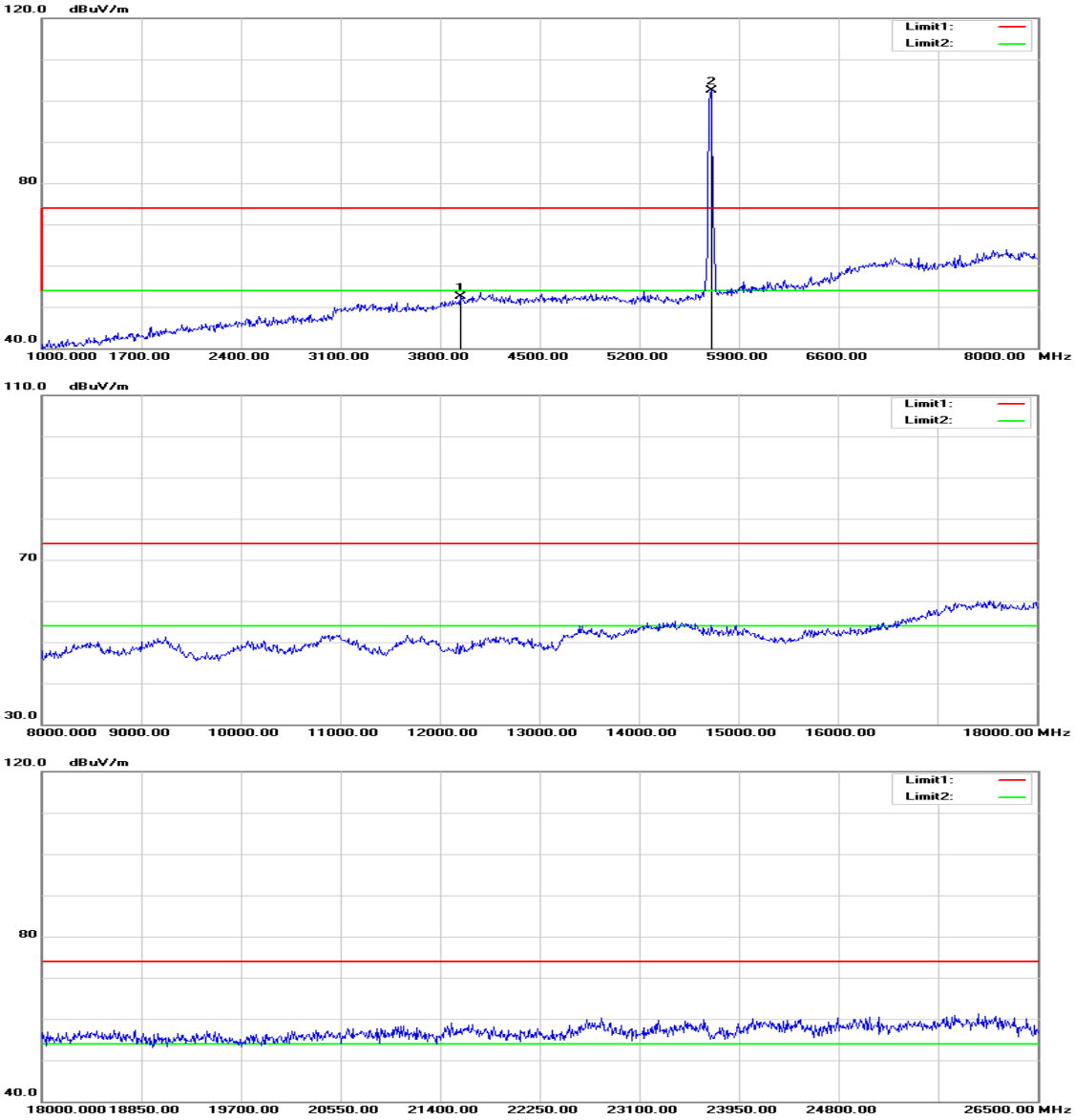
Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3681.000	50.23	0.52	50.75	74.00	-23.25	peak	V
N/A							
2890.000	50.08	-2.44	47.64	74.00	-26.36	peak	H
N/A							

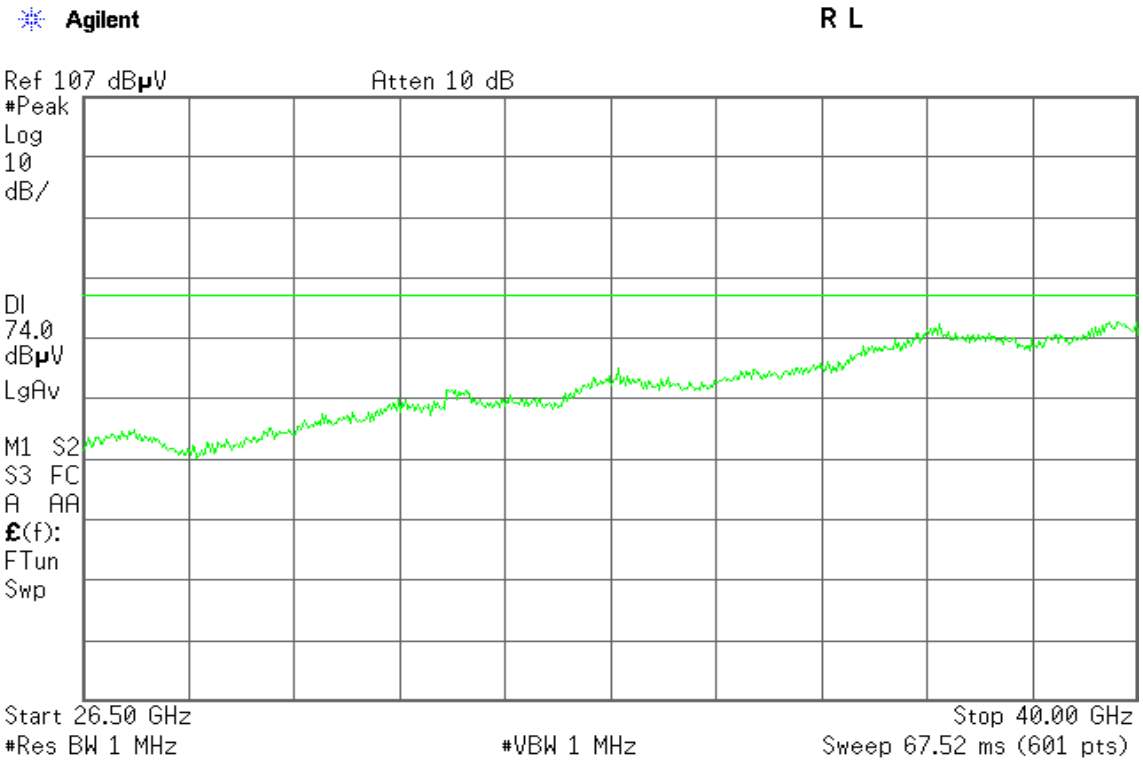
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

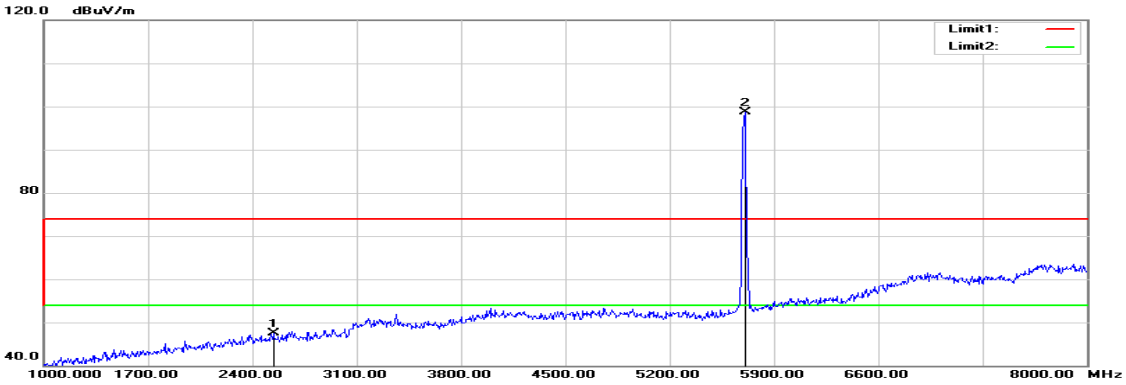
Tx / IEEE 802.11n HT 20 MHz / High

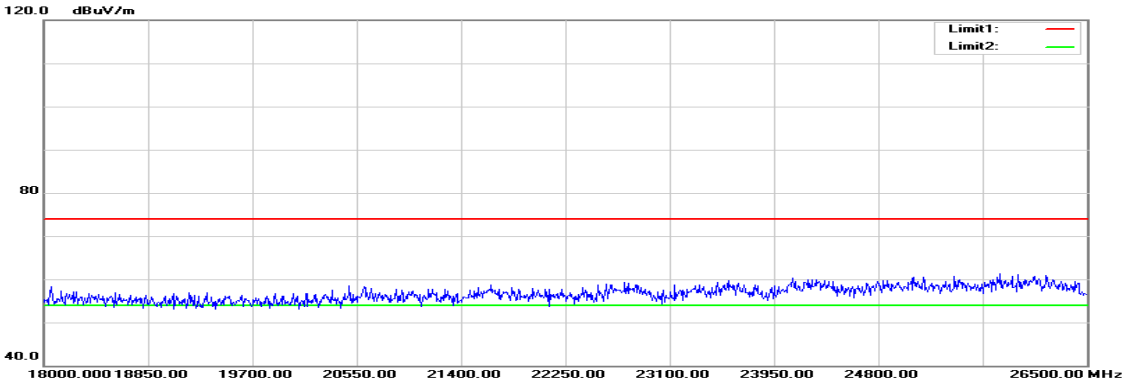
Polarity: Vertical

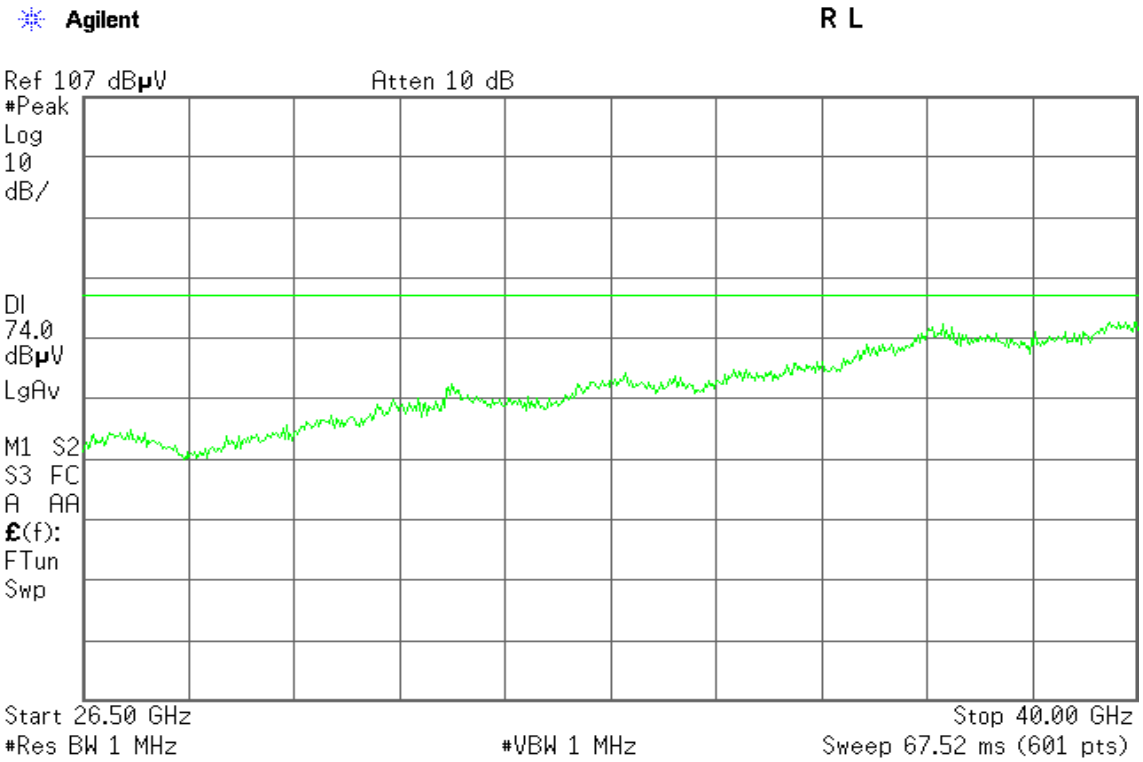



Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Polarity: Horizontal






Agilent
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Dl
74.0
dBµV
LgAv
M1 S2
S3 FC
A AA
£(f):
FTun
Swp
Start 26.50 GHz
Stop 40.00 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 67.52 ms (601 pts)

Operation Mode:	Tx / IEEE 802.11n HT 20 MHz Channel mode / 5500 ~ 5700MHz / CH High	**Test Date:**	May 15, 2014
Temperature:	27°C	**Tested by:**	David Shu
Humidity:	53 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Pol. (H/V)
3940.000	50.44	2.12	52.56	74.00	-21.44	peak	V
N/A							
2540.000	50.65	-3.17	47.48	74.00	-26.52	peak	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit or as required by the applicant.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

7.7 POWERLINE CONDUCTED EMISSIONS

LIMIT

According to §15.207(a) & RSS-Gen §7.2.4, except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

** Decreases with the logarithm of the frequency.*

Test Configuration

See test photographs attached in Appendix II for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

TEST RESULTS

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Test Data

Operation Mode:	Normal Link	**Test Date:**	May 27, 2014
Temperature:	24°C	**Tested by:**	Moore Cheng
Humidity:	50% RH		

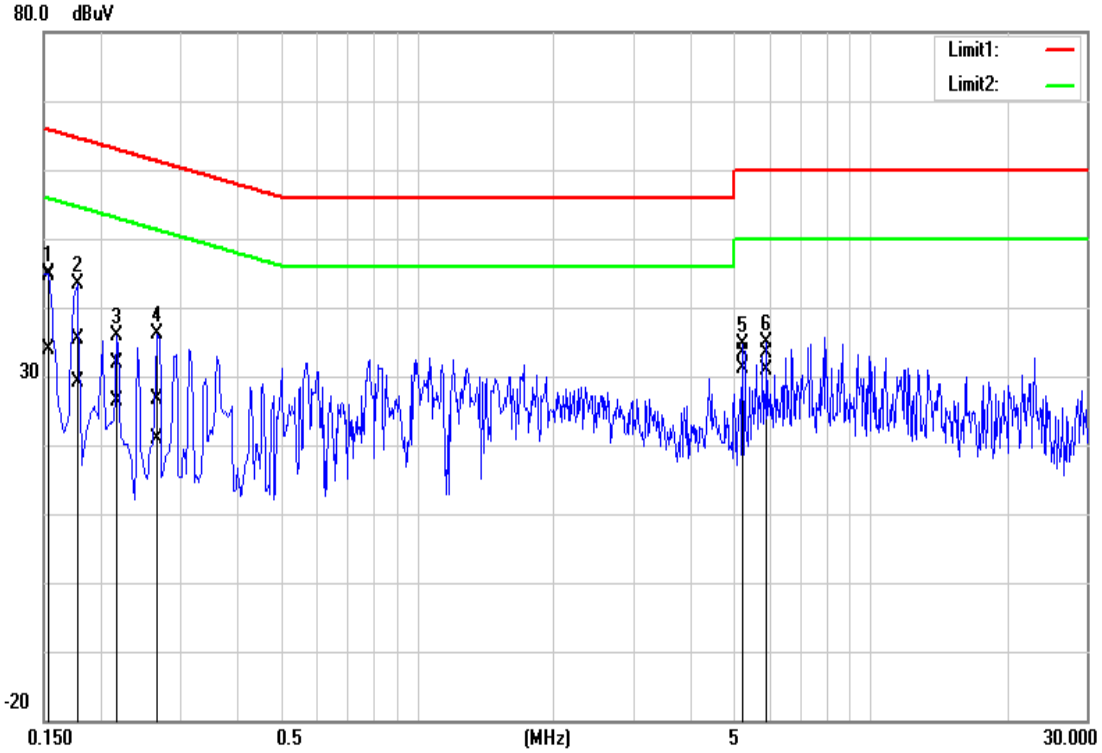
Freq. (MHz)	QP Reading (dBuV)	AV Reading (dBuV)	Corr. factor (dB/m)	QP Result (dBuV/m)	AV Result (dBuV/m)	QP Limit (dBuV)	AV Limit (dBuV)	QP Margin (dB)	AV Margin (dB)	Note
0.1539	34.97	24.26	9.58	44.55	33.84	65.78	55.79	-21.23	-21.95	L1
0.1780	25.85	19.57	9.58	35.43	29.15	64.57	54.58	-29.14	-25.43	L1
0.2180	22.25	16.75	9.58	31.83	26.33	62.89	52.89	-31.06	-26.56	L1
0.2660	17.13	11.24	9.58	26.71	20.82	61.24	51.24	-34.53	-30.42	L1
5.2380	23.82	21.41	9.62	33.44	31.03	60.00	50.00	-26.56	-18.97	L1
5.9100	23.73	21.22	9.63	33.36	30.85	60.00	50.00	-26.64	-19.15	L1
0.1620	28.13	16.38	9.63	37.76	26.01	65.36	55.36	-27.60	-29.35	L2
0.2100	22.60	12.26	9.63	32.23	21.89	63.20	53.21	-30.97	-31.32	L2
2.1140	18.23	11.86	9.65	27.88	21.51	56.00	46.00	-28.12	-24.49	L2
5.2380	25.27	22.77	9.67	34.94	32.44	60.00	50.00	-25.06	-17.56	L2
9.3900	23.72	20.49	9.71	33.43	30.20	60.00	50.00	-26.57	-19.80	L2
23.1299	22.91	21.60	9.79	32.70	31.39	60.00	50.00	-27.30	-18.61	L2

Remark:

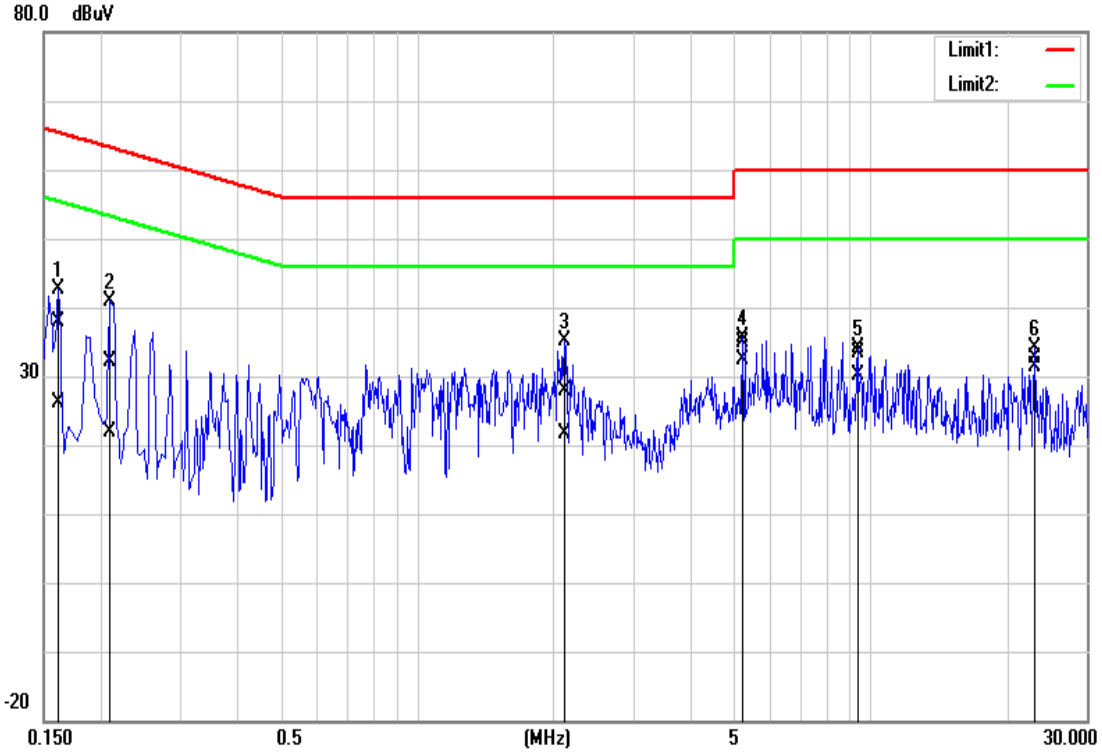
1. *Measuring frequencies from 0.15 MHz to 30MHz.*
2. *The emissions measured in frequency range from 0.15 MHz to 30MHz were made with an instrument using Quasi-peak detector and average detector.*
3. *The IF bandwidth of SPA between 0.15MHz to 30MHz was 10kHz; the IF bandwidth of Test Receiver between 0.15MHz to 30MHz was 9kHz;*
4. *L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)*

Test Plots

Conducted emissions (Line 1)



Conducted emissions (Line 2)

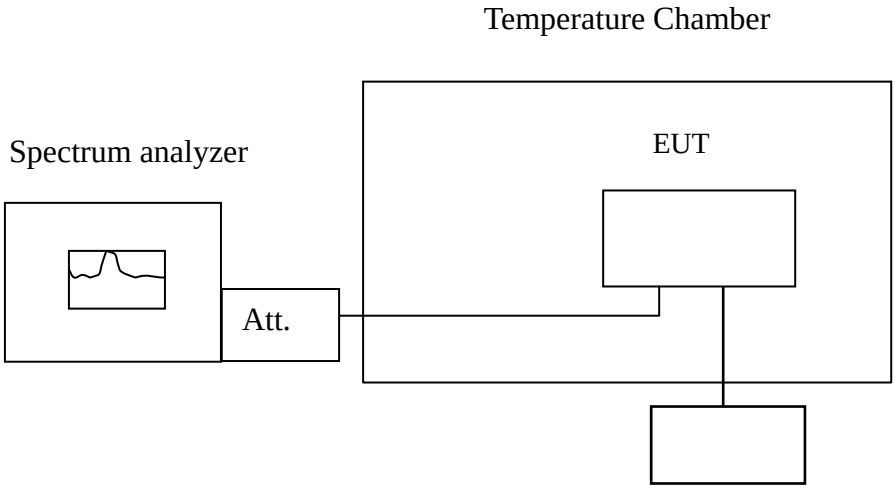


7.8 FREQUENCY STABILITY

LIMIT

According to §15.407(g) & RSS-GEN, manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to –20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

TEST RESULTS

No non-compliance noted.

IEEE 802.11a mode / 5180 ~ 5240 MHz:

CH Low

Operating Frequency: 5180 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5179.971922	5150~5250	Pass
40	110	5180.017425	5150~5250	Pass
30	110	5180.017814	5150~5250	Pass
20	110	5179.972595	5150~5250	Pass
10	110	5180.006330	5150~5250	Pass
0	110	5180.013179	5150~5250	Pass
-10	110	5179.973117	5150~5250	Pass
-20	110	5180.011279	5150~5250	Pass

Operating Frequency: 5180 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5180.016574	5150~5250	Pass
	110	5180.019547	5150~5250	Pass
	121	5179.991363	5150~5250	Pass

CH Mid

Operating Frequency: 5220 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5219.999319	5150~5250	Pass
40	110	5220.017693	5150~5250	Pass
30	110	5219.994543	5150~5250	Pass
20	110	5220.009433	5150~5250	Pass
10	110	5220.002832	5150~5250	Pass
0	110	5219.997370	5150~5250	Pass
-10	110	5220.015813	5150~5250	Pass
-20	110	5220.001667	5150~5250	Pass

Operating Frequency: 5220 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5219.998551	5150~5250	Pass
	110	5219.987843	5150~5250	Pass
	121	5219.990518	5150~5250	Pass

CH High

Operating Frequency: 5240 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5239.988492	5150~5250	Pass
40	110	5239.989069	5150~5250	Pass
30	110	5239.977121	5150~5250	Pass
20	110	5240.008775	5150~5250	Pass
10	110	5240.019077	5150~5250	Pass
0	110	5239.996633	5150~5250	Pass
-10	110	5240.017787	5150~5250	Pass
-20	110	5240.009597	5150~5250	Pass

Operating Frequency: 5240 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5240.006745	5150~5250	Pass
	110	5239.970727	5150~5250	Pass
	121	5239.972046	5150~5250	Pass

IEEE 802.11n HT 20 MHz Channel mode / 5180 ~ 5240 MHz:

CH Low

Operating Frequency: 5180 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5179.975335	5150~5250	Pass
40	110	5179.984502	5150~5250	Pass
30	110	5180.014165	5150~5250	Pass
20	110	5180.004991	5150~5250	Pass
10	110	5179.995901	5150~5250	Pass
0	110	5179.992770	5150~5250	Pass
-10	110	5179.991701	5150~5250	Pass
-20	110	5179.992407	5150~5250	Pass

Operating Frequency: 5180 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5179.993884	5150~5250	Pass
	110	5179.982006	5150~5250	Pass
	121	5180.019782	5150~5250	Pass

CH Mid

Operating Frequency: 5220 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5220.008565	5150~5250	Pass
40	110	5219.970284	5150~5250	Pass
30	110	5220.020086	5150~5250	Pass
20	110	5220.004974	5150~5250	Pass
10	110	5220.007919	5150~5250	Pass
0	110	5220.019699	5150~5250	Pass
-10	110	5219.994178	5150~5250	Pass
-20	110	5219.999104	5150~5250	Pass

Operating Frequency: 5220 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5219.998766	5150~5250	Pass
	110	5219.993425	5150~5250	Pass
	121	5219.975654	5150~5250	Pass

CH High

Operating Frequency: 5240 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5239.998147	5150~5250	Pass
40	110	5239.982682	5150~5250	Pass
30	110	5240.008071	5150~5250	Pass
20	110	5240.018907	5150~5250	Pass
10	110	5240.009527	5150~5250	Pass
0	110	5239.997012	5150~5250	Pass
-10	110	5240.017271	5150~5250	Pass
-20	110	5240.015790	5150~5250	Pass

Operating Frequency: 5240 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5239.971796	5150~5250	Pass
	110	5240.020121	5150~5250	Pass
	121	5239.991293	5150~5250	Pass

IEEE 802.11a mode / 5260 ~ 5320 MHz:

CH Low

Operating Frequency: 5260 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5259.978042	5250~5350	Pass
40	110	5260.019034	5250~5350	Pass
30	110	5259.987870	5250~5350	Pass
20	110	5260.019849	5250~5350	Pass
10	110	5260.012137	5250~5350	Pass
0	110	5260.019873	5250~5350	Pass
-10	110	5260.011067	5250~5350	Pass
-20	110	5259.987653	5250~5350	Pass

Operating Frequency: 5260 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5260.020774	5250~5350	Pass
	110	5259.994173	5250~5350	Pass
	121	5259.989295	5250~5350	Pass

CH Mid

Operating Frequency: 5280 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5280.011953	5250~5350	Pass
40	110	5279.978941	5250~5350	Pass
30	110	5279.991199	5250~5350	Pass
20	110	5279.991521	5250~5350	Pass
10	110	5280.013282	5250~5350	Pass
0	110	5280.004532	5250~5350	Pass
-10	110	5280.008589	5250~5350	Pass
-20	110	5279.997713	5250~5350	Pass

Operating Frequency: 5280 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5279.970060	5250~5350	Pass
	110	5279.979088	5250~5350	Pass
	121	5279.993675	5250~5350	Pass

CH High

Operating Frequency: 5320 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5319.986255	5250~5350	Pass
40	110	5320.008301	5250~5350	Pass
30	110	5319.988505	5250~5350	Pass
20	110	5320.005926	5250~5350	Pass
10	110	5319.986485	5250~5350	Pass
0	110	5320.010018	5250~5350	Pass
-10	110	5319.972449	5250~5350	Pass
-20	110	5319.982162	5250~5350	Pass

Operating Frequency: 5320 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5320.001075	5250~5350	Pass
	110	5319.97268	5250~5350	Pass
	121	5319.997661	5250~5350	Pass

IEEE 802.11n HT 20 MHz Channel mode / 5260 ~ 5320 MHz:

CH Low

Operating Frequency: 5260 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5259.986233	5250~5350	Pass
40	110	5260.012025	5250~5350	Pass
30	110	5259.970888	5250~5350	Pass
20	110	5259.991421	5250~5350	Pass
10	110	5259.970003	5250~5350	Pass
0	110	5259.988172	5250~5350	Pass
-10	110	5259.974118	5250~5350	Pass
-20	110	5259.983993	5250~5350	Pass

Operating Frequency: 5260 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5260.00122	5250~5350	Pass
	110	5260.007581	5250~5350	Pass
	121	5259.984747	5250~5350	Pass

CH Mid

Operating Frequency: 5280 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5279.972809	5250~5350	Pass
40	110	5280.013123	5250~5350	Pass
30	110	5280.005181	5250~5350	Pass
20	110	5279.975308	5250~5350	Pass
10	110	5279.989230	5250~5350	Pass
0	110	5279.999472	5250~5350	Pass
-10	110	5279.995252	5250~5350	Pass
-20	110	5280.010085	5250~5350	Pass

Operating Frequency: 5280 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5279.98545	5250~5350	Pass
	110	5279.980609	5250~5350	Pass
	121	5279.997643	5250~5350	Pass

CH High

Operating Frequency: 5320 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5320.019227	5250~5350	Pass
40	110	5319.998001	5250~5350	Pass
30	110	5319.994047	5250~5350	Pass
20	110	5319.982087	5250~5350	Pass
10	110	5320.012679	5250~5350	Pass
0	110	5320.015739	5250~5350	Pass
-10	110	5320.006926	5250~5350	Pass
-20	110	5320.020184	5250~5350	Pass

Operating Frequency: 5320 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5319.992578	5250~5350	Pass
	110	5319.99432	5250~5350	Pass
	121	5319.987323	5250~5350	Pass

IEEE 802.11a mode / 5500 ~ 5700 MHz:

CH Low

Operating Frequency: 5500 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5500.013695	5470~5725	Pass
40	110	5500.015921	5470~5725	Pass
30	110	5499.987370	5470~5725	Pass
20	110	5500.012110	5470~5725	Pass
10	110	5499.987128	5470~5725	Pass
0	110	5499.970108	5470~5725	Pass
-10	110	5500.001836	5470~5725	Pass
-20	110	5500.009347	5470~5725	Pass

Operating Frequency: 5500 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5500.003171	5470~5725	Pass
	110	5499.98777	5470~5725	Pass
	121	5499.989752	5470~5725	Pass

CH Mid

Operating Frequency: 5580 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5579.990266	5470~5725	Pass
40	110	5580.007508	5470~5725	Pass
30	110	5580.001764	5470~5725	Pass
20	110	5580.015784	5470~5725	Pass
10	110	5579.992455	5470~5725	Pass
0	110	5579.975132	5470~5725	Pass
-10	110	5580.016665	5470~5725	Pass
-20	110	5579.987234	5470~5725	Pass

Operating Frequency: 5580 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5580.00088	5470~5725	Pass
	110	5579.991264	5470~5725	Pass
	121	5579.988449	5470~5725	Pass

CH High

Operating Frequency: 5700 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5699.998322	5470~5725	Pass
40	110	5699.984800	5470~5725	Pass
30	110	5699.973065	5470~5725	Pass
20	110	5700.006088	5470~5725	Pass
10	110	5700.018320	5470~5725	Pass
0	110	5700.011116	5470~5725	Pass
-10	110	5699.986972	5470~5725	Pass
-20	110	5700.001364	5470~5725	Pass

Operating Frequency: 5700 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5699.982061	5470~5725	Pass
	110	5699.99775	5470~5725	Pass
	121	5700.006034	5470~5725	Pass

IEEE 802.11n HT 20 MHz Channel mode / 5500 ~ 5700 MHz:

CH Low

Operating Frequency: 5500 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5499.990389	5470~5725	Pass
40	110	5500.009124	5470~5725	Pass
30	110	5500.000945	5470~5725	Pass
20	110	5499.970937	5470~5725	Pass
10	110	5499.970844	5470~5725	Pass
0	110	5500.001117	5470~5725	Pass
-10	110	5499.975272	5470~5725	Pass
-20	110	5499.999240	5470~5725	Pass

Operating Frequency: 5500 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5500.001826	5470~5725	Pass
	110	5499.996109	5470~5725	Pass
	121	5500.019698	5470~5725	Pass

CH Mid

Operating Frequency: 5580 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5579.974422	5470~5725	Pass
40	110	5580.000505	5470~5725	Pass
30	110	5580.009855	5470~5725	Pass
20	110	5579.991959	5470~5725	Pass
10	110	5579.990597	5470~5725	Pass
0	110	5580.007806	5470~5725	Pass
-10	110	5579.975456	5470~5725	Pass
-20	110	5579.989105	5470~5725	Pass

Operating Frequency: 5580 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5580.005608	5470~5725	Pass
	110	5579.975037	5470~5725	Pass
	121	5579.972993	5470~5725	Pass

CH High

Operating Frequency: 5700 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
50	110	5699.989683	5470~5725	Pass
40	110	5699.980945	5470~5725	Pass
30	110	5699.971481	5470~5725	Pass
20	110	5699.983275	5470~5725	Pass
10	110	5700.010431	5470~5725	Pass
0	110	5699.984069	5470~5725	Pass
-10	110	5700.006676	5470~5725	Pass
-20	110	5699.971601	5470~5725	Pass

Operating Frequency: 5700 MHz				
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)	Limit Range	Test Result
20	99	5699.992834	5470~5725	Pass
	110	5699.97896	5470~5725	Pass
	121	5699.99825	5470~5725	Pass

7.9 DYNAMIC FREQUENCY SELECTION

TEST PROCEDURE

According to “KDB 905462 D02 v01r02”

LIMIT

According to §15.407 (h) and FCC 06-96 appendix “compliance measurement procedures for unlicensed-national information infrastructure devices operating in the 5250-5350 MHz and 5470-5725 MHz bands incorporating dynamic frequency selection”.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client(with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Table 3: Interference Threshold values, Master or Client incorporating In-Service

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	60%	30
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

Table 6 – Long Pulse Radar Test Signal

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

DESCRIPTION OF EUT

Overview Of EUT With Respect To §15.407 (H) Requirements

The EUT operates over the 5250-5350 MHz range as a Client Device that does not have radar detection capability.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11a architecture, with a nominal channel bandwidth of 20 MHz.

The Master Device is a Data Collection Computer, FCC ID: HD5-CV31A1

The rated output power of the Master unit is < 23dBm (EIRP). Therefore the required interference threshold level is -62 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is –62 + 5 = -57dBm.

The calibrated conducted DFS Detection Threshold level is set to -62 dBm. The tested level is lower than the required level hence it provides margin to the limit.

Manufacturer’s Statement Regarding Uniform Channel Spreading

The end product implements an automatic channel selection feature at startup such that operation commences on channels distributed across the entire set of allowed 5GHz channels. This feature will ensure uniform spreading is achieved while avoiding non-allowed channels due to prior radar events.

TEST AND MEASUREMENT SYSTEM

System Overview

The measurement system is based on a conducted test method.

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

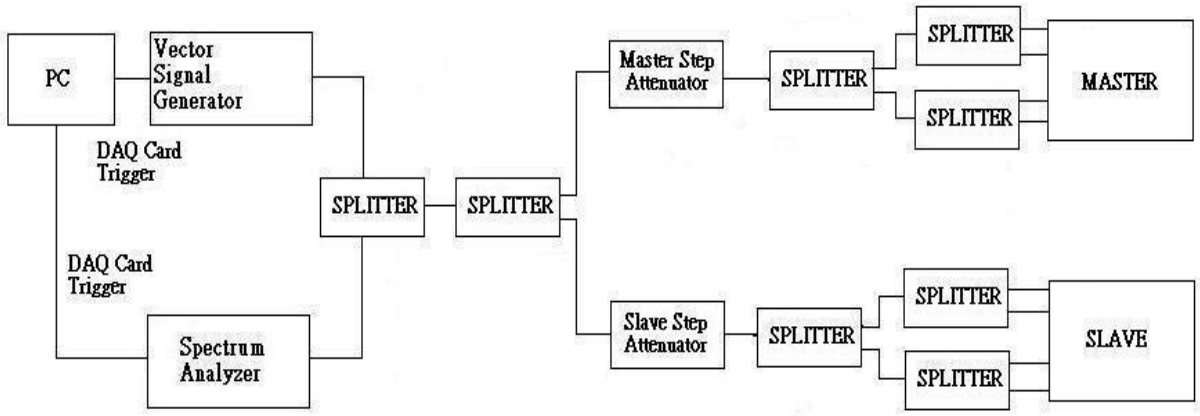
The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold. The time-domain resolution is 3 msec / bin with a 24 second sweep time, meeting the 22 second long pulse reporting criteria and allowing a minimum of 10 seconds after the end of the long pulse waveform.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), 50 ohm termination would be removed from the splitter so that connection can be established between splitter and the Master and/or Slave devices.

Conducted Method System Block Diagram



System Calibration

Connect the spectrum analyzer to the test system in place of the master device. Set the signal generator to CW mode. Adjust the amplitude of the signal generator to yield a measured level of –62 dBm on the spectrum analyzer.

Without changing any of the instrument settings, reconnect the spectrum analyzer to the Common port of the Spectrum Analyzer Combiner/Divider and connect a 50 ohm load to the Master Device port of the test system.

Measure the amplitude and calculate the difference from –62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference. Confirm that the signal is displayed at –62 dBm. Readjust the RBW and VBW to 3 MHz, set the span to 10 MHz, and confirm that the signal is still displayed at –62 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

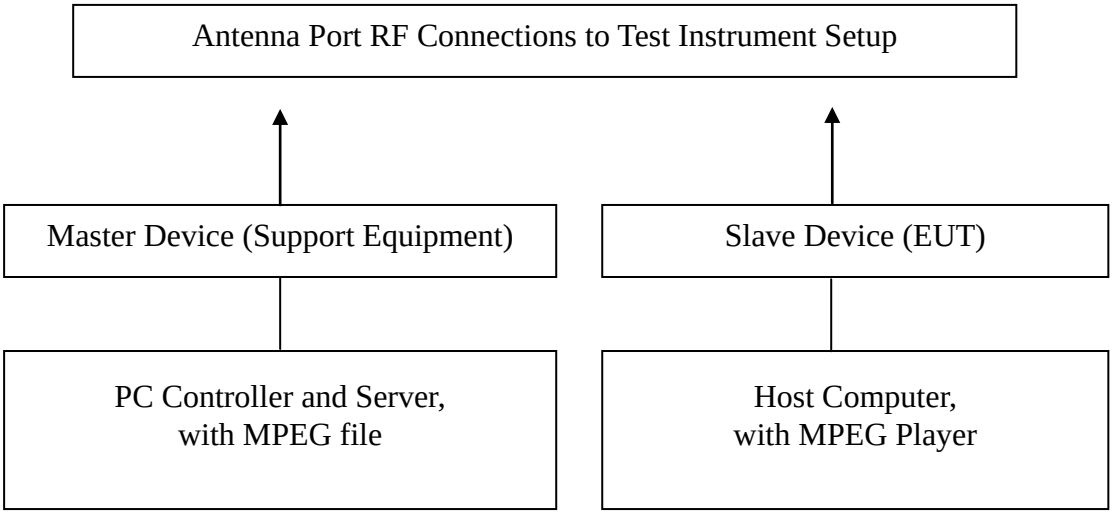
Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.

Adjustment Of Displayed Traffic Level

Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold. Confirm that the displayed traffic is from the Master Device. For Master Device testing confirm that the displayed traffic does not include Slave Device traffic. For Slave Device testing confirm that the displayed traffic does not include Master Device traffic.

If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

Test Setup



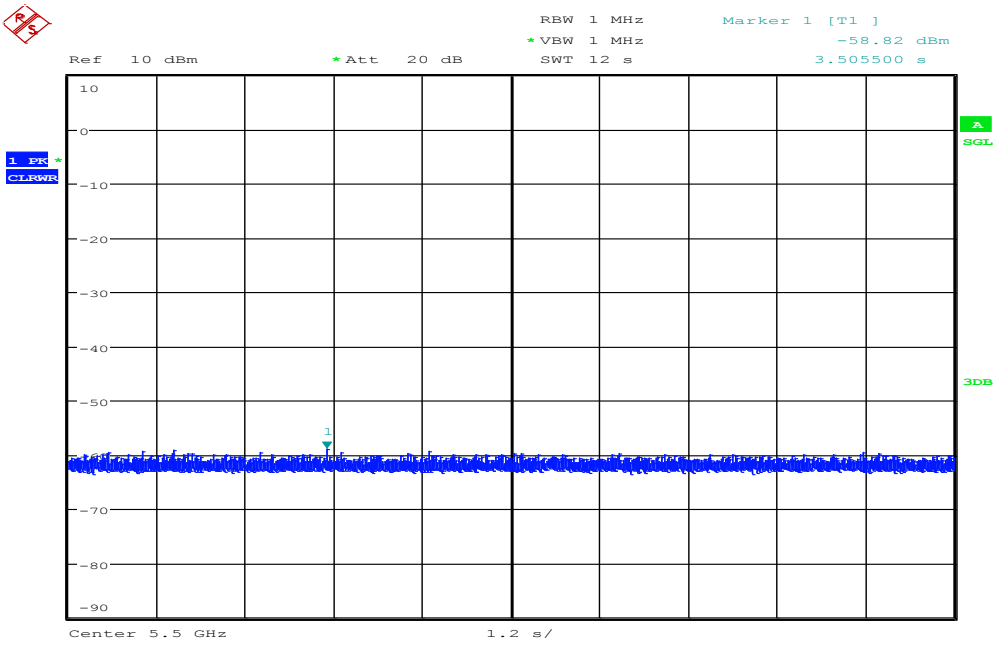
TEST RESULTS

No non-compliance noted

Test Plot

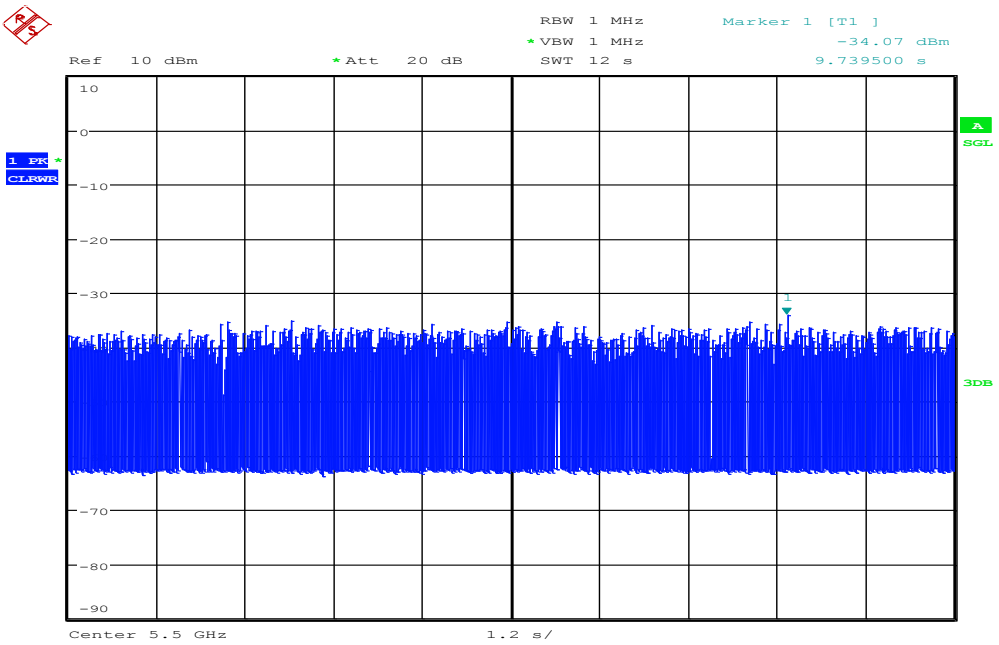
PLOTS OF RADAR WAVEFORMS

Noise Floor



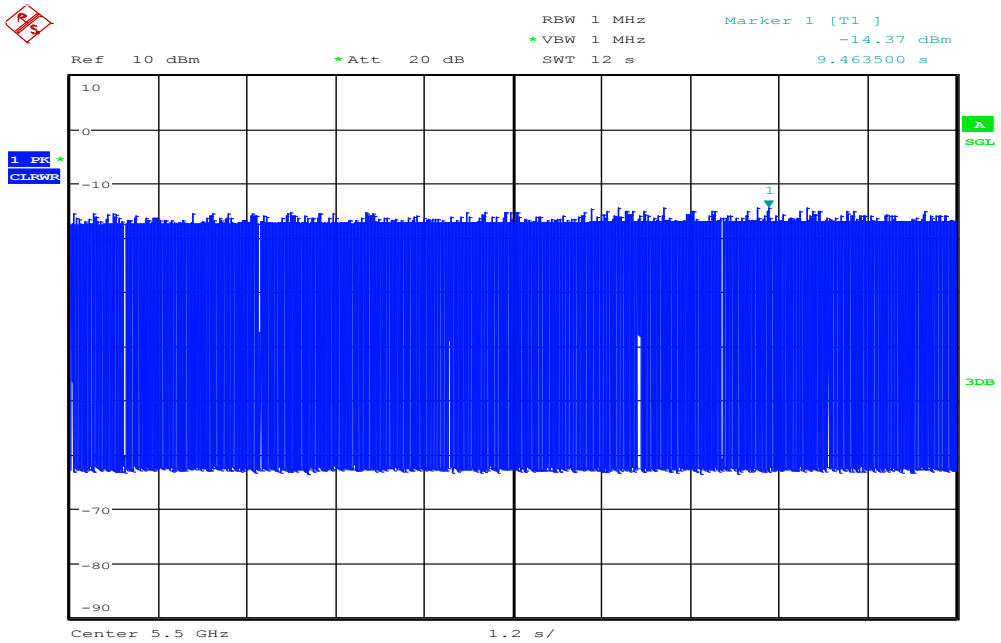
Date: 4.DEC.2015 15:07:45

Master Level



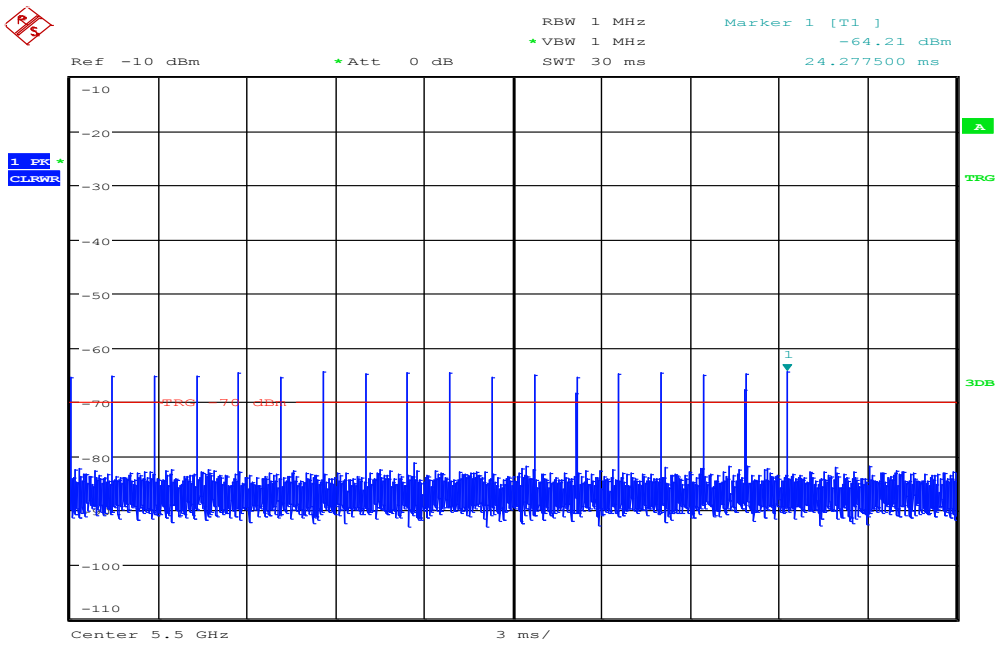
Date: 4.DEC.2015 15:05:21

Slave Level



Date: 4.DEC.2015 15:05:54

Radar



Date: 4.DEC.2015 10:29:33

TEST CHANNEL AND METHOD

All tests were performed at a channel center frequency of 5500 MHz utilizing a conducted test method.

CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME

GENERAL REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =

(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated

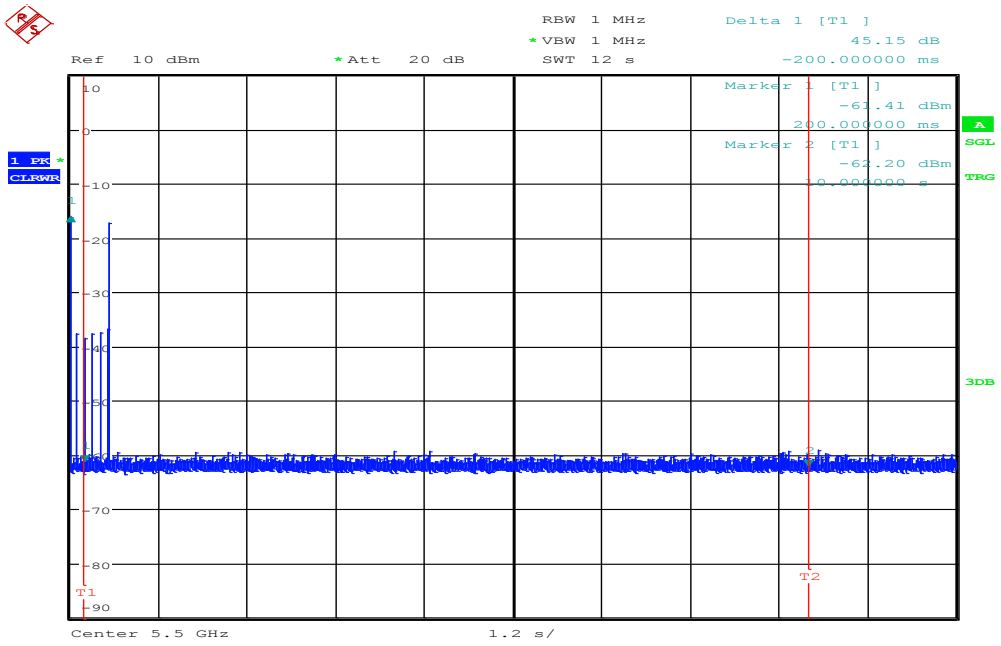
Begins at (Reference Marker + 200 msec) and

Ends no earlier than (Reference Marker + 10 sec).

Type 1 Channel Move Time Results

No non-compliance noted.

Channel Move Time (s)	Limit (s)
0.2	10

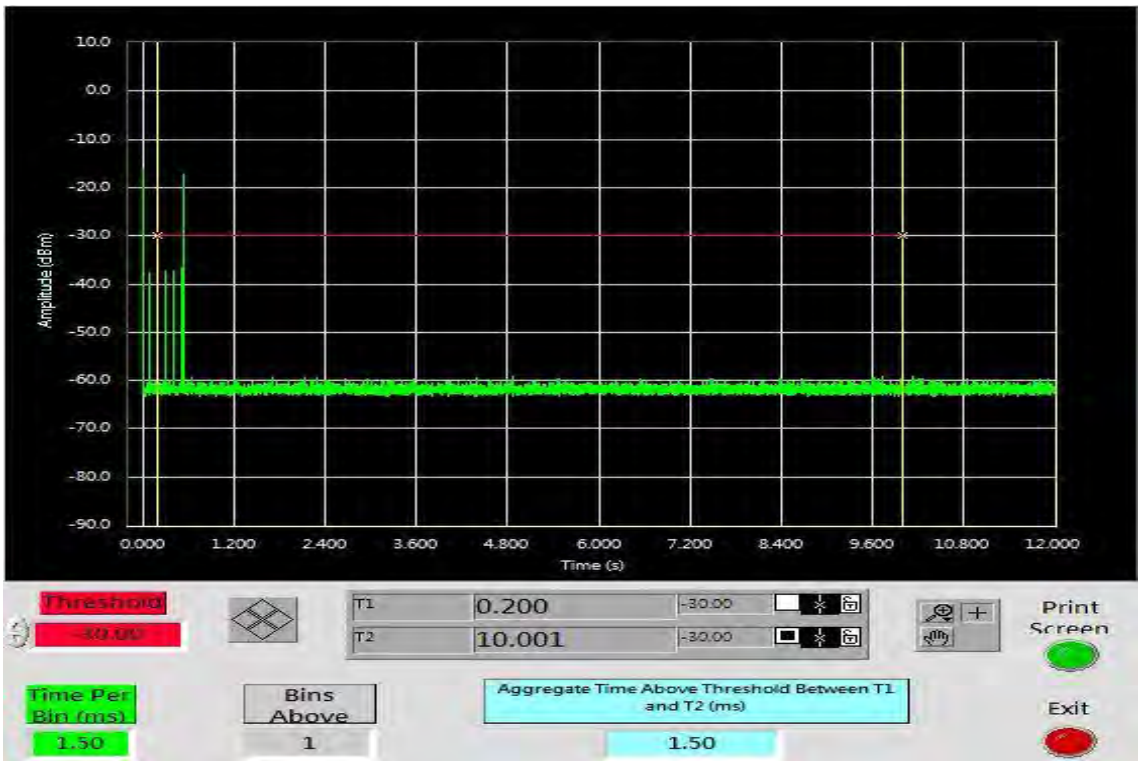


Date: 4.DEC.2015 15:10:22

Type 1 Channel Closing Transmission Time Results

No non-compliance noted.

Aggregate Transmission Time (ms)	Limit (ms)	Margin (ms)
1.5	60	-58.5

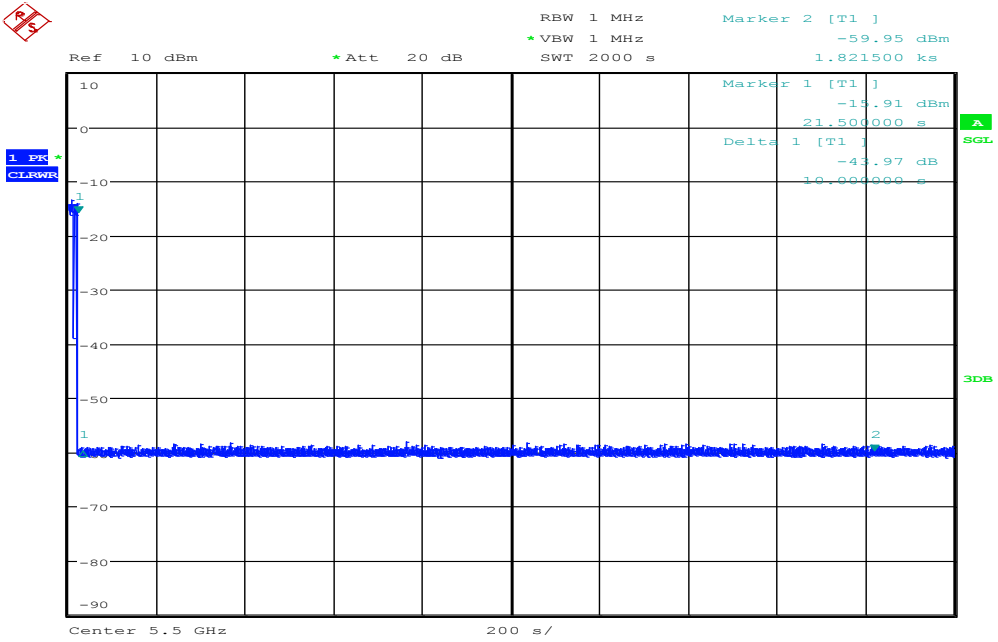


NON-OCCUPANCY PERIOD

Type 1 Non-Occupancy Period Test Results

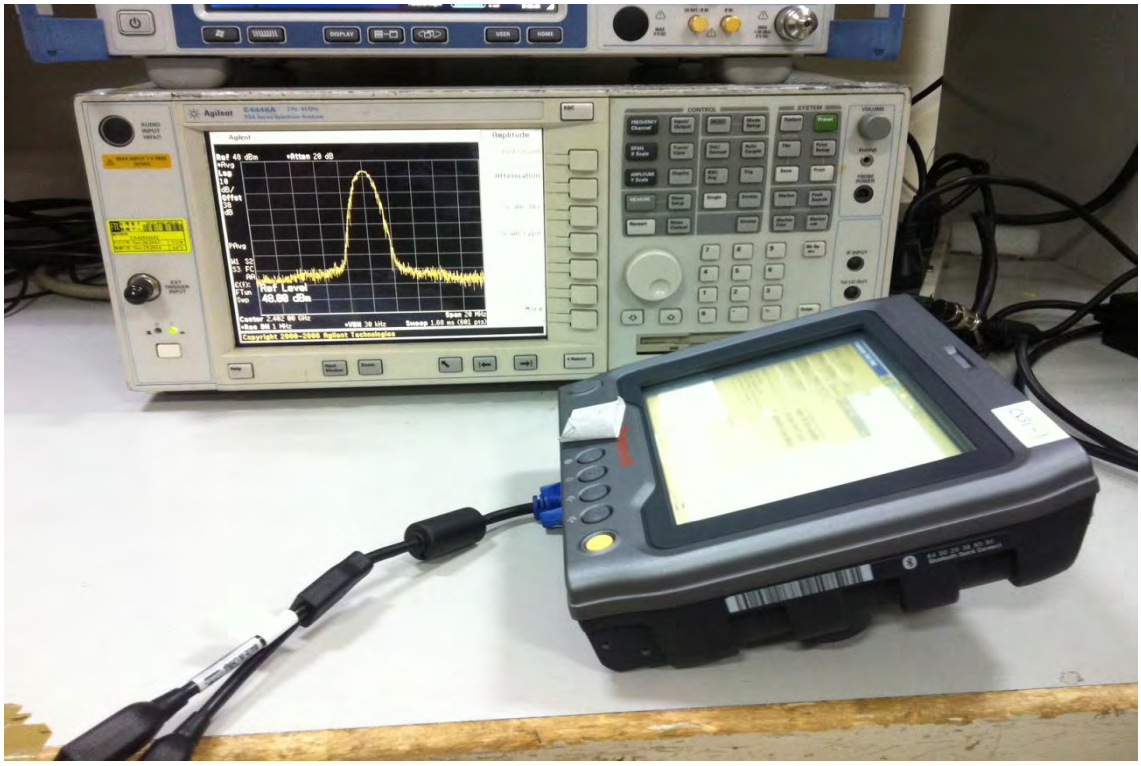
No non-compliance noted.

No EUT transmissions were observed on the test channel during the 30 minute observation time.



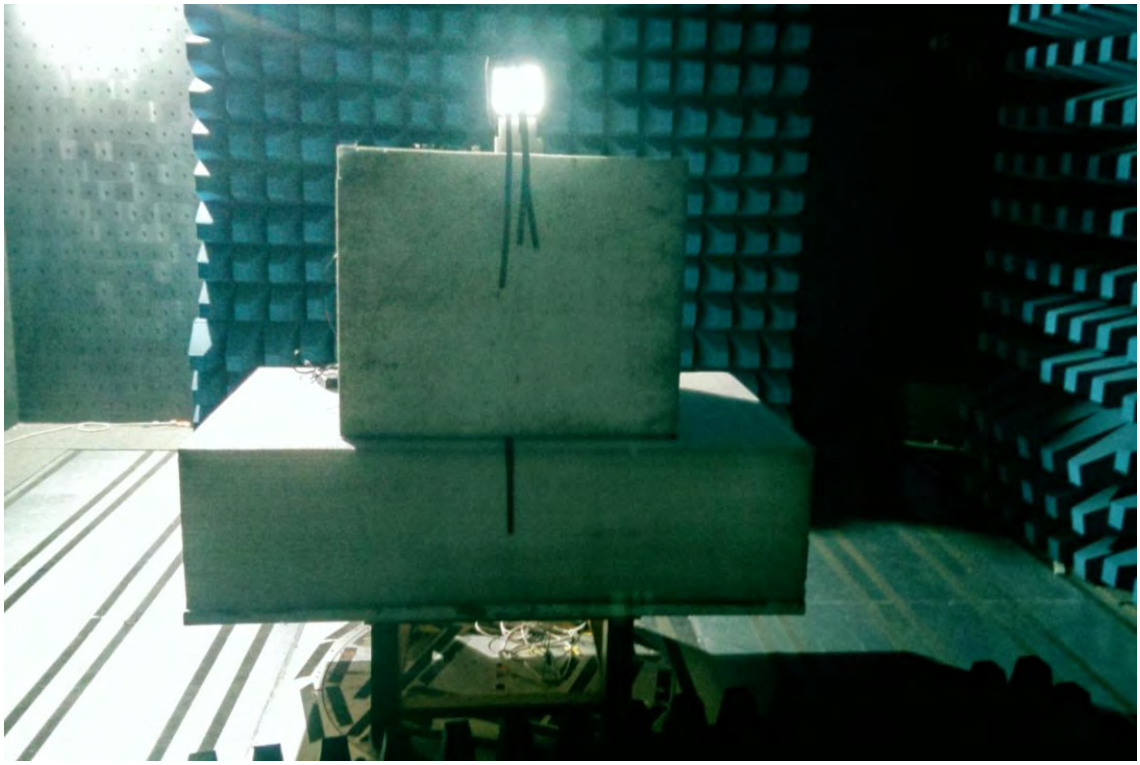
APPENDIX 1
PHOTOGRAPHS OF TEST SETUP

Conducted Emission Set Up Photo

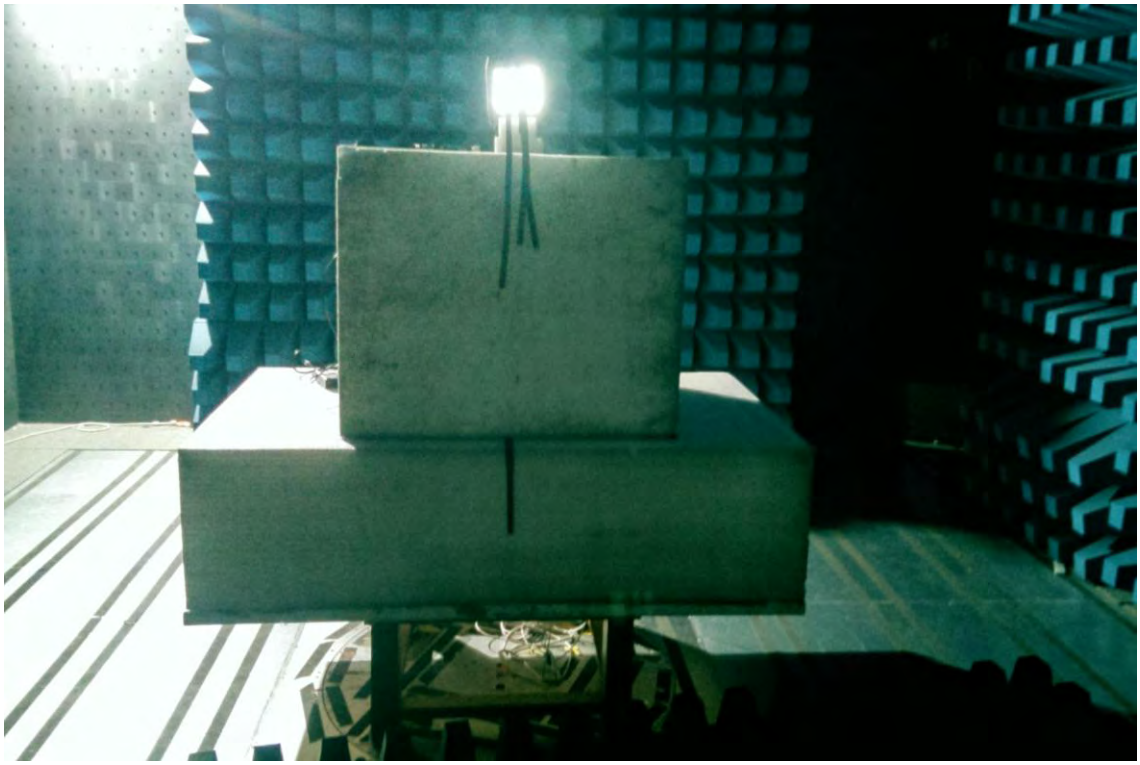


Radiated Emission Setup Photos

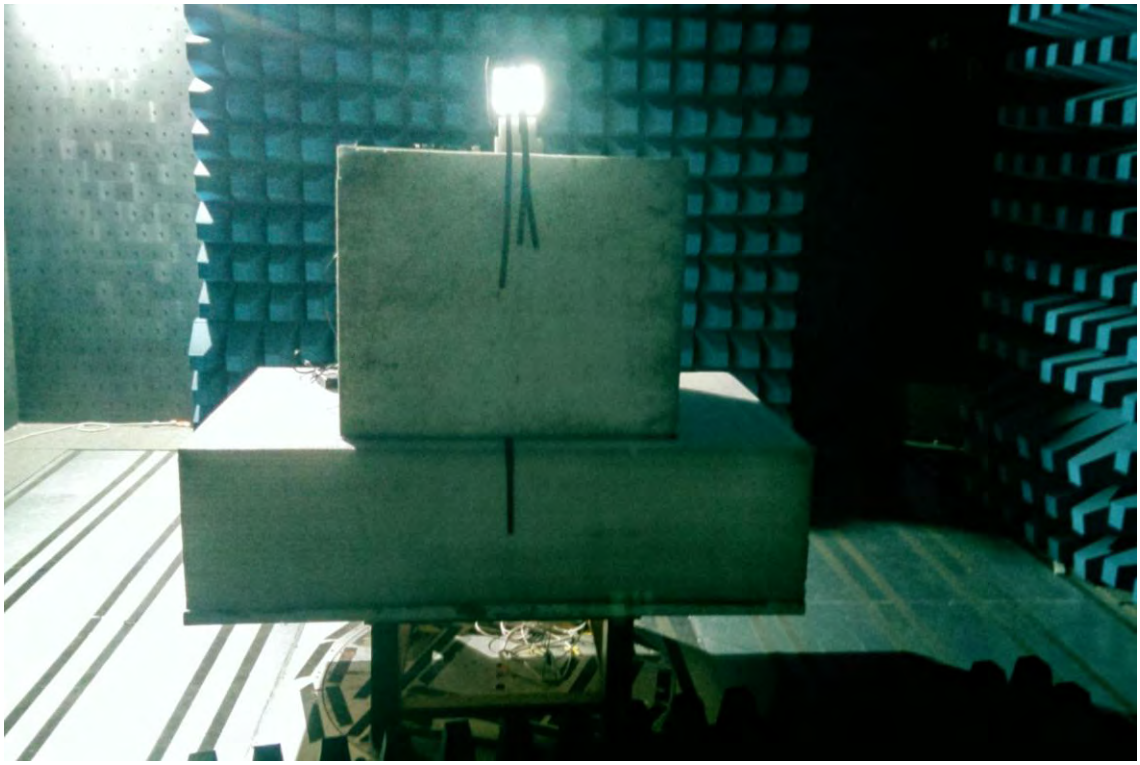
For Internal Antenna



For Square Antenna



For Round Antenna



Powerline Conducted Emissions Setup Photos

Dynamic Frequency Selection Set Up Photo