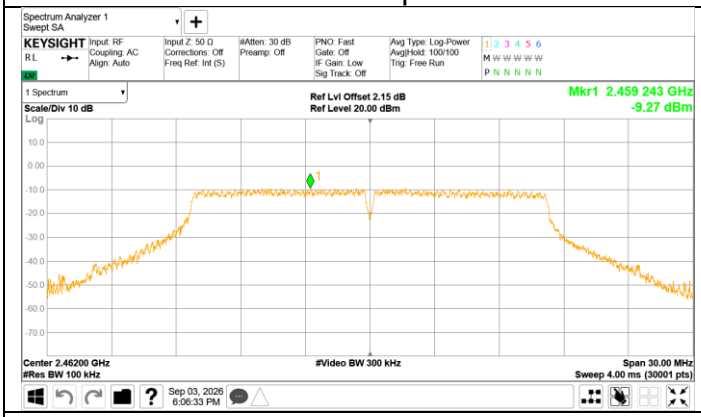
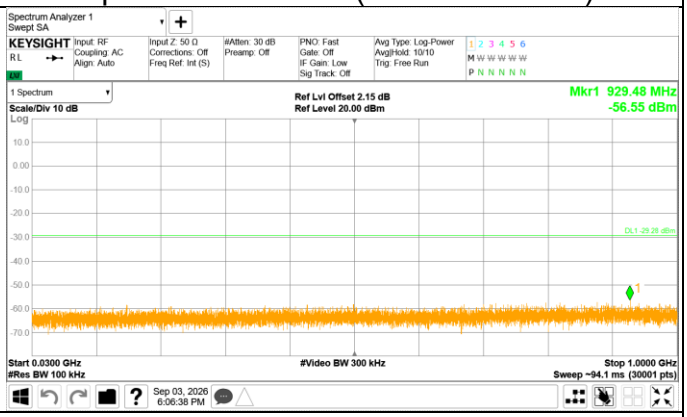
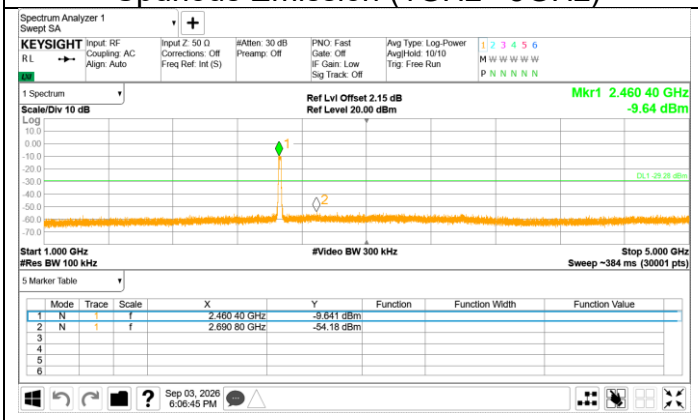
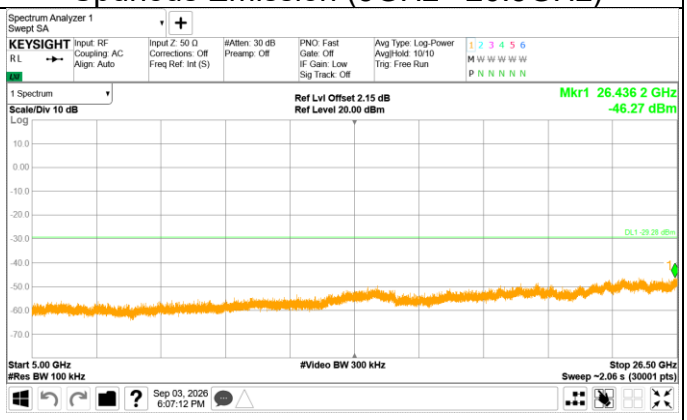
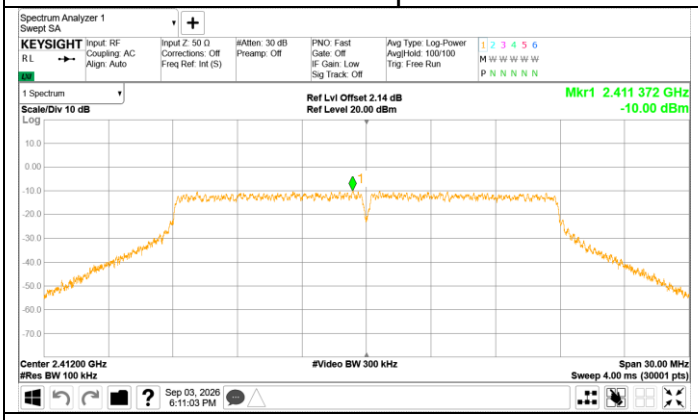
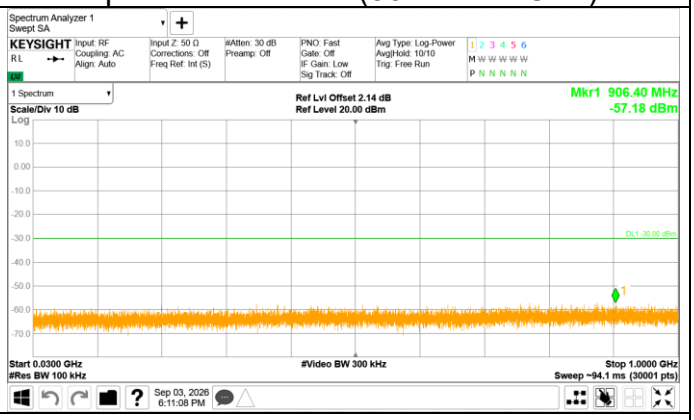
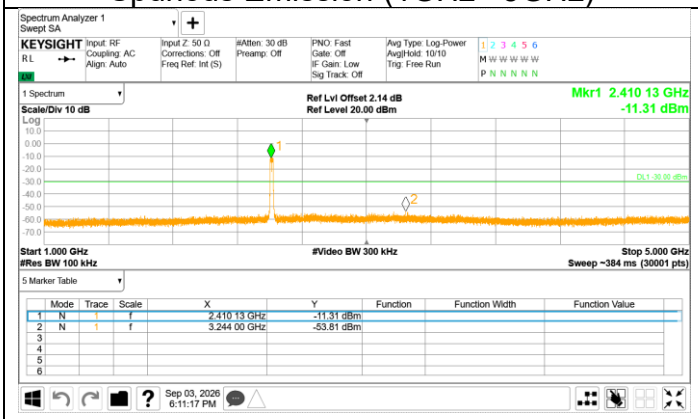
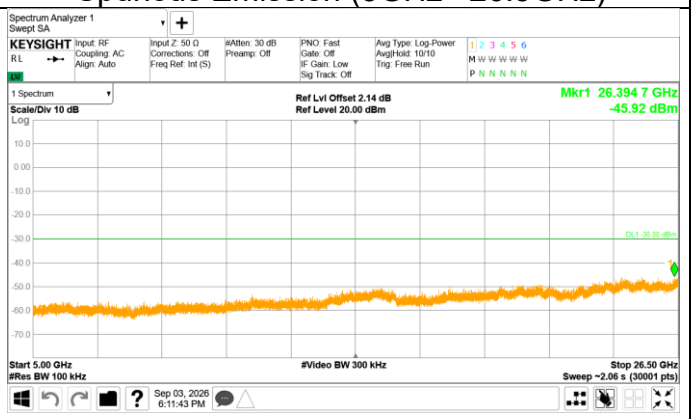
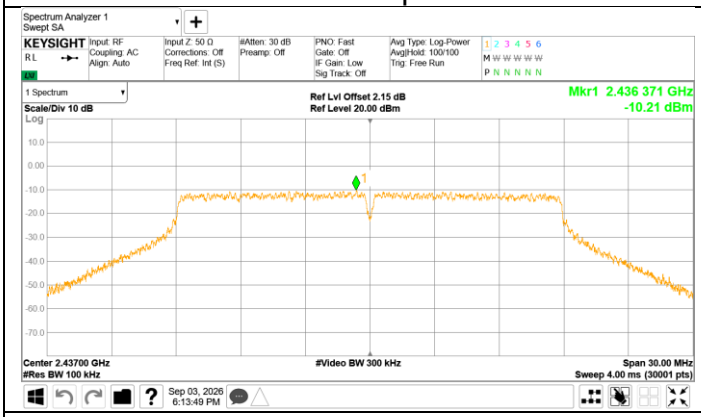
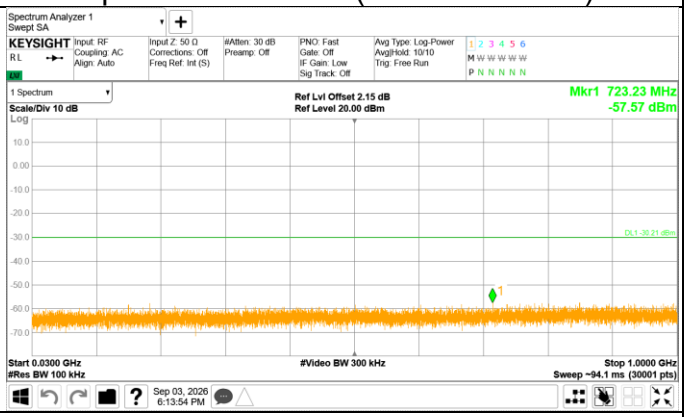
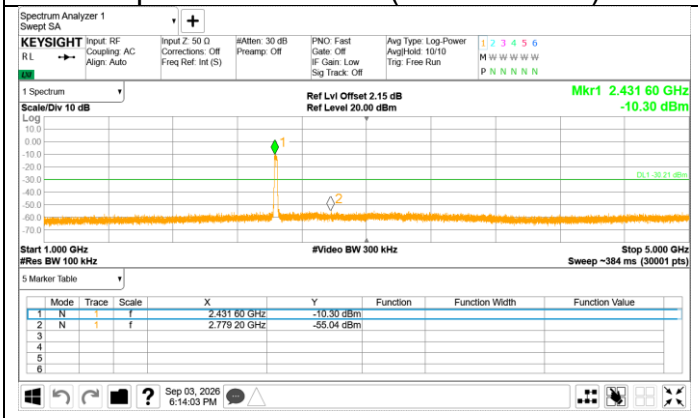
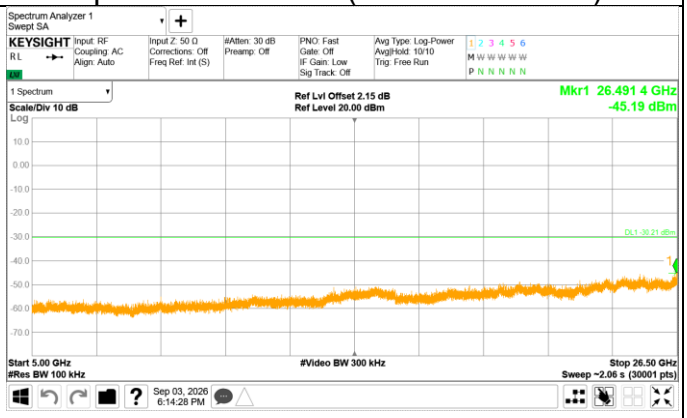
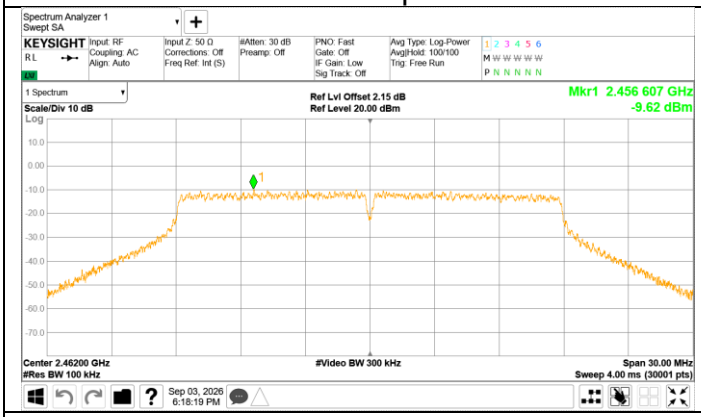
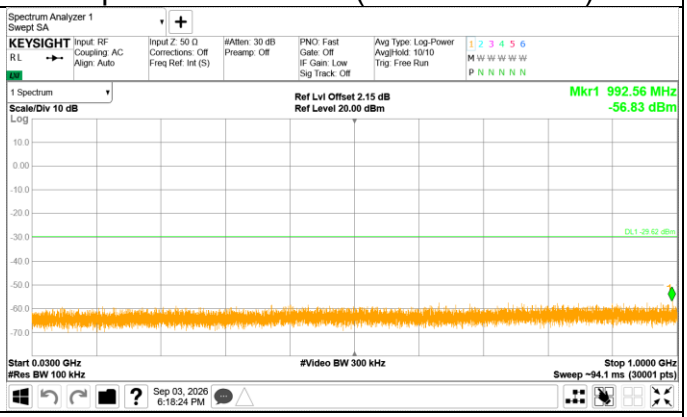
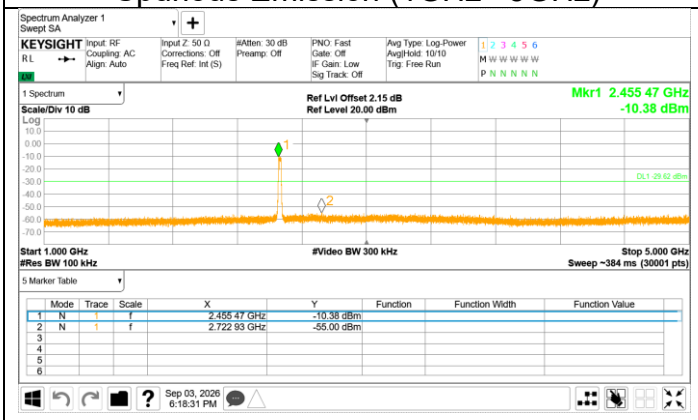
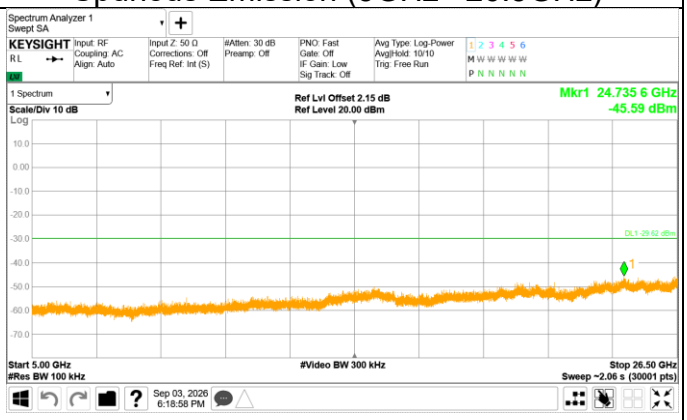
Out-of-Band Emissions	
Channel 11 (2462MHz)	
Reference point	Spurious Emission (30MHz – 1GHz)
	
Spurious Emission (1GHz –5GHz)	Spurious Emission (5GHz –26.5GHz)
	

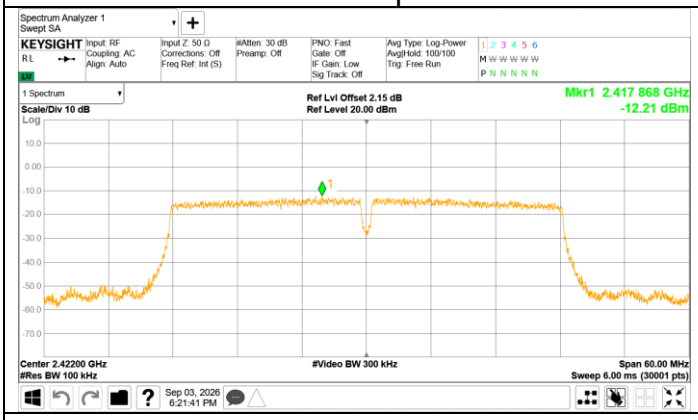
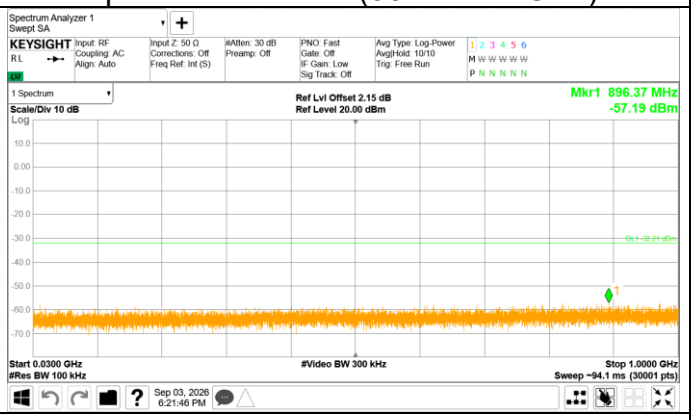
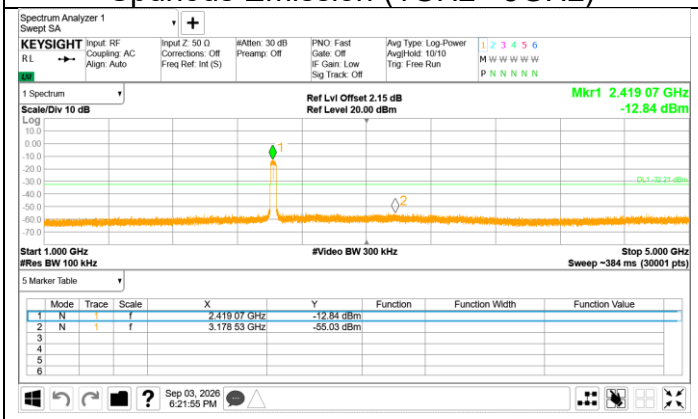
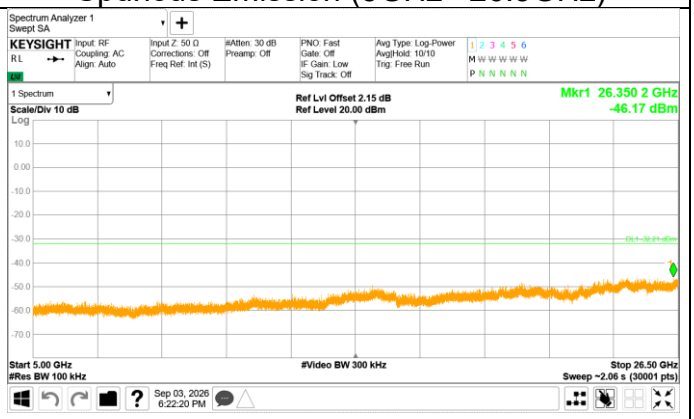
802.11N20

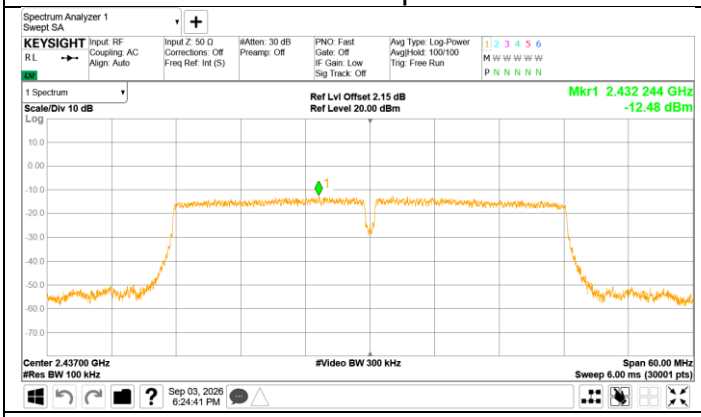
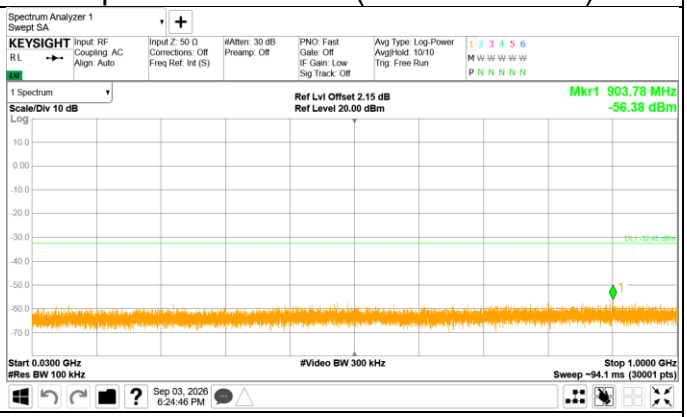
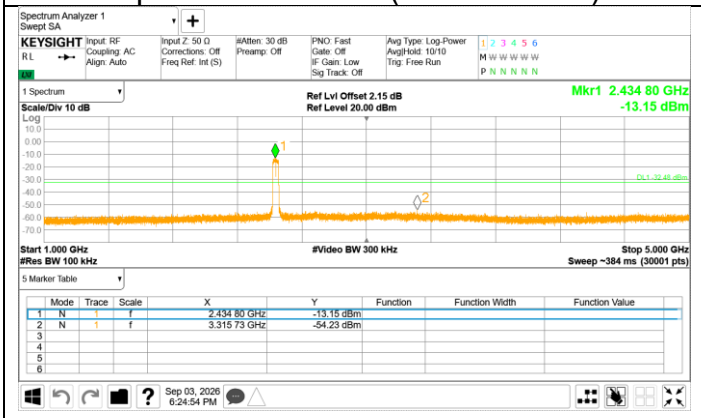
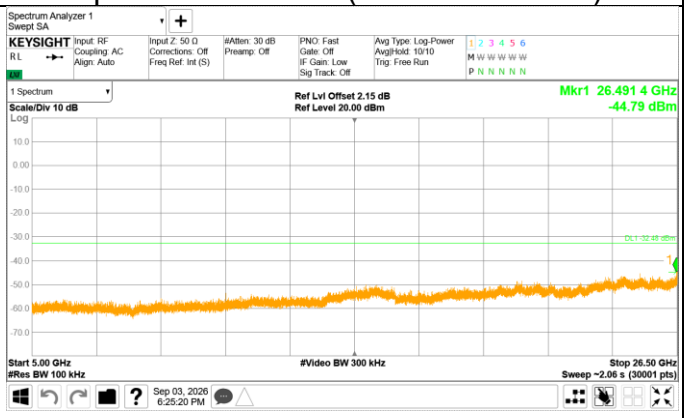
Out-of-Band Emissions	
Channel 1 (2412MHz)	
Reference point	Spurious Emission (30MHz – 1GHz)
	
Spurious Emission (1GHz –5GHz)	Spurious Emission (5GHz –26.5GHz)
	

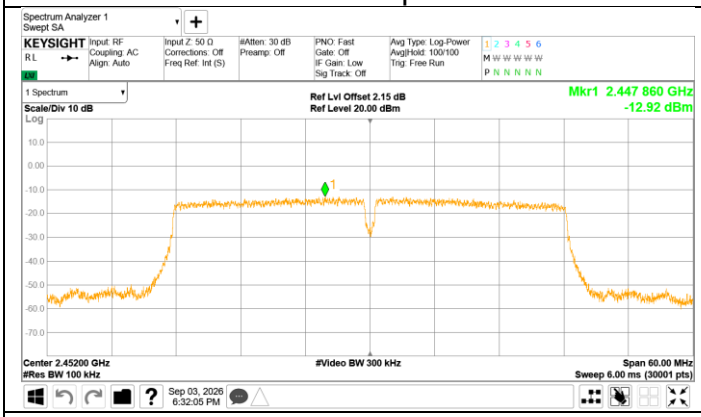
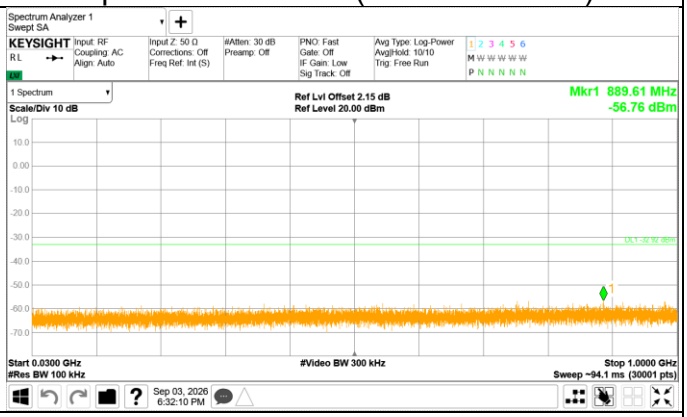
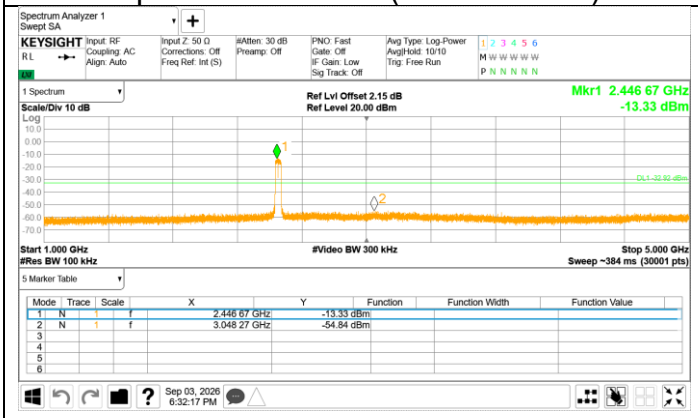
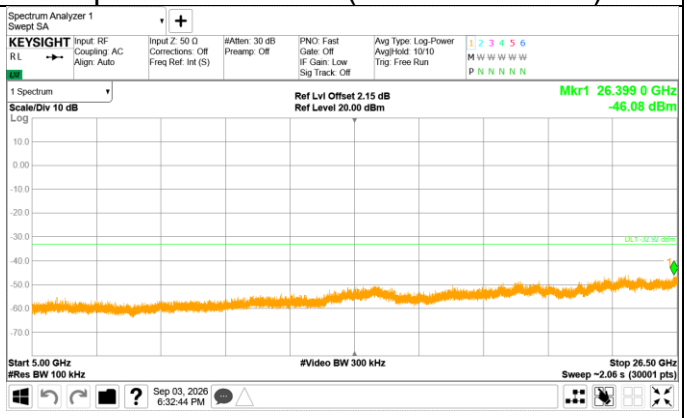
Out-of-Band Emissions	
Channel 6 (2437MHz)	
Reference point	Spurious Emission (30MHz – 1GHz)
	
Spurious Emission (1GHz –5GHz)	Spurious Emission (5GHz –26.5GHz)
	

Out-of-Band Emissions	
Channel 11 (2462MHz)	
Reference point	Spurious Emission (30MHz – 1GHz)
	
Spurious Emission (1GHz –5GHz)	Spurious Emission (5GHz –26.5GHz)
	

802.11N40

Out-of-Band Emissions	
Channel 1 (2422MHz)	
Reference point	Spurious Emission (30MHz – 1GHz)
	
Spurious Emission (1GHz –5GHz)	Spurious Emission (5GHz –26.5GHz)
	

Out-of-Band Emissions	
Channel 6 (2437MHz)	
Reference point	Spurious Emission (30MHz – 1GHz)
	
Spurious Emission (1GHz –5GHz)	Spurious Emission (5GHz –26.5GHz)
	

Out-of-Band Emissions	
Channel 11 (2452MHz)	
Reference point	Spurious Emission (30MHz – 1GHz)
	
Spurious Emission (1GHz –5GHz)	Spurious Emission (5GHz –26.5GHz)
	

10.7 Band edge

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
   Span = wide enough to capture the peak level of the in-band emission and all spurious
   RBW = 100 kHz, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize, use the peak and delta measurement to record the result.
5. The level displayed must comply with the limit specified in this Section.
6. Repeat above procedures until all frequencies measured were complete and submit all the plots.

Limit:

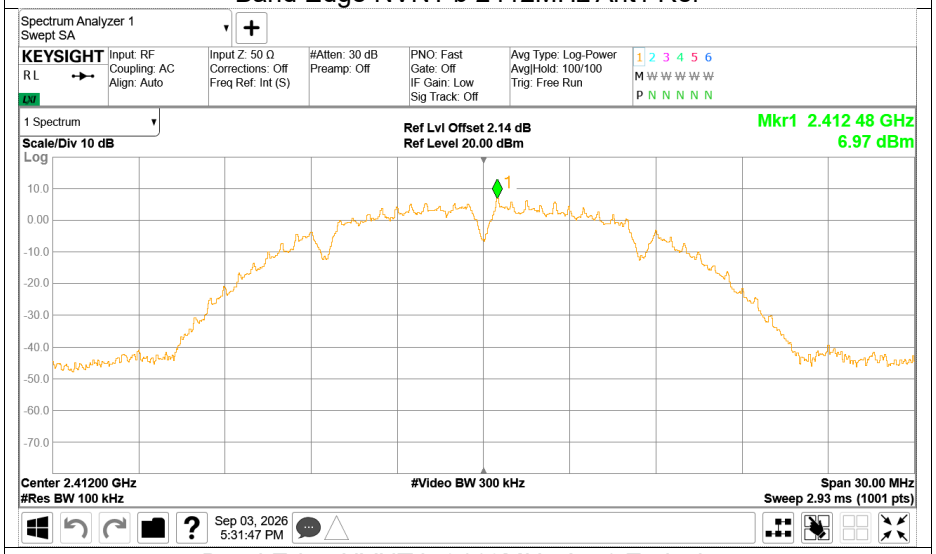
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under § 15.247(b)(3) and RSS-247 section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB.

Frequency Range MHz	Limit (dBc)
30-25000	-20

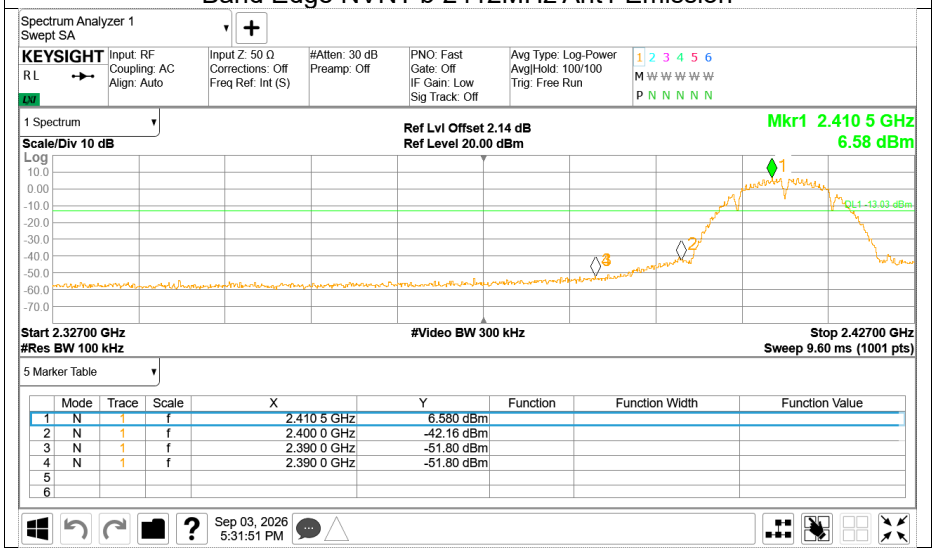
Test Results

Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref

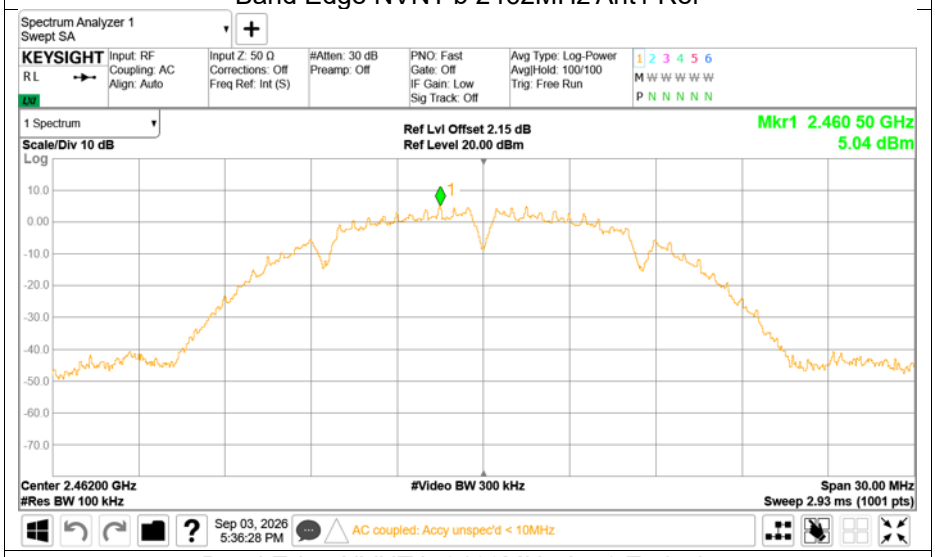


Band Edge NVNT b 2412MHz Ant1 Emission

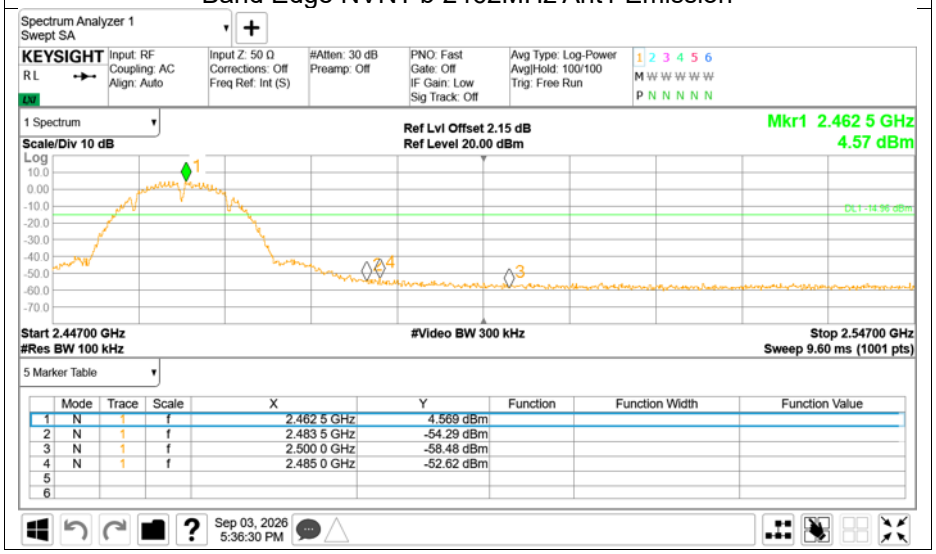


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.410 5 GHz	6.580 dBm			
2	N	1	f	2.400 0 GHz	-42.16 dBm			
3	N	1	f	2.390 0 GHz	-51.80 dBm			
4	N	1	f	2.390 0 GHz	-51.80 dBm			
5								
6								

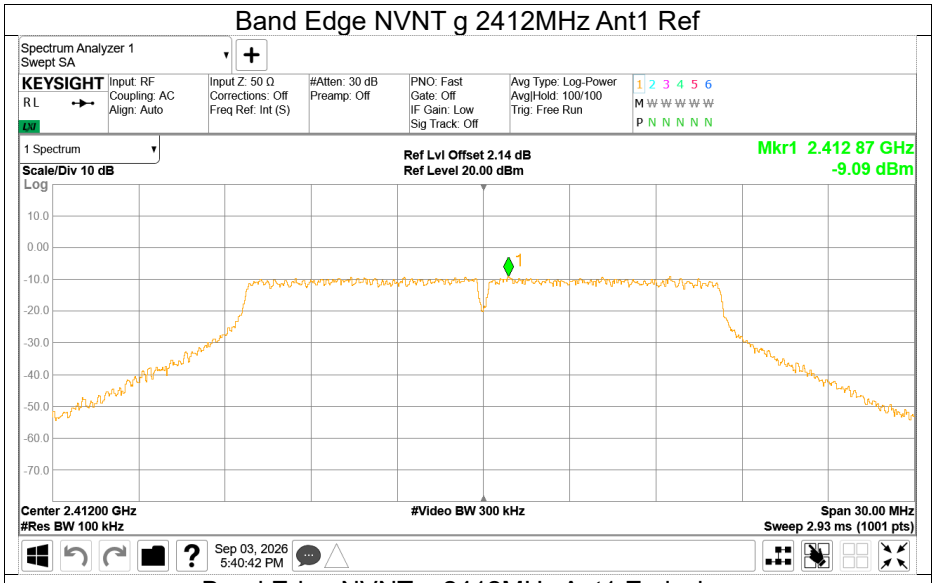
Band Edge NVNT b 2462MHz Ant1 Ref



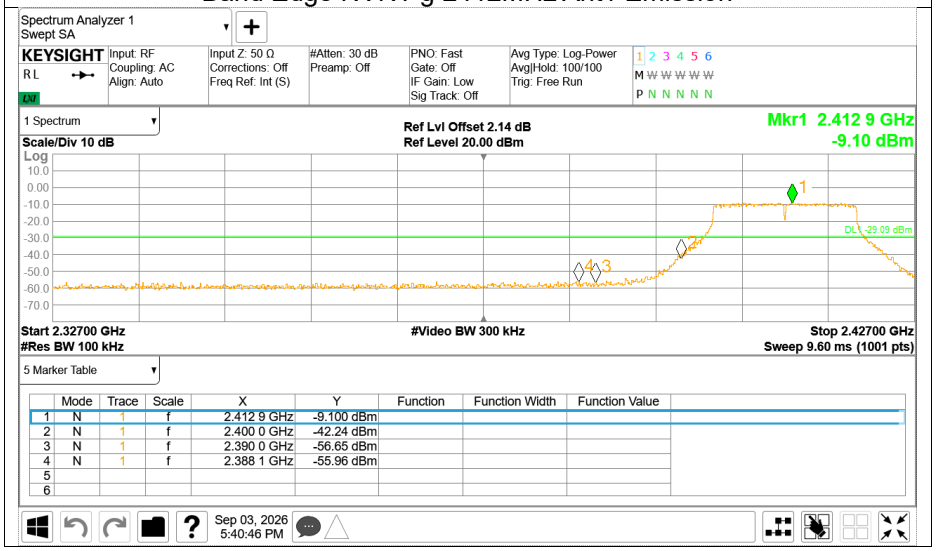
Band Edge NVNT b 2462MHz Ant1 Emission



Band Edge NVNT g 2412MHz Ant1 Ref

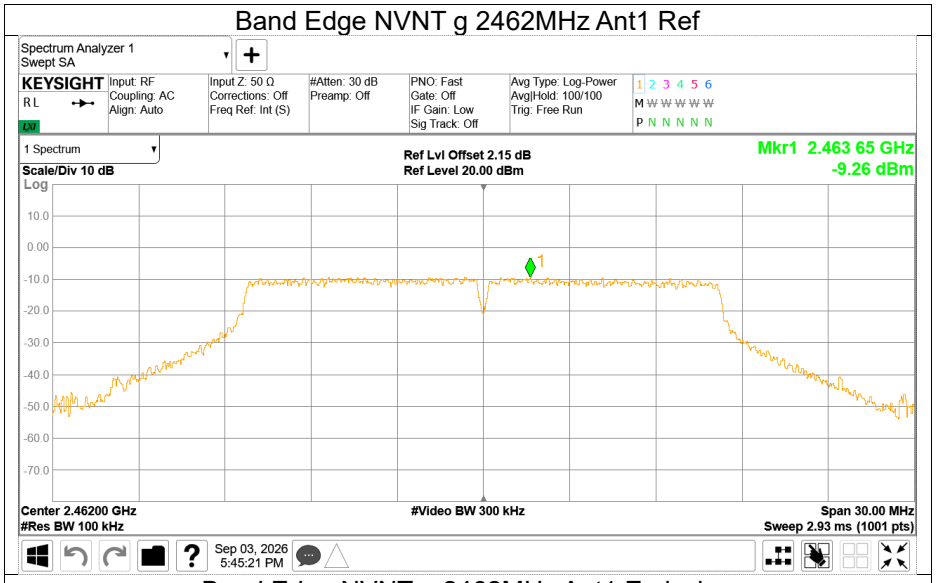


Band Edge NVNT g 2412MHz Ant1 Emission

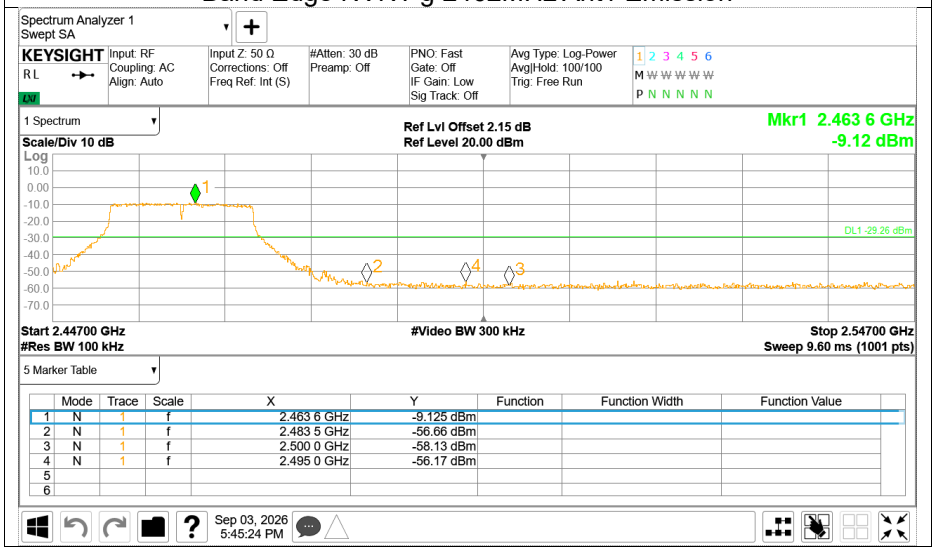


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.412 9 GHz	-9.100 dBm			
2	N	1	f	2.400 0 GHz	-42.24 dBm			
3	N	1	f	2.390 0 GHz	-56.65 dBm			
4	N	1	f	2.388 1 GHz	-55.96 dBm			
5								
6								

Band Edge NVNT g 2462MHz Ant1 Ref

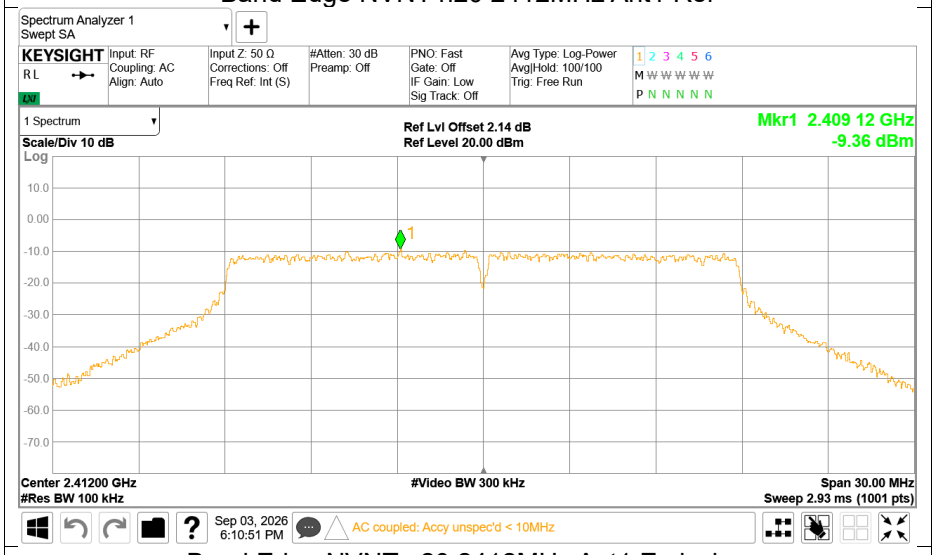


Band Edge NVNT g 2462MHz Ant1 Emission

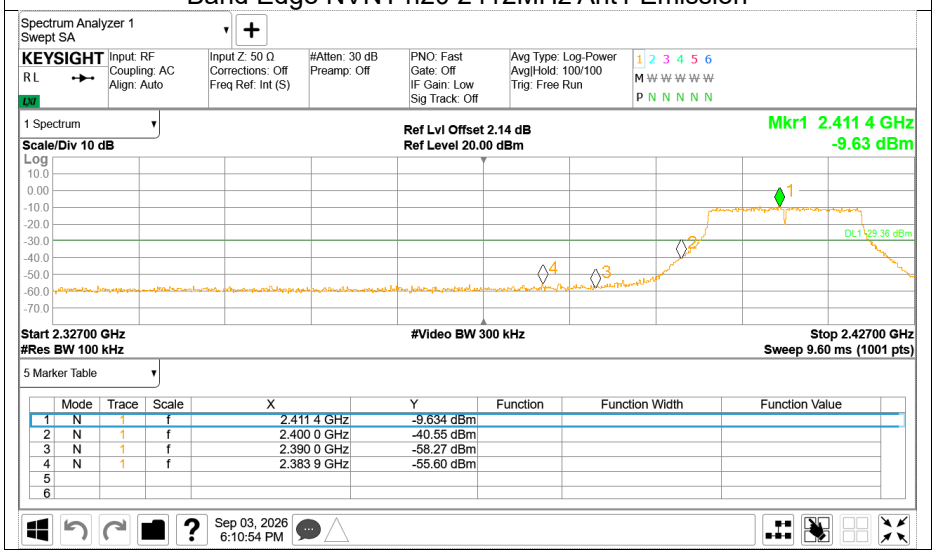


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.463 6 GHz	-9.125 dBm			
2	N	1	f	2.483 5 GHz	-56.66 dBm			
3	N	1	f	2.500 0 GHz	-58.13 dBm			
4	N	1	f	2.495 0 GHz	-56.17 dBm			
5								
6								

Band Edge NVNT n20 2412MHz Ant1 Ref

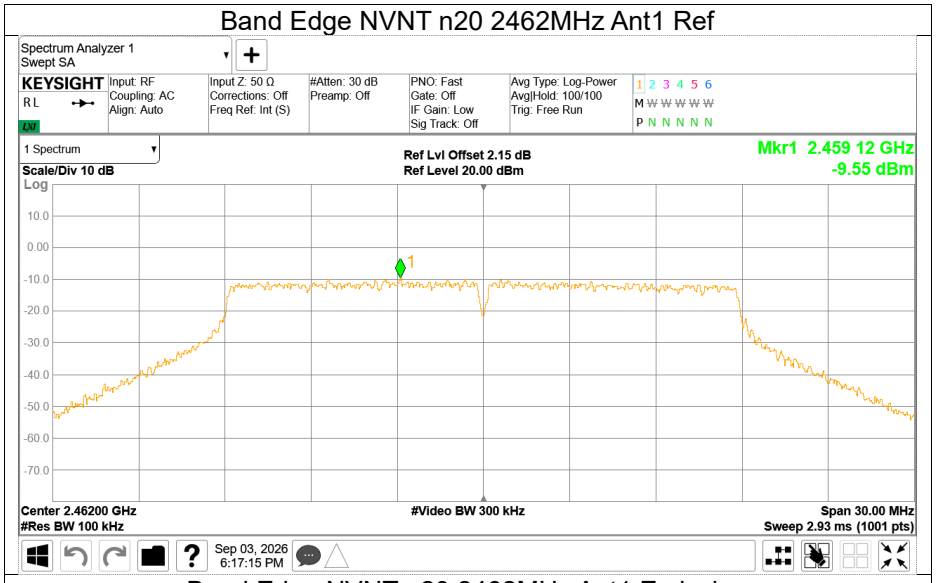


Band Edge NVNT n20 2412MHz Ant1 Emission

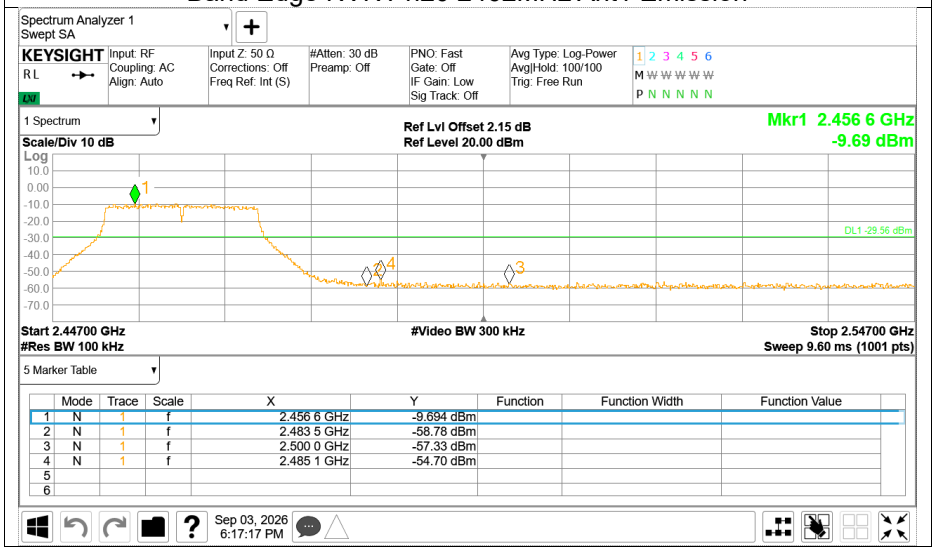


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.411 4 GHz	-9.634 dBm			
2	N	1	f	2.400 0 GHz	-40.55 dBm			
3	N	1	f	2.390 0 GHz	-58.27 dBm			
4	N	1	f	2.383 9 GHz	-55.60 dBm			
5								
6								

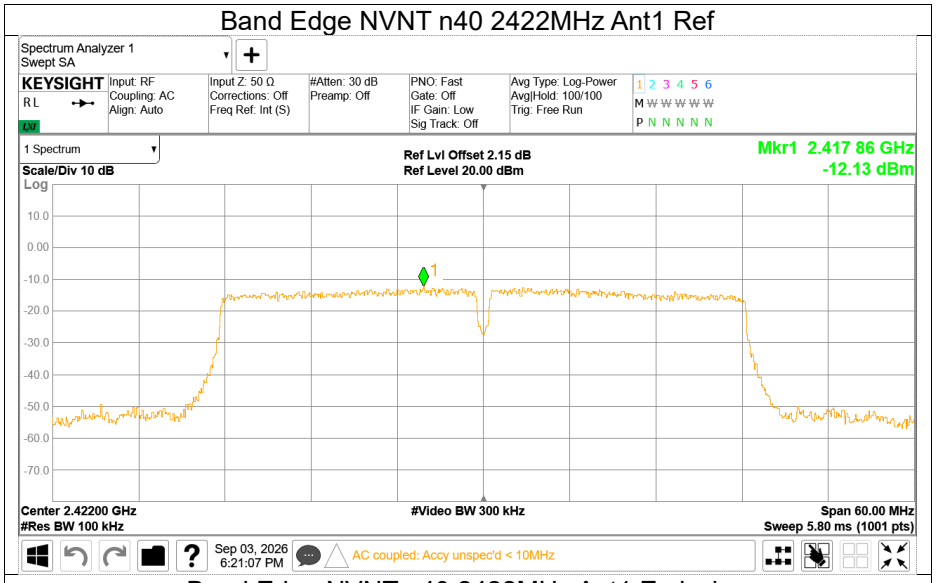
Band Edge NVNT n20 2462MHz Ant1 Ref



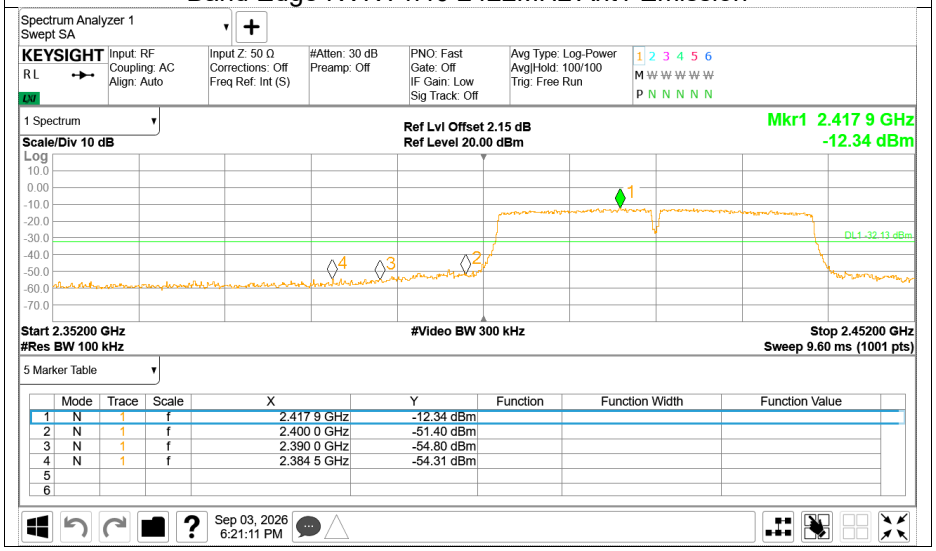
Band Edge NVNT n20 2462MHz Ant1 Emission



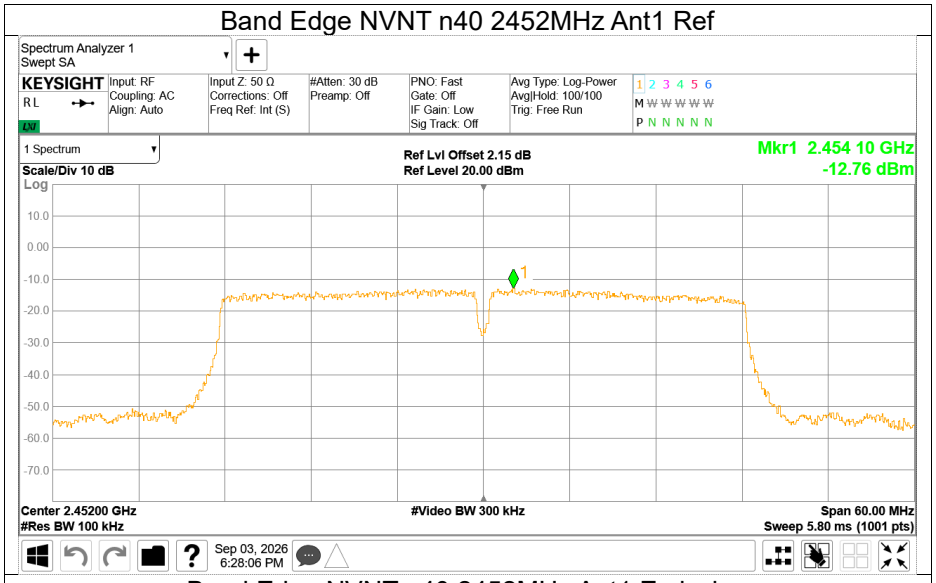
Band Edge NVNT n40 2422MHz Ant1 Ref



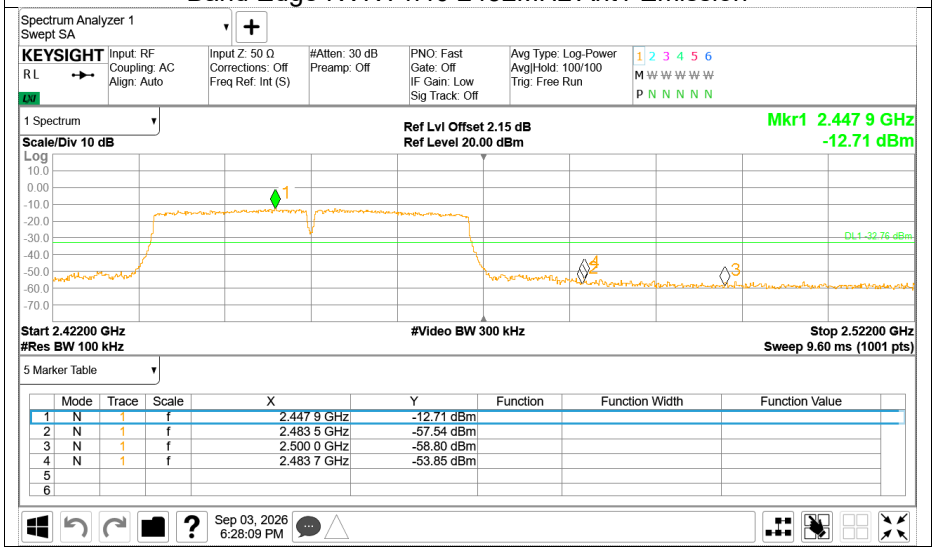
Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission



	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.447 9 GHz	-12.71 dBm			
2	N	1	f	2.483 5 GHz	-57.54 dBm			
3	N	1	f	2.500 0 GHz	-58.80 dBm			
4	N	1	f	2.483 7 GHz	-53.85 dBm			
5								
6								

10.8 Spurious radiated emissions for transmitter

Test Method

1. The EUT was place on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3. The height of antenna 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.
4. 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.
5. Use the following spectrum analyzer settings According to C63.10

   1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

   Span = wide enough to capture the peak level of the in-band emission and all spurious RBW = 100 kHz to 120kHz, VBW≥RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

   2) For Peak unwanted emissions Above 1GHz:

   Span = wide enough to capture the peak level of the in-band emission and all spurious RBW = 1MHz, VBW≥RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

   Procedures for average unwanted emissions measurements above 1GHz

   a) RBW = 1MHz.

   b) VBW \ [3 × RBW].

   c) Detector = RMS (power averaging), if [span / (# of points in sweep)] \ RBW / 2. Satisfying this condition can require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, then the detector mode shall be set to peak.

   d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)

   e) Sweep time = auto.

   f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)

   g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

   1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is [10 log (1 / D)], where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.

2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is [20 log (1 / D)], where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.
3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission (AV) at frequency above 1GHz.

Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under § 15.247(b)(3) and RSS-247 section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in § 15.209(a) and RSS-Gen is not required. In addition, radiated emissions which fall in the restricted bands, as defined in§ 15.205(a) and RSS-Gen scetion8.9, must also comply with the radiated emission limits specified in § 15.209(a) and RSS-Gen section 8.10.

Below 30MHz
§15.247(d) & §15.209 & §15.205

Frequency MHz	Field Strength uV/m	Detector	Measured Distance Meters
0.009~0.090	2400/F (kHz)	AV	300
0.090~0.110	2400/F (kHz)	QP	300
0.110~0.490	2400/F (kHz)	AV	300
0.490~1.705	24000/F (kHz)	QP	30
1.705~30	30	QP	30

Note 1: Limit 3m(dBμV/m)=Limit 300m(dBμV/m)+40Log(300m/3m) (Below 30MHz)
Note 2: Limit 3m(dBμV/m)=Limit 30m(dBμV/m)+40Log(30m/3m) (Below 30MHz)
Note 3: dBμV/m = 20log(μV/m)

RSS-247 & RSS-Gen 8.9

Frequency MHz	Field Strength uA/m	Detector	Measured Distance Meters
0.009~0.090	6.37/F (kHz)	AV	300
0.090~0.110	6.37/F (kHz)	QP	300
0.110~0.490	6.37/F (kHz)	AV	300
0.490~1.705	63.7/F (kHz)	QP	30
1.705~30	0.08	QP	30

Note 1: Limit 3m(dBμV/m)=Limit 300m(dBμV/m)+40Log(300m/3m) (Below 30MHz)
Note 2: Limit 3m(dBμV/m)=Limit 30m(dBμV/m)+40Log(30m/3m) (Below 30MHz)
Note 3: dBμV/m = 20log(μV/m), dBμA/m = 20log(μA/m)

When the limit is in terms of magnetic field, the following equation applies:
$H[dB(\mu A/m)] = V[dB(\mu V)] + Lc\ [dB] - G_{PA}\ [dB] + AF^{E}\ [dB(m^{-1})] - 51.5\ [dB\Omega]$

When the limit is in terms of electric field, the following equation applies:
$E[dB(\mu V/m)] = V[dB(\mu V)] + Lc[dB] - G_{PA}[dB] + AF^{E}\ [dB(m^{-1})]$

The magnetic field limit is converted to the electric field limit by the equation:
$E_{limit}[dB(\mu V/m)] = H_{limit}\ [dB(\mu A/m)] + 51.5\ [dB\Omega]$

where
H is the magnetic field strength (to be compared with the limit),
V is the voltage level measured by the receiver or spectrum analyzer.
Lc is the cable loss.
G_{PA} is the gain of the preamplifier (if used), and A_{FH} is the magnetic antenna factor.

Above 30MHz
§15.247(d) & §15.209 & §15.205
RSS-247 & RSS-Gen 8.9 & 8.10

Frequency MHz	Field Strength uV/m	Field Strength dBµV/m	Detector	Measured Distance Meters
30-88	100	40	QP	3
88-216	150	43.5	QP	3
216-960	200	46	QP	3
960-1000	500	54	QP	3
Above 1000	500	54	AV	3
Above 1000	5000	74	PK	3

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

Test Results

Worst case Radiated Emission 9KHz-30MHz

0.009-30MHz Radiated Emission

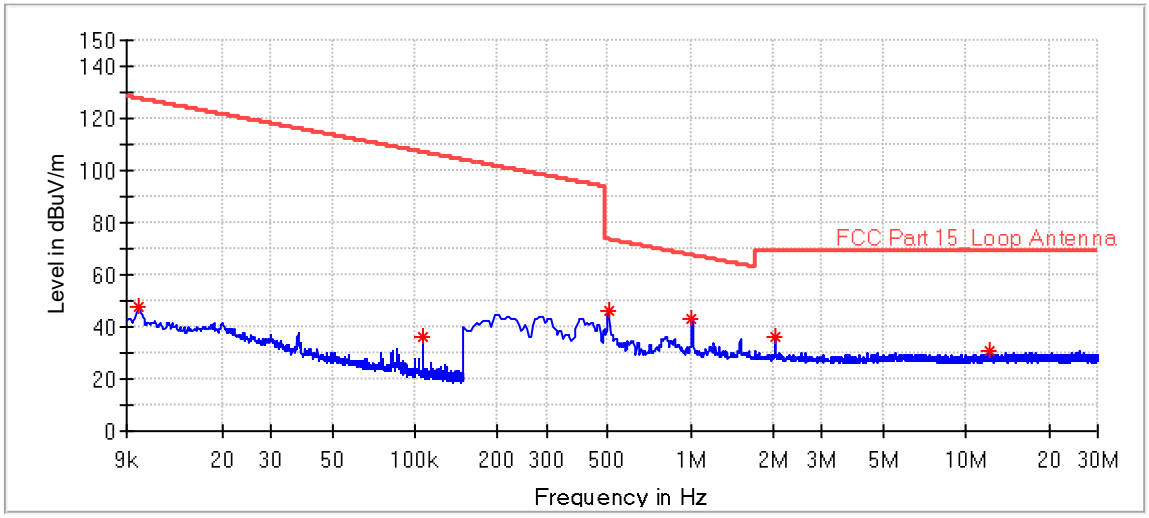
EUT Information

EUT Name:	WiFi Module
Model	GRJWB05-J12
Client:	Gree Electric Appliances, Inc. of Zhuhai
Op Cond	Power on, TX_2412MHz at 802.11B
Operator:	Doujun XU
Standard	FCC part 15.209
Sample No.:	SHA-1075771-1

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup:	RE_Loop Antenna V
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.009969	47.66	127.63	79.97	X	244.0	19.6
0.107524	36.52	106.97	70.46	X	341.0	18.8
0.505566	45.85	73.53	27.68	X	277.0	18.8
1.010383	43.30	67.51	24.21	X	302.0	18.8
2.024405	36.31	69.54	33.23	X	302.0	19.0
12.173405	30.72	69.54	38.83	X	47.0	18.7

0.009-30MHz Radiated Emission

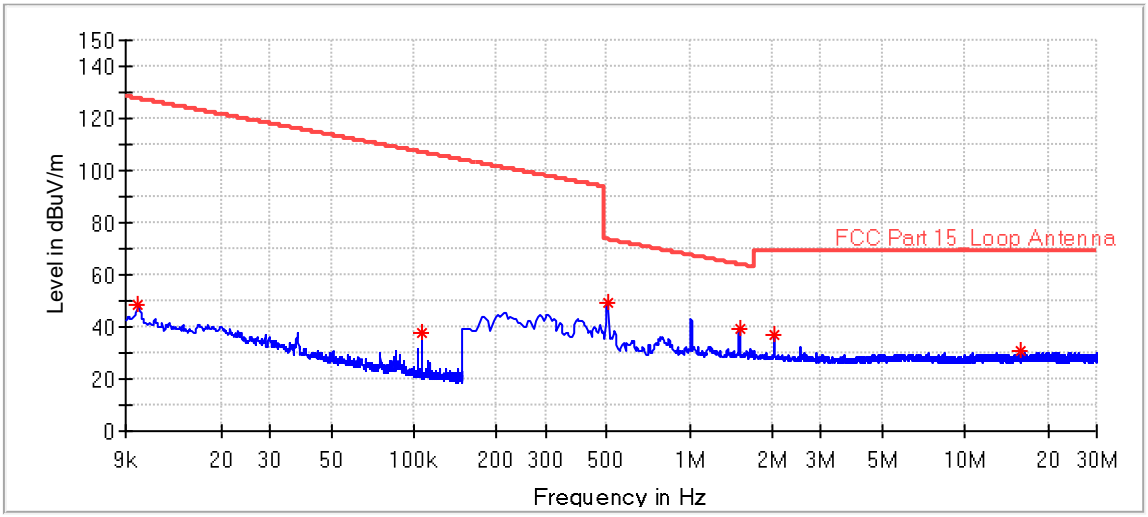
EUT Information

EUT Name:	WiFi Module
Model	GRJWB05-J12
Client:	Gree Electric Appliances, Inc. of Zhuhai
Op Cond	Power on, TX_2412MHz at 802.11B
Operator:	Doujun XU
Standard	FCC part 15.209
Sample No.:	SHA-1075771-1

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup:	RE_Loop Antenna V
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.009969	48.38	127.63	79.26	Y	74.0	19.6
0.107524	37.33	106.97	69.64	Y	331.0	18.8
0.505566	49.10	73.53	24.42	Y	264.0	18.8
1.519588	39.40	63.97	24.57	Y	264.0	18.9
2.024405	36.73	69.54	32.81	Y	313.0	19.0
15.900265	30.52	69.54	39.02	Y	359.0	18.9

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

0.009-30MHz Radiated Emission

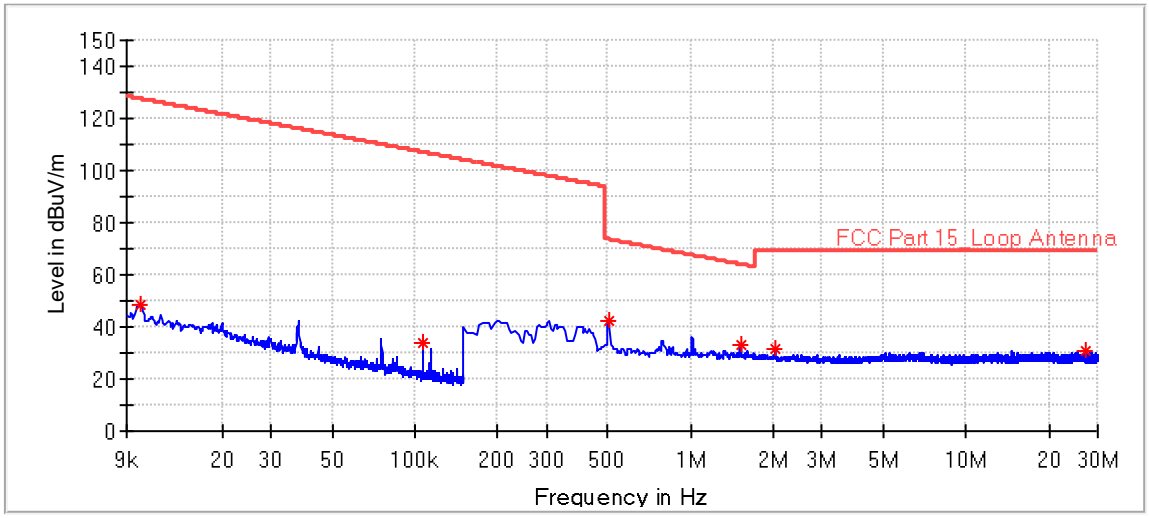
EUT Information

EUT Name:	WiFi Module
Model	GRJWB05-J12
Client:	Gree Electric Appliances, Inc. of Zhuhai
Op Cond	Power on, TX_2412MHz at 802.11B
Operator:	Doujun XU
Standard	FCC part 15.209
Sample No.:	SHA-1075771-1

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup:	RE_Loop Antenna V
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.010146	48.35	127.48	79.13	Z	212.0	19.6
0.107524	34.01	106.97	72.96	Z	273.0	18.8
0.505566	42.45	73.53	31.08	Z	356.0	18.8
1.519588	33.36	63.97	30.61	Z	356.0	18.9
2.024405	31.40	69.54	38.14	Z	356.0	19.0
27.151081	30.92	69.54	38.63	Z	355.0	19.2

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

Worst case Radiated Emission 30MHz-1GHz

30-1000MHz Radiated Emission

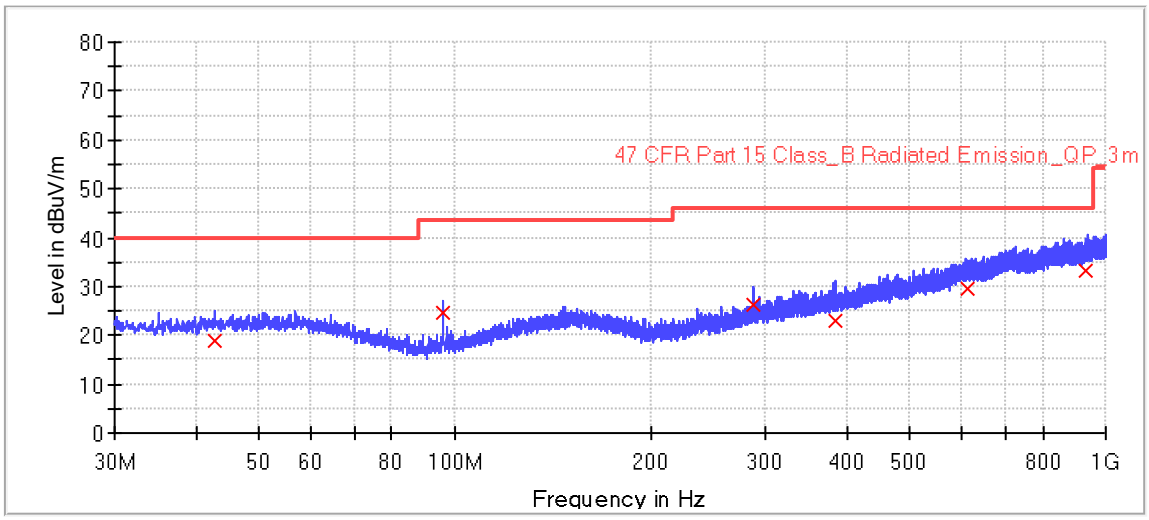
EUT Information

EUT Name:	WiFi Module
Model	GRJWB05-J12
Client:	Gree Electric Appliances, Inc. of Zhuhai
Op Cond	Power on, TX_2412MHz at 802.11B
Operator:	Doujun XU
Standard	FCC part 15.209
Sample No.:	SHA-1075771-1

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup:	RE_VULB9168
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
42.760000	18.9	1000.0	120.000	250.0	H	241.0	20.2	21.1	40.0
95.680000	24.6	1000.0	120.000	300.0	H	156.0	15.3	18.9	43.5
287.080000	26.3	1000.0	120.000	150.0	H	289.0	21.3	19.7	46.0
384.000000	23.1	1000.0	120.000	200.0	H	341.0	23.9	22.9	46.0
611.280000	29.4	1000.0	120.000	100.0	H	15.0	29.7	16.6	46.0
932.480000	33.1	1000.0	120.000	150.0	H	274.0	33.9	12.9	46.0

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

30-1000MHz Radiated Emission

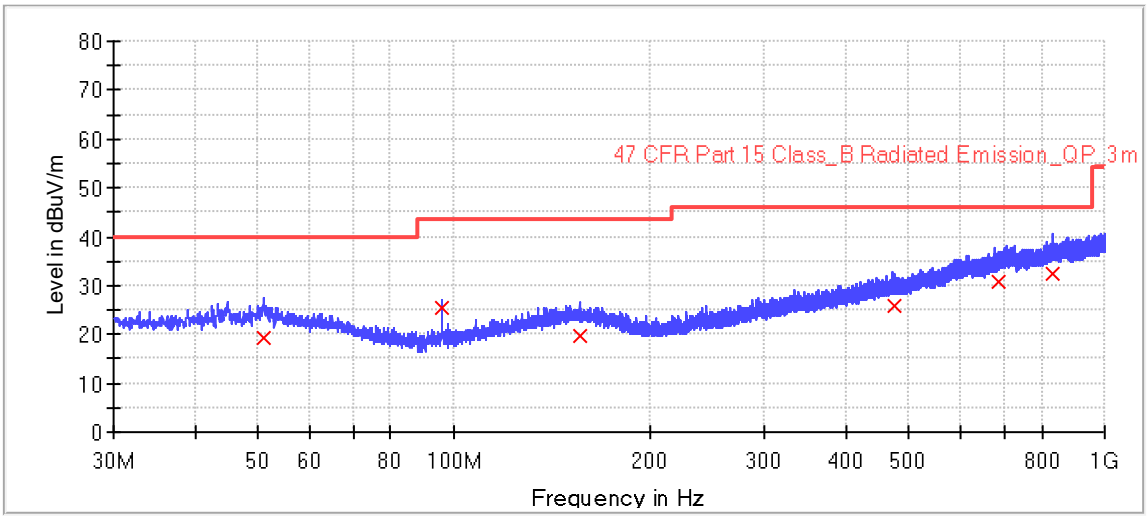
EUT Information

EUT Name:	WiFi Module
Model	GRJWB05-J12
Client:	Gree Electric Appliances, Inc. of Zhuhai
Op Cond	Power on, TX_2412MHz at 802.11B
Operator:	Doujun XU
Standard	FCC part 15.209
Sample No.:	SHA-1075771-1

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup:	RE_VULB9168
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
50.960000	19.2	1000.0	120.000	100.0	V	224.0	20.5	20.8	40.0
95.680000	25.4	1000.0	120.000	200.0	V	158.0	15.3	18.1	43.5
155.760000	19.6	1000.0	120.000	250.0	V	267.0	20.7	23.9	43.5
473.960000	25.7	1000.0	120.000	300.0	V	143.0	26.1	20.3	46.0
686.400000	30.9	1000.0	120.000	150.0	V	209.0	30.6	15.1	46.0
830.680000	32.6	1000.0	120.000	150.0	V	314.0	33.1	13.4	46.0

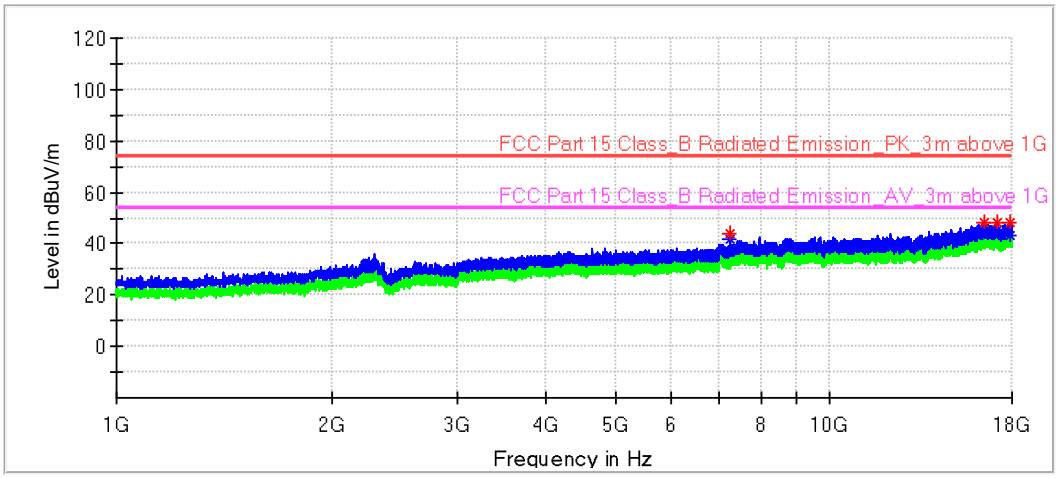
Remark:

(1) Emission level= Original Receiver Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss -Amplifier gain
(3) Margin = limit – Corrected Reading

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

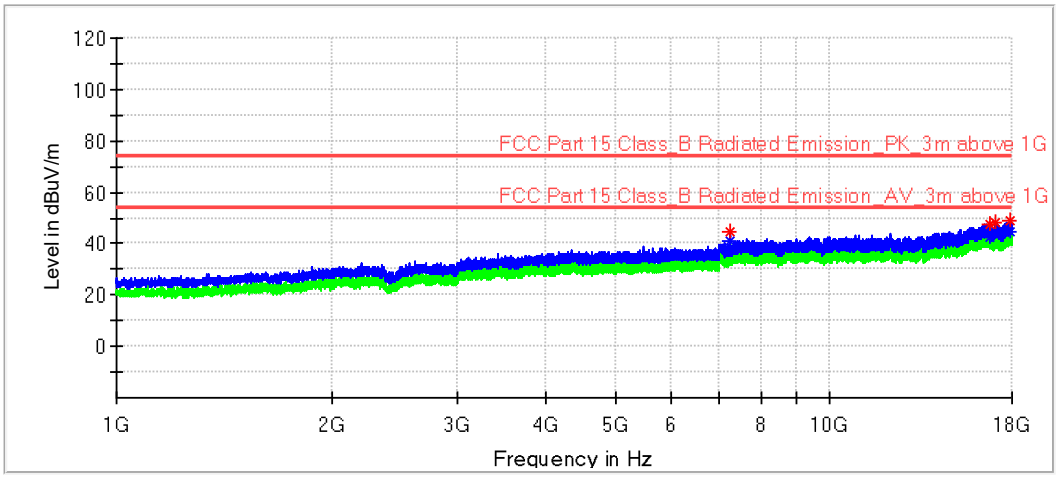
Radiated Emission 1-18 GHz at 802.11B

Frequency:2412MHz



Limit and Margin

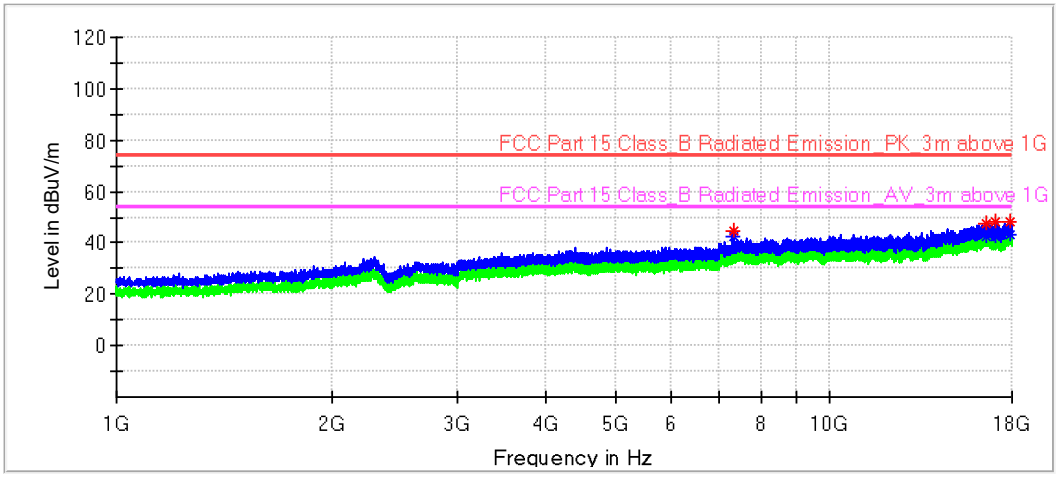
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7236.875000	44.08	---	74.00	29.92	100.0	H	158.0	-0.6
7236.875000	---	42.06	54.00	11.94	250.0	H	264.0	-0.6
16408.375000	---	44.03	54.00	9.97	300.0	H	246.0	9.3
16416.875000	48.30	---	74.00	25.70	250.0	H	359.0	9.4
17115.468750	---	45.69	54.00	8.31	310.0	H	120.0	10.5
17152.656250	47.92	---	74.00	26.08	400.0	H	300.0	10.6
17860.281250	48.49	---	74.00	25.51	350.0	H	246.0	11.7
17865.062500	---	43.29	54.00	10.71	150.0	H	168.0	11.7



Limit and Margin

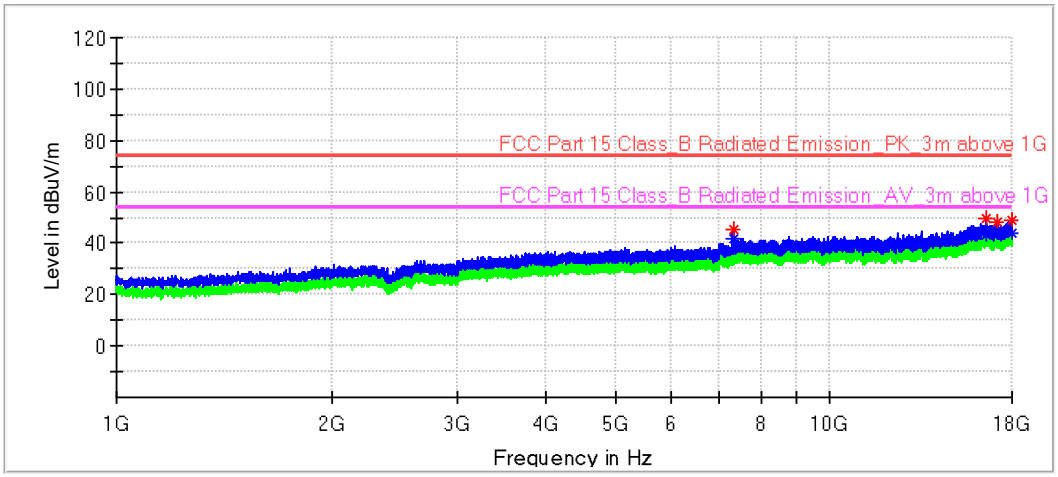
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7235.812500	44.44	---	74.00	29.56	250.0	V	118.0	-0.6
7237.937500	---	41.38	54.00	12.62	300.0	V	113.0	-0.6
16754.218750	---	42.56	54.00	11.44	250.0	V	241.0	10.0
16757.937500	47.35	---	74.00	26.65	100.0	V	235.0	10.0
17108.562500	48.49	---	74.00	25.51	150.0	V	42.0	10.5
17108.562500	---	44.38	54.00	9.62	400.0	V	265.0	10.5
17888.968750	---	44.77	54.00	9.23	300.0	V	341.0	11.8
17888.968750	48.69	---	74.00	25.31	350.0	V	126.0	11.8

Frequency:2437MHz



Limit and Margin

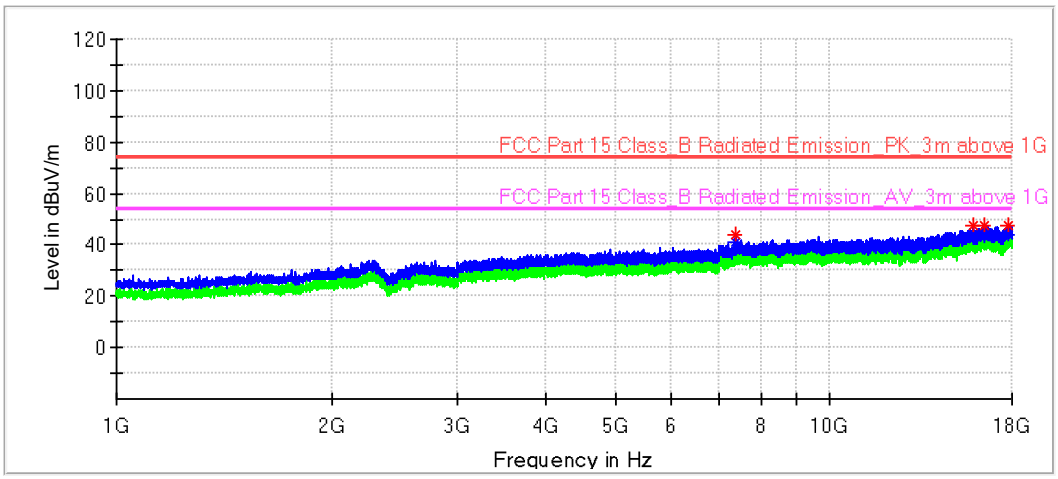
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7311.781250	---	42.76	54.00	11.24	150.0	H	298.0	-0.7
7311.781250	44.44	---	74.00	29.56	100.0	H	138.0	-0.7
16540.125000	---	42.36	54.00	11.64	250.0	H	264.0	9.7
16540.125000	47.56	---	74.00	26.44	250.0	H	246.0	9.7
17035.250000	---	42.71	54.00	11.29	320.0	H	175.0	10.4
17035.250000	48.41	---	74.00	25.59	320.0	H	186.0	10.4
17941.031250	---	43.35	54.00	10.65	350.0	H	202.0	11.9
17941.031250	48.33	---	74.00	25.67	350.0	H	178.0	11.9



Limit and Margin

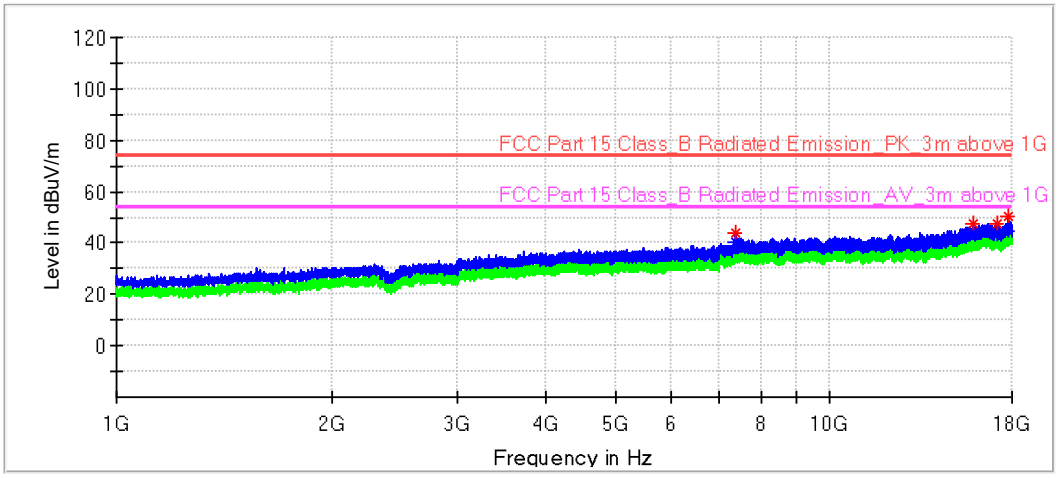
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7311.250000	---	42.09	54.00	11.91	400.0	V	263.0	-0.7
7311.250000	45.61	---	74.00	28.39	250.0	V	106.0	-0.7
16536.937500	---	43.48	54.00	10.52	300.0	V	178.0	9.7
16536.937500	49.42	---	74.00	24.58	150.0	V	292.0	9.7
17120.781250	---	44.49	54.00	9.51	100.0	V	307.0	10.6
17120.781250	48.51	---	74.00	25.49	250.0	V	254.0	10.6
18000.000000	---	43.91	54.00	10.09	300.0	V	219.0	12.0
18000.000000	49.03	---	74.00	24.97	200.0	V	228.0	12.0

Frequency:2462MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7385.625000	---	41.33	54.00	12.67	350.0	H	135.0	-0.6
7385.625000	43.63	---	74.00	30.37	400.0	H	258.0	-0.6
15903.687500	47.15	---	74.00	26.85	250.0	H	356.0	8.2
15906.343750	---	42.52	54.00	11.48	300.0	H	248.0	8.2
16416.343750	47.35	---	74.00	26.65	200.0	H	225.0	9.4
16423.250000	---	42.97	54.00	11.03	150.0	H	331.0	9.4
17820.968750	---	44.00	54.00	10.00	100.0	H	231.0	11.6
17820.968750	47.73	---	74.00	26.27	150.0	H	120.0	11.6



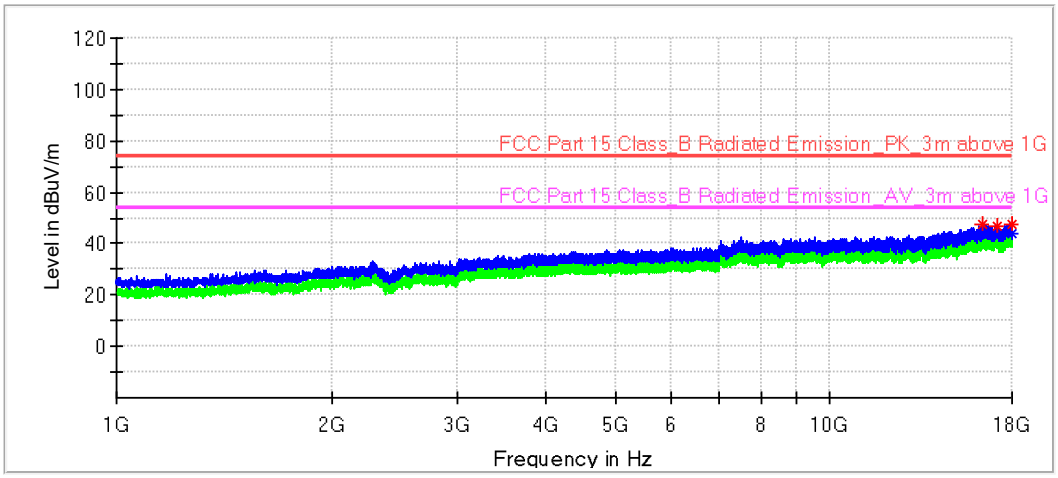
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7384.562500	---	40.21	54.00	13.79	350.0	V	71.0	-0.6
7385.093750	43.67	---	74.00	30.33	250.0	V	128.0	-0.6
15909.531250	47.36	---	74.00	26.64	100.0	V	167.0	8.2
15950.968750	---	42.85	54.00	11.15	150.0	V	35.0	8.4
17147.875000	47.41	---	74.00	26.59	220.0	V	139.0	10.6
17150.000000	---	42.99	54.00	11.01	250.0	V	228.0	10.6
17787.500000	50.13	---	74.00	23.87	150.0	V	117.0	11.5
17787.500000	---	44.91	54.00	9.09	200.0	V	328.0	11.5

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

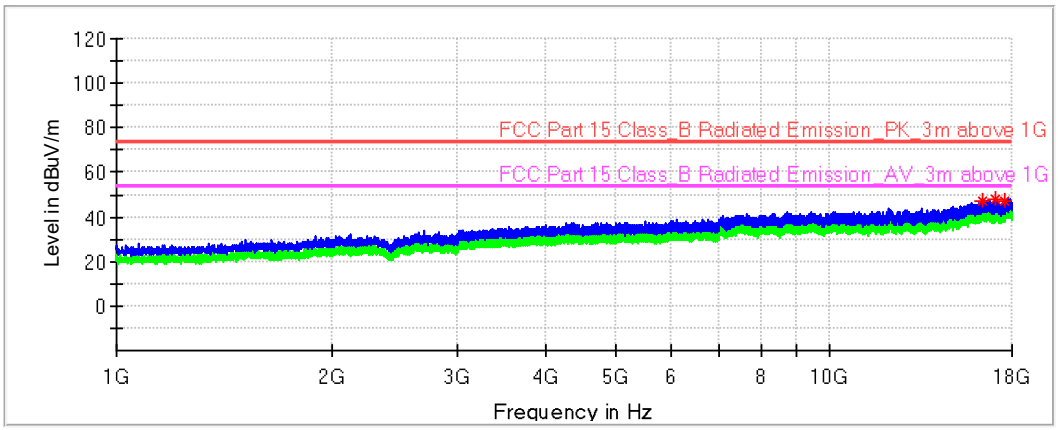
Radiated Emission 1-18 GHz at 802.11G

Frequency:2412MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16356.312500	---	44.40	54.00	9.60	250.0	H	142.0	9.2
16356.312500	47.63	---	74.00	26.37	330.0	H	235.0	9.2
17103.781250	---	43.77	54.00	10.23	200.0	H	157.0	10.5
17120.781250	47.08	---	74.00	26.92	150.0	H	135.0	10.6
17967.062500	---	44.04	54.00	9.96	150.0	H	101.0	11.9
17998.406250	47.72	---	74.00	26.28	100.0	H	296.0	12.0

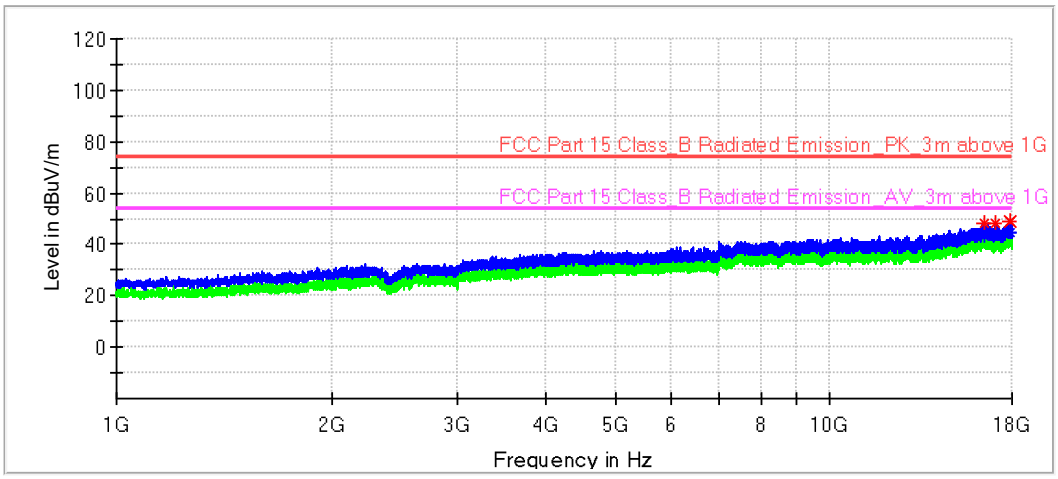


Comment

Limit and Margin

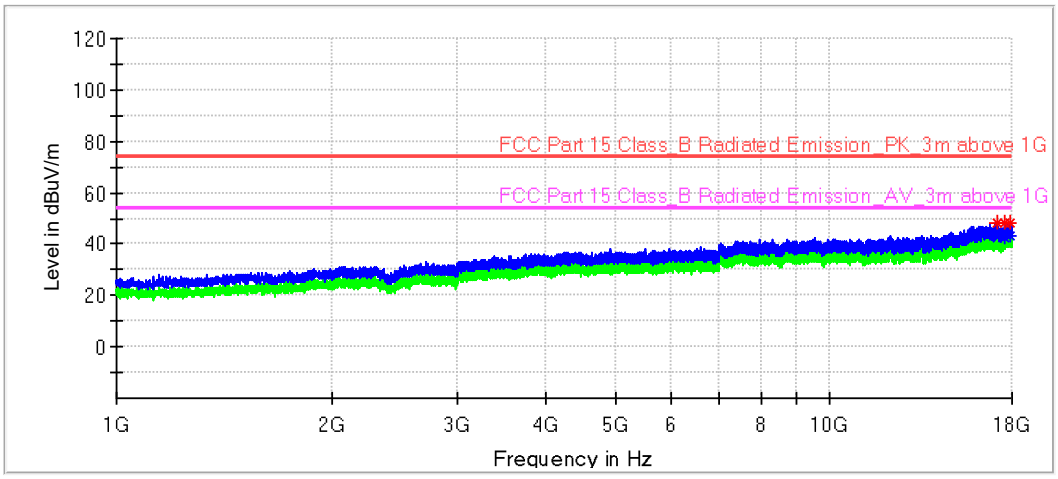
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16341.968750	---	44.79	54.00	9.21	350.0	V	139.0	9.2
16412.093750	47.30	---	74.00	26.70	400.0	V	41.0	9.4
17055.968750	48.11	---	74.00	25.89	300.0	V	337.0	10.4
17610.593750	---	43.43	54.00	10.57	150.0	V	145.0	11.2
17610.593750	47.05	---	74.00	26.95	250.0	V	262.0	11.2

Frequency:2437MHz



Limit and Margin

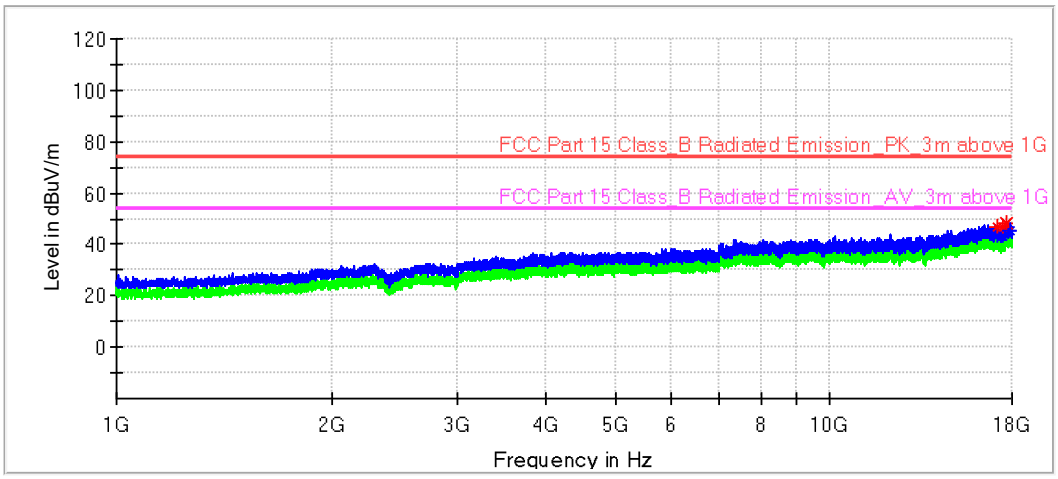
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16487.531250	48.11	---	74.00	25.89	200.0	H	234.0	9.5
16487.531250	---	43.18	54.00	10.82	150.0	H	197.0	9.5
17108.031250	48.18	---	74.00	25.82	250.0	H	90.0	10.5
17134.062500	---	43.78	54.00	10.22	300.0	H	174.0	10.6
17866.656250	---	44.84	54.00	9.16	400.0	H	37.0	11.7
17866.656250	48.63	---	74.00	25.37	100.0	H	194.0	11.7



Limit and Margin

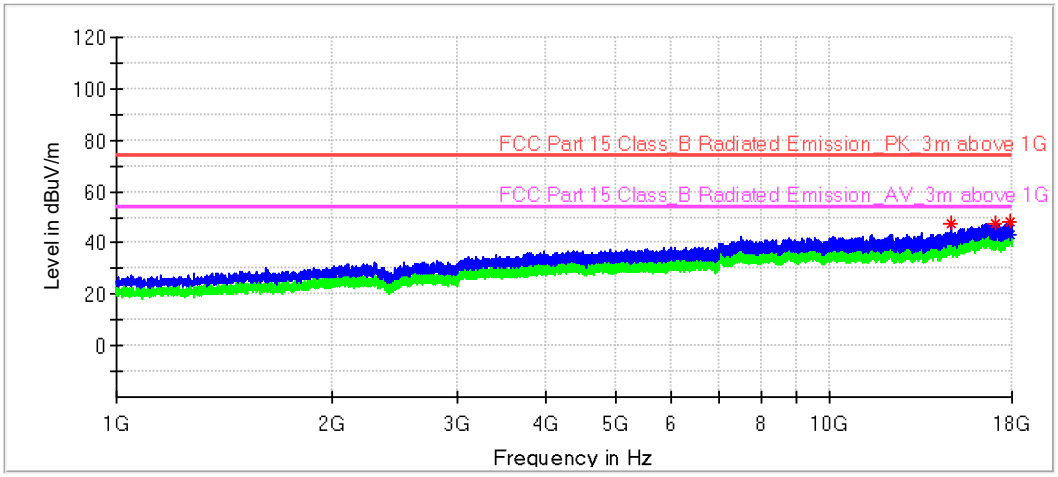
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16751.562500	---	44.53	54.00	9.47	320.0	V	163.0	10.0
17147.875000	48.33	---	74.00	25.67	150.0	V	190.0	10.6
17605.281250	47.91	---	74.00	26.09	240.0	V	246.0	11.2
17607.937500	---	42.61	54.00	11.39	150.0	V	235.0	11.2
17867.718750	48.46	---	74.00	25.54	150.0	V	101.0	11.7
17907.562500	---	43.51	54.00	10.49	200.0	V	185.0	11.8

Frequency:2462MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
17136.718750	46.80	---	74.00	27.20	200.0	H	197.0	10.6
17150.000000	---	43.51	54.00	10.49	150.0	H	147.0	10.6
17492.656250	47.12	---	74.00	26.88	350.0	H	158.0	11.1
17497.437500	---	43.01	54.00	10.99	300.0	H	191.0	11.1
17723.218750	48.08	---	74.00	25.92	150.0	H	163.0	11.4
17871.437500	---	45.15	54.00	8.85	210.0	H	64.0	11.7

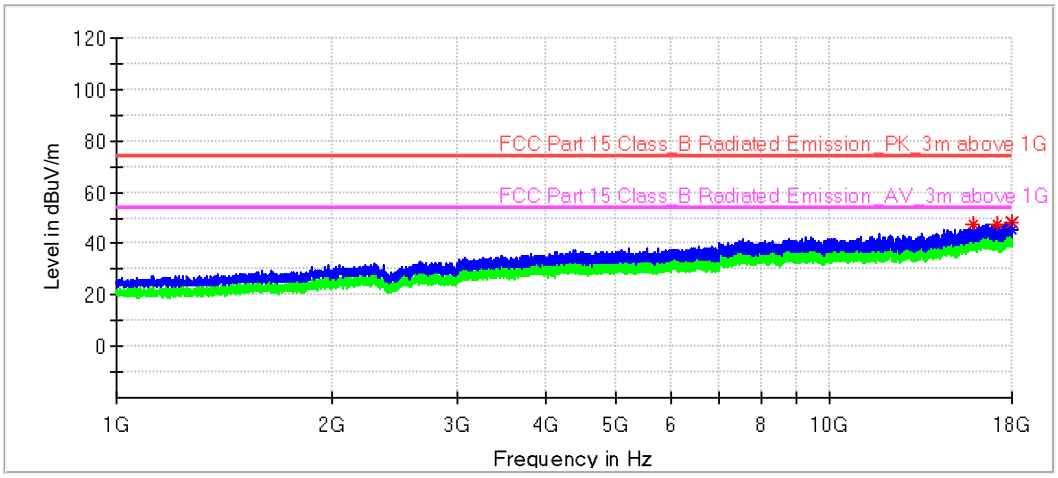


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
14821.531250	---	42.19	54.00	11.81	150.0	V	278.0	6.4
14821.531250	47.29	---	74.00	26.71	220.0	V	114.0	6.4
17110.687500	47.81	---	74.00	26.19	300.0	V	98.0	10.5
17124.500000	---	44.72	54.00	9.28	350.0	V	136.0	10.6
17880.468750	---	43.44	54.00	10.56	210.0	V	160.0	11.7
17891.625000	47.89	---	74.00	26.11	400.0	V	305.0	11.8

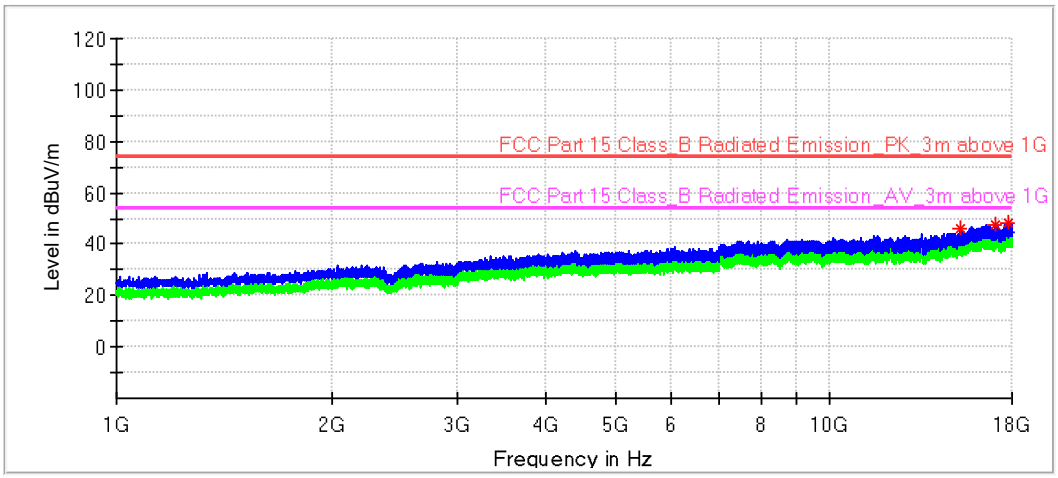
Radiated Emission 1-18 GHz at 802.11N20

Frequency:2412MHz



Limit and Margin

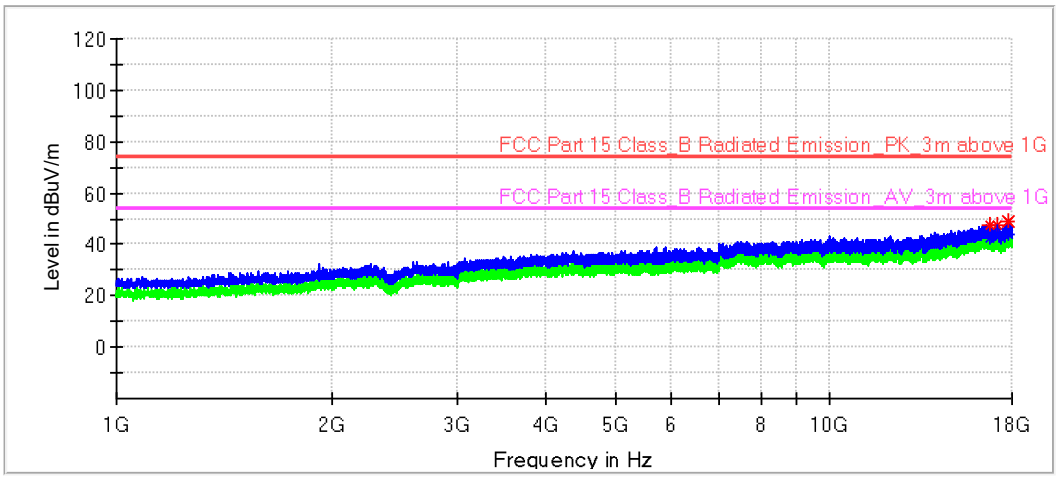
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
15876.062500	---	42.27	54.00	11.73	320.0	H	149.0	8.2
15894.656250	47.32	---	74.00	26.68	150.0	H	258.0	8.2
17133.000000	47.43	---	74.00	26.57	350.0	H	133.0	10.6
17133.000000	---	45.19	54.00	8.81	200.0	H	229.0	10.6
17951.125000	---	45.27	54.00	8.73	150.0	H	208.0	11.9
17951.125000	48.56	---	74.00	25.44	400.0	H	252.0	11.9



Limit and Margin

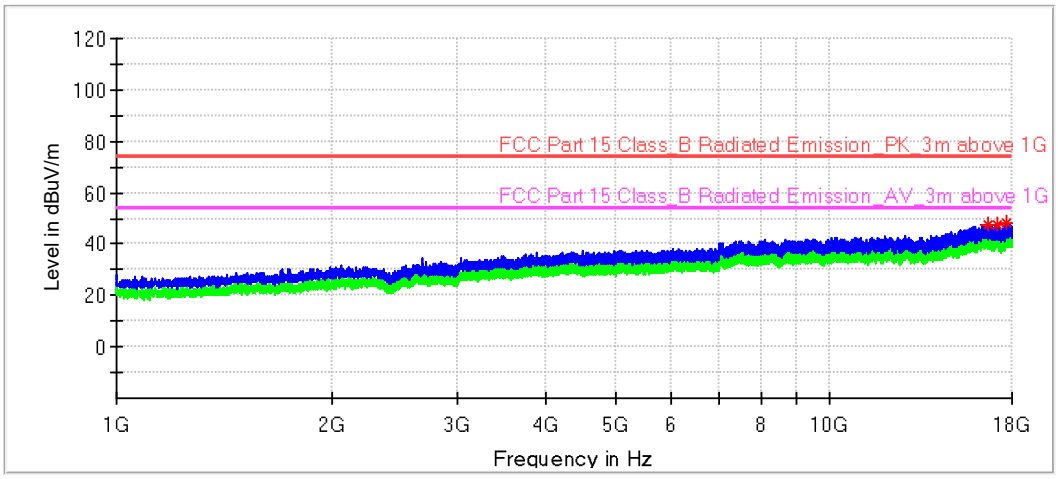
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
15200.843750	46.11	---	74.00	27.89	310.0	V	234.0	7.1
15225.281250	---	41.94	54.00	12.06	250.0	V	240.0	7.1
17079.875000	47.59	---	74.00	26.41	400.0	V	174.0	10.5
17102.187500	---	43.93	54.00	10.07	150.0	V	130.0	10.5
17817.781250	48.04	---	74.00	25.96	150.0	V	110.0	11.6
17817.781250	---	44.75	54.00	9.25	200.0	V	219.0	11.6

Frequency:2437MHz



Limit and Margin

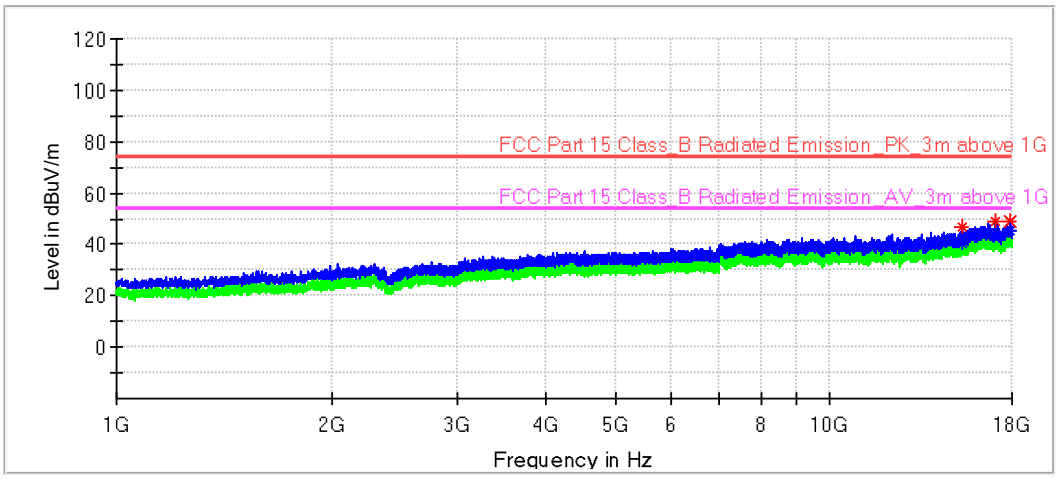
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16713.312500	47.51	---	74.00	26.49	150.0	H	263.0	10.0
16713.843750	---	42.75	54.00	11.25	150.0	H	45.0	10.0
17138.843750	---	44.62	54.00	9.38	150.0	H	281.0	10.6
17173.375000	47.40	---	74.00	26.60	150.0	H	191.0	10.6
17795.468750	---	43.93	54.00	10.07	150.0	H	135.0	11.6
17802.906250	48.58	---	74.00	25.42	150.0	H	152.0	11.6



Limit and Margin

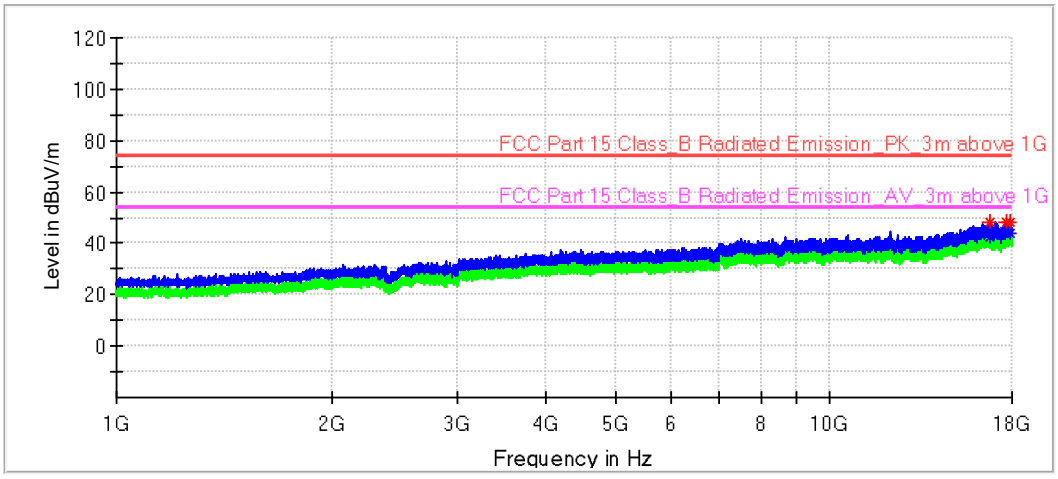
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16391.906250	---	44.27	54.00	9.73	200.0	V	252.0	9.3
16683.562500	---	43.83	54.00	10.17	100.0	V	167.0	10.0
16683.562500	47.77	---	74.00	26.23	150.0	V	290.0	10.0
17137.250000	47.62	---	74.00	26.38	350.0	V	234.0	10.6
17145.218750	---	43.70	54.00	10.30	150.0	V	92.0	10.6
17688.156250	48.45	---	74.00	25.55	220.0	V	184.0	11.4

Frequency:2462MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
15337.375000	46.51	---	74.00	27.49	400.0	H	288.0	7.2
15337.375000	---	40.56	54.00	13.44	350.0	H	154.0	7.2
17110.156250	---	44.42	54.00	9.58	100.0	H	321.0	10.5
17110.156250	48.58	---	74.00	25.42	250.0	H	227.0	10.5
17859.750000	48.80	---	74.00	25.20	400.0	H	171.0	11.7
17865.062500	---	45.65	54.00	8.35	150.0	H	15.0	11.7

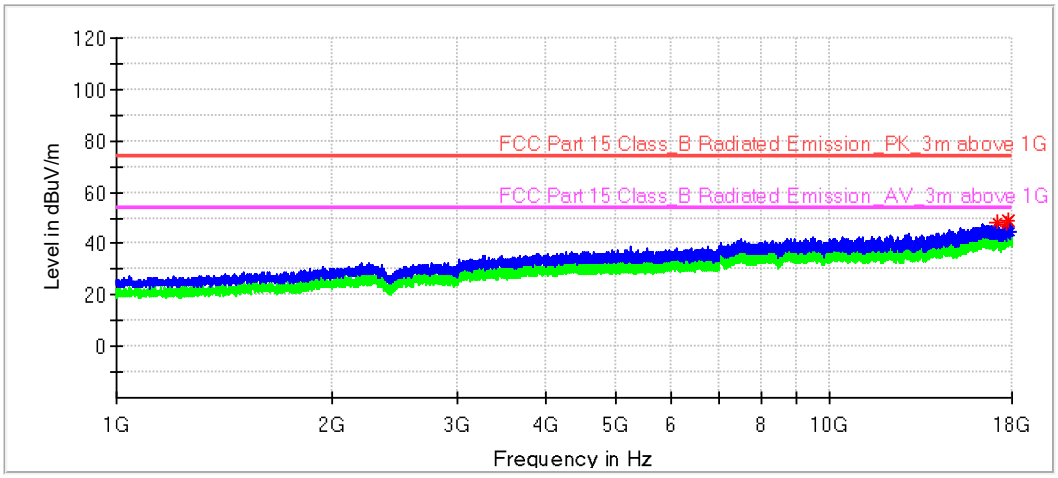


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16723.937500	47.95	---	74.00	26.05	220.0	V	245.0	10.0
16723.937500	---	42.81	54.00	11.19	150.0	V	307.0	10.0
17623.875000	---	44.67	54.00	9.33	310.0	V	178.0	11.3
17650.968750	48.35	---	74.00	25.65	250.0	V	216.0	11.3
17908.625000	---	43.82	54.00	10.18	400.0	V	223.0	11.8
17919.250000	48.47	---	74.00	25.53	330.0	V	193.0	11.8

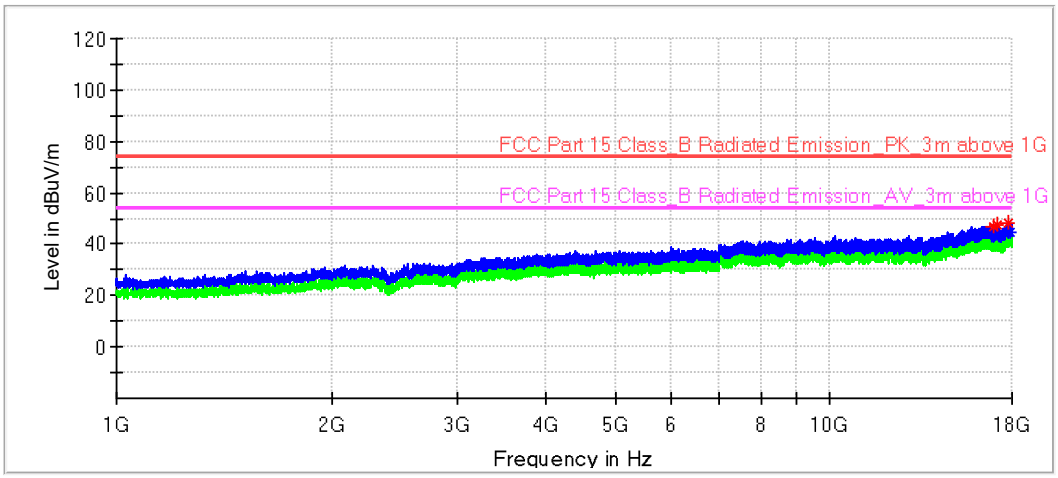
Radiated Emission 1-18 GHz at 802.11N40

Frequency:2422MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
17123.437500	48.13	---	74.00	25.87	220.0	H	218.0	10.6
17123.437500	---	44.00	54.00	10.00	250.0	H	281.0	10.6
17640.343750	---	43.43	54.00	10.57	150.0	H	246.0	11.3
17643.000000	47.83	---	74.00	26.17	30.0	H	79.0	11.3
17824.687500	48.91	---	74.00	25.09	350.0	H	207.0	11.6
17924.031250	---	44.41	54.00	9.59	400.0	H	145.0	11.9

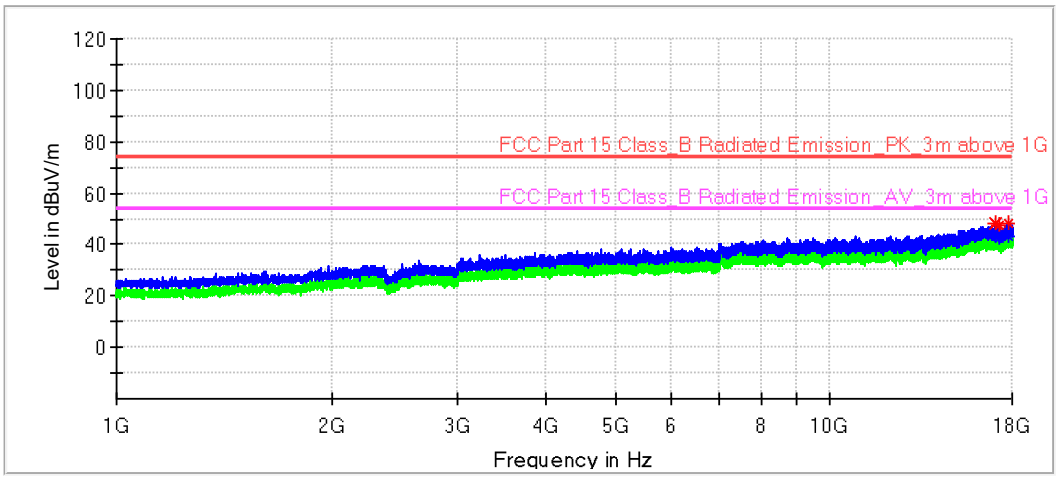


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16988.500000	46.63	---	74.00	27.37	250.0	V	186.0	10.3
16988.500000	---	43.65	54.00	10.35	400.0	V	247.0	10.3
17130.875000	---	43.62	54.00	10.38	150.0	V	77.0	10.6
17131.406250	47.33	---	74.00	26.67	250.0	V	258.0	10.6
17775.812500	48.30	---	74.00	25.70	300.0	V	338.0	11.5
17877.812500	---	44.88	54.00	9.12	150.0	V	264.0	11.7

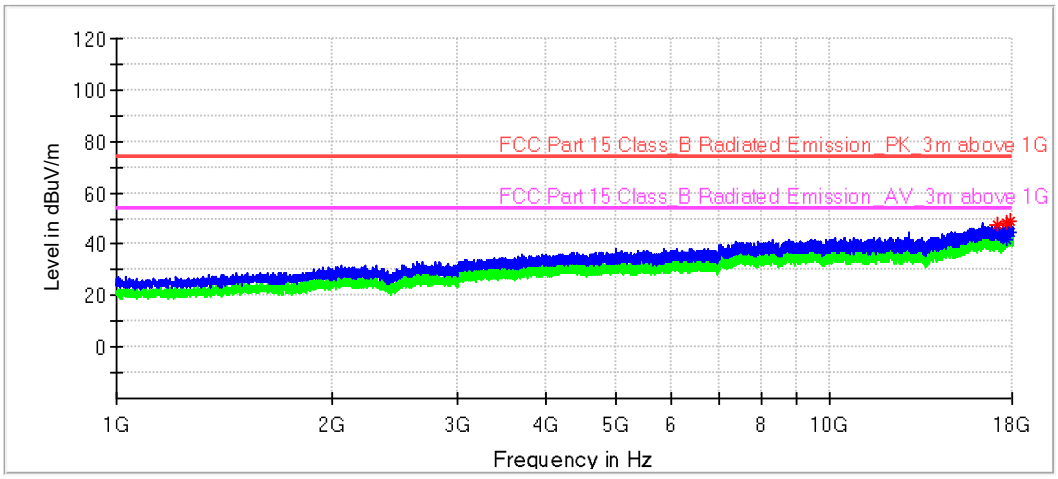
TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

Frequency:2437MHz



Limit and Margin

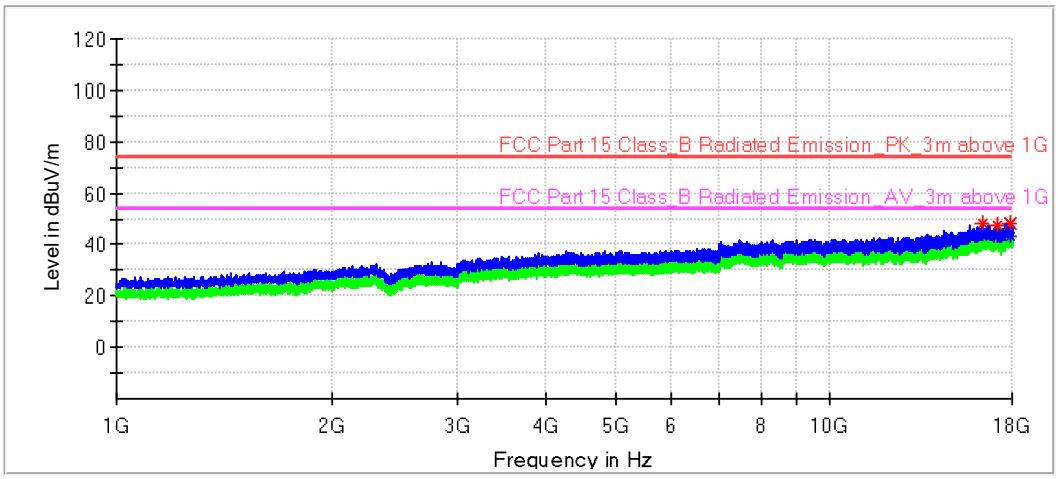
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
17093.156250	48.07	---	74.00	25.93	250.0	H	289.0	10.5
17093.156250	---	43.91	54.00	10.09	330.0	H	24.0	10.5
17259.968750	47.23	---	74.00	26.77	200.0	H	156.0	10.8
17282.281250	---	42.48	54.00	11.52	150.0	H	75.0	10.8
17806.625000	48.00	---	74.00	26.00	350.0	H	241.0	11.6
17808.750000	---	43.03	54.00	10.97	150.0	H	282.0	11.6



Limit and Margin

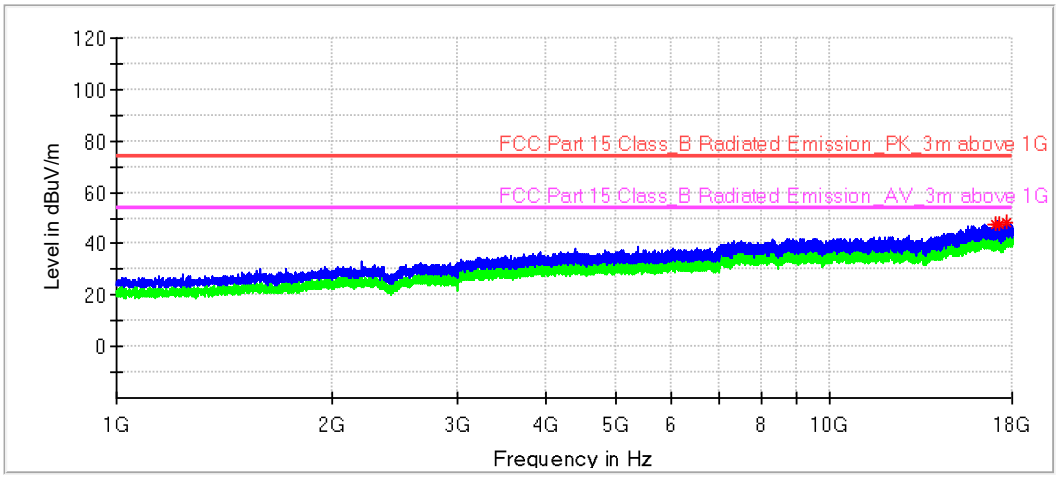
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
17143.625000	47.34	---	74.00	26.66	250.0	V	128.0	10.6
17152.656250	---	43.63	54.00	10.37	200.0	V	180.0	10.6
17684.437500	---	41.99	54.00	12.01	100.0	V	219.0	11.4
17686.562500	48.04	---	74.00	25.96	350.0	V	230.0	11.4
17916.593750	49.22	---	74.00	24.78	180.0	V	123.0	11.8
17916.593750	---	44.61	54.00	9.39	400.0	V	239.0	11.8

Frequency:2452MHz



Limit and Margin

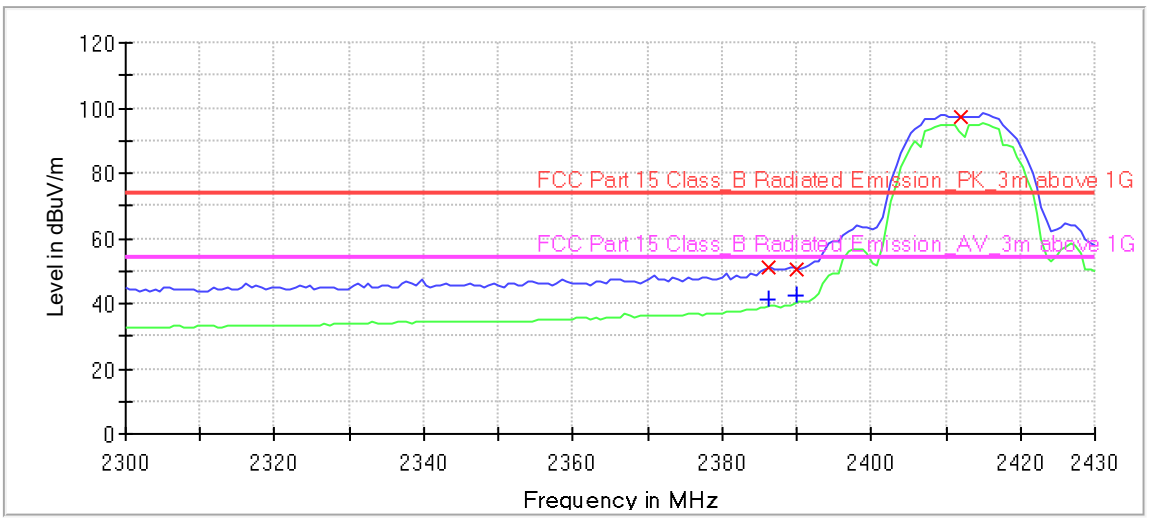
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
16377.031250	48.16	---	74.00	25.84	200.0	H	228.0	9.3
16377.031250	---	43.91	54.00	10.09	220.0	H	269.0	9.3
17121.843750	---	43.11	54.00	10.89	150.0	H	46.0	10.6
17122.906250	47.80	---	74.00	26.20	300.0	H	298.0	10.6
17852.843750	48.46	---	74.00	25.54	330.0	H	247.0	11.7
17854.437500	---	42.85	54.00	11.15	100.0	H	108.0	11.7



Limit and Margin

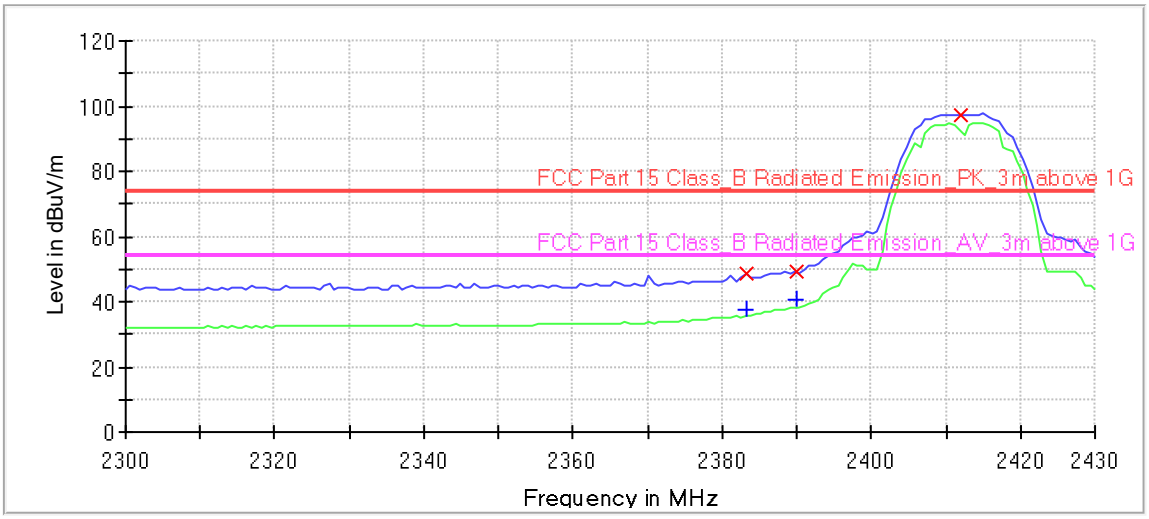
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
17107.500000	47.18	---	74.00	26.82	300.0	V	75.0	10.5
17142.031250	---	45.78	54.00	8.22	150.0	V	201.0	10.6
17306.718750	47.66	---	74.00	26.34	250.0	V	69.0	10.8
17315.750000	---	43.30	54.00	10.70	400.0	V	331.0	10.8
17716.312500	47.87	---	74.00	26.13	150.0	V	175.0	11.4
17716.312500	---	46.13	54.00	7.87	330.0	V	239.0	11.4

Band Edge at 802.11B



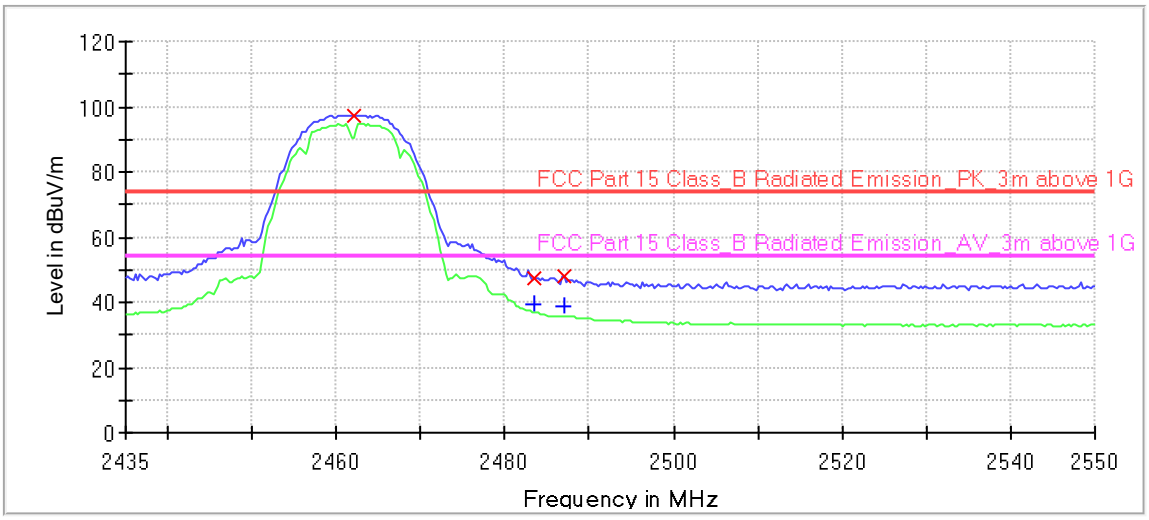
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2386.300000	51.2	41.4	250.0	H	126.0	-2.0	22.8	74.0	12.6
2390.000000	50.6	42.6	300.0	H	248.0	-2.0	23.4	74.0	11.4
2412.000000	97.2	---	150.0	H	157.0	-1.9	-23.2	74.0	---



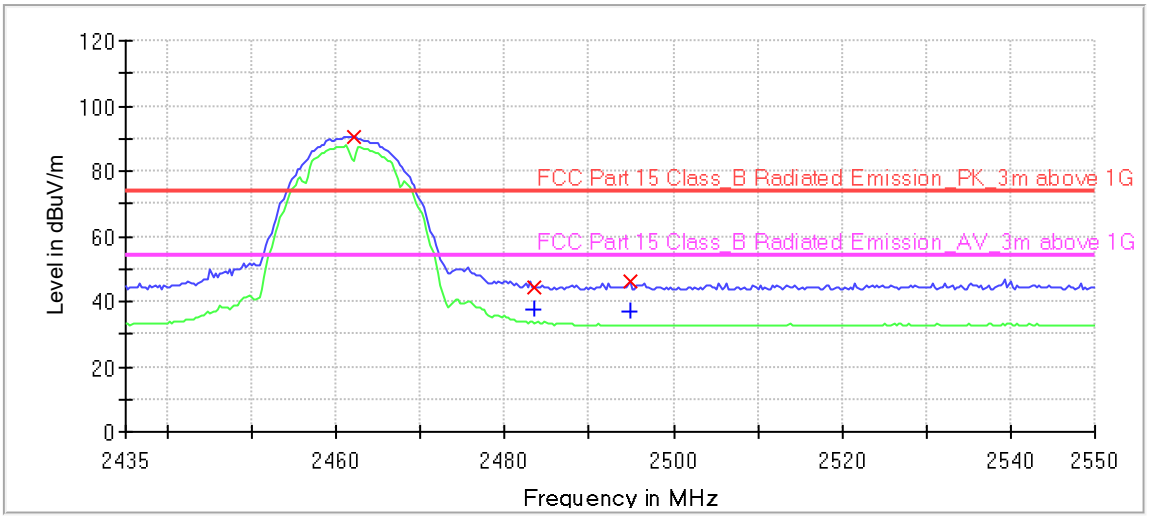
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2383.300000	48.7	37.5	350.0	V	225.0	-2.0	25.3	74.0	16.6
2390.000000	49.5	40.5	400.0	V	136.0	-2.0	24.5	74.0	13.5
2412.000000	97.0	---	150.0	V	279.0	-1.9	---	---	---



Limit and Margin

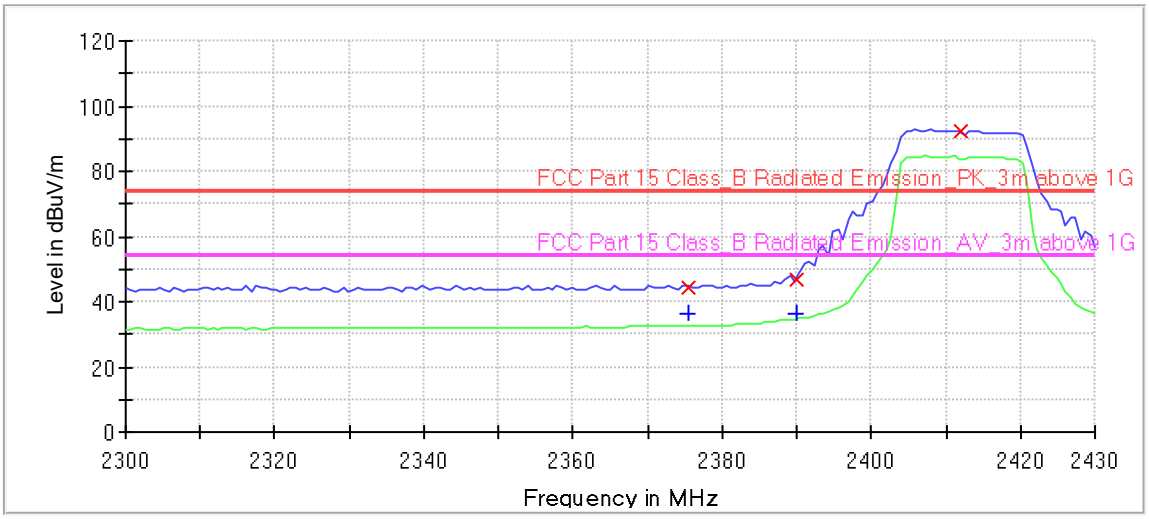
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2462.000000	97.3	---	300.0	H	236.0	-1.5	---	---	---
2483.500000	47.2	39.2	200.0	H	148.0	-1.4	26.8	74.0	14.8
2487.100000	48.1	38.6	350.0	H	293.0	-1.4	25.9	74.0	15.4



Limit and Margin

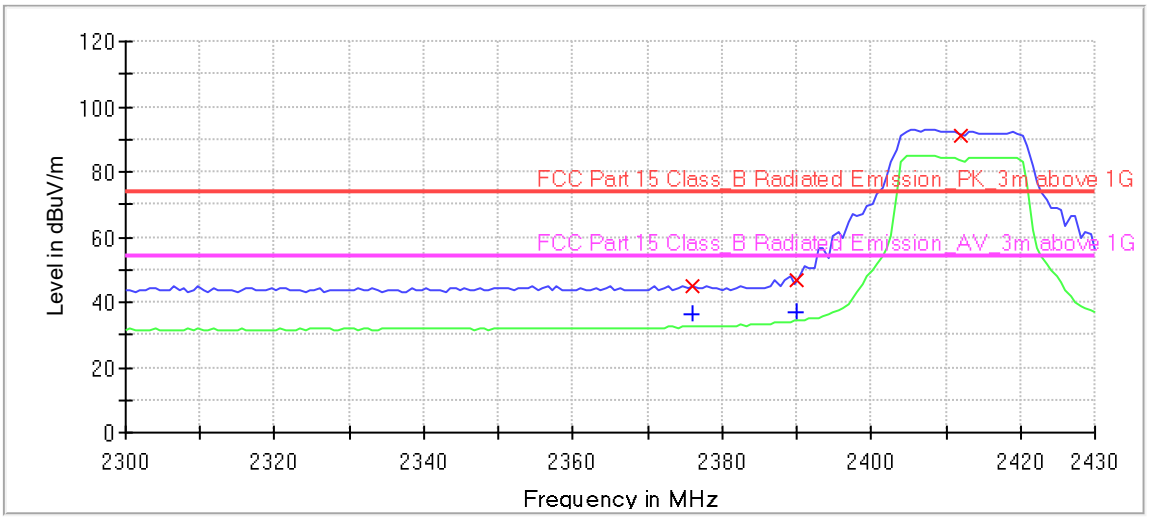
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2462.000000	90.3	---	250.0	V	126.0	-1.5	---	---	---
2483.500000	44.4	37.6	200.0	V	236.0	-1.4	29.6	74.0	16.4
2494.900000	46.4	37.0	150.0	V	179.0	-1.4	27.6	74.0	17.0

Band Edge at 802.11G



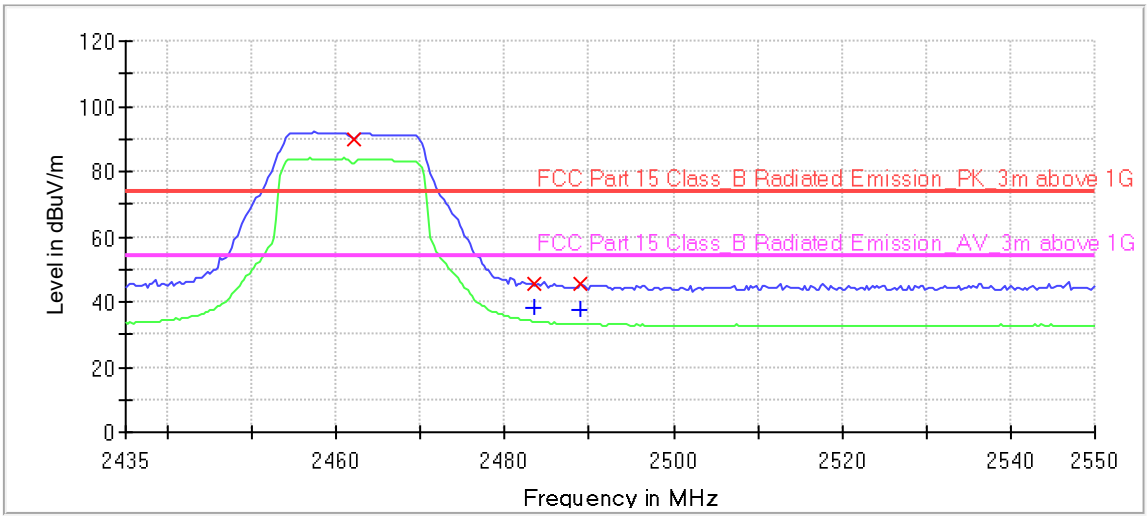
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2375.500000	44.6	36.4	300.0	H	231.0	-2.0	29.4	74.0	17.6
2390.000000	46.9	36.6	200.0	H	147.0	-2.0	27.2	74.0	17.4
2412.000000	92.1	---	150.0	H	158.0	-1.9	---	---	---



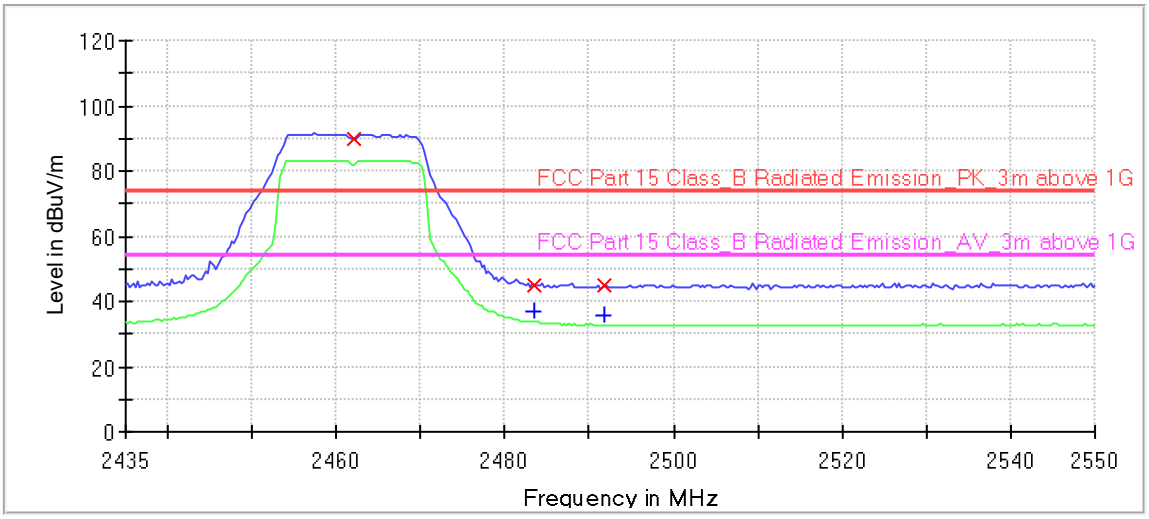
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2376.100000	45.1	36.2	400.0	V	263.0	-2.0	28.9	74.0	17.8
2390.000000	46.7	37.1	250.0	V	241.0	-2.0	27.3	74.0	16.9
2412.000000	91.1	---	200.0	V	179.0	-1.9	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2462.000000	89.6	---	150.0	H	53.0	-1.6	---	---	---
2483.500000	45.3	38.2	250.0	H	264.0	-1.4	28.7	74.0	15.8
2488.900000	45.7	37.6	300.0	H	120.0	-1.4	28.3	74.0	16.4

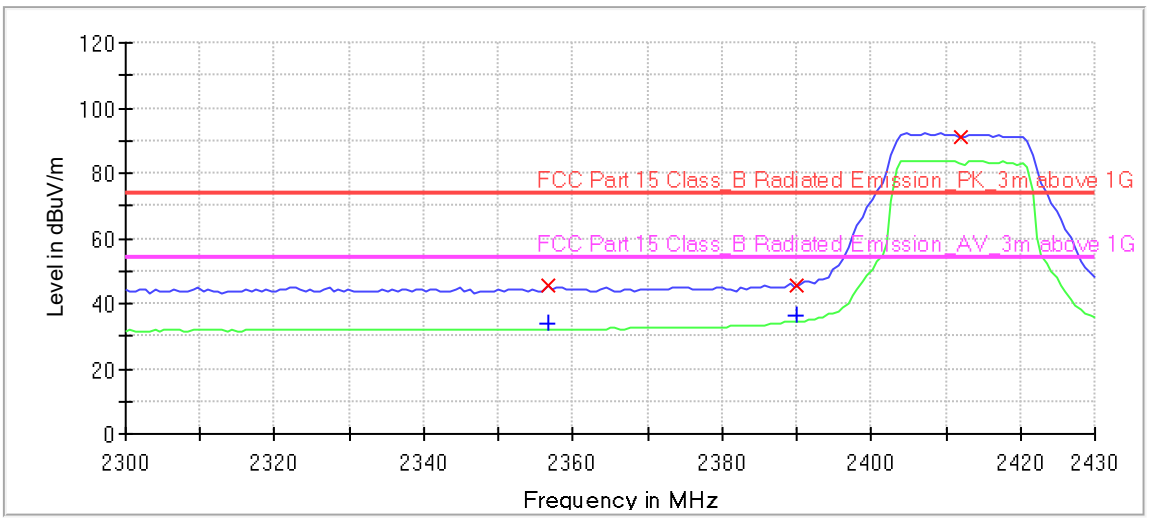


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2462.000000	89.7	---	330.0	V	150.0	-1.5	---	---	---
2483.500000	45.2	36.8	200.0	V	234.0	-1.4	28.8	74.0	17.2
2491.900000	45.1	36.0	150.0	V	174.0	-1.4	28.9	74.0	18.0

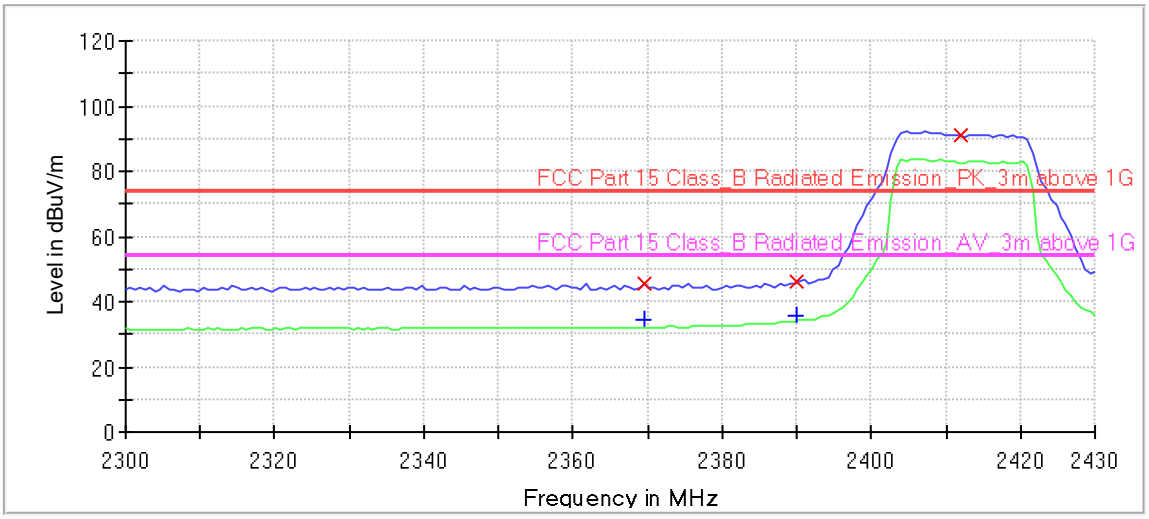
TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

Band Edge at 802.11N20



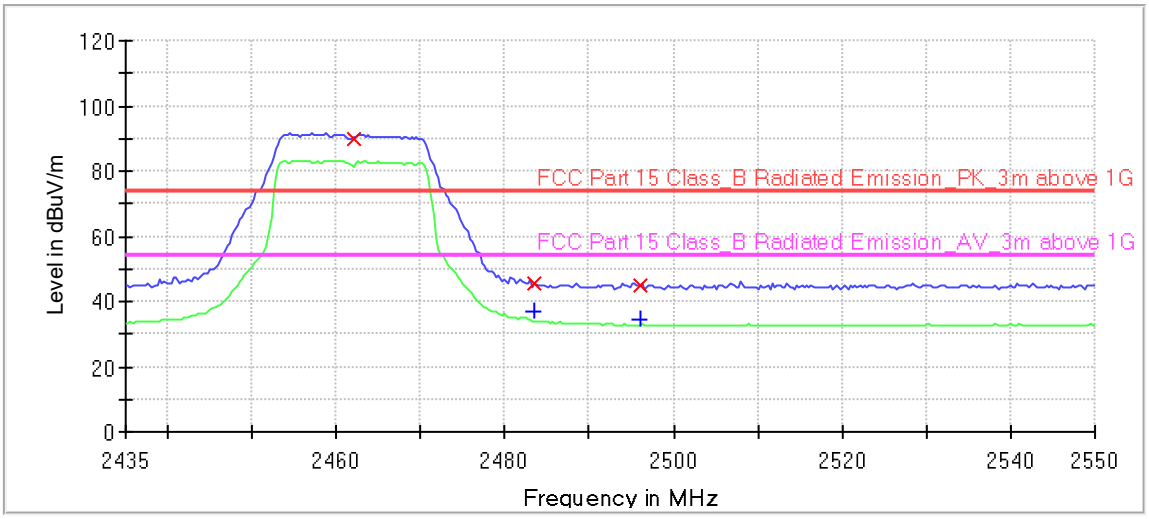
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2356.600000	45.8	34.0	300.0	H	220.0	-2.2	28.2	74.0	20.0
2390.000000	45.5	36.5	200.0	H	149.0	-2.0	28.5	74.0	17.5
2412.000000	91.1	---	150.0	H	256.0	-1.9	---	---	---



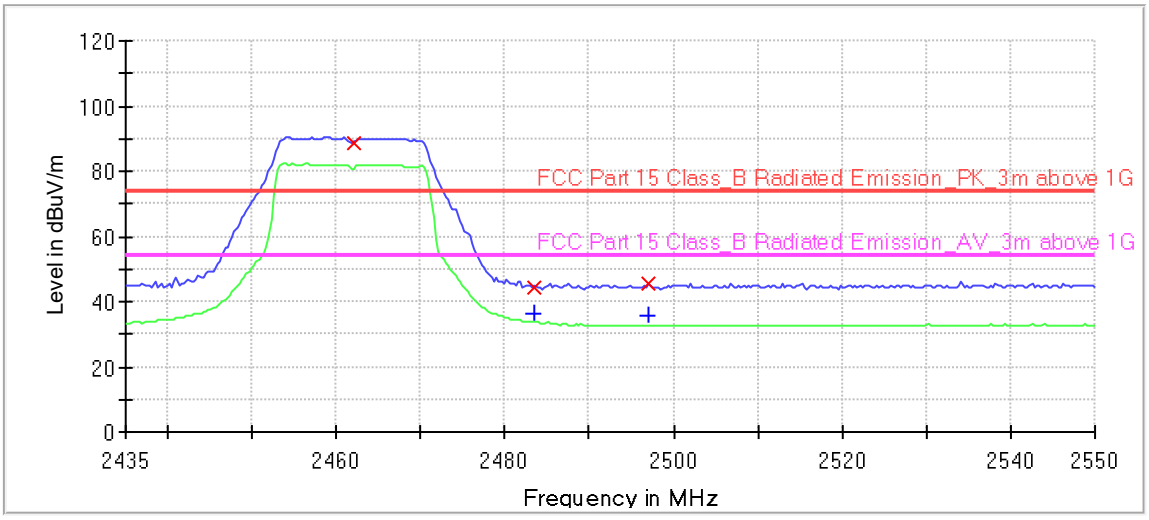
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2369.500000	45.5	34.3	220.0	V	264.0	-2.1	28.5	74.0	19.7
2390.000000	46.1	35.9	310.0	V	155.0	-2.0	27.9	74.0	18.1
2412.000000	91.3	---	300.0	V	208.0	-1.9	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2462.000000	90.2	---	400.0	H	236.0	-1.5	---	---	---
2483.500000	45.3	37.2	250.0	H	142.0	-1.4	28.7	74.0	16.8
2496.100000	44.7	34.7	150.0	H	258.0	-1.4	29.3	74.0	19.3

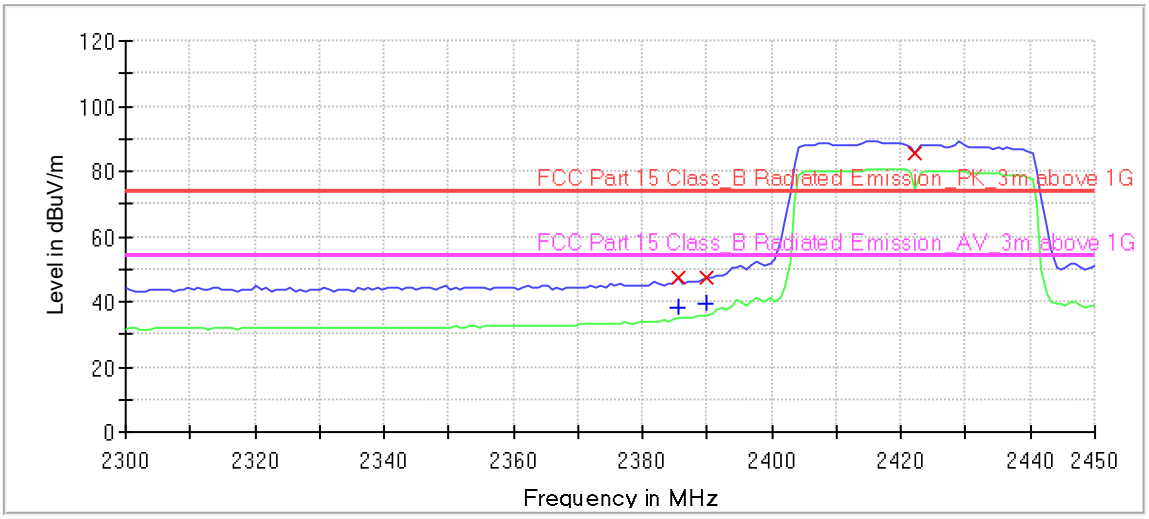


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2462.000000	88.6	---	220.0	V	97.0	-1.5	---	---	---
2483.500000	44.6	36.5	150.0	V	264.0	-1.4	29.4	74.0	17.5
2497.000000	45.4	35.4	310.0	V	102.0	-1.4	28.6	74.0	18.6

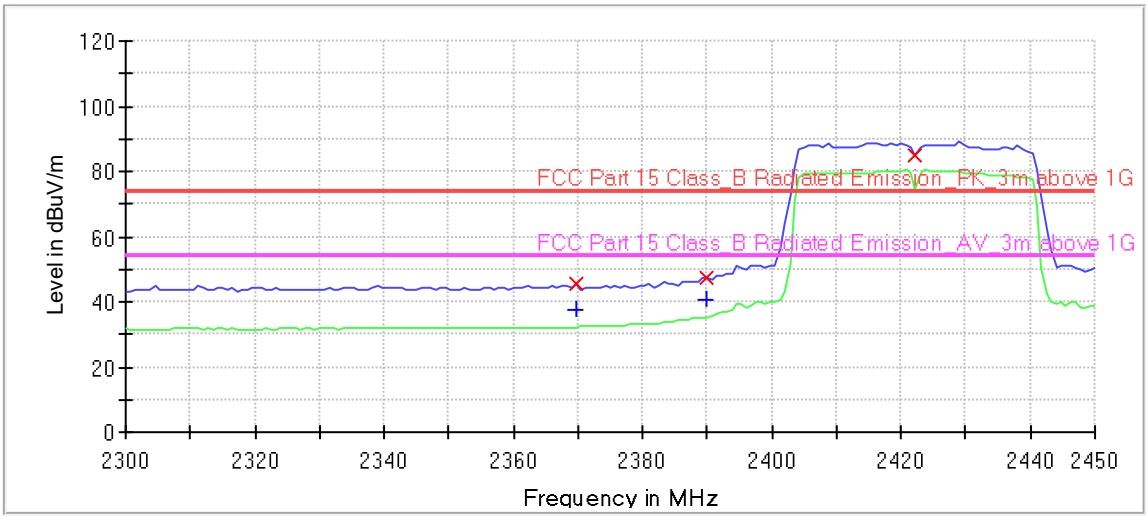
TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

Band Edge at 802.11N40



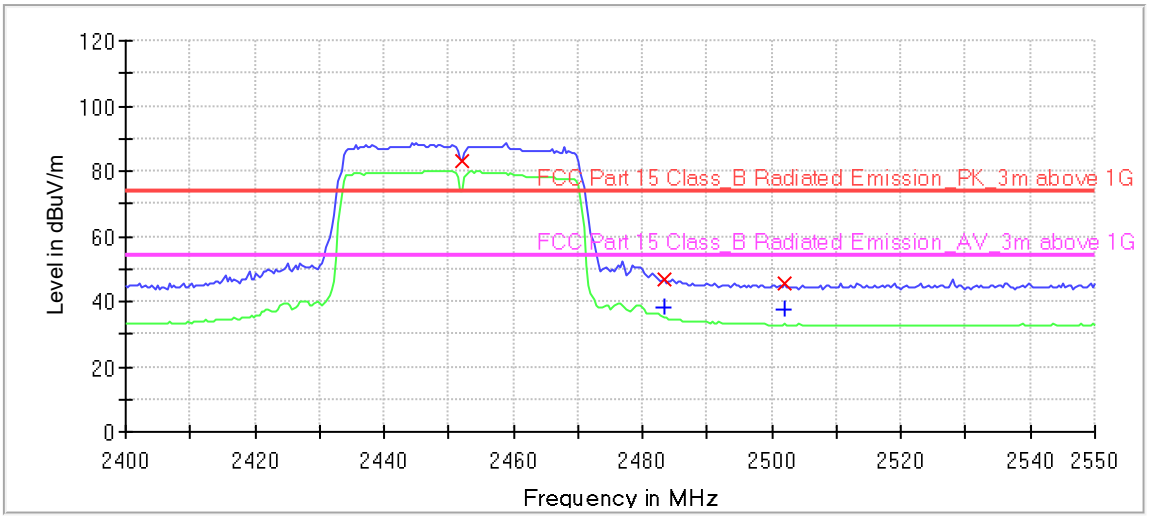
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2385.400000	47.2	38.2	330.0	H	263.0	-2.0	26.8	74.0	15.8
2390.000000	47.3	39.6	250.0	H	241.0	-2.0	26.7	74.0	14.4
2422.000000	85.3	---	150.0	H	175.0	-1.8	---	---	---



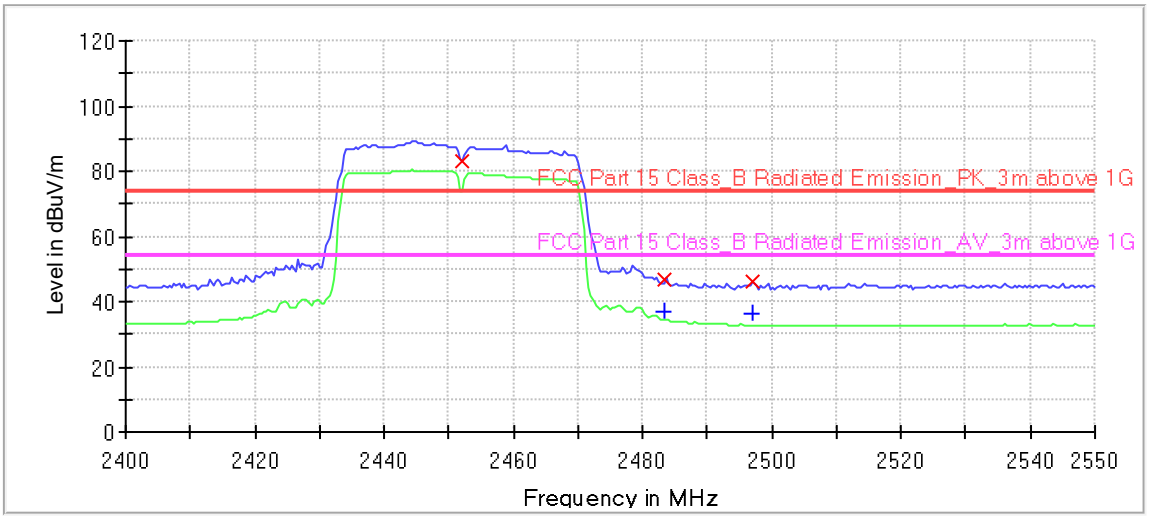
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2369.800000	45.2	37.5	150.0	V	226.0	-2.1	28.8	74.0	16.5
2390.000000	47.1	40.5	350.0	V	352.0	-2.0	26.9	74.0	13.5
2422.000000	84.8	---	250.0	V	210.0	-1.8	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - RMS (dB)
2452.000000	83.1	---	250.0	H	147.0	-1.6	---	---	---
2483.500000	46.7	38.4	400.0	H	256.0	-1.4	27.3	74.0	15.6
2502.100000	45.7	37.3	300.0	H	230.0	-1.4	28.3	74.0	16.7



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m	Margin - Average (dB)
2452.000000	83.0	---	330.0	V	164.0	-1.6	---	---	---
2483.500000	46.9	36.9	250.0	V	264.0	-1.4	27.1	74.0	17.1
2497.000000	45.9	36.6	200.0	V	152.0	-1.4	28.1	74.0	17.4

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

The worst case of Radiated Emission Above 18GHz

18-40GHz Radiated Emission

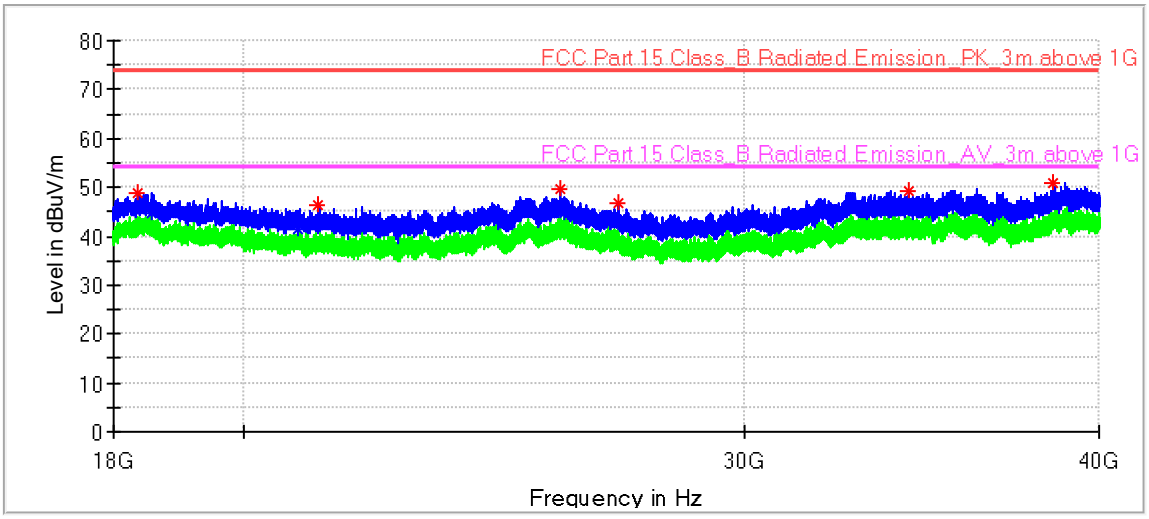
EUT Information

EUT Name:	WiFi Module
Model	GRJWB05-J12
Client:	Gree Electric Appliances, Inc. of Zhuhai
Op Cond	Power on, TX_2412MHz at 802.11B
Operator:	Doujun XU
Standard	FCC part 15.209
Sample No.:	SHA-1075771-1

Sweep Setup: RE_3116C_pre [EMI radiated]

Hardware Setup:	RE_3116C
Receiver:	[FSV 40]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
18 GHz - 40 GHz	500 kHz	PK+ ; AVG	1 MHz	0.05 s	0 dB



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18356.125000	48.98	---	74.00	25.02	100.0	H	129.0	8.6
18575.437500	---	44.61	54.00	9.39	100.0	H	35.0	8.6
20902.625000	---	41.58	54.00	12.42	100.0	H	117.0	9.0
21230.562500	46.18	---	74.00	27.82	100.0	H	263.0	9.2
25838.875000	49.51	---	74.00	24.49	100.0	H	41.0	10.3
25928.937500	---	44.66	54.00	9.34	100.0	H	359.0	10.3
27095.625000	46.61	---	74.00	27.39	100.0	H	71.0	9.7
27095.625000	---	42.58	54.00	11.42	100.0	H	71.0	9.7
33716.937500	---	45.14	54.00	8.86	100.0	H	83.0	11.5
34307.500000	49.35	---	74.00	24.65	100.0	H	359.0	11.9
35527.125000	---	45.86	54.00	8.14	100.0	H	0.0	12.6
38556.250000	51.01	---	74.00	22.99	100.0	H	95.0	13.0

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

18-40GHz Radiated Emission

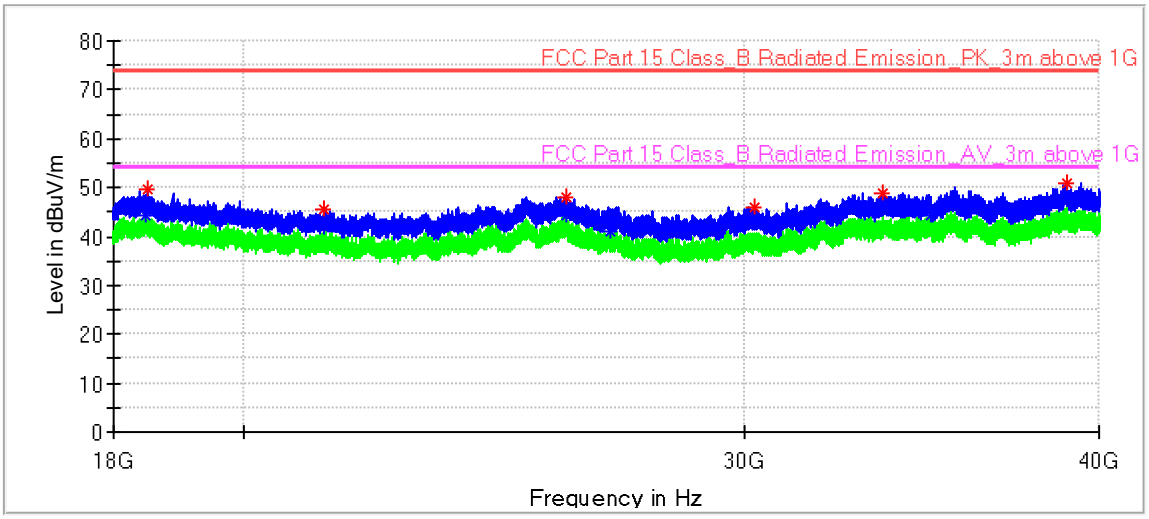
EUT Information

EUT Name:	WiFi Module
Model	GRJWB05-J12
Client:	Gree Electric Appliances, Inc. of Zhuhai
Op Cond	Power on, TX_2412MHz at 802.11B
Operator:	Doujun XU
Standard	FCC part 15.209
Sample No.:	SHA-1075771-1

Sweep Setup: RE_3116C_pre [EMI radiated]

Hardware Setup:	RE_3116C
Receiver:	[FSV 40]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
18 GHz - 40 GHz	687.5 kHz	PK+ ; AVG	1 MHz	0.05 s	0 dB



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18470.250000	---	44.22	54.00	9.78	100.0	V	313.0	8.6
18517.687500	49.63	---	74.00	24.37	100.0	V	0.0	8.6
21329.562500	---	41.80	54.00	12.20	100.0	V	166.0	9.2
21339.875000	45.63	---	74.00	28.37	100.0	V	290.0	9.2
25966.750000	---	44.28	54.00	9.72	100.0	V	123.0	10.2
25979.812500	48.09	---	74.00	25.91	100.0	V	190.0	10.2
26934.062500	---	41.22	54.00	12.78	100.0	V	281.0	9.7
30246.437500	46.08	---	74.00	27.92	100.0	V	79.0	10.6
33562.250000	48.73	---	74.00	25.28	100.0	V	232.0	11.6
34887.750000	---	44.32	54.00	9.68	100.0	V	313.0	11.9
38955.000000	51.01	---	74.00	22.99	100.0	V	79.0	13.0
38955.000000	---	47.58	54.00	6.42	100.0	V	79.0	13.0

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

11 Test Equipment List

List of Test Instruments
Test Site1

	Description	Manufacturer	Model no.	Serial no.	CAL. DATE	CAL. DUE DATE
C	Signal spectrum analyzer	Agilent	N9020B	MY59050168	2026-2-24	2027-2-23
	RF automatic control unit	MWRFtest	MW100-RFCB	MW211122-28	2025-10-9	2026-10-8
	RF_Cable	UCWAVE ELECTRONIC	UCA500-NJWSM-1.5M	---	2026-8-3	2027-8-2
	Wideband power sensor	Rohde & Schwarz	NRP-Z81	105903	2026-2-24	2027-2-23
	10dB Attenuator	Aeroflex Weinschel	CG-4689	93459	2026-2-24	2027-2-23
RE	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2026-8-3	2027-8-2
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2026-8-3	2027-8-2
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2026-6-25	2027-6-24
	Double-ridged waveguide horn antenna	Rohde & Schwarz	HF907	102393	2026-4-14	2027-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYPA23026	2026-4-14	2027-4-13
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2026-6-25	2027-6-24
	Double Ridged Horn Antenna	ETS-Lindgren	3116C	000222727	2026-6-25	2027-6-24
	RE_Cable_01 Coaxial Cable	JUNFLON	MWX221	1906S057	2026-8-3	2027-8-2
	RE_Cable_02 Coaxial Cable	HUBER+SUHNER	RG214	1358176	2026-8-3	2027-8-2
	RE_Cable_03 Coaxial Cable	JUNFLON	MWX221	J12J102482	2026-8-3	2027-8-2
	RE_Cable_04 Coaxial Cable	PASTERNACK	PE360	2233	2026-8-3	2027-8-2
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7
	Band reject filter	Wainwright	WRCGV10-2382-2402-2480-2500-52SS	38	2026-8-3	2027-8-2
	10dB Attenuator	Aeroflex Weinschel	CG-4689	93459	2026-2-24	2027-2-23
CE	EMI Test Receiver	Rohde & Schwarz	ESR3	101907	2026-8-3	2027-8-2
	LISN	Rohde & Schwarz	ENV216	101924	2026-8-3	2027-8-2
	CE_Cable_01 Coaxial Cable	HUBER+SUHNER	RG400	1002115055	2026-8-3	2027-8-2

Measurement Software Information

Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFtest	3.0.0.0
	Power Viewer	Rohde & Schwarz	V 11.0
RE	EMC 32	Rohde & Schwarz	V10.50.40
CE	EMC 32	Rohde & Schwarz	V9.15.03

- C - Conducted RF tests
- Conducted peak output power
- 6dB bandwidth and 99% Occupied Bandwidth
- Power spectral density
- Spurious RF conducted emissions
- Band edge

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

12 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

Items	Extended Uncertainty
Conducted Disturbance at Mains Terminals	150kHz to 30MHz, LISN, 3.16dB
Radiated Disturbance	9kHz to 30MHz, 3.52dB 30MHz to 1GHz, 5.03dB (Horizontal) 5.12dB (Vertical) 1GHz to 18GHz, 5.49dB 18GHz to 40GHz, 5.63dB
RF Conducted Measurement	Power related： 1.16dB Frequency related： 6.00×10^{-8}

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3.

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

13 Photographs of Test Set-ups

Refer to the < Test Setup photos >.

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300

14 Photographs of EUT

Refer to the < External Photos > & < Internal Photos >.

----------End of Test Report----------

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
1F, No.16, Lane 1951 Duhui Road, Shanghai, 201108, People's Republic of China
Tel: +86 021 60376300