

# Test Report No.10048538 001

## Appendix D: Radiated and Mains Spurious Emission Data

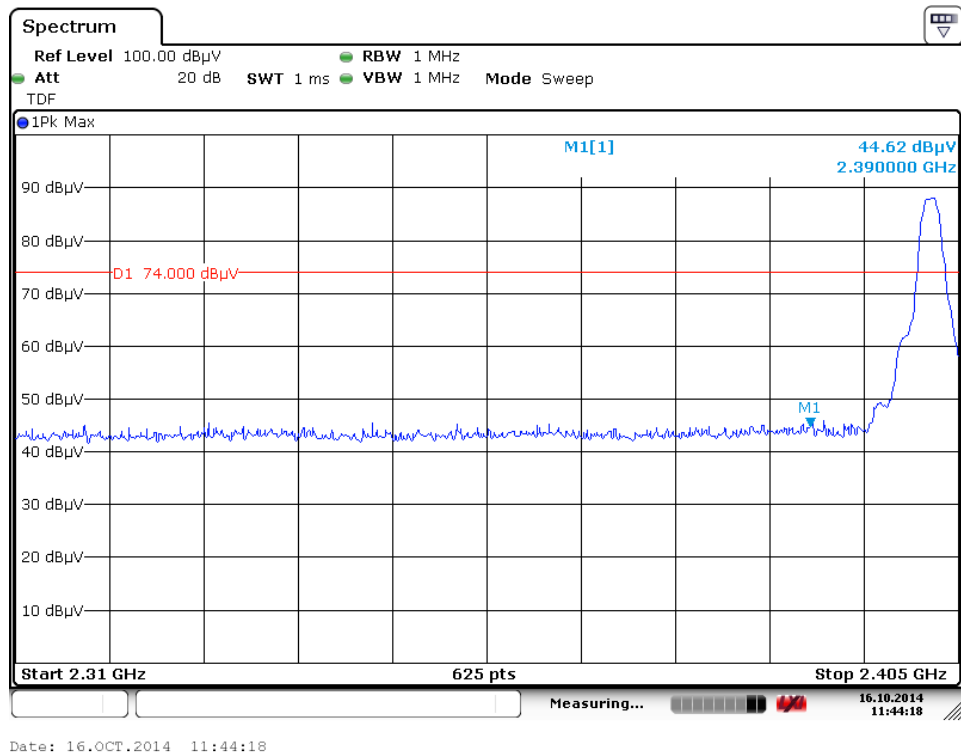
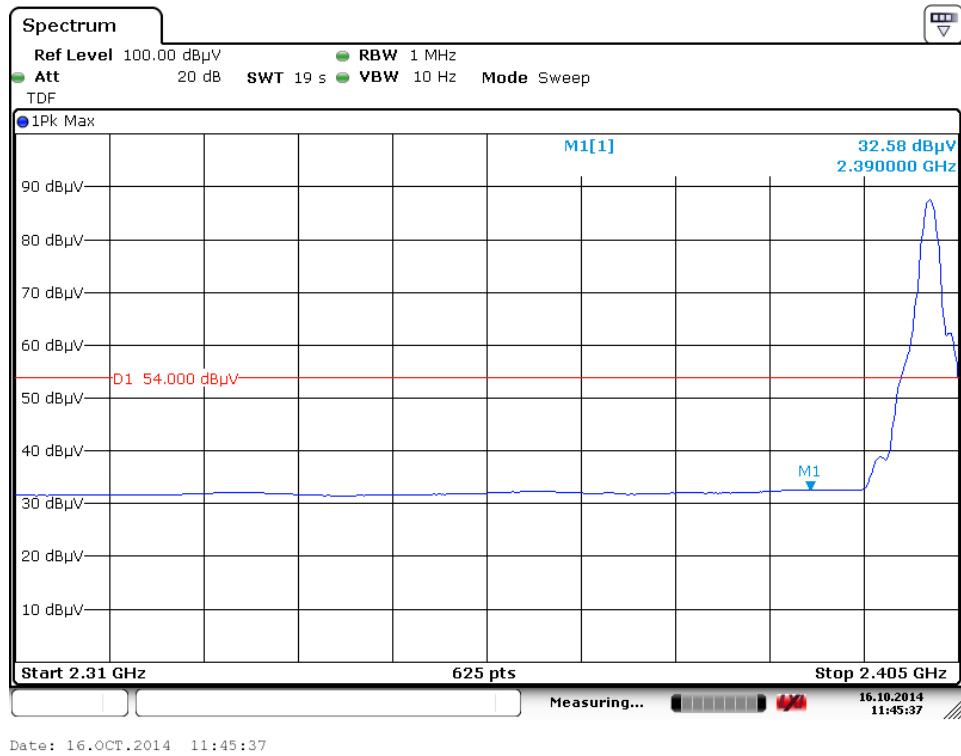
(File: 10048538AppendixD)

### Contents

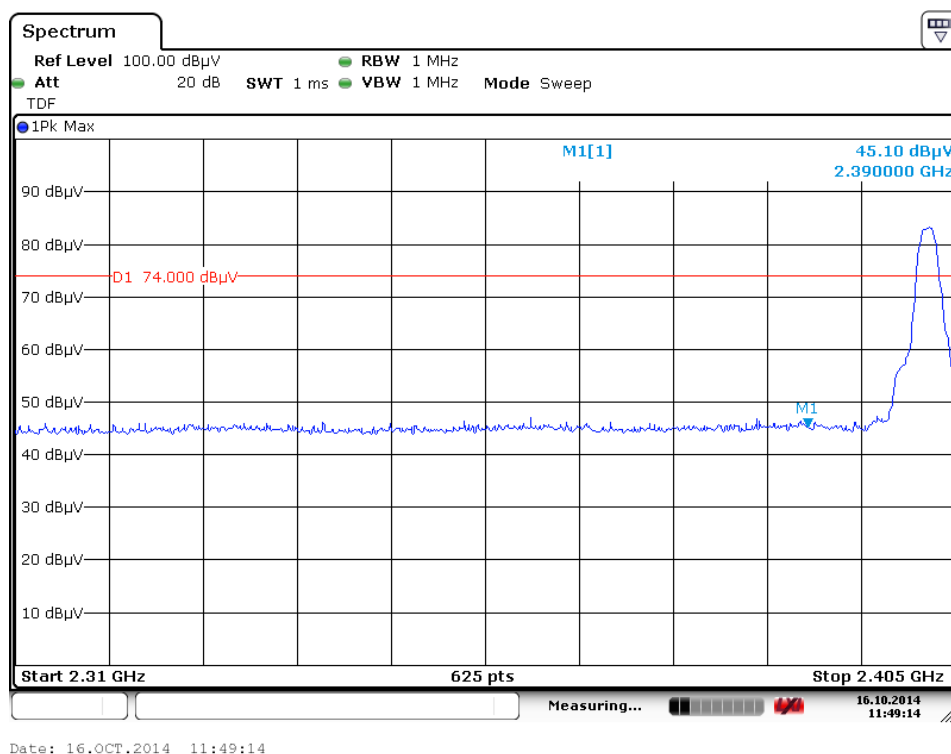
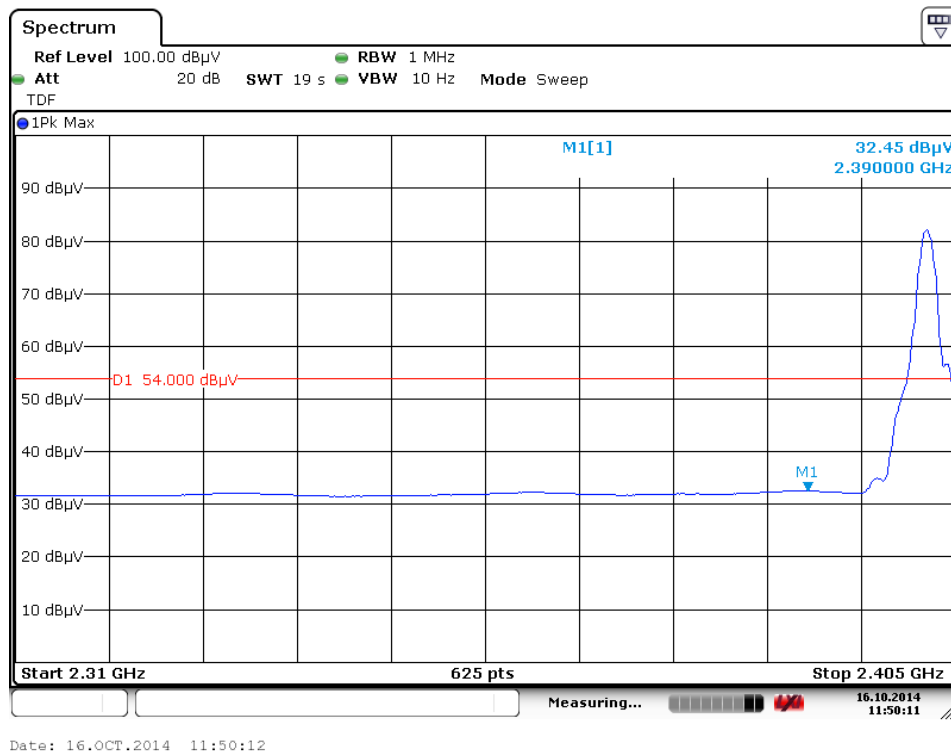
Spurious Emissions, Band Edges, 2.35-2.5G .....	2
Spurious Emissions, TX Mode, 1-18G.....	6
Spurious Emissions, TX Mode, 18-26G.....	12
Spurious Emissions, TX Mode, 30M-1G .....	18
Spurious Emissions, RX Mode, 1-18G .....	20
Spurious Emissions, RX Mode, 18-26G .....	26
Spurious Emissions, RX Mode, 30M-1G .....	32
Spurious Emissions, Mains, 150kHz - 30MHz .....	34

# Radiated Bandedge (GFSK)

## Low Channel (Hor)



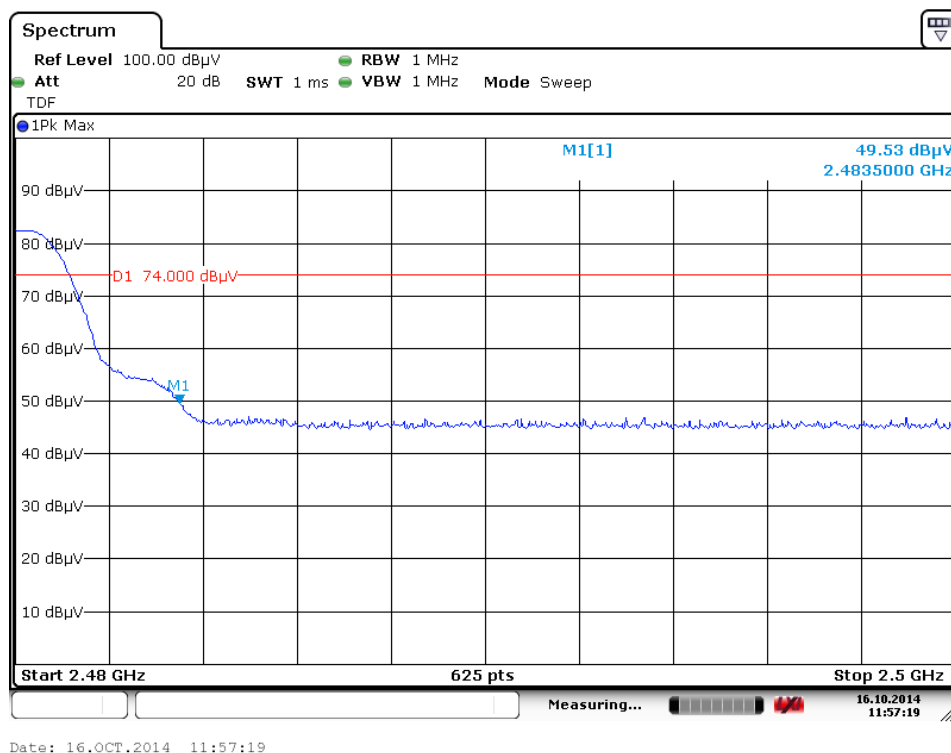
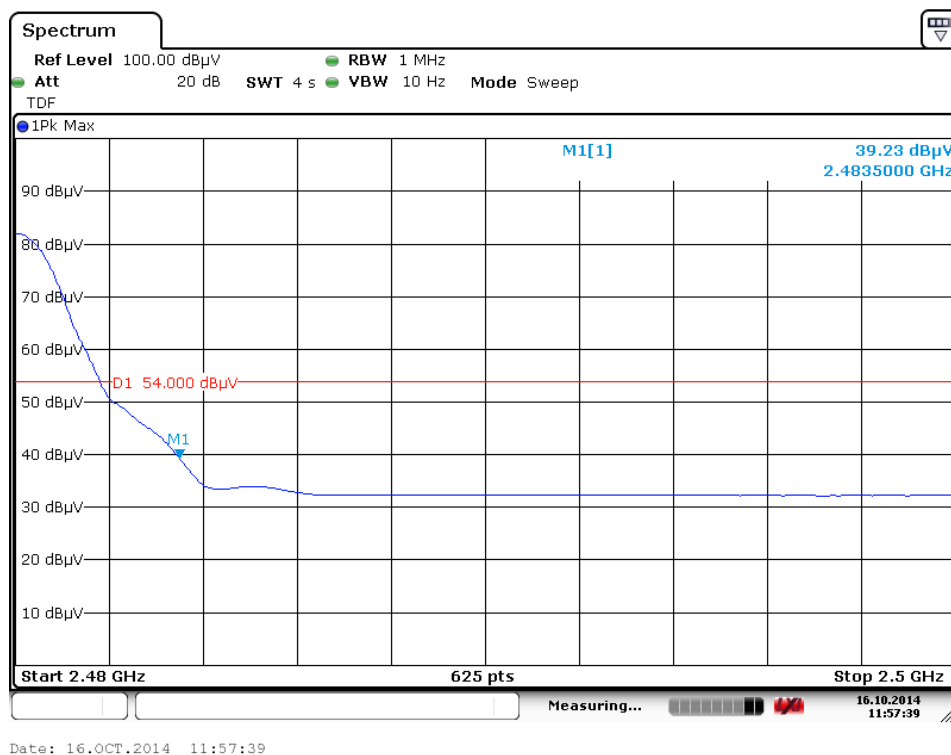
## Low Channel (Ver)



## Spurious Emissions, Band Edge, 2.35-2.5G

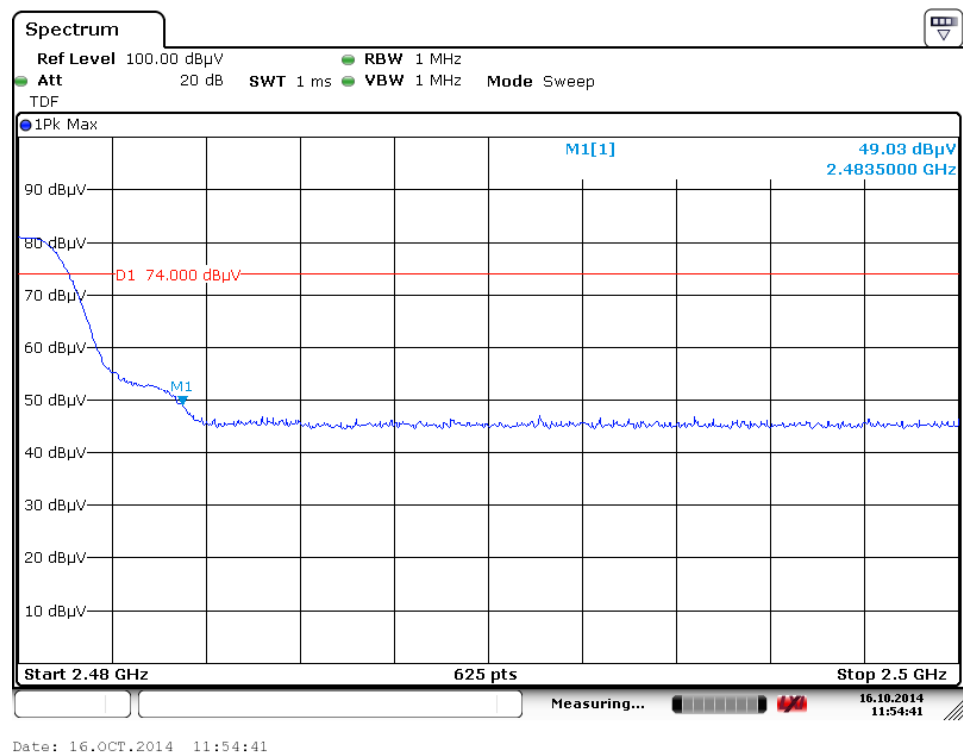
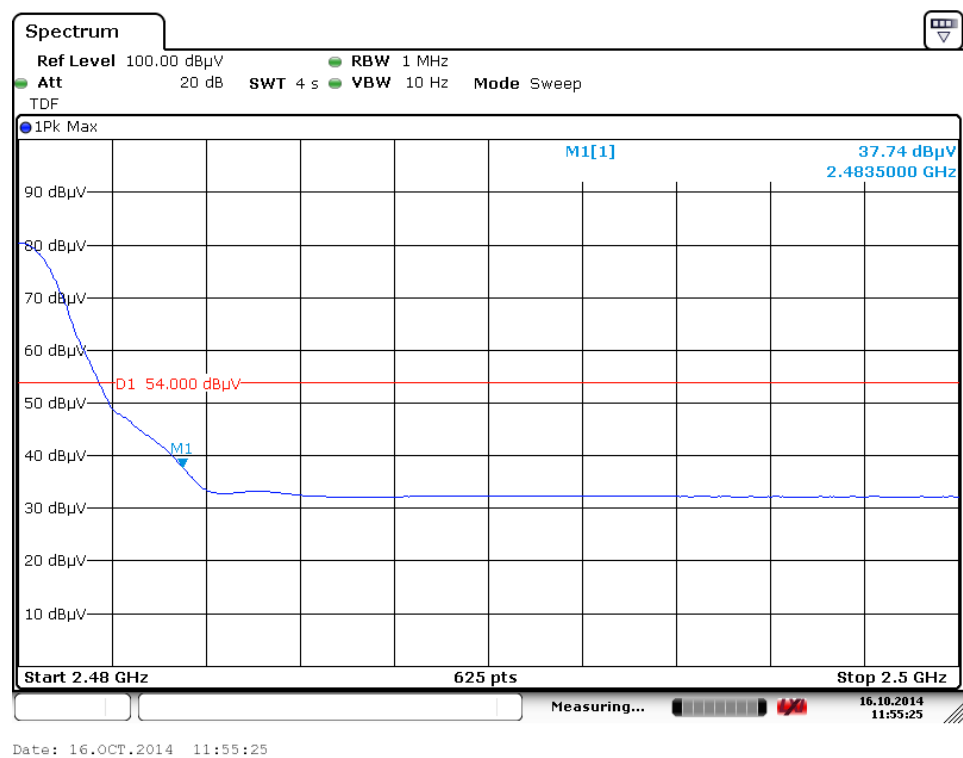
# Radiated Bandedge (GFSK)

## High Channel (Hor)



## Spurious Emissions, Band Edge, 2.35-2.5G

High Channel (Ver)



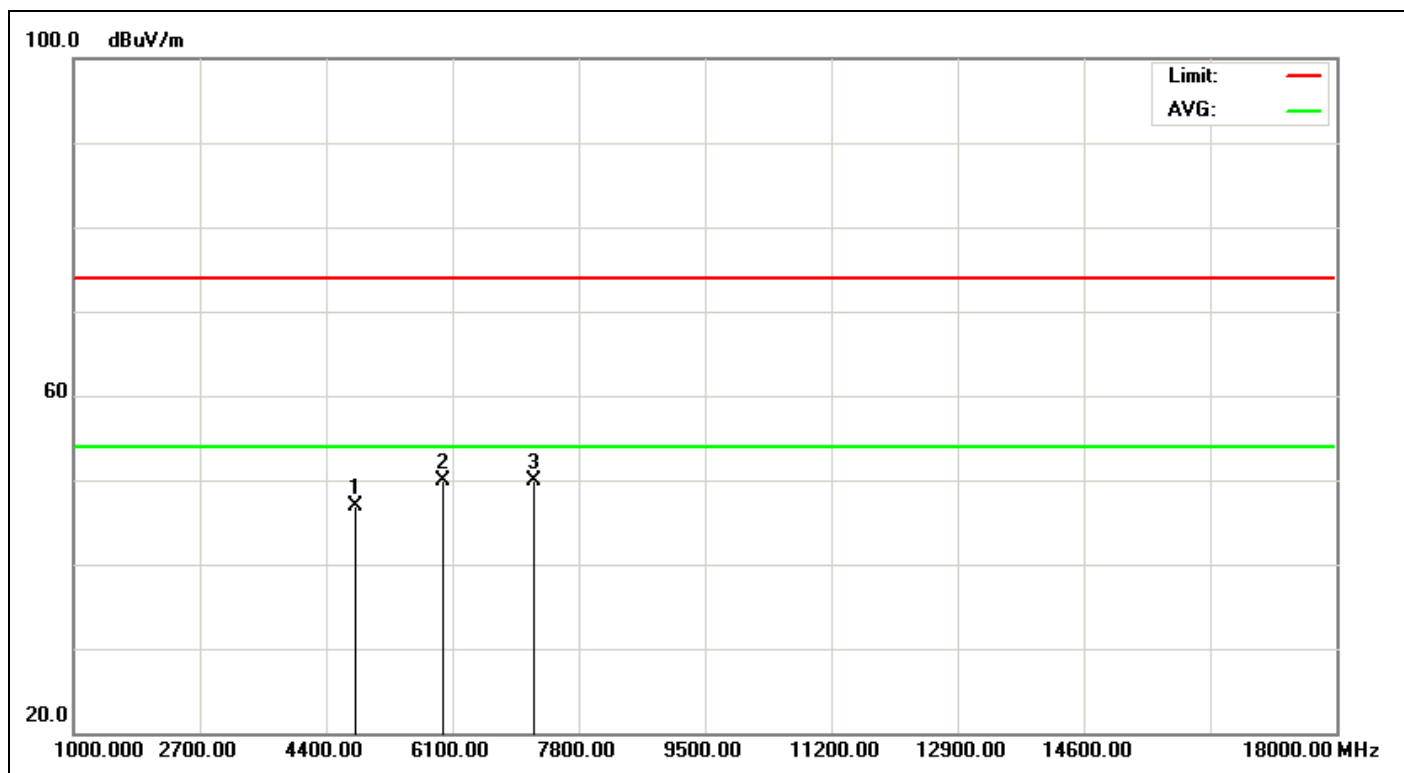
## Spurious Emissions, TX Mode, 1-18G



**TUV Rheinland Taiwan**

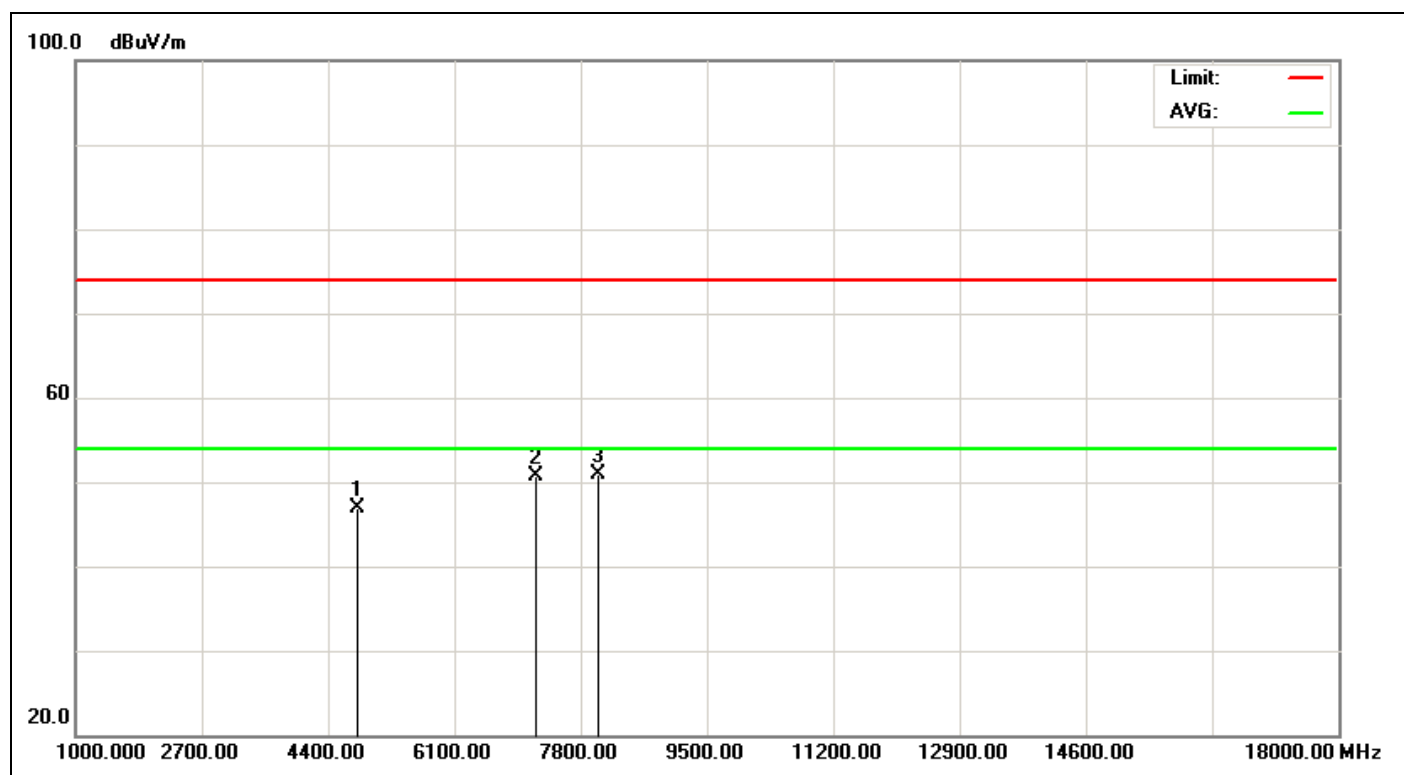
11F.,No.758,Sec. 4,Bade Rd.,Songshan Dist.,Taipei 105,Taiwan

Tel:+886-2-2172-7000 Fax:+886-2-2528-0018



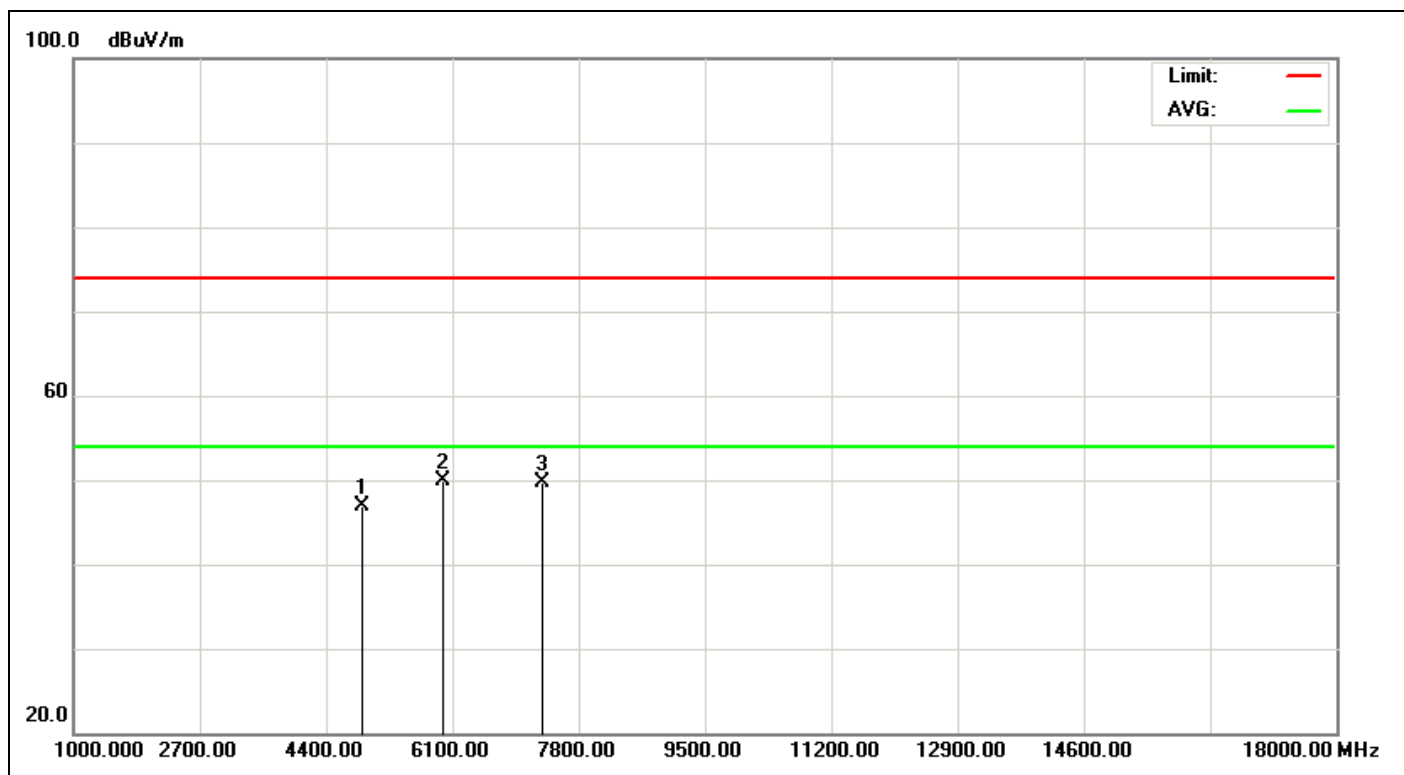
<b>Service No.:</b>	<b>114024429-NCC</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>NCC Above 1G PEAK</b>	<b>Ant. Polarization:</b>	<b>Horizontal</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2014/10/16 13:07:35</b>
<b>Applicant:</b>	<b>Yellowstone</b>	<b>Test Rating:</b>	<b>DC 3V</b>
<b>Product:</b>	<b>LE Module</b>	<b>Temp.(°C)/Hum.(%):</b>	<b>24(°C)/58%</b>
<b>Model No.:</b>	<b>Module</b>	<b>Test Engineer:</b>	<b>Hugo Chang</b>
<b>Test Mode:</b>	<b>2402-TX</b>		
<b>Remark:</b>			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	4804.000	-2.59	49.47	46.88	74.00	-27.12	peak			
2	5985.577	3.62	46.37	49.99	74.00	-24.01	peak	100	219	
3	7206.000	5.44	44.53	49.97	74.00	-24.03	peak			



<b>Service No.:</b>	<b>114024429-NCC</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>NCC Above 1G PEAK</b>	<b>Ant. Polarization:</b>	<b>Vertical</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2014/10/16 13:08:38</b>
<b>Applicant:</b>	<b>Yellowstone</b>	<b>Test Rating:</b>	<b>DC 3V</b>
<b>Product:</b>	<b>LE Module</b>	<b>Temp.(°C)/Hum.(%)</b>	<b>24(°C)/58%</b>
<b>Model No.:</b>	<b>Module</b>	<b>Test Engineer:</b>	<b>Hugo Chang</b>
<b>Test Mode:</b>	<b>2402-TX</b>		
<b>Remark:</b>			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	4804.000	-2.59	49.57	46.98	74.00	-27.02	peak			
2	7206.000	5.44	45.22	50.66	74.00	-23.34	peak			
3	8028.846	6.04	44.86	50.90	74.00	-23.10	peak	100	200	



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Horizontal

**Test item:** Radiation Emission

**Test Time:** 2014/10/16 13:13:21

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

**Model No.:** Module

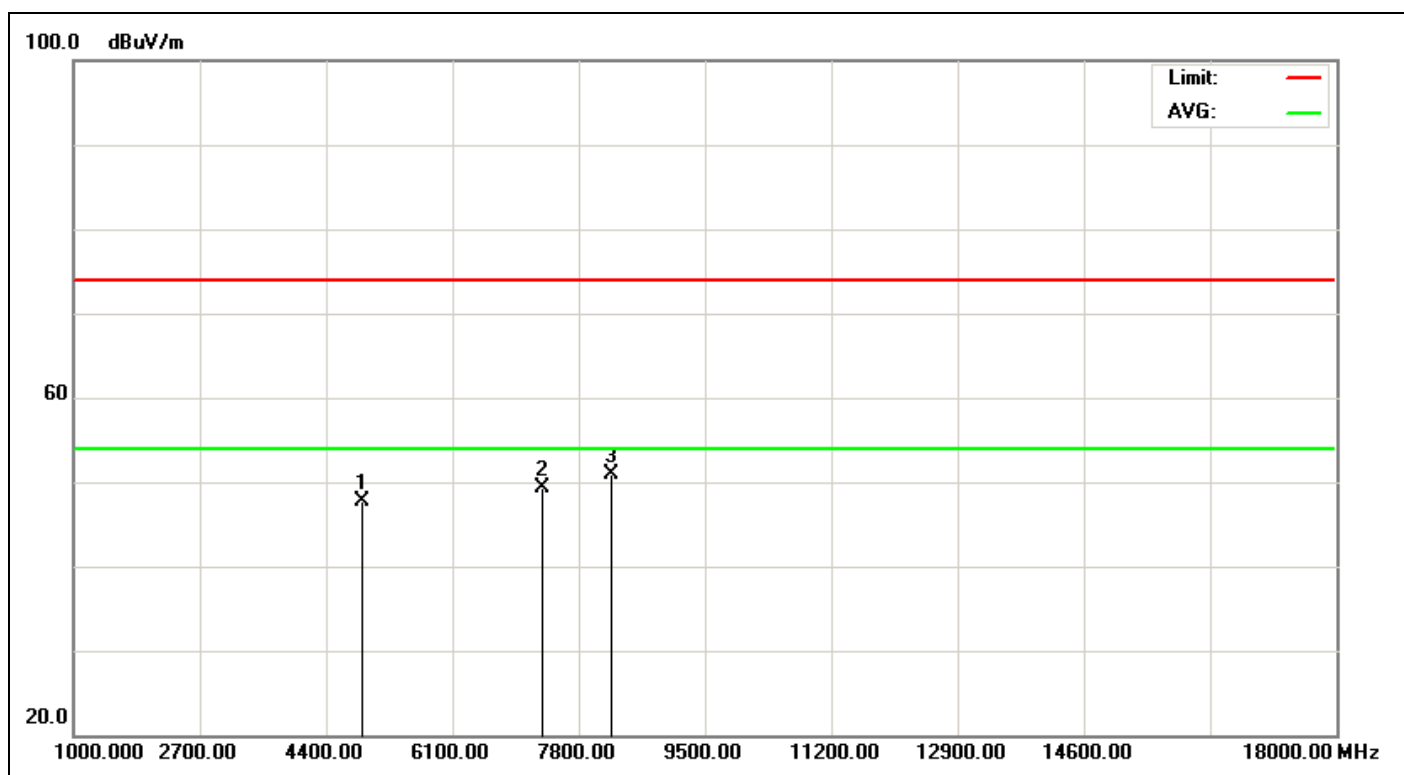
**Test Engineer:** Hugo Chang

**Test Mode:** 2440-TX

**Remark:**

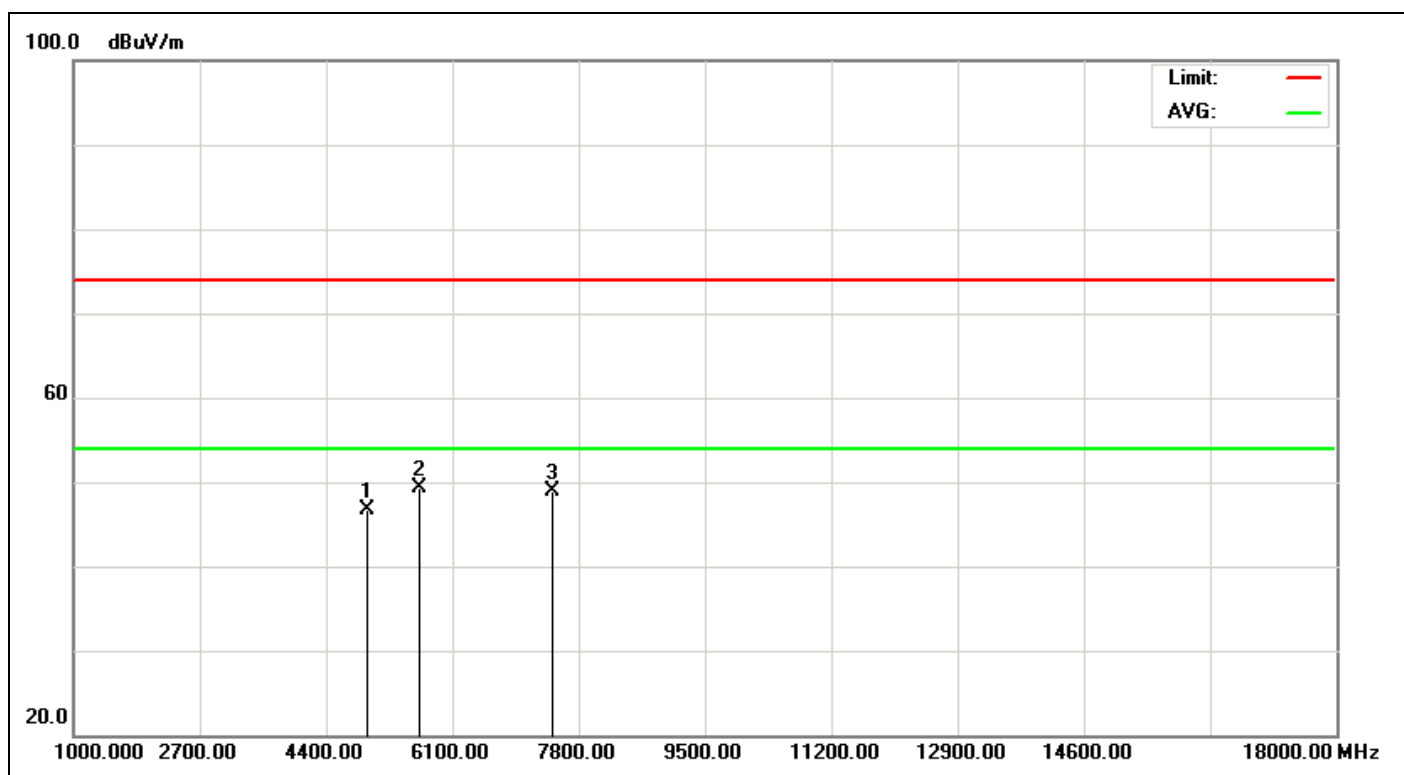
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	4880.000	-2.39	49.29	46.90	74.00	-27.10	peak			
2	5985.577	3.62	46.30	49.92	74.00	-24.08	peak	100	360	
3	7320.000	5.76	43.88	49.64	74.00	-24.36	peak			





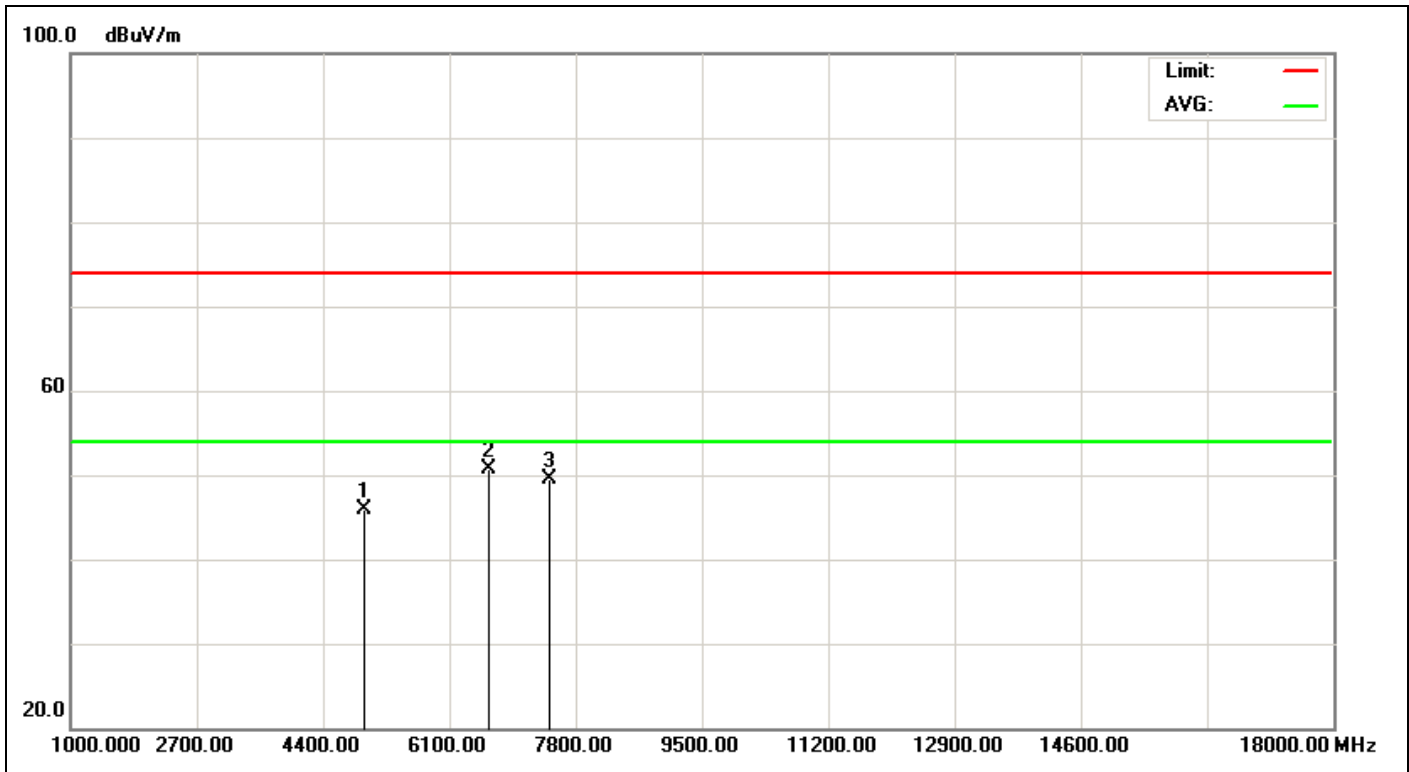
Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/10/16 13:14:23
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%)	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2440-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4880.000	-2.39	50.00	47.61	74.00	-26.39	peak			
2	7320.000	5.76	43.48	49.24	74.00	-24.76	peak			
3	8246.795	6.23	44.72	50.95	74.00	-23.05	peak	100	253	



Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/10/16 13:16:55
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2480-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	4960.000	-2.19	48.82	46.63	74.00	-27.37	peak			
2	5658.654	1.41	47.83	49.24	74.00	-24.76	peak	100	107	
3	7440.000	6.09	42.76	48.85	74.00	-25.15	peak			



<b>Service No.:</b>	<b>114024429-NCC</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>NCC Above 1G PEAK</b>	<b>Ant. Polarization:</b>	<b>Vertical</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2014/10/16 13:17:57</b>
<b>Applicant:</b>	<b>Yellowstone</b>	<b>Test Rating:</b>	<b>DC 3V</b>
<b>Product:</b>	<b>LE Module</b>	<b>Temp.(°C)/Hum.(%)</b>	<b>24(°C)/58%</b>
<b>Model No.:</b>	<b>Module</b>	<b>Test Engineer:</b>	<b>Hugo Chang</b>
<b>Test Mode:</b>	<b>2480-TX</b>		
<b>Remark:</b>			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	4960.000	-2.19	48.07	45.88	74.00	-28.12	peak			
2	6639.423	5.29	45.38	50.67	74.00	-23.33	peak	100	312	
3	7440.000	6.09	43.47	49.56	74.00	-24.44	peak			

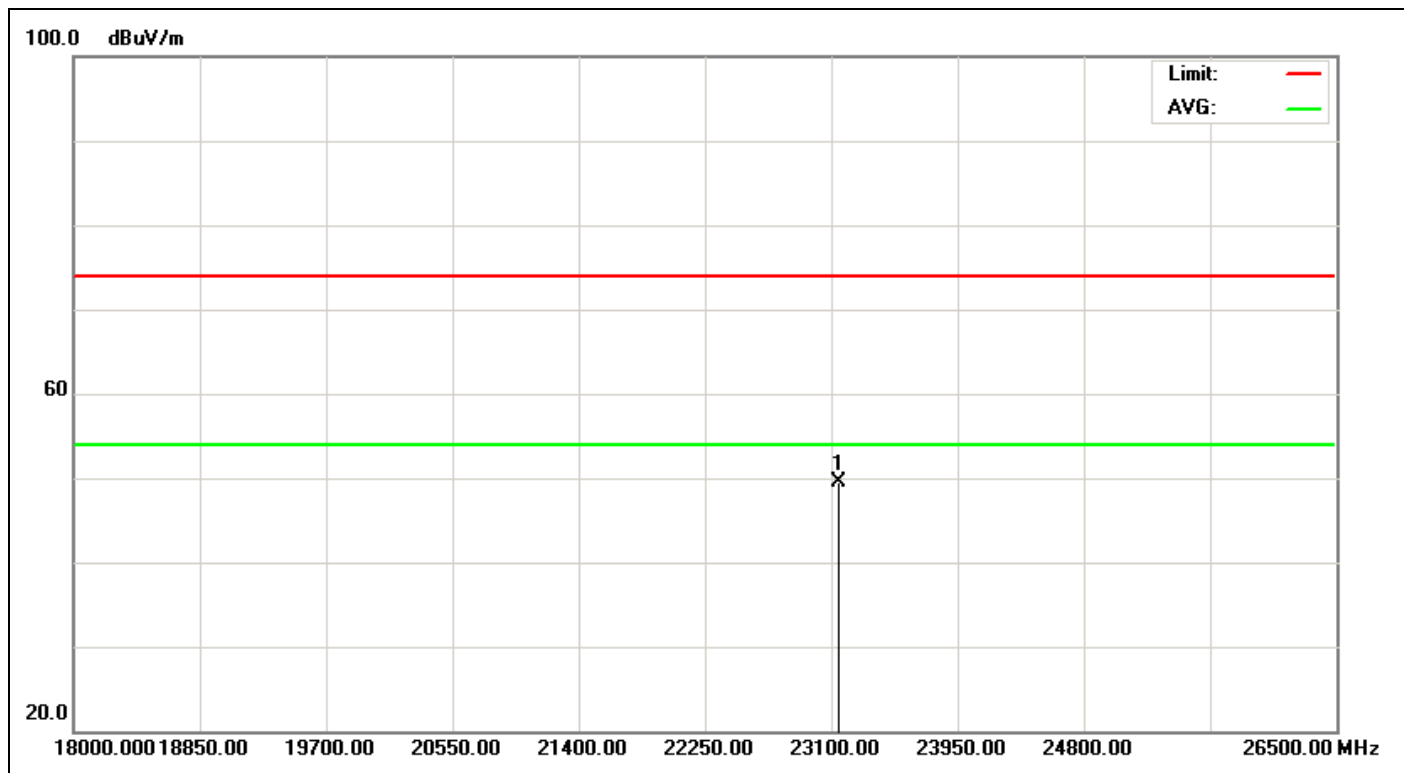
## Spurious Emissions, TX Mode, 18-26G



**TUV Rheinland Taiwan**

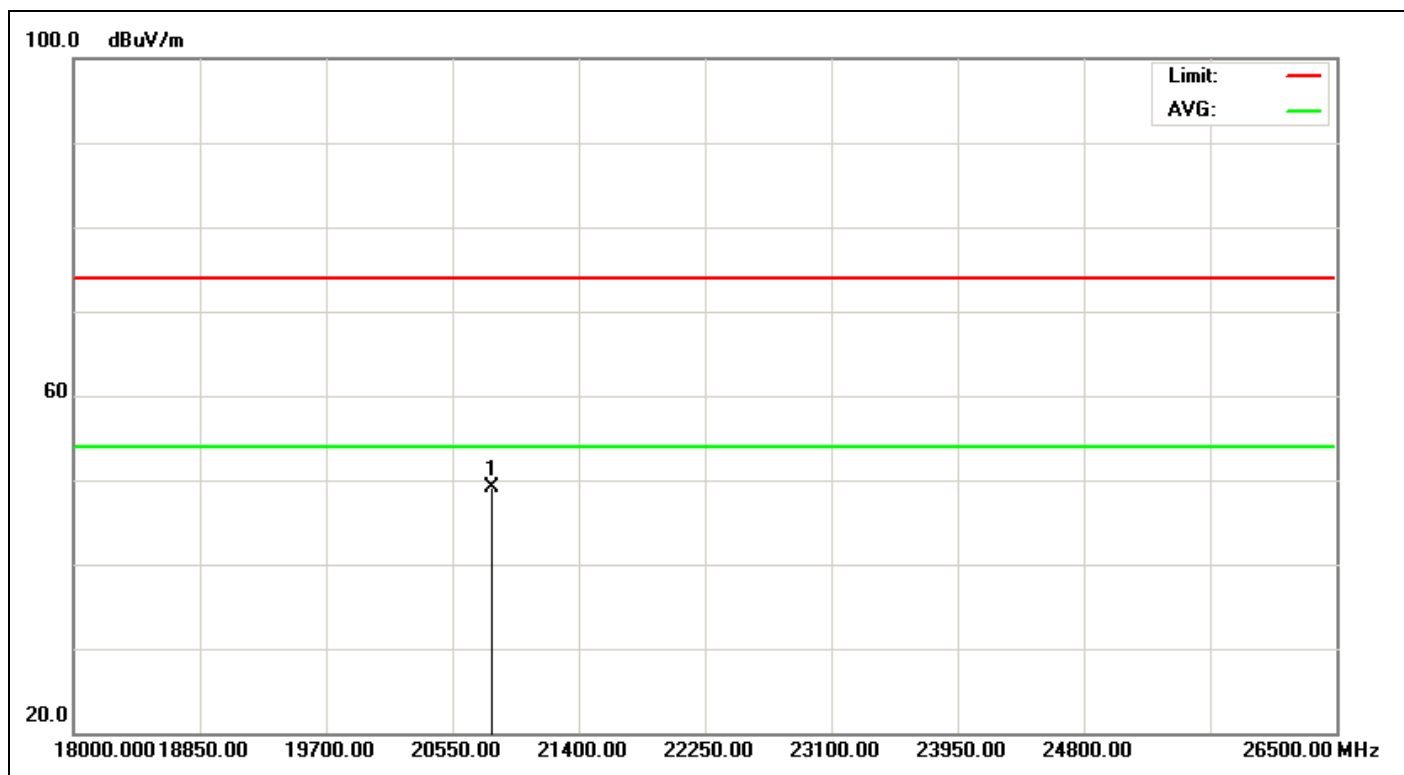
11F.,No.758,Sec. 4,Bade Rd.,Songshan Dist.,Taipei 105,Taiwan

Tel:+886-2-2172-7000 Fax:+886-2-2528-0018



Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/10/17 20:59:31
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2402-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23149.038	30.23	19.29	49.52	74.00	-24.48	peak			



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Vertical

**Test item:** Radiation Emission

**Test Time:** 2014/10/17 21:00:05

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

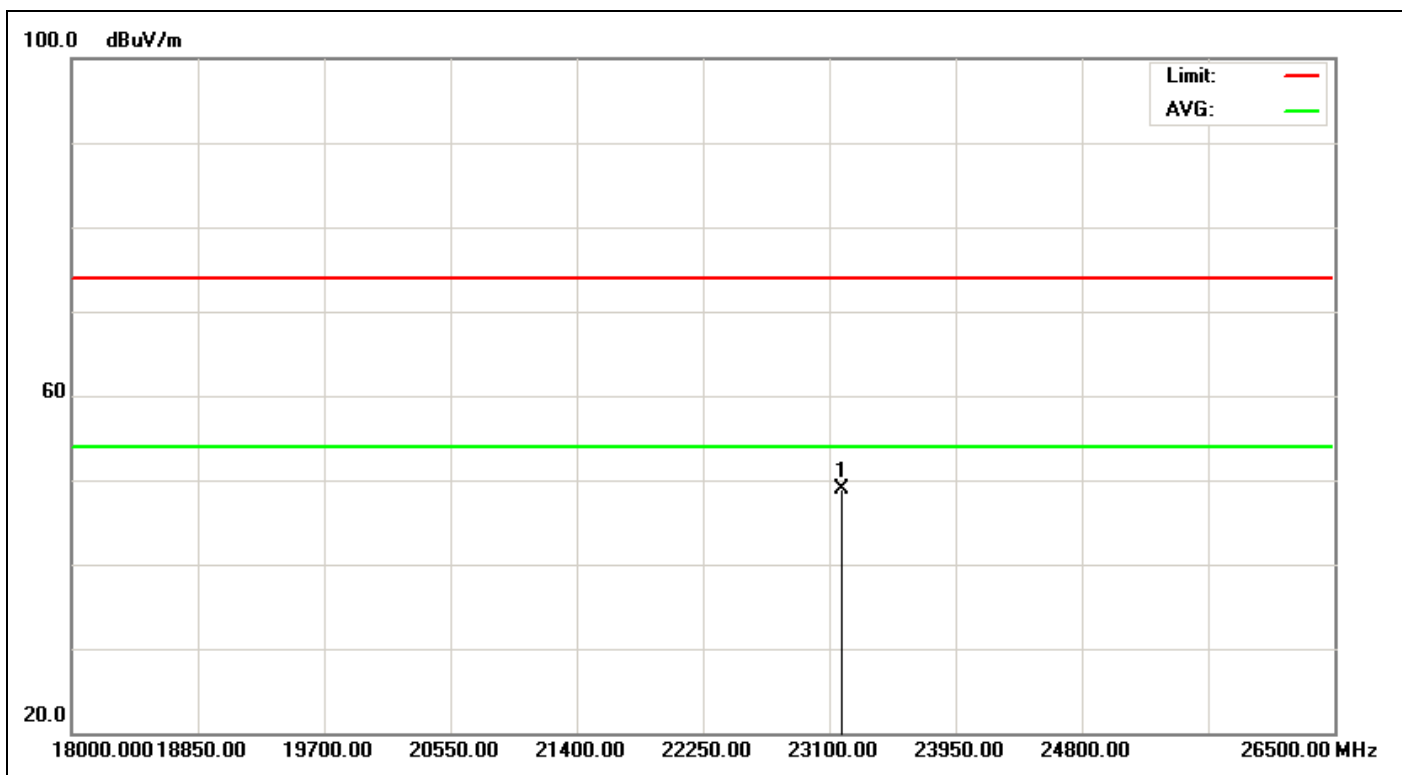
**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2402-TX

**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	20819.712	29.58	19.47	49.05	74.00	-24.95	peak			



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Horizontal

**Test item:** Radiation Emission

**Test Time:** 2014/10/17 21:00:32

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

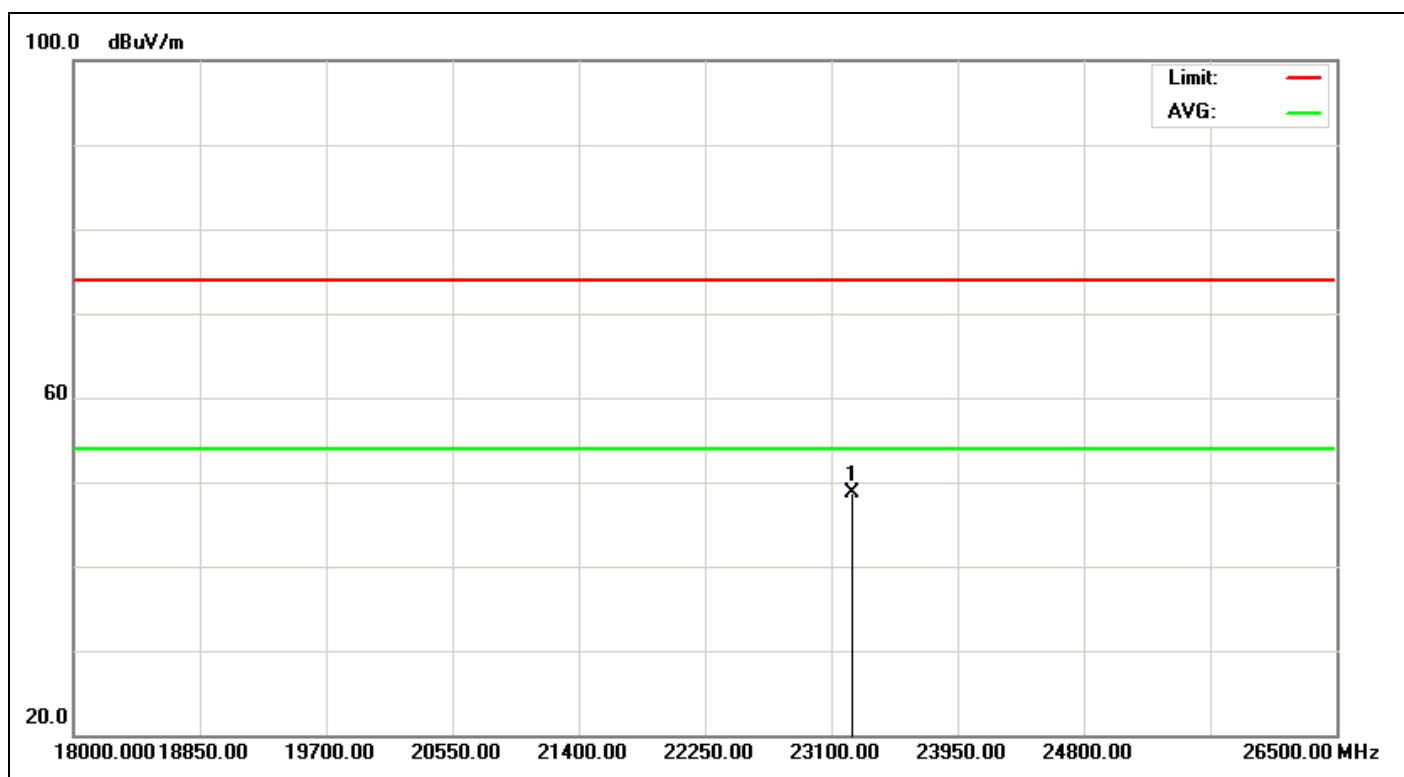
**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2440-TX

**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23189.904	30.21	18.66	48.87	74.00	-25.13	peak			



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Vertical

**Test item:** Radiation Emission

**Test Time:** 2014/10/17 21:00:56

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

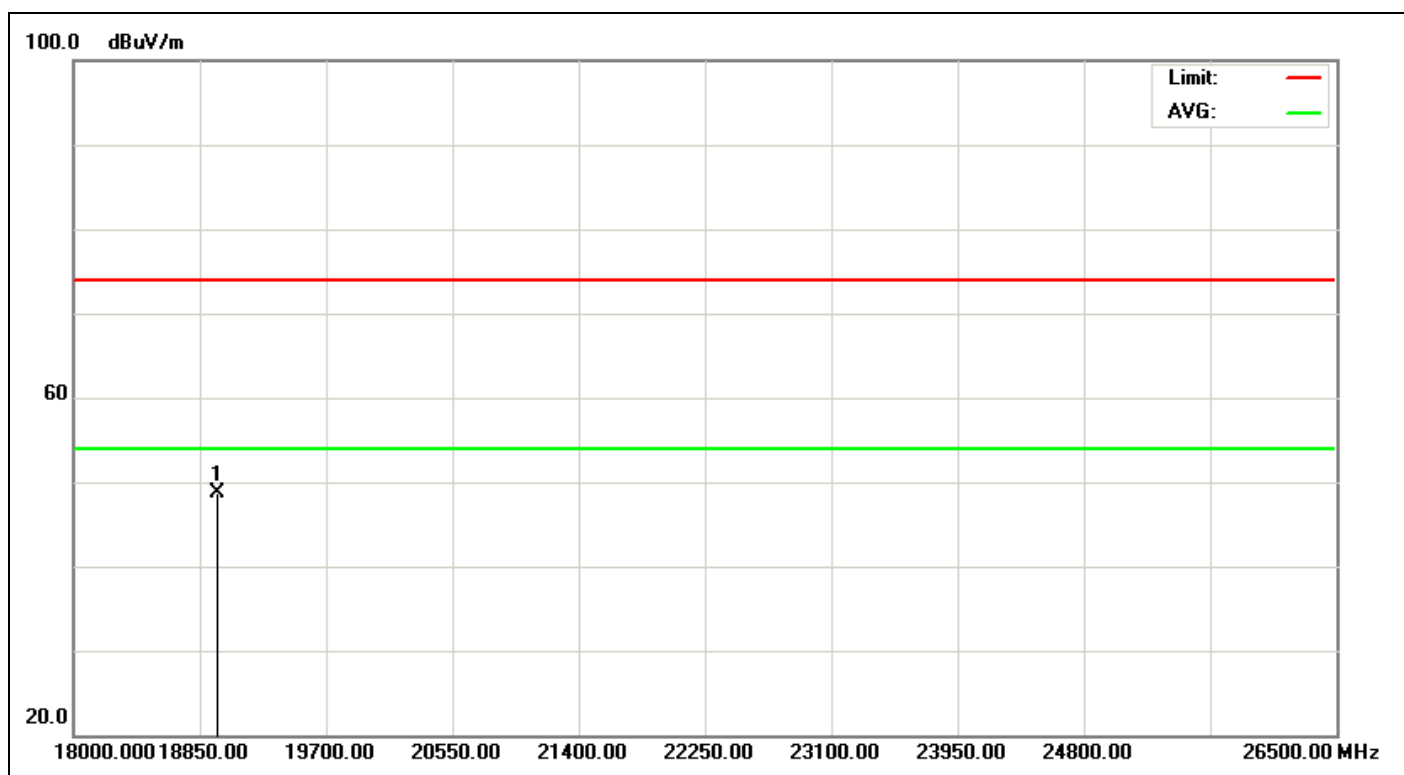
**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2440-TX

**Remark:**

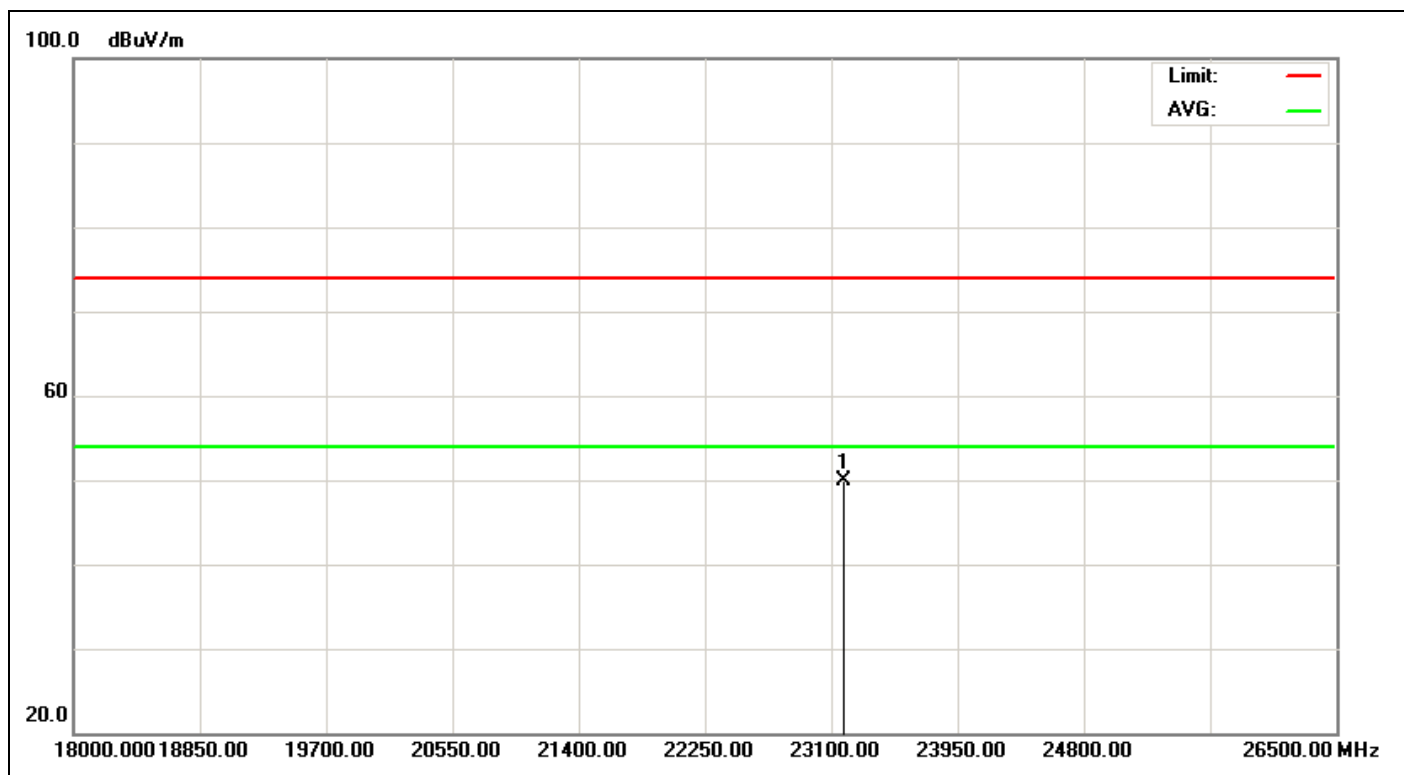
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23244.391	30.19	18.49	48.68	74.00	-25.32	peak			



Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/10/17 21:01:24
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2480-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	18967.147	29.88	18.74	48.62	74.00	-25.38	peak			





**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Vertical

**Test item:** Radiation Emission

**Test Time:** 2014/10/17 21:01:53

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2480-TX

**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23189.904	30.21	19.64	49.85	74.00	-24.15	peak			

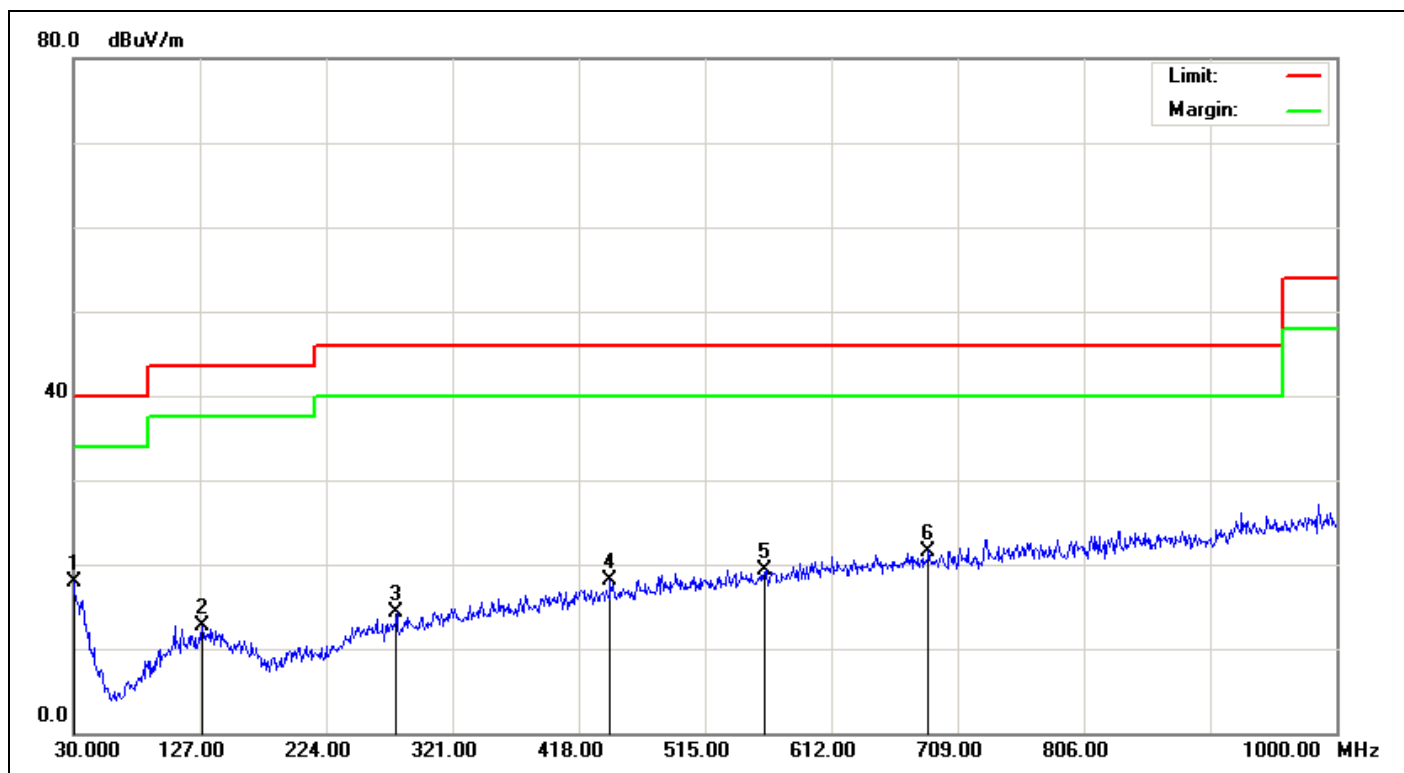
# Spurious Emissions, TX Mode, 30M-1G



**TUV Rheinland Taiwan**

11F.,No.758,Sec. 4,Bade Rd.,Songshan Dist.,Taipei 105,Taiwan

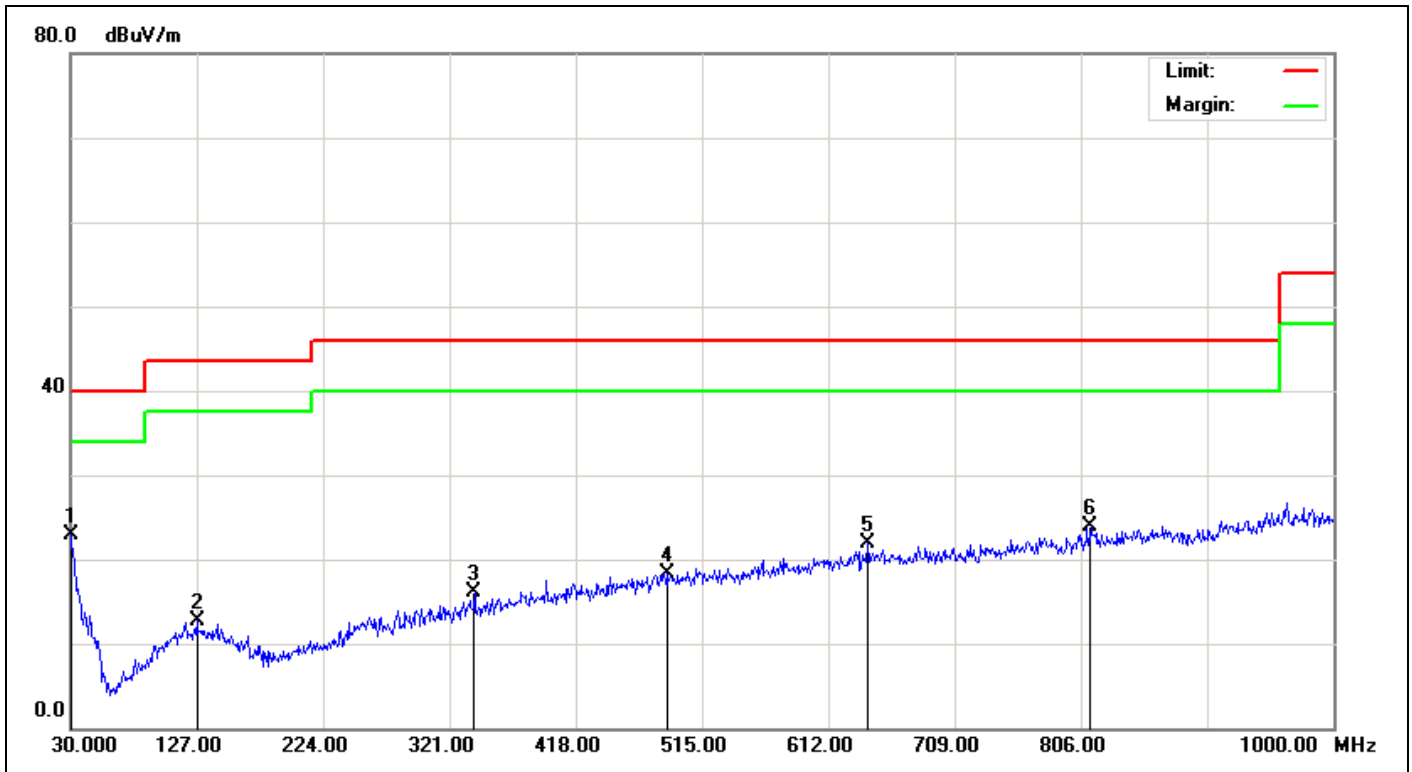
Tel:+886-2-2172-7000 Fax:+886-2-2528-0018



<b>Service No.:</b>	<b>114024429-NCC</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>NCC Class B 3M Radiation</b>	<b>Ant. Polarization:</b>	<b>Horizontal</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2014/10/17 21:33:25</b>
<b>Applicant:</b>	<b>Yellowstone</b>	<b>Test Rating:</b>	<b>DC 3V</b>
<b>Product:</b>	<b>LE Module</b>	<b>Temp.(°C)/Hum.(%)</b>	<b>24(°C)/58%</b>
<b>Model No.:</b>	<b>Module</b>	<b>Test Engineer:</b>	<b>Hugo Chang</b>
<b>Test Mode:</b>	<b>TX</b>		
<b>Remark:</b>			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	30.0000	-7.35	25.18	17.83	40.00	-22.17	QP	100	149	
2	128.9399	-14.22	26.83	12.61	43.50	-30.89	QP	100	344	
3	278.3199	-12.66	27.01	14.35	46.00	-31.65	QP	100	4	
4	442.2500	-9.46	27.54	18.08	46.00	-27.92	QP	100	186	
5	561.5599	-7.92	27.28	19.36	46.00	-26.64	QP	100	234	
6	686.6900	-6.15	27.75	21.60	46.00	-24.40	QP	100	213	

Spurious Emissions, TX Mode, 30M-1G



<b>Service No.:</b>	<b>114024429-NCC</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>NCC Class B 3M Radiation</b>	<b>Ant. Polarization:</b>	<b>Vertical</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2014/10/17 21:34:28</b>
<b>Applicant:</b>	<b>Yellowstone</b>	<b>Test Rating:</b>	<b>DC 3V</b>
<b>Product:</b>	<b>LE Module</b>	<b>Temp.(°C)/Hum.(%)</b>	<b>24(°C)/58%</b>
<b>Model No.:</b>	<b>Module</b>	<b>Test Engineer:</b>	<b>Hugo Chang</b>
<b>Test Mode:</b>	<b>TX</b>		
<b>Remark:</b>			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	30.0000	-7.35	30.32	22.97	40.00	-17.03	QP	100	192	
2	127.0000	-14.30	27.00	12.70	43.50	-30.80	QP	100	0	
3	340.3999	-11.05	27.19	16.14	46.00	-29.86	QP	100	72	
4	488.8100	-8.70	27.09	18.39	46.00	-27.61	QP	100	157	
5	642.0700	-6.54	28.45	21.91	46.00	-24.09	QP	100	325	
6	813.7599	-4.25	28.22	23.97	46.00	-22.03	QP	100	258	

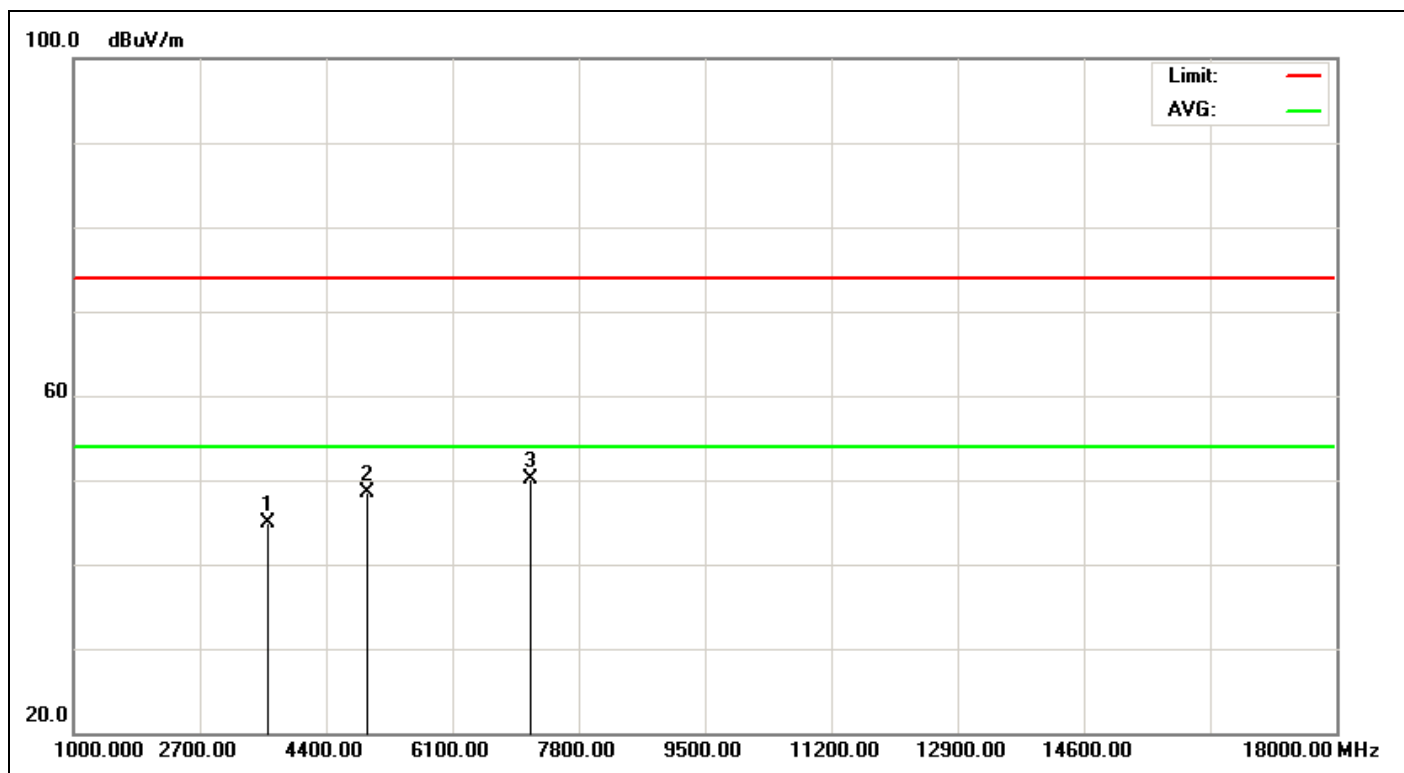
## Spurious Emissions, RX Mode, 1-18G



**TUV Rheinland Taiwan**

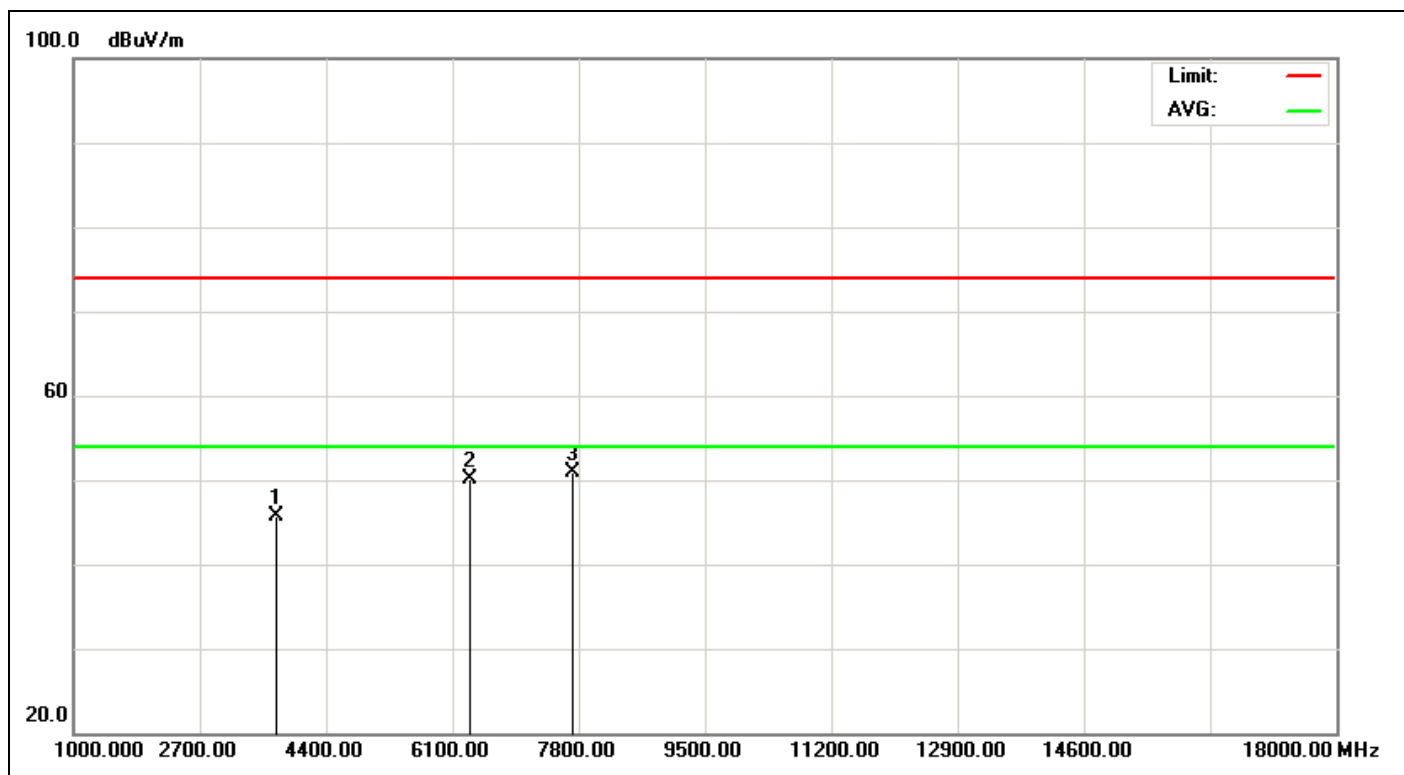
11F.,No.758,Sec. 4,Bade Rd.,Songshan Dist.,Taipei 105,Taiwan

Tel:+886-2-2172-7000 Fax:+886-2-2528-0018



<b>Service No.:</b>	<b>114024429-NCC</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>NCC Above 1G PEAK</b>	<b>Ant. Polarization:</b>	<b>Horizontal</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2014/10/16 13:21:23</b>
<b>Applicant:</b>	<b>Yellowstone</b>	<b>Test Rating:</b>	<b>DC 3V</b>
<b>Product:</b>	<b>LE Module</b>	<b>Temp.(°C)/Hum.(%):</b>	<b>24(°C)/58%</b>
<b>Model No.:</b>	<b>Module</b>	<b>Test Engineer:</b>	<b>Hugo Chang</b>
<b>Test Mode:</b>	<b>2402-RX</b>		
<b>Remark:</b>			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	3615.385	-5.55	50.52	44.97	74.00	-29.03	peak	100	235	
2	4950.320	-2.21	50.62	48.41	74.00	-25.59	peak	100	357	
3	7157.051	5.31	44.86	50.17	74.00	-23.83	peak	100	205	



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Vertical

**Test item:** Radiation Emission

**Test Time:** 2014/10/16 13:22:25

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

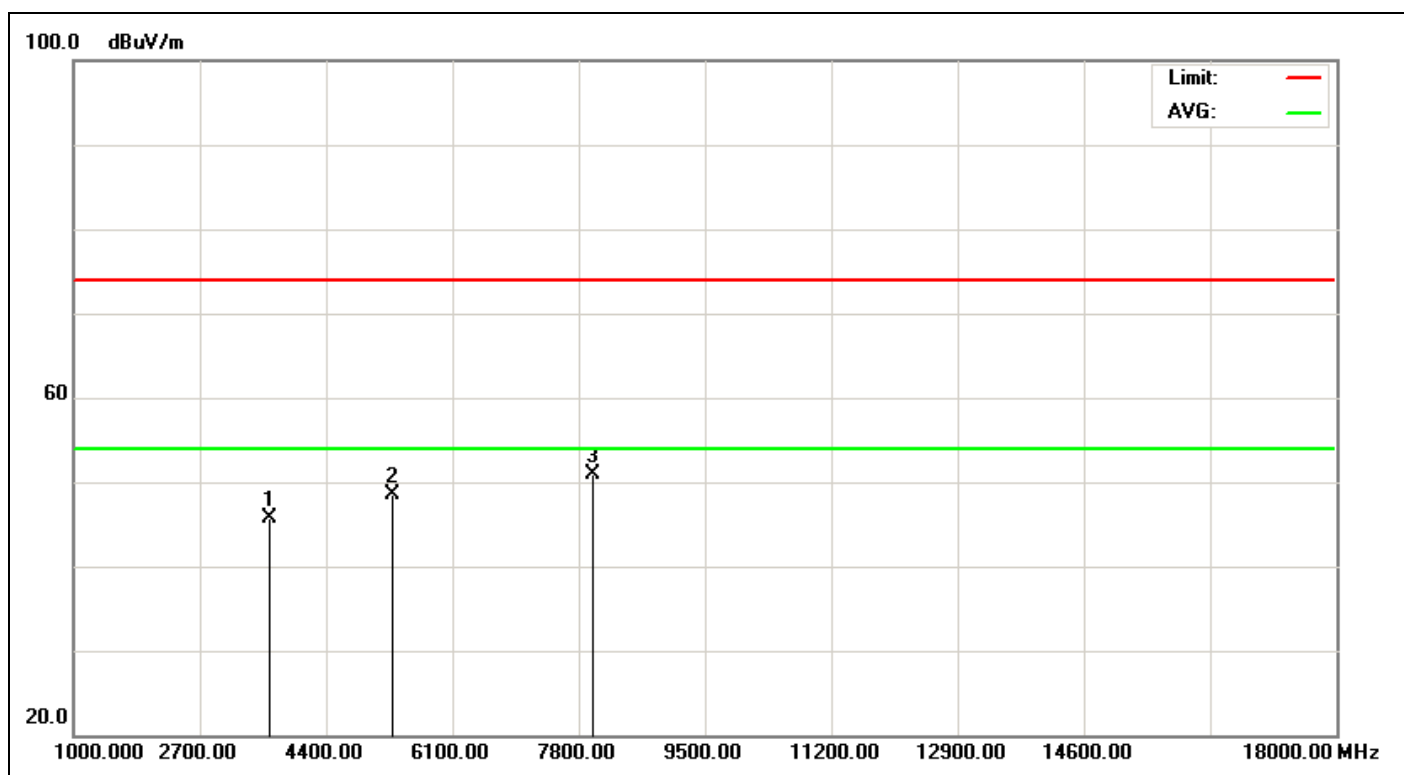
**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2402-RX

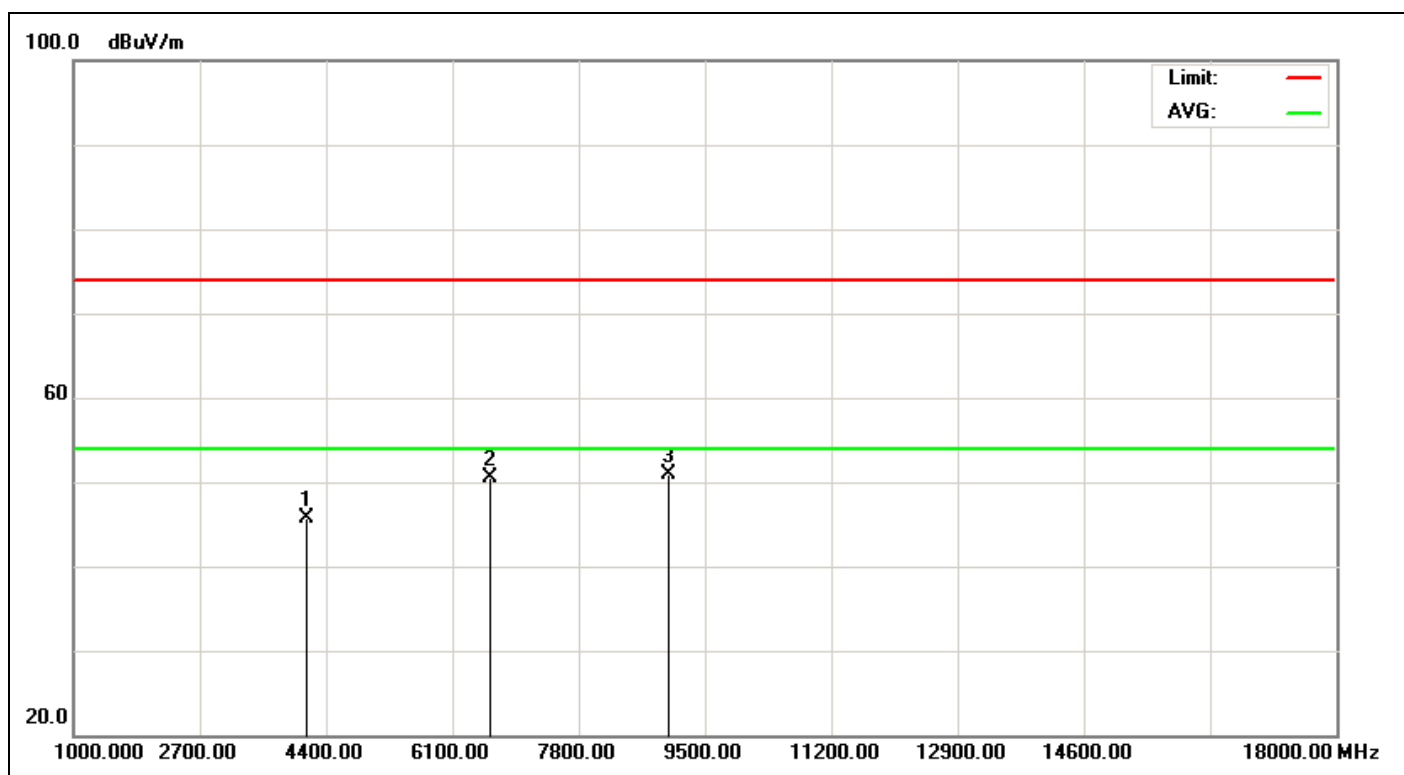
**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	3724.359	-5.49	51.26	45.77	74.00	-28.23	peak	100	91	
2	6339.743	4.90	45.29	50.19	74.00	-23.81	peak	100	213	
3	7729.167	6.15	44.68	50.83	74.00	-23.17	peak	100	22	



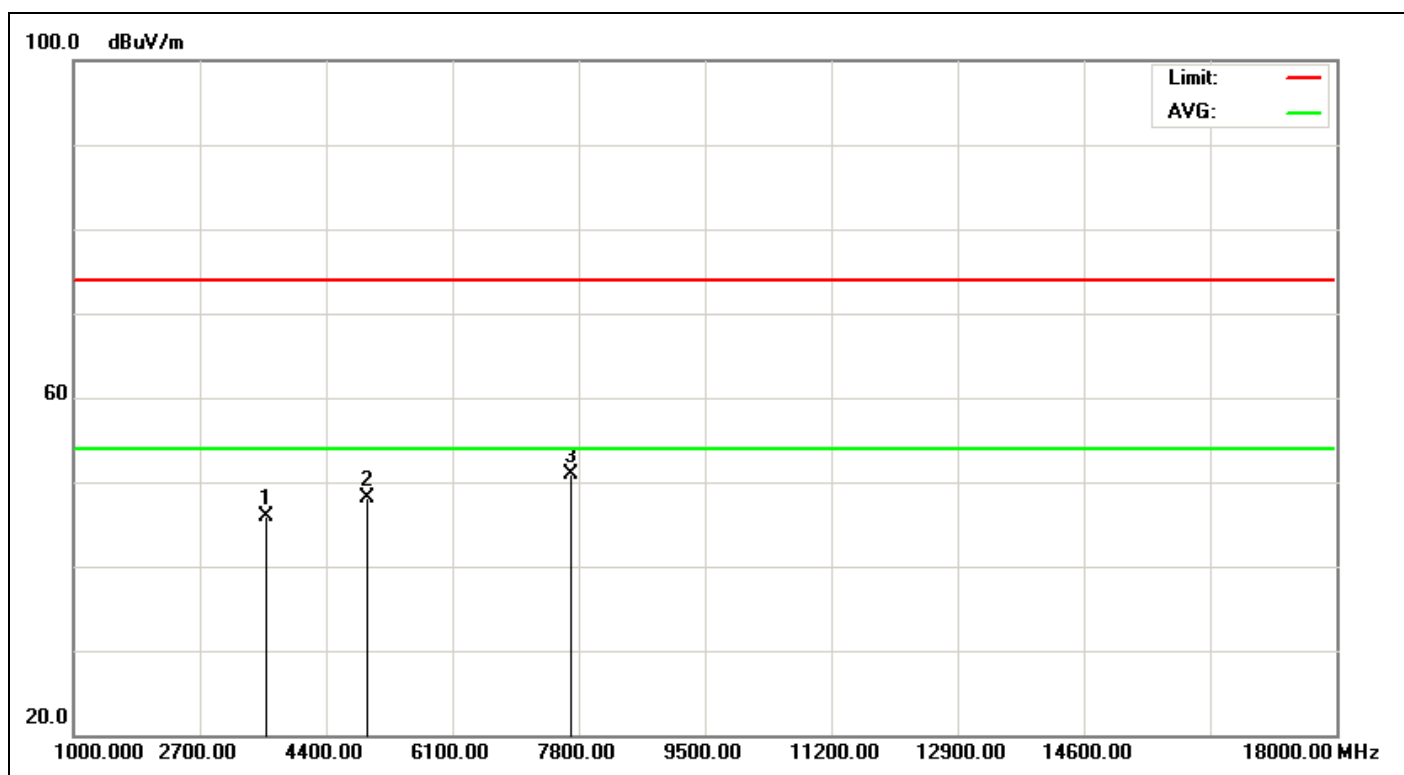
Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/10/16 13:24:04
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2440-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3642.628	-5.55	51.20	45.65	74.00	-28.35	peak	100	205	
2	5304.487	-0.61	49.10	48.49	74.00	-25.51	peak	100	0	
3	8001.602	6.01	44.87	50.88	74.00	-23.12	peak	100	341	



Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/10/16 13:25:06
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2440-RX		
Remark:			

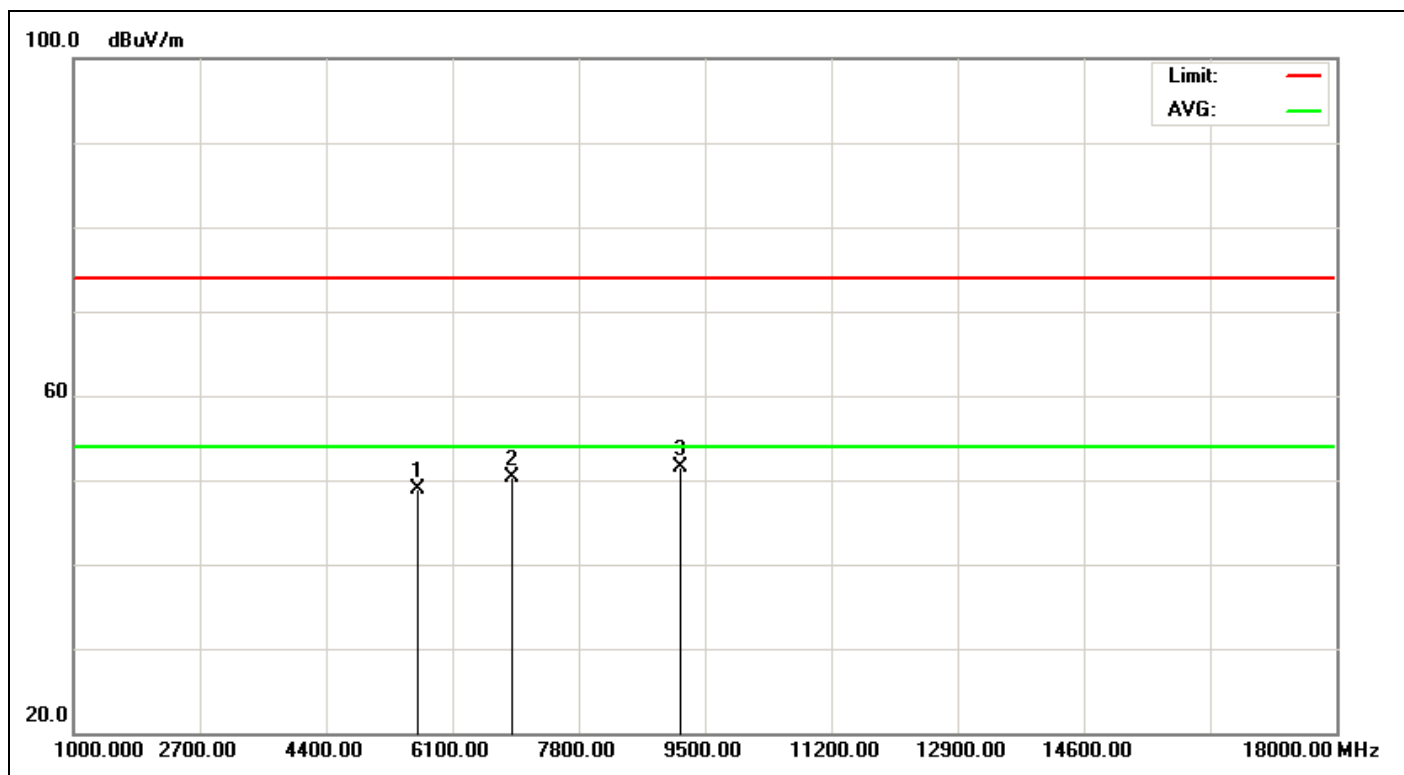
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4133.013	-4.79	50.47	45.68	74.00	-28.32	peak	100	182	
2	6612.179	5.33	45.15	50.48	74.00	-23.52	peak	100	213	
3	9009.615	6.87	44.09	50.96	74.00	-23.04	peak	100	261	



Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/10/16 13:26:42
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2480-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3588.141	-5.57	51.41	45.84	74.00	-28.16	peak	100	240	
2	4950.320	-2.21	50.41	48.20	74.00	-25.80	peak	100	53	
3	7701.923	6.16	44.68	50.84	74.00	-23.16	peak	100	303	





**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Vertical

**Test item:** Radiation Emission

**Test Time:** 2014/10/16 13:27:44

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2480-RX

**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	5631.410	1.22	47.78	49.00	74.00	-25.00	peak	100	165	
2	6911.859	4.98	45.23	50.21	74.00	-23.79	peak	100	0	
3	9173.077	6.74	44.86	51.60	74.00	-22.40	peak	100	338	

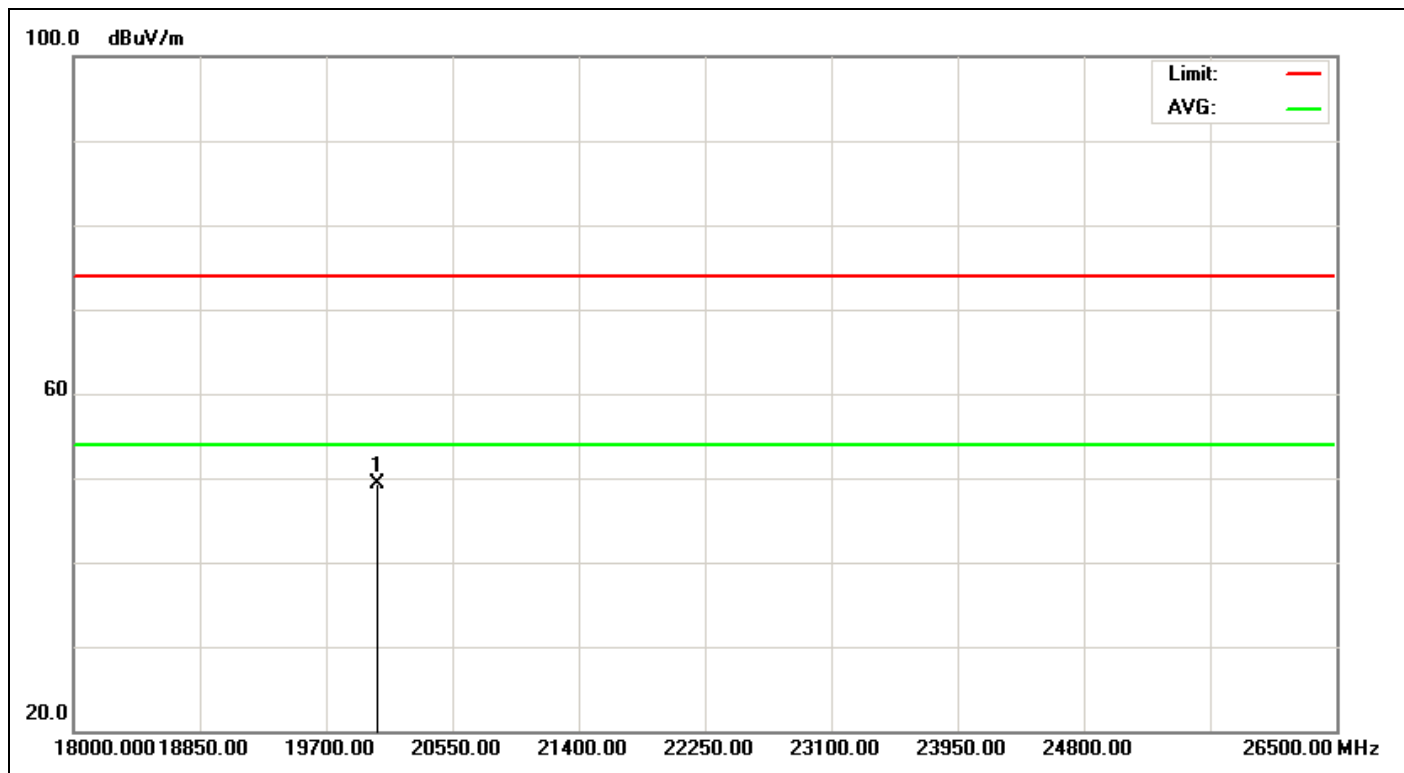
## Spurious Emissions, RX Mode, 18-26G



**TUV Rheinland Taiwan**

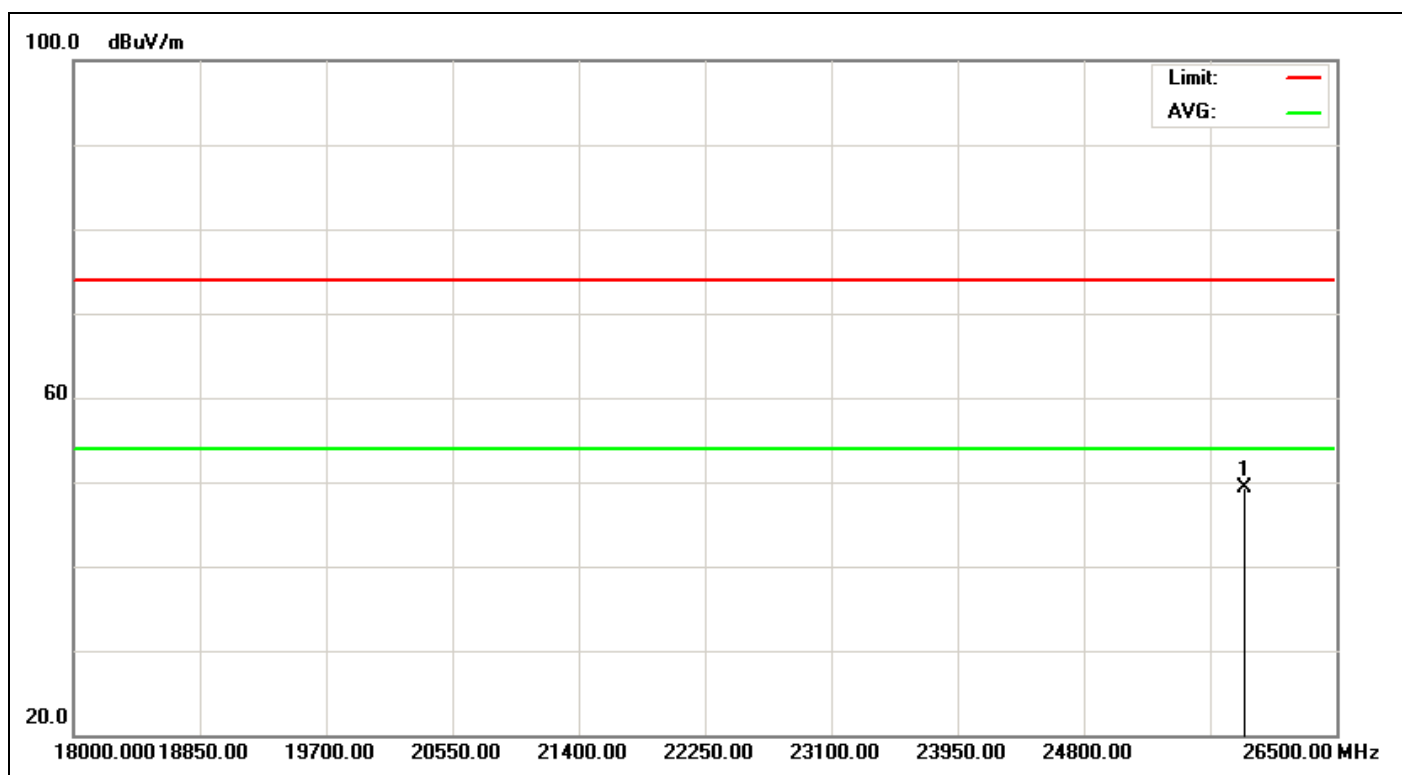
11F.,No.758,Sec. 4,Bade Rd.,Songshan Dist.,Taipei 105,Taiwan

Tel:+886-2-2172-7000 Fax:+886-2-2528-0018



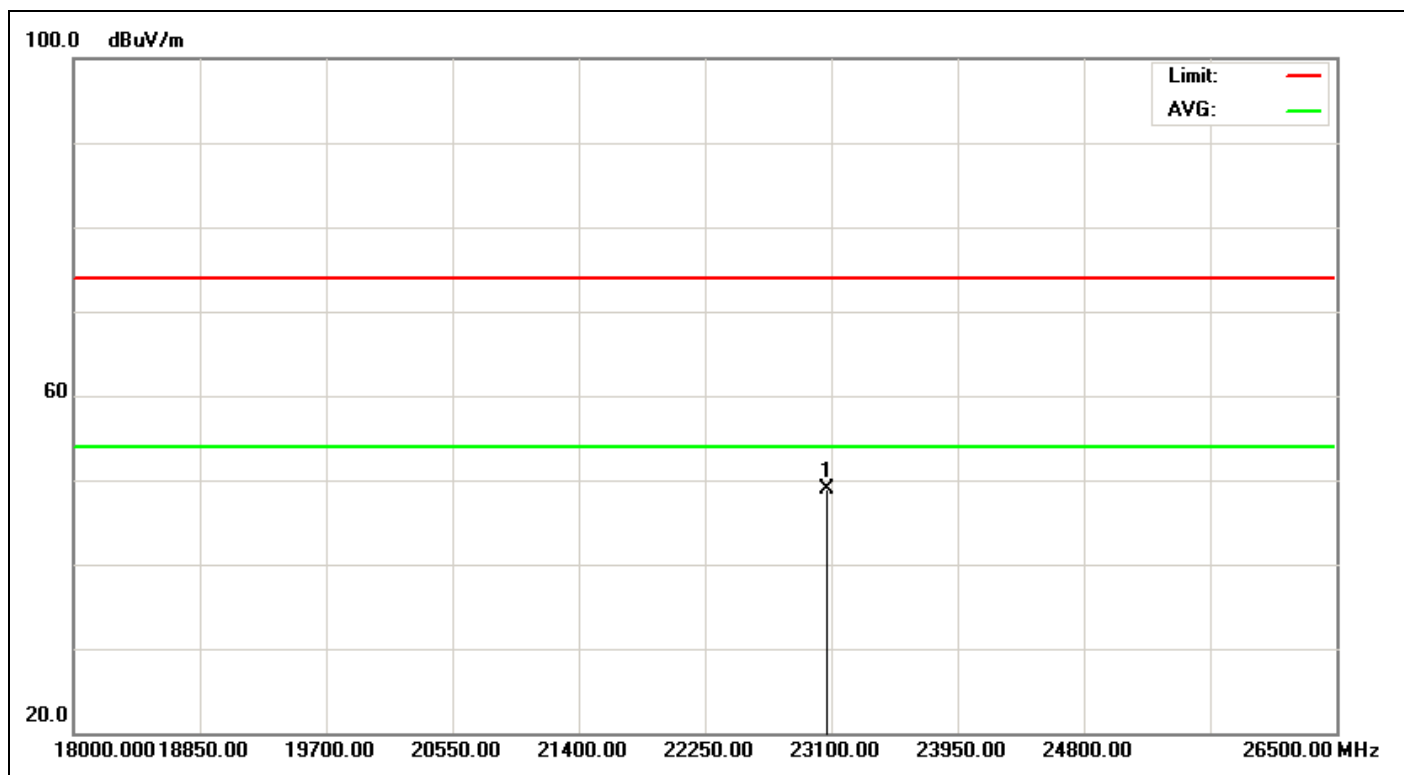
Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/10/17 21:02:25
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2402-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20043.269	29.34	19.94	49.28	74.00	-24.72	peak			



Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/10/17 21:02:58
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2402-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	25887.019	31.96	17.36	49.32	74.00	-24.68	peak			



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Horizontal

**Test item:** Radiation Emission

**Test Time:** 2014/10/17 21:03:26

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

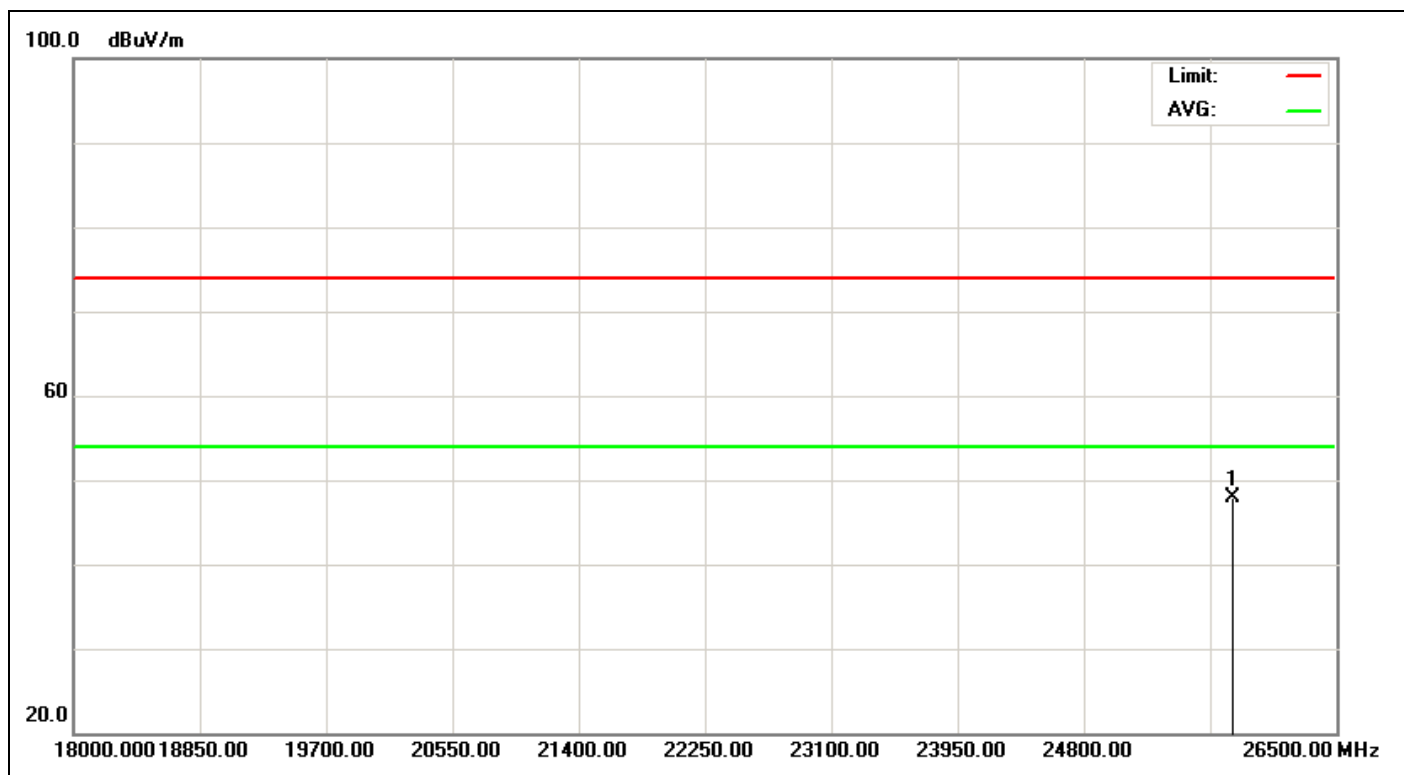
**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2440-RX

**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	23067.308	30.25	18.56	48.81	74.00	-25.19	peak			



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Vertical

**Test item:** Radiation Emission

**Test Time:** 2014/10/17 21:03:51

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

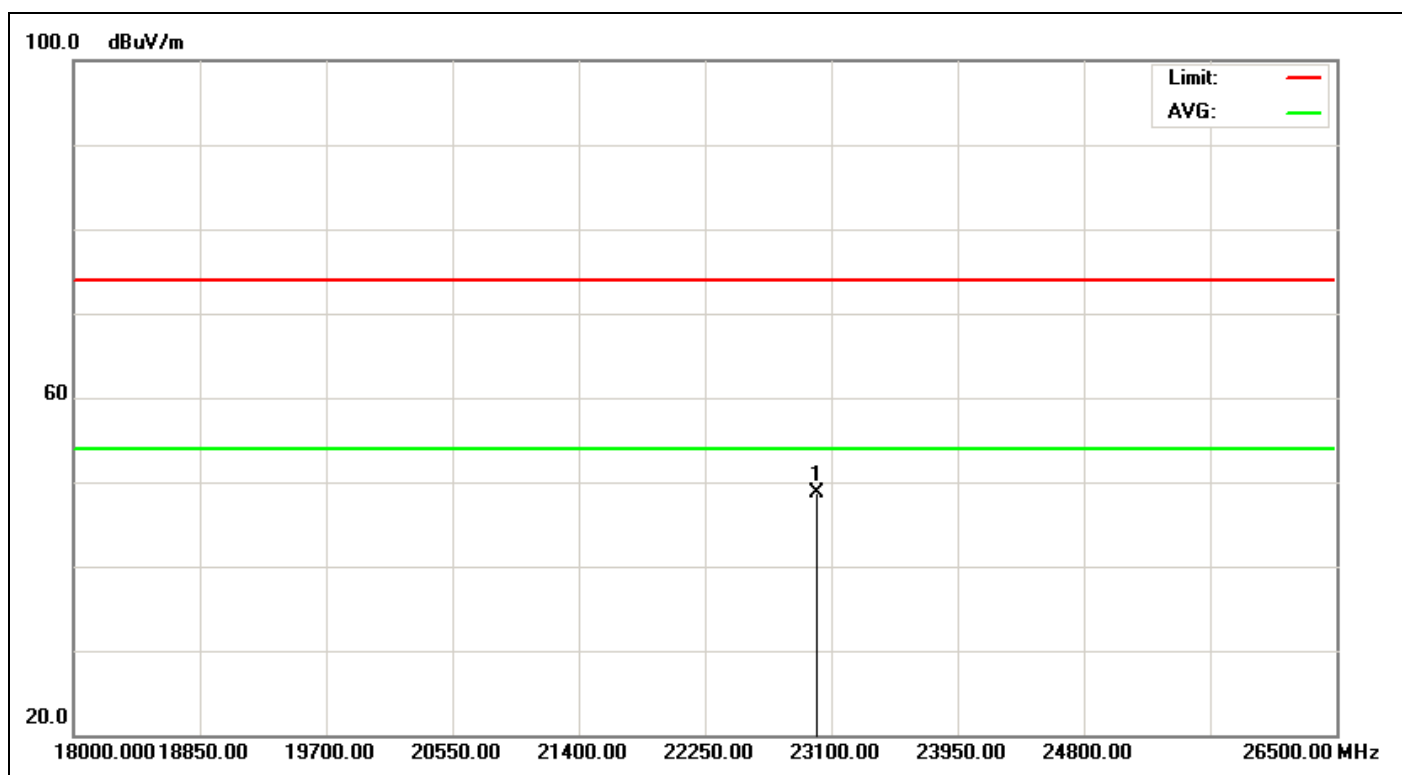
**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2440-RX

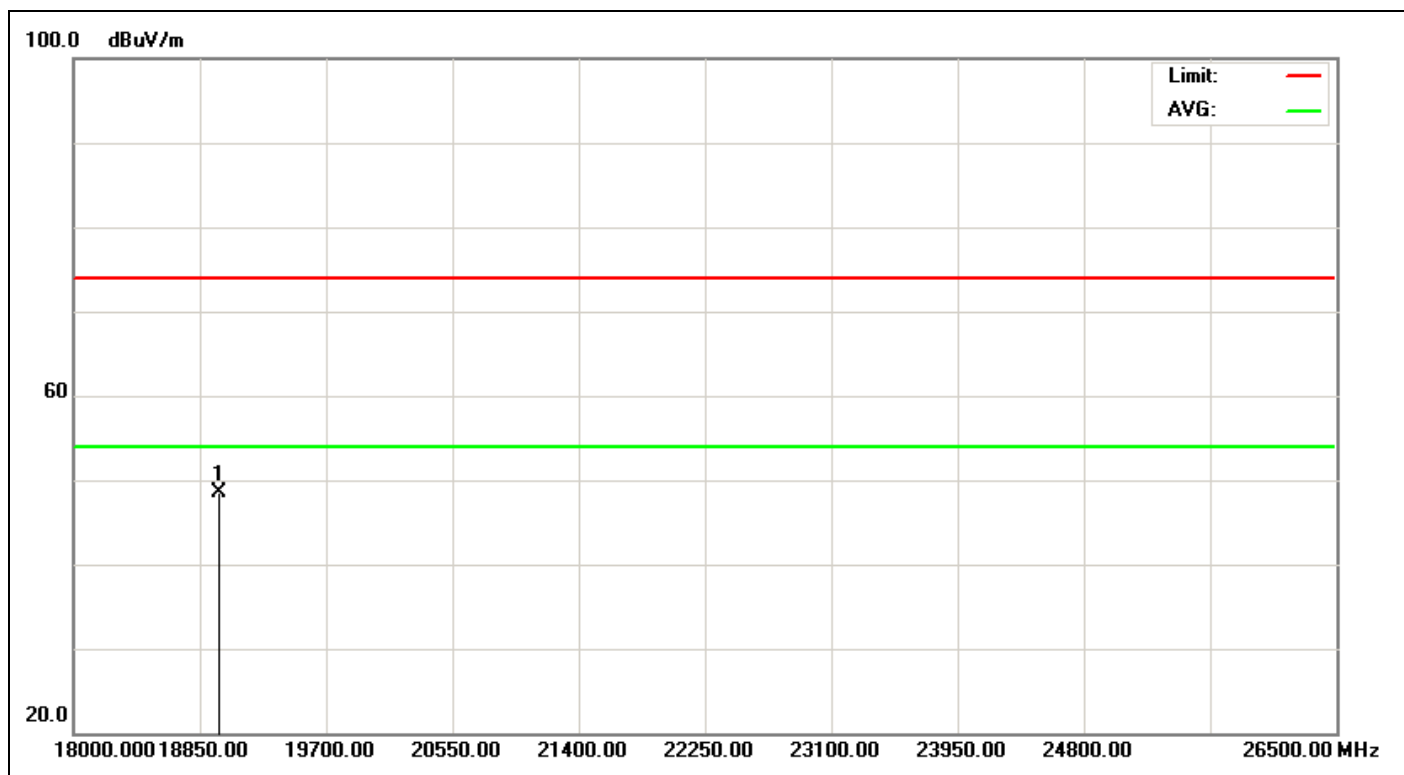
**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	25805.288	31.70	16.27	47.97	74.00	-26.03	peak			



Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/10/17 21:04:19
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%):	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	2480-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22999.199	30.28	18.43	48.71	74.00	-25.29	peak			



**Service No.:** 114024429-NCC

**Test Distance:** 3m

**Test Standard:** NCC Above 1G PEAK

**Ant. Polarization:** Vertical

**Test item:** Radiation Emission

**Test Time:** 2014/10/17 21:04:45

**Applicant:** Yellowstone

**Test Rating:** DC 3V

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 24(°C)/58%

**Model No.:** Module

**Test Engineer:** Hugo Chang

**Test Mode:** 2480-RX

**Remark:**

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	18980.769	29.93	18.52	48.45	74.00	-25.55	peak			

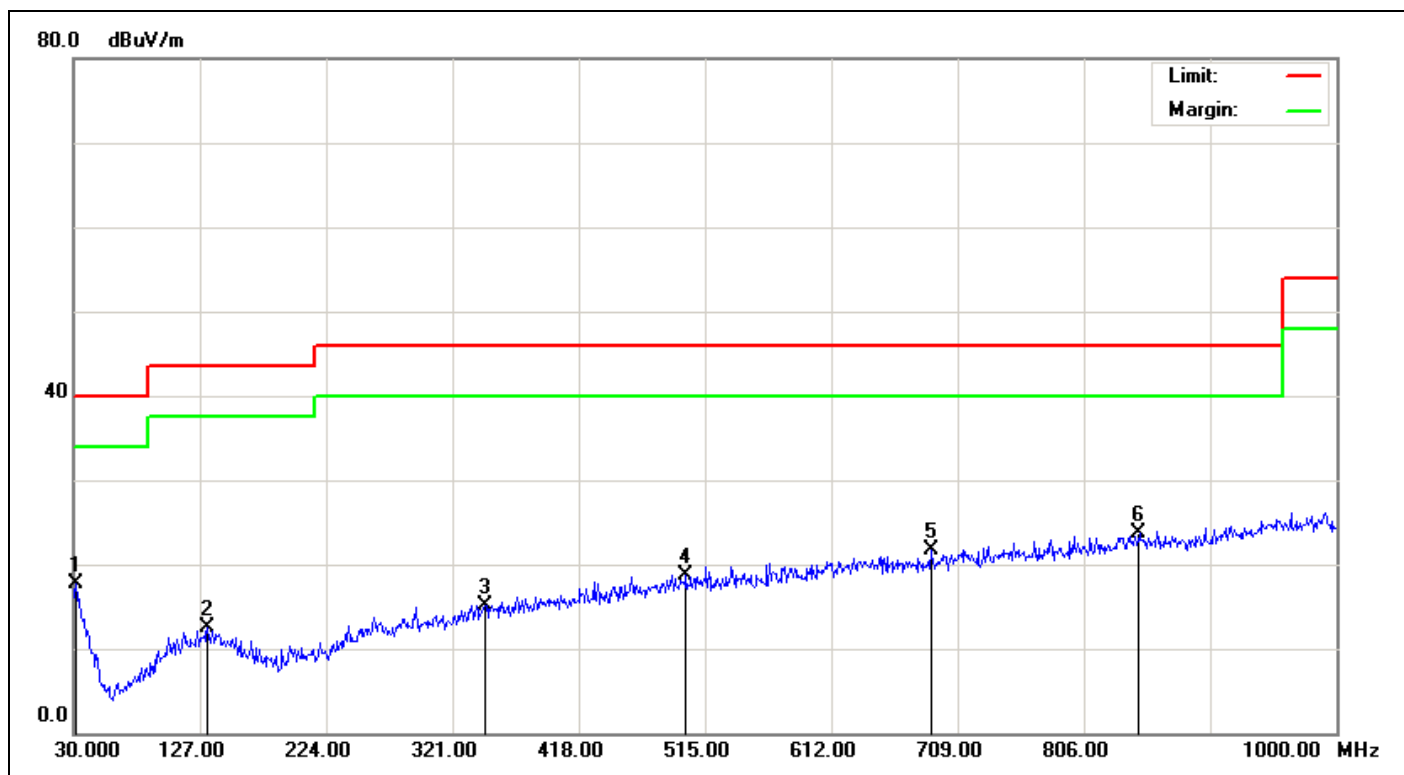
## Spurious Emissions, RX Mode, 30M-1G



**TUV Rheinland Taiwan**

11F.,No.758,Sec. 4,Bade Rd.,Songshan Dist.,Taipei 105,Taiwan

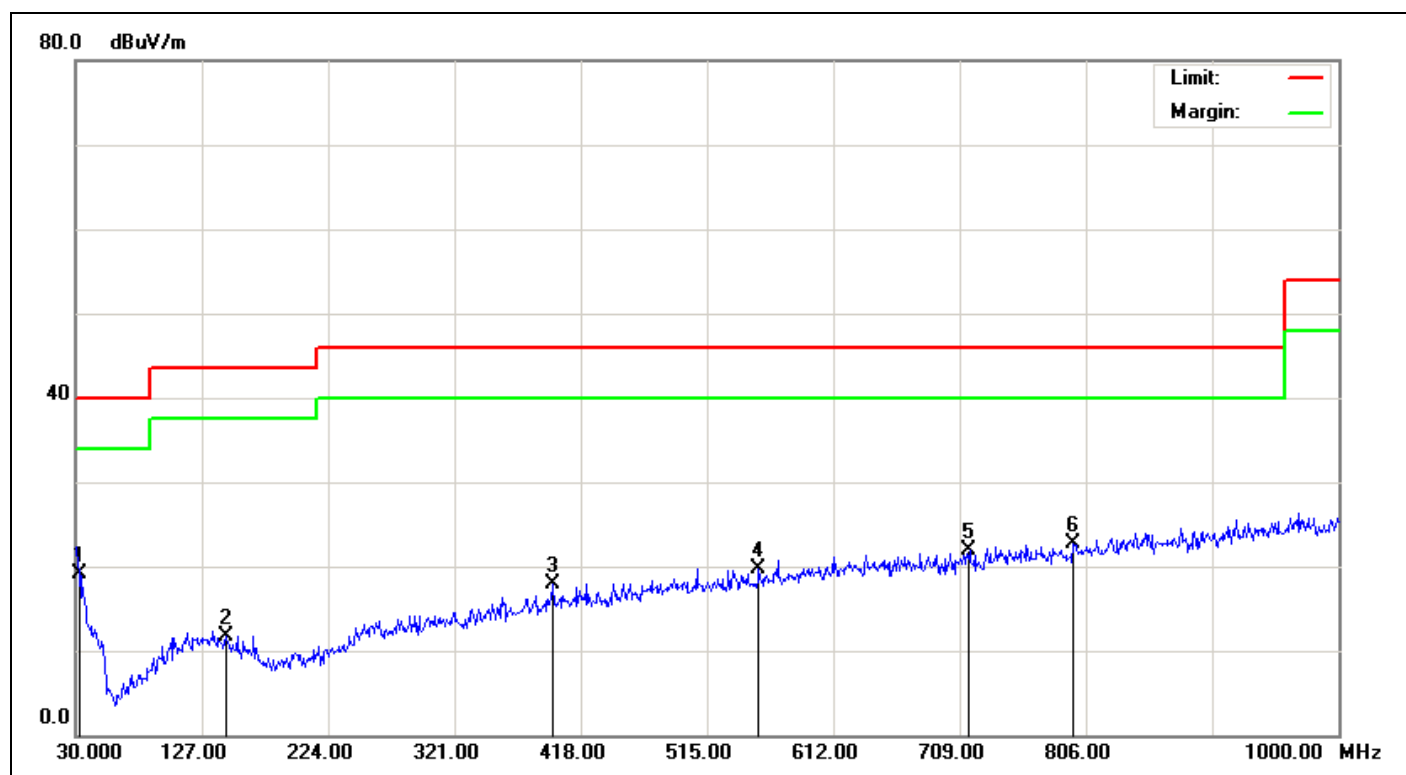
Tel:+886-2-2172-7000 Fax:+886-2-2528-0018



<b>Service No.:</b>	<b>114024429-NCC</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>NCC Class B 3M Radiation</b>	<b>Ant. Polarization:</b>	<b>Horizontal</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2014/10/17 21:36:38</b>
<b>Applicant:</b>	<b>Yellowstone</b>	<b>Test Rating:</b>	<b>DC 3V</b>
<b>Product:</b>	<b>LE Module</b>	<b>Temp.(°C)/Hum.(%):</b>	<b>24(°C)/58%</b>
<b>Model No.:</b>	<b>Module</b>	<b>Test Engineer:</b>	<b>Hugo Chang</b>
<b>Test Mode:</b>	<b>RX</b>		
<b>Remark:</b>			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth ( ° )	Remark
1	31.9400	-8.42	26.17	17.75	40.00	-22.25	QP	100	227	
2	132.8199	-14.20	26.70	12.50	43.50	-31.00	QP	100	38	
3	346.2200	-10.91	26.03	15.12	46.00	-30.88	QP	100	78	
4	500.4499	-8.53	27.15	18.62	46.00	-27.38	QP	100	67	
5	688.6299	-6.14	27.83	21.69	46.00	-24.31	QP	100	248	
6	848.6799	-3.35	27.08	23.73	46.00	-22.27	QP	100	166	

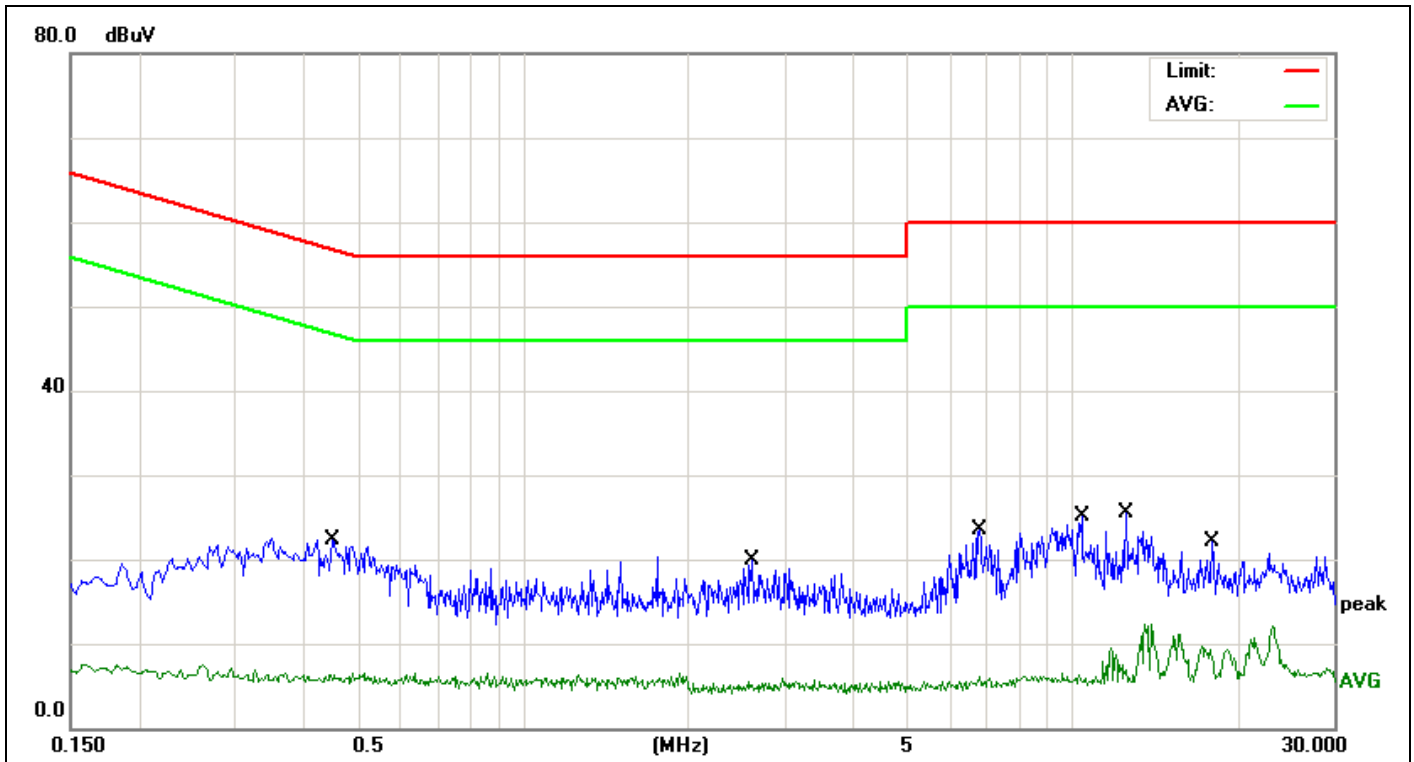




Service No.:	114024429-NCC	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/10/17 21:37:41
Applicant:	Yellowstone	Test Rating:	DC 3V
Product:	LE Module	Temp.(°C)/Hum.(%)	24(°C)/58%
Model No.:	Module	Test Engineer:	Hugo Chang
Test Mode:	RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	32.9099	-8.96	28.01	19.05	40.00	-20.95	QP	100	117	
2	145.4299	-14.53	26.32	11.79	43.50	-31.71	QP	100	104	
3	396.6600	-10.11	28.03	17.92	46.00	-28.08	QP	100	152	
4	554.7698	-8.06	27.75	19.69	46.00	-26.31	QP	100	0	
5	716.7599	-5.71	27.55	21.84	46.00	-24.16	QP	100	325	
6	796.2999	-4.62	27.31	22.69	46.00	-23.31	QP	100	14	

# Mains Spurious Emissions



**Service No.:** 114024429-NCC

**Test Standard:** FCC Class B Conduction(QP)

**Probe:** L1

**Test item:** Conduction Emission

**Test Time:** 2014/10/21 09:41:23

**Applicant:** Yellowstone

**Test Rating:** AC 110V/60Hz

**Product:** LE Module

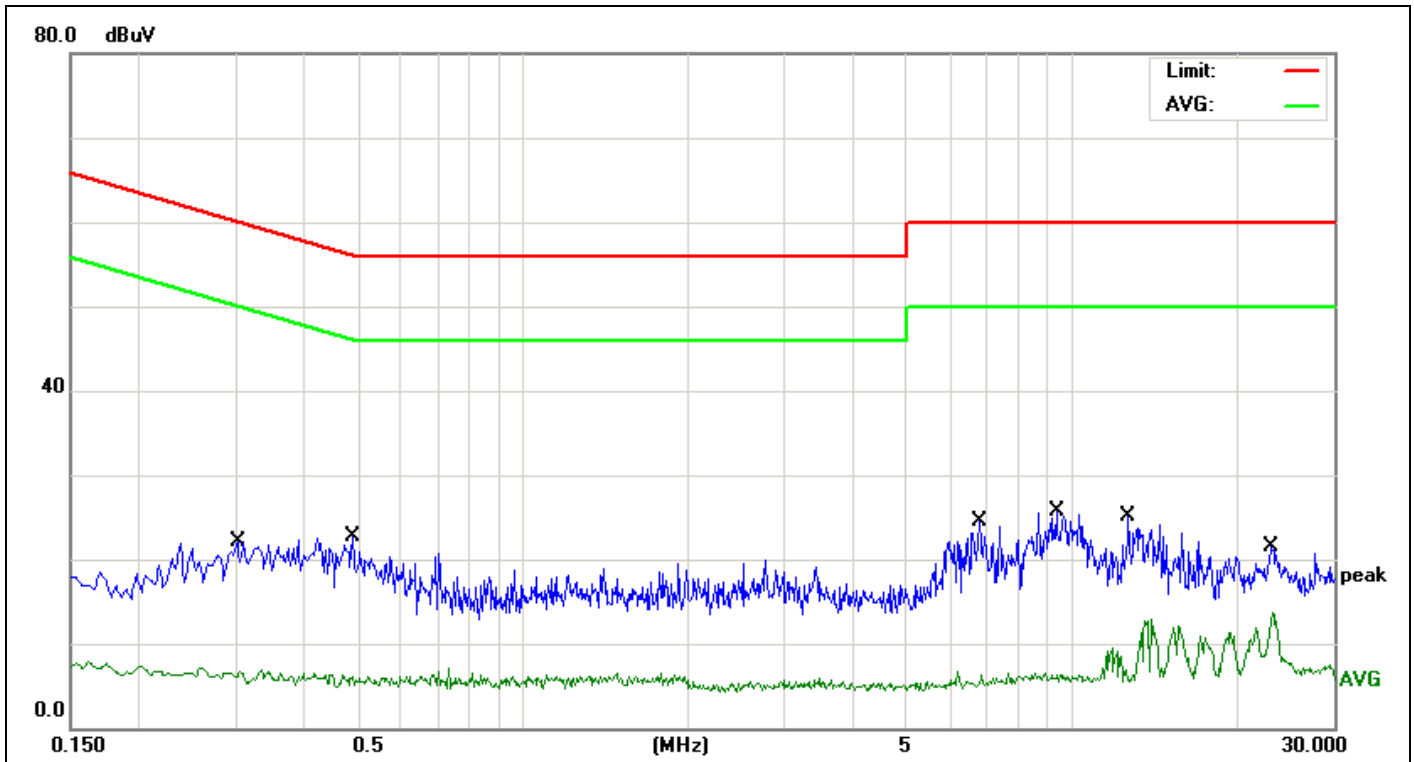
**Temp.(°C)/Hum.(%):** 27(°C)/50%

**Model No.:** Module

**Test Engineer:** Hugo Chang

**Remark:**

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	0.4500	9.63	2.81	12.44	56.87	-44.43	QP	
2	0.4500	9.63	-3.99	5.64	46.87	-41.23	AVG	
3	2.6099	9.65	-0.01	9.64	56.00	-46.36	QP	
4	2.6099	9.65	-5.31	4.34	46.00	-41.66	AVG	
5	6.8020	9.70	0.17	9.87	60.00	-50.13	QP	
6	6.8020	9.70	-5.29	4.41	50.00	-45.59	AVG	
7	10.4340	9.77	1.63	11.40	60.00	-48.60	QP	
8	10.4340	9.77	-4.89	4.88	50.00	-45.12	AVG	
9	12.5460	9.79	1.85	11.64	60.00	-48.36	QP	
10	12.5460	9.79	-3.59	6.20	50.00	-43.80	AVG	
11	17.9580	9.85	2.38	12.23	60.00	-47.77	QP	
12	17.9580	9.85	-2.16	7.69	50.00	-42.31	AVG	



**Service No.:** 114024429-NCC

**Test Standard:** FCC Class B Conduction(QP)

**Probe:** N

**Test item:** Conduction Emission

**Test Time:** 2014/10/21 09:44:06

**Applicant:** Yellowstone

**Test Rating:** AC 110V/60Hz

**Product:** LE Module

**Temp.(°C)/Hum.(%):** 27(°C)/50%

**Model No.:** Module

**Test Engineer:** Hugo Chang

**Remark:**

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	0.3020	9.64	2.49	12.13	60.19	-48.06	QP	
2	0.3020	9.64	-3.59	6.05	50.19	-44.14	AVG	
3	0.4900	9.64	1.98	11.62	56.17	-44.55	QP	
4	0.4900	9.64	-4.04	5.60	46.17	-40.57	AVG	
5	6.7900	9.73	0.97	10.70	60.00	-49.30	QP	
6	6.7900	9.73	-5.25	4.48	50.00	-45.52	AVG	
7	9.3940	9.78	6.12	15.90	60.00	-44.10	QP	
8	9.3940	9.78	-4.58	5.20	50.00	-44.80	AVG	
9	12.6780	9.84	1.33	11.17	60.00	-48.83	QP	
10	12.6780	9.84	-4.42	5.42	50.00	-44.58	AVG	
11	23.0300	10.00	5.76	15.76	60.00	-44.24	QP	
12	23.0300	10.00	-0.63	9.37	50.00	-40.63	AVG	