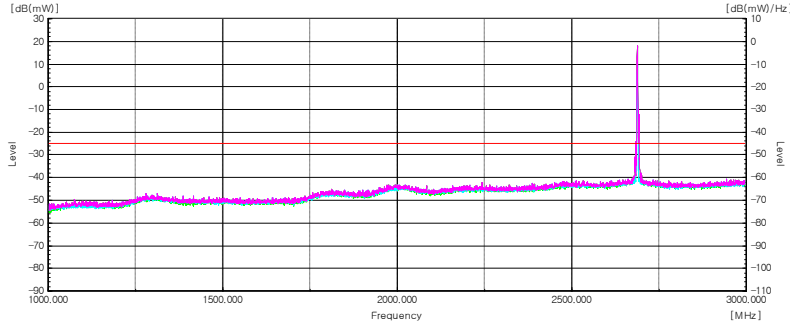
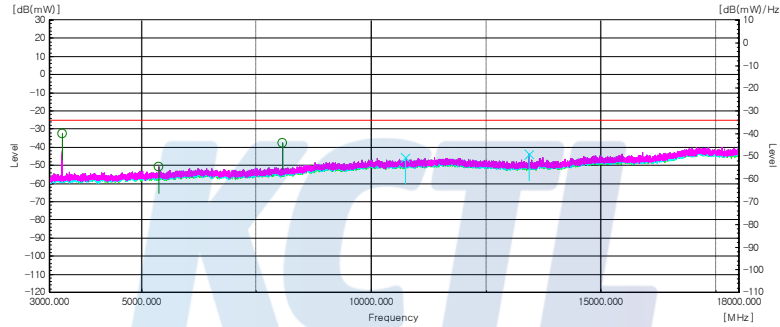


Test mode : LTE Band41  
Frequency(MHz) : 2 687.5  
Channel : 41565

1 000 MHz to 3 000 MHz



Above 3 000 MHz



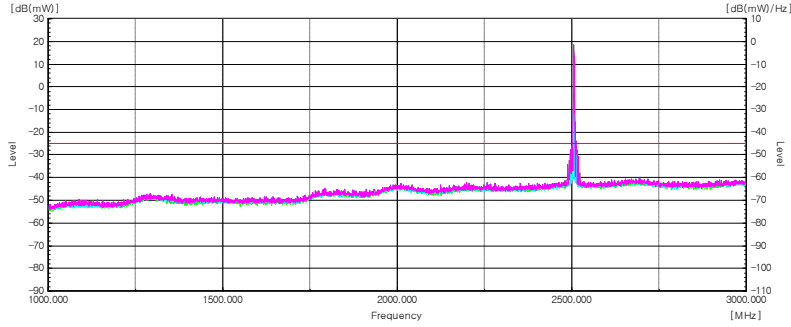
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	5	3 278.019	H	9.3	7.65	-34.45	-32.80	-25.00	7.80
		5 375.158	H	11.1	10.88	-51.22	-51.00	-25.00	26.00
		8 063.337	H	11.5	13.75	-35.45	-37.70	-25.00	12.70
		10 749.516	V	12.8	15.40	-42.90	-45.50	-25.00	20.50
		13 437.695	V	12.7	17.11	-39.49	-43.90	-25.00	18.90

Note.

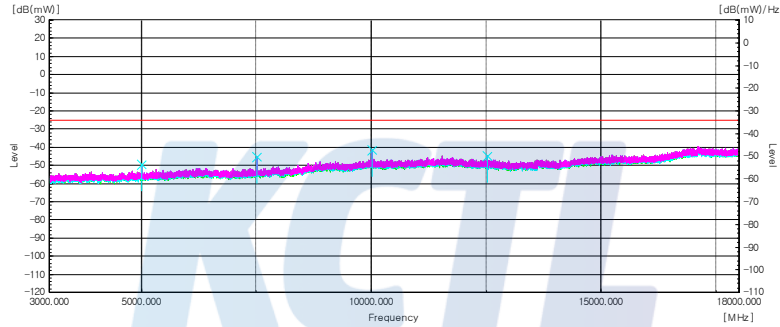
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 501.0  
Channel : 39700

1 000 MHz to 3 000 MHz



Above 3 000 MHz



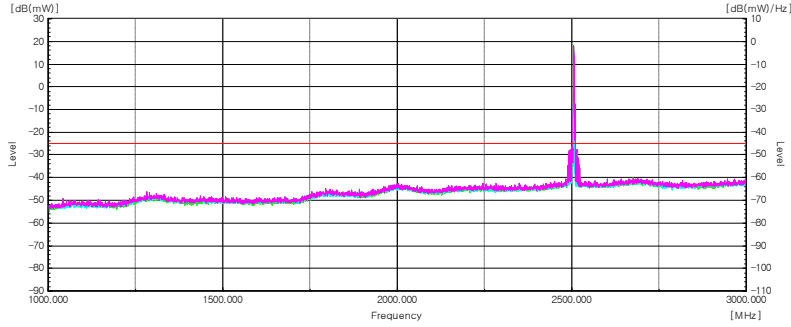
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	10	5 011.134	V	10.9	10.46	-49.94	-49.50	-25.00	24.50
		7 516.301	V	11.0	13.24	-43.16	-45.40	-25.00	20.40
		10 021.467	V	12.2	14.88	-38.82	-41.50	-25.00	16.50
		12 526.634	V	13.5	16.52	-41.88	-44.90	-25.00	19.90

Note.

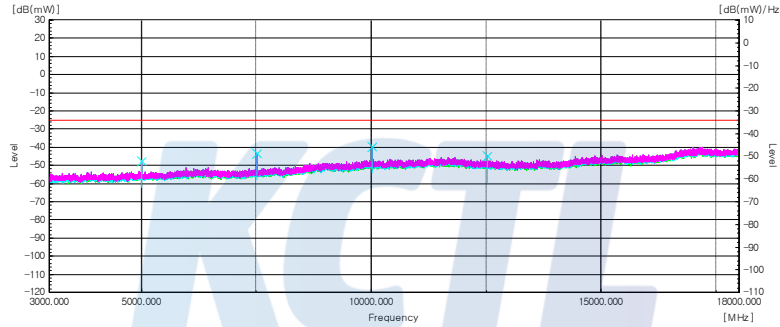
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 501.0  
Channel : 39700

1 000 MHz to 3 000 MHz



Above 3 000 MHz



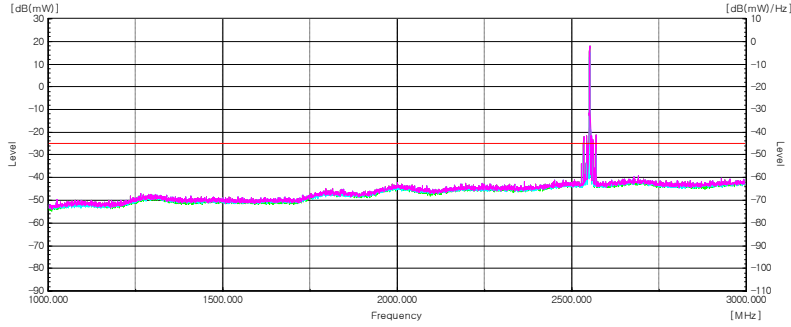
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	10	5 011.134	V	10.9	10.46	-48.24	-47.80	-25.00	22.80
		7 516.301	V	11.0	13.24	-41.16	-43.40	-25.00	18.40
		10 021.467	V	12.2	14.88	-37.02	-39.70	-25.00	14.70
		12 526.634	V	13.5	16.52	-41.78	-44.80	-25.00	19.80

Note.

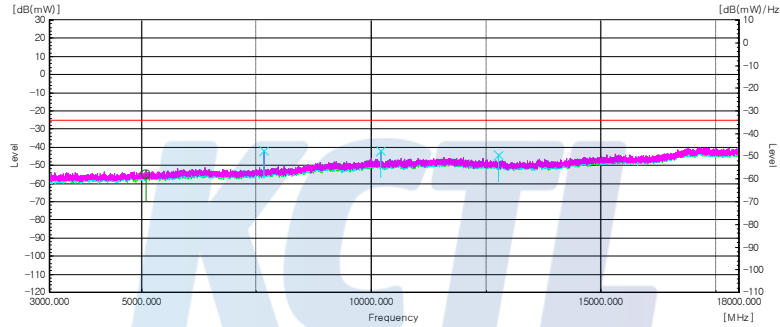
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 547.0  
Channel : 40160

1 000 MHz to 3 000 MHz



Above 3 000 MHz



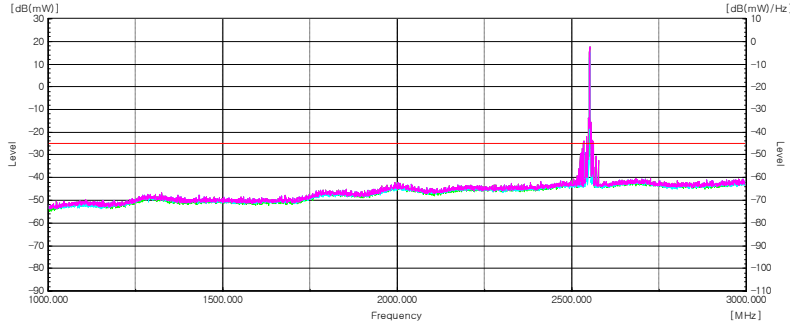
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	10	5 094.140	H	10.8	10.46	-55.44	-55.10	-25.00	30.10
		7 654.310	V	11.3	13.25	-39.85	-41.80	-25.00	16.80
		10 205.480	V	12.3	14.85	-39.25	-41.80	-25.00	16.80
		12 756.649	V	13.6	16.74	-41.06	-44.20	-25.00	19.20

Note.

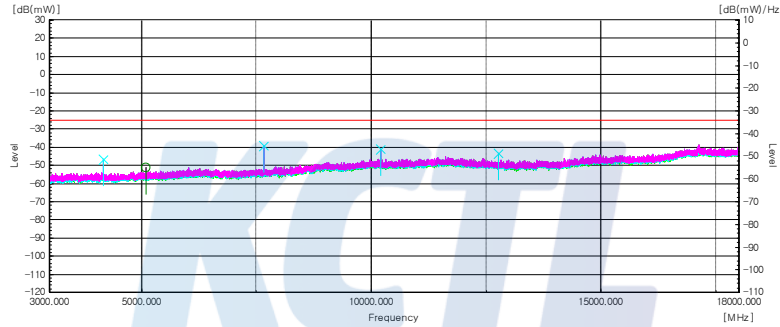
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 547.0  
Channel : 40160

1 000 MHz to 3 000 MHz



Above 3 000 MHz



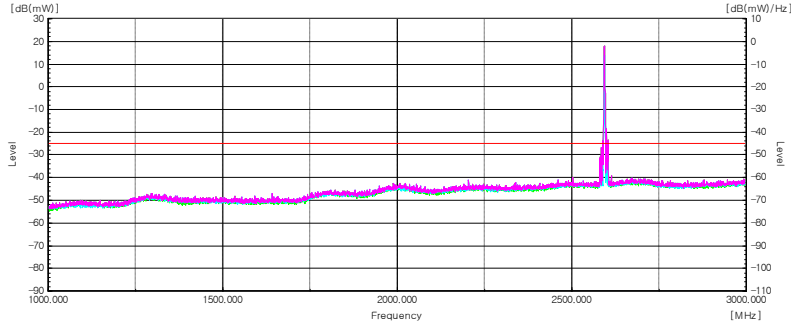
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	10	4 169.078	V	10.1	9.35	-47.45	-46.7	-25.00	21.70
		5 103.140	H	10.8	10.46	-51.74	-51.4	-25.00	26.00
		7 654.310	V	11.3	13.25	-37.05	-39.0	-25.00	14.00
		10 205.480	V	12.3	14.85	-38.45	-41.0	-25.00	16.00
		12 756.649	V	13.6	16.74	-40.16	-43.3	-25.00	18.30

Note.

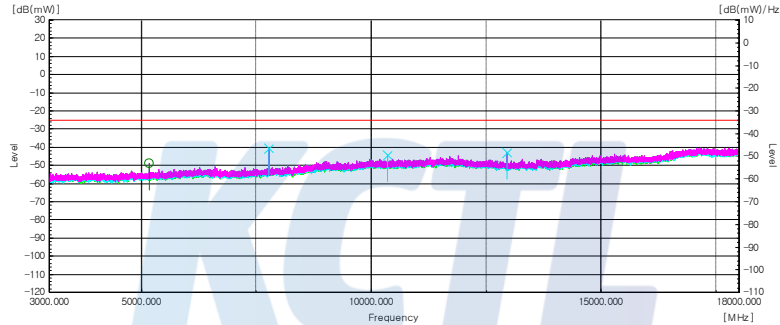
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 593.0  
Channel : 40620

1 000 MHz to 3 000 MHz



Above 3 000 MHz



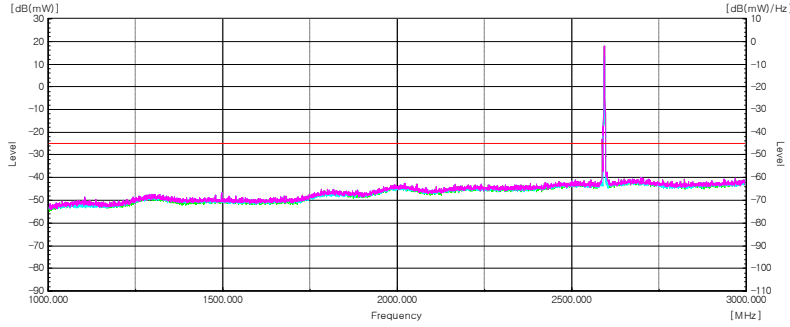
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	10	5 177.145	H	10.9	10.63	-49.07	-48.80	-25.00	23.8
		7 766.317	V	11.6	13.31	-38.99	-40.70	-25.00	15.7
		10 354.490	V	12.6	15.06	-41.74	-44.20	-25.00	19.2
		12 942.662	V	13.4	17.05	-39.35	-43.00	-25.00	18.0

Note.

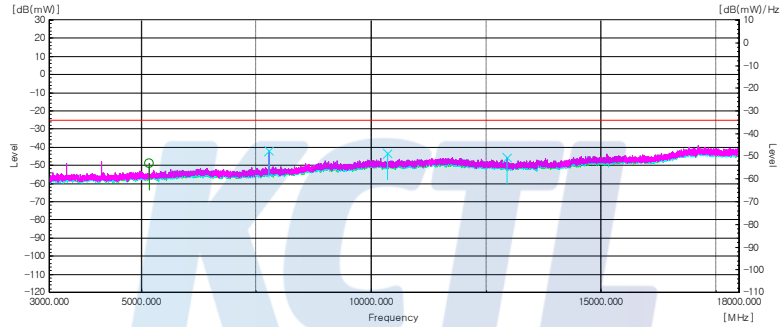
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 593.0  
Channel : 40620

1 000 MHz to 3 000 MHz



Above 3 000 MHz



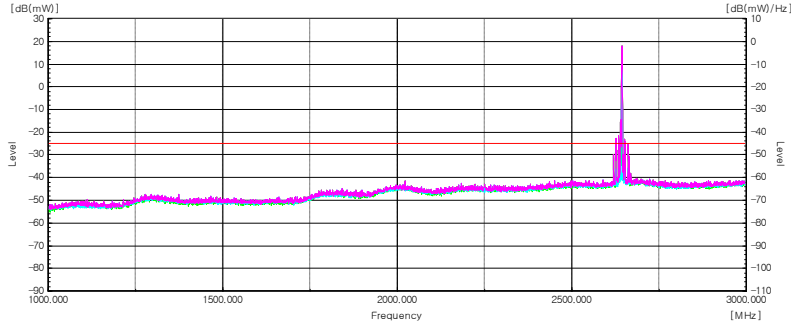
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	10	5 177.145	H	10.9	10.63	-48.97	-48.70	-25.00	23.70
		7 766.317	V	11.6	13.31	-40.39	-42.10	-25.00	17.10
		10 354.49	V	12.6	15.06	-40.94	-43.40	-25.00	18.40
		12 943.662	V	13.4	17.05	-42.05	-45.70	-25.00	20.70

Note.

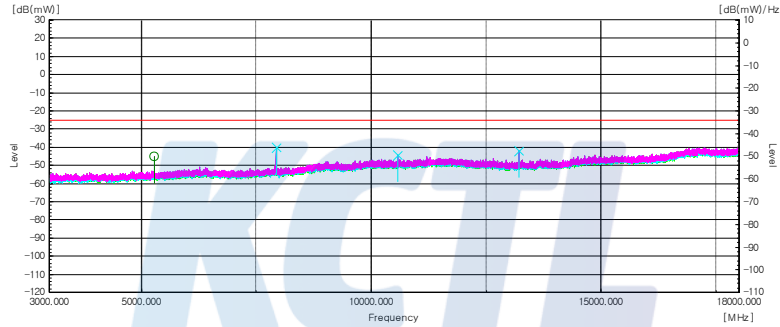
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 639.0  
Channel : 41080

1 000 MHz to 3 000 MHz



Above 3 000 MHz



Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	10	5 286.152	H	11.3	10.73	-45.77	-45.20	-25.00	20.20
		7 930.328	V	11.5	13.59	-38.21	-40.30	-25.00	15.30
		10 573.504	V	12.6	15.28	-41.42	-44.10	-25.00	19.10
		13 216.68	V	13.0	17.14	-37.66	-41.80	-25.00	16.80

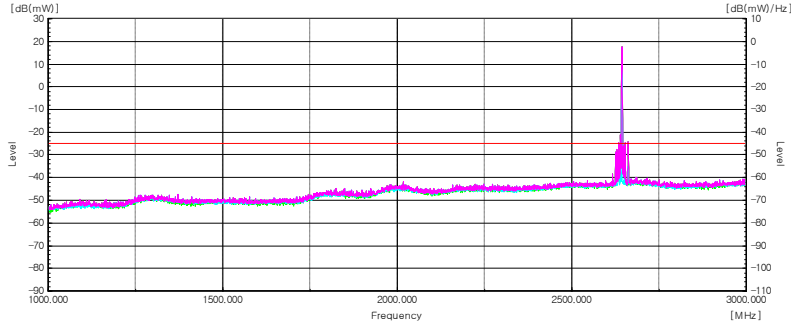
Note.

1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

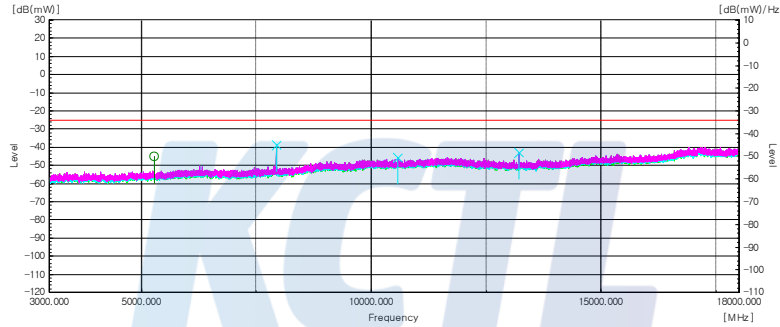


Test mode : LTE Band41  
Frequency(MHz) : 2 639.0  
Channel : 41080

1 000 MHz to 3 000 MHz



Above 3 000 MHz



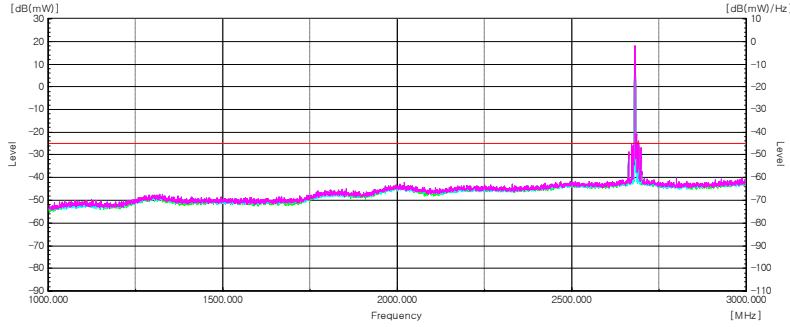
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	10	5 286.152	H	11.3	10.73	-45.97	-45.4	-25.00	20.40
		7 930.328	V	11.5	13.59	-36.61	-38.7	-25.00	13.70
		10 573.504	V	12.6	15.28	-42.92	-45.6	-25.00	20.60
		13 216.680	V	13.0	17.14	-38.86	-43.0	-25.00	18.00

Note.

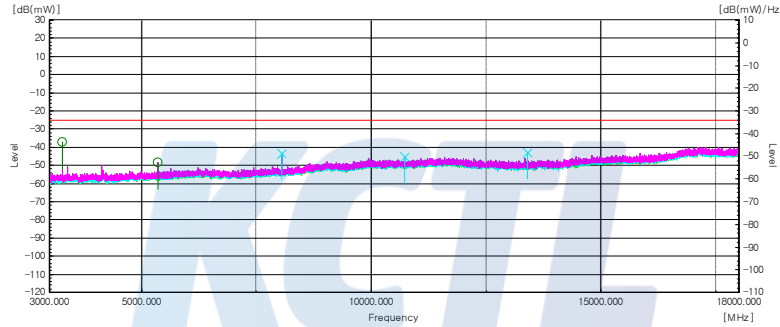
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 685.0  
Channel : 41540

1 000 MHz to 3 000 MHz



Above 3 000 MHz



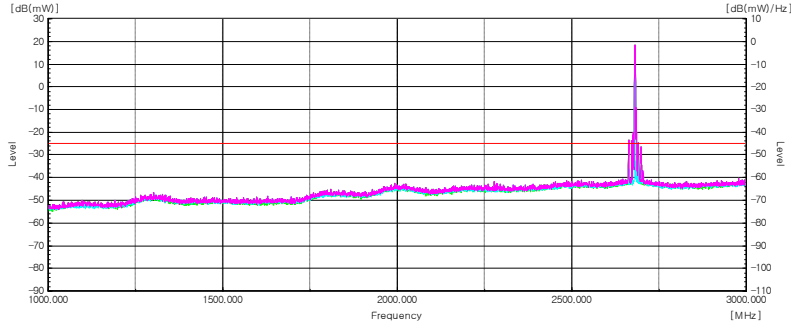
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	10	3 277.019	H	9.3	7.65	-39.05	-37.40	-25.00	12.40
		5 361.157	H	11.1	10.88	-48.62	-48.40	-25.00	23.40
		8 041.336	V	11.5	13.75	-40.95	-43.20	-25.00	18.20
		10 722.514	V	12.8	15.40	-42.70	-45.30	-25.00	20.30
		13 402.692	V	12.7	17.11	-38.39	-42.80	-25.00	17.80

Note.

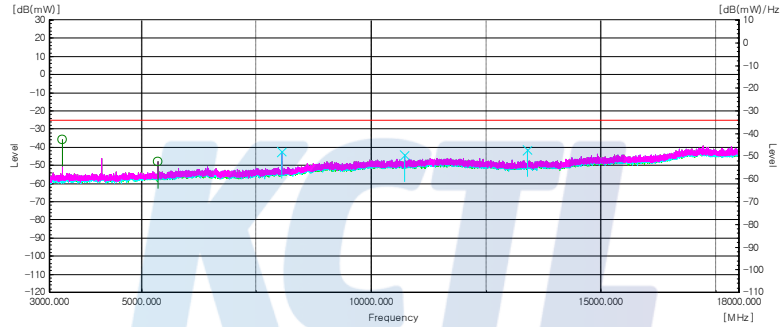
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 685.0  
Channel : 41540

1 000 MHz to 3 000 MHz



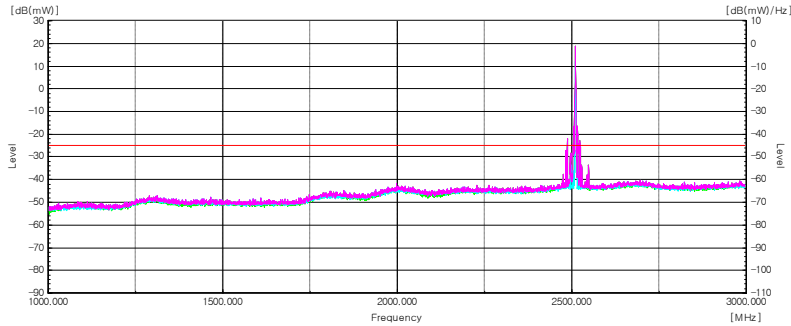
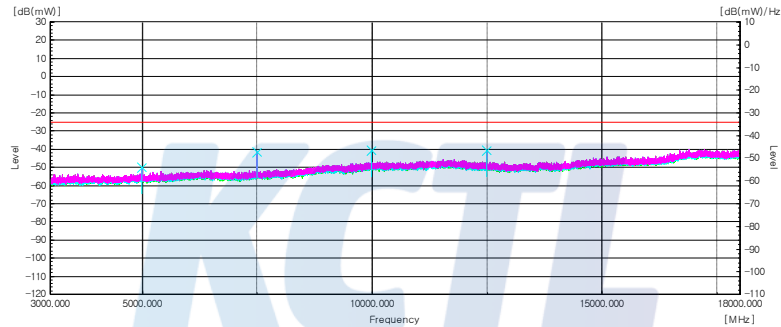
Above 3 000 MHz



Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	10	3 276.019	H	9.3	7.65	-37.45	-35.80	-25.00	10.80
		5 361.157	H	11.1	10.88	-48.42	-48.20	-25.00	23.20
		8 041.336	V	11.5	13.75	-40.25	-42.50	-25.00	17.50
		10 722.514	V	12.8	15.40	-41.70	-44.30	-25.00	19.30
		13 402.692	V	12.7	17.11	-36.99	-41.40	-25.00	16.40

Note.

- Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
- No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41Frequency(MHz) : 2 503.5Channel : 397251 000 MHz to 3 000 MHzAbove 3 000 MHz

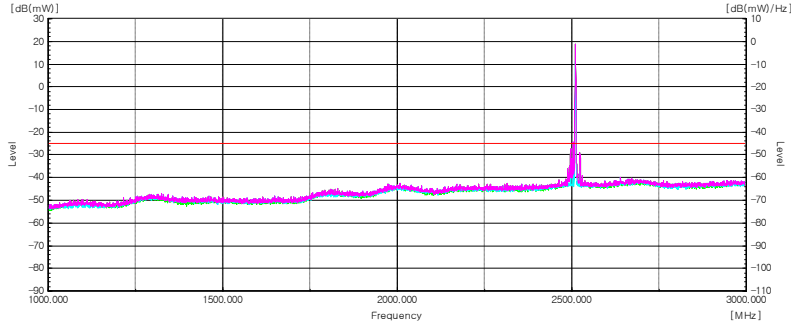
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	15	4 993.133	V	10.9	10.46	-50.44	-50.00	-25.00	25.00
		7 490.299	V	11.0	13.24	-39.36	-41.60	-25.00	16.60
		9 987.465	V	12.2	14.88	-37.82	-40.50	-25.00	15.50
		12 484.631	V	13.5	16.52	-37.58	-40.60	-25.00	15.60

## Note.

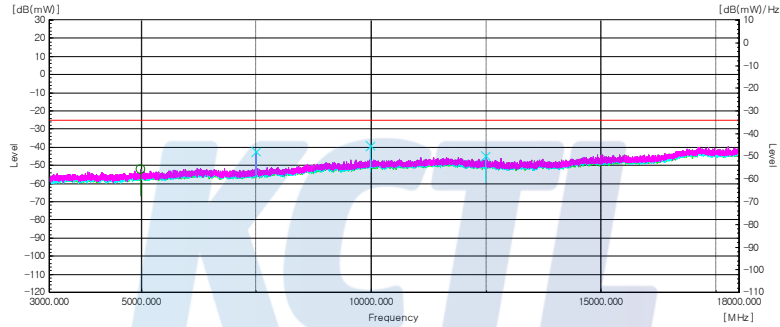
- Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
- No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 503.5  
Channel : 39725

1 000 MHz to 3 000 MHz



Above 3 000 MHz



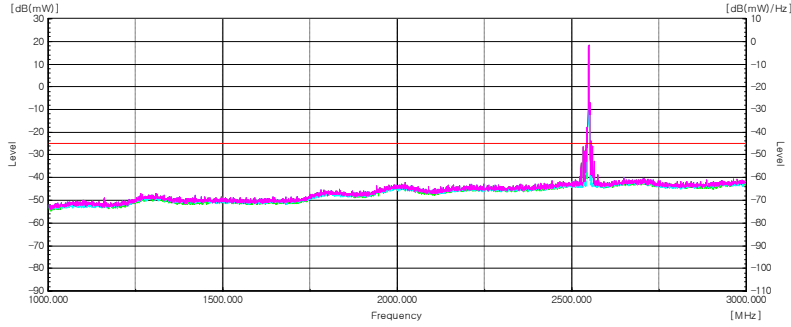
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	15	4 994.133	H	10.9	10.46	-52.54	-52.10	-25.00	27.10
		7 490.299	V	11.0	13.24	-40.36	-42.60	-25.00	17.60
		9 987.465	V	12.2	14.88	-36.52	-39.20	-25.00	14.20
		12 484.631	V	13.5	16.52	-41.88	-44.90	-25.00	19.90

Note.

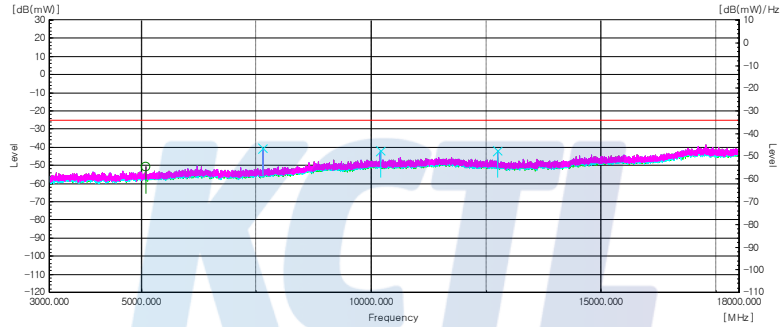
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 548.3  
Channel : 40173

1 000 MHz to 3 000 MHz



Above 3 000 MHz



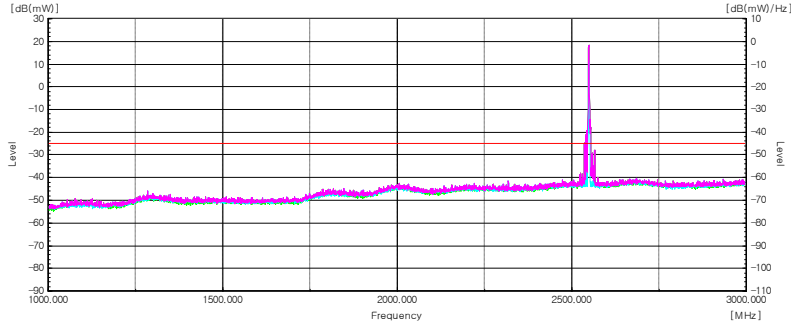
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	15	5 097.14	H	10.8	10.46	-51.24	-50.90	-25.00	25.90
		7 644.309	V	11.3	13.24	-38.46	-40.40	-25.00	15.40
		10 194.478	V	12.3	14.85	-39.55	-42.10	-25.00	17.10
		12 741.648	V	13.6	16.74	-38.66	-41.80	-25.00	16.80

Note.

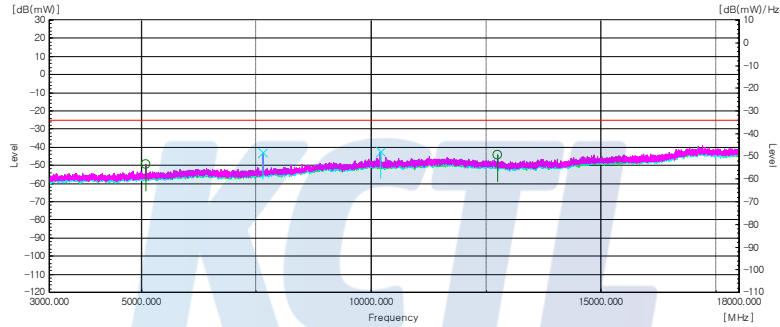
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 548.3  
Channel : 40173

1 000 MHz to 3 000 MHz



Above 3 000 MHz



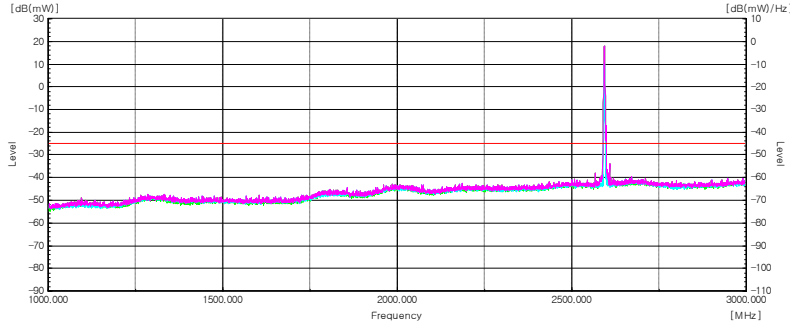
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	15	5 097.14	H	10.8	10.46	-49.74	-49.40	-25.00	24.40
		7 645.309	V	11.3	13.24	-40.96	-42.90	-25.00	17.90
		10 194.478	V	12.3	14.85	-39.75	-42.30	-25.00	17.30
		12 741.648	H	13.6	16.74	-41.36	-44.50	-25.00	19.50

Note.

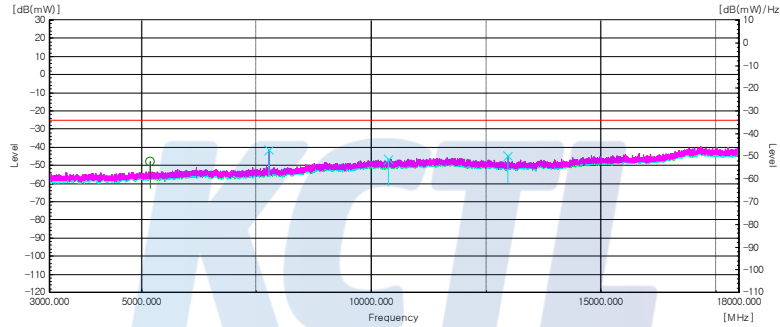
- Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
- No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 593.0  
Channel : 40620

1 000 MHz to 3 000 MHz



Above 3 000 MHz



Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	15	5 186.146	H	10.9	10.63	-48.17	-47.90	-25.00	22.90
		7 779.318	V	11.6	13.31	-39.69	-41.40	-25.00	16.40
		10 372.49	V	12.6	15.06	-44.04	-46.50	-25.00	21.50
		12 966.663	V	13.4	17.05	-41.25	-44.90	-25.00	19.90

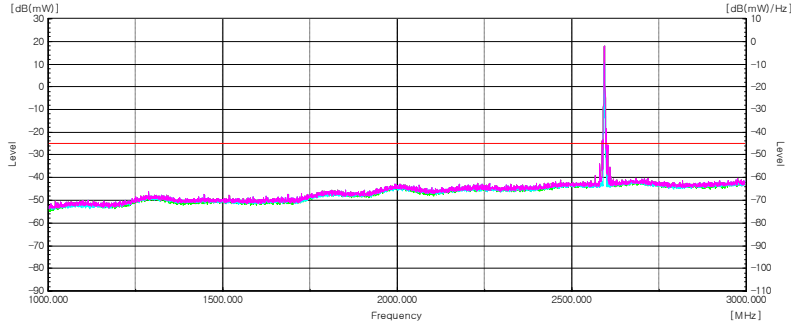
Note.

1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

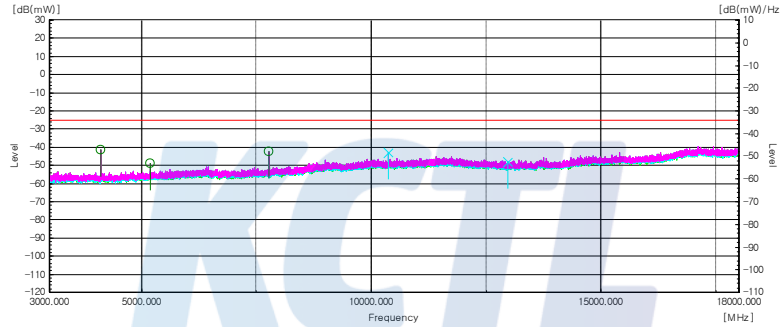


Test mode : LTE Band41  
Frequency(MHz) : 2 593.0  
Channel : 40620

1 000 MHz to 3 000 MHz



Above 3 000 MHz



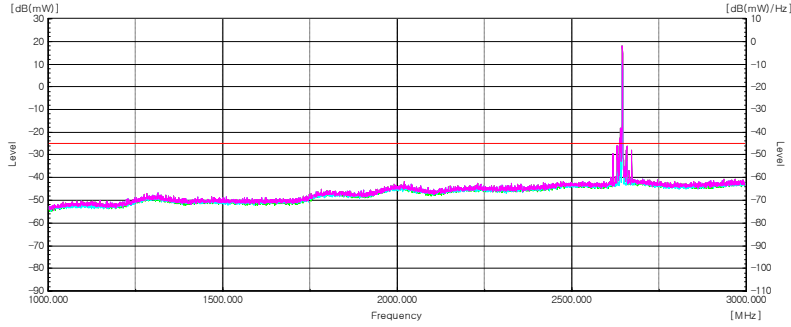
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	15	4 110.074	H	9.9	9.35	-42.25	-41.70	-25.00	16.70
		5 186.146	H	10.9	10.63	-49.37	-49.10	-25.00	24.10
		7 780.318	H	11.6	13.31	-40.79	-42.50	-25.00	17.50
		10 372.49	V	12.6	15.06	-40.44	-42.90	-25.00	17.90
		12 966.663	V	13.4	17.05	-44.65	-48.30	-25.00	23.30

Note.

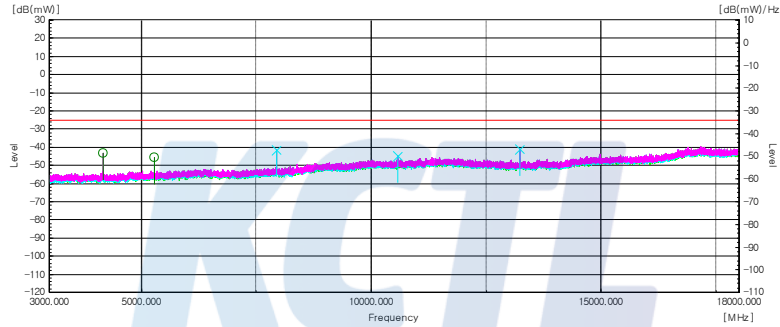
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 637.8  
Channel : 41068

1 000 MHz to 3 000 MHz



Above 3 000 MHz



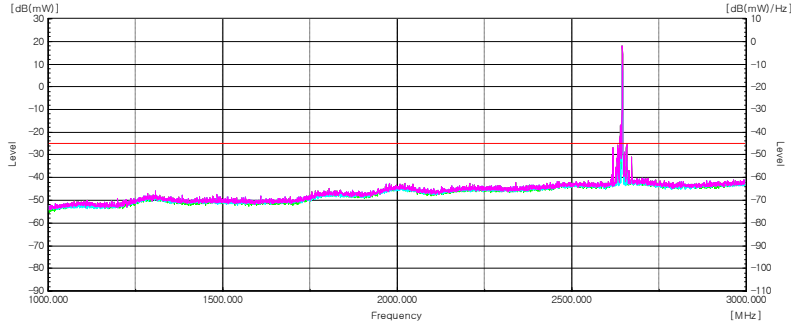
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	15	4 168.078	H	10.1	9.35	-44.05	-43.30	-25.00	18.30
		5 289.152	H	11.3	10.73	-46.07	-45.50	-25.00	20.50
		7 933.329	V	11.5	13.59	-39.61	-41.70	-25.00	16.70
		10 578.504	V	12.6	15.28	-42.12	-44.80	-25.00	19.80
		13 221.680	V	13.0	17.14	-36.96	-41.10	-25.00	16.10

Note.

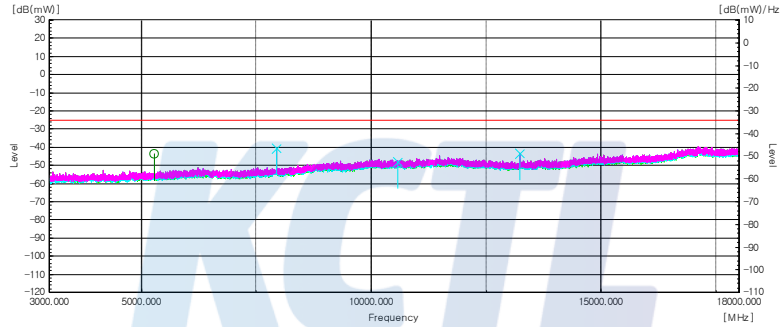
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 637.8  
Channel : 41068

1 000 MHz to 3 000 MHz



Above 3 000 MHz



Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	15	5 289.152	H	11.3	10.73	-44.47	-43.90	-25.00	18.90
		7 933.329	V	11.5	13.59	-38.51	-40.60	-25.00	15.60
		10 578.504	V	12.6	15.28	-45.52	-48.20	-25.00	23.20
		13 221.680	V	13.0	17.14	-39.46	-43.60	-25.00	18.60

Note.

1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

# KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 16677, Korea  
TEL: 82-31-285-0894 FAX: 82-505-299-8311  
[www.kctl.co.kr](http://www.kctl.co.kr)

Report No.:  
KR19-SRF0009-B

Page (205) of (221)

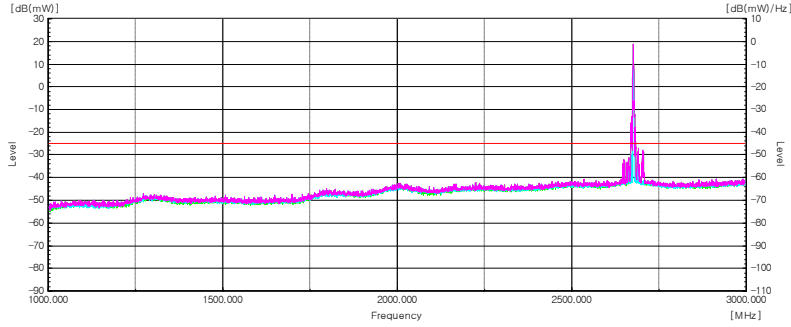


Test mode : LTE Band41

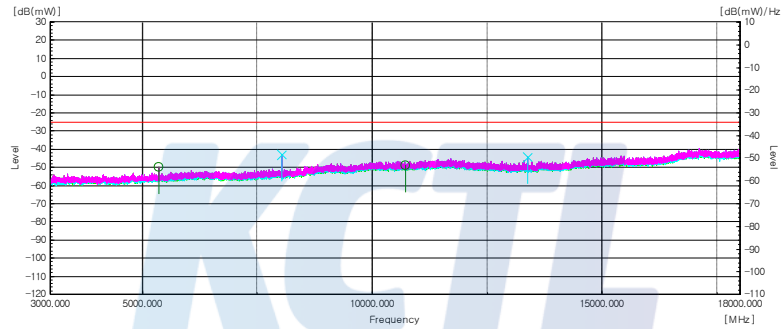
Frequency(MHz) : 2 682.5

Channel : 41515

## 1 000 MHz to 3 000 MHz



## Above 3 000 MHz



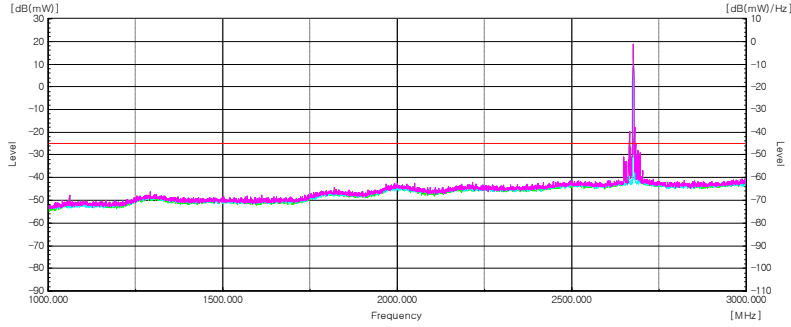
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	15	5 351.157	H	11.1	10.88	-50.12	-49.90	-25.00	24.90
		8 027.335	V	11.4	13.75	-40.75	-43.10	-25.00	18.10
		10 730.514	H	12.8	15.40	-46.30	-48.90	-25.00	23.90
		13 379.691	V	12.7	17.11	-39.69	-44.10	-25.00	19.10

### Note.

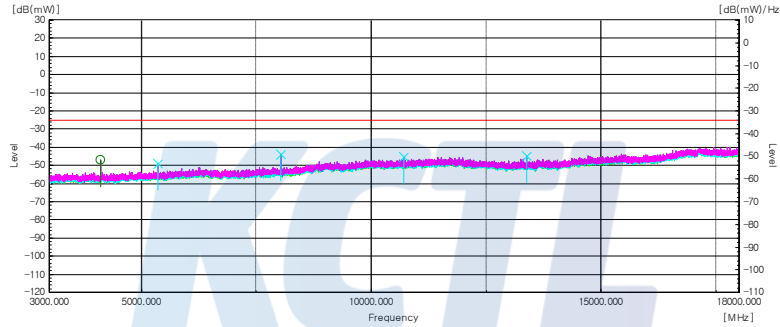
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 682.5  
Channel : 41515

1 000 MHz to 3 000 MHz



Above 3 000 MHz



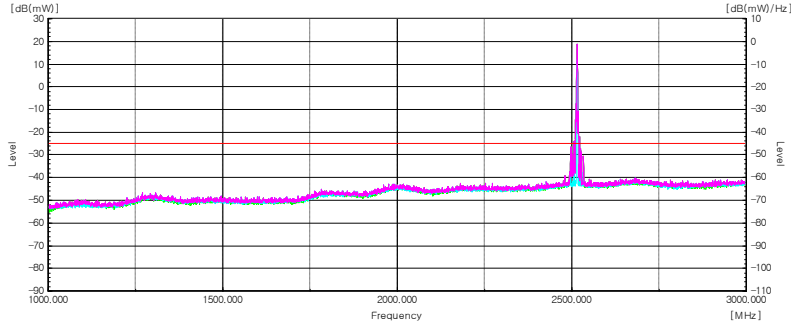
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	15	4 109.074	H	9.9	9.35	-47.45	-46.90	-25.00	21.90
		5 351.157	V	11.1	10.88	-49.32	-49.10	-25.00	24.10
		8 027.335	V	11.4	13.75	-41.25	-43.60	-25.00	18.60
		10 703.512	V	12.8	15.40	-42.70	-45.30	-25.00	20.30
		13 379.691	V	12.7	17.11	-40.59	-45.00	-25.00	20.00

Note.

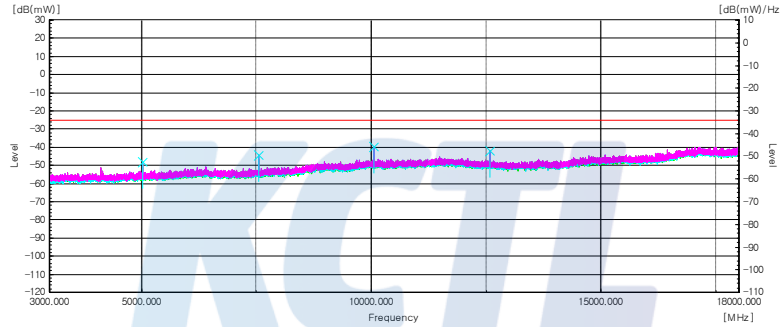
- Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
- No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 506.0  
Channel : 39750

1 000 MHz to 3 000 MHz



Above 3 000 MHz



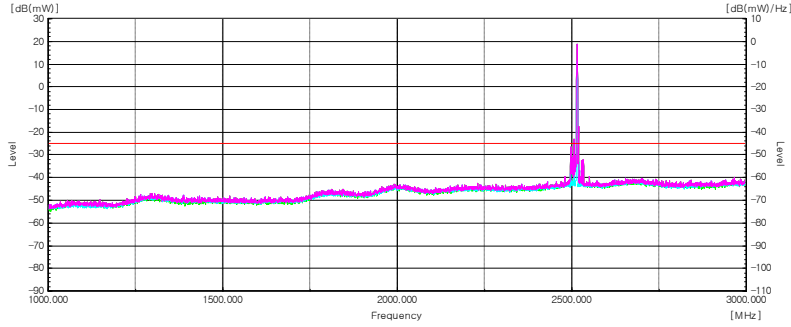
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	20	5 030.135	V	10.9	10.46	-48.24	-47.80	-25.00	22.80
		7 544.303	V	11.0	13.24	-42.16	-44.40	-25.00	19.40
		10 059.470	V	12.2	14.88	-37.02	-39.70	-25.00	14.70
		12 574.637	V	13.5	16.52	-38.98	-42.00	-25.00	17.00

Note.

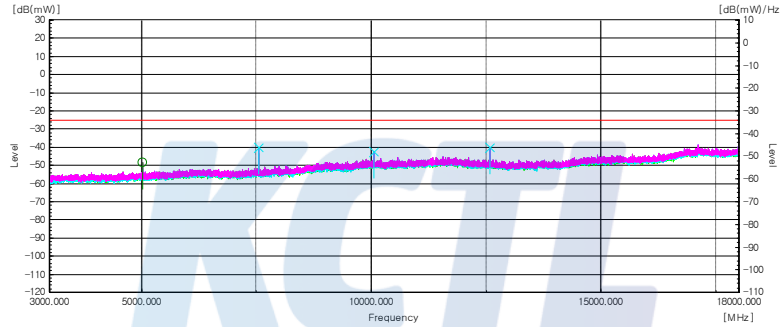
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 506.0  
Channel : 39750

1 000 MHz to 3 000 MHz



Above 3 000 MHz



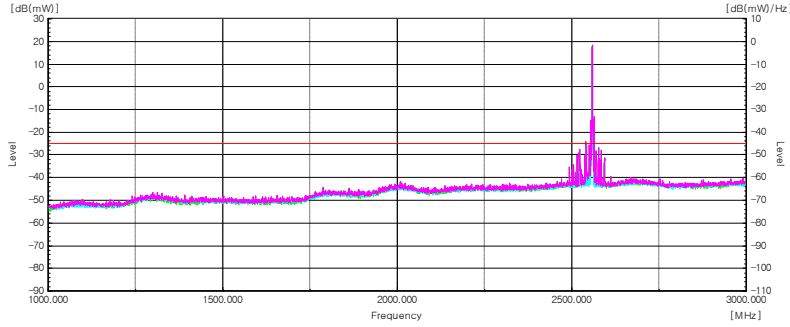
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	20	5 030.135	H	10.9	10.46	-49.04	-48.60	-25.00	23.60
		7 545.303	V	11.0	13.24	-37.86	-40.10	-25.00	15.10
		10 059.470	V	12.2	14.88	-39.62	-42.30	-25.00	17.30
		12 574.637	V	13.5	16.52	-37.18	-40.20	-25.00	15.20

Note.

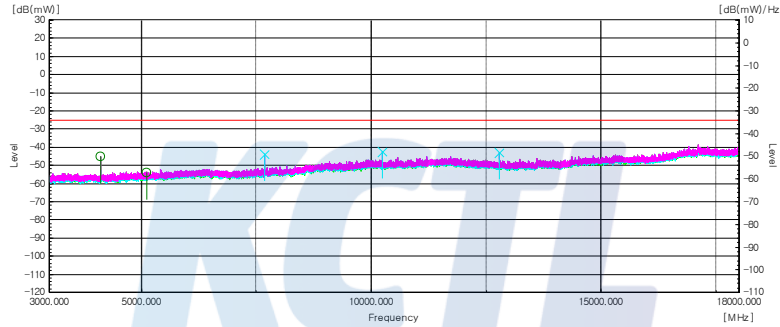
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 549.5  
Channel : 40185

1 000 MHz to 3 000 MHz



Above 3 000 MHz



Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	20	4 116.074	H	10.1	9.35	-45.95	-45.20	-25.00	20.20
		5 117.141	H	10.8	10.46	-54.64	-54.30	-25.00	29.30
		7 675.311	V	11.3	13.24	-41.66	-43.60	-25.00	18.60
		10 233.480	V	12.3	14.85	-39.65	-42.20	-25.00	17.20
		12 791.650	V	13.6	16.74	-39.76	-42.90	-25.00	17.90

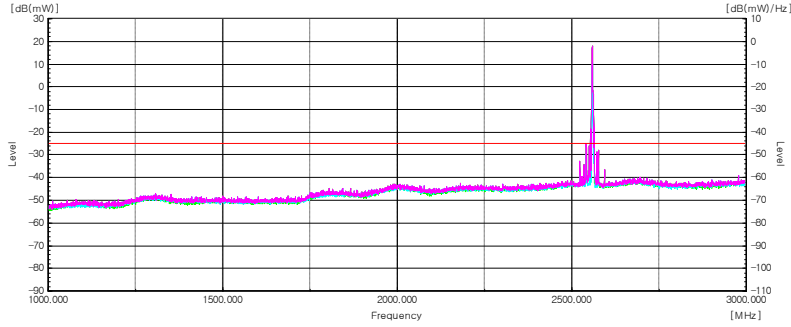
Note.

1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

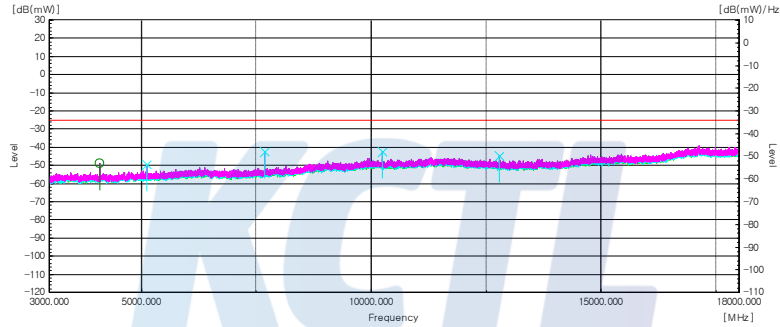


Test mode : LTE Band41  
Frequency(MHz) : 2 549.5  
Channel : 40185

1 000 MHz to 3 000 MHz



Above 3 000 MHz



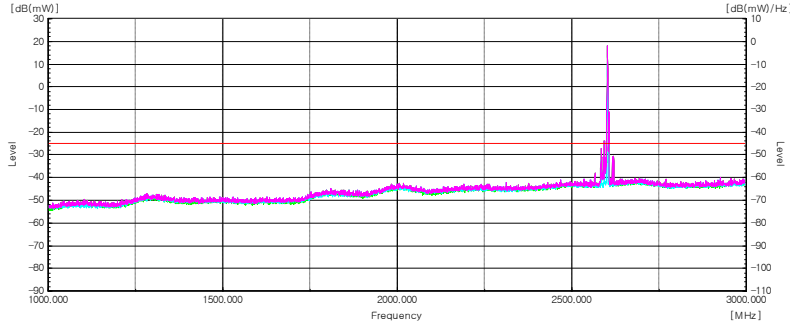
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	20	4 103.074	H	9.9	9.35	-49.75	-49.20	-25.00	24.20
		5 117.141	V	10.8	10.46	-49.64	-49.30	-25.00	24.30
		7 675.311	V	11.3	13.24	-40.46	-42.40	-25.00	17.40
		10 233.482	V	12.3	14.85	-39.85	-42.40	-25.00	17.40
		12 791.652	V	13.6	16.74	-41.66	-44.80	-25.00	19.80

Note.

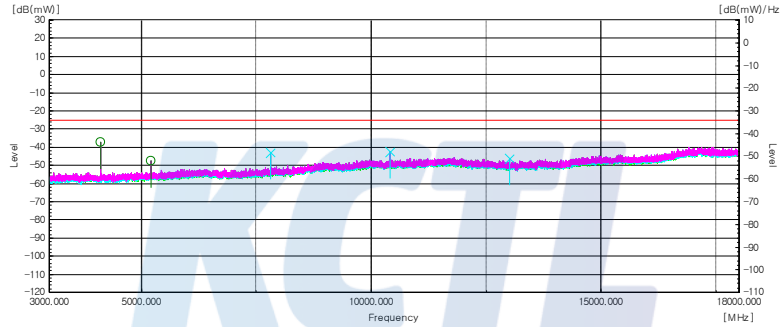
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 593.0  
Channel : 40620

1 000 MHz to 3 000 MHz



Above 3 000 MHz



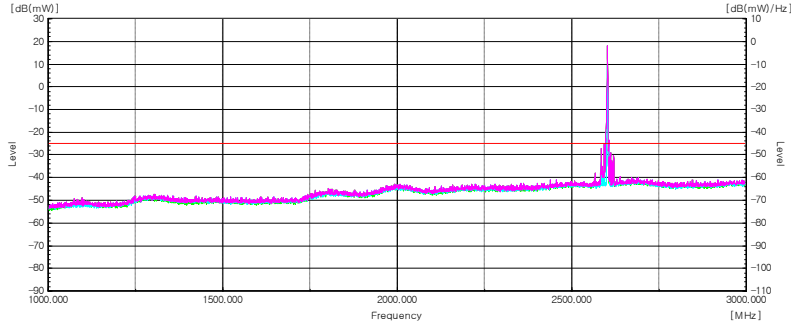
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	20	4 107.074	H	9.9	9.35	-37.75	-37.20	-25.00	12.20
		5 203.147	H	10.9	10.63	-47.67	-47.40	-25.00	22.40
		7 805.320	V	11.6	13.31	-41.39	-43.10	-25.00	18.10
		10 407.493	V	12.6	15.06	-40.04	-42.50	-25.00	17.50
		13 009.666	V	13.4	17.05	-42.35	-46.00	-25.00	21.00

Note.

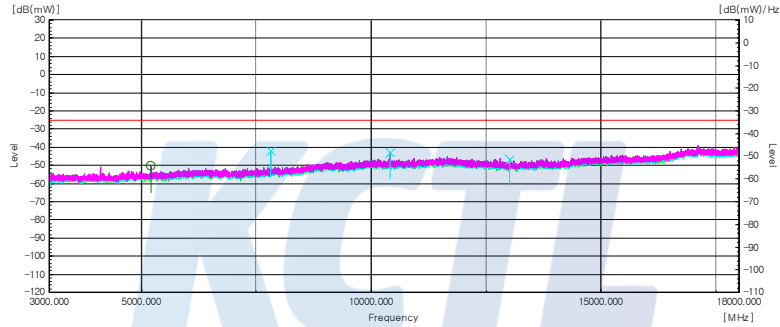
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 593.0  
Channel : 40620

1 000 MHz to 3 000 MHz



Above 3 000 MHz



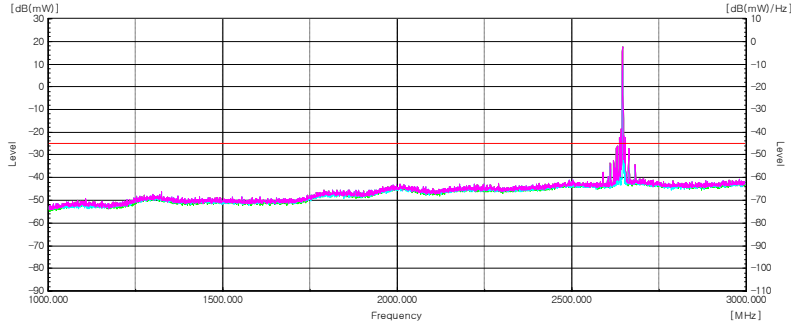
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	20	5 204.147	H	10.9	10.63	-50.67	-50.40	-25.00	25.40
		7 805.320	V	11.6	13.31	-39.99	-41.70	-25.00	16.70
		10 407.493	V	12.6	15.06	-40.34	-42.80	-25.00	17.80
		13 009.666	V	13.4	17.05	-42.75	-46.40	-25.00	21.40

Note.

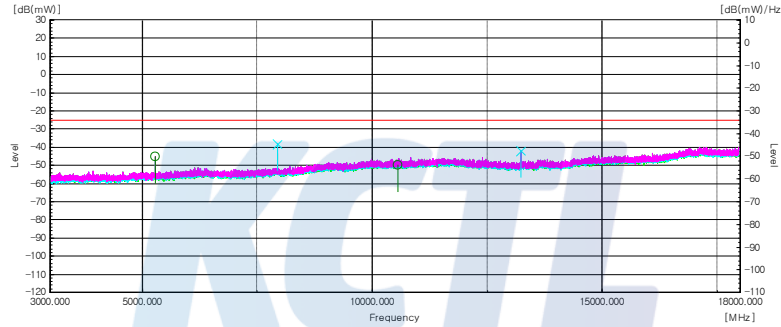
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 636.5  
Channel : 41055

1 000 MHz to 3 000 MHz



Above 3 000 MHz



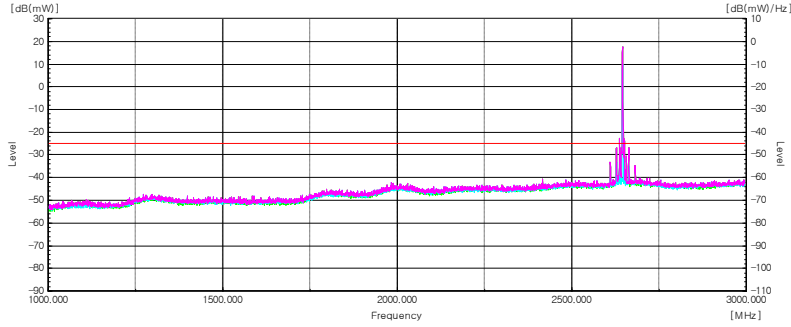
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	20	5 291.153	H	11.3	10.73	-46.07	-45.50	-25.00	20.50
		7 936.329	V	11.5	13.59	-36.21	-38.30	-25.00	13.30
		13 226.681	V	12.6	15.28	-39.52	-42.20	-25.00	17.20
		10 546.502	H	13.0	17.14	-45.96	-50.10	-25.00	25.10

Note.

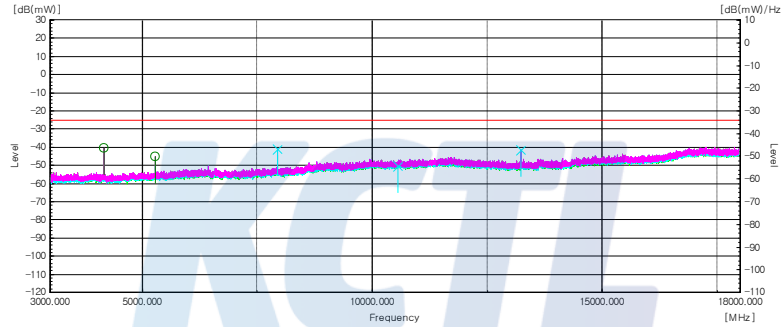
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 636.5  
Channel : 41055

1 000 MHz to 3 000 MHz



Above 3 000 MHz



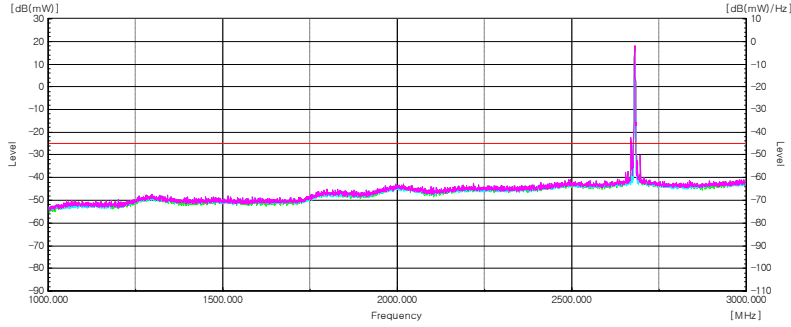
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	20	4 167.078	H	10.1	9.35	-41.35	-40.60	-25.00	15.60
		5 291.153	H	11.3	10.73	-45.77	-45.20	-25.00	20.20
		7 936.329	V	11.5	13.59	-39.11	-41.20	-25.00	16.20
		10 546.502	V	12.6	15.28	-47.82	-50.50	-25.00	25.50
		13 226.681	V	13.0	17.14	-37.26	-41.40	-25.00	16.40

Note.

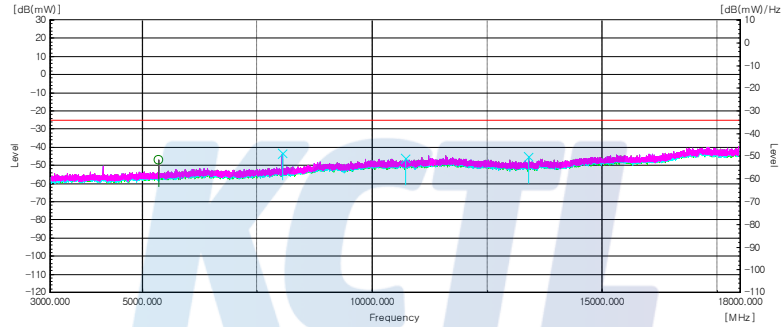
- Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
- No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 680.0  
Channel : 41490

1 000 MHz to 3 000 MHz



Above 3 000 MHz



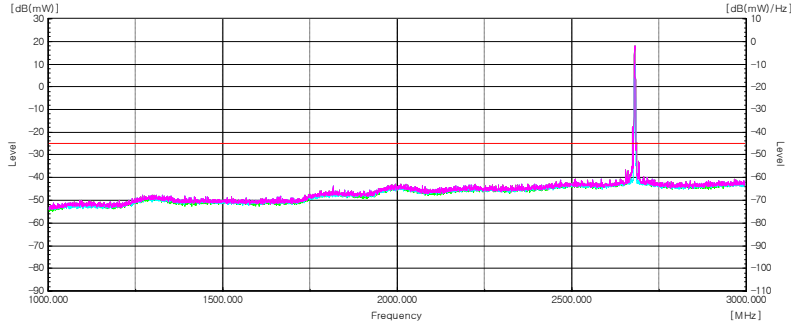
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
QPSK	20	5 360.157	H	11.1	10.88	-47.12	-46.90	-25.00	21.90
		8 040.336	V	11.4	13.75	-40.95	-43.30	-25.00	18.30
		10 720.514	V	12.8	15.40	-43.70	-46.30	-25.00	21.30
		13 400.692	V	12.7	17.11	-40.79	-45.20	-25.00	20.20

Note.

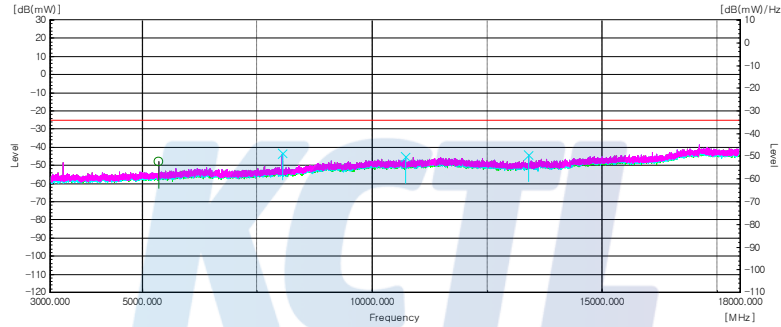
1. Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
2. No spurious emission were detected 1 000 MHz to 3 000 MHz.

Test mode : LTE Band41  
Frequency(MHz) : 2 680.0  
Channel : 41490

1 000 MHz to 3 000 MHz



Above 3 000 MHz



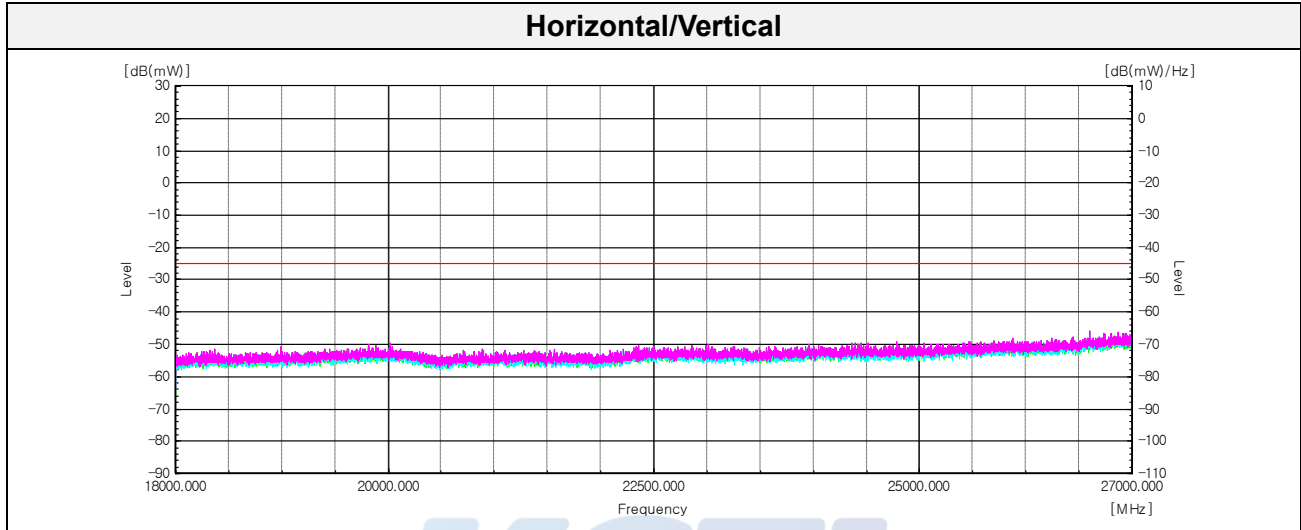
Mode	Bandwidth	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[MHz]	[MHz]	[V/H]	[dBi]	[dB]	[dBm]	[dB]	[dBm]	[dB]
16QAM	20	5 360.157	H	11.1	10.88	-48.12	-47.90	-25.00	22.90
		8 040.336	V	11.4	13.75	-40.95	-43.30	-25.00	18.30
		10 720.514	V	12.8	15.40	-42.70	-45.30	-25.00	20.30
		13 399.692	V	12.7	17.11	-40.09	-44.50	-25.00	19.50

Note.

- Limit Calculation(dBm)= 55 + 10log(P<sub>[Watts]</sub>) [dBc]
- No spurious emission were detected 1 000 MHz to 3 000 MHz.

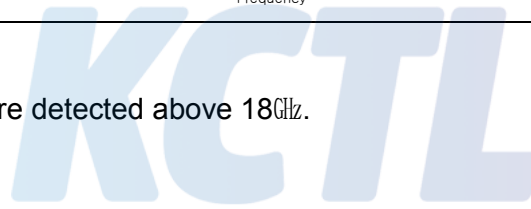
**Test results (Above 18 GHz to 40 GHz) – Worst case**

Test mode : LTE Band41  
Frequency (MHz) : 2 593.0  
Channel : 40620



**Note.**

1. No spurious emissions were detected above 18GHz.





## 8. Geo-location mechanism

The device uses a geo-location mechanism based on the cellular MCC codes in order to only enable certain LTE bands when the device is not in the USA.

The validation of this mechanism is provided below.

The device was configured for cellular communications to a test set and the MCC code was adjusted on the test set between the US MCC and then an MCC code valid for a country where the LTE band is supported.

Mode	MCC = USA	MCC = Non US
LTE 7	Did not connect	Connected (Canada)
LTE 38	Did not connect	Connected (Canada)
LTE 40	Did not connect	Connected (Canada)
LTE 41	Connected (USA)	Connected (Canada)

Note.

1. The verification tests confirmed the operational of the geo-location mechanism.

**Test results**

Mode	MCC = USA	MCC = Non US
LTE Band7		
LTE Band38		
LTE Band40		

# KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 16677, Korea  
TEL: 82-31-285-0894 FAX: 82-505-299-8311  
[www.kctl.co.kr](http://www.kctl.co.kr)

Report No.:  
KR19-SRF0009-B

Page (220) of (221)



Mode	MCC = USA	MCC = Non US
LTE Band41		



**KCTL Inc.**

65, Sinwon-ro, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 16677, Korea  
TEL: 82-31-285-0894 FAX: 82-505-299-8311  
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Report No.:  
KR19-SRF0009-B

Page (221) of (221)



## 9. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R & S	FSW50	101013	19.05.14
Spectrum Analyzer	AGILENT	N9040B	MY57010132	19.10.12
Power Divider	Aeroflex/ Weinschel, Inc.	1580-1	NX380	19.08.02
Wideband Radio Communication Tester	R & S	CMW500	102159	19.08.08
Wideband Radio Communication Tester	R & S	CMW500	106840	20.01.25
Radio Communication Analyzer	Anritsu	MT8820C	6201010005	19.08.02
High pass Filter	Wainwright Instruments GmbH	WHKX3.0/18G- 12SS	44	20.01.25
High pass Filter	Wainwright Instruments GmbH	WHKX1.0/1.5S- 10SS	14	20.01.25
Attenuator	Weinschel ENGINEERING	10	AJ1239	19.05.14
ATTENUATOR	API Inmet	40AH2W-10	15	19.05.17
Biconical VHF-UHF Broadband Antenna	SCHWARZBECK	VUBA9117	275	20.04.13
Horn Antenna	ETS.lindgren	3115	62589	19.08.24
Horn Antenna	ETS.lindgren	3116	00086635	19.05.10
Horn Antenna	Steatite Antennas	QMS-00225	17790	19.08.24
Bilog Antenna	Teseq GmbH	CBL 6143A	35039	19.05.19
Horn Antenna	ETS.lindgren	3117	161225	19.05.18
Amplifier	SONOMA INSTRUMENT	317	321041	20.01.04
Amplifier	L-3 Narda-MITEQ	AFS5-00101800-25- S-5	2054570	19.10.18
Amplifier	L-3 Narda-MITEQ	JS44-18004000-33- 8P	2000997	19.08.02
RF Selector	TOYO Corporation	NS5800	1003-010	N/A
Band Selector	TOYO Corporation	NS5800	1003-135	N/A
Band Selector	TOYO Corporation	NS5800	1003-320	N/A
Antenna Mast	MATURO	EAS 1.5	042/8941211	N/A
Antenna Mast	MATURO	EAS 1.5	043/8941211	N/A
Turn Table	MATURO	TT 0.8 PF	041/8941211	N/A
Cable Assembly	Radiall	R286303620	1649.241	
Cable Assembly	Radiall	TESTPRO 3	-	

**End of test report**