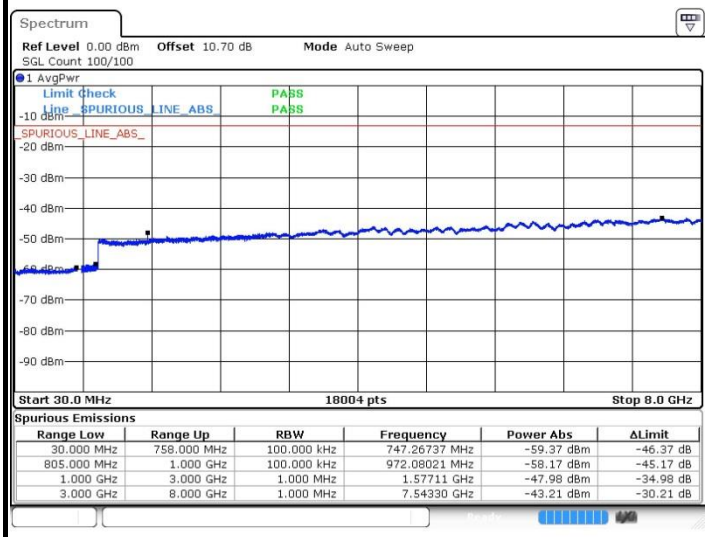
LTE Band 14 / 5MHz

Lowest Channel / 64QAM

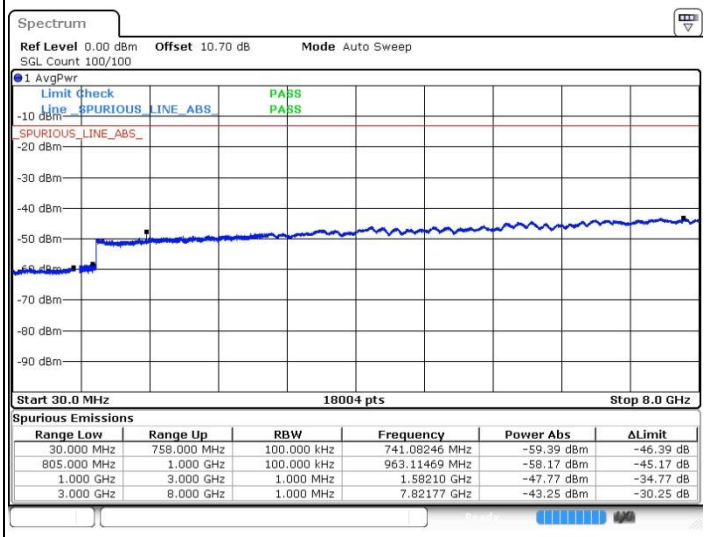


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	758.000 MHz	100.000 kHz	747.26737 MHz	-59.37 dBm	-46.37 dB
805.000 MHz	1.000 GHz	100.000 kHz	972.08021 MHz	-58.17 dBm	-45.17 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.57711 GHz	-47.98 dBm	-34.98 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.54330 GHz	-43.21 dBm	-30.21 dB

Date: 14.APR.2019 08:19:54

Middle Channel / 64QAM

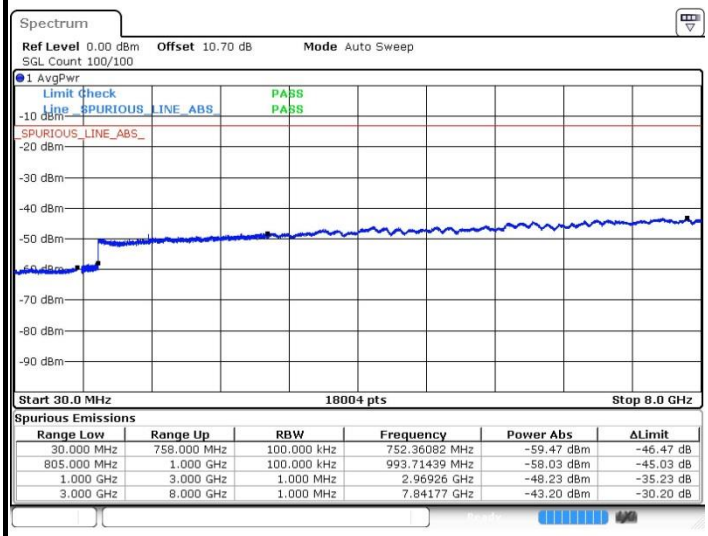


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	758.000 MHz	100.000 kHz	741.08246 MHz	-59.39 dBm	-46.39 dB
805.000 MHz	1.000 GHz	100.000 kHz	963.11469 MHz	-58.17 dBm	-45.17 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.58210 GHz	-47.77 dBm	-34.77 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.82177 GHz	-43.25 dBm	-30.25 dB

Date: 14.APR.2019 08:20:44

Highest Channel / 64QAM

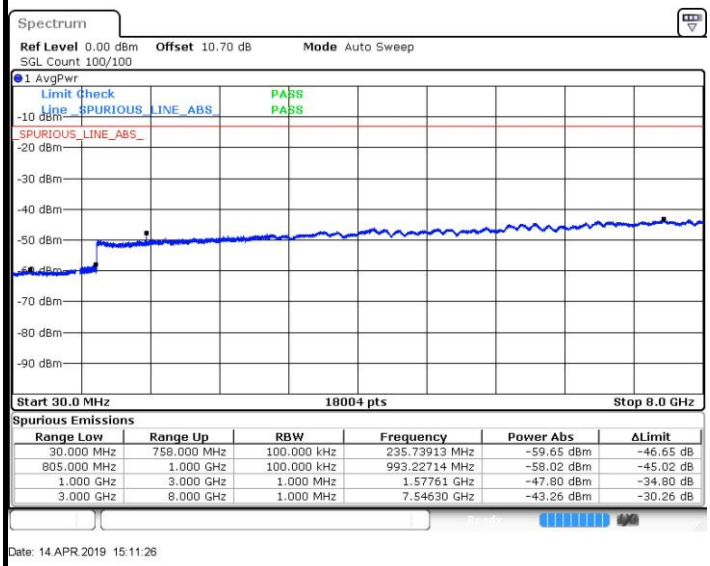


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	758.000 MHz	100.000 kHz	752.36082 MHz	-59.47 dBm	-46.47 dB
805.000 MHz	1.000 GHz	100.000 kHz	993.71439 MHz	-58.03 dBm	-45.03 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96926 GHz	-48.23 dBm	-35.23 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.84177 GHz	-43.20 dBm	-30.20 dB

Date: 14.APR.2019 08:25:44

LTE Band 14 / 10MHz	
Middle Channel / 64QAM	



Spurious Emissions

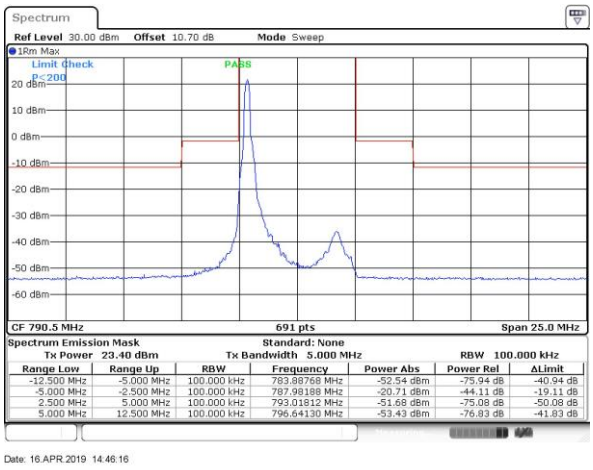
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	758.000 MHz	100.000 kHz	235.73913 MHz	-59.65 dBm	-46.65 dB
805.000 MHz	1.000 GHz	100.000 kHz	993.22714 MHz	-58.02 dBm	-45.02 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.57761 GHz	-47.80 dBm	-34.80 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.54630 GHz	-43.26 dBm	-30.26 dB

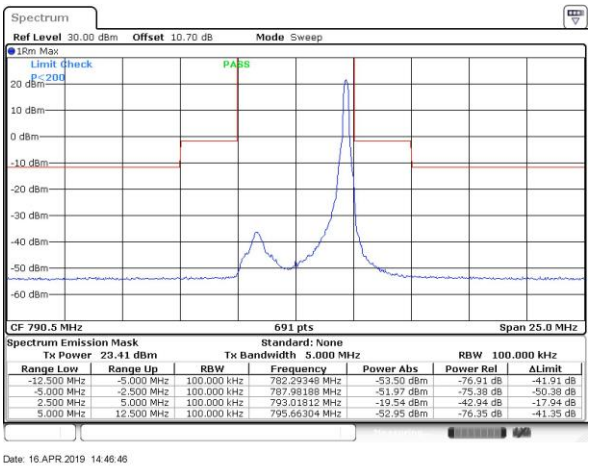
Date: 14.APR.2019 15:11:26

Mask

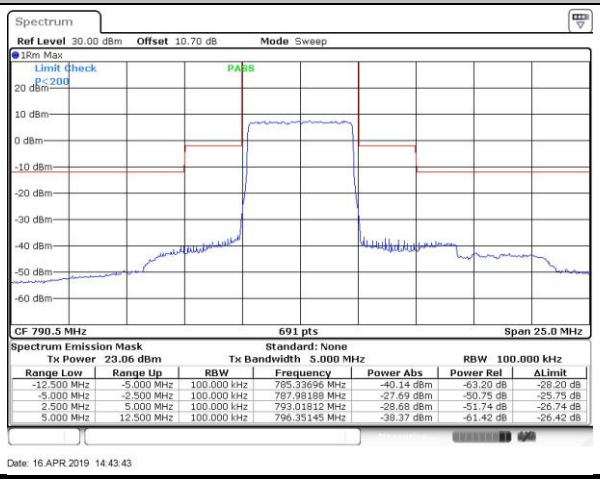
LTE Band 14 / 5MHz / QPSK

Lowest Channel / 1RB



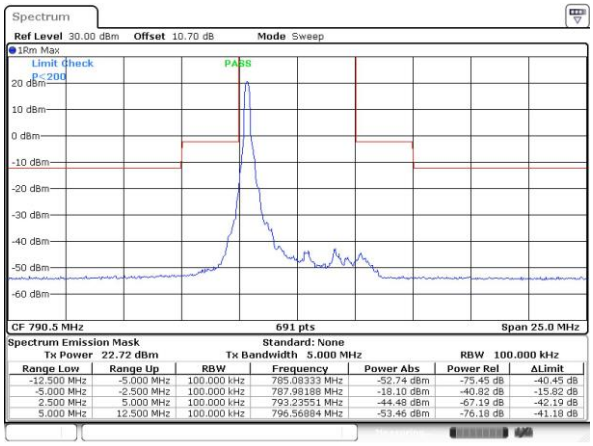


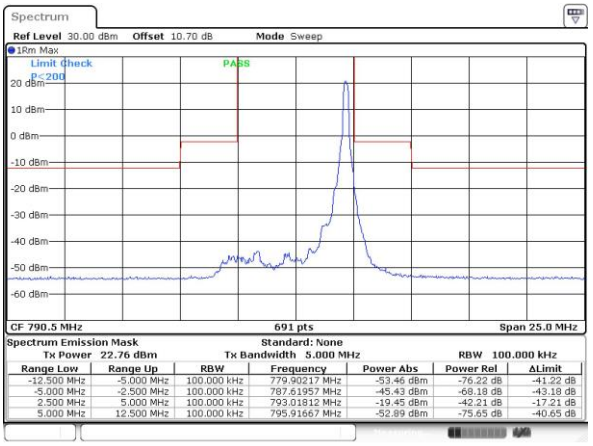
Lowest Channel / Full RB



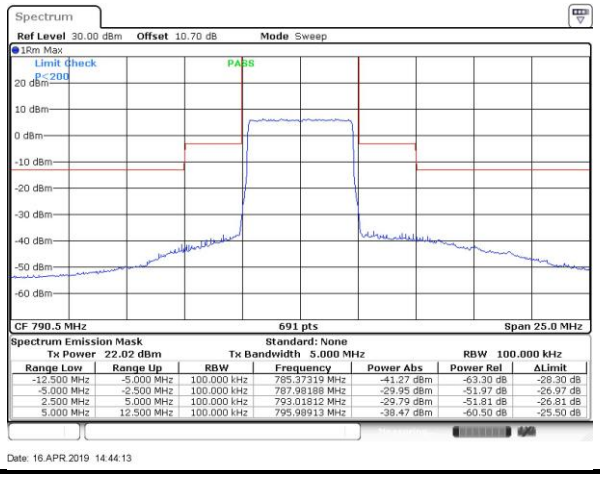
LTE Band 14 / 5MHz / 16QAM

Lowest Channel / 1RB



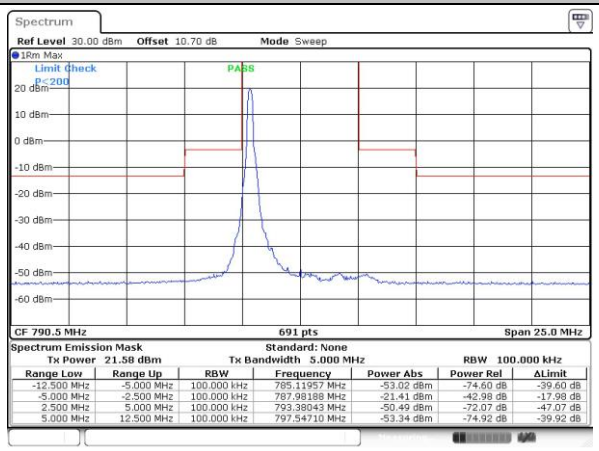


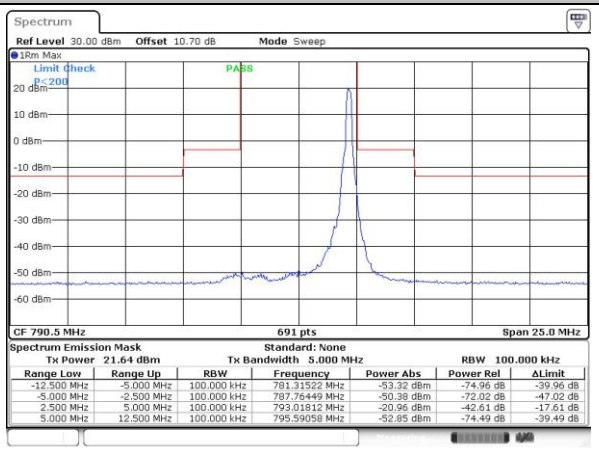
Lowest Channel / Full RB



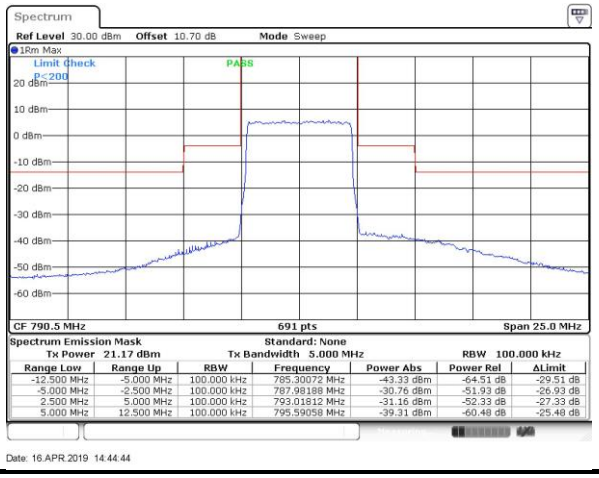
LTE Band 14 / 5MHz / 64QAM

Lowest Channel / 1RB



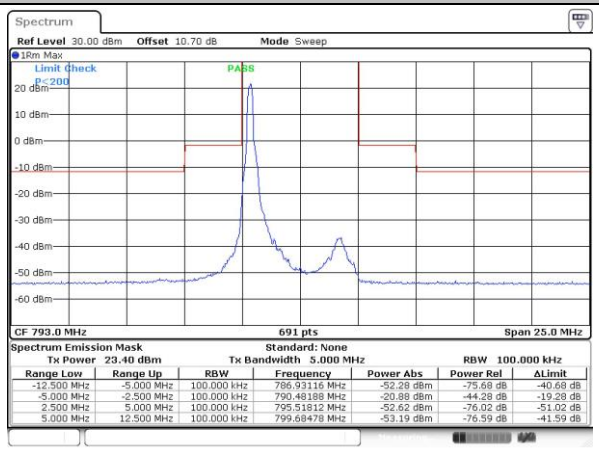


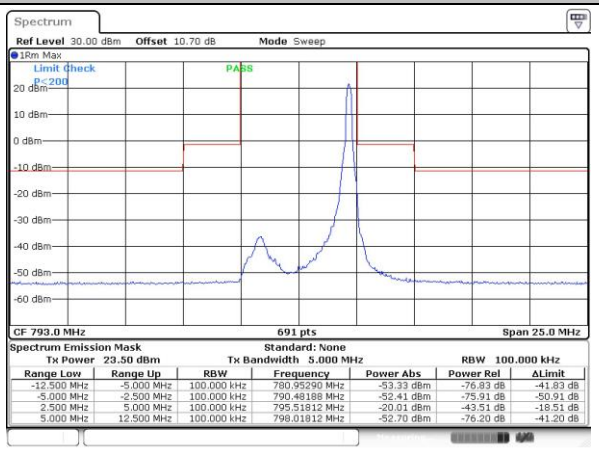
Lowest Channel / Full RB



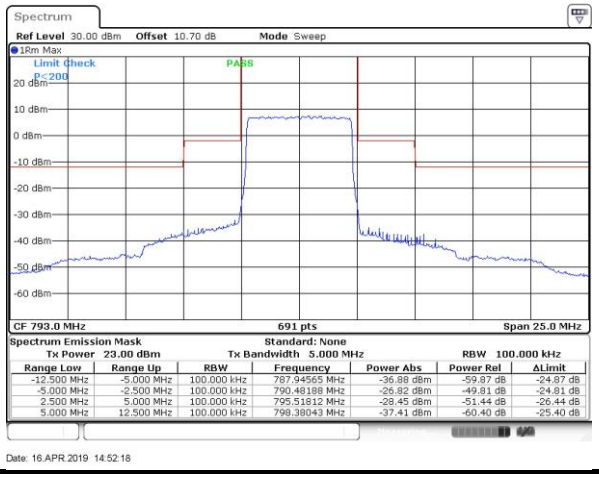
LTE Band 14 / 5MHz / QPSK

Middle Channel / 1RB



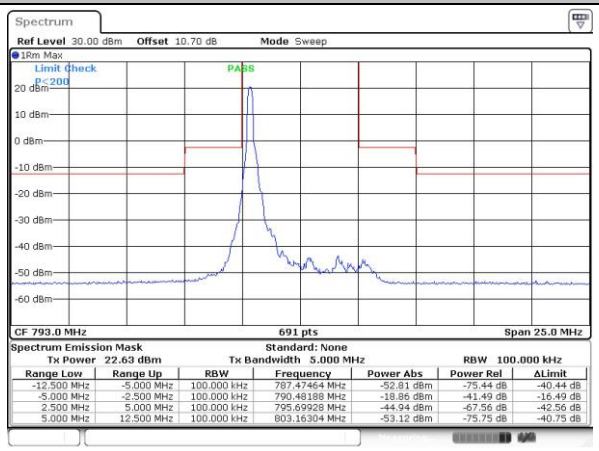


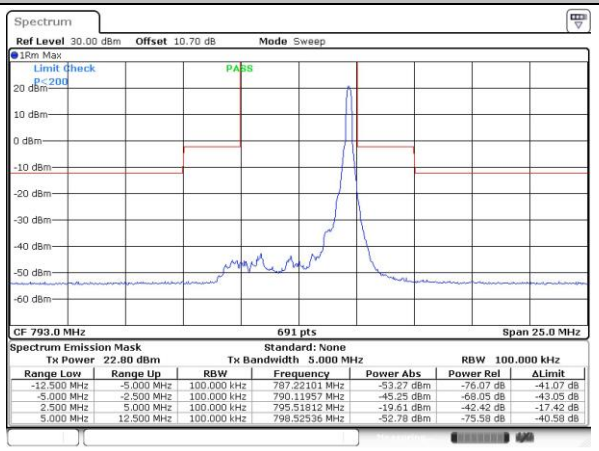
Middle Channel / Full RB



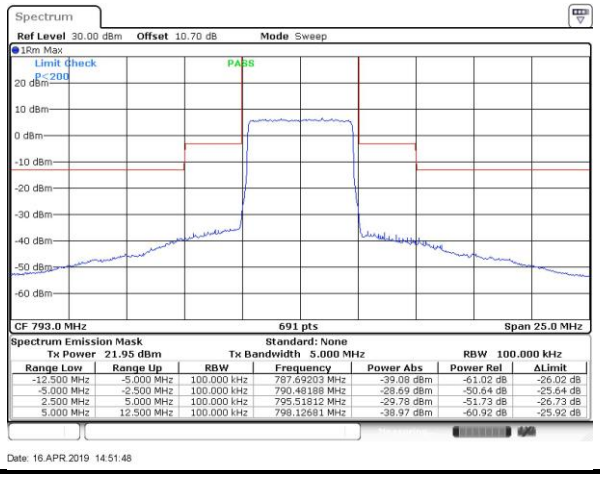
LTE Band 14 / 5MHz / 16QAM

Middle Channel / 1RB



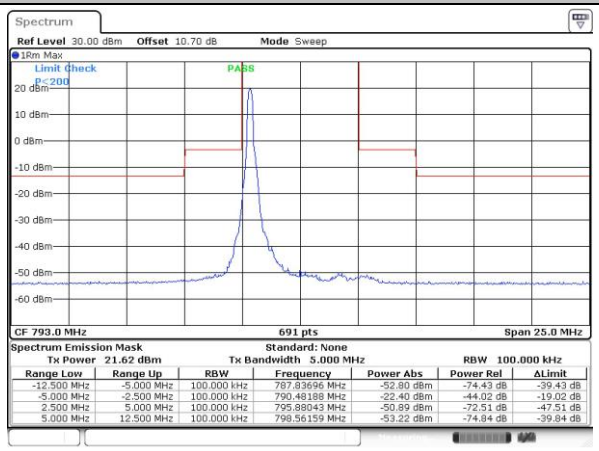


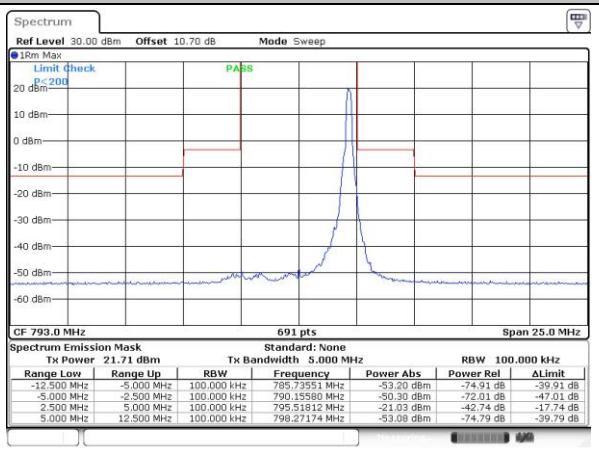
Middle Channel / Full RB



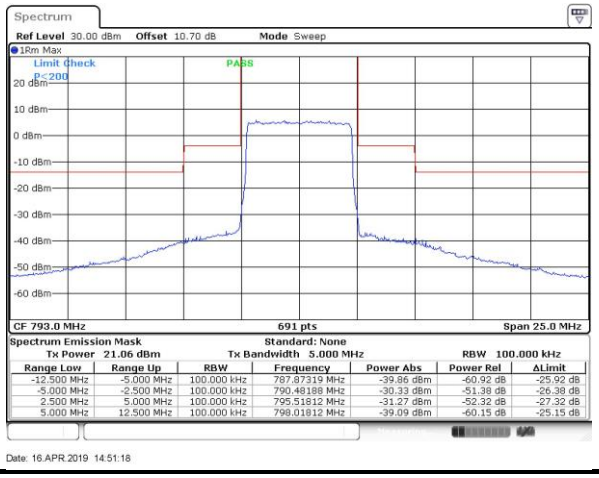
LTE Band 14 / 5MHz / 64QAM

Middle Channel / 1RB



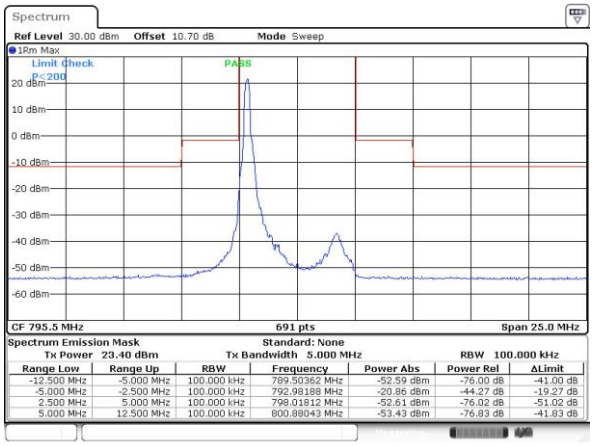


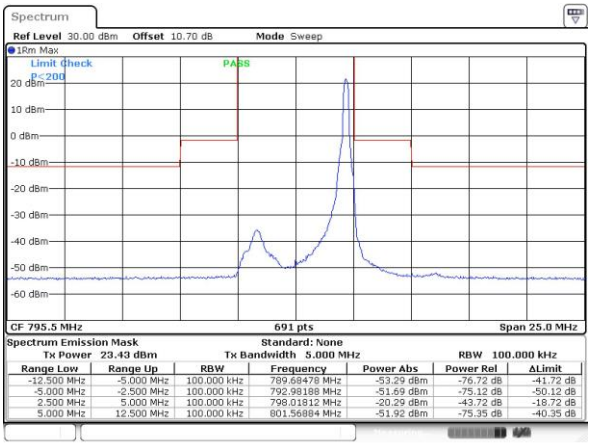
Middle Channel / Full RB



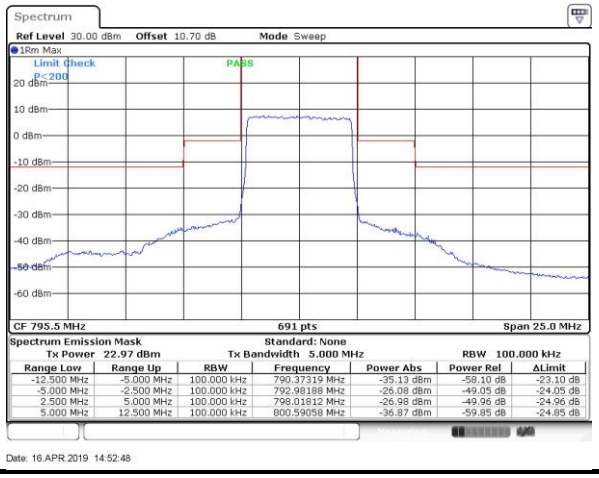
LTE Band 14 / 5MHz / QPSK

Highest Channel / 1RB



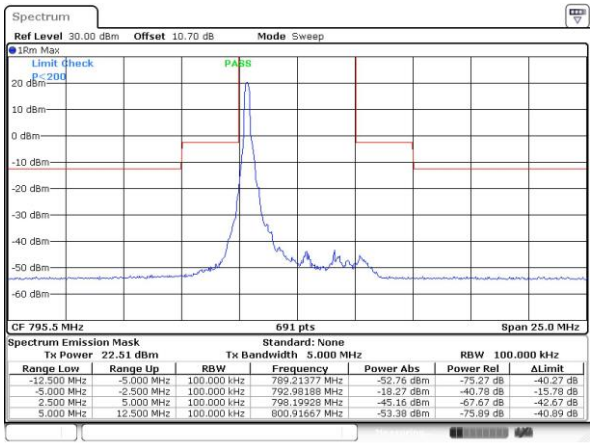


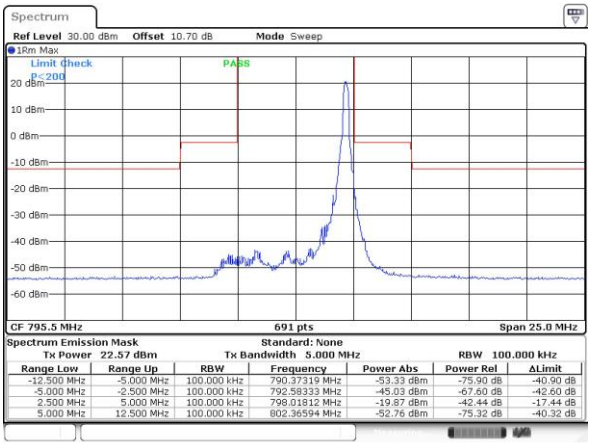
Highest Channel / Full RB



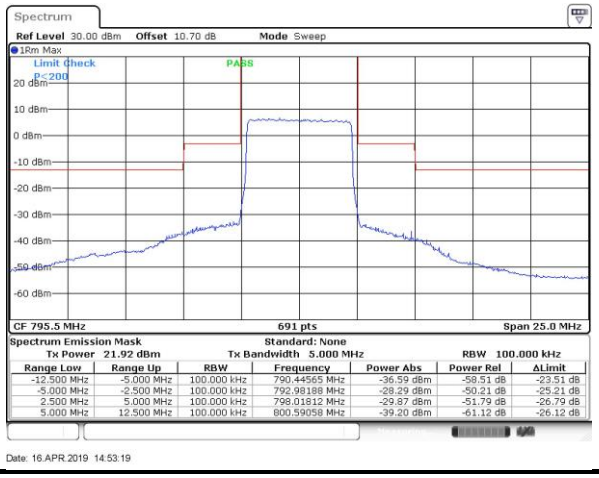
LTE Band 14 / 5MHz / 16QAM

Highest Channel / 1RB



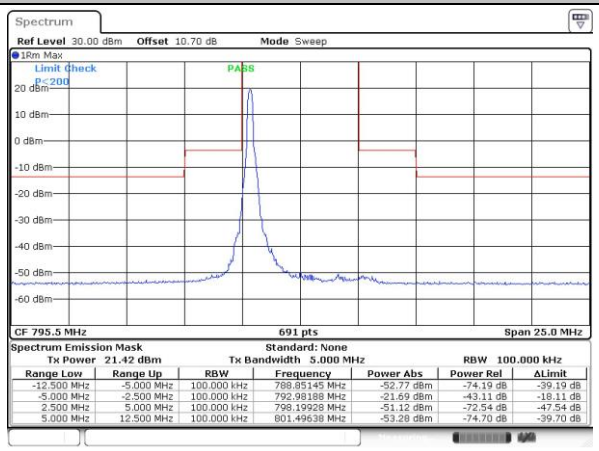


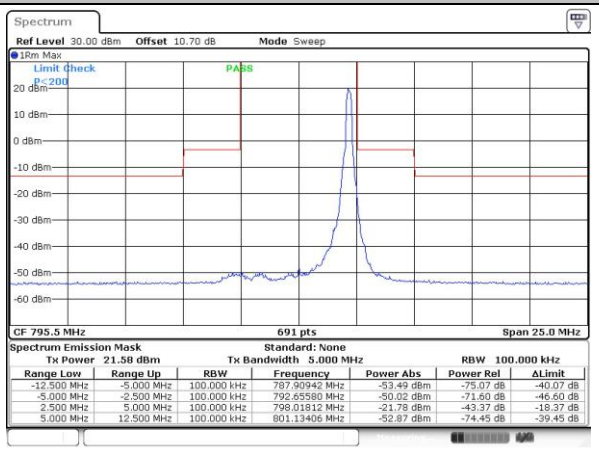
Highest Channel / Full RB



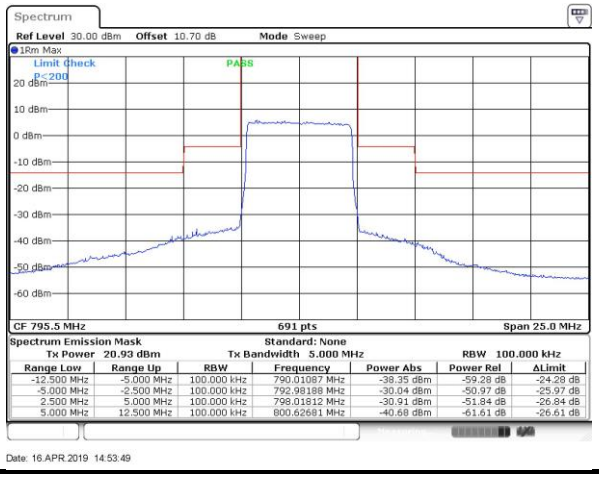
LTE Band 14 / 5MHz / 64QAM

Highest Channel / 1RB



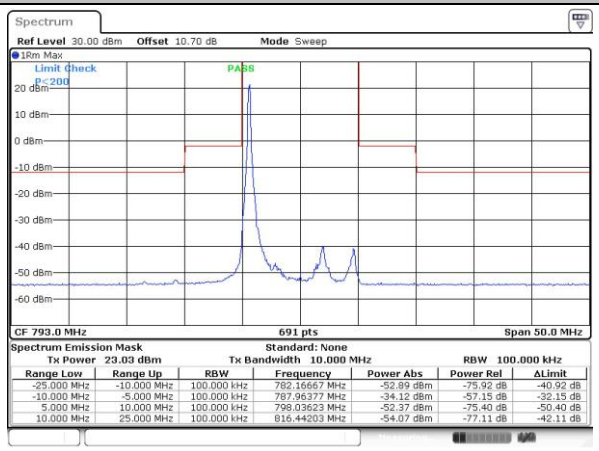


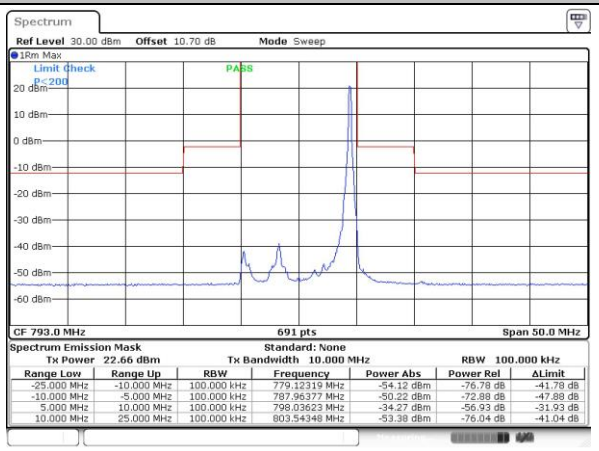
Highest Channel / Full RB



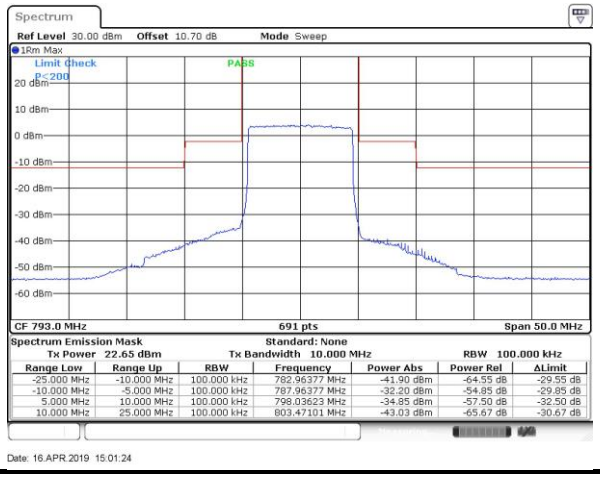
LTE Band 14 / 10MHz / QPSK

Middle Channel / 1RB



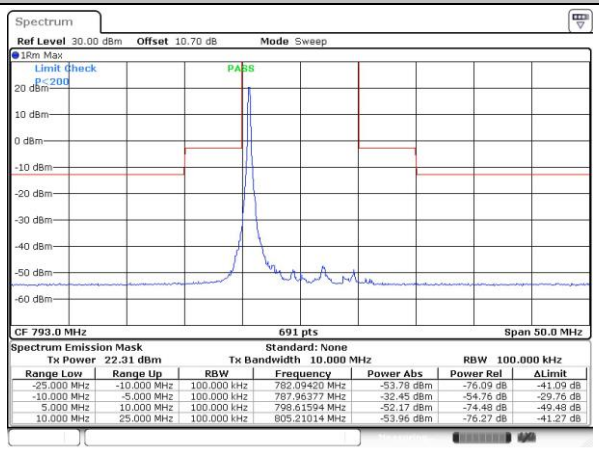


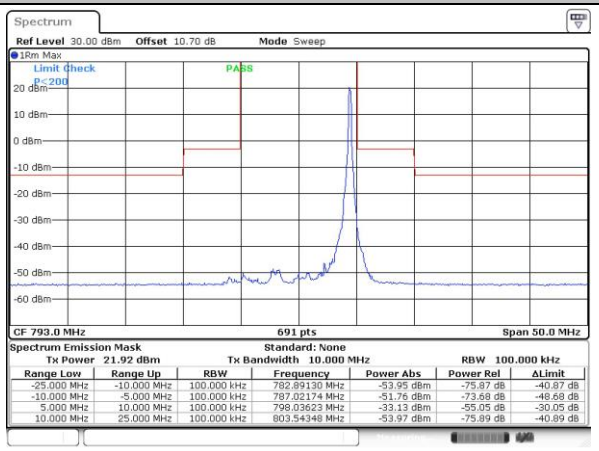
Middle Channel / Full RB



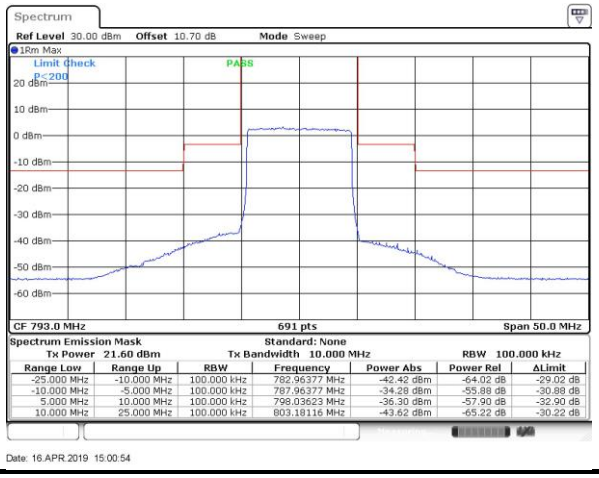
LTE Band 14 / 10MHz / 16QAM

Middle Channel / 1RB



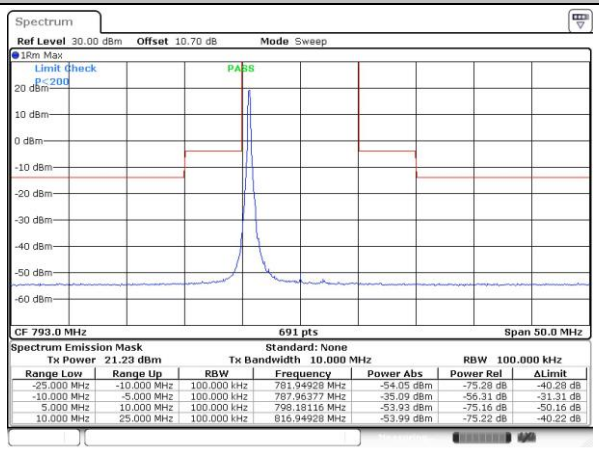


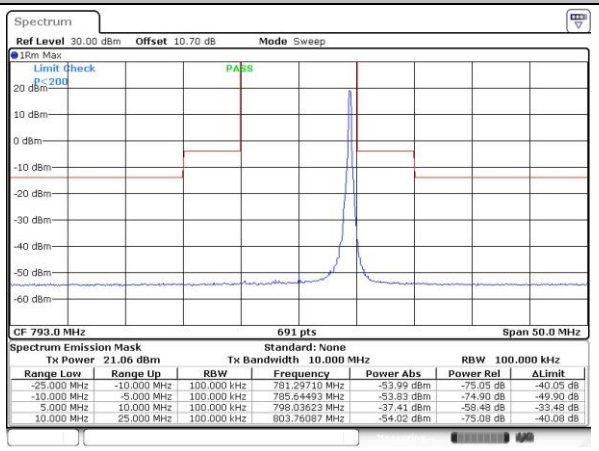
Middle Channel / Full RB



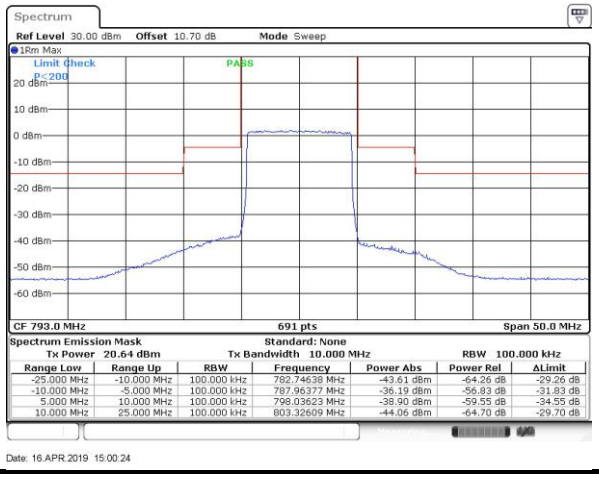
LTE Band 14 / 10MHz / 64QAM

Middle Channel / 1RB





Middle Channel / Full RB



Frequency Stability

Test Conditions		LTE Band 14 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0013	PASS
40	Normal Voltage	0.0057	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0010	
-10	Normal Voltage	0.0095	
-20	Normal Voltage	0.0008	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0021	

Note:

1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.5 V.；Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of ERP/EIRP and Radiated Test

ERP/EIRP

<Ant. 0_A>

LTE Band 14 / 5MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	24.76	0.2992	19.11	0.0815
Middle		1	24	24.69	0.2944	19.04	0.0802
Highest		1	24	24.66	0.2924	19.01	0.0796
Lowest	16QAM	1	12	23.98	0.2500	18.33	0.0681
Middle		1	12	23.96	0.2489	18.31	0.0678
Highest		1	12	23.92	0.2466	18.27	0.0671
Lowest	64QAM	1	12	22.96	0.1977	17.31	0.0538
Middle		1	12	22.89	0.1945	17.24	0.0530
Highest		1	12	22.89	0.1945	17.24	0.0530
Limit	ERP < 3W			Result		PASS	

LTE Band 14 / 10MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	-	-	-	-	-	-
Middle		1	0	24.77	0.2999	19.12	0.0817
Highest		-	-	-	-	-	-
Lowest	16QAM	-	-	-	-	-	-
Middle		1	0	23.95	0.2483	18.30	0.0676
Highest		-	-	-	-	-	-
Lowest	64QAM	-	-	-	-	-	-
Middle		1	0	22.95	0.1972	17.30	0.0537
Highest		-	-	-	-	-	-
Limit	ERP < 3W			Result		PASS	

<Ant. 1>

LTE Band 14 / 5MHz (Average) (GT - LC = -4.7 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	24.76	0.2992	17.91	0.0618
Middle		1	24	24.69	0.2944	17.84	0.0608
Highest		1	24	24.66	0.2924	17.81	0.0604
Lowest	16QAM	1	12	23.98	0.2500	17.13	0.0516
Middle		1	12	23.96	0.2489	17.11	0.0514
Highest		1	12	23.92	0.2466	17.07	0.0509
Lowest	64QAM	1	12	22.96	0.1977	16.11	0.0408
Middle		1	12	22.89	0.1945	16.04	0.0402
Highest		1	12	22.89	0.1945	16.04	0.0402
Limit	ERP < 3W			Result		PASS	

LTE Band 14 / 10MHz (Average) (GT - LC = -4.7 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	-	-	-	-	-	-
Middle		1	0	24.77	0.2999	17.92	0.0619
Highest		-	-	-	-	-	-
Lowest	16QAM	-	-	-	-	-	-
Middle		1	0	23.95	0.2483	17.10	0.0513
Highest		-	-	-	-	-	-
Lowest	64QAM	-	-	-	-	-	-
Middle		1	0	18.25	0.0668	16.10	0.0407
Highest		-	-	-	-	-	-
Limit	ERP < 3W			Result		PASS	

Radiated Spurious Emission

<Ant. 0_A>

LTE Band 14

LTE Band 14 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1584	-63.85	-42.15	-21.70	-75.73	-65.82	0.95	5.06	H
	2376	-55.73	-13	-42.73	-72.92	-57.36	1.25	5.03	H
	3176	-58.85	-13	-45.85	-77.9	-61.77	1.50	6.57	H
	1584	-62.95	-42.15	-20.80	-75.39	-64.92	0.95	5.06	V
	2376	-57.05	-13	-44.05	-74.65	-58.68	1.25	5.03	V
	3176	-58.11	-13	-45.11	-77.78	-61.03	1.50	6.57	V
Middle	1592	-63.68	-42.15	-21.53	-75.67	-65.62	0.95	5.04	H
	2384	-55.23	-13	-42.23	-72.33	-56.88	1.25	5.05	H
	3184	-58.63	-13	-45.63	-77.8	-61.58	1.51	6.61	H
	1592	-63.08	-42.15	-20.93	-75.58	-65.02	0.95	5.04	V
	2384	-56.35	-13	-43.35	-73.92	-58	1.25	5.05	V
	3184	-58.21	-13	-45.21	-77.93	-61.16	1.51	6.61	V
Highest	1592	-63.67	-42.15	-21.52	-75.68	-65.61	0.95	5.04	H
	2392	-55.16	-13	-42.16	-72.36	-56.83	1.26	5.08	H
	3192	-58.75	-13	-45.75	-77.95	-61.74	1.51	6.64	H
	1592	-62.98	-42.15	-20.83	-75.53	-64.92	0.95	5.04	V
	2392	-56.94	-13	-43.94	-74.56	-58.61	1.26	5.08	V
	3192	-57.87	-13	-44.87	-77.64	-60.86	1.51	6.64	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 14 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1576	-63.77	-42.15	-21.62	-75.43	-65.76	0.95	5.09	H
	2368	-55.34	-13	-42.34	-72.15	-56.94	1.25	5.00	H
	3152	-59.02	-13	-46.02	-77.79	-61.84	1.50	6.47	H
	1576	-63.48	-42.15	-21.33	-75.61	-65.47	0.95	5.09	V
	2368	-56.06	-13	-43.06	-73.26	-57.66	1.25	5.00	V
	3152	-58.37	-13	-45.37	-77.8	-61.19	1.50	6.47	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

<Ant. 1>

LTE Band 14

LTE Band 14 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1586	-62.55	-42.15	-20.40	-74.46	-64.51	0.95	5.06	H
	2379	-55.25	-13	-42.25	-74.42	-56.88	1.25	5.04	H
	3176	-58.05	-13	-45.05	-77.18	-60.97	1.50	6.57	H
	1586	-62.80	-42.15	-20.65	-75.21	-64.76	0.95	5.06	V
	2379	-55.39	-13	-42.39	-72.97	-57.02	1.25	5.04	V
	3176	-57.70	-13	-44.70	-77.43	-60.62	1.50	6.57	V
Middle	1592	-63.49	-42.15	-21.34	-75.54	-65.43	0.95	5.04	H
	2384	-55.59	-13	-42.59	-72.76	-57.24	1.25	5.05	H
	3184	-58.38	-13	-45.38	-77.51	-61.33	1.51	6.61	H
	1592	-63.02	-42.15	-20.87	-75.56	-64.96	0.95	5.04	V
	2384	-56.17	-13	-43.17	-73.75	-57.82	1.25	5.05	V
	3184	-57.55	-13	-44.55	-77.28	-60.5	1.51	6.61	V
Highest	1596	-63.43	-42.15	-21.28	-74.47	-65.36	0.95	5.03	H
	2394	-55.59	-13	-42.59	-72.85	-57.26	1.26	5.08	H
	3192	-58.41	-13	-45.41	-77.66	-61.4	1.51	6.64	H
	1596	-62.78	-42.15	-20.63	-75.31	-64.71	0.95	5.03	V
	2394	-52.83	-13	-39.83	-70.51	-54.5	1.26	5.08	V
	3192	-57.50	-13	-44.50	-77.32	-60.49	1.51	6.64	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 14 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1584	-63.08	-42.15	-20.93	-74.99	-65.05	0.95	5.06	H
	2376	-58.95	-13	-45.95	-76.12	-60.58	1.25	5.03	H
	3176	-58.32	-13	-45.32	-77.45	-61.24	1.50	6.57	H
	1584	-62.96	-42.15	-20.81	-75.37	-64.93	0.95	5.06	V
	2376	-57.09	-13	-44.09	-74.67	-58.72	1.25	5.03	V
	3176	-57.51	-13	-44.51	-77.24	-60.43	1.50	6.57	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

———THE END———