



## Tune Up Procedure

### Tune-up procedure

LTE TEST

Measurement Procedure:

LTE

1.Connect EUT with CMU200(E5515C)/CMW500, through RF cable. Make a call from CMU200(E5515C)/CMW500;

2.Measure the Output Power Average value;

3.Remarks: All Output Power are tested in Average Value specification.

### Manufacturing tolerance

#### 1.1.1. Conducted Power Measurement Results(LTE Band 2)

BW(MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch18607/18 50.7MHz	POWER (dBm) Mid Ch18900/1 880MHz	POWER (dBm) High Ch19193/19 09.3MHz	Tune Up(dBm)
1.4	QPSK	1	0	23.65	23.5	23.52	24.00
1.4	QPSK	1	3	23.43	23.78	23.77	24.00
1.4	QPSK	1	5	23.72	23.62	23.57	24.00
1.4	QPSK	3	0	23.69	23.73	23.49	24.00
1.4	QPSK	3	1	23.91	23.89	23.8	24.00
1.4	QPSK	3	3	23.84	23.68	23.77	24.00
1.4	QPSK	6	0	22.63	22.74	22.7	23.00
1.4	16QAM	1	0	21.73	22.01	21.91	23.00
1.4	16QAM	1	3	22.12	22.11	22.22	23.00
1.4	16QAM	1	5	22.21	21.88	21.77	23.00





BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch18615/18 51.5MHz	POWER (dBm) ) Mid Ch18900/1 880MHz	POWER (dBm) High Ch19185/19 08.5MHz	Tune Up(dBm)
3	QPSK	1	0	23.72	23.58	23.62	24.00
3	QPSK	1	7	23.91	23.64	23.75	24.00
3	QPSK	1	14	23.64	23.38	23.54	24.00
3	QPSK	8	0	22.72	22.5	22.38	23.00
3	QPSK	8	3	22.33	22.49	22.67	23.00
3	QPSK	8	7	22.61	22.81	22.38	23.00
3	QPSK	15	0	22.65	22.31	22.43	23.00
3	16QAM	1	0	21.99	22.25	21.77	23.00
3	16QAM	1	7	22.58	22.51	22.16	23.00
3	16QAM	1	14	22.17	22.06	21.93	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch18625/18 52.5MHz	POWER (dBm) ) Mid Ch18900/1 880MHz	POWER (dBm) High Ch19175/19 07.5MHz	Tune Up(dBm)
5	QPSK	1	0	23.17	23.42	23.41	24.00
5	QPSK	1	12	23.46	23.48	23.28	24.00
5	QPSK	1	24	23.28	23.21	23.49	24.00
5	QPSK	12	0	22.41	22.61	22.47	23.00
5	QPSK	12	6	22.32	22.56	22.47	23.00
5	QPSK	12	13	22.55	22.53	22.36	23.00





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5	QPSK	25	0	22.39	22.56	22.37	23.00
5	16QAM	1	0	22.01	22.46	22.05	23.00
5	16QAM	1	12	22.43	22.43	22.32	23.00
5	16QAM	1	24	22.11	22.15	22.15	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch18650/1855MHz	POWER (dBm) Mid Ch18900/1880MHz	POWER (dBm) High Ch19150/1905MHz	Tune Up (dBm)
10	QPSK	1	0	24.36	23.7	23.65	24.50
10	QPSK	1	24	24.05	23.6	23.74	24.50
10	QPSK	1	49	24.15	23.59	23.91	24.50
10	QPSK	25	0	22.85	22.57	22.79	23.00
10	QPSK	25	12	22.61	22.71	22.52	23.00
10	QPSK	25	25	22.76	22.72	22.41	23.00
10	QPSK	50	0	21.77	22.04	22.18	23.00
10	16QAM	1	0	22.37	22.33	22.31	23.00
10	16QAM	1	24	22.31	22.15	22.16	23.00
10	16QAM	1	49	22.18	22.21	22.22	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch18675/1857.5MHz	POWER (dBm) Mid Ch18900/1880MHz	POWER (dBm) High Ch19125/1902.5MHz	Tune Up (dBm)
15	QPSK	1	0	23.73	23.61	23.52	24.00





15	QPSK	1	37	24	23.77	23.81	24.00
15	QPSK	1	74	24.26	23.73	23.54	24.50
15	QPSK	36	0	22.71	22.64	22.86	23.00
15	QPSK	36	19	22.72	22.73	22.65	23.00
15	QPSK	36	39	22.68	22.72	22.61	23.00
15	QPSK	75	0	22.74	22.57	22.39	23.00
15	16QAM	1	0	22.62	22.31	22.74	23.00
15	16QAM	1	37	22.51	22.17	22.51	23.00
15	16QAM	1	74	22.33	22.34	22.32	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch18700/1860MHz	POWER (dBm) Mid Ch18900/1880MHz	POWER (dBm) High Ch19100/1900MHz	Tune Up (dBm)
20	QPSK	1	0	24.08	24.08	23.47	24.50
20	QPSK	1	49	23.74	23.72	23.98	24.00
20	QPSK	1	99	24.23	23.88	23.55	24.50
20	QPSK	50	0	22.84	23.2	22.74	24.00
20	QPSK	50	25	22.7	22.73	22.92	23.00
20	QPSK	50	50	22.59	22.7	22.49	23.00
20	QPSK	100	0	22.84	22.75	22.86	23.00
20	16QAM	1	0	22.41	22.57	22.28	23.00
20	16QAM	1	49	22.54	22.04	22.67	23.00





20	16QAM	1	99	22.91	22.65	22.11	23.00
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**1.1.2. Conducted Power Measurement Results(LTE Band 4)**

BW(M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch19957/17 10.7MHz	POWER (dBm) Mid Ch20175/17 32.5MHz	POWER (dBm) High Ch20393/17 54.3MHz	Tune Up(dBm)
1.4	QPSK	1	0	23.2	23.13	23.02	24.00
1.4	QPSK	1	3	23.43	23.25	23.12	24.00
1.4	QPSK	1	5	23.16	23.18	23.04	24.00
1.4	QPSK	3	0	23.55	23.63	23.32	24.00
1.4	QPSK	3	1	23.71	23.66	23.53	24.00
1.4	QPSK	3	3	23.44	23.58	23.27	24.00
1.4	QPSK	6	0	22.41	22.22	22.35	23.00
1.4	16QAM	1	0	22.04	21.33	21.82	23.00
1.4	16QAM	1	3	21.63	21.27	21.57	22.00
1.4	16QAM	1	5	21.61	21.65	21.46	22.00
BW(M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch19965/17 11.5MHz	POWER (dBm) Mid Ch20175/17 32.5MHz	POWER (dBm) High Ch20385/17 53.5MHz	Tune Up(dBm)
3	QPSK	1	0	23.02	23.31	23.24	24.00
3	QPSK	1	7	23.3	23.57	23.32	24.00
3	QPSK	1	14	23.26	23.31	23.29	24.00
3	QPSK	8	0	22.86	22.64	22.45	23.00
3	QPSK	8	3	22.59	22.28	22.28	23.00





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3	QPSK	8	7	22.73	22.64	22.17	23.00
3	QPSK	15	0	22.05	22.54	22.04	23.00
3	16QAM	1	0	21.57	21.74	21.75	22.00
3	16QAM	1	7	22.03	22.08	21.75	23.00
3	16QAM	1	14	21.89	21.51	21.58	22.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch19975/17 12.5MHz	POWER (dBm) Mid Ch20175/17 32.5MHz	POWER (dBm) High Ch20375/17 52.5MHz	Tune Up (dBm)
5	QPSK	1	0	23.66	23.67	23.35	24.00
5	QPSK	1	12	23.64	23.58	23.31	24.00
5	QPSK	1	24	23.27	23.46	23.25	24.00
5	QPSK	12	0	22.44	22.76	22.5	23.00
5	QPSK	12	6	22.38	22.31	22.27	23.00
5	QPSK	12	13	22.21	22.24	22.13	23.00
5	QPSK	25	0	22.38	22.22	22.1	23.00
5	16QAM	1	0	21.75	22.14	21.53	23.00
5	16QAM	1	12	22.01	22.15	21.83	23.00
5	16QAM	1	24	21.75	21.57	21.93	22.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch20000/17 15MHz	POWER (dBm) Mid Ch20175/17 32.5MHz	POWER (dBm) High Ch20350/17 50MHz	Tune Up (dBm)
10	QPSK	1	0	23.75	23.93	23.47	24.00





10	QPSK	1	24	23.05	23.21	23.07	24.00
10	QPSK	1	49	23.75	23.04	23.04	24.00
10	QPSK	25	0	22.37	22.35	22.12	23.00
10	QPSK	25	12	22.23	22.21	22.11	23.00
10	QPSK	25	25	22.34	22.3	22.11	23.00
10	QPSK	50	0	22.29	22.31	22.11	23.00
10	16QAM	1	0	21.73	21.87	22.02	23.00
10	16QAM	1	24	21.56	21.88	21.58	22.00
10	16QAM	1	49	21.68	22.01	21.78	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch20025/17 17.5MHz	POWER (dBm) Mid Ch20175/17 32.5MHz	POWER (dBm) High Ch20325/17 47.5MHz	Tune Up (dBm)
15	QPSK	1	0	23.18	23.25	23.66	24.00
15	QPSK	1	37	23.84	23.61	23.67	24.00
15	QPSK	1	74	24.12	23.51	23.48	24.00
15	QPSK	36	0	22.68	22.65	22.63	23.00
15	QPSK	36	19	22.76	22.54	22.46	23.00
15	QPSK	36	39	22.53	22.52	22.08	23.00
15	QPSK	75	0	22.04	22.41	22.34	23.00
15	16QAM	1	0	22.55	22.22	22.42	23.00
15	16QAM	1	37	22.37	22.53	22.47	23.00
15	16QAM	1	74	22.59	22.55	22.35	23.00







BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch20050/17 20MHz	POWER (dBm) Mid Ch20175/17 32.5MHz	POWER (dBm) High Ch20300/17 45MHz	Tune Up (dBm)
20	QPSK	1	0	23.44	23.48	23.84	24.00
20	QPSK	1	49	23.16	23.09	23.17	24.00
20	QPSK	1	99	23.44	23.49	23.39	24.00
20	QPSK	50	0	22.25	22.14	22.41	23.00
20	QPSK	50	25	22.12	22.19	22.04	23.00
20	QPSK	50	50	22.35	22.15	22.04	23.00
20	QPSK	100	0	22.37	22.28	22.33	23.00
20	16QAM	1	0	22.44	22.69	22.18	23.00
20	16QAM	1	49	22.01	22.05	21.91	23.00
20	16QAM	1	99	22.09	22.15	22.11	23.00



**1.1.3. Conducted Power Measurement Results(LTE Band 5)**

BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch20407/82 4.7MHz	POWER (dBm) Mid Ch20525/83 6.5MHz	POWER (dBm) High Ch20643/84 8.3MHz	Tune Up(dBm)
1.4	QPSK	1	0	23.86	23.93	23.91	24.00
1.4	QPSK	1	3	23.59	24.09	23.77	24.50
1.4	QPSK	1	5	24.13	23.85	23.65	24.50
1.4	QPSK	3	0	23.65	24.06	24.26	24.50
1.4	QPSK	3	1	23.85	23.73	23.67	24.00
1.4	QPSK	3	3	23.57	24.06	23.99	24.50
1.4	QPSK	6	0	22.55	22.67	22.74	23.00
1.4	16QAM	1	0	22.19	22.6	22.66	23.00
1.4	16QAM	1	3	21.99	22.54	22.61	23.00
1.4	16QAM	1	5	22.02	22.45	22.15	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch20415/82 5.5MHz	POWER (dBm) Mid Ch20525/83 6.5MHz	POWER (dBm) High Ch20635/84 7.5MHz	Tune Up(dBm)
3	QPSK	1	0	23.79	23.78	23.72	24.00
3	QPSK	1	7	23.95	24.25	24.09	24.50
3	QPSK	1	14	23.94	23.98	24.04	24.50
3	QPSK	8	0	23.06	23.16	23.22	24.00
3	QPSK	8	3	22.98	22.78	23.17	24.00





3	QPSK	8	7	22.77	22.63	23.08	24.00
3	QPSK	15	0	23.08	22.61	22.95	24.00
3	16QAM	1	0	21.99	22.11	22.17	23.00
3	16QAM	1	7	22.31	22.66	22.29	23.00
3	16QAM	1	14	22.54	22.13	22.09	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch20425/82 6.5MHz	POWER (dBm) Mid Ch20525/83 6.5MHz	POWER (dBm) High Ch20625/84 6.5MHz	Tune Up(dBm)
5	QPSK	1	0	23.54	23.72	24.03	24.50
5	QPSK	1	12	23.79	23.87	23.85	24.00
5	QPSK	1	24	24.05	23.82	24.03	24.50
5	QPSK	12	0	23.19	23.23	23.1	24.00
5	QPSK	12	6	22.82	22.61	23.09	24.00
5	QPSK	12	13	22.91	22.97	23.09	24.00
5	QPSK	25	0	22.61	22.65	22.59	23.00
5	16QAM	1	0	22.59	22.04	22.21	23.00
5	16QAM	1	12	22.57	22.97	22.54	23.00
5	16QAM	1	24	22.56	22.02	22.41	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch20450/82 9MHz	POWER (dBm) Mid Ch20525/83 6.5MHz	POWER (dBm) High Ch20600/84 4MHz	Tune Up(dBm)
10	QPSK	1	0	23.31	23.43	23.41	24.00





10	QPSK	1	24	23.84	23.7	23.66	24.00
10	QPSK	1	49	23.51	24.01	24.09	24.50
10	QPSK	25	0	23.12	22.67	22.58	24.00
10	QPSK	25	12	22.89	22.55	22.48	23.00
10	QPSK	25	25	22.73	22.73	22.61	23.00
10	QPSK	50	0	23.12	22.71	22.83	24.00
10	16QAM	1	0	22.15	22.49	22.23	23.00
10	16QAM	1	24	22.47	22.19	22.5	23.00
10	16QAM	1	49	22.04	22.44	22.76	23.00





## 1.1.4. Conducted Power Measurement Results(LTE Band 12)

BW (M Hz)	Modulation	RB Size	RB offset	POWER (dBm)			Tune Up(d Bm)
				Low Ch23017/69 9.7MHz	Mid Ch23095/70 7.5MHz	High Ch23173/71 5.3MHz	
1.4	QPSK	1	0	23.18	23.24	23.11	24.00
1.4	QPSK	1	3	23.45	23.44	23.28	24.00
1.4	QPSK	1	5	23.22	23.31	23.15	24.00
1.4	QPSK	3	0	23.3	23.39	23.21	24.00
1.4	QPSK	3	1	23.47	23.49	23.35	24.00
1.4	QPSK	3	3	23.32	23.36	23.25	24.00
1.4	QPSK	6	0	22.41	22.38	22.28	23.00
1.4	16QAM	1	0	21.83	22.1	21.39	23.00
1.4	16QAM	1	3	22.28	22.38	22	23.00
1.4	16QAM	1	5	21.85	21.95	22.01	23.00
BW (M Hz)	Modulation	RB Size	RB offset	POWER (dBm)			Tune Up(d Bm)
				Low Ch23025/70 0.5MHz	Mid Ch23095/70 7.5MHz	High Ch23165/71 4.5MHz	
3	QPSK	1	0	23.19	23.51	23.54	24.00
3	QPSK	1	7	23.46	23.52	23.35	24.00
3	QPSK	1	14	23.45	23.16	23.24	24.00
3	QPSK	8	0	22.46	22.47	22.42	23.00
3	QPSK	8	3	22.62	22.68	22.66	23.00
3	QPSK	8	7	22.69	22.44	22.64	23.00





3	QPSK	15	0	22.52	22.45	22.56	00 23. 00
3	16QAM	1	0	22.58	22.59	22.33	00 23. 00
3	16QAM	1	7	22.88	23.24	22.57	00 23. 00
3	16QAM	1	14	22.74	22.32	22.01	00 23. 00
BW (M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch23035/70 1.5MHz	POWER (dBm) Mid Ch23095/70 7.5MHz	POWER (dBm) High Ch23155/71 3.5MHz	Tune Up(d Bm)
5	QPSK	1	0	23.14	23.36	23.64	00 24. 00
5	QPSK	1	12	23.63	23.56	23.34	00 24. 00
5	QPSK	1	24	23.18	23.35	23.16	00 24. 00
5	QPSK	12	0	22.58	22.45	22.41	00 23. 00
5	QPSK	12	6	22.62	22.5	22.29	00 23. 00
5	QPSK	12	13	22.49	22.38	22.39	00 23. 00
5	QPSK	25	0	22.59	22.55	22.64	00 23. 00
5	16QAM	1	0	21.94	22.04	22.2	00 23. 00
5	16QAM	1	12	22.18	22.01	22.19	00 23. 00
5	16QAM	1	24	21.66	21.75	21.66	00 22. 00
BW (M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch23060/70 4MHz	POWER (dBm) Mid Ch23095/70 7.5MHz	POWER (dBm) High Ch23130/71 1MHz	Tune Up(d Bm)
10	QPSK	1	0	23.21	23.19	23.31	00 24. 00
10	QPSK	1	24	23.55	23.22	23.6	00 24. 00





10	QPSK	1	49	23.42	23.42	23.49	24.00
10	QPSK	25	0	22.26	22.38	22.33	23.00
10	QPSK	25	12	22.48	22.37	22.44	23.00
10	QPSK	25	25	22.65	22.71	22.69	23.00
10	QPSK	50	0	22.87	22.68	22.68	23.00
10	16QAM	1	0	22.35	22.61	22.64	23.00
10	16QAM	1	24	21.74	22.06	22.33	23.00
10	16QAM	1	49	21.81	21.73	21.88	22.00



**1.1.5. Conducted Power Measurement Results(LTE Band 13)**

BW (M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch23205/77 9.5MHz	POWER (dBm) Mid Ch23230/7 82MHz	POWER (dBm) High Ch23255/78 4.5MHz	Tune Up(dBm)
5	QPSK	1	0	23.72	23.91	23.74	24.00
5	QPSK	1	12	23.96	24.24	23.98	24.50
5	QPSK	1	24	23.71	23.67	23.73	24.00
5	QPSK	12	0	22.79	23.04	23.02	24.00
5	QPSK	12	6	22.98	22.99	22.93	23.00
5	QPSK	12	13	23.17	22.88	22.94	24.00
5	QPSK	25	0	23	23.21	22.94	24.00
5	16QAM	1	0	22.46	22.95	22.25	23.00
5	16QAM	1	12	22.71	22.45	22.78	23.00
5	16QAM	1	24	22.54	22.73	22.66	23.00
BW (M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low&Mid&High Ch23230/782MHz			Tune Up(dBm)
10	QPSK	1	0	23.79			24.50
10	QPSK	1	24	23.91			24.50
10	QPSK	1	49	23.85			24.50
10	QPSK	25	0	22.81			23.00
10	QPSK	25	12	22.85			23.00



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10	QPSK	25	25	22.83	0 23.0 0
10	QPSK	50	0	22.76	23.0 0
10	16QAM	1	0	22.64	23.0 0
10	16QAM	1	24	22.78	23.0 0
10	16QAM	1	49	22.33	23.0 0



**1.1.6. Conducted Power Measurement Results(LTE Band 66)**

BW(M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch131979/17 10.7MHz	POWER (dBm) Mid Ch132322/ 1745MHz	POWER (dBm) High Ch132665/17 79.3MHz	Tune Up(dBm)
1.4	QPSK	1	0	23.44	23.51	23.41	24.00
1.4	QPSK	1	3	23.28	23.42	23.59	24.00
1.4	QPSK	1	5	23.34	23.34	23.73	24.00
1.4	QPSK	3	0	23.22	23.31	23.27	24.00
1.4	QPSK	3	1	23.21	23.21	23.25	24.00
1.4	QPSK	3	3	23.24	23.18	23.34	24.00
1.4	QPSK	6	0	22.29	22.28	22.23	23.00
1.4	16QAM	1	0	22.43	22.58	22.09	23.00
1.4	16QAM	1	3	22.79	22.62	22.54	23.00
1.4	16QAM	1	5	22.57	22.44	21.92	23.00
BW(M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch131987/17 11.5MHz	POWER (dBm) Mid Ch132322/ 1745MHz	POWER (dBm) High Ch132657/17 78.5MHz	Tune Up(dBm)
3	QPSK	1	0	23.17	23.07	23.17	24.00
3	QPSK	1	7	23.18	23.04	23.01	24.00
3	QPSK	1	14	23.37	22.93	23.05	24.00
3	QPSK	8	0	22.22	22.22	22.28	23.00



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3	QPSK	8	3	22.32	22.18	22.16	23.00
3	QPSK	8	7	22.46	22.12	22.31	23.00
3	QPSK	15	0	22.09	22.11	22.24	23.00
3	16QAM	1	0	22.57	22.61	22.34	23.00
3	16QAM	1	7	22.56	22.54	22.46	23.00
3	16QAM	1	14	22.55	22.56	22.51	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch131997/17 12.5MHz	POWER (dBm) ) Mid Ch132322/ 1745MHz	POWER (dBm) High Ch132647/17 77.5MHz	Tune Up (dBm)
5	QPSK	1	0	23.57	23.61	23.02	24.00
5	QPSK	1	12	23.63	23.22	23.24	24.00
5	QPSK	1	24	23.46	23.38	23.13	24.00
5	QPSK	12	0	22.41	22.61	22.45	23.00
5	QPSK	12	6	22.35	22.53	22.38	23.00
5	QPSK	12	13	22.45	22.43	22.33	23.00
5	QPSK	25	0	22.53	22.47	22.22	23.00
5	16QAM	1	0	22.07	22.18	21.89	23.00
5	16QAM	1	12	22.11	22.12	22.31	23.00
5	16QAM	1	24	22.17	22.01	21.92	23.00
BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch132022/17 15MHz	POWER (dBm) ) Mid Ch132322/ 75	POWER (dBm) High Ch132622/17 75	Tune Up (dBm)





					1745MHz	MHz	
10	QPSK	1	0	23.44	23.76	23.46	24.00
10	QPSK	1	24	23.18	23.38	23.33	24.00
10	QPSK	1	49	23.49	23.53	23.58	24.00
10	QPSK	25	0	22.61	22.77	22.39	23.00
10	QPSK	25	12	22.34	22.58	22.35	23.00
10	QPSK	25	25	22.57	22.63	22.45	23.00
10	QPSK	50	0	22.41	22.62	22.51	23.00
10	16QAM	1	0	22.84	22.85	22.41	23.00
10	16QAM	1	24	22.96	22.61	22.82	23.00
10	16QAM	1	49	22.79	22.81	22.46	23.00
BW(MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch132047/17 17.5MHz	POWER (dBm) Mid Ch132322/ 1745MHz	POWER (dBm) High Ch132597/17 72.5MHz	Tune Up(dBm)
15	QPSK	1	0	24.11	23.07	23.29	24.50
15	QPSK	1	37	23.46	23.21	23.27	24.00
15	QPSK	1	74	23.82	23.16	23.36	24.00
15	QPSK	36	0	22.53	22.69	22.39	23.00
15	QPSK	36	19	22.49	22.38	22.22	23.00
15	QPSK	36	39	22.62	22.42	22.28	23.00
15	QPSK	75	0	22.65	22.56	22.36	23.00





BW (MHz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch132072/17 20MHz	POWER (dBm) Mid Ch132322/ 1745MHz	POWER (dBm) High Ch132572/17 70MHz	Tune Up (dBm)
15	16QAM	1	0	22.9	23.01	22.62	24.00
15	16QAM	1	37	22.89	22.76	22.61	23.00
15	16QAM	1	74	22.88	22.78	22.33	23.00
20	QPSK	1	0	23.55	23.76	23.51	24.50
20	QPSK	1	49	23.68	23.5	23.69	24.50
20	QPSK	1	99	23.96	23.46	23.3	24.50
20	QPSK	50	0	22.51	23.07	22.21	24.00
20	QPSK	50	25	22.55	22.57	22.18	23.00
20	QPSK	50	50	22.6	22.43	22.24	23.00
20	QPSK	100	0	22.49	22.45	22.21	23.00
20	16QAM	1	0	23.05	22.12	22.43	24.00
20	16QAM	1	49	23.18	22.54	23.15	24.00
20	16QAM	1	99	23	22.64	22.78	24.00





## 1.1.7. Conducted Power Measurement Results(LTE Band 71)

BW(M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch133147/6 65.5MHz	POWER (dBm) Mid Ch133297/ 680.5MHz	POWER (dBm) High Ch133447/6 95.5MHz	Tune Up(dBm)
5	QPSK	1	0	23.33	23.19	22.88	24.00
5	QPSK	1	12	23.17	23.07	22.96	24.00
5	QPSK	1	24	23.28	23.4	22.81	24.00
5	QPSK	12	0	22.37	22.42	22.32	23.00
5	QPSK	12	6	22.31	22.28	22.19	23.00
5	QPSK	12	13	22.36	22.39	22.23	23.00
5	QPSK	25	0	22.11	22.28	22.43	23.00
5	16QAM	1	0	21.96	22.63	21.88	23.00
5	16QAM	1	12	22.13	22.03	22.1	23.00
5	16QAM	1	24	22.11	22.28	21.85	23.00
BW(M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch133172/6 68MHz	POWER (dBm) Mid Ch133297/ 680.5MHz	POWER (dBm) High Ch133422/6 93MHz	Tune Up(dBm)
10	QPSK	1	0	23.85	23.49	23.38	24.00
10	QPSK	1	24	23.14	23.33	23.29	24.00
10	QPSK	1	49	23.37	23.66	23.32	24.00
10	QPSK	25	0	22.36	22.49	22.46	23.00
10	QPSK	25	12	22.45	22.45	22.33	23.00
10	QPSK	25	25	22.51	22.48	22.34	23.00
10	QPSK	50	0	22.43	22.29	22.32	23.00
10	16QAM	1	0	23.15	22.61	22.52	24.00
10	16QAM	1	24	23.24	22.92	23.01	24.00
10	16QAM	1	49	23.12	22.63	22.84	24.00
BW(M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch133197/6 70.5MHz	POWER (dBm) Mid Ch133297/ 680.5MHz	POWER (dBm) High Ch133397/6 90.5MHz	Tune Up(dBm)
15	QPSK	1	0	23.86	23.26	23.53	24.00
15	QPSK	1	37	23.43	23.24	23.48	24.00





15	QPSK	1	74	23.62	23.42	23.61	24.00
15	QPSK	36	0	22.53	22.46	22.39	23.00
15	QPSK	36	19	22.55	22.38	22.38	23.00
15	QPSK	36	39	22.61	22.42	22.33	23.00
15	QPSK	75	0	22.51	22.38	22.37	23.00
15	16QAM	1	0	22.48	22.75	22.87	23.00
15	16QAM	1	37	23.61	22.89	22.75	24.00
15	16QAM	1	74	22.79	22.59	22.61	23.00
BW (M Hz)	Modulation	RB Size	RB offset	POWER (dBm) Low Ch133222/6 73MHz	POWER (dBm) ) Mid Ch133297/ 680.5MHz	POWER (dBm) High Ch133372/6 88MHz	Tune Up(dBm)
20	QPSK	1	0	22.98	22.94	23.38	24.00
20	QPSK	1	49	23.44	23.38	23.79	24.00
20	QPSK	1	99	23	23.56	23.37	24.00
20	QPSK	50	0	22.41	22.47	22.42	23.00
20	QPSK	50	25	22.37	22.41	22.38	23.00
20	QPSK	50	50	22.43	22.36	22.55	23.00
20	QPSK	100	0	22.45	22.36	22.49	23.00
20	16QAM	1	0	22.82	22.82	22.24	23.00
20	16QAM	1	49	23.06	23.09	22.55	24.00
20	16QAM	1	99	22.87	22.96	22.43	23.00





### Tune Up Procedure

1. RX Gain Calibration
  - a. Put DUT in test mode
  - b. Put DUT in BCH mode
  - c. Put DUT in selected channel band
  - d. Total gain chain calibration at center ARFCN
  - e. Frequency Ripple calibration
  - f. Complete RX\_AGC Gain table
  
2. TX Power Calibration
  - a. Put DUT in test mode
  - b. Put DUT in BCH mode
  - c. Put DUT in selected channel band
  - d. Total gain chain calibration at center ARFCN
  - e. Frequency Ripple calibration
  - f. Complete TX\_APC Gain table
  
3. AFC Calibration
  - a. Put DUT in test mode
  - b. Put DUT in selected channel mode
  - c. Calibration AFC at center ARFCN
  - d. Complete AFC result table

