

ULCA_5B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_ High Channel (834.1 MHz + 844.0 MHz)									
1 625.10	54.33	H	25.55	-38.61	41.27	-97.41	-56.15	-13	43.15
1 625.46	52.25	V	25.55	-38.61	39.19	-97.41	-58.22	-13	45.22
1 677.04	59.47	H	25.92	-38.67	46.72	-97.41	-50.69	-13	37.69
1 676.96	57.64	V	25.92	-38.67	44.89	-97.41	-52.52	-13	39.52
2 516.50	52.70	H	28.20	-36.97	43.93	-97.41	-53.49	-13	40.49
2 516.58	56.85	V	28.20	-36.97	48.08	-97.41	-49.33	-13	36.33
3 354.02	59.95	H	30.61	-36.97	53.59	-97.41	-43.82	-13	30.82
3 353.96	56.92	V	30.61	-36.97	50.56	-97.41	-46.85	-13	33.85
4 192.76	46.76	H	31.91	-36.25	42.42	-97.41	-54.99	-13	41.99
4 194.90	45.52	V	31.91	-36.25	41.18	-97.41	-56.23	-13	43.23
4 999.95	41.05	H	33.00	-35.26	38.79	-97.41	-58.63	-13	45.63
4 999.87	44.81	V	33.00	-35.26	42.55	-97.41	-54.86	-13	41.86
Above 5 000.00	Not detected	-	-	-	-	-	-	-	-

ULCA_7C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_Low Channel (2 510 MHz + 2 529.8 MHz)									
7 556.65	48.41	H	35.90	-32.72	51.59	-95.26	-43.67	-25	18.67
7 556.70	54.14	V	35.90	-32.72	57.32	-95.26	-37.94	-25	12.94
10 077.75	50.63	H	37.80	-31.52	56.91	-95.26	-38.35	-25	13.35
10 075.75	54.41	V	37.80	-31.52	60.69	-95.26	-34.57	-25	9.57
12 488.40	35.16	H	38.48	-28.66	44.98	-95.26	-50.28	-25	25.28
12 459.40	34.38	V	38.42	-28.55	44.25	-95.26	-51.01	-25	26.01
Above 12 500.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_Middle Channel (2 525.1 MHz + 2 544.9 MHz)									
7 604.00	54.90	H	35.90	-32.62	58.18	-95.26	-37.08	-25	12.08
7 604.05	57.43	V	35.90	-32.62	60.71	-95.26	-34.55	-25	9.55
10 138.05	49.13	H	37.88	-31.61	55.40	-95.26	-39.86	-25	14.86
10 136.15	53.86	V	37.87	-31.62	60.11	-95.26	-35.15	-25	10.15
12 669.75	38.33	H	38.64	-28.92	48.05	-95.26	-47.21	-25	22.21
12 669.85	38.49	V	38.64	-28.92	48.21	-95.26	-47.06	-25	22.06
Above 12 700.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_High Channel (2 540.2 MHz + 2 560 MHz)									
7 649.38	52.46	H	35.90	-32.41	55.95	-95.26	-39.31	-25	14.31
7 649.16	52.43	V	35.90	-32.42	55.91	-95.26	-39.35	-25	14.35
10 196.73	44.25	H	37.90	-31.60	50.55	-95.26	-44.71	-25	19.71
10 196.48	48.11	V	37.90	-31.60	54.41	-95.26	-40.85	-25	15.85
12 826.80	33.39	H	38.95	-27.39	44.95	-95.26	-50.32	-25	25.32
12 745.40	34.22	V	38.88	-27.84	45.26	-95.26	-50.00	-25	25.00
Above 12 900.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_Low Channel (1 715 MHz + 1 724.9 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
PCC 10 MHz + SCC 10 MHz_Middle Channel (1 750.1 MHz + 1 760 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-
PCC 10 MHz + SCC 10 MHz_High Channel (1 765.1 MHz + 1 775 MHz)									
Below 1 000.00	Not detected	-	-	-	-	-	-	-	-
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_Low Channel (1 720 MHz + 1 739.8 MHz)									
3 457.75	50.14	H	31.10	-36.76	44.48	-95.26	-50.78	-13	37.78
3 458.00	51.73	V	31.10	-36.76	46.07	-95.26	-49.19	-13	36.19
5 188.73	52.10	H	33.45	-35.23	50.32	-95.26	-44.94	-13	31.94
5 188.71	52.69	V	33.45	-35.23	50.91	-95.26	-44.35	-13	31.35
6 916.00	48.10	H	35.33	-33.45	49.98	-95.26	-45.28	-13	32.28
6 916.08	52.34	V	35.33	-33.45	54.22	-95.26	-41.04	-13	28.04
8 646.52	66.06	H	36.69	-34.00	68.75	-95.26	-26.51	-13	13.51
8 644.60	68.65	V	36.69	-34.00	71.34	-95.26	-23.92	-13	10.92
10 375.20	44.49	H	37.80	-30.81	51.48	-95.26	-43.78	-13	30.78
10 377.48	46.18	V	37.80	-30.82	53.16	-95.26	-42.10	-13	29.10
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66C

Frequency (MHz)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_ Middle Channel (1 745.1 MHz + 1 764.9 MHz)									
3 508.24	53.75	H	31.08	-36.71	48.12	-95.26	-47.14	-13	34.14
3 508.00	55.63	V	31.08	-36.71	50.00	-95.26	-45.26	-13	32.26
5 261.90	49.89	H	33.65	-35.01	48.53	-95.26	-46.73	-13	33.73
5 261.90	52.64	V	33.65	-35.01	51.28	-95.26	-43.98	-13	30.98
7 016.04	45.16	H	35.50	-33.12	47.54	-95.26	-47.72	-13	34.72
7 023.88	49.73	V	35.50	-33.16	52.07	-95.26	-43.19	-13	30.19
8 772.16	64.31	H	37.04	-33.43	67.92	-95.26	-27.34	-13	14.34
8 769.92	66.85	V	37.04	-33.46	70.43	-95.26	-24.83	-13	11.83
10 524.52	44.75	H	37.70	-30.98	51.47	-95.26	-43.79	-13	30.79
10 524.08	47.44	V	37.70	-30.98	54.16	-95.26	-41.10	-13	28.10
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_ High Channel (1 750.2 MHz + 1 770 MHz)									
3 518.08	54.15	H	31.06	-36.79	48.42	-95.26	-46.84	-13	33.84
3 518.32	55.64	V	31.06	-36.79	49.91	-95.26	-45.35	-13	32.35
5 277.56	50.06	H	33.71	-34.91	48.86	-95.26	-46.40	-13	33.40
5 277.36	49.99	V	33.71	-34.91	48.79	-95.26	-46.47	-13	33.47
7 036.84	49.53	H	35.50	-33.13	51.90	-95.26	-43.36	-13	30.36
7 036.48	51.99	V	35.50	-33.13	54.36	-95.26	-40.90	-13	27.90
8 797.44	64.59	H	37.09	-33.14	68.54	-95.26	-26.72	-13	13.72
8 797.56	67.78	V	37.10	-33.14	71.74	-95.26	-23.52	-13	10.52
10 554.84	44.85	H	37.71	-30.97	51.59	-95.26	-43.67	-13	30.67
10 554.56	46.51	V	37.71	-30.97	53.25	-95.26	-42.01	-13	29.01
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

ANT 4.
ULCA_5B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_Low Channel (829 MHz + 838.9 MHz)									
1 625.00	57.38	H	25.55	-38.61	44.32	-97.41	-53.09	-13	40.09
1 625.00	57.46	V	25.55	-38.61	44.40	-97.41	-53.01	-13	40.01
2 500.24	56.89	H	28.10	-37.21	47.78	-97.41	-49.63	-13	36.63
2 500.34	56.15	V	28.10	-37.21	47.04	-97.41	-50.37	-13	37.37
3 333.76	55.68	H	30.63	-37.01	49.30	-97.41	-48.11	-13	35.11
3 335.78	53.96	V	30.63	-37.02	47.57	-97.41	-49.84	-13	36.84
4 168.34	52.14	H	31.96	-36.21	47.89	-97.41	-49.52	-13	36.52
4 168.22	53.24	V	31.96	-36.21	48.99	-97.41	-48.42	-13	35.42
Above 4 200.00	Not detected	-	-	-	-	-	-	-	-
PCC 10 MHz + SCC 10 MHz_Middle Channel (831.6 MHz + 841.5 MHz)									
1 625.10	55.87	H	25.55	-38.61	42.81	-97.41	-54.60	-13	41.60
1 625.32	57.10	V	25.55	-38.61	44.04	-97.41	-53.37	-13	40.37
1 672.00	57.19	H	25.86	-38.66	44.39	-97.41	-53.03	-13	40.03
1 672.20	58.40	V	25.87	-38.66	45.61	-97.41	-51.80	-13	38.80
2 509.39	54.76	H	28.16	-37.07	45.85	-97.41	-51.56	-13	38.56
2 508.23	53.60	V	28.15	-37.09	44.66	-97.41	-52.75	-13	39.75
3 346.11	54.98	H	30.61	-36.99	48.60	-97.41	-48.81	-13	35.81
3 344.25	54.73	V	30.61	-36.99	48.35	-97.41	-49.06	-13	36.06
4 181.30	51.44	H	31.94	-36.25	47.13	-97.41	-50.28	-13	37.28
4 183.58	51.38	V	31.93	-36.25	47.06	-97.41	-50.35	-13	37.35
Above 4 200.00	Not detected	-	-	-	-	-	-	-	-

ULCA_5B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_ High Channel (834.1 MHz + 844.0 MHz)									
1 625.20	55.96	H	25.55	-38.61	42.90	-97.41	-54.51	-13	41.51
1 625.00	57.62	V	25.55	-38.61	44.56	-97.41	-52.85	-13	39.85
1 677.16	58.09	H	25.93	-38.67	45.35	-97.41	-52.07	-13	39.07
1 677.04	58.71	V	25.92	-38.67	45.96	-97.41	-51.46	-13	38.46
2 516.89	56.35	H	28.20	-36.97	47.58	-97.41	-49.83	-13	36.83
2 517.67	57.03	V	28.21	-36.96	48.28	-97.41	-49.13	-13	36.13
3 354.23	55.61	H	30.61	-36.97	49.25	-97.41	-48.16	-13	35.16
3 356.23	56.20	V	30.61	-36.98	49.83	-97.41	-47.59	-13	34.59
4 193.53	52.32	H	31.91	-36.25	47.98	-97.41	-49.43	-13	36.43
4 193.85	51.75	V	31.91	-36.25	47.41	-97.41	-50.00	-13	37.00
Above 4 200.00	Not detected	-	-	-	-	-	-	-	-

ULCA_7C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_Low Channel (2 510 MHz + 2 529.8 MHz)									
7 556.85	47.65	H	35.90	-32.72	50.83	-95.26	-44.43	-25	19.43
7 560.85	53.29	V	35.90	-32.70	56.49	-95.26	-38.77	-25	13.77
10 075.60	51.39	H	37.80	-31.52	57.67	-95.26	-37.59	-25	12.59
10 075.55	56.79	V	37.80	-31.52	63.07	-95.26	-32.19	-25	7.19
Above 10 100.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_Middle Channel (2 525.1 MHz + 2 544.9 MHz)									
7 603.85	54.34	H	35.90	-32.62	57.62	-95.26	-37.64	-25	12.64
7 602.15	57.66	V	35.90	-32.62	60.94	-95.26	-34.32	-25	9.32
10 138.05	48.06	H	37.88	-31.61	54.33	-95.26	-40.93	-25	15.93
10 138.15	54.08	V	37.88	-31.61	60.35	-95.26	-34.91	-25	9.91
Above 10 200.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_High Channel (2 540.2 MHz + 2 560 MHz)									
7 649.75	49.91	H	35.90	-32.41	53.40	-95.26	-41.86	-25	16.86
7 647.35	51.44	V	35.90	-32.43	54.91	-95.26	-40.35	-25	15.35
10 195.95	43.01	H	37.90	-31.60	49.31	-95.26	-45.95	-25	20.95
10 196.40	46.84	V	37.90	-31.60	53.14	-95.26	-42.12	-25	17.12
Above 10 200.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_Low Channel (1 715 MHz + 1 724.9 MHz)									
3 438.78	59.59	H	31.01	-36.82	53.78	-95.26	-41.48	-13	28.48
3 438.74	57.34	V	31.01	-36.82	51.53	-95.26	-43.73	-13	30.73
5 159.20	51.77	H	33.34	-35.42	49.69	-95.26	-45.57	-13	32.57
5 159.24	52.54	V	33.34	-35.42	50.46	-95.26	-44.80	-13	31.80
6 877.58	50.35	H	35.30	-33.69	51.96	-95.26	-43.30	-13	30.30
6 877.80	49.90	V	35.30	-33.69	51.51	-95.26	-43.75	-13	30.75
8 597.84	51.90	H	36.60	-33.72	54.78	-95.26	-40.48	-13	27.48
8 599.04	54.20	V	36.60	-33.73	57.07	-95.26	-38.19	-13	25.19
10 316.28	44.17	H	37.80	-31.03	50.94	-95.26	-44.32	-13	31.32
10 316.48	48.84	V	37.80	-31.03	55.61	-95.26	-39.65	-13	26.65
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-
PCC 10 MHz + SCC 10 MHz_Middle Channel (1 750.1 MHz + 1 760 MHz)									
3 508.94	58.94	H	31.08	-36.72	53.30	-95.26	-41.97	-13	28.97
3 509.16	59.18	V	31.08	-36.72	53.54	-95.26	-41.72	-13	28.72
5 263.46	49.26	H	33.65	-35.00	47.91	-95.26	-47.36	-13	34.36
5 263.76	50.92	V	33.66	-35.00	49.58	-95.26	-45.68	-13	32.68
7 017.98	48.41	H	35.50	-33.13	50.78	-95.26	-44.48	-13	31.48
7 017.92	53.33	V	35.50	-33.13	55.70	-95.26	-39.56	-13	26.56
8 773.60	50.07	H	37.05	-33.41	53.71	-95.26	-41.55	-13	28.55
8 774.05	52.24	V	37.05	-33.40	55.89	-95.26	-39.37	-13	26.37
10 528.20	47.07	H	37.70	-30.98	53.79	-95.26	-41.47	-13	28.47
10 527.90	46.19	V	37.70	-30.98	52.91	-95.26	-42.35	-13	29.35
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_ High Channel (1 765.1 MHz + 1 775 MHz)									
3 539.08	59.43	H	31.02	-36.92	53.53	-95.26	-41.73	-13	28.73
3 539.20	59.53	V	31.02	-36.93	53.62	-95.26	-41.65	-13	28.65
5 308.48	48.05	H	33.82	-34.75	47.12	-95.26	-48.14	-13	35.14
5 308.32	52.07	V	33.82	-34.75	51.14	-95.26	-44.12	-13	31.12
7 078.26	54.52	H	35.56	-33.10	56.98	-95.26	-38.28	-13	25.28
7 077.82	57.32	V	35.56	-33.10	59.78	-95.26	-35.48	-13	22.48
8 848.82	49.90	H	37.20	-32.99	54.11	-95.26	-41.15	-13	28.15
8 848.84	52.23	V	37.20	-32.99	56.44	-95.26	-38.82	-13	25.82
10 617.02	47.71	H	37.80	-30.95	54.56	-95.26	-40.70	-13	27.70
10 617.18	46.17	V	37.80	-30.96	53.01	-95.26	-42.25	-13	29.25
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_Low Channel (1 720 MHz + 1 739.8 MHz)									
3 459.74	58.65	H	31.10	-36.76	52.99	-95.26	-42.27	-13	29.27
3 457.90	57.62	V	31.10	-36.76	51.96	-95.26	-43.30	-13	30.30
5 188.60	59.07	H	33.45	-35.23	57.29	-95.26	-37.97	-13	24.97
5 188.58	56.57	V	33.45	-35.23	54.79	-95.26	-40.47	-13	27.47
6 915.70	53.96	H	35.33	-33.45	55.84	-95.26	-39.42	-13	26.42
6 915.60	53.39	V	35.33	-33.45	55.27	-95.26	-39.99	-13	26.99
8 646.50	63.72	H	36.69	-34.00	66.41	-95.26	-28.85	-13	15.85
8 644.50	60.28	V	36.69	-34.00	62.97	-95.26	-32.29	-13	19.29
10 373.80	47.11	H	37.80	-30.80	54.11	-95.26	-41.15	-13	28.15
10 377.30	48.30	V	37.80	-30.82	55.28	-95.26	-39.98	-13	26.98
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_Middle Channel (1 745.1 MHz + 1 764.9 MHz)									
3 507.99	60.56	H	31.08	-36.71	54.93	-95.26	-40.33	-13	27.33
3 507.81	60.51	V	31.08	-36.71	54.88	-95.26	-40.39	-13	27.39
5 262.06	53.68	H	33.65	-35.01	52.32	-95.26	-42.94	-13	29.94
5 262.08	58.95	V	33.65	-35.01	57.59	-95.26	-37.67	-13	24.67
7 015.96	52.11	H	35.50	-33.12	54.49	-95.26	-40.77	-13	27.77
7 016.22	53.34	V	35.50	-33.12	55.72	-95.26	-39.55	-13	26.55
8 772.25	68.64	H	37.04	-33.43	72.25	-95.26	-23.01	-13	10.01
8 771.95	64.38	V	37.04	-33.43	67.99	-95.26	-27.27	-13	14.27
10 525.95	50.12	H	37.70	-30.98	56.84	-95.26	-38.42	-13	25.42
10 524.05	50.72	V	37.70	-30.98	57.44	-95.26	-37.82	-13	24.82
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_ High Channel (1 750.2 MHz + 1 770 MHz)									
3 518.39	61.47	H	31.06	-36.79	55.74	-95.26	-39.52	-13	26.52
3 518.29	61.43	V	31.06	-36.79	55.70	-95.26	-39.57	-13	26.57
5 277.50	53.78	H	33.71	-34.91	52.58	-95.26	-42.68	-13	29.68
5 277.22	57.23	V	33.71	-34.91	56.03	-95.26	-39.23	-13	26.23
7 036.54	56.04	H	35.50	-33.13	58.41	-95.26	-36.85	-13	23.85
7 036.40	52.88	V	35.50	-33.13	55.25	-95.26	-40.01	-13	27.01
8 795.70	69.96	H	37.09	-33.16	73.89	-95.26	-21.37	-13	8.37
8 795.50	65.72	V	37.09	-33.16	69.65	-95.26	-25.61	-13	12.61
10 554.35	50.69	H	37.71	-30.97	57.43	-95.26	-37.83	-13	24.83
10 554.40	49.33	V	37.71	-30.97	56.07	-95.26	-39.19	-13	26.19
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

ANT 5.
ULCA_5B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_Low Channel (829 MHz + 838.9 MHz)									
1 625.22	56.78	H	25.55	-38.61	43.72	-97.41	-53.69	-13	40.69
1 625.20	56.97	V	25.55	-38.61	43.91	-97.41	-53.50	-13	40.50
1 666.85	58.66	H	25.80	-38.67	45.79	-97.41	-51.62	-13	38.62
1 666.73	57.80	V	25.80	-38.67	44.93	-97.41	-52.49	-13	39.49
2 502.59	58.59	H	28.12	-37.17	49.54	-97.41	-47.87	-13	34.87
2 501.17	57.17	V	28.11	-37.19	48.09	-97.41	-49.32	-13	36.32
3 334.94	56.75	H	30.63	-37.01	50.37	-97.41	-47.04	-13	34.04
3 334.74	52.92	V	30.63	-37.01	46.54	-97.41	-50.87	-13	37.87
4 168.10	45.01	H	31.96	-36.21	40.76	-97.41	-56.65	-13	43.65
4 168.25	47.00	V	31.96	-36.21	42.75	-97.41	-54.66	-13	41.66
Above 4 200.00	Not detected	-	-	-	-	-	-	-	-
PCC 10 MHz + SCC 10 MHz_Middle Channel (831.6 MHz + 841.5 MHz)									
1 625.50	56.48	H	25.55	-38.61	43.42	-97.41	-53.99	-13	40.99
1 625.10	57.30	V	25.55	-38.61	44.24	-97.41	-53.17	-13	40.17
1 671.98	59.09	H	25.86	-38.66	46.29	-97.41	-51.12	-13	38.12
1 671.92	58.52	V	25.86	-38.66	45.72	-97.41	-51.69	-13	38.69
2 509.09	60.32	H	28.15	-37.08	51.39	-97.41	-46.02	-13	33.02
2 508.87	58.53	V	28.15	-37.08	49.60	-97.41	-47.81	-13	34.81
3 343.99	57.08	H	30.61	-36.99	50.70	-97.41	-46.71	-13	33.71
3 343.97	53.17	V	30.61	-36.99	46.79	-97.41	-50.62	-13	37.62
4 179.92	46.04	H	31.94	-36.25	41.73	-97.41	-55.68	-13	42.68
4 179.92	46.04	V	31.94	-36.25	41.73	-97.41	-55.68	-13	42.68
Above 4 200.00	Not detected	-	-	-	-	-	-	-	-

ULCA_5B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_ High Channel (834.1 MHz + 844.0 MHz)									
1 625.14	56.60	H	25.55	-38.61	43.54	-97.41	-53.87	-13	40.87
1 624.98	57.02	V	25.55	-38.61	43.96	-97.41	-53.45	-13	40.45
1 677.20	59.28	H	25.93	-38.67	46.54	-97.41	-50.87	-13	37.87
1 677.12	57.20	V	25.93	-38.67	44.46	-97.41	-52.95	-13	39.95
2 516.76	60.99	H	28.20	-36.97	52.22	-97.41	-45.19	-13	32.19
2 516.54	60.21	V	28.20	-36.97	51.44	-97.41	-45.97	-13	32.97
3 353.88	55.59	H	30.61	-36.97	49.23	-97.41	-48.18	-13	35.18
3 354.26	50.97	V	30.61	-36.97	44.61	-97.41	-52.80	-13	39.80
4 193.58	46.18	H	31.91	-36.25	41.84	-97.41	-55.58	-13	42.58
4 193.60	44.64	V	31.91	-36.25	40.30	-97.41	-57.11	-13	44.11
Above 4 200.00	Not detected	-	-	-	-	-	-	-	-

ULCA_7C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_ Low Channel (2 510 MHz + 2 529.8 MHz)									
5 037.64	51.74	H	33.00	-35.22	49.52	-95.26	-45.74	-25	20.74
5 037.78	53.17	V	33.00	-35.22	50.95	-95.26	-44.31	-25	19.31
7 556.78	56.17	H	35.90	-32.72	59.35	-95.26	-35.91	-25	10.91
7 556.92	60.20	V	35.90	-32.72	63.38	-95.26	-31.88	-25	6.88
10 075.48	51.98	H	37.80	-31.52	58.26	-95.26	-37.00	-25	12.00
10 075.86	58.38	V	37.80	-31.52	64.66	-95.26	-30.60	-25	5.60
Above 10 100.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_ Middle Channel (2 525.1 MHz + 2 544.9 MHz)									
5 068.06	48.80	H	33.07	-35.28	46.59	-95.26	-48.67	-25	23.67
5 067.96	50.06	V	33.07	-35.28	47.85	-95.26	-47.42	-25	22.42
7 602.10	60.55	H	35.90	-32.62	63.83	-95.26	-31.43	-25	6.43
7 602.15	61.22	V	35.90	-32.62	64.50	-95.26	-30.76	-25	5.76
10 137.95	53.86	H	37.88	-31.61	60.13	-95.26	-35.13	-25	10.13
10 138.10	57.10	V	37.88	-31.61	63.37	-95.26	-31.89	-25	6.89
Above 10 200.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_ High Channel (2 540.2 MHz + 2 560 MHz)									
5 098.23	46.06	H	33.19	-35.41	43.84	-95.26	-51.42	-25	26.42
5 098.33	48.37	V	33.19	-35.41	46.15	-95.26	-49.11	-25	24.11
7 647.40	56.76	H	35.90	-32.43	60.23	-95.26	-35.03	-25	10.03
7 647.40	56.54	V	35.90	-32.43	60.01	-95.26	-35.25	-25	10.25
10 198.55	51.36	H	37.90	-31.59	57.67	-95.26	-37.59	-25	12.59
10 198.15	52.09	V	37.90	-31.60	58.39	-95.26	-36.88	-25	11.88
Above 10 200.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_Low Channel (1 715 MHz + 1 724.9 MHz)									
3 438.86	56.80	H	31.01	-36.82	50.99	-95.26	-44.27	-13	31.27
3 438.78	54.97	V	31.01	-36.82	49.16	-95.26	-46.10	-13	33.10
5 159.82	53.95	H	33.34	-35.42	51.87	-95.26	-43.39	-13	30.39
5 159.26	55.41	V	33.34	-35.42	53.33	-95.26	-41.93	-13	28.93
6 877.76	54.95	H	35.30	-33.69	56.56	-95.26	-38.70	-13	25.70
6 877.76	54.95	V	35.30	-33.69	56.56	-95.26	-38.70	-13	25.70
8 598.14	53.70	H	36.60	-33.72	56.58	-95.26	-38.68	-13	25.68
8 598.26	58.32	V	36.60	-33.72	61.20	-95.26	-34.06	-13	21.06
10 317.84	49.77	H	37.80	-31.00	56.57	-95.26	-38.69	-13	25.69
10 317.66	52.37	V	37.80	-31.01	59.16	-95.26	-36.10	-13	23.10
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-
PCC 10 MHz + SCC 10 MHz_Middle Channel (1 750.1 MHz + 1 760 MHz)									
3 508.98	63.33	H	31.08	-36.72	57.69	-95.26	-37.57	-13	24.57
3 509.14	63.74	V	31.08	-36.72	58.10	-95.26	-37.16	-13	24.16
5 263.40	50.45	H	33.65	-35.00	49.10	-95.26	-46.16	-13	33.16
5 263.50	50.25	V	33.65	-35.00	48.90	-95.26	-46.36	-13	33.36
7 017.87	51.91	H	35.50	-33.13	54.28	-95.26	-40.98	-13	27.98
7 017.97	52.55	V	35.50	-33.13	54.92	-95.26	-40.34	-13	27.34
8 775.78	53.68	H	37.05	-33.37	57.36	-95.26	-37.90	-13	24.90
8 772.78	57.31	V	37.05	-33.42	60.94	-95.26	-34.32	-13	21.32
10 526.58	45.07	H	37.70	-30.98	51.79	-95.26	-43.47	-13	30.47
10 527.66	49.58	V	37.70	-30.98	56.30	-95.26	-38.96	-13	25.96
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66B

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 10 MHz + SCC 10 MHz_ High Channel (1 765.1 MHz + 1 775 MHz)									
3 538.90	62.69	H	31.02	-36.92	56.79	-95.26	-38.47	-13	25.47
3 538.98	63.57	V	31.02	-36.92	57.67	-95.26	-37.59	-13	24.59
5 308.44	52.51	H	33.82	-34.75	51.58	-95.26	-43.68	-13	30.68
5 308.44	51.14	V	33.82	-34.75	50.21	-95.26	-45.05	-13	32.05
7 078.16	56.10	H	35.56	-33.10	58.56	-95.26	-36.70	-13	23.70
7 077.80	57.184	V	35.56	-33.10	59.64	-95.26	-35.62	-13	22.62
8 848.58	56.701	H	37.20	-32.99	60.91	-95.26	-34.35	-13	21.35
8 848.48	59.04	V	37.20	-32.99	63.25	-95.26	-32.01	-13	19.01
10 617.00	44.05	H	37.80	-30.95	50.90	-95.26	-44.36	-13	31.36
10 616.70	49.00	V	37.80	-30.95	55.85	-95.26	-39.41	-13	26.41
Above 10 700.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_Low Channel (1 720 MHz + 1 739.8 MHz)									
3 457.96	59.44	H	31.10	-36.76	53.78	-95.26	-41.48	-13	28.48
3 457.80	57.71	V	31.10	-36.76	52.05	-95.26	-43.21	-13	30.21
5 188.80	50.14	H	33.46	-35.23	48.37	-95.26	-46.89	-13	33.89
5 186.60	51.61	V	33.45	-35.25	49.81	-95.26	-45.46	-13	32.46
6 915.55	53.73	H	35.33	-33.45	55.61	-95.26	-39.65	-13	26.65
6 915.65	57.29	V	35.33	-33.45	59.17	-95.26	-36.09	-13	23.09
8 644.60	54.33	H	36.69	-34.00	57.02	-95.26	-38.24	-13	25.24
8 646.70	55.10	V	36.69	-34.01	57.78	-95.26	-37.48	-13	24.48
10 373.40	49.24	H	37.80	-30.80	56.24	-95.26	-39.02	-13	26.02
10 373.40	54.54	V	37.80	-30.80	61.54	-95.26	-33.72	-13	20.72
Above 10 400.00	Not detected	-	-	-	-	-	-	-	-
PCC 20 MHz + SCC 20 MHz_Middle Channel (1 745.1 MHz + 1 764.9 MHz)									
3 508.00	63.21	H	31.08	-36.71	57.58	-95.26	-37.68	-13	24.68
3 508.00	63.31	V	31.08	-36.71	57.68	-95.26	-37.58	-13	24.58
5 262.30	49.03	H	33.65	-35.01	47.67	-95.26	-47.59	-13	34.59
5 267.75	49.93	V	33.67	-34.97	48.63	-95.26	-46.63	-13	33.63
7 016.20	51.70	H	35.50	-33.12	54.08	-95.26	-41.19	-13	28.19
7 015.98	52.89	V	35.50	-33.12	55.27	-95.26	-39.99	-13	26.99
8 770.06	54.84	H	37.04	-33.46	58.42	-95.26	-36.84	-13	23.84
8 770.14	57.51	V	37.04	-33.46	61.09	-95.26	-34.17	-13	21.17
10 528.10	43.62	H	37.70	-30.98	50.34	-95.26	-44.93	-13	31.93
10 524.00	50.49	V	37.70	-30.98	57.21	-95.26	-38.05	-13	25.05
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

ULCA_66C

Frequency (MHz)	Measured Level (dB μ V)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB μ V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
PCC 20 MHz + SCC 20 MHz_ High Channel (1 750.2 MHz + 1 770 MHz)									
3 518.14	65.75	H	31.06	-36.79	60.02	-95.26	-35.24	-13	22.24
3 518.30	65.40	V	31.06	-36.79	59.67	-95.26	-35.59	-13	22.59
5 277.35	52.35	H	33.71	-34.91	51.15	-95.26	-44.11	-13	31.11
5 277.20	52.64	V	33.71	-34.91	51.44	-95.26	-43.82	-13	30.82
7 036.40	54.99	H	35.50	-33.13	57.36	-95.26	-37.90	-13	24.90
7 036.20	56.50	V	35.50	-33.13	58.87	-95.26	-36.39	-13	23.39
8 797.51	57.07	H	37.10	-33.14	61.03	-95.26	-34.23	-13	21.23
8 797.31	61.04	V	37.09	-33.14	64.99	-95.26	-30.27	-13	17.27
10 556.65	45.58	H	37.71	-30.95	52.34	-95.26	-42.92	-13	29.92
10 556.75	49.14	V	37.71	-30.95	55.90	-95.26	-39.36	-13	26.36
Above 10 600.00	Not detected	-	-	-	-	-	-	-	-

Remark;

1. AF = Antenna Factor, CL = Cable Loss, CF = Conversion Factor.
2. E (dB μ V/m) = Measured Level (dB μ V) + Antenna Factor (dB/m) + AMP (dB) + Cable Loss (dB).
3. E.I.R.P. (dB m) = E (dB μ V/m) + CF (dB).
4. E.R.P. (dB m) = E (dB μ V/m) + CF (dB) - 2.15 (dB); where E.R.P. and E.I.R.P. are expressed in consistent units.
5. CF (dB) = 20 log D - 104.8; where D is the measurement distance in meters, According to KDB 971168 D01 v03r01 5.8.4.
6. The frequency spectrum is examined from 9 kHz to the 10th harmonic of the fundamental frequency of the transmitter. No other spurious and harmonic emissions were reported greater than listed emissions above table.

3. Conducted Output Power

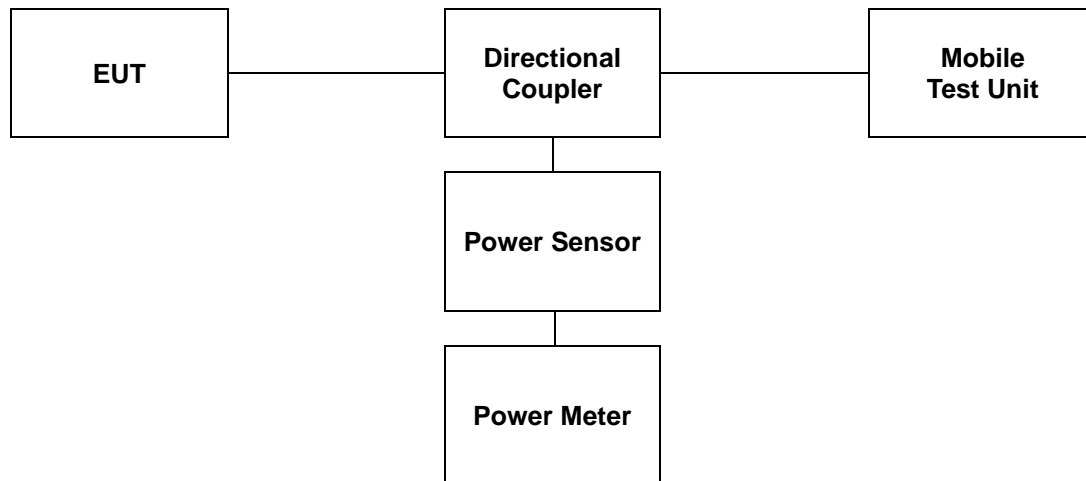
3.1. Limit

CFR 47, Section FCC §2.1046 and IC RSS-Gen Issue 5 6.12.

3.2. Test Procedure

Output power shall be measured at the RF output terminals for all configurations.

1. The RF output of the transmitter was connected to the input of the mobile test unit in order to establish communication with the EUT.
2. The EUT was set up for the max. output power with pseudo random data modulation by using mobile test unit parameters.
3. The measurement performed using a wideband RF power meter.
4. This EUT was tested under all configurations and the highest power was investigated and reported.



3.3. Test Result

Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 % R.H.

ULCA 5B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	3	825.6	20416	1	14	5	825.6	20455	1	0	22.15	0.164
	5	826.5	20425	1	24	3	830.4	20464	1	0	22.17	0.165
	5	826.8	20428	1	24	10	834.0	20500	1	0	24.22	0.264
	10	829.0	20450	1	49	5	836.2	20522	1	0	24.23	0.265
	10	829.0	20450	1	49	10	838.9	20549	1	0	24.29	0.269
Middle	3	834.1	20501	1	14	5	838.0	20540	1	0	22.16	0.164
	5	835.0	20510	1	24	3	838.9	20549	1	0	22.08	0.161
	5	831.8	20478	1	24	10	839.0	20550	1	0	24.16	0.261
	10	834.0	20500	1	49	5	841.2	20572	1	0	22.27	0.169
	10	831.6	20476	1	49	10	841.5	20575	1	0	24.25	0.266
High	3	842.6	20586	1	14	5	846.5	20625	1	0	22.18	0.165
	5	843.5	20595	1	24	3	847.4	20634	1	0	22.14	0.164
	5	836.8	20528	1	24	10	844.0	20600	1	0	24.18	0.262
	10	839.0	20550	1	49	5	846.2	20622	1	0	24.25	0.266
	10	834.1	20501	1	49	10	844.0	20600	1	0	24.28	0.268

Note;

QPSK Modulation with 1 RB

ULCA 5B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	3	825.6	20416	1	14	5	825.6	20455	1	0	21.60	0.145
	5	826.5	20425	1	24	3	830.4	20464	1	0	21.85	0.153
	5	826.8	20428	1	24	10	834.0	20500	1	0	23.49	0.223
	10	829.0	20450	1	49	5	836.2	20522	1	0	23.44	0.221
	10	829.0	20450	1	49	10	838.9	20549	1	0	23.65	0.232
Middle	3	834.1	20501	1	14	5	838.0	20540	1	0	21.58	0.144
	5	835.0	20510	1	24	3	838.9	20549	1	0	21.69	0.148
	5	831.8	20478	1	24	10	839.0	20550	1	0	23.51	0.224
	10	834.0	20500	1	49	5	841.2	20572	1	0	23.58	0.228
	10	831.6	20476	1	49	10	841.5	20575	1	0	23.62	0.230
High	3	842.6	20586	1	14	5	846.5	20625	1	0	21.62	0.145
	5	843.5	20595	1	24	3	847.4	20634	1	0	21.59	0.144
	5	836.8	20528	1	24	10	844.0	20600	1	0	23.45	0.221
	10	839.0	20550	1	49	5	846.2	20622	1	0	23.60	0.229
	10	834.1	20501	1	49	10	844.0	20600	1	0	23.62	0.230

Note;

16QAM Modulation with 1 RB

ULCA 5B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	3	825.6	20416	15	0	5	825.6	20455	25	0	22.20	0.166
	5	826.5	20425	25	0	3	830.4	20464	15	0	22.15	0.164
	5	826.8	20428	25	0	10	834.0	20500	50	0	22.12	0.163
	10	829.0	20450	50	0	5	836.2	20522	25	0	22.09	0.162
	10	829.0	20450	50	0	10	838.9	20549	50	0	22.28	0.169
Middle	3	834.1	20501	15	0	5	838.0	20540	25	0	22.19	0.166
	5	835.0	20510	25	0	3	838.9	20549	15	0	22.20	0.166
	5	831.8	20478	25	0	10	839.0	20550	50	0	22.20	0.166
	10	834.0	20500	50	0	5	841.2	20572	25	0	22.12	0.163
	10	831.6	20476	50	0	10	841.5	20575	50	0	22.23	0.167
High	3	842.6	20586	15	0	5	846.5	20625	25	0	22.15	0.164
	5	843.5	20595	25	0	3	847.4	20634	15	0	22.14	0.164
	5	836.8	20528	25	0	10	844.0	20600	50	0	22.17	0.165
	10	839.0	20550	50	0	5	846.2	20622	25	0	22.09	0.162
	10	834.1	20501	50	0	10	844.0	20600	50	0	22.20	0.166

Note;

QPSK Modulation with Full RB

ULCA 5B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	3	825.6	20416	15	0	5	825.6	20455	25	0	21.24	0.133
	5	826.5	20425	25	0	3	830.4	20464	15	0	21.17	0.131
	5	826.8	20428	25	0	10	834.0	20500	50	0	21.25	0.133
	10	829.0	20450	50	0	5	836.2	20522	25	0	21.22	0.132
	10	829.0	20450	50	0	10	838.9	20549	50	0	21.26	0.134
Middle	3	834.1	20501	15	0	5	838.0	20540	25	0	21.22	0.132
	5	835.0	20510	25	0	3	838.9	20549	15	0	21.19	0.132
	5	831.8	20478	25	0	10	839.0	20550	50	0	21.21	0.132
	10	834.0	20500	50	0	5	841.2	20572	25	0	21.20	0.132
	10	831.6	20476	50	0	10	841.5	20575	50	0	21.22	0.132
High	3	842.6	20586	15	0	5	846.5	20625	25	0	21.20	0.132
	5	843.5	20595	25	0	3	847.4	20634	15	0	21.18	0.131
	5	836.8	20528	25	0	10	844.0	20600	50	0	21.23	0.133
	10	839.0	20550	50	0	5	846.2	20622	25	0	21.21	0.132
	10	834.1	20501	50	0	10	844.0	20600	50	0	21.28	0.134

Note;

16QAM Modulation with Full RB

ULCA 7C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	2 505.5	20805	1	49	20	2 519.9	20949	1	0	24.20	0.263
	20	2 510.0	20850	1	99	10	2 524.4	20994	1	0	24.18	0.262
	15	2 507.5	20825	1	74	10	2 519.5	20945	1	0	24.17	0.261
	15	2 507.5	20825	1	74	15	2 522.5	20975	1	0	24.21	0.264
	15	2 507.8	20828	1	74	20	2 524.9	20999	1	0	24.22	0.264
	20	2 510.0	20850	1	99	15	2 527.1	21021	1	0	24.28	0.268
	20	2 510.0	20850	1	99	20	2 529.8	21048	1	0	24.32	0.270
Middle	10	2 525.6	21006	1	49	20	2 540.0	21150	1	0	24.18	0.262
	20	2 530.1	21051	1	99	10	2 544.5	21195	1	0	24.11	0.258
	15	2 530.1	21051	1	74	10	2 542.1	21171	1	0	24.18	0.262
	15	2 527.5	21025	1	74	15	2 542.5	21175	1	0	24.22	0.264
	15	2 525.3	21003	1	74	20	2 542.4	21174	1	0	24.26	0.267
	20	2 527.6	21026	1	99	15	2 544.7	21197	1	0	24.19	0.262
	20	2 525.1	21001	1	99	20	2 544.9	21199	1	0	24.26	0.267
High	10	2 545.6	21206	1	49	20	2 560.0	21350	1	0	24.21	0.264
	20	2 550.1	21251	1	99	10	2 564.5	21395	1	0	24.15	0.260
	15	2 552.7	21277	1	74	10	2 564.7	21397	1	0	24.22	0.264
	15	2 547.5	21225	1	74	15	2 562.5	21375	1	0	24.18	0.262
	15	2 542.9	21179	1	74	20	2 560.0	21350	1	0	24.11	0.258
	20	2 545.1	21201	1	99	15	2 562.2	21372	1	0	24.26	0.267
	20	2 540.2	21152	1	99	20	2 560.0	21350	1	0	24.27	0.267

Note;

QPSK Modulation with 1 RB

ULCA 7C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	2 505.5	20805	1	49	20	2 519.9	20949	1	0	23.42	0.220
	20	2 510.0	20850	1	99	10	2 524.4	20994	1	0	23.38	0.218
	15	2 507.5	20825	1	74	10	2 519.5	20945	1	0	23.40	0.219
	15	2 507.5	20825	1	74	15	2 522.5	20975	1	0	23.37	0.217
	15	2 507.8	20828	1	74	20	2 524.9	20999	1	0	23.39	0.218
	20	2 510.0	20850	1	99	15	2 527.1	21021	1	0	23.41	0.219
	20	2 510.0	20850	1	99	20	2 529.8	21048	1	0	23.46	0.222
Middle	10	2 525.6	21006	1	49	20	2 540.0	21150	1	0	23.38	0.218
	20	2 530.1	21051	1	99	10	2 544.5	21195	1	0	23.37	0.217
	15	2 530.1	21051	1	74	10	2 542.1	21171	1	0	23.41	0.219
	15	2 527.5	21025	1	74	15	2 542.5	21175	1	0	23.40	0.219
	15	2 525.3	21003	1	74	20	2 542.4	21174	1	0	23.40	0.219
	20	2 527.6	21026	1	99	15	2 544.7	21197	1	0	23.38	0.218
	20	2 525.1	21001	1	99	20	2 544.9	21199	1	0	23.41	0.219
High	10	2 545.6	21206	1	49	20	2 560.0	21350	1	0	23.29	0.213
	20	2 550.1	21251	1	99	10	2 564.5	21395	1	0	23.35	0.216
	15	2 552.7	21277	1	74	10	2 564.7	21397	1	0	23.40	0.219
	15	2 547.5	21225	1	74	15	2 562.5	21375	1	0	23.31	0.214
	15	2 542.9	21179	1	74	20	2 560.0	21350	1	0	23.35	0.216
	20	2 545.1	21201	1	99	15	2 562.2	21372	1	0	23.39	0.218
	20	2 540.2	21152	1	99	20	2 560.0	21350	1	0	23.41	0.219

Note;

16QAM Modulation with 1 RB

ULCA 7C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	2 505.5	20805	50	0	20	2 519.9	20949	100	0	22.05	0.160
	20	2 510.0	20850	100	0	10	2 524.4	20994	50	0	21.98	0.158
	15	2 507.5	20825	75	0	10	2 519.5	20945	50	0	22.08	0.161
	15	2 507.5	20825	75	0	15	2 522.5	20975	75	0	22.02	0.159
	15	2 507.8	20828	75	0	20	2 524.9	20999	100	0	22.04	0.160
	20	2 510.0	20850	100	0	15	2 527.1	21021	75	0	22.03	0.160
	20	2 510.0	20850	100	0	20	2 529.8	21048	100	0	22.10	0.162
Middle	10	2 525.6	21006	50	0	20	2 540.0	21150	100	0	22.02	0.159
	20	2 530.1	21051	100	0	10	2 544.5	21195	50	0	22.10	0.162
	15	2 530.1	21051	75	0	10	2 542.1	21171	50	0	22.10	0.162
	15	2 527.5	21025	75	0	15	2 542.5	21175	75	0	22.10	0.162
	15	2 525.3	21003	75	0	20	2 542.4	21174	100	0	22.09	0.162
	20	2 527.6	21026	100	0	15	2 544.7	21197	75	0	22.03	0.160
	20	2 525.1	21001	100	0	20	2 544.9	21199	100	0	22.11	0.163
High	10	2 545.6	21206	50	0	20	2 560.0	21350	100	0	22.05	0.160
	20	2 550.1	21251	100	0	10	2 564.5	21395	50	0	22.04	0.160
	15	2 552.7	21277	75	0	10	2 564.7	21397	50	0	22.07	0.161
	15	2 547.5	21225	75	0	15	2 562.5	21375	75	0	22.04	0.160
	15	2 542.9	21179	75	0	20	2 560.0	21350	100	0	22.01	0.159
	20	2 545.1	21201	100	0	15	2 562.2	21372	75	0	22.01	0.159
	20	2 540.2	21152	100	0	20	2 560.0	21350	100	0	22.10	0.162

Note;

QPSK Modulation with Full RB

ULCA 7C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	2 505.5	20805	50	0	20	2 519.9	20949	100	0	21.02	0.126
	20	2 510.0	20850	100	0	10	2 524.4	20994	50	0	21.04	0.127
	15	2 507.5	20825	75	0	10	2 519.5	20945	50	0	21.07	0.128
	15	2 507.5	20825	75	0	15	2 522.5	20975	75	0	20.98	0.125
	15	2 507.8	20828	75	0	20	2 524.9	20999	100	0	20.99	0.126
	20	2 510.0	20850	100	0	15	2 527.1	21021	75	0	20.98	0.125
	20	2 510.0	20850	100	0	20	2 529.8	21048	100	0	21.09	0.129
Middle	10	2 525.6	21006	50	0	20	2 540.0	21150	100	0	21.00	0.126
	20	2 530.1	21051	100	0	10	2 544.5	21195	50	0	21.99	0.158
	15	2 530.1	21051	75	0	10	2 542.1	21171	50	0	21.89	0.155
	15	2 527.5	21025	75	0	15	2 542.5	21175	75	0	22.05	0.160
	15	2 525.3	21003	75	0	20	2 542.4	21174	100	0	22.06	0.161
	20	2 527.6	21026	100	0	15	2 544.7	21197	75	0	22.01	0.159
	20	2 525.1	21001	100	0	20	2 544.9	21199	100	0	22.05	0.160
High	10	2 545.6	21206	50	0	20	2 560.0	21350	100	0	22.04	0.160
	20	2 550.1	21251	100	0	10	2 564.5	21395	50	0	22.01	0.159
	15	2 552.7	21277	75	0	10	2 564.7	21397	50	0	21.95	0.157
	15	2 547.5	21225	75	0	15	2 562.5	21375	75	0	21.96	0.157
	15	2 542.9	21179	75	0	20	2 560.0	21350	100	0	22.06	0.161
	20	2 545.1	21201	100	0	15	2 562.2	21372	75	0	22.05	0.160
	20	2 540.2	21152	100	0	20	2 560.0	21350	100	0	22.10	0.162

Note;

16QAM Modulation with Full RB

ULCA 66B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	5	1 712.5	131997	1	24	5	1 717.3	132045	1	0	23.56	0.227
	5	1 712.8	132000	1	24	10	1 720.0	132072	1	0	23.62	0.230
	10	1 715.0	132022	1	49	5	1 722.2	132094	1	0	23.60	0.229
	5	1 713.0	132002	1	24	15	1 722.3	132095	1	0	23.72	0.236
	15	1 717.5	132047	1	74	5	1 726.8	132140	1	0	23.71	0.235
	10	1 715.0	132022	1	49	10	1 724.9	132121	1	0	23.77	0.238
Middle	5	1 752.6	132398	1	24	5	1 757.4	132446	1	0	23.55	0.226
	5	1 750.3	132375	1	24	10	1 757.5	132447	1	0	23.71	0.235
	10	1 752.5	132397	1	49	5	1 759.7	132469	1	0	23.65	0.232
	5	1 748.1	132353	1	24	15	1 757.4	132446	1	0	23.69	0.234
	15	1 752.6	132398	1	74	5	1 761.9	132491	1	0	23.70	0.234
	10	1 750.1	132373	1	49	10	1 760.0	132472	1	0	23.40	0.219
High	5	1 772.7	132599	1	24	5	1 777.5	132647	1	0	23.55	0.226
	5	1 767.8	132550	1	24	10	1 775.0	132622	1	0	23.58	0.228
	10	1 770.0	132572	1	49	5	1 777.2	132644	1	0	23.61	0.230
	5	1 763.2	132504	1	24	15	1 772.5	132597	1	0	23.63	0.231
	15	1 767.7	132549	1	74	5	1 777.0	132642	1	0	23.66	0.232
	10	1 765.1	132523	1	49	10	1 775.0	132622	1	0	23.66	0.232

Note;

QPSK Modulation with 1 RB

ULCA 66B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	5	1 712.5	131997	1	24	5	1 717.3	132045	1	0	22.60	0.182
	5	1 712.8	132000	1	24	10	1 720.0	132072	1	0	22.84	0.192
	10	1 715.0	132022	1	49	5	1 722.2	132094	1	0	22.78	0.190
	5	1 713.0	132002	1	24	15	1 722.3	132095	1	0	22.85	0.193
	15	1 717.5	132047	1	74	5	1 726.8	132140	1	0	22.86	0.193
	10	1 715.0	132022	1	49	10	1 724.9	132121	1	0	22.87	0.194
Middle	5	1 752.6	132398	1	24	5	1 757.4	132446	1	0	22.58	0.181
	5	1 750.3	132375	1	24	10	1 757.5	132447	1	0	22.75	0.188
	10	1 752.5	132397	1	49	5	1 759.7	132469	1	0	22.89	0.195
	5	1 748.1	132353	1	24	15	1 757.4	132446	1	0	22.85	0.193
	15	1 752.6	132398	1	74	5	1 761.9	132491	1	0	22.88	0.194
	10	1 750.1	132373	1	49	10	1 760.0	132472	1	0	22.92	0.196
High	5	1 772.7	132599	1	24	5	1 777.5	132647	1	0	22.68	0.185
	5	1 767.8	132550	1	24	10	1 775.0	132622	1	0	22.64	0.184
	10	1 770.0	132572	1	49	5	1 777.2	132644	1	0	22.80	0.191
	5	1 763.2	132504	1	24	15	1 772.5	132597	1	0	22.81	0.191
	15	1 767.7	132549	1	74	5	1 777.0	132642	1	0	22.78	0.190
	10	1 765.1	132523	1	49	10	1 775.0	132622	1	0	22.81	0.191

Note;

16QAM Modulation with 1 RB

ULCA 66B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	5	1 712.5	131997	25	0	5	1 717.3	132045	25	0	20.83	0.121
	5	1 712.8	132000	25	0	10	1 720.0	132072	50	0	20.89	0.123
	10	1 715.0	132022	50	0	5	1 722.2	132094	25	0	20.87	0.122
	5	1 713.0	132002	25	0	15	1 722.3	132095	75	0	20.89	0.123
	15	1 717.5	132047	75	0	5	1 726.8	132140	25	0	20.90	0.123
	10	1 715.0	132022	50	0	10	1 724.9	132121	50	0	20.94	0.124
Middle	5	1 752.6	132398	25	0	5	1 757.4	132446	25	0	20.88	0.122
	5	1 750.3	132375	25	0	10	1 757.5	132447	50	0	20.84	0.121
	10	1 752.5	132397	50	0	5	1 759.7	132469	25	0	20.75	0.119
	5	1 748.1	132353	25	0	15	1 757.4	132446	75	0	20.68	0.117
	15	1 752.6	132398	75	0	5	1 761.9	132491	25	0	20.87	0.122
	10	1 750.1	132373	50	0	10	1 760.0	132472	50	0	20.91	0.123
High	5	1 772.7	132599	25	0	5	1 777.5	132647	25	0	20.82	0.121
	5	1 767.8	132550	25	0	10	1 775.0	132622	50	0	20.84	0.121
	10	1 770.0	132572	50	0	5	1 777.2	132644	25	0	20.75	0.119
	5	1 763.2	132504	25	0	15	1 772.5	132597	75	0	20.69	0.117
	15	1 767.7	132549	75	0	5	1 777.0	132642	25	0	20.72	0.118
	10	1 765.1	132523	50	0	10	1 775.0	132622	50	0	20.85	0.122

Note;

QPSK Modulation with Full RB

ULCA 66B												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	5	1 712.5	131997	25	0	5	1 717.3	132045	25	0	19.93	0.098
	5	1 712.8	132000	25	0	10	1 720.0	132072	50	0	19.91	0.098
	10	1 715.0	132022	50	0	5	1 722.2	132094	25	0	19.90	0.098
	5	1 713.0	132002	25	0	15	1 722.3	132095	75	0	19.91	0.098
	15	1 717.5	132047	75	0	5	1 726.8	132140	25	0	19.89	0.097
	10	1 715.0	132022	50	0	10	1 724.9	132121	50	0	19.94	0.099
Middle	5	1 752.6	132398	25	0	5	1 757.4	132446	25	0	19.85	0.097
	5	1 750.3	132375	25	0	10	1 757.5	132447	50	0	19.87	0.097
	10	1 752.5	132397	50	0	5	1 759.7	132469	25	0	19.79	0.095
	5	1 748.1	132353	25	0	15	1 757.4	132446	75	0	19.88	0.097
	15	1 752.6	132398	75	0	5	1 761.9	132491	25	0	19.82	0.096
	10	1 750.1	132373	50	0	10	1 760.0	132472	50	0	19.75	0.094
High	5	1 772.7	132599	25	0	5	1 777.5	132647	25	0	19.79	0.095
	5	1 767.8	132550	25	0	10	1 775.0	132622	50	0	19.87	0.097
	10	1 770.0	132572	50	0	5	1 777.2	132644	25	0	19.77	0.095
	5	1 763.2	132504	25	0	15	1 772.5	132597	75	0	19.69	0.093
	15	1 767.7	132549	75	0	5	1 777.0	132642	25	0	19.82	0.096
	10	1 765.1	132523	50	0	10	1 775.0	132622	50	0	19.91	0.098

Note;

16QAM Modulation with Full RB

ULCA 66C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	1 715.3	132025	1	49	15	1 727.3	132145	1	0	23.91	0.246
	15	1 717.5	132047	1	74	10	1 729.5	132167	1	0	23.90	0.245
	10	1 715.5	132027	1	49	20	1 729.9	132171	1	0	23.88	0.244
	20	1 720.0	132072	1	99	10	1 734.4	132216	1	0	23.85	0.243
	15	1 717.5	132047	1	74	15	1 732.5	132197	1	0	23.89	0.245
	15	1 717.8	132050	1	74	20	1 734.9	132221	1	0	23.79	0.239
	20	1 720.0	132072	1	99	15	1 737.1	132243	1	0	23.81	0.240
	20	1 720.0	132072	1	99	5	1 731.7	132189	1	0	23.88	0.244
	5	1 713.3	132005	1	24	20	1 725.0	132122	1	0	23.87	0.244
	20	1 720.0	132072	1	99	20	1 739.8	132270	1	0	23.92	0.247
Middle	10	1 747.9	132351	1	49	15	1 759.9	132471	1	0	23.87	0.244
	15	1 750.1	132373	1	74	10	1 762.1	132493	1	0	23.85	0.243
	10	1 745.6	132328	1	49	20	1 760.0	132472	1	0	23.81	0.240
	20	1 750.1	132373	1	99	10	1 764.5	132517	1	0	23.86	0.243
	15	1 747.5	132347	1	74	15	1 762.5	132497	1	0	23.84	0.242
	15	1 745.3	132325	1	74	20	1 762.4	132496	1	0	23.80	0.240
	20	1 747.6	132348	1	99	15	1 764.7	132519	1	0	23.79	0.239
	20	1 752.5	132397	1	99	5	1 764.2	132514	1	0	23.77	0.238
	5	1 745.8	132330	1	24	20	1 757.5	132447	1	0	23.82	0.241
	20	1 745.1	132323	1	99	20	1 764.9	132521	1	0	23.88	0.244
High	10	1 760.5	132477	1	49	15	1 772.5	132597	1	0	23.89	0.245
	15	1 762.7	132499	1	74	10	1 774.7	132619	1	0	23.88	0.244
	10	1 755.6	132428	1	49	20	1 770.0	132572	1	0	23.90	0.245
	20	1 760.1	132473	1	99	10	1 774.5	132617	1	0	23.81	0.240
	15	1 757.5	132447	1	74	15	1 772.5	132597	1	0	23.84	0.242
	15	1 752.9	132401	1	74	20	1 770.0	132572	1	0	23.87	0.244
	20	1 755.1	132423	1	99	15	1 772.2	132594	1	0	23.79	0.239
	20	1 765.0	132522	1	99	5	1 776.7	132639	1	0	23.77	0.238
	5	1 758.3	132455	1	24	20	1 770.0	132572	1	0	23.82	0.241
	20	1 750.2	132374	1	99	20	1 770.0	132572	1	0	23.86	0.243

Note;

QPSK Modulation with 1 RB

ULCA 66C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	1 715.3	132025	1	49	15	1 727.3	132145	1	0	23.02	0.200
	15	1 717.5	132047	1	74	10	1 729.5	132167	1	0	22.80	0.191
	10	1 715.5	132027	1	49	20	1 729.9	132171	1	0	22.89	0.195
	20	1 720.0	132072	1	99	10	1 734.4	132216	1	0	22.84	0.192
	15	1 717.5	132047	1	74	15	1 732.5	132197	1	0	22.91	0.195
	15	1 717.8	132050	1	74	20	1 734.9	132221	1	0	22.96	0.198
	20	1 720.0	132072	1	99	15	1 737.1	132243	1	0	22.95	0.197
	20	1 720.0	132072	1	99	5	1 731.7	132189	1	0	22.89	0.195
	5	1 713.3	132005	1	24	20	1 725.0	132122	1	0	22.87	0.194
	20	1 720.0	132072	1	99	20	1 739.8	132270	1	0	23.04	0.201
Middle	10	1 747.9	132351	1	49	15	1 759.9	132471	1	0	22.98	0.199
	15	1 750.1	132373	1	74	10	1 762.1	132493	1	0	22.94	0.197
	10	1 745.6	132328	1	49	20	1 760.0	132472	1	0	22.89	0.195
	20	1 750.1	132373	1	99	10	1 764.5	132517	1	0	22.82	0.191
	15	1 747.5	132347	1	74	15	1 762.5	132497	1	0	22.95	0.197
	15	1 745.3	132325	1	74	20	1 762.4	132496	1	0	22.76	0.189
	20	1 747.6	132348	1	99	15	1 764.7	132519	1	0	22.79	0.190
	20	1 752.5	132397	1	99	5	1 764.2	132514	1	0	22.89	0.195
	5	1 745.8	132330	1	24	20	1 757.5	132447	1	0	22.92	0.196
	20	1 745.1	132323	1	99	20	1 764.9	132521	1	0	23.01	0.200
High	10	1 760.5	132477	1	49	15	1 772.5	132597	1	0	23.01	0.200
	15	1 762.7	132499	1	74	10	1 774.7	132619	1	0	22.98	0.199
	10	1 755.6	132428	1	49	20	1 770.0	132572	1	0	22.84	0.192
	20	1 760.1	132473	1	99	10	1 774.5	132617	1	0	22.79	0.190
	15	1 757.5	132447	1	74	15	1 772.5	132597	1	0	22.86	0.193
	15	1 752.9	132401	1	74	20	1 770.0	132572	1	0	22.82	0.191
	20	1 755.1	132423	1	99	15	1 772.2	132594	1	0	22.81	0.191
	20	1 765.0	132522	1	99	5	1 776.7	132639	1	0	22.88	0.194
	5	1 758.3	132455	1	24	20	1 770.0	132572	1	0	22.89	0.195
	20	1 750.2	132374	1	99	20	1 770.0	132572	1	0	23.00	0.200

Note;

16QAM Modulation with 1 RB

ULCA 66C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	1 715.3	132025	50	0	15	1 727.3	132145	75	0	21.26	0.134
	15	1 717.5	132047	75	0	10	1 729.5	132167	50	0	21.24	0.133
	10	1 715.5	132027	50	0	20	1 729.9	132171	100	0	21.32	0.136
	20	1 720.0	132072	100	0	10	1 734.4	132216	50	0	21.34	0.136
	15	1 717.5	132047	75	0	15	1 732.5	132197	75	0	21.33	0.136
	15	1 717.8	132050	75	0	20	1 734.9	132221	100	0	21.28	0.134
	20	1 720.0	132072	100	0	15	1 737.1	132243	75	0	21.30	0.135
	20	1 720.0	132072	100	0	5	1 731.7	132189	25	0	21.25	0.133
	5	1 713.3	132005	25	0	20	1 725.0	132122	100	0	21.23	0.133
	20	1 720.0	132072	100	0	20	1 739.8	132270	100	0	21.36	0.137
Middle	10	1 747.9	132351	50	0	15	1 759.9	132471	75	0	21.25	0.133
	15	1 750.1	132373	75	0	10	1 762.1	132493	50	0	21.26	0.134
	10	1 745.6	132328	50	0	20	1 760.0	132472	100	0	21.28	0.134
	20	1 750.1	132373	100	0	10	1 764.5	132517	50	0	21.19	0.132
	15	1 747.5	132347	75	0	15	1 762.5	132497	75	0	21.22	0.132
	15	1 745.3	132325	75	0	20	1 762.4	132496	100	0	21.35	0.136
	20	1 747.6	132348	100	0	15	1 764.7	132519	75	0	21.31	0.135
	20	1 752.5	132397	100	0	5	1 764.2	132514	25	0	21.28	0.134
	5	1 745.8	132330	25	0	20	1 757.5	132447	100	0	21.31	0.135
	20	1 745.1	132323	100	0	20	1 764.9	132521	100	0	21.31	0.135
High	10	1 760.5	132477	50	0	15	1 772.5	132597	75	0	21.21	0.132
	15	1 762.7	132499	75	0	10	1 774.7	132619	50	0	21.19	0.132
	10	1 755.6	132428	50	0	20	1 770.0	132572	100	0	21.25	0.133
	20	1 760.1	132473	100	0	10	1 774.5	132617	50	0	21.20	0.132
	15	1 757.5	132447	75	0	15	1 772.5	132597	75	0	21.31	0.135
	15	1 752.9	132401	75	0	20	1 770.0	132572	100	0	21.28	0.134
	20	1 755.1	132423	100	0	15	1 772.2	132594	75	0	21.26	0.134
	20	1 765.0	132522	100	0	5	1 776.7	132639	25	0	21.23	0.133
	5	1 758.3	132455	25	0	20	1 770.0	132572	100	0	21.22	0.132
	20	1 750.2	132374	100	0	20	1 770.0	132572	100	0	21.28	0.134

Note;

QPSK Modulation with Full RB

ULCA 66C												
Ch.	PCC					SCC					Power	
	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	BW [MHz]	Freq. [MHz]	Ch.	RB	RB Offset	(dB m)	(W)
Low	10	1 715.3	132025	50	0	15	1 727.3	132145	75	0	20.23	0.105
	15	1 717.5	132047	75	0	10	1 729.5	132167	50	0	20.20	0.105
	10	1 715.5	132027	50	0	20	1 729.9	132171	100	0	20.34	0.108
	20	1 720.0	132072	100	0	10	1 734.4	132216	50	0	20.31	0.107
	15	1 717.5	132047	75	0	15	1 732.5	132197	75	0	20.28	0.107
	15	1 717.8	132050	75	0	20	1 734.9	132221	100	0	20.30	0.107
	20	1 720.0	132072	100	0	15	1 737.1	132243	75	0	20.25	0.106
	20	1 720.0	132072	100	0	5	1 731.7	132189	25	0	20.18	0.104
	5	1 713.3	132005	25	0	20	1 725.0	132122	100	0	20.21	0.105
	20	1 720.0	132072	100	0	20	1 739.8	132270	100	0	20.26	0.106
Middle	10	1 747.9	132351	50	0	15	1 759.9	132471	75	0	20.28	0.107
	15	1 750.1	132373	75	0	10	1 762.1	132493	50	0	20.31	0.107
	10	1 745.6	132328	50	0	20	1 760.0	132472	100	0	20.24	0.106
	20	1 750.1	132373	100	0	10	1 764.5	132517	50	0	20.28	0.107
	15	1 747.5	132347	75	0	15	1 762.5	132497	75	0	20.25	0.106
	15	1 745.3	132325	75	0	20	1 762.4	132496	100	0	20.26	0.106
	20	1 747.6	132348	100	0	15	1 764.7	132519	75	0	20.31	0.107
	20	1 752.5	132397	100	0	5	1 764.2	132514	25	0	20.30	0.107
	5	1 745.8	132330	25	0	20	1 757.5	132447	100	0	20.28	0.107
	20	1 745.1	132323	100	0	20	1 764.9	132521	100	0	20.38	0.109
High	10	1 760.5	132477	50	0	15	1 772.5	132597	75	0	20.31	0.107
	15	1 762.7	132499	75	0	10	1 774.7	132619	50	0	20.20	0.105
	10	1 755.6	132428	50	0	20	1 770.0	132572	100	0	20.30	0.107
	20	1 760.1	132473	100	0	10	1 774.5	132617	50	0	20.25	0.106
	15	1 757.5	132447	75	0	15	1 772.5	132597	75	0	20.22	0.105
	15	1 752.9	132401	75	0	20	1 770.0	132572	100	0	20.24	0.106
	20	1 755.1	132423	100	0	15	1 772.2	132594	75	0	20.23	0.105
	20	1 765.0	132522	100	0	5	1 776.7	132639	25	0	20.32	0.108
	5	1 758.3	132455	25	0	20	1 770.0	132572	100	0	20.29	0.107
	20	1 750.2	132374	100	0	20	1 770.0	132572	100	0	20.32	0.108

Note;

16QAM Modulation with Full RB

4. Occupied Bandwidth

4.1. Limit

CFR 47, Section FCC §2.1049 and IC RSS-Gen Issue 5 6.7.

4.2. Test Procedure

FCC

The test follows section 5.4.4 of ANSI C63.26-2015.

- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation. products including the emission skirts (typically a span of $1.5 \times \text{OBW}$ is sufficient).
- b. The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1 % to 5 % of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d. Set the detection mode to peak, and the trace mode to max-hold.
- e. If the instrument does not have a 99 % OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5 % of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5 % of the total is reached and record that frequency as the upper OBW frequency. The 99 % power OBW can be determined by computing the difference these two frequencies.
- f. The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).

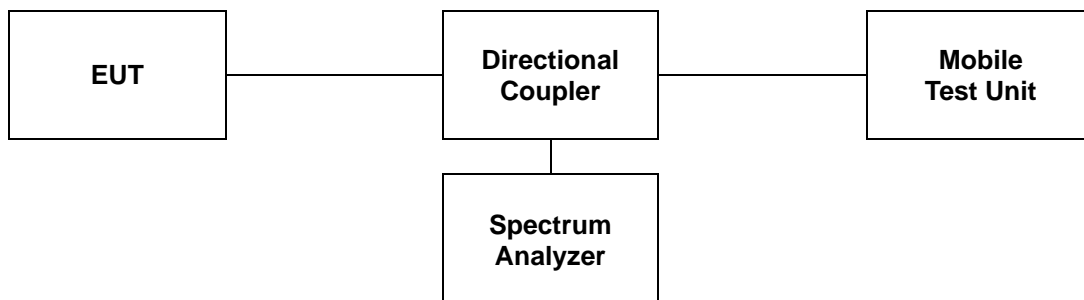
IC

The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
- The resolution bandwidth (RBW) shall be in the range of 1 % to 5 % of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99 % emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99 % emission bandwidth).



4.3 Test Results

Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 % R.H.

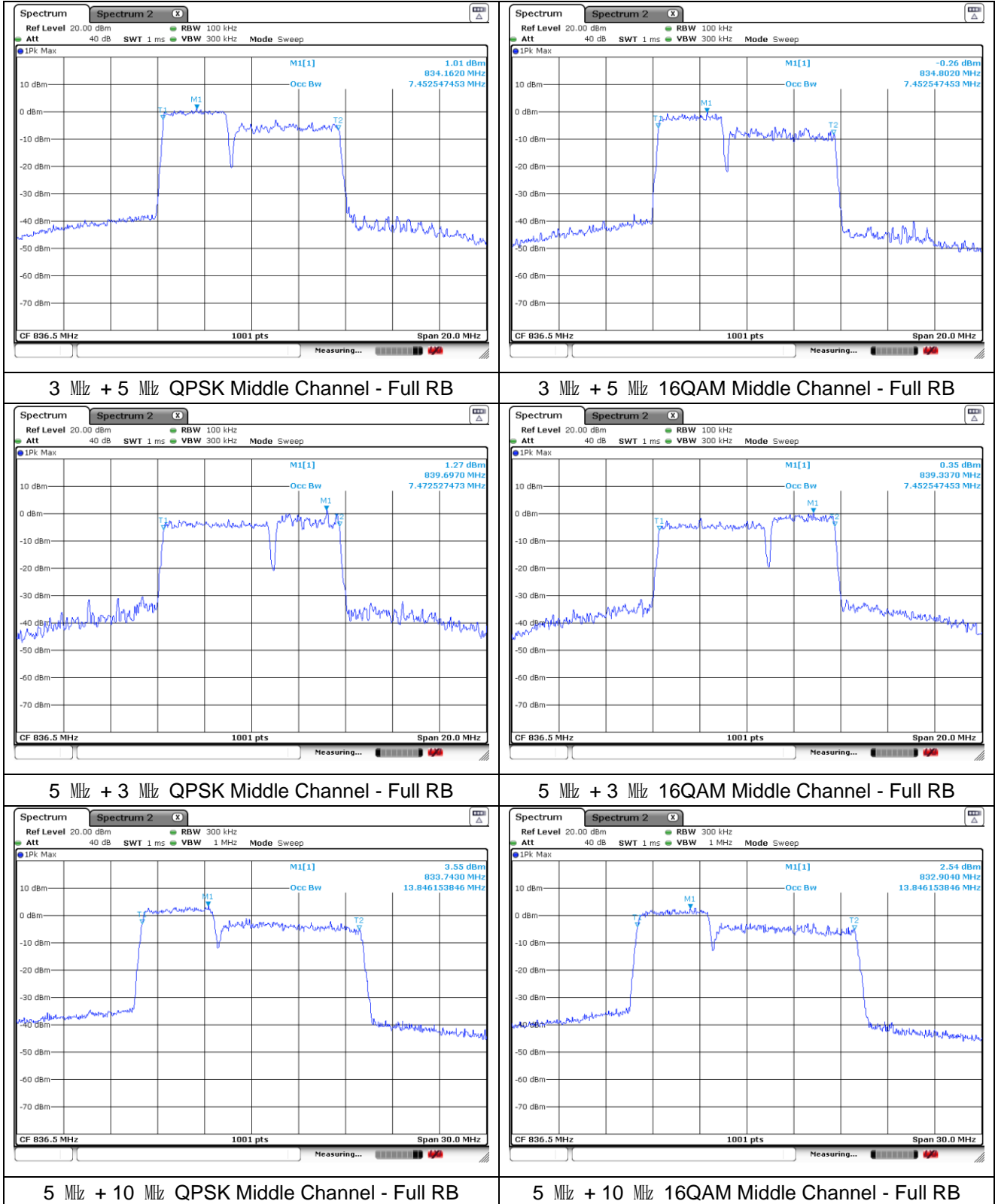
Band	PCC			SCC			Occupied Bandwidth (MHz)	
	BW (MHz)	Frequency (MHz)	Channel	BW (MHz)	Frequency (MHz)	Channel	QPSK	16QAM
5B	3	834.1	20501	5	838.0	20540	7.453	7.453
	5	835.0	20510	3	838.9	20549	7.473	7.453
	5	831.8	20478	10	839.0	20550	13.846	13.846
	10	834.0	20500	5	841.2	20572	13.846	13.846
	10	831.6	20476	10	841.5	20575	18.741	18.741
7C	10	2 525.6	21006	20	2 540.0	21150	27.632	27.632
	20	2 530.1	21051	10	2 544.5	21195	27.692	27.632
	15	2 530.1	21051	15	2 542.1	21171	28.232	28.172
	15	2 530.1	21051	10	2 542.1	21171	23.027	23.077
	15	2 525.3	21003	20	2 542.4	21174	32.657	32.587
	20	2 527.6	21026	15	2 544.7	21197	32.657	32.587
	20	2 525.1	21001	20	2 544.9	21199	37.403	37.483
66B	5	1 752.6	132398	5	1 757.4	132446	9.231	9.211
	5	1 750.3	132375	10	1 757.5	132447	13.936	13.906
	10	1 752.5	132397	5	1 759.7	132469	13.906	13.936
	5	1 748.1	132353	15	1 757.4	132446	18.182	18.102
	15	1 752.6	132398	5	1 761.9	132491	18.222	18.262
	10	1 750.1	132373	10	1 760.0	132472	18.741	18.781
66C	10	1 747.9	132351	15	1 759.9	132471	23.057	23.017
	15	1 750.1	132373	10	1 762.1	132493	23.017	23.097
	10	1 745.6	132328	20	1 760.0	132472	27.632	27.572
	20	1 750.1	132373	10	1 764.5	132517	27.752	27.692
	15	1 747.5	132347	15	1 762.5	132497	28.352	28.232
	15	1 745.3	132325	20	1 762.4	132496	32.657	32.657
	20	1 747.6	132348	15	1 764.7	132519	32.657	32.657
	20	1 752.5	132397	5	1 764.2	132514	22.827	22.877
	5	1 745.8	132330	20	1 757.5	132447	22.727	22.677
20	1 745.1	132323	20	1 764.9	132521	37.483	37.562	

Note;

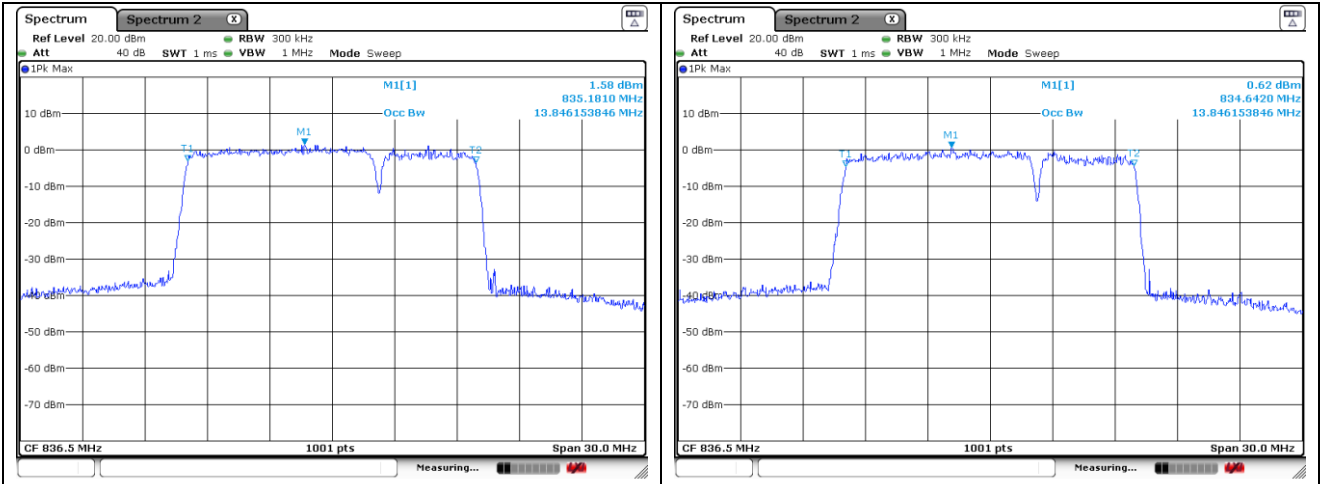
There is no limit required and power is the same for low, middle and high channel; therefore, All channels were tested but only middle was reported.

- Test plots

ULCA 5B

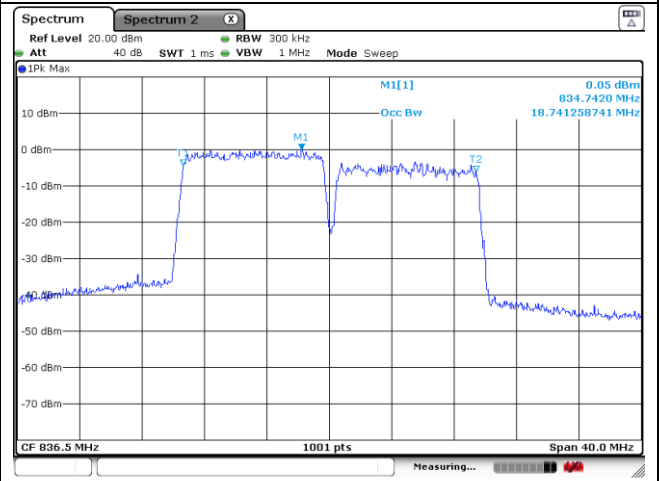
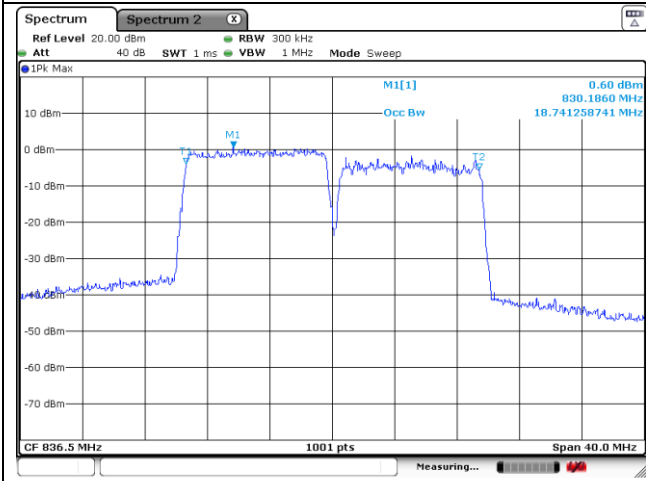


ULCA 5B



10 MHz + 5 MHz QPSK Middle Channel - Full RB

10 MHz + 5 MHz 16QAM Middle Channel - Full RB



10 MHz + 10 MHz QPSK Middle Channel - Full RB

10 MHz + 10 MHz 16QAM Middle Channel - Full RB

ULCA 7C

