

Appendix-WCDMA

AppendixA: Effective (Isotropic) Radiated Power Output Data

Test Result(WCDMA)

Band	Type	Channel	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
Band2	TestMode	9262	20.59	21.09	33	PASS
Band2	TestMode	9400	23.07	23.57	33	PASS
Band2	TestMode	9538	23.07	23.57	33	PASS
Band4	TestMode	1312	22.45	22.95	30	PASS
Band4	TestMode	1413	22.52	23.02	30	PASS
Band4	TestMode	1513	22.61	23.11	30	PASS
Band5	TestMode	4132	22.63	20.98	38.5	PASS
Band5	TestMode	4183	22.60	20.95	38.5	PASS
Band5	TestMode	4233	22.43	20.78	38.5	PASS

Test Result(HSDPA)

Band	Channel	SubTest	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
Band2	9262	1	22.36	22.86	33	PASS
Band2	9262	2	22.58	23.08	33	PASS
Band2	9262	3	22.62	23.12	33	PASS
Band2	9262	4	22.61	23.11	33	PASS
Band2	9400	1	22.76	23.26	33	PASS
Band2	9400	2	22.77	23.27	33	PASS
Band2	9400	3	22.86	23.36	33	PASS
Band2	9400	4	22.85	23.35	33	PASS
Band2	9538	1	22.66	23.16	33	PASS
Band2	9538	2	22.66	23.16	33	PASS
Band2	9538	3	22.65	23.15	33	PASS
Band2	9538	4	22.64	23.14	33	PASS
Band4	1312	1	20.44	20.94	30	PASS
Band4	1312	2	20.01	20.51	30	PASS
Band4	1312	3	20.06	20.56	30	PASS
Band4	1312	4	19.97	20.47	30	PASS
Band4	1413	1	20.74	21.24	30	PASS
Band4	1413	2	20.79	21.29	30	PASS

Band4	1413	3	20.77	21.27	30	PASS
Band4	1413	4	20.90	21.4	30	PASS
Band4	1513	1	19.96	20.46	30	PASS
Band4	1513	2	20.03	20.53	30	PASS
Band4	1513	3	20.02	20.52	30	PASS
Band4	1513	4	20.05	20.55	30	PASS
Band5	4132	1	21.40	19.75	38.5	PASS
Band5	4132	2	21.35	19.7	38.5	PASS
Band5	4132	3	21.34	19.69	38.5	PASS
Band5	4132	4	21.33	19.68	38.5	PASS
Band5	4183	1	21.76	20.11	38.5	PASS
Band5	4183	2	21.74	20.09	38.5	PASS
Band5	4183	3	21.73	20.08	38.5	PASS
Band5	4183	4	21.73	20.08	38.5	PASS
Band5	4233	1	21.30	19.65	38.5	PASS
Band5	4233	2	21.27	19.62	38.5	PASS
Band5	4233	3	21.27	19.62	38.5	PASS
Band5	4233	4	21.27	19.62	38.5	PASS

Test Result(HSUPA)

Band	Channel	SubTest	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
Band2	9262	1	19.61	20.11	33	PASS
Band2	9262	2	19.74	20.24	33	PASS
Band2	9262	3	19.74	20.24	33	PASS
Band2	9262	4	19.75	20.25	33	PASS
Band2	9262	5	22.05	22.55	33	PASS
Band2	9400	1	19.80	20.3	33	PASS
Band2	9400	2	20.05	20.55	33	PASS
Band2	9400	3	20.05	20.55	33	PASS
Band2	9400	4	20.01	20.51	33	PASS
Band2	9400	5	22.44	22.94	33	PASS
Band2	9538	1	20.05	20.55	33	PASS
Band2	9538	2	20.07	20.57	33	PASS
Band2	9538	3	20.07	20.57	33	PASS
Band2	9538	4	20.07	20.57	33	PASS
Band2	9538	5	22.34	22.84	33	PASS
Band4	1312	1	18.67	19.17	30	PASS

Band4	1312	2	18.67	19.17	30	PASS
Band4	1312	3	18.64	19.14	30	PASS
Band4	1312	4	18.71	19.21	30	PASS
Band4	1312	5	19.96	20.46	30	PASS
Band4	1413	1	19.56	20.06	30	PASS
Band4	1413	2	19.77	20.27	30	PASS
Band4	1413	3	19.81	20.31	30	PASS
Band4	1413	4	19.80	20.3	30	PASS
Band4	1413	5	21.22	21.72	30	PASS
Band4	1513	1	18.96	19.46	30	PASS
Band4	1513	2	18.91	19.41	30	PASS
Band4	1513	3	18.98	19.48	30	PASS
Band4	1513	4	19.05	19.55	30	PASS
Band4	1513	5	20.50	21	30	PASS
Band5	4132	1	19.95	18.3	38.5	PASS
Band5	4132	2	19.77	18.12	38.5	PASS
Band5	4132	3	19.74	18.09	38.5	PASS
Band5	4132	4	19.75	18.1	38.5	PASS
Band5	4132	5	21.36	19.71	38.5	PASS
Band5	4183	1	20.22	18.57	38.5	PASS
Band5	4183	2	20.44	18.79	38.5	PASS
Band5	4183	3	20.43	18.78	38.5	PASS
Band5	4183	4	20.43	18.78	38.5	PASS
Band5	4183	5	21.57	19.92	38.5	PASS
Band5	4233	1	20.11	18.46	38.5	PASS
Band5	4233	2	20.11	18.46	38.5	PASS
Band5	4233	3	20.09	18.44	38.5	PASS
Band5	4233	4	20.09	18.44	38.5	PASS
Band5	4233	5	21.13	19.48	38.5	PASS

Remark: EIRP (dBm) = Conducted power (dBm) + Antenna Gain (dBi). (For Band2&4)

ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For Band5)

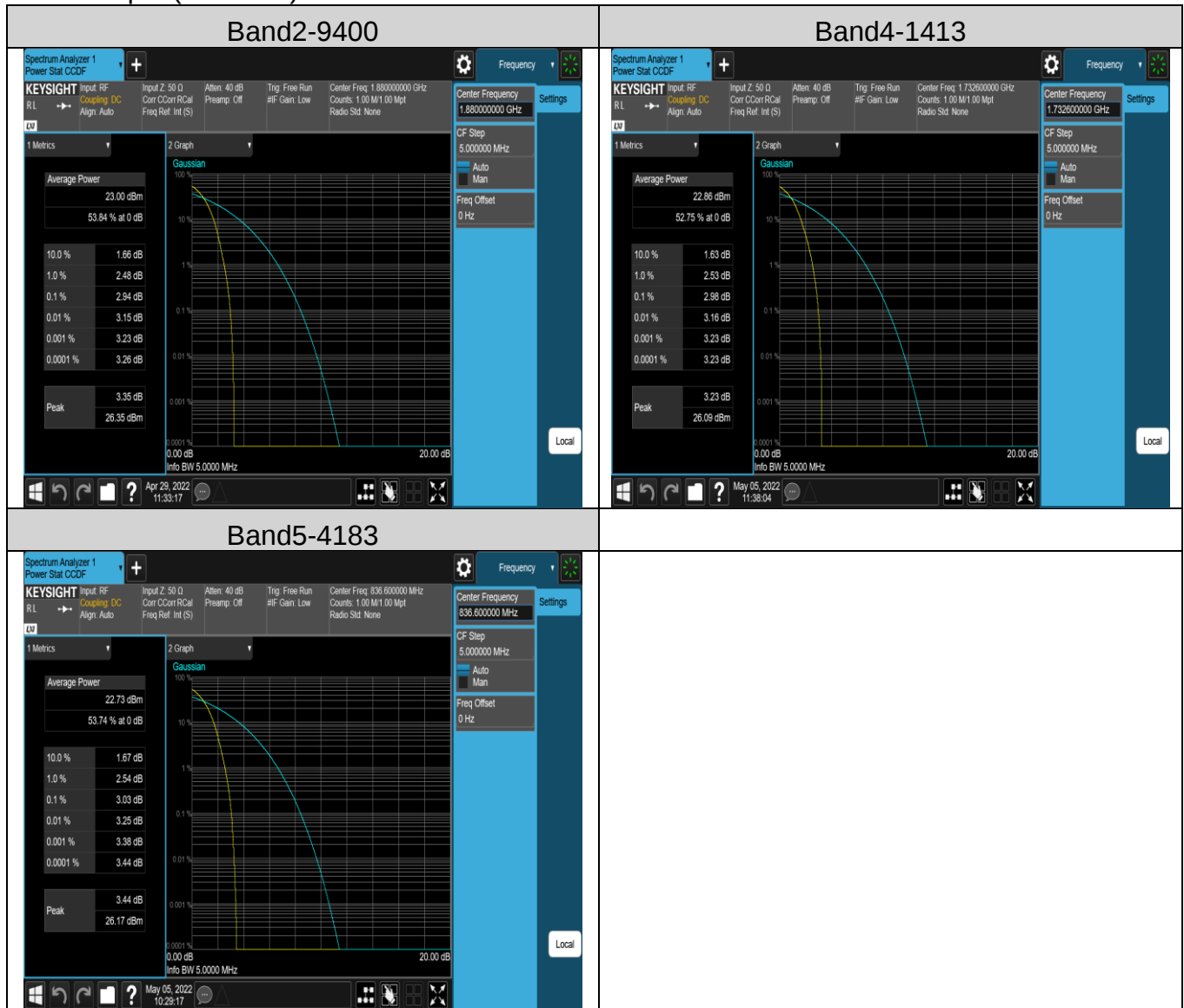
AppendixB:Peak-to-Average Ratio

Test Result(WCDMA)

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band2	9400	2.94	13	PASS
Band4	1413	2.98	13	PASS
Band5	4183	3.03	13	PASS

Remark: All channel had been tested, but only the worst case data displayed in this report.

Test Graphs(WCDMA)

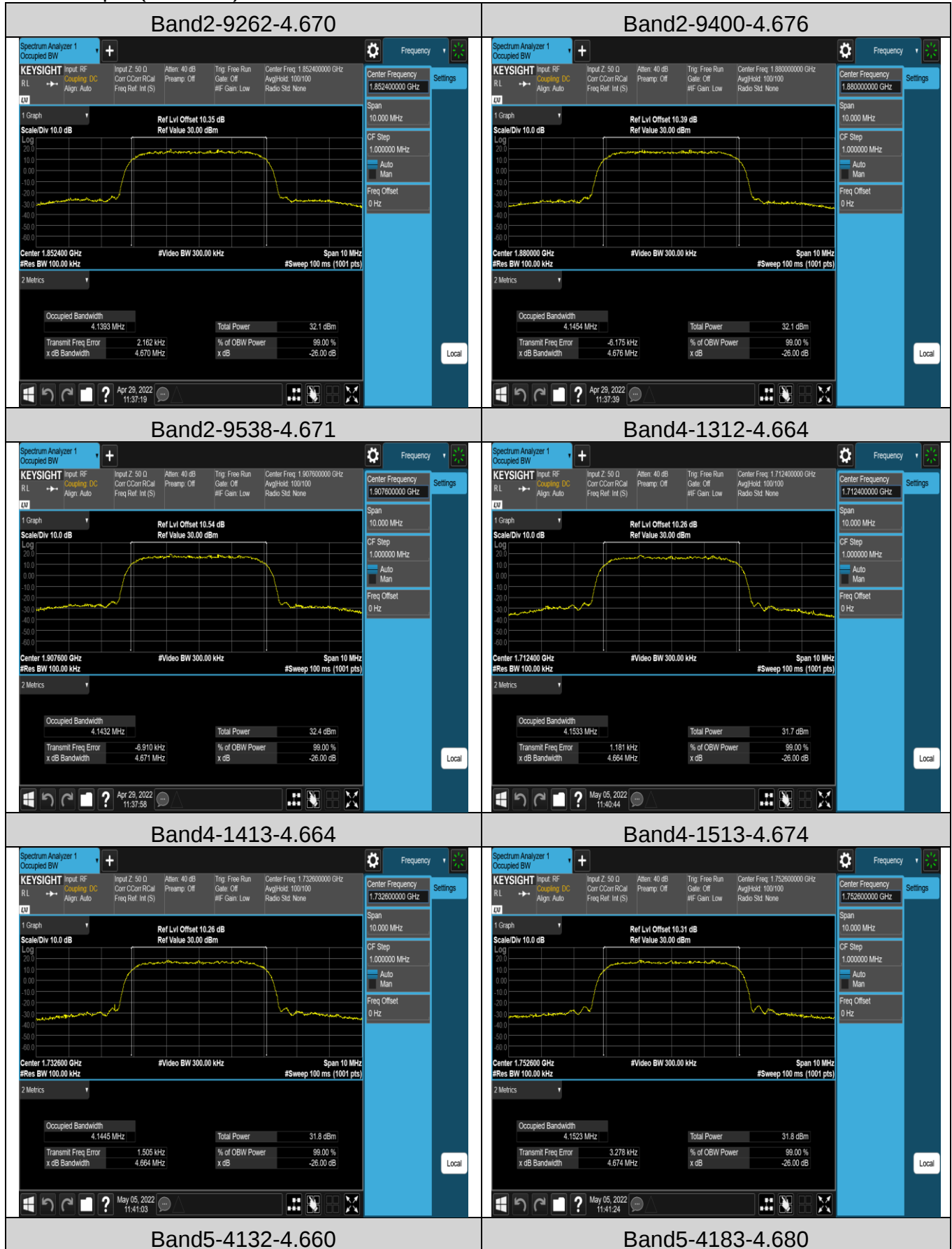


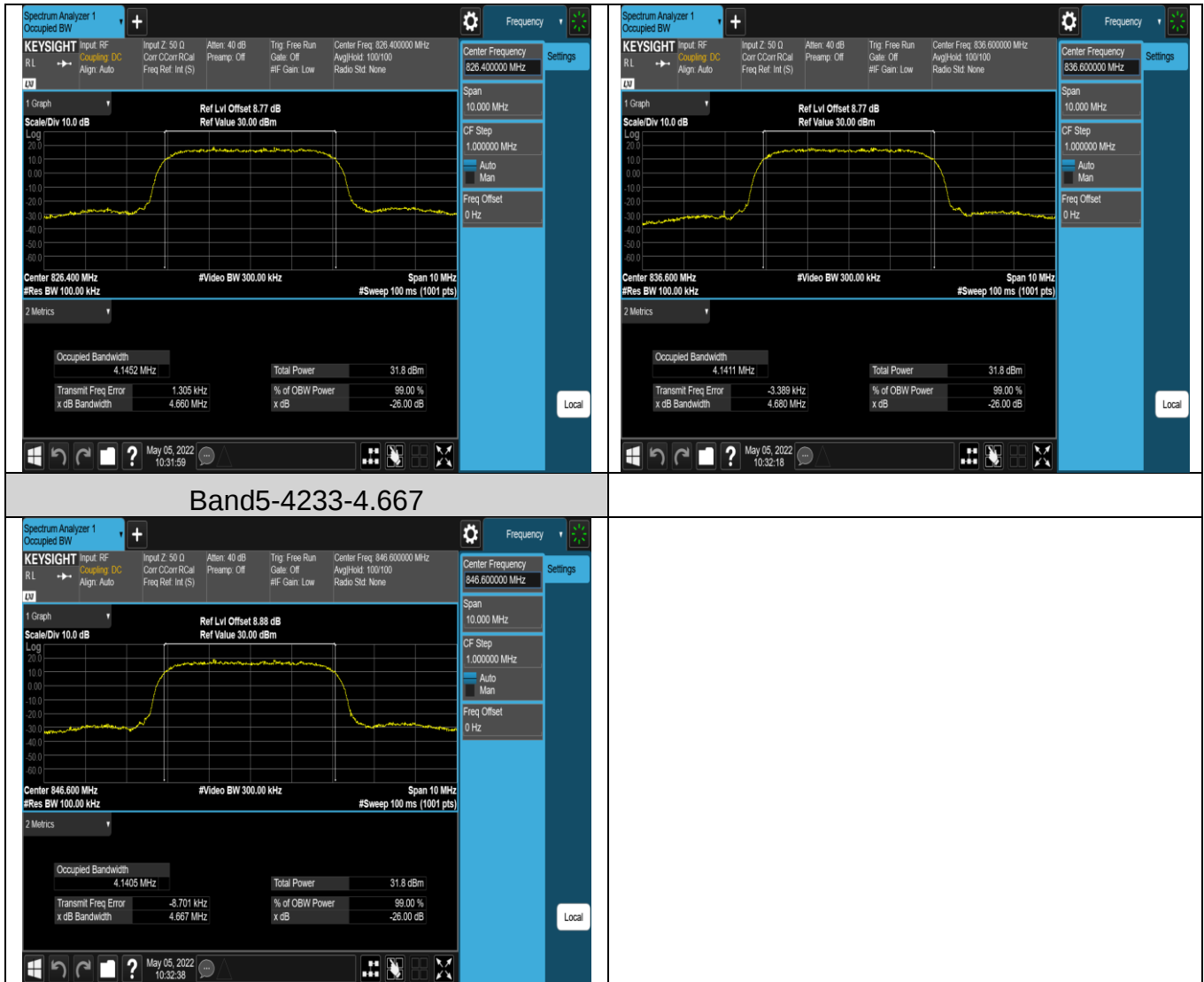
AppendixC:26dB Bandwidth andOccupied Bandwidth

Test Result(WCDMA)

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit(kHz)	Verdict
Band2	9262	4.1393	4.670	---	PASS
Band2	9400	4.1454	4.676	---	PASS
Band2	9538	4.1432	4.671	---	PASS
Band4	1312	4.1533	4.664	---	PASS
Band4	1413	4.1445	4.664	---	PASS
Band4	1513	4.1523	4.674	---	PASS
Band5	4132	4.1452	4.660	---	PASS
Band5	4183	4.1411	4.680	---	PASS
Band5	4233	4.1405	4.667	---	PASS

Test Graphs(WCDMA)



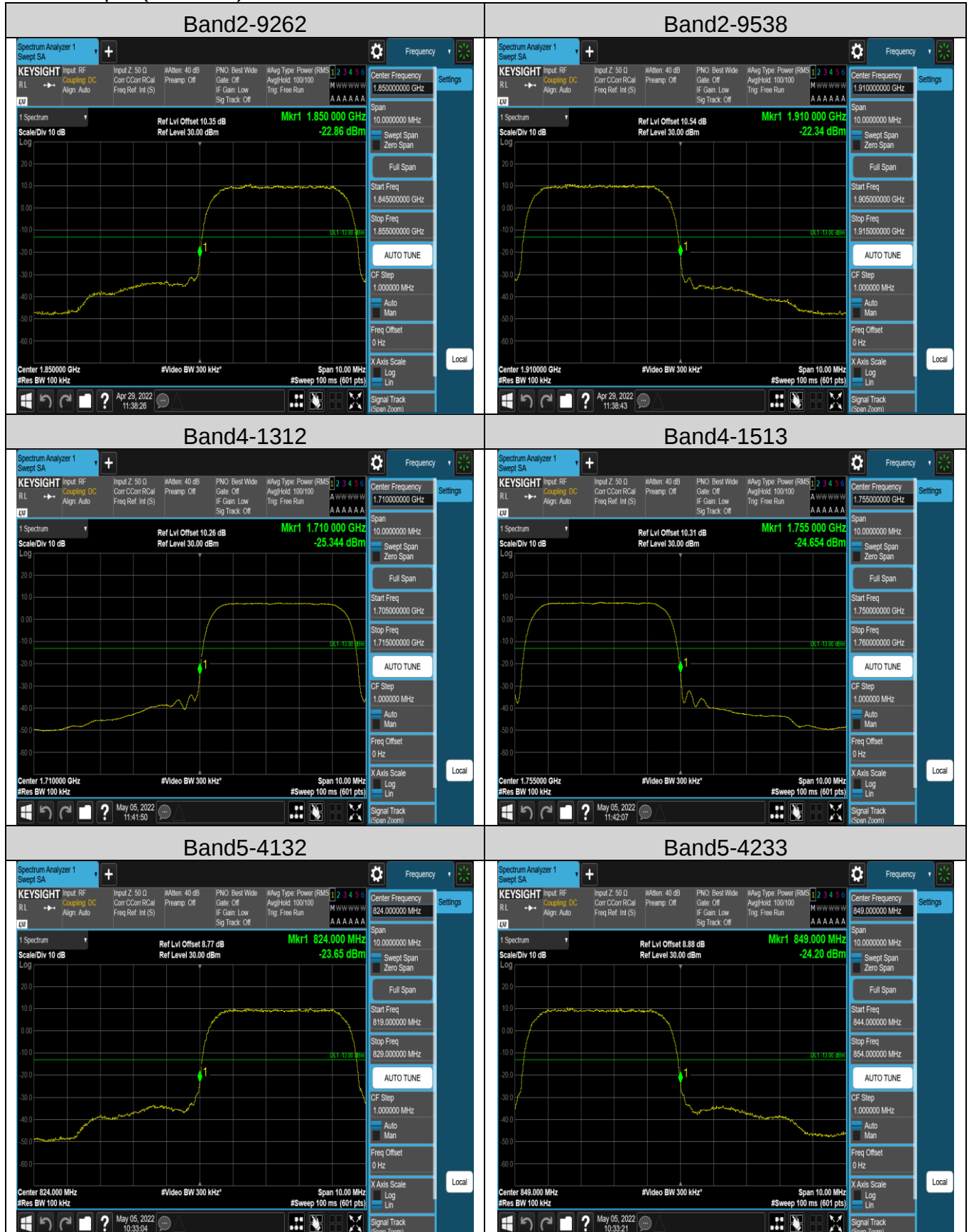


AppendixD:Band Edge

Test Result(WCDMA)

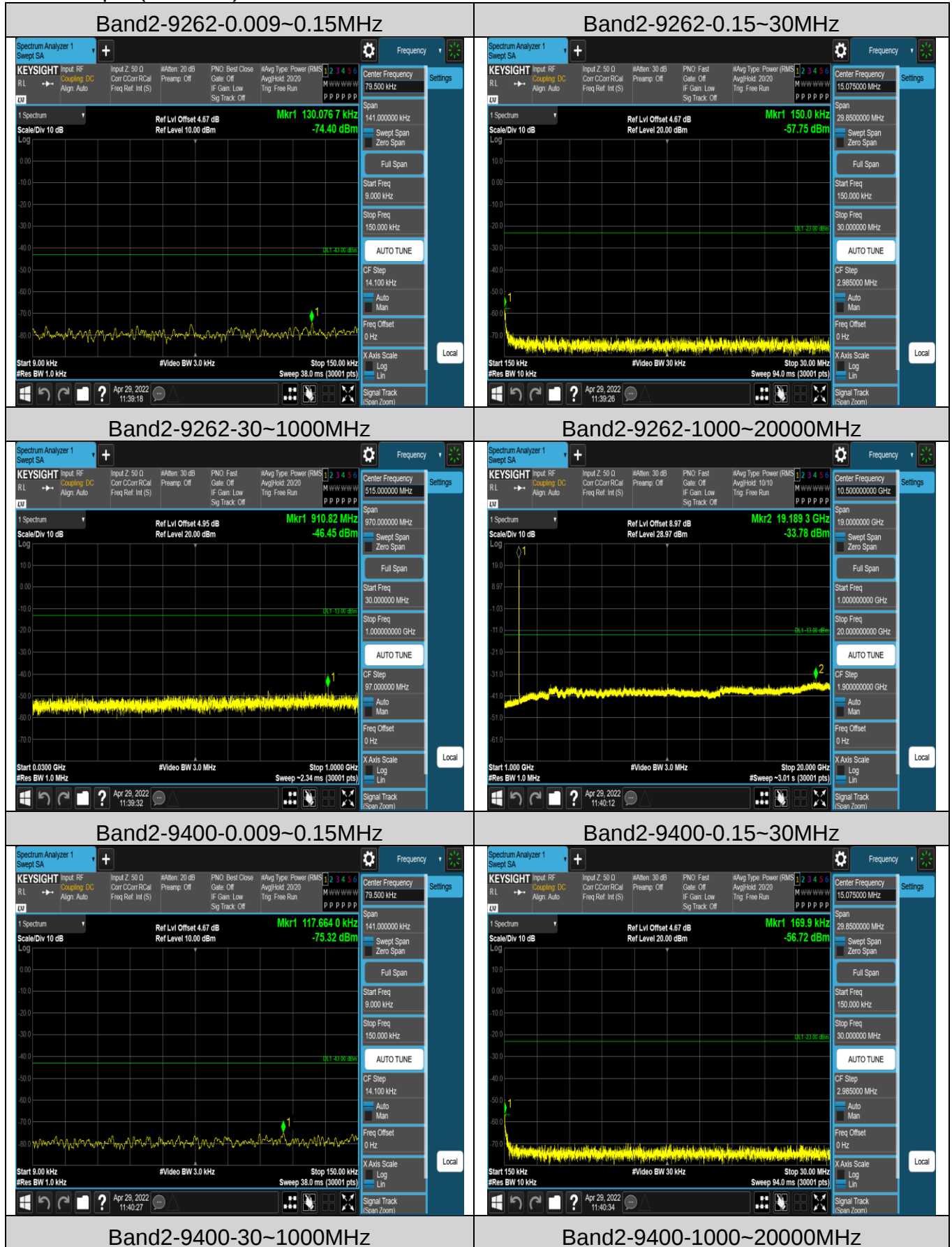
Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band2	9262	1850.00	-22.86	-13	PASS
Band2	9538	1910.00	-22.34	-13	PASS
Band4	1312	1710.00	-25.34	-13	PASS
Band4	1513	1755.00	-24.65	-13	PASS
Band5	4132	824.00	-23.65	-13	PASS
Band5	4233	849.00	-24.20	-13	PASS

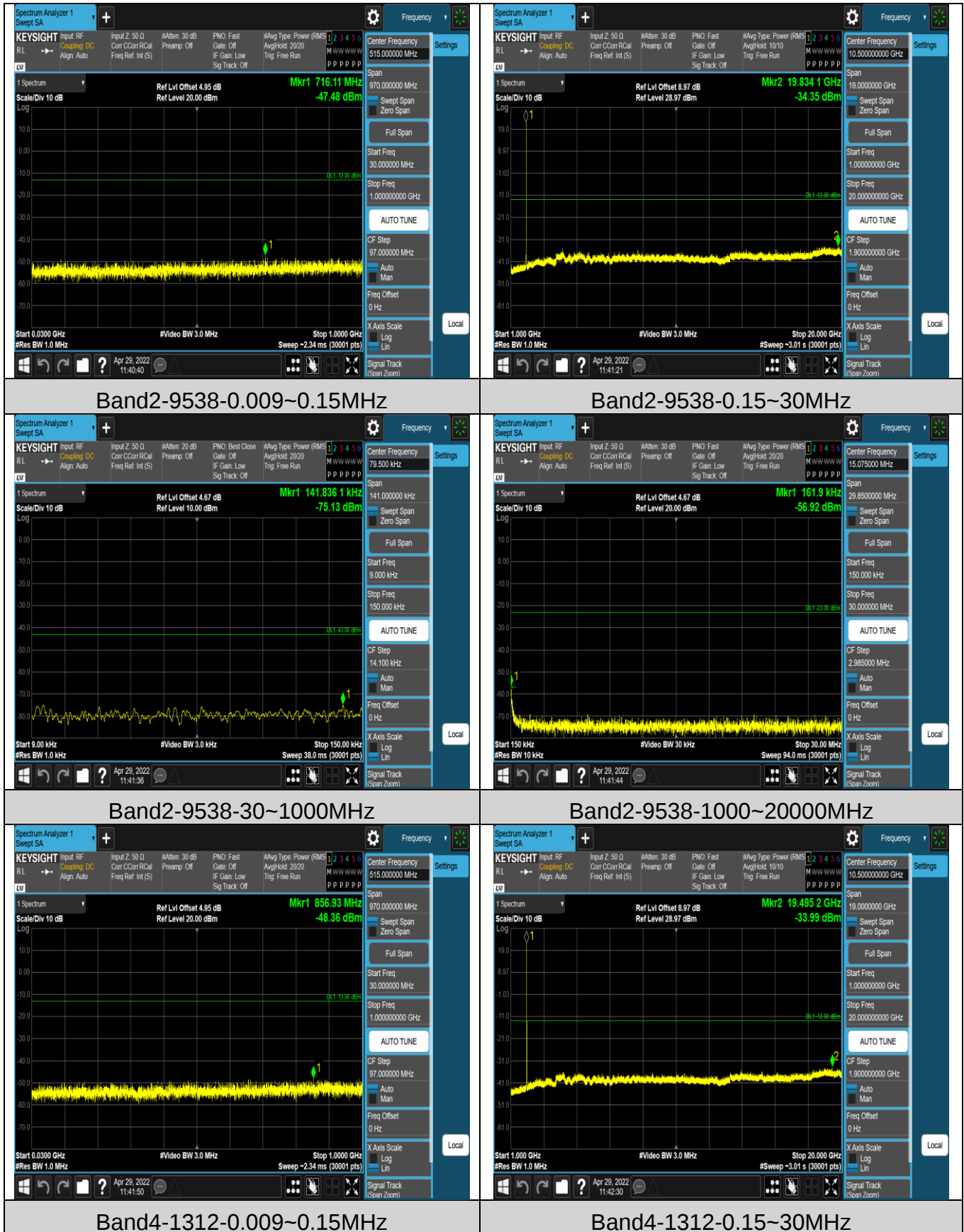
Test Graphs(WCDMA)

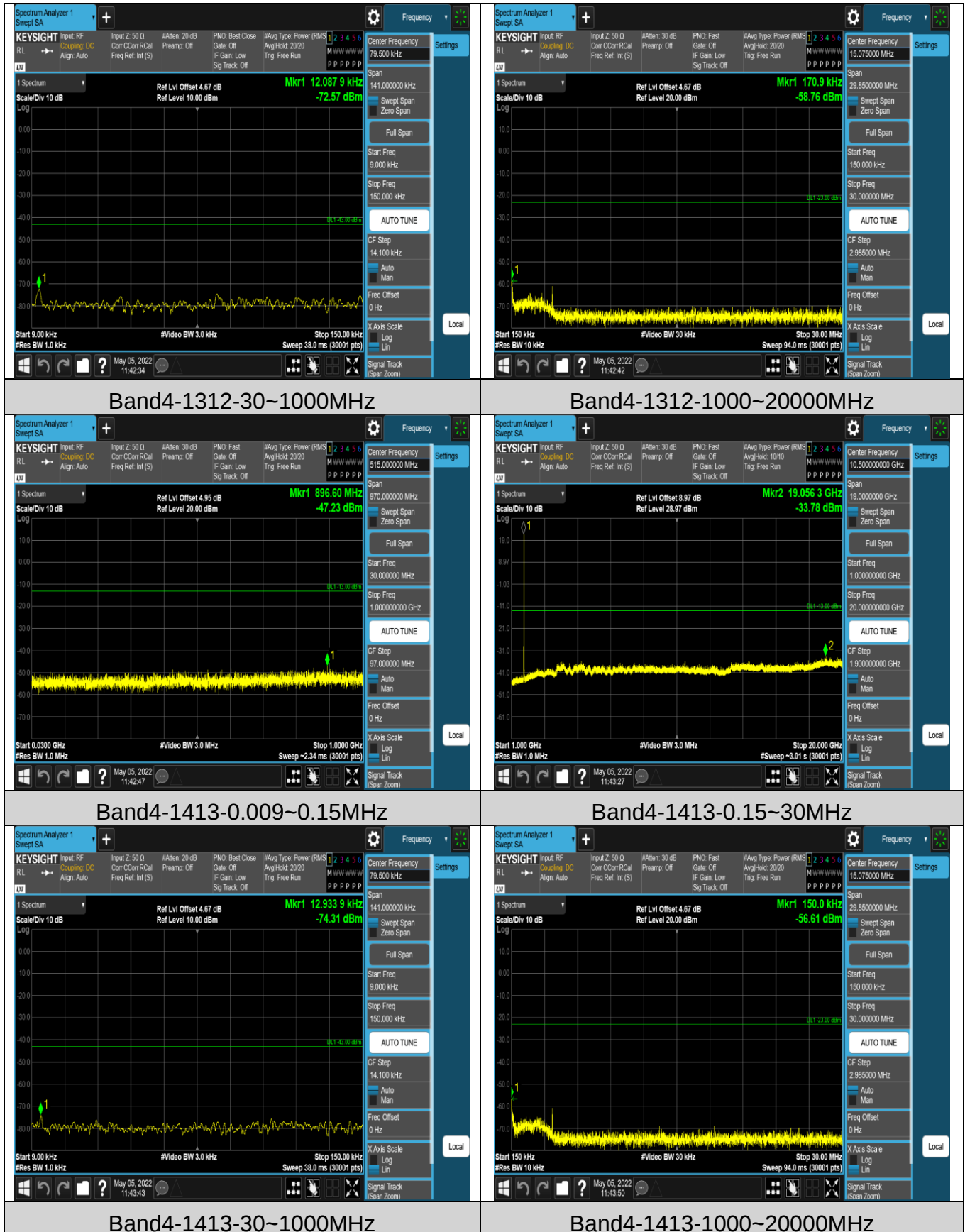

AppendixE:Conducted SpuriousEmission
Test Result(WCDMA)

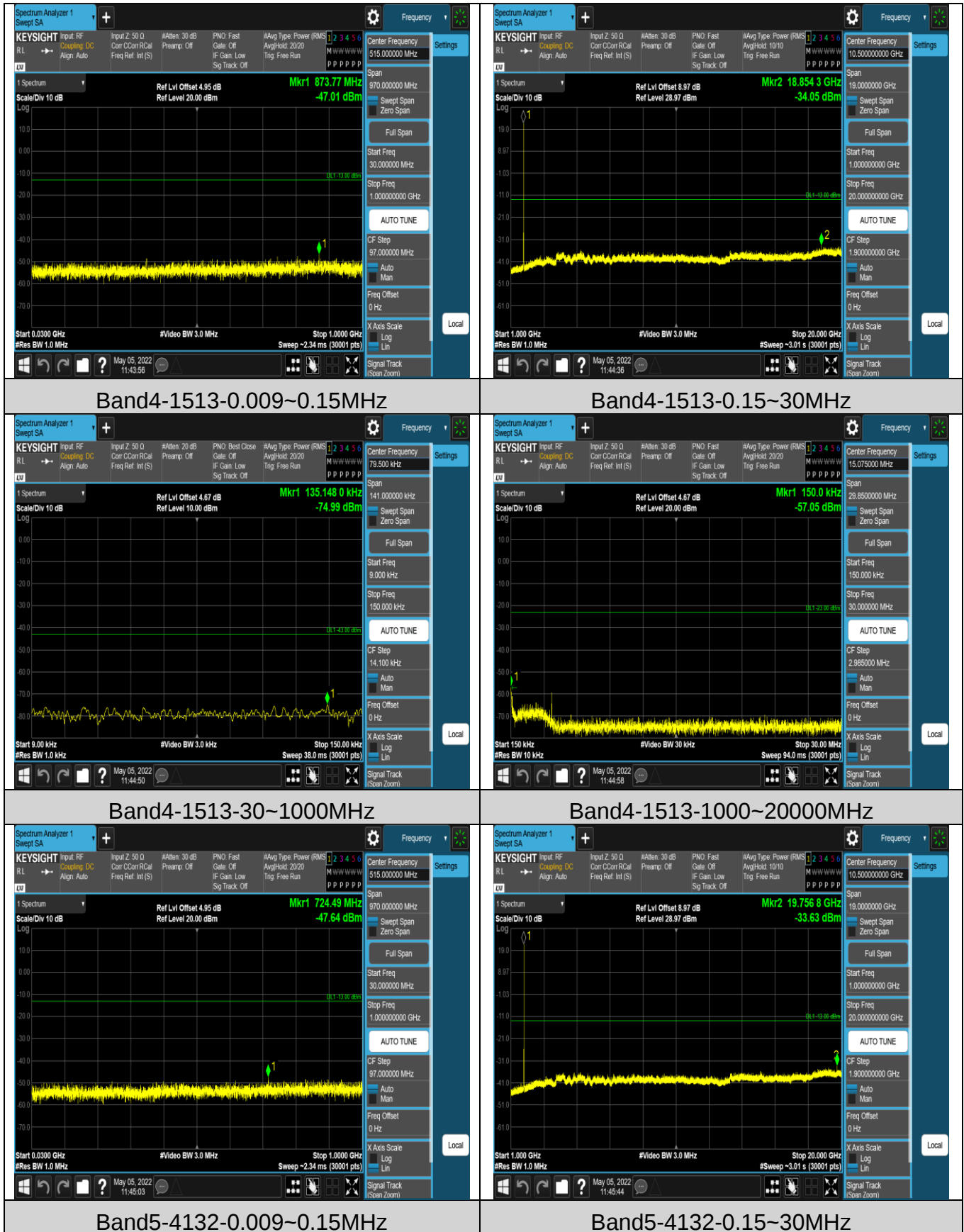
Band	Channel	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band2	9262	0.009~0.15MHz	0.13	-74.4	-43	PASS
Band2	9262	0.15~30MHz	0.15	-57.75	-23	PASS
Band2	9262	30~1000MHz	910.82	-46.45	-13	PASS
Band2	9262	1000~20000MHz	19189.33	-33.78	-13	PASS
Band2	9400	0.009~0.15MHz	0.12	-75.32	-43	PASS
Band2	9400	0.15~30MHz	0.17	-56.72	-23	PASS
Band2	9400	30~1000MHz	716.11	-47.48	-13	PASS
Band2	9400	1000~20000MHz	19834.07	-34.35	-13	PASS
Band2	9538	0.009~0.15MHz	0.14	-75.13	-43	PASS
Band2	9538	0.15~30MHz	0.16	-56.92	-23	PASS
Band2	9538	30~1000MHz	856.93	-48.36	-13	PASS
Band2	9538	1000~20000MHz	19495.23	-33.99	-13	PASS
Band4	1312	0.009~0.15MHz	0.01	-72.57	-43	PASS
Band4	1312	0.15~30MHz	0.17	-58.77	-23	PASS
Band4	1312	30~1000MHz	896.6	-47.23	-13	PASS
Band4	1312	1000~20000MHz	19056.33	-33.78	-13	PASS
Band4	1413	0.009~0.15MHz	0.01	-74.31	-43	PASS
Band4	1413	0.15~30MHz	0.15	-56.61	-23	PASS
Band4	1413	30~1000MHz	873.77	-47.01	-13	PASS
Band4	1413	1000~20000MHz	18854.3	-34.05	-13	PASS
Band4	1513	0.009~0.15MHz	0.14	-74.99	-43	PASS
Band4	1513	0.15~30MHz	0.15	-57.05	-23	PASS
Band4	1513	30~1000MHz	724.49	-47.64	-13	PASS
Band4	1513	1000~20000MHz	19756.8	-33.63	-13	PASS
Band5	4132	0.009~0.15MHz	0.01	-72.73	-33	PASS
Band5	4132	0.15~30MHz	0.15	-57.75	-13	PASS
Band5	4132	30~1000MHz	996.99	-57.45	-13	PASS
Band5	4132	1000~10000MHz	3962.2	-35.59	-13	PASS
Band5	4183	0.009~0.15MHz	0.01	-72.83	-33	PASS
Band5	4183	0.15~30MHz	0.15	-58.62	-13	PASS
Band5	4183	30~1000MHz	622.22	-57.51	-13	PASS
Band5	4183	1000~10000MHz	3967	-35.58	-13	PASS
Band5	4233	0.009~0.15MHz	0.01	-74.23	-33	PASS
Band5	4233	0.15~30MHz	0.16	-56.01	-13	PASS
Band5	4233	30~1000MHz	680.45	-57.37	-13	PASS
Band5	4233	1000~10000MHz	4931.8	-35.73	-13	PASS

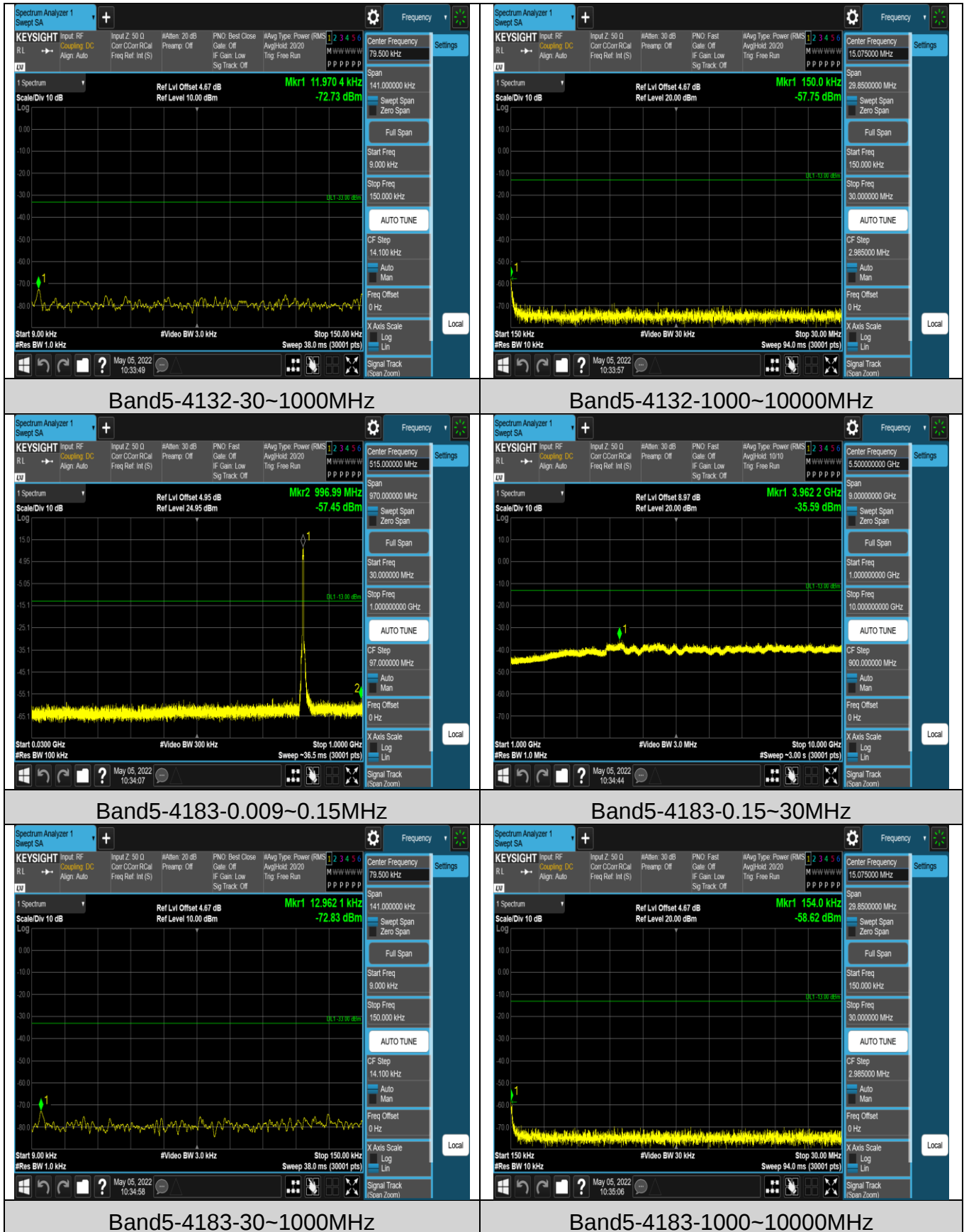
Test Graphs(WCDMA)

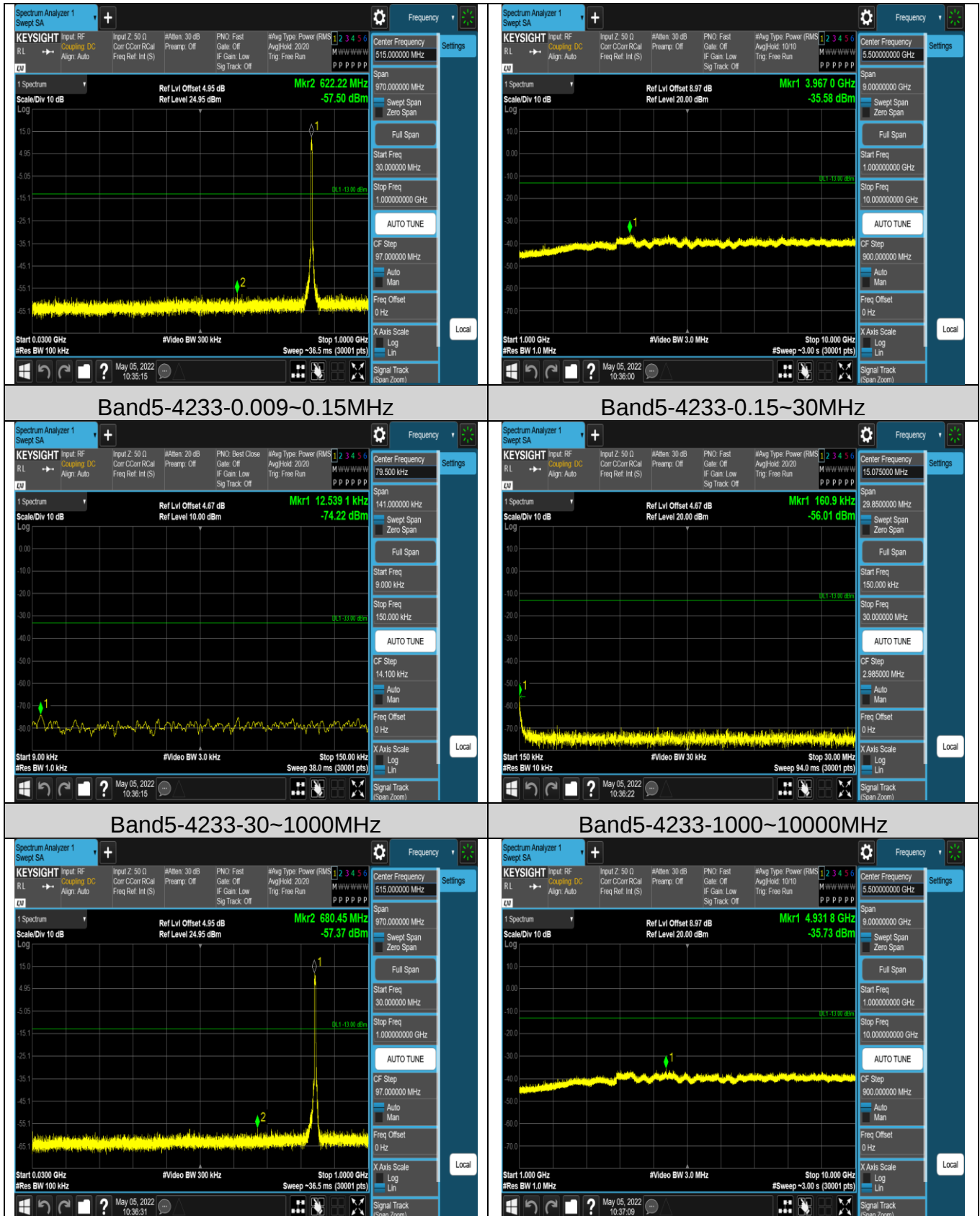












Appendix F: Frequency Stability

Test Result

Reference Frequency: WCDMA BAND V 12.2k RMC Middle channel=4183 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	-0.82	-0.000980	±2.5	Pass
	-20	1.04	0.001243		
	-10	2.34	0.002797		
	0	-0.27	-0.000323		
	10	-2.80	-0.003347		
	20	-0.39	-0.000466		
	30	0.01	0.000012		
	40	0.39	0.000466		
	50	-0.91	-0.001088		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-0.42	-0.000502	±2.5	Pass
	3.70	0.14	0.000167		
	4.20	0.04	0.000048		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: WCDMA BAND IV 12.2k RMC Middle Frequency=1413 channel=1732.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	4.05	0.002338	Within authorized band for BAND IV	Pass
	-20	4.58	0.002643		
	-10	7.46	0.004306		
	0	5.94	0.003428		
	10	4.12	0.002378		
	20	5.45	0.003146		
	30	6.51	0.003757		
	40	6.55	0.003780		
	50	3.65	0.002107		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	0.47	0.000271	Within authorized band for BAND IV	Pass
	3.70	1.60	0.000923		
	4.20	3.47	0.002003		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: WCDMA BAND II 12.2k RMC Middle Frequency=9400 channel=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	-0.11	-0.000059	Within authorized band for BAND II	Pass
	-20	0.16	0.000085		
	-10	0.46	0.000245		
	0	1.02	0.000543		
	10	0.01	0.000005		
	20	0.00	0.000000		
	30	0.09	0.000048		
	40	-0.92	-0.000489		
	50	0.24	0.000128		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-2.00	-0.001064	Within authorized band for BAND II	Pass
	3.70	-2.09	-0.001112		
	4.20	-0.59	-0.000314		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

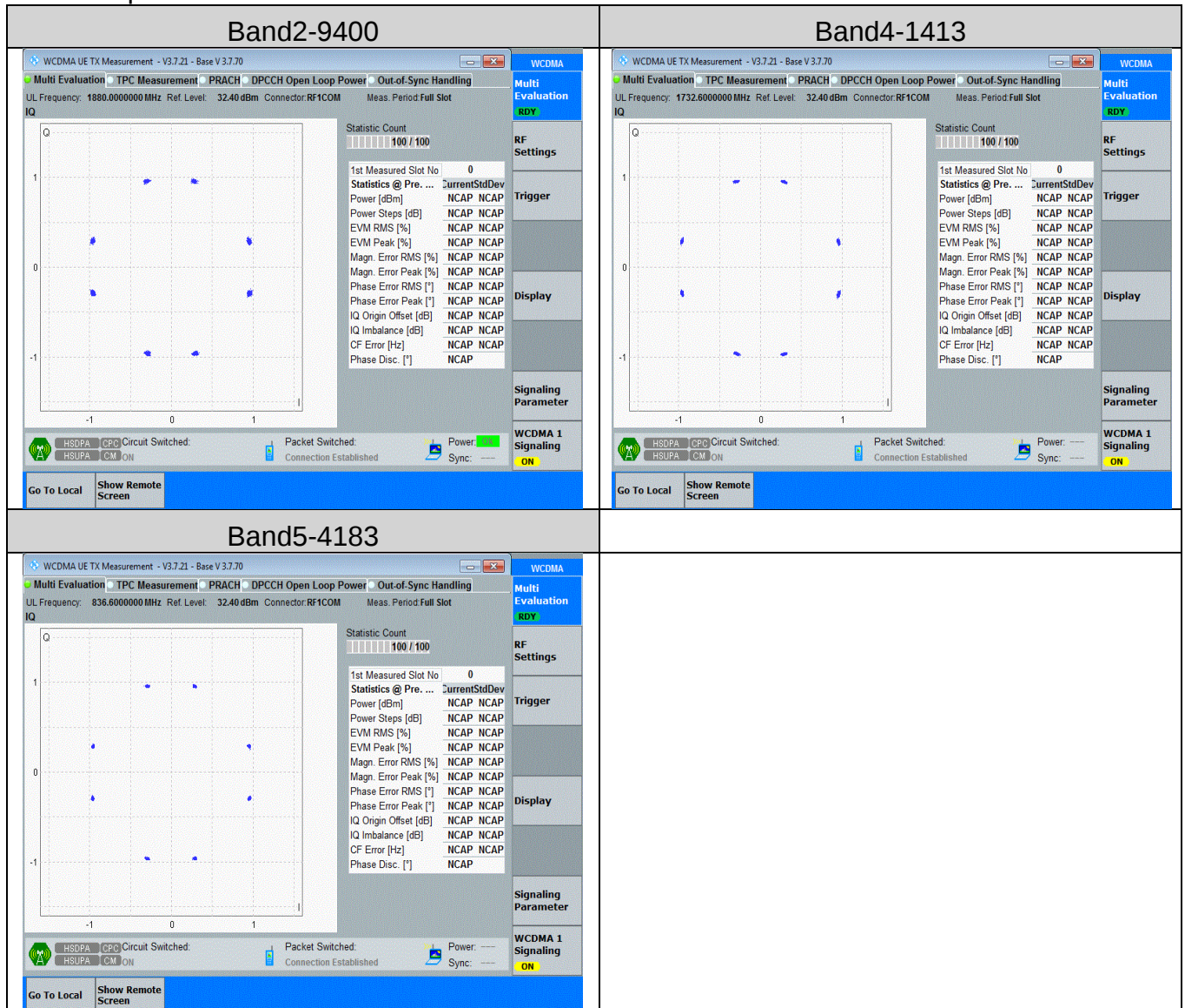
Appendix G: Modulation Characteristics

Test Result

Band	Channel	Result	Verdict
Band2	9400	PASS	PASS
Band4	1413	PASS	PASS
Band5	4183	PASS	PASS

Remark: All channel had been tested, but only the worst case data displayed in this report.

Test Graphs



-----End of report-----