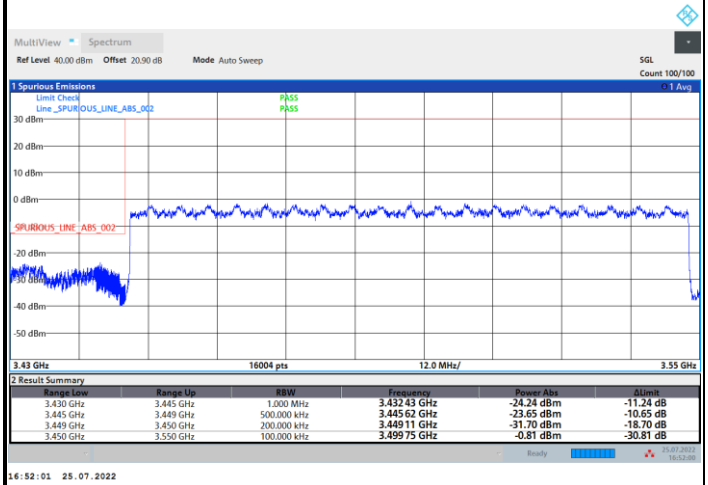
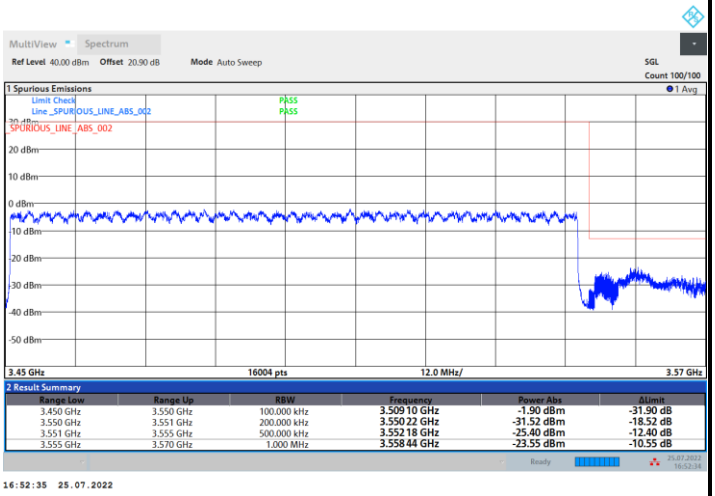
FR1 n77 / 100MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

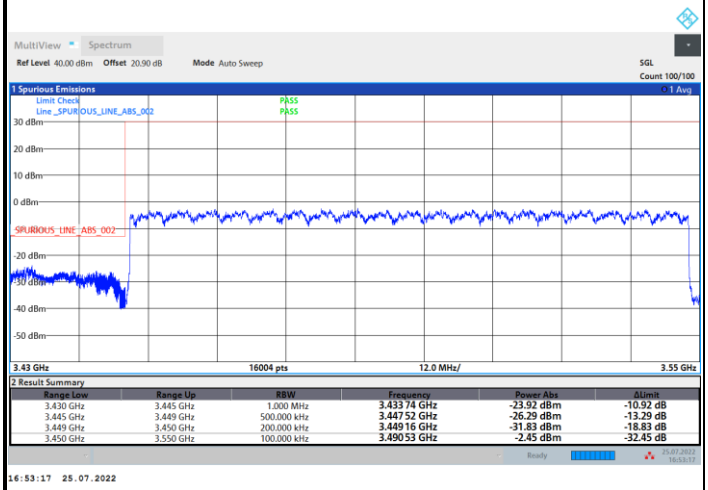


Highest Band Edge / Full RB

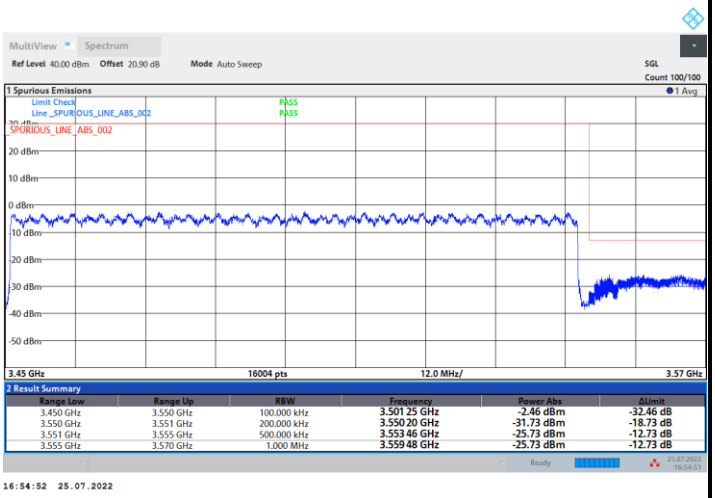


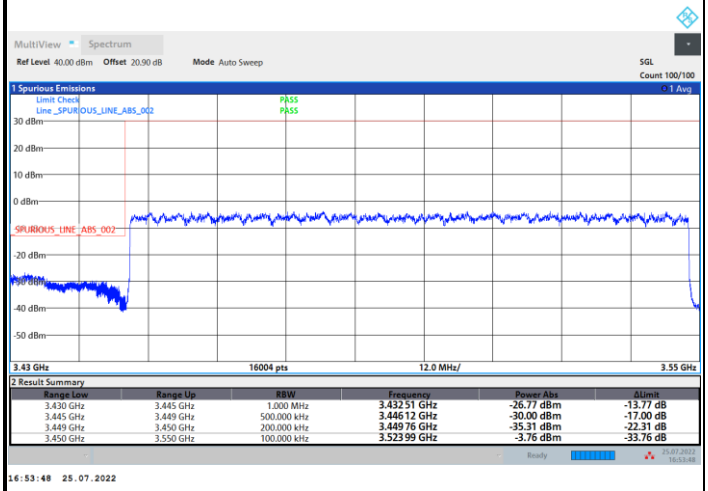
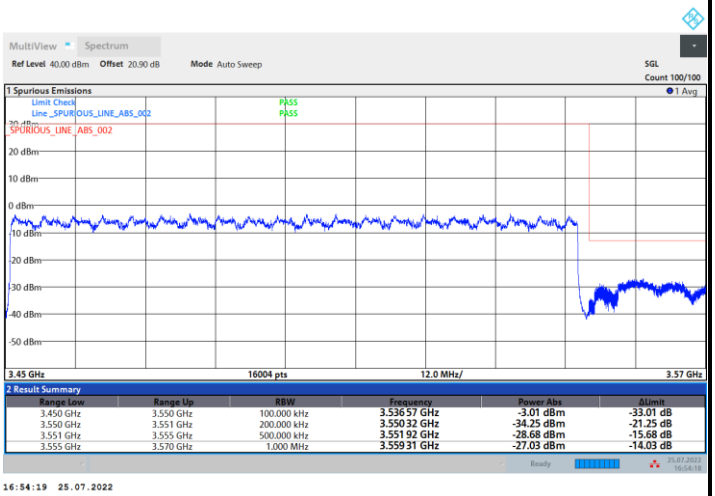
FR1 n77 / 100MHz / DFT-S OFDM / QPSK

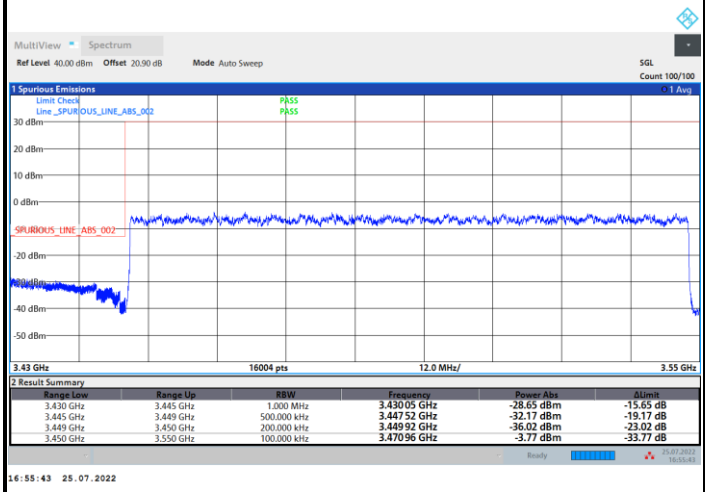
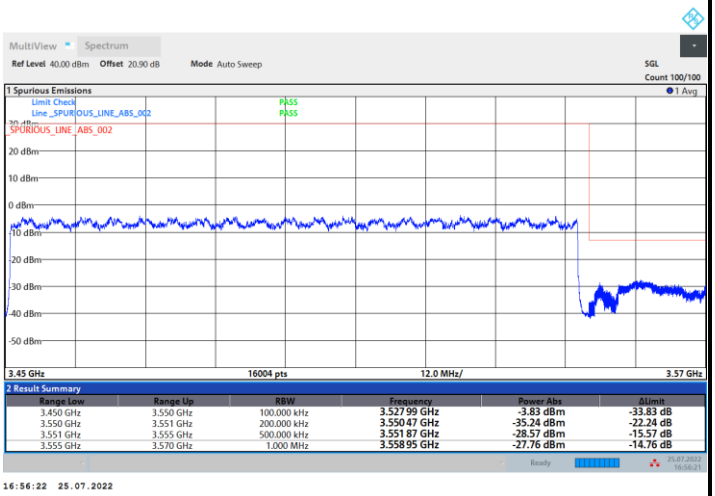
Lowest Band Edge / Full RB



Highest Band Edge / Full RB

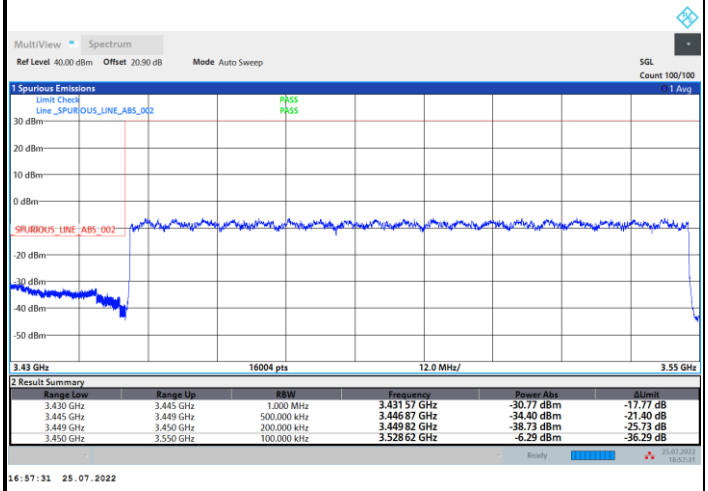


FR1 n77 / 100MHz / DFT-S OFDM / 16QAM	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

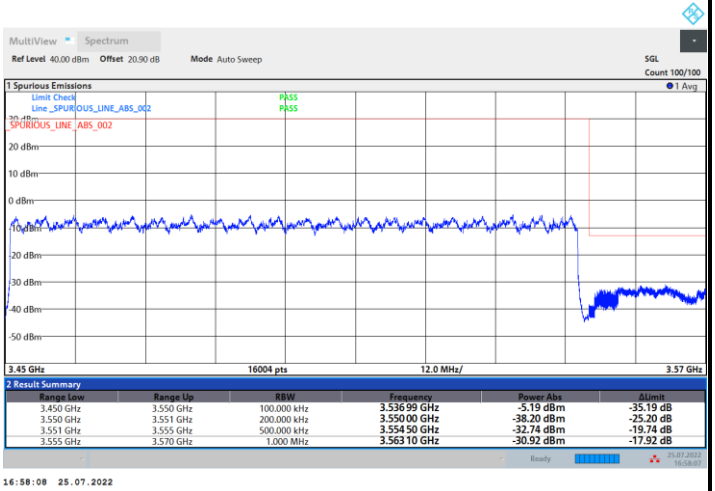
FR1 n77 / 100MHz / DFT-S OFDM / 64QAM	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n77 / 100MHz / DFT-S OFDM / 256QAM

Lowest Band Edge / Full RB

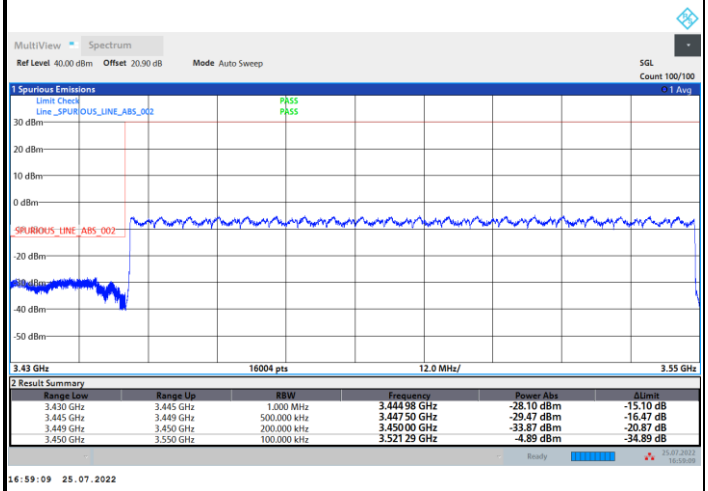


Highest Band Edge / Full RB

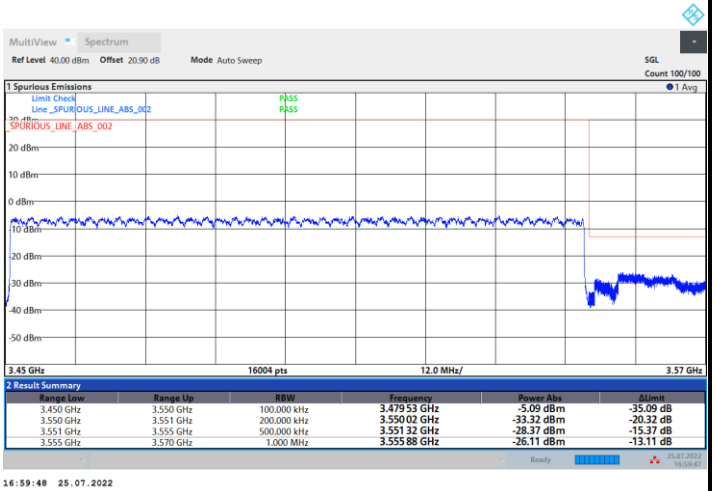


FR1 n77 / 100MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



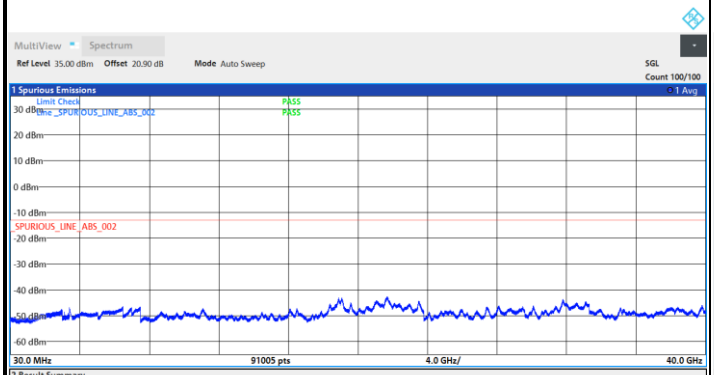
Highest Band Edge



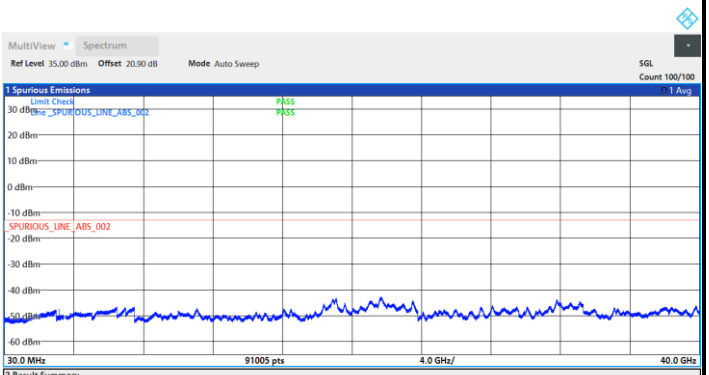
Conducted Spurious Emission

FR1 n77 / 20MHz / DFT-S OFDM / QPSK / 1RB1

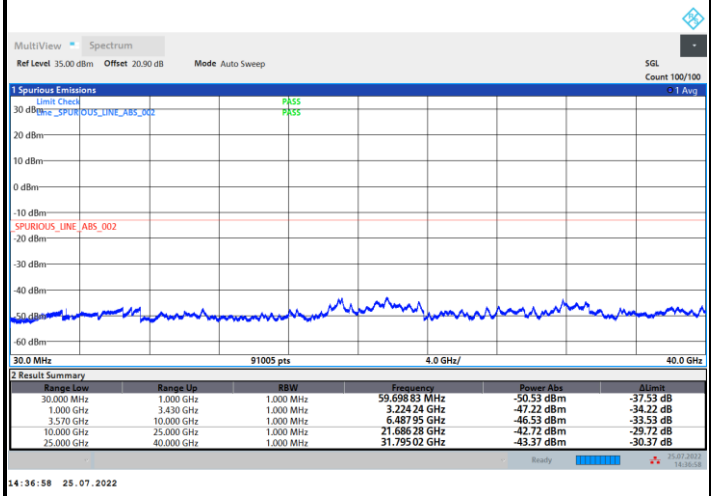
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n77 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0019	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0030	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0015	
20	Maximum Voltage	0.0018	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0015	

Note:

1. Normal Voltage = 4.05 V.；Battery End Point (BEP) = 3.85 V.；Maximum Voltage = 4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

<Ant. 11>

5G NR n77

SA NR n77 / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	6903	-42.23	-13	-29.23	-71.64	-50.42	1.84	12.19	H
	10354	-35.68	-13	-22.68	-71.48	-42.16	2.26	10.89	H
	13805	-28.82	-13	-15.82	-72.72	-36.59	2.63	12.56	H
	20708	-62.46	-13	-49.46	-74.36	-75.00	3.22	17.92	H
	24159	-59.04	-13	-46.04	-76.23	-71.60	3.78	18.50	H
	27610	-56.37	-13	-43.37	-76.57	-69.82	3.95	19.54	H
									H
	6903	-42.09	-13	-29.09	-72	-50.28	1.84	12.19	V
	10354	-36.57	-13	-23.57	-71.58	-43.05	2.26	10.89	V
	13805	-29.46	-13	-16.46	-72.33	-37.23	2.63	12.56	V
	20708	-62.30	-13	-49.30	-73.96	-74.84	3.22	17.92	V
	24159	-58.89	-13	-45.89	-75.72	-71.45	3.78	18.50	V
	27610	-56.67	-13	-43.67	-76.55	-70.12	3.95	19.54	V
Middle	6983	-42.47	-13	-29.47	-71.96	-50.35	1.84	11.87	H
	10474	-36.08	-13	-23.08	-72.02	-42.49	2.25	10.82	H
	13965	-29.93	-13	-16.93	-73.16	-37.54	2.66	12.43	H
	20948	-62.46	-13	-49.46	-74.37	-74.89	3.24	17.82	H
	24439	-58.47	-13	-45.47	-76.38	-71.23	3.76	18.66	H
	27930	-56.12	-13	-43.12	-76.44	-69.68	3.97	19.67	H
									H
	6983	-42.11	-13	-29.11	-71.76	-49.99	1.84	11.87	V
	10474	-36.93	-13	-23.93	-72.27	-43.34	2.25	10.82	V
	13965	-30.61	-13	-17.61	-73.19	-38.22	2.66	12.43	V
	20948	-62.37	-13	-49.37	-73.99	-74.80	3.24	17.82	V
	24439	-58.73	-13	-45.73	-76.33	-71.49	3.76	18.66	V
	27930	-56.92	-13	-43.92	-76.85	-70.48	3.97	19.67	V

Highest	7063	-42.18	-13	-29.18	-71.93	-49.83	1.84	11.64	H
	10594	-36.32	-13	-23.32	-72.49	-42.67	2.24	10.74	H
	14125	-29.50	-13	-16.50	-72.59	-37.02	2.66	12.33	H
	21188	-62.11	-13	-49.11	-74.61	-74.70	3.29	18.03	H
	24719	-58.50	-13	-45.50	-76.7	-71.19	3.73	18.57	H
	28250	-55.47	-13	-42.47	-75.95	-68.89	3.98	19.55	H
									H
	7063	-41.95	-13	-28.95	-71.88	-49.60	1.84	11.64	V
	10594	-36.48	-13	-23.48	-72.18	-42.83	2.24	10.74	V
	14125	-29.79	-13	-16.79	-72.58	-37.31	2.66	12.33	V
	21188	-62.54	-13	-49.54	-74.61	-75.13	3.29	18.03	V
	24719	-58.45	-13	-45.45	-76.7	-71.14	3.73	18.57	V
	28250	-55.56	-13	-42.56	-75.95	-68.98	3.98	19.55	V
									V

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

5G NR n78

SA NR n78 / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	6902	-43.42	-13	-30.42	-72.83	-51.62	1.84	12.19	H
	10353	-35.84	-13	-22.84	-71.64	-42.32	2.26	10.89	H
	13808	-29.37	-13	-16.37	-73.27	-37.14	2.64	12.55	H
	20708	-61.92	-13	-48.92	-73.82	-74.46	3.22	17.92	H
	24159	-58.92	-13	-45.92	-76.11	-71.48	3.78	18.50	H
	27610	-56.17	-13	-43.17	-76.37	-69.62	3.95	19.54	H
									H
	6902	-42.70	-13	-29.70	-72.61	-50.90	1.84	12.19	V
	10353	-36.87	-13	-23.87	-71.88	-43.35	2.26	10.89	V
	13808	-30.31	-13	-17.31	-73.18	-38.08	2.64	12.55	V
	20708	-62.60	-13	-49.60	-74.26	-75.14	3.22	17.92	V
	24159	-58.99	-13	-45.99	-75.82	-71.55	3.78	18.50	V
	27610	-56.61	-13	-43.61	-76.49	-70.06	3.95	19.54	V
									V
Middle	6982	-41.64	-13	-28.64	-71.13	-49.52	1.84	11.87	H
	10473	-36.41	-13	-23.41	-72.35	-42.82	2.25	10.82	H
	13968	-30.24	-13	-17.24	-73.47	-37.85	2.66	12.43	H
	20948	-62.11	-13	-49.11	-74.02	-74.54	3.24	17.82	H
	24439	-58.41	-13	-45.41	-76.32	-71.17	3.76	18.66	H
	27930	-56.25	-13	-43.25	-76.57	-69.81	3.97	19.67	H
									H
	6982	-42.32	-13	-29.32	-71.97	-50.20	1.84	11.87	V
	10473	-36.84	-13	-23.84	-72.18	-43.25	2.25	10.82	V
	13968	-30.71	-13	-17.71	-73.29	-38.32	2.66	12.43	V
	20948	-62.43	-13	-49.43	-74.05	-74.86	3.24	17.82	V
	24439	-58.95	-13	-45.95	-76.55	-71.71	3.76	18.66	V
	27930	-56.48	-13	-43.48	-76.41	-70.04	3.97	19.67	V
									V

Highest	7062	-42.64	-13	-29.64	-72.38	-50.29	1.84	11.65	H
	10593	-36.17	-13	-23.17	-72.34	-42.52	2.24	10.74	H
	14125	-29.74	-13	-16.74	-72.83	-37.26	2.66	12.33	H
	21188	-62.35	-13	-49.35	-74.85	-74.94	3.29	18.03	H
	24719	-58.25	-13	-45.25	-76.45	-70.94	3.73	18.57	H
	28250	-55.57	-13	-42.57	-76.05	-68.99	3.98	19.55	H
									H
	7062	-42.04	-13	-29.04	-71.96	-49.69	1.84	11.65	V
	10593	-36.79	-13	-23.79	-72.49	-43.14	2.24	10.74	V
	14125	-29.98	-13	-16.98	-72.76	-37.50	2.66	12.33	V
	21188	-62.85	-13	-49.85	-75.04	-75.44	3.29	18.03	V
	24719	-58.86	-13	-45.86	-76.75	-71.55	3.73	18.57	V
	28250	-55.74	-13	-42.74	-75.81	-69.16	3.98	19.55	V
									V

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

<Ant. 0 + Ant. 12>

EN-DC 13A-n77A

EN-DC 13A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	6903	-43.15	-13	-30.15	-72.56	-51.34	1.84	12.19	H
	10354	-36.06	-13	-23.06	-71.86	-42.54	2.26	10.89	H
	13805	-29.32	-13	-16.32	-73.22	-37.09	2.63	12.56	H
	20708	-62.20	-13	-49.20	-74.1	-74.74	3.22	17.92	H
	24159	-58.80	-13	-45.80	-75.99	-71.36	3.78	18.50	H
	27610	-56.21	-13	-43.21	-76.41	-69.66	3.95	19.54	H
									H
	6903	-42.89	-13	-29.89	-72.8	-51.08	1.84	12.19	V
	10354	-37.00	-13	-24.00	-72.01	-43.48	2.26	10.89	V
	13805	-30.71	-13	-17.71	-73.58	-38.48	2.63	12.56	V
	20708	-62.40	-13	-49.40	-74.06	-74.94	3.22	17.92	V
	24159	-59.44	-13	-46.44	-76.27	-72.00	3.78	18.50	V
	27610	-57.00	-13	-44.00	-76.88	-70.45	3.95	19.54	V
									V
Middle	6983	-42.54	-13	-29.54	-72.03	-50.42	1.84	11.87	H
	10474	-36.27	-13	-23.27	-72.22	-42.68	2.25	10.82	H
	13965	-30.46	-13	-17.46	-73.71	-38.07	2.66	12.43	H
	20948	-62.04	-13	-49.04	-73.95	-74.47	3.24	17.82	H
	24439	-58.24	-13	-45.24	-76.15	-71.00	3.76	18.66	H
	27930	-55.98	-13	-42.98	-76.3	-69.54	3.97	19.67	H
									H
	6983	-42.55	-13	-29.55	-72.2	-50.43	1.84	11.87	V
	10474	-36.71	-13	-23.71	-72.06	-43.12	2.25	10.82	V
	13965	-30.84	-13	-17.84	-73.43	-38.45	2.66	12.43	V
	20948	-62.26	-13	-49.26	-73.88	-74.69	3.24	17.82	V
	24439	-58.59	-13	-45.59	-76.19	-71.35	3.76	18.66	V
	27930	-56.68	-13	-43.68	-76.61	-70.24	3.97	19.67	V

Highest	7063	-42.59	-13	-29.59	-72.34	-50.24	1.84	11.64	H
	10594	-36.81	-13	-23.81	-72.98	-43.16	2.24	10.74	H
	14125	-30.00	-13	-17.00	-73.09	-37.52	2.66	12.33	H
	21188	-61.97	-13	-48.97	-74.47	-74.56	3.29	18.03	H
	24719	-57.71	-13	-44.71	-75.91	-70.40	3.73	18.57	H
	28250	-55.38	-13	-42.38	-75.86	-68.80	3.98	19.55	H
									H
	7063	-42.37	-13	-29.37	-72.3	-50.02	1.84	11.64	V
	10594	-37.04	-13	-24.04	-72.74	-43.39	2.24	10.74	V
	14125	-30.40	-13	-17.40	-73.19	-37.92	2.66	12.33	V
	21188	-62.53	-13	-49.53	-74.72	-75.12	3.29	18.03	V
	24719	-58.65	-13	-45.65	-76.54	-71.34	3.73	18.57	V
	28250	-55.96	-13	-42.96	-76.03	-69.38	3.98	19.55	V
									V

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

<Ant. 4 + Ant. 12>

EN-DC 66A-n78A

EN-DC 66A-n78A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	6903	-43.51	-13	-30.51	-72.92	-51.70	1.84	12.19	H
	10354	-36.21	-13	-23.21	-72.01	-42.69	2.26	10.89	H
	13805	-29.77	-13	-16.77	-73.67	-37.54	2.63	12.56	H
	20708	-62.46	-13	-49.46	-74.36	-75.00	3.22	17.92	H
	24159	-58.95	-13	-45.95	-76.14	-71.51	3.78	18.50	H
	27610	-56.03	-13	-43.03	-76.23	-69.48	3.95	19.54	H
									H
	6903	-42.88	-13	-29.88	-72.79	-51.07	1.84	12.19	V
	10354	-37.14	-13	-24.14	-72.15	-43.62	2.26	10.89	V
	13805	-30.56	-13	-17.56	-73.43	-38.33	2.63	12.56	V
	20708	-63.04	-13	-50.04	-74.7	-75.58	3.22	17.92	V
	24159	-59.49	-13	-46.49	-76.32	-72.05	3.78	18.50	V
	27610	-56.87	-13	-43.87	-76.75	-70.32	3.95	19.54	V
									V
Middle	6983	-42.85	-13	-29.85	-72.34	-50.73	1.84	11.87	H
	10474	-36.52	-13	-23.52	-72.47	-42.93	2.25	10.82	H
	13965	-30.94	-13	-17.94	-74.19	-38.55	2.66	12.43	H
	20948	-61.79	-13	-48.79	-73.7	-74.22	3.24	17.82	H
	24439	-58.26	-13	-45.26	-76.17	-71.02	3.76	18.66	H
	27930	-55.95	-13	-42.95	-76.27	-69.51	3.97	19.67	H
									H
	6983	-42.77	-13	-29.77	-72.42	-50.65	1.84	11.87	V
	10474	-36.96	-13	-23.96	-72.31	-43.37	2.25	10.82	V
	13965	-31.45	-13	-18.45	-74.04	-39.06	2.66	12.43	V
	20948	-62.47	-13	-49.47	-74.09	-74.90	3.24	17.82	V
	24439	-58.68	-13	-45.68	-76.28	-71.44	3.76	18.66	V
	27930	-56.47	-13	-43.47	-76.4	-70.03	3.97	19.67	V
									V

Highest	7063	-42.51	-13	-29.51	-72.26	-50.16	1.84	11.64	H
	10594	-36.95	-13	-23.95	-73.12	-43.30	2.24	10.74	H
	14125	-30.02	-13	-17.02	-73.11	-37.54	2.66	12.33	H
	21188	-61.99	-13	-48.99	-74.49	-74.58	3.29	18.03	H
	24719	-58.02	-13	-45.02	-76.22	-70.71	3.73	18.57	H
	28250	-55.84	-13	-42.84	-76.32	-69.26	3.98	19.55	H
									H
	7063	-42.38	-13	-29.38	-72.31	-50.03	1.84	11.64	V
	10594	-37.31	-13	-24.31	-73.01	-43.66	2.24	10.74	V
	14125	-30.44	-13	-17.44	-73.23	-37.96	2.66	12.33	V
	21188	-62.13	-13	-49.13	-74.32	-74.72	3.29	18.03	V
	24719	-58.67	-13	-45.67	-76.56	-71.36	3.73	18.57	V
	28250	-56.14	-13	-43.14	-76.21	-69.56	3.98	19.55	V
									V

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