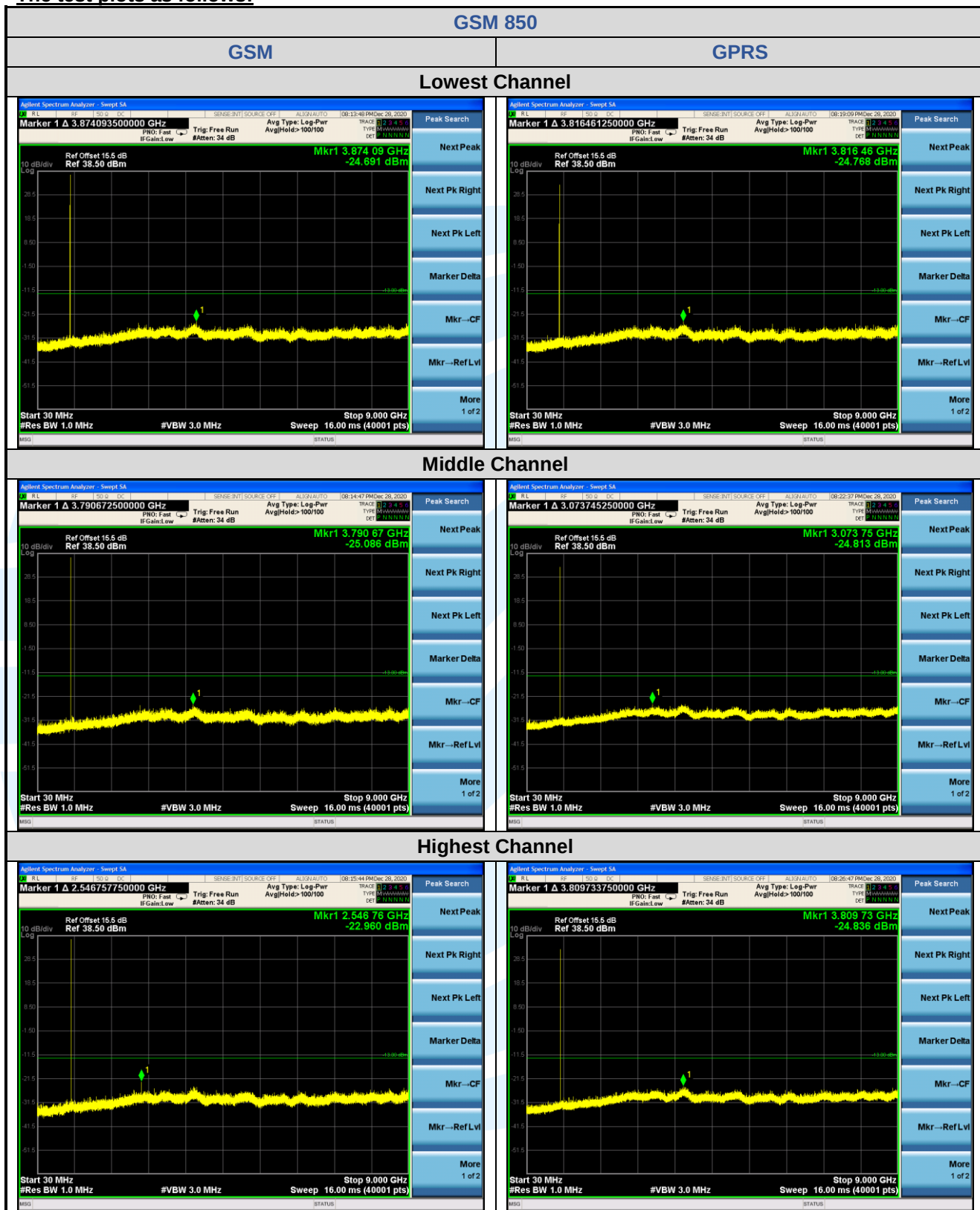


The test plots as follows:



Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China

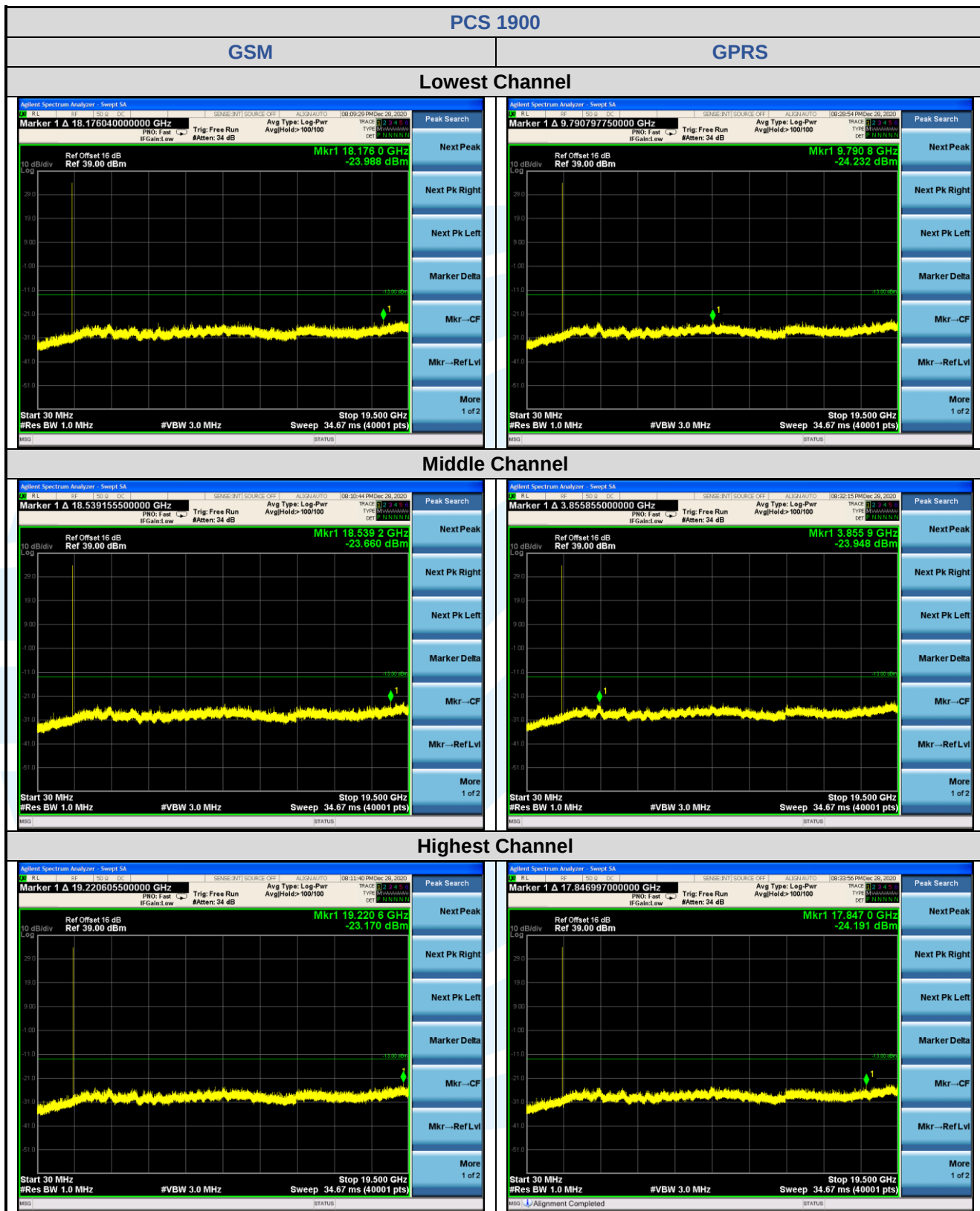
Tel: +86-755-28230888

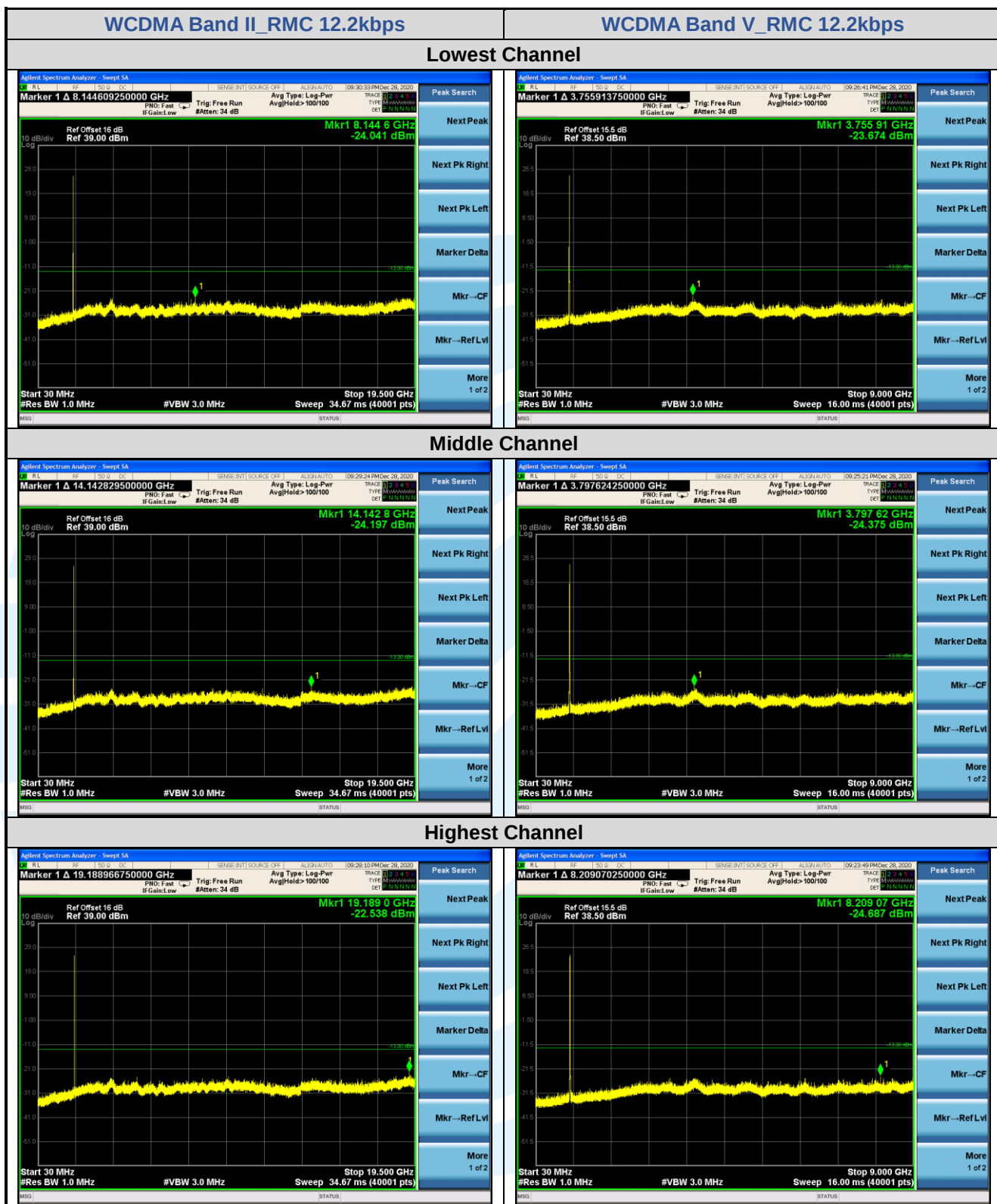
Fax: +86-755-28230886

E-mail: info@uttlab.com

<http://www.uttlab.com>

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Remark:

1) All the above radiation data, the fundamental frequency is not marked, it may exceed the limit, please ignore it.

5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: FCC 47 CFR Part 2.1053,
FCC 47 CFR Part 22.917(a)(b),
FCC 47 CFR Part 24.238(a)(b),

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01 Section 7

Limits:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13 dBm.

Test Setup: Refer to section 4.2.1 for details.

Test Procedures: KDB 971168 D01v03r01 Section 7

Equipment Used: Refer to section 3 for details.

Test Result: Pass

The measurement data as follows:

GSM 850							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
Lowest Channel							
1	35.762	-88.33	30.02	-58.31	-13.00	-45.31	Horizontal
2	95.649	-86.68	25.33	-61.35	-13.00	-48.35	Horizontal
3	669.952	-86.79	40.04	-46.75	-13.00	-33.75	Horizontal
4	1648.400	-45.82	0.04	-45.78	-13.00	-32.78	Horizontal
5	2472.600	-54.07	2.72	-51.35	-13.00	-38.35	Horizontal
6	95.649	-86.38	25.33	-61.05	-13.00	-48.05	Vertical
7	478.139	-87.62	36.29	-51.33	-13.00	-38.33	Vertical
8	798.620	-86.55	40.59	-45.96	-13.00	-32.96	Vertical
9	1648.400	-44.38	-0.74	-45.12	-13.00	-32.12	Vertical
10	2472.600	-57.86	2.32	-55.54	-13.00	-42.54	Vertical
Middle Channel							
1	95.649	-85.93	25.33	-60.60	-13.00	-47.60	Horizontal
2	338.855	-86.99	32.61	-54.38	-13.00	-41.38	Horizontal
3	669.952	-86.18	40.04	-46.14	-13.00	-33.14	Horizontal
4	1673.200	-46.38	0.19	-46.19	-13.00	-33.19	Horizontal
5	2509.800	-49.61	2.82	-46.79	-13.00	-33.79	Horizontal
6	276.382	-87.89	30.52	-57.37	-13.00	-44.37	Vertical
7	565.978	-87.63	38.20	-49.43	-13.00	-36.43	Vertical
8	703.731	-86.53	39.62	-46.91	-13.00	-33.91	Vertical
9	1673.200	-48.62	-0.57	-49.19	-13.00	-36.19	Vertical
10	2509.800	-56.41	2.41	-54.00	-13.00	-41.00	Vertical
Middle Channel							
1	97.002	-85.66	25.42	-60.24	-13.00	-47.24	Horizontal
2	228.617	-87.39	28.77	-58.62	-13.00	-45.62	Horizontal
3	320.331	-86.81	31.74	-55.07	-13.00	-42.07	Horizontal
4	1697.600	-49.07	0.34	-48.73	-13.00	-35.73	Horizontal
5	2546.400	-52.73	2.93	-49.80	-13.00	-36.80	Horizontal
6	95.649	-86.92	25.33	-61.59	-13.00	-48.59	Vertical
7	389.987	-87.47	33.78	-53.69	-13.00	-40.69	Vertical
8	527.571	-86.57	37.44	-49.13	-13.00	-36.13	Vertical
9	1697.600	-54.88	-0.40	-55.28	-13.00	-42.28	Vertical
10	2546.400	-55.66	2.50	-53.16	-13.00	-40.16	Vertical

PCS 1900							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
Lowest Channel							
1	54.135	-70.89	-5.31	-76.20	-13.00	-63.20	Horizontal
2	607.181	-78.92	9.51	-69.41	-13.00	-56.41	Horizontal
3	945.334	-80.80	14.50	-66.30	-13.00	-53.30	Horizontal
4	3700.400	-54.56	6.78	-47.78	-13.00	-34.78	Horizontal
5	5550.600	-60.84	10.87	-49.97	-13.00	-36.97	Horizontal
6	350.972	-80.18	4.70	-75.48	-13.00	-62.48	Vertical
7	573.988	-80.45	8.90	-71.55	-13.00	-58.55	Vertical
8	945.334	-81.39	13.17	-68.22	-13.00	-55.22	Vertical
9	3700.400	-50.18	6.76	-43.42	-13.00	-30.42	Vertical
10	5550.600	-62.48	11.36	-51.12	-13.00	-38.12	Vertical
Middle Channel							
1	53.756	-70.91	-5.28	-76.19	-13.00	-63.19	Horizontal
2	693.910	-80.26	11.18	-69.08	-13.00	-56.08	Horizontal
3	938.714	-81.88	14.28	-67.60	-13.00	-54.60	Horizontal
4	3760.000	-61.57	6.93	-54.64	-13.00	-41.64	Horizontal
5	5640.000	-61.22	10.84	-50.38	-13.00	-37.38	Horizontal
6	30.425	-79.41	3.89	-75.52	-13.00	-62.52	Vertical
7	546.437	-80.24	8.30	-71.94	-13.00	-58.94	Vertical
8	912.695	-81.08	13.06	-68.02	-13.00	-55.02	Vertical
9	3760.000	-55.47	6.93	-48.54	-13.00	-35.54	Vertical
10	5640.000	-62.67	11.32	-51.35	-13.00	-38.35	Vertical
Highest Channel							
1	53.756	-70.61	-5.28	-75.89	-13.00	-62.89	Horizontal
2	620.117	-80.02	9.73	-70.29	-13.00	-57.29	Horizontal
3	952.000	-82.37	14.62	-67.75	-13.00	-54.75	Horizontal
4	3819.600	-61.29	7.08	-54.21	-13.00	-41.21	Horizontal
5	5729.400	-62.71	10.82	-51.89	-13.00	-38.89	Horizontal
6	421.329	-79.95	6.38	-73.57	-13.00	-60.57	Vertical
7	615.774	-80.10	8.34	-71.76	-13.00	-58.76	Vertical
8	919.132	-81.11	13.14	-67.97	-13.00	-54.97	Vertical
9	3819.600	-57.23	7.11	-50.12	-13.00	-37.12	Vertical
10	5729.400	-61.90	11.27	-50.63	-13.00	-37.63	Vertical

WCDMA Band II							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	53.756	-69.06	-5.28	-74.34	-13.00	-61.34	Horizontal
2	598.707	-79.22	9.31	-69.91	-13.00	-56.91	Horizontal
3	938.714	-81.91	14.28	-67.63	-13.00	-54.63	Horizontal
4	3704.800	-60.13	6.79	-53.34	-13.00	-40.34	Horizontal
5	5557.200	-62.66	10.87	-51.79	-13.00	-38.79	Horizontal
6	590.351	-79.54	8.47	-71.07	-13.00	-58.07	Vertical
7	703.731	-80.05	10.19	-69.86	-13.00	-56.86	Vertical
8	850.760	-79.79	11.71	-68.08	-13.00	-55.08	Vertical
9	3704.800	-60.66	6.77	-53.89	-13.00	-40.89	Vertical
10	5557.200	-61.68	11.36	-50.32	-13.00	-37.32	Vertical
RMC 12.2kbps_ Middle Channel							
1	53.379	-70.15	-5.25	-75.40	-13.00	-62.40	Horizontal
2	684.226	-80.58	10.97	-69.61	-13.00	-56.61	Horizontal
3	912.695	-81.30	13.51	-67.79	-13.00	-54.79	Horizontal
4	3760.000	-58.89	6.93	-51.96	-13.00	-38.96	Horizontal
5	5640.000	-62.81	10.84	-51.97	-13.00	-38.97	Horizontal
6	149.968	-77.74	-2.19	-79.93	-13.00	-66.93	Vertical
7	348.514	-79.50	4.62	-74.88	-13.00	-61.88	Vertical
8	833.013	-80.76	11.80	-68.96	-13.00	-55.96	Vertical
9	3760.000	-56.83	6.93	-49.90	-13.00	-36.90	Vertical
10	5640.000	-61.00	11.32	-49.68	-13.00	-36.68	Vertical
RMC 12.2kbps_ Highest Channel							
1	54.135	-69.41	-5.31	-74.72	-13.00	-61.72	Horizontal
2	669.952	-80.52	10.60	-69.92	-13.00	-56.92	Horizontal
3	925.613	-81.86	13.82	-68.04	-13.00	-55.04	Horizontal
4	3815.200	-61.25	7.07	-54.18	-13.00	-41.18	Horizontal
5	5722.800	-60.89	10.83	-50.06	-13.00	-37.06	Horizontal
6	421.329	-80.32	6.38	-73.94	-13.00	-60.94	Vertical
7	598.707	-79.06	8.22	-70.84	-13.00	-57.84	Vertical
8	972.283	-81.37	13.24	-68.13	-13.00	-55.13	Vertical
9	3815.200	-55.98	7.10	-48.88	-13.00	-35.88	Vertical
10	5722.800	-62.99	11.28	-51.71	-13.00	-38.71	Vertical

WCDMA Band V							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	87.914	-86.55	24.79	-61.76	-13.00	-48.76	Horizontal
2	505.789	-87.45	36.53	-50.92	-13.00	-37.92	Horizontal
3	693.910	-87.69	40.62	-47.07	-13.00	-34.07	Horizontal
4	1652.800	-55.21	0.07	-55.14	-13.00	-42.14	Horizontal
5	2479.200	-56.60	2.74	-53.86	-13.00	-40.86	Horizontal
6	97.002	-87.15	25.42	-61.73	-13.00	-48.73	Vertical
7	259.443	-87.98	30.14	-57.84	-13.00	-44.84	Vertical
8	531.291	-87.38	37.51	-49.87	-13.00	-36.87	Vertical
9	1652.800	-60.39	-0.71	-61.10	-13.00	-48.10	Vertical
10	2479.200	-56.95	2.34	-54.61	-13.00	-41.61	Vertical
RMC 12.2kbps_ Middle Channel							
1	97.002	-86.31	25.42	-60.89	-13.00	-47.89	Horizontal
2	430.305	-87.64	34.99	-52.65	-13.00	-39.65	Horizontal
3	611.462	-87.74	39.04	-48.70	-13.00	-35.70	Horizontal
4	1672.800	-61.18	0.19	-60.99	-13.00	-47.99	Horizontal
5	2509.200	-56.67	2.82	-53.85	-13.00	-40.85	Horizontal
6	148.917	-87.52	26.34	-61.18	-13.00	-48.18	Vertical
7	488.326	-86.04	36.54	-49.50	-13.00	-36.50	Vertical
8	713.692	-87.22	39.52	-47.70	-13.00	-34.70	Vertical
9	1672.800	-60.53	-0.57	-61.10	-13.00	-48.10	Vertical
10	2509.200	-53.36	2.41	-50.95	-13.00	-37.95	Vertical
RMC 12.2kbps_ Highest Channel							
1	97.002	-87.53	25.42	-62.11	-13.00	-49.11	Horizontal
2	311.452	-87.99	31.44	-56.55	-13.00	-43.55	Horizontal
3	602.929	-86.64	38.90	-47.74	-13.00	-34.74	Horizontal
4	1693.200	-58.67	0.32	-58.35	-13.00	-45.35	Horizontal
5	2539.800	-55.98	2.91	-53.07	-13.00	-40.07	Horizontal
6	147.875	-87.58	26.24	-61.34	-13.00	-48.34	Vertical
7	516.565	-87.68	37.20	-50.48	-13.00	-37.48	Vertical
8	708.694	-87.68	39.57	-48.11	-13.00	-35.11	Vertical
9	1693.200	-60.10	-0.43	-60.53	-13.00	-47.53	Vertical
10	2539.800	-54.52	2.48	-52.04	-13.00	-39.04	Vertical

Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com

<http://www.uttlab.com>

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5.9 FREQUENCY STABILITY

Test Requirement: FCC 47 CFR Part 2.1055 &
FCC 47 CFR Part 22.355 &
FCC 47 CFR Part 24.235 &

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limits:

FCC 47 CFR Part 22.355,

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

FCC 47 CFR Part 24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Setup: Refer to section 4.2.2 for details.

Test Procedures:

1) Use CMW 500 with Frequency Error measurement capability.

a) Temp. = -30° to $+50^{\circ}\text{C}$

b) Voltage = low voltage, 3.45 Vdc, Normal, 3.8 Vdc and High voltage, 4.35 Vdc.

2) Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10°C degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

3) Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

Equipment Used: Refer to section 3 for details.

Test Result: Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature ($^{\circ}\text{C}$)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
GSM 850							
GMSK	190 / 836.6	VL	TN	26	0.0311	± 2.5	Pass
		VN		23	0.0275	± 2.5	Pass
		VH		33	0.0394	± 2.5	Pass
		VN	50	23	0.0275	± 2.5	Pass
			40	31	0.0371	± 2.5	Pass
			30	24	0.0287	± 2.5	Pass
			20	26	0.0311	± 2.5	Pass
			10	31	0.0371	± 2.5	Pass
			0	24	0.0287	± 2.5	Pass
			-10	19	0.0227	± 2.5	Pass
			-20	23	0.0275	± 2.5	Pass
			-30	23	0.0275	± 2.5	Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
PCS 1900							
GMSK	661 / 1880.0	VL	TN	29	0.0154	N/A	Pass
		VN		26	0.0138		Pass
		VH		27	0.0144		Pass
		VN	50	26	0.0138		Pass
			40	31	0.0165		Pass
			30	27	0.0144		Pass
			20	24	0.0128		Pass
			10	22	0.0117		Pass
			0	27	0.0144		Pass
			-10	37	0.0197		Pass
			-20	24	0.0128		Pass
			-30	25	0.0133		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
WCDMA Band II							
RMC 12.2kbps	9400 / 1880.0	VL	TN	25	0.0133	N/A	Pass
		VN		31	0.0165		Pass
		VH		31	0.0165		Pass
		VN	50	29	0.0154		Pass
			40	25	0.0133		Pass
			30	29	0.0154		Pass
			20	31	0.0165		Pass
			10	19	0.0101		Pass
			0	29	0.0154		Pass
			-10	23	0.0122		Pass
			-20	33	0.0176		Pass
			-30	23	0.0122		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
WCDMA Band V							
RMC 12.2kbps	4182 / 836.4	VL	TN	27	0.0323	± 2.5	Pass
		VN		28	0.0335	± 2.5	Pass
		VH		31	0.0371	± 2.5	Pass
		VN	50	22	0.0263	± 2.5	Pass
			40	27	0.0323	± 2.5	Pass
			30	23	0.0275	± 2.5	Pass
			20	25	0.0299	± 2.5	Pass
			10	26	0.0311	± 2.5	Pass
			0	27	0.0323	± 2.5	Pass
			-10	29	0.0347	± 2.5	Pass
			-20	26	0.0311	± 2.5	Pass
			-30	31	0.0371	± 2.5	Pass

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com

<http://www.uttlab.com>

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APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

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