



5.8 Conducted Emission

5.8.1 Measuring Instruments

As described in chapter 6 of this test Report.

The receiver setting :

150 KHz ~ 30 MHz	Detector : Quasi – Peak and Average Bandwidth : 9 KHz
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5.8.2 Test Procedures :

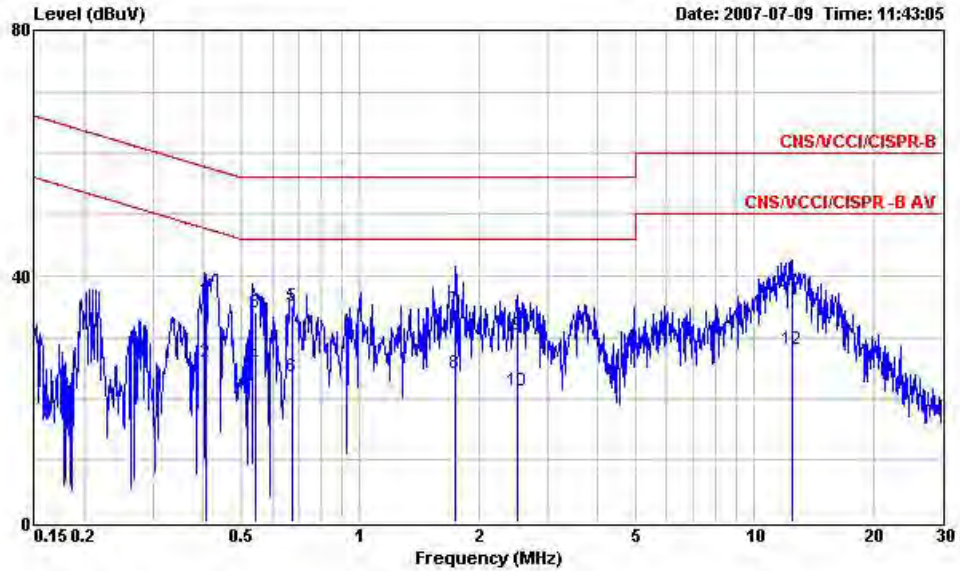
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of a line impedance stabilization network (LISN).
- c. All the support units are connected to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.



5.8.3 Test Data

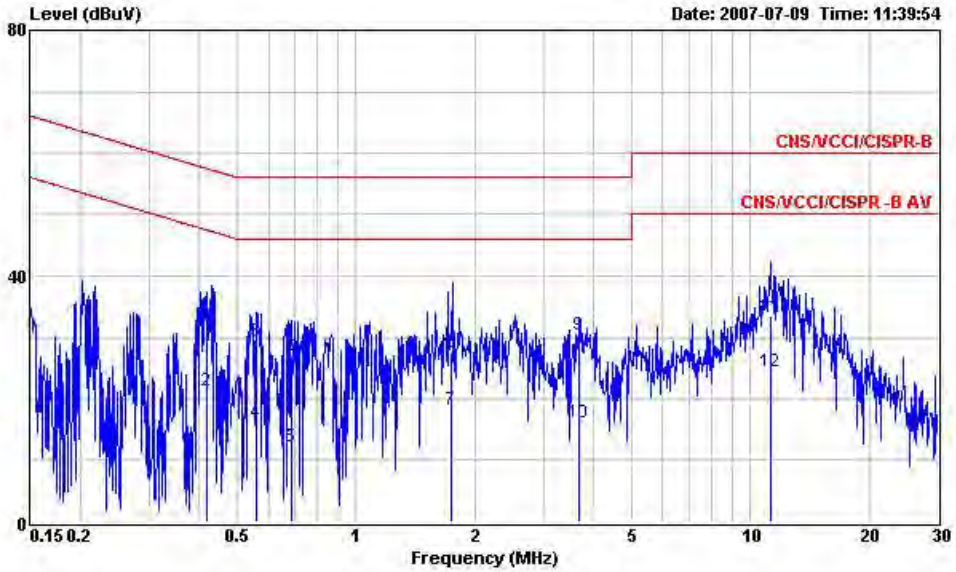
- Temperature : 24~25 °C
- Relating Humidity : 51~53 %
- Test Engineer : Louis
- Test Mode : Mode 1

The test that passed at minimum margin was marked by the frame in the following table.



Site : CO01-HV
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : GSM850 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 1+ADAPTOR 1+MPEG4+Earphone
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.406	36.22	-21.51	57.73	36.08	0.10	0.04	QP
2	0.406	25.93	-21.80	47.73	25.79	0.10	0.04	Average
3	0.541	34.14	-21.86	56.00	33.96	0.10	0.08	QP
4	0.541	25.52	-20.48	46.00	25.34	0.10	0.08	Average
5	0.672	34.99	-21.01	56.00	34.78	0.10	0.11	QP
6	0.672	23.55	-22.45	46.00	23.34	0.10	0.11	Average
7	1.740	34.62	-21.38	56.00	34.29	0.10	0.23	QP
8	1.740	24.09	-21.91	46.00	23.76	0.10	0.23	Average
9	2.499	30.52	-25.48	56.00	30.18	0.13	0.21	QP
10	2.499	21.27	-24.73	46.00	20.93	0.13	0.21	Average
11	12.447	36.18	-23.82	60.00	35.64	0.30	0.24	QP
12	12.447	28.14	-21.86	50.00	27.60	0.30	0.24	Average



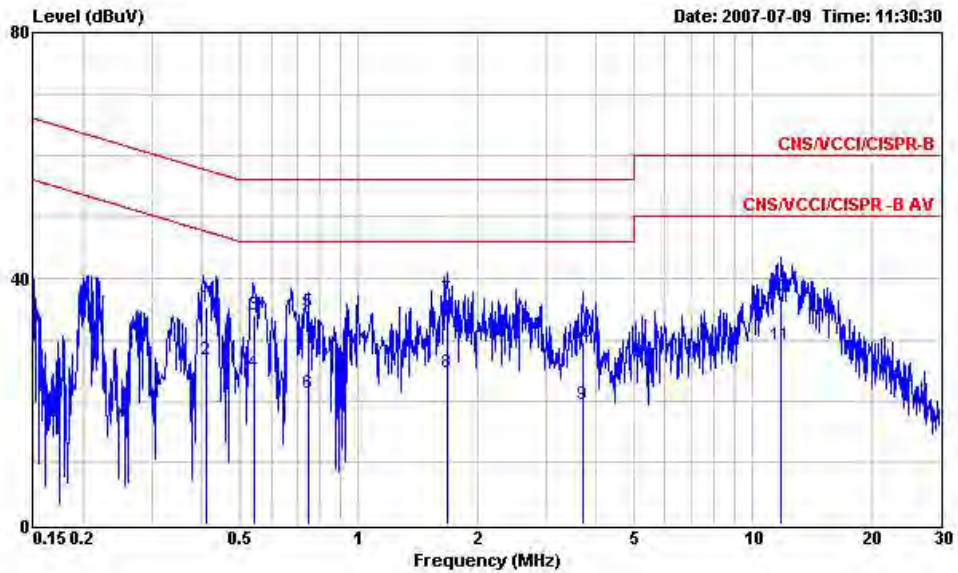
Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : GSM850 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 1+ADAPTOR 1+MPEG4+Earphone
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.418	33.68	-23.80	57.48	33.53	0.10	0.05	QP
2	0.418	21.31	-26.17	47.48	21.16	0.10	0.05	Average
3	0.558	29.41	-26.59	56.00	29.22	0.10	0.09	QP
4	0.558	16.05	-29.95	46.00	15.86	0.10	0.09	Average
5	0.687	12.09	-33.91	46.00	11.87	0.10	0.12	Average
6	0.687	26.89	-29.11	56.00	26.67	0.10	0.12	QP
7	1.747	18.13	-27.87	46.00	17.80	0.10	0.23	Average
8	1.747	27.44	-28.56	56.00	27.11	0.10	0.23	QP
9	3.679	30.29	-25.71	56.00	30.02	0.10	0.17	QP
10	3.679	16.21	-29.79	46.00	15.94	0.10	0.17	Average
11	11.260	33.59	-26.41	60.00	33.07	0.23	0.29	QP
12	11.260	24.48	-25.52	50.00	23.96	0.23	0.29	Average



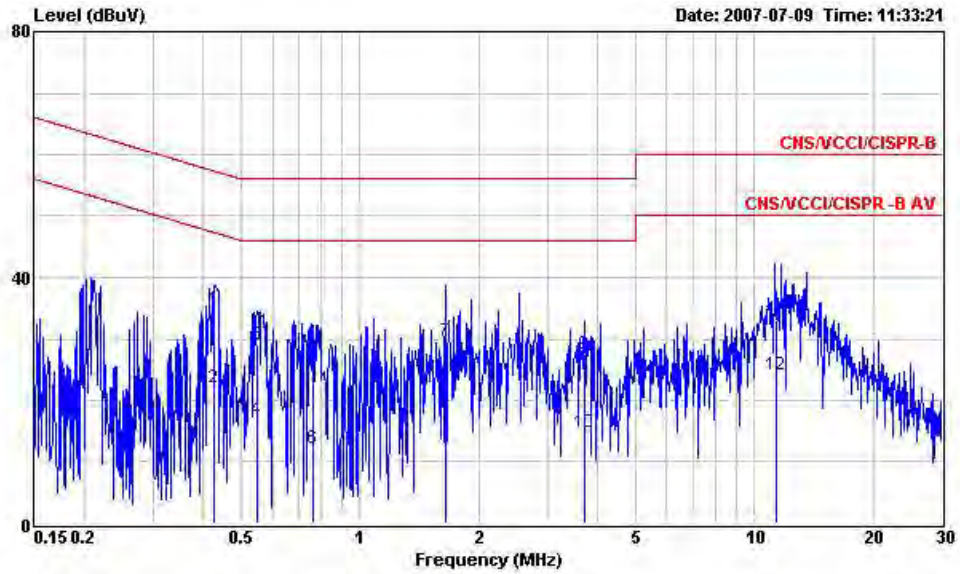
- Temperature : 24~25 °C
- Relating Humidity : 51~53 %
- Test Engineer : Louis
- Test Mode : Mode 2

The test that passed at minimum margin was marked by the frame in the following table.



Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001A04 200604 LINE
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : GSM850 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 2+ADAPTOR 1+MPEG4+Earphone
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.412	35.22	-22.40	57.62	35.08	0.10	0.04	QP
2	0.412	26.62	-21.00	47.62	26.48	0.10	0.04	Average
3	0.544	34.06	-21.94	56.00	33.88	0.10	0.08	QP
4	0.544	24.80	-21.20	46.00	24.62	0.10	0.08	Average
5	0.743	34.45	-21.55	56.00	34.22	0.10	0.13	QP
6	0.743	21.18	-24.82	46.00	20.95	0.10	0.13	Average
7	1.679	36.68	-19.32	56.00	36.36	0.10	0.22	QP
8	1.679	24.73	-21.27	46.00	24.41	0.10	0.22	Average
9	3.720	19.36	-26.64	46.00	19.00	0.19	0.17	Average
10	3.720	29.67	-26.33	56.00	29.31	0.19	0.17	QP
11	11.810	28.97	-21.03	50.00	28.40	0.30	0.27	Average
12	11.810	37.04	-22.96	60.00	36.47	0.30	0.27	QP



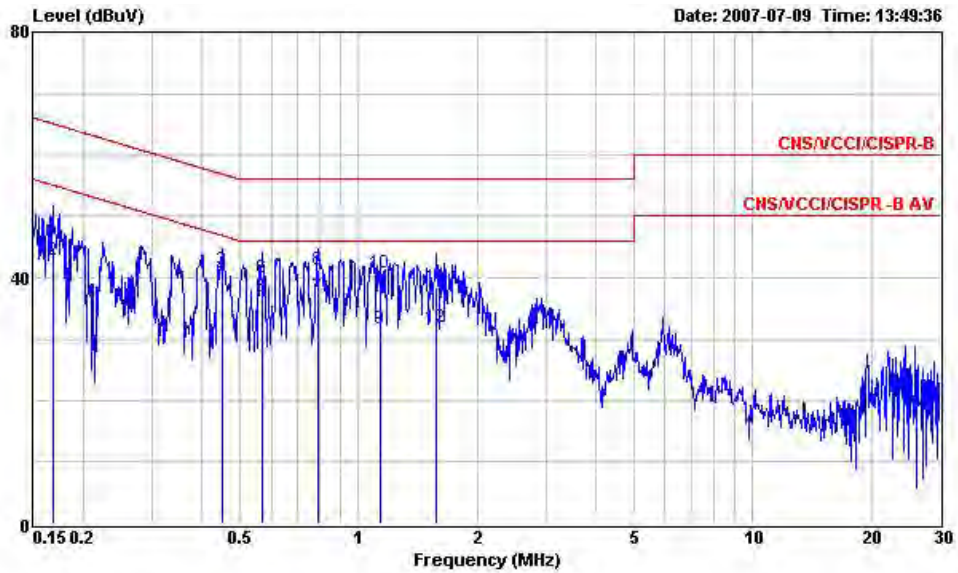
Site : C001-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : GSM850 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 2+ADAPTOR 1+MPEG4+Earphone
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.426	34.69	-22.64	57.33	34.54	0.10	0.05	QP
2	0.426	22.07	-25.26	47.33	21.92	0.10	0.05	Average
3	0.550	29.16	-26.84	56.00	28.98	0.10	0.08	QP
4	0.550	16.84	-29.16	46.00	16.66	0.10	0.08	Average
5	0.759	26.25	-29.75	56.00	26.02	0.10	0.13	QP
6	0.759	12.09	-33.91	46.00	11.86	0.10	0.13	Average
7	1.650	29.67	-26.33	56.00	29.35	0.10	0.22	QP
8	1.650	19.36	-26.64	46.00	19.04	0.10	0.22	Average
9	3.720	27.45	-28.55	56.00	27.18	0.10	0.17	QP
10	3.720	14.87	-31.13	46.00	14.60	0.10	0.17	Average
11	11.319	32.88	-27.12	60.00	32.36	0.23	0.29	QP
12	11.319	24.25	-25.75	50.00	23.73	0.23	0.29	Average



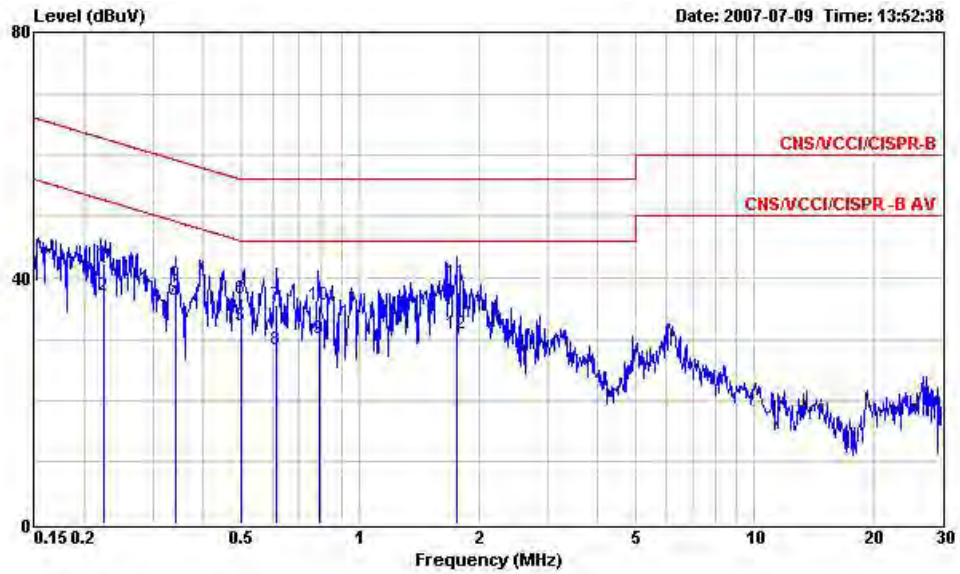
- Temperature : 24~25 °C
- Relating Humidity : 51~53 %
- Test Engineer : Louis
- Test Mode : Mode 3

The test that passed at minimum margin was marked by the frame in the following table.



Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : GSM850 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 2+USB 1 LINK+MPEG4+Earphone
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.168	44.57	-20.49	65.06	44.38	0.10	0.09	QP
2	0.168	42.83	-12.23	55.06	42.64	0.10	0.09	Average
3	0.450	41.36	-15.51	56.87	41.20	0.10	0.06	QP
4	0.450	40.17	-6.70	46.87	40.01	0.10	0.06	Average
5	0.567	36.88	-9.12	46.00	36.69	0.10	0.09	Average
6	0.567	40.09	-15.91	56.00	39.90	0.10	0.09	QP
7	0.789	36.85	-9.15	46.00	36.61	0.10	0.14	Average
8	0.789	41.24	-14.76	56.00	41.00	0.10	0.14	QP
9	1.134	31.74	-14.26	46.00	31.46	0.10	0.18	Average
10	1.134	40.74	-15.26	56.00	40.46	0.10	0.18	QP
11	1.579	38.49	-17.51	56.00	38.17	0.10	0.22	QP
12	1.579	31.86	-14.14	46.00	31.54	0.10	0.22	Average



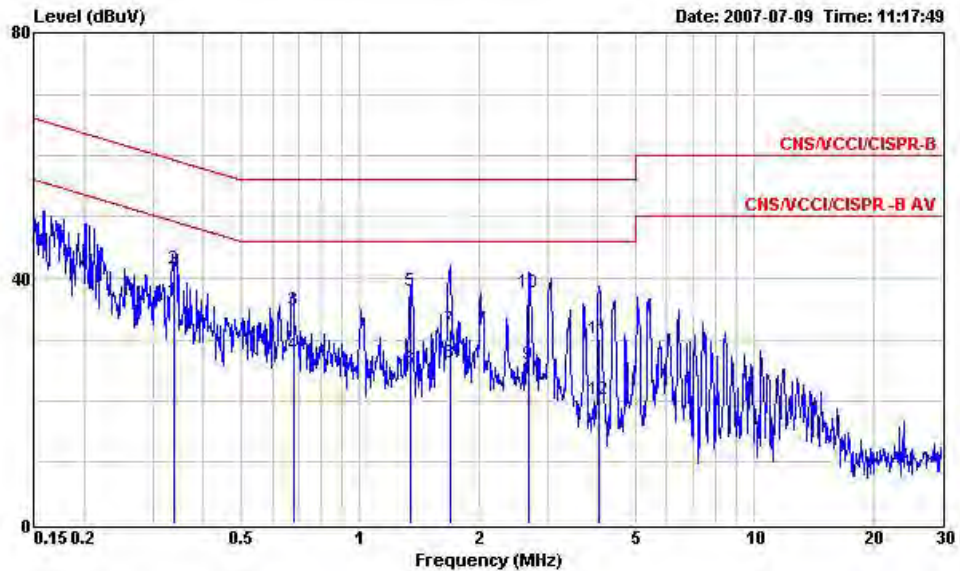
Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : GSM850 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 2+USB 1 LINK+MPEG4+Earphone
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.223	42.26	-20.44	62.70	42.07	0.10	0.09	QP
2	0.223	37.05	-15.65	52.70	36.86	0.10	0.09	Average
3	0.340	37.72	-21.49	59.21	37.57	0.10	0.05	QP
4	0.340	35.80	-13.41	49.21	35.65	0.10	0.05	Average
5	0.501	32.25	-13.75	46.00	32.08	0.10	0.07	Average
6	0.501	36.63	-19.37	56.00	36.46	0.10	0.07	QP
7	0.615	35.60	-20.40	56.00	35.40	0.10	0.10	QP
8	0.615	28.28	-17.72	46.00	28.08	0.10	0.10	Average
9	0.787	30.01	-15.99	46.00	29.77	0.10	0.14	Average
10	0.787	35.52	-20.48	56.00	35.28	0.10	0.14	QP
11	1.754	39.34	-16.66	56.00	39.01	0.10	0.23	QP
12	1.754	30.79	-15.21	46.00	30.46	0.10	0.23	Average



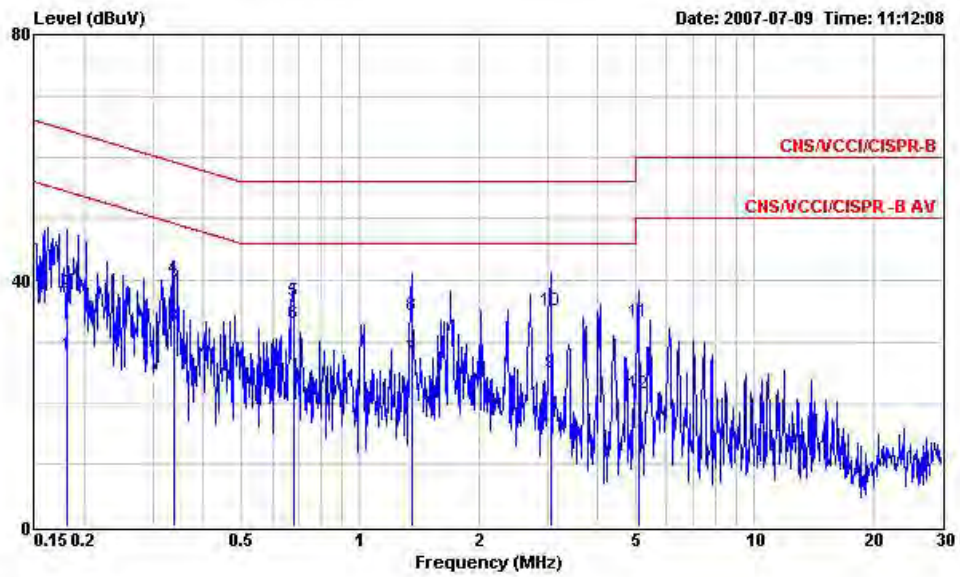
- Temperature : 24~25 °C
- Relating Humidity : 51~53 %
- Test Engineer : Louis
- Test Mode : Mode 4

The test that passed at minimum margin was marked by the frame in the following table.



Site : CO01-HV
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : Mobile Phone
 Power : 120V/50Hz
 Model : FR762206
 Memo : GSM850 IDLE+USB2 LINK+BT LINK+WLAN LINK
 Memo : SCANNER 2+ADAPTOR 2+MPEG4+CRADLE
 Memo :

Freq	Level	Over	Limit	Read	Probe	Cable	Loss	Remark
MHz	dBuV	Limit	Line	Level	Factor	Loss	dB	
1	0.339	36.36	-12.86	49.22	36.21	0.10	0.05	Average
2	0.339	41.61	-17.61	59.22	41.46	0.10	0.05	QP
3	0.679	34.73	-21.27	56.00	34.52	0.10	0.11	QP
4	0.679	27.45	-18.55	46.00	27.24	0.10	0.11	Average
5	1.349	38.02	-17.98	56.00	37.72	0.10	0.20	QP
6	1.349	25.29	-20.71	46.00	24.99	0.10	0.20	Average
7	1.689	31.76	-24.24	56.00	31.44	0.10	0.22	QP
8	1.689	26.15	-19.85	46.00	25.83	0.10	0.22	Average
9	2.683	26.00	-20.00	46.00	25.65	0.14	0.21	Average
10	2.683	37.74	-18.26	56.00	37.39	0.14	0.21	QP
11	4.049	30.00	-26.00	56.00	29.64	0.20	0.16	QP
12	4.049	20.37	-25.63	46.00	20.01	0.20	0.16	Average



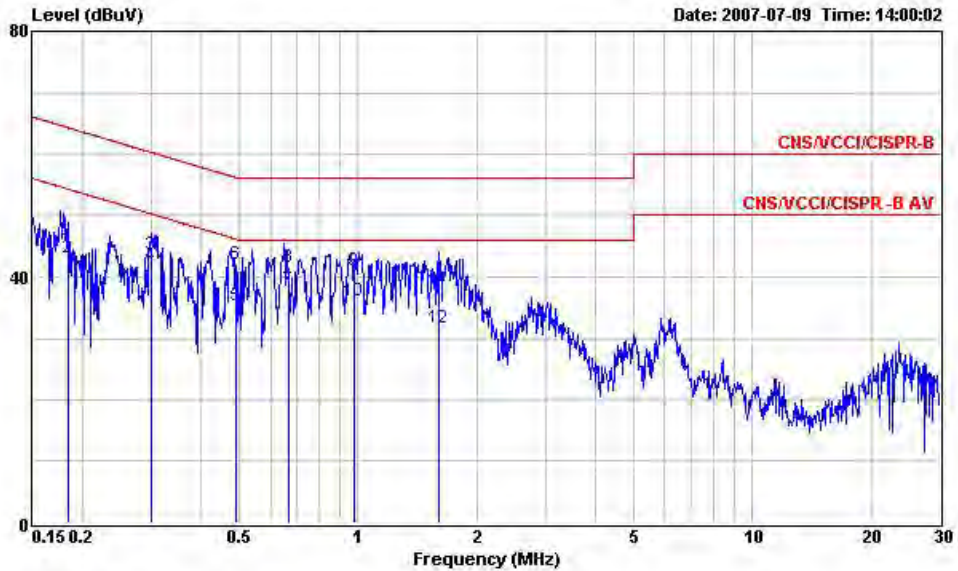
Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : GSM850 IDLE+USB2 LINK+BT LINK+WLAN LINK
 Memo : SCANNER 2+ADAPTOR 2+MPEG4+CRADLE
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.181	27.75	-26.70	54.45	27.56	0.10	0.09	Average
2	0.181	37.93	-26.52	64.45	37.74	0.10	0.09	QP
3	0.337	32.44	-16.83	49.27	32.29	0.10	0.05	Average
4	0.337	40.28	-18.99	59.27	40.13	0.10	0.05	QP
5	0.678	36.53	-19.47	56.00	36.32	0.10	0.11	QP
6	0.678	33.08	-12.92	46.00	32.87	0.10	0.11	Average
7	1.350	27.28	-18.72	46.00	26.98	0.10	0.20	Average
8	1.350	34.38	-21.62	56.00	34.08	0.10	0.20	QP
9	3.047	25.04	-20.96	46.00	24.75	0.10	0.19	Average
10	3.047	35.08	-20.92	56.00	34.79	0.10	0.19	QP
11	5.080	33.16	-26.84	60.00	32.82	0.13	0.21	QP
12	5.080	21.54	-28.46	50.00	21.20	0.13	0.21	Average



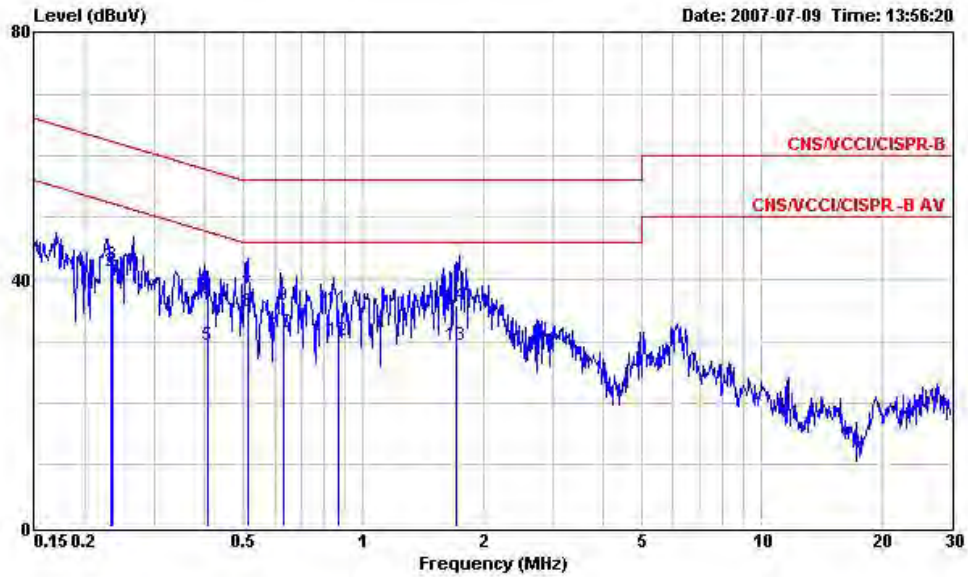
- Temperature : 24~25 °C
- Relating Humidity : 51~53 %
- Test Engineer : Louis
- Test Mode : Mode 5

The test that passed at minimum margin was marked by the frame in the following table.



Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : Mobile Phone
 Power : 120V/60Hz
 Model : FR762206
 Memo : PCS1900 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 2+USB 1 LINK+MPEG4+Earphone
 Memo :

Freq	Level	Over	Limit	Read	Probe	Cable	Loss	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
	44.56	-19.70	64.26	44.37	0.10	0.09	0.09	QP
	42.99	-11.27	54.26	42.80	0.10	0.09	0.09	Average
3	0.299	43.52	-16.75	60.27	43.35	0.10	0.07	QP
4	0.299	41.71	-8.56	50.27	41.54	0.10	0.07	Average
5	0.490	35.28	-10.88	46.16	35.11	0.10	0.07	Average
6	0.490	42.00	-14.16	56.16	41.83	0.10	0.07	QP
7	0.665	38.00	-8.00	46.00	37.79	0.10	0.11	Average
8	0.665	41.65	-14.35	56.00	41.44	0.10	0.11	QP
9	0.982	41.04	-14.96	56.00	40.77	0.10	0.17	QP
10	0.982	36.12	-9.88	46.00	35.85	0.10	0.17	Average
11	1.597	37.90	-18.10	56.00	37.58	0.10	0.22	QP
12	1.597	31.71	-14.29	46.00	31.39	0.10	0.22	Average



Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : Mobile Phone
 Power : 120V/50Hz
 Model : FR762206
 Memo : PCS1900 IDLE+BT LINK+WLAN LINK
 Memo : SCANNER 2+USB 1 LINK+MPEG4+Earphone
 Memo :

	Freq	Level	Over	Limit	Read	Probe	Cable	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.232	42.56	-19.80	62.36	42.37	0.10	0.09	QP	
2	0.232	41.20	-11.16	52.36	41.01	0.10	0.09	Average	
3	0.235	42.43	-19.86	62.29	42.24	0.10	0.09	QP	
4	0.235	41.68	-10.61	52.29	41.49	0.10	0.09	Average	
5	0.406	29.38	-18.34	47.72	29.24	0.10	0.04	Average	
6	0.406	36.79	-20.93	57.72	36.65	0.10	0.04	QP	
7	0.516	37.57	-18.43	56.00	37.39	0.10	0.08	QP	
8	0.516	34.92	-11.08	46.00	34.74	0.10	0.08	Average	
9	0.631	35.76	-20.24	56.00	35.56	0.10	0.10	QP	
10	0.631	31.42	-14.58	46.00	31.22	0.10	0.10	Average	
11	0.863	35.23	-20.77	56.00	34.98	0.10	0.15	QP	
12	0.863	30.24	-15.76	46.00	29.99	0.10	0.15	Average	
13	1.711	29.28	-16.72	46.00	28.96	0.10	0.22	Average	
14	1.711	35.80	-20.20	56.00	35.48	0.10	0.22	QP	

5.9 Radiated Emission Measurement

5.9.1 Measuring Instruments

As described in chapter 6 of this Report.

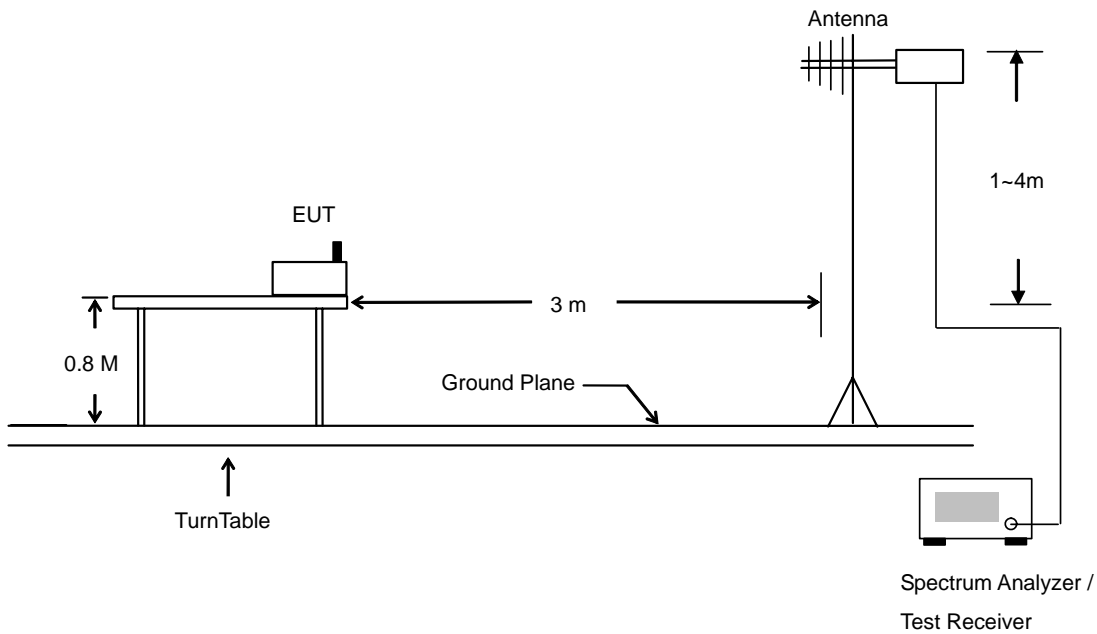
The spectrum analyzer setting :

30 ~ 1000 MHz	Detector : Quasi – Peak Bandwidth : 120 KHz
1 ~ 25 GHz	Detector : Peak and Average Bandwidth : 1 MHz

5.9.2 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

5.9.3 Typical Test Setup Layout of Radiated Emission

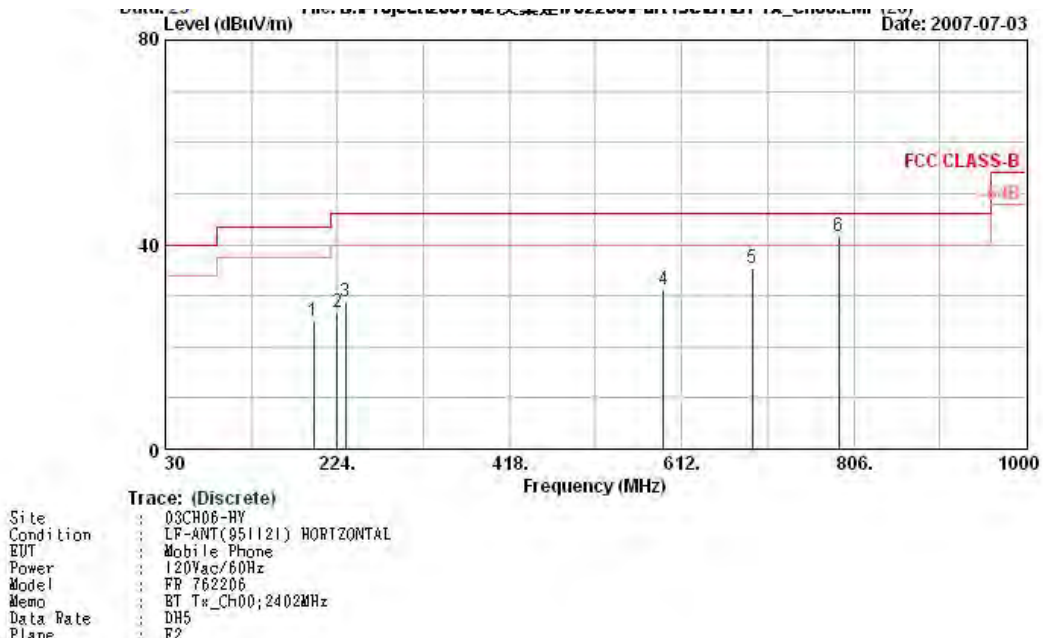




5.9.4 Test Data

- Temperature : 24~25°C
- Relating Humidity : 48~49%
- Test Engineer : Sam
- Test Mode : Mode 1
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at the minimum margin was marked by the frame in the following test record

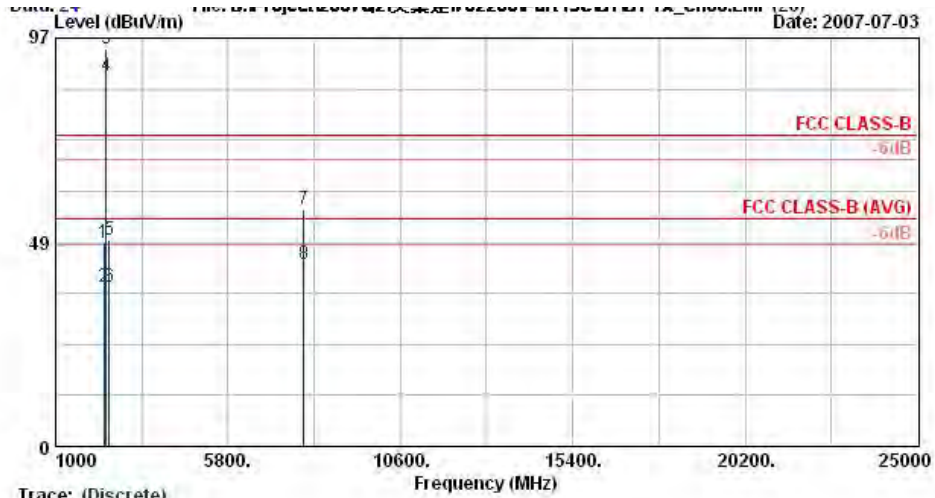


	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	197.13	24.85	-18.65	43.50	45.02	9.32	1.53	31.02	-	-	Peak
2	224.13	26.63	-19.37	46.00	45.26	10.73	1.63	30.99	-	-	Peak
3	233.58	28.81	-17.19	46.00	46.77	11.30	1.67	30.93	-	-	Peak
4	591.90	31.33	-14.67	46.00	40.69	18.38	2.93	30.67	-	-	Peak
5	691.30	35.47	-10.53	46.00	44.00	18.85	3.22	30.60	-	-	Peak
6	! 789.30	41.60	-4.40	46.00	48.99	19.72	3.39	30.50	100.00	24.00	Peak



- Polarization : Horizontal (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)
 Site : 03CH06-HY
 Condition : SHF-EHF HORN HORIZONTAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : ET Tx_Ch00; 2402MHz
 Data Rate : DH5
 Plane : E2

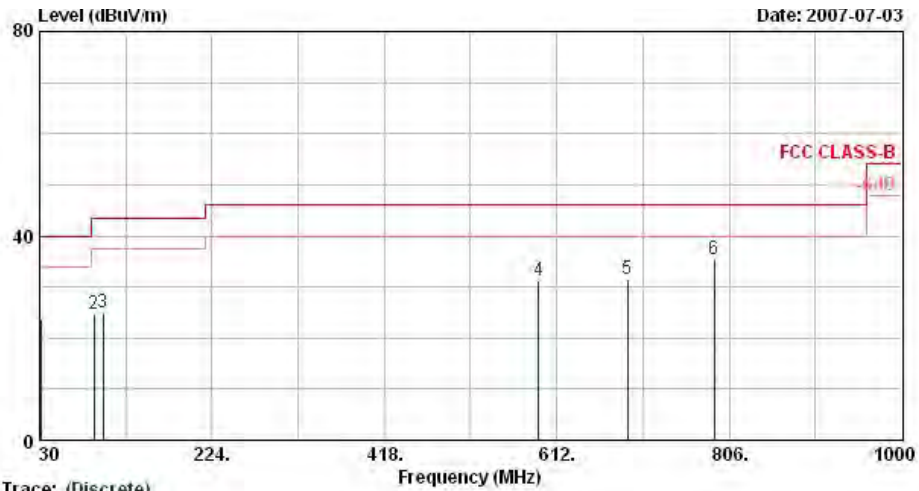
	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	2341.92	48.24	-25.76	74.00	49.69	30.26	3.75	35.46	100.00	0.00	Peak
2	2341.92	37.89	-16.11	54.00	39.36	30.24	3.71	35.42	100.00	339.00	Average
3	X 2402.00	94.47			95.90	30.26	3.77	35.46	100.00	0.00	Peak
4	X 2402.00	87.90			89.33	30.26	3.77	35.46	100.00	339.00	Average
5	2488.00	49.16	-24.84	74.00	50.51	30.30	3.86	35.51	100.00	0.00	Peak
6	2488.00	37.98	-16.02	54.00	39.33	30.30	3.86	35.51	100.00	339.00	Average
7	7902.00	56.30	-17.70	74.00	44.96	39.46	7.76	35.88	100.00	0.00	Peak
8	7902.00	43.13	-10.87	54.00	31.79	39.46	7.76	35.88	100.00	255.00	Average

Remark: "X" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

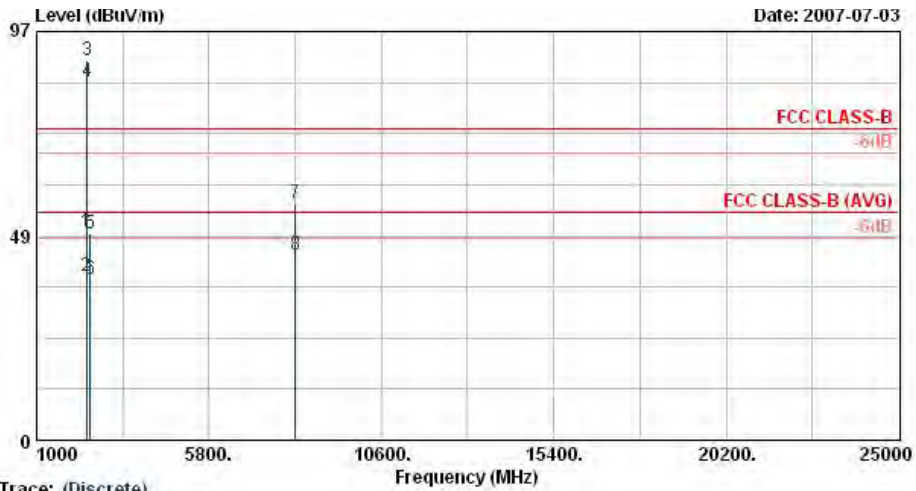
Site : 03CH06-HV
 Condition : LF-ANT(051121) VERTICAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : BT Tx_Ch00; 2402MHz
 Data Rate : DR5
 Plane : E2

	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	31.08	23.84	-16.16	40.00	35.68	18.95	0.64	31.43	-	-	Peak
2	91.29	24.57	-18.93	43.50	45.42	9.23	1.04	31.12	-	-	Peak
3	101.28	24.93	-18.57	43.50	43.94	11.07	1.07	31.15	-	-	Peak
4	591.90	31.18	-14.82	46.00	40.54	18.38	2.93	30.67	-	-	Peak
5	691.30	31.51	-14.49	46.00	40.04	18.85	3.22	30.60	-	-	Peak
6	789.30	35.51	-10.49	46.00	42.90	19.72	3.39	30.50	100.00	53.00	Peak



- Polarization : Vertical (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)
 Site : 03CR06-HY
 Condition : SHF-EHF HORN VERTICAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : ET Tx_Ch00; 2402MHz
 Data Rate : DR5
 Plane : E2

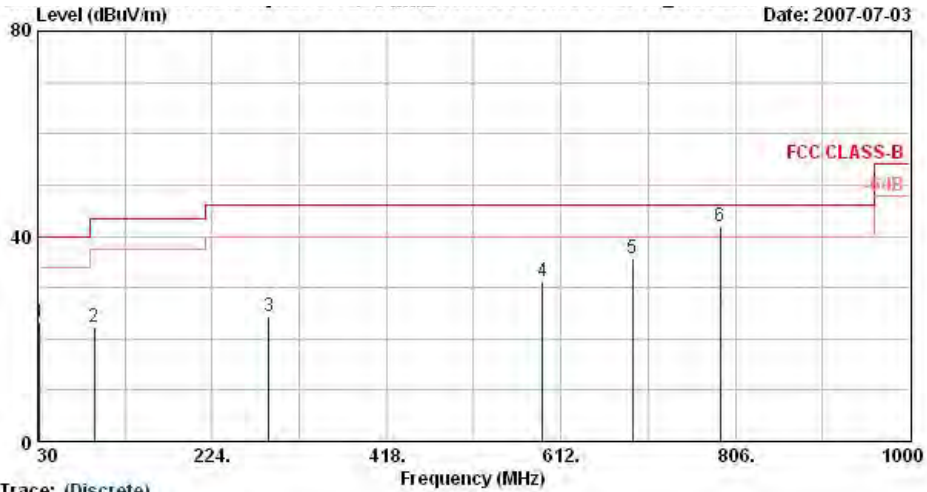
	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	2387.36	49.24	-24.76	74.00	50.71	30.24	3.71	35.42	100.00	0.00	Peak
2	2387.36	38.88	-15.12	54.00	40.31	30.26	3.75	35.44	100.00	278.00	Average
3	X 2402.00	90.30			91.73	30.26	3.77	35.46	100.00	0.00	Peak
4	X 2402.00	84.95			86.38	30.26	3.77	35.46	100.00	278.00	Average
5	2483.50	48.94	-25.06	74.00	50.30	30.29	3.86	35.51	100.00	0.00	Peak
6	2483.50	38.06	-15.94	54.00	39.42	30.29	3.86	35.51	100.00	278.00	Average
7	8202.00	56.29	-17.71	74.00	44.80	39.43	8.02	35.96	100.00	0.00	Peak
8	8202.00	43.88	-10.12	54.00	32.39	39.43	8.02	35.96	100.00	255.00	Average

Remark: "X" represents the Fundamental Signal



- Test Mode : Mode 2
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



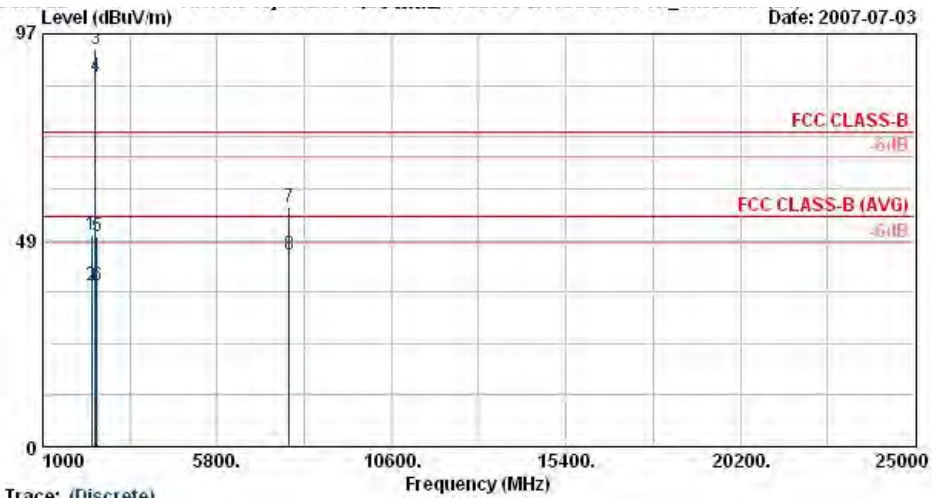
Trace: (Discrete)
 Site : 03CH06-HY
 Condition : LP-ANT(951121) HORIZONTAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : BT Tx_Ch39;2441MHz
 Data Rate : DH5
 Plane : E2

	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	31.89	23.30	-16.70	40.00	35.79	18.25	0.65	31.39	-	-	Peak
2	92.64	22.35	-21.15	43.50	42.79	9.62	1.05	31.11	-	-	Peak
3	287.04	24.32	-21.68	46.00	40.42	12.97	1.89	30.96	-	-	Peak
4	591.90	31.23	-14.77	46.00	40.59	18.38	2.93	30.67	-	-	Peak
5	691.30	35.76	-10.24	46.00	44.29	18.85	3.22	30.60	-	-	Peak
6	! 789.30	42.06	-3.94	46.00	49.45	19.72	3.39	30.50	100.00	259.00	Peak



- Polarization : Horizontal (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

Site : 03CH06-HY
 Condition : SHF-EHF HORN HORIZONTAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : ET Tx_Ch30;2441MHz
 Data Rate : DH5
 Plane : E2

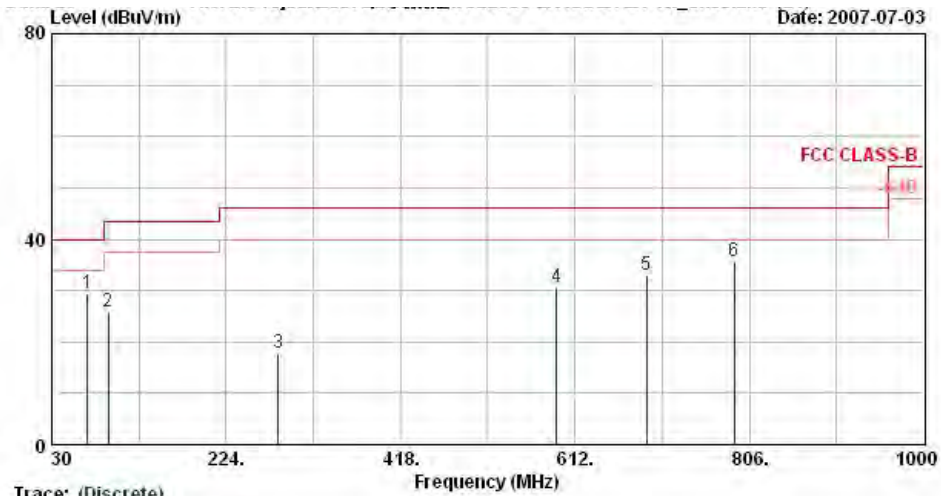
	Frequency (MHz)	Level (dBUV/m)	Over Limit (dB)	Limit Line (dBUV/m)	Read Level (dBUV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	2338.00	49.69	-24.31	74.00	51.16	30.24	3.69	35.40	100.00	0.00	Peak
2	2338.00	37.97	-16.03	54.00	39.44	30.24	3.69	35.40	100.00	335.00	Average
3	X 2441.00	93.22			94.59	30.28	3.82	35.47	100.00	0.00	Peak
4	X 2441.00	86.92			88.29	30.28	3.82	35.47	100.00	335.00	Average
5	2484.00	49.57	-24.43	74.00	50.93	30.29	3.86	35.51	100.00	0.00	Peak
6	2484.00	38.04	-15.96	54.00	39.40	30.29	3.86	35.51	100.00	335.00	Average
7	7791.00	56.19	-17.81	74.00	45.12	39.30	7.71	35.94	100.00	0.00	Peak
8	7791.00	44.93	-9.07	54.00	33.86	39.30	7.71	35.94	100.00	255.00	Average

Remark: "X" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

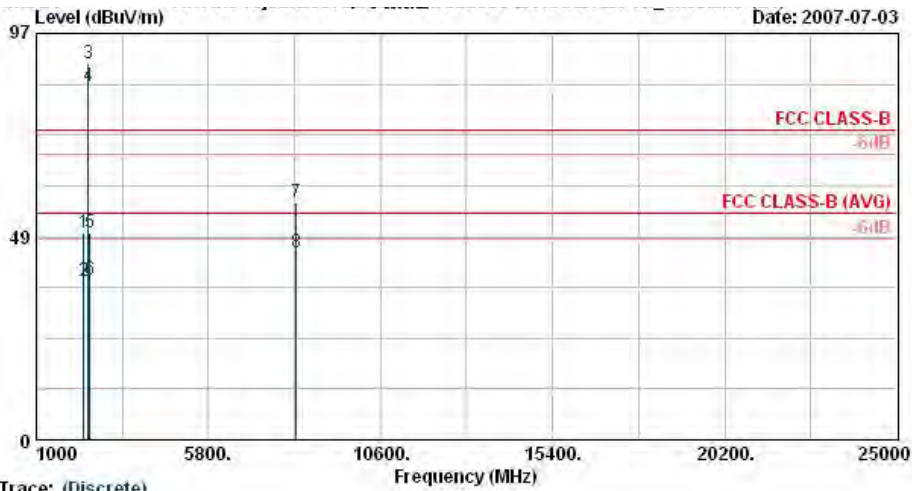
Site : 03CH06-HY
 Condition : LP-ANT(851121) VERTICAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : ET Tx_Ch39;2441MHz
 Data Rate : DH5
 Plane : E2

	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	69.69	29.51	-10.49	40.00	52.87	6.89	0.92	31.17	-	-	Peak
2	92.64	25.95	-17.55	43.50	46.39	9.62	1.05	31.11	-	-	Peak
3	282.18	17.89	-28.11	46.00	34.11	12.88	1.87	30.97	-	-	Peak
4	591.90	30.51	-15.49	46.00	39.87	18.38	2.93	30.67	-	-	Peak
5	691.30	32.97	-13.03	46.00	41.50	18.85	3.22	30.60	-	-	Peak
6	789.30	35.74	-10.26	46.00	43.13	19.72	3.39	30.50	100.00	273.00	Peak



- Polarization : Vertical (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)
 Site : 03CHD6-HY
 Condition : SHF-EHF HORN VERTICAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : BT Tx_Ch39;2441MHz
 Data Rate : DH5
 Plane : E2

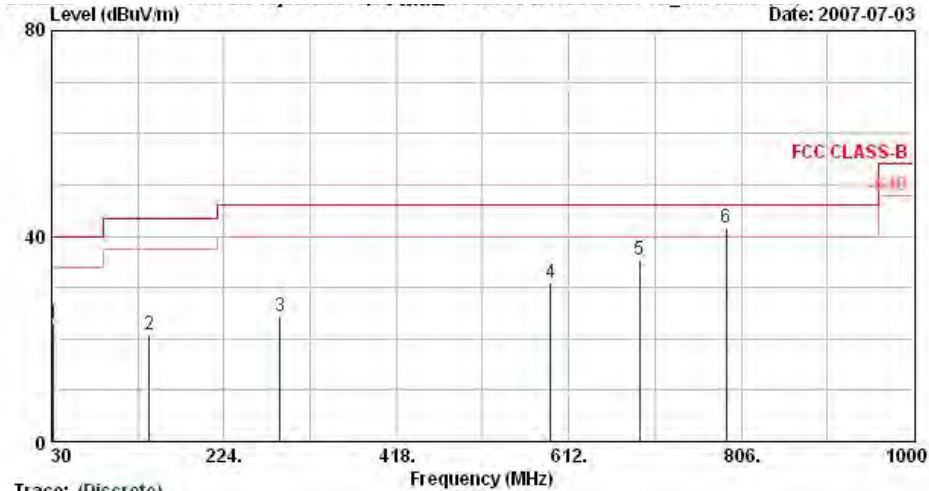
	Frequency (MHz)	Level (dBUV/m)	Over Limit (dB)	Limit Line (dBUV/m)	Read Level (dBUV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	2314.00	49.43	-24.57	74.00	50.95	30.22	3.66	35.40	100.00	0.00	Peak
2	2314.00	37.83	-16.17	54.00	39.35	30.22	3.66	35.40	100.00	276.00	Average
3	X 2441.00	89.94			91.31	30.28	3.82	35.47	100.00	0.00	Peak
4	X 2441.00	84.27			85.64	30.28	3.82	35.47	100.00	276.00	Average
5	2484.00	49.28	-24.72	74.00	50.64	30.29	3.86	35.51	100.00	0.00	Peak
6	2484.00	38.06	-15.94	54.00	39.42	30.29	3.86	35.51	100.00	276.00	Average
7	8241.00	56.51	-17.49	74.00	45.02	39.41	8.06	35.98	100.00	0.00	Peak
8	8241.00	44.60	-9.40	54.00	33.11	39.41	8.06	35.98	100.00	255.00	Average

Remark: "X" represents the Fundamental Signal



- Test Mode : Mode 3
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



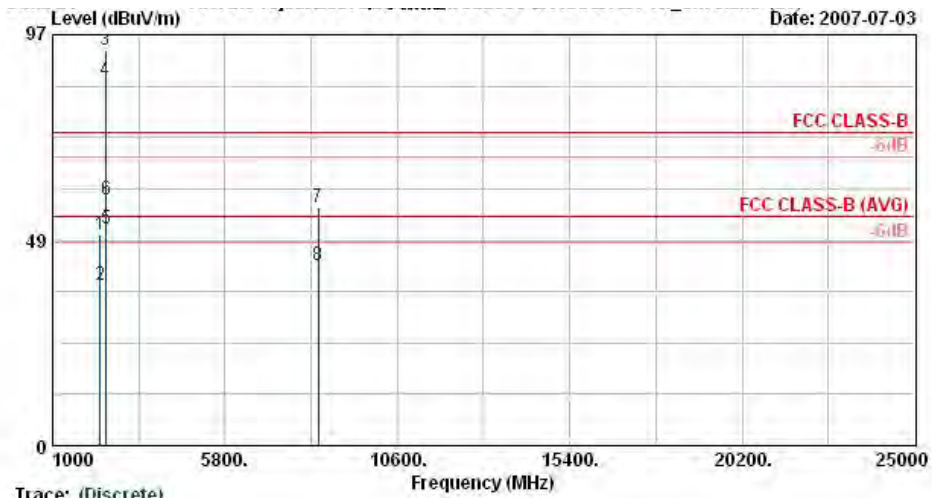
Trace: (Discrete)
 Site : 03CH06-HY
 Condition : LP-ANT(951121) HORIZONTAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : BT TX_CH76;2480MHz
 Data Rate : DH5
 Plane : E2

	Frequency (MHz)	Level (dBUV/m)	Over Limit (dB)	Limit Line (dBUV/m)	Read Level (dBUV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	31.89	22.94	-17.06	40.00	35.43	18.25	0.65	31.39	-	-	Peak
2	139.89	20.84	-22.66	43.50	40.34	10.25	1.29	31.04	-	-	Peak
3	287.04	24.24	-21.76	46.00	40.34	12.97	1.89	30.96	-	-	Peak
4	591.90	30.80	-15.20	46.00	40.16	18.38	2.93	30.67	-	-	Peak
5	691.30	35.25	-10.75	46.00	43.78	18.85	3.22	30.60	-	-	Peak
6	! 789.30	41.78	-4.22	46.00	49.17	19.72	3.39	30.50	100.00	47.00	Peak



- Polarization : Horizontal (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)
 Site : D3CH06-HY
 Condition : SHF-EHF HORN HORIZONTAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : ET_TX_CH78; 2480MHz
 Data Rate : DH5
 Plane : E2

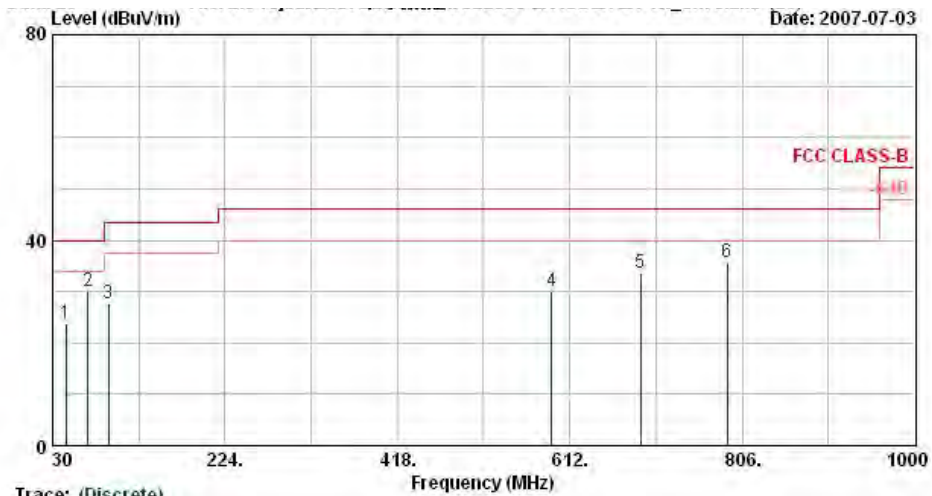
	Frequency (MHz)	Level (dBUV/m)	Over Limit (dB)	Limit Line (dBUV/m)	Read Level (dBUV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	2328.00	49.67	-24.33	74.00	51.15	30.23	3.69	35.40	100.00	0.00	Peak
2	2328.00	38.00	-16.00	54.00	39.48	30.23	3.69	35.40	100.00	6.00	Average
3	X 2480.00	93.42			94.78	30.29	3.86	35.51	100.00	0.00	Peak
4	X 2480.00	86.01			87.37	30.29	3.86	35.51	100.00	6.00	Average
5	! 2483.50	51.06	-2.94	54.00	52.42	30.29	3.86	35.51	100.00	6.00	Average
6	2483.50	58.21	-15.79	74.00	59.57	30.29	3.86	35.51	100.00	0.00	Peak
7	8391.00	56.18	-17.82	74.00	44.73	39.28	8.23	36.06	100.00	0.00	Peak
8	8391.00	42.72	-11.28	54.00	31.27	39.28	8.23	36.06	100.00	267.00	Average

Remark: "X" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



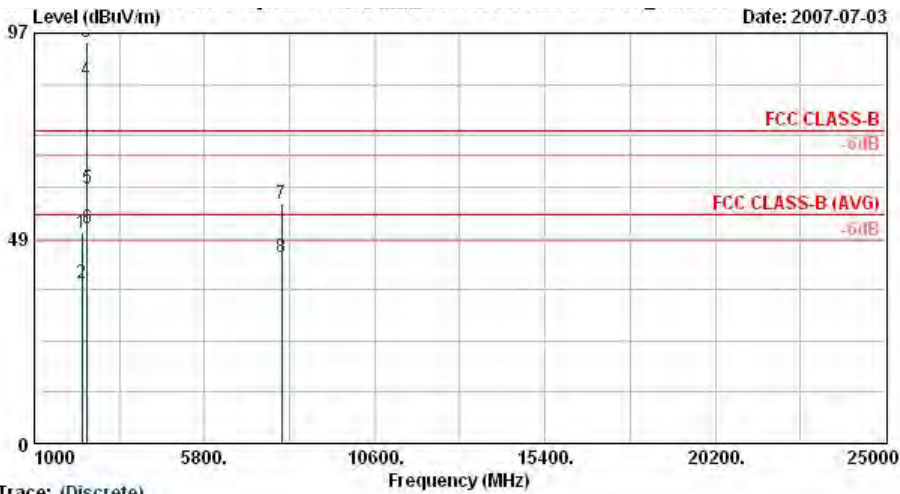
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : LF-ANT(851121) VERTICAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : BT_TX_CH78; 2480MHz
 Data Rate : DH5
 Plane : E2

	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	44.58	23.80	-16.20	40.00	43.14	11.02	0.76	31.12	-	-	Peak
2	69.69	30.02	-9.98	40.00	53.38	6.89	0.92	31.17	100.00	143.00	Peak
3	92.64	27.68	-15.82	43.50	48.12	9.62	1.05	31.11	-	-	Peak
4	591.90	29.97	-16.03	46.00	39.33	18.38	2.93	30.67	-	-	Peak
5	691.30	33.70	-12.30	46.00	42.23	18.85	3.22	30.60	-	-	Peak
6	789.30	35.79	-10.21	46.00	43.18	19.72	3.39	30.50	-	-	Peak



- Polarization : Vertical (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)
 Site : 03CH06-HY
 Condition : SHF-EHF HORN VERTICAL
 EUT : Mobile Phone
 Power : 120Vac/60Hz
 Model : FR 762206
 Memo : ET_TX_CH76;2480MHz
 Data Rate : DH5
 Plane : E2

	Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
1	2344.00	49.82	-24.18	74.00	51.29	30.24	3.71	35.42	100.00	0.00	Peak
2	2344.00	37.92	-16.08	54.00	39.39	30.24	3.71	35.42	100.00	280.00	Average
3	X 2480.00	94.76			96.12	30.29	3.86	35.51	100.00	0.00	Peak
4	X 2480.00	85.76			87.12	30.29	3.86	35.51	100.00	280.00	Average
5	2483.50	60.06	-13.94	74.00	61.42	30.29	3.86	35.51	100.00	0.00	Peak
6	! 2483.50	50.68	-3.32	54.00	52.04	30.29	3.86	35.51	100.00	280.00	Average
7	7971.00	56.49	-17.51	74.00	45.02	39.55	7.78	35.86	100.00	0.00	Peak
8	7971.00	44.11	-9.89	54.00	32.64	39.55	7.78	35.86	100.00	267.00	Average

Remark: "X" represents the Fundamental Signal



5.10 Antenna Requirements

5.10.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no other antenna except assembled by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

5.10.2 Antenna Connected Construction

The antenna used in this product is a PIFA antenna without connector and it is considered to meet antenna requirement of FCC.

5.10.3 Antenna Gain

The antenna gain of EUT is less than 6dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



6. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Aug. 30, 2006	Aug. 29, 2007	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Mar. 30, 2007	Mar. 29, 2008	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 30, 2007	Mar. 29, 2008	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 04, 2006	Dec. 03, 2007	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	N/A	Conduction (CO01-HY)
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Oct. 05, 2006	Oct. 04, 2007	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul. 26, 200	Jul. 25, 2008	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 20, 2006	Nov. 19, 2007	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Com-Power	AH118	071025	1G~18G	Jun. 04, 2007	Jun. 03, 2008	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Nov. 20, 2006	Nov. 19, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G - 26.5G	Nov. 15, 2006	Nov. 14, 2007	Radiation (03CH06-HY)
Pre Amplifier	Mini Circuits	ZKL-2	D092004-1	10~2500MHz	Nov. 15, 2006	Nov. 14, 2007	Radiation (03CH06-HY)
Base Station Simulator	R & S	CMU200	106656	WCDMA	Nov. 20, 2006	Nov. 19, 2007	Radiation (03CH06-HY)
Controller	INN-CO	CO2000	N/A	N/A	N/A	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	INN-CO	MM3000	114/8000604/L	1 m - 4 m	N/A	N/A	Radiation (03CH06-HY)



7. Uncertainty Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.26		

Uncertainty of Radiated Emission Evaluation (30MHz ~ 1000MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.15	Normal(k=2)	0.08
Antenna factor calibration	1.12	Normal(k=2)	0.56
Cable loss calibration	0.12	Normal(k=2)	0.06
Pre Amplifier Gain calibration	0.13	Normal(k=2)	0.07
RCV/SPA specification	2.5	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1	Rectangular	0.29
Site imperfection	2.1	Rectangular	1.21
Mismatch	+0.39/-0.41	U-shaped	0.28
combined standard uncertainty Uc(y)	1.58		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	3.16		



Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of confidence of 95% $U = 2U_c(y)$	4.72				



APPENDIX A. Photographs of EUT

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(Scanner 1)

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(Scanner 2)

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(Scanner 1)

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(Scanner 2)

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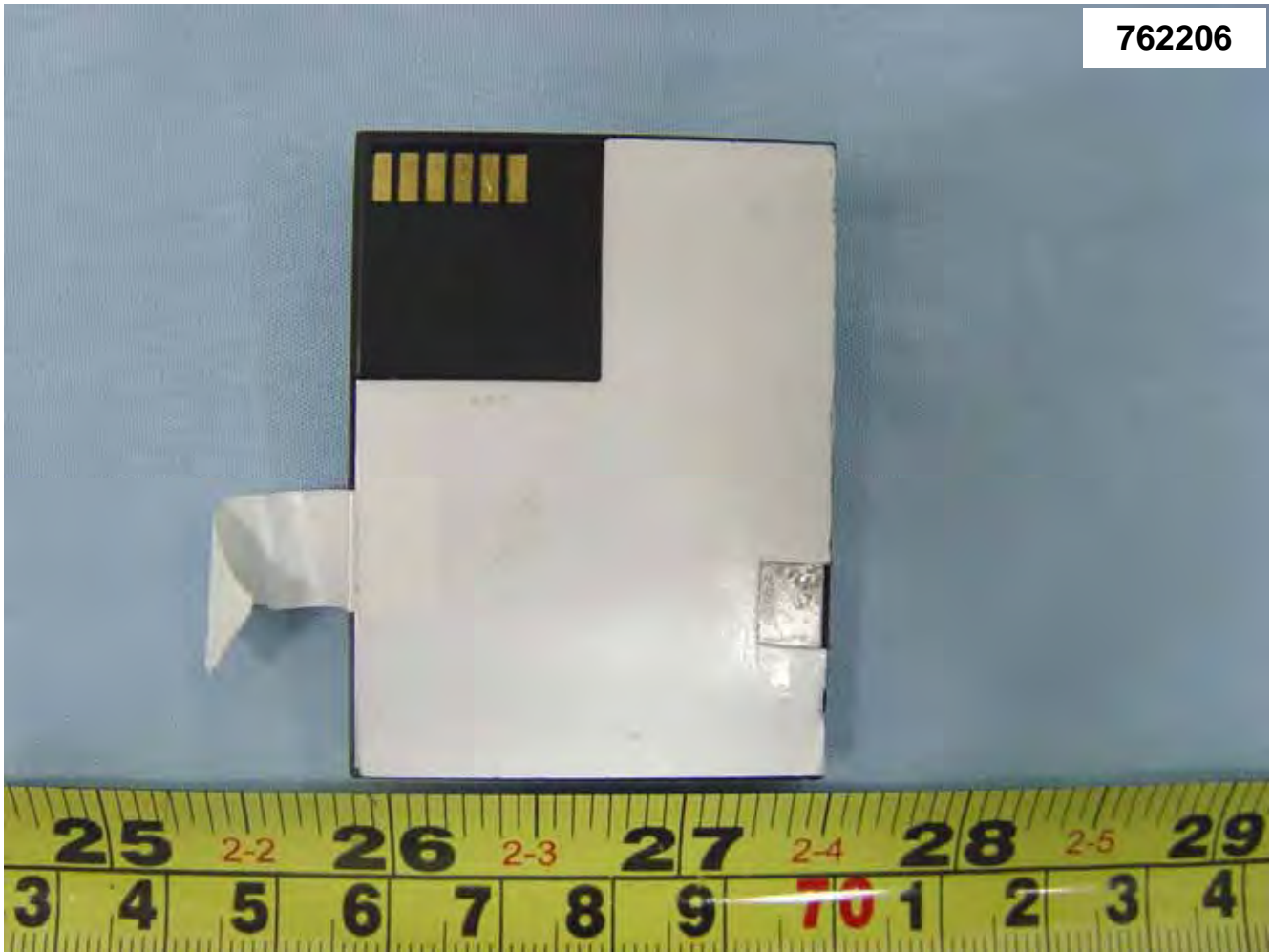


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APPENDIX B. Internal Photographs of EUT

(Scanner 1)

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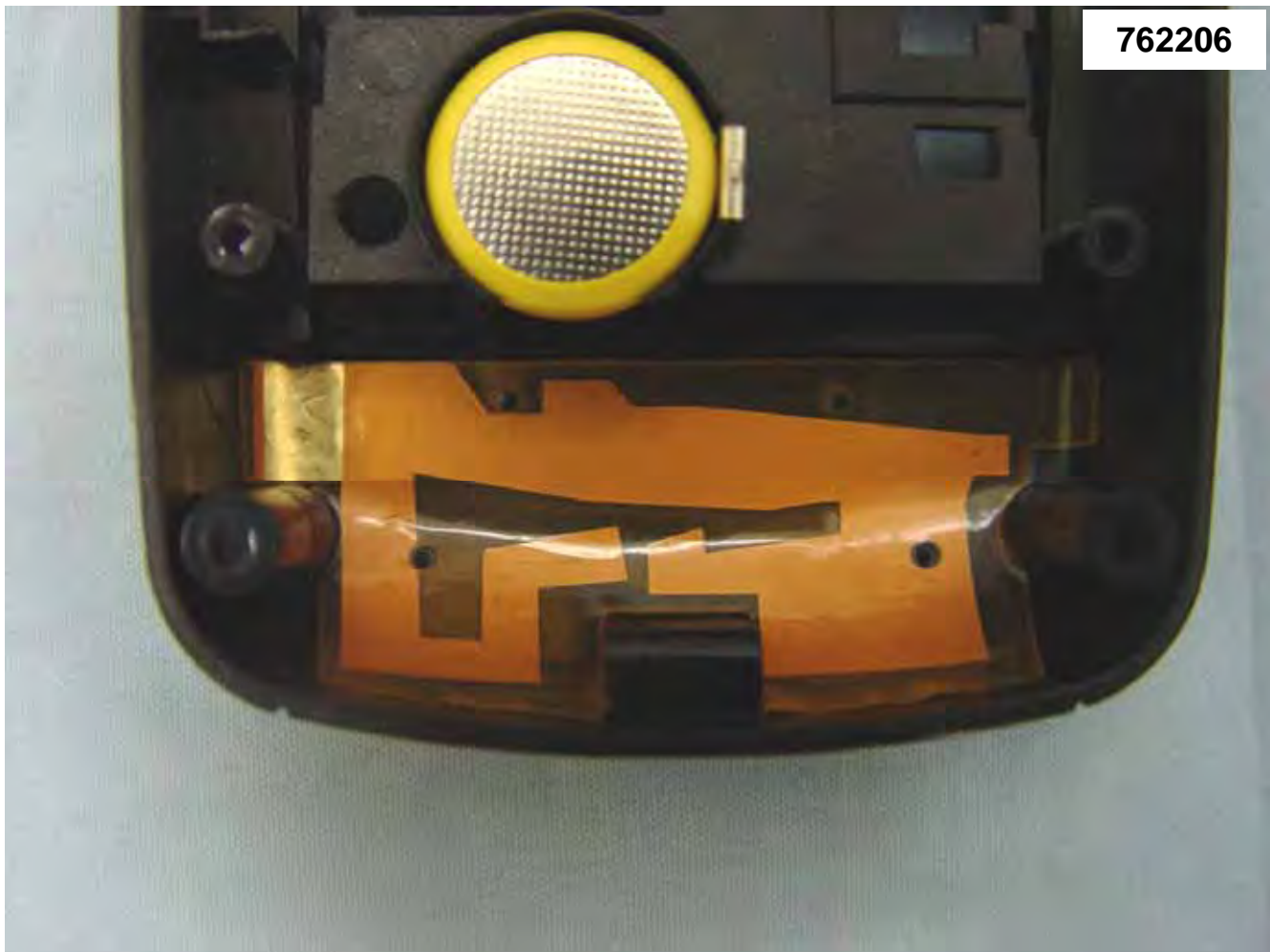




(Scanner 2)

762206

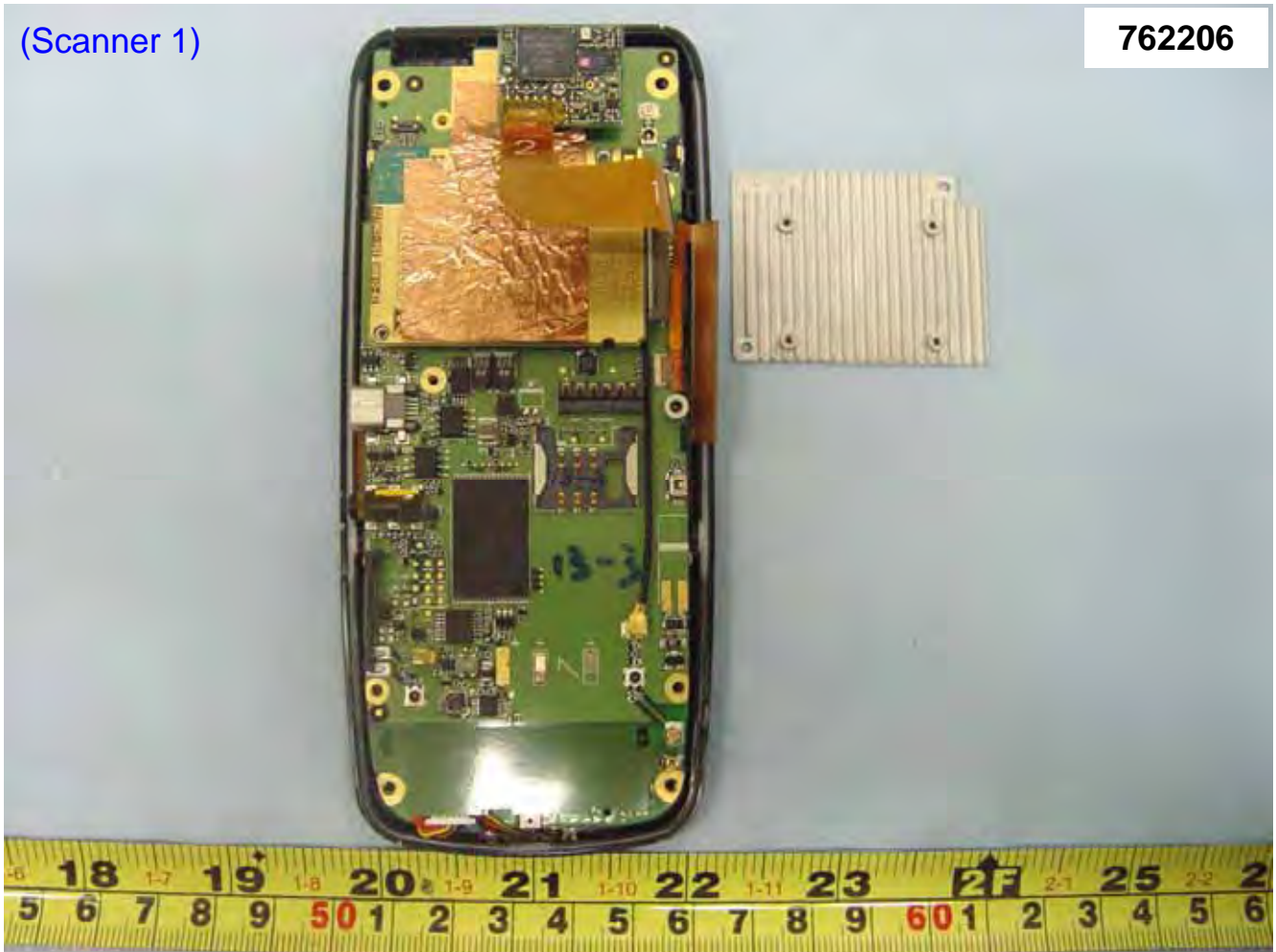






(Scanner 1)

762206





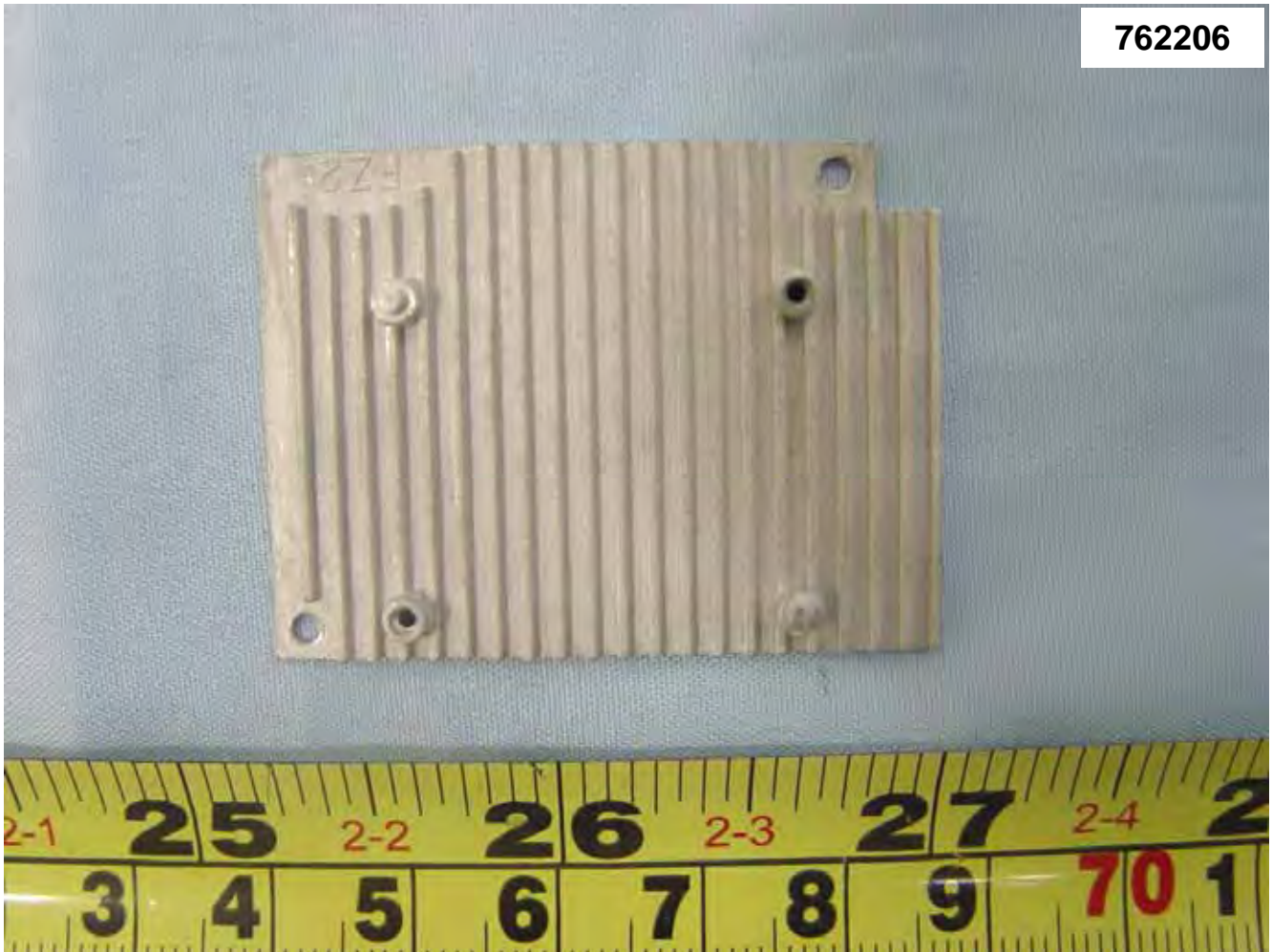
(Scanner 2)

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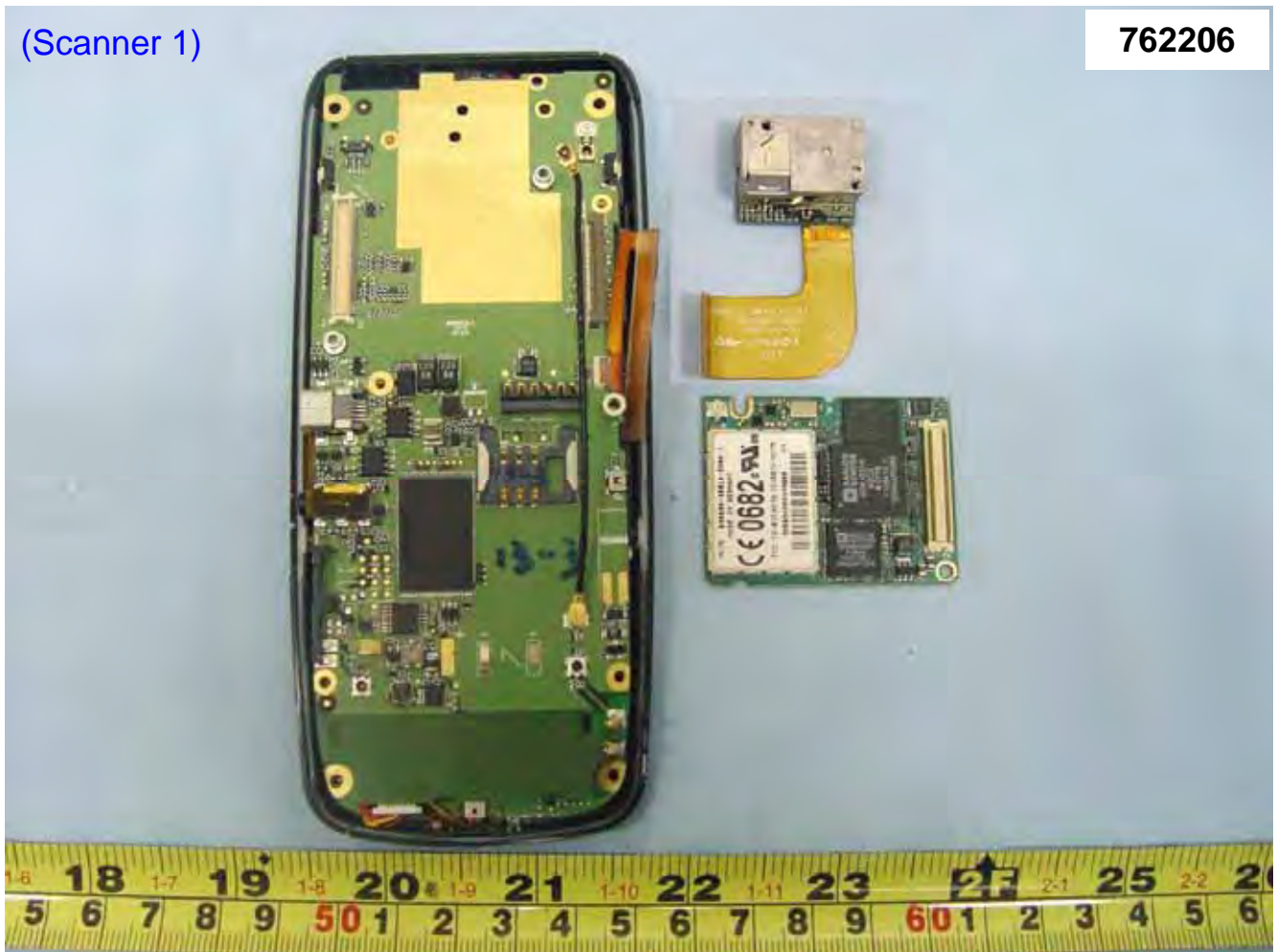
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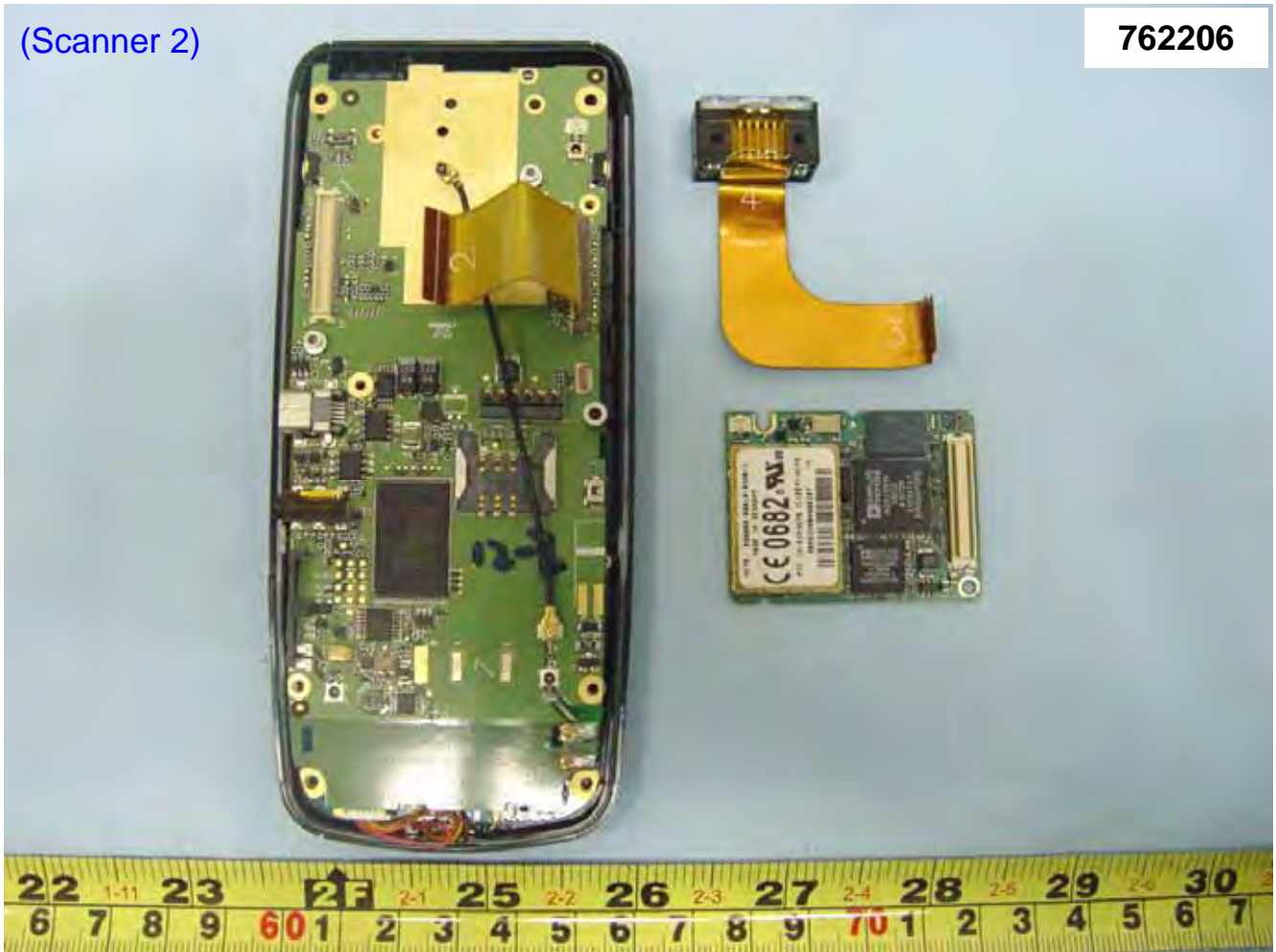
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(Scanner 2)

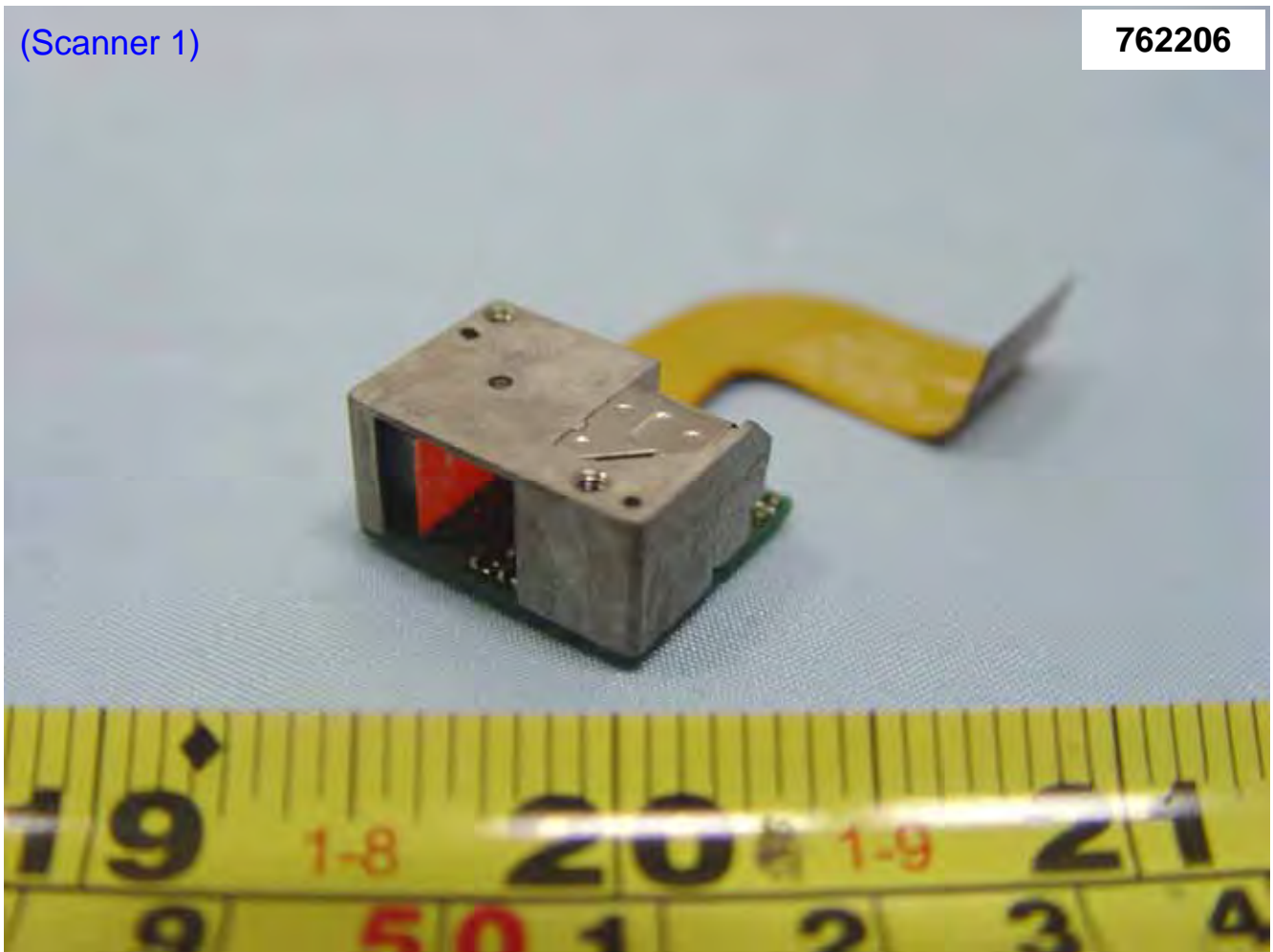
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(Scanner 1)

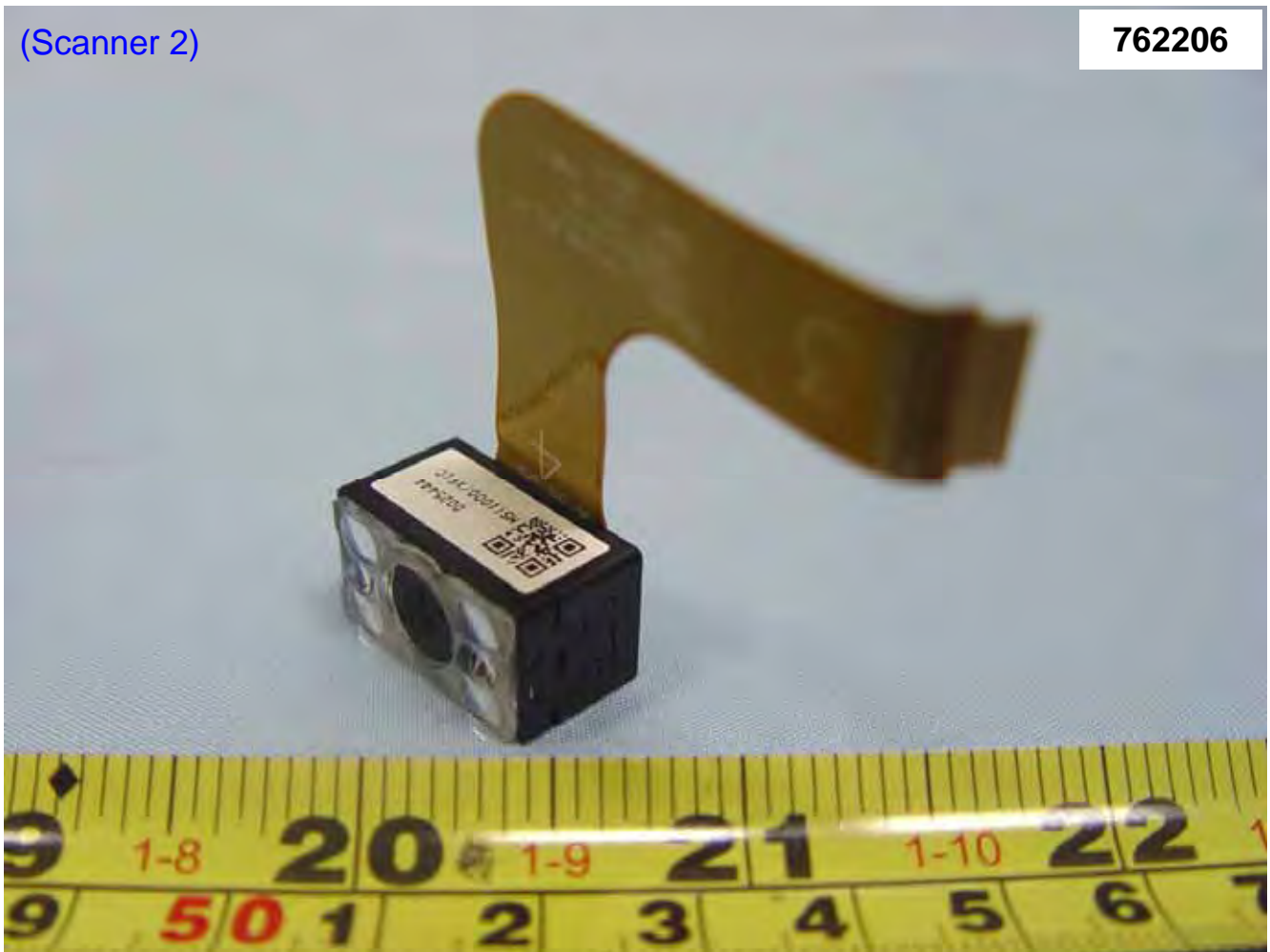
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(Scanner 2)

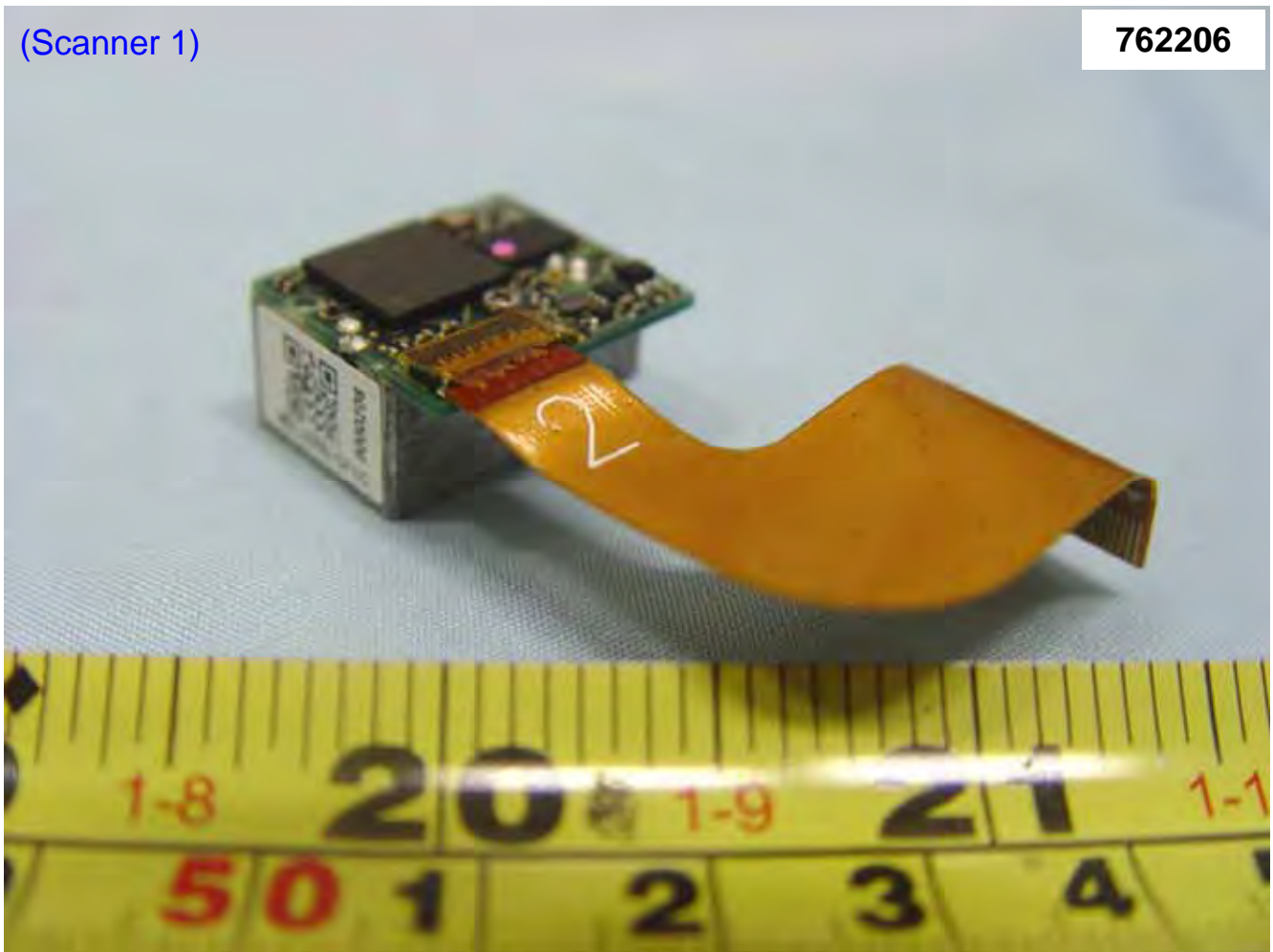
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(Scanner 1)

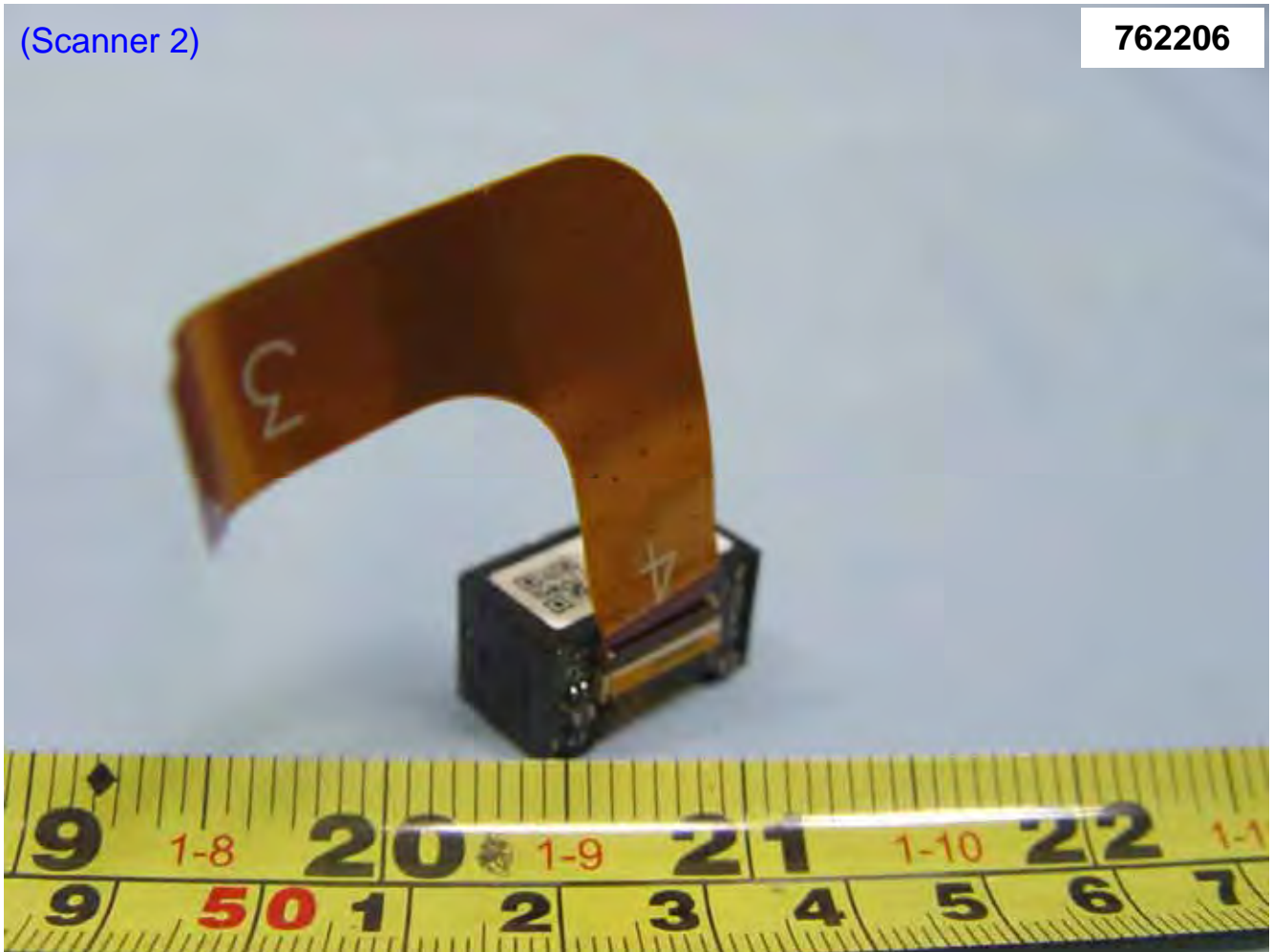
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(Scanner 2)

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(Scanner 1)

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(Scanner 2)

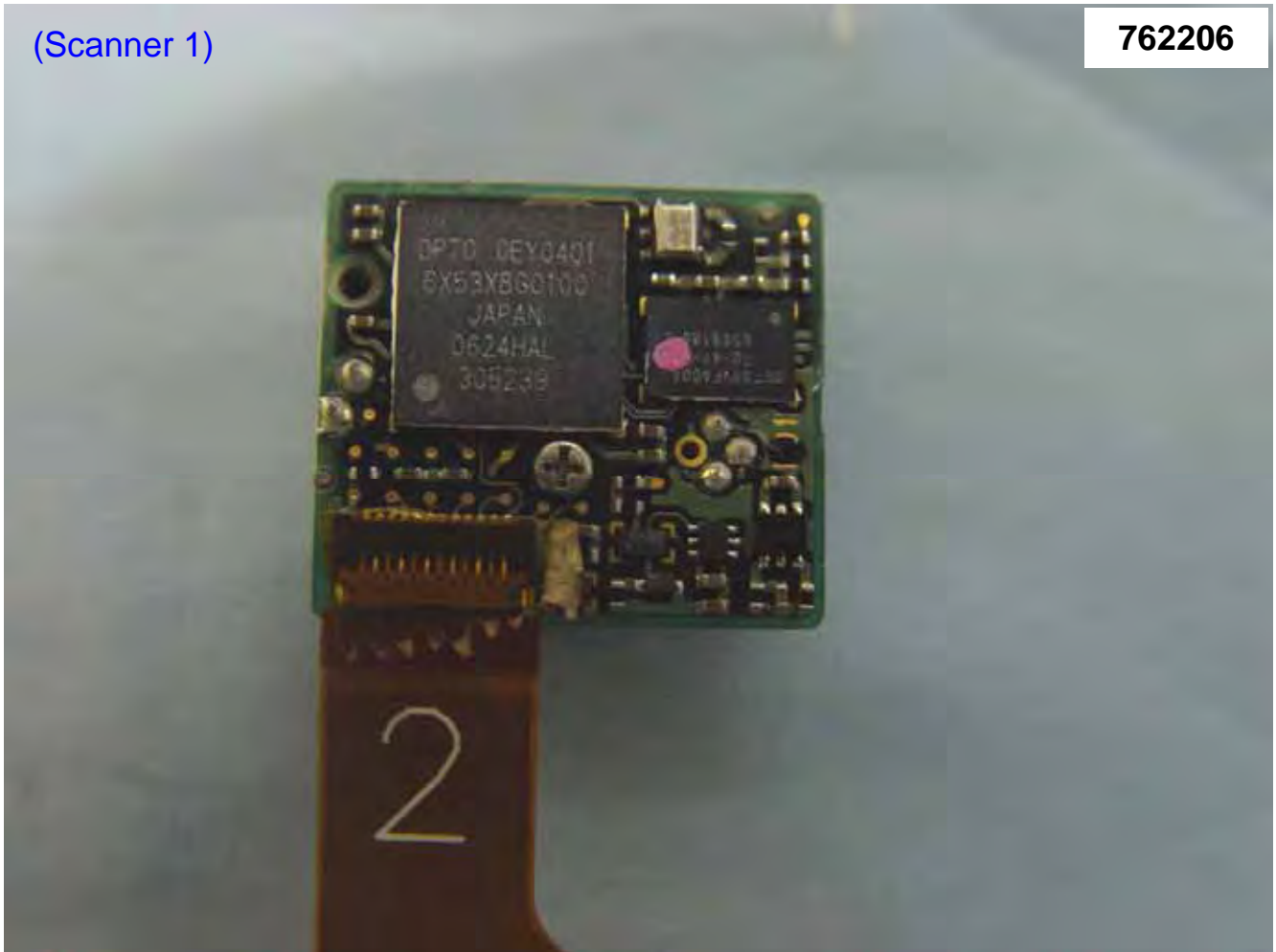
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(Scanner 1)

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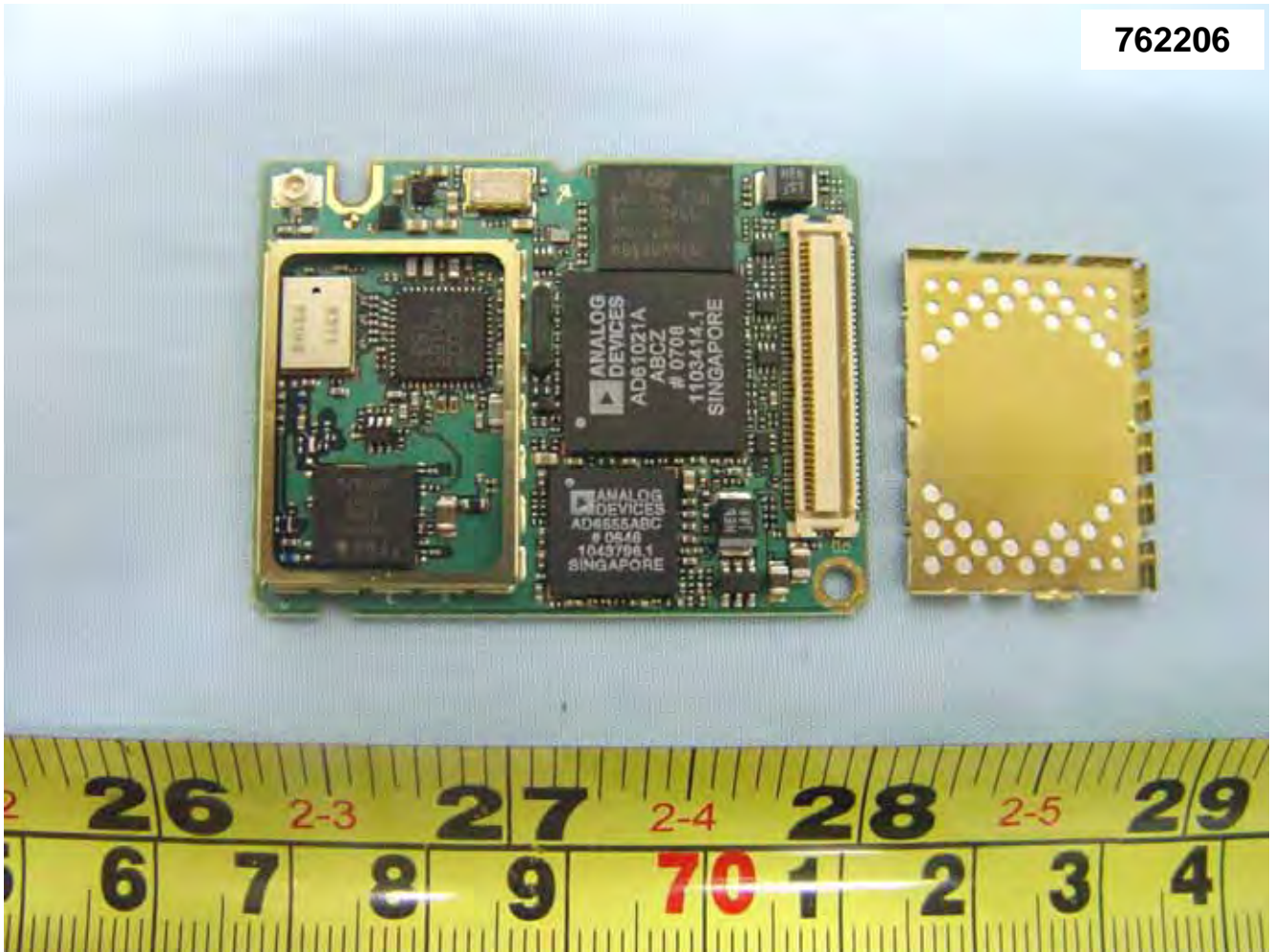
(Scanner 2)

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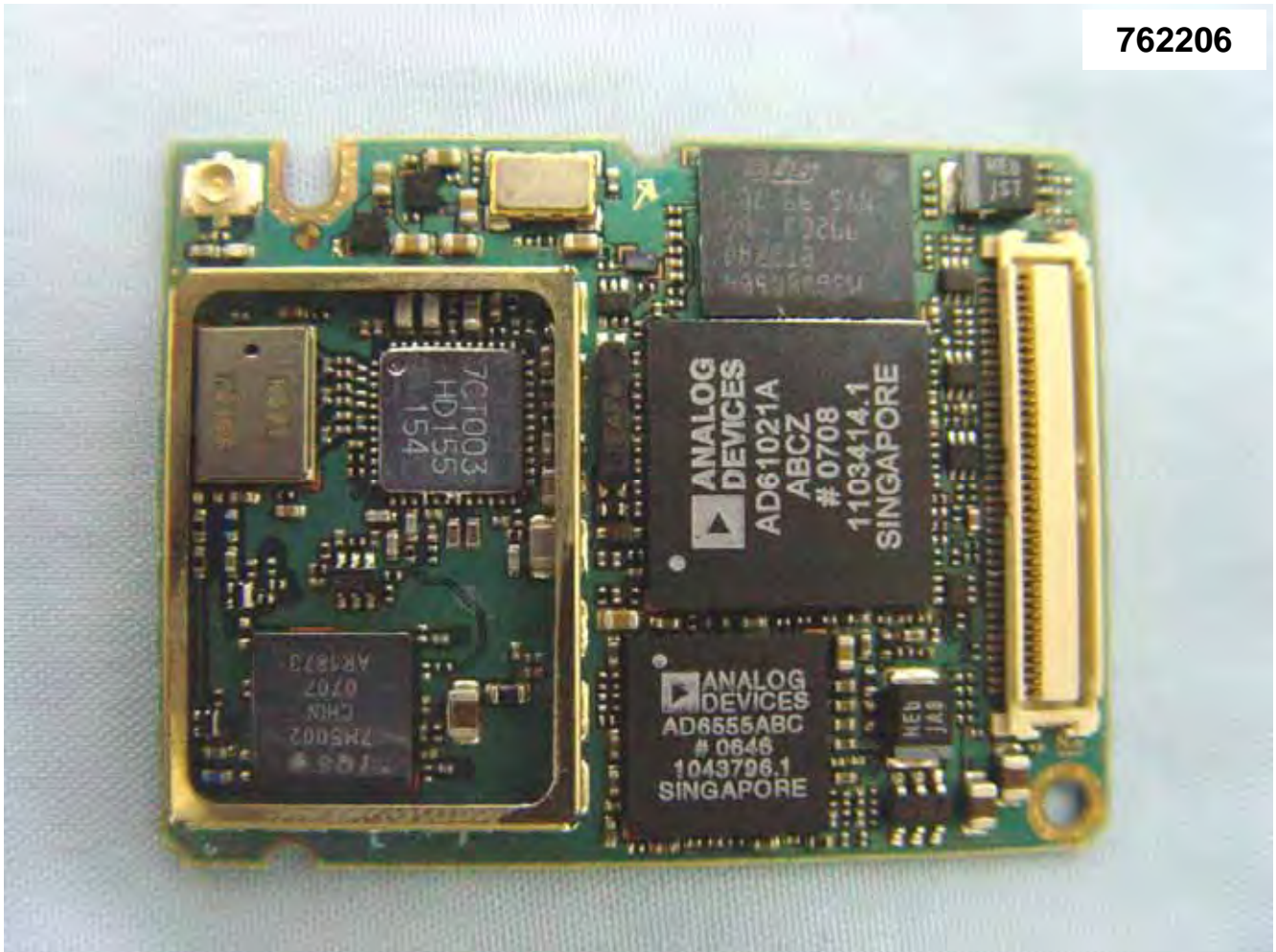


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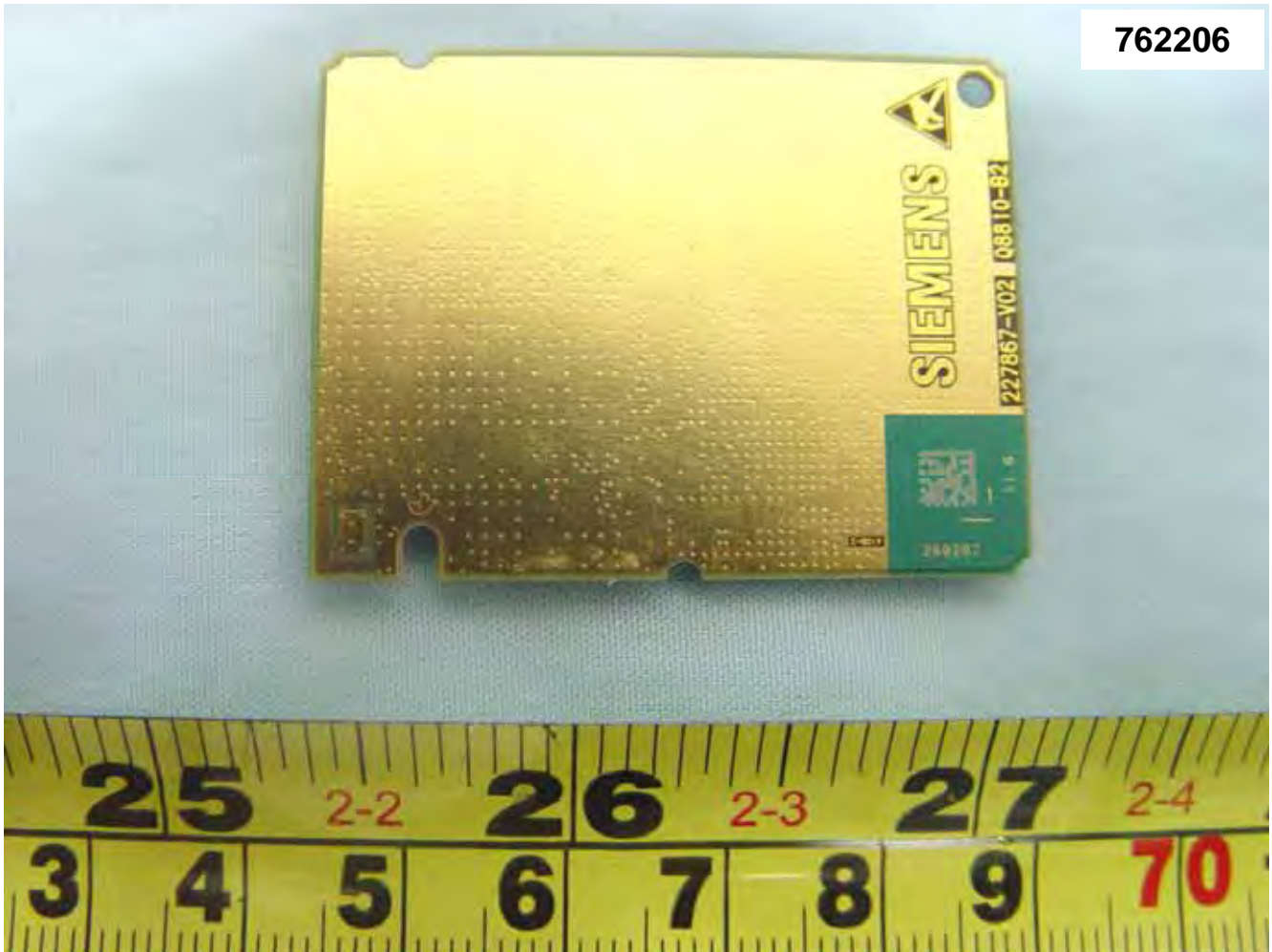


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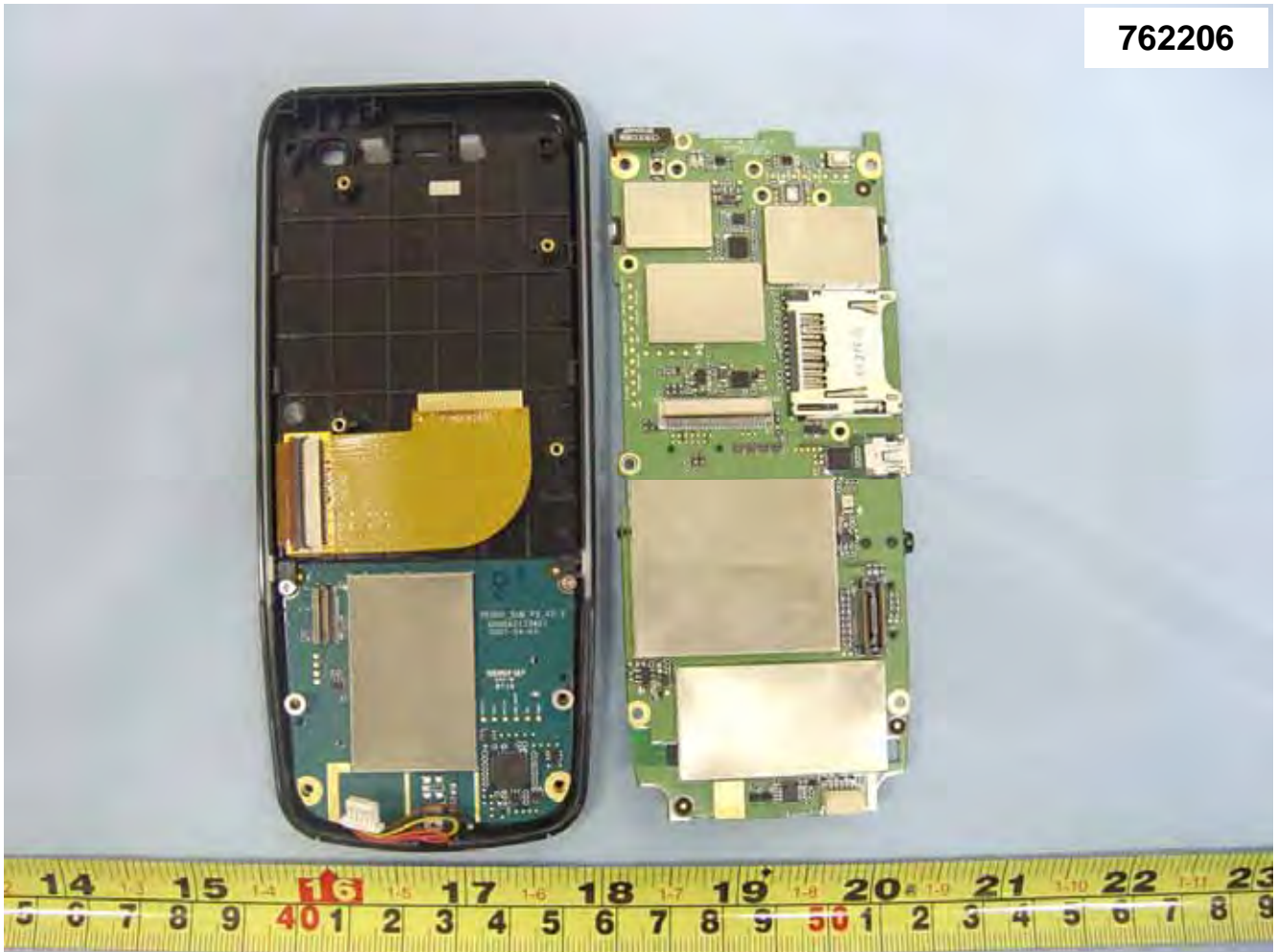


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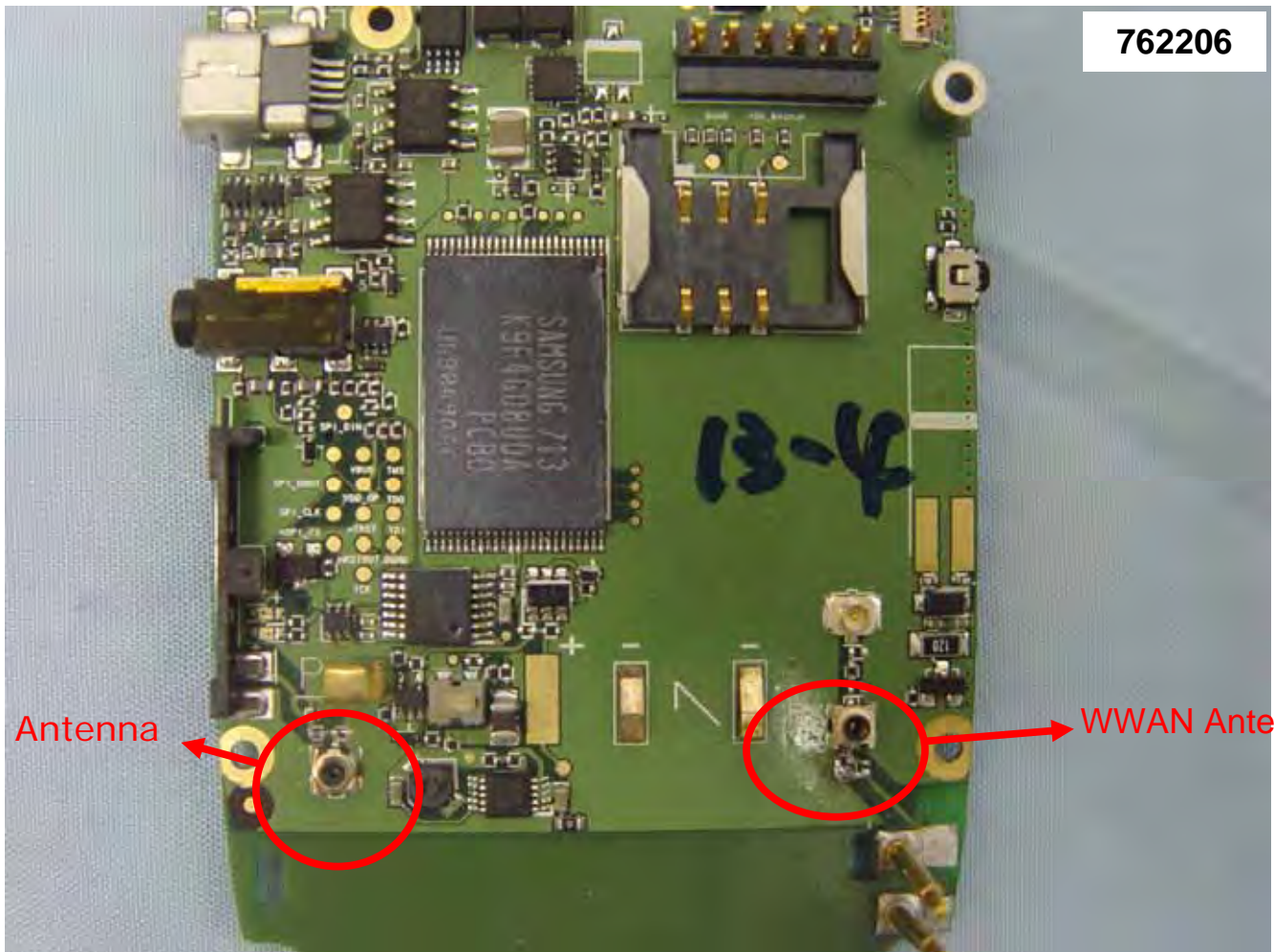


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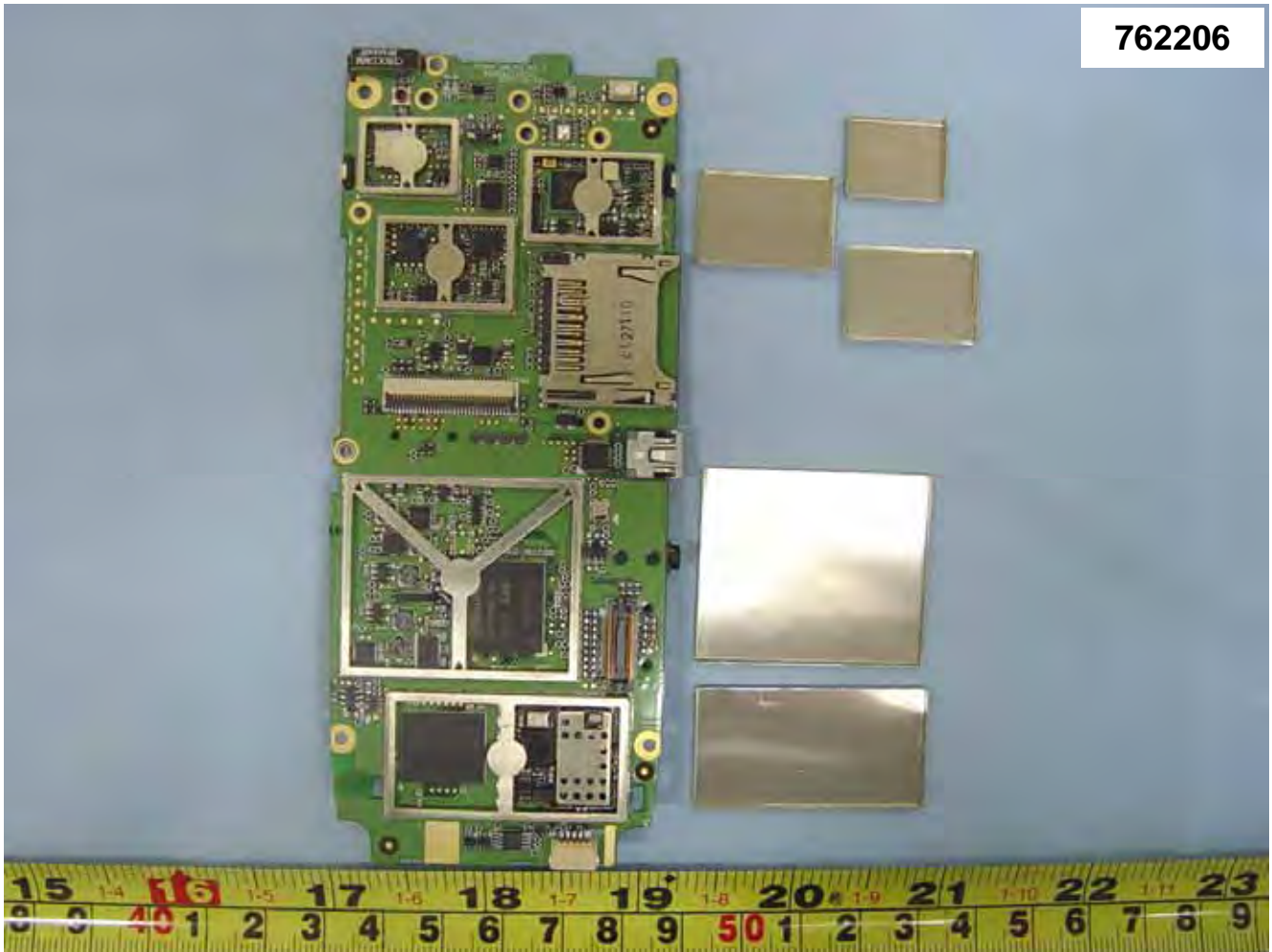


WLAN Antenna

WWAN Antenna



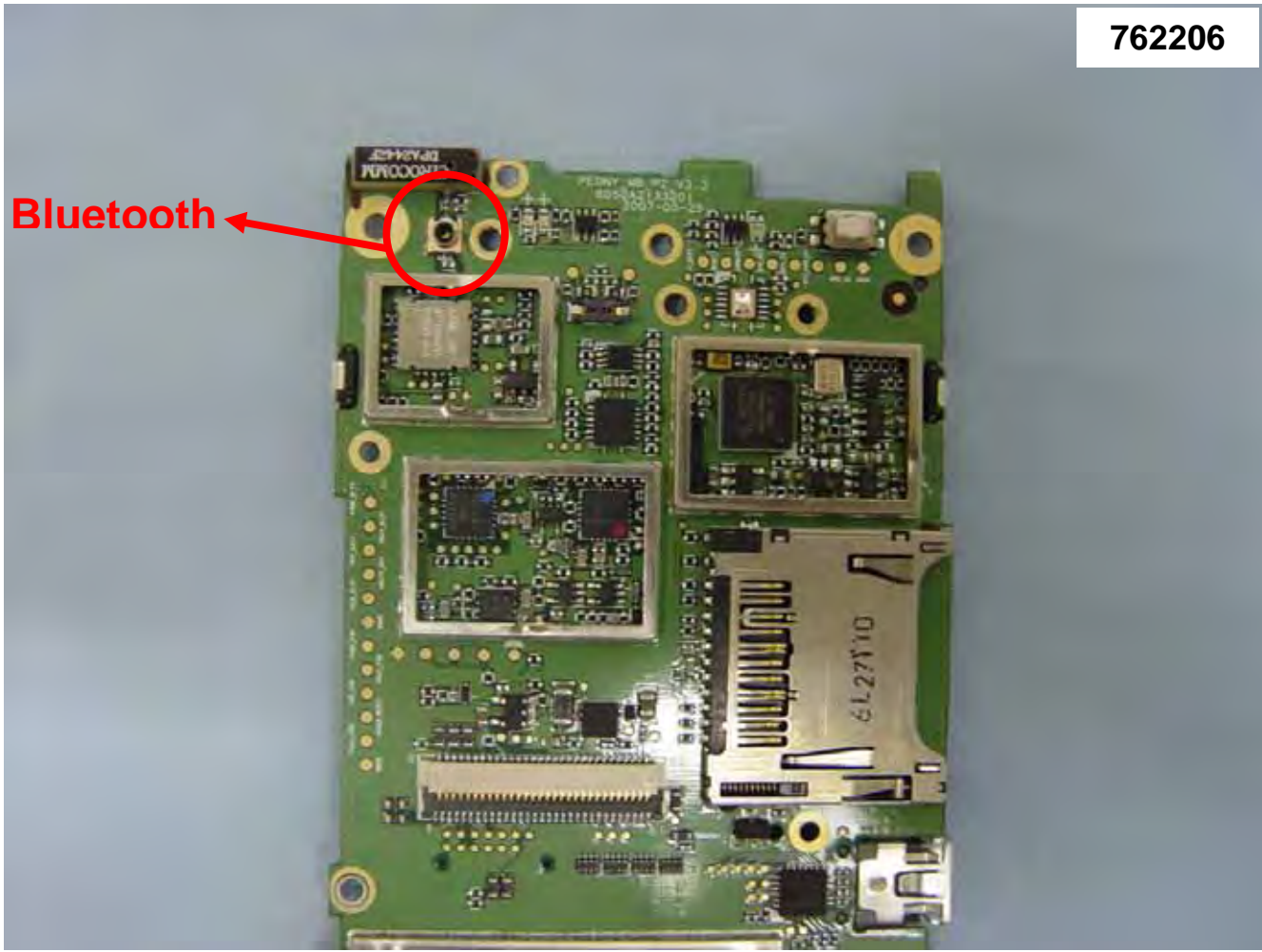
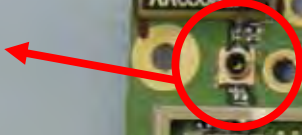
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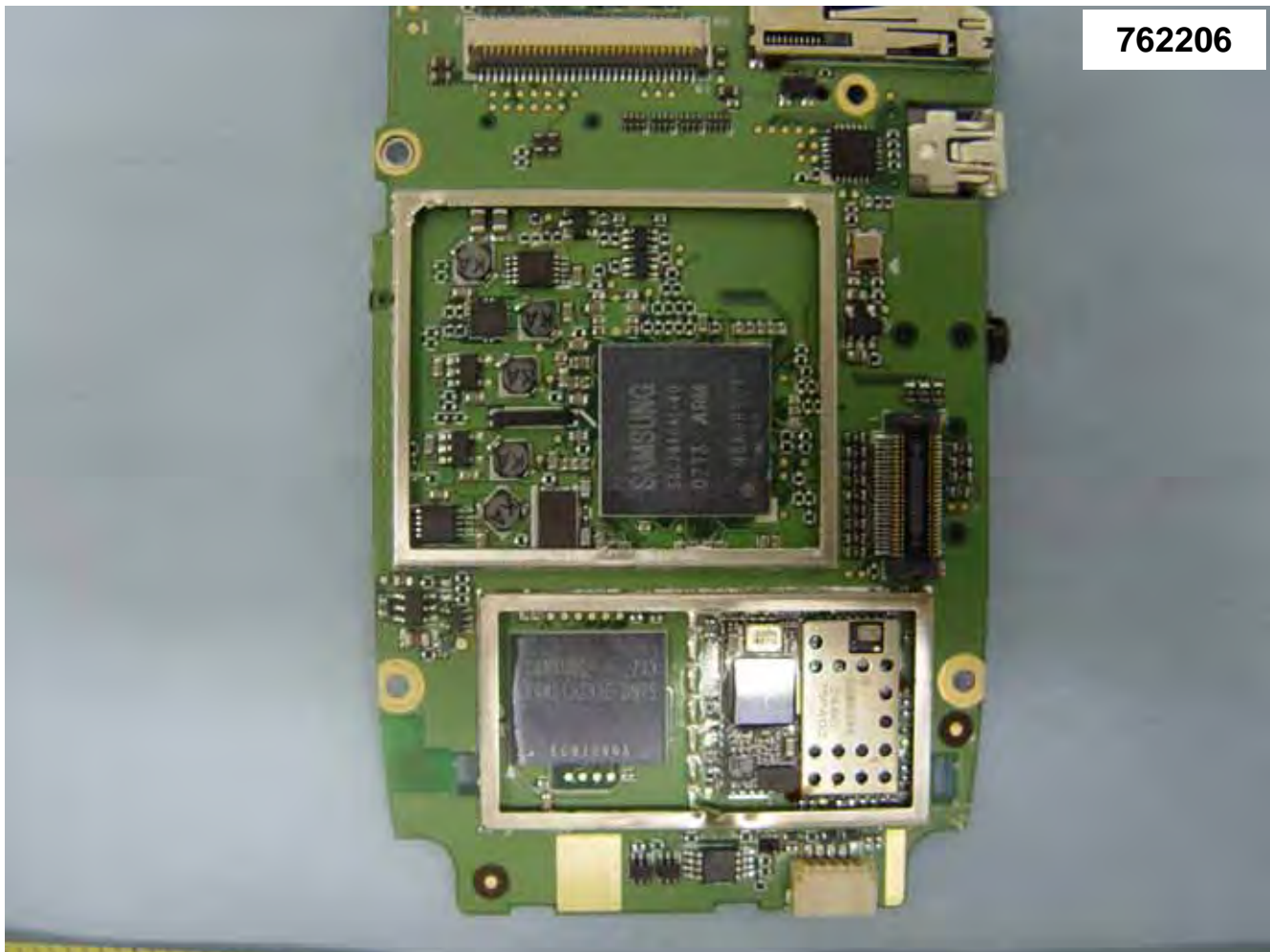




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Bluetooth





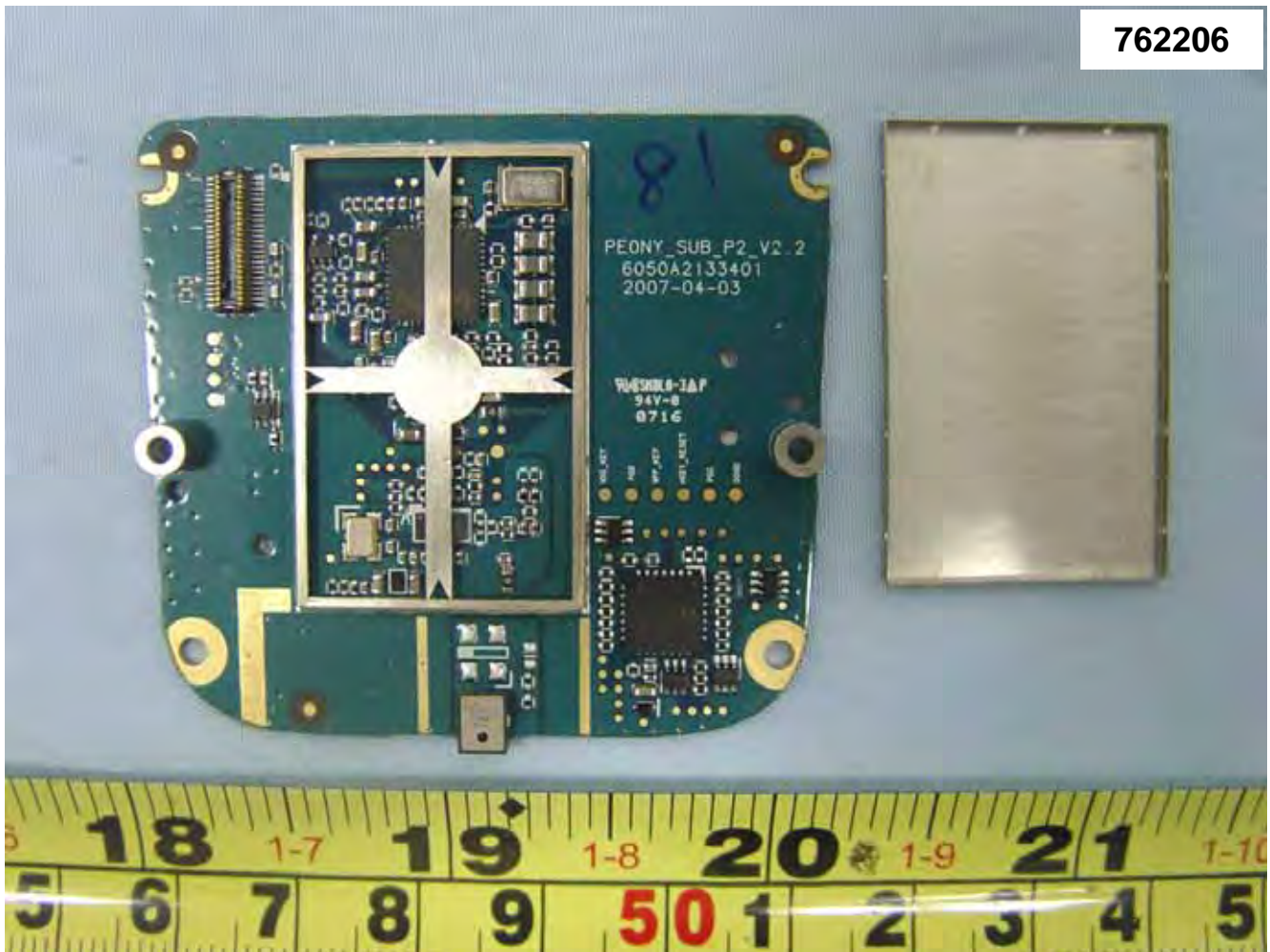


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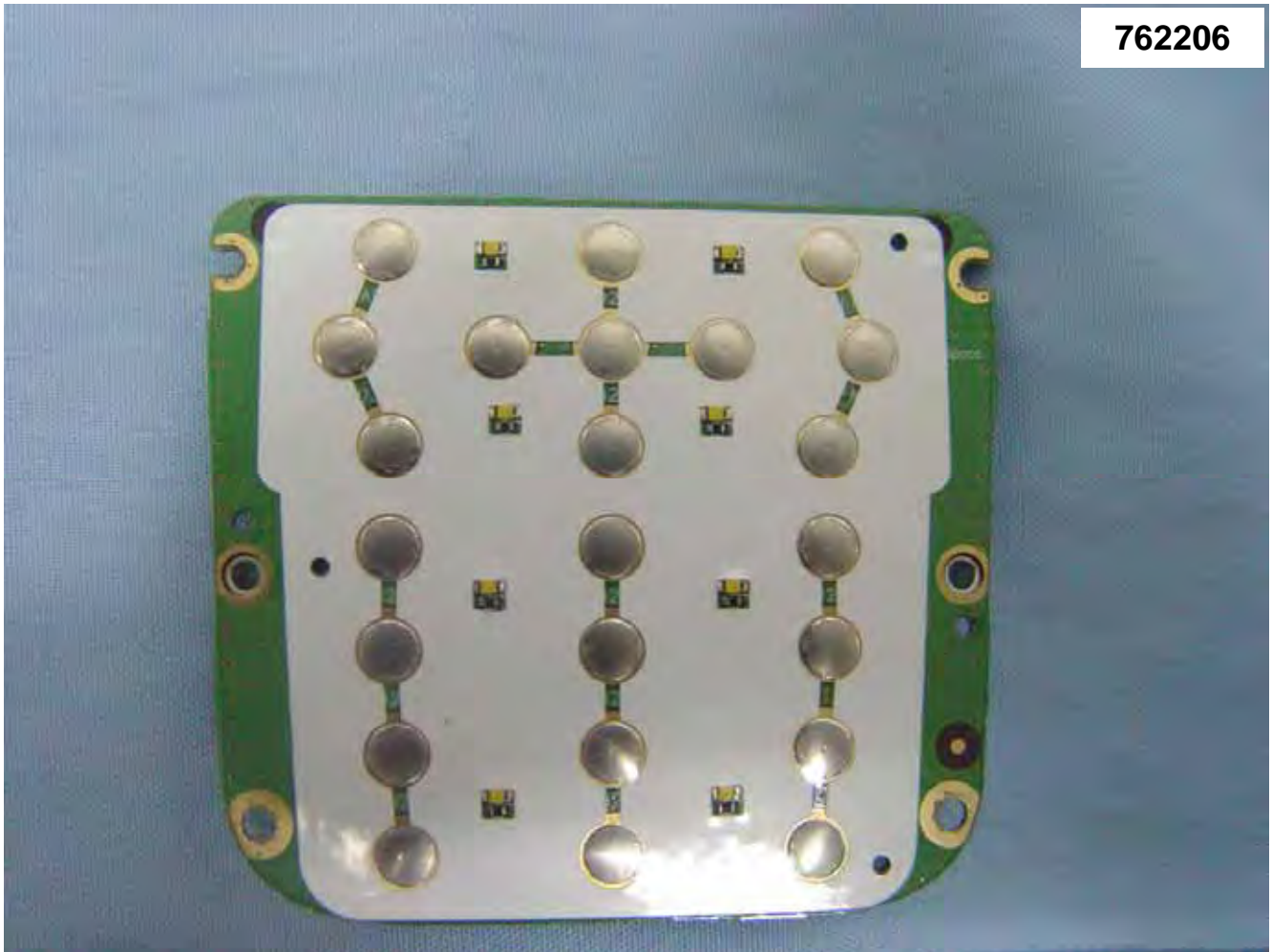


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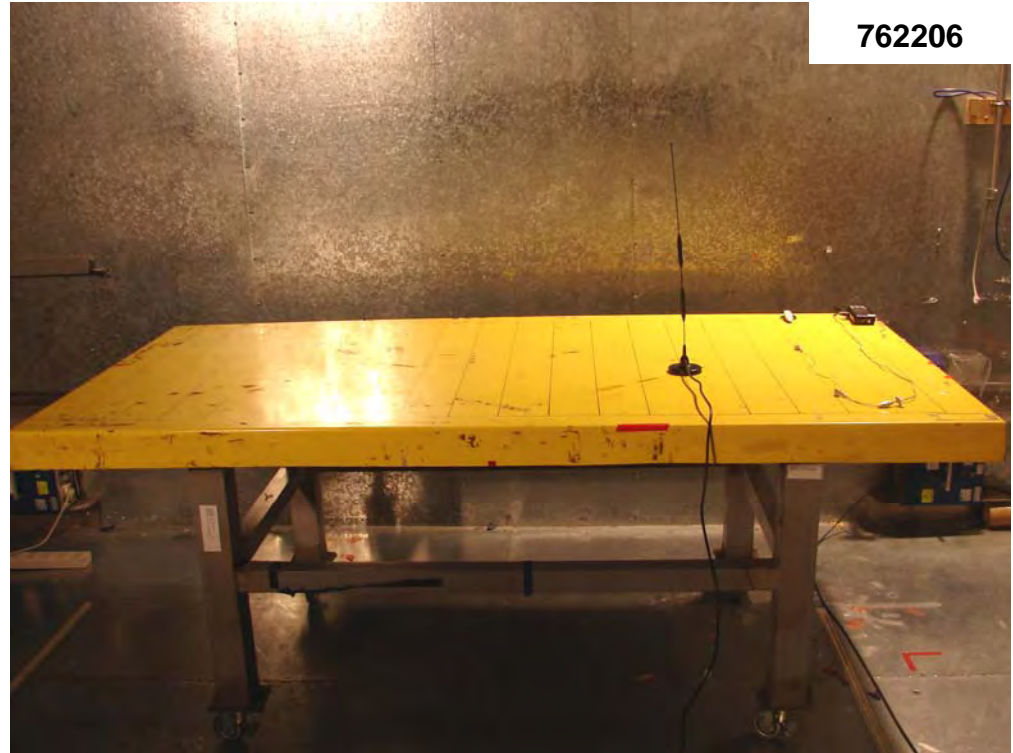


Appendix C. Set up Photograph

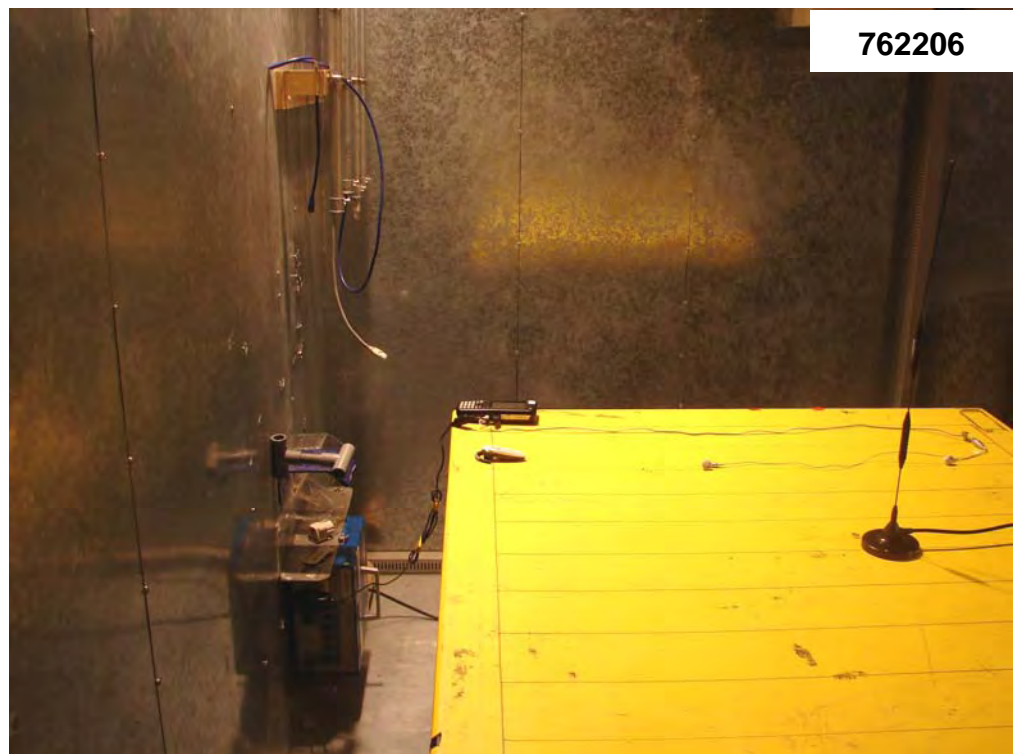
Conducted Emission

Mode 1~2

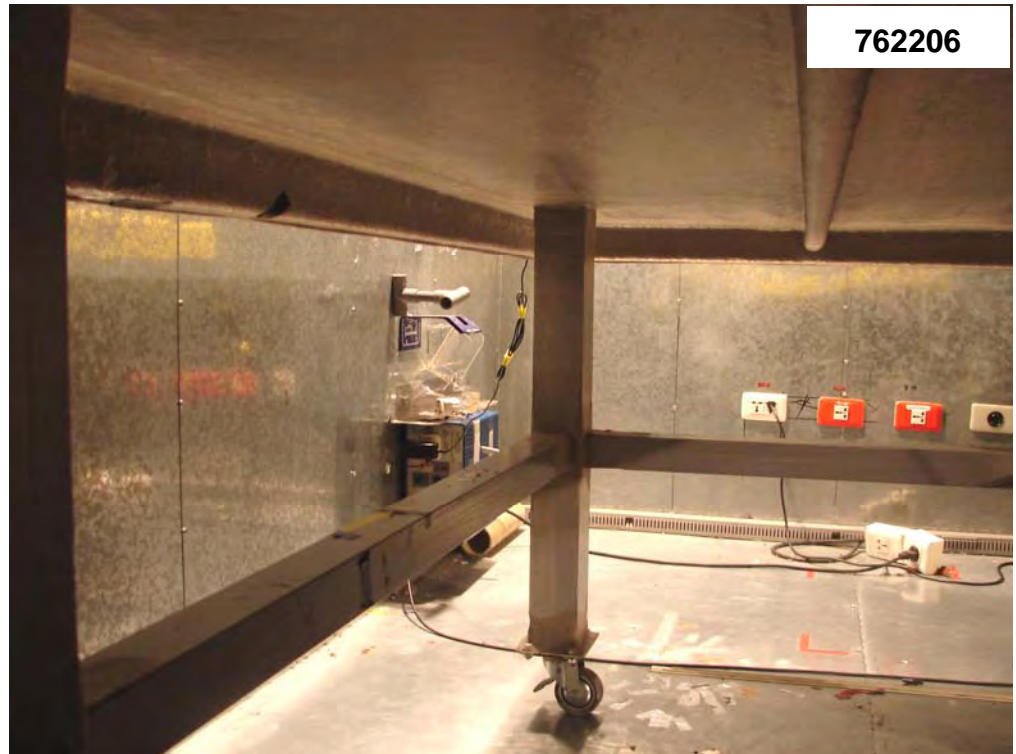
FRONT VIEW



REAR VIEW



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SIDE VIEW

Mode 3~5

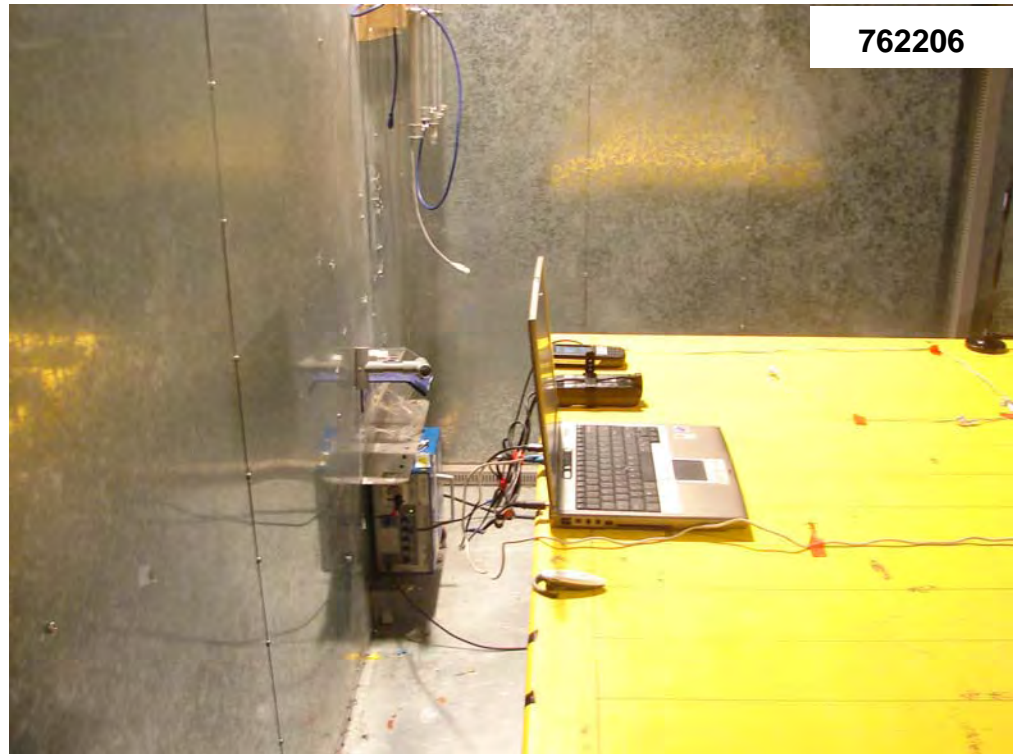
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FRONT VIEW



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REAR VIEW

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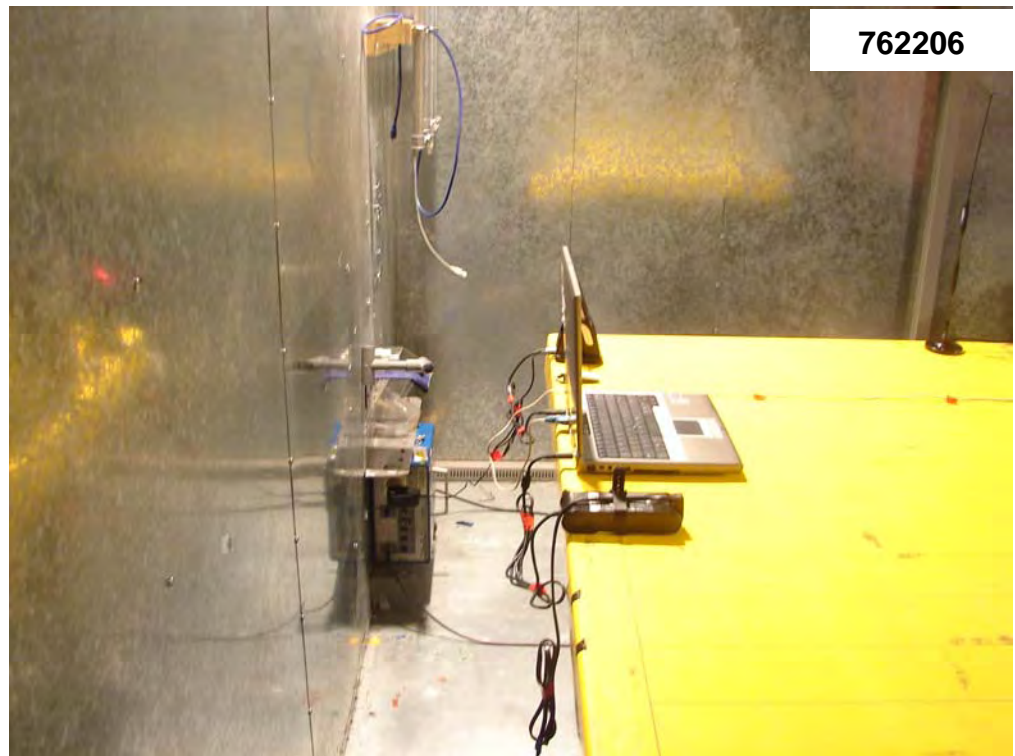
SIDE VIEW

Mode 4

FRONT VIEW



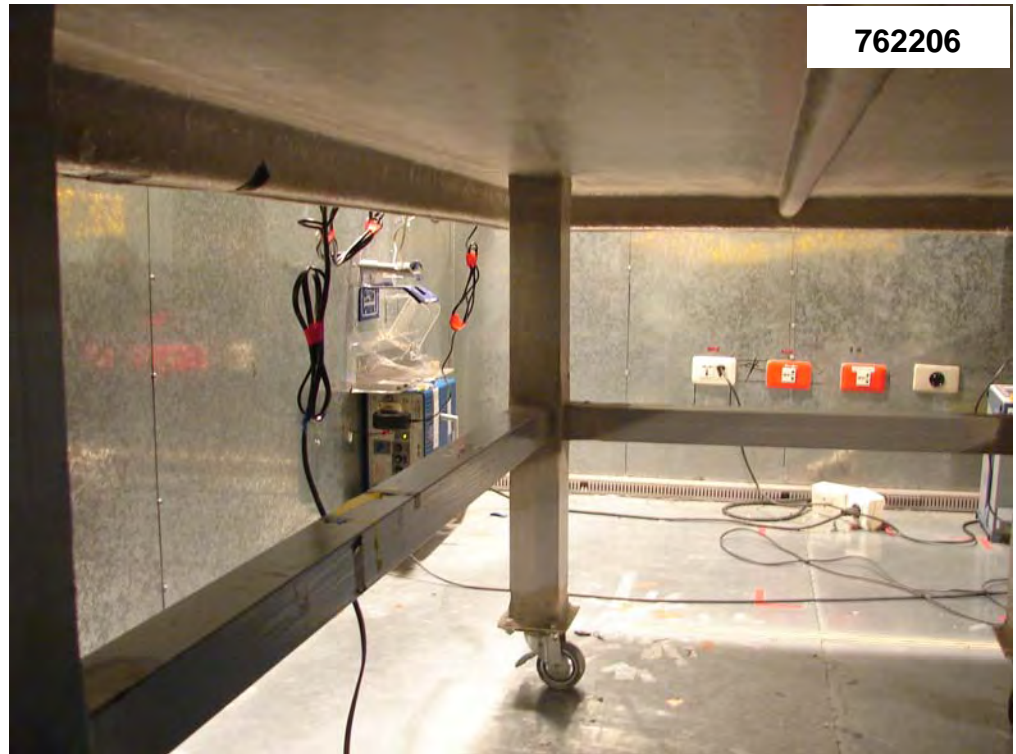
REAR VIEW





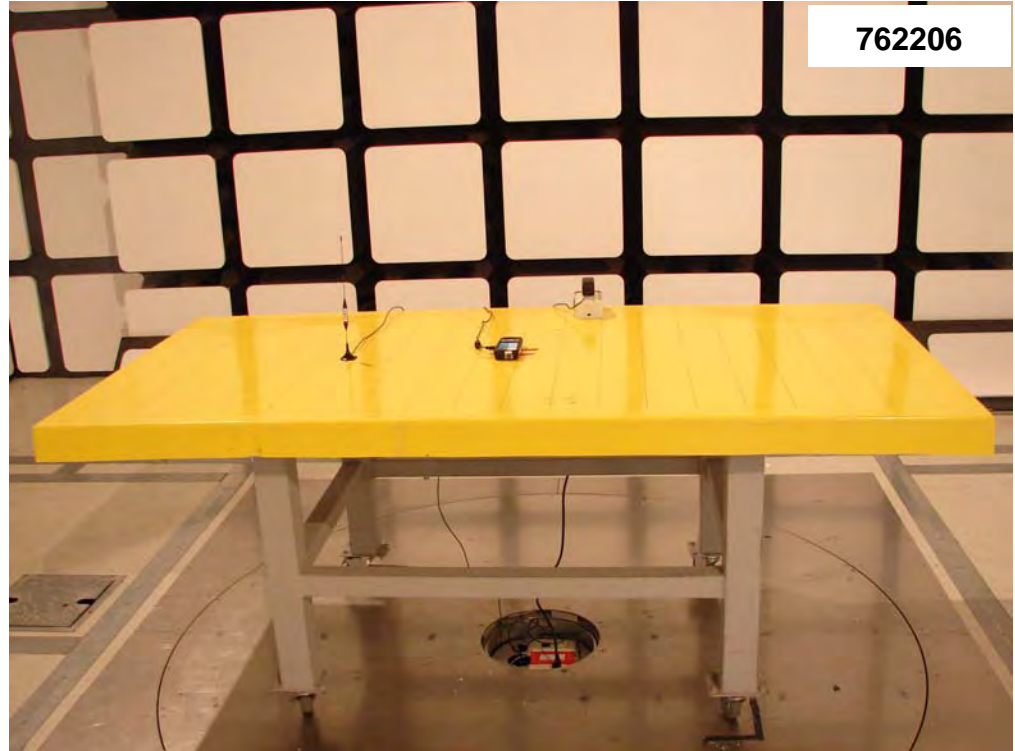
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SIDE VIEW



Radiation Emission

FRONT VIEW



REAR VIEW

