



Training Research Co., Ltd

No. 2, Lane 194, Huan-Ho St., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
TEL: 886-2-26935155 FAX: 886-2-26934440
E-mail: report@trclab.com.tw

March 24, 2000

Federal Communications Commission

FCC Application Processing Branch

Re: FCC ID OHH-8000

Applicant: Cal-Comp Electronics (Thailand) Co., Ltd.

Correspondence Reference Number: 11750

731 Confirmation Number: EA95776

Dear Joe,

The 20 dB bandedge requirement for subjective device channel 20 as attachment 1. And attachment 2, these two spectrum analyzer plots are coping from our original application page 49-2 and 49-4.

In these two spectrum analyzer plots, we found the center frequency **NOT 927.133 MHz**. It should be 925.80 this mistaken is same as our application case FCC ID: OHH-8800 same mistaken happen in same day.

Attachment 3 and attachment 4 are the subject device preliminary testing data, since the spectrum analyzer SPAN width was set at 250MHz, So the **Fundamental Emission Frequency read out 927.133 MHz**.

The value of the frequency in this test report. We have retest as attachment 5, attachment 6, and attachment 7.

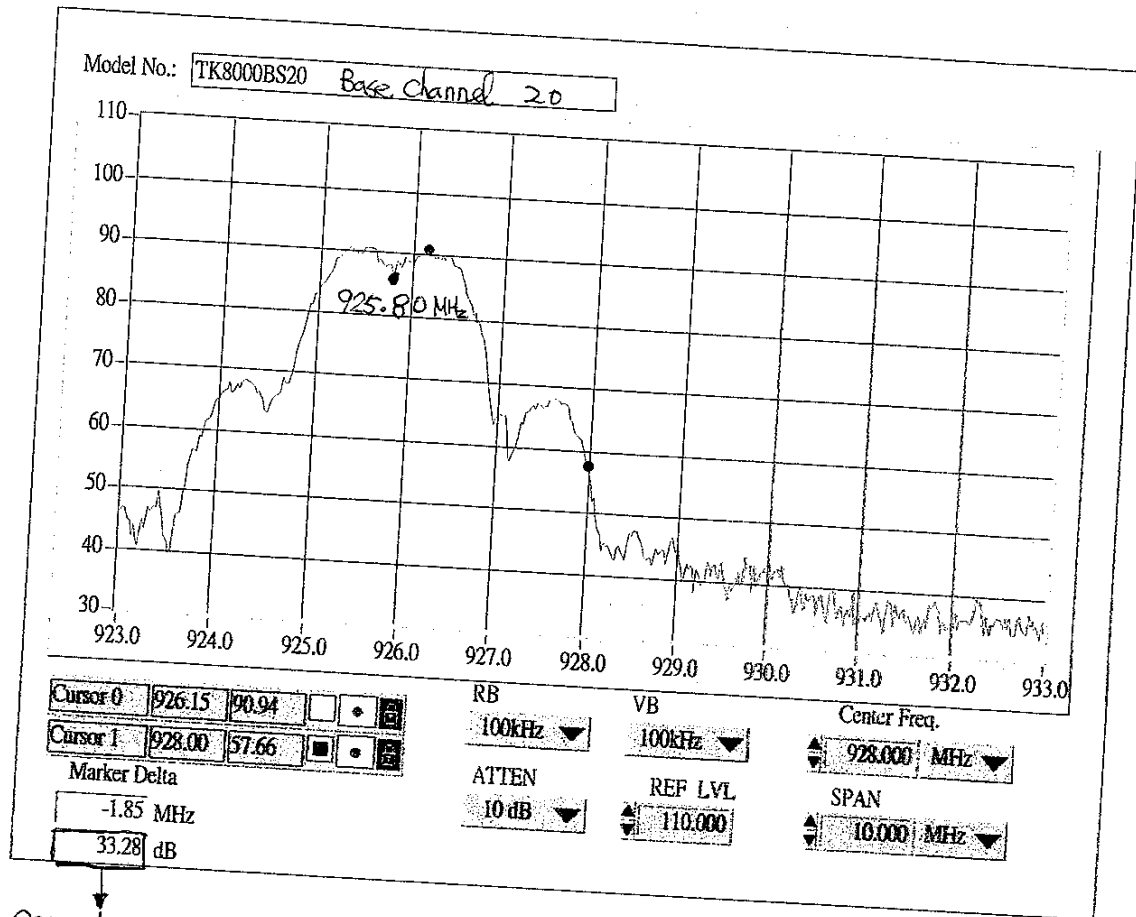
Since FCC ID: OHH-8800 and FCC ID: OHH-8000 these application mistaken the original software for measurement system was use in HP 8566, but use in HP 8546A that frequency accuracy become a problem, We have modify our software and reduce the frequency SPAN to reach the frequency accuracy.

Thank for your notify and patience, I think this mistaken should not happen again.

If you have any question, Please feel free to FAX at 886-2-26934440 or e-mail at jack@trc.com.tw

Sincerely,

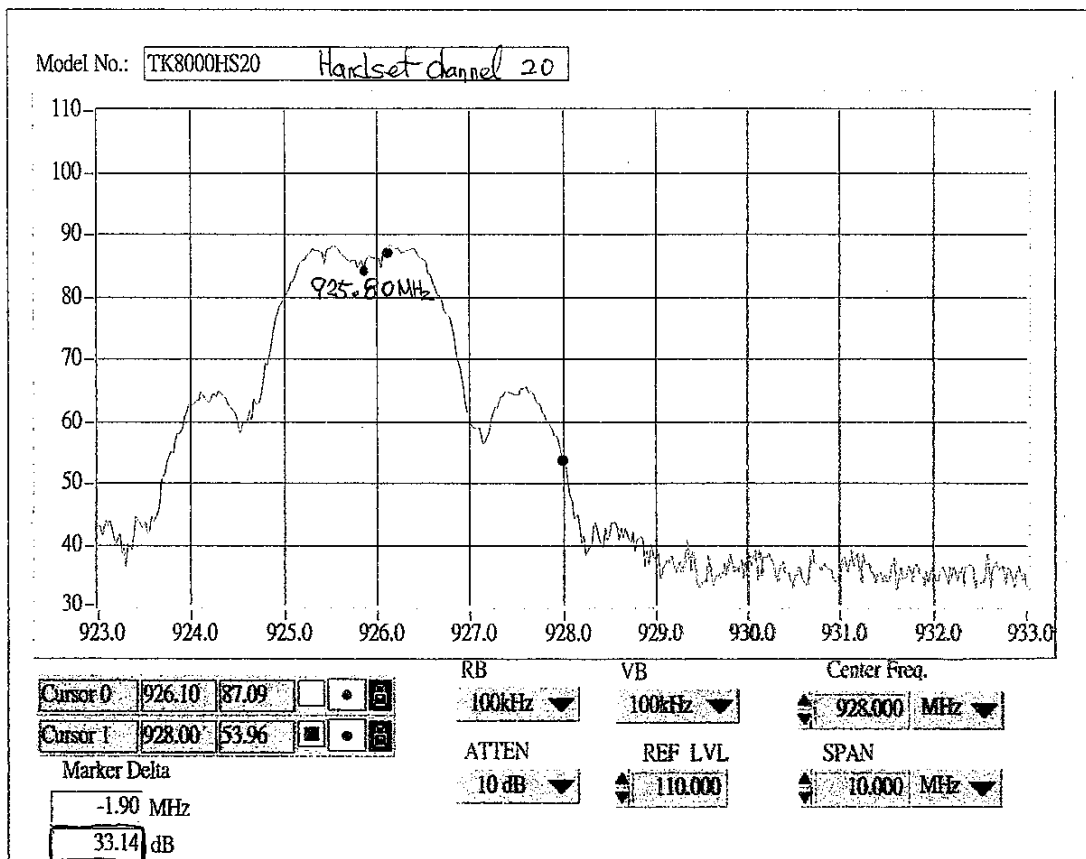
Frank Tsai/General Manager



Compliance with 20dB bandedge requirement.

Attachment 1.

2/8



Compliance with 20dB bandedge requirement.

Attachment 2...

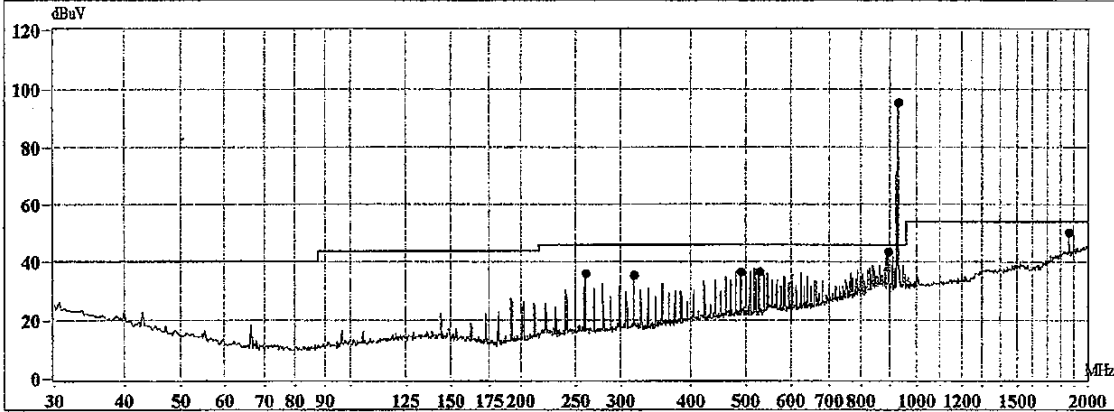
3/3

927.133 → Handset channel 20

Report No.: K1215457

Mode: TK3000HS20

Standard: FCC Class B Ver.



Frequency(MHz)	Peak Amplitude(dBuV)	Limit(dBuV)	Margin(dB)	Ampfact(dB)
259.853	35.95	46.00	-10.05	-16.10
317.160	35.59	46.00	-10.41	-17.63
489.637	36.80	46.00	-9.20	-21.70
528.520	36.46	46.00	-9.54	-22.40
888.440	43.63	46.00	-2.37	-28.03
* 927.133	95.30	46.00	49.30	-29.33
1857.500	50.53	54.00	-3.47	-39.92

← Fundamental Emission Frequency

Test engineer: Paul 8/3

Traininig Research Co., Ltd.

Tel: 02-6935155 Fax: 02-6934440

Test date: 1999/8/13 at AM 08:47

Remark:

1. Margin < 0 means under limit.
2. "Ampfact" is amplify's factor, just for reference only.

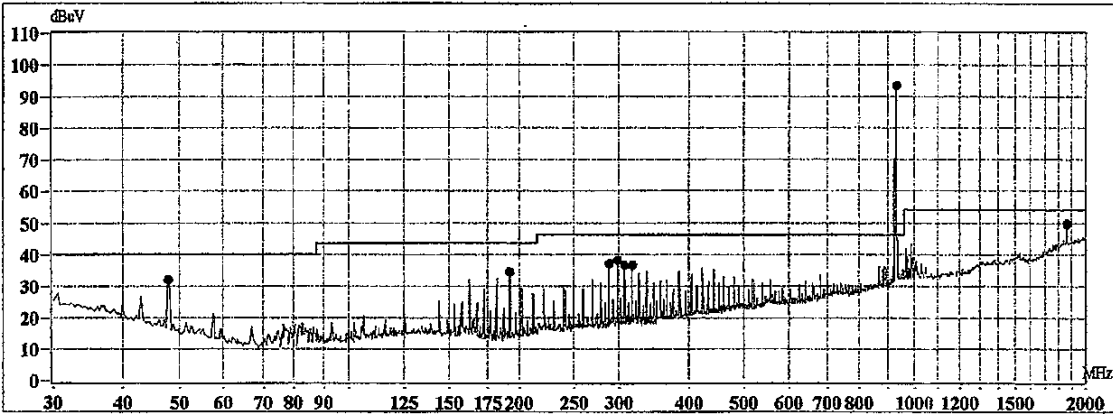
Attachment 3

4/8

Report No.: K1215457

Mode: TK3000BS20

Standard: FCC Class B Ver.



Frequency(MHz)	Peak Amplitude(dBuV)	Limit(dBuV)	Margin(dB)	Ampfact(dB)
47.847	31.74	40.00	-8.26	-15.79
192.280	34.50	43.50	-9.00	-13.03
288.543	37.27	46.00	-8.73	-16.53
297.980	38.15	46.00	-7.85	-17.27
307.410	36.46	46.00	-9.54	-17.10
317.160	36.77	46.00	-9.23	-17.63
* 927.133	93.92	46.00	47.92	-29.33
1855.000	✓ 49.87	54.00	-4.13	-39.99

Fundamental Emission Frequency

Test engineer:

Paul & 2

Training Research Co., Ltd.

Tel: 02-6935155 Fax: 02-6934440

Test date: 1999/8/12 at PM 06:28

Remark:

1. Margin < 0 means under limit.

2. "Ampfact" is amplify's factor,
just for reference only.

Attachment 4

5/8

1.4 Configuration of System Under Test

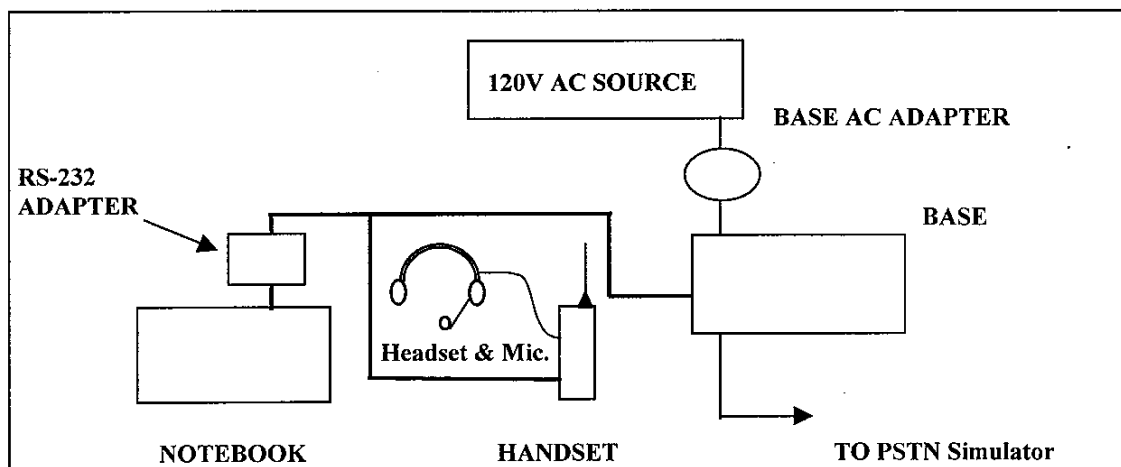


Fig. 1 Configuration of system under test

The tests below are run with the DCT transmitter set at high power in TDD mode .A serial port from a computer to the DCT UUT is needed to force selection of output power level and channel number.

The setting up procedure was recorded in Appendix A.

1.5 Verify the Frequency and Channel

1.5.1 Verify the Frequency Pairs

Channel	Base(MHz)	Handset(MHz)	Channel	Base(MHz)	Handset(MHz)
1	905.525	904.520	11	915.300	915.300
2	904.700	904.700	12	916.500	916.500
3	906.900	906.900	13	918.700	918.700
4	907.100	907.100	14	919.900	919.900
5	908.300	908.300	15	920.100	920.100
6	909.500	909.500	16	921.300	921.300
7	910.700	910.700	17	922.500	922.500
8	912.900	912.900	18	924.050	924.050
9	913.100	913.100	19	925.246	925.246
10	915.575	915.575	20	925.800	925.800

Note:

- 1.This is for sure that all frequencies are in 902 MHz to 928 MHz.
- 2.Section 15.31(m): Measurements on intentional radiators or receivers shall be performed at three frequencies for operating frequency range over 10 MHz. (The locations of these frequencies one near the top, one near the middle and one near the bottom.)
- 3.After test, the EUT operating frequencies are in 904.520 MHz to 927.133 MHz. So all the items as followed in testing report are need to test these three frequencies: top: channel 1, middle: channel 10, bottom: channel 20.

4.3 Test Result of Fundamental Emissions

The peak values of fundamental emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Model No. : TK8000

EUT : 900MHz S.S.T. Cordless Phone

Table 6 Open Field Fundamental Emissions

Channel	Frequency (MHz)	A.P. (H/V)	A.H. (M)	Table (degree)	Amplitude (dBμV/m)	CF (dB)	Corrected Amplitude (dBμV/m)	E.R.P.(Peak)	
								mW	dBm
Base 01	905.525	H	1.00	114	111.57	-27.60	83.97	0.075	-11.259
	905.525	V	1.00	17	121.15	-28.48	92.67	0.555	-2.559
Base 10	915.072	H	1.00	262	112.85	-27.75	85.10	0.097	-10.129
	915.575	V	1.00	191	122.53	-28.75	93.78	0.716	-1.449
Base 20	925.800	H	1.00	100	112.94	-28.02	84.92	0.093	-10.309
	925.800	V	1.00	336	123.25	-29.33	93.92	0.740	-1.309
Handset 01	904.520	H	1.00	8	111.53	-27.59	83.94	0.074	-11.289
	904.520	V	1.00	245	124.23	-28.46	95.77	1.133	0.541
Handset 10	915.575	H	1.00	157	111.68	-27.76	83.92	0.074	-11.309
	915.575	V	1.00	80	122.62	-28.75	93.87	0.731	-1.359
Handset 20	925.800	H	1.00	278	109.46	-28.01	81.45	0.042	-13.779
	925.800	V	1.00	216	124.63	-29.33	95.30	1.017	0.071

Note:

1. A.P. means antenna polarization, horizontal and vertical.
2. A.H. means antenna height.
3. Table means turntable turning position.
4. Corrected Factor (C. F.) = Cable Loss + Antenna Factor – Amplified Gain
Corrected Amplitude = Peak Amplitude + Corrected Factor
5. Amplitude means the fundamental emission measured.
6. Effective Radiation Power (E.R.P.) = $(E d)^2 / 30G$

E is the measured maximum field strength in V/m utilizing the maximum hold mode RBW (3MHz).

G is the numeric gain of the transmitting antenna over an isotropic radiator (1.00).

d is the distance in meters from which the field strength was measured (3M).

Example: the Max Radiation Emission of base ch01 = 83.97 dBuV/m

$$10^{(83.97/20)} \times 10^{-6} = 0.015794 \text{ V}$$

$$\text{E.R.P.} = (0.015794 \times 3)^2 / 30 = 0.07484 \text{ mW} = 10 \times \log (0.07484 \text{ mW}/1\text{mW}) = -11.259 \text{ dBm}$$

Report No.: K1215457, 900MHz S.S.T. Cordless Phone, FCC Part 15 Class B

Test date: 08/25/99, Training Research Co., Ltd., TEL:886-2-26935155, Fax:886-2-26934440

Attachment 6

1/8

5.4 Test Result of Second Harmonic

Set the spectrum RB= 3 MHz, VB = 3MHz and span = 5MHz. The correction factors of the second harmonic is the second harmonic must lower 20 dB than the fundamental.

Model No. : TK8000

EUT : 900MHz S.S.T. Cordless Phone

Table 7 Second Harmonic Attenuation

Channel	Fundamental (MHz)	Fundamental (dBuV/m)	2 nd Harmonic (GHz)	2 nd Har. (dBuV/m)	Result (F/H dB)	Limit (dB)	Margin (dB)
B/S CH 01	905.525	92.67	1.812	49.76	42.91	20.00	22.91
B/S CH 10	915.575	93.78	1.832	49.21	44.57	20.00	24.57
B/S CH 20	925.800	93.92	1.855	49.87	44.05	20.00	24.05
H/S CH 01	904.520	95.77	1.812	48.80	46.97	20.00	26.97
H/S CH 10	915.575	93.87	1.835	51.34	42.53	20.00	22.53
H/S CH 20	925.800	95.30	1.857	50.53	44.77	20.00	24.77

Note:

- 1.The data in the above table are summarize the following attachment spectrum analyzer hard copy.
- 2.Result = Fundamental – 2nd Harmonic must over 20 dB.

Report No.: K1215457, 900MHz S.S.T. Cordless Phone, FCC Part 15 Class B

Test date: 08/25/99, Training Research Co., Ltd., TEL:886-2-26935155, Fax:886-2-26934440

Attachment 7

8/8