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June 18, 1999
KM499-U027B
Form 731 Confirmation No.: EA94139

Federal Communications Commission
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, MD. 21046

Attn: Joseph Dichoso, Electronic Engineer

Subject: Supplement to Original Application for Certification of 900/2400MHz Spread Spectrum Cordless Telephone System, Panasonic Model KX-TG2550 Series Base Unit, FCC ID: ACJ96NKX-TG2550

Dear Mr. Dichoso:

This is in response to your correspondence reference number 8310 dated June 17, 1999 regarding processing gain test for the subject application that was assigned Form 731 Confirmation Number EA94139.

The factory's responsible test engineer has been given your comments regarding theoretical processing gain, pad loss and measurement should be performed at same point for accurate measurement. Please refer his attached response explanation which I hope can resolve this remaining outstanding item.

Should you have any additional questions or comment, please contact the undersigned immediately. Thank you for your attention in this matter.

Sincerely yours,

Richard Mullen
Project Manager

FAX Correspondence

Date: June 18, 1999

ATT: Mr. Mullen/ PSCD

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From: M. Mori/ Nawata/ KM4
RE: Your E-mail, Base Unit: ACJ96NKX-TG2550/ FCC 15

Dear Mr. Mullen;

We have received FCC's E-mail via you.
We discussed with our engineer again, and at last, we can understand why FCC engineer was confused.
Please see a copy of page 16 of PCTest report (See next sheet). This page shows;

② The signal generator 2 is switched on.

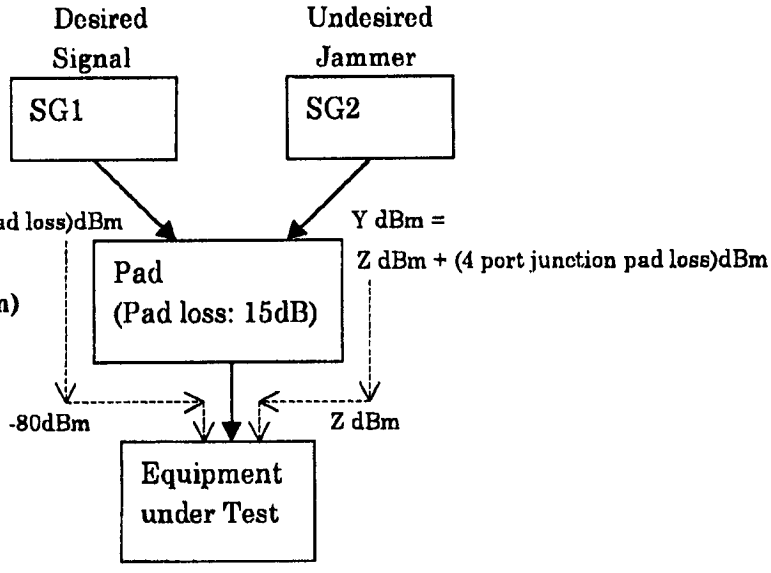
:

SG1 output level is (-80dBm)+(4 port junction pad loss) and
SG2 output level is Y dBm.

Our engineer considered "Y dBm" is Jammer level at the output of SG2.
But, FCC engineer seems to consider "Y dBm" is Jammer level at the input of the receiver.
If we consider Z dBm to be Jammer level at the input of the receiver, SG2 output level will be Y dBm = {Z dBm + (4 port junction pad loss)}.

4 port junction pad loss is 15 dB.
Desired Signal Level at the input of receiver is -80dBm.
Jammer Signal Level at the input of receiver is Z dBm.

Jamming Margin = Z dBm - (-80dBm)



We think, above is what FCC engineer wants to know.

Thank you very much.

Mr. Mullen

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Test Report S/N: 15.990413250.ACJ
Dates of Tests: April 19-23, 1999

FCC Part 15.247
Certification

§15.247(E) PROCESSING GAIN (CONTINUED)

①Desired Signal ····· Signal Generator 1
Undesired Signal ····· Signal Generator 2

Initially Signal generator 2 should be switched off.
The Signal generator 1 should be at the standard conditions.
Then the SINAD ratio is had result as X dB.

②The signal generator 2 is switched on.
RF output level of signal generator 2 is increased to 12dB.
In This time,
SG1 output level is (-80dBm)+(4 port junction pad loss),and
SG2 output level is Y dBm.

③Jamming Margin=(Y dBm)··[(-80dBm)+(4 port junction pad loss)].
Setting level on SG1

Regarding processing gain, this device uses analog modulation for baseband signal and does not convert voice signal to digital signal. The analog voice signal is modulated to a FM signal and processed to produce a spread spectrum signal. Since the processed signal is analog and not digital, this unit does not have BER. Instead, it uses SINAD, which means a distortion of analog signal. Since C/N of the 2nd IF signal, which is input to FM de-modulator at SINAD =12 dB is 3 dB, this device uses (S/N)o= 3dB.