

FCC ID : FU5F004U

EUT System: Charging Mode for FB004

< FRONT VIEW >

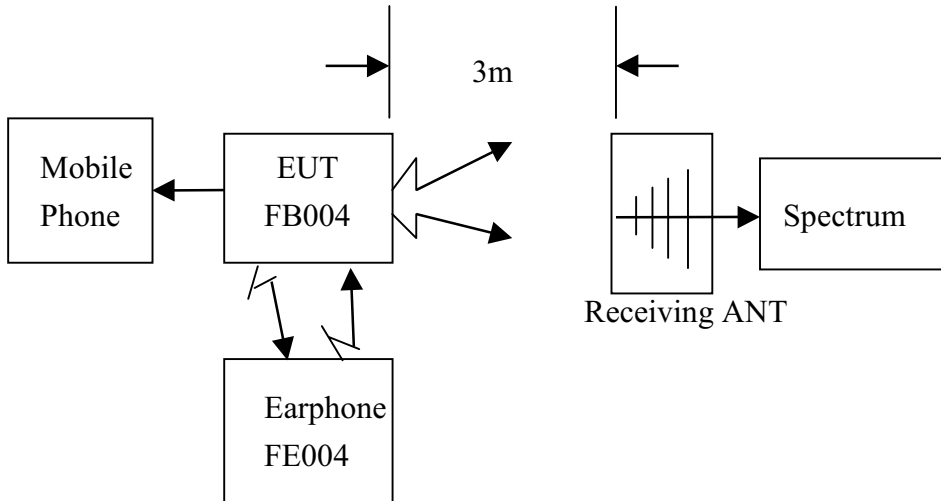


< REAR VIEW >

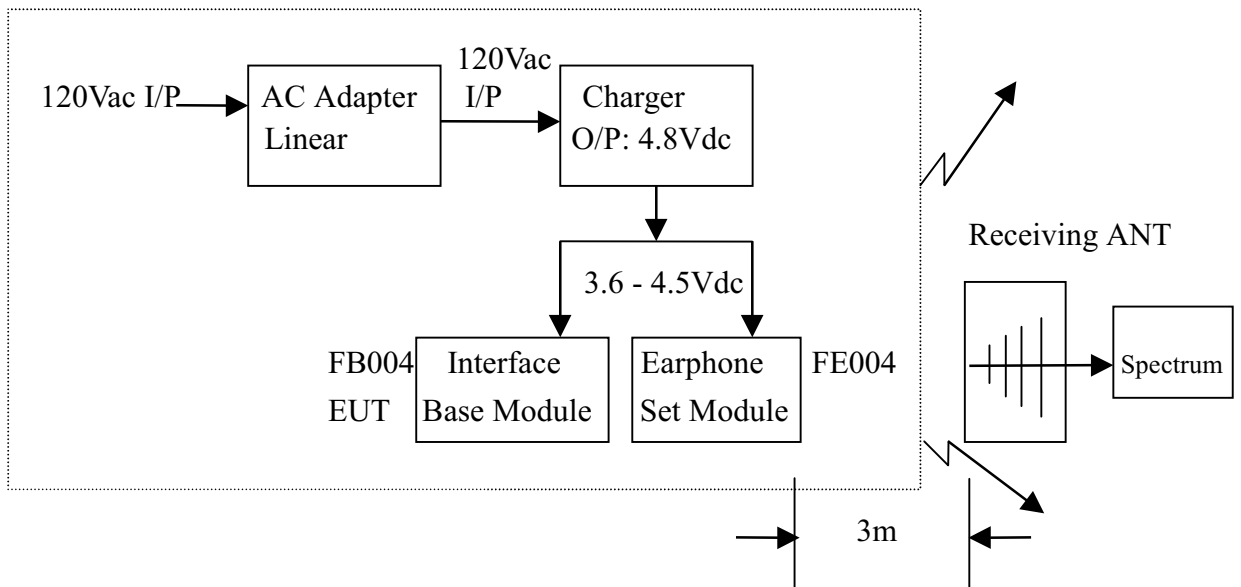


FCC ID : FU5F004U
EUT Model No. FB004

Transmitting / Receiving Mode



Charging Mode



§ 15.247(c) : Carrier Frequency

FCC ID : FU5F004U

EUT Model No. FB004

In any 100KHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating , the radio frequency power that is produced by the intentional radiator shall be at least 20dB

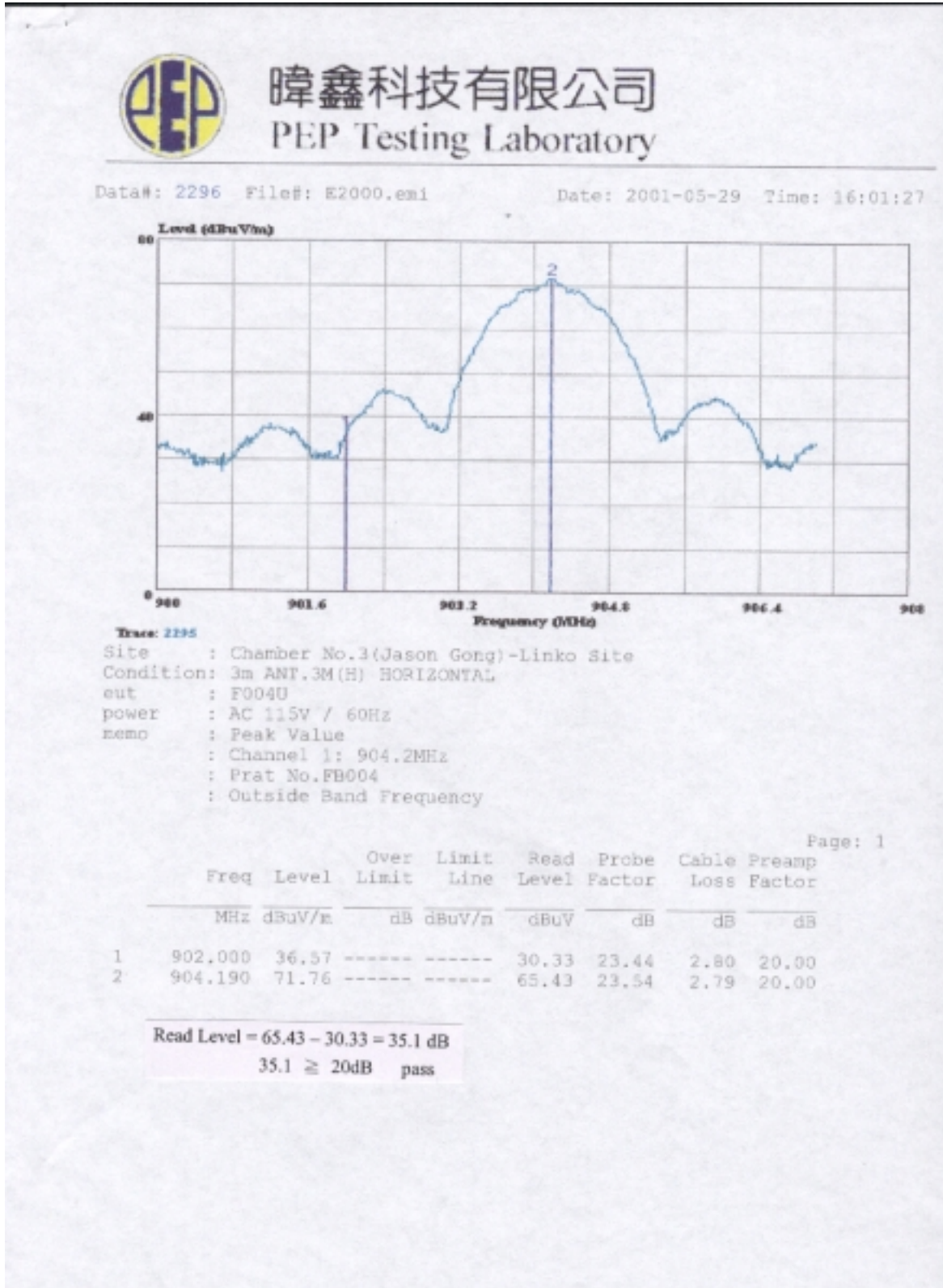
below that in the 100KHz bandwidth within the band that contains the highest level of the desired power , based on either an RF conducted or a radiated measurement.

Test result : top channel – 902 MHz = $\Delta 35.1 \text{ dB} > 20\text{dB}$

bottom channel – 928MHz = $\Delta 37.89 \text{ dB} > 20\text{dB}$

Spectrum plot on next page .

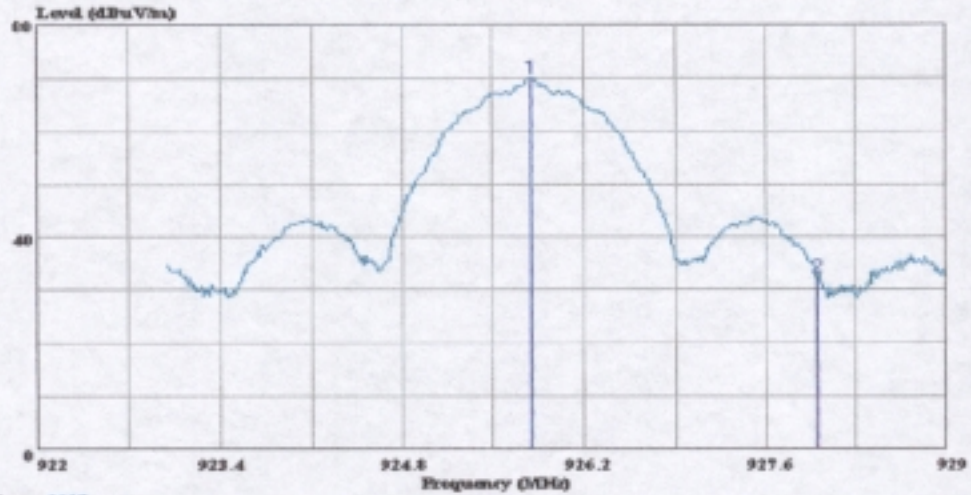
Spectrum Plot





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Data#: 2298 File#: E2000.emi Date: 2001-05-29 Time: 16:05:32



Trace: 2297
 Site : Chamber No.3(Jason Gong)-Linko Site
 Condition: 3m ANT.3M(H) HORIZONTAL
 eut : F004U
 power : AC 115V / 60Hz
 memo : Peak Value
 : Channel 1: 925.8MHz
 : Prat No.FB004
 : Outside Band Frequency

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	Freq	Level	Over Limit	Limit	Read Level	Probe Factor	Cable Loss	Preamp Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB
1	925.800	70.07	-----	-----	62.91	24.39	2.77	20.00
2	928.000	32.28	-----	-----	25.02	24.49	2.77	20.00

Read Level = 62.91 - 25.02 = 37.89 dB
 37.89 ≥ 20dB pass

§ 15.247(d) : Power Spectral Density

FCC ID : FU5F004U

**The summary below is the highest power spectral density of the
EUT Model No. FB004**

RBW = 3KHz VBW = 10KHz SWP = 100 sec.

Channel	Frequency (MHz)	S.P. read (dBuV/m)	C.F. (dB)	Level (dBm)	Limit (dBm)	Margin (dBm)
Top	904.279	55.83	6.33	62.16	8	-33
Middle	904.488	56.03	6.72	62.75	8	-33
Bottom	925.705	54.08	7.15	61.23	8	-33

Note:

1. "S.P. read" means spectrum analyzer read power density .
2. "C.F." means correct factor = antenna factor + cable loss – Preamplifier Gain .
3. "Level" means power spectral density .

$$E.R.P. = (E d)^2 / 30G$$

where E (V) = S.P. read + C.F.

d (m) = measurement distance = 3m

G = 1 (the gain of the transmitting antenna over isotropic antenna)

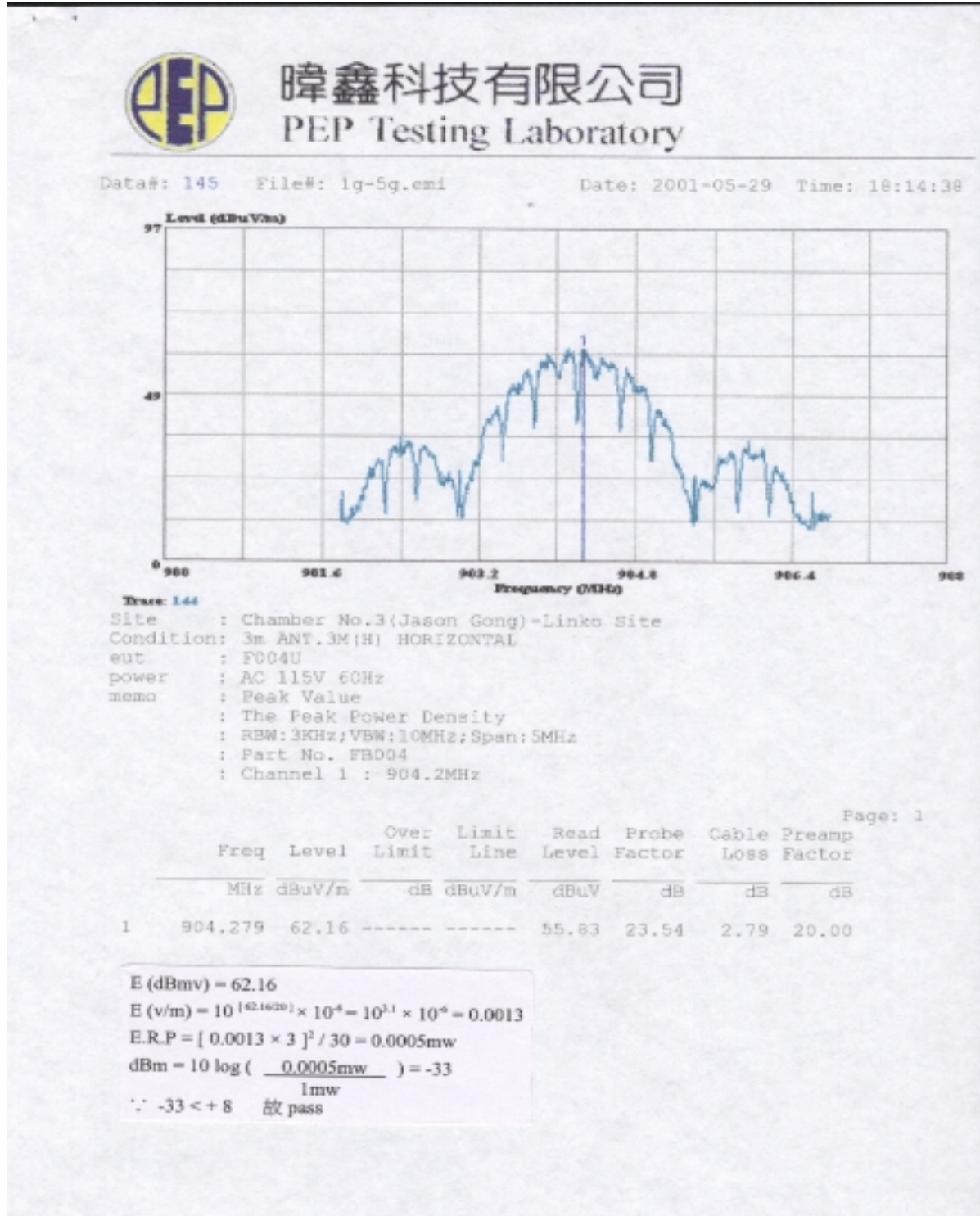
Example :

If Level = 120 dBuV/m

$$10^{(120/20)} \times 10^{-6} = 1 \text{ V}$$

$$E.R.P. = (1 \times 3)^2 / 30 = 300 \text{ mW} = 10 \text{ Log} (300\text{mW}/1\text{mW}) \\ = 24.77\text{dBm}$$

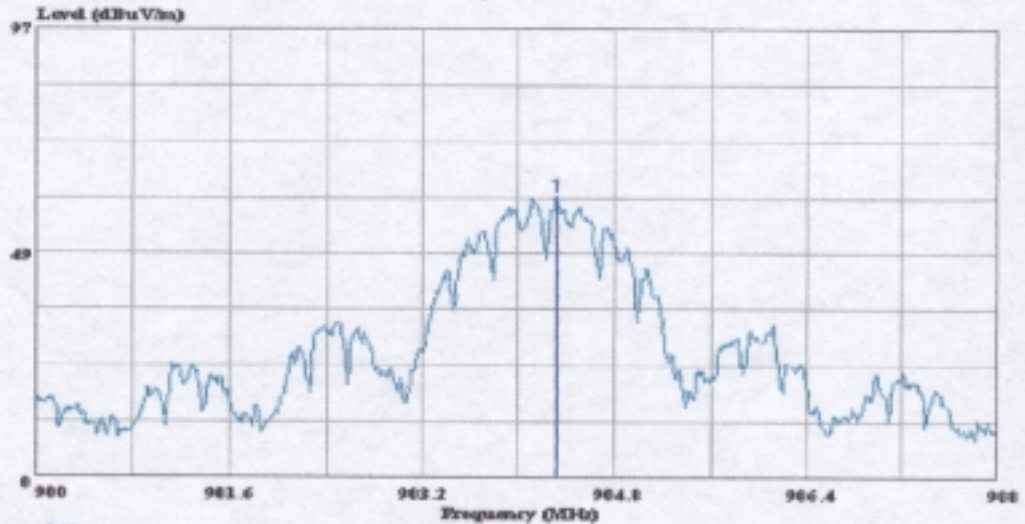
Spectrum of Power Spectral Density





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Data#: 147 File#: 1q-5g.eml Date: 2001-05-29 Time: 18:34:57



Trace: 146

Site : Chamber No.3(Jason Gong)-Linko Site
 Condition: 3m ANT,3M(V) VERTICAL
 eut : F004U
 power : AC 115V 60Hz
 memo : Peak Value
 : The Peak Power Density
 : RBW:3KHz;VBW:10MHz;Span:5MHz
 : Part No. FBC04
 : Channel 1 : 904.2MHz

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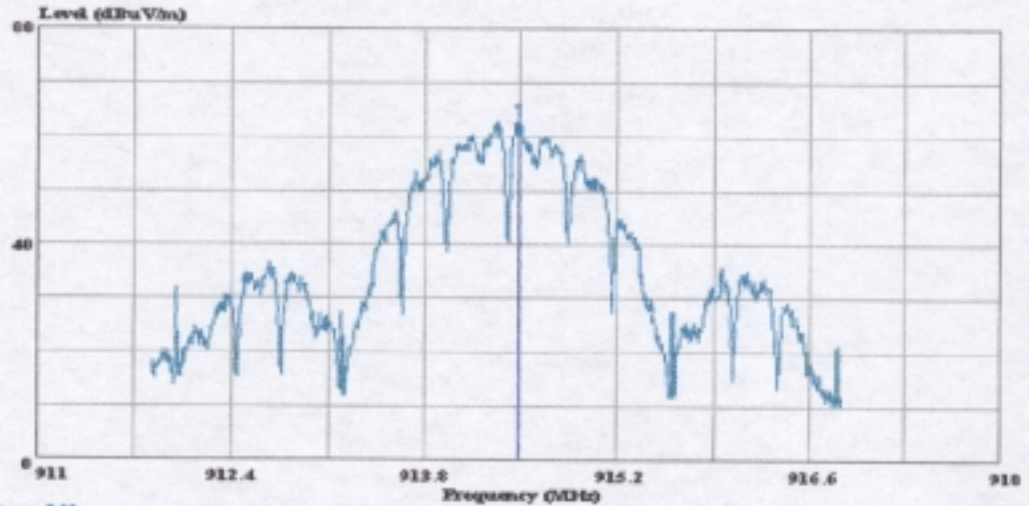
	Freq	Level	Over Limit	Limit	Read	Probe	Cable	Preamp
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB
1	904.320	60.76	-----	-----	54.43	23.54	2.79	20.00

$E \text{ (dBmV)} = 60.76$
 $E \text{ (v/m)} = 10^{(60.76/20)} \times 10^{-6} = 10^3 \times 10^{-6} = 0.001$
 $E.R.P = [0.001 \times 3]^2 / 30 = 0.0003\text{mw}$
 $\text{dBm} = 10 \log \left(\frac{0.0003\text{mw}}{1\text{mw}} \right) = -35.2$
 $\therefore -35.2 < +8$ 故 pass



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Data#: 170 File#: 1g-5g.emi Date: 2001-05-30 Time: 19:47:56



Trace: 169
 Site : Chamber No.3(Jason Gong)-Linko Site
 Condition: 3m ANT.3M(H) HORIZONTAL
 out : F004U
 power : AC 115V 60Hz
 memo : Peak Value
 : The Peak Power Density
 : RBW:3KHz;VBW:10KHz;Span:5MHz
 : Part No. FB004
 : Channel 10 : 914.4MHz

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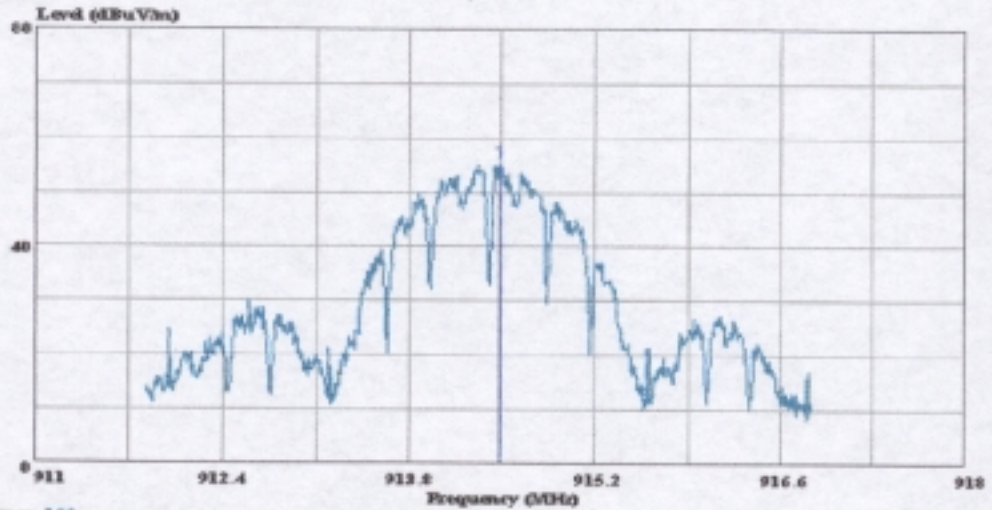
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB
1	914.488	62.75	-----	-----	56.03	23.94	2.78	20.00

$E \text{ (dBmv)} = 62.75$
 $E \text{ (v/m)} = 10^{(62.75/20)} \times 10^{-6} = 10^{3.1375} \times 10^{-6} = 0.0013$
 $E.R.P = [0.0013 \times 3]^2 / 30 = 0.0005\text{mw}$
 $\text{dBm} = 10 \log \left(\frac{0.0005\text{mw}}{1\text{mw}} \right) = -33$
 $\therefore -33 < +8 \text{ 故 pass}$



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Data#: 167 File#: 1g-5g.emi Date: 2001-05-30 Time: 19:42:24



Trace: 166
 Site : Chamber No.3(Jason Gong)-Linko Site
 Condition: 3m ANT.3M(V) VERTICAL
 eut : F004U
 power : AC 115V 60Hz
 memo : Peak Value
 : The Peak Power Density
 : RBW:3KHz;VBW:10KHz;Span:5MHz
 : Part No. FB004
 : Channel 10 : 914.4MHz

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	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB
1	914.488	55.31	-----	-----	48.59	23.94	2.78	20.00

E (dBmv) = 55.31
 $E (v/m) = 10^{(55.31/20)} \times 10^{-4} = 10^{2.7655} \times 10^{-4} = 0.00063$
 $E.R.P = [0.00063 \times 3]^2 / 30 = 0.00012mw$
 $dBm = 10 \log \left(\frac{0.00012mw}{1mw} \right) = -39.2$
 $\therefore -39.2 < +8$ 故 pass