

Antenna Conducted Spurious Emission Measurement
PCS1900

Test Date: November 18, 2003

Temp.: 24 °C ; Humi.: 55 %

Measurement Results:

PCS1900

Transmitting Frequency :1850.200 MHz (512ch)

Frequency [MHz]	Correction Factor [dB]	Meter Readings (dBm)	Limits (dBm)	Results (dBm)	Margin [dB]	Remarks (Note 2)
3696.430	-19.4	-21.6	-13.0	-41.0	+28.0	C
3855.144	-19.1	-33.3	-13.0	-52.4	+39.4	C
5544.297	-20.2	-34.3	-13.0	-54.5	+41.5	C
6834.465	-16.0	-36.1	-13.0	-52.1	+39.1	D
8534.955	-15.2	-51.6	-13.0	-66.8	+53.8	D
11950.105	-13.7	-50.1	-13.0	-63.8	+50.8	D

PCS1900

Transmitting Frequency :1880.000 MHz (661ch)

Frequency [MHz]	Correction Factor [dB]	Meter Readings (dBm)	Limits (dBm)	Results (dBm)	Margin [dB]	Remarks (Note 2)
3756.893	-19.9	-22.7	-13.0	-42.6	+29.6	C
3915.605	-19.1	-32.6	-13.0	-51.7	+38.7	C
5638.769	-20.2	-22.2	-13.0	-42.4	+29.4	C
6947.831	-16.1	-25.3	-13.0	-41.4	+28.4	D
8683.748	-15.2	-42.1	-13.0	-57.3	+44.3	D
10426.750	-14.6	-56.1	-13.0	-70.7	+57.7	D
12169.752	-13.1	-43.8	-13.0	-56.9	+43.9	D

PCS1900

Transmitting Frequency :1909.800 MHz (810ch)

Frequency [MHz]	Correction Factor [dB]	Meter Readings (dBm)	Limits (dBm)	Results (dBm)	Margin [dB]	Remarks (Note 2)
3817.355	-19.4	-30.7	-13.0	-50.1	+37.1	C
3976.067	-19.1	-31.1	-13.0	-50.2	+37.2	C
5725.683	-19.7	-25.8	-13.0	-45.5	+32.5	C
7068.282	-17.5	-25.5	-13.0	-43.0	+30.0	D
8832.540	-16.6	-45.8	-13.0	-62.4	+49.4	D
12368.143	-15.7	-48.5	-13.0	-64.2	+51.2	D

Sample of calculated result at 3696.430 MHz, as the Minimum Margin point:

$$\begin{array}{rcl} \text{Correction Factor} & = & -19.4 \text{ dB} \\ +) \text{ Meter Reading} & = & -21.6 \text{ dBm} \\ \hline \text{Result} & = & -41.0 \text{ dBm} \end{array}$$

Minimum Margin : $-13.0 - (-41.0) = 28.0(\text{dB})$

The point shown on "___" is the Minimum Margin Point.

Applied limits :

$$\begin{aligned} \text{Applied limits} &= 10\log[\text{TP(mW)}] - [43 + 10\log[\text{tp(W)}]] = 10\log[\text{TP(mW)}] - [43 + (10\log[\text{TP(mW)}] - 30)] \\ &= -13 [\text{dBm}] \end{aligned}$$

Where $\text{tp(W)} = \text{TP(mW)} / 1000$: Transmitter Power at antenna terminal

$$10\log[\text{tp(W)}] = 10\log[\text{TP(mW)}] - 30$$

Note : 1. The spectrum was checked from 9 kHz up to 20 GHz.

2. All emissions not listed were found to be more than 20dB below the limit.

Remarks:

Note 3	Detector Function	RES. B.W	V.B.W	Correction Factor *
A	Peak (SP)	10 kHz	30 kHz	CL+P10(D-73)
B	Peak (SP)	1 MHz	3 MHz	CL+P10(D-73)
C	Peak (SP)	1 MHz	3 MHz	CL+HPF(D-42)+P10(D-73)+PA(A-21)+P10(D-74)
D	Peak (SP)	1 MHz	3 MHz	CL+HPF(D-42)+P10(D-73)+PA(A-33)+P10(D-74)

*)CL: Cable Loss / P10: 10dB Att. / HPF: High Pass Filter Loss / PA : Pre-Amp.

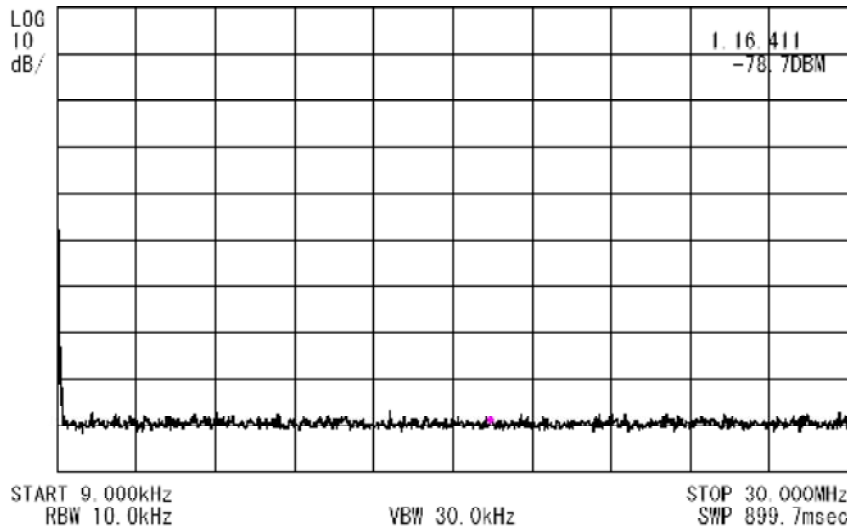
Tester : Shigeru Kinoshita

Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1850.200 MHz (512 ch)
Frequency Range : 9kHz - 30 MHz

Antenna Conducted Spurious PCS1900
1850.2MHz (512ch) 9kHz-30MHz
REF 10.0 DBM ATT 20dB

2003/11/18 14:38:03

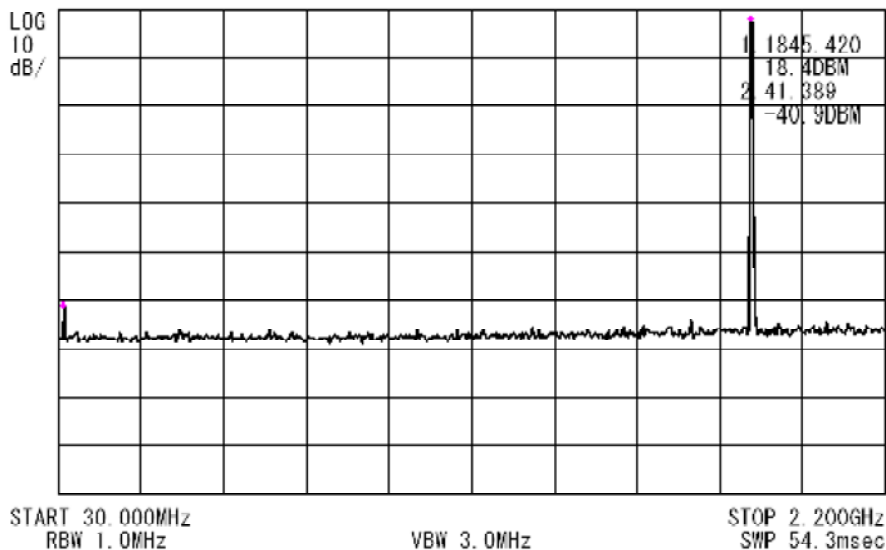


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1850.200 MHz (512 ch)
Frequency Range : 30MHz - 2.2GHz

Antenna Conducted Spurious PCS1900
1850.2MHz (512ch) 30MHz-2.2GHz
REF 20.0 DBM ATT 30dB

2003/11/18 15:24:31

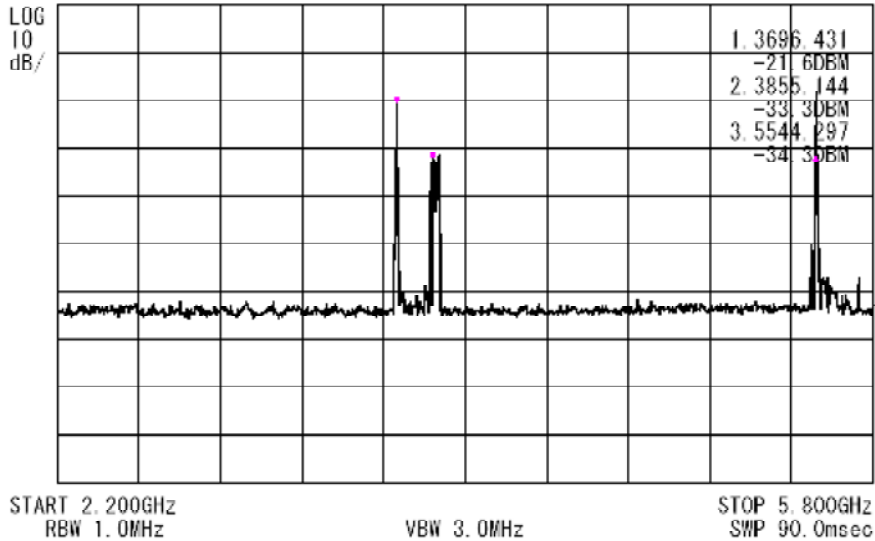


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1850.200 MHz (512 ch)
Frequency Range : 2.2GHz - 5.8GHz

Antenna Conducted Spurious PCS1900
1850.2MHz (512ch) 2.2GHz-5.8GHz
REF -2.0 DBM ATT 10dB

2003/11/18 19:31:29

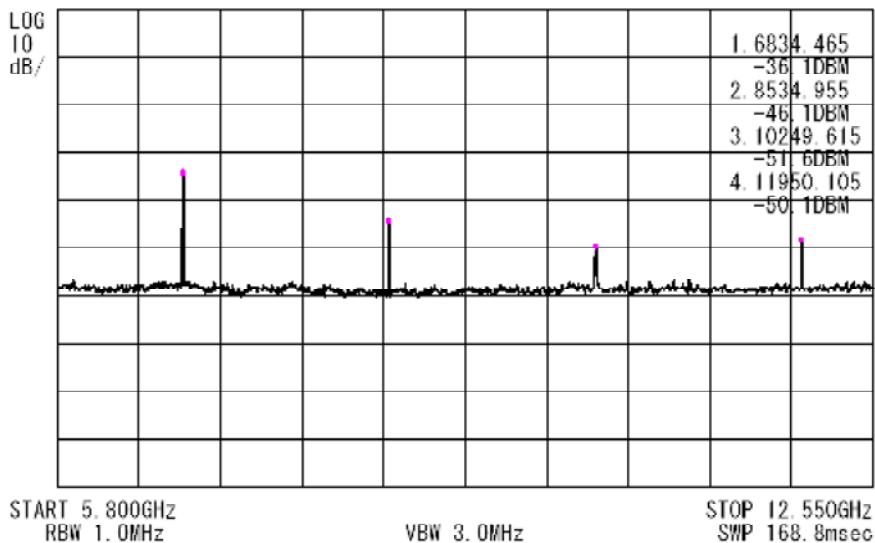


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1850.200 MHz (512 ch)
Frequency Range : 5.8GHz - 12.55GHz

Antenna Conducted Spurious PCS1900
1850.2MHz (512ch) 5.8GHz-12.55GHz
REF -2.0 DBM ATT 10dB

2003/11/18 21:31:01



JQA Application No.: KL80030551
Model No. : GX30
FCC ID : APYHRO00033

Regulation : CFR 47 FCC Rules Parts 22/24
Issue Date : November 25, 2003

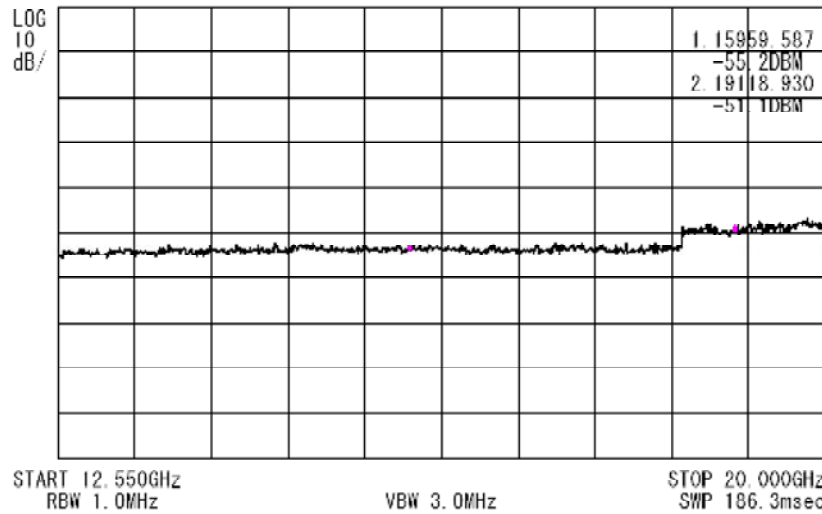
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Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1850.200 MHz (512 ch)
Frequency Range : 12.55GHz - 20.0GHz

Antenna Conducted Spurious PGS1900
1850.2MHz (512ch) 12.55GHz-20GHz
REF -2.0 DBM ATT 10dB

2003/11/18 21:53:43

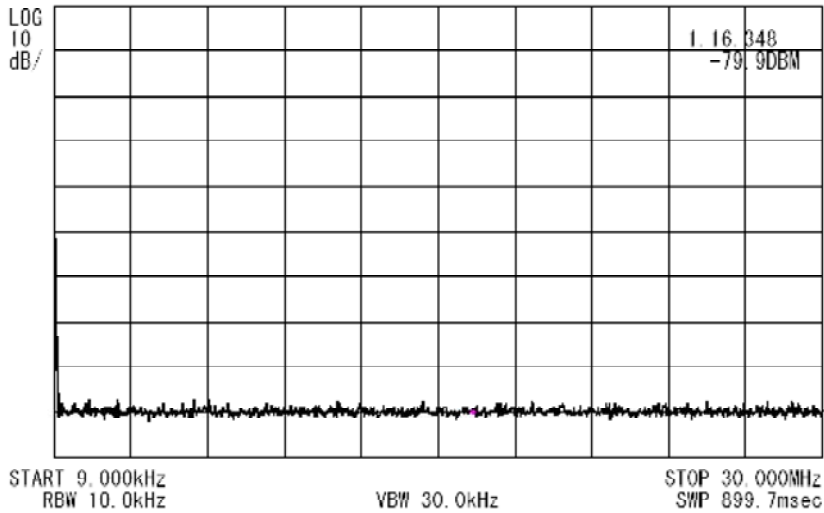


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1880.000 MHz (661 ch)
Frequency Range : 9kHz - 30 MHz

Antenna Conducted Spurious PCS1900
1880.0MHz (661ch) 9kHz-30MHz
REF 10.0 DBM ATT 20dB

2003/11/18 14:41:10

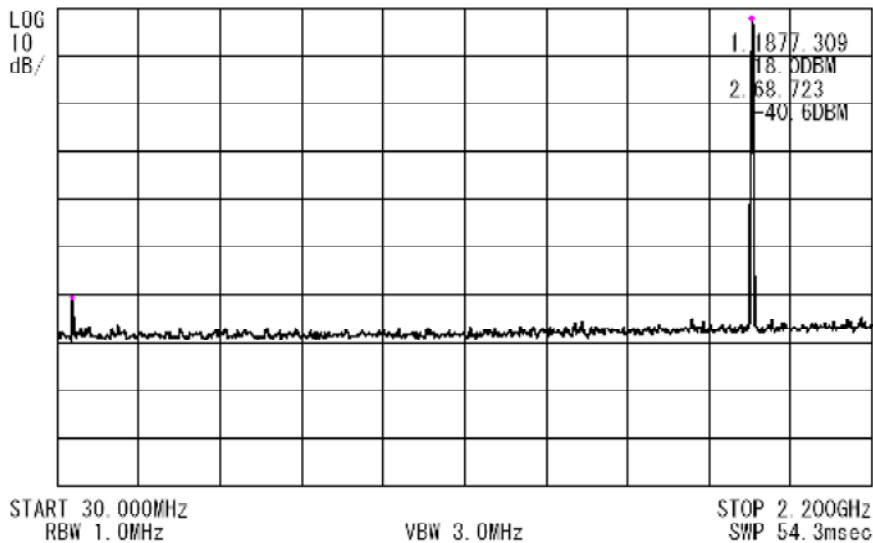


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1880.000 MHz (661 ch)
Frequency Range : 30MHz - 2.2GHz

Antenna Conducted Spurious PCS1900
1880.0MHz (661ch) 30MHz-2.2GHz
REF 20.0 DBM ATT 30dB

2003/11/18 15:27:34



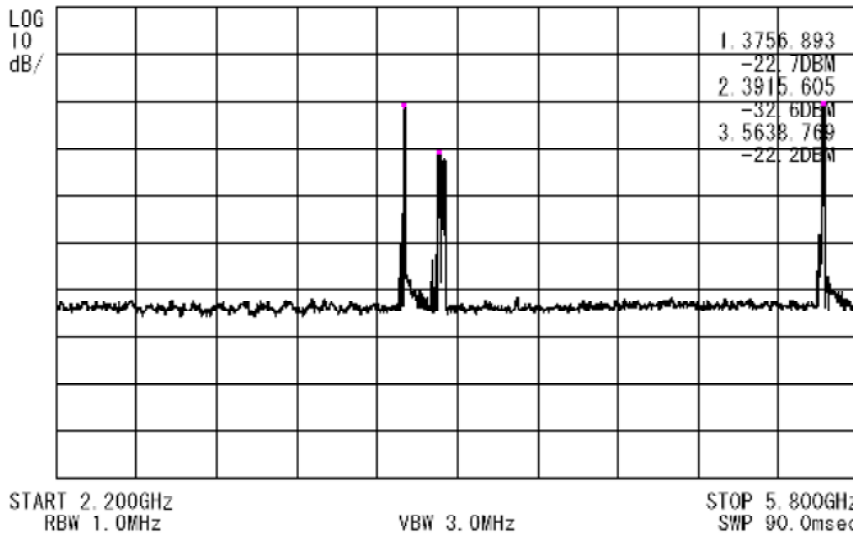
Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1880.000 MHz (661 ch)
Frequency Range : 2.2GHz - 5.8GHz

Antenna Conducted Spurious PCS1900
1880.0MHz(661ch) 2.2GHz-5.8GHz

2003/11/18 19:45:26

REF -2.0 DBM ATT 10dB



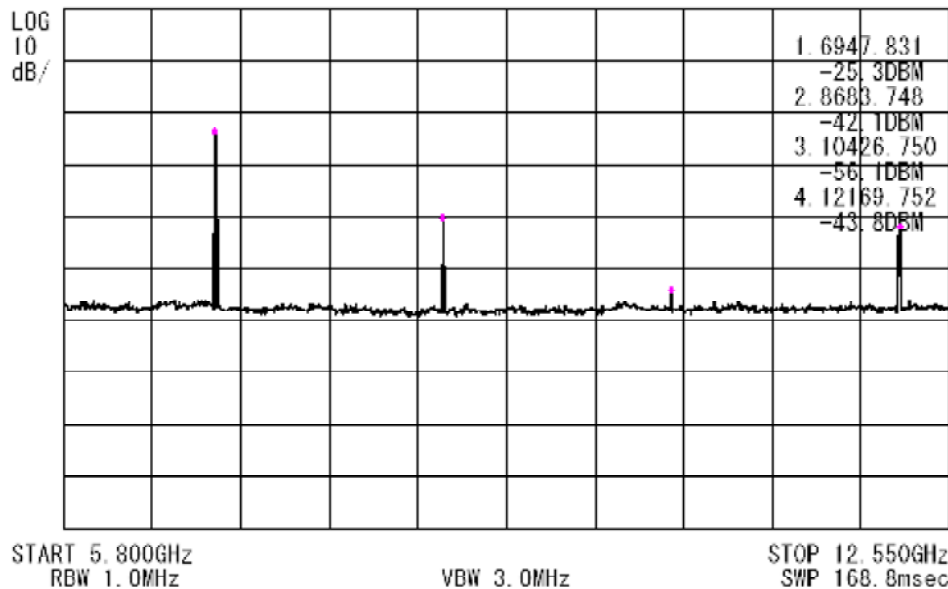
Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1880.000 MHz (661 ch)
Frequency Range : 5.8GHz - 12.55GHz

Antenna Conducted Spurious PCS1900
1880.0MHz(661ch) 5.8GHz-12.55GHz

2003/11/18 21:41:08

REF -2.0 DBM ATT 10dB



JQA Application No.: KL80030551
Model No. : GX30
FCC ID : APYHRO00033

Regulation : CFR 47 FCC Rules Parts 22/24
Issue Date : November 25, 2003

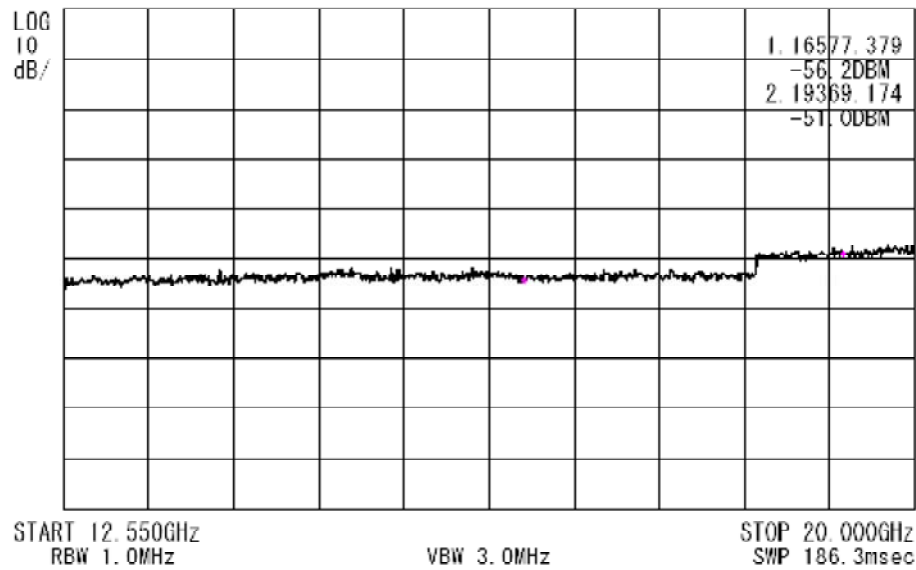
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Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1880.000 MHz (661 ch)
Frequency Range : 12.55GHz - 20.0GHz

Antenna Conducted Spurious PCS1900
1880.0MHz (661ch) 12.55GHz-20GHz
REF -2.0 DBM ATT 10dB

2003/11/18 21:51:41

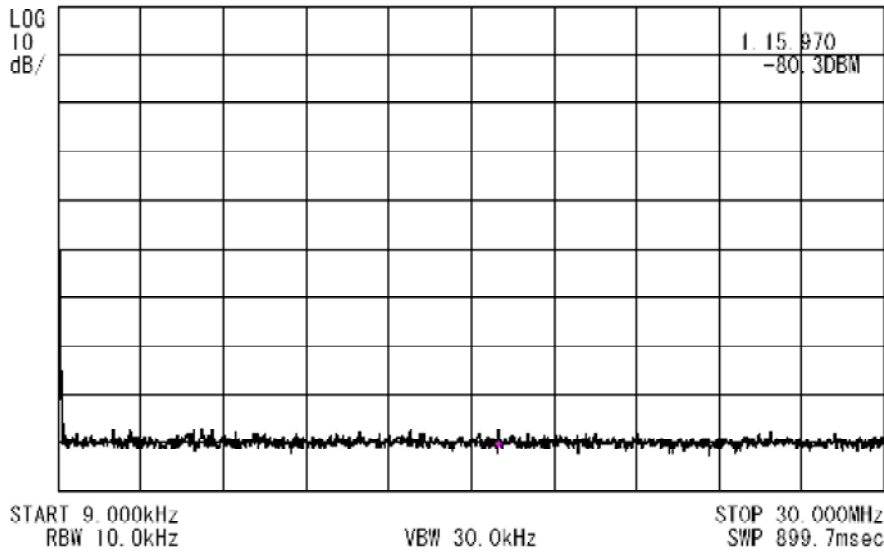


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1909.800 MHz (810 ch)
Frequency Range : 9kHz - 30 MHz

Antenna Conducted Spurious PCS1900
1909.8MHz(810ch) 9kHz-30MHz
REF 10.0 DBM ATT 20dB

2003/11/18 14:43:22

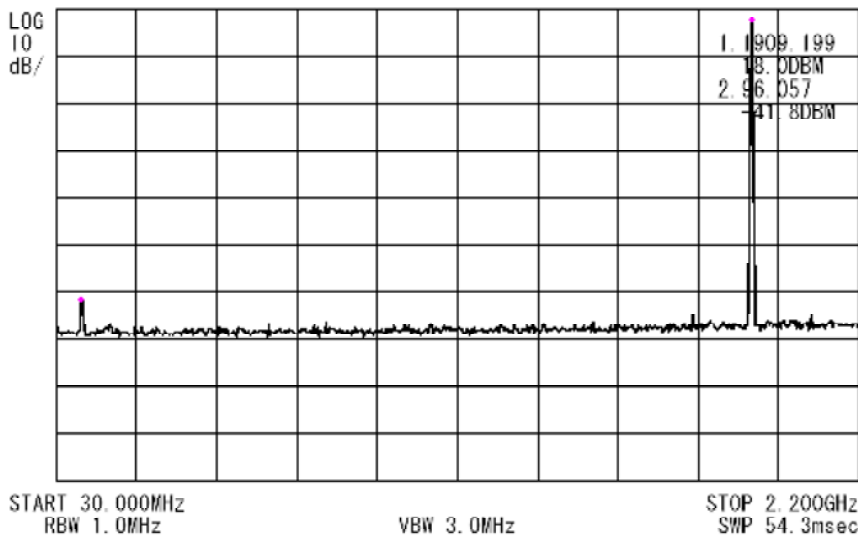


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1909.800 MHz (810 ch)
Frequency Range : 30MHz - 2.2GHz

Antenna Conducted Spurious PCS1900
1909.8MHz(810ch) 30MHz-2.2GHz
REF 20.0 DBM ATT 30dB

2003/11/18 15:29:52

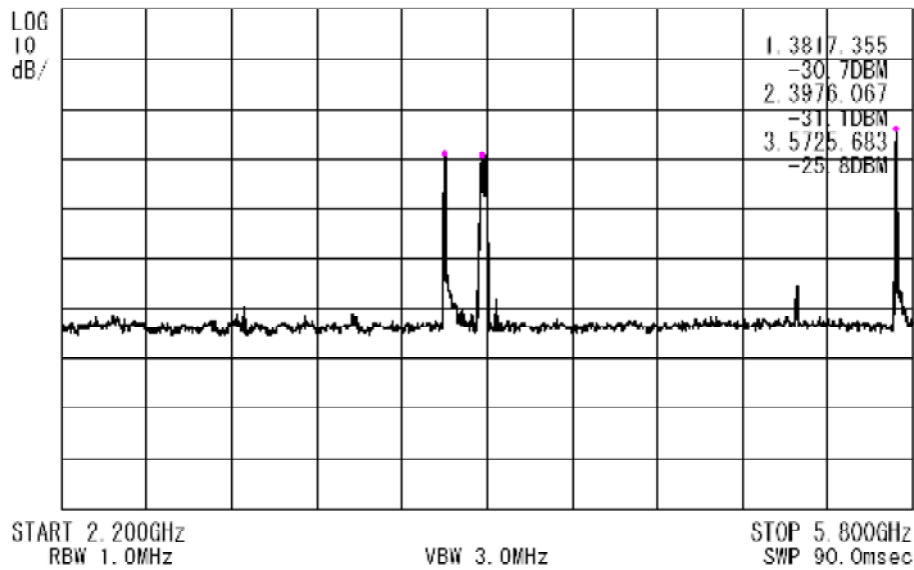


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1909.800 MHz (810 ch)
Frequency Range : 2.2GHz - 5.8GHz

Antenna Conducted Spurious PCS1900
1909.8MHz (810ch) 2.2GHz-5.8GHz
REF -2.0 DBM ATT 10dB

2003/11/18 19:49:46

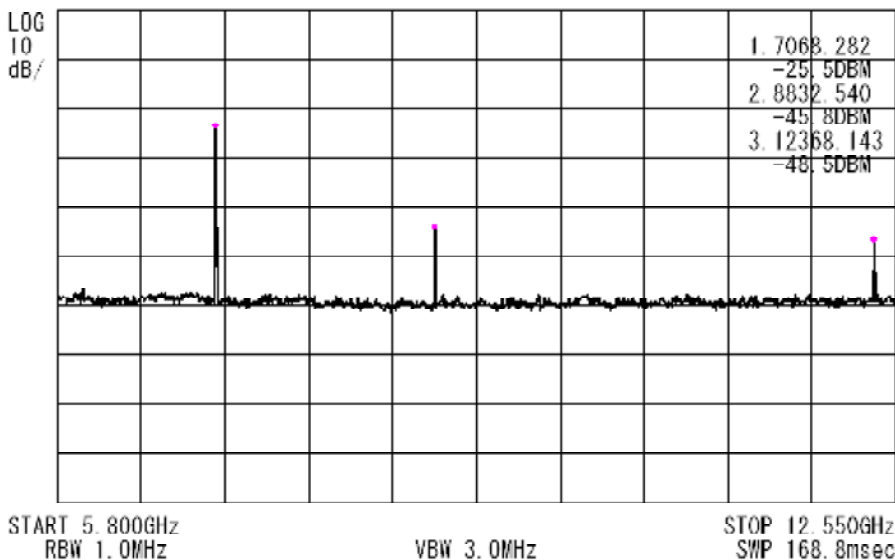


Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1909.800 MHz (810 ch)
Frequency Range : 5.8GHz - 12.55GHz

Antenna Conducted Spurious PCS1900
1909.8MHz (810ch) 5.8GHz-12.55GHz
REF -2.0 DBM ATT 10dB

2003/11/18 21:45:16



JQA Application No.: KL80030551
Model No. : GX30
FCC ID : APYHRO00033

Regulation : CFR 47 FCC Rules Parts 22/24
Issue Date : November 25, 2003

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Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 1909.800 MHz (810 ch)
Frequency Range : 12.55GHz - 20.0GHz

Antenna Conducted Spurious PCS1900
1909.8MHz (810ch) 12.55GHz-20GHz

2003/11/18 21:48:12

REF -2.0 DBM ATT 10dB

