

Attachment B

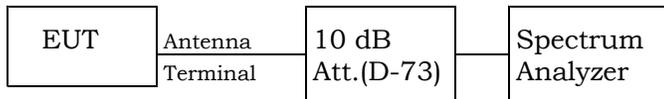
Antenna Conducted Spurious Emission Measurement (§2.1051,§24.238)

Test Procedure :

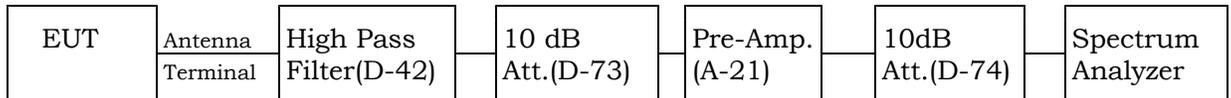
The Antenna Conducted Emission was measured with a spectrum analyzer. The test system is shown as follows:

PCS1900

1) Frequency Range : 9kHz - 2.2GHz



2) Frequency Range : 2.2GHz -5.8GHz



3) Frequency Range : 5.8GHz - 20GHz

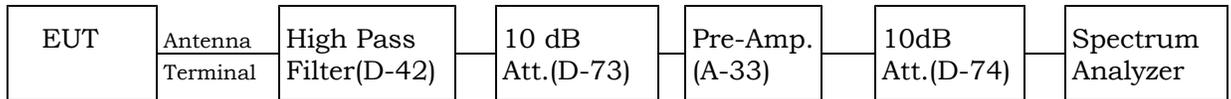


Fig.2 Antenna Conducted Spurious Emission Measurement

JQA Application No.: KL80030711
Model No. : V801SH
FCC ID : APYHRO00032

Regulation : CFR 47 FCC Rules Part 24
Issue Date : March 4, 2004

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Test location :

KITA-KANSAI Testing Center
7-7, Ishimaru, 1-Chome, Mino-Shi, Osaka, 562-0027, Japan

● - Shielded room

KAMEOKA EMC Branch

9-1, Ozaki, Inukanno, Nishibetsuin-Cho, Kameoka-Shi, Kyoto, 621-0126, Japan

○ - Shielded room

Used test instruments:

Model No.	Device ID	Last Cal. Date	Cal. Interval
○ - MP721C	D - 66		
● - 4T-10	D - 73	May, 2003	1 Year
● - 4T-10	D - 74	May, 2003	1 Year
○ - 2-10	D - 79		
○ - 2-10	D - 80		
○ - WJ-6611-513	A - 23		
● - WJ-6882-824	A - 21	May, 2003	1 Year
● - DBL-0618N515	A - 33	May, 2003	1 Year
● - UHP-127	D - 42	May, 2003	1 Year
○ - UHP-128	D - 43		
● - 8566B	A - 13	February, 2003	1 Year
○ - 8593A	A - 15		

Environmental conditions:

Temperature: 20 °C Humidity: 40 %

Antenna-Conducted Spurious Emission Measurement
 PCS 1900

Test Date: February 10, 2004

Temp.: 20 °C, Humi: 40 %

CH	Transmitting Frequency [MHz]	Measured Frequency [MHz]	Corr. Factor [dB]	Meter Readings [dBm]	Limits [dBm]	Results [dBm]	Margin [dB]	Remarks
512	1850.200	3700.400	-19.4	-17.9	-13.0	-37.3	+24.3	C
		5550.600	-20.7	-30.1	-13.0	-50.8	+37.8	C
		7400.800	-9.7	-47.6	-13.0	-57.3	+44.3	C
		9251.000	-10.0	-27.5	-13.0	-37.5	+24.5	C
		11101.200	-10.5	-57.1	-13.0	-67.6	+54.6	C
		12951.400	-10.3	-52.9	-13.0	-63.2	+50.2	C
		14801.600	-10.7	-47.1	-13.0	-57.8	+44.8	C
		16651.800	-10.4	-41.4	-13.0	-51.8	+38.8	C
661	1880.000	3760.000	-19.9	-16.6	-13.0	-36.5	+23.5	C
		5640.000	-20.2	-29.4	-13.0	-49.6	+36.6	C
		7520.000	-9.7	-39.2	-13.0	-48.9	+35.9	C
		9400.000	-10.1	-31.4	-13.0	-41.5	+28.5	C
		11280.000	-10.0	-52.0	-13.0	-62.0	+49.0	C
		15040.000	-10.6	-38.1	-13.0	-48.7	+35.7	C
		16920.000	-10.1	-41.3	-13.0	-51.4	+38.4	C
810	1909.800	3819.600	-19.4	-16.9	-13.0	-36.3	+23.3	C
		5729.400	-19.7	-29.5	-13.0	-49.2	+36.2	C
		7639.200	-10.2	-36.1	-13.0	-46.3	+33.3	C
		9549.000	-10.3	-32.7	-13.0	-43.0	+30.0	C
		11458.800	-10.5	-49.4	-13.0	-59.9	+46.9	C
		15278.400	-10.5	-38.5	-13.0	-49.0	+36.0	C
		17188.200	-10.5	-44.6	-13.0	-55.1	+42.1	C

Sample of calculated result at 3819.6 MHz, as the Minimum Margin point:

Corr. Factor = -19.4 dB
 +) Meter Reading = -16.9 dB(μV)
 Result = -36.3 dB(μV)

Minimum Margin: -13.0 - (-36.3) = 23.3 (dB)

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

Applied Limits:

-13.0 [dBm] = $10\log(TP[mW]) - (43 + 10\log(tp[W])) = 10\log(TP[mW]) - (43 + (10 \log(TP[mW]) - 30))$

where $tp[W] = TP[mW] / 1000$: Transmitter power at antenna terminal

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

Correction factor details:

Cable Loss + 10dB Pad Att. [dB] (9 kHz - 2.2 GHz)

Cable Loss + 20dB Pad Att. + High Pass Filter Loss (D-42) - Pre-Amp. Gain [dB] (over 5.8 GHz)

- Note: 1) The spectrum was scanned 9 kHz to 20 GHz and all emissions not reported were more than 20 dB below the applied limits.
 2) The spectrum analyzer displays were printed out in Attachment B.

Remarks:

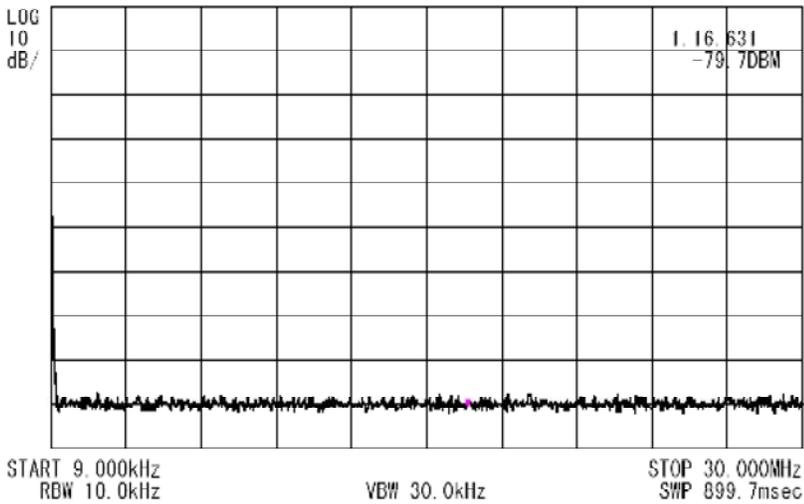
	Detector Function	RES B.W.	V.B.W.	Sweep Time
A	Peak	10 kHz	30 kHz	20 msec.
B	Peak	100 kHz	300 kHz	20 msec.
C	Peak	1 MHz	3 MHz	20 msec.

Tester : Shigeru Kinoshita

Antenna Conducted Spurious Emission Measurement

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

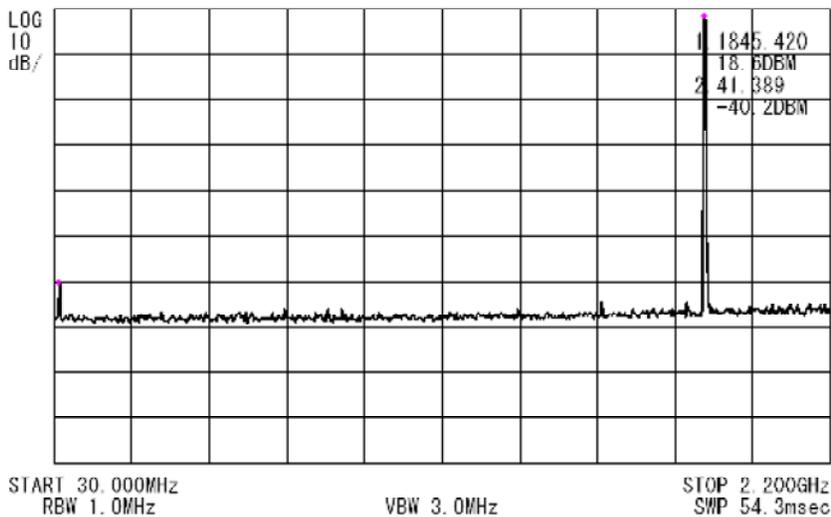
Antenna Conducted Spurious PGS1900
1850.2MHz (512ch) 9kHz-30MHz
REF 10.0 DBM ATT 20dB
2004/02/10 15:45:54



Antenna Conducted Spurious Emission Measurement

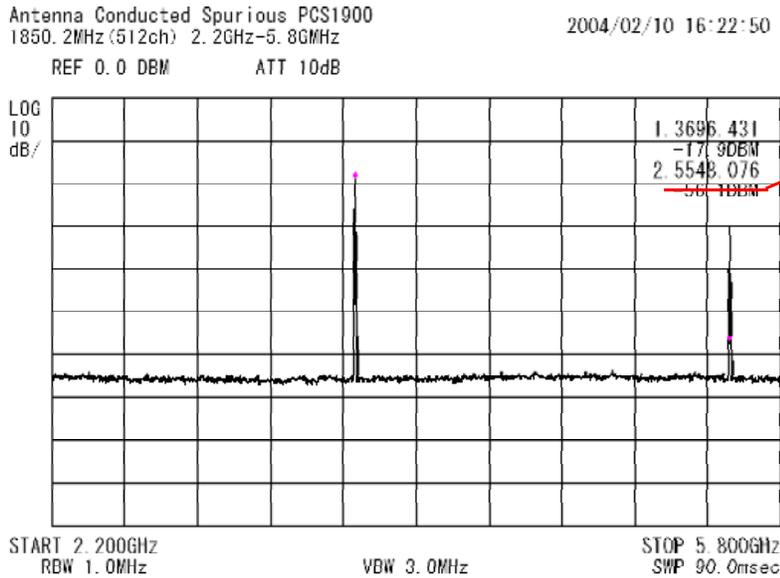
Transmitting Frequency : 1850.200 MHz (512 ch)
Frequency Range : 30MHz - 2.2GHz

Antenna Conducted Spurious PGS1900
1850.2MHz (512ch) 30MHz-2.2GHz
REF 20.0 DBM ATT 30dB
2004/02/10 16:09:50



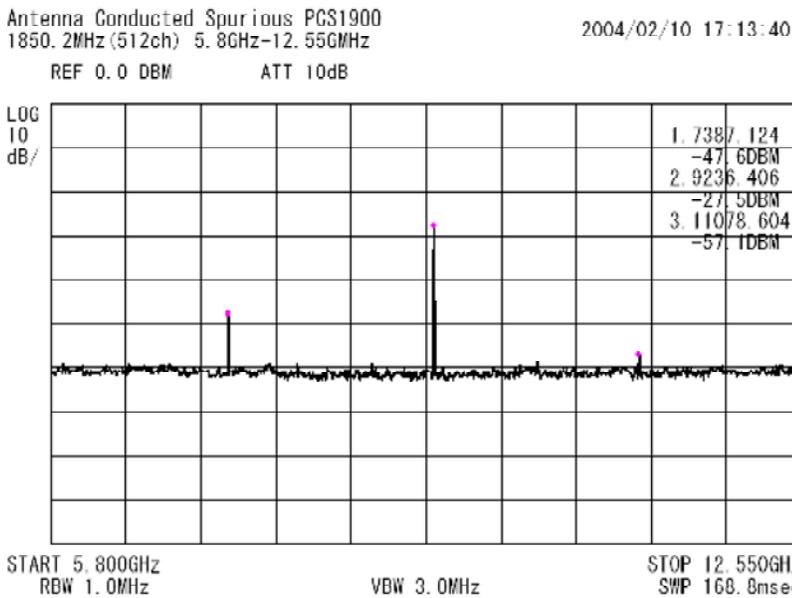
Antenna Conducted Spurious Emission Measurement

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



Antenna Conducted Spurious Emission Measurement

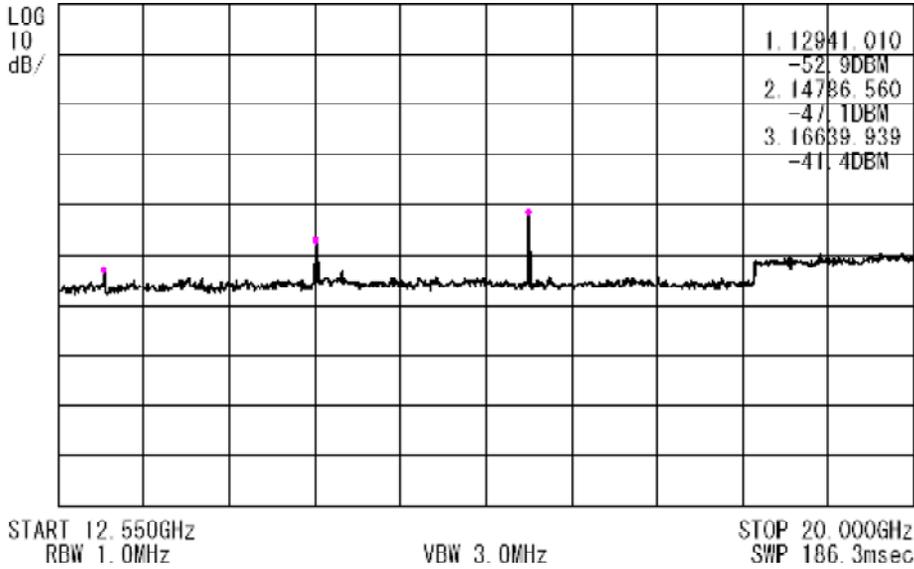
Transmitting Frequency : 1850.200 MHz (512 ch)
Frequency Range : 5.8GHz - 12.55GHz



Antenna Conducted Spurious Emission Measurement

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

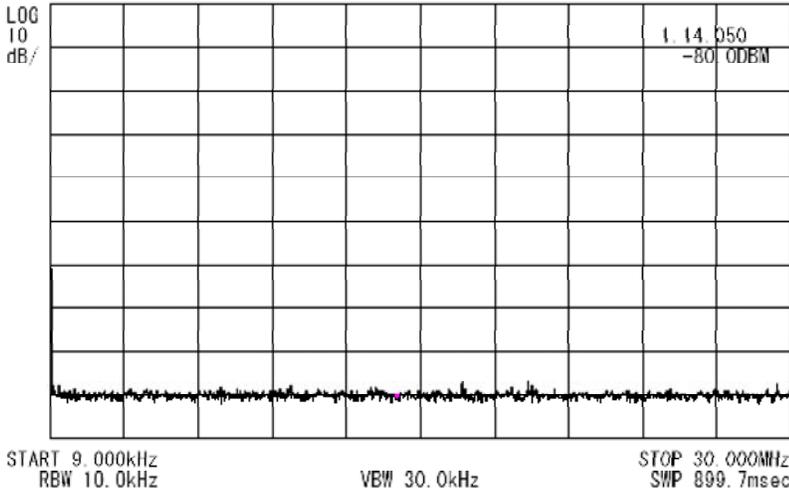
Antenna Conducted Spurious PCS1900
1850.2MHz (512ch) 12.55GHz-20GHz
REF 0.0 DBM ATT 10dB



Antenna Conducted Spurious Emission Measurement

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

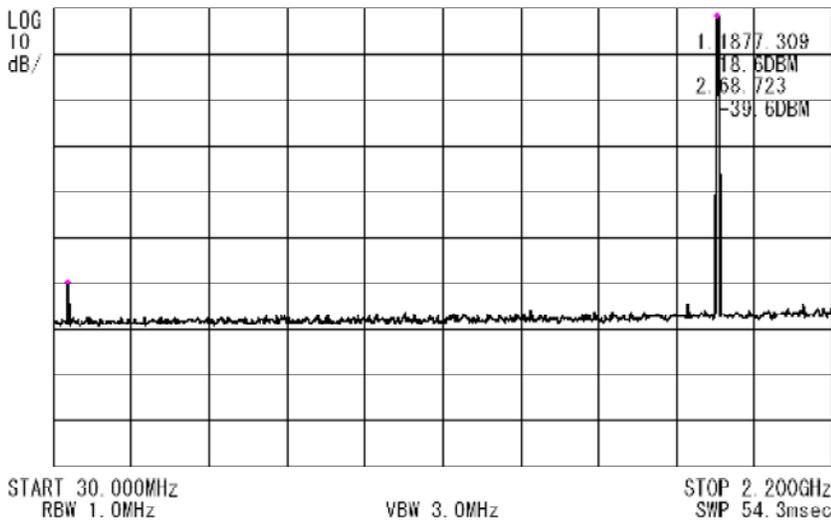
Antenna Conducted Spurious PCS1900
1880.0MHz(661ch) 9kHz-30MHz
2004/02/10 15:49:36
REF 10.0 DBM ATT 20dB



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
2004/02/10 16:06:06
REF 20.0 DBM ATT 30dB



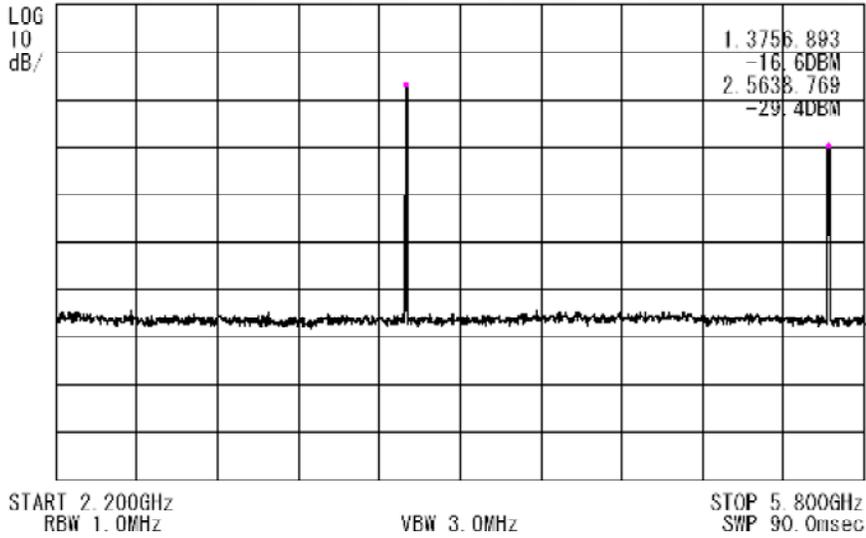
Antenna Conducted Spurious Emission Measurement

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

Antenna Conducted Spurious PGS1900
1880.0MHz (661ch) 2.2GHz-5.8GHz

2004/02/10 16:47:56

REF 0.0 DBM ATT 10dB



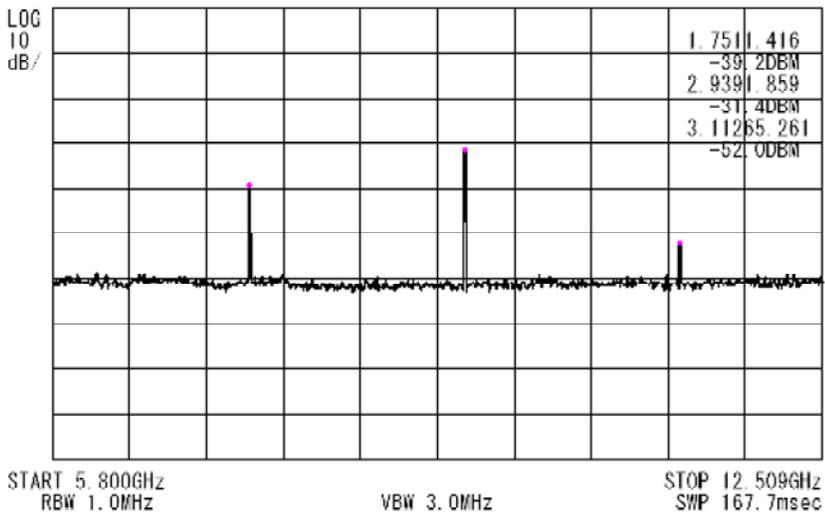
Antenna Conducted Spurious Emission Measurement

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

Antenna Conducted Spurious PGS1900
1880.0MHz (661ch) 5.8GHz-12.55GHz

2004/02/10 17:00:18

REF 0.0 DBM ATT 10dB

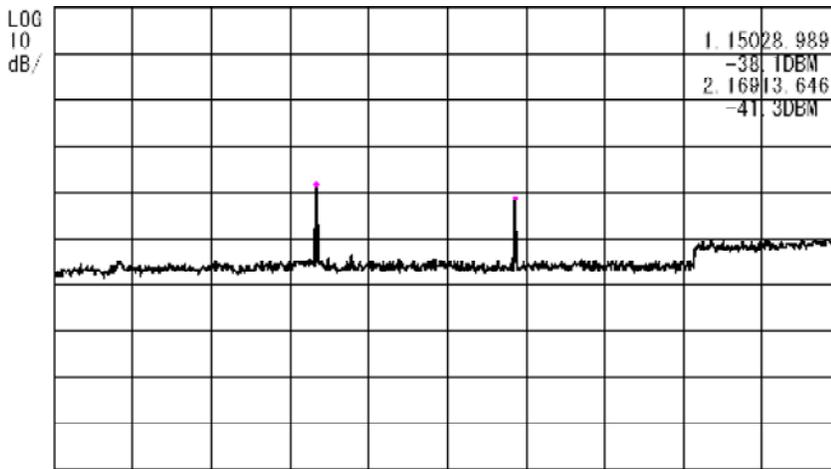


Antenna Conducted Spurious Emission Measurement

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

Antenna Conducted Spurious PCS1900
1880.0MHz (661ch) 12.55GHz-20GHz
REF 0.0 DBM ATT 10dB

2004/02/10 17:19:23



START 12.550GHz
RBW 1.0MHz

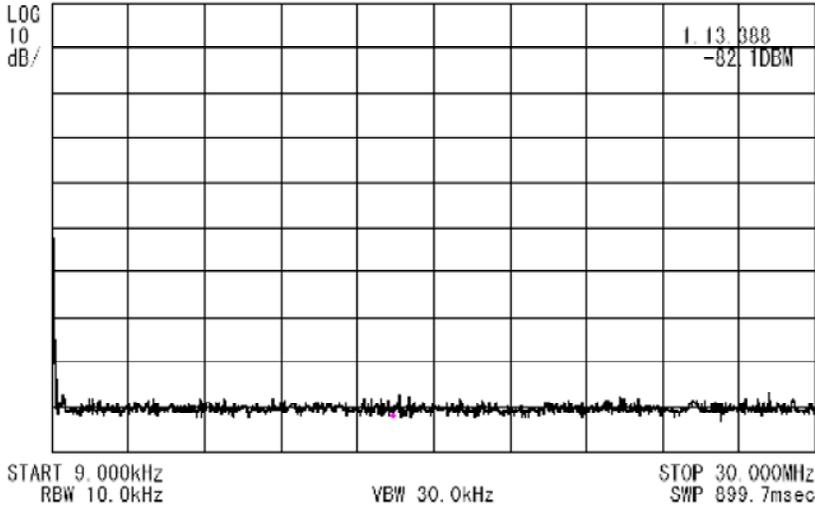
VBW 3.0MHz

STOP 20.000GHz
SWP 186.3msec

Antenna Conducted Spurious Emission Measurement

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

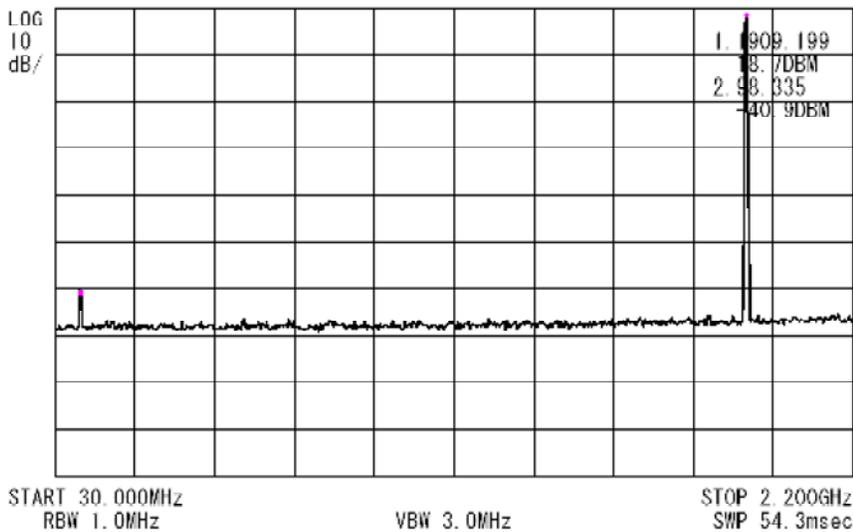
Antenna Conducted Spurious PGS1900 2004/02/10 15:53:22
1909.8MHz(810ch) 9kHz-30MHz
REF 10.0 DBM ATT 20dB



Antenna Conducted Spurious Emission Measurement

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

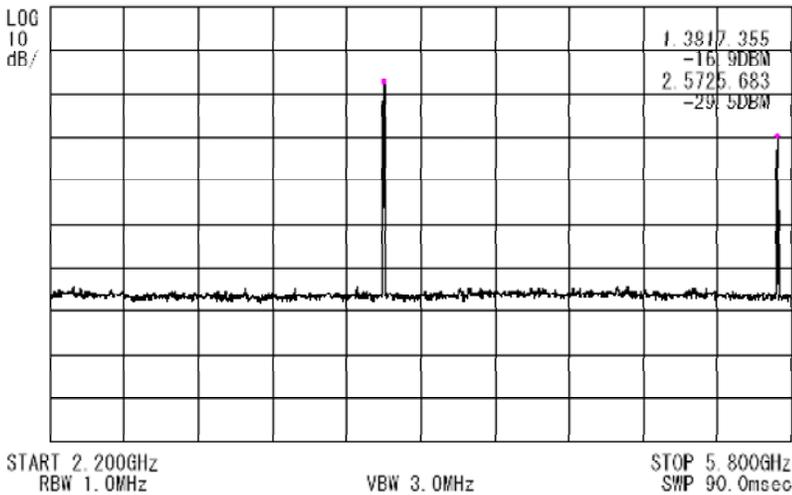
Antenna Conducted Spurious PGS1900 2004/02/10 16:00:49
1909.8MHz(810ch) 30MHz-2.2GHz
REF 20.0 DBM ATT 30dB



Antenna Conducted Spurious Emission Measurement

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

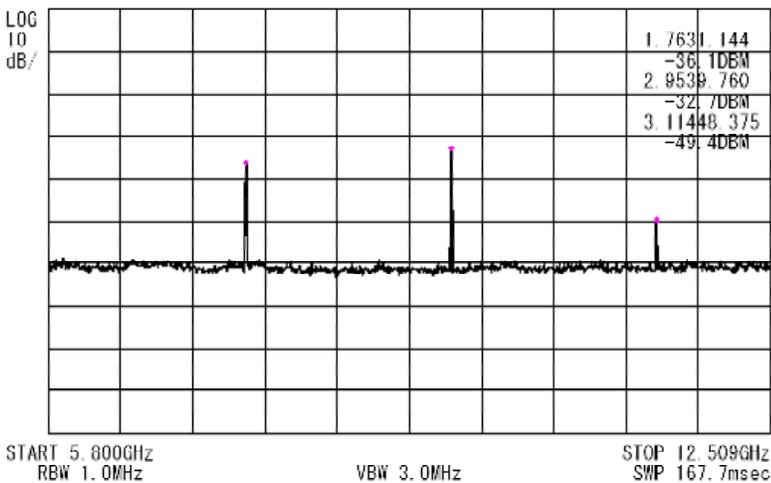
Antenna Conducted Spurious PCS1900
1909.8MHz (810ch) 2.2GHz-5.8GHz
REF 0.0 DBM ATT 10dB
2004/02/10 16:51:33



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 0.0 DBM ATT 10dB
2004/02/10 16:57:14



Antenna Conducted Spurious Emission Measurement

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

Antenna Conducted Spurious PGS1900
1909.8MHz(810ch) 12.55GHz-20GHz
REF 0.0 DBM ATT 10dB

2004/02/10 17:21:48

