

Attachment B

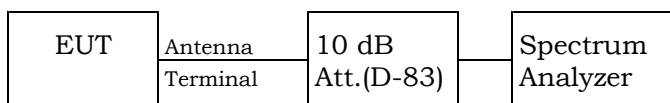
Antenna Conducted Spurious Emission Measurement (§2.1051,§22.917)

Test Procedure :

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

CDMA800

1) Frequency Range : 9kHz - 1.2GHz



2) Frequency Range : 1.2GHz - 10GHz

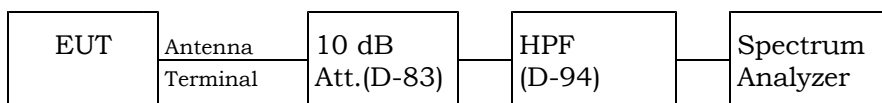


Fig.2 Antenna Conducted Spurious Emission Measurement

The setting of the spectrum analyzer are shown as follows :

Frequency Range	9kHz - 150kHz	150kHz - 30 MHz	30 MHz - 10 GHz
Res. Bandwidth	200 Hz	10 kHz	1 MHz
Video Bandwidth	1 kHz	30 kHz	3 MHz
Sweep Time	AUTO	AUTO	AUTO
Trace	Maxhold	Maxhold	Maxhold

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
○ - 8566B	A - 13	October, 2004	1 Year
● - E4446A	A - 39		
○ - 4T-10	D - 73		
○ - 4T-10	D - 74		
○ - 2-10	D - 79		
○ - 2-10	D - 80	November, 2004	1 Year
○ - 54-10	D - 82		
● - 54-10	D - 83		
○ - BRM50701	D - 93	February, 2005	1 Year
● - HPM5010S	D - 94		
○ - HPM13900	D - 95		
○ - HPM13899	D - 96		

Environmental conditions:

Temperature: 21 °C Humidity: 70 %

Antenna-Conducted Spurious Emission Measurement (CDMA800)

Test Date: July 1, 2005
 Temp.: 21 °C, Humi: 70 %

CH	Transmitting Frequency [MHz]	Measured Frequency [MHz]	Corr. Factor [dB]	Meter Readings [dBm]	Limits [dBm]	Results [dBm]	Margin [dB]	Remarks
1013	824.730	1649.460	12.6	-62.4	-13.0	-49.8	+36.8	C
		2474.190	12.9	-59.0	-13.0	-46.1	+33.1	C
		3298.920	14.8	< -63.0	-13.0	< -48.2	> +35.2	C
		4123.650	14.4	< -63.0	-13.0	< -48.6	> +35.6	C
		4948.380	15.3	< -63.0	-13.0	< -47.7	> +34.7	C
		5773.110	16.2	< -63.0	-13.0	< -46.8	> +33.8	C
		6597.840	17.0	< -63.0	-13.0	< -46.0	> +33.0	C
		7422.570	20.3	< -63.0	-13.0	< -42.7	> +29.7	C
383	836.490	8247.300	21.2	< -63.0	-13.0	< -41.8	> +28.8	C
		1672.980	12.6	-59.2	-13.0	-46.6	+33.6	C
		2509.470	12.8	-51.7	-13.0	-38.9	+25.9	C
		3345.960	14.9	< -63.0	-13.0	< -48.1	> +35.1	C
		4182.450	14.8	< -63.0	-13.0	< -48.2	> +35.2	C
		5018.940	15.3	< -63.0	-13.0	< -47.7	> +34.7	C
		5855.430	16.3	< -63.0	-13.0	< -46.7	> +33.7	C
		6691.920	17.1	< -63.0	-13.0	< -45.9	> +32.9	C
777	848.310	7528.410	20.7	< -63.0	-13.0	< -42.3	> +29.3	C
		8364.900	21.5	< -63.0	-13.0	< -41.5	> +28.5	C
		1696.620	12.6	-57.1	-13.0	-44.5	+31.5	C
		2544.930	12.8	-59.5	-13.0	-46.7	+33.7	C
		3393.240	14.8	< -63.0	-13.0	< -48.2	> +35.2	C
		4241.550	15.1	< -63.0	-13.0	< -47.9	> +34.9	C
		5089.860	15.2	< -63.0	-13.0	< -47.8	> +34.8	C
		5938.170	16.4	< -63.0	-13.0	< -46.6	> +33.6	C
		6786.480	17.2	< -63.0	-13.0	< -45.8	> +32.8	C
		7634.790	20.8	< -63.0	-13.0	< -42.2	> +29.2	C
		8483.100	21.7	< -63.0	-13.0	< -41.3	> +28.3	C

Sample of calculated result at 2509.5 MHz, as the Minimum Margin point:

Corr. Factor	=	12.8 dB
+) Meter Reading	=	-51.7 dB(μV)
Result	=	-38.9 dB(μV)

Minimum Margin: $-13.0 - (-38.9) = 25.9$ (dB)

The point shown on “ ____ ” is the Minimum Margin Point.

Applied Limits:

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

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

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

Correction factor details:

Cable Loss + 10dB Pad Att. [dB] (9 kHz - 1.2 GHz)

Cable Loss + 10dB Pad Att. + High Pass Filter Loss (D-94) [dB] (1.2 GHz - 10 GHz)

- Note: 1) The spectrum was scanned 9 kHz to 10 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:

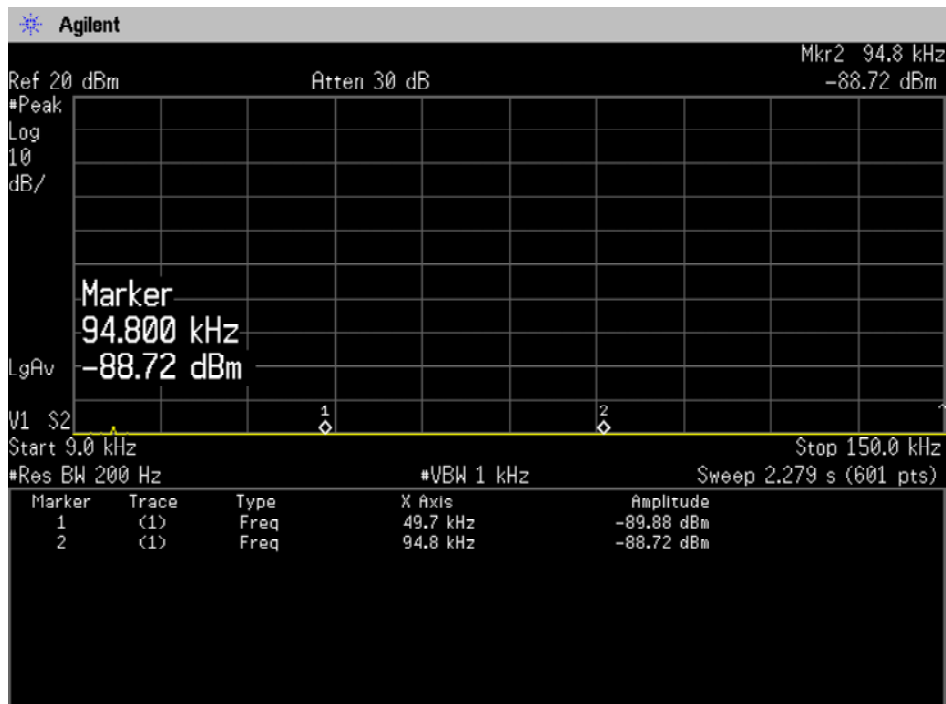
	Detector Function	RES B.W.	V.B.W.	Sweep Time
A	Peak	10 kHz	30 kHz	20 msec.
B	Peak	100 kHz	300 kHz	20 msec.
C	Peak	1 MHz	3 MHz	20 msec.

Tester : Shigeru Kinoshita

Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 824.73 MHz (1013ch)

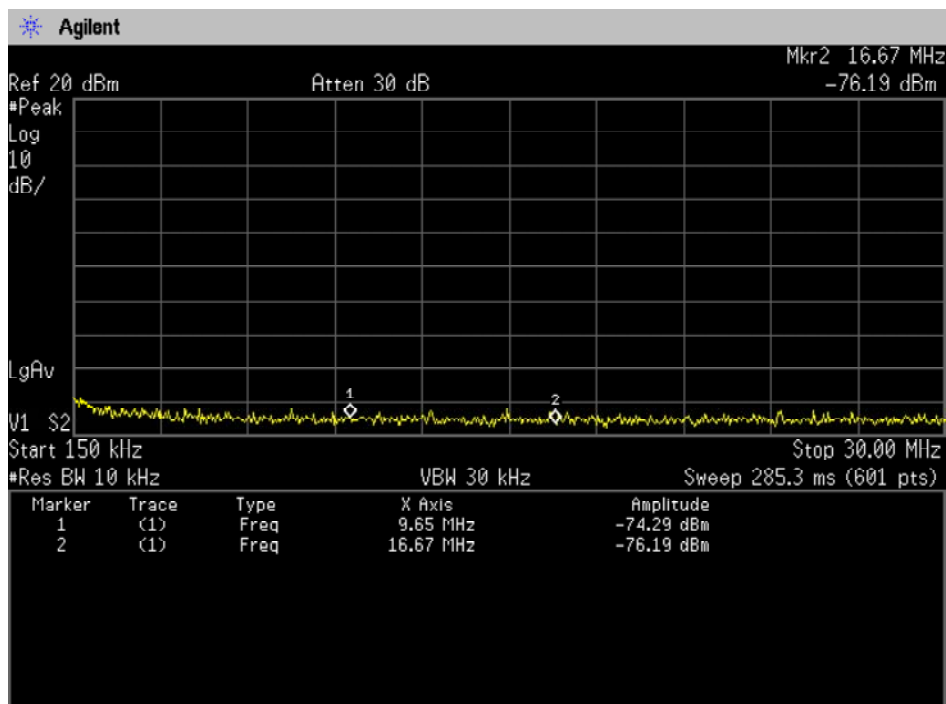
Frequency Range : 9kHz - 150 kHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 824.73 MHz (1013ch)

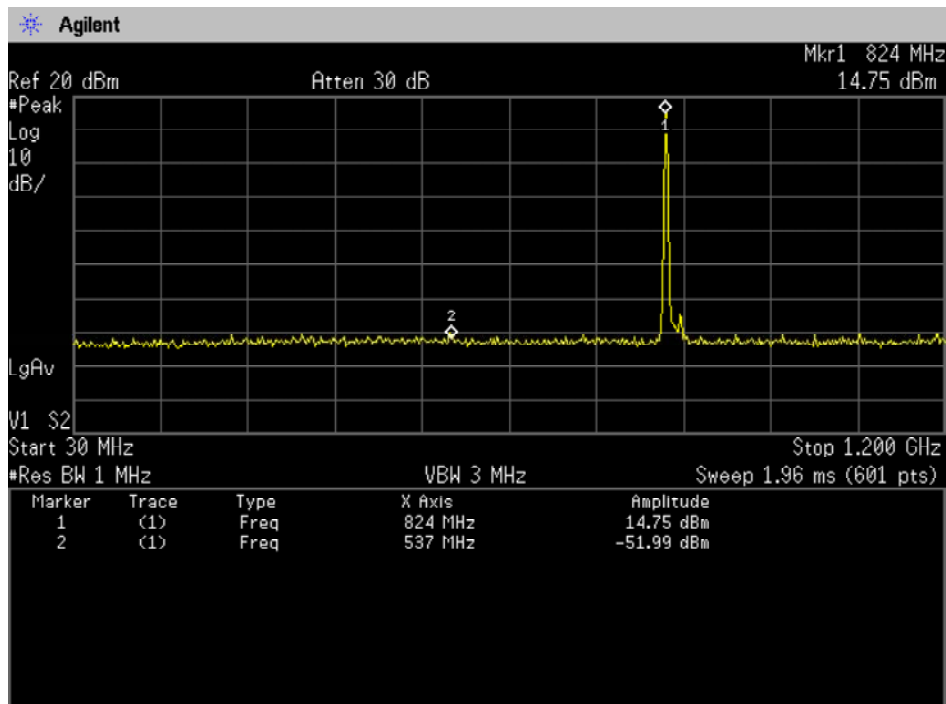
Frequency Range : 150kHz - 30MHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 824.73 MHz (1013ch)

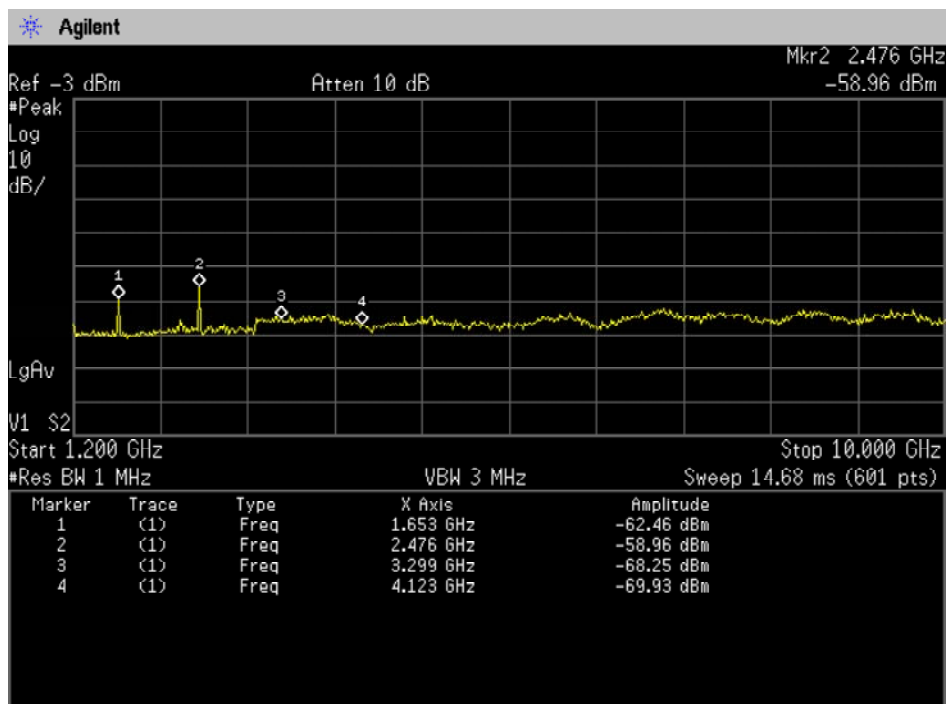
Frequency Range : 30MHz - 1.2GHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 824.73 MHz (1013ch)

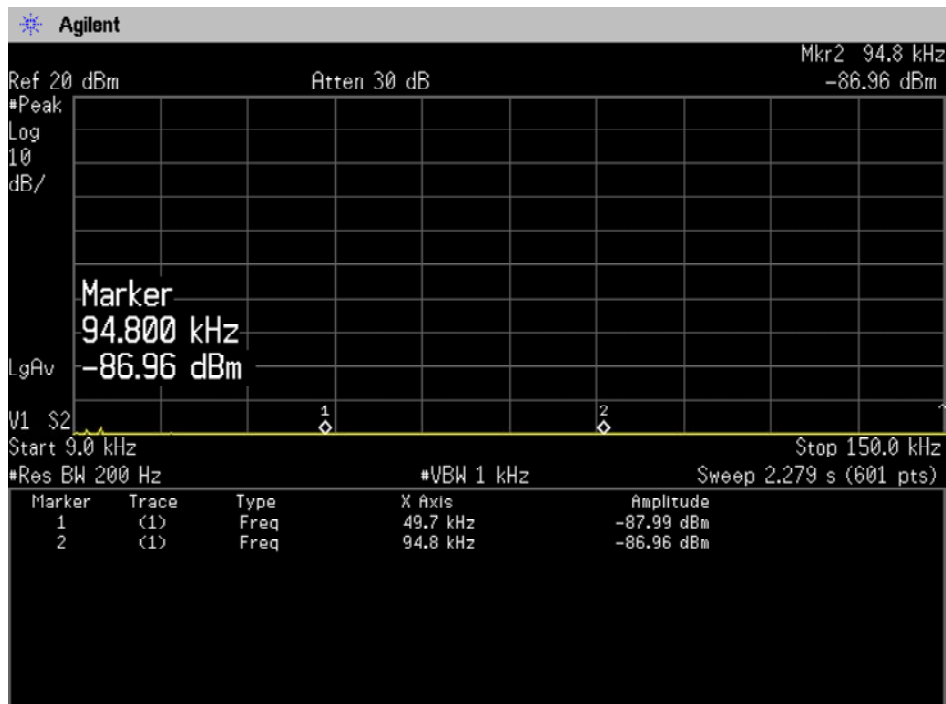
Frequency Range : 1.2GHz - 10GHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 836.49 MHz (383ch)

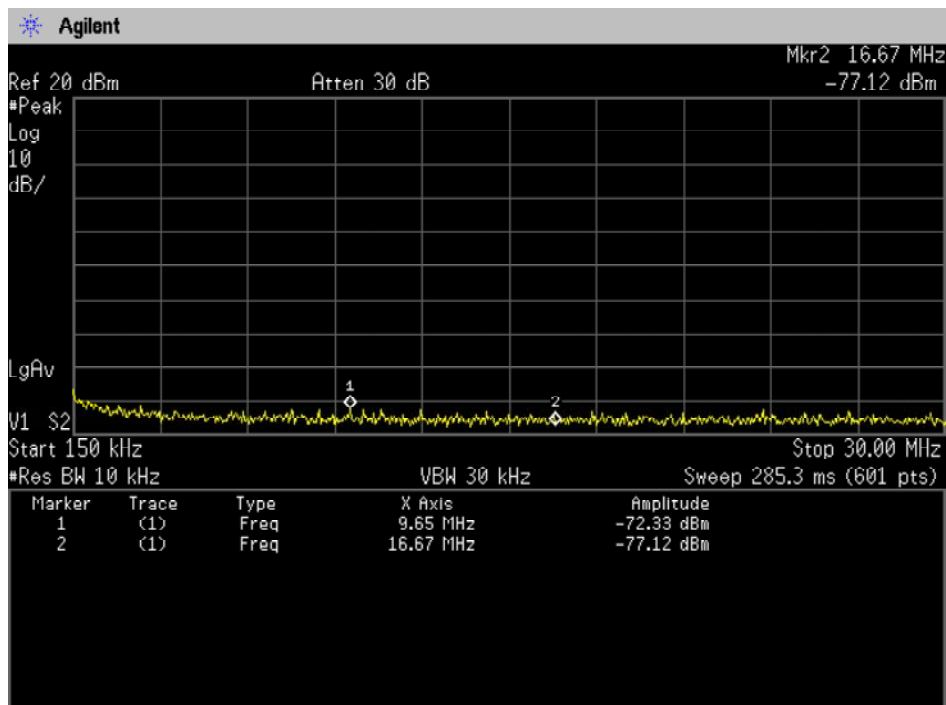
Frequency Range : 9kHz - 150 kHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 836.49 MHz (383ch)

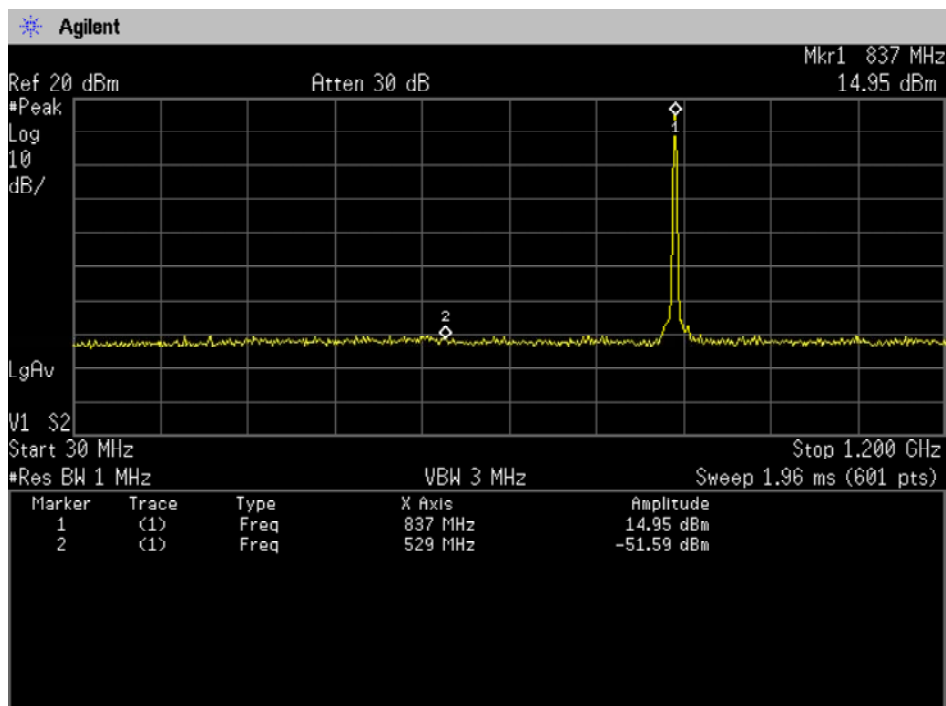
Frequency Range : 150kHz - 30MHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 836.49 MHz (383ch)

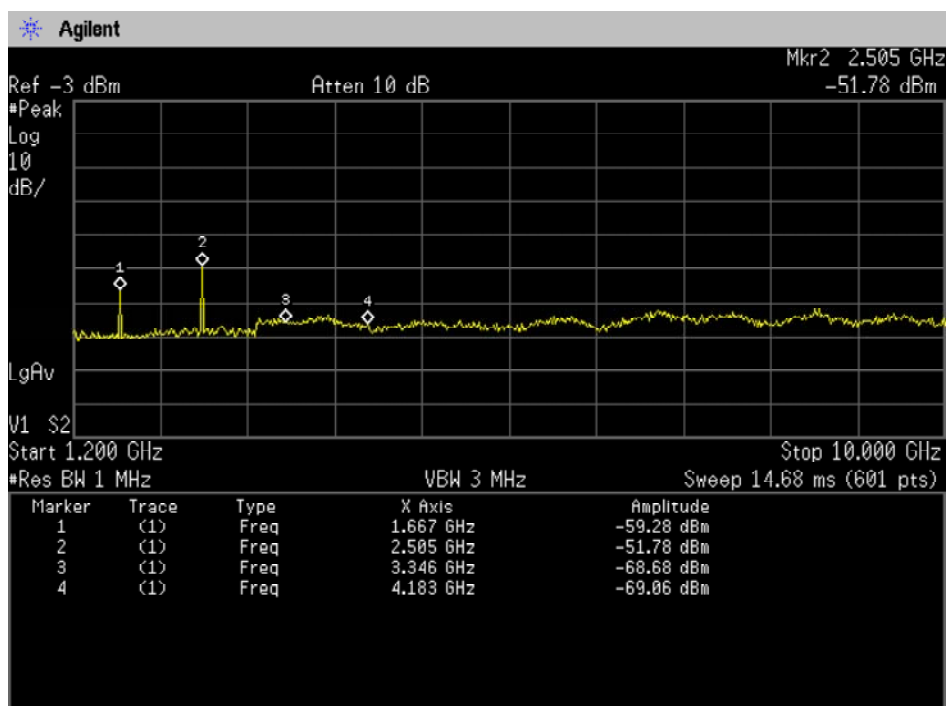
Frequency Range : 30MHz - 1.2GHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 836.49 MHz (383ch)

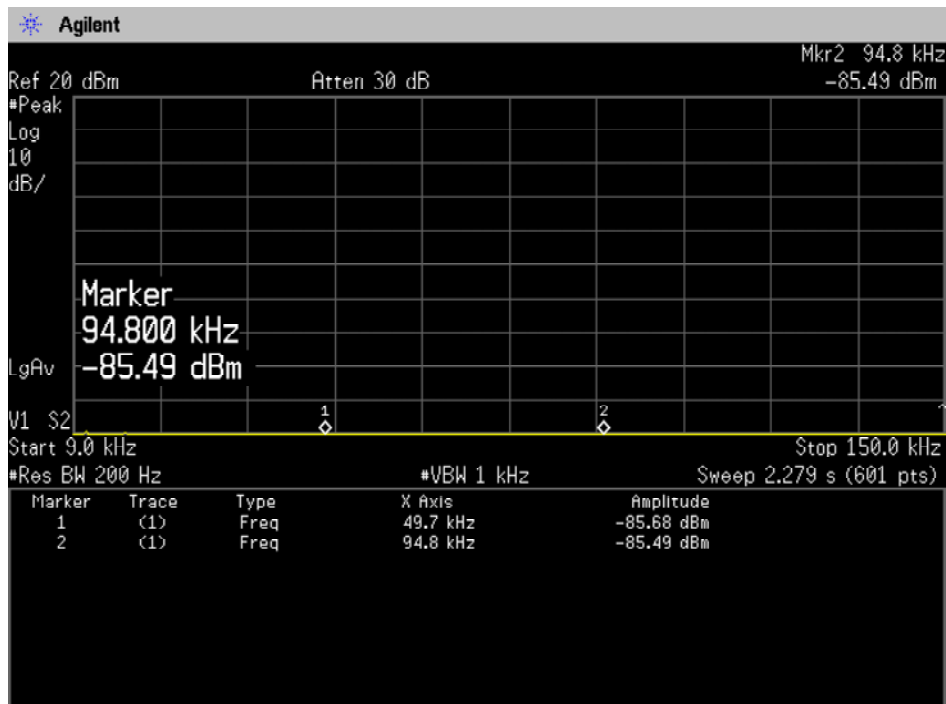
Frequency Range : 1.2GHz - 10GHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 848.31 MHz (777ch)

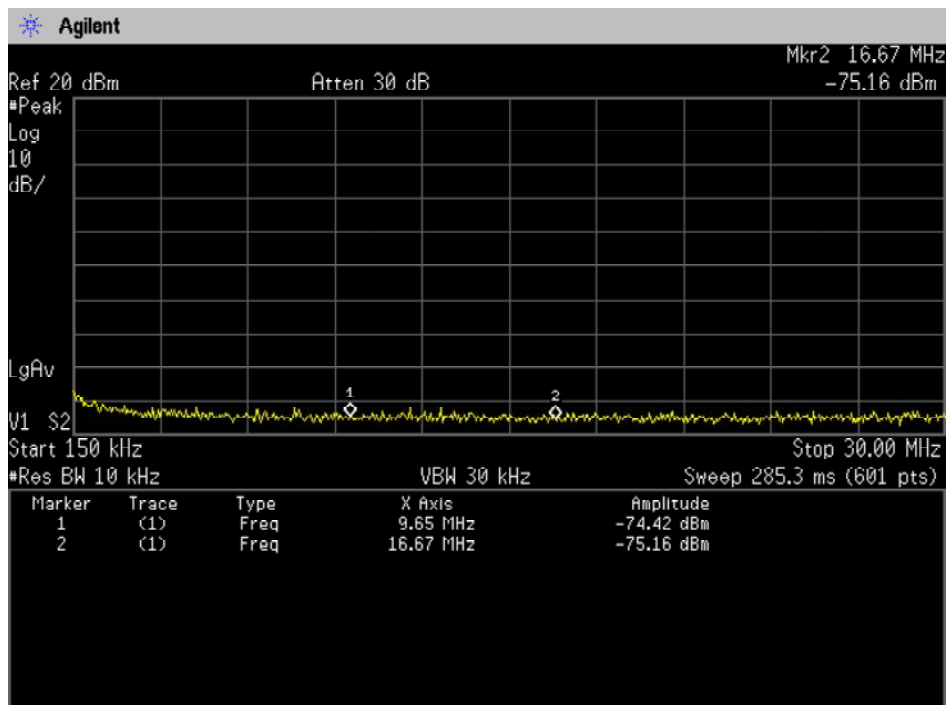
Frequency Range : 9kHz - 150 kHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 848.31 MHz (777ch)

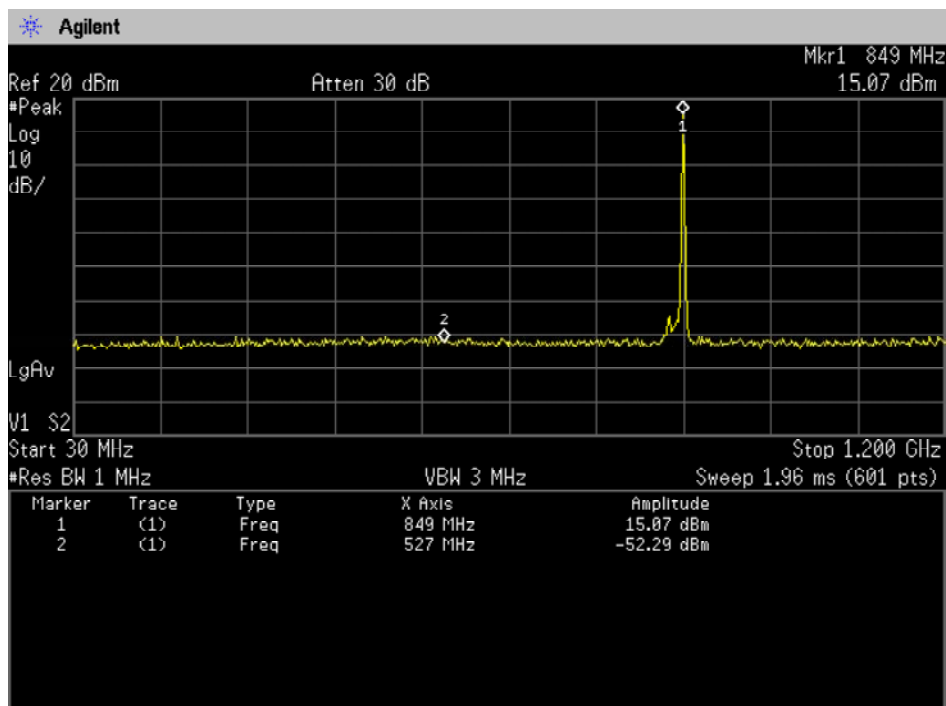
Frequency Range : 150kHz - 30MHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 848.31 MHz (777ch)

Frequency Range : 30MHz - 1.2GHz



Antenna Conducted Spurious Emission Measurement

Transmitting Frequency : 848.31 MHz (777ch)

Frequency Range : 1.2GHz - 10GHz

