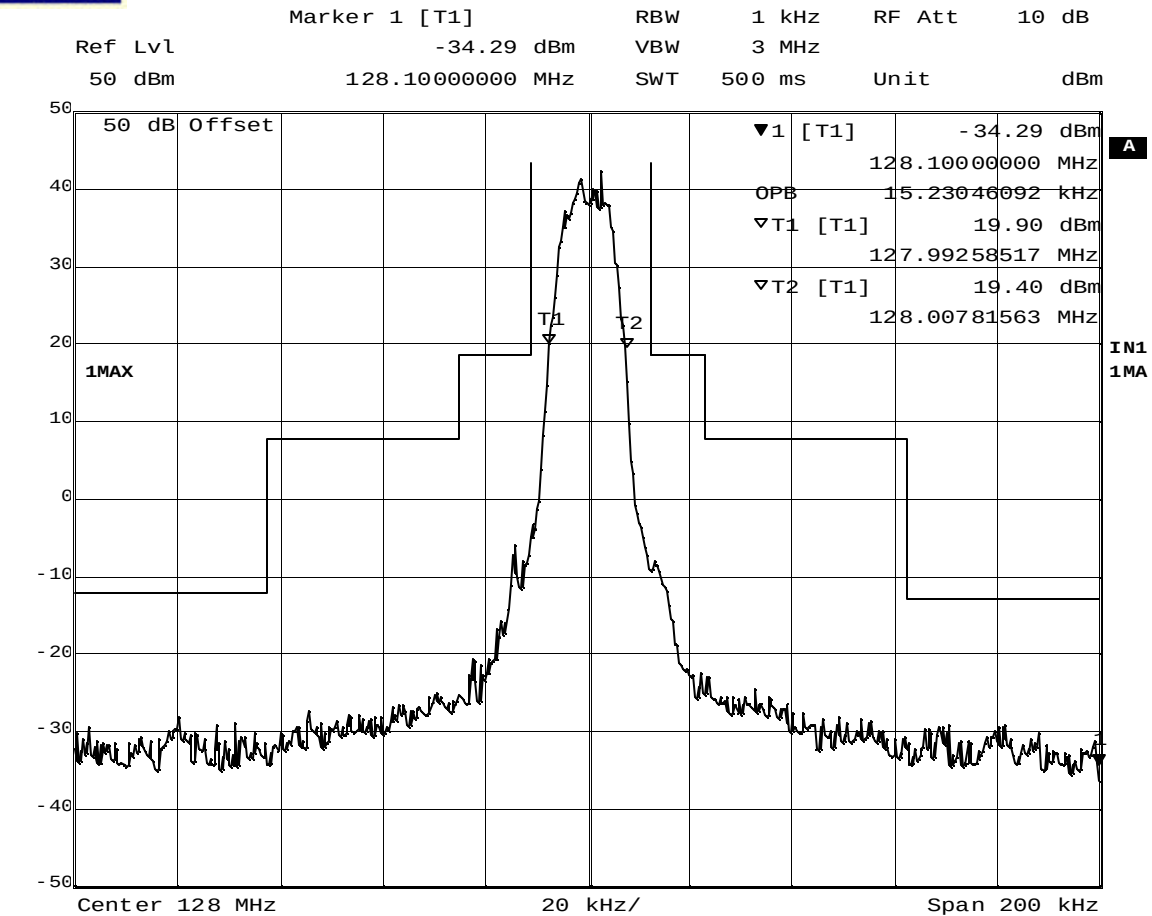
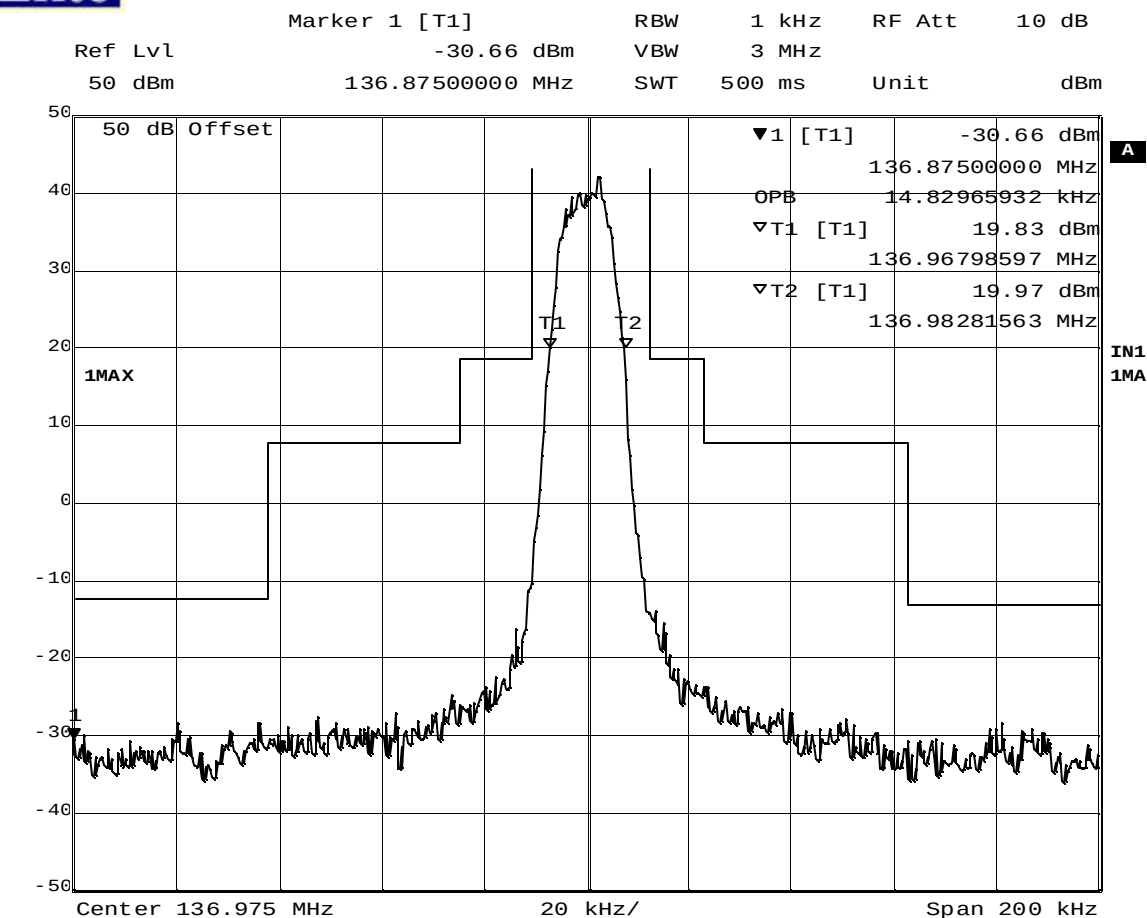




Date: 17. JAN. 2006 15:42:45

MANUFACTURER : Rockwell Collins
MODEL NUMBER : VHF-4100/VHF-4100E
SERIAL NUMBER : 21H9X
TEST MODE : Occupied Bandwidth
TEST PARAMETERS : Channel 128
NOTES : Data Link
EQUIPMENT USED : RBA0, GWF2, T2D9

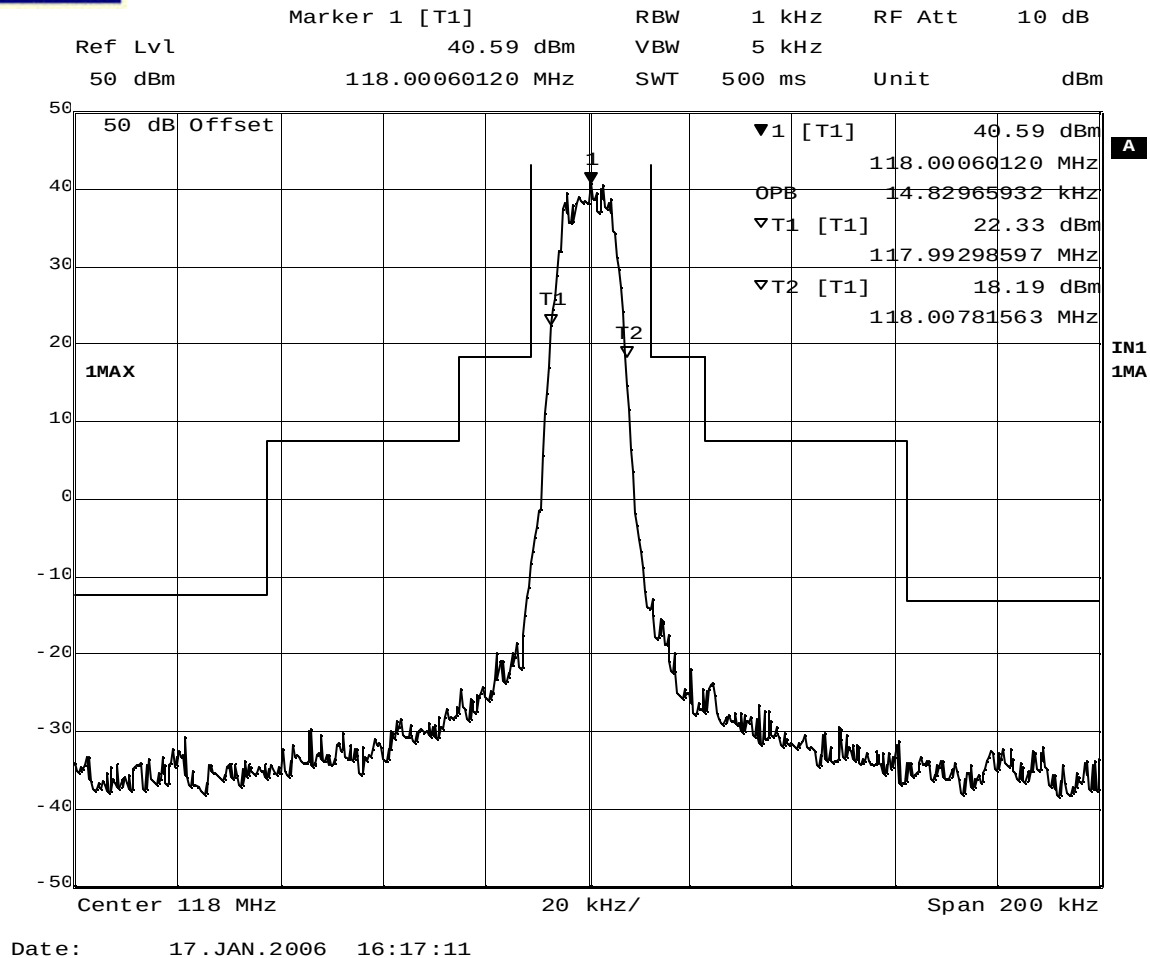
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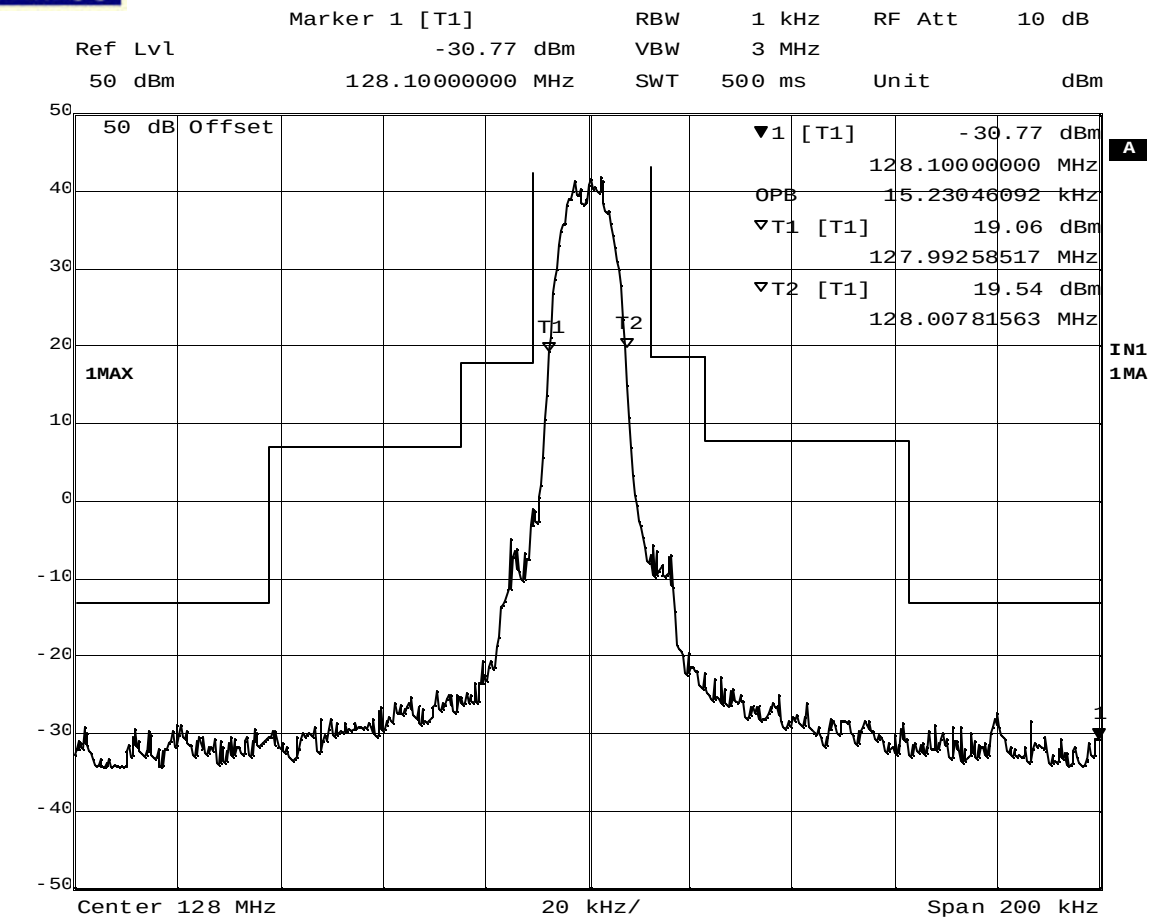
MANUFACTURER : Rockwell Collins
MODEL NUMBER : VHF-4100/VHF-4100E
SERIAL NUMBER : 21H9X
TEST MODE : Occupied Bandwidth
TEST PARAMETERS : Channel 136.975
NOTES : Data Link
EQUIPMENT USED : RBA0, GWF2, T2D9

NOTES



MANUFACTURER : Rockwell Collins
MODEL NUMBER : VHF-4100/VHF-4100E
SERIAL NUMBER : 21H9X
TEST MODE : Conducted Emissions
TEST PARAMETERS : Channel 118
NOTES : Digital Audio Link
EQUIPMENT USED : RBA0, GWF2, T2D9

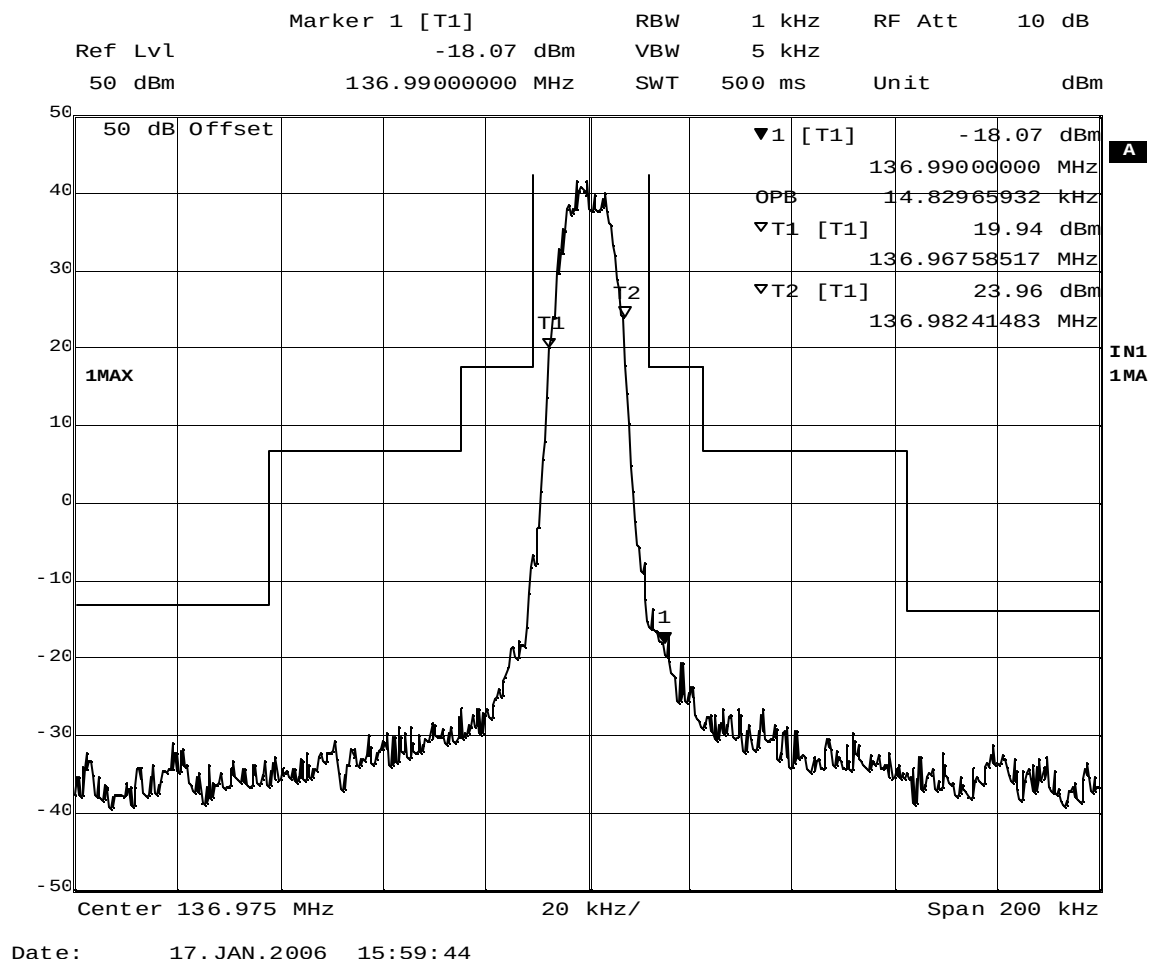
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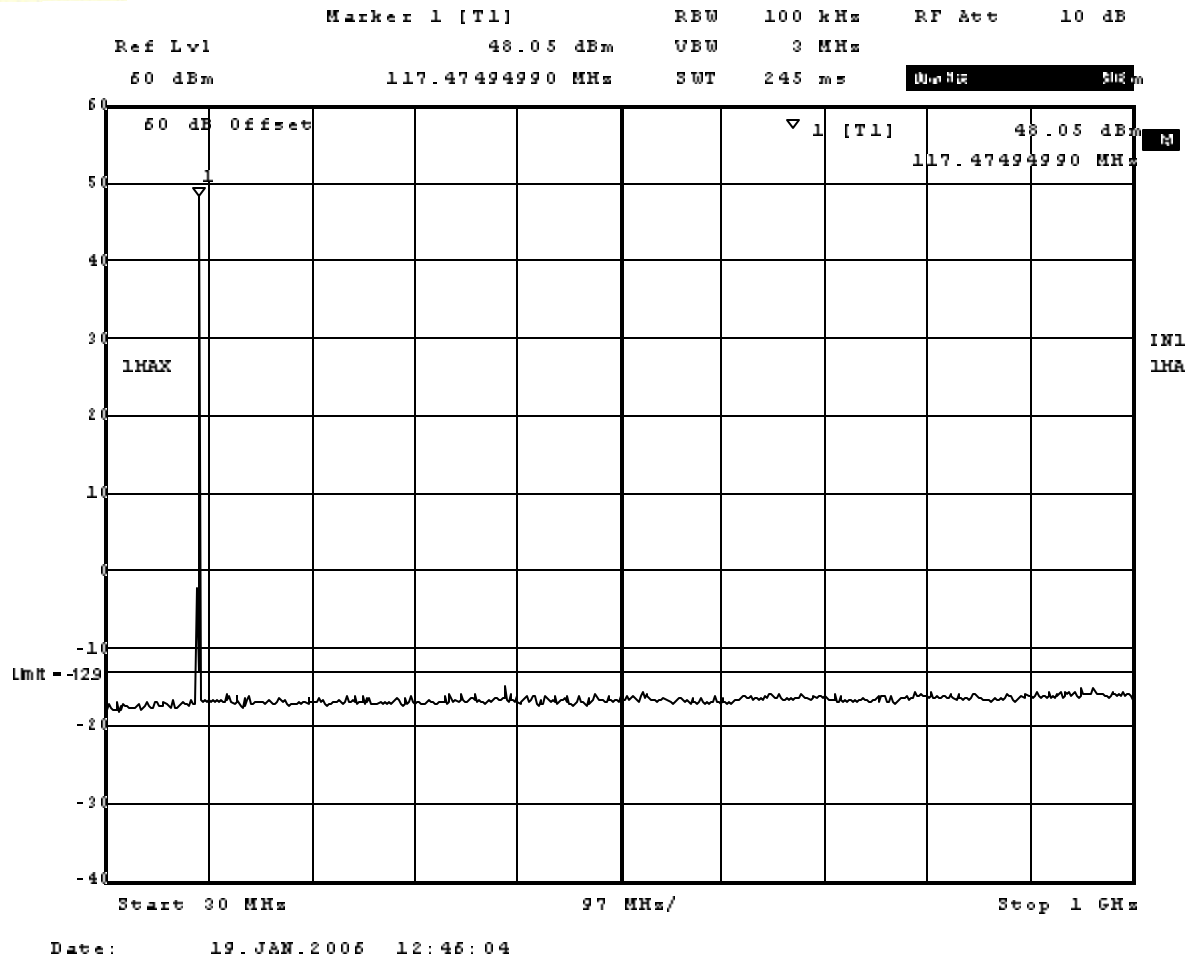
MANUFACTURER : Rockwell Collins
MODEL NUMBER : VHF-4100/VHF-4100E
SERIAL NUMBER : 21H9X
TEST MODE : Occupied Bandwidth
TEST PARAMETERS : Channel 128
NOTES : Digital Audio Link
EQUIPMENT USED : RBA0, GWF2, T2D9

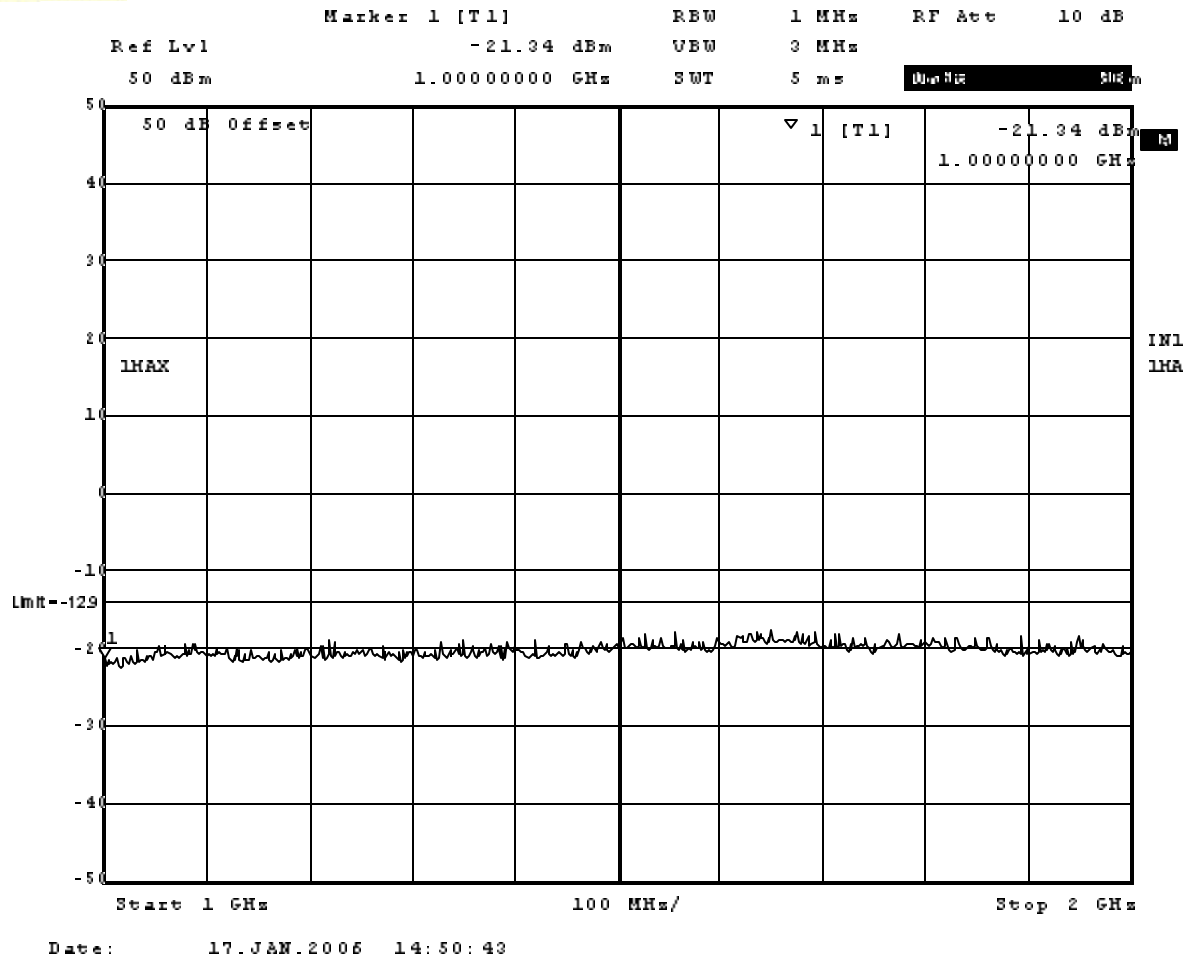
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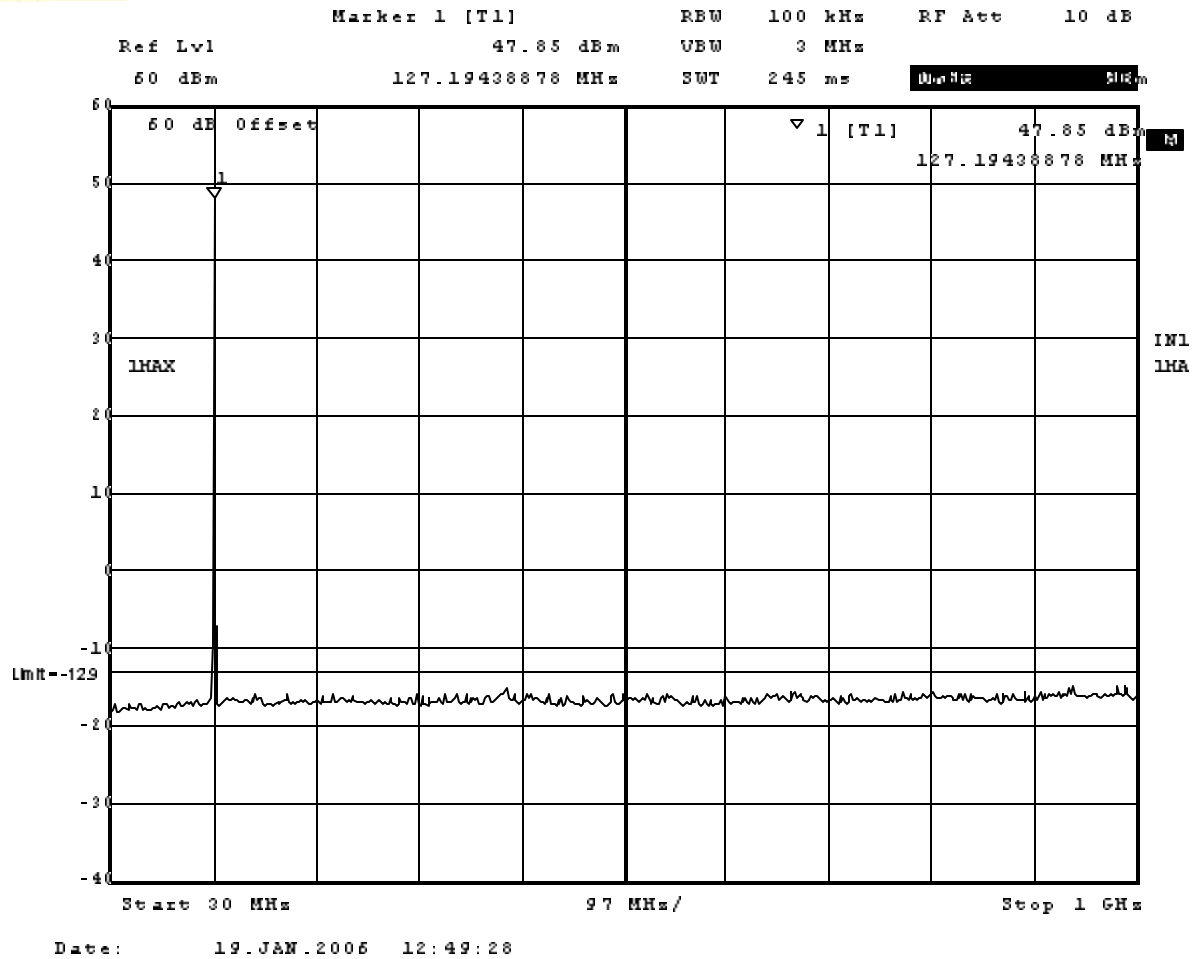


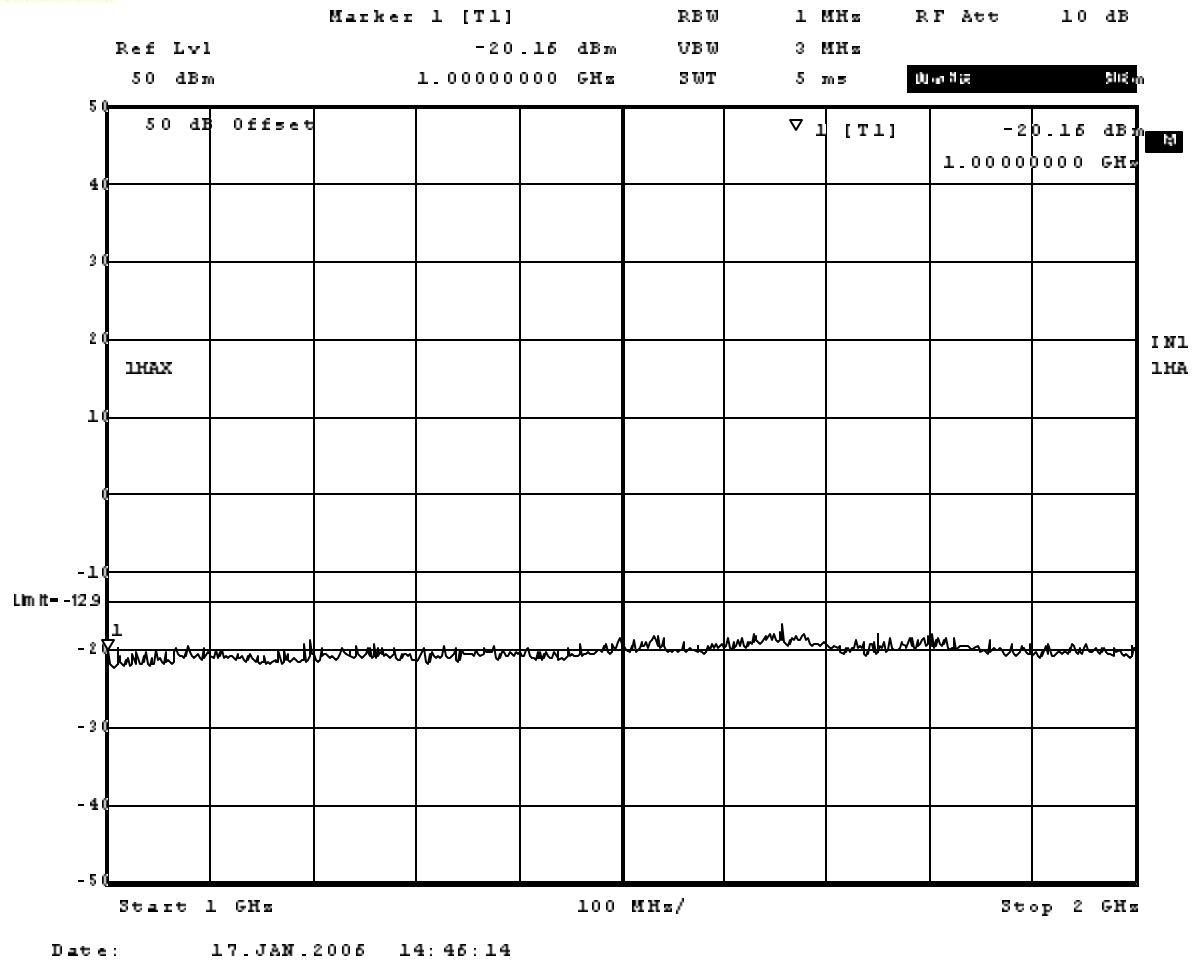
MANUFACTURER : Rockwell Collins
MODEL NUMBER : VHF-4100/VHF-4100E
SERIAL NUMBER : 21H9X
TEST MODE : Occupied Bandwidth
TEST PARAMETERS : Channel 136.975
NOTES : Digital Audio Link
EQUIPMENT USED : RBA0, GWF2, T2D9

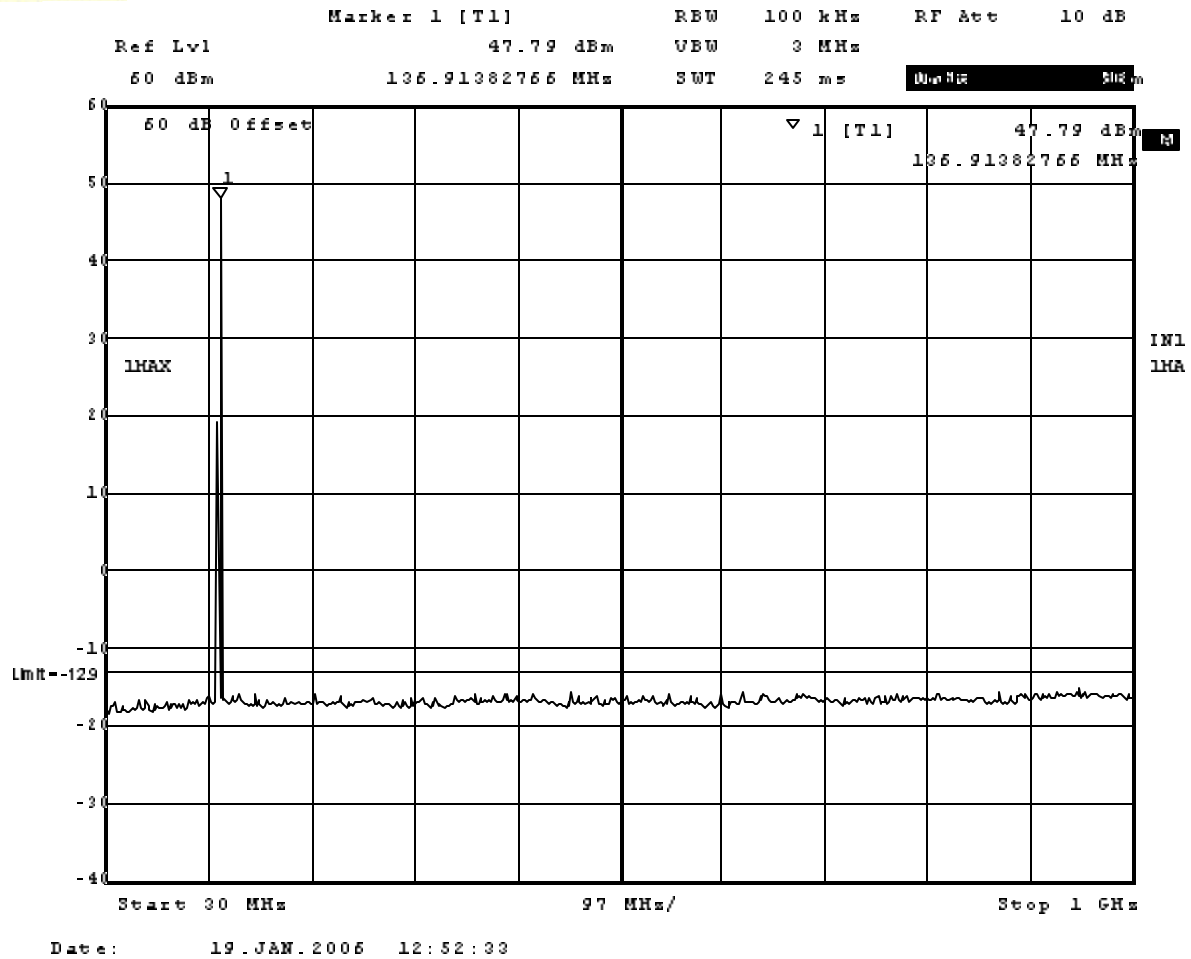
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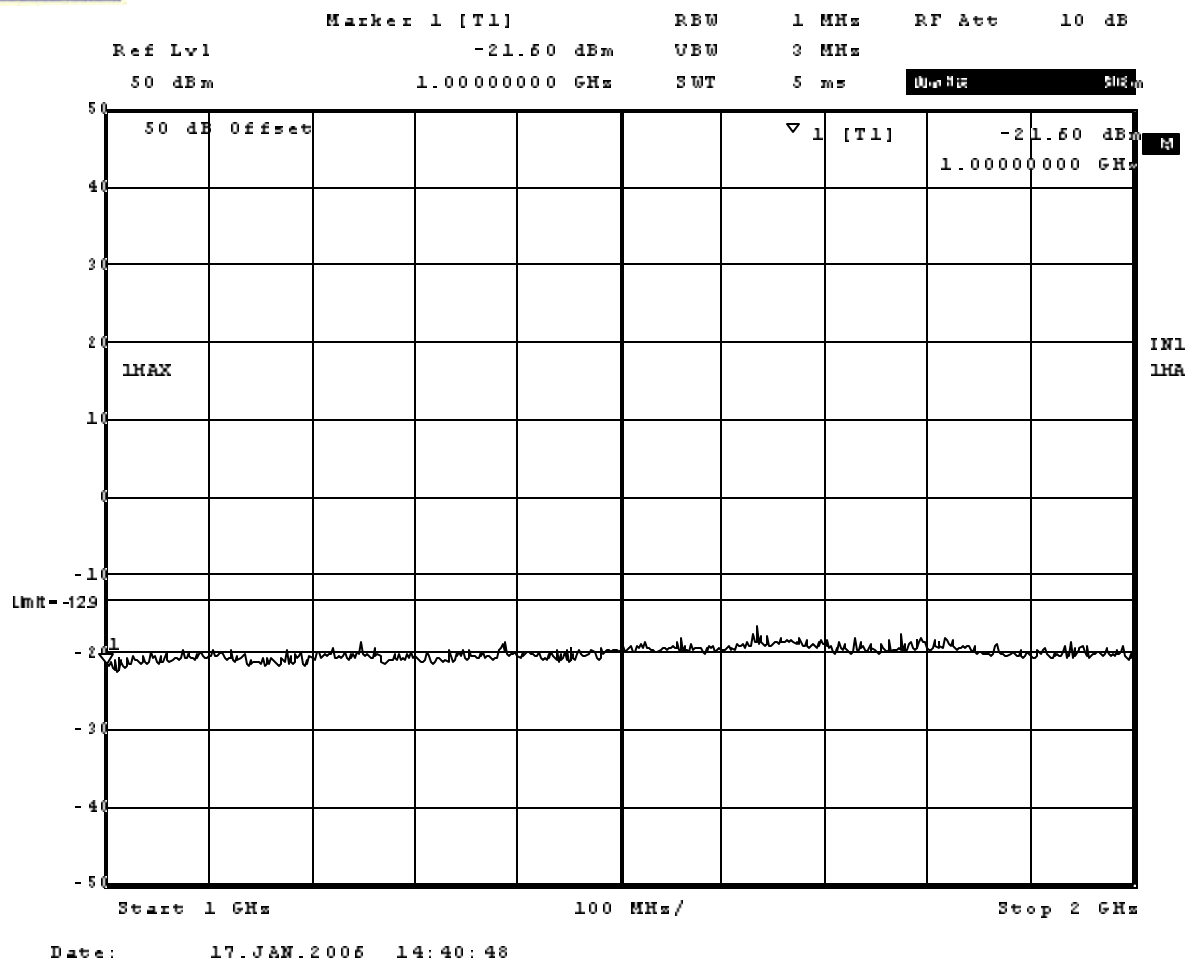


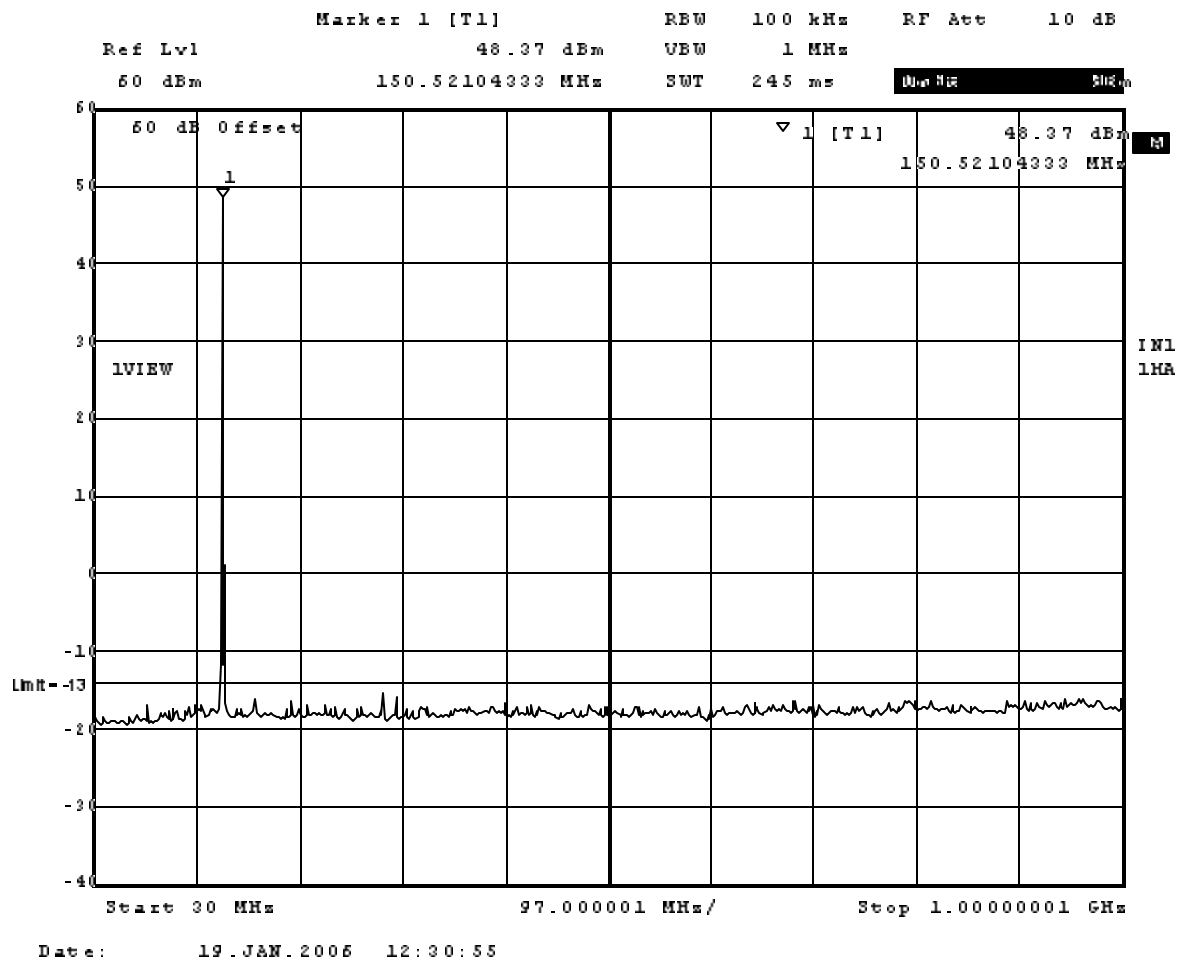


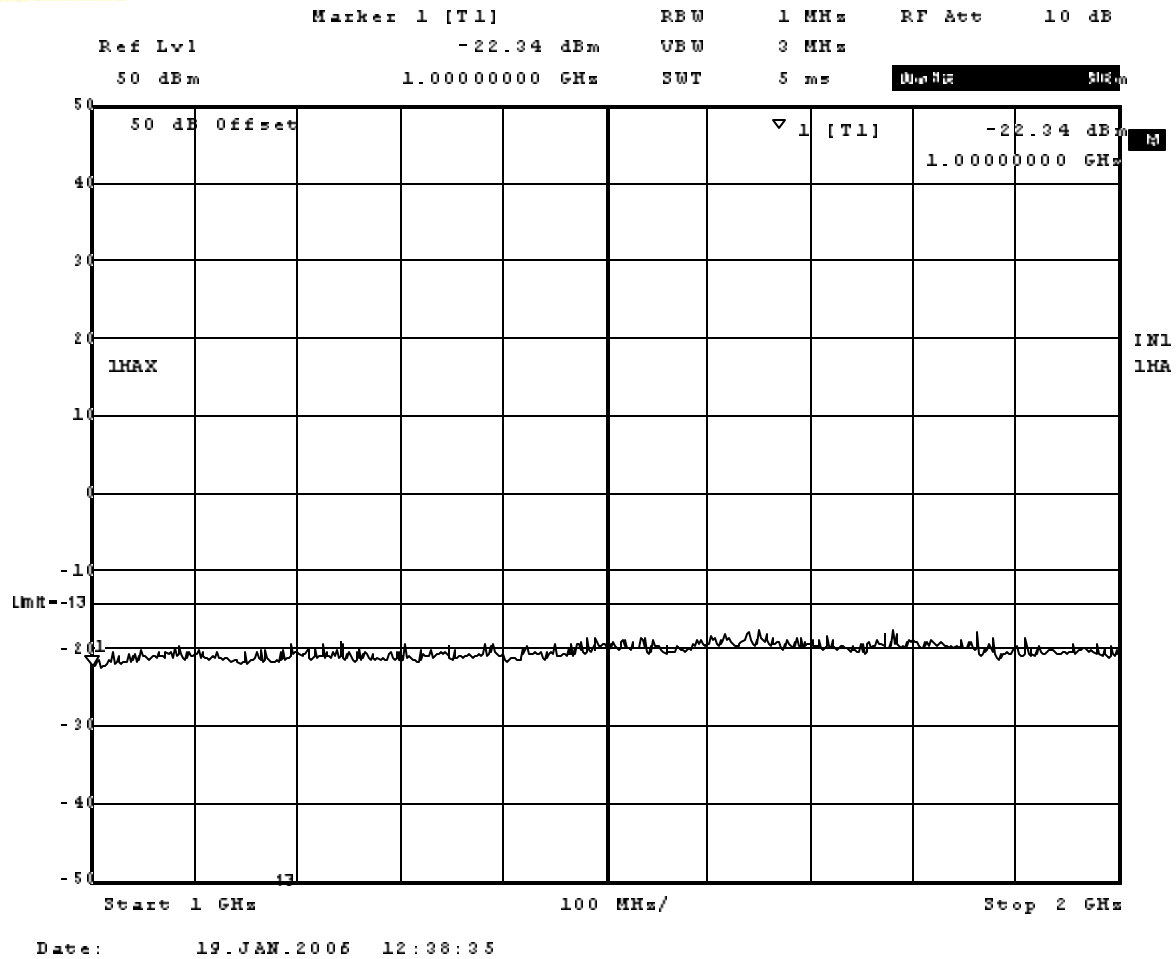


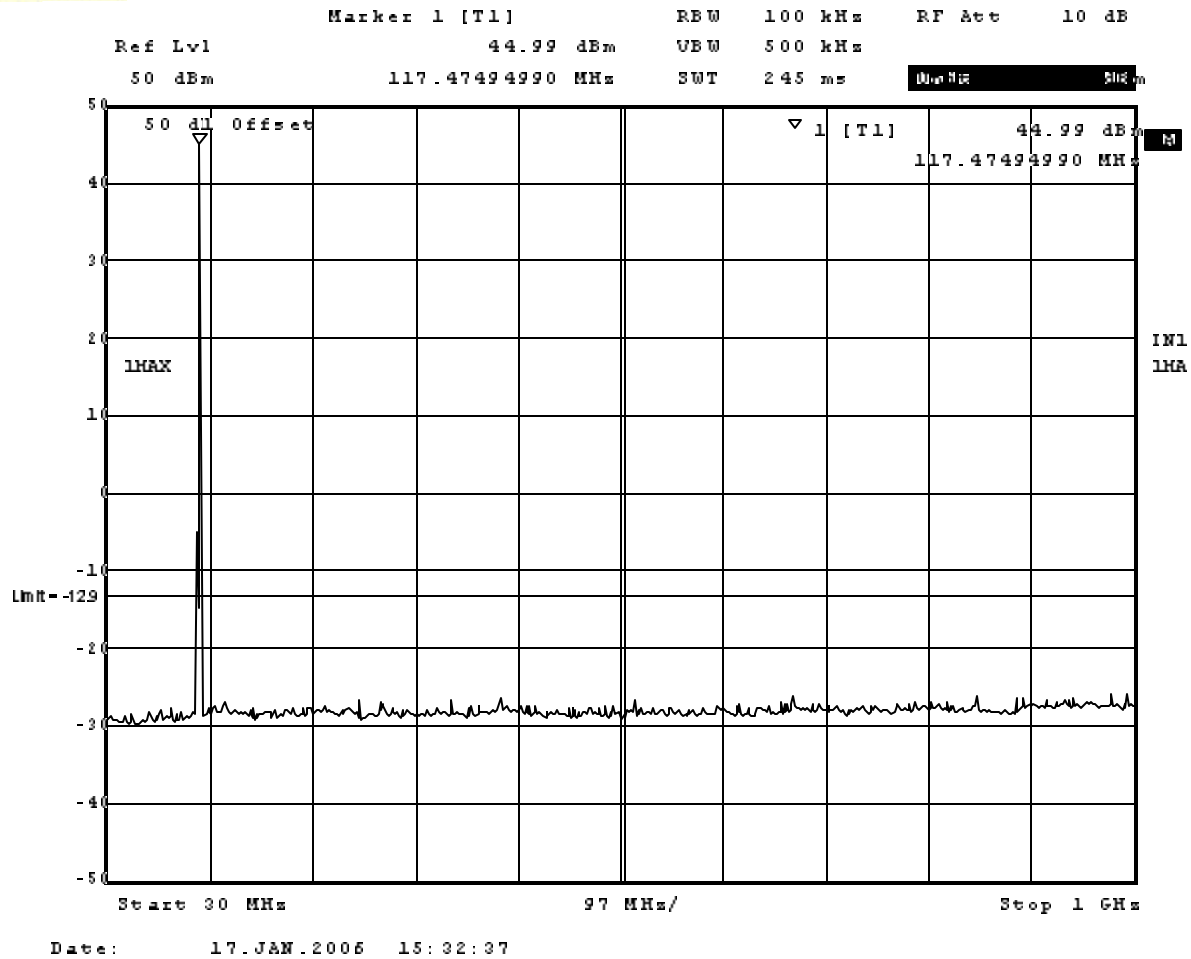


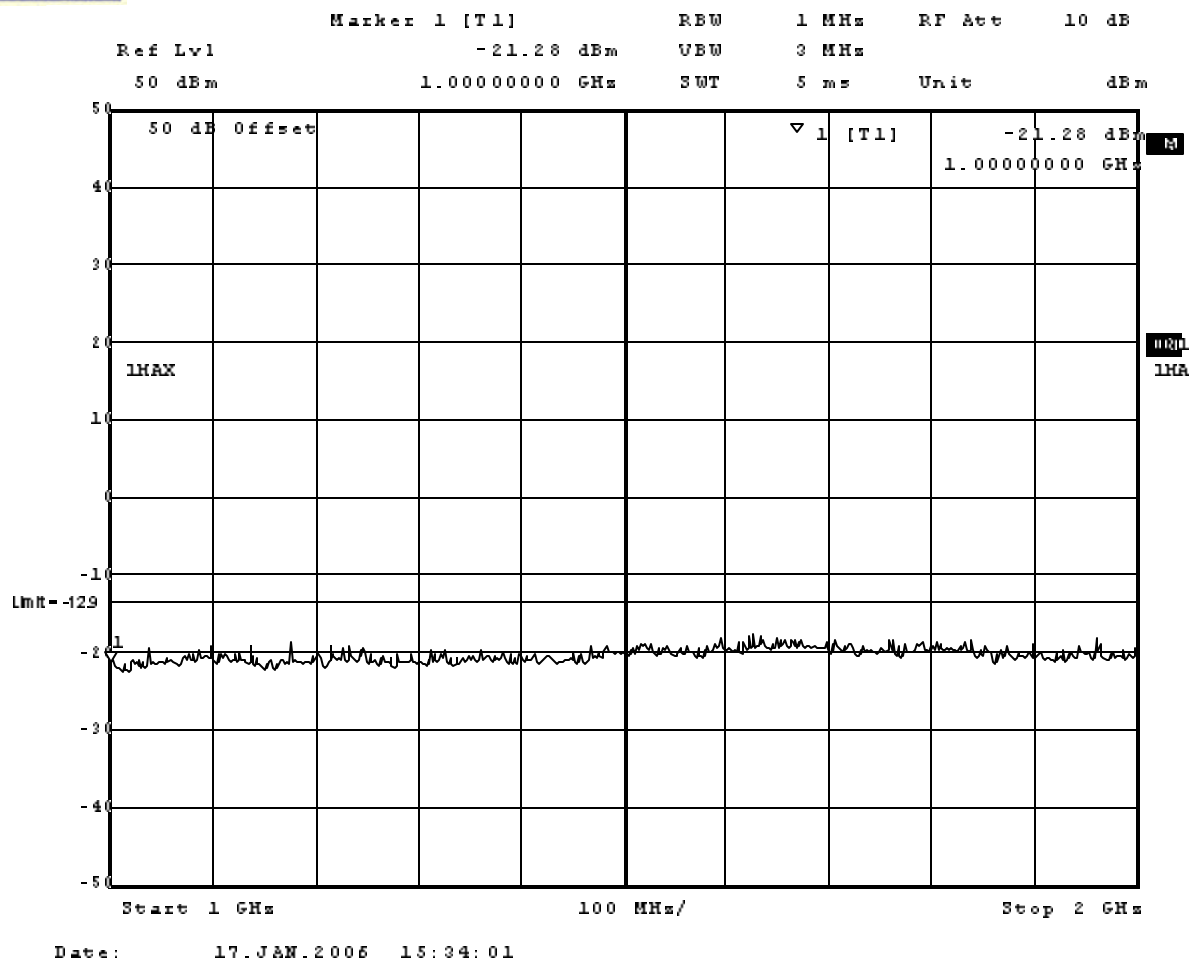


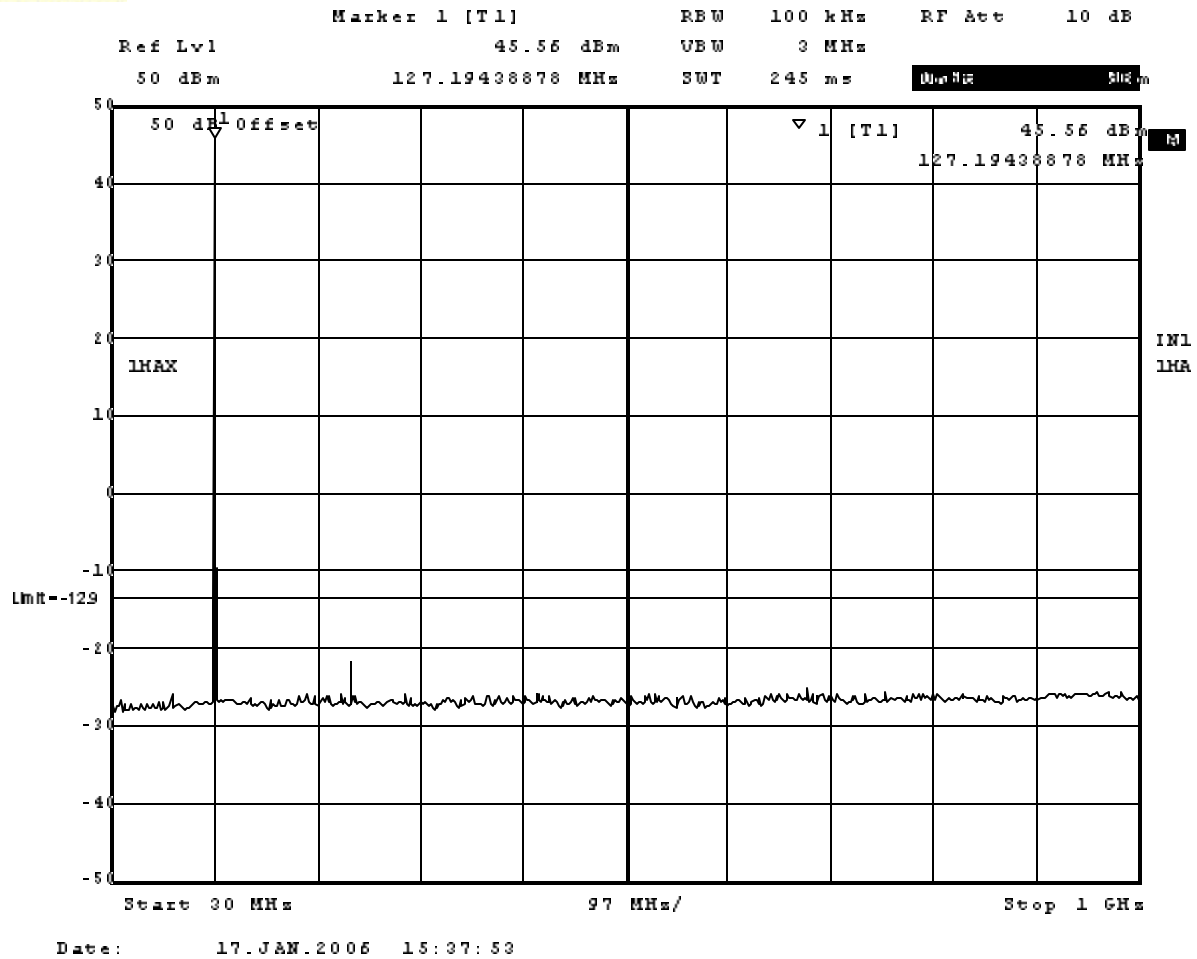


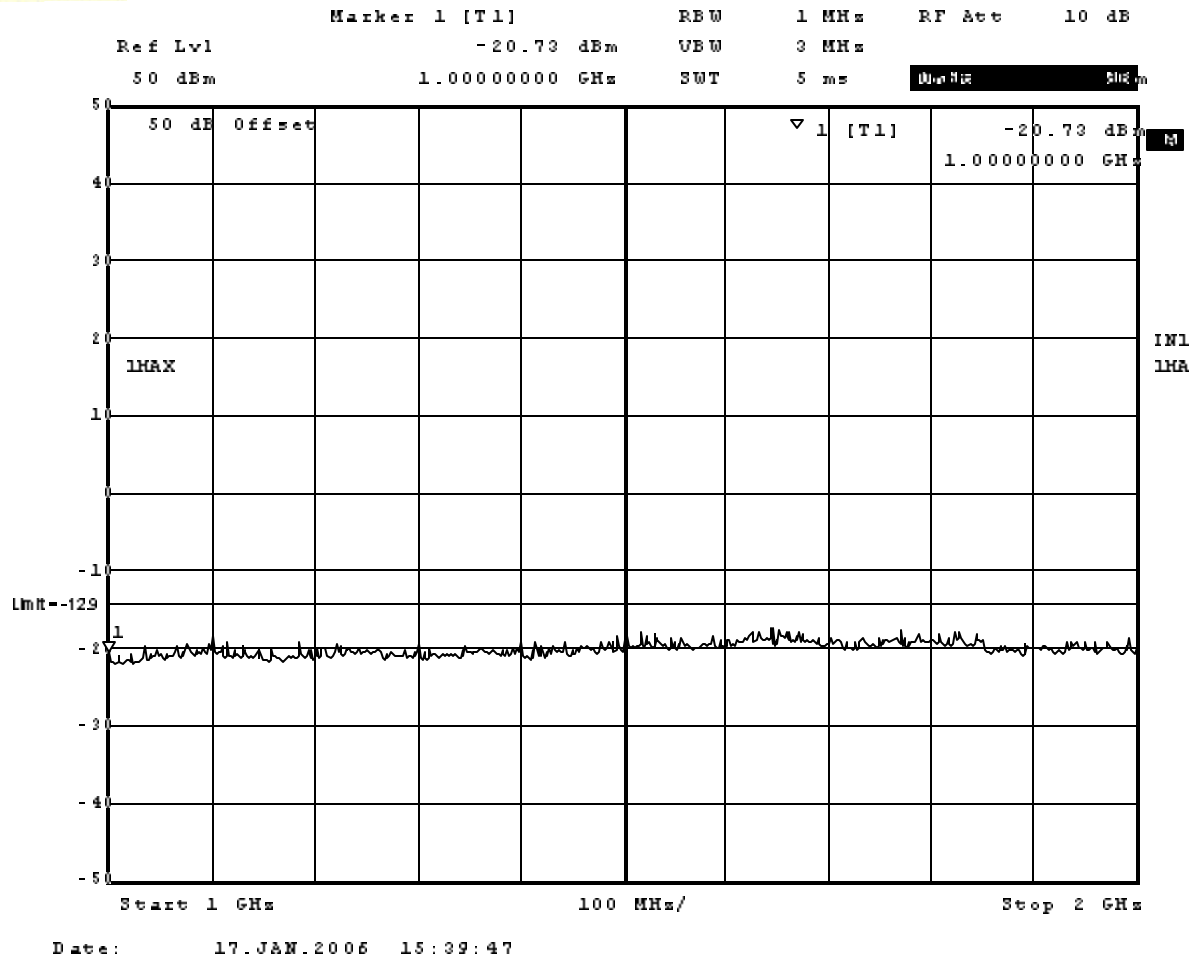


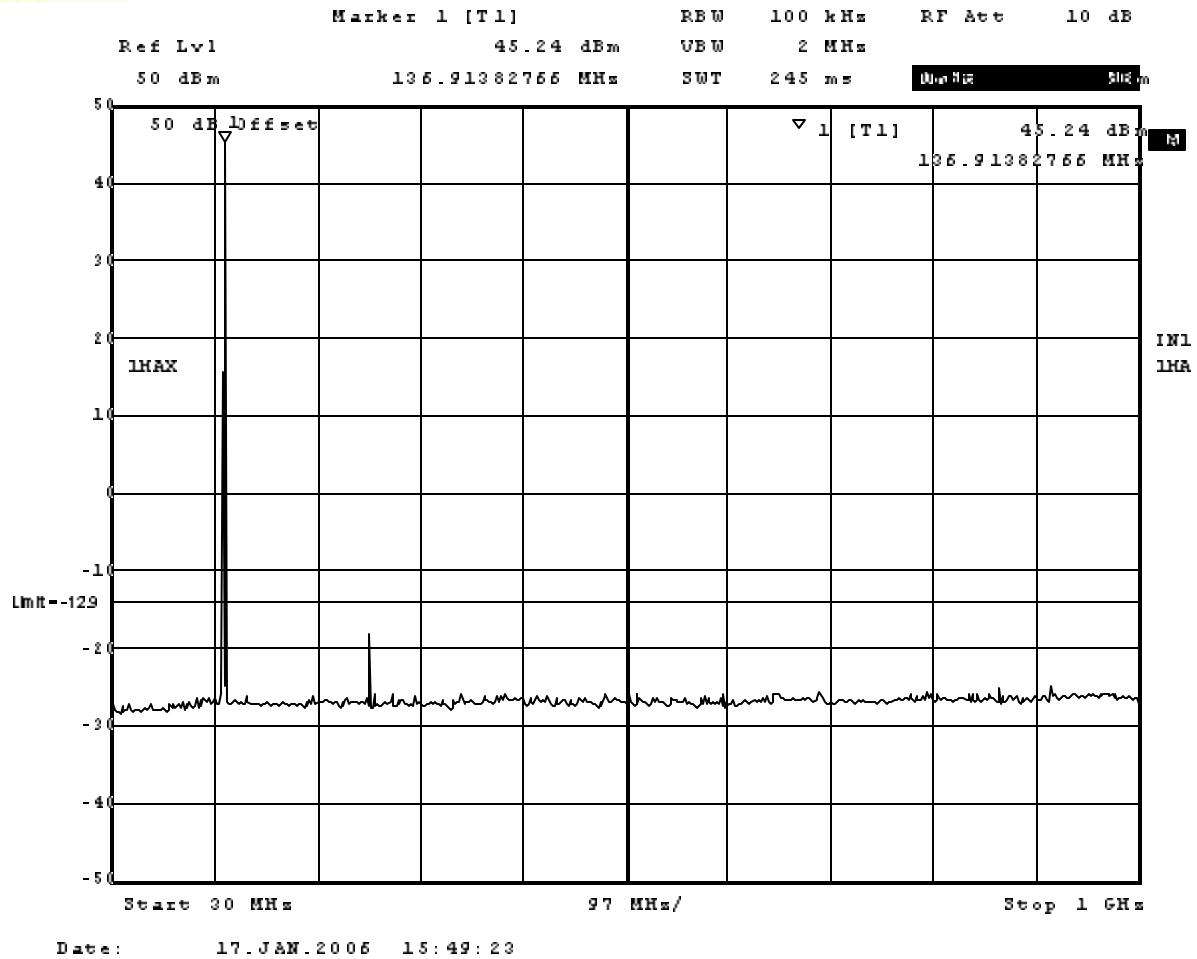


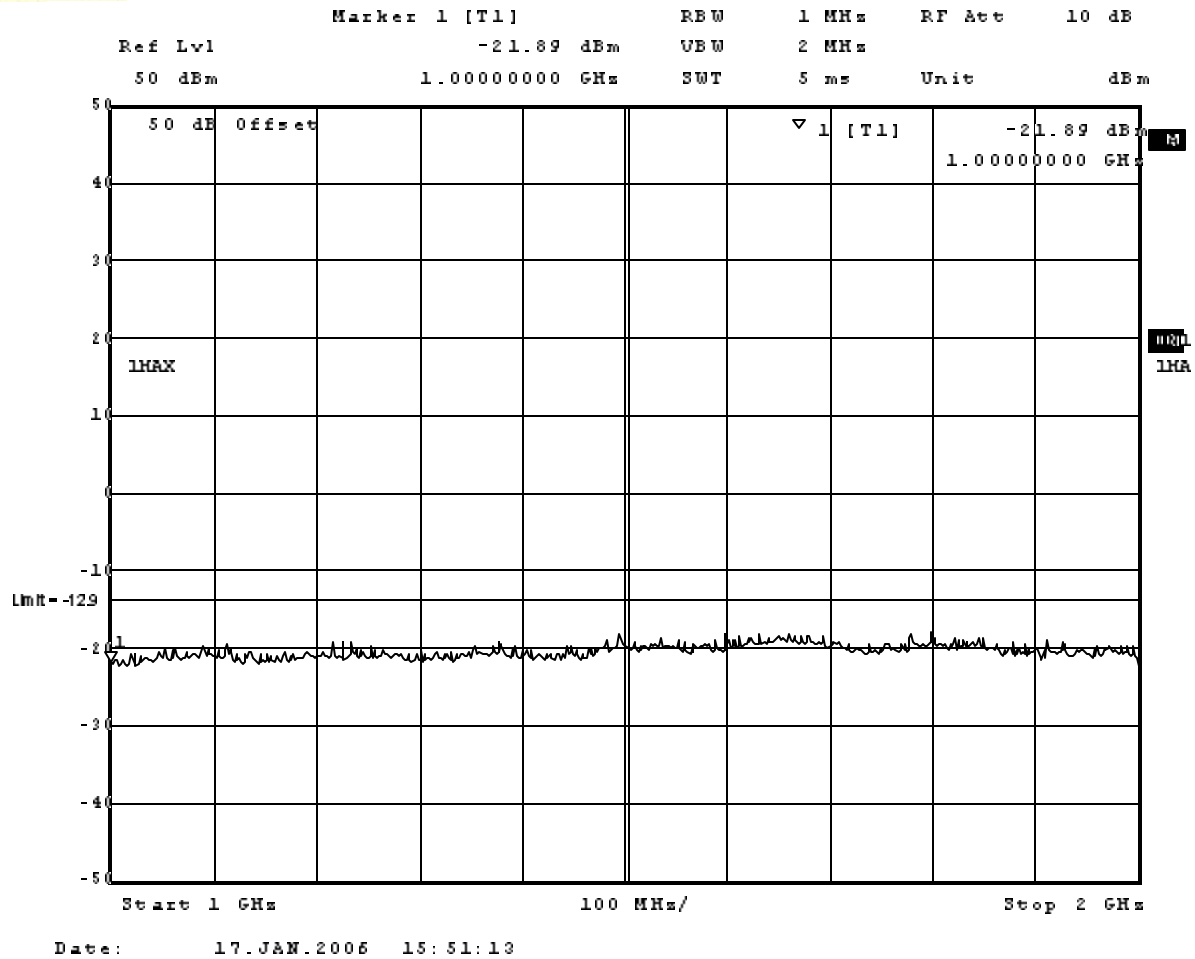


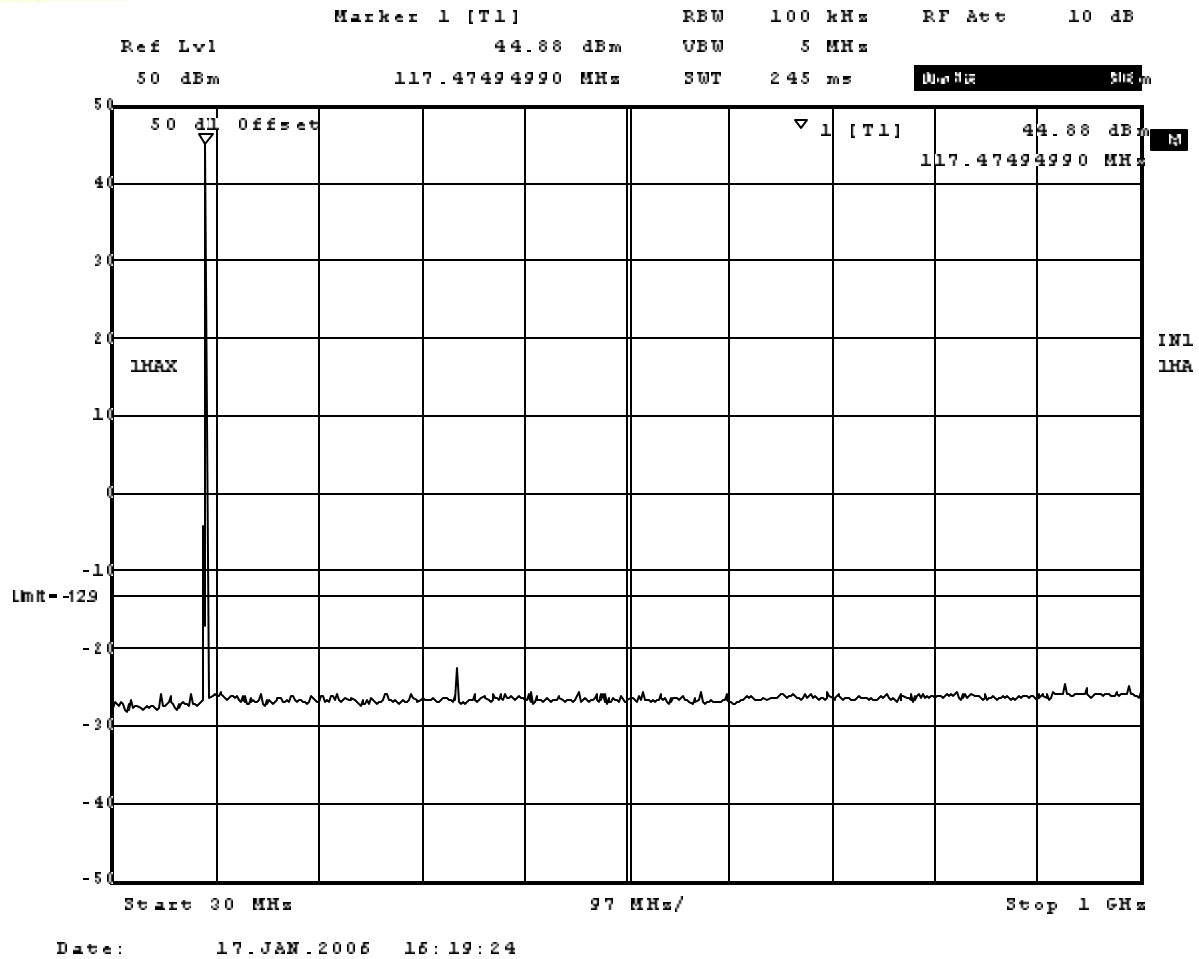


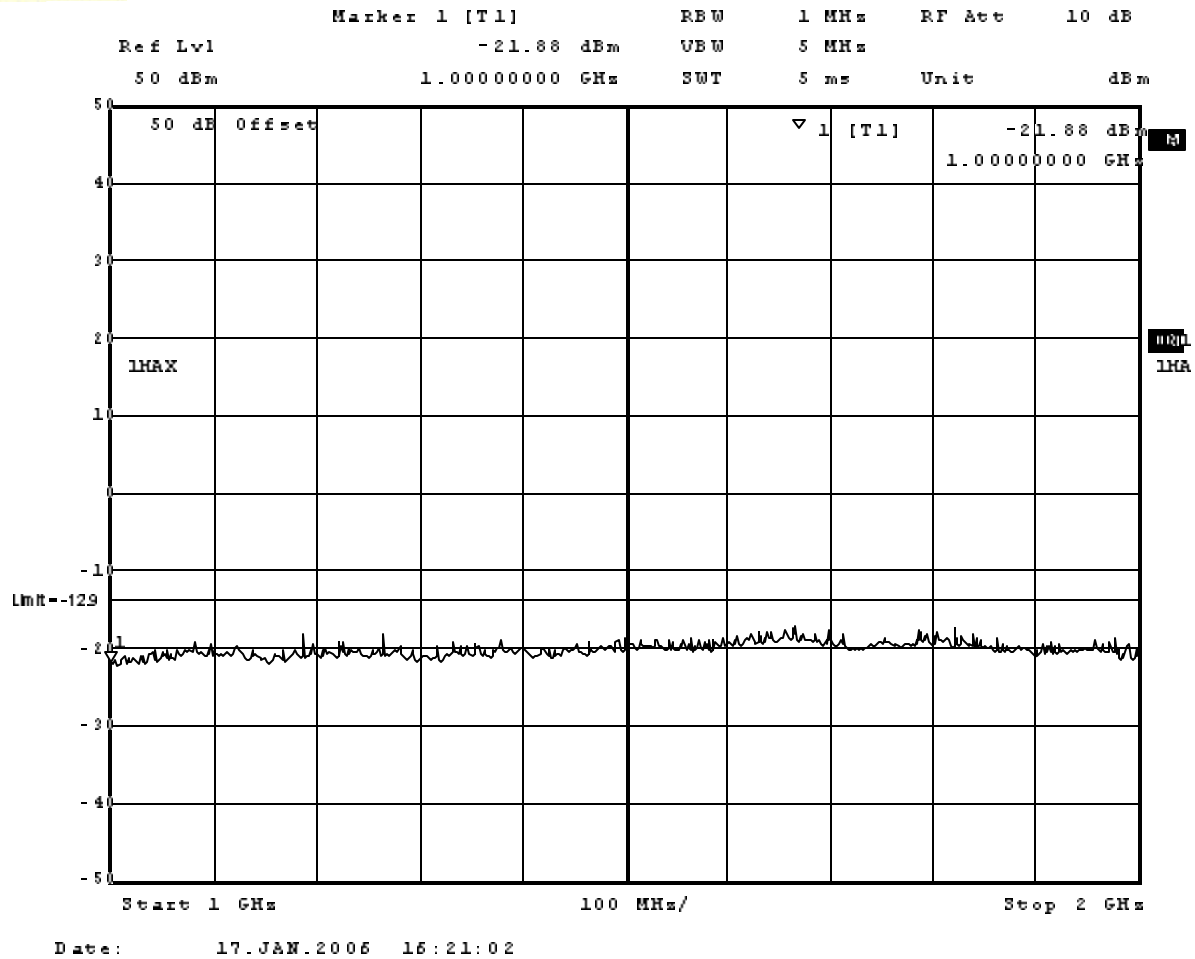


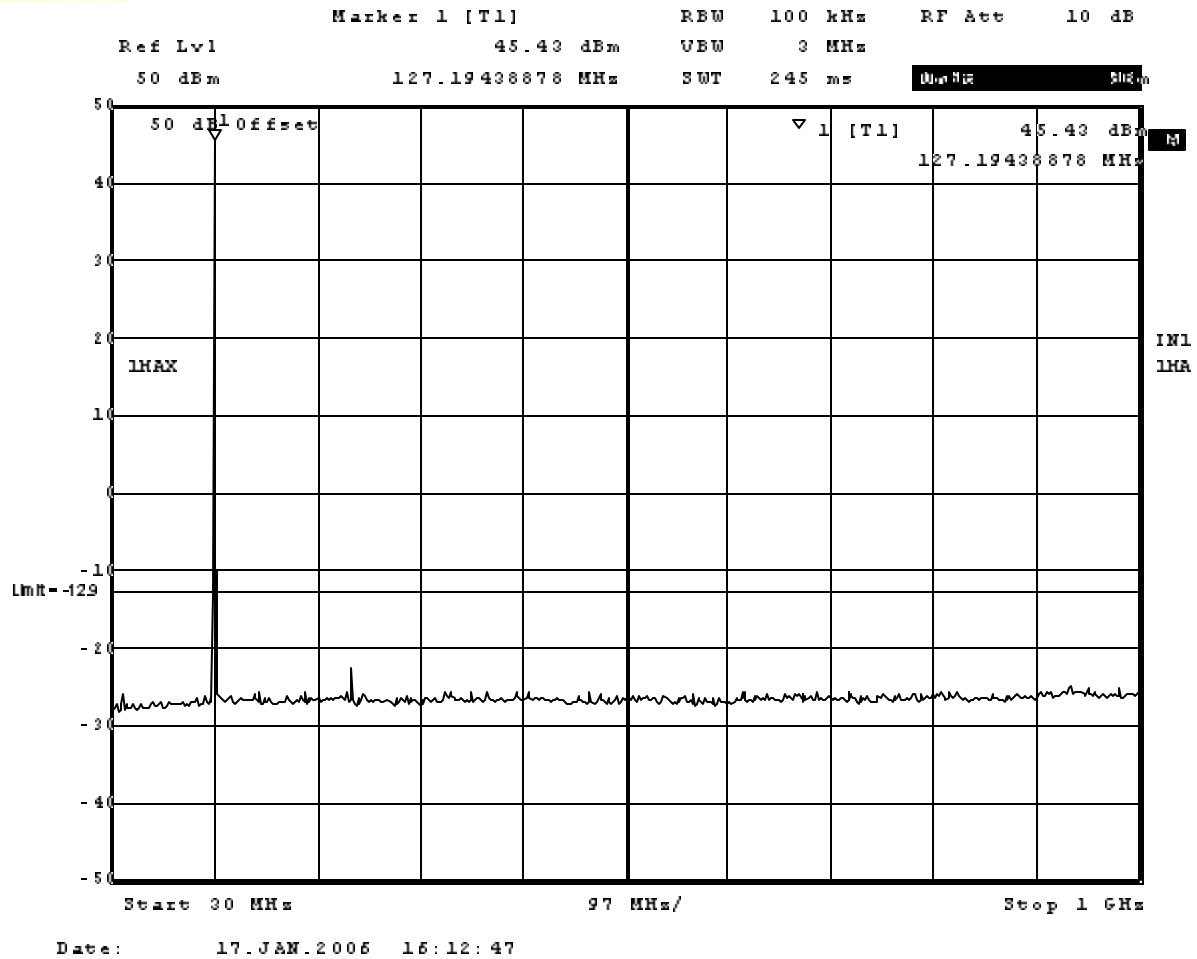


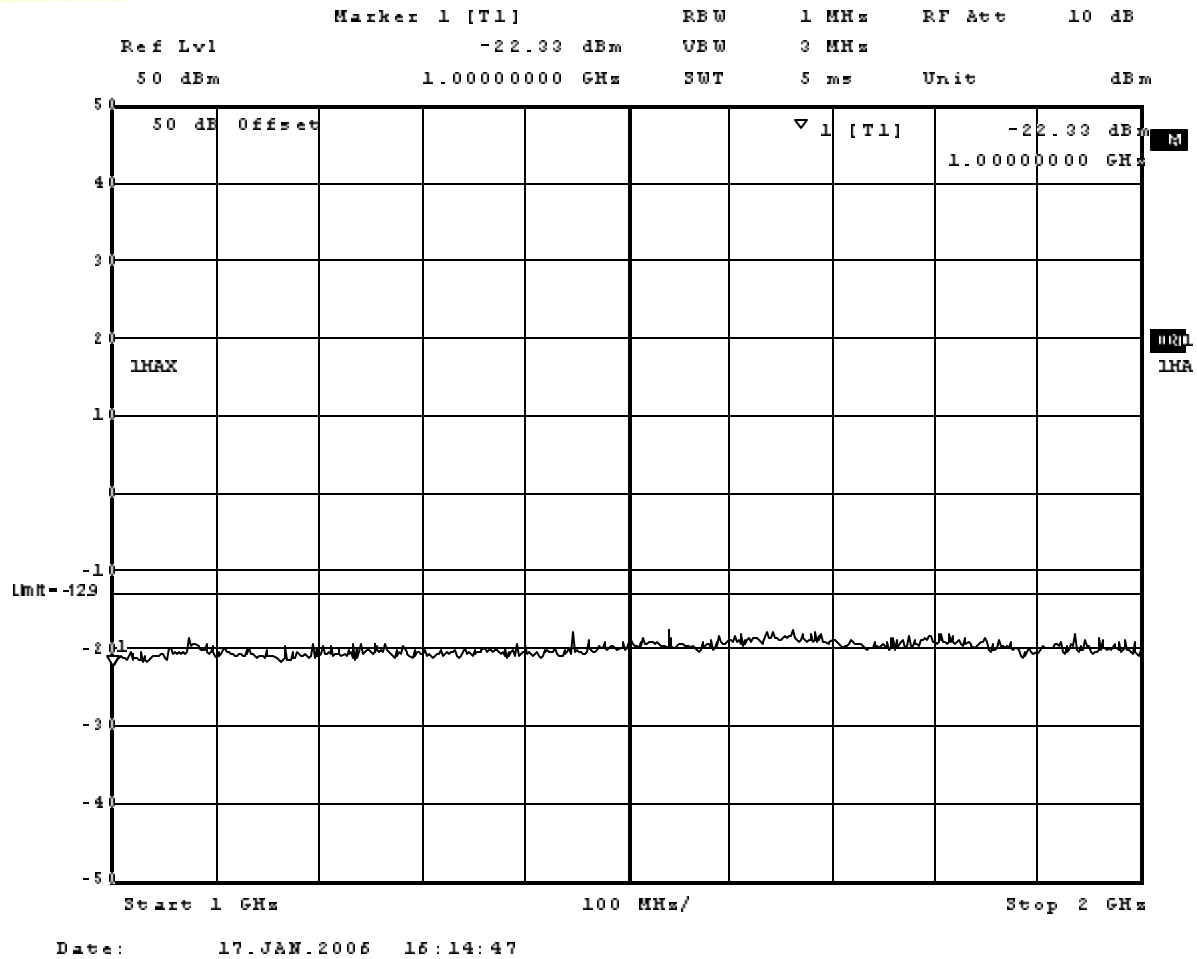


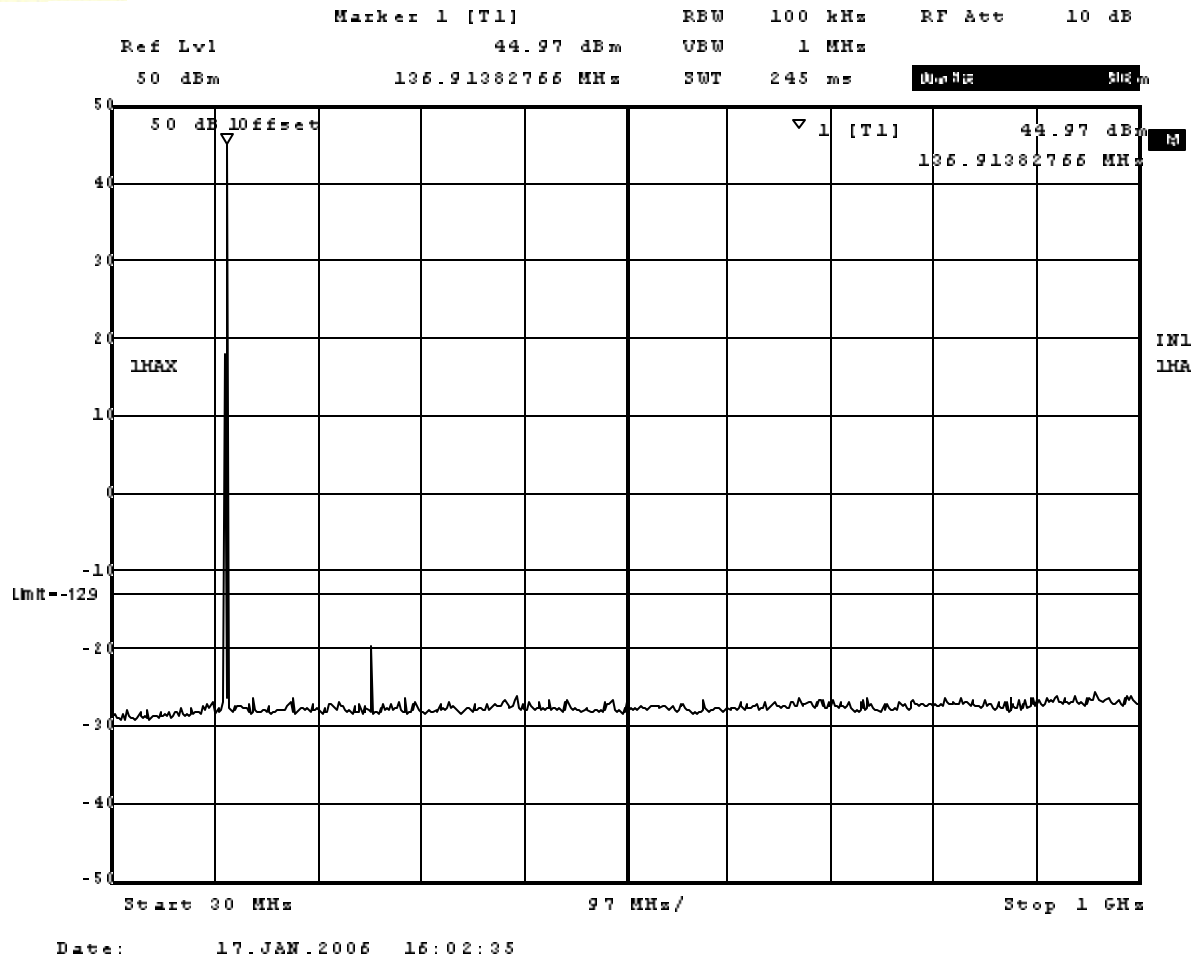


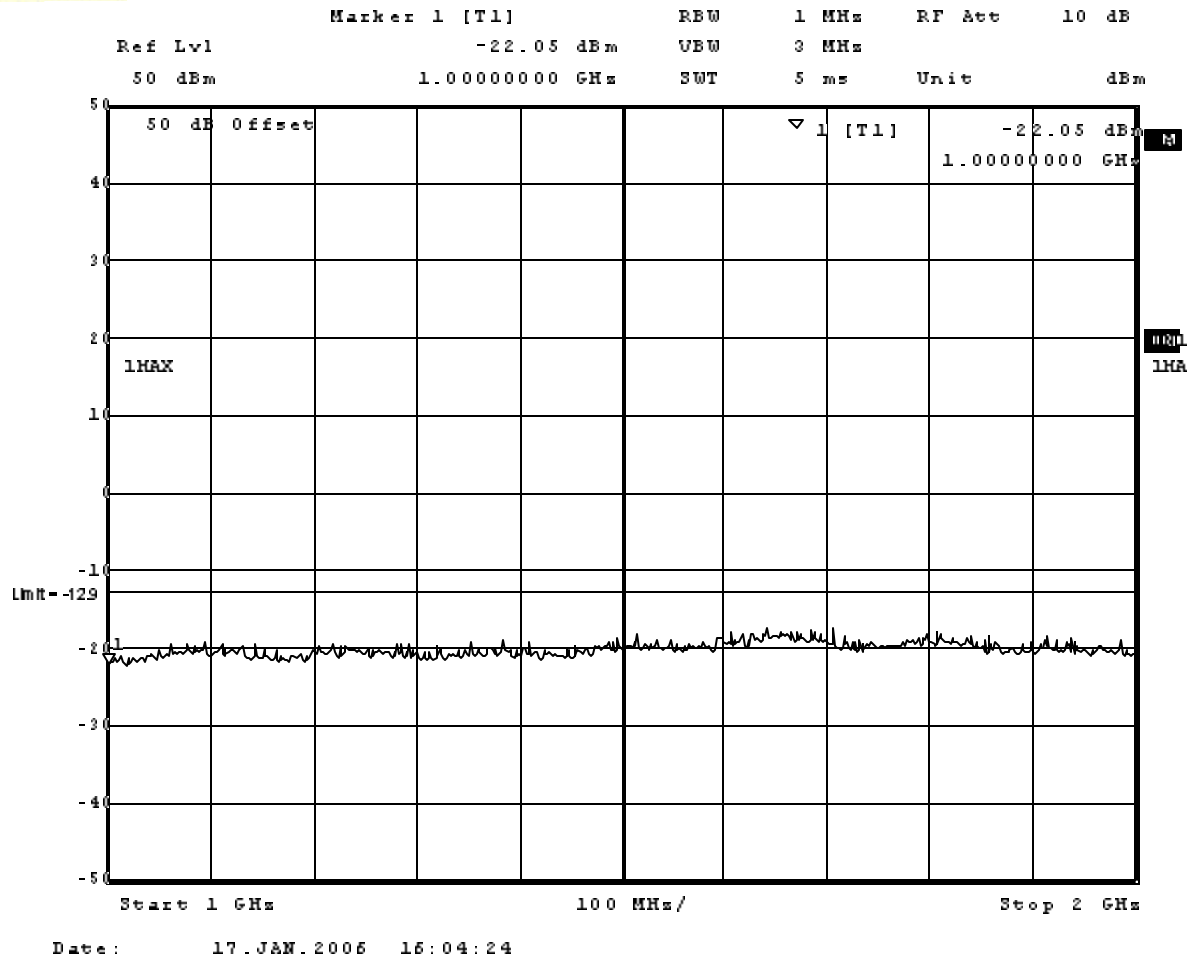


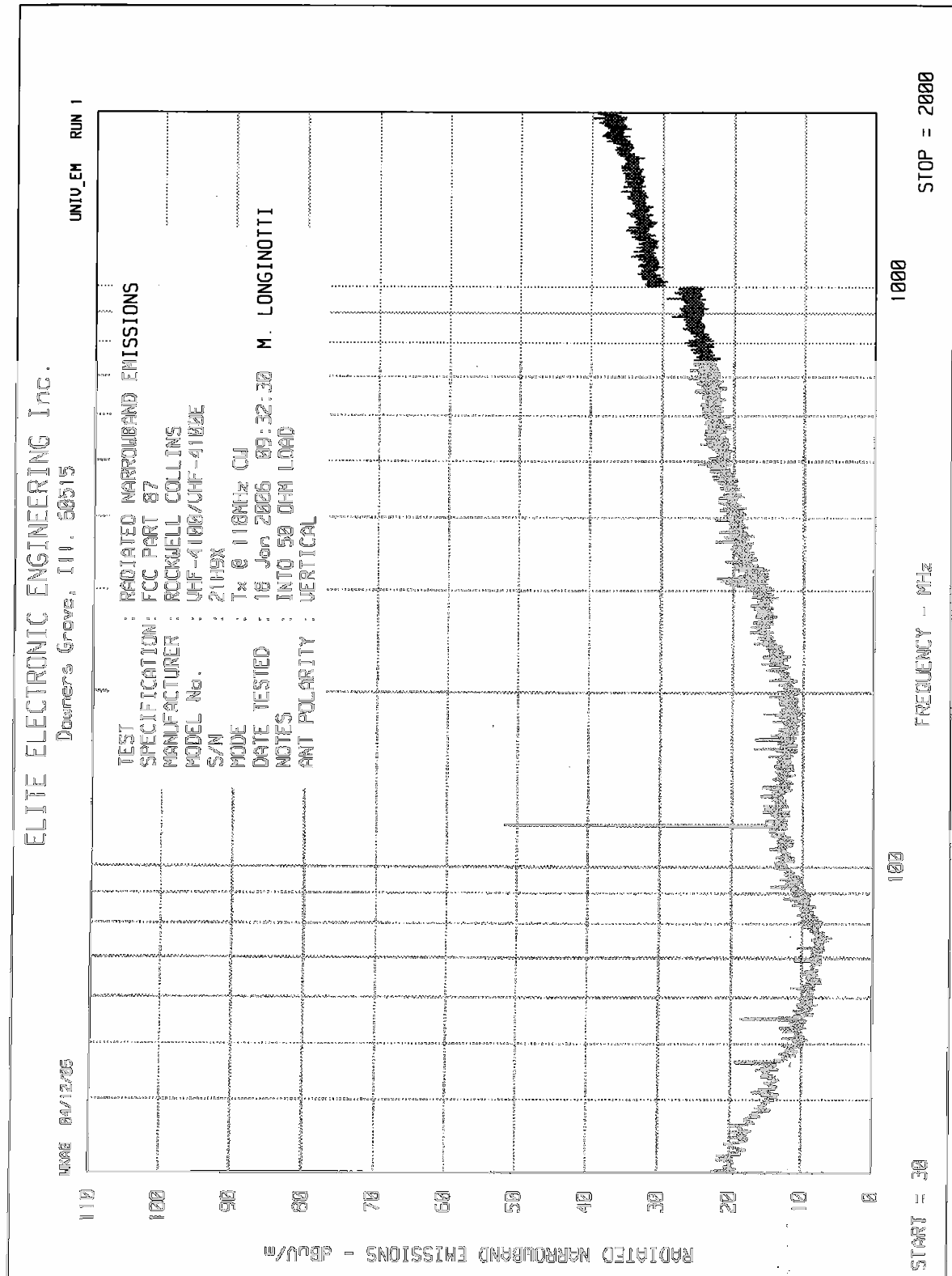


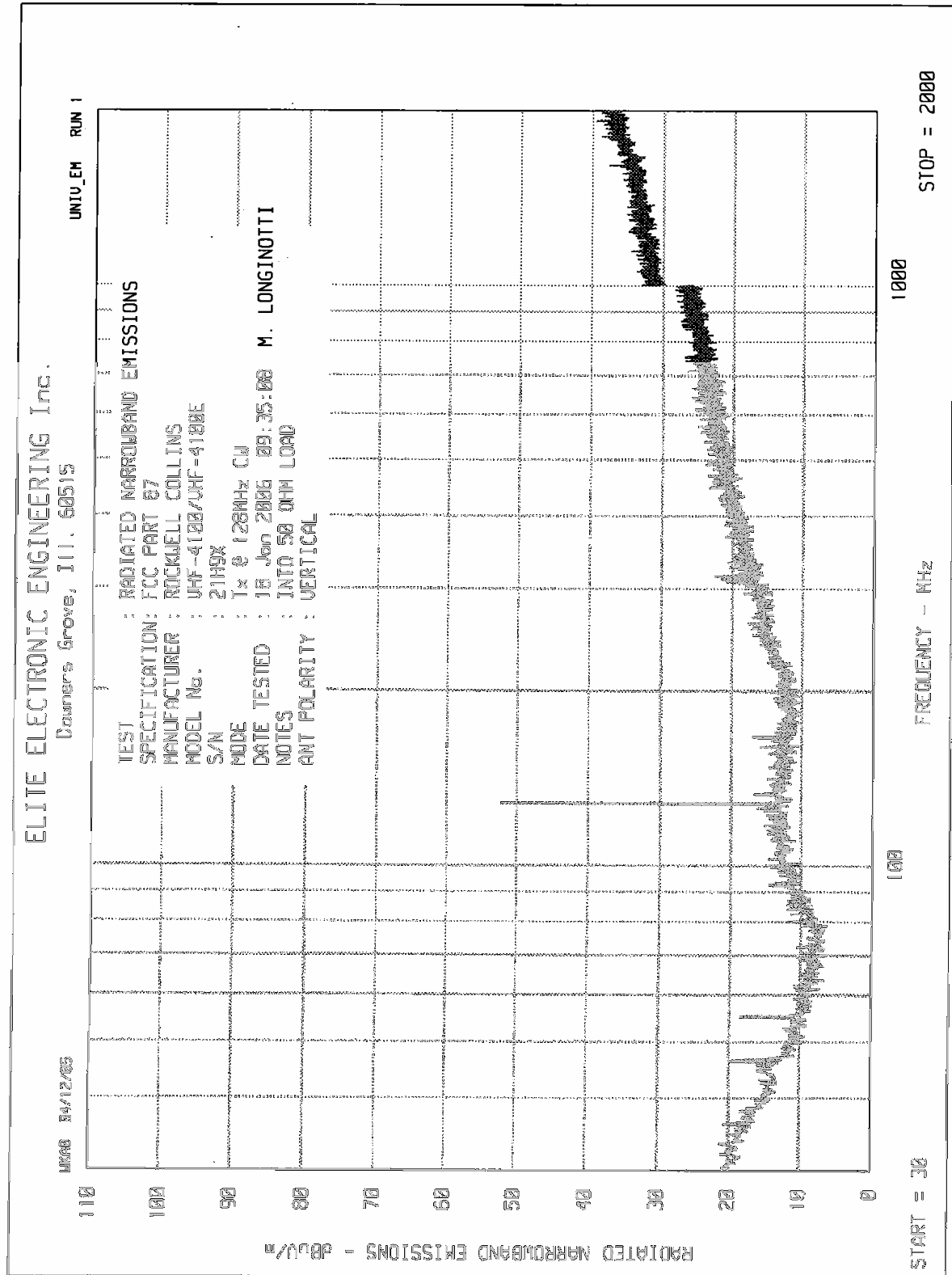


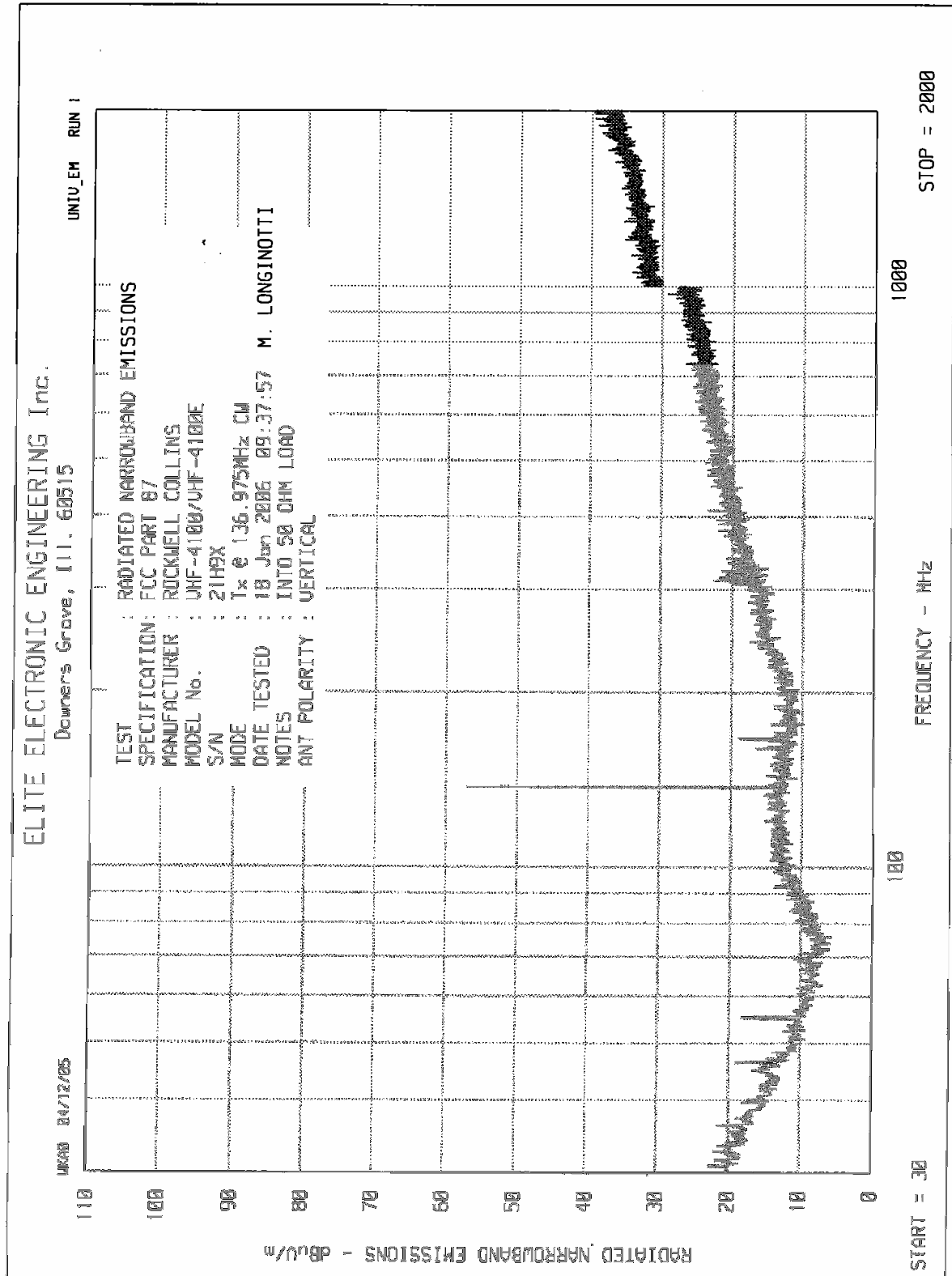


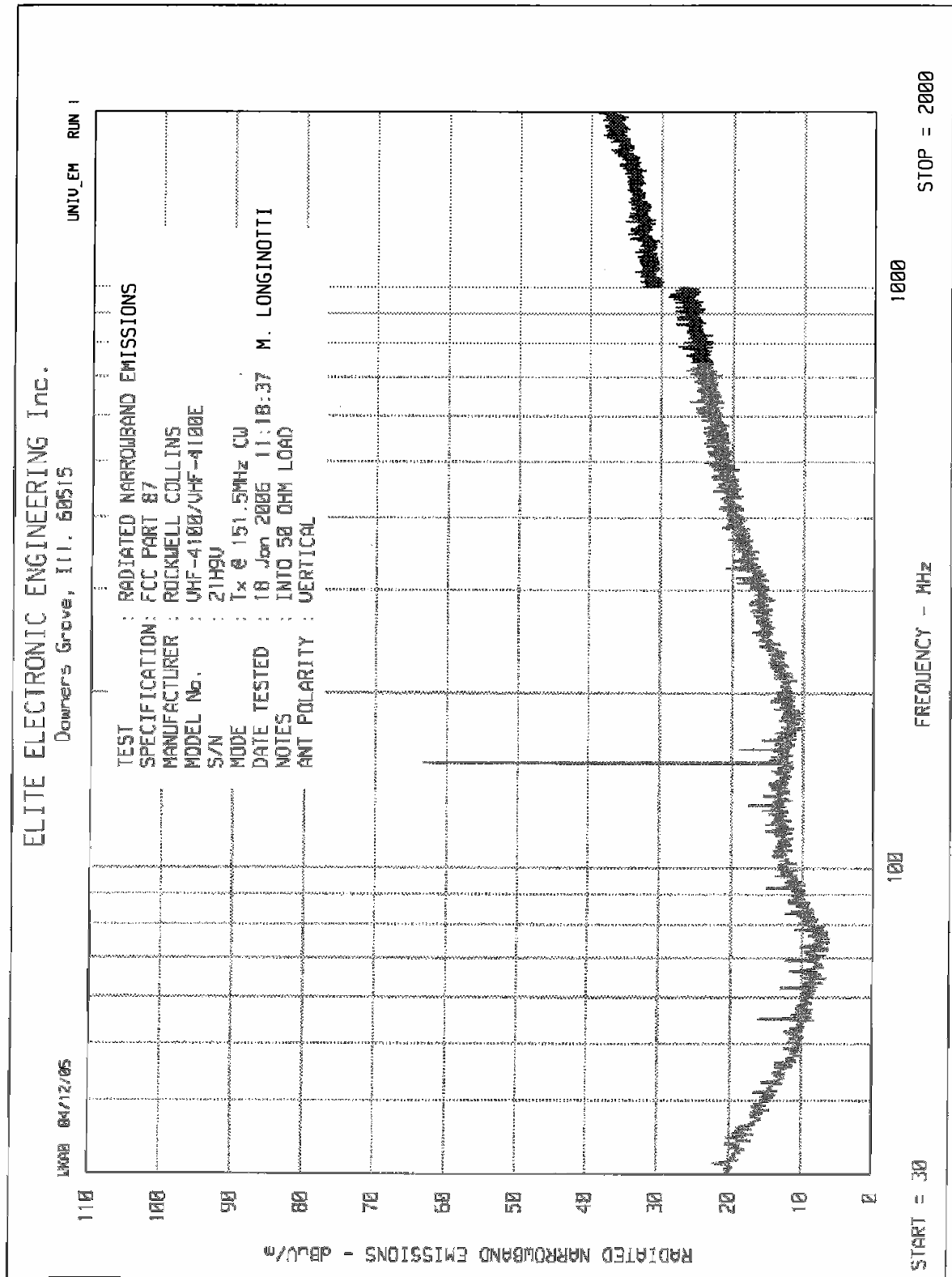














MANUFACTURER : Rockwell Collins
MODEL : VHF-4100/VHF-4100E
SERIAL NO. : 21H9X
SPECIFICATION : FCC Part 87 Spurious Radiated Emissions
DATE : January 18 and 19, 2006
NOTES : Transmit at 118MHz
: Test Distance is 3 meters

Frequency MHz	Antenna Polarity	Meter Reading dBuV	Ambient	Matched Signal dBm	Antenna Gain dB	Cable Loss dB	ERP dBm	Limit dBm
236	H	4.5	Ambient	-83.3	0.0	1.5	-84.8	-13.0
	V	3.3	Ambient	-76	0.0	1.5	-77.5	-13.0
354	H	4.9	Ambient	-78.1	0.0	1.6	-79.7	-13.0
	V	5.3	Ambient	-77.2	0.0	1.6	-78.8	-13.0
472	H	5.3	Ambient	-73.8	0.0	2	-75.8	-13.0
	V	5.9	Ambient	-73.5	0.0	2	-75.5	-13.0
590	H	4.8	Ambient	-72.8	0.0	2.3	-75.1	-13.0
	V	5.6	Ambient	-70.8	0.0	2.3	-73.1	-13.0
708	H	5	Ambient	-72.4	0.0	2.6	-75.0	-13.0
	V	4.7	Ambient	-71.6	0.0	2.6	-74.2	-13.0
826	H	4.7	Ambient	-71	0.0	2.8	-73.8	-13.0
	V	4.6	Ambient	-69.3	0.0	2.8	-72.1	-13.0
944	H	4.6	Ambient	-69	0.0	3	-72.0	-13.0
	V	4.4	Ambient	-65.4	0.0	3	-68.4	-13.0
1062	H	45.1	Ambient	-63.5	2.5	3.3	-64.3	-13.0
	V	46.1	Ambient	-62.5	2.5	3.3	-63.3	-13.0
1180	H	44.5	Ambient	-63.1	3.3	3.5	-63.3	-13.0
	V	45.2	Ambient	-62.8	3.3	3.5	-63.0	-13.0

ERP = matched signal + antenna gain - cable loss
limit = power (dBm) - (43+ 10*log(Power in watts))

Checked By: MARK E. LONGINOTTI



MANUFACTURER : Rockwell Collins
MODEL : VHF-4100/VHF-4100E
SERIAL NO. : 21H9X
SPECIFICATION : FCC Part 87 Spurious Radiated Emissions
DATE : January 18 and 19, 2006
NOTES : Transmit at 128MHz
: Test Distance is 3 meters

Frequency MHz	Antenna Polarity	Meter Reading dBuV	Ambient	Matched Signal dBm	Antenna Gain dB	Cable Loss dB	ERP dBm	Limit dBm
256	H	3	Ambient	-82.9	0.0	1.5	-84.4	-13.0
	V	4.4	Ambient	-73.7	0.0	1.5	-75.2	-13.0
384	H	5.4	Ambient	-75.7	0.0	1.7	-77.4	-13.0
	V	5	Ambient	-74.7	0.0	1.7	-76.4	-13.0
512	H	4.9	Ambient	-73.5	0.0	2.1	-75.6	-13.0
	V	4.7	Ambient	-73.9	0.0	2.1	-76.0	-13.0
640	H	5.4	Ambient	-71.8	0.0	2.4	-74.2	-13.0
	V	4.7	Ambient	-71.7	0.0	2.4	-74.1	-13.0
768	H	4.6	Ambient	-72.2	0.0	2.7	-74.9	-13.0
	V	4.6	Ambient	-70.4	0.0	2.7	-73.1	-13.0
896	H	4.9	Ambient	-70	0.0	3	-73.0	-13.0
	V	4.9	Ambient	-66.7	0.0	3	-69.7	-13.0
1024	H	44.9	Ambient	-63.2	2.3	3.2	-64.1	-13.0
	V	44.6	Ambient	-64.8	2.3	3.2	-65.7	-13.0
1152	H	45.5	Ambient	-62.6	3.0	3.5	-63.1	-13.0
	V	46	Ambient	-62.6	3.0	3.5	-63.1	-13.0
1280	H	44.3	Ambient	-61.4	3.8	3.7	-61.3	-13.0
	V	44.4	Ambient	-63.5	3.8	3.7	-63.4	-13.0

ERP = matched signal + antenna gain - cable loss
limit = power (dBm) - (43+ 10*log(Power in watts))

Checked By: MARK E. LONGINOTTI



MANUFACTURER : Rockwell Collins
MODEL : VHF-4100/VHF-4100E
SERIAL NO. : 21H9X
SPECIFICATION : FCC Part 87 Spurious Radiated Emissions
DATE : January 18 and 19, 2006
NOTES : Transmit at 136.975MHz
: Test Distance is 3 meters

Frequency MHz	Antenna Polarity	Meter Reading dBuV	Ambient	Matched Signal dBm	Antenna Gain dB	Cable Loss dB	ERP dBm	Limit dBm
273.95	H	4.9	Ambient	-80.4	0.0	1.5	-81.9	-13.0
	V	3.4	Ambient	-77.6	0.0	1.5	-79.1	-13.0
410.925	H	6.9	Ambient	-72.1	0.0	1.7	-73.8	-13.0
	V	6.8	Ambient	-72.2	0.0	1.7	-73.9	-13.0
547.9	H	4.4	Ambient	-73.1	0.0	2.2	-75.3	-13.0
	V	4.7	Ambient	-74.1	0.0	2.2	-76.3	-13.0
684.875	H	5.1	Ambient	-71.5	0.0	2.5	-74.0	-13.0
	V	5	Ambient	-69.8	0.0	2.5	-72.3	-13.0
821.85	H	4.8	Ambient	-70.4	0.0	2.8	-73.2	-13.0
	V	3.4	Ambient	-70.9	0.0	2.8	-73.7	-13.0
958.825	H	5.1	Ambient	-69.1	0.0	3.1	-72.2	-13.0
	V	4.6	Ambient	-66.9	0.0	3.1	-70.0	-13.0
1095.8	H	44.7	Ambient	-63.9	2.7	3.3	-64.5	-13.0
	V	45	Ambient	-63.6	2.7	3.3	-64.2	-13.0
1232.775	H	45.3	Ambient	-62.3	3.5	3.6	-62.4	-13.0
	V	45.2	Ambient	-63.7	3.5	3.6	-63.8	-13.0
1369.75	H	44.8	Ambient	-63.3	4.3	3.9	-62.9	-13.0
	V	44.5	Ambient	-63.7	4.3	3.9	-63.3	-13.0

ERP = matched signal + antenna gain - cable loss
limit = power (dBm) - (43+ 10*log(Power in watts))

Checked By: MARK E. LONGINOTTI



MANUFACTURER : Rockwell Collins
MODEL : VHF-4100/VHF-4100E
SERIAL NO. : 21H9V
SPECIFICATION : FCC Part 87 Spurious Radiated Emissions
DATE : January 18 and 19, 2006
NOTES : Transmit at 151.5MHz
: Test Distance is 3 meters

Frequency MHz	Antenna Polarity	Meter Reading dBuV	Ambient	Matched Signal dBm	Antenna Gain dB	Cable Loss dB	ERP dBm	Limit dBm
303	H	4.3	Ambient	-80.3	0.0	1.6	-81.9	-13.0
	V	4.3	Ambient	-76.1	0.0	1.6	-77.7	-13.0
454.5	H	4.9	Ambient	-69.6	0.0	1.9	-71.5	-13.0
	V	5.3	Ambient	-73.8	0.0	1.9	-75.7	-13.0
606	H	5.2	Ambient	-72.6	0.0	2.3	-74.9	-13.0
	V	5.5	Ambient	-71.8	0.0	2.3	-74.1	-13.0
757.5	H	5.2	Ambient	-71.9	0.0	2.7	-74.6	-13.0
	V	4.9	Ambient	-66.5	0.0	2.7	-69.2	-13.0
909	H	5.4	Ambient	-68.6	0.0	3	-71.6	-13.0
	V	4.4	Ambient	-67.5	0.0	3	-70.5	-13.0
1060.5	H	46	Ambient	-62.7	2.5	3.3	-63.5	-13.0
	V	45.9	Ambient	-63.4	2.5	3.3	-64.2	-13.0
1212	H	44.8	Ambient	-62.7	3.4	3.6	-62.9	-13.0
	V	46	Ambient	-62.2	3.4	3.6	-62.4	-13.0
1363.5	H	44.5	Ambient	-63.6	4.2	3.8	-63.2	-13.0
	V	44.9	Ambient	-63.6	4.2	3.8	-63.2	-13.0
1515	H	44.3	Ambient	-63.9	4.8	4.1	-63.2	-13.0
	V	44.5	Ambient	-62.9	4.8	4.1	-62.2	-13.0

ERP = matched signal + antenna gain - cable loss
limit = power (dBm) - (43+ 10*log(Power in watts))

Checked By: MARK E. LONGINOTTI



MANUFACTURER : Rockwell Collins
MODEL : VHF-4100/VHF-4100E
SERIAL NO. : 21H9X
SPECIFICATION : FCC Part 87 Frequency Stability vs. Temperature
DATE : January 19 and 20, 2006
NOTES : Transmit at 136.975MHz, CW

Temperature °C	Measured Frequency MHz	Frequency Error Hz	Limit Hz
+27	136.975029	29	4109
-20	136.975025	25	4109
-10	136.975030	30	4109
0	136.975050	50	4109
+10	136.975054	54	4109
+20	136.975035	35	4109
+30	136.974978	22	4109
+40	136.974979	21	4109
+50	136.974926	74	4109

Limit = 30ppm = 136,975,000Hz * 30ppm = 4109Hz

Checked By: MARK E. LONGINOTTI



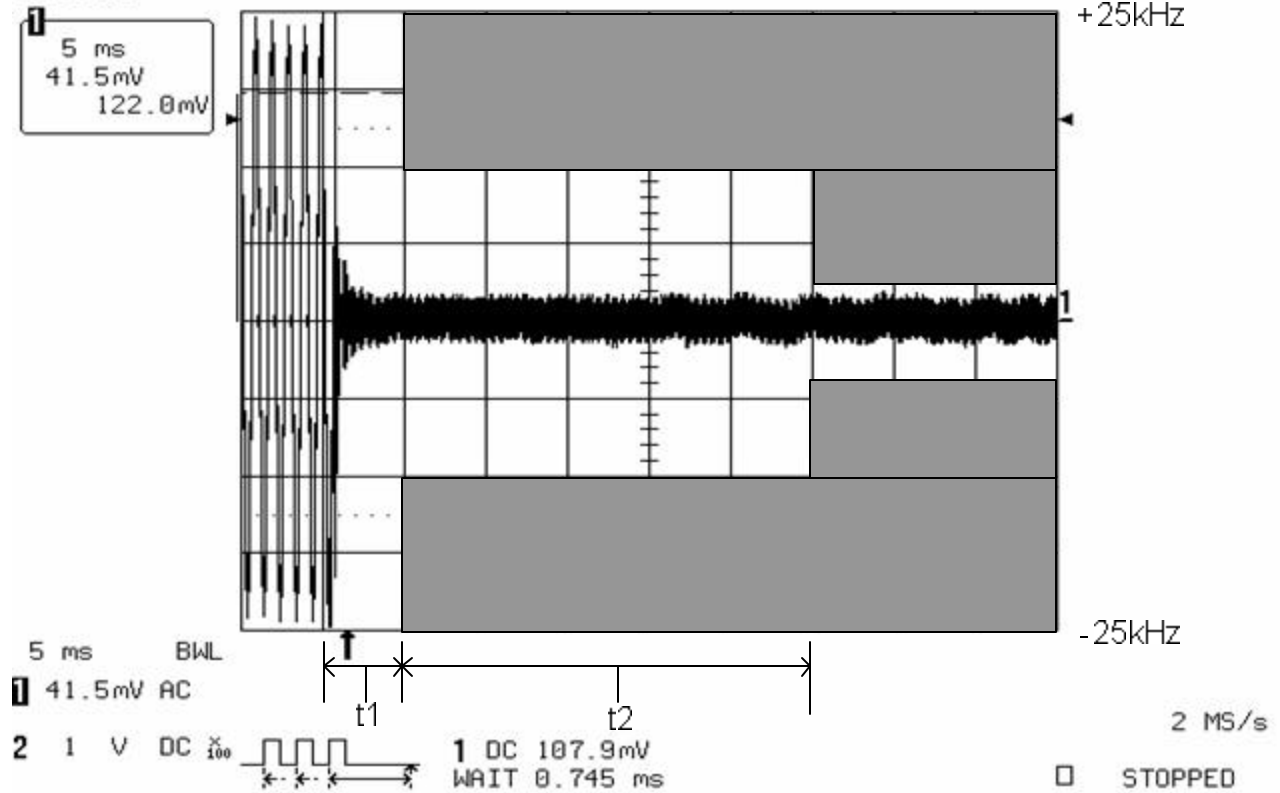
MANUFACTURER : Rockwell Collins
MODEL : VHF-4100/VHF-4100E
SERIAL NO. : 21H9X
SPECIFICATION : FCC Part 87 Frequency Stability vs. Voltage
DATE : January 20, 2006
NOTES : Transmit at 136.975MHz, CW

Supply Voltage VDC	Measured Frequency MHz	Frequency Error Hz	Limit Hz
23.38 (85%)	136.975048	48	4109
27.5	136.975043	43	4109
31.63 (115%)	136.975046	46	4109

Limit = 30ppm = 136,975,000Hz * 30ppm = 4109Hz

Checked By: MARK E. LONGINOTTI

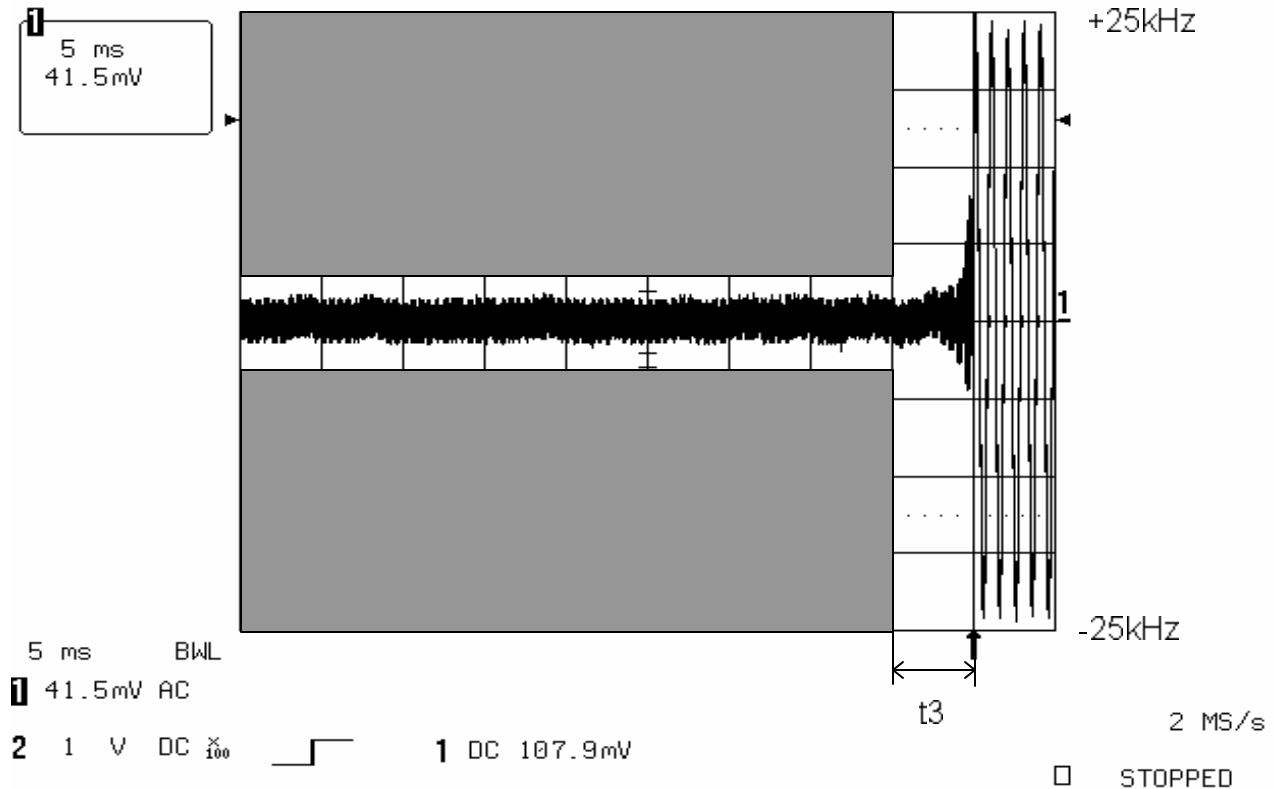
20-Jan-06
11:00:00



MANUFACTURER	: Rockwell Collins
MODEL NUMBER	: VHF-4100/VHF-4100E
SERIAL NO.	: 21H9X
TEST	: Transient Frequency Behavior, On
TEST MODE	: Tx @ 118MHz, 25kHz channel spacing
TEST	: Transmit on Time, t1= 5ms, t2=20ms
EQUIPMENT USED	: MSQ1,GRD0,RYE0,T2DA,T2E0



20-Jan-06
11:07:19



Transient Frequency Behavior

MANUFACTURER : Rockwell Collins
MODEL NUMBER : VHF-4100/VHF-4100E
SERIAL NO. : 21H9X
TEST : Transient Frequency Behavior, Off
TEST MODE : Tx @ 118MHz, 25kHz channel spacing
TEST : Transmit off Time, t3=5ms
EQUIPMENT USED : MSQ1,GRD0,RYE0,T2DA,T2E0