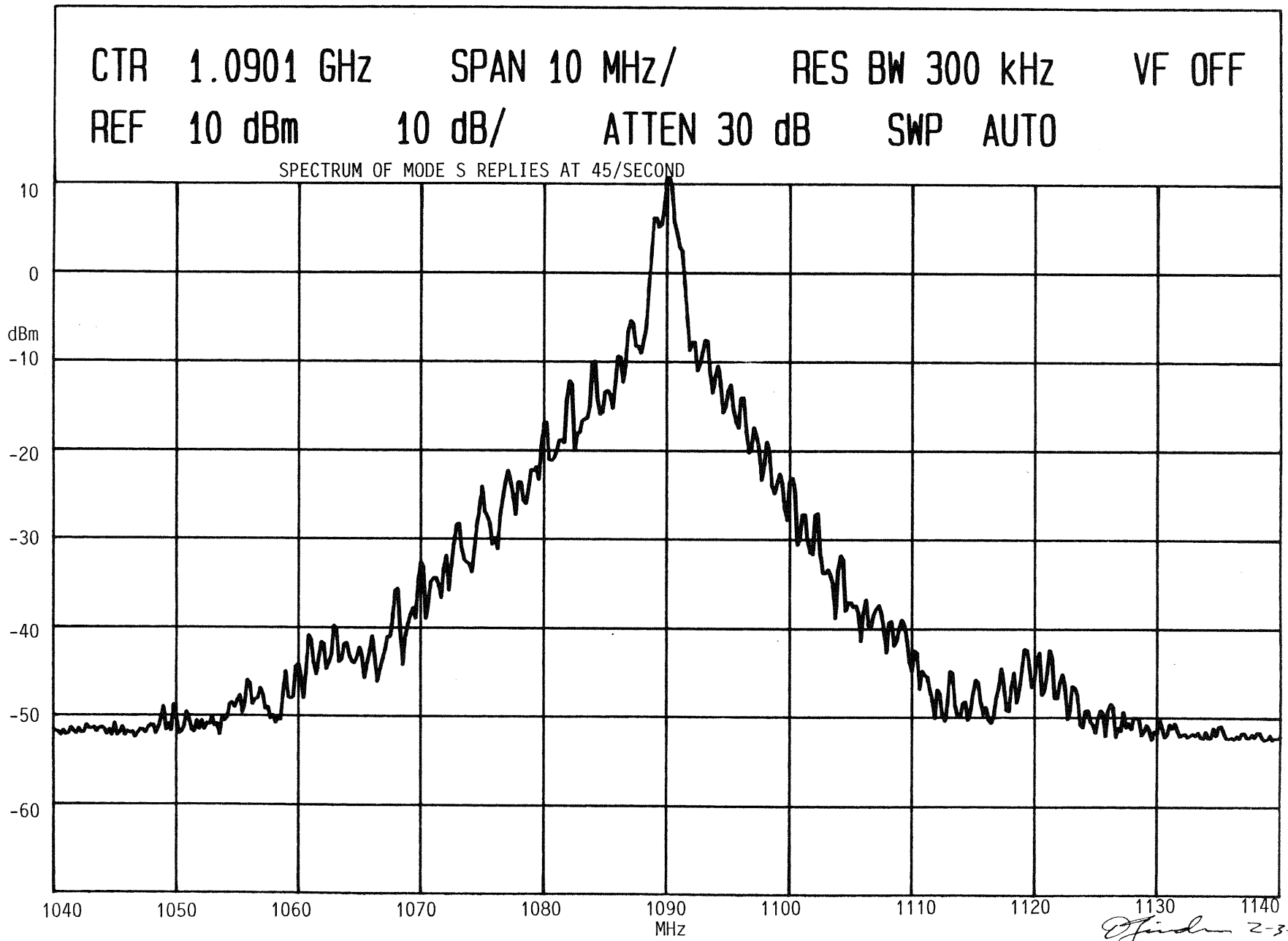
TRANSPONDER OUTPUT



2-3-89

SPURIOUS EMISSIONS

1.	Narrowband Radiated Interference	10 kHz to 1 GHz
2.	Broadband Radiated Interference	10 kHz to 1 GHz
3.	Narrowband Radiated Interference	1 GHz to 1.5 GHz
4.	Broadband Radiated Interference	1 kHz to 1.5 GHz
5.	Transponder Output at Antenna	0.01 GHz to 1.82 GHz
6.	Transponder Output at Antenna	2 GHz to 4 GHz
7.	Transponder Output at Antenna	3.7 GHz to 8.5 GHz
8.	Transponder Output at Antenna	6.5 GHz to 11.5 GHz

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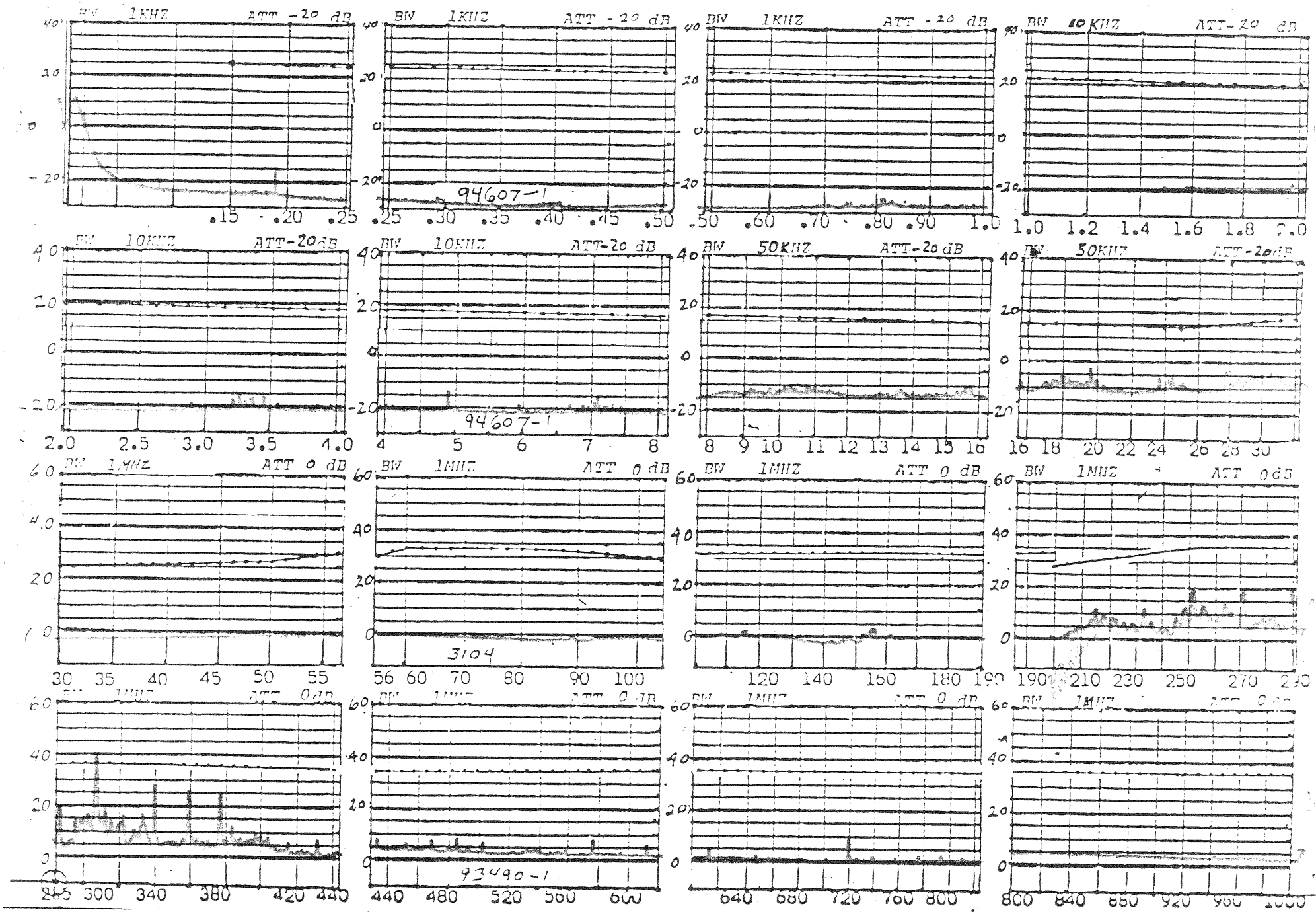
NARROWBAND RADIATED INTERFERENCE RTCA DO-160B CAT. A/L

PRODUCT Mode 5 TEST #: _____ TECH. _____ GRAPH #: L-9

DETECTOR: FIELD INTENSITY Date: _____ RESPONSIBLE ENGINEER _____

SCAN SPEED: 5 MIN/BAND SPEC. LIMITS ARE CORRECTED FOR ANTENNA FACTOR

REMARKS:



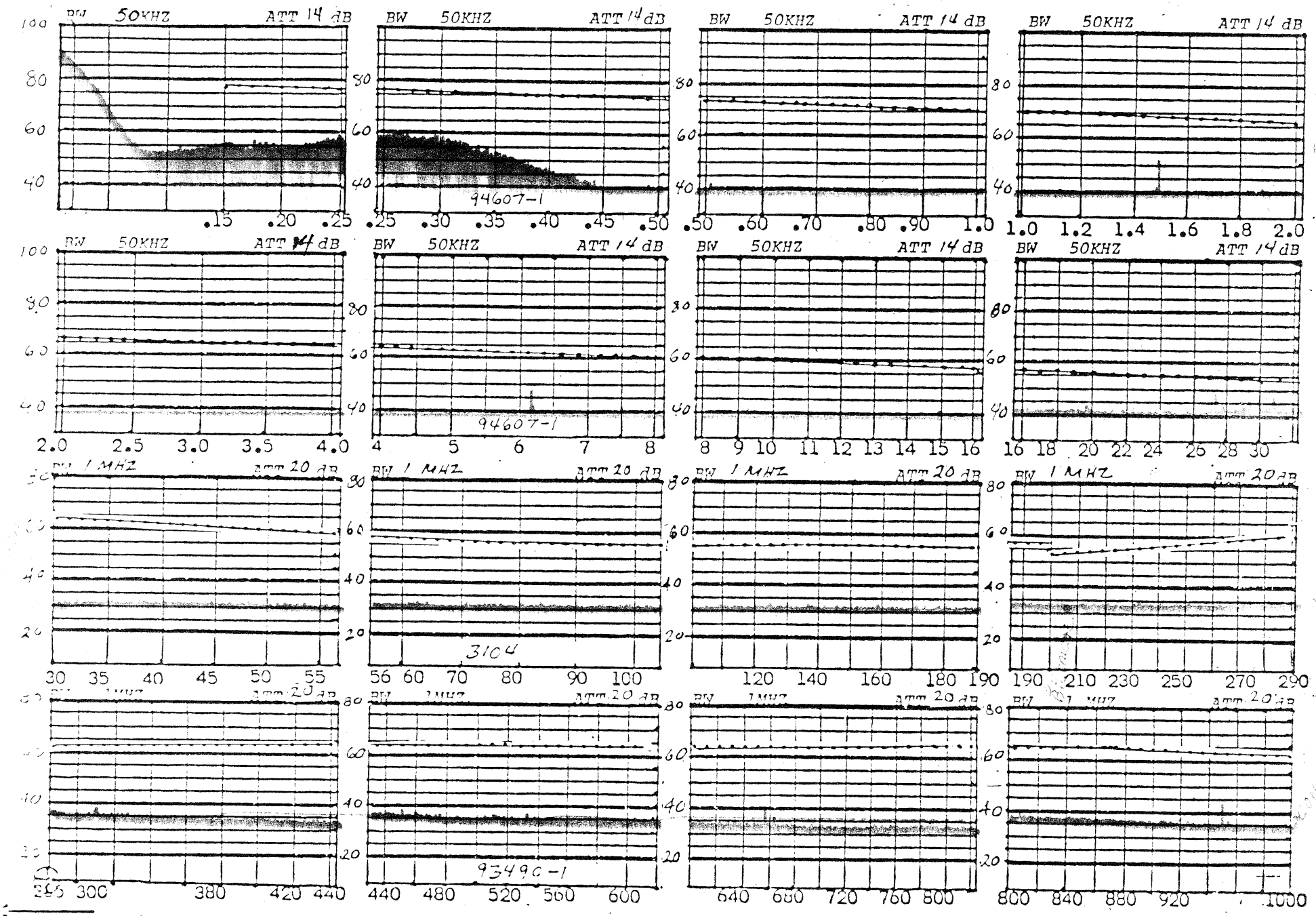
BROADBAND RADIATED INTERFERENCE RTCA DO-160B CAT N/R

PRODUCT: Mode S TEST # : TECH. GRAPH #: L-10

DETECTOR: PEAK .05 SEC Date: RESPONSIBLE ENGINEER

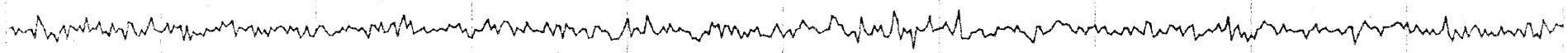
SCAN SPEED: 1.5 MIN/BAND SPEC. LIMITS ARE CORRECTED FOR ANTENNA FACTOR

REMARKS:



60 to 62 dBuV/M NARROWBAND RADIATED LIMIT R.F. ENCLOSURE

1.05 1.10 1.15 1.20 1.25 1.30 1.35 1.40 1.45GHZ



TR 00-160 REV B PARA 21.4 BAND 6 OF 6
RADIATED EMISSIONS, N.B.
CAT A/Z

UUT HP853A/8559A

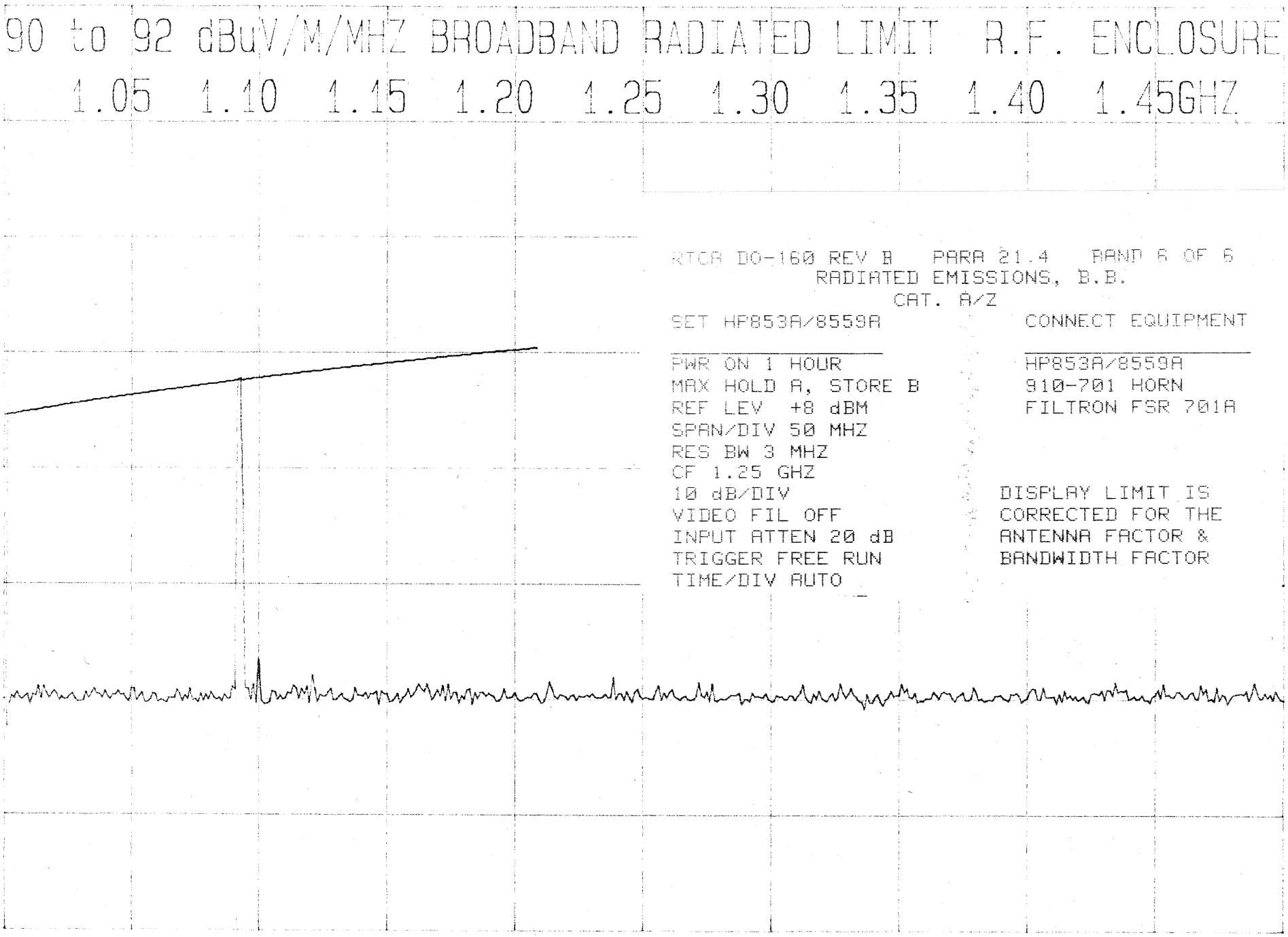
PWR ON 1 HOUR
CL WRITE A, STORE B
REF LEV -42 dBM
SPAN/DIV 50 MHZ
RES BW 1 MHZ
CF 1.25 GHZ
10 dB/DIV
VIDEO FIL CW, < MAX
INPUT ATTEN 0 dB
TRIGGER FREE RUN
TIME/DIV AUTO
BAND 0 TO 3 GHZ

CONNECT EQUIPMENT

HP853A/8559A
910-701 HORN
FILTRON FSR 701A

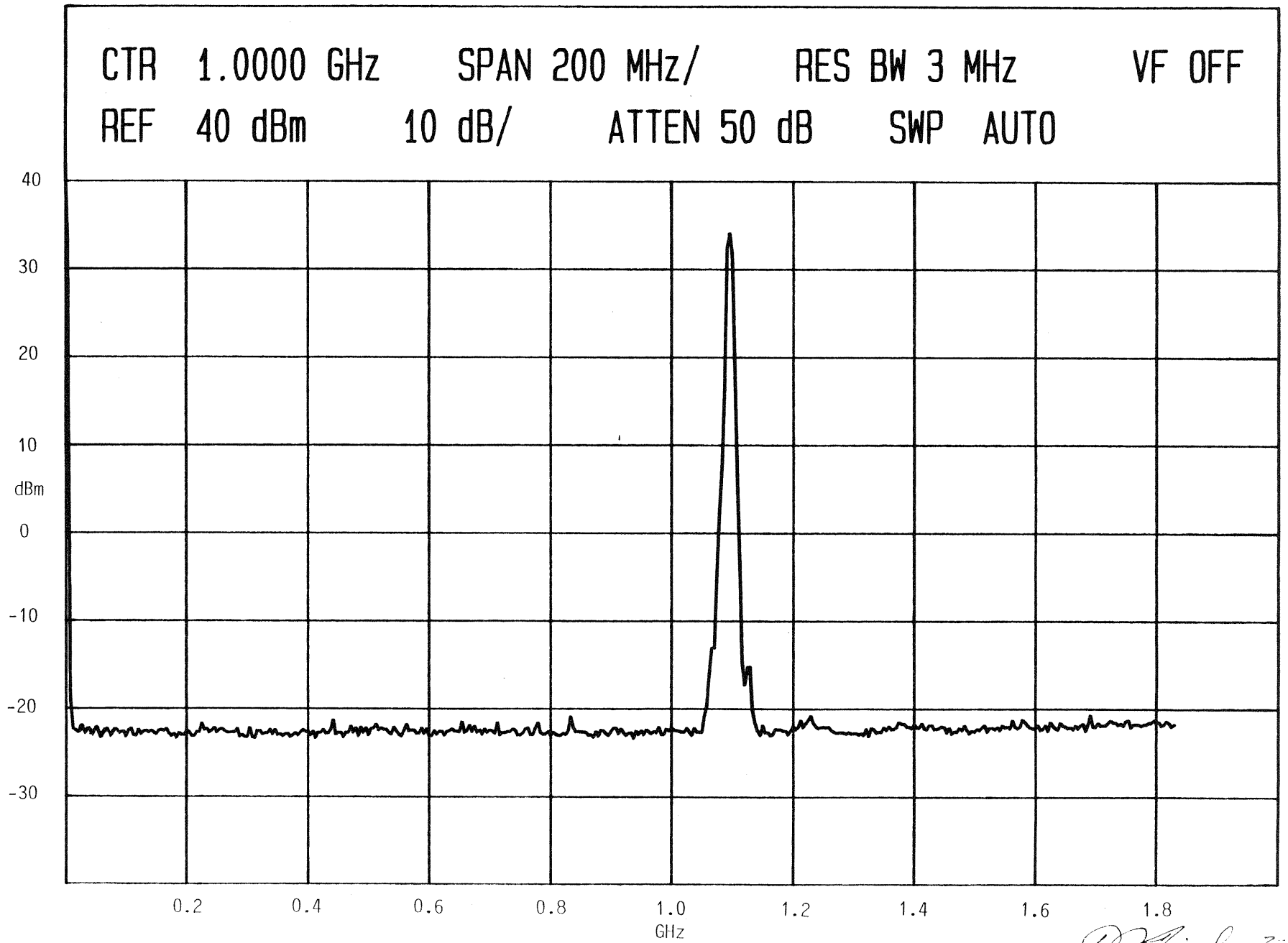
DISPLAY LIMIT IS
CORRECTED FOR THE
ANTENNA FACTOR

MODE S TRANSPONDER RADIATED EMISSIONS (HORN)



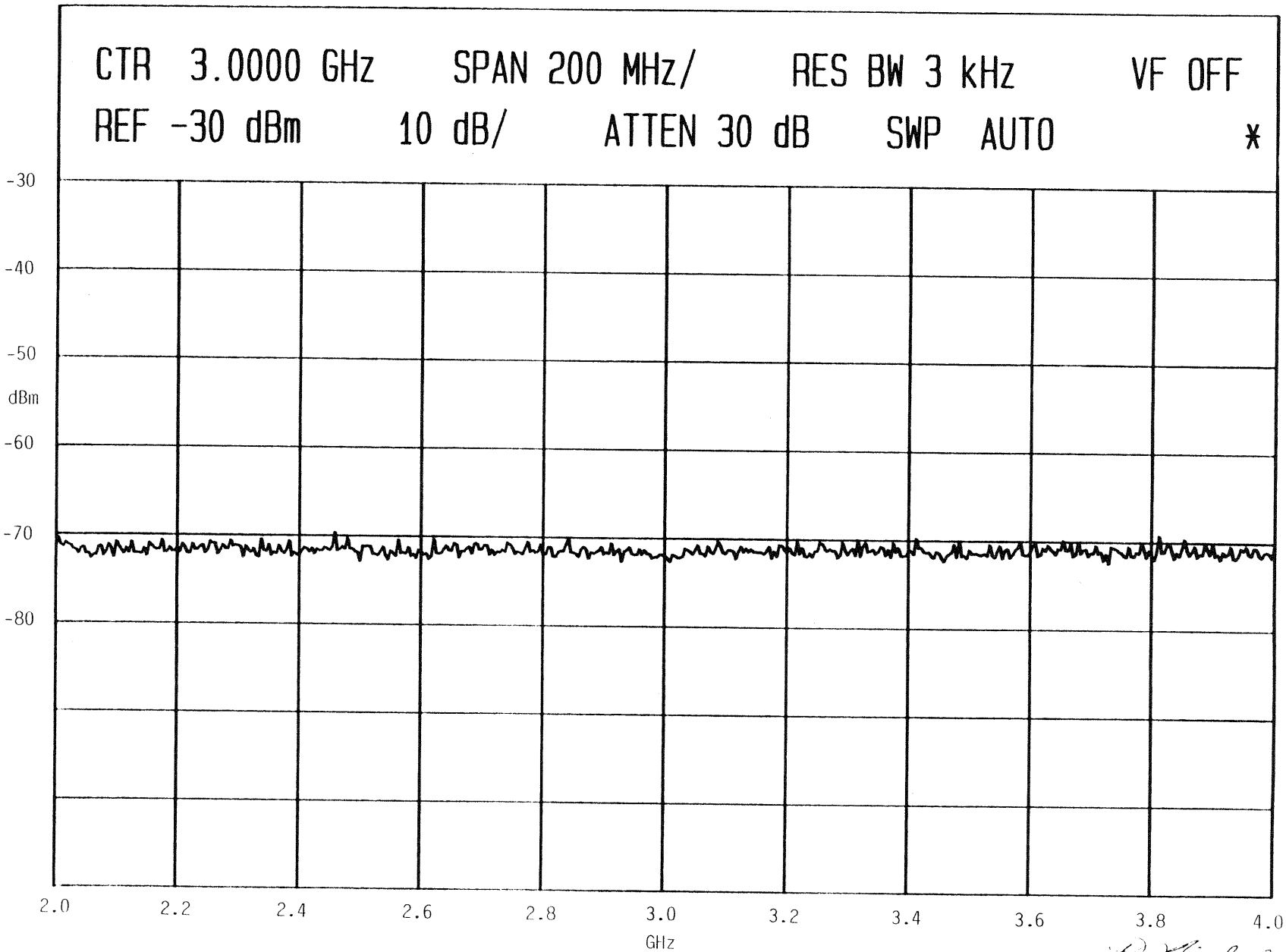
MODE S TRANSPONDER RADIATED EMISSIONS (HORN)

TRANSPONDER OUTPUT



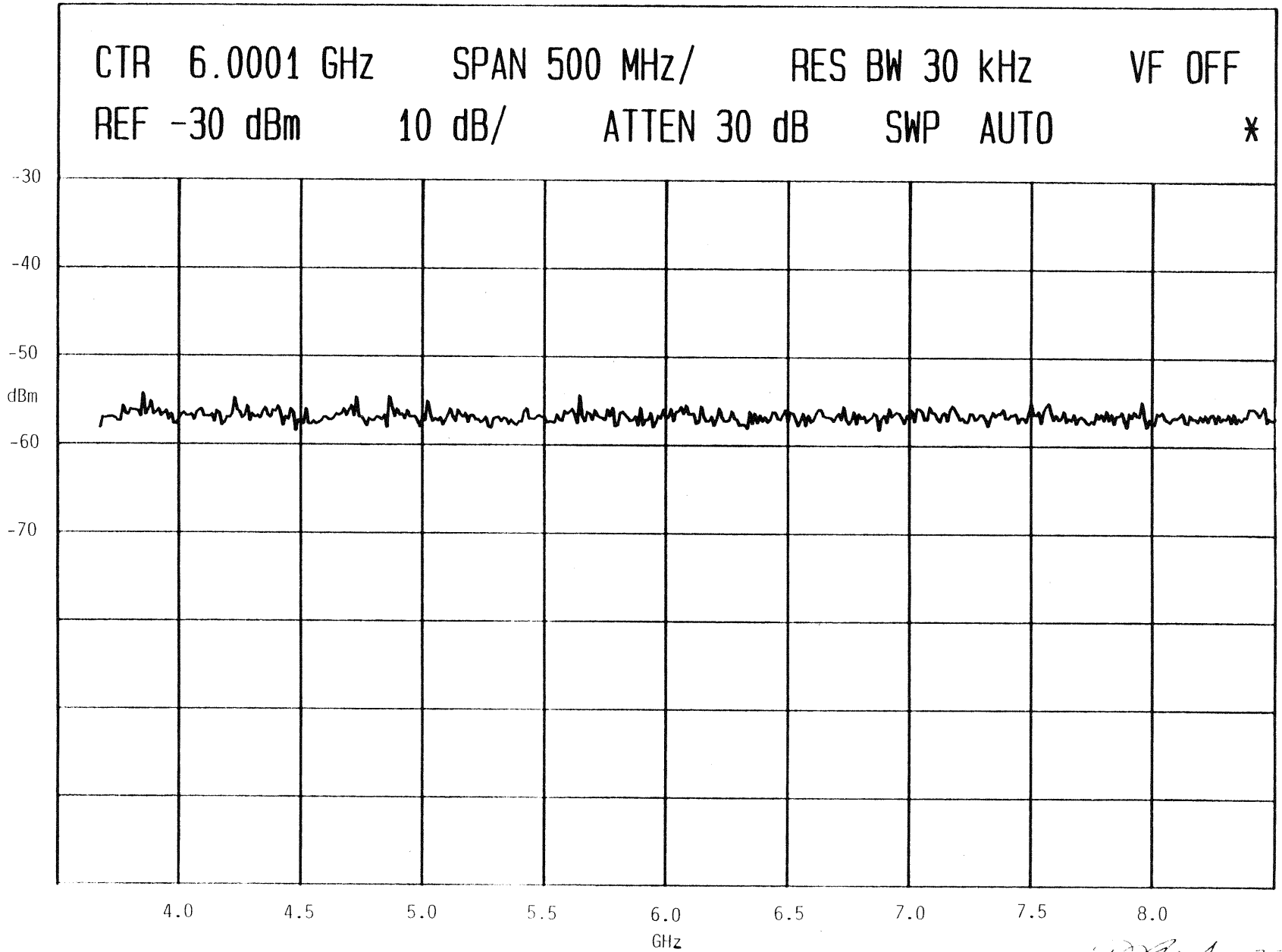
2-3-89

TRANSPONDER OUTPUT

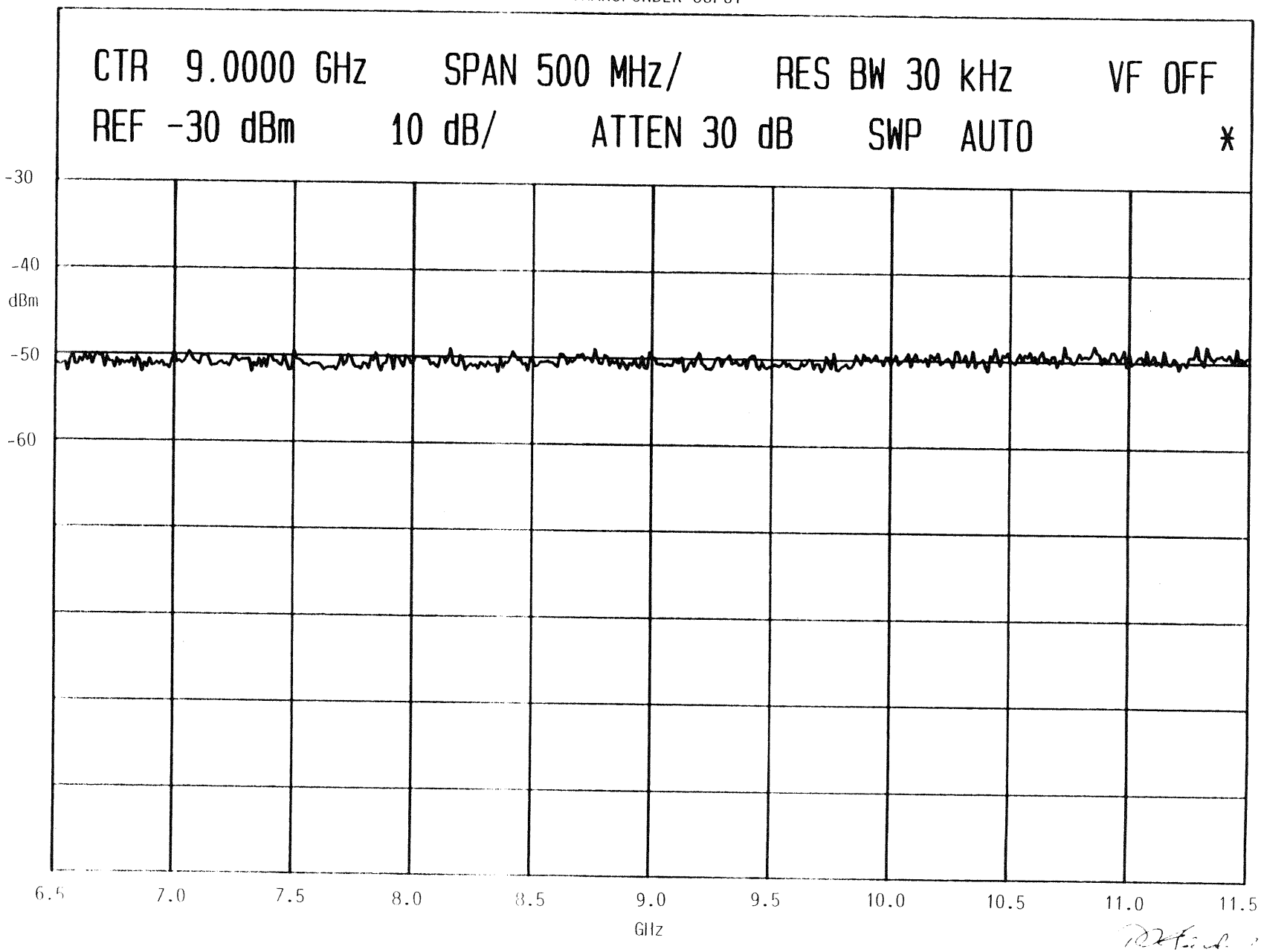


2-3-89

TRANSPONDER OUTPUT



TRANSPONDER OUPUT



FREQUENCY STABILITY

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Honeywell **TEST DATA SHEET**

SPERRY COMMERCIAL FLIGHT SYSTEMS DIVISION

TEST NAME Frequency Stability

UNIT UNDER TEST (UUT)

NAME Mode S Transponder

P/N 4061400-901 **SERIAL** 88110002

TEST FIXTURES AND SUPPORT EQUIPMENT

TEST FIXTURE OR EQUIPMENT	MFR	MODEL	ID/SN	CAL DUE DATE
Mode S Tester	IFR	S1403	10704	9/30/89
ATCRBS Tester	IFR	ATC1400A	10703	9/15/89
Test Chamber	Thermotron	F12	13108	NCR
Temperature Contr.	Thermotron	4100	18080	NCR
Digital Thermometer	Fluke	2190A	16222	5/10/89
Chart Recorder	Honeywell	X455X1	Part of 18080	2-28-89

TEST CONDITIONS

STANDARD LABORATORY AMBIENT ☒

TEMP. ~~68~~ 75°F BARO. 28.62 inHg REL. HUM. 22%

POWER: 115 VAC 60 Hz ☒ 400 Hz ☒ 28 VDC ☐

OTHER:

APPLICABLE DOCUMENTS

TEST SPECIFICATION	5140-0602	REV –	DATE
TEST SOFTWARE		REV	DATE
UUT SOFTWARE		REV	DATE

TEST NOTES

Chamber Temp.	Frequency	Pass/Fail
-20°C (402w)	1089.96	PASS
-10°C (407w)	1090.01	PASS
0°C (413w)	1090.05	PASS
10°C (418w)	1090.09	PASS
20°C (435w)	1090.13	PASS
30°C (437w)	1090.13	PASS
40°C (440w)	1090.13	PASS
50°C (442w)	1090.15	PASS

QC	TESTER	DATE
	[signature]	12-23-88

PAGE 1 OF 1

Honeywell TEST DATA SHEET

SPERRY COMMERCIAL FLIGHT SYSTEMS DIVISION

TEST NAME Power Input

UNIT UNDER TEST (UUT)

NAME Mode S Transponder

P/N 4061400-901 SERIAL 88110101

TEST FIXTURES AND SUPPORT EQUIPMENT

TEST FIXTURE OR EQUIPMENT	MFR	MODEL	ID/SN	CAL DUE DATE
OSCILLOSCOPE	TEKTRONIX	7834	ID30429	3/10/89
PLUG-IN	TEKTRONIX	7A26	ID13834	3/10/89
PLUG-IN	TEKTRONIX	7B15	ID8064	3/10/89
BUS TESTER	JC AIR	429		N/A
INTERFACE PNL	HONEYWELL		88110102	N/A
POWER CONSOLE	HONEYWELL	–	–	N/A
VOLTOHMMETER	H-P	3456A	SFS 30468	N/A
AC POWER SOURCE	CAL. INSTR	800T	SFS 14053	4/89
IFR	IFR	S-1403	ID10702	89/48
IFR	IFR	ATC 1400A	ID10701	89/48

TEST CONDITIONS

STANDARD LABORATORY AMBIENT ☑

TEMP. BARO. REL. HUM. %

POWER: 115 VAC 60 Hz ☐ 400 Hz ☐ 28 VDC ☐

OTHER:

APPLICABLE DOCUMENTS

TEST SPECIFICATION	5140-0602	REV –	DATE
TEST SOFTWARE		REV	DATE
UUT SOFTWARE		REV	DATE

TEST NOTES

Maximum AC voltage - 122 V		PASS
Minimum AC voltage - 104 V		PASS
Voltage ~~Modification~~ WEB MODULATION		PASS
Frequency Modulation		PASS
Momentary Power Interruptions		PASS
Normal Surge- 160V		PASS
Normal Surge - 60V		PASS
Abnormal Voltage - 134V		PASS
Abnormal Voltage - 97V		PASS
Momentary Undervoltage - 60V		PASS
Abnormal Surge - 180V, 148V		PASS
Frequency 132V	1089.86 MHz	PASS
Frequency 115V	1089.86 MHz	PASS
Frequency 97V	1089.86 MHz	PASS

QC	TESTER	DATE
	W R Bergfeld	1/06/89