APPLICATION FOR FCC CERTIFICATION
BZ5MX1U
MODULATOR INPUT
1 WATT UHF TRANSLATOR

EXHIBIT 4a

FREQUENCY DRIFT VS. TEMPERATURE
M369 MODULATOR

DEGREES C	MEASURED LO FREQUENCY(MHz)	DEVIATION(Hz)	DEVIATION(%)
+50	651,241,054	-10,693	-0.001642
+40	651,244,998	- 6,749	-0.001036
+30	651,249,389	- 2,358	-0.000362
+25	651,251,747	0	+0.0000
+20	651,254,160	+ 2,413	+0.000371
+10	651,258,449	+ 6,702	+0.001029
00	651,262,385	+10,638	+0.001633
-10	651,267,175	+13,628	+0.002093
-20	651,267,175	+15,428	+0.002369
-30	651,266,810	+15,063	+0.002313

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EXHIBIT 8

Power requirements for the 1 Watt UHF Translator were determined as follows:

1. The translator's visual power meter measures the peak visual power by reading the average levels of a detected sample of the output. The meter is calibrated by multiplying the above visual power reading by 168%. The visual metering circuitry has a negligible response to the aural power due to the large (>10MHz) detector bandwidth. When the detector bandwidth is this large, the detector does not peak detect the intercarrier beat product.

2. The aural power is measured by reading the peak level of the detected 4.5MHz intercarrier product. The level of this product has a direct correspondence to the aural power and is independent of the visual power as long as the peak visual power exceeds the aural power. This is always true for normal operation.

BZ5MX1U
POWER MEASUREMENTS

MEASURED VISUAL POWER NOTE 1	MEASURED AURAL POWER NOTE 2	SUPPLY CURRENT TO OUTPUT DEVICES VISUAL ONLY NOTE 3	SUPPLY CURRENT TO OUTPUT DEVICES VISUAL & AURAL NOTE 3
.595 WATTS	.100 WATTS	0.85 AMPS	0.85 AMPS

NOTE 1: Measured on the Model 43 Bird Wattmeter with the visual carrier modulated by the standard synchronizing signal at 75% of peak amplitude and the aural carrier disabled.

NOTE 2: Measured on the Model 43 Bird Wattmeter with the visual carrier disabled.

NOTE 3: The voltage across the output devices on all models is +24 volts. The output devices are operated Class A.

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EXHIBIT 9

ATTENUATION VS. FREQUENCY

MODULATING FREQUENCY REF=VISUAL CARRIER(MHz)	UPPER SIDEBAND	FCC LIMIT(dB)	LOWER SIDEBAND	FCC LIMIT(dB)
+0.2	0	Reference	-	-
-0.5	-0.5		-	-
+0.5	-0.1		-	-
+1.25	-0.3		-20	>-20
+2.0	-0.4		-36	>-20
+2.5	-0.4		-40	>-20
+3.0	-0.3		-42	>-20
+3.5	-0.3		-42	>-20
+3.58	-0.2		-44	>-42
+4.1	-0.3		-46	>-20
+4.18	-0.2		-46	>-20
+4.75	-20	>-20	-50	>-20
+5.0	-20	>-20	-50	>-20
+6.0	-50	>-20	-50	>-20
+7.0	-50	>-20	-50	>-20
+8.0	-50	>-20	-50	>-20
+9.0	-50	>-20	-50	>-20
+10.0	-50	>-20	-50	>-20

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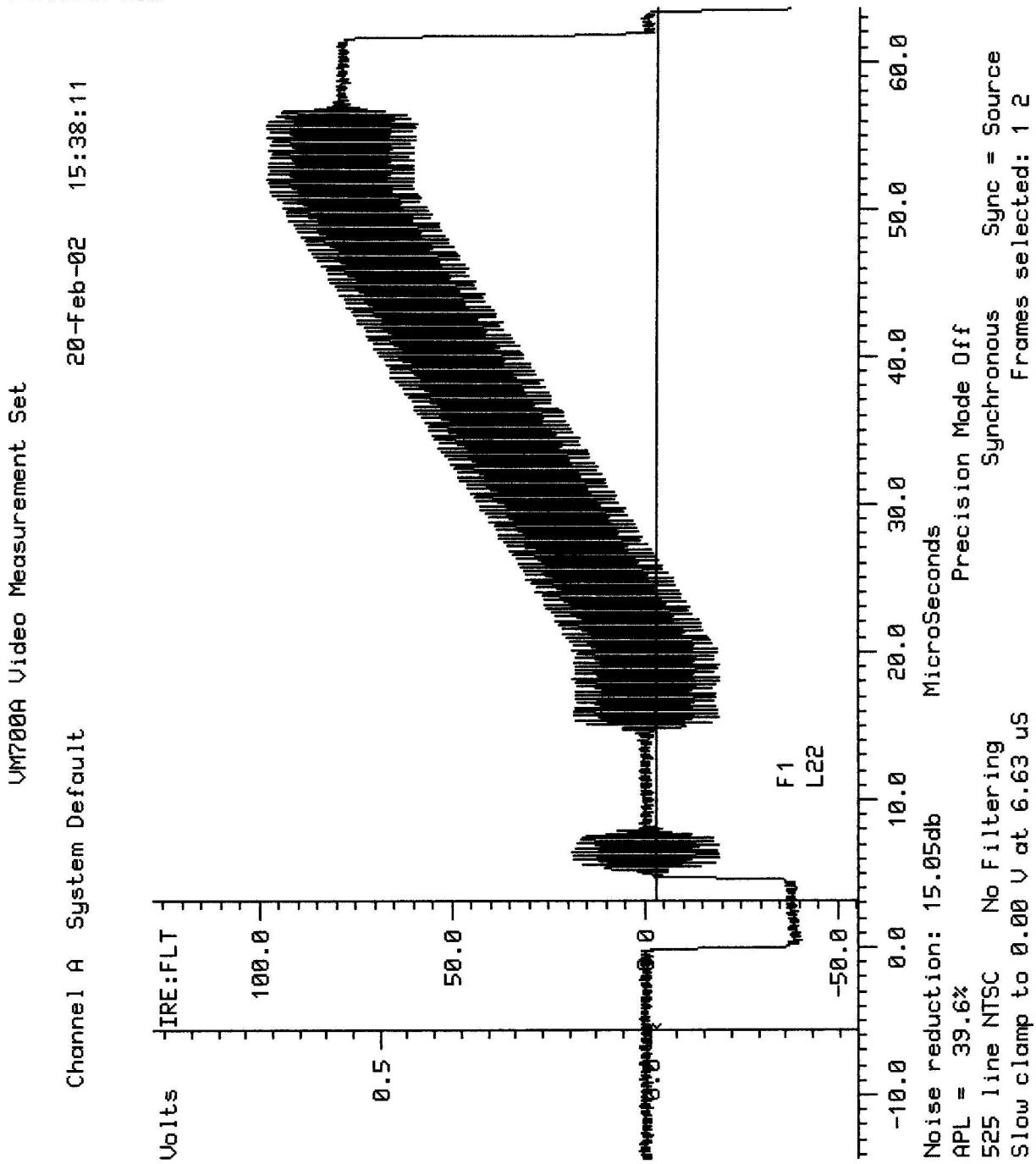
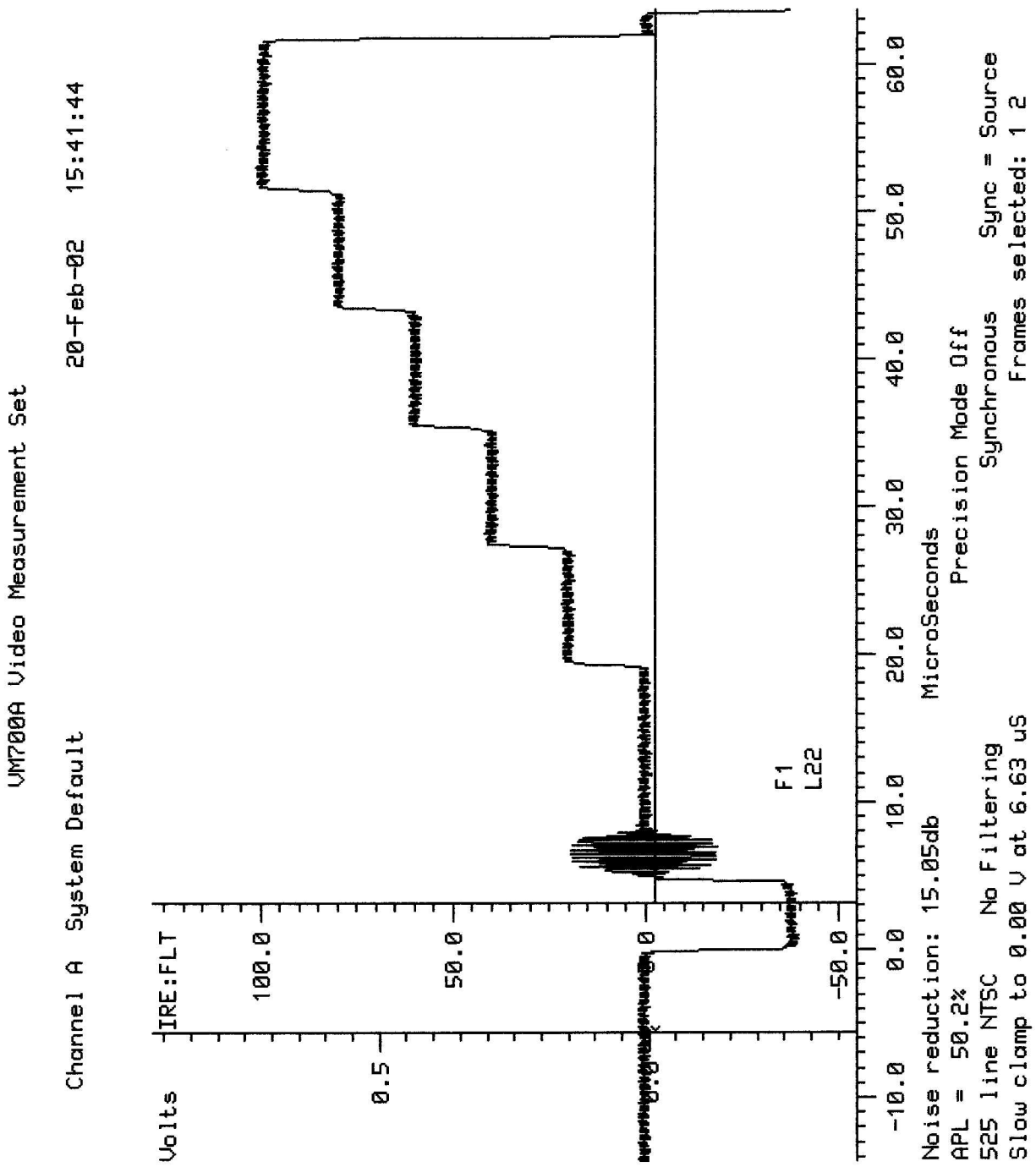
EXHIBIT 10a



APPLICATION FOR FCC CERTIFICATION
BZ5MX1U
MODULATOR INPUT
1 WATT UHF TRANSLATOR

EXHIBIT 10b



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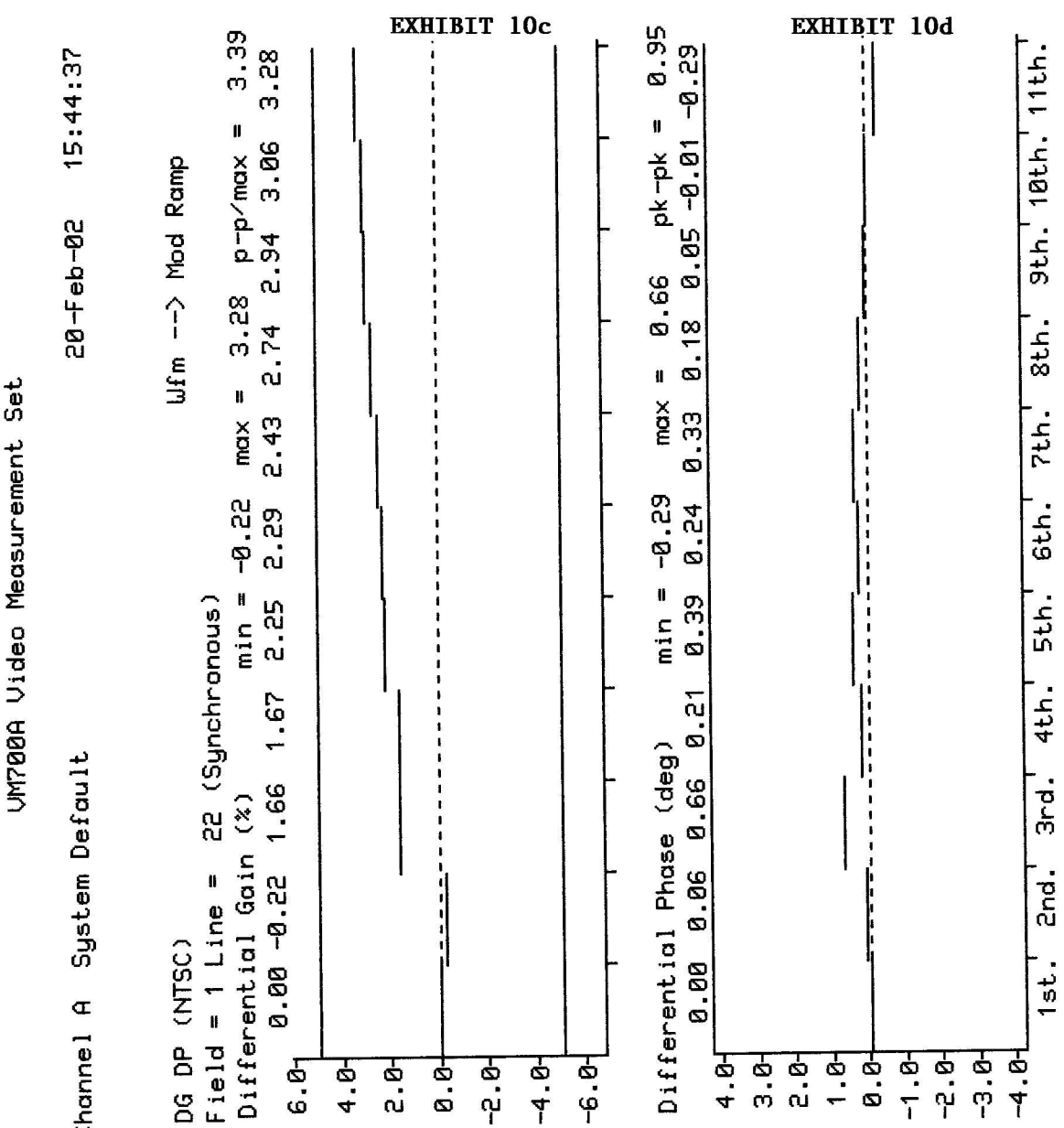

EXHIBIT 10c

EXHIBIT 10d

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EXHIBIT 11a

OVERALL GROUP DELAY

FREQUENCY(MHz)	OVERALL DELAY (nS)
0.20	0 (Reference)
0.40	0
0.60	+20
0.80	+10
1.00	+10
1.20	+20
1.40	+40
1.60	0
1.80	+10
2.00	+20
2.20	+10
2.40	+20
2.60	+20
2.80	+20
3.00	-10
3.20	-10
3.40	-120
3.58	-140
3.80	-220
4.00	-280
4.18	-300

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EXHIBIT 11b

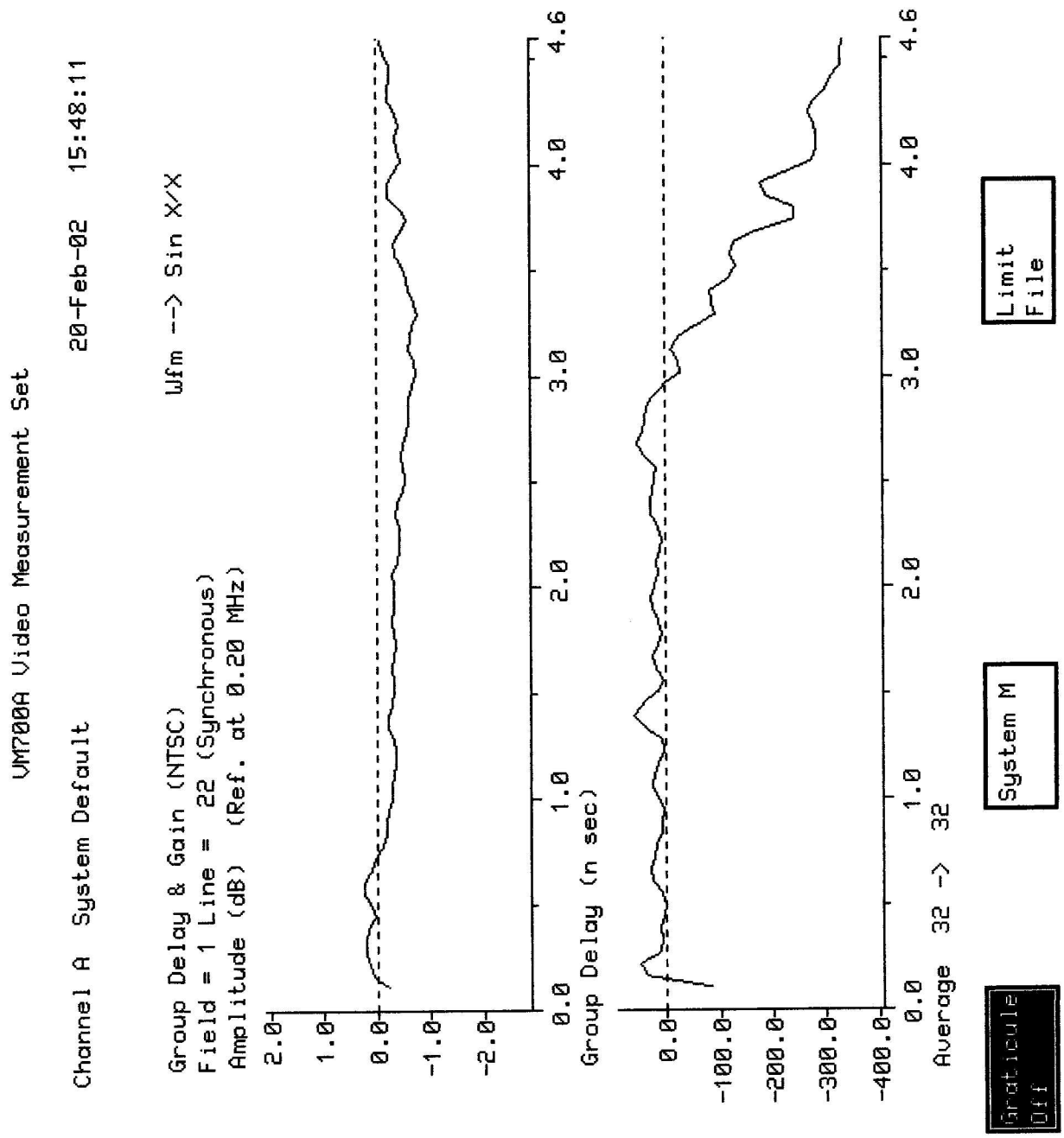
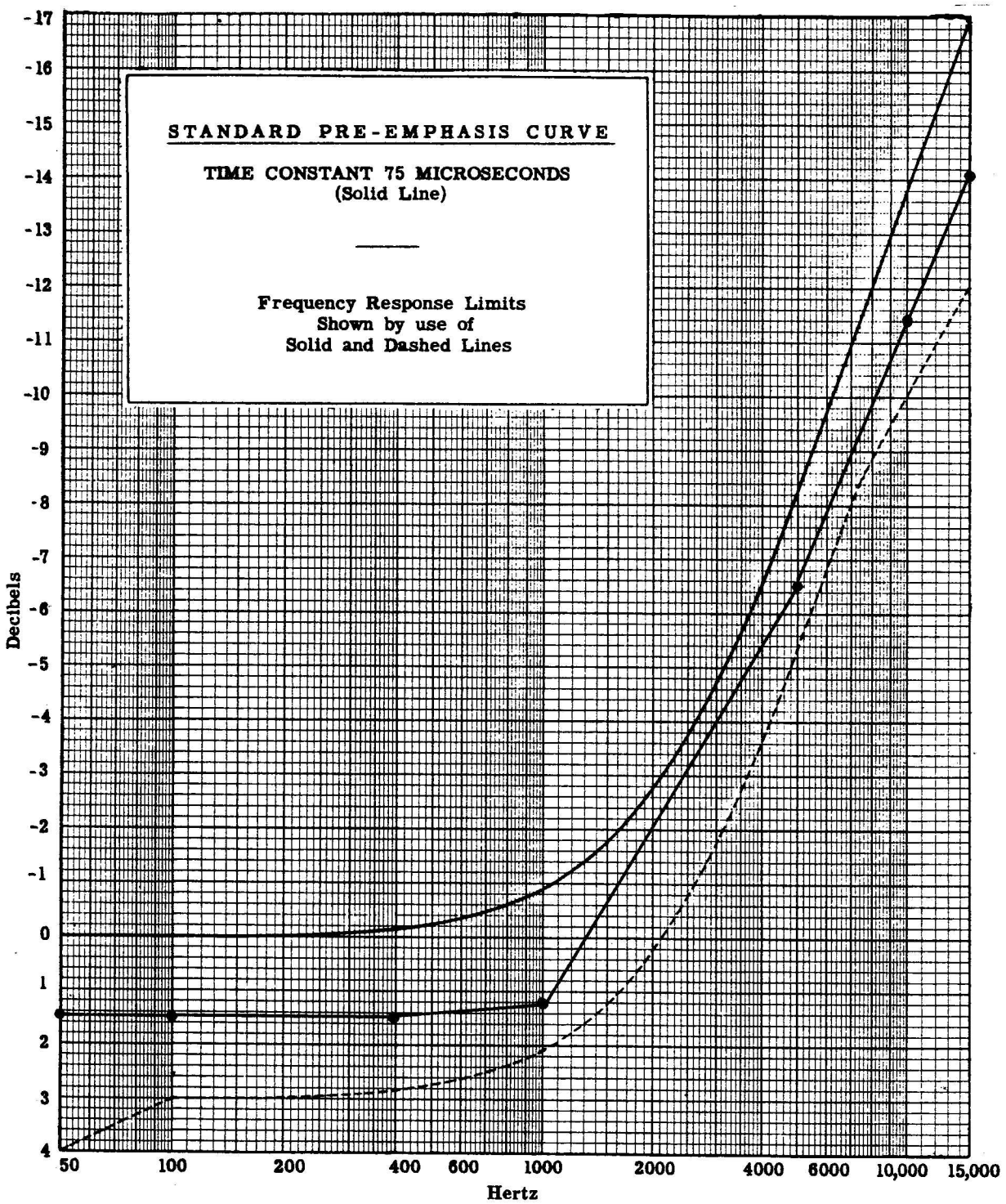


EXHIBIT 12 MODEL NUMBER: BZ5MX1U

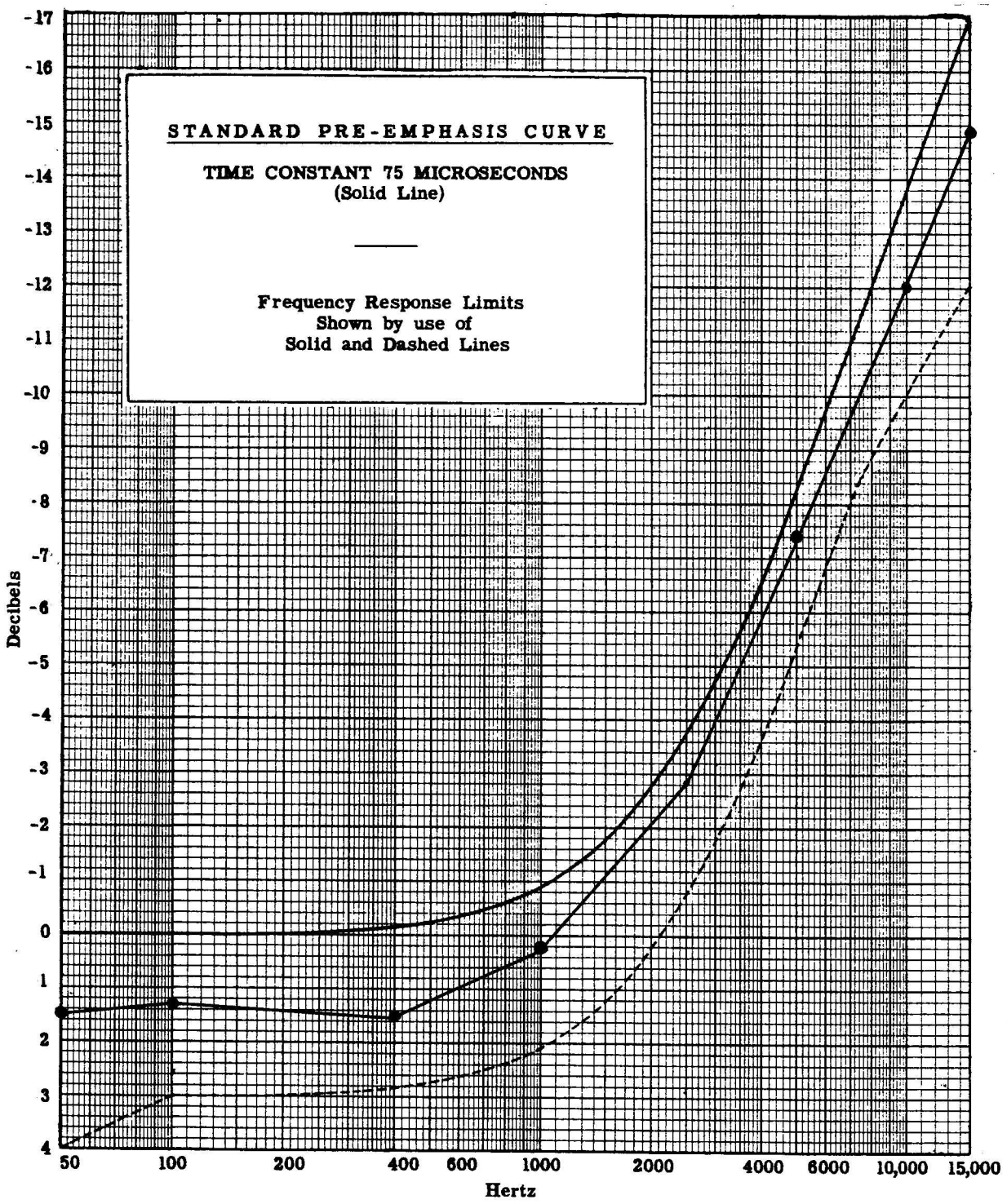
AUDIO FREQUENCY RESPONSE 50 % MODULATION



Reference 50 Hz; 0dB = 1.5 dB

EXHIBIT 13 MODEL NUMBER: BZ5MX1U

AUDIO FREQUENCY RESPONSE 100% MODULATION



Reference 50 Hz; 0dB = 1.5 dB