4. When the OCXO generates a warm-up signal, energize the transmitter and measure the frequency of the transmitted signal. (This measurement must be made within one minute after the transmitter is energized.) Record the measured frequency and the corresponding elapsed time in the spaces provided on the test data sheet. Measure transmitter frequency at intervals of no more than one minute until ten minutes have elapsed or until frequency stabilization is clearly indicated (whichever is the longer time period). Each time a measurement is made, record elapsed time and measured frequency.

   The ambient temperature shall not be allowed to rise more than 10^0C above the starting temperature during these measurements.

5. Repeat Steps 3 and 4 after allowing the ARTU to stabilize at an ambient temperature of 0^0C with primary power disconnected.

6. Repeat Step 3 and 4 after allowing the ARTU to stabilize at an ambient temperature of 30^0C with primary power disconnected.

7. List all test equipment used in these measurements. Include the manufacturer's name and model number, a description of the equipment, and calibration dates.

2.5.2.2 Frequency Stability Versus Primary Power Voltage

[2.1055(d)]

Prepare the test setup shown in Figure 2.5-4. All RF connections shall be made using 50 Ohm coaxial cables.

2. Power the ARTU from a 28 VDC power source.

3. Via the MMT, program the transmitter to operate at the maximum power output level at 895.005500 MHz (Ch.1, Blk 5).

4. Set the input voltage to 23.8 VDC (85% of the nominal primary power input voltage).

5. Energize the transmitter and measure the frequency of the transmitted signal. Record input voltage and the measured frequency in the space provided on a test data sheet of the type shown in Figure 2.5-5.

6. Re-energize the transmitter and note the effects of keying and oven cycling on the frequency of the transmitted signal. Record comments in the spaces provided on the test data sheet.

   Repeat Steps 5 and 6 at the input voltage increments listed in Figure 2.5-5.

8. List all test equipment used in these measurements. Include the manufacturer's name and model number, a description of the equipment, and calibration dates.

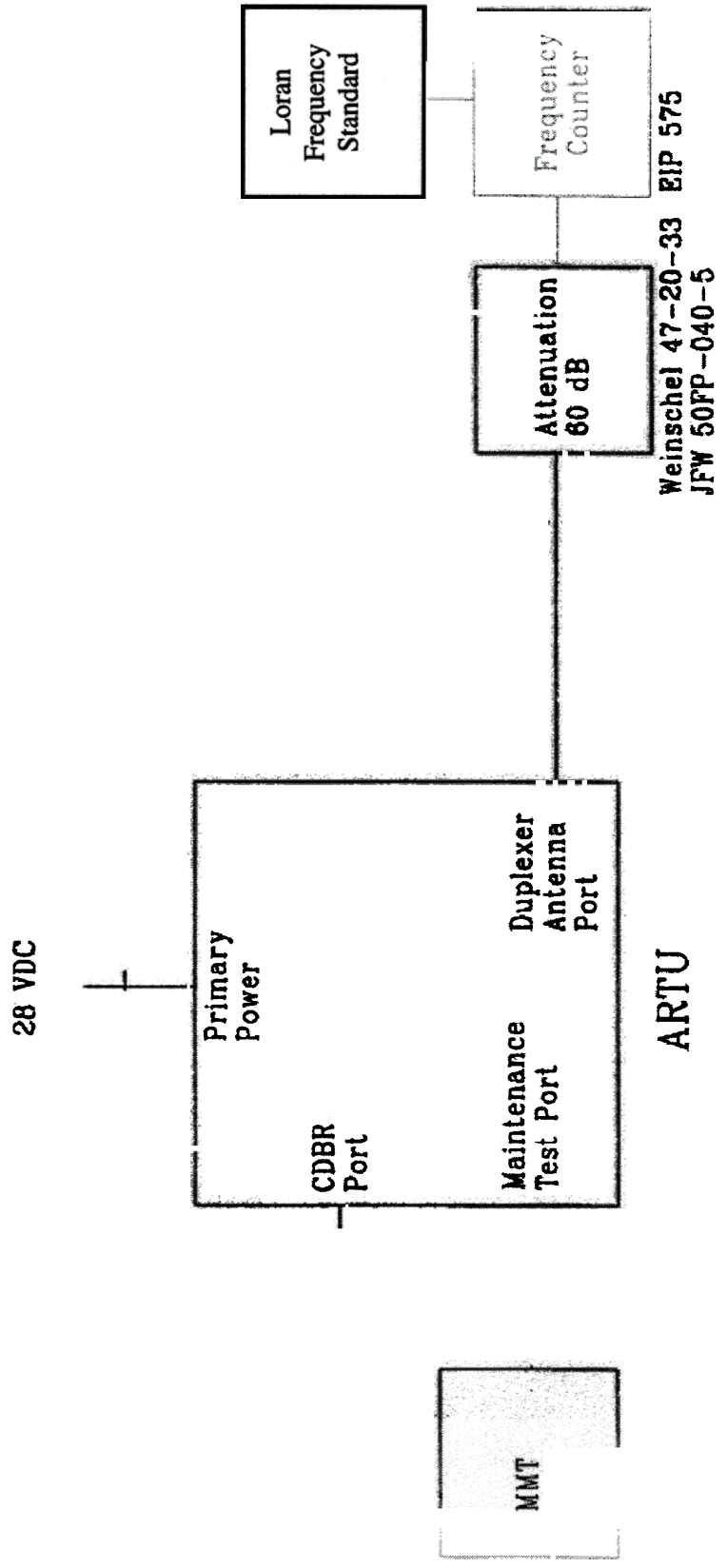

Figure 2.5- Frequency Versus Temperature Measurement Setup

Fig. 2.5-1

FREQUENCY STABILITY VERSUS TEMPERATURE [2.1055 (b)]

Tester _____ Date _____ EUT_____

Witness Date EUT SN_____

Transmitter Operating Frequency 895.005500 MHz

Ambient Temp. (OC)	Measured Frequency (MHz)	Deviation from Assigned Freq. (ppm)	Comments: Effect of Keying & oven cycling
-30			
-20			
-10			
0			
10			
20			
30			
40			
50			

Figure 2.5-2 Frequency Stability Versus Temperature Data Sheet

COLD-START FREQUENCY STABILITY [2.1055 (c)]

Tester _____ Date _____ EUT_____

Witness _____Date _____EUT SN_____

Transmitter Operating Frequency 895.005500 MHz

Cold-Start Ambient Temp. (°C)	Elapsed Time[1]	Measured Frequency	Deviation from Assigned Freq.(ppm)
-30	0		
-30	1		
-30	2		
-30	3		
-30	4		
-30	5		
-30	6		
-30	7		
-30	8		
-30	9		
-30	10		
0	0		
0	1		
0	2		
0	3		
0	4		
0	5		
0	6		
0	7		
0	8		
0	9		
0	10		
30	0		
30	1		
30	2		
30	3		
30	4		
30	5		
30	6		
30	7		
30	8		
30	9		
30	10		

1. Time elapsed after transmitter is initially keyed

Figure 2.5-3 Cold-Start Frequency Stability Data Sheet

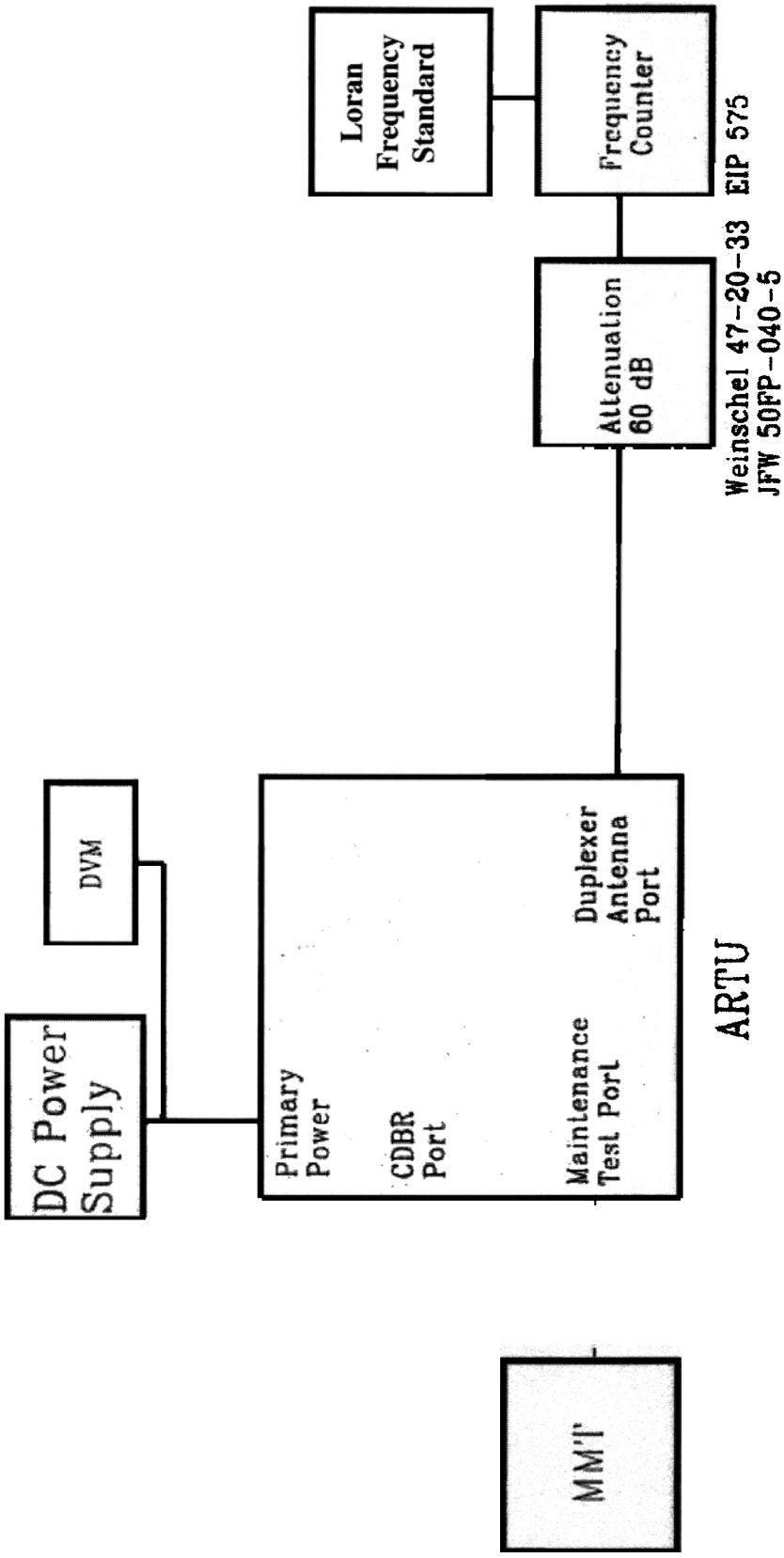

Figure 2.5-4. Frequency Versus Supply Voltage Measurement Setup

FREQUENCY STABILITY VERSUS PRIMARY POWER VOLTAGE [2.1055 (d)]

Tester _____ Date _____ EUT_____

Witness Date EUT SN_____

Transmitter Operating Frequency 895.005500 MHz

Input Voltage (VDC)	Measured Frequency (MHz)	Deviation from Assigned Freq. (ppm)	Comments: Effect of Keying & oven cycling
23.80 V. (85 %)			
24.00 V.			
25.00 V.			
26.00 V.			
27.00 V.			
28.00 V.			
29.00 V.			
30.00 V.			
31.00V			
32.20 V. (115 %)			

Figure 2.5-5 Frequency Stability Versus Input Voltage Data Sheet