GENERAL INFORMATION

1.1 Product Description

The Equipment Under Test (EUT) is a Schlumberger Resource Management Services, Inc., Model R300C. The R300C is a Centron solid state residential watt-hour meter (with a Time of Use/Demand register) combined with an RF Transmitter Model R300 Demand. The combined RF transmitter and meter are collectively referred to as a model R300C. The R300C periodically transmits the meter reading and an ID number to utility data collectors that may be stationary, handheld, or vehicular mounted. Operation is one way, as the R300 Demand does not receive. The R300C may contain an optional solid state relay output, which is not related to the RF operation.

The R300 Demand is a low power frequency hopping spread spectrum RF transmitter, however because the receivers that are used with this transmitter do not meet with the spread spectrum receiver requirements of 15.247, the transmitter has been designed to meet the requirements of 15.249. The R300 Demand physically consists of two small circuit boards. The RF control board has a linear power supply, a microprocessor, and the optional relay output. The RF transmit board has an RF oscillator and a stripline antenna

The EUT transmits on 32 different frequencies between 912 to 918 MHz. These frequencies are selected by changing the DC bias in a portion of the transmitter circuitry. Since the frequencies are not digitally controlled, the frequency accuracy of the transmitter will be approximately ±0.5 MHz.

Schlumberger plans to sell the R300C as a whole, but the R300 Demand may also be offered as an upgrade to the following model meters: C1ST, C1SL, CN1ST, or CN1SL. Since the differences between the 4 meter models are not considered to affect the transmitter board, a typical model C1ST was selected and used for all testing.