2.995(a)(b)(d) Frequency_stability:
90.213(a)

Temperature and voltage tests were performed to verify that the frequency remains within the .00025%, 2.5 ppm specification limit, for 25KHz spacing & 0.00025% for 12.5KHz spacing and 0.0001% for 6.25KHz spacing. The test was conducted as follows: The transmitter was placed in the temperature chamber at 25 degrees C and allowed to stabilize for one hour. The transmitter was keyed ON for one minute during which four frequency readings were recorded at 15 second intervals. The worse case number was taken for temperature plotting. The assigned channel frequency was considered to be the reference frequency. The temperature was then reduced to -30 degrees C after which the transmitter was again allowed to stabilize for one hour. The transmitter was keyed ON for one minute, and again frequency readings were noted at 15 second intervals. The worst case number was recorded for temperature plotting. This procedure was repeated in 10 degree increments up to + 50 degrees C.

Readings were also taken at minus 25% of the battery voltage of 5.4VDC, which we estimate to be the battery endpoint.

MEASUREMENT DATA:

Assigned Frequency (Ref. Frequency): 470.000 000MHz

TEMPERATURE_C	FREQUENCY_MHz	PPM
REFERENCE_____	470.000 000	00.0
-30_____	470.001 130	+2.40
-20_____	470.000 680	+1.45
-10_____	470.000 390	+0.82
0_____	470.000 420	+0.89
+10_____	470.000 770	1.64
+20_____	470.000 188	-0.40
+30_____	469.999 500	-1.06
+40_____	469.999 330	-1.43
+50_____	469.999 190	-1.72

20oC Battery End-Point 5.6VDC	470.000 340	+0.72
20oC 115% of battery 8.28VDC	470.000 320	+0.68
20oc 85% of Battery 6.12VDC	470.000 330	+0.70

RESULTS OF MEASUREMENTS: The maximum frequency variation over the temperature range was -1.72 to 2.40 ppm. The maximum frequency variation over the voltage range was +0.72 ppm.