Applicant: QUALCOMM FCC ID: J9CGSPDM1

## **Exhibit 8 Frequency Stability Data**

The test results reported in the following tables are abstracted from the conducted design verification test (DVT) results on 5 sample DVT1 Modem Modules reported in the in-progress Globalstar GSP-1620 Satellite Packet Data Modem Design Verification Test Report. Modem frequency stability is determined by that of the synthesizer and LO circuitry on the Modem Module RF board. The Modem ODU Tx antenna is passive; the PA is located on the Modem Module RF board.

Modem input power voltage variation and temperature variation sensitivity testing has not been completed. But preliminary data indicates the regulated DC power provided, by the switching power supply in the modem module to the module RF board synthesizer and LO circuits, will remain well within the input power tolerance band for those circuits. That applies at nominal modem input power voltage and over the power output voltage range specified for the external DC power supply of the modem in the Globalstar Satellite Packet Data Modem Product Spec. (Exhibit E.11a).

Table 1 presents the measured values of frequency variation in parts per million (ppm) for each of 5 phones, at cold (-30° C), ambient (25°C), and hot (60° C) temperatures, for transmit channel 7 (which in previous Globalstar user terminals has proven representative of the average performance across the Tx frequency band), at the nominal modem DC power input voltage (12 VDC). Table 2 presents the mean values over all temperatures for the 5 phones tested.

Table 1. Mean PPM Errors in Frequency, for Tx Midband (Channel 7) Frequency

	-30 C	+25 C	+60 C
No. 7	-0.581	-0.439	-1.925
No. 10	-0.958	-0.074	-0.711
No. 17	-1.632	-0.256	-2.033
No. 20	-0.837	-0.318	-1.604
No. 30	-1.394	-0.247	-2.027

Table 2. Mean PPM Errors in Frequency, Averaged Over 5 Test Units

	-30 C	+25 C	+60 C
Mean	-1.08	-0.27	-1.66
Std. Dev.	0.43	0.13	0.56