EXHIBIT 6

MEANS FOR DETERMINING AND STABILIZING FREQUENCY, SUPPRESSION OF SPURIOUS RADIATION, LIMITING MODULATION, AND LIMITING POWER

As required by § 2.1033(c)(10), this Exhibit details the methods employed within the DTSA transmitter to determine and stabilize frequency, suppress spurious radiation and to limit both modulation and power

Means for Determining and Stabilizing Frequency

No absolute frequency stability requirements are levied against broadband PCS equipment operating under the authority of Part 24, Subpart J. However, per § 24.235, the frequency stability of the DTSA shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. Specifically, this is accomplished as follows:

> The transmit RF carrier of the DTSA is generated by a voltage controlled oscillator (VCO) which is phase locked to a 13 MHz master reference source. This 13 MHz source is synchronized to the GSM network and, within the DTSA, is controlled by a 10 bit DAC to keep the carrier to within ±0.1 ppm of the network reference.

Measurements of the stability of the fundamental emission of the DTSA, over variations in temperature and input voltage, are presented in Exhibit 14. As a GSM-compliant terminal, the stability of the DTSA carrier is to within 0.1 ppm of the received frequency from a base station, in accordance with GSM performance requirements (see J-STD-007, Personal Communications Services, Air Interface Specification; Volume 1, Radio Path Physical Layer, Section 7.4.1).

Means for Suppression of Spurious Radiation

Suppression of spurious and harmonic radiation in the DTSA is ensured through proper transmitter design, lay-out, and construction.

1. Transmitter Architecture and Design
    - Frequency plan of the transmitter—local oscillator frequencies were selected to minimize spurious products.
    - Ceramic filtering along the IF chain, both prior to and following the modulator, to attenuate both spurious products and broadband noise.
    - Use of a balanced mixer in the transmitter upconverter to provide additional attenuation of the image frequency.
    - SAW filtering following the final transmitter upconverter to further attenuate any mixing products.
    - Incorporation of an directional coupler and detector diode at the output of the power amplifier to implement power control and ramping.

2. Physical Realization of the Transmitter Module

- Fully shielded GSM radio module construction with filtering on all signal (data, control, clock) and power supply leads.
- Localized shielding within the GSM radio module, which is also housed underneath an additional RF shield on the DTSA PCB (carrier board).
- Careful component placement and layout, multi-layer circuit board construction, microstrip signal routing, and construction techniques to eliminate cavity moding and resonances.

Means for Limiting Modulation

Per GSM specifications, the modulation scheme implemented on the DTSA is Gaussian MSK (GMSK), with a bandwidth-time product of BT=0.3. Modulation rate is 1625/6 kbps, or approximately 280.83 kbps. To minimize spreading of the spectrum, GSM standards require that the RF output spectrum meet the mask shown in Figure E6.1. In the DTSA radio module, modulation accuracy is maintained through the use of direct digital synthesis techniques.

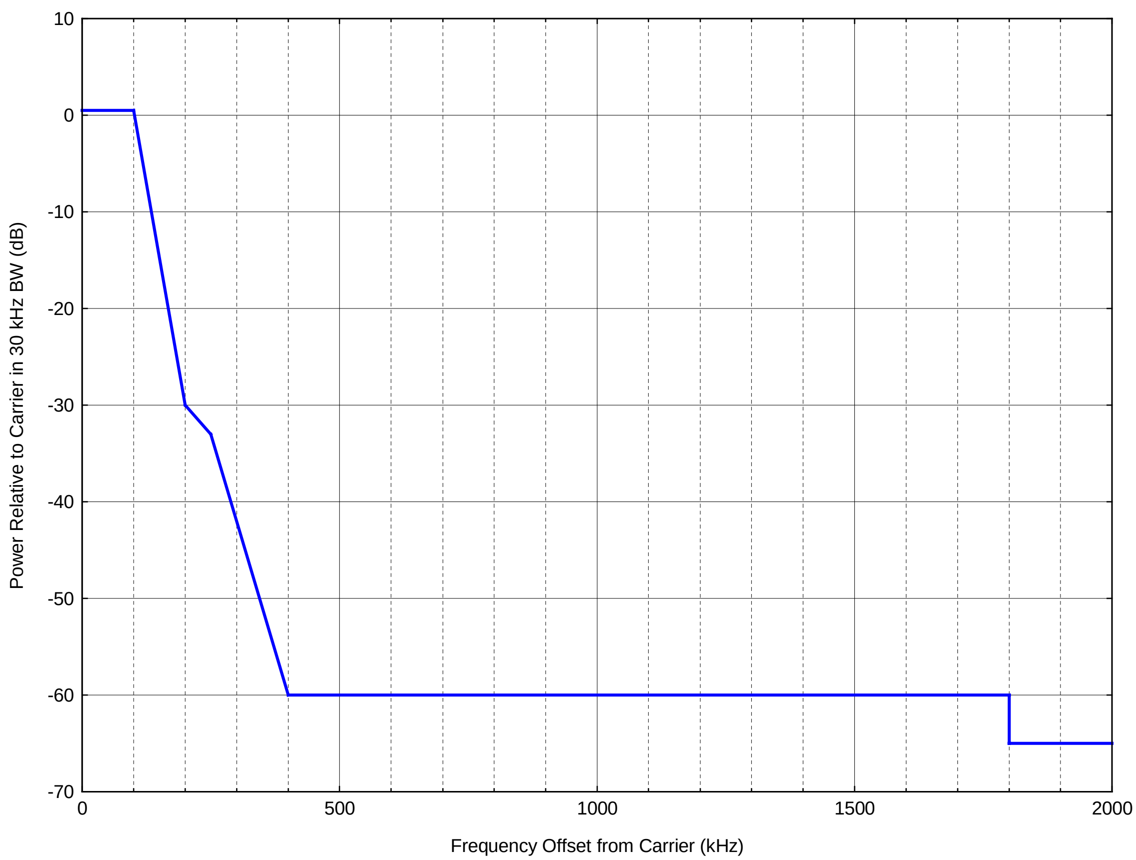

Figure E6.1. GSM terminal modulation mask.

Means for Limiting Power

As a GSM-compliant terminal, the DTSA will transmit at any of the 15 defined nominal RF output power levels, from 30 dBm to 0 dBm, during its assigned TDMA frame. Transmitter operation (power level, frame) is controlled by the GSM network, specifically by the base station to which the unit is in communication. Maximum RF output power of the DTSA is set at the factory and cannot be altered or increased. Furthermore, the temporal variation in power level within each transmission (i.e., burst time mask) is in accordance with GSM requirements. This is accomplished by adjusting transmitter gain through a discrete time power control loop and ramping the transmitter on and off at the beginning and ending of each burst. The power control loop is implemented using a directional coupler and detector; maximum RF output power is adjusted to within the specified tolerance during each burst, at the output power level specified by the base station.