## Tune Up Procedure

GMSG01 requires no Frequency tunes. The crystal is a TCXO qualified in operating range at time of manufacture.

Power levels are set as below.

#### 2.3.2 Power

The output power shall have two settings selectable by a discrete input to the board, (sampled during power-up), or by command via the serial port.

A jumper shall be included on the board to indicate the source of the control.

If the jumper setting corresponds to the discrete input control, the discrete input PWR LVL is sampled during power up to indicate the output power level.

| Discrete Control Setting | Power Setting |
|--------------------------|---------------|
| (Sampled at power-up)    |               |
| Open                     | Low           |
| Ground                   | High          |

If the jumper setting corresponds to a serial control, the power level is set according to a value set in the EEPROM. Serial port commands (See **Error! Reference source not found.**) can modify this EEPROM value.

The output power on a 50 ohms load after the power amplifier shall be according to Table 1, Output Power

| Discrete Control Setting | Avg Power<br>(During 1.28 s) |
|--------------------------|------------------------------|
| High                     | 22dBm +/- 2 dB               |
| Low                      | 18 dBm +/- 2 dB              |

**Table 1, Output Power** 

The power tolerances shall include the temperature and voltage variations as well as the manufacturing tolerances.

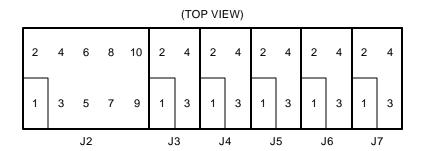
The power measurement shall be made in a 5 MHz bandwidth centered on the carrier frequency.

Closed loop power control should not be required.

I/O Connector and Power/Ground connectors may be combined.

# 9.1 I/O & Power Connector

| Description      | RS232 connection for control and test |  |  |
|------------------|---------------------------------------|--|--|
|                  | Discrete control pins for test        |  |  |
|                  | I/O Pins                              |  |  |
|                  | Power pins                            |  |  |
| Connector        | TBD                                   |  |  |
| Mating Connector | TBD                                   |  |  |



| J2-1  | POWER IN                                     | J5-1 | NO PIN                |  |  |
|-------|--|------|-----------------------|--|--|
| J2-2  | POWER IN                                     | J5-2 | NO PIN                |  |  |
| J2-3  | GROUND                                       | J5-3 | NO PIN                |  |  |
| J2-4  | GROUND                                       | J5-4 | NO PIN                |  |  |
| J2-5  | DIGITAL INPUT 1                              |      |                       |  |  |
| J2-6  | DIGITAL INPUT 2                              | J6-1 | POWER LEVEL           |  |  |
| J2-7  | SERIAL TX (INPUT)                            | J6-2 | GROUND                |  |  |
| J2-8  | RTS (INPUT)                                  | J6-3 | POWER LEVEL OVERRIDE  |  |  |
| J2-9  | SERIAL RX (OUTPUT)                           | J6-4 | GROUND                |  |  |
| J2-10 | CTS (OUTPUT)                                 |      |                       |  |  |
|       | ,  | J7-1 | RTC EXTERNAL POWER IN |  |  |
| J3-1  | NO PIN                                       | J7-2 | GROUND                |  |  |
| J3-2  | NO PIN                                       | J7-3 | LED POWER             |  |  |
| J3-3  | NO PIN                                       | J7-4 | LED CONTROL           |  |  |
| J3-4  | NO PIN                                       |      |                       |  |  |
|       |  |      |                       |  |  |
| _     | TEST INPUT 1                                 |      |                       |  |  |
| J4-2  | TEST INPUT 2                                 |      |                       |  |  |
| J4-3  | VDIG (ICP - NOT INSTALLED IN PRODUCTION)     |      |                       |  |  |
| J4-4  | uC RESET (ICP - NOT INSTALLED IN PRODUCTION) |      |                       |  |  |

### Notes:

- LED\_GND may be connected to board ground.
- The cable length between the I/O connector and the DTE will not exceed 20 cm
- Unused pins of the connector will be left unconnected

#### Note:

• The OEM integrator will keep the power cable length to less than 20 cm with a minimum gauge wire gauge of 20 AWG