FCC ID: GCD-SA25G OPERATIONAL DESCRIPTION

1.operational description

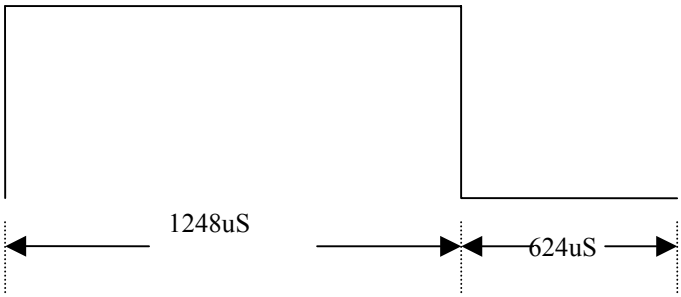
The RF section of the SA25G is based on a Melexis chip and a one transistor- based PA. The Melexis chip is a fixed medullas (32) PLL. Thus the 13.56 MHz Xtal is multiplied by 32 giving the 433.92 MHz carrier frequency. A balanced output is matched by a passive network to a one transistor PA that can deliver up to +8 dBm into 50 OHM. This device is followed by a passive antenna matching network. A printed F type antenna is used.
The u-Controller provides two signals. Namely a chip enable line that activates the Melexis and the PA and a data line that is used to OOK modulate both the Melexis device and the PA

2. Timming Requirements

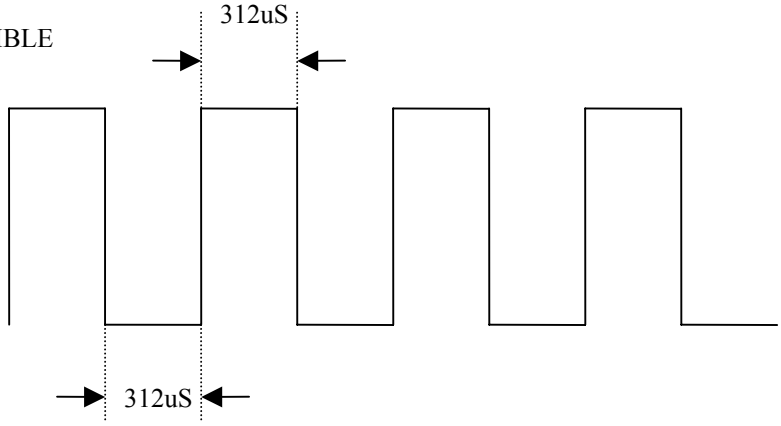
When the Wired to RF Transmitter detects activity 4 identical transmissions are sent. The time between the end of one transmission and the start of the subsequent one being random. This time interval varies between 105ms and 400 ms. However, the total TX period is always less than 1 s.

In addition 3 times per hour a similar supervisory transmission is sent even if there was no activity

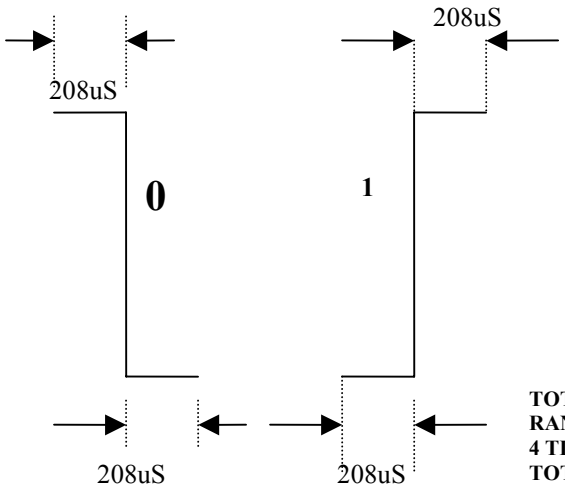
1. START BIT

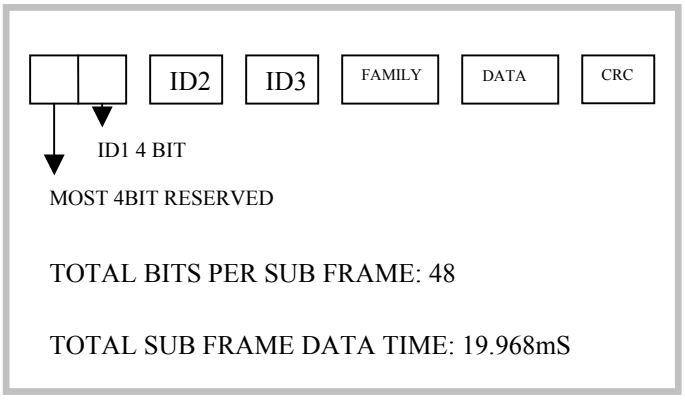


1. PREAMBLE



1. DATA





TOTAL SUB FRAME TIME: 21.842Ms
RANDOM SUB FRAMES
4 TIME SLOTS
TOTAL SUB FRAMES IN SUPER FRAME: 5

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