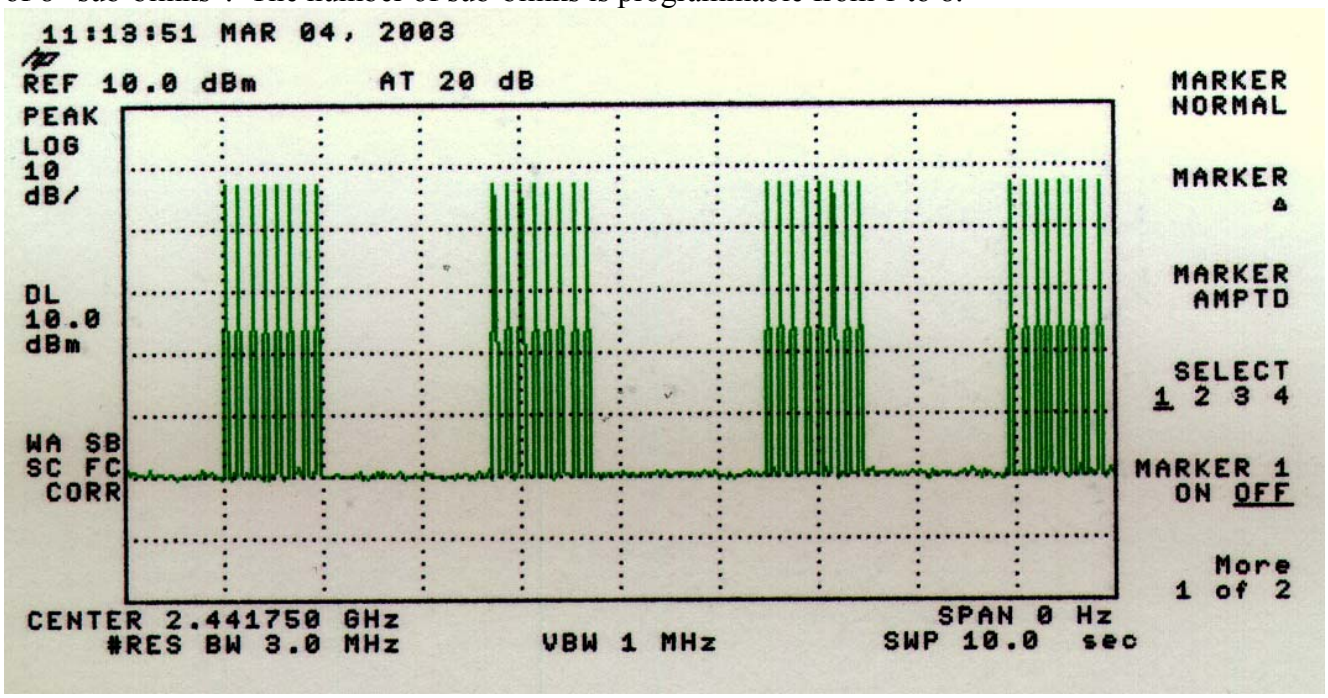
TFF-1015
Transmitter Duty Cycle Calculation and Measurements.

The spectrum analyzer's (Agilent 8595E) input was driven by a 2.4 GHz receiving antenna, which was coupled to the transmit antenna of EUT. The spectrum analyzer center frequency was set to EUT's RF channel carrier. The frequency span on the analyzer was set to ZERO SPAN. The transmitter ON time was determined from the resultant time-amplitude display.

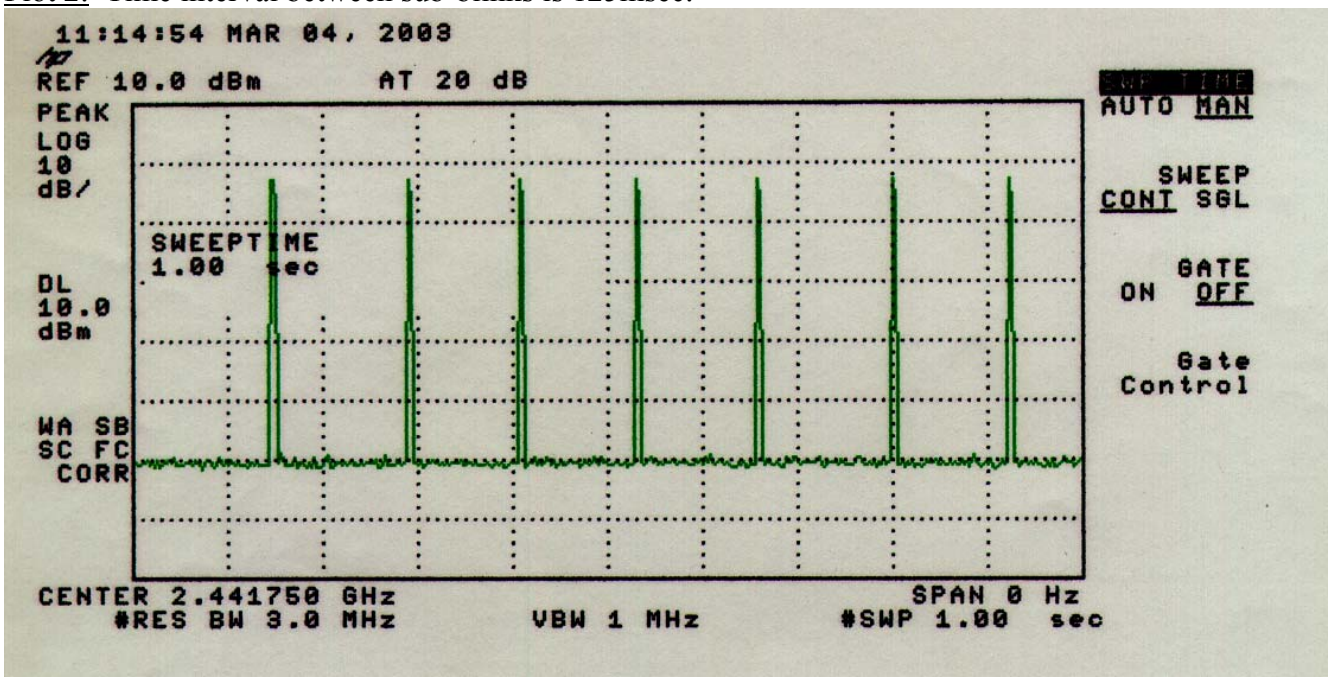
Duty Cycle Calculation:
Duty cycle = Maximum ON time in 100 msec/100.
For DSSS mode (see plot 4), maximum duty cycle = 2.55 msec/100 msec = **2.55%**
For OOK mode (see plot 6), maximum duty cycle = 9.3 msec/100 msec **= 9.3%**

Duty Cycle Measurements:
Please see pages 2-4.

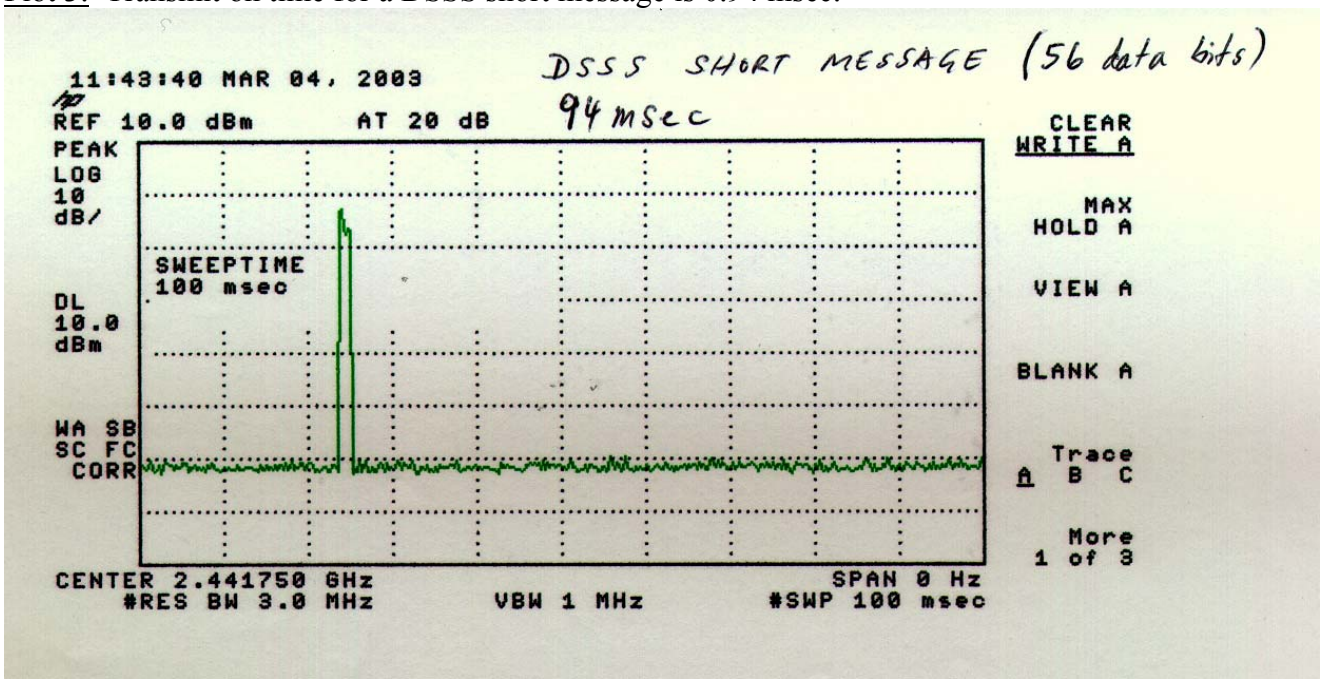
Plot 1: DSSS Transmission at fastest repetition rate of 1.5 seconds. Each transmission consists of 8 "sub-blinks". The number of sub-blinks is programmable from 1 to 8.



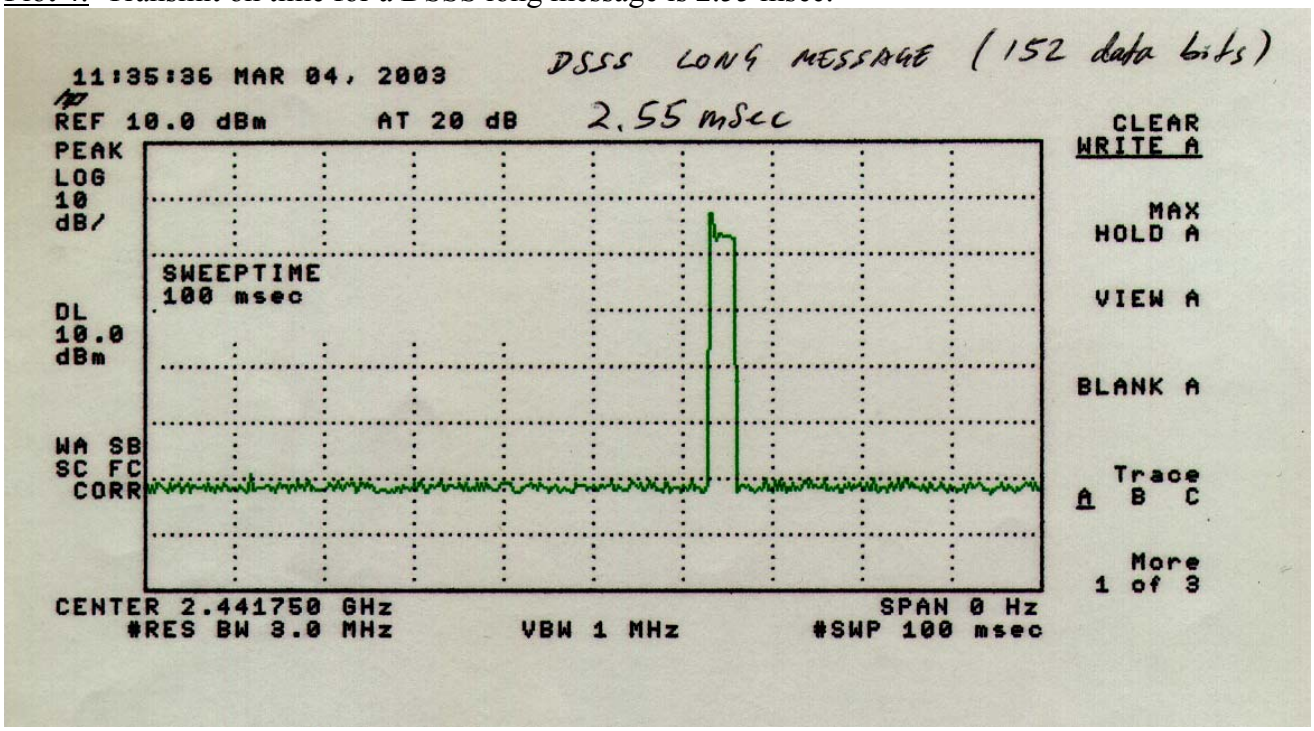
Plot 2: Time interval between sub-blinks is 125msec.



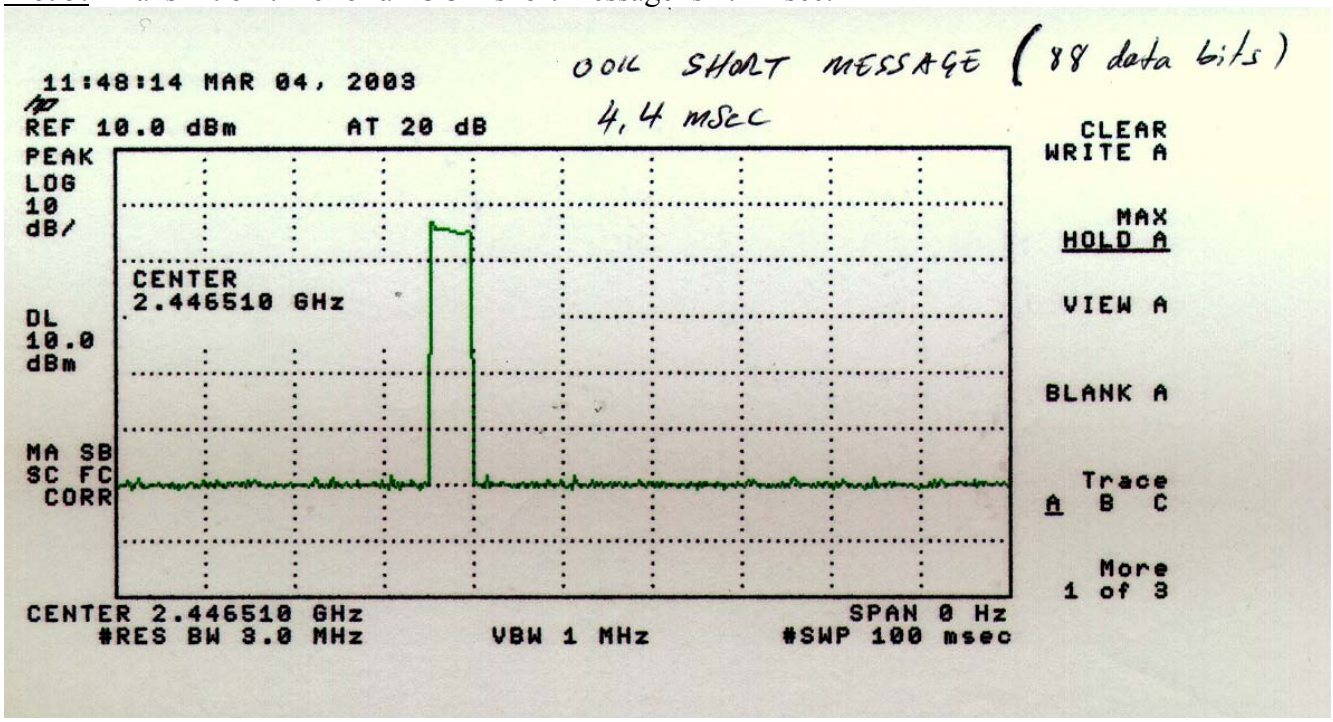
Plot 3: Transmit on time for a DSSS short message is 0.94 msec.



Plot 4: Transmit on time for a DSSS long message is 2.55 msec.



Plot 5: Transmit on time for an OOK short message is 4.4 msec.



Plot 6: Transmit on time for an OOK long message is 9.3 msec.