EXHIBIT 3-1 CFS8DL6160RF

6160RF DUTY CYCLE CALCULATIONS

TM TRANSMISSION

Transmit data rate is 3.7 Kbit/sec. Each bit has a nominal duration of 270 usec.
The data output is Manchester phase-encoded, which has an inherent 50% duty cycle.
Each TM message consists of 72 bits, which makes for a message duration of 19.44 msec. Each message is transmitted six times. Inter-message gap is 100msec.

Duty Cycle =6x19.44x0.5 / 616.64 = 9.4%

TM2 TRANSMISSION

Transmit data rate is 3.7Kbit/sec. Each bit has a nominal duration of 270 usec.
The data output is Manchester phase-encoded, which has an inherent 50% duty cycle.
TM2 message consists of 120 bits, so message duration is 32.4 msec. Each message is transmitted six times. Inter-message gap is 100msec

Duty Cycle =6x32.4x0.5 / 694.4 = 13.99%

SITE ID TRANSMISSION

Transmit data rate is 10KBits/sec. Each bit has a nominal duration of 100usec.
The data output is Manchester phase-encoded, which has an inherent 50% duty cycle.
Longest Site ID message consists of 440 bits; this makes one message duration equal to 44 msec. Each message is transmitted six times. Inter-message gap is 100msec

Duty Cycle =6x44x0.5 / 764 = 17.27%