

**FCC Request:**

Re: FCC ID P7YSDIDD101

> Applicant: Shearwater Digital Innovations  
> Correspondence Reference Number: 23742

*Since the transmitter is automatically activated, please provide the transmission time duration from the trigger point to when the transmission is completed and turned off.*

Answer:

The processor samples the reed switch approximately once per second. After detecting a change of state, it constructs the packet (1mS), then enables the VCO on the transmitter to power up (10mS), but does not transmit during that time. Then 8 packets (20 mS worst case) are sent, with a random timeout between them (100mS – 450mS). Therefore the total duration time from when the device is triggered, to when transmission is completed and turned off (worst case) is 4.321seconds.

|        |   |
|--------|---|
| 0.000s | Trigger Point   |
| 1.000s | Microprocessor sample time (worst case)   |
| 0.011s | Microprocessor setup time for packet construction and transmitter warmup (worst case)         |
| 0.020s | Packet 1  |
| 0.450s | delay 1 between packets (no transmission)   |
| 0.020s | Packet 2  |
| 0.450s | delay 2 between packets (no transmission)   |
| 0.020s | Packet 3  |
| 0.450s | delay 3 between packets (no transmission)   |
| 0.020s | Packet 4  |
| 0.450s | delay 4 between packets (no transmission)   |
| 0.020s | Packet 5  |
| 0.450s | delay 5 between packets (no transmission)   |
| 0.020s | Packet 6  |
| 0.450s | delay 6 between packets (no transmission)   |
| 0.020s | Packet 7  |
| 0.450s | delay 7 between packets (no transmission)   |
| 0.020s | Packet 8  |
| 4.321s | Total Duration (worst case ) from when device is triggered to transmission completed and off. |