



Figure 8-6. Power up timing diagram for pin 7 pulled high up

8.3.8 LIMP (Limp Home Output – High Voltage Open Drain Output)

The default configuration for the LIMP pin is used for the limp home function. When in the LIMP configuration, the pin is connected to external circuitry for a limp home function due to various fault conditions explained in the device functional mode sections. The LIMP pin can be configured as other functions in SPI control mode, but only performs the limp home function in pin control mode.

8.3.8.1 LIMP in Pin Control Mode

In pin control mode, LIMP is the only function the LIMP pin can perform. The LIMP pin turns on for all faults that cause the device to enter fail-safe mode to provide the limp home function. To exit fail-safe mode, a wake event must take place and the fault condition is cleared or the SWE timer times out. When any non-watchdog fault caused the device to enter fail-safe mode, the LIMP pin will turn off automatically after exiting fail-safe mode. When exiting fail-safe mode due to a watchdog fault, the LIMP pin is still on until the device transitions to standby mode and three correct watchdog input events take place thus turning off the LIMP pin. If this first event is missed, the device enters fail-safe.