



- ① Client receives address byte. Address matches. Client generates interrupt. Address byte is moved to the I2CxRCV register and must be read by user software to prevent buffer overflow.
- ② Next received byte is message data. The byte is moved to the I2CxRCV register, sets RBF. Client generates interrupt. Client Acknowledges reception.
- ③ Next byte received before I2CxRCV is read by software. I2CxRCV register is unchanged. I2COV overflow bit is set. Client generates interrupt. Client sends NACK for reception.

- ④ Next byte also received before I2CxRCV is read by software. I2CxRCV register is unchanged. Client generates interrupt. Client sends NACK for reception. The host state machine should not be programmed to send another byte after receiving a NACK in this manner. Instead, it should abort the transmission with a Stop condition or send a Repeated Start condition and attempt to retransmit the data.
- ⑤ User software reads the I2CxRCV register. RBF bit clears.
- ⑥ User software clears the I2COV bit. Reception will still not be able to proceed normally until the module sees a Stop/Repeated Start bit. If neither of these conditions is met, an additional transmission will be received correctly, but sends a NACK and sets the I2COV bit again.