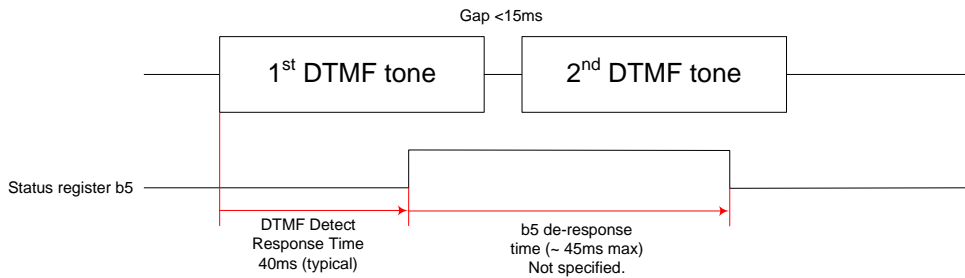
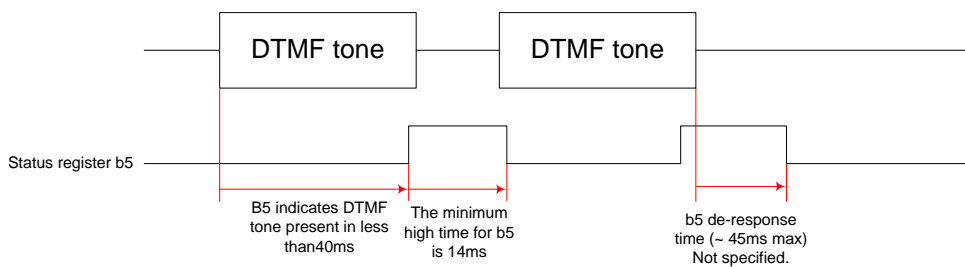


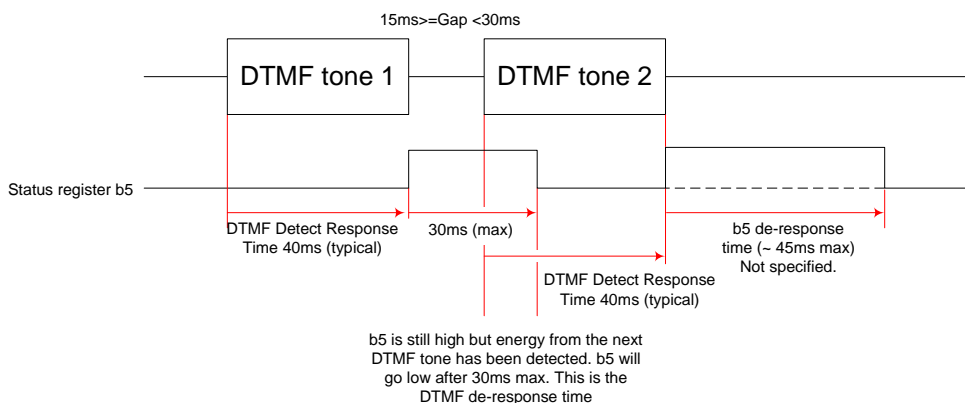
Normal DTMF tones are received and the tone gap is equal to or greater than 15ms (min)



Normal DTMF tones are received but the tone gap is less than 15ms. In this case b5 remains high, there will be no interrupt for the second tone and the DTMF decoder may not indicate the 2<sup>nd</sup> tone value.



DTMF tones are received under ideal conditions. They are just long enough to be decoded. With good signal conditions, the de-response time is short. B5 is guaranteed to be at least 14ms long so that it cannot be missed due to long polling delays or long interrupt service latency.



Short DTMF tones (>25ms) are received and the tone gap is less than 30ms but valid. The DTMF decoder will not de-respond in time to re-respond to DTMF tone 2. b5 will not de-assert and signal the new DTMF thus no interrupt can be generated. To avoid this, energy detected after ~15ms will cause b5 to deassert after after 30ms maximum. This is the DTMF decoder de-response time specified. Ie the time that a DTMF tone will be signalled for when DTMF tones have short gaps.

Note: Figures are not to scale