

5.2.5 Wake-up out of low-power mode

5.2.5.1 Wake-up pattern

During low-power mode, a transceiver shall monitor the bus lines CAN_H and CAN_L for wake-up patterns (WUPs). Implementations shall make use of a differential bus comparator monitoring the bus lines.

A WUP is signalled on the bus by two consecutive dominant bus levels for at least t_{Wake} , each separated by a recessive level for at least t_{Wake} . A bus wake-up shall be performed, if the selective wake-up function is disabled or is not supported and a WUP has been received (i.e. being in state 3 or 4, see figure 5).

According to the target bit rate of the system, the individual time thresholds of an implementation can be adapted, but shall stay within the defined minimum and maximum timings as defined in **Fehler! Verweisquelle konnte nicht gefunden werden..**

5.2.5.2 Wake-up frame

5.2.5.2.1 General

All CAN frames as they are mentioned below shall follow the definitions in the ISO 11898-1.

A transceiver with selective wake-up function shall monitor the bus lines CAN_H and CAN_L for wake-up frames (WUFs). Implementations supporting this feature shall make use of a differential bus comparator monitoring the bus lines. A bus wake-up shall be performed, if selective wake-up function is enabled and a "valid WUF" has been received. The transceiver may ignore up to four (or up to eight in case of data rate > 500kBaud) consecutive CAN data frames that start after switching on the bias.

A received frame shall be considered as a valid frame in case all of the following conditions are met:

The section 12.4 of the ISO 11898-1 shall not be considered. Instead, the following described physical layer effects including the transmitter baud rate tolerance influencing the bit reception shall be considered. The maximum transmitter baud rate tolerance that can be accepted is device specific. Figure 6 depicts physical layer effects influencing the bit reception under the consumption of 10 consecutive bits containing only one recessive to dominant edge (worst case bit sequence for resynchronisation).

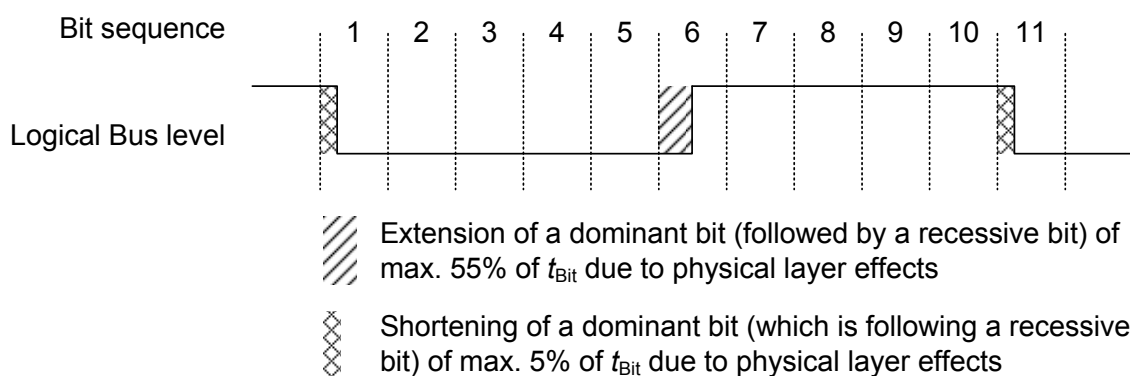


Figure 6 — worst case timings for bit reception

The two explained physical layer effects depicted in Figure 6 may occur independently of each other.

The maximum shortening of a dominant bit (which is following a recessive bit) described in Figure 6 is constant (except the ACK bit) for and each dominant bit (which is following a recessive bit) in one frame (without loss of arbitration).