



# DA14680/681-01 Hardware Known Limitations

Family:	DA1468x			
Date:	4-Jul-16 © 2016 Dialog Semiconductor, Confidential			
Item Nr	Date	Description	Solution/workaround	Status DA14680/681-01
173	6-Oct-15	Depending on the board layout the 32kHz xtal clock can cease to oscillate when the system goes into deep sleep. When this occurs the sleep timer is stopped and the system cannot wake up. The root cause of this problem is a digital output driver that is multiplexed on the XTAL32P pin.	<b>Fix:</b> This is planned to be fixed in the next version in the DA1468x family <b>SW Workaround:</b> N/A <b>HW Workaround:</b> A 10M ohm resistor can be placed between the positive XTAL32 pin and ground or between the positive and negative pin of the XTAL32. This will create a small current (nA) and will keep the oscillator running.	Not Fixed
171	17-Sep-15	Reading from on-chip OTP is not guaranteed under all conditions. Process variations and temperature both have impact on correct behavior, where low temperature is most likely to cause the OTP read out to fail.	<b>Fix:</b> This has been correctly fixed in DA14680/681-01 <b>SW Workaround:</b> N/A <b>HW Workaround:</b> N/A	Fixed
170	24-Aug-15	While the device is in deep sleep an external HW reset will not correctly boot all the logic. As a result the execution of the Boot ROM can get stuck	<b>Fix:</b> This has been correctly fixed in DA14680/681-00 <b>SW Workaround:</b> N/A <b>HW Workaround:</b> N/A	Fixed
168	14-Jul-15	The device will not run correctly on an external 32MHz XTAL for the system clock. The root cause is found in the synchronization of two related internal clock signals that have an independent clock divider (÷2) from the 32MHz. As a result the 16MHz RF PLL input is affected and not able to generate the proper RF signals.	<b>Fix:</b> This is not fixed in DA14680/681-01 <b>SW Workaround:</b> N/A <b>HW Workaround:</b> Do not use the 32MHz XTAL mode.	Not Fixed
151	17-Jun-15	An increased Packet Error rate might occur if certain GPIOs are toggled during RF activity. The root cause of this problem is the close location of these GPIOs pins to the on-chip 16MHz XTAL oscillator circuitry. Toggling of these GPIOs might corrupt the clock, which will be visible in the Packet Error Rate. The following pins are affected by this: aQFN60: P1.0; WLCSP: P1.0; P1.5	<b>Fix:</b> This is not fixed in DA14680/681-01 <b>SW workaround:</b> N/A <b>HW Workaround:</b> Carefull PCB design. These pins should only be used for waking up the device and not while the XTAL 16MHz is running. An application note explaining how to design the PCB is available on the Dialog support website: AN-B-061 DA1468x Application hardware design guidelines	Not Fixed
161	21-Apr-15	Charging current at 90mA or above can lead to very high current values when the voltage drops below the Constant Current/Constant Voltage switching point. This can happen when the Charger cable is connected but the device is drawing more current from the battery than the charger supplies. In such a situation the charge current is no longer controlled and this can damage the battery.	<b>Fix:</b> This has been correctly fixed in DA14680/681-00 <b>SW workaround:</b> N/A <b>HW workaround:</b> N/A	Fixed
176	27-Nov-15	During plugin of the USB connector, a large voltage overshoot in combination with ringing on the VBUS pin can occur. The voltage overshoot depends on the configuration of the application: USB-source type, wire types, wire length, capacitor on the VBUS pin. Without precautions the device can be damaged.	<b>Fix:</b> This is not fixed in DA14680/681-00 <b>SW workaround:</b> N/A <b>HW workaround:</b> A 0.390hm series resistor and 10uF shunt capacitor will prevent voltage overshoot and ringing.	Not Fixed
		Also check the Software Known Limitations, which are described in the SDK release notes		

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