Freescale Semiconductor
Chip Errata

MC13202CE/D
Rev. 1.1, 02/2008

MC13202/203 Errata

2.4 GHz Low Power Transceiver for 802.15.4

1 Introduction

These errata pertains to all MC13202/203 production devices. The related IC Data Sheet, MC13202/D, and Reference Manual, MC13202RM apply to these devices. This document is included in shipments for which this errata applies.

2 Errata

Table 1. MC13202/203 Errata

No	Errata	Work Around
1	The Doze current (no CLKO output active) is specified as 35 µA (typical) on the data sheet with the programmed CLKO frequency at a default of 32.786 kHz. This Doze current can be considerably higher for certain combinations of higher CLKO frequencies and event timer prescale options. These combinations consist of: a) CLKO freq = 16 MHZ with prescale select at 5, 6, or 7. b) CLKO freq = 8 MHZ with prescale select at 6, or 7. c) CLKO freq = 4 MHZ with prescale select at 7. All other combinations have no problems. The higher current will not occur every time Doze is enabled. There is no potential harm either to the transceiver or its operation. The Doze current is simply higher.	To work around this issue, there are three choices: a) Accept higher current in Doze mode. b) Do not use any of the described combinations in Doze mode. c) If a higher CLKO frequency is desired when using CLKO as an MCU clock source, and the desired prescale select can cause a problem, just before entering Doze mode, program the CLKO frequency to a lower value. Next, use the desired prescale value while in Doze. Finally, after exiting Doze mode, reprogram CLKO to the desired frequency before releasing the MCU clock to the CLKO source.
2	Timer Comparator 3 can abort an RX sequence - If an RX sequence (Packet Mode or Streaming Mode) is active and Timer Comp 3 matches the value of the Event Timer “current time” counter, the RX sequence will be aborted. No status bit is set and no interrupt can be generated. Exit from RX mode can only be detected by using GPIO1 as an “out-of-idle” indicator. Freescale IEEE 802.15.4 MAC (and BeeStack) software already deals with and compensates for this situation. If users are writing their own software (such as using SMAC), this condition should be compensated for.	**Note:** The Freescale IEEE 802.15.4 MAC and BeeStack (which uses the MAC) already compensate for this condition. For users writing their own applications: a) Never let the counter reach the compare value in Time Comp 3 register. b) Enable Timer Compare 3 always to generate an interrupt. If the interrupt occurs and the RX state was enabled. Take appropriate action, such as restarting RX. c) Monitor the “out-of_idle” indicator while in RX mode.

NOTES

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