

## 11.12 QDEC Electrical specification

### 11.12.1 QDEC Electrical Specification

Symbol	Description	Min.	Typ.	Max.	Units
$t_{\text{SAMPLE}}$	Time between sampling signals from quadrature decoder	128		131072	$\mu\text{s}$
$t_{\text{LED}}$	Time from LED is turned on to signals are sampled	0		511	$\mu\text{s}$

## 11.13 RADIO Electrical specification

### 11.13.1 General radio characteristics

Symbol	Description	Min.	Typ.	Max.	Units
$f_{\text{OP}}$	Operating frequencies	2400		2500	MHz
$f_{\text{CH,SP}}$	Channel spacing		1.0		MHz
$f_{\text{DELTA},1\text{M}}$	Frequency deviation @ 1 Mbps		$\pm 160$		kHz
$f_{\text{DELTA,BLE},1\text{M}}$	Frequency deviation @ Bluetooth LE 1 Mbps		$\pm 250$		kHz
$f_{\text{DELTA},2\text{M}}$	Frequency deviation @ 2 Mbps		$\pm 320$		kHz
$f_{\text{DELTA,BLE},2\text{M}}$	Frequency deviation @ Bluetooth LE 2 Mbps		$\pm 500$		kHz
$f_{\text{DELTA},4\text{M}}$	Frequency deviation @ 4 Mbps		$\pm 1000$		kHz
$f_{\text{skBPS}}$	On-the-air data rate	125		4000	kbps
$f_{\text{chip, IEEE 802.15.4}}$	Chip rate in IEEE 802.15.4 mode		2000		kchip/s

### 11.13.2 Radio current consumption (transmitter)

Symbol	Description	Min.	Typ.	Max.	Units
$I_{\text{TX,MaxdBm,QFN}}$	TX only run current for QFN package, $P_{\text{RF}}$ at maximum power setting	9.1			mA
$I_{\text{TX,MaxdBm,CSP}}$	TX only run current for CSP package, $P_{\text{RF}}$ at maximum power setting	9.7			mA
$I_{\text{TX,0dBm}}$	TX only run current, $P_{\text{RF}} = 0 \text{ dBm}$	3.7			mA
$I_{\text{TX,MINUS4dBm}}$	TX only run current $P_{\text{RF}} = -4 \text{ dBm}$	2.8			mA
$I_{\text{TX,MINUS8dBm}}$	TX only run current $P_{\text{RF}} = -8 \text{ dBm}$	2.2			mA
$I_{\text{TX,MINUS12dBm}}$	TX only run current $P_{\text{RF}} = -12 \text{ dBm}$	1.9			mA
$I_{\text{TX,MINUS16dBm}}$	TX only run current $P_{\text{RF}} = -16 \text{ dBm}$	1.7			mA
$I_{\text{TX,MINUS40dBm}}$	TX only run current $P_{\text{RF}} = -40 \text{ dBm}$	1.2			mA
$I_{\text{START,TX}}$	TX start-up current, $P_{\text{RF}} = 4 \text{ dBm}$	..			mA

### 11.13.3 Radio current consumption (Receiver)

Symbol	Description	Min.	Typ.	Max.	Units
$I_{\text{RX,1M}}$	RX only run current, 1 Mbps/1 Mbps Bluetooth LE mode	2.1			mA
$I_{\text{RX,2M}}$	RX only run current, 2 Mbps/2 Mbps Bluetooth LE mode	2.1			mA
$I_{\text{START,RX,1M}}$	RX start-up current, 1 Mbps/1 Mbps Bluetooth LE mode	1.6			mA