

Symbol	Description	Min.	Typ.	Max.	Units
$f_{NOM}$	Nominal output frequency		64/128		MHz
$f_{TOL\_HFINT}$	Frequency tolerance when running from internal oscillator	-10		6	%
$t_{START\_HFINT}$	Startup time for internal RC oscillator			6	$\mu s$

## 11.2.2 32.768 kHz clock source (LFCLK)

Symbol	Description	Min.	Typ.	Max.	Units
$f_{NOM\_LFCLK}$	Nominal output frequency		32.768		kHz
$t_{START\_LFXO}$	Startup time for 32.768 kHz crystal oscillator		0.43		s
$f_{TOL\_LFRC}$	Frequency tolerance, uncalibrated			$\pm 4.5$	%
$f_{TOL\_CAL\_LFRC}$	Frequency tolerance after calibration. Constant temperature within $\pm 0.5$ °C, calibration performed at least every 8 seconds, averaging interval > 7.5 ms, defined as 3 sigma.			$\pm 250$	ppm
$t_{START\_LFRC}$	Startup time for internal RC oscillator	1000			$\mu s$

## 11.3 COMP Electrical specification

### 11.3.1 COMP Electrical Specification

Symbol	Description	Min.	Typ.	Max.	Units
$t_{PROPDLY,LP}$	Propagation delay, low-power mode <sup>3</sup>		0.5		$\mu s$
$t_{PROPDLY,HS}$	Propagation delay, high-speed mode <sup>3</sup>		0.1		$\mu s$
$I_{SOURCE}$	Configurable input current provided by the output driven current source.				$\mu A$
$I_{SOURCE,A}$	Current when register ISOURCE=LEN2uA5	1.4	2.2	3.6	$\mu A$
$I_{SOURCE,B}$	Current when register ISOURCE=LEN5uA	3.3	4.5	6.1	$\mu A$
$I_{SOURCE,C}$	Current when register ISOURCE=LEN10uA	6.7	8.9	11.3	$\mu A$
$V_{DIFFHYST}$	Optional hysteresis applied to differential input	40	60	80	mV
$t_{INT\_REF,START}$	Startup time for the internal bandgap reference		1.5	2.2	$\mu s$
$E_{INT\_REF}$	Internal bandgap reference error	-4.7	0	4.0	%
$V_{INPUTOFFSET}$	Input offset	-15	0	15	mV
$t_{COMP,START}$	Startup time for the comparator core		3		$\mu s$

## 11.4 CPU Electrical specification

### 11.4.1 CPU performance

The CPU performance metrics are derived from benchmarks executed on highly optimized firmware. The firmware is compiled using the specified compiler version and settings to ensure accurate and reliable performance data.

Compiler: Arm version 6.16 (armclang)

Compiler flags:

```
--target=arm-arm-none-eabi -c -g -masm=auto -Wno-unused-value -mcpu=cortex-m33 -mfloating-point-abi=hard -mfpu=fpv5-sp-d16 -fno-finite-math-only -Omax
```

<sup>3</sup> Propagation delay is with 10 mV overdrive.