11 Electrical specification

11.1 Current consumption

Because the power and clock management system is constantly adjusting power and clock sources, it is difficult to estimate an application's current consumption. To facilitate the estimation process, a set of current consumption scenarios is provided to show the typical current drawn from the supply pins.

Each scenario specifies a set of operations and conditions applying to the given scenario. All scenarios are listed in the following sections.

11.1.1 Conditions

The following table shows a set of common conditions used in all scenarios, unless otherwise stated.

Condition	Value	Note
Supply	3 V on VDD	
Temperature	25°C	
CPU	WFI (wait for interrupt)/WFE (wait for event) sleep	
Peripherals	All IDLE	
Clock	HFCLK = HFINT running at 128 MHz LFCLK = Not running	
Regulator	DC/DC	
RAM	32 kB	In System ON, RAM value refers to the amount of RAM that is powered. The remaining RAM is powered off and not retained. In System OFF, RAM value refers to amount of RAM that is retained.
External components	As reference circuitry	See Reference circuitry on page 889 for details.
Cache enabled	Yes	Only applies when the CPU is running from non-volatile memory.
Compiler version	GCC version 10.3.1 20210621	
Compiler flags	`-O0 -fno-strict-aliasing -fno-delete-null-pointer-checks -fomit-frame-pointer -ffunction-sections -fmax-errors=1 -mcpu=cortex-m33 -mthumb -falign-functions=16 -mfloat-abi=soft -msoft-float`	

Table 91: Current consumption scenarios, common conditions