

3. The current consumption values include input leakage current.
4. Maximum values are characterized values and not test limits in production.

26.2.4 ATmega328P DC Characteristics

$T_A = -40^{\circ}\text{C}$ to 85°C , $V_{CC} = 1.8\text{V}$ to 5.5V (unless otherwise noted)

Symbol	Parameter	Condition	Min.	Typ. ⁽²⁾	Max.	Units
I_{CC}	Power Supply Current ⁽¹⁾	Active 1 MHz, $V_{CC} = 2\text{V}$		0.3	0.5	mA
		Active 4 MHz, $V_{CC} = 3\text{V}$		1.7	2.5	mA
		Active 8 MHz, $V_{CC} = 5\text{V}$		5.2	9	mA
		Idle 1 MHz, $V_{CC} = 2\text{V}$		0.04	0.15	mA
		Idle 4 MHz, $V_{CC} = 3\text{V}$		0.3	0.7	mA
		Idle 8 MHz, $V_{CC} = 5\text{V}$		1.2	2.7	mA
	Power-save mode ⁽³⁾⁽⁴⁾	32 kHz TOSC enabled, $V_{CC} = 1.8\text{V}$		0.8	1.6	μA
		32 kHz TOSC enabled, $V_{CC} = 3\text{V}$		0.9	2.6	μA
	Power-down mode ⁽³⁾	WDT enabled, $V_{CC} = 3\text{V}$		4.2	8	μA
		WDT disabled, $V_{CC} = 3\text{V}$		0.1	2	μA

- Notes:
1. Values with "Minimizing Power Consumption" enabled (0xFF).
 2. Typical values at 25°C . Maximum values are test limits in production.
 3. The current consumption values include input leakage current.
 4. Maximum values are characterized values and not test limits in production.

26.3 Speed Grades

Maximum frequency is dependent on V_{CC} . As shown in [Figure 26-1](#) and [Figure 26-2](#), the Maximum Frequency vs. V_{CC} curve is linear between $1.8\text{V} < V_{CC} < 2.7\text{V}$ and between $2.7\text{V} < V_{CC} < 4.5\text{V}$.