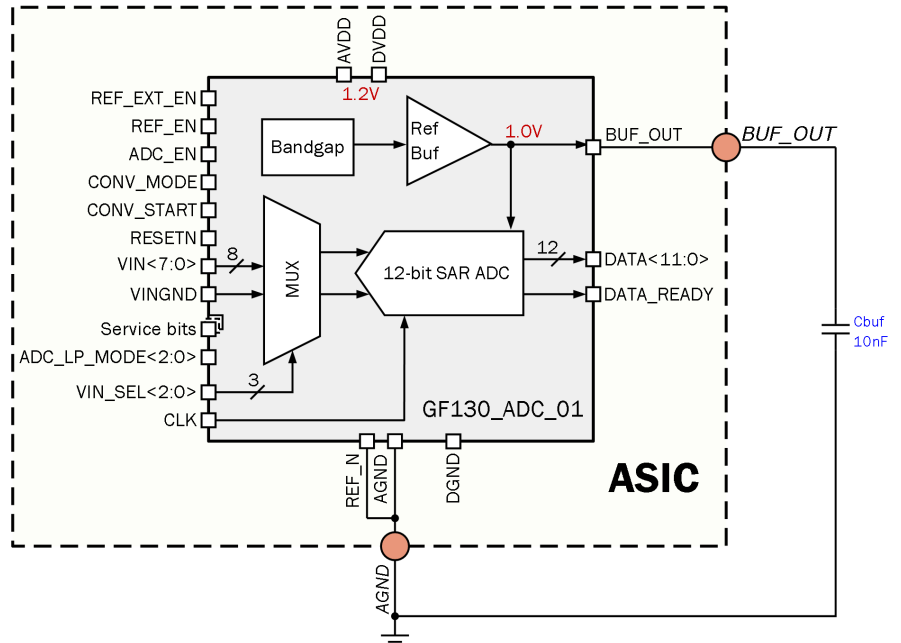


12-bit 1-channel up to 100 kSPS low power SAR ADC
OVERVIEW

130GF_ADC_01 is a 12-bit analog to digital converter (ADC) with sample rates up to 100kSPS. The IP has 8-inputs with multiplexer and includes a bandgap and a reference voltage buffer for the ADC.

IP technology: GF Embedded EEPROM 0.13um.
 IP status: silicon verification.
 Area: 0.3mm².


ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Units
			min	typ.	max	
Analog supply voltage	AVDD	-	1.14	1.2	1.26	V
Digital supply voltage	DVDD	-	1.14	1.2	1.26	V
Operating temperature range	T _j	-	-40	+27	+85	°C
Reference voltage	V _{REF}	-	-	1	-	V
Full scale input	V _{FULL}	-	-	V _{REF}	-	V
Operating input range	V _{IN}	-	0	-	V _{REF}	V
Resolution	N	-	-	12	-	bits
Sample rates	F _S	-	-	-	100	kSPS
External clock frequency	F _{CLK}	F _{CLK} = 16 F _S	-	-	1.6	MHz
Offset error	E _O	-	-15	-	+15	mV
Differential non-linearity	DNL	-	-	-	±1	LSB
Integral non-linearity	INL	-	-	-	±3	LSB
Sampling time	T _S	-	-	3	-	T _{clk}
Input capacitance	C _{IN}	-	-	10	-	pF
Start-up time	T _{START}	-	-	0.3	-	ms
Shutdown current	I _{SD}	-	-	90	-	nA
Current consumption	I _{AVDD}	@AVDD	-	241	-	uA
	I _{DVDD}	@DVDD	-	3	-	
Total current consumption	I _{CC}	F _S = 100kSPS	-	244	-	