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Rev.1.10
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Data Converter Datasheet

12bit 2.5MSps SAR ADC

Key Features

- Conversion method : Successive approximation
- Resolution : 12/10/8bit selectable
- Conversion time : 0.4us
- Differential nonlinearity : -1LSB(Min.)/+1LSB(Max)
- Integral nonlinearity : -2LSB(Min.)/+2LSB(Max)
- Supply voltage: VCCA=2.7 to 3.6 V
- Analog Input range : 0 to VREF, single-ended, no multiplexer included.

Technology

- Process : TSMC CLN40LP
- Available metallization technologies :4X2Y1Z+AP.

Electrical characteristics

Item	Unit	Spec			Description
		MIN	TYP	MAX	
Analog operating voltage (VCCA)	V	2.7	3.3	3.6	
Digital operating voltage (VDD)	V	1.04	1.2	1.26	
Reference voltage (VREF)	V	2.7	3.3	3.6	VCCA≧VREF
Junction temperature (Tj)	℃	-40	25	125	
Resolution	bits	8	10	12	selectable
Clock frequency (ADCLK)	MHz	-	60	61.5	
Analog input range (Vin)	V	0		VREF	Single ended
Analog input channel number	n	-	-	1	No multiplexer included
Conversion rate (Fconv)	Msps	-	-	2.5	ADCLK=60MHz, 12bit
Conversion time (Tconv)	us	0.4	-	-	ADCLK=60MHz, 12bit
Integral Non-Linearity (INL)	LSB	-2	-	+2	12bit
Differential Non-Linearity (DNL)	LSB	-1	-	+1	12bit
Absolute accuracy (Abs)	LSB	-4	-	+4	12bit
Power consumption (Icc)	mA	-	0.7	1.1	ADCLK=60MHz, VCCA pin

**This IP is contract design IP. Please contact for detail.*

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