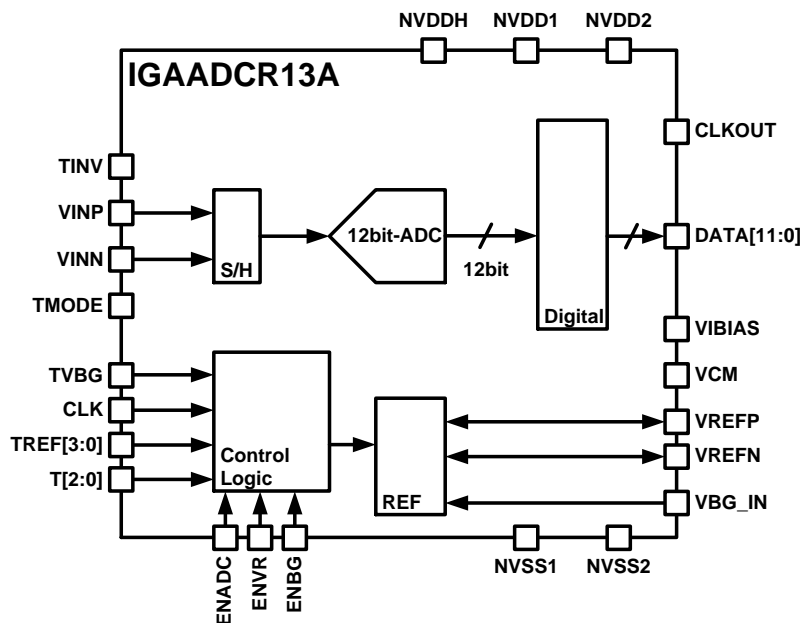# IGAADCR13A
TSMC CLN55LP 12Bit 100MHz Pipelined ADC [1ch]

Overview

IGAADCR13A is a general-purpose analog to digital converter (ADC) with 12-bit resolution. This ADC is based on pipelined architecture and the sampling rate can be up to 100MHz.

IGAADCR13A contains one sample/hold circuit and one 12-bit ADC and high speed parallel interface.

A power down mode is available to disable IGAADCR13A and is used for lower power dissipation.

IGAADCR13A Block Diagram

Features

- 12-bit resolution
- 100MHz conversion rate
- Dual supply voltage, 3.3V and 1.2V for digital
- Differential input is available
- 2's complement format
- Built in analog input inverse function
- Power down mode is available
- Operation temperature : -40℃ to 125℃

Technology

- TSMC 55nm 1.2V/2.5V Low Power Process
- Metal scheme :4X1Z
- Device information
  Core device : nch / pch
  IO device : nch_25 / pch_25
  High R resistor: rppolywo
  BJT : PNP

Applications

- Pipelined ADC

Deliverables

Item	Description	Format
1	Comprehensive Documents	.pdf
2	Hard Macro	.gds / .spi
3	Synthesis Model	.lib / .db
4	Verilog Model	.v
5	LEF Model	.lef

About Global Unichip Design Excellence

GUC, the Flexible ASIC Leader™, provides a comprehensive suite of Flexible ASIC Services from silicon-proven IP to complete SoC integration and delivery. Founded in 1998, GUC is publicly traded on the Taiwan Stock Exchange. GUC's design services cover all fabrication technologies from mature processes up to the most advanced 28nm node. At the most advanced nodes, high complexity, noise coupling, electro migration, dynamic IR drop and design for manufacturing (DFM) problems now exceed the capability of traditional design methodology. That's why GUC provides an advanced technology design flow that includes a quick prototyping step to achieve rapid timing and signal integrity closure.

As an added assurance, all of GUC IP are silicon-proven and designed with manufacturability, test, and yield considerations in mind. GUC provides a total IP solution through FPGA platform verification for a variety of products.

GUC's in-house IP Portfolio includes DDR, High Speed Interface, Data Converter, Hardened ARM Core, Multimedia and specialized IP. GUC's IP Eco-System provides the flexibility to work with IP from GUC, TSMC and other vendors, creating the widest range of design options. Based in Hsinchu Taiwan, GUC has developed a global reputation with a presence in China, Europe, Japan, Korea, and North America. With a solid track record of shipping more than150 million complex SoC units to date, GUC provides the fastest time-to-market at the lowest possible risk.

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