

CT20115

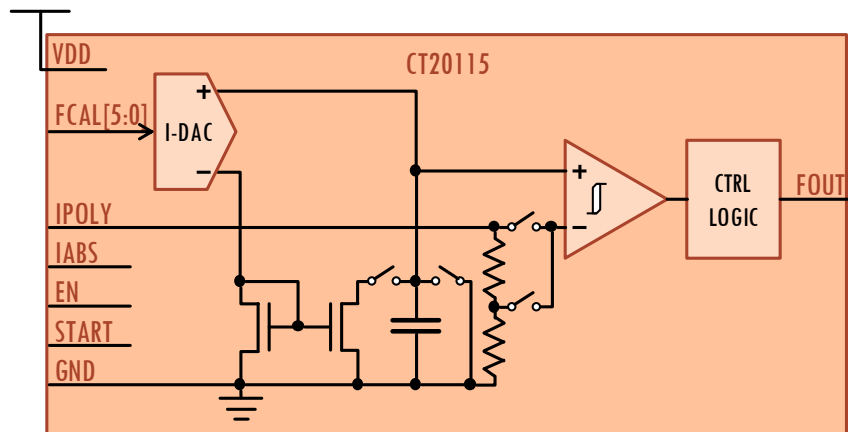
Frequency adjustable 32MHz RC Oscillator

Status

- Silicon-Proven on 0.13um TSMC technology
- PVT characterized
- Easy portability
- In mass-production

Deliverables

- Datasheet
- Integration guidelines
- GDS2 and LVS Netlist
- Footprint (.LEF)
- Test Specifications



Applications

- General Purposes IP

Features

- Nominal frequency $f_0 = 32\text{MHz}$
- Total current consumption below $100\mu\text{A}$, stand-by current below $6\mu\text{A}$
- Trimmable via OTP
- Frequency accuracy:
 - 30% untrimmed
 - 5% trimmed
- Supply voltage: $1.5\text{V} \pm 10\%$
- Operating temperature: $-25/125^\circ\text{C}$

Description

CT20115 is a low power oscillator with internal RC designed to meet power budget target for portable and battery-operated devices.

Internal trimming allows to calibrate the oscillation frequency and improve output accuracy.

The component is optimized for ease of use and integration in complex SoCs.

Related Ips

- CT20308 – Accurate BangGap Voltage Reference Generator
- CT22406 – Ultra-Low Power 12bits, 35KSps SAR ADC

PMIC Auxiliary block TSMC 130n-BCD

Application Example Frequently-Asked Questions

Application Example

In this application example, the bundle of the CT20115, the CT20308 and the CT22406, constitutes the auxiliary section of a PMIC product in TSMC 130n-BCD process (Silicon-Proven and in mass-production implementation).

The bundle provides to the whole PMIC system the following references:

- The buffered reference voltage of $1V \pm 0.4\%$ (CT20308)
- The reference current (both IPOLY and IABS) of $1\mu A \pm 1.5\%$ including current distributors (CT20308)
- The reference clock of $32MHz \pm 5\%$ (CT20115)

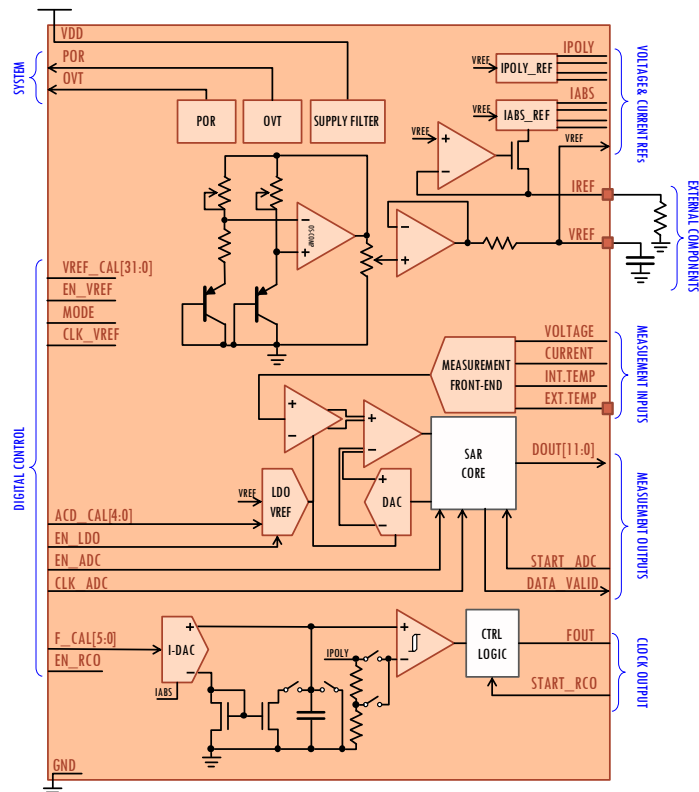
The following controls are also provided by the CT20308:

- Precise Power-On Reset signaling
- $140^{\circ}C \pm 10^{\circ}C$ Over-Temperature protection signaling

The Measurement Front-End of the CT22406, designed to meet overall 12bits accuracy after conversion, is able to measure:

- Voltage and Current in different ranges
- internal/external Temperature Sensor

CT22406 ADC Readout can be used for checking the whole system during operation and to provide Analog-BIST support during final testing at ATE,



FAQs

Q: May I ask Canova Tech to migrate the IPs to a different manufacturing foundry and process?

A: Yes, you can. Our business model includes porting of the IPs to your preferable silicon foundry supplier.

Q: May I ask Canova Tech to develop custom and dedicated analog and/or digital on top of the IPs?

A: Yes, you can. Our business model includes custom and dedicated Design Services to facilitate the integration of our IPs into your chip architecture. This business model includes the possibility for you to assign Canova the responsibility for design of a complete integrated circuit (GDS IP) based upon our IPs and your requirements.

Q: Which options do I have for licensing the Canova Tech silicon IPs solution?

A: You can have several licensing options which includes:

- single-use/multiple-use license: the IPs (single or in bundle) are delivered as object-code and licensed for the use on a well-defined product code (single-use) or for unlimited product codes (multiple-use).
- manufacturing license: here Canova Tech can develop your entire product, based upon our IPs (single or in bundle) and your product specifications. The GDS IP is licensed and delivered to you (including all necessary documentation and support) for you to manufacture your product and brand it.

Q: What kind of Support and IP Maintenance will I get from Canova?

A: You will get all required Support and IP Maintenance to ensure proper IP integration into your products for 12 months following the IP licensing. You can then subscribe, at your option, annual renewals of the Support and Maintenance agreement.