

KEY FEATURES

- 8/10/12.5MHz Frequency Oscillation
- 32.768KHz additional output
- Wide power supply range 1.8-3.6V
- Internal band-gap reference
- Low Current Consumption: Contact ip@cosmiccircuits.com
- Low Core Cell Area: Contact ip@cosmiccircuits.com
- Fujitsu 0.35um CMOS

OVERVIEW

The CC10MOSC-F350C is a self contained oscillator capable of generating 8/10/12.5MHz clock along with a 32.768KHz clock. Designed in a 0.35um CMOS, the oscillator works from 1.8V to 3.6V power supply. It requires no external components and hence no pin. It occupies 0.4mm² and consumes about 400ua current.

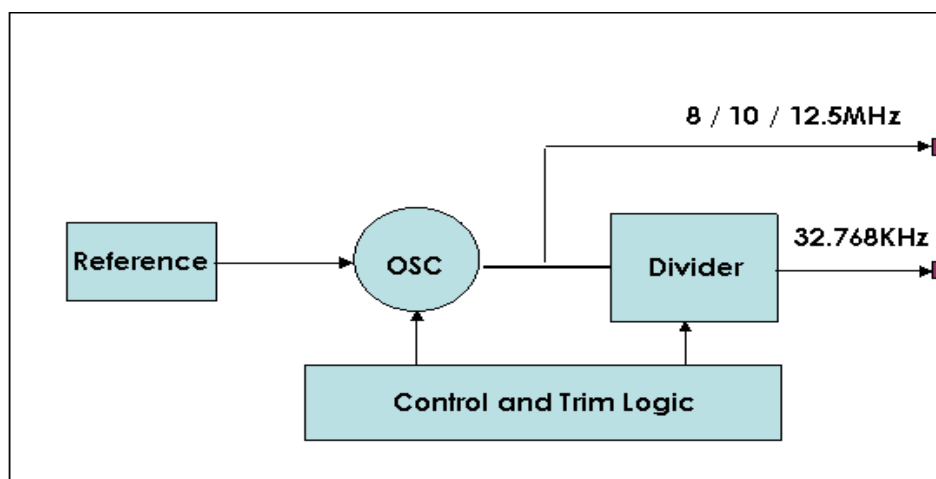
DIFFERENTIATION

The CC10MOSC-F350C is a self contained high accuracy oscillator generating 8/10/12.5MHz CMOS-level clock. A novel architecture maintains excellent stability of oscillation across process, voltage and temperature variations. The power-supply can have a wide variation from 1.8V to 3.6V, with the oscillator maintaining its performance in spite of this wide range. This enables sharing of existing power-supplies on the system, such as a 1.8V or a 2.5V or a 2.6V power-supply voltage. A 32.768KHz clock is derived of this high frequency

APPLICATIONS

- Clocks for Microcontrollers
- RTC

BLOCK DIAGRAM



SPECIFICATIONS TABLE

Parameter	Condition	Value			Units
		Min	Nom	Max	
Supply Voltage		1.8		3.6	V
Specified Temperature Range		-40		125	°C
High Freq Clock					
Frequency		8	10	12.5	MHz
Accuracy		-2		2	%
Pulse Width		40		60	%
RMS Jitter				1	ns
Low Freq Clock					
Frequency			32.768		KHz
Accuracy		-2		2	%
Pulse Width		40		60	%
RMS Jitter				1	%
Process		Fujitsu 350nm			
Status		Silicon Proven			

Note-1: Product specifications are subject to change without notice. No responsibility is assumed for use of information herein.

Note-2: Products specifications such as that described above can typically be altered and customized for specific applications. Contact Cosmic Circuits for more information.

ABOUT COSMIC CIRCUITS

Cosmic Circuits is a provider of differentiated and complex Analog, Mixed-Signal & RF Silicon IP cores. We create and provide IP cores that are best-in-class and thereby make our customers' solutions differentiated and low-cost.

Cosmic Circuits has quickly grown to be a company with the potential to become the destination of choice for world-wide customers for their complex and differentiated Analog, Mixed-Signal & RF Intellectual Property needs.

DIFFERENTIATED IPS

We endeavor to create and provide Analog-IP solutions that are unique in functionality, burn the least amount of power, and take up minimal silicon die-area. 'Best-in-Class' is our Mantra. By using our analog-IP cores, our customers can expect their solution not to be disadvantaged because of analog, and even better, let the analog stand-out as a differentiating factor for the entire solution.

We value our unique blend of deep and broad analog skills and understanding of systems. Our customers can engage with our experts on the type of customization that needs to be done, or the kind of trade-offs to make, and expect the interaction to be a rewarding experience.

DELIVERABLES

We provide the following deliverables to aid quick and reliable integration into the design flow. Please contact us for any additional views.

- ✓ GDSII
- ✓ Netlist (Spice format for LVS)
- ✓ Footprint (LEF format)
- ✓ User documentation
- ✓ Module integration guidelines
- ✓ Datasheet
- ✓ Silicon validation report (where available)
- ✓ Evaluation board (where available)

LICENSING AND CUSTOMIZATION

Our engagements-models includes single-use and multi-use licensing of our IP-cores, Customization of IP-cores, Process porting of the cores to the customers' target process, turn-key development and licensing of customized IP cores and full-chip solutions, as well as supply of Known-Good-Dies (KGD) of full-chip ICs.

SUPPORT

We consider ourselves successful when our customers succeed. We offer active support, both during the chip integration phase and during the product-ramp phase. We offer on-site support when needed. With Cosmic Circuits, our customers can be assured of a reliable partner interested in the success of the end product.

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