Real Time Clock Module (I²C-BUS)

YSN8130

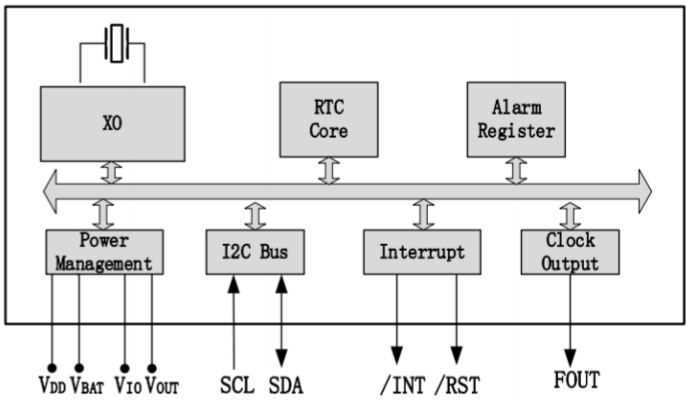
Built-in backup
battery charge control function

YSN8130E(SMD 3225)

Overview

- Low current consumption: 0.9uA(Typ.)
- High stability: ＜5±23ppm @ +25℃
- Build-in XO: 32.768KHz
- Communication interface: I2C bus
- Power supply voltage: 1.6V~5.5V
- Operation temperature range: -40℃ ~ +85℃
- Leap years autocorrection
- Timer output function with adjustable period
- Package: 3.2mm × 2.5mm × 1.0mm
- Digital offset function
- RoHS2.0, REACH& Halogen-freecompliant

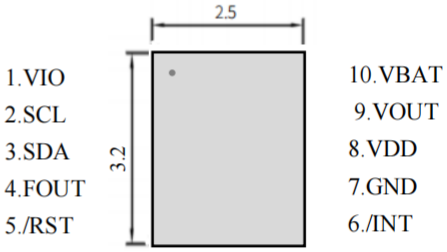
Block diagram



Pin Fuction

Pin	Pin Name	I/O	Description
1	V_{IO}	-	Interface power supply pin.
2	SCL	In	I²C clock signal
3	SDA	In/Out	I²C data signal
4	FOUT	Out	Frequency output. Frequency can be set by FSEL bits.
5	/RST	Out	Reset signal output. After the VDD pressure drop is detected, the pin outputs a negative pulse.
6	/INT	Out	Timing event interrupt output. Open-Drain
7	GND	-	Ground
8	VDD	-	Power supply
9	V_{OUT}	Out	Internal voltage output pin. Connect capacitor of 1.0uF to Ground
10	V_{BAT}	-	Backup battery pin. VBAT cannot floating, connect to large-capacity capacitors or a backup battery. Connect to VDD when switchover function is not necessary.

Terminal Connection



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Specifications (Characteristics)

Parameter	Symbol	Value			Unit	Remarks
		Min.	Typ.	Max.		
Power Supply Voltage(normal mode)	VDD	1.2	3.0	5.5	V	
Interface Voltage(normal mode)	VIO	1.6	3.0	5.5	V	If INIEN = 1, VDD<V_{DET}, the interface is disable
Backup Battery	V_{BAT}	1.2	3.0	5.5	V	
Operation Temperature	TOPR	-40	25	85	℃	
Frequency stability	Δf1/f		5±23		ppm	@ 25℃, VDD=3.0V;
	Δf2/f	-120		10	ppm	VDD=3.0V; -20℃ ~ +70℃; Reference frequency @ 25℃
Oscillation start time	t_{STA}			1	s	@25℃
Year Aging	fa			±5	ppm	First year@25℃
Average Currentl	IDD1		0.9	5.6	μA	SCL=SDA = 'H', FOUT=OFF, /INT =OFF, VDD=VIO =3.0V,CHGEN=0b or VBAT≧VDET3, -40℃~85℃

SHENZHEN YANGXING TECHNOLOGY CO., LTD.
Address: 19th Floor, 1st Huide Building, Mintang Rd No.385, Longhua District, Shenzhen, China
Email: sales@yxcxtal.com Whatsapp: +86 181 2376 0094 Phone: +86 181 2376 0094