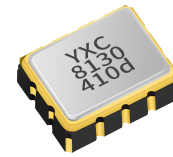


## Real Time Clock Module (I<sup>2</sup>C-BUS)

# YSN8130

Built-in backup battery charge control function



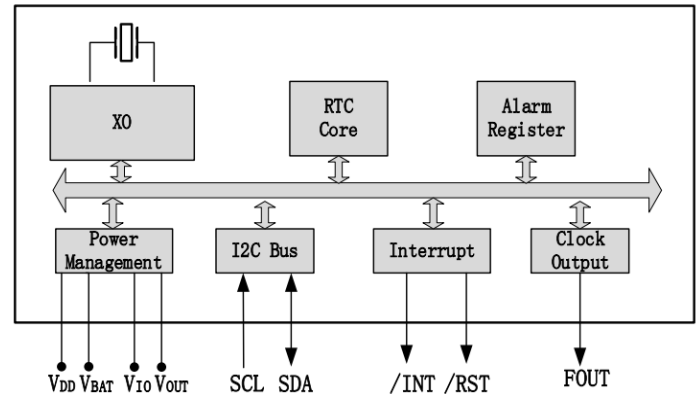
YSN8130C(Ceramic 3225)

YSN8130E(SMD 3225)

### Overview

- Low current consumption: 0.9uA(Typ.)
- High stability: <math>5 \pm 23\text{ppm}</math> @ +25
- Build-in XO: 32.768KHz
- Communication interface: I<sup>2</sup>C-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-free compliant

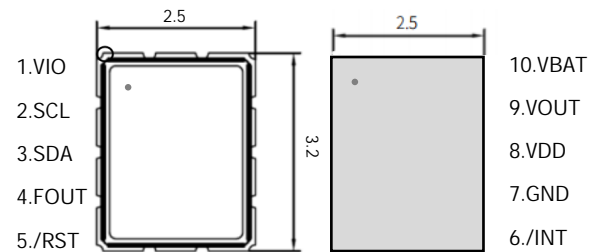
### Block Diagram



### Pin Function

Pin	Pin Name	I/O	Description
1	V <sub>IO</sub>	-	Interface power supply pin.
2	SCL	In	I <sup>2</sup> C clock signal
3	SDA	In/Out	I <sup>2</sup> C 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 <sub>OUT</sub>	Out	Internal voltage output pin. Connect capacitor of 1.0uF to Ground
10	V <sub>BAT</sub>	-	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



YSN8130C(Ceramic 3225)

YSN8130E(SMD 3225)

### 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 <math>< V_{DET}</math>, the interface is disable
Backup Battery	V <sub>BAT</sub>	1.2	3.0	5.5	V	
Operation Temperature	TOPR	-40	25	85	°C	
Frequency stability	$\Delta f_1/f$	5 ± 23			ppm	@ 25°C, VDD=3.0V;
	$\Delta f_2/f$	-120		10	ppm	VDD=3.0V; -20°C ~ +70°C; Reference frequency @ 25°C
Oscillation start time	t <sub>STA</sub>			1	s	@25°C
Year Aging	f <sub>a</sub>			±5	ppm	First year@25°C
Average CurrentI	IDD1		0.9	5.6	μA	SCL=SDA = 'H', FOUT=OFF, /INT =OFF, VDD=VIO =3.0V,CHGEN=0b or VBAT ≥ VDET3, -40°C~85°C

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