Real Time Clock Module (I²C-BUS)

YSN8111

Time stamp function
Low current consumption

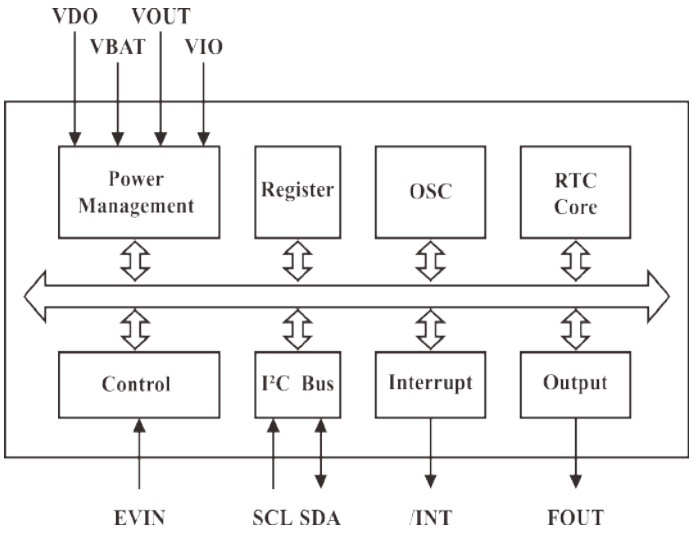


YSN8111E(SMD 3225)

Overview

- Ultra-Low current consumption:250nA(Typ.)
- High stability: ±11.5ppm / ±23ppm @ 25
- Power Supply Voltage: 1.6V~5.5V
- Operation Temperature Range: -40 ~+85
- Leap years auto correction
- Backup battery switchover function
- Timer output function with adjustable period
- Size:3.2mm × 2.5mm × 0.9mm
- Build-in Cystal: 32.768KHz
- Communication Interface: I2C bus
- RoHS2.0, REACH & Halogen-free compliant

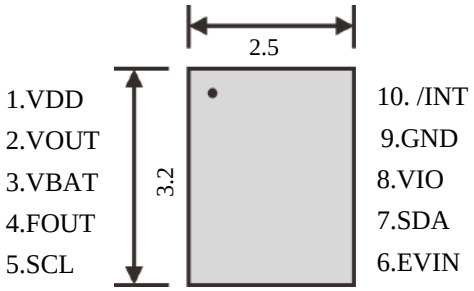
Block diagram



Pin Fuction

Pin	PinName	I/O	Description
1	VDD	-	Power supply
2	V_{OUT}	Out	Internal voltage output pin.Connect bypass capacitor of 1.0uF.
3	V_{BAT}	-	Backup battery pin.Connect to large-capacity capacitors or a backup battery.Connect to VDD when switchover function is not necessary.
4	FOUT	Out	Frequency output.Frequency can be set by FSEL bits.
5	SCL	In	I²C clock signal
6	EVIN	In	Trigger input terminal for time stamps.
7	SDA	In/Out	I²C data signal
8	V_{IO}	-	Power supply for IO.
9	GND	-	Ground
10	/INT	Out	Interrupt Output,Open-Drain

Terminal Connection



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Specifications (Characteristics)

Parameter	Symbol	Value			Unit	Remarks
		Min.	Typ.	Max.		
Power Supply Voltage(Start UP)	VDD	2.5	3.0	5.5	V	/
Power Supply Voltage(Operating)	V_{BAT}/V_{DD}	1.2	3.0	5.5	V	/
Interface Voltage	V_{IO}	1.6	3.0	5.5	V	If INIEN=1,VDD<V_{DET},the interface is disable
Operation Temperature	TOPR	-40	25	125	°C	/
Frequency stability	△f1/f	±23/±11.5			PPM	@25°C, VDD=3.0V:
	△f2/f	-120		10	PPM	VDD=3.0V;-20°C~+70°C;Reference frequency@ 25°C
Oscillation start time	t_{STA}			1	S	@25°C
Year Aging	fa			±5	PPM	First year@25°C
Average Current1	IDD1		0.25	1.4	μA	SCL=SDA=High,FOUT=OFF,/INT=OFF,VDD=VOUT =VBAT=3.0V,VIO=3.0V,40-85°C,CHGEN=0b,INIEN=0b

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