



# REAL TIME CLOCK IC

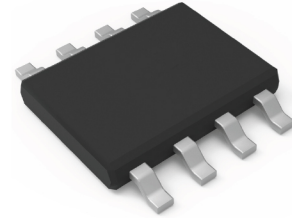
## REAL TIME CLOCK IC (Built-in Crystal Oscillator)

High-precision

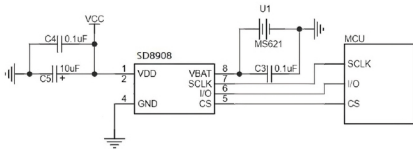


### ST8908

- Low power consumption: 0.6 $\mu$ A typical (Ta=25°C).
- Operating voltage: 2.5V~5.5V.
- Operating temperature: -40°C~+105°C.
- Accuracy at room temperature is  $<\pm 5$ ppm.
- ROHS Recognized
- 3-wire serial interface, up to 2MHz.
- Chip pin ESD>4KV
- CMOS Process
- Package Form:SOP8.



#### Application Block diagram

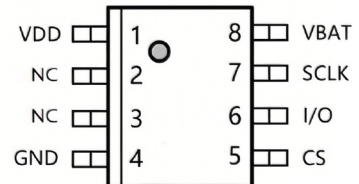


#### Overview

- Built-in Battery Charging; VBAT selectable charging voltage of 3.3V or 4.2V.
- Digital Calibration Function
- Pass 4 kV EFT Interference Test
- Battery Voltage & Temperature Measurement
- Built-in Communication Verification Function
- Built-in 31-Byte General-Purpose SRAM Registers
- Built-in clock data write-protection function
- Built-in 8-Byte ID

#### Pin Function

Pin	Name	Function	Feature
1	VDD	Positive power supply pin	2.5V ~ 5.5V
2, 3	NC	Not connected internally	-
4	GND	Power ground	-
5	CS	Chip select pin, internally pulled down to ground through a 40k $\Omega$ resistor	CMOS input
6	I/O	Data input/output pin, internally pulled down to ground through a 40k $\Omega$ resistor	CMOS input/output
7	SCLK	Serial clock pin, internally pulled down to ground through a 40k $\Omega$ resistor	CMOS input
8	VBAT	Backup battery input pin	-



#### Terminal connection

#### DC Characteristics

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	NOTES
V <sub>DD</sub>	Main Power Supply		2.5		5.5	V	
V <sub>BAT</sub>	Battery Supply Voltage		1.0		5.0	V	
I <sub>DD1</sub>	Supply Current	V <sub>DD</sub> =5V		0.6		$\mu$ A	
		V <sub>DD</sub> =3V		0.5		$\mu$ A	
I <sub>BAT</sub>	Battery Supply Current	V <sub>BAT</sub> =3V		0.5		$\mu$ A	
INT/I/O V <sub>OL</sub>	Output Low Voltage	V <sub>DD</sub> =5V I <sub>OL</sub> =0.5mA	0.1	0.2	0.3	V	