



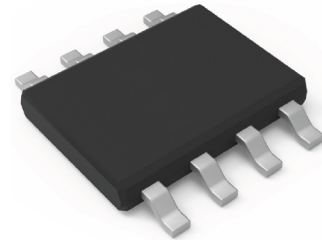
REAL TIME CLOCK IC

REAL TIME CLOCK IC (External Crystal Oscillator)

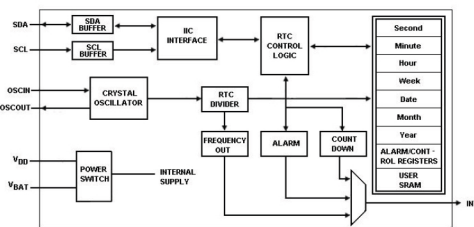


ST2068

- Low power consumption: 1µA typical (VDD =3.0V, Ta=25°C).
- Operating voltage: 1.5V~5.5V.
- Operating temperature: -40°C~+85°C.
- ROHS Recognized
- Standard IIC bus interface, maximum speed 400KHz (4.5V~5.5V).
- Chip pin ESD>4KV
- CMOS Process
- Package Form:SOP8/TSSOP8.



Block diagram



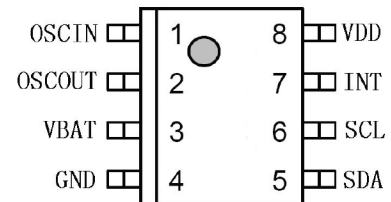
Overview

- IIC Bus Communication Disable Function in Built-in VBAT Mode
- Internal three clock data write protection bits
- Built-in IIC bus 0.5 seconds automatic reset function
- 2 bytes general SRAM implemented for system data backup
- Auto reload 8-bit countdown timer
- Built-in clock data write-protection function
- Built-in power-on reset circuit
- Built-in power supply regulator

Pin Function

NAME	FUNCTION
SCL	Serial Clock Input. This pin is the clock input for the I ² C serial interface and is used to synchronize data movement on the serial interface. Up to 5.5V can be used for this pin, regardless of the voltage on VCC.
SDA	Serial Data Input/Output. This pin is the data input/output for the I ² C serial interface. This open-drain pin requires an external pullup resistor. The pullup voltage can be up to 5.5V, regardless of the voltage on VCC.
INT	Active-Low Interrupt or Square-Wave Output. This open-drain pin requires an external pullup resistor connected to a supply at 5.5V or less. If not used, this pin can be left floating.
VBAT	External Battery input pin.
OSCIN	The input of the internal oscillator
OSCOUT	The output of the internal oscillator
VCC	DC Power Pin for Primary Power Supply. This pin should be decoupled using a 0.1µF to 1.0µF capacitor.
GND	Ground

Terminal connection



Characteristics

DC characteristics

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	NOTES
V _{DD}	Main Power Supply		1.8		5.5	V	
V _{BAT}	Battery Supply Voltage		1.8		5.5	V	
I _{DD1}	Supply Current	V _{DD} =5V		1.6	3.0	µA	
		V _{DD} =3V		1.0	1.2	µA	
I _{DD2}	Supply Current with IIC Active	V _{DD} =5V		40	120	µA	
I _{BAT}	Battery Supply Current	V _{BAT} =3V		800		nA	
I _{L1}	Input Leakage Current On SCL			100		nA	
I _{L0}	I/O Leakage Current On SDA			100		nA	
V _{BATHTVS}	V _{BAT} Hysteresis		15	50	100	mV	
INT Vol	Output Low Voltage	V _{DD} =5V I _{OL} =3mA			0.4	V	
		V _{DD} =3V I _{OL} =3mA			0.4	V	

Frequency Error & Temperature Relationship Curve

