

➤ 2.1 Real Time Clock (RTC)

RTC is an integrated circuit chip that provides accurate time for electronic products or provides an accurate time reference for electronic systems.



Key Features

Built in 32.768KHz crystal, accuracy up to ± 2 ppm, has multiple functions of I2C bus interface, calendar function (year, month, week, day, hour, minute, second, 1/16 second), leap years autocorrection, backup battery, power auto switchover, timer, frequency output.

Applications

Security monitoring/Security: IPC, DVR, NVR, Smart lock, Access control system, etc.

Consumer Electronics: Notebook, Pad, PC, etc.

Communication network: Base stations, Switch/PBX, etc.

Automotive electronics: T-BOX, Commercial vehicle IPC, Taxi meter, Driving recorder, Vehicle instrument, etc.

Meter: Electric meter, Water meter, Gas meter, etc.

Smart home: HEMS home energy management system, Smart thermostat, Sweeper, Water heater, Smart socket, etc.

Industrial automation: Robotic arm, PLC motor servo, Human-machine interface HMI, Servo controller, etc.

Medical/office appliance/testing and measurement: Oximeter, Medical monitor, Endoscope, Attendance machine, Multifunction printer (MFP), etc.

High Accuracy RTC

Part Number	Built-in Crystal	Accuracy	Typical Power Consumption	Dimensions	Backup Power Support	State
INS5609	Yes	± 5 ppm@-20°C ~ +70°C ± 20 ppm@-40°C ~ -20°C ± 20 ppm@+70°C ~ +85°C	0.7 uA	3.2*2.5*1.0mm	Yes	●
INS5699S	Yes	± 5 ppm@-40°C ~ +85°C	0.5 uA	3.2*2.5*1.0mm	Yes	●

RTC

Part Number	Built-in Crystal	Accuracy	Typical Power Consumption	Dimensions	Backup Power Support	State
INS5710A	Yes	5 $\pm$ 23ppm@25°C	0.5 uA	SOP8 4.9* 6.0* 1.6mm	No	●
INS5830A	Yes	5 $\pm$ 23ppm@25°C	0.5 uA	3.2*2.5*1.0mm	Yes	●

Lower Power Consumption RTC

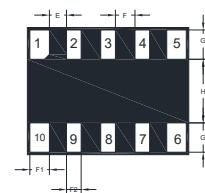
Part Number	Built-in Crystal	Accuracy	Typical Power Consumption	Dimensions	Backup Power Support	State
INS5903X	Yes	±5ppm@25°C	0.3 uA	3.2*2.5*1.0mm	Yes	○

Automotive Grade RTC

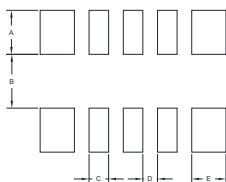
Part Number	Built-in Crystal	Accuracy	Typical Power Consumption	Dimensions	Backup Power Support	State
INS591X	Yes	±8ppm@-40°C ~ +105°C	0.5 uA	3.2*2.5*1.0mm	Yes	○

Package

SMD 3225



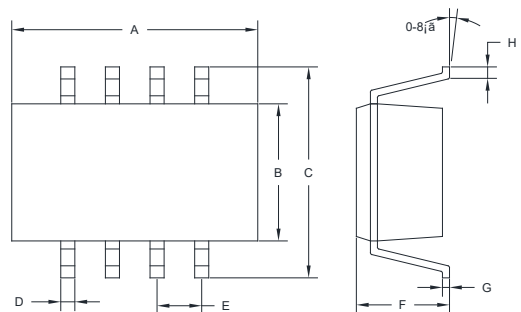
Dimension	Typ.
A	3.2
B	2.5
C	1.0
E	0.35
F	0.4
G	0.6
H	1.3
F1	0.50
F2	0.30



Dimension	Max
A	0.9
B	1.1
C	0.4
D	0.3
E	0.7

unit:mm

SOP8



Dimension	Min	Nom	Max
A	4.8	4.9	5.0
B	3.8	3.9	4.0
C	5.8	6.0	6.2
D	0.356	--	0.456
E	--	1.27	--
F	1.3	--	1.6
G	0.203	--	0.233
H	0.4	0.6	0.8

unit:mm