Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

REAL TIME CLOCK MODULE (4-bit)

RTC - 72421
RTC - 72423

- Built-in crystal unit allows adjustment-free efficient operation.
- 24 h /12 h changeable and leap year automatically adjustable (Gregorian calendar).

Note

- 7242series does not have complete compatibility ability for the "old product RTC-6242 series".
- when replace to 7242series from 6242 series, confirm the technical information of RTC7242 latest manual by all means.

RoHS Compliant

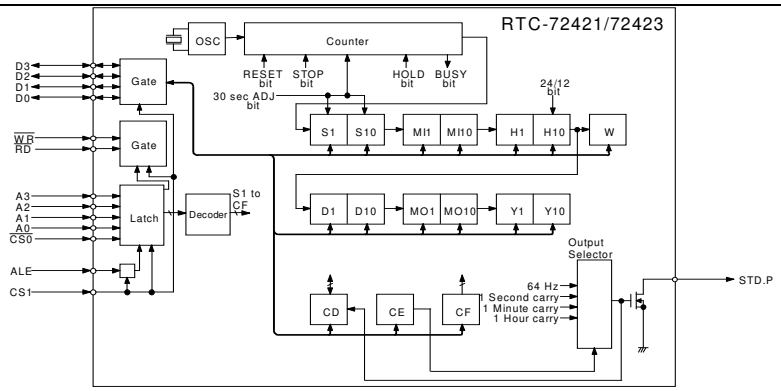
Product Number (Please contact us)
RTC-72421A : Q4272421200010O
RTC-72421B : Q4272421200020O
RTC-72423A : Q4272423200060O
RTC-72423B : Q4272423200070O

Actual size

RTC-72421

RTC-72423

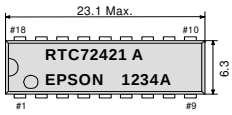
Block diagram



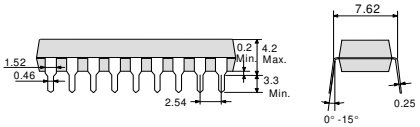
Terminal connection/External dimensions

(Unit:mm)

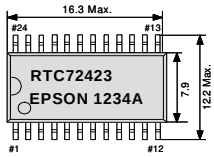
● **RTC-72421 (DIP 18-pin)**



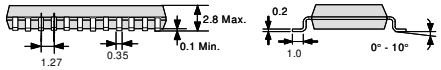
No.	Pin terminal	No.	Pin terminal
1	STD.P	18	VDD
2	/CS0	17	(VDD)
3	ALE	16	(VDD)
4	A0	15	CS1
5	A1	14	C0
6	A2	13	D1
7	A3	12	D2
8	/RD	11	D3
9	GND	10	/WR



● **RTC-72423 (SOP 24-pin)**



No.	Pin terminal	No.	Pin terminal
1	STD.P	24	VDD
2	/CS0	23	(VDD)
3	N.C.	22	(VDD)
4	ALE	21	N.C.
5	A0	20	CS1
6	N.C.	19	D0
7	A1	18	N.C.
8	N.C.	17	N.C.
9	A2	16	D1
10	A3	15	D2
11	/RD	14	D3
12	GND	13	/WR



The metal case inside of the molding compound may be exposed on the top or bottom of this product.
This purely cosmetic and does not have any effect on quality, reliability or electrical specs.

Specifications (characteristics)

***Refer to application manual for details.**

Absolute Max. rating

Item	Symbol	Conditions	Min.	Max.	Unit
Supply voltage	VDD	Ta=+25 °C	-0.3	+7.0	V
Input voltage	VI/O	Ta=+25 °C	GND-0.3	VDD+0.3	V
Storage temperature *	TSTG	RTC-72421	-55	+85	°C
		RTC-72423	-55	+125	°C

*Stored as bare product after unpacking

Operating range

Item	Symbol	Conditions	Min.	Max.	Unit
Power voltage	VDD	—	4.5	5.5	V
Clock voltage	VCLK	—	2.0	5.5	V
Operating temperature	TOPR	RTC-72421	-10	+70	°C
		RTC-72423	-40	+85	°C

Stored as bare produc after unpacking

Frequency characteristics

Item	Symbol	Conditions		Range	Unit
Frequency precision	Δf /f	Ta=+25 °C VDD=5.0 V	72421A	±10	×10-6
			72421B	±50	
			72423A	±20	
			72423B	±50	
Frequency temperature characteristics	TOP	-10 °C to +70 °C (+25 °C)		+10 / -120	
		-40 °C to +85 °C(+25 °C)		+10 / -220	
Frequency voltage characteristics	f/V	Ta=+25 °C,VDD=2.0 V to 5.5 V		±5.0 Max.	×10-6/V
Aging	fa	Ta=+25 °C,VDD=5.0 V,First year		±5.0 Max.	×10-6/year

DC characteristics

Item	Symbol	Conditions		Min.	Typ.	Max.	Unit	Applicable terminal
Current consumption	IDD1	CS1= 0 V Exclude input/ output current	VDD=5 V	—	1	10	μA	—
	IDD2		VDD=2 V		0.9	5		—
HIGH input voltage (1)	VIH1	—		2.2	—	—	V	All inputs other than CS1
LOW input voltage (1)	VIL1			—	—	0.8		
LOW output voltage (1)	VOL1	IOL=2.5 mA		—	—	0.4	V	D0 to D3
HIGH output voltage	VOH	IOH=-400 μA		2.4	—	—		
LOW output voltage (2)	VOL2	IOL=2.5 mA		—	—	0.4		STD.P
OFF leak current	IOFFLK	V1=VDD/0 V			—	10/-10	μA	
Input capacity	C1	Input frequency 1 MHz			10	—	pF	Input other than D0 to D3
					20			D0 to D3, STD.P
HIGH input voltage (2)	VIH2	VDD=2.0 V to 5.5 V		4/5 VDD	—	—	V	CS1
LOW input voltage (2)	VIL2			—	—	1/5 VDD		
Input leak current (1)	ILK1	V1=VDD/0 V		—	—	1/-1	μA	Input other than D0 to D3
Input leak current (2)	ILK2				—	10/-10		D0 to D3

PROMOTION OF ENVIRONMENTAL MANAGEMENT SYSTEM CONFORMING TO INTERNATIONAL STANDARDS

At Seiko Epson, all environmental initiatives operate under the Plan-Do-Check-Action (PDCA) cycle designed to achieve continuous improvements. The environmental management system (EMS) operates under the ISO 14001 environmental management standard.

All of our major manufacturing and non-manufacturing sites, in Japan and overseas, completed the acquisition of ISO 14001 certification.

ISO 14000 is an international standard for environmental management that was established by the International Standards Organization in 1996 against the background of growing concern regarding global warming, destruction of the ozone layer, and global deforestation.

WORKING FOR HIGH QUALITY

In order provide high quality and reliable products and services than meet customer needs,

Seiko Epson made early efforts towards obtaining ISO9000 series certification and has acquired ISO9001 for all business establishments in Japan and abroad. We have also acquired ISO/TS 16949 certification that is requested strongly by major automotive manufacturers as standard.

ISO/TS16949 is the international standard that added the sector-specific supplemental requirements for automotive industry based on ISO9001.

►Explanation of the mark that are using it for the catalog

Pb Free	►Pb free.
RoHS Compliant	►Complies with EU RoHS directive. *About the products without the Pb-free mark. Contains Pb in products exempted by EU RoHS directive. (Contains Pb in sealing glass, high melting temperature type solder or other.)
For Automotive	►Designed for automotive applications such as Car Multimedia, Body Electronics, Remote Keyless Entry etc.
Automotive Safety	►Designed for automotive applications related to driving safety (Engine Control Unit, Air Bag, ESC etc).

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