

4-bit REAL TIME CLOCK MODULE

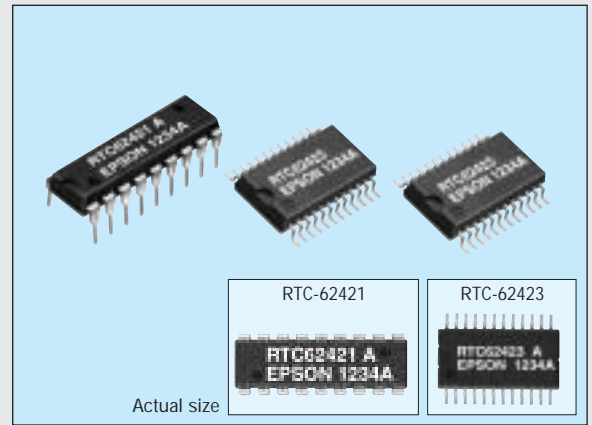
RTC-62421/62423

Product number (please refer to page 2)

Q4262421xxxxx00

Q4262423xxxxx00

- Built-in crystal unit allows adjustment-free efficient operation.
- 24 h/12 h changeable and leap year automatically adjustable (gregorian calendar).
- Pins and functions are compatible with the MSM6242 series.



The details are mentioned in the application manual.

<http://www.epsondevice.com>

Specifications (characteristics)

Absolute Max. rating

Item	Symbol	Condition	Min.	Max.	Unit
Supply voltage	V _{DD}	Ta=+25 °C	-0.3	+7.0	V
Input and output voltage	V _{I/O}		GND-0.3	V _{DD} +0.3	
Storage temperature *	T _{STG}	RTC-62421	-55	+85	°C
		RTC-62423	-55	+125	

*Stored as bare product after unpacking

Operating range

Item	Symbol	Condition	Min.	Max.	Unit
Power voltage	V _{DD}	—	4.5	5.5	V
Clock voltage	V _{CLK}	—	2.0	5.5	V
Operating temperature	T _{OPR}	No condensation	-40	+85	°C

Frequency characteristics

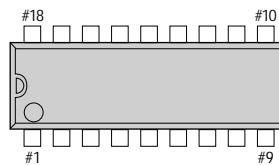
Item	Symbol	Condition	Range	Unit	
Frequency tolerance	Δf/fo	Ta=+25 °C	62421 A	±10	x 10 ⁻⁶
			62421 B	±50	
		V _{DD} =5 V	62423 A	±20	
			62423	±50	
Frequency temperature characteristics	T _{OP}	-10 °C to +70 °C (Reference at +25 °C)	+10/-120	x 10 ⁻⁶ /V	
		-40 °C to +85 °C (Reference at +25 °C)	+10/-220		
Frequency voltage characteristics	f/V	Ta=+25 °C V _{DD} =4.5 V to 5.5V	±5	x 10 ⁻⁶ /V	
Aging	fa	V _{DD} =5 V, Ta=+25 °C, first year	±5	x 10 ⁻⁶ /year	

DC characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Applicable terminal
Current consumption	I _{DD1}	CS ₁ =0 V V _{DD} =5 V	—	15	30	μA	—
	I _{DD2}		—	1	1.8		
"H" input voltage (1)	V _{IH1}	—	2.2	—	—	V	All inputs other than CS ₁
"L" input voltage (1)	V _{IL1}			0.8	—		
Input leak current (1)	I _{LK1}	V _I =V _{DD} /0 V	—	1/-1	—	μA	Input other than D ₀ to D ₃
Input leak current (2)	I _{LK2}			10/-10	—		
"L" output voltage (1)	V _{OL1}	I _{OL} =2.5 mA	2.4	0.4	—	V	D ₀ to D ₃
"H" output voltage	V _{OH}			I _{OH} =-400 μA	—		
"L" output voltage (2)	V _{OL2}	I _{OL} =2.5 mA	—	0.4	—	V	STD.P
OFF leak current	I _{OFFLK}	V _I =V _{DD} /0 V	—	10	—		
Input capacity	C ₁	Input frequency 1 MHz	—	5	—	pF	Input Pins
"H" input voltage (2)	V _{IH2}	V _{DD} =2 V to 5.5 V	4/5 V _{DD}	—	—	V	CS ₁
"L" input voltage (2)	V _{IL2}			—	1/5 V _{DD}		

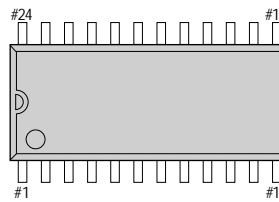
Terminal connection

RTC-62421



No.	Pin terminal	No.	Pin terminal
1	STD.P	18	V _{DD}
2	CS ₁	17	(V _{DD})
3	ALE	16	(V _{DD})
4	A ₀	15	CS ₁
5	A ₁	14	D ₀
6	A ₂	13	D ₁
7	A ₃	12	D ₂
8	RD	11	D ₃
9	GND	10	WR

RTC-62423



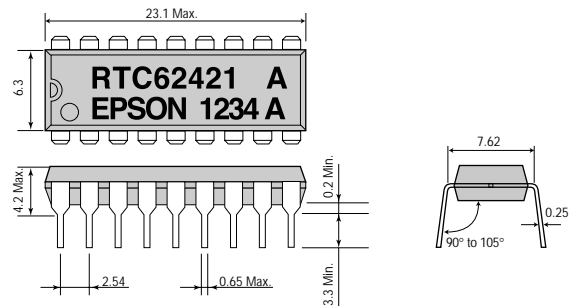
No.	Pin terminal	No.	Pin terminal
1	STD.P	24	V _{DD}
2	CS ₁	23	(V _{DD})
3	NC	22	(V _{DD})
4	ALE	21	NC
5	A ₀	20	CS ₁
6	NC	19	D ₀
7	A ₁	18	NC
8	NC	17	NC
9	A ₂	16	D ₁
10	A ₃	15	D ₂
11	RD	14	D ₃
12	GND	13	WR

- (V_{DD}) and V_{DD} are to have the same level of voltage. Do not connect it to any external terminals.
- NC is not connected internally.

External dimensions

(Unit: mm)

RTC-62421 (DIP 18-pin)



RTC-62423 (SOP 24-pin)

