

ARTC8050-HALP-PF



RTC module, I²C interface, 3.2 x 1.5 x 0.8mm

Features:

Low power consumption: 240 nA @ 3 V.
Wide operating voltage range: 1.5 V to 5.5 V.
Temperature compensated, high accuracy: ± 3 ppm for -40°C to $+85^{\circ}\text{C}$.
Provides year, month, date, weekday, hours, minutes, seconds and 100th seconds
Timer, alarm and external event input with time stamp
Clock output frequencies: 32.768 kHz, 1024 Hz, 1 Hz.
100% Pb-free, RoHS-compliant.
Automotive qualification AEC-Q200 compliant option



Description:

This Real-Time Clock Module that incorporates an integrated CMOS circuit together with an XTAL. It operates under vacuum in a hermetically sealed ceramic package with metal lid.

Applications:

IOT, Metering, Industrial, Automotive, Health care, Wearables, Portables

Electrical characteristics at 25°C

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test condition |
|---------------------------------------|--------------|--------------|---------|---------|------|---------------------------------|
| Supply voltage | V_{DD} | 1.5 | | 5.5 | V | Temp. Comp. |
| Current consumption Time keeping mode | I_{DDO} | | 240 | 350 | nA | I2C-bus inactive, V_{DD} 3V |
| CLKOUT frequency | F_{CLKOUT} | 32768/1024/1 | | | Hz | Programmable |
| Time accuracy | $\Delta F/F$ | | ± 3 | | ppm | -40 to $+85^{\circ}\text{C}$ |
| | | | ± 7 | | ppm | $+85$ to $+105^{\circ}\text{C}$ |
| Aging first year max. | $\Delta F/F$ | | | ± 3 | ppm | @ 25°C |

Environmental characteristics

| | | | |
|-----------------------|---------------|--------------------|-----------------------------------|
| Storage temp. Range | -55 to +125 | $^{\circ}\text{C}$ | |
| Operating temp. Range | -40 to +85 | $^{\circ}\text{C}$ | |
| Shock resistance | Max ± 5.0 | ppm | 5000 g, 0.3ms, $\frac{1}{2}$ sine |
| Vibration resistance | Max ± 5.0 | ppm | 20 g/10-2000Hz |

Other information

| | | | |
|---------------------------|--|--|--|
| Package-type | SON-8 | | |
| Termination | Au flashed pads | | |
| Processing | Reflow soldering 260°C / 20s-40s max | | |
| Packaging (Tape and Reel) | 1kpcs/reel, 3kpcs/reel | | |

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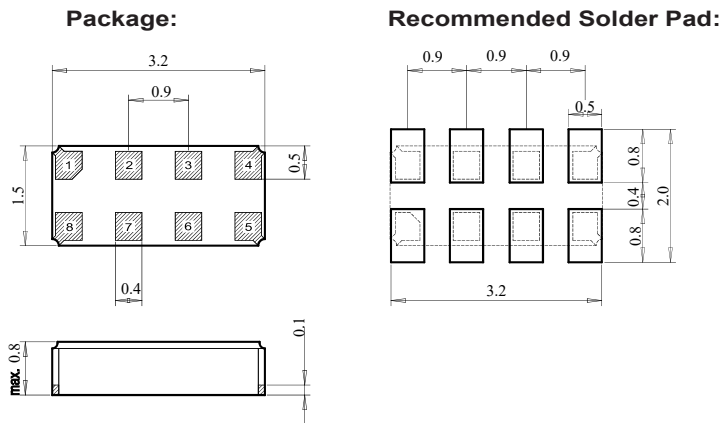
Specifications subject to change without notification

ARTC8050-HALP-PF

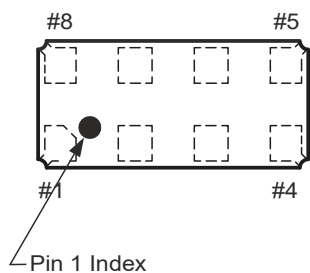
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Mechanical dimensions and Pin functions and test circuits

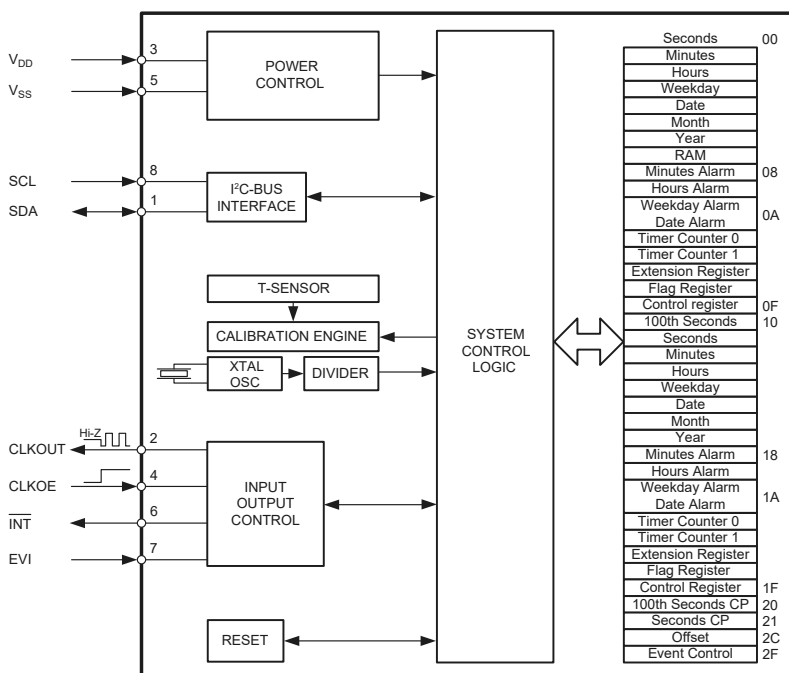


All dimensions in mm typical



| Pin | Connection |
|-----|--------------------------------------|
| 1 | SDA Serial Data |
| 2 | CLKOUT Clock Output |
| 3 | V _{DD} Power Supply Voltage |
| 4 | CLKOE Clock Output Enable |
| 5 | V _{SS} Ground |
| 6 | INT Interrupt Output |
| 7 | EVI Event Input |
| 8 | SCL Serial Clock Input |

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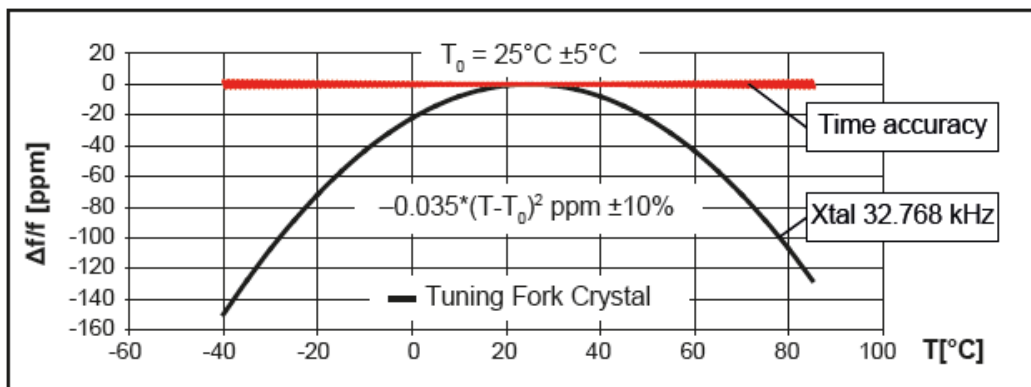


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Reflow soldering curve (RoHS)



Drawing control: (Internal use only)
Commodity code: 9110 9000
Issue number : N1
Date : 01/06/2018
Internal reference : M1

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