Real-Time Clock Claimed as World's Smallest

For cost-sensitive, high-volume applications that require an ultra-miniature Real Time Clock, Micro Crystal has introduced the world smallest integrated Real Time Clock Module, the RV-4162-C7 [1]. It is ideal for compact battery-powered devices, where its wide 1.3 to 4.4V operating range provides added flexibility. Timekeeping will function down to 1.0V with a current consumption of only 270nA typical. Communications with other circuitry is simplified by an I^2C Bus.

The 8-pin ceramic package contains a 32.768 kHz crystal, matched with a CMOS-based oscillator and real-time-clock circuitry. At room temperature, frequency and time keeping is within +/-20ppm with an operating temperature range of – 40 to +85°C. Aging rate is a maximum of $\pm$3ppm for the first year.

The clock function tracks tenths/hundredths of seconds, seconds, minutes and hours. The calendar function tracks date, month, year and century, with automatic leap year compensation. Programmable clock-out frequencies, alarm settings and a watchdog function increase flexibility using this device.

Because it is entirely self-contained, the RV-4162-C7 is a simple solution that can save engineering, procurement and inventory costs. External dimensions of the standard ceramic package are extremely small: 3.2x1.5x0.8mm, which represents a board space of only 4.8mm^2. Like all Micro Crystal products, it is RoHS compliant and 100% lead free.

Potential applications are widespread, including battery powered handheld devices, portable point-of-sale terminals, GPS, digital still cameras, glucose meters, security systems, appliances, factory automation and programmable logic control and data loggers

The new Real Time Clock is available in production quantities. Datasheets [2] are

available online. For more information, visit: www.microcrystal.com [3]
email sales@microcrystal.com [4] or call 847-818-9825

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