

FEATURES

- Low frequency using an AT-cut crystal
- Current consumption in μA range
- Supply voltage range from +1.8 to +5.0Volts
- 32.768kHz standard frequency ideal for accurate real-time-clock applications
- Suitable for battery-operated devices, data loggers etc.

DESCRIPTION

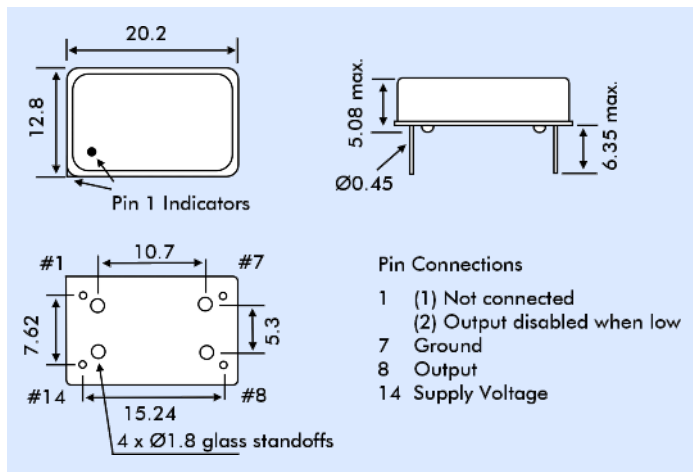
LPO-AT oscillators are ideal for battery operated portable or hand-held consumer electronic devices where low supply current consumption is essential. Applications include data logging and portable test equipment.

SPECIFICATION

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|-------------------------------|---|
| Model: | LPO-AT14 |
| Input Voltage ($\pm 10\%$): | 1.8V, 2.5V, 3.3V, 5.0V |
| Frequency Range: | 27.3kHz~100.00kHz |
| 5.0V Supply ONLY: | 27.3kHz~52kHz |
| Output Waveform: | HCMOS (square wave) |
| Frequency Stability: | See table 1 |
| Current Consumption | |
| Supply = 1.8 Volts: | 32 μA typical, 50 μA maximum |
| Supply = 2.5 Volts: | 32 μA typical, 50 μA maximum |
| Supply = 3.3 Volts: | 33 μA typical, 50 μA maximum |
| Supply = 5.0 Volts: | 36 μA typical, 60 μA maximum |
| Output Logic High '1': | 90% of Supply Voltage |
| Output Logic Low '0': | 10% of Supply Voltage |
| Rise/Fall Times | |
| Supply = 1.8 Volts: | 20nsec. maximum |
| Supply = 2.5 Volts: | 20nsec. maximum |
| Supply = 3.3 Volts: | 12nsec. maximum |
| Supply = 5.0 Volts: | 12nsec. maximum |
| Start-up Time: | 1.0ms typical, 5.0ms maximum |
| Duty Cycle: | 50% $\pm 5\%$ |
| Storage Temperature: | -55°C to +125°C |
| Ageing: | $\pm 3\text{ppm}$ maximum first year, $\pm 2\text{ppm}$ maximum per year thereafter |
| Output Load: | 15pF |



OUTLINE & DIMENSIONS



| Frequency Stability over Operating Temperature Range | $\pm 25\text{ppm}$ | $\pm 50\text{ppm}$ | $\pm 100\text{ppm}$ |
|--|--------------------|--------------------|---------------------|
| Commercial (-10°C to +70°C) | A | B | C |
| Industrial (-40°C to +85°C) | D | E | F |

Table 1, Frequency Stability Codes

PART NUMBERING

