Available in a wide selection of audio frequencies
Designed for High-End Audio DAC
Makes digital music a unique listening experience
Ultra Low Phase Noise
Femtosecond Jitter
Very Low Power Consumption
Fits into DIL14 Clock Sockets
HCMOS Output
Easy Installation
Laser Etched Serial Number

PULSAR CLOCK is an oven controlled crystal oscillator designed for top quality audio playback providing significant improvement on listening parameters like focus, scene extension, tonal quality.

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MAIN FEATURES

**Frequency Range**
- From 10 MHz To 100 MHz
  - 11.289600 MHz
  - 12.288000 MHz
  - 22.579200 MHz
  - 24.576000 MHz
  - 45.158400 MHz
  - 49.152000 MHz
  - 90.316800 MHz
  - 98.304000 MHz
  - 100.000000 MHz

**Standard Frequencies** ($f_0$)
- 45.158400 MHz
- 49.152000 MHz
- 90.316800 MHz
- 98.304000 MHz
- 100.000000 MHz

**Case Pinout**
- Power Supply Voltage (Vcc) + 3.3 Vdc ± 0.15 V

**POWER**

- Steady State Current
  - Max @ + 25 °C Vcc = 3.3V
  - 50 mA Max

- Steady State Power
  - Max @ + 25 °C Vcc = 3.3V
  - 0.165 W

- Warm Up Current
  - Max @ Vcc = 3.3V
  - 120 s

- Warm Up Power
  - Max @ + 25 °C Vcc = 3.3V
  - 0.495 W

**OUTPUT**

- Output Waveform
  - HCMOS

- Output Logic High ($V_{OH}$)
  - Min 2.4 V

- Output Logic Low ($V_{OL}$)
  - Max 0.4 V

- Duty Cycle
  - 50 % ± 5 %

- Load
  - 10 kΩ Min 5 pF Max

**TIMING**

- Frequency Stability vs. Temperature
  - ± 0.1 ppm @ + 25 °C

- Frequency Stability vs. Supply Voltage
  - ± 0.005 ppm @ Vcc = 3.3V

- Initial Tolerance ($\delta f/f_0$)
  - ± 0.2 ppm @ + 25 °C

- Ageing Per Day
  - ± 0.005 ppm

- Ageing Per Year
  - ± 0.1 ppm first year

**ABSOLUTE MAXIMUM RATINGS**

- Power Supply Voltage (Vcc)
  - -0.5 To 4.0 V

**ENVIRONMENT**

- Operating Temperature
  - 0°C To +50 °C

- Storage Temperature
  - -10°C To +80 °C

- Humidity
  - Non-condensing 95% Max

- Shock
  - 30 g Vaseline 11 ms

- Vibration
  - 10 g 10 Hz to 2000 Hz

**HANDLING**

- Socket Install
  - Can be mounted on a clock socket

- Soldering
  - NOT FOR REFLOW

- Hand solder: 10 s @ 260 °C on pins

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PULSAR CLOCK Static Phase Noise [dBc/Hz]

<table>
<thead>
<tr>
<th>SSB Offset [Hz]</th>
<th>Clock Frequency [MHz]</th>
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</thead>
<tbody>
<tr>
<td>11.289600</td>
<td>12.288000</td>
</tr>
</tbody>
</table>

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