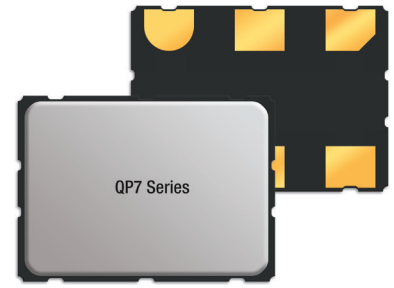


QP7 Series

5x7 SMD LVPECL Clock Oscillator



Features

- Miniature 5.0 x 7.0 x 1.8mm package
- Frequency Range 10.000 to 625.000MHz
- Supply voltage range: 2.5 or 3.3 Volts

Description

QP7 series oscillators provide a high quality differential PECL output at frequencies from 10.000MHz to 625.000MHz. Power supply voltages may be specified as +2.5 Volts or +3.3 Volts.

General Specifications

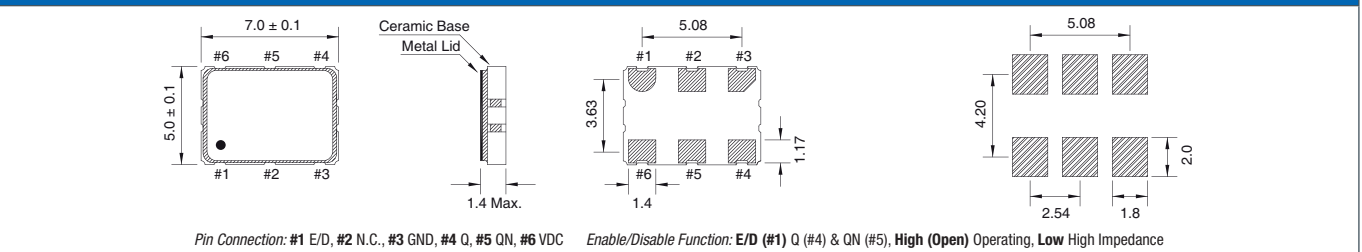
| | | |
|-----------------------------|-------------------------------|--------------|
| Frequency Range | 10.000 to 625.000MHz | |
| Output Type | LVPECL - Complementary Output | |
| Temperature Stability* | ±100ppm max. | |
| | ±50ppm max. | |
| | ±25ppm max. | |
| Aging per year | ±3ppm max. | |
| Operating Temperature Range | Standard | -20 to +70°C |
| | Extended | -40 to +85°C |
| Storage Temperature Range | -55 to +125°C | |

* Frequency stability is inclusive of calibration tolerance at 25°C, frequency change due to shock & vibration, ±10% supply voltage variation and stability over temperature range.

Electrical Specifications

| | | | |
|-------------------------------|------------------------|--------------------|---------------|
| Supply Voltage | | 2.5 Vdd ±5% | 3.3 Vdd ±5% |
| Input Current | 10.000 to 29.900MHz | 60mA max. | 60mA max. |
| | 30.000 to 59.900MHz | 65mA max. | 65mA max. |
| | 60.000 to 99.900MHz | 65mA max. | 65mA max. |
| | 100.000 to 159.000MHz | 65mA max. | 65mA max. |
| | 160.000 to 625.000MHz | 100mA max. | 110mA max. |
| Output Voltage | Logic High (Voh) | 1.475Vdd min. | 2.275Vdd min. |
| | Logic Low (Vol) | 1.095Vdd max. | 1.68Vdd max. |
| Output Symmetry | 45 to 55% | | |
| Output Load | 50Ω | | |
| Rise and Fall Time | 10.000 to 29.900MHz | 2ns max. | 2ns max. |
| | 30.000 to 59.900MHz | 1.5ns max. | 1.5ns max. |
| | 60.000 to 99.900MHz | 1ns max. | 1ns max. |
| | 100.000 to 159.000MHz | 0.5ns max. | 0.5ns max. |
| | 160.000 to 625.000MHz | 1.5ns max. | 1.5ns max. |
| Enable-Disable Function | Tri-State | | |
| | INH - Pin 1 | Q Pin 4 - QN Pin 5 | |
| | High - Pin 1 | Operating | |
| | Low - Pin 1 | High Impedance | |
| Enable High Input Voltage | | 1.75Vdd min. | 2.31Vdd min. |
| Output Enable Time | | 0.75Vdd max. | 0.99Vdd max. |
| Phase Jitter (12KHz to 20MHz) | 10.000 to 159.900 MHz | 1ps RMS | |
| | 160.000 to 625.000 MHz | 4ps RMS | |

Mechanical Dimensions



Part Numbering Guide

| Qantek Code | Package | Supply Voltage | Frequency Stability | Frequency | Operating Temperature Range | Packaging |
|-------------|----------|------------------------|--|--|---|--|
| Q = Qantek | P7 = 5x7 | 25 = 2.5V 33 = 3.3V | A = ±25ppm B = ±50ppm C = ±100ppm | in MHz, always 8 digits including the decimal point (f.i.e. 156.25000) | A = -20 to +70°C B = -40 to +85°C | R = Tape&Reel M = Minireel (250 pscs Tape&Reel) |

Example: QP733B156.25000BR

bold letters = recommended standard specification



QANTEK Technology Corporation

Phone: +1 877-227-0440 (tollfree)

Fax: +1 877-227-0440 (tollfree)

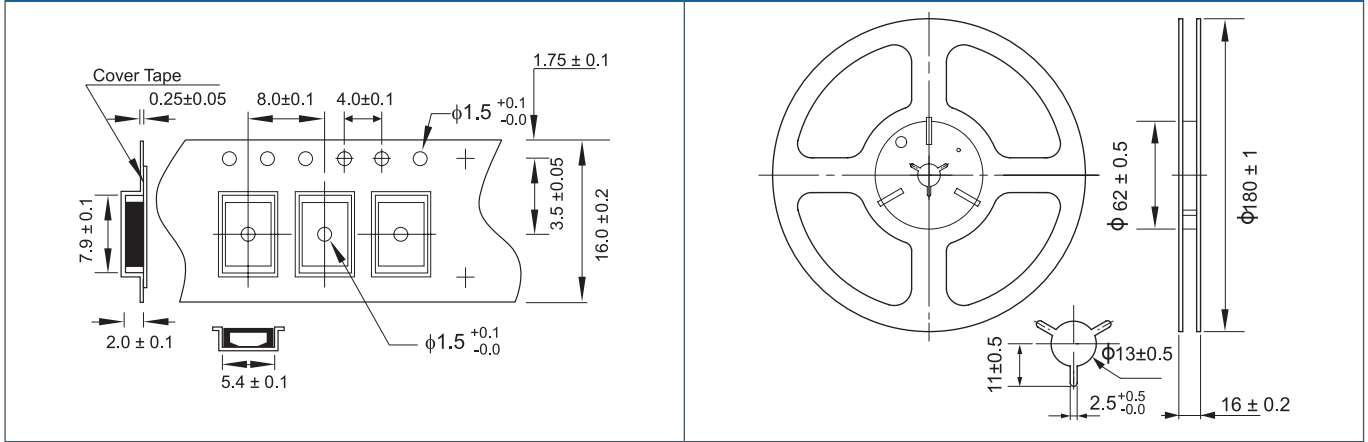
www.qantek.com

info@qantek.com

QP7 Series

5x7 SMD LVPECL Clock Oscillator

Tape and Reel Dimensions



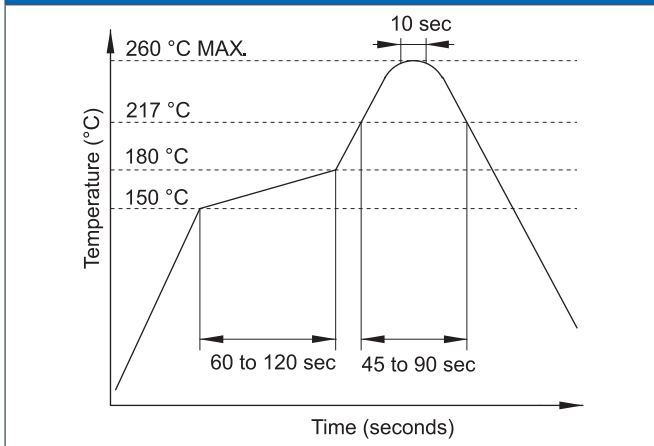
Marking Code Guide

Contains frequency, Qantek manufacturing Code, production code (month and year), stability, temperature range and voltage indicator.

| Month Codes | | | | Year Codes | | | | | | Stability | | Temperature Range | | Voltage | |
|-------------|---|-----------|---|------------|---|------|---|------|---|-----------|---------|-------------------|---------|---------|---------|
| January | A | July | G | 2019 | 9 | 2020 | 0 | 2021 | 1 | ppm | PN Code | °C | PN Code | Volt | PN Code |
| February | B | August | H | 2022 | 2 | 2023 | 3 | 2024 | 4 | 25 | A | -20 to +70°C | A | 2.5 | 2 |
| March | C | September | I | 2025 | 5 | 2026 | 6 | 2027 | 7 | 50 | B | -40 to +85°C | B | 3.3 | 3 |
| April | D | October | J | | | | | | | 100 | C | custom | S | custom | S |
| May | E | November | K | | | | | | | custom | S | | | | |
| June | F | December | L | | | | | | | | | | | | |

Example: First Line: 20.000 (Frequency) Second Line: QA9BB3 (Qantek – January – 2019 – ±50ppm – -40 to +85°C – 3.3V)

Solder Reflow Profile



Environmental Specifications

| | |
|------------------|-------------------------------|
| Mechanical Shock | MIL-STD-202, Method 213, C |
| Vibration | MIL-STD-202, Method 201 & 204 |
| Thermal Cycle | MIL-STD, Method 1010, B |
| Gross Leak | MIL-STD-202, Method 112 |
| Fine Leak | MIL-STD-202, Method 112 |

All specifications are subject to change without notice.



QANTEK Technology Corporation

Phone: +1 877-227-0440 (tollfree)

Fax: +1 877-227-0440 (tollfree)

www.qantek.com

info@qantek.com