

Features

- Very quick delivery
- Industry-standard 5 x 3.2mm miniature SMD package
- Ultra-low jitter at 1 million samples
- Supply Voltage 2.7V, 3.3V or 5.0Volts
- Enable/Disable or Power Down options

Description

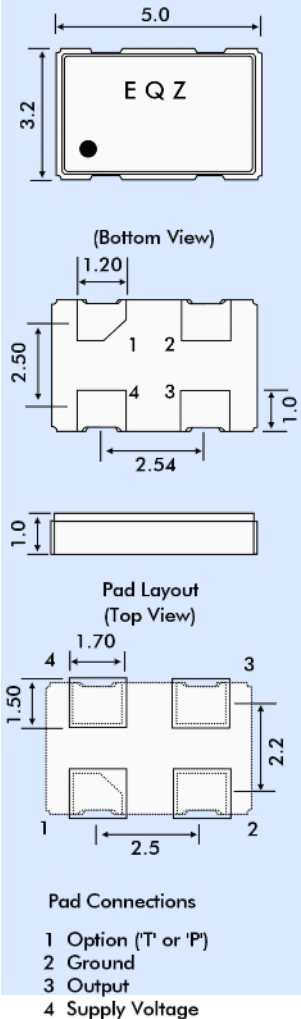
XOPL53 programmable oscillators provide custom frequency and specification oscillators with a very quick delivery time. Jitter, general performance and specification is comparable to discrete frequency oscillators.

Electrical Specification

| | |
|---------------------------------------|---|
| Frequency Range: | 1.000MHz ~ 133.0MHz |
| Frequency stability: | from ± 25 ppm to ± 100 ppm |
| Operating Temperature Range: | |
| 0° ~ +70°C | Part Code 'C' |
| -20° ~ +70°C | Part Code 'D' |
| -40° ~ +85°C | Part Code 'I' |
| Storage Temperature Range: | -55° ~ +125°C |
| Ageing: | ± 5 ppm per year max. |
| Packaging: | Bulk packed or Tubed |
| Output Levels: | CMOS or TTL |
| Maximum Output Loads: | Below 40MHz: 30pF Above 40MHz: 15pF (See note opposite) |
| Duty Cycle: | Below 40MHz: 45/55% min. Above 40MHz: 40/60% min. |
| Rise/Fall Times: | 4ns max. |
| Supply Current: | 25mA (unloaded) |
| Standby Current: | 10 μ A typical, 50 μ A max. |
| Start-up Time: | 10ms max. |
| Power Down and Disable Delay Time | |
| Synchronous: | T/2ns typical, T + 10ns typical |
| Asynchronous: | 10ns typical, 15ns maximum (T - frequency period) |
| Output Enable Time: | 100ns maximum |
| Period Jitter Σ 1MHz ~ 133MHz: | 8ps typical, 99ps max. |
| Period Jitter Peak to Peak | |
| <33.0MHz: | 65ps typical, 99ps max. |
| 33MHz ~ 133MHz: | 65ps typical, 80ps max. |



OUTLINE & DIMENSIONS



Operating Load Conditions

Maximum Capacitive Load TTL

| | |
|-------------------|------|
| 5.0 Volt Supply | |
| 1.0MHz to 40MHz: | 50pF |
| 40.0MHz ~ 133MHz: | 25pF |

Maximum Capacitive Load CMOS

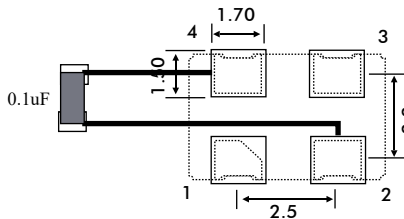
| | |
|--------------------|------|
| 5.0 Volt Supply | |
| 1.0MHz to 66MHz: | 50pF |
| 66.1MHz to 133MHz: | 25pF |

3.3 Volt/2.7 Volt Supply

| | |
|--------------------|------|
| 1.0MHz to 40MHz: | 30pF |
| 40.0MHz to 100MHz: | 15pF |

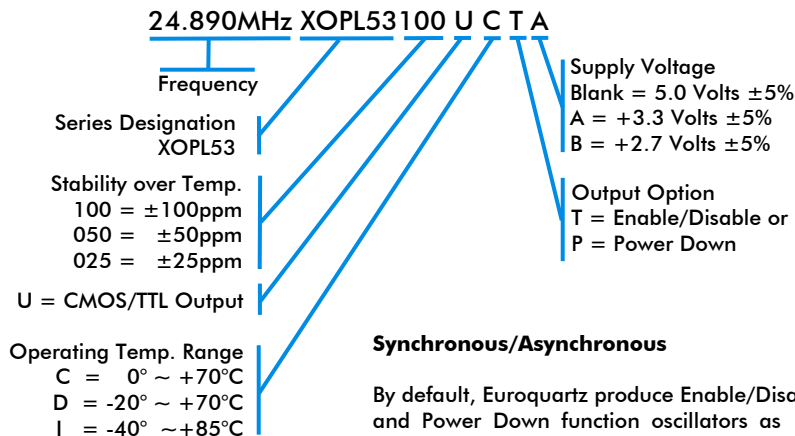
Please Note

The latest product release now requires an external capacitor to be fitted as per diagram from V_{DD} to ground.



Model Selection Guide

Part Number Example: 24.890MHz XOPL53100UCTA (see Part Numbers table)



Synchronous/Asynchronous

By default, Euroquartz produce Enable/Disable and Power Down function oscillators as ASYNCHRONOUS. If SYNCHRONOUS operation is required (see above specification for details,) append 'SYNC' to part number.

Part Numbers

| Model Number | Stability | Operating Temperature Range |
|--------------|-----------|-----------------------------|
| XOPL53100UC | ± 100 | 0° ~ +70°C |
| XOPL53050UC | ± 50 | 0° ~ +70°C |
| XOPL53025UC | ± 25 | 0° ~ +70°C |
| XOPL53100UD | ± 100 | -20° ~ +70°C |
| XOPL53050UD | ± 50 | -20° ~ +70°C |
| XOPL53025UD | ± 25 | -20° ~ +70°C |
| XOPL53100UI | ± 100 | -40° ~ +85°C |
| XOPL53050UI | ± 50 | -40° ~ +85°C |
| XOPL53025UI | ± 25 | -40° ~ +85°C |