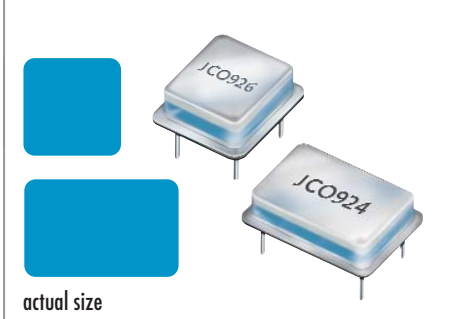




# Oscillator · VCXO · 3.3 V

## Voltage Control Crystal Oscillator

- pulling range up to  $\pm 150$  ppm min.
- soldering temperature:  $260^\circ\text{C}$  max.
- full metal package DIP8/DIP14



### General Data

| type                            |                  | JCO924 / JCO926 3.3 V                                                                 |
|---------------------------------|------------------|---------------------------------------------------------------------------------------|
| frequency range                 |                  | 1.84320 ~ 125.0 MHz (JCO924)                                                          |
|                                 |                  | 1.84320 ~ 40.00 MHz (JCO926)                                                          |
| frequency stability over all*   |                  | $\pm 25$ ppm / $\pm 50$ ppm (table 1)                                                 |
| current consumption             |                  | see table 2                                                                           |
| supply voltage $V_{DC}$         |                  | $3.3\text{ V} \pm 10\%$                                                               |
| frequency pulling range min.    |                  | $\pm 100$ ppm / $\pm 150$ ppm                                                         |
| pulling control voltage         |                  | $1.65\text{ V} \pm 1.65\text{ V}$                                                     |
| pulling linearity               |                  | $<10\%$                                                                               |
| temperature                     | operating        | $-10^\circ\text{C} \sim +70^\circ\text{C} / -40^\circ\text{C} \sim +85^\circ\text{C}$ |
|                                 | storage          | $-55^\circ\text{C} \sim +125^\circ\text{C}$                                           |
| output                          | rise & fall time | see table 3                                                                           |
|                                 | load max.        | 15pF / 30pF ( $< 40\text{ MHz}$ )                                                     |
|                                 | current max.     | 8mA                                                                                   |
|                                 | low level max.   | $+0.5\text{ V}$                                                                       |
|                                 | high level min.  | $V_{DC} - 0.5\text{ V}$                                                               |
| start-up time max.              |                  | 10ms                                                                                  |
| symmetry at $0.5 \times V_{DC}$ |                  | $45\% \sim 55\%$ typ. ( $40\% \sim 60\%$ max.)                                        |

Table 1: Frequency Stability Code

| stability code                             | B            | C            |  |  |  |  |
|--------------------------------------------|--------------|--------------|--|--|--|--|
|                                            | $\pm 50$ ppm | $\pm 25$ ppm |  |  |  |  |
| $-10^\circ\text{C} \sim +70^\circ\text{C}$ | ○            | ●            |  |  |  |  |
| $-40^\circ\text{C} \sim +85^\circ\text{C}$ | ●            | ○            |  |  |  |  |
| ● standard ○ available                     |              |              |  |  |  |  |

\* includes stability at  $25^\circ\text{C}$ , operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

| Current at 15pF load: |       | Current at 30pF load: |       |
|-----------------------|-------|-----------------------|-------|
| 1.8432 ~ 19.9 MHz     | 10 mA | 1.8432 ~ 19.9 MHz     | 20 mA |
| 20.0 ~ 39.9 MHz       | 20 mA | 20.0 ~ 40.0 MHz       | 25 mA |
| 40.0 ~ 65.9 MHz       | 25 mA |                       |       |
| 66.0 ~ 79.9 MHz       | 30 mA |                       |       |
| 80.0 ~ 125.0 MHz      | 40 mA |                       |       |

Table 3: Rise & Fall Time max.

|         |                   |                                                                                                                               |
|---------|-------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 6.0 ns: | 1.8432 ~ 39.9 MHz | note:<br>- specific data on request<br>- rise time: $0.1 V_{DC} \sim 0.9 V_{DC}$<br>- fall time: $0.9 V_{DC} \sim 0.1 V_{DC}$ |
| 5.0 ns: | 40.0 ~ 79.9 MHz   |                                                                                                                               |
| 4.0 ns: | 80.0 ~ 125.0 MHz  |                                                                                                                               |

### Dimensions JCO924 / JCO926

|        |  |  |  |                                                                                              |
|--------|--|--|--|----------------------------------------------------------------------------------------------|
| JCO924 |  |  |  | pin connection<br># 1: control voltage<br># 7: ground<br># 8: output<br># 14: supply voltage |
| JCO926 |  |  |  | pin connection<br># 1: control voltage<br># 4: ground<br># 5: output<br># 8: supply voltage  |

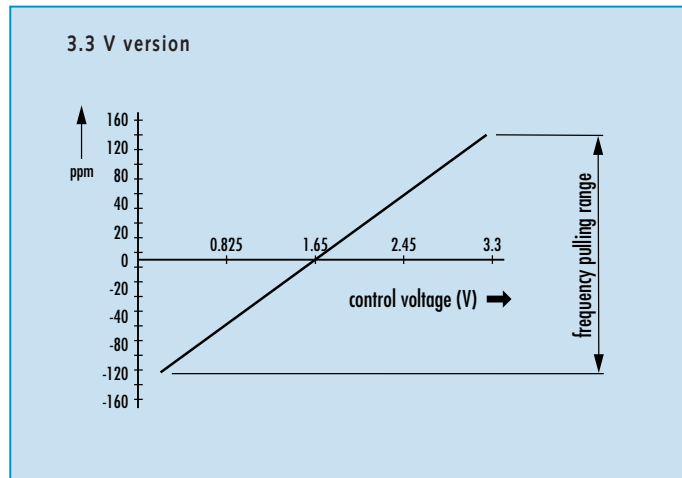
### Order Information

| 0                                                                          | frequency<br>in MHz | type             | pulling range<br>in ppm                         | frequency stability<br>in ppm          | option                                                                                                |
|----------------------------------------------------------------------------|---------------------|------------------|-------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------|
| Oscillator                                                                 | 1.84320 ~ 125.0 MHz | JCO924<br>JCO926 | 100 = $\pm 100$ ppm std.<br>150 = $\pm 150$ ppm | 25 = $\pm 25$ ppm<br>50 = $\pm 50$ ppm | blank = $-10^\circ\text{C} \sim +70^\circ\text{C}$<br>T1 = $-40^\circ\text{C} \sim +85^\circ\text{C}$ |
| Example: O 27.0-JCO924-100-25 (LF = RoHS compliant / Pb free pins or pads) |                     |                  |                                                 |                                        |                                                                                                       |



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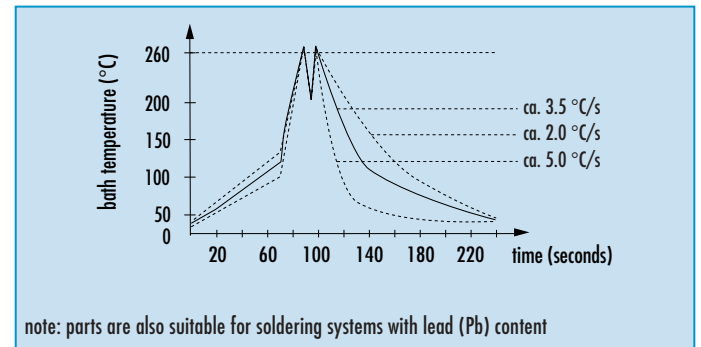
## Control Voltage Characteristic



## Packaging

|        |                                            |
|--------|--------------------------------------------|
| JC0924 | packed in antistatic plastic tubes, 25 pcs |
| JC0926 | packed in antistatic plastic tubes, 40 pcs |

## Wave Soldering Profile



## Marking

type  
frequency  
company code / date code