



actual size

# Oscillator · LVDS · VCXO

SMD LVDS VCXO · 7.5 x 5.0 mm

- uses quartz crystal at fundamental mode and PLL
- high pulling range  $\pm 150$  ppm
- complementary LVDS output, low EMI
- ceramic/metal package



## General Data

| type                            | JVD75B                                                                                |
|---------------------------------|---------------------------------------------------------------------------------------|
| frequency range                 | 12.0 ~ 800.0 MHz                                                                      |
| frequency stability over all*   | $\pm 25$ ppm / $\pm 50$ ppm (see table 1)                                             |
| frequency pulling range min.    | $\pm 150$ ppm                                                                         |
| pulling control voltage         | $1.65 \text{ V} \pm 1.5 \text{ V}^*$                                                  |
| pulling control input imp. min. | 60 k $\Omega$                                                                         |
| current consumption             | 80mA max.                                                                             |
| supply voltage $V_{DC}$         | $3.3 \text{ V} \pm 5\%$                                                               |
| temperature                     |                                                                                       |
| operating                       | $-10^\circ\text{C} \sim +70^\circ\text{C} / -40^\circ\text{C} \sim +85^\circ\text{C}$ |
| storage                         | $-40^\circ\text{C} \sim +85^\circ\text{C}$                                            |
| output                          |                                                                                       |
| rise & fall time                | 1.0ns (20% ~ 80% of $V_{pp}$ )                                                        |
| load nom.                       | 100 $\Omega$ differential                                                             |
| swing min.                      | 0.35Vp-p                                                                              |
| offset voltage                  | $1.25 \text{ V} \pm 0.125 \text{ V}$                                                  |
| standby function                | yes                                                                                   |
| output enable time max.         | 10ms                                                                                  |
| output disable time max.        | 150ns                                                                                 |
| start-up time max.              | 10ms                                                                                  |
| phase jitter 12 kHz ~ 20.0 MHz  | < 5.0ps RMS                                                                           |
| symmetry at 50% of $V_{pp}$     | 45% ~ 55% typ. (40% $\pm$ 60% max.)                                                   |

Table 1: Frequency Stability Code

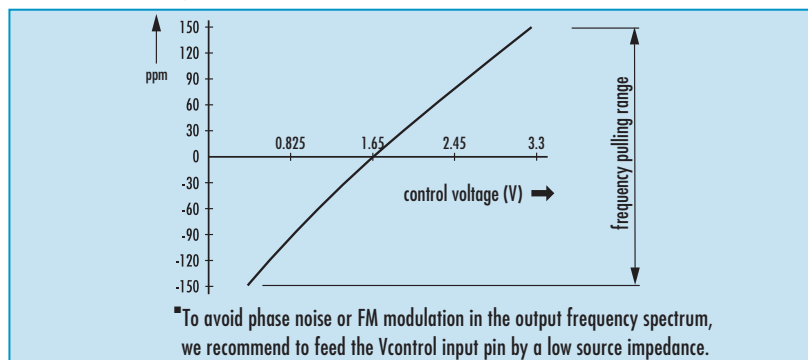
| stability code                             | B            | C            |  |  |  |
|--------------------------------------------|--------------|--------------|--|--|--|
|                                            | $\pm 50$ ppm | $\pm 25$ ppm |  |  |  |
| $-10^\circ\text{C} \sim +70^\circ\text{C}$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

\* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

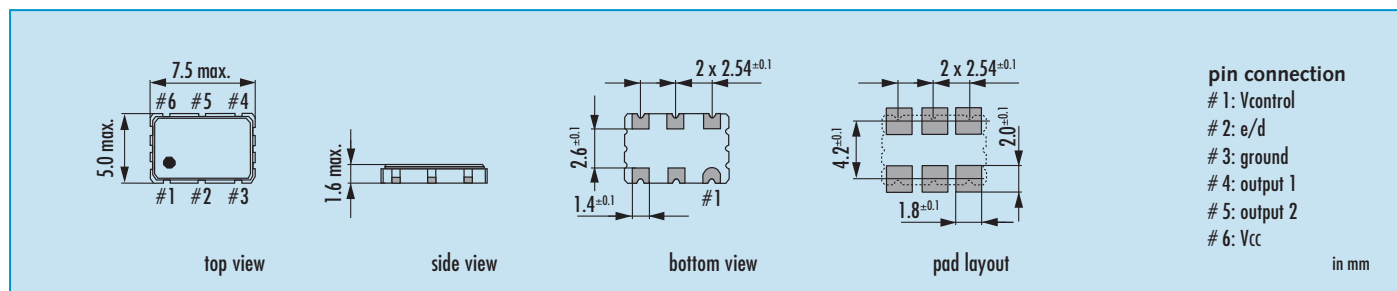
## Enable / Disable Function

| pin #2 (e/d control)         | pin #4 / #5 (outputs) |  |
|------------------------------|-----------------------|--|
| open or $\geq 2.4 \text{ V}$ | active                |  |
| gnd or $\leq 0.4 \text{ V}$  | high impedance        |  |

## Control Voltage Characteristic



## Dimensions

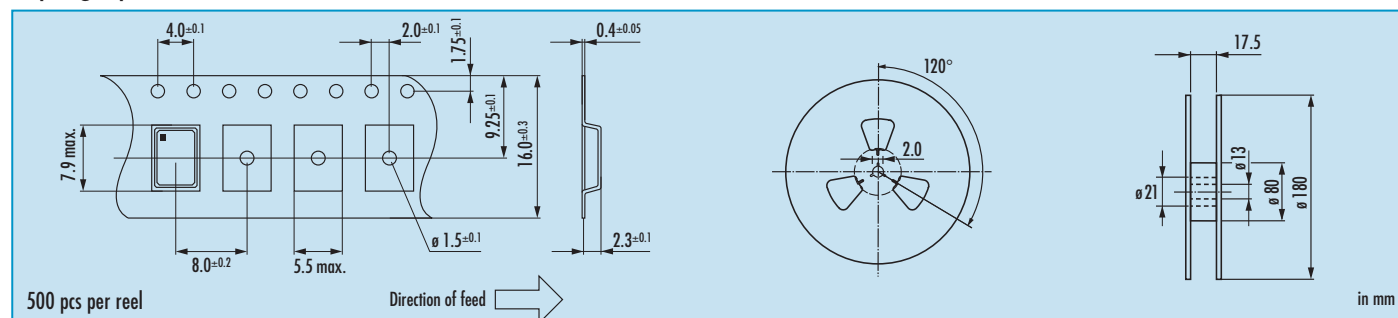


## Order Information

| 0          | frequency        | type   | stability at 25 °C in ppm            | supply voltage | pulling range in ppm | option                                                                                                |
|------------|------------------|--------|--------------------------------------|----------------|----------------------|-------------------------------------------------------------------------------------------------------|
| Oscillator | 12.0 ~ 800.0 MHz | JVD75B | B = $\pm 50$ ppm<br>C = $\pm 25$ ppm | 3.3 = 3.3 V    | 15 = $\pm 150$ ppm   | blank = $-10^\circ\text{C} \sim +70^\circ\text{C}$<br>T1 = $-40^\circ\text{C} \sim +85^\circ\text{C}$ |

Example: O 155.520-JVD75B-B-3.3-15-T1 (Suffix LF = RoHS compliant / Pb free pins or pads)

## Taping Specification



## Packing Note

- standard packing units are 500 pieces per reel
- non-multiple packing units are only supplied taped / bulk

## Marking

type / frequency / date code

date code:

A ~ M: Jan.- Dec.

9: 2009

0: 2010

1: 2011

| Jan. | Febr. | Mar.  | Apr. | May  | June |
|------|-------|-------|------|------|------|
| A    | B     | C     | D    | E    | F    |
| July | Aug.  | Sept. | Oct. | Nov. | Dec. |
| G    | H     | J     | K    | L    | M    |

## Reflow Soldering Profile

