



actual size

Oscillator · JO32 · 3.3 V

SMD Oscillator with Stop Function · 3.2 x 2.5 mm

- reflow soldering temperature: 260 °C max.
- compact & flat ceramic/metal package



General Data

| type | JO32 3.3 V |
|---------------------------------|--|
| frequency range | 0.75 ~ 80.0 MHz (15 pF max.) |
| | 0.75 ~ 50.0 MHz (30 pF max.) |
| higher frequencies | 80.0 ~ 135.0 MHz (15 pF max.)* |
| frequency stability over all** | ± 20 ppm ~ ± 100 ppm (table 1) |
| current consumption | see table 2 |
| supply voltage V_{DC} | 3.3 V $\pm 5\%$ |
| temperature | operating -10 °C ~ +70 °C / -40 °C ~ +85 °C / -40 °C ~ +105 °C |
| | storage -55 °C ~ +125 °C |
| output | rise & fall time see table 3 |
| | load max. 15 pF / 30 pF ($\leq +85$ °C and ≤ 50.0 MHz) |
| | current max. 4 mA / 5 mA |
| | low level max. 0.4 V |
| | high level min. $V_{DC} - 0.4$ V |
| output enable time max. | 10 ms |
| output disable time max. | 50 μ s |
| start-up time max. | 10 ms |
| standby function | stop |
| standby current max. | 5 μ A |
| phase jitter 12 kHz ~ 20.0 MHz | < 1.0 ps RMS |
| symmetry at $0.5 \times V_{DC}$ | 45% ~ 55% (40% ~ 60% max.) |

* ask if available

Table 1: Frequency Stability Code

| stability code / temp. code** | A ± 100 ppm | B ± 50 ppm | G ± 30 ppm | C ± 25 ppm | D ± 20 ppm |
|---------------------------------|--------------------|-------------------|-------------------|-------------------|-------------------|
| -20 °C ~ +70 °C | | ○ | ○ | ○ | △ |
| -40 °C ~ +85 °C T1 | ○ | ○ | ○ | | |
| -40 °C ~ +105 °C T2 | ○ | ○ | | | |
| ○ available △ excludes aging | | | | | |

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

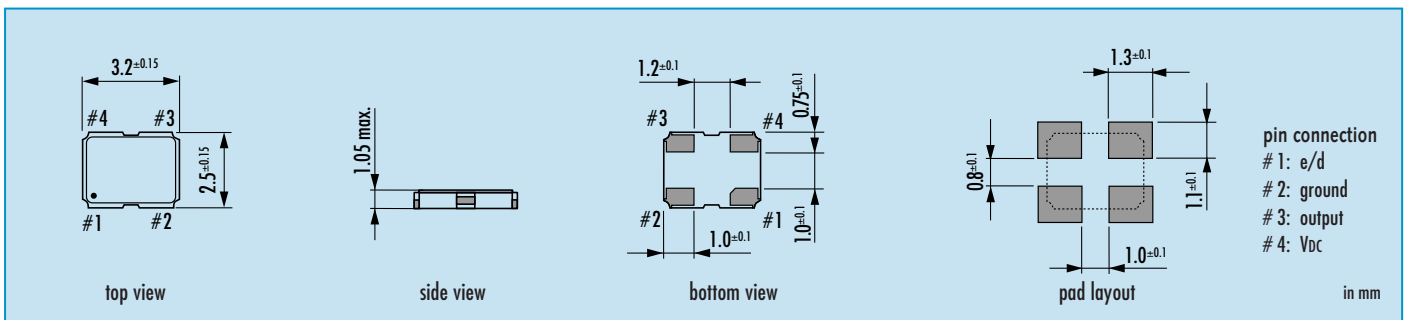
Table 2: Current Consumption max.

| Current at 15 pF load | | Current at 30 pF load | |
|-----------------------|-------|-----------------------|-------|
| 0.75 ~ 19.9 MHz | 4 mA | 0.75 ~ 19.9 MHz | 6 mA |
| 20.00 ~ 39.9 MHz | 7 mA | 20.00 ~ 39.9 MHz | 13 mA |
| 40.00 ~ 59.9 MHz | 19 mA | 40.00 ~ 50.0 MHz | 24 mA |
| 60.00 ~ 79.9 MHz | 24 mA | | |
| 80.00 ~ 135.0 MHz* | 45 mA | | |

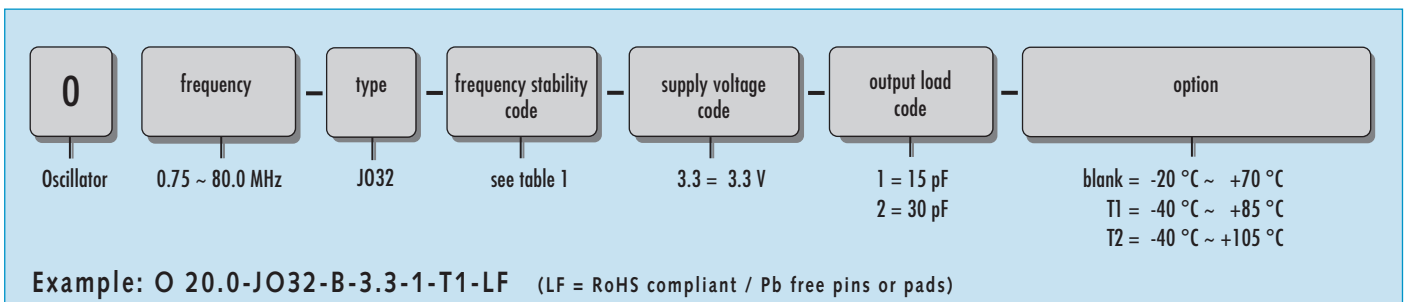
Table 3: Rise & Fall Time max.

| at 15 pF | at 30 pF |
|---|------------------------|
| 5 ns: 0.75 ~ 49.99 MHz | 8 ns: 0.75 ~ 49.99 MHz |
| 4 ns: 50.00 ~ 79.99 MHz | |
| 3 ns: 80.00 ~ 135.00 MHz* | |
| note: rise time: $0.1 V_{DC} \sim 0.9 V_{DC}$ / fall time: $0.9 V_{DC} \sim 0.1 V_{DC}$ specific data on request | |

Dimensions

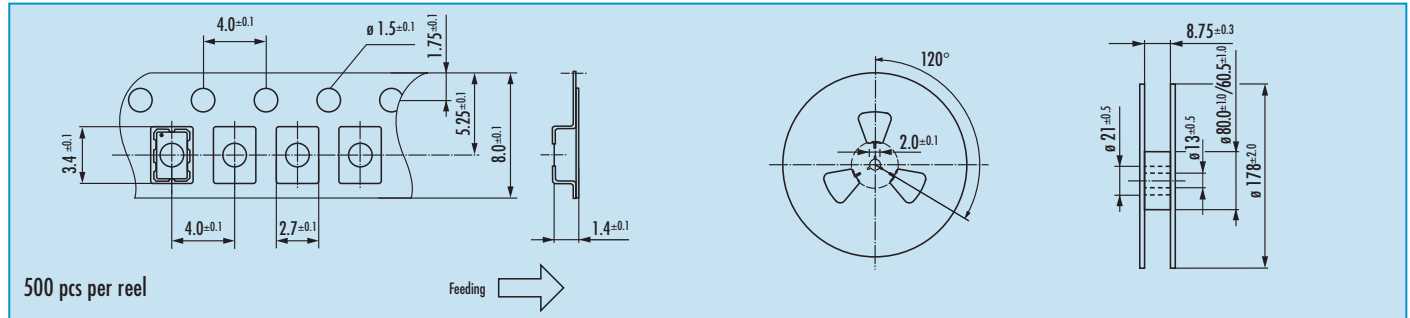


Order Information



Oscillator · JO32 · 3.3 V · Stop Function

Taping Specification



Enable / Disable Function

| | |
|---|-----------------|
| pin #1 (e/d control) | pin #3 (output) |
| open | active |
| high "1" ($V_{IH} \geq 0.8 V_{DC}$) | active |
| low "0" ($V_{IL} \leq 0.2 V_{DC}$) | high impedance |
| stop function: | |
| <ul style="list-style-type: none"> oscillator stops output high impedance | |

Marking

frequency

company code / frequency stability code / date code

date code:

A ~ M: Jan. - Dec.

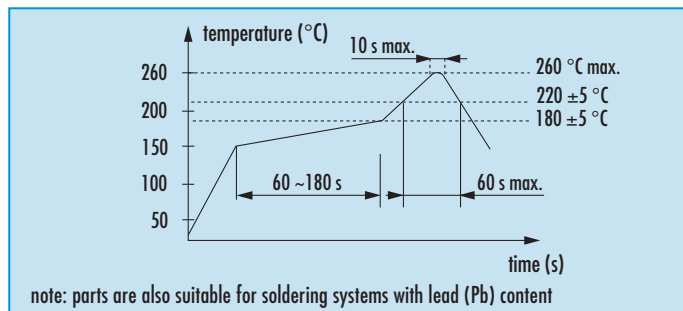
1: 2011 4: 2014

2: 2012 5: 2015

3: 2013 6: 2016

| | | | | | |
|------|-------|-------|------|------|------|
| 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



Packing Note

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