



actual size

# Oscillator · JO32 · 2.8 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 2.8 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 <sub>DC</sub>	2.8 V ± 5%
temperature	operating -20 °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 (≤ +85 °C and ≤ 50.0 MHz)
	current max. 4 mA / 5 mA
	low level max. 0.4 V
	high level min. V <sub>DC</sub> - 0.4 V
output enable time max.	10 ms
output disable time max.	50 μs
start-up time max.	10 ms
standby function	stop
standby current max.	10 μA
phase jitter 12 kHz ~ 20.0 MHz	< 1.0 ps RMS
symmetry at 0.5 x V <sub>DC</sub>	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		○	○	○	Δ
-40 °C ~ +85 °C T1	○	○	○	□	
-40 °C ~ +105 °C T2	○	○			

○ available   Δ excludes aging   □ only 0.75 ~ 60.0 MHz

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

Table 2: Current Consumption max.

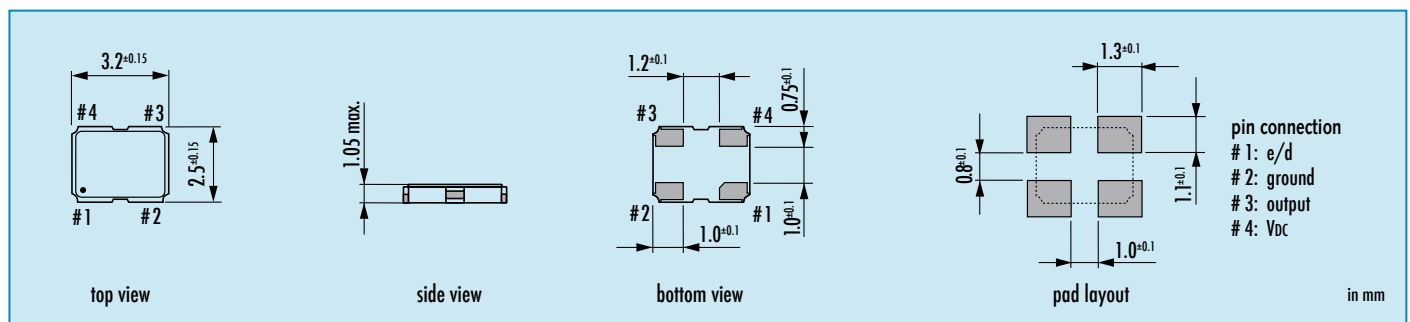
Current at 15 pF load		Current at 30 pF load	
0.75 ~ 19.9 MHz	4 mA	0.75 ~ 19.9 MHz	6 mA
20.00 ~ 39.9 MHz	7 mA	20.00 ~ 39.9 MHz	13 mA
40.00 ~ 59.9 MHz	16 mA	40.00 ~ 49.9 MHz	18 mA
60.00 ~ 79.9 MHz	18 mA	50.00 ~ 60.0 MHz	25 mA
80.00 ~ 135.0 MHz*	40 mA		

Table 3: Rise & Fall Time max.

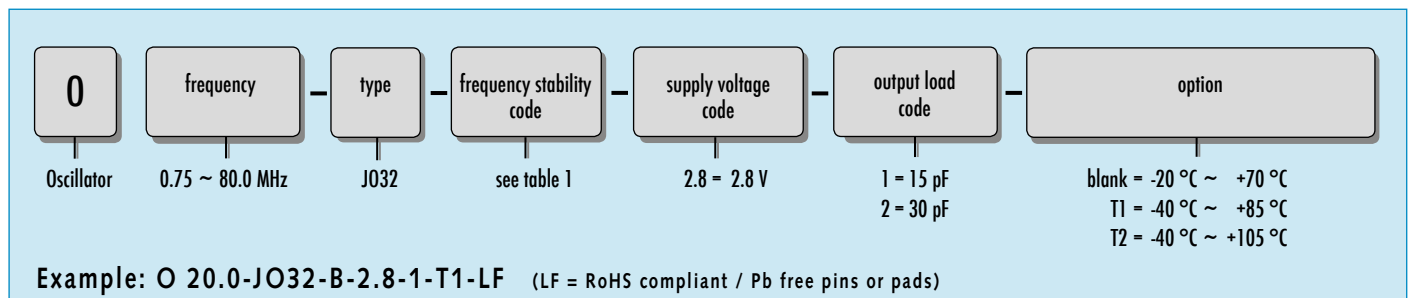
at 15 pF	at 30 pF
5 ns: 0.75 ~ 59.99 MHz	8 ns: 0.75 ~ 60.00 MHz
5 ns: 60.00 ~ 79.99 MHz	
4 ns: 80.00 ~ 135.00 MHz*	

note: rise time: 0.1 V<sub>DC</sub> ~ 0.9 V<sub>DC</sub> / fall time: 0.9 V<sub>DC</sub> ~ 0.1 V<sub>DC</sub>  
specific data on request

## Dimensions

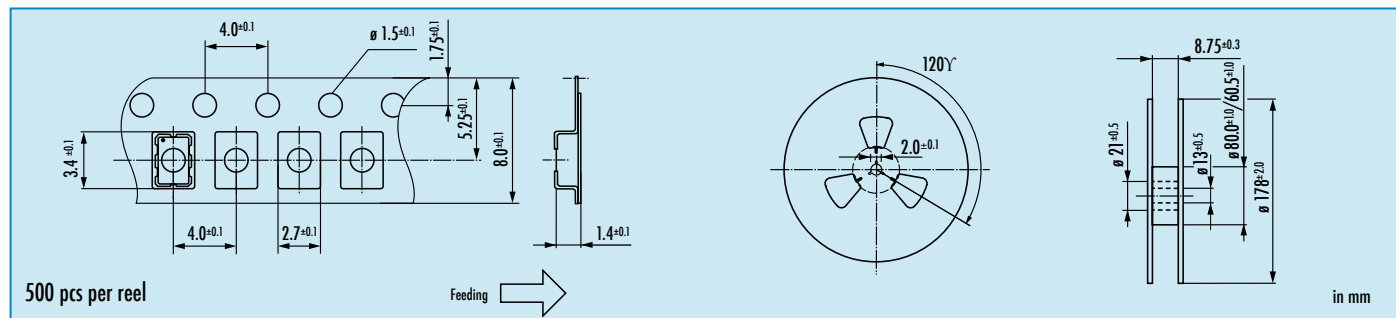


## Order Information



# Oscillator · JO32 · 2.8 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:**

- oscillator stops
- output high impedance

## Marking

frequency

company code / frequency stability code / date code

date code:

A ~ M: Jan. - Dec.

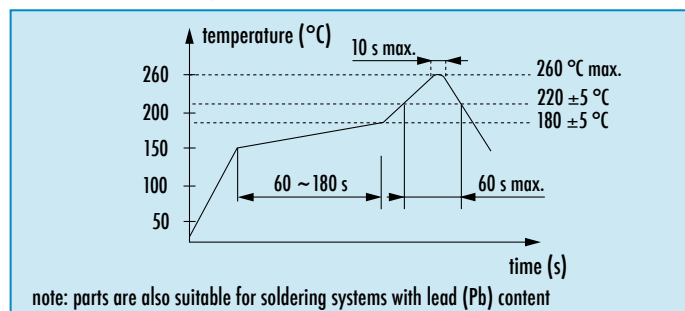
3: 2013      6: 2016

4: 2014      7: 2017

5: 2015      8: 2018

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