



actual size

# Oscillator · JO32 · 1.8 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 1.8V
frequency range	0.75 ~ 40.0 MHz (15 pF max.)
	0.75 ~ 40.0 MHz (30 pF max.)
frequency stability over all*	± 25ppm ~ ± 100ppm (table 1)
current consumption	see table 2
supply voltage V <sub>DC</sub>	1.8V ± 5%
temperature	operating -20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage -55 °C ~ +100 °C
output	rise & fall time see table 3
	load max 15pF / 30pF
	current max. 2mA
	low level max. 0.1 x V <sub>DC</sub>
	high level min. 0.9 x V <sub>DC</sub>
output enable time max.	10ms
output disable time max.	250ns
start-up time max.	10ms
standby function	stop
standby current max.	5µA
phase jitter 12 kHz ~ 20.0 MHz	< 1.0ps RMS
symmetry at 0.5 x V <sub>DC</sub>	45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A	B	G	C		
	± 100 ppm	± 50 ppm	± 30 ppm	± 25 ppm		
-20 °C ~ +70 °C		○	○	△		
-40 °C ~ +85 °C	○	○	○			

● standard ○ available △ excludes aging

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

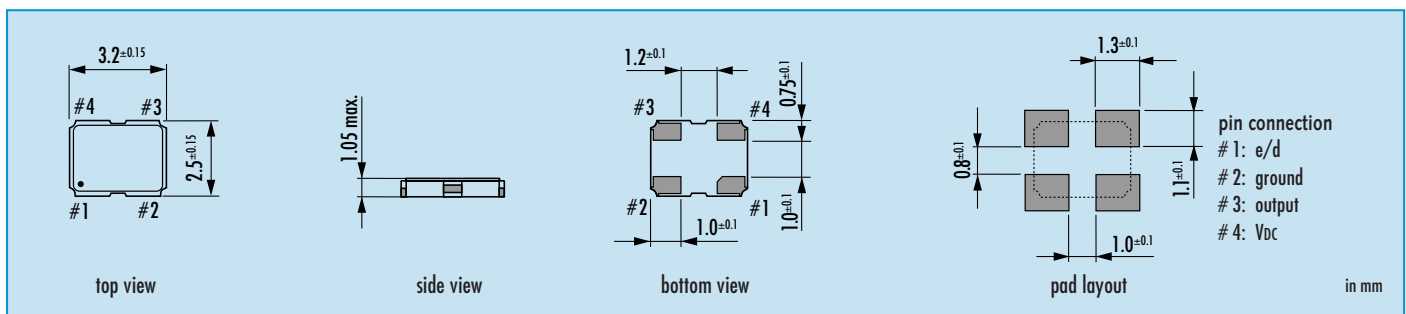
Table 2: Current Consumption max.

Current at 15pF load		Current at 30pF load	
0.75 ~ 29.9 MHz	2 mA	0.75 ~ 29.9 MHz	4 mA
30.00 ~ 40.0 MHz	3 mA	30.00 ~ 40.0 MHz	5 mA

Table 3: Rise & Fall Time max.

8 ns: 0.75 ~ 1.8 MHz	<b>note:</b> - specific data on request - 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>
7 ns: 1.81 ~ 40.0 MHz	

## Dimensions



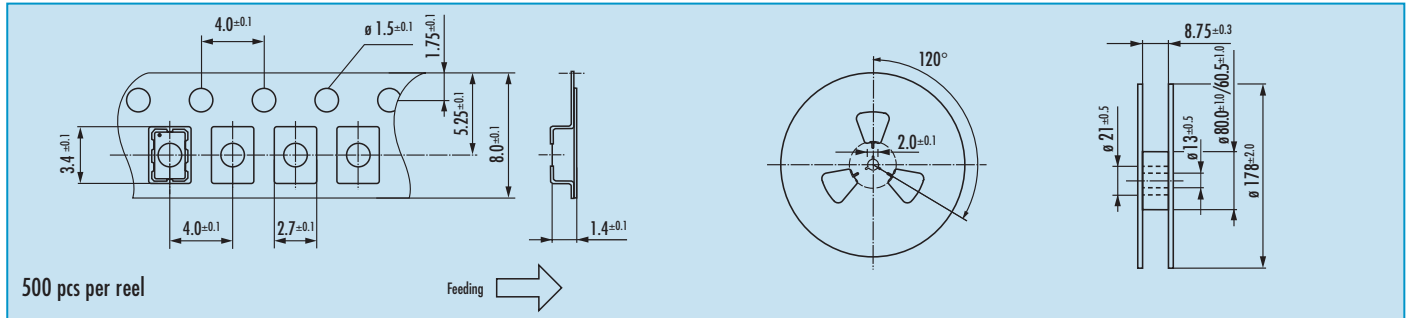
## Order Information

0	frequency	type	frequency stability code	supply voltage code	output load code	option
Oscillator	0.75 ~ 40.0 MHz	JO32	see table 1	1.8 = 1.8 V	1 = 15 pF 2 = 30 pF	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C

Example: O 20.0-JO32-B-1.8-1 (LF = RoHS compliant / Pb free pins or pads)

# Oscillator · JO32 · 1.8 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
<b>stop function:</b> <ul style="list-style-type: none"> <li>oscillator stops</li> <li>output high impedance</li> </ul>	

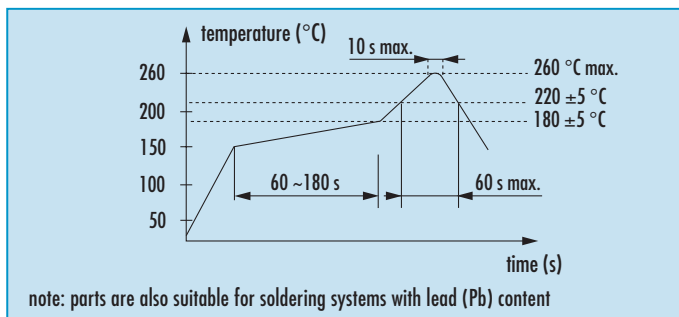
## Marking

frequency  
type / date code

date code:  
A ~ M: Jan. - Dec.  
5: 2005  
6: 2006  
7: 2007

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