



actual size

# Oscillator · JO22 · 3.0 V

## SMD Oscillator with Stop Function · 2.5 x 2.0 mm

- low current consumption
- low phase noise type for WLAN available\*\*
- reflow soldering temperature: 260 °C max.
- ultra flat ceramic / metal package



### General Data

<b>type</b>	<b>JO22 3.0 V</b>	
frequency range	0.75 ~ 50.0 MHz	
frequency stability over all*	± 25 ppm ~ ± 100 ppm	
	see table 1	
current consumption	see table 2	
supply voltage V <sub>DC</sub>	3.0 V ± 5%	
temperature	operating	-20 °C ~ +70 °C up to -40 °C ~ +105 °C
	storage	-55 °C ~ +105 °C
output	rise & fall time	see table 3
	load max.	15 pF
	current max.	4 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 % 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	○	○	○			
-40 °C ~ +105 °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.

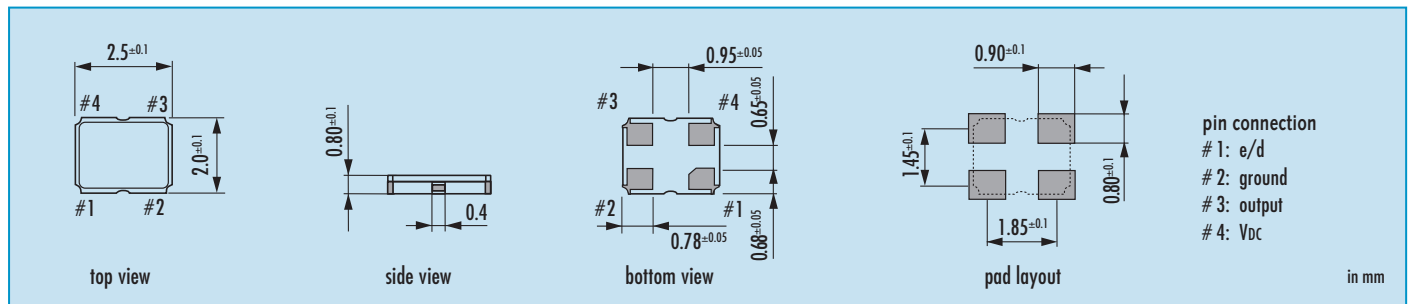
3.0 V: current at 15pF load:	
0.75 ~ 19.9 MHz	5.5 mA
20.00 ~ 39.9 MHz	6.5 mA
40.00 ~ 50.0 MHz	7.5 mA

Table 3: Rise & Fall Time max.

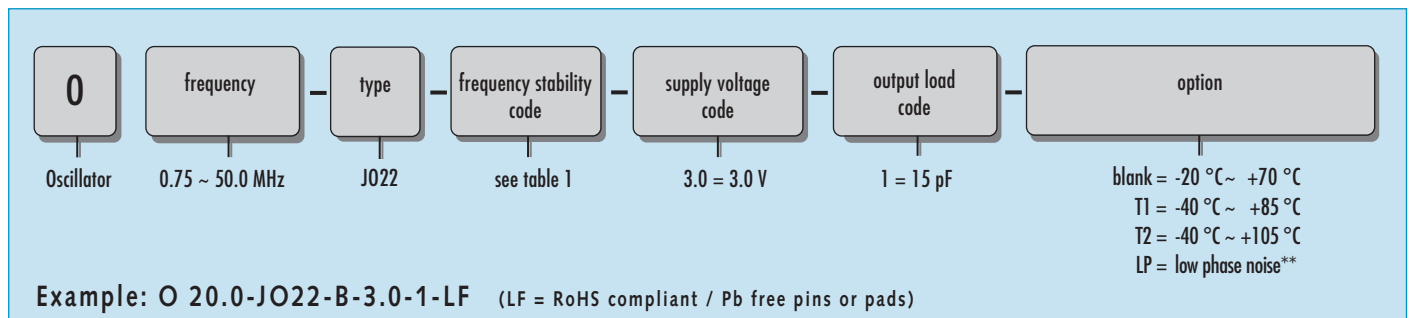
5 ns: 0.75 ~ 50.0 MHz	<p><b>note:</b></p> <ul style="list-style-type: none"> <li>- specific data on request</li> <li>- rise time: 0.1 V<sub>DC</sub> ~ 0.9 V<sub>DC</sub></li> <li>- fall time: 0.9 V<sub>DC</sub> ~ 0.1 V<sub>DC</sub></li> </ul>
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\*\* detailed data and available frequencies for option - LP upon request

### Dimensions

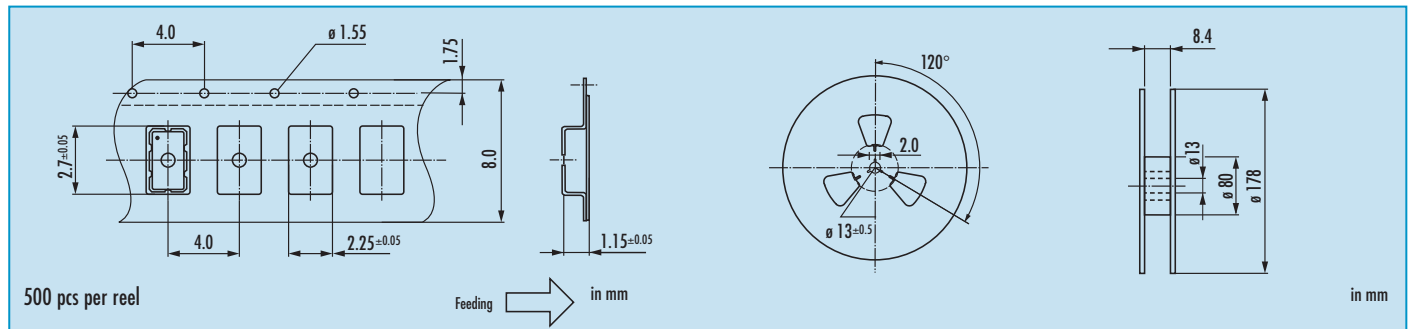


### Order Information



# Oscillator · JO22 · 3.0 V · Stop Function

## Taping Specification



## Enable / Disable Function

<b>pin #1 (e/d control)</b>	<b>pin #3 (output)</b>
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  
company code / frequency stability code / date code

date code:

A ~ M: Jan. - Dec.

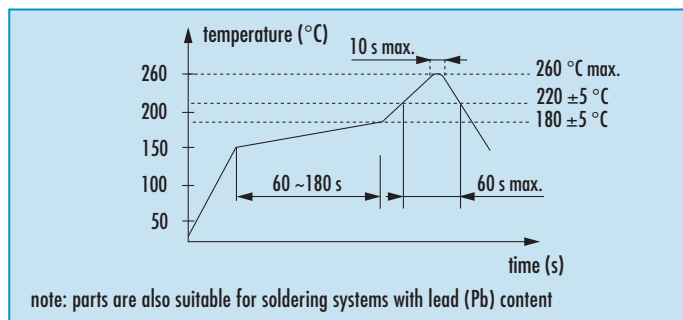
0: 2010    3: 2013

1: 2011    4: 2014

2: 2012    5: 2015

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 1000 pieces per reel
- non-multiple packing units are only supplied taped / bulk

\* hand soldering temperature should not exceed 280 °C