



actual size

Oscillator · JO22 · 2.8 V

SMD Oscillator with Stop Function · 2.5 x 2.0 mm

- very low current consumption
- HCMOS/LVCMOS output
- reflow soldering temperature: 260 °C max.
- ultra flat ceramic / metal package



General Data

type	JO22 2.8 V
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 _{DC}	2.8 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 _{DC} - 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 _{DC}	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.

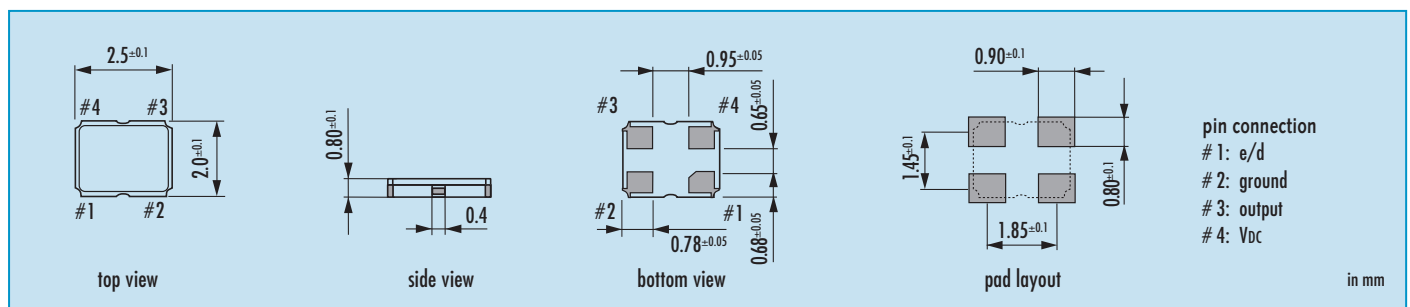
2.8 V: current at 15pF load:

0.75 ~ 19.9 MHz	5 mA
20.00 ~ 39.9 MHz	6 mA
40.00 ~ 50.0 MHz	7 mA

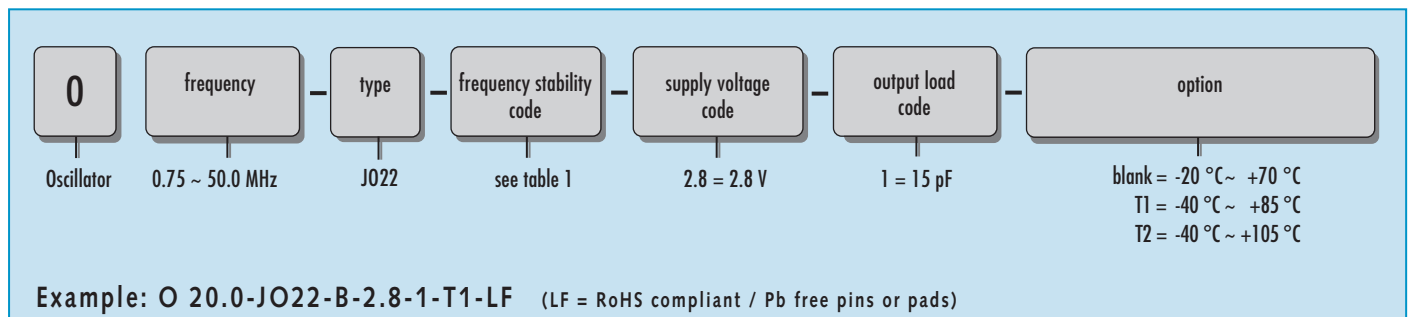
Table 3: Rise & Fall Time max.

5 ns: 0.75 ~ 50.0 MHz	<p>note:</p> <ul style="list-style-type: none"> - specific data on request - rise time: 0.1 V_{DC} ~ 0.9 V_{DC} - fall time: 0.9 V_{DC} ~ 0.1 V_{DC}
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Dimensions

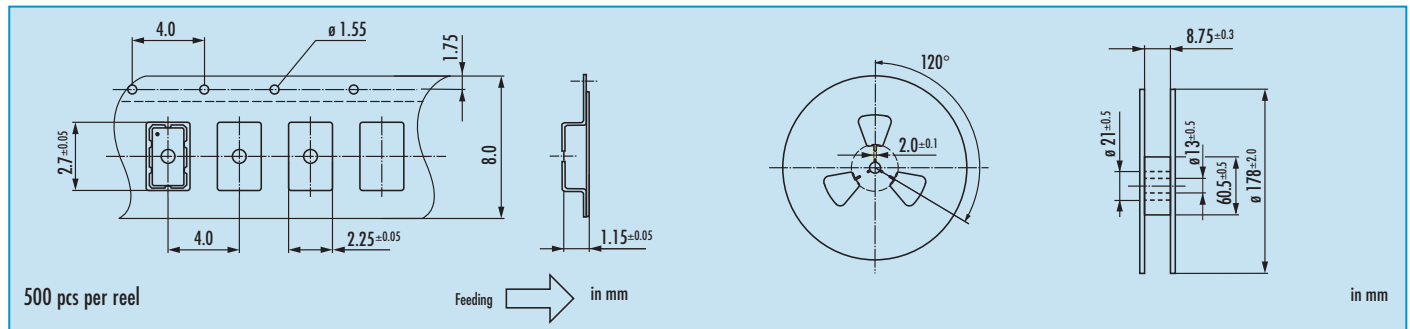


Order Information



Oscillator · JO22 · 2.8 V · Stop Function

Taping Specification



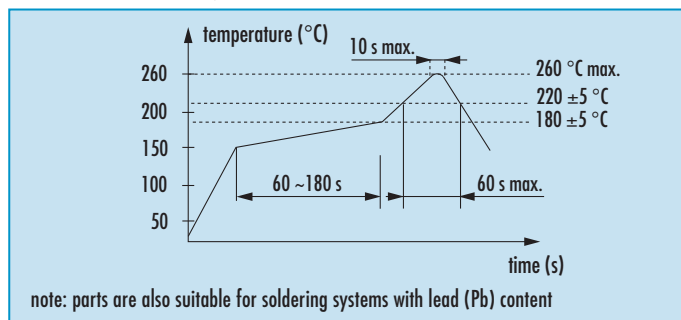
Enable / Disable Function

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:	
<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.		Jan.	Febr.	Mar.	Apr.	May	June
3: 2013 6: 2016		A	B	C	D	E	F
4: 2014 7: 2017		July	Aug.	Sept.	Oct.	Nov.	Dec.
5: 2015 8: 2018		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

* hand soldering temperature should not exceed 280 °C