



actual size

Oscillator · JO22 · 3.3 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

type	JO22 3.3 V
frequency range	0.75 ~ 50.0 MHz
frequency stability over all*	± 25ppm ~ ± 100ppm see table 1
current consumption	see table 2
supply voltage V _{DC}	3.3 V ± 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 current max.: 4mA low level max.: 0.1 x V _{DC} high level min.: 0.9 x V _{DC}
output enable time max.	10ms
output disable time max.	50µs
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 _{DC}	45% ~ 55% max.

** detailed data and available frequencies for option - LP upon request

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.

3.3 V: current at 15pF load:

0.75 ~ 19.9 MHz	6 mA
20.00 ~ 39.9 MHz	7 mA
40.00 ~ 50.0 MHz	8 mA

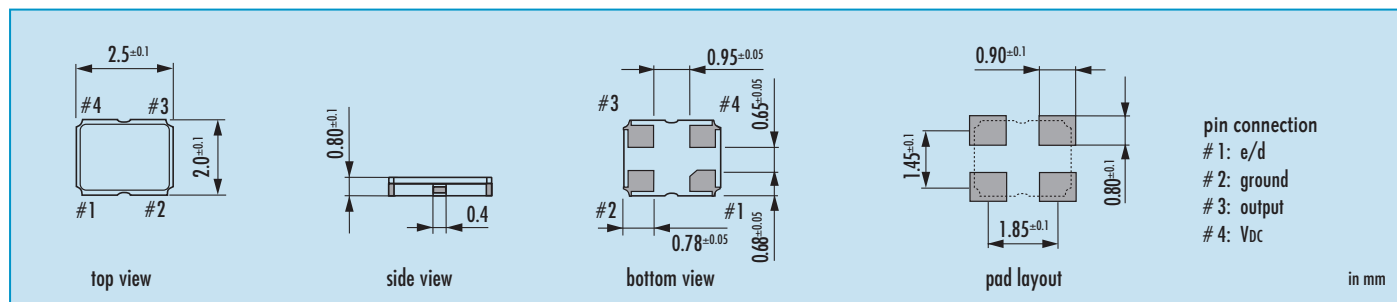
Table 3: Rise & Fall Time max.

5 ns: 0.75 ~ 50.0 MHz

note:

- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



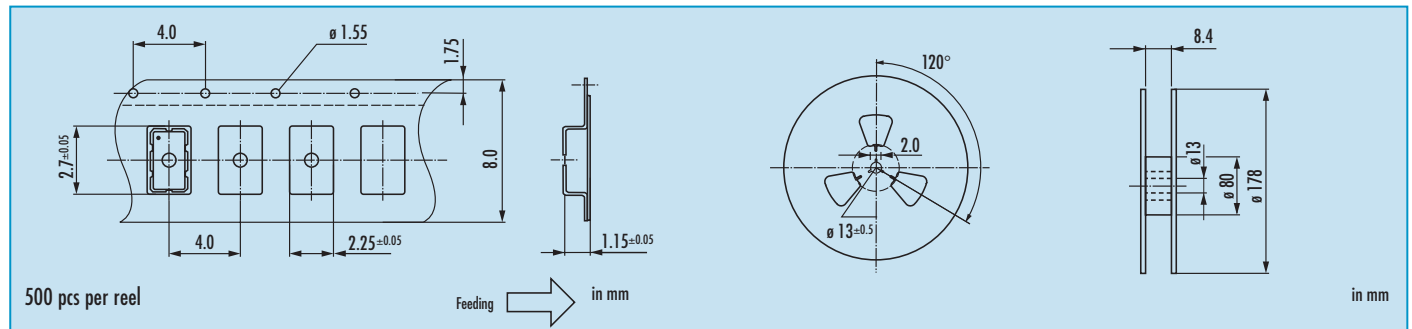
Order Information

0	frequency	type	frequency stability code	supply voltage code	output load code	option
Oscillator	0.75 ~ 50.0 MHz	JO22	see table 1	3.3 = 3.3 V	1 = 15 pF	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C LP = low phase noise**
Example: O 20.0-JO22-B-3.3-1 (LF = RoHS compliant / Pb free pins or pads)						



Oscillator · JO22 · 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: • oscillator stops • output high impedance	

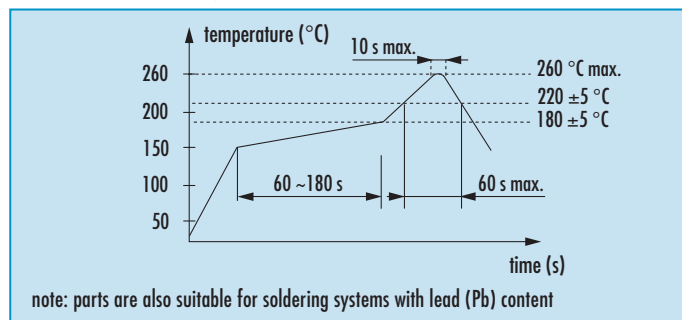
Marking

frequency
type / date code

date code:
A ~ M: Jan.- Dec.
7: 2007
8: 2008
9: 2009

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