



actual size

Oscillator · JO32 · 3.3 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 3.3 V
frequency range	0.75 ~ 80.0 MHz (15 pF max.)
	0.75 ~ 50.0 MHz (30 pF max.)
frequency stability over all*	± 25ppm ~ ± 100ppm (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 / 30pF
	current max. 5mA
	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.	150ns
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.

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.

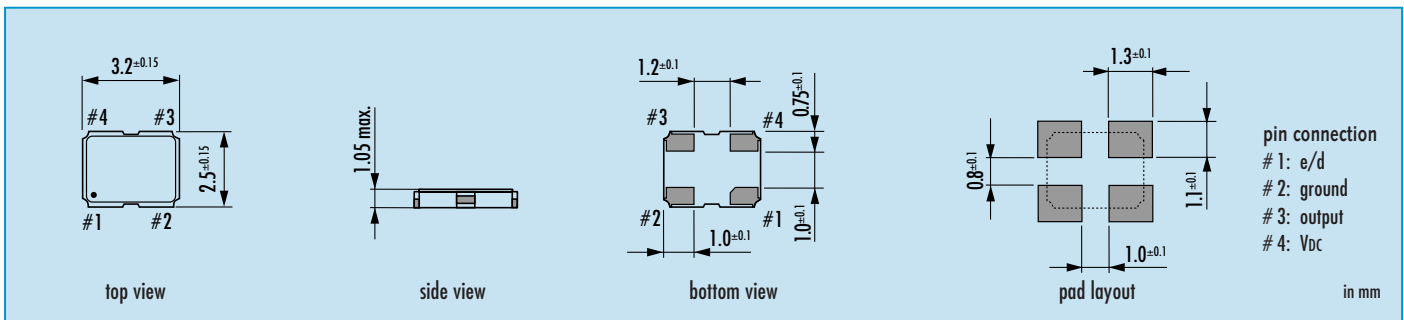
Table 2: Current Consumption max.

Current at 15pF load		Current at 30pF load	
0.75 ~ 19.9 MHz	7 mA	0.75 ~ 19.9 MHz	10 mA
20.00 ~ 39.9 MHz	13 mA	20.00 ~ 39.9 MHz	17 mA
40.00 ~ 59.9 MHz	19 mA	40.00 ~ 50.0 MHz	24 mA
60.00 ~ 80.0 MHz	24 mA		

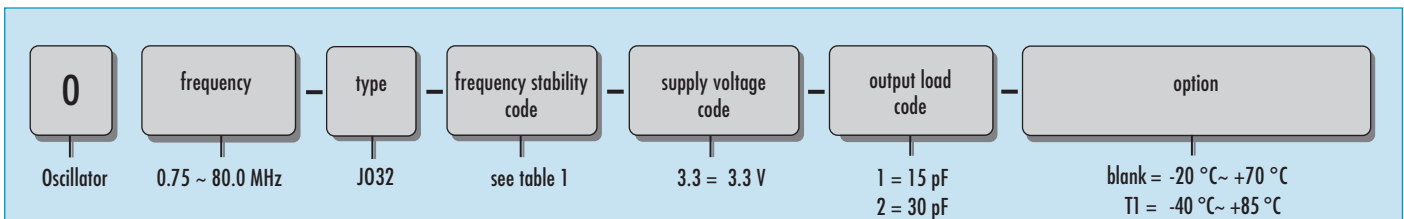
Table 3: Rise & Fall Time max.

5 ns: 0.75 ~ 1.8 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}
4 ns: 1.81 ~ 80.0 MHz	

Dimensions



Order Information

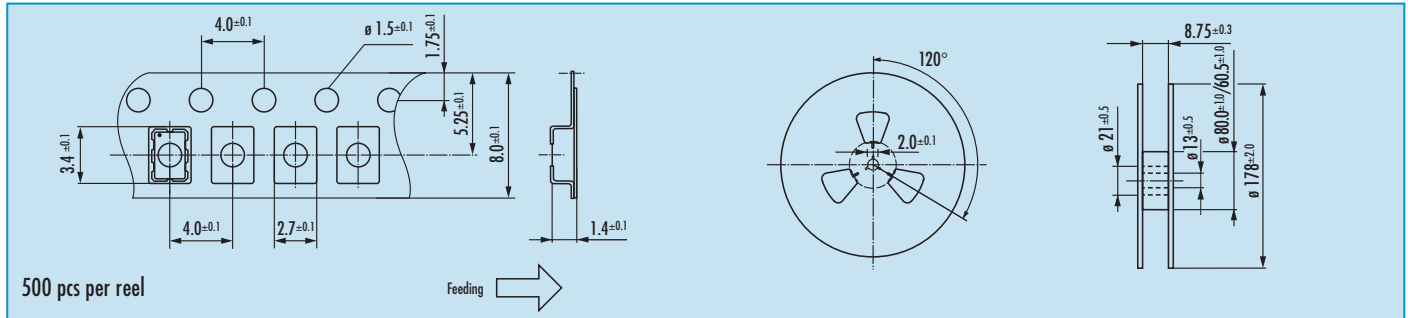


Example: O 20.0-JO32-B-3.3-1 (LF = RoHS compliant / Pb free pins or pads)



Oscillator · JO32 · 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: <ul style="list-style-type: none"> oscillator stops output high impedance 	

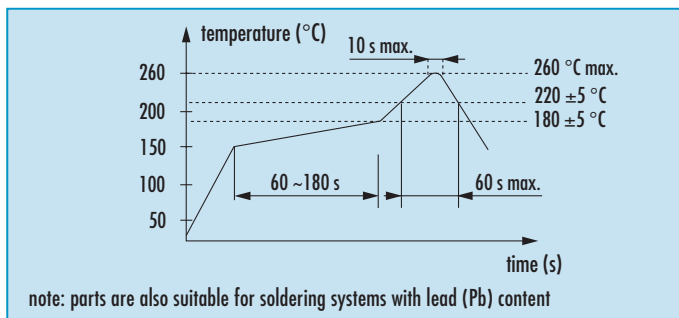
Marking

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