



actual size

# Oscillator · JO32H · 2.5 V

High Stability Oscillator with Stop Function · 3.2 x 2.5 mm

- low cost high stability SMD oscillator
- stability meets spec for WiMax and WLAN
- RoHS compliant, ceramic/metal package
- reflow soldering temperature: 260 °C max.



## General Data

type	JO32H 2.5V	
frequency range	4.0 ~ 54.0 MHz (15pF max.)	
frequency stability over all*	± 10ppm ~ ± 20ppm (table 1)	
aging 1st year	+/-2 ppm max.	
current consumption	7 mA max.	
supply voltage V <sub>DC</sub>	2.5 V ± 10%	
temperature	operating	-20°C ~ +70°C / -40°C ~ +85°C
	storage	-40°C ~ +85°C
output	rise & fall time	5 nsec max.
	load max	15pF
	current max.	4 mA
	low level max.	0.1 x V <sub>DC</sub>
	high level min.	0.9 x V <sub>DC</sub>
output enable time max.	1ms	
output disable time max.	250ns	
start-up time max.	2ms	
standby function	stop	
standby current max.	5µA	
phase jitter 12kHz~20MHz	< 3.0 ps RMS typ.	
symmetry at 0.5 x VDC	45% ~ 55% max.	

Table 1: Frequency Stability Code

stability code	D	E	F		
	± 20 ppm	± 15 ppm	± 10 ppm		
-20 °C ~ +70 °C	○	○	○		
-40 °C ~ +85 °C	○	○	○		
○ available					

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

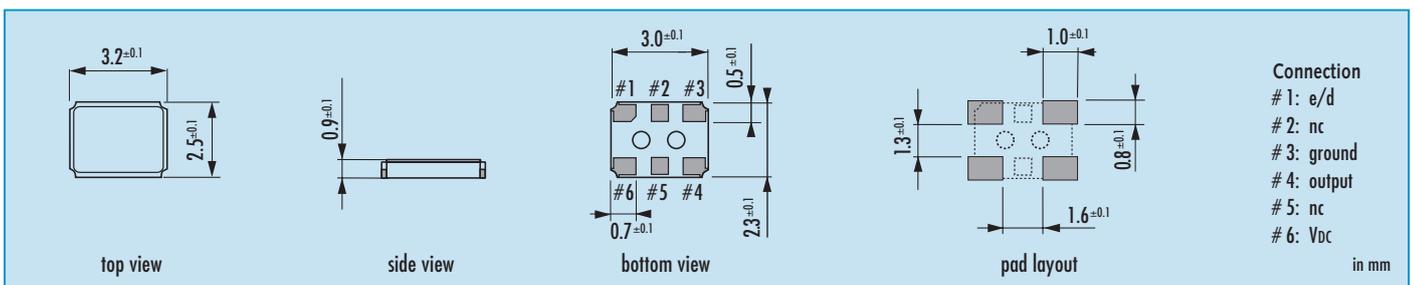
Table 2: Rise & Fall Time max.

5 ns: 4.0 ~ 54.0 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>
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## Enable / Disable Function

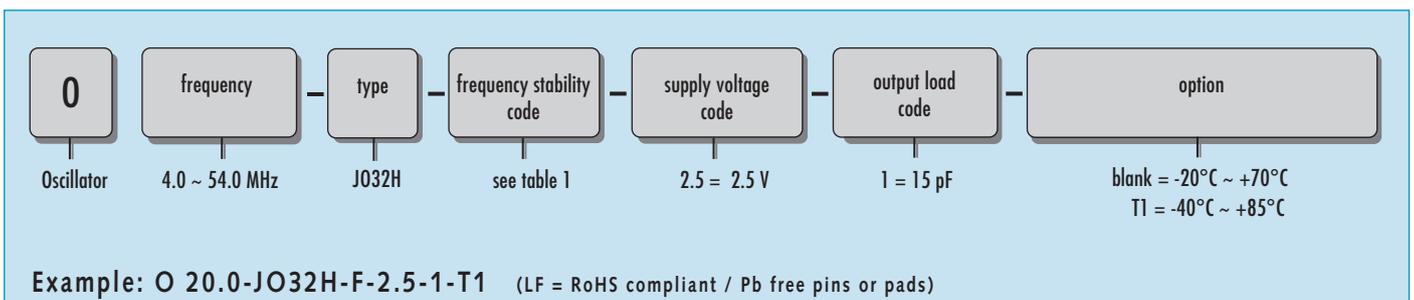
pin #1 (e/d control)	pin #3 (output)
open	active
high "1" (V <sub>IH</sub> ≥ 0.7 V <sub>DC</sub> )	active
low "0" (V <sub>IL</sub> ≤ 0.3 V <sub>DC</sub> )	high impedance
<b>stop function:</b> ● oscillator stops / ● output high impedance	

## Dimensions



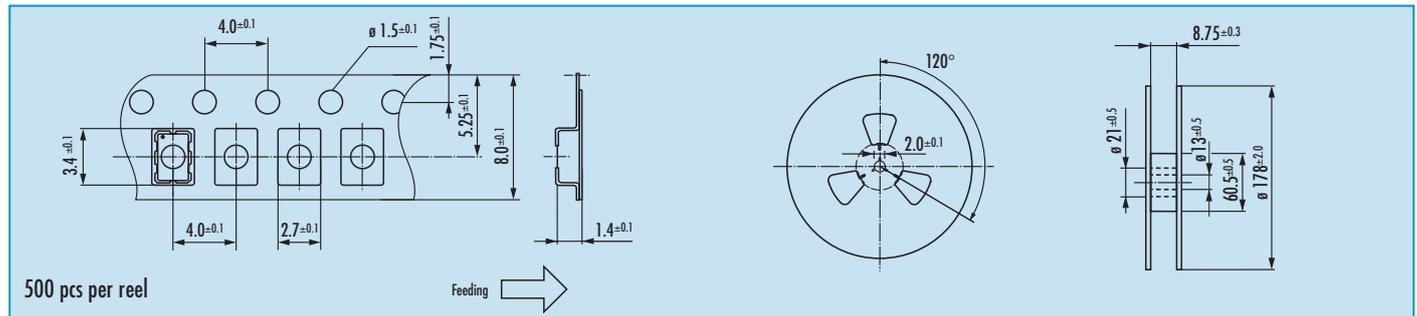
- Connection
- # 1: e/d
  - # 2: nc
  - # 3: ground
  - # 4: output
  - # 5: nc
  - # 6: V<sub>DC</sub>

## Order Information

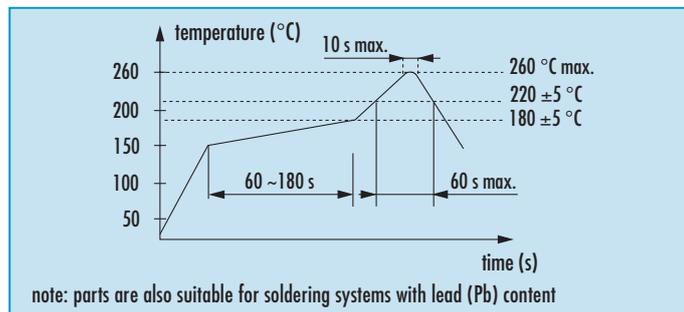


# Oscillator · JO32H · 2.5 V · Low Power

## Taping Specification



## Reflow Soldering Profile



## Marking

frequency

frequency / frequ. stability code / date code

date code:

Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F
July	Aug.	Sept.	Oct.	Nov.	Dec.
G	H	J	K	L	M

A ~ M: Jan.- Dec.

5: 2005

6: 2006

7: 2007

## Packing Note

- standard packing units are 500 pieces per reel
- non-multiple packing units are only supplied taped / bulk