



actual size

Oscillator · JO53 · 3.3 V

SMD Oscillator with Stop Function · 5.0 x 3.2 mm

- reflow soldering temperature: 260 °C max.
- ceramic/metal package



General Data

type	JO53 3.3 V
frequency range	0.50 ~ 125.0 MHz (15pF max.) 0.50 ~ 50.0 MHz (30pF max.)
frequency stability over all*	± 20 ppm ~ ± 100 ppm (table 1)
current consumption	see table 2
supply voltage V_{DC}	3.3 V ± 5%
temperature	operating: -10 °C ~ +70 °C / -40 °C ~ +85 °C storage: -55 °C ~ +125 °C
output	rise & fall time: see table 3 load max: 15pF / 30pF current max.: 5mA low level max.: $0.1 \times V_{DC}$ high level min.: $0.9 \times V_{DC}$
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 $0.5 \times V_{DC}$	45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A	B	G	C	D
	± 100 ppm	± 50 ppm	± 30 ppm	± 25 ppm	± 20 ppm
-10 °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.

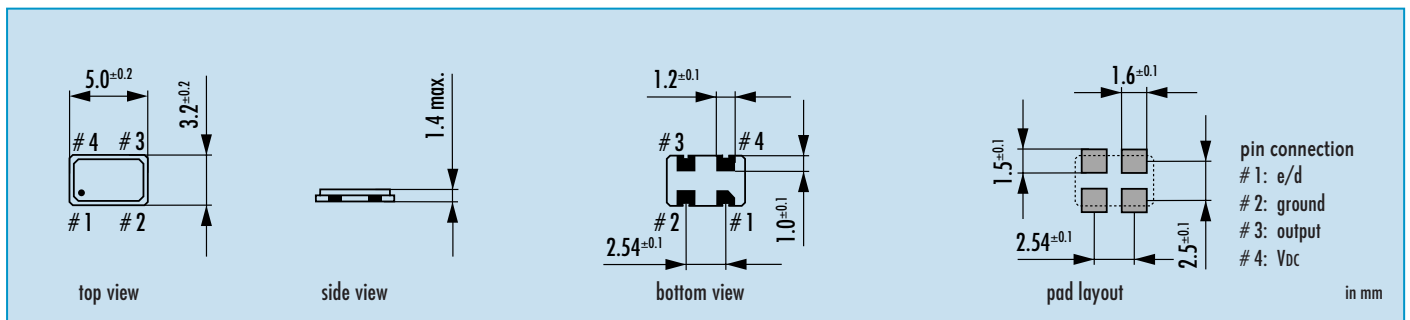
Table 2: Current Consumption max.

Current at 15pF load		Current at 30pF load	
0.5 ~ 29.9 MHz	15 mA	0.5 ~ 29.9 MHz	15 mA
30.0 ~ 49.9 MHz	25 mA	30.0 ~ 50.0 MHz	30 mA
50.0 ~ 79.9 MHz	40 mA		
80.0 ~ 125.0 MHz	50 mA		

Table 3: Rise & Fall Time max.

6 ns: 0.5 ~ 1.79 MHz	note: - specific data on request - rise time: $0.1 V_{DC} \sim 0.9 V_{DC}$ - fall time: $0.9 V_{DC} \sim 0.1 V_{DC}$
5 ns: 1.80 ~ 49.00 MHz	
4 ns: 50.0 ~ 125.00 MHz	

Dimensions



Order Information

0	frequency	type	frequency stability code	supply voltage code	output load code	option
Oscillator	0.5 ~ 125.0 MHz	JO53	see table 1	3.3 = 3.3 V	1 = 15 pF 2 = 30 pF	blank = -10 °C ~ +70 °C T1 = -40 °C ~ +85 °C

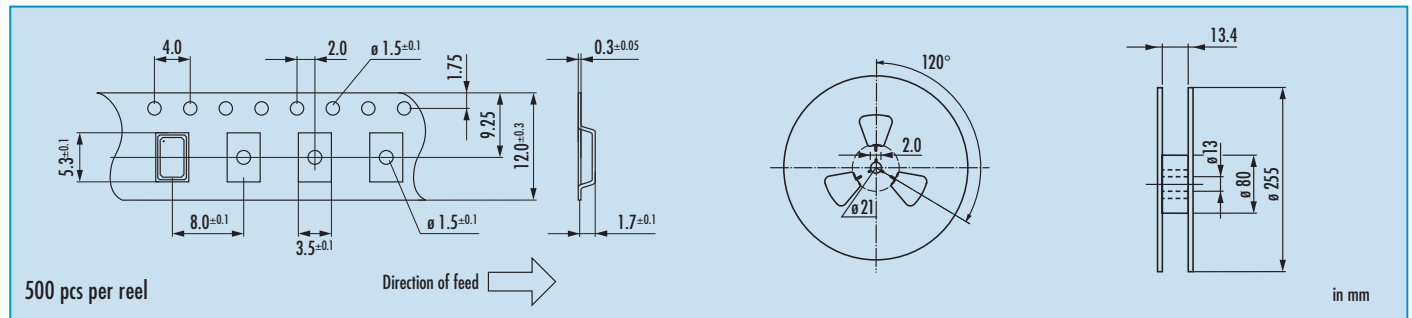
Example: O 20.0-JO53-B-3.3-1 (LF = RoHS compliant / Pb free pins or pads)



Jauch Quartz GmbH • e-mail: info@jauch.de
 full data can be found under: www.jauch.de / www.jauch.fr / www.jauchusa.com
 All specifications are subject to change without notice

Oscillator · JO53 · 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	

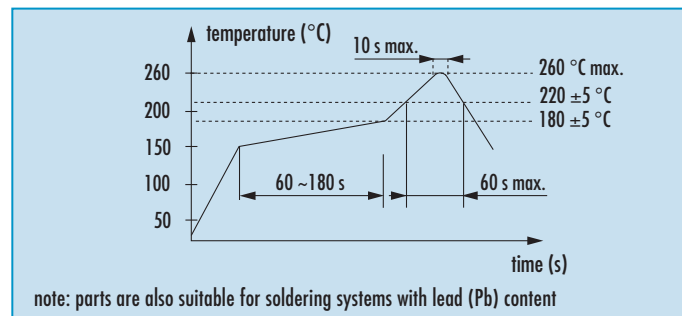
Marking

frequency
type / date code

date code:
A ~ M: Jan.- Dec.
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