



actual size

# Oscillator · JO53 · 2.5 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 2.5 V
frequency range	0.50 ~ 80.0 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 <sub>DC</sub>	2.5 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. 4mA
	low level max. 0.1 x V <sub>DC</sub>
	high level min. 0.9 x V <sub>DC</sub>
output enable time max.	10ms
output disable time max.	200ns
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 <sub>DC</sub>	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.

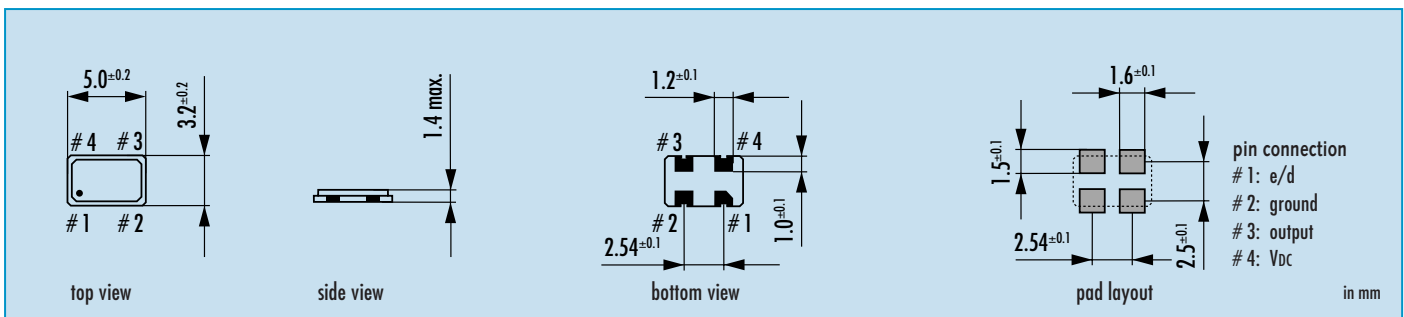
Table 2: Current Consumption max.

Current at 15pF load		Current at 30pF load	
0.5 ~ 14.9 MHz	6 mA	0.5 ~ 14.9 MHz	8 mA
15.0 ~ 29.9 MHz	8 mA	15.0 ~ 29.9 MHz	10 mA
30.0 ~ 39.9 MHz	10 mA	30.0 ~ 39.9 MHz	13 mA
40.0 ~ 49.9 MHz	13 mA	40.0 ~ 50.0 MHz	15 mA
50.0 ~ 59.9 MHz	16 mA		
60.0 ~ 80.0 MHz	20 mA		

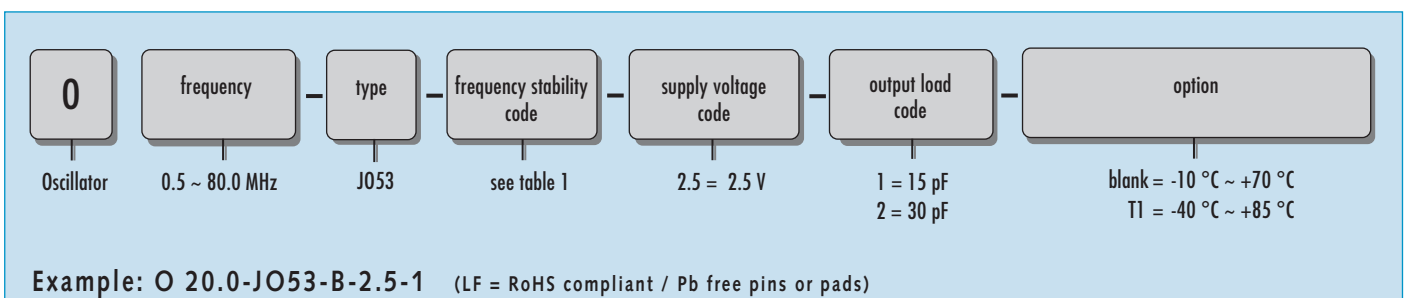
Table 3: Rise & Fall Time max.

6 ns: 0.5 ~ 1.79 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>
5 ns: 1.80 ~ 49.90 MHz	
4 ns: 50.0 ~ 80.00 MHz	

## Dimensions

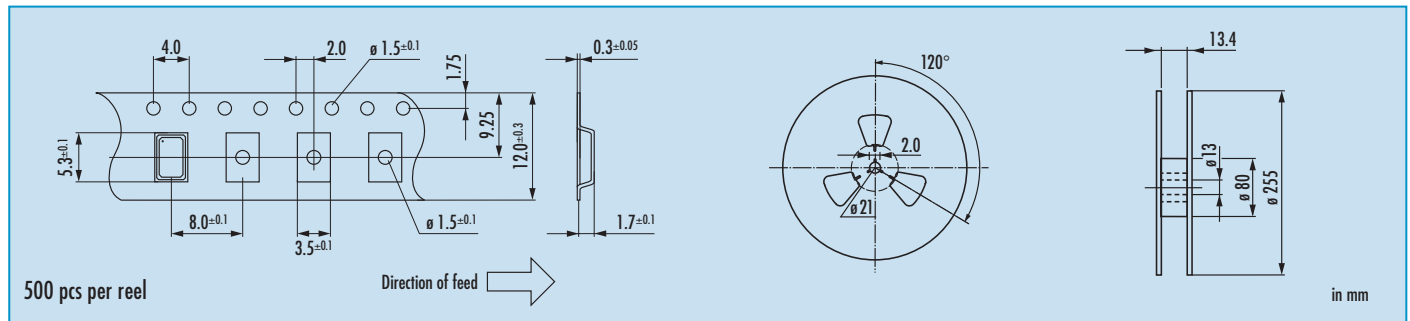


## Order Information



# Oscillator · JO53 · 2.5 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

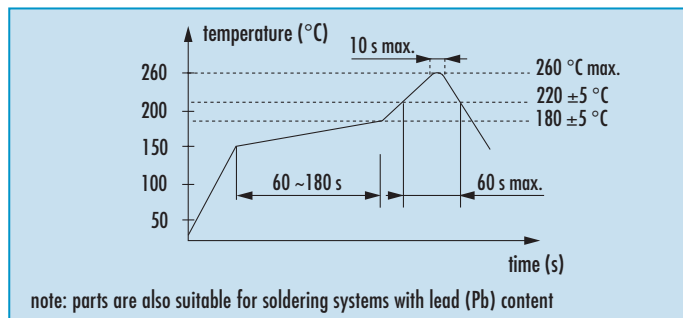
date code:  
A ~ M: Jan.- Dec.  
5: 2005  
6: 2006  
7: 2007

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