



actual size

Oscillator · VCXO · JV53 · 5.0 V

SMD Voltage Control Crystal Oscillator · 5.0 x 3.2 mm

- pulling range up to ± 100 ppm min.
- reflow soldering temperature: 260 °C max.
- ceramic/metal package



General Data

type	JV53 5.0 V
frequency range	2.0 ~ 54.0 MHz
frequency stability over all*	± 30 ppm / ± 50 ppm see table 1
current consumption	see table 2
supply voltage V_{DC}	5.0 V $\pm 10\%$
frequency pulling range min.	± 100 ppm (± 150 ppm typ.)
pulling control voltage	2.5 V ± 2.0 V [■]
pulling linearity	<10%
temperature	operating -20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage -55 °C ~ +125 °C
output	rise & fall time see table 3
	load max. 15pF
	current max. 8mA
	low level max. 0.1 x V_{DC}
	high level min. 0.9 x V_{DC}
standby function	no
start-up time max.	10ms
symmetry at 0.5 x V_{DC}	45% ~ 55% max.

Table 1: Frequency Stability Code

stability code	B	G				
	± 50 ppm	± 30 ppm				
-20 °C ~ +70 °C	○	○				
-40 °C ~ +85 °C	○	○				

● standard ○ available

* 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:	
2.0 ~ 19.9 MHz	15 mA
20.0 ~ 29.9 MHz	20 mA
30.0 ~ 39.9 MHz	25 mA
40.0 ~ 54.0 MHz	30 mA

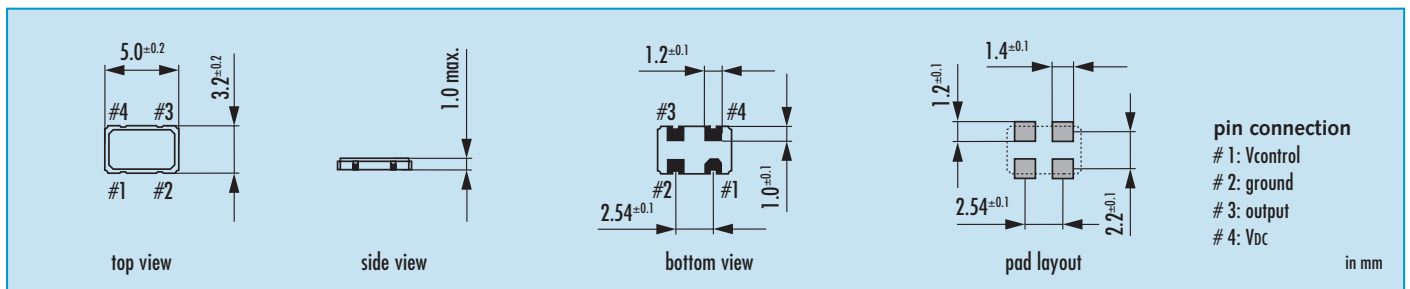
Table 3: Rise & Fall Time max.

6.0 ns: > 10.0 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}
10.0 ns: < 10.0 MHz	

Recommendation

To avoid phase noise or FM modulation in the output frequency spectrum, we recommend to feed the Vcontrol input pin by a low source impedance.

Dimensions



Order Information

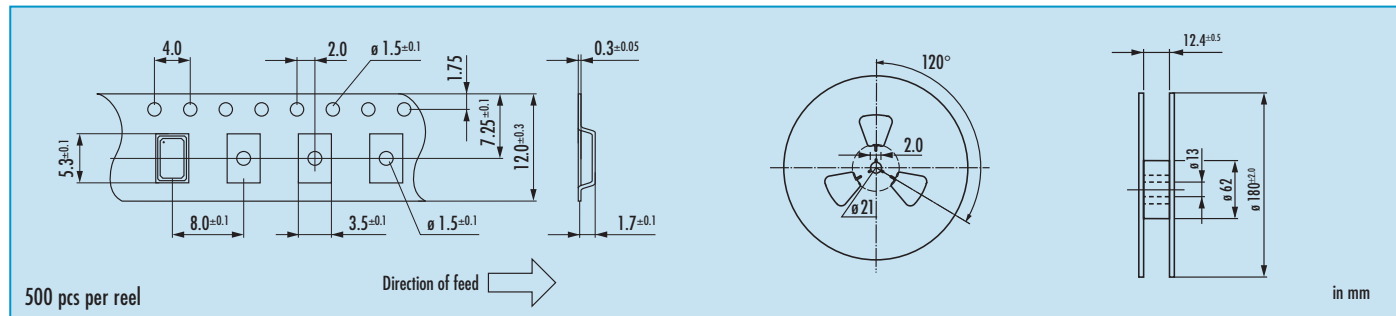
0	frequency in MHz	type	frequency stability in ppm	supply voltage in Volt	pulling range in ppm	option
Oscillator	2.0 ~ 54.0 MHz	JV53	G = ± 30 ppm B = ± 50 ppm	5.0 = 5.0 V	10 = ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C on request

Example: O 27.0-JV53-B-5.0-10 (Suffix LF = RoHS compliant / Pb free pins or pads)

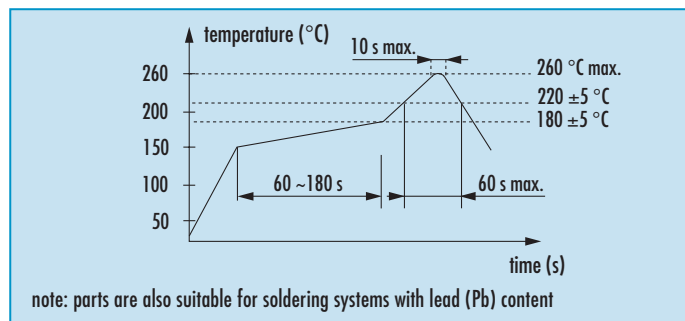


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Taping Specification



Reflow Soldering Profile



Marking

frequency
type / date code

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

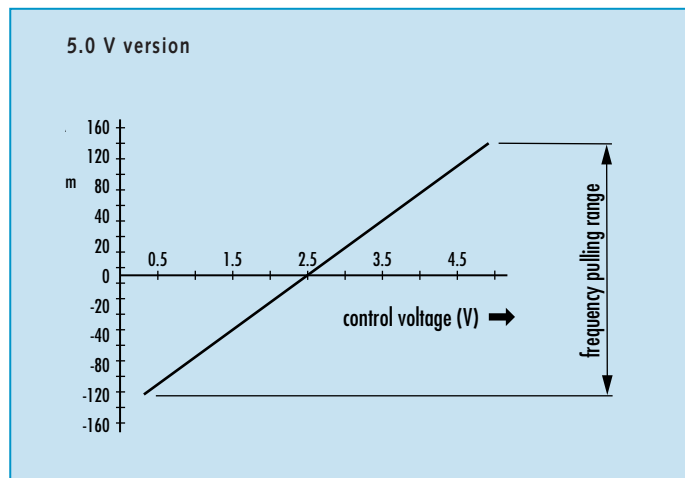
9: 2009

0: 2010

1: 2011

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

Control Voltage Characteristic



Packing Note

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