



actual size

# Oscillator JV32 · VCXO · 3.3 V

- SMD Voltage Controlled Crystal Oscillator, 3.2 x 2.5 mm
- pulling range  $\pm 100$  ppm minimum
- HCMOS / LVCMOS output
- ceramic/metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA		
TYPE	JV32 3.3 V VCXO HCMOS / LVCMOS output	
frequency range	1.25 ~ 55.0 MHz	
frequency stability over all*	$\pm 25$ ppm / $\pm 30$ ppm / $\pm 50$ ppm	
	see table 1	
current consumption	see table 2	
supply voltage $V_{DC}$	3.30 V $\pm 10\%$	
frequency pulling range min.	$\pm 100$ ppm	
pulling	control voltage	1.65 V $\pm 1.65$ V**
	linearity	< 10 %
	input impedance	1 M $\Omega$ min.
	modulation BW	20 kHz min.
temperature	operating	see table 1
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF
	current max.	2.8 mA
	low level max.	0.4 V
	high level min.	$V_{DC} - 0.4$ V
standby function	no	
start-up time max.	10 ms	
Phase noise @ 1 kHz	-130 dBc/Hz typ. (at 27.0 MHz output)	
symmetry at $0.5 \times V_{DC}$	45 % ~ 55 % max.	

TABLE 1: FREQUENCY STABILITY CODE

stability code / temp. code	B $\pm 50$ ppm	G $\pm 30$ ppm	C $\pm 25$ ppm
-20 °C ~ +70 °C	○	○	○
-40 °C ~ +85 °C	T1 ○	○	○

○ 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 15 pF load:  
 1.25 ~ 29.9 MHz 5.0 mA  
 30.0 ~ 55.0 MHz 6.5 mA

TABLE 3: RISE & FALL TIME MAX.

6.0 ns: 1.25 ~ 55.0 MHz

note:

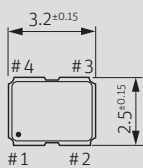
- rise time:  $0.1 V_{DC} \sim 0.9 V_{DC}$
- fall time:  $0.9 V_{DC} \sim 0.1 V_{DC}$
- specific data on request

## \*\* RECOMMENDATION

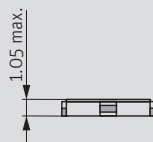
To avoid phase noise or FM modulation in the output frequency spectrum, we recommend to feed the Vcontrol input pin by a low source impedance.

For supply voltage noise reduction, connect a capacitor close to the oscillator's supply voltage pins.

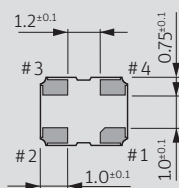
## DIMENSIONS



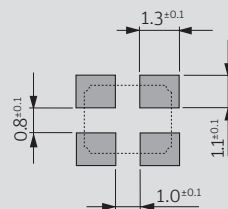
top view



side view



bottom view



pad layout

- # 1:  $V_{control}$
- # 2: ground
- # 3: output
- # 4:  $V_{DC}$

pin connection

in mm

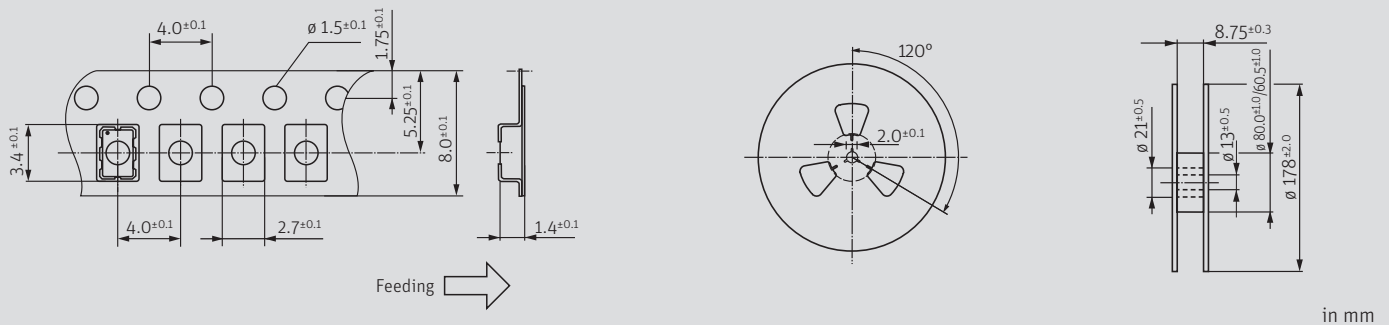
## ORDER INFORMATION

0	frequency	type	frequency stability code	supply voltage	pulling center voltage	pulling range	option
Oscillator	1.25 ~ 55.0 MHz	JV32	C = $\pm 25$ ppm G = $\pm 30$ ppm B = $\pm 50$ ppm	3.3 = 3.3 V	1.65 = 1.65 V	10 = $\pm 100$ ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C

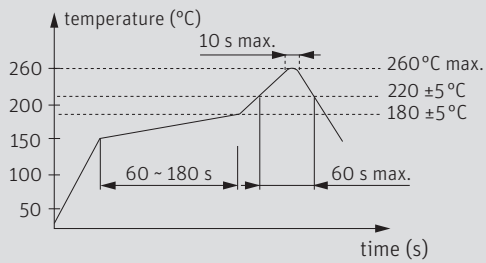
Example: 0 27.0-JV32-B-3.3-1.65-10-T1-LF (Suffix LF = RoHS compliant / Pb free)

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## TAPING SPECIFICATION



## REFLOW SOLDERING PROFILE



note: parts are also suitable for soldering systems with lead (Pb) content

## MARKING

### frequency

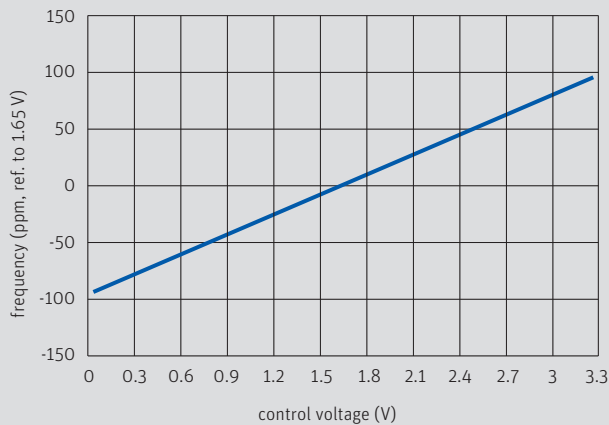
### company code / voltage code / date code

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

2: 2022   3: 2023   4: 2024   5: 2025   6: 2026   7: 2027

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



## PACKAGING NOTE

- standard packing unit is 500 pieces per reel
- customized quantities on request