



actual size

# Oscillator VX3 · 1.8 V

- SMD Oscillator with Stop Function, 7.0 x 5.0 mm
- preferred type for extended temperature range
- full ceramic package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA		VX3 1.8 V
TYPE		VX3 1.8 V
frequency range		0.5 ~ 40.0 MHz
higher frequencies on request		40.1 ~ 125.0 MHz
frequency stability over all*		± 20 ppm ~ ± 100 ppm see table 1
current consumption		see table 2
supply voltage V <sub>DC</sub>		1.8 V ± 10%
temperature	operating	-10 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	30 pF
	current max.	2.8 mA (< 40 MHz) / 8.0 mA (> 40 MHz)
	low level max.	0.1 x V <sub>DC</sub>
	high level min.	0.9 x V <sub>DC</sub>
output enable time max.		10 ms
output disable time max.		200 ns
start-up time max.		10 ms
standby function		stop
standby current max.		10 µA (< 40 MHz) / 100 µA (> 40 MHz)
phase jitter 12 kHz ~ 20.0 MHz		< 1.0 ps RMS
symmetry at 0.5 x V <sub>DC</sub>		45% ~ 55% typ. (40% ~ 60% max.)

TABLE 1: TYPE					
stability*	± 100 ppm	± 50 ppm	± 30 ppm	± 25 ppm	± 20 ppm
type VX3	V	VH	VS	VQ	VP
output load	30 pF	30 pF	30 pF	30 pF	30 pF
-10 °C ~ +70 °C	○	○	○	○	△
-40 °C ~ +85 °C	○	○	○	○	

○ 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.	
0.50 ~ 19.9 MHz	7 mA
20.0 ~ 39.9 MHz	10 mA
40.0 ~ 69.9 MHz	18 mA
70.0 ~ 94.9 MHz	25 mA
95.0 ~ 125.0 MHz	30 mA

TABLE 3: RISE & FALL TIME MAX.		note: - 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>
8.0 ns:	0.5 ~ 1.79 MHz	
6.0 ns:	1.8 ~ 69.90 MHz	
5.0 ns:	70.00 ~ 99.90 MHz	
4.0 ns:	100.00 ~ 125.00 MHz	

### DIMENSIONS

top view      side view      bottom view      pad layout      pin connection      in mm

# 1: e/d  
# 2: ground  
# 3: output  
# 4: V<sub>DC</sub>

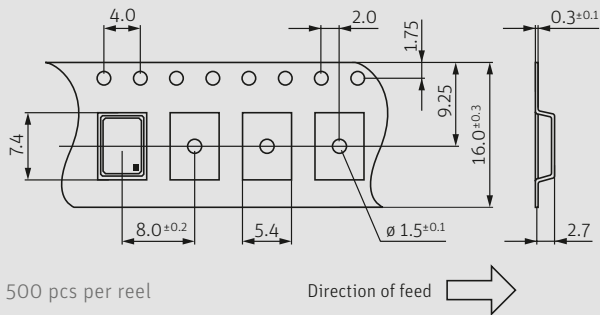
### ORDER INFORMATION

0	frequency	type	option
Oscillator	0.5 ~ 40.0 MHz 40.1 ~ 125.0 MHz on request	VX3V-VX3VP see table 1	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C

**Example: 0 20.0-VX3VH** (Suffix LF = RoHS compliant / Pb free)

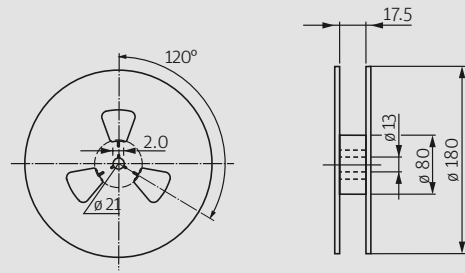
# Oscillator VX3 · 1.8 V · Stop Function

## TAPING SPECIFICATION (JIS-C0806)



500 pcs per reel

Direction of feed →



reel marking: type - OH/H

in mm

## 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

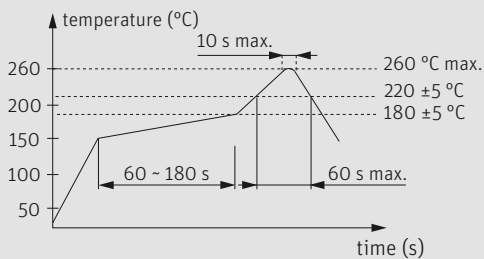
### type / frequency

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

7: 2017    8: 2018    9: 2019    0: 2020    1: 2021    2: 2022

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



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

## PACKAGING NOTE

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