



actual size

Oscillator VX3 · 2.8 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

TYPE		VX3 2.8 V
frequency range		0.5 ~ 165.0 MHz (15 pF max.)
higher frequencies on request		0.5 ~ 100.0 MHz (30 pF max.)
frequency stability over all*		± 20 ppm ~ ± 100 ppm see table 1
current consumption		see table 2
supply voltage V_{DC}		2.8 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.	15 pF / 30 pF
	current max.	8 mA
	low level max.	0.1 x V_{DC}
	high level min.	0.9 x V_{DC}
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
phase jitter 12 kHz ~ 20.0 MHz		< 1.0 ps RMS
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

TABLE 1: TYPE

stability*	± 100 ppm		± 50 ppm		± 30 ppm		± 25 ppm		± 20 ppm	
type VX3	P	N	PH	NH	PS	NS	PQ	NQ	PP	NP
output load	15pF	30pF	15pF	30pF	15pF	30pF	15pF	30pF	15pF	30pF
-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.

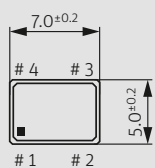
TABLE 2: CURRENT CONSUMPTION MAX.

Current at 15 pF load		Current at 30 pF load	
0.50 ~ 33.9 MHz	7 mA	0.50 ~ 19.9 MHz	10 mA
34.0 ~ 49.9 MHz	12 mA	20.0 ~ 49.9 MHz	20 mA
50.0 ~ 79.9 MHz	18 mA	50.0 ~ 79.9 MHz	25 mA
80.0 ~ 99.9 MHz	30 mA	80.0 ~ 100.0 MHz	35 mA
100.0 ~ 124.9 MHz	40 mA		
125.0 ~ 165.0 MHz	60 mA		

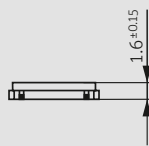
TABLE 3: RISE & FALL TIME MAX.

8.0 ns:	0.5 ~ 1.79 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}
6.0 ns:	1.8 ~ 79.99 MHz	
5.0 ns:	80.00 ~ 99.99 MHz	
3.0 ns:	100.00 ~ 165.00 MHz	

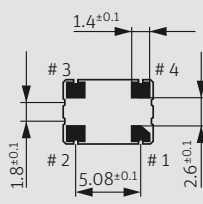
DIMENSIONS



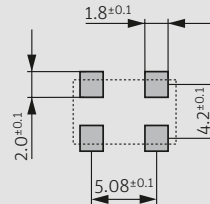
top view



side view



bottom view



pad layout

1: e/d
2: ground
3: output
4: V_{DC}

pin connection

in mm

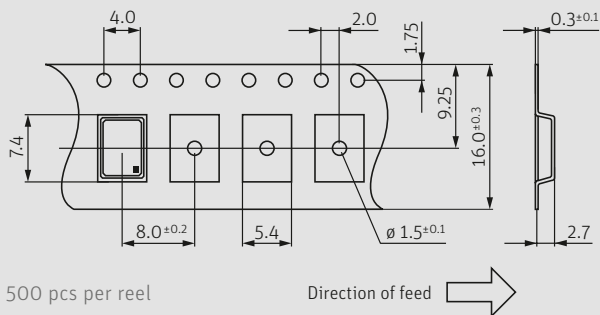
ORDER INFORMATION

0	frequency	type	option
Oscillator	0.5 ~ 165.0 MHz	VX3P-VX3NP see table 1	blank = -10 °C ~ +70 °C T1 = -40 °C ~ +85 °C

Example: 0 20.0-VX3PH (Suffix LF = RoHS compliant / Pb free)

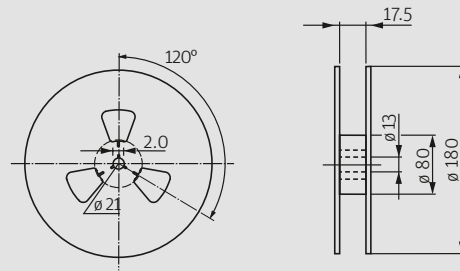
Oscillator VX3 · 2.8 V · Stop Function

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

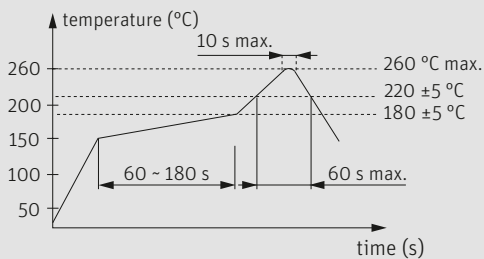
type / frequency

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