



actual size

Oscillator · VX3 · 3.3 V

SMD Oscillator with Tristate Function · 7.0 x 5.0 mm

- preferred type for extended temperature range
- reflow soldering temperature: 260 °C max.
- full ceramic package



General Data

type	VX3 3.3 V
frequency range	0.50 ~ 70.0 MHz (15pF max.) 0.50 ~ 70.0 MHz (30pF max.)
frequency stability over all*	± 20ppm ~ ± 100ppm (table 1)
current consumption	see table 2
supply voltage V_{DC}	3.3 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: 15pF / 30pF current max.: 8mA low level max.: 0.1 x V_{DC} high level min.: 0.9 x V_{DC}
output enable time max.	100ns
output disable time max.	100ns
start-up time max.	10ms
standby function	tristate
phase jitter 12 kHz ~ 20.0 MHz	< 1.0ps 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	J	M	K	MH	JS	MS	JQ	MQ	JP	MP
output load	15 pF	30 pF	15 pF	30 pF	15 pF	30 pF	15 pF	30 pF	15 pF	30 pF
-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.

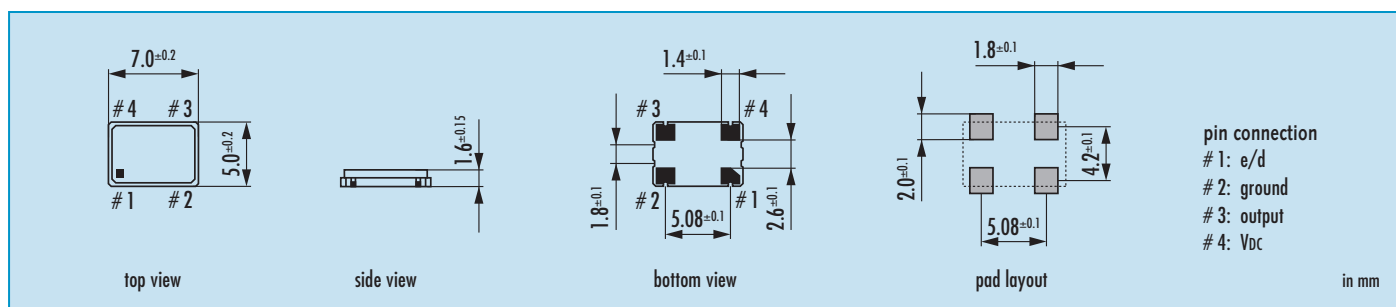
Table 2: Current Consumption max.

Current at 15pF load		Current at 30pF load	
0.5 ~ 33.9 MHz	8 mA	0.5 ~ 33.9 MHz	10 mA
34.0 ~ 49.9 MHz	12 mA	34.0 ~ 49.9 MHz	20 mA
50.0 ~ 70.0 MHz	25 mA	50.0 ~ 70.0 MHz	25 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 ~ 34.99 MHz	
5.0 ns: 35.0 ~ 70.00 MHz	

Dimensions



Order Information

0	frequency	type	option
Oscillator	0.5 ~ 70.0 MHz	VX3J-VX3MP see table 1	blank = -10 °C ~ +70 °C T1 = -40 °C ~ +85 °C

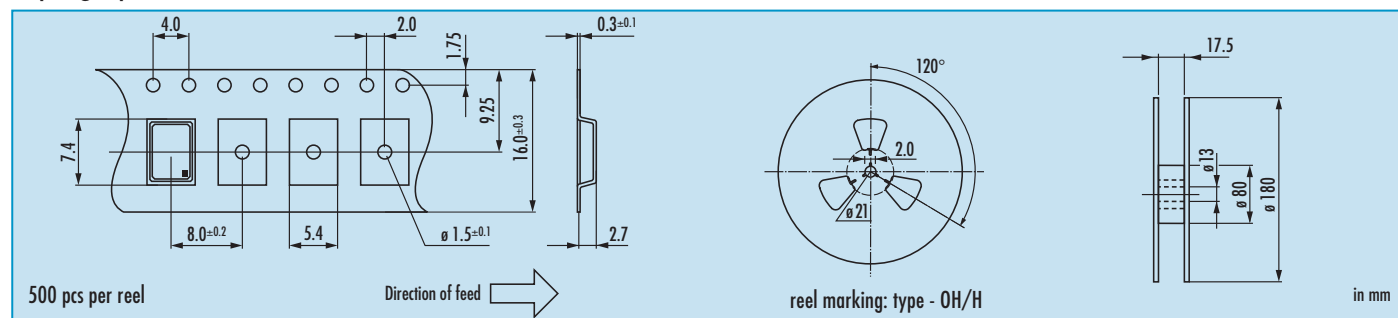
Example: O 20.0-VX3MH (LF = RoHS compliant / Pb free pads)

Preferred Type

VX3MH-T1: ± 50 ppm / 30 pF / -40 °C ~ +85 °C
 VX3MH: ± 50 ppm / 30 pF

Oscillator · VX3 · 3.3 V · Tristate Function

Taping Specification (JIS-C0806)



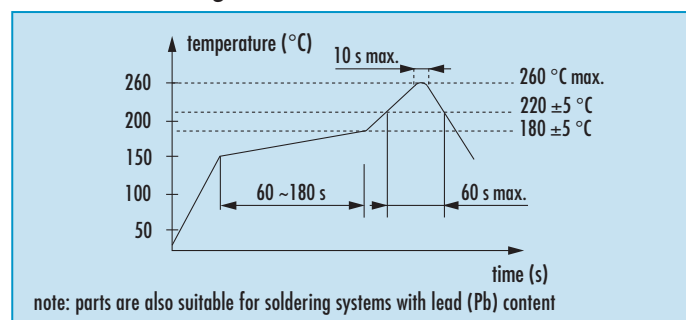
Enable / Disable Function

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
disabled conditions: • oscillator active • output high impedance	

Marking

type / frequency						
date code:						
A ~ M: Jan. - Dec.						
0: 2010						
1: 2011						
2: 2012						
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