



actual size

Oscillator · VX3 · 5.0 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 5.0 V
frequency range	0.50 ~ 107.0 MHz (15pF max.) 0.50 ~ 80.0 MHz (50pF max.)
frequency stability over all*	± 20ppm ~ ± 100ppm (table 1)
current consumption	see table 2
supply voltage V_{DC}	5.0 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 / 50pF current max.: 16mA 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	E	X	F	Y	FS	YS	EQ	XQ	EP	XP
output load	15 pF	50 pF	15 pF	50 pF	15 pF	50 pF	15 pF	50 pF	15 pF	50 pF
-10 °C ~ +70 °C	●	○	○	○	○	○	○	○	△	△
-40 °C ~ +85 °C	●	○	○	○	○	○	○	○		
● standard ○ available △ excludes aging										

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* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

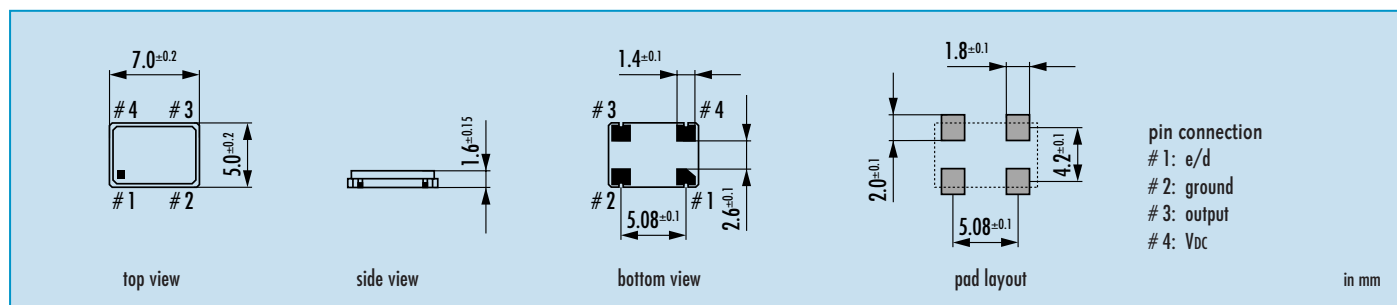
Table 2: Current Consumption max.

Current at 15pF load		Current at 50pF load	
0.5 ~ 29.9 MHz	10 mA	0.5 ~ 19.9 MHz	20 mA
30.0 ~ 34.9 MHz	15 mA	20.0 ~ 49.9 MHz	35 mA
35.0 ~ 65.9 MHz	30 mA	50.0 ~ 80.0 MHz	60 mA
66.0 ~ 79.9 MHz	50 mA		
80.0 ~ 107.0 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 ~ 34.99 MHz	
5.0 ns: 35.0 ~ 107.00 MHz	

Dimensions



Order Information

0	frequency	type	option
Oscillator	0.5 ~ 107.0 MHz	VX3E-VX3XP see table 1	blank = -10 °C ~ +70 °C T1 = -40 °C ~ +85 °C

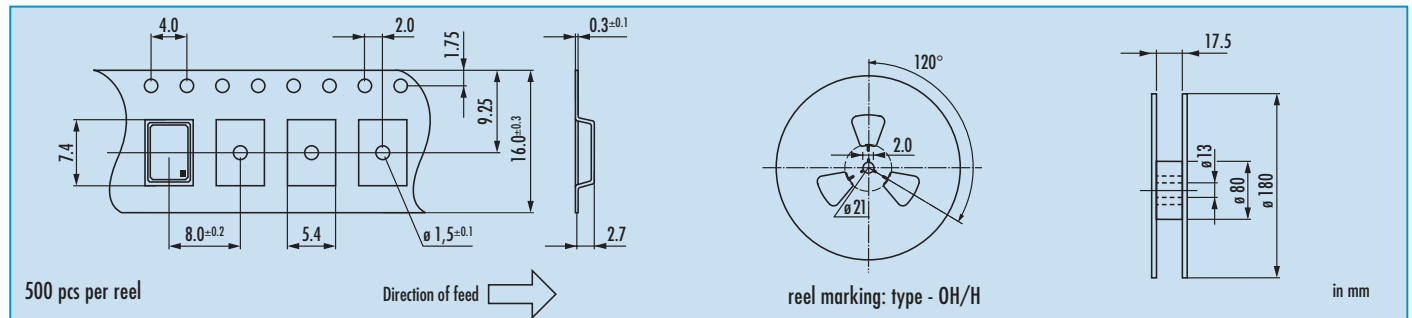
Example: O 20.0-VX3X (LF = RoHS compliant / Pb free pins or pads)

Preferred Type

VX3E-T1: ± 100 ppm / 15 pF / -40 °C ~ +85 °C
VX3E: ± 100 ppm / 15 pF

Oscillator · VX3 · 5.0 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	

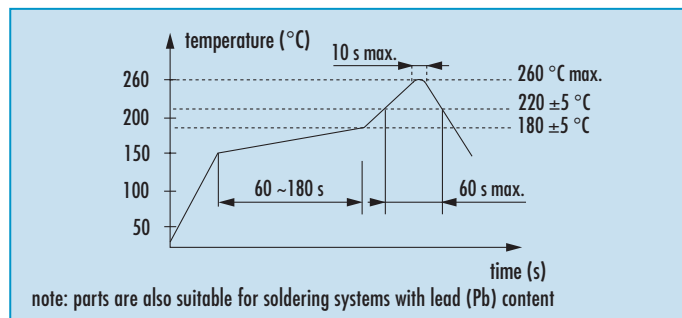
Marking

type / frequency

date code:
 A ~ M: Jan. - Dec.
 5: 2005
 6: 2006
 7: 2007

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