



actual size

Programmed Oscillator · VX7

Surface Mount Crystal Oscillator – Low Jitter

Features

■ RoHS compliant

■ stand-by or stop function available

General Data

type	VX7 3.3 V	VX7 5.0 V	
frequency range	1.0 ~ 200.0 MHz	1.0 ~ 200.0 MHz	
frequency stability over all*	± 25 ppm ~ ± 100 ppm	± 25 ppm ~ ± 100 ppm	
current consumption	see table 1	see table 1	
supply voltage	3.3 V ± 10 %	5.0 V ± 10 %	
output	rise & fall time	see table 3	
	load	15 pF: 1.0 ~ 200.0 MHz	15 pF: 1.0 ~ 200.0 MHz
		50 pF: 1.0 ~ 80.0 MHz	50 pF: 1.0 ~ 80.0 MHz
	current max.	8 mA	16 mA
	low level max.	$V_{DC} \times 0.1$	$V_{DC} \times 0.1$
high level min.	$V_{DC} \times 0.9$	$V_{DC} \times 0.9$	
temperature	operating	-10 °C ~ +70 °C	-10 °C ~ +70 °C
	extended	-40 °C ~ +85 °C	-40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C	-55 °C ~ +125 °C
symmetry at 1/2 V_{DC}	< 45 / 55 % typical	< 45 / 55 % typical	

Table 1: current consumption max.

3.3 V version: 20 mA with 15 pF load 30 mA with 50 pF load
5.0 V version: 30 mA with 15 pF load 50 mA with 50 pF load

Table 3: rise & fall time max.

	5.0 V	3.3 V
1.0 ~ 79.99 MHz	5 ns	6 ns
50.0 ~ 200.0 MHz	6 ns	6 ns

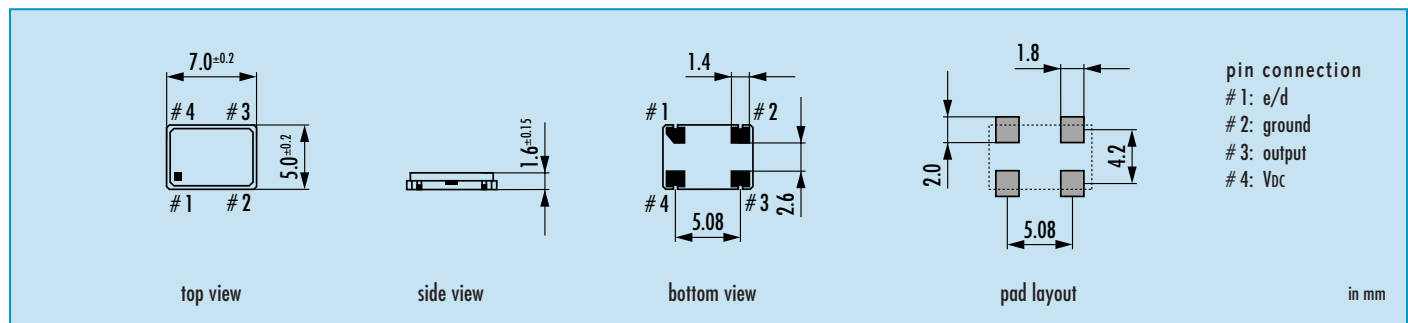
* inclusive stability at 25°C, operating temperature range, input voltage change, aging, shock and vibration.

Order Information

0	frequency in MHz	type	frequency stability code	supply voltage code	output load code	option
Oscillator	1.0 ~ 200.0 MHz (15 pF) 1.0 ~ 80.0 MHz (50 pF)	VX7	A = ± 100 ppm B = ± 50 ppm G = ± 30 ppm C = ± 25 ppm	3= 3.3 V 5= 5.0 V	1= 15 pF 3= 50 pF	blank = -10 °C ~ +70 °C std. blank = tristate function STP = stop function T1 = -40 °C ~ +85 °C
Example: O 20.0-VX7-B-3-1 (LF = Pb free / RoHS compliant)						

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Dimensions



Enable / Disable Function

pin #1	pin #3
open or high	oscillation
gnd or low	high impedance

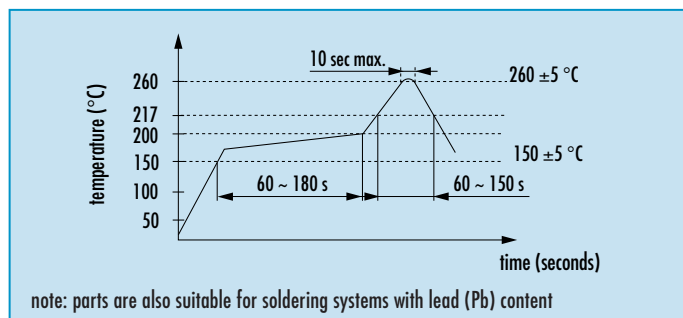
start-up time: < 3 ms typical

Jitter Reference Data

3.3V version, 15 pF

frequency in MHz	1 sigma RMS in ps	peak-peak in ps
8.0000	50	200
16.0000	41	160
32.0000	42	170
50.0000	13	70
106.250	27	125
125.000	21	100
155.520	27	130
200.000	40	150

Reflow Soldering Profile



Marking

J / date code

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