



中川電子有限公司
Nakagawa Electronics Limited

HCMOS, 9X14,J-LEAD, VCXO (SEE PART NUMBERING SYSTEM FOR PART NUMBER)

DESCRIPTION: A crystal controlled, HCMOS, highly stable oscillator, The output can be Tri-stated to facilitate testing or combined multiple clocks. The device is contained in a sub-miniature, very low profile, leadless ceramic SMD package with 6 or 4 gold J lead contacts. This miniature oscillator is ideal for today's automated assembly environments.

APPLICATIONS AND FEATURES:

- DSL; Network Processors; Test instruments; Switches; WAN Interfaces
- Common Frequencies: 27 MHz; 35.328 MHz; 19.44 MHz; 77.76MHz; 16.384 MHz;
- +5 VDC or +3.3Vdc HCMOS
- Frequency Range from 1 to 77.760 MHz
- Miniature Ceramic SMD Package Available on Tape and Reel
- Lead Free

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MECHANICAL SPECIFICATION

		<p>OUTLINE TOLERANCE: ±0.015" / 0.4mm (unless otherwise specified)</p> <p>6 PIN FUNCTIONS: [1] CONTROL VOLTAGE [2] N/C or ENABLE / DISABLE [3] CASE/GROUND [4] OUTPUT [5] NO CONNECT [6] SUPPLY VOLTAGE</p> <p>4 PIN FUNCTIONS: [1] CONTROL VOLTAGE [2] CASE/GROUND [3] OUTPUT [4] SUPPLY VOLTAGE</p> <p>MARKING EXAMPLE: VC8450A-LZ -100-FREQ.-T-4 R D/C</p>
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ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Frequency, nom	f _o	-	1.000-77.760	MHz
Supply voltage, nom.	V _{cc}	V _{cc} ±5%	+3.3 +5.0	V
Supply current, max.	I _s	V _{cc} =+3.3/+5.0VDC, T _a =+25°C, load=15pF	25.0...35.0	mA
HCMOS/TTL compatible output	V _{OH} / V _{OL}	V _{cc} =+3.3/+5.0VDC, load=15pF	2.97 / 0.33 4.5 / 0.5	V
Duty cycle	DC	load=15pF / @50%V _{cc} , T _a =+25°C	40...60 OR 45...55	%
Rise- / fall time, max.	t _r / t _f	20%~80% V _{out} , 80%~20% V _{out}	3.0...10.0	ns
Overall freq. stability, max.	Δf/fc	Including operating temperature, ±5% load & supply variations, 10 year aging, and calibration @+25°C (note 2)	±25.0...±100.0	ppm
Control voltage range	V _c	DC	0...+3.3 +0.5...+4.5	V
Pullability	Δf/fc(vc)	V _{cc} =+3.3V/V _c =0...3.3 OR +5.0V/V _c =+0.5...4.5V, 15pF load	SEE PART NUMBER GENERATION TABLE	PPM
Linearity, max.	Δf/V	-	10	%
Input impedance, min.	Z _{in}	-	10.0	KΩ
Modulation freq. bandwidth, min.	MBW (-3dB)	V _{cc} =+3.3V/V _c =+1.65V OR +5.0V/V _c =+2.5V T _a =+25°C, 15pF load	10.0	KHz
Enable option (pin 2)	En	High or open (min.)	+2.4	V
Disable option (pin 2)	Dis	Ground (output pin high impedance) (max.)	+0.4	V
Operating temperature range	T _a	-	0...+70 TO -40...+85	°C
Storage temperature range	T(stg)	-	-55...+125	°C
Absolute voltage range	V _{cc} (abs)	Non-destructive, DC	-0.5...+7.0	V

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PART NUMBERING SYSTEM:

SERIES	OVERALL STABILITY	REV	TEMP. RANGE (°C)	PULLABILITY Min (PPM)(Note 3)	FREQUENCY (MHz)	OPTIONS
VE2: 5.0V HCM NO E/D VE4: 3.3V HCM NO E/D VE82: 5.0V HCM E/D VE84: 3.3V HCM E/D	25±25 (note 2) 50: ±50ppm 00: ±100ppm	A	LV0...50 L: ...+70 H20...+70 D3: -40...+85	50±50 ppm 80±80 ppm 100±100 ppm 150±150 ppm	1.000...7776 0	4: 4 PADS VERSION (Note 1) T: 45...55 DUTY CYCLE

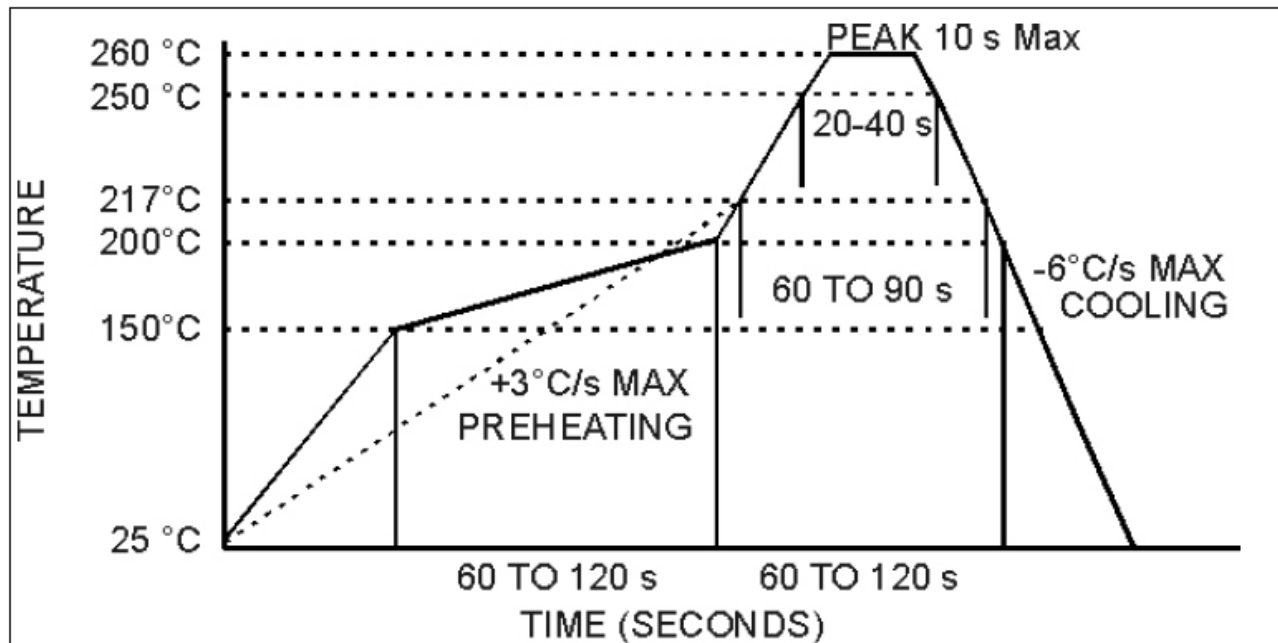
NOTE:

1. Enable/Disable feature is not available with 4 pads version
2. ±25 PPM stability option is available at 0-70 only and aging of 3 years max and max pullability of ±100 PPM
3. Max pullability is defined as double the Min defined value (Example: ±100 PPM min...±200 PPM max)

EX. VC8400A-LZ-100-77.760-T-4

DEVIATIONS FROM STANDARD ARE AVAILABLE, PLEASE CONSULT FACTORY.

■ REFLOW SOLDER



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