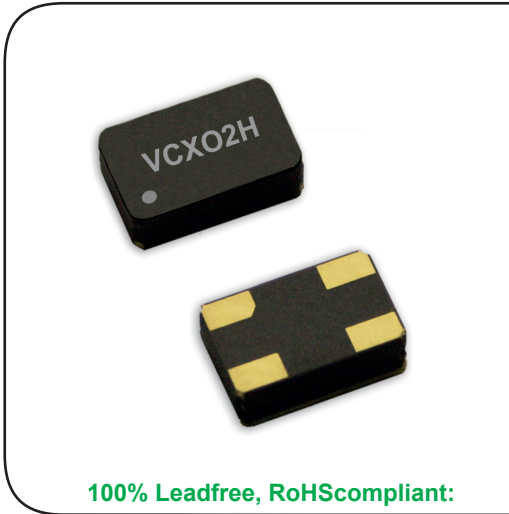


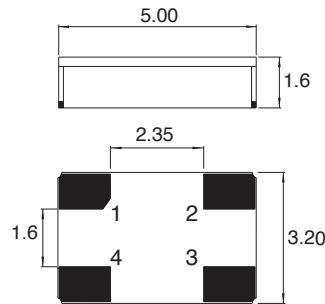
# VCXO2H family package 5×3.2 mm

T range up to 125°C 5MHz to 170MHz

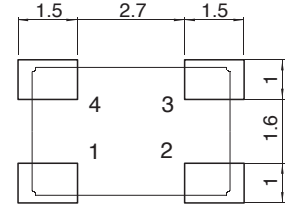


## DIMENSIONS

Package:  
Bottom view



Recommended Solder Pad:



pin 1 Vc  
pin 2 GND  
pin 3 Fout  
pin 4 Vdd

All dimensions in mm typical

**SMT Voltage control oscillator in ceramic package**  
**Fundamental quartz mode frequency**  
**High shock and vibration resistance**  
**Wide temperature range**  
**Low aging**  
**Ultra low internal MSL**  
**Very fast start-up**  
**Excellent solderability**  
**Swiss made quality**  
**Customer specification on request**

## DESCRIPTION:

This SMD oscillator in ceramic package has been specially designed for surface mount using infrared, vapor phase or epoxy techniques.

## APPLICATIONS:

- Radio transmission / transceiver
- Avionics
- Airborne equipments
- Fire fighter equipments

The VCXO2H's are supplied on trays (128 pcs / tray)  
 For pick-and-place equipment, the parts are available in 12mm tapes with 250 parts min

## ELECTRICAL CHARACTERISTICS AT +25°C

Absolute Frequency Pulling range APR (Minimum frequency deviation including 2)*			
Temperature range B= -40 to 85°C C= -55 to 125°C	$\Delta F/F$	$\pm 130$ $\pm 110$	ppm
Supply voltage $\pm 5\%$ 1)*	Vdd	3.3	V
Input current	Idd	see table 1	
Output signal		HC-MOS compatible	
Symmetry at Vdd/2		40 / 60	%
Rise & fall time (load 15pf 20% to 80%)		$\leq 2$	ns
Level "0" & "1"		$< 0.4 > V_{dvd} - 0.5$	V
Start-up time	t	$< 5$	ms
Load min / max		3/27	pF

\* 1) C = 47nF ceramic must be connected between GND & Vdd

\* 2) APR is inclusive of frequency deviation due to stability adjustment at +25°C, long term aging 1 year over supply voltage  $\pm 5\%$  over load min to max frequency stability over T range

**TABLE 1: Idd  
(Without load)**

Frequency	F=40MHz	≤ 100MHz	130MHz
V=Vdd = 3.3V	< 10mA	< 20mA	< 25mA

**FREQUENCY CONTROLE RANGE:**

Vc (Voltage control range)	0 to 3.3V
Response Slope	positive
Frequency bandwiche	≤10kHz
Input impedance	≥100kohm

**STANDARD FREQUENCIES:**

Frequency «MHz»				
16.384	24.576	80	100	128
Other frequencies on request				

**ENVIRONMENTAL  
CHARACTERISTICS:**

Storage temp. range	-65 to +125°C
Vibration resistance	10 to 2000Hz / 20g
Shocks resistance	5000g / 0.3ms / ½ sine

**TERMINATIONS AND  
PROCESSING:**

Reflow soldering	260°C / 10s max
Package	Ceramic 5 x 3.2 x 1.6mm
Lids	Ceramic
Terminations option T3 on request	with tinned Ag/Cu/Zn

**PRODUCT DESCRIPTION AND  
ORDERING INFORMATION:**

**VCXO2H      V - C 100MHz      T3    XXX**

V = Vdd 3.3V

B = -40 to 85°C

C = -55 to 125°C

X = custom

Frequency

option 2  
blank Au plated  
T3 = tinned

customer  
spec N°

A unique part number will be generated for each product specification

20xxxx-EA00      xxx pcs (in ESD plastic tray)

200xxx-ML00      xxx pcs (in tape & reel, any quantity)

All specifications subject to change without notice.



Micro Crystal AG  
Mühlestrasse 14  
CH-2540 Grenchen  
Switzerland

Tel. +41 32 655 82 82  
Fax +41 32 655 82 83  
sales@microcrystal.com  
www.microcrystal.com