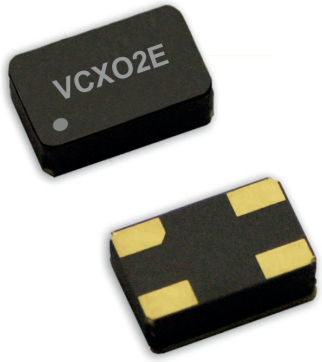
MICRO CRYSTAL SWITZERLAND

VCXO2E family package 5×3.2 mm

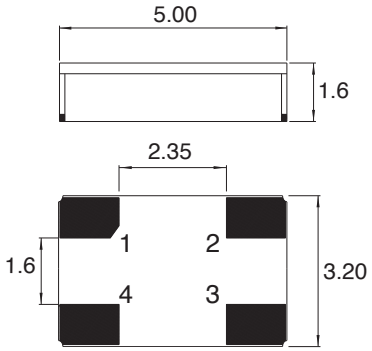
T range up to 210°C 5 to 40MHz



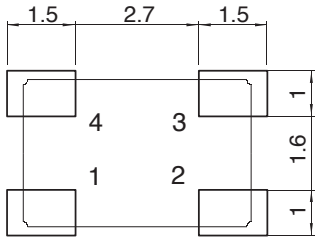
100% Leadfree, RoHScompliant:

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:

- Downhole and Well drilling equipments
- Avionics
- Airbone equipments
- Geothermal equipments
- Fire fighter equipments

The VCXO2E's are supplied on trays (128 pcs / tray)
For pick-and-place equipment, the parts are available in 12mm tapes
with 250 parts min
1000 parts min

ELECTRICAL CHARACTERISTICS AT +25°C

Absolute Frequency Pulling range APR (Minimum frequency deviation including 2)* Tempperature range B= -40 to 85°C C= -55 to 125°C R= -10 to 150°C S= -10 to 175°C T= -10 to 210°C	**ΔF/F**	 **± 130** **± 110** **± 90** **± 50** **± 30**	**ppm**
Supply voltage ± 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%)		≤5	ns
Level "0" & "1"		<0.4>Vdvd-0.5	V
Start-up time	t	<5	ms
Load min / max		3/47	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 ±5%
over load min to max
frequency stability over T range

TABLE 1: Idd (Without load)

Frequency	F=< 10MHz	≤ 20MHz	40MHz
V=Vdd = 3.3V	< 4mA	< 5mA	< 20mA

FREQUENCY CONTROLE RANGE:

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

STANDARD FREQUENCIES:

Frequency «MHz»			
10	12.288	12.8	20
24	24.576	25.6	
Other frequencies on request			

ENVIRONMENTAL CHARACTERISTICS:

Storage temp. range	-65 to +125°C
Vibration resistance (survival)	10 to 2000Hz / 80g
Shocks resistance (survival)	10000g / 0.3ms / ½ sine

TERMINATIONS AND PROCESSING:

Reflow soldering	260°C / 10s max
Package	Ceramic 5 x 3.2 x 1.6mm
Lids	Ceramic (Kovar on version T)
Terminations option T3 on request (not available on T temperature range)	with tinned Ag/Cu/Sn

PRODUCT DESCRIPTION AND ORDERING INFORMATION:

VCXO2E V - D 20MHz T3 XXX

V = Vdd 3.3V

B = -40 to 85°C
C = -55 to 125°C
R = -10 to 150°C
S = -10 to 175°C
T = -10 to 210°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.

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