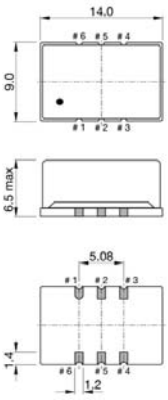
VTO-P9-3CM-HPG

High stability, ultra-low phase noise and low jitter
low G-sensitivity, vibration resistant, (LV)HCMOS (VC)TCXO

Application: 5G Repeaters, Link and micro cells, Low noise microwave

Frequency range	**40.0 to 200 MHz**		
Standard frequencies	**50, 60, 70, 72, 80, 100, 120, 125 & 150 MHz**		
Frequency stability:			
vs. temperature reference to (FMAX+FMIN)/2	≤ ±1.0ppm ≤ ±0.5 ppm	over -40 to +85 °C over -40 to +85 °C	standard optional (1)
vs. supply voltage changes reference to frequency at nominal supply	≤ ±0.05 ppm	±5 %	
vs. load changes reference to frequency at nominal load	≤ ±0.05 ppm	±10 %	
vs. aging @ +40 °C	≤ ±1.0 ppm	1st year	
G-sensitivity	0.50 ppb/g 0.25 ppb/g	per axis, max. per axis, typ.	optional (2)
Short term stability ADEV	$< 1*10^{-10}$	τ = 1.0 s	
Frequency tolerance ex factory	0 ~ +1.0 ppm	@ +25 °C	
Supply voltage	+3.3 V	5.0 V optional	
Current consumption	< 50 mA		
Output signal	(LV)HCMOS	V_{OH} > 0.9 x Vcc	V_{OL} < 0.1 x Vcc
Symmetry	50 %	±5%	
Output load	10 pF	max.	
Electronic Frequency Control (EFC)	ΔF > ±5 ppm	positive slope	
Control voltage Vc	+1.50 V ±1.0 V	+2.50 V ±2.0 V	by 5.0 V
Phase noise (typical for 100 MHz)	-78 dBc/Hz -105 dBc/Hz -127 dBc/Hz -150 dBc/Hz -178 dBc/Hz	@ 10 Hz @ 100 Hz @ 1 kHz @ 10 kHz @ 100 kHz	
RMS phase jitter	10 fs (typ.)	12 kHz ~ 20 MHz	
Sub-harmonics	-80 dBc (typ.)	-60 dBc (max.)	
Operating temperature range	-40 ~ +85 °C		
Storage temperature range	-55 ~ +105 °C		
Reflow profiles as per IPC/JEDEC J-STD-020C	≤ 245 °C over 10 s max.		

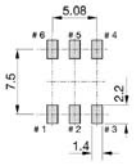
Notes: 1. For tighter frequency stability (≤ ±0.50 ppm), consult the factory
2. For lower G-sensitivity (< 0.1 ppb/g) , consult the factory



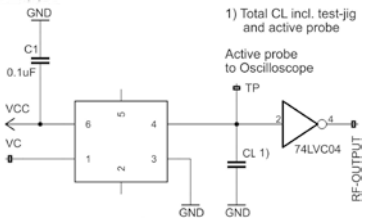
Pin function

# 1	Vc (EFC) for (VC)TCXO GND or NC for TCXO
# 2	NC or GND
# 3	GND
# 4	RF output
# 5	NC or GND
# 6	Vcc

Solder pattern



Test circuit



QuartzCom AG
Bruehlstrasse 15
CH 2540 Grenchen
Switzerland
Fax +41 32 644 24 05
Tel +41 32 644 24 00
E-Mail sales@quartzcom.com
www.quartzcom.com
From design to production in Switzerland