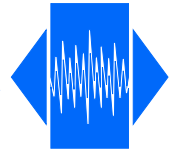


# VTX 14M-D/P

High Precision, Low noise floor, Low jitter  
Output LVDS or LVPECL (VC)TCXO

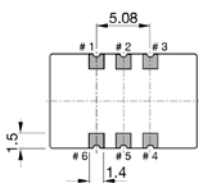
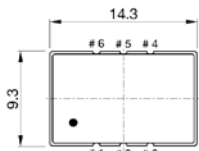
**QuartzCom**  
the communications company



<b>Frequency range</b>	<b>40.000 to 200.000 MHz</b>		
<b>Standard frequencies</b>	<b>40, 50, 60, 70, 80, 100, 120, 122.88, 125 150, 155.52 MHz</b>		
Frequency stability:			
vs. temperature referenced to (F <sub>MAX</sub> +F <sub>MIN</sub> )/2	≤ ±0.50 ppm	over -40 to +85 °C	(*)
vs. supply voltage changes referenced to frequency at nominal supply	≤ ±0.05 ppm	±5 %	
vs. load changes referenced to frequency at nominal load	≤ ±0.05 ppm	±10 %	
vs. aging @ +40 °C	≤ ±1.0 ppm	1 <sup>st</sup> year	
Short term stability ADEV	< 1*10 <sup>-10</sup>	τ = 1.0 s	
Frequency tolerance ex factory	0 ~ +1.0 ppm	@ +25 °C	
Supply voltage	+3.3 V		
Output signal	LVDS	LVPECL	
Output level	V <sub>OH</sub> ≤ 1.6 V V <sub>OL</sub> > 0.9 V	V <sub>OH</sub> ≥ V <sub>CC</sub> - 1.1 V V <sub>OL</sub> ≤ V <sub>CC</sub> - 1.5 V	
Output load	100 Ω (OUT - C OUT)	50 Ω into V <sub>CC</sub> - 2 V	
Current consumption	< 50 mA	< 75 mA	
Electronic Frequency Control (EFC)	ΔF = ±5 to ±10 ppm	positive slope	(*)
Control voltage (Vc)	+1.50 V ±1.0 V		
EFC input impedance	> 100 kΩ		
Phase noise ( typical value for 100 MHz )	-78 dBc/Hz -105 dBc/Hz -125 dBc/Hz -145 dBc/Hz -160 dBc/Hz	@ 10 Hz @ 100 Hz @ 1 kHz @ 10 kHz @ 100 kHz	
RMS phase jitter	30 fs (typ.)	12 kHz ~ 20 MHz	
Operating temperature range	-40 ~ +85 °C (*)		
Reflow profiles as per IPC/JEDEC J-STD-020C	≤ 245 °C over 10 s max.		

(\*) See available options on page #2

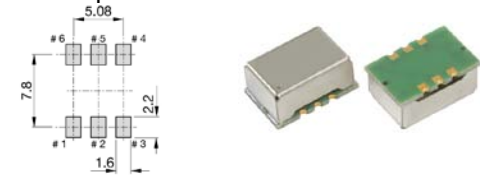
Note: Unless otherwise specified conditions are @+25 °C



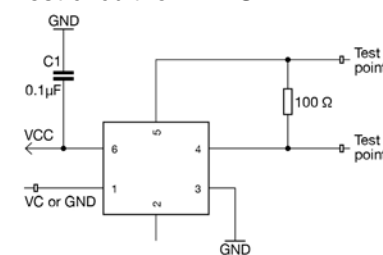
### Pin function

- # 1 Open or ED
- # 2 NC or GND
- # 3 GND
- # 4 Output
- # 5 C- Output
- # 6 Vcc

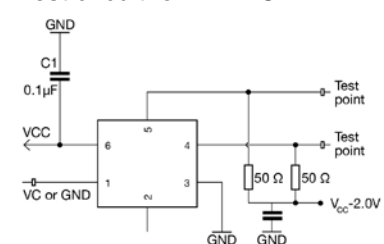
### Solder pattern



### Test circuit for LVDS



### Test circuit for LVPECL



# VTX 14M-D/P

High Precision, Low noise floor, Low jitter  
Output LVDS or LVPECL (VC)TCXO



## Ordering code

**(0)14M-(1)33-(3)(4)-(5)-100.000MHz** Example: *VT14-D33-NNu50-V05-80.000MHz*

(0) Oscillator type	(1) Output signal	(3) Operating temperature	(4) Frequency stability
TX = TCXO VT = VC-TCXO	D = LVDS P = LVPECL	JK = -20 to +70 °C NN = -40 to +85 °C NP = -40 to +95 °C NR = -40 to +105 °C QN = -55 to +85 °C	U10 = ± 0.10 ppm u25 = ± 0.25 ppm u50 = ± 0.50 ppm 1u0 = ± 1.00 ppm 1u5 = ± 1.50 ppm
		<b>(5) Pulling range</b> (VT only)	
		V05 = 1.5 ± 1.0 V ±5 ppm V10 = 1.5 ± 1.0 V ±10 ppm	
		Z = special spec	

### Frequency stability vs. temperature

ppm	≤± 0.10	≤± 0.25	≤± 0.50	≤± 1.00	≤± 1.50
-20 to +70 °C	Δ	O	O	O	O
-40 to +85 °C	Δ	O	O	O	O
-40 to +95 °C	X	Δ	Δ	Δ	O
-40 to +105 °C	X	Δ	Δ	Δ	Δ
-55 to +85 °C	X	X	Δ	Δ	Δ

Δ Ask factory
O Available
X Not available

### Absolute max. ratings

Supply voltage (Vcc)	6.0 V
Storage temperature range	-55 ~ +105 °C
Control voltage (Vc)	0 / Vcc

### Frequency deviation vs. temperature

