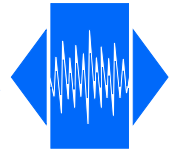


VTX 14M-D/P

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

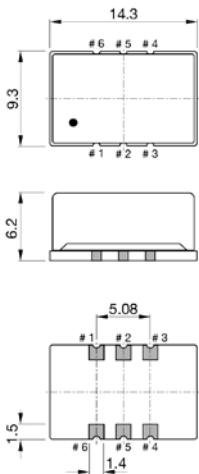
QuartzCom
the communications company



Frequency range	40.000 to 200.000 MHz		
Standard frequencies	40, 50, 60, 70, 80, 100, 120, 122.88, 125 150, 155.52 MHz		
Frequency stability:			
vs. temperature referenced to (F _{MAX} +F _{MIN})/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 st year	
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		
Output signal	LVDS	LVPECL	
Output level	V _{OH} ≤ 1.6 V V _{OL} > 0.9 V	V _{OH} ≥ V _{CC} - 1.1 V V _{OL} ≤ V _{CC} - 1.5 V	
Output load	100 Ω (OUT - C OUT)	50 Ω into V _{CC} - 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



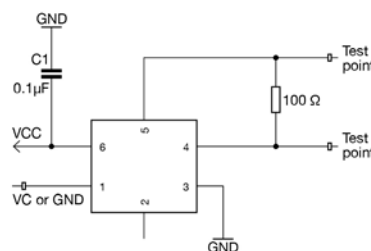
Pin function

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

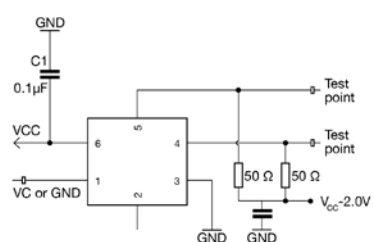
Solder pattern



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
		(5) Pulling range (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

