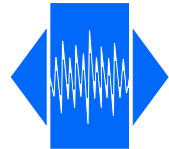


TX14M- / VT14M- LG



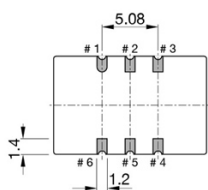
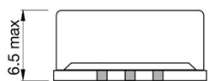
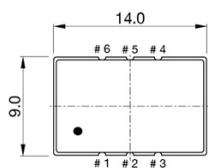
(LG) Low G-sensitive, vibration and shock resistant
Ultra-low noise floor, low jitter (VC)TCXO

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

Frequency range	40.000 to 200.000 MHz		
Standard frequencies	50, 60, 70, 80, 100, 120, 125, 150 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	
G-sensitivity	0.25 ppb/g	per axis	(*)
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 or 5.0 V		(*)
Current consumption	< 50 mA		
Output signal	Sine wave 3 to 6 dBm	(LV)HCMOS	(*)
Output load	50 Ω	15 pF max.	(*)
Electronic Frequency Control (EFC)	ΔF = ±5 to ±8 ppm	positive slope	
Control voltage (Vc)	+1.50 V ±1.0 V for 3.3 V	+2.50 V ±2.0 V for 5.0 V	
Phase noise (typical value 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	-65 dBc max.	-75 dBc typ.	
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.		

(*) See available options on page #2

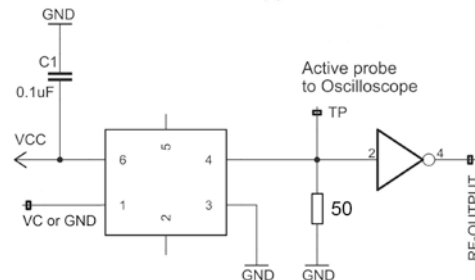
Note: Unless otherwise specified conditions are @+25 °C



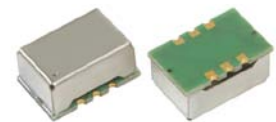
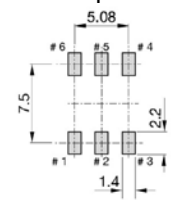
Pin function

- # 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

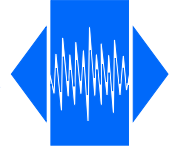
Test circuit (sine wave)



Solder pattern



TX14M- / VT14M- LG



(LG) Low G-sensitive, vibration and shock resistant
Ultra-low noise floor, low jitter (VC)TCXO

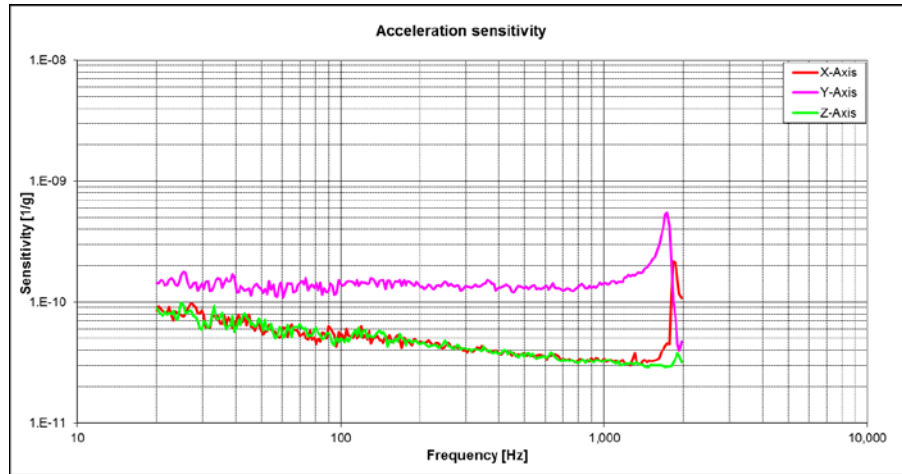
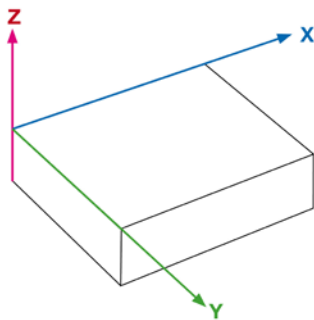
Application: 5G Repeaters, Link and micro cells, Low noise microwave

G-Sensitivity performance

Noise shape vibration from 20-2'000 Hz
with 0.1 g²/Hz ($G_{RMS} = 14.11g$) for the axis

Osc-#	X-axis [ppb/g]	Y-axis [ppb/g]	Z-axis [ppb/g]	Gamma Γ [ppb/g]
#1	0.056	0.105	0.159	0.199
#2	0.052	0.137	0.052	0.156
#3	0.051	0.057	0.181	0.197
#4	0.108	0.091	0.17	0.221

Definitions of vibration axes



Ordering code

TX14M-(1)(2)-(3)(4)-(5)-100.0000MHz Example: **TX14M-S3-NNu50-C-100.0000MHz**

Oscillator type	(1) Output signal	(2) Supply voltage							
TX = TCXO VT = VC-TCXO	H = (LV)HCMOS S = Sine wave	3 = 3.3 V 5 = 5.0 V							
(3) Operating temperature	(4) Frequency stability	(5) G-sensitivity per axis							
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	u25 = ± 0.25 ppm u50 = ± 0.50 ppm 1u0 = ± 1.00 ppm 1u5 = ± 1.50 ppm	A = 0.10 ppb/g B = 0.25 ppb/g C = 0.50 ppb/g D = 1.00 ppb/g E = 1.50 ppb/g - = Non specified							
Q	P	O	N	L	J	K	N	P	R
-55 °C	-50 °C	-45 °C	-40 °C	-30 °C	-20 °C	+70 °C	+85 °C	+95 °C	+105 °C

Frequency stability vs. temperature

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

O Available	Δ Ask factory
E Under development	X Not available

