

LT-4 sub-miniature precision resistance weld crystal (25 ~ 200)MHz

The LT-4 series provide custom specified ultra-miniature high quality quartz resonators over the frequency range of 15MHz ~ 200MHz. It is the smallest available leaded package and ideally suited where a quality resonator is required within a limited space. Identical pitch and lead diameter to slightly larger UM-1, UM-4, UM-5 and HC-45 packages makes direct substitution possible.

The low volumetric, light weight package is ideal for tight specification wildlife tracking applications. Weighing a mere 0.17g it is a popular choice for fish tags and avian monitoring transceivers.

The very low mass combined with gold plated electrodes results in good shock and vibration and long term ageing performance.

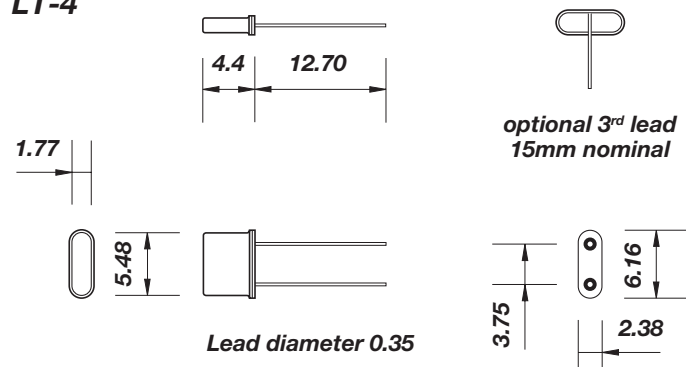
An excellent resonator for miniature OCXO applications where small size and minimum warm up time are critical with an optional vacuum braze seal which further improves long term ageing, Q and phase noise.

ESR - equivalent series resistance

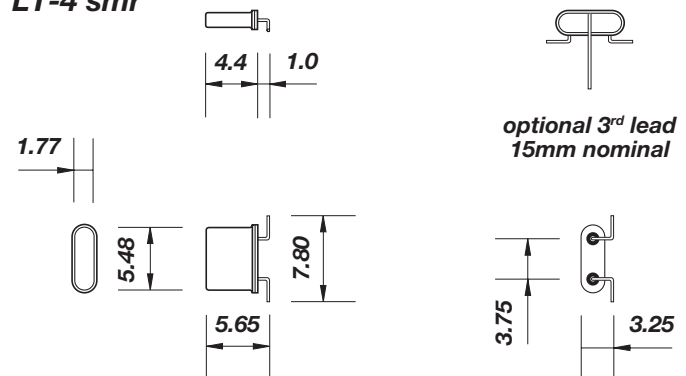
frequency range(MHz)	cut/mode	esr(Ω) max.
25 ~ 30	AT1	<80
30 ~ 40	AT1	<60
40 ~ 90	AT3	<70
90 ~ 150	AT3	<60
100 ~ 200	AT5	<120

Dimensions(mm):

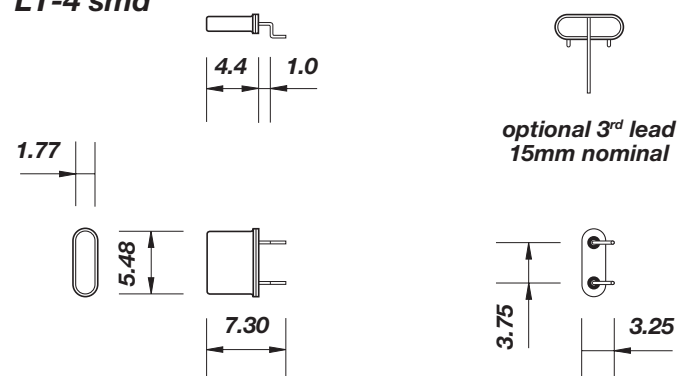
LT-4



LT-4 smr



LT-4 smd



Specification data:

environment	<i>dry Nitrogen/ vacuum option</i>
quartz orientation	<i>AT cut, SC cut and IT cut available with vacuum braze</i>
frequency range	<i>(25 ~ 40)MHz fundamental, (39 ~ 105)MHz 3rd overtone, (100 ~ 200)MHz 5th overtone</i>
adjustment tolerance	<i>from ±3ppm at +25°C, frequency dependent</i>
thermal stability	<i>OCXO turn point from ±3°C</i>
	<i>TCXO from ±0.5', equivalent Ø angle, XO from ±3ppm</i>
	<i>temperature range dependent</i>
operating temperature	<i>(-55 +125)°C</i>
	<i>custom specified</i>
storage temperature	<i>(-40 +125)°C</i>
load	<i>custom specified</i>
shunt capacitance C₀	<i>(1.5 ~ 5.0)pF</i>
suggested drive level	<i>(5 ~ 150)µW</i>
Q factor	<i>up to 400K, mode and cut dependent</i>
ageing - frequency dependent	<i>AT cut: ±1ppm typical, first year max., SC cut: ±0.5ppm typical, first year max.</i>
insulation resistance	<i>500Meg. Ω min. at 100Vd.c.</i>

Ordering information

EXAMPLE	<i>LT-4 crystal, standard leads, 25.00MHz, load 20pF, ±20ppm at +25°C, ±20ppm(-10 +60)°C</i>
TFC PART NUMBER	<i>LT4S 25.00M H C C I</i>
LT4	<i>crystal series and case style: LT-4S = standard axial leads LT-4smr = radial smd lead preform LT-4smd = axial smd lead preform</i>
25.00M	<i>frequency: 25.00M = 25.00MHz, frequency range (25 ~ 200)MHz</i>
H	<i>load capacitance: H = 20pF</i>
C	<i>adjustment tolerance at +25°C: C = ±20ppm</i>
C	<i>temperature tolerance: C = ±20ppm</i>
I	<i>temperature range: I = (-10 +60)°C</i>
OPTIONS	
load capacitance	<i>C: 10pF, D: 12pF, E: 15pF, F: 16pF, G: 18pF, H: 20pF, J: 32pF, S: series</i>
adjustment tolerance	<i>A: ±5ppm, B: ±10ppm, P: ±15ppm, C: ±20ppm, E: ±30ppm, G: ±50ppm</i>
temperature tolerance	<i>A: ±5ppm, B: ±10ppm, P: ±15ppm, C: ±20ppm, E: ±30ppm, G: ±50ppm, H: ±100ppm</i>
temperature range	<i>B: (0 +55)°C, I: (-10 +60)°C, C: (-20 +70)°C, L: (-40 +85)°C</i>