

TX25SA Series

TCXO, 2.5 x 2.0mm, Clipped sine wave

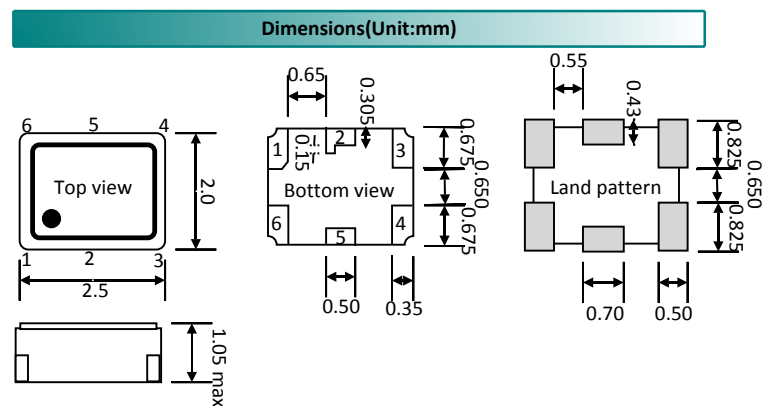
From ± 0.5 ppm stability over -30°C to 85°C



| Parameters | | Specification | | Remarks |
|--|----------------|---------------|--|--|
| Frequency range | | F_nom | 8.0MHz ~ 50.0MHz | Limited frequencies available |
| Supply voltage | | Vcc | 1.8V, 2.4V, 2.8V, 3.0V | $\pm 5\%$ tolerance |
| Initial frequency tolerance | | F_tol | ± 1.0 ppm max | At $+25^{\circ}\text{C}$ |
| Frequency stability | vs Temperature | F_stb | ± 0.5 ppm max | Table 1 |
| | vs Load | F_load | ± 0.2 ppm max. | $\pm 10\%$ load condition change |
| | vs Voltage | F_Vcc | ± 0.2 ppm max. | $\pm 5\%$ input voltage change |
| | vs Aging | F_age | ± 1.0 ppm max | 1 year |
| | vs Reflow | | ± 1.0 ppm max. | 2 times |
| Frequency stability slope ($-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$) | | | ± 0.1 ppm/ $^{\circ}\text{C}$ max | Every $+2^{\circ}\text{C}$ |
| Frequency stability slope ($-30^{\circ}\text{C} \sim -20^{\circ}\text{C}$) | | | ± 0.2 ppm/ $^{\circ}\text{C}$ max | Every $+2^{\circ}\text{C}$ |
| Frequency stability slope ($+70^{\circ}\text{C} \sim +85^{\circ}\text{C}$) | | | ± 0.2 ppm/ $^{\circ}\text{C}$ max | Every $+2^{\circ}\text{C}$ |
| Operating temperature range ($^{\circ}\text{C}$) | | Topr | $-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$ | Table 1 |
| Storage temperature ($^{\circ}\text{C}$) | | Tstg | $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ | |
| Output wave form | | | Clipped sine wave | DC coupled |
| Output voltage level | | | 0.8V p-p (min.) | |
| Output Load | | | 10K Ω //10pF | $\pm 10\%$ tolerance |
| Current consumption | | Icc | 1.5mA max. | 10K Ω //10pF $\pm 10\%$ |
| Start-up time | | T_str | 2.0ms max. | Reach 90% amplitude at $+25^{\circ}\text{C}$ |
| Moisture sensitive level | | MSL | 1 | |
| ESD sensitive device | | | Yes | |

Please leave product at room temperature for 2 hrs or more after reflow.

| Temp. ($^{\circ}\text{C}$) | Stability in ppm | | | | | |
|---|------------------|-----------|-----------|-----------|-----------|-----------|
| | ± 0.5 | ± 1.0 | ± 1.5 | ± 2.0 | ± 2.5 | ± 3.0 |
| 0°C to 50°C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| -10°C to 60°C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| -20°C to 70°C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| -30°C to 75°C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| -30°C to 85°C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |



- Pad 1 : Ground
- Pad 2 : NC
- Pad 3 : Ground
- Pad 4 : Output
- Pad 5 : NC
- Pad 6 : Supply voltage

TX25SA Series

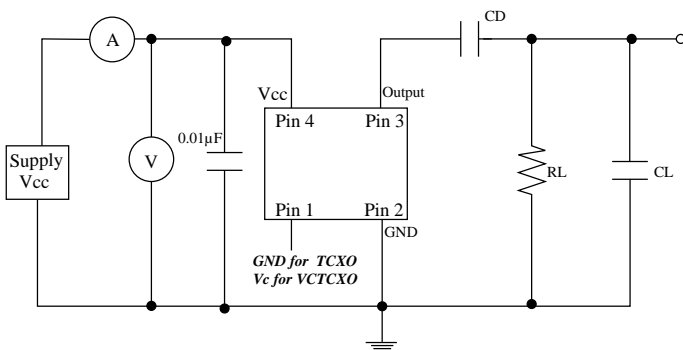
TCXO, 2.5 x 2.0mm, Clipped sine wave



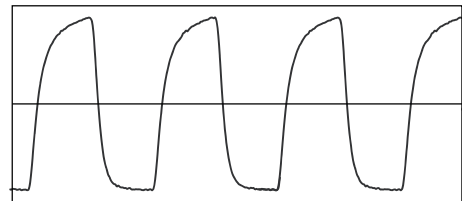
| TCXO/VC-TCXO part number generation | | | | | | | | | |
|-------------------------------------|---|--|--|--|-------------|--------------------------------|-------------------|-----------------------------------|-----------|
| TX25SA | 2600 | M | E | X | B | X | Z | L | -PF |
| ACT series Code | Frequency (MHz) Ex. 26.00MHz = 2600 8.00MHz = 0800 14.7456MHz = 1474 | Temp. stability (\pm ppm) | Supply voltage (V) | Operating temp. range ($^{\circ}$ C) | Output wave | Electrical tuning (\pm ppm) | Duty Cycle | Tape & Reel | RoHS Code |
| TCXO = TX25SA | < 100MHz First 4 digit of frequency > 100MHz First 5 digit of frequency | 0.5 = R 1.0 = P 1.5 = O 2.0 = N 2.5 = M 3.0 = L | 1.8V = D 2.4V = J 2.8V = H 3.0V = E | 0 ~ 50 = D -10 ~ +60 = F -20 ~ +70 = B -30 ~ +75 = W -30 ~ +85 = X | CSW = B | None = X | Not specified = Z | Loose = L 1000 = C 3000 = D | -PF |

Note: It is important to suffix the above part number with full frequency required to give a completed part number as illustrated below.
Full Example part number : **TX25SA2600MEXBXZL-PF [26MHz]**, **TX25SA1474MEXBXZL-PF [14.7456MHz]**

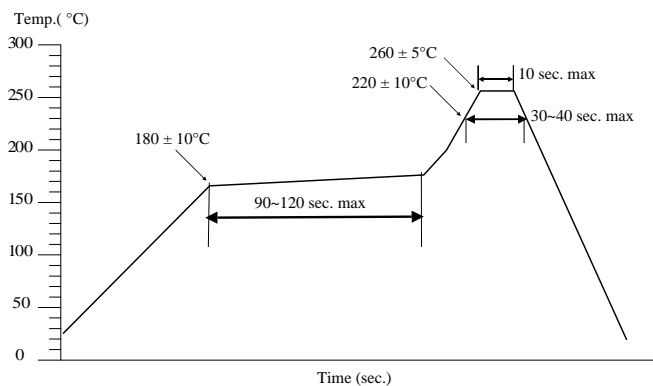
Test circuit



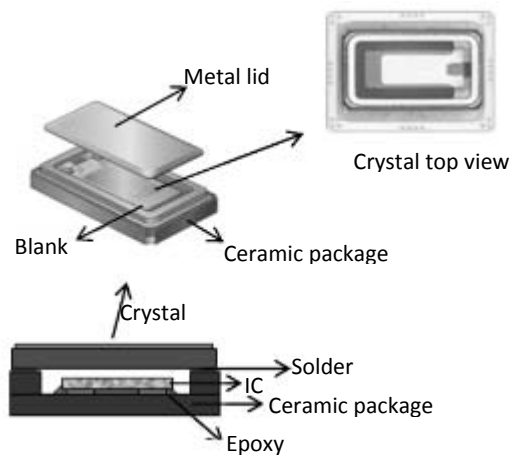
Clipped sine waveform



Solder reflow profile



TCXO construction



Drawing control: (Internal use only)
Commodity code: 854370 90 99
Issue number : 1
Date : 24062016
Internal reference : C1f

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