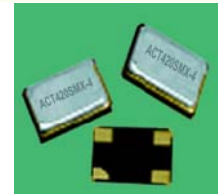


ACT420SMX-4

Compatible with Eu Directive
 2002/EC - RoHS

The ACT420SMX-4 is a low cost, 4 pad, high quality, low aging 4x2.5mm SMD Crystal in a ceramic base / metal lid package, seam welded for good long term reliability. The device has the lid grounded via the package to reduce EMI issues. The wide frequency range and specification options ensure suitability for many applications.

APPLICATIONS: Bluetooth, WLAN, PDA, Pagers, Card readers, Cellular, PC Accessories, Notebook, Audio-visual, PCMCIA, MP3, Consumer & Communications



Specification

| Parameter | Symbol | Specification | Condition |
|------------------------------|---------------|---|--|
| Frequency Range | fo | 12.000 ~ 50.000MHz | Please specify |
| Frequency Tolerance (@25°C) | $\Delta f/fo$ | $\pm 5, \pm 10, \pm 15, \pm 20, \pm 30$ & ± 50 ppm(Std) | Please specify |
| Stability over temp range | Tc | ± 5 ppm ~ 50ppm (See table 2) | Please specify |
| Temp Operating Range | Topr | 0~+50°C ~ -40~+85°C (See table 2) | Please specify |
| Temp Storage Range | Tstg | -40 ~+85°C | |
| Equivalent Series Resistance | ESR | See table 1 | |
| Load Capacitance | CL | 8pF ~ 50pF & Series | (16,20 & 30pF Std. Please specify) |
| Shunt Capacitance | C0 | 5pF max | |
| Drive Level | DL | 100 μ W typical (500 μ W max) | (Custom available - Please enquire) |
| Drive Level Dependency | DLD | ESR min to max <1.3 FL min to max <1.3 | 0.01, 0.1, 1, 10, 100, 500, 1000 μ s |
| Insulation Resistance | IR | 500M Ω min | 100V DC |
| Aging | Fa | ± 3 ppm p/year * | 1 year max @ 25°C) |

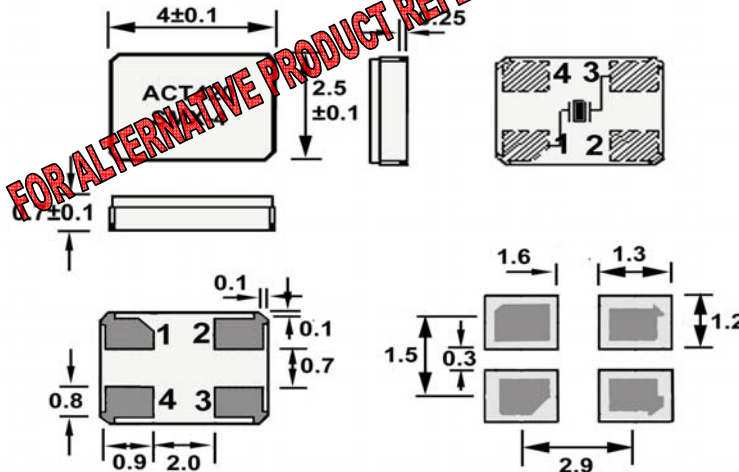
* ± 1.00 ppm aging p/year part is available, to order, as a "semi-custom" part. Please enquire

Table 1

| Freq. Range (MHz) | ESR (Ω) max | Package Cut |
|-------------------|----------------------|-------------|
| 12.000 ~ 14.999 | 80 | Fundamental |
| 15.000 ~ 50.000 | 50 | Fundamental |

Pad Surface Material: Gold (Au)

Dimensions (mm)



Connections

- #1. Crystal
- #2. Grounded to lid
- #3. Crystal
- #4. Grounded to lid

Please note that all parameters can not necessarily be specified in the same device

Customer to specify : Frequency, Frequency Tolerance, Temperature Stability, Operating Temperature & Load Capacitance
 In line with our ongoing policy of product evolution and improvement, the above specification may subject to change without notice

ISO9001:2000 Registered

For quotations or further information please contact us at:

3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK

<http://www.actcrystals.com>

Issue 3 C1F
 Date 24/01/07

ACT420SMX-4

Table 2

| Stability Temp | +/- 5ppm | +/- 10ppm | +/- 20ppm | +/- 30ppm | +/- 50ppm |
|----------------|----------|-----------|-----------|-----------|-----------|
| 0~+50°C | + | + | + | + | + |
| -10~+60°C | + | + | + | + | + |
| -20~+70°C | | + | + | + | + |
| -30~+80°C | | + | + | + | + |
| -40~+85°C | | + | + | + | + |

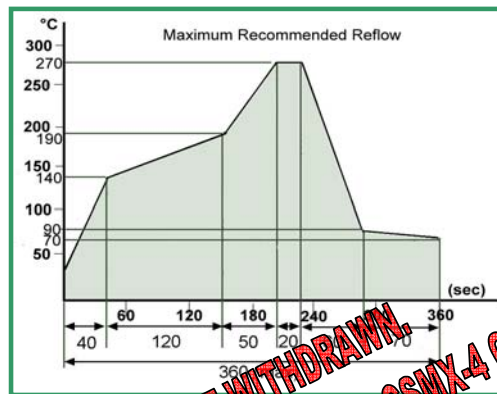
+

Available stabilities

+

Standard stabilities

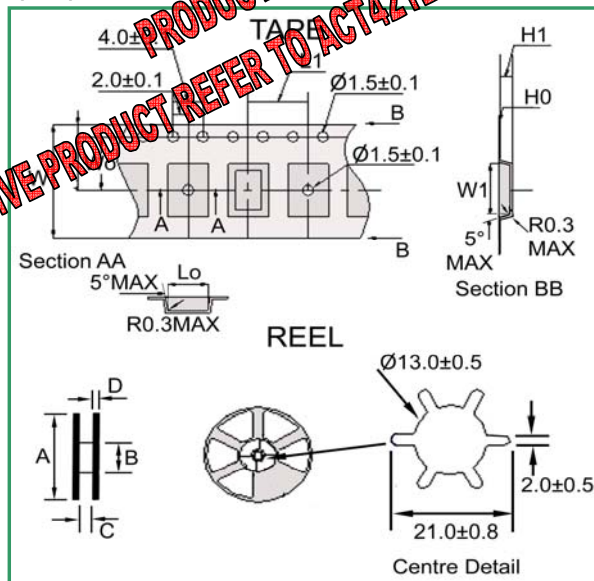
Standard Re-flow Profile



Tape & Reel Specification (mm)

(1K pcs each reel)

PRODUCT WITHDRAWN.
 FOR ALTERNATIVE PRODUCT REFER TO ACT421LCSMX-4 OR ACT421SMX-4 SERIES.



| Tolerance Dimension | TAPE | | | | | | | REEL | | | |
|---------------------|------|-------|------|------|------|-------|------|------|----|------|------|
| | W | Wo | W1 | Lo | L1 | Ho | H1 | A | B | C | D |
| | ±0.3 | ±0.05 | ±0.1 | ±0.1 | ±0.1 | ±0.05 | ±0.1 | ±1 | ±1 | ±0.5 | ±0.2 |
| | 12.0 | 5.5 | 4.4 | 2.9 | 4.0 | 0.3 | 1.0 | 178 | 80 | 13.5 | 2.0 |

In line with our ongoing policy of product evolution and improvement, the above specification may subject to change without notice

ISO9001:2000 Registered

For quotations or further information please contact us at:

3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK

<http://www.actcrystals.com>

Issue 3 C1F

Date 24/01/07