

ACT86LCSMX

The ACT86LCSMX is a low cost version of our popular ACT86SMX device. Compact in size, the Surface Mount, plastic packaged **ACT86LCSMX** is ideal for high density packing and automatic placement on circuit boards. The device has, as its core, a heat resisting cylinder type crystal which makes full use of AT cut crystal characteristics. This device can be used in a variety of applications such as Communications, Audio Visual, Measurement and Portable Equipments. The footprint is an industry standard layout and is compatible with other popular plastic crystals in this package.

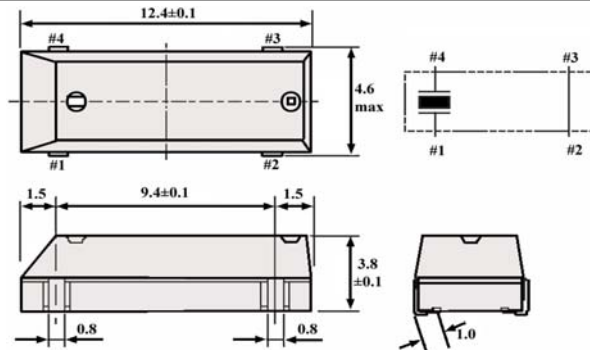


Compatible with Eu Directive
2002/EC - RoHS

Specification

| Parameter | Symbol | Specification | Condition |
|------------------------------|---------------|---|--|
| Frequency Range | fo | 3.579 ~ 27.00MHz | Fundamental. Please specify |
| Frequency Tolerance | $\Delta f/fo$ | $\pm 15\text{ppm}$, 30ppm & 50ppm | Please specify |
| Temp Operating Range | Topr | -10°C~+60°C, -20°C~+70°C | (-40°C~+85°C Available @ 100ppm only) Please specify |
| Stability over Temp Range | Tc | $\pm 50\text{ppm}$ std ($\pm 30\text{ppm}$ option) | (-40°C~+85°C Available @ 100ppm only) Please specify |
| Temp Storage Range | Tstg | -40°C ~ +85°C | |
| Equivalent Series Resistance | ESR | See table below | @25°C |
| Shunt Capacitance | C0 | 5.0pF max | |
| Load Capacitance | Cl | 10 ~ 32pF & SR | Please specify |
| Drive Level | DL | 10 ~ 100 μ W | |
| Insulation Resistance | IR | 500M Ω Min | DC 100V \pm 15V |
| Aging (First Year) | Fa | $\pm 5\text{ppm}$ | @25°C $\pm 3^\circ\text{C}$ |

| Frequency (MHz) | ESR (Ω) max | Mode |
|-----------------|----------------------|-------------|
| 3.579 ~ 4.499 | 150 | Fundamental |
| 4.500 ~ 4.999 | 130 | Fundamental |
| 5.000 ~ 6.999 | 120 | Fundamental |
| 7.000 ~ 9.999 | 100 | Fundamental |
| 10.000 ~ 11.999 | 80 | Fundamental |
| 12.000 ~ 13.999 | 70 | Fundamental |
| 14.000 ~ 15.999 | 50 | Fundamental |
| 16.000 ~ 27.000 | 35 | Fundamental |



Do not connect pads #2 & #3 to external devices.
 Metal may be exposed on the top or bottom of device. This will not affect any quality, reliability or electrical performance

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

Customer to specify : Frequency, Frequency Tolerance, Temperature Stability, Operating Temperature Range, Load Capacitance

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

ISO9001:2000 Registered

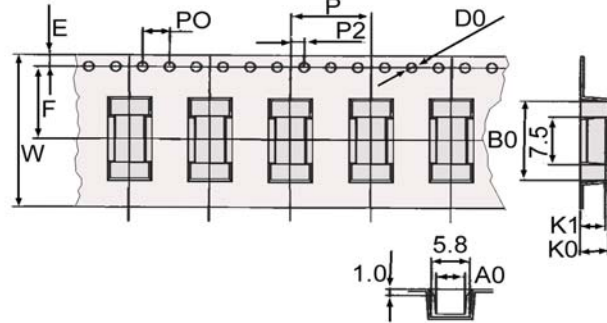
For quotations or further information please contact us at:
 3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK
<http://www.actcrystals.com>

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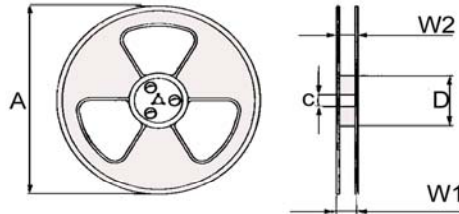
ACT86LCSMX

Tape and Reel information (mm)

Standard reel size 2000 pieces per reel



| W | A0 | B0 | E | F | P | P0 | P2 | D0 | K0 | K1 |
|------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-----------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| 24 ^{+0.3} _{-0.3} | 4.5 ^{+0.1} _{-0.1} | 2.8 ^{+0.1} _{-0.1} | 1.75 ^{+0.1} _{-0.1} | 11.5 ^{+0.1} _{-0.1} | 12.0 ^{+0.1} _{-0.1} | 4 ^{+0.1} _{-0.1} | 2 ^{+0.15} _{-0.15} | 1.5 ^{+0.15} _{-0.15} | 4.3 ^{+0.1} _{-0.1} | 3.8 ^{+0.1} _{-0.1} |



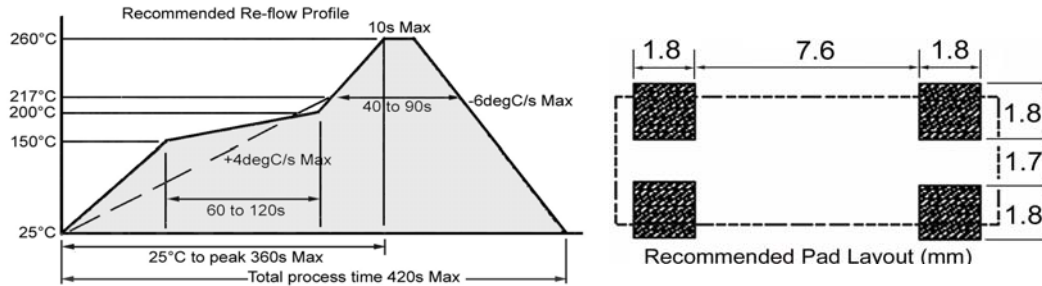
| A | C | D | W1 | W2 |
|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|------------------------------------|
| 330 ^{+0.5} _{-0.5} | 25 ^{+0.2} _{-0.2} | 100 ^{+0.3} _{-0.3} | 28 ^{+0.2} _{-0.2} | 24 ^{+0.4} _{+0.2} |

Internal cylinder crystal

ACT86LCSMX utilizes a 3x8mm 6.0MHz ~ 27.0MHz, 3x9mm 4.0MHz & 3x10mm 3.579545 ~ 3.9999MHz)

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Soldering Information



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