

## ACT631SMX-4

Compatible with Eu Directive  
 2002/EC - RoHS

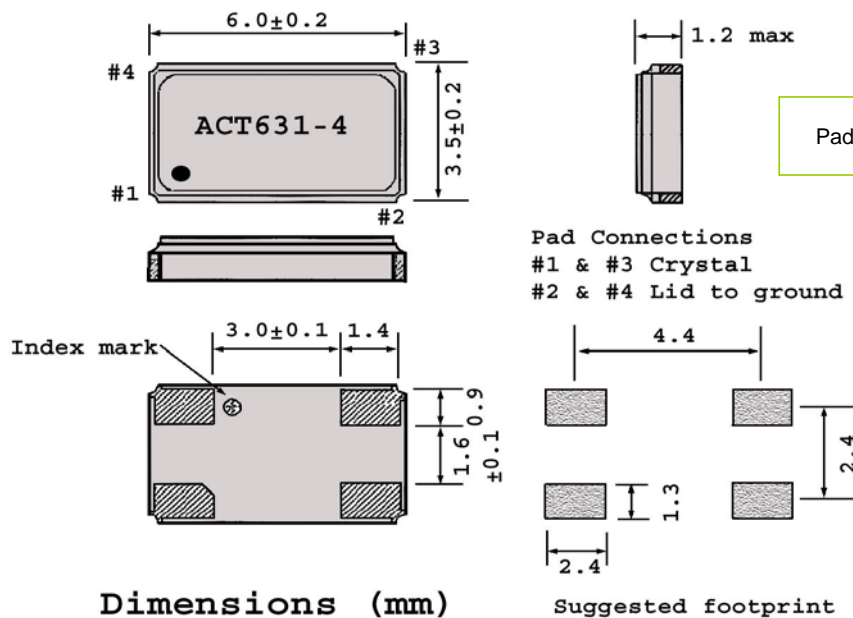
The **ACT631SMX-4** is a 4 pad, high quality, low aging, metal seam, packaged crystal suitable for automatic placement on printed circuit boards. It utilises a ceramic base and metal lid for durability. The lid is grounded through the package and the pads are gold plated. With a wide frequency range, and tight stability it has become one of the optimum choices for design engineers. **Applications** include Communications, Microprocessor Systems, Instrumentation and many more.



### Specification

Parameter	Symbol	Specification	Condition
Frequency Range	fo	10.00 ~ 120.00 MHz	Please specify
Frequency Tolerance (@25°C)	$\Delta f/f_0$	$\pm 10, \pm 15, \pm 30, \pm 50$ & $\pm 100$ ppm	( $\pm 7.5$ ppm available to 24.999MHz)
Stability over Temp Range	Tc	See Table 2	Please specify
Temp Operating Range	Topr	-10~+60°C, -20~+70°C, -40~+85°C	Please specify
Temp Storage Range	Tstg	-40 ~ +85°C	
Equivalent Series Resistance	ESR	See Table 1	
Load Capacitance	CL	8 ~ 50pF or Series	Please specify
Shunt Capacitance	C0	7pF max	
Drive Level	DL	100 $\mu$ W Typical	(100 $\mu$ W ~ 1.0mW options available)
Insulation Resistance	IR	500M $\Omega$ min	@100V DC
Aging	Fa	$\pm 5$ ppm / year max	@25°C

Frequency Range (MHz)	ESR ( $\Omega$ ) max	Mode
10.000~11.999	70	Fundamental
12.000~19.999	60	Fundamental
20.000~34.999	50	Fundamental
35.000~43.999	40	Fundamental
44.000~120.000	80	3 <sup>rd</sup> Overtone



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 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>

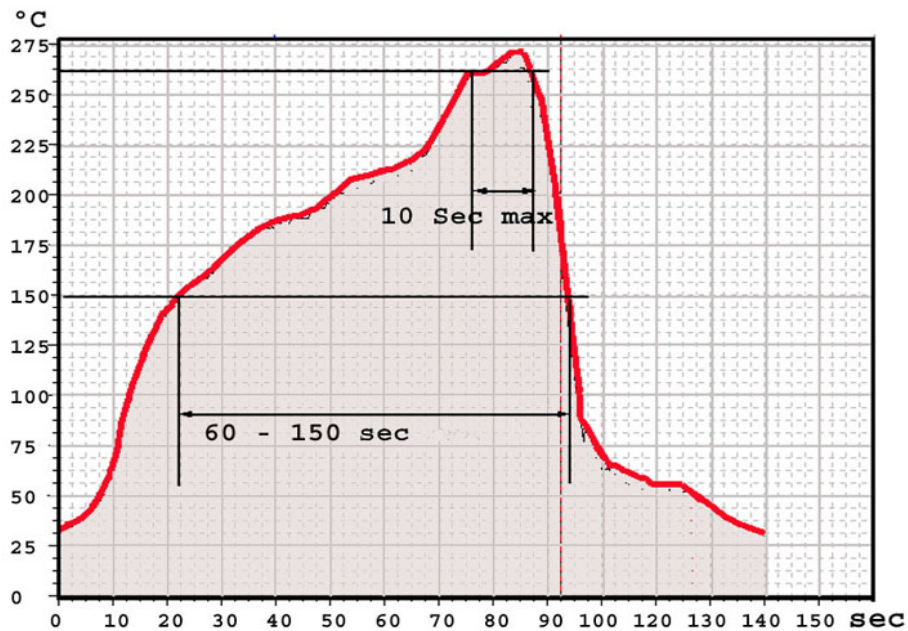
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**Table 2 Frequency Stability VS Temperature Stability**

Stability Temp	+/- 5ppm	+/- 7.5ppm	+/- 10ppm	+/- 15ppm	+/- 20ppm	+/- 30ppm	+/- 50ppm	+/- 100ppm
0~+60°C	+	+	+	+	+	+	+	+
-10~+60°C		+	+	+	+	+	+	+
-10~+70°C		+	+	+	+	+	+	+
-20~+70°C		+	+	+	+	+	+	+
-30~+60°C		+	+	+	+	+	+	+
-30~+70°C			+	+	+	+	+	+
-20~+85°C				+	+	+	+	+
-30~+85°C				+	+	+	+	+
-40~+85°C				+	+	+	+	+
-40~+90°C						+	+	+
-40~+105°C						+	+	+

### Maximum Re flow Profile



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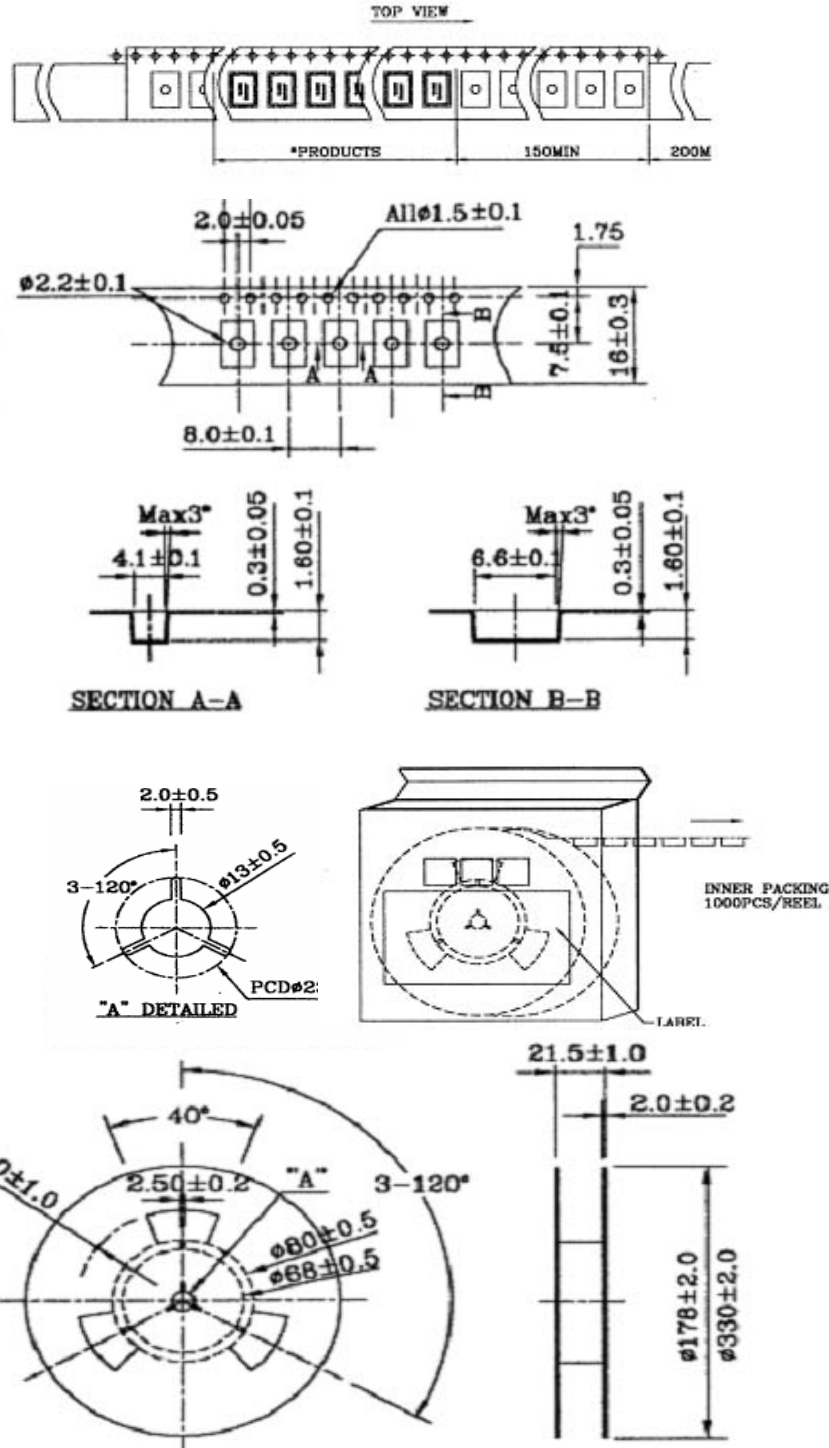
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**TAPE & REEL SPECIFICATION**

( 1K per reel )



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