

## ACT250SMX-4

The ACT250SMX-4 is an ultra miniature surface mount Crystal whose low power consumption makes it ideal for portable applications. It's size makes it suitable for high density circuit boards or applications where space is limited and the tape and reel packaging means that it is ideal for automatic placement machines. The heart of the device is a heat resistant cylinder type crystal which gives it high stability characteristics sufficient to allow reflow soldering.



### Specification

Parameter	Symbol	Specification	Condition
Frequency Range	fo	30.00 ~ 100KHz    100~200kHz	See table/note 1 Please specify
Frequency Tolerance	$\Delta f/fo$	$\pm 20\text{ppm} \sim 100\text{ppm}$ $\pm 200\text{ppm} \sim 300\text{ppm}$	Please specify
Frequency v Temp Characteristics	$\Delta f/Fo$	See drawing	-10 ~ +60°C
Turnover Temperature	Tm	25°C $\pm 5^\circ\text{C}$	
Freq. Temp. coefficient	$\beta$	-0.04ppm / °C <sup>2</sup> max	
Temp Operating Range	Topr	-10 ~ +60°C std ( -40 ~ +85°C available)	Please specify
Temp Storage Range	Tstg	-20 ~ +70°C std	Others available, please enquire.
Equivalent Series Resistance	ESR	65k $\Omega$ max**	@ 25°C
Shunt Capacitance	C0	2.0pF max	
Load Capacitance	CL	10 ~ 25.0pF	Please specify.
Motional Capacitance	C1	4.0 fF max	
Drive Level	DL	1.0 $\mu$ W max	
Insulation Resistance	IR	500M $\Omega$ Min	
Soldering reflow		see diagram: page 2	
Aging (first year)	Fa	$\pm 5\text{ppm}$ / first year	25°C $\pm 3^\circ\text{C}$

\*\* For the ESR specification on specific frequencies please enquire.

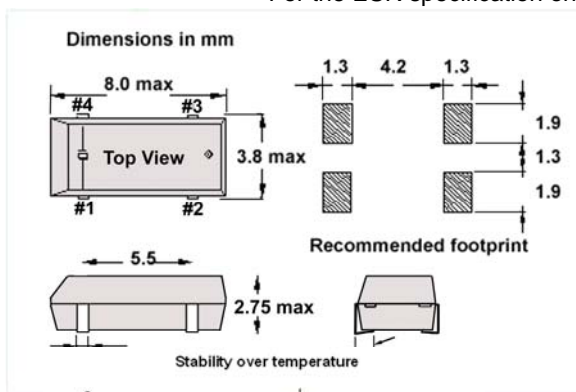
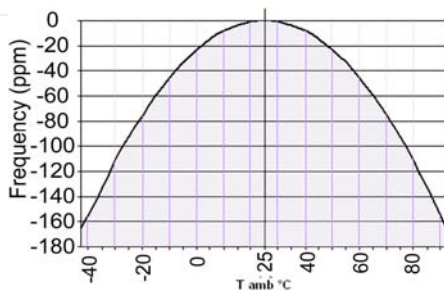


Table 1

Developed frequencies (kHz)
32.000
32.768
40.000
60.000
77.500
76.800

Note1. Availability of other frequencies dependant on MOQ please enquire.

**Pad Surface  
Material  
Sn/Cu**



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

Customer to specify : Frequency, Frequency tolerance, Operating Temperature, Load capacitance

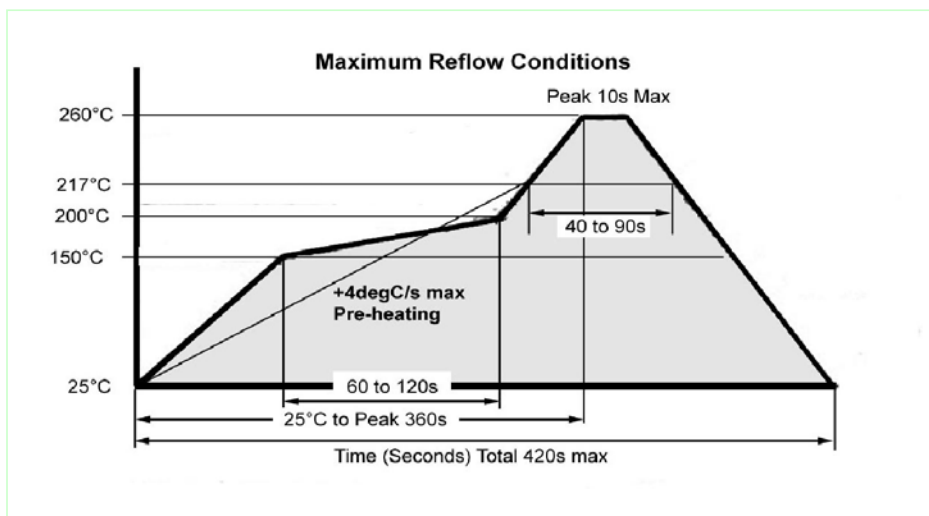
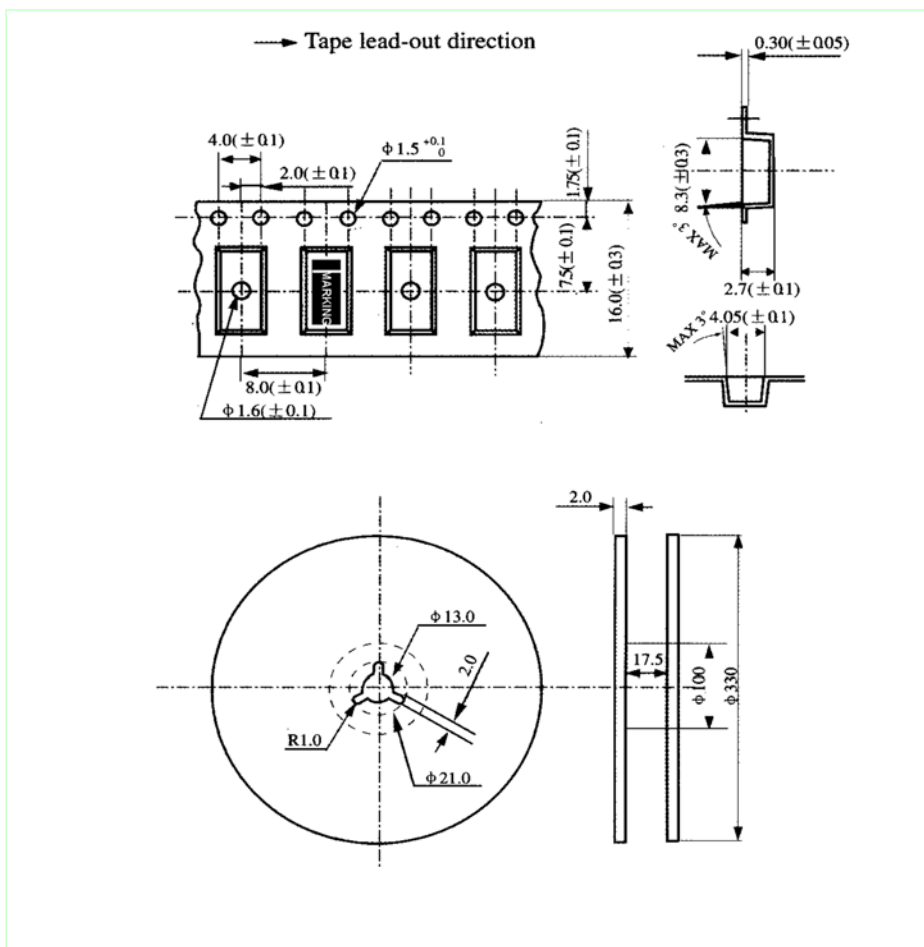
In line with our ongoing policy of product evolution and improvement, the above specification may be subject to change without notice

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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>

**ACT250SMX-4**  
**TAPE AND REEL DIMENSIONS (mm)**

Standard Reel Size 2000 pieces



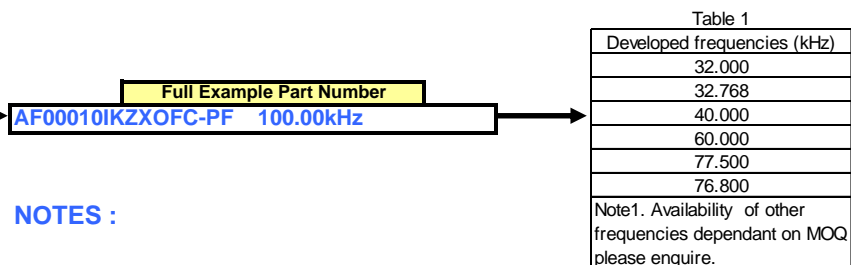
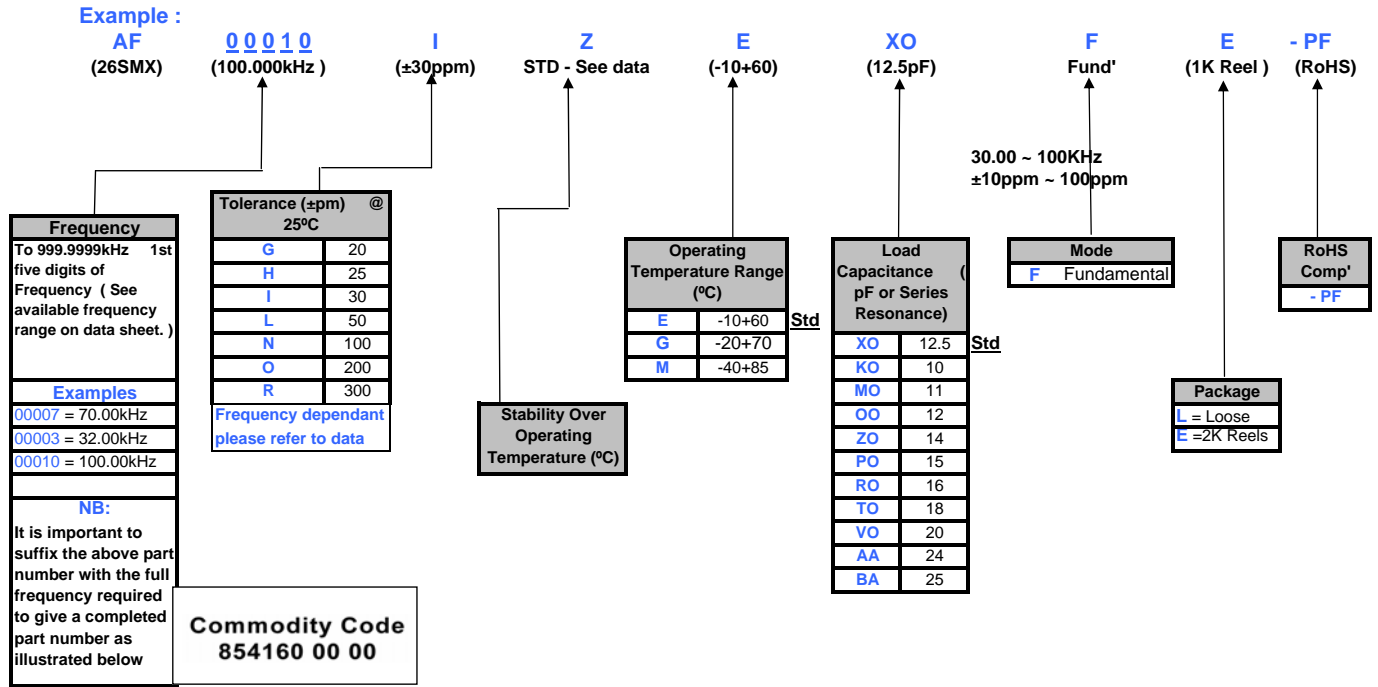
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ACT250SMX- Device series code is AF



**NOTES :**

- 2) Other Tolerances, CL's and other Operating Temperature Ranges may be available. As each of these specification parameters impact on each other, it is not always possible to combine all options in one device. Therefore, if a specification not catered for above is required, please contact us directly for the relevant part
- 3) ACT are always happy to consider truly custom specification parts which may require non-standard specification parameters, specific testing, customer requested AQL requirements, non standard packaging or taping and reeling and custom marking. Such devices would normally be allocated a custom specification ACT250SMX device may have a part number such as AF00007C- C1121-PF)