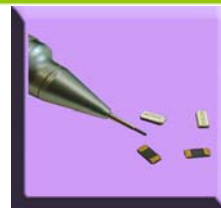


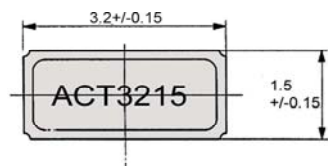
ACT3215 SMX

The **ACT3215** is a miniature surface mount high density Watch Crystal in a metal lid ceramic package offering light weight and low height. High stability is assured with a vacuum, within a seam sealed package. It is very suitable for portable equipment and close component packing density requirements. The product is available taped and reeled on 3,000 piece reels and is fully RoHS compatible.

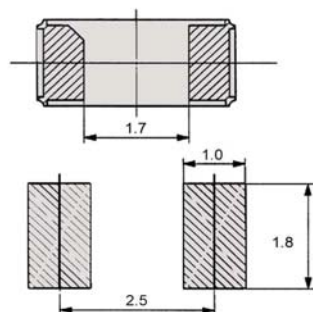


Specification

Parameter	Symbol	Specification	condition
Nominal Frequency	fo	32.768KHz	
Frequency Tolerance @25°C	$\Delta f/f_o$	$\pm 20\text{ppm}$	DL 0.1 μ W
Frequency v Temperature	$\Delta f/f_o$	See Drawing	
Turnover Temperature	Tm	25°C $\pm 5^\circ\text{C}$	
Temperature Coefficient	β	-0.04ppm / °C max	
Temp Operating Range	Topr	-40 ~ +85°C	
Temp Storage Range	Tstg	-55 ~ +125°C	
Equivalent Series Resistance	ESR	80K Ω max	
Load Capacitance	CL	12.5pF	
Shunt Capacitance	C0	1.6pF Typical	
Motional Capacitance	C1	3.6fF Typical	
Drive Level	DL	0.1 μ W typical, 1.0 μ W max	
Insulation Resistance	IR	500M Ω @ 100VDC min	
Aging	Fa	$\pm 3\text{ppm}$ max	First year, 25°C $\pm 3^\circ\text{C}$
Reflow		Please refer to page 2	
Leakage		$< 1 \times 10^{-8}$ hpa · 1/s	Helium leakage



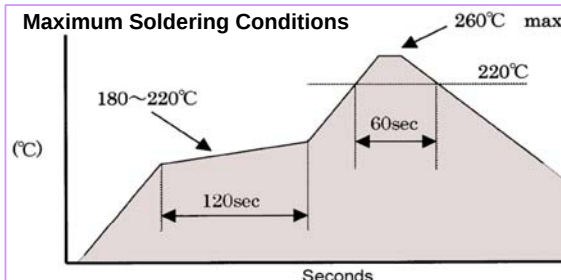
Dimensions (mm)



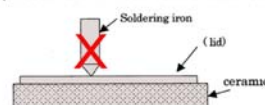
Recommended Pad Layout

Pad Surface Material
Au

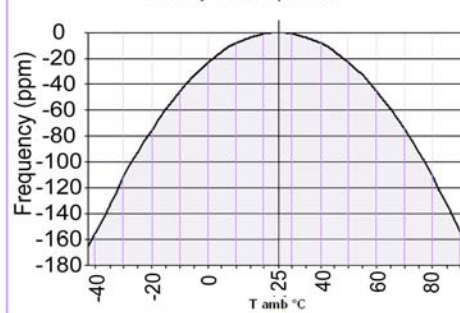
Maximum Soldering Conditions



Please note:
Avoid any pressure or direct heat onto the top lid.



Stability over temperature



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 2A3L

08/03/2007

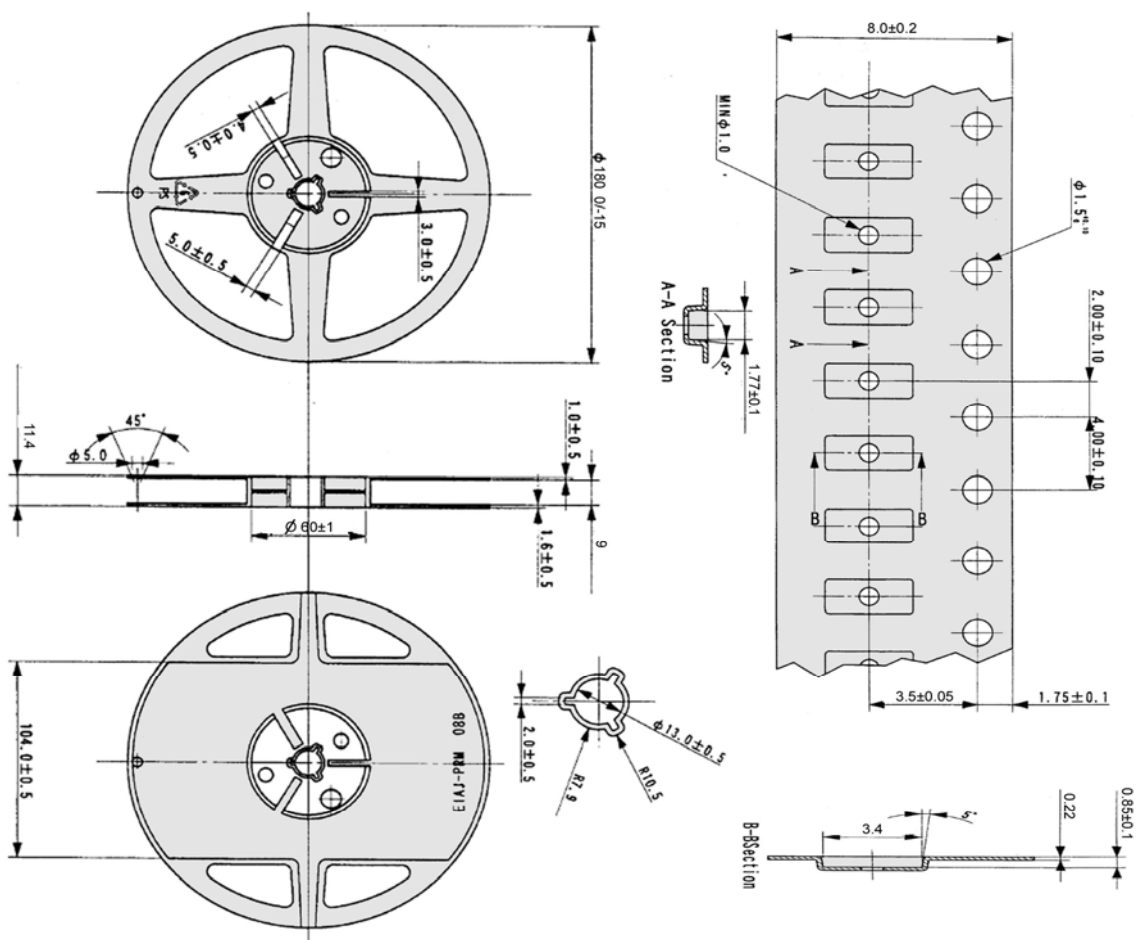
ACT3215 SMX

Reliability

Test	Condition	Δ Fo Limit
Shock	Load mass 100g Dropped 150cm onto concrete. 3 drops 6 directions XX,YY,ZZ	+/-10ppm
Vibration	Frequency 10~60hz. 1.5mm Amplitude. Period 2~3 min. 2 hr each of X,Y & Z	+/-5ppm
Solder Heat Resistance	Profile as above 2 times	+/-5ppm
Dry Heat	85°C, 500 hrs	+/-7ppm
Cold	-40°C, 500hrs	+/-10ppm
Damp Heat	60°C, 90~95 RH, 500hrs	+/-10ppm
Heat Cycle	-40 «->+85°C Period 30 min, 100Cycles	+/-10ppm

Tape Dimensions (mm)

Standard reel size 3K per reel



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