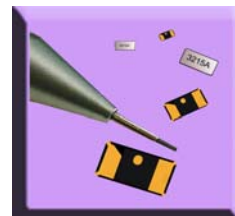


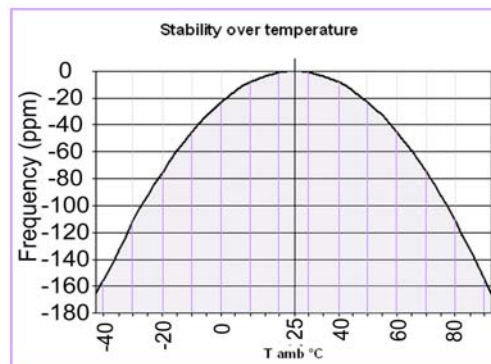
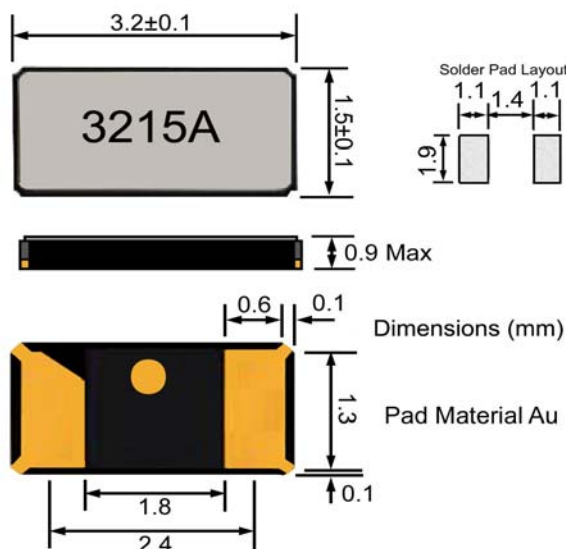
ACT3215A SMX

The **ACT3215A** 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 μW
Frequency v Temperature	$\Delta f/f_o$	See Drawing Below	
Turnover Temperature	Tm	25°C $\pm 5^\circ\text{C}$	
Temperature Coefficient	β	-0.034 $\pm 0.006\text{ppm} / ^\circ\text{C}^2$ max	
Temp Operating Range	Topr	-40 ~ +85°C	
Temp Storage Range	Tstg	-55 ~ +125°C	
Equivalent Series Resistance	ESR	70K Ω max	
Load Capacitance	CL	12.5pF (standard)	9pF and 7pF available please specify
Shunt Capacitance	C0	0.95pF Typical	
Motional Capacitance	C1	0.0033pF Typical	
Drive Level	DL	1.0 μW max	
Insulation Resistance	IR	500M Ω @ 100 $\pm 15\text{VDC}$ 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



ACT 3215 Material Content			
Material	Mass Grams	Material	Mass Grams
Ag	0.0720	Mo	0.0458
Al2O3	6.7161	Ni	1.0202
Au	0.8505	Pd	0.0001
CaO	0.0275	Si Resin	0.0080
Co	0.5066	SiO2	0.5674
Cr2O3	0.2837	Sn	0.0800
Fe	1.5840	Ti	0.0006
Ge	0.0648	TiO2	0.0732
MgO	0.0366	W	1.4000
Total	13.33676g		

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

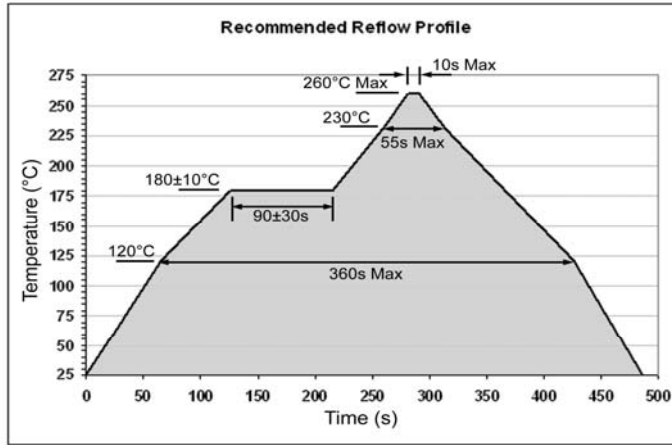
ISO9001:2000 Registered

For quotations or further information please contact us at:

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

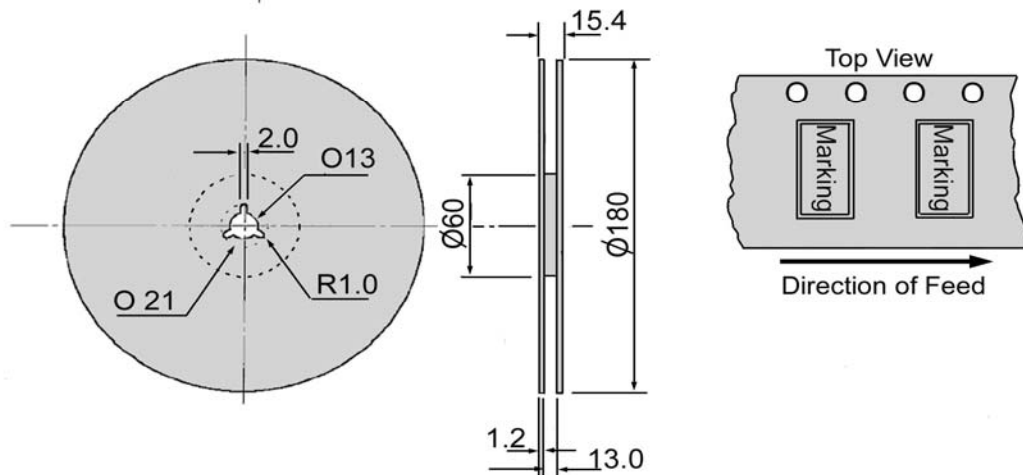
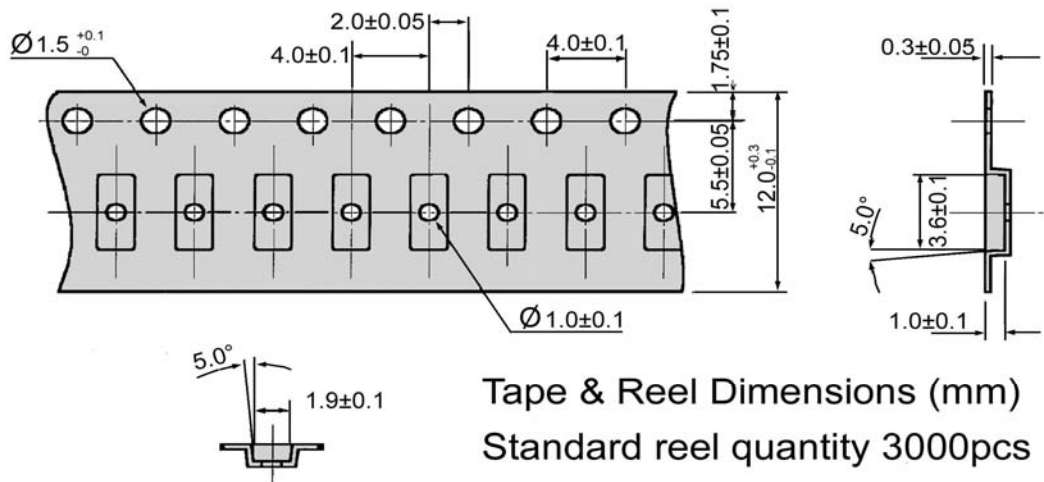
<http://www.actcrystals.com>

ACT3215 SMX continued



Note:

Crystal products may be affected or even destroyed by ultrasonic cleaning. Undertake trials of any cleaning process before committing that process to production.



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