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Fax : 0044 (0)118 979 1283
email : info@actcrystals.com

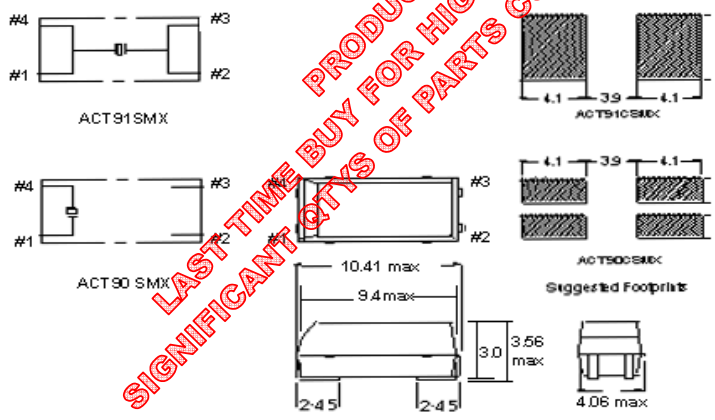
ACT90 & 91CSMX

The ACT90 & 91are miniature surface mount Watch Crystal whose low power consumption makes them ideal for portable applications. Their size makes them suitable for high density circuit boards or applications where space is limited and the tape and reel packaging means that they are ideal for automatic placement machines. The heart of the device is a heat resistant cylinder type crystal which gives them high stability characteristics sufficient to allow reflow soldering.



Parameter	Symbol	Specification	Condition
Nominal Frequency	fo	32.768KHz	
Frequency Tolerance @25°C	Df/fo	±20ppm, ±50ppm & 100±ppm	Please specify
Frequency v Temp Characteristics	Df/fo	See drawing	-10 ~ +60°C
Turnover Temperature	Tm	25°C ±5°C	
Freq. Temp. coefficient	b	(-3.5± 0.8) x 10^{-8}/°C^2	
Temp Operating Range	Torp	-40 ~ +85°C	
Temp Storage Range	Tstg	-55 ~ +125°C	
Q' Value	Q	40 x 10^3 min	
Equivalent Series Resistance	ESR	50KΩ @ 25°C	
Shunt Capacitance	Co	1.0pF Typical	
Load Capacitance	CL	6 ~ 12.5pF	Please specify
Motional Capacitance	C1	2.1fF Typical	
Capacitance Ratio	g	450 Typical	
Drive Level	DL	1μ W max - 0.1μW recommended	
Insulation Resistance	IR	500MΩ min	@ 100V DC
Aging (first year)	Fa	±5ppm max	@ 25°C ±3°C
Shock Resistance		±5ppm max Dropped 3 times from 75cm onto	
Reflow Soldering Condition	Tsol	230°C max, 20 Secs Max x 2 times	

DIMENSIONS (mm)



Lead Free-RoHS Comp.

Lead frame material: Ni/Fe
Pad surface finish: Sn/Bi

PRODUCT GOING OBSOLETE.
LAST TIME BUY FOR HIGH VOLUME NEW ORDERS 29/03/06.
SIGNIFICANT QTYS OF PARTS CURRENTLY AVAILABLE FROM STOCK.

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

ISO9001:2000 Registered - Registration number 6830/2

For quotations or further information please contact us at:
3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK
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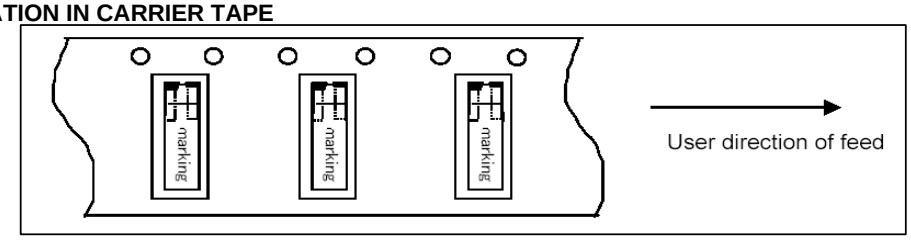
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ACT90 & 91CSMX 3.000 PIECE REELS

MATERIAL

	Tape	A_PET
	Reel	Cardboard

ORIENTATION IN CARRIER TAPE



LAYOUT OF TAPE

No Components	10
Cover Tape Leader	150mm Minimum

Start of carrier tape bent vertically and hooked into reel slot.

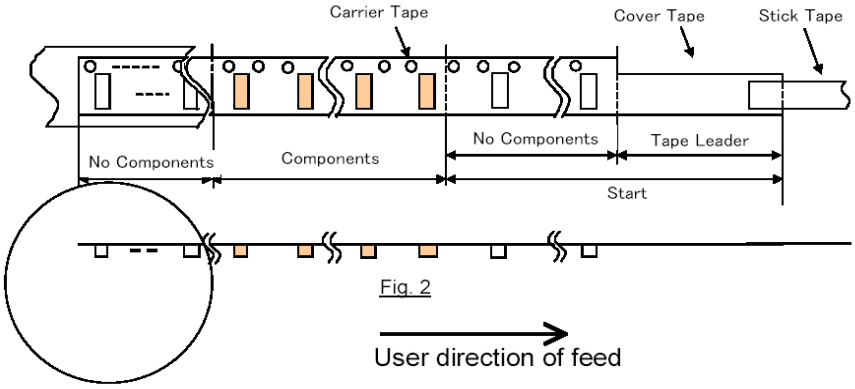
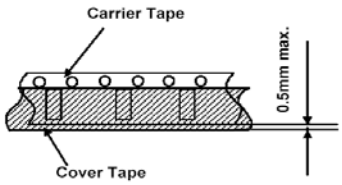
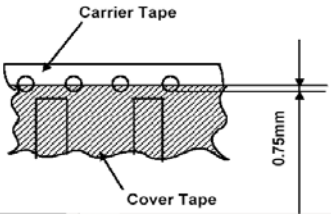


Fig. 2

COVER TAPE OVERLAP





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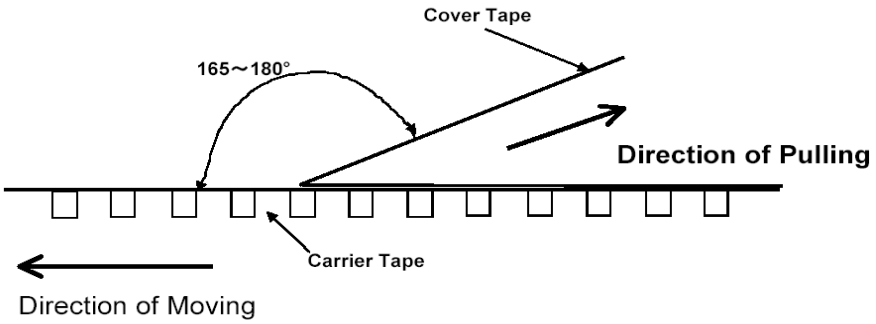
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ACT90/91C TAPE & REELING SPECIFICATION cont'd

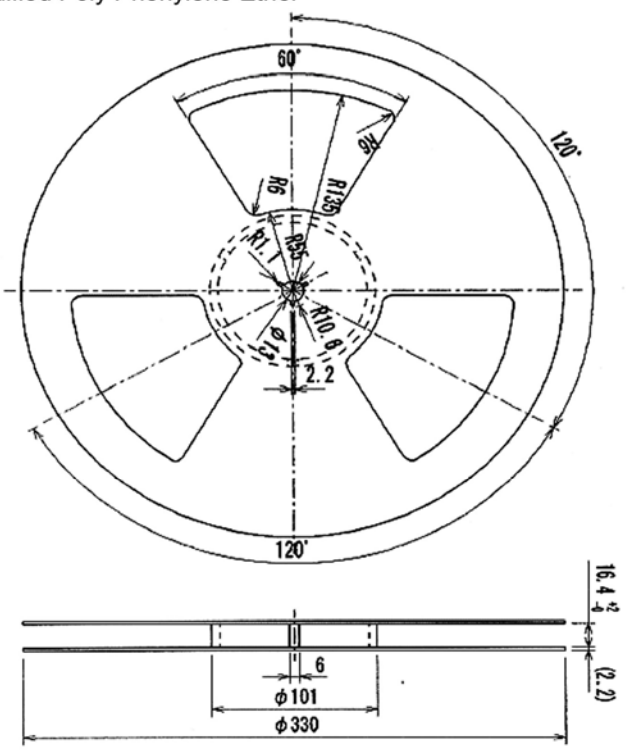
PEEL STRENGTH

Using method below the force to start the tape peeling with a pull speed of 300±10 mm/min shall be 0.1~1.3N.



REEL DIMENSIONS (mm)

Conforms to IEC 60286-3
Modified Poly Phenylene Ether



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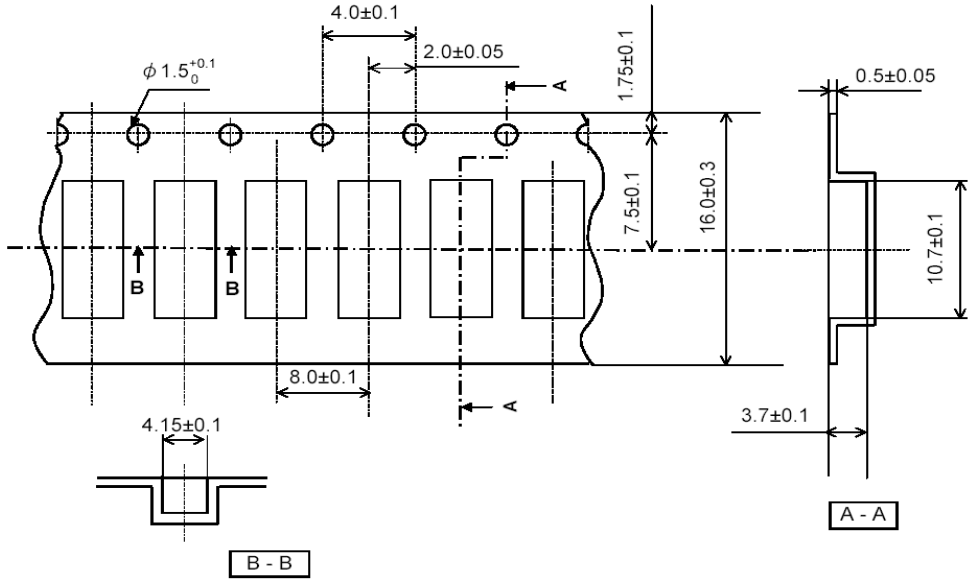
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Advanced crystal technology

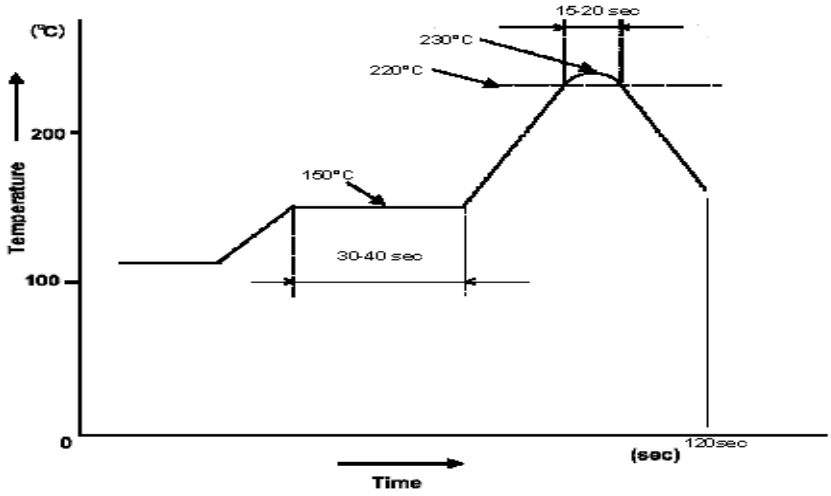
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ACT90/91C TAPE & REELING SPECIFICATION cont'd

CARRIER TAPE DIMENSIONS (mm)



ACT90/91 REFLOW SOLDERING PROFILE



Temperatures are PCB temperatures.

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