

## ACT9301

The ACT9301 family is a miniature SMD clock oscillator in a ceramic package with a seam welded metal lid. The metal lid is grounded via the package to assist with EMI emission control. This 3.2x2.5mm packaged device is available in frequencies from 1.5 to 125 MHz. Taped and reeled packaging and loose quantities are available for purchase, to suit high and low volume requirements. The device is offered in a variety of voltages between 1.8 and 5V for a CMOS Output and 5V for a TTL output..



www.DataSheet4U Specification

Parameter	Symbol	Specification	Condition
Frequency Range	$f_0$	1.5 ~125MHz	Please specify
Frequency stability	$\Delta f/f_1$	+/-50ppm over -40 ~ +85°C **	Others available please specify
		+/-25ppm over -20 ~ +70°C **	
		+/-20ppm over -10 ~ +70°C **	
Storage Temperature Range	Tstg	-55 ~ 125°C	
Output		<b>CMOS</b>	<b>TTL</b>
Supply Voltage	Vdd	5.0V 3.3V 2.8V 2.5V 1.8V	5.0V
Output Load	N/C <sub>L</sub>	15(*50)pF 15(*30)pF 15(*30)pF 15(*30)pF 15pF	10TTL (*) available enquire
Output Level '0'	V <sub>OL</sub>	0.1 Vdd max	
Output Level '1'	V <sub>OH</sub>	0.9 Vdd min	
Supply Current max	I <sub>op</sub>	45mA 30mA 30mA 30mA 20mA 45mA	
Duty Cycle	T <sub>w</sub> /t	40/60% Standard (45/55% Available)	
Enable Voltage High	V <sub>IH</sub>	70% Vdd min	
Enable Voltage Low	V <sub>IL</sub>	10% Vdd max	
Standby Current	I <sub>ST</sub>	10µA max	
Output Disable Time	T <sub>DIS</sub>	100ns max	
Output Enable Time	T <sub>EN</sub>	100ns max	
Rise and Fall Time	T <sub>r</sub> /T <sub>f</sub>	10ns max	
Start-up Time	T <sub>OSC</sub>	10ms max	
Aging	$\Delta f/f_0$	+/-3.0ppm max	
Phase Jitter		10ps max	
Re-flow condition		260°C 10 sec max	

\*\* Inclusive of 25°C Tolerance, Operating Temperature, Vdd, load, first year aging, shock and vibration

\* Dependant on frequency  $f_0$ .

**Lead Free -RoHS comp.**

**Pad surface Material Au**

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

Customer to specify: Frequency, Stability, Operating temperature range, Output and supply voltage

In line with our ongoing policy of product evolution 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>

Issue 1T6

Date 25/08/2005

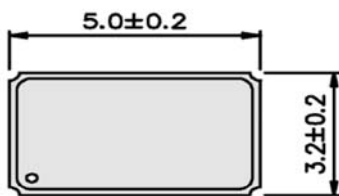
## ACT9301

Standard frequencies (MHz)

1.8432	12.0	20.0	24.5454	28.636	48.0
3.6864	13.5	22.0	24.576	36.0	50.0
4.069	14.318	22.5792	25	40.0	80.0
7.3728	16.0	24.0	27	44.0	106.25

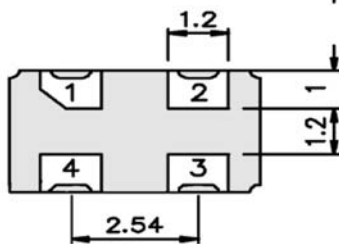
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## Dimensions (mm)

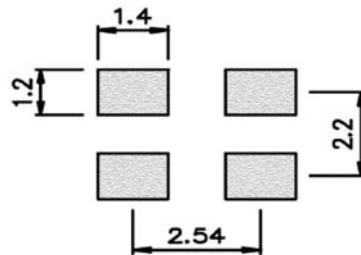


### Pin Functions:

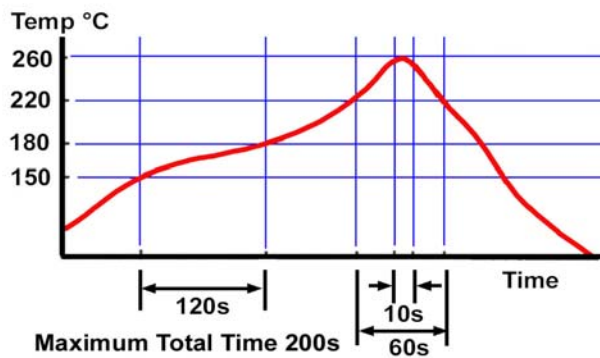
1. STAND BY
2. GND
3. OUT PUT
4. VDD



### Recommend Land Pattern



### Recommended Reflow Profile



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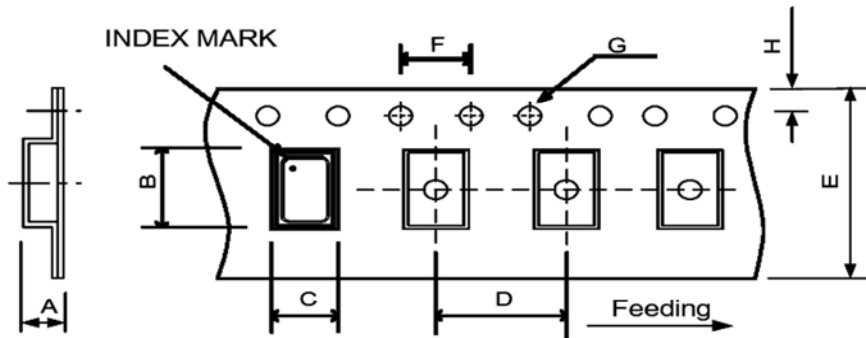
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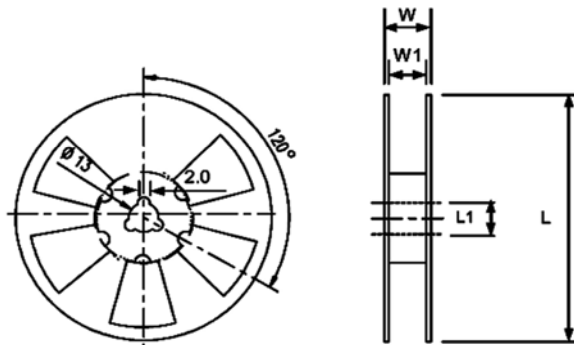
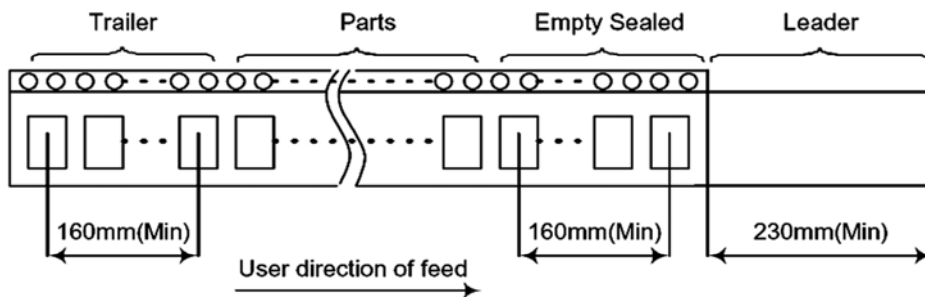
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## Tape and Reel Dimensions

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DIMENSIONS	A	B	C	D	E	F	G	H	(UNIT : mm)
	1.40	5.40	3.60	8.00	12.00	4.00	1.55	1.75	



DIMENSIONS	L	L1	W	W1	pcs / Reel (UNIT : mm)
	180	13	16.5	12	Standard Reel Quantity is 1,000 pcs per reel

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