

ACT9214 LVDS OSCILLATOR

The ACT9214 LVDS Oscillator is a miniature low profile device allowing for frequencies up to 350.0MHz to be available in a 7X5 mm SMD package. The metal lid is grounded through the ceramic package and the pads are gold plated. This device is particularly suited to Communications / Networking applications and also to many other applications where a low voltage LVDS output is required. Only 7x5mm this device is particularly popular where board space dictates small size and / or automatic assembly is a requirement. The devices are available loose or taped and reeled to suit both low and higher volume requirements.



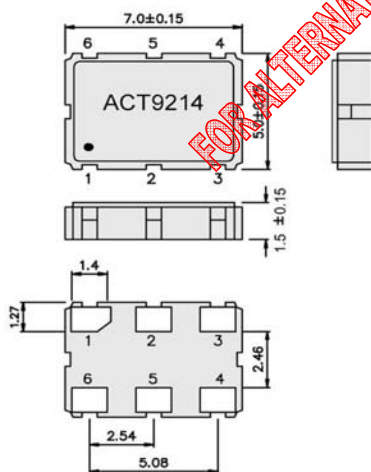
Specification

| Parameter | Symbol | Specification | Condition |
|------------------------|-----------------|-------------------------------------|---|
| Frequency Range | fo | 40 ~ 350MHz | Please specify |
| Frequency Stability | $\Delta f/fo$ | $\pm 20 \sim \pm 100$ ppm max * | Please specify |
| Temp Operating Range | Top | -20 ~ +70°C Standard | Others available please enquire |
| Temp Storage Range | Tstg | -55 ~ +125°C | |
| Supply Voltage | Vdd | 3.3V (2.375V Min) 2.5V (3.465V max) | Please specify |
| Supply Current (max) | Iop | 99mA (85mA typical) | |
| Duty Cycle | Tw/t | 50% \pm 10% | Ta 25°C |
| Output Level '0' | VOL | 1.1V typical | |
| Output Level '1' | VOH | 1.43V typical | |
| Rise & Fall Time (max) | Tr/Tf | 2.0ns max | |
| Output Load | N/CL | 100 Ω | Refer to test circuit on page 3 |
| Start-up Time | Tosc | 5ms max | Within ± 0.5 ppm of fo & power to 90% final amplitude |
| Aging | Fa | ± 3.0 ppm/yr max | |
| Output Enable Function | | Pin 1 | |
| Enable Voltage high | Venh | 0.7Vdd min | |
| Enable Voltage low | Venl | 0.3Vdd max | |
| Standby Current | I _{sb} | 10 μ A max | OE low |
| Phase Jitter | Tj | 1.0ps | 12kHz to 20MHz |

* Inclusive of 25°C Tolerance, Operating temperature stability, Vdd, Output load, first year aging, shock and vibration

Standard frequencies MHz

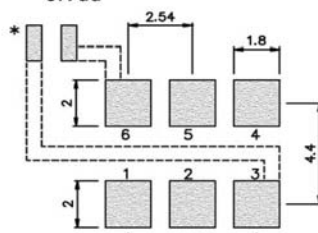
| | |
|--------|--------|
| 106.25 | 156.25 |
| 125.00 | 187.50 |
| 155.52 | 212.50 |



Dimensions (mm)

Pin Functions:

- 1:OE
 - 2:NC
 - 3:GND
 - 4:OUT
 - 5:OUT
 - 6:Vdd
- } see waveform page3



* :External high frequency power supply decoupling required.

Lead free - RoHS comp.

Pad surface plating Au 0.7-1.2 μ m

Please note that all parameters can not necessarily be specified in the same device
 Customer to specify: Frequency, Vdd, Frequency Stability, Operating Temperature Range

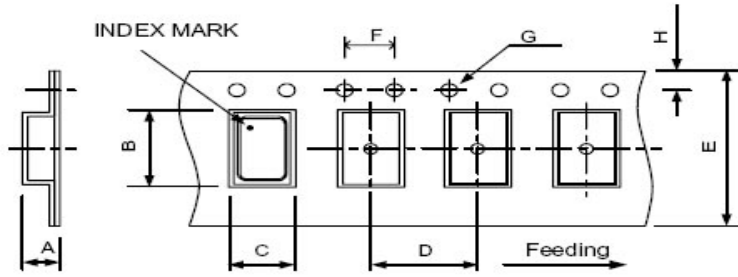
In line with our ongoing policy of product evolution and improvement, the above specification may subject to change without notice

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For quotations or further information please contact us at:
 3 The Business Centre, Molly Millars Lane, Wokingham, Berks, RG41 2EY, UK
<http://www.actcrystals.com>

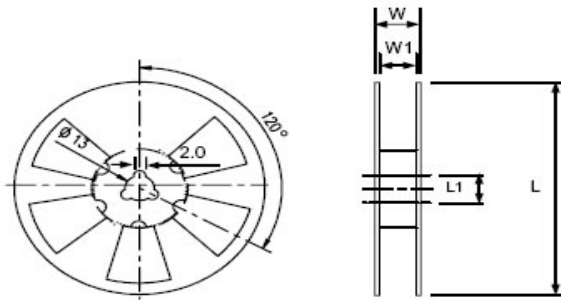
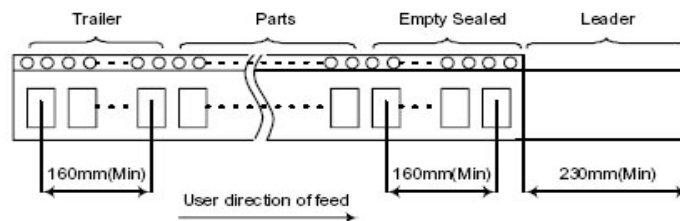
Issue : 1 T6
 Date :16/08/05

ACT9214 TAPE AND REEL DIMENSIONS (mm)



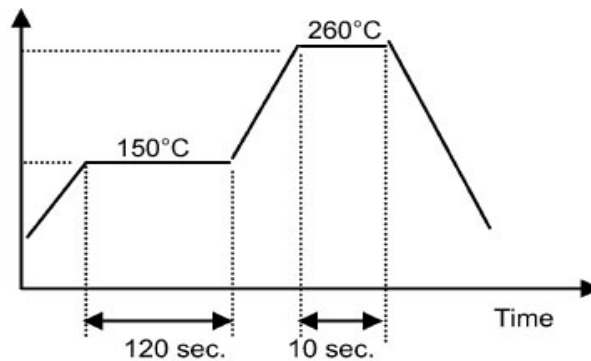
| DIMENSIONS | A | B | C | D | E | F | G | H | (UNIT : mm) |
|------------|------|------|------|------|-------|------|------|------|-------------|
| | 2.00 | 7.90 | 5.45 | 8.00 | 16.00 | 4.00 | 1.50 | 1.75 | |

REMARK :



| DIMENSIONS | L | L1 | W | W1 | pcs / Reel (UNIT : mm) |
|------------|-----|----|------|----|--|
| | 180 | 13 | 20.5 | 16 | Standard Reel Quantity is 1,000 pcs per reel |

Maximum Re-flow Conditions



Total time : 200 sec. Max.

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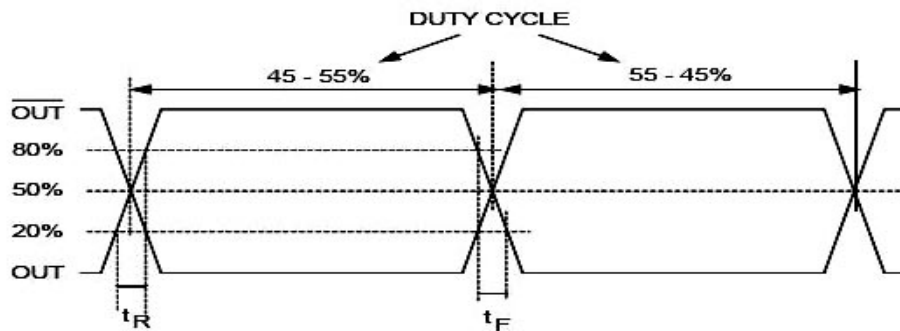
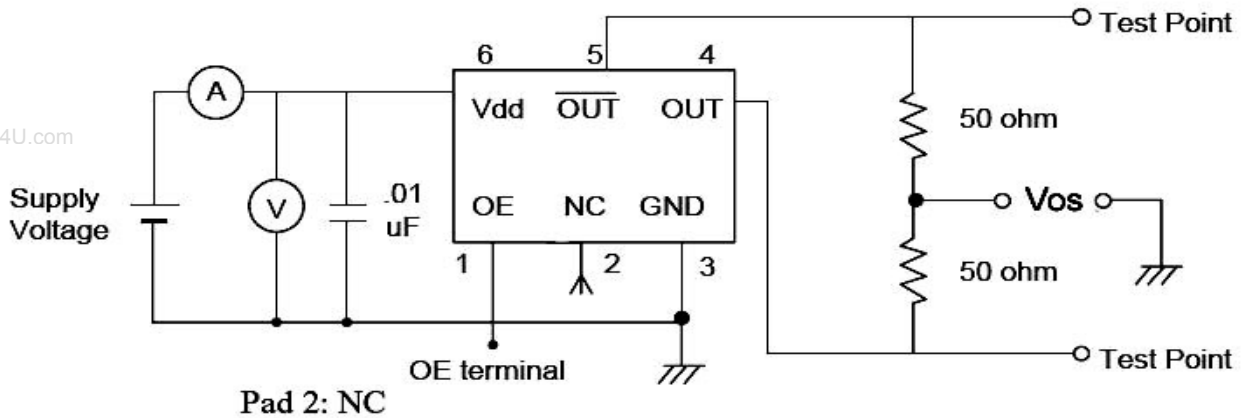
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ACT9214 Test Circuit and Waveform

www.DataSheet4U.com



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