# HIGH FREQUENCY, LOW JITTER, LEAD OSCILLATOR FOR GIGABIT ETHERNET APPLICATIONS

## FEATURES

- VCXO
- LOW JITTER
- 3rd OVERTONE CRYSTAL DESIGN

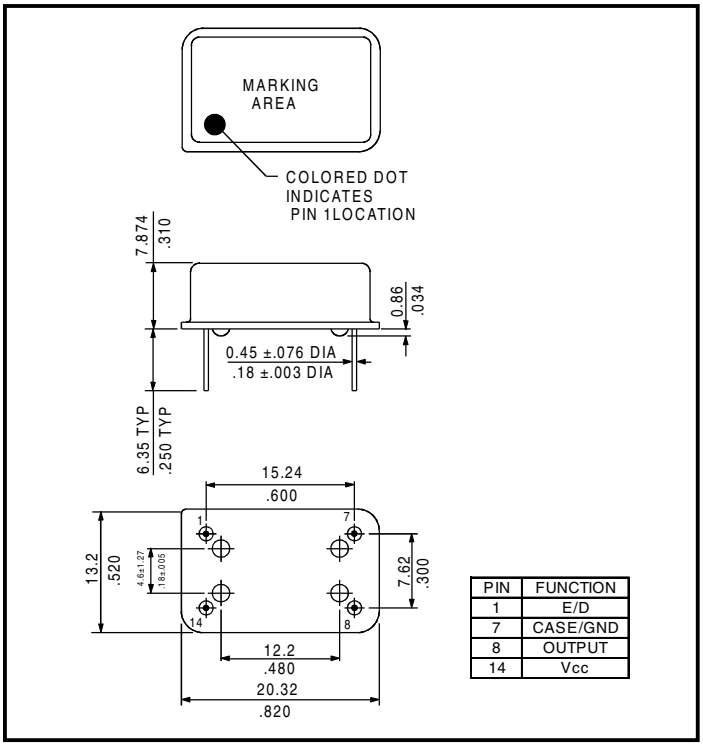
***MODEL VC7225A***

REVISON: B
DATE: 11/01/01

## SPECIFICATIONS

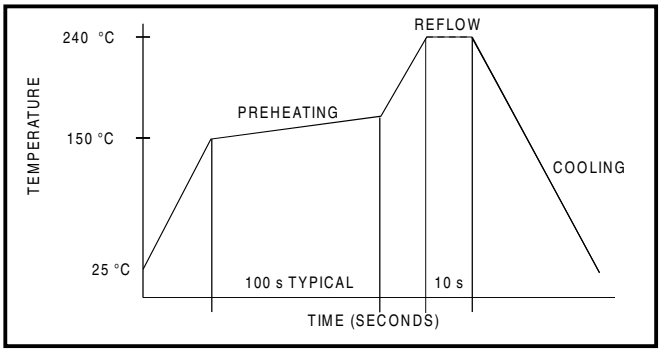
| PARAMETER | SYMBOL | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|
| FREQUENCY, NOM | fo | - | 125.00, 133.00, 156.25 | MHz |
| SUPPLY VOLTAGE, NOM | Vcc | Vcc ±5% | 5.0 | V |
| SUPPLY CURRENT, MAX | Is | Vcc=+5.0 VDC, Vc=+2.5VDC, Ta=+25°C, 15pF LOAD | 70.0 | mA |
| HCMOS OUTPUT LEVEL | VOH / VOL | LOAD = 15pF ±5% | 4.5 / 0.5 | V |
| DUTY CYCLE | DC | LOAD = 15pF / 50% Vcc | 40..60 | % |
| RISE AND FALL TIME | tr/tf | 20%~80%, 80%~20% Vout, MAX | 3 | nS |
| PHASE NOISE AT FREQ. OFFSET | £(Δf)s | Δf = 10Hz<br>Δf = 100Hz<br>Δf = 1kHz<br>Δf = 10kHz | -65<br>-100<br>-125<br>-140<br>-145 | dBc/Hz |
| FREQ. STABILITY VS. TEMP. MAX | Δf/fc (Ta) | Ta = 0°C...+70°C,(REF. TO +25°C) | ±25.0 | PPM |
| FREQ. STABILITY VS. SUPPLY VOLT MAX | Δf/fc (ΔVcc) | SUPPLY VARIATION = ±5% | ±5.0 | PPM |
| FREQ. STABILITY VS. LOAD, MAX | Δf/fc (ΔLoad) | LOAD VARIATION = ±10% | ±3.0 | PPM |
| FREQ. STABILITY VS. CALIBRATION, MAX | (fc-fo)/fo | Vcc = +5.0VDC, Vc=+2.5VDC, Ta=+25°C, 15pF LOAD | ±5.0 | PPM |
| AGING | Δf/fc (Δt) | Δt= 10 YEARS | ±20.0 | PPM |
| CONTROL VOLTAGE | Vc | DC | +0.5...±4.5 | V |
| FREQUENCY PULLING RANGE, MIN | Δf/fc (ΔVc) | OVER THE CONTROL VOLTAGE RANGE | ±30.0...±50.0 | PPM |
| LINEARITY, MAX | Δf/V | POSITIVE SLOPE | ±10 | % |
| INPUT IMPEDANCE, MIN | Zin | - | 47.0 | kΩ |
| MODULATION FREQ. BANDWIDTH, MIN | MBW (-3dB) | Vcc = +5.0VDC, Vc=+2.5VDC, Ta=+25°C, 15pF LOAD | 10.0 | kHz |
| OPERATING TEMPERATURE RANGE | Ta | - | 0..+70 | °C |
| STORAGE TEMPERATURE RANGE | T(stg) | - | -40...+90 | °C |
| ABSOLUTE VOLTAGE RANGE | Vcc, Vc(abs) | NON-DESTRUCTIVE,DC | -0.5...+7.0 | V |

## OUTLINE DRAWING




| PIN | FUNCTION |
|---|---|
| 1 | E/D |
| 7 | CASE/GND |
| 8 | OUTPUT |
| 14 | Vcc |

## SOLDER REFLOW PROFILE




## PACKAGING

25 PIECES PER PLASTIC TUBE

## EXAMPLE

VC7225A-LZ-30-125.000


**Raltron Electronics Corporation 10651 NW 19th St. Miami, Florida 33172 U.S.A.**
**Tel: 305-593-6033 Fax: 305-594-3973 e-mail: sales@raltron.com Internet: http://www.raltron.com**