

## 14 pin DIL VCXO

- Frequency range 60MHz to 240MHz
- LVPECL Output
- Supply Voltage 3.3 VDC
- Phase jitter 0.2ps typical
- Pull range from  $\pm 30\text{ppm}$  to  $\pm 150\text{ppm}$

### DESCRIPTION

GPA14 VCXOs are packaged in a 14 pin dual-in-line package. Typical phase jitter for GPA series VCXOs is 0.2 ps. Output is LVPECL. Applications include phase lock loop, SONET/ATM, set-top boxes, MPEG, audio/video modulation, video game consoles and HDTV.

### SPECIFICATION

|                              |   |
|------------------------------|---|
| Frequency Range:             | 60.0MHz to 240.0MHz   |
| Supply Voltage:              | 3.3 VDC $\pm 5\%$   |
| Output Logic:                | LVPECL  |
| RMS Period Jitter            |   |
| 60.0MHz ~ 120MHz:            | 2.5ps typical   |
| 120MHz ~ 240MHz:             | 4.7ps typical   |
| Peak to Peak Jitter          |   |
| 60.0MHz ~ 120MHz:            | 17.5ps typical  |
| 120MHz ~ 240MHz:             | 24.5ps typical  |
| Phase Jitter:                | 0.2ps typical   |
| Initial Frequency Accuracy:  | Tune to the nominal frequency with $V_c = 1.65 \pm 0.2\text{VDC}$         |
| Output Voltage HIGH (1):     | Vdd-1.025V minimum<br>Vdd-0.880V maximum                                  |
| Output Voltage LOW (0):      | Vdd-1.810V minimum<br>Vdd-1.620V maximum<br>( $R_L = 50\Omega$ to Vdd-2V) |
| Pulling Range:               | From $\pm 30\text{ppm}$ to $\pm 150\text{ppm}$                            |
| Control Voltage Range:       | 1.65 $\pm 0.35$ Volts   |
| Temperature Stability:       | See table   |
| Output Load:                 | 50 $\Omega$ into Vdd or Thevenin equiv.                                   |
| Rise/Fall Times:             | 0.5ns typ., 0.7ns max.<br>20% Vdd to 80% Vdd                              |
| Duty Cycle:                  | 50% $\pm 5\%$<br>(Measured at Vdd-1.3V)                                   |
| Start-up Time:               | 10ms maximum, 5ms typical   |
| Current Consumption:         | 75mA maximum at 212.5MHz<br>80mA maximum at 622.08MHz                     |
| Static Discharge Protection: | 2kV maximum   |
| Storage Temperature:         | -55° to +150°C  |
| Ageing:                      | $\pm 2\text{ppm}$ per year maximum  |
| Enable/Disable:              | Not implemented - 4 pin package   |
| RoHS Status:                 | Fully compliant or non-compliant  |

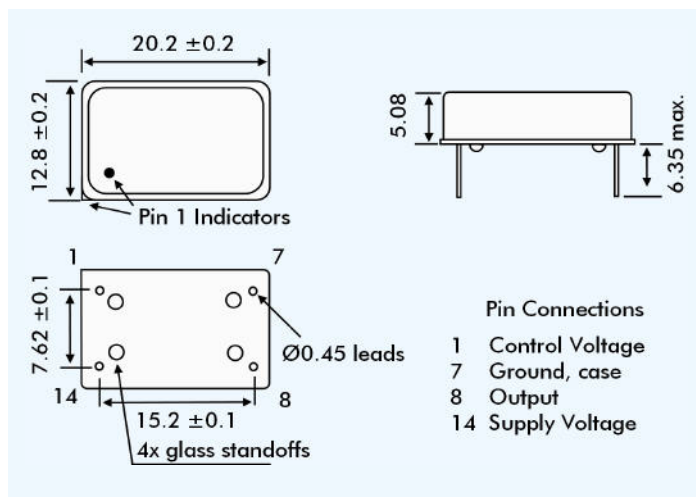
### FREQUENCY STABILITY

| Stability Code | Stability $\pm\text{ppm}$ | Temp. Range |
|----------------|---------------------------|-------------|
| A              | 25                        | 0°~+70°C    |
| B              | 50                        | 0°~+70°C    |
| C              | 100                       | 0°~+70°C    |
| D              | 25                        | -40°~+85°C  |
| E              | 50                        | -40°~+85°C  |
| F              | 100                       | -40°~+85°C  |

If non-standard frequency stability is required Use 'I' followed by stability, i.e. I20 for  $\pm 20\text{ppm}$



### OUTLINE & DIMENSIONS



### PART NUMBERING

