

- Frequency range 50.01MHz to 200MHz (15pF load)
- Frequency range 50.01MHz to 320MHz (10pF load)
- LVCMOS Output
- Supply Voltage 3.3 VDC
- Ultra low jitter less than 1ps



## 8 pin Dual-in-Line

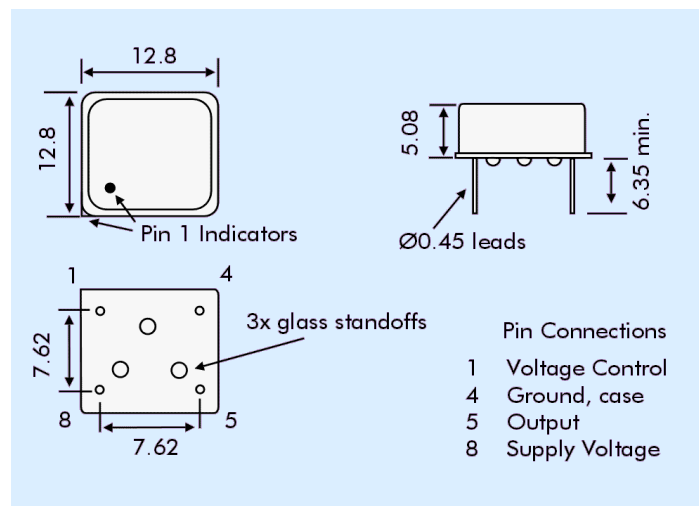


### DESCRIPTION

GF8 VCXOs, are packaged in an industry-standard, 8 pin Dual in Line package. GF8 VCXOs provide excellent phase jitter performance, less than 1ps.

### SPECIFICATION

|                             |                                                                                             |
|-----------------------------|---------------------------------------------------------------------------------------------|
| Frequency Range             | 50.01MHz to 200.0MHz                                                                        |
| Load 15pF:                  | 50.01MHz to 200.0MHz                                                                        |
| Load 10pF:                  | 50.01MHz to 320.0MHz                                                                        |
| Supply Voltage:             | 3.3 VDC $\pm 5\%$                                                                           |
| Output Logic:               | LVCMOS                                                                                      |
| Integrated Phase Jitter:    | 0.4ps typical, 0.5ps maximum (for 155.250MHz)                                               |
| Period Jitter RMS:          | 3.0ps typical (for 155.250MHz)                                                              |
| Period Jitter Peak to peak: | 20ps typical (for 155.250MHz)                                                               |
| Phase Noise:                | See table below                                                                             |
| Initial Frequency Accuracy: | Tune to the nominal frequency with $V_c = 1.65 \pm 0.2VDC$                                  |
| Output Voltage HIGH (1):    | 90% Vdd minimum                                                                             |
| Output Voltage LOW (0):     | 10% Vdd maximum                                                                             |
| Pulling Range:              | From $\pm 30ppm$ to $\pm 150ppm$                                                            |
| Temperature Stability:      | See table                                                                                   |
| Output Load:                | 15pF                                                                                        |
| Start-up Time:              | 10ms maximum, 5ms typical                                                                   |
| Duty Cycle:                 | 50% $\pm 5\%$ measured at 50% Vdd                                                           |
| Rise/Fall Times:            | 0.7ns typical (15pF load)                                                                   |
| Current Consumption         |                                                                                             |
| < 100MHz:                   | 30mA maximum (15pF load)                                                                    |
| > 100MHz:                   | 40mA maximum (15pF load)                                                                    |
| Linearity:                  | 10% maximum, 6% typical                                                                     |
| Modulation Bandwidth:       | 25kHz minimum                                                                               |
| Input Impedance:            | 60k $\Omega$ minimum                                                                        |
| Slope Polarity:             | Monotonic and Positive. (An increase of control voltage always increases output frequency.) |
| Storage Temperature:        | -50° to +100°C                                                                              |
| Ageing:                     | $\pm 5ppm$ per year maximum                                                                 |
| Enable/Disable (Tristate):  | Not available (4 pad package)                                                               |
| RoHS Status:                | Fully compliant                                                                             |



### PHASE NOISE

| Offset | Frequency 155.25MHz |
|--------|---------------------|
| 10Hz   | -62dBc/Hz           |
| 100Hz  | -92dBc/Hz           |
| 1kHz   | -120dBc/Hz          |
| 10kHz  | -132dBc/Hz          |
| 100kHz | -128dBc/Hz          |
| 1MHz   | -140dBc/Hz          |
| 10MHz  | -150dBc/Hz          |

### FREQUENCY STABILITY

| Stability Code | Stability $\pm ppm$ | 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  $\pm 20ppm$

### PART NUMBERING

Example: **3GF8B-80N-156.25**

