G8 CMOS VCXO

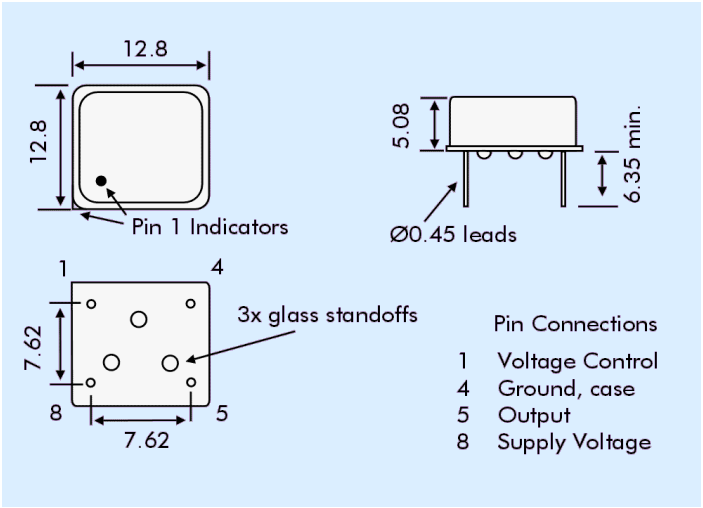
8 pin Dual-in-Line

- **Frequency range 0.625MHz to 50.0MHz**
- **CMOS/TTL Output**
- **Supply Voltage 5.0 V or 3.3 VDC**
- **Integrated Phase Jitter 1ps typical**

RoHS COMPLIANT 2002 / 95 /EC

DESCRIPTION

G8 VCXOs, are packaged in an industry-standard, 8 pin Dual in Line package. Typical phase jitter for G series VCXOs is <1ps, output CMOS/TTL. G series VCXOs use fundamental mode crystal osccillators. Applications include phase lock loop, SONET/ATM, set-top boxes, MPEG , audio/video modulation, video game consoles and HDTV.



SPECIFICATION

Frequency Range	
Vdd = +3.3VDC:	0.625MHz to 50.0MHz
Vdd = +5.0VDC:	1.0MHz to 50.0MHz
Supply Voltage:	+3.3 VDC ±5% or +5.0VDC±5%
Output Logic:	TTL/HCMOS
Integrated Phase Jitter:	1.0ps maximum 12kHz to 20MHz
Period Jitter RMS:	2.0ps typical
Period Jitter Peak to Peak:	14ps maximum
Phase Noise:	*See table below*
Initial Frequency Accuracy	
Tune to the nominal frequency with:	
+3.3VDC:	Vc= 1.65V ±0.2V
+5.0 VDC:	Vc= 2.5V ±0.2V
Output Voltage HIGH (1):	90% Vdd minimum
Output Voltage LOW (0):	10% Vdd maximum
Control Voltage Centre	
+3.3VDC:	1.65V
+5.0VDC:	2.5V
Control Voltage Range	
+3.3VDC:	0.3V to 3.0V
+5.0VDC:	0.5V to 4.5V
Pulling Range	
+3.3VDC	±80ppm to ±120ppm (standard)
+5.0VDC:	±80ppm to ±150ppm (±200ppm available)
Temperature Stability:	*See table*
Output Load:	CMOS = 15pF, TTL = 2 gates
Start-up Time:	10ms maximum, 5ms typical
Duty Cycle:	50% ±5% measured at 50% Vdd
Rise/Fall Times:	0.7ns typical (15pF load)
Current Consumption:	10 to 45mA, frequency dependent
Linearity:	10% maximum, 6% typical
Modulation Bandwidth:	10kHz minimum
Input Impedance:	1 MΩ minimum
Slope Polarity: (Transfer function)	Monotonic and Positive. (*An increase of control voltage always increases output frequency.*)
Storage Temperature:	-50° to +100°C
Ageing:	±5ppm per year maximum
RoHS Status:	Fully compliant

PHASE NOISE

Offset	Frequency 27.0MHz
10Hz	-70dBc/Hz
100Hz	-105dBc/Hz
1kHz	-132dBc/Hz
10kHz	-142dBc/Hz
1MHz	-150dBc/Hz

FREQUENCY STABILITY

Stability Code	Stability ±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 ±20ppm

PART NUMBERING

Example: 3 G8 B-80N-27.000

- Supply Voltage
  - 3 = +3.3V
  - 5 = +5.0V
- Series Designator
  - G8
- Stability over temperature range
  - (See table)
- Pullability in ±ppm
- Pullability determinator
  - N = minimum
  - M = maximum
  - T = Typical
- Frequency in MHz

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