EUROQUARTZ

G14 VCXO

14 pin Dual-in-Line — 1.25MHz ~ 50.0MHz

- **Industry-standard 14 pin DIL package**
- **Frequency range 1.25MHz to 50.0MHz**
- **CMOS/TTL Output**
- **Supply Voltage 2.5, 3.3 VDC**
- **Integrated Phase Jitter 1ps maximum**

DESCRIPTION & APPLICATIONS

G14 VCXOs are packaged in the industry-standard 14 pin Dual-in-Line package. G series VCXOs use fundamental mode crystal oscillators for low phase noise. Applications include phase lock loop, SONET/ATM, set-top boxes, MPEG , audio/video modulation, video game consoles, Fibre Channel, FPGAs, Data Acquisition and HDTV.

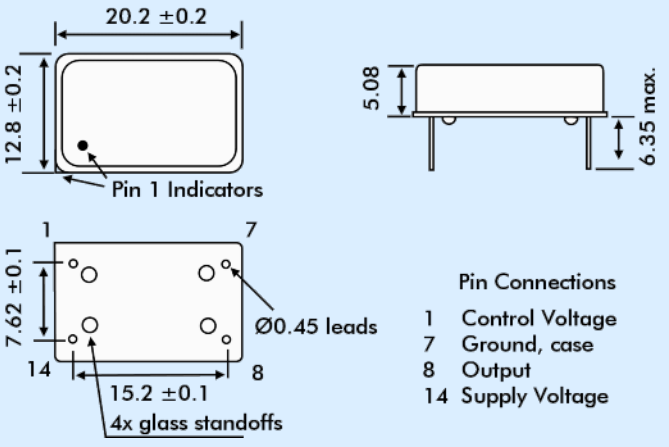
SUPPLY VOLTAGE-DEPENDENT SPECIFICATION

Input Voltage (Vdd):		**Vdd = +2.5VDC ±5%**	**Vdd = +3.3VDC ±10%**
Frequency Range*:		1.25MHz ~ 50.0MHz	1.25MHz ~ 50.0MHz
Output Waveform:		CMOS	CMOS
Initial Frequency Accuracy:		To tune to nominal fr. with Vc=1.25±0.2V	To tune to nominal fr. with Vc=1.65±0.2V
Output Logic HIGH '1'	**CMOS:**	2.25V (min.)	2.97V (min.)
Output Logic LOW '0'	**CMOS:**	0.25V (max.)	0.33 (max.)
Frequency Deviation Range:		Standard: ±80ppm (min.)	Standard: ±80ppm (min.)
Control Voltage Centre		1.25VDC	1.62VDC
Control Voltage Range:		025V to 2.25V	0.3V to 3.0V

GENERAL SPECIFICATION

Frequency Stability:	*See table*
Frequency Change vs. Input Voltage:	±5ppm max. (V_{DD}±5%)
Input Voltage:	+2.5V±5%, +3.3V±10%
Output Load:	15pF
Rise/Fall Time:	6ns max, 4ns typ. (10%~90% Vdd)
Duty Cycle:	50±10% standard, 50±5% option
Integrated Phase Jitter:	1ps maximum (12kHz to 20MHz)
Period Jitter RMS:	2.0ps typical
Period Jitter Peak to Peak:	14ps
Start-up time:	10ms max., 3ms typical
Current Consumption:	10 to 45mA, frequency dependant (27MHz: 10mA typical at 3.3V)
Linearity:	6% typical, 10% maximum
Modulation Bandwidth:	10kHz min., measured at Vcont = 1.65V or2.5V.
Input Impedance:	1MΩ typical
Slope Polarity:	Monotonic and Positive, increasing control voltage increases output frequency.
Ageing:	±3ppm per year maximum
RoHS Status:	RoHS Compliant and lead (Pb) free

OUTLINE & DIMENSIONS



Issue 3

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PHASE NOISE

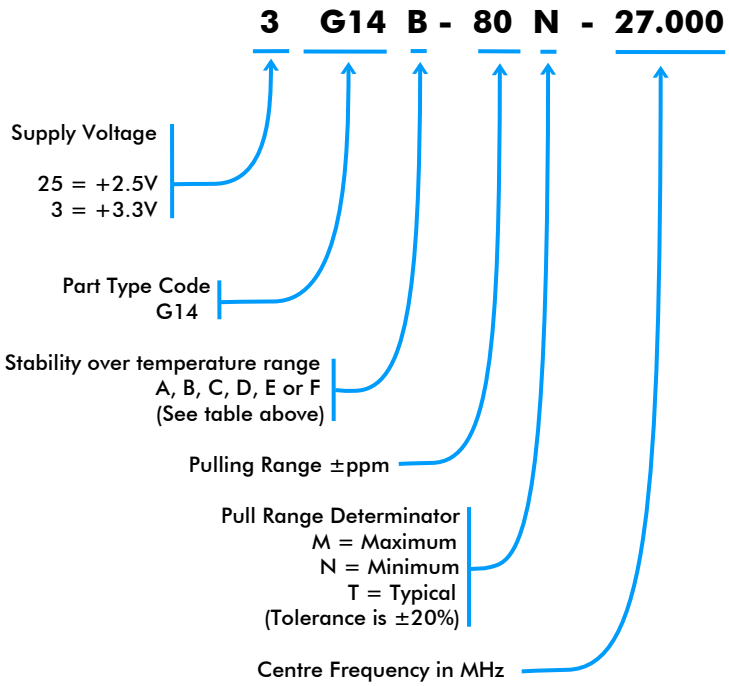
27.0MHz 3.3V supply	Offset:	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz
		-40dBc/Hz	-104dBc/Hz	-132dBc/Hz	-147dBc/Hz	-152dBc/Hz	-150dBc/Hz

FREQUENCY STABILITY OVER OPERATING TEMPERATURE RANGE PART NUMBER CODES

Stability	±25ppm	±50ppm	±100ppm
Commercial 'C' -10° to +70°C	A	B	C
Industrial 'I' -40° to +85°C	D	E	F

PART NUMBERING PROCEDURE

Example = 3G14B-80N-27.000



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