EUROQUARTZ

G536 VCXO

5.0 x 3.2 x 1.2mm 6 pad SMD — 625.0kHz ~ 50.0MHz

- **Industry-standard 5 x 3.2 x 1.2mm 6 pad SMD package**
- **Frequency range 625kHz to 50.0MHz**
- **CMOS/TTL Output**
- **Supply Voltage 1.8, 3.3 VDC**
- **Integrated Phase Jitter 1ps maximum**

DESCRIPTION & APPLICATIONS

G536 VCXOs are packaged in the industry-standard 5 x 3.2 x 1.2mm, 6 pad SMD 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

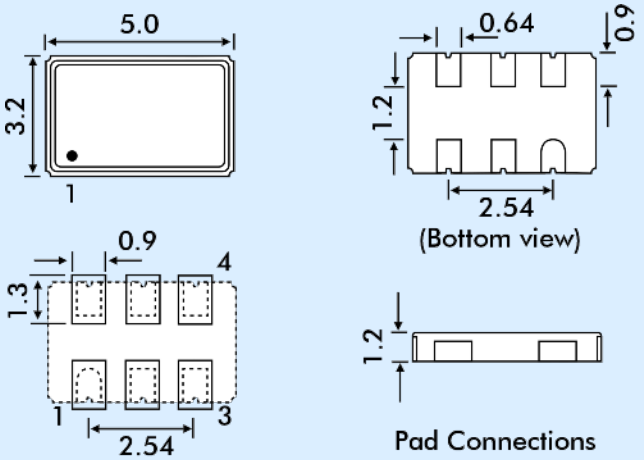
Input Voltage (Vdd):		**Vdd = +1.8VDC ±5%**	**Vdd = +2.5VDC ±5%**	**Vdd = +3.3VDC ±5%**	**Vdd = +5.0VDC ±10%**
Frequency Range*:		16.0MHz ~ 50.0MHz	0.625MHz ~ 50.0MHz	0.625MHz ~ 50.0MHz	1.0MHz ~ 50.0MHz
Output Waveform:		TTL/CMOS	TTL/CMOS	TTL/CMOS	TTL/CMOS
Initial Frequency Accuracy:		To tune to nominal fr. with Vc=0.9±0.15V	To tune to nominal fr. with Vc=1.25±0.2V	To tune to nominal fr. with Vc=1.65±0.2V	To tune to nominal fr. with Vc=2.5±2V
Output Logic HIGH '1'	**TTL:**	- - - -	- - - -	2.4V (min.)	2.4V (min.)
	CMOS:	1.62V (min.)	2.25V (min.)	2.97V (min.)	4.5V (min.)
Output Logic LOW '0'	**TTL:**	- - - -	- - - -	0.4V (max.)	0.4V (max.)
	CMOS:	0.183V (max.)	0.25V (max.)	0.33 (max.)	0.5V (max.)
Frequency Deviation Range:		Standard: ±80ppm (min.)	Standard: ±80ppm (min.)	Standard: ±80ppm (min.)	Standard: ±80ppm (min.) ±100ppm available
Control Voltage Centre		0.9VDC	1.25VDC	1.62VDC	2.5VDC
Control Voltage Range:		0V to 1.8V	025V to 2.25V	0.3V to 3.0V	0.5V to 1.5V

5V DISCONTINUED

GENERAL SPECIFICATION

Frequency Stability:	*See table*
Frequency Change vs. Input Voltage:	±5ppm max. (V_{DD}±5%)
Input Voltage:	+1.8V±5%, +3.3V±5%
Output Load	
TTL:	2TTL gates
CMOS:	15pF
Rise/Fall Time	
TTL:	6ns max, 4ns typ. (0.4V to 2.4V)
CMOS:	6ns max, 4ns typ. (20%~80% 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, 20mA typical at 5.0VDC)
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
Tri-State	
Enable:	No connection to Tris-State pad or Vdd -0.5V min. is applied.
Disable:	Tri-State pad grounded or +0.5V max. is applied.

OUTLINE & DIMENSIONS



Issue 2

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PHASE NOISE

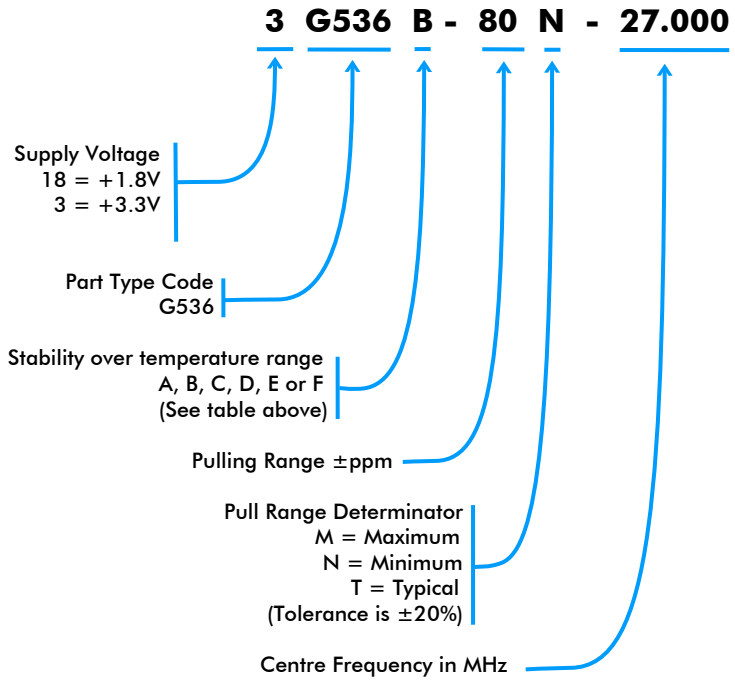
27.0MHz 3.3V supply	Offset:	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz
		-40dBc/Hz	-104dBc/Hz	-132dBc/Hz	-147dBc/Hz	-152dBc/Hz	-150dBc/Hz

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 = 3G536B-80N-27.000



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