5 x 3.2 x 1.2mm 6 pad SMD CMOS

- **Frequency range 0.625MHz to 50.0MHz**
- **CMOS/TTL Output**
- **Supply Voltage 1.8V, 2.5V, or 3.3V or 5.0VDC**
- **Integrated Phase Jitter 1ps typical**
- **Fundamental mode crystals for best phase noise performance**

SUPPLY VOLTAGE DEPENDENT SPECIFICATION

Model:	'G' Series			
Input Voltage:	**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 Wave Form:	CMOS/TTL			
Initial Freq. Accuracy	Tune with Vc = 0.9V±0.15V	Tune with Vc = 1.25V±0.2V	Tune with Vc = 1.65V±0.2V	Tune with Vc = 2.5V±0.2V
Output Logic High '1' TTL	----	----	2.4V minimum	2.4V minimum
CMOS	1.62V minimum	2.25V minimum	2.97V minimum	4.5V minimum
Output Logic Low '0' TTL	----	----	0.4V maximum	0.4V maximum
CMOS	0.783V maximum	0.25V maximum	0.33V maximum	0.5V maximum
Frequency Deviation Range:	Standard ±80ppm min.	Standard ±80ppm min.	Standard ±80ppm min.	Standard ±80ppm min.**
Control Voltage Centre:	0.9VDC	1.25VDC	1.65 VDC	2.5 VDC
Control Voltage Range:	0.0V to 1.8V	0.25V to 2.25V	0.3V to 3.0V	0.5V to 1.5V

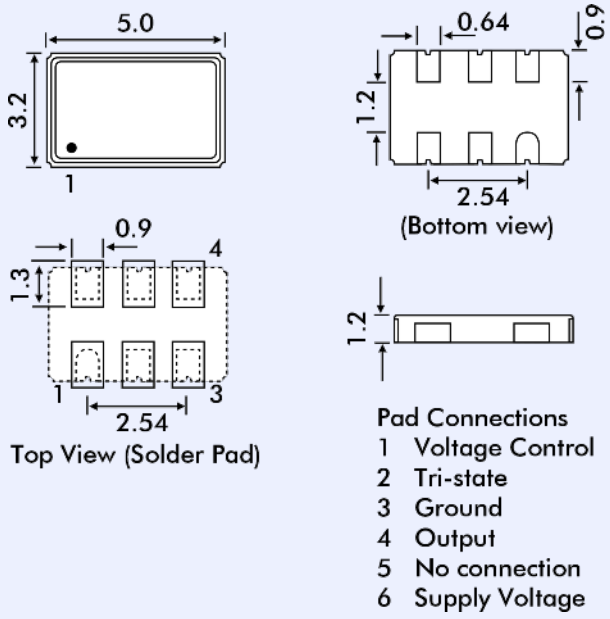
** All 'G' series VCXOs use fundamental mode crystals throughout.*
*** ±200ppm pull range is available with 5.0 Volt 'G' series VCXOs*

GENERAL SPECIFICATION

Frequency Stability:		*See table*
Output Load		
	TTL:	2 TTL gates
	CMOS:	15pF
Rise/Fall Times		
	TTL:	6ns max., 4ns typical Measured between 0.4V to 2.4V
	CMOS:	6ns max., 4ns typical Measured between 20% to 80% of wave form, (CL = 15pF)
Duty Cycle:		50%±10% standard, 50%±5% is available, add 'S' to part number
Integrated Phase Jitter:		1ps max. (12kHz to 20MHz)
Period Jitter RMS:		2.0ps typical
Period Jitter Peak to Peak:		14ps max.
Start-up Time:		10ms max., 5ms typical
Current Consumption***:		Frequency dependant (*See note*)
Linearity:		6% typical, 10% max.
Modulation Bandwidth:		10kHz min. Measured at -3dB with V control at 1.65V or 2.5V
Input Impedance:		1MΩ typical
Slope Polarity:		Monotonic and positive (An increase of control voltage increases output frequency.)
Ageing:		±5ppm per year max.
Tri-state		
	Enable high:	No connection of VDD-0.5V min. is applied to Tri-state pin to enable.
	Disable:	Ground +0.5V max. disables output. (High impedance)

**** Current consumption is frequency dependent, e.g. at 27MHz = 10mA typical with supply voltage 3.3V, and 20mA typical with supply voltage = 5.0V.*

OUTLINE AND DIMENSIONS



FREQUENCY STABILITY OVER TEMPERATURE*

Frequency Stability over Operating Temp. Range**	±25ppm	±50ppm	±100ppm
Commercial -10° to +70°C	A	B	C
Industrial -40 to +85°C	D	E	F

** See ordering information*
*** If non-standard temperature stability is required enter the required stability (in ppm) after either 'C' (-10° to +70°) or 'I' (-40° to +85°C)*
Example: 'C20' = ±20ppm over -10 to +70°C

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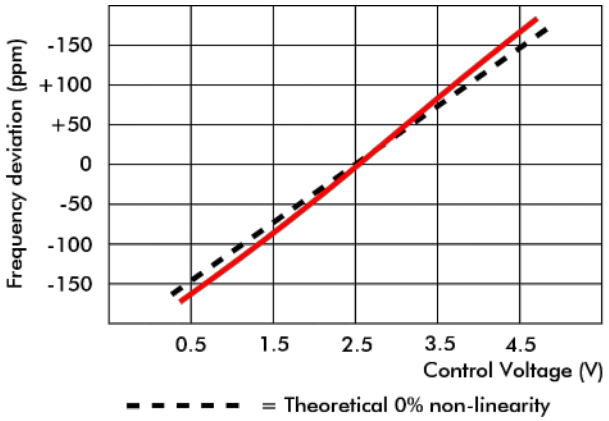
PHASE NOISE

Characteristics typical of 27MHz, +3.3V supply.

Offset	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz
dBc/Hz	-40	-104	-132	-147	-152	-150

TRANSFER FUNCTION

Typical response of 5G536-C-150N-27.000
(at 25°C, positive transfer)



PART NUMBER SCHEDULE

Example: 3G536B-80N-27.000

Supply Voltage
18 = +1.8V
25 = +2.5V
3 = +3.3V
5 = +5.0 V

Series Designator
G536

Stability over temperature range
A = ±25ppm over -10° to +60°C
B = ±50ppm over -10° to +60°C
C = ±100ppm over -10° to +60°C
D = ±25ppm over -40° to +85°C
E = ±50ppm over -40° to +85°C
F = ±100ppm over -40° to +85°C

Pullability
±ppm

Pullability determinator
N = minimum
M = maximum
T = Typical

Frequency
MHz