



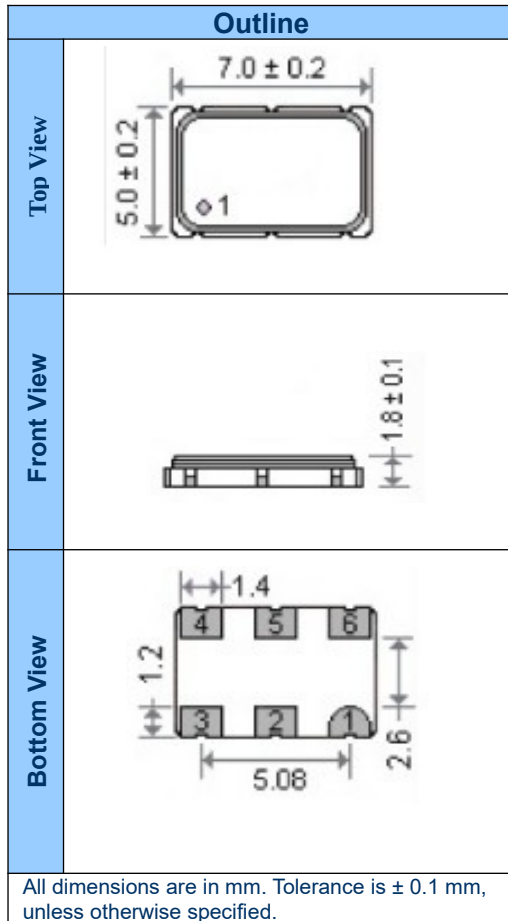
SMD Crystal Oscillator - PECL

XO 0970

Features

- 200 fs Integrated Phase Jitter
- Superior Phase Noise at 10 KHz and at 100 KHz offsets
- RoHS Compliant Standard
- Supply Voltage of +3.3 V and +2.5 V

Mechanical Specifications



Parameter	Specification	
Series	XO 0970	
Frequency Range	15 MHz ~ 200 MHz	
Supply Voltage, Vdd	3.3 V ± 5%; 2.5 V ± 5%	
Output Waveform	LVPECL	
Output High Level	Min.	Max.
	Vdd-1.03 V	Vdd-0.6 V
Output Low Level	Min.	Max.
	Vdd-1.85 V	Vdd-1.6 V
Output Voltage Swing	595 mV (min.), 750 mV (typ.), 930 mV (max.)	
Waveform Symmetry	50% ± 5%	
Integrated Phase Jitter	0.2 ps (typ.) [12 KHz to 20 MHz] for 156.25 MHz	
Rise/ Fall Time	0.3 ns (typ.), 0.5 ns (max.) [20% and 80% of Waveform]	
Current Consumption	50 mA (max.)	
Load	50 Ohms into Vdd-2 V	
Frequency Stability	Select from Table 1	
Operating Temperature Range (OTR)	Select from Table 1	
V Disable	0.3 Vdd (max.)	
V Enable	0.7 Vdd (min.)	
Enable Time	10 ms (max.)	
Disable Time	200 ns (max.)	
Start up Time	5 ms (typ.) and 10 ms (max.)	
Aging @ 25°C	± 3 ppm (max.) for First Year; ± 2 ppm (max.) per Year, thereafter	
Storage Temperature Range	-55°C to +150°C	

Table 1

OTR Codes	Stability Codes	F	G	M	K
		±20 ppm	±25 ppm	±50 ppm	±100 ppm
F	0°C to +70°C				
C	-20°C to +70°C				
I	-40°C to +85°C				

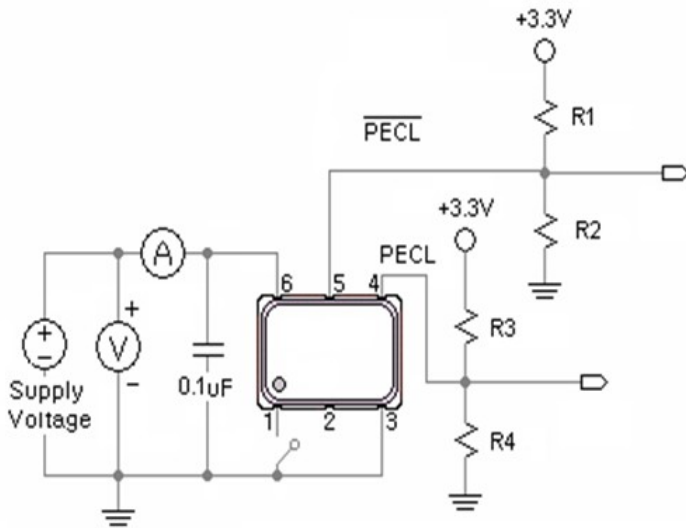
Denotes Available Denotes not Available

Pad Configuration:

Pad	Description
1	Tristate
2	No Connection
3	Ground
4	Output
5	Complementary Output
6	Supply Voltage

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LOAD CIRCUIT



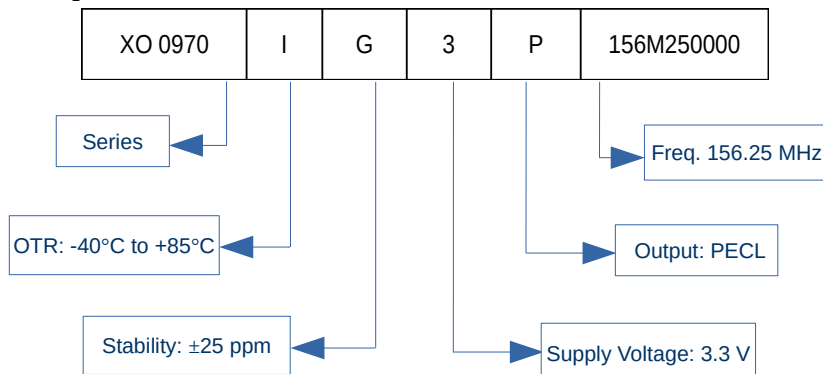
VDD = 3.3 V : R1 = R3 = 127 Ω ; R2 = R4 = 82.5 Ω
 VDD = 2.5 V : R1 = R3 = 250 Ω ; R2 = R4 = 62.5 Ω

SSB Phase Noise [dBc/ Hz (typ.)]

Offset	62.500 MHz	156.250 MHz
10 Hz	-50	-50
100 Hz	-82	-80
1 KHz	-116	-115
10 KHz	-138	-135
100 KHz	-144	-142
1 MHz	-149	-147
10 MHz	-155	-152

Ordering Information

Example



Specifications subject to change without notice

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Note: Not all combination of options are available. Other specifications may be available upon request.

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