



SMD Crystal Oscillator

CXO 7050

Features

- Low Height
- 32.768 KHz and 312 KHz ~ 160 MHz
- High speed CMOS
- RoHS Compliant

Table 1: General Specifications

Parameter/ Package	Supply Voltage	Frequency Range
Frequency Range	1.8 V	32.768 KHz and 0.312 MHz ~ 160 MHz
	2.5 V	
	3.3 V	
	5.0 V	0.375 MHz ~ 100 MHz
Output Load	15 pF to 50 pF	
Logic Levels	V_{Low} : 0.1 Vdd (max.), V_{High} : 0.9 Vdd (min.)	
Rise/ Fall Time	<30 MHz	
	>30 MHz	
	7 ns (max.): For +1.8 Volts and +2.5 Volts 10 ns (max.): For +3.3 Volts and +5.0 Volts	5 ns (max.): For +1.8 Volts and +2.5 Volts 6 ns (max.): For +3.3 Volts and +5.0 Volts
Start-up Time	5 ms (max.) (1.0 MHz ~ 32.0 MHz) 10 ms (max.) (32.0 MHz ~ 160.0 MHz)	
Duty Cycle	45% to 55%	
Output Waveform	HCMOS compatible, Square Wave	
Frequency Stability	Select from Table 3	
Operating Temperature Range (OTR)	Select from Table 3	
Supply Voltage, Vdd	+1.8 V DC ($\pm 5\%$) [code: 1] +2.5 V DC ($\pm 5\%$) [code: 2] +3.3 V DC ($\pm 5\%$) [code: 3] +1.8 V DC ~ +3.3 V DC [code: 4] +5.0 V DC ($\pm 10\%$) [code: 5] +2.25 V DC ~ +3.63 V DC [code: 6]	
Current Consumption	<33 MHz	
	>33 MHz	
	9 mA (max.) @ +1.8 Volts 12 mA (max.) @ +2.5 Volts 15 mA (max.) @ +3.3 Volts 20 mA (max.) @ +5.0 Volts	22 mA (max.) @ +1.8 Volts 25 mA (max.) @ +2.5 Volts 35 mA (max.) @ +3.3 Volts 40 mA (max.) @ +5.0 Volts
Tri-state Function at Pad 1	To be kept floating or apply 70% of Vdd (min.) to enable Output; 30% of Vdd (max.) to disable Output	
Aging at 25°C	± 3 ppm (max.) per year	
RMS Phase Jitter	1 ps (max.) [12 KHz to 20 MHz]	
Storage Temperature Range	-55°C to +125°C	

Table 2: Environmental Specifications

Vibration	Frequency : 10 Hz ~ 55 Hz Amplitude : 1.5 mm peak, Acceleration : 20g Vibration waveform : Full waveform Duration: 2 Hours in each axis, 3 directions (X, Y, Z)
Drop Test	Method of Drop : Free Drop Dropping Floor : Hard wood board 3cm/ min. Height : 75 cm ± 1.0 cm No. of Drops : 3 times
Humidity	98% at 40°C ambient (Non-condensing)

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ISSUE 01

REVISION 08
Page 1 of 2

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Mechanical Specifications:

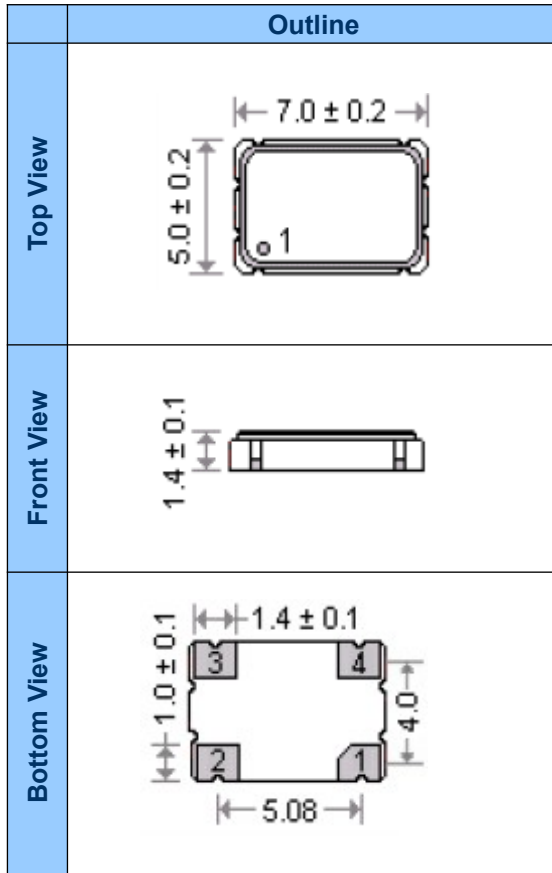


Table 3: Operating Temperature and Stability

OTR Codes	Stability Codes	F	G	H	M	K
	Frequency Stability	±20 ppm	±25 ppm	±30 ppm	±50 ppm	±100 ppm
D	-10°C to +60°C	Available	Available	Available	Available	Available
F	0°C to +70°C	Available	Available	Available	Available	Available
E	-10°C to +70°C	Available	Available	Available	Available	Available
C	-20°C to +70°C	Available	Available	Available	Available	Available
G	-30°C to +80°C	Available	Available	Available	Available	Available
H	-30°C to +85°C	Available	Available	Available	Available	Available
I	-40°C to +85°C	Available	Available	Available	Available	Available
J2	-40°C to +95°C	Not Available	Available	Available	Available	Available
J5	-40°C to +105°C	Not Available	Not Available	Available	Available	Available
K	-55°C to +105°C	Not Available	Not Available	Not Available	Available	Available
L	-55°C to +125°C	Not Available	Not Available	Not Available	Not Available	Available

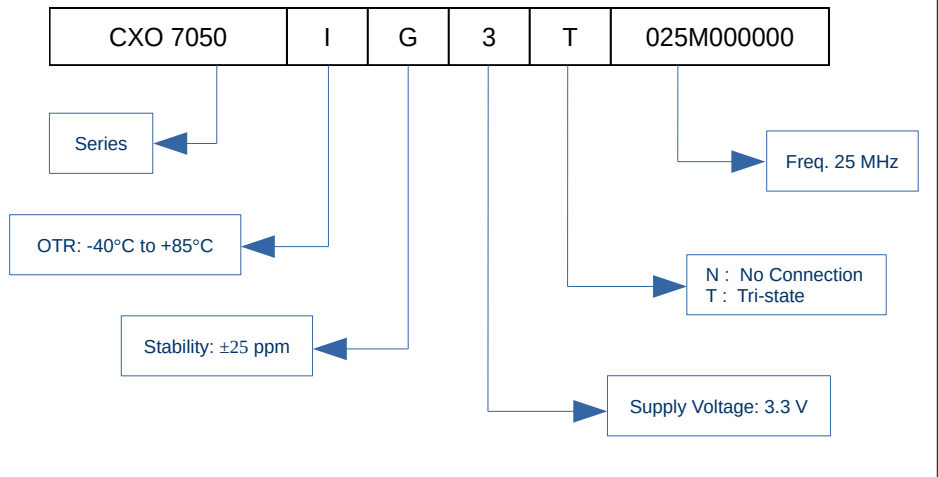
■ Denotes Available □ Denotes not Available

▲ All dimensions are in mm. Tolerance is ±0.1 mm, unless otherwise specified.

Pad Configuration:
Pad 1: Tri-state (Standard); No Connection (Optional)
Pad 2: Ground
Pad 3: Output
Pad 4: Supply Voltage

Ordering Information

Example



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

Specifications subject to change without prior notice.

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ISSUE 01

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REVISION 08

Page 2 of 2

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