

Low Jitter & Low Power Oscillator

Features

- Frequency range 20MHz ~ 40MHz
- Supply voltage 1.62V ~ 3.63V
- CMOS output
- Operating temperature -40~125°C
- SMD seam sealing ceramic package
- RoHS compliant & Pb free
- 2.0mm x 1.6mm
- AEC-Q100 G1

Electrical Specifications

Item	Specification
Frequency	20MHz ~ 40MHz
Supply Voltage (VDD)	1.8V ~ 3.3V ^[1] , ±10%
Output Type	CMOS
Output Load	15 pF
Oscillation Mode	Fundamental
Frequency Stability	±50 ppm ^{[1][2]}
Operation Temperature Range	-40°C ~ 125°C ^[1]
Storage Temperature Range	-55°C ~ 125°C
Output Voltage Low (V _{OL}) @ VDD = 3.3V, I _{OL} = 12mA @ VDD = 1.8V, I _{OL} = 4mA	0.2VDD Max.
Output Voltage High (V _{OH}) @ VDD = 3.3V, I _{OH} = -12mA @ VDD = 1.8V, I _{OH} = -4mA	0.8VDD Min.
Rise(Tr) / Fall(Tf) Time ^[3]	6 ns Max.
Dynamic Supply Current ^[4]	2.5mA
Duty Cycle ^[5]	45% ~ 55%
Start-Up Time	1 ms Max.
Phase Jitter (12kHz~5MHz)	0.5 ps Max. ^[4]
Aging (at 25°C)	±3 ppm/year Max.

[1] Ordering options

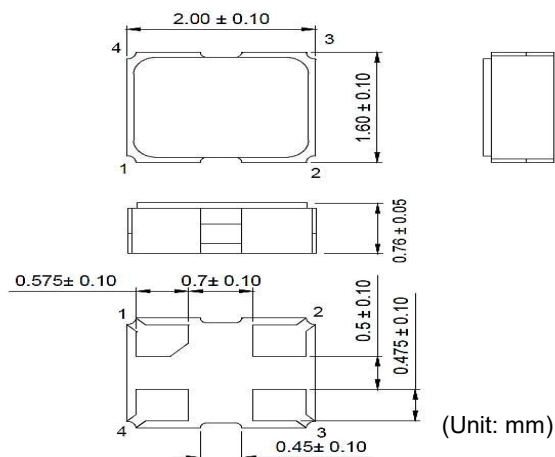
[2] Inclusive of frequency tolerance at 25°C, variations over operating temperature, supply voltage, load and 1st year aging at 25°C.

[3] Tr measure between 10% to 90%, Tf measure between 90% to 10% at 15pF load and VDD 1.8V~3.3V

[4] Measure at 24MHz, VDD 1.8V

[5] Measure at VDD / 2

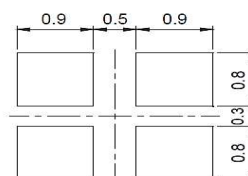
Dimensions



Pad Function

- 1 EN
- 2 GND
- 3 OUTPUT
- 4 VDD

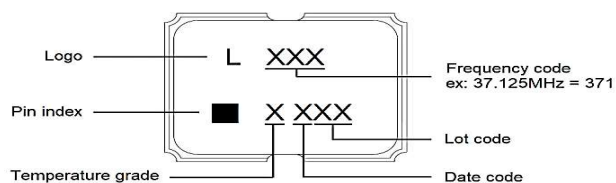
Suggested Layout



Pin Definition

Pin#	Symbol	Functionality
1	EN	Output Clock Mode Enable Pin H (Logic "1") : Enable L (Logic "0") : High-Z Internal pull-high resistor
2	GND	System ground reference
3	OUTPUT	Oscillator output
4	VDD	System power supply

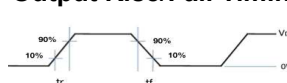
Marking



Duty Cycle Timing

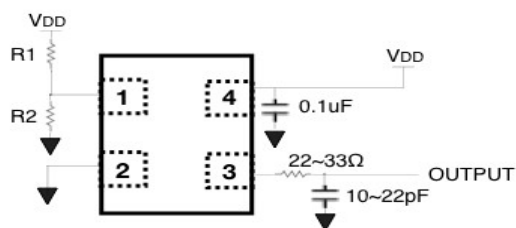


Output Rise/Fall Timing



Temperature grade	Temperature range	Frequency stability (ppm)
A	-40°C ~ 125°C	±50

Schematics



Ordering Information

LO200	A	-	24M	-	50	-	C
Product series			Frequency in Hz				Supply voltage
	Operating temperature range				Frequency stability		
	A : -40~125°C				50: +/-50ppm		A : 3.3V C : 1.8V