Ultra-low Current 32.768kHz For RTC Reference Clock

Features

- Operation supply voltage: 1.5V, 1.8V
- RTC frequency 32.768kHz
- Ultra-Low current: 1.4uA typical.
- Frequency Stability ± 25ppm over -40°C to 85°C @3days Average
- Pb-free/RoHS compliant
- 2.0x1.6mm, 1.6x1.2mm

Applications

- RTC Reference Clock
- Wearable device
- Sport Video Cams
- Ultra-small Notebook PC
- Mobile Phones
- Health and Wellness Monitors

ELECTRICAL SPECIFICATION:

Parameters		1.5V		1.8V		Unit
		Min	Max	Min	Max	
Supply Voltage Variation		V_{DD}-5%	V_{DD}+5%	V_{DD}-5%	V_{DD}+5%	V
Frequency		32.768				KHz
Frequency Tolerance (@ 25°C, 3 days average)		-10	10	-10	10	ppm
Frequency vs Temperature (@-40 to +85°C with reference to +25°C , 3days average)		-25	25	-25	25	ppm
Supply Current (@No load)		Typ. 1.4	1.8	Typ. 1.4	1.8	uA
Output Level	Output High	90% VDD	-	90% VDD	-	V
	Output Low	-	10%VDD	-	10%VDD	V
Transition Time @10%-90%	Rise Time / Fall Time	-	10	-	10	nSec
Duty Cycle		45	55	45	55	&
Startup Time		-	8	-	8	mSec
Aging (@ 25oC, First Year)		-	±3	-	±3	ppm
Storage Temp. Range		-55	125	-55	125	°C

Ordering information

LO101C-32.768K-20-C

Package Size
0: 2.0x1.6mm
1: 1.6x1.2mm

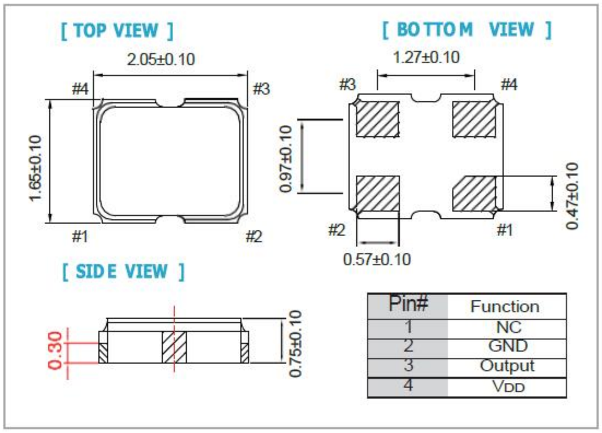
Operation Temperature
C: -20~70ºC
P: -40~105ºC
I: -40~85ºC

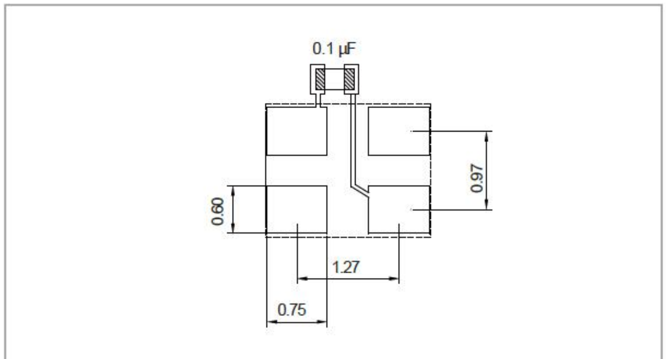
Frequency stability
20: ± 20PPM
25: ± 25PPM
50: ± 50PPM

Supply Voltage
C: 1.8V
D: 1.5V

Dimensions(mm)

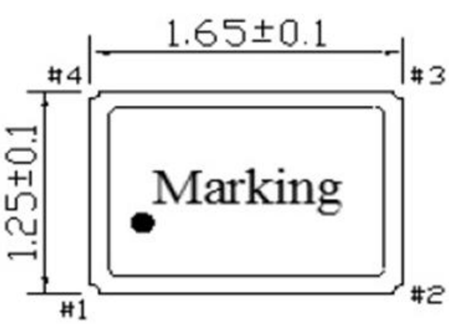
2.0x1.6mm

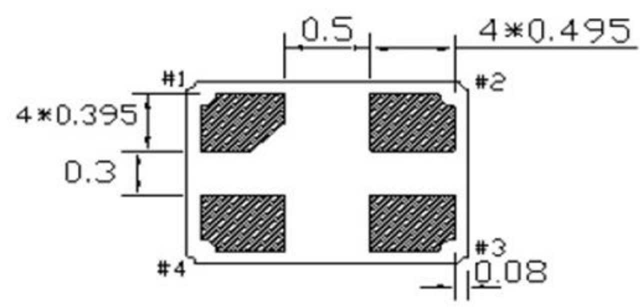


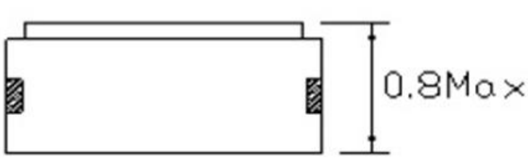


To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

1.6x1.2mm

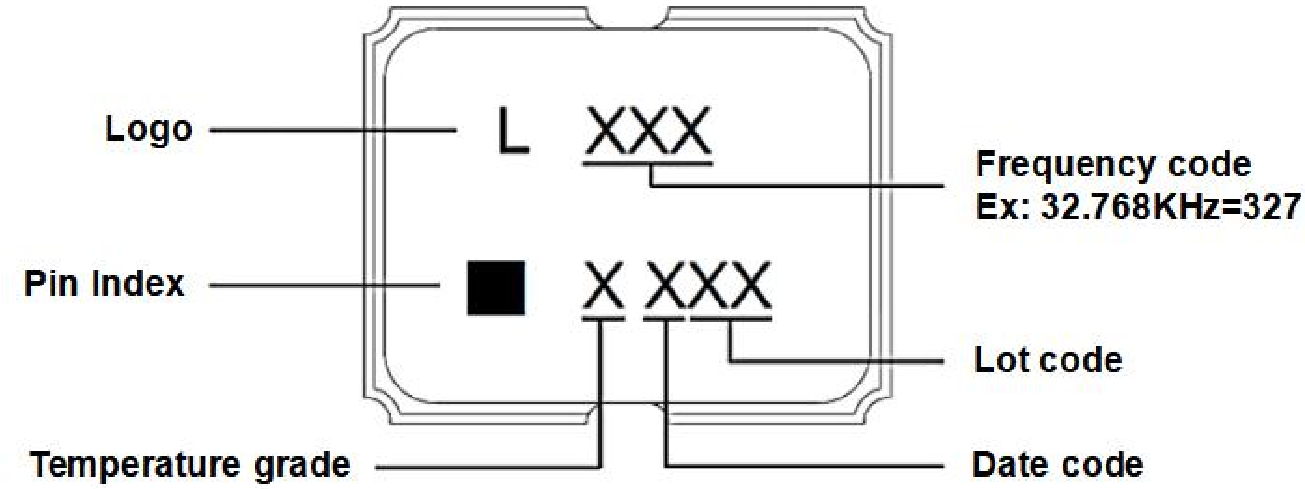






E/D Function	
#1	#3(output)
Open	Active
"H"Level	Active
"L"Level	High Z(Oscilllation Stopped)

Marking



Temperature Grade	Temperature Range
C	-20~70℃
P	-40~105℃
I	-40~85℃

Frequency Stability vs. Temperature Range

Temp.(ºC) \ ppm	±20	±25	±50
-20~+70	△	○	○
-40~+85	X	○	○
-40~+105	X	△	○

*O: Available △: Conditional X: Not available
*Inclusive of calibration @ 25 ºC ,operating temperature rrange,input Voltage variation,load variation,aging (1st year),shock,and vibration

Notice

LFC Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all LFC Semiconductor products described or contained herein. LFC Semiconductor products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner.

Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. LFC Semiconductor makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Information furnished is believed to be accurate and reliable. However LFC Semiconductor assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of LFC Semiconductor. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information without express written approval of LFC Semiconductor.