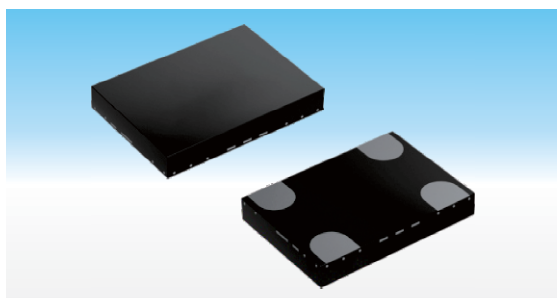


# MEMS Oscillator-Low Power

LQ8008/LQ8009 Low Power MEMS Oscillator 1MHz~137MHz Output: CMOS Package: 2016~7050



## Features

- Any frequency from 1MHz~110MHz(LQ8008), 115MHz~137MHz (LQ8009), accurate to 6 decimal places
- Low power consumption of 3.5mA typical at 1.8V
- LVCMOS /HCMOS compliant output
- Excellent total frequency stability:  $\pm 20$ ppm
- Fast start-up time of 5ms
- Application for DSC, DVC, DVR, IP cam, SSD, GPON, EPON, High-speed ethernet, Firewire, SAS, E-books, Tables, etc
- RoHS Compliant /Pb Free



## Standard Specifications

Item	Type	LQ8008 Low Power MEMS Oscillator	LQ8009 Low Power MEMS Oscillator
Output Type		LVCMOS /HCMOS	
Load condition		15pF	
Frequency Range		1MHz~110MHz	115MHz~137MHz
Supply Voltage		1.8V, 2.5V, 2.8V, 3.0V, 3.3V, 1.62V~3.63V, 2.25V~3.63V	
Frequency Stability (All Condition)		$\pm 20$ ppm, $\pm 25$ ppm, $\pm 50$ ppm	
Current Consumption		4.5mA max.	7.5mA max.
OE Disable Current		4.2mA max.	
Stand-by Current		4.3 $\mu$ A max.	
Symmetry		45~55%	
0 Level Output Voltage ( $V_{OL}$ )		0.1 $\times V_{CC}$ max.	
1 Level Output Voltage ( $V_{OH}$ )		0.9 $\times V_{CC}$ min.	
Rise Time / Fall Time		2.7ns max.	2.0ns max.
OE Pin 0 Level Input Voltage ( $V_{IL}$ )		0.3 $\times V_{CC}$ max.	
OE Pin 1 Level Input Voltage ( $V_{IH}$ )		0.7 $\times V_{CC}$ min.	
Input Pull-up Impedance		50~150K $\Omega$ (Pin1 OE or ST logic high)	
		2M $\Omega$ min. (Pin1 ST logic low)	
Start-up Time		5ms max.	
Enable/Disable Time		130ns max.	122ns max.
Resume Time		5ms max.	
RMS Period Jitter		3.3ps max.	4ps max.
Peak to Peak Period Jitter		30ps max.	
RMS Phase Jitter (12KHz~20MHz)		2.3ps max.	2.0ps max.
Operating Temperature Range		-20~+70C, -40~+85 $^{\circ}$ C, -55~+85 $^{\circ}$ C, -40~+105 $^{\circ}$ C, -55~+125 $^{\circ}$ C or specify	
Storage Temperature Range		-65~+150 $^{\circ}$ C	
Package Size (L $\times$ W $\times$ H) (Unit: mm)		2.0 $\times$ 1.6 $\times$ 0.8, 2.5 $\times$ 2.0 $\times$ 0.8, 3.2 $\times$ 2.5 $\times$ 0.8, 5.0 $\times$ 3.2 $\times$ 0.8, 7.0 $\times$ 5.0 $\times$ 1.0	
Footprint Package		4-Pin Package	