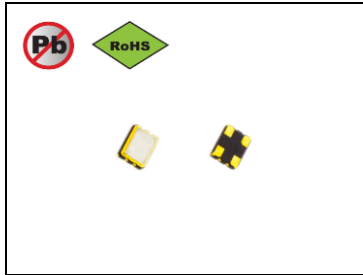


# KOS1

# CLOCK OSCILLATOR



## ■ HCMOS SMD OSC 2.0×1.6mm

- Ultra Miniature Ceramic Surface Mount package
- Fundamental and 3rd overtone crystal design
- Wide temperature and Low phase noise

- Applications : Consumer electronics, Industrial applications, Telecommunications, Network equipment

## ■ Standard Specification

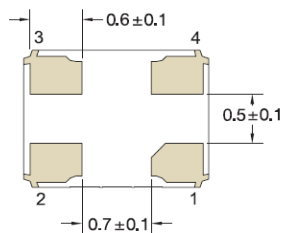
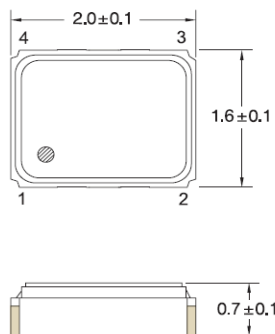
Frequency range	32.768kHz, 0.250MHz to 80.000MHz		
Supply voltage	1.8V, 2.5V, 3.3V, 5.0V (0.8 to 1.5V Option)		
Frequency Stability	±20ppm, ±25ppm, ±50ppm	±50ppm, ±100ppm	
Operating Temperature Range	-20 to 70°C	-40 to 85°C	-55 to 125°C
Storage Temperature Range	-55 to 125°C		
Output load condition	CMOS 15pF		
Symmetry (Duty)	50% ±10% or please specify		
Output rise and fall time ( Tr /Tf )	10ns Max (except 32.768kHz) or please specify		
Output high level	90% Vdd Min		
Output low level	10% Vdd Max		
Pin 1	Enable input voltage	70% Vdd Min or N.C	
Function	Disable input voltage	30% Vdd Max	
Oscillation start up time	5ms Max		
Aging (Initial first year)	± 3ppm Max		
Phase jitter (12KHz ~ 20MHz)	1.0ps RMS Max or please specify		
Period jitter (pk-pk)	25ps Max		

## ■ Current consumption (mA Max)

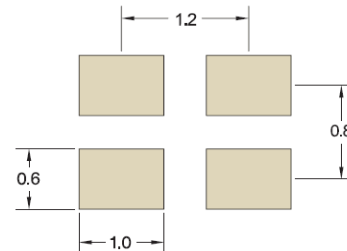
Vdd vs Frequency	≤ 25M	≤ 40M	≤ 60M	≤ 80M
1.8V	4	6	10	15
2.5V	6	8	12	18
3.3V	10	15	20	25
5.0V	15	20	30	35

\*Please contact us for lower Current

## ■ Dimensions (mm)



## • Recommended Soldering Pattern



CONNECTION  
 1: N.C or EN/DIS(Tri-State)  
 2: GND  
 3: OUTPUT  
 4: Vdd