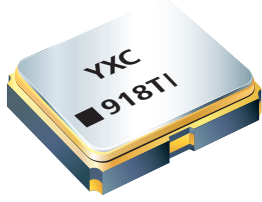




# YSO221SK



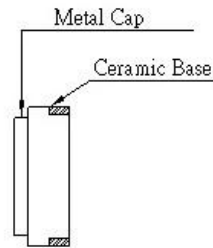
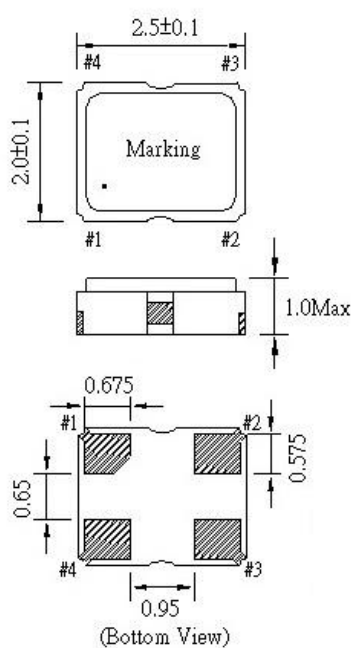
## Features

- External dimensions: 2.5 x 2.0 x 1.0 mm.
- Frequency range: 32.768KHz.
- Ultra Small SMD seam sealed clock crystal oscillator units.
- Applications: RTC, Bluetooth, DSC, DSL and other IT product.
- Tri-state function available.

## Electrical Specifications

Item / Type	YSO221SK
Output Frequency Range	32.768KHz
Output Type	CMOS
Supply Voltage	1.8V~3.3V, or specify
Oscillation Mode	Fundamental
Frequency Tolerance	± 20ppm, ± 50ppm, or specify
Output Load	15 pF, or specify
Operating Temperature Range	- 20 ~ + 70 °C , - 40 ~ + 85 °C , or specify
Storage Temperature Range	- 55 ~ + 125 °C
Voltage Vol ( Max. ) / Vol ( Min. )	0.1VDD / 0.9VDD
Symmetry	45 ~ 55 % Standard
Rise ( Tr ) / Fall ( Tf ) Time	30 ns Max
Start-up Time	10 ms Max.
Supply Current	200µA Max. (10µA is available)
Frequency Aging ( at 25 °C )	± 3 ppm / year Max.

## Dimensions



Pin Connections  
 #1 : INH  
 #2 : Gnd  
 #3 : Output  
 #4 : Vdd

INH Function	
#1	#3 (Output)
Open	Active
"H"Level	Active
"L"Level	High Z(Oscillation Stopped)

Units: mm



# YS0221SK



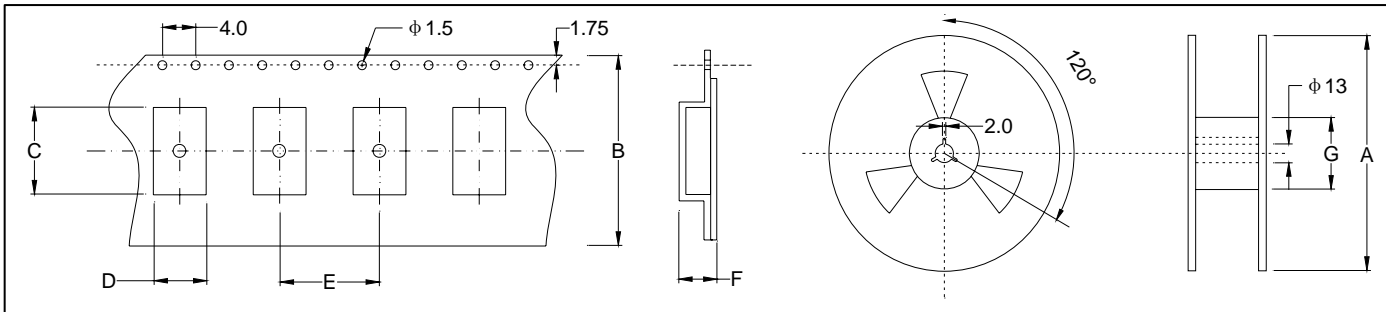
★ PART NUMBER GUIDE

e.g. O252032768KEEA4SC

YS0221SK=2.5x2.0 SMD SEAM TYPE

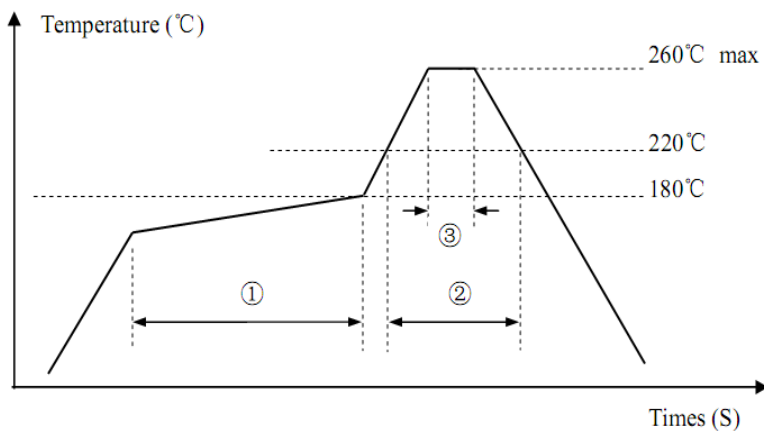
Quartz Crystal Oscillator	Dimensions	Frequency (Hz)	Supply voltage (V)	Frequency Stability Overall (ppm)	output	Pin	Material	Operating Temp. Range
O	2520	32.768K	E	E	A	4	S	C

★ TAPING SPECIFICATION (Unit: mm)



	A	B	C	D	E	F	G
OSC-SMD2520	180±2.0	8.00±0.3	2.80±0.15	2.30±0.15	4.00±0.1	1.15±0.1	60.0±1.0
3000 pcs per reel							

★ REFLOW SOLDERING PROFILE



Pb free reflow A	①	Preheat	160~180°C	120sec. max
	②	Primary heat	220°C	60sec. max
	③	Peak	260°C	10sec. max.

★ Test Circuit

