

# 3.2 x 2.5 x 1.2 mm 32.768kHz CERAMIC SURFACE MOUNT CRYSTAL OSCILLATOR

ASEK Series



RoHS Compliant



3.2 x 2.5 x 1.2 mm

## FEATURES:

- 32.768kHz in 3.2 x 2.5 package
- Seam sealed assure high reliability performance
- Low current consumption
- IR-Reflow capable
- Extend temperature range available

## APPLICATIONS:

- Laptop
- Digital camera
- Wireless LAN
- Bluetooth and mobile communication
- LCD
- PDA and MP3 player
- Electricity, gas and water metering

## STANDARD SPECIFICATIONS:

### PARAMETERS

ABRACON P/N	ASEK Series
Frequency	32.768kHz
Operating Temperature	0°C to + 70°C (see options)
Storage Temperature	- 55°C to + 125°C
Overall frequency stability:	±100 ppm max. (see options)
Supply voltage (Vdd):	3.3 Vdc ± 10% (see options)
Supply current:	0.8mA typical, 1.5mA max.(Vdd= 1.8V±5%) 1.2mA typical, 2.5mA max.(Vdd= 2.5V±5%) 1.7mA typical, 3.5mA max.(Vdd= 3.3V±10%)
Symmetry:	40/60 % max.@ 1/2Vdd (see options)
Rise and fall time (Tr/Tf):	40ns typical, 50 ns max
Output load:	15pF
Output voltage:	VOH = 0.9 * Vdd min. VOL = 0.1 * Vdd max
Start-up time:	24ms typical, 28ms max
Tri-state function :	Logic "1" or open: Oscillation Logic "0" (VIL < 0.8 Vdc) : Hi z
Aging at 25°C :	± 3ppm/year

## OPTIONS AND PART IDENTIFICATION (Left blank if standard)

ASEK-□ - 32.768kHz - □ - □ - □ - □

Supply Voltage	
Blank	3.3V±10%
1	2.5V±5%
2	1.8V±5%

Operating Temp.	
E	-20°C to +70°C
F	-30°C to +70°C
N	-30°C to +85°C
L	-40°C to +85°C

\*Contact ABRACON for extended temperature range.

Freq. Stability	
J	±20ppm(*)
R	±25ppm
K	±30ppm
C	±50ppm

\* For E, F, N and 0° C to + 70° C only

Packaging	
T	Tape and Reel

Symmetry	
S	45/55% max at 1/2Vdd



# 3.2 x 2.5 x 1.2 mm 32.768kHz CERAMIC SURFACE MOUNT CRYSTAL OSCILLATOR

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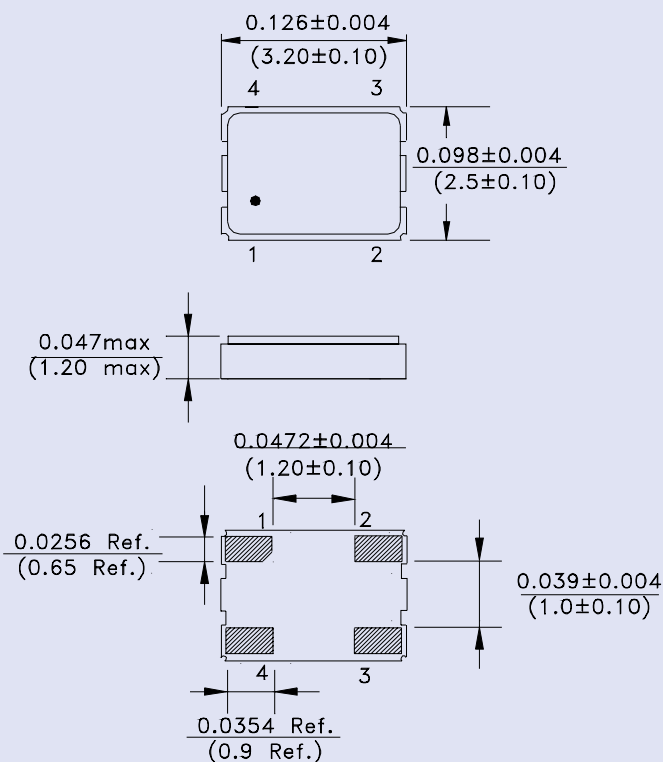


RoHS Compliant

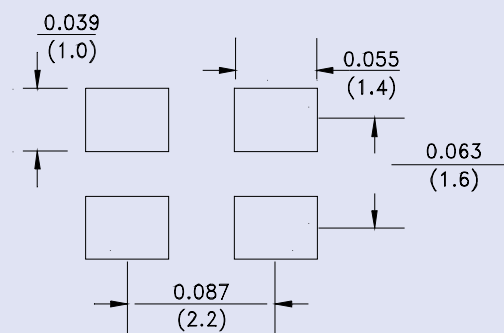


3.2 x 2.5 x 1.2 mm

## OUTLINE DRAWING:



## Recommended Land Pattern



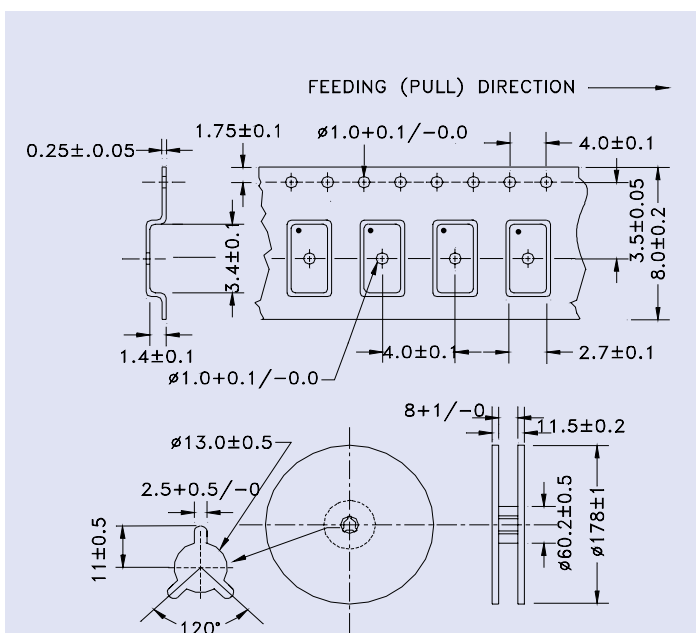
PIN	FUNCTION
1	Tri-state
2	GND
3	Output
4	Vdd

Note: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

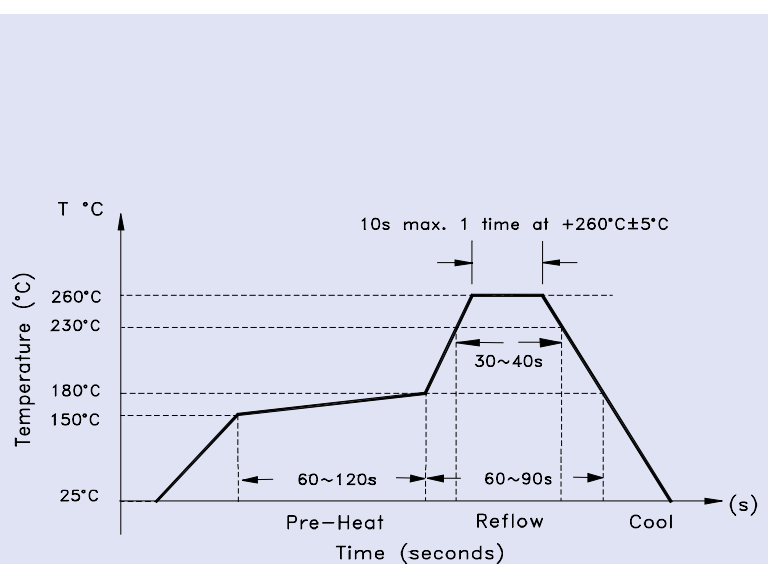
Dimensions: inches (mm)

## TAPE & REEL: (1,000pcs/reel)

## REFLOW PROFILE



Dimensions: mm



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