

# 32.768kHz CERAMIC SMD CRYSTAL OSCILLATOR

ASFLK SERIES



5.0 x 3.2 x 1.3mm



## FEATURES:

- Pb-Free/RoHS Compliant
- IR reflow capable
- Tri state function
- Seam sealed ceramic package
- Suitable for high density SMT

## APPLICATIONS:

- CCD clock for VTR camera
- Computers and peripherals
- Portable MP3 players and games

## STANDARD SPECIFICATIONS:

PARAMETERS	
ABRACON P/N:	ASFLK Series
Frequency range:	32.768kHz
Operating temperature:	0°C to +70°C (see options)
Storage temperature:	-55°C to +125°C
Overall Frequency Stability:	± 100ppm max. (see options)
Supply Voltage (Vdd):	3.3 Vdc ± 10% (see options)
Supply current:	Vdd = 2.5 ~ 3.3V, 0.5mA typ. 1.0mA max. Vdd = 5.0V, 1.5mA typ. 5.0mA max.
Symmetry:	40/60 % max. @ 1/2Vdd (see options)
Rise and fall time (Tr/Tf):	250 ns max.
Output Load:	15pF or 10TTL max.
Output Voltage:	VOH = 2.97V min. VOL = 0.33V max.
Start-up-time	30ms max.
Tristate function:	Logic "1" or open: Oscillation Logic "0" (VIL < 0.8 Vdc) : Hi Z
Aging at 25°C/year :	± 3ppm/year max.
Phase jitter:	1ps RMS max.

## OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ASFLK-□ - 32.768kHz - □ - □ - □ - □

Supply Voltage	
Blank	3.3V±10%
1	3.0V±10%
2	2.5V±10%
4	5.0V±10%

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.

Packaging	
T	Tape and Reel

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

Freq. Stability	
J	±20ppm
R	±25ppm
K	±30ppm
H	±35ppm
B	±40ppm
C	±50ppm

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## OUTLINE DRAWING:

**Dimensions: Inches (mm)**

**Recommended Land Pattern**

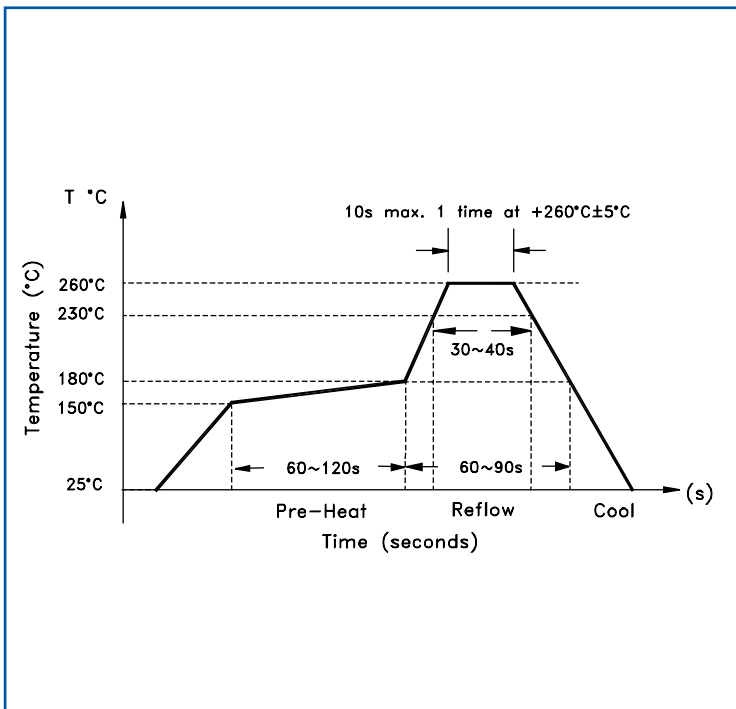
PIN	FUNCTION
1	Tri-state
2	GND
3	Output
4	Vdd

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

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

**Dimensions:mm**

## REFLOW PROFILE



Need a test socket for the ASFLK series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#).

**\* NOTE:** Abracon manufactured products are intended for general commercial and industrial use. For applications requiring high reliability and/or presenting extreme operating environment, written consent & authorization from Abracon is required.

ABRACON IS  
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