

2.5 x 2.0 x 0.95 mm 32.768kHz CERAMIC SURFACE MOUNT CRYSTAL OSCILLATOR



2.5 x 2.0 x 0.95 mm

ASDK Series



RoHS Compliant

FEATURES:

- 32.768kHz in 2.5 x 2.0 x 0.95mm package
- Seam sealed assure high reliability performance
- Low current consumption 1.0mA (Vdd=1.8V)
- Suitable for RoHS compliant reflow
- 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	Minimum	Typical	Maximum	Units	Notes
Frequency Range	-----	32.768	-----	kHz	
Operating Temperature	0	-----	+70	°C	See options
Storage Temperature	-55	-----	+125	°C	
Overall Frequency Stability	-100	-----	+100	ppm	See options
Supply Voltage (Vdd)	2.97	3.3	3.66	V	Standard
	2.375	2.5	2.625		Option 1
	1.71	1.8	1.89		Option 2
Supply Current (I _{dd})	-----	1.0	1.5	mA	Vdd=1.8V
	-----	1.2	2.5		Vdd=2.5V
	-----	2.2	3.5		Vdd=3.3V
Output Load	-----	-----	15	pF	CMOS
Output Voltage	V _{OH}	0.9*Vdd	-----	V	
	V _{OL}	-----	0.1*Vdd		
Tri-state function	"1" (V _{IH} ≥2.0V or open) : Oscillation "0" (V _{IL} <0.8V) : Hi Z				
Aging	-3.0	-----	+3.0	ppm	@+25°C First year
Symmetry @1/2Vdd	40	50	60	%	Standard
	45	50	55		Option S
Start-up Time	-----	≤ 2	5	ms	
Rise/Fall Time (Tr/Tf)	-----	43	50	ns	

OPTIONS AND PART IDENTIFICATION (Left blank if standard)

ASDK - 32.768kHz - - - -

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

Operating Temp.
Blank: 0°C ~ +70°C
E: -20°C ~ +70°C
F: -30°C ~ +70°C
N: -30°C ~ +85°C
L: -40°C ~ +85°C

Overall Freq. Stability
Blank: ±100ppm
J: ±20ppm (**)
R: ±25ppm
K: ±30 ppm
C: ±50 ppm

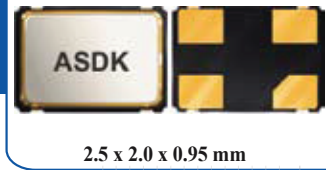
Symmetry
Blank: 40/60%
S: 45/55%

Packaging
Blank: Bulk
T: Tape & Reel

*Contact ABRACON for extended temperature range

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

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OUTLINE DRAWING:

METAL CAP
CERAMIC BASE

0.079±0.004 (2.00±0.1)
0.098±0.004 (2.50±0.1)
0.037 max (0.95 max)
0.016 (0.4)
0.031 (0.775)
0.027 (0.675)
0.026±0.004 (0.65±0.1)
0.064±0.004 (1.625±0.1)

Recommended Land Pattern

0.035 (0.9)
0.039 (1.0)
0.048 (1.225)
0.064 (1.625)

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

FEEDING (PULL) DIRECTION →

0.25±0.05, 1.75±0.1, ø1.55±0.05, 4.0±0.1, 3.5±0.05, 8.0±0.2, 0.8±0.05, ø1.10±0.1, 4.0±0.1, 2.25±0.05, ø13.0±0.5, 2.5±0.5/-0, 11±0.5, 120°, 8+1/-0, 11.5±0.2, ø60.2±0.5, ø178±1

Dimensions: mm

Temperature vs. Time graph showing Preheat, Ramp Up, Peak Heat, and Ramp Down phases. Critical Zone is indicated between T_L and T_P.

Zone	Description	Temperature	Time
1	Preheat	T _{SMIN} ~ T _{SMAX} 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	T _L 230°C	30 ~ 40 sec.
3	Peak Heat	T _P 260°C	10 sec. MAX

Need a test socket for the ASDK Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#). **AXS-2520-04-07**

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