

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

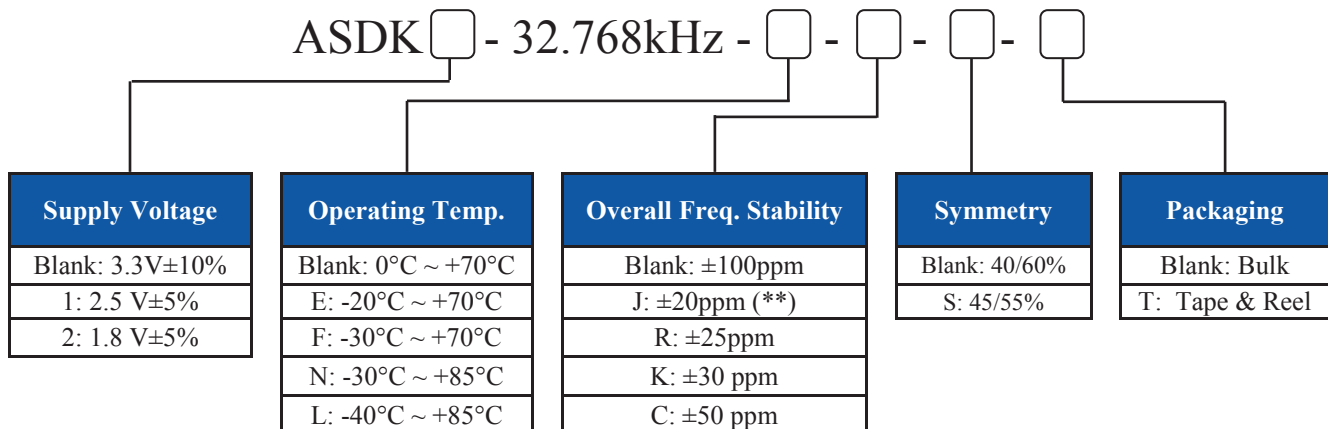
APPLICATIONS:

- 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} ≥ 0.7*Vdd) Open: Oscillation "0" (V _{IL} < 0.3*Vdd) : 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 | |
| Disable Current | | | | 10 | μA | |

OPTIONS AND PART IDENTIFICATION (Left blank if standard)



*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

Top View Dimensions:
 Width: 0.098 ± 0.004 (2.50 ± 0.1)
 Height: 0.079 ± 0.004 (2.00 ± 0.1)

Side View Dimensions:
 Metal Cap Height: 0.037 max (0.95 max)
 Ceramic Base Height: 0.037 max (0.95 max)

Pin Dimensions:
 Pin 1: 0.031 (0.775)
 Pin 2: 0.027 (0.675)
 Pin 3: 0.026 ± 0.004 (0.65 ± 0.1)
 Pin 4: 0.027 (0.675)
 Pin Spacing: 0.064 ± 0.004 (1.625 ± 0.1)
 Pin Width: 0.016 (0.4)

Recommended Land Pattern

Pin 1: 0.035 (0.9)
 Pin 2: 0.039 (1.0)
 Pin 3: 0.048 (1.225)
 Pin 4: 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)

FEEDING (PULL) DIRECTION →

Carrier Tape Dimensions:
 Pin Pitch: 1.75 ± 0.1
 Pin Diameter: $\phi 1.55 \pm 0.05$
 Pin Spacing: 4.0 ± 0.1
 Pin Height: 0.25 ± 0.05
 Pin Width: 0.8 ± 0.05
 Pin Thickness: 0.7 ± 0.05
 Pin Position: 4.0 ± 0.1
 Pin Diameter: $\phi 1.10 \pm 0.1$
 Pin Length: 3.5 ± 0.05
 Pin Spacing: 8.0 ± 0.2
 Pin Diameter: $\phi 1.10 \pm 0.1$
 Pin Length: 2.25 ± 0.05

Reel Dimensions:
 Reel Diameter: $\phi 13.0 \pm 0.5$
 Reel Thickness: $2.5 \pm 0.5 / -0$
 Reel Height: 11 ± 0.5
 Reel Width: 11.5 ± 0.2
 Reel Diameter: $\phi 60.2 \pm 0.5$
 Reel Diameter: $\phi 178 \pm 1$
 Reel Diameter: $8+1 / -0$

Dimensions: mm

REFLOW PROFILE

Temperature vs Time Profile:

- Zone 1:** Preheat (Temperature: $T_{SMIN} \sim T_{SMAX}$, $150^{\circ}C \sim 180^{\circ}C$; Time: 60 ~ 120 sec.)
- Zone 2:** Reflow (Temperature: T_L , $230^{\circ}C$; Time: 30 ~ 40 sec.)
- Zone 3:** Peak Heat (Temperature: T_p , $260^{\circ}C$; Time: 10 sec. MAX)

Other parameters: Ramp Up, Ramp Down, Critical Zone T_L to T_p , $t_{25^{\circ}C \text{ to Peak}}$

| Zone | Description | Temperature | Time |
|------|-------------|--|---------------|
| 1 | Preheat | $T_{SMIN} \sim T_{SMAX}$ $150^{\circ}C \sim 180^{\circ}C$ | 60 ~ 120 sec. |
| 2 | Reflow | T_L $230^{\circ}C$ | 30 ~ 40 sec. |
| 3 | Peak Heat | T_p $260^{\circ}C$ | 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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单击下面可查看定价，库存，交付和生命周期等信息

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