

CMOS 3.2 x 2.5 x 0.9mm 32.768kHz SMD CRYSTAL OSCILLATOR



3.2 x 2.5 x 0.9 mm

ASHEK SERIES



RoHS Compliant

FEATURES:

- Ultra low uA current consumption with CMOS output
- Miniature ceramic package (3.2 x 2.5 x 0.9mm)
- Operating Temp -40°C to +85°C
- Start up time less than 1 sec with supply voltage 1.5 to 5.0V
- Tri-state function
- Pb-free reflow capable

APPLICATIONS:

- General purpose clock generator for digital systems
- Clock drivers for Real Time Clocks
- Timekeeping in network servers and computers
- Electricity, gas and water metering
- Portable field communication
- Mobile phone
- Clock & Data recovery
- CCD clock for VTR camera
- Computers and peripherals
- Portable MP3 players & games

STANDARD SPECIFICATIONS:

PARAMETERS	
ABRACON P/N	ASHEK Series
Frequency range:	32.768kHz
Operating temperature:	-20° C to + 70° C (see options)
Storage temperature:	- 55° C to + 125° C
Frequency tolerance (at + 25 °C):	- 15 ppm to + 25 ppm @ + 25 °C
Frequency stability (ref to + 25 °C):	-90 to +10 ppm over -20 to +70° C; referenced to frequency measured @ +25 °C
Supply voltage (Vdd):	3.3 V ± 5% (see options. 1.5 to 5.5V)
Supply current:	1.5µA max. (no load), Vdd=+ 3.3V 2.5µA max. (no load), Vdd=+ 5.5V
Symmetry:	40/60 % @ 1/2Vdd
Rise and fall time (Tr/Tf):	200ns max. (10% to 90%Vdd, CL=15pF)
Startup time:	1 sec max. for 0.9*Vdd @ +25° C
Output load:	CMOS (15 pF max.)
Output voltage (CL=15pF @ +25 °C):	VOH = Vdd-0.4V min. VOL = 0.4V max.
Tri-state function:	"1" (VIH >= 0.9*Vdd) or High Z (N.C) "0" (VIL < 0.1*Vdd) : Hi Z
Aging (per year) 25°C ± 5°C:	± 5ppm max.

TABLE 1 Supply Current with no load

Vdd (V)	Supply Current (µA typ.)	Supply Current (µA max.)
3.3 (STD)	0.9	1.5
5	1.8	2.5
2.8	0.8	1.5
1.8	0.6	1.5
1.5	0.5	1.5

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASHEK -32.768kHz- -

Supply Voltage
Blank: 3.3V
2: 5.0V
3: 2.8V
4: 1.8V
5: 1.5V

Frequency Temp Characteristics
Blank: -20°C to +70°C / -90 to +10 ppm
L: -40°C to +85°C / -140 to +10 ppm

Packaging
Blank: Bulk
T: Tape and Reel (1kpcs)
T3: Tape and Reel (3kpcs)

ABRACON IS
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3.2 x 2.5 x 0.9 mm

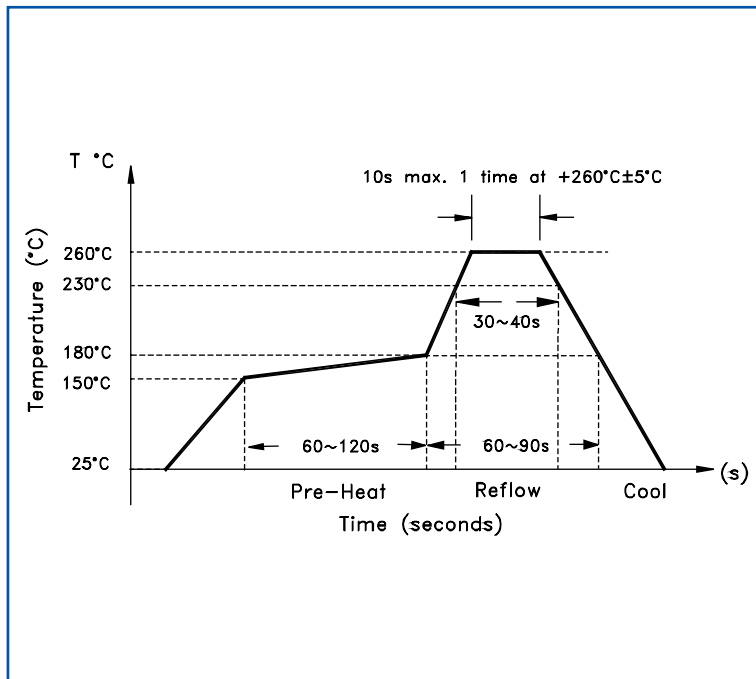
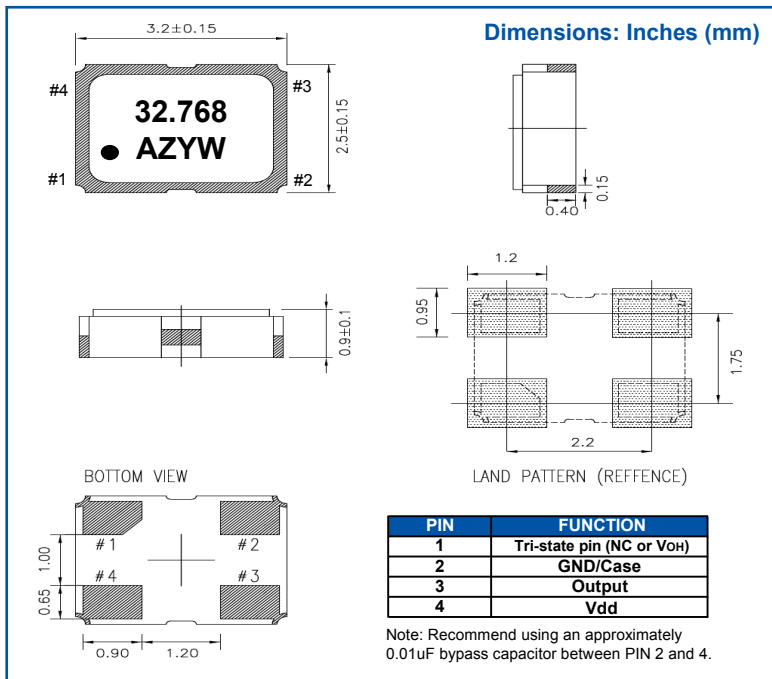
ASHEK SERIES



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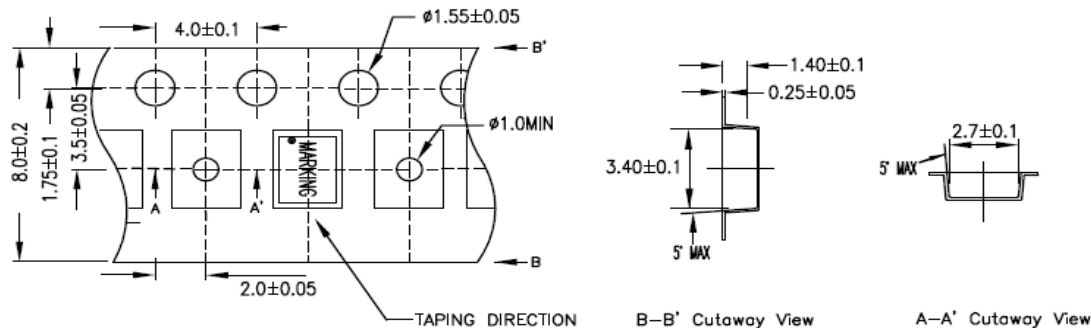
OUTLINE DRAWING:

REFLOW PROFILE:

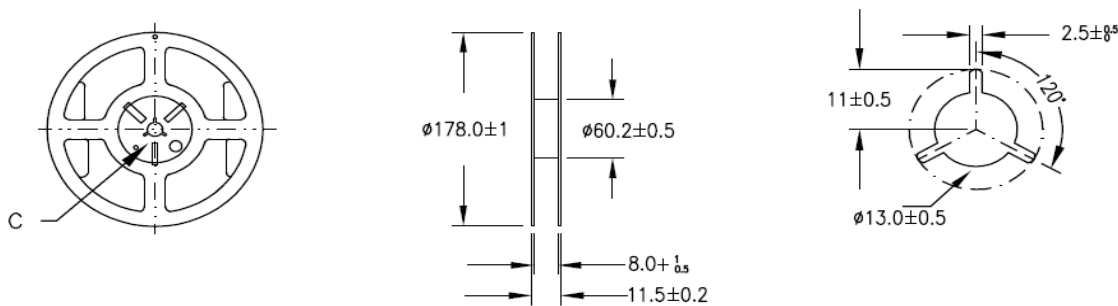


TAPE & REEL: Tape and reel 1,000/3,000pcs/reel

1. CARRIER TYPE



2. REEL



Dimensions: mm



Need a test socket for the ASHEK Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#). P/N AXS-3225-04-06

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