

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

ASDK Series



RoHS
Compliant



2.5 x 2.0 x 0.95 mm

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

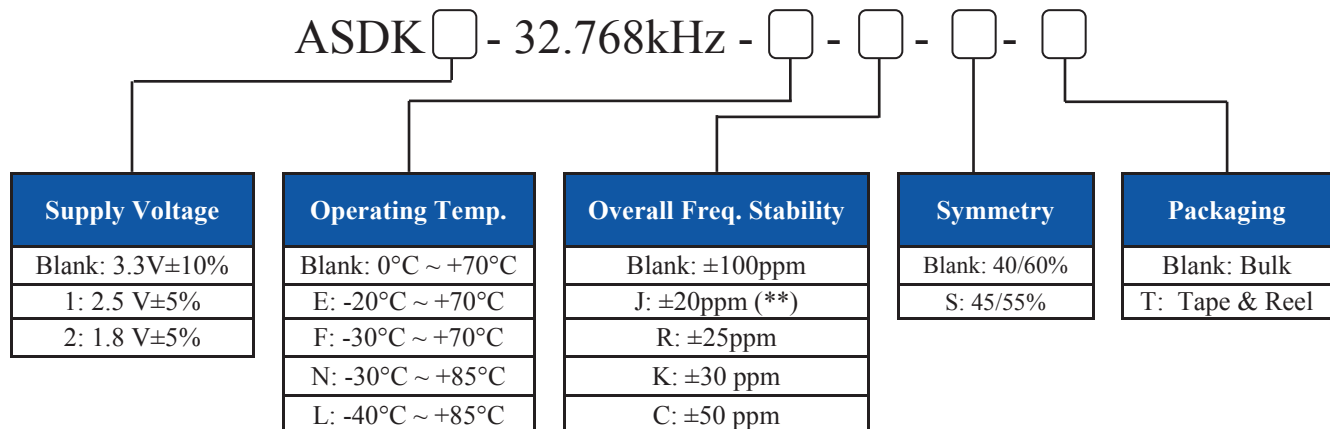
APPLICATIONS:

- 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)

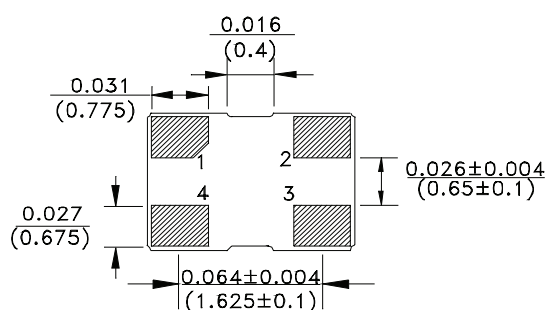


*Contact ABRACON for extended temperature range

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

2.5 x 2.0 x 0.95 mm

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

Dimensions: inches (mm)

FEEDING (PULL) DIRECTION →

0.25±0.05

1.75±0.1

4.7±0.05

0.8±0.05

4.0±0.1

2.25±0.05

3.5±0.05

8.0±0.2

8±1/-0

11±0.5

2.5±0.5/-0

120°

Ø1.55±0.05

Ø1.10±0.1

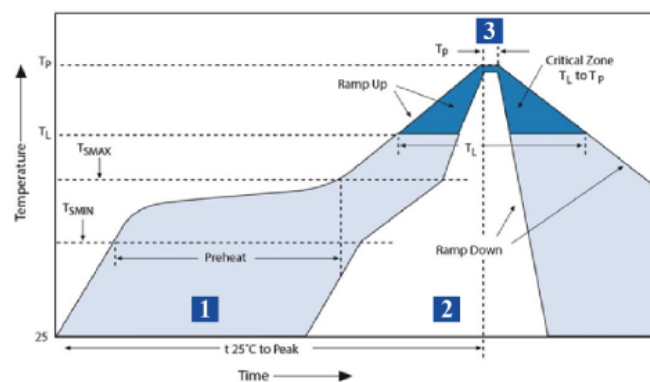
Ø13.0±0.5

Ø60.2±0.5

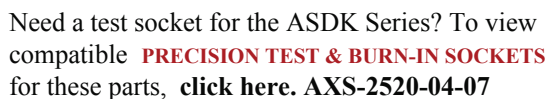
Ø178±1

11.5±0.2

Dimensions: mm



Zone	Description	Temperature	Time
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	T_1 230°C	30 ~ 40 sec.
3	Peak Heat	T_2 260°C	10 sec. MAX



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