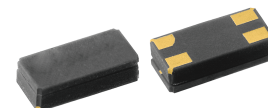


# 32.768kHz LOW POWER SMD CRYTAL OSCILLATOR

**ASH7KW**

**Pb** | RoHS/RoHS II Compliant



3.2 x 1.5 x 1.0mm

Moisture Sensitivity Level (MSL) – Level 1

## FEATURES:

- Ultra-miniature size 3.2x1.5x1.0mm [max.]
- Low Voltage Operation (Min:1.2V)
- Low Current Consumption
- Operating temperature : -40 to +85 °C; -40 to +125 °C
- VDD controls the output amplitude

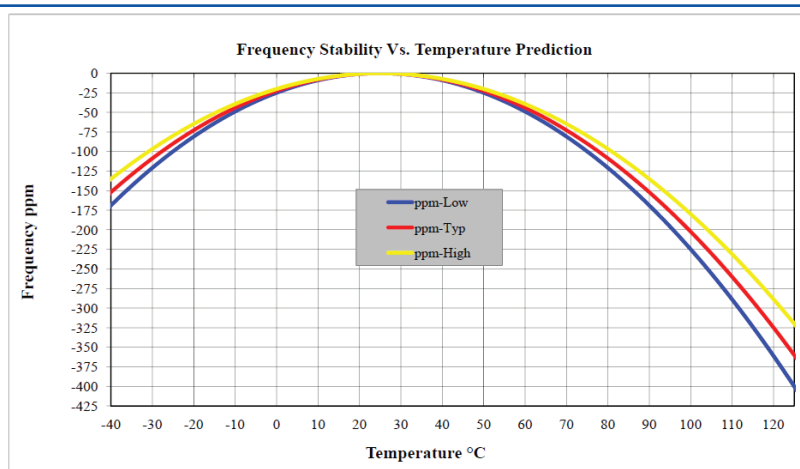
## APPLICATIONS:

- Factory Automation
- PC Server
- W-LAN/GPS Chipset
- 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	Minimum	Typical	Maximum	Units	Notes
Output Frequency	32.768			kHz	
Operating Temperature	-40		+85	°C	Option "L"
	-40		+125		Option "H"
Storage Temperature	-55		+125	°C	
Turnover Temperature	+20	+25	+30	°C	
Frequency Tolerance	-20		+20	ppm	
Temperature Coefficient	-0.035±10%			ppm/C <sup>2</sup>	
Supply Voltage Range (V <sub>dd</sub> )	1.2		5.5	V	
Current Consumption		0.3	0.5	μA	V <sub>dd</sub> =3.0V, OE (output disabled)
Current Consumption		1.8		μA	Load=15pF, V <sub>dd</sub> =3.0V, OE
Output Load (CMOS)			15	pF	
Output Voltage	V <sub>OH</sub>	V <sub>dd</sub> -0.4		V	I <sub>OH</sub> = -1mA
	V <sub>OL</sub>		GND+0.4		I <sub>OL</sub> = 1mA
CLKOE Pin Function	"1" (VIH≥0.8*Vdd) or Open: Oscillation "0" (VIL<0.2*Vdd) : Output disabled				
Aging@+25	-3.0		+3.0	ppm	First year
Duty Cycle	40		60	%	
Voltage Coefficient	-1.5		+1.5	ppm/V	
Start-up Time			0.5	s	
Output Rise Time			70.0	ns	Load=10pF, 10% to 90%
Output Fall Time			70.0	ns	Load=10pF, 10% to 90%

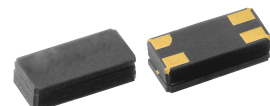
## TYPICAL FREQUENCY TEMPERATURE CHARACTERISTICS:



# 32.768kHz LOW POWER SMD CRYTAL OSCILLATOR

**ASH7KW**

 **RoHS/RoHS II Compliant**



3.2 x 1.5 x 1.0mm

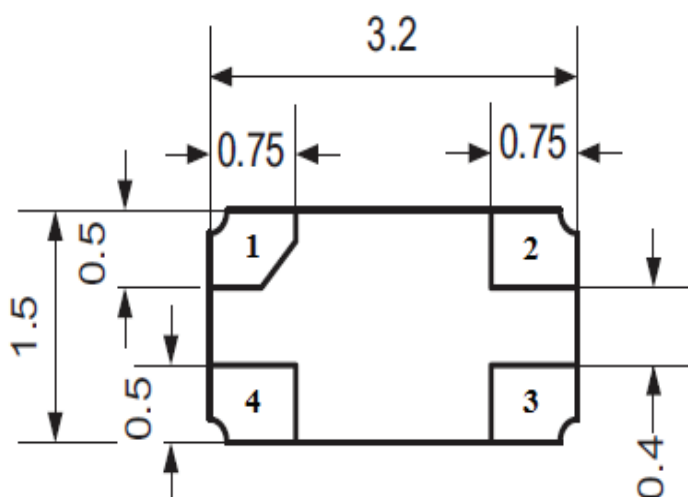
## PART IDENTIFICATIONS:

ASH7KW-32.768kHz-□-□

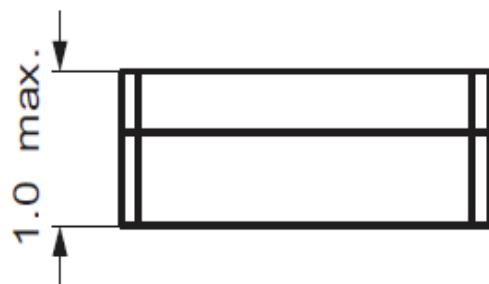
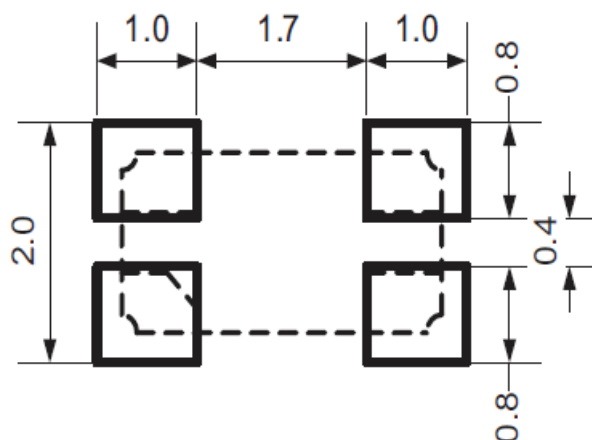
Operating Temp.
L: -40°C ~ +85°C
H: -40°C ~ +125°C

Packaging
Blank: Bulk
T: 1000pcs/Reel
T3: 3000pcs/Reel

## OUTLINE DIMENSIONS:



### Recommended Land Pattern



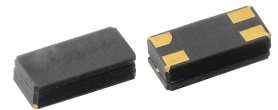
Pin No.	Function
1	Output
2	GND
3	OE
4	Vdd

Dimensions: mm  
All Dimensions are typical values.

# 32.768kHz LOW POWER SMD CRYSTAL OSCILLATOR

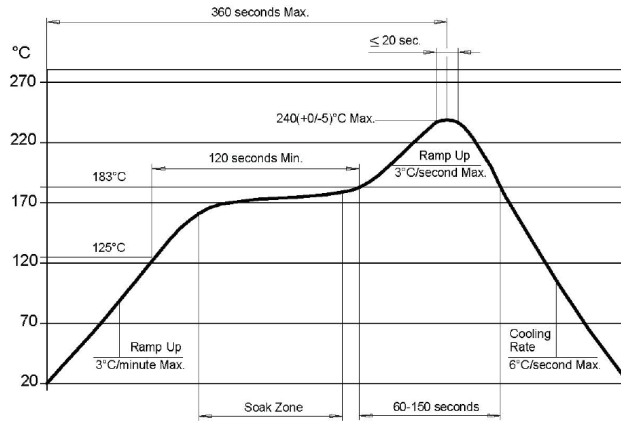
**ASH7KW**

**Pb** | RoHS/RoHS II Compliant



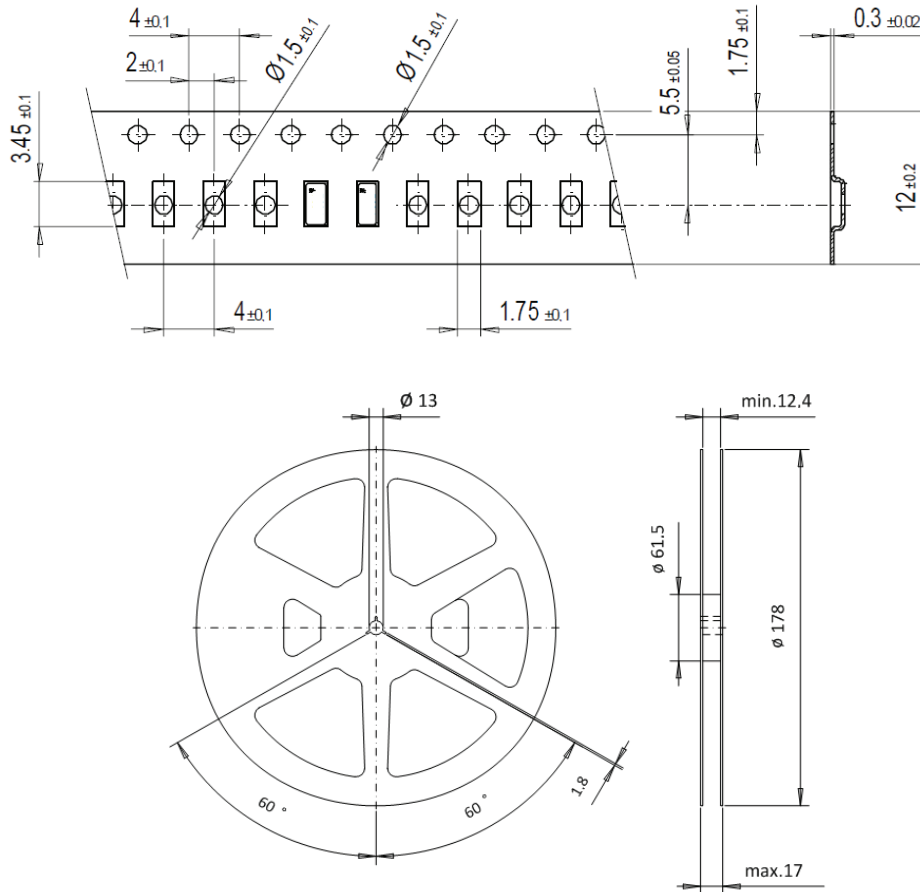
3.2 x 1.5 x 1.0mm

## REFLOW PROFILE:



## TAPE & REEL:

**T= Tape and reel (1,000pcs/reel)**  
**T3= Tape and reel (3,000pcs/reel)**



Dimensions: mm

**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS  
ISO9001:2008  
CERTIFIED



Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale **Revised: 02.10.13**

30332 Esperanza, Rancho Santa Margarita, California 92688

tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)