

ABS07-120-32.768kHz-T; TUNING FORK CRYSTAL

32.768kHz SMD; ESR OPTIMIZED CRYSTAL



RoHS/RoHS II



3.2 x 1.5 x 0.9 mm

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

FEATURES:

- Guaranteed ESR of 60kΩ Maximum for Low Power Designs
- 0.9mm height ideal for high density circuit boards
- Seam sealed ceramic package offers excellent environmental & heat resistance
- Extended Operating temperature of -40°C to +85°C for industrial applications

APPLICATIONS:

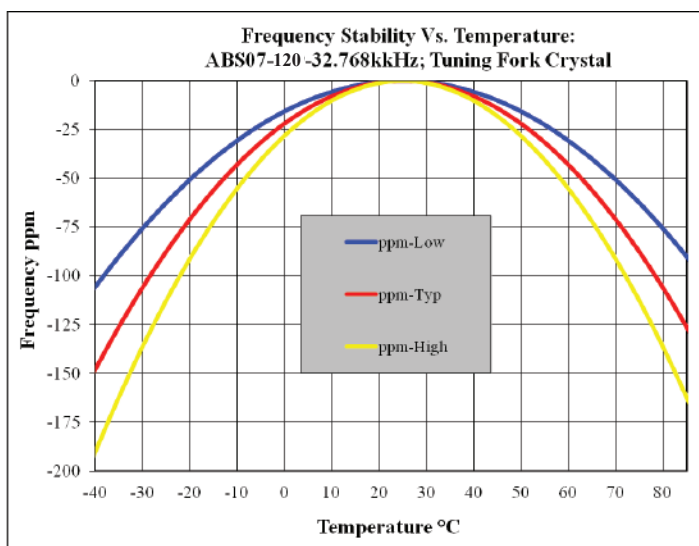
- Power sensitive designs requiring Low ESR Crystal, such as ST-Micro MCU STM32L based solutions
- Communication & measurement equipment
- Commercial, Consumer & Industrial applications
- Wireless communications
- PDA and Smartphone

STANDARD SPECIFICATIONS

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency		32.768		kHz	
Operation Mode	Tuning Fork – AT Cut				
Operating Temperature	-40		+85	°C	
Storage Temperature	-55		+125	°C	
Frequency Tolerance @+25°C	-20		+20	ppm	Tested at 0.1uW
Temperature Coefficient:	-0.045	-0.035	-0.025	ppm/T ²	
Turn-over temperature:	+20	+25	+30	°C	
Equivalent series resistance (R1)		55	60	kΩ	
Shunt capacitance (C0)		1.20		pF	
Motional capacitance (Cm)	3.0	3.7	4.4	fF	
Load capacitance (CL)		6.0		pF	
Drive Level		0.1	0.5	μW	
Q value	13000				
Aging@25°C±3°C	-3		3	ppm	First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

PART IDENTIFICATION: ABS07-120-32.768 kHz-T

FREQUENCY VARIATION OVER OPERATING TEMPERATURE; RELATIVE TO MEASURED FREQUENCY AT 25°C



Temp °C	(ppm) Low	(ppm) Typ	(ppm) High
-40	-105.63	-147.88	-190.13
-35	-90.00	-126.00	-162.00
-30	-75.63	-105.88	-136.13
-25	-62.50	-87.50	-112.50
-20	-50.63	-70.88	-91.13
-15	-40.00	-56.00	-72.00
-10	-30.63	-42.88	-55.13
-5	-22.50	-31.50	-40.50
0	-15.63	-21.88	-28.13
5	-10.00	-14.00	-18.00
10	-5.63	-7.88	-10.13
15	-2.50	-3.50	-4.50
20	-0.63	-0.88	-1.13
25	0.00	0.00	0.00
30	-0.63	-0.88	-1.13
35	-2.50	-3.50	-4.50
40	-5.63	-7.88	-10.13
45	-10.00	-14.00	-18.00
50	-15.63	-21.88	-28.13
55	-22.50	-31.50	-40.50
60	-30.63	-42.88	-55.13
65	-40.00	-56.00	-72.00
70	-50.63	-70.88	-91.13
75	-62.50	-87.50	-112.50
80	-75.63	-105.88	-136.13
85	-90.00	-126.00	-162.00

ABRACON IS
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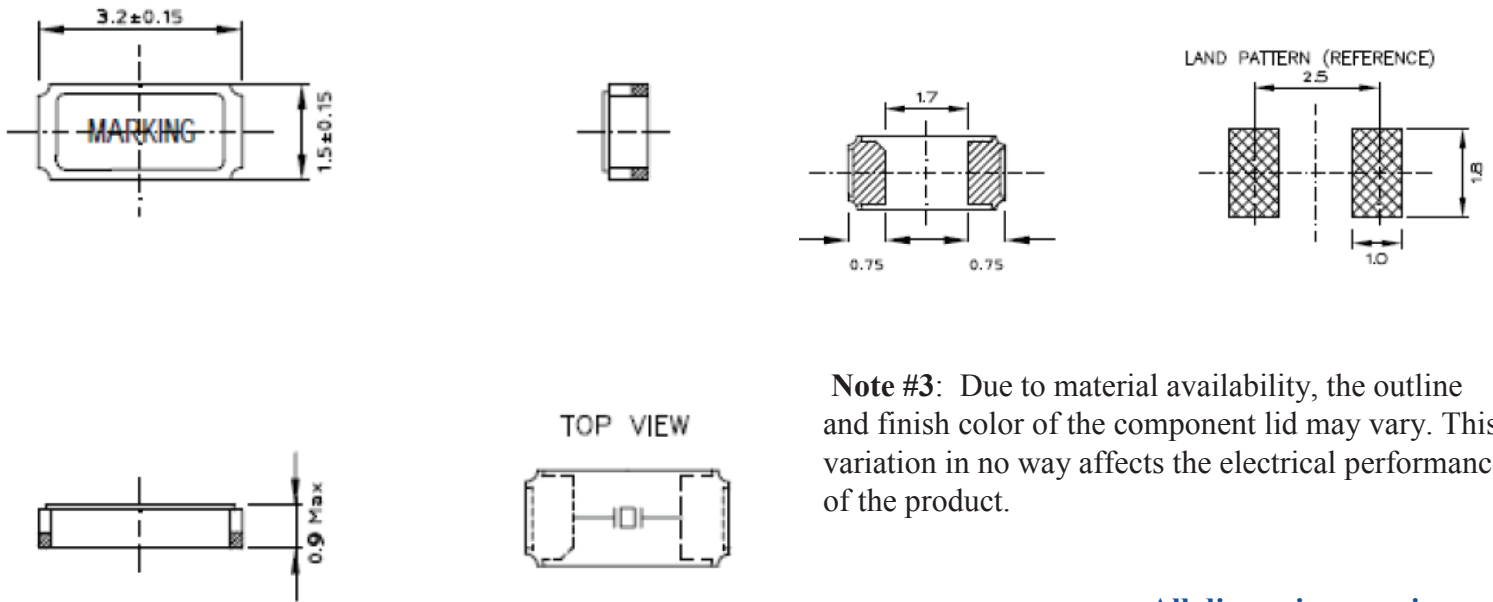


RoHS/RoHS II



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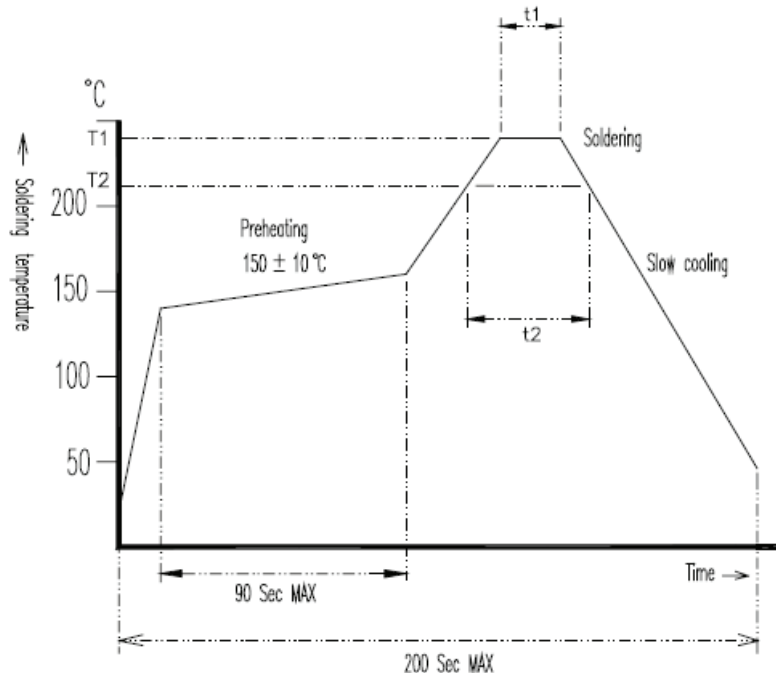
OUTLINE DRAWING:



Note #3: Due to material availability, the outline and finish color of the component lid may vary. This variation in no way affects the electrical performance of the product.

All dimensions are in mm

REFLOW PROFILE:



Application \ Temperature	Time	T1 / t1	T2 / t2
Lead Free		260 ± 5°C / 10-seconds Max.	225 Min / 60 Seconds Max.

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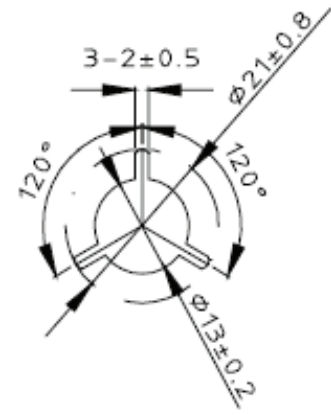
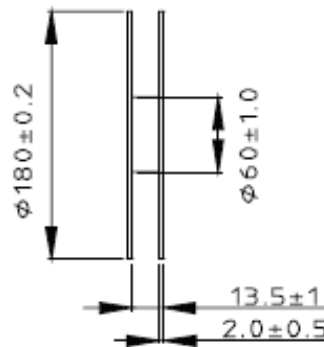
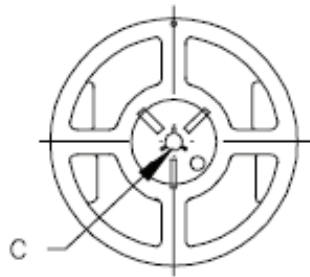


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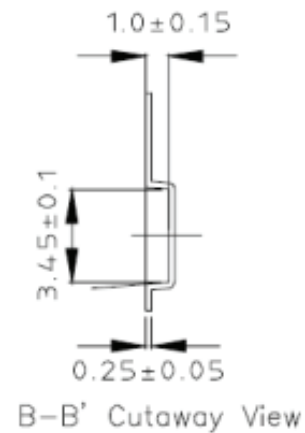
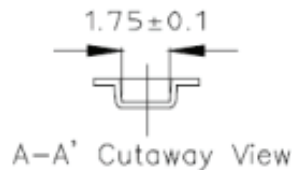
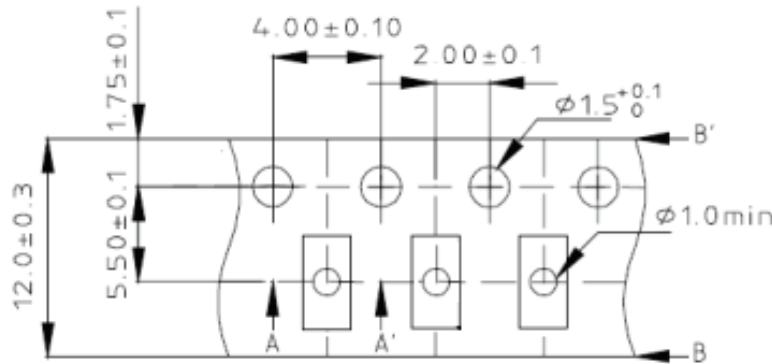
TAPE & REEL:

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

REEL : 3000PCS



C.ENLARGE



B-B' Cutaway View

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