32.768kHz SMD CRYSTAL

ABS13

RoHS/RoHS II compliant. Pb in high temperature solder (exempt 7(a) per 2015/863/EU Annex)



ABS13

6.9 x 1.4 x 1.4 mm

Moisture Sensitivity Level: Level 1

> FEATURES:

- Low frequency
- Plastic package with embedded heat resistant crystal in cylinder package
- Extended temperature -40°C to +85°C for industrial applications
- Suitable to RoHS compliant reflow

> APPLICATIONS:

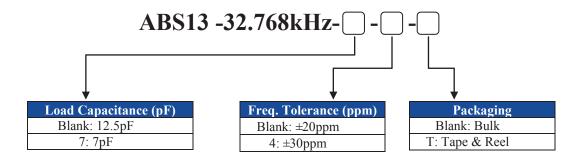
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

STANDARD SPECIFICATIONS:

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|-----------------------------------|---------|-------------|---------|---------------------|------------------------------------|
| Nominal Frequency | | 32.768 | | kHz | |
| Operating Temperature | -40 | | +85 | °C | |
| Turnover Temperature | +20 | +25 | +30 | °C | |
| Storage Temperature | -55 | | +125 | °C | |
| Frequency Tolerance @+25°C | -20 | | +20 | ppm | See options |
| Frequency Coefficient (B) | | -0.035±0.01 | | ppm/°C ² | |
| Equivalent series resistance (R1) | | | 65 | kΩ | |
| Load capacitance (CL) | | 12.5 | | pF | See options |
| Drive Level | | | 1 | μW | |
| Aging | -3 | | +3 | ppm | @25°C±3°C First year |
| Insulation Resistance | 500 | | | ΜΩ | $@ 100 \text{Vdc} \pm 15 \text{V}$ |

> OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)





REVISED: 09.30.2019

ABRACON IS ISO9001-2015 CERTIFIED

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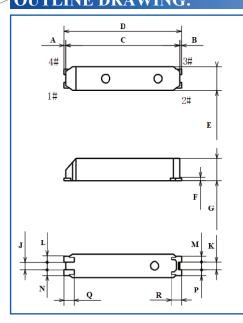
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6.9 x 1.4 x 1.4 mm

> OUTLINE DRAWING:

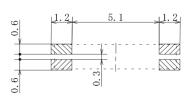


| Dimension Table | | | |
|-----------------|-------------|--|--|
| A | 0.10 | | |
| В | 0.10 | | |
| C | 6.70 | | |
| D | 6.9 ± 0.1 | | |
| E | 1.4 ± 0.1 | | |
| F | 0.15 ± 0.03 | | |
| G | 1.4 ± 0.1 | | |
| J | 0.55 | | |
| K | 0.65 ± 0.1 | | |
| L | 0.3 ± 0.1 | | |
| M | 0.3 ± 0.1 | | |
| N | 0.3 ± 0.1 | | |
| P | 0.3 ± 0.1 | | |
| Q | 0.55 ± 0.15 | | |
| R | 0.55 ± 0.15 | | |
| | | | |

4# 3# 1# 2#

Do not connect to external with #2 and #3.

Recommended Land Pattern



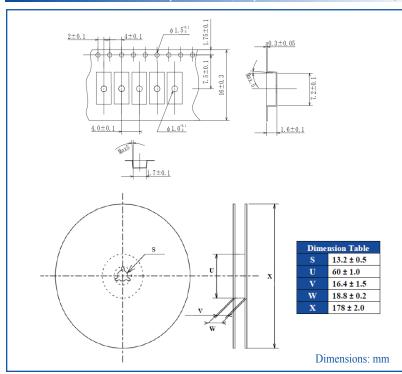
Note 1:

The part of the cylinder inside the resin mold may sometimes be exposed on the top or bottom of this crystal unit.

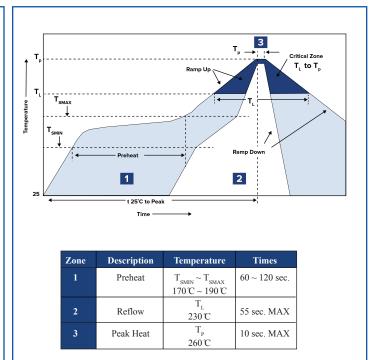
This aspect is purely cosmetic and does not have any effect on the quality, reliability, or electrical performance of the crystal unit.

Dimensions: mm

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



REFLOW PROFILE



ATTENTION: Abracon LLC'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-dependent 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 LLC is required. Please contact Abracon LLC for more information.



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