# 32.768kHz SMD LOW PROFILE CRYSTAL

ABS13

RoHS/RoHS II compliant.
Pb in high temperature solder
(exempt 7(a) per RoHS II 2011/65/EU Annex)



**ABS13** 

6.9 x 1.4 x 1.3 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:

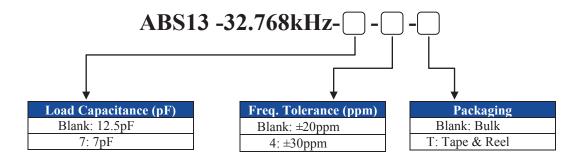
- Commercial & Industrial applications
- Wireless communications
- PDA and Palm Pilots

## 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)         | -0.040  | -0.034  | -0.028  | ppm/T <sup>2</sup> |                                    |
| 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<br>First year            |
| Insulation Resistance             | 500     |         |         | ΜΩ                 | @ $100 \text{Vdc} \pm 15 \text{V}$ |

### > OPTIONS AND PART IDENTIFICATION:

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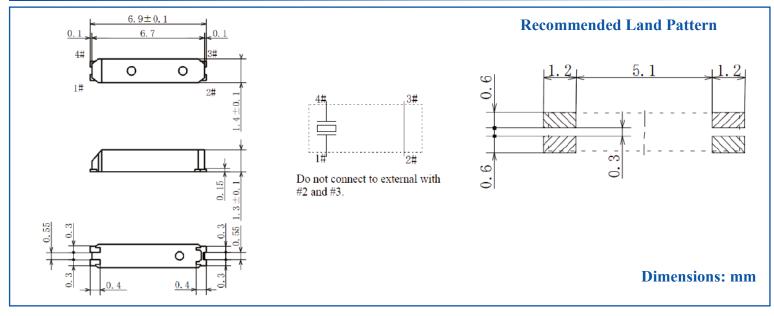
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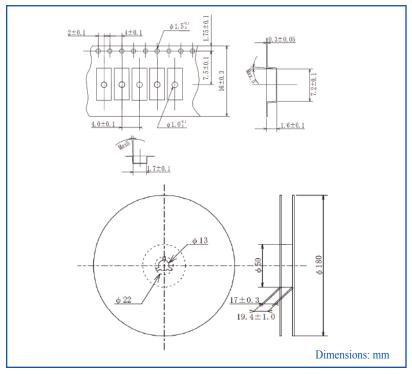
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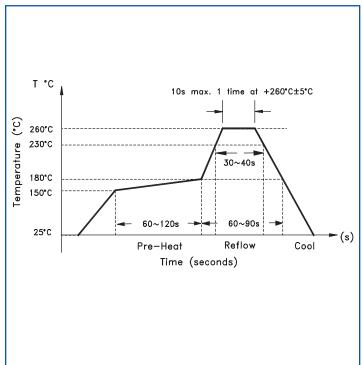
## **OUTLINE DRAWING:**



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

# REFLOW PROFILE





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