## 32.768 kHz LOW FREQUENCY SMD CRYSTAL

ABS25

Pb in High Temperature Solder (exempt 7(a) per 2015/863/EU Annex)





#### **FEATURES:**

- Plastic molded SMD
- 2.5mm height ideal for high density circuit boards
- Suitable for RoHS compliant reflow
- Extended temperature -40°C to +85°C for industrial applications

#### > APPLICATIONS:

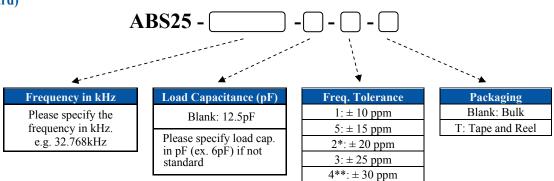
- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Computer clock

### STANDARD SPECIFICATIONS:

| Parameters                        | Minimum | Typical     | Maximum | Units               | Notes             |
|-----------------------------------|---------|-------------|---------|---------------------|-------------------|
| Nominal Frequency                 |         | 32.768      |         | kHz                 |                   |
| Frequency Range                   | 30      |             | 100     | kHz                 | Other frequencies |
| Operating Temperature             | -40     |             | +85     | °C                  |                   |
| Turnover Temperature              | +20     | +25         | +30     | °C                  |                   |
| Storage Temperature               | -55     |             | +125    | °C                  |                   |
| Frequency Tolerance @+25°C        | -20     |             | +20     | ppm                 | 32.768kHz         |
|                                   | -30     |             | +30     |                     | Other frequencies |
| Capacitance Ratio (C0/C1)         |         | 450         |         |                     | 32.768kHz         |
|                                   |         | 425 to 800  |         |                     | Other frequencies |
| Frequency Coefficient (B)         |         | -0.035±0.01 |         | ppm/°C <sup>2</sup> |                   |
| Equivalent series resistance (R1) |         |             | 50      | kΩ                  |                   |
| Shunt capacitance (C0)            |         | 1.35        |         | pF                  | 32.768kHz         |
|                                   |         | 0.8 to 1.7  |         | pF                  | Other frequencies |
| Load capacitance (CL)             |         | 12.5        |         | pF                  | See options       |
| Drive Level                       |         |             | 1       | μW                  |                   |
| Aging @ 25°C±3°C (First year)     | -3      |             | +3      | ppm                 | 32.768kHz         |
|                                   | -5      |             | +5      |                     | Other frequencies |
| Insulation Resistance             | 500     |             |         | $M\Omega$           |                   |

## > OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)



<sup>\*</sup>STD for 32.768kHz. Please leave this blank if F is 32.768kHz.



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ABRACON IS ISO9001-2015 CERTIFIED

<sup>\*\*</sup>STD for other frequencies. Please leave this blank if F is not 32.768kHz.

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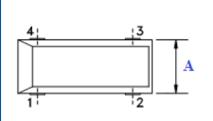
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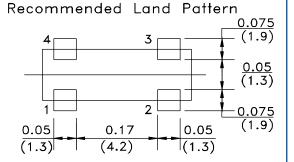


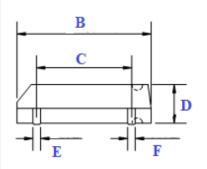
#### **OUTLINE DRAWING:**





Electrode Arrangement Pin 2 and 3 are not connected to the GND (Floating)





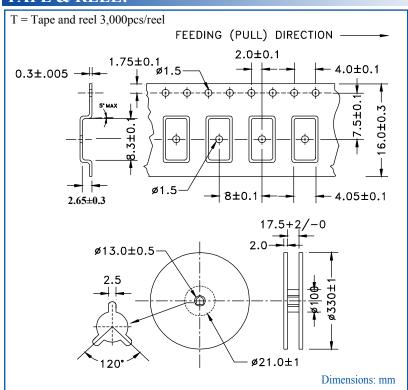
| Dimension Table |                            |  |  |
|-----------------|----------------------------|--|--|
| A               | $3.8 \pm 0.2 \text{ MAX}$  |  |  |
| В               | 8.4 MAX                    |  |  |
| C               | $5.5 \pm 0.1$              |  |  |
| D               | $2.5 \pm 0.1 \mathrm{MAX}$ |  |  |
| E               | 0.5                        |  |  |
| F               | 0.5                        |  |  |
| G               | 0.9 Ref.                   |  |  |
|                 |                            |  |  |

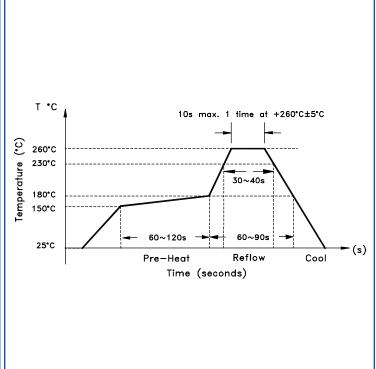


Dimensions: (inches) mm

### **► TAPE & REEL:**

## REFLOW PROFILE





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