

# LOW FREQUENCY CERAMIC SURFACE MOUNT MICROPROCESSOR CRYSTAL

ABC2

RoHS compliant with exemption of Pb in glass  
(exempt per RoHS 2002/95/EC Annex (5))

**RoHS**  
Compliant



11.8 x 5.5 x 1.9mm

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

## FEATURES:

- Low frequency in small size SMD
- 1.9mm height ideal for high density circuit boards
- Ceramic package offers excellent environmental & heat resistance
- Extended temperature -40°C to +85°C for industrial applications
- Suitable for RoHS compliant reflow

## APPLICATIONS:

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

## STANDARD SPECIFICATIONS:

| Parameters                                                                           | Minimum                                 | Typical | Maximum | Units | Notes                                                                               |
|--------------------------------------------------------------------------------------|-----------------------------------------|---------|---------|-------|-------------------------------------------------------------------------------------|
| Frequency Range                                                                      | 3.500                                   |         | 30.000  | MHz   | Fundamental, AT                                                                     |
|                                                                                      | 30.000                                  |         | 70.000  |       | 3 <sup>rd</sup> Overtone, AT                                                        |
| Operation Mode                                                                       | Fundamental or 3 <sup>rd</sup> Overtone |         |         |       |                                                                                     |
| Operating Temperature                                                                | -10                                     |         | +60     | °C    | Please see available options under Part Identification section                      |
| Storage Temperature                                                                  | -55                                     |         | +125    | °C    |                                                                                     |
| Frequency Tolerance @+25°C                                                           | -50                                     |         | +50     | ppm   | See options                                                                         |
| Frequency Stability over the Operating Temperature -10 °C to +60 °C ( ref. to +25°C) | -50                                     |         | +50     | ppm   | Standard for below 6.0MHz (-10 °C to +60 °C) See options for other temperature      |
|                                                                                      | -30                                     |         | +30     |       | Standard for 6.0MHz and above; (-10 °C to +60 °C) See options for other temperature |
| Equivalent series resistance (R1)                                                    | See table 1 below                       |         |         | Ω     |                                                                                     |
| Shunt capacitance (C0)                                                               |                                         |         | 7       | pF    |                                                                                     |
| Load capacitance (CL)                                                                |                                         | 18      |         | pF    | See options                                                                         |
| Drive Level                                                                          |                                         |         | 100     | μW    |                                                                                     |
| Aging@25°C±3°C                                                                       |                                         |         | ±5      | ppm   | First year                                                                          |
| Insulation Resistance                                                                | 500                                     |         |         | M Ω   | @ 100Vdc ± 15V                                                                      |

**Table 1**

| Frequency Ranges      | Operation mode | ESR (max) |
|-----------------------|----------------|-----------|
| 3.200MHz ~ 3.499MHz   | Fundamental    | 200 Ω     |
| 3.500MHz ~ 3.999MHz   | Fundamental    | 140 Ω     |
| 4.000MHz ~ 4.399MHz   | Fundamental    | 120 Ω     |
| 4.400MHz ~ 4.899MHz   | Fundamental    | 100 Ω     |
| 4.900MHz ~ 5.999MHz   | Fundamental    | 80 Ω      |
| 6.000MHz ~ 6.999MHz   | Fundamental    | 60 Ω      |
| 7.000MHz ~ 7.999MHz   | Fundamental    | 50 Ω      |
| 8.000MHz ~ 10.999MHz  | Fundamental    | 45 Ω      |
| 11.000MHz ~ 11.999MHz | Fundamental    | 40 Ω      |
| 12.000MHz ~ 14.999MHz | Fundamental    | 35 Ω      |
| 15.000MHz ~ 36.000MHz | Fundamental    | 30 Ω      |
| 27.000MHz ~ 70.000MHz | 3rd OT         | 100Ω      |



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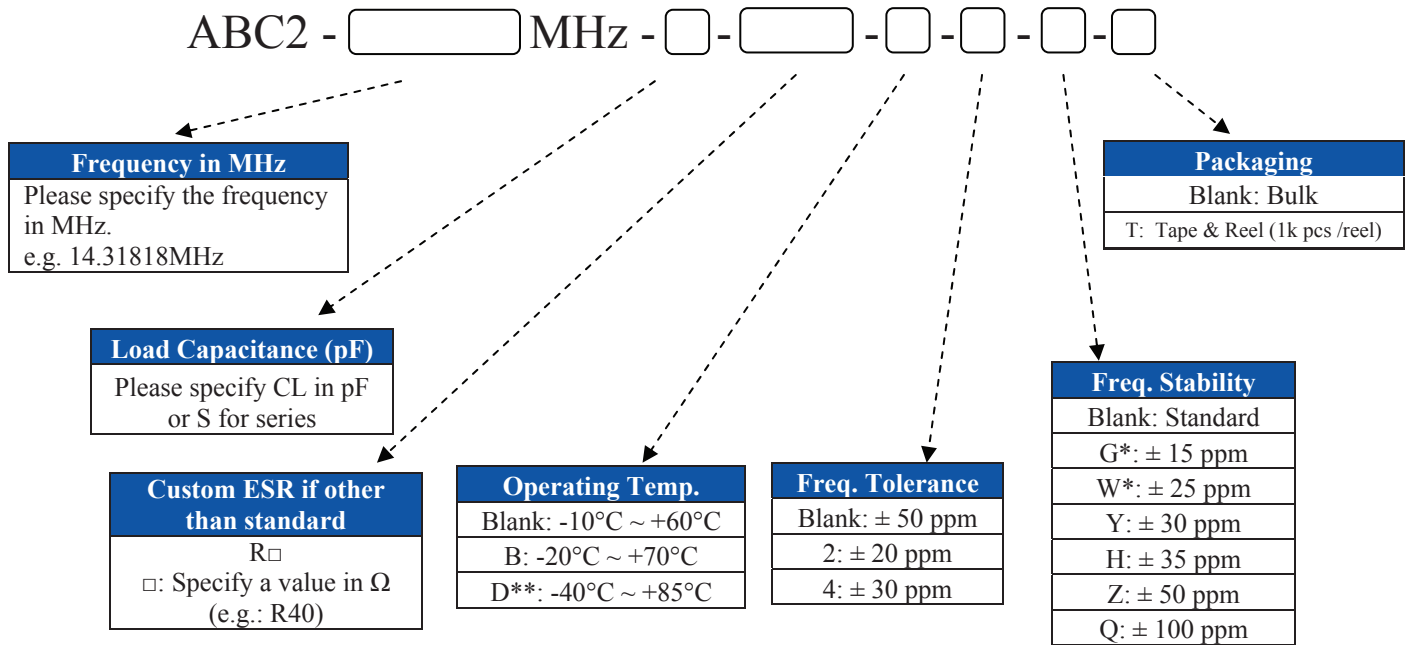
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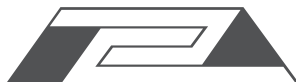
11.8 x 5.5 x 1.9mm

## OPTIONS AND PART IDENTIFICATION: (Left blank if standard)



\* Option B and -10 ~60°C only

\*\* Option Y, Z and Q only for F≥6.0MHz; Option Z and Q only for F<6.0MHz



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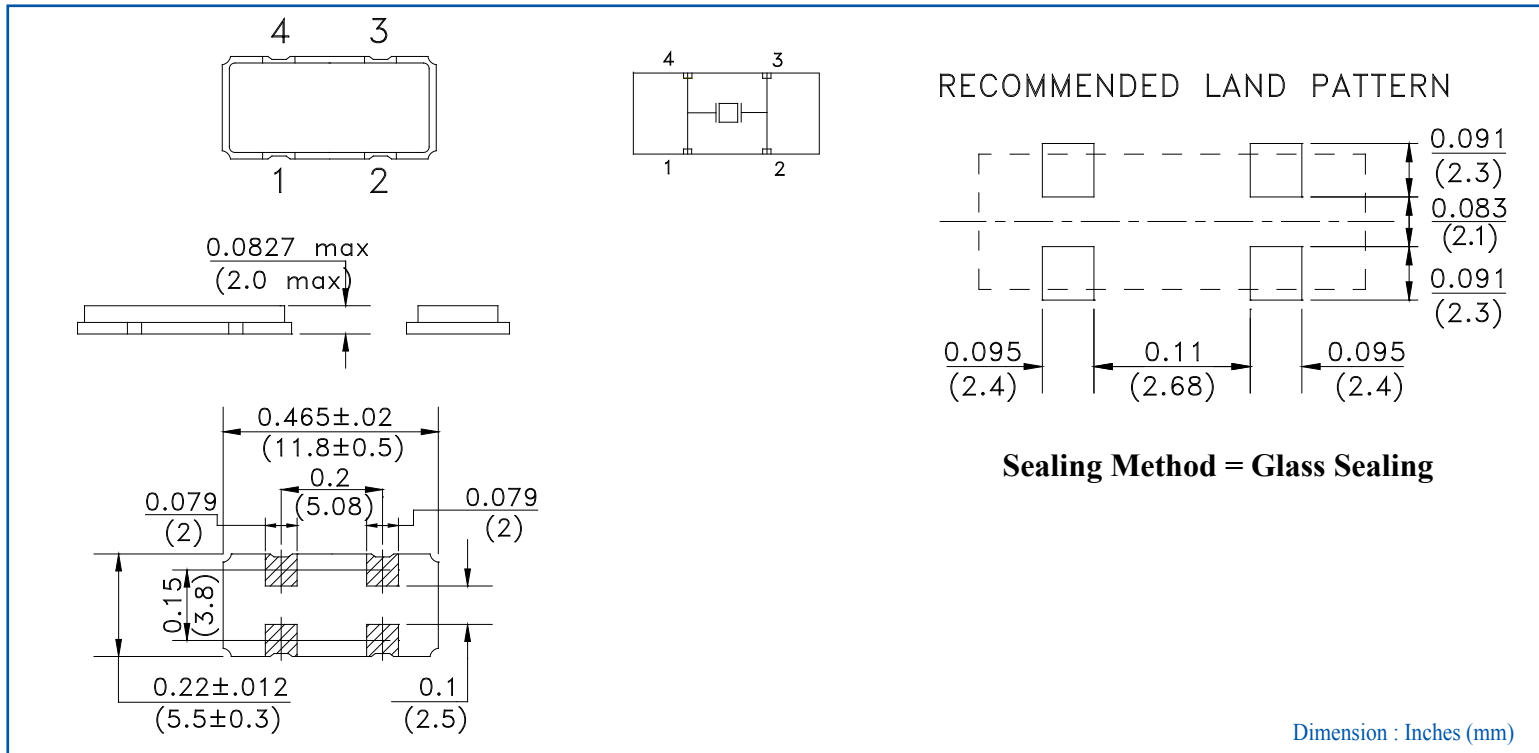
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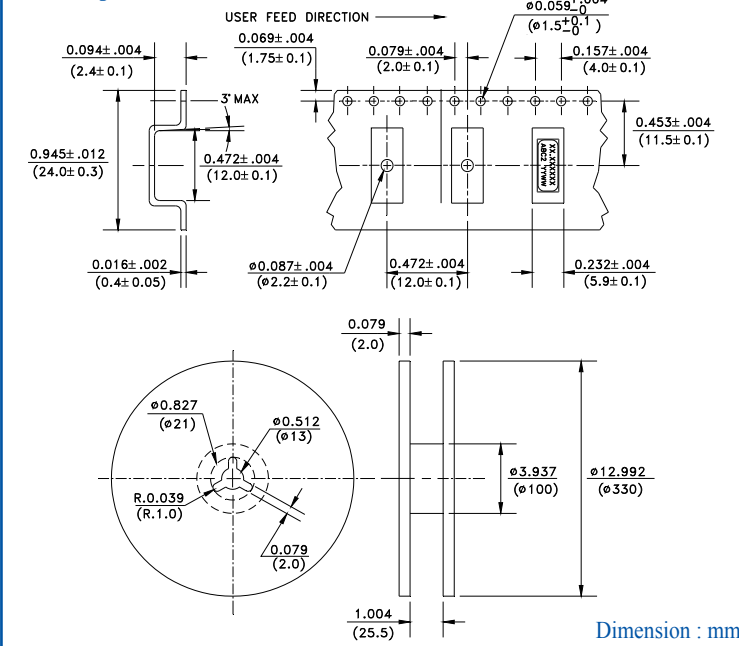
11.8 x 5.5 x 1.9mm

## OUTLINE DRAWING:

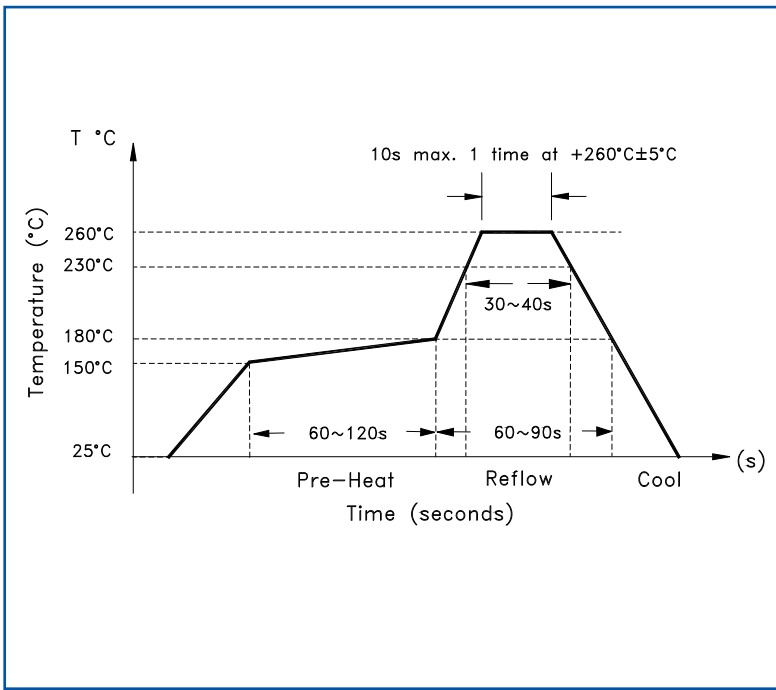


## TAPE & REEL:

T: 1,000 pcs/reel



## REFLOW PROFILE:



Need a test socket for the ABC2 Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#). P/N AXS-1155-04-01

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