

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 rd Overtone, AT |
| Operation Mode | Fundamental or 3 rd 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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OPTIONS AND PART IDENTIFICATION: (Left blank if standard)

ABC2 - MHz - - - - - -

Frequency in MHz
Please specify the frequency in MHz.
e.g. 14.31818MHz

Load Capacitance (pF)
Please specify CL in pF or S for series

Custom ESR if other than standard
R
□: Specify a value in Ω (e.g.: R40)

Operating Temp.
Blank: -10°C ~ +60°C
B: -20°C ~ +70°C
D**: -40°C ~ +85°C

Freq. Tolerance
Blank: ± 50 ppm
2: ± 20 ppm
4: ± 30 ppm

Packaging
Blank: Bulk
T: Tape & Reel (1k pcs /reel)

Freq. Stability
Blank: Standard
G*: ± 15 ppm
W*: ± 25 ppm
Y: ± 30 ppm
H: ± 35 ppm
Z: ± 50 ppm
Q: ± 100 ppm

* 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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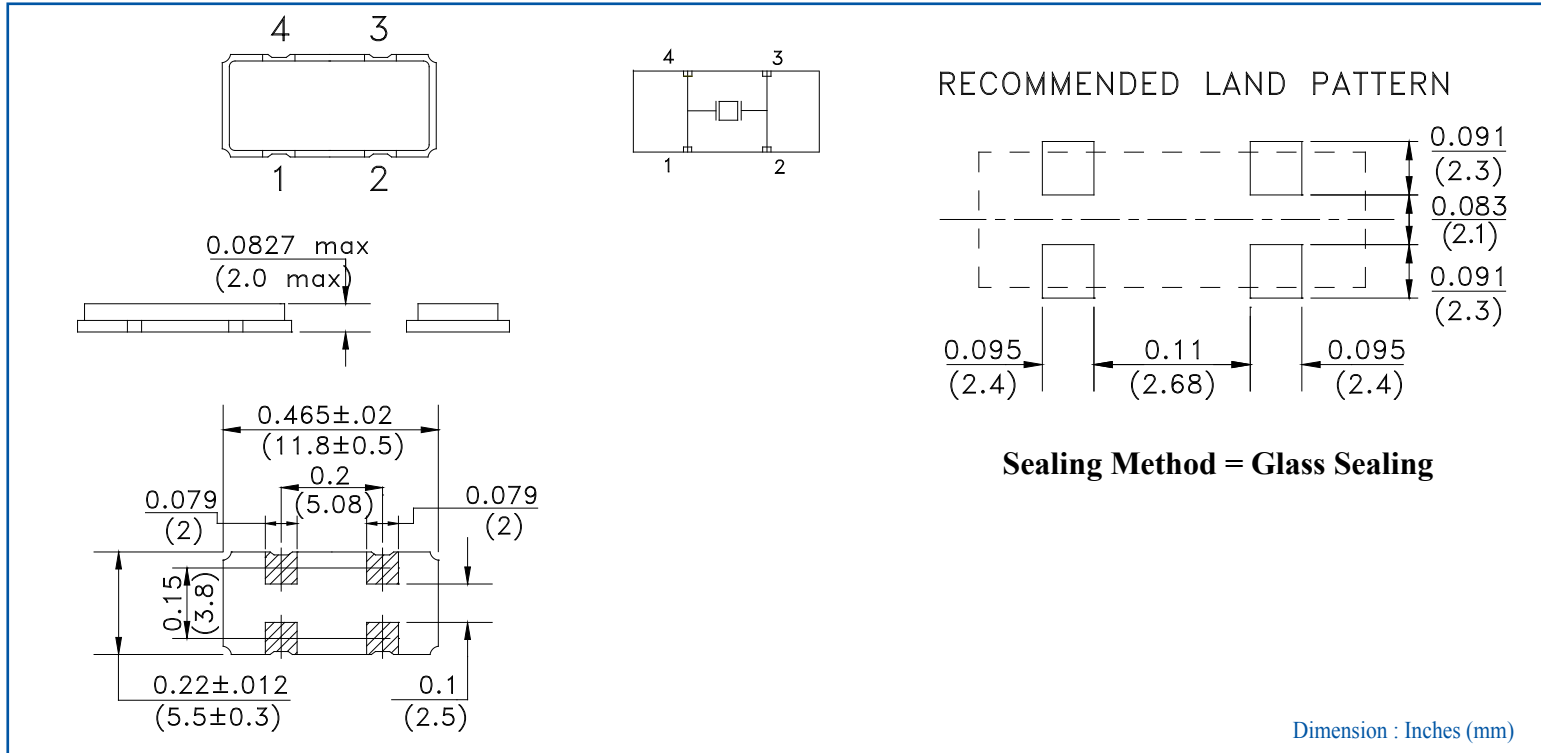
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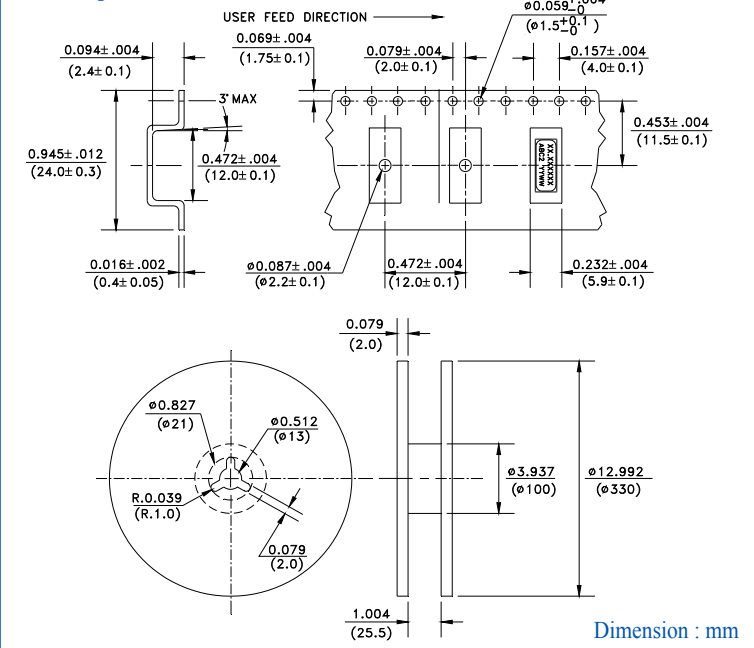
RoHS
Compliant

OUTLINE DRAWING:

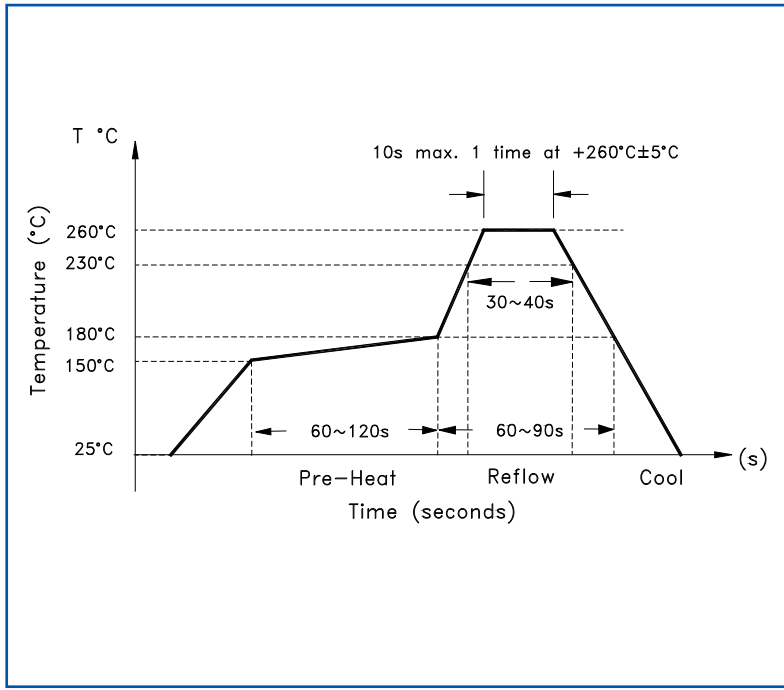


TAPE & REEL:

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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