

# IoT OPTIMIZED LOW PROFILE QUARTZ CRYSTAL



ABM11W-101-32.0000MHZ-T3



2.0 x 1.6 x 0.5mm  
RoHS/RoHS II Compliant

MSL = N/A: NOT APPLICABLE

## FEATURES

- Optimized for energy saving wearables, and IoT applications
- 0.5 mm max height ideally suited for height constrained designs
- Seam sealed for longterm reliability

## APPLICATIONS

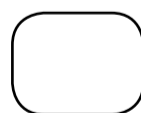
- Wearables
- Internet of Things (IoT)
- Bluetooth/Bluetooth Low Energy (BLE)
- Wireless modules
- Machine-to-machine (M2M) connectivity
- Ultra-low power MCU
- Near Field Communication (NFC)
- ISM Band

## KEY ELECTRICAL SPECIFICATIONS

| Parameters  | Minimum     | Typical | Maximum | Units | Notes          |
|---|-------------|---------|---------|-------|----------------|
| Frequency   | 32.0000     |         |         | MHz   |                |
| Operation Mode  | Fundamental |         |         |       |                |
| Operating Temperature Range   | -40         |         | +85     | °C    |                |
| Storage Temperature   | -55         |         | +125    | °C    |                |
| Frequency Tolerance @ +25°C   | -10         |         | +10     | ppm   |                |
| Frequency Stability over the Operating Temperature ( ref. to +25°C) | -20         |         | +20     | ppm   |                |
| Equivalent series resistance (R1)                                   |             |         | 80      | Ω     |                |
| Shunt capacitance (C0)  |             | <1.0    | 2.0     | pF    |                |
| Load capacitance (CL)   |             | 8.0     |         | pF    |                |
| Drive Level   |             | 10      | 100     | μW    |                |
| Aging (1 year)  | -2          |         | +2      | ppm   | @ 25°C±3°C     |
| Insulation Resistance   | 500         |         |         | MΩ    | @ 100Vdc ± 15V |

## PART IDENTIFICATION

ABM11W-101-32.0000MHz -



### Packaging

Blank: Bulk

T3: 3kpcs / reel

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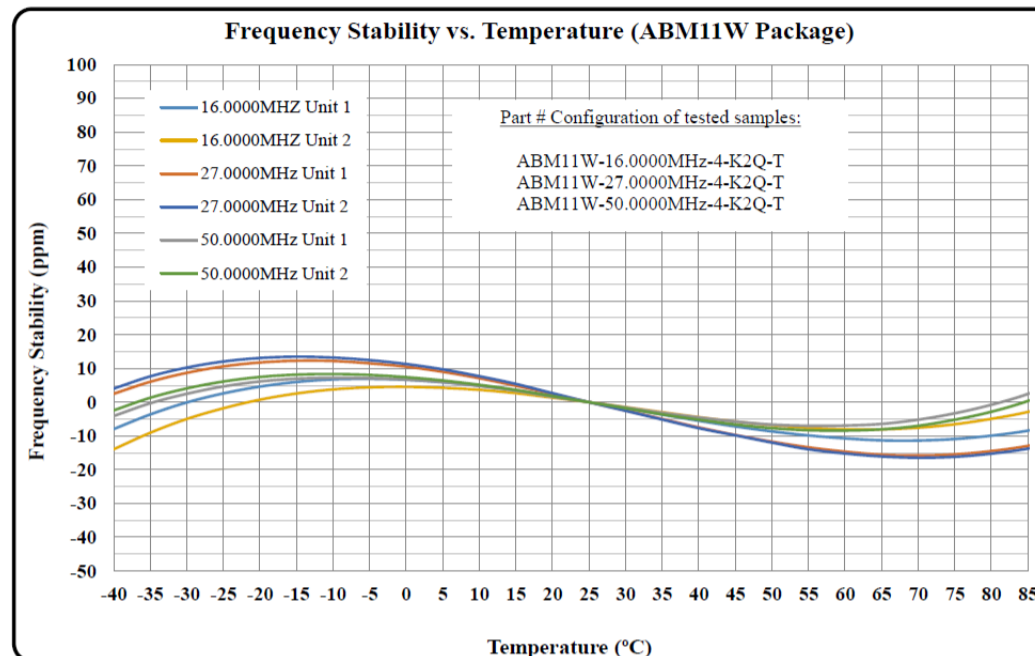
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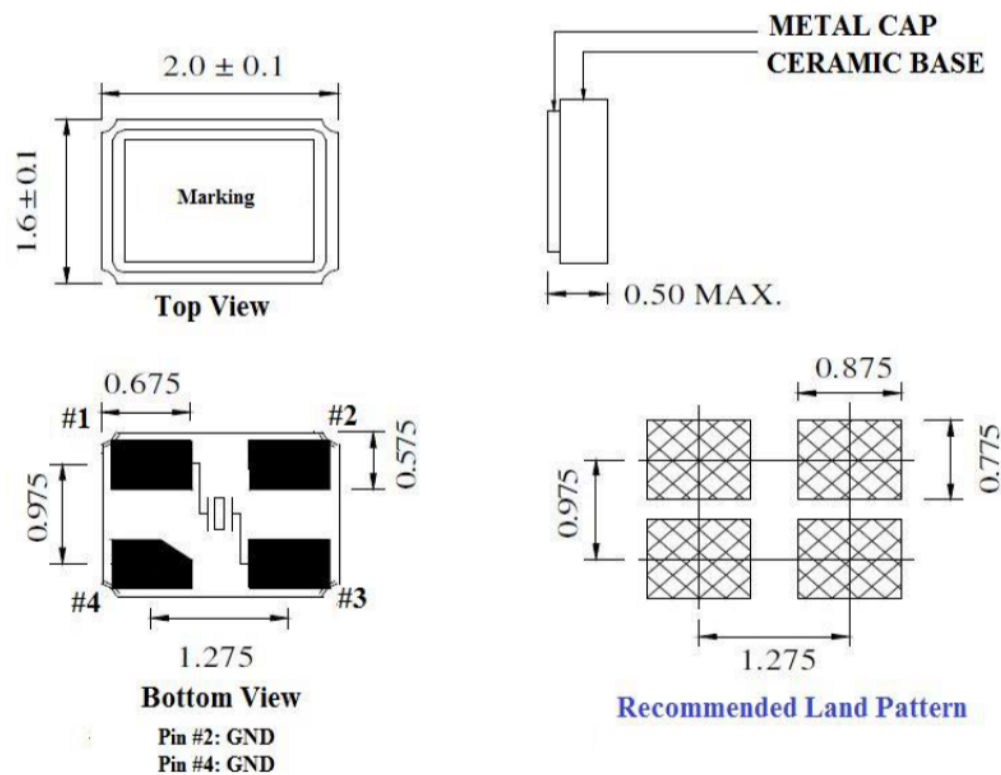
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## TYPICAL FREQUENCY vs. TEMPERATURE CHARACTERISTICS



## MECHANICAL DIMENSIONS



Dimensions: mm

### Note:

Due to material availability the Chamfer could be located on pin #1, 2 or 4. Be advised that the Chamfer location has no impact on the electrical performance of the device.

**SEALING METHOD = GLASS SEALING**

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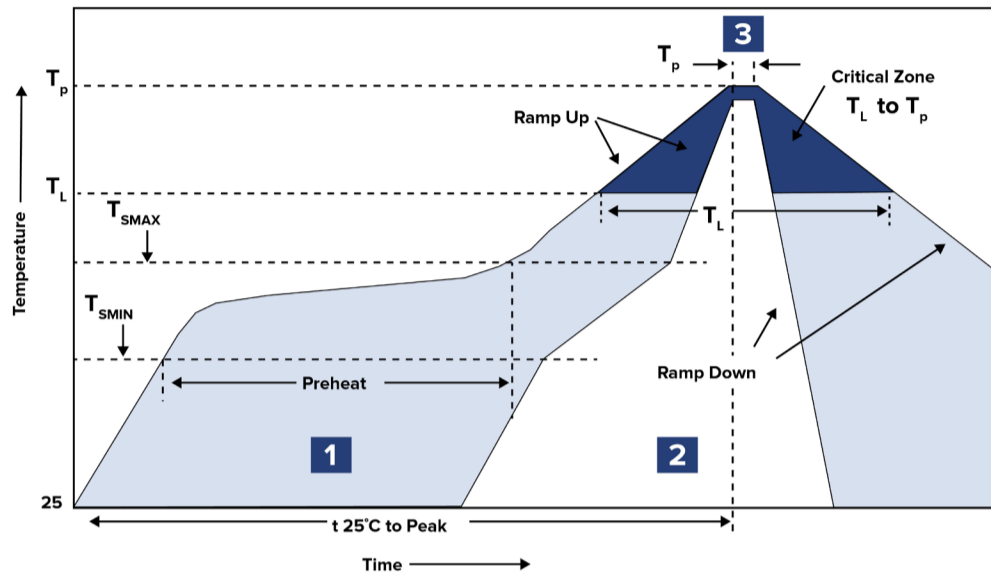
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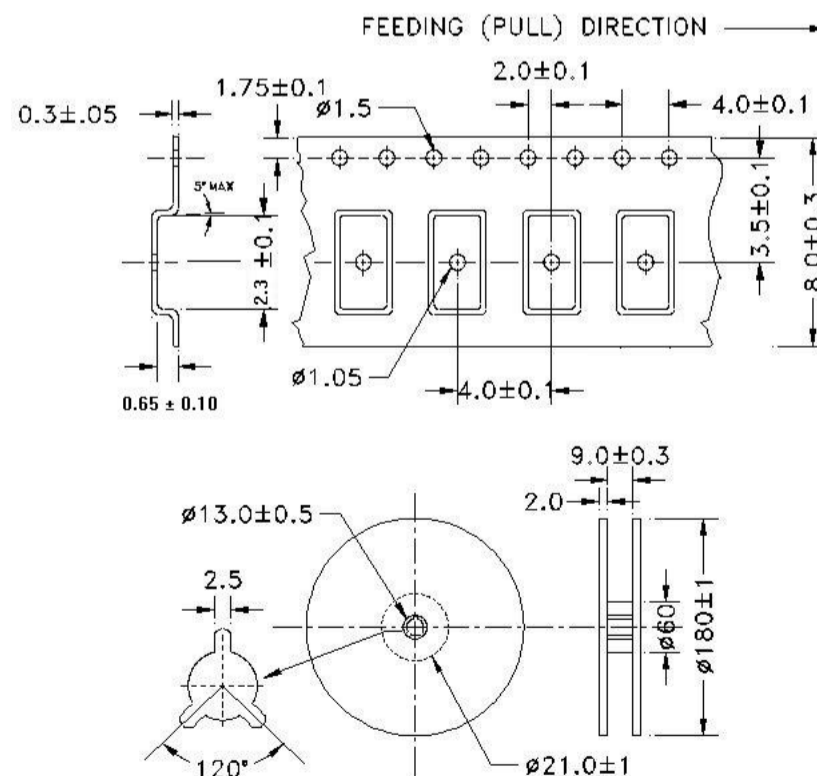
## REFLOW PROFILE



| Zone | Description | Temperature                               | Time          |
|------|-------------|---|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 180°C | 60 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>217°C                            | 45 ~ 90 sec.  |
| 3    | Peak Heat   | $T_p$<br>260°C MAX                        | 10 sec.       |

## PACKAGING:

T3: Tape and reel (3,000 pcs/reel)



Dimensions: mm

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