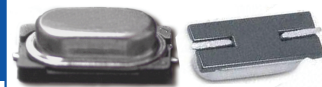


SMD MICROPROCESSOR CRYSTAL

ABLS7M2



RoHS / RoHS II Compliant



7.0 x 4.1 x 2.0mm

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

FEATURES:

- **Reduced footprint from ABLs (standard HC/49US package) by 50%**
- Low profile: 2.0mm max. height
- Suitable for RoHS compliant reflow
- Tight stability & extended temperature options
- High reliability & Cost effective
- Resistance welded metal package

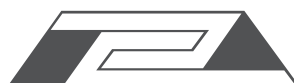
APPLICATIONS:

- Wireless Applications
- Home electronics
- Computers, modems, and communications
- Microprocessors

STANDARD SPECIFICATIONS:

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---|--|---------|---------|-------|--|
| Frequency Range* | 12.0 | | 40.0 | MHz | |
| Standard Frequencies | 12.0, 12.288, 13.5, 13.56, 14.31818, 14.7456, 16.0, 18.432, 20.0, 20.5, 24.0, 24.576, 25.0, 26.0, 27.0 | | | MHz | |
| Operation Mode | Fundamental (AT-cut) | | | | |
| Operating Temperature | 0 | | +70 | °C | See options |
| Storage Temperature | -40 | | +125 | °C | |
| Frequency Tolerance @+25°C | -50 | | +50 | ppm | See options |
| Frequency Stability over the Operating Temperature (ref. to +25°C) | -50 | | +50 | ppm | See options |
| Equivalent series resistance (R1) @+25°C | | | 60 | Ω | 12.000 ~ 16.000MHz |
| | | | 40 | | 16.001 ~ 30.000MHz |
| | | | 25 | | 30.001 ~ 40.000MHz |
| Shunt capacitance (C0) | | | 5 | pF | |
| Load capacitance (CL) | 18 | | | pF | Standard (See options if other than STD) |
| Drive Level | | 50 | 100 | μW | |
| Aging | -5 | | +5 | ppm | @25°C±3°C First year |
| Insulation Resistance | 500 | | | MΩ | @ 100Vdc ± 15V |
| Drive level dependency (DLD) | 10nw ~ 100uw, 12 points Change in ESR (Maximum - Minimum) over DLD range < 30% ESR max. | | | | |

* Please contact Abracon for other frequencies.



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PART IDENTIFICATIONS: (left blank if standard)

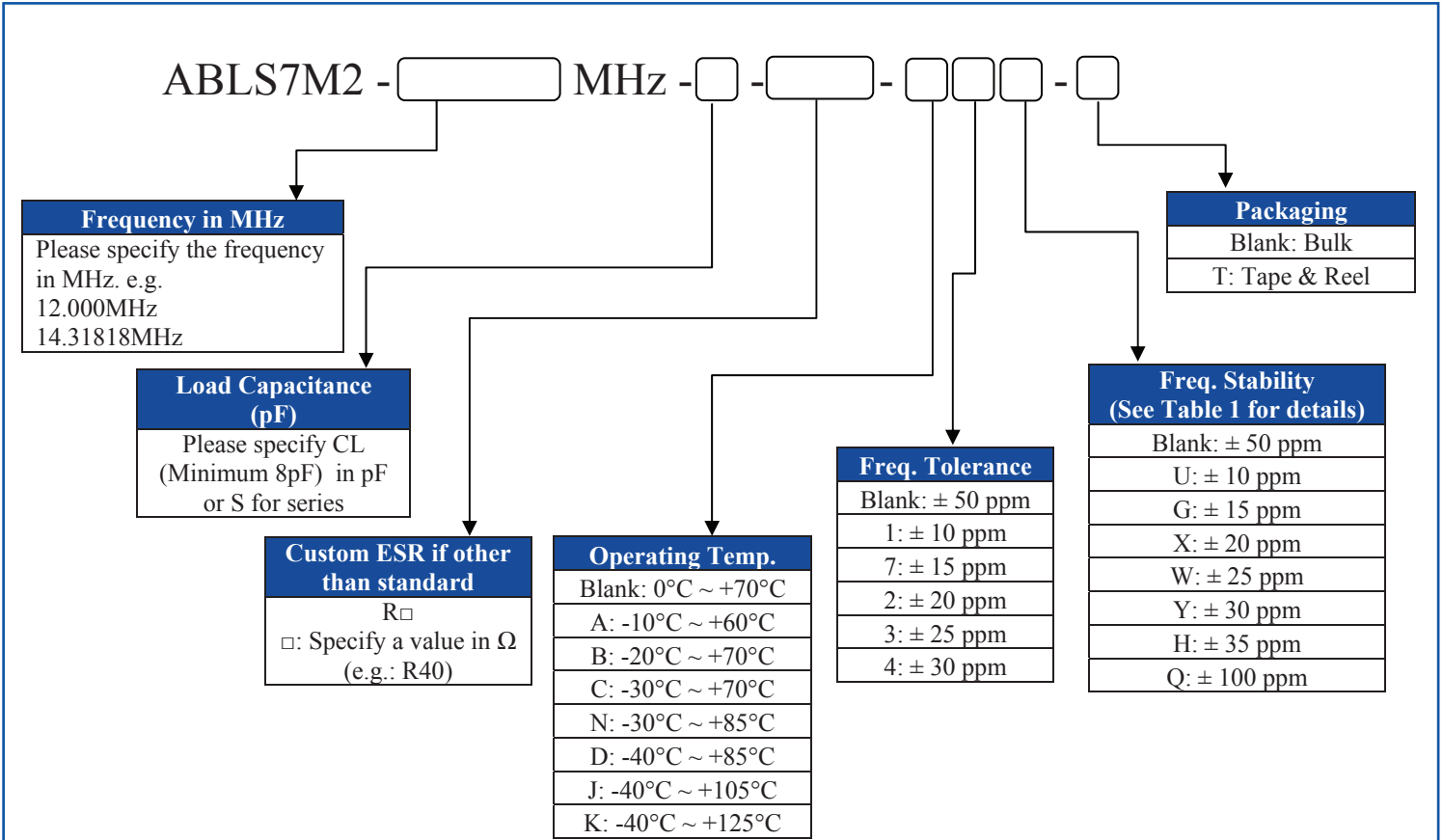


Table 1 Available Combinations of Operating Temp. and Freq. Stability

| Operating Temp. | Freq. Stability | | | | | | | |
|-------------------|-----------------|----------|----------|----------|----------|----------|-------------|-----------|
| | U:±10ppm | G:±15ppm | X:±20ppm | W:±25ppm | Y:±30ppm | H:±35ppm | Std.:±50ppm | Q:±100ppm |
| A: -10°C ~ +60°C | √ | √ | √ | √ | √ | √ | √ | √ |
| Std.: 0°C ~ +70°C | √ | √ | √ | √ | √ | √ | √ | √ |
| B: -20°C ~ +70°C | | √ | √ | √ | √ | √ | √ | √ |
| C: -30°C ~ +70°C | | | √ | √ | √ | √ | √ | √ |
| N: -30°C ~ +85°C | | | | | √ | √ | √ | √ |
| D: -40°C ~ +85°C | | | | | √ | √ | √ | √ |
| J: -40°C ~ +105°C | | | | | | | √ | √ |
| K: -40°C ~ +125°C | | | | | | | | √ |

Note: Please contact Abracon for other frequency stability and operating temperature range options.



SMD MICROPROCESSOR CRYSTAL

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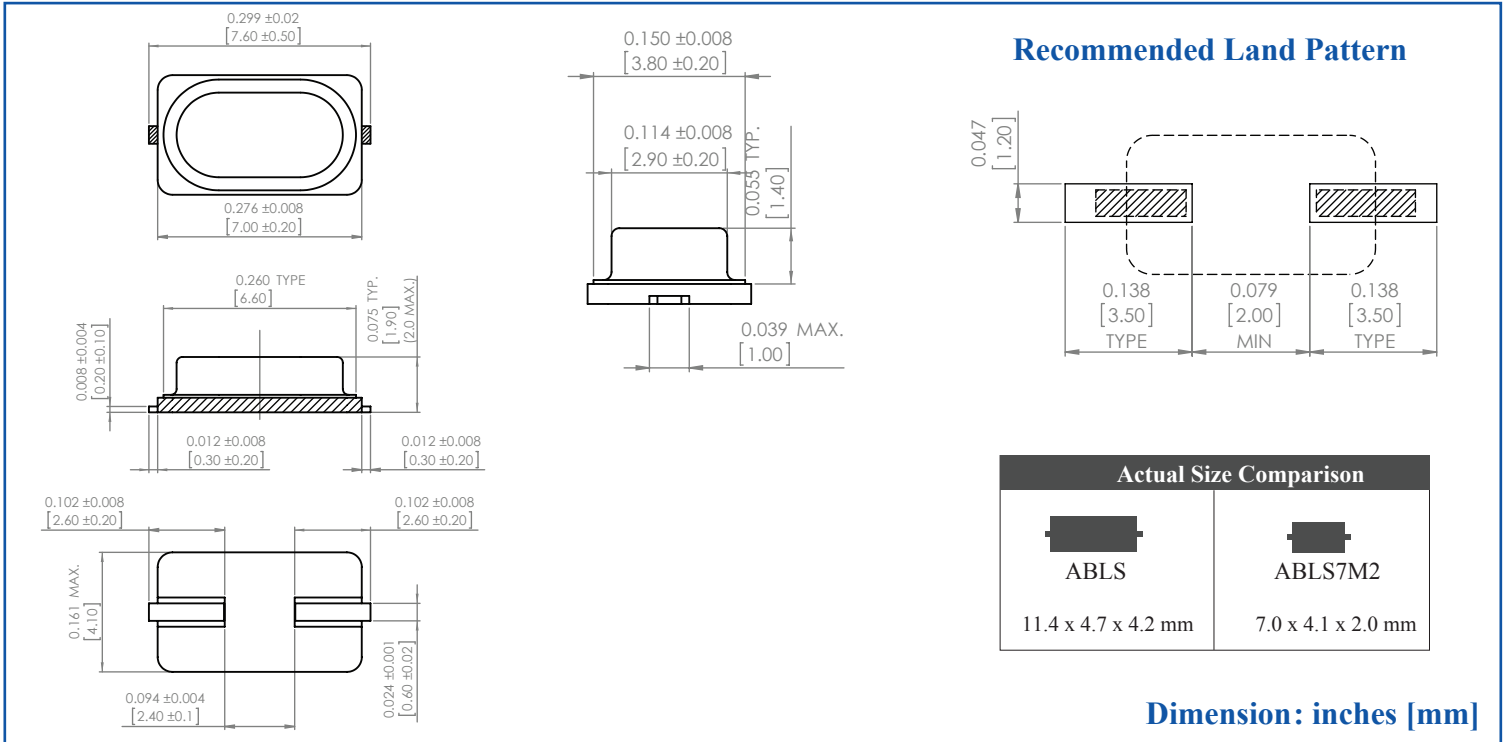


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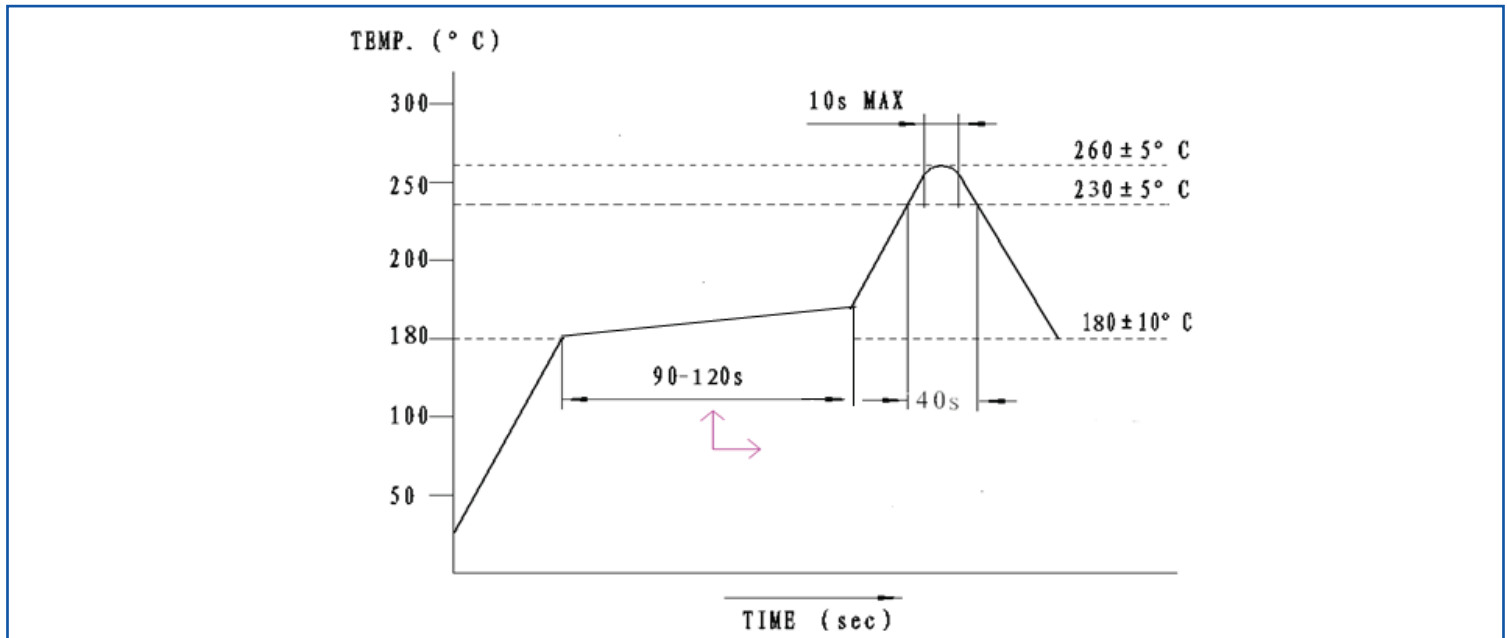


7.0 x 4.1 x 2.0mm

OUTLINE DIMENSION:



REFLOW PROFILE:



SMD MICROPROCESSOR CRYSTAL

ABLS7M2



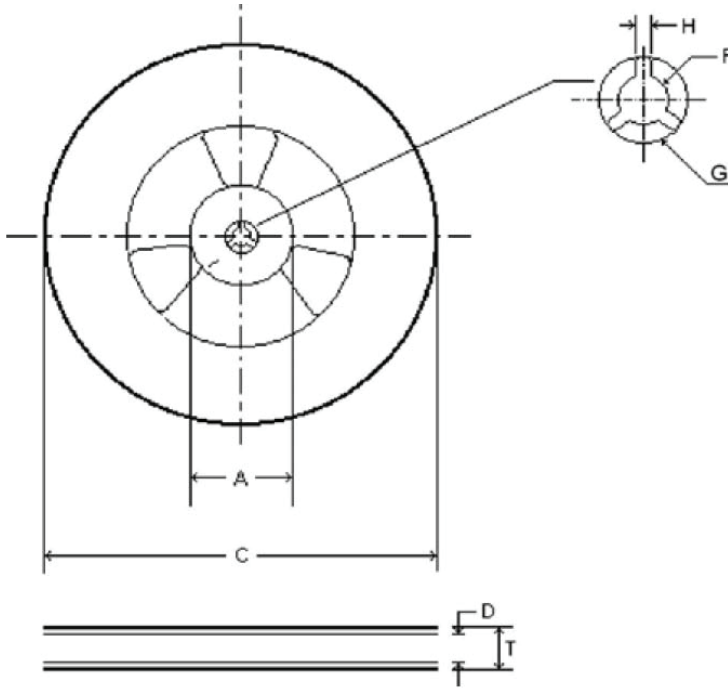
RoHS / RoHS II Compliant



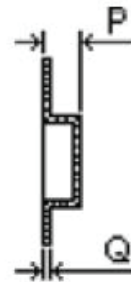
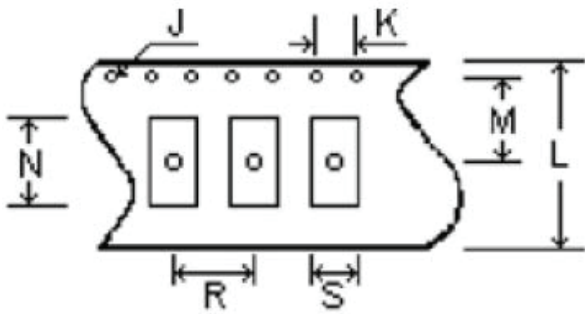
7.0 x 4.1 x 2.0mm

TAPE & REEL:

T = tape and reel (3000pcs/reel)



| No. | Dimensions (mm) |
|-----|-----------------|
| A | 100 ± 1.0 |
| C | 330 ± 2.0 |
| D | 16.4 ± 1.0 |
| T | 20.4 ± 0.5 |
| F | 13.0 ± 0.2 |
| G | 20.2 min. |
| H | 1.5 min. |



| No. | Dimensions (mm) |
|-----|-----------------|
| J | Ø1.5 |
| K | 4.0 ± 0.1 |
| L | 16.0 ± 0.3 |
| M | 7.5 ± 0.1 |
| N | 9.4 ± 0.1 |
| P | 2.5 ± 0.1 |
| Q | 0.3 ± 0.05 |
| R | 8.0 ± 0.1 |
| S | 4.4 ± 0.1 |

Dimensions: mm

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