# MINIATURE CERAMIC SMD CRYSTAL





4.0 x 2.5 x 0.7mm

# ABM9

#### **FEATURES**:

- Low in height; suitable for thin equipment.
- Ceramic package and metal lid assures high reliability.
- Tight tolerance and stability available.
- Suitable for solder reflow.
- High precision crystal, fundamental mode.

## **STANDARD SPECIFICATIONS:**

## > APPLICATIONS:

- High density applications.
- Modems, communication and test equipment.
- PMCIA, Wireless applications.

PARAMETERS	
ABRACON P/N	ABM9 Series
Frequency Range	12.00 MHz - 32.00 MHz (*)
Operation Mode	Fundamental AT
Operating Temperature	-10°C to + 60°C (see options)
Storage Temperature	- 40°C to + 105°C
Frequency Tolerance	± 50 ppm max. (see options)
Frequency Stability over the Operating Temp. (Ref to +25°C)	± 50 ppm max. (see options)
Equivalent Series Resistance	See Table 1
Shunt Capacitance C <sub>0</sub>	7pF max.
Load Capacitance C <sub>L</sub>	18pF (see options)
Drive Level	100μW max., 10μ W typical
Aging at 25°C Per Year	± 5ppm max.
Insulation Resistance	500M $\Omega$ min with 100 Vdc ± 15 Vdc

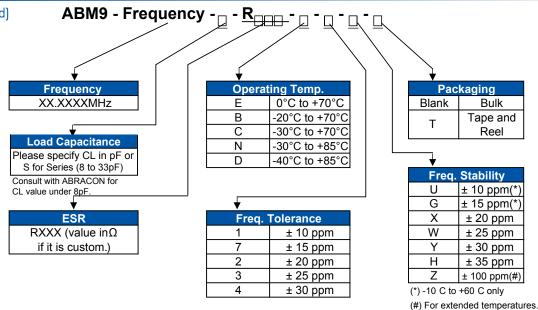
#### TABLE 1 - Standard ESR

FREQ (MHz)	ESR ( $\Omega$ )max.
12.000 - 23.999	80
24.000 - 32.000	60

(\*) Frequencies above 32MHz based on availability. Please contact ABRACON for further details.

### ➢ OPTIONS & PART IDENTIFICATION:

(Left blank if standard)



ABRACON IS ISO 9001 / QS 9000 CERTIFIED



\*Contact ABRACON for tighter freq. stability.

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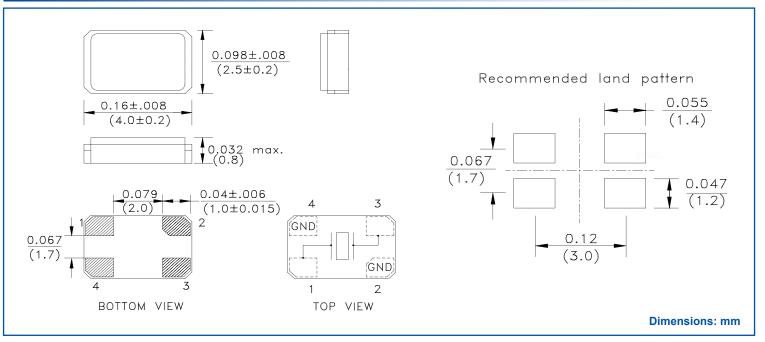
RoHS

Compliant

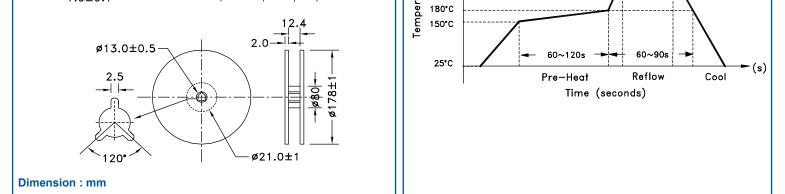
Pb

ABM9

## **OUTLINE DRAWING:**



TAPE & REEL: Tape and reel (1,000pcs or 3,000pcs/reel) REFLOW PROFILE: FEEDING (PULL) DIRECTION  $2.0 \pm 0.1$ 1.75±0.1 / ø1.5 4.0±0.1 0.3±0.05 ф ¢ ¢ ¢ .5±0.05 |2±0.2<sup>-</sup> т •с 10s max. 1 time at +260°C±5°C 4±0. ં 260°C Temperature 230°C ø1.0 4.0±0.1 30~40s 2.9±0.1  $1.0 \pm 0.1$ 180°C 150°C



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