

# CERAMIC SMD CRYSTAL

**ABM8**

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



**RoHS**  
Compliant



3.2 x 2.5 x 0.8mm

## FEATURES:

- Seam sealed package assures high reliability
- Tight tolerance and stability available
- Suitable for RoHS reflow

## APPLICATIONS:

- High density applications
- Modems, communication and test equipment
- PCMCIA, Wireless applications

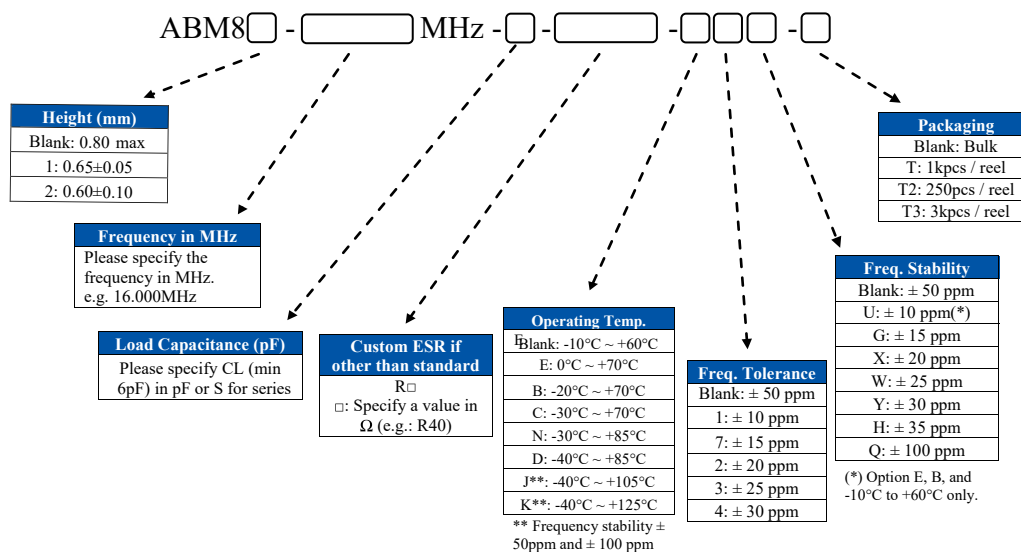
## STANDARD SPECIFICATIONS:

| Parameters                                                          | Minimum                                                                              | Typical | Maximum  | Units | Notes                                                              |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------|----------|-------|--------------------------------------------------------------------|
| Frequency Range                                                     | 8.000                                                                                |         | 125.000* | MHz   | Contact Abracon for available F<10MHz                              |
| Operation Mode                                                      | Fundamental                                                                          |         |          |       | 8MHz - 54MHz                                                       |
|                                                                     | 3rd Overtone<br>(Standard Frequencies: 64, 66, 66.6666, 75, 80, 98.304, 100, 125MHz) |         |          |       | 64MHz - 125MHz<br>Please contact Abracon for available frequencies |
| Operating Temperature                                               | -10                                                                                  |         | +60      | °C    | Standard<br>(see options if other than STD)                        |
| Storage Temperature                                                 | -55                                                                                  |         | +125     | °C    |                                                                    |
| Frequency Tolerance @+25°C                                          | -50                                                                                  |         | +50      | ppm   | Standard<br>(see options if other than STD)                        |
| Frequency Stability over the Operating Temperature ( ref. to +25°C) | -50                                                                                  |         | +50      | ppm   | Standard<br>(see options if other than STD)                        |
| Equivalent series resistance (R1)                                   | See table 1 below                                                                    |         |          | Ω     |                                                                    |
| Shunt capacitance (C0)                                              |                                                                                      |         | 3.0      | pF    |                                                                    |
| Load capacitance (CL)                                               |                                                                                      | 18.0    |          | pF    | Standard (See options if other than STD)                           |
| Drive Level                                                         |                                                                                      | 10      | 100      | μW    |                                                                    |
| Aging                                                               | -2                                                                                   |         | +2       | ppm   | @25°C±3°C<br>First year                                            |
| Insulation Resistance                                               | 500                                                                                  |         |          | MΩ    | @ 100Vdc ± 15V                                                     |

TABLE 1- Standard ESR

| Frequency (MHz)        | ESR(Ω)<br>max | Frequency (MHz)           | ESR(Ω)<br>max |
|------------------------|---------------|---------------------------|---------------|
| 8.000-9.999 (Fund)     | 400           | 30.000 - 39.999 (Fund)    | 40            |
| 10.000 -11.999 (Fund)  | 200           | 40.000 - 54.000 (Fund)    | 35            |
| 12.000 -15.999 (Fund)  | 120           | 64.000 - 80.000 (3rd OT)  | 120           |
| 16.000 -19.999 (Fund)  | 70            | 98.304 - 125.000 (3rd OT) | 80            |
| 20.000 - 29.999 (Fund) | 50            |                           |               |

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



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## OUTLINE DRAWING:

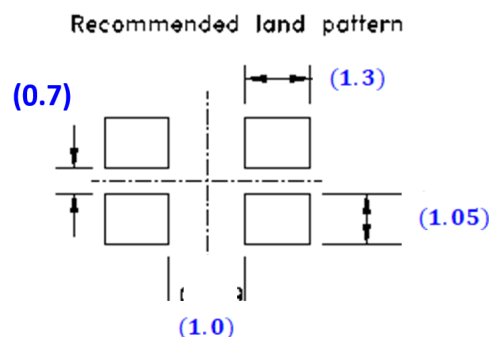
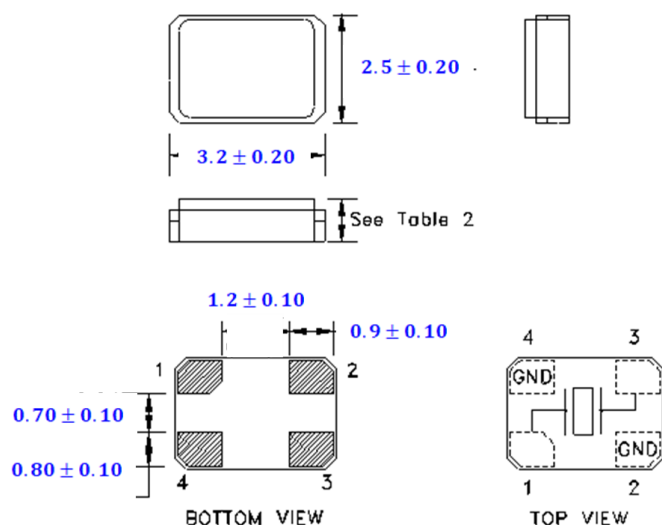


Table 2

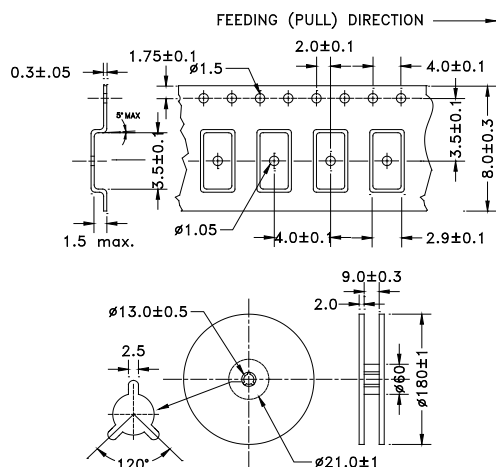
| Height (mm) |             |
|-------------|-------------|
| ABM8        | 0.80 max    |
| ABM81       | 0.65+/-0.05 |
| ABM82       | 0.60+/-0.10 |

**Note:** Due to material availability, the chamfer could be located on pin #1, 3, or 4. Be advised that the chamfer location has no impact on the electrical performance of the device.

Dimensions: mm

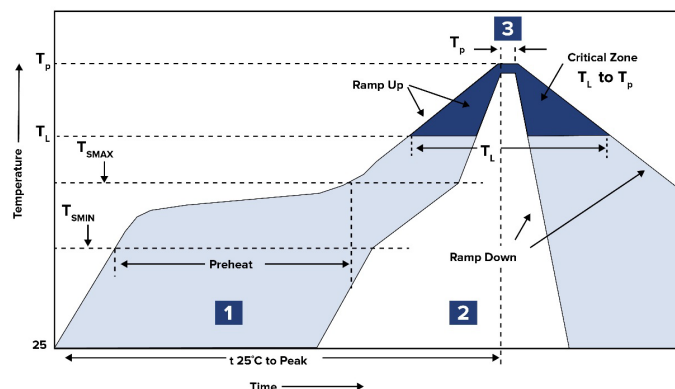
## TAPE & REEL:

- Option "-T" : Tape and reel (1,000pcs/reel) : ABM8, ABM82  
Tape and reel (3,000pcs/reel) : ABM81
- Option "-T2" : Tape and reel (250pcspcs/reel) : ABM8
- Option "-T3" : Tape and reel (3,000pcs/reel) : ABM8, ABM82 only



Dimensions: mm

## 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>230°C                            | 30 ~ 40 sec.  |
| 3    | Peak heat   | $T_p$<br>260°C ± 5°C                      | 10 sec. MAX   |

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