

ULTRA MINIATURE 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:

- Low in height; suitable for thin equipment, 0.8mm max
- Seam sealed package assures high reliability
- Tight tolerance and stability available
- Suitable for RoHS reflow
- Available for fundamental and 3rd over tone mode

APPLICATIONS:

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

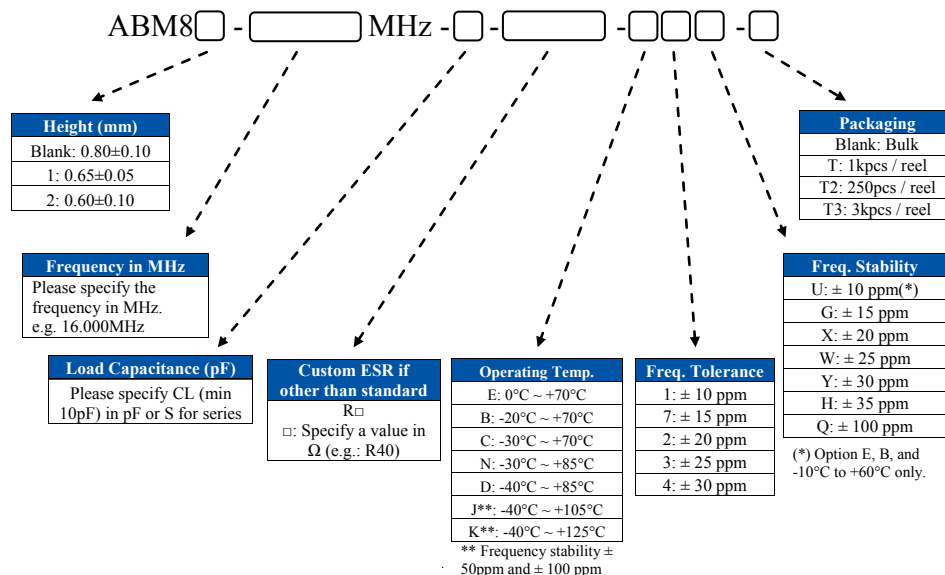
STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	10.000	-----	125.000*	MHz	Contact Abracon for available F<11MHz
Operation Mode	Fundamental			-----	10MHz - 54MHz
	3rd Overtone (Standard Frequencies: 64, 66, 66.6666, 75, 80, 98.304, 100, 125MHz)			-----	64.000 MHz - 125.000 MHz Please contact Abracon for available frequencies
Operating Temperature	-10	-----	+60	°C	See options
Storage Temperature	-55	-----	+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)	See table 1 below			Ω	
Shunt capacitance (C0)	-----	-----	7.0	pF	
Load capacitance (CL)	-----	18.0	-----	pF	Standard (See options if other than STD)
Drive Level	-----	10	100	μW	
Aging	-3	-----	+3	ppm	@25°C±3°C First year
Insulation Resistance	500	-----	-----	MΩ	@ 100Vdc ± 15V

TABLE 1- Standard ESR

Frequency (MHz)	ESR(Ω) max	Frequency (MHz)	ESR(Ω) max
10.000 -11.999 (Fund)	200	30.000 - 39.999 (Fund)	40
12.000 -15.999 (Fund)	120	40.000 - 54.000 (Fund)	35
16.000 -19.999 (Fund)	70	66.000 - 80.000 (3rd OT)	120
20.000 - 29.999 (Fund)	50	98.304 - 125.000 (3rd OT)	80

OPTIONS AND PART IDENTIFICATION: (Left blank if standard)



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ABM8

Pb

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3.2 x 2.5 x 0.8mm

The drawing includes the following views and dimensions:

- Isometric View:** Shows the package with dimensions 0.098 ± 0.008 (2.5 ± 0.2) mm for height and 0.126 ± 0.008 (3.2 ± 0.2) mm for width.
- Side View:** Shows the package profile with a reference to "See Table 2" for height.
- Bottom View:** Shows the package footprint with dimensions 0.047 (1.2) mm for pin pitch, 0.035 ± 0.006 (0.9 ± 0.15) mm for pin width, and 0.026 ± 0.006 (0.65 ± 0.15) mm for pin thickness.
- Top View:** Shows the package footprint with pins numbered 1, 2, 3, and 4, and GND locations.
- Recommended Land Pattern:** Shows the recommended solder pad layout with dimensions 0.033 (0.8) mm for pad width, 0.052 (1.3) mm for pad length, 0.039 (1.0) mm for pad spacing, and 0.041 (1.05) mm for pad thickness.

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

Dimensions: inch (mm)

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

FEEDING (PULL) DIRECTION →

Technical drawing of the ABM8 package showing dimensions in mm. The drawing includes a top view, a side view, and a detail view of the mounting tab.

Top View Dimensions:

- Overall width: 8.0 ± 0.3
- Overall length: 21.0 ± 1
- Pin pitch (center-to-center): 2.0 ± 0.1
- Pin diameter: $\phi 1.5$
- Distance from mounting tab to first pin: 0.3 ± 0.05
- Distance between mounting tab and first pin: 1.0 ± 0.1
- Distance from mounting tab to center of package: 1.75 ± 0.1
- Distance from mounting tab to center of package (alternative): 3.5 ± 0.1
- Distance from mounting tab to center of package (alternative): 5° MAX
- Distance from mounting tab to center of package (alternative): $\phi 1.05$
- Distance from mounting tab to center of package (alternative): 4.0 ± 0.1
- Distance from mounting tab to center of package (alternative): 2.9 ± 0.1
- Distance from mounting tab to center of package (alternative): 4.0 ± 0.1
- Distance from mounting tab to center of package (alternative): 2.9 ± 0.1

Side View Dimensions:

- Overall height: 9.0 ± 0.3
- Distance from mounting tab to center of package: 2.0
- Distance from mounting tab to center of package: $\phi 6.0$
- Distance from mounting tab to center of package: $\phi 180 \pm 1$

Detail View Dimensions:

- Overall width: 2.5
- Overall height: 120°

Dimensions:
mm

The graph illustrates the temperature profile for a reflow soldering process. The Y-axis represents Temperature in degrees Celsius (°C), with marked values at 25°C, 150°C, 180°C, 230°C, and 260°C. The X-axis represents Time in seconds (s), with marked regions for Pre-Heat, Reflow, and Cool. The profile starts at 25°C, rises to 150°C, then to 180°C (labeled 60~120s), then to 260°C (labeled 30~40s), and finally cools down (labeled 60~90s). A note indicates '10s max. 1 time at +260°C±5°C'.



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