

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

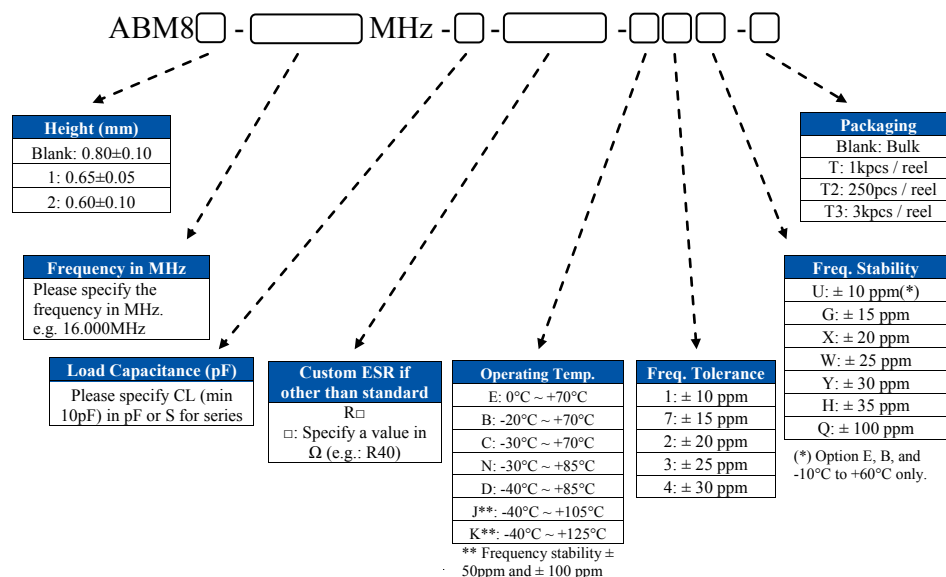
STANDARD SPECIFICATIONS:

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 the central slot width, 0.035 ± 0.006 (0.9 ± 0.15) mm for the central slot length, and 0.026 ± 0.006 (0.65 ± 0.15) mm for the corner width. Pin locations are numbered 1, 2, 3, and 4.
- Top View:** Shows the package footprint with "GND" pads at the corners and pin locations numbered 1, 2, 3, and 4.
- 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 pad.

Top View Dimensions:

- Overall width: 8.0 ± 0.3
- Overall length: 21.0 ± 1
- Distance from left edge to first pin center: 0.3 ± 0.05
- Pin pitch (center-to-center): 2.0 ± 0.1
- Distance from last pin center to right edge: 2.9 ± 0.1
- Pin diameter: $\phi 1.5$
- Distance from left edge to mounting pad center: 1.0 ± 0.1
- Mounting pad width: 2.5
- Mounting pad diameter: $\phi 13.0 \pm 0.5$
- Mounting pad thickness: 1.75 ± 0.1
- Mounting pad inner diameter: $\phi 1.05$
- Mounting pad outer diameter: $\phi 1.5$
- Mounting pad inner diameter: $\phi 1.05$
- Mounting pad outer diameter: $\phi 1.5$

Side View Dimensions:

- Package height: 3.5 ± 0.1
- Distance from mounting pad to first pin: 4.0 ± 0.1
- Distance from last pin to right edge: 4.0 ± 0.1
- Distance from mounting pad to right edge: 9.0 ± 0.3
- Pin height: 0.6
- Pin diameter: $\phi 0.6$
- Pin pitch: 2.0
- Distance from mounting pad to first pin: 4.0 ± 0.1
- Distance from last pin to right edge: 2.9 ± 0.1

Detail View Dimensions:

- Mounting pad diameter: $\phi 13.0 \pm 0.5$
- Mounting pad thickness: 1.75 ± 0.1
- Mounting pad inner diameter: $\phi 1.05$
- Mounting pad outer diameter: $\phi 1.5$

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'.



Need a test socket for the ABM8 Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here.](#)

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