

CERAMIC SMD ULTRA MINIATURE QUARTZ CRYSTAL

ABM3C

Pb in glass

(Exempt per RoHS 2002/95/EC Annex (5))

RoHS
Compliant



5.0 x 3.2 x 1.3mm

Moisture Sensitivity Level – MSL – N/A (The ABM3C Series is a Hermetically Sealed device and not moisture sensitive)

FEATURES:

- Low in height; suitable for thin in equipment.
- Glass sealed package assures high reliability and high temperature operation
- Tight tolerance and stability available.
- Suitable for RoHS reflow profile

APPLICATIONS:

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

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	10.000	-----	50.000	MHz	Fundamental
Operation Mode	Fundamental				
Operating Temperature	-10	-----	+70	°C	See options
Storage Temperature	-40	-----	+90	°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)	-----	-----	60	Ω	10.000 – 15.999MHz
	-----	-----	50		16.000 – 50.000MHz
Shunt capacitance (C0)	-----	-----	7	pF	
Load capacitance (CL)	-----	18	-----	pF	Standard (See options if other than STD)
Drive Level	-----	10	100	μW	
Aging	-5	-----	+5	ppm	@25°C±3°C First year
Insulation Resistance	500	-----	-----	MΩ	@ 100Vdc ± 15V

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ABM3C - MHz - - - -

Frequency in MHz
Please specify the frequency in MHz.
e.g. 14.31818MHz

Load Capacitance (pF)
Please specify CL in pF or S for series

Custom ESR if other than standard
R□
□: Specify a value in Ω (e.g.: R40)

Operating Temp.
E: 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

Freq. Tolerance
2: ± 20 ppm
3: ± 25 ppm
4: ± 30 ppm

Packaging
Blank: Bulk
T: Tape & Reel

Freq. Stability
Y*: ± 30 ppm
H*: ± 35 ppm
A**: ± 80 ppm
Q**: ± 100 ppm
V: ± 120 ppm

* Standard temp. or option E, B, C, N, D only
** Stability option Q and V only
*** Stability option V only

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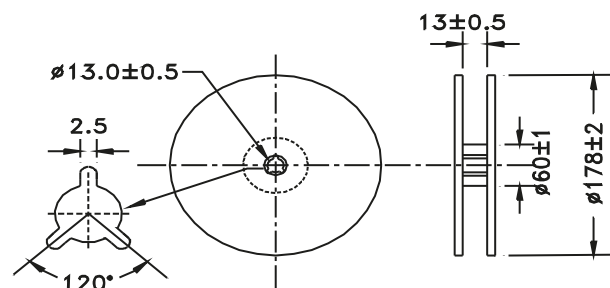
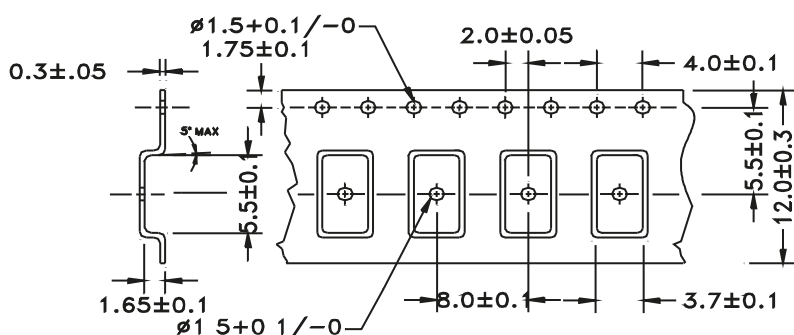
The drawing includes the following views and dimensions:

- Top View:** Shows the overall footprint with a width of $0.20 \pm .006$ (5.0 ± 0.15) and a height of $0.126 \pm .006$ (3.2 ± 0.15). It also shows a detail of the corner with a radius of 0.012 C(0.3).
- Side View:** Shows the profile of the connector with a maximum height of 0.051 Max. (1.3).
- Detail View:** Shows a close-up of the corner with a radius of 0.012 C(0.3).
- TOP VIEW:** Shows the internal layout with four pins labeled 1, 2, 3, and 4. Pin 1 is connected to GND, pin 2 is connected to a central component, pin 3 is connected to GND, and pin 4 is connected to GND. The dimensions for the pins are: Pin 1 width 0.055 (1.4), Pin 2 width 0.10 (2.6), Pin 3 width $0.043 \pm .006$ (1.1 ± 0.15), and Pin 4 width 0.055 (1.4).

Dimensions: inches (mm)

1000pcs/reel

FEEDING (PULL) DIRECTION



Dimensions: mm

The graph illustrates a typical reflow profile with the following stages and parameters:

- Pre-Heat:** Temperature rises from 25°C to 150°C. Duration: 60~120s.
- Reflow:** Temperature rises from 150°C to 260°C, remains at 260°C for 30~40s, and then cools down. Duration: 60~90s.
- Cool:** Temperature decreases from 260°C to 25°C.
- Peak Temperature:** 10s max. 1 time at $+260^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

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