CERAMIC SMD CRYSTAL

5.0 X 3.2 X 1.3mm

ABM3

Pb in Glass, exemption 7C-I per RoHS II Directive 2011/65/EU Annex | **RoHS/RoHS II Compliant.**

Smaller package alternative for ABM7 series

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

FEATURES:

- AT-cut fundamental or 3rd OT mode
- Suitable for RoHS reflow profile
- Tight Stability available ±10
- Ceramic package hermetically glass sealed assures high precision and reliability.

APPLICATIONS:

- Cellular telephones, pagers
- Communication and test equipment
- PCMCIA and wireless applications

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	8.000		54.000	MHz	Fundamental
	54.100		80.000		3rd Overtone
Operation Mode	Fundamental or 3rd Overtone				
Operating Temperature	-10		+60	ºC	See options
Storage Temperature	-40		+90	ºC	
Frequency Tolerance @+25ºC	-50		+50	ppm	See options
Frequency Stability over the Operating Temperature (ref. to +25ºC)	-50		+50	ppm	See options
Equivalent series resistance (R1)			140	Ω	8.000 ≤ F < 9.000 (Fund)
			120		9.000 ≤ F < 10.000 (Fund)
			60		10.000 ≤ F < 16.000 (Fund)
			40		16.000 ≤ F < 20.000 (Fund)
			30		20.000 ≤ F < 30.000 (Fund)
			25		30.000 ≤ F ≤ 54.000 (Fund)
			60		54.000 < F ≤ 80.000 (3rd OT)
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	@25ºC±3ºC First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

ABRACON

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 05-03-21

ABRACON IS ISO9001-2015 CERTIFIED

MINIATURE CERAMIC SMD CRYSTAL

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OPTIONS AND PART IDENTIFICATION: (Left blank if standard)

ABM3 - [ ] 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. (See Table 1 for details)
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
7: ± 15 ppm
2: ± 20 ppm
3: ± 25 ppm
4: ± 30 ppm

Freq. Stability (See Table 1 for details)
U: ± 10 ppm
G: ± 15 ppm
X: ± 20 ppm
W: ± 25 ppm
Y: ± 30 ppm
H: ± 35 ppm
Q: ± 100 ppm

Packaging
Blank: Bulk
T: Tape & Reel

Table 1 Available Combinations of Operating Temp. and Freq. Stability

Operating Temp.	Freq. Stability							
	U:±10ppm	G:±15ppm	X:±20ppm	W:±25ppm	Y:±30ppm	H:±35ppm	Std:±50ppm	Q:±100ppm
Std: -10°C ~ +60°C	√	√	√	√	√	√	√	√
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							√	√

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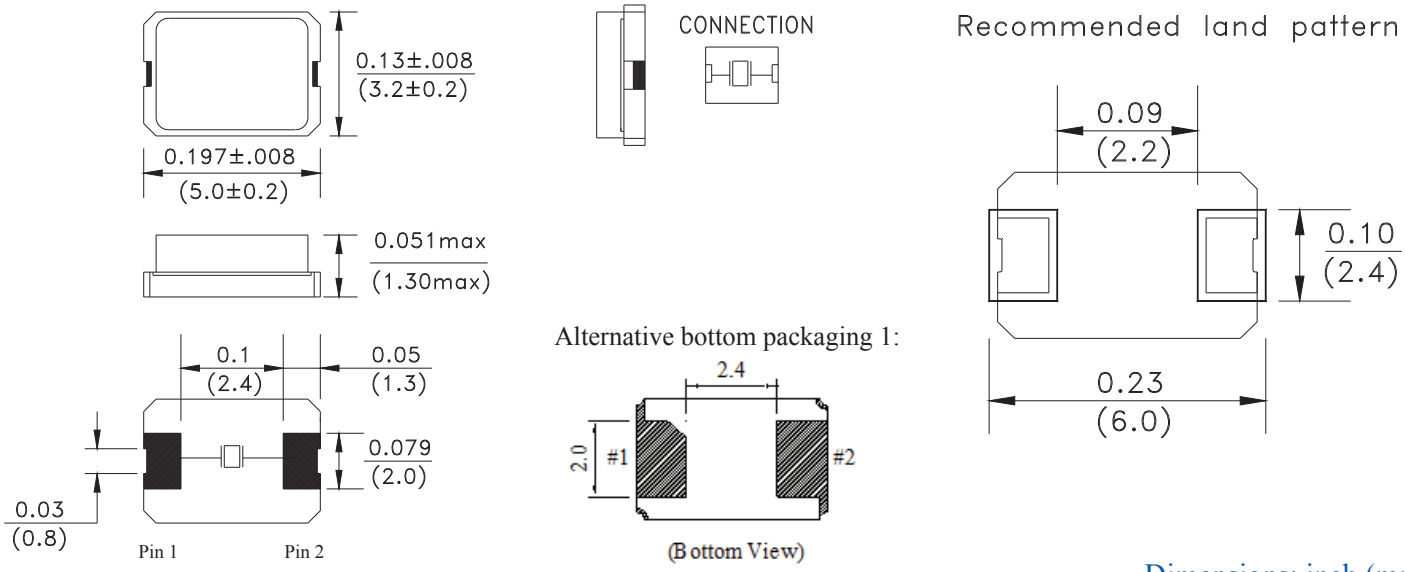
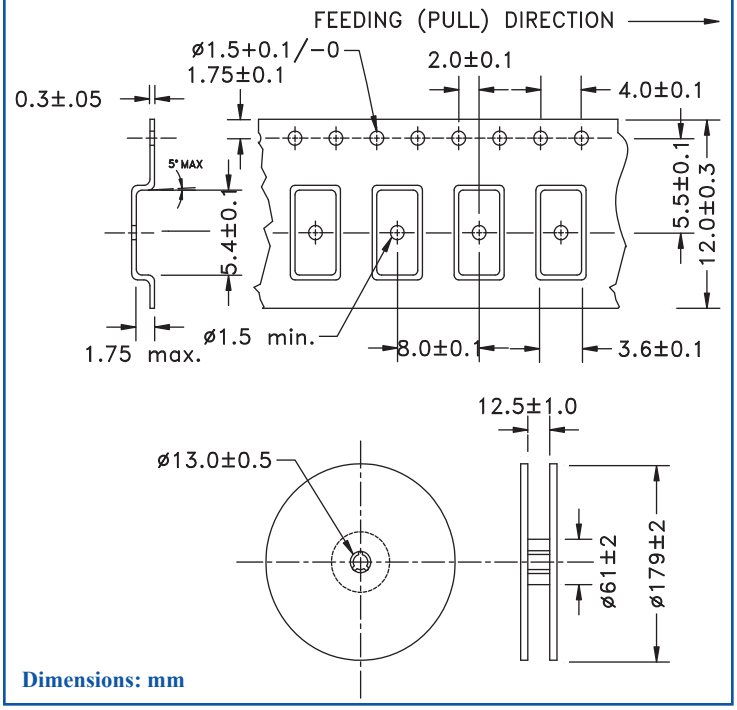
OUTLINE DRAWING:



Dimensions: inch (mm)

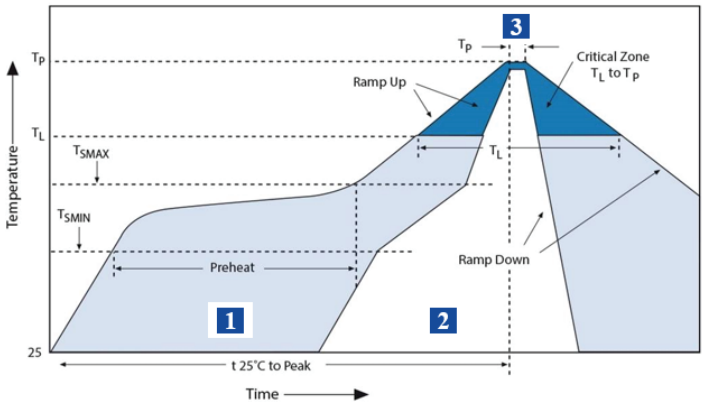
TAPE & REEL:

Tape and reel (1,000pcs/reel)



Dimensions: mm

REFLOW PROFILE



Zone	Description	Temperature	Time
1	Preheat / Soak	T_{SMIN} ~ T_{SMAX} 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	T_L 230°C	30 ~ 40 sec.
3	Peak heat	T_P 260°C±5°C	10 sec. MAX.

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Mouser Electronics

Authorized Distributor

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ABM3-24.000MHZ-B2-T ABM3-24.576MHZ-B2-T ABM3-27.000MHZ-B2-T ABM3-33.000MHZ-B2-T ABM3-30.000MHZ-B2-T ABM3-20.000MHZ-B2-T ABM3-40.000MHZ-B2-T ABM3-29.4912MHZ-B2-T ABM3-16.000MHZ-B2-T ABM3-25.000MHZ-B2-T ABM3-13.560MHZ-B2-T ABM3-28.6363MHZ-B2-T ABM3-18.432MHZ-B2-T ABM3-14.31818MHZ-B2-T ABM3-12.000MHZ-B2-T ABM3-48.000MHZ-B2-T ABM3-8.000MHZ-D2Y-T ABM3-10.0000MHZ-D2Y-T ABM3-11.0592MHZ-D2Y-T ABM3-11.2896MHZ-D2Y-T ABM3-12.000MHZ-D2Y-T ABM3-12.288MHZ-D2Y-T ABM3-14.31818MHZ-D2Y-T ABM3-14.7456MHZ-D2Y-T ABM3-16.000MHZ-D2Y-T ABM3-18.432MHZ-D2Y-T ABM3-19.6608MHZ-D2Y-T ABM3-20.000MHZ-D2Y-T ABM3-22.1184MHZ-D2Y-T ABM3-24.000MHZ-D2Y-T ABM3-24.576MHZ-D2Y-T ABM3-25.000MHZ-D2Y-T ABM3-27.000MHZ-D2Y-T ABM3-30.000MHZ-D2Y-T ABM3-32.000MHZ-D2Y-T ABM3-33.000MHZ-D2Y-T ABM3-40.000MHz-D2Y-F-T ABM3-48.000MHZ-D2Y-F-T ABM3-50.000MHz-D2Y-F-T ABM3-9.8304MHZ-D2Y-T ABM3-48000MHZ-B4Y-T ABM3-36000MHZ-B4Y-T ABM3-110592MHZ-B4Y-T ABM3-196608MHZ-B4Y-T ABM3-13000MHZ-B4Y-T ABM3-30000MHZ-B4Y-T ABM3-12288MHZ-B4Y-T ABM3-13560MHZ-B4Y-T ABM3-16384MHZ-B4Y-T ABM3-32000MHZ-B4Y-T ABM3-24000MHZ-B4Y-T ABM3-18432MHZ-B4Y-T ABM3-26000MHZ-B4Y-T ABM3-25000MHZ-B4Y-T ABM3-8000MHZ-B4Y-T ABM3-15000MHZ-B4Y-T ABM3-20000MHZ-B4Y-T ABM3-12000MHZ-B4Y-T ABM3-33000MHZ-B4Y-T ABM3-27000MHZ-B4Y-T ABM3-98304MHZ-B4Y-T ABM3-147456MHZ-B4Y-T ABM3-294912MHZ-B4Y-T ABM3-40000MHZ-B4Y-T ABM3-16000MHZ-B4Y-T ABM3-221184MHZ-B4Y-T ABM3-24576MHZ-B4Y-T ABM3-10000MHZ-B4Y-T ABM3-1431818MHZ-B4Y-T ABM3-8192MHZ-B4Y-T ABM3-22.1184MHZ-B4Y-T ABM3-8.000MHZ-B4Y-T ABM3-16.384MHZ-B4Y-T ABM3-27.000MHZ-B4Y-T ABM3-10.000MHZ-B4Y-T ABM3-19.6608MHZ-B4Y-T ABM3-33.000MHZ-B4Y-T ABM3-24.000MHZ-B4Y-T ABM3-12.288MHZ-B4Y-T ABM3-29.4912MHZ-B4Y-T ABM3-20.000MHZ-B4Y-T ABM3-30.000MHZ-B4Y-T ABM3-26.000MHZ-B4Y-T ABM3-16.000MHZ-B4Y-T ABM3-13.000MHZ-B4Y-T ABM3-8.192MHZ-B4Y-T ABM3-32.000MHZ-B4Y-T ABM3-9.8304MHZ-B4Y-T ABM3-48.000MHZ-B4Y-T ABM3-11.0592MHZ-B4Y-T ABM3-15.000MHZ-B4Y-T ABM3-40.000MHZ-B4Y-T ABM3-24.576MHZ-B4Y-T ABM3-25.000MHZ-B4Y-T ABM3-12.000MHZ-B4Y-T ABM3-18.432MHZ-B4Y-T ABM3-14.31818MHZ-B4Y-T ABM3-13.560MHZ-B4Y-T ABM3-14.7456MHZ-B4Y-T ABM3-36.000MHZ-B4Y-T