

7.0 x 5.0 x 1.3 mm

# MICROPROCESSOR CRYSTALS CERAMIC SURFACE MOUNT MINIATURE ABMM and ABMM1

## FEATURES:

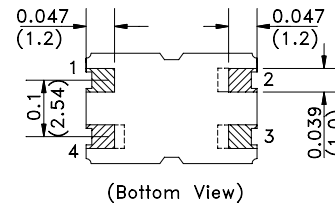
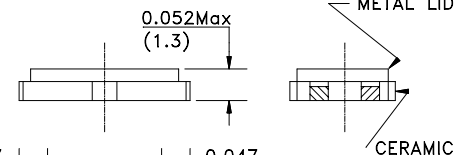
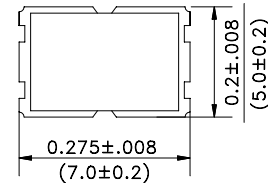
- Low in height; (1.1 mm) suitable for thin equipment.
- AT strip cut offering a tight tolerance and stability.
- Ceramic package assures high reliability.
- Suitable for solder reflow.
- Ceramic lid option (-K) See Note.

## APPLICATIONS:

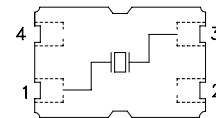
- PCMCIA applications. • Suitable for thin equipment.

## STANDARD SPECIFICATIONS

Frequency Range	<b>8.000MHz - 125MHz</b> (See note)
Operation Mode	8.0MHz ~ 33MHz (Fundamental) 33.01MHz ~ 125MHz (3rd overtone)
Operating Temperature	-10°C to + 60°C (See Options)
Storage Temperature	-40°C to +85°C
Frequency Tolerance @ 25°C	±50ppm max. (See Options)
Frequency Stability over Temp.	±50ppm max. (See Options) ±100ppm max. @ -10°C to +60°C (FB)
Equivalent Series Resistance (ESR) Fundamental	70 Ω max. for 8.0MHz ≤ F < 12.0MHz 50 Ω max. for 12MHz ≤ F < 20.0MHz 40 Ω max. for 20.0MHz ≤ F ≤ 33.0MHz
3rd Overtone	80 Ω max. for 33.0MHz < F ≤ 125MHz
Shunt Capacitance C <sub>0</sub>	7pF max.
Load Capacitance C <sub>L</sub>	18pF (See Options)
Drive Level	500μW max, 100μW correlation
Aging @ 25°C per Year	±5ppm max.
Insulation Resistance:	500M Ω min. at 100Vdc ±15V

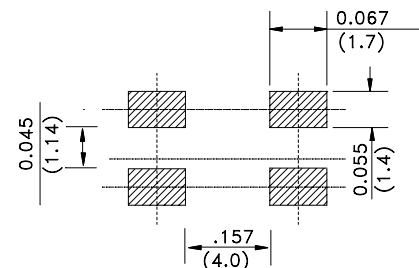


(Bottom View)



(Top View)

Recommended Land Pattern



Environmental, and mechanical specifications, see appendix C. Group 2.

Marking, see appendix G. Tape and Reel, see appendix H.(1,000 pcs/reel)

Reflow profile, see appendix E. Recommended handling, see appendix F.

Application notes, see appendix A.

**Note:** Please contact us for availability above 100MHz

## ORDERING OPTIONS

**ABMMX - Frequency - CL - ESR - Temperature - Tolerance - Stability - Lid Material - Mode - Packaging**

Blank or 1

RXXX  
(value in Ω)

XX.XXXX MHz

Load cap.in pF or  
-S for Series

-E for 0°C to +70°C  
-B for -20°C to +70°C  
-C for -30°C to +70°C  
-N for -30°C to +85°C  
-D for -40°C to +85°C

-1 for ± 10ppm  
-7 for ± 15ppm  
-2 for ± 20ppm  
-3 for ± 25ppm  
-4 for ± 30ppm

-Y for ± 10ppm max.\*  
-G for ± 15ppm max.\*  
-X for ± 20ppm max.\*  
-W for ± 25ppm max.\*  
-Y for ± 30ppm max.\*  
-H for ± 35ppm max.\*

-K  
(Ceramic Lid)

-T  
(Tape & Reel)

-F (for Fundamental AT ≥ 33MHz)  
-FB (Fundamental BT)\*\*

PACKAGE	H MAX.
ABMM	0.052 (1.3)
ABMM1	0.043 (1.1)

Dimensions:  
Inches (mm)

Contact us for tighter tolerance and stability.

Certain restrictions apply on selected frequencies and frequency stabilities.

\* Please contact us for availability.

\*\* ±100ppm max. stability  
from -10°C. to 60°C only.



NOTE: Left blank if standard • All specifications and markings subject to change without notice

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