CERAMIC SMD CRYSTAL

ABM3C RoHS/RoHS II Compliant





ABM3C Series products with the Date Code/Traceability Code marking ending in "X" are Glass-Sealed and the following RoHS Exemption applies:

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

ABM3C Series products with the Date Code/Traceability Code marking ending in "C" and "F" are Seam-Sealed and are Pb-Free.

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

FEATURES:

- Low height; suitable for thin equipment.
- New seam sealed package available (code "C")
- Tight tolerance and stability available.
- Suitable for RoHS compliant reflow profile

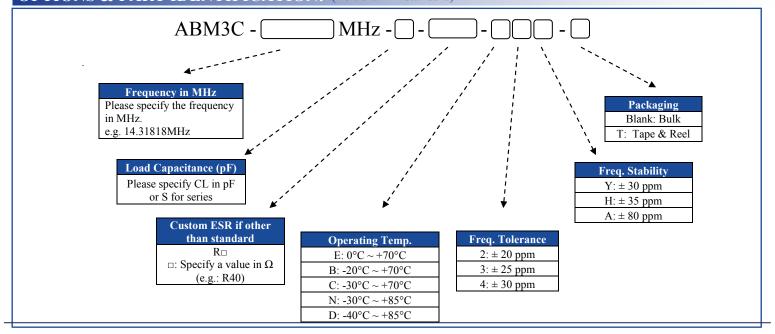
APPLICATIONS:

- High density applications.
- Modems, communication and test equipment.
- PMCIA, 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	52	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	@ $100 \text{Vdc} \pm 15 \text{V}$

OPTIONS & PART IDENTIFICATION: (Left blank if standard)





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ABRACON IS
ISO9001-2015
CERTIFIED

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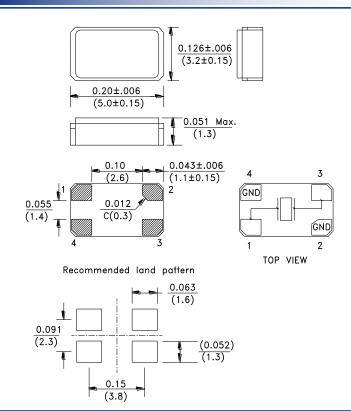
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5.0 x 3.2 x 1.3mm

OUTLINE DRAWING:



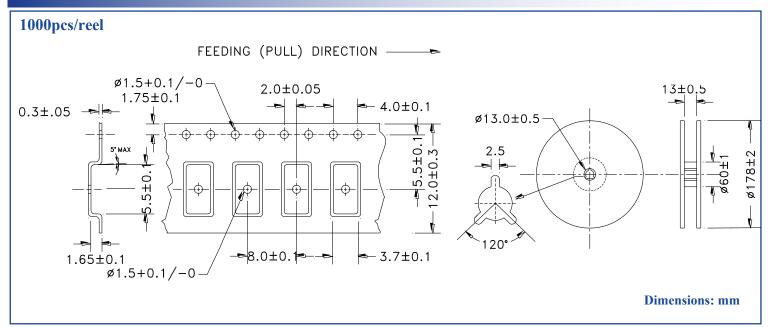
Sealing Method:

Glass Sealing for parts with Traceability Code ending in "X" Seam Sealing for parts with Traceability Code ending in "C" and "F"

Note: Due to material availability, the chamfer could be located on pin #1 or #2. Be advised that the chamfer location has no impact on the electrical performance of the device.

Dimensions: inches (mm)

TAPE & REEL:





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5.0 x 3.2 x 1.3mm

REFLOW PROFILE:

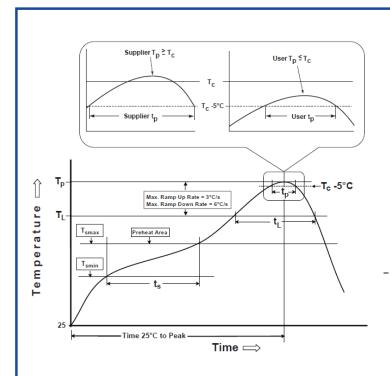


Table 1 SnPb Eutectic Process Classification Temperatures (Tc) Package Thickness Volume mm³ Volume mm³ >350 <2.5 mm</td> 235 °C 220 °C >2.5 mm 220 °C 220 °C

Table 2

Pb-Free Process Classification Temperatures (Tc) Volume mm³ Package Volume mm³ Volume mm³ Thickness <350 350-2000 >2000 260 °C 260 °C 260°C <1.6 mm 245 °C 1.6 mm - 2.5 mm 260°C 250 °C 250 °C 245 °C 245 °C >2.5 mm

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T _{smin})	100°C	150°C
Temperature maximum (T _{smax})	150°C	200°C
Time $(T_{smin} \text{ to } T_{smax})$ (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T _{smax} to T _P)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T _L)	183°C	217°C
Time at liquidous (t _L)	60 - 150 sec.	60 - 150 sec.
Peak package body temperature (T _P)*	see Table 1	see Table 2
Time (t _p)** within 5°C of the specified classification temperature (T _C)	20 sec.	30 sec.
Ramp-down rate (T _p to T _{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

^{*}Tolerance for peak profile temperature (T_P) is defined as a supplier minimum and a user maximum.

ATTENTION: Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.



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^{**}Tolerance for time at peak profile temperature (tp) is defined as supplier minimum and a user maximum.