

CERAMIC SMD CRYSTAL



ABM3C

RoHS/RoHS II Compliant

5.0 x 3.2 x 1.3mm

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

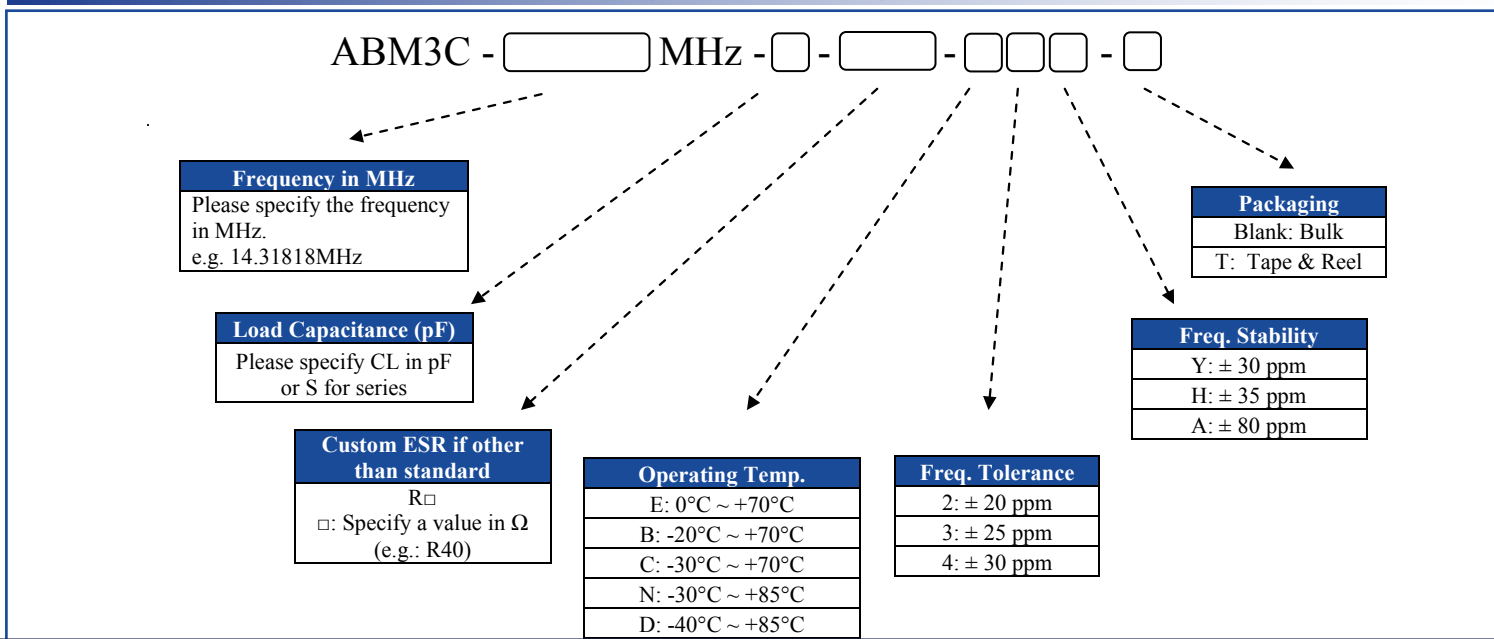
➤ **APPLICATIONS:**

- High density applications.
- Modems, communication and test equipment.
- 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)



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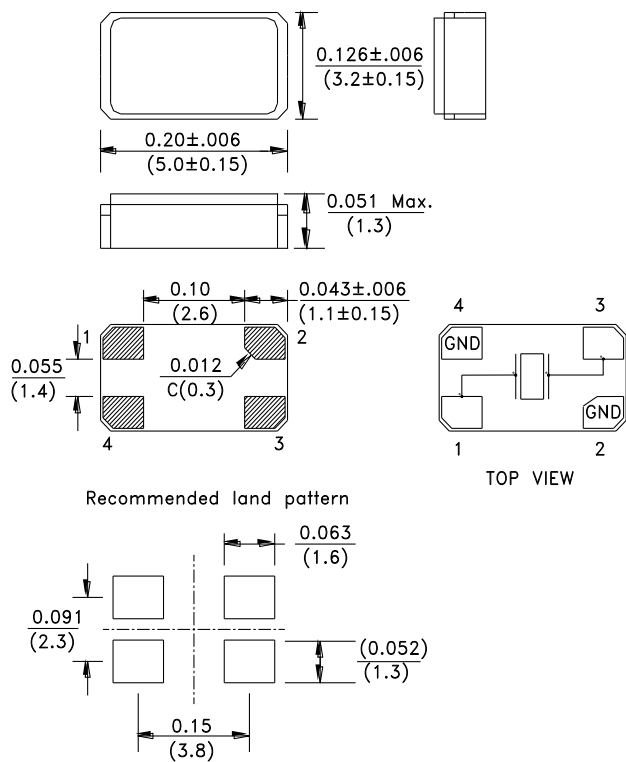
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OUTLINE DRAWING:



Sealing Method :

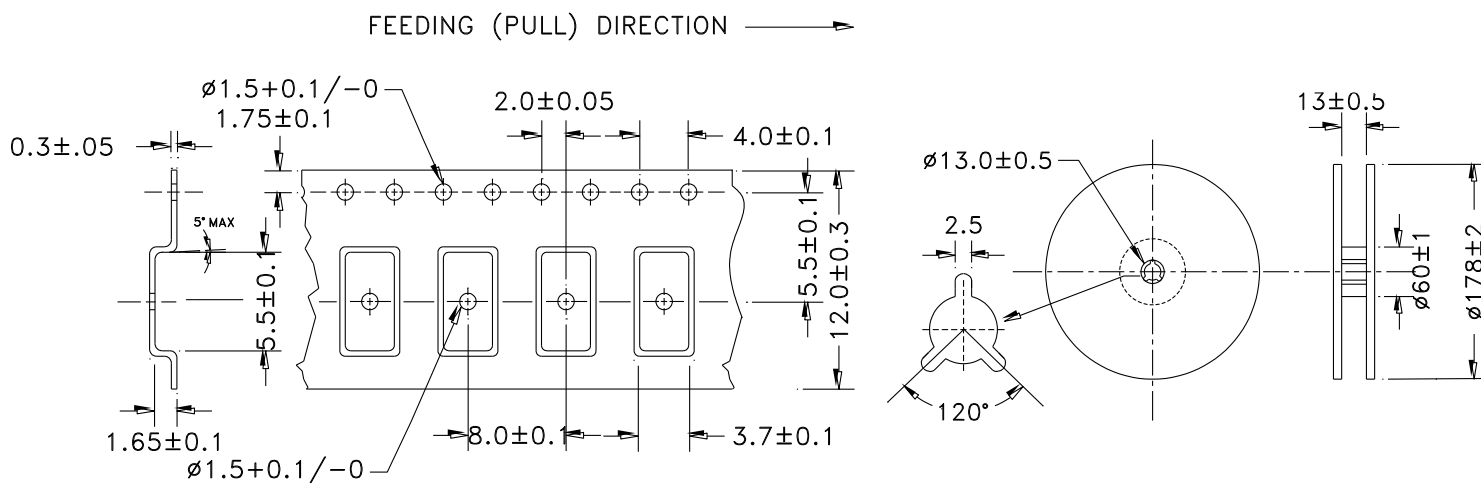
Glass Sealing for parts with Traceability Code ending in "X"
 Seam Sealing for parts with Traceability Code ending in "C" and "F"

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:

1000pcs/reel



Dimensions: mm



REFLOW PROFILE:

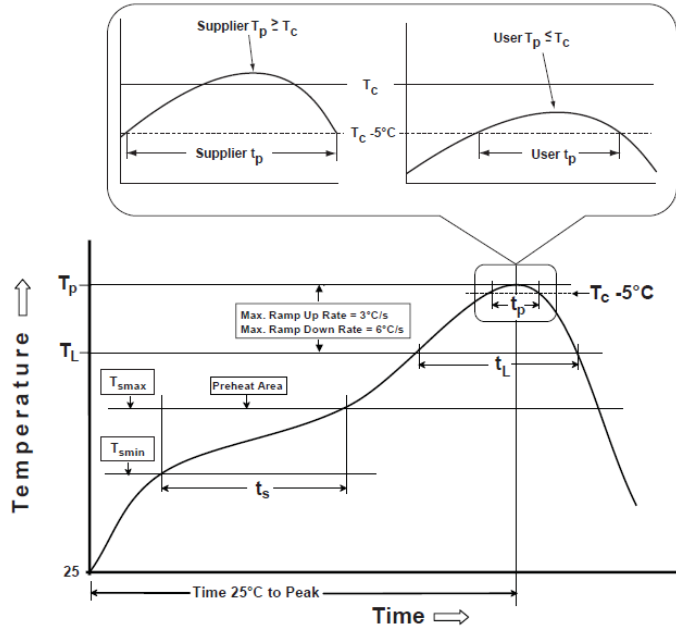


Table 1

SnPb Eutectic Process Classification Temperatures (T _c)		
Package Thickness	Volume mm ³ <350	Volume mm ³ >350
<2.5 mm	235 °C	220 °C
>2.5 mm	220 °C	220 °C

Table 2

Pb-Free Process Classification Temperatures (T _c)			
Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

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} 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.

**Tolerance for time at peak profile temperature (t_p) is defined as 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.