



# THE DATASHEET OF ABM3C-30.000MHZ-D4Y-T

# 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.
- 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		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

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

# CERAMIC SMD CRYSTAL

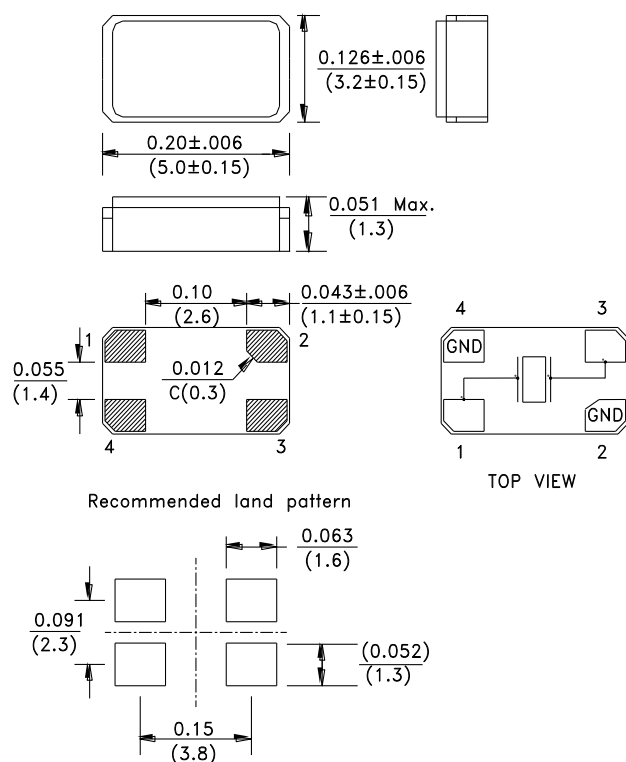
ABM3C

RoHS/RoHS II Compliant



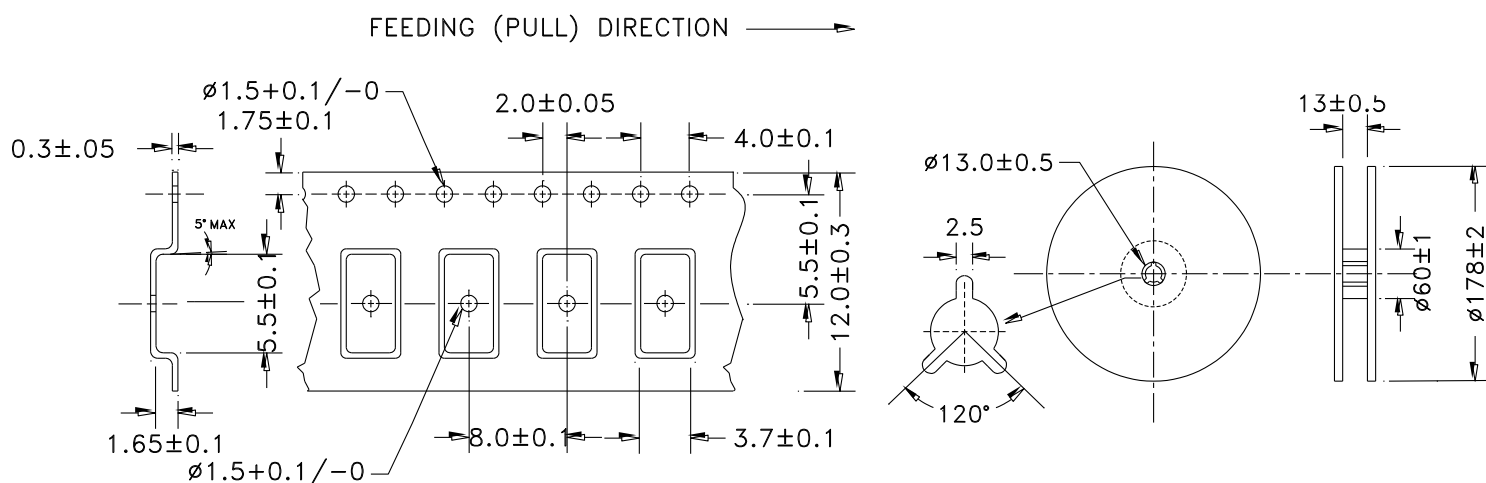
5.0 x 3.2 x 1.3mm

## OUTLINE DRAWING:



## TAPE & REEL:

1000pcs/reel





### REFLOW PROFILE:

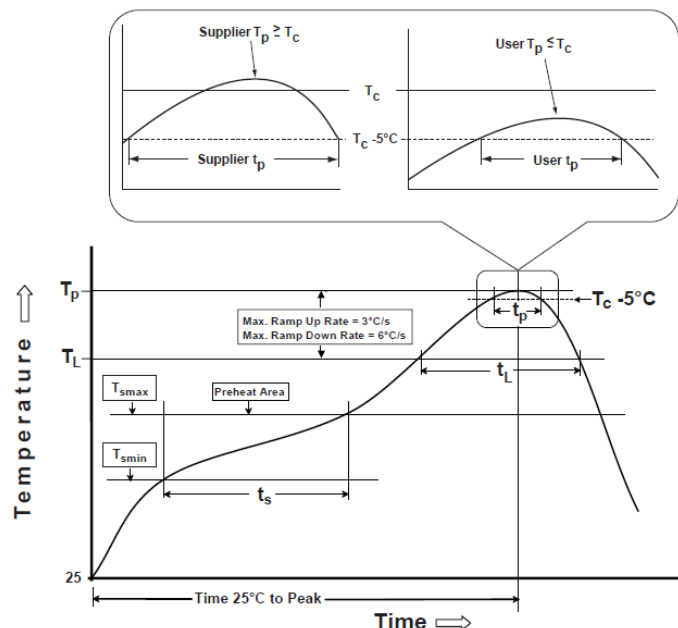


Table 1

SnPb Eutectic Process  
Classification Temperatures ( $T_c$ )

Package Thickness	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> >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 <sup>3</sup> <350	Volume mm <sup>3</sup> 350-2000	Volume mm <sup>3</sup> >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.

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