

# CERAMIC SMD CRYSTAL

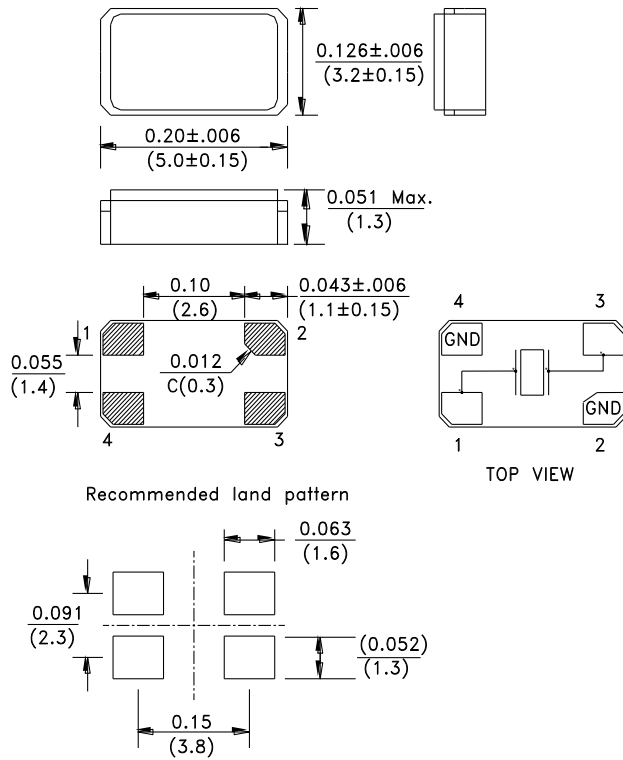
ABM3C

RoHS/RoHS II Compliant



5.0 x 3.2 x 1.3mm

## OUTLINE DRAWING:



### Sealing Method :

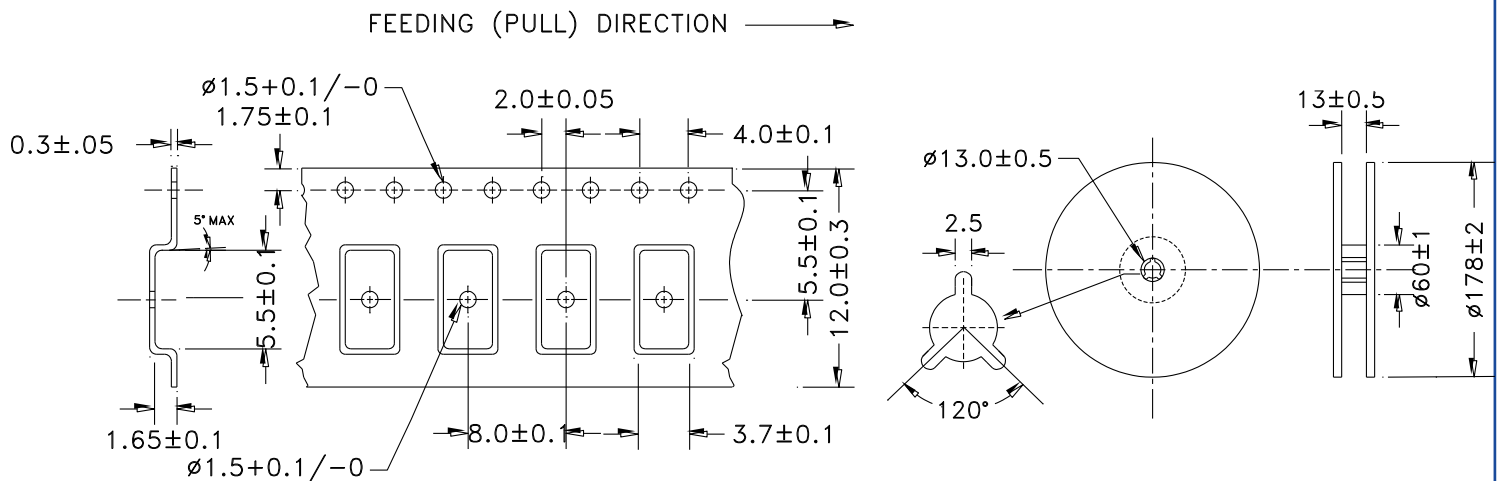
Glass Sealing for parts with Traceability Code ending in "X"  
Seam Sealing for parts with Traceability Code ending in "C" and "F"

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:

1000pcs/reel



Dimensions: mm



### REFLOW PROFILE:

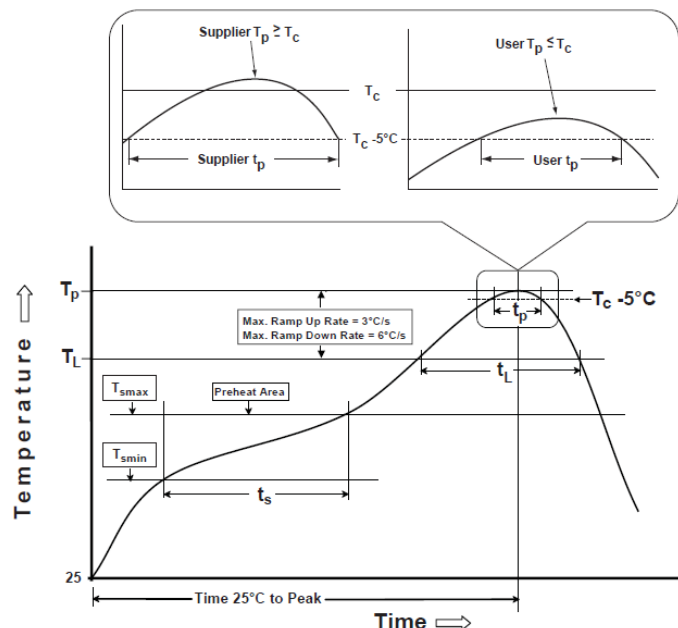


Table 1

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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