

# AEC-Q200 Automotive Mini Molded Power Inductor



**AOTA-C322512Q**

Request Samples



Check Inventory



**3.2 x 2.5 x 1.2mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Features

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)
- Shielded construction
- Soft saturation
- Low DCR, High Efficiency
- High temperature current rating

## Applications

- Body electronics and comfort system
- Infotainment and entertainment
- Electric vehicles
- Lighting
- Solar inverters and power
- Industrial and robotics
- Medium and high-power switch mode power supplies.

## Electrical Specifications

Part Number*	Inductance	Tolerance	DC Resistance		Saturation Current		Temperature Rise Current	
	1MHz/1.0V		Typ.	Max	Typ.	Max	Typ.	Max
Units	μH	%	mΩ		A		A	
Symbol	L	M	DCR		Isat		Irms	
AOTA-C322512Q4R7	4.7	20	115	135	2.9	2.6	2.3	2.0
AOTA-C322512Q100	10.0	20	210	230	2.3	1.9	2.2	1.8

\*For complete part numbers, please refer to the Part Identification section.

### Test Conditions

**Isat:** DC current at which the inductance drops 30% from its initial value.

**Irms:** DC current that causes the temperature rise ( $\Delta T$ , approximate 40 °C) from 25°C ambient.

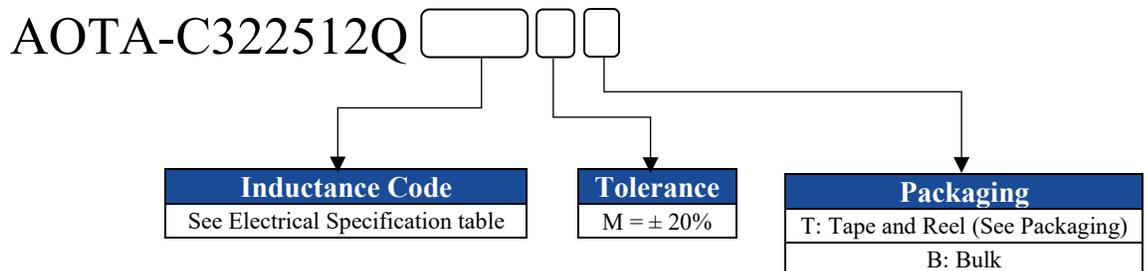
**Operating Temperature:** -55°C ~ +155°C (including self-temperature rise)

**Storage Condition:** -55°C ~ +155°C (on board), -10°C ~ +40°C (with packaging) and R.H. 70% max.

**AOTA-C322512Q Series is RoHS Compliant and Pb free.**

**AOTA-C322512Q is AEC-Q200 Automotive qualified (Grade 0)**

## Part Identification



12117 Bee Caves Rd Bldg-3, Ste 200  
 Bee Cave, TX 78738  
 Phone: 512-371-6159 | Fax: 512-351-8858  
 For terms and conditions of sales, please visit:  
[www.abracon.com](http://www.abracon.com)

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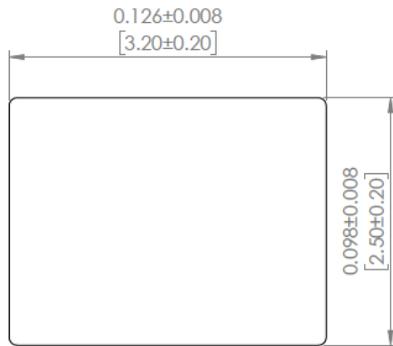


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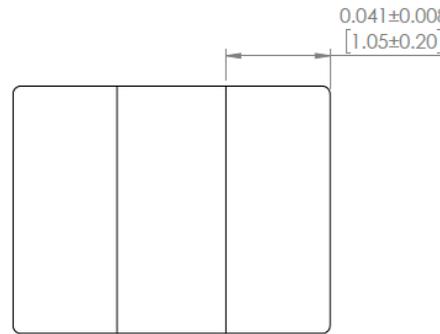


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## Mechanical Specifications



TOP VIEW

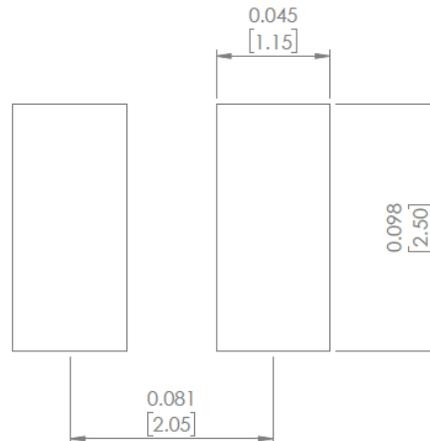


BOTTOM VIEW

## Recommended Land Pattern



FRONT VIEW



Dimensions: Inches[mm]

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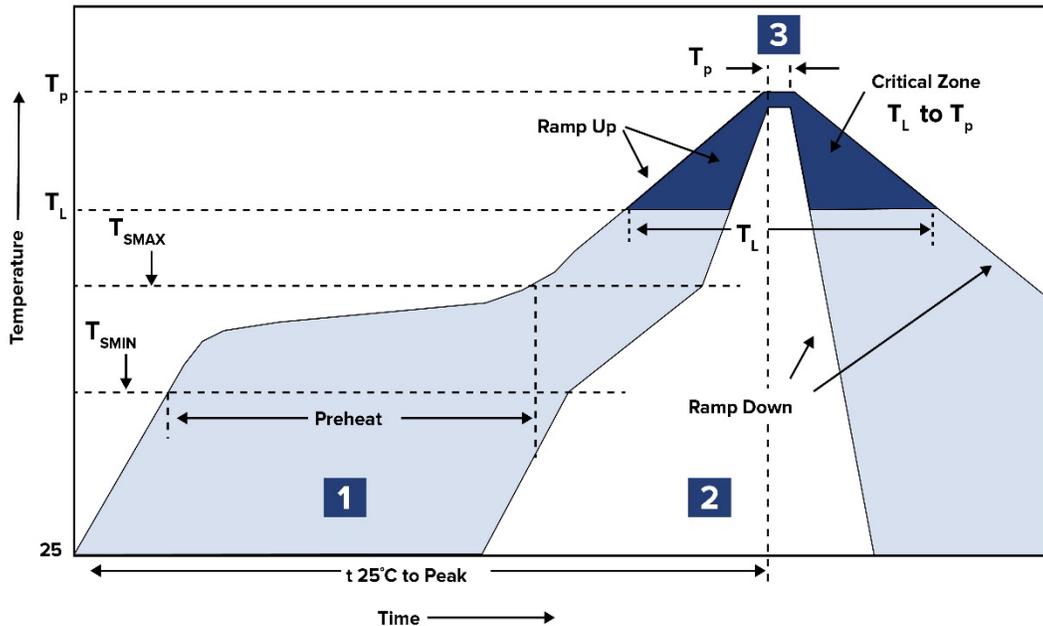


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	$T_L$ 230°C	40 sec. Max
3	Peak heat	$T_P$ 250°C	5 sec. MAX

Ref. solder paste: Sn/3.0Ag/0.5Cu

Ramp up rate: 3°C/s Max.

Ramp down rate: 6°C/s Max.



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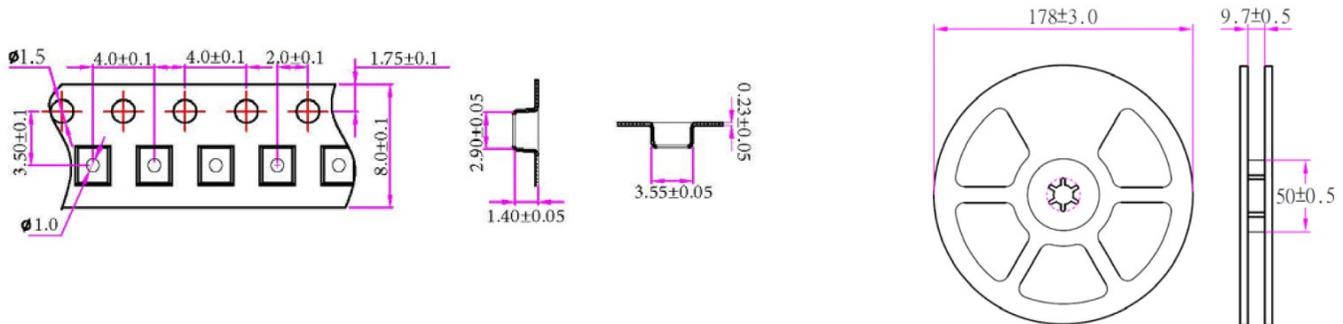
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## Packaging

**Tape & Reel: 3000 pcs/reel**



**Dimensions: mm**

**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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