

# AEC-Q200 Automotive Mini Molded Power Inductor



AOTA-C201612Q

Request Samples



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2.0 x 1.6 x 1.2mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Features

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 Grade qualified (-55°C ~ +125°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.
Units	µH	%	mΩ		A		A	
Symbol	L	M	DCR		Isat		Irms	
AOTA-C201612Q3R3	3.3	20	135	165	2.7	2.3	2.4	2.0
AOTA-C201612Q4R7	4.7	20	160	185	2.2	2.0	2.0	1.8

\*For full 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 20°C ambient.

**Operating Temperature:** -55°C ~ +125°C (including self-temperature rise)

**Storage Condition:** -55°C ~ +125°C (on board), -10°C ~ +40°C (with packaging) and R.H. 70% max.

**AOTA-C201612Q Series is RoHS Compliant and Pb free.**

**AOTA-C201612Q is AEC-Q200 Automotive qualified**

## Part Identification

AOTA-C201612Q



Inductance Code

See Electrical Specification table

Tolerance

M = ± 20%

Packaging

T: Tape and Reel (See Packaging)

Blank: Bulk

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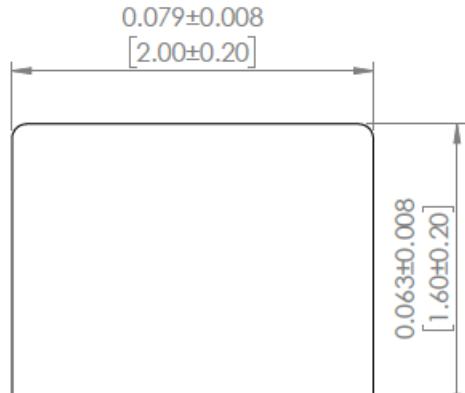
AOTA-C201612Q

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## Mechanical Specifications

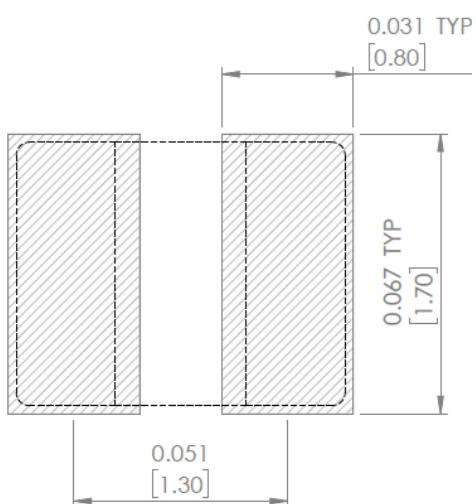
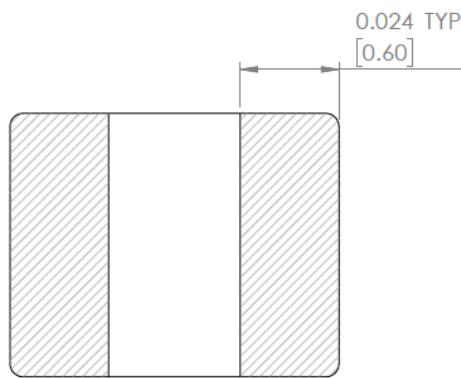


TOP VIEW



FRONT VIEW

## Recommended Land Pattern



Dimensions: Inches[mm]

 ABRACON

12117 Bee Caves Rd Bldg-3, Ste 200

Bee Cave, TX 78738

Phone: 512-371-6159 | Fax: 512-351-8858

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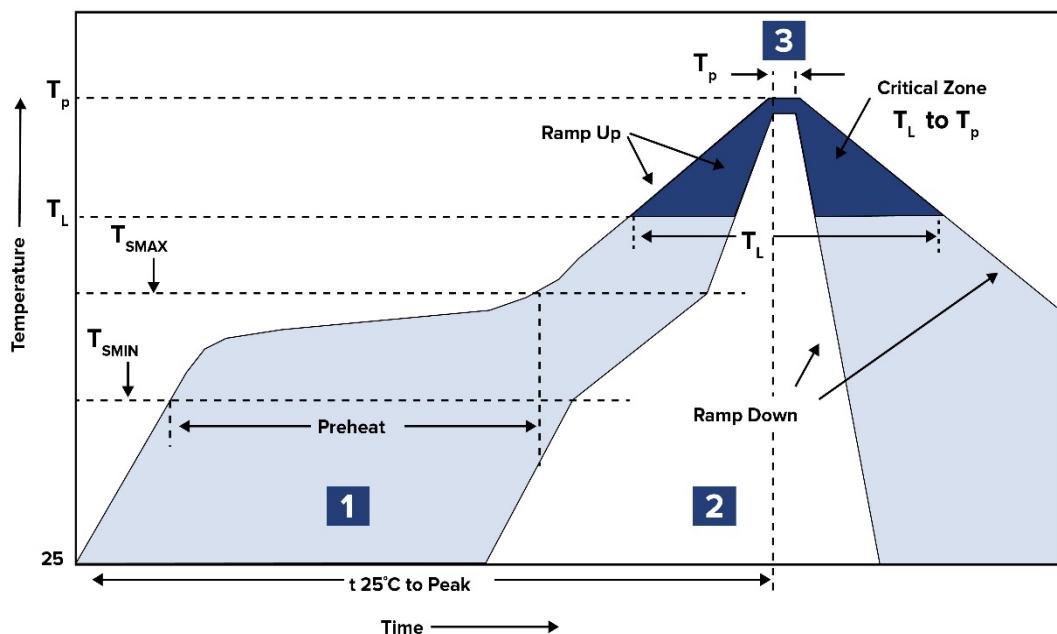


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 170°C ~ 200°C	60 ~ 120 sec.
2	Reflow	$T_L$ 230°C	40 sec. MAX
3	Peak heat	$T_p$ 260°C	10 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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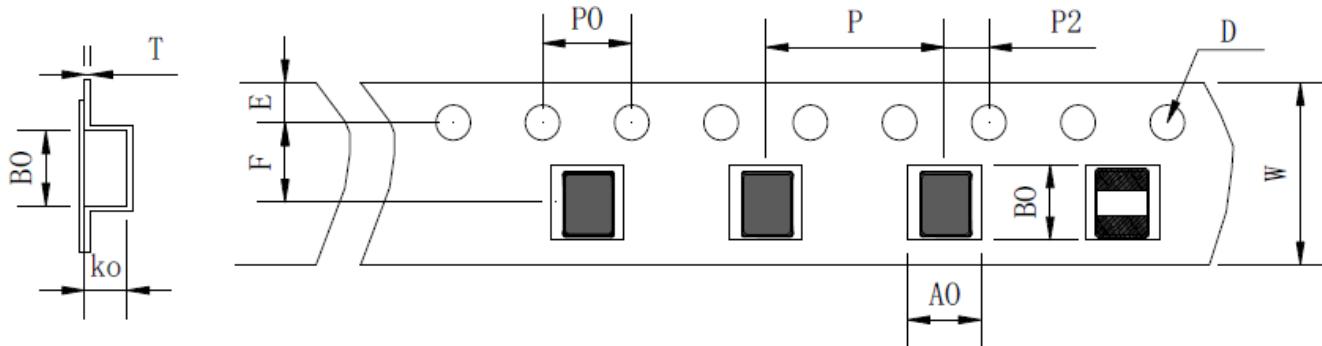
Check Inventory



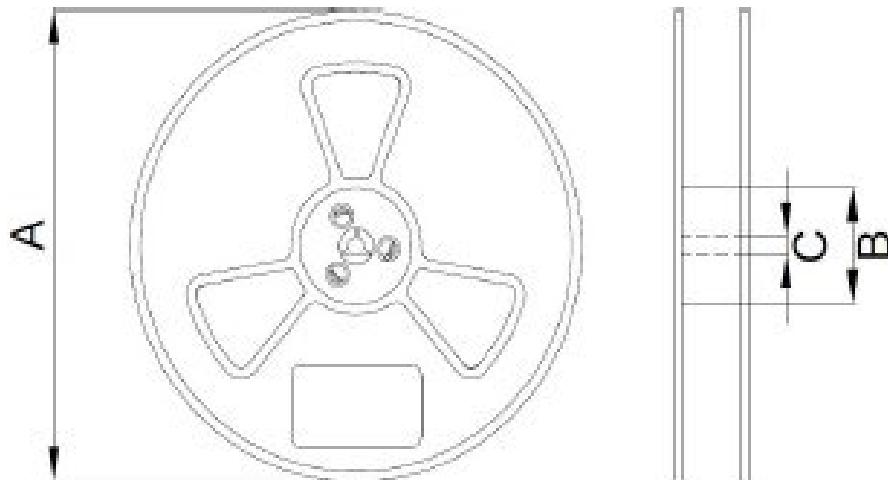
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## Packaging

Tape & Reel: 3000 pcs/reel



W	A0	B0	K0	D	F	E	P	P0	P2	T
8.0 ±0.2	1.95 ±0.1	2.35 ±0.1	1.4 ±0.1	1.5 ±0.1	3.5 ±0.1	1.75 ±0.1	4.0 ±0.1	4.0 ±0.1	2.0 ±0.1	0.25 ±0.05



Item	Dimensions
A	178 ±1.0
B	60 ±1.0
C	13 ±0.5

**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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