

AEC-Q200 Automotive Mini Molded Power Inductor



AOTA-B322512Q

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 (-50°C ~ +150°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-B322512QR10M	0.10	20	5.0	9.0	14.0	12.0	11.0	8.0
AOTA-B322512QR24M	0.24	20	6.0	11	13.4	11.5	9.5	7.0
AOTA-B322512QR33M	0.33	20	10	15	9.5	8.6	7.3	6.0
AOTA-B322512QR47M	0.47	20	16	21	8.2	7.0	6.1	5.3
AOTA-B322512Q1R0M	1.0	20	30	36	5.2	4.6	4.4	4.0
AOTA-B322512Q1R5M	1.5	20	45	54	4.5	4.0	3.5	3.2
AOTA-B322512Q2R2M	2.2	20	62	75	3.8	3.3	3.0	2.7
AOTA-B322512Q3R3M	3.3	20	97	113	2.9	2.5	2.5	2.3

*For full part numbers 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 (ΔT , approximate 40 °C) from 25°C ambient.

Operating Temperature: -50°C ~ +150°C (including self-temperature rise)

Storage Condition: -50°C ~ +150°C (on board), -10°C ~ +40°C (with packaging) and R.H. 70% max.

AOTA-B322512Q Series is RoHS Compliant and Pb free.

AOTA-B322512Q is AEC-Q200 Automotive qualified (Grade 0)



12117 Bee Caves Rd Bldg-3, Ste 200
 Bee Cave, TX 78738
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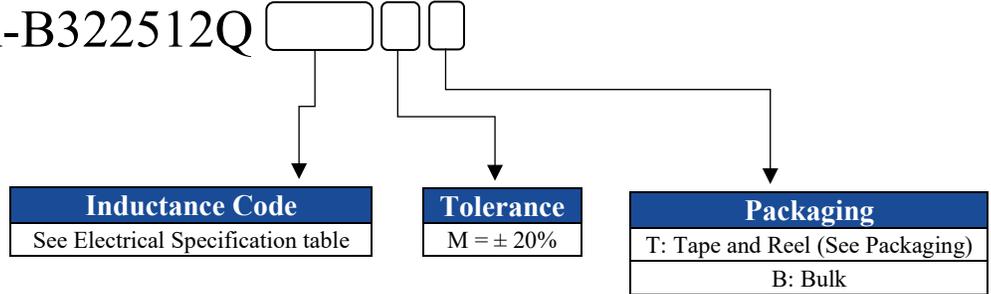
Check Inventory



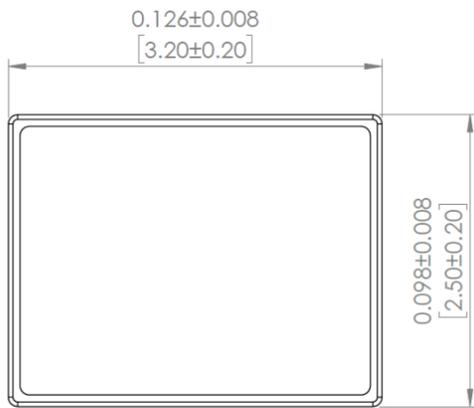
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Part Identification

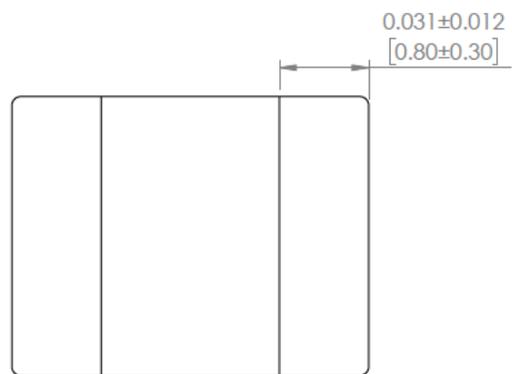
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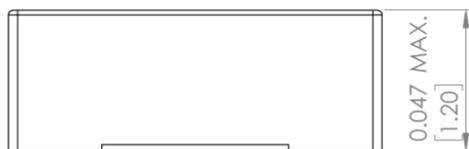
Mechanical Specifications



TOP VIEW

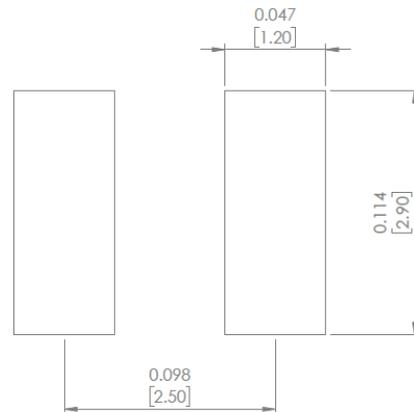


BOTTOM VIEW



FRONT VIEW

Recommended Land Pattern



Marking on Top view is for illustration purposes only

Dimensions: Inches[mm]



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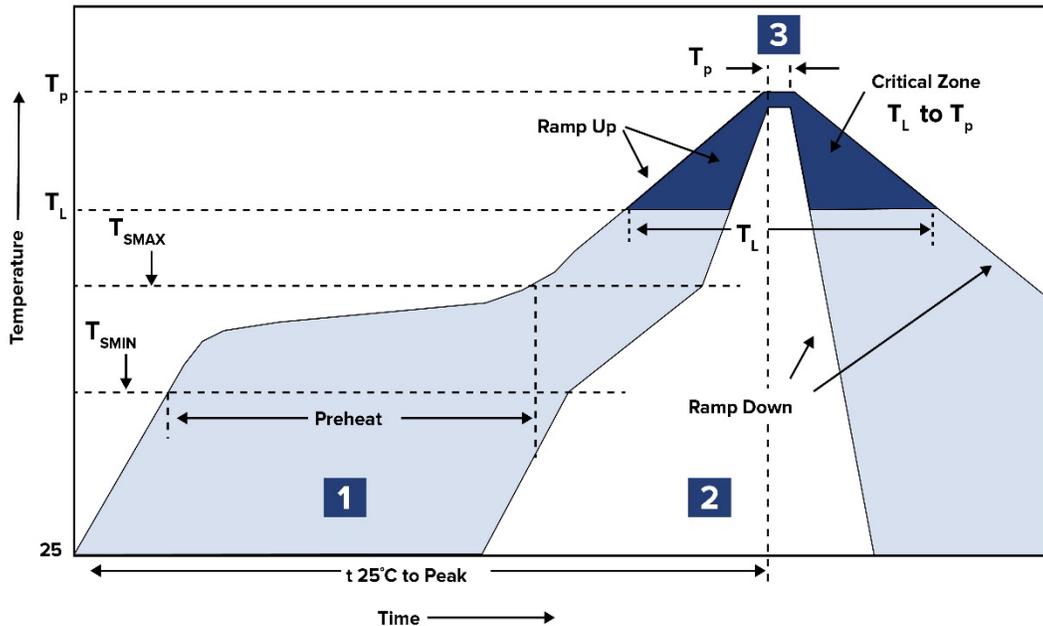


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 90 sec.
3	Peak heat	T_P 260°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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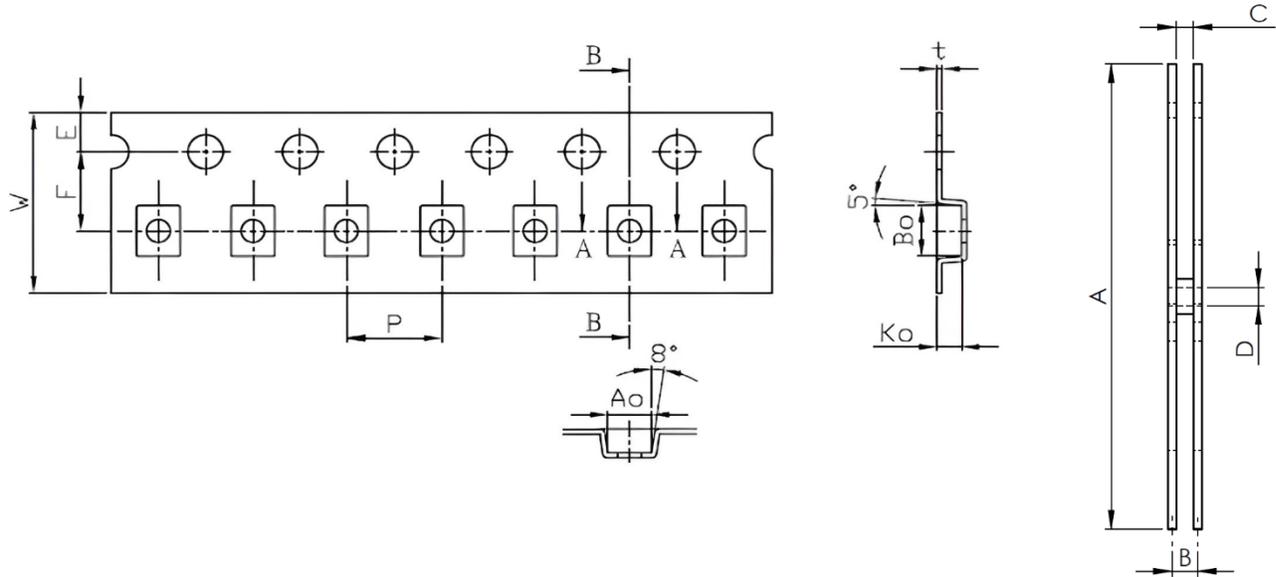
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Packaging

Tape & Reel: 2000 pcs/reel



W	F	E	P	Ao	Bo	K0	t	A	B	C	D
8.0 ±0.1	3.5 ±0.05	1.75 ±0.1	4.0 ±0.1	2.8 ±0.1	3.5 ±0.1	1.35 ±0.1	0.25 ±0.05	178 ±2.0	14.4 Max.	8.4 +1.5/-0.0	13.5 ±0.2

Dimensions: mm

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