

Molded Inductor



AMPLA4020Q

Request Samples



Check Inventory



4.4 x 4.0 x 1.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- AEC-Q200 Qualified
- Shielded construction
- Soft saturation
- Low DCR per cubic mm
- Designed for switching frequencies between 100KHz-2MHz Feature 4

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 (uH)	Tolerance (%)	Irms (A)	Isat (A)	DC Resistance (mΩ)		Type
					Typ	Max	
AMPLA4020Q-R10NT	0.10	30	14	35	3.2	4	Lead Frame
AMPLA4020Q-R18NT	0.18	30	13.5	28	4.6	5.4	Lead Frame
AMPLA4020Q-R22NT	0.22	30	13	24	6.6	7.3	Lead Frame
AMPLA4020Q-R33MT	0.33	20	10	18	7.8	8.6	Lead Frame
AMPLA4020Q-R47MT	0.47	20	8.0	12	11.2	14	Lead Frame
AMPLA4020Q-R56MT	0.56	20	7.3	10	13.5	16	Lead Frame
AMPLA4020Q-R68MT	0.68	20	7.0	10	16	19	Lead Frame
AMPLA4020Q-1R0MT	1	20	5.0	8.5	22	27	Lead Frame
AMPLA4020Q-1R2MT	1.2	20	4.8	7.8	25	30	Lead Frame
AMPLA4020Q-1R5MT	1.5	20	4.5	7.0	34.8	42	Lead Frame
AMPLA4020Q-2R2MT	2.2	20	4.0	6.0	51	61	Lead Frame
AMPLA4020Q-3R3MT	3.3	20	3.5	4.0	69	76	Lead Frame
AMPLA4020Q-4R7MT	4.7	20	2.6	3.5	95	105	Lead Frame
AMPLA4020Q-5R6MT	5.6	20	2.2	3.0	112	125	Lead Frame
AMPLA4020Q-6R8MT	6.8	20	2.1	2.8	150	172	Lead Frame
AMPLA4020Q-8R2MT	8.2	20	2.0	2.5	158	180	Lead Frame
AMPLA4020Q-100MT	10	20	1.8	2.3	215	243	Lead Frame
AMPLA4020Q-150MT	15	20	1.5	1.9	325	374	Lead Frame
AMPLA4020Q-220MT	22	20	1.2	1.4	470	500	Lead Frame

* Please refer to Part Identification Section

Test Conditions: Inductance: 100 KHz, 1 V, 0 Adc

Humidity Range: 85 ± 2% RH

Temperature Rise Current: Current measured when ΔT of 40°C

Saturation Current: Current measured when ΔL of 10%

General Specifications

Operating Temperature: -55°C to +125°C with (40°C rise) Irms current.

Maximum Part Temperature: +125°C

Tape and Reel packaging Temperature: -10°C to +40°C

AMPLA4020Q series is **RoHS/ RoHS II Compliant and Pb free.**

AEC-Q200 Qualified



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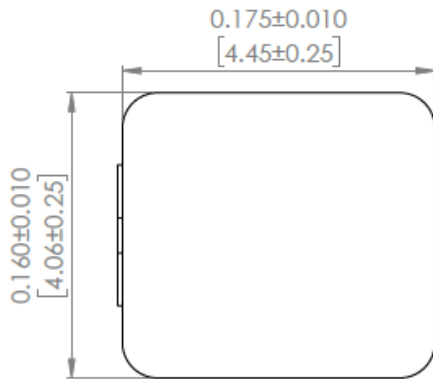


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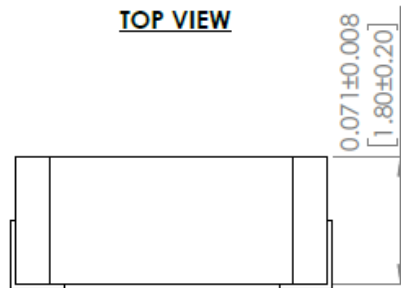
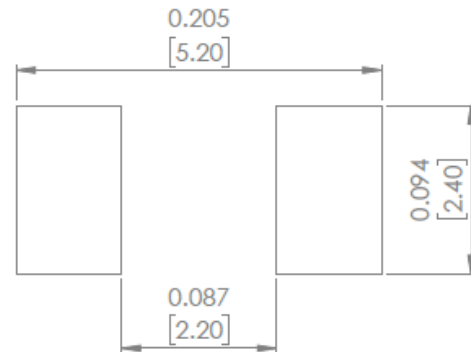
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Mechanical Specifications

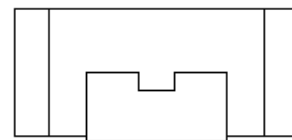


TOP VIEW

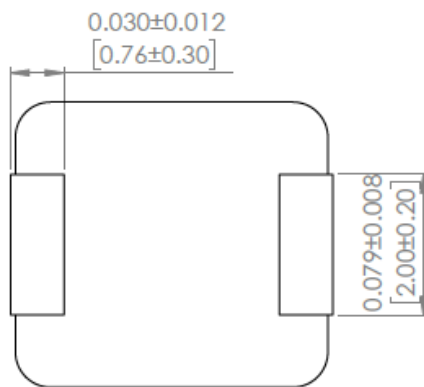
RECOMMENDED LAND PATTERN



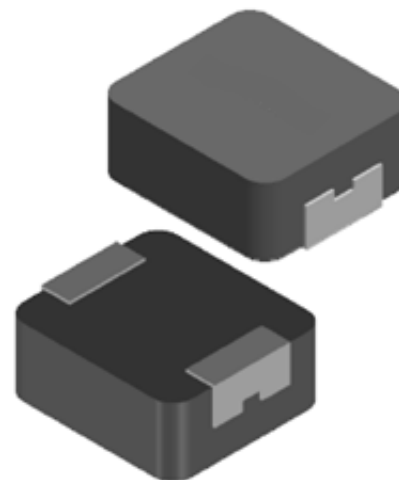
FRONT VIEW



SIDE VIEW



BOTTOM VIEW



Dimensions: inch/[mm]



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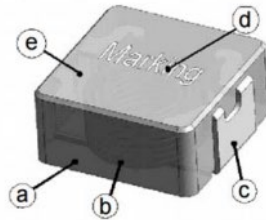


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Mechanical Specifications



- (a) Core
- (b) Wire
- (c) Terminal
- (d) Ink
- (e) Paint

Part Identification

AMPLA4020Q -

Inductance Code
Refer to Electrical Specification table E.g. 1R0

Tolerance
M: 20%
N: 30%

Packaging
T: 3,000 pcs/reel

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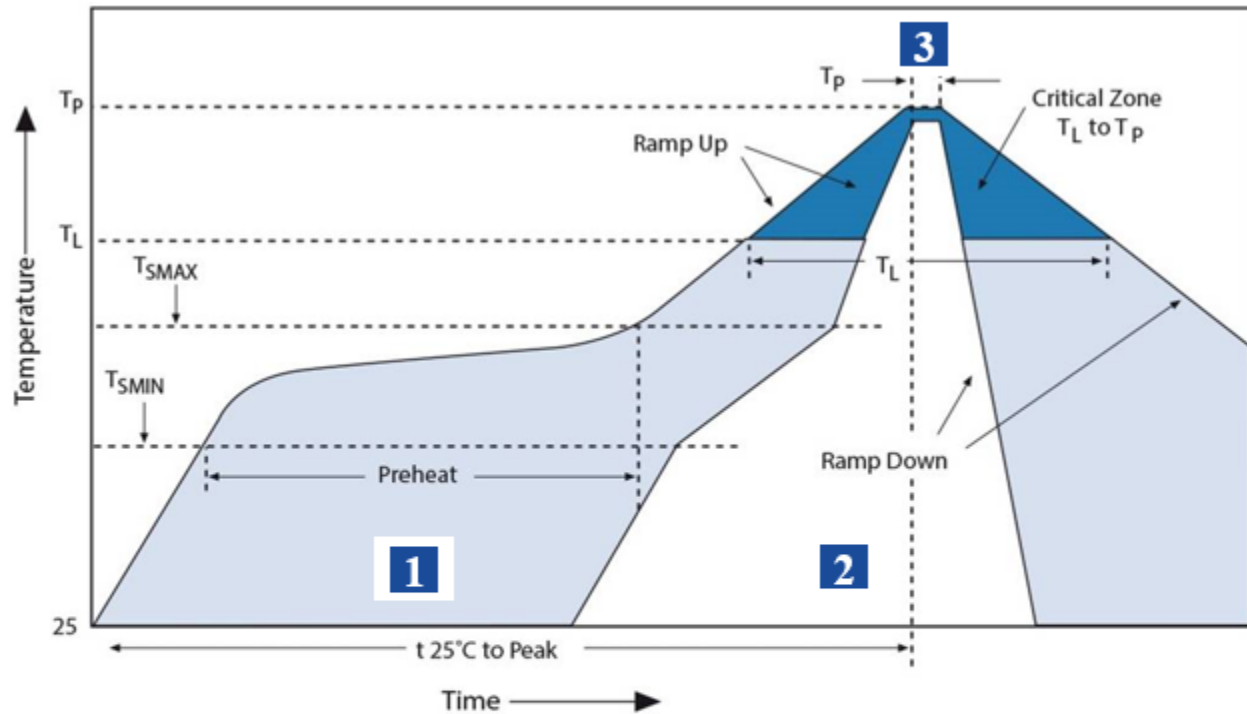


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_P 260°C	10 sec. MAX

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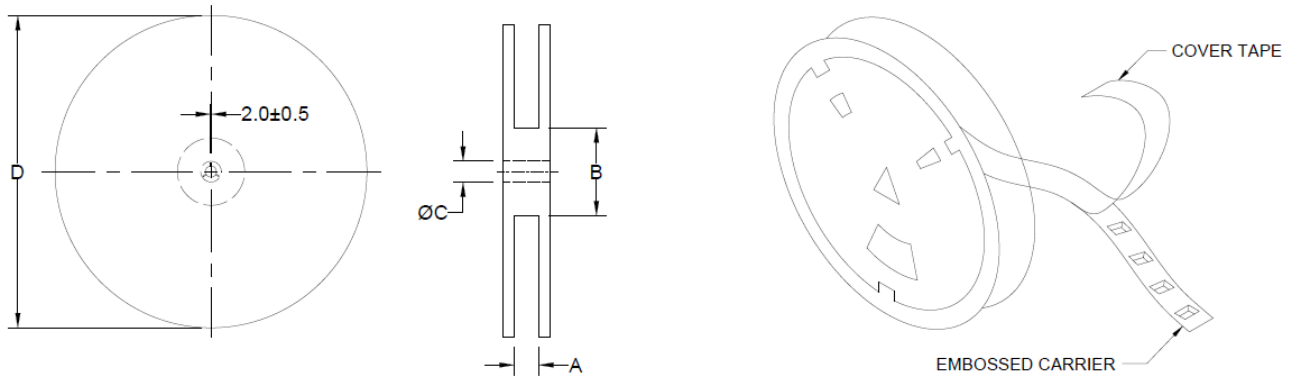
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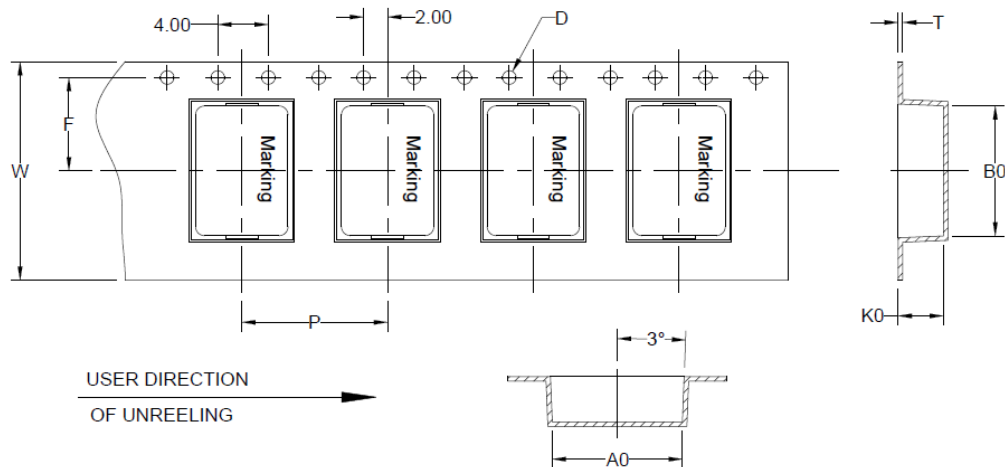
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Packaging

T: Tape and Reel (3,000 pcs/reel)



Type	A	B	C	D
13" x 12 mm	12.4 +2/-0	100 ± 2.0	13.0 +0.5/-0.2	330



B ₀	A ₀	K ₀	P	W	F	T	D
5.0 ± 0.1	4.4 ± 0.1	2.3 ± 0.1	8.0 ± 0.1	12.0 ± 0.3	5.5 ± 0.1	0.35 ± 0.05	1.5

Dimensions: mm

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