

Molded Power Inductor



AMPLA5030S

Request Samples



Check Inventory



5.7 x 5.2 x 2.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Shielded construction.
- Soft saturation.
- High current density.
- Designed for switching frequencies between 100KHz-2MHz.
- Automotive option available upon request

Applications

- Power electronics such as DC-DC converters, inverters and voltage regulators.
- Industrial applications, robotics, instrumentation and control systems.
- IoT devices, smart home, automation systems

Electrical Specifications

Part Number*	Inductance (uH)	Tolerance (%)	Irms (A)	Isat (A)	DC Resistance (mΩ)		Type
					Typ	Max	
AMPLA5030S-R10NT	0.10	30	23	27	2.5	3.0	Lead Type
AMPLA5030S-R20NT	0.20	30	16	25	2.6	3.2	Lead Type
AMPLA5030S-R22MT	0.22	20	15.5	21	3.7	4.4	Lead Type
AMPLA5030S-R33MT	0.33	20	14	18	4.3	5.0	Lead Type
AMPLA5030S-R47MT	0.47	20	12	16	6.4	7.4	Lead Type
AMPLA5030S-R68MT	0.68	20	8.5	14	10	12	Lead Type
AMPLA5030S-1R0MT	1.0	20	7.0	11	13	14	Lead Type
AMPLA5030S-1R2MT	1.2	20	6.5	11	14	16	Lead Type
AMPLA5030S-1R5MT	1.5	20	6.0	10	16	25	Lead Type
AMPLA5030S-2R2MT	2.2	20	5.5	9.0	25	35	Lead Type
AMPLA5030S-3R3MT	3.3	20	5.0	8.0	32	38	Lead Type
AMPLA5030S-3R6MT	3.6	20	4.9	7.0	46	54	Lead Type
AMPLA5030S-4R7MT	4.7	20	4.6	6.0	50	53	Lead Type
AMPLA5030S-5R6MT	5.6	20	4.25	4.5	55	63	Lead Type
AMPLA5030S-6R8MT	6.8	20	4.0	4.3	68	76.2	Lead Type
AMPLA5030S-100MT	10	20	2.75	3.5	110	128	Lead Type
AMPLA5030S-150MT	15	20	2.1	2.6	165	190	Lead Type
AMPLA5030S-180MT	18	20	2.0	2.3	195	230	Lead Type
AMPLA5030S-220MT	22	20	1.9	1.7	220	250	Lead Type
AMPLA5030S-330MT	33	20	1.6	1.6	380	440	Lead Type

Test Conditions

Inductance: 100 KHz, 1 V, 0 ADC

Isat: DC current at which the inductance drops 30% from its value without current.

Irms: DC current that causes the temperature rise (ΔT , approximate 40 °C) from 25°C ambient.

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

Storage Condition: -55°C ~ +125°C (on board), -55°C ~ +85°C (with packaging) and R.H. 85 max

AMPLA5030S Series is RoHS Compliant and Pb free

AMPLA5030S Series is Moisture Sensitivity Level (MSL) – Level 1



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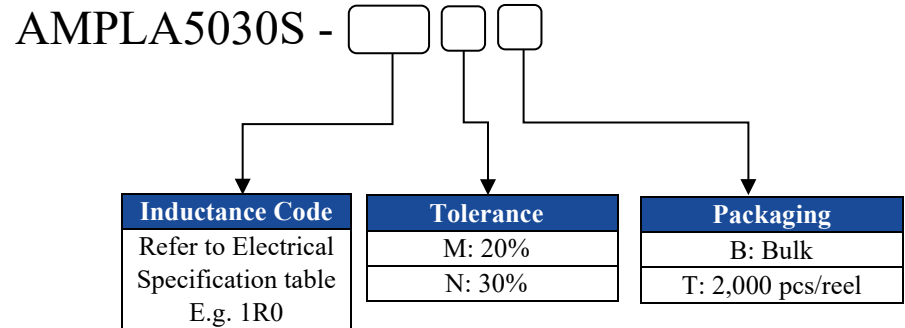


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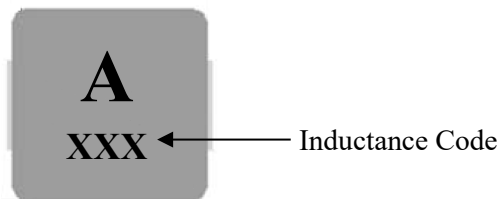


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Part Identification



Marking



Marking Method = Ink Marking

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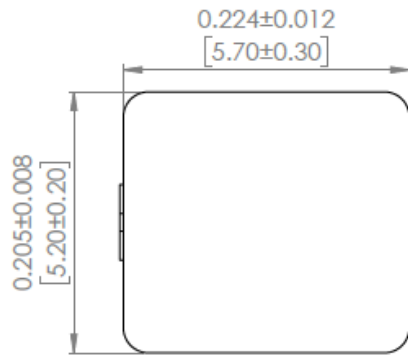


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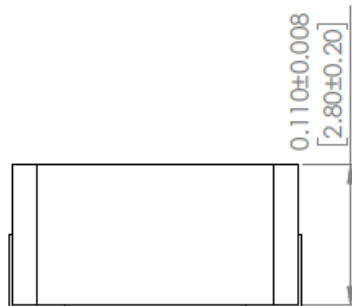


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Mechanical Specifications

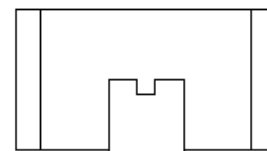
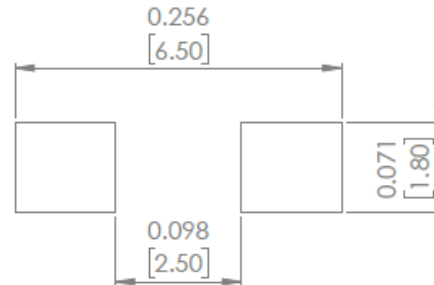


TOP VIEW

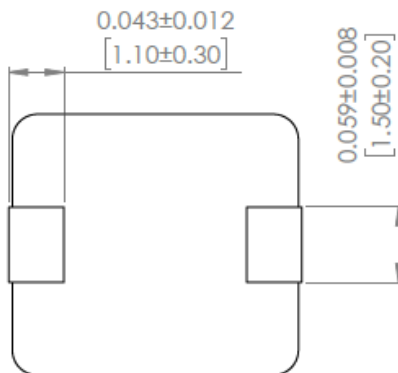


FRONT VIEW

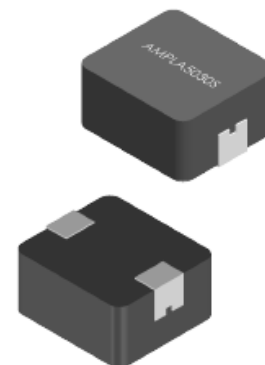
RECOMMENDED LAND PATTERN



SIDE VIEW



BOTTOM VIEW



Dimensions: mm[inches]

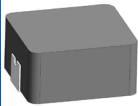


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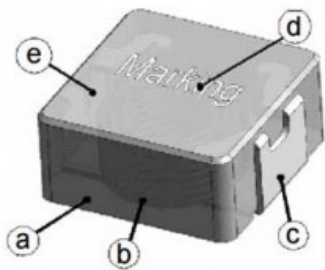


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Materials



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

a	Core	Carbonyl Powder
b	Wire	Copper
c	Terminal	Tin plating
d	Ink	Black
e	Paint	Gray

Item	Description	Material Type	Composition (%)
Core	Carbonyl Powder	Fe	97.8
		C	0.9
		N ₂	0.9
		O ₂	0.4
Wire	Round Wire	Cu	100

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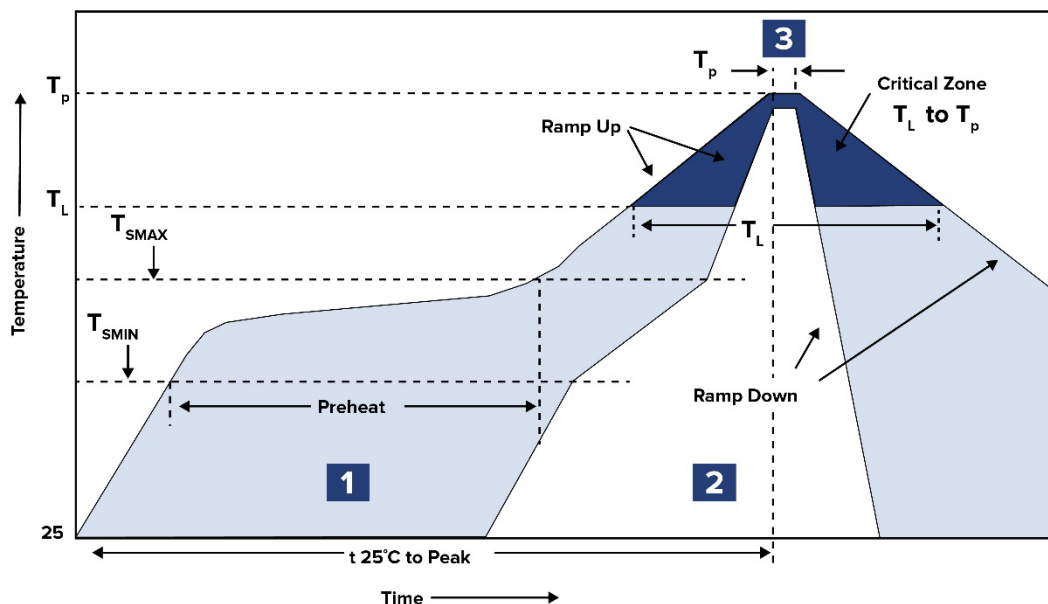


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Reflow Profile



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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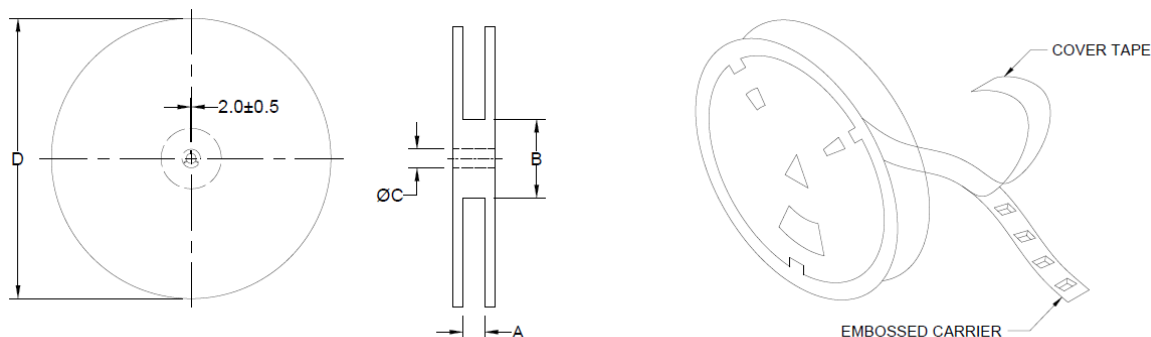
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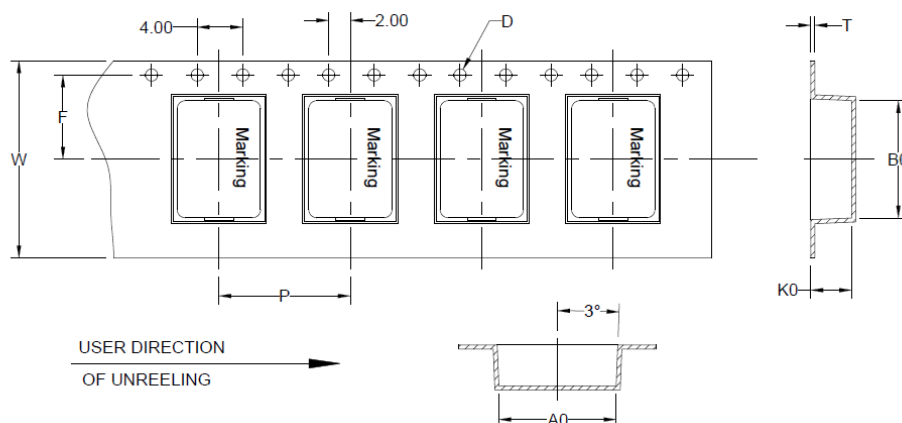
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Packaging

Tape and Reel: 2,000
Pieces per Carton: 16,000
T&R per Carton: 8
Weight per Carton: 12.5kg
Weight per Piece: 0.46g
Carton Dimensions: 410 x 325 x 415mm



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
6.2 ± 0.1	5.5 ± 0.1	3.3 ± 0.1	8.0 ± 0.1	12.0 ± 0.3	5.5 ± 0.1	0.35 ± 0.05	1.5 ± 0.1

Dimensions: mm

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