

# AMPLA4012Q-R33MT Datasheet

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DiGi Electronics Part Number	AMPLA4012Q-R33MT-DG
Manufacturer	<a href="#">Abracon LLC</a>
Manufacturer Product Number	AMPLA4012Q-R33MT
Description	FIXED IND 330NH 7A 16 MOHM SMD
Detailed Description	330 nH Shielded Molded Inductor 7 A 16mOhm Max Nonstandard



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

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## Purchase and inquiry

Manufacturer Product Number:

AMPLA4012Q-R33MT

Series:

AMPLA4012Q

Type:

Molded

Inductance:

330 nH

Current Rating (Amps):

7 A

Shielding:

Shielded

Q @ Freq:

-

Ratings:

AEC-Q200

Inductance Frequency - Test:

100 kHz

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.047" (1.20mm)

Manufacturer:

Abracon LLC

Product Status:

Active

Material - Core:

Carbonyl Powder

Tolerance:

±20%

Current - Saturation (Isat):

11A

DC Resistance (DCR):

16mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-55°C ~ 125°C

Features:

-

Package / Case:

Nonstandard

Size / Dimension:

0.175" L x 0.160" W (4.45mm x 4.06mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



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## FEATURES

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



## ELECTRICAL SPECIFICATIONS @ 25°C

PART NUMBER*	INDUCTANCE (uH)	TOLERANCE (%)	IRMS (A)	ISAT (A)	DC RESISTANCE (mΩ)		TYPE
					TYP	MAX	
AMPLA4012Q-R10NT	0.10	30	11.5	25	4.3	5.5	Lead Frame
AMPLA4012Q-R22MT	0.22	20	8.5	20	6.6	8	Lead Frame
AMPLA4012Q-R33MT	0.33	20	7.0	11	13.6	16	Lead Frame
AMPLA4012Q-R36MT	0.36	20	6.5	8.5	15.5	18	Lead Frame
AMPLA4012Q-R47MT	0.47	20	6.0	6.5	18	12	Lead Frame
AMPLA4012Q-R60MT	0.60	20	5.3	6.0	22.5	26	Lead Frame
AMPLA4012Q-R68MT	0.68	20	5.0	6.0	32	37	Lead Frame
AMPLA4012Q-1R0MT	1.0	20	4.0	6.0	41	47	Lead Frame
AMPLA4012Q-1R2MT	1.2	20	3.5	5.0	48	56	Lead Frame
AMPLA4012Q-1R5MT	1.5	20	3.0	4.0	55	63.3	Lead Frame
AMPLA4012Q-2R2MT	2.2	20	2.8	3.5	69.2	80	Lead Frame
AMPLA4012Q-3R3MT	3.3	20	2.3	3.0	84	97	Lead Frame
AMPLA4012Q-4R7MT	4.7	20	2.0	2.5	128	145	Lead Frame
AMPLA4012Q-5R6MT	5.6	20	1.7	2.3	180	208	Lead Frame
AMPLA4012Q-6R8MT	6.8	20	1.5	1.7	300	360	Lead Frame
AMPLA4012Q-8R2MT	8.2	20	1.4	1.6	313	376	Lead Frame
AMPLA4012Q-100MT	10	20	1.3	1.4	410	463	Lead Frame
AMPLA4012Q-220MT	22.0	20	0.8	1.0	950	1050	Lead Frame

\* Please refer to Part Identification section

### Test Conditions

Inductance: 100 kHz, 1V, 0 Adc

Humidity Range: 85 ± 2% RH

Temperature Rise Current: Current measured at Δ T of 40°C

Saturation Current: Current measured at Δ L of 30%

## GENERAL SPECIFICATIONS

### Operating Temperature:

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

### Maximum Part Temperature: +125°C

### Components Storage Temperature:

-55°C to +125°C

### Tape and Reel Packaging

Temperature: -55°C to +80°C

MSL: Level 1

## MATERIALS

Core: Carbonyl Powder

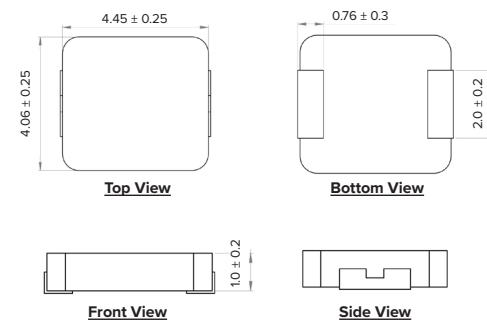
Wire: Copper

Terminal: Tin Plating

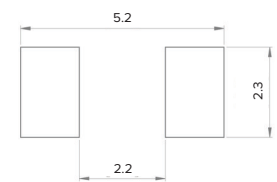
Ink: Black

Paint: Gray

## PRODUCT DIMENSIONS



### RECOMMENDED LANDING PATTERN



Dimensions: mm

## PART BUILDER

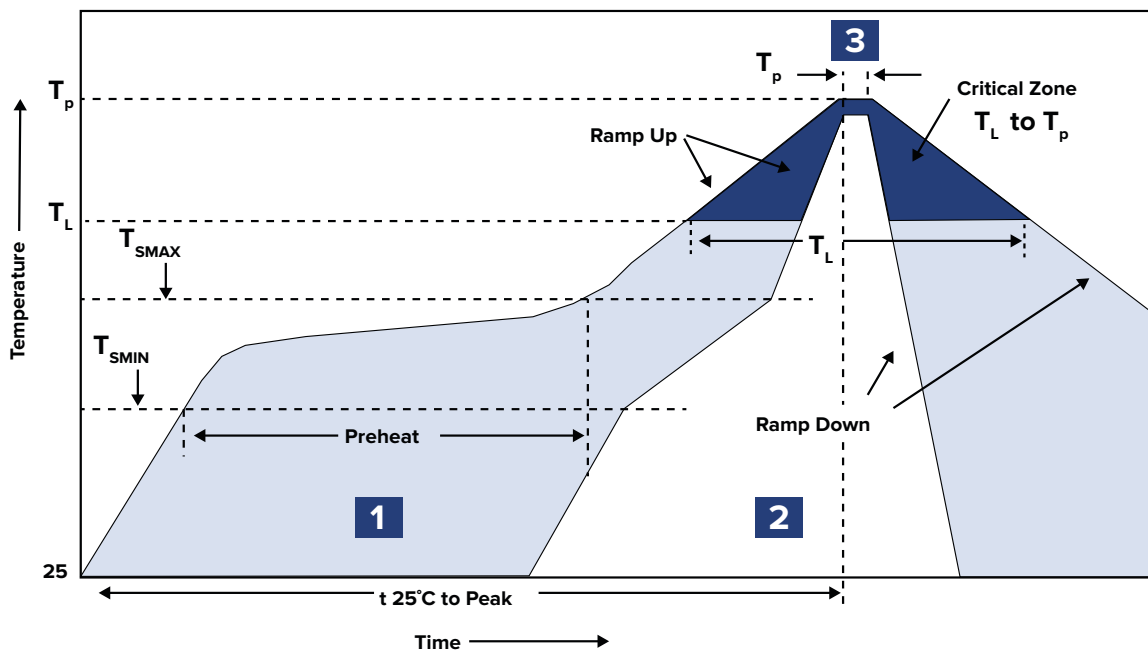


1. Tolerance: M = 20%  
N = 30%

2. Packaging: B = Bulk  
T = Tape and Reel (4,000pcs/reel)

\*Refer to Electrical Specification table

## RECOMMENDED REFLOW PROFILE



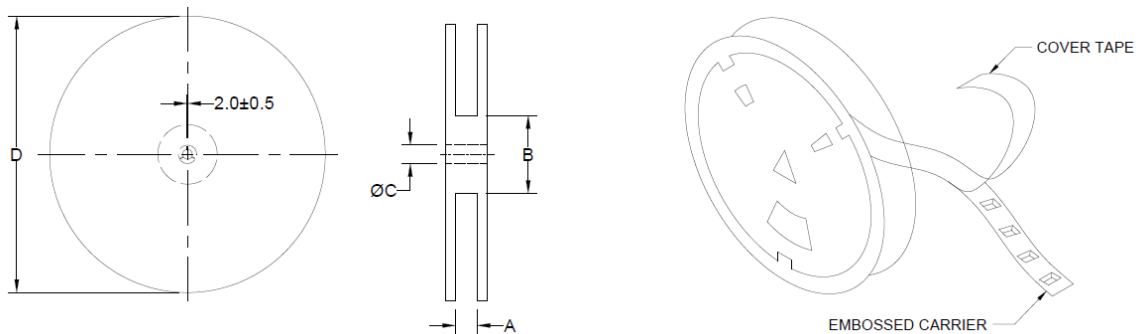
ZONE	DESCRIPTION	TEMPERATURE	TIMES
1	Preheat	$T_{smin} \sim T_{smax}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	$T_L$ 217°C	60 ~ 150 sec.
3	Peak Heat	$T_p$ 260°C	10 sec. MAX

# AMPLA4012Q MOLDED INDUCTOR

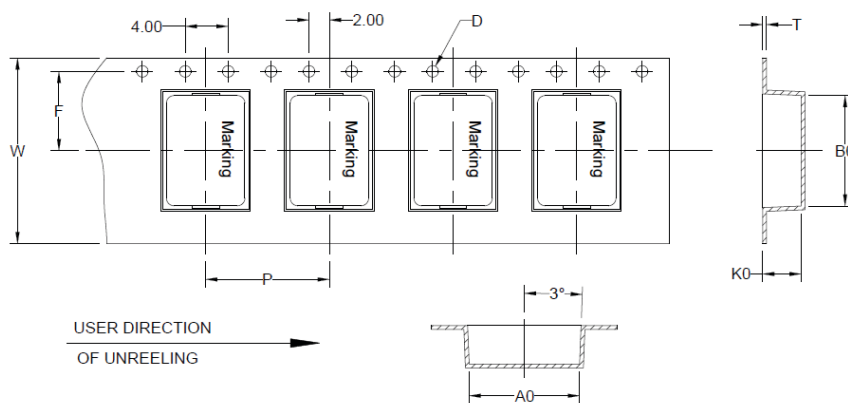


## PACKAGING

Tape and Reel: 4,000  
 Units per Carton: 32,000  
 T&R per Carton: 8  
 Weight per Carton: 10.7 kg  
 Weight per Unit: 0.105 g  
 Carton Dimensions: 410 x 325 x 415 mm



TYPE	A	B	C	D
13" x 12 mm	12.4 +2/-0	100.0 ± 2.0	13.0 +0.5/-0.2	330.0



B <sub>0</sub>	A <sub>0</sub>	K <sub>0</sub>	P	W	F	T	D
5.0 ± 0.1	4.1 ± 0.1	1.5 ± 0.1	8.0 ± 0.1	12.0 ± 0.3	5.5 ± 0.1	0.35 ± 0.05	1.5

Dimensions: mm

This product is commercial off-the-shelf (COTS) and not specifically designed for automotive, military, aviation, aerospace, implantable, life-dependent medical or safety applications. This product is not recommended for use in any application requiring high reliability in which component failure could result in loss of life and/or property damage without prior written approval from Abracon. Specifications are subject to change without notice. Contact Abracon for more information.



Headquarters:  
 5101 Hidden Creek Ln Spicewood TX 78669  
 Phone: 512-371-6159 | Fax: 512-351-8858

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