

AMDLA3020S-R47MT Datasheet



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DiGi Electronics Part Number AMDLA3020S-R47MT-DG

Manufacturer Abracon LLC

Manufacturer Product Number AMDLA3020S-R47MT

Description FIXED IND 470NH 8A 18 MOHM SMD

Detailed Description 470 nH Shielded Molded Inductor 8 A 18mOhm Ma

x Nonstandard



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Purchase and inquiry

| Manufacturer Product Number: | Manufacturer: |
|------------------------------|---------------------------------------|
| AMDLA3020S-R47MT | Abracon LLC |
| Series: | Product Status: |
| AMDLA3020S | Active |
| Type: | Material - Core: |
| Molded | Metal |
| Inductance: | Tolerance: |
| 470 nH | ±20% |
| Current Rating (Amps): | Current - Saturation (Isat): |
| 8 A | 12A |
| Shielding: | DC Resistance (DCR): |
| Shielded | 18mOhm Max |
| Q @ Freq: | Frequency - Self Resonant: |
| | |
| Ratings: | Operating Temperature: |
| | -55°C ~ 125°C |
| Inductance Frequency - Test: | Features: |
| 1 MHz | |
| Mounting Type: | Package / Case: |
| Surface Mount | Nonstandard |
| Supplier Device Package: | Size / Dimension: |
| | 0.134" L x 0.118" W (3.40mm x 3.00mm) |
| Height - Seated (Max): | |
| 0.079" (2.00mm) | |

Environmental & Export classification

8504.50.8000

| RoHS Status: | Moisture Sensitivity Level (MSL): |
|------------------|-----------------------------------|
| ROHS3 Compliant | 1 (Unlimited) |
| REACH Status: | ECCN: |
| REACH Unaffected | EAR99 |
| HTSUS: | |



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FEATURES

- Shielded construction
- Soft saturation
- Low DCR per cubic mm
- Designed for switching frequencies between 100KHz-5MHz
- Automotive option available upon request





ELECTRICAL SPECIFICATIONS @ 25°C

| PART NUMBER* | INDUCTANCE | TOLERANCE | | | - | TYPE | |
|------------------|------------|-----------|------|-----|-----|------|------------|
| | (uH) | (%) | (A) | (A) | TYP | MAX | |
| AMDLA3020S-R22MT | 0.22 | 20 | 10.0 | 16 | 8 | 10 | Lead Frame |
| AMDLA3020S-R33MT | 0.33 | 20 | 9.0 | 14 | 12 | 15 | Lead Frame |
| AMDLA3020S-R47MT | 0.47 | 20 | 8.0 | 12 | 15 | 18 | Lead Frame |
| AMDLA3020S-R68MT | 0.68 | 20 | 7.0 | 10 | 22 | 26 | Lead Frame |
| AMDLA3020S-1R0MT | 1.0 | 20 | 5.0 | 8.0 | 25 | 30 | Lead Frame |
| AMDLA3020S-1R5MT | 1.5 | 20 | 4.2 | 6.0 | 34 | 39 | Lead Frame |
| AMDLA3020S-2R2MT | 2.2 | 20 | 3.3 | 4.8 | 60 | 69 | Lead Frame |
| AMDLA3020S-3R3MT | 3.3 | 20 | 2.8 | 4.0 | 70 | 83 | Lead Frame |
| AMDLA3020S-4R7MT | 4.7 | 20 | 2.4 | 3.5 | 120 | 144 | Lead Frame |
| AMDLA3020S-6R8MT | 6.8 | 20 | 1.6 | 3.0 | 153 | 184 | Lead Frame |
| AMDLA3020S-100MT | 10.0 | 20 | 1.3 | 1.8 | 224 | 260 | Lead Frame |

^{*} Please refer to Part Identification section

Test Conditions

Inductance: 1 MHz, 1 V, 0 Adc Humidity Range: 65% 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: -20°C to +65°C

MSL: Level 1

MATERIALS

Core: Metal Alloy Wire: Copper Terminal: Tin Plating Black Ink:

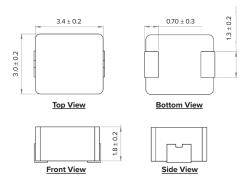
PART BUILDER



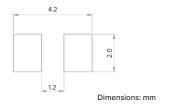
1. Tolerance: M = 20% 2. Packaging: B = Bulk

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

PRODUCT DIMENSIONS



RECOMMENDED LANDING PATTERN

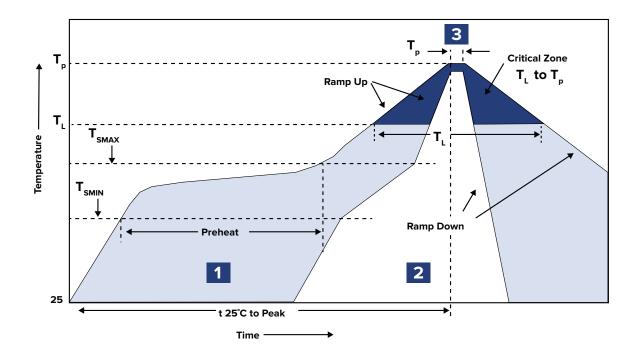




^{*}Refer to Electrical Specification table



RECOMMENDED REFLOW PROFILE



| ZONE | DESCRIPTION | TEMPERATURE | TIMES | | |
|------|-------------|--|--------------------------|--|--|
| 1 | Preheat | T _{smin} ~ T _{smax} 150°C ~ 180°C | 60 [~] 120 sec. | | |
| 2 | Reflow | T _∟ 230°C | 30 ~ 40 sec. | | |
| 3 | Peak Heat | T _P 250°C+0/-5°C | 10 sec. MAX | | |





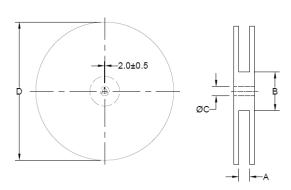
PACKAGING

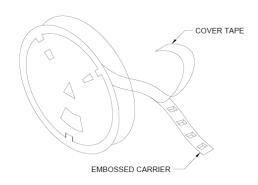
Tape and Reel: 3,000 Units per Carton: 24,000

T&R per Carton: 8

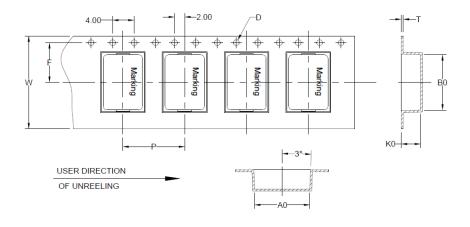
Weight per Carton: 13.5 kg Weight per Unit: 0.45 g

Carton Dimensions: 360 x 360 x 400 mm





| TYPE | А | В | С | D |
|-------------|------------|-------------|----------------|-------|
| 13" x 12 mm | 12.4 +2/-0 | 100.0 ± 0.5 | 13.0 +0.5/-0.2 | 330.0 |



| B _o | A_{o} | K _o | Р | W | F | Т | D |
|----------------|---------------|----------------|---------------|----------------|-----------|----------------|-----|
| 3.8 ± 0.1 | 3.4 ± 0.1 | 2.3 ± 0.1 | 8.0 ± 0.1 | 12.0 ± 0.3 | 5.5 ± 0.1 | 0.3 ± 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.





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