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FEATURES

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



ELECTRICAL SPECIFICATIONS @ 25°C

| PART NUMBER* | INDUCTANCE (uH) | TOLERANCE (%) | IRMS (A) | ISAT (A) | DC RESISTANCE (mΩ) | | TYPE |
|------------------|-----------------|---------------|----------|----------|--------------------|------|------------|
| | | | | | TYP | MAX | |
| AMPLA4012S-R10NT | 0.10 | 30 | 11.5 | 25 | 4.3 | 5.5 | Lead Frame |
| AMPLA4012S-R22MT | 0.22 | 20 | 8.5 | 20 | 6.6 | 8 | Lead Frame |
| AMPLA4012S-R33MT | 0.33 | 20 | 7.0 | 11 | 13.6 | 16 | Lead Frame |
| AMPLA4012S-R36MT | 0.36 | 20 | 6.5 | 8.5 | 15.5 | 18 | Lead Frame |
| AMPLA4012S-R47MT | 0.47 | 20 | 6.0 | 6.5 | 18 | 12 | Lead Frame |
| AMPLA4012S-R60MT | 0.60 | 20 | 5.3 | 6.0 | 22.5 | 26 | Lead Frame |
| AMPLA4012S-R68MT | 0.68 | 20 | 5.0 | 6.0 | 32 | 37 | Lead Frame |
| AMPLA4012S-1R0MT | 1.0 | 20 | 4.0 | 6.0 | 41 | 47 | Lead Frame |
| AMPLA4012S-1R2MT | 1.2 | 20 | 3.5 | 5.0 | 48 | 56 | Lead Frame |
| AMPLA4012S-1R5MT | 1.5 | 20 | 3.0 | 4.0 | 55 | 63.3 | Lead Frame |
| AMPLA4012S-2R2MT | 2.2 | 20 | 2.8 | 3.5 | 69.2 | 80 | Lead Frame |
| AMPLA4012S-3R3MT | 3.3 | 20 | 2.3 | 3.0 | 84 | 97 | Lead Frame |
| AMPLA4012S-4R7MT | 4.7 | 20 | 2.0 | 2.5 | 128 | 145 | Lead Frame |
| AMPLA4012S-5R6MT | 5.6 | 20 | 1.7 | 2.3 | 180 | 208 | Lead Frame |
| AMPLA4012S-6R8MT | 6.8 | 20 | 1.5 | 1.7 | 300 | 360 | Lead Frame |
| AMPLA4012S-8R2MT | 8.2 | 20 | 1.4 | 1.6 | 313 | 376 | Lead Frame |
| AMPLA4012S-100MT | 10 | 20 | 1.3 | 1.4 | 410 | 463 | Lead Frame |
| AMPLA4012S-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

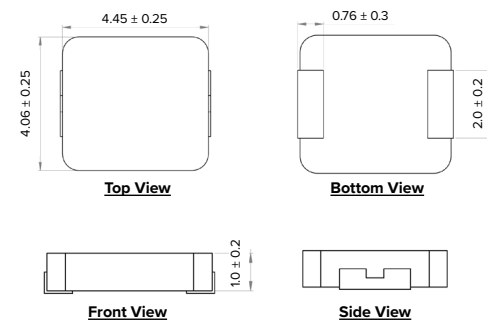
Temperature: -55°C to +80°C

MSL: Level 1

MATERIALS

Core: Carbonyl Powder
Wire: Copper
Terminal: Tin Plating
Ink: Black
Paint: Gray

PRODUCT DIMENSIONS



PART BUILDER

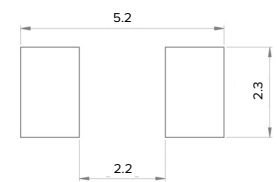


1. Tolerance: M = 20%
N = 30%

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

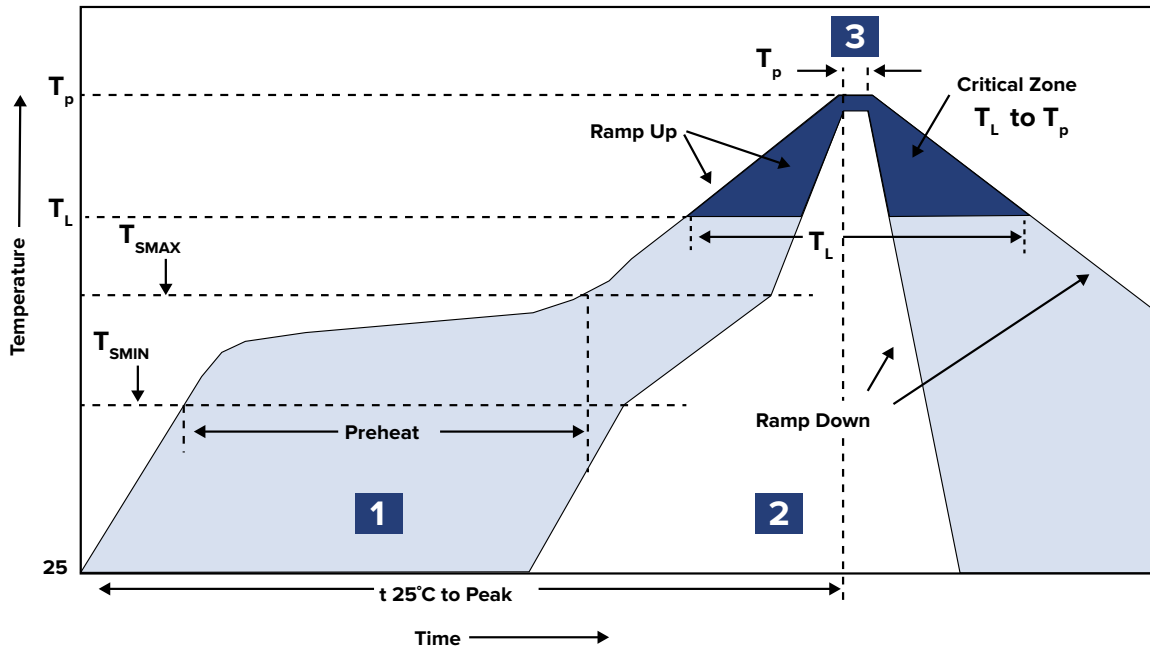
*Refer to Electrical Specification table

RECOMMENDED LANDING PATTERN



Dimensions: mm

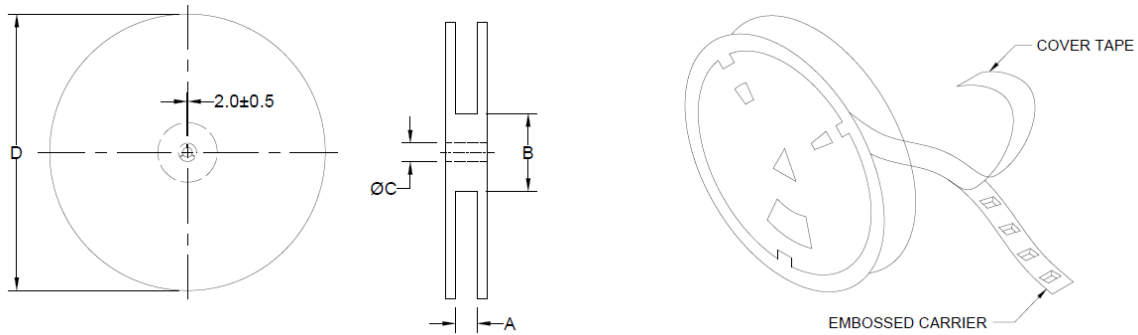
RECOMMENDED REFLOW PROFILE



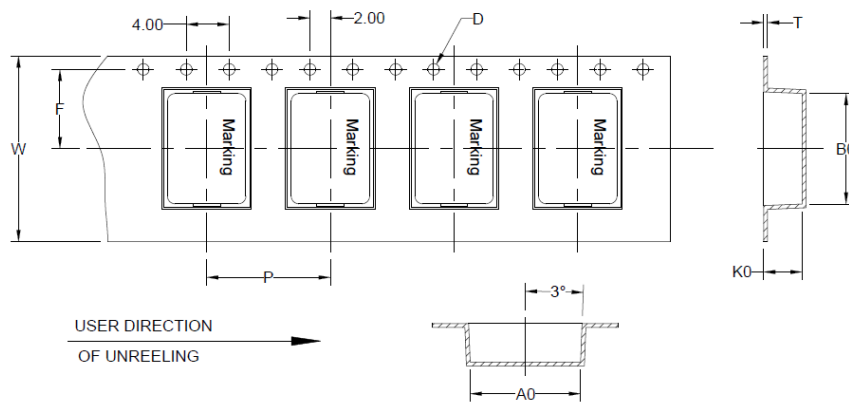
| ZONE | DESCRIPTION | TEMPERATURE | TIMES |
|------|-------------|---|---------------|
| 1 | Preheat | $T_{smin} \sim T_{smax}$ 150°C ~ 200°C | 60 ~ 180 sec. |
| 2 | Reflow | T_L 217°C | 60 ~ 150 sec. |
| 3 | Peak Heat | T_p 260°C | 10 sec. MAX |

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 ₀ | A ₀ | K ₀ | 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.

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ABRACON:

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