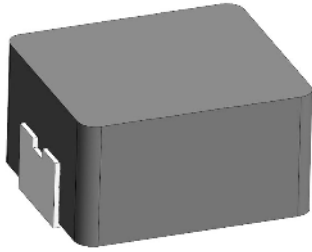


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## FEATURES

- 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 |            |
| AMPLA4020S-R10NT | 0.10            | 30            | 12.0     | 35       | 3.2                | 4   | Lead Frame |
| AMPLA4020S-R18NT | 0.18            | 30            | 13.5     | 28       | 4.6                | 5.4 | Lead Frame |
| AMPLA4020S-R22NT | 0.22            | 30            | 13.0     | 24       | 6.6                | 7.3 | Lead Frame |
| AMPLA4020S-R33MT | 0.33            | 20            | 10.0     | 18       | 7.8                | 8.6 | Lead Frame |
| AMPLA4020S-R36MT | 0.36            | 20            | 9.0      | 15       | 8.7                | 12  | Lead Frame |
| AMPLA4020S-R47MT | 0.47            | 20            | 8.0      | 12       | 11.2               | 14  | Lead Frame |
| AMPLA4020S-R56MT | 0.56            | 20            | 7.3      | 10       | 13.5               | 16  | Lead Frame |
| AMPLA4020S-R68MT | 0.68            | 20            | 7.0      | 10       | 16                 | 19  | Lead Frame |
| AMPLA4020S-1R0MT | 1.0             | 20            | 5.0      | 8.5      | 22                 | 27  | Lead Frame |
| AMPLA4020S-1R2MT | 1.2             | 20            | 4.8      | 7.8      | 25                 | 30  | Lead Frame |
| AMPLA4020S-1R5MT | 1.5             | 20            | 4.5      | 7.0      | 34.8               | 42  | Lead Frame |
| AMPLA4020S-2R2MT | 2.2             | 20            | 4.0      | 6.0      | 51                 | 61  | Lead Frame |
| AMPLA4020S-3R3MT | 3.3             | 20            | 3.5      | 4.0      | 69                 | 76  | Lead Frame |
| AMPLA4020S-4R7MT | 4.7             | 20            | 2.6      | 3.5      | 95                 | 105 | Lead Frame |
| AMPLA4020S-5R6MT | 5.6             | 20            | 2.2      | 3.0      | 112                | 125 | Lead Frame |
| AMPLA4020S-6R8MT | 6.8             | 20            | 2.1      | 2.8      | 150                | 172 | Lead Frame |
| AMPLA4020S-8R2MT | 8.2             | 20            | 2.0      | 2.5      | 158                | 180 | Lead Frame |
| AMPLA4020S-100MT | 10.0            | 20            | 1.8      | 2.3      | 215                | 243 | Lead Frame |
| AMPLA4020S-150MT | 15.0            | 20            | 1.5      | 1.9      | 325                | 374 | Lead Frame |
| AMPLA4020S-220MT | 22.0            | 20            | 1.2      | 1.4      | 470                | 500 | 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%

## PART BUILDER



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

2. Packaging: B = Bulk  
T = Tape and Reel (3,000pcs/reel)

\*Refer to Electrical Specification table

## 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

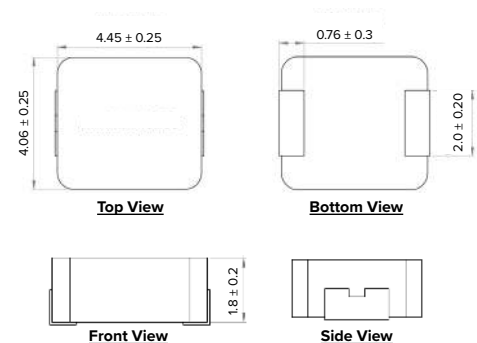
Wire: Copper

Terminal: Tin Plating

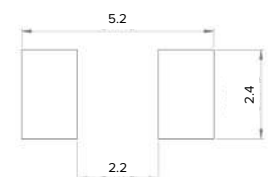
Ink: Black

Paint: Gray

## PRODUCT DIMENSIONS

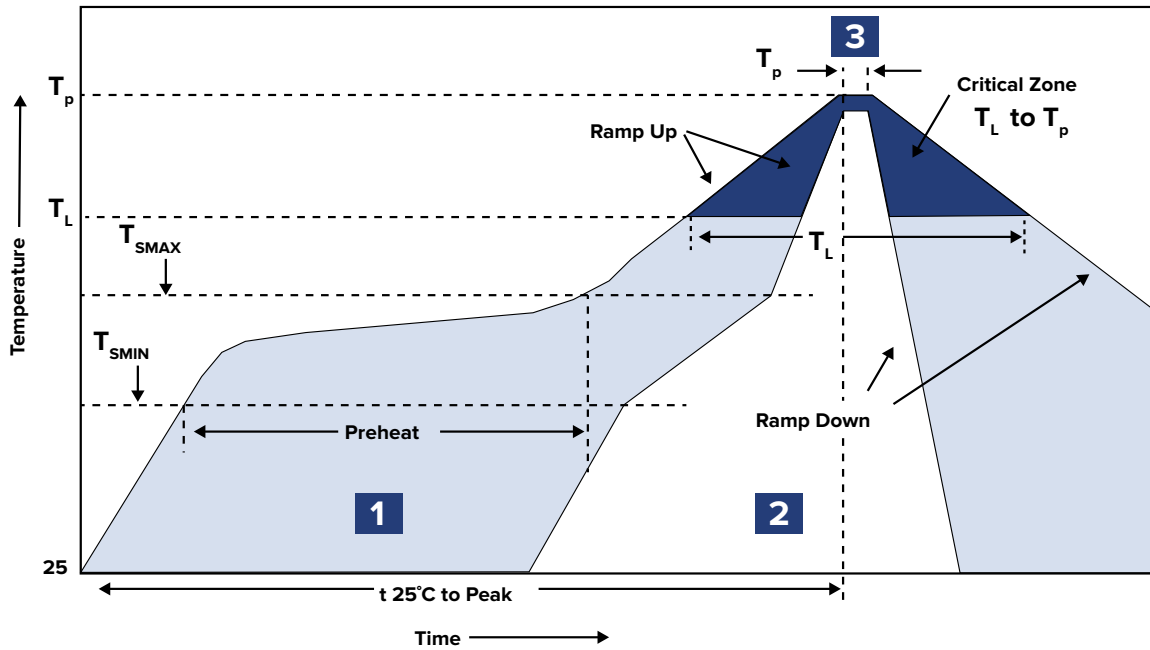


### RECOMMENDED LANDING PATTERN



Dimensions: mm

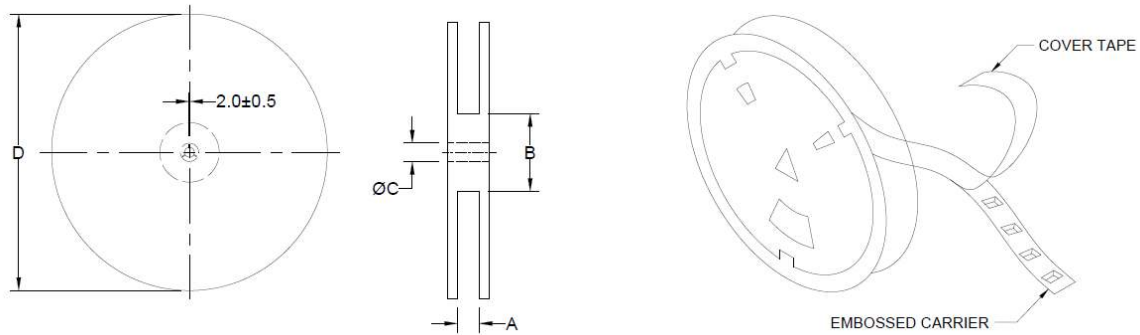
## RECOMMENDED REFLOW PROFILE



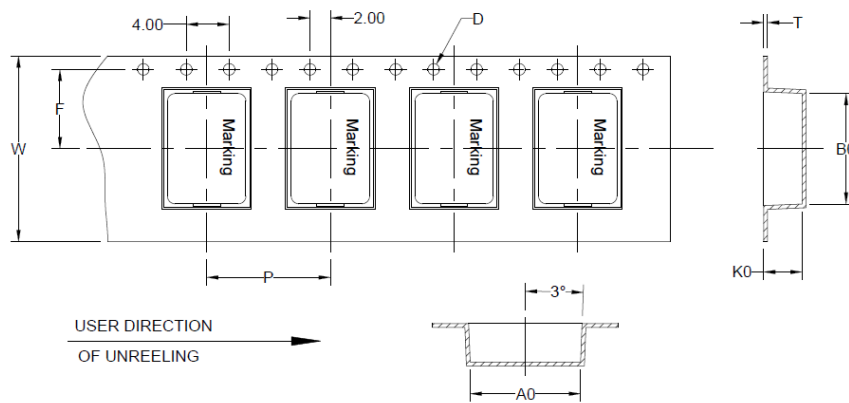
| ZONE | DESCRIPTION | TEMPERATURE                               | TIMES         |
|------|-------------|---|---------------|
| 1    | Preheat     | $T_{smin} \sim T_{smax}$<br>150°C ~ 200°C | 60 ~ 180 sec. |
| 2    | Reflow      | $T_L$<br>217°C                            | 60 ~ 150 sec. |
| 3    |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

## PACKAGING

Tape and Reel: 3,000  
 Units per Carton: 24,000  
 T&R per Carton: 8  
 Weight per Carton: 9.72 kg  
 Weight per Unit: 0.175 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      | 4.4 ± 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

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.