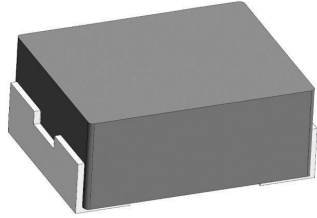


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## FEATURES

- Shielded construction
- Soft saturation
- High efficiency
- Designed for switching frequencies between 100KHz-5MHz
- Automotive option available upon request



## ELECTRICAL SPECIFICATIONS @ 25°C

| PART NUMBER*     | INDUCTANCE (uH) | TOLERANCE (%) | IRMS (A) | ISAT (A) | DC RESISTANCE (mΩ) |      | TYPE       |
|------------------|-----------------|---------------|----------|----------|--------------------|------|------------|
|                  |                 |               |          |          | TYP                | MAX  |            |
| AMELA2012S-R22MT | 0.22            | 20            | 10.0     | 8.5      | 11                 | 13   | Lead Frame |
| AMELA2012S-R33MT | 0.33            | 20            | 5.8      | 7.0      | 15                 | 16.5 | Lead Frame |
| AMELA2012S-R47MT | 0.47            | 20            | 4.8      | 6.0      | 20                 | 25   | Lead Frame |
| AMELA2012S-R68MT | 0.68            | 20            | 3.9      | 4.6      | 30                 | 34   | Lead Frame |
| AMELA2012S-1R0MT | 1.0             | 20            | 3.7      | 4.3      | 38                 | 45   | Lead Frame |
| AMELA2012S-1R5MT | 1.5             | 20            | 2.9      | 3.0      | 53                 | 60   | Lead Frame |
| AMELA2012S-2R2MT | 2.2             | 20            | 2.4      | 2.7      | 78                 | 90   | 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

**Ink:** Black

## PART BUILDER

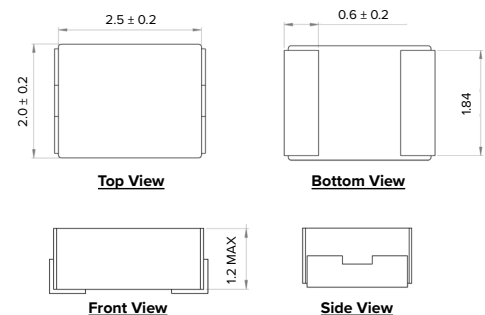


1. Tolerance: M = 20%

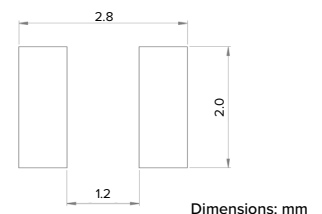
2. Packaging: B = Bulk  
T = Tape and Reel (3,000pcs/reel)

\*Refer to Electrical Specification table

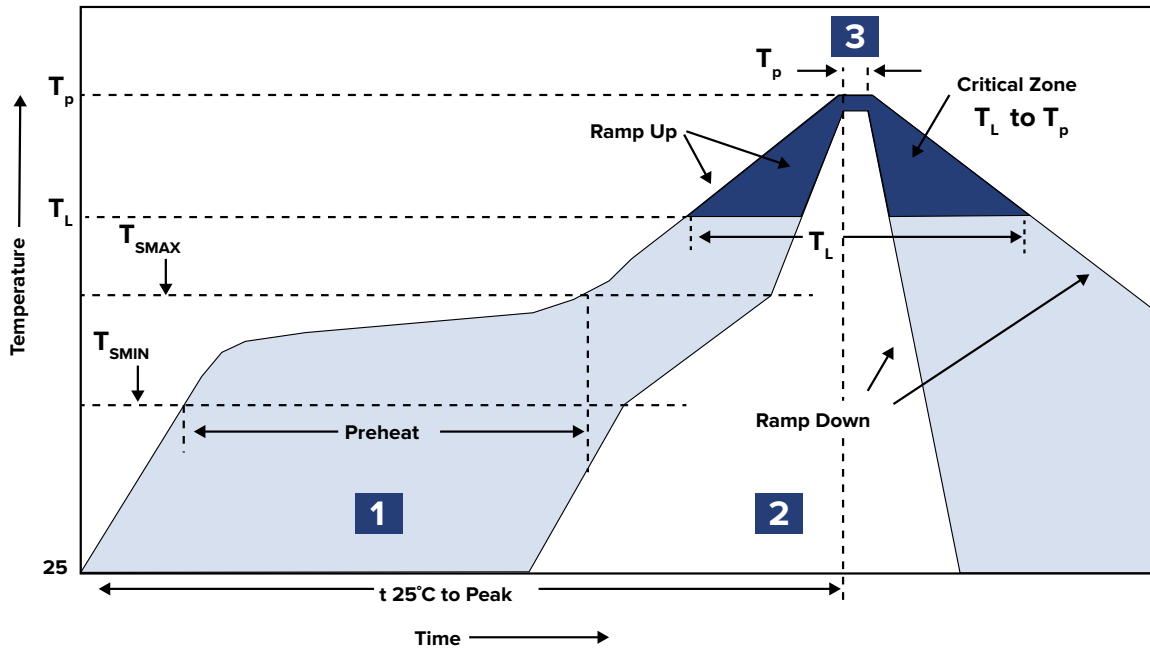
## PRODUCT DIMENSIONS



## RECOMMENDED LANDING PATTERN



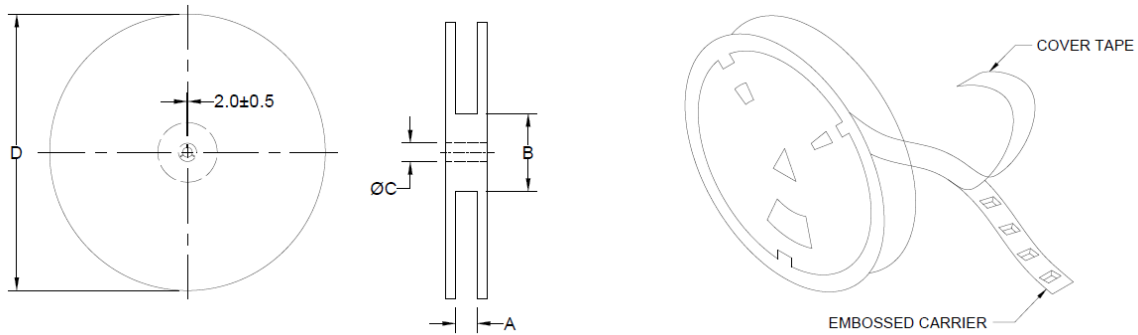
RECOMMENDED REFLOW PROFILE



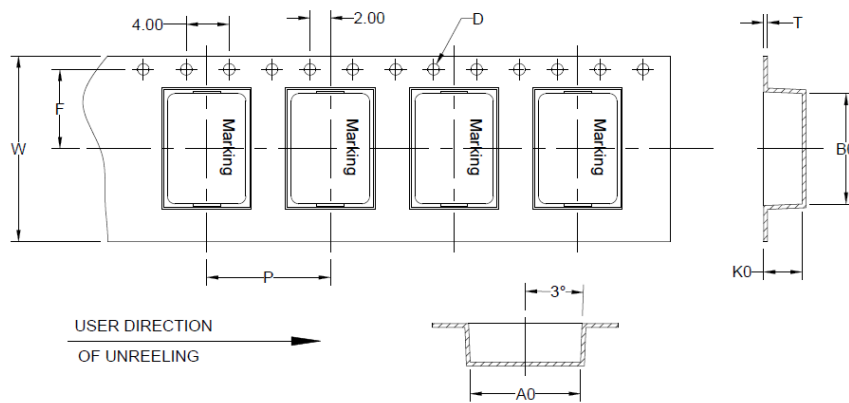
| ZONE | DESCRIPTION | TEMPERATURE                               | TIMES         |
|------|-------------|---|---------------|
| 1    | Preheat     | $T_{smin} \sim T_{smax}$<br>150°C ~ 180°C | 60 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>230°C                            | 30 ~ 40 sec.  |
| 3    | Peak Heat   | $T_p$<br>250°C+0/-5°C                     | 10 sec. MAX   |

## PACKAGING

Tape and Reel: 3,000  
 Units per Carton: 144,000  
 T&R per Carton: 48  
 Weight per Carton: 6.3 kg  
 Weight per Unit: 0.06 g  
 Carton Dimensions: 450 x 380 x 210 mm



| TYPE      | A         | B          | C          | D         |
|-----------|-----------|------------|------------|-----------|
| 7" x 8 mm | 9.7 ± 0.5 | 50.0 ± 0.5 | 13.0 ± 0.1 | 183 ± 3.0 |



USER DIRECTION  
OF UNREELING →

| B <sub>0</sub> | A <sub>0</sub> | K <sub>0</sub> | P         | W         | F         | T           | D   |
|----------------|----------------|----------------|-----------|-----------|-----------|-------------|-----|
| 2.85 ± 0.1     | 2.4 ± 0.1      | 1.35 ± 0.05    | 4.0 ± 0.1 | 8.0 ± 0.1 | 3.5 ± 0.1 | 0.25 ± 0.03 | 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.