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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**

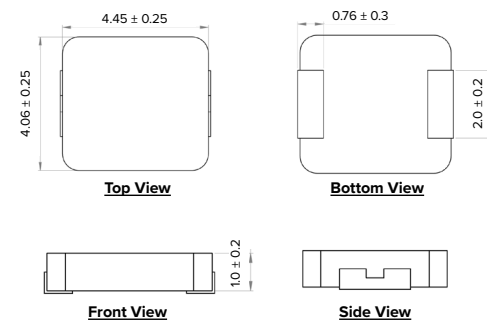
**Temperature:** -55°C to +80°C

**MSL:** Level 1

## MATERIALS

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

## PRODUCT DIMENSIONS



## PART BUILDER

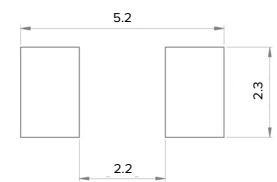


1. Tolerance: M = 20%  
 N = 30%

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

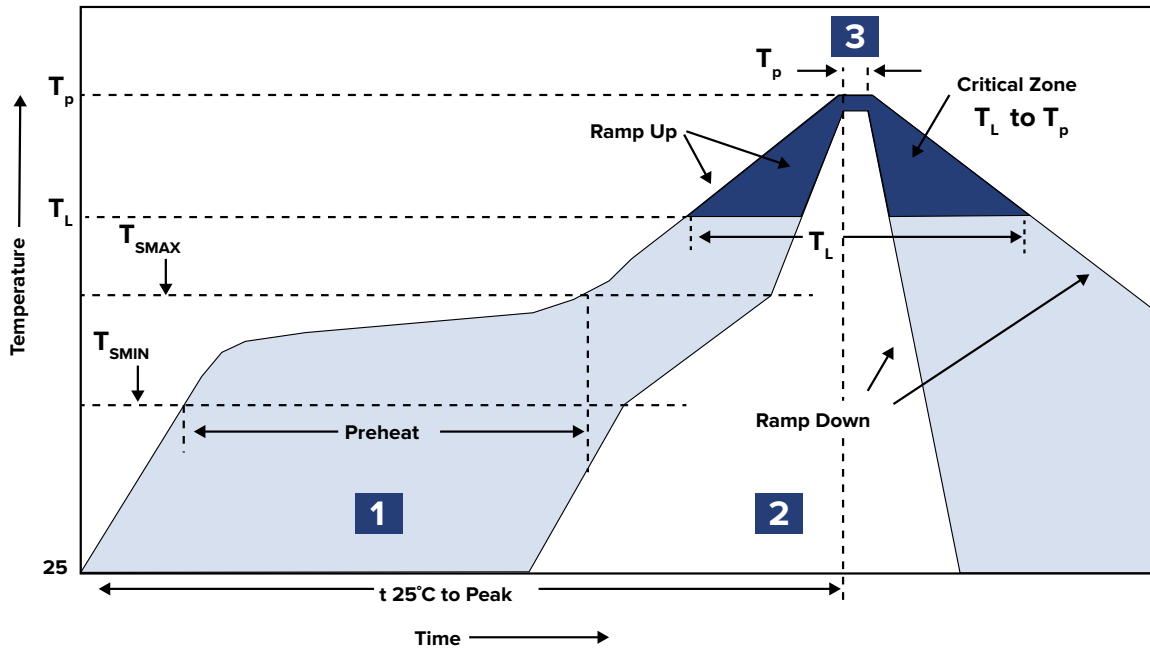
\*Refer to Electrical Specification table

## RECOMMENDED LANDING PATTERN



Dimensions: mm

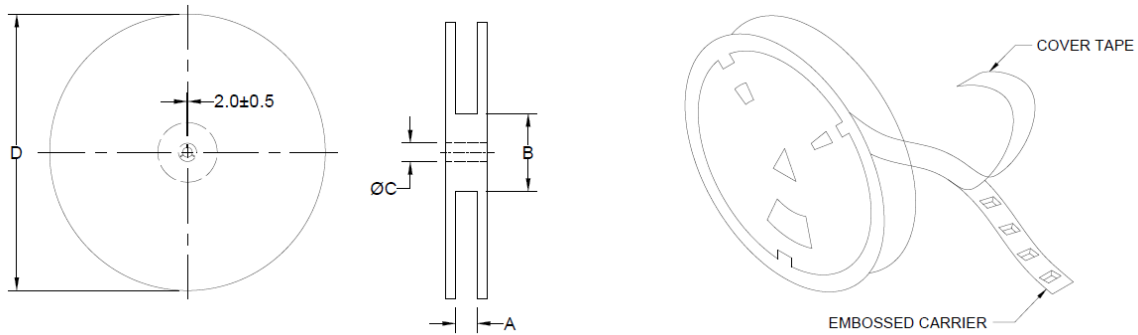
## RECOMMENDED REFLOW PROFILE



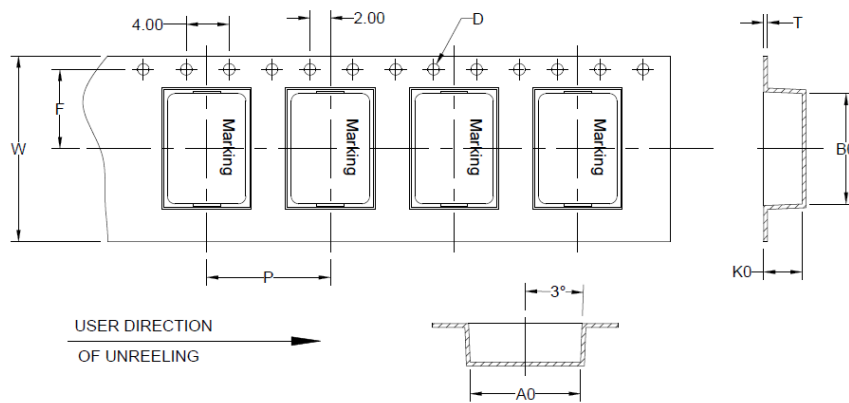
ZONE	DESCRIPTION	TEMPERATURE	TIMES
1	Preheat	$T_{smin} \sim T_{smax}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	$T_L$ 217°C	60 ~ 150 sec.
3	Peak Heat	$T_p$ 260°C	10 sec. MAX

## 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 <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.

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