

Molded Inductor



AMELA2012S-R22M

Request Samples



Check Inventory



2.5 x 2.0 x 1.2 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Shielded Construction
- Soft Saturation
- Highly Efficient
- Designed for switching frequencies between 100KHz – 5MHz
- Automotive option available upon request

Applications

- Buck DC/DC Converters
- Buck-Boost DC/DC converters
- Power Factor Correction applications
- Server/ Workstation VRM's
- Industrial power supplies
- Solar inverters / Renewable Energy Systems
- Battery energy storage systems
- EMI/Power line filtering chokes
- Industrial / Heavy equipment

Electrical Specifications

Part Number*	Inductance (uH)	Tolerance (%)	Irms (A)	Isat (A)	DC Resistance (mΩ)		Type
			Typ	Typ	Typ	Max	
AMELA2012S-R22M	0.22	20	11.0	12.0	9.0	10.0	Lead Frame

*For full orderable part number, please refer to the Part Identification section.

Test Conditions

Inductance: 1 MHz, 1 V, 0 ADC

Humidity Range: 65% RH

Temperature Rise Current: Typical current measured when ΔT of 40°C

Saturation Current: Typical current measured when ΔL of 30%

General Specifications

Operating Temperature: -55°C to +125°C with (40°C rise) Irms current.

Maximum Part Temperature: +125°C

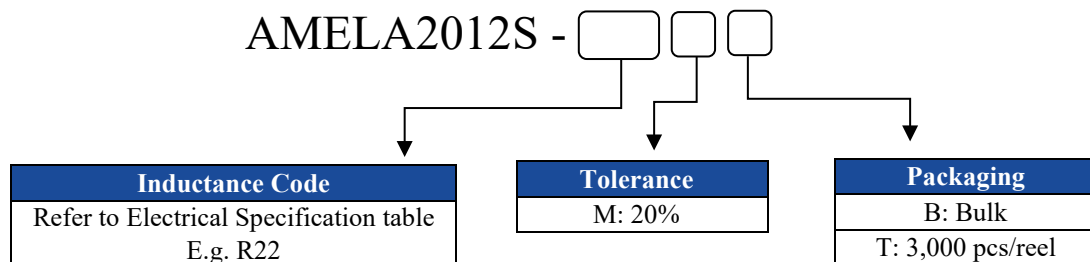
Components Storage Temperature: -55°C to +125°C

Tape and Reel packaging Temperature: -20°C to +65°C

AMELA2012S-R22M is RoHS/ RoHS II Compliant and Pb free.

Moisture Sensitivity Level (MSL) – Level 1

Part Identification



12117 Bee Caves Rd, Bldg-3, Suite 200
Bee Cave, TX 78738
Phone: 512-371-6159 Fax: 512-351-8858
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REVISION A : 1/13/2026

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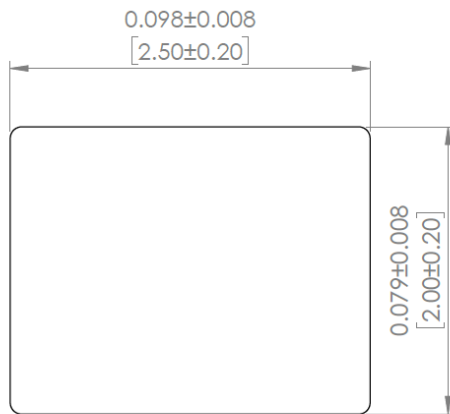


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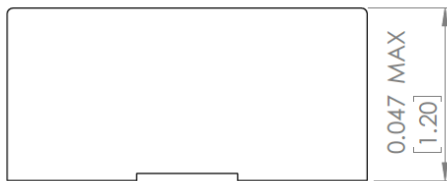


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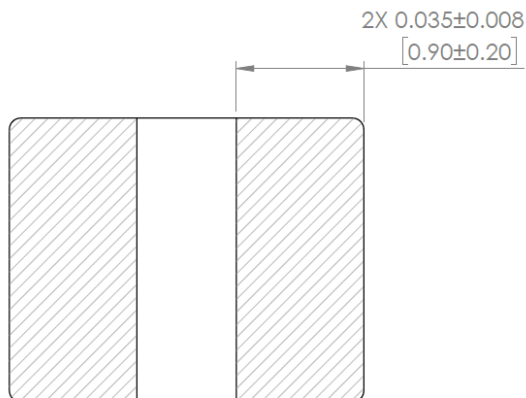
Mechanical Specifications



TOP VIEW

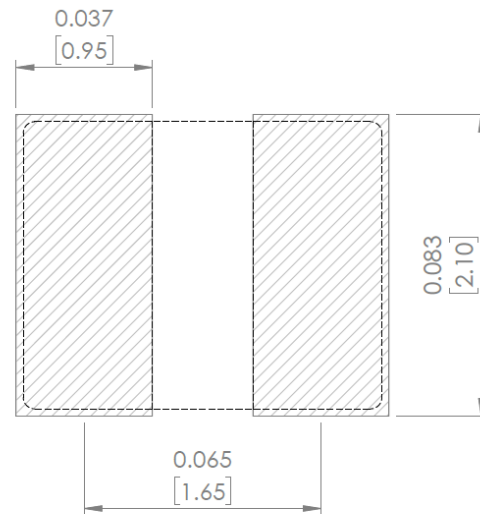


FRONT VIEW



BOTTOM VIEW

RECOMMENDED LAND PATTERN



SCHEMATIC



DIMENSIONS: INCHES[mm]



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Reflow Profile

Reflow standard: [JEDEC J-STD-020]

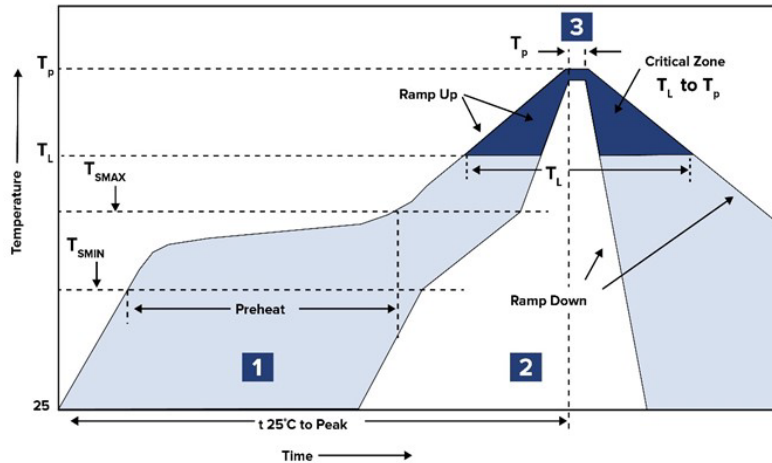


Table 1

SnPb Eutectic Process Classification Temperatures (T_c)		
Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2

Pb-Free Process Classification Temperatures (T_c)			
Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smin})	100°C	150°C
Temperature maximum (T_{smax})	150°C	200°C
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_P)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60 - 150 sec.	60 - 150 sec.
Peak package body temperature (T_P)*	see Table 1	see Table 2
Time (t_p)** within 5°C of the specified classification temperature (T_c)	20 sec.	30 sec.
Ramp-down rate (T_P to T_{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

*Tolerance for peak profile temperature (T_P) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.

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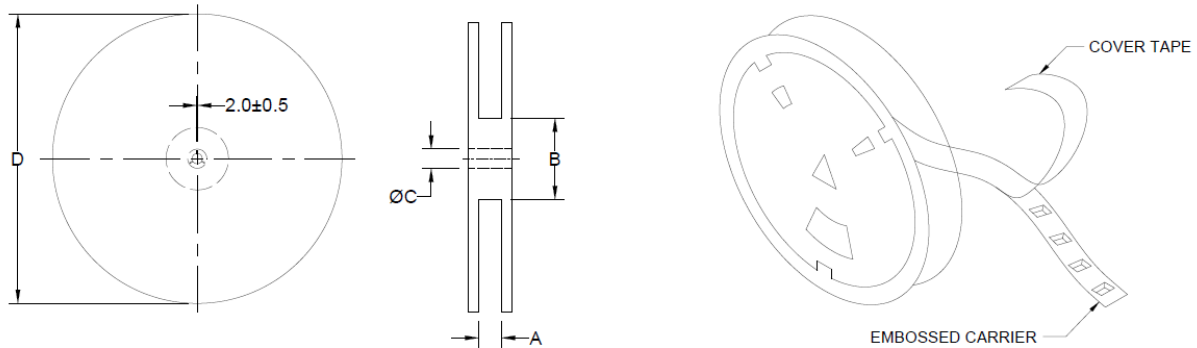


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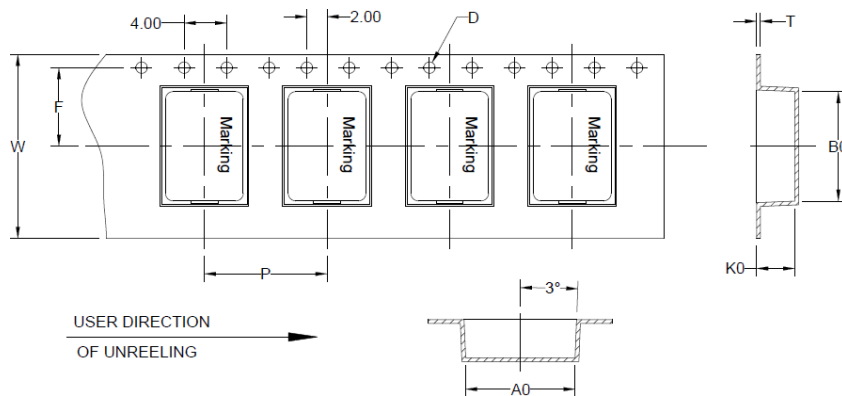
Packaging

Tape and Reel: 3,000 pcs/reel

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



B ₀	A ₀	K ₀	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

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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