

AOTA-B201210S

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2.0 x 1.2 x 1.0 mm RoHS/RoHS II Compliant MSL Level = 1

Features

- Shielded construction for minimized EMI.
- Low DCR (as low as $8m\Omega$) for better efficiency
- High current up to 14.5A handling capability.
- Compact size that is suitable for high-density designs
- Excellent for high frequency switching applications due to SRF up to 264MHz.

Applications

- Consumer electronics and portable devices
- Power electronics such as DC-DC converters, inverters and voltage regulators
- Industrial applications, robotics, signal conditioning, instrumentation and control systems
- IoT devices, smart home, automation systems and wireless sensing

Electrical Specifications

Part Number	Inductance	Tolerance	Self- Resonant Frequency	DC Res	DC Resistance		Saturation Current		Temperature Rise Current	
	1MHz/1.0V		Min.	Тур	Max	Тур	Max	Тур	Max	
Units	μН	%	MHz	m	Ω	A	4	A	\	
Symbol	L	M	SRF	DC	CR	Is	at	Irr	ns	
AOTA-B201210SR11MT	0.11	20%	264	8	10	14.5	13.0	7.1	6.4	
AOTA-B201210SR24MT	0.24	20%	136	12	15	7.5	6.8	5.5	5.0	
AOTA-B201210SR47MT	0.47	20%	96	21	24	5.7	5.1	5.2	4.8	
AOTA-B201210S1R0MT	1.0	20%	56	46	51	4.0	3.6	3.5	3.1	
AOTA-B201210S2R2MT	2.2	20%	36	100	112	2.4	2.1	2.2	1.9	

Test Conditions

Isat: DC current at which the inductance drops 30% from its nominal value.

Irms: DC current that causes the temperature rise (ΔT, approximate 40 °C) from 25°C ambient.

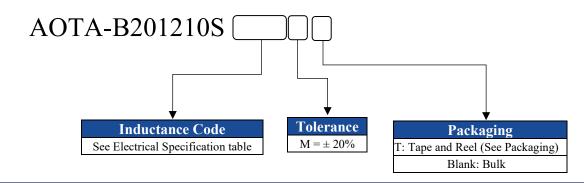
Operating Temperature: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (including self-temperature rise)

Storage Condition: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (on board), $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ (with packaging) and R.H. 60 max.

Working Voltage: 20V

AOTA-B201210S Series is RoHS Compliant and Pb free.

Part Identification





5101 Hidden Creek Ln, Spicewood TX 78669 Phone: 512-371-6159 Fax: 512-351-8858 For terms and conditions of sales, please visit: www.abracon.com

REVISION Initial Release: 8/2/2024

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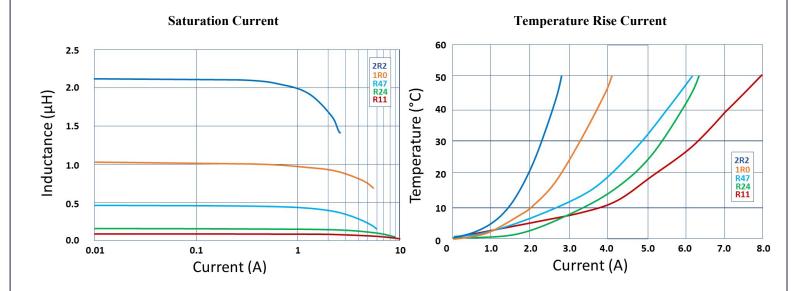


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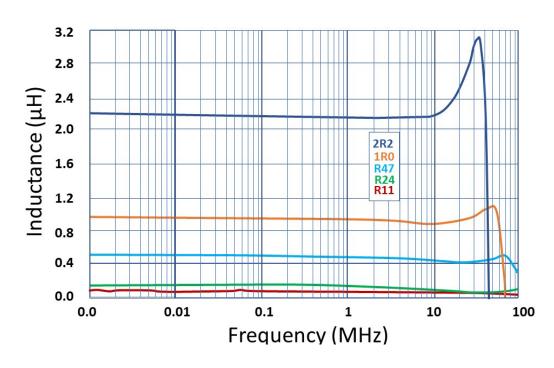


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Performance Graphs



Inductance vs. Frequency





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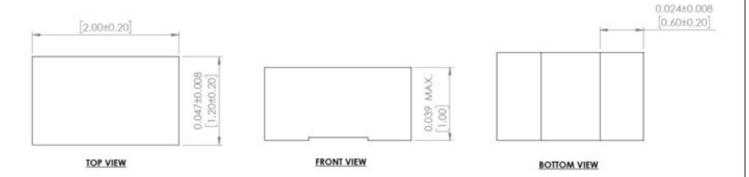


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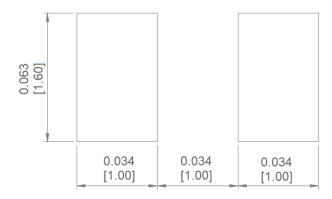


2.0 x 1.2 x 1.0 mm **RoHS/RoHS II Compliant** MSL Level = 1

Mechanical Specifications



Recommended Land Pattern (Typ.)



Dimensions: Inch[mm]

Marking

No Marking





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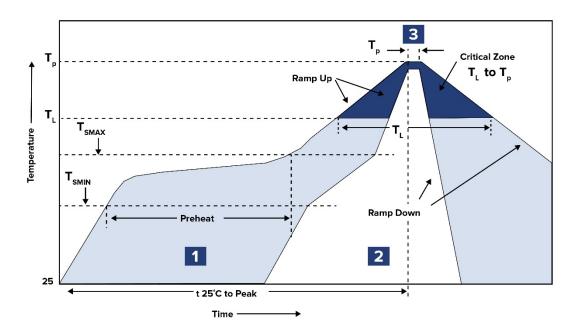


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$\begin{split} T_{SMIN} \sim T_{SMAX} \\ 150^{\circ}C \sim 200^{\circ}C \end{split}$	$60 \sim 120 \text{ sec.}$
2	Reflow	T _L 217°C	60 ~ 90 sec.
3	Peak heat	T _P 260°C Max	10 sec. MAX





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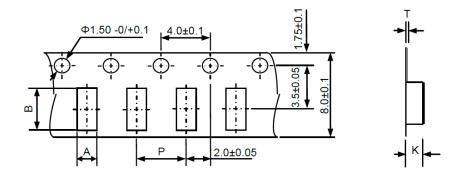
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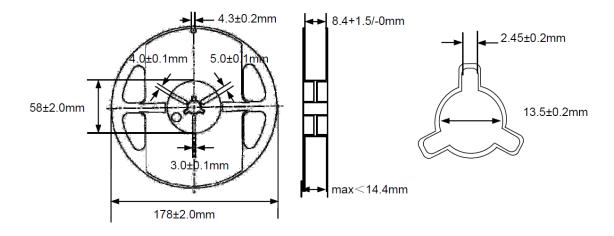
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Packaging

Tape & Reel: 3000 pcs/reel



A	В	P	K	T
1.50±0.1	2.30±0.1	4.0±0.1	1.30 Max	0.3 Max



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.

