

ASPI-0530LR Series

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5.7 x 5.3 x 3.0 mm **RoHS/RoHS II Compliant** MSL Level = 1

Features

- High saturation current.
- Low loss due to low DC resistance.
- Frequency application up to 3MHz.
- Low profile with max thickness 3.0mm.
- 100% lead free and meets RoHS standard.
- Suitable for reflow soldering.
- High reliable SMD package

Applications

- DC/DC converters.
- Power circuitry for Notebooks, Netbooks, desktops, and servers.
- Low profile, high current power supplies.

Electrical Specifications

Part Number ASPI-0520LR- Inductance Code	Inductance	Tolerance	DCR Typ.	DCR Max	Saturation Current	Temperature Rise Current
Units	μН	%	mΩ	mΩ	A	A
Symbol	L	M			Isat	Irms
ASPI-0530LR-R22	0.22	M	4.0	5.0	23.0	15.0
ASPI-0530LR-R33	0.33	M	5.0	6.0	20.0	12.0
ASPI-0530LR-R47	0.47	M	6.3	7.4	18.0	13.0
ASPI-0530LR-R68	0.68	M	9.1	10.0	14.0	10.0
ASPI-0530LR-1R0	1.0	M	13.0	14.0	11.0	7.0
ASPI-0530LR-1R5	1.5	M	18.5	20.0	7.0	8.0
ASPI-0530LR-2R2	2.2	M	24.0	26.0	5.5	7.0
ASPI-0530LR-3R3	3.3	M	32.0	36.0	5.0	6.5
ASPI-0530LR-4R7	4.7	M	54.0	60.0	4.5	4.5
ASPI-0530LR-5R6	5.6	M	55.0	65.0	4.0	4.5
ASPI-0530LR-6R8	6.8	M	65.0	76.5	4.0	3.8
ASPI-0530LR-100	10.0	M	104	120	3.5	3.2

Test Conditions

- 1. Inductance is measured in HP-4285A Precision LCR Meter.
- 2. RDC is measured in HP-4338B milli ohm meter.(or equivalent).
- 3. Isat: Based on inductance change ($\triangle L/Lo : \le -20\%$)
- 4. Irms: Based on temperature rise ($\triangle T : 40^{\circ}C \text{ TYP.}$)

Operating Temperature: -55°C to +125°C (Including self-generated heat) **Storage Temperature and Humidity:** +25°C to +35°C, 45% to 85% RH

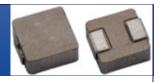
ASPI-0530LR is RoHS/RoHS II Compliant and Pb free

ASPI-0530LR is MSL level: 1 Maximum voltage 30VDC.



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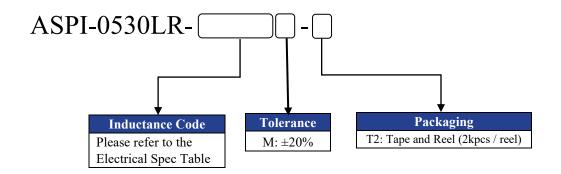


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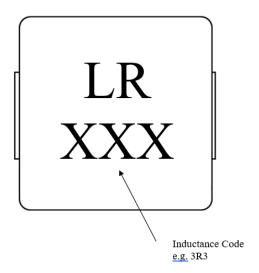


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Part Number Identification



Marking



Marking Method: INK



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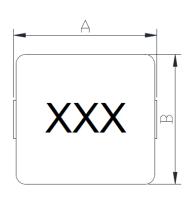


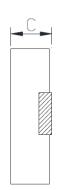
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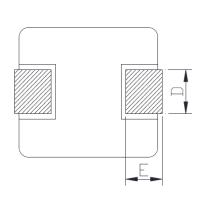


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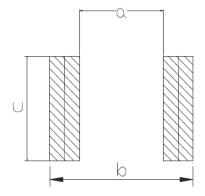
Mechanical Specifications







A	В	C	D	E
5.7 ± 0.3	5.3 ±0.4	3.0 MAX	2.2 ± 0.5	1.2 ± 0.5



Recommended Layout

a	b	c
3.0 TYP	7.0 TYP	2.5 TYP

Dimension: mm



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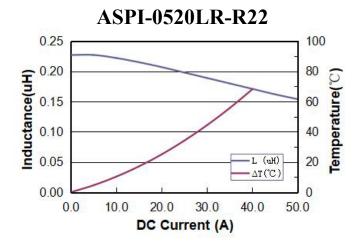


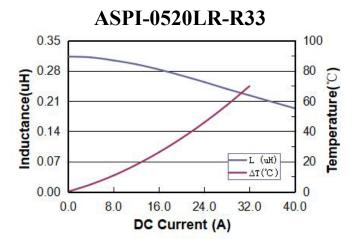
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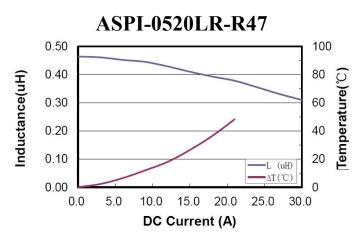


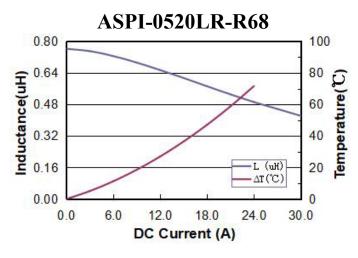
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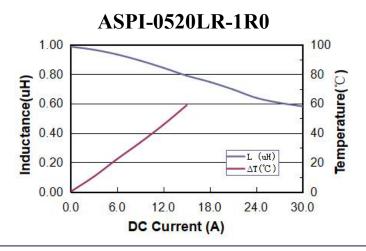
Performance Graphs

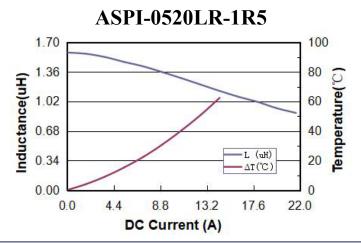














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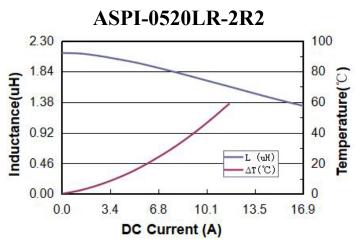




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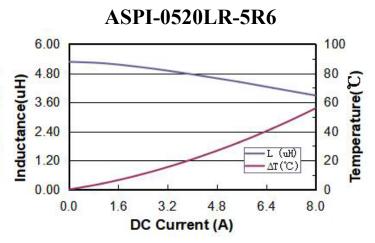
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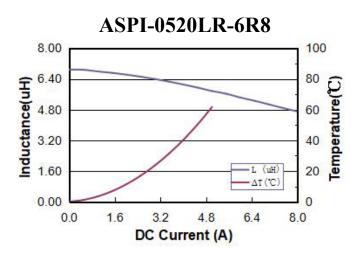


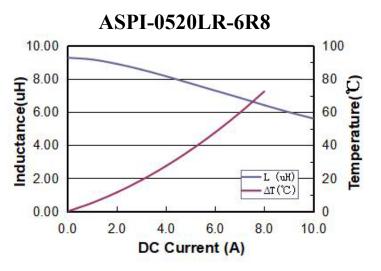
ASPI-0520LR-3R3 3.50 100 2.80 80 Temperature(℃) Inductance(uH) 2.10 60 1.40 -L (mH) 0.70 ΔT(°C) 0.00 0.0 3.2 6.4 9.6 12.8 16.0 DC Current (A)

ASPI-0520LR-4R7 100 4.50 3.60 80 lemperature(ೆ) Inductance(uH) 60 2.70 40 1.80 L (uH) 0.90 20 AT(°C) 0.00 0.0 1.8 3.6 5.4 7.2 9.0

DC Current (A)









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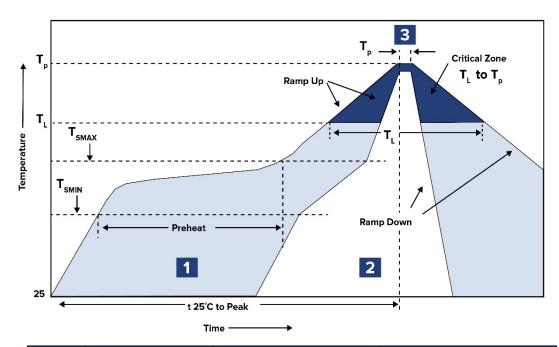


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Reflow Soldering Profile



Zone	Description	Temperature	Times
1	Preheat	$\begin{split} T_{SMIN} \sim T_{SMAX} \\ 150^{\circ}C \sim 180^{\circ}C \end{split}$	$60 \sim 100 \text{ sec.}$
2	Reflow	${ m T_L} m 200^{\circ}C$	20 sec. MAX
3	Peak heat	Т _Р 250°С	3 sec. MAX



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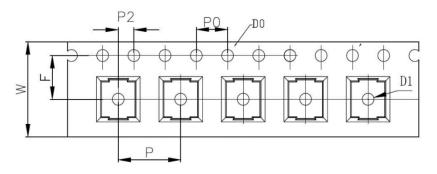
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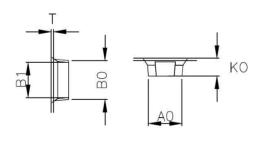


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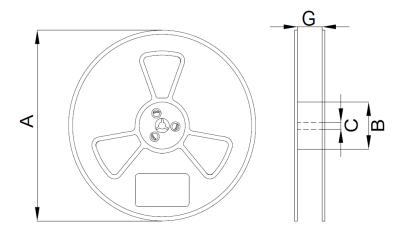
Packaging

Tape & Reel: 2,000pcs/Reel





\mathbf{W}	A0	В0	K0	P	F	E	D0	P0	P2	T
12.0 ± 0.3	5.7 ± 0.3	5.9 ± 0.3	3.4 ± 0.3	8.0 ± 0.1	5.5 ± 0.1	1.75±0.1	1.5±0.1	4.0±0.1	2.0±0.1	±0.35 typ



A	В	C	G
330 ± 1.0	100 ± 1.0	13.2 ± 0.5	12.5 ± 0.2

Dimensions: mm

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