

# POWER INDUCTORS

## WCM 301 Series



### PRODUCT DESCRIPTION

West Coast Magnetics' 301 series is designed to be used as a power inductor in switchmode power supply applications. These power inductors combine high current handling capability in a low profile SMD package. This inductor has lower EMI than drum core style inductors. Many part numbers can be used as a coupled inductor to accommodate multiple outputs.

### FEATURES - BENEFITS



SMD, Tape and Reel • Power to 30 amps • Low EMI • Multiple Inductors in a single package.

### DESIGN CONSTANTS

Size Code	Inductance $\mu\text{H} \pm 15\%$	Schematic	DCR (m $\Omega$ ) each winding	DCR (m $\Omega$ ) parallel	I max (amps) each winding <sup>a</sup>	I max (amps) parallel <sup>a</sup>	I max (amps) L drop limited <sup>b</sup>
301-1	2.5	A	10	2.5	5.0	20.0	26.7
301-2	3.2	A	15	3.8	4.1	16.2	23.3
301-3	4.1	A	25	6.3	3.2	12.6	20.8
301-4	4.9	A	10	2.5	5.0	20.0	13.4
301-5	6.4	A	15	3.8	4.1	16.2	11.7
301-62	8.1	A	25	6.3	3.2	12.6	10.4
301-7	9.8	C	19	9.5	5.2	10.3	13.4
301-8	10.0	A	30	7.5	2.9	11.5	9.4
301-9	12.8	C	26	13.0	4.4	8.8	11.7
301-10	18.1	C	46	23.0	3.3	6.6	9.8
301-11	19.6	C	19	9.5	5.2	10.3	6.7
301-12	22.1	C	60	30.0	2.9	5.8	8.9
301-13	25.6	C	26	13.0	4.4	8.8	5.8
301-14	28.8	B	79	26.0	2.1	6.2	7.8
301-15	36.1	C	46	23.0	3.3	6.6	4.9
301-16	44.1	C	60	30.0	2.9	5.8	4.5
301-17	51.2	D	55	55.0	4.3	4.3	5.8
301-18	57.6	B	79	26.0	2.1	6.2	3.9
301-19	68.5	D	92	92.0	3.3	3.3	5.0
301-20	84.1	D	120	120.0	2.9	2.9	4.6
301-21	90.0	D	38	38.0	5.1	5.1	3.1
301-22	102.0	D	55	55.0	4.3	4.3	2.9
301-23	130.0	E	154	154.0	2.5	2.5	3.7
301-24	136.0	D	92	92.0	3.3	3.3	2.5
301-25	168.0	D	120	120.0	2.9	2.9	2.3
301-26	186.0	E	184	184.0	2.3	2.3	3.1
301-27	260.0	E	154	154.0	2.5	2.5	1.8
301-28	372.0	E	184	184.0	2.3	2.3	1.5
301-29	532.0	E	220	220.0	2.1	2.1	1.3

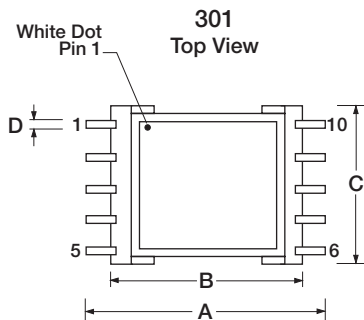
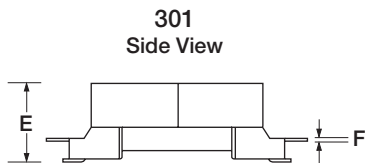
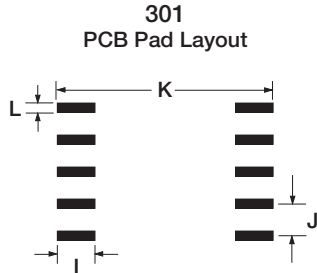
#### Notes:

- a. This is the RMS current which will generate a 40°C T rise with a maximum 1% current ripple.
- b. This is the maximum current for no reduction in inductance. Exceeding this value by a factor of 2 will result in an approximate 10% drop in inductance. Beyond this L drops more rapidly.

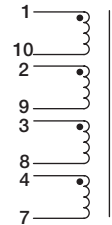


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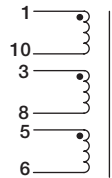
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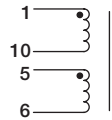
Schematic A



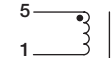
Schematic B



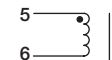
Schematic C



Schematic D



Schematic E



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Size Code	A	B	C	D	E	F	I	J	K	L
301	$\frac{1.091}{27.7}$	$\frac{.933}{23.7}$	$\frac{.854}{21.7}$	$\frac{.039}{1.0}$	$\frac{.406}{10.3}$	$\frac{.012}{0.3}$	$\frac{.110}{2.8}$	$\frac{.150}{3.75}$	$\frac{1.01}{25.6}$	$\frac{.079}{2.0}$

Note: All materials of construction minimum Class B 130 degrees C rated.

