301 series

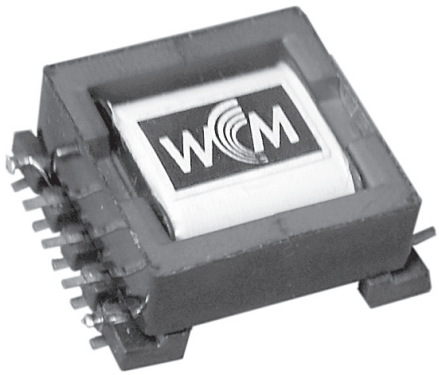
power inductors

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 accomodate multiple outputs.

FEATURES - BENEFITS

SMD, Tape and reel – Current to 30 amps – Low EMI – Multiple inductors in a single package



Product Code	*Inductance (µH) ± 15%*	*Schematic*	*DCR (mΩ) each Winding*	*DCR (mΩ) Parallel*	*I max (amps) each Winding a.*	*I max (amps) Parallel a.*	*I max (amps) L drop limited b.*
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
301-6	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

17 – 29, *continued next page* ➟

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.

...continued from previous

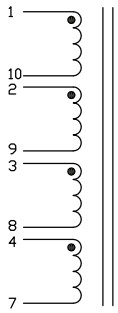
Product Code	Inductance (µH) ± 15%	Schematic	DCR (mΩ) each Winding	DCR (mΩ) Parallel	I max (amps) each Winding a.	I max (amps) Parallel a.	I max (amps) L drop limited b.
301-17	51.2	D	55	55.0	4.3	4.3	5.8
301-18	57.6	B	79	26.0	2.1	6.2	3.9
301-19	68.5	D	92	92.0	3.3	3.3	5.0
301-20	84.1	D	120	120.0	2.9	2.9	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:

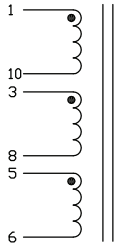
a. This is the RMS current which will generate a 40°C T rise with a maximum 1% current ripple.

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.

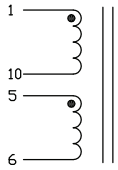
Schematic A



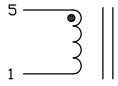
Schematic B



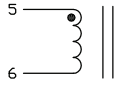
Schematic C



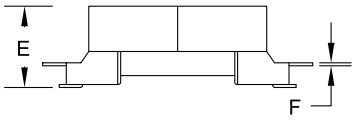
Schematic D



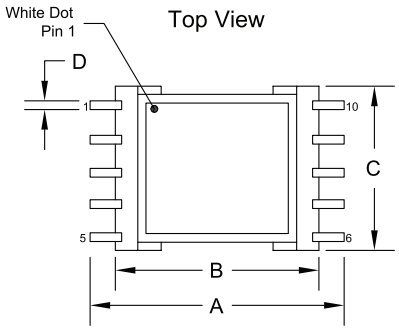
Schematic E



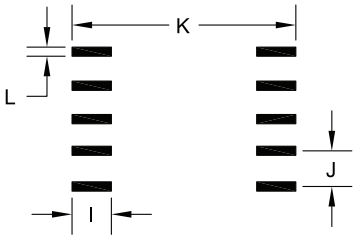
301
Side View



301
Top View



301
PCB Pad Layout



Dimensions: inches / mm

Product Code	A	B	C	D	E	F	I	J	K	L
301	1.091 27.7	0.933 23.7	0.854 21.7	0.039 1.0	0.406 10.3	0.012 0.3	0.110 2.8	0.150 3.75	1.01 25.6	0.079 2.0