

EP CORE CHOKES - FERRITE

APPLICATION FEATURES

The DL Series Filter chokes are offered for use in high-frequency DC power supply applications including switching regulators.

The principal feature of this Series is small size and high packaging density. That is, relatively larger amounts of energy storage per unit volume.

High energy storage (LI^2) is obtained by optimizing the magnetic circuit. This results in the highest inductance at the maximum rated DC.

These bobbin wound coils provide higher self-resonant frequency compared to toroidal coils.

PACKAGING CONSIDERATIONS

Parallel windings are used for low inductance parts to provide high current ratings. The multiple windings makes winding practical on small bobbins and permits termination to PC pins. All the pins are left on each part to provide maximum holding strength to the PC board. It is recommended that the holes and pads be provided for all the pins of the choke on the PC board. Also, that all the pads on each side be connected together. This will provide maximum holding strength.

The EP core and bobbin designs provide all the pins to be within the outline of the core, therefor minimizing board mounting area compared to traditional pot cores.

Contact MCE for questions concerning packaging or modified standard parts including surface mount.

ELECTRICAL SPECIFICATIONS

PART NUMBER	$L_o \pm 10\%$ MILLI-H	DCR $\pm 15\%$ OHMS	DC AMPS MAX	SELF RES. FREQ.-KHZ	PIN CONNECTIONS
OE07DL22	.00279	.0081	6.6	>3000	1,2,3-4,5,6
OE07DL23	.00462	.012	5.4	>3000	1,2,3-4,5,6
OE07DL24	.00690	.018	4.5	>3000	1,3-4,6
OE07DL25	.0128	.033	3.3	>3000	1,3-4,6
OE07DL26	.0185	.047	2.7	>3000	1,3-4,6
OE07DL27	.0251	.067	2.3	>3000	1-4
OE07DL28	.0584	.14	1.6	>3000	1-4
OE07DL29	.0780	.20	1.3	>3000	1-4
OE07DL30	.148	.34	1.0	>3000	1-4
OE07DL31	.295	.62	.76	2700	1-4
OE07DL32	.374	.86	.64	2300	1-4
OE07DL33	.605	1.4	.51	1800	1-4
OE07DL34	.993	2.3	.39	1400	1-4
OE07DL35	1.50	3.5	.32	1100	1-4
OE07DL36	1.89	4.7	.27	1000	1-4
OE10DL22	.0160	.026	4.4	>3000	1,2,3,4-5,6,7,8
OE10DL23	.0223	.038	3.7	>3000	1,2,3,4-5,6,7,8
OE10DL24	.0502	.075	2.6	2800	1,4-5,8
OE10DL25	.0658	.11	2.2	2400	1,4-5,8
OE10DL26	.139	.22	1.5	1100	1,2,4-5,6,8
OE10DL27	.217	.32	1.3	2800	1-5
OE10DL28	.279	.45	1.1	2500	1-5
OE10DL29	.444	.70	.86	2100	1-5
OE10DL30	.813	1.3	.63	1500	1-5
OE10DL31	1.24	1.9	.52	1100	1-5
OE10DL32	1.93	2.9	.42	890	1-5
OE10DL33	3.30	4.9	.32	670	1-5
OE10DL34	4.40	7.0	.27	570	1-5
OE10DL35	6.98	11	.21	440	1-5
OE10DL36	12.7	20	.16	350	1-5
OE13DL20	.0116	.014	6.8	>3000	1,2,3,4,5-6,7,8,9,10
OE13DL21	.0144	.019	5.8	>3000	1,2,4,5-6,7,9,10
OE13DL22	.0250	.034	4.4	>3000	1,2,4,5-6,7,9,10
OE13DL23	.0462	.057	3.4	2800	1,2,4,5-6,7,9,10
OE13DL24	.0810	.092	2.7	2800	2,4-7,9
OE13DL25	.108	.13	2.2	1600	2,4-7,9
OE13DL26	.196	.23	1.7	1200	2,4-7,9
OE13DL27	.324	.38	1.3	2000	3-8
OE13DL28	.666	.70	.98	1300	3-8
OE13DL29	1.05	1.1	.78	1100	3-8
OE13DL30	1.80	1.9	.60	840	3-8
OE13DL31	2.30	2.5	.51	740	3-8
OE13DL32	3.55	3.9	.41	580	3-8
OE13DL33	6.72	7.0	.31	400	3-8
OE13DL34	9.41	10	.25	350	3-8
OE17DL19	.0259	.016	6.7	>3000	1,2,3,4-5,6,7,8
OE17DL20	.0500	.027	5.1	2300	1,2,3,4-5,6,7,8
OE17DL21	.0769	.041	4.2	2000	1,2,3,4-5,6,7,8
OE17DL22	.104	.058	3.5	1600	1,4-5,8
OE17DL23	.135	.082	2.9	1400	1,4-5,8
OE17DL24	.328	.17	2.1	710	1,4-5,8
OE17DL25	.620	.29	1.6	1200	1-5
OE17DL26	.816	.41	1.3	1000	1-5
OE17DL27	1.46	.69	1.0	780	1-5
OE17DL28	2.31	1.1	.80	630	1-5
OE17DL29	2.89	1.5	.70	570	1-5
OE17DL30	5.04	2.6	.53	440	1-5
OE17DL31	8.55	4.2	.41	300	1-5
OE17DL32	12.9	6.3	.34	240	1-5
OE17DL33	21.7	11	.26	190	1-5
OE20DL18	.0706	.022	7.3	1500	1,2,3,4,5-6,7,8,9,10
OE20DL19	.172	.048	4.9	830	1,2,4,5-6,7,9,10
OE20DL20	.271	.073	4.0	520	1,3,5-6,8,10
OE20DL21	.380	.10	3.3	560	1,2,4,5-6,7,9,10
OE20DL22	.602	.16	2.7	400	1,5-6,10
OE20DL23	1.04	.28	2.0	780	1,5-6,10
OE20DL24	1.37	.39	1.7	680	1,5-6,10
OE20DL25	3.23	.78	1.2	440	1-6
OE20DL26	4.04	1.1	1.0	400	1-6
OE20DL27	6.78	1.8	.82	290	1-6
OE20DL28	11.1	2.9	.63	230	1-6
OE20DL29	18.4	4.6	.50	180	1-6
OE20DL30	29.4	7.7	.39	140	1-6
OE20DL31	39.3	11	.33	120	1-6
OE20DL32	58.6	17	.26	98	1-6

MECHANICAL SPECIFICATIONS

SIZE	Fig.	H MAX	W MAX	L MAX	P MIN	D $\pm .01$	S $\pm .01$	DIA. $\pm .003$	WT. (g)
OE07	A	.40	.33	.40	.11	.20	.10	.024	2.2
OE10	B	.47	.47	.49	.15	.30	.10	.026	4.4
OE13	C	.51	.55	.55	.15	.40	.10	.028	7.1
OE17	B	.65	.78	.78	.15	.60	.20	.026	15
OE20	C	.80	.89	.99	.15	.70	.20	.026	37

Figure A

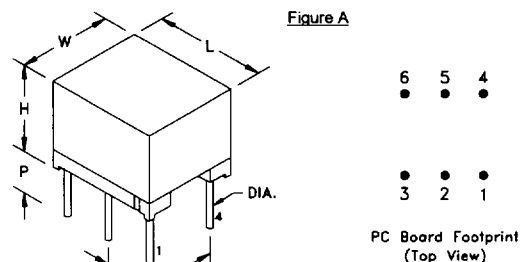


Figure B

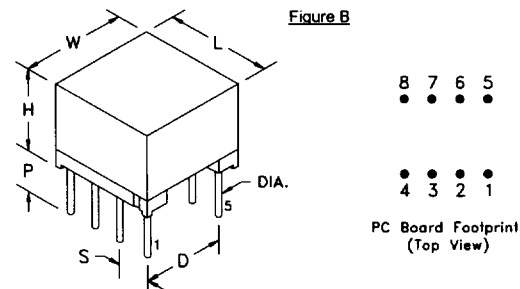
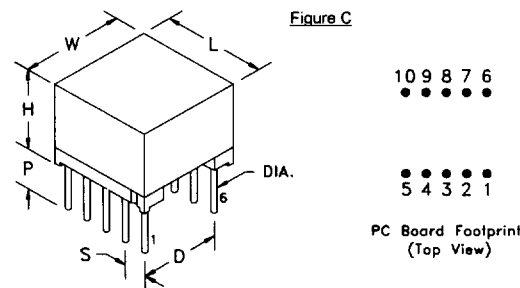


Figure C



NOTES

- Initial inductance (L_o) is measured at 1 KHz.
- DC Amps maximum rating is for a 50°C rise.
- Maximum operating temperature is 130°C.
- Self-Resonant Frequency is typical and for reference only.
- Dielectric Withstanding Voltage (winding-to-core) is 1800 Vdc, 10 μ A MAX leakage per UL1459.
- All electrical data at 20° $\pm$ 5°C with multiple windings in parallel.
- All mechanical dimensions are in inches.
- Clear acrylic resin impregnated.
- Pins are hot solder dipped.

	INIT.	DATE	CAGE 09349	MAGNETIC CIRCUIT ELEMENTS INC.				
PROD.	MP	3-12-97		"EP" CORE CHOKES - FERRITE				
ENG.	J.C.	3-12-97	TEST CONDITION 20° $\pm$ 5° C	DECIMALS	VOLTS	FREQUENCY	SIZE	DWG. NO.
Q.A.	B.T.	3-12-97		.XX $\pm$.03	$\pm 5\%$	$\pm 5\%$	A	OE(07-20)DL
REV.	A	3-12-97		.XXX $\pm$.010				