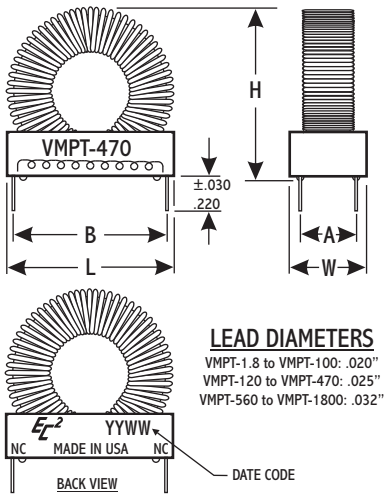
Vertical Mount Power Toroidal Inductor

The Vertical Mount Power Toroidal Inductors manufactured by Engineered Components Company are designed using stable powdered iron core material. The toroidal core inductor design provides a low external magnetic field and a high core saturation currents.

The standard inductance value tolerance is +/-10% when measured at 1 Khz, (I_{DC}=0). Inductance values and Q values are measured on an HP 4284A LCR meter. Since inductance varies with AC/DC current values, each end application should be evaluated to ensure proper readings. The tabulated current ratings (Rated I_{DC}) are those calculated to cause a 40 deg. C rise in case temperature. These inductors are designed to meet the applicable portions of MIL-C-15305, Grade 1, Class B. The operating temperature range is -55 to +125 deg. C. Inductors are capable of withstanding 500Vdc@50 uA applied between the coil and the case.

The wound toroid inductor is secured in the housing with an epoxy resin. A portion of the wound inductor extends above the housing and is not encapsulated. The housing material is a Liquid Crystal Polymer, off-white in color. Marking is applied by silkscreen using blue epoxy paint. The active inductor leads are marked by a coil symbol, while unused leads are marked "NC". The copper leads are tin-lead plated.



LEAD DIAMETERS
VMPT-1.8 to VMPT-100: .020"
VMPT-120 to VMPT-470: .025"
VMPT-560 to VMPT-1800: .032"

Product Selection Table — I_{DC} (amps) readings for % drops

PART NUMBER	L(uH)	W	L	H	A	B	DCR(ohms)	RATED I_{DC}(amps)	10% DROP IN L	20% DROP IN L	30% DROP IN L
VMPT-1.8	1.8	0.150	0.275	0.250	N/A	0.150	0.02	1.9	0.84	1.39	1.94
VMPT-2.2	2.2	0.150	0.275	0.250	N/A	0.150	0.02	1.8	0.76	1.26	1.75
VMPT-2.7	2.7	0.200	0.325	0.350	0.100	0.200	0.03	2.4	1.43	2.39	3.32
VMPT-3.3	3.3	0.200	0.325	0.350	0.100	0.200	0.03	2.3	1.30	2.16	3.00
VMPT-3.9	3.9	0.200	0.325	0.350	0.100	0.200	0.03	2.2	1.19	1.99	2.76
VMPT-4.7	4.7	0.200	0.325	0.350	0.100	0.200	0.04	2.1	1.09	1.81	2.52
VMPT-5.6	5.6	0.200	0.325	0.350	0.100	0.200	0.04	2.0	0.99	1.66	2.31
VMPT-6.8	6.8	0.200	0.325	0.350	0.100	0.200	0.04	1.9	0.90	1.50	2.09
VMPT-8.2	8.2	0.200	0.325	0.350	0.100	0.200	0.05	1.8	0.82	1.37	1.91
VMPT-10	10.0	0.200	0.325	0.350	0.100	0.200	0.05	1.7	0.74	1.24	1.73
VMPT-12	12.0	0.250	0.425	0.425	0.150	0.300	0.06	2.0	0.97	1.62	2.26
VMPT-15	15.0	0.250	0.425	0.425	0.150	0.300	0.07	1.9	0.87	1.45	2.02
VMPT-18	18.0	0.250	0.425	0.425	0.150	0.300	0.07	1.8	0.80	1.33	1.84
VMPT-22	22.0	0.250	0.425	0.500	0.150	0.300	0.06	2.3	0.83	1.39	1.93
VMPT-27	27.0	0.250	0.425	0.525	0.150	0.300	0.06	2.2	0.75	1.25	1.74
VMPT-33	33.0	0.275	0.600	0.575	0.150	0.500	0.08	2.4	0.90	1.50	2.09
VMPT-39	39.0	0.275	0.600	0.600	0.150	0.500	0.08	2.3	0.83	1.38	1.92
VMPT-47	47.0	0.275	0.600	0.600	0.150	0.500	0.09	2.2	0.75	1.26	1.75
VMPT-56	56.0	0.275	0.600	0.625	0.150	0.500	0.11	2.3	0.78	1.29	1.80
VMPT-68	68.0	0.275	0.600	0.625	0.150	0.500	0.12	2.1	0.70	1.17	1.63
VMPT-82	82.0	0.275	0.600	0.650	0.150	0.500	0.14	2.0	0.64	1.07	1.49
VMPT-100	100.0	0.275	0.600	0.675	0.150	0.500	0.15	1.9	0.58	0.97	1.35
VMPT-120	120.0	0.350	0.650	0.725	0.200	0.500	0.17	2.2	0.77	1.28	1.77
VMPT-150	150.0	0.350	0.650	0.750	0.200	0.500	0.19	2.1	0.68	1.14	1.59
VMPT-180	180.0	0.350	0.650	0.750	0.200	0.500	0.20	2.0	0.63	1.04	1.45
VMPT-220	220.0	0.400	0.750	0.950	0.200	0.600	0.17	2.8	0.75	1.24	1.73
VMPT-270	270.0	0.400	0.750	0.975	0.200	0.600	0.18	2.7	0.67	1.12	1.56
VMPT-330	330.0	0.400	0.750	0.975	0.200	0.600	0.20	2.5	0.61	1.01	1.41
VMPT-390	390.0	0.550	0.900	1.175	0.400	0.800	0.15	3.6	0.78	1.29	1.80
VMPT-470	470.0	0.550	0.900	1.175	0.400	0.800	0.16	3.4	0.71	1.18	1.64
VMPT-560	560.0	0.600	1.000	1.300	0.400	0.800	0.19	3.7	0.84	1.40	1.94
VMPT-680	680.0	0.600	1.000	1.300	0.400	0.800	0.21	3.5	0.76	1.27	1.76
VMPT-820	820.0	0.700	1.200	1.600	0.500	1.000	0.16	4.7	0.83	1.38	1.91
VMPT-1000	1000.0	0.700	1.200	1.600	0.500	1.000	0.18	4.4	0.75	1.25	1.73
VMPT-1200	1200.0	0.725	1.400	1.750	0.500	1.200	0.20	4.7	0.84	1.40	1.95
VMPT-1500	1500.0	0.725	1.400	1.775	0.500	1.200	0.22	4.5	0.75	1.25	1.74
VMPT-1800	1800.0	0.725	1.400	1.800	0.500	1.200	0.25	4.3	0.69	1.14	1.59

Special modules can often be manufactured to provide for customer specific applications.

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