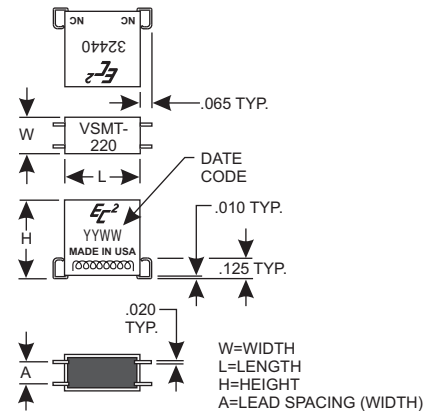


# Vertical Surface Mount Toroidal Inductor

The Vertical Surface Mount Toroidal Inductors manufactured by Engineered Components Company are designed for RF/low power applications using stable powdered iron core material. The fully encapsulated inductor provides a low external magnetic field, a high self-resonant frequency, and a high Q.

The standard inductance value tolerance is +/-5% when measured at the frequencies specified in Table 1. Inductance 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<sub>dc</sub>) are those calculated to cause a 25 deg. C rise in case temperature. These inductors are designed to meet the applicable portions of MIL-C-15305, Grade 1, Class B. The temperature coefficient of inductance is less than 400ppm/deg. C over the operating temperature range of -55 to +125 deg. C. Inductors are capable of withstanding 500Vdc@50 uA applied between the coil and the case.

The inductor is fully encapsulated in epoxy resin and is housed in a Liquid Crystal Polymer case, off-white in color. The case dimensions are specified in Table 2. The case marking is applied by silkscreen using blue epoxy paint. The 4 Phosphor-Bronze or Beryllium Copper leads are tin-lead plated and the 2 active leads are marked on the case by the coil emblem.



INDUCTANCE (IN uH)	TEST FREQUENCY	SIZE	W	L	H	A
2.7-9.1	7.9MHz	1	.150	.250	.260	.100
10-91	2.5MHz	2	.200	.300	.310	.100
100-910	790KHz	3	.225	.350	.360	.150
1000-1200	250KHz	4	.250	.500	.510	.150
		5	.300	.600	.610	.200

TABLE 1  
Test Frequencies

TABLE 2  
Package Sizes

Product Selection Table

PART NUMBER	L (uH)	SIZE	DCR (ohms)	Q (nom)	SRF TYP. (Mhz)	RATED IDC (mA)
VSMT-2.7	2.7	1	0.50	90	93	900
VSMT-3.0	3.0	1	0.50	90	87	880
VSMT-3.3	3.3	1	0.50	87	81	860
VSMT-3.6	3.6	1	0.50	87	76	840
VSMT-3.9	3.9	1	0.60	85	71	820
VSMT-4.3	4.3	1	0.60	85	67	810
VSMT-4.7	4.7	1	0.60	80	63	800
VSMT-5.1	5.1	1	0.60	78	60	790
VSMT-5.6	5.6	1	0.60	78	57	780
VSMT-6.2	6.2	1	0.60	75	54	770
VSMT-6.8	6.8	1	0.60	75	51	760
VSMT-7.5	7.5	2	0.80	92	48	750
VSMT-8.2	8.2	2	0.90	92	45	730
VSMT-9.1	9.1	2	0.90	92	42	710
VSMT-10	10.0	2	0.90	91	40	690
VSMT-11	11.0	2	1.0	91	38	670
VSMT-12	12.0	2	1.1	91	36	650
VSMT-13	13.0	2	1.1	90	34	630
VSMT-15	15.0	2	1.2	90	32	610
VSMT-16	16.0	2	1.2	90	30	600
VSMT-18	18.0	2	1.3	90	28	590
VSMT-20	20.0	2	1.4	90	26	570
VSMT-22	22.0	2	1.5	89	24	550
VSMT-24	24.0	2	1.5	89	22	540
VSMT-27	27.0	2	1.6	88	21	530
VSMT-30	30.0	2	1.7	88	20	510
VSMT-33	33.0	2	1.8	87	19	500
VSMT-36	36.0	2	1.9	85	18	490
VSMT-39	39.0	2	2.0	83	17	480
VSMT-43	43.0	2	2.1	80	16	470
VSMT-47	47.0	2	2.2	76	15	470
VSMT-51	51.0	3	2.3	110	14	460

Product Selection Table (cont.)

PART NUMBER	L (uH)	SIZE	DCR (ohms)	Q (nom)	SRF TYP. (Mhz)	RATED IDC (mA)
VSMT-56	56.0	3	2.4	106	13	450
VSMT-62	62.0	3	2.6	102	12	440
VSMT-68	68.0	3	2.8	98	12	420
VSMT-75	75.0	3	3.0	96	11	410
VSMT-82	82.0	3	3.2	94	10	400
VSMT-91	91.0	3	3.4	92	10	400
VSMT-100	100	3	3.6	105	9	380
VSMT-110	110	3	3.8	104	9	370
VSMT-120	120	3	3.9	103	8	360
VSMT-130	130	3	4.0	102	8	350
VSMT-150	150	3	4.2	102	7	340
VSMT-160	160	3	4.4	101	7	330
VSMT-180	180	3	4.8	101	6	330
VSMT-200	200	4	5.1	100	6	320
VSMT-220	220	4	5.4	100	5	320
VSMT-240	240	4	5.7	100	5	320
VSMT-270	270	4	3.8	100	5	400
VSMT-300	300	4	4.0	100	4	390
VSMT-330	330	4	4.2	100	4	380
VSMT-360	360	4	4.4	100	4	370
VSMT-390	390	4	4.6	99	3	360
VSMT-430	430	4	4.8	98	3	350
VSMT-470	470	4	5.0	97	3	350
VSMT-510	510	4	5.2	95	3	340
VSMT-560	560	4	5.5	92	3	330
VSMT-620	620	5	5.8	88	2.8	350
VSMT-680	680	5	6.2	82	2.6	340
VSMT-750	750	5	6.5	75	2.5	330
VSMT-820	820	5	6.8	70	2.3	320
VSMT-910	910	5	7.1	65	2.2	320
VSMT-1000	1000	5	7.5	115	2.1	310
VSMT-1200	1200	5	8.2	115	1.8	300

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



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