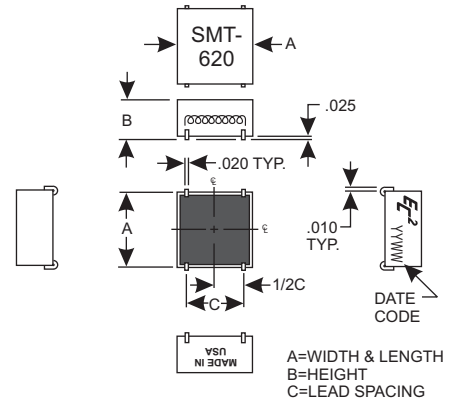


# Surface Mount Toroidal Inductor

The 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 Idc) 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
2.7-9.1	7.9MHz
10-91	2.5MHz
100-910	790KHz
1000-1200	250KHz

TABLE 1  
Test Frequencies

SIZE	A	B	C
1	.250	.200	.150
2	.300	.200	.200
3	.350	.275	.250
4	.400	.275	.300
5	.500	.275	.400

TABLE 2  
Package Sizes

Product Selection Table

PART NUMBER	L (uH)	SIZE	DCR (ohms)	Q (nom)	SRF TYP. (Mhz)	RATED IDC (mA)
SMT-2.7	2.7	1	0.50	90	93	900
SMT-3.0	3.0	1	0.50	90	87	880
SMT-3.3	3.3	1	0.50	87	81	860
SMT-3.6	3.6	1	0.50	87	76	840
SMT-3.9	3.9	1	0.60	85	71	820
SMT-4.3	4.3	1	0.60	85	67	810
SMT-4.7	4.7	1	0.60	80	63	800
SMT-5.1	5.1	1	0.60	78	60	790
SMT-5.6	5.6	1	0.60	78	57	780
SMT-6.2	6.2	1	0.60	75	54	770
SMT-6.8	6.8	1	0.60	75	51	760
SMT-7.5	7.5	2	0.80	92	48	750
SMT-8.2	8.2	2	0.90	92	45	730
SMT-9.1	9.1	2	0.90	92	42	710
SMT-10	10.0	2	0.90	91	40	690
SMT-11	11.0	2	1.0	91	38	670
SMT-12	12.0	2	1.1	91	36	650
SMT-13	13.0	2	1.1	90	34	630
SMT-15	15.0	2	1.2	90	32	610
SMT-16	16.0	2	1.2	90	30	600
SMT-18	18.0	2	1.3	90	28	590
SMT-20	20.0	2	1.4	90	26	570
SMT-22	22.0	2	1.5	89	24	550
SMT-24	24.0	2	1.5	89	22	540
SMT-27	27.0	2	1.6	88	21	530
SMT-30	30.0	2	1.7	88	20	510
SMT-33	33.0	2	1.8	87	19	500
SMT-36	36.0	2	1.9	85	18	490
SMT-39	39.0	2	2.0	83	17	480
SMT-43	43.0	2	2.1	80	16	470
SMT-47	47.0	2	2.2	76	15	470
SMT-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)
SMT-56	56.0	3	2.4	106	13	450
SMT-62	62.0	3	2.6	102	12	440
SMT-68	68.0	3	2.8	98	12	420
SMT-75	75.0	3	3.0	96	11	410
SMT-82	82.0	3	3.2	94	10	400
SMT-91	91.0	3	3.4	92	10	400
SMT-100	100	3	3.6	105	9	380
SMT-110	110	3	3.8	104	9	370
SMT-120	120	3	3.9	103	8	360
SMT-130	130	3	4.0	102	8	350
SMT-150	150	3	4.2	102	7	340
SMT-160	160	3	4.4	101	7	330
SMT-180	180	3	4.8	101	6	330
SMT-200	200	4	5.1	100	6	320
SMT-220	220	4	5.4	100	5	320
SMT-240	240	4	5.7	100	5	320
SMT-270	270	4	3.8	100	5	400
SMT-300	300	4	4.0	100	4	390
SMT-330	330	4	4.2	100	4	380
SMT-360	360	4	4.4	100	4	370
SMT-390	390	4	4.6	99	3	360
SMT-430	430	4	4.8	98	3	350
SMT-470	470	4	5.0	97	3	350
SMT-510	510	4	5.2	95	3	340
SMT-560	560	4	5.5	92	3	330
SMT-620	620	5	5.8	88	2.8	350
SMT-680	680	5	6.2	82	2.6	340
SMT-750	750	5	6.5	75	2.5	330
SMT-820	820	5	6.8	70	2.3	320
SMT-910	910	5	7.1	65	2.2	320
SMT-1000	1000	5	7.5	115	2.1	310
SMT-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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