

Section 13. Toroids



Ferrite toroids offer high magnetic efficiency as there is no air gap, and the cross sectional area is uniform. Available in many sizes (O.D.'s from .100" to 3.375"), and materials (permeabilities from 750 to 15,000), this section lists the common ones used in the industry. For other sizes, contact the factory.

HIGH PERMEABILITY APPLICATIONS. High inductance, high impedance over wide frequency ranges and low loss factor make J, W and H toroids excellent choices for common mode chokes, broadband transformers, pulse transformers and current transformers.

POWER APPLICATIONS. Low losses, high B_{sat} , minimum losses at high temperature and high Curie temperature make R, P, K, and F toroids excellent choices for high frequency transformers.

GFI APPLICATIONS. Special sizes in J and B materials are available for ground fault interrupter applications. B is a 5000 μ material and has a minimum permeability of 4000 over a temperature range of -35°C to +70°C.

COATINGS

In order to increase winding ease and improve voltage breakdown, the cores can be coated.

1. **Parylene C®.** This vacuum-deposited material has a uniform coating (including edges) with a thickness of .0005" to .002", a smooth winding surface, and good moisture resistance to organic solvents and acid bases. The electrical characteristics are superior to other coatings. It is available in O.D.'s up to .500". Continuous maximum rating is 130°C. (Minimum inductance 5% lower than listed.) For Parylene, add Y to part number.

2. **Grey coating.** This inexpensive coating is typically .004" to .008" thick, provides good adhesion, smooth winding surface, and good resistance to moisture and organic solvents. Good for continuous operation from -65°C to +155°C, this coating is available in O.D. sizes .375" and larger. See "Specifying coating" below. For grey coating, add Z to part number.

VOLTAGE BREAKDOWNS

The following are voltage breakdowns for the above coatings (wire to wire). See page 3.1, how measured.

Parylene C: 600 volts min. (*Minimum inductance 5% lower than listed*)

Grey coating: 1000 volts min.

SPECIAL REQUIREMENTS

Color coding. Toroids (and other cores) can be marked with a color code to distinguish different materials. When ordering, add "-CC" at the end of the part number. Codes are:

Material	R	P	F	J	W	H
Color	Blue	Green	White	Red	Yellow	Purple

High Voltage. Voltage breakdown, higher than the standard guarantee, can be provided. Dimensional tolerances are relaxed to allow for the added coating. Contact the factory for a special specification.

Specifying coating. Grey coating may be polyester or nylon, in order to minimize cost. Polyester is rated to 200°C. Nylon exhibits outstanding solvent resistance. Nylon is available only in sizes 41305 to 42908 as listed in this catalog. Within this range, add "-PO" at the end of the part number to specify *polyester only* or add "-NO" at the end of the part number to specify *nylon only*.

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TORIOD DATA

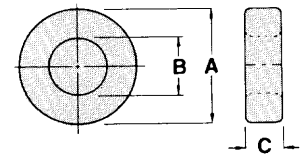
(Contact Factory for other available sizes)

available coatings ↓ ↑ Y ↓ ↑ Z ↓	MECHANICAL DIMENSIONS (Note 1 – P13.3)						A _L (mH/1000 TURNS)							
							POWER MATERIALS				TELECOM MATERIALS			
	PART NO.	A (OD)	B (ID)	C HGT. ⁽²⁾	A (OD)	B (ID)	C HGT. ⁽²⁾	K 1500μ ±25%	R 2300μ ±25%	P 2500μ ±25%	F 3000μ ±20%	A 750μ ±20%	D 200μ ±20%	G 2300μ ±20%
	40200-TC	0.100	0.050	0.050	2.54	1.27	1.27	—	400	454	525	130	350	400
	40301-TC	0.138	0.072	0.050	3.51	1.83	1.27	—	380	410	495	125	330	380
	40502-TC	0.155	0.088	0.050	3.94	2.24	1.27	—	340	368	440	110	295	340
	40503-TC	0.155	0.088	0.100	3.94	2.24	2.54	—	670	716	885	220	590	680
	40401-TC	0.190	0.090	0.050	4.83	2.29	1.27	—	440	474	570	140	380	440
	40402-TC	0.190	0.090	0.100	4.83	2.29	2.54	—	870	948	1,140	280	760	880
	40601-TC	0.230	0.120	0.060	5.84	3.05	1.52	—	450	488	585	160	390	460
	40603-TC	0.230	0.120	0.125	5.84	3.05	3.18	—	940	1,020	1,225	310	820	940
	40705-TC	0.300	0.125	0.188	7.62	3.18	4.78	—	1,920	2,088	2,505	626	1,670	1,920
	40907-TC	0.375	0.220	0.280	9.53	5.59	7.11	—	1,730	1,884	2,260	567	1,510	1,730
	41003-TC	0.375	0.187	0.125	9.53	4.75	3.18	—	1,000	1,095	1,314	330	875	1,010
	41005-TC	0.375	0.187	0.188	9.53	4.75	4.78	—	1,510	1,650	1,980	496	1,315	1,515
	41206-TC	0.500	0.203	0.250	12.7	5.16	6.35	—	2,600	2,820	3,384	848	2,255	2,595
	41303-TC	0.500	0.312	0.125	12.7	7.92	3.18	—	680	745	894	224	596	684
	41305-TC	0.500	0.312	0.200	12.7	7.92	5.08	710	1,090	1,190	1,430	357	952	1,090
	41306-TC	0.500	0.312	0.250	12.7	7.92	6.35	890	1,360	1,485	1,782	444	1,188	1,364
	41406-TC	0.500	0.281	0.250	12.7	7.14	6.35	1,080	1,660	1,805	2,166	540	1,444	1,660
	41407-TC	0.500	0.281	0.188	12.7	7.14	4.78	810	1,240	1,356	1,630	410	1,085	1,250
	41506-TC	0.520	0.290	0.156	13.2	7.37	3.96	670	1,020	1,111	1,334	343	920	1,055
	41435-TC	0.535	0.276	0.138	13.6	7.01	3.51	675	1,040	1,130	1,350	340	900	1,040
	41450-TC	0.551	0.354	0.197	14.0	8.99	5.00	640	990	1,080	1,290	325	860	990
	41605-TC	0.625	0.350	0.185	15.9	8.89	4.70	820	1,260	1,375	1,650	410	1,100	1,260
	41809-TC	0.726	0.384	0.404	18.4	9.75	10.3	1,830	2,810	3,050	3,660	915	2,440	2,810
	42106-TC	0.810	0.500	0.250	20.6	12.7	6.35	900	1,380	1,500	1,680	420	1,200	1,380
	42109-TC	0.810	0.500	0.350	20.6	12.7	8.89	1,260	1,930	2,100	2,520	630	1,680	1,930
	42206-TC	0.870	0.540	0.250	22.1	13.7	6.35	900	1,380	1,510	1,812	452	1,208	1,388
	42207-TC	0.870	0.540	0.312	22.1	13.7	7.92	1,120	1,720	1,875	2,250	560	1,500	1,740
	42212-TC	0.870	0.540	0.500	22.1	13.7	12.7	1,810	2,770	3,020	3,624	904	2,416	2,776
	42507-TC	1.000	0.610	0.312	25.4	15.5	7.92	1,170	1,800	1,958	2,348	587	1,565	1,800
	42508-TC	1.000	0.610	0.394	25.4	15.5	10.0	1,450	2,220	2,420	2,900	725	1,930	2,220
	42908-TC	1.142	0.748	0.295	29.0	19.0	7.49	950	1,450	1,585	1,902	476	1,268	1,458
	42915-TC	1.142	0.748	0.600	29.0	19.0	15.2	1,930	2,960	3,222	3,868	967	2,579	2,966
	43113-TC	1.220	0.748	0.512	31.0	19.0	13.0	1,860	2,850	3,100	3,720	930	2,480	2,850
	43205-TC	1.260	0.591	0.177	32.0	15.0	4.50	965	1,480	1,610	1,930	480	1,290	1,480
	43610-TC	1.417	0.906	0.394	36.0	23.0	10.0	—	2,030	2,210	2,726	680	1,770	2,035
	43615-TC	1.417	0.906	0.590	36.0	23.0	15.0	—	3,100	3,366	4,040	1,011	2,696	3,100
	43806-TC	1.500	0.750	0.250	38.1	19.0	6.35	—	2,020	2,200	2,640	660	1,760	2,025
	43813-TC	1.500	0.750	0.500	38.1	19.0	12.7	—	3,850	4,185	5,020	1,255	3,345	3,850
	43825-TC	1.500	0.750	1.000	38.1	19.0	25.4	—	8,060	8,762	10,040	—	—	—
	44416-TC	1.750	0.750	0.625	44.5	19.0	15.9	—	5,360	5,830	7,000	—	—	—
	44715-TC	1.846	1.063	0.591	46.9	27.0	15.0	—	3,700	4,030	4,840	—	—	—
	44916-TC	1.932	1.332	0.625	49.1	33.8	15.9	—	2,710	2,950	3,540	—	—	—
	44920-TC	1.932	1.252	0.625	49.1	31.8	15.9	—	2,790	3,032	3,640	—	—	—
	44925-TC	1.932	1.252	0.750	49.1	31.8	19.0	—	3,420	3,718	4,460	—	—	—
	44932-TC	1.932	1.332	1.250	49.1	33.8	31.8	—	5,430	5,900	7,080	—	—	—
	46113-TC	2.400	1.400	0.500	61.0	35.6	12.7	—	3,140	3,491	4,107	—	—	—
	46326-TC	2.480	1.496	0.984	63.0	38.0	25.0	—	5,770	6,270	7,530	—	—	—
	47313-TC	2.900	1.530	0.500	73.7	38.9	12.7	—	3,700	4,024	4,880	—	—	—
	48613-TC	3.375	2.187	0.500	85.7	55.5	12.7	—	2,510	2,726	3,310	—	—	—

FOR PREFERRED PARTS, SEE INSIDE BACK COVER

▲ A_L values based on testing @ 5 gauss in a de-gaussed state.

PART NO.	A _L (mH/1000 TURNS)			CORE WGT. (gms)	MAGNETIC DIMENSIONS				
	HIGH PERMEABILITY MATERIALS				l _e (cm)	A _e (cm ²)	V _e (cm ³)	WINDOW AREA (cm ²)	WaAc (Note 3) (cm ⁴)
	J 5000μ ± 20%	W 10,000μ ± 30%	H 15,000μ ± 30%						
40200-TC	875	1,750	2,625	.03	0.553	0.008	0.0044	0.013	
40301-TC	825	1,650	2,475	.04	0.782	0.0102	0.0079	0.026	
40502-TC	735	1,470	2,205	.05	0.921	0.0108	0.0099	0.039	
40503-TC	1,475	2,950	4,425	.10	0.921	0.0210	0.0193	0.039	
40401-TC	950	1,900	2,850	.09	1.021	0.0154	0.0157	0.041	
40402-TC	1,900	3,800	5,700	.17	1.021	0.0308	0.0314	0.041	
40601-TC	980	1,960	2,940	.14	1.30	0.021	0.027	0.073	
40603-TC	2,040	4,080	6,120	.30	1.30	0.044	0.057	0.073	
40705-TC	4,175	8,350	12,500	.90	1.50	0.098	0.146	0.079	
40907-TC	3,765	7,530	11,300	1.6	2.27	0.135	0.306	0.245	0.033
41003-TC	2,196	4,392	6,590	.82	2.07	0.070	0.145	0.177	
41005-TC	3,308	6,616	9,920	1.2	2.07	0.107	0.221	0.177	0.019
41206-TC	5,640	11,280	16,900	3.3	2.46	0.221	0.554	0.209	0.046
41303-TC	1,488	2,976	4,460	1.2	3.12	0.072	0.225	0.493	0.035
41305-TC	2,380	4,760	7,140	1.9	3.12	0.117	0.364	0.493	0.058
41306-TC	2,968	5,936	8,900	2.4	3.12	0.146	0.457	0.493	0.072
41406-TC	3,612	7,224	10,800	2.7	2.95	0.169	0.498	0.400	0.064
41407-TC	2,715	5,430	8,140	1.9	2.95	0.126	0.373	0.400	0.050
41506-TC	2,295	4,590	6,880	1.9	3.06	0.109	0.332	0.426	0.046
41435-TC	2,260	4,520	6,780	1.8	3.01	0.108	0.326	0.386	0.042
41450-TC	2,160	4,320	6,480	2.2	3.50	0.120	0.421	0.636	0.076
41605-TC	2,760	5,520	8,280	2.8	3.68	0.153	0.562	0.620	0.094
41809-TC	6,115	12,200	18,300	9.9	4.14	0.403	1.67	0.746	0.301
42106-TC	2,800	5,600	8,400	5.4	5.00	0.231	1.15	1.27	0.293
42109-TC	4,200	8,400	12,600	8.1	5.00	0.326	1.63	1.27	0.414
42206-TC	3,020	6,040	9,060	6.4	5.42	0.250	1.36	1.48	0.370
42207-TC	3,700	7,400	11,100	8.5	5.42	0.315	1.71	1.48	0.466
42212-TC	6,040	12,080	18,100	13.5	5.42	0.511	2.77	1.48	0.756
42507-TC	3,913	7,825	11,700	11.6	6.17	0.374	2.31	1.89	0.707
42508-TC	4,830	9,660	14,490	14.9	6.17	0.475	2.93	1.89	0.898
42908-TC	3,170	6,340	9,510	12.9	7.32	0.358	2.62	2.84	1.02
42915-TC	6,447	12,894	19,300	27.6	7.32	0.740	5.42	2.84	2.10
43113-TC	6,200	12,400	—	29.3	7.55	0.745	5.62	2.83	2.11
43205-TC	3,220	6,440	—	12.9	6.72	0.345	2.32	1.77	0.611
43610-TC	4,543	9,085	—	29.4	8.97	0.628	5.63	4.15	2.61
43615-TC	6,736	13,400	—	44.0	8.97	0.946	8.48	4.15	3.93
43806-TC	4,400	8,800	—	26.4	8.30	0.570	4.73	2.85	1.62
43813-TC	8,365	16,700	—	51.7	8.30	1.15	9.55	2.85	3.27
43825-TC	16,730	33,400	—	103.4	8.30	2.31	19.2	2.85	6.58
44416-TC	11,600	23,200	—	80.8	8.87	1.87	16.6	2.85	5.33
44715-TC	8,075	16,100	—	84	11.0	1.42	15.7	5.72	8.12
44916-TC	5,900	11,800	—	75.3	12.7	1.16	14.8	8.99	10.4
44920-TC	6,065	12,130	—	74.6	12.3	1.19	14.7	7.94	9.45
44925-TC	7,435	14,870	—	91.0	12.3	1.46	18.0	7.94	11.6
44932-TC	11,800	23,600	—	150.6	12.7	2.36	30.0	8.99	21.2
46113-TC	6,845	13,690	—	117.3	14.5	1.56	22.5	9.93	15.5
46326-TC	12,500	25,100	—	231	15.2	3.04	46.2	11.3	34.4
47313-TC	8,140	16,280	—	177	16.5	2.12	35.5	11.9	25.2
48613-TC	5,520	11,040	—	203	21.5	1.87	40.2	24.2	45.2



TO ORDER TOROIDS

- Add the material designation-letter before the part number (e.g., F-42206-TC).
- For Parylene coated cores, add Y to part number (YF-40601-TC). For grey coated cores, add Z to part number (ZF-42206-TC).
- "0" in part number = bare core (0F-40601-TC).
- Suffixes for the following requirements may be added as shown:
 CC= core Color Coded
 PO= Polyester Only toroid coating
 NO= Nylon Only toroid coating
 For example, ZF-42206-TC-PO

**FOR PREFERRED PARTS,
SEE INSIDE BACK COVER**

NOTES

- For the cores listed here, dimensional tolerances for bare and coated cores are on pages 13.4-13.6. Page 13.6 also lists guidelines for dimensional tolerances of all toroids.
- Other core heights are available on special request.
- Product of window area and core area.

Ferrite Toroids (Bare Core) Limiting Dimensions

Inches						PART NO.	Millimeters					
Materials other than W and H			W and H Materials				Materials other than W and H			W and H Materials		
O.D. Max.	I.D. Min.	Hgt. Max.	O.D. Max.	I.D. Min.	Hgt. Max.		O.D. Max.	I.D. Min.	Hgt. Max.	O.D. Max.	I.D. Min.	Hgt. Max.
0.108	0.042	0.057	0.108	0.042	0.057	40200-TC	2.75	1.06	1.45	2.75	1.06	1.45
0.146	0.064	0.057	0.146	0.064	0.057	40301-TC	3.71	1.62	1.45	3.71	1.62	1.45
0.163	0.080	0.057	0.163	0.080	0.057	40502-TC	4.14	2.03	1.45	4.14	2.03	1.45
0.163	0.080	0.110	0.163	0.080	0.110	40503-TC	4.14	2.03	2.80	4.14	2.03	2.80
0.198	0.082	0.057	0.198	0.082	0.057	40401-TC	5.03	2.08	1.45	5.03	2.08	1.45
0.198	0.082	0.110	0.198	0.082	0.110	40402-TC	5.03	2.08	2.80	5.03	2.08	2.80
0.241	0.109	0.067	0.241	0.109	0.067	40601-TC	6.13	2.76	1.71	6.13	2.76	1.71
0.241	0.109	0.135	0.241	0.109	0.135	40603-TC	6.13	2.76	3.43	6.13	2.76	3.43
0.310	0.115	0.193	0.315	0.110	0.198	40705-TC	7.88	2.92	4.91	8.01	2.79	5.03
0.385	0.210	0.287	0.390	0.205	0.291	40907-TC	9.78	5.33	7.29	9.91	5.20	7.40
0.385	0.177	0.130	0.390	0.172	0.135	41003-TC	9.78	4.49	3.31	9.91	4.36	3.43
0.385	0.177	0.193	0.390	0.172	0.198	41005-TC	9.78	4.49	4.91	9.91	4.36	5.03
0.510	0.193	0.257	0.515	0.188	0.261	41206-TC	12.96	4.90	6.53	13.09	4.77	6.63
0.510	0.302	0.130	0.515	0.297	0.135	41303-TC	12.96	7.67	3.31	13.09	7.54	3.43
0.510	0.302	0.207	0.515	0.297	0.211	41305-TC	12.96	7.67	5.26	13.09	7.54	5.36
0.510	0.302	0.257	0.515	0.297	0.261	41306-TC	12.96	7.67	6.53	13.09	7.54	6.63
0.510	0.271	0.257	0.515	0.266	0.261	41406-TC	12.96	6.88	6.53	13.09	6.75	6.63
0.510	0.271	0.193	0.515	0.266	0.198	41407-TC	12.96	6.88	4.91	13.09	6.75	5.03
0.530	0.280	0.161	0.535	0.275	0.166	41506-TC	13.47	7.11	4.09	13.59	6.98	4.22
0.545	0.266	0.143	0.550	0.261	0.148	41435-TC	13.85	6.75	3.64	13.97	6.62	3.76
0.561	0.344	0.202	0.566	0.339	0.207	41450-TC	14.25	8.73	5.14	14.38	8.61	5.26
0.640	0.335	0.190	0.648	0.327	0.195	41605-TC	16.26	8.50	4.83	16.46	8.30	4.96
0.741	0.369	0.414	0.749	0.361	0.419	41809-TC	18.83	9.37	10.52	19.03	9.16	10.65
0.825	0.485	0.257	0.833	0.477	0.261	42106-TC	20.96	12.31	6.53	21.16	12.11	6.63
0.825	0.485	0.360	0.833	0.477	0.365	42109-TC	20.96	12.31	9.15	21.16	12.11	9.28
0.885	0.525	0.257	0.893	0.517	0.261	42206-TC	22.48	13.33	6.53	22.69	13.13	6.63
0.885	0.525	0.322	0.893	0.517	0.327	42207-TC	22.48	13.33	8.18	22.69	13.13	8.31
0.885	0.525	0.510	0.893	0.517	0.515	42212-TC	22.48	13.33	12.96	22.69	13.13	13.09
1.020	0.590	0.322	1.030	0.580	0.327	42507-TC	25.91	14.98	8.18	26.17	14.73	8.31
1.020	0.590	0.404	1.030	0.580	0.409	42508-TC	25.91	14.98	10.27	26.17	14.73	10.39
1.162	0.728	0.302	1.172	0.718	0.306	42908-TC	29.52	18.49	7.68	29.77	18.23	7.78
1.162	0.728	0.615	1.172	0.718	0.623	42915-TC	29.52	18.49	15.63	29.77	18.23	15.83
1.240	0.728	0.522	1.250	0.718	0.527	43113-TC	31.50	18.49	13.26	31.75	18.23	13.39
1.280	0.571	0.182	1.290	0.561	0.185	43205-TC	32.52	14.50	4.63	32.77	14.24	4.70
1.437	0.886	0.404	1.447	0.876	0.409	43610-TC	36.50	22.50	10.27	36.76	22.25	10.39
1.437	0.886	0.600	1.447	0.876	0.605	43615-TC	36.50	22.50	15.24	36.76	22.25	15.37
1.530	0.720	0.257	1.545	0.705	0.261	43806-TC	38.87	18.28	6.53	39.25	17.90	6.63
1.530	0.720	0.510	1.545	0.705	0.515	43813-TC	38.87	18.28	12.96	39.25	17.90	13.09
1.530	0.720	1.020	1.545	0.705	1.030	43825-TC	38.87	18.28	25.91	39.25	17.90	26.17
1.780	0.720	0.640	1.795	0.705	0.648	44416-TC	45.22	18.28	16.26	45.60	17.90	16.46
1.876	1.033	0.601	1.891	1.018	0.606	44715-TC	47.65	26.23	15.27	48.04	25.85	15.40
1.962	1.302	0.640	1.977	1.287	0.648	44916-TC	49.84	33.07	16.26	50.22	32.69	16.46
1.962	1.222	0.640	1.977	1.207	0.648	44920-TC	49.84	31.03	16.26	50.22	30.65	16.46
1.962	1.222	0.765	1.977	1.207	0.773	44925-TC	49.84	31.03	19.44	50.22	30.65	19.64
1.962	1.302	1.270	1.977	1.287	1.280	44932-TC	49.84	33.07	32.26	50.22	32.69	32.52
2.435	1.365	0.510	2.453	1.347	0.515	46113-TC	61.85	34.67	12.96	62.31	34.21	13.09
2.515	1.461	0.999	2.533	1.443	1.007	46326-TC	63.89	37.10	25.38	64.34	36.65	25.58
2.940	1.490	0.510	2.960	1.470	0.523	47313-TC	74.68	37.84	12.96	75.19	37.33	13.29
3.425	2.137	0.510	3.450	2.112	0.523	48613-TC	87.00	54.28	12.96	87.63	53.64	13.29

Ferrite Toroids (Z Coated) Limiting Dimensions

Inches						PART NO.	Millimeters					
Materials other than W and H			W and H Materials				Materials other than W and H			W and H Materials		
O.D. Max.	I.D. Min.	Hgt. Max.	O.D. Max.	I.D. Min.	Hgt. Max.		O.D. Max.	I.D. Min.	Hgt. Max.	O.D. Max.	I.D. Min.	Hgt. Max.
0.400	0.195	0.302	0.405	0.190	0.306	40907-TC	10.16	4.95	7.68	10.29	4.82	7.78
0.400	0.162	0.145	0.405	0.157	0.150	41003-TC	10.16	4.11	3.69	10.29	3.98	3.81
0.400	0.162	0.208	0.405	0.157	0.213	41005-TC	10.16	4.11	5.29	10.29	3.98	5.41
0.525	0.178	0.272	0.530	0.173	0.276	41206-TC	13.34	4.52	6.91	13.47	4.39	7.01
0.525	0.287	0.145	0.530	0.282	0.150	41303-TC	13.34	7.29	3.69	13.47	7.16	3.81
0.525	0.287	0.222	0.530	0.282	0.226	41305-TC	13.34	7.29	5.64	13.47	7.16	5.75
0.525	0.287	0.272	0.530	0.282	0.276	41306-TC	13.34	7.29	6.91	13.47	7.16	7.01
0.525	0.256	0.272	0.530	0.251	0.276	41406-TC	13.34	6.50	6.91	13.47	6.37	7.01
0.525	0.256	0.208	0.530	0.251	0.213	41407-TC	13.34	6.50	5.29	13.47	6.37	5.41
0.545	0.265	0.176	0.550	0.260	0.181	41506-TC	13.84	6.73	4.47	13.97	6.60	4.60
0.560	0.251	0.158	0.565	0.246	0.163	41435-TC	14.23	6.37	4.02	14.36	6.24	4.14
0.576	0.329	0.217	0.581	0.324	0.222	41450-TC	14.64	8.35	5.52	14.76	8.23	5.64
0.655	0.320	0.205	0.663	0.312	0.210	41605-TC	16.64	8.12	5.21	16.84	7.92	5.34
0.756	0.354	0.429	0.764	0.346	0.434	41809-TC	19.21	8.99	10.90	19.41	8.78	11.03
0.840	0.470	0.272	0.848	0.462	0.276	42106-TC	21.34	11.93	6.91	21.54	11.73	7.01
0.840	0.470	0.375	0.848	0.462	0.380	42109-TC	21.34	11.93	9.53	21.54	11.73	9.66
0.900	0.510	0.272	0.908	0.502	0.276	42206-TC	22.86	12.95	6.91	23.07	12.75	7.01
0.900	0.510	0.337	0.908	0.502	0.342	42207-TC	22.86	12.95	8.56	23.07	12.75	8.69
0.900	0.510	0.525	0.908	0.502	0.530	42212-TC	22.86	12.95	13.34	23.07	12.75	13.47
1.035	0.575	0.337	1.045	0.565	0.342	42507-TC	26.29	14.60	8.56	26.55	14.35	8.69
1.035	0.575	0.419	1.045	0.565	0.424	42508-TC	26.29	14.60	10.65	26.55	14.35	10.77
1.177	0.713	0.317	1.187	0.703	0.321	42908-TC	29.90	18.11	8.06	30.15	17.85	8.16
1.177	0.713	0.630	1.187	0.703	0.638	42915-TC	29.90	18.11	16.01	30.15	17.85	16.21
1.255	0.713	0.537	1.265	0.703	0.542	43113-TC	31.88	18.11	13.64	32.14	17.85	13.77
1.295	0.556	0.197	1.305	0.546	0.200	43205-TC	32.90	14.12	5.01	33.15	13.86	5.08
1.452	0.871	0.419	1.462	0.861	0.424	43610-TC	36.89	22.12	10.65	37.14	21.86	10.77
1.452	0.871	0.615	1.462	0.861	0.620	43615-TC	36.89	22.12	15.63	37.14	21.86	15.75
1.545	0.705	0.272	1.560	0.690	0.276	43806-TC	39.25	17.90	6.91	39.63	17.52	7.01
1.545	0.705	0.525	1.560	0.690	0.530	43813-TC	39.25	17.90	13.34	39.63	17.52	13.47
1.545	0.705	1.035	1.560	0.690	1.045	43825-TC	39.25	17.90	26.29	39.63	17.52	26.55
1.795	0.705	0.655	1.810	0.690	0.663	44416-TC	45.60	17.90	16.64	45.98	17.52	16.85
1.891	1.018	0.616	1.906	1.003	0.621	44715-TC	48.04	25.85	15.65	48.42	25.47	15.78
1.977	1.287	0.655	1.992	1.272	0.663	44916-TC	50.22	32.69	16.64	50.60	32.30	16.85
1.977	1.207	0.655	1.992	1.192	0.663	44920-TC	50.22	30.65	16.64	50.60	30.27	16.85
1.977	1.207	0.780	1.992	1.192	0.788	44925-TC	50.22	30.65	19.82	50.60	30.27	20.02
1.977	1.287	1.285	1.992	1.272	1.295	44932-TC	50.22	32.69	32.64	50.60	32.30	32.90
2.450	1.350	0.525	2.468	1.332	0.530	46113-TC	62.23	34.29	13.34	62.69	33.83	13.47
2.530	1.446	1.014	2.548	1.428	1.022	46326-TC	64.27	36.72	25.76	64.72	36.27	25.96
2.955	1.475	0.525	2.975	1.455	0.538	47313-TC	75.06	37.46	13.34	75.57	36.95	13.67
3.440	2.122	0.525	3.465	2.097	0.538	48613-TC	87.38	53.89	13.34	88.02	53.26	13.67

See page 13.6 for Y coated cores

Ferrite Toroids (Y Coated) Limiting Dimensions

Inches						PART NO.	Millimeters					
Materials other than W and H			W and H Materials				Materials other than W and H			W and H Materials		
O.D. Max.	I.D. Min.	Hgt. Max.	O.D. Max.	I.D. Min.	Hgt. Max.		O.D. Max.	I.D. Min.	Hgt. Max.	O.D. Max.	I.D. Min.	Hgt. Max.
0.111	0.039	0.060	0.111	0.039	0.060	40200-TC	2.82	0.99	1.53	2.82	0.99	1.53
0.149	0.061	0.060	0.149	0.061	0.060	40301-TC	3.79	1.54	1.53	3.79	1.54	1.53
0.166	0.077	0.060	0.166	0.077	0.060	40502-TC	4.22	1.95	1.53	4.22	1.95	1.53
0.166	0.077	0.113	0.166	0.077	0.113	40503-TC	4.22	1.95	2.87	4.22	1.95	2.87
0.201	0.079	0.060	0.201	0.079	0.060	40401-TC	5.11	2.00	1.53	5.11	2.00	1.53
0.201	0.079	0.113	0.201	0.079	0.113	40402-TC	5.11	2.00	2.87	5.11	2.00	2.87
0.244	0.106	0.070	0.244	0.106	0.070	40601-TC	6.20	2.69	1.78	6.20	2.69	1.78
0.244	0.106	0.138	0.244	0.106	0.138	40603-TC	6.20	2.69	3.51	6.20	2.69	3.51
0.313	0.112	0.196	0.318	0.107	0.201	40705-TC	7.95	2.84	4.98	8.08	2.71	5.11
0.388	0.207	0.290	0.393	0.202	0.294	40907-TC	9.86	5.25	7.37	9.99	5.13	7.47
0.388	0.174	0.133	0.393	0.169	0.138	41003-TC	9.86	4.42	3.38	9.99	4.29	3.51
0.388	0.174	0.196	0.393	0.169	0.201	41005-TC	9.86	4.42	4.98	9.99	4.29	5.11
0.513	0.190	0.260	0.518	0.185	0.264	41206-TC	13.03	4.82	6.61	13.16	4.69	6.71
0.513	0.299	0.133	0.518	0.294	0.138	41303-TC	13.03	7.59	3.38	13.16	7.46	3.51
0.513	0.299	0.210	0.518	0.294	0.214	41305-TC	13.03	7.59	5.34	13.16	7.46	5.44
0.513	0.299	0.260	0.518	0.294	0.264	41306-TC	13.03	7.59	6.61	13.16	7.46	6.71
0.513	0.268	0.260	0.518	0.263	0.264	41406-TC	13.03	6.80	6.61	13.16	6.68	6.71
0.513	0.268	0.196	0.518	0.263	0.201	41407-TC	13.03	6.80	4.98	13.16	6.68	5.11

DIMENSIONAL TOLERANCE GUIDELINES

FOR THESE CORE OD'S	OD and ID TOLERANCES ARE		FOR THESE CORE HEIGHTS	HEIGHT TOLERANCES ARE ⁽¹⁾⁽²⁾	
	Mat'l's other than W & H	W & H Mat'l's		Mat'l's other than W & H	W & H Mat'l's
up to .099"	±.005"	±.005"	Up to .099"	±.003"	±.007"
.100" - .199"	±.008"	±.008"	.100" - .199"	±.005"	±.010"
.200" - .299"	±.011"	±.011"	.200" - .299"	±.007"	±.011"
.300" - .599"	±.010"	±.015"	.300" - .599"	±.010"	±.015"
.600" - .999"	±.015"	±.023"	.600" - .999"	±.015"	±.023"
1.000" - 1.499"	±.020"	±.030"	1.000" - 1.499"	±.020"	±.030"
1.500" - 1.999"	±.030"	±.045"	1.500" - 1.999"	±.030"	±.045"
2.000" - 2.499"	±.035"	±.053"			
2.500" - 2.999"	±.040"	±.060"			
3.000" - 3.500"	±.050"	±.075"			

(1) For W and H material cores 2.8" and larger in OD, add 50% to height tolerance.
(2) For cores <.300" OD, use W & H column.

FOR COATED CORES:

Allow .003" for Y finish.

Allow .015" for Z finish.

Allow .030" for voltages above 1000 up to 4000.

COATING SIZE LIMITS:

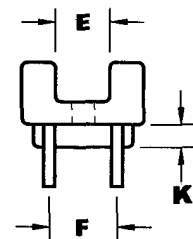
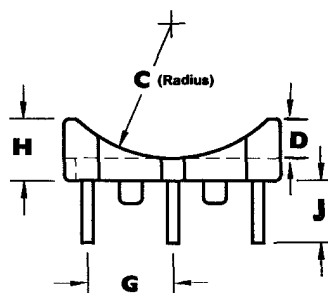
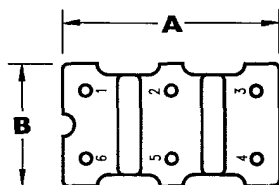
Parylene(Y) 41406 and smaller
(Minimum inductance 5% lower than listed)
Grey (Z) 40907 and larger

Toroid Mounts

These vertical mount accessories are designed to accommodate a variety of toroidal core sizes on to printed circuit board or other assemblies.
(Check factory for new parts not shown here)

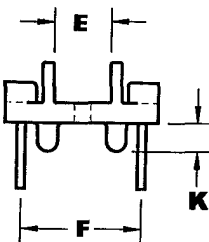
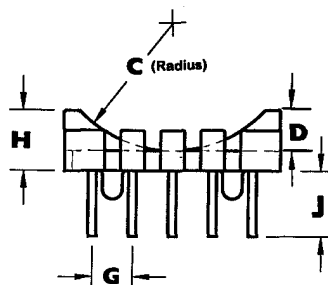
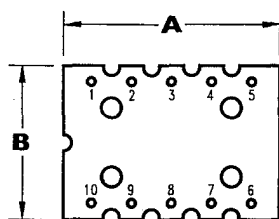
TV-B2206-6A

For use with P/N's
41206TC - 42212TC
or toroid sizes with an
O.D. = .500" - .870"



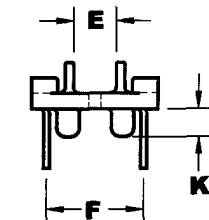
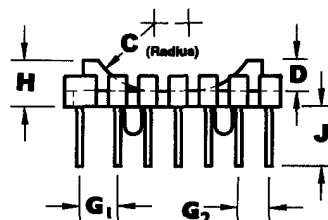
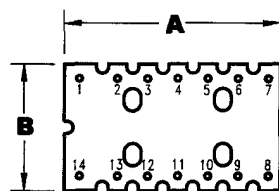
TV-B2908-TA

For use with P/N's
42507TC - 43113TC
or toroid sizes with an
O.D. = .81" - 1.25"



TV-B3610-FA

For use with P/N's
42908TC - 43825TC
or toroid sizes with an
O.D. = 1.142" - 1.500"



Material: Phenolic
UL 94 VO rated
Pin Material: CP Wire
Pin Diameter: .039"

PART NUMBER	DIMENSIONS (IN.)									
	A NOM.	B NOM.	C REF.	D NOM.	E REF.	F TYP.	G TYP.	H NOM.	J REF.	K REF.
TV-B2206-6A (6 pins)	.748	.425	.472	.138	.189	.236	.295	.216	.216	.079
TV-B2908-TA (10 pins)	1.063	.748	.630	.197	.276	.590	.197	.295	.320	.138
TV-B3610-FA (14 pins)	1.409	.819	.433	.197	.276	.630	G ₁ .248 G ₂ .197	.299	.384	.177

Toroid Mounts

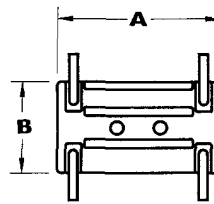


FIGURE 1

For use with core sizes (outside diameter) from .50" to 1.00"

Material: Nylon
UL 94 VO Rated
Pin Material: CP Wire
Pin Diameter: .040"

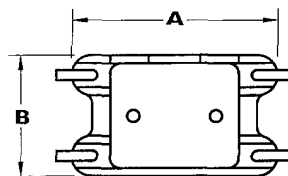
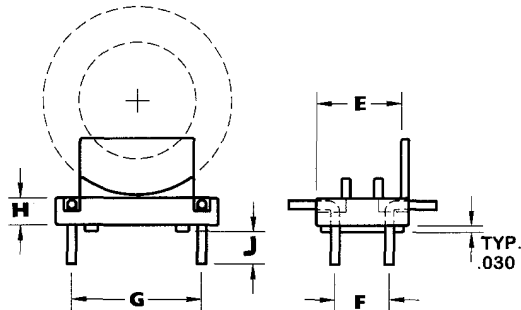
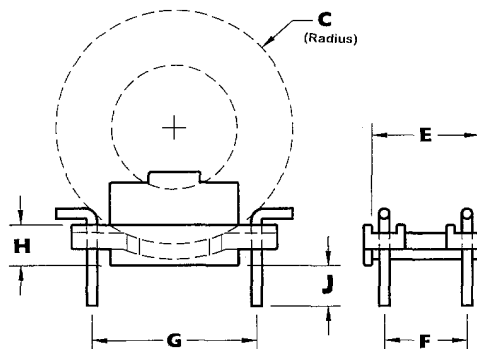


FIGURE 2

For use with core sizes (outside diameter) from .81" to 2.8"

Material: Nylon
UL 94 VO Rated
Pin Material: CP Wire
Pin Diameter: .050"



PART NUMBER	FIG.	DIMENSIONS (IN.) (NOM.)								For Core O.D.
		A	B	C	E	F	G	H	J	
TV-H2206-4A	1	0.750	0.425	—	0.385	0.250	0.600	0.125	0.150	.5" - 1.00"
TV-H2507-4A	2	1.000	0.600	0.60	0.51	0.400	0.800	0.200	0.200	.81" - 1.14"
TV-H3813-4A	2	1.10	0.800	0.80	0.71	0.600	0.900	0.200	0.200	1.25" - 1.50"
TV-H4916-4A	2	1.40	0.900	1.27	0.81	0.700	1.20	0.200	0.200	1.5" - 2.5"
TV-H6113-4A	2	1.70	1.10	1.40	1.01	0.900	1.50	0.200	0.200	1.9" - 2.8"

SURFACE MOUNT HEADERS

Several surface mount headers are available. See pages 6.6, 6.9 and 6.12 for sizes and dimensions.

Toroid Cups and Headers

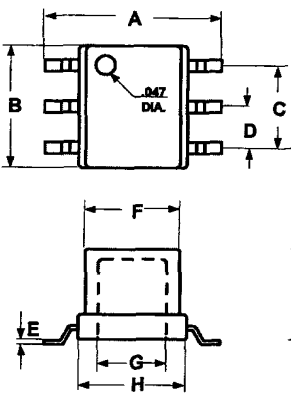


Figure 1
Material: L.C.P.

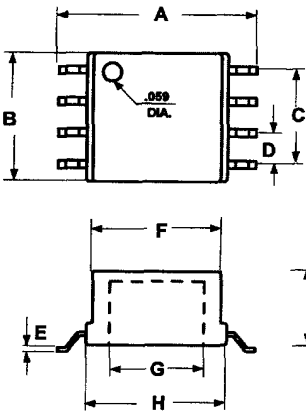


Figure 2
Material: Phenolic

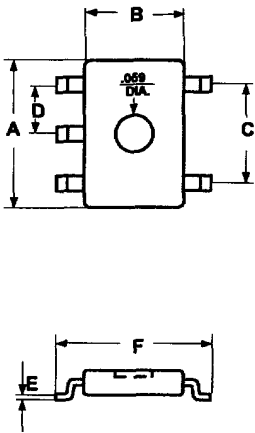


Figure 3
Material: Phenolic

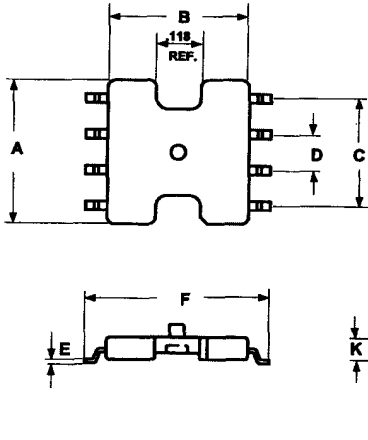


Figure 4
Material: L.C.P.

All parts - UL 94 V-O rated
Pin Materials - Phosphor bronze

		DIMENSIONS IN INCHES												
PART NUMBER	FIG.	A MAX.	B MAX.	C NOM.	D TYP.	E NOM.	F MAX.	G MIN.	H NOM.	J MIN.	K MAX.	L NOM.	M MIN.	For Core O.D.
SM-C0301-6A	1	.431	.303	.200	.100	.010	.232	.161	.264	.197	.228	.028	.189	<.155
SM-C0601-8A	2	.636	.409	.300	.100	.012	.409	.301	.449	.301	.240	.024	.205	<.250
SM-H0502-5A	3	.240	.161	.157	.079	.010	.250	—	—	—	.043	.024	—	<.200
SM-H0705-8A	4	.378	.398	.295	.098	.010	.494	—	—	—	.063	.024	—	<.310