

Multi-Aperture Cores

Multi-aperture cores are used in balun (balance-unbalance) transformers and find wide applications as broadband transformers in communications and CATV circuits. They are also employed in airbag designs to prevent accidental activation.

- All multi-aperture cores are supplied burnished.
- Multi-aperture cores in 73 and 43 materials are controlled for impedance only. The 61 NiZn material is controlled for both impedance and AL value. The high frequency 67 material is controlled for AL value. All listed impedance values are typical values. Minimum impedance values are specified for the + marked frequencies. The minimum guaranteed impedance is the listed typical impedance less 20%.
- Multi-aperture cores are measured for impedance on the 4193A Vector Impedance Analyzer. The cores are wound with a single turn through both holes, with the shortest practical wire length.
- The 61 and 67 material multi-hole beads are tested for AL value. The test frequency is 10 kHz at < 10 gauss. The test winding is five turns wound through both holes.
- Performance curves for all multi-hole cores can be found on the Fair-Rite Products CD-ROM.
- For any multi-aperture core requirement not listed, please contact our customer service group for availability and pricing.
- Our "Multi-Aperture Core Kit" (part number 0199000036) is available for proto type evaluation. See page 68.
- Explanation of Part Numbers: Digits 1&2 = product class, 3&4 = material grade last digit 2 = burnished.

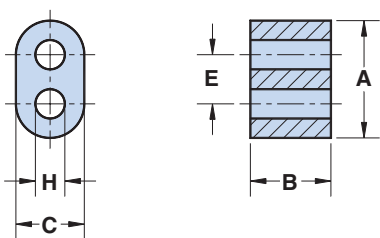


Figure 1

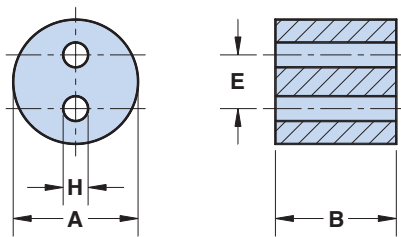


Figure 2

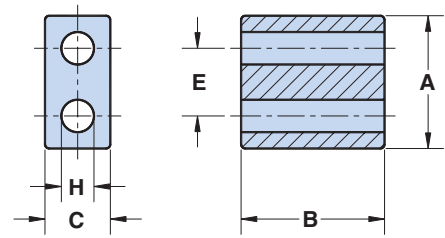


Figure 3

Fair-Rite Products Corp.

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Multi-Aperture Cores

Lower Frequencies < 50 MHz (73 material)

Dimensions (Bold numbers are in millimeters, light numbers are nominal in inches.)

Part Number	Fig.	A	B	C	E	H	Wt (g)	Typical Impedance (Ω)	
								10 MHz	25 MHz ⁺
2873002302	1	3.45±0.25 .136	2.35±0.25 .093	2.0±0.15 .079	1.45±0.1 .057	0.75+0.25 .034	.1	35	44
2873002702	1	7.0±0.25 .276	3.1±0.25 .122	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.3	28	38
2873002402	1	7.0±0.25 .276	6.2±0.25 .244	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.5	80	75
2873001802	2	6.35±0.25 .250	6.15±0.25 .242	—	2.75±0.2 .108	1.1 + 0.3 .050	.8	115	106
2873001702	2	6.35±0.25 .250	12.0±0.35 .471	—	2.75±0.2 .108	1.1 + 0.3 .050	1.6	200	200
2873001502	1	13.3±0.6 .525	6.6±0.25 .260	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	1.7	57	50
2873000302	1	13.3±0.6 .525	10.3±0.3 .407	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	2.6	94	75
2873000102	1	13.3±0.6 .525	13.4±0.3 .528	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.5	127	93
2873000202	1	13.3±0.6 .525	14.35±0.5 .565	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.7	125	106
2873006802	1	13.3±0.6 .525	27.0±0.75 1.062	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	7.0	195	180

Broadband Frequencies 20-300 MHz (43 material)

Part Number	Fig.	A	B	C	E	H	Wt (g)	Typical Impedance (Ω)	
								25 MHz	100 MHz ⁺
2843002302	1	3.45±0.25 .136	2.35±0.25 .093	2.0±0.15 .079	1.45±0.1 .057	0.75+0.25 .034	.1	29	44
2843002702	1	7.0±0.25 .276	3.1±0.25 .122	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.3	37	50
2843002402	1	7.0±0.25 .276	6.2±0.25 .244	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.5	74	100
2843001802	2	6.35±0.25 .250	6.15±0.25 .242	—	2.75±0.2 .108	1.1 + 0.3 .050	.8	100	131
2843001702	2	6.35±0.25 .250	12.0±0.35 .471	—	2.75±0.2 .108	1.1 + 0.3 .050	1.6	188	256
2843001502	1	13.3±0.6 .525	6.6±0.25 .260	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	1.7	59	88
2843000302	1	13.3±0.6 .525	10.3±0.3 .407	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	2.6	104	130
2843000102	1	13.3±0.6 .525	13.4±0.3 .528	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.5	122	175
2843000202	1	13.3±0.6 .525	14.35±0.5 .565	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.7	123	180
2843006802	1	13.3±0.6 .525	27.0±0.75 1.062	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	7.0	219	300
2843010402	3	19.45±0.4 .765	12.7±0.5 .500	9.5±0.25 .375	9.9±0.25 .390	4.75±0.2 .187	7.5	135	200
2843010302	3	19.45±0.4 .765	25.4±0.7 1.000	9.5±0.25 .375	9.9±0.25 .390	4.75±0.2 .187	18	295	400
2843009902	3	28.7±0.6 1.130	28.7±0.7 1.130	14.25±0.3 .560	14.0±0.3 .550	6.35±0.15 .250	48	380	500

⁺ Test frequency

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Multi-Aperture Cores

Higher Frequencies > 250 MHz (61 & 67 materials)

Dimensions (Bold numbers are in millimeters, light numbers are nominal in inches.)

Part Number	Fig.	A	B	C	E	H	Wt (g)	Typical Impedance (Ω)		Minimum AL (nH)
								100 MHz ⁺	250 MHz	
2861002302	1	3.45±0.25 .136	2.35±0.25 .093	2.0±0.15 .079	1.45±0.1 .057	0.75+0.25 .034	.1	38	50	60
2867002302	1	3.45±0.25 .136	2.35±0.25 .093	2.0±0.15 .079	1.45±0.1 .057	0.75+0.25 .034	.1	–	–	18
2861002702	1	7.0±0.25 .276	3.1±0.25 .122	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.3	44	58	80
2867002702	1	7.0±0.25 .276	3.1±0.25 .122	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.3	–	–	24
2861002402	1	7.0±0.25 .276	6.2±0.25 .244	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.5	88	120	160
2867002402	1	7.0±0.25 .276	6.2±0.25 .244	4.2 - 0.25 .160	2.9±0.1 .114	1.7+ 0.2 .071	.5	–	–	48
2861001802	2	6.35±0.25 .250	6.15±0.25 .242	–	2.75±0.2 .108	1.1 + 0.3 .050	.8	119	155	220
2867001802	2	6.35±0.25 .250	6.15±0.25 .242	–	2.75±0.2 .108	1.1 + 0.3 .050	.8	–	–	65
2861001702	2	6.35±0.25 .250	12.0±0.35 .471	–	2.75±0.2 .108	1.1 + 0.3 .050	1.6	230	320	440
2867001702	2	6.35±0.25 .250	12.0±0.35 .471	–	2.75±0.2 .108	1.1 + 0.3 .050	1.6	–	–	130
2861001502	1	13.3±0.6 .525	6.6±0.25 .260	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	1.7	69	90	145
2867001502	1	13.3±0.6 .525	6.6±0.25 .260	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	1.7	–	–	44
2861000302	1	13.3±0.6 .525	10.3±0.3 .407	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	2.6	106	145	230
2867000302	1	13.3±0.6 .525	10.3±0.3 .407	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	2.6	–	–	68
2861000102	1	13.3±0.6 .525	13.4±0.3 .528	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.5	138	175	300
2867000102	1	13.3±0.6 .525	13.4±0.3 .528	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.5	–	–	89
2861000202	1	13.3±0.6 .525	14.35±0.5 .565	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.7	150	210	320
2867000202	1	13.3±0.6 .525	14.35±0.5 .565	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	3.7	–	–	95
2861006802	1	13.3±0.6 .525	27.0±0.75 1.062	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	7.0	280	400	600
2867006802	1	13.3±0.6 .525	27.0±0.75 1.062	7.5±0.35 .295	5.7±0.25 .225	3.8±0.25 .150	7.0	–	–	180
2861010002	3	30.2±0.6 1.190	28.7±0.7 1.130	15.0±0.4 .590	14.6±0.4 .575	6.8±0.2 .268	46	600	800	800

⁺ Test frequency

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