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 A_L value. The high frequency 67 material is controlled for A_L 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 A_L 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.

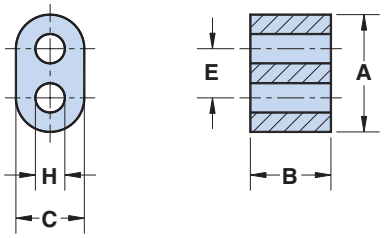

Figure 1

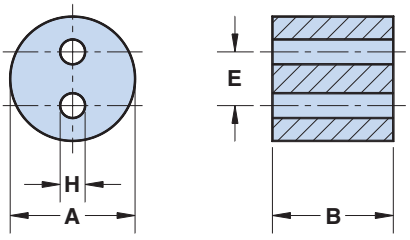

Figure 2

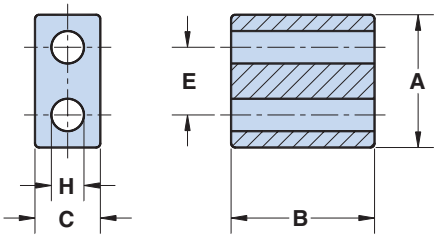

Figure 3

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

Click on part number for performance curves.

+ 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 A_L (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

Click on part number for performance curves.

+ Test frequency

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