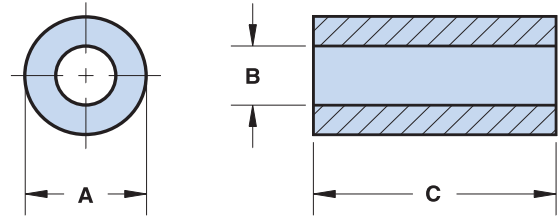


# EMI Suppression Beads

Listed by frequency range and in ascending order of "B" dimension.

Fair-Rite offers a broad selection of ferrite EMI suppression beads with guaranteed minimum impedance specifications

- Beads with a "1" as the last digit of the part number are not burnished. Parts that are burnished to break the sharp edges have a "2" as the last digit.
- Upon request beads can be supplied with a Parylene coating. The last digit of the Parylene coated part is a "4". The minimum coating thickness beads is 0.005mm (.0002"). See page 124 for material characteristics of Parylene C.
- The column "H (Oe)" gives for each bead the calculated dc bias field in oersted for 1 turn and 1 ampere direct current. The actual dc H field in the application is this value of "H" times the actual NI (ampere-turn) product. For the effect of the dc bias on the impedance of the bead material, see the material graphs on pages 145-146, Figures 18-23.
- Suppression beads are controlled for impedances only. The impedances listed are typical values. Minimum impedance values are specified for the + marked frequencies. The minimum guaranteed impedance is the listed typical impedance less 20%.
- Single turn impedance tests for 73 and 43 material beads are performed on the 4193A Vector Impedance Analyzer. The 61 material beads are tested on the 4191A RF Impedance Analyzer. **Beads are tested with the shortest practical wire length.**
- Performance curves of all listed EMI suppression beads are compiled on the Fair-Rite Products CD-ROM.
- For larger suppression cores, refer to the section "Round Cable EMI Suppression Cores" found on pages 70-74.
- For any EMI suppression bead requirement not listed here, feel free to contact our customer service group for availability and pricing.
- Our "Shield Bead Kit" (part number 0199000019) contains a selection of these beads. See page 67.
- Explanation of Part Numbers: Digits 1&2 = product class, 3&4 = material grade and last digit 1= not burnished, 2 = burnished and 4 = Parylene coated.



## Lower Frequencies < 50 MHz (73 material)

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

Part Number**	A	B	C*	Wt (g)	H (Oe)	Typical Impedance(Ω)			
						1 MHz	5 MHz	10 MHz <sup>+</sup>	25 MHz <sup>+</sup>
2673901301	<b>0.95 - 0.05</b> .036	<b>0.45+0.1</b> .020	<b>3.8±0.2</b> .150	.01	6.0	5.3	13	16	24
2673004601	<b>1.1 - 0.1</b> .041	<b>0.65+0.1</b> .028	<b>4.1 - 0.3</b> .156	.01	4.7	3.3	8.2	12.5	19
2673004701	<b>1.45 - 0.15</b> .054	<b>0.7+0.1</b> .029	<b>2.3±0.15</b> .090	.01	4.0	3.1	7.6	12.5	17
<b>2673030101</b>	<b>1.22 - 0.13</b> .045	<b>0.8+0.1</b> .033	<b>5.3 - 0.45</b> .200	.01	4.1	3.5	8.6	11	17
2673025301	<b>1.25 - 0.1</b> .047	<b>0.8+0.1</b> .033	<b>3.8±0.2</b> .150	.01	4.0	2.9	7.1	10	15
2673010101	<b>1.95 - 0.25</b> .072	<b>0.8+0.1</b> .033	<b>10.0 - 0.4</b> .384	.08	3.3	20.5	48.5	55	77

\*\*Bold part numbers designate preferred parts.

<sup>+</sup> Test frequency

\*This dimension may be modified to suit specific applications.

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# EMI Suppression Beads

Listed by frequency range and in ascending order of "B" dimension.

## Lower Frequencies < 50 MHz (73 material)

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

Part Number**	A	B	C*	Wt (g)	H (Oe)	Typical Impedance(Ω)			
						1 MHz	5 MHz	10 MHz <sup>+</sup>	25 MHz <sup>+</sup>
<b>2673004801</b>	<b>2.1 - 0.15</b> .080	<b>0.85+0.1</b> .034	<b>2.9 - 0.45</b> .105	.03	3.1	5.5	13.5	18	28
<b>2673028602</b>	<b>2.13 - 0.1</b> .082	<b>0.85+0.1</b> .034	<b>5.6±0.15</b> .220	.07	2.7	13	30.5	38	50
2673012401	<b>1.55 - 0.1</b> .059	<b>0.95+0.15</b> .040	<b>4.2 - 0.25</b> .160	.02	3.3	3.5	8.6	11	19
2673002201	<b>1.95 - 0.2</b> .072	<b>1.05+0.1</b> .043	<b>10.4±0.25</b> .410	.09	2.9	14	33.5	38	55
<b>2673000501</b>	<b>2.0 - 0.15</b> .076	<b>1.05+0.1</b> .043	<b>1.65 - 0.25</b> .060	.01	2.8	2.1	6.3	7.5	12
<b>2673000201</b>	<b>2.0 - 0.15</b> .076	<b>1.05+0.1</b> .043	<b>3.8±0.25</b> .150	.04	2.8	5.2	12.5	18	27
<b>2673000101</b>	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>3.25±0.25</b> .128	.13	2.0	8.1	19.5	25	35
<b>2673000301</b>	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>6.0±0.25</b> .236	.24	2.0	15.5	37.5	57	63
<b>2673000701</b>	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>12.7±0.35</b> .500	.51	2.0	34.5	81.5	120	125
<b>2673022401</b>	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>6.35±0.25</b> .250	.56	1.5	20	47.5	54	58
<b>2673021801</b>	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>11.1±0.35</b> .437	1.0	1.5	35.5	84	94	95
2673018001	<b>2.85±0.1</b> .112	<b>1.65+0.15</b> .068	<b>6.65±0.25</b> .262	.13	1.8	8.3	20	29	41
2673004901	<b>2.85±0.1</b> .112	<b>1.65+0.15</b> .068	<b>10.45±0.25</b> .410	.20	1.8	13.5	32.5	40	58
2673001601	<b>3.55±0.15</b> .140	<b>1.65+0.25</b> .070	<b>3.3 - 0.4</b> .122	.11	1.6	5.1	12.5	16	24
2673015301	<b>4.1 - 0.25</b> .156	<b>1.8±0.15</b> .071	<b>6.85±0.25</b> .270	.32	1.5	14	34	41	54
<b>2673000801</b>	<b>7.5±0.25</b> .296	<b>2.25+0.25</b> .094	<b>7.55±0.25</b> .297	1.4	1.0	23	55.5	48	45
2673200201	<b>5.2±0.15</b> .205	<b>2.65±0.25</b> .105	<b>20.6±0.75</b> .812	1.6	1.1	37	89	110	113
2673003201	<b>5.6 - 0.5</b> .210	<b>2.65±0.25</b> .105	<b>12.7±0.5</b> .500	1.0	1.1	23.5	56.5	60	60
<b>2673002402</b>	<b>9.65±0.25</b> .380	<b>5.0±0.2</b> .197	<b>5.05 - 0.45</b> .190	1.2	.59	7.9	19	19	15

\*\*Bold part numbers designate preferred parts.

<sup>+</sup> Test frequency

\*This dimension may be modified to suit specific applications.

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# EMI Suppression Beads

Listed by frequency range and in ascending order of "B" dimension.

## Broadband Frequencies 25-300 MHz (43 material)

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

Part Number**	A	B	C*	Wt (g)	H (Oe)	Typical Impedance (Ω)			
						10 MHz	25 MHz <sup>†</sup>	100 MHz <sup>†</sup>	250 MHz
2643004601	1.1 - 0.1 .041	<b>0.65+0.1</b> .028	4.1 - 0.3 .156	.01	4.7	9	12.5	31	39
2643004701	1.45 - 0.15 .054	<b>0.7+0.1</b> .029	<b>2.3±0.15</b> .090	.01	4.0	8	12.5	26	39
2643004101	<b>3.5±0.2</b> .138	<b>0.75+0.1</b> .031	<b>4.45±0.35</b> .175	.11	2.6	32	48	70	89
2643706001	<b>3.5±0.25</b> .138	<b>0.8+0.1</b> .033	<b>2.7 - 0.45</b> .097	.06	2.5	18	26	45	59
<b>2643020501</b>	<b>1.65±0.025</b> .065	<b>0.85+0.1</b> .034	<b>3.68 - 0.25</b> .140	.02	3.4	12	17	31	47
<b>2643004801</b>	2.1 - 0.15 .080	<b>0.85+0.1</b> .034	<b>2.9 - 0.45</b> .105	.03	3.1	12	18	31	47
2643002201	<b>1.95 - 0.2</b> .072	<b>1.05+0.1</b> .043	<b>10.4±0.25</b> .410	.08	2.9	26	34	58	77
<b>2643000501</b>	2.0 - 0.15 .076	<b>1.05+0.1</b> .043	<b>1.65 - 0.25</b> .060	.01	2.8	6	9	22	33
<b>2643000201</b>	2.0 - 0.15 .076	<b>1.05+0.1</b> .043	<b>3.8±0.25</b> .150	.03	2.8	12	16	31	46
<b>2643000101</b>	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>3.25±0.25</b> .128	.10	2.0	17	26	40	56
<b>2643000301</b>	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>6.0±0.25</b> .236	.18	2.0	29	46	60	83
<b>2643000701</b>	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>12.7±0.35</b> .500	.38	2.0	60	89	125	148
2643200101	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>3.4 - 0.45</b> .125	.19	1.5	19	30	41	61
<b>2643022401</b>	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>6.35±0.25</b> .250	.38	1.5	36	55	82	97
<b>2643021801</b>	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>11.1±0.35</b> .437	.67	1.5	62	96	131	151
2643023801	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>22.85±0.75</b> .900	1.4	1.5	126	192	266	285
<b>2643001501</b>	<b>3.5±0.2</b> .138	<b>1.6±0.1</b> .063	<b>3.25±0.25</b> .128	.10	1.7	13	21	35	50
2643025601	<b>3.5±0.2</b> .138	<b>1.6±0.1</b> .063	<b>6.0±0.25</b> .236	.18	1.7	23	38	55	70
2643023201	<b>2.85±0.1</b> .112	<b>1.65+0.15</b> .068	<b>3.75±0.25</b> .147	.06	1.8	10	15	30	43
2643013801	<b>3.5±0.2</b> .138	<b>1.65+0.25</b> .070	<b>4.05±0.25</b> .160	.12	1.6	14	24	38	52
2643001601	<b>3.55±0.15</b> .140	<b>1.65+0.25</b> .070	<b>3.3 - 0.4</b> .122	.09	1.6	11	19	30	46
2643001301	<b>3.55±0.15</b> .140	<b>1.65+0.25</b> .070	<b>5.95±0.25</b> .234	.18	1.6	21	31	48	65
<b>2643005701</b>	<b>5.1±0.25</b> .200	<b>2.3±0.2</b> .090	<b>12.7±0.35</b> .500	.81	1.2	49	78	120	123
<b>2643000801</b>	<b>7.5±0.2</b> .296	<b>2.25+0.25</b> .094	<b>7.55±0.25</b> .297	1.0	1.0	42	63	92	109

\*\*Bold part numbers designate preferred parts.

<sup>†</sup> Test frequency

\*This dimension may be modified to suit specific applications.

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# EMI Suppression Beads

Listed by frequency range and in ascending order of "B" dimension.

## Broadband Frequencies 25-300 MHz (43 material)

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

Part Number**	A	B	C*	Wt (g)	H (Oe)	Typical Impedance( $\Omega$ )			
						10 MHz	25 MHz <sup>+</sup>	100 MHz <sup>+</sup>	250 MHz
2643300101	<b>7.6±0.25</b> .300	<b>2.25±0.25</b> .094	<b>15.1±0.75</b> .595	2.1	1.0	83	115	200	195
2643003201	<b>5.6-0.5</b> .210	<b>2.65±0.25</b> .105	<b>12.7±0.5</b> .500	.87	1.1	42	63	88	110
<b>2643250402</b>	<b>6.35±0.15</b> .250	<b>2.95±0.45</b> .125	<b>12.7±0.5</b> .500	1.2	.91	43	69	102	111
<b>2643250302</b>	<b>6.35±0.15</b> .250	<b>2.95±0.45</b> .125	<b>15.9±0.5</b> .625	1.5	.91	53	85	122	132
<b>2643250202</b>	<b>6.35±0.15</b> .250	<b>2.95±0.45</b> .125	<b>25.4±0.75</b> 1.000	2.5	.91	83	135	200	196
2643375102	<b>9.5±0.25</b> .375	<b>4.5±0.75</b> .192	<b>6.35±0.35</b> .250	1.4	.60	21	35	50	66
2643375002	<b>9.5±0.25</b> .375	<b>4.5±0.75</b> .192	<b>14.5±0.6</b> .570	3.1	.60	47	78	115	119
<b>2643006302</b>	<b>9.5±0.25</b> .375	<b>4.75±0.3</b> .193	<b>10.4±0.25</b> .410	2.2	.60	34	53	80	92
2643023402	<b>9.5±0.25</b> .375	<b>4.75±0.3</b> .193	<b>15.9±0.45</b> .625	3.4	.60	51	83	120	127
<b>2643023002</b>	<b>9.5±0.25</b> .375	<b>4.75±0.3</b> .193	<b>19.05±0.7</b> .750	4.1	.60	60	100	145	148
<b>2643002402</b>	<b>9.65±0.25</b> .380	<b>5.0±0.2</b> .197	<b>5.05 - 0.45</b> .190	1.1	.59	16	26	43	56
2643012702	<b>9.65±0.25</b> .380	<b>6.35±0.15</b> .250	<b>7.35±0.25</b> .290	1.3	.51	15	24	38	55

\*\*Bold part numbers designate preferred parts.

<sup>+</sup> Test frequency

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# EMI Suppression Beads

Listed by frequency range and in ascending order of "B" dimension.

## Higher Frequencies 250-1000 MHz (61 material)

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

Part Number**	A	B	C*	Wt (g)	H (Oe)	Typical Impedance( $\Omega$ )			
						100 MHz	250MHz <sup>+</sup>	500 MHz <sup>+</sup>	1000 MHz
<b>2661030101</b>	<b>1.22 - 0.13</b> .045	<b>0.8+0.1</b> .033	<b>5.3 - 0.45</b> .200	.01	4.1	17	32	53	93
<b>2661002201</b>	<b>1.95 - 0.2</b> .072	<b>1.05+0.1</b> .043	<b>10.4±0.25</b> .410	.08	2.9	53	76	97	122
<b>2661000101</b>	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>3.25±0.25</b> .128	.10	2.0	30	45	62	95
2661000301	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>6.0±0.25</b> .236	.18	2.0	54	82	103	120
2661000701	<b>3.5±0.2</b> .138	<b>1.3±0.1</b> .051	<b>12.7±0.35</b> .500	.38	2.0	120	158	178	185
2661022401	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>6.35±0.25</b> .250	.38	1.5	58	82	103	138
2661021801	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>11.1±0.35</b> .437	.67	1.5	102	141	167	185
2661023801	<b>5.1±0.25</b> .200	<b>1.45+0.25</b> .062	<b>22.85±0.75</b> .900	1.4	1.5	210	286	325	350
2661005701	<b>5.1±0.25</b> .200	<b>2.3±0.2</b> .090	<b>12.7±0.35</b> .500	.81	1.2	97	130	150	167
2661000801	<b>7.5±0.25</b> .296	<b>2.25+0.25</b> .094	<b>7.55±0.25</b> .297	1.0	1.0	84	114	134	160
2661250402	<b>6.35±0.15</b> .250	<b>2.95+0.45</b> .125	<b>12.7±0.5</b> .500	1.2	.91	75	103	120	143
2661250202	<b>6.35±0.15</b> .250	<b>2.95+0.45</b> .125	<b>25.4±0.75</b> 1.000	1.4	.91	165	230	275	330
2661375102	<b>9.5±0.25</b> .375	<b>4.5+0.75</b> .192	<b>6.35±0.35</b> .250	2.5	.60	42	63	83	117
2661002402	<b>9.65±0.25</b> .380	<b>5.0±0.2</b> .197	<b>5.05 - 0.45</b> .190	1.1	.59	35	54	75	112

\*\*Bold part numbers designate preferred parts.

<sup>+</sup> Test frequency

\*This dimension may be modified to suit specific applications.

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