

# SM Beads

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

Part Number*	Fig.	A	B	C	D	E	Wt (g)	Tape Width mm	Pitch mm	Parts/Reel
<b>2773019447</b>	1	<b>2.85±0.2</b> .112	<b>3.05±0.1</b> .120	<b>5.1 - 0.85</b> .184	<b>1.5±0.5</b> .059	—	.15	12	8	2800
<b>2743019447</b>	1	<b>2.85±0.2</b> .112	<b>3.05±0.1</b> .120	<b>5.1 - 0.85</b> .184	<b>1.5±0.5</b> .059	—	.15	12	8	2800
<b>2761019447</b>	1	<b>2.85±0.2</b> .112	<b>3.05±0.1</b> .120	<b>5.1 - 0.85</b> .184	<b>1.5±0.5</b> .059	—	.15	12	8	2800
<b>2773021447</b>	1	<b>2.85±0.2</b> .112	<b>3.05±0.1</b> .120	<b>9.6 - 0.95</b> .359	<b>1.5±0.5</b> .059	—	.30	16	8	2800
<b>2743021447</b>	1	<b>2.85±0.2</b> .112	<b>3.05±0.1</b> .120	<b>9.6 - 0.95</b> .359	<b>1.5±0.5</b> .059	—	.30	16	8	2800
<b>2761021447</b>	1	<b>2.85±0.2</b> .112	<b>3.05±0.1</b> .120	<b>9.6 - 0.95</b> .359	<b>1.5±0.5</b> .059	—	.30	16	8	2800
<b>2773037447</b>	1	<b>2.70±0.2</b> .106	<b>4.6±0.2</b> .181	<b>9.25 - 0.7</b> .350	<b>1.4±0.4</b> .055	—	.45	16	8	2800
<b>2743037447</b>	1	<b>2.70±0.2</b> .106	<b>4.6±0.2</b> .181	<b>9.25 - 0.7</b> .350	<b>1.4±0.4</b> .055	—	.45	16	8	2800
<b>2773044447</b>	1	<b>1.52 Max.</b> .060 Max.	<b>3.1±0.1</b> .122	<b>5.65±0.45</b> .222	<b>1.55±0.5</b> .061	—	.09	12	8	4500
<b>2744044447</b>	1	<b>1.52 Max.</b> .060 Max.	<b>3.1±0.1</b> .122	<b>5.65±0.45</b> .222	<b>1.55±0.5</b> .061	—	.09	12	8	4500
<b>2744041447</b>	2	<b>2.85±0.2</b> .112	<b>5.6±0.2</b> .220	<b>5.0 - 0.6</b> .185	<b>1.35±0.5</b> .053	<b>2.54±0.1</b> .100	.30	12	8	2400
<b>2744045447</b>	2	<b>2.85±0.2</b> .112	<b>5.6±0.2</b> .220	<b>8.9 - 0.8</b> .335	<b>1.35±0.5</b> .053	<b>2.54±0.1</b> .100	.53	16	8	2400
<b>2744040447</b>	3	<b>1.45±0.2</b> .057	<b>4.5±0.2</b> .177	<b>6.2 - 0.6</b> .232	<b>1.4±0.4</b> .055	<b>1.27±0.05</b> .050	.14	12	8	4000
<b>2744051447</b>	4	<b>4.5 Max.</b> .177 Max.	<b>6.65 Max.</b> .262 Max.	<b>12.0 Max.</b> .472 Max.	<b>2.5±0.5</b> .098	<b>3.00±0.1</b> .120	1.0	24	12	1000
<b>2744555577</b>	5	<b>5.0 Max.</b> .197 Max.	<b>5.00±0.25</b> .197	<b>11.0 Max.</b> .433 Max.	<b>2.0 Min.</b> .079 Min.	—	.96	24	12	1500

\* Bold part numbers designate preferred parts.

# Chip Beads

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## Low Current Chip Beads (<1 Amp)

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

Pkg. Size	Dimensions				Wt(g)	Signal Speed	Part Number	Z(Ω) ±25% @ 100 MHz	Max. DCR ohm	Max. Current mA	Z, R <sub>s</sub> , X <sub>L</sub> vs. Frequency Curve	DC Bias Curve
	A	B	C	D								
<b>0603</b>	<b>0.8±0.3</b> .031	<b>0.8±0.3</b> .031	<b>1.6±0.15</b> .063	<b>0.4±0.2</b> .016	<b>0.006</b>	Standard	<b>2506033007Y0</b>	30	0.1	200	Figure 1A	Figure 1B
							<b>2506036007Y0</b>	60	0.2	200	Figure 2A	Figure 2B
							<b>2506038007Y0</b>	80	0.2	150	Figure 3A	Figure 3B
							<b>2506039007Y0</b>	90	0.2	150	Figure 4A	Figure 4B
							<b>2506031017Y0</b>	100	0.2	150	Figure 5A	Figure 5B
							<b>2506031217Y0</b>	120	0.2	150	Figure 6A	Figure 6B
							<b>2506031517Y0</b>	150	0.3	150	Figure 7A	Figure 7B
							<b>2506033017Y0</b>	300	0.6	100	Figure 8A	Figure 8B
							<b>2506036017Y0</b>	600	0.8	100	Figure 9A	Figure 9B
						<b>2506031027Y0</b>	1000	1	100	Figure 10A	Figure 10B	
						High	<b>2506036007Z0</b>	60	0.5	200	Figure 11A	Figure 11B
							<b>2506031217Z0</b>	120	0.5	150	Figure 12A	Figure 12B
							<b>2506033017Z0</b>	300	0.85	100	Figure 13A	Figure 13B
<b>0805</b>	<b>0.9±0.2</b> .035	<b>1.25±0.2</b> .049	<b>2.0±0.2</b> .079	<b>0.45±0.35</b> .018	<b>0.01</b>	Standard	<b>2508051107Y0</b>	11	0.1	300	Figure 14A	Figure 14B
							<b>2508053007Y0</b>	30	0.2	300	Figure 15A	Figure 15B
							<b>2508055007Y0</b>	50	0.2	300	Figure 16A	Figure 16B
							<b>2508056007Y0</b>	60	0.2	300	Figure 17A	Figure 17B
							<b>2508059007Y0</b>	90	0.3	300	Figure 18A	Figure 18B
							<b>2508051017Y0</b>	100	0.3	300	Figure 19A	Figure 19B
							<b>2508051217Y0</b>	120	0.3	300	Figure 20A	Figure 20B
							<b>2508051817Y0</b>	180	0.3	300	Figure 21A	Figure 21B
							<b>2508053017Y0</b>	300	0.4	300	Figure 22A	Figure 22B
							<b>2508056017Y0</b>	600	0.6	200	Figure 23A	Figure 23B
						<b>2508051027Y0</b>	1000	0.8	100	Figure 24A	Figure 24B	
						<b>2508051527Y0</b>	1500	1	100	Figure 25A	Figure 25B	
						High	<b>2508056007Z0</b>	60	0.3	300	Figure 26A	Figure 26B
							<b>2508051217Z0</b>	120	0.3	300	Figure 27A	Figure 27B
							<b>2508053017Z0</b>	300	0.55	100	Figure 28A	Figure 28B
<b>1206</b>	<b>1.1±0.2</b> .043	<b>1.6±0.2</b> .063	<b>3.2±0.2</b> .126	<b>0.55±0.45</b> .022	<b>0.03</b>	Standard	<b>2512063007Y0</b>	30	0.1	500	Figure 29A	Figure 29B
							<b>2512065007Y0</b>	50	0.2	400	Figure 30A	Figure 30B
							<b>2512066007Y0</b>	60	0.2	400	Figure 31A	Figure 31B
							<b>2512067007Y0</b>	70	0.2	400	Figure 32A	Figure 32B
							<b>2512068007Y0</b>	80	0.2	400	Figure 33A	Figure 33B
							<b>2512069007Y0</b>	90	0.2	300	Figure 34A	Figure 34B
							<b>2512061017Y0</b>	100	0.2	300	Figure 35A	Figure 35B
							<b>2512061217Y0</b>	120	0.2	300	Figure 36A	Figure 36B
							<b>2512063017Y0</b>	300	0.3	200	Figure 37A	Figure 37B
							<b>2512066017Y0</b>	600	0.6	200	Figure 38A	Figure 38B
							<b>2512061027Y0</b>	1000	0.8	100	Figure 39A	Figure 39B
							<b>2512061527Y0</b>	1500@50 MHz	1	100	Figure 40A	Figure 40B
<b>1806</b>	<b>1.6±0.2</b> .063	<b>1.6±0.2</b> .063	<b>4.5±0.2</b> .177	<b>0.55±0.45</b> .022	<b>0.06</b>	Standard	<b>2518066007Y0</b>	60	0.2	500	Figure 41A	Figure 41B
							<b>2518067007Y0</b>	70	0.2	500	Figure 42A	Figure 42B
							<b>2518068007Y0</b>	80	0.2	500	Figure 43A	Figure 43B
							<b>2518061017Y0</b>	100	0.3	400	Figure 44A	Figure 44B
							<b>2518061517Y0</b>	150	0.3	400	Figure 45A	Figure 45B
							<b>2518063017Y0</b>	300	0.3	400	Figure 46A	Figure 46B

\* Bold part numbers designate preferred parts.

# Chip Beads

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## Medium Current Chip Beads (1-3 Amp)

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

Pkg. Size	Dimensions				Wt(g)	Signal Speed	Part Number*	Z( $\Omega$ ) $\pm$ 25% @ 100 MHz	Max. DCR ohm	Max. Current mA	Z, R <sub>s</sub> , X <sub>L</sub> vs. Frequency Curve	DC Bias Curve
	A	B	C	D								
<b>0603</b>	<b>0.8<math>\pm</math>0.3</b> .031	<b>0.8<math>\pm</math>0.3</b> .031	<b>1.6<math>\pm</math>0.15</b> .063	<b>0.4<math>\pm</math>0.2</b> .016	<b>0.006</b>	Standard	<b>2506033007Y1</b>	30	0.1	1000	Figure 47A	Figure 47B
<b>0805</b>	<b>0.9<math>\pm</math>0.2</b> .035	<b>1.25<math>\pm</math>0.2</b> .049	<b>2.0<math>\pm</math>0.2</b> .079	<b>0.55<math>\pm</math>0.45</b> .022	<b>0.01</b>	Standard	<b>2508053007Y3</b>	30	0.04	3000	Figure 48A	Figure 48B
<b>1206</b>	<b>1.1<math>\pm</math>0.2</b> .043	<b>1.6<math>\pm</math>0.2</b> .063	<b>3.2<math>\pm</math>0.2</b> .126	<b>0.55<math>\pm</math>0.45</b> .022	<b>0.03</b>	Standard	<b>2512061907Y1</b>	19	0.04	1500	Figure 49A	Figure 49B
							<b>2512063007Y3</b>	30	0.04	3000	Figure 50A	Figure 50B
							<b>2512065007Y3</b>	50	0.05	3000	Figure 51A	Figure 51B
							<b>2512067007Y3</b>	70	0.05	3000	Figure 52A	Figure 52B
<b>1806</b>	<b>1.6<math>\pm</math>0.2</b> .063	<b>1.6<math>\pm</math>0.2</b> .063	<b>4.5<math>\pm</math>0.2</b> .177	<b>0.55<math>\pm</math>0.45</b> .022	<b>0.06</b>	Standard	<b>2518066007Y3</b>	60	0.04	3000	Figure 54A	Figure 54B
							<b>2518068007Y1</b>	80	0.1	1500	Figure 55A	Figure 55B
<b>1812</b>	<b>1.6<math>\pm</math>0.2</b> .063	<b>3.2<math>\pm</math>0.2</b> .126	<b>4.5<math>\pm</math>0.2</b> .177	<b>0.55<math>\pm</math>0.45</b> .022	<b>0.09</b>	Standard	<b>2518127007Y3</b>	70	0.04	3000	Figure 56A	Figure 56B
							<b>2518121217Y3</b>	120	0.04	3000	Figure 57A	Figure 57B

## High Current Chip Beads (>3 Amp)

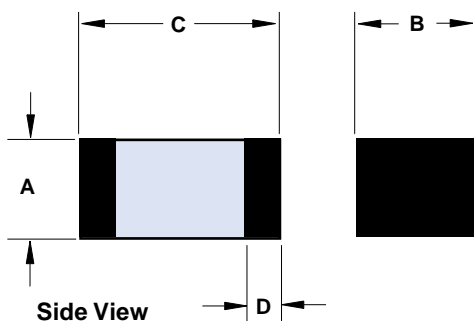
Dimensions (Bold numbers are in millimeters, light numbers are in inches.)

Pkg. Size	Dimensions				Wt(g)	Signal Speed	Part Number*	Z( $\Omega$ ) $\pm$ 25% @ 100 MHz	Max. DCR ohm	Max. Current mA	Z, R <sub>s</sub> , X <sub>L</sub> vs. Frequency Curve	DC Bias Curve
	A	B	C	D								
<b>1206</b>	<b>1.1<math>\pm</math>0.2</b> .043	<b>1.6<math>\pm</math>0.2</b> .063	<b>3.2<math>\pm</math>0.2</b> .126	<b>0.6<math>\pm</math>0.2</b> .024	<b>0.03</b>	Standard	<b>2512065007Y6</b>	50	0.02	6000	Figure 58A	Figure 58B
<b>1806</b>	<b>1.6<math>\pm</math>0.2</b> .063	<b>1.6<math>\pm</math>0.2</b> .063	<b>4.5<math>\pm</math>0.2</b> .177	<b>0.6<math>\pm</math>0.2</b> .024	<b>0.06</b>	Standard	<b>2518065007Y6</b>	50	0.01	6000	Figure 59A	Figure 59B
							<b>2518068007Y6</b>	80	0.02	6000	Figure 60A	Figure 60B
<b>1812</b>	<b>1.6<math>\pm</math>0.2</b> .063	<b>3.2<math>\pm</math>0.2</b> .126	<b>4.5<math>\pm</math>0.2</b> .177	<b>0.55<math>\pm</math>0.45</b> .022	<b>0.09</b>	Standard	<b>2518121217Y6</b>	120	0.02	6000	Figure 61A	Figure 61B

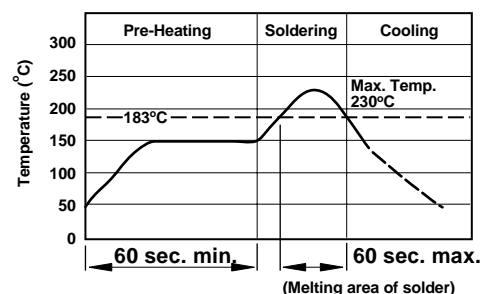
\* Bold part numbers designate preferred parts.

## Part Number System: Example 2512063017Y1

25	1206	301	7	Y	1
Chip Bead Code	Package Size Code	Impedance Code	Packaging Code	Material Code	Current Code
			6= Bulk Packed 7= Taped and Reeled 7" Reel 8= Taped and Reeled 13" Reel	Y = Standard Signal Speed Z = High Signal Speed	0 < 1.0A 1 $\geq$ 1.0A < 2.0A 3 $\geq$ 3.0A < 4.0A 6 $\geq$ 6.0A < 7.0A



## Standard Soldering Profile



# Engineering Evaluation Kits

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## Expanded Cable and Connector EMI Suppressor Kit

*Part Number 0199000005*

This is our most popular engineering kit. As the name implies, this kit provides a broad sampling of suppression cores, specifically designed to attenuate EMI between all types of cable connected systems. To assemble the split cable suppression cores, polypropylene cases and steel clips are included in this kit.

## Snap-It Cable Suppressor Kit

*Part Number 0199000017*

This kit contains six sets of round cable snap-its in two of our materials; the high resistivity NiZn 44 material and the new recently introduced MnZn 31 material. Either material in these round cable snap-its can be used to suppress frequencies up to 500 MHz.

The round cable snap-its can accommodate round cables with diameters from .160 to .750 inches

## Chip Bead Kit

*Part Number 0199000018*

This kit contains 20 different chip bead parts in four different EIA standard package sizes. This kit contains low current, medium current, as well as high current chip beads. Also included in this kit are a selection of standard and high signal speed parts.

## EMI Suppression Bead Kit

*Part Number 0199000019*

This kit contains 20 different EMI suppression beads in two different materials; 73 and 43 material. The beads range from a hole diameter of 0.85mm up to 5.0 mm.

## Connector Plate Kit

*Part Number 0199000020*

This kit contains 20 different suppression plates in high resistivity NiZn 44 material.

## RFID Kit

*Part Number 0199000024*

This Kit contains 10 different sizes in materials 78 (for 125 kHz) & 61 (for 13.56 MHz) and is specifically designed for use in transponders in Radio Frequency identification Devices.



## Surface Mount Kit

*Part Number 0199000025*

This Bookshelf kit contains a combination of 20 differential and common-mode surface mount beads. Supplied in several sizes and four Fair-Rite materials (73, 43, 44, 61), these beads attenuate conducted EMI from 1 MHz into the GHz frequencies. These SM beads have lower dc resistances and higher current carrying capacities than plated beads.

## Wound Bead Kit

*Part Number 0199000027*

Contains an assortment of 6 and 11 hole beads, wound in several configurations. These beads in Fair-Rite's 44 and 61 materials, provide an impedance of hundreds of ohm over a 5 to 800 MHz frequency range, with or without a dc bias current of up to 5 ampere.

## Bead-On-Lead EMI Suppressor Kit

*Part Number 0199000028*

Three popular core sizes in materials 43, 61 & 73 are included in this evaluation kit.

These nine Fair-Rite engineering evaluation kits are available from Fair-Rite in Wallkill, NY. They can also be purchased from our distributors.

Please refer to our web site at [www.fair-rite.com](http://www.fair-rite.com) for a complete list of our distributors.

**Fair-Rite Products Corp.**

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(888) 324-7748

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Note: (914) Area Code has changed to (845).