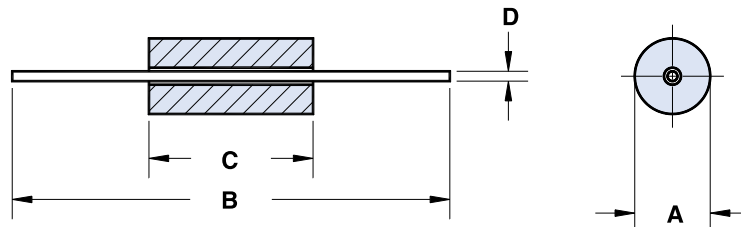


# Beads on Leads

Beads are supplied assembled on tinned copper wire to aid automated circuit assembly.

- Parts with a "2" as the last digit of the part number are supplied taped and reeled per IEC 60286-1 and EIA Standard RS-296-F. Taped and reeled parts are supplied 4500 pieces on a 14" reel. Inside tape spacing is **52.4±1.5 mm**. These parts can also be supplied not taped and reeled and are then bulk packed. The last digit of bulk packaged part number is a "1".



- Wires are oxygen free high conductivity copper with a tin/lead coating. The resistance of the wire is 3.5 mΩ maximum for the 22 AWG wire and 2.2 mΩ maximum for the 20 AWG wire.
- Beads are controlled for impedance limits only. They are tested for impedance with a single turn, using a Hewlett Packard HP 4193A Vector Impedance Meter for beads in 73 and 43 material and the HP 4191A RF Impedance Analyzer for 61 material beads.
- Recommended storage and operating temperature is -55°C to 125°C.
- For impedance vs. frequency curves and DC bias curves for these parts, see Figures 1-30.
- For any bead on lead requirement not listed in the catalog, please contact our customer service group for availability and pricing.
- The Bead on Lead EMI Suppressor Kit (part number 0199000028) is available for prototype evaluation. See page 92.

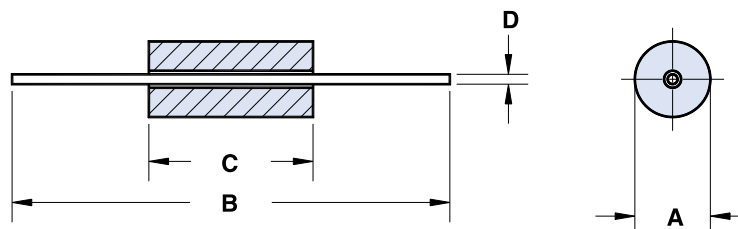
**Dimensions** (Bold numbers are in millimeters, light numbers are nominal in inches.)

Part Number*	A	B	C	D	Wt (g)	Typical Impedance(Ω) <sup>1</sup>				Z, R <sub>s</sub> , X <sub>L</sub> vs. Frequency Curve	DC Bias Curve
						10 MHz	25 MHz	100 MHz	250 MHz		
<b>2773001112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>4.45±0.25</b> .175	<b>0.65</b> 22 AWG	.4	48	61	—	—	Figure 1A	Figure 1B
<b>2743001112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>4.45±0.25</b> .175	<b>0.65</b> 22 AWG	.4	—	49	68	—	Figure 2A	Figure 2B
<b>2761001112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>4.45±0.25</b> .175	<b>0.65</b> 22 AWG	.4	—	—	56	80	Figure 3A	Figure 3B
<b>2773015112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>5.25±0.25</b> .206	<b>0.65</b> 22 AWG	.4	55	68	—	—	Figure 4A	Figure 4B
<b>2743015112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>5.25±0.25</b> .206	<b>0.65</b> 22 AWG	.4	—	54	82	—	Figure 5A	Figure 5B
<b>2761015112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>5.25±0.25</b> .206	<b>0.65</b> 22 AWG	.4	—	—	69	100	Figure 6A	Figure 6B
<b>2773005112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>6.0±0.25</b> .236	<b>0.65</b> 22 AWG	.4	63	78	—	—	Figure 7A	Figure 7B
<b>2743005112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>6.0±0.25</b> .236	<b>0.65</b> 22 AWG	.4	—	60	91	—	Figure 8A	Figure 8B
<b>2761005112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>6.0±0.25</b> .236	<b>0.65</b> 22 AWG	.4	—	—	75	113	Figure 9A	Figure 9B
<b>2773003112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>6.7±0.25</b> .263	<b>0.65</b> 22 AWG	.5	70	86	—	—	Figure 10A	Figure 10B

\* Bold part numbers designate preferred parts.

<sup>1</sup>Guaranteed Z Min is Z Typ -20%

# Beads on Leads



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

Part Number*	A	B	C	D	Wt (g)	Typical Impedance( $\Omega$ ) <sup>1</sup>				Z, R <sub>s</sub> , X <sub>L</sub> vs. Frequency Curve	DC Bias Curve
						10 MHz	25 MHz	100 MHz	250 MHz		
<b>2743003112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>6.7±0.25</b> .263	<b>0.65</b> 22 AWG	.5	–	65	100	–	Figure 11A	Figure 11B
<b>2761003112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>6.7±0.25</b> .263	<b>0.65</b> 22 AWG	.5	–	–	88	125	Figure 12A	Figure 12B
<b>2773004112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>7.6±0.3</b> .300	<b>0.65</b> 22 AWG	.5	80	100	–	–	Figure 13A	Figure 13B
<b>2743004112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>7.6±0.3</b> .300	<b>0.65</b> 22 AWG	.5	–	75	110	–	Figure 14A	Figure 14B
<b>2761004112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>7.6±0.3</b> .300	<b>0.65</b> 22 AWG	.5	–	–	94	144	Figure 15A	Figure 15B
<b>2773002112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>8.9±0.3</b> .350	<b>0.65</b> 22 AWG	.6	94	115	–	–	Figure 16A	Figure 16B
<b>2743002112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>8.9±0.3</b> .350	<b>0.65</b> 22 AWG	.6	–	88	133	–	Figure 17A	Figure 17B
<b>2761002112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>8.9±0.3</b> .350	<b>0.65</b> 22 AWG	.6	–	–	113	168	Figure 18A	Figure 18B
<b>2773007112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>9.5±0.3</b> .374	<b>0.65</b> 22 AWG	.6	110	115	–	–	Figure 19A	Figure 19B
<b>2743007112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>9.5±0.3</b> .374	<b>0.65</b> 22 AWG	.6	–	96	150	–	Figure 20A	Figure 20B
<b>2761007112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>9.5±0.3</b> .374	<b>0.65</b> 22 AWG	.6	–	–	125	180	Figure 21A	Figure 21B
<b>2773008112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>11.4±0.4</b> .450	<b>0.65</b> 22 AWG	.7	125	145	–	–	Figure 22A	Figure 22B
<b>2743008112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>11.4±0.4</b> .450	<b>0.65</b> 22 AWG	.7	–	116	180	–	Figure 23A	Figure 23B
<b>2761008112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>11.4±0.4</b> .450	<b>0.65</b> 22 AWG	.7	–	–	144	213	Figure 24A	Figure 24B
<b>2773009112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>13.8±0.5</b> .545	<b>0.65</b> 22 AWG	.8	151	170	–	–	Figure 25A	Figure 25B
<b>2743009112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>13.8±0.5</b> .545	<b>0.65</b> 22 AWG	.8	–	143	220	–	Figure 26A	Figure 26B
<b>2761009112</b>	<b>3.5±0.25</b> .138	<b>62.0±1.5</b> 2.440	<b>13.8±0.5</b> .545	<b>0.65</b> 22 AWG	.8	–	–	175	258	Figure 27A	Figure 27B
<b>2743012201+</b>	<b>9.8±0.3</b> .385	<b>62.0±1.5</b> 2.440	<b>11.4±0.4</b> .449	<b>0.8</b> 20 AWG	4.5	–	193	271	–	Figure 28A	Figure 28B
<b>2743013211+</b>	<b>9.8±0.3</b> .385	<b>62.0±1.5</b> 2.440	<b>14.0±0.5</b> .550	<b>0.8</b> 20 AWG	5.5	–	235	331	–	Figure 29A	Figure 29B
<b>2743014221+</b>	<b>9.8±0.3</b> .385	<b>62.0±1.5</b> 2.440	<b>16.5±0.5</b> .650	<b>0.8</b> 20 AWG	6.5	–	280	391	–	Figure 30A	Figure 30B

\* Bold part numbers designate preferred parts.

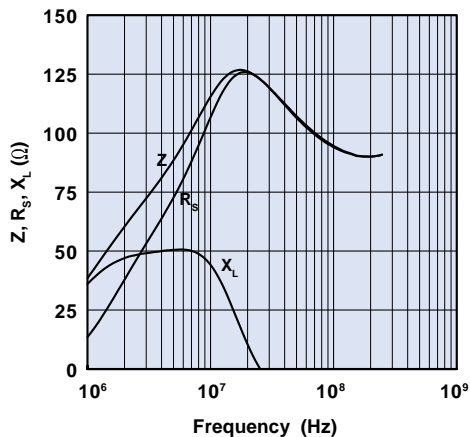
+ Not available taped and reeled.

<sup>1</sup>Guaranteed Z Min is Z Typ -20%

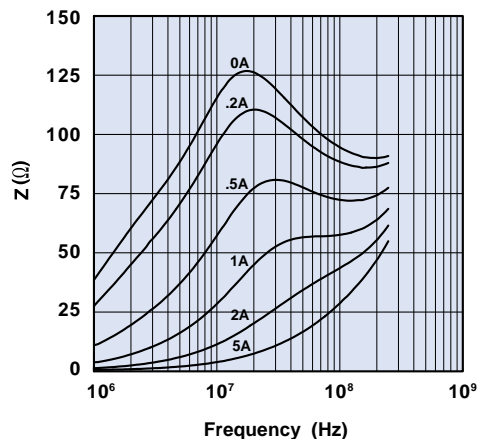
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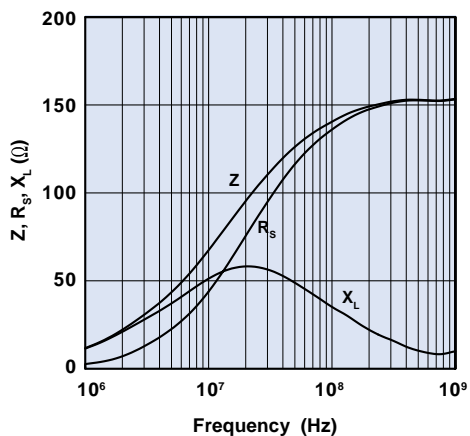
# Beads on Leads



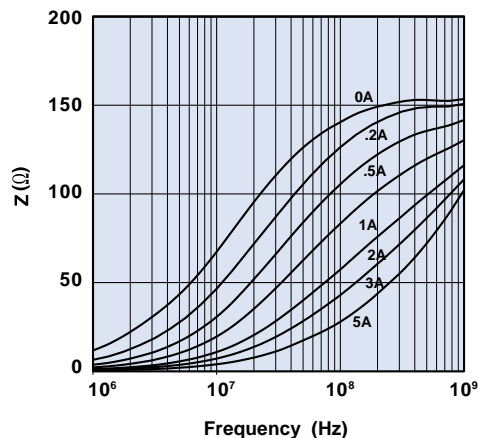
**Figure 19A** Impedance, reactance, and resistance vs. frequency for bead on lead 2773007112.



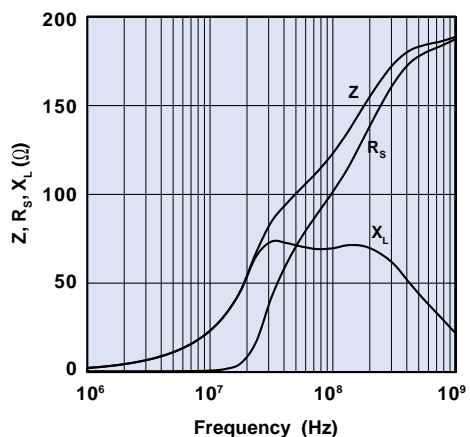
**Figure 19B** Impedance vs. frequency with dc bias as parameter for bead on lead 2773007112.



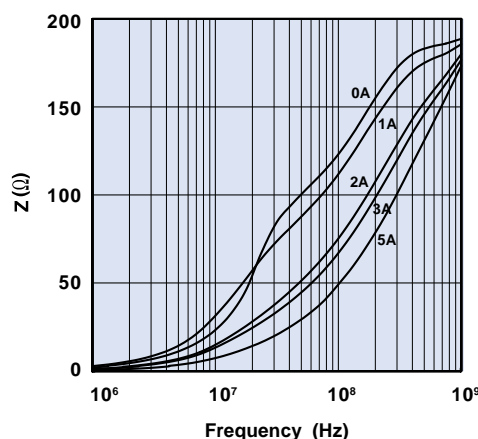
**Figure 20A** Impedance, reactance, and resistance vs. frequency for bead on lead 2743007112.



**Figure 20B** Impedance vs. frequency with dc bias as parameter for bead on lead 2743007112.



**Figure 21A** Impedance, reactance, and resistance vs. frequency for bead on lead 2761007112.



**Figure 21B** Impedance vs. frequency with dc bias as parameter for bead on lead 2761007112.