

# Chip Beads

Fair-Rite offers a broad selection of cost effective chip beads to suppress conducted EMI in a wide variety of devices such as cellular phones, computers, laptops, pagers, etc.

The small standard package sizes accommodate automated installation and allow for a dense packaging of circuit boards.

Chip beads are 100% tested for impedance and dc resistance. They are available in standard, high and GHz signal speeds. Chip beads are organized and listed by increasing current carrying capacity.

- All multi-layer chip beads are supplied taped and reeled, if required bulk packed chip beads can be provided. See table on the next page with tape and reel particulars.
- Chip beads are controlled for impedance. The impedance values listed are typical values. A nominal impedance with a +/- 25% tolerance is specified for the + marked frequency.
- Chip beads are measured for impedance on the HP 4291A and fixture HP 16192A.
- Chip beads can accommodate both reflow and wave soldering technologies. See page 28 for the recommended soldering profile for chip components.
- Suggested land patterns are in accordance to the latest revision of IPC-7351.
- Chip beads have plated contacts, 100% tin over a nickel undercoating.
- Recommended storage and operating temperature range is -55°C to 125°C.
- Performance curves for all listed chip beads, with and without dc bias, are on the Fair-Rite Products CD-ROM.
- Our "Chip Bead Kit" (part number 0199000018) is available for prototype evaluation. See page 68.

## Part Number System: Example 2512063017Y1

25	1206	301	7	Y	1
<b>Chip Bead Code</b>	<b>Package Size Code</b>	<b>Impedance Code</b>	<b>Packaging Code</b>	<b>Material Code</b>	<b>Current Code</b>
		6= Bulk Packed 7= Taped and Reeled 7" Reel 8= Taped and Reeled 13" Reel		Y = Standard Signal Speed Z = High Signal Speed H = GHz Speed	0 < 1.0A 1 ≥ 1.0A < 2.0A 3 ≥ 3.0A < 4.0A ETC

# Fair-Rite Products Corp.

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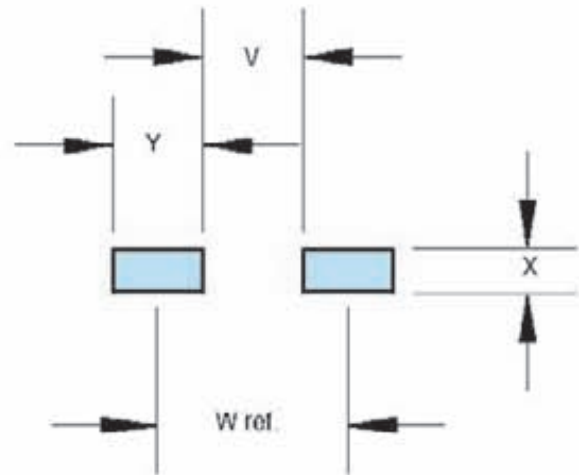
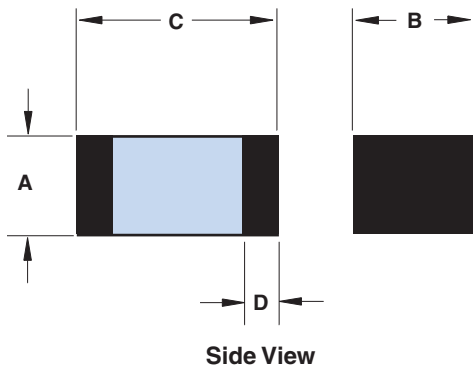
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# Chip Beads

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

Pkg. Size	Dimensions					Land Patterns				Tape Width mm	Pitch mm	Parts per Reel	
	A	B	C	D	Wt(g)	V	W ref	X	Y			7"	13"
0402 <b>(1005)</b>	<b>0.5±0.15</b> .020	<b>0.5±0.15</b> .020	<b>1.0±0.15</b> .040	<b>0.25±0.15</b> .010	<b>0.002</b>	<b>0.40</b> .016	<b>1.30</b> .051	<b>0.70</b> .028	<b>0.90</b> .035	8	4	10,000	N/A
0603 <b>(1608)</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>	<b>0.60</b> .024	<b>1.70</b> .067	<b>1.00</b> .039	<b>1.10</b> .043	8	4	4,000	10,000
0805 <b>(2012)</b>	<b>0.9±0.2</b> .035	<b>1.25±0.2</b> .049	<b>2.0±0.2</b> .079	<b>0.5±0.3</b> .020	<b>0.01</b>	<b>0.60</b> .024	<b>1.90</b> .075	<b>1.50</b> .059	<b>1.30</b> .051	8	4	4,000	10,000
1206 <b>(3216)</b>	<b>1.1±0.2</b> .043	<b>1.6±0.2</b> .063	<b>3.2±0.2</b> .126	<b>0.7±0.3</b> .028	<b>0.03</b>	<b>1.20</b> .047	<b>2.80</b> .110	<b>1.80</b> .071	<b>1.60</b> .063	8	4	3,000	10,000
1806 <b>(4516)</b>	<b>1.6±0.2</b> .063	<b>1.6±0.2</b> .063	<b>4.5±0.2</b> .177	<b>0.7±0.3</b> .028	<b>0.06</b>	<b>2.00</b> .079	<b>3.90</b> .154	<b>1.80</b> .071	<b>1.90</b> .075	12	8	2,000	10,000
1812 <b>(4532)</b>	<b>1.6±0.2</b> .063	<b>3.2±0.2</b> .126	<b>4.5±0.2</b> .177	<b>0.7±0.3</b> .028	<b>0.09</b>	<b>2.00</b> .079	<b>3.90</b> .154	<b>3.40</b> .134	<b>1.90</b> .075	12	8	1,000	5,000



# Chip Beads

Current	Pkg. Size	Signal Speed	Part Number	Z (Ω) 50 MHz	Z (Ω) ± 25% 100 MHz <sup>+</sup>	Z (Ω) 500 MHz	Z (Ω) 1000 MHz	Max.DCR (Ω)	Max Cur. mA
Low	0402 (1005)	Standard	2504021007Y0	8	10	13	14	0.05	500
			2504026007Y0	48	60	79	79	0.4	200
			2504021217Y0	88	120	170	157	0.5	200
			2504023017Y0	234	300	370	264	0.75	100
			2504026017Y0	421	600	652	362	1.1	50
	0603 (1608)	Standard	2506033007Y0	23	30	46	48	0.1	400
			2506036007Y0	45	60	94	82	0.15	400
			2506038007Y0	59	80	121	102	0.15	400
			2506031017Y0	77	100	144	131	0.15	400
			2506031217Y0	90	120	179	142	0.15	400
			2506031517Y0	109	150	224	179	0.15	400
			2506033017Y0	213	300	326	205	0.3	400
			2506036017Y0	426	600	405	226	0.35	400
		High	2506031027Y0	653	1000	241	110	0.55	300
			2506036007Z0	28	60	145	96	0.25	450
			2506031217Z0	60	120	278	192	0.3	450
		GHz	2506033017Z0	112	300	314	142	0.35	450
			2506030707H0	4	7	30	38	0.1	700
			2506031007H0	5	10	43	50	0.1	700
			2506031217H0	50	120	600	500	0.5	200
			2506032217H0	100	220	800	1000	0.8	100
			2506033317H0	150	330	1300	1500	1.2	50
	0805 (2012)	Standard	2508051107Y0	8	11	16	16	0.1	300
			2508053007Y0	22	30	46	49	0.1	300
			2508055007Y0	36	50	73	76	0.15	300
			2508056007Y0	45	60	88	89	0.15	300
			2508059007Y0	68	90	125	107	0.2	300
			2508051017Y0	75	100	134	120	0.2	300
			2508051217Y0	89	120	172	127	0.2	300
			2508051817Y0	134	180	198	111	0.2	300
			2508053017Y0	216	300	161	84	0.25	300
			2508056017Y0	428	600	284	141	0.35	300
		High	2508051027Y0	688	1000	300	148	0.45	300
2508051527Y0			989	1500	235	118	0.7	300	
2508056007Z0			28	60	111	122	0.15	300	
2508051217Z0			45	120	253	191	0.2	250	
2508053017Z0			118	300	280	139	0.25	200	
GHz	2508052027Z0	440	2000	160	80	0.4	200		
		GHz	2508050507H0	2	5	17	22	0.07	500

+ Test frequency

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Current	Pkg. Size	Signal Speed	Part Number	Z (Ω) 50 MHz	Z (Ω) ± 25% 100 MHz <sup>+</sup>	Z (Ω) 500 MHz	Z (Ω) 1000 MHz	Max.DCR (Ω)	Max Cur. mA
Low	1206 (3216)	Standard	2512063007Y0	21	30	49	52	0.1	800
			2512065007Y0	38	50	68	67	0.15	800
			2512067007Y0	53	70	101	102	0.15	500
			2512069007Y0	72	90	121	113	0.2	450
			2512061017Y0	72	100	127	86	0.2	450
			2512061217Y0	87	120	151	109	0.2	450
			2512063017Y0	203	300	233	118	0.2	350
			2512066017Y0	581	600	116	67	0.25	350
			2512061027Y0	784	1000	230	117	0.35	350
			2512061527Y0	1500	1500	250	200	0.4	350
	1806 (4516)	Standard	2518061017Y0	73	100	153	155	0.3	400
			2518061517Y0	110	150	205	167	0.5	200
Medium	0603 (1608)	Standard	2506033007Y3	23	30	40	41	0.04	3000
			2506036007Y3	48	60	84	81	0.04	3000
			2506031217Y2	90	120	170	152	0.05	2000
	0805 (2012)	Standard	2508053007Y3	23	30	41	41	0.03	3000
			2508056007Y3	49	60	84	84	0.04	3000
			2508051217Y3	91	120	165	135	0.05	3000
			2508053017Y3	239	300	218	117	0.05	3000
			2508056017Y2	449	600	293	159	0.1	2000
			2508051027Y1	764	1000	402	216	0.3	1000
	1206 (3216)	Standard	2512063007Y3	24	30	40	38	0.03	3000
			2512065007Y3	39	50	69	70	0.03	3000
			2512067007Y3	53	70	102	103	0.04	3000
			2512061517Y3	120	150	173	130	0.05	3000
			2512063017Y3	212	300	150	88	0.06	3000
			2512066017Y1	460	600	260	120	0.08	1000
			2512061027Y1	925	1000	210	117	0.30	1000
	1806 (4516)	Standard	2518066007Y3	44	60	91	94	0.04	3000
			2518068007Y3	64	80	114	114	0.04	3000
	1812 (4532)	Standard	2518127007Y3	54	70	96	96	0.04	3000
			2518121217Y3	92	120	150	106	0.04	3000
High	0805 (2012)	Standard	2508056007Y6	47	60	88	68	0.02	6000
			2508051217Y6	94	120	158	132	0.025	6000
	1206 (3216)	Standard	2512065007Y6	39	50	68	56	0.02	6000
			2512061217Y5	96	120	137	91	0.025	5000
	1806 (4516)	Standard	2518065007Y6	36	50	63	61	0.01	6000
			2518061017Y6	75	100	139	132	0.02	6000
1812	Standard	2518121217Y6	92	120	149	105	0.02	6000	

+ Test frequency

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