

Quick Link: www.fair-rite.com/sbd

Surface mount beads are available from Fair-Rite in several materials and sizes. Their rugged construction lowers the dc resistance and increases current carrying capacity compared to plated beads.

- SM Beads on 12 mm tape width are supplied taped and reeled per EIA 481-1 and IEC 60286-3 standards. SM Beads on 16 and 24 mm tape widths are supplied taped and reeled per EIA 481-2 and IEC 60286-3 standards. Taped and reeled parts are supplied on a 13" reel.
- SM Beads can also be supplied not taped and reeled and then are bulk packed. This packing method will change the last digit of the part number to a "6".
- Wires are oxygen free high conductivity copper with 100% matte tin plating over a nickel undercoating.
- SM Beads meet the solderability specifications when tested in accordance with MIL-STD-202, method 208. After dipping the mounting site of the bead, the solder surface shall be at least 95% covered with a smooth solder coating. The edges of the copper strip are not specified as solderable surfaces.
- After preheating the beads to within 100 °C of the soldering temperature, the parts meet the resistance to soldering requirements of EIA-186-10E, temperature 260 ±5 °C and time 10 ±1 seconds.
- Suggested land patterns are in accordance with the latest revision of IPC-7351.
- SM Beads are controlled for impedance limits only. Minimum impedance values are specified for the + marked frequencies. The minimum impedance is typically the listed value less 20%. SM Beads in 73, 43 and 44 materials are measured for impedance on the 4193 Vector Impedance Analyzer. The 52 and 61 SM Beads are tested for impedance on the 4291A RF Impedance Analyzer.
- Recommended storage and operation temperature is -55 °C to 125 °C.
- The maximum practical current rating for these SM Beads is 5 amps, check the component bias curves. The 019/021/037 and 044 SM Beads can withstand a continuous current of 10 amps resulting in a component temperature rise < 40 °C
- Performance curves for these suppression components are on our web site.
- For any SM Bead requirement not listed, please contact our customer service group for availability and pricing.
- Our "Surface Mount Bead Kit" (part number 0199000025) is available for prototype evaluation.
- Explanation of Part Numbers: Digits 1&2 = product class, 3&4 = material grade, last digit 6 = bulk packed, 7 = taped and reeled.

SM Beads (Differential-Mode)



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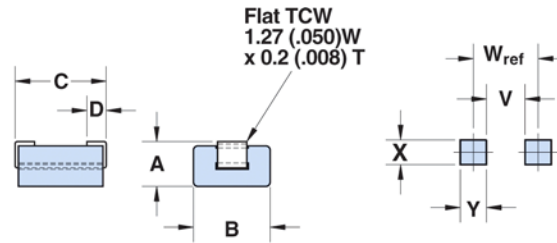


Figure 1

Land Pattern
for Fig. 1

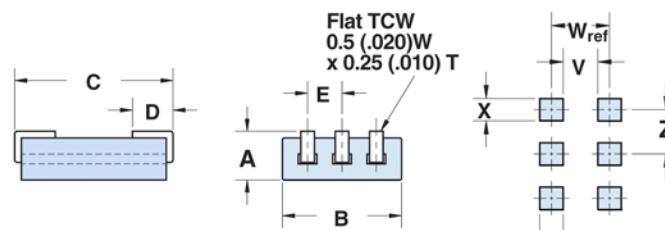


Figure 2

Land Pattern
for Fig. 2
E = Z

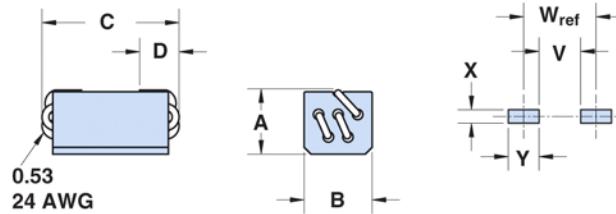


Figure 3

Land Pattern
for Fig. 3

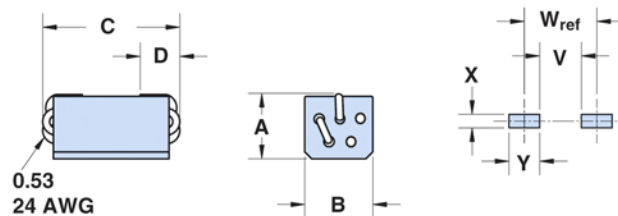


Figure 4

Land Pattern
for Fig. 4

SM Beads (Differential-Mode)



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Legend

Dimensions (Top numbers are in millimeters, bottom numbers are in nominal inches.)

+ Test frequency

Lower Frequencies < 50 MHz (73 material)

Row #	Part Number	Fig.	A	B	C	D	Wt. (g)	Reel Information		
								Tape Width mm	Pitch mm	Parts 13" Reel
(1)	2773019447	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	5.10 -0.85 0.184	1.50 ±0.50 0.059	0.15	12	8	2800
(2)	2773019446	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	5.10 -0.85 0.184	1.50 ±0.50 0.059	0.15	-	-	-
(3)	2773021447	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	9.60 -0.95 0.359	1.50 ±0.50 0.059	0.30	16	8	2800
(4)	2773021446	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	9.60 -0.95 0.359	1.50 ±0.50 0.059	0.30	-	-	-
(5)	2773037447	1	2.70 ±0.20 0.106	4.60 ±0.20 0.181	9.25 -0.70 0.350	1.40 ±0.40 0.055	0.45	16	8	2800
(6)	2773037446	1	2.70 ±0.20 0.106	4.60 ±0.20 0.181	9.25 -0.70 0.350	1.40 ±0.40 0.055	0.45	-	-	-
(7)	2773044447	1	1.75 Max 0.068 Max	3.10 ±0.10 0.122	5.65 ±0.45 0.222	1.55 ±0.50 0.061	0.09	12	8	4500
(8)	2773044446	1	1.75 Max 0.068 Max	3.10 ±0.10 0.122	5.65 ±0.45 0.222	1.55 ±0.50 0.061	0.09	-	-	-

Table Continued ...

Row #	Part Number	Impedance (Ω)				Max Rdc (mΩ)	Land Patterns				
		1 MHz	5 MHz	10 MHz ⁺	25 MHz ⁺		V	W (ref)	X	Y	Z
(1)	2773019447	12	25	31	40	0.80	1.00 0.040	4.00 0.157	1.80 0.071	3.00 0.118	-
(2)	2773019446	12	25	31	40	0.80	1.00 0.040	4.00 0.157	1.80 0.071	3.00 0.118	-
(3)	2773021447	25	50	60	78	1.20	4.50 0.177	7.50 0.295	1.80 0.071	3.00 0.118	-
(4)	2773021446	25	50	60	78	1.20	4.50 0.177	7.50 0.295	1.80 0.071	3.00 0.118	-
(5)	2773037447	25	50	60	78	1.20	5.00 0.197	8.00 0.315	1.80 0.071	3.00 0.118	-
(6)	2773037446	25	50	60	78	1.20	5.00 0.197	8.00 0.315	1.80 0.071	3.00 0.118	-
(7)	2773044447	9	19	25	33	1.10	1.50 0.059	4.50 0.177	1.80 0.071	3.00 0.118	-
(8)	2773044446	9	19	25	33	1.10	1.50 0.059	4.50 0.177	1.80 0.071	3.00 0.118	-

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Broadband Frequencies 25-300 MHz (43 & 44 materials)

Row #	Part Number	Fig.	A	B	C	D	E	Wt. (g)	Reel Information		
									Tape Width mm	Pitch mm	Parts 13" Reel
(9)	2743019447	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	5.10 -0.85 0.184	1.50 ±0.50 0.059	-	0.15	12	8	2800
(10)	2743019446	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	5.10 -0.85 0.184	1.50 ±0.50 0.059	-	0.15	-	-	-
(11)	2743021447	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	9.60 -0.95 0.359	1.50 ±0.50 0.059	-	0.30	16	8	2800
(12)	2743021446	1	2.85 ±0.20 0.112	3.05 ±0.10 0.120	9.60 -0.95 0.359	1.50 ±0.50 0.059	-	0.30	-	-	-
(13)	2743037447	1	2.70 ±0.20 0.106	4.60 ±0.20 0.181	9.25 -0.70 0.350	1.40 ±0.40 0.055	-	0.45	16	8	2800
(14)	2743037446	1	2.70 ±0.20 0.106	4.60 ±0.20 0.181	9.25 -0.70 0.350	1.40 ±0.40 0.055	-	0.45	-	-	-
(15)	2744044447	1	1.75 Max 0.068 Max	3.10 ±0.10 0.122	5.65 ±0.45 0.222	1.55 ±0.50 0.061	-	0.09	12	8	4500
(16)	2744044446	1	1.75 Max 0.068 Max	3.10 ±0.10 0.122	5.65 ±0.45 0.222	1.55 ±0.50 0.061	-	0.09	-	-	-
(17)	2744040447	2	1.95 Max 0.076 Max	4.50 ±0.20 0.177	6.40 -0.60 0.240	1.40 ±0.40 0.055	1.27 ±0.05 0.050	0.14	12	8	4000
(18)	2744040446	2	1.95 Max 0.076 Max	4.50 ±0.20 0.177	6.40 -0.60 0.240	1.40 ±0.40 0.055	1.27 ±0.05 0.050	0.14	-	-	-
(19)	2744555567	4	5.00 Max 0.197 Max	5.00 ±0.25 0.197	11.00 Max 0.433 Max	2.50 ±0.50 0.098	-	0.96	24	12	1500
(20)	2744555566	4	5.00 Max 0.197 Max	5.00 ±0.25 0.197	11.00 Max 0.433 Max	2.50 ±0.50 0.098	-	0.96	-	-	-
(21)	2744555577	3	5.00 Max 0.197 Max	5.00 ±0.25 0.197	11.00 Max 0.433 Max	2.50 ±0.50 0.098	-	0.96	24	12	1500
(22)	2744555576	3	5.00 Max 0.197 Max	5.00 ±0.25 0.197	11.00 Max 0.433 Max	2.50 ±0.50 0.098	-	0.96	-	-	-

Table Continued ...

Row #	Part Number	Impedance (Ω)				Max Rdc (mΩ)	Land Patterns				
		10 MHz	25 MHz ⁺	100 MHz ⁺	250 MHz		V	W (ref)	X	Y	Z
(9)	2743019447	18	29	47	49	0.80	1.00 0.040	4.00 0.157	1.80 0.071	3.00 0.118	-
(10)	2743019446	18	29	47	49	0.80	1.00 0.040	4.00 0.157	1.80 0.071	3.00 0.118	-
(11)	2743021447	37	56	95	100	1.20	4.50 0.177	7.50 0.295	1.80 0.071	3.00 0.118	-
(12)	2743021446	37	56	95	100	1.20	4.50 0.177	7.50 0.295	1.80 0.071	3.00 0.118	-
(13)	2743037447	37	56	95	100	1.20	5.00 0.197	8.00 0.315	1.80 0.071	3.00 0.118	-
(14)	2743037446	37	56	95	100	1.20	5.00 0.197	8.00 0.315	1.80 0.071	3.00 0.118	-
(15)	2744044447	13	21	36	39	1.10	1.50 0.059	4.50 0.177	1.80 0.071	3.00 0.118	-
(16)	2744044446	13	21	36	39	1.10	1.50 0.059	4.50 0.177	1.80 0.071	3.00 0.118	-
(17)	2744040447	18	29	56	60	1.60	1.80 0.071	4.80 0.189	0.80 0.032	3.00 0.118	1.27 0.050
(18)	2744040446	18	29	56	60	1.60	1.80 0.071	4.80 0.189	0.80 0.032	3.00 0.118	1.27 0.050
(19)	2744555567	150	250	375	385	3.80	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-

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Table Continued ...

Row #	Part Number	Impedance (Ω)				Max Rdc (m Ω)	Land Patterns				
		10 MHz	25 MHz ⁺	100 MHz ⁺	250 MHz		V	W (ref)	X	Y	Z
(20)	2744555566	150	250	375	385	3.80	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-
(21)	2744555577	255	425	600	575	6.20	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-
(22)	2744555576	255	425	600	575	6.20	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-

Higher Frequencies 250-1000 MHz (52 & 61 materials)

Row #	Part Number	Fig.	A	B	C	D	Wt. (g)	Reel Information		
								Tape Width mm	Pitch mm	Parts 13" Reel
(23)	2761019447	1	2.85 \pm 0.20 0.112	3.05 \pm 0.10 0.120	5.10 -0.85 0.184	1.50 \pm 0.50 0.059	0.15	12	8	2800
(24)	2761019446	1	2.85 \pm 0.20 0.112	3.05 \pm 0.10 0.120	5.10 -0.85 0.184	1.50 \pm 0.50 0.059	0.15	-	-	-
(25)	2761021447	1	2.85 \pm 0.20 0.112	3.05 \pm 0.10 0.120	9.60 -0.95 0.359	1.50 \pm 0.50 0.059	0.30	16	8	2800
(26)	2761021446	1	2.85 \pm 0.20 0.112	3.05 \pm 0.10 0.120	9.60 -0.95 0.359	1.50 \pm 0.50 0.059	0.30	-	-	-
(27)	2752555567	4	5.00 Max 0.197 Max	5.00 \pm 0.25 0.197	11.00 Max 0.433 Max	2.50 \pm 0.50 0.098	0.96	24	12	1500
(28)	2752555566	4	5.00 Max 0.197 Max	5.00 \pm 0.25 0.197	11.00 Max 0.433 Max	2.50 \pm 0.50 0.098	0.96	-	-	-
(29)	2752555577	3	5.00 Max 0.197 Max	5.00 \pm 0.25 0.197	11.00 Max 0.433 Max	2.50 \pm 0.50 0.098	0.96	24	12	1500
(30)	2752555576	3	5.00 Max 0.197 Max	5.00 \pm 0.25 0.197	11.00 Max 0.433 Max	2.50 \pm 0.50 0.098	0.96	-	-	-

Table Continued ...

Row #	Part Number	Impedance (Ω)				Max Rdc (m Ω)	Land Patterns				
		100 MHz	250 MHz ⁺	500 MHz ⁺	1000 MHz		V	W (ref)	X	Y	Z
(23)	2761019447	36	50	55	59	0.80	1.00 0.040	4.00 0.157	1.80 0.071	3.00 0.118	-
(24)	2761019446	36	50	55	59	0.80	1.00 0.040	4.00 0.157	1.80 0.071	3.00 0.118	-
(25)	2761021447	69	94	106	118	1.20	4.50 0.177	7.50 0.295	1.80 0.071	3.00 0.118	-
(26)	2761021446	69	94	106	118	1.20	4.50 0.177	7.50 0.295	1.80 0.071	3.00 0.118	-
(27)	2752555567	400	490	425	250	3.80	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-
(28)	2752555566	400	490	425	250	3.80	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-
(29)	2752555577	700	770	440	250	6.20	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-
(30)	2752555576	700	770	440	250	6.20	2.00 0.079	7.00 0.276	2.00 0.079	5.00 0.197	-

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