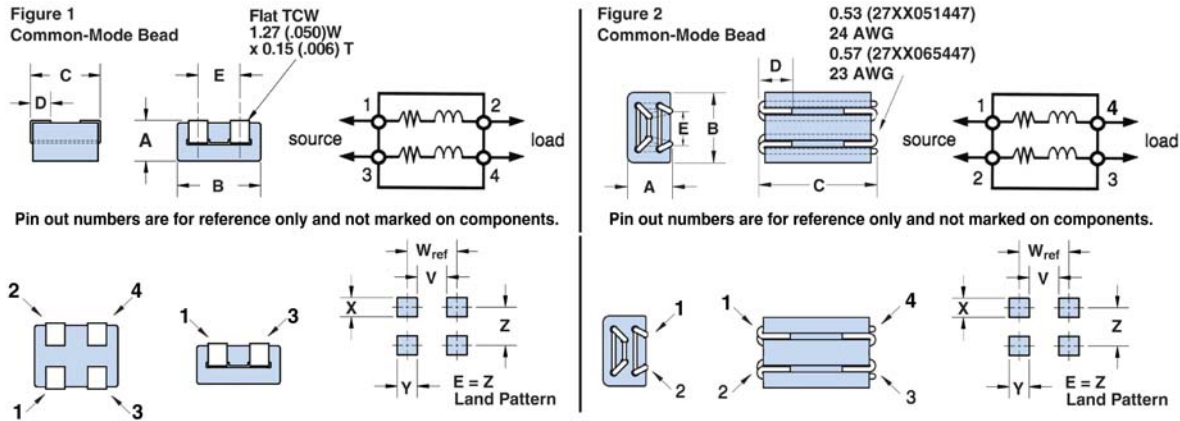


SM Beads (Common-Mode)



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

Surface mount common-mode beads are available from Fair-Rite in several materials and sizes. The common-mode bead provides a common magnetic path for the flux generated by the current to the load and the return current from the load. The current compensation results in zero magnetic flux in the bead.



- 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 44 materials are measured for impedance on the 4193 Vector Impedance Analyzer. The 52 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 current rating for these SM Beads is 5 amps.
- Performance curves for these suppression components are 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.

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Legend

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

+ Test frequency

Broadband Frequencies 10-300 MHz (44 material)

Row #	Part Number	Fig.	A	B	C	D	E	Wt. (g)	Reel Information		
									Tape Width mm	Pitch mm	Parts 13" Reel
(1)	2744041447	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	5.00 -0.60 0.185	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.30	12	8	2400
(2)	2744041446	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	5.00 -0.60 0.185	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.30	-	-	-
(3)	2744045447	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	8.90 -0.80 0.335	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.53	16	8	2400
(4)	2744045446	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	8.90 -0.80 0.335	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.53	-	-	-
(5)	2744051447	2	4.50 Max 0.177 Max	6.65 Max 0.262 Max	12.00 Max 0.472 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.00	24	12	1000
(6)	2744051446	2	4.50 Max 0.177 Max	6.65 Max 0.262 Max	12.00 Max 0.472 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.00	-	-	-
(7)	2744065447	2	5.30 Max 0.209 Max	7.00 Max 0.275 Max	14.80 Max 0.582 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.80	24	12	1000
(8)	2744065446	2	5.30 Max 0.209 Max	7.00 Max 0.275 Max	14.80 Max 0.582 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.80	-	-	-

Table Continued ...

Row #	Part Number	Impedance (Ω)					Max Rdc (mΩ)	Land Patterns				
		10 MHz	25 MHz ⁺	100 MHz ⁺	250 MHz	300 MHz		V	W (ref)	X	Y	Z
(1)	2744041447	12	20	33	41	-	1.10	1.00 0.040	4.00 0.158	1.80 0.071	3.00 0.118	2.54 0.100
(2)	2744041446	12	20	33	41	-	1.10	1.00 0.040	4.00 0.158	1.80 0.071	3.00 0.118	2.54 0.100
(3)	2744045447	23	38	60	78	-	1.40	4.00 0.158	7.00 0.276	1.80 0.071	3.00 0.118	2.54 0.100
(4)	2744045446	23	38	60	78	-	1.40	4.00 0.158	7.00 0.276	1.80 0.071	3.00 0.118	2.54 0.100
(5)	2744051447	60	100	230	-	275	4.00	4.00 0.158	9.00 0.354	1.00 0.040	5.00 0.197	3.00 0.118
(6)	2744051446	60	100	230	-	275	4.00	4.00 0.158	9.00 0.354	1.00 0.040	5.00 0.197	3.00 0.118
(7)	2744065447	95	145	255	-	315	4.10	6.80 0.268	11.80 0.465	1.10 0.043	5.00 0.197	3.00 0.118
(8)	2744065446	95	145	255	-	315	4.10	6.80 0.268	11.80 0.465	1.10 0.043	5.00 0.197	3.00 0.118

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SM Beads (Common-Mode)



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Higher Frequencies 250-1000 MHz (52 material)

Row #	Part Number	Fig.	A	B	C	D	E	Wt. (g)	Reel Information		
									Tape Width mm	Pitch mm	Parts 13" Reel
(9)	2752041447	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	5.00 -0.60 0.185	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.30	12	8	2400
(10)	2752041446	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	5.00 -0.60 0.185	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.30	-	-	-
(11)	2752045447	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	8.90 -0.80 0.335	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.53	16	8	2400
(12)	2752045446	1	2.85 ±0.20 0.112	5.60 ±0.20 0.220	8.90 -0.80 0.335	1.35 ±0.50 0.053	2.54 ±0.25 0.100	0.53	-	-	-
(13)	2752051447	2	4.50 Max 0.177 Max	6.65 Max 0.262 Max	12.00 Max 0.472 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.00	24	12	1000
(14)	2752051446	2	4.50 Max 0.177 Max	6.65 Max 0.262 Max	12.00 Max 0.472 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.00	-	-	-
(15)	2752065447	2	5.30 Max 0.209 Max	7.00 Max 0.275 Max	14.80 Max 0.582 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.80	24	12	1000
(16)	2752065446	2	5.30 Max 0.209 Max	7.00 Max 0.275 Max	14.80 Max 0.582 Max	2.50 ±0.50 0.098	3.00 ±0.10 0.118	1.80	-	-	-

Table Continued ...

Row #	Part Number	Impedance (Ω)				Max Rdc (mΩ)	Land Patterns				
		100 MHz	250 MHz ⁺	500 MHz ⁺	1000 MHz		V	W (ref)	X	Y	Z
(9)	2752041447	30	50	60	70	1.10	1.00 0.040	4.00 0.158	1.80 0.071	3.00 0.118	2.54 0.100
(10)	2752041446	30	50	60	70	1.10	1.00 0.040	4.00 0.158	1.80 0.071	3.00 0.118	2.54 0.100
(11)	2752045447	58	90	115	130	1.40	4.00 0.158	7.00 0.276	1.80 0.071	3.00 0.118	2.54 0.100
(12)	2752045446	58	90	115	130	1.40	4.00 0.158	7.00 0.276	1.80 0.071	3.00 0.118	2.54 0.100
(13)	2752051447	200	330	340	350	4.00	4.00 0.158	9.00 0.354	1.00 0.040	5.00 0.197	3.00 0.118
(14)	2752051446	200	330	340	350	4.00	4.00 0.158	9.00 0.354	1.00 0.040	5.00 0.197	3.00 0.118
(15)	2752065447	230	380	450	380	4.10	6.80 0.268	11.80 0.465	1.10 0.043	5.00 0.197	3.00 0.118
(16)	2752065446	230	380	450	380	4.10	6.80 0.268	11.80 0.465	1.10 0.043	5.00 0.197	3.00 0.118

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