Fair-Rite Products Corp.
Your Signal Solution®

SM Beads (Differential-Mode)

Part Number: 2744044447

44 SM BEAD

Explanation of Part Numbers:
– Digits 1 & 2 = Product Class
– Digits 3 & 4 = Material Grade
– Last digit 6 = Bulk Packed, 7 = Taped and Reeled

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.

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.

Recommended storage and operation temperature is -55 °C to 125 °C.

Our “Surface Mount Bead Kit” (part number 0199000025) is available for prototype evaluation.

Recommended Soldering Profile

Packaging Options:
– SM Beads on 12 mm tape width are supplied taped and reeled per EIA 481 and IEC 60286-3 standards. SM Beads on 16 and 24 mm tape widths are supplied taped and reeled per EIA 481 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”.

For any SM Bead requirement not listed, please contact our customer service group for availability and pricing.

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Suggested land patterns are in accordance with the latest revision of IPC-7351.

Weight: 0.09 (g)

Dim	mm	mm tol	nominal inch	inch misc.
A	1.80	Max	0.068	Max
B	3.1	±0.10	0.122	_
C	6.20	Max	0.240	_
D	1.55	±0.50	0.061	_

Land Patterns				
V	W	X	Y	Z
1.50 (0.059”)	4.50 (0.177”)	1.80 (0.071”)	3.00 (0.118”)	–

Reel Information				
Tape Width mm	Pitch mm	Parts 7" Reel	Parts 13" Reel	Parts 14" Reel
12	8	--	4500	--

Chart Legend
+ Test frequency

Typical Impedance (Ω)	
10 MHz	17.5
25 MHz+	26
100 MHz+	37
250 MHz	40

Electrical Properties	
Max Rdc(mΩ)	1.1

SM Beads are controlled for impedance limits only. Minimum impedance values are specified for the + marked frequencies. The minimum impedance is listed on our catalog drawing.

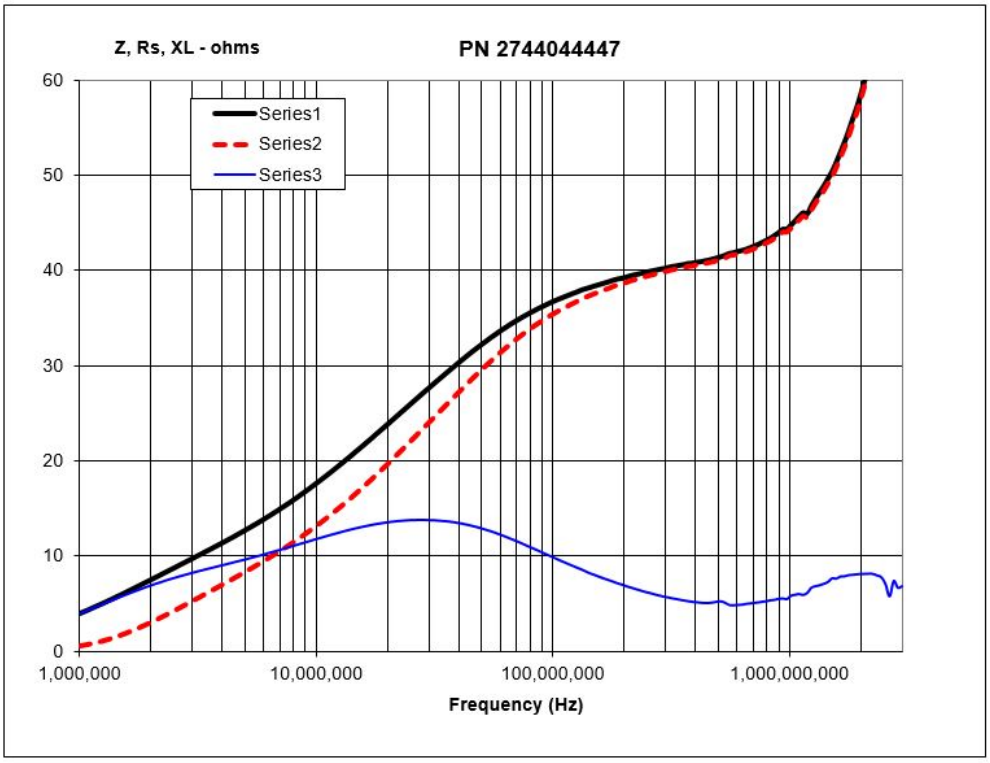
Catalog Drawing

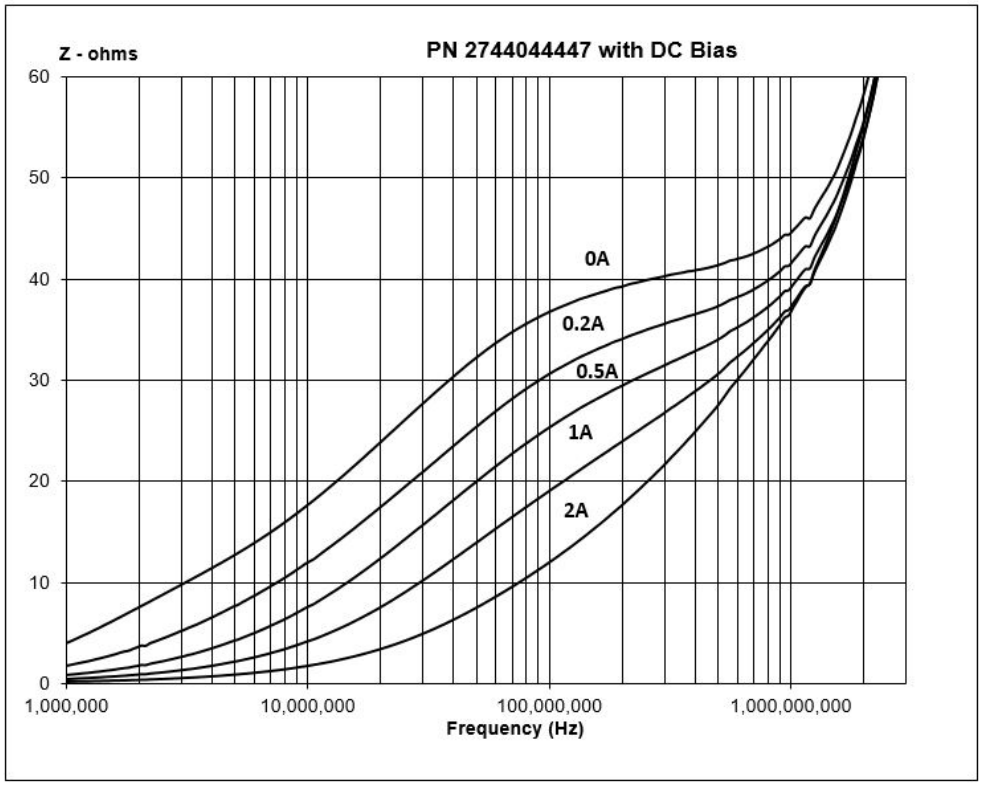
SM Beads in 73, 43 and 44 materials are measured for impedance on the E4990A Impedance Analyzer. The 52 and 61 SM Beads are tested for impedance on the E4991A / HP4291B Impedance Analyzer.

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

Typical Impendance (Ω)	
10 MHz	13
25 MHz+	21
100 MHz+	36
250 MHz	39

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