Fair-Rite Products Corp.
Your Signal Solution®

SM Beads (Common-Mode)

Part Number: 2744051447

44 COMMON MODE 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 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.

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 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”.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.

For any SM Bead requirement not listed, please contact our customer service group for

availability and pricing.

Catalog Drawing
3D Model

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

Weight: 1 (g)

Dim	mm	mm tol	nominal inch	inch misc.
A	4.60	Max	0.181	Max
B	6.50	+/- 0.15	0.256	Max
C	12	Max	0.472	Max
D	2.5	±0.50	0.098	_
E	3	±0.10	0.118	_

Land Patterns				
V	W	X	Y	Z
4.00 (0.158”)	09.00 (0.354”)	1.00 (0.040”)	5.00 (0.197”)	3.00 (0.118”)

Reel Information				
Tape Width mm	Pitch mm	Parts 7" Reel	Parts 13" Reel	Parts 14" Reel
24	12	--	1000	--

Chart Legend
+ Test frequency

Typical Impedance (Ω)	
10 MHz	82
25 MHz+	133
100 MHz+	236
250 MHz	_
300 MHz	357

Electrical Properties	
Max Rdc(mΩ)	4

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 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.

The maximum current rating for these SM Beads is 5 amps.

Typical Impendance (Ω)	
10 MHz	82
25 MHz+	133
100 MHz+	236
250 MHz	_

Typical Impendance (Ω)	
300 MHz	357

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