

# SM Beads (Differential- Mode)

Part Number: 2744040447

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.**

[Catalog Drawing](#)

[3D Model](#)

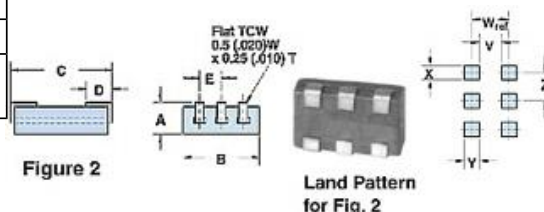
Suggested land patterns are in accordance with the latest revision of IPC-7351.

Weight: 0.14 (g)

Dim	mm	mm tol	nominal inch	inch misc.
A	1.95	Max	0.077	Max
B	4.5	±0.20	0.177	—
C	6.4	Max	0.252	—
D	1.50	±0.50	0.059	—
E	1.27	±0.05	0.05	—

Land Patterns				
V	W	X	Y	Z
1.80 (0.071”)	4.80 (0.189”)	0.80 (0.032”)	3.00 (0.118”)	1.27 (0.050”)

Reel Information				
Tape Width mm	Pitch mm	Parts 7” Reel	Parts 13” Reel	Parts 14” Reel
12	8	--	4000	--



### Chart Legend

+ Test frequency

#### Typical Impedance ( $\Omega$ )

10 MHz	28
25 MHz <sup>+</sup>	42
100 MHz <sup>+</sup>	63
250 MHz	67

#### Electrical Properties

Max Rdc(m $\Omega$ )	1.6
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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

