High Reliability Ferrite Chip Beads

AEM's High Reliability Ferrite Chip Beads

Benefits

- Sole source and first ever DSCC approved ferrite chip bead (tested to Drawing 03024)
- Made in USA
- Sn/Pb terminations (5%+ Pb, no tin whisker worries)
- Designed and qualified as Hi-Rel
- Complete material and process traceability
- Meets all high reliability demands

Features

- Operating temperature range of –55°C to +125°C
- Tin whisker free (Sn/Pb or Au termination finish)
- Reliable terminations (Ni barrier)
- Groups A/B data are supplied with each shipment. Group C inspection is optional.
- Monolithic structure for closed magnetic path and high reliability
- Standard EIA/EIAJ chip sizes (0603, 0805, 1206)

Applications

- Mission critical
- Where replacement is not an option
- Where pure tin terminations are prohibited
- Down-hole and undersea

As the first and only DSCC approved ferrite chip bead designed for high reliability use, the HRB Series ferrite chip beads from AEM, Inc. are manufactured in a AS9100 facility in San Diego, CA, providing complete material and process traceability. All components are manufactured with qualified materials and process systems and tested to DSCC drawing 03024.

The HRB Series beads are designed with mission critical applications in mind. Capable of operating in harsh environments and extreme temperatures, these Hi-Rel chips are free of tin whiskers with Sn/Pb or Au terminations. A variety of EIA/EIAJ chip sizes are offered and feature nickel barrier terminations with a solder plate finish to help ensure a reliable solder joint.

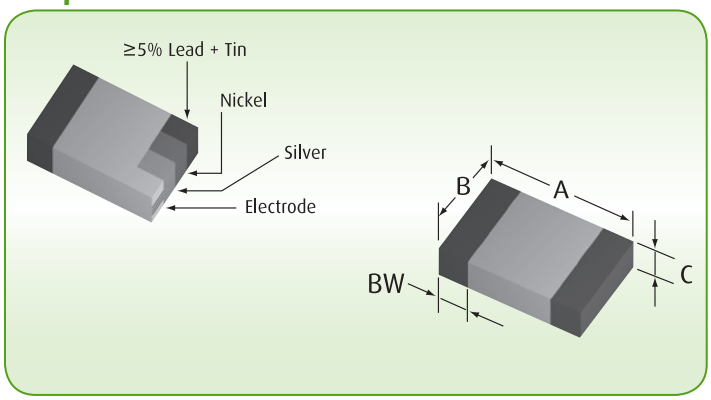
AEM, INC. 6610 Cobra Way, San Diego, CA 92121, USA 858.481.0210 www.aem-usa.com

AEM's High Reliability Ferrite Chip Beads

	AEM Part No.	DSCC Part No.	Impedance Ω	Max. Ω RDC	Max. Amps
0603	HRB0603S300P.500 . .	03024-001P	30	0.15	0.50
	HRB0603S600P.500 . .	03024-002P	60	0.15	0.50
	HRB0603S101P.400 . .	03024-003P	100	0.20	0.40
	HRB0603S151P.400 . .	03024-004P	150	0.25	0.40
	HRB0603S181P.400 . .	03024-005P	180	0.25	0.40
	HRB0603S301P.200 . .	03024-006P	300	0.30	0.20
	HRB0603S401P.200 . .	03024-007P	400	0.35	0.20
	HRB0603S601P.200 . .	03024-008P	600	0.40	0.20
	HRB0603S102P.200 . .	03024-009P	1000	0.60	0.20
0805	HRB0805S300P4.00 . .	03024-010P	30	0.02	4.00
	HRB0805S500P2.00 . .	03024-011P	50	0.08	2.00
	HRB0805S600P1.50 . .	03024-012P	60	0.15	1.50
	HRB0805S700P1.50 . .	03024-013P	70	0.15	1.50
	HRB0805S101P1.00 . .	03024-014P	100	0.20	1.00
	HRB0805S121P1.00 . .	03024-015P	120	0.20	1.00
	HRB0805S151P1.00 . .	03024-016P	150	0.20	1.00
	HRB0805S221P1.00 . .	03024-017P	220	0.20	1.00
	HRB0805S331P1.00 . .	03024-018P	330	0.25	1.00
	HRB0805S471P1.00 . .	03024-019P	470	0.25	1.00
	HRB0805S601P1.00 . .	03024-020P	600	0.30	1.00
	HRB0805S102P1.00 . .	03024-021P	1000	0.40	1.00
1206	HRB1206S300P4.00 . .	03024-022P	30	0.01	4.00
	HRB1206S500P3.00 . .	03024-023P	50	0.03	3.00
	HRB1206S800P1.50 . .	03024-024P	80	0.10	1.50
	HRB1206S121P1.50 . .	03024-025P	120	0.10	1.50
	HRB1206S251P1.50 . .	03024-026P	250	0.10	1.50
	HRB1206S501P1.00 . .	03024-027P	500	0.20	1.00
	HRB1206S601P1.00 . .	03024-028P	600	0.30	1.00

Other Sizes and Values may be added by request

Shape and Dimensions



Product Identification

HRB	0805	S	300	P	4.00	F	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(1) Series code: High Reliability Ferrite Chip Bead

(2) Chip size, EIA/EIAJ dimensions A x B
First 2 digits: A ("length) Last 2 digits: B ("width)

(3) Speed code: S = Standard H = High speed

(4) Value code: Impedance (Ohms at 100 MHz)
The first two digits are significant. The last digit specifies zeros to follow 300 = 30 Ohms

(5) Tolerance code: J = ±5%; K = ±10%; M = ±20%; P = ±25%

(6) Current value in Ampere (4.00 = 4A; .150 = 0.15A)

(7) Termination code: F = Sn/Pb solder plate; G = Au plate

(8) Package Code: T = Tape & Reel; B = Bulk

Chip Size *EIA / EIAJ*	A *Inch (mm)*	B *Inch (mm)*	C *Inch (mm)*	TERMINATION (BW) *Inch (mm)*
0603/1608	0.063 ± 0.006 (1.60 ± 0.15)	0.031 ± 0.006 (0.80 ± 0.15)	0.031 ± 0.006 (0.80 ± 0.15)	0.014 ± 0.006 (0.36 ± 0.15)
0805/2012	0.079 ± 0.008 (2.00 ± 0.20)	0.049 ± 0.008 (1.25 ± 0.20)	0.035 ± 0.008 (0.90 ± 0.20)	0.020 ± 0.010 (0.51 ± 0.25)
1206/3216	0.126 ± 0.008 (3.20 ± 0.20)	0.063 ± 0.008 (1.60 ± 0.20)	0.043 ± 0.008 (1.10 ± 0.20)	0.020 ± 0.010 (0.51 ± 0.25)

TÜV AS9100 MIL-STD-790

October 2011