High Reliability MIL Spec Ferrite Chip Beads

First and only DSCC approved Ferrite Chip Bead designed for space and other high reliability use. AEM HRB Series Ferrite Chip Beads are manufactured in our QPL certified facility in San Diego, providing complete material and process traceability.

All components are manufactured with space qualified materials and terminations. AEM HRB components are qualified and tested to AEM Drawing 487070 or DSCC Drawing 03024.

Do not let penny cost commodity components disable your mission-critical program !

Ni Barrier & S/N PB Solder Plate

Benefits

- Sole Source, DSCC Drawing 03024, 1st ever Military specification for Ferrite Chip Bead
- Made in USA
- Tin-lead terminations (5%+ Pb, no Tin Whisker worries)
- Designed and qualified as Hi Rel
- Complete material and process traceability
- Meets all high reliability demands

Features

- Military Temperatures –55°C to +125°C
- Tin-lead or gold terminations
- Reliability Qualified—Groups A/B data is supplied with shipment. Group C Inspection is optional
- Monolithic structure for closed magnetic path and high reliability
- Standard EIA/EIAJ chip sizes from 0603 to 1206

Applications

- Noise suppression in analog and digital circuits
- Where pure tin termination is prohibited
- Commercial or Military high reliability
- Medical instrumentation
- Down-hole and undersea
- Where reliability is a priority

MIL-STD-790
PRODUCT ASSURANCE PROGRAM CERTIFICATION

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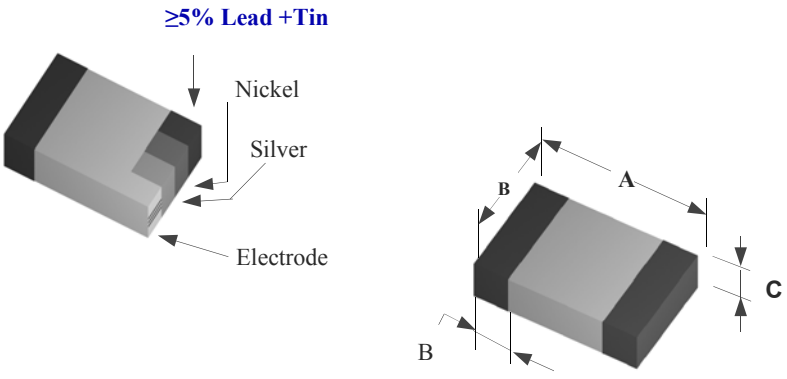
AEM, INC.

AEM Ferrite Chip Beads

	AEM Part #	DSCC Drawing #	Impedance Ω	Max. Ω R_{DC}	Max. Amps
0603	HRB0603S300P.500 . .	03024-001	30	0.15	0.50
	HRB0603S600P.500 . .	03024-002	60	0.15	0.50
	HRB0603S101P.400 . .	03024-003	100	0.20	0.40
	HRB0603S151P.400 . .	03024-004	150	0.25	0.40
	HRB0603S181P.400 . .	03024-005	180	0.25	0.40
	HRB0603S301P.200 . .	03024-006	300	0.30	0.20
	HRB0603S401P.200 . .	03024-007	400	0.35	0.20
	HRB0603S601P.200 . .	03024-008	600	0.40	0.20
	HRB0603S102P.200 . .	03024-009	1000	0.60	0.20
0805	HRB0805S300P4.00 . .	03024-010	30	0.02	4.00
	HRB0805S500P2.00 . .	03024-011	50	0.08	2.00
	HRB0805S600P1.50 . .	03024-012	60	0.15	1.50
	HRB0805S700P1.50 . .	03024-013	70	0.15	1.50
	HRB0805S101P1.00 . .	03024-014	100	0.20	1.00
	HRB0805S121P1.00 . .	03024-015	120	0.20	1.00
	HRB0805S151P1.00 . .	03024-016	150	0.20	1.00
	HRB0805S221P1.00 . .	03024-017	220	0.20	1.00
	HRB0805S331P1.00 . .	03024-018	330	0.25	1.00
	HRB0805S471P1.00 . .	03024-019	470	0.25	1.00
	HRB0805S601P1.00 . .	03024-020	600	0.30	1.00
	HRB0805S102P1.00 . .	03024-021	1000	0.40	1.00
1206	HRB1206S300P4.00 . .	03024-022	30	0.01	4.00
	HRB1206S500P3.00 . .	03024-023	50	0.03	3.00
	HRB1206S800P1.50 . .	03024-024	80	0.10	1.50
	HRB1206S121P1.50 . .	03024-025	120	0.10	1.50
	HRB1206S251P1.50 . .	03024-026	250	0.10	1.50
	HRB1206S501P1.00 . .	03024-027	500	0.20	1.00
	HRB1206S601P1.00 . .	03024-028	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: **H**igh **R**eliability Ferrite Chip **B**ead
(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 = Gold
(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)

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Wire Wound Ceramic Inductors

Features

- Groups A/B and Qualification data
- From an AEM selected manufacturer
- Standard 5%+ Pb solder plate terminations
- Storage Temperature –55C to +125
- Wire wound structure with high Q and large current capacity
- 0402, 0603, 0805 and 1008 sizes

Applications

- For applications where reliability is Priority 1
- Where pure tin termination is prohibited
- General Noise, EMI, RFI suppression
- Surface mounting

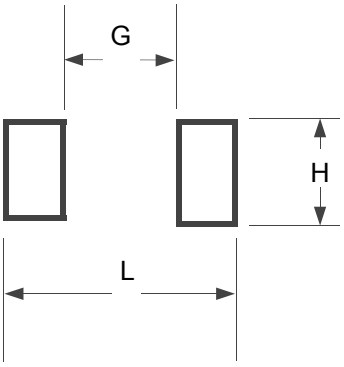
Product Identification

HRI	0603	C	1N0	J	T
(1)	(2)	(3)	(4)	(5)	(6)

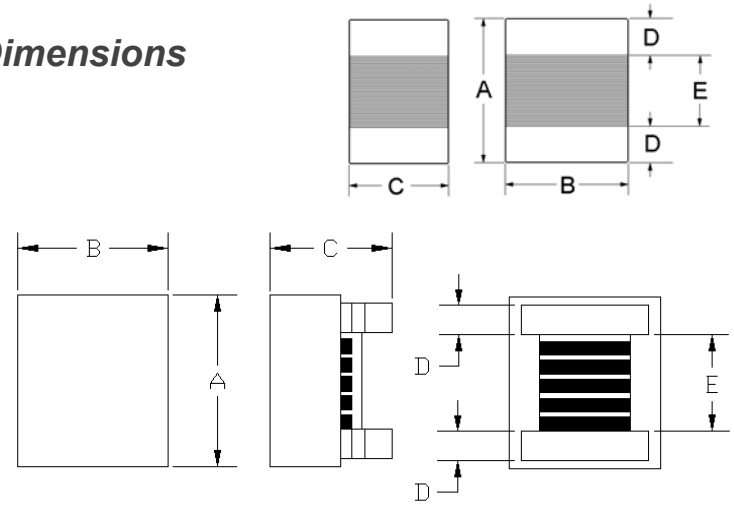
(1) Series code:
HRI: High Reliability Inductors
(2) Dimensions A x C inches
The first two digits: A (length)
The last two digits: C (height/thickness)
(3) Characteristic code: **C**
(4) Value code: Inductance
N — decimal point for nH
Example: **1N**2 = 1.2 nH
R — decimal point for µH (1000 nH)
Example: R12 = 0.12 µH = 120 nH
(5) Tolerance code:
F = ±1%
G = ±2%
J = ±5%
K = ±10%
M = ±20%
(6) Package code:
T = Tape & Reel
B = Bulk

Recommended PC Board Land Patterns

CHIP SIZE	L INCH (mm)	G INCH (mm)	H INCH (mm)
0402	0.044 (1.12)	0.016 (0.40)	0.027 (0.68)
0603	0.075 (1.91)	0.025 (0.64)	0.040 (1.02)
0805	0.110 (2.80)	0.036 (0.92)	0.069 (1.75)
1008	0.130 (3.30)	0.050 (1.27)	0.100 (2.54)



Shape and Dimensions



CHIP SIZE	A INCH (mm)	B INCH (mm)	C INCH (mm)	D INCH (mm)	E INCH (mm)
0402	0.039 (1.00)	0.027 (0.68)	0.022 (0.55)	0.008 (0.20)	0.024 (0.60)
0603	0.071 (1.80)	0.044 (1.12)	0.040 (1.02)	0.013 (0.33)	0.034 (0.86)
0805	0.091 (2.30)	0.067 (1.70)	0.063 (1.60)	0.017 (0.43)	0.046 (1.17)
1008	0.112 (2.85)	0.104 (2.65)	0.087 (2.20)	0.020 (0.50)	0.059 (1.50)

Note: Dimensions A, B, and C are maximum. Dimensions D and E are typical.

High Reliability, HRI Series Wire Wound Inductors

Size	AEM Part Number	LnH @MHz	Q(min) @MHz	SRF(min) MHz	DCR Ω	mA(max)
1206						
0805						
0603	HRI0603C72N	72@150	33@150	1700	0.49	400
	HRI0603CR15	150@150	28@150	1300	1.80	200