Multilayer Ferrite Chip Beads

Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: SB, GB, PB, UPB, NB, HF, and VPB series.

Product Identification

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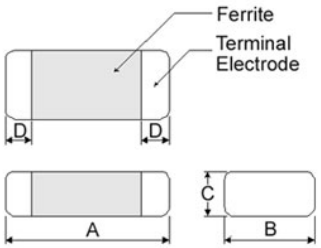
- CEC Internal No.
- Tolerance
- Impedance
- Packaging Style
- Dimensions(A、B、C)
- Design code
- Product Symbol

- Product symbol: SB, GB, PB, UPB, NB, HF, VPB
- Packaging: T：Tape and Reel；B：Bulk
- Tolerance: Y = ± 25%; M = ± 20%; T:±30%
- Note: RoHS Compliant

Shape and Dimensions

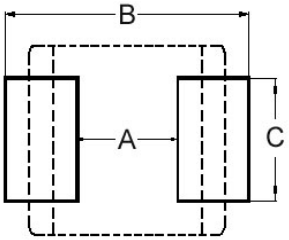


Dimensions in mm

TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
④201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑤201212	2.0±0.20	1.25±0.20	1.25±0.20	0.5±0.3
④321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑥321616	3.2±0.20	1.60±0.20	1.6±0.20	0.5±0.3
⑦322513	3.2±0.20	2.50±0.20	1.3±0.20	0.5±0.3
⑧451616	4.5±0.25	1.60±0.20	1.6±0.20	0.5±0.3
⑧453215	4.5±0.25	3.20±0.20	1.5±0.20	0.5±0.3

①：SB / PB / NB ②：SB / PB / NB / HF ⑦：SB / PB
③：SB / PB / NB / GB / UPB / HF / VPB ⑤：UPB ⑥：SB
④：SB / PB / NB / GB / UPB ⑧：PB / UPB

Recommended Pattern



Dimensions in mm

TYPE	A	B	C
①060303	0.2 ~ 0.3	0.75 ~ 1.05	0.3
②100505	0.4	1.2 ~ 1.4	0.5
③160808	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
④201209	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
⑤201212	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
④321611	2.0	4.2 ~ 5.2	1.2
⑥321616	2.0	4.2 ~ 5.2	1.2
⑦322513	2.0	5.5 ~ 6.5	1.8
⑧451616	3.0	5.5 ~ 6.5	1.2
⑧453215	3.0	5.5 ~ 6.5	2.4

＊ Don't apply narrower pattern than listed above to PBY and UPB. Narrow pattern might cause excessive heat or open circuit.

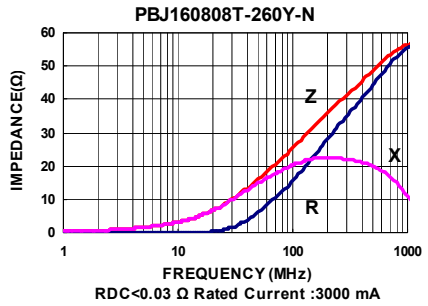
Dimension Conversion

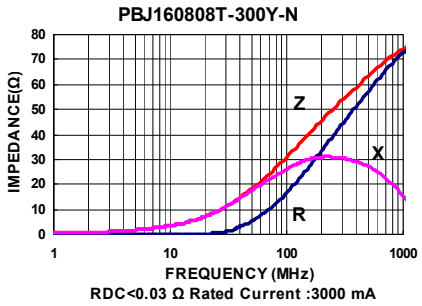
Code	Dimension in mm (AxBxC)	EIA
060303	0.6X0.3X0.3	0201
100505	1.0X0.5X0.5	0402
160808	1.6x0.8x0.8	0603
201209	2.0x1.2x0.9	0805
201212	2.0x1.2x1.25	0805
321611	3.2x1.6x.1.1	1206
321616	3.2x1.6x1.6	1206
322513	3.2x2.5x1.3	1210
451616	4.5x1.6x1.6	1806
453215	4.5x3.2x1.5	1812

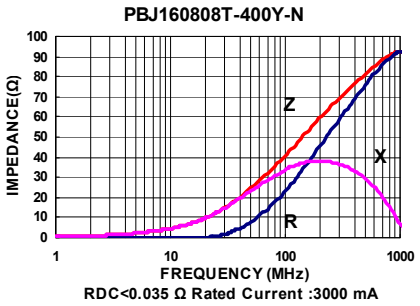
Electrical Characteristics

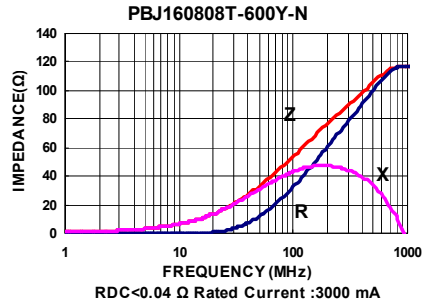
Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
PBJ160808T-100Y-N	100	10±30%	0.02	4000
PBJ160808T-260Y-N	100	26	0.03	3000
PBJ160808T-300Y-N	100	30	0.03	3000
PBJ160808T-400Y-N	100	40	0.035	3000
PBJ160808T-600Y-N	100	60	0.04	3000
PBJ160808T-800Y-N	100	80	0.05	2500
PBJ160808T-101Y-N	100	100	0.05	2500
PBJ160808T-121Y-N	100	120	0.08	2500
PBJ160808T-221Y-N	100	220	0.10	2000
PBJ160808T-331Y-N	100	330	0.15	1500
PBJ160808T-601Y-N	100	600	0.20	1000
PBJ160808T-751Y-N	100	750	0.25	800
PBJ160808T-102Y-N	100	1000	0.25	800

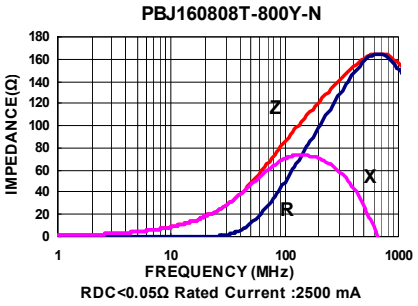
Test Instruments：Agilent E4991A Impedance / Material Analyzer

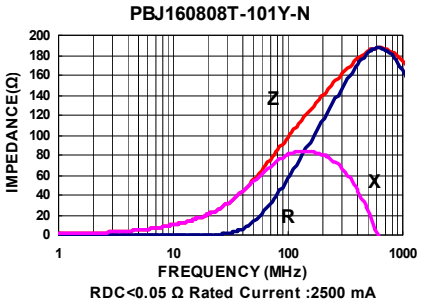


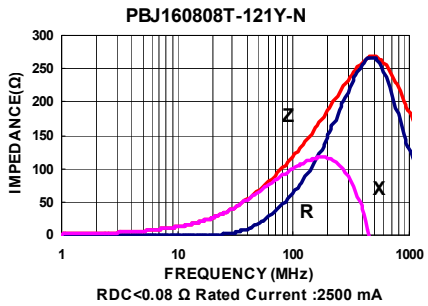


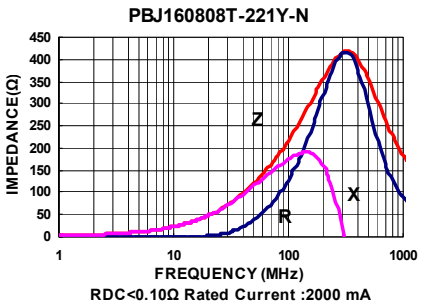


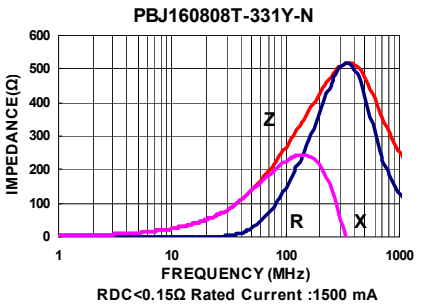




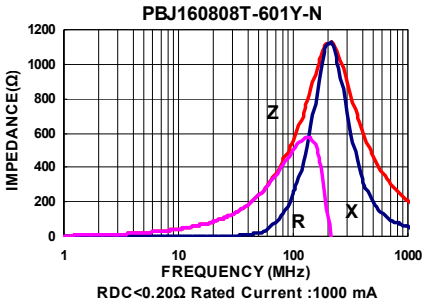


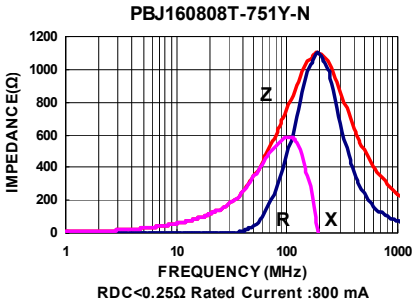


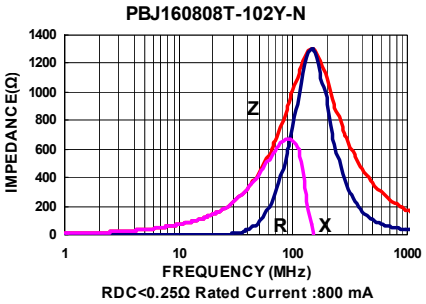




Test Instruments：Agilent E4991A Impedance / Material Analyzer





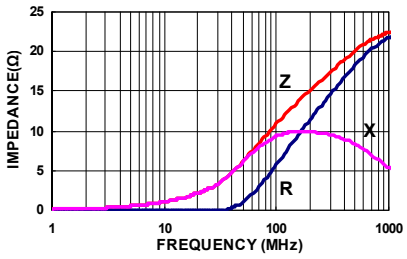


Electrical Characteristics

Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
PBJ201209T-110Y-N	100	11±30%	0.01	6000
PBJ201209T-300Y-N	100	30	0.02	4000
PBJ201209T-500Y-N	100	50	0.025	3000
PBJ201209T-600Y-N	100	60	0.03	3000
PBJ201209T-900Y-N	100	90	0.04	3000
PBJ201209T-101Y-N	100	100	0.04	3000
PBJ201209T-121Y-N	100	120	0.04	3000
PBJ201209T-221Y-N	100	220	0.08	2000
PBJ201209T-301Y-N	100	300	0.08	2000
PBJ201209T-401Y-N	100	400	0.10	2000
PBJ201209T-601Y-N	100	600	0.12	2000
PBJ201209T-102Y-N	100	1000	0.15	1500

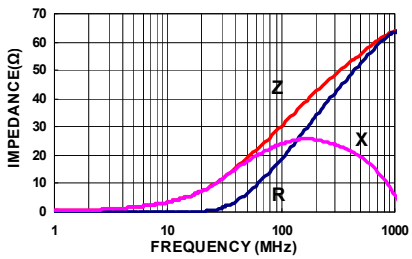
Test Instruments：Agilent E4991A Impedance / Material Analyzer

PBJ201209T-110Y-N



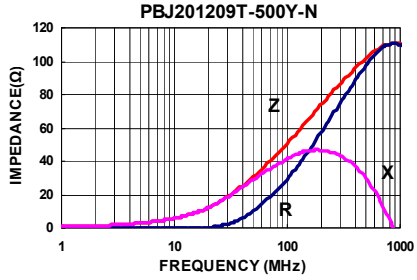
RDC<0.01Ω Rated Current :6000 mA

PBJ201209T-300Y-N



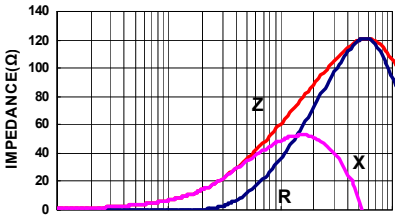
RDC<0.02Ω Rated Current :4000 mA

PBJ201209T-500Y-N



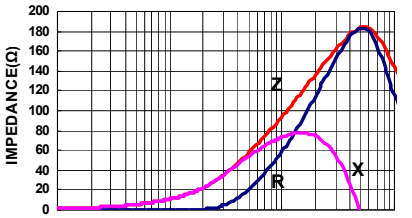
RDC<0.25Ω Rated Current :3000 mA

PBJ201209T-600Y-N



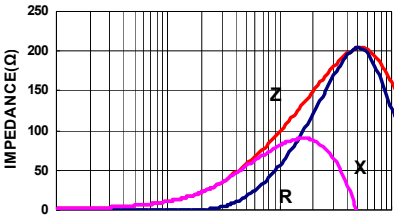
RDC<0.03Ω Rated Current :3000 mA

PBJ201209T-900Y-N



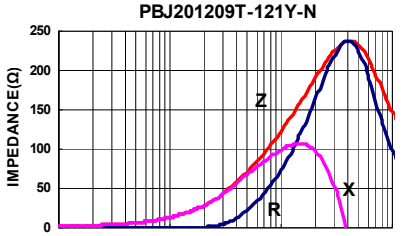
RDC<0.04Ω Rated Current :3000 mA

PBJ201209T-101Y-N



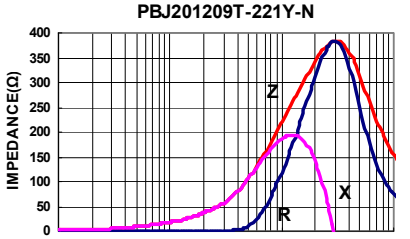
RDC<0.04Ω Rated Current :3000 mA

PBJ201209T-121Y-N



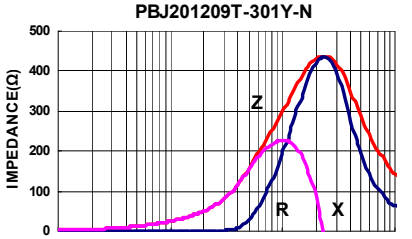
RDC<0.04Ω Rated Current :3000 mA

PBJ201209T-221Y-N



RDC<0.08Ω Rated Current :2000 mA

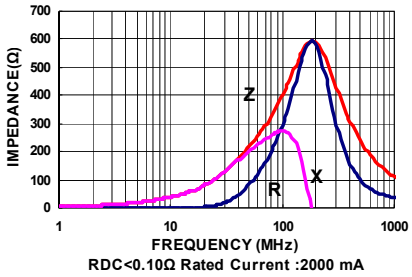
PBJ201209T-301Y-N



RDC<0.080Ω Rated Current :2000 mA

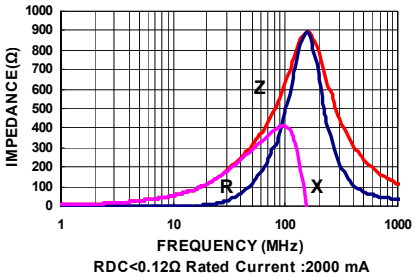
Test Instruments：Agilent E4991A Impedance / Material Analyzer

PBJ201209T-401Y-N



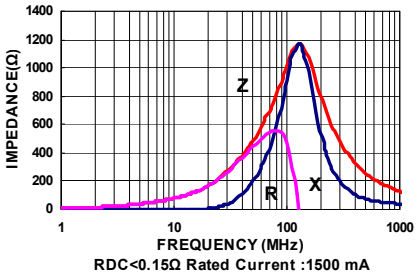
RDC<0.10Ω Rated Current :2000 mA

PBJ201209T-601Y-N



RDC<0.12Ω Rated Current :2000 mA

PBJ201209T-102Y-N

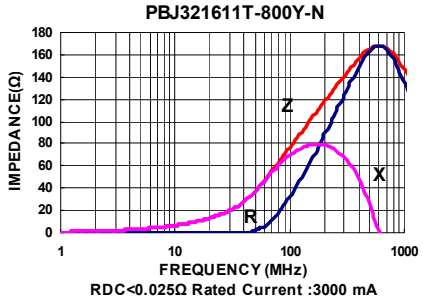


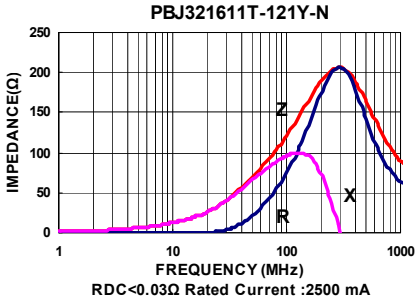
RDC<0.15Ω Rated Current :1500 mA

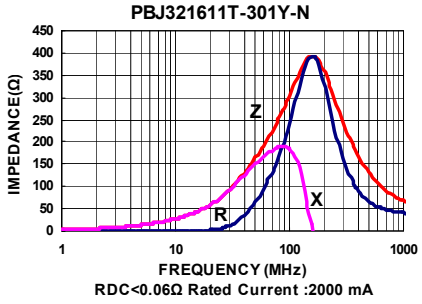
Electrical Characteristics

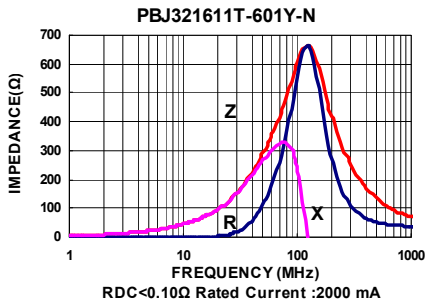
Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
PBJ321611T-110Y-N	100	11±30%	0.015	6000
PBJ321611T-310Y-N	100	31	0.015	4000
PBJ321611T-500Y-N	100	50	0.02	4000
PBJ321611T-800Y-N	100	80	0.025	3000
PBJ321611T-101Y-N	100	100	0.03	2500
PBJ321611T-121Y-N	100	120	0.03	2500
PBJ321611T-151Y-N	100	150	0.04	2000
PBJ321611T-221Y-N	100	220	0.05	2000
PBJ321611T-301Y-N	100	300	0.06	2000
PBJ321611T-401Y-N	100	400	0.10	2000
PBJ321611T-601Y-N	100	600	0.10	2000
PBJ321611T-102Y-N	100	1000	0.15	1200
PBJ321611T-122Y-N	100	1200	0.18	1000
PBJ321611T-152Y-N	100	1500	0.20	800

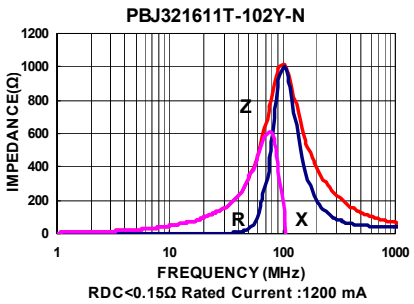
Test Instruments：Agilent E4991A Impedance / Material Analyzer

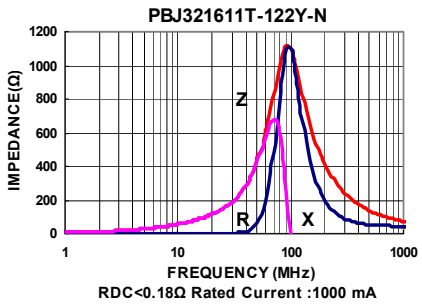






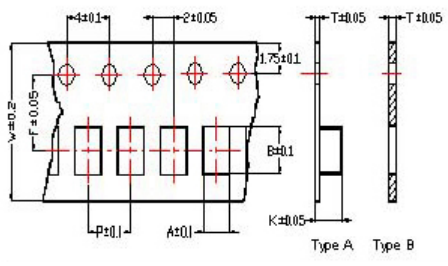




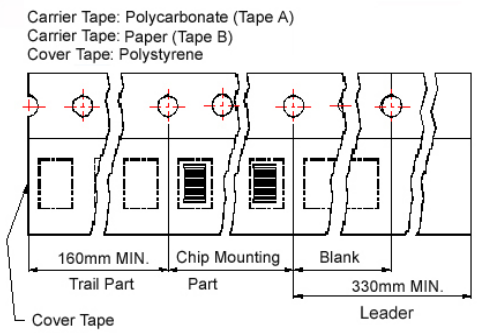


Packaging Specifications

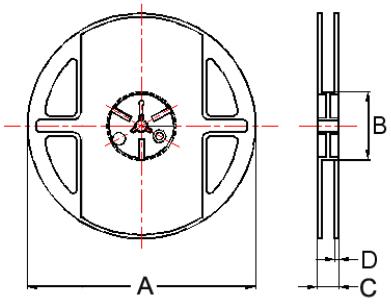
Tape Dimensions



Tape Material



Reel Dimensions



① : SB / PB / NB ② : SB / PB / NB / HF ⑦ : SB / PB
③ : SB / PB / NB / GB / UPB / HF / VPB ⑤ : UPB
④ : SB / PB / NB / GB / UPB ⑥ : SB ⑧ : PB / UPB

Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Quantity
	A	B	T	W	P	F	K	Tape	A	B	C	D	PCS / REEL
①060303	0.38	0.67	0.45	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.65	1.15	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160808	1.05	1.85	0.95	8.0	4.0	3.5	-	B	178	60	12	2	4000
④201209	1.50	2.30	0.97	8.0	4.0	3.5	-	B	178	60	12	2	4000
⑤201212	1.35	2.25	0.22	8.0	4.0	3.5	1.35	A	178	60	12	2	3000
④321611	1.88	3.50	0.22	8.0	4.0	3.5	1.27	A	178	60	12	2	3000
⑥321616	1.88	3.53	0.22	8.0	4.0	3.5	1.80	A	178	60	12	2	2000
⑦322513	2.77	3.42	0.22	8.0	4.0	3.5	1.55	A	178	60	12	2	2500
⑧451616	1.93	4.95	0.24	12	4.0	5.5	1.93	A	178	60	14	2	2000
⑧453215	3.66	4.95	0.24	12	8.0	5.5	1.85	A	178	60	14	2	1000