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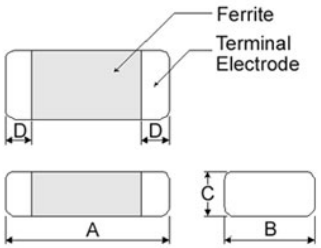
- CEC Internal No.
- Tolerance
- Impedance
- Packaging Style
- Dimensions(A、B、C)
- Design code
- Product Symbol

- 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

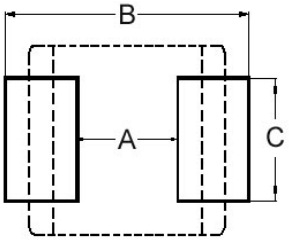


Dimensions in mm

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.

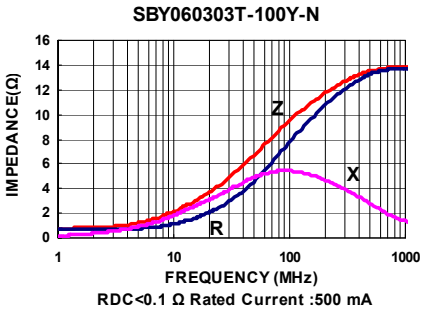
Dimension Conversion

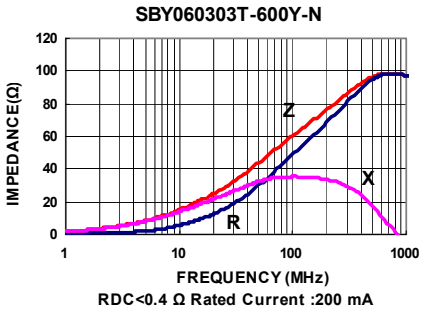
Code	Dimension in mm (AxBxC)	EIA
060303	0.6X0.3X0.3	0201
100505	1.0X0.5X0.5	0402
160808	1.6x0.8x0.8	0603
201209	2.0x1.2x0.9	0805
201212	2.0x1.2x1.25	0805
321611	3.2x1.6x.1.1	1206
321616	3.2x1.6x1.6	1206
322513	3.2x2.5x1.3	1210
451616	4.5x1.6x1.6	1806
453215	4.5x3.2x1.5	1812

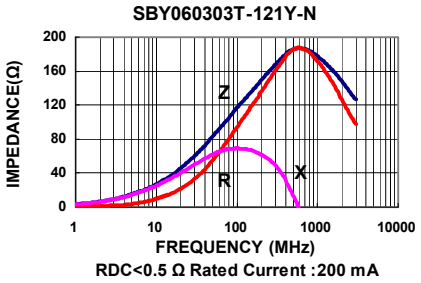
Electrical Characteristics

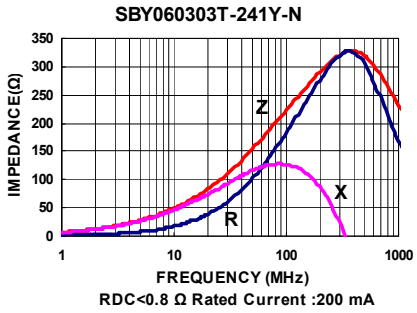
Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
SBY060303T-100Y-N	100	10±30%	0.1	500
SBY060303T-600Y-N	100	60	0.4	200
SBY060303T-121Y-N	100	120	0.5	200
SBY060303T-241Y-N	100	240	0.8	200
SBY060303T-601Y-N	100	600	1.5	100

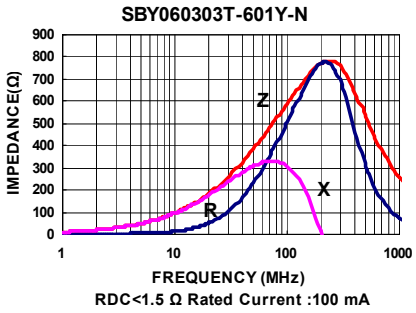
Test Instruments：Agilent E4991A Impedance / Material Analyzer









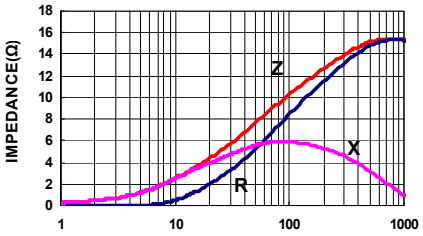


Electrical Characteristics

Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
SBY100505T-100Y-N	100	10±30%	0.05	500
SBY100505T-400Y-N	100	40	0.20	500
SBY100505T-600Y-N	100	60	0.20	500
SBY100505T-700Y-N	100	70	0.20	500
SBY100505T-101Y-N	100	100	0.25	500
SBY100505T-121Y-N	100	120	0.25	500
SBY100505T-221Y-N	100	220	0.40	400
SBY100505T-301Y-N	100	300	0.50	300
SBY100505T-471Y-N	100	470	0.50	300
SBY100505T-601Y-N	100	600	0.60	300
SBY100505T-102Y-N	100	1000	0.95	200
SBY100505T-182Y-N	100	1800	1.40	100
SBY100505T-222Y-N	100	2200	1.40	100

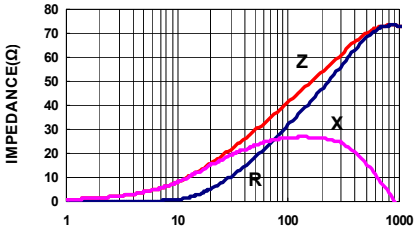
Test Instruments：Agilent E4991A Impedance / Material Analyzer

SBY100505T-100Y-N



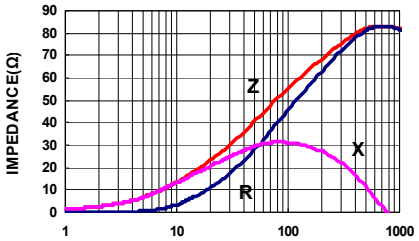
RDC<0.05 Ω Rated Current :500 mA

SBY100505T-400Y-N



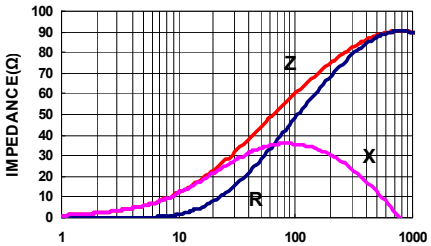
RDC<0.2 Ω Rated Current :500 mA

SBY100505T-600Y-N



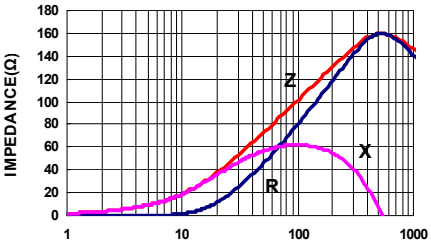
RDC<0.2 Ω Rated Current :500 mA

SBY100505T-700Y-N



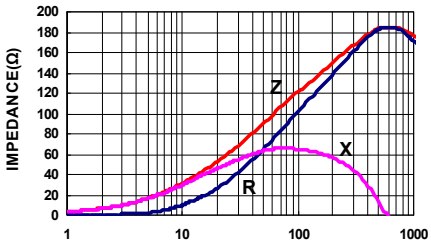
RDC<0.2 Ω Rated Current :500 mA

SBY100505T-101Y-N



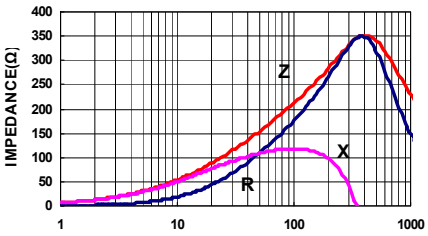
RDC<0.25 Ω Rated Current :500 mA

SBY100505T-121Y-N



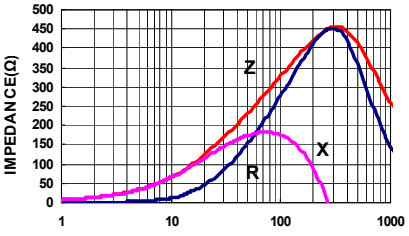
RDC<0.25 Ω Rated Current :500 mA

SBY100505T-221Y-N



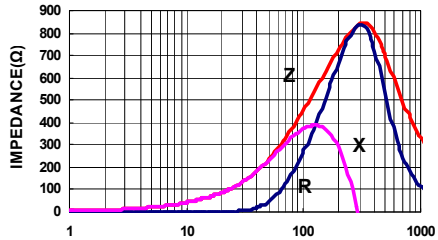
RDC<0.4Ω Rated Current :400 mA

SBY100505T-301Y-N



RDC<0.5 Ω Rated Current :300 mA

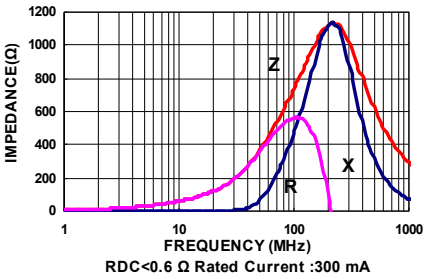
SBY100505T-471Y-N



RDC<0.5 Ω Rated Current :300 mA

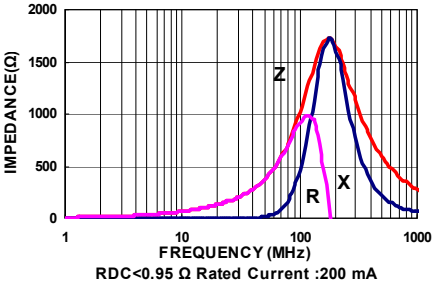
Test Instruments：Agilent E4991A Impedance / Material Analyzer

SBY100505T-601Y-N



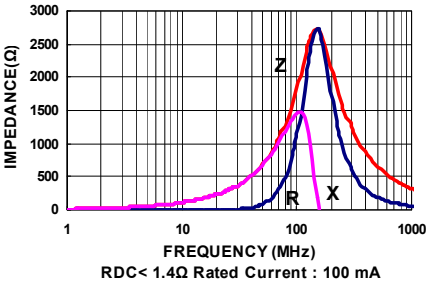
RDC<0.6 Ω Rated Current :300 mA

SBY100505T-102Y-N



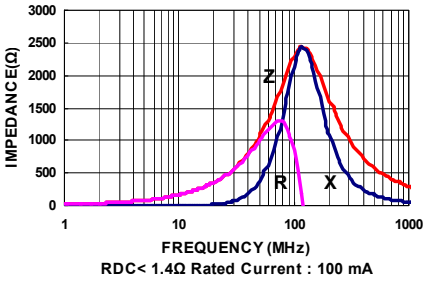
RDC<0.95 Ω Rated Current :200 mA

SBY100505T-182Y-N



RDC< 1.4Ω Rated Current : 100 mA

SBY100505T-222Y-N



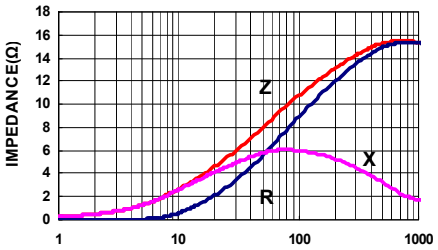
RDC< 1.4Ω Rated Current : 100 mA

Electrical Characteristics

Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
SBK160808T-110Y-N	100	11±30%	0.05	500
SBK160808T-300Y-N	100	30	0.10	400
SBK160808T-600Y-N	100	60	0.10	400
SBK160808T-800Y-N	100	80	0.15	400
SBK160808T-121Y-N	100	120	0.25	400
SBK160808T-221Y-N	100	220	0.30	300
SBK160808T-301Y-N	100	300	0.40	300
SBK160808T-471Y-N	100	470	0.50	300
SBK160808T-601Y-N	100	600	0.50	300
SBK160808T-751Y-N	100	750	0.60	300
SBK160808T-102Y-N	100	1000	0.60	300
SBK160808T-152Y-N	100	1500	0.60	300
SBK160808T-222Y-N	100	2200	0.80	200
SBK160808T-272Y-N	100	2700	0.80	200

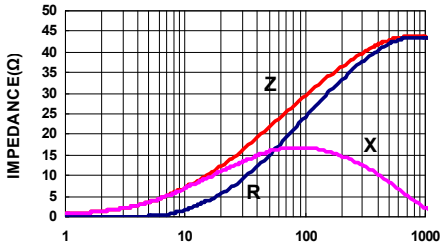
Test Instruments：Agilent E4991A Impedance / Material Analyzer

SBK160808T-110Y-N



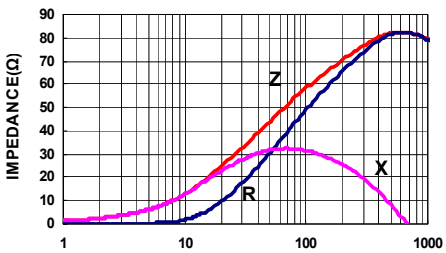
RDC<0.05 Ω Rated Current :500 mA

SBK160808T-300Y-N



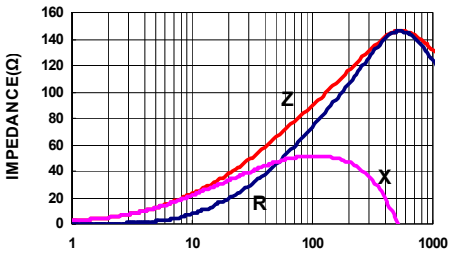
RDC<0.1 Ω Rated Current :400 mA

SBK160808T-600Y-N



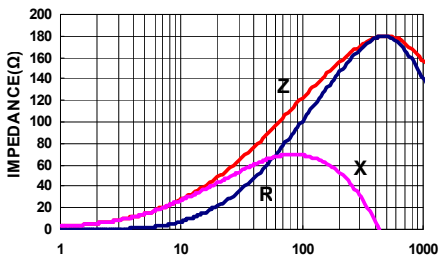
RDC<0.1 Ω Rated Current :400 mA

SBK160808T-800Y-N



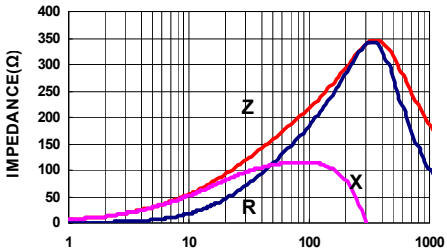
RDC<0.15 Ω Rated Current :400 mA

SBK160808T-121Y-N



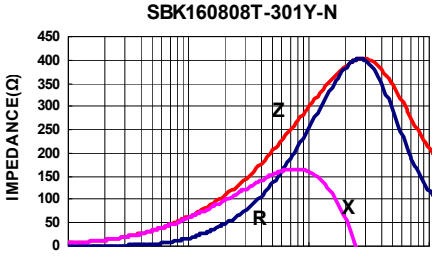
RDC<0.25 Ω Rated Current :400 mA

SBK160808T-221Y-N



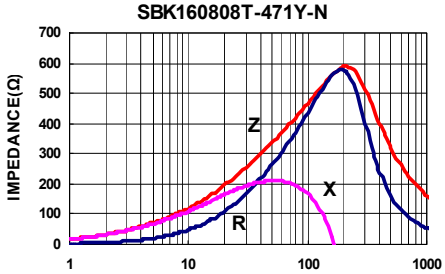
RDC<0.3 Ω Rated Current :300 mA

SBK160808T-301Y-N



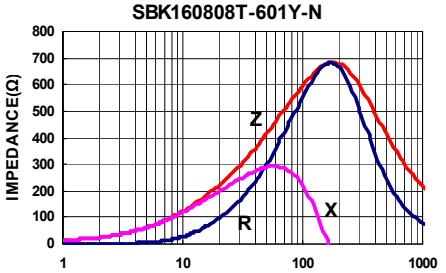
RDC<0.4 Ω Rated Current :300 mA

SBK160808T-471Y-N



RDC<0.5 Ω Rated Current :300 mA

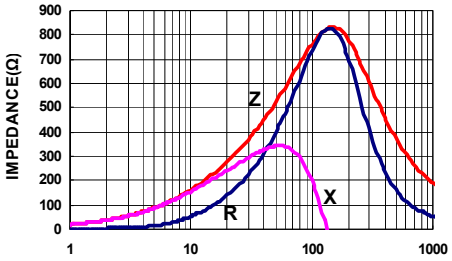
SBK160808T-601Y-N



RDC<0.5 Ω Rated Current :300 mA

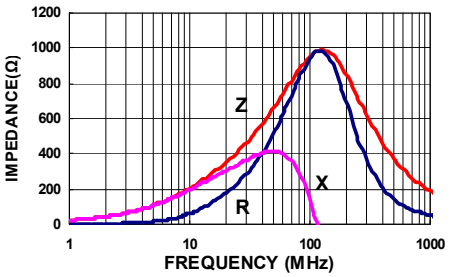
Test Instruments：Agilent E4991A Impedance / Material Analyzer

SBK160808T-751Y-N



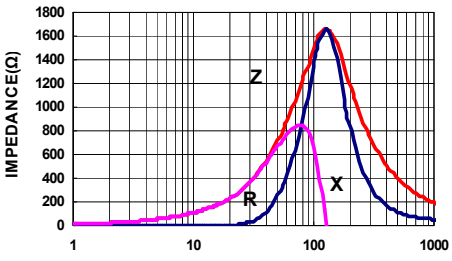
RDC<0.6 Ω Rated Current :300 mA

SBK160808T-102Y-N



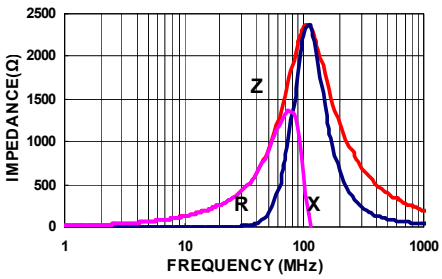
RDC<0.6 Ω Rated Current :300 mA

SBK160808T-152Y-N



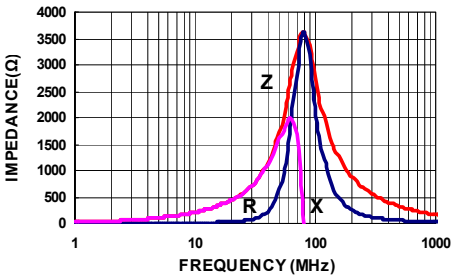
RDC<0.6 Ω Rated Current :300 mA

SBK160808T-222Y-N



RDC<0.8 Ω Rated Current :200 mA

SBK160808T-272Y-N



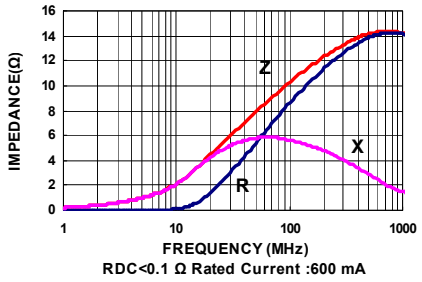
RDC<0.8 Ω Rated Current :200 mA

Electrical Characteristics

Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
SBY201209T-110Y-N	100	11±30%	0.10	600
SBY201209T-320Y-N	100	32	0.10	600
SBK201209T-600Y-N	100	60	0.15	500
SBK201209T-121Y-N	100	120	0.25	300
SBK201209T-151Y-N	100	150	0.25	300
SBK201209T-221Y-N	100	220	0.30	300
SBK201209T-301Y-N	100	300	0.30	300
SBK201209T-471Y-N	100	470	0.30	300
SBK201209T-601Y-N	100	600	0.40	300
SBK201209T-751Y-N	100	750	0.50	200
SBK201209T-102Y-N	100	1000	0.50	200
SBK201209T-152Y-N	100	1500	0.60	200
SBK201209T-202Y-N	100	2000	0.70	200
SBK201209T-222Y-N	100	2200	0.70	200
SBK201209T-252Y-N	100	2500	0.70	200
SBK201209T-272Y-N	100	2700	0.70	200

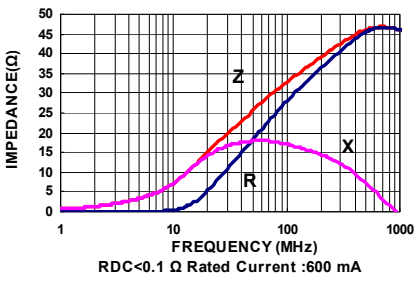
Test Instruments：Agilent E4991A Impedance / Material Analyzer

SBY201209T-110Y-N



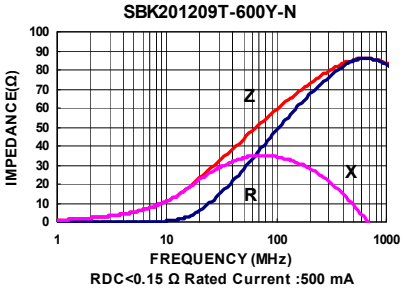
RDC<0.1 Ω Rated Current :600 mA

SBY201209T-320Y-N



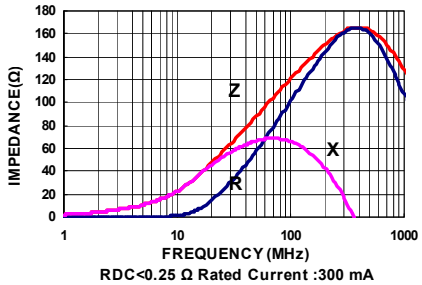
RDC<0.1 Ω Rated Current :600 mA

SBK201209T-600Y-N



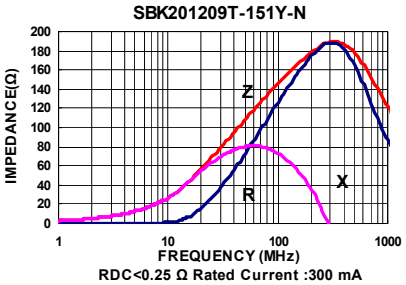
RDC<0.15 Ω Rated Current :500 mA

SBK201209T-121Y-N



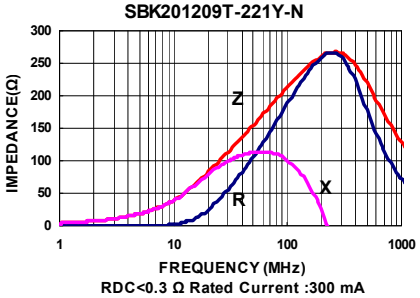
RDC<0.25 Ω Rated Current :300 mA

SBK201209T-151Y-N



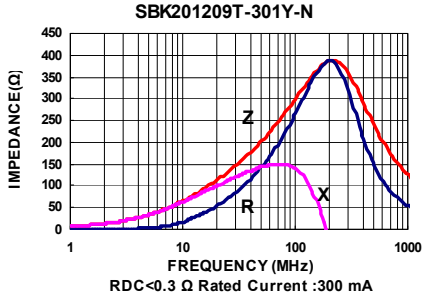
RDC<0.25 Ω Rated Current :300 mA

SBK201209T-221Y-N



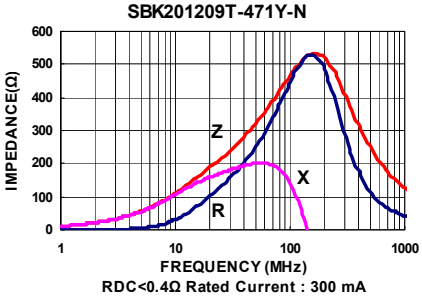
RDC<0.3 Ω Rated Current :300 mA

SBK201209T-301Y-N



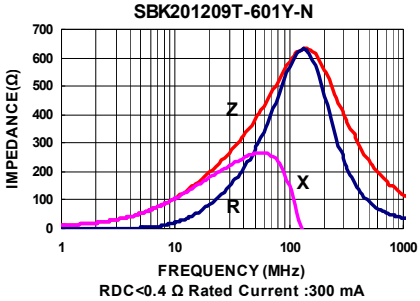
RDC<0.3 Ω Rated Current :300 mA

SBK201209T-471Y-N



RDC<0.4Ω Rated Current : 300 mA

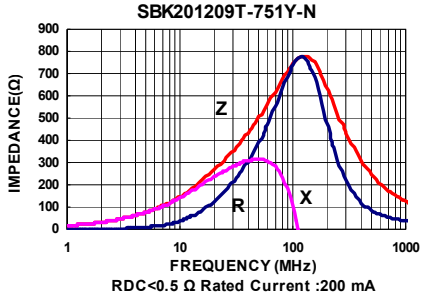
SBK201209T-601Y-N



RDC<0.4 Ω Rated Current :300 mA

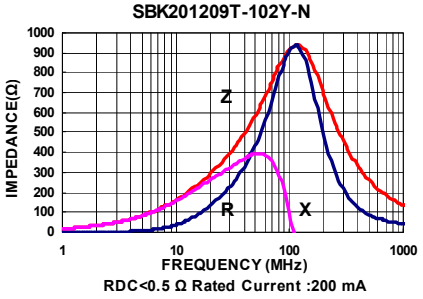
Test Instruments：Agilent E4991A Impedance / Material Analyzer

SBK201209T-751Y-N



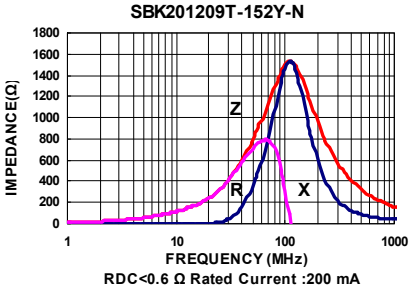
RDC<0.5 Ω Rated Current :200 mA

SBK201209T-102Y-N



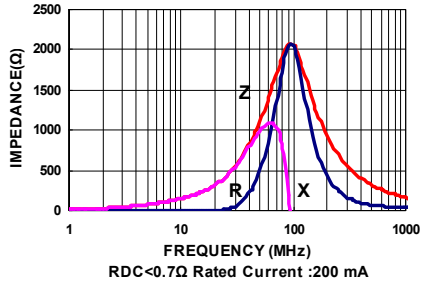
RDC<0.5 Ω Rated Current :200 mA

SBK201209T-152Y-N



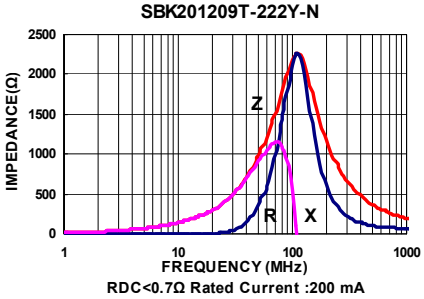
RDC<0.6 Ω Rated Current :200 mA

SBK201209T-202Y-N



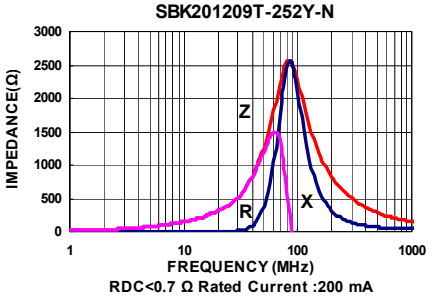
RDC<0.7Ω Rated Current :200 mA

SBK201209T-222Y-N



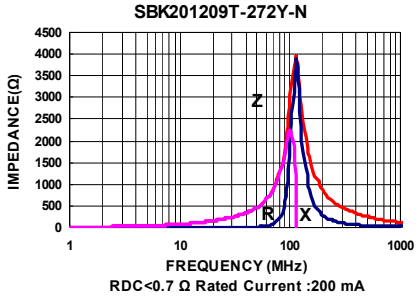
RDC<0.7Ω Rated Current :200 mA

SBK201209T-252Y-N



RDC<0.7 Ω Rated Current :200 mA

SBK201209T-272Y-N



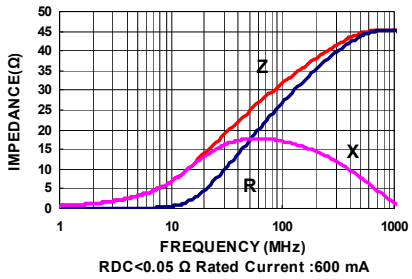
RDC<0.7 Ω Rated Current :200 mA

Electrical Characteristics

Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
SBY321611T-110Y-N	100	11±30%	0.05	600
SBY321611T-320Y-N	100	32	0.05	600
SBY321611T-600Y-N	100	60	0.10	500
SBK321611T-900Y-N	100	90	0.15	500
SBK321611T-121Y-N	100	120	0.15	500
SBK321611T-151Y-N	100	150	0.15	500
SBK321611T-471Y-N	100	470	0.20	400
SBK321611T-601Y-N	100	600	0.30	400
SBK321611T-102Y-N	50	1000	0.40	200
SBK321611T-122Y-N	50	1200	0.40	200
SBK321611T-152Y-N	50	1500	0.45	200

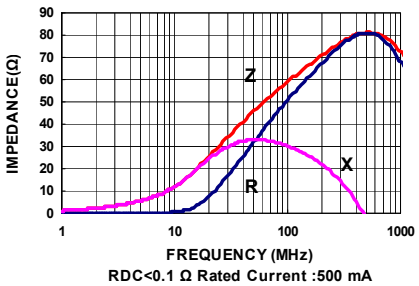
Test Instruments：Agilent E4991A Impedance / Material Analyzer

SBY321611T-320Y-N



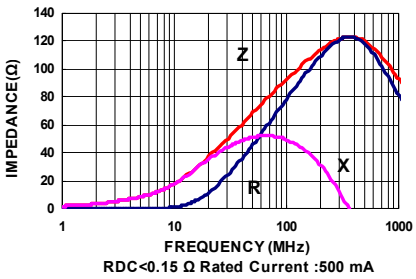
RDC<0.05 Ω Rated Current :600 mA

SBY321611T-600Y-N



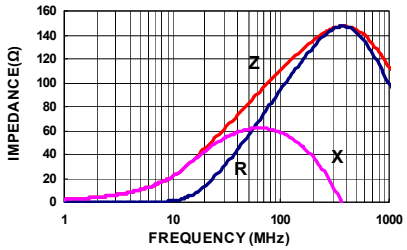
RDC<0.1 Ω Rated Current :500 mA

SBK321611T-900Y-N



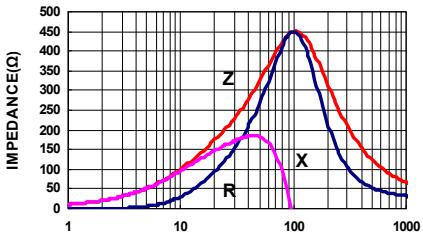
RDC<0.15 Ω Rated Current :500 mA

SBK321611T-121Y-N



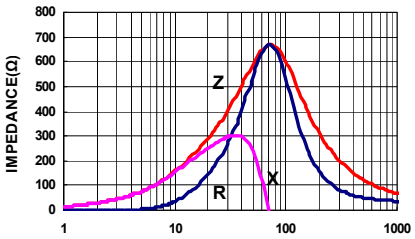
RDC<0.15 Ω Rated Current :500 mA

SBK321611T-471Y-N



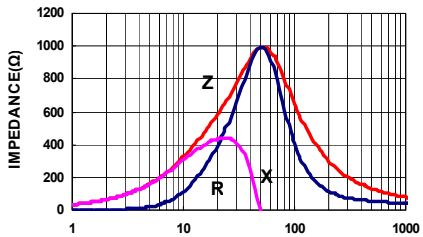
RDC<0.3 Ω Rated Current :400 mA

SBK321611T-601Y-N



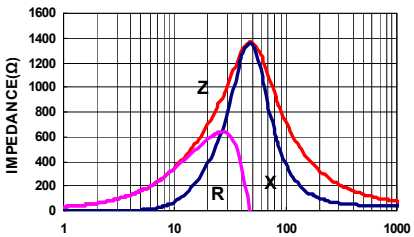
RDC<0.3 Ω Rated Current :400 mA

SBK321611T-102Y-N



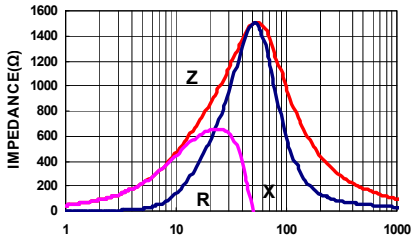
RDC<0.4 Ω Rated Current :200 mA

SBK321611T-122Y-N



RDC<0.4 Ω Rated Current :200 mA

SBK321611T-152Y-N

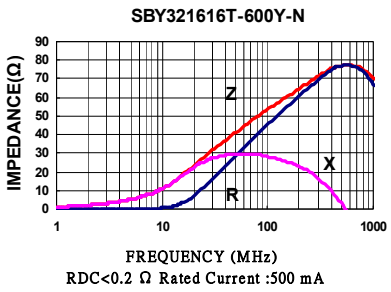


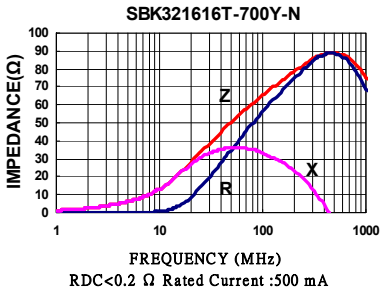
RDC<0.45 Ω Rated Current :200 mA

Electrical Characteristics

Part Number	Test Frequency (MHz)	Impedance (Ω±25%)	DC Resistance (Ω) Max	Rated current (mA) Max
SBY321616T-250Y-N	100	25	0.10	500
SBY321616T-600Y-N	100	60	0.20	500
SBK321616T-700Y-N	100	70	0.20	500

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
SBY322513T-320Y-N	100	32	0.20	500
SBY322513T-600Y-N	100	60	0.20	500
SBY322513T-900Y-N	100	90	0.20	500
SBY322513T-121Y-N	100	120	0.20	500

Test Instruments：Agilent E4991A Impedance / Material Analyzer