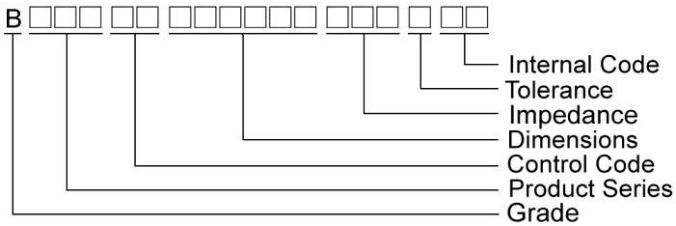
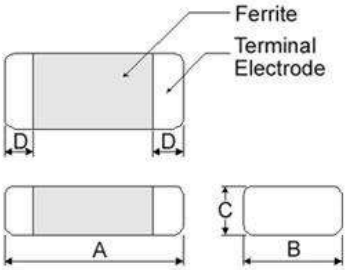
Multilayer Ferrite Chip Beads

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: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

Product Identification



Shape and Dimensions

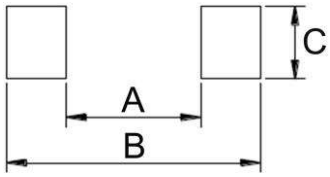


Dimensions in mm

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
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20	1.5±0.20	0.5±0.3

① : BBSY / BBSJ / BBNQ / BBPY
② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
⑦ : BBPY / BBUP

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
③160805	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
④160808	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
⑤201209	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.4
⑥321611	2.0 ~ 2.4	4.2 ~ 5.2	1.3 ~ 1.9
⑦453215	3.0	5.5 ~ 6.5	2.4

∗ Don't apply narrower pattern than listed above to BBPY and BBUP 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
160805	1.6x0.8x0.5	0603
160808	1.6x0.8x0.8	0603
201209	2.0x1.2x0.9	0805
321611	3.2x1.6x.1.1	1206
453215	4.5x3.2x1.5	1812

Electrical Characteristics

Part Number	Impedance (Ω±25%)	Test Frequency (MHz)	RDC (Ω) Max	Rated current (mA) Max
BBPY00060303100Y00	10	100	0.050	1000
BBPY00060303220Y00	22	100	0.065	1000
BBPY00060303330Y00	33	100	0.090	750
BBPY00060303470Y00	47	100	0.120	500
BBPY00060303800Y00	80	100	0.180	500
BBPY00060303121Y00	120	100	0.230	450
BBPY00060303241Y00	240	100	0.400	350
BBPY00060303331Y00	330	100	0.500	300

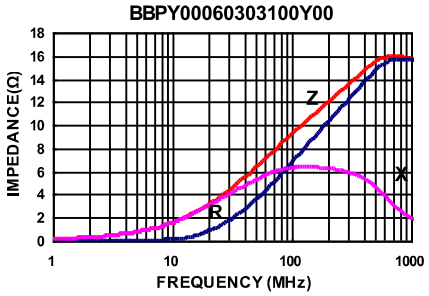
Note: When ordering, please specify tolerance code. Tolerance : Y=±25%

- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Rate Current：Applied the current to coils, the temperature rise shall not be more than 30℃
- Measure Equipment：

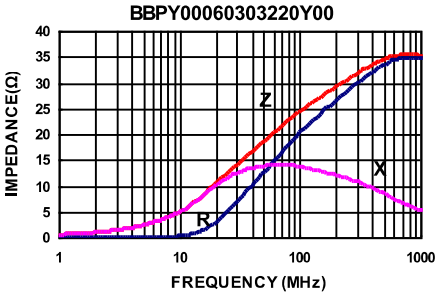
  Z：HP4291A

  RDC：HP4338B or CHEN HWA 502

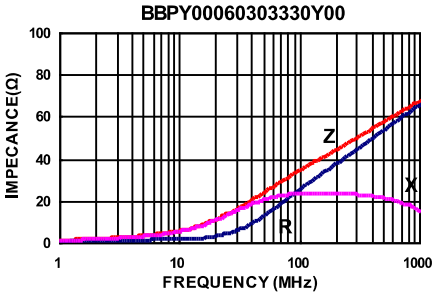
Test Instruments：Agilent E4991A Impedance / Material Analyzer



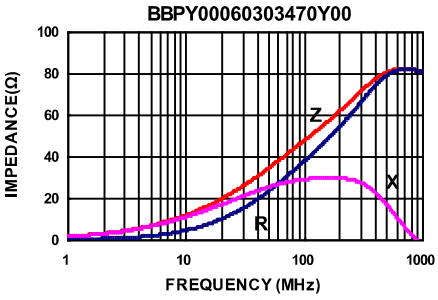
RDC<0.05 Ω Rated Current :1000 mA



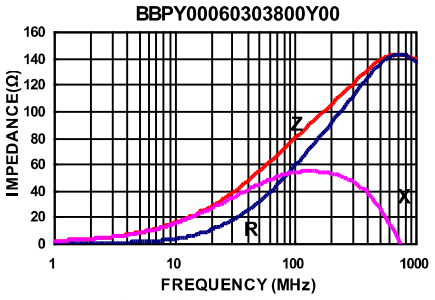
RDC<0.065 Ω Rated Current :1000 mA



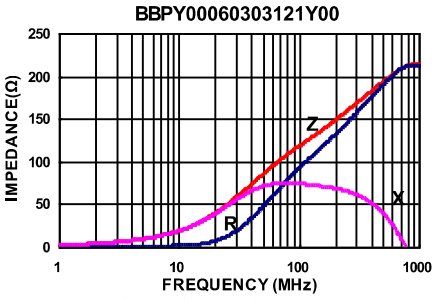
RDC<0.09 Ω Rated Current :750 mA



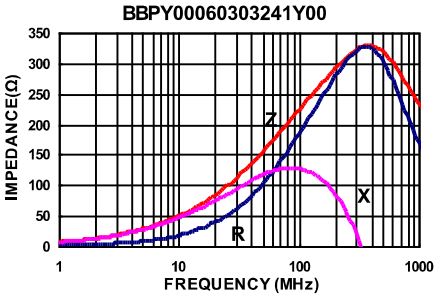
RDC<0.12 Ω Rated Current :500 mA



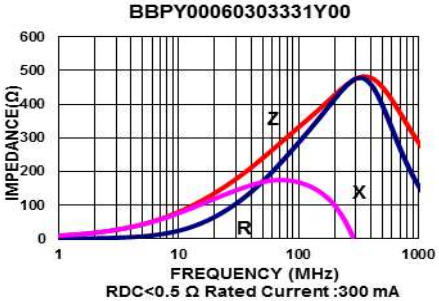
RDC<0.18 Ω Rated Current :500 mA



RDC<0.23 Ω Rated Current :450 mA



RDC<0.4 Ω Rated Current :350 mA



RDC<0.5 Ω Rated Current :300 mA

Electrical Characteristics

Part Number	Impedance (Ω±25%)	Test Frequency (MHz)	RDC (Ω) Max	Rated current (mA) Max
BBPY00100505100Y00	10	100	0.03	2000
BBPY00100505250Y00	25	100	0.05	1700
BBPY00100505300Y00	30	100	0.05	1700
BBPY00100505320Y00	32	100	0.05	1700
BBPY00100505400Y00	40	100	0.075	1500
BBPY00100505500Y00	50	100	0.075	1500
BBPY00100505600Y00	60	100	0.075	1500
BBPY00100505680Y00	68	100	0.09	1200
BBPY00100505700Y00	70	100	0.09	1200
BBPY00100505800Y00	80	100	0.09	1200
BBPY00100505101Y00	100	100	0.09	1200
BBPY00100505121Y00	120	100	0.09	1400
BBPY00100505151Y00	150	100	0.14	1400
BBPY00100505181Y00	180	100	0.14	900
BBPY00100505221Y00	220	100	0.18	1100
BBPY00100505601Y00	600	100	0.34	700
BBPY00100505102Y00	1000	100	0.49	500

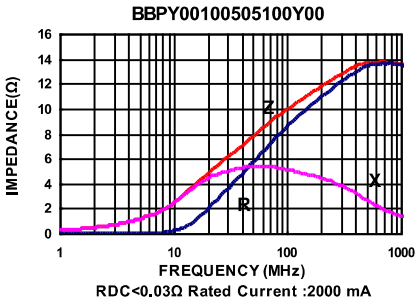
Note: When ordering, please specify tolerance code. Tolerance : Y=±25%

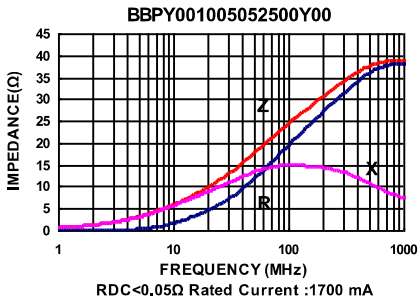
- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Rate Current：Applied the current to coils, the temperature rise shall not be more than 30℃
- Measure Equipment：

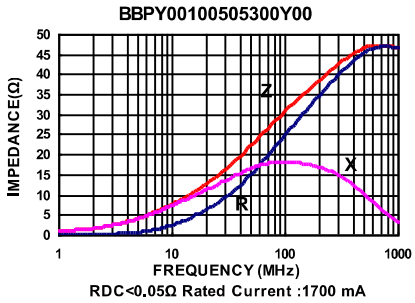
  Z：HP4291A

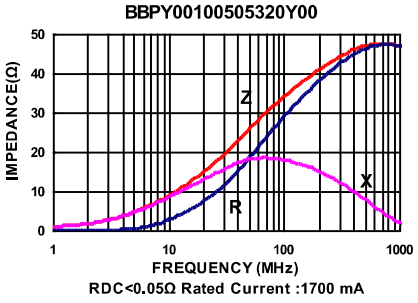
  RDC：HP4338B or CHEN HWA 502

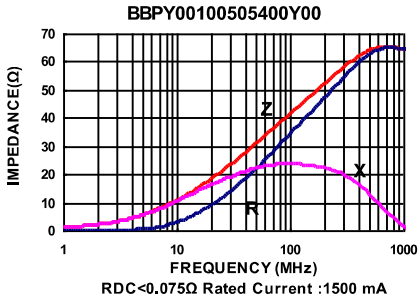
Test Instruments：Agilent E4991A Impedance / Material Analyzer

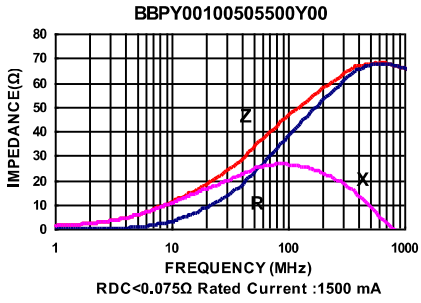






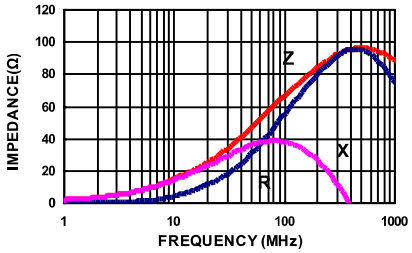






Test Instruments：Agilent E4991A Impedance / Material Analyzer

BBPY00100505600Y00



RDC<0.075Ω Rated Current :1500 mA

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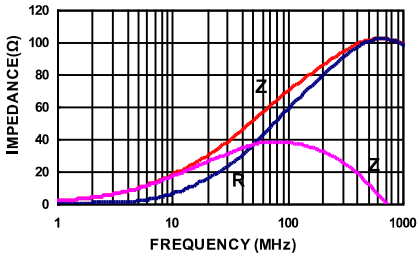

RDC<0.09Ω Rated Current :1200 mA

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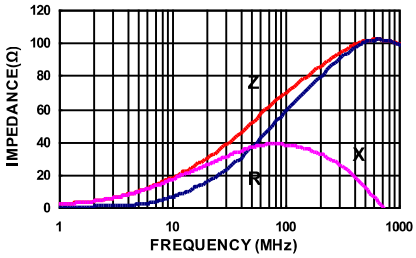

RDC<0.09Ω Rated Current :1200 mA

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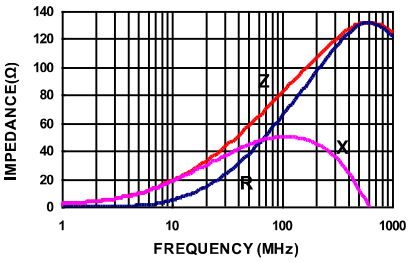

RDC<0.09Ω Rated Current :1200 mA

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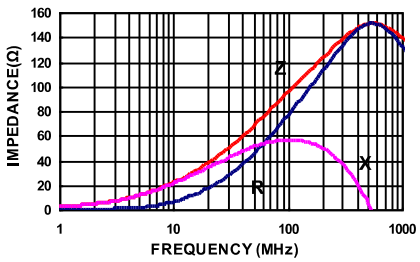

RDC<0.09Ω Rated Current :1200 mA

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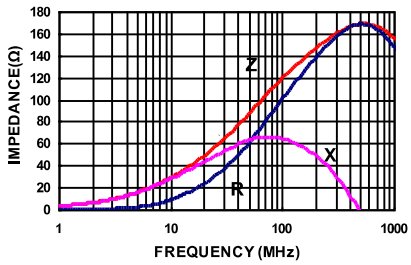

RDC<0.09Ω Rated Current :1400mA

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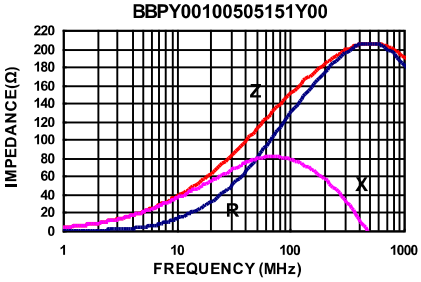

RDC<0.14Ω Rated Current :1400mA

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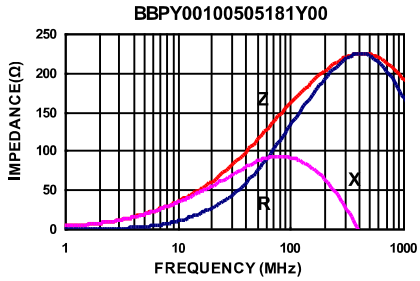
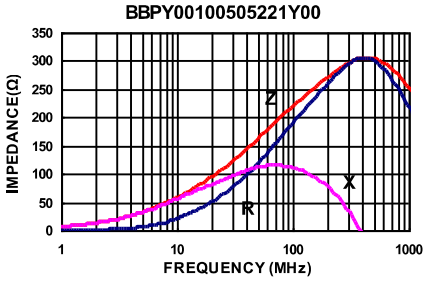


RDC<0.14Ω Rated Current :900 mA

BBPY00100505221Y00



RDC<0.18Ω Rated Current :1100mA

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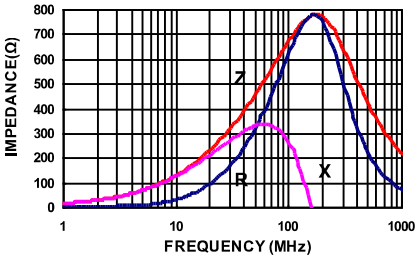

RDC<0.34Ω Rated Current :700 mA

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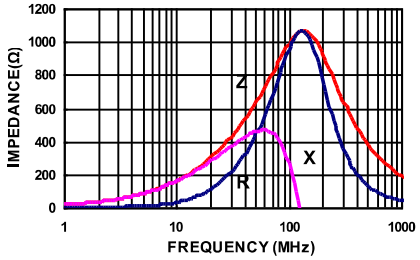

RDC<0.49Ω Rated Current :500 mA

Electrical Characteristics

Part Number	Impedance (Ω±25%)	Test Frequency (MHz)	RDC (Ω) Max	Rated current (mA) Max
BBPY00160808100Y00	10	100	0.020	4000
BBPY00160808110Y00	11	100	0.020	4000
BBPY00160808190Y00	19	100	0.03	3000
BBPY00160808220Y00	22	100	0.030	3000
BBPY00160808250Y00	25	100	0.03	3000
BBPY00160808260Y00	26	100	0.03	3000
BBPY00160808300Y00	30	100	0.030	3000
BBPY00160808330Y00	33	100	0.035	3000
BBPY00160808400Y00	40	100	0.035	3000
BBPY00160808470Y00	47	100	0.04	3000
BBPY00160808500Y00	50	100	0.04	3000
BBPY00160808600Y00	60	100	0.040	3000
BBPY00160808680Y00	68	100	0.05	2500
BBPY00160808700Y00	70	100	0.05	2500
BBPY00160808750Y00	75	100	0.05	2500
BBPY00160808800Y00	80	100	0.050	2500
BBPY00160808101Y00	100	100	0.050	2500
BBPY00160808121Y00	120	100	0.080	2500
BBPY00160808151Y00	150	100	0.085	2000
BBPY00160808181Y00	180	100	0.090	2000
BBPY00160808201Y00	200	100	0.095	2000
BBPY00160808221Y00	220	100	0.100	2000
BBPY00160808241Y00	240	100	0.12	1500
BBPY00160808301Y00	300	100	0.120	1500
BBPY00160808331Y00	330	100	0.120	1500
BBPY00160808471Y00	470	100	0.150	1500
BBPY00160808601Y00	600	100	0.200	1000
BBPY00160808102Y00	1000	100	0.250	800
BBPY00160808122Y00	1200	100	0.250	800
BBPY00160808152Y00	1500	100	0.400	500

Note: When ordering, please specify tolerance code. Tolerance : Y=±25%

- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Rate Current：Applied the current to coils, the temperature rise shall not be more than 30℃
- Measure Equipment：
  Z：HP4291A
  RDC：HP4338B or CHEN HWA 502

Test Instruments：Agilent E4991A Impedance / Material Analyzer

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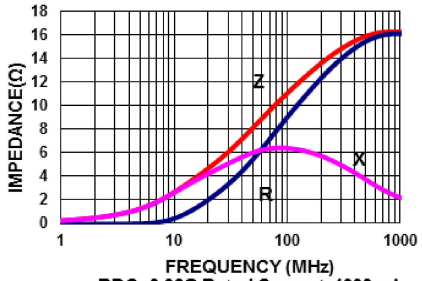

RDC<0.02Ω Rated Current :4000 mA

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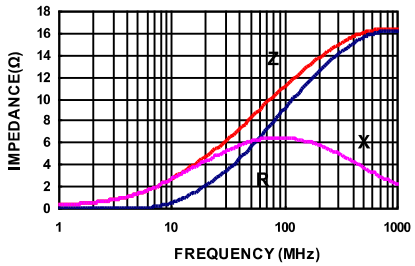

RDC<0.02Ω Rated Current :4000 mA

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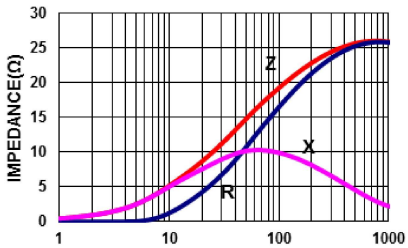

RDC<0.03Ω Rated Current :3000 mA

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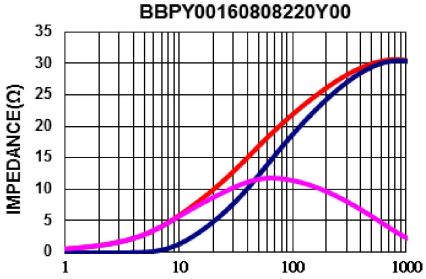

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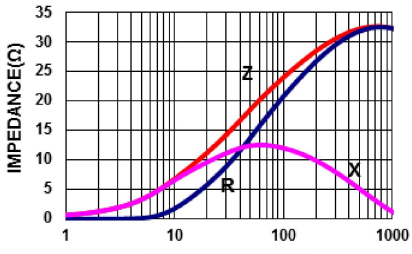

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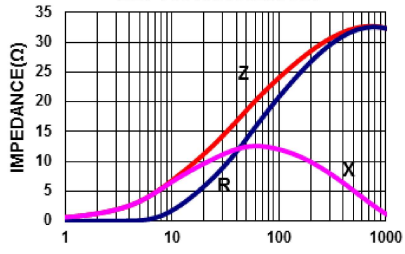
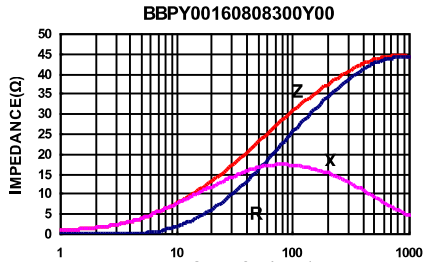


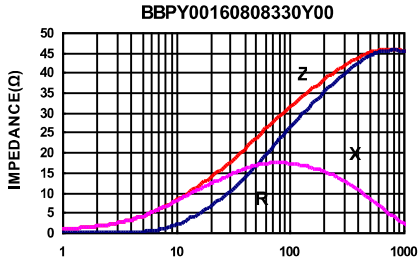
RDC<0.03Ω Rated Current :3000 mA

BBPY00160808300Y00



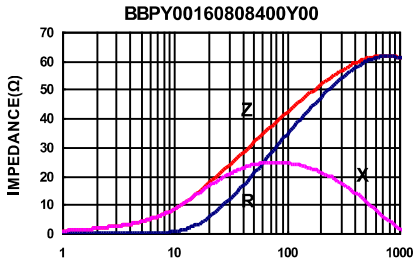
RDC<0.03Ω Rated Current :3000 mA

BBPY00160808330Y00



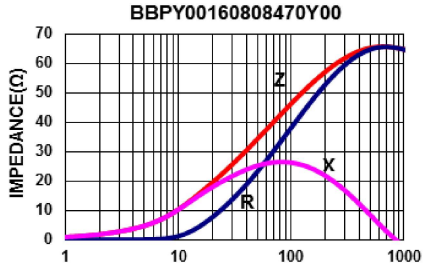
RDC<0.035Ω Rated Current :3000M mA

BBPY00160808400Y00



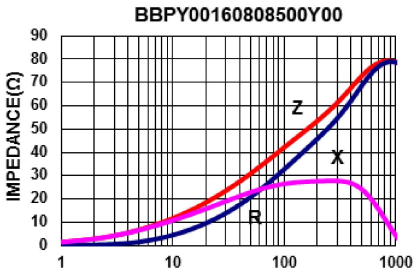
RDC<0.035Ω Rated Current :3000 mA

BBPY00160808470Y00



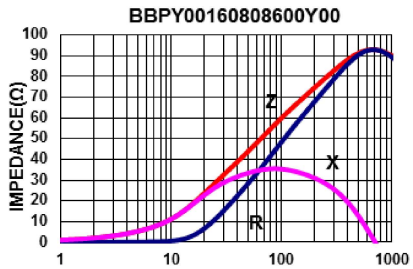
RDC<0.04Ω Rated Current :3000 mA

BBPY00160808500Y00



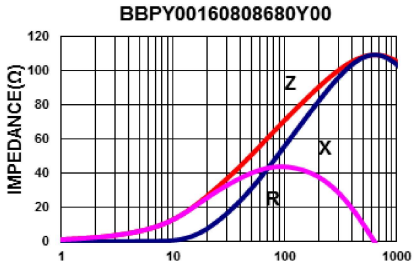
RDC<0.04Ω Rated Current :3000 mA

BBPY00160808600Y00



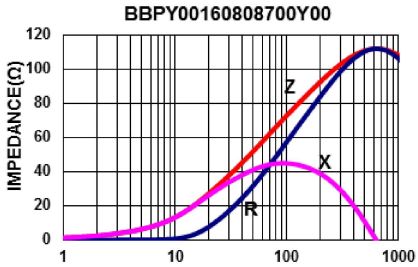
RDC<0.04Ω Rated Current :3000 mA

BBPY00160808680Y00



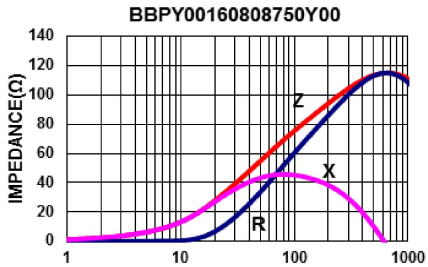
RDC<0.05Ω Rated Current :2500 mA

BBPY00160808700Y00



RDC<0.05Ω Rated Current :2500 mA

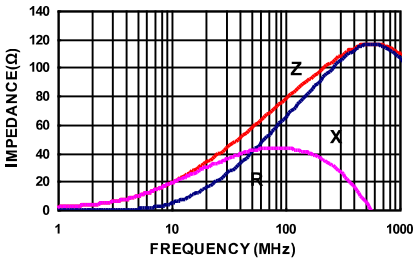
BBPY00160808750Y00



RDC<0.05Ω Rated Current :2500 mA

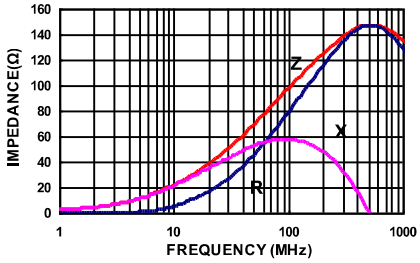
Test Instruments：Agilent E4991A Impedance / Material Analyzer

BBPY00160808800Y00



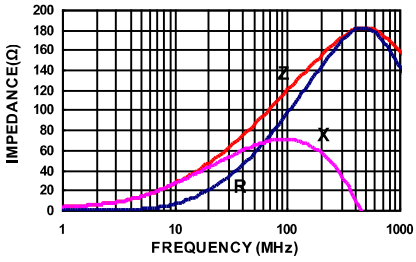
RDC<0.05Ω Rated Current :2500 mA

BBPY00160808101Y00



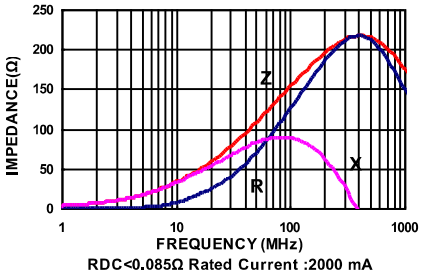
RDC<0.05Ω Rated Current :2500 mA

BBPY00160808121Y00



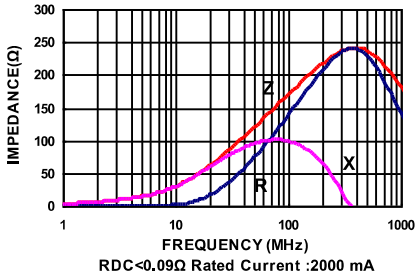
RDC<0.08Ω Rated Current :2500 mA

BBPY00160808151Y00



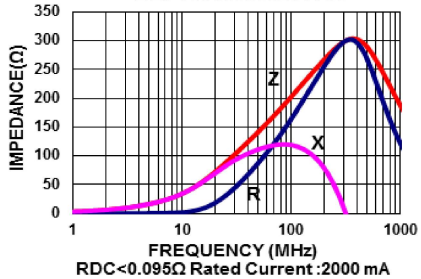
RDC<0.085Ω Rated Current :2000 mA

BBPY00160808181Y00



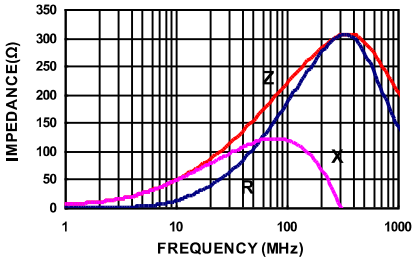
RDC<0.09Ω Rated Current :2000 mA

BBPY00160808201Y00



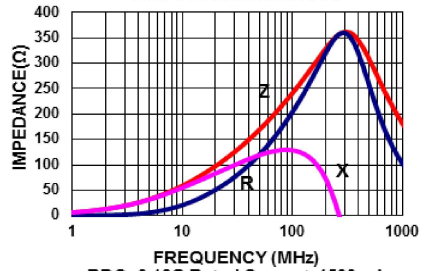
RDC<0.095Ω Rated Current :2000 mA

BBPY00160808221Y00



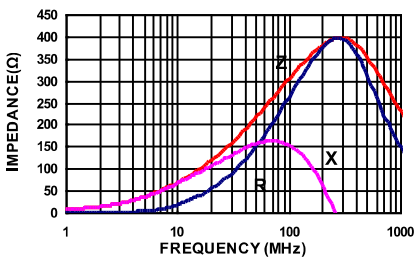
RDC<0.10Ω Rated Current :2000 mA

BBPY00160808241Y00



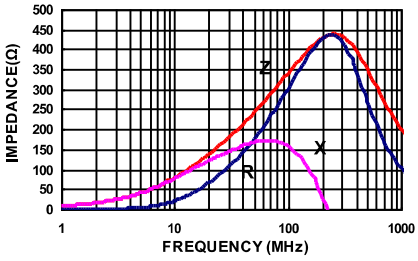
RDC<0.12Ω Rated Current :1500 mA

BBPY00160808301Y00



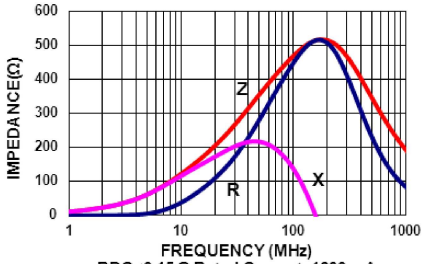
RDC<0.12Ω Rated Current :1500 mA

BBPY00160808331Y00



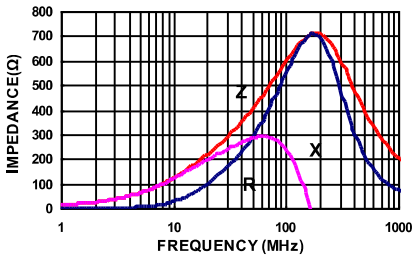
RDC<0.12Ω Rated Current :1500 mA

BBPY00160808471Y00



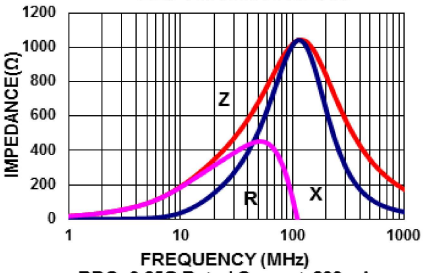
RDC<0.15Ω Rated Current :1200 mA

BBPY00160808601Y00



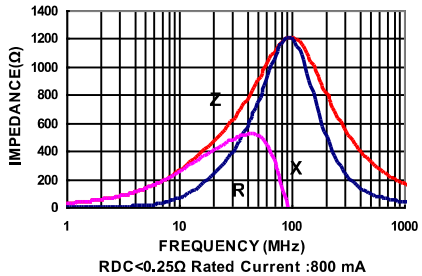
RDC<0.2Ω Rated Current :1000 mA

BBPY00160808102Y00



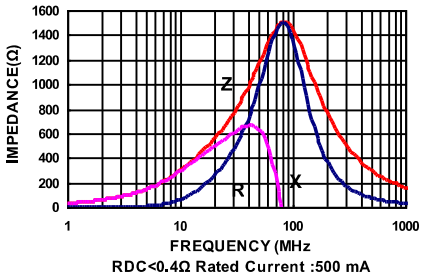
RDC<0.25Ω Rated Current :800 mA

BBPY00160808122Y00



RDC<0.25Ω Rated Current :800 mA

BBPY00160808152Y00



RDC<0.4Ω Rated Current :500 mA

Electrical Characteristics

Part Number	Impedance (Ω±25%)	Test Frequency (MHz)	RDC (Ω) Max	Rated current (mA) Max
BBPY00201209100Y00	10	100	0.01	6000
BBPY00201209110Y00	11	100	0.01	6000
BBPY00201209170Y00	17	100	0.02	5000
BBPY00201209300Y00	30	100	0.015	4000
BBPY00201209500Y00	50	100	0.025	3000
BBPY00201209600Y00	60	100	0.03	3000
BBPY00201209700Y00	70	100	0.04	3000
BBPY00201209800Y00	80	100	0.04	3000
BBPY00201209101Y00	100	100	0.04	3000
BBPY00201209121Y00	120	100	0.04	3000
BBPY00201209221Y00	220	100	0.08	2000
BBPY00201209301Y00	300	100	0.08	2000
BBPY00201209331Y00	330	100	0.08	2000
BBPY00201209471Y00	470	100	0.10	2000
BBPY00201209601Y00	600	100	0.10	2000
BBPY00201209102Y00	1000	100	0.12	1500
BBPY00201209152Y00	1500	100	0.30	1000

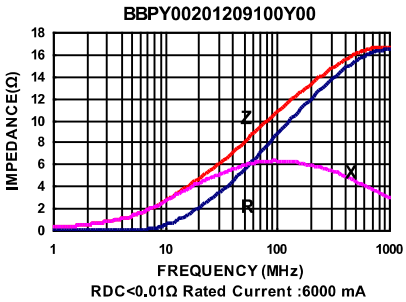
Note: When ordering, please specify tolerance code. Tolerance : Y=±25%

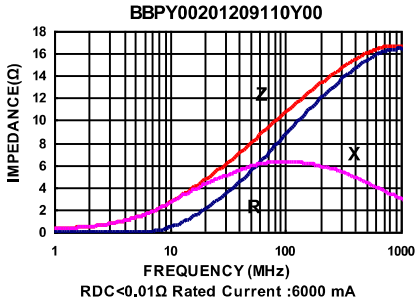
- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Rate Current：Applied the current to coils, the temperature rise shall not be more than 30℃
- Measure Equipment：

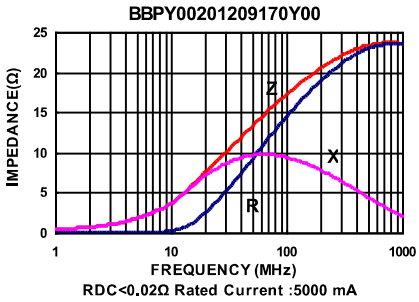
  Z：HP4291A

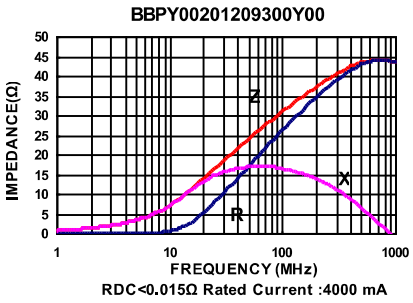
  RDC：HP4338B or CHEN HWA 502

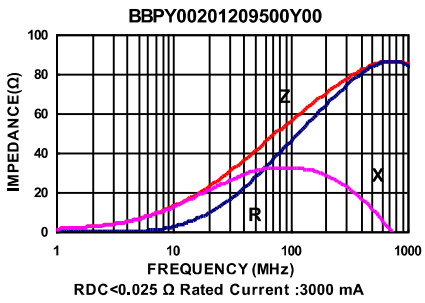
Test Instruments： Agilent E4991A Impedance / Material Analyzer

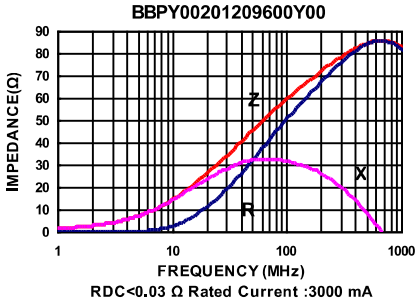






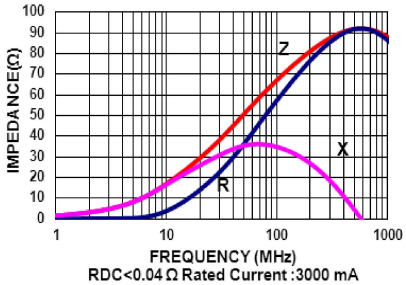






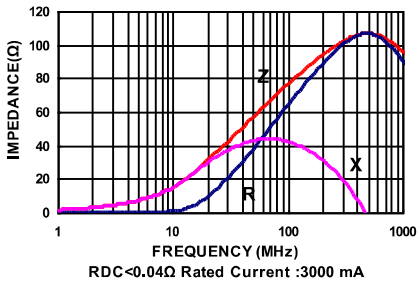
Test Instruments： Agilent E4991A Impedance / Material Analyzer

BBPY00201209700Y00



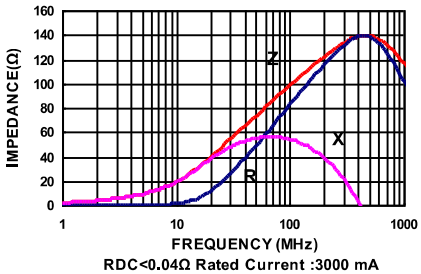
RDC<0.04 Ω Rated Current :3000 mA

BBPY00201209800Y00



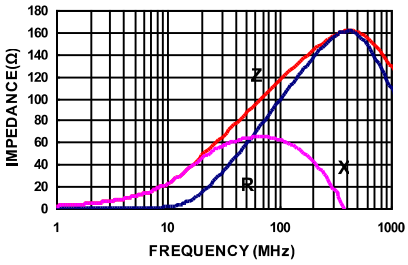
RDC<0.04Ω Rated Current :3000 mA

BBPY00201209101Y00



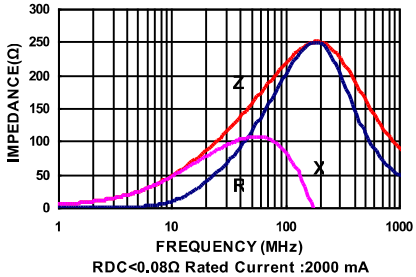
RDC<0.04Ω Rated Current :3000 mA

BBPY00201209121Y00



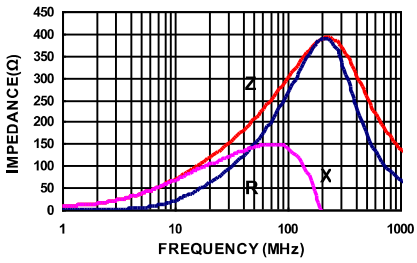
RDC<0.04Ω Rated Current :3000 mA

BBPY00201209221Y00



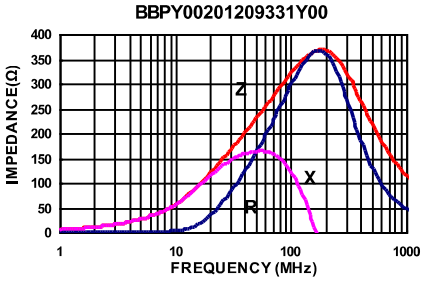
RDC<0.08Ω Rated Current :2000 mA

BBPY00201209301Y00



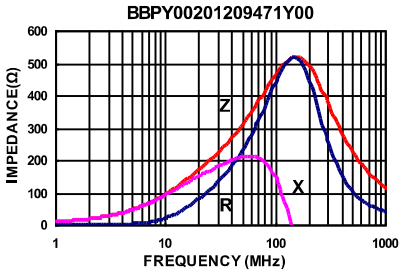
RDC<0.08Ω Rated Current :2000 mA

BBPY00201209331Y00



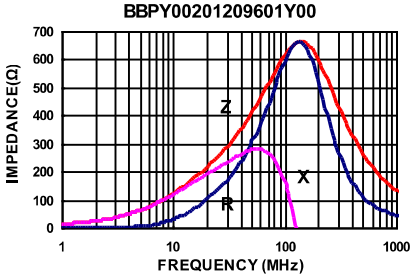
RDC<0.08 Ω Rated Current :2000 mA

BBPY00201209471Y00



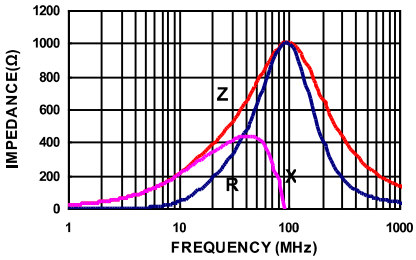
RDC<0.1Ω Rated Current :2000 mA

BBPY00201209601Y00



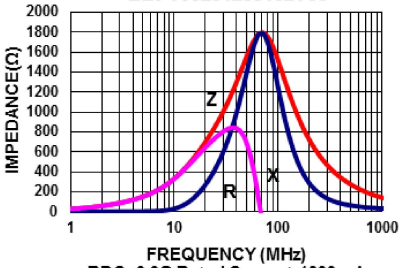
RDC<0.1Ω Rated Current :2000 mA

BBPY00201209102Y00



RDC<0.12Ω Rated Current :1500 mA

BBPY00201209152Y00



RDC<0.3Ω Rated Current:1000 mA

Electrical Characteristics

Part Number	Impedance (Ω±25%)	Test Frequency (MHz)	RDC (Ω) Max	Rated current (mA) Max
BBPY00321611100Y00	10	100	0.015	6000
BBPY00321611110Y00	11	100	0.015	6000
BBPY00321611300Y00	30	100	0.015	4000
BBPY00321611320Y00	32	100	0.015	4000
BBPY00321611330Y00	33	100	0.015	4000
BBPY00321611400Y00	40	100	0.015	4000
BBPY00321611500Y00	50	100	0.02	4000
BBPY00321611600Y00	60	100	0.02	4000
BBPY00321611700Y00	70	100	0.02	4000
BBPY00321611800Y00	80	100	0.025	3000
BBPY00321611101Y00	100	100	0.03	3000
BBPY00321611121Y00	120	100	0.03	3000
BBPY00321611151Y00	150	100	0.04	2000
BBPY00321611201Y00	200	100	0.05	2000
BBPY00321611221Y00	220	100	0.05	2000
BBPY00321611301Y00	300	100	0.06	2000
BBPY00321611331Y00	330	100	0.06	2000
BBPY00321611391Y00	390	100	0.06	2000
BBPY00321611401Y00	400	100	0.1	2000
BBPY00321611471Y00	470	100	0.1	2000
BBPY00321611501Y00	500	100	0.1	2000
BBPY00321611601Y00	600	100	0.1	2000
BBPY00321611102Y00	1000	50	0.15	1200
BBPY00321611122Y00	1200	50	0.18	1000
BBPY00321611152Y00	1500	50	0.2	800

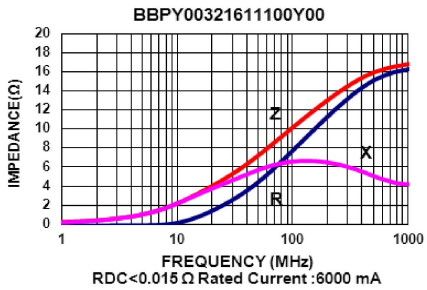
Note: When ordering, please specify tolerance code. Tolerance : Y=±25%

- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Rate Current：Applied the current to coils, the temperature rise shall not be more than 30℃
- Measure Equipment：

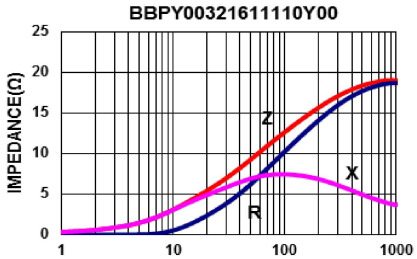
  Z：HP4291A

  RDC：HP4338B or CHEN HWA 502

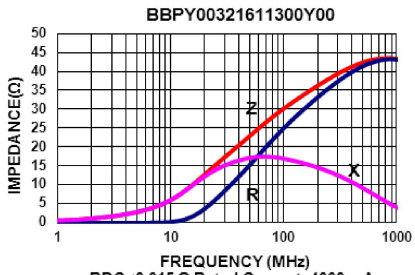
Test Instruments：Agilent E4991A Impedance / Material Analyzer



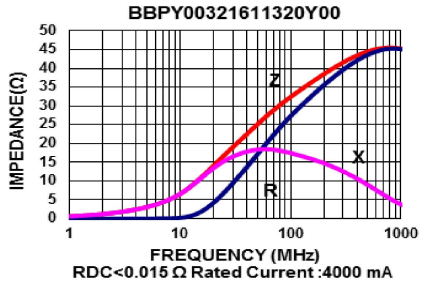
RDC<0.015 Ω Rated Current :6000 mA



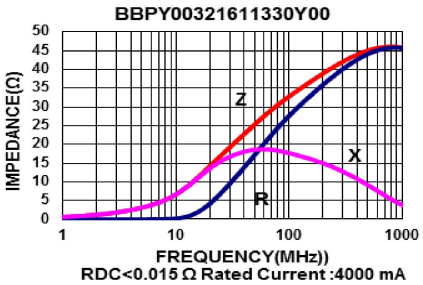
RDC<0.015 Ω Rated Current :6000 mA



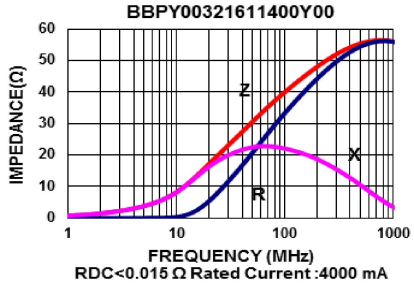
RDC<0.015 Ω Rated Current :4000 mA



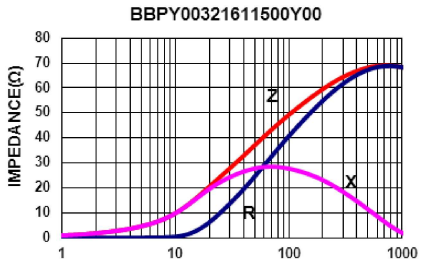
RDC<0.015 Ω Rated Current :4000 mA



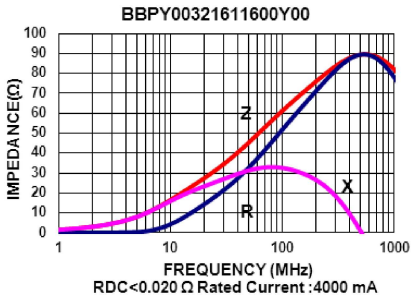
RDC<0.015 Ω Rated Current :4000 mA



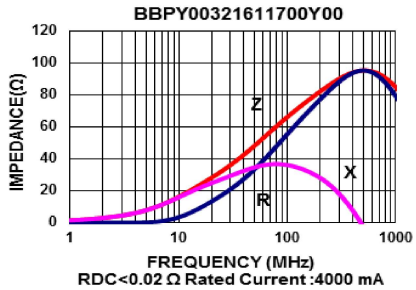
RDC<0.015 Ω Rated Current :4000 mA



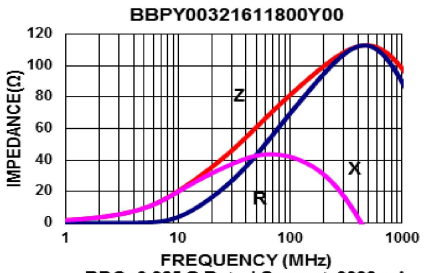
RDC<0.02 Ω Rated Current :4000 mA



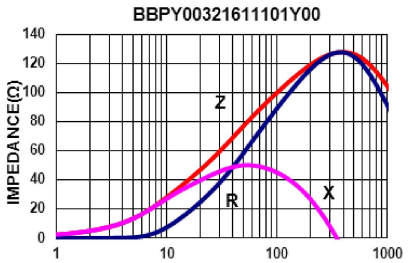
RDC<0.020 Ω Rated Current :4000 mA



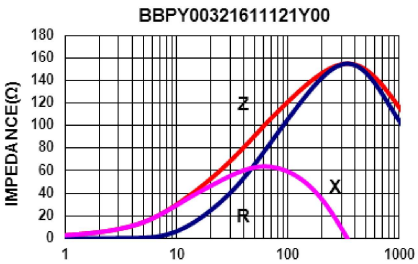
RDC<0.02 Ω Rated Current :4000 mA



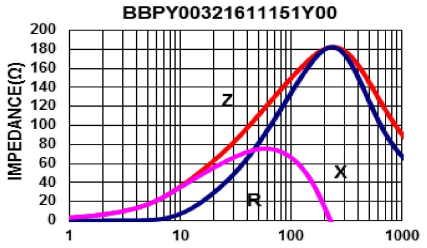
RDC<0.025 Ω Rated Current :3000 mA



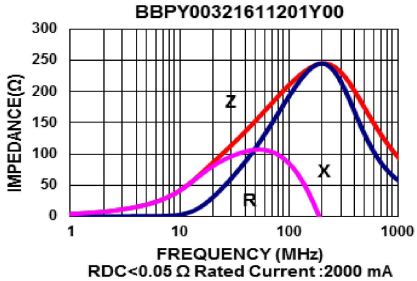
RDC<0.03 Ω Rated Current :3000 mA



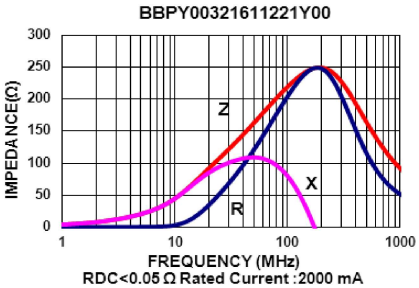
RDC<0.03 Ω Rated Current :3000 mA



RDC<0.04 Ω Rated Current :2000 mA

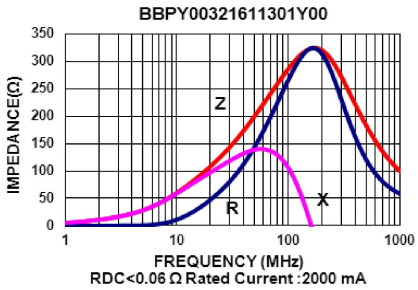


RDC<0.05 Ω Rated Current :2000 mA

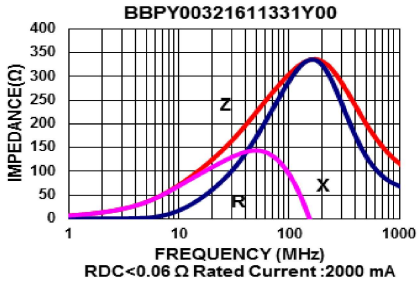


RDC<0.05 Ω Rated Current :2000 mA

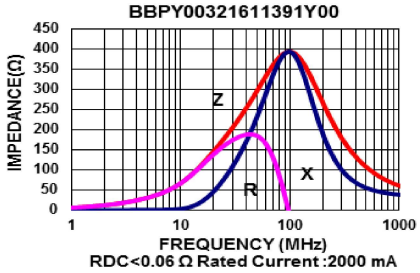
Test Instruments：Agilent E4991A Impedance / Material Analyzer



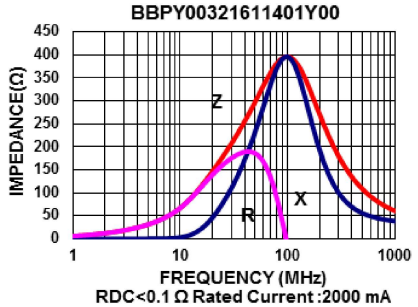
RDC<0.06 Ω Rated Current :2000 mA



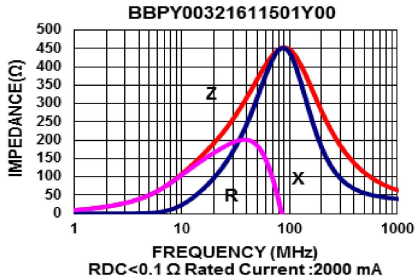
RDC<0.06 Ω Rated Current :2000 mA



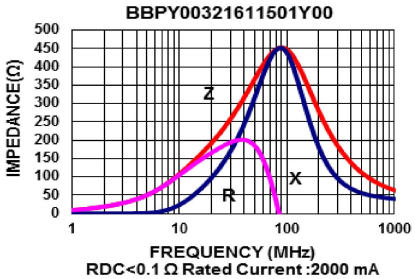
RDC<0.06 Ω Rated Current :2000 mA



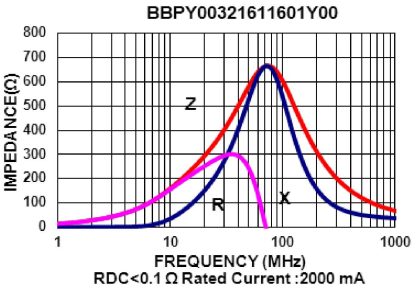
RDC<0.1 Ω Rated Current :2000 mA



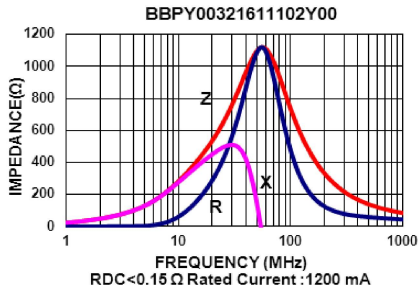
RDC<0.1 Ω Rated Current :2000 mA



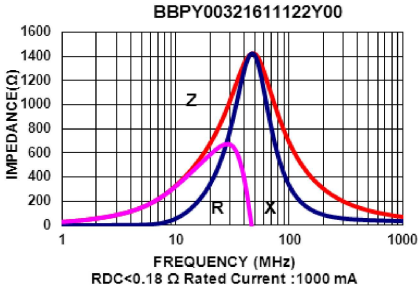
RDC<0.1 Ω Rated Current :2000 mA



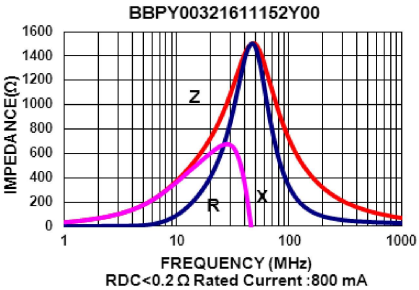
RDC<0.1 Ω Rated Current :2000 mA



RDC<0.15 Ω Rated Current :1200 mA



RDC<0.18 Ω Rated Current :1000 mA



RDC<0.2 Ω Rated Current :800 mA

Electrical Characteristics

Part Number	Impedance (Ω±25%)	Test Frequency (MHz)	DC Resistance (Ω) Max	Rated current (mA) Max
BBPY00453215700Y00	70	100	0.030	6000
BBPY00453215121Y00	120	100	0.030	4000

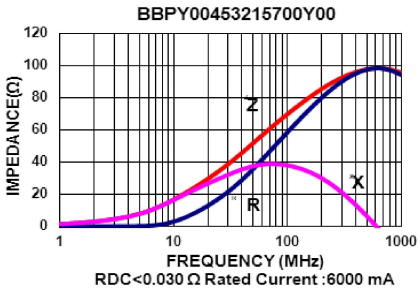
Note: When ordering, please specify tolerance code. Tolerance : Y=±25%

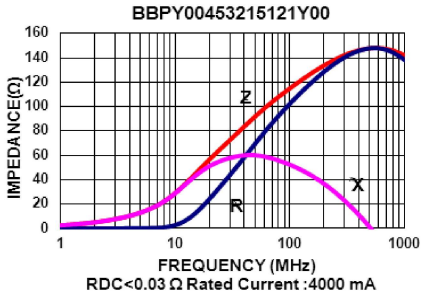
- Operating temperature range - 55℃ ~ 125℃(Including self - temperature rise)
- Rate Current：Applied the current to coils, the temperature rise shall not be more than 30℃
- Measure Equipment：

  Z：HP4291A

  RDC：HP4338B or CHEN HWA 502

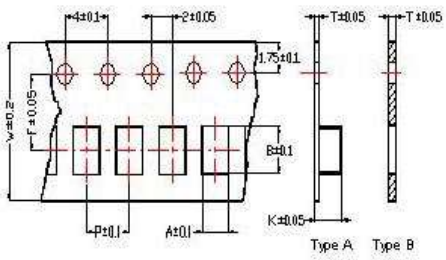
Test Instruments： Agilent E4991A Impedance / Material Analyzer



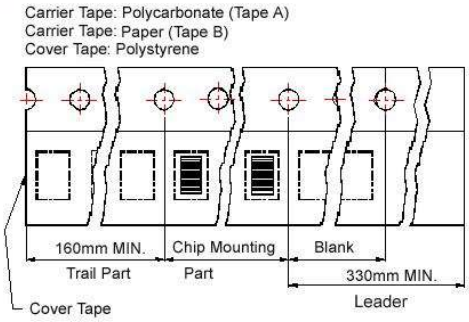


Packaging Specifications

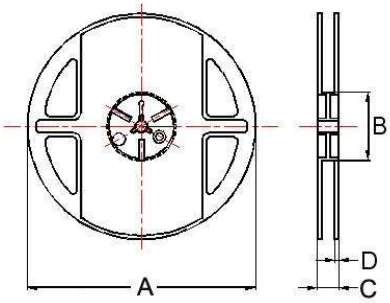
Tape Dimensions



Tape Material



Reel Dimensions



① : BBSY/BBSJ/BBNQ/BBPY ③ : BBUP
② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
⑤ : BBBK/BBGK/BBPY/BBUP
⑥ : BBSY/BBBK/BBPY/BBUP
⑦ : BBPY/BBUP

Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Quantity
	A	B	T	W	P	F	K	Tape	A	B	C	D	PCS / REEL
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160805	1.05	1.85	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	B	178	60	12	2	4000
⑤201209	1.50	2.30	0.97	8.0	4.0	3.5	-	B	178	60	12	2	4000
⑥321611	1.88	3.50	0.22	8.0	4.0	3.5	1.27	A	178	60	12	2	3000
⑦453215	3.66	4.95	0.24	12	8.0	5.5	1.85	A	178	60	14	2	1000