

Multilayer Chip Beads-JB Series

Sunlei offers hundreds of multi-layered ferrite chip beads with various sizes, frequency characteristics and a board range of impedance values to provide a powerful solutions for EMI problems.

Features

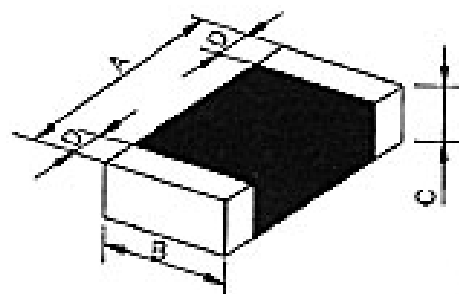
1. Standard type used to suppress lower-frequency, lower current signals.
2. Impedance over a broad frequency range.
3. Suitable for flow and reflow soldering.
4. Available in 8 sizes.



Applications

I/O ports, DC power lines, and Signal lines.
Computer and peripheral products.
Consumer electronic products.

Dimensions (mm)



Product Identification

JB 160808U- 201 - PF

JB: SERIES NAME

160808: DIMENSION SIZE CODE

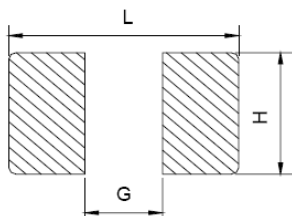
U: Material Type CODE

201: IMPEDANCE CODE.

PF: Pb Free

SERIES	A	B	C	D
JB100505	1.0±0.10	0.50±0.10	0.50±0.10	0.25±0.10
JB160808	1.6±0.20	0.80±0.20	0.8±0.20	0.3±0.2
JB201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
JB321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
JB321616	3.2±0.20	1.60±0.20	1.6±0.20	0.5±0.3
JB322513	3.2±0.20	0.25±0.20	1.3±0.20	0.5±0.3
JB451616	4.5±0.25	1.60±0.20	1.6±0.20	0.5±0.3
JB453215	4.5±0.25	3.20±0.20	1.5±0.20	0.5±0.3

RECOMMENDER P.C.B LAYOUT

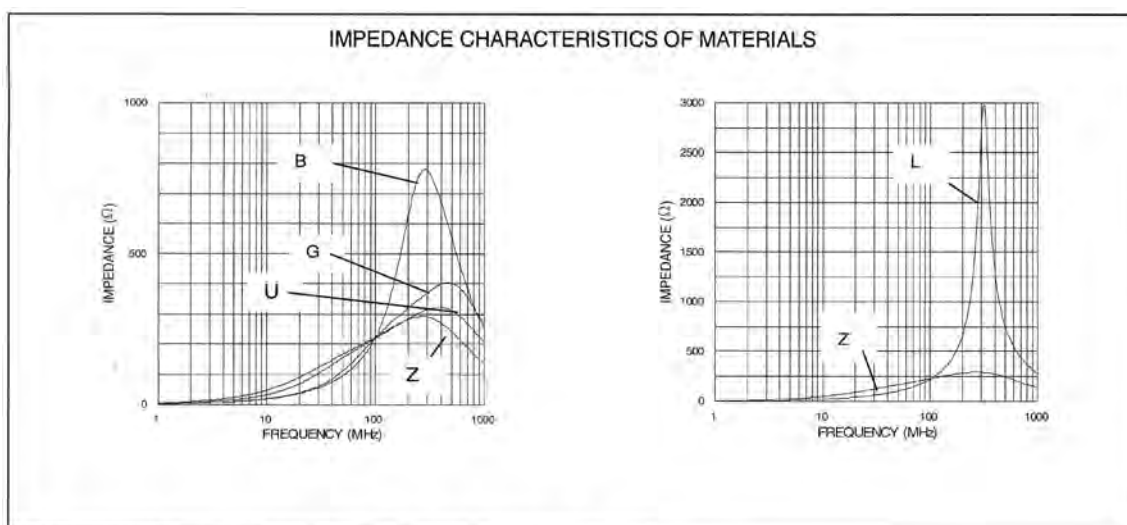


SERIES	L	G	H
JB100505	1.2~1.4	0.4	0.4
JB160808	2.4~3.4	0.8	0.6
JB201209	3.0~4.0	1.2	1.0
JB321611	4.2~5.2	2.0	1.2
JB321616	4.2~5.2	2.0	1.2
JB322513	5.5~6.5	2.0	1.8
JB451616	5.5~6.5	3.0	1.2
JB453215	5.5~6.5	3.0	2.4

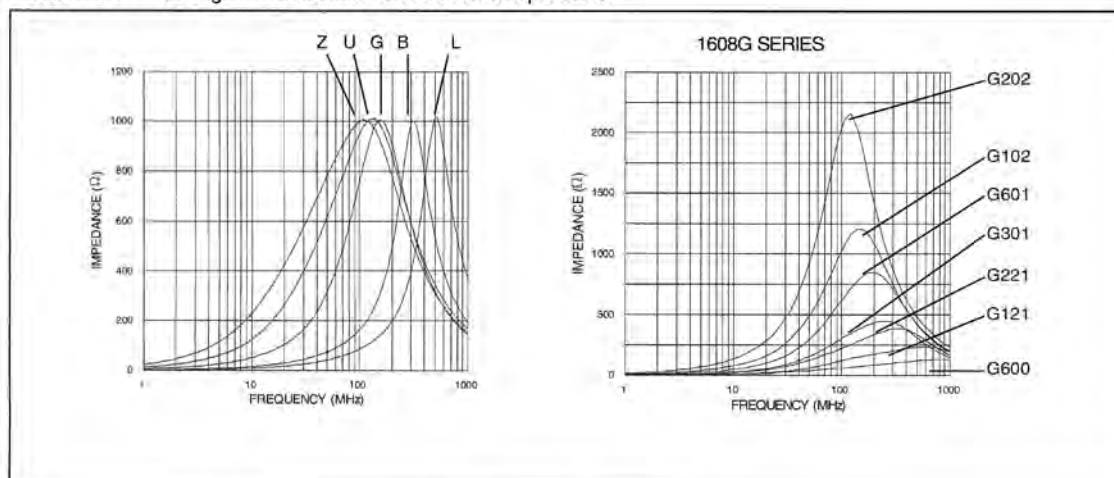
Multilayer Chip Beads-JB Series

MATERIAL CHARACTERISTICS

ITEM		UNIT	Material Code				
			L	B	G	U	Z
Initial Permeability	μ_{iac}	-	25	45	110	200	500
Maximun Permeability	μ_M	-	125	125	250	450	900
Saturation Flux Density at 10 Oe	Bs	Gauss	2000	2000	1700	1400	1500
Curie Temperature	Tc	°C	> 200	> 200	> 130	> 130	> 100
Volume Resistivity	ρ	Ω -m	105	105	105	105	105
Temperature Coefficient(Inductance)		$10^{-4}/^{\circ}\text{C}$	10		12	13	5
Density		g/cm^3	4.8		4.8	4.8	4.8



- ✧ Z Material is for applications whose blocking region is near 100 MHz.
- ✧ L material, an improvement of B material, has sharp impedance characteristics at high frequency.
- ✧ G material is for application whose signal frequency is far from the cut off region. Suitable for application requires low insertion loss at high frequency.
- ✧ Please confirm the signal waveform to choose suitable products.



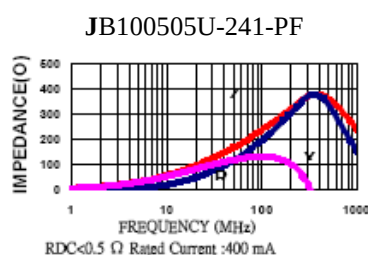
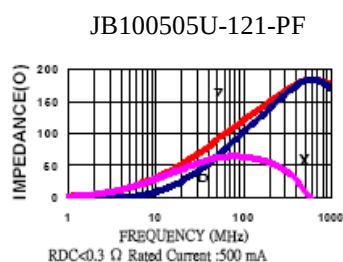
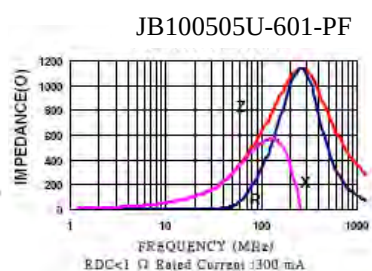
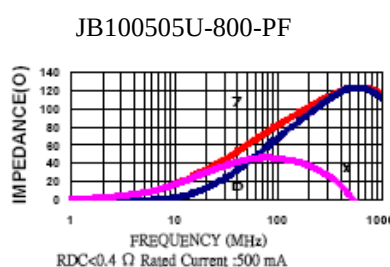
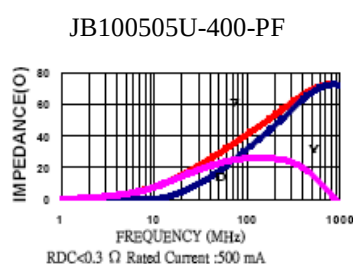
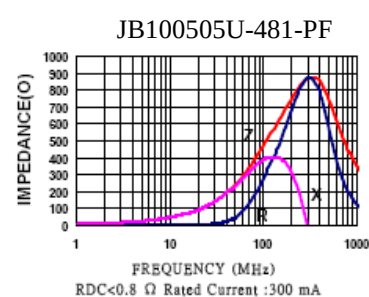
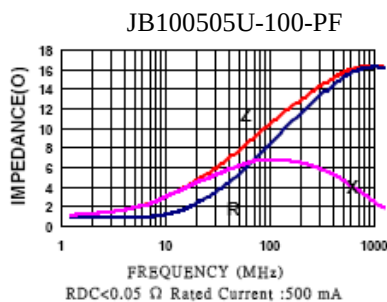
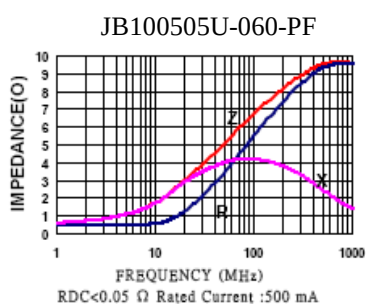
- ✧ Different materials are available for different application range.
- ✧ With one material, higher impedance has sharper characteristics.

Multilayer Chip Beads-JB Series

JB-U series For General Use

Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resietance (Ω)max	Rated current (mA)max
JB100505U-060-PF	100	6	0.05	500
JB100505U-100-PF	100	10	0.05	500
JB100505U-400-PF	100	40	0.20	500
JB100505U-800-PF	100	80	0.20	500
JB100505U-121-PF	100	120	0.25	400
JB100505U-241-PF	100	240	0.40	400
JB100505U-481-PF	100	480	0.50	300
JB100505U-601-PF	100	600	0.60	300
JB100505U-102-PF	100	1000	0.95	200
JB100505U-152-PF	100	1500	1.15	100
JB100505U-182-PF	100	1800	1.40	100

Test Instruments:HP4291A Impedance / Material Analyzer



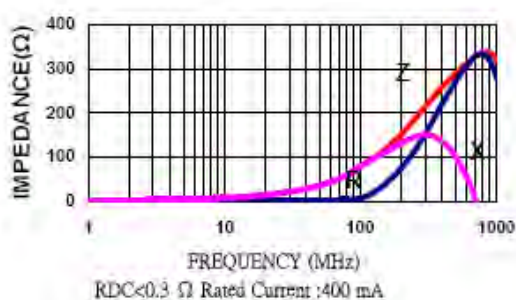
Multilayer Chip Beads-JB Series

JB-B series For High speed signals Use

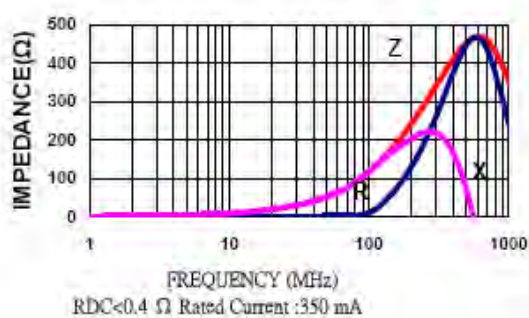
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resistance (Ω)max	Rated current (mA)max
JB100505B-060-PF	100	6	0.10	300
JB100505B-100-PF	100	10	0.20	200
JB100505B-400-PF	100	40	0.40	150
JB100505B-800-PF	100	80	0.60	100
JB100505B-121-PF	100	120	0.80	50

Test Instruments:HP4291A Impedance / Material Analyzer

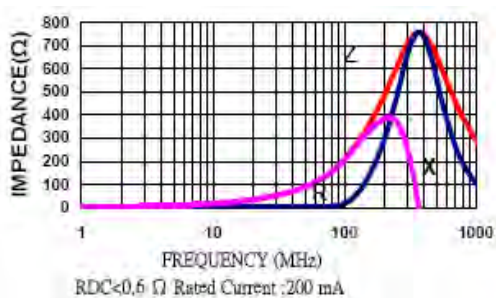
JB100505B-800-PF



JB100505B-121-PF



JB100505B-241-PF

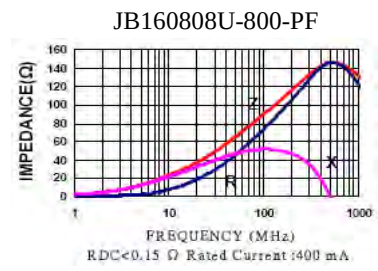
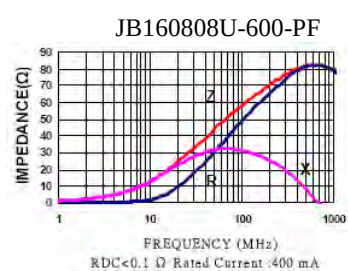
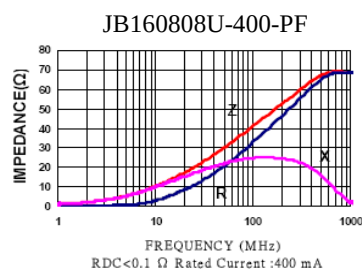
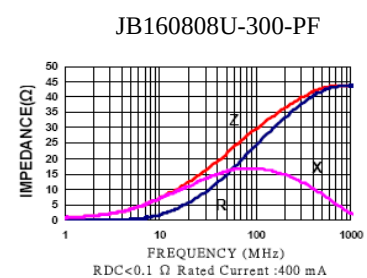
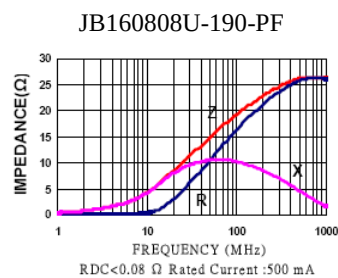
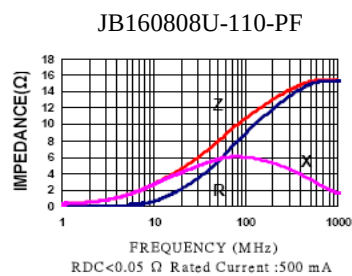


Multilayer Chip Beads-JB Series

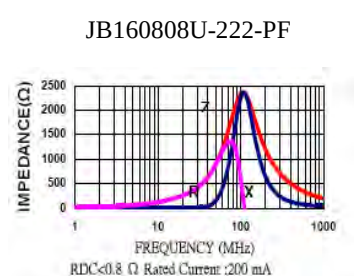
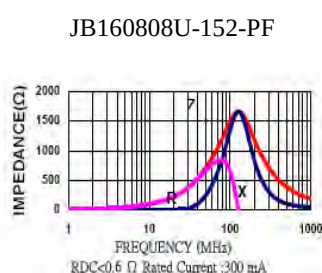
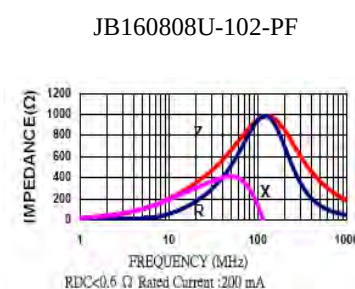
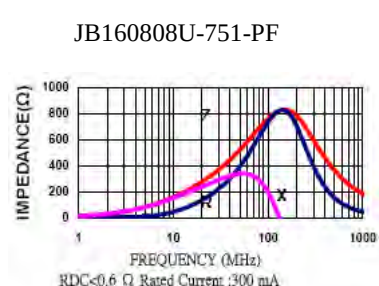
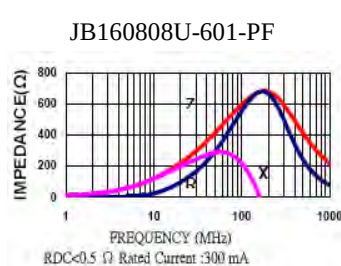
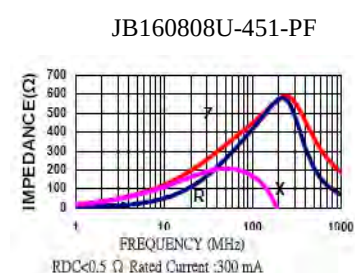
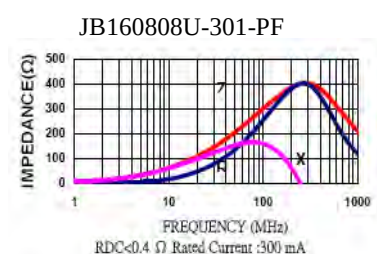
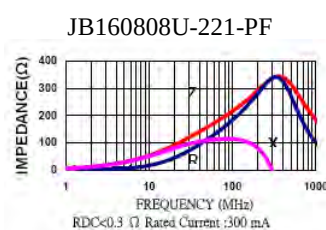
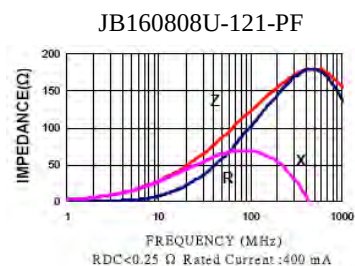
JB-U series For General Use

Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resistance (Ω)max	Rated current (mA)max
JB160808U-110-PF	100	11	0.05	500
JB160808U-190-PF	100	19	0.08	500
JB160808U-300-PF	100	30	0.10	400
JB160808U-400-PF	100	40	0.10	400
JB160808U-600-PF	100	60	0.10	400
JB160808U-800-PF	100	80	0.15	400
JB160808U-121-PF	100	120	0.25	400
JB160808U-221-PF	100	220	0.30	300
JB160808U-301-PF	100	300	0.40	300
JB160808U-451-PF	100	450	0.50	300
JB160808U-601-PF	100	600	0.60	300
JB160808U-751-PF	100	750	0.60	300
JB160808U-102-PF	100	1000	0.60	300
JB160808U-152-PF	100	1500	0.60	300
JB160808U-222-PF	100	2200	0.80	200
JB160808U-272-PF	100	2700	0.80	200

Test Instruments:HP4291A Impedance / Material Analyzer



Multilayer Chip Beads-JB Series





昕磊科技
SUNLEI T.C.

追求卓越、不斷創新、創造雙贏

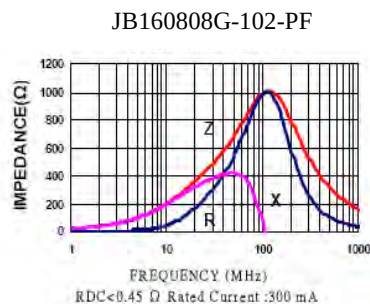
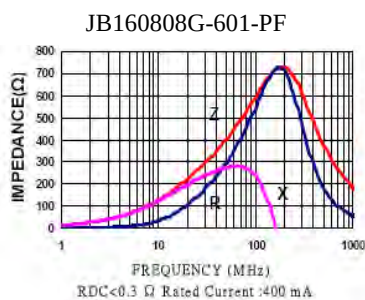
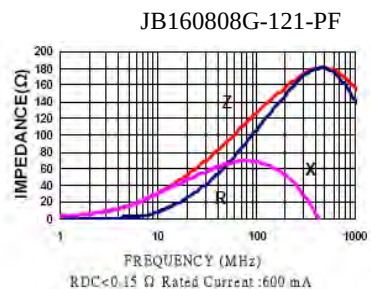
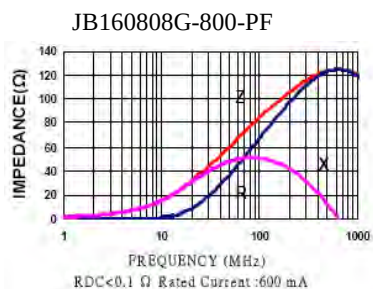
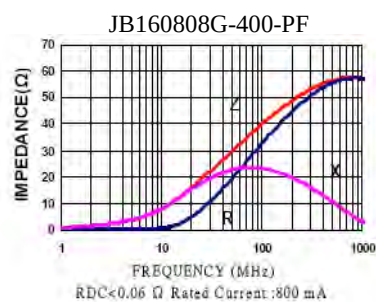
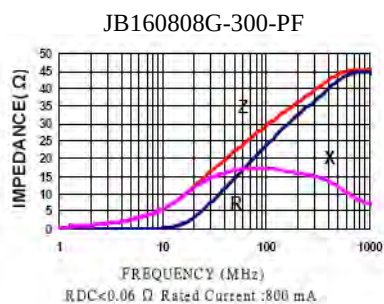
www.sunlei.com.tw

Multilayer Chip Beads-JB Series

JB-G series For Mid current Use

Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resistance (Ω)max	Rated current (mA)max
JB160808G-110-PF	100	11	0.03	1000
JB160808G-190-PF	100	19	0.05	1000
JB160808G-300-PF	100	30	0.06	800
JB160808G-400-PF	100	40	0.06	800
JB160808G-600-PF	100	60	0.06	600
JB160808G-800-PF	100	80	0.10	600
JB160808G-121-PF	100	120	0.15	600
JB160808G-221-PF	100	220	0.18	400
JB160808G-301-PF	100	300	0.25	400
JB160808G-451-PF	100	450	0.30	400
JB160808G-601-PF	100	600	0.30	400
JB160808G-751-PF	100	750	0.45	300
JB160808G-102-PF	100	1000	0.45	300

Test Instruments:HP4291A Impedance / Material Analyzer



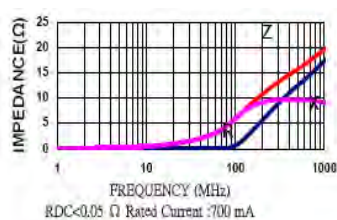
Multilayer Chip Beads-JB Series

JB-B series For High speed signals Use

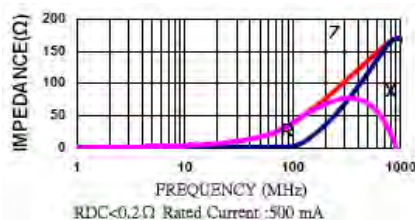
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resietance (Ω)max	Rated current (mA)max
JB160808B-060-PF	100	6	0.05	500
JB160808B-100-PF	100	10	0.07	400
JB160808B-400-PF	100	40	0.20	300
JB160808B-600-PF	100	60	0.25	300
JB160808B-800-PF	100	80	0.25	300
JB160808B-121-PF	100	120	0.30	300
JB160808B-241-PF	100	240	0.35	200
JB160808B-301-PF	100	300	0.40	200
JB160808B-481-PF	100	480	0.50	200
JB160808B-601-PF	100	600	0.50	200
JB160808B-102-PF	100	1000	0.60	100
JB160808B-122-PF	100	1200	0.60	100
JB160808B-152-PF	100	1500	0.70	100
JB160808B-182-PF	100	1800	0.80	100
JB160808B-222-PF	100	2200	1.00	50
JB160808B-252-PF	100	2500	1.00	50

Test Instruments:HP4291A Impedance / Material Analyzer

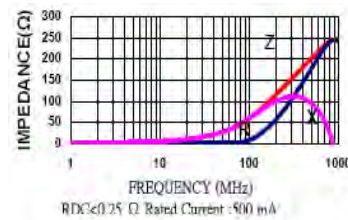
JB160808B-060-PF



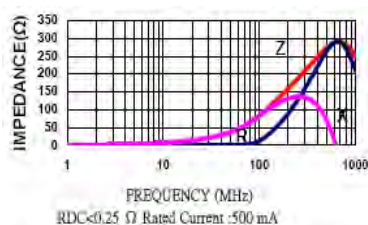
JB160808B-400-PF



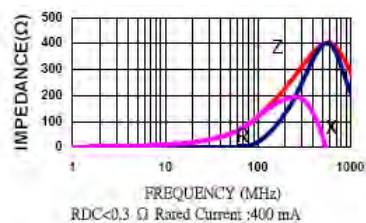
JB160808B-600-



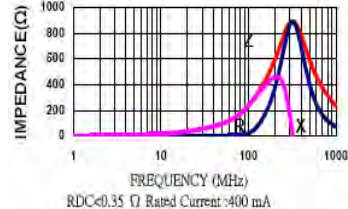
JB160808B-800-PF



JB160808B-121-



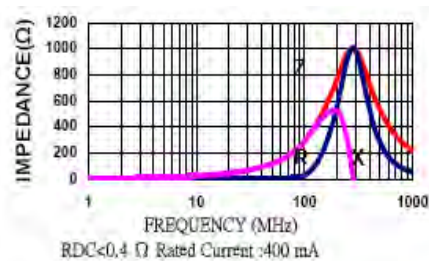
JB160808B-



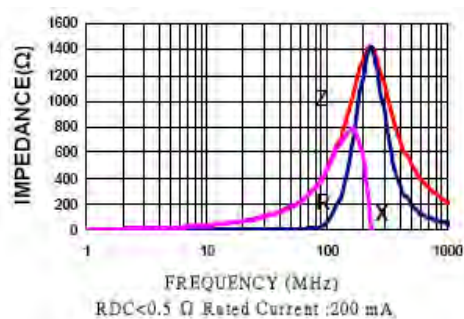


Multilayer Chip Beads-JB Series

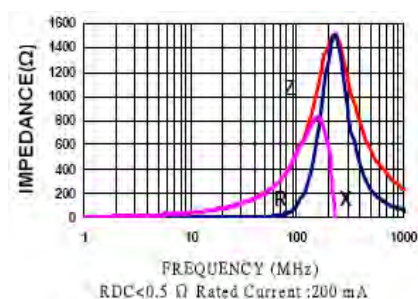
JB160808B-301-PF



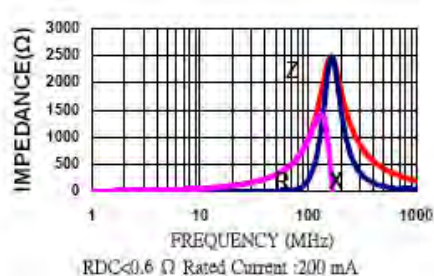
JB160808B-481-PF



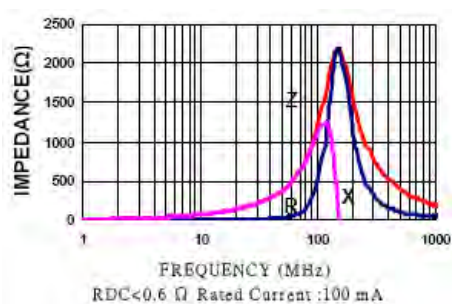
JB160808B-601-PF



JB160808B-102-



JB160808B-122-PF

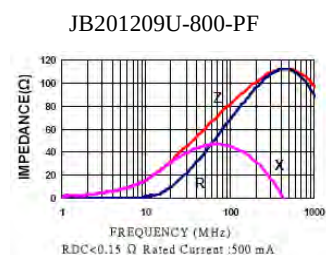
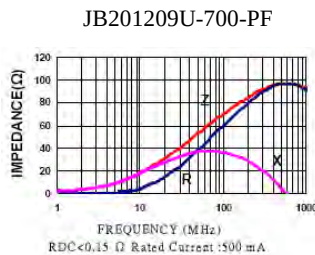
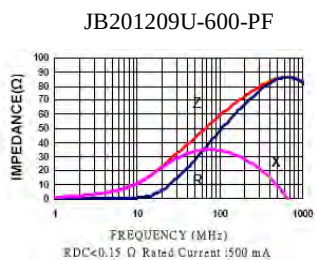
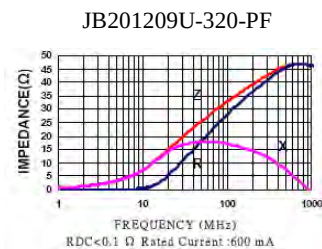
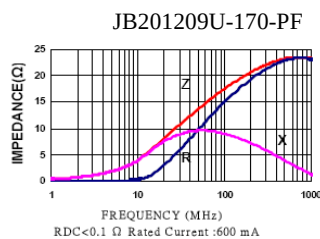
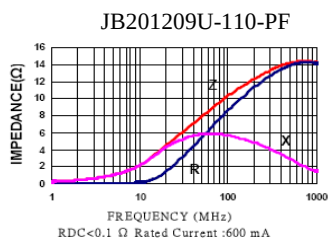


Multilayer Chip Beads-JB Series

JB-U series For General Use

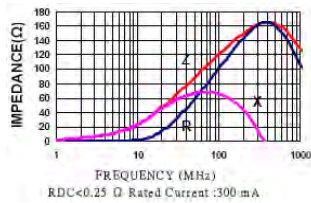
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resistance (Ω)max	Rated current (mA)max
JB201209U-070-PF	100	7	0.10	600
JB201209U-090-PF	100	9	0.10	600
JB201209U-110-PF	100	11	0.10	600
JB201209U-170-PF	100	17	0.10	600
JB201209U-320-PF	100	32	0.10	600
JB201209U-600-PF	100	60	0.15	500
JB201209U-700-PF	100	70	0.15	500
JB201209U-800-PF	100	80	0.15	500
JB201209U-121-PF	100	120	0.25	300
JB201209U-151-PF	100	150	0.25	300
JB201209U-221-PF	100	220	0.30	300
JB201209U-301-PF	100	300	0.30	300
JB201209U-401-PF	100	400	0.30	300
JB201209U-501-PF	100	500	0.40	300
JB201209U-601-PF	100	600	0.40	300
JB201209U-751-PF	100	750	0.50	200
JB201209U-102-PF	100	1000	0.50	200
JB201209U-152-PF	100	1500	0.60	200
JB201209U-202-PF	100	2000	0.70	200
JB201209U-222-PF	100	2200	0.70	200
JB201209U-252-PF	100	2500	0.70	200
JB201209U-272-PF	100	2700	0.70	200

Test Instruments:HP4291A Impedance / Material Analyzer

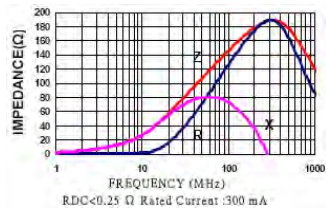


Multilayer Chip Beads-JB Series

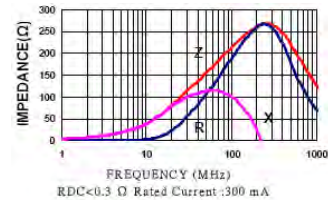
JB201209U-121-PF



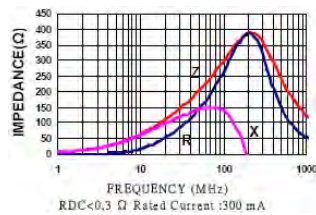
JB201209U-151-PF



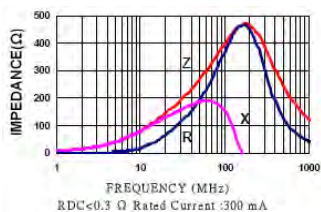
JB201209U-221-PF



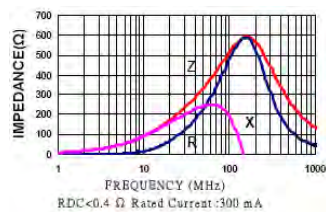
JB201209U-301-PF



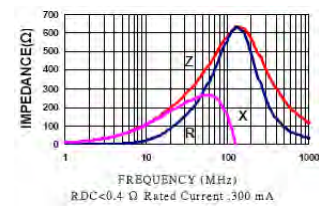
JB201209U-401-



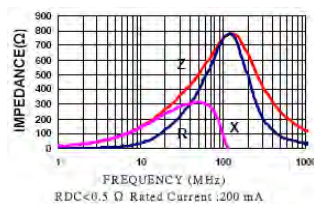
JB201209U-501-PF



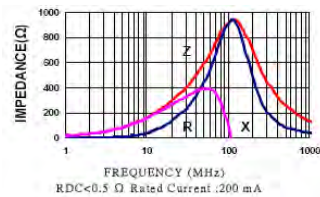
JB201209U-601-PF



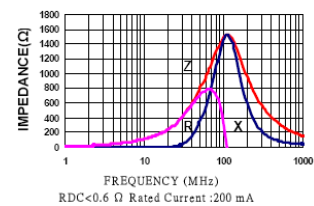
JB201209U-751-PF



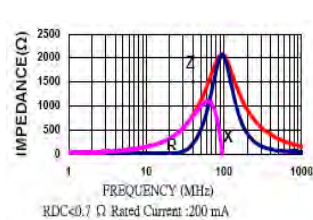
JB201209U-102-PF



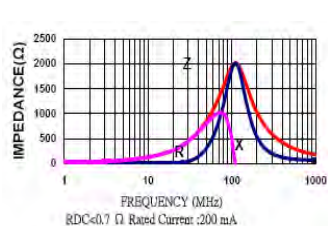
JB201209U-152-PF



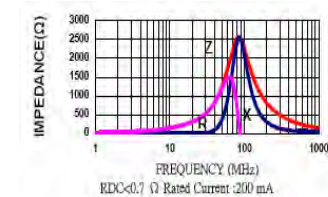
JB201209U-202-PF



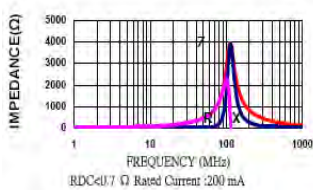
JB201209U-222-PF



JB201209U-252-PF



JB201209U-272-PF



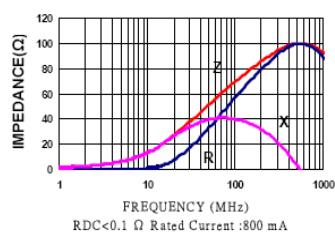
Multilayer Chip Beads-JB Series

JB-G series For Mid current Use

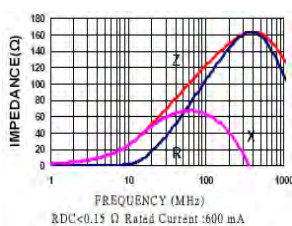
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resistance (Ω)max	Rated current (mA)max
JB201209G-070-PF	100	7	0.06	1000
JB201209G-090-PF	100	9	0.06	1000
JB201209G-110-PF	100	11	0.06	1000
JB201209G-170-PF	100	17	0.06	1000
JB201209G-320-PF	100	32	0.06	1000
JB201209G-600-PF	100	60	0.10	800
JB201209G-700-PF	100	70	0.10	800
JB201209G-800-PF	100	80	0.10	800
JB201209G-121-PF	100	120	0.15	600
JB201209G-151-PF	100	150	0.15	600
JB201209G-221-PF	100	220	0.18	600
JB201209G-301-PF	100	300	0.18	600
JB201209G-401-PF	100	400	0.18	600
JB201209G-501-PF	100	500	0.25	500
JB201209G-601-PF	100	600	0.25	500
JB201209G-751-PF	100	750	0.30	400
JB201209G-102-PF	100	1000	0.30	400
JB201209G-152-PF	100	1500	0.40	400
JB201209G-202-PF	100	2000	0.55	400

Test Instruments:HP4291A Impedance / Material Analyzer

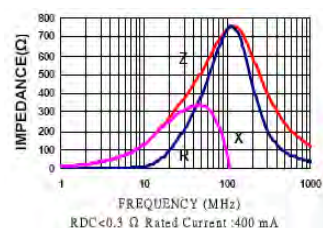
JB201209G-700-PF



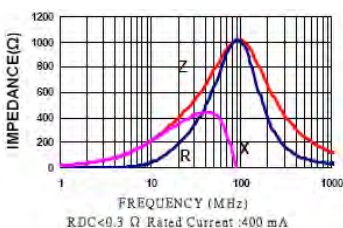
JB201209G-121-PF



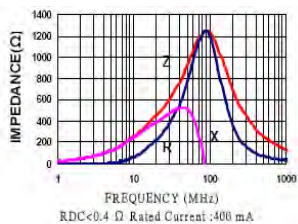
JB201209G-751-PF



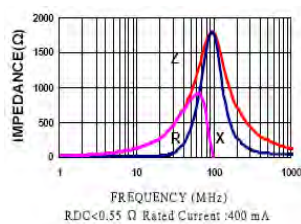
JB201209G-102-PF



JB201209G-152-PF



JB201209G-202-PF





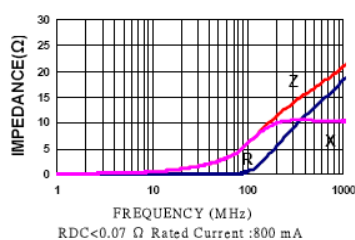
Multilayer Chip Beads-JB Series

JB-B series For High speed signals Use

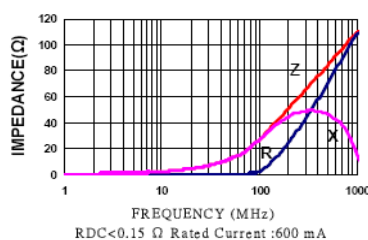
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resietance (Ω)max	Rated current (mA)max
JB201209B-060-PF	100	6	0.07	800
JB201209B-110-PF	100	11	0.10	700
JB201209B-260-PF	100	26	0.15	600
JB201209B-320-PF	100	32	0.15	600
JB201209B-600-PF	100	60	0.15	500
JB201209B-750-PF	100	75	0.15	500
JB201209B-900-PF	100	90	0.15	500
JB201209B-121-PF	100	120	0.20	400
JB201209B-151-PF	100	150	0.20	400
JB201209B-171-PF	100	170	0.30	400
JB201209B-221-PF	100	220	0.30	300
JB201209B-301-PF	100	300	0.30	300
JB201209B-401-PF	100	400	0.35	300
JB201209B-501-PF	100	500	0.35	200
JB201209B-601-PF	100	600	0.35	200
JB201209B-102-PF	100	1000	0.40	200
JB201209B-122-PF	100	1200	0.45	200
JB201209B-152-PF	100	1500	0.45	200
JB201209B-222-PF	100	2200	0.50	200
JB201209B-272-PF	100	2700	0.60	200

Test Instruments:HP4291A Impedance / Material Analyzer

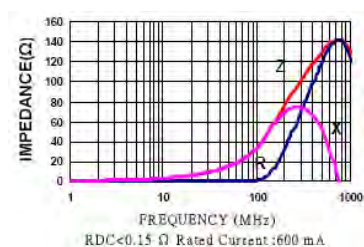
JB201209B-060-PF



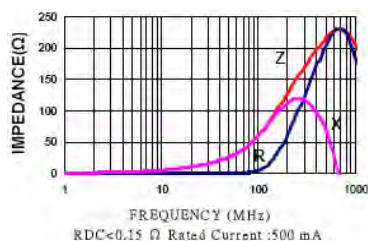
JB201209B-260-PF



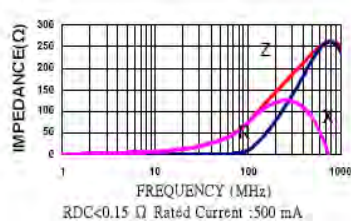
JB201209B-320-PF



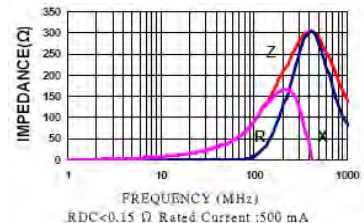
JB201209B-600-PF



JB201209B-750-PF



JB201209B-900-PF





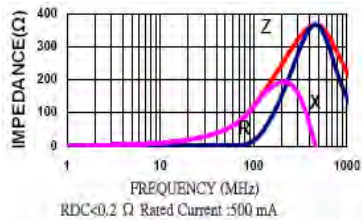
昕磊科技
SUNLEI T.C.

追求卓越、不斷創新、創造雙贏

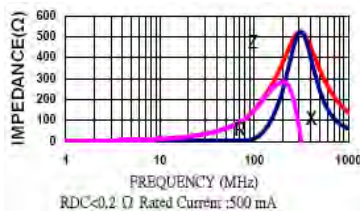
www.sunlei.com.tw

Multilayer Chip Beads-JB Series

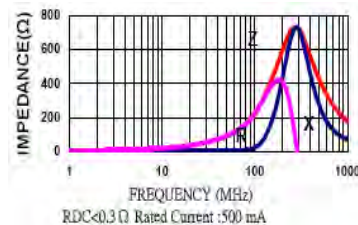
JB201209B-121-PF



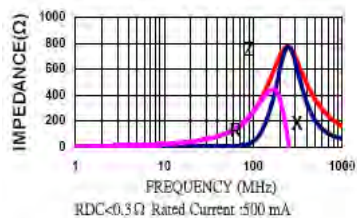
JB201209B-151-



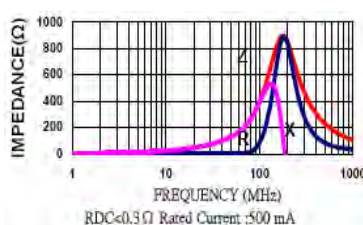
JB201209B-221-PF



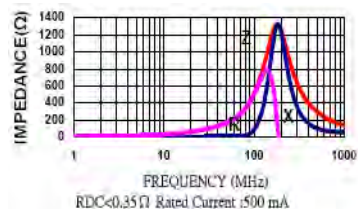
JB201209B-301-PF



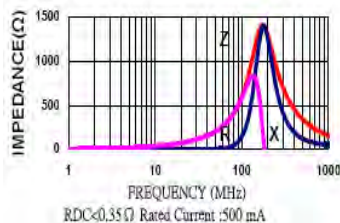
JB201209B-401-PF



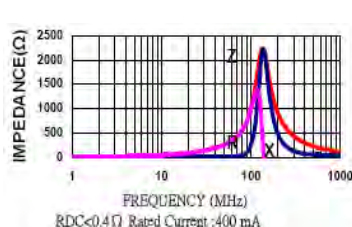
JB201209B-501-PF



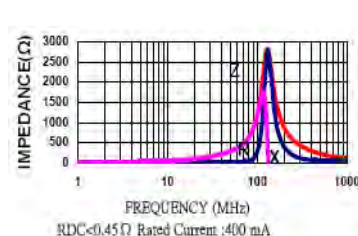
JB201209B-601-PF



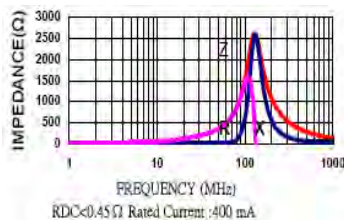
JB201209B-102-PF



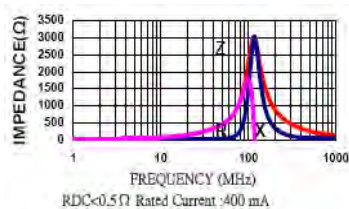
JB201209B-122-PF



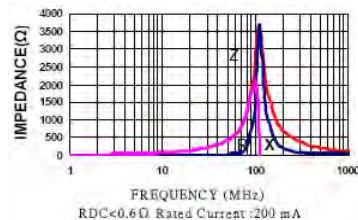
JB201209B-152-PF



JB201209B-222-PF



JB201209B-272-PF

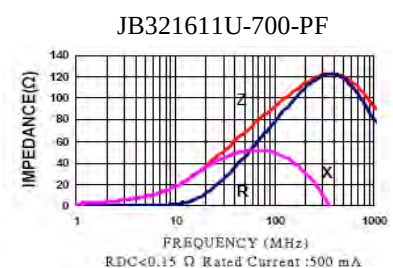
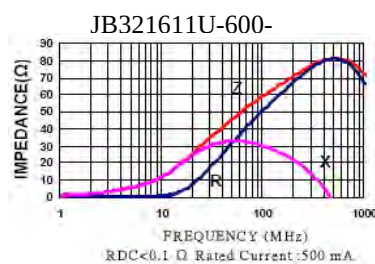
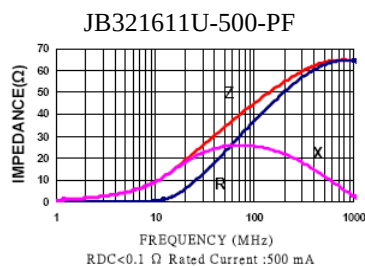
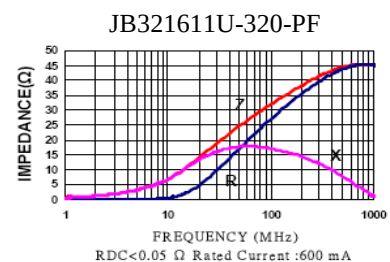
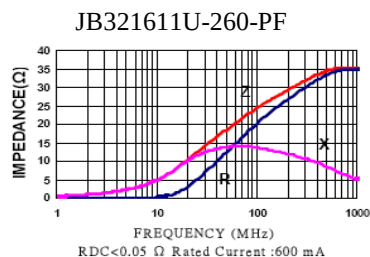
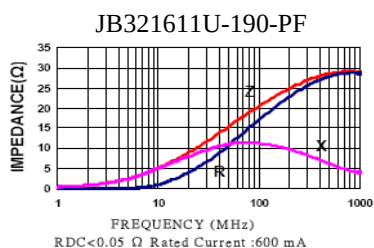


Multilayer Chip Beads-JB Series

JB-U series For General Use

Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resietance (Ω)max	Rated current (mA)max
JB321611U-190-PF	100	19	0.05	600
JB321611U-260-PF	100	26	0.05	600
JB321611U-320-PF	100	32	0.05	600
JB321611U-500-PF	100	50	0.10	500
JB321611U-600-PF	100	60	0.10	500
JB321611U-700-PF	100	70	0.10	500
JB321611U-900-PF	100	90	0.15	500
JB321611U-121-PF	100	120	0.15	500
JB321611U-151-PF	100	150	0.15	500
JB321611U-201-PF	100	200	0.20	400
JB321611U-401-PF	100	400	0.20	400
JB321611U-501-PF	100	500	0.20	400
JB321611U-601-PF	100	600	0.30	400
JB321611U-102-PF	50	1000	0.40	200
JB321611U-122-PF	50	1200	0.40	200
JB321611U-152-PF	50	1500	0.45	200
JB321611U-202-PF	30	2000	0.60	200
JB321611U-272-PF	30	2700	0.60	200

Test Instruments:HP4291A Impedance / Material Analyzer





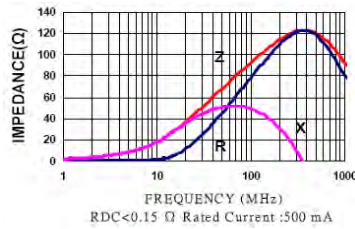
昕磊科技
SUNLEI T.C.

追求卓越、不斷創新、創造雙贏

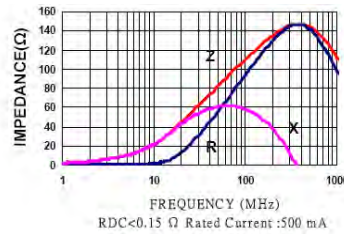
www.sunlei.com.tw

Multilayer Chip Beads-JB Series

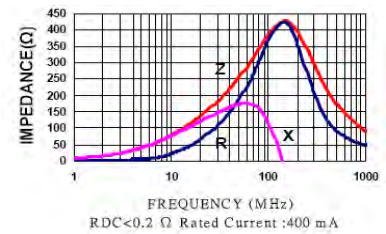
JB321611U-900-PF



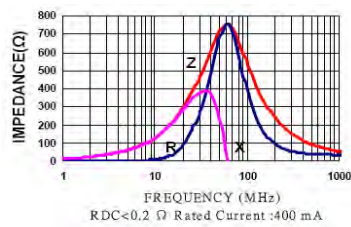
JB321611U-121-PF



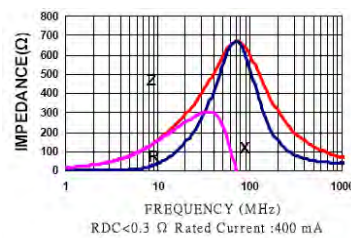
JB321611U-401-PF



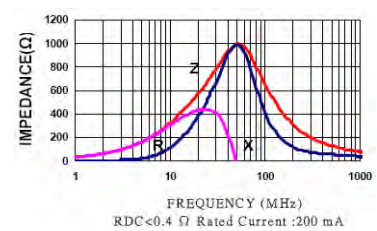
JB321611U-501-PF



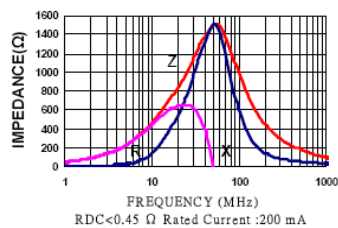
JB321611U-601-PF



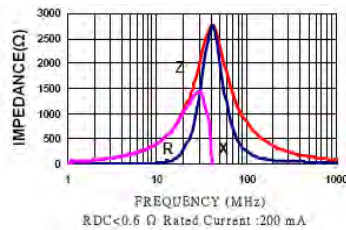
JB321611U-102-PF



JB321611U-152-PF



JB321611U-202-PF



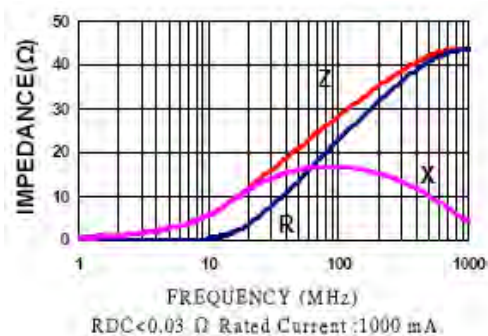
Multilayer Chip Beads-JB Series

JB-G series For Mid current Use

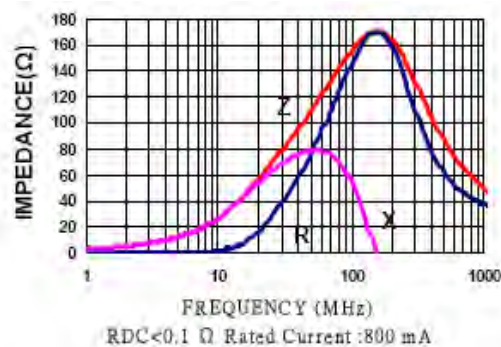
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resistance (Ω)max	Rated current (mA)max
JB321611G-190-PF	100	19	0.03	1000
JB321611G-260-PF	100	26	0.03	1000
JB321611G-320-PF	100	32	0.03	1000
JB321611G-500-PF	100	50	0.06	800
JB321611G-600-PF	100	60	0.06	800
JB321611G-700-PF	100	70	0.06	800
JB321611G-900-PF	100	90	0.10	800
JB321611G-121-PF	100	120	0.10	800
JB321611G-151-PF	100	150	0.10	800
JB321611G-201-PF	100	200	0.15	600
JB321611G-401-PF	100	400	0.15	600
JB321611G-501-PF	100	500	0.15	600
JB321611G-601-PF	100	600	0.20	500
JB321611G-102-PF	50	1000	0.25	400
JB321611G-122-PF	30	1200	0.25	400
JB321611G-202-PF	30	2000	0.35	400

Test Instruments: HP4291A Impedance / Material Analyzer

JB321611G-260-PF



JB321611G-151-PF



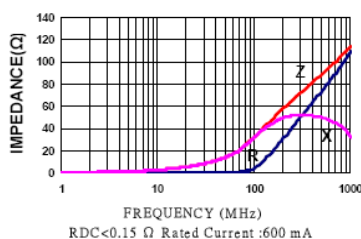
Multilayer Chip Beads-JB Series

JB-B series For High speed signals Use

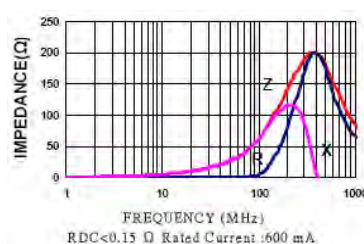
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	DC Resietance (Ω)max	Rated current (mA)max
JB321611B-320-PF	100	32	0.15	600
JB321611B-600-PF	100	60	0.15	500
JB321611B-800-PF	100	80	0.15	500
JB321611B-900-PF	100	90	0.15	500
JB321611B-121-PF	100	120	0.20	400
JB321611B-151-PF	100	150	0.20	400
JB321611B-201-PF	100	200	0.25	300
JB321611B-221-PF	100	220	0.30	300
JB321611B-351-PF	100	350	0.30	300
JB321611B-401-PF	100	400	0.30	300
JB321611B-601-PF	100	600	0.35	300
JB321611B-122-PF	100	1200	0.40	200
JB321611B-152-PF	100	1500	0.45	200
JB321611B-202-PF	30	2000	0.35	400

Test Instruments:HP4291A Impedance / Material Analyzer

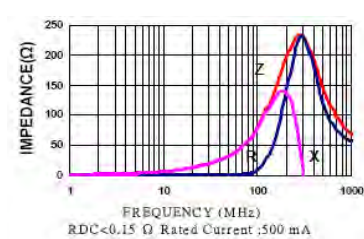
JB321611B-320-PF



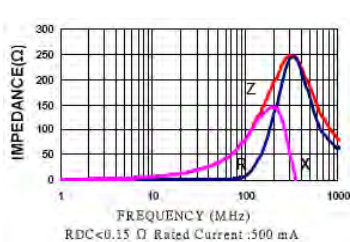
JB321611B-600-PF



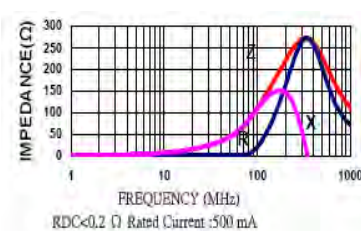
JB321611B-800-PF



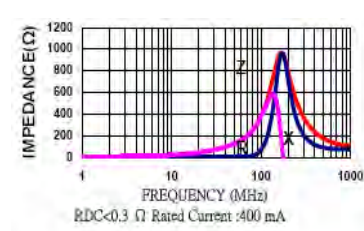
JB321611B-900-PF



JB321611B-121-PF

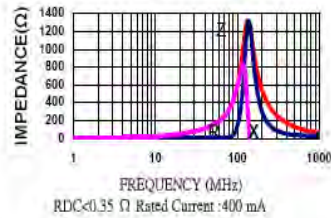


JB321611B-401-PF

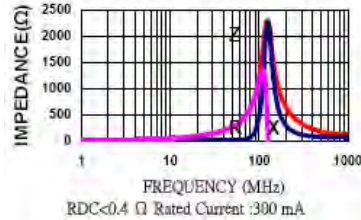


Multilayer Chip Beads-JB Series

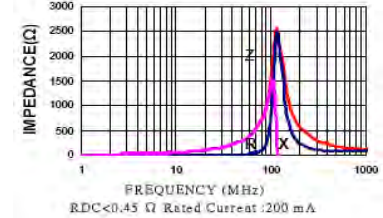
JB321611B-601-PF



JB321611B-122-PF



JB321611B-152-PF



Multilayer Chip Beads-JB Series

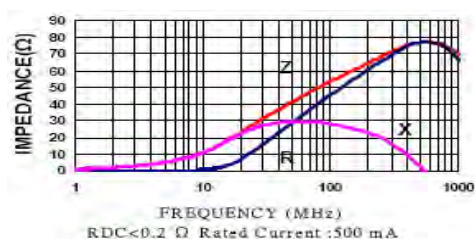
JB-U series For General Use

Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	Dc Resietance (Ω)max	Rated current (mA)max
JB321616U-250-PF	100	25	0.10	500
JB321616U-600-PF	100	60	0.20	500
JB321616U-700-PF	100	70	0.20	500

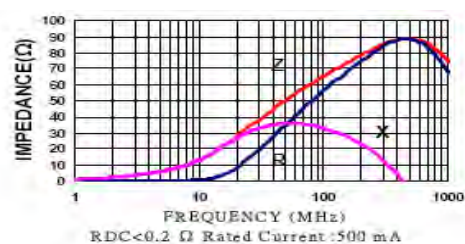
JB322513U-320-PF	100	32	0.20	500
JB322513U-600-PF	100	60	0.20	500
JB322513U-900-PF	100	90	0.20	500

Test Instruments:HP4291A Impedance / Material Analyzer

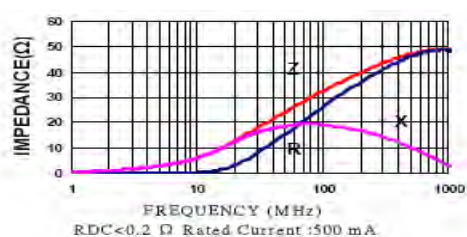
JB321616U-600-PF



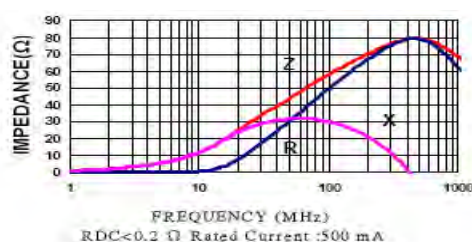
JB321616U-700-PF



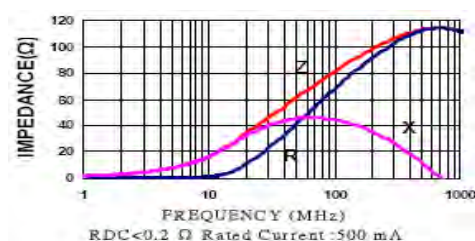
JB322513U-320-PF



JB322513U-600-PF



JB322513U-900-PF



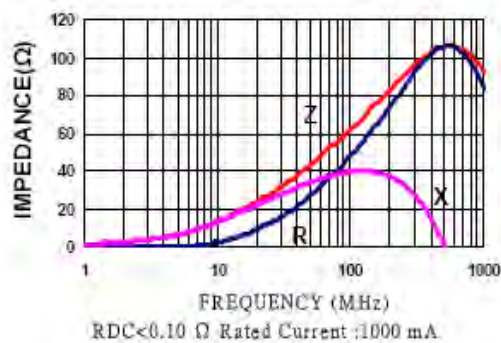
Multilayer Chip Beads-JB Series

JB-G series For Mid current Use

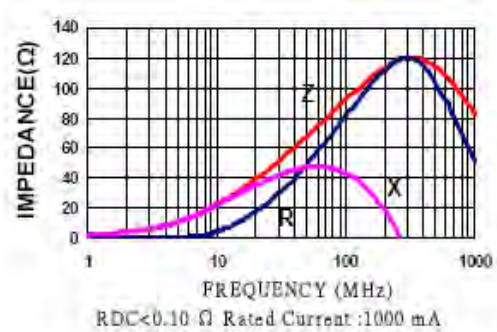
Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	Dc Resistance (Ω)max	Rated current (mA)max
JB321611G-250-PF	100	25	0.10	1000
JB321611G-600-PF	100	60	0.10	1000
JB321611G-700-PF	100	70	0.10	1000
JB322513G-320-PF	100	32	0.10	1000
JB322513G-600-PF	100	60	0.10	1000
JB322513G-900-PF	100	90	0.10	1000

Test Instruments: HP4291A Impedance / Material Analyzer

JB322513G-600-PF



JB322513G-900-PF



Multilayer Chip Beads-JB Series

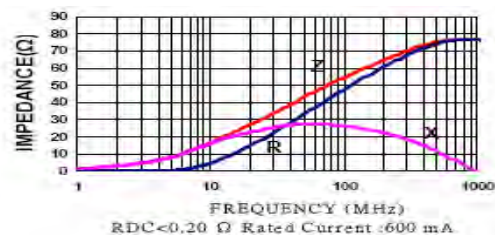
JB-U series For General Use

Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	Dc Resietance (Ω)max	Rated current (mA)max
JB451616U-500-PF	100	50	0.20	600
JB451616U-600-PF	100	60	0.20	600
JB451616U-800-PF	100	80	0.20	600
JB451616U-101-PF	100	100	0.30	500
JB451616U-151-PF	100	150	0.30	500
JB451616U-171-PF	100	170	0.30	500

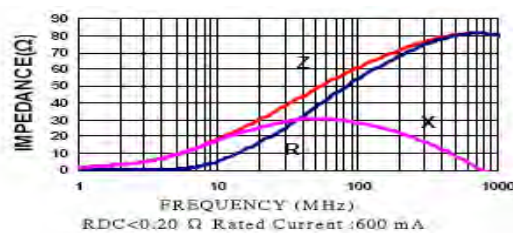
JB453215U-700-PF	100	70	0.30	500
JB453215U-121-PF	100	120	0.30	500

Test Instruments:HP4291A Impedance / Material Analyzer

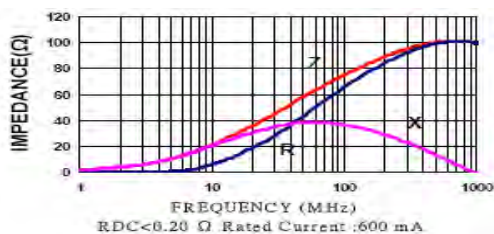
JB451616U-500-PF



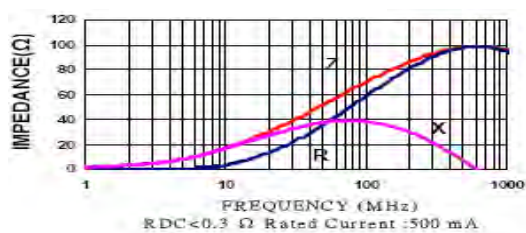
JB451616U-600-PF



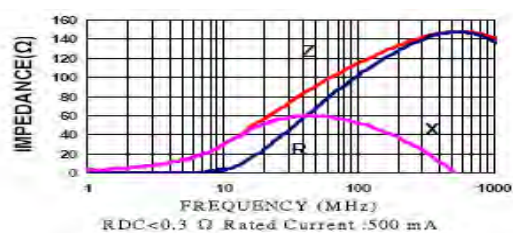
JB451616U-800-PF



JB453215U-700-PF



JB453215U-121-PF



Multilayer Chip Beads-JB Series

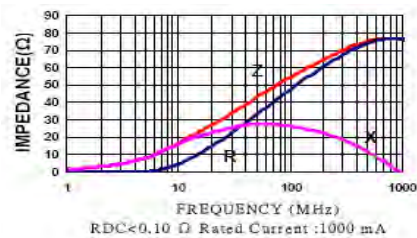
JB-G series For Mid current Use

Part Number	Test Frequency (MHz)	Impedance ($\Omega \pm 25\%$)	Dc Resietance (Ω)max	Rated current (mA)max
JB451616G-500-PF	100	50	0.10	1000
JB451616G-600-PF	100	60	0.10	1000
JB451616G-800-PF	100	80	0.10	1000
JB451616G-101-PF	100	100	0.18	800
JB451616G-151-PF	100	150	0.18	800
JB451616G-171-PF	100	170	0.18	800

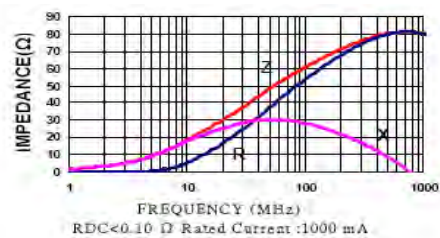
JB453215G-700-PF	100	70	0.18	800
JB453215G-121-PF	100	120	0.18	800

Test Instruments: HP4291A Impedance / Material Analyzer

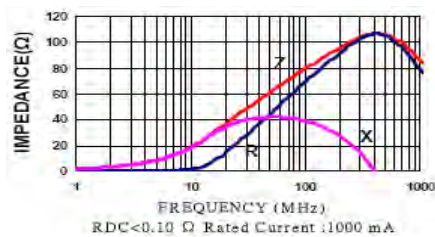
JB451616G-500-PF



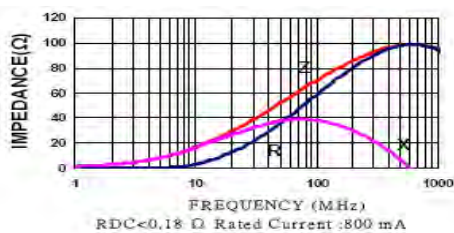
JB451616G-600-PF



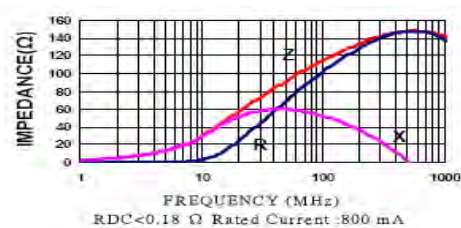
JB451616G-800-PF



JB453215G-700-PF

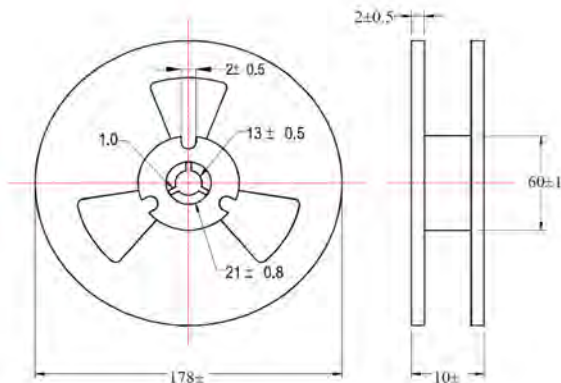


JB453215G-121-PF

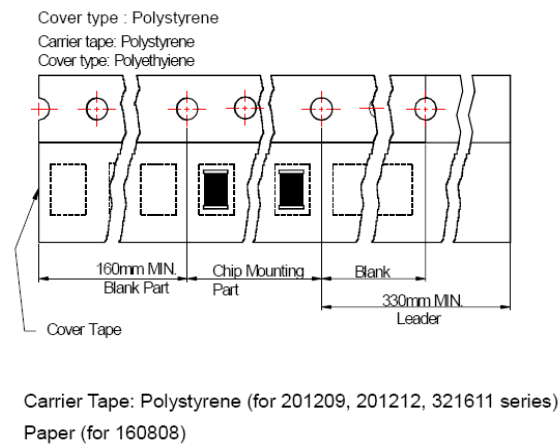


PACKAGING

REEL Dimensions (mm)



TAPE Material



Tape Dimensions (mm)

Figure A

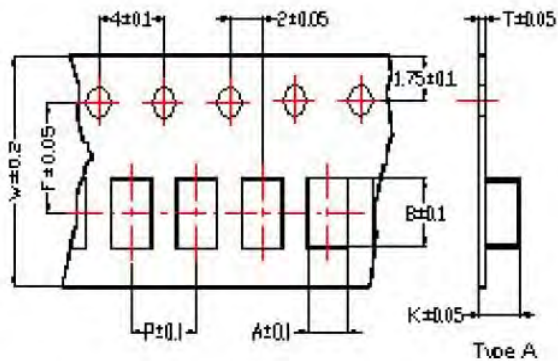
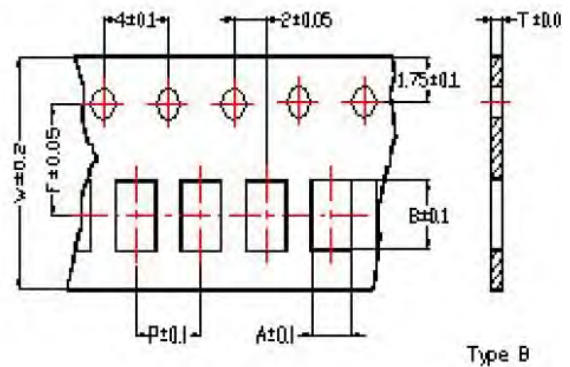


Figure B



TAPE DIMENSIONS AND PACKAGING QUANTITIES

TYPE	A	B	W	P	T	CHIPS / REEL
100505	0.65	1.12	8	2	0.6	10000
160808	1.01	1.8	8	4	0.95	4000
201209	1.42	2.24	8	4	0.22	4000
201212	1.42	2.24	8	4	0.22	3000
321611	1.88	3.5	8	4	0.22	3000
321616	1.88	3.5	8	4	0.22	2000
322513	2.77	3.5	8	4	0.22	2500
451616	1.93	4.95	12	8	0.24	2000
453215	3.66	4.95	12	8	0.24	1000