

# SUNLEI TECHNOLOGY CORP.

## Multilayer Chip Beads-JI 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

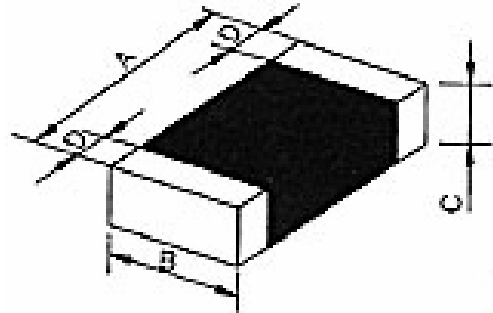
- Suitable for high current applications
- Nickel barrier terminations provide excellent solder heat resistance
- Current rating up to 6 AMPS ( max ) ( high current handling capacity)
- Low DCR
- Suitable for flow and reflow soldering
- Available in 7 sizes



### Applications

High current DC power lines for USB interface circuitry, personal computers, electronic games, hard disk drives, and other general electronic equipment

### Dimensions (mm)



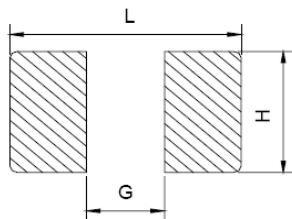
### Product Identification

JI 160808U- 201 - PF

JI: SERIES NAME  
 160808: DIMENSION SIZE CODE  
 U: Material Type CODE  
 201: IMPEDANCE CODE.  
 PF: Pb Free

SERIES	A	B	C	D
JI100505	1.0±0.10	0.50±0.10	0.50±0.10	0.25±0.10
JI160808	1.6±0.20	0.80±0.20	0.8±0.20	0.3±0.2
JI201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
JI321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
JI321616	3.2±0.20	1.60±0.20	1.6±0.20	0.5±0.3
JI322513	3.2±0.20	0.25±0.20	1.3±0.20	0.5±0.3
JI451616	4.5±0.25	1.60±0.20	1.6±0.20	0.5±0.3
JI453215	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
JI100505	1.2~1.4	0.4	0.4
JI160808	2.4~3.4	0.8	0.6
JI201209	3.0~4.0	1.2	1.0
JI321611	4.2~5.2	2.0	1.2
JI321616	4.2~5.2	2.0	1.2
JI322513	5.5~6.5	2.0	1.8
JI451616	5.5~6.5	3.0	1.2
JI453215	5.5~6.5	3.0	2.4

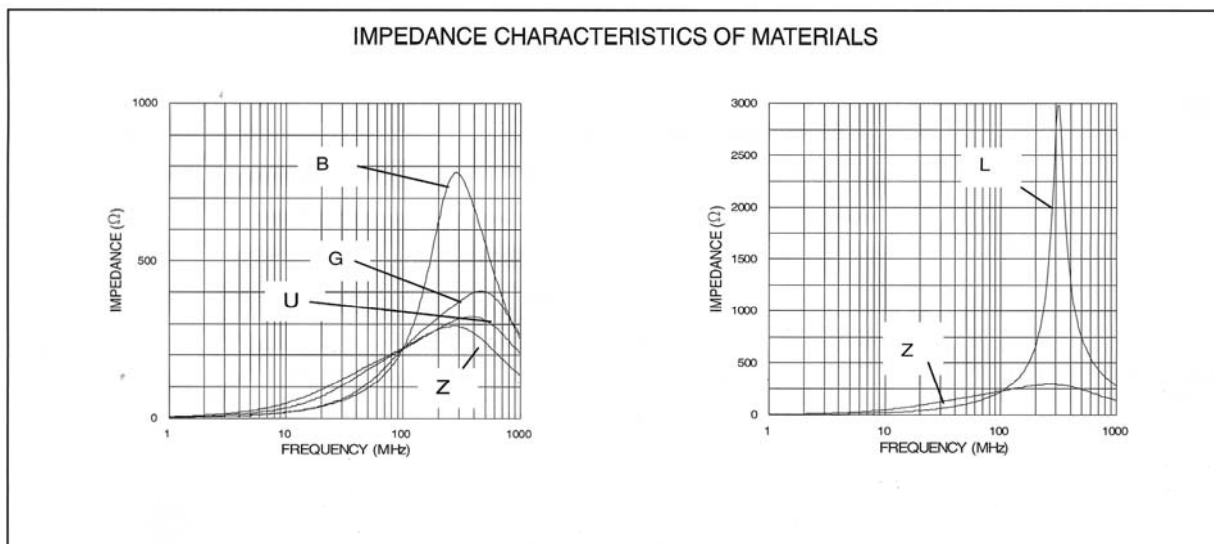
# SUNLEI TECHNOLOGY CORP.

## Multilayer Chip Beads-JI Series

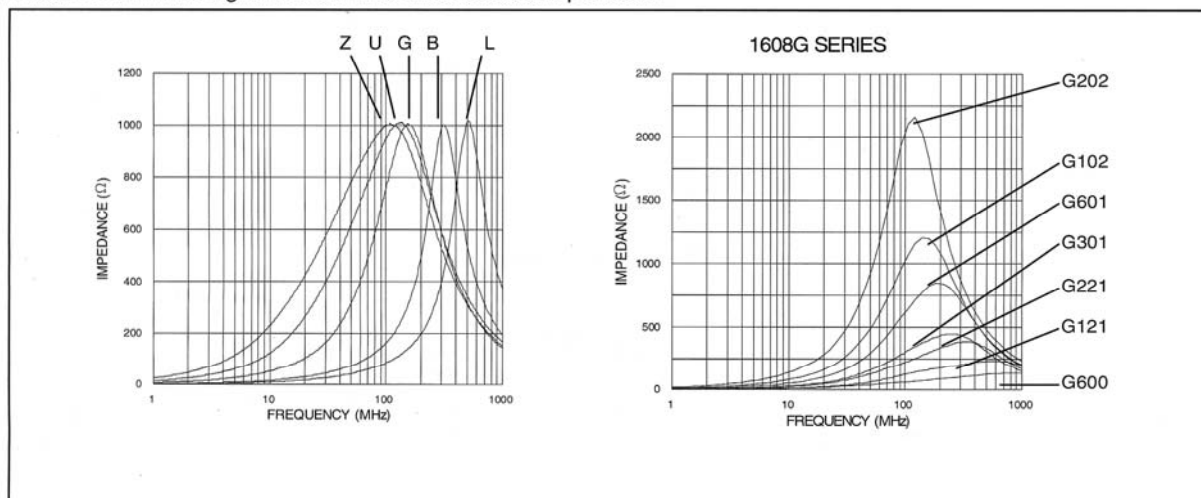
JI series For High Current Use

### MATERIAL CHARACTERISTICS

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

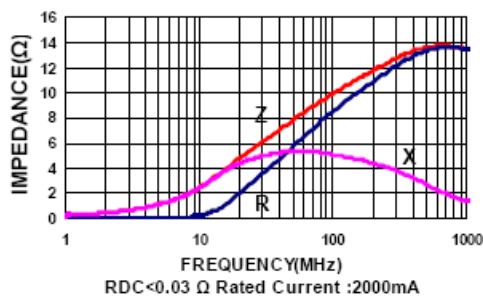
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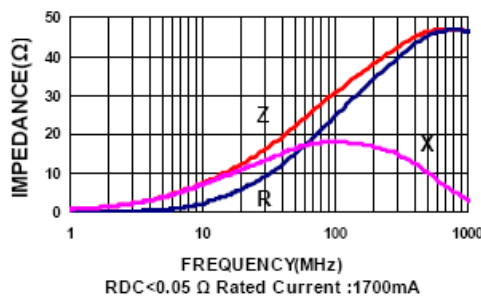
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	DC Resistance ( $\Omega$ )max	Rated current (mA)max
J1100505U-100-PF	100	10	0.03	2000
J1100505U-300-PF	100	30	0.05	1700
J1100505U-400-PF	100	40	0.08	1500
J1100505U-600-PF	100	60	0.08	1500
J1100505U-700-PF	100	70	0.09	1200
J1100505U-800-PF	100	80	0.09	1200
J1100505U-121-PF	100	120	0.09	1200

### Test Instruments:HP4291A Impedance / Material Analyzer

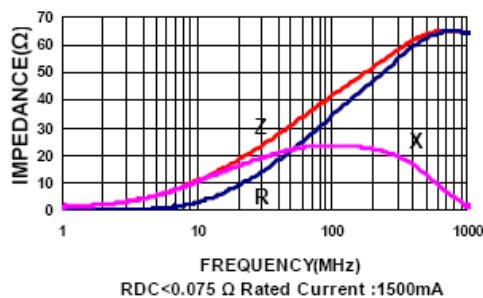
J1100505U-100-PF



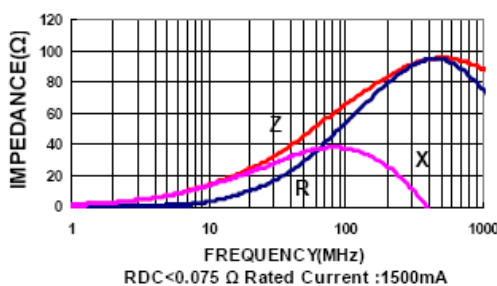
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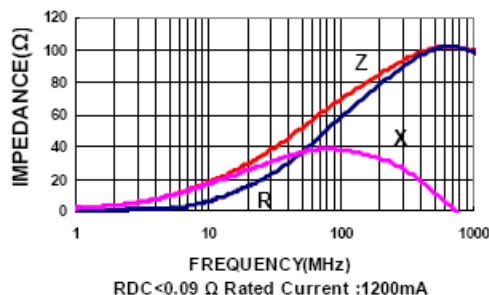
J1100505U-400-PF



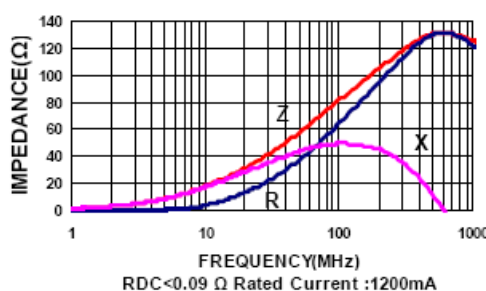
J1100505U-600-PF



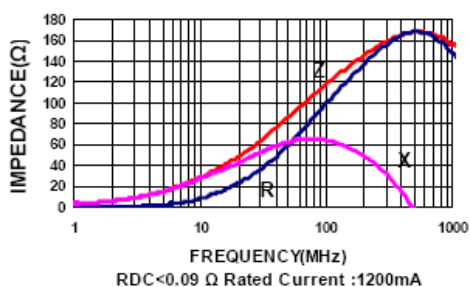
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J1100505U-800-PF



J1100505U-121-PF



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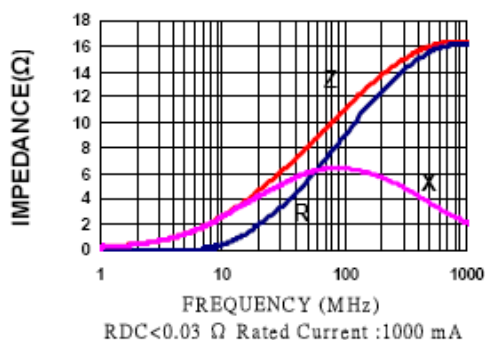
## Multilayer Chip Beads-JI Series

JI series For High Current Use

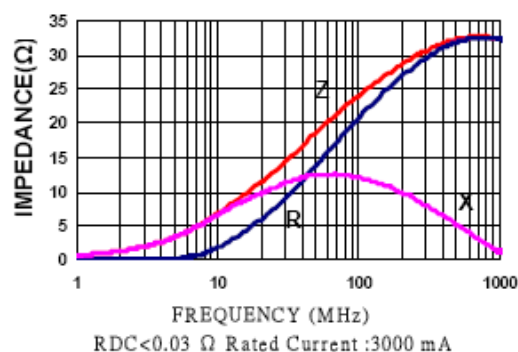
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	DC Resistance ( $\Omega$ )max	Rated current (mA)max
JI160808U-110-PF	100	11	0.02	4000
JI160808U-250-PF	100	25	0.03	3000
JI160808U-400-PF	100	40	0.035	3000
JI160808U-600-PF	100	60	0.04	3000
JI160808U-121-PF	100	120	0.08	2500
JI160808U-151-PF	100	150	0.085	2000
JI160808U-181-PF	100	180	0.09	2000
JI160808U-201-PF	100	200	0.095	2000
JI160808U-301-PF	100	300	0.12	1500
JI160808U-501-PF	100	500	0.15	1200
JI160808U-601-PF	100	600	0.20	1000
JI160808U-102-PF	100	1000	0.25	800

Test Instruments:HP4291A Impedance / Material Analyzer

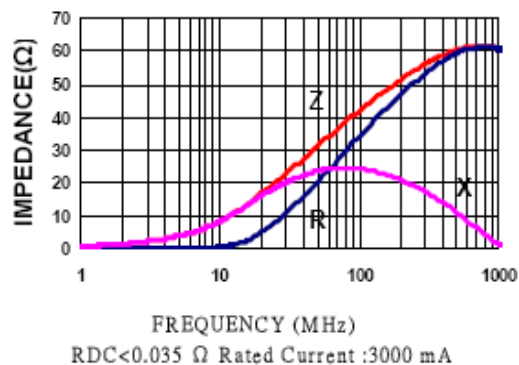
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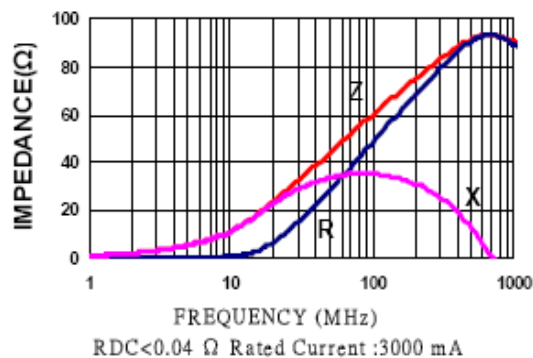
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JI160808U-400-PF

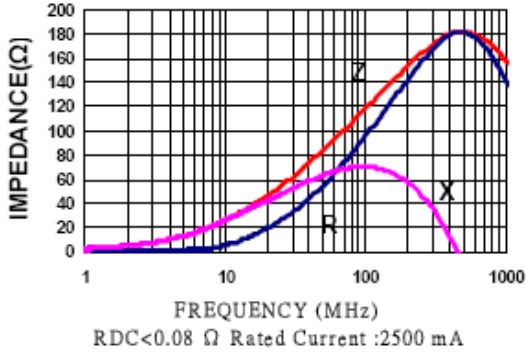


JI160808U-600-PF

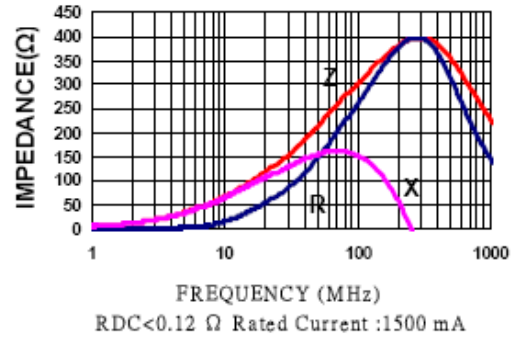


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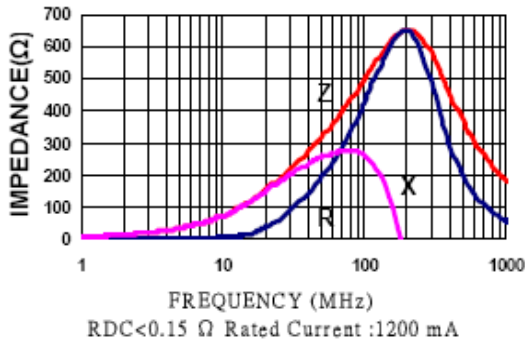
J1160808U-121-PF



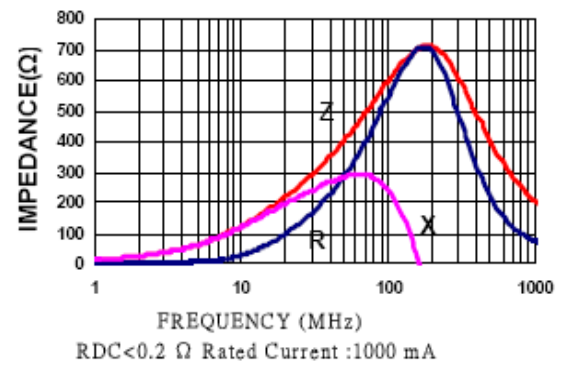
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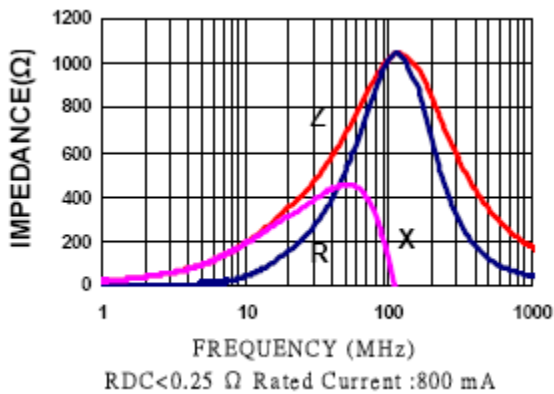
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J1160808U-601-PF



J1160808U-102-PF



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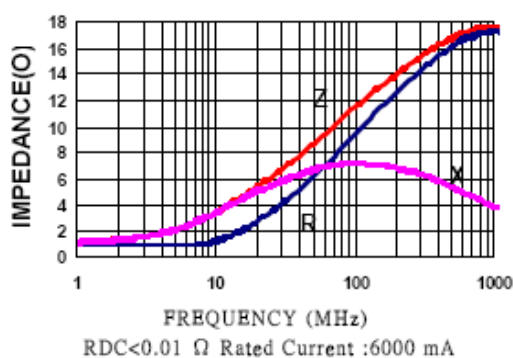
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JI series For High Current Use

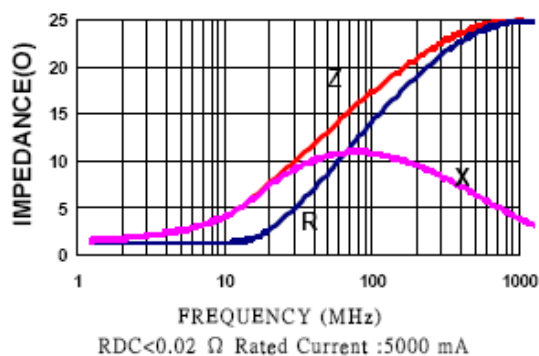
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	DC Resistance ( $\Omega$ )max	Rated current (mA)max
JI201209U-110-PF	100	11	0.01	6000
JI201209U-170-PF	100	17	0.02	5000
JI201209U-300-PF	100	30	0.015	5000
JI201209U-500-PF	100	50	0.025	3000
JI201209U-600-PF	100	60	0.03	3000
JI201209U-800-PF	100	80	0.04	3000
JI201209U-121-PF	100	120	0.04	3000
JI201209U-201-PF	100	200	0.050	2500
JI201209U-301-PF	100	300	0.08	2000
JI201209U-601-PF	100	600	0.1	2000
JI201209U-102-PF	100	1000	0.12	1500

Test Instruments:HP4291A Impedance / Material Analyzer

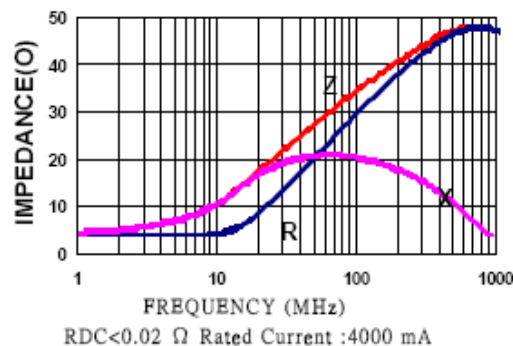
JI201209U-110-PF



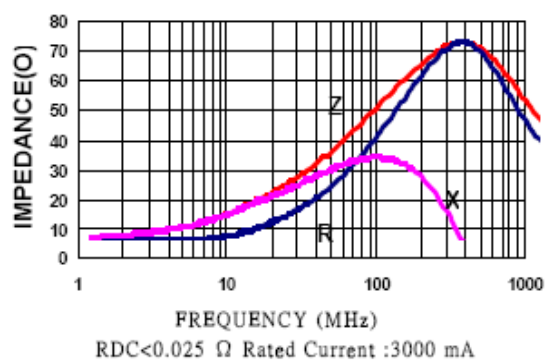
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JI201209U-300-PF

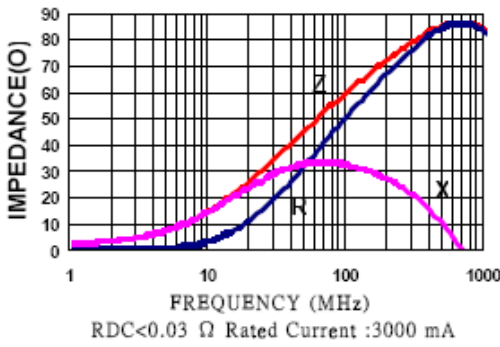


JI201209U-500-PF

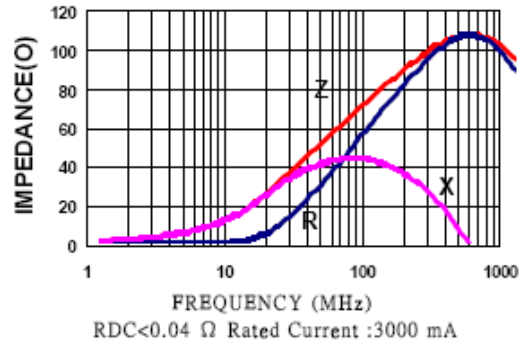


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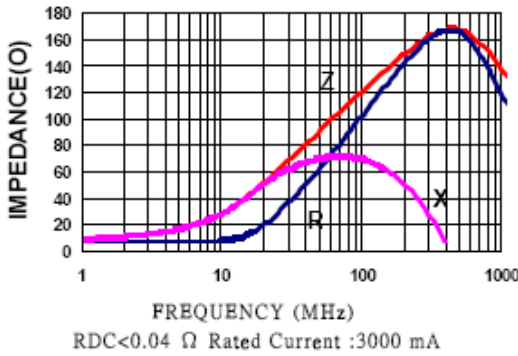
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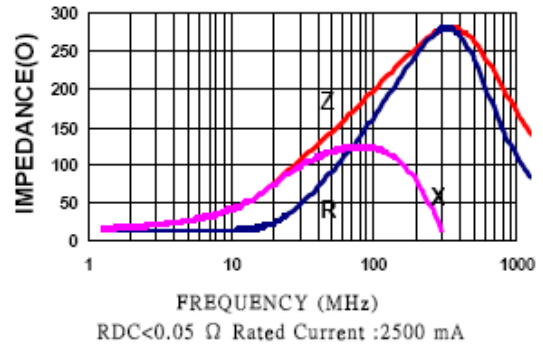
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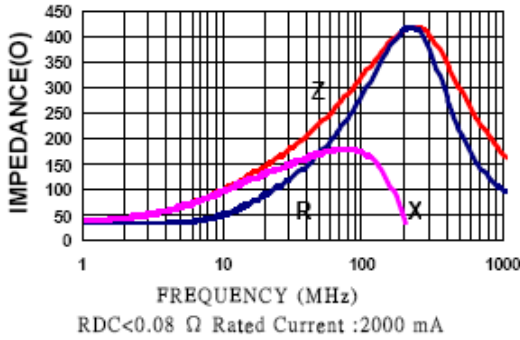
JI201209U-121-PF



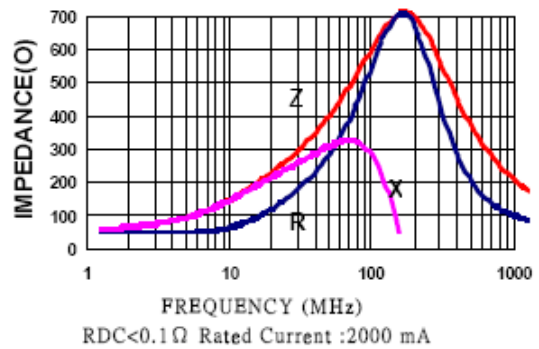
JI201209U-201-PF



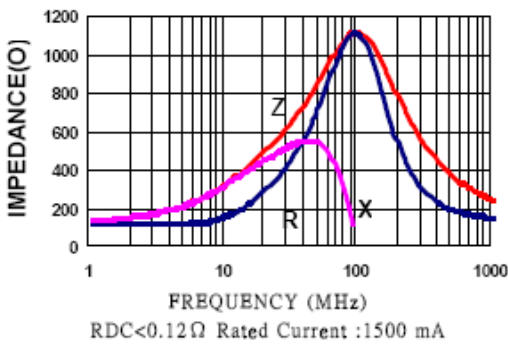
JI201209U-301-PF



JI201209U-601-PF



JI201209U-102-PF



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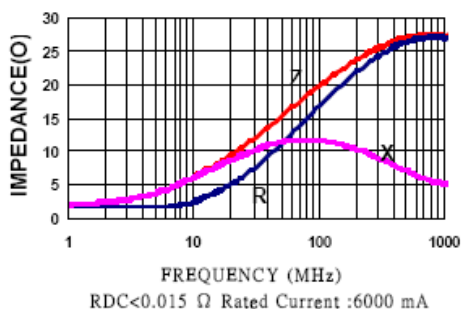
## Multilayer Chip Beads-JI Series

JI series For High Current Use

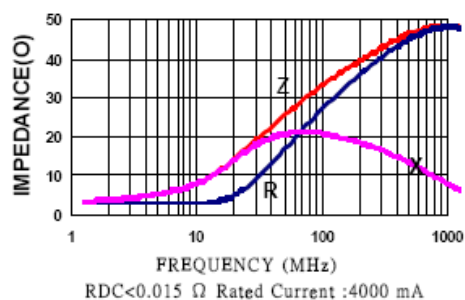
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	DC Resistance ( $\Omega$ )max	Rated current (mA)max
JI321611U-190-PF	100	19	0.015	6000
JI321611U-320-PF	100	32	0.015	5000
JI321611U-500-PF	100	50	0.020	4000
JI321611U-800-PF	100	80	0.025	3000
JI321611U-101-PF	100	100	0.03	3000
JI321611U-121-PF	100	120	0.03	3000
JI321611U-221-PF	100	220	0.05	2000
JI321611U-301-PF	100	300	0.06	2000
JI321611U-601-PF	100	600	0.10	2000
JI321611U-102-PF	50	1000	0.15	1200
JI321611U-122-PF	50	1200	0.18	1000
JI321611U-152-PF	50	1500	0.20	800

### Test Instruments:HP4291A Impedance / Material Analyzer

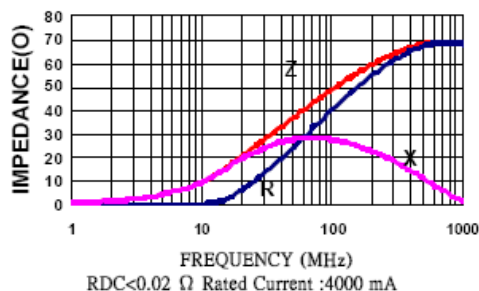
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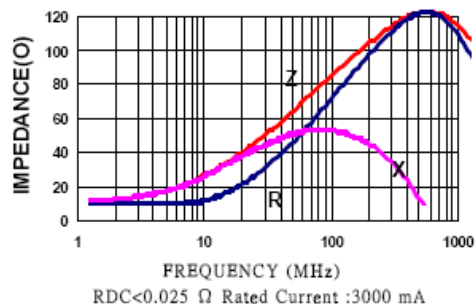
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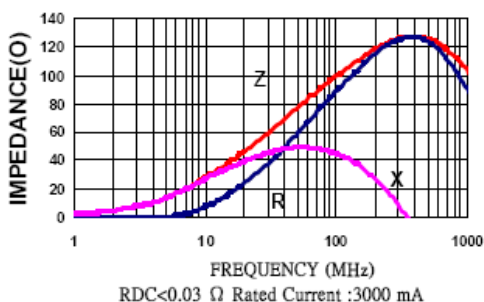
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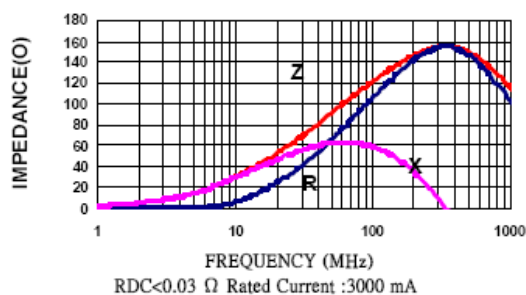
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JI321611U-101-PF



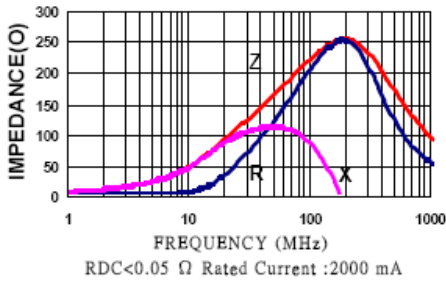
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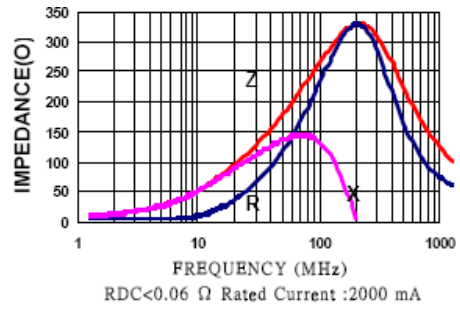


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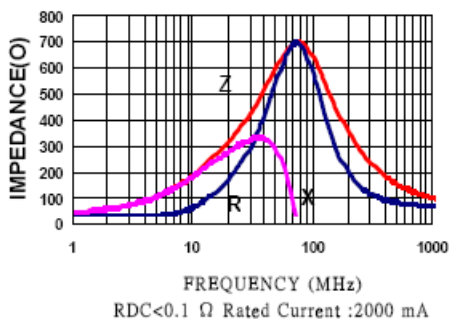
JI321611U-221-PF



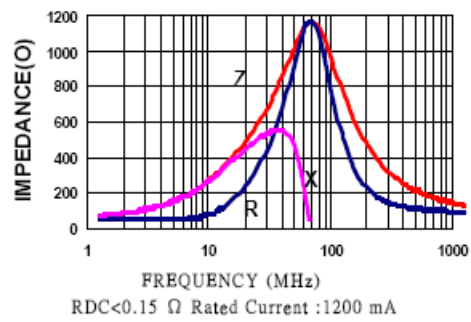
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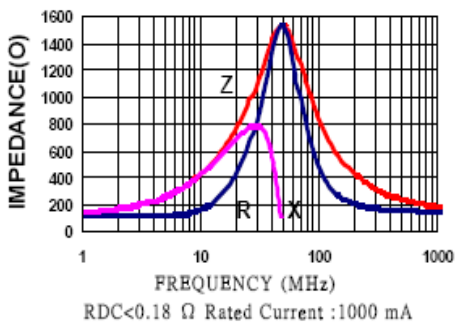
JI321611U-601-PF



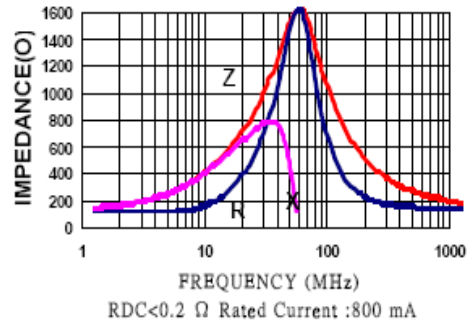
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JI321611U-122-PF



JI321611U-152-PF



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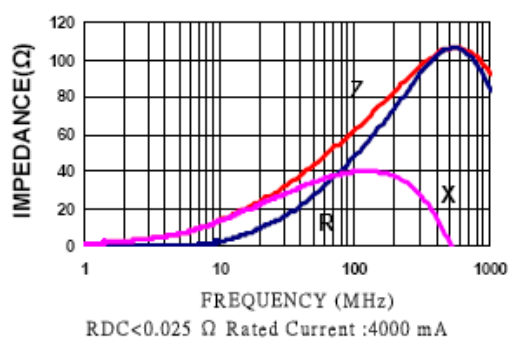
## Multilayer Chip Beads-JI Series

JI series For High Current Use

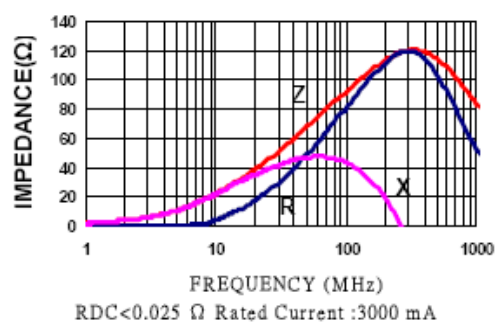
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	D.c. Resistance ( $\Omega$ )max	Rated current (mA)max
JI322513U-600-PF	100	60	0.025	4000
JI322513U-900-PF	100	90	0.025	3000

**Test Instruments:**HP4291A Impedance / Material Analyzer

JI322513U-600-PF



JI322513U-900-PF



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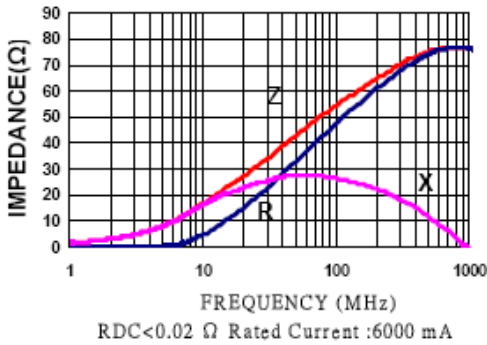
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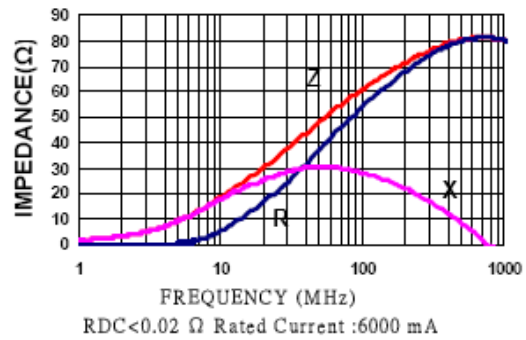
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	D.c. Resistance ( $\Omega$ )max	Rated current (mA)max
JI451616U-500-PF	100	50	0.020	6000
JI451616U-600-PF	100	60	0.020	6000
JI451616U-800-PF	100	80	0.025	4000
JI451616U-900-PF	100	90	0.040	4000
JI451616U-151-PF	100	150	0.100	2000

**Test Instruments:**HP4291A Impedance / Material Analyzer

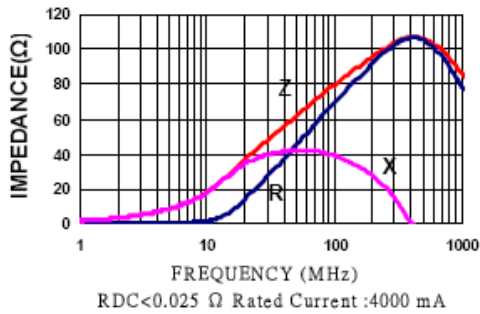
JI451616U-500-PF



JI451616U-600-PF



JI451616U-800-PF



# SUNLEI TECHNOLOGY CORP.

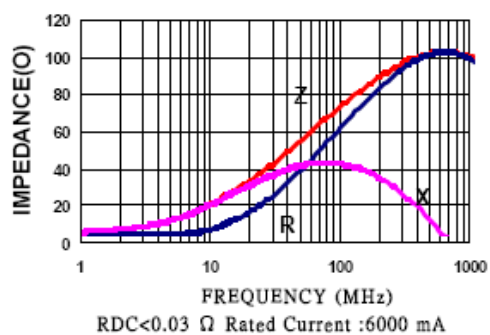
## Multilayer Chip Beads-JI Series

JI series For High Current Use

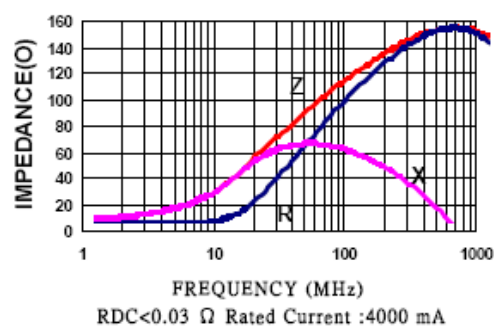
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	D.c. Resietance ( $\Omega$ )max	Rated current (mA)max
JI453215U-700-PF	100	70	0.03	6000
JI453215U-121-PF	100	120	0.03	4000
JI453215U-151-PF	100	150	0.03	4000
JI453215U-601-PF	100	600	0.10	2000

**Test Instruments:**HP4291A Impedance / Material Analyzer

JI453215U-700-PF



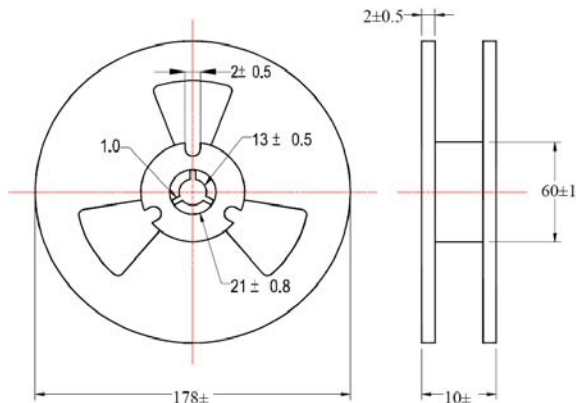
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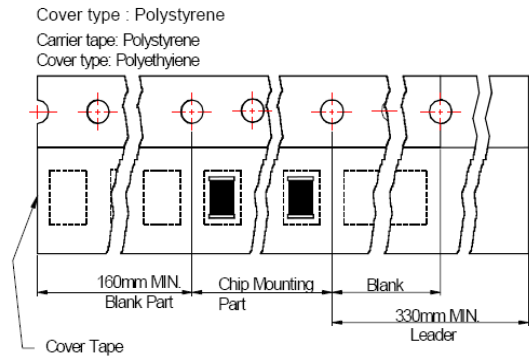
# Multilayer Chip Inductors-JI Series

## PACKAGING

### REEL Dimensions (mm)



### TAPE Material

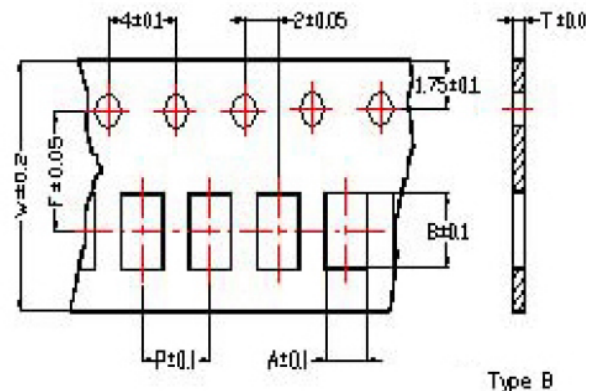
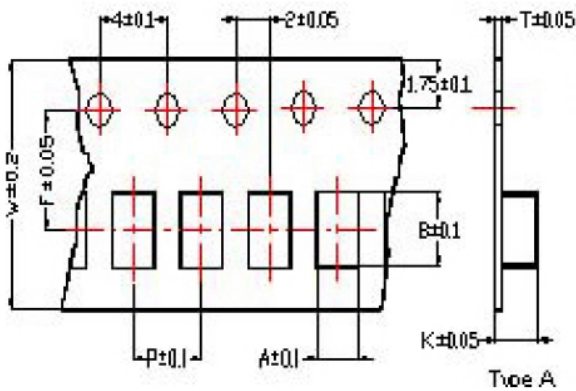


Carrier Tape: Polystyrene (for 201209, 201212, 321611 series)  
Paper (for 160808)

### 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