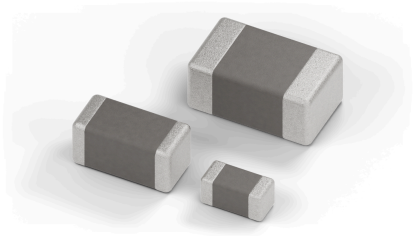
KCBW Series

Multilayer Chip Ferrite High Current Beads



Features

- A unique terminal electrode structure ensures permissible current 6.0A(max).
- High impedance and EMI suppression effective over a wide frequency range.
- Suitable reflow and wave soldering.

TYPE	SIZES	IMPEDANCE	OPERATING TEMP.
Ferrite chip bead	0201 – 1812	0 – 3000 Ω	-55 ~ +125 °C Includes product surface temperature rise

Applications

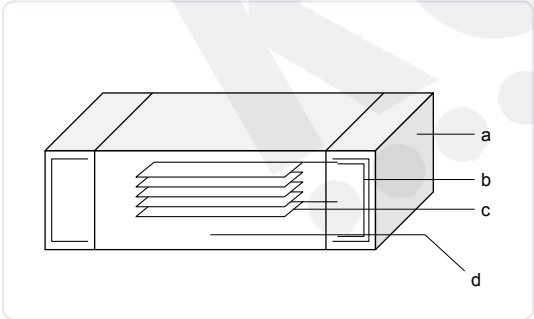
- Noise suppression in power lines or high current signal lines of electrical equipment such as communication equipment, computers and LCD TVs.

Part number system

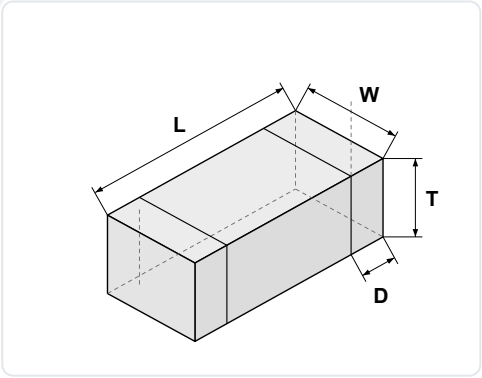
Example: KCBW0805U121T

KCBW	0805	U	121	T
Product Code Multilayer Chip Ferrite High Current Beads	Dimensions (mm) 0201(060303) 0.6×0.3×0.3 0402(100505) 1.0×0.5×0.5 0603(160808) 1.6×0.8×0.8 0805(201209) 2.0×1.2×0.9 1206(321609) 3.2×1.6×0.9 1210(322513) 3.2×2.5×1.3 1806(451616) 4.5×1.6×1.6 1812(453215) 4.5×3.2×1.5	Material Code U · X	Impedance (Ω) Example: 110 = 11 121 = 120 102 = 1000	Packaging Style T = Tape & Reel · B = Bulk

Product structure and dimensions



a. Ni/Sn plating · b. Ag layer · c. Inner electrode · d. Body



Part No	L(mm)	W(mm)	T(mm)	D(mm)
060303 (0201)	0.6±0.03 (0.020±0.003)	0.3±0.03 (0.010±0.003)	0.3±0.03 (0.010±0.003)	0.15±0.05 (0.010±0.002)
100505 (0402)	1.0± 0.15 (0.040± 0.006)	0.5± 0.15 (0.020± 0.006)	0.5± 0.15 (0.020± 0.006)	0.25± 0.1 (0.010± 0.004)
160808 (0603)	1.6± 0.20 (0.063± 0.008)	0.8± 0.20 (0.031± 0.008)	0.8± 0.20 (0.031± 0.008)	0.3± 0.2 (0.01± 0.008)
201209 (0805)	2.0± 0.20 (0.079± 0.008)	1.2± 0.20 (0.047± 0.008)	0.9± 0.20 (0.035± 0.008)	0.5± 0.3 (0.020± 0.012)
321609 (1206)	3.2± 0.20 (0.126± 0.008)	1.6± 0.20 (0.063± 0.008)	0.9± 0.20 (0.035± 0.008)	0.5± 0.3 (0.020± 0.012)
322513 (1210)	3.2± 0.20 (0.126± 0.008)	2.5± 0.20 (0.098± 0.008)	1.3± 0.20 (0.051± 0.008)	0.5± 0.3 (0.020± 0.012)
451616 (1806)	4.5± 0.20 (0.186± 0.008)	1.6± 0.20 (0.063± 0.008)	1.6± 0.20 (0.063± 0.008)	0.5± 0.3 (0.020± 0.012)
453215 (1812)	4.5± 0.20 (0.186± 0.008)	3.2± 0.20 (0.126± 0.008)	1.5± 0.20 (0.060± 0.008)	0.5± 0.3 (0.020± 0.012)

Unit: mm (inch)

Electrical characteristics

Impedance testing conditions: E4982A or equivalent, test voltage 50mV ± 5mV, Temperature 15°C~35°C, Humidity 25%~75%.

RDC Testing conditions:RM3542A or equivalent, Temperature 15°C~35°C, Humidity 25%~75%.

Rated current:Apply the rated current, and the surface temperature rise of the product shall not exceed 40°C.

0603 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW0201X100T	±5Ω	10	100	0.05	1000
KCBW0201X330T	±25%	33	100	0.15	750
KCBW0201X800T	±25%	80	100	0.18	500
KCBW0201X121T	±25%	120	100	0.23	450
KCBW0201X241T	±25%	240	100	0.38	350
KCBW0201X601T	±25%	600	100	0.85	250
KCBW0201X102T	±25%	1000	100	1.25	200

1005 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW0402U000T	0~15Ω	0	100	0.04	1800
KCBW0402U050T	0~15Ω	5	100	0.04	1800
KCBW0402U070T	0~11Ω	7	100	0.04	1800
KCBW0402U090T	5~13Ω	9	100	0.04	1800
KCBW0402U100T	7~15Ω	10	100	0.04	1800
KCBW0402U110T	7~15Ω	11	100	0.04	1800
KCBW0402U150T	9~21Ω	15	100	0.04	1800
KCBW0402U190T	12~25Ω	19	100	0.06	1800
KCBW0402U260T	±25%	26	100	0.06	1800
KCBW0402U300T	±25%	30	100	0.08	1800
KCBW0402U310T	±25%	31	100	0.08	1800
KCBW0402U360T	±25%	36	100	0.13	1800
KCBW0402U470T	±25%	47	100	0.13	1000
KCBW0402U600T	±25%	60	100	0.13	1000
KCBW0402U750T	±25%	75	100	0.17	1000
KCBW0402U800T	±25%	80	100	0.17	1000
KCBW0402U101T	±25%	100	100	0.20	900
KCBW0402U121T	±25%	120	100	0.25	700
KCBW0402U151T	±25%	150	100	0.25	700
KCBW0402U181T	±25%	180	100	0.30	700
KCBW0402U201T	±25%	200	100	0.30	700
KCBW0402U221T	±25%	220	100	0.30	700
KCBW0402U301T	±25%	300	100	0.40	400
KCBW0402U331T	±25%	330	100	0.60	300
KCBW0402U501T	±25%	500	100	0.60	300
KCBW0402U601T	±25%	600	100	0.60	300
KCBW0402U801T	±25%	800	100	0.80	250
KCBW0402U102T	±25%	1000	100	0.90	250
KCBW0402U122T	±25%	1200	100	1.10	150

1608 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW0603U000T	0~15Ω	0	100	0.02	3000
KCBW0603U050T	0~15Ω	5	100	0.02	3000
KCBW0603U070T	0~11Ω	7	100	0.02	3000
KCBW0603U090T	5~13Ω	9	100	0.02	3000
KCBW0603U100T	7~15Ω	10	100	0.02	3000

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW0603U110T	7~15Ω	11	100	0.02	3000
KCBW0603U150T	9~21Ω	15	100	0.03	3000
KCBW0603U190T	12~25Ω	19	100	0.03	3000
KCBW0603U220T	±25%	22	100	0.03	3000
KCBW0603U300T	±25%	30	100	0.03	3000
KCBW0603U310T	±25%	31	100	0.03	3000
KCBW0603U330T	±25%	33	100	0.03	3000
KCBW0603U400T	±25%	40	100	0.10	1500
KCBW0603U500T	±25%	50	100	0.10	1500
KCBW0603U600T	±25%	60	100	0.10	1500
KCBW0603U700T	±25%	70	100	0.10	1500
KCBW0603U750T	±25%	75	100	0.10	1500
KCBW0603U800T	±25%	80	100	0.10	1500
KCBW0603U900T	±25%	90	100	0.12	1400
KCBW0603U101T	±25%	100	100	0.12	1400
KCBW0603U121T	±25%	120	100	0.14	1300
KCBW0603U151T	±25%	150	100	0.15	1200
KCBW0603U181T	±25%	180	100	0.15	1200
KCBW0603U201T	±25%	200	100	0.18	1200
KCBW0603U221T	±25%	220	100	0.18	1200
KCBW0603U301T	±25%	300	100	0.20	1200
KCBW0603U331T	±25%	330	100	0.30	1000
KCBW0603U471T	±25%	470	100	0.30	1000
KCBW0603U501T	±25%	500	100	0.30	1000
KCBW0603U601T	±25%	600	100	0.30	1000
KCBW0603U801T	±25%	800	100	0.35	500
KCBW0603U102T	±25%	1000	100	0.40	500
KCBW0603U122T	±25%	1200	100	0.45	500
KCBW0603U152T	±25%	1500	100	0.55	400
KCBW0603U182T	±25%	1800	100	0.55	400
KCBW0603U202T	±25%	2000	100	0.60	400
KCBW0603U252T	±25%	2500	100	0.65	400

2012 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW0805U000T	0~15Ω	0	100	0.02	3000
KCBW0805U050T	0~15Ω	5	100	0.02	3000
KCBW0805U070T	0~11Ω	7	100	0.02	3000
KCBW0805U090T	5~13Ω	9	100	0.02	3000
KCBW0805U100T	7~15Ω	10	100	0.02	3000
KCBW0805U110T	7~15Ω	11	100	0.02	3000
KCBW0805U150T	9~21Ω	15	100	0.02	3000
KCBW0805U190T	12~25Ω	19	100	0.02	3000
KCBW0805U220T	±25%	22	100	0.04	3000
KCBW0805U260T	±25%	26	100	0.04	3000
KCBW0805U300T	±25%	30	100	0.04	3000
KCBW0805U310T	±25%	31	100	0.04	3000
KCBW0805U330T	±25%	33	100	0.04	3000
KCBW0805U400T	±25%	40	100	0.05	3000
KCBW0805U500T	±25%	50	100	0.05	3000
KCBW0805U600T	±25%	60	100	0.05	3000
KCBW0805U700T	±25%	70	100	0.06	3000

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW0805U800T	±25%	80	100	0.06	3000
KCBW0805U900T	±25%	90	100	0.08	2500
KCBW0805U101T	±25%	100	100	0.08	2500
KCBW0805U121T	±25%	120	100	0.08	2500
KCBW0805U151T	±25%	150	100	0.10	2500
KCBW0805U181T	±25%	180	100	0.12	2000
KCBW0805U201T	±25%	200	100	0.12	2000
KCBW0805U221T	±25%	220	100	0.13	2000
KCBW0805U301T	±25%	300	100	0.13	2000
KCBW0805U331T	±25%	330	100	0.15	2000
KCBW0805U391T	±25%	390	100	0.22	1500
KCBW0805U471T	±25%	470	100	0.22	1500
KCBW0805U501T	±25%	500	100	0.22	1500
KCBW0805U601T	±25%	600	100	0.22	1500
KCBW0805U801T	±25%	800	100	0.25	1000
KCBW0805U102T	±25%	1000	100	0.25	1000
KCBW0805U122T	±25%	1200	100	0.28	800
KCBW0805U152T	±25%	1500	100	0.40	700
KCBW0805U202T	±25%	2000	100	0.40	700
KCBW0805U222T	±25%	2200	100	0.40	700
KCBW0805U252T	±25%	2500	50	0.45	600

3216 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW1206U000T	0~15Ω	0	100	0.04	4000
KCBW1206U050T	0~15Ω	5	100	0.04	3000
KCBW1206U070T	0~11Ω	7	100	0.04	3000
KCBW1206U090T	5~13Ω	9	100	0.04	3000
KCBW1206U100T	7~15Ω	10	100	0.04	3000
KCBW1206U110T	7~15Ω	11	100	0.04	3000
KCBW1206U150T	9~21Ω	15	100	0.04	3000
KCBW1206U190T	12~25Ω	19	100	0.04	3000
KCBW1206U220T	±25%	22	100	0.04	3000
KCBW1206U260T	±25%	26	100	0.04	3000
KCBW1206U300T	±25%	30	100	0.04	3000
KCBW1206U310T	±25%	31	100	0.04	3000
KCBW1206U400T	±25%	40	100	0.04	3000
KCBW1206U500T	±25%	50	100	0.04	3000
KCBW1206U600T	±25%	60	100	0.04	3000
KCBW1206U700T	±25%	70	100	0.07	3000
KCBW1206U800T	±25%	80	100	0.07	3000
KCBW1206U900T	±25%	90	100	0.07	3000
KCBW1206U101T	±25%	100	100	0.07	3000
KCBW1206U121T	±25%	120	100	0.07	3000
KCBW1206U151T	±25%	150	100	0.10	2500
KCBW1206U181T	±25%	180	100	0.10	2500
KCBW1206U221T	±25%	220	100	0.11	2500
KCBW1206U301T	±25%	300	100	0.15	2000
KCBW1206U331T	±25%	330	100	0.20	2000
KCBW1206U391T	±25%	390	100	0.20	2000
KCBW1206U501T	±25%	500	100	0.20	2000
KCBW1206U601T	±25%	600	100	0.20	2000

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW1206U801T	±25%	800	100	0.25	2000
KCBW1206U102T	±25%	1000	100	0.25	2000
KCBW1206U122T	±25%	1200	100	0.35	1500
KCBW1206U152T	±25%	1500	50	0.45	500
KCBW1206U182T	±25%	1800	50	0.60	500
KCBW1206U202T	±25%	2000	50	0.70	300
KCBW1206U252T	±25%	2500	50	0.90	200
KCBW1206U302T	±25%	3000	50	0.90	200

3225 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW1210U000T	0~15Ω	0	100	0.03	5000
KCBW1210U100T	7~15Ω	10	100	0.03	5000
KCBW1210U110T	7~15Ω	11	100	0.03	5000
KCBW1210U190T	12~25Ω	19	100	0.03	5000
KCBW1210U260T	±25%	26	100	0.03	5000
KCBW1210U300T	±25%	30	100	0.03	5000
KCBW1210U310T	±25%	31	100	0.03	5000
KCBW1210U400T	±25%	40	100	0.03	5000
KCBW1210U500T	±25%	50	100	0.03	5000
KCBW1210U600T	±25%	60	100	0.03	5000
KCBW1210U700T	±25%	70	100	0.03	5000
KCBW1210U800T	±25%	80	100	0.03	5000
KCBW1210U900T	±25%	90	100	0.04	4000
KCBW1210U101T	±25%	100	100	0.06	4000
KCBW1210U121T	±25%	120	100	0.06	4000
KCBW1210U151T	±25%	150	100	0.08	4000
KCBW1210U181T	±25%	180	100	0.08	3000
KCBW1210U221T	±25%	220	100	0.08	3000
KCBW1210U301T	±25%	300	100	0.08	3000
KCBW1210U501T	±25%	500	100	0.12	3000
KCBW1210U601T	±25%	600	100	0.18	2000
KCBW1210U801T	±25%	800	100	0.23	2000
KCBW1210U102T	±25%	1000	100	0.28	2000

4516 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW1806U190T	12~25Ω	19	100	0.015	6000
KCBW1806U300T	±25%	30	100	0.020	6000
KCBW1806U310T	±25%	31	100	0.020	6000
KCBW1806U500T	±25%	50	100	0.025	6000
KCBW1806U600T	±25%	60	100	0.025	6000
KCBW1806U750T	±25%	75	100	0.04	6000
KCBW1806U800T	±25%	80	100	0.05	3000
KCBW1806U900T	±25%	90	100	0.06	3000
KCBW1806U101T	±25%	100	100	0.06	3000
KCBW1806U121T	±25%	120	100	0.06	3000
KCBW1806U151T	±25%	150	100	0.06	3000
KCBW1806U181T	±25%	180	100	0.08	2000
KCBW1806U221T	±25%	220	100	0.08	2000
KCBW1806U301T	±25%	300	100	0.09	2000
KCBW1806U501T	±25%	500	100	0.20	1500

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW1806U601T	±25%	600	100	0.20	1500

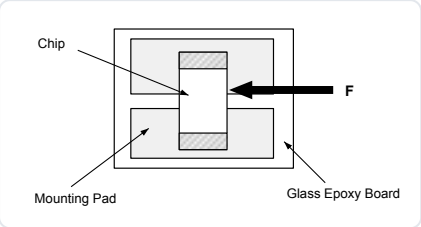
4532 Type

Part NO	Tolerance	Impedance(Ω)	Test frequency(MHz)	DCR (Ω)Max	Ir (mA)Max
KCBW1812U190T	12~25Ω	19	100	0.02	5000
KCBW1812U260T	±25%	26	100	0.02	5000
KCBW1812U300T	±25%	30	100	0.02	5000
KCBW1812U310T	±25%	31	100	0.02	5000
KCBW1812U380T	±25%	38	100	0.02	5000
KCBW1812U500T	±25%	50	100	0.02	4000
KCBW1812U600T	±25%	60	100	0.02	4000
KCBW1812U700T	±25%	70	100	0.02	4000
KCBW1812U800T	±25%	80	100	0.02	4000
KCBW1812U900T	±25%	90	100	0.02	4000
KCBW1812U101T	±25%	100	100	0.03	4000
KCBW1812U121T	±25%	120	100	0.03	4000
KCBW1812U151T	±25%	150	100	0.04	3500
KCBW1812U181T	±25%	180	100	0.06	3000
KCBW1812U201T	±25%	200	100	0.06	3000
KCBW1812U221T	±25%	220	100	0.06	2000
KCBW1812U301T	±25%	300	100	0.06	2000
KCBW1812U501T	±25%	500	100	0.10	1000
KCBW1812U601T	±25%	600	100	0.10	1000

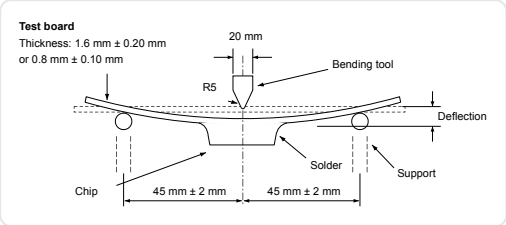
Reliability test method

No.	Items	Requirements	Test Methods and Remarks
1	Operating Temperature Range	-55°C~+125°C	Includes product surface temperature rise
2	Solder ability	No mechanical damage. 95%(75% for 0603 series)or more of electrode area shall be coated by new solder.	Preheating temperature:120°C to 150°C Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 245±3°C Immersion tin depth:10mm Duration : 3±0.3s Dip performance to a flux of about:3 ~ 5 s
3	Resistance to Soldering Heat	No mechanical damage. Inductance : Impedance change: within ±30%	Preheating temperature: 120°C to 150°C Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 260°C±5°C Immersion tin depth:10mm Duration : 10±1s Dip performance to a flux of about:3~5 s
4	Adhesion of electrode	The termination and body should be no damage.	Applied force: 2N force for 0603 series;5N force for 1005 series;7N force for 1608 series;10N force for 2012, 3216 series. 15N force for 3225, 4532 series. Keep time :10±1S
5	Low temperature resistance	No mechanical damage. Impedance change: within ±30%	Temperature:-55±2°C Testing time: 1000 +24/–0 h
6	Bending strength	No mechanical damage	Testing board: glass epoxy-resin substrate For (1±0.5) mm/s compression speed, curvature: 2mm, hold time20s±1s .
7	Vibration	No mechanical damage. Impedance change: within ±30%	Amplitude modulation: 1.5mm Test time: A period of 2h in each of 3 mutually perpendicular directions. Frequency range: 10Hz to 55Hz to 10Hz for 1min.
8	High temperature resistance	No mechanical damage. Impedance change: within ±30%	Testing time: 1000 +24/–0 h Temperature: 125±2°C
9	Static Humidity	No mechanical damage. Impedance change: within ±30%	Humidity: 90% to 95% RH Temperature: 60°C±2°C Testing time: 1000 +24/–0 h

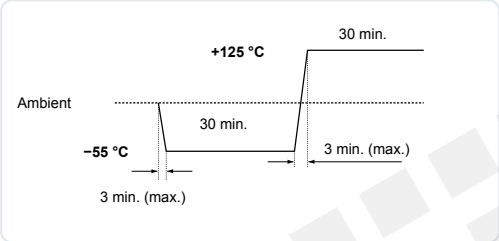
No.	Items	Requirements	Test Methods and Remarks
10	High temperature load	No mechanical damage. Impedance change: within ±30%	impose current: at room Testing time: 1000 +24/−0 h Temperature: 85±2°C
11	Temperature Shock	No mechanical damage. Impedance change: within ±30%	Temperature: -55°C for 30±3min +125°C for 30±3min Number of cycles: 100



Adhesion of electrode



Bending strength



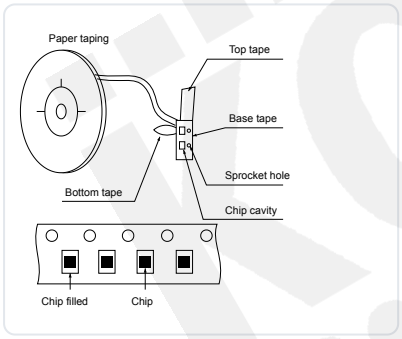
Temperature shock

Note: When there are questions concerning, measurement shall be made after 24±2hrs of recovery under the standard condition.

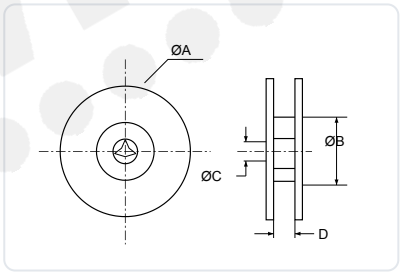
Product characteristic curve

See attached table.

Packaging



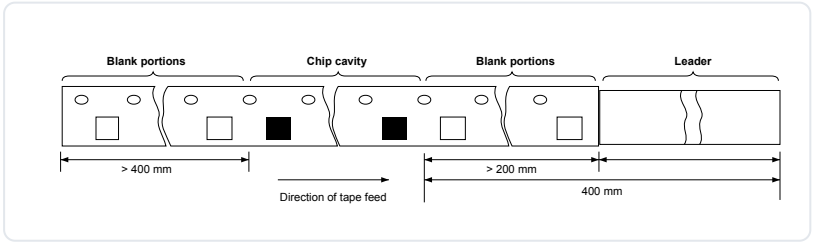
Taping drawings



Reel dimensions (Unit: mm)

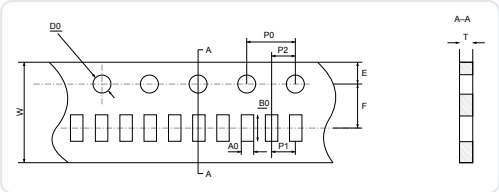
Size	A	B	C	D
7 inch	178±2.0	60±2.0	13.0±1.0	9.5±2.0
13 inch	330±2.0	100±2.0	13.5±1.0	12.4±2.0

Note: 7 inch is available in 060303, 100505, 160808, 201209, 321609, 322513 sizes, 13 inch is available in 451616, 453215 sizes.



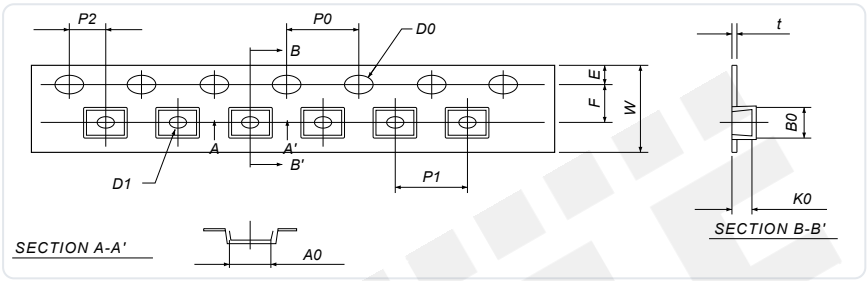
Leader and blank portion

Taping dimensions (Unit: mm) · Paper tape



Part NO.	A0	B0	W	F	E	P1	P2	P0	D0	T
060303	0.38±0.03	0.68±0.03	8.00±0.10	3.50±0.05	1.75±0.05	2.00±0.05	2.00±0.05	4.00±0.10	1.55±0.05	0.42±0.03
100505	0.59±0.10	1.12±0.10	8.00±0.20	3.50±0.10	1.75±0.20	2.00±0.10	2.00±0.10	4.00±0.20	1.55±0.10	0.60±0.10
160808	1.05±0.20	1.85±0.20	8.00±0.20	3.50±0.10	1.75±0.20	4.00±0.20	2.00±0.10	4.00±0.20	1.55±0.10	0.95±0.10
201209	1.45±0.20	2.35±0.20	8.00±0.20	3.50±0.10	1.75±0.20	4.00±0.20	2.00±0.10	4.00±0.20	1.55±0.10	0.95±0.10
321609	1.90±0.20	3.46±0.20	8.00±0.20	3.50±0.10	1.75±0.20	4.00±0.20	2.00±0.10	4.00±0.20	1.55±0.10	0.95±0.10

Taping dimensions (Unit: mm) · Embossed tape



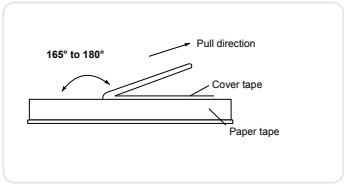
Size	453215	451616	322513	321611	201212
W	12.00+/-0.20	12.00+/-0.20	8.00+/-0.20	8.00+/-0.20	8.00+/-0.2
E	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10
F	5.50+/-0.10	5.50+/-0.10	3.50+/-0.10	3.50+/-0.10	3.50+/-0.10
D0	1.50+/-0.10	1.50+/0.10	1.50+/-0.10	1.50+/-0.10	1.50+/-0.10
D1	1.50+/-0.10	1.50+/-0.10	1.00+/-0.10	1.00+/-0.10	1.00+/-0.10
P0	4.00+/-0.10	4.00+/-0.10	4.00+/-0.10	4.00+/-0.10	4.00+/-0.10
P010	40.0+/-0.20	40.00+/-0.20	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20
P1	8.00+/-0.10	8.00+/-0.10	4.00+/-0.10	4.00+/-0.10	4.00+/-0.10
P2	2.00+/-0.10	2.00+/-0.10	2.0+/-0.05	2.0+/-0.05	2.00+/-0.10
A0	3.66+/-0.10	1.93+/-0.10	2.77+/-0.10	1.88+/-0.10	1.52+/-0.10
B0	4.95+/-0.10	4.95+/-0.10	3.42+/-0.10	3.50+/-0.10	2.41+/-0.10
K0	1.85+/-0.10	1.93+/-0.10	1.55+/-0.10	1.27+/-0.10	1.35+/-0.10
t	0.24+/-0.10	0.24+/-0.10	0.22+/-0.10	0.22+/-0.10	0.23+/-0.10

Peeling off force

(1) Peeling force should be 0.1~0.7N pulling in the direction of arrow.

(2) Speed of peeling off: 300mm/min.

(3) The cover bond should not be damaged and bond the tape when it peeled off.



Packaging quantity (Unit: pcs)

SIZE	453215	451616	322513	321611	321609	201212	201209	160808	100505	060303
REEL	3000	5000	3000	3000	4000	3000	4000	4000	10000	15000
BOX	12000	20000	30000	30000	40000	30000	40000	40000	100000	150000
CASE	36000	60000	180000	180000	240000	180000	240000	240000	600000	900000

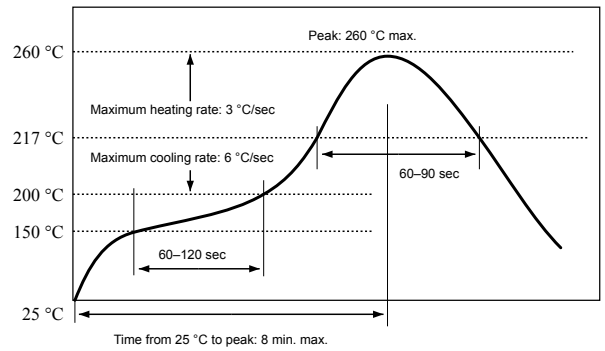
Recommended soldering conditions

Products can be applied to reflow soldering.

Pre-heating should be in such a way that the temperature difference between solder and ferrite surface is limited to 150°C max. Also cooling into solvent after soldering should be in such way that the temperature difference is limited to 100°C max. Un-enough pre-heating may cause cracks on the ferrite, resulting in the deterioration of product quality.

Products should be soldered within the following allowable range indicated by the slanted line. The excessive soldering conditions may cause the corrosion of the electrode. When soldering is repeated, allowable time is the accumulated time.

Reflow soldering profile



Preheat condition: 150 ~200°C/60~120sec

Allowed time above 217°C: 60~90sec

Max temp: 260 °C

Max time at max temp: 10 sec

Solder paste: Sn/3.0Ag/0.5Cu

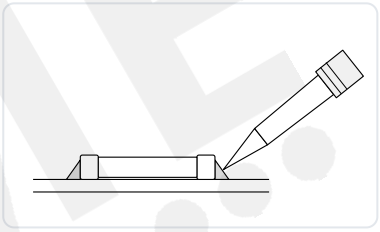
Allowed reflow time: 2x max

Iron soldering

Perform soldering at 350°C on 30W max

Time: < 5S

Take care not to apply the tip of the soldering iron to the terminal electrodes



Cleaning

(1) Cleaning temperature : 60°C max

(2) Cleaning time: 1 minute min.

(3) Ultrasonic output power: 200W max

Storage

Storage period

Products which inspected inductor company over 1 year ago should be examined and used, which can be Confirmed with inspection No. marked on the container. Solder ability should be checked if this period is exceeded.

Storage conditions

⑴Products should be storage in the warehouse on the following conditions: Temperature : -10~+40°C Humidity: 30~70% relative humidity

⑵Don't keep products in corrosive gases such as sulfur, chlorine gas or acid , or it may case oxidization of Electrodes resulting in poor solder ability.

⑶Products should be storaged on the palette for the prevention of the influence from humidity, dust and so on.

⑷Products should be storaged in the warehouse without heat shock, vibration, direct sunlight and so on.

⑸Products should be storaged under the airtight packaged condition.

Usage of ODS

For ODS listed below , we don't use in process. ODS: CCl4, HCFC, etc.

Notes

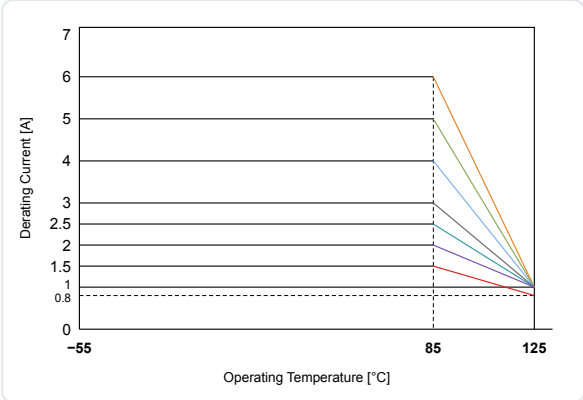
(1) If the parcel label on product is "Unitary lead free" that indicate the products in accord with ROHS appointed requests.

(2) This product specification guarantees the quality of our product as a single unit, Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.

(3) We can't warrant against failure caused by any use of our product that deviates from the intended use as described in this product specification.

Remark

When Operating temperatures exceed +85°C,derating of current is necessary for chip ferrite beads for which rated current is1A and over. Please apply the derating curve shown in chart according to the operating temperature.



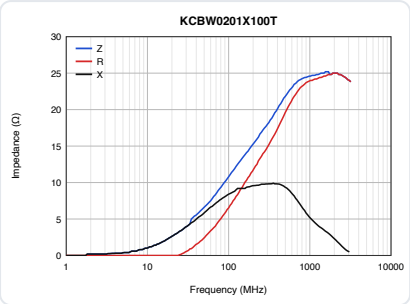
Revision of resume

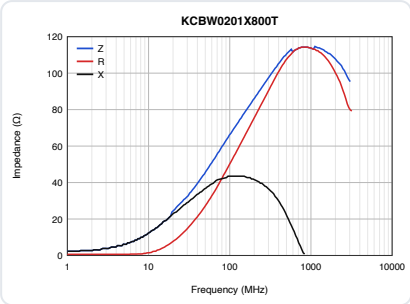
Version	Date	Description
18.01	2018-5-21	Initial issue
20.01	2020-3-27	Electrical performance parameter table KCBW1206U122T model modified rated current standard.
20.02	2020-5-28	Modified the bending strength test method and requirements of reliability test items.
21.01	2021-5-6	Modified the reliability test item of bending strength test method, changed the temperature cycling items into temperature shocking . Deleted the drop test item.
21.02	2021-11-8	Modified the working temperature range of reliability test items, modified the temperature conditions of low temperature resistance/high temperature resistance/temperature impact test. added the usage instructions of rated current derating
22.01	2022-3-28	Modified the electrical characteristics; modified the storage period.
A0	2024-05-16	Modified the version name to delete the welding, cleaning, and storage requirements
A1	2025-03-10	Add welding, cleaning, and storage requirements Remove the requirement for soldering rate in the reliability test for resistance to soldering heat. Update frequency curve Modify the naming of reel sizes
A2	2025-05-08	Modify the reel dimensions guidelines.
A3	2025-12-01	Rename 'Margin of Error' to 'Accuracy Range'; Corrected the P1 standards for 1608 and 2012 specification paper tapes . Corrected the error range of KCBW1806U190T, and the nominal impedance of KCBW1812U190T and KCBW1812U380T. Update the disk label diagram

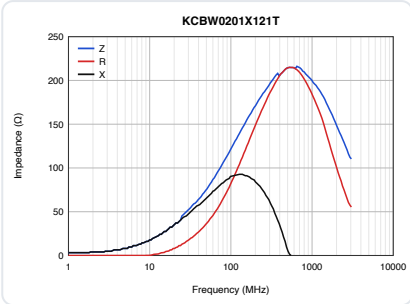
The information provided above is the product specifications. Until the product is changed, reserves the right to modify this content without notice. Any product changes will be notified to customers via PCN.

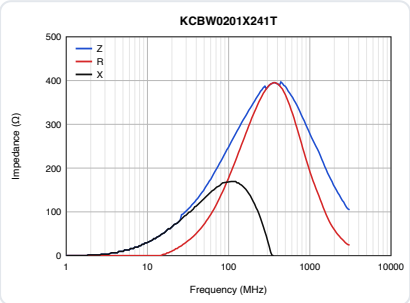
Schedule

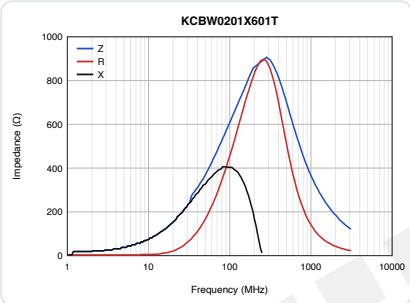
KCBW0201 Type

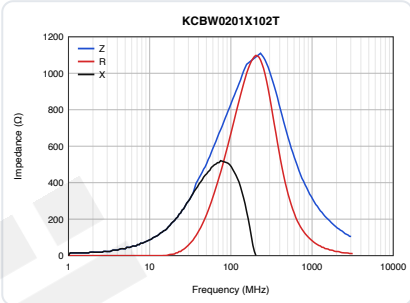




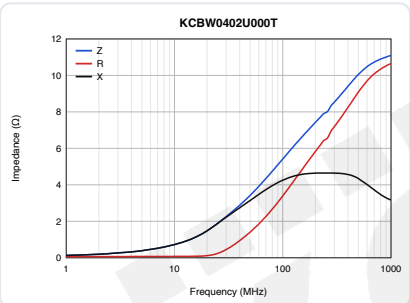


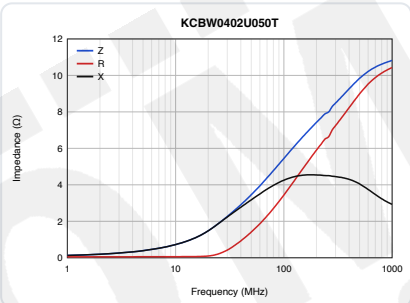


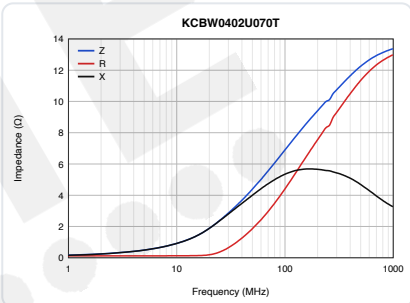


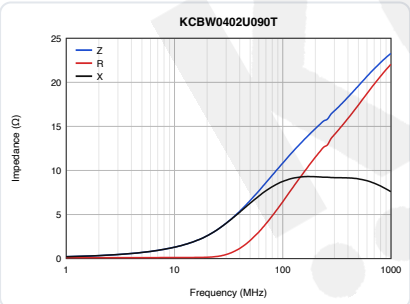


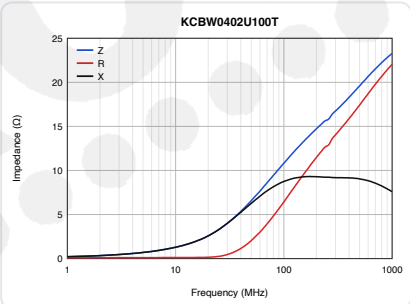
KCBW0402 Type

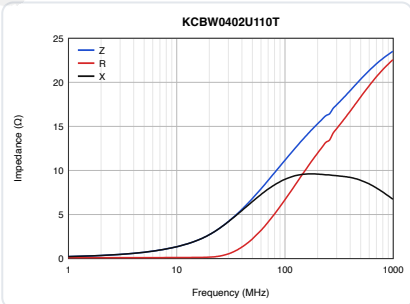


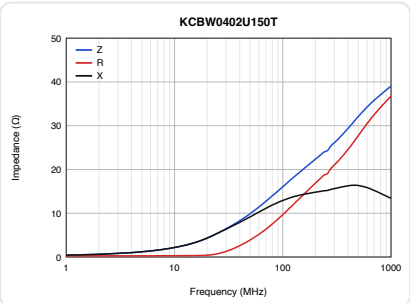


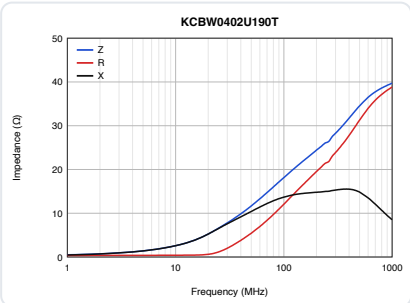


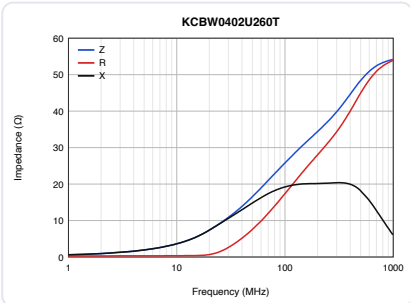


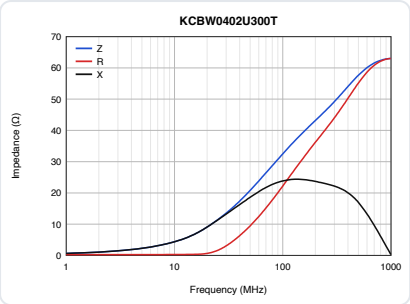


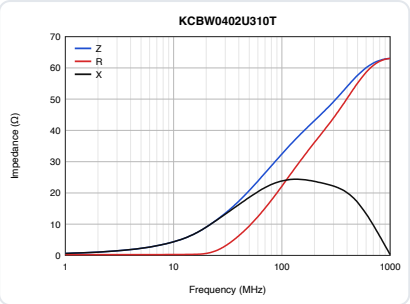


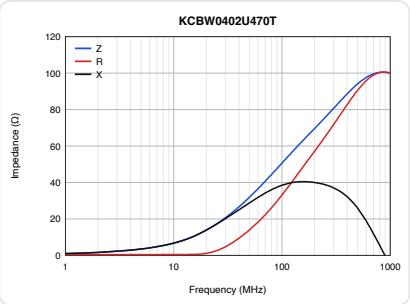


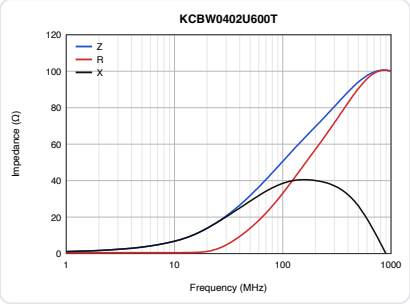


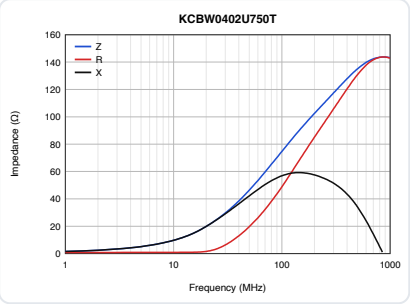


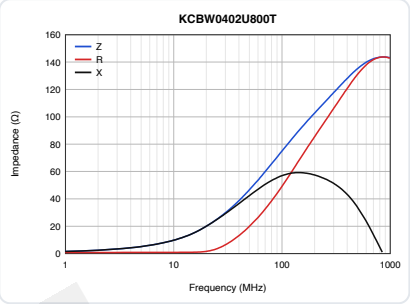

KCBW0402U300T
Z
R
X
Impedance (Ω)
Frequency (MHz)

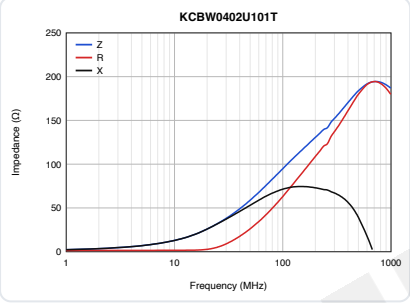

KCBW0402U310T
Z
R
X
Impedance (Ω)
Frequency (MHz)

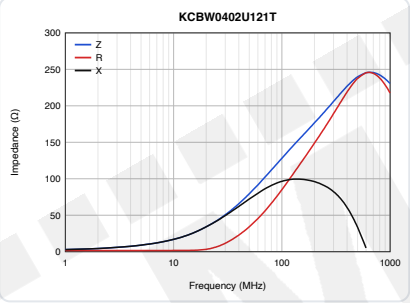

KCBW0402U470T
Z
R
X
Impedance (Ω)
Frequency (MHz)

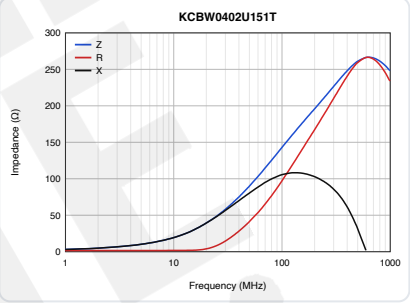

KCBW0402U600T
Z
R
X
Impedance (Ω)
Frequency (MHz)

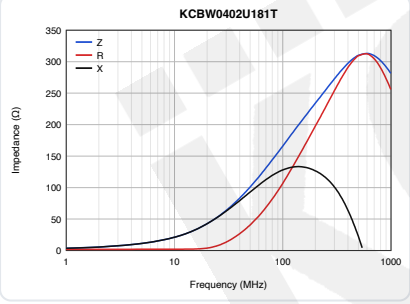

KCBW0402U750T
Z
R
X
Impedance (Ω)
Frequency (MHz)

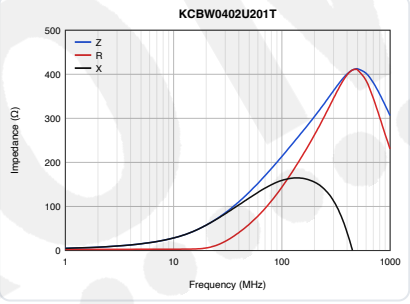

KCBW0402U800T
Z
R
X
Impedance (Ω)
Frequency (MHz)

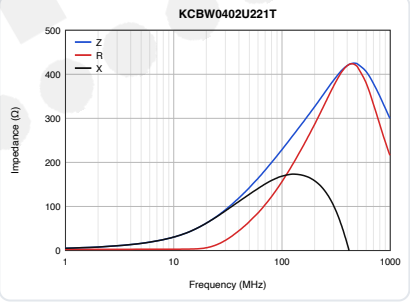

KCBW0402U101T
Z
R
X
Impedance (Ω)
Frequency (MHz)

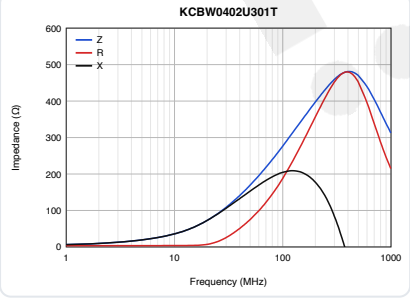

KCBW0402U121T
Z
R
X
Impedance (Ω)
Frequency (MHz)

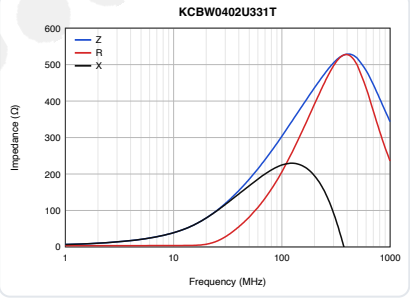

KCBW0402U151T
Z
R
X
Impedance (Ω)
Frequency (MHz)

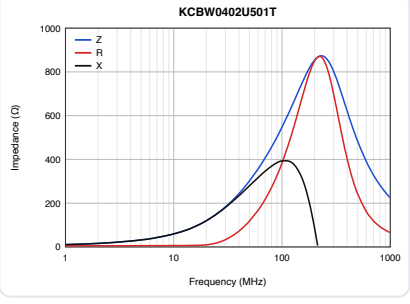

KCBW0402U181T
Z
R
X
Impedance (Ω)
Frequency (MHz)

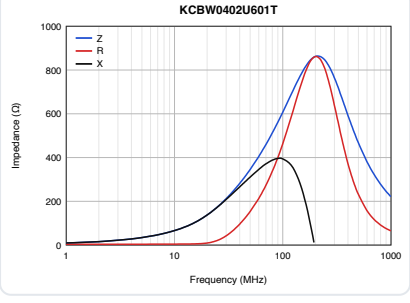

KCBW0402U201T
Z
R
X
Impedance (Ω)
Frequency (MHz)

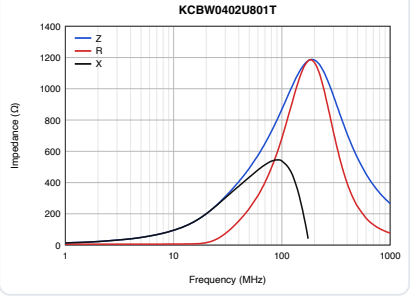

KCBW0402U221T
Z
R
X
Impedance (Ω)
Frequency (MHz)

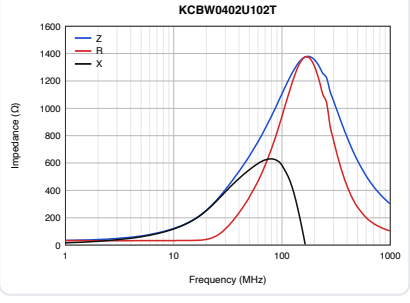

KCBW0402U301T
Z
R
X
Impedance (Ω)
Frequency (MHz)

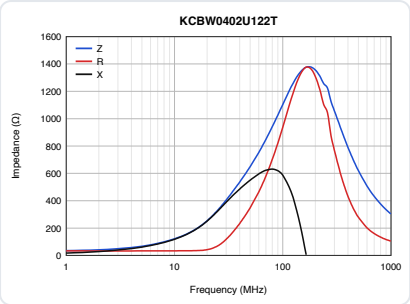

KCBW0402U331T
Z
R
X
Impedance (Ω)
Frequency (MHz)


KCBW0402U501T
Z
R
X
Impedance (Ω)
Frequency (MHz)

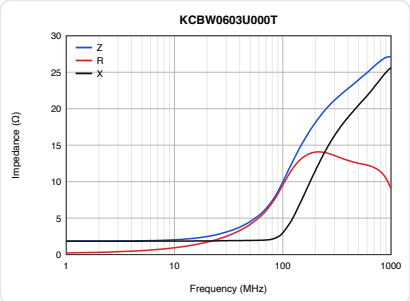

KCBW0402U601T
Z
R
X
Impedance (Ω)
Frequency (MHz)

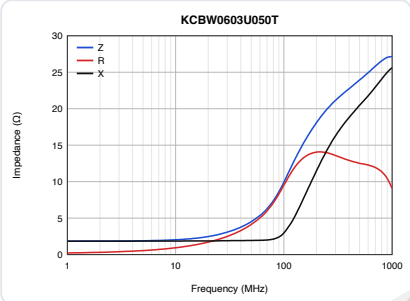

KCBW0402U801T
Z
R
X
Impedance (Ω)
Frequency (MHz)

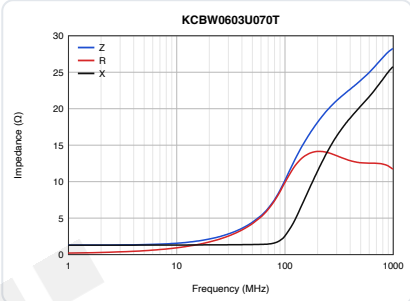

KCBW0402U102T
Z
R
X
Impedance (Ω)
Frequency (MHz)

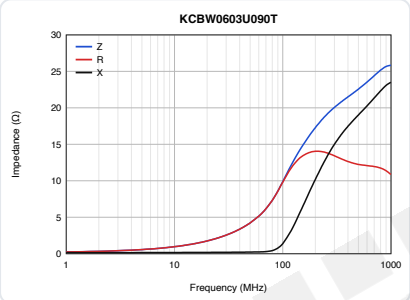


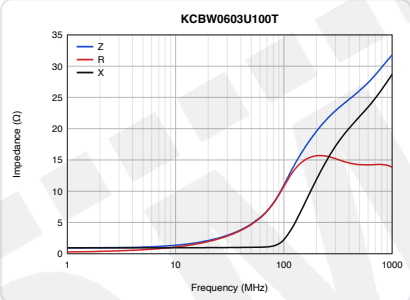
KCBW0603 Type

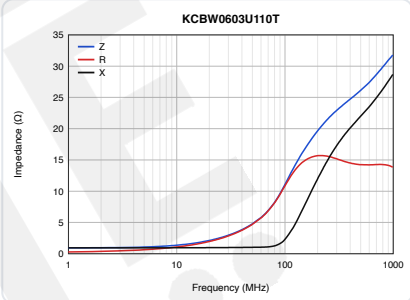


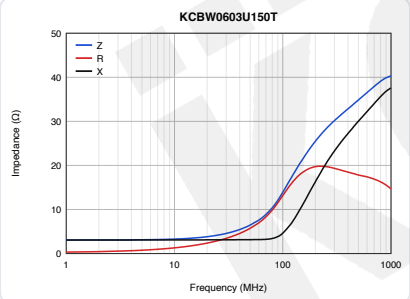


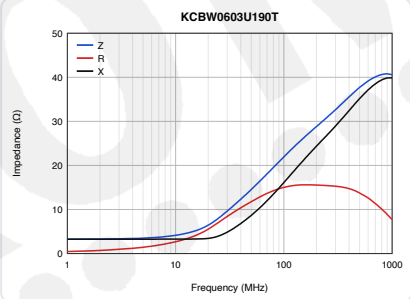


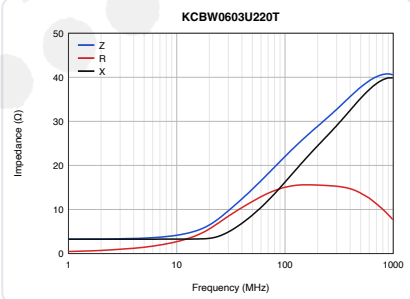


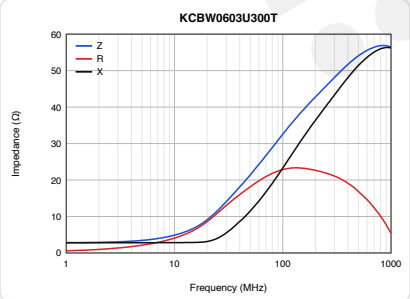


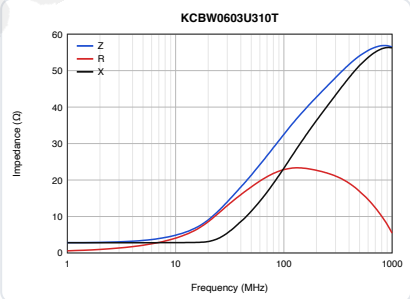


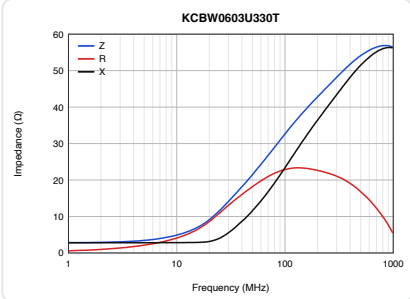


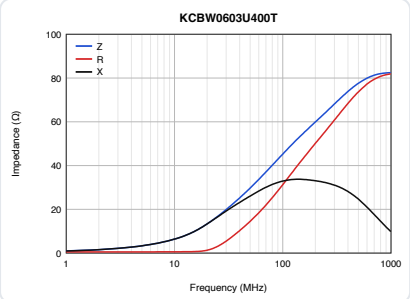


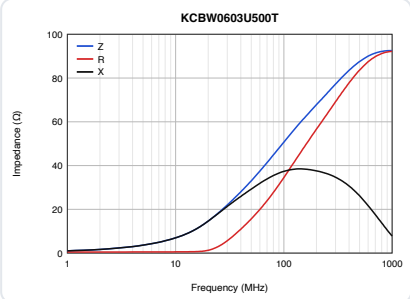


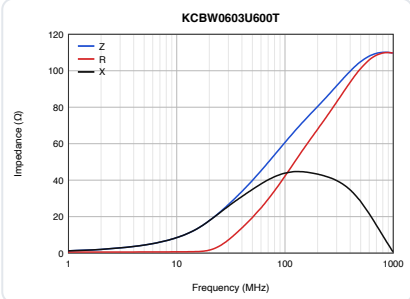


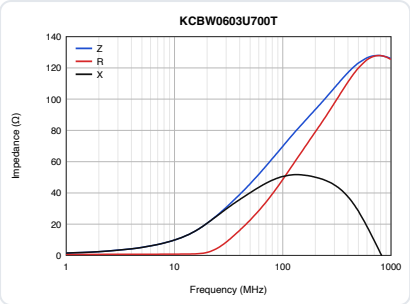


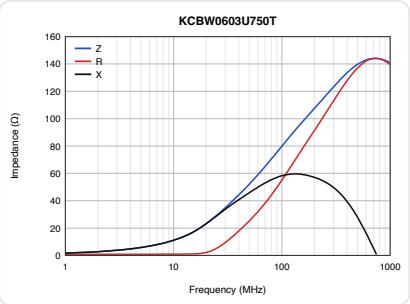


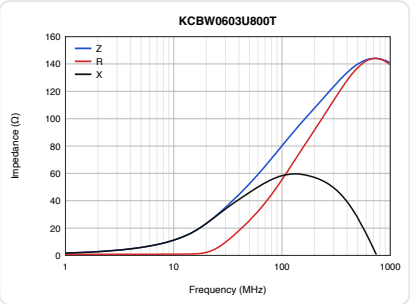


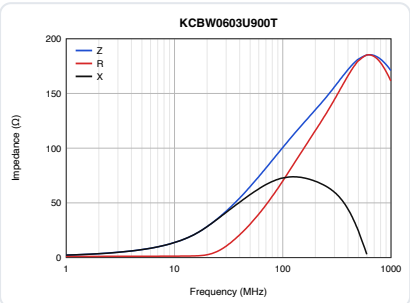


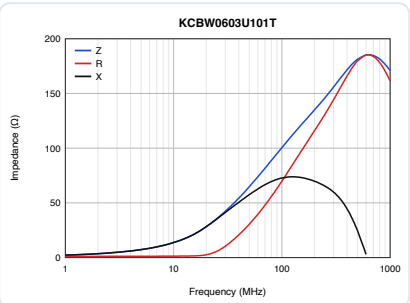


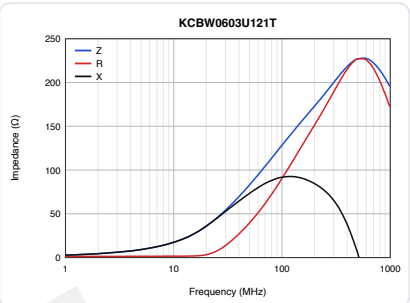

KCBW0603U700T
Z
R
X
Impedance (Ω)
Frequency (MHz)

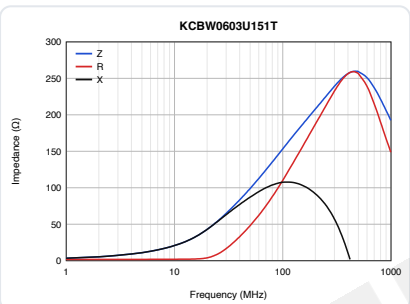

KCBW0603U750T
Z
R
X
Impedance (Ω)
Frequency (MHz)

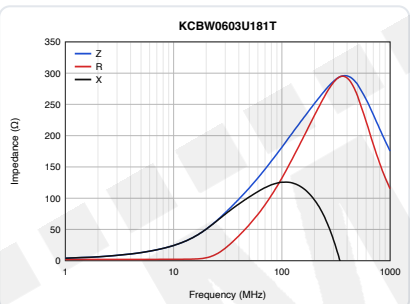

KCBW0603U800T
Z
R
X
Impedance (Ω)
Frequency (MHz)

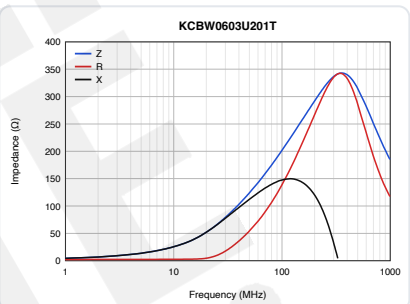

KCBW0603U900T
Z
R
X
Impedance (Ω)
Frequency (MHz)

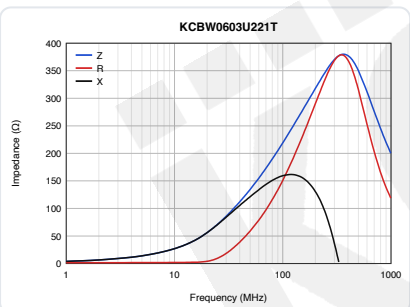

KCBW0603U101T
Z
R
X
Impedance (Ω)
Frequency (MHz)

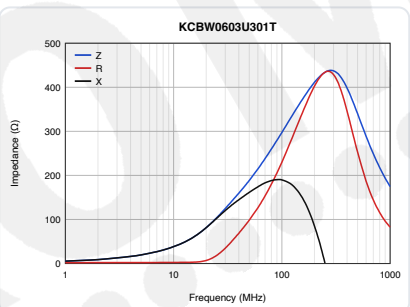

KCBW0603U121T
Z
R
X
Impedance (Ω)
Frequency (MHz)

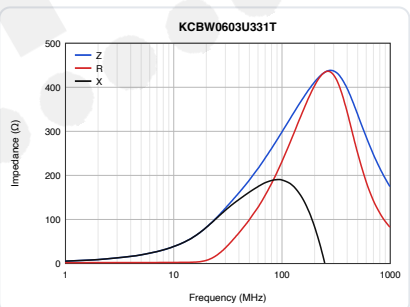

KCBW0603U151T
Z
R
X
Impedance (Ω)
Frequency (MHz)

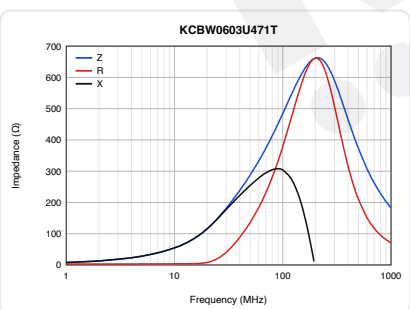

KCBW0603U181T
Z
R
X
Impedance (Ω)
Frequency (MHz)

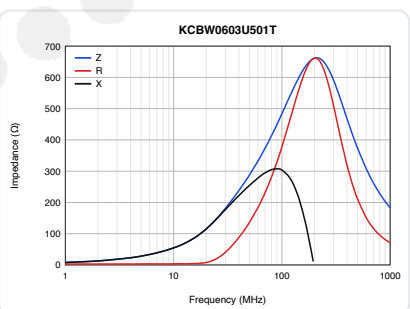

KCBW0603U201T
Z
R
X
Impedance (Ω)
Frequency (MHz)

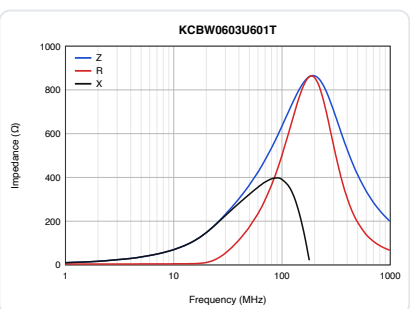

KCBW0603U221T
Z
R
X
Impedance (Ω)
Frequency (MHz)

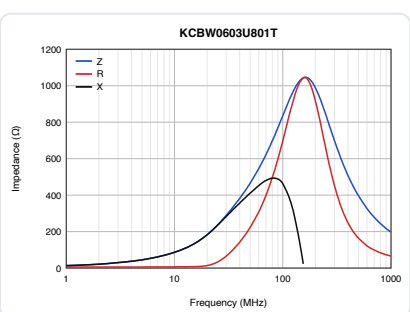

KCBW0603U301T
Z
R
X
Impedance (Ω)
Frequency (MHz)

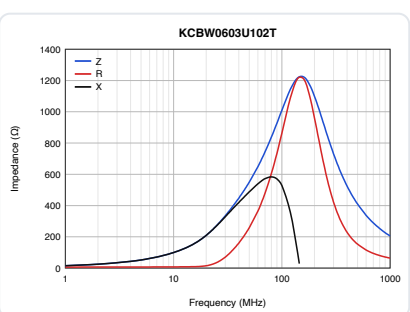

KCBW0603U331T
Z
R
X
Impedance (Ω)
Frequency (MHz)

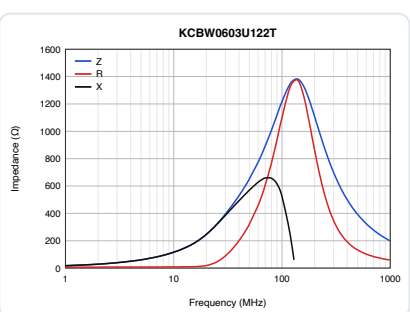

KCBW0603U471T
Z
R
X
Impedance (Ω)
Frequency (MHz)

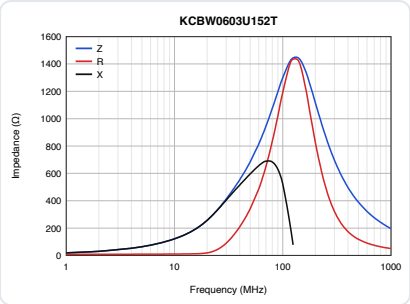

KCBW0603U501T
Z
R
X
Impedance (Ω)
Frequency (MHz)

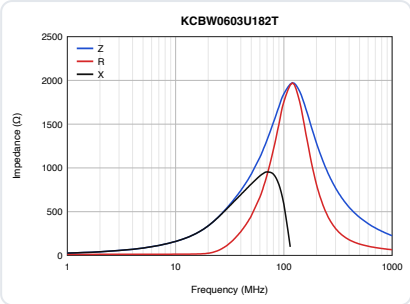

KCBW0603U601T
Z
R
X
Impedance (Ω)
Frequency (MHz)

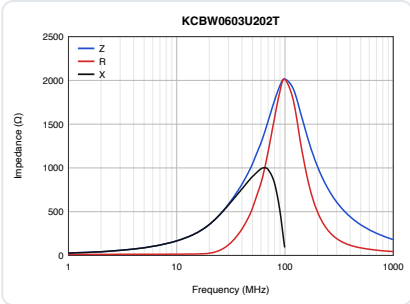

KCBW0603U801T
Z
R
X
Impedance (Ω)
Frequency (MHz)

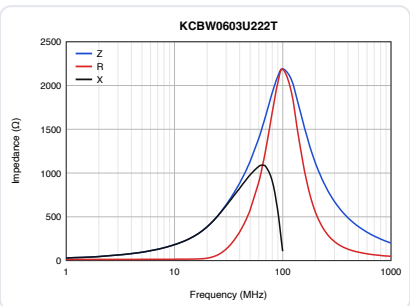

KCBW0603U102T
Z
R
X
Impedance (Ω)
Frequency (MHz)

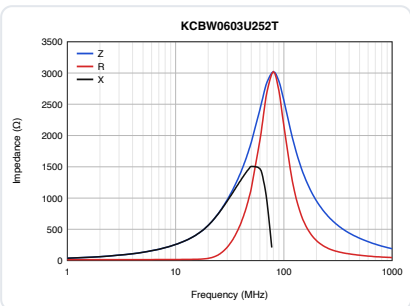

KCBW0603U122T
Z
R
X
Impedance (Ω)
Frequency (MHz)



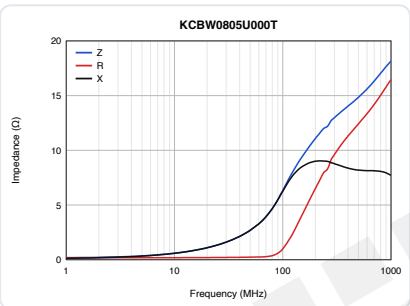


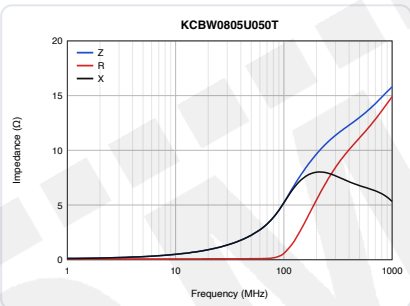


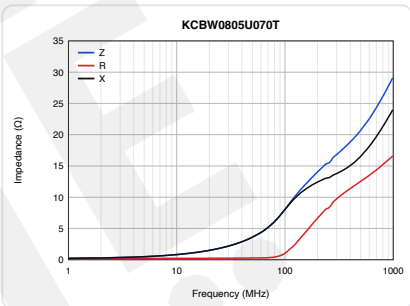


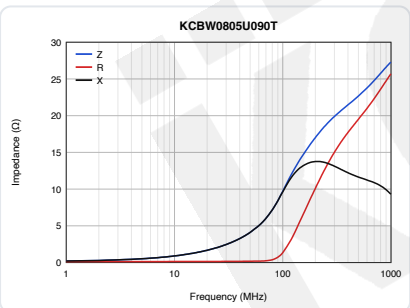


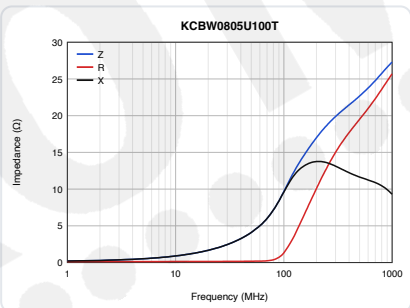
KCBW0805 Type

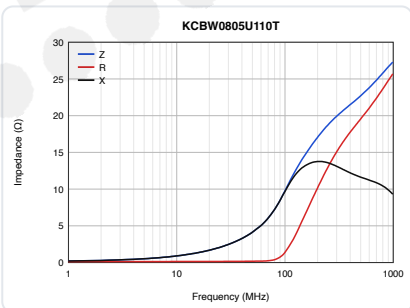


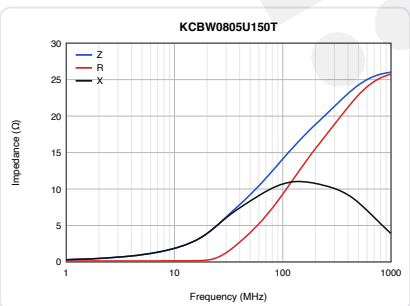


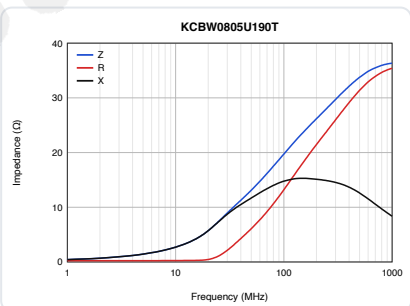


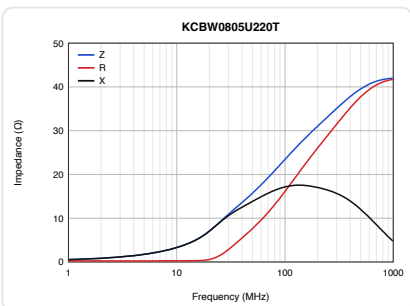


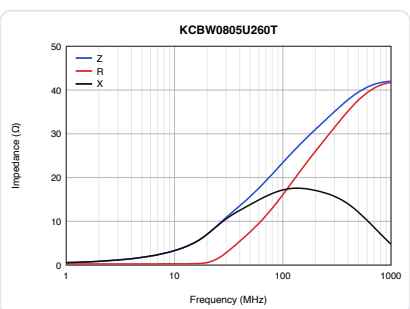


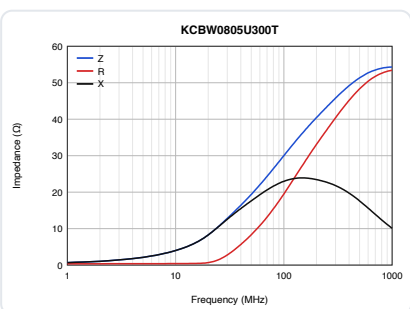


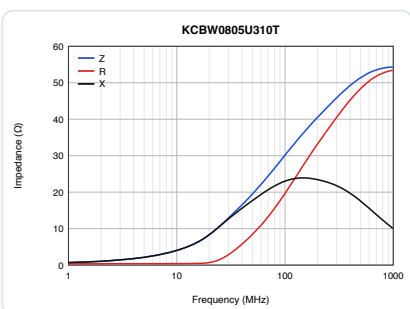


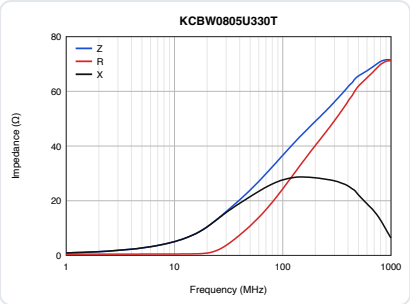


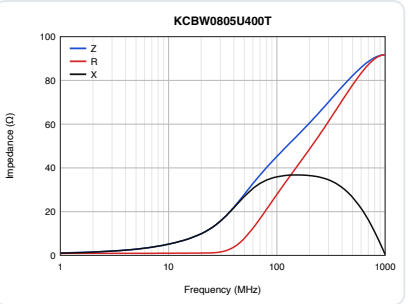


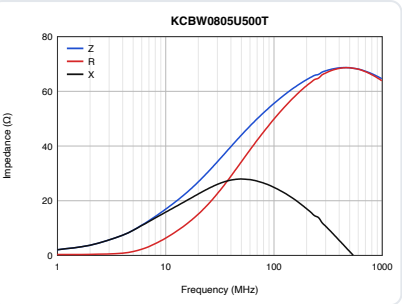


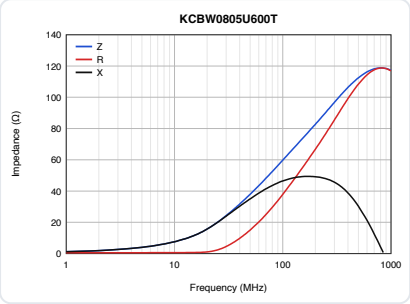


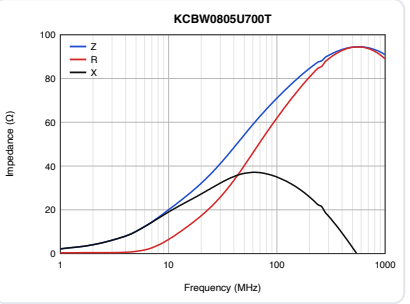


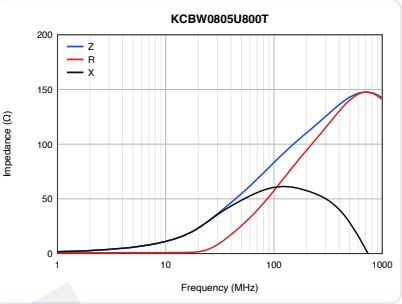

KCBW0805U330T
Z
R
X
Impedance (Ω)
Frequency (MHz)

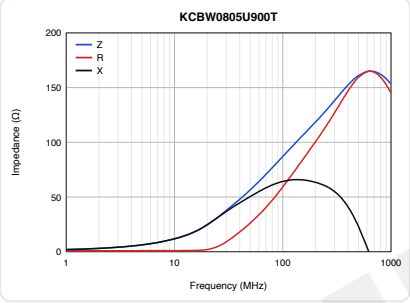

KCBW0805U400T
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R
X
Impedance (Ω)
Frequency (MHz)

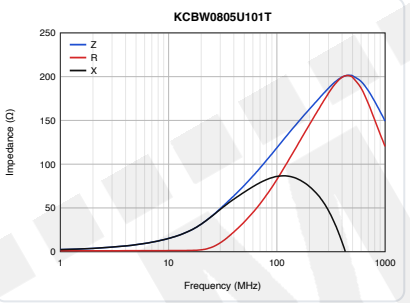

KCBW0805U500T
Z
R
X
Impedance (Ω)
Frequency (MHz)

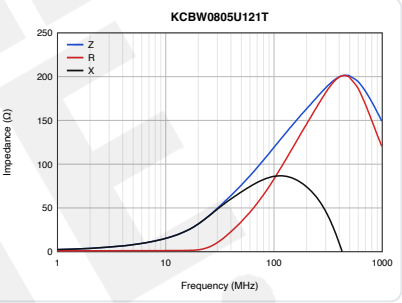

KCBW0805U600T
Z
R
X
Impedance (Ω)
Frequency (MHz)

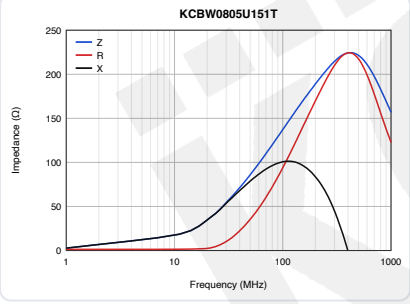

KCBW0805U700T
Z
R
X
Impedance (Ω)
Frequency (MHz)

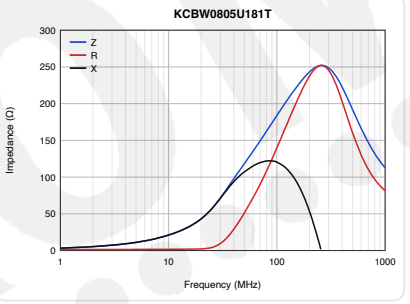

KCBW0805U800T
Z
R
X
Impedance (Ω)
Frequency (MHz)

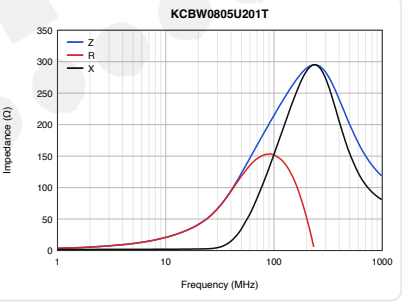

KCBW0805U900T
Z
R
X
Impedance (Ω)
Frequency (MHz)

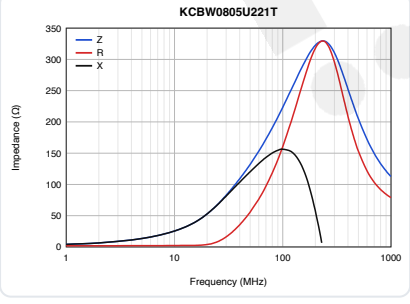

KCBW0805U101T
Z
R
X
Impedance (Ω)
Frequency (MHz)

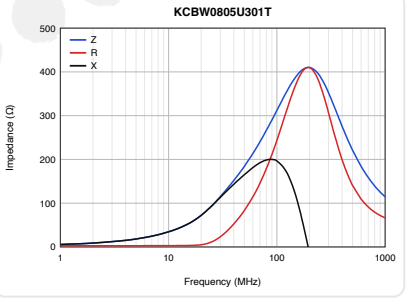

KCBW0805U121T
Z
R
X
Impedance (Ω)
Frequency (MHz)

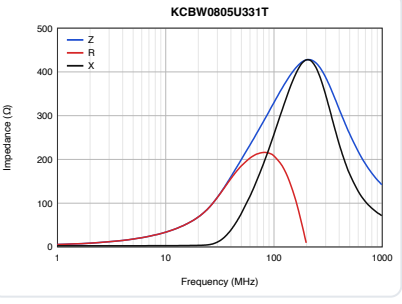

KCBW0805U151T
Z
R
X
Impedance (Ω)
Frequency (MHz)

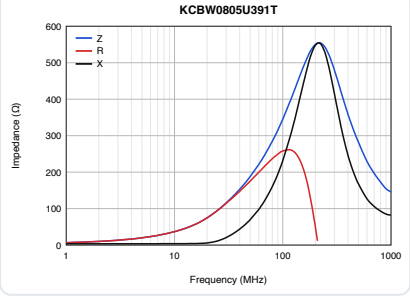

KCBW0805U181T
Z
R
X
Impedance (Ω)
Frequency (MHz)

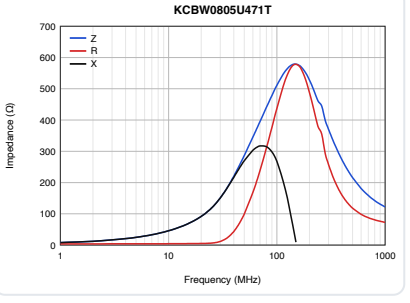

KCBW0805U201T
Z
R
X
Impedance (Ω)
Frequency (MHz)

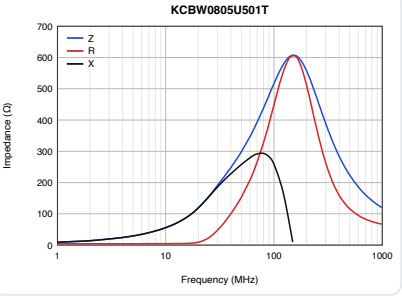

KCBW0805U221T
Z
R
X
Impedance (Ω)
Frequency (MHz)

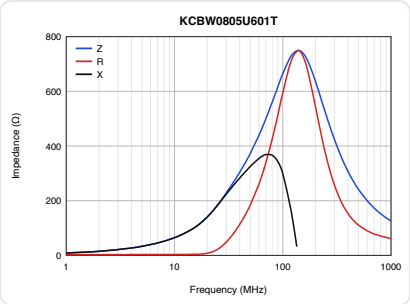

KCBW0805U301T
Z
R
X
Impedance (Ω)
Frequency (MHz)

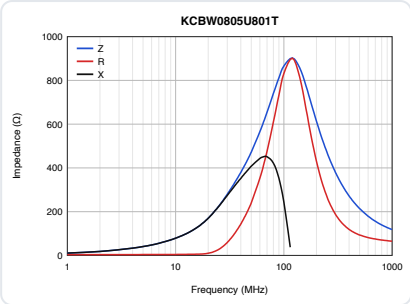

KCBW0805U331T
Z
R
X
Impedance (Ω)
Frequency (MHz)

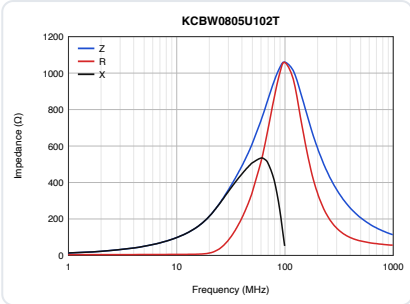

KCBW0805U391T
Z
R
X
Impedance (Ω)
Frequency (MHz)

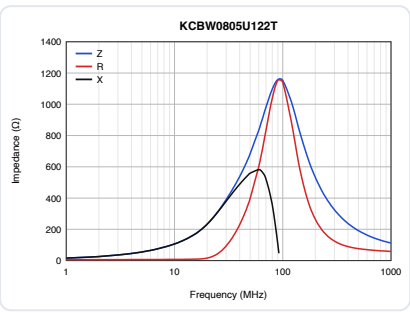

KCBW0805U471T
Z
R
X
Impedance (Ω)
Frequency (MHz)

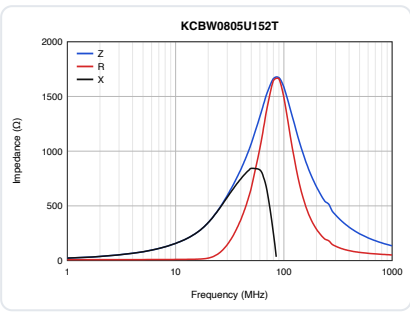

KCBW0805U501T
Z
R
X
Impedance (Ω)
Frequency (MHz)

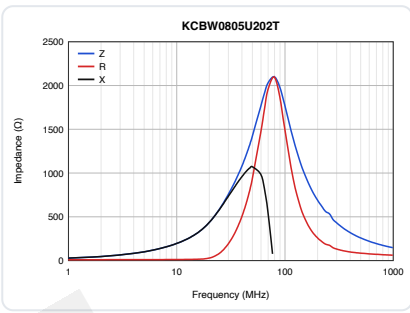


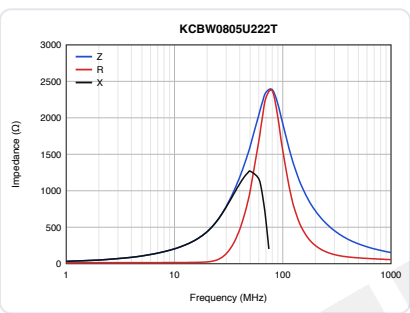


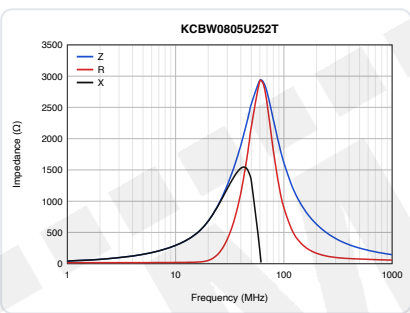




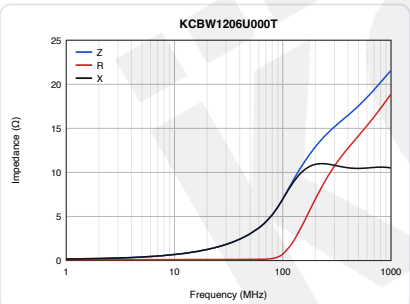


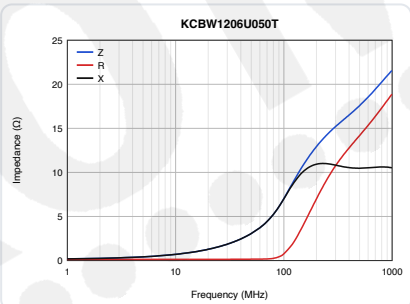


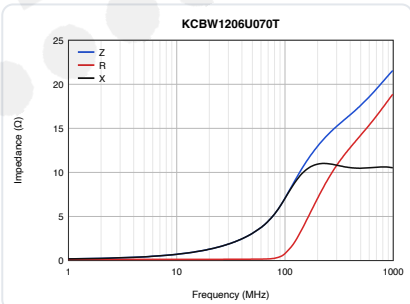


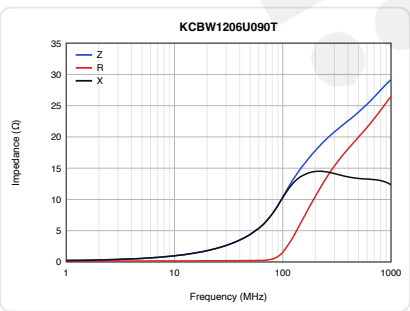


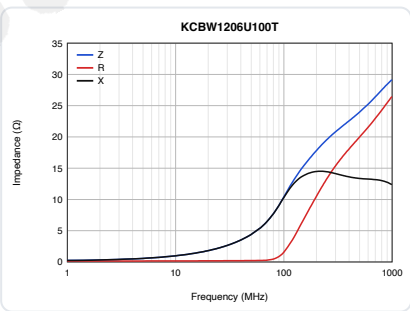
KCBW1206 Type

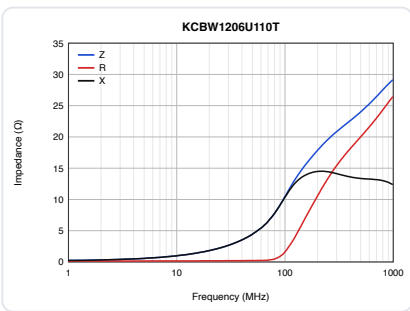


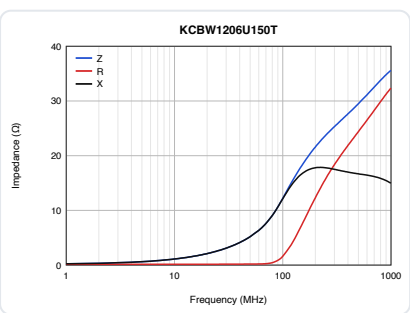


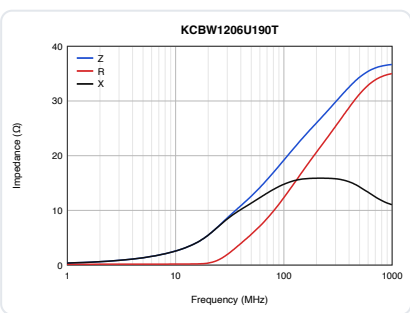


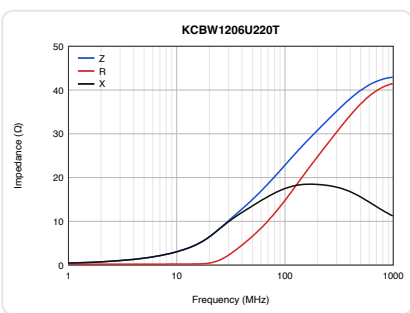


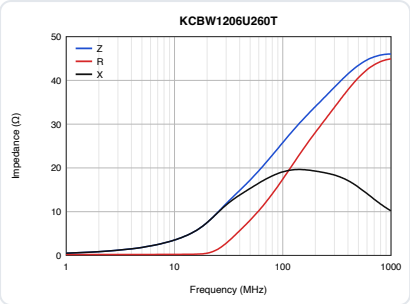


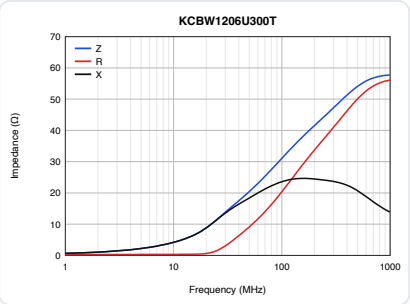


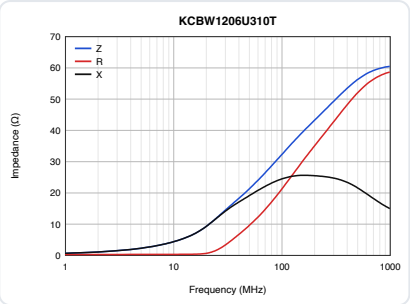


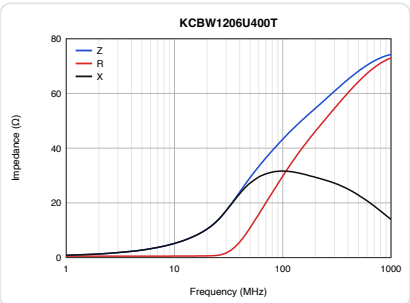


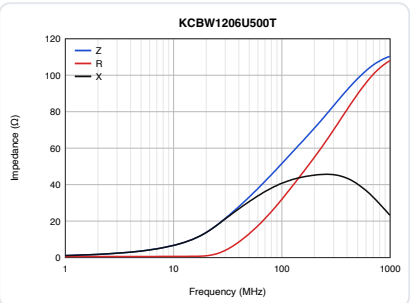


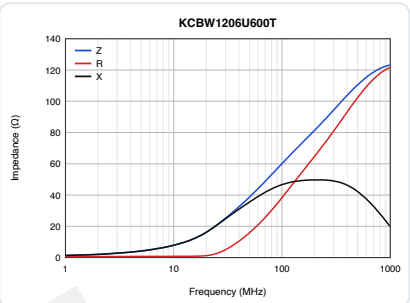

KCBW1206U260T
Z
R
X
Impedance (Ω)
Frequency (MHz)

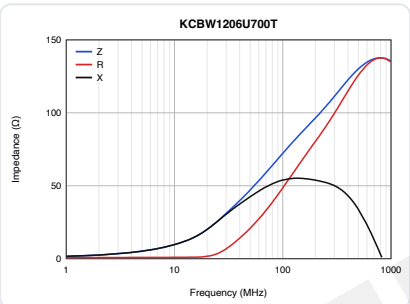

KCBW1206U300T
Z
R
X
Impedance (Ω)
Frequency (MHz)

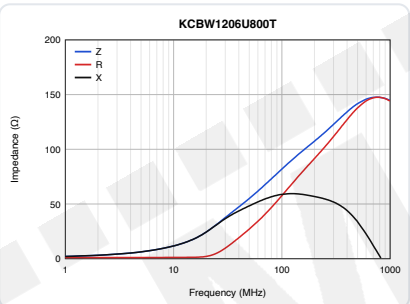

KCBW1206U310T
Z
R
X
Impedance (Ω)
Frequency (MHz)

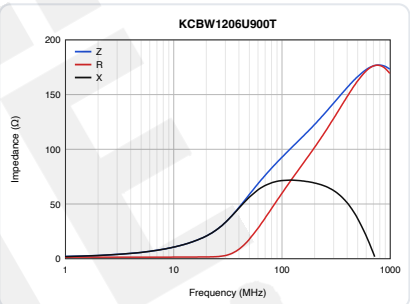

KCBW1206U400T
Z
R
X
Impedance (Ω)
Frequency (MHz)

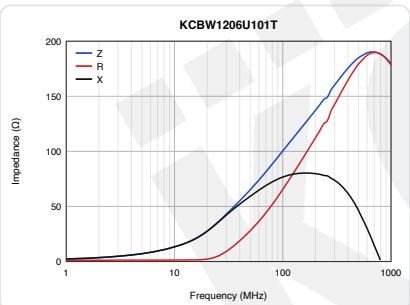

KCBW1206U500T
Z
R
X
Impedance (Ω)
Frequency (MHz)

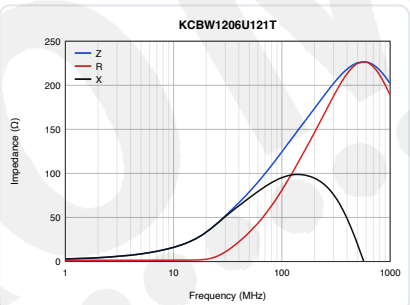

KCBW1206U600T
Z
R
X
Impedance (Ω)
Frequency (MHz)

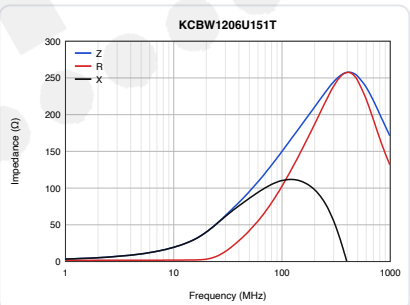

KCBW1206U700T
Z
R
X
Impedance (Ω)
Frequency (MHz)

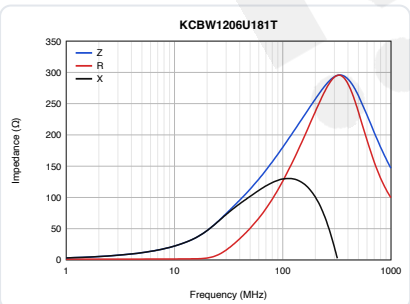

KCBW1206U800T
Z
R
X
Impedance (Ω)
Frequency (MHz)

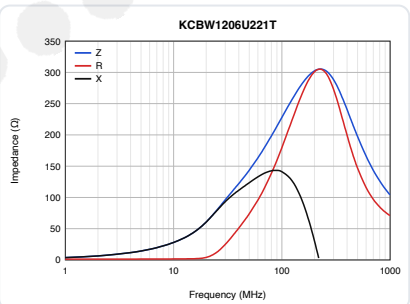

KCBW1206U900T
Z
R
X
Impedance (Ω)
Frequency (MHz)

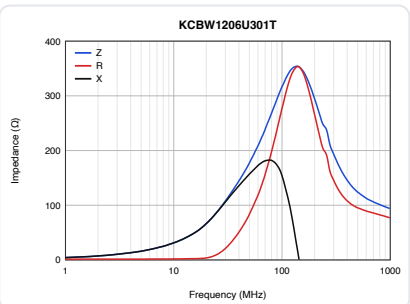

KCBW1206U101T
Z
R
X
Impedance (Ω)
Frequency (MHz)

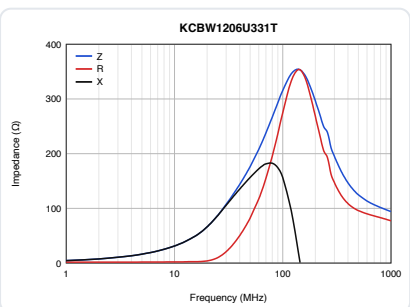

KCBW1206U121T
Z
R
X
Impedance (Ω)
Frequency (MHz)

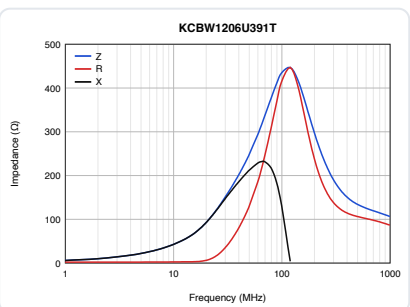

KCBW1206U151T
Z
R
X
Impedance (Ω)
Frequency (MHz)

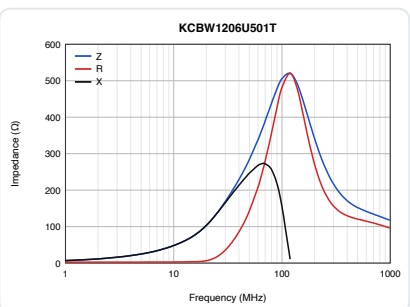

KCBW1206U181T
Z
R
X
Impedance (Ω)
Frequency (MHz)

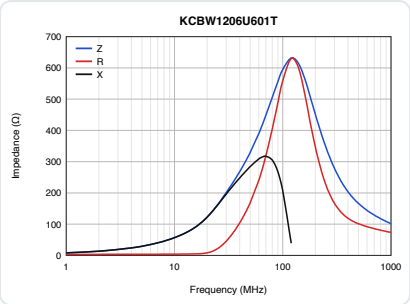

KCBW1206U221T
Z
R
X
Impedance (Ω)
Frequency (MHz)

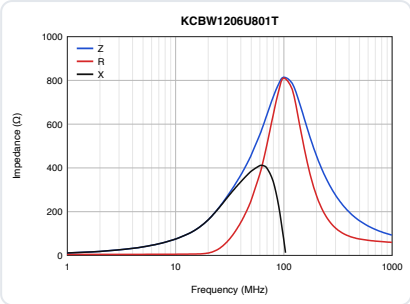

KCBW1206U301T
Z
R
X
Impedance (Ω)
Frequency (MHz)

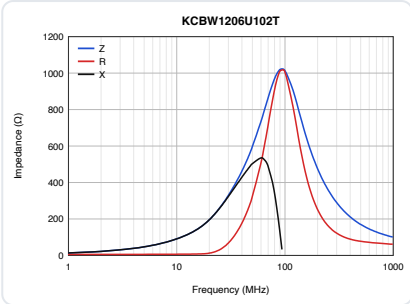

KCBW1206U331T
Z
R
X
Impedance (Ω)
Frequency (MHz)

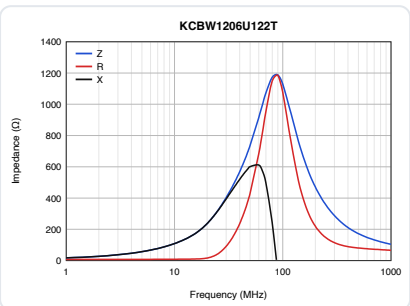

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Z
R
X
Impedance (Ω)
Frequency (MHz)

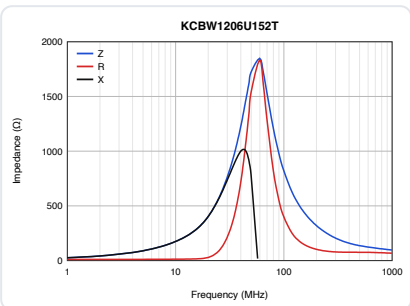

KCBW1206U501T
Z
R
X
Impedance (Ω)
Frequency (MHz)

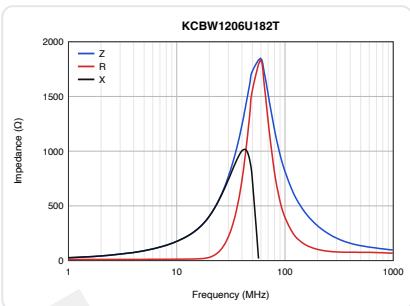


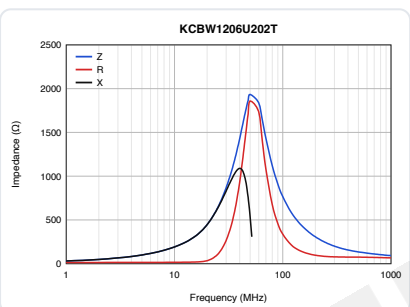


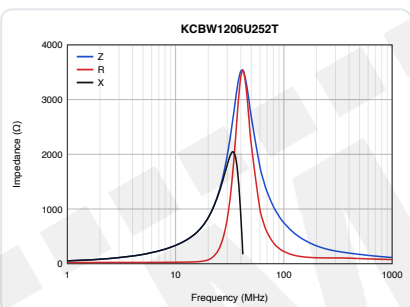


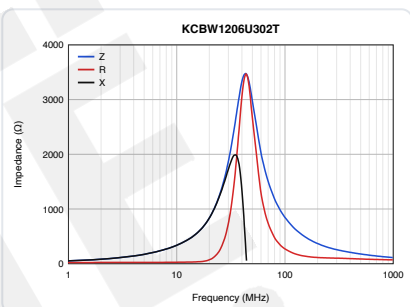




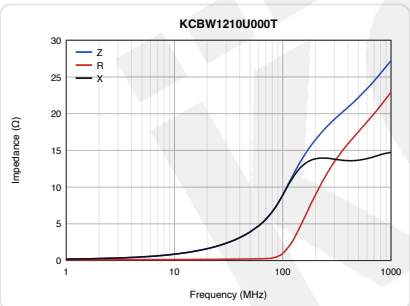


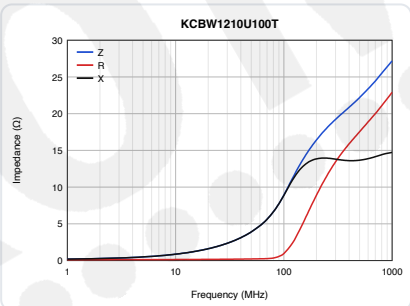


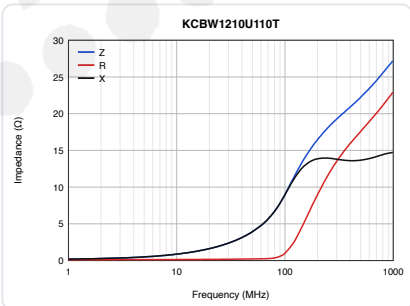


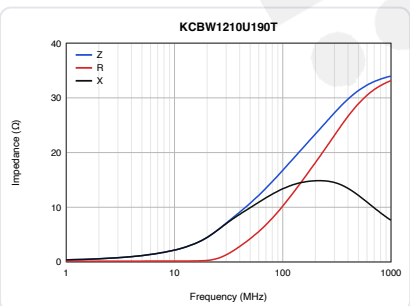


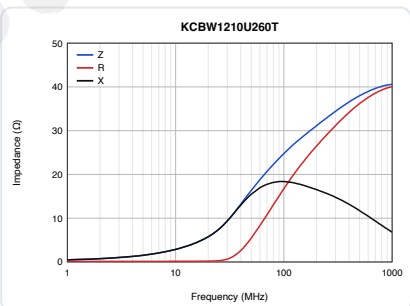
KCBW1210 Type

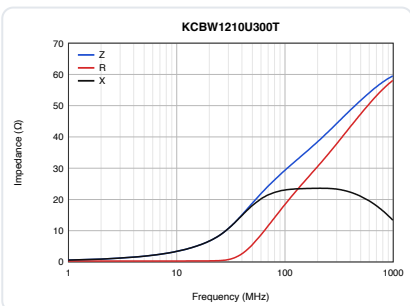


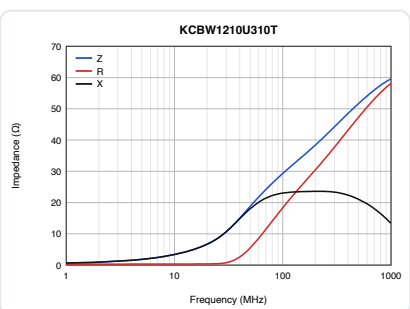


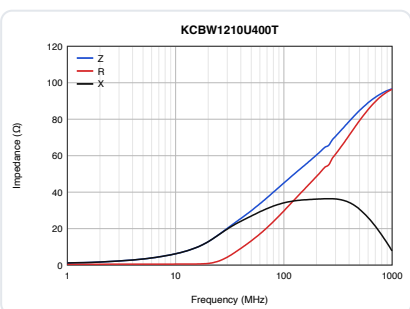


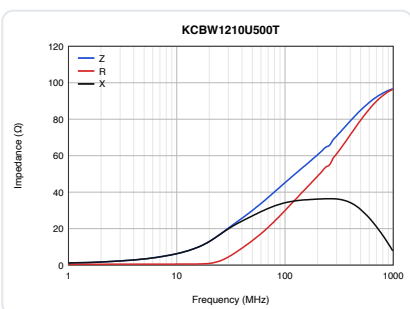


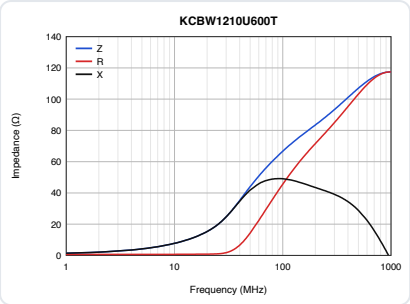


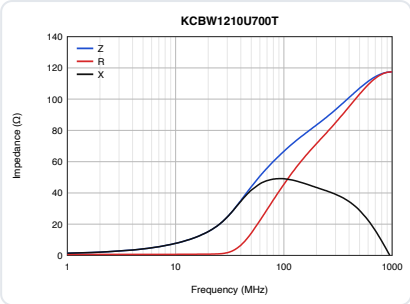


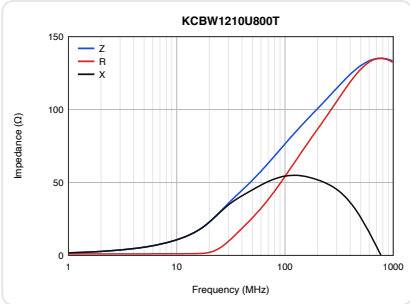


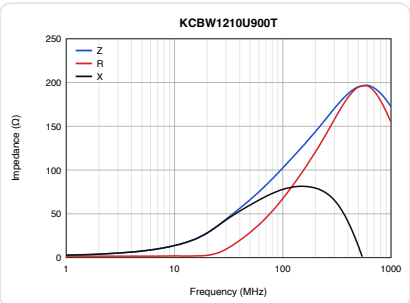


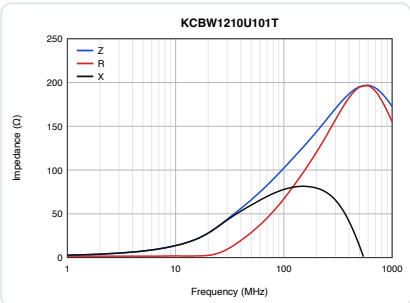


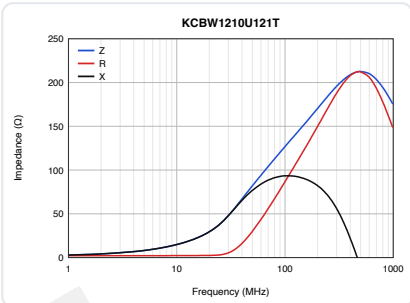


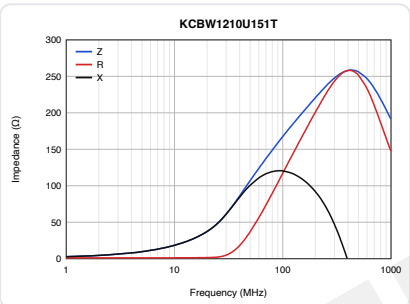


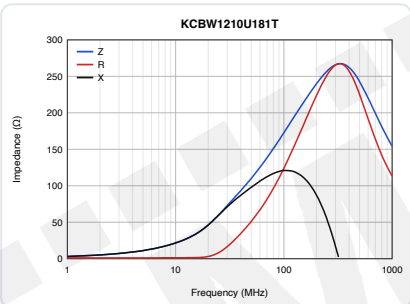


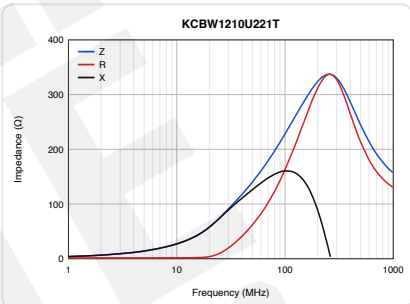


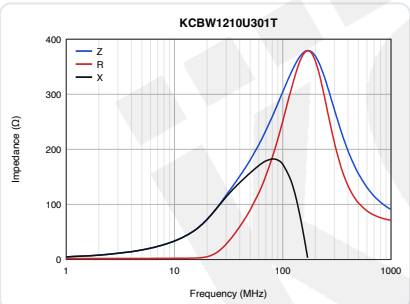


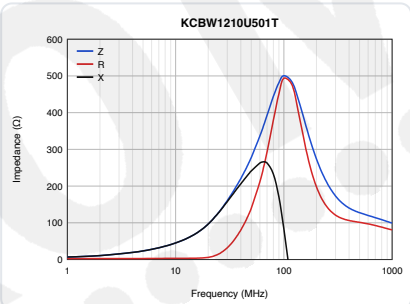


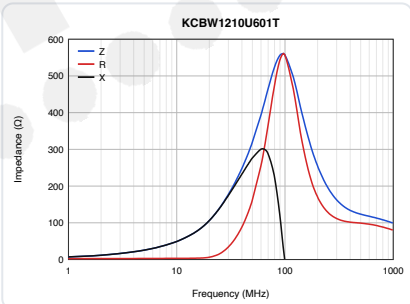


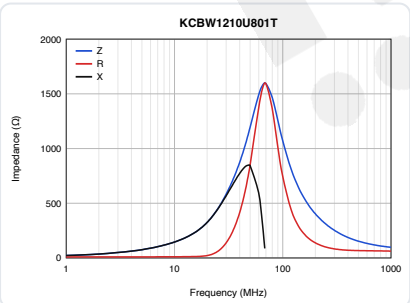


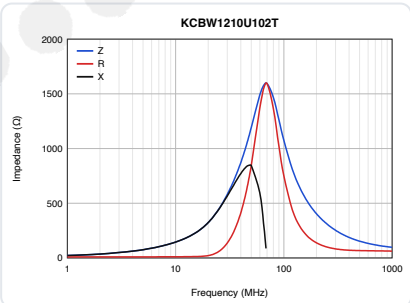




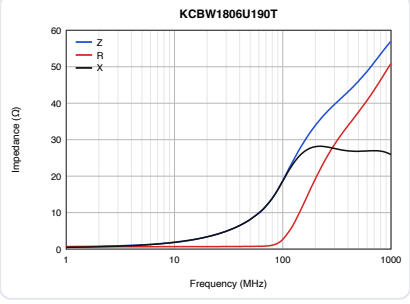


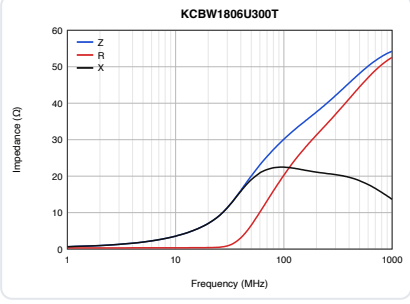


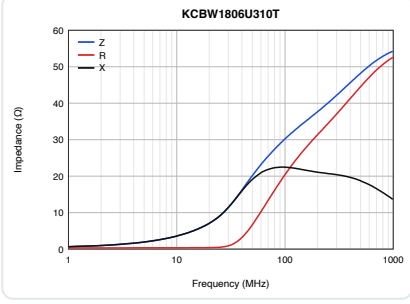


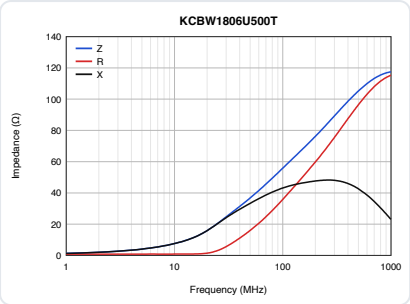


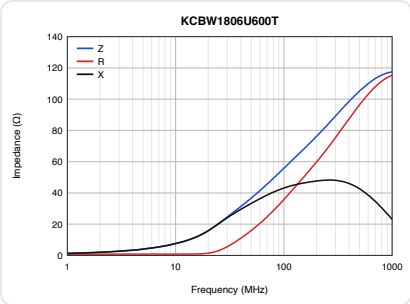
KCBW1806 Type

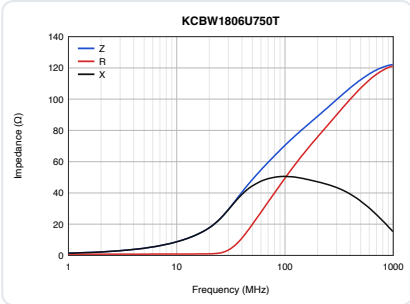


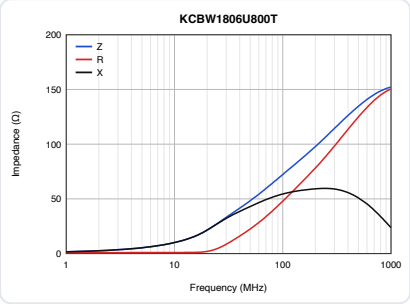


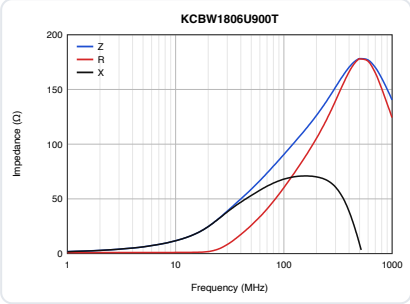


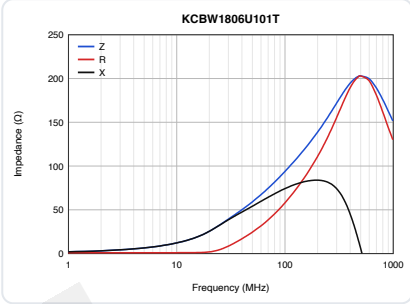


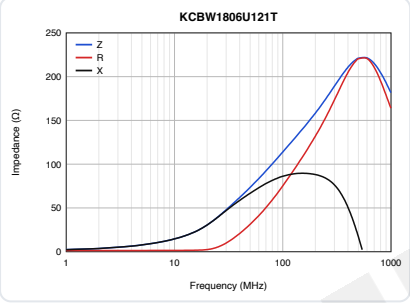


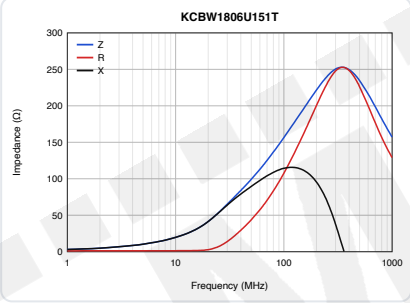


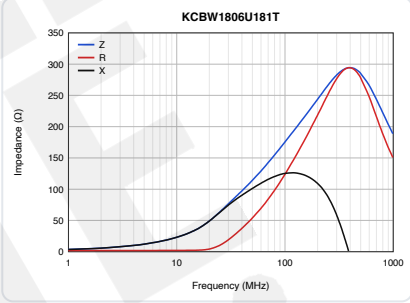


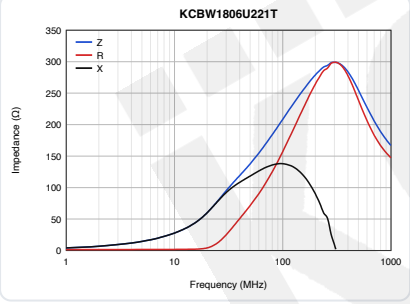


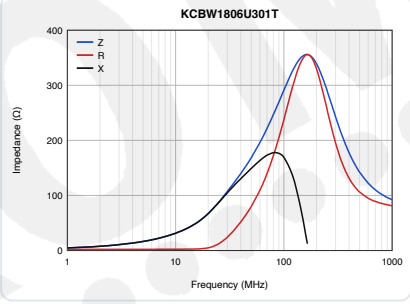


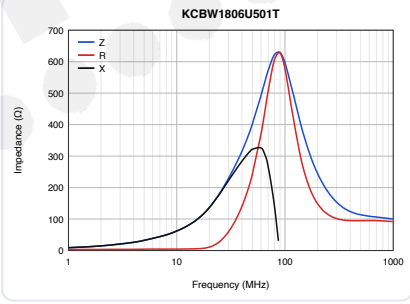


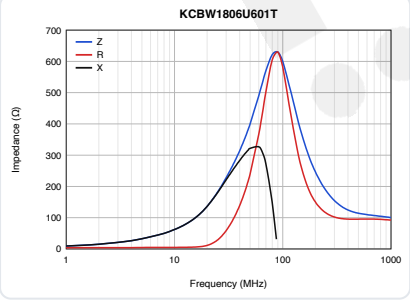




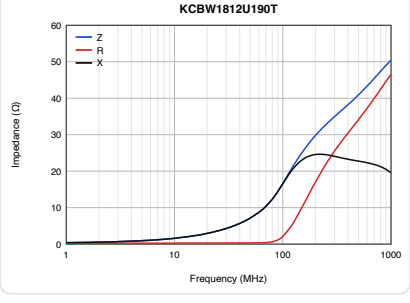


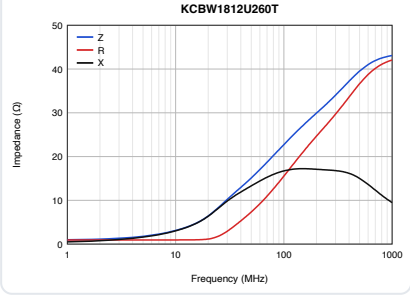


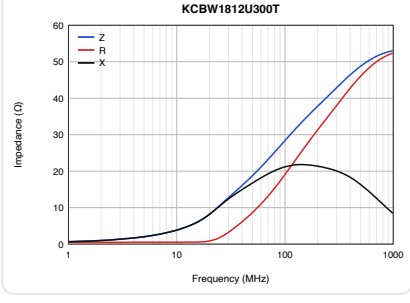


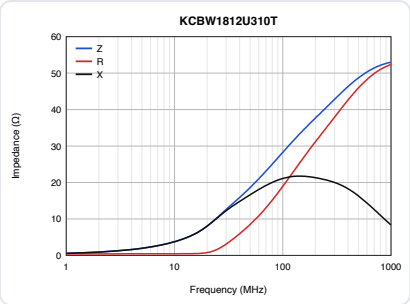


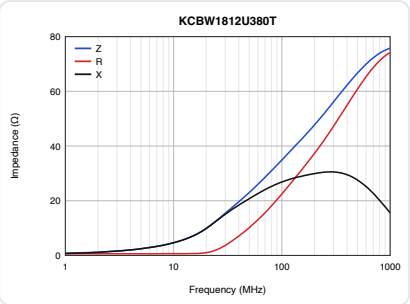
KCBW1812 Type

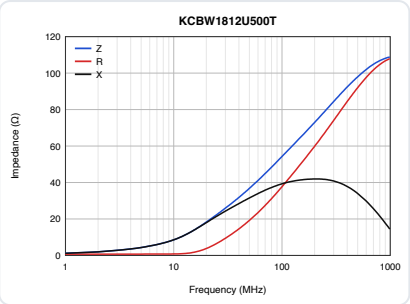


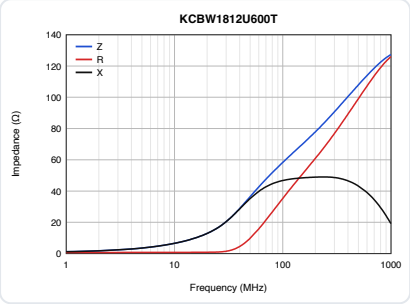


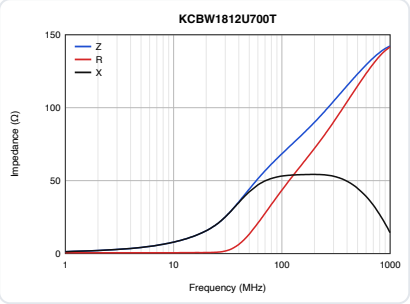


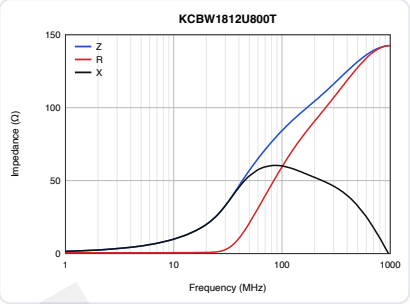

KCBW1812U310T
Z
R
X
Impedance (Ω)
Frequency (MHz)

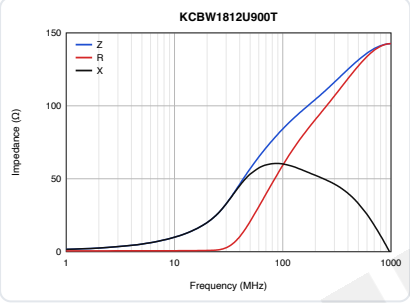

KCBW1812U380T
Z
R
X
Impedance (Ω)
Frequency (MHz)

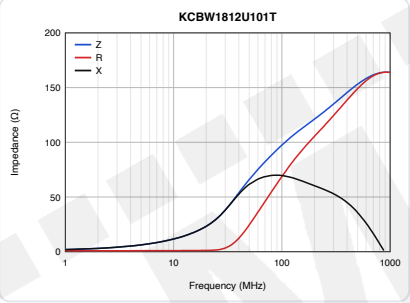

KCBW1812U500T
Z
R
X
Impedance (Ω)
Frequency (MHz)

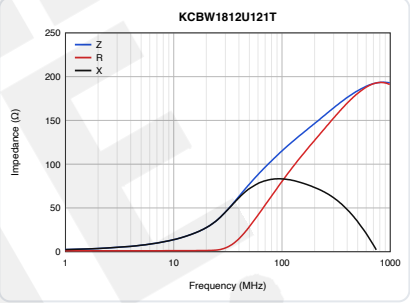

KCBW1812U600T
Z
R
X
Impedance (Ω)
Frequency (MHz)

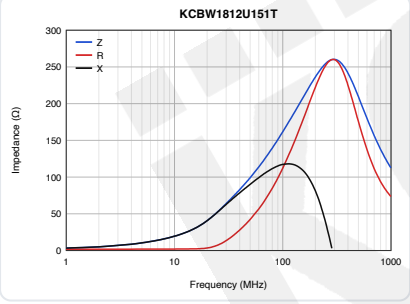

KCBW1812U700T
Z
R
X
Impedance (Ω)
Frequency (MHz)

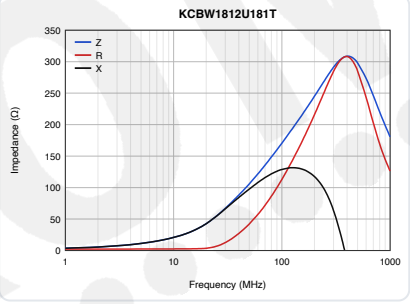

KCBW1812U800T
Z
R
X
Impedance (Ω)
Frequency (MHz)

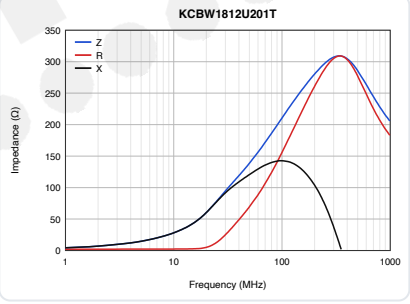

KCBW1812U900T
Z
R
X
Impedance (Ω)
Frequency (MHz)

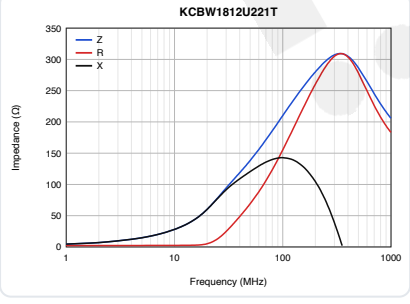

KCBW1812U101T
Z
R
X
Impedance (Ω)
Frequency (MHz)

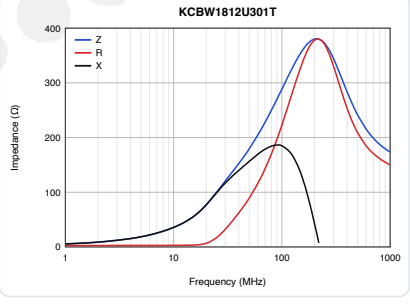

KCBW1812U121T
Z
R
X
Impedance (Ω)
Frequency (MHz)

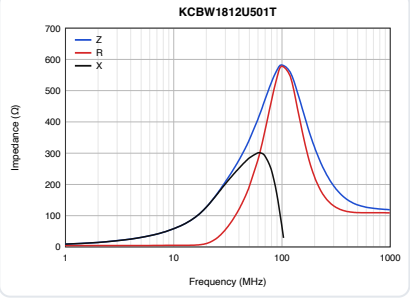

KCBW1812U151T
Z
R
X
Impedance (Ω)
Frequency (MHz)

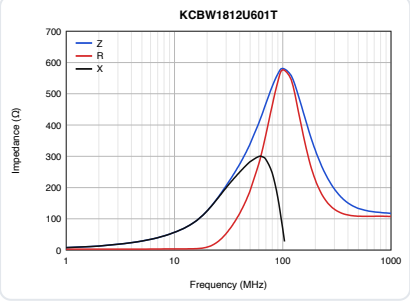

KCBW1812U181T
Z
R
X
Impedance (Ω)
Frequency (MHz)


KCBW1812U201T
Z
R
X
Impedance (Ω)
Frequency (MHz)


KCBW1812U221T
Z
R
X
Impedance (Ω)
Frequency (MHz)


KCBW1812U301T
Z
R
X
Impedance (Ω)
Frequency (MHz)


KCBW1812U501T
Z
R
X
Impedance (Ω)
Frequency (MHz)


KCBW1812U601T
Z
R
X
Impedance (Ω)
Frequency (MHz)