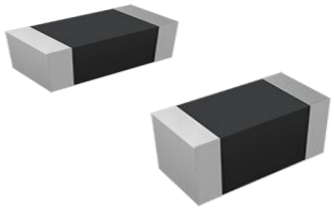
Multilayer Chip Ferrite Beads

APBH-D Series

FEATURES 特征

- Can be used in a wide range of frequency to suppress EMI.
  可在宽频率范围内用于抑制电磁干扰（EMI）
- Internal silver printed layers and magnetic shielded structures to minimize crosstalk.
  内部银浆印刷层及磁屏蔽结构，以最大限度减少串扰.
- Monolithic structure for excellent reliability.
  整体式结构，可靠性优异.
- Smaller DC resistance and larger rated current than APBE series.
  低直流电阻,比APBE系列更大的额定电流.
- Operating Temp：-55℃~+125℃(Including self heating)
  工作温度范围:-55~+125°℃(包括自身温度上升)



APPLICATIONS 用途

- Noise suppression in power lines or extra-large current signal lines of electrical equipment such as communication equipment, computers and LCD TVs.
  适用于通信设备、计算机、液晶电视等电气设备的电源线或超大电流信号线中的噪声抑制.

PART NUMBERING 产品型号

APBH	1608	-	121	W	T	D16
①	②		③	④	⑤	⑥

① Series Name	
APBH	Multilayer Chip Ferrite Ultra-High Current Beads

② External Dimensions [inch]	(L×W) (mm)
0603 [0201]	0.6×0.3
1005 [0402]	1.0×0.5
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.2
3216 [1206]	3.2×1.6
3225 [1210]	3.2×2.5
4516 [1806]	4.5×1.6
4532 [1812]	4.5×3.2

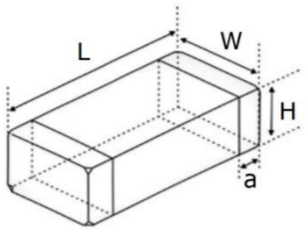
③ Impedance	
Code (example)	Impedance［Ω］
900	90
121	120
102	1000

⑤ Packaging	
T	Tape & Reel

④ Characteristics Code	
Stardard	W

⑥ Special Material Code
D16

DIMENSIONS 尺寸



Unit: mm [inch]

Dimensions				
Series	L	W	H	a
APBH0603 [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]
APBH1005 [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]
APBH1608 [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]
APBH2012 [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]
APBH3216 [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]
APBH3225 [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]
APBH4516 [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]
APBH4532 [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]

ELECTRICAL CHARACTERISTICS 特性规格表

● APBH0603 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH0603-220WTD16	22	±25%	100	0.040	1900
APBH0603-330WTD16	33	±25%	100	0.055	1600
APBH0603-800WTD16	80	±25%	100	0.130	1100
APBH0603-121WTD16	120	±25%	100	0.160	950

● APBH1005 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH1005-000WTD16	0	0~15Ω	100	0.020	2100
APBH1005-050WTD16	5	0~15Ω	100	0.020	2100
APBH1005-070WTD16	7	0~11Ω	100	0.020	2100
APBH1005-090WTD16	9	5~13Ω	100	0.020	2100
APBH1005-100WTD16	10	7~15Ω	100	0.020	2100
APBH1005-110WTD16	11	7~15Ω	100	0.020	2100
APBH1005-150WTD16	15	9~21Ω	100	0.020	2100
APBH1005-190WTD16	19	12~25Ω	100	0.035	1800

ELECTRICAL CHARACTERISTICS 特性规格表

● APBH1005 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH1005-260WTD16	26	±25%	100	0.060	1600
APBH1005-300WTD16	30	±25%	100	0.060	1600
APBH1005-600WTD16	60	±25%	100	0.100	1400
APBH1005-750WTD16	75	±25%	100	0.150	1100
APBH1005-101WTD16	100	±25%	100	0.150	1100
APBH1005-121WTD16	120	±25%	100	0.150	1100
APBH1005-151WTD16	150	±25%	100	0.200	750
APBH1005-181WTD16	180	±25%	100	0.250	750
APBH1005-201WTD16	200	±25%	100	0.250	750
APBH1005-221WTD16	220	±25%	100	0.280	750
APBH1005-301WTD16	300	±25%	100	0.300	650
APBH1005-331WTD16	330	±25%	100	0.400	550
APBH1005-471WTD16	470	±25%	100	0.400	550
APBH1005-501WTD16	500	±25%	100	0.400	550
APBH1005-601WTD16	600	±25%	100	0.500	550
APBH1005-801WTD16	800	±25%	100	0.650	320
APBH1005-102WTD16	1000	±25%	100	0.650	320

● APBH1608 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH1608-000WTD16	0	0~15Ω	100	0.010	6200
APBH1608-050WTD16	5	0~15Ω	100	0.010	6200
APBH1608-070WTD16	7	0~11 Ω	100	0.010	6200
APBH1608-090WTD16	9	5~13Ω	100	0.010	6200
APBH1608-100WTD16	10	7~15Ω	100	0.010	6200
APBH1608-110WTD16	11	7~15Ω	100	0.010	6200
APBH1608-150WTD16	15	9~21 Ω	100	0.010	6200
APBH1608-190WTD16	19	12~25Ω	100	0.010	6200
APBH1608-220WTD16	22	±25%	100	0.030	6200
APBH1608-260WTD16	26	±25%	100	0.030	5200
APBH1608-280WTD16	28	±25%	100	0.030	4200
APBH1608-300WTD16	30	±25%	100	0.030	4200
APBH1608-310WTD16	31	±25%	100	0.030	4200
APBH1608-330WTD16	33	±25%	100	0.030	4200
APBH1608-400WTD16	40	±25%	100	0.030	3700
APBH1608-500WTD16	50	±25%	100	0.040	3100
APBH1608-600WTD16	60	±25%	100	0.040	3100
APBH1608-700WTD16	70	±25%	100	0.060	2600
APBH1608-750WTD16	75	±25%	100	0.060	2600

ELECTRICAL CHARACTERISTICS 特性规格表

● APBH1608 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH1608-800WTD16	80	±25%	100	0.060	2600
APBH1608-101WTD16	100	±25%	100	0.060	2600
APBH1608-121WTD16	120	±25%	100	0.065	2100
APBH1608-151WTD16	150	±25%	100	0.070	1600
APBH1608-181WTD16	180	±25%	100	0.090	1600
APBH1608-201WTD16	200	±25%	100	0.100	1600
APBH1608-221WTD16	220	±25%	100	0.120	1600
APBH1608-301WTD16	300	±25%	100	0.150	1600
APBH1608-331WTD16	330	±25%	100	0.180	1400
APBH1608-471WTD16	470	±25%	100	0.180	1400
APBH1608-501WTD16	500	±25%	100	0.180	1400
APBH1608-601WTD16	600	±25%	100	0.180	1400
APBH1608-801WTD16	800	±25%	100	0.300	850
APBH1608-102WTD16	1000	±25%	100	0.350	750

● APBH2012 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH2012-000WTD16	0	0~15Ω	100	0.010	6200
APBH2012-050WTD16	5	0~15Ω	100	0.010	6200
APBH2012-070WTD16	7	0~11 Ω	100	0.010	6200
APBH2012-090WTD16	9	5~13Ω	100	0.010	6200
APBH2012-100WTD16	10	7~15Ω	100	0.010	6200
APBH2012-110WTD16	11	7~15Ω	100	0.010	6200
APBH2012-190WTD16	19	12~25Ω	100	0.010	6200
APBH2012-220WTD16	22	±25%	100	0.010	6200
APBH2012-260WTD16	26	±25%	100	0.010	6200
APBH2012-280WTD16	28	±25%	100	0.010	6200
APBH2012-300WTD16	30	±25%	100	0.010	6200
APBH2012-310WTD16	31	±25%	100	0.010	6200
APBH2012-330WTD16	33	±25%	100	0.010	6200
APBH2012-360WTD16	36	±25%	100	0.010	6200
APBH2012-380WTD16	38	±25%	100	0.010	6200
APBH2012-400WTD16	40	±25%	100	0.030	4200
APBH2012-500WTD16	50	±25%	100	0.030	4200
APBH2012-600WTD16	60	±25%	100	0.030	4200
APBH2012-700WTD16	70	±25%	100	0.040	4200
APBH2012-800WTD16	80	±25%	100	0.040	4200
APBH2012-900WTD16	90	±25%	100	0.045	4200
APBH2012-101WTD16	100	±25%	100	0.045	4200
APBH2012-121WTD16	120	±25%	100	0.045	4200

ELECTRICAL CHARACTERISTICS 特性规格表

● APBH2012 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH2012-151WTD16	150	±25%	100	0.070	3100
APBH2012-181WTD16	180	±25%	100	0.070	3100
APBH2012-221WTD16	220	±25%	100	0.070	3100
APBH2012-301WTD16	300	±25%	100	0.080	2600
APBH2012-331WTD16	330	±25%	100	0.090	2600
APBH2012-391WTD16	390	±25%	100	0.090	2600
APBH2012-501WTD16	500	±25%	100	0.090	2600
APBH2012-601WTD16	600	±25%	100	0.100	2100
APBH2012-801WTD16	800	±25%	100	0.120	1600
APBH2012-102WTD16	1000	±25%	100	0.120	1600
APBH2012-122WTD16	1200	±25%	100	0.200	850
APBH2012-152WTD16	1500	±25%	100	0.300	650

● APBH3216 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH3216-000WTD16	0	0~15Ω	100	0.010	6200
APBH3216-050WTD16	5	0~15Ω	100	0.010	6200
APBH3216-070WTD16	7	0~11 Ω	100	0.010	6200
APBH3216-090WTD16	9	5~13Ω	100	0.010	6200
APBH3216-100WTD16	10	7~15Ω	100	0.010	6200
APBH3216-110WTD16	11	7~15Ω	100	0.010	6200
APBH3216-150WTD16	15	9~21 Ω	100	0.015	6200
APBH3216-190WTD16	19	12~25Ω	100	0.015	6200
APBH3216-220WTD16	22	±25%	100	0.015	6200
APBH3216-260WTD16	26	±25%	100	0.015	6200
APBH3216-280WTD16	28	±25%	100	0.015	6200
APBH3216-300WTD16	30	±25%	100	0.015	6200
APBH3216-310WTD16	31	±25%	100	0.020	5200
APBH3216-330WTD16	33	±25%	100	0.020	5200
APBH3216-360WTD16	36	±25%	100	0.020	5200
APBH3216-380WTD16	38	±25%	100	0.020	5200
APBH3216-400WTD16	40	±25%	100	0.020	5200
APBH3216-500WTD16	50	±25%	100	0.020	5200
APBH3216-600WTD16	60	±25%	100	0.025	5200
APBH3216-700WTD16	70	±25%	100	0.035	4200
APBH3216-800WTD16	80	±25%	100	0.035	4200
APBH3216-900WTD16	90	±25%	100	0.035	4200
APBH3216-101WTD16	100	±25%	100	0.035	4200
APBH3216-121WTD16	120	±25%	100	0.035	4200
APBH3216-151WTD16	150	±25%	100	0.045	3100

ELECTRICAL CHARACTERISTICS 特性规格表

APBH3216 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH3216-181WTD16	180	±25%	100	0.055	3100
APBH3216-221WTD16	220	±25%	100	0.055	3100
APBH3216-271WTD16	270	±25%	100	0.060	3100
APBH3216-301WTD16	300	±25%	100	0.065	2600
APBH3216-331WTD16	330	±25%	100	0.080	2600
APBH3216-391WTD16	390	±25%	100	0.080	2600
APBH3216-501WTD16	500	±25%	100	0.080	2600
APBH3216-601WTD16	600	±25%	100	0.085	2300
APBH3216-801WTD16	800	±25%	100	0.110	2200
APBH3216-102WTD16	1000	±25%	100	0.120	2200

APBH3225 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH3225-000WTD16	0	0~15Ω	100	0.020	6200
APBH3225-100WTD16	10	7~15Ω	100	0.020	6200
APBH3225-110WTD16	11	7~15Ω	100	0.020	6200
APBH3225-150WTD16	15	9~21 Ω	100	0.020	6200
APBH3225-190WTD16	19	12~25Ω	100	0.020	6200
APBH3225-220WTD16	22	±25%	100	0.020	6200
APBH3225-260WTD16	26	±25%	100	0.020	6200
APBH3225-280WTD16	28	±25%	100	0.020	6200
APBH3225-300WTD16	30	±25%	100	0.020	6200
APBH3225-310WTD16	31	±25%	100	0.020	6200
APBH3225-330WTD16	33	±25%	100	0.020	6200
APBH3225-360WTD16	36	±25%	100	0.020	6200
APBH3225-380WTD16	38	±25%	100	0.020	6200
APBH3225-400WTD16	40	±25%	100	0.020	6200
APBH3225-500WTD16	50	±25%	100	0.020	6200
APBH3225-600WTD16	60	±25%	100	0.020	6200
APBH3225-700WTD16	70	±25%	100	0.020	6200
APBH3225-800WTD16	80	±25%	100	0.020	6200
APBH3225-900WTD16	90	±25%	100	0.030	5200
APBH3225-101WTD16	100	±25%	100	0.030	5200
APBH3225-121WTD16	120	±25%	100	0.030	5200
APBH3225-151WTD16	150	±25%	100	0.030	5200
APBH3225-181WTD16	180	±25%	100	0.060	4200
APBH3225-221WTD16	220	±25%	100	0.060	4200
APBH3225-301WTD16	300	±25%	100	0.060	4200
APBH3225-331WTD16	330	±25%	100	0.100	4200

ELECTRICAL CHARACTERISTICS 特性规格表

● APBH3225 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH3225-391WTD16	390	±25%	100	0.100	4200
APBH3225-501WTD16	500	±25%	100	0.100	4200
APBH3225-601WTD16	600	±25%	100	0.150	3100
APBH3225-801WTD16	800	±25%	100	0.200	2600
APBH3225-102WTD16	1000	±25%	100	0.230	2600

● APBH4516 Series

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH4516-000WTD16	0	0~15Ω	100	0.009	6200
APBH4516-190WTD16	19	12~25Ω	100	0.009	6200
APBH4516-220WTD16	22	±25%	100	0.009	6200
APBH4516-260WTD16	26	±25%	100	0.009	6200
APBH4516-280WTD16	28	±25%	100	0.009	6200
APBH4516-300WTD16	30	±25%	100	0.009	6200
APBH4516-310WTD16	31	±25%	100	0.009	6200
APBH4516-330WTD16	33	±25%	100	0.009	6200
APBH4516-360WTD16	36	±25%	100	0.009	6200
APBH4516-380WTD16	38	±25%	100	0.009	6200
APBH4516-400WTD16	40	±25%	100	0.009	6200
APBH4516-500WTD16	50	±25%	100	0.009	6200
APBH4516-600WTD16	60	±25%	100	0.009	6200
APBH4516-750WTD16	75	±25%	100	0.020	4200
APBH4516-800WTD16	80	±25%	100	0.025	3100

● APBH4532 Series

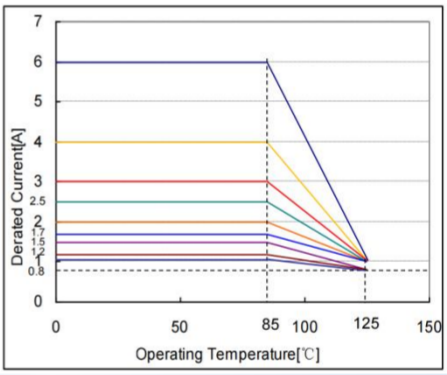
Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH4532-000WTD16	0	0~15Ω	100	0.010	6200
APBH4532-190WTD16	19	12~25Ω	100	0.010	6200
APBH4532-220WTD16	22	±25%	100	0.010	6200
APBH4532-260WTD16	26	±25%	100	0.010	6200
APBH4532-280WTD16	28	±25%	100	0.010	6200
APBH4532-300WTD16	30	±25%	100	0.010	6200
APBH4532-310WTD16	31	±25%	100	0.010	6200
APBH4532-330WTD16	33	±25%	100	0.010	6200
APBH4532-360WTD16	36	±25%	100	0.010	6200
APBH4532-380WTD16	38	±25%	100	0.010	6200
APBH4532-400WTD16	40	±25%	100	0.010	6200
APBH4532-500WTD16	50	±25%	100	0.010	6200

ELECTRICAL CHARACTERISTICS 特性规格表

Part No.	Impedance	Tolerance	Test Frequency (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)
APBH4532-600WTD16	60	±25%	100	0.010	6200
APBH4532-700WTD16	70	±25%	100	0.010	6200
APBH4532-800WTD16	80	±25%	100	0.020	6200
APBH4532-900WTD16	90	±25%	100	0.020	6200
APBH4532-101WTD16	100	±25%	100	0.020	6200
APBH4532-121WTD16	120	±25%	100	0.020	6200
APBH4532-151WTD16	150	±25%	100	0.020	6200
APBH4532-181WTD16	180	±25%	100	0.020	6200
APBH4532-221WTD16	220	±25%	100	0.020	6200
APBH4532-501WTD16	500	±25%	100	0.080	4200
APBH4532-601WTD16	600	±25%	100	0.080	4200

- Impedance testing conditions: E4982A or equivalent, test voltage 50mV ± 5mV, Temperature 15℃~35℃,Humidity 25%~75%.
- Max. DC Resistance Testing conditions：RM3542A or equivalent, Temperature 15℃~35℃,Humidity 25%~75%.
- Rated current：Apply the rated current, and the surface temperature rise of the product shall not exceed 40℃ .

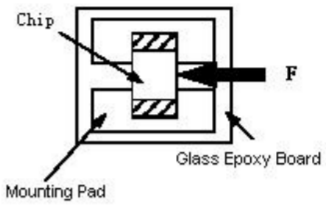
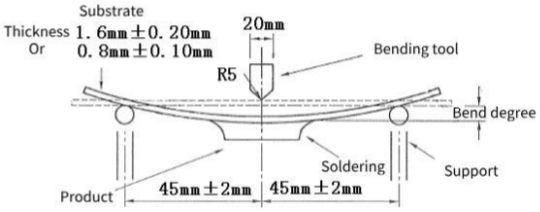
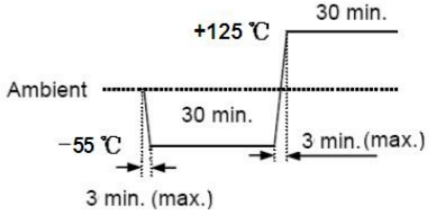
When operating temperatures exceed +85℃, derating of current is necessary for chip ferrite beads for which rated current is 1000mA and over. Please apply the derating curve shown in chart according to the operating temperature.



RELIABILITY TEST 可靠性测试

Items	Requirements	Test Methods and Remarks
1. Operating Temperature Range	-55℃~+ 125℃	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℃ to 150℃ Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 245±3℃ 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℃ to 150℃ Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 260℃±5℃ Immersion tin depth:10mm Duration : 10±1s Dip performance to a flux of about:3～5 s

RELIABILITY TEST 可靠性测试

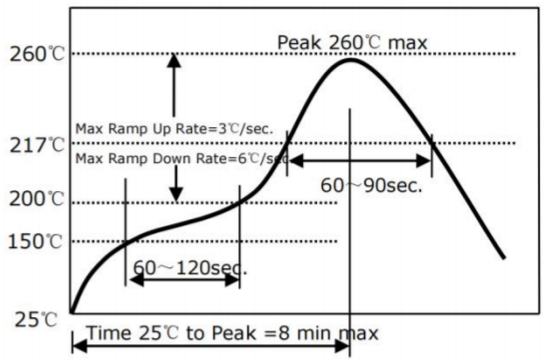
Items	Requirements	Test Methods and Remarks
4. Adhesion of electrode	The termination and body should be no damage.	Applied force: 2N force for 0603 series ; 5N force for 1005 series ; 7N force for 1608 series ; 10N force for2012 、 3216 series. 15N force for 3225 、 4532 series. Keep time ; 10±1S 
5. Low temperature resistance	No mechanical damage. Impedance change: within ±30%	Temperature:-55±2℃ Testing time: 1000 h （+24h）
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 h （+24h） Temperature: 125±2℃
9. Static Humidity	No mechanical damage. Impedance change: within ±30%	Humidity: 90% to 95% RH Temperature: 60℃±2℃ Testing time: 1000 h （+24h）
10. High temperature load	No mechanical damage. Impedance change: within ±30%	impose current: at room Testing time: 1000 h （+24h） Temperature: 85±2℃
11. Temperature Shock	No mechanical damage. Impedance change: within ±30%	Temperature: -55℃ for 30±3min + 125℃ for 30±3min Number of cycles: 100 

Recommended Soldering Technologies 回流焊建议

Reflowing Profile

- Preheat condition: 150~200℃/60~120sec.
- Allowed time above 217℃: 60~90sec.
- Max temp: 260℃
- Max time at max temp: 10sec.
- Solder paste: Sn/3.0Ag/0.5Cu
- Allowed Reflow time: 2x max

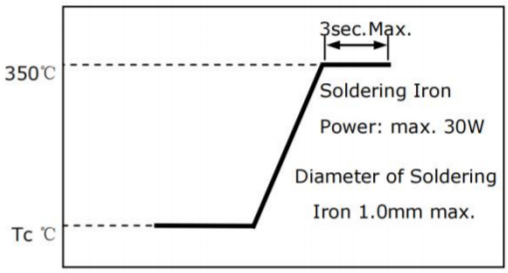
Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.



Iron Soldering Profile

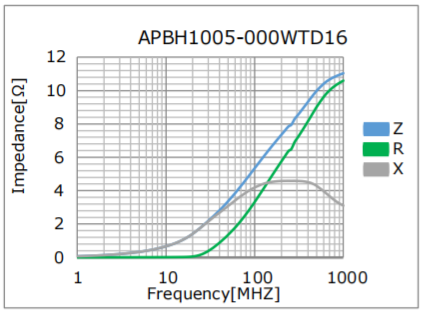
- Iron soldering power: Max.30W
- Pre-heating: 150 ℃ / 60sec.
- Soldering Tip temperature: 350℃Max.
- Soldering time: 3sec Max.
- Solder paste: Sn/3.0Ag/0.5Cu
- Max.1 times for iron soldering

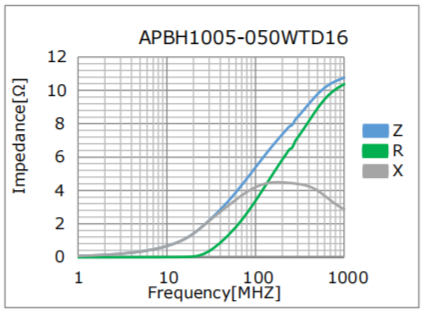
Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.

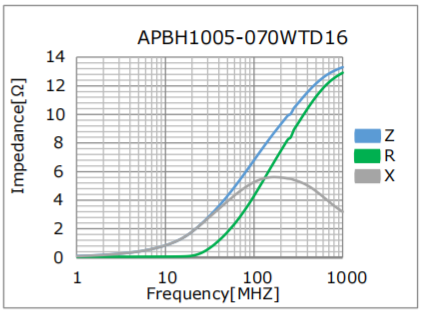


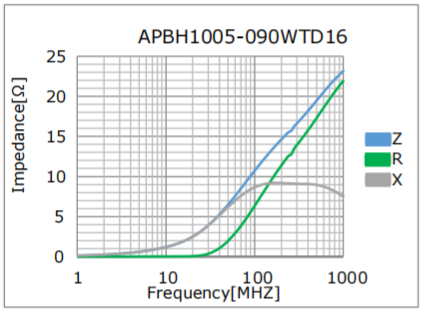
DETAIL ELECTRICAL CHARACTERISTICS 电气特性

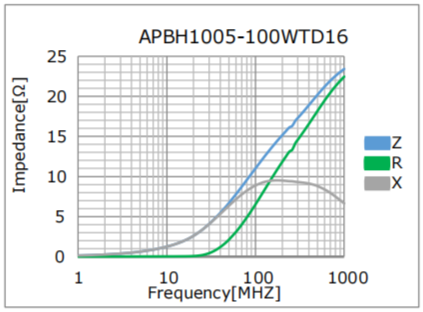
APBH1005 Series

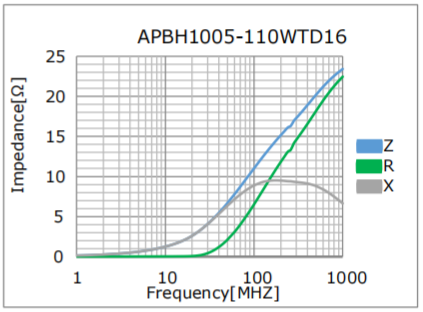


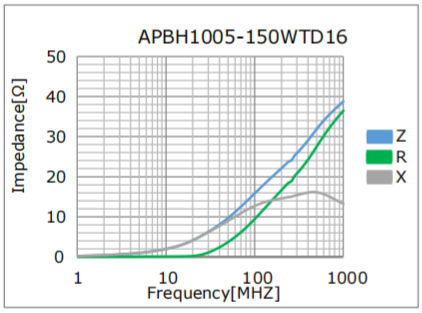


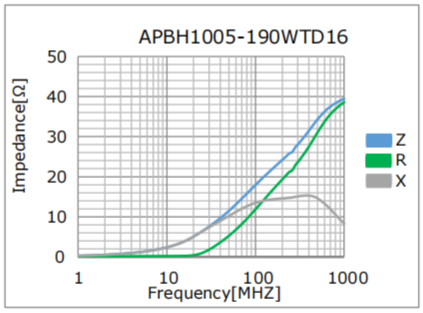


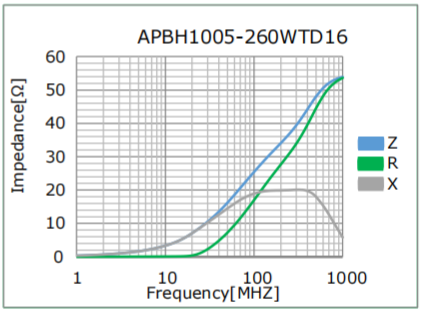


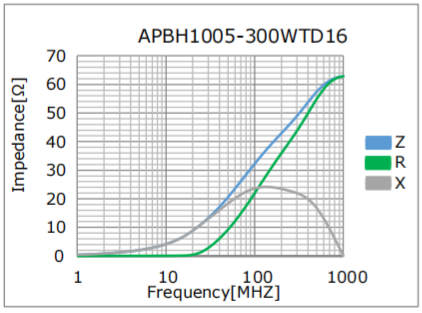


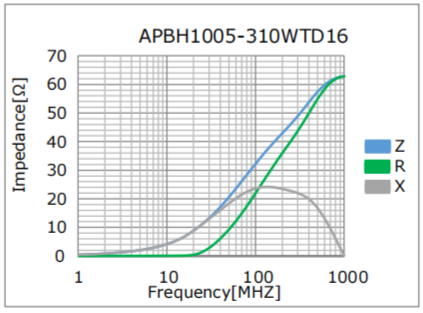


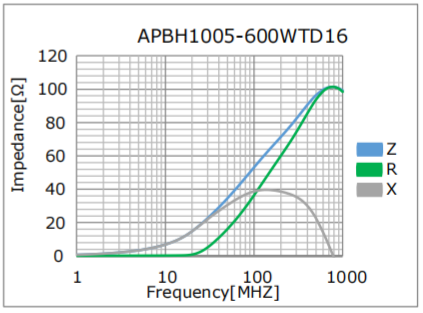


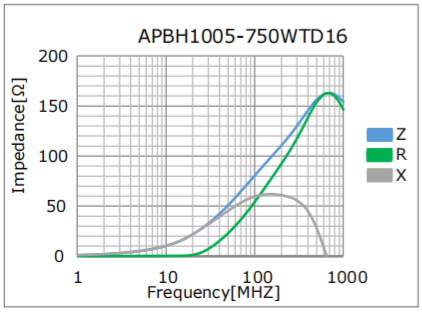


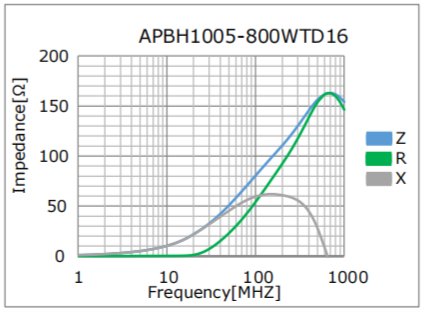


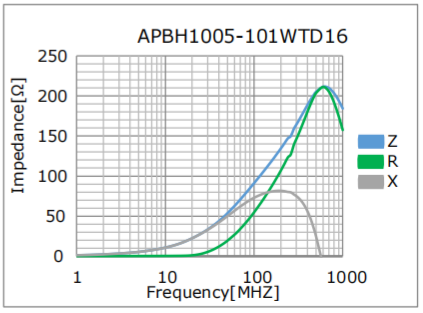




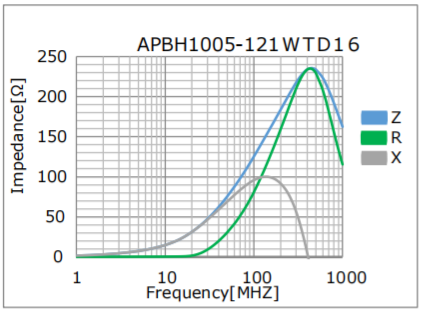


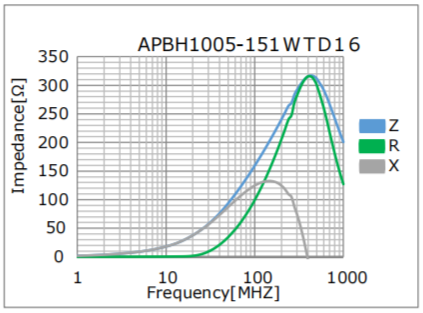


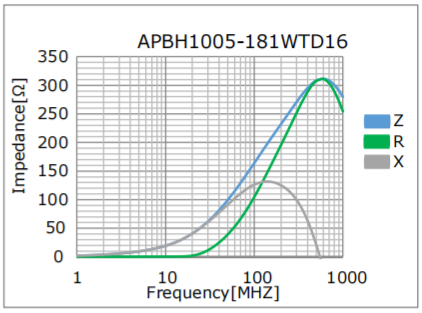


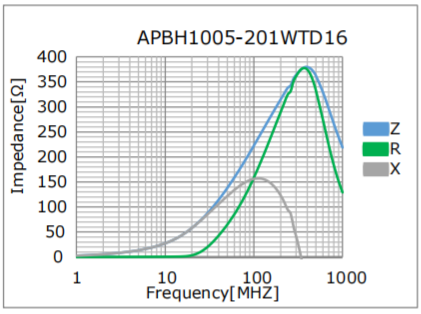


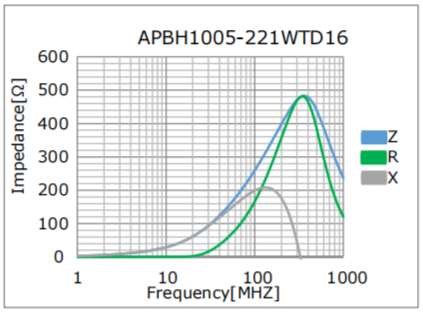
APBH1005 Series

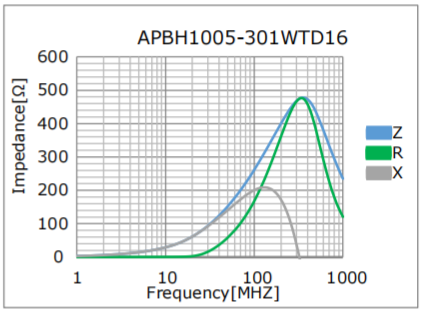


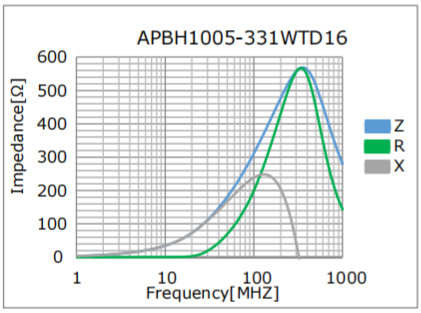


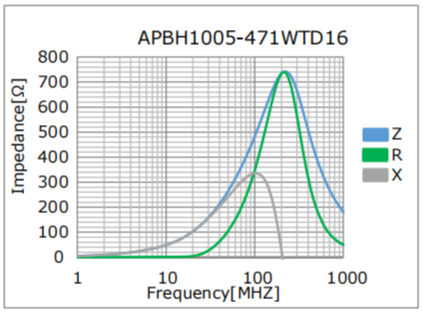


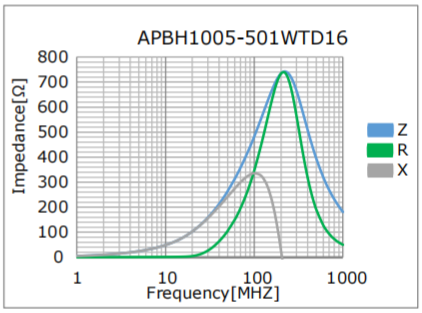


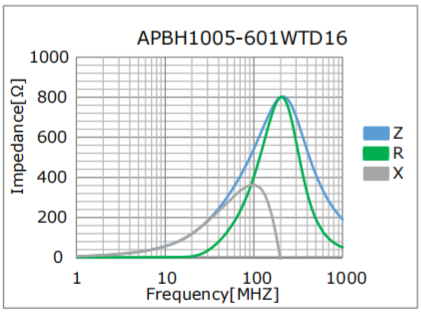


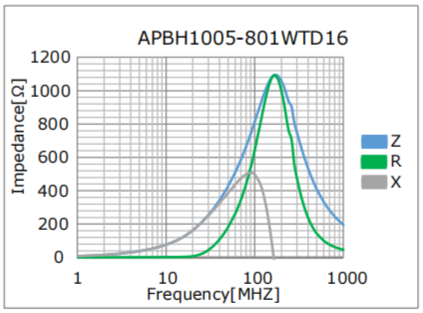


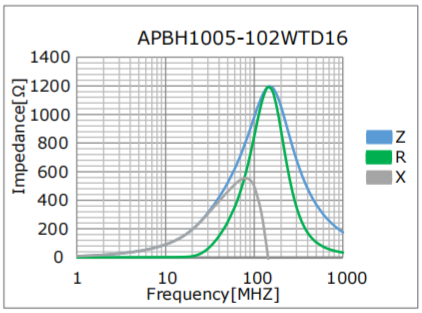




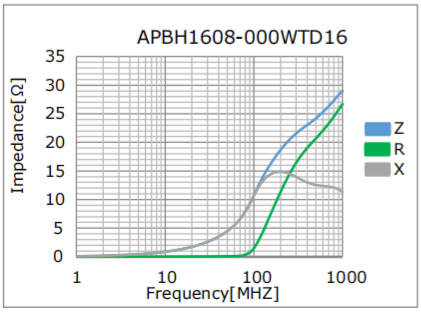


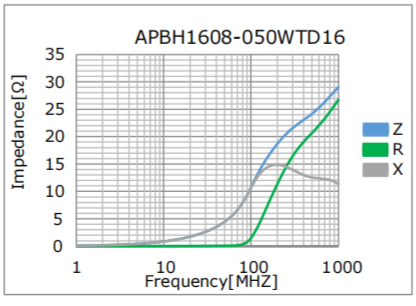


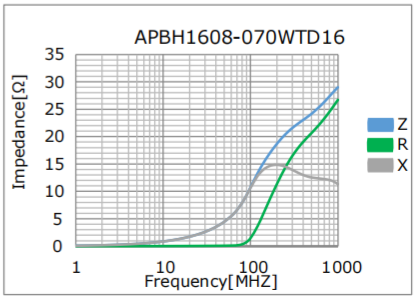


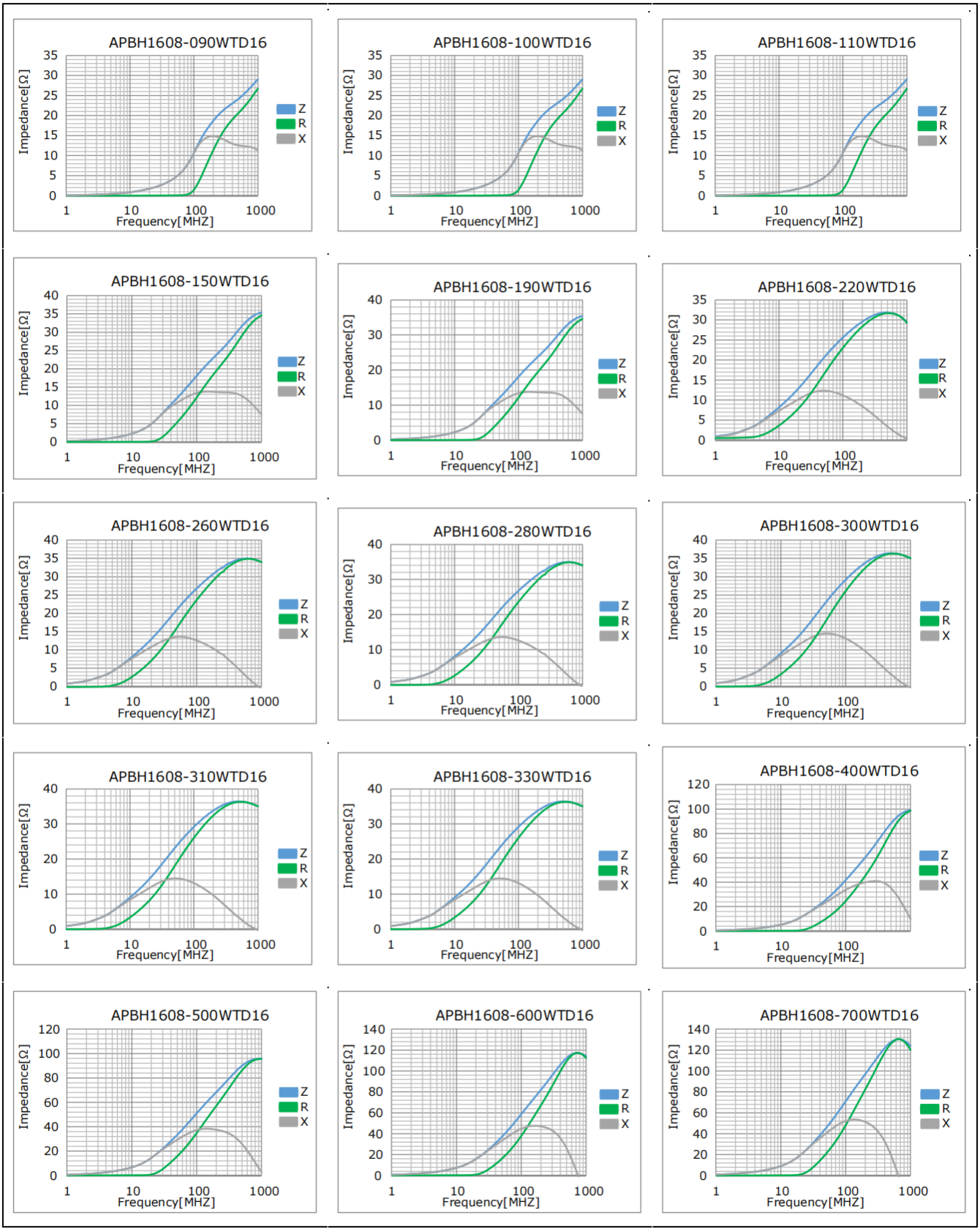


APBH1608 Series





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APBH1608-110WTD16
APBH1608-150WTD16
APBH1608-190WTD16
APBH1608-220WTD16
APBH1608-260WTD16
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APBH1608-300WTD16
APBH1608-310WTD16
APBH1608-330WTD16
APBH1608-400WTD16
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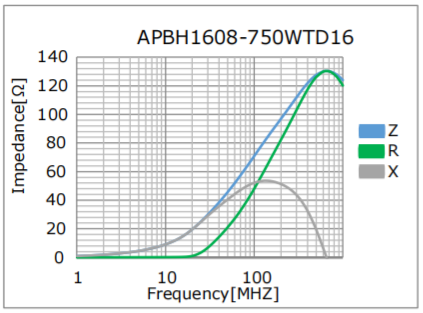
Impedance[Ω]
Frequency[MHZ]
Z
R
X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100
80
60
40
20
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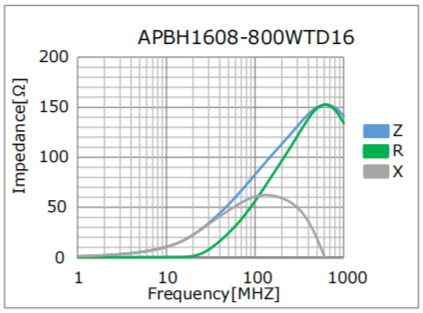
1
10
100
Frequency[MHZ]
Z
R
X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Frequency[MHZ]
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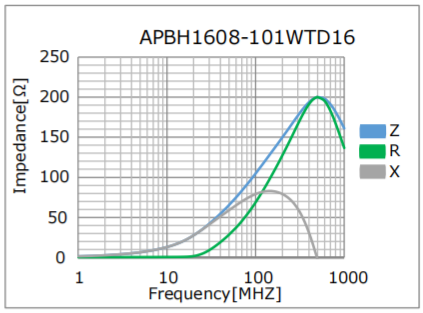
R
X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Frequency[MHZ]
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R
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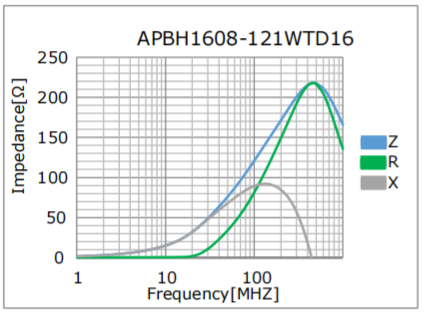
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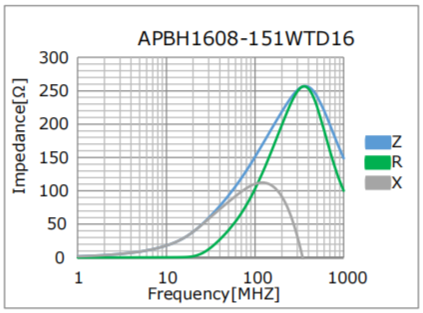
Frequency[MHZ]
Z
R
X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Frequency[MHZ]
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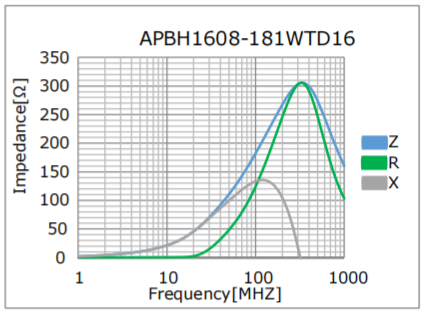
X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Frequency[MHZ]
Z
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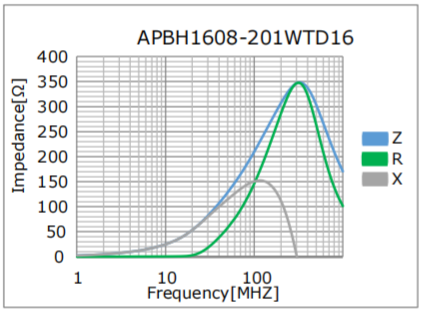
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Frequency[MHZ]
Z
R
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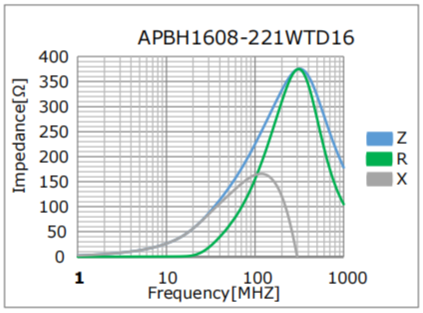
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100
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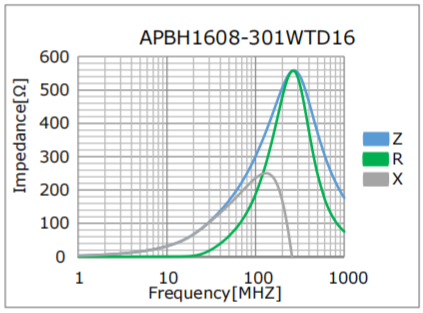
Frequency[MHZ]
Z
R
X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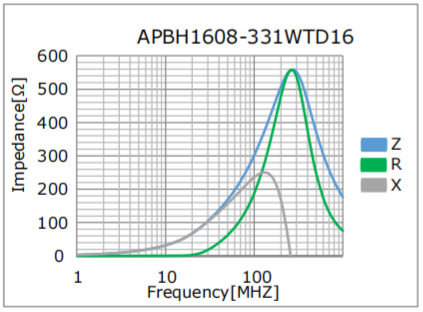
Frequency[MHZ]
Z
R
X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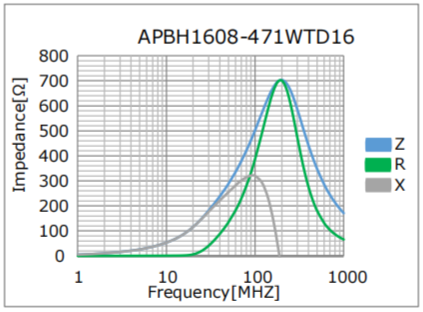
10
100
Frequency[MHZ]
Z
R
X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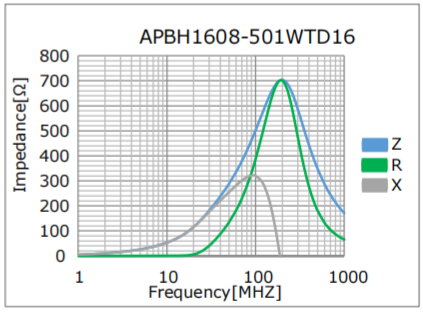
100
1000
Frequency[MHZ]
Z
R
X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Impedance[Ω]
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700
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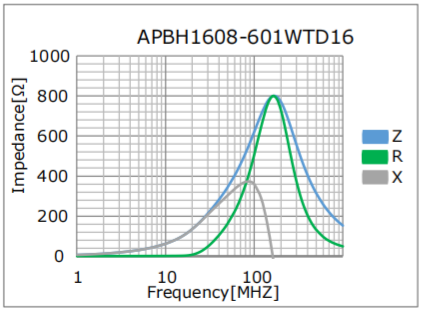
500
400
300
200
100
0
1
10
100
1000
Frequency[MHZ]
Z
R
X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Impedance[Ω]
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600
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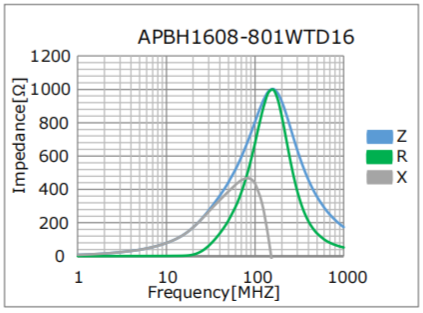
200
0
1
10
100
Frequency[MHZ]
Z
R
X


APBH1608-801WTD16
Impedance[Ω]
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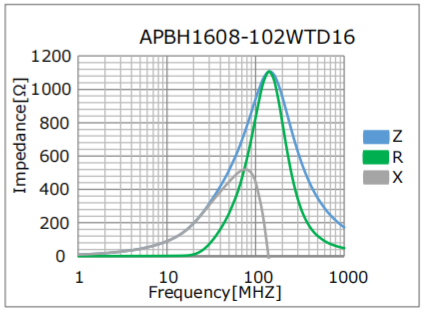
400
200
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH1608-102WTD16
Impedance[Ω]
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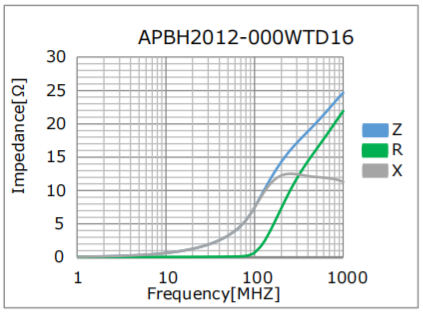
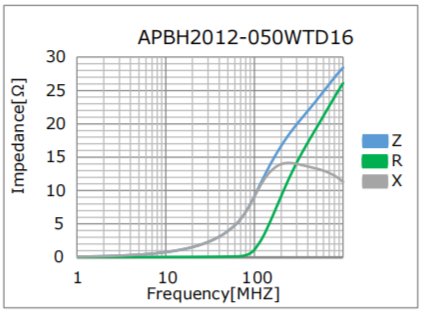
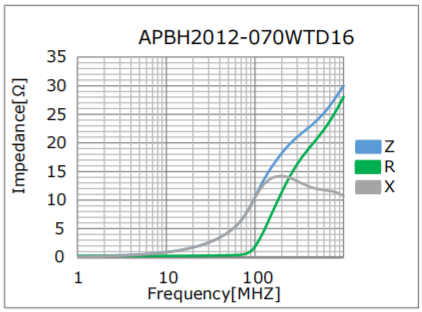
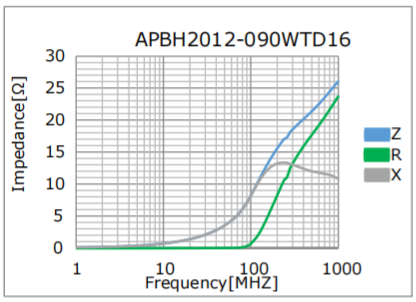
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

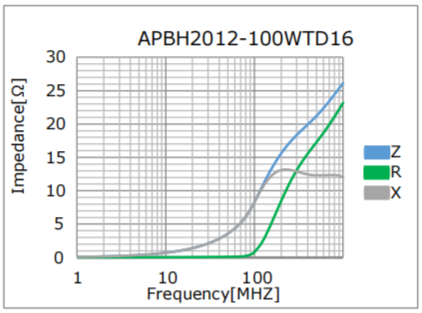
APBH2012 Series

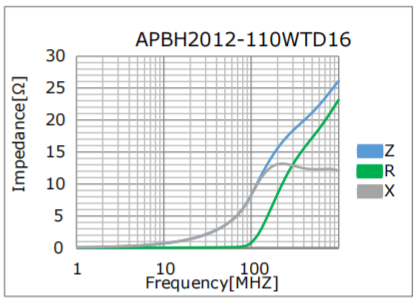


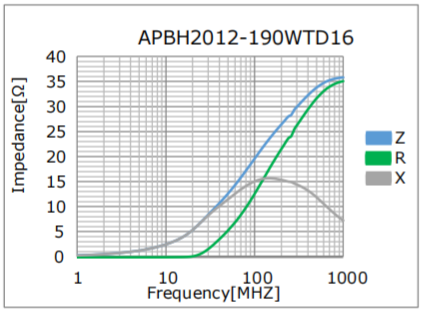


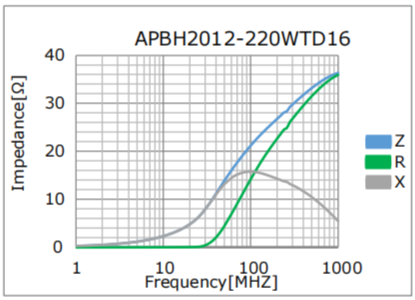


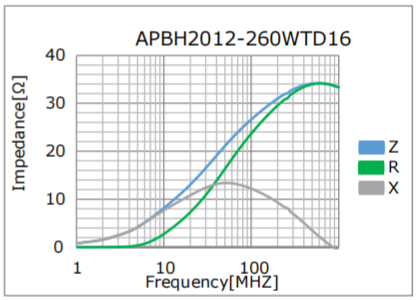


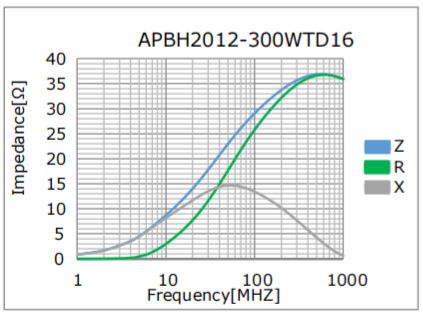


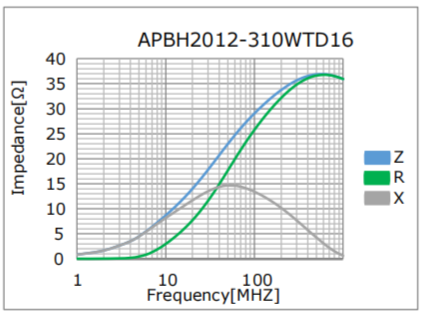


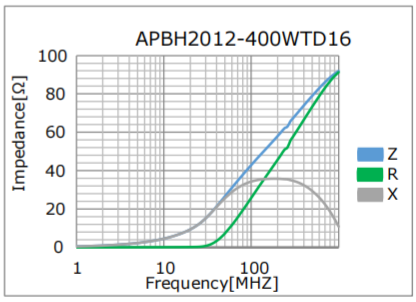


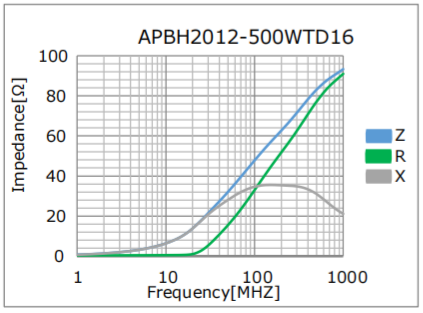


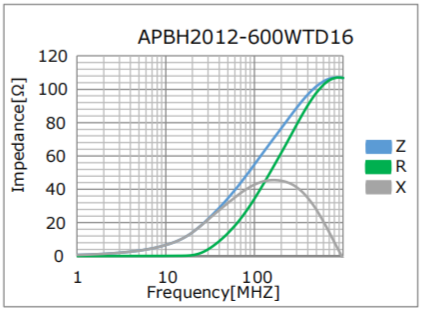


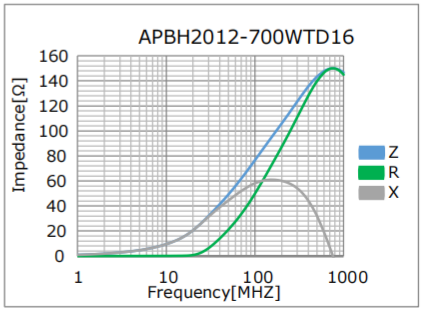


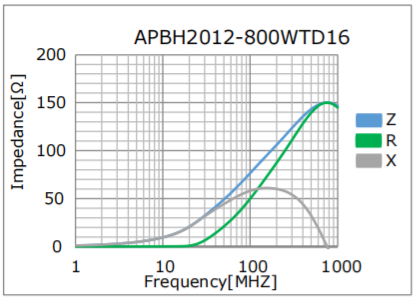


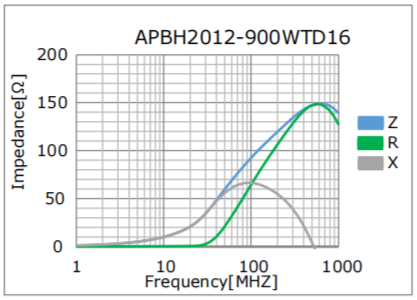









APBH2012-800WTD16
Impedance[Ω]
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH2012-900WTD16
Impedance[Ω]
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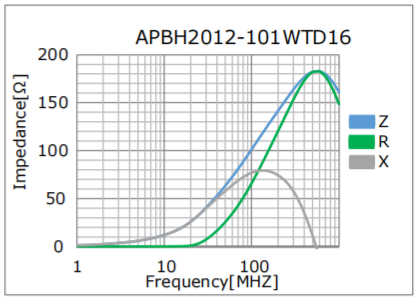
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH2012-101WTD16
Impedance[Ω]
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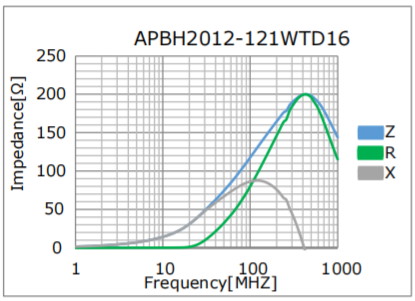
150
100
50
0
1
10
100
Frequency[MHZ]
Z
R
X


APBH2012-121WTD16
Impedance[Ω]
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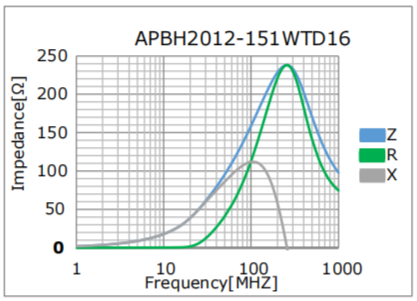
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH2012-151WTD16
Impedance[Ω]
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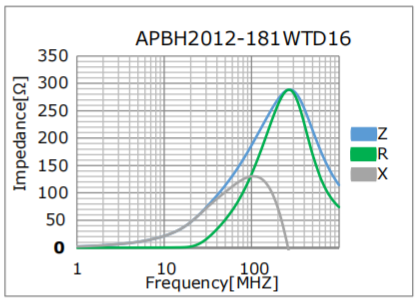
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH2012-181WTD16
Impedance[Ω]
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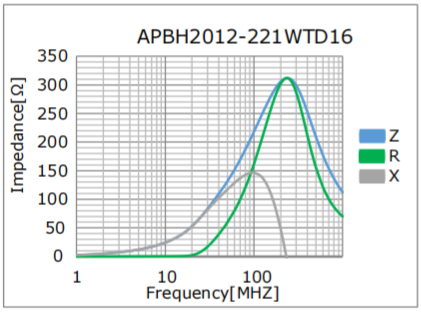
250
200
150
100
50
0
1
10
100
Frequency[MHZ]
Z
R
X


APBH2012-221WTD16
Impedance[Ω]
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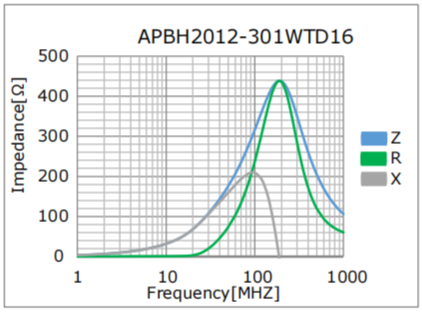
300
250
200
150
100
50
0
1
10
100
Frequency[MHZ]
Z
R
X


APBH2012-301WTD16
Impedance[Ω]
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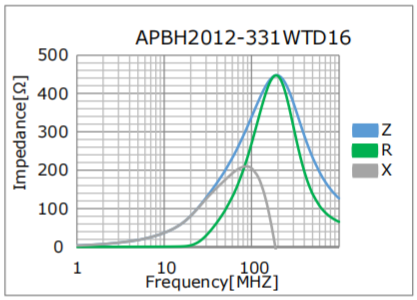
400
300
200
100
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH2012-331WTD16
Impedance[Ω]
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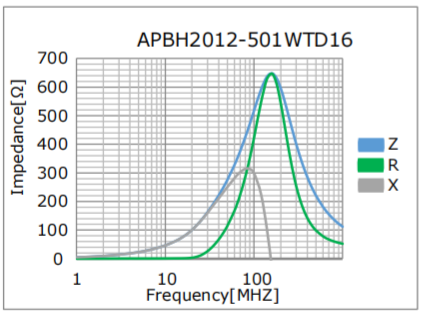
400
300
200
100
0
1
10
100
Frequency[MHZ]
Z
R
X


APBH2012-501WTD16
Impedance[Ω]
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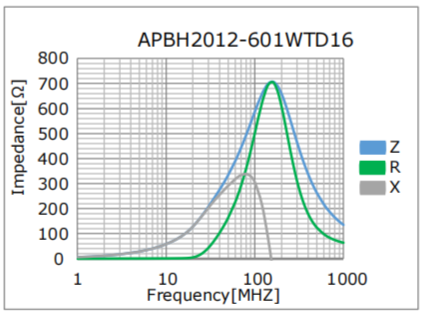
600
500
400
300
200
100
0
1
10
100
Frequency[MHZ]
Z
R
X


APBH2012-601WTD16
Impedance[Ω]
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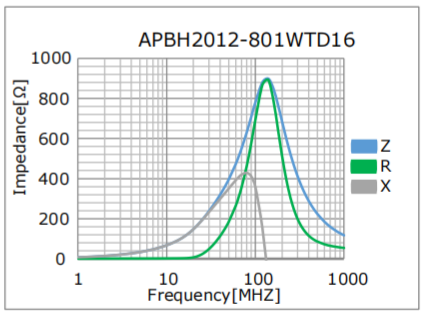
700
600
500
400
300
200
100
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH2012-801WTD16
Impedance[Ω]
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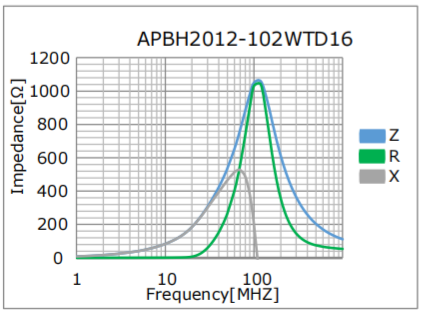
800
600
400
200
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH2012-102WTD16
Impedance[Ω]
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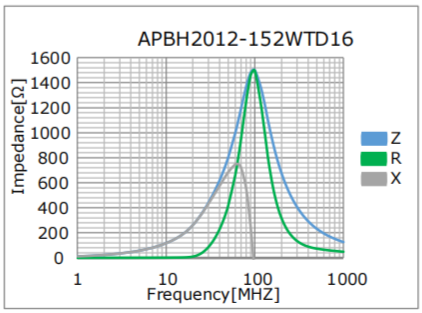
1000
800
600
400
200
0
1
10
100
Frequency[MHZ]
Z
R
X


APBH2012-152WTD16
Impedance[Ω]
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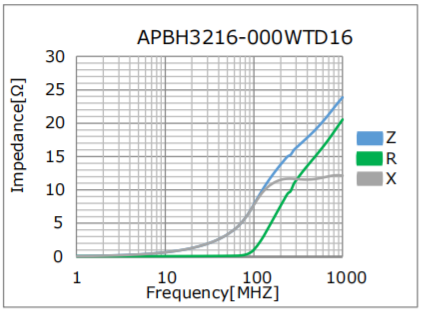
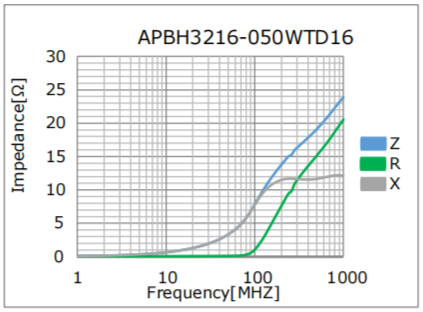
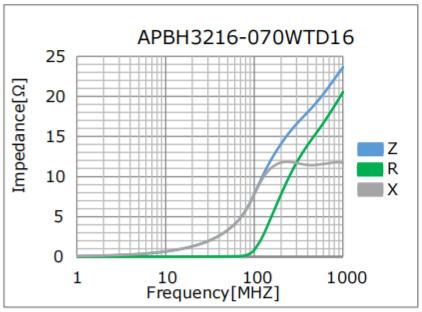
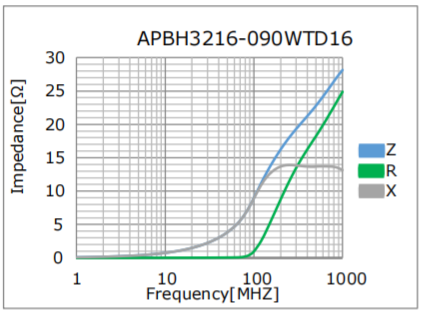
1400
1200
1000
800
600
400
200
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

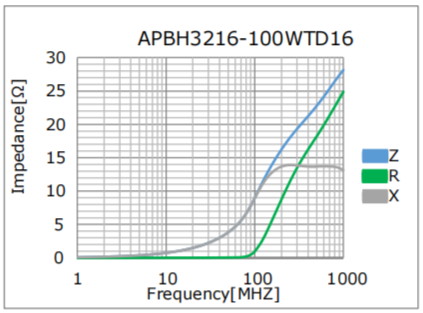
APBH3216 Series

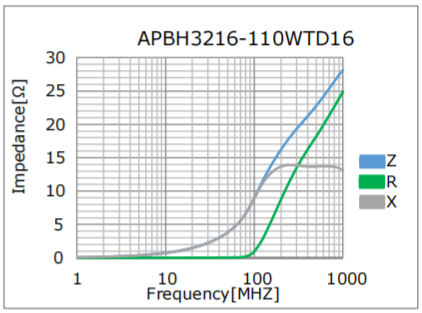


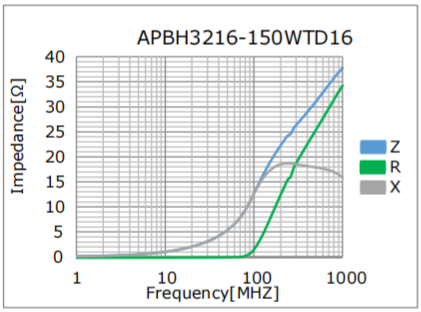


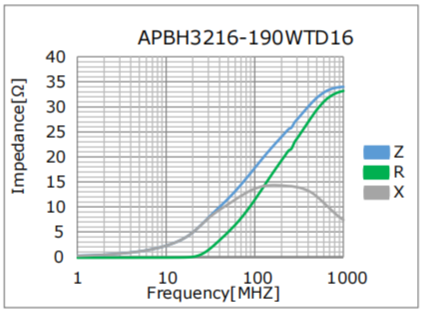


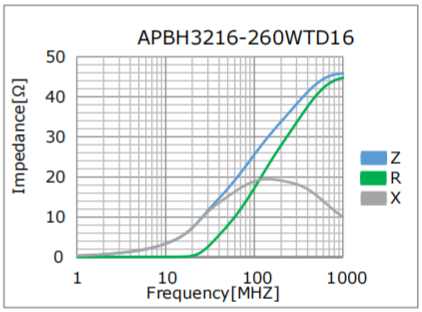


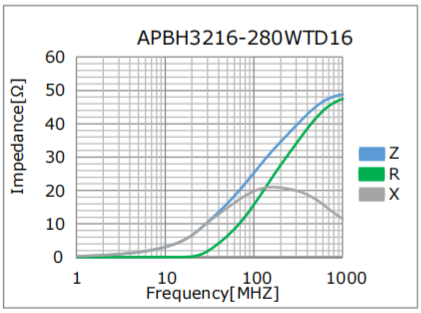


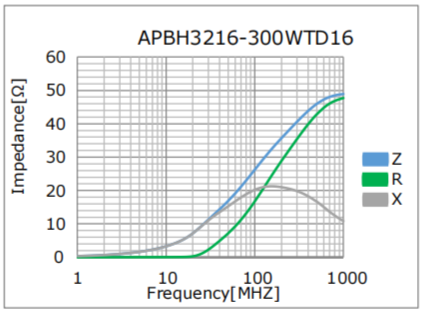


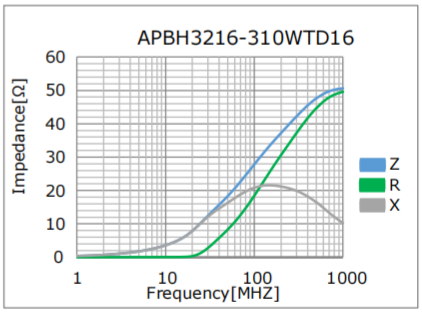


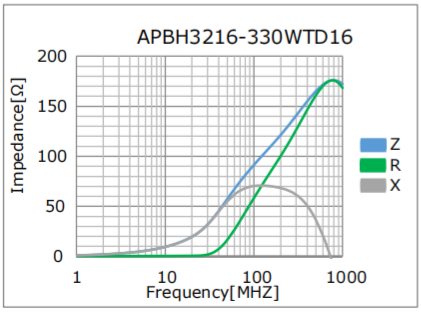


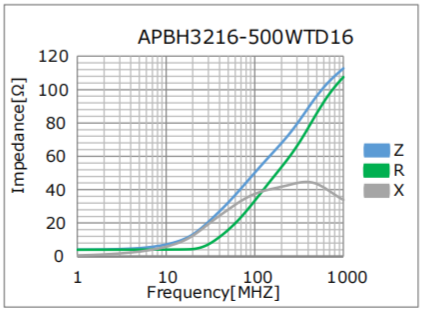


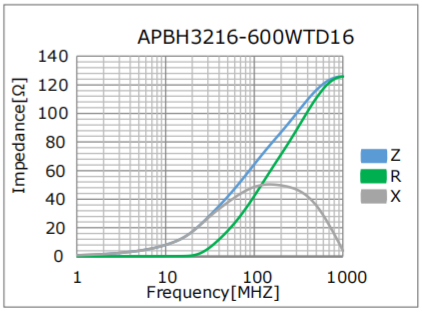


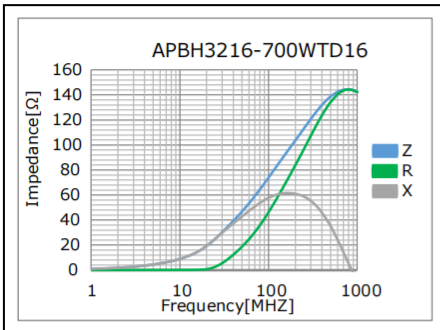


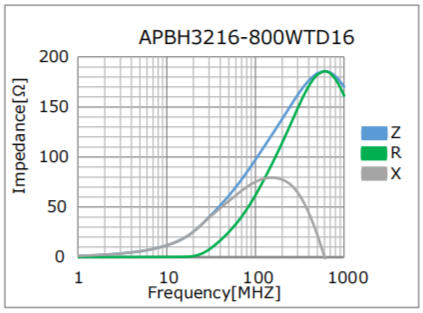


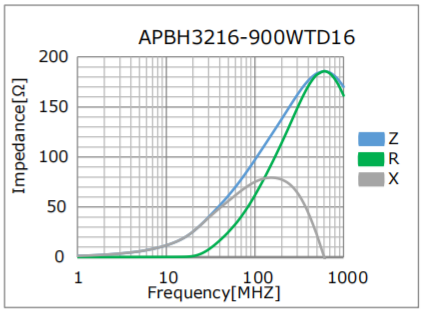


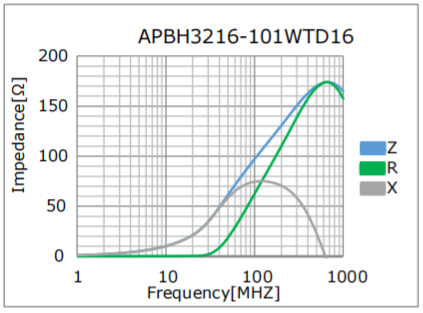


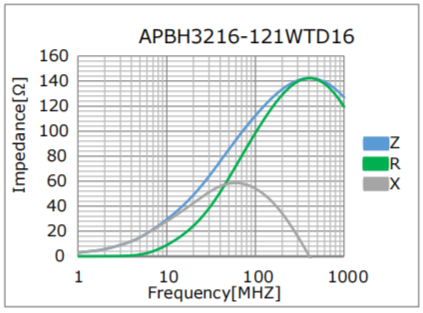



APBH3216-700WTD16
Impedance[Ω]
160
140
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH3216-800WTD16
Impedance[Ω]
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH3216-900WTD16
Impedance[Ω]
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH3216-101WTD16
Impedance[Ω]
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH3216-121WTD16
Impedance[Ω]
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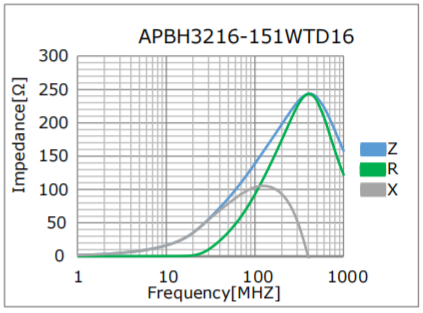
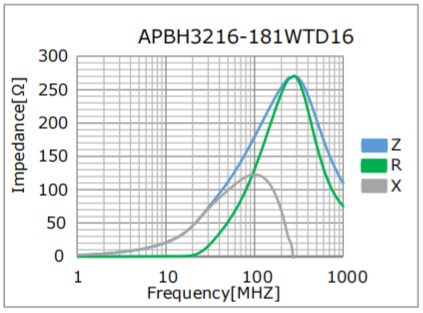
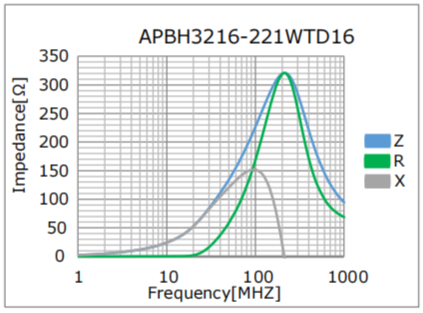
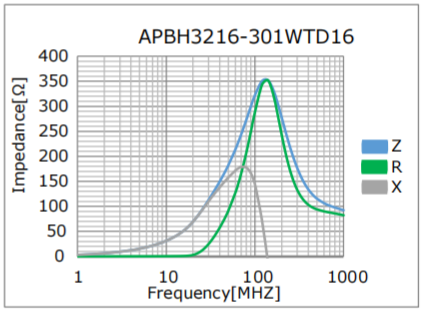
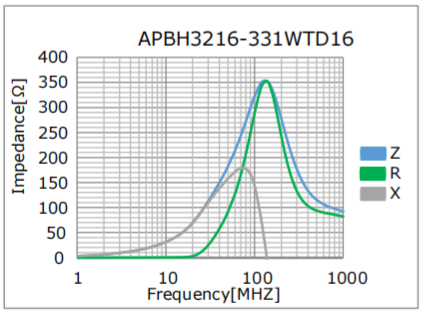
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

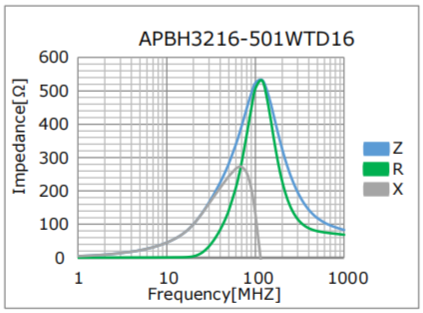

APBH3216-151WTD16
Impedance[Ω]
300
250
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

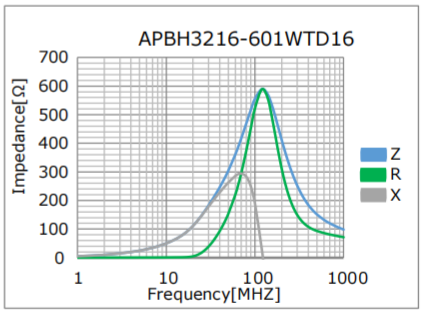

APBH3216-181WTD16
Impedance[Ω]
300
250
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

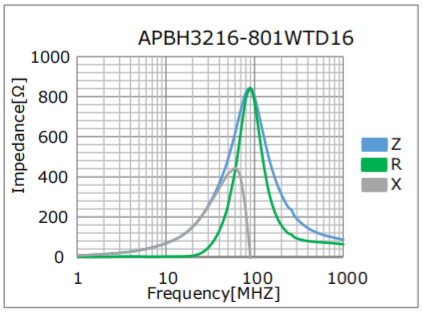

APBH3216-221WTD16
Impedance[Ω]
350
300
250
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

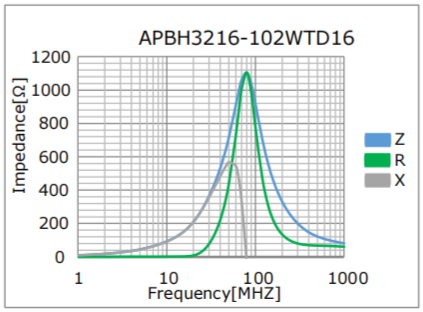

APBH3216-301WTD16
Impedance[Ω]
400
350
300
250
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH3216-331WTD16
Impedance[Ω]
400
350
300
250
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

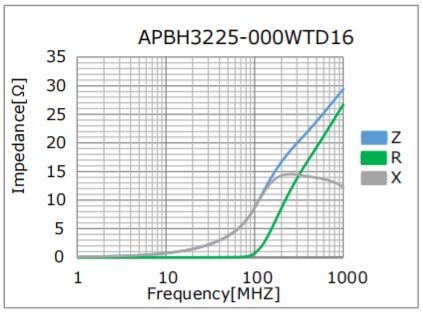

APBH3216-501WTD16
Impedance[Ω]
600
500
400
300
200
100
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

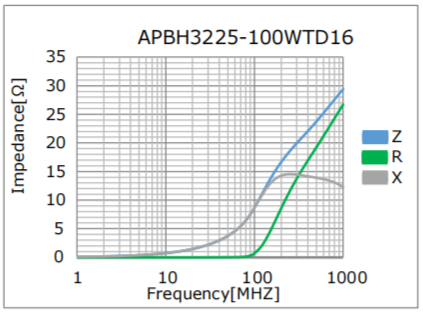

APBH3216-601WTD16
Impedance[Ω]
700
600
500
400
300
200
100
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

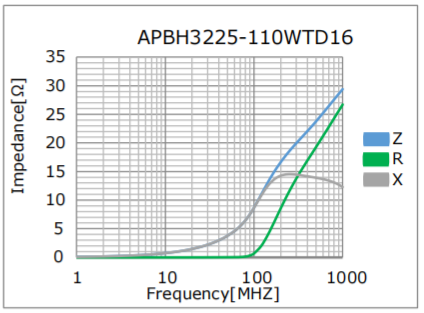

APBH3216-801WTD16
Impedance[Ω]
1000
800
600
400
200
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

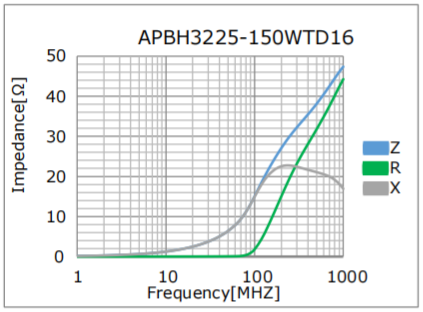

APBH3216-102WTD16
Impedance[Ω]
1200
1000
800
600
400
200
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

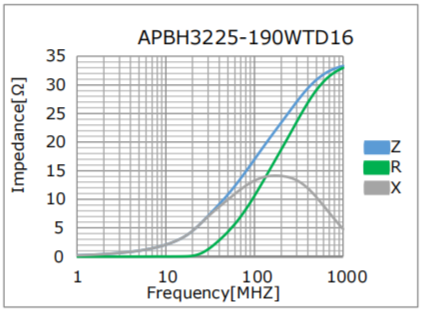
APBH3225Series

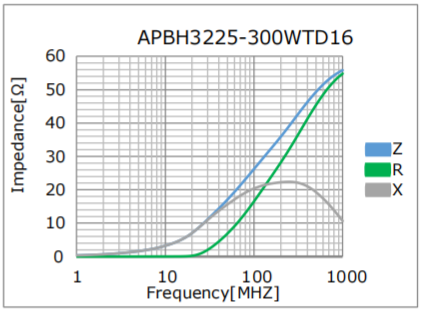


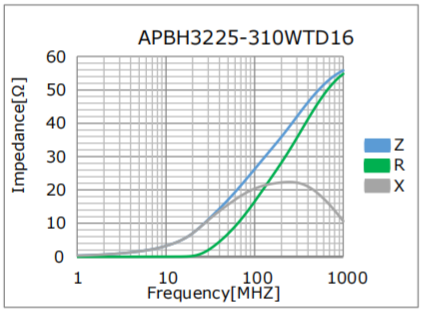


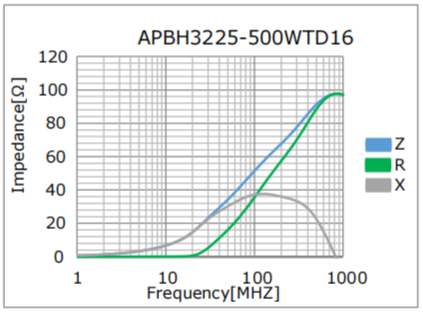


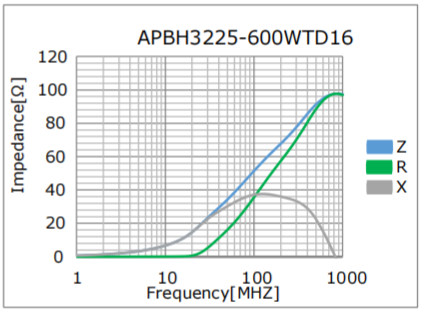


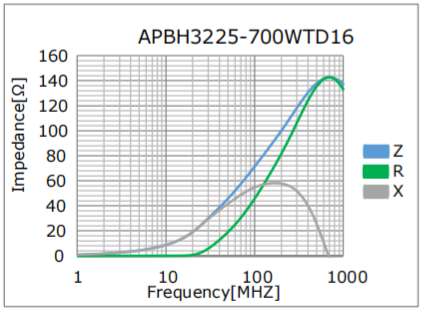


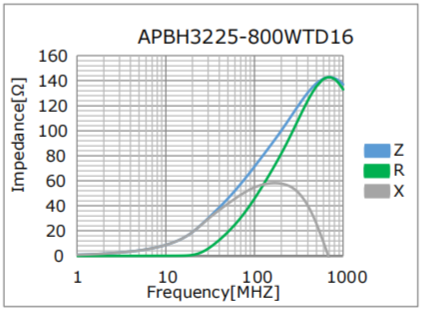


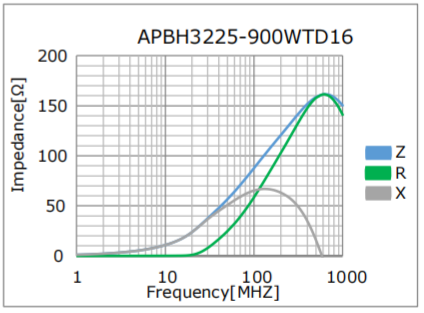


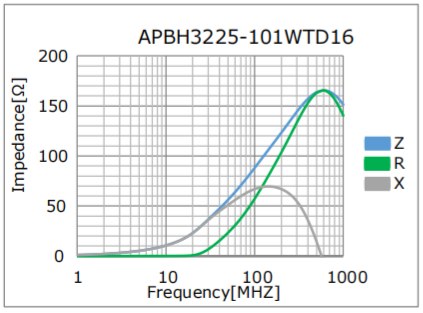


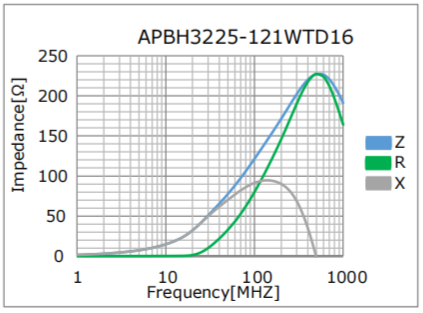


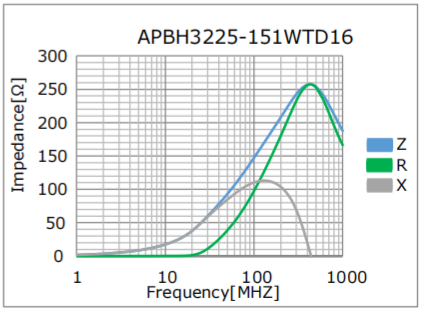


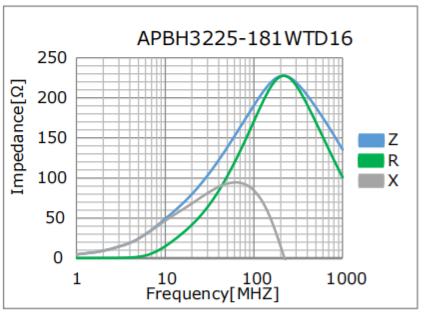


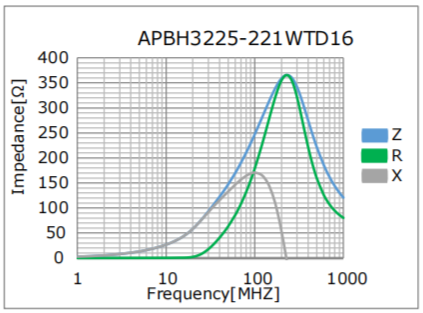


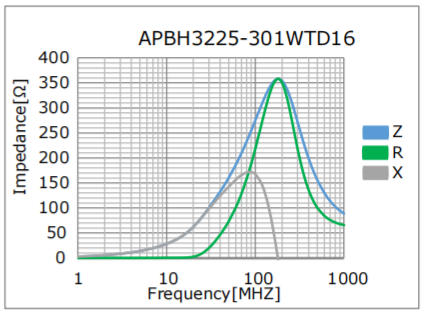


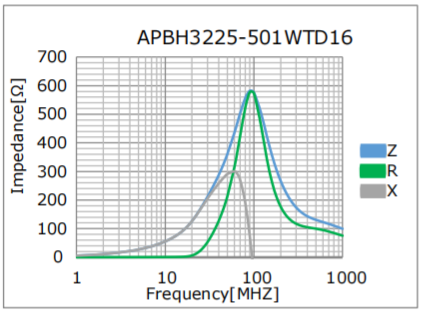


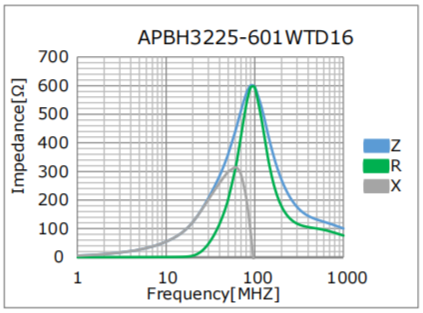


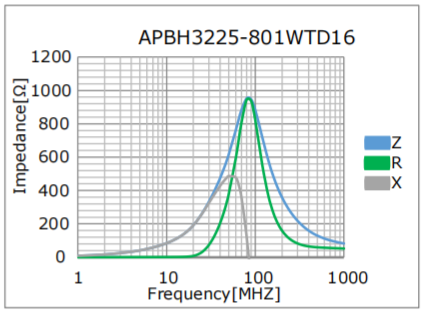


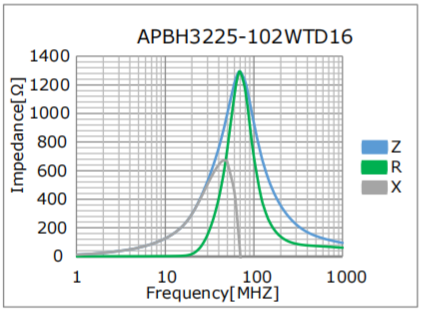




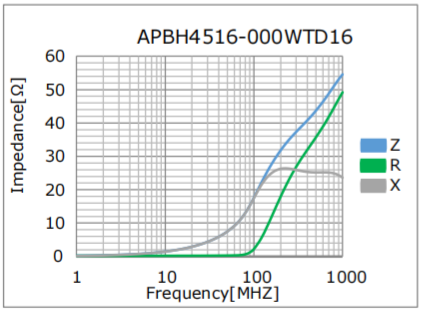


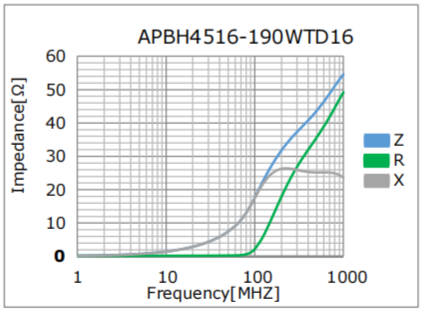


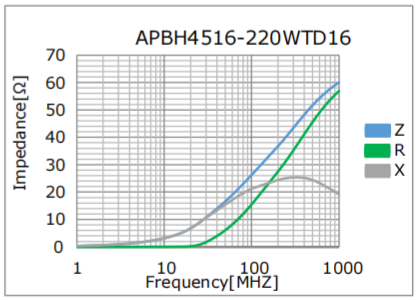


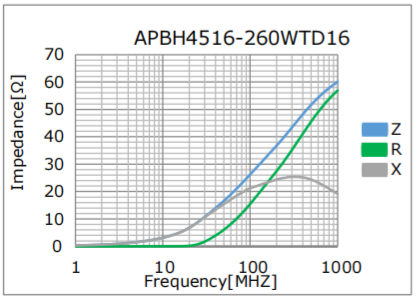


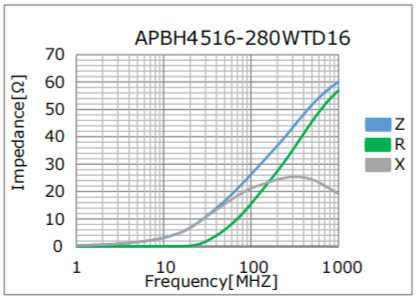
APBH4516 Series

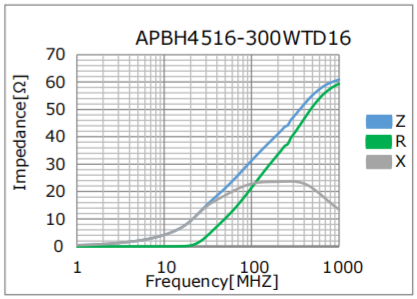


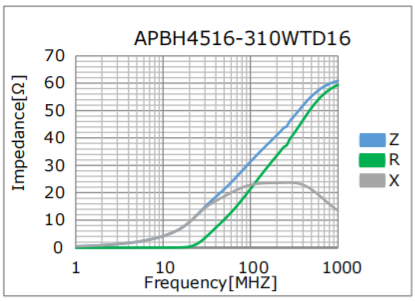


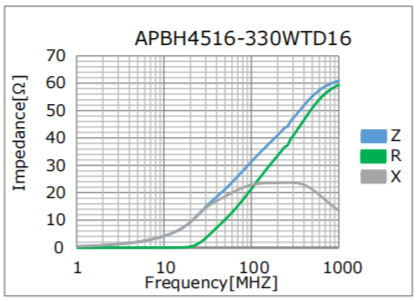


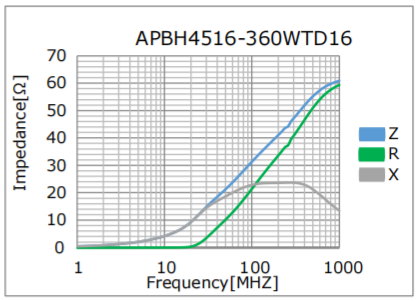


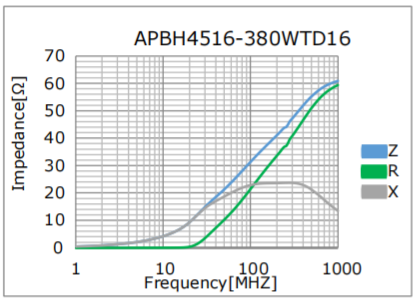


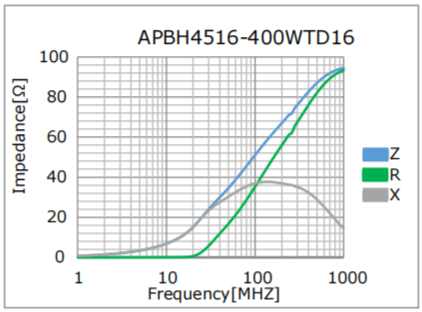


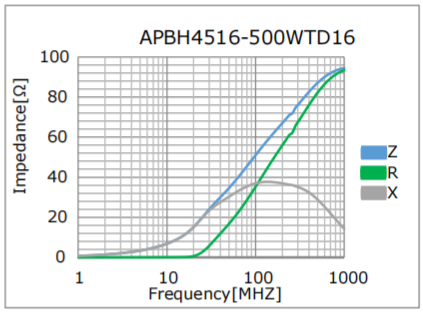


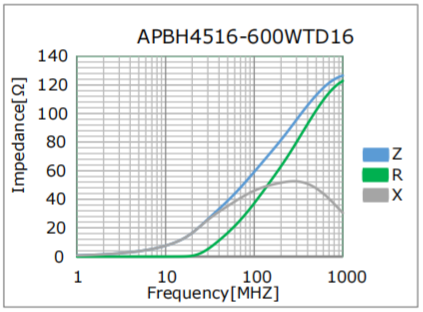


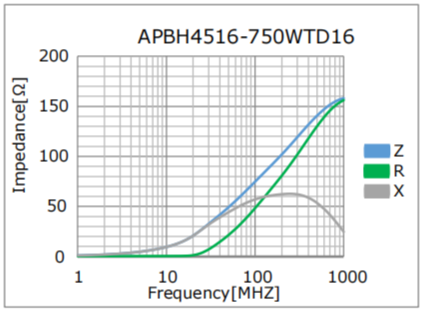


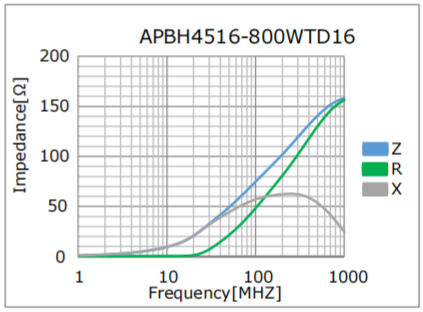




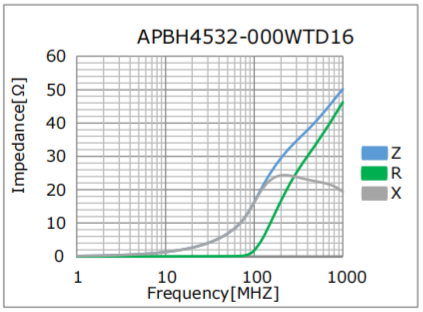


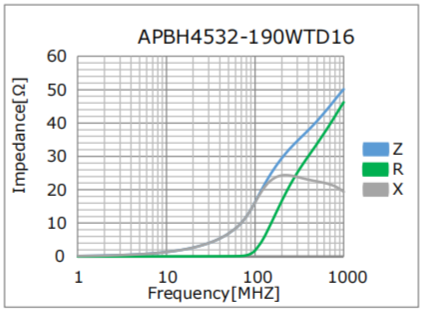


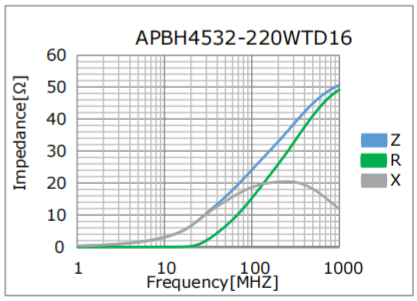


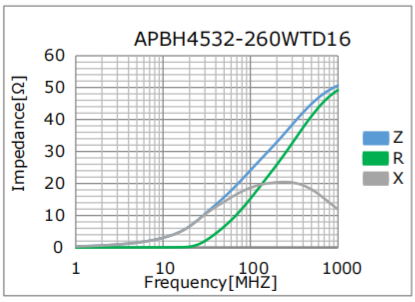


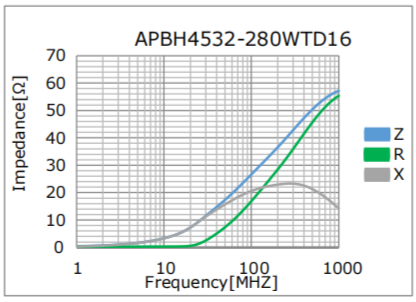
APBH4532 Series

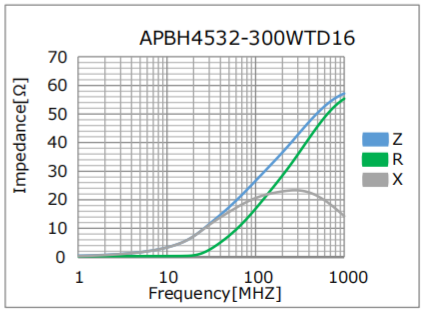


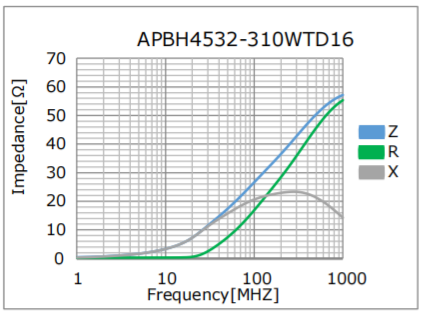


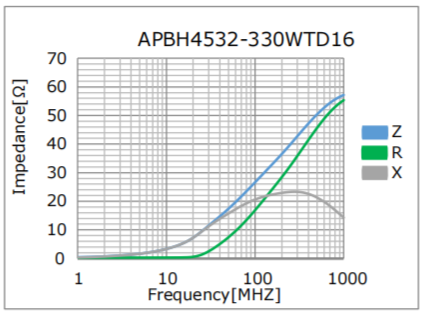


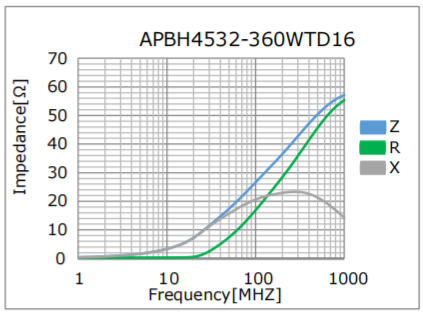


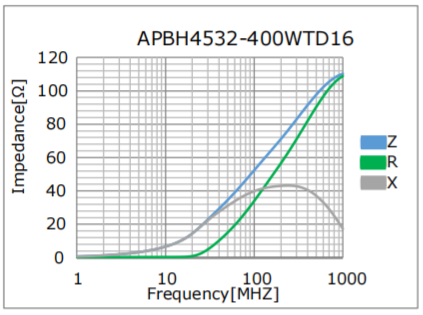


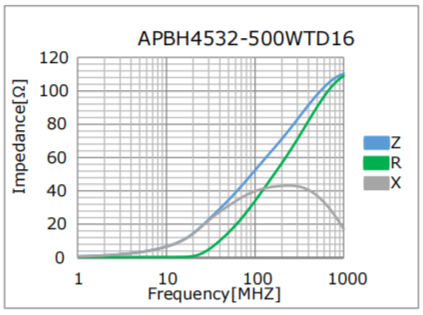


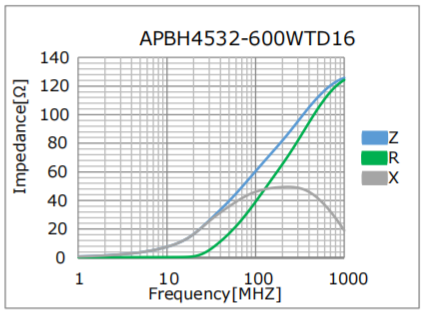

APBH4532-310WTD16
Impedance[Ω]
70
60
50
40
30
20
10
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

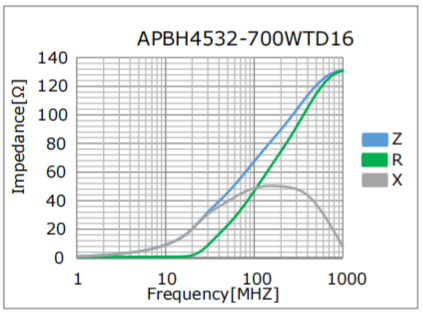

APBH4532-330WTD16
Impedance[Ω]
70
60
50
40
30
20
10
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

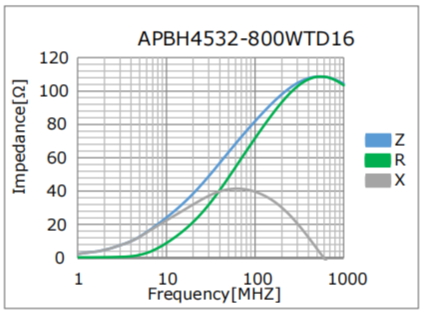

APBH4532-360WTD16
Impedance[Ω]
70
60
50
40
30
20
10
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

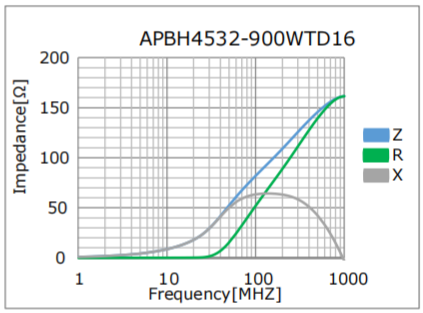

APBH4532-400WTD16
Impedance[Ω]
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

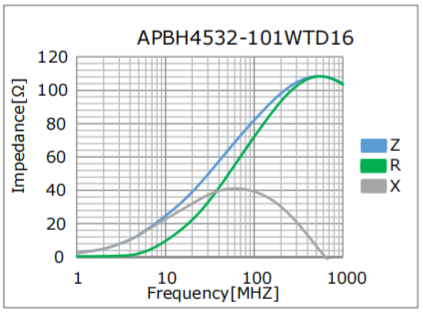

APBH4532-500WTD16
Impedance[Ω]
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

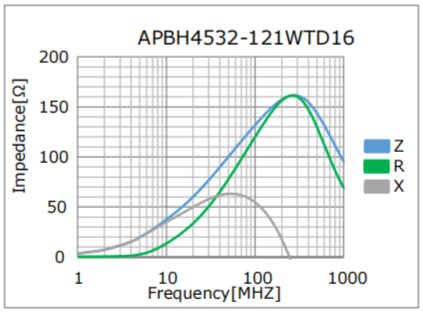

APBH4532-600WTD16
Impedance[Ω]
140
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

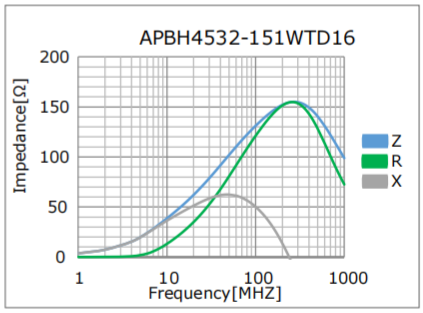

APBH4532-700WTD16
Impedance[Ω]
140
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

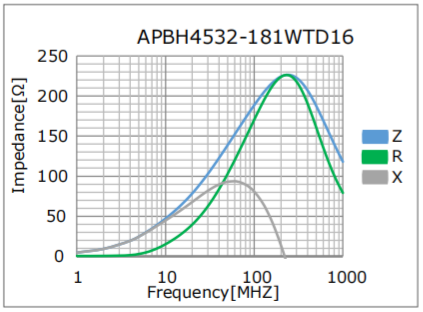

APBH4532-800WTD16
Impedance[Ω]
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

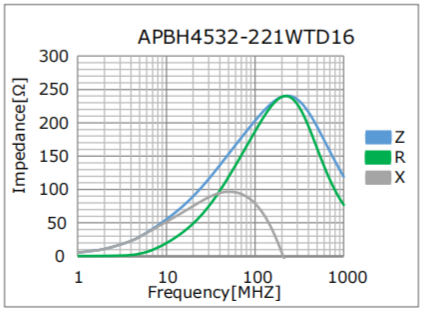

APBH4532-900WTD16
Impedance[Ω]
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

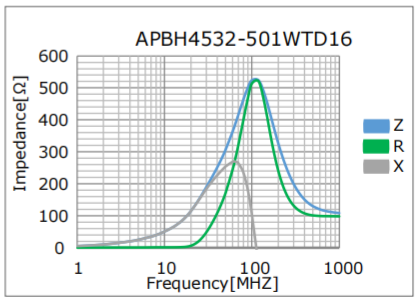

APBH4532-101WTD16
Impedance[Ω]
120
100
80
60
40
20
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

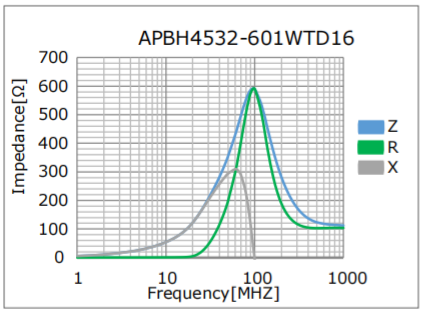

APBH4532-121WTD16
Impedance[Ω]
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH4532-151WTD16
Impedance[Ω]
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH4532-181WTD16
Impedance[Ω]
250
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH4532-221WTD16
Impedance[Ω]
300
250
200
150
100
50
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH4532-501WTD16
Impedance[Ω]
600
500
400
300
200
100
0
1
10
100
1000
Frequency[MHZ]
Z
R
X


APBH4532-601WTD16
Impedance[Ω]
700
600
500
400
300
200
100
0
1
10
100
1000
Frequency[MHZ]
Z
R
X

Safety Reminders 注意事项

SAFETY REMINDERS

- The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 15 to 35℃, humidity: 75% RH or less).If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- This product is not designed for production processes involving ultrasonic welding, as high-frequency vibration may cause application issues such as product detachment and breakage.
- Carefully layout the coil for the circuit board design of the non-magnetic shield type. A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment, under a normal operation and use condition.

The Company shall not guarantee the suitability, performance, or quality for the following applications that require a high level of safety and reliability, or where equipment failure, malfunction, or abnormal operation may cause damage to human life, physical well-being, or property, and may have significant social impacts (hereinafter referred to as "specific applications").If you intend to use this product in the application scenarios listed below, or if you have special requirements exceeding the scope or conditions specified in each product catalog, please contact us.

(1) Aerospace/aviation equipment
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(4) Power-generation control equipment
(5) Atomic energy-related equipment
(6) Seabed equipment
(7) Transportation control equipment
(8) Public information-processing equipment
(9) Military equipment
(10) Electric heating apparatus, burning equipment
(11) Disaster prevention/crime prevention equipment
(12) Safety equipment
(13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.