

CHIP FERRITE BEADS

Features

1. Effective for suppressing noise at high frequency, from several MHz to several hundreds MHz.
2. Chip type is suited for preventing the abnormal oscillation in high frequency amplifying circuits.
3. Terminal electrode has excellent solder heat resistance.
4. Frequency Characteristics of the high impedance products for high performance electronic system.
5. High reliability in the circuits of high-current, because internal electrode has low resistivity.

Applications

1. Noise suppression in digital equipment.
2. Computers and its peripheral devices, VCR and camera.
3. Noise suppression in automotive electronic equipment, car stereo, car engine controller.
4. Noise suppression for OA electronic instruments.

Ordering Information

$\frac{HB-1}{(1)}$
 $\frac{M}{(2)}$
 $\frac{1608}{(3)}$
 $\frac{-121}{(4)}$
 $\frac{J}{(5)}$
 $\frac{T}{(6)}$

(1) Series

HB : For signal line
 HH : For high current(~3.0A)
 HU : For ultra high current(~6.0A)

(2) Material & Design

L, Y : For ultra high speed
 S, B : For high speed
 H, C : For general purpose
 M, P : For high impedance type
 T, V : For Low speed

(3) Diminsions

The first two digits : length(mm)
 The last two digits : width(mm)

(4) Impedance(at 100MHz)

The first two digit are significant.
 The last digits is the number of zeros following.

(5) Termination

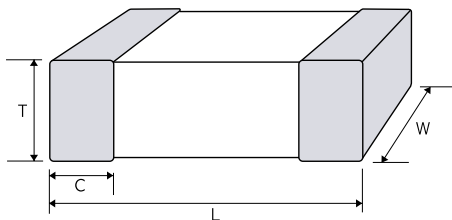
J : Nickel barrier

(6) Packing

B : Bulk Pack
 T : Tape & Reel (' "178mm [7 inches])
 L : Tape & Reel (' "254mm [10 inches])

Shape and Dimensions

unit : mm[inches]



Type	L	W	T	C(max.)
H□-1□1005-	1.0±0.05 [.039±.002]	0.5±0.05 [.020±.002]	0.5±0.05 [.020±.002]	0.3 [.012]
H□-1□1608-	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.5 [.020]
H□-1□2012-	2.0±0.20 [.079±.008]	1.25±0.20 [.049±.008]	1.0±0.20 [.039±.008]	0.6 [.024]
	2.0±0.20 [.079±.008]	1.25±0.20 [.049±.008]	*1.25±0.20 [.049±.008]	0.6 [.024]
H□-1□3216-	3.2±0.20 [.126±.008]	1.6±0.20 [.063±.008]	1.3±0.20 [.051±.008]	0.7 [.028]
H□-1□4516-	4.5±0.25 [.177±.010]	1.6±0.20 [.063±.008]	1.3±0.20 [.051±.008]	0.8 [.031]
H□-1□4532-	4.5±0.25 [.177±.010]	3.2±0.25 [.126±.010]	1.3±0.25 [.051±.010]	1.0 [.039]
H□-1□5750-	5.7±0.30 [.225±.012]	5.0±0.30 [.198±.012]	1.6±0.25 [.063±.010]	1.2 [.047]

i Only HU Series

Specifications

HB series (For signal line)

HB1005

Part No.	Z at 100\$ (¥)		DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HB-1H1005-100□□	10	7.5	0.10	200
HB-1M1005-400□□	40	30	0.15	200
HB-1M1005-600□□	60	45	0.30	200
HB-1M1005-800□□	80	60	0.30	200
HB-1M1005-121□□	120	90	0.40	150
HB-1M1005-221□□	220	165	0.60	100
HB-1M1005-301□□	300	225	0.80	50
HB-1M1005-471□□	470	355	1.00	50
HB-1M1005-601□□	600	450	1.00	50
HB-1M1005-102□□	1000	750	1.50	50
HB-1M1005-202□□	2000	1500	2.00	50
HB-1T1005-100□□	10	7.5	0.10	200
HB-1T1005-400□□	40	30	0.15	200
HB-1T1005-600□□	60	45	0.30	200
HB-1T1005-700□□	70	53	0.30	200
HB-1T1005-800□□	80	60	0.30	200
HB-1T1005-121□□	120	90	0.40	150
HB-1T1005-221□□	220	165	0.60	100
HB-1T1005-241□□	240	180	0.80	50
HB-1T1005-301□□	300	225	0.80	50
HB-1T1005-601□□	600	450	1.00	50
HB-1S1005-100□□	10	7.5	0.20	200
HB-1S1005-300□□	30	23	0.30	200
HB-1S1005-600□□	60	45	0.40	150
HB-1S1005-101□□	100	75	0.50	150
HB-1S1005-121□□	120	90	0.50	150

HB1608

Part No.	Z at 100\$ (¥)		DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HB-1H1608-300□□	30	22	0.08	500
HB-1M1608-600□□	60	45	0.09	200
HB-1M1608-800□□	80	60	0.10	200
HB-1M1608-121□□	120	90	0.12	200
HB-1M1608-221□□	220	165	0.20	200
HB-1M1608-301□□	300	225	0.30	200
HB-1M1608-501□□	500	375	0.40	200
HB-1M1608-601□□	600	450	0.40	200
HB-1M1608-801□□	800	600	0.60	200
HB-1M1608-102□□	1000	750	0.60	150
HB-1S1608-100□□	10	7.5	0.05	300
HB-1S1608-200□□	20	15	0.12	300
HB-1S1608-300□□	30	22	0.2	300
HB-1S1608-400□□	40	30	0.12	300
HB-1S1608-550□□	55	42	0.15	200
HB-1S1608-800□□	80	60	0.25	200
HB-1S1608-121□□	120	90	0.25	200
HB-1S1608-221□□	220	165	0.40	200
HB-1T1608-260□□	26	20	0.0	500
HB-1T1608-300□□	30	22	0.05	500
HB-1T1608-800□□	80	60	0.10	300
HB-1T1608-121□□	120	90	0.20	250
HB-1T1608-221□□	220	165	0.30	200
HB-1T1608-301□□	300	225	0.35	200
HB-1T1608-331□□	330	250	0.35	200

HB1608

Part No.	Z at 100\$ (¥)		DC Resistance (§) max.	Rated Current (mA) max.
	typ.	min.		
HB-1T1608-601□□	600	450	0.50	200
HB-1T1608-102□□	1000(at 60MHz)	750	0.70	200
HB-1T1608-202□□	2000(at 70MHz)	1500	1.2	100
HB-1B1608-222□□	2200	1650	0.85	50
HB-1P1608-121□□	120	90	0.25	250
HB-1P1608-201□□	200	150	0.30	200
HB-1P1608-301□□	300	225	0.35	200
HB-1P1608-601□□	600	450	0.50	150
HB-1V1608-121□□	120	90	0.25	250
HB-1V1608-201□□	200	150	0.30	200
HB-1V1608-301□□	300	225	0.35	200
HB-1V1608-601□□	600	450	0.50	150

HB2012

Part No.	Z at 100\$ (¥)		DC Resistance (§) max.	Rated Current (mA) max.
	typ.	min.		
HB-1H2012-150□□	15	12	0.02	600
HB-1H2012-260□□	26	20	0.02	600
HB-1H2012-300□□	30	23	0.02	600
HB-1H2012-320□□	32	24	0.03	600
HB-1M2012-800□□	80	60	0.08	300
HB-1M2012-121□□	120	90	0.10	300
HB-1M2012-151□□	150	115	0.12	300
HB-1M2012-221□□	220	165	0.12	300
HB-1M2012-301□□	300	225	0.15	300
HB-1M2012-451□□	450	338	0.25	300
HB-1M2012-601□□	600	450	0.25	300
HB-1M2012-102□□	1000	750	0.30	300
HB-1M2012-202□□	2000(at 70MHz)	1500	0.50	300
HB-1M2012-252□□	2500(at 50MHz)	1875	0.60	300
HB-1S2012-5R0□□	5	3.5	0.05	300
HB-1S2012-8R0□□	8	6	0.05	300
HB-1S2012-400□□	40	30	0.15	250
HB-1S2012-800□□	80	60	0.18	200
HB-1S2012-121□□	120	90	0.20	300
HB-1S2012-221□□	220	165	0.30	300
HB-1S2012-251□□	250	190	0.50	300
HB-1T2012-260□□	26	20	0.04	600
HB-1T2012-400□□	40	30	0.05	600
HB-1T2012-800□□	80	60	0.08	300
HB-1T2012-121□□	120	90	0.08	300
HB-1T2012-151□□	150	115	0.08	300
HB-1T2012-221□□	220	170	0.12	200
HB-1T2012-301□□	300	225	0.15	200
HB-1T2012-331□□	330	250	0.15	200
HB-1T2012-401□□	400	300	0.15	200
HB-1T2012-601□□	600	450	0.25	200
HB-1T2012-102□□	1000(at 60MHz)	750	0.30	200
HB-1T2012-202□□	2000(at 40MHz)	1500	0.50	200
HB-1T2012-252□□	2500(at 35MHz)	1875	0.60	200
HB-1B2012-222□□	2200	1650	0.60	300
HB-1B2012-252□□	2500	1875	0.70	300
HB-1B2012-272□□	2700	2025	0.70	300
HB-1V2012-121□□	120	90	0.08	300
HB-1V2012-221□□	220	170	0.12	200
HB-1V2012-301□□	300	225	0.15	200

HB2012

Part No.	Z at 100\$ (¥)		DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HB-1V2012-601□□	600	450	0.25	200
HB-1V2012-102□□	1000(at 60MHz)	750	0.30	200
HB-1P2012-121□□	120	90	0.08	300
HB-1P2012-221□□	220	170	0.12	200
HB-1P2012-301□□	300	225	0.15	200
HB-1P2012-601□□	600	450	0.25	200
HB-1P2012-102□□	1000(at 60MHz)	750	0.30	200

HB3216

Part No.	Z at 100\$ (¥)		DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HB-1C3216-350□□	35	26	0.02	600
HB-1H3216-500□□	50	37	0.03	600
HB-1H3216-700□□	70	52	0.05	600
HB-1M3216-121□□	120	90	0.05	300
HB-1M3216-151□□	150	115	0.05	300
HB-1M3216-201□□	200	150	0.08	300
HB-1M3216-301□□	300	225	0.09	200
HB-1M3216-601□□	600	450	0.20	200
HB-1M3216-102□□	1000	750	0.25	200
HB-1S3216-100□□	10	7.5	0.05	300
HB-1S3216-200□□	20	15	0.10	300
HB-1S3216-800□□	80	60	0.25	200
HB-1S3216-251□□	250	190	0.30	200
HB-1S3216-601□□	600	450	0.40	200
HB-1T3216-350□□	35	26	0.03	600
HB-1T3216-500□□	50	37	0.03	600
HB-1T3216-700□□	70	52	0.05	400
HB-1T3216-800□□	80	60	0.05	400
HB-1T3216-121□□	120	90	0.10	300
HB-1T3216-151□□	150	115	0.10	300
HB-1T3216-201□□	200	150	0.15	300
HB-1T3216-601□□	600	450	0.30	200
HB-1T3216-801□□	800	600	0.30	200
HB-1T3216-102□□	1000(at 60MHz)	750	0.40	200
HB-1T3216-122□□	1200(at 50MHz)	900	0.40	200
HB-1T3216-202□□	2000(at 30MHz)	1500	0.50	200
HB-1V3216-700□□	70	53	0.08	300

HB4516

Part No.	Z at 100\$ (¥)		DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HB-1H4516-600□□	60	45	0.02	600
HB-1H4516-700□□	70	52	0.03	600
HB-1M4516-151□□	150	115	0.05	300
HB-1T4516-700□□	70	52	0.05	600

HB4532

Part No.	Z at 100\$ (¥)		DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HB-1H4532-121□□	120	90	0.04	600
HB-1H4532-151□□	150	115	0.04	600
HB-1T4532-800□□	80	60	0.04	600
HB-1T4532-121□□	120	90	0.04	600

HB5750

Part No.	Z at 100\$ (¥)		DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HB-1M5750-181□□	180	135	0.08	600

HB series - L Type (For ultra high frequency signal line)

Part No.	Z at 100\$ (¥)	Z at 1\$ (¥)	DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	typ.		
HB-1L1608-2R0□□	2.0	20	0.20	300
HB-1L1608-4R0□□	4.0	40	0.25	300
HB-1L1608-5R5□□	5.5	55	0.30	300
HB-1L1608-7R0□□	7.0	80	0.30	300
HB-1L1608-9R0□□	9.0	40(at 500MHz)	0.40	300
HB-1L1608-110□□	11.0	55(at 500MHz)	0.40	300
HB-1L1608-130□□	13.0	70(at 500MHz)	0.50	300
HB-1L1608-150□□	15.0	80(at 500MHz)	0.50	300
HB-1L2012-3R5□□	3.5	30	0.15	500
HB-1L2012-6R5□□	6.5	30(at 500MHz)	0.20	500
HB-1L2012-100□□	10.0	50(at 500MHz)	0.25	500

HB series - Y Type (For ultra high frequency signal line)

Part No.	Z at 100\$ (¥)	Z at 1\$ (¥)	DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	typ.		
HB-1Y1608-4R0□□	4.0	40	0.20	300
HB-1Y1608-8R0□□	8.0	80	0.25	300
HB-1Y1608-100□□	10.0	100	0.30	300
HB-1Y1608-150□□	15.0	150	0.35	300
HB-1Y1608-200□□	20.0	120(at 500MHz)	0.40	300

HH series (For high current ~3A)

Part No.	Z at 100\$ (¥)	Z at 1\$ (¥)	DC Resistance (\$) max.	Rated Current (mA) max.
	typ.	min.		
HH-1H1005-100□□	10	7.5	0.07	500
HH-1T1005-100□□	10	7.5	0.07	500
HH-1S1005-100□□	10	7.5	0.08	500
HH-1S1608-5R0□□	5.0	3.8	0.10	1000
HH-1M1608-300□□	30	22	0.05	1000
HH-1M1608-600□□	60	45	0.10	500
HH-1M1608-600□□ A	60	45	0.08	1000
HH-1M1608-121□□	120	90	0.15	500
HH-1M1608-121□□A	120	90	0.08	1000
HH-1M2012-260□□	26	20	0.02	2000
HH-1M2012-600□□	60	45	0.02	3000
HH-1M2012-121□□	120	90	0.05	2500
HH-1M2012-221□□	220	165	0.05	2000
HH-1M2012-301□□	300	225	0.07	2000
HH-1M2012-601□□	600	450	0.13	1500
HH-1T2012-260□□	26	20	0.02	3000
HH-1T2012-121□□	120	90	0.03	2500
HH-1T2012-251□□	250	190	0.05	3000
HH-1T2012-601□□	600	450	0.13	1500
HH-1S2012-8R0□□	8	6	0.03	1500
HH-1T3216-260□□	26	20	0.03	3000
HH-1T3216-350□□	35	26	0.03	2500

HH series (For high current ~3A)

Part No.	Z at 100S (¥)	Z at 1S (¥)	DC Resistance (S) max.	Rated Current (mA) max.
	typ.	min.		
HH-1H3216-500□□	50	37	0.02	3000
HH-1H3216-700□□	70	53	0.02	3000
HH-1M3216-900□□	90	68	0.03	3000
HH-1M3216-121□□	120	90	0.03	3000
HH-1M3216-501□□	500	375	0.06	2500
HH-1M3216-601□□	600	450	0.06	2500
HH-1H4516-600□□	60	45	0.02	3000
HH-1H4516-111□□	110	83	0.02	3000
HH-1H4532-121□□	120	90	0.03	3000
HH-1T4532-121□□	120	90	0.03	3000
HH-1M4532-601□□	600(at 50MHz)	450	0.04	3000
HH-1M4532-132□□	1300(at 60MHz)	980	0.05	3000
HH-1B4532-132□□	1300	980	0.05	3000
HH-1M5750-101□□	100	75	0.03	4000
HH-1M5750-401□□	400	300	0.04	2000
HH-1M5750-501□□	500	375	0.05	2000
HH-1T5750-151□□	150	115	0.05	3000

HU series (For ultra high current ~6A)

Part No.	Z at 100S (¥)	Z at 1S (¥)	DC Resistance (S) max.	Rated Current (mA) max.
	typ.	min.		
HU-1M2012-400□□	40	30	0.02	5000
HU-1M2012-600□□	60	45	0.02	5000
HU-1M2012-800□□	80	60	0.02	5000
HU-1M2012-121□□	120	90	0.02	5000
HU-1T2012-500□□	50	37	0.015	4000
HU-1H3216-500□□	50	37	0.01	6000
HU-1H3216-121□□	120	90	0.02	6000
HU-1H4516-600□□	60	45	0.01	6000
HU-1B4532-681□□	680	510	0.03	4000
HU-1H4532-121□□	120	90	0.02	6000
HU-1M5750-401□□	400	300	0.02	6000

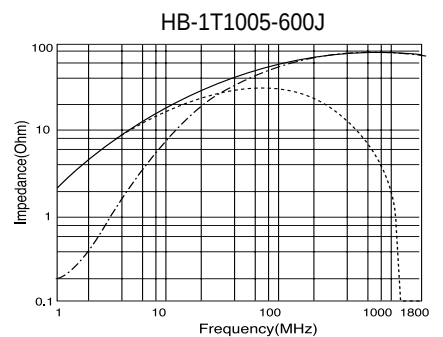
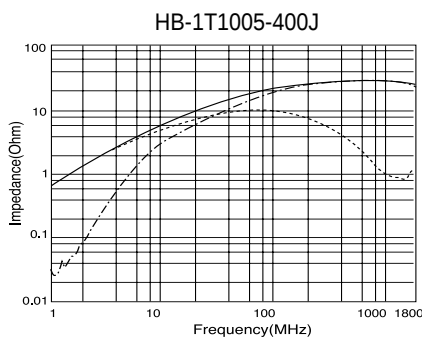
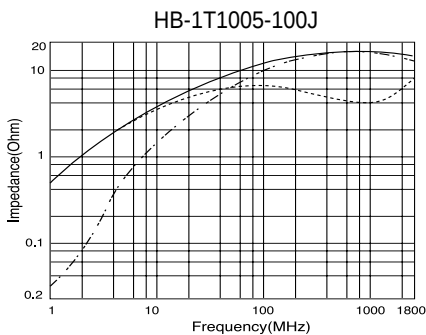
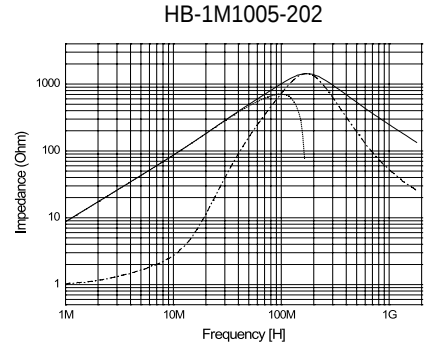
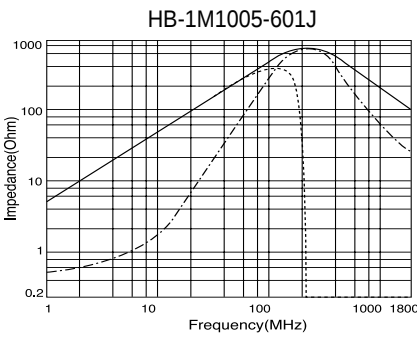
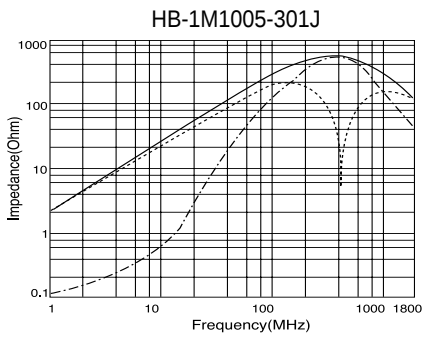
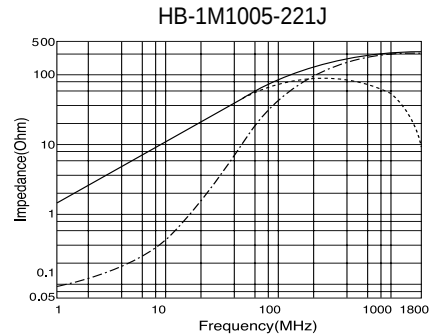
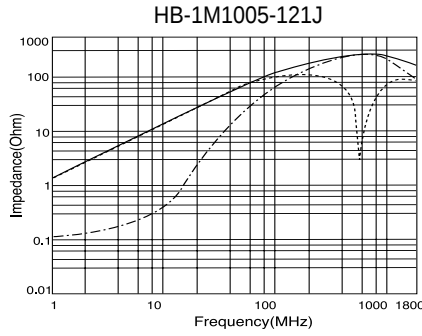
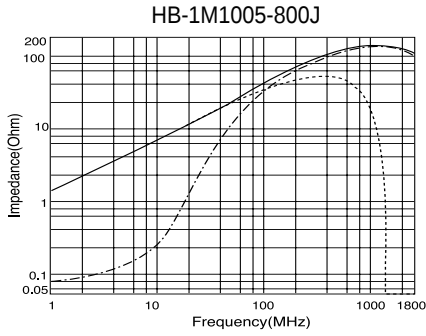
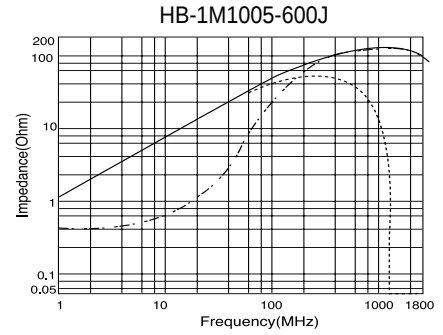
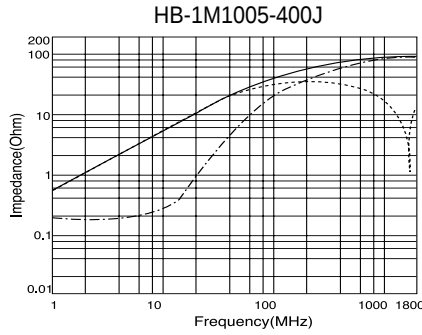
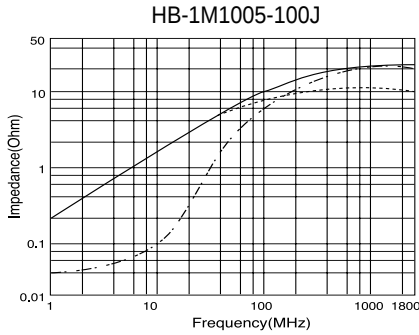
¡ Parts with other electrical characteristics can be provided upon customer ¡ request.

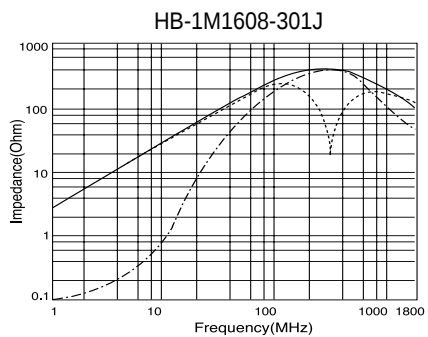
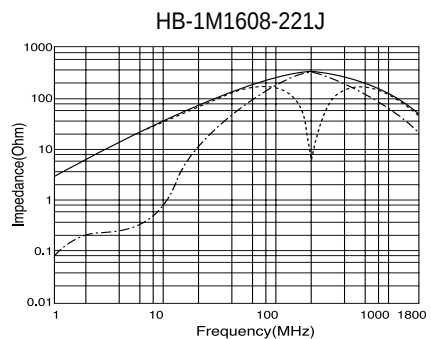
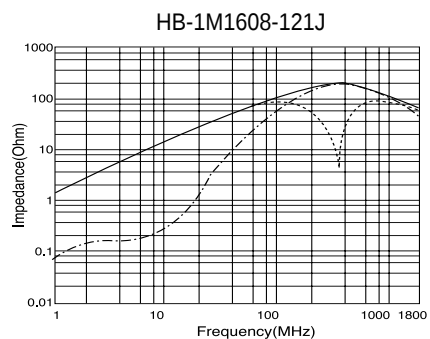
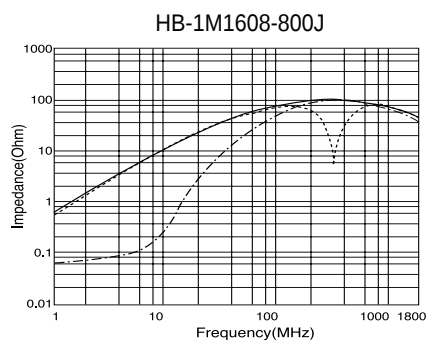
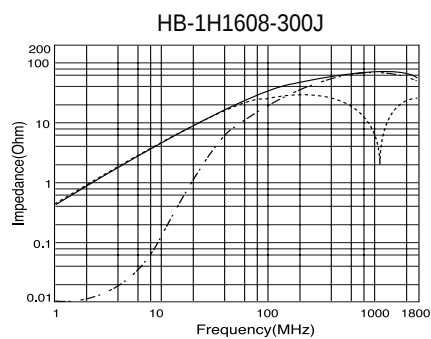
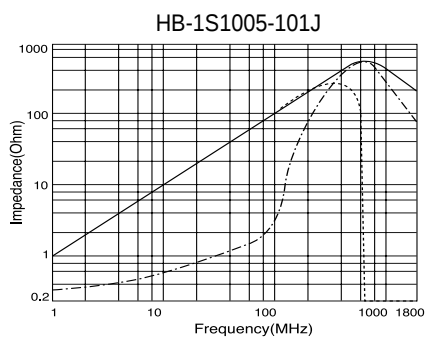
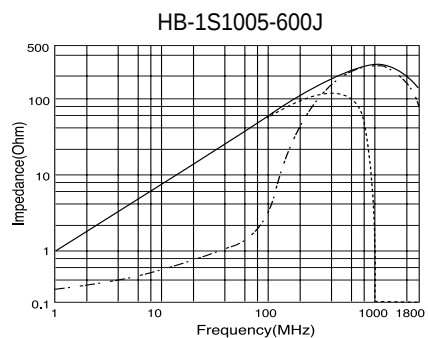
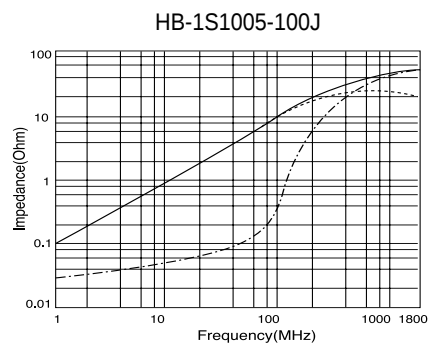
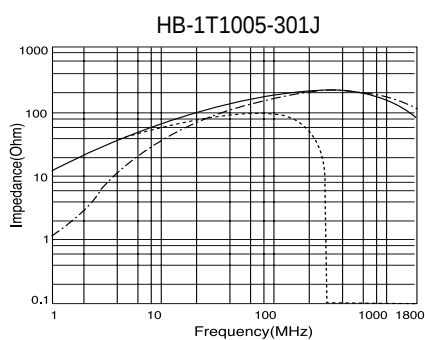
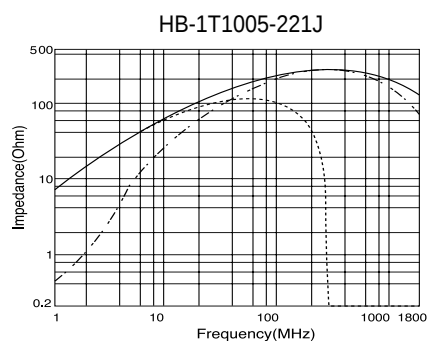
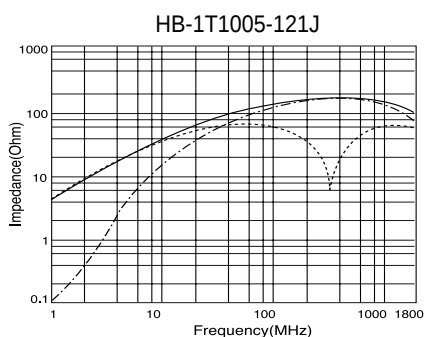
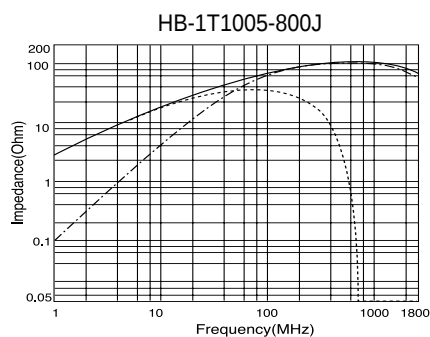
¡ Test equipment : HP4291A + HP16192A

Electrical Characteristics

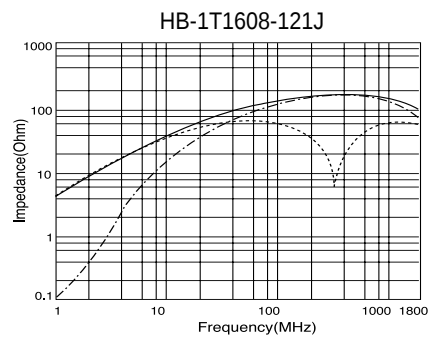
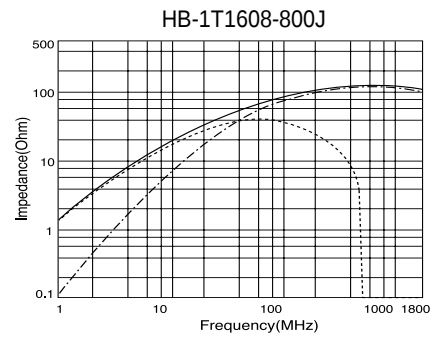
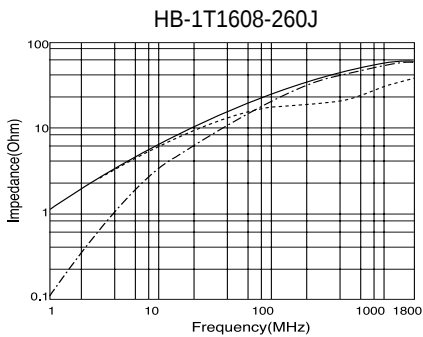
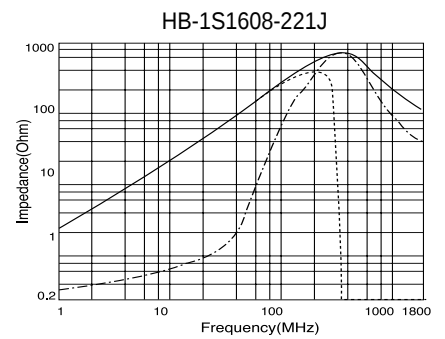
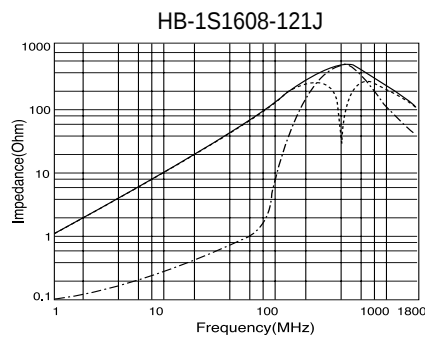
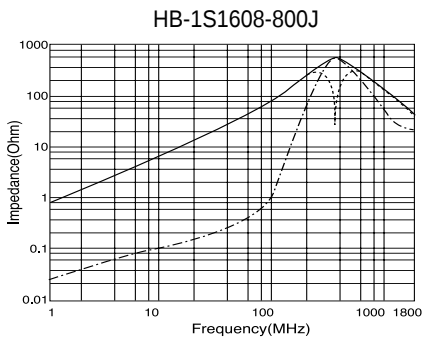
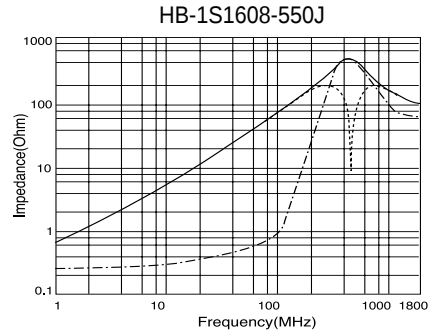
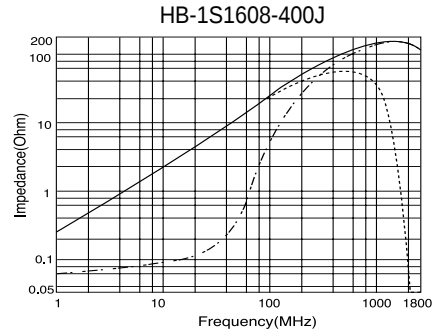
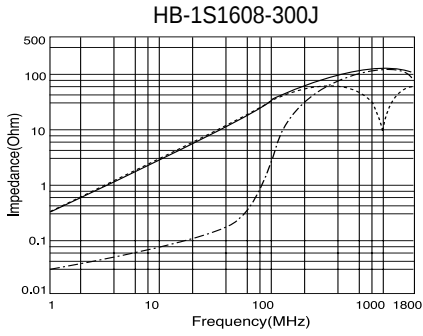
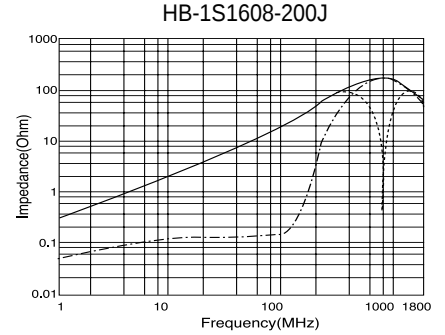
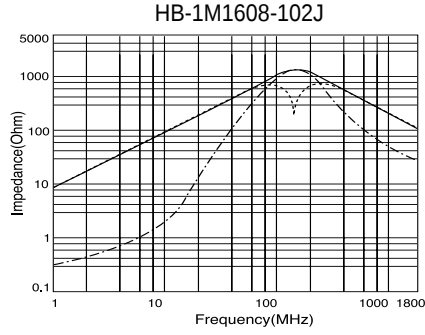
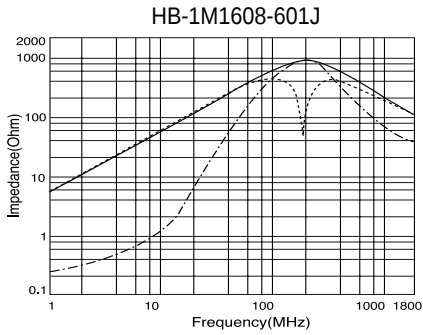
· HB1005, HB1608, HB2012

—Z— R— X---



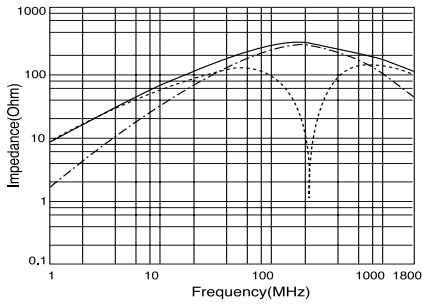


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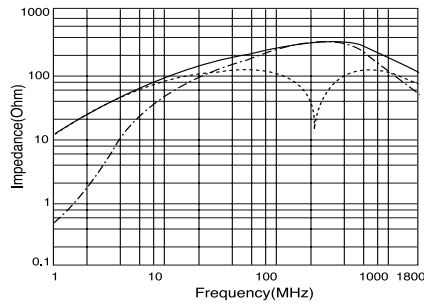


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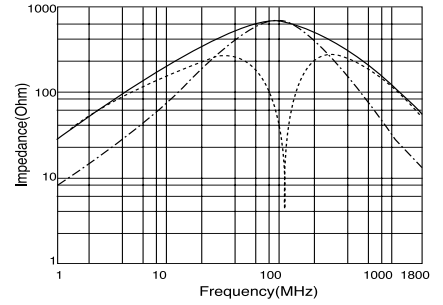
HB-1T1608-221J



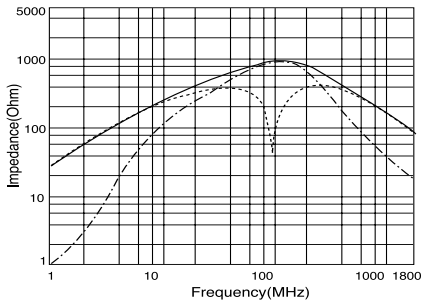
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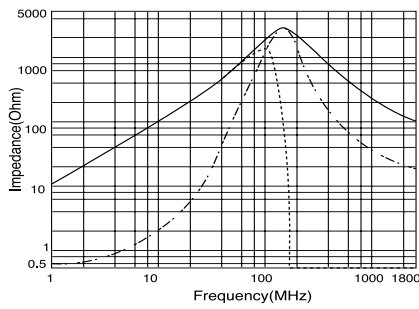
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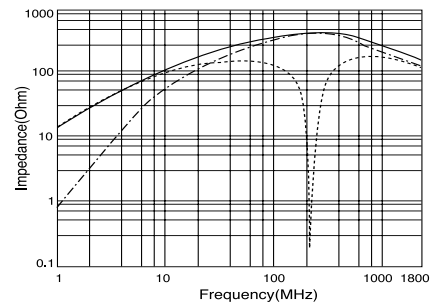
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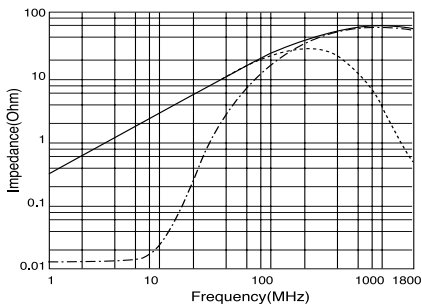
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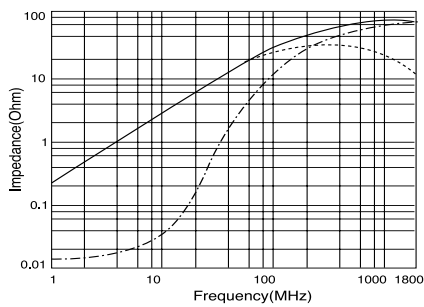
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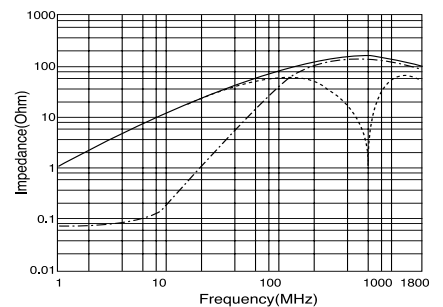
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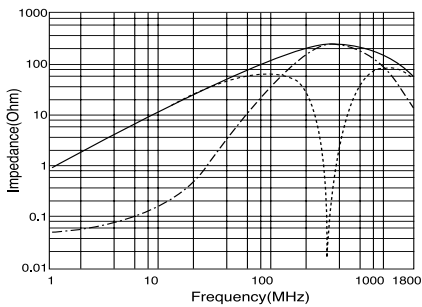
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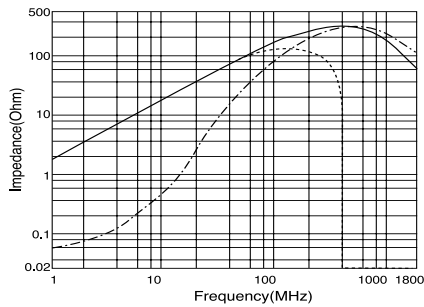
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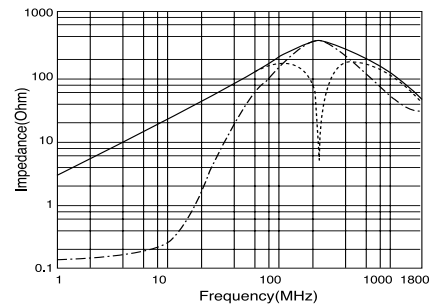
HB-1M2012-121J



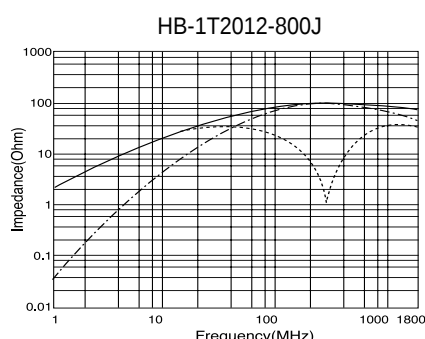
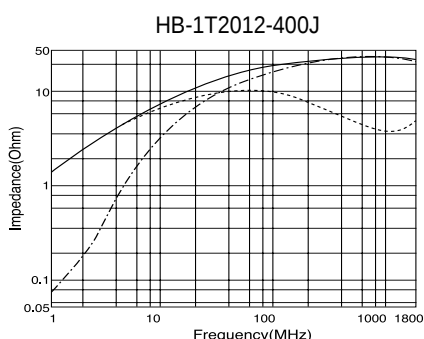
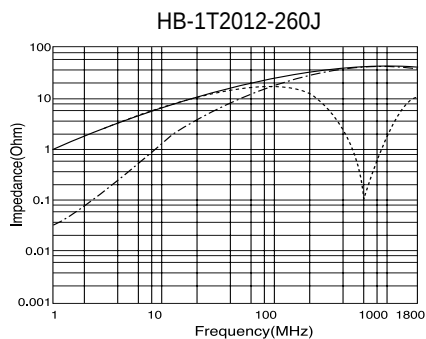
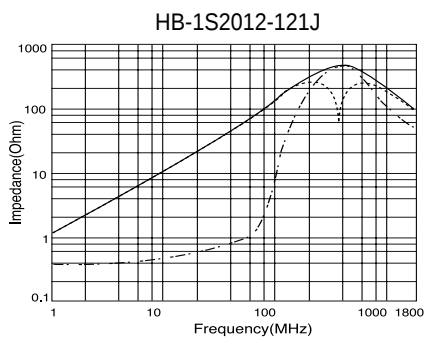
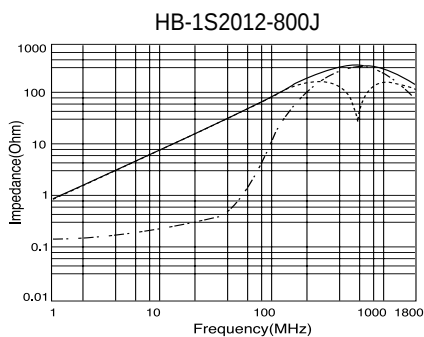
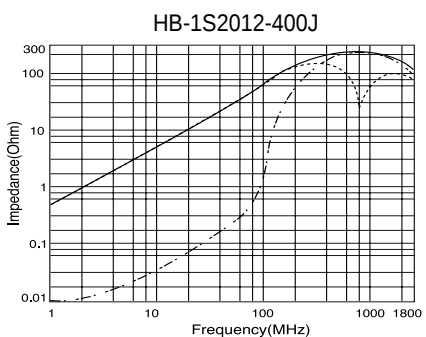
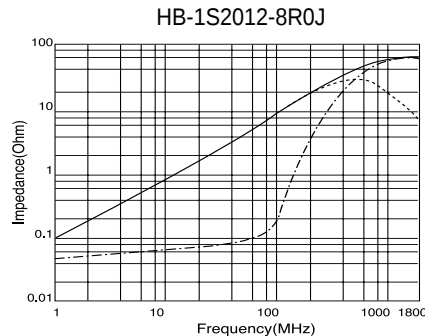
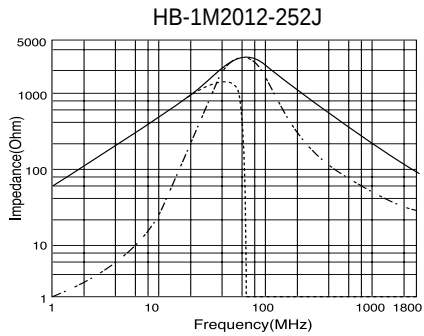
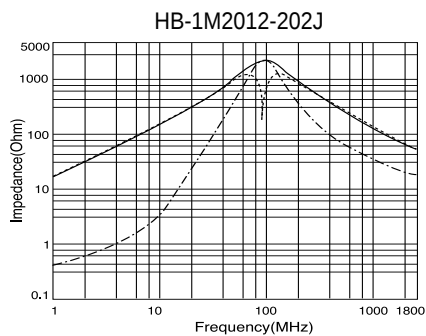
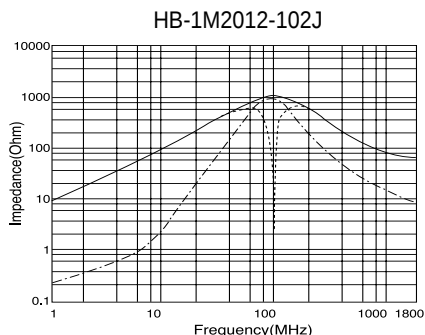
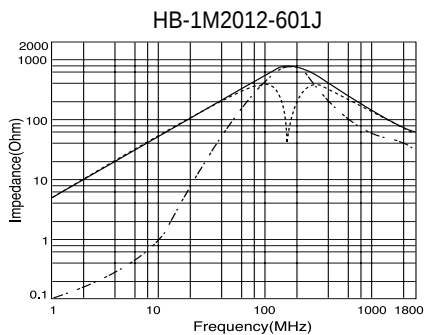
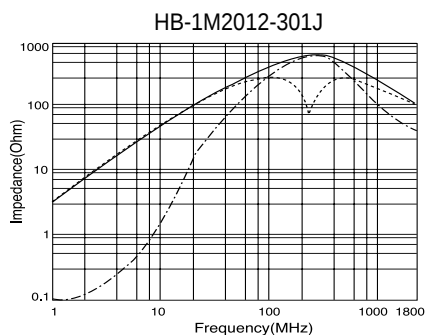
HB-1M2012-151J



HB-1M2012-221J

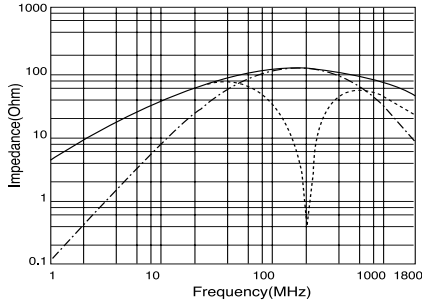


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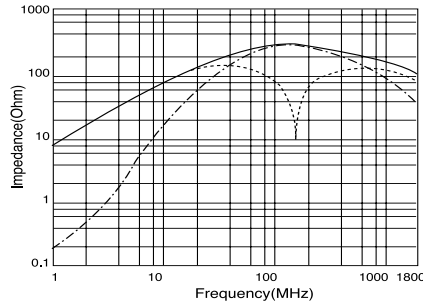


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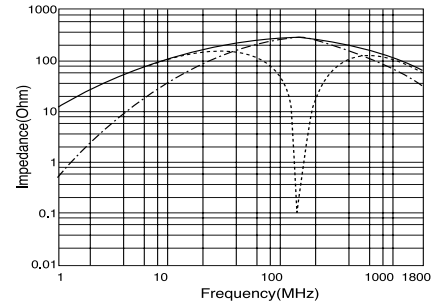
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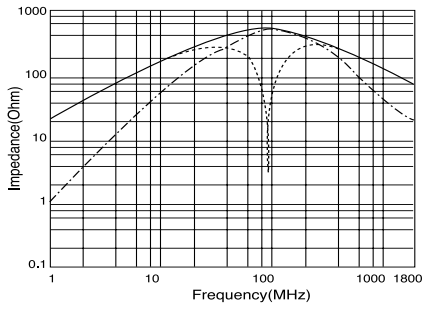
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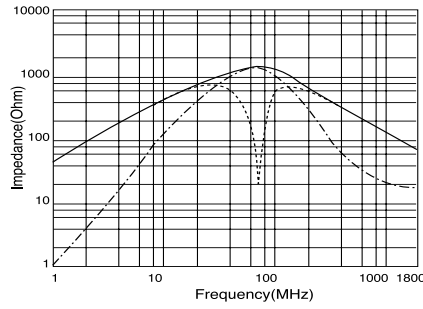
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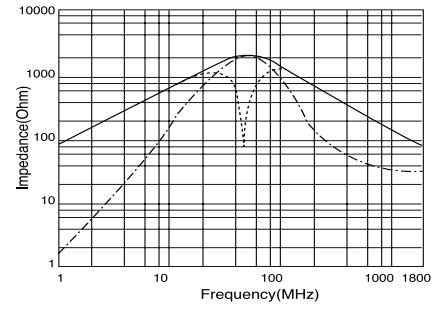
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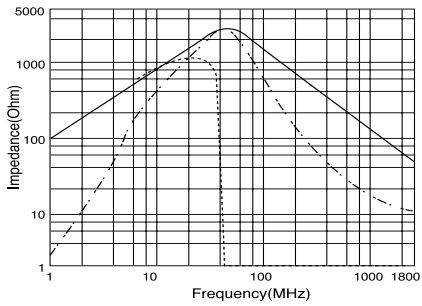
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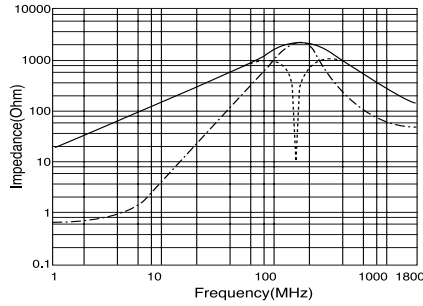
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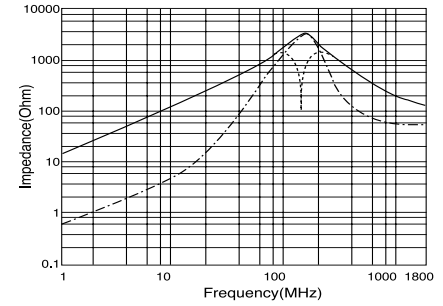
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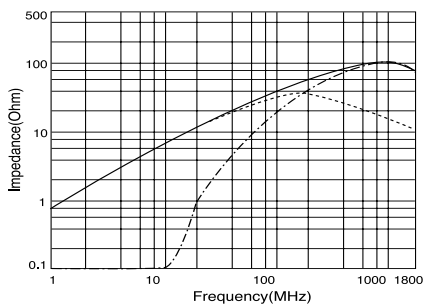
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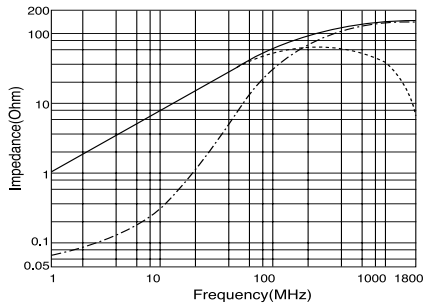
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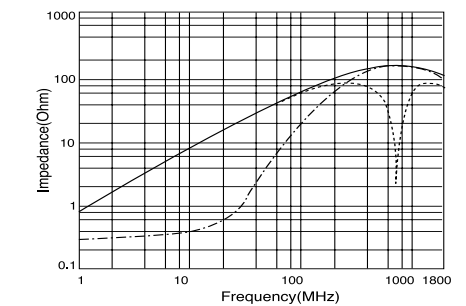
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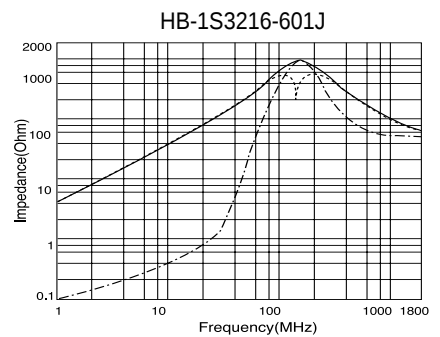
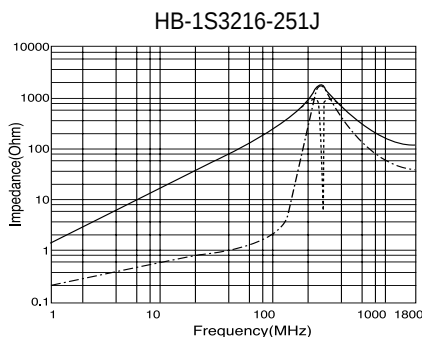
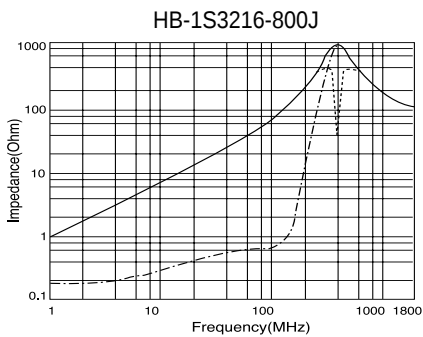
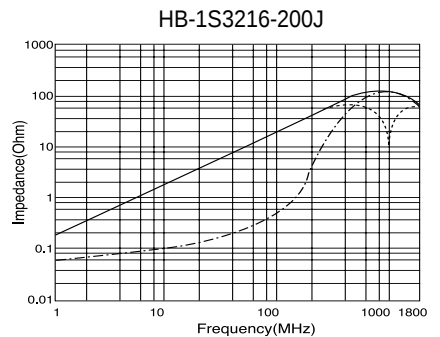
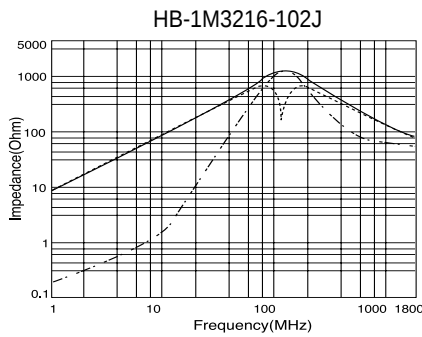
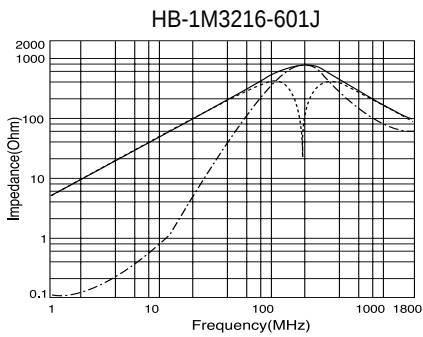
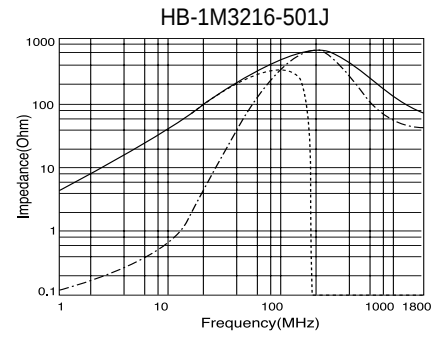
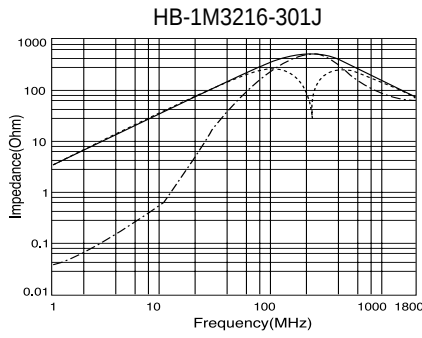
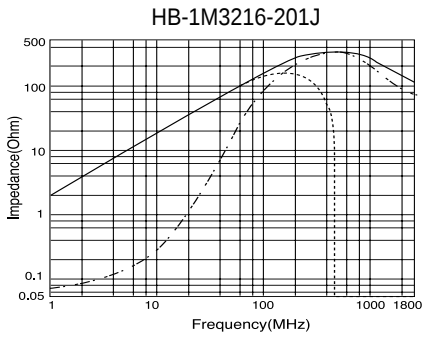
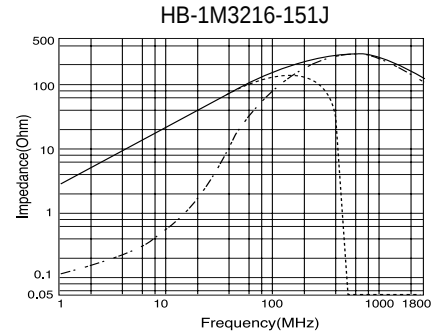
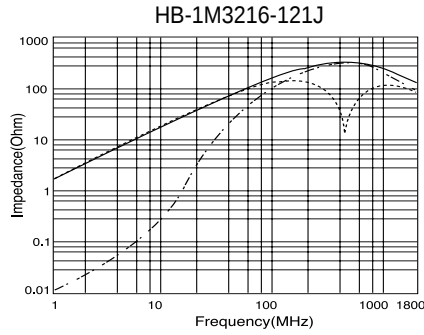
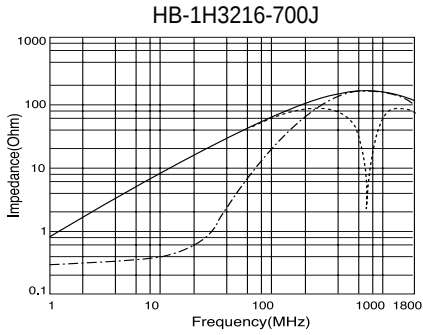
HB-1H3216-320J



HB-1H3216-500J

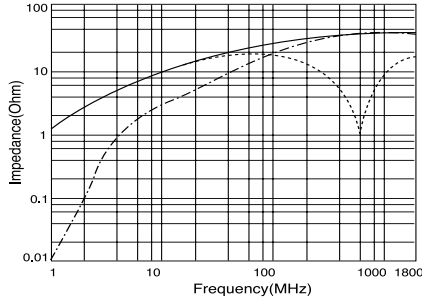


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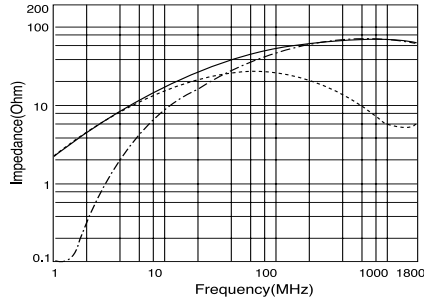


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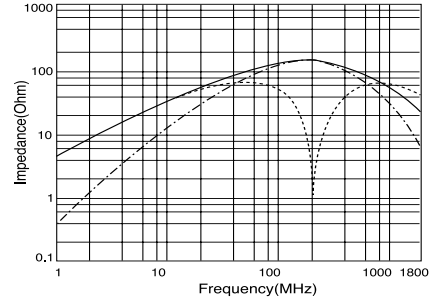
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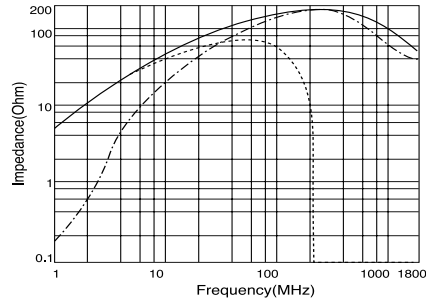
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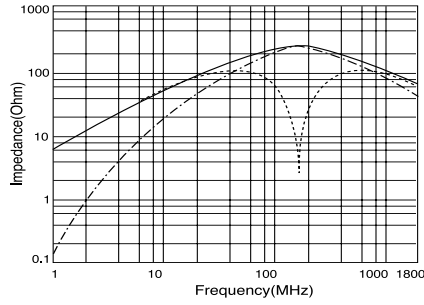
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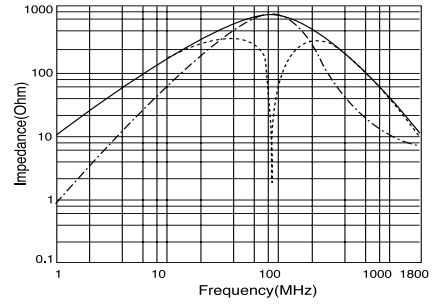
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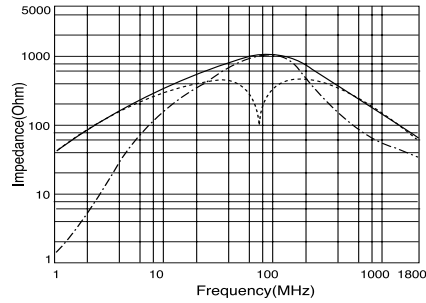
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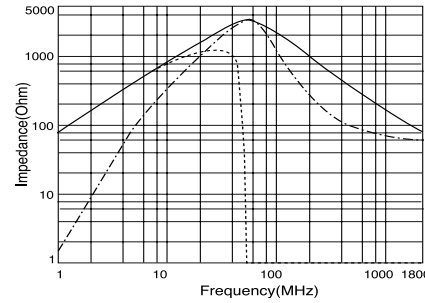
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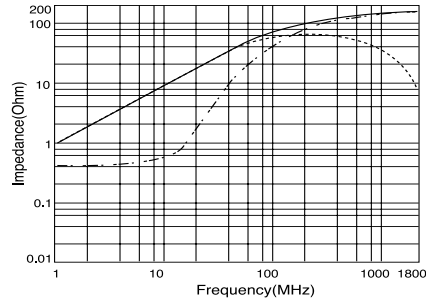
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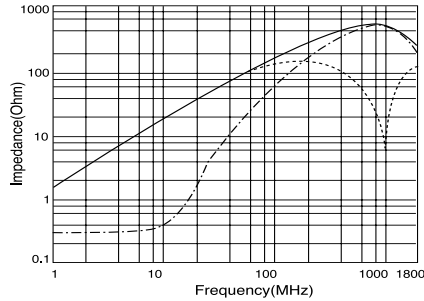
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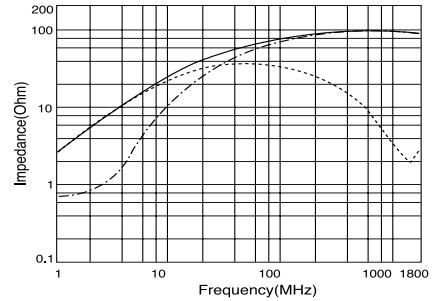
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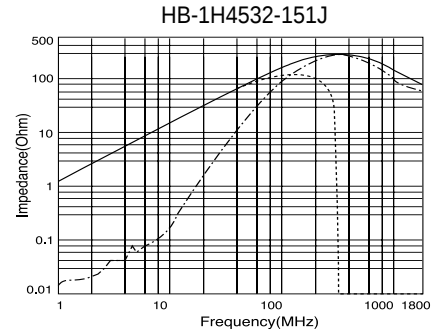
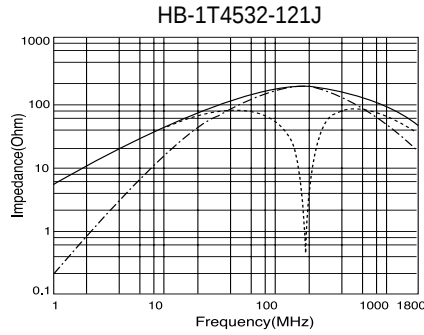
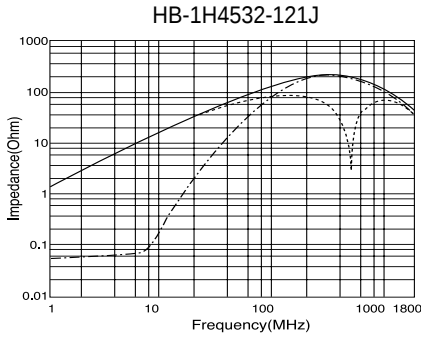
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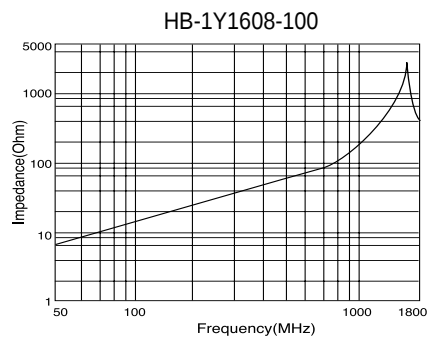
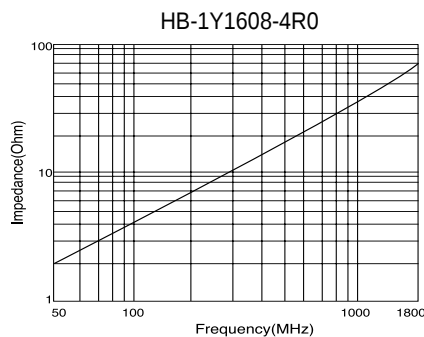
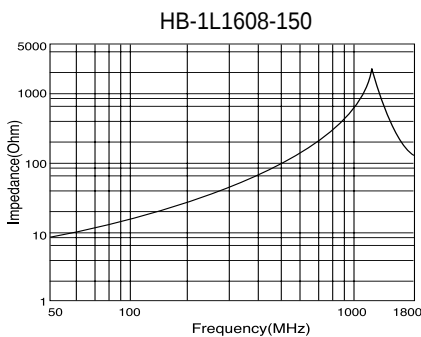
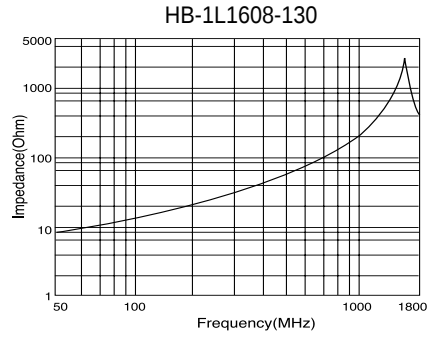
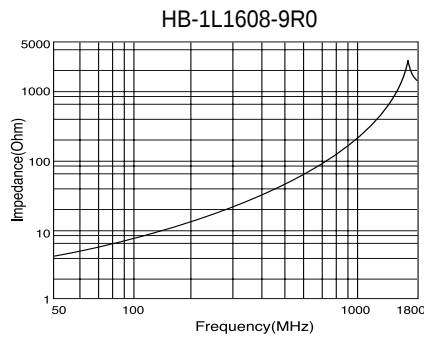
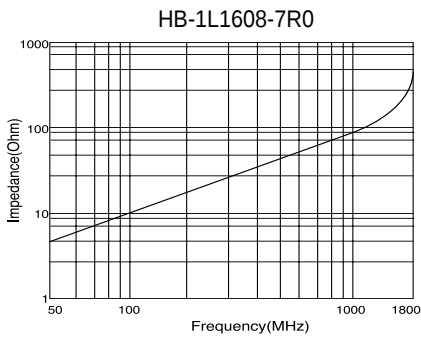
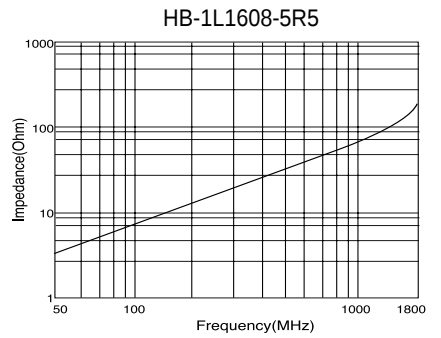
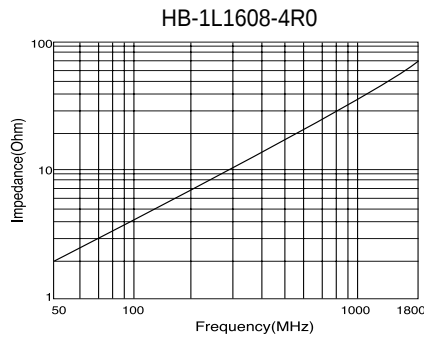
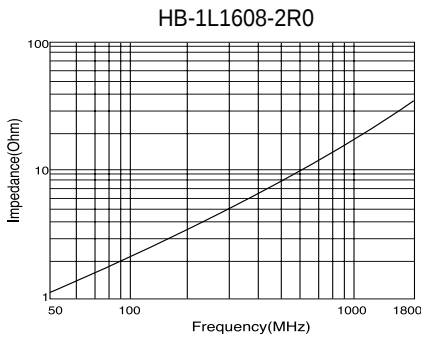
HB-1T4516-700J



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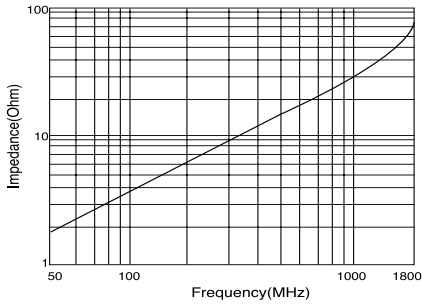


· HB series(For ultra high speed signal line)
HB1608,HB2012

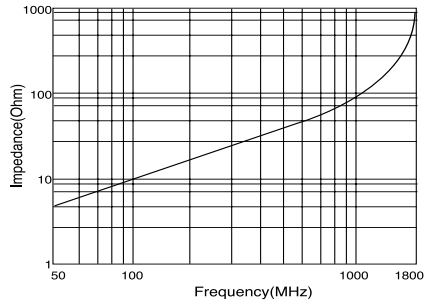


—Z R—X---

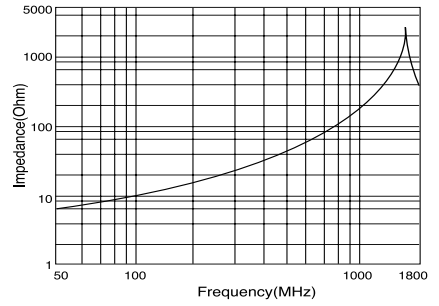
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HB-1L2012-6R5

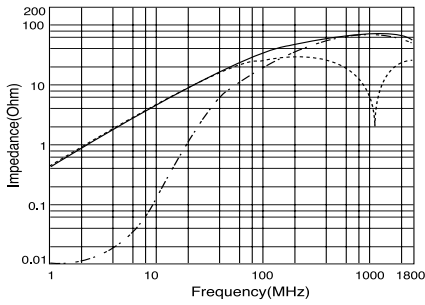


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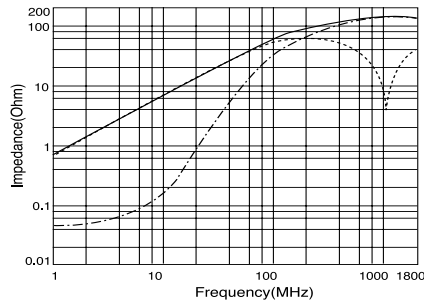


· HH,HU series

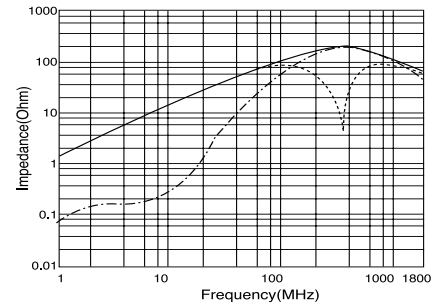
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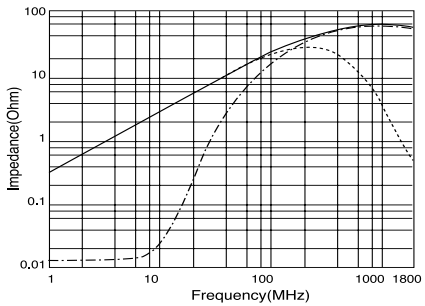
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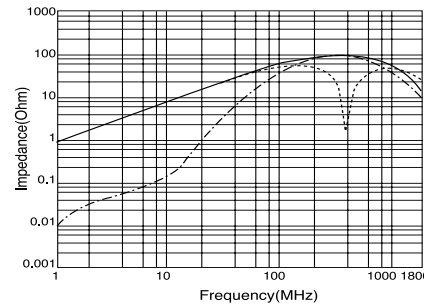
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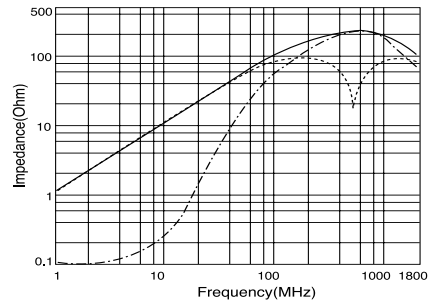
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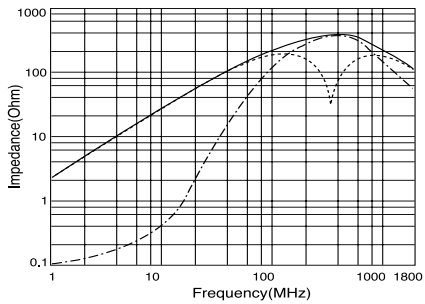
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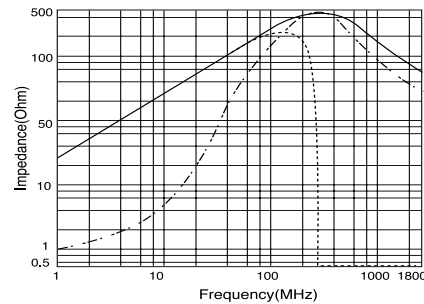
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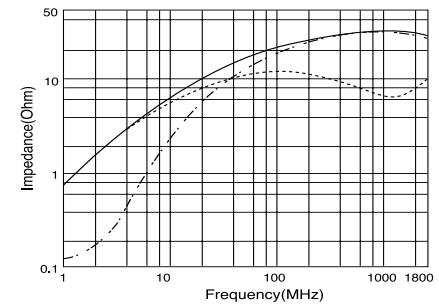
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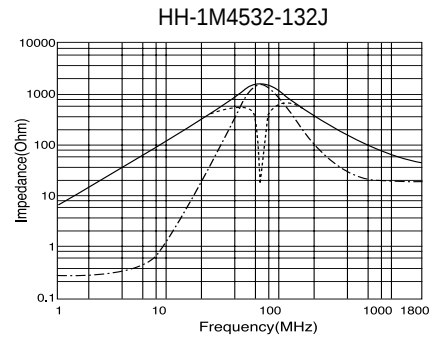
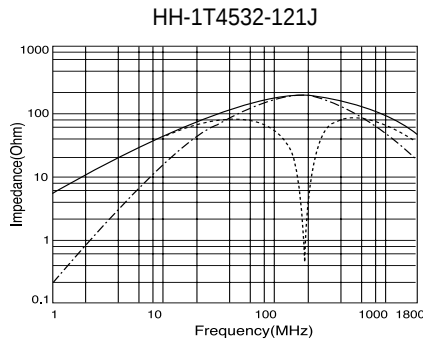
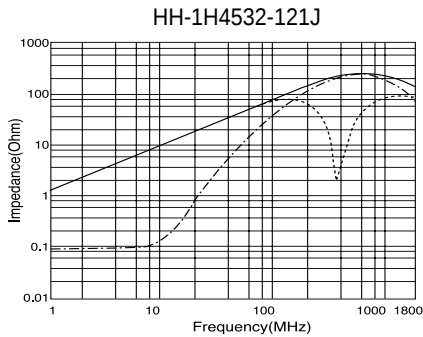
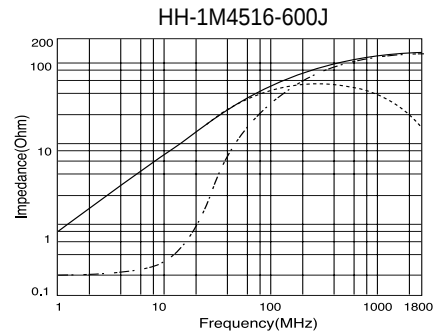
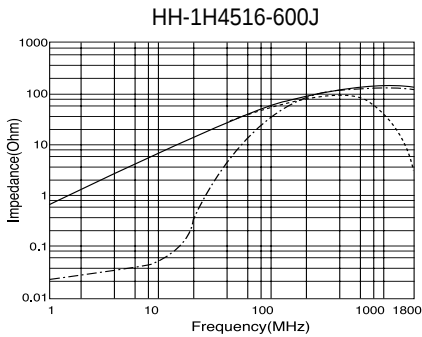
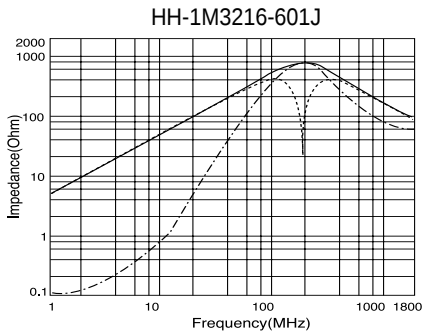
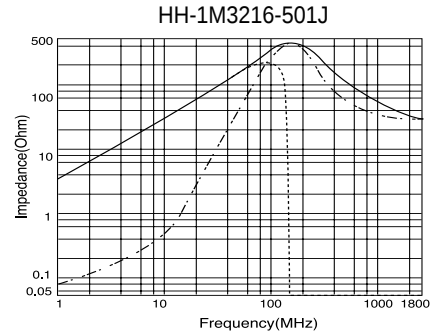
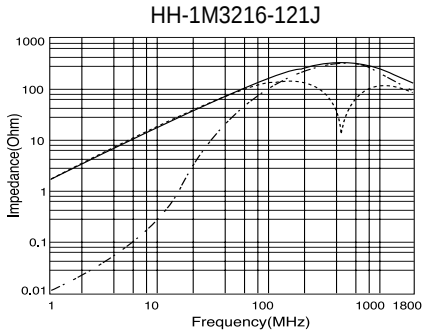
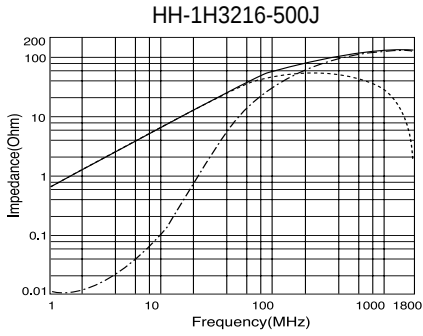
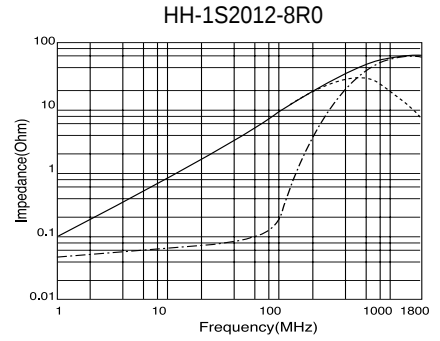
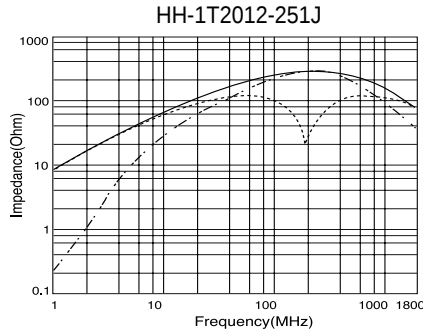
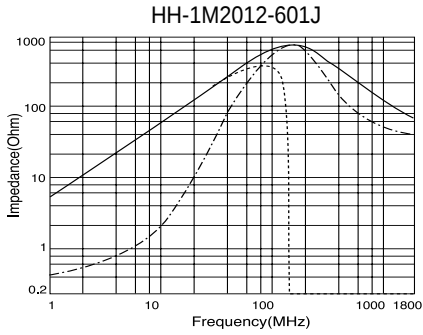
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HH-1T2012-260J

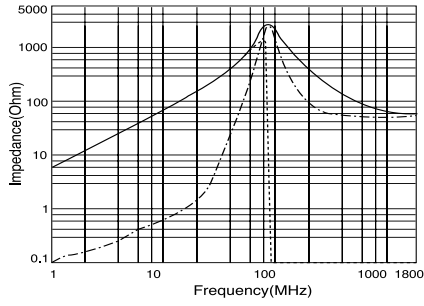


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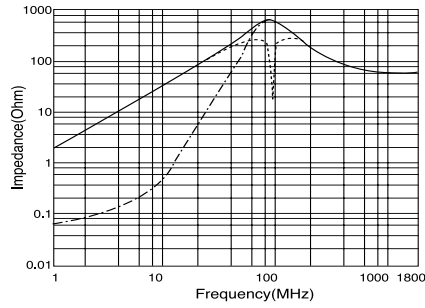


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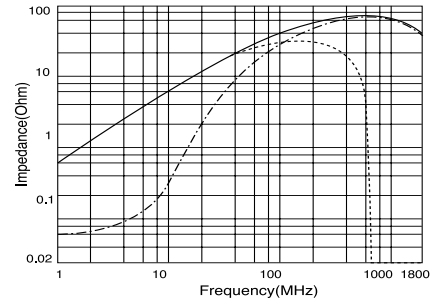
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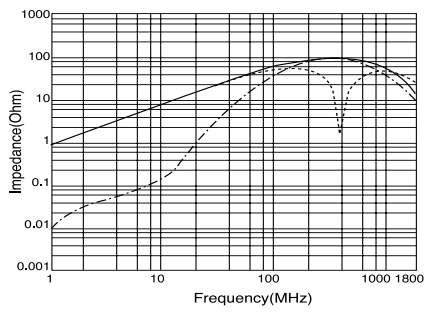
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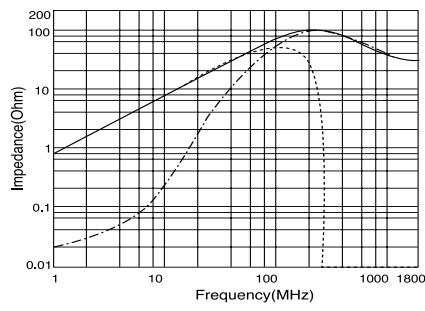
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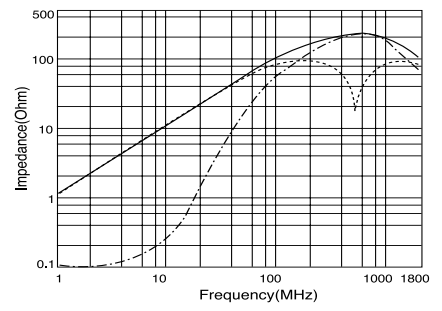
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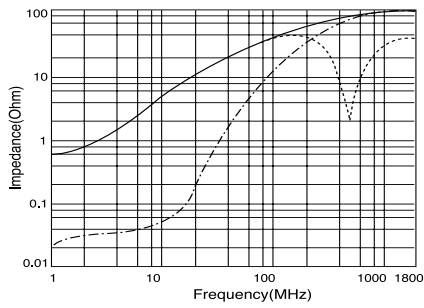
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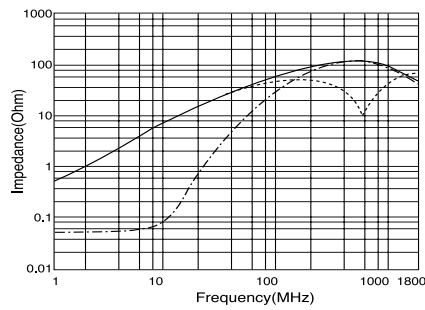
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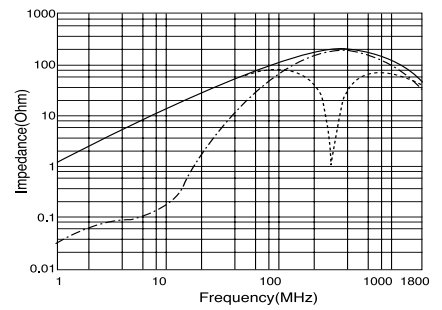
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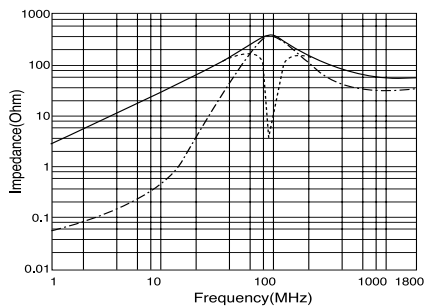
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HU-1H4532-121J

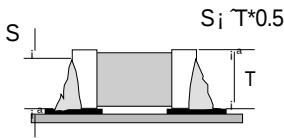
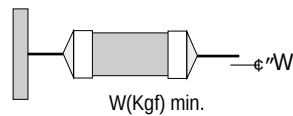
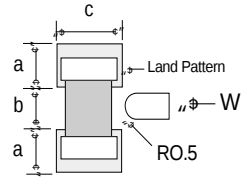
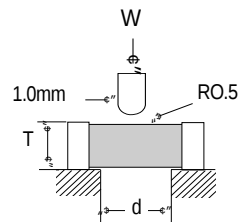


HU-1M5750-401J



RELIABILITY AND TEST CONDITIONS

CHIP FERRITE BEADS

ITEM	REQUIREMENTS							TEST CONDITION
	1005	1608	2012	3216	4516	4532	5750	
Operating temp. range	-55 ; ~+125 ;							—
Storage temp. & humidity range	40 ; max. , 70% RH max.							at packing condition
Resistance to solder heat	1. No damage such as cracks should be caused in chip element. 2. More than 75% of the terminal electrode shall be covered with new solder. 3. Impedance change : ; within 30%							Preheat temperature : 100 to 150 ; Preheat time : 1min. Solder temperature : 260 ; 10 ; Dipping time : 10 ; 0.5sec.
Solderability	1. More than 90% of the terminal electrode shall be covered with new solder. 2. Impedance change : ; within 30%							Preheat temperature : 100 to 150 ; Preheat time : 1min. Solder temperature : 230 ; 10 ; Dipping time : 3 ; 1sec.
Reflow soldering	1. More than 50% of the terminal electrode shall be covered with new solder. 							Preheat temperature : 150 ; Preheat time : 1min. Solder temperature : 230 ; Soldering time: 10 sec. max. (Reflow soldering profile)
Tensile strength (Terminal strength)	1. No mechanical damage unit:Kgf (W)							
	W	-	1.0	2.0	2.5	2.5	3.0	3.0
Adhesion of terminal electrode (Flexure strength)	1. No mechanical damage unit: mm (a,b,c) , Kgf (W)							
	a	0.7	1.0	1.0	1.3	1.5	1.5	1.8
	b	0.5	0.8	1.0	1.5	3.6	3.6	4.6
	c	0.7	1.3	1.3	3.0	3.0	3.8	5.8
	W	0.7	2.0	4.0	5.0	5.0	5.0	5.0
Body strength (Bending strength)	1. The body shall not be damaged by forces applied on the right. unit: mm (d) , Kgf (W)							
	d	-	1.3	1.3	2.0	3.0	3.8	4.8
	W	-	2.0	3.0	4.0	4.0	5.0	5.0

CHIP FERRITE BEADS

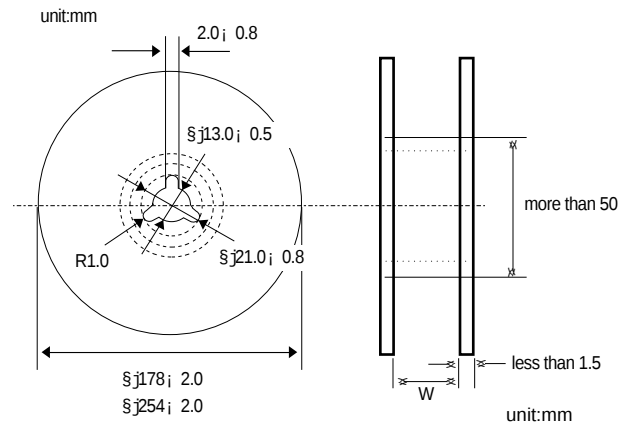
ITEM	REQUIREMENTS							TEST CONDITION
	1005	1608	2012	3216	4516	4532	5750	
Drop	1. No mechanical damage 2. Impedance change : $\pm$ within 30%							Drop 10 times on a concrete floor from a height of 91cm.
Vibration	1. No mechanical damage 2. Impedance change : $\pm$ within 30%							Frequency : 10~55~10Hz Amplitude : 1.52 mm Direction and time : X,Y,Z directions for 2 hours
Thermal shock (Temperature cycle)	1. No mechanical damage 2. Impedance change : $\pm$ within 30%							Step1. -40 $\pm$ 3 $\pm$ 30 $\pm$ 3min. Step2. 85 $\pm$ 3 $\pm$ 30 $\pm$ 3min. Number of cycle : 100 times
Heat load resistance	1. No mechanical damage 2. Impedance change : $\pm$ within 30%							Temperature : 85 $\pm$ 2 $\pm$ Applied current : rated current Time : 1,000 hours Measured at room ambient temperature after placing for 24 hours
Low temp. resistance	1. No mechanical damage 2. Impedance change : $\pm$ within 30%							Temperature : -40 $\pm$ 5 $\pm$ Time : 1,000 hours Measured at room ambient temperature after placing for 24 hours
Humidity resistance	1. No mechanical damage 2. Impedance change : $\pm$ within 30%							Temperature : 40 $\pm$ 2 $\pm$ Humidity : 90~95% RH Time : 500 hours Measured at room ambient temperature after placing for 24 hours
Humidity load resistance	1. No mechanical damage 2. Impedance change : $\pm$ within 30%							Temperature : 40 $\pm$ 2 $\pm$ Humidity : 90~95% RH Applied current : rated current Time : 500 hours Measured at room ambient temperature after placing for 24 hours

PACKING

■ STANDARD QUANTITY

Type	Q _i TY(PCS)	REMARKS
0603	15,000	
	10,000	
1005	50,000	BULK CASSETTE
	10,000	
1608	4,000	4mm pitch
	8,000	
2012	3,000	
	7,000	254mm
3216	3,000	
	7,000	254mm
4516	3,000	
4532	1,500	
5750	1,000	

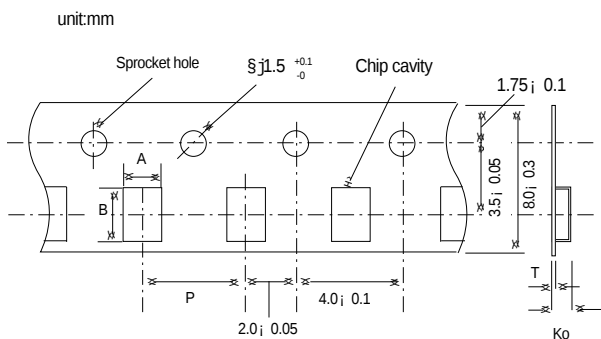
■ REEL DIMENSION



Type	W[mm]
0603, 1005, 1608, 2012, 3216 Array	9.0 ±0.3
4516, 4532, 5750	13.0 ±0.3]

■ TAPING DIMENSION / 8mm wide

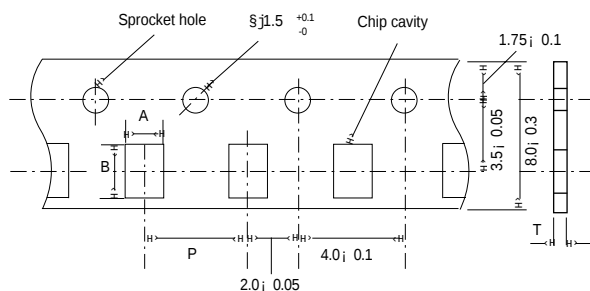
i /Embossing Tape



PRODUCT	Type	A _i 0.1	B _i 0.1	P _i 0.1	Ko _i 0.1	T(max.)
CHIP BEADS	1608	1.00	1.80	4.0	0.95	0.3
CHIP BEADS ARRAY					0.08	
CHIP FERRITE INDUCTOR	2012	1.45	2.25	4.0	1.00	0.3
CHIP EMI SUPPRESSION FILTER					1.35	
CHIP EMI FILTER ARRAY	3216	1.90	3.60	4.0	1.00	0.3
CHIP LC FILTER					1.35	
CHIP COMMON MODE FILTER	3216	1.90	3.60	4.0	1.00	0.3
CHIP FEEDTHRU					1.35	
CHIP VARISTOR					1.35	
CHIP VARISTOR ARRAY	3216	1.90	3.60	4.0	1.35	0.3
CHIP SURGE ABSORBER					1.35	

i /Paper Tape

unit:mm

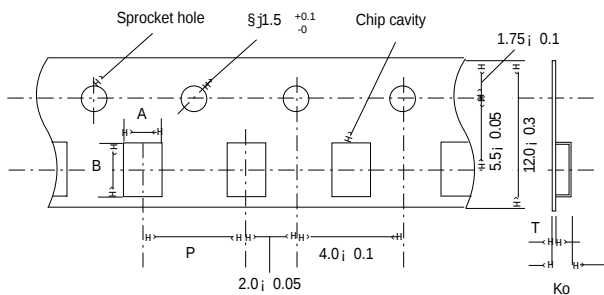


PRODUCT	Type	A _i 0.1	B _i 0.1	P _i 0.1	T(max.)
MICRO INDUCTOR	0603	0.37 ±0.02	0.67 ±0.02	4.0 ±0.1	0.45
CHIP BEADS					
CHIP INDUCTOR	1005	0.65 ±0.1	1.15 ±0.1	2.0 ±0.1	0.8
CHIP VARISTOR					
CHIP SURGE ARRAY	1608	1.00 ±0.1	1.8 ±0.1	2.0 ±0.1	1.1

■ TAPING DIMENSION / 12mm wide

i /Embossing Tape

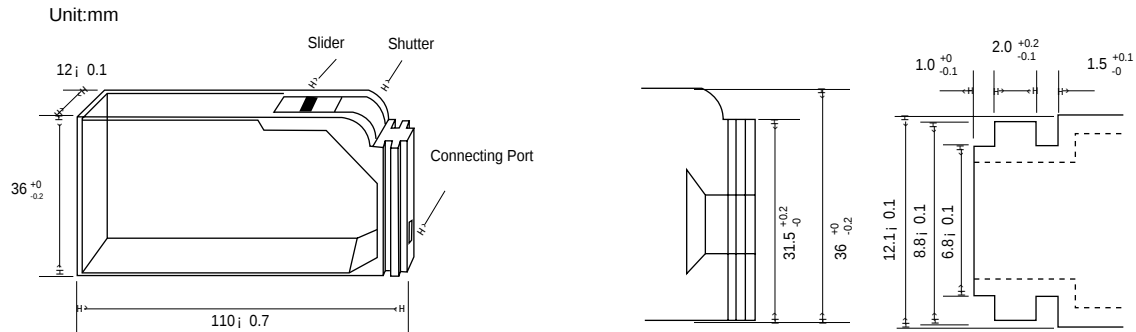
unit:mm



unit ; mm

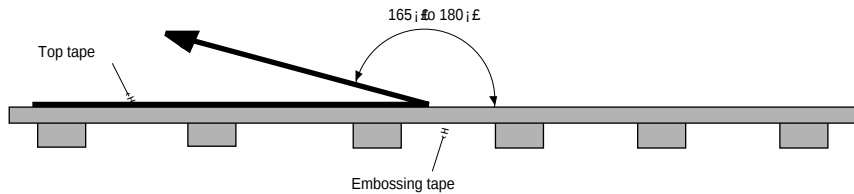
PRODUCT	Type	A _i 0.1	B _i 0.1	P _i 0.1	Ko _i 0.1	T(max.)
CHIP BEADS	4516	1.90	4.90	4.0	1.00	0.3
CHIP FEEDTHRU	4516	1.90	4.90	4.0	1.35	0.3
	4532	3.60	4.90	8.0	1.40	0.3
	5750	5.20	6.10	8.0	2.05	0.3

§ 1005 BULK CASSETTE DIMENSION



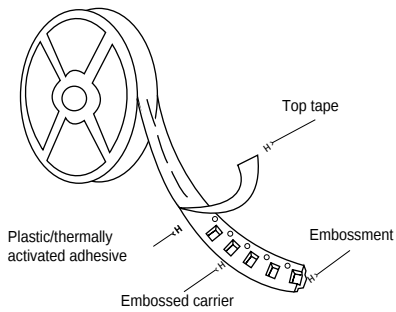
§ TOP TAPE STRENGTH

; /The force for tearing off top tape is 20 to 70 grams in the arrow direction.

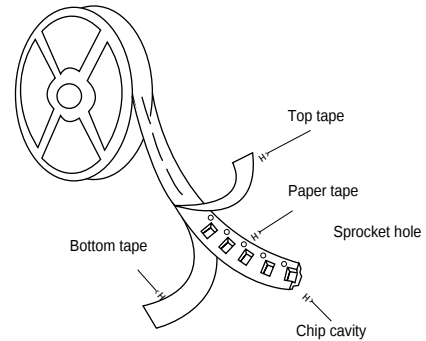


§ TAPING MATERIAL

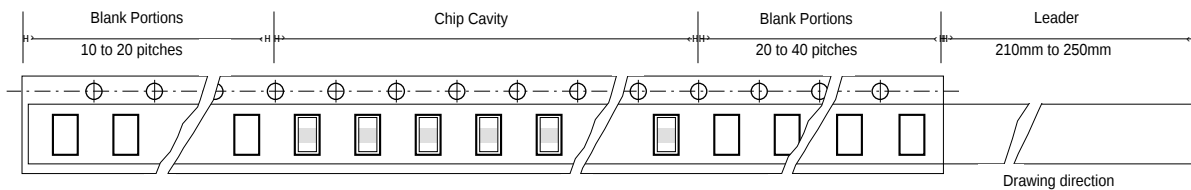
; /Embossed Tape



; /Paper Tape



§ LEADER AND BLANK PORTION

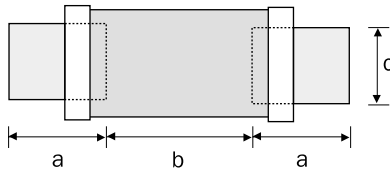


; /The pitch holes shift within ± 0.3 mm for cumulative 10 pitches.

LAND PATTERN DESIGN

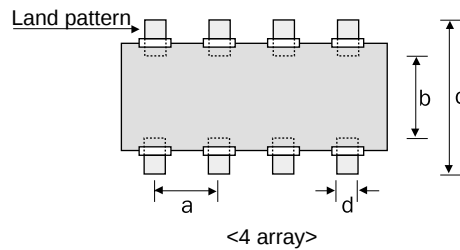
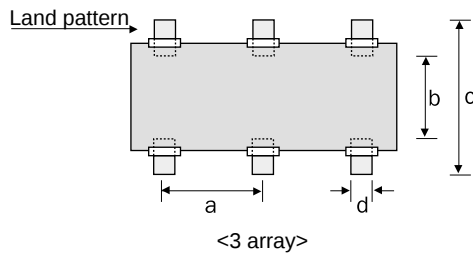
■ BEAD, INDUCTOR, VARISTOR, SURGE ABSORBER

unit ; mm



SIZE	a	b	c
0603	0.22	0.25	0.32
1005	0.7	0.4	0.5
1608	1.0	0.6	0.8
2012	1.0	1.0	1.0
3216	1.1	2.2	1.4
4516	1.5	3.0	1.4
4532	1.8	3.0	3.0
5750	2.0	4.0	5.8

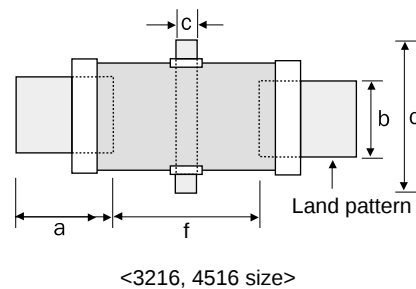
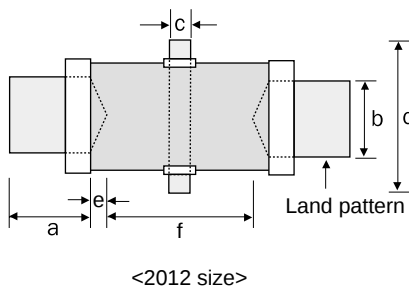
■ ARRAY



unit ; mm

SIZE	array	a	b	c	d
3216	3 array	1.0	0.8	3.0	0.5
3216	4 array	0.8	0.8	3.0	0.4

■ EMI SUPPRESSION FILTER, LC FILTER, FEEDTHRU CAPACITOR

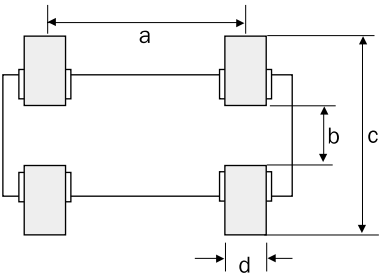


unit ; mm

SIZE	a	b	c	d	e	f
2012	1.0	1.0	0.4	2.0	0.1	1.4
3216	1.1	1.4	0.6	2.4	-	2.4
4516	1.5	1.4	0.8	2.4	-	3.4

LAND PATTERN DESIGN

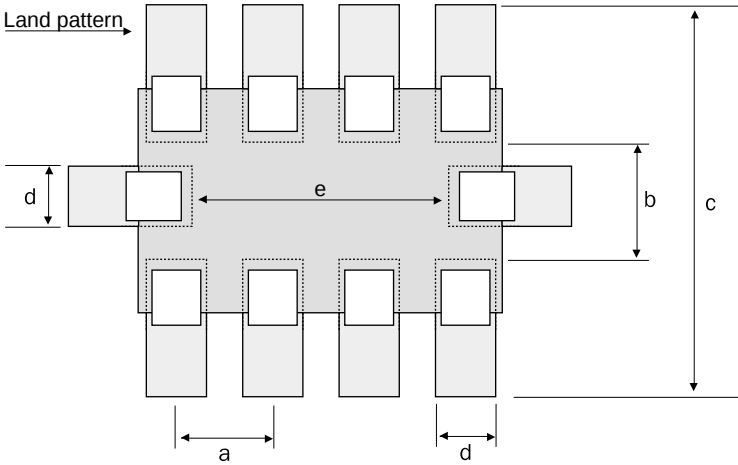
■ COMMON MODE FILTER, VARISTOR ARRAY



unit ; mm

SIZE	POLE(Array)	a	b	c	d
2012	2 POLE	1.20	0.60	2.60	0.40
2012	2 Array	0.76	0.38	2.16	0.46
3216	2 POLE	2.10	0.80	3.00	0.60
3216	2 Array	1.96	0.76	2.54	0.90

■ EMI FILTER ARRAY

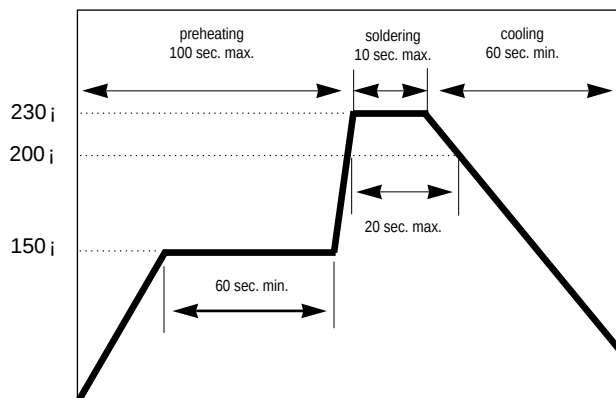


unit ; mm

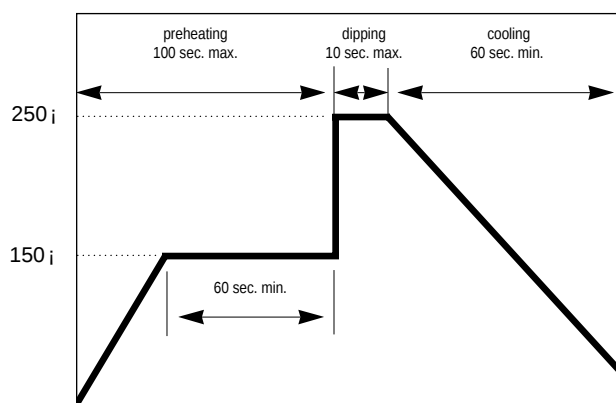
SIZE	POLE(Array)	a	b	c	d	e
3216	4 Array	0.8	0.8	3.0	0.4	2.4

SOLDERING PROFILE

■ REFLOW SOLERING PROFILE



■ FLOW SOLDERING PROFILE



■ MANUAL SOLDERING

