

# Ferrite Cores for EMI Suppression

## Ferrite Beads

### BB Series(1 Hole)

Bead cores series are easy to handle and are supplied in various materials, shapes and packaging styles to meet for users' requests.

#### FEATURES

- Appropriate materials and shapes can be selected from various cores to suppress EMI effectively.

#### APPLICATIONS

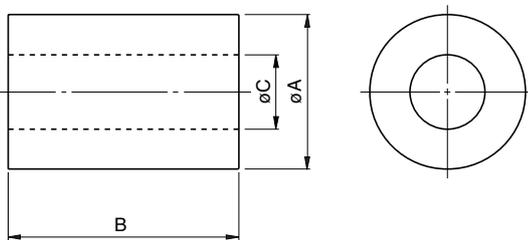
Video, acoustic, office automation equipment, communication equipment, automotive electronic equipment and others.

- Absorption EMI and penetrating noise
- Prevent parasitic oscillation

#### MATERIAL CHARACTERISTICS

Material	Initial permeability $\mu_i$	Temperature factor of initial permeability $\alpha_{\text{pir}} \times 10^{-6}/^{\circ}\text{C}$	Curie temperature $T_c$ ( $^{\circ}\text{C}$ )	Saturation magnetic flux density $B_s$ (mT)
HF70	1500	1 to 6	>100	280[H=1600A/m]
HF57	600	3 to 15	>150	370[H=4000A/m]
HF40	120	8 to 18	>250	410[H=4000A/m]
HF30	45	5 to 15	>300	320[H=4000A/m]

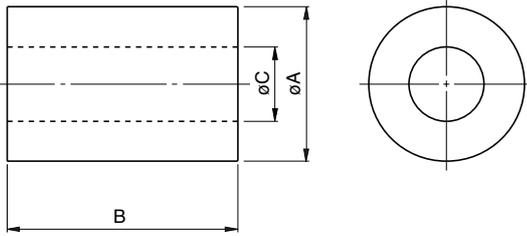
#### SHAPES AND DIMENSIONS/CHARACTERISTICS



Part No.	Dimensions (mm)			Impedance( $\Omega$ )[at 23°C]	
	A	B	C	10MHz typ.	100MHz typ.
HF30BB1.8X5X0.7	1.8±0.15	5.0±0.3	0.7±0.1	3.4	36
HF30BB2.5X2X0.8	2.5±0.15	2.0±0.2	0.8±0.1	1.9	20
HF30BB3X5X1	3.0±0.15	5.0±0.3	1.0±0.1	3.3	37
HF30BB3.5X5X1.3	3.5±0.15	5.0±0.3	1.3±0.1	3.2	32
HF30BB5X5X2	5.0±0.15	5.0±0.3	2.0±0.15	2.7	33
HF30BB6.4X5X3.2	6.4±0.2	5.0±0.2	3.2±0.15	2.6	26
HF40BB1.7X1.9X0.7	1.7±0.15	1.9±0.2	0.7±0.1	1.8	16
HF40BB3X5X1	3.0±0.15	5.0±0.3	1.0±0.1	9	60
HF40BB3.4X3X1	3.4±0.15	3.0±0.2	1.0±0.1	7	39
HF40BB3.5X5X1.3	3.5±0.15	5.0±0.3	1.3±0.1	9.1	50
HF40BB4.5X4X2.5-G	4.5±0.15	4.0±0.2	2.5±0.15	4.5	32
HF40BB4.5X5X1.6	4.5±0.15	5.0±0.3	1.6±0.1	11	60
HF40BB5X5X2	5.0±0.15	5.0±0.3	2.0±0.15	9.4	52
HF40BB5X6X2.5	5.0±0.15	6.0±0.3	2.5±0.15	10	50
HF40BB5.5X5X2.5	5.5±0.2	5.0±0.3	2.5±0.15	8.1	43
HF40BB6X3.8X3A-G	6.0±0.2	3.8±0.2	3.0±0.2	4	35
HF57BB2.85X2X1.35	2.85±0.1	2.0±0.15	1.35±0.1	8	23
HF57BB2.85X5X1.35	2.85±0.1	5.0±0.2	1.35±0.1	20	54
HF57BB3.35X2X2	3.35±0.2	2.0±0.1	2.0±0.2	6	20
HF57BB3.5X1X1.6	3.5±0.15	1.0+0, -0.2	1.6±0.1	4.5	17
HF57BB3.5X1.5X1.3	3.5±0.15	1.5±0.15	1.3±0.1	9	23
HF57BB3.5X3X1.3	3.5±0.15	3.0±0.2	1.3±0.1	16	40
HF57BB3.5X5X1.3	3.5±0.15	5.0±0.3	1.3±0.1	28	65
HF57BB3.6X3.2X2.7	3.6±0.15	3.2±0.2	2.7±0.15	6	17
HF57BB4X2X2	4.0±0.15	2.0±0.15	2.0±0.15	8	24
HF57BB4X5X2	4.0±0.15	5.0±0.3	2.0±0.15	19	46
HF57BB4.5X4X2.5	4.5±0.15	4.0±0.2	2.5±0.15	14	37
HF57BB4.8X4.8X2.4	4.8±0.2	4.8±0.2	2.4±0.15	18	49
HF57BB5X5X2	5.0±0.15	5.0±0.3	2.0±0.15	25	59

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## SHAPES AND DIMENSIONS/CHARACTERISTICS

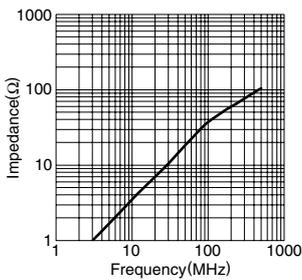


Part No.	Dimensions (mm)			Impedance( $\Omega$ )[at 23°C]	
	A	B	C	10MHz typ.	100MHz typ.
HF70BB1.8X5X0.7	1.8±0.15	5.0±0.3	0.7±0.1	31	48
HF70BB2.5X2.2X0.8	2.5±0.15	2.2±0.2	0.8±0.1	15	27
HF70BB2.5X5X0.8	2.5±0.15	5.0±0.3	0.8±0.1	31	51
HF70BB3X5X1	3.0±0.15	5.0±0.3	1.0±0.1	33	53
HF70BB3.4X3X1	3.4±0.15	3.0±0.2	1.0±0.1	22	36
HF70BB3.5X2X1.3	3.5±0.15	2.0±0.15	1.3±0.1	13	24
HF70BB3.5X5X0.8	3.5±0.15	5.0±0.3	0.8±0.1	40	68
HF70BB3.5X3X1.3	3.5±0.15	3.0±0.2	1.3±0.1	17	28
HF70BB3.5X5X1.3	3.5±0.15	5.0±0.3	1.3±0.1	29	49
HF70BB3.5X10X1.3	3.5±0.15	10.0±0.4	1.3±0.1	53	92
HF70BB4.5X4X2.5	4.5±0.15	4.0±0.2	2.5±0.15	17	30
HF70BB4.5X5X1.6	4.5±0.15	5.0±0.3	1.6±0.1	31	53
HF70BB4X15X1.35	4+0.1, -0.2	15.0±0.5	1.35±0.1	92	155
HF70BB5X5X2	5.0±0.15	5.0±0.3	2.0±0.15	27	42
HF70BB5.5X5X2.5	5.5±0.2	5.0±0.3	2.5±0.15	22	38
HF70BB6X3.8X3	6.0±0.2	3.8±0.2	3.0±0.2	19	31
HF70BB6.4X4.5X3.2	6.4±0.2	4.5±0.2	3.2±0.15	22	37
HF70BB6.4X5X3.2	6.4±0.2	5.0±0.2	3.2±0.15	20	32
HF70BB6.4X10X3.2	6.4±0.2	10.0±0.5	3.2±0.15	40	63
HF70BB9X5X4.5	9.0±0.25	5.0±0.3	4.5±0.15	20	34
HF70BB9X10X4.5	9.0±0.25	10.0±0.4	4.5±0.15	40	68
HF70BB9.5X10.4X4.9	9.52±0.25	10.42±0.25	4.9±0.15	40	70

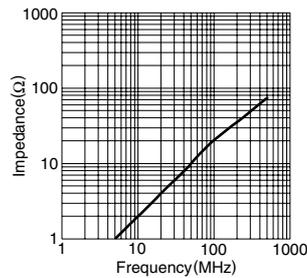
## TYPICAL ELECTRICAL CHARACTERISTICS

### IMPEDANCE vs. FREQUENCY CHARACTERISTICS

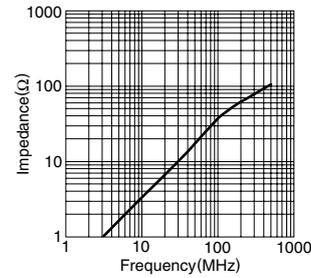
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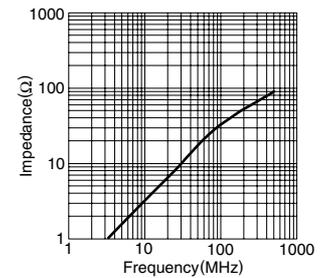
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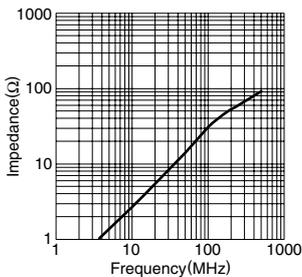
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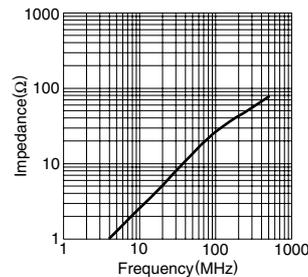
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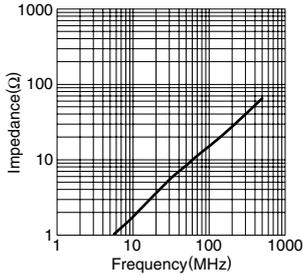
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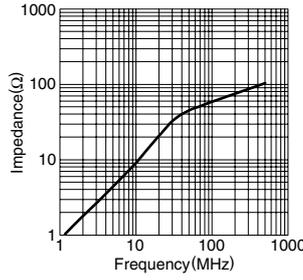
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**TYPICAL ELECTRICAL CHARACTERISTICS**  
**IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

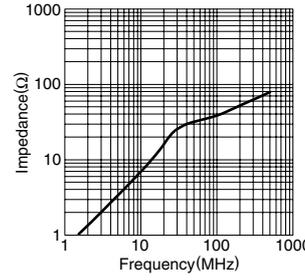
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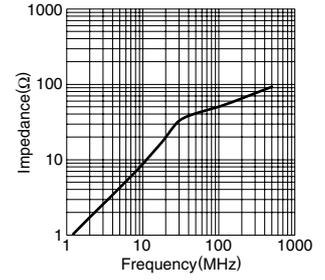
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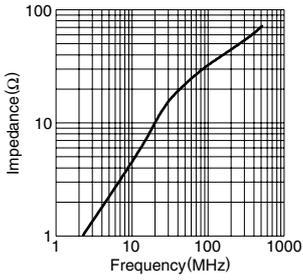
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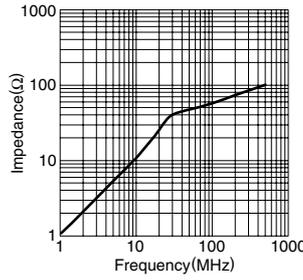
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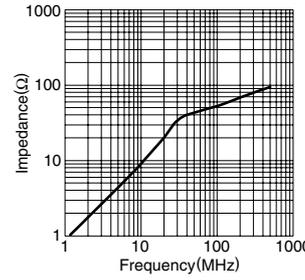
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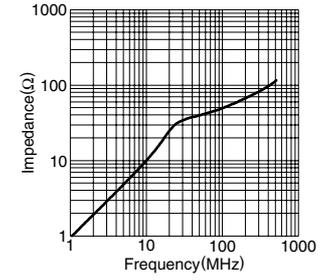
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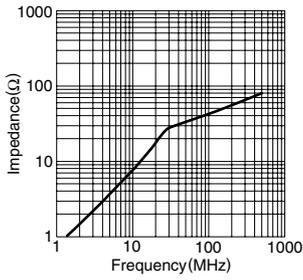
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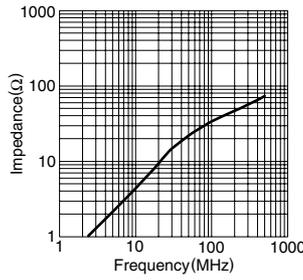
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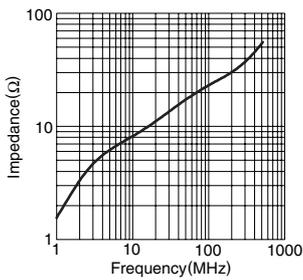
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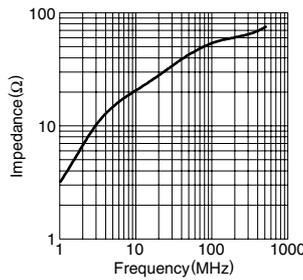
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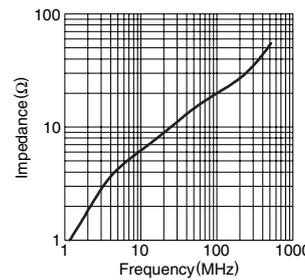
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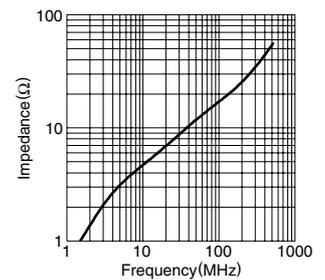
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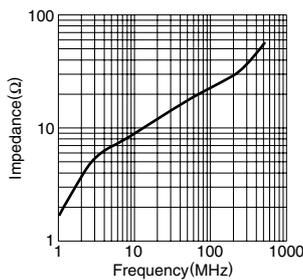
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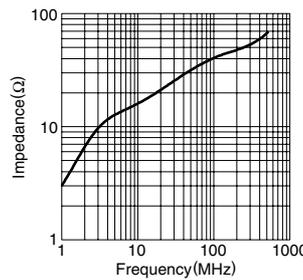
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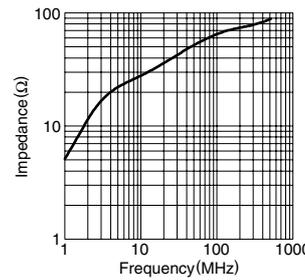
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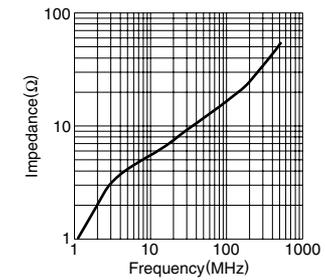
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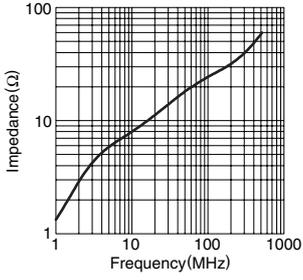
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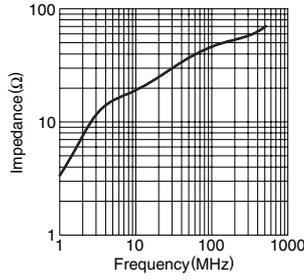
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**TYPICAL ELECTRICAL CHARACTERISTICS**  
**IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

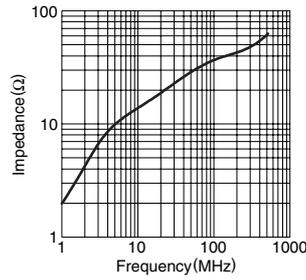
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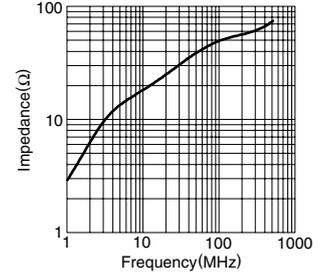
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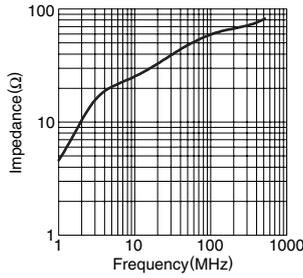
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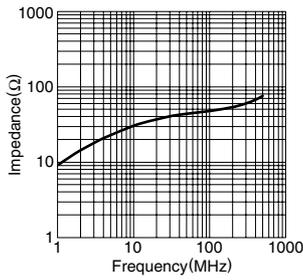
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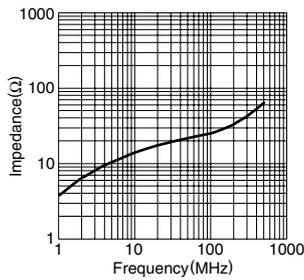
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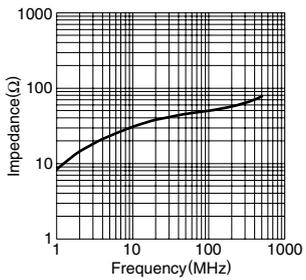
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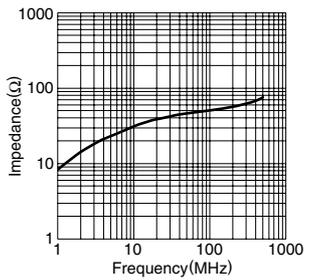
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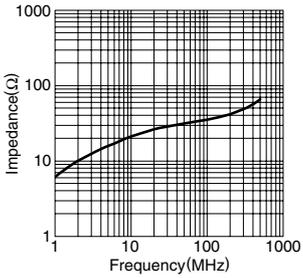
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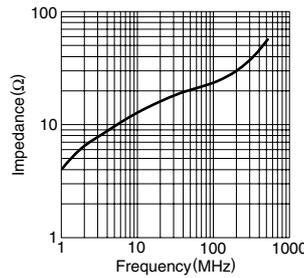
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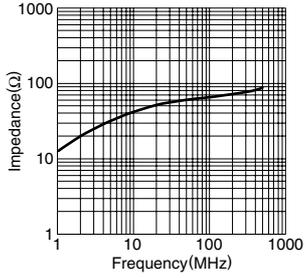
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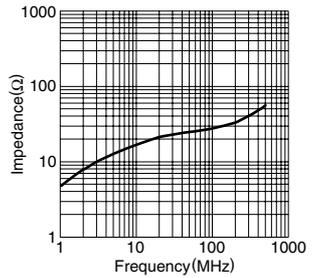
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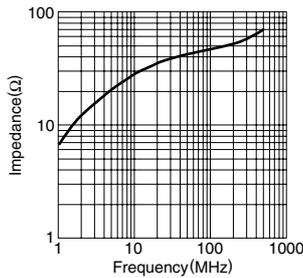
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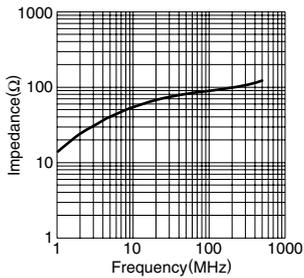
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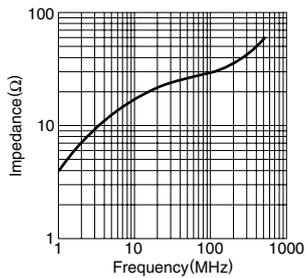
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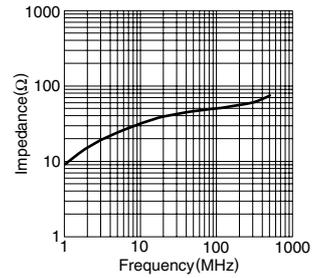
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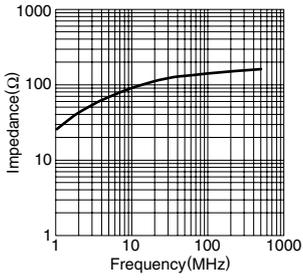
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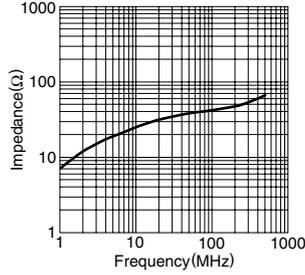
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**TYPICAL ELECTRICAL CHARACTERISTICS**  
**IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

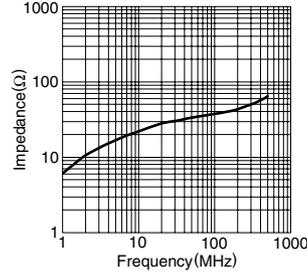
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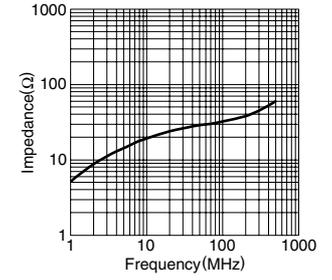
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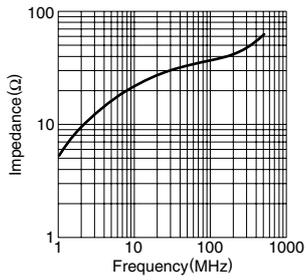
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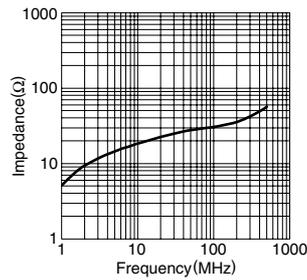
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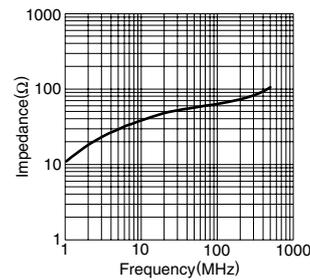
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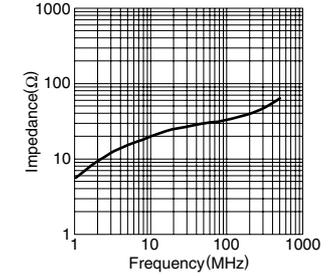
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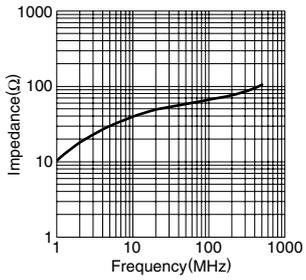
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**HF70BB9X5X4.5**



**HF70BB9X10X4.5**



**HF70BB9.5X10.4X4.9**

