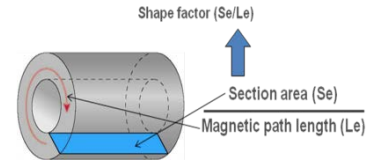


# Ferrite Cores, Tiles, and Sheets



1. Shape factor (Se/Le): the larger the shape factor, the higher the impedance. If there is 1 turn through the ferrite, a snug fit and longer core is recommended (space permitting).
2. Adjust the ferrite core's position to target the antinode of the problem frequency.
3. Impedance performance can be increased by turning the cable around the core.



## ROUND CABLE CORES: Split Type **G Ferrite Core** – nickel-free



### GRFC Series

PART NO.	Profile	A	B	C	D	Applicable Cable Diameter	Impedance $\Omega/100\text{MHz}$ (1Turn)
GRFC-3	N/A	13.7	13.5	18.0	-	3.0 ~ 4.0	$\geq 35$
GRFC-4	N/A	13.7	13.5	27.5	-	3.5 ~ 4.5	$\geq 75$
GRFC-5	N/A	18.1	18.4	31.5	35.5	4.5 ~ 5.5	$\geq 100$
GRFC-6	N/A	18.1	18.4	31.5	35.5	5.5 ~ 6.5	$\geq 100$
GRFC-7	N/A	14.25	15.8	20.0	24.0	7.0 MAX	$\geq 45$
GRFC-8	N/A	20.1	20.4	31.5	35.5	7.5 ~ 8.5	$\geq 75$
GRFC-9	N/A	20.1	20.4	31.5	35.5	8.5 ~ 9.5	$\geq 75$
GRFC-10	N/A	26.3	26.4	32.4	37.2	9.5 ~ 10.5	$\geq 105$
GRFC-13	N/A	29.1	29.4	31.5	36.3	12.5 ~ 13.5	$\geq 95$

### RFC Series

RFC-H13	N/A	31.7	29.4	41.0	-	12.5 ~ 13.5	$\geq 170$
RFC-20	N/A	40.0	40.0	47	-	20 MAX	$\geq 180$
RFCK2-20 (RFC-20 with mount tab)	N/A	40.0	40.0	47	-	20 MAX	$\geq 180$

### GTFC Series

GTFC-16-8-13	1	22.3	20.1	18.9	-	7.2 MAX	$\geq 45$
GTFC-16-8-16	1	22.3	20.1	21.9	-	7.2 MAX	$\geq 55$
GTFC-20-10-10	1	27.1	24.9	16.0	-	8.5 MAX	$\geq 40$
GTFC-23-11-14	1	30.5	28.3	20.2	-	10.5 MAX	$\geq 55$
GTFC-25-15-12	1	31.1	28.9	17.8	-	13.0 MAX	$\geq 40$
GTFC-28-16-13	1	35.1	32.9	18.8	-	14.7 MAX	$\geq 50$
GTFC-28-16-20	1	35.1	32.9	25.8	-	14.7 MAX	$\geq 70$
GTFC-41-27-16	2	48.2	44.5	19.6	-	26.0 MAX	$\geq 50$

### GTFCCK Series

GTFCCK-16-8-13	1	32.5	20.4	18.9	22.9	7.2 MAX	$\geq 45$
GTFCCK-16-8-16	1	32.5	20.4	21.9	25.9	7.2 MAX	$\geq 55$
GTFCCK-20-10-10	1	37.1	24.9	16.0	20.0	8.5 MAX	$\geq 40$
GTFCCK-23-11-14	1	40.5	28.3	20.2	24.2	10.5 MAX	$\geq 55$
GTFCCK-25-15-12	1	41.2	28.9	17.8	21.8	13.0 MAX	$\geq 40$
GTFCCK-28-16-13	1	45.3	32.9	18.8	22.8	14.7 MAX	$\geq 50$
GTFCCK-28-16-20	1	45.3	32.9	25.8	29.8	14.7 MAX	$\geq 70$
GTFCCK-41-27-16	2	51.8	44.5	19.6	-	26.0 MAX	$\geq 50$

### GTRCA Series

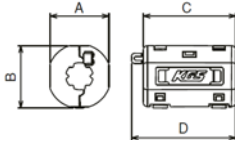
GTRCA-20-10-10	N/A	22.6	8.2	13.3	-	-	$\geq 45$
GTRCA-25-15-12	N/A	27.3	12.8	15.2	-	-	$\geq 40$

### GTFCR Series

GTFCR-16-8-16	1	35.8	20.1	16.3	21.9	7.2 MAX	$\geq 55$
GTFCR-41-27-16	2	55.2	44.5	23.6	19.6	26 MAX	$\geq 50$

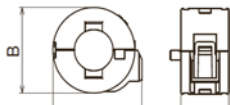
Operating temperature: -40 ~ 85°C

### GRFC Series

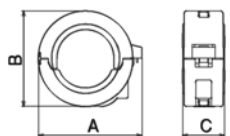


### GTFC Series

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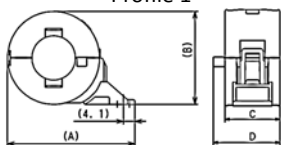


#### Profile 2

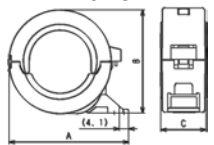


### GTFCCK Series

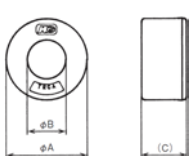
#### Profile 1



#### Profile 2

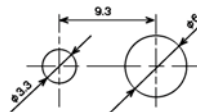


### GTRCA Series

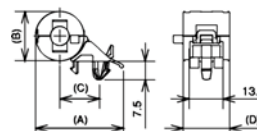


### GTFCR Series

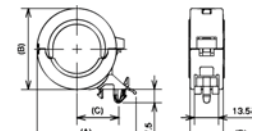
#### Mount hole



#### Profile 1



#### Profile 2



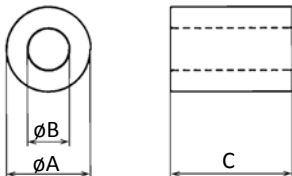
**KITAGAWA INDUSTRIES America, Inc.**  
 2325 Paragon Drive, Suite 10, San Jose, CA 95131  
 Tel: (408) 971-2055 Fax: (408) 971-6033  
 www.kgs-ind.com

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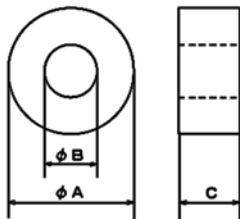
The specifications and properties regarding performance above are not guaranteed, and are subject to change without notice due to product improvement and specification change. While our absorbers are electrically non-conductive, usage directly on the PC Board near the power should be carefully checked. KITAGAWA INDUSTRIES America, Inc. makes no guarantees as to electrical resistivity values and accepts no liability due to short circuits where EMI absorbers are used directly on a PC Board. The products are designed for EMI noise reduction for electronics. This is not recommended to use for applications involving human life or extremely high accuracy. Prior to your usage of the products in production, please verify their performance of EMI noise absorption or adhesive strength of PSA for long term use. Avoid applying any external stress such as bending or high amounts of tension. Note that when the absorber products are cut, bent or pulled, there might be some possibility of creating cracks. For storage of the products keep them in cool and dry rooms at ambient temperature avoiding high temperatures, humidity, and direct sunlight. Keep in a cool, dry, well ventilated place.

# ROUND CABLE CORES: One-Piece Type G Ferrite Core – nickel-free

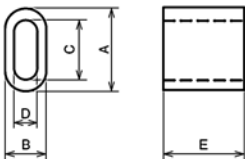
## GRI Series



## GTR Series



## GTRE Series



## GRIP Series



## GRI Series

Unit: mm

Part No.	A	B	C	Impedance $\Omega/100\text{MHz}$ (1Turn)
GRI-3-4-1	3	1	4	$\geq 25$
GRI-3.5-3.5-1.2	3.5	1.2	3.5	$\geq 25$
GRI-3.5-7-1.2	3.5	1.2	7	$\geq 40$
GRI-4-5-1.5	4	1.5	5	$\geq 30$
GRI-11-18-5	11	5	18.5	$\geq 85$
GRI-11-20-5	11	5	20	$\geq 90$
GRI-11-25-5	11	5	25	$\geq 105$
GRI-12-16-8.5	12	8.5	16	$\geq 35$
GRI-12.3-20-7	12.3	7	20	$\geq 70$
GRI-14-28-6	14.3	6.3	28.6	$\geq 130$
GRI-16-20-7	16	7	20	$\geq 95$
GRI-16-28-7	16	7	28	$\geq 130$
GRI-16-28-8	16	8	28	$\geq 115$
GRI-16-28-9	16	9	28	$\geq 95$
GRI-17.5-28.5-10.7	17.5	10.7	28.5	$\geq 85$
GRI-18-28-10	18	10	28	$\geq 100$
GRI-26-28-13	26	13	28	$\geq 120$

Operating temperature: -40 ~ 85°C

## GTR Series

Unit: mm

Part No.	A	B	C	Impedance $\Omega/100\text{MHz}$ (1Turn)
GTR-7-3-4	7	3.5	4	$\geq 20$
GTR-9-5-8	9	5	8	$\geq 30$
GTR-10-5-5	10	5	5	$\geq 25$
GTR-11-5-9	11	5	9	$\geq 45$
GTR-12.5-8-12	12.6	8.1	12	$\geq 35$
GTR-13-7-6	13	7	6	$\geq 25$
GTR-13-7-12.7	13	7.1	12.7	$\geq 45$
GTR-14.5-10-8	14.5	10.2	8	$\geq 20$
GTR-16-8-13	16.5	8.2	13	$\geq 55$
GTR-16-8-16	16.5	8.2	16	$\geq 65$
GTR-16-10-7	16	10	7	$\geq 25$
GTR-16-10-10	16	10	10	$\geq 30$
GTR-18-10-6	18	10	6	$\geq 25$
GTR-20-10-5	20.5	10.2	5	$\geq 25$
GTR-20-10-10	20.5	10.2	10	$\geq 45$
GTR-21-13-6	21.2	12.7	6	$\geq 25$
GTR-22-14-10	22	14	10	$\geq 30$
GTR-23-11-14	23.6	11.4	14	$\geq 60$
GTR-25-15-8	25	15	8	$\geq 30$
GTR-25-15-12	25	15	12	$\geq 40$
GTR-28-16-13	28	16	13	$\geq 45$
GTR-28-16-20	28	16	20	$\geq 70$
GTR-31-19-8	31	19	8	$\geq 30$
GTR-40-27-15	40.6	27.4	15	$\geq 45$

Operating temperature: -40 ~ 85°C

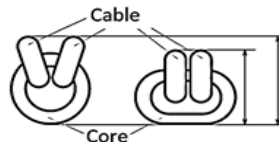
## GTRE Series

Unit: mm

Part No.	A	B	C	D	E	Impedance $\Omega/100\text{MHz}$ (1Turn)
GTRE-14-12.5-8	14.0	8.0	10.0	4.0	12.5	$\geq 30$
GTRE-14-14-8	14.0	8.0	10.0	4.0	14.0	$\geq 35$

Operating temperature: -40 ~ 85°C

Cross-sectional view of GRI (round) and GTRE (oblong) ferrite cores

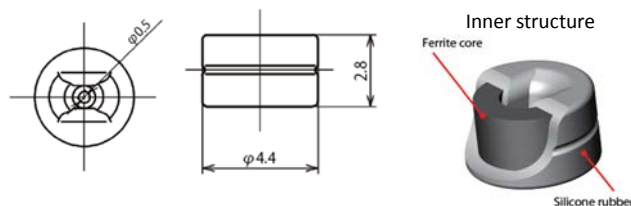


Unit: mm

Part No.	Outer Diameter	Height	Applicable Lead Diameter	Applicable Lead Dimension	Impedance $\Omega/100\text{MHz}$ (1Turn)
GRIP-3.5-1.8-2	$\phi 4.4$	2.8	$\phi 0.6\sim 1.6$	W: 0.8~1.5 T: 0.3~0.7	$\geq 15$

Operating temperature: -40 ~ 125°C

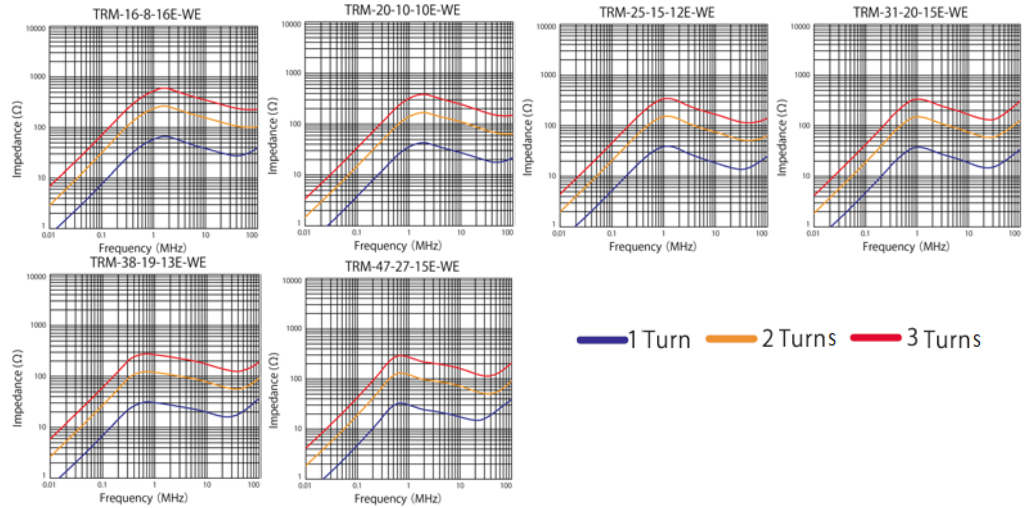
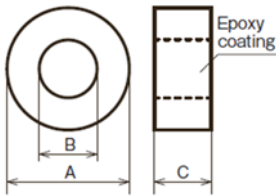
Application Example



# Low Frequency Cores

## TRM – cores for low frequency range

- High impedance noise filters for the low MHz range
- Turning the cable around the core increases effectiveness by a power of 2 ( $N^2$ )
- Operating temperature: -40 ~ 85°C

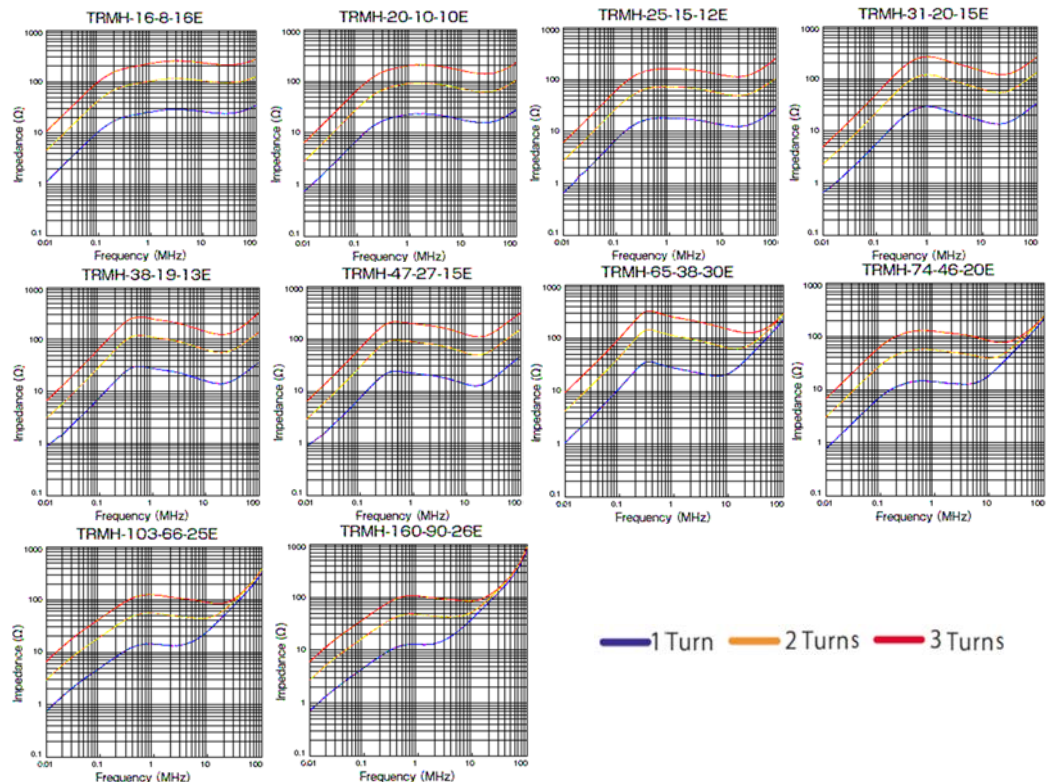
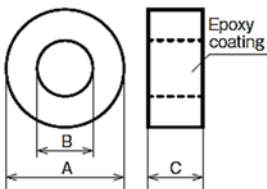
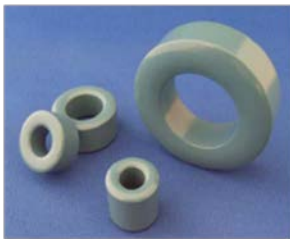


Unit: mm

Part No.	A	B	C	Impedance $\Omega/10\text{MHz}$ (2 turns)
TRM-16-8-16E-WE	17.0	7.1	16.9	$\geq 70$
TRM-20-10-10E-WE	21.0	9.1	10.9	$\geq 35$
TRM-25-15-12E-WE	26.0	14.1	12.9	$\geq 35$
TRM-31-20-15E-WE	32.1	19.0	15.9	$\geq 30$
TRM-38-19-13E-WE	39.2	17.9	14.0	$\geq 35$
TRM-47-27-15E-WE	48.5	25.7	16.3	$\geq 25$

## TRMH – Low frequency, high $\mu$ ferrite cores

- High impedance at less than 1MHz
- Increased impedance obtained with each turn around the core
- Suitable for conducted emissions in the kHz range
- Operating temperature: -40 ~ 85°C



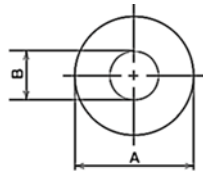
Unit: mm

Part No.	A	B	C	Impedance $\Omega/1\text{MHz}$ (1 Turn)
TRMH-16-8-16E	16.9	7.2	16.8	$\geq 18$
TRMH-20-10-10E	21.0	9.2	10.9	$\geq 11$
TRMH-25-15-12E	25.9	14.1	12.8	$\geq 9$
TRMH-31-20-15E	32.1	19.0	15.9	$\geq 9$
TRMH-38-19-13E	39.1	18.0	13.9	$\geq 11$
TRMH-47-27-15E	48.3	26.0	15.9	$\geq 10$
TRMH-65-38-30E	67.3	36.6	31.1	$\geq 12$
TRMH-74-46-20E	75.76	44.22	21.0	$\geq 6$
TRMH-103-66-25E	105.6	63.1	26.9	$\geq 6$
TRMH-160-90-26E	165.1	87.9	28.1	$\geq 6$

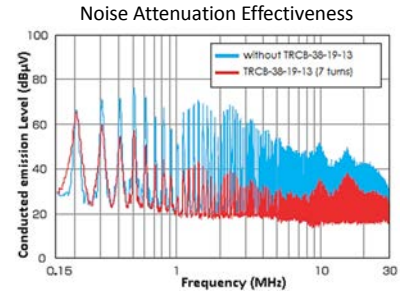
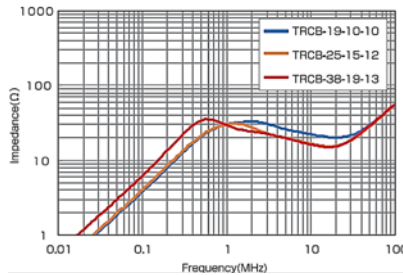
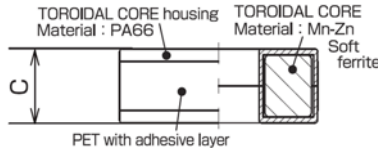
### TRCB – Low frequency ferrite core with plastic casing

- Plastic casing protects ferrite from cracking and chipping
- Suitable for conducted emission from kHz to lower MHz range

Unit: mm



Part No.	A	B	C	Impedance $\Omega/10\text{MHz}$ (1 Turn)
TRCB-19-10-10	20	8.1	(11.7)	$\geq 11$
TRCB-25-15-12	26.7	13.3	(13.5)	$\geq 8$
TRCB-38-19-13	40.5	16.6	(15.1)	$\geq 7$



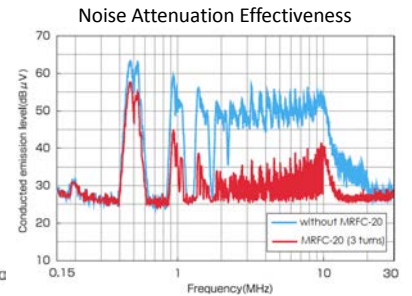
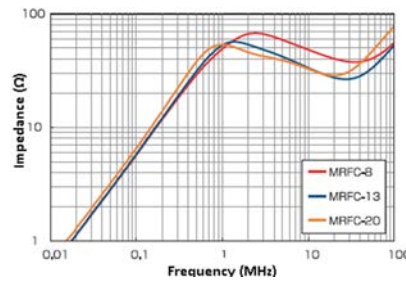
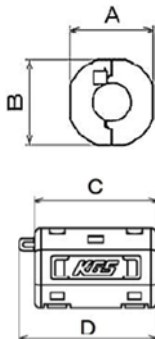
### MRFC – ferrite clamp for low frequency range

- Aimed to suppress low frequency noise between 150kHz ~ 30MHz
- Plastic screw mount option available
- Operating temperature:  $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
- UL94 V-0 rated housing

Unit: mm



Part No.	Part No. (screw mount option)	A	B	C	D	Applicable cable diameter	Impedance $\Omega/10\text{MHz}$ (1 Turn)
MRFC-8	-	20.1	20.4	31.5	35.5	8.5 (MAX)	$\geq 20$
MRFC-13	MRFC-13	29.1	33.05	32.3	37.1	13.5 (MAX)	$\geq 20$
MRFC-20	MRFC-20	40.3	40	47	53.5	20.0 (MAX)	$\geq 20$



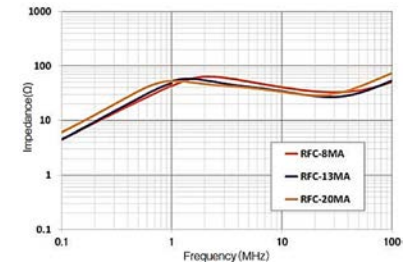
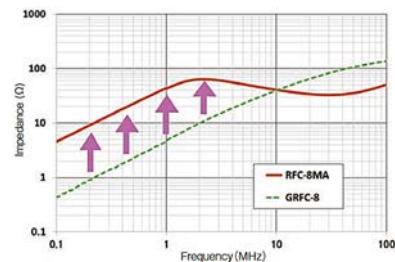
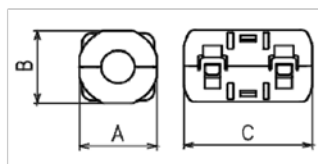
### RFC-MA – Low frequency, high $\mu$ ferrite cores

- Aimed to suppress low frequency noise generated by engine control units (ECU), inverters, and motors
- Split type with heat-resistant plastic casing
- Operating temperature:  $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- Casing designed with a slot for a plastic cable tie
- UL94 V-2 rated housing

Unit: mm



Part No.	A	B	C	Applicable Cable Diameter	Impedance $\Omega/10\text{MHz}$ (1 Turn)
RFC-8MA	20.6	19.8	34.0	8.5 (MAX)	$\geq 20$
RFC-13MA	29.6	28.4	34.0	12.5~13.5	$\geq 20$
RFC-20MA	40.0	40.0	47.0	20 (MAX)	$\geq 20$



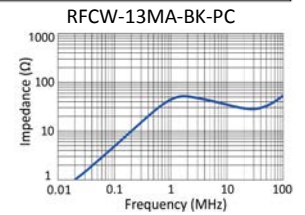
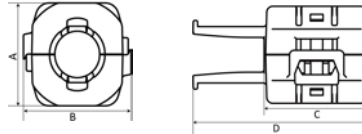
## Low Frequency Ferrite Clamp **NEW!**

- Automotive grade ferrite for suppressing low frequency noise (150kHz~30MHz)
- Specifically designed to withstand vibration requirements for passenger vehicles
- Easy to install and very secure; un/installation requires a tool to unfasten the clamp's interlocking feature
- Outer casing also feature strap and tape mounting guides to prevent sliding
- Casing is UL94V-2 rating
- Operating temperature: -40~125°C



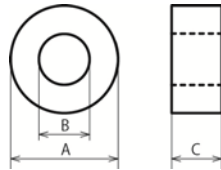
Part No.	A	B	C	D	Applicable Cable Diameter	Impedance $\Omega/10\text{MHz}$ (1turn)
RFCW-13MA-BK-1PC	31.4	33.6	34.8	58.3	13.5 MAX	$\geq 20$

Product dimensions (2 pieces locked together)

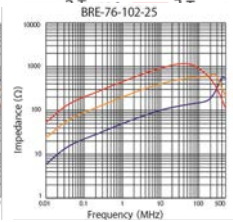
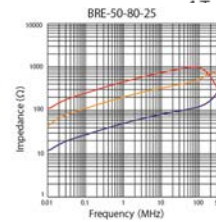
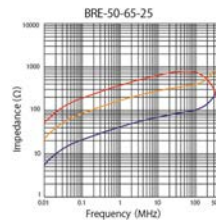
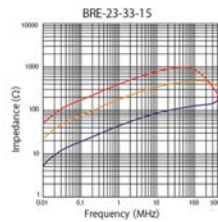
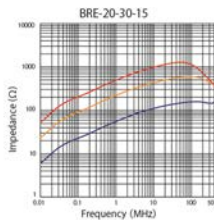
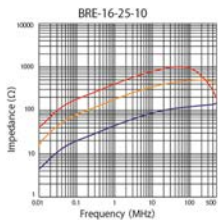


## BROAD EFFECT CORE

- Amorphous metal core, effective for conducted and radiated broadband noise suppression from around 1MHz~100MHz
- High impedance characteristics reduces the number of cable turns
- Impedance characteristics remains stable within a wide temperature range
- Operating temperature: -30 ~ 130°C
- PBT plastic housing provides electrical insulation and is UL94 V-0 rated

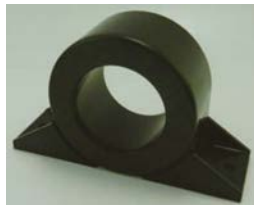


Part No.	A	B	C	Impedance $\Omega/1\text{MHz}$ (1turn)
BRE-16-25-10	27.5	13.8	12.6	$\geq 28$
BRE-20-30-15	33.5	17.7	17.9	$\geq 36$
BRE-23-33-15	36.3	21	18	$\geq 28$
BRE-50-65-25	68.4	46.7	28.7	$\geq 34$
BRE-50-80-25	84	47	29.2	$\geq 38$
BRE-76-102-25	107.9	70.2	30.4	$\geq 31$

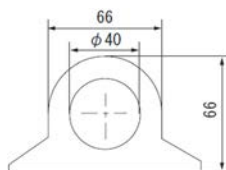


## AMORPHOUS CORE

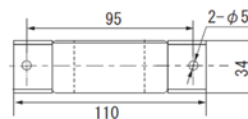
- Higher magnetic permeability and saturated magnetic density than a ferrite core
- Suppresses noise from 150kHz ~ 30MHz generated by switching regulator or inverter
- Available with screw hole on either side
- UL94 V-0 rated



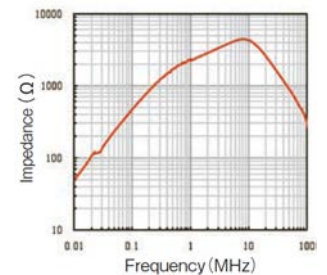
AF01-40 Dimensions (Side view in mm)



AF01-40 Dimensions (Top view in mm)

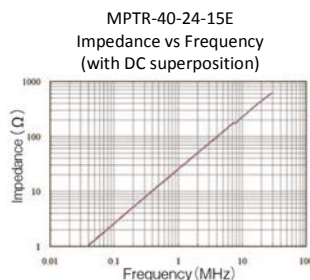


AF01-40 Impedance vs Frequency (10 turns)



## METAL CORE

- Due to higher magnetic flux density, current superposition (current at 20A or less) will not lower the impedance
- Resin-coated core to protect cables
- Impedance is stable from -40°C ~ +140°C, with a high Curie temperature
- Possible to suppress normal mode noise



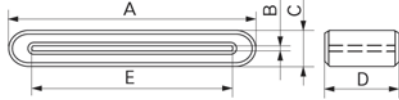
PART NO.	Max Outer Diameter	Min Inner Diameter	Max Length	Impedance $\Omega/1\text{MHz}$ (5turns)
MPTR-20-13-10E	21.2	11.8	10.9	$\geq 7$
MPTR-27-15-11E	27.8	13.8	12.1	$\geq 12$
MPTR-40-24-15E	40.9	23.1	15.48	$\geq 12$

## FLAT CABLE CORES: 1-Piece Type **G Ferrite Core** – nickel-free

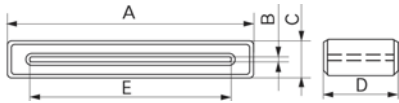


### GFPC Series

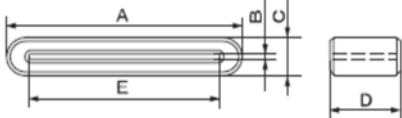
Profile 1



Profile 2



### GSSC Series



### GFPC Series

Unit: mm

Part No.	Profile	A	B	C	D	E	Impedance $\Omega/100\text{MHz}$ (1 Turn)
GFPC-11-8-2	1	11.0	0.7	2.3	8.0	9.0	$\geq 25$
GFPC-16-5-3	1	16.0	0.5	3.0	5.0	11.5	$\geq 20$
GFPC-16-8-2	1	15.5	0.7	2.3	8.0	12.0	$\geq 25$
GFPC-16-8-3	1	16.0	0.5	3.0	8.0	11.5	$\geq 25$
GFPC-16-12	1	16.0	0.5	5.0	12.0	11.5	$\geq 45$
GFPC-16-20	1	16.0	0.8	5.0	20.0	11.5	$\geq 60$
GFPC-18-3-2	1	18	0.7	2.3	3.0	14.5	$\geq 20$
GFPC-18-8-2	1	18.0	0.7	2.3	8.0	14.5	$\geq 25$
GFPC-22-8-2	1	21.5	0.7	2.3	8.0	18.0	$\geq 25$
GFPC-24-12-3	2	23.3	0.9	3.0	12.0	20.0	$\geq 30$
GFPC-25-10-3	2	25.5	0.8	3.0	10.0	21.5	$\geq 25$
GFPC-25-12	1	24.5	0.5	5.0	12.0	20.0	$\geq 35$
GFPC-25-15-3	2	25.5	0.8	3.0	15.0	21.5	$\geq 35$
GFPC-25-20	1	24.5	0.5	5.0	20.0	20.0	$\geq 50$
GFPC-31-12	1	31.0	0.5	5.0	12.0	27.0	$\geq 40$
GFPC-31-12-3	2	31.0	1.0	3.0	12.0	27.0	$\geq 30$
GFPC-46-12	1	46.0	0.5	5.0	12.0	41.5	$\geq 40$
GFPC-56-12	1	56.2	0.5	5.0	12.0	52.4	$\geq 35$

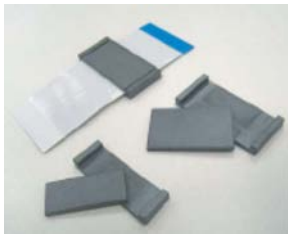
### GSSC Series

GSSC-33.5-8	N/A	33.5	1.4	6.5	8.0	28.4	$\geq 30$
GSSC-33.5-10	N/A	33.5	1.4	6.5	10.0	28.4	$\geq 30$
GSSC-33.5-12	N/A	33.5	1.4	6.5	12.0	28.4	$\geq 35$
GSSC-33.5-20	N/A	33.5	1.3	6.5	20.0	27.8	$\geq 50$
GSSC-33.5-10-2	N/A	33.5	2.2	7.4	10.0	27.0	$\geq 30$
GSSC-40-12	N/A	40.0	1.3	6.5	12.0	35.0	$\geq 35$
GSSC-45-8	N/A	45.2	1.3	6.5	8.0	40.0	$\geq 30$
GSSC-45-12	N/A	45.2	1.3	6.5	12.0	40.0	$\geq 35$
GSSC-50-12	N/A	50.0	1.4	6.5	12.0	44.9	$\geq 35$
GSSC-58-12	N/A	57.6	1.3	6.5	12.0	52.0	$\geq 35$

GSSC series operating temperature:  $-40\text{--}85^\circ\text{C}$

## FLAT CABLE CORES: 2-Piece Type

- GSSH and GFPH series are a set of two of the same U-shaped pieces
- GFPO series has a combination of one U-shaped piece and one flat piece



### GFPH and GFPO Series

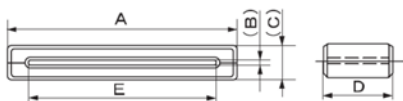
Unit: mm

Part No.	A	B	C	D	E	Impedance $\Omega/100\text{MHz}$ (1 Turn)
GFPH-10-6-5	10.0	1.8	5.0	6.0	6.8	$\geq 25$
GFPO-23-8-3	23.0	0.5	2.8	8.0	19.0	$\geq 30$
GFPO-25-12-3	25.0	0.5	2.8	12.0	21.0	$\geq 35$
GFPO-31-12-3	31.0	0.5	2.8	12.0	27.0	$\geq 35$

### GSSH Series

GSSH-33.5-12	33.5	1.2	6.6	12.0	27.0	$\geq 35$
GSSH-33.5-20	33.5	1.2	6.6	20.0	27.0	$\geq 50$
GSSH-40-12	40.0	1.2	6.6	12.0	34.8	$\geq 35$
GSSH-45-12	45.2	1.2	6.6	12.0	40.0	$\geq 35$

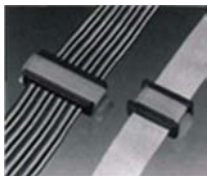
### GFPH and GSSH Series



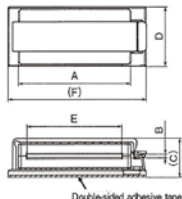
### GFPO Series



## FLAT CABLE CORES: Large 2-Piece Type



### BCN



### BCN Series

Adhesive mount with plastic holders

Unit: mm

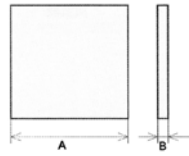
Part No.	A	B	(C)	D	(E)	(F)	Impedance $\Omega/100\text{MHz}$ (1 Turn)
BCN-26	45.0	2.0	19.6	30	34.0	59.2	$\geq 125$
BCN-40	63.0	2.0	19.5	30	52.0	76.5	$\geq 137$
BCN-50	76.5	2.0	19.5	30	64.5	90.7	$\geq 142$

Double-sided adhesive tape

# FERRITE TILES and SHEET

## SD Tiles – high performance, sintered ferrite tiles for CPU's high density

- Solid ferrite tiles for RF noise suppression
- Options for with adhesive (with "T") and without adhesive (no "T") available



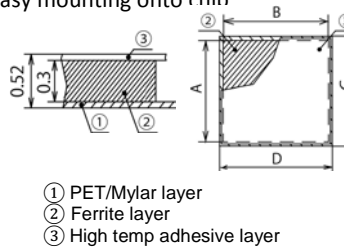
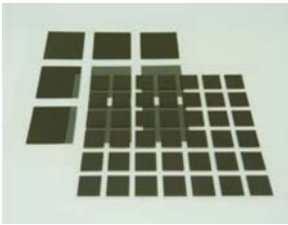
PART NO.	A	B	Impedance* Ω/25MHz	Impedance* Ω/100MHz
SD-28-28-0.8	28	0.8	≥22	≥76
SD-28-28-0.8T	28	0.8	≥22	≥76
SD-28-28-1.5	28	1.5	≥34	≥115
SD-28-28-1.5T	28	1.5	≥34	≥115

Unit: mm

\*Test method for impedance test wire was sandwiched between two pieces of SD tiles in the center.

## FFS Series – flexible ferrite tiles for low frequency

- 0.3mm thick, flexible ferrite
- Suppresses low frequency noise around 1MHz
- Adhesive on one side for easy mounting onto chin



- PET/Mylar layer
- Ferrite layer
- High temp adhesive layer

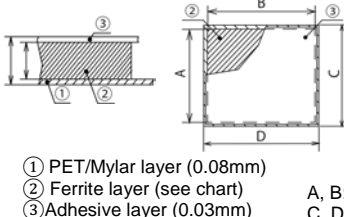
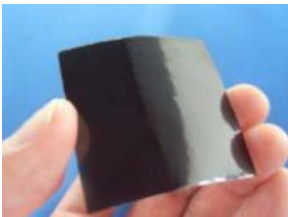
Part Number	Ferrite Dimension		PET/Mylar Dimension	
	A	B	C	D
FFS-0.3-1010T	10	10	11.5	11.5
FFS-0.3-1020T	10	20	11.5	21.5
FFS-0.3-1515T	15	15	16.5	16.5
FFS-0.3-2020T	20	20	21.5	21.5
FFS-0.3-2030T	20	30	21.5	31.5
FFS-0.3-2525T	25	25	26.5	26.5
FFS-0.3-3030T	30	30	31.5	31.5
FFS-0.3-5050T	50	50	55	55

Unit: mm

Operating temperature: -40 ~ 105°C

## FFSX Series – flexible ferrite sheet for RFID/NFC and Rezenze wireless charging

- Thin, flexible ferrite sheet with high  $\mu'$ ; low loss at lower frequencies
- Effective for RFID/NFC-to-metal systems at 13.56MHz
- Increases field strength from Tx to Rx for wireless charging (6.78MHz)



- PET/Mylar layer (0.08mm)
- Ferrite layer (see chart)
- Adhesive layer (0.03mm)

A, B: ferrite dimension  
C, D: PET/Mylar dimension

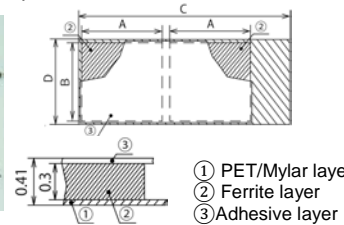
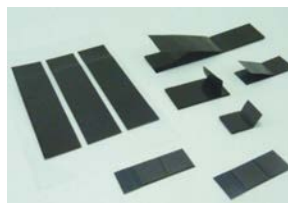
Part Number	Ferrite thickness	Total thickness	Standard Ferrite Size	
			Tile	Sheet
FFSX-0.1	0.1	0.21	50 x 60	180 x 200
FFSX-0.2	0.2	0.31	50 x 60	180 x 200
FFSX-0.3	0.3	0.41	50 x 60	180 x 200

Unit: mm

Operating Temperature: -40°C~85°C

## FFPC Series – flexible ferrite cores

- 0.3mm thick, flexible ferrite cores that will not shatter if dropped
- Ideal for applications that cannot accept the weight and bulkiness of solid ferrite cores
- Adhesive on one side for easy installation



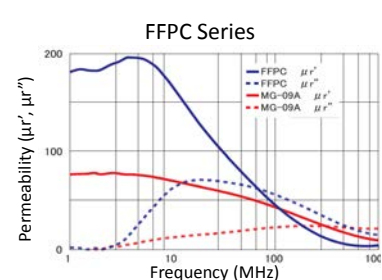
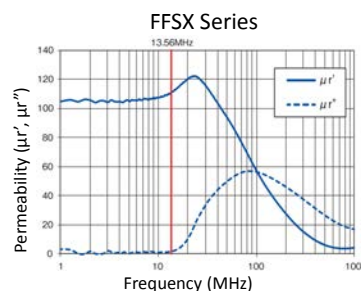
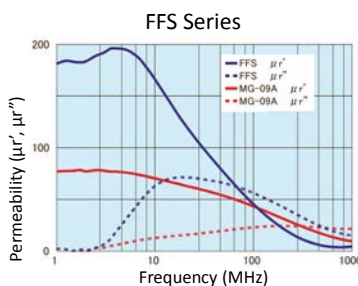
- PET/Mylar layer
- Ferrite layer
- Adhesive layer

Part Number	Ferrite Dimension		PET/Mylar Dimension	
	A	B	C	D
FFPC-0.3-10-5	10	5	32.5	6.5
FFPC-0.3-10-10	10	10	30	11
FFPC-0.3-12-8	12	8	38.5	9.5
FFPC-0.3-14-14	14	14	38	15
FFPC-0.3-22-8	22	8	60.5	9.5
FFPC-0.3-22-14	22	14	54	15
FFPC-0.3-27-14	27	14	70.5	15.5
FFPC-0.3-44-14	44	14	98	15

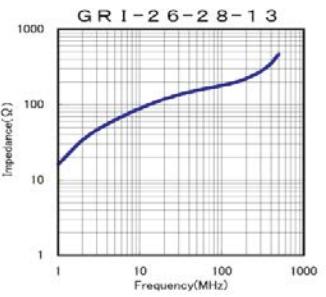
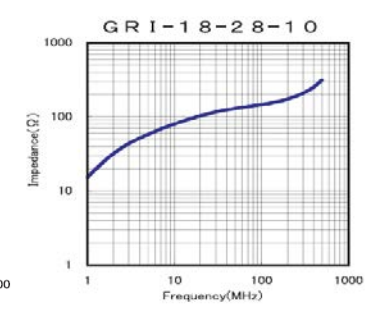
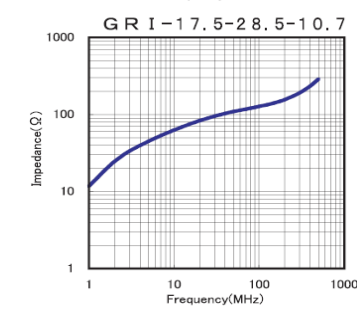
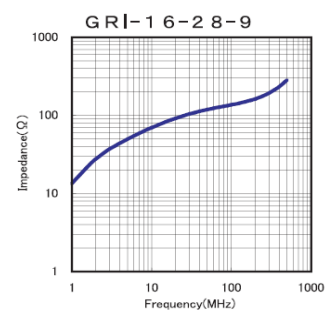
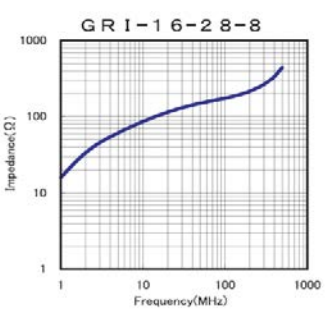
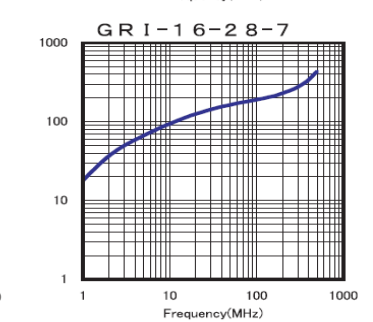
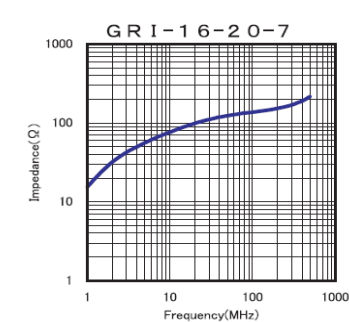
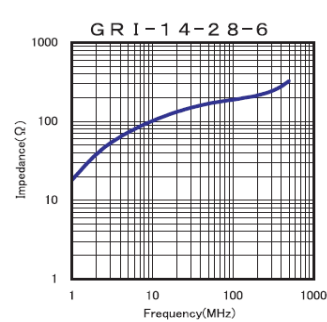
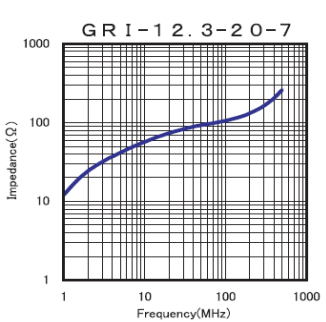
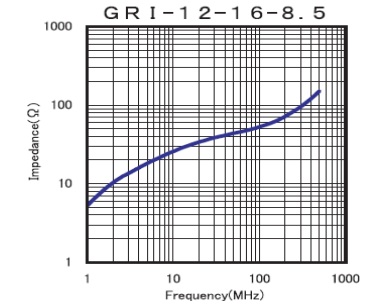
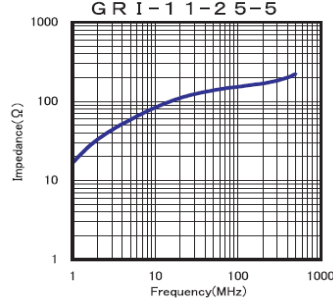
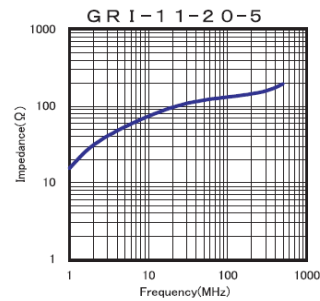
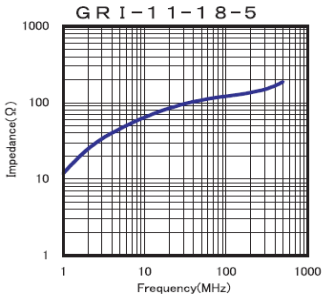
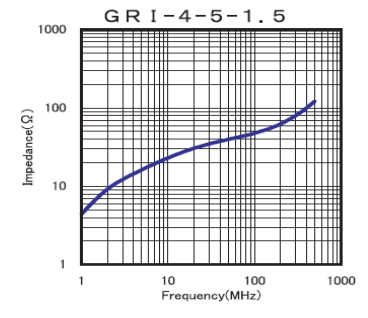
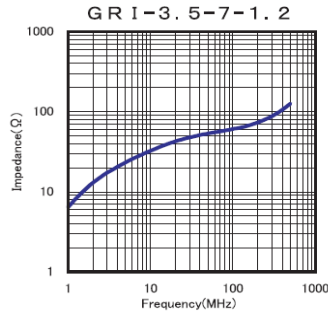
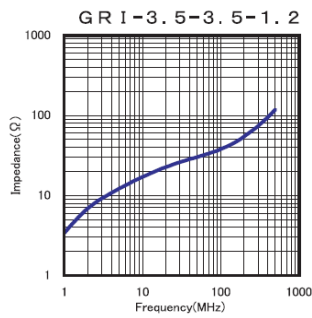
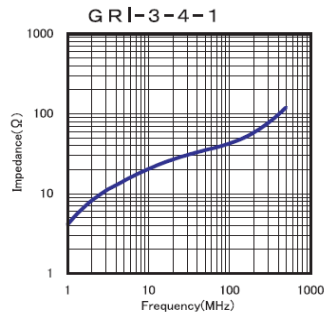
Unit: mm

Operating temperature: -40 ~ 85°C

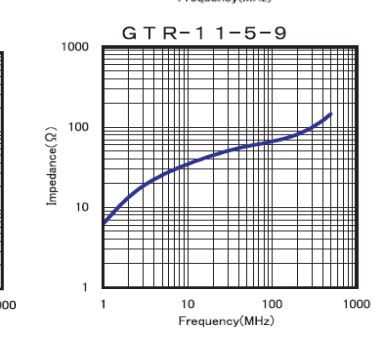
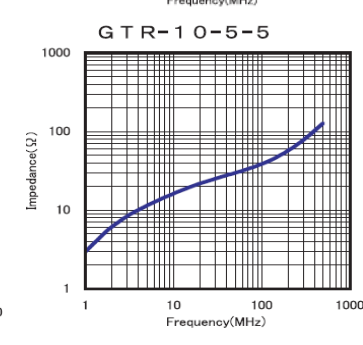
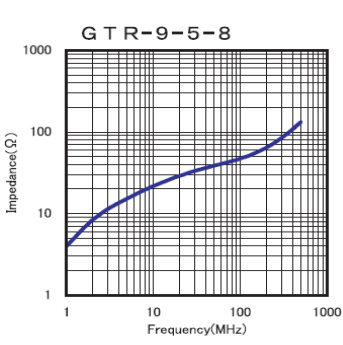
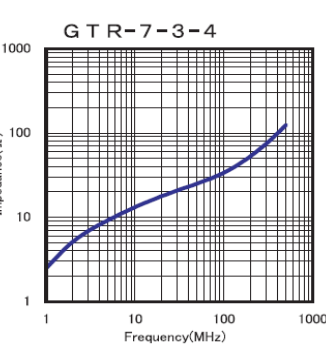
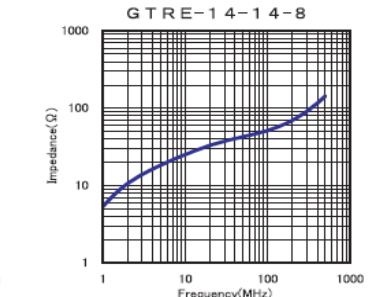
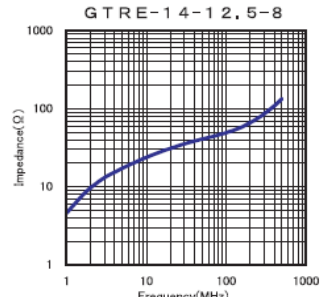
## Ferrite Sheet Permeability Graphs



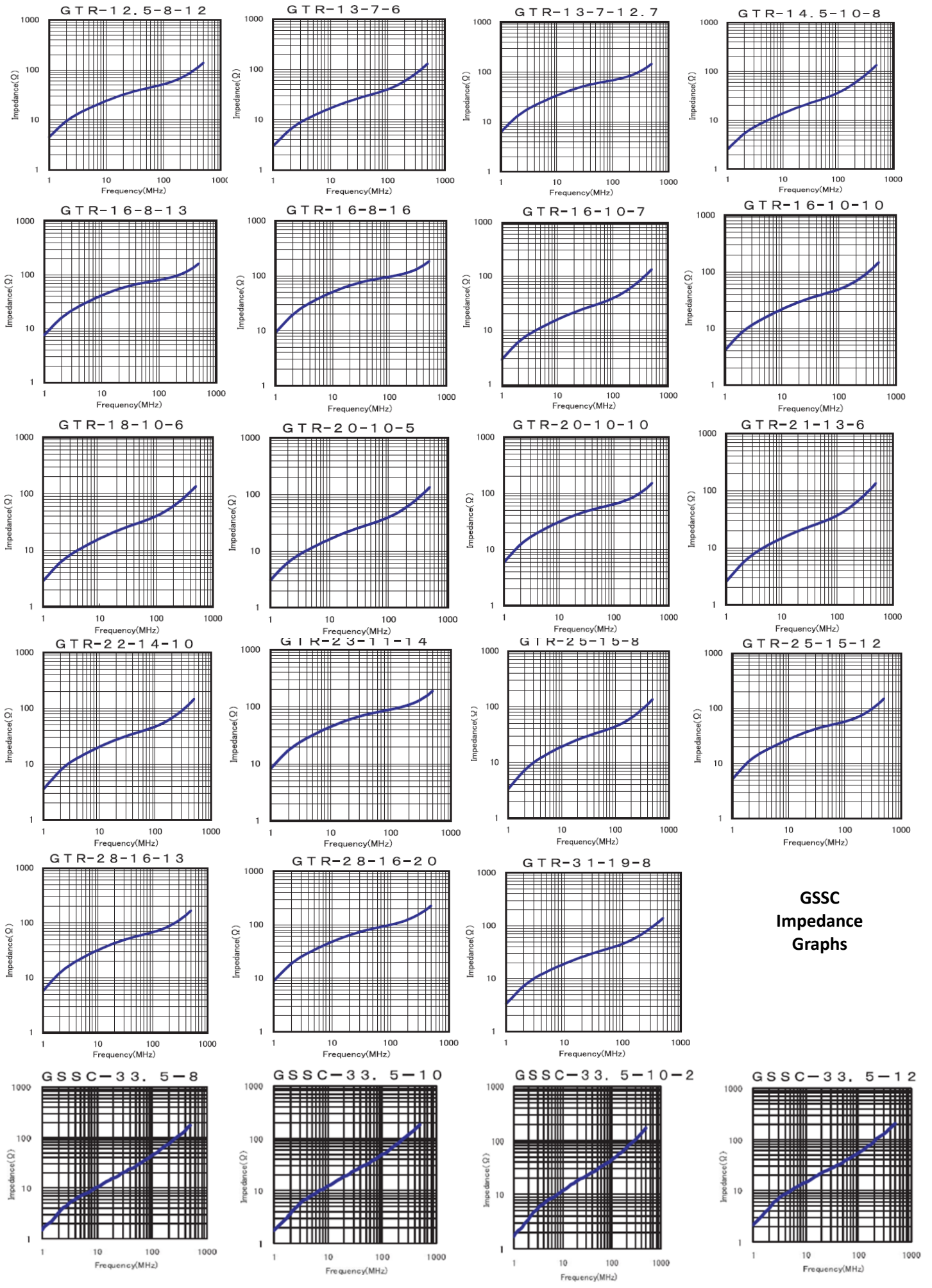
# GRI Impedance Graphs



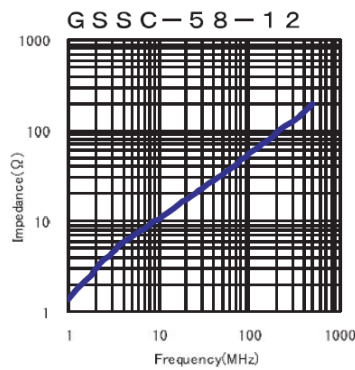
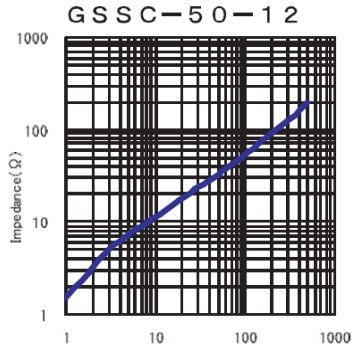
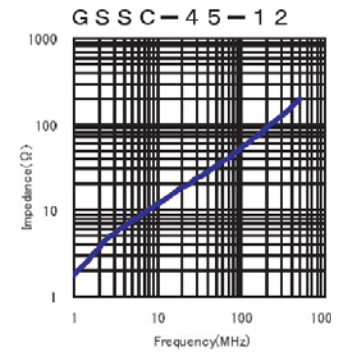
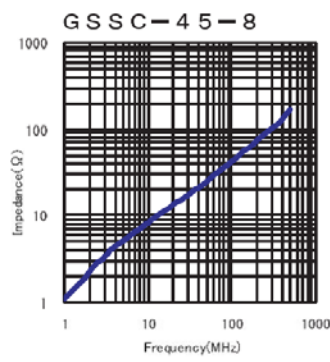
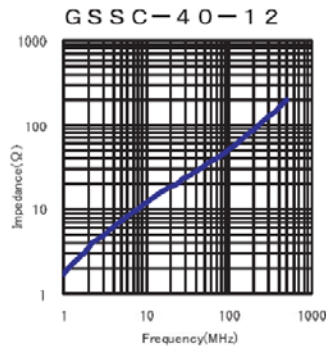
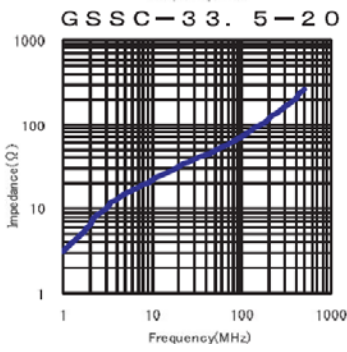
## GTR Impedance Graphs



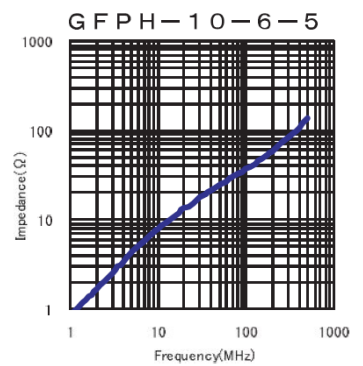




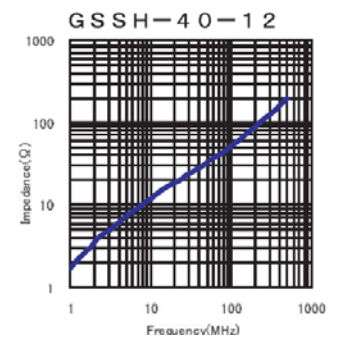
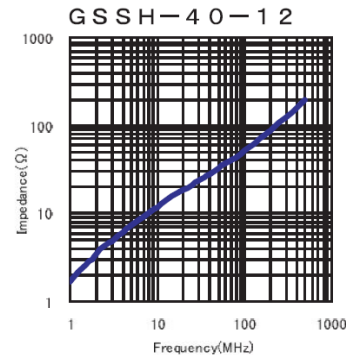
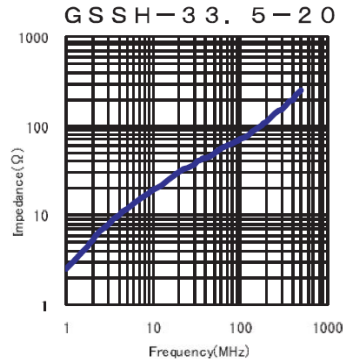
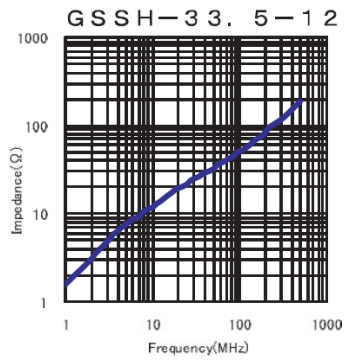
**GSSC  
Impedance  
Graphs**



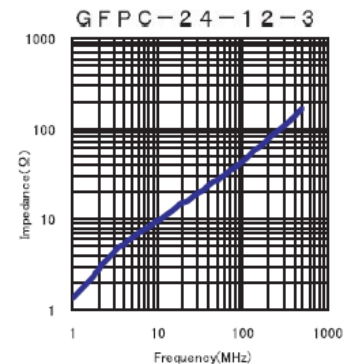
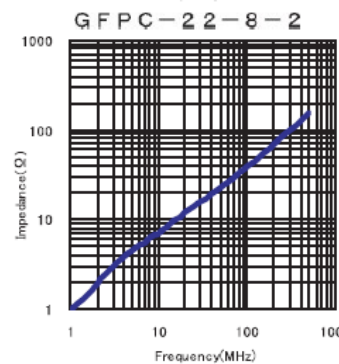
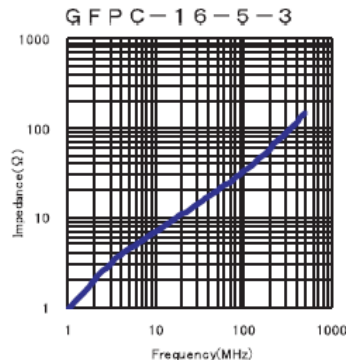
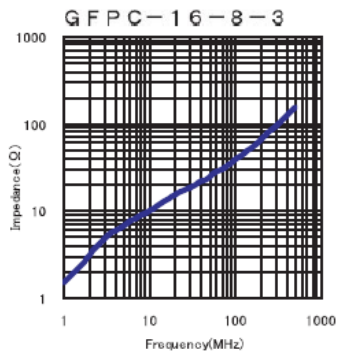
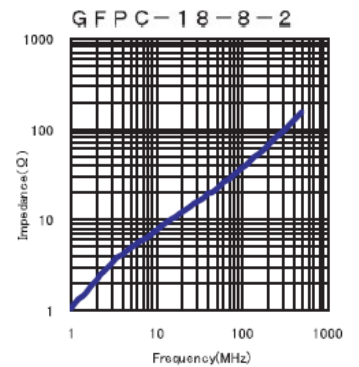
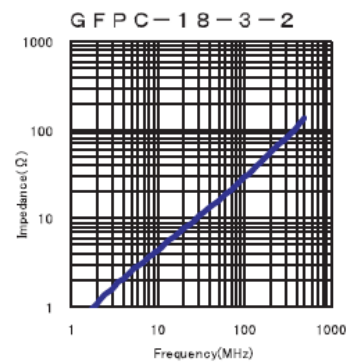
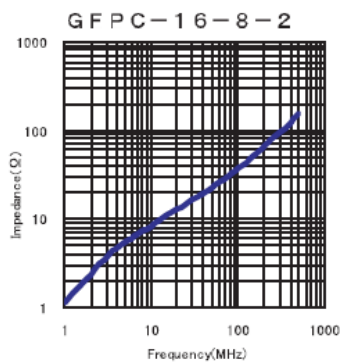
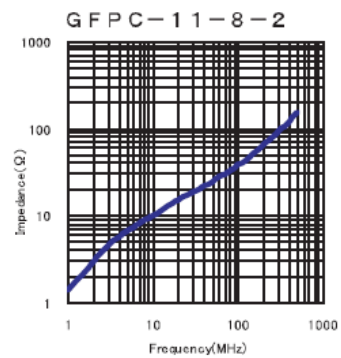
**GFPH Impedance Graph**

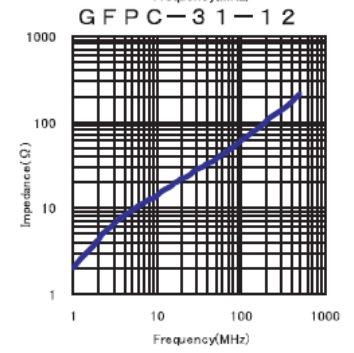
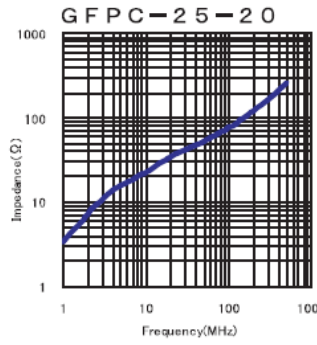
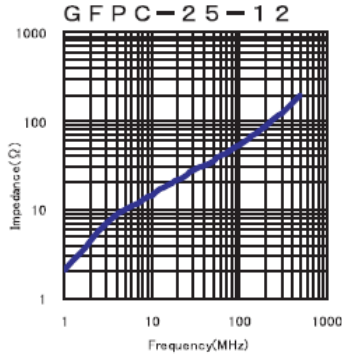
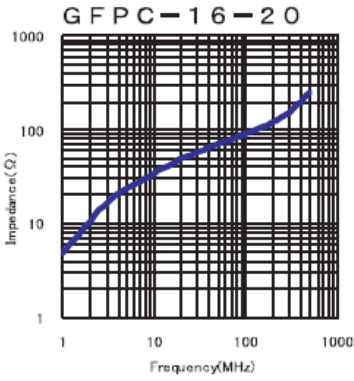
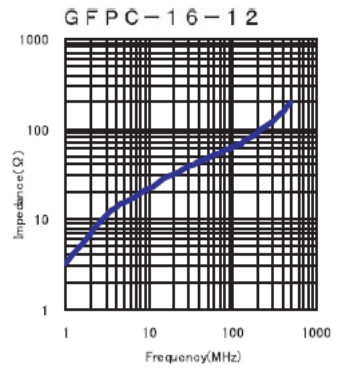
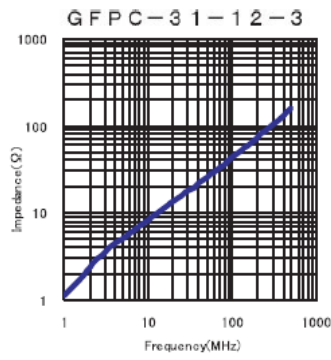
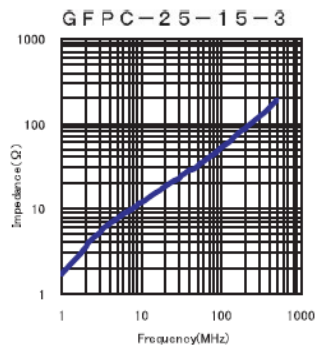
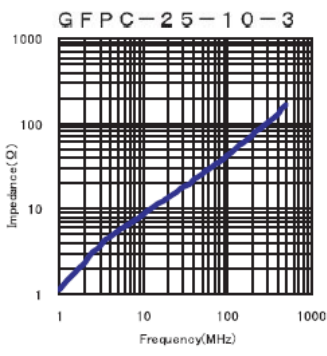


**GSSH Impedance Graphs**

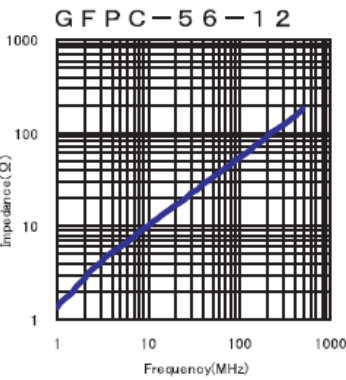
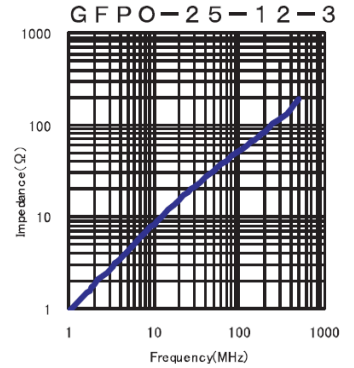
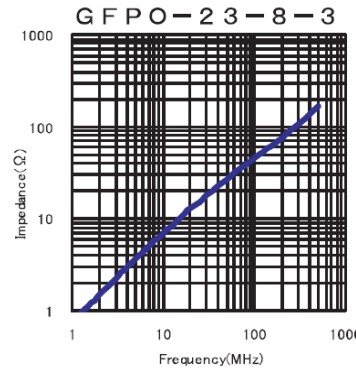
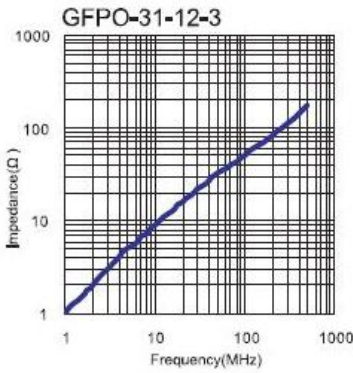
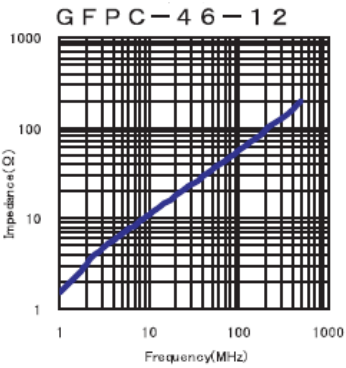


**GFPC Impedance Graphs**

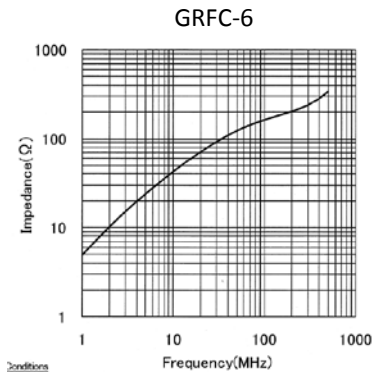
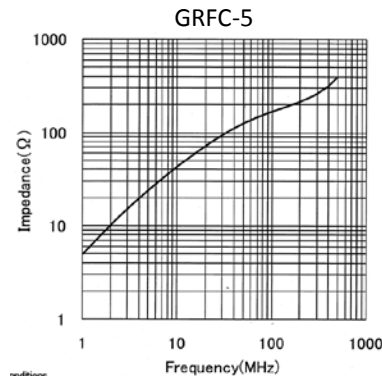




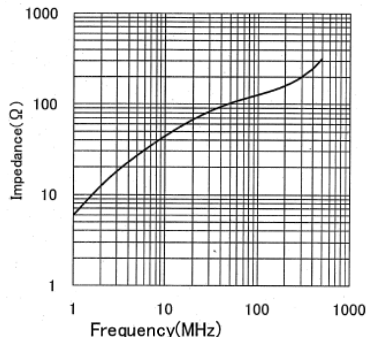
**GFPO Impedance Graphs**



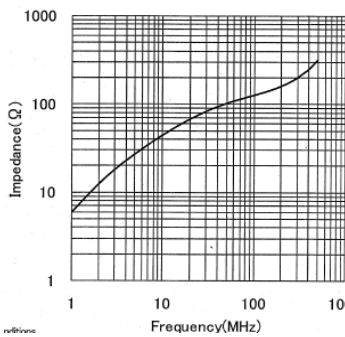
**GRFC Impedance Graphs**



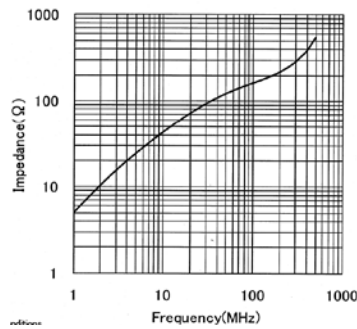
**GRFC-8**



**GRFC-9**



**GRFC-13**



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