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# FERRITE CORE FSRC Series

## Reference Specification

### 1. Scope

This reference specification is applied to ferrite core (FSRC Series) used for noise suppression.

Please contact us when using this product for any other applications than described in the above.

### 2. Murata Part Number

Please see P.4/9.

< Part Numbering >

(ex.) F S R C 0 8 0 0 9 0 R T B 0 0 B

- |                                     |     |     |     |     |     |                                    |     |     |
|-------------------------------------|-----|-----|-----|-----|-----|------------------------------------|-----|-----|
| (1)                                 | (2) | (3) | (4) | (5) | (6) | (7)                                | (8) | (9) |
| (1) Ferrite                         |     |     |     |     |     | (6) Material                       |     |     |
| (2) Flat Cable                      |     |     |     |     |     | (7) Process 00:Standard/ B0:Barrel |     |     |
| (3) Dimensions                      |     |     |     |     |     | (8) Individual Specification Code  |     |     |
| (4) Outer Dimension Supplement Code |     |     |     |     |     | (9) Packing Code B:Bulk/ T:Tray    |     |     |
| (5) Length                          |     |     |     |     |     |                                    |     |     |

### 3. Material

Ferrite	Permeability (Ref.)	Curie temperature	Electrical resistance
RT (Ni-Zn Type)	1600±30%	≥ 110°C	≥ 10 <sup>5</sup> Ω·m
RX (Ni-Zn Type)	750±30%	≥ 110°C	≥ 10 <sup>5</sup> Ω·m

### 4. Use in the environment

Operating temperature : -25~85°C

Storage temperature : -25~125°C

### 5. Shape and Dimension

Please see P.5/9~9/9.

### 6. Appearance Standard

- Please see P.4/9 as for Limit size of defect (Xmm<sup>2</sup>) fig. a
- If there is any doubt about the appearance, the worst samples shall be made.

X mm<sup>2</sup> max.



fig. a

### 7. Electrical Characteristic

No.	Ferrite	Specification	Test Methods
7. 1	Impedance value	Please see P.4/9	Instruments : AGILENT4191A (or equivalent) Frequency : 100MHz Lead wire : 2UEW AWG18 (Please see P. 4/9)
7. 2	Frequency-characteristics of impedance. (reference)	Please see P. 5/9 ~ 9/9.	Impedance shall be measured at fig.b.



fig.b

### 8. Inspection

#### 8.1 Test condition

Characteristics shall be measured at 20±15°C, 85% RH under. If the measured value should be doubted, characteristics shall be measured at 23±2°C, 85% RH under again.

#### 8.2 Inspection Level: ANSI/ASQC Z1.4-1993, Revel S-4, Normal, Single inspection

Inspection item	Judgment	Measurement
Characteristic	n=10, Ac=0, Re=1	AGILENT4191A (or equivalent)
Appearance	AQL 2.5%	Visual Inspection
Dimension	n=10, Ac=0, Re=1	Slide Calipers ... etc.

**9. Packing**

- Quantity in package • weight...Please see P.4/9.
- Basic packing

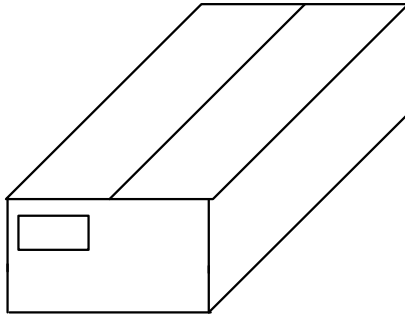


fig.c Outer case

No.	Outer Case Dimensions (mm)			Inner Case
	W	D	H	
①	4 0 6	2 6 5	1 1 8	<FSRC*****B> Inner Case (Bulk)
②	4 0 6	2 6 5	1 1 8	<FSRC*****T> Tray

※Above Outer Case size is typical  
When quantity is less than standard quantity, size or kind of outer case and inner case is changed if needed.

- Marking for Outside package

Customer name Purchasing Order Number, Customer Part Number, MURATA part number, Inspection number(\*1),RoHS Marking(\*2), Quantity, etc

\*1) « Expression of Inspection No. »

$\frac{\square\square}{(1)} \quad \frac{\text{O O O O}}{(2)} \quad \frac{\times\times\times}{(3)}$

- (1) Factory Code
- (2) Date

First digit : Year / Last digit of year  
Second digit : Month / Jan. to Sep. → 1 to 9, Oct. to Dec. → O,N,D  
Third, Fourth digit : Day

- (3) Serial No.

\*2) « Expression of RoHS Marking »

ROHS – Y (Δ)  
(1) (2)

- (1) RoHS regulation conformity parts.
- (2) MURATA classification number

**10. Changes of specification**

Any changes in these devices shall be enforced after consultation.

**11. ⚠CAUTION**

- 1) Limitation of Applications

Please contact us before using our products for the under mentioned applications requiring especially high reliability in order to prevent defects which might directly cause damage to other party's life, body or property (listed below).

- (1) Aircraft equipment
  - (2) Aerospace equipment
  - (3) Undersea equipment
  - (4) Nuclear control apparatus
  - (5) Medical equipment
  - (6) Transportation equipment (automobiles, trains, ships, etc.)
  - (7) Traffic signal equipment
  - (8) Disaster prevention / crime prevention equipment
  - (9) Data-processing equipment
  - (10) Applications of similar complexity or with reliability requirements comparable to the applications listed in the above 2)
- Be sure to provide an appropriate fail-safe function on your product to prevent a second damage that may be caused by the abnormal function or the failure of our product.

**12. Notice**

- 1) Protect product from damage that may occur in transit such as cracking of core.
- 2) Handle product with care. Do not drop.
- 3) Do not apply excessive force to the product.
- 4) Core should be taken to damage of lead wire when it is inserting or rolling in core.
- 5) This product is designed for use in the environment specified in this approval drawing; do not be used in the following environments or under the following conditions.
  - (1) Ambient air containing corrosive gas. (Cl<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, SO<sub>2</sub>, NO<sub>x</sub>, etc.)
  - (2) In liquid.
  - (3) Other environments similar to (1) through (2).

Please contact us before using our products for the below mentioned environments.

13.  Note:

- 1) Please make sure that your product has been evaluated in view of your specifications with our product being mounted to your product.
- 2) You are requested not to use our product deviating from the reference specifications.
- 3) The contents of this reference specification are subject to change without advance notice.

Please approve our product specifications or transact the approval sheet for product specifications before ordering

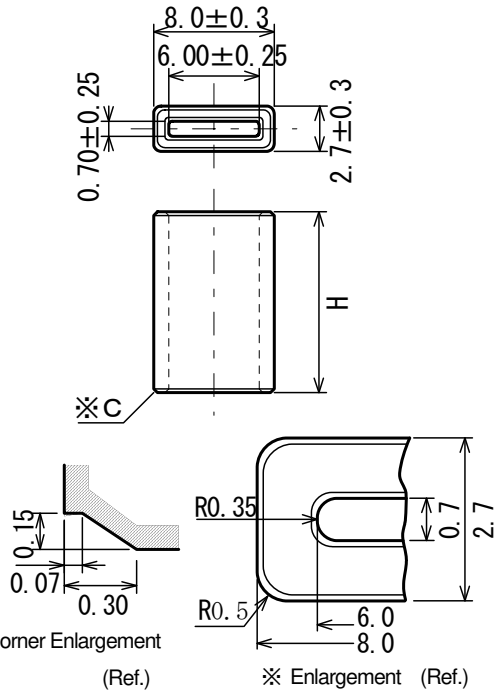
**Core type, Appearance,Characteristic,Packing List**

MURATA Part Number	Material	appearance (Xmm <sup>2</sup> )	Dimension	Characteristic			Packing	Packing quantity		Mass	
				Impedance	Lead wire			Min. Qty.	Total Qty.	Unit mass	Total mass
FSRC080090RTB00B	RT	3	fig.1	$\geq 35\Omega$	$\phi 0.5$	45mm	①	2,000	10,000	0.8g	8.8kg
FSRC080120RTB00B	RT	3	fig.1	$\geq 44\Omega$	$\phi 0.5$	45mm	①	1,500	7,500	1.1g	8.8kg
FSRC120120RXB00B	RX	3	fig.2	$\geq 41\Omega$	$\phi 0.5$	45mm	①	1,000	5,000	1.7g	9.4kg
FSRC140120RX000T	RX	4	fig.3	$\geq 58\Omega$	$\phi 0.5$	45mm	②	600	3,000	3.4g	11.6kg
FSRC140200RXB00T	RX	6	fig.3	$\geq 88\Omega$	$\phi 0.5$	45mm	②	150	1,050	5.7g	7.4kg
FSRC141060RXB00T	RX	4	fig.4	$\geq 28\Omega$	$\phi 0.5$	45mm	②	600	4,200	1.5g	7.7kg
FSRC142150RTB00T	RT	5	fig.5	$\geq 63\Omega$	AWG18	65mm	②	330	1,650	6.1g	11.5kg
FSRC170090RTB00T	RT	6	fig.6	$\geq 34\Omega$	$\phi 0.5$	40mm	②	600	2,400	3.6g	10.0kg
FSRC170120RT000T	RT	6	fig.6	$\geq 48\Omega$	$\phi 0.5$	50mm	②	600	2,400	4.3g	11.7kg
FSRC171060RTB00T	RT	6	fig.7	$\geq 24\Omega$	$\phi 0.5$	40mm	②	1,080	7,560	1.2g	10.5kg
FSRC171090RTB00T	RT	6	fig.7	$\geq 31\Omega$	$\phi 0.5$	50mm	②	1,080	4,320	1.8g	9.2kg
FSRC171120RTB00T	RT	6	fig.7	$\geq 37\Omega$	$\phi 0.5$	50mm	②	1,080	4,320	2.3g	11.3kg
FSRC222060RX000T	RX	7	fig.8	$\geq 26\Omega$	$\phi 0.5$	50mm	②	550	3,850	1.5g	6.8kg
FSRC222090RX000T	RX	7	fig.8	$\geq 32\Omega$	$\phi 0.5$	50mm	②	550	2,750	2.3g	7.3kg
FSRC222120RX000T	RX	7	fig.8	$\geq 37\Omega$	$\phi 0.5$	50mm	②	550	2,750	3.1g	9.5kg
FSRC240150RX000T	RX	7	fig.9	$\geq 55\Omega$	$\phi 0.8$	48mm	②	320	1,600	9.0g	15.9kg

Shape and Dimension (UNIT : mm)

Frequency-characteristics of impedance. (reference)  
 Instruments : AGILENT4191A / Lead wire: Through  
 (Please see P.4/9)

fig. 1



Murata Part Number	H	Barrel
FSRC080090RTB00B	9.0±0.25	○
FSRC080120RTB00B	12.0±0.25	○

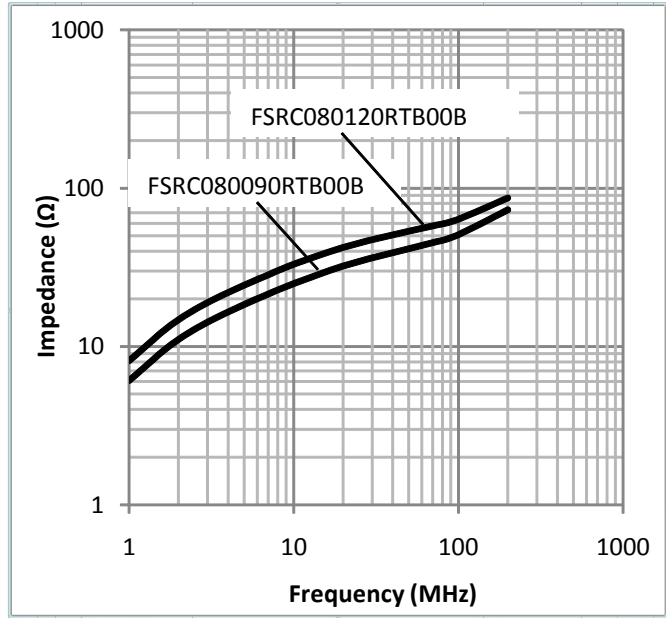
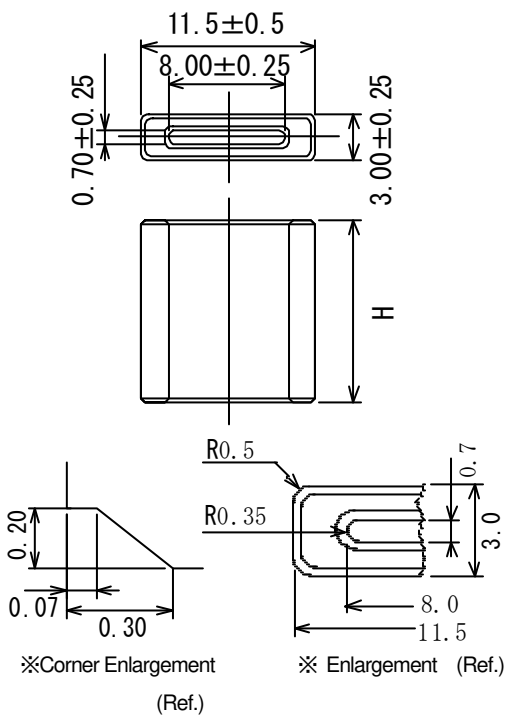
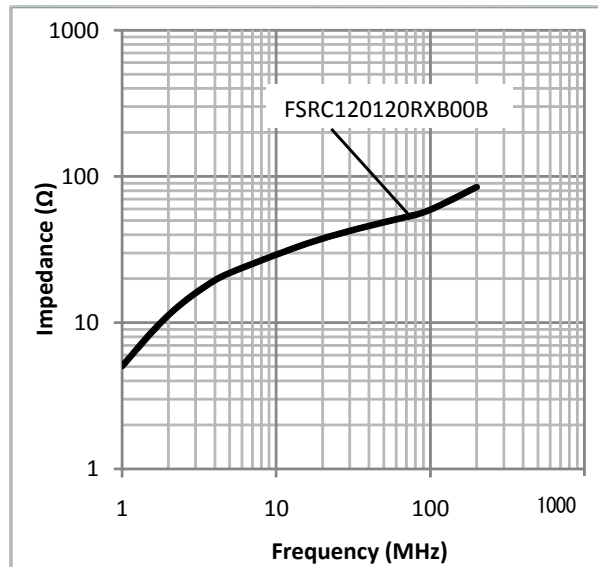


fig. 2



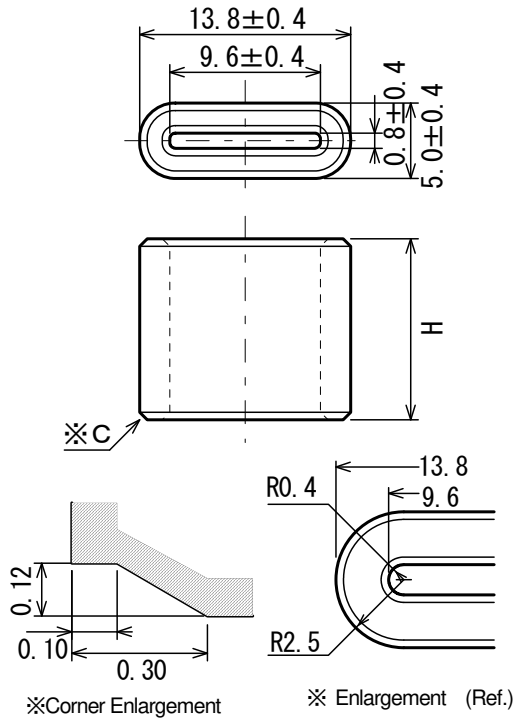
Murata Part Number	H	Barrel
FSRC120120RXB00B	12.0±0.25	○



Shape and Dimension (UNIT : mm)

Frequency-characteristics of impedance. (reference)  
 Instruments : AGILENT4191A / Lead wire: Through  
 (Please see P. 4/9)

fig.3



Murata Part Number	H	Barrel
FSRC140120RX000T	$12.0 \pm 0.4$	-
FSRC140200RXB00T	$20.0 \pm 0.7$	○

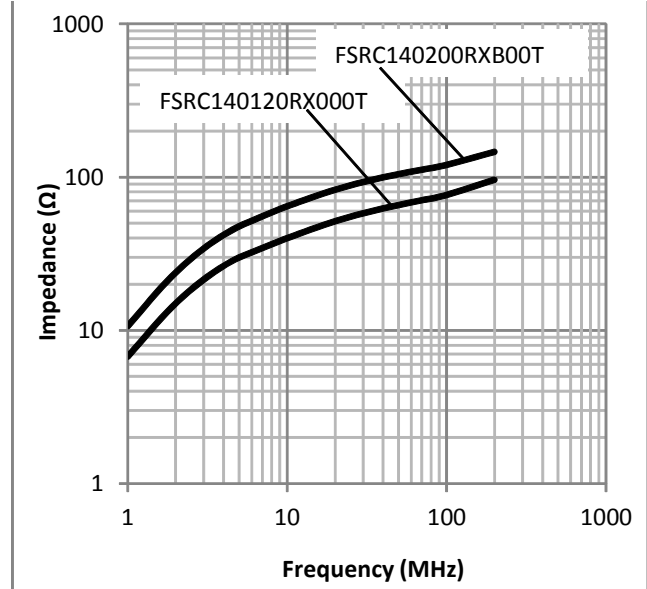
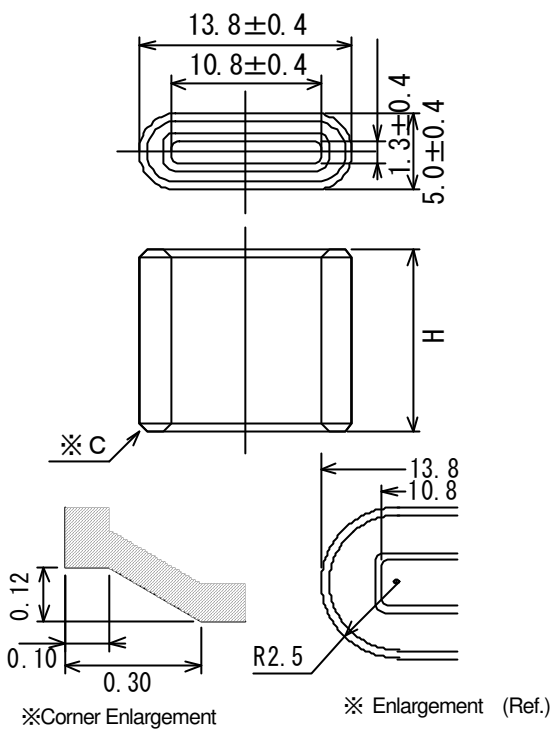
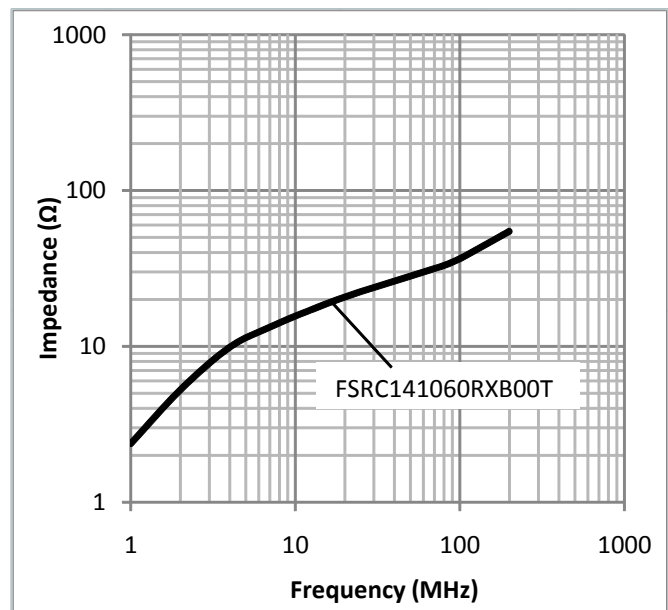


fig.4



Murata Part Number	H	Barrel
FSRC141060RXB00T	$6.0 \pm 0.4$	○

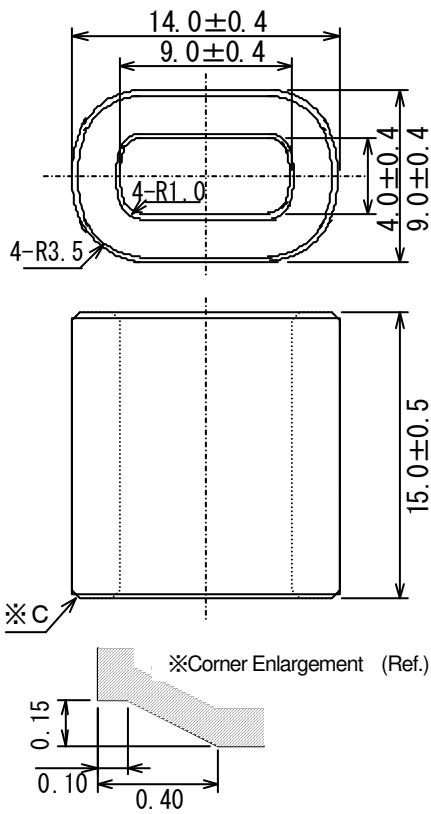


Shape and Dimension (UNIT : mm)

Frequency-characteristics of impedance. (reference)

Instruments : AGILENT4191A / Lead wire: Through  
(Please see P. 4/9)

fig.5



Murata Part Number		Barrel
FSRC142150RTB00T		○

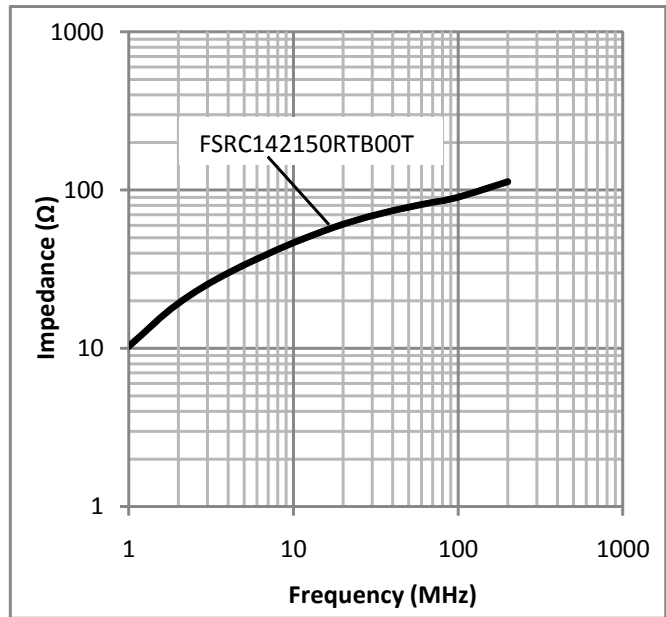
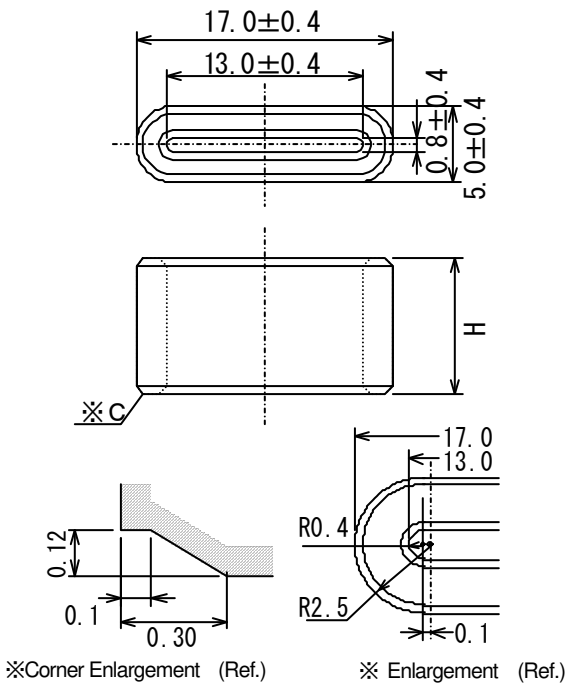
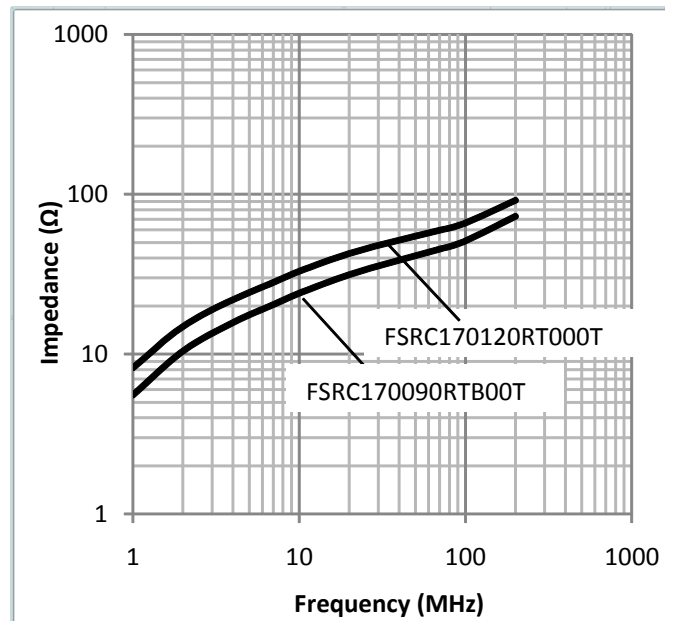


fig.6



Murata Part Number	H	Barrel
FSRC170090RTB00T	9.0±0.4	○
FSRC170120RT000T	12.0±0.4	-

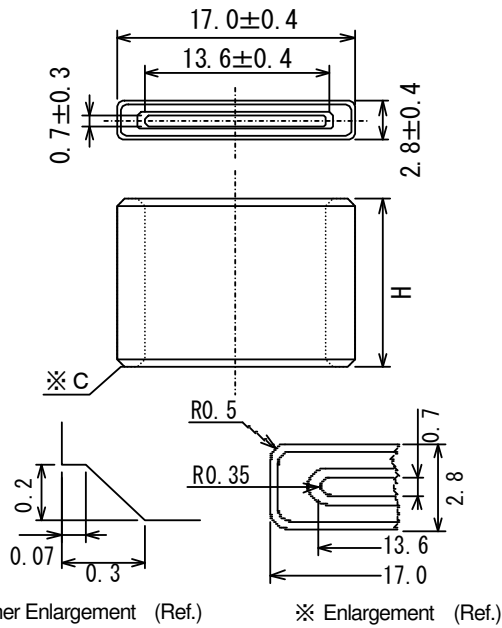




Shape and Dimension (UNIT : mm)

Frequency-characteristics of impedance. (reference)  
 Instruments : AGILENT4191A / Lead wire: Through  
 (Please see P. 4/9)

fig 7



Murata Part Number	H	Barrel
FSRC171060RTB00T	6.0±0.4	○
FSRC171090RTB00T	9.0±0.4	○
FSRC171120RTB00T	12.0±0.4	○

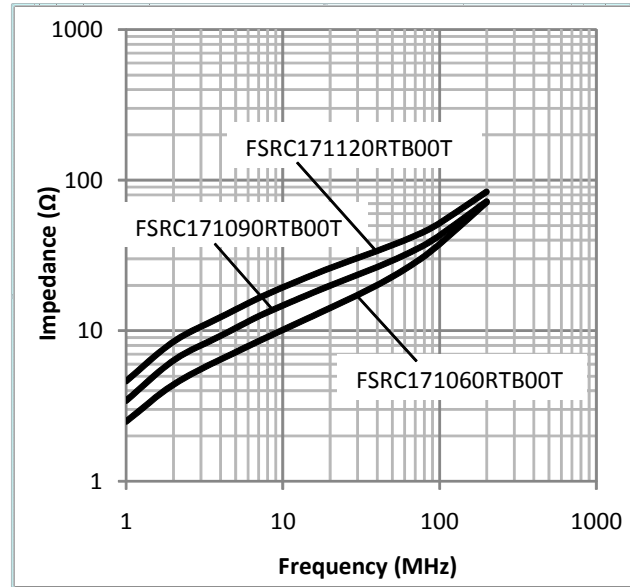
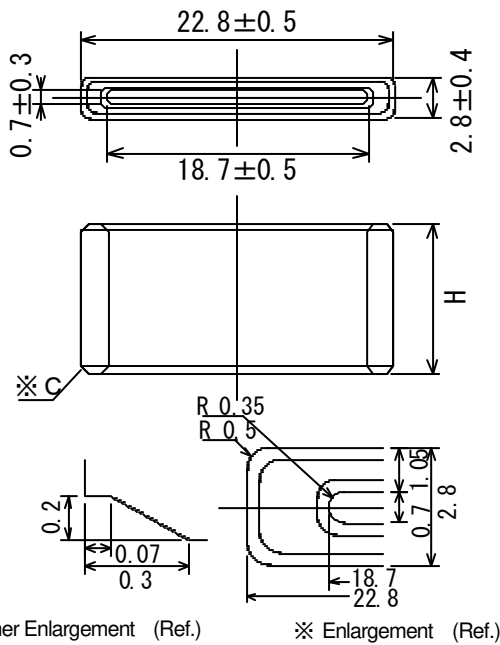
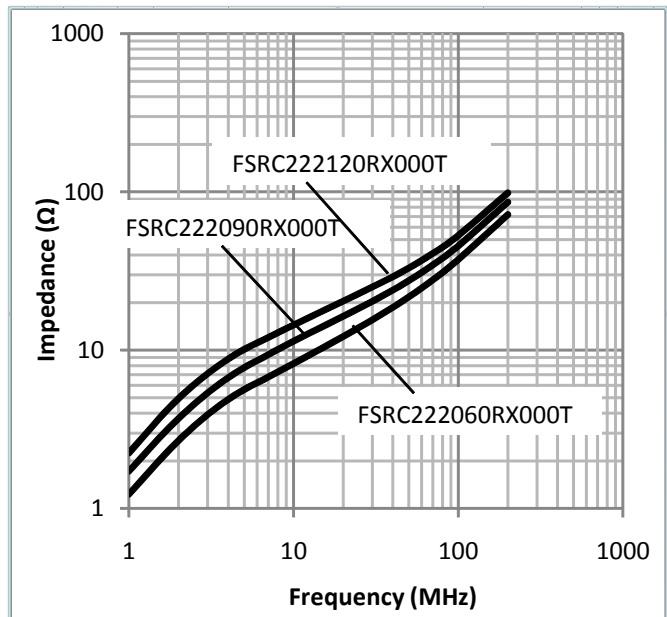


fig.8



Murata Part Number	H	Barrel
FSRC222060RX000T	6.0±0.4	-
FSRC222090RX000T	9.0±0.4	-
FSRC222120RX000T	12.0±0.4	-



Shape and Dimension (UNIT : mm)

Frequency-characteristics of impedance. (reference)

Instruments : AGILENT4191A / Lead wire: Through  
(Please see P. 4/9)

fig.9

Murata Part Number		Barrel
FSRC240150RX000T		-

