

**FERRITECORE  
FSRB Series**

**Reference Specification**

**1. Scope**

This reference specification is applied to ferrite core (FSRB 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.4/14.

< Part Numbering >

(例) FS RB 08 0 030 RT B0 0 B  
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

- (1) Ferrite
- (2) Ring Core
- (3) Dimensions
- (4) Outer Dimension Supplement Code
- (5) Length
- (6) Material
- (7) Process [B0:Barrel Type]
- (8) Individual Specification Code
- (9) Packing Code [B:Bulk ]

**3. Material**

Ferrite	Permeability (Ref.)	Curie temperature	Electrical resistance
RT (Ni-Zn Type)	1600 ± 30%	≥ 110 °C	≥ 10 <sup>5</sup> Ω · m
RN (Ni-Zn Type)	550 ± 30%	≥ 130 °C	≥ 10 <sup>5</sup> Ω · m

**4. Use in the environment**

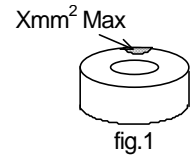
Operating temperature : -25~+85°C  
 Storage temperature : -25~+125°C

**5. Shape and Dimension**

Please see P.5/8~8/8.

**6. Appearance Standard**

- Please see P.4/8 as for Limit size of defect (Xmm<sup>2</sup>) fig. 1
- If there is any doubt about the appearance, the worst samples shall be made.



**7. Electrical Characteristic**

No.	Ferrite	Specification	Test Methods
7.1	Impedance	Please see P.4/8.	Instruments : AGILENT4191A (or equivalent)
7.2	Frequency-characteristics of Impedance (reference)	Please see P.5/8~8/8.	Frequency : 100MHz Lead wire : 2UEW AWG#18 (Please see P.4/8.) Temperature : 23±2°C Impedance shall be measured at fig.2



**8. Inspection**

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.

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.4/14.
- Basic packing

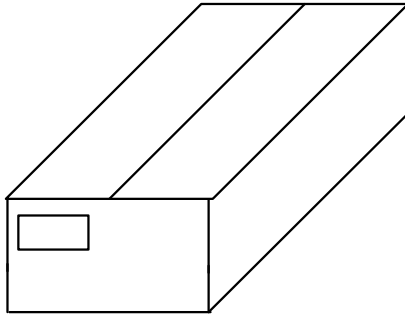


fig.3 Outer case

	Outer Case Dimensions(mm)			Inner Case
	W	D	H	
①	406	265	118	<FSRB*****B> Inner Case

※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. »

□□    OOOO    XXX  
 (1)            (2)            (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 –  $\frac{Y}{(1)} \frac{\Delta}{(2)}$

- (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) 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.

**Murata Part Number, 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
FSRB041020RNB00B	RN	2	fig.1	$\geq 22\Omega$	$\phi 0.8$	25mm	①	10,000	50,000	0.09g	5.4kg
FSRB044020RNB00B	RN	2	fig.2	$\geq 16\Omega$	$\phi 0.8$	25mm	①	5,000	25,000	0.09g	3.2kg
FSRB060040RNB00B	RN	2	fig.3	$\geq 25\Omega$	$\phi 0.8$	35mm	①	4,000	20,000	0.37g	8.3kg
FSRB071040RNB00B	RN	2	fig.4	$\geq 20\Omega$	$\phi 0.8$	35mm	①	2,000	10,000	0.53g	6.2kg
FSRB090060RNB00B	RN	3	fig.5	$\geq 30\Omega$	AWG18	40mm	①	600	3,000	1.3g	4.9kg
FSRB090080RNB00B	RN	3	fig.5	$\geq 39\Omega$	AWG18	40mm	①	600	3,000	1.8g	6.3kg
FSRB091060RNB00B	RN	3	fig.6	$\geq 38\Omega$	AWG18	40mm	①	600	3,000	1.5g	5.4kg
FSRB091080RNB00B	RN	3	fig.6	$\geq 50\Omega$	AWG18	40mm	①	600	3,000	2.0g	6.9kg
FSRB100030RTB00B	RT	4	fig.7	$\geq 20\Omega$	AWG18	60mm	①	1,000	5,000	0.78g	4.8kg
FSRB100060RTB00B	RT	5	fig.7	$\geq 31\Omega$	AWG18	60mm	①	600	3,000	1.6g	5.6kg
FSRB100080RTB00B	RT	5	fig.7	$\geq 38\Omega$	AWG18	60mm	①	500	2,500	2.1g	6.2kg
FSRB100100RTB00B	RT	5	fig.7	$\geq 45\Omega$	AWG18	60mm	①	500	2,500	2.5g	7.3kg

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

Shape and Dimension (UNIT : mm)

Frequency-characteristics of Impedance (reference)  
 Instruments : AGILENT4191A / Lead wire: Through  
 (Please see P.4/8.)

fig. 1

Murata Part Number		Barrel
FSRB041020RNB00B		○

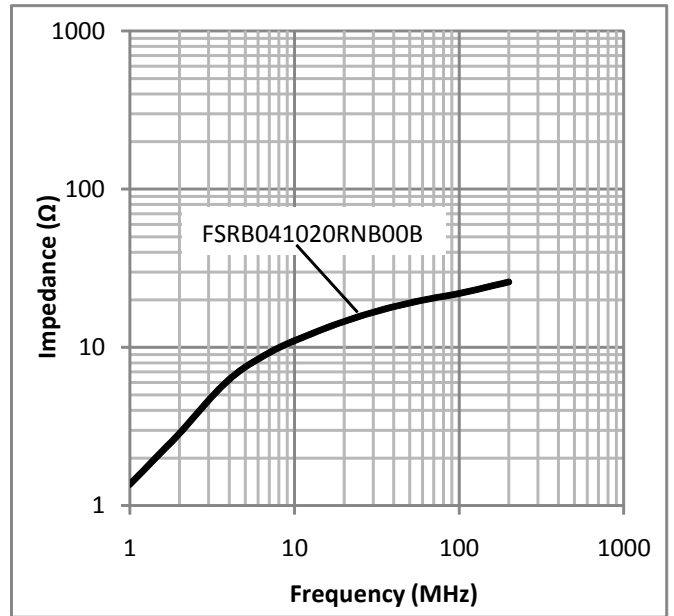
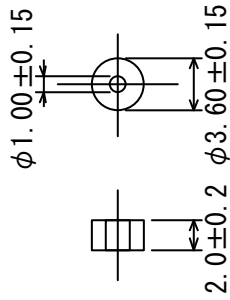
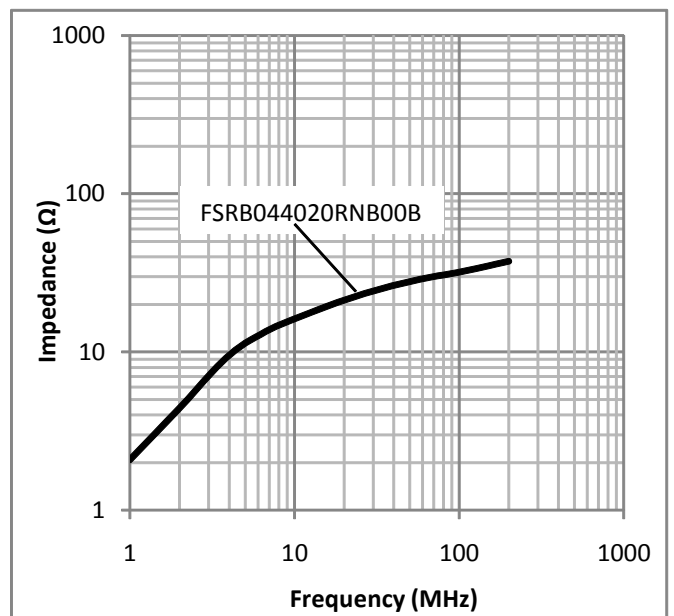
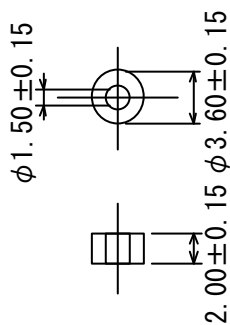


fig. 2

Murata Part Number		Barrel
FSRB044020RNB00B		○



Shape and Dimension (UNIT : mm)

Frequency-characteristics of Impedance (reference)  
 Instruments : AGILENT4191A / Lead wire: Through  
 (Please see P.4/8.)

fig. 3

Murata Part Number		Barrel
FSRB060040RNB00B		○

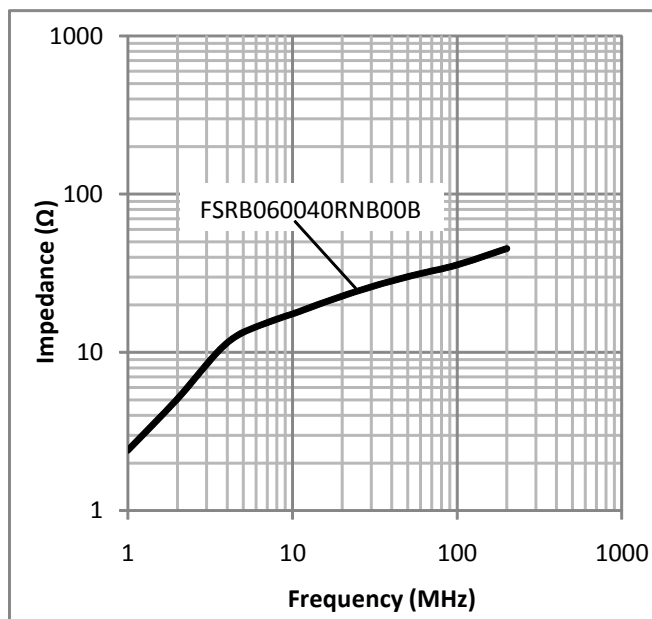
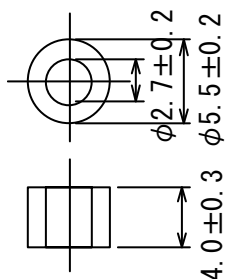
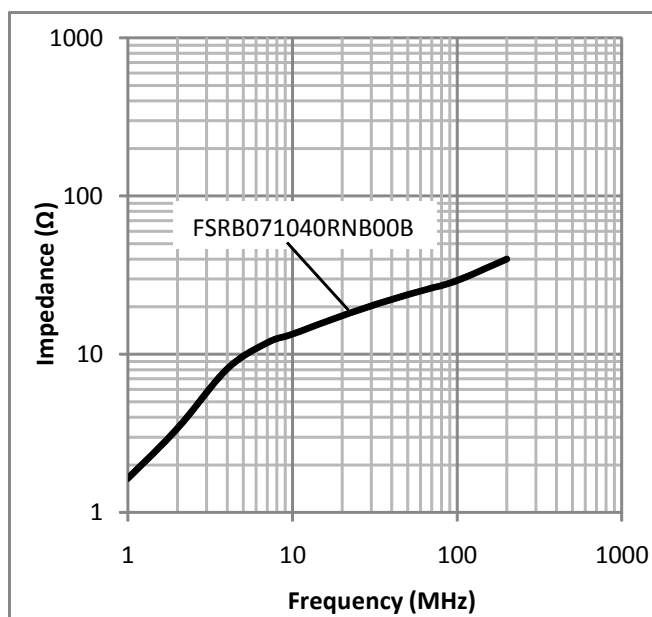
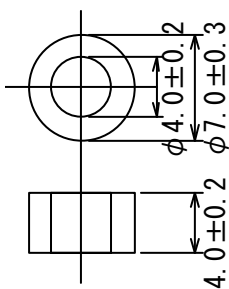


fig. 4

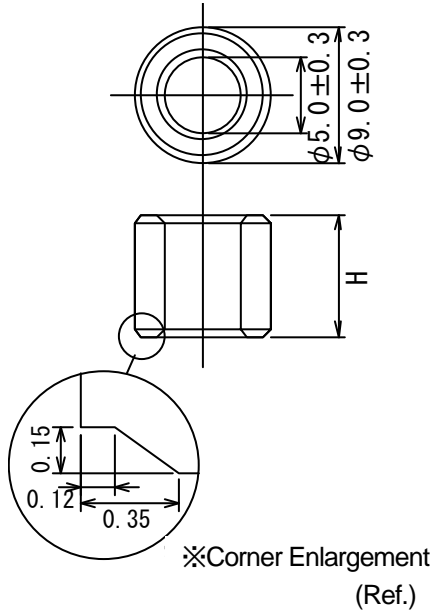
Murata Part Number		Barrel
FSRB071040RNB00B		○



Shape and Dimension (UNIT : mm)

Frequency-characteristics of Impedance (reference)  
 Instruments : AGILENT4191A / Lead wire: Through  
 (Please see P.4/8.)

fig. 5



Murata Part Number	H	Barrel
FSRB090060RNB00B	6.0±0.5	○
FSRB090080RNB00B	8.0±0.5	○

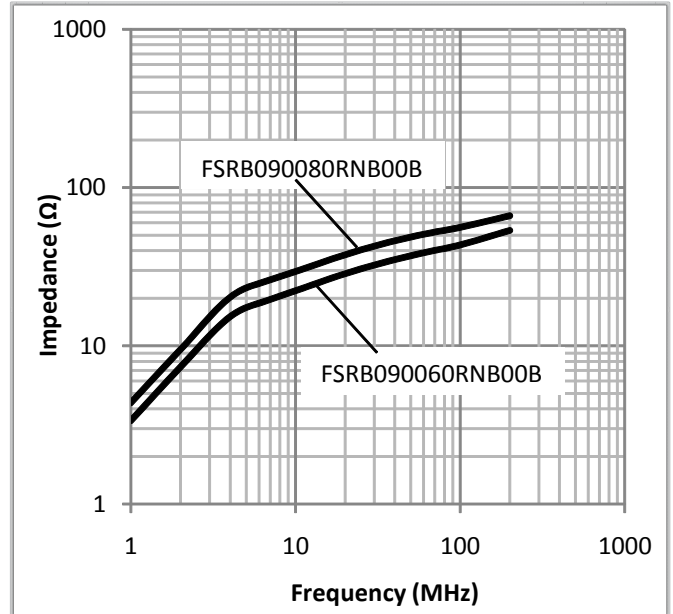
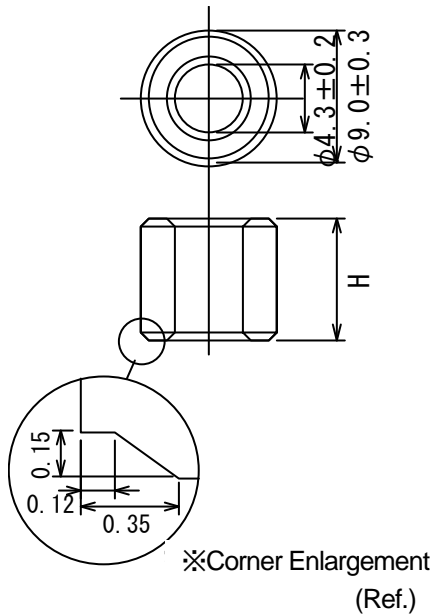
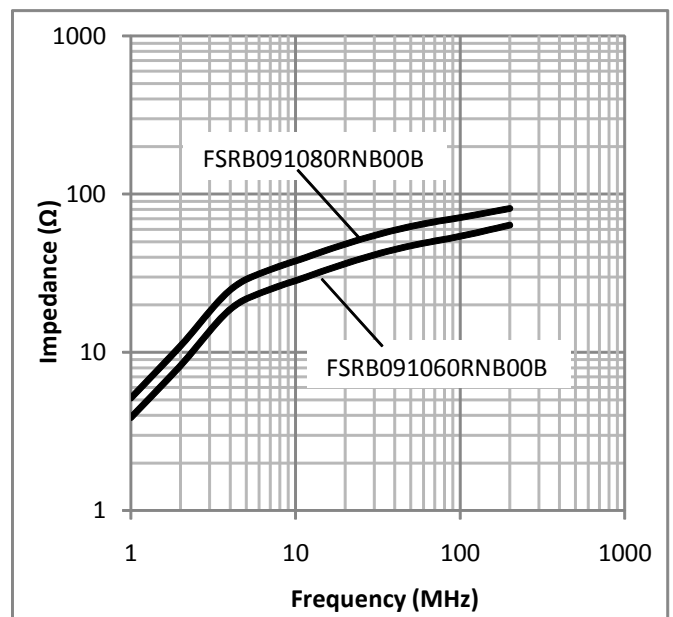


fig. 6



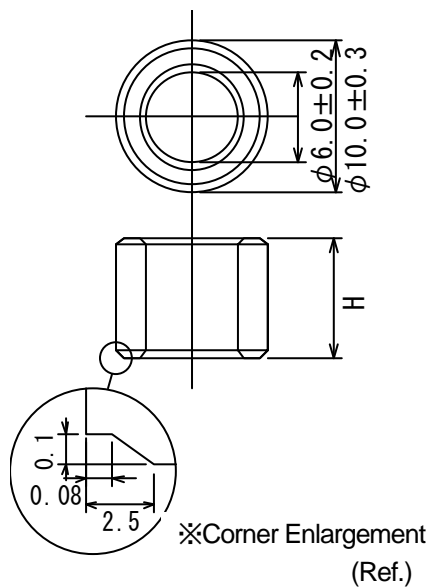
Murata Part Number	H	Barrel
FSRB091060RNB00B	6.0±0.5	○
FSRB091080RNB00B	8.0±0.5	○



Shape and Dimension (UNIT : mm)

Frequency-characteristics of Impedance (reference)  
 Instruments : AGILENT4191A / Lead wire: Through  
 (Please see P.4/8.)

fig. 7



Murata Part Number	H	Barrel
FSRB100030RTB00B	3.0±0.3	○
FSRB100060RTB00B	6.0±0.5	○
FSRB100080RTB00B	8.0±0.5	○
FSRB100100RTB00B	10.0±0.5	○

