# **LC** Filter

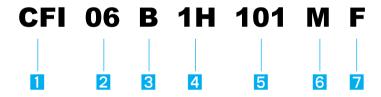
#### **Features**

- The noise-rejection band can be requested by selecting the capacitors capacitance as required.
- These filters serve as an excellent countermeasure against noise since they provide high attenuation over a wide band of frequency from 10 to 1,000MHz.
- Epoxy powder exteriors provide solid strength and stable lead pitches to assure optimum suitability for automatic inserting operation.
- · Compact size allows high density PCB mounting for 2.5mm steps.

# **Applications**

- Computers and peripheral equipment, word processors, facsimiles.
- Digital controlled equipment and electronic type writer, program controllers.
- Automotive engine control units, car electronics.
- TVs, VCRs, electronic music instruments, video games etc.

# **How to Order**(Product Identification)



1 Type

Type of EMI suppression filter

**3** Temperature Characteristics B(Y5P) : ∠C :-15~15%(-55°C~125°C)

**5** Norminal Capacitance(pF)

The first two digits indicate significants digits, the third digits indicate the number of zero following ex)  $470 \rightarrow 47 \, \text{pF}$ ,  $271 \rightarrow 270 \, \text{pF}$ ,  $222 \rightarrow 2200 \, \text{pF}$ 

Physical Dimensions

06: Component

4 Rated Valtage

1H:50V DC 2H:100V DC

**6** Capacitance Tolerance

Code	Tolerance
K	±10%
М	±20%
Z	-20, 80%

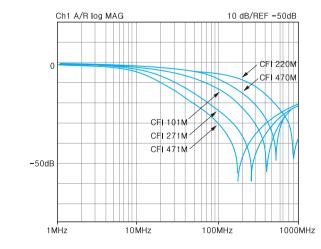
### Packing Style

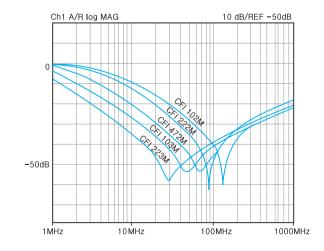
Code	В	F
Packing	Bulk Packing	Taping type of flat pack(Ammo-Pack)

# **Specifications**

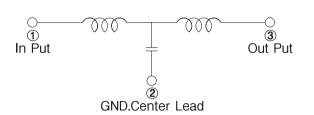
Dout No.	Capacitance	Tolerance	Frequency	Range(MHz)
Part No.	(pF)	loierance	-15dB	-25dB
CFI 06 B 1H 220M	22±20%		500~800	700~800
CFI 06 B 1H 330M	33±20%		400~800	650~800
CFI 06 B 1H 470M	47 ± 20%		350~800	550~700
CFI 06 B 1H 680M	68±20%		250~800	450~600
CFI 06 B 1H 101M	100±20%		200~800	350~500
CFI 06 B 1H 151M	150±20%	K, M	150~800	300~400
CFI 06 B 1H 221M	220±20%		100~800	200~350
CFI 06 B 1H 271M	270±20%		80~800	200~300
CFI 06 B 1H 331M	330±20%		70~800	150~300
CFI 06 B 1H 471M	470±20%		50~800	120~300
CFI 06 B 1H 681M	680±20%		40~800	90~300
CFI 06 B 1H 102M	1000±20%		30~800	70~200
CFI 06 B 1H 152M	1500 ± 20%		25~800	60~200
CFI 06 B 1H 222M	2200±20%		20~800	45~200
CFI 06 B 1H 332M	3300±20%	M	15~800	35~200
CFI 06 B 1H 472M	4700±20%	М	10~800	25~200
CFI 06 B 1H 682M	6800±20%		8~800	20~200
CFI 06 B 1H 103M	10000±20%		6~800	15~200
CFI 06 B 1H 153M	15000±20%		5~800	10~200
CFI 06 B 1H 223M	22000±20%		4~800	9~200
CFI 06 B 1H 333M	33000±20%	N4 7	3~800	7~200
CFI 06 B 1H 473M	47000±20%	M, Z	2~800	3~200
CFI 06 B 1H 104M	100000±20%		1~800	3~200

# **Typical Insertion Loss Characteristics**





## **Schematic and Characteristics**

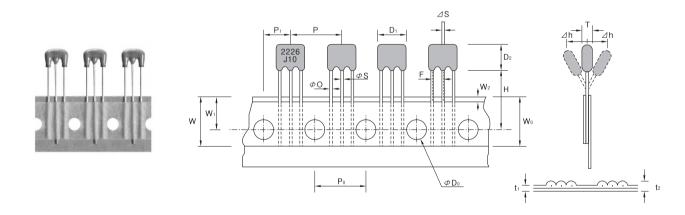


Item	Specification
Rated Voltage	50VDC
Rated current Between terminals $\mathop{\textcircled{\i}}$ and $\mathop{\textcircled{\o}}$	1A
Withstanding test voltage between terminals ① and ② or ② and ③	125V DC
Insulation resistance at 50V DC for 1 minute	10,000MΩ Min.
DC resistance between terminals $\mathbin{\textcircled{\scriptsize 1}}$ and $\mathbin{\textcircled{\scriptsize 3}}$	50mΩ Max.
Operating temperature range	–25°C ~ 85°C

## **Electrical Characteristics**

Item	Specification	Item	Specification
Operating Temperature	B: −55°C∼+125°C	Temperature characteristic	B: ±15%
Rated voltage	50V/100V DC	Testing voltage	125V/250V DC
Insulation resistance	10,000MΩ Min.	Tan∂	B : 3.0% Max.
Rated current	1A Max.	DC Resistance	50mΩ Max.

# **Shape & Dimensions**



ltem	Code	Dimensions(mm)	Item	Code	Dimensions(mm)
Component Width	D <sub>1</sub>	8.0 Max.	Carrier Type Width	W	$18.0 \pm 0.5$
Component Height	D <sub>2</sub>	6.2 Max.	Hole Down Type Width	W <sub>0</sub>	5.0 Min.
Component Thickness	T	2.8 Max.	Position of Sprocket Hole	<b>W</b> <sub>1</sub>	9.0±0.5
Pitch of Component	Р	12.7 ± 1.0	Hole Down Type Position	$W_2$	1.5 ± 1.5
Pitch of Sprocket Hole	Po	$12.7 \pm 0.3$	Height of Component from Hole Center	Н	19.0±1.0
Length from Hole Center to	P <sub>1</sub>	6.35 ±1.3	Diameter of Sprocket Hole	ØD₀	$4.0 \pm 0.2$
Component Center	11	0.55 ± 1.5	Total Tape Thickness	t <sub>1</sub>	$0.5 \pm 0.2$
Lead Spacing	F	2.5 -0.1, +0.4	Total Thickness, Tape and Lead wire	<b>t</b> 2	1.5 Max.
Deviation along Tape, Left of Right	⊿S	1.0 Max.	Lead Diameter	ØΟ	$0.6 \pm 0.05$
Deviation across Type	⊿h	2.0 Max.	Lead Diameter	ØS	$0.5 \pm 0.05$

# **BEAD Filter**

#### **Features**

- Available in various configurations to conform to the wiring materials in use the characteristics as required.
- Absorbs noise effectively because of the impedance over 30Q in high frequency band.
- Automatic insertion type of taping is available.
- An invention patented article Korea, Japan, U.S.A, U.K, Taiwan, Germany, Sweden, Italy.

# **Applications**

- Computers and peripheral equipment, word processors, facsimiles.
- Digital controlled equipment and electronic type writer, program controllers.
- Automotive engine control units, car electronics.
- TVs, VCRs, electronic music instruments, video games etc.

# **How to Order**(Product Identification)



#### 1 Type **BEAD Filter**

## **2** Beads Shape Code

S	D	W	R
Single Bead	Double Bead	Wide Bead	Ferrite Core

### Physical Dimensions

Unit: mm

	Single & Double Type			W	ide Type	Fer	rite Core Type
Code	Size O.D $ imes$ L	Code	Size O.D $ imes$ L	Code	Size O.D $ imes$ L	Code	Size O.D $\times$ L $\times$ I.D
2070	2.0×7.0	3565	3.5×6.5	7555	7.5×5.5	601009	6.0×10×0.9
2550	2.5×5.0	3580	3.5×8.0				
3550	3.5×5.0	3510	3.5×10.0				
3557	3.5×5.7	3512	3.5×12.0				
3560	3.5×6.0	3514	3.5×14.0				

[O.D: Out Diameter, L:Length, W:Width, I.D:Inner Diameter]

4 Leaded Type

5 Leaded Pitch

A : Axial Leaded R : Radial Leaded 0: Straight 2:5mm Pitch

#### 6 Packing Style

Code	Packing	Code	Packing
В	Bulk Packing	F	Taping Type Flat Pack(Radial)
S	Taping Type Flat Pack(Axial 26mm)	L	Taping Type Flat Pack(Axial 52mm)

# **Specifications**

Testing frequency: at 100MHz.an exception SPEC: BFS 3557 A0. BFS 3560 A0 at 10MHz

Smar	z	$ z (\Omega)$ DC Resistance Insulation		Allowable DC Current	
Spec	Min.	Typical	(mΩ)	(At DC 100V, MΩ)	(A Max.)
BFD 2070 R2	120	150	10	1	3
BFS 2550 A0	50	65	10	1	3
BFS 2550 R2	50	65	10	1	3
BFD 2550 R2	100	130	10	1	3
BFS 3550 A0	65	70	10	1	6
BFS 3550 R2	65	70	10	1	6
BFD 3550 R2	130	140	10	1	6
BFS 3557 A0	31.5	45	10	1	6
BFS 3560 A0	31.5	45	10	1	6
BFS 3565 A0	80	100	10	1	6
BFS 3565 R2	80	100	10	1	6
BFD 3565 R2	160	200	10	1	6
BFS 3580 A0	103	120	10	1	6
BFS 3580 R2	103	120	10	1	6
BFD 3580 R2	206	240	10	1	6
BFS 3510 A0	120	150	10	1	6
BFS 3510 R2	120	150	10	1	6
BFD 3510 R2	240	300	10	1	6
BFS 3512 A0	148	180	10	1	6
BFS 3512 R2	148	180	10	1	6
BFD 3512 R2	296	360	10	1	6
BFS 3514 A0	170	210	10	1	6
BFS 3514 R2	170	210	10	1	6
BFD 3514 R2	340	420	10	1	6
BFW 7555 R2	90	120	10	1	6
BFR601009C8ND	280	350	50	1	6
BFR601009C8NE	360	450	50	1	6
BFR601009C8NF	440	550	50	1	6
BFR601009C8NG	520	650	50	1	6

# **Electrical Characteristics Test Method**

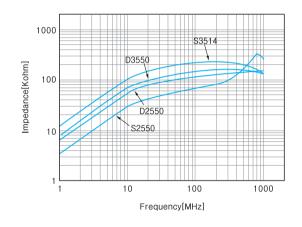
#### 1. Impedance(IZI)

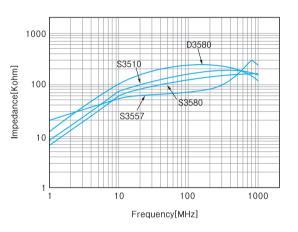
Refer to article IZI-f Characteristics(Measurement : Impedance Analyzer)

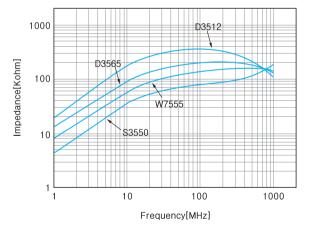
#### 2. Insulation Resistance Test

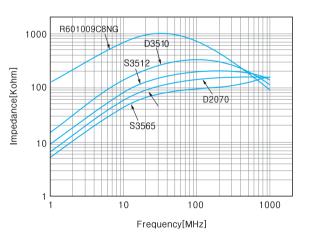
Insulation resistance test between core and wire shall be measured H.P 4339B Insulation Resistance Meter Insulation Resistance : 1MΩ, Min. ↑ (At DC 100V, 60Sec)

# |**Z**|-f Characteristics





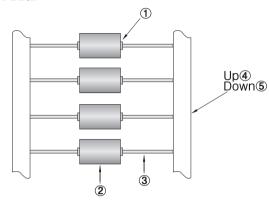




# **Material Certificate**

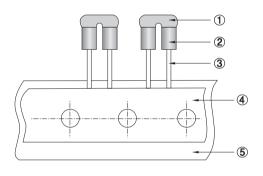
\* We guarantee that the same material above used

#### **Axial**



No.	Component Parts	Material	Remark
1	Epoxy Bond	Uni Bond Orange	Lead free
2	Ferrite Core	Ni-Zn Material	Lead free
3	Lead-Wire	Sn 100% Plat on Copper Wire(0.6Ø)	Lead free
4	Marking Tape	Width 5.8mm	Lead free
⑤	Paper Tape	Width 6.0mm	Lead free

#### Radial



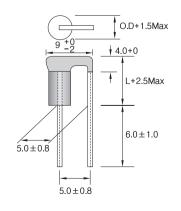
No.	Component Parts	Material	Remark
1	Epoxy Bond	ECP-200 Orange	Lead free
2	Ferrite Core	Ni-Zn Material	Lead free
3	Lead-Wire	Sn 100% Plat on Copper Wire(0.6Ø)	Lead free
4	Marking Tape	Heating Tape	Lead free
(5)	Hard Paper	18mm×0.38mm	Lead free

# **Shape & Dimensions**

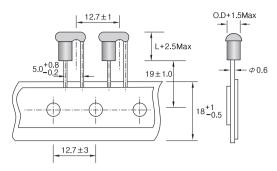
# **Radial Type**



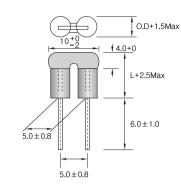
### BFS R2B Type



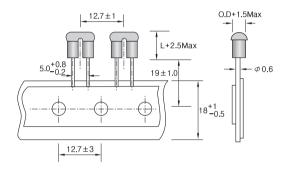
### BFS R2F Type



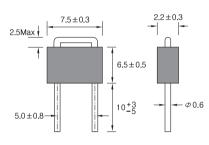
### BFD R2B Type



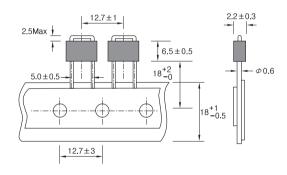
## BFD R2F Type



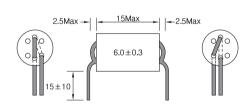
### BFW R2B Type



### BFW R2F Type

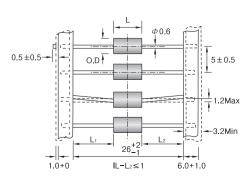


BFR 6010 Type



# **Axial Type**

## BFS A0S Type



### BFS A0L Type

