

AVFC 0603 series

Amotech Multilayer Chip EMI and ESD filter



Overview

This product is a multi-functioned filter for EMI/ESD protection of Feed through type, and main application fields are ESD protection of power line, remove noise, ESD prevention occurring from audio line such as speaker, receiver, microphone, and ear-jack, also eliminate TDMA noise to enhance audio performance.

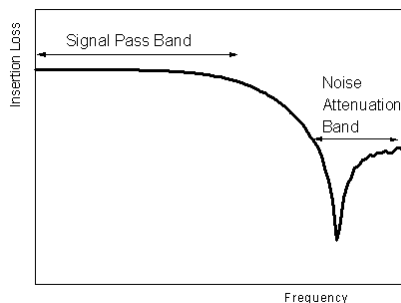


Fig 1 General characteristics of EMI & ESD filter

Features

- Feed through type 4channel array filter
- Four elements in one 0603 size chip
- IEC61000-4-2(ESD) Level #4 , IEC 61000-4-4(EFT) Level #4
- Multilayer laminated structure
- Low Insertion Loss

Applications

- Possible to apply variously for elimination of high frequency noise, and protection of ESD .
- Intercept noise generating from power line & audio line .
- Interrupt ESD flowing into the power source, speaker, microphone, etc .

Model Description

AVFC	5	S	03	Q	050
(1)	(2)	(3)	(4)	(5)	(6)

- (1) Series name : **“AVFC”** – Feed through Type EMI & ESD filter
- (2) Maximum continuous working voltage (Vdc) : **“5”**- 5.5V, **“14”**- 14V, **“18”**-18V
- (3) Varistor voltage tolerance : **“S”** - special order
- (4) Chip Size : **“03”** - 0603 (1.6 x 0.8 mm) , **“05”** – 0805 (2.0 x 1.2 mm)
- (5) Configuration : **“Q”**- Quad array (4 elements), **“D”**-Dual array (2 elements)
- (6) Capacitance : **“100”** =100pF, **“050”** = 50 pF, **“033”** = 33pF, **“015”** = 15pF

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Electrical characteristics

Part No.	Vdc ⁽¹⁾	Varistor voltage (Vn) @1mA DC	Cp (@ 1MHz, V _{rms} =0.5V)	Cp tolerance	IR (@3V DC)	Cut-off Frequency (-3dB)	Minimum -20dB ATT. Band
	(V)	(V)	(pF)	(%)	(MΩ)	(MHz)	(MHz)
AVFC 5S 03Q 100	5.5	14±4	100	±30	> 10	50	600~3000
AVFC 5S 03Q 050	5.5	14±4	50	±30	> 10	100	1000~3000
AVFC 5S 03Q 033	5.5	14±4	33	±30	> 10	150	1500~3000
AVFC 5S 03Q 015	5.5	14±4	15	±30	> 10	340	2500~3000

- (1) Maximum continuous DC working voltage
- (2) Series resistance between input and output

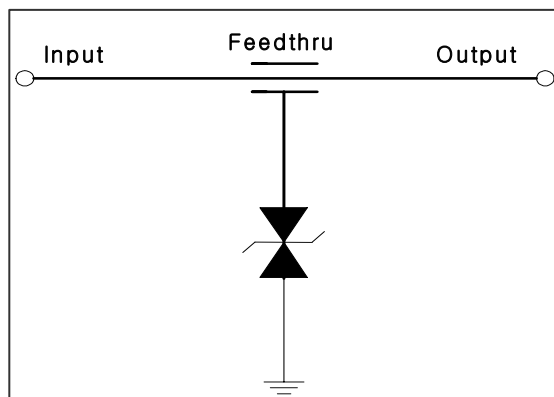
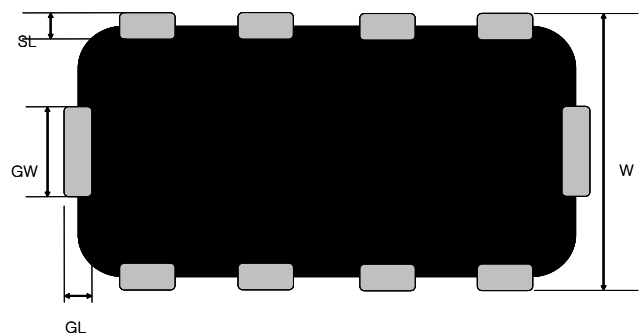
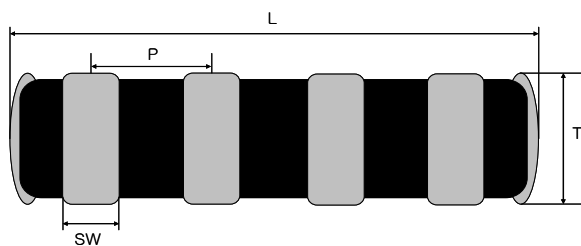


Fig.2 Equivalent Circuit

Appearance

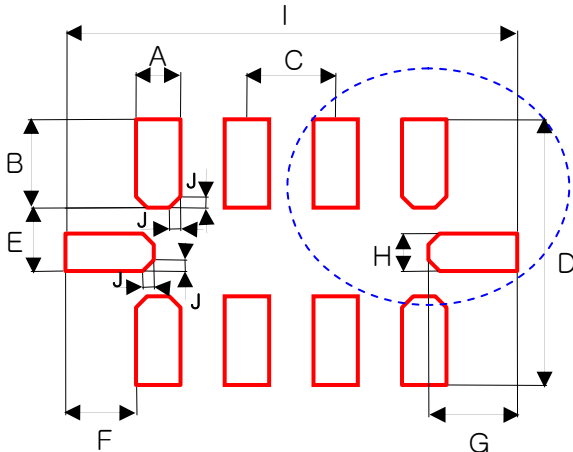


(Unit : mm)

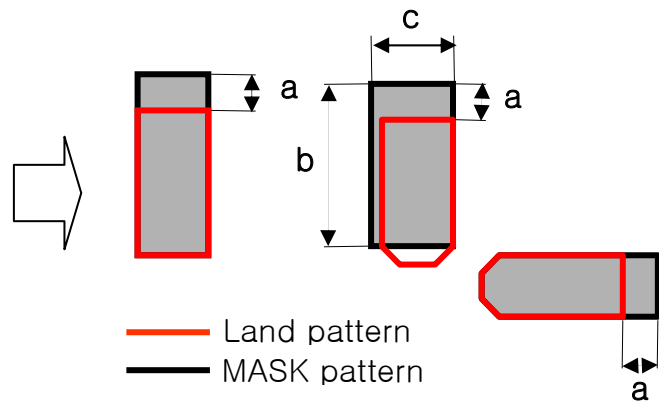
표기	L	W	T	GL	GW	SL	SW	P
치수	1.60±0.10	0.80±0.10	0.44±0.05	0.15±0.05	0.20±0.05	0.15±0.05	0.20±0.05	0.40±0.05

Recommended Land pattern (Typical Dimensions)

- Land pattern



- Mask (Stencil) pattern

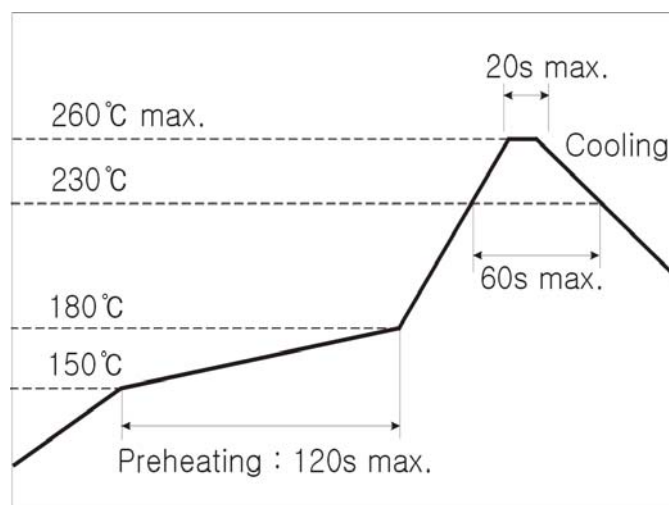


ITEM	A	B	C	D	E	F	G	H	I	J
Size (mm)	0.2	0.4	0.4	1.2	0.285	0.32	0.4	0.17	2.04	0.05

ITEM	a	b	c
Size (mm)	0.1	0.45	0.23

Recommended Soldering Profile

- Pb Free Solder Paste : Sn/Ag/Cu (96.5 / 3.0 / 0.5)



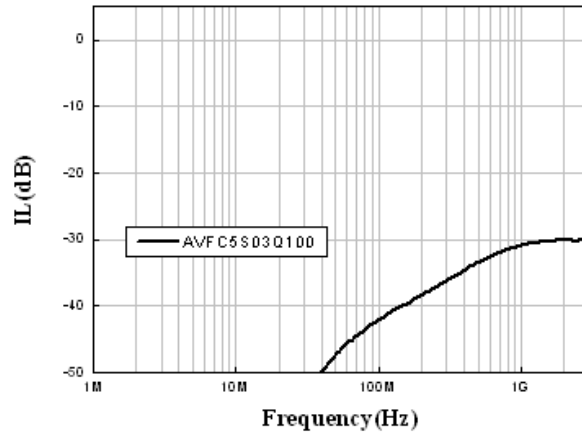
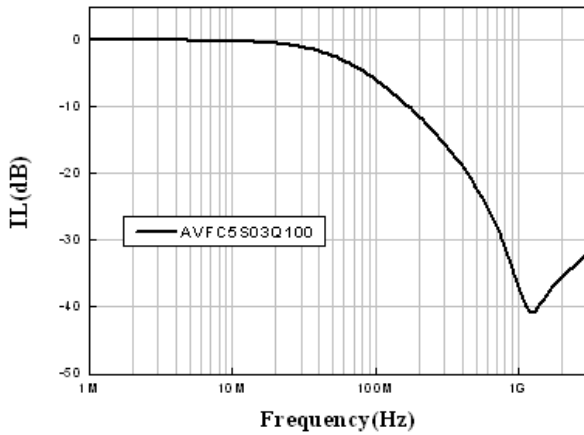
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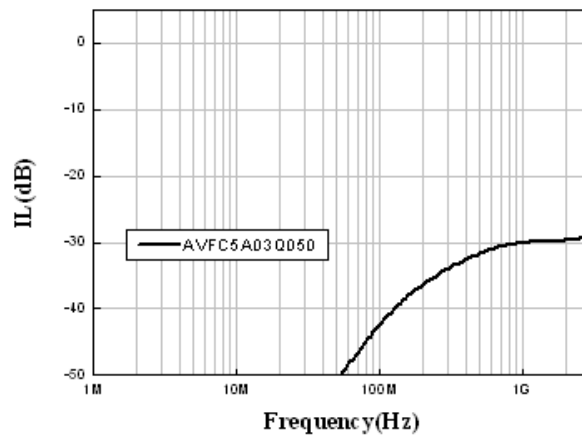
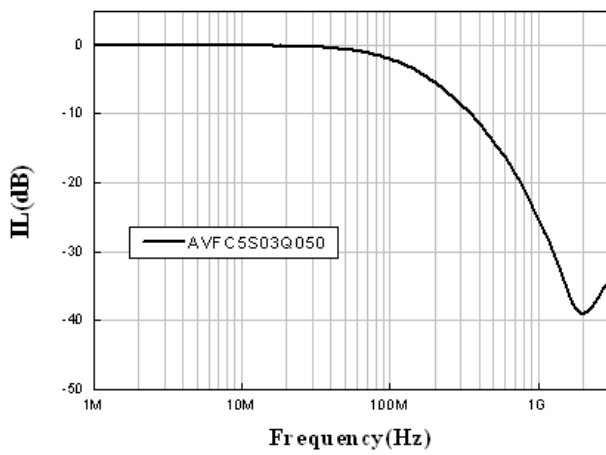


EMI Characteristics (Typical data)

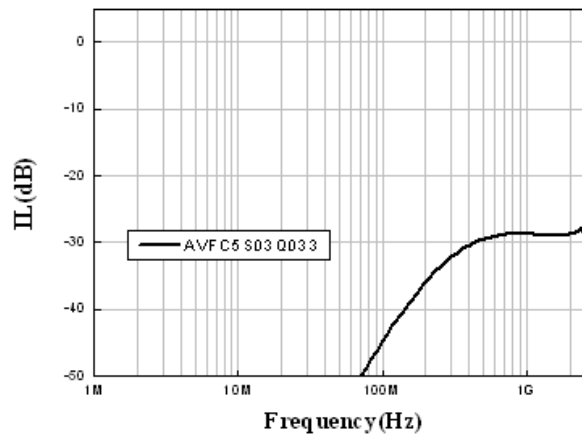
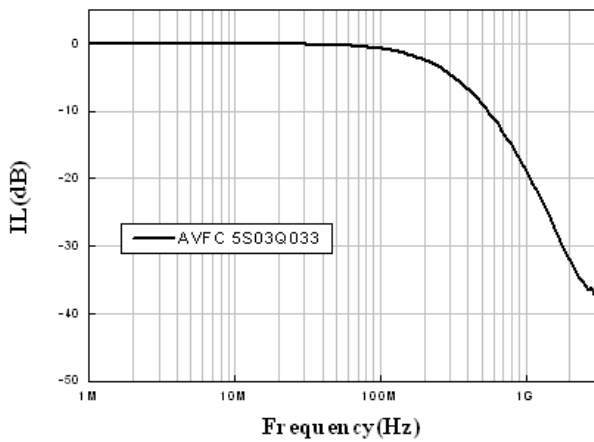
AVFC 5S 03Q 100



AVFC 5S 03Q 050



AVFC 5S 03Q 033

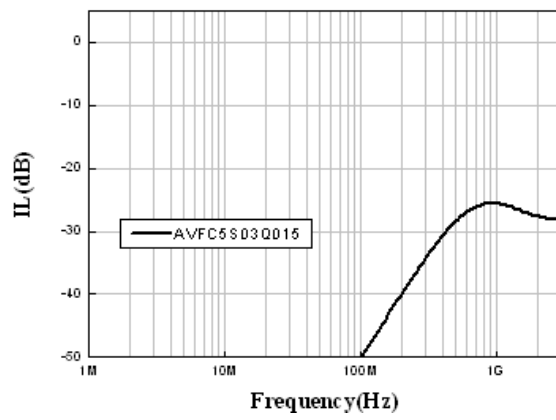
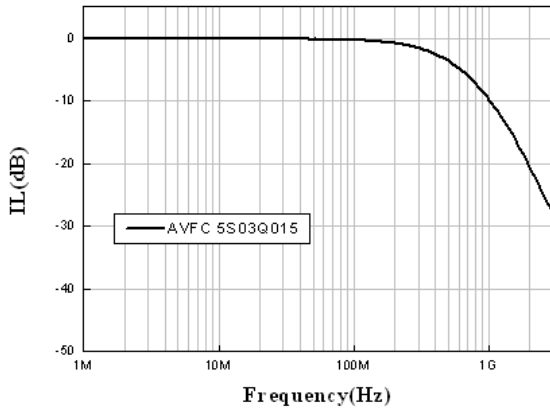


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AVFC 5S 03Q 015



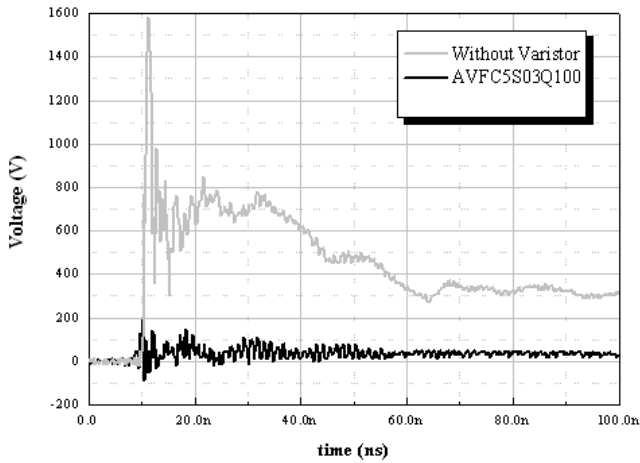
AVFC 0603 series

Amotech Multilayer Chip EMI and ESD filter

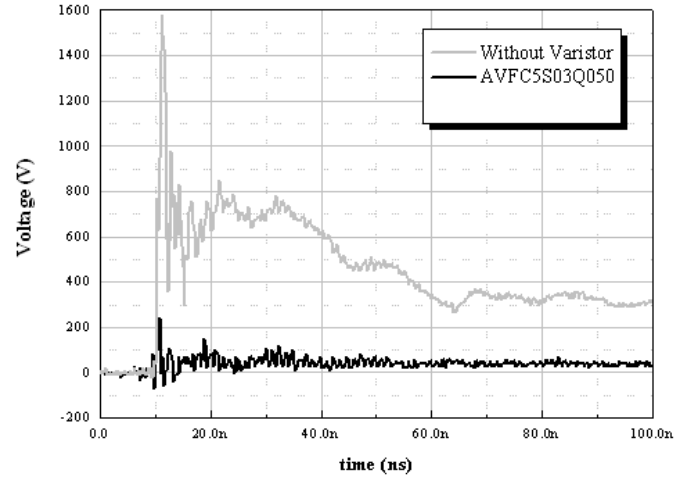


ESD Absorption Characteristics (Typical data)

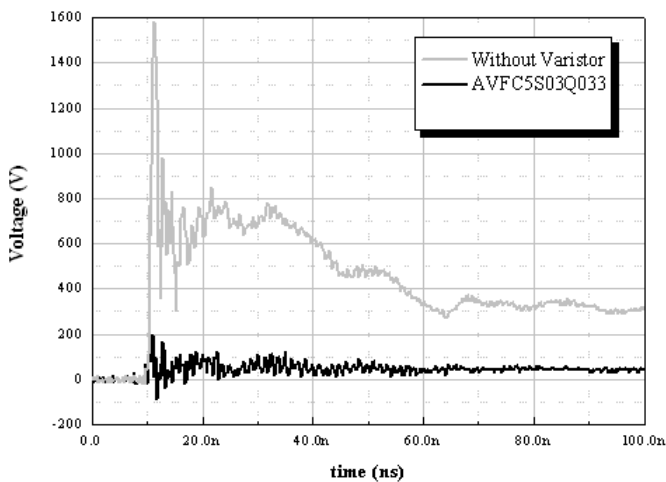
AVFC 5S 03Q 100



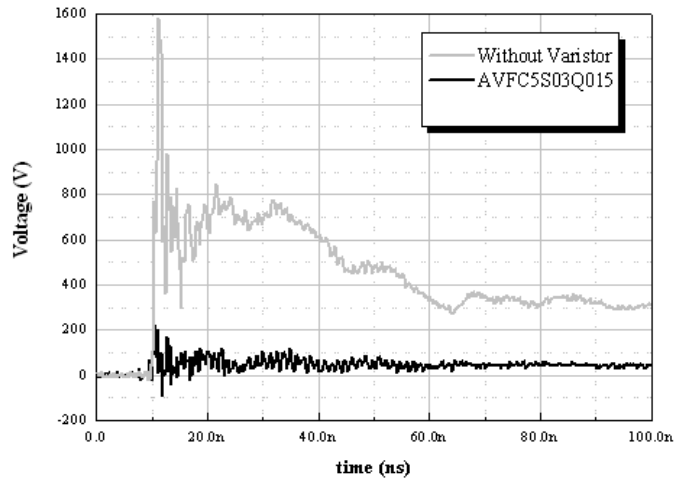
AVFC 5S 03Q 050



AVFC 5S 03Q 033



AVFC 5S 03Q 015



AVFC 0805 series

Amotech Multilayer Chip EMI and ESD filter



Overview

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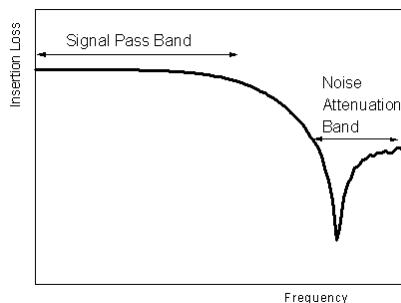


Fig 1 General characteristics of EMI & ESD filter

Features

- Feed through type 4channel array filter
- Four elements in one 0805 size chip
- IEC61000-4-2(ESD) Level #4 , IEC 61000-4-4(EFT) Level #4
- Multilayer laminated structure
- Low Insertion Loss

Applications

- Possible to apply variously for elimination of high frequency noise, and protection of ESD .
- Intercept noise generating from power line & audio line .
- Interrupt ESD flowing into the power source, speaker, microphone, etc .

Model Description

AVFC	5	S	05	Q	050
(1)	(2)	(3)	(4)	(5)	(6)

- (1) Series name : **“AVFC”** – Feed through Type EMI & ESD filter
- (2) Maximum continuous working voltage (Vdc) : **“5”**- 5V, **“14”**- 14V, **“18”**-18V
- (3) Varistor voltage tolerance : **“S”** - special order
- (4) Chip Size : **“03”** - 0306 (0.8 x 1.6 mm) , **“05”** – 0508 (1.2 x 2.0 mm)
- (5) Configuration : **“Q”**- Quad array (4 elements), **“D”**-Dual array (2 elements)
- (6) Capacitance : **“050”** = 50 pF, **“030”** = 30pF

AVFC 0805 series

Amotech Multilayer Chip EMI and ESD filter



Electrical characteristics

Part No.	Vdc ⁽¹⁾	Varistor voltage (Vn) @1mA DC	Cp (@ 1MHz, V _{rms} =0.5V)	Cp tolerance	IR (@3V DC)	Cut-off Frequency (-3dB)	Minimum -20dB ATT. Band
	(V)	(V)	(pF)	(%)	(MΩ)	(MHz)	(MHz)
AVFC 5S 05Q 100	5.5	14±4	100	±30	> 10	50	550~4000
AVFC 5S 05Q 050	5.5	14±4	50	±30	> 10	120	1000~4000
AVFC 14S 05Q 030	14	23±5	30	±30	> 10	210	1500~4000
AVFC 18S 05Q 015	18	30±6	15	±30	> 10	450	2500~4000

- (1) Maximum continuous DC working voltage
- (2) Series resistance between input and output

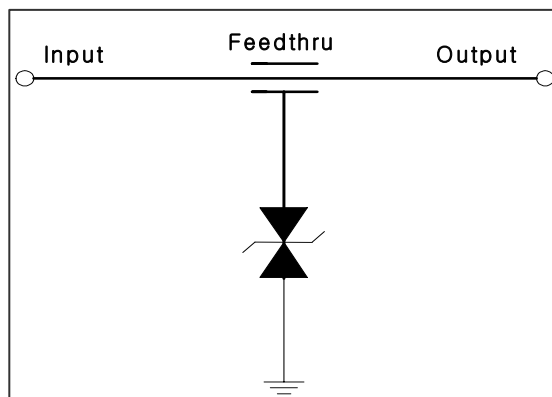
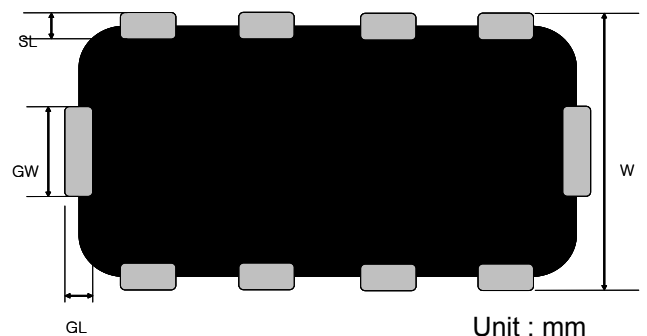
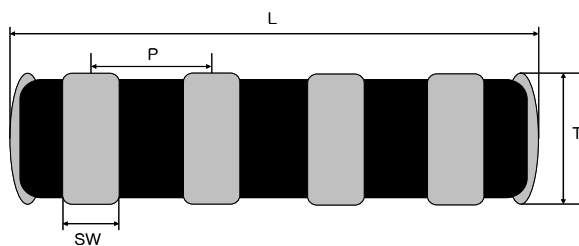


Fig.2 Equivalent Circuit

Appearance



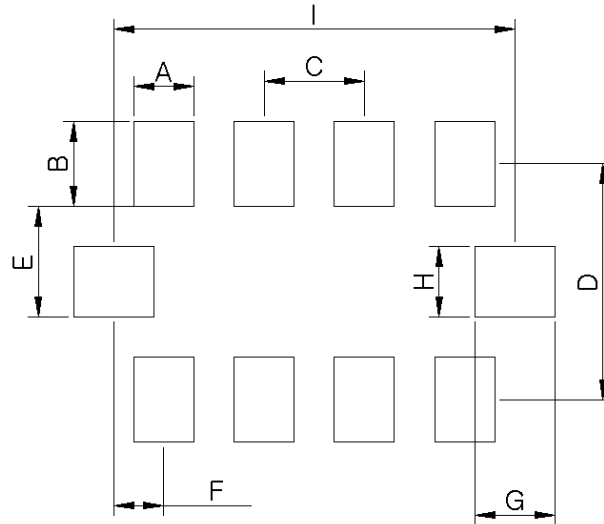
	L	W	T	GL	GW	SL	SW	P
size	2.05±0.10	1.25±0.10	0.55±0.10	0.25±0.10	0.30±0.10	0.25±0.10	0.25±0.10	0.50±0.10

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Recommended Land pattern (Typical Dimensions)

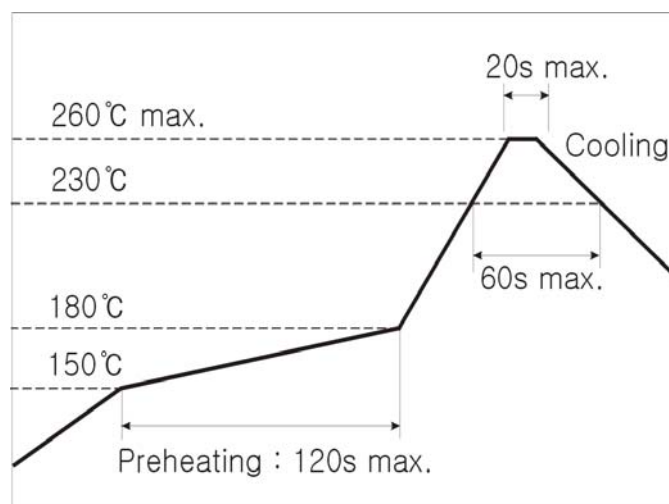


(Unit : mm)

A	B	C	D	E	F	G	H	I
0.3	0.42	0.5	1.17	0.55	0.25	0.4	0.35	2

Recommended Soldering Profile

- Pb Free Solder Paste : Sn/Ag/Cu (96.5 / 3.0 / 0.5)



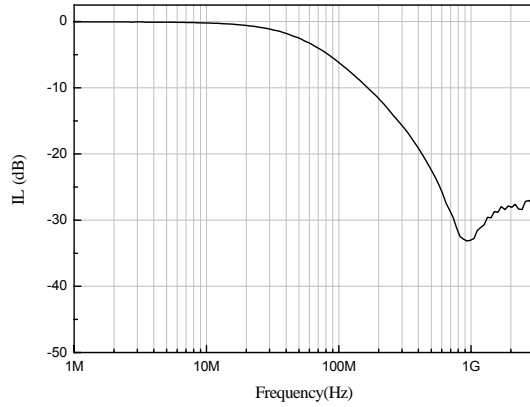
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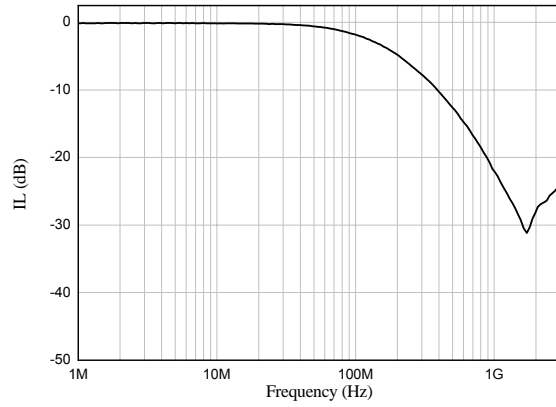


EMI Characteristics (Typical data)

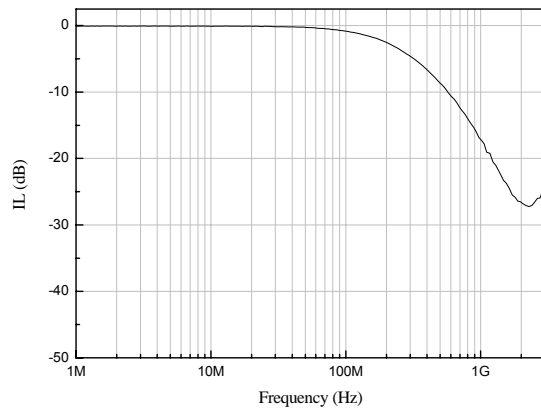
AVFC 5S 05Q 100



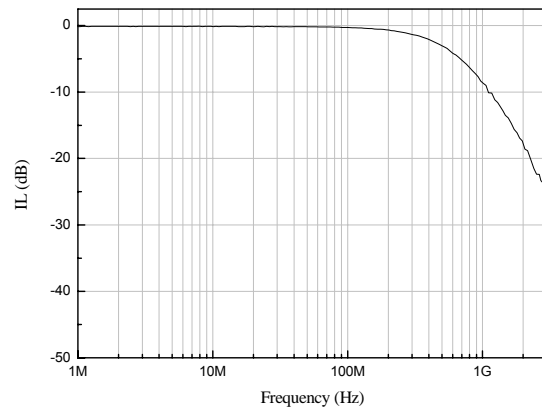
AVFC 5S 05Q 050



AVFC 14S 05Q 030



AVFC 18S 05Q 015

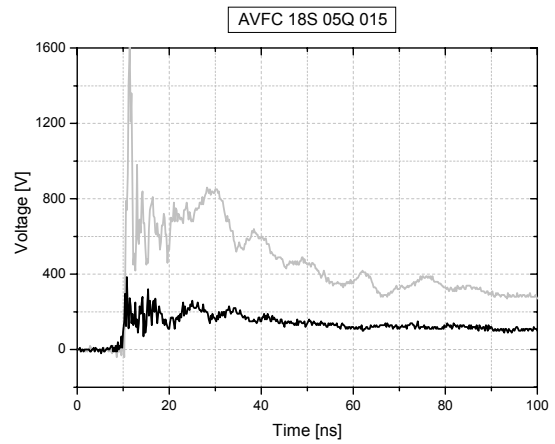
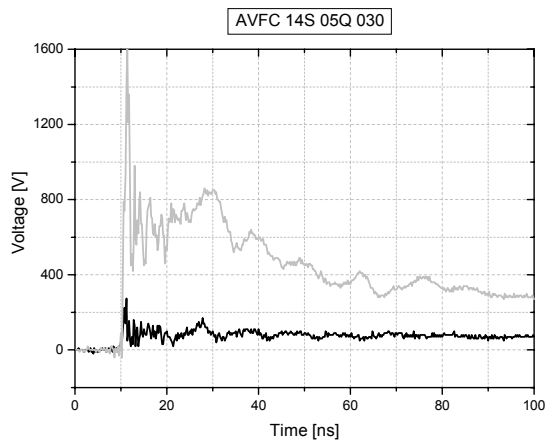
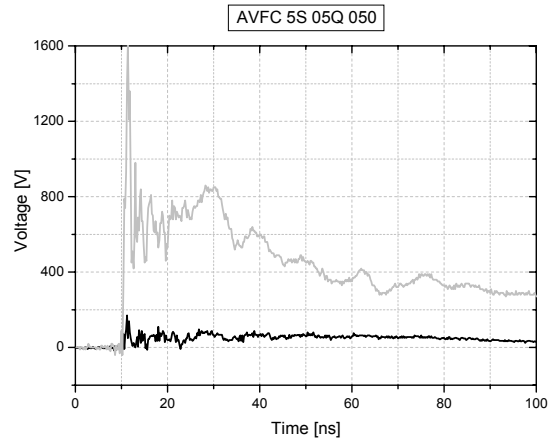
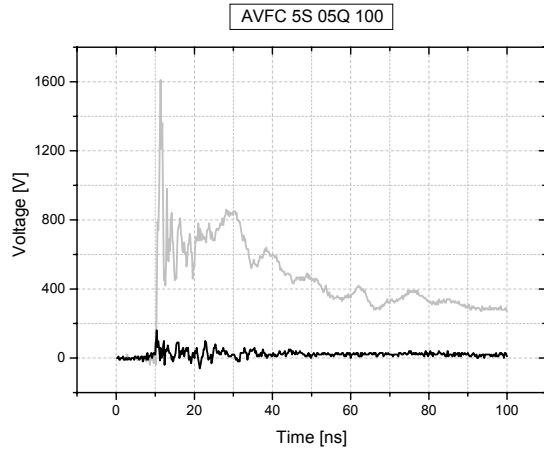


AVFC 0805 series

Amotech Multilayer Chip EMI and ESD filter



ESD Absorption Characteristics (Typical data)



AVFC 5S04D150

Amotech Multilayer Chip EMI and ESD filter



Overview

This product is a multi-functioned filter for EMI/ESD protection of Feed through type, and main application fields are ESD protection of power line, remove noise, ESD prevention occurring from audio line such as speaker, receiver, microphone, and ear-jack, also eliminate TDMA noise to enhance audio performance.

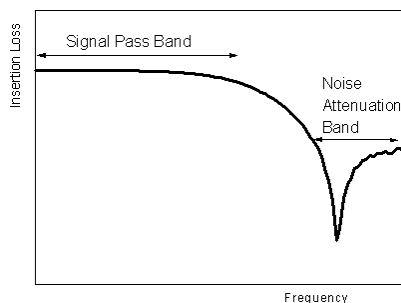


Fig 1 General characteristics of EMI & ESD filter

Features

- Lead free
- Feed through type 2 channel array filter
- 0504(1409 mm) size
- IEC 61000-4-2(ESD) Level #4
- Multilayer laminated structure
- Low Insertion Loss

Applications

- Possible to apply variously for elimination of high frequency noise, and protection of ESD .
- Intercept noise generating from power line & audio line .
- Interrupt ESD flowing into the power source, speaker, microphone, etc .

Model Description

AVFC	5	S	04	D	150
(1)	(2)	(3)	(4)	(5)	(6)

- (1) Series name : “**AVFC**” means **F**eed through Type EMI & ESD filter
- (2) Maximum continuous working voltage (Vdc) : “**5**” means **5.5V**
- (3) Varistor voltage tolerance : “**S**” means **s**pecial order
- (4) Chip Size : “**04**” means **0504** (1.4 x 0.9 mm)
- (5) Configuration : “**D**” means **D**ual array (2 elements)
- (6) Capacitance : “**150**” means **150** pF,

AVFC 5S04D150

Amotech Multilayer Chip EMI and ESD filter



Electrical characteristics

Part No.	Vdc ⁽¹⁾	Varistor voltage (Vn) @1mA DC	Cp (@ 1MHz, V _{rms} =0.5V)	Cp tolerance	IR (@3V DC)	Cut-off Frequency (-3dB)	Minimum -20dB ATT. Band
	(V)	(V)	(pF)	(%)	(MΩ)	MHz	MHz
AVFC 5S 04D 150	5.5	14±4	150	±30	> 10	35	400~3000

(1) Maximum continuous DC working voltage

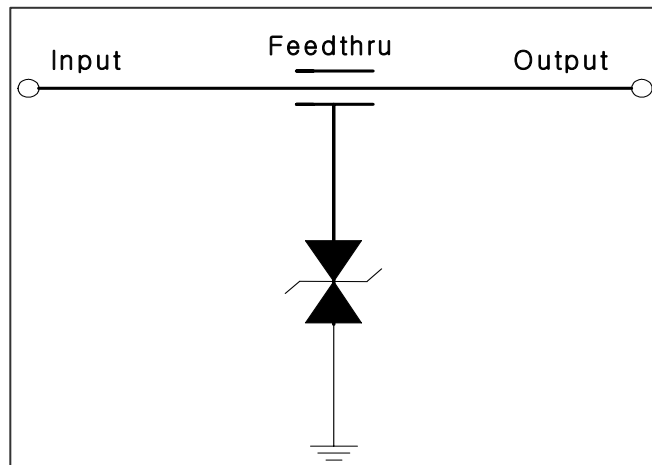
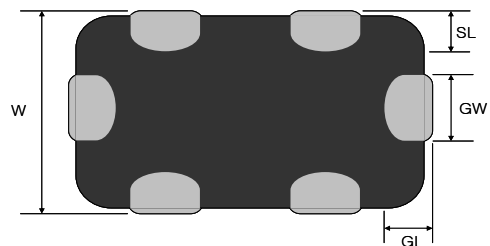
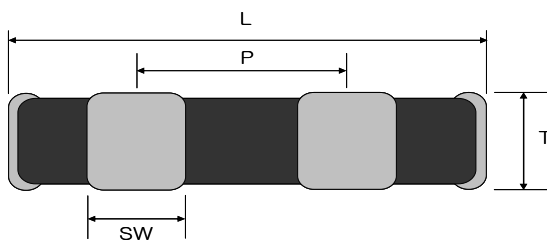


Fig.2 Equivalent Circuit

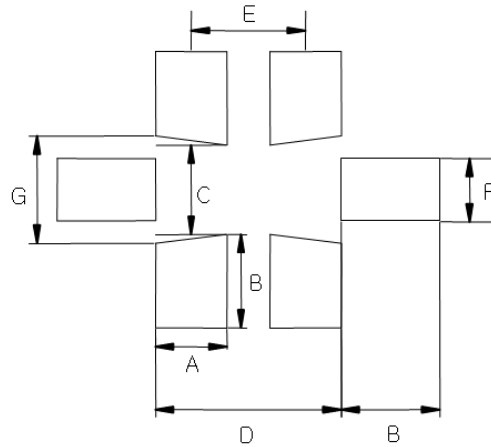
Appearance



(Unit : mm)

Symbol	L	W	T	GL	GW	SL	SW	P
Dimensions	1.40±0.10	0.90±0.0	0.55±0.15	0.25±0.10	0.30±0.05	0.25±0.10	0.30±0.05	0.64±0.05

Recommended Land pattern (Typical Dimension)

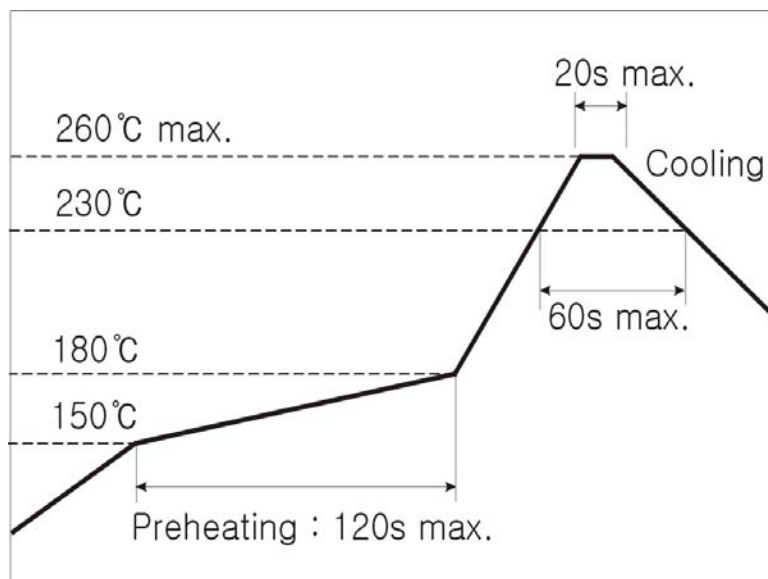


(unit : mm)

Symbol	A	B	C	D	E	F	G
Dimension	0.35	0.5	0.5	1.04	0.64	0.35	0.65

Recommended Soldering Profile

- Pb Free Solder Paste : Sn/Ag/Cu (96.5 / 3.0 / 0.5)

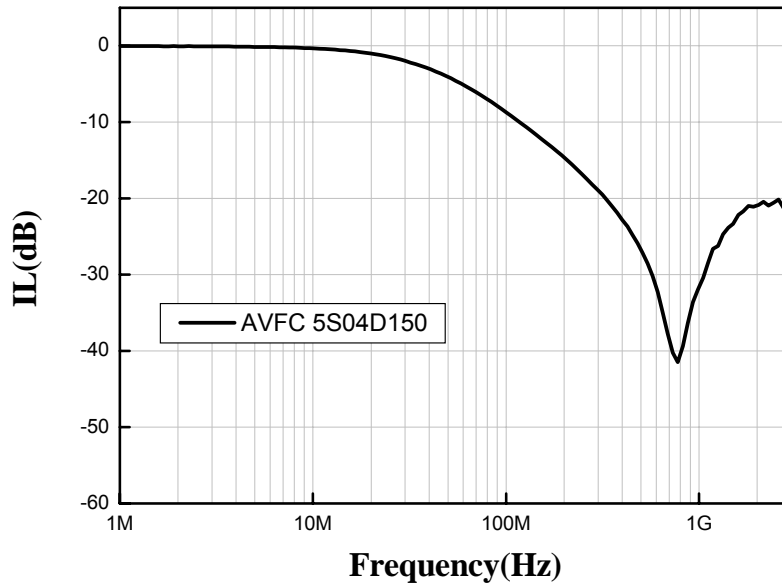


AVFC 5S04D150

Amotech Multilayer Chip EMI and ESD filter



EMI Characteristics (Typical data)



ESD Characteristics (Typical data)

