

AVRC 0603 series

Amotech Multilayer Chip EMI and ESD filter



Overview

This product is a multi-functioned filter for EMI/ESD protection with C-R-C structure of type Π (π), and mainly uses it to interrupt EMI noise at the end of camera and LCD, and uses to protect ESD of high voltage. Especially, it shows its excellent reduction characteristics at the 800 ~ 3,000GHz band in the receiving base band of terminal.

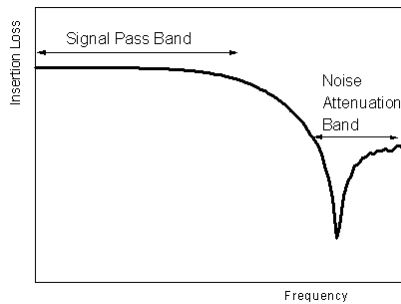


Fig 1 General characteristics of EMI & ESD filter

Features

- R-C type 4 channels array filter
- 0603 size
- IEC 61000-4-2 (ESD) Level #4, MSL Level #1
- Multilayer laminated structure

Applications

- Possible to apply variously for elimination of high frequency noise, and protection of ESD.
- Intercept noise generating from control line and data line of LCD & Camera module.
- Interrupt ESD flowing into the LCD and camera module.

Model Description

AVRC	5	S	03	Q	050	100R
(1)	(2)	(3)	(4)	(5)	(6)	(7)

- (1) Series name : "AVRC" - R-C 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)
- (5) Configuration : "Q" - Quad array (4 elements)
- (6) Capacitance : "050" - C1+C2 = 50 pF,
- (7) Typical Resistance : "100R" - 100 \pm 30 Ω

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Electrical characteristics

Part No.	Vdc ⁽¹⁾	Varistor voltage (Vn) @1mA DC	Rdc R series between I/O ⁽²⁾	Rdc tolerance	Cp (@ 1MHz, V _{rms} =0.5V) C1+C2	Cp tolerance	IR (@3V DC)	Cut-off Frequency (-3dB)	Minimum -20dB ATT. Band
	(V)	(V)	(Ω)	(%)	(pF)		(MΩ)	(MHz)	(MHz)
AVRC 5S 03Q 050 050R	5.5	14±4	50	±30	25+25	±30 %	> 10	70	600~3000
AVRC 5S 03Q 050 100R	5.5	14±4	100	±30	25+25	±30 %	> 10	70	450~3000
AVRC 5S 03Q 050 200R	5.5	14±4	200	±30	25+25	±30 %	> 10	70	350~3000
AVRC 5S 03Q 050 400R	5.5	14±4	400	±30	25+25	±30 %	> 10	70	300~3000
AVRC 14S 03Q 030 050R	14	23±5	50	±30	15+15	±30 %	> 10	100	800~3000
AVRC 14S 03Q 030 100R	14	23±5	100	±30	15+15	±30 %	> 10	100	700~3000
AVRC 14S 03Q 030 200R	14	23±5	200	±30	15+15	±30 %	> 10	120	650~3000
AVRC 14S 03Q 030 400R	14	23±5	400	±30	15+15	±30 %	> 10	120	600~3000
AVRC 18S 03Q 015 010R	18	30±6	10	±30	7.5+7.5	±30 %	> 10	350	1700~3000
AVRC 18S 03Q 015 050R	18	30±6	50	±30	7.5+7.5	±30 %	> 10	350	1500~3000
AVRC 18S 03Q 015 100R	18	30±6	100	±30	7.5+7.5	±30 %	> 10	350	1100~3000
AVRC 18S 03Q 007 010R	18	40±8	10	±30	3.5+3.5	3~7pF	> 10	850	3500~5000
AVRC 18S 03Q 007 050R	18	40±8	50	±30	3.5+3.5	3~7pF	> 10	850	3100~5000

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

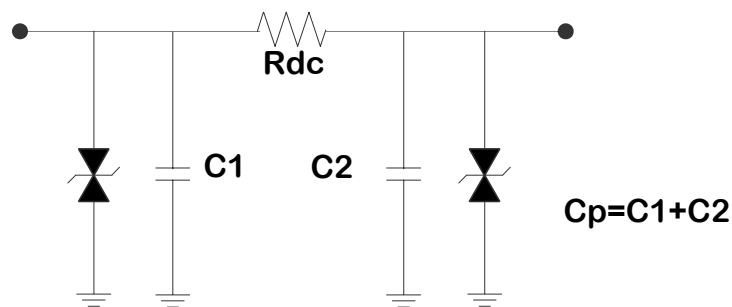


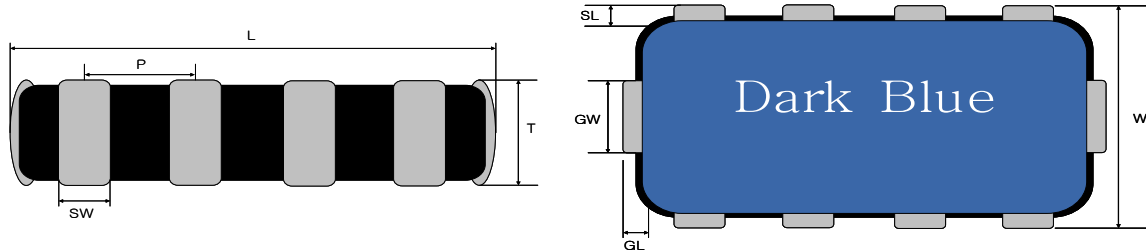
Fig.2 Equivalent Circuit

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Appearance



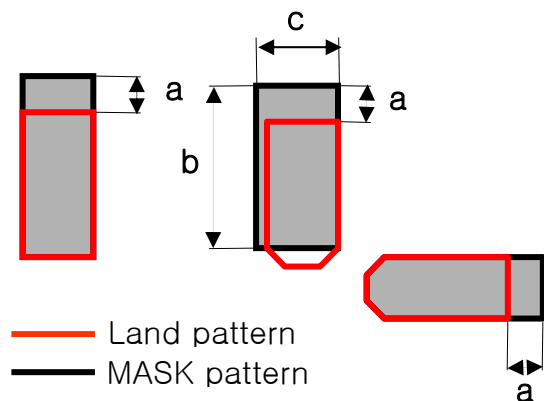
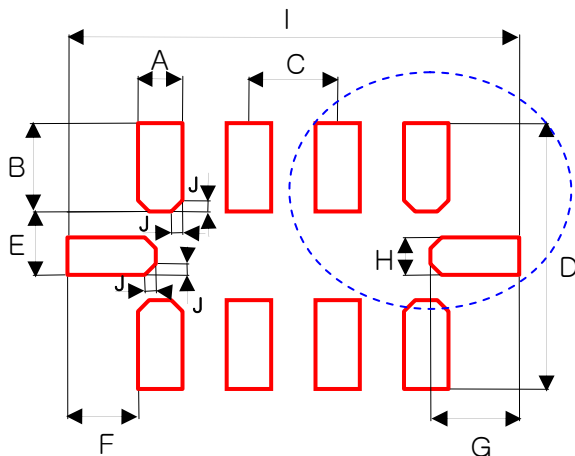
(Unit : mm)

	L	W	T	GL	GW	SL	SW	P
Size	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

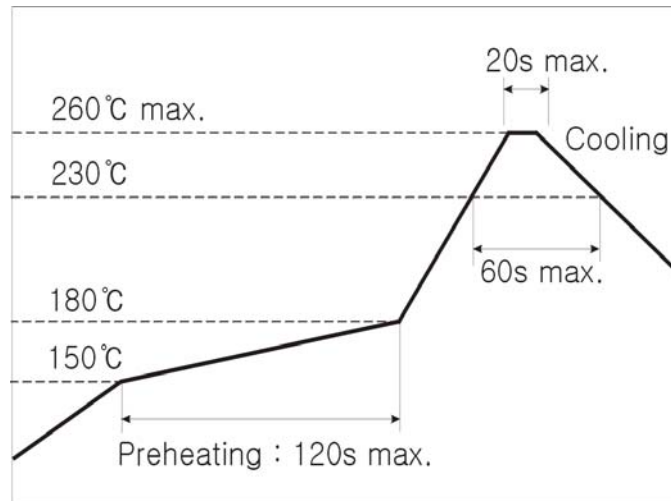
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Recommended Soldering Profile

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

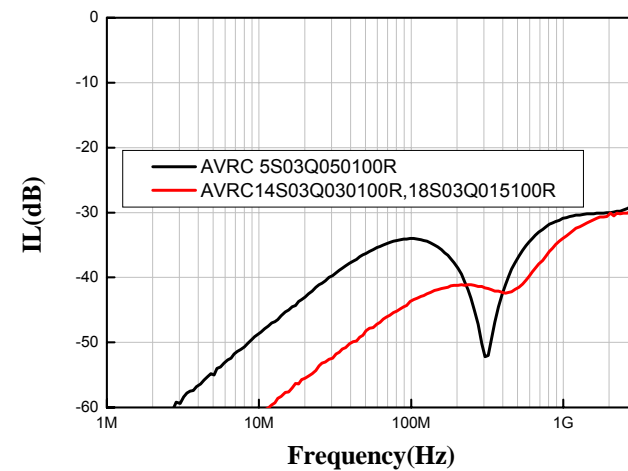
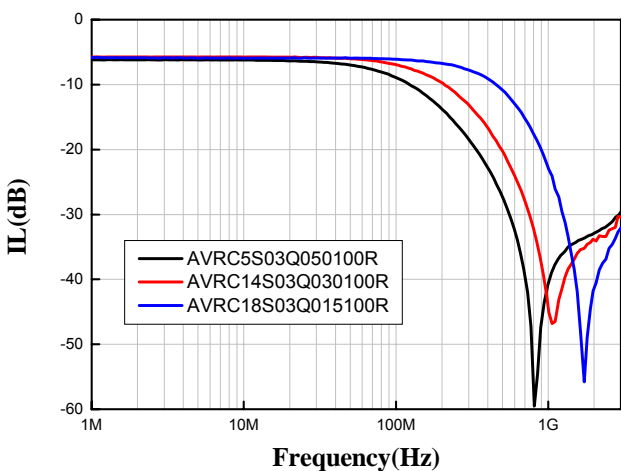
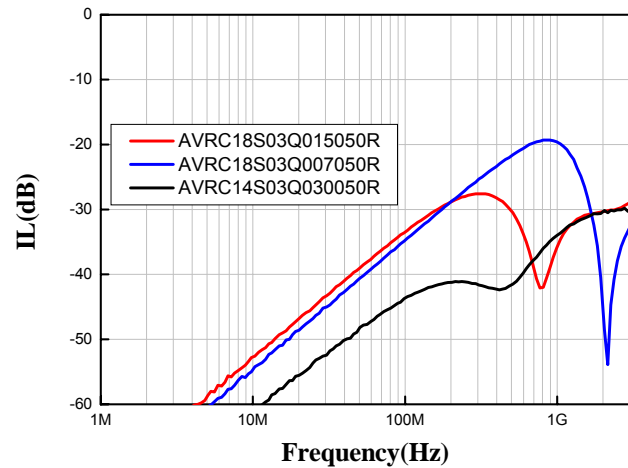
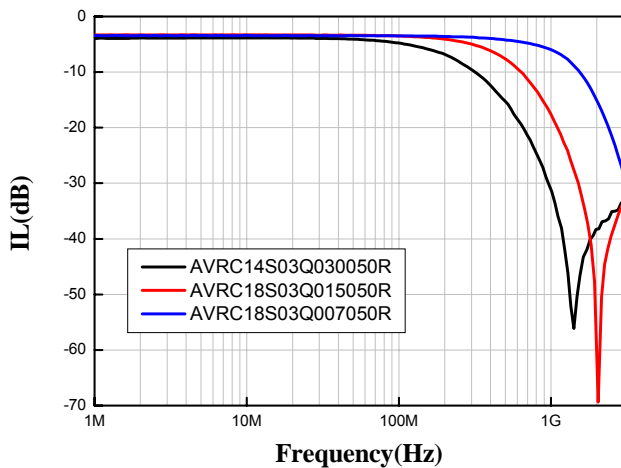
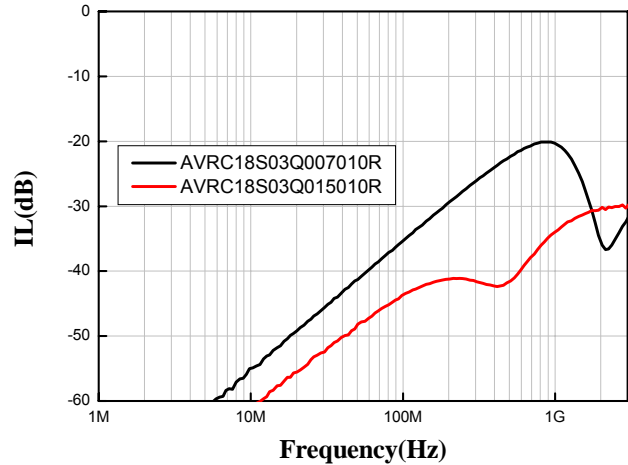
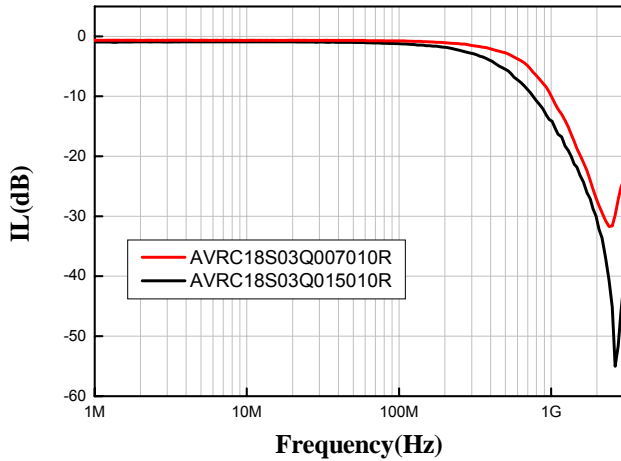


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EMI Characteristics (Typical data)



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