

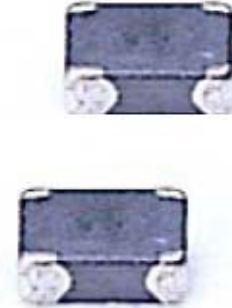
# SUNLEI TECHNOLOGY CORP.

## Multilayer Chip Common Mode Filter-MCM- Series

MCM series For USB 2.0/ IEEE1394/ LVDS

### Features

- 1.Monolithic morganic meteral construction
- 2.Closed magnetic circuit avoids crosstalk
- 3.Suitable for flow and reflow soldering.  
Effective for common mode noise suppression digital
- 4.equipment which radiation from cables.



### Applications

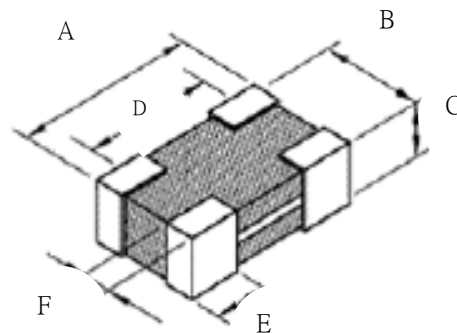
- 1.Excellent solderability and heat resistance
- 2.High reliability
- 3.Used as acommon mode filter for usb2.0&IEEE13394

### Product Identification

MCM 2012B- 121 - PF

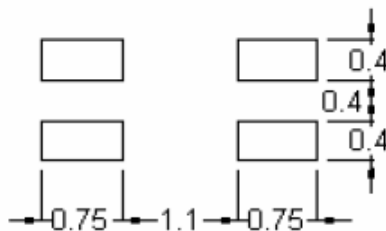
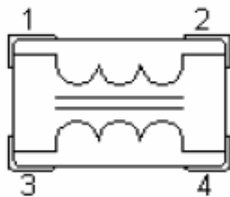
MCM: SERIES NAME  
 2012: DIMENSION SIZE CODE  
 B: Material Type CODE  
 121: IMPEDANCE CODE.  
 PF: Pb Free

### Dimensions (mm)



SERIES	A	B	C	D	E	F
MCM2012	2.0±0.2	1.25±0.2	1.0±0.2	1.6±0.2	0.4±0.2	0.3±0.2

### Recommended Pattern(mm)

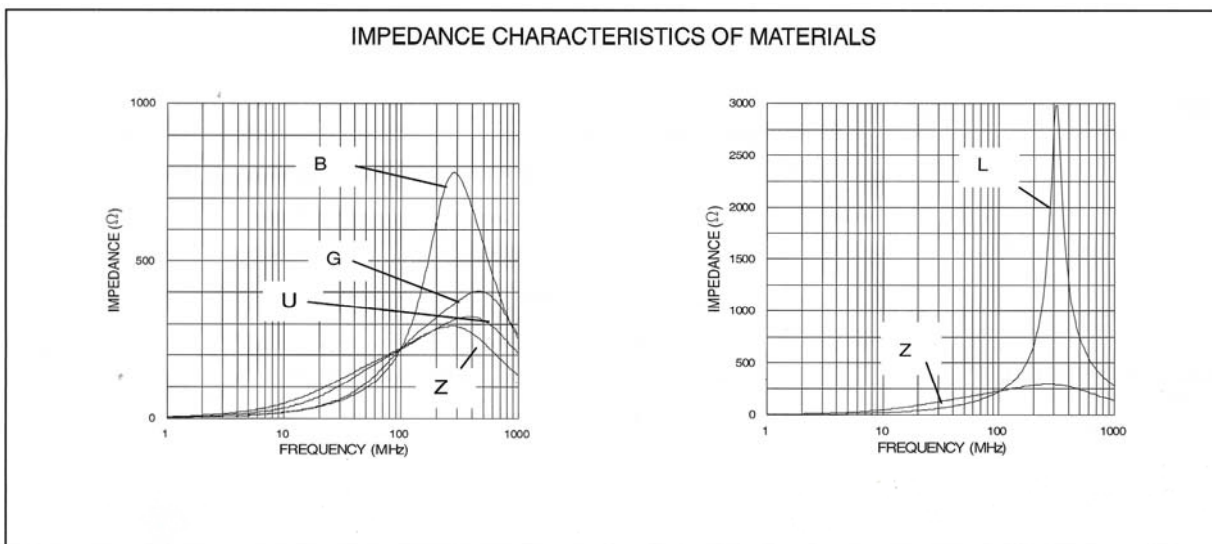


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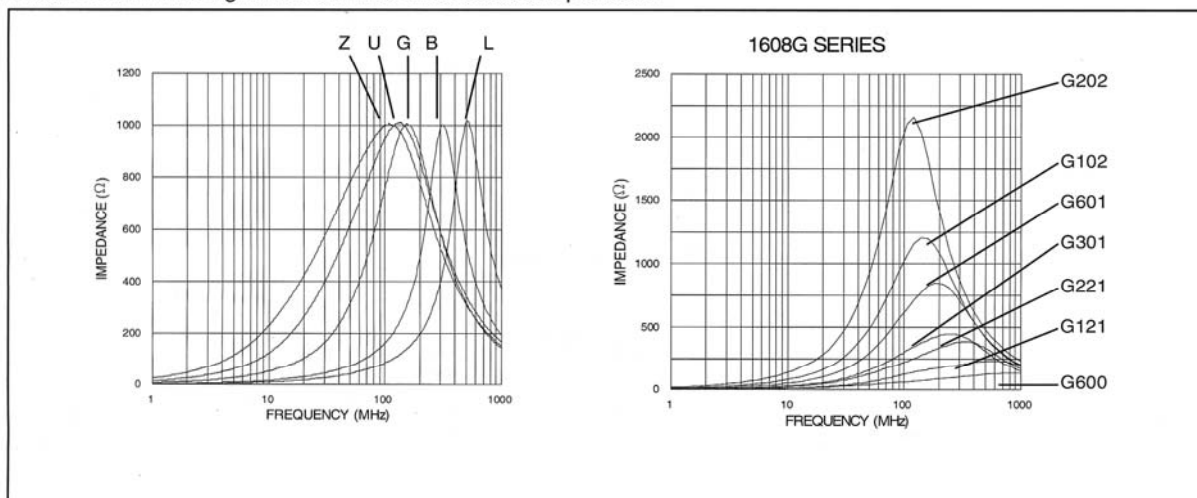
## Multilayer Chip Common Mode Filter-MCM- Series

### MATERIAL CHARACTERISTICS

ITEM	UNIT	Material Code				
		L	B	G	U	Z
Initial Permeability $\mu_{iac}$	-	25	45	110	200	500
Maximun Permeability $\mu_M$	-	125	125	250	450	900
Saturation Flux Density at 10 Oe $B_s$	Gauss	2000	2000	1700	1400	1500
Curie Temperature $T_c$	$^{\circ}C$	>200	>200	>130	>130	>100
Volume Resistivity $\rho$	$\Omega\text{-m}$	105	105	105	105	105
Temperature Coefficient(Inductance)	$10^{-4}/^{\circ}C$	10		12	13	5
Density	$g/cm^3$	4.8		4.8	4.8	4.8



- ◇ Z Material is for applications whose blocking region is near 100 MHz.
- ◇ L material, an improvement of B material, has sharp impedance characteristics at high frequency.
- ◇ G material is for application whose signal frequency is far from the cut off region. Suitable for application requires low insertion loss at high frequency.
- ◇ Please confirm the signal waveform to choose suitable products.



- ◇ Different materials are available for different application range.
- ◇ With one material, higher impedance has sharper characteristics.

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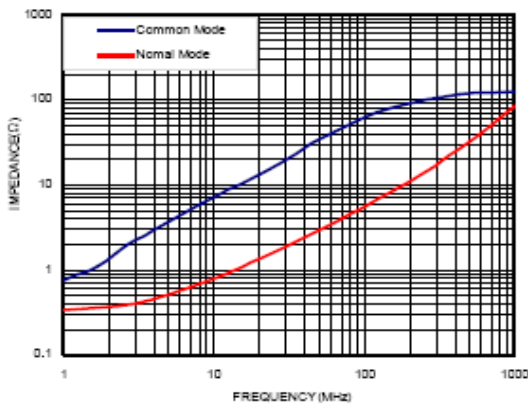
## Multilayer Chip Common Mode Filter-MCM- Series

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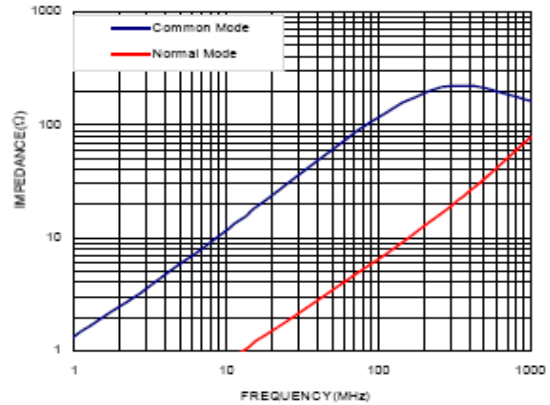
Part Number	Test Frequency (MHz)	Impedance ( $\Omega \pm 25\%$ )	DC Resistance ( $\Omega$ )max	Rated current (mA)max	Rated voltage Vdc
MCM2012B-670-PF	100/60mV	67	0.60	400	10
MCM2012B-900-PF	100/60mV	90	0.70	400	10
MCM2012B-121-PF	100/60mV	120	0.85	400	10
MCM2012B-161-PF	100/60mV	160	1.00	350	10
MCM2012B-221-PF	100/60mV	220	1.20	300	10

Test Instruments:HP4291A Impedance / Material Analyzer

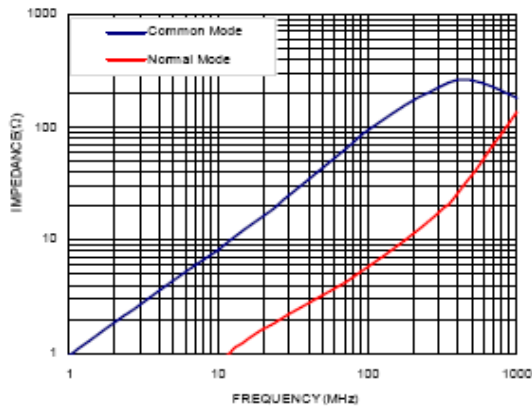
MCM2012B-670-PF



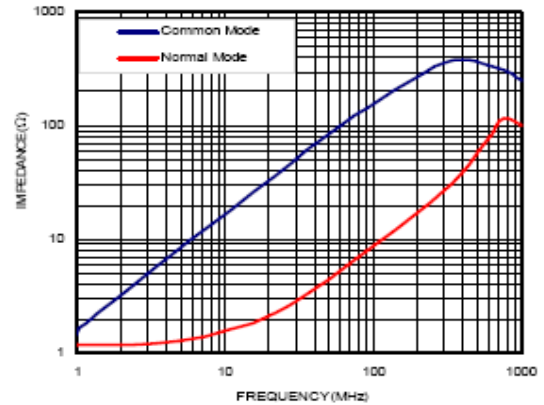
MCM2012B-900-PF



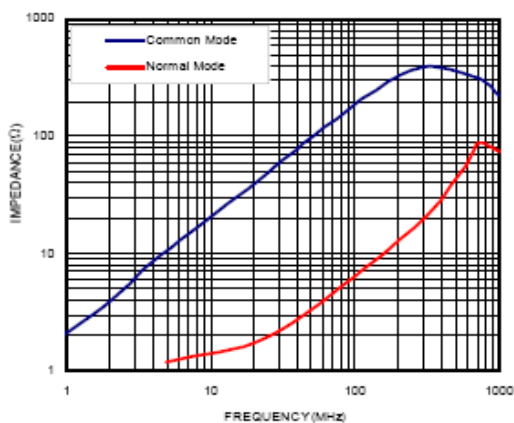
MCM2012B-121-PF



MCM2012B-161-PF

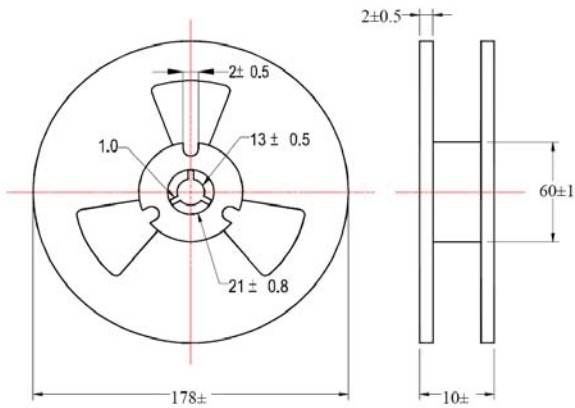


MCM2012B-221-PF

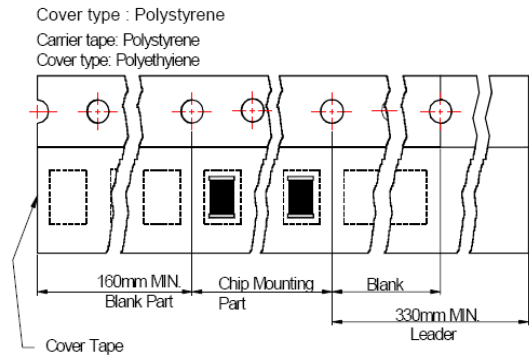


## PACKAGING

### REEL Dimensions (mm)



### TAPE Material

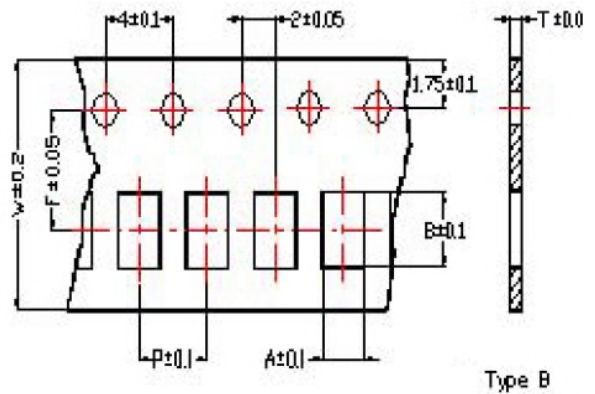
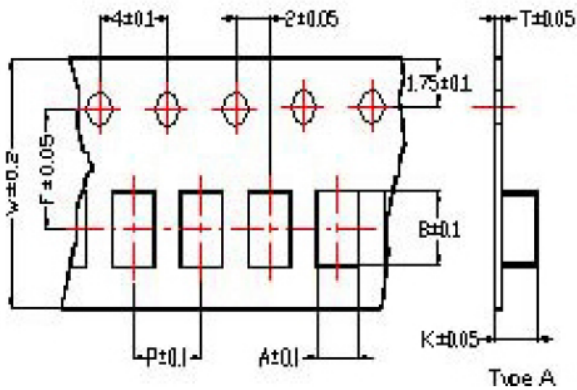


Carrier Tape: Polystyrene (for 201209, 201212, 321611 series)  
Paper (for 160808)

### Tape Dimensions (mm)

Figure A

Figure B



### TAPE DIMENSIONS AND PACKAGING QUANTITIES

TYPE	A	B	W	P	T	CHIPS / REEL
2012	1.42	2.24	8	4	0.22	3000