Chip Common Mode Filter
MCM Series

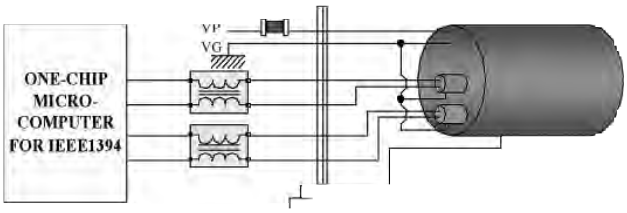
Features

- Powerful component with composite co-fired material to solve EMI problem for high-speed differential signal transmission line as USB, IEEE1394 and LVDS, without distortion to high speed signal transmission.
- High coupling constant : 0.99
- Small size and low profile.
- Various common mode impedance items of 90 to 550 ohm can be used, considering noise level and signal frequency.
- Small dimension enable higher density packaging.

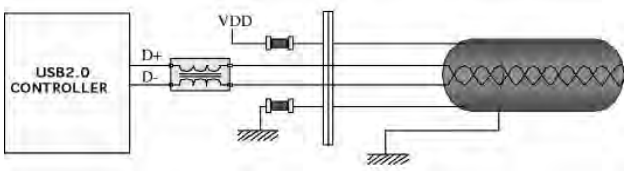
Applications

Common mode noise suppression of signal lines in high speed and high density digital equipment such as personal computer, facsimiles, modem, and digital telephones.

IEEE 1394



USB 2.0



How to Order

MCM 3216 B 90 0 H B —

1 2 3 4 5 6 7 8

1 Series Type: MCM—Common Mode Filter

2 Size (mm): Length x Width

3 Material Code
B—for High Speed type
H—for Standard type

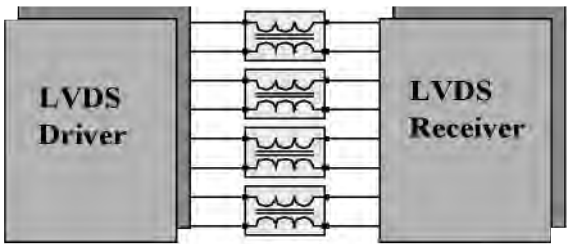
4 Impedance Value (Ω)/±25%
5 Fixed Decimal Point
ex.: 90Ω → 900; 120Ω → 121

6 Rated current:
A=50mA, B=80mA, C=100mA, D=150mA, E=200mA, F=300mA
G=400mA, H=500mA, I=600mA, J=700mA, K=800mA

7 Soldering: Green Parts: A—Soldering Lead-Free, B—Lead-Free for whole chip

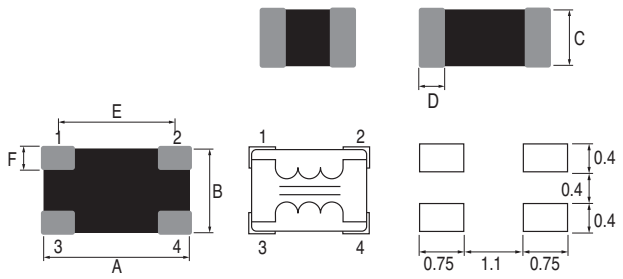
8 Packaging: E—Embossed plastic tape, 7" reel
N—Embossed anti-static electricity tape, 7" reel
T—Embossed anti-static electricity tape, 13" reel

LVDS

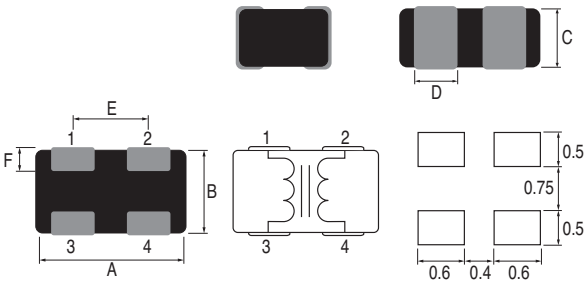


Dimensions

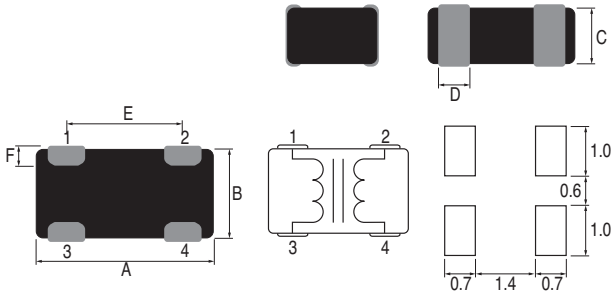
MCM 2012 series



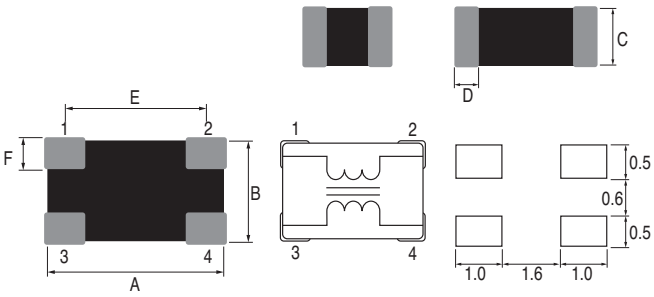
MCM 1220 series



MCM 3216 series



MCM 1632 series

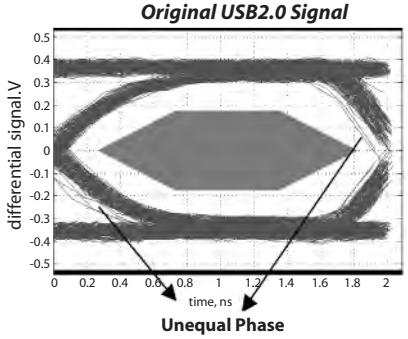


Unit:mm

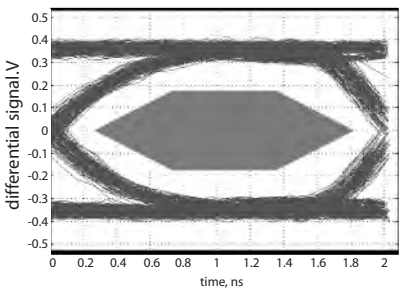
Size (EIA)	2012 (0805)	1220 (0508)	3216 (1206)	1632 (0612)
A	2.00±0.20	2.00±0.20	3.20±0.20	3.20±0.20
B	1.25±0.20	1.25±0.20	1.60±0.20	1.60±0.20
C	1.10±0.20	1.10±0.20	1.10±0.20	1.10±0.20
D	0.40±0.20	0.60±0.20	0.70±0.20	0.60±0.20
E	1.60±0.20	1.00±0.20	2.10±0.20	2.60±0.20
F	0.30±0.20	0.25±0.20	0.30±0.20	0.45±0.20

Signal Quality Test Result

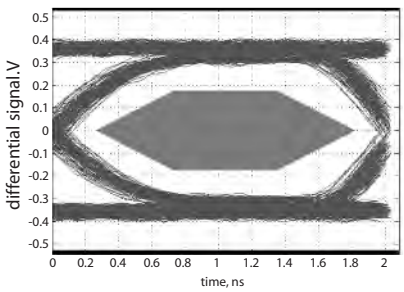
Original USB2.0 Signal



USE MCM2012B900G



USE MCM3216B900H

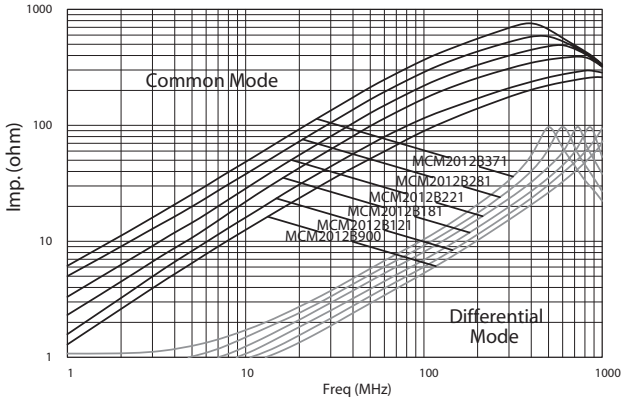


Specifications

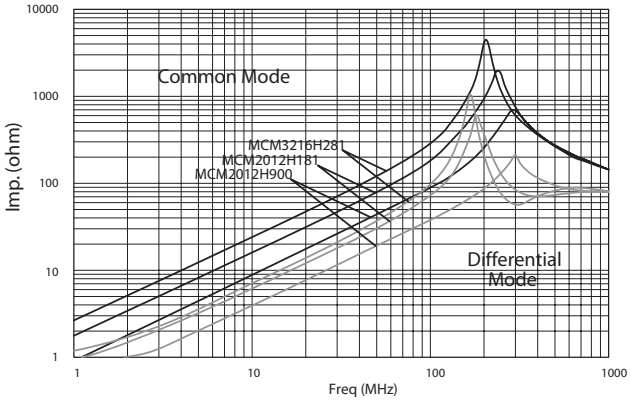
Part Number	Impedance at 100MHz (Ω)	DCR Max. (Ω)	DCR typ. (Ω)	Rated Current (mA)	Rated Voltage (V)	Withstand Voltage (V)	Insulation resistance Min. (MΩ)
2012 (EIA 0805)							
MCM2012B900G	90	0.70	0.30	400	10	25	200
MCM2012B121G	120	0.80	0.35	400	10	25	200
MCM2012B181G	180	0.90	0.40	400	10	25	200
MCM2012B221F	220	1.00	0.50	300	10	25	200
MCM2012B281F	280	1.10	0.60	300	10	25	200
MCM2012B371F	370	1.20	0.70	300	10	25	200
MCM2012H900G	90	0.50	0.30	400	10	25	100
MCM2012H181G	180	0.60	0.40	400	10	25	100
MCM2012H281F	280	0.70	0.50	300	10	25	100
1220 (EIA 0508)							
MCM1220B900G	90	0.70	0.30	400	10	25	200
MCM1220B121G	120	0.80	0.35	400	10	25	200
MCM1220B181G	180	0.90	0.40	400	10	25	200
MCM1220B221F	220	1.00	0.50	300	10	25	200
MCM1220B281F	280	1.10	0.60	300	10	25	200
MCM1220B371F	370	1.20	0.70	300	10	25	200
3216 (EIA 1206)							
MCM3216B900H	90	0.70	0.30	500	10	25	200
MCM3216B121H	120	0.80	0.35	500	10	25	200
MCM3216B181G	180	0.90	0.40	400	10	25	200
MCM3216B221G	220	1.00	0.45	400	10	25	200
MCM3216B281G	280	1.00	0.55	400	10	25	200
MCM3216B371F	370	1.10	0.60	300	10	25	200
MCM3216B471F	470	1.20	0.70	300	10	25	200
MCM3216B551F	550	1.30	0.80	300	10	25	200
MCM3216H900J	90	0.30	0.20	700	10	25	100
MCM3216H121G	120	0.30	0.20	400	10	25	100
MCM3216H201G	200	0.35	0.30	400	10	25	100
MCM3216H281G	280	0.40	0.30	400	10	25	100
MCM3216H371G	370	0.45	0.35	400	10	25	100
MCM3216H551G	550	0.50	0.40	400	10	25	100
1632 (EIA 0612)							
MCM1632B900H	90	0.70	0.30	500	10	25	200
MCM1632B121H	120	0.80	0.35	500	10	25	200
MCM1632B181G	180	0.90	0.40	400	10	25	200
MCM1632B221G	220	1.00	0.45	400	10	25	200
MCM1632B281G	280	1.00	0.55	400	10	25	200
MCM1632B371F	370	1.10	0.60	300	10	25	200
MCM1632B471F	470	1.20	0.70	300	10	25	200
MCM1632B551F	550	1.30	0.80	300	10	25	200
MCM1632H900G	90	0.50	0.30	400	10	25	100
MCM1632H181G	180	0.60	0.35	400	10	25	100
MCM1632H371G	370	0.70	0.40	400	10	25	100

Impedance vs. Frequency Characteristics

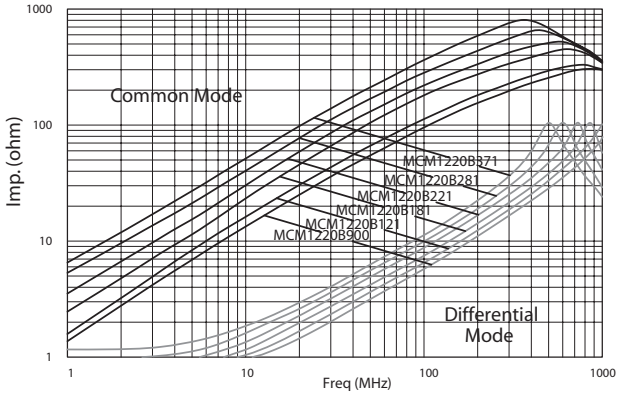
MCM2012B series



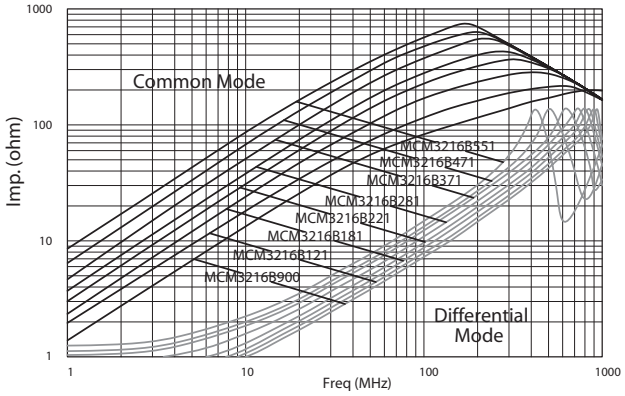
MCM2012H series



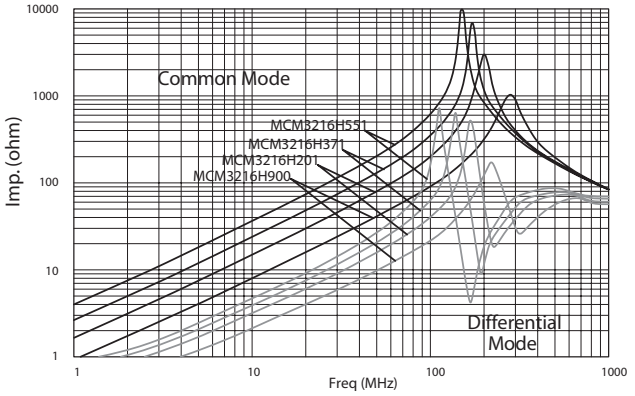
MCM1220B series



MCM3216B series



MCM3216H series



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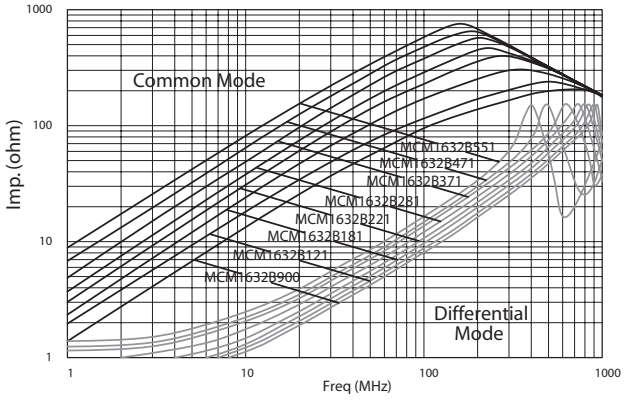
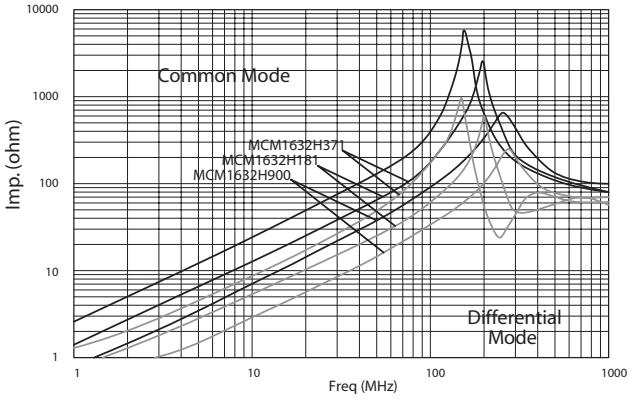
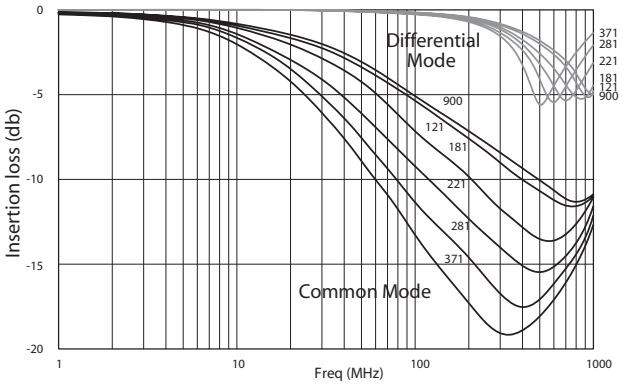


MCM1632H series

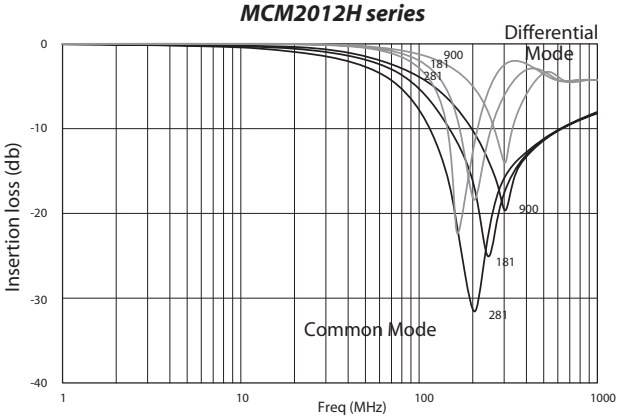


Insertion Loss vs. Frequency Characteristics

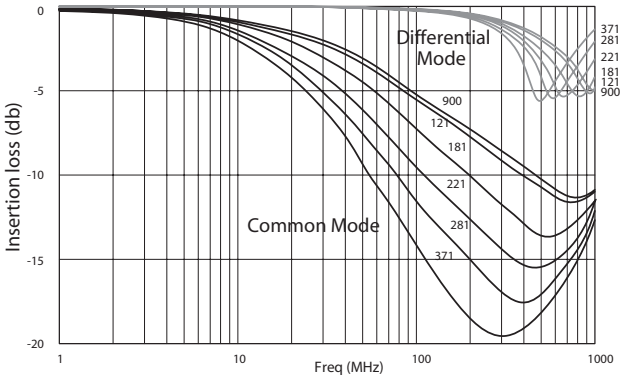
MCM2012B series



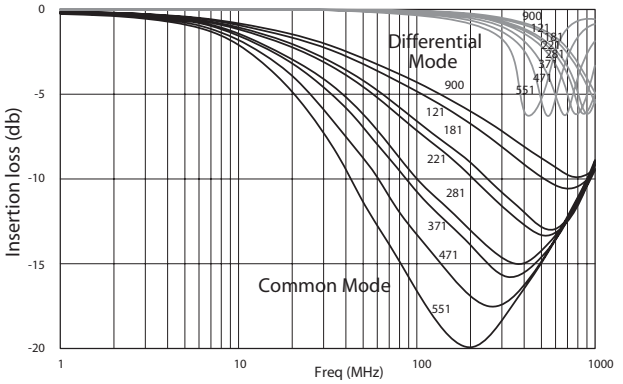
MCM2012H series



MCM1220B series



MCM3216B series



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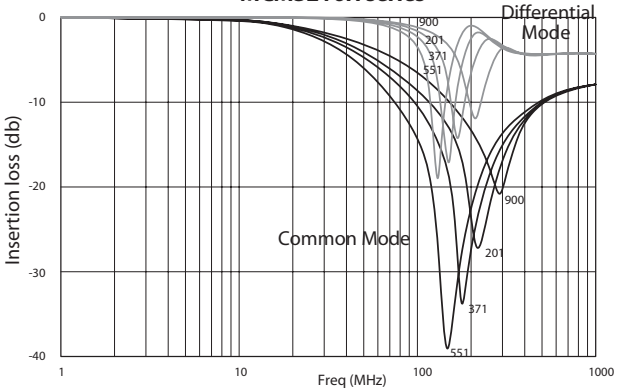
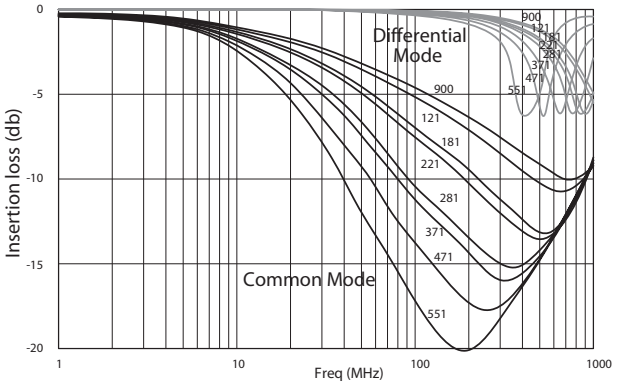
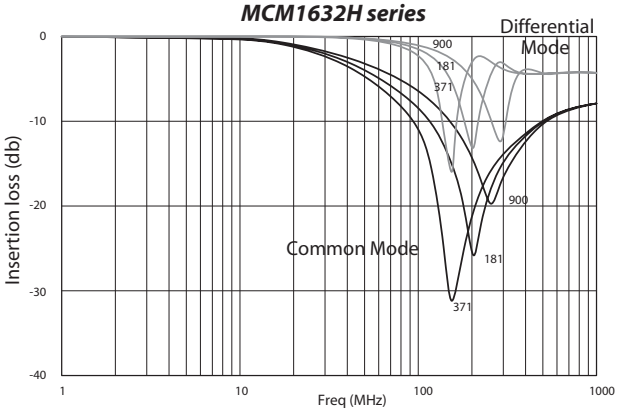


MCM1632B series



MCM1632H series



Package

Standard packing quantity : 3,000pcs/reel