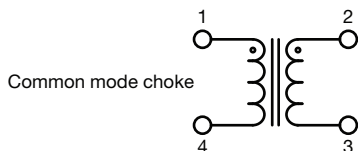
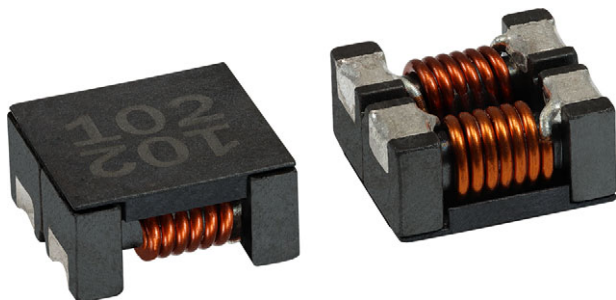


# High Current, SMD Common Mode Choke



## FEATURES

- Wirewound ferrite common mode choke
- 12.0 mm x 11.0 mm x 6.0 mm SMD package
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

## APPLICATIONS

- DC/DC power supplies
- LCD displays
- Noise suppression and filtering
- Lighting drivers
- Battery powered devices

## LINKS TO ADDITIONAL RESOURCES


[Product Page](#)

## ELECTRICAL SPECIFICATIONS

Resistance to solder heat: 245 °C peak for < 30 s (3 times max. through reflow)

## STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	COMMON MODE IMPEDANCE, AT 10 MHz, TYP. (Ω)	COMMON MODE IMPEDANCE, AT 100 MHz, TYP. (Ω)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>
ICM5050ER501R	160	500	4	11
ICM5050ER701N	210	700	5	9
ICM5050ER102N	340	1000	8	7
ICM5050ER172N	850	1700	12	5.5

### Notes

- All test data is referenced to 25 °C ambient
  - DCR specification is for a single coil
  - Rated operating voltage = 80 V<sub>DC</sub>
  - Insulating resistance 10 MΩ min.
  - Operating temperature range -40 °C to +125 °C
  - Storage condition: -40 °C to +125 °C (on board); less than 40°C and < 60 % RH (in component packaging)
- <sup>(1)</sup> DC current (A) that will cause an approximate ΔT of 40 °C

## DIMENSIONS in inches [millimeters]

A	B	C	D	E	F	G	L	H	G1	G2
0.472 ± 0.020 [12.0 ± 0.5]	0.433 ± 0.012 [11.0 ± 0.3]	0.236 max. [6.0 max.]	0.264 typ. [6.7 typ.]	0.106 ± 0.020 [2.7 ± 0.5]	0.102 ± 0.020 [2.6 ± 0.5]	0.102 ± 0.020 [2.6 ± 0.5]	0.551 ref. [14.0 ref.]	0.311 ref. [7.9 ref.]	0.291 ref. [7.4 ref.]	0.098 ref. [2.5 ref.]



## GLOBAL PART NUMBER

I C M

PRODUCT  
FAMILY

5 0 5 0

SIZE

E R

PACKAGE CODE

ER = tape and reel

5 0 1

IMPEDANCE  
VALUE

501 = 500  $\Omega$

R

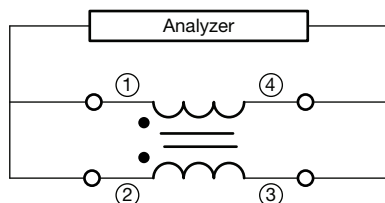
TOLERANCE

N = 25 %

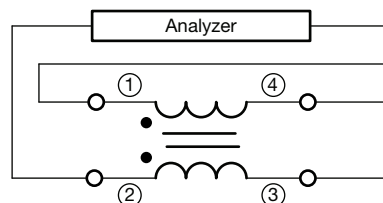
R = 50 %

## SCHEMATICS

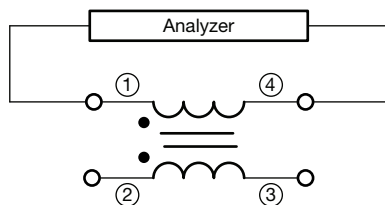
Common Mode Impedance



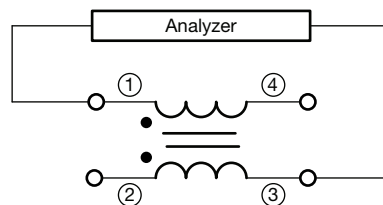
Differential Mode Impedance

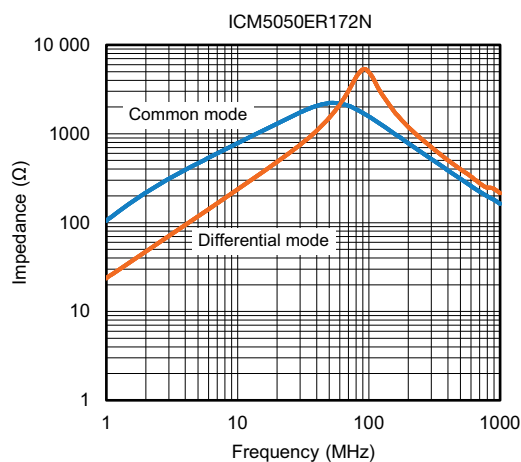
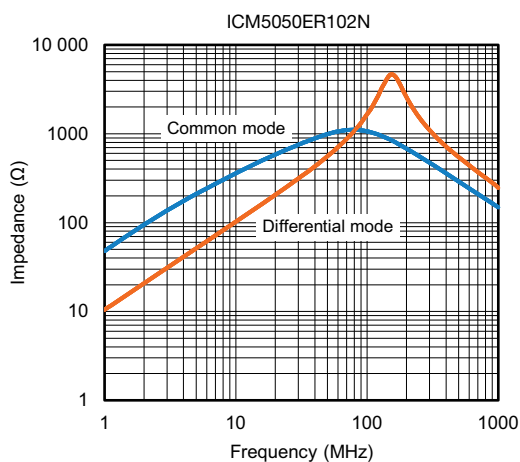
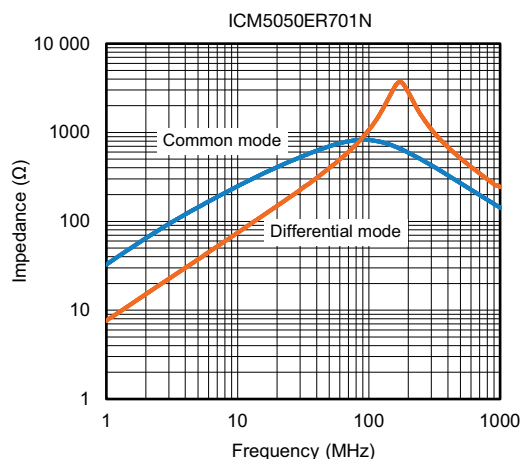
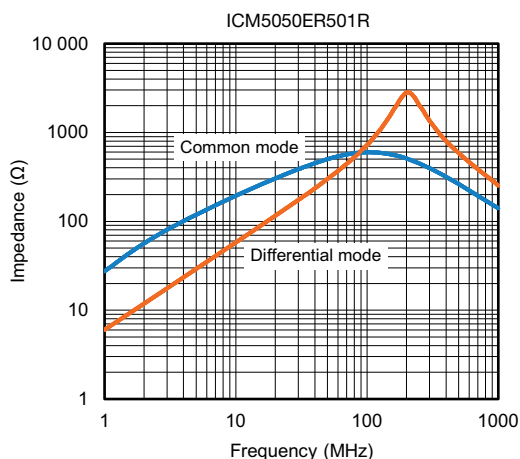


DC Resistance



Insulation Resistance



**PERFORMANCE GRAPHS**




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