

# DC common mode choke coil

## WCNFC453228L/DS



### Features

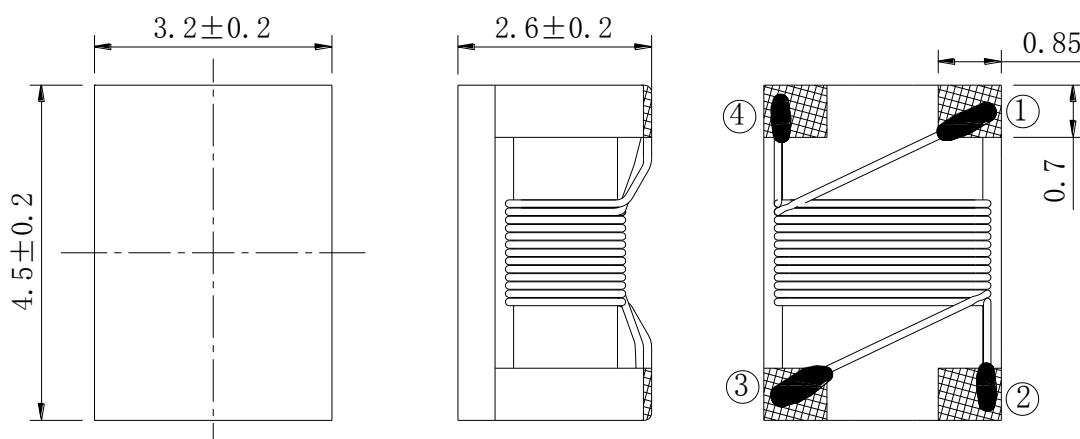
- Special very low profile and small size SMD design.
- Wound Chip constructure with standard 0805 to 1812 size.
- Best EMI suppression effect but least impact to data signal wave form.
- Very high Self-resonance frequency enables high cut-off frequency.
- Excellent Solderability.
- L x W x H: 4.7x3.4x2.8mm Max.
- Moisture sensitivity level: MSL.1.
- RoHs & Halogen free compliance
- Operation temperature range: -40°C ~ 125 °C(Including coil's self heat)
- Storage temperature range: -40°C ~ 125 °C



### Applications

- For common mode noise suppression in high-speed differential signal lines: USB 2.0, IEEE1394, LVDS, etc..
- High Speed differential signal lines for HDMI, DVI, etc..
- Audio lines.
- For USB 3.x application.
- Best for NB, DSC, mobile device design.
- Multimedia system and Ethernet(100BASE-T1).
- Common mode noise filter for power line.
- For LAN module application.

### Dimensions (mm)

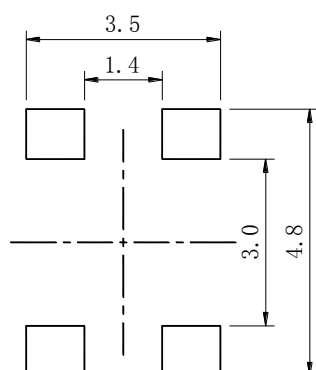


Note : This specification is subject to change without notice. Please contact your nearest sales office for updated information when placing an order.

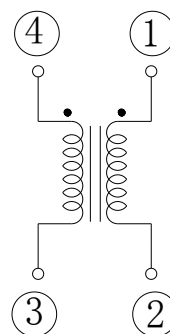
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## Land patterns (mm)



## Terminal Connection



(Bottom view)

## Electrical specifications

Part No.	Inductance ( $\mu$ H) [Within] 1-2 (3-4)	Common mode Impedance ( $\Omega$ ) Min.(Typ.) 1-2 (3-4)	D.C.R (m $\Omega$ ) Max. (Typ.) (1-2)OR (3-4)	Insulation resistance (M $\Omega$ ) Min. (1-2)-(3-4)	Rated Voltage (Vdc) Max.	Temperature rise current (mA) ※1 Max. (1-2) OR (3-4)
	100kHz,0.1V	10MHz,0.1V	at 25°C	DC100V,60S		
WCNFC453228LDS-110	11+50%/-30%	300(600)	259(207)	10	50	700
WCNFC453228LDS-220	22+50%/-30%	500(1200)	421(337)	10	50	620
WCNFC453228LDS-510	51+50%/-30%	1000(2800)	699(559)	10	50	460
WCNFC453228LDS-101	100+50%/-30%	2000(5800)	1596(1276)	10	50	330

※1 Temperature rise current: The actual value of DC current when temperature of coil rise is  $\Delta T=40^{\circ}\text{C}$  ( $T_a=25^{\circ}\text{C}$ )

(Test board condition:FR4,Copper=70  $\mu$  m,four-layer PWB t=1.6mm)

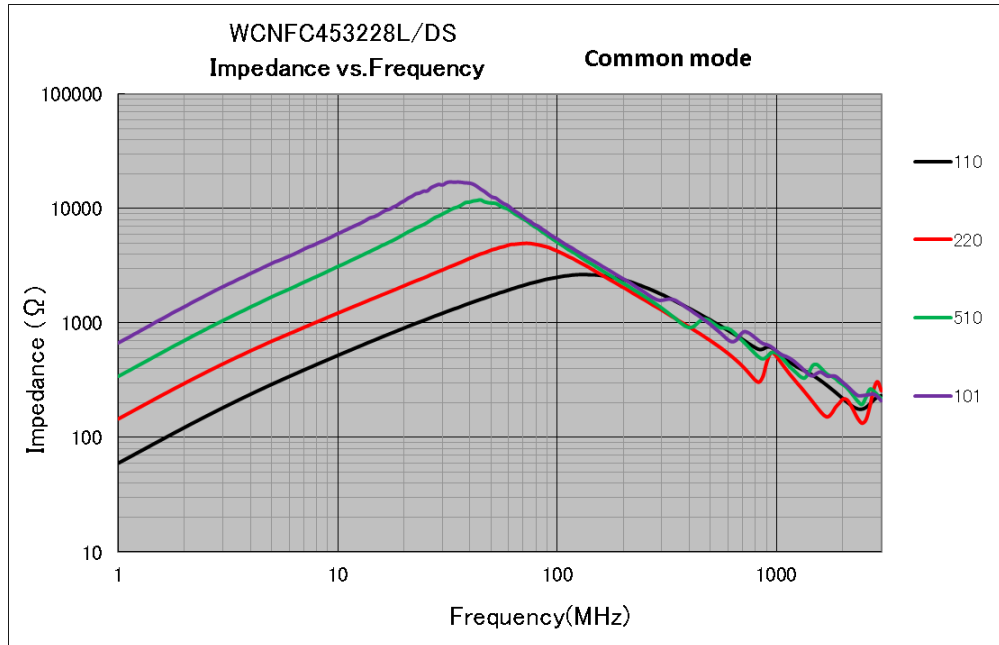
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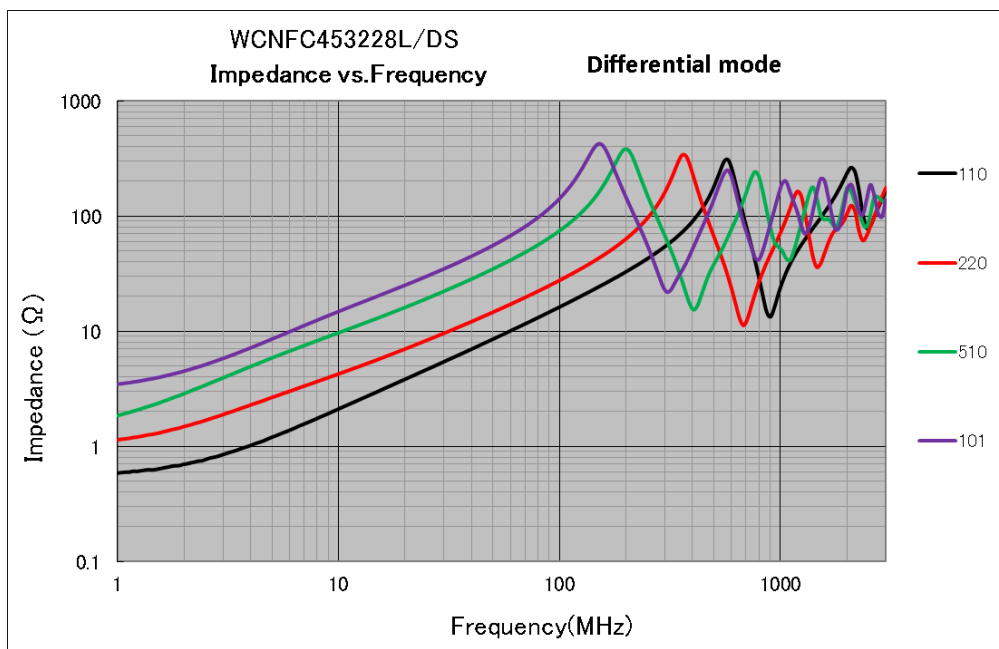


## Common mode Impedance Characteristics

Impedance vs. frequency Common mode



Impedance vs. frequency Differential mode



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