Eaton's chip LAN transformers/ common-mode choke solutions for high-speed network applications

Eaton's CLCC family is a complete chip LAN auto transformer and common mode choke combination solution offering a flexible and reliable network PHY interface.

Product description

Eaton's CLCC family is a complete chip LAN auto transformer (CLCC2V3216) and common mode choke (CLCC1V2012) combination solution offering a flexible and reliable network PHY interface. The CLCC is conveniently packaged in two standard sizes: 1206 (3216 metric) and 0805 (2012 metric). When used together, CLCC1V and CLCC2V provide high-speed filtering for IEEE 802.3 up to 2.5 G for 1000BASE-T Ethernet systems. Applications for Eaton's CLCC include RJ45 network interface cards, Ethernet switches, routers, ADSL, VDSL digital equipment, network set-top boxes, smart TVs, network cameras, PC motherboards, and industrial motherboards.

The CLCC uses precision coil winding to offer superior filtering with lower interwinding capacitance characteristics for diverse high-speed commercial network applications.

Features and benefits

- Supports 10/100/1000BASE-T
  - IEEE 802.3 up to 2.5 G BASE-T
  - Suitable for new-generation, high-speed Ethernet gaming and 4K HD video applications
- CLCC2V3216 chip LAN auto transformer, when used in conjunction with CLCC1V2012 common mode choke, provides flexible design options for RJ45 PHY Ethernet interface saving board space and cost compared to traditional network LAN transformers
- Standard PCB layout compatibility with competitive solutions
- High current capability up to 300 mA
- Precision coil winding construction for optimum parasitic capacitance suppression
- 50 V rated
- Operating temperature range: -40 °C to +85 °C

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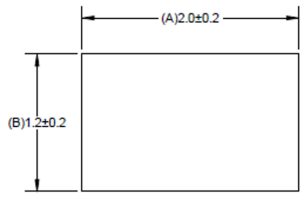
Product specifications

Part number	Impedance (Ω) @ 100 MHz	Inductance @ 100 KHz (µH) minimum	Capacitance (pF) maximum	DCR (Ω) @ +25 °C maximum	Rated current (mA) maximum	Rated voltage (Vdc) maximum	Withstand voltage (Vdc) maximum	IR (MΩ minimum)
CLCC1V2012-801-R	800 ± 25%	2.0	-	0.88	300	50	125	10
CLCC2V3216-600-R	-	60	25	1.70	200	50	125	10

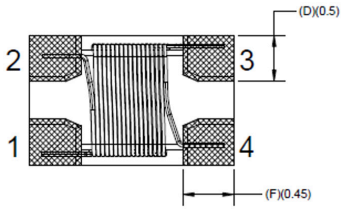
Mechanical parameters

CLCC1V

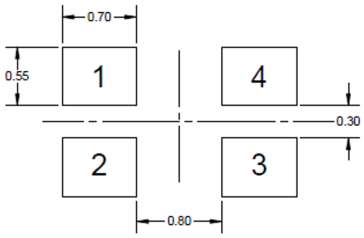
Top view



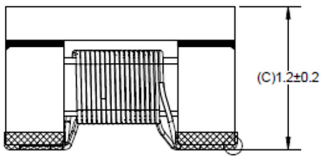
Bottom view



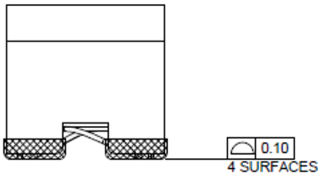
Recommended pad layout



Front view

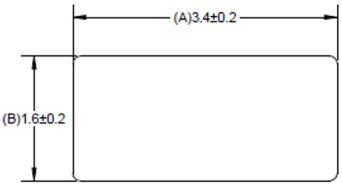


Right view

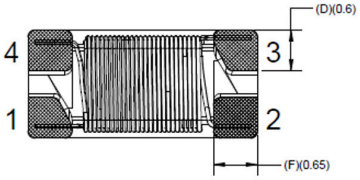


CLCC2V

Top view



Bottom view



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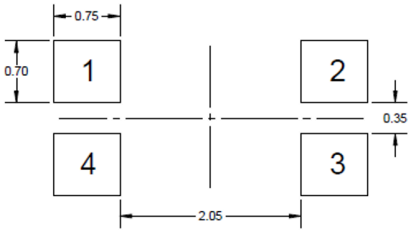
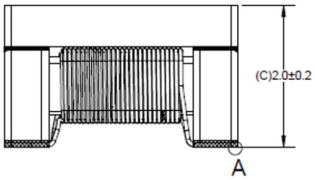
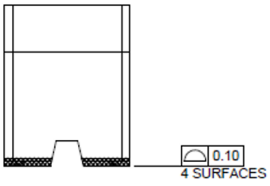


Front view



Right view



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