

ALT4532-EVA-01 Evaluation Board

LAN Magnetics Solution for 1000BASE-T

TDK has released the ALT4532-EVA-01 evaluation board as a tool to simplify evaluation of the discrete LAN magnetics solution based on the ALT4532 series transformer and the ACM2012E series common-mode filter combination. This evaluation board configuration supports the 1000BASE-T Ethernet standard. TDK has developed the ALT4532M and the smaller version ALT3232M series pulse transformers in an SMD package using an automated winding process that provides excellent frequency performance and manufacturing consistency due to the fully automated winding and assembly process. When used in conjunction with the appropriate common-mode filter (ACM2012E in this case or the smaller multilayer type MCZ series) it provides the complete solution for LAN magnetics comparable or better than traditional LAN magnetics modules and typically in a smaller overall footprint. The proposed ALT + ACM solution can reduce overall placement area significantly (~40%) depending on the configuration versus a traditional LAN module. The ALT4532M-EVA-01 Evaluation Board allows for quick performance evaluation, signal integrity, and EMC testing of the solution. The solution is compatible with other Ethernet standards (10BASE-T, 100BASE-TX, and 1000BASE-T) by means of interchanging different common-mode filters.



[Pulse Transformers](#)
[ALT4532M-201-T001](#)
[ACM2012E-900-2P-T00](#)

Features

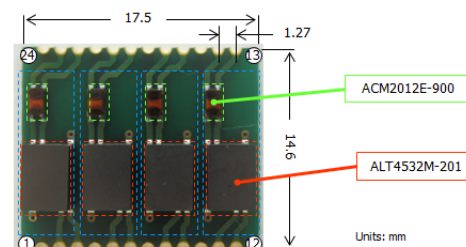
- Contains ALT4532M-201-T001 + ACM2012E-900-2P-T00 solution for quick evaluation
- Allows SI/EMC test for our ALT4532 on same land pattern as module
- Operating temperature range of -40°C to $+85^{\circ}\text{C}$

Applications

LAN interfaces of various devices including:

- Telecom Switches, Routers
- Computing Equipment LAN ports
- Industrial Network Interface Equipment (including Modbus and other)

ALT4532-EVA-01 Dimensions



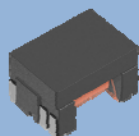
[General Technology Overview](#)

[Combination Table](#)

ALT4532M-201-T001

Pulse Transformer for LAN Interface

- Wound chip type pulse transformer developed for LAN
- High-quality, high-reliability product that uses automatic winding processes
- Designed for lead free reflow soldering (245°C max)
- Greater than $200\mu\text{H}$ (100KHz) at DC current bias 8mA
- SMD package



ACM2012E-900-2P-T00

Common-mode Filter for High-speed/General Signal Line

- Wound type chip common-mode filter that maintains required common-mode filter characteristics
- Downsized & low profile
- Differential mode impedance is suppressed with virtually no effect on high-speed signals
- Impedance for common-mode noise can clear 1000Ω (100MHz) with excellent EMC suppression

