Next generation of PulseChip™ LAN Transformers

TCxG series

Introduction

The next generation of PulseChip™ LAN Transformer and Choke combinations are the first to offer high speed Ethernet data rates with 90W of PoE Power.
The **TCxG** series covers 1G, 2.5G, 5.G and 10G Base-T, with regular PoE+ and a unique core to support 90W over 4 pair with our recommended smaller 2012 (0805) size choke

Benefits

- Revised Core Design matches PCB Layout leading competitors' products TDK, WURTH
- Fully automated winding and assembly for high quality and reliability
- Recommended Line Choke for improved EMC while supporting PoE/PoE+ power level
- FIRST to offer 90W PoE Power rating in Chip-LAN
- Operating Temperature range -40 to +85ºC (including self-heating from PoE loading)

Tools & Resources

- NPI Launch
  Stock package: Yes
  - Website: Datasheet, TC002 and W725
  - (RoHS, REACh and 3D on request)
  - Resource Library : Sales Product Flyer
  - Added to Cross Ref: **TDK, WÜRTH, BORUNS**

Features

- Cross and match to leading Industry standard SMD LAN transformers
  - Fit on the same Pad layout as TDK, Bourns and WURTH
- **Unique PulseChip™ core (4.6x3.4x4.2mm) for 90W PoE applications**
- Standard PulseChip™ core (4.7x3.2x3.1mm). for non and 60W PoE
- High reliability automated winding and assembly guarantees 1500Vac Isolation
- Operating temperature: -40°C to +85°C
- Supports 3x 245ºC, or 1x 260°C peak reflow soldering temperature
- Matched data rate common mode choke available

Ethernet Data Rate supported	Non PoE	PoE 60W	PoE 90W
1 Gigibit 1CT:1CT LAN Transformer	TC1G00	TC1G00P	TC1G001P
2.5Gigibit 1CT:1CT LAN Transformer	TC2G00	TC2G00P	TC2G001P
5Gigibit 1CT:1CT LAN Transformer	TC5G00	TC5G00P	TC5G001P
10Gigibit 1CT:1CT LAN Transformer	TC10G00	TC10G00P	TC10G001P

Recomended Choke	Impedance @ 100MHz	Data Rate
PE-0805GCMC801STS	800	1000Base-T
PE-0805GCMC381STS	380	2.5/5GBase-T
PE-0805GCMC261STS	260	10GBase-T

NPI OWNER: Robert Frost
Target Month for NPI: October 2024
Product Current Status: A-released
Sample Availability: Samples available
NPI Stage: Release stage

Cross-Ref: TDK ALT4532
Würth WE-STST
Bourns SM4532



Applications

- Ethernet LAN Interfaces for Industrial Drives and devices, Laptops and Switches
- Critical Communication equipment where consistent and reliable connectivity is required
- Digital Consumer and IOT devices where space and flexibility of design is needed

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