

# Single Port GigE Transformer

SMD Single Port Gigabit or Dual Port 10/100BASE-TX Transformer



US Patent Numbers:  
5,656,985 6,297,721 B1  
6,297,720 B1 6,320,489 B1  
6,344,785 B1 6,662,431 B1

## Product Features:

- Gigabit Ethernet Discrete Transformer
- IEEE802.3ab Compliant
- UL/EN60950 Recognized
- 100% Electrical Testing
- 1500Vrms Hi-Pot
- Patented Open Frame Construction

| Part Number   | Circuit | Package | Temp. Range  | Return Loss (min) |       |       |        | OCL (min)<br><small>(100KHz, 0.1Vrms, 8mA)</small> | RoHS <sup>1</sup> |
|---------------|---------|---------|--------------|-------------------|-------|-------|--------|--|-------------------|
|               |         |         |              | 1-40MHz           | 60MHz | 80MHz | 100MHz |  |                   |
| TG1G-S001NZLF | A       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | Pb-Free           |
| TG1G-S001NZRL | A       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | RoHS (7a)         |
| TG1G-E001NZLF | A       | NZ      | -40 to +85°C | -18dB             | -14dB | -12dB | -10dB  | 350µH  | Pb-Free           |
| TG1G-E001NZRL | A       | NZ      | -40 to +85°C | -18dB             | -14dB | -12dB | -10dB  | 350µH  | RoHS (7a)         |
| TG1G-S002NZLF | B       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | Pb-Free           |
| TG1G-S002NZRL | B       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | RoHS (7a)         |
| TG1G-S010NZLF | C       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | Pb-Free           |
| TG1G-S010NZRL | C       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | RoHS (7a)         |
| TG1G-E010NZLF | C       | NZ      | -40 to +85°C | -18dB             | -14dB | -12dB | -10dB  | 350µH  | Pb-Free           |
| TG1G-E010NZRL | C       | NZ      | -40 to +85°C | -18dB             | -14dB | -12dB | -10dB  | 350µH  | RoHS (7a)         |
| TG1G-S012NZLF | D       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | Pb-Free           |
| TG1G-S012NZRL | D       | NZ      | 0 to 70°C    | -18dB             | -14dB | -12dB | -10dB  | 350µH  | RoHS (7a)         |
| TG1G-E012NZLF | D       | NZ      | -40 to +85°C | -18dB             | -14dB | -12dB | -10dB  | 350µH  | Pb-Free           |
| TG1G-E012NZRL | D       | NZ      | -40 to +85°C | -18dB             | -14dB | -12dB | -10dB  | 350µH  | RoHS (7a)         |

### Notes:

1. Pb-Free parts are RoHS 6/6 compliant. RoHS (7a) parts contain lead per exemption 7a which is set to expire in July 2016.
2. Parts with RL suffix are not recommended for new designs.
3. For the smallest single port Gigabit transformer or dual port 10/100BASE-TX contact the factory about the proprietary *GEmini™* series.
4. Please contact the factory or representative for individual datasheets or additional information.

# Single Port GigE Transformer



SMD Single Port Gigabit or Dual Port 10/100BASE-TX Transformer

| Part Number     | Circuit | Package | Temp. Range  | Return Loss (min) |       |                 |        | OCL (min)              |           | RoHS <sup>1</sup> |
|-----------------|---------|---------|--------------|-------------------|-------|-----------------|--------|------------------------|-----------|-------------------|
|                 |         |         |              | 1-40MHz           | 60MHz | 80MHz           | 100MHz | (100KHz, 0.1Vrms, 8mA) |           |                   |
| TG1G-S031NYLF   | A       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG1G-S031NYRL   | A       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG1G-S031NYLF   | A       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG1G-S031NYRL   | A       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG1G-E001NYLF   | A       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG1G-E001NYRL   | A       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB <td -10dB | 350μH  | RoHS (7a)              |           |                   |
| TG1G-S032NYLF   | B       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG1G-S032NYRL   | B       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG111-E032NYLF  | B       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG111-E032NYRL  | B       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG1G-S035NYLF   | C       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG1G-S035NYRL   | C       | NY      | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG1G-E035NYLF   | C       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG1G-E035NYRL   | C       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG111-E112NYLF  | D       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | Pb-Free   |                   |
| TG111-E112NYRL  | D       | NY      | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG111-S001J24RL | A       | J24     | 0 to 70°C    | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |
| TG111-E001J24RL | A       | J24     | -40 to +85°C | -18dB             | -14dB | -12dB           | -10dB  | 350μH                  | RoHS (7a) |                   |

Notes:

1. Pb-Free parts are RoHS 6/6 compliant. RoHS (7a) parts contain lead per exemption 7a which is set to expire in July 2016.
2. Parts with RL suffix are not recommended for new designs.
3. For the smallest single port Gigabit transformer or dual port 10/100BASE-TX contact the factory about the proprietary *GEmini™* series.
4. Please contact the factory or representative for individual datasheets or additional information.

Circuit A



Circuit B



Circuit C



Circuit D



For additional information contact your [local representative](#), or HALO's support staff at (650) 903-3800 or [info@haloelectronics.com](mailto:info@haloelectronics.com)

# HALO Gigabit Family of Ethernet Transformers

## NZ Package



Recommended Solder Pad Layout  
 Dimensions: inch [mm]  
 Co-Planarity: 0.004 [0.10]

## NY Package



Recommended Solder Pad Layout

## J24 Package



Recommended Solder Pad Layout



2880 Lakeside Drive #116  
 Santa Clara, CA 95054  
 (650) 903-3800  
[www.haloelectronics.com](http://www.haloelectronics.com)

HALO® Electronics is a leading supplier of high quality communication magnetics including signal transformers, filters, CMR chokes, PoE power transformers, DC/DC converters, and integrated Ethernet connectors. HALO's leading edge technology solutions are manufactured in ISO9001 and ISO14001 factories offering high quality products at a competitive price.

© Copyright 2015 HALO Electronics, Inc. All rights reserved.

Revised 8/2015. Download the latest version at [www.haloelectronics.com/pdf/discrete-single-1gbaset.pdf](http://www.haloelectronics.com/pdf/discrete-single-1gbaset.pdf)

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9