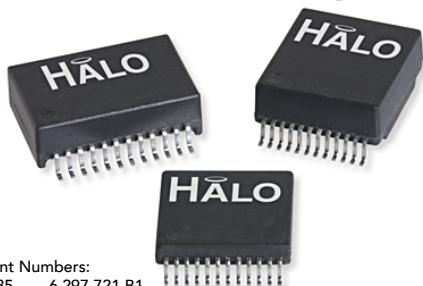


# Single Port GigE Transformer

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

**HALO**  
ELECTRONICS, INC.



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.<br>Range | Return Loss (min) |       |       |        | OCL (min)<br>(100KHz, 0.1Vrms, 8mA) | 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 Isolation Modules

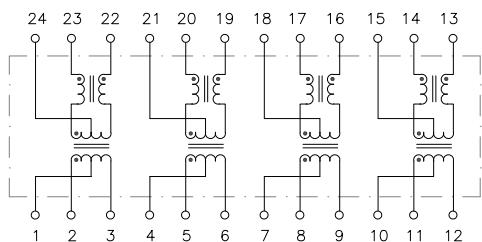


| Part Number     | Circuit | Package | Temp.<br>Range | Return Loss (min) |       |       |        | OCL (min)<br>(100KHz, 0.1Vrms, 8mA) | RoHS <sup>1</sup> |
|-----------------|---------|---------|----------------|-------------------|-------|-------|--------|-------------------------------------|-------------------|
|                 |         |         |                | 1-40MHz           | 60MHz | 80MHz | 100MHz |                                     |                   |
| 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 | -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)         |

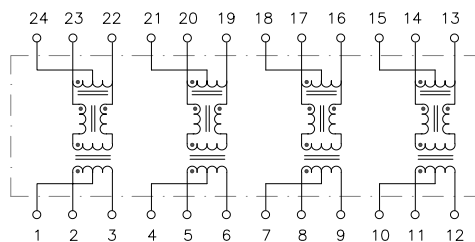
Notes:

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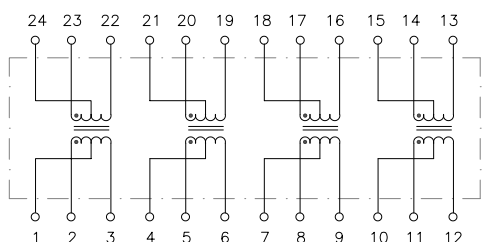
Circuit A



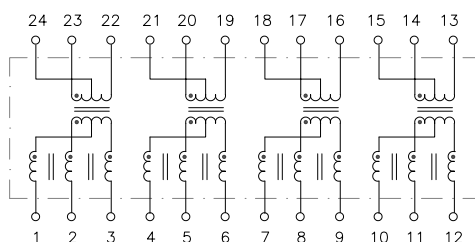
Circuit B



Circuit C

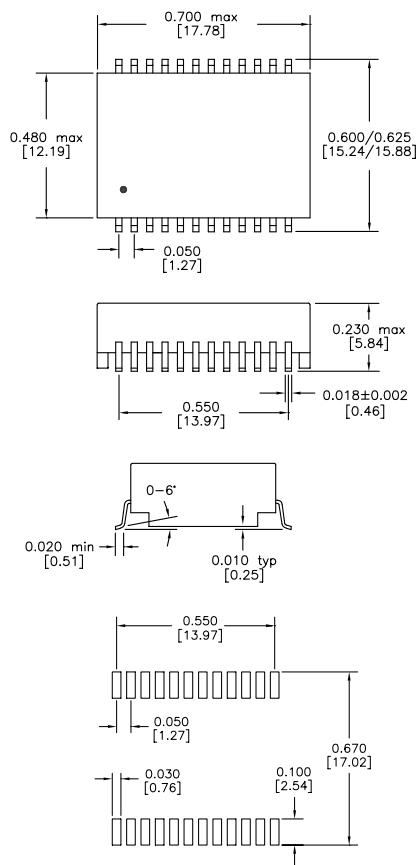


Circuit D



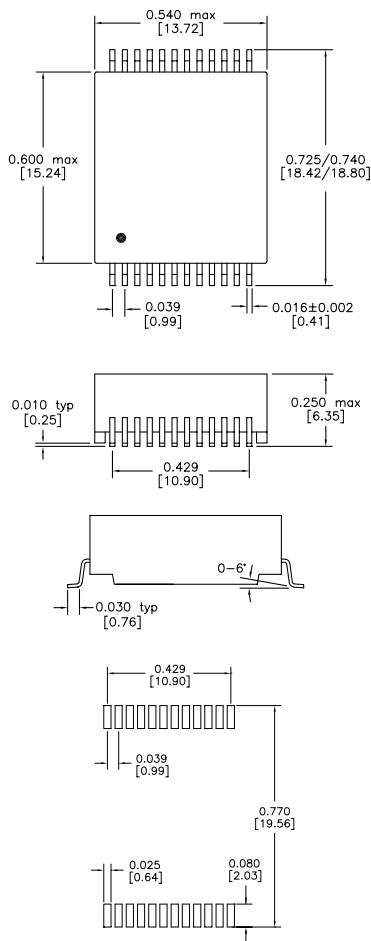
For additional information contact your [local representative](#), or HALO's support staff at (650) 903-3800 or [info@haloelectronics.com](mailto:info@haloelectronics.com)

## NZ Package



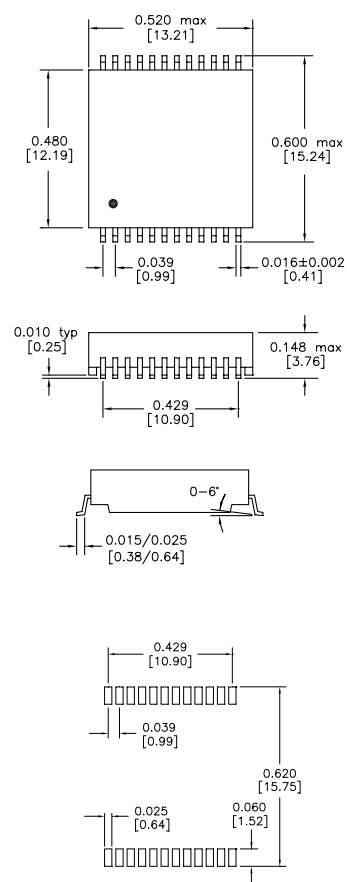
Recommended Solder Pad Layout  
 Dimensions: inch [mm]  
 Co-Planarity: 0.004 [0.10]

## NY Package



Recommended Solder Pad Layout

## J24 Package



Recommended Solder Pad Layout



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