

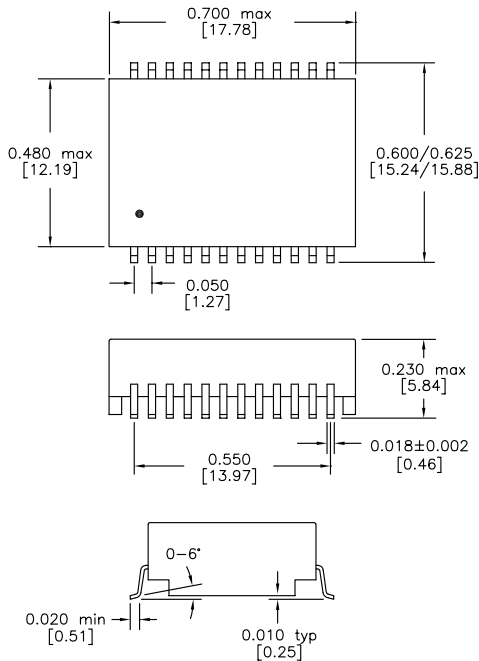
# HALO SMD Single Port Gigabit Isolation Modules

HALO ELECTRONICS, INC.

HALO Electronics is pleased to present this standard series of high performance Gigabit Ethernet Isolation Modules to specifically address the isolation, insertion loss and return loss requirements of IEEE 802.3ab for 1000BASE-T applications. Available in a low profile 24 pin SMD package. Isolation Modules are available for most LAN IC manufacturer's products.

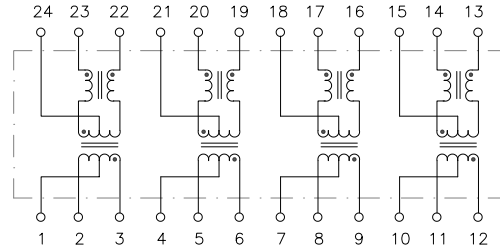


## Package NZ

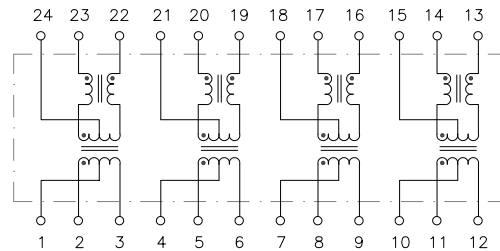


DIMENSIONS: Inch [mm]  
CO-PLANARITY: 0.004 [0.10]

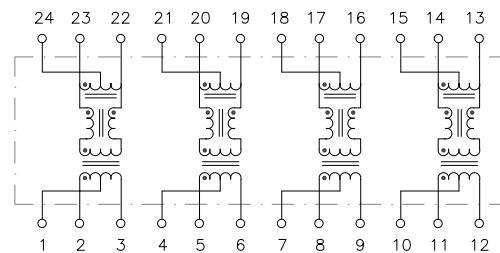
## Schematic A



## Schematic B



## Schematic C



## Electrical Specifications @ 25°C

Isolation Voltage: 1,500 Vrms  
 OCL (100KHz, 0.1Vrms, 8mA): 350  $\mu$ H min.  
 Rise Time: 1.75 nS Typ.  
 Cross Talk: 33-20(f/100MHz)  
 CMR (0.1 -100Mhz) -30dB min.

## Patented Construction

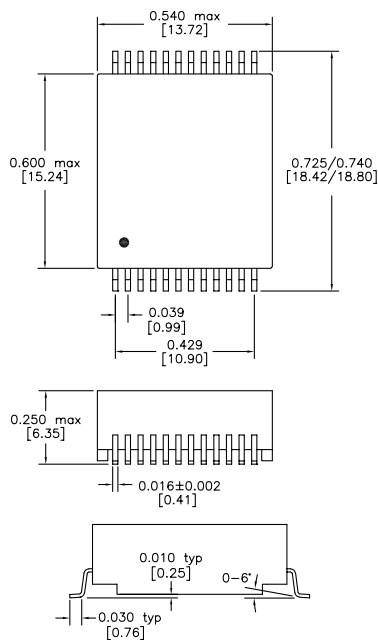
US Pat Nbrs: 5,656,985 6,297,721 B1  
 6,297,720 B1 6,320,489 B1  
 6,344,785 B1 6,662,431 B1

| Part Number   | Turns Ratio $\pm 2\%$ | Circuit Schematic | Insertion Loss Return Loss (min) |         |            |        |       |
|---------------|-----------------------|-------------------|----------------------------------|---------|------------|--------|-------|
|               |                       |                   | (1-100Mhz)                       | 1-40Mhz | 60Mhz80Mhz | 100Mhz |       |
| TG1G-3506NZRL | 1CT:1CT               | A                 | -1.0 max                         | -18dB   | -14.5dB    | -12dB  | -10dB |
| TG1G-S001NZRL | 1CT:1CT               | B                 | -1.0 max                         | -18dB   | -14.5dB    | -12dB  | -10dB |
| TG1G-S002NZRL | 1CT:1CT               | C                 | -1.1 max                         | -18dB   | -14.5dB    | -12dB  | -10dB |

HALO Electronics is pleased to present this standard series of high density, high performance Gigabit Ethernet Isolation Modules. These devices have been designed specifically to address the isolation, insertion loss and return loss requirements of IEEE802.3ab for 10/100/1000BASE-TX applications. Compatible with all leading Phy vendors' gigabit IC's. Dual port versions are also available.

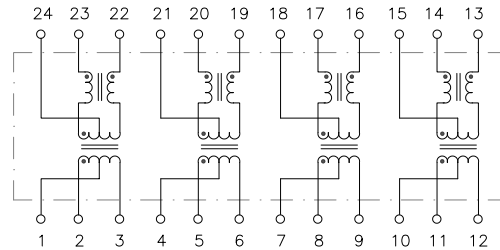


### Package NY

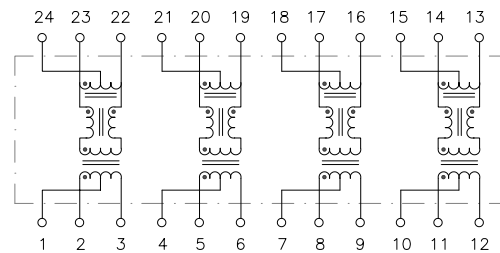


DIMENSIONS: Inch [mm]  
CO-PLANARITY: 0.004 [0.10]

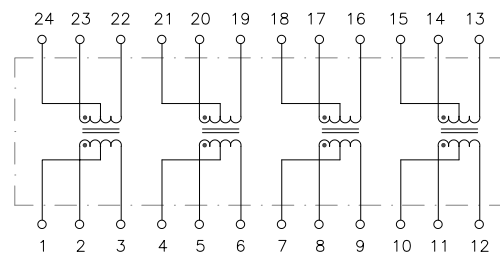
### Schematic A



### Schematic B



### Schematic C



### Electrical Specifications @ 25°C

|                             |  |
|-----------------------------|--|
| Isolation Voltage:          | 1,500 Vrms                               |
| OCL (100KHz, 0.1Vrms, 8mA): | 350 $\mu$ H                              |
| Turns Ratio:                | 1CT:1CT                                  |
| Rise Time:                  | 1.75nS                                   |
| CMR (0.1 – 100MHz):         | -40dB typ. (not applicable to Circuit C) |
| Crosstalk:                  | [33-20log (F/100MHz)]dB typ              |

### Patented Construction

|              |              |
|--------------|--------------|
| US Pat Nbrs: | 5,656,985    |
|              | 6,297,721 B1 |
|              | 6,297,720 B1 |
|              | 6,320,489 B1 |
|              | 6,344,785 B1 |
|              | 6,662,431 B1 |

| Part Number   | Circuit Schematic | Insertion Loss (1-100MHz) | Return Loss (min) |       |       |        | Temp Range  |
|---------------|-------------------|---------------------------|-------------------|-------|-------|--------|-------------|
|               |                   |                           | 1-40MHz           | 60MHz | 80MHz | 100MHz |             |
| TG1G-S031NYRL | A                 | -1.0dB max                | -18dB             | -14dB | -12dB | -10dB  | 0 to 70C    |
| TG1G-S032NYRL | B                 | -1.1dB max                | -18dB             | -14dB | -12dB | -10dB  | 0 to 70C    |
| TG1G-S035NYRL | C                 | -1.0dB max                | -18dB             | -14dB | -12dB | -10dB  | 0 to 70C    |
| TG1G-E001NYRL | A                 | -1.1dB max                | -18dB             | -14dB | -12dB | -10dB  | -40 to +85C |