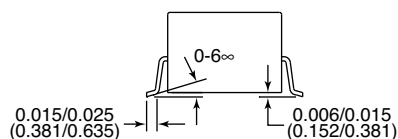
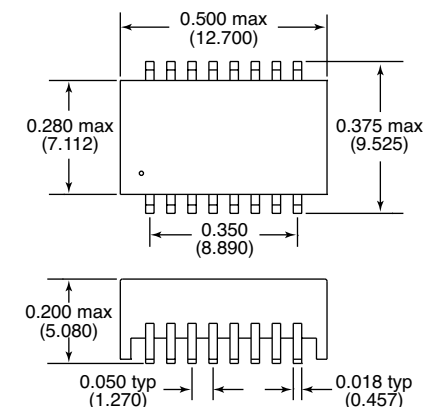


# HALO **ULTRA™ Series, 16 Pin SOIC** ELECTRONICS, INC. **10/100BASE-TX Magnetic Modules**

HALO Electronics has developed the ULTRA™ series of 16 pin SOIC Isolation Modules to meet the requirements of IEEE 802.3 for 10/100BASE-TX and ATM155 applications. Designed to provide a significant real estate reduction at the lowest price. Standard devices are available for all Phy's. Please visit our web site to select the correct device for the corresponding Phy.



**N2 Package**

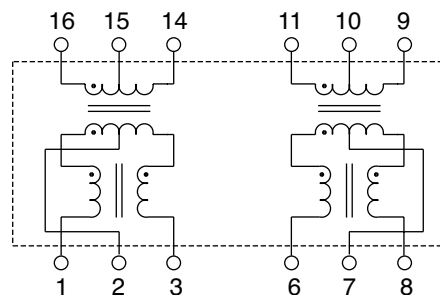


DIMENSIONS: Inch(mm)  
CO-PLANARITY: 0.004(0.102)

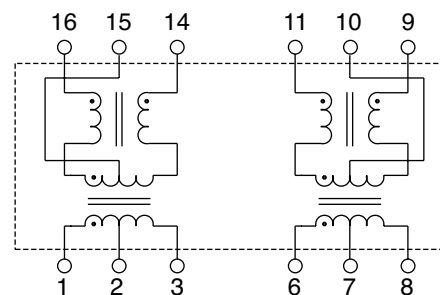
## Electrical Specifications @ 25°C

|                              |             |
|------------------------------|-------------|
| Isolation Voltage:           | 1,500Vrms   |
| OCL @ 100KHz, 8mA:           | 350μH min   |
| CMR (0.1-100MHz):            | -40dB typ   |
| Crosstalk (0.1-100MHz):      | -40dB min   |
| Insertion Loss (0.1-100MHz): | -1.1dB max  |
| Return Loss (0.5-30MHz):     | -18dB min   |
| (40MHz):                     | -15.5dB min |
| (50MHz):                     | -13.6dB min |
| (60-80MHz):                  | -12dB min   |

**Schematic A**



**Schematic B**



## Patented Construction

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



RoHS compliant versions are available.

Specify RoHS compliant product by adding the suffix "RL".

| Part Number  | Turns Ratio $\pm 3\%$<br>(1-3:16-14)/(6-8:11-9) | Circuit<br>Schematic | PRI/SEC<br>Cw/w<br>(pF typ) | PRI<br>LL<br>(μH max) | PRI<br>DCR<br>(Ωmax) |
|--------------|-------------------------------------------------|----------------------|-----------------------------|-----------------------|----------------------|
| TG110-S050N2 | (1CT:1CT) / (1CT:1CT)                           | A                    | 15                          | 0.4                   | 1.5                  |
| TG110-S055N2 | (1CT:1CT) / (1CT:1CT)                           | B                    | 15                          | 0.4                   | 1.5                  |
| TG110-S120N2 | (2CT:1CT) / (1CT:1CT)                           | B                    | 15                          | 1.2                   | .9                   |
| TG110-S125N2 | (1CT:1CT) / (2CT:1CT)                           | B                    | 15                          | 1.2                   | .9                   |
| TG110-S131N2 | (√2CT:1CT) / (1CT:1CT)                          | B                    | 15                          | 0.9                   | .9                   |
| TG110-S139N2 | (1.25CT:1CT) / (1CT:1CT)                        | B                    | 15                          | 0.9                   | .9                   |
| TG110-S141N2 | (1CT:√2CT) / (1CT:1CT)                          | B                    | 15                          | 0.4                   | .9                   |