

## GLGNET I LAN-Transformer I



### 方向电子

引領全球的通訊連接器製造專家

*Leads Global Communications Connector  
Manufacture Experts*

# 資質認證

## QUALIFICATION CERTIFICATION

**认 证 证 书**

**BM TRADA**  
CERTIFICATION

BM TRADA 证明以下公司的质量管理体系

深圳市方向电子有限公司  
中国广东省深圳市宝安区松岗街道山门第三工业区

符合 ISO 9001:2008 要求 并在 BM TRADA 认证项目范围内注册

贵公司同意按 ISO 9001:2008 标准维持质量体系及按规则使用认可质量体系标志

认 证 范 围

网络接插件的设计开发和生产

在证书有效期内，需在下图相应位置粘贴与之对应的年度监督审核合格标志，凡逾期未粘贴标志的证书，自然失效。

|                         |                  |                         |                  |  |  |
|-------------------------|------------------|-------------------------|------------------|--|--|
| 2012年3月<br>至<br>2013年2月 | 第一次<br>监督<br>审核处 | 2013年3月<br>至<br>2014年2月 | 第二次<br>监督<br>审核处 |  |  |
|-------------------------|------------------|-------------------------|------------------|--|--|

证书编号  
PRC000987  
首次注册日期  
2008年2月15日  
发证日期  
2011年3月25日  
有效期至  
2014年2月14日

Signed on behalf of BM TRADA Certification Ltd  
Shocking Lane, Huggers Valley, High Wycombe,  
Buckinghamshire HP14 4SD

BM TRADA 是经 ISO 9001:2008 认证的合格证书，  
由 BM TRADA 公司颁发，其证书编号为：PRC000987

BM TRADA 是经 ISO 9001:2008 认证的合格证书，  
由 BM TRADA 公司颁发，其证书编号为：PRC000987

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**the standard in safety**

Underwriters Laboratories

File: R324753 Vol. 1 Issued: 2009-03-05  
Revised:

FOLLOW-UP SERVICE PROCEDURE  
(TYPE R)

COMPONENT - COMMUNICATIONS CIRCUIT ACCESSORIES  
(TYPE R)

Manufacturer: SHENZHEN GLOBE ELECTRONIC CO LTD  
(106449-001) 3RD INDUSTRIAL AREA, SHAMEN  
COMMUNITY, SHENGANG TOWN  
BAG AB AREA  
SHENZHEN,  
GUANGDONG 518105 CHINA

Applicant: SAME AS MANUFACTURER  
(106449-001)

Recognized Company: SAME AS MANUFACTURER  
(106449-001)

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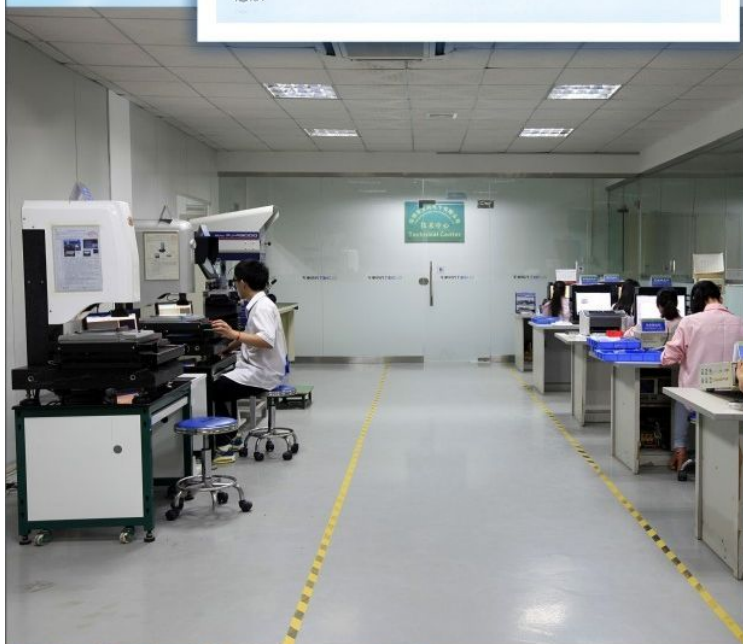
The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

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Underwriters Laboratories Inc.

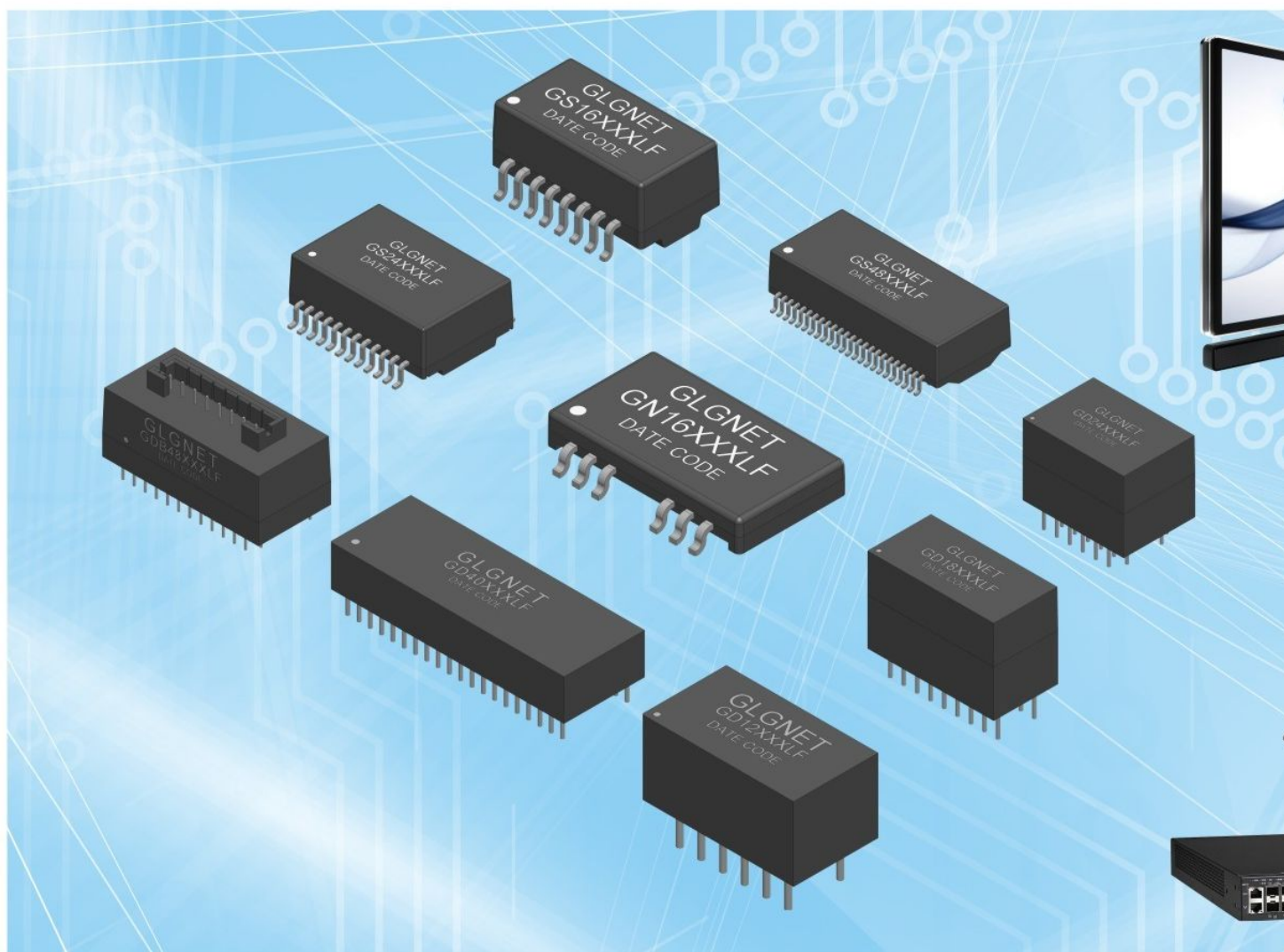
*Stephen Reason*  
Stephen Reason  
Senior Vice President  
Global Follow-Up Service Operations

*William R. Carney*  
William R. Carney  
Director  
North American Certification Program



BASE-T ETHERNET ISOLATION TRANSFORMER

# GLGN



ET

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## LAN-Transformer SERIES

### 网络滤波器编码原则

#### 网络变压器系统命名规则 ORDER INFORMATION

G X XX XXX X XX  
A B C D E

EX: GS16001LF

(普通16PIN/SMT式/100兆/无铅)

#### A: Mechanical Code(结构代码)

| CODE  | Mechanical           |
|-------|----------------------|
| S     | SMT式PIN脚分布           |
| D     | DIP式PIN脚分布           |
| N     | NB(超薄系列)             |
| SB—SZ | SMT式同样PIN脚数量, 封装结构不同 |
| DB—DZ | DIP式同样PIN脚数量, 封装结构不同 |

备注: 结构字符后加入B-Z字符表示不同结构的流水号

#### C: Schematic Code(电路图代码)

| CODE    | Number Of Cores |
|---------|-----------------|
| XXX     | 电路流水码           |
| 001-100 | 10/100兆电路图流水号   |
| 101-200 | 1000兆电路图流水号     |

- 1、普通POE/350mA以下电路不采用延伸码;
- 2、交叉信号脚对接和其他综合性电路按顺序编码, 不采用延伸码  
(例如: 同是POE+, 又是三线电路等)

#### E: ROHS And Halogen-free distribution Code (无铅和无卤要求代码)

| CODE | NOTE |
|------|------|
| LF   | 无铅   |
| HF   | 无卤   |

#### F: 印字面标识说明

|             |              |
|-------------|--------------|
| GLGNET      | ———> 方向LOGO  |
| GN16001LF   | ———> 网络变压器型号 |
| ● DATE CODE | ———> 生产周期    |

#### B: PIN number of Code(PIN脚数量代码)

| CODE | Transmission rate               |
|------|---------------------------------|
| 4    | 4 = 4PIN 10BASE (802.3)         |
| 12   | 12 = 12PIN 100BASE (802.3)      |
| 14   | 14 = 12PIN 100BASE (802.3)      |
| 16   | 16 = 16PIN 100BASE (802.3)      |
| 20   | 20 = 20PIN 100BASE (802.3)      |
| 24   | 24 = 24PIN 100/1000BASE (802.3) |
| 40   | 40 = 40PIN 100/1000BASE (802.3) |
| 48   | 48 = 48PIN 1000BASE (802.3)     |
| 50   | 50 = 50PIN 1000BASE (802.3)     |
| 72   | 72 = 72PIN 1000BASE (802.3)     |
| 88   | 88 = 88PIN 1000BASE (802.3)     |

#### D: Circuit diagram extension code(电路图延伸码)

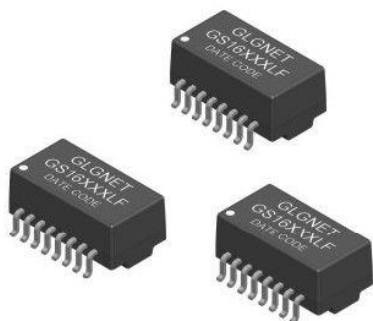
| CODE |                            |
|------|----------------------------|
| A    | 两线主CORE与CMC位置互换(例:001A)    |
| C    | 三线CMC置于初级侧(例:001C)         |
| D    | 双CHOCK电路(例:001D)           |
| G    | 10G电路(例:001G)              |
| J    | 三线CMC置于次级侧(例:001J)         |
| P    | POE+电路(例:001P)             |
| T    | 两通道或以上同时带并珠(例:001T)        |
| W    | 产品军规温度(-40 to 85度)(例:001W) |
| Z    | 两通道共用CMC(例:001Z)           |



## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/16PIN/100 BASE-T ETHERNET ISOLATION TRANSFORMER



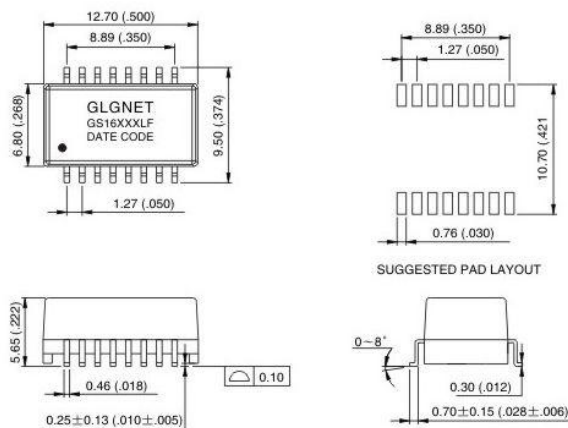
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |     |       | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-----|-------|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      |                            | 0.3-100                 | 1-30  | 40    | 50  | 60-80 | 100                    | 30  | 60  | 100              | 30  | 60  |                  |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz | MHz   | MHz                    | MHz | MHz | MHz              | MHz | MHz | MHz              |
| GS16002LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS16002ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS16010LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS16013LF  | 1CT:1       | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (SMT Series)

#### GS16XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

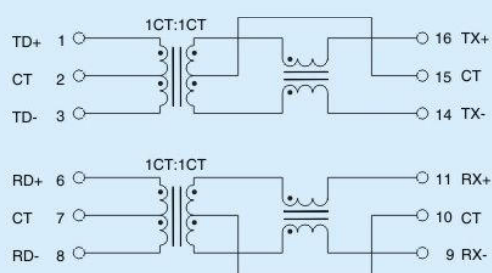


## LAN-Transformer SERIES

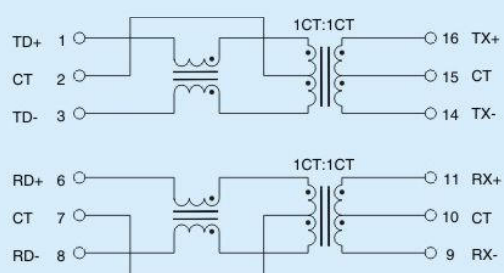
网络变压器电路图(SMT系列)

### Schematic

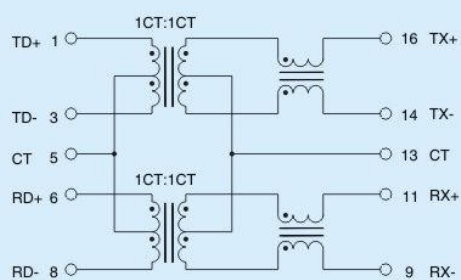
#### GS16002LF



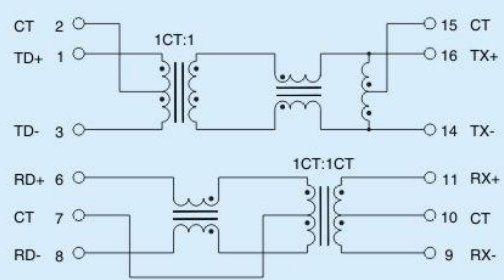
#### GS16002ALF



#### GS16010LF



#### GS16013LF

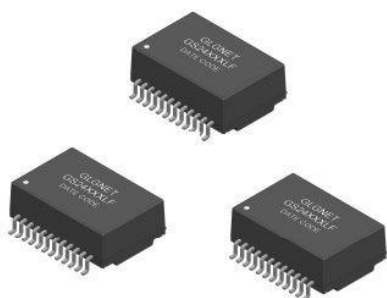




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/24PIN(MAX)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



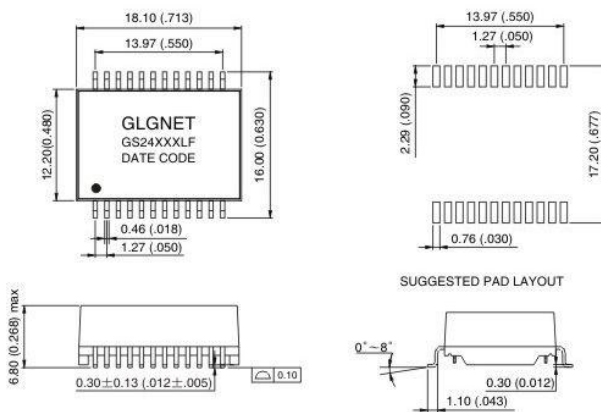
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C.
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GS24103LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS24103PLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS24103ZLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS24111LF  | 1CT:1       | 1CT:1   | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS24103TLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS24103CLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (SMT Series)

#### GS24XXXLF



Units: mm(inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

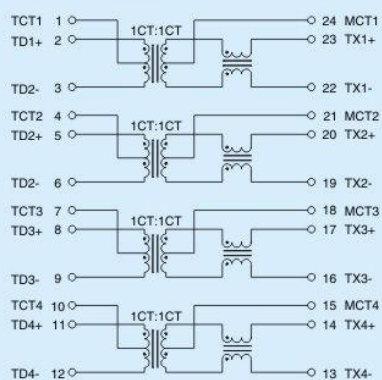


## LAN-Transformer SERIES

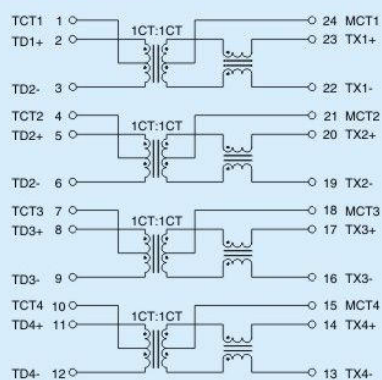
网络变压器电路图(SMT系列)

### Schematic

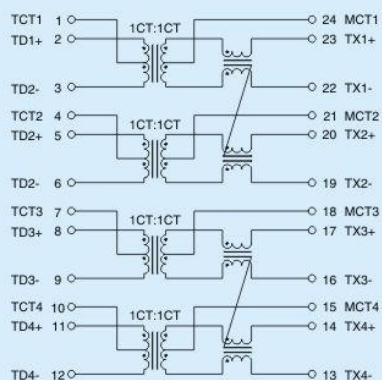
#### GS24103LF



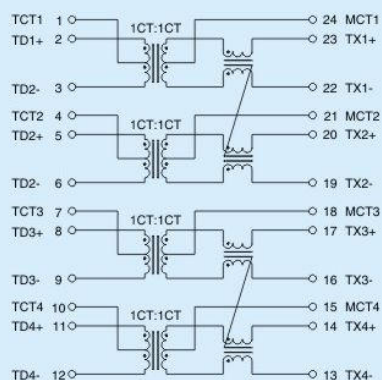
#### GS24103PLF



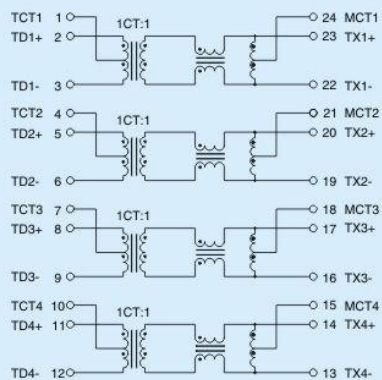
#### GS24103ZLF



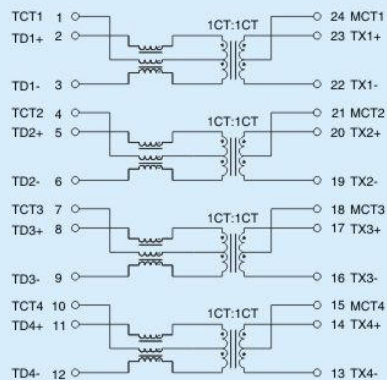
#### GS24111LF



#### GS24103TLF



#### GS24103CLF

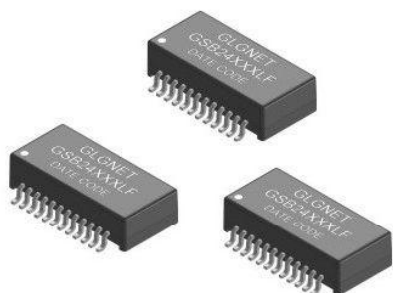




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

SMT/24PIN(MIN)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



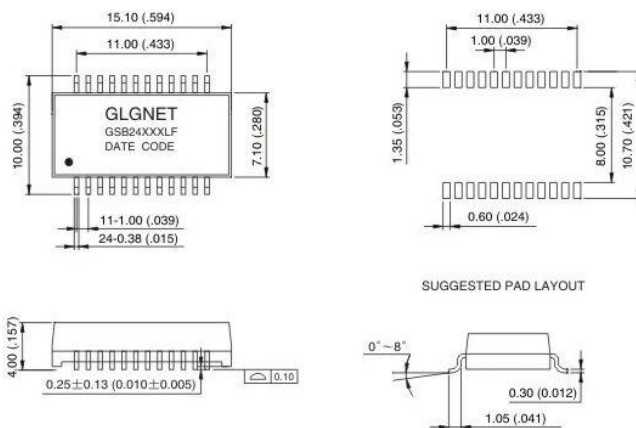
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|             | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |     |       | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |     |
|-------------|-------------|---------|----------------------------|-------------------------|-------|-------|-----|-------|------------------------|-----|-----|------------------|-----|-----|------------------|-----|
|             | TX          | RX      |                            | 0.3-100                 | 1-30  | 40    | 50  | 60-80 | 100                    | 30  | 60  | 100              | 30  | 60  |                  | 100 |
|             |             |         |                            | MHz                     | MHz   | MHz   | MHz | MHz   | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  | MHz |
| GSB24103LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |     |
| GSB24109LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |     |
| GSB24103ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |     |
| GSB24103CLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |     |

### Mechanical (SMT Series)

#### GSB24XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

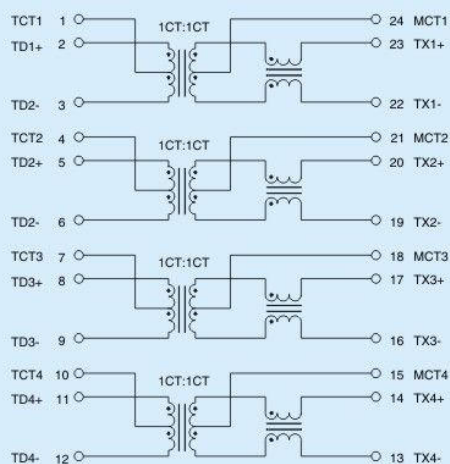


## LAN-Transformer SERIES

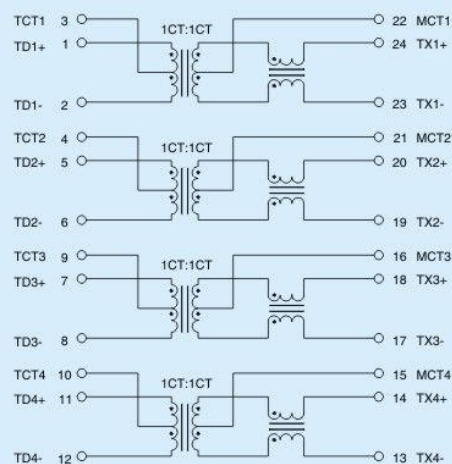
网络变压器电路图(SMT系列)

### Schematic

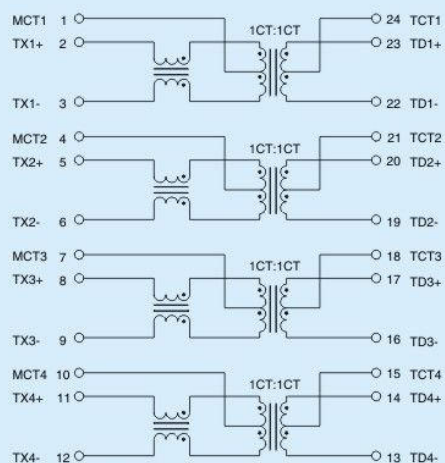
#### GSB24103LF



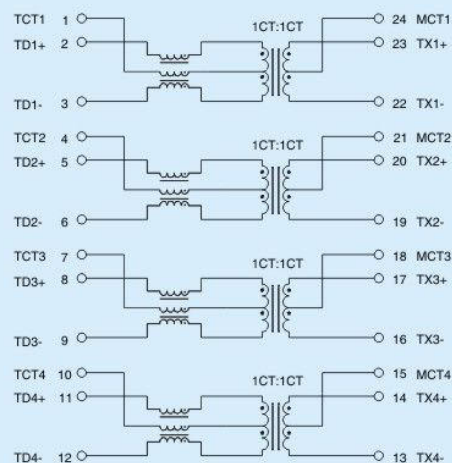
#### GSB24109LF



#### GSB24103ALF



#### GSB24103CLF

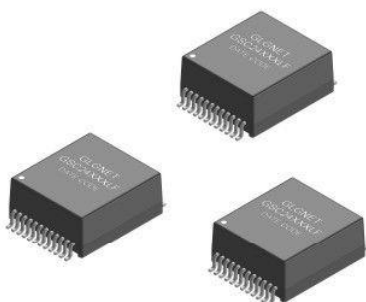




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/24PIN(MID)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



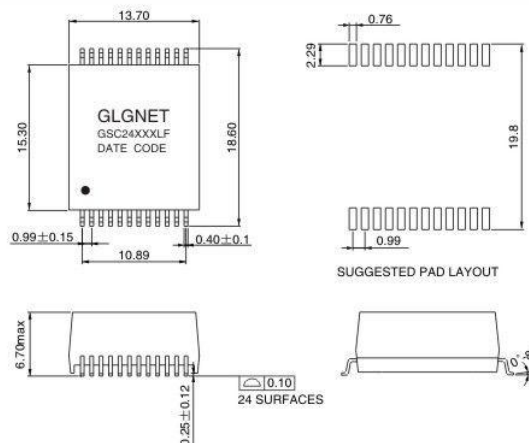
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C.
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### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|             | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|-------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|             | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|             |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GSC24103TLF | 1CT:1       | 1CT:1   | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GSC24109LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GSC24103ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GSC24103CLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (SMT Series)

#### GSC24XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

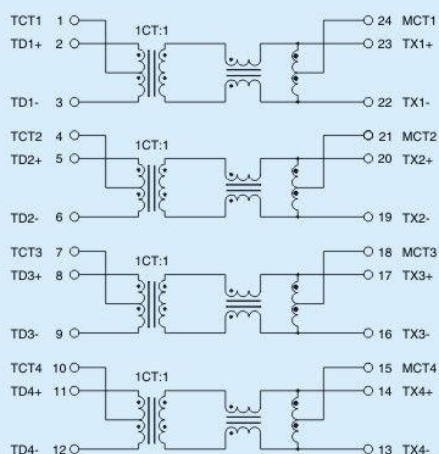


## LAN-Transformer SERIES

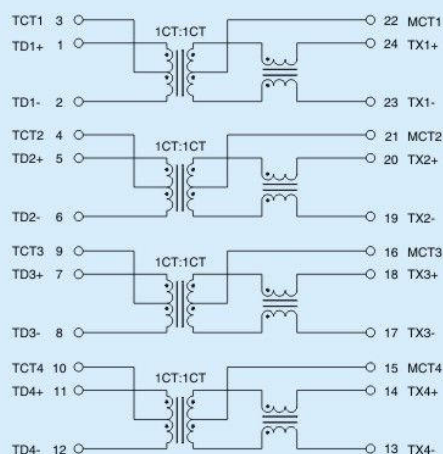
网络变压器电路图(SMT系列)

### Schematic

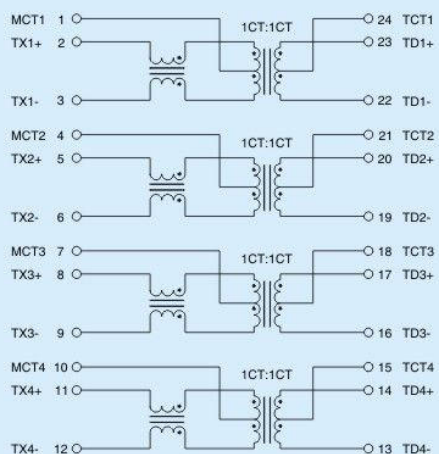
#### GSC24103TLF



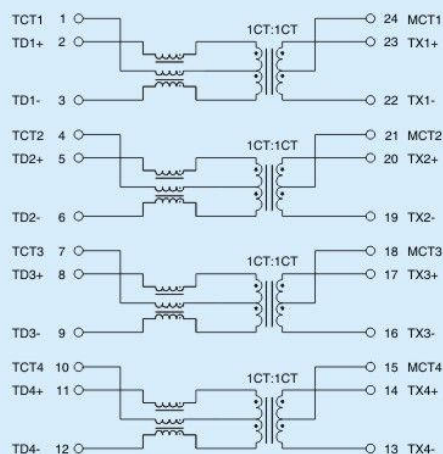
#### GSC24109LF



#### GSC24103ALF



#### GSC24103CLF

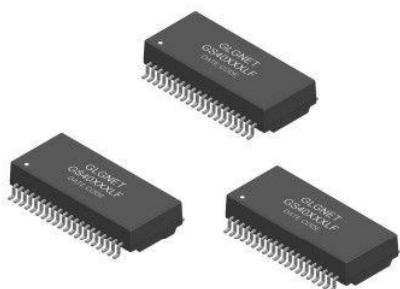




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/40PIN/100 BASE-T ETHERNET ISOLATION TRANSFORMER



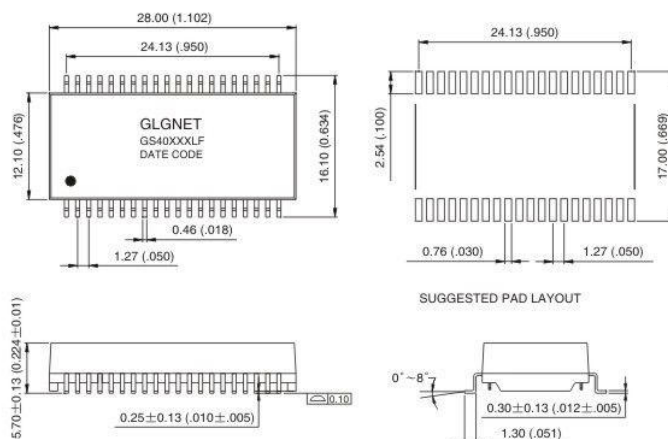
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C.
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |           |           |              |            | Cross talk<br>(dB Min) |           |            | DCMR<br>(dB Min) |           |            | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-----------|-----------|--------------|------------|------------------------|-----------|------------|------------------|-----------|------------|------------------|
|            | TX          | RX      | 0.3-100<br>MHz             | 1-30<br>MHz             | 40<br>MHz | 50<br>MHz | 60-80<br>MHz | 100<br>MHz | 30<br>MHz              | 60<br>MHz | 100<br>MHz | 30<br>MHz        | 60<br>MHz | 100<br>MHz | 1500             |
| GS40005LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |
| GS40005ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |

### Mechanical (SMT Series)

#### GS40XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

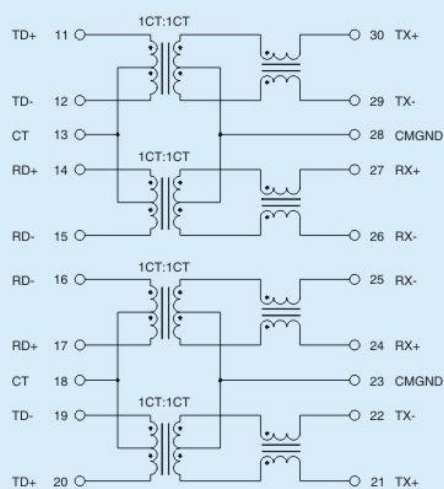
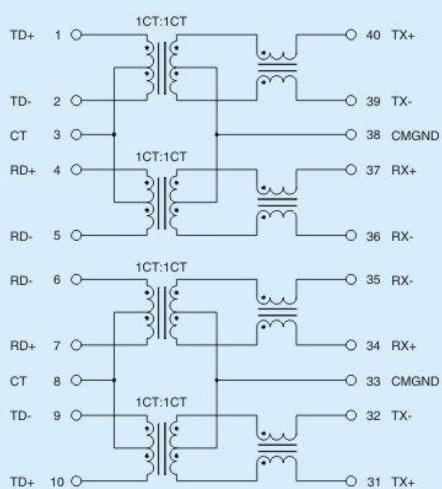


## LAN-Transformer SERIES

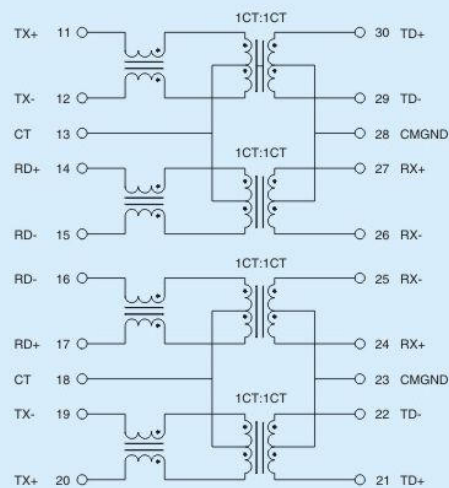
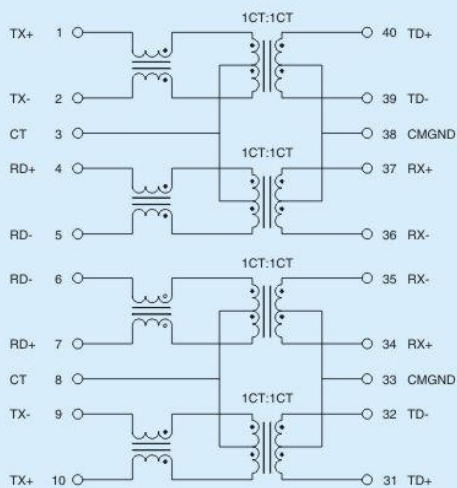
网络变压器电路图(SMT系列)

### Schematic

#### GS40005LF



#### GS40005ALF





## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/48PIN/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



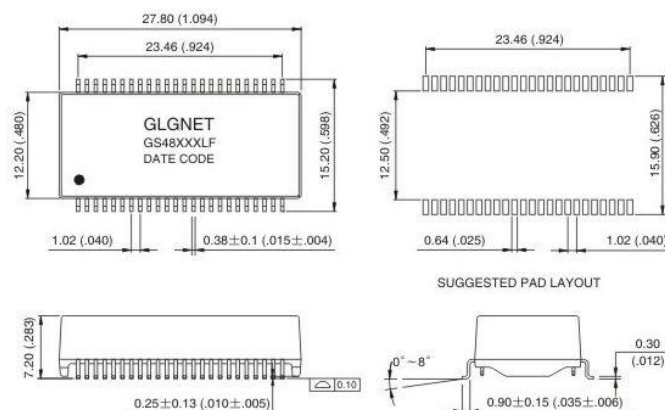
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GS48104LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS48104TLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS48112LF  | 1CT:1       | 1CT:1   | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS48104CLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (SMT Series)

#### GS48XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

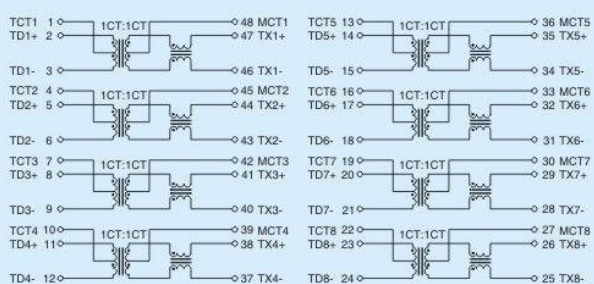


# LAN-Transformer SERIES

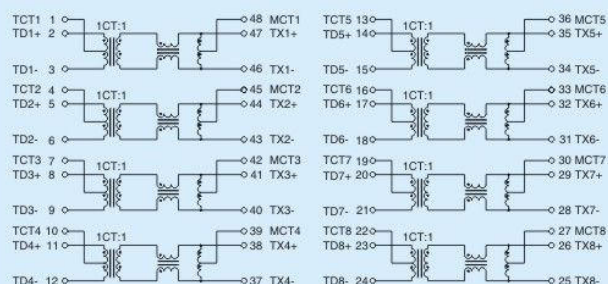
## 网络变压器电路图(SMT系列)

### Schematic

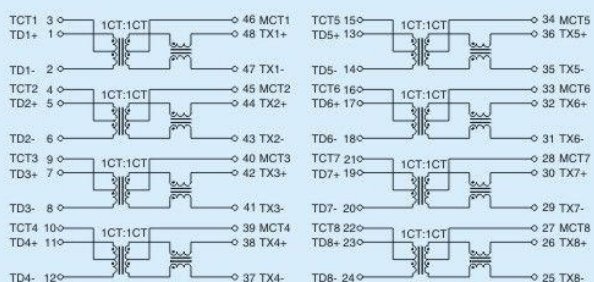
#### GS48104LF



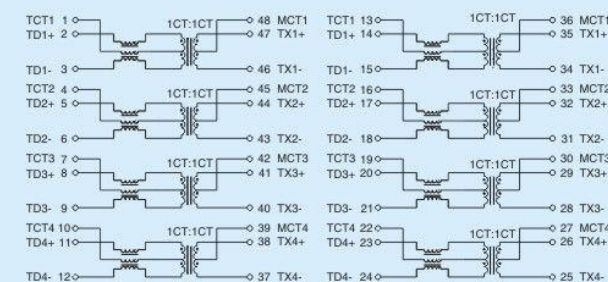
#### GS48104TLF



#### GS48112LF



#### GS48104CLF

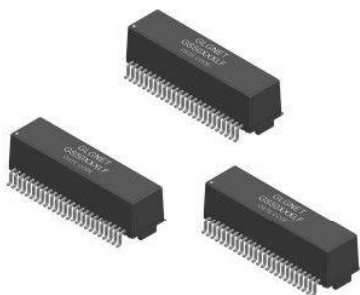




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/50PIN/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



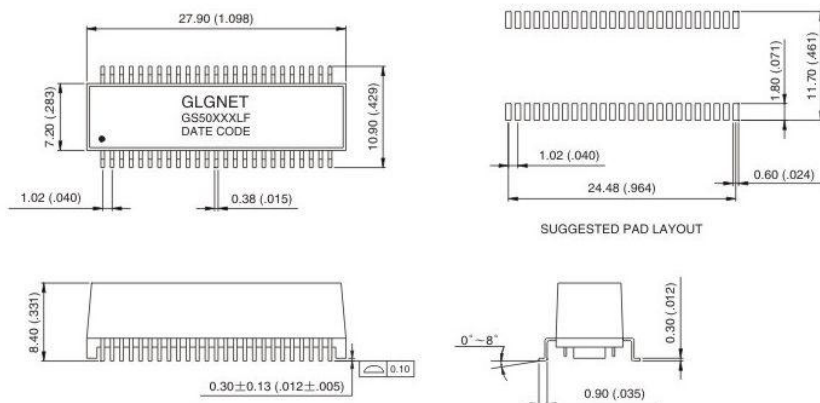
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GS50108LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GS50108ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (SMT Series)

#### GS50XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

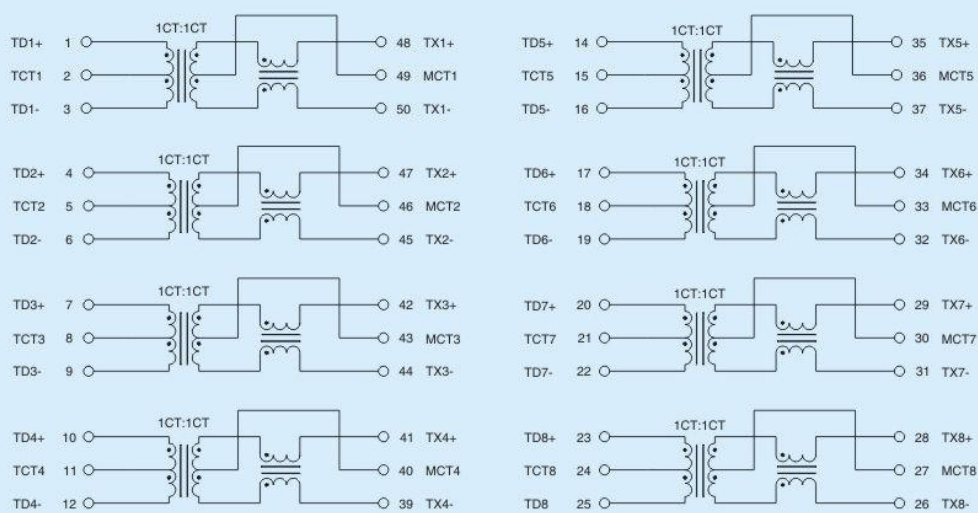


## LAN-Transformer SERIES

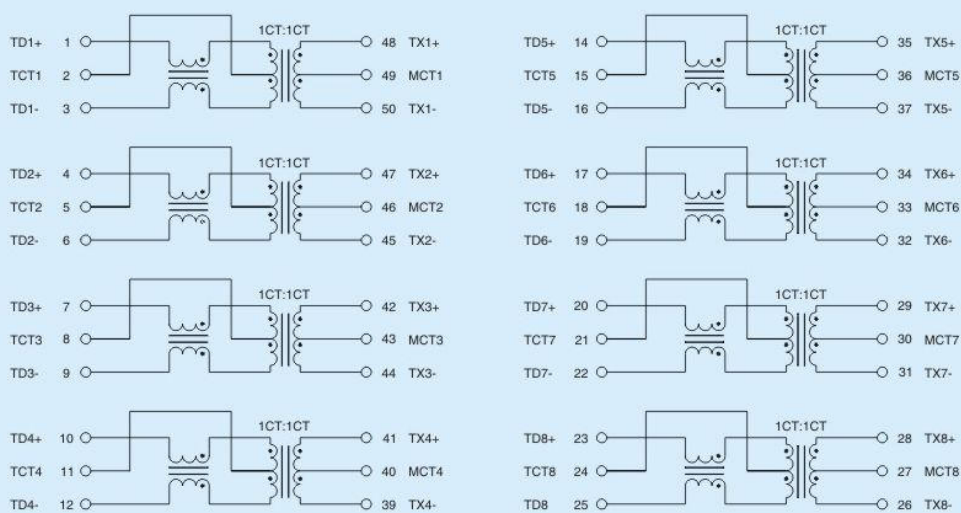
网络变压器电路图(SMT系列)

### Schematic

#### GS50108LF



#### GS50108ALF

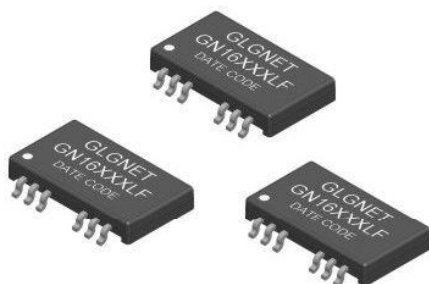




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/12PIN(NB)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



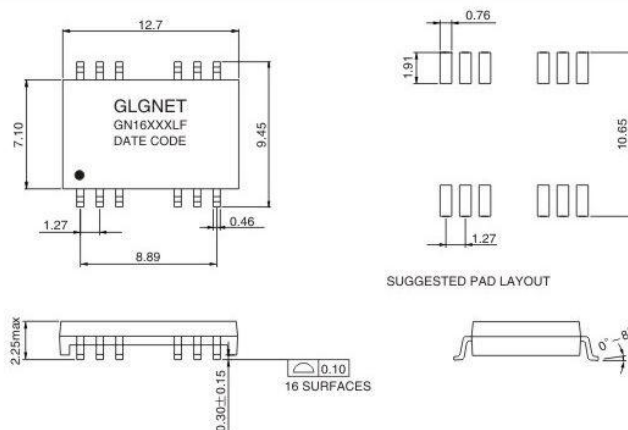
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GN16002LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GN16014LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GN16014ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GN16015LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (SMT Series)

#### GN16XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

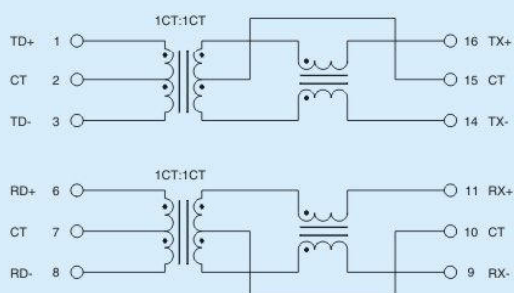


## LAN-Transformer SERIES

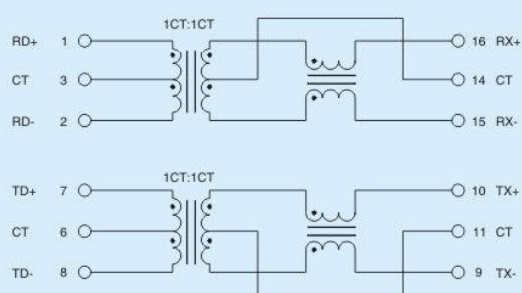
网络变压器电路图(SMT系列)

### Schematic

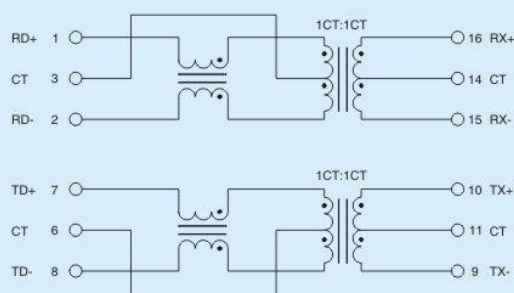
#### GN16002LF



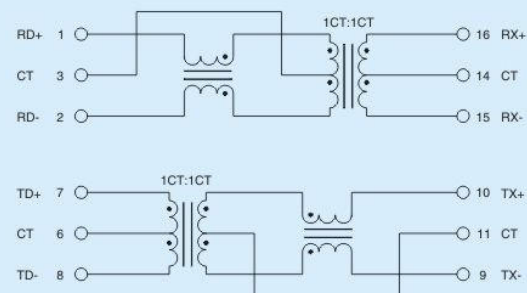
#### GN16014LF



#### GN16014ALF



#### GN16015LF

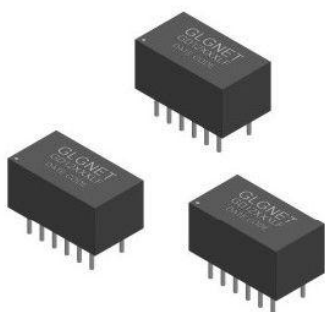




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

DIP/12PIN(MAX)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



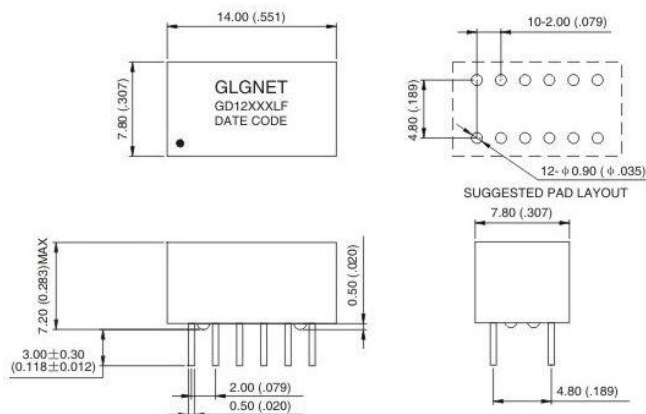
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GD12008DLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD12009LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD12009DLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD12016LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD12XXLXF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

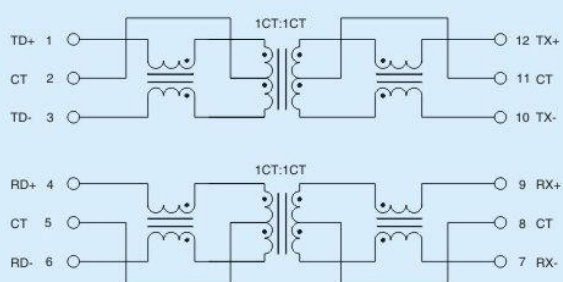


## LAN-Transformer SERIES

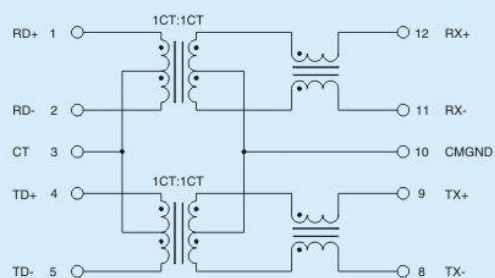
网络变压器电路图(DIP系列)

### Schematic

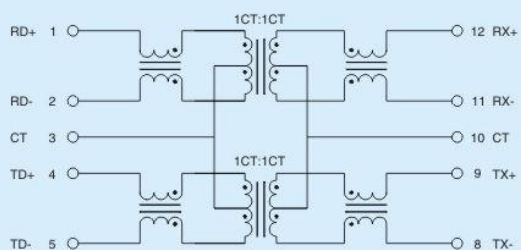
**GD12008DLF**



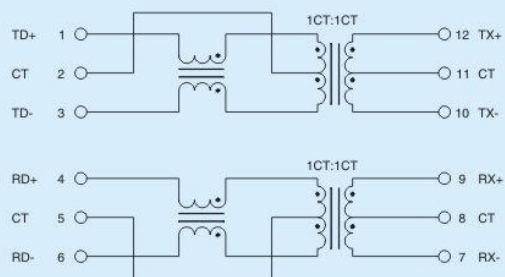
**GD12009LF**



**GD12009DLF**



**GD12016LF**

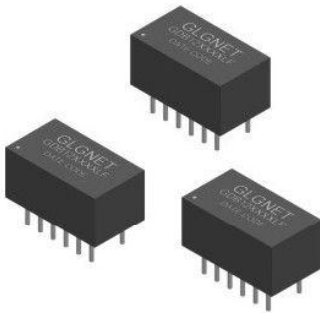




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/12PIN(MID)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



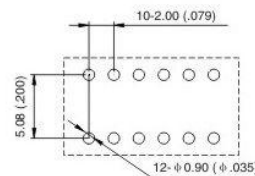
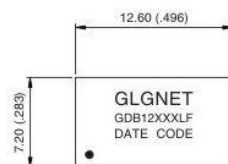
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

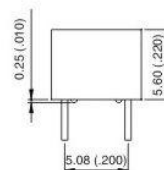
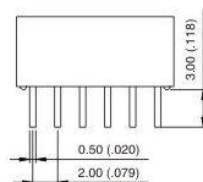
|                   | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|-------------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|                   | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|                   |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| <b>GDB12008LF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| <b>GDB12009LF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GDB12XXXLF



SUGGESTED PAD LAYOUT



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

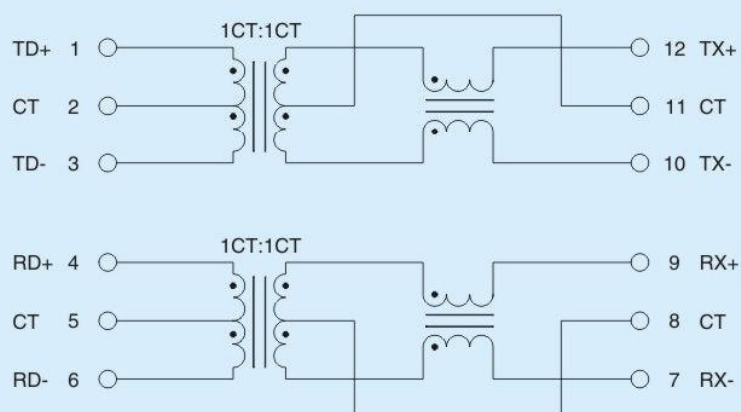


## LAN-Transformer SERIES

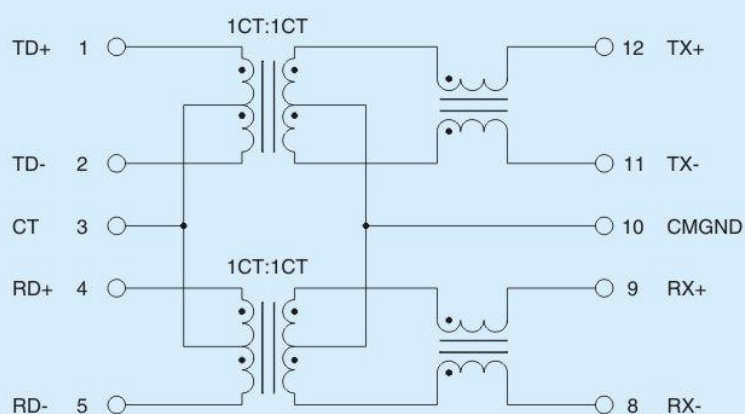
网络变压器电路图(DIP系列)

### Schematic

#### GDB12008LF



#### GDB12009LF

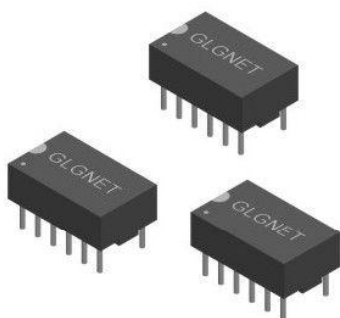




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/12PIN(MIN)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



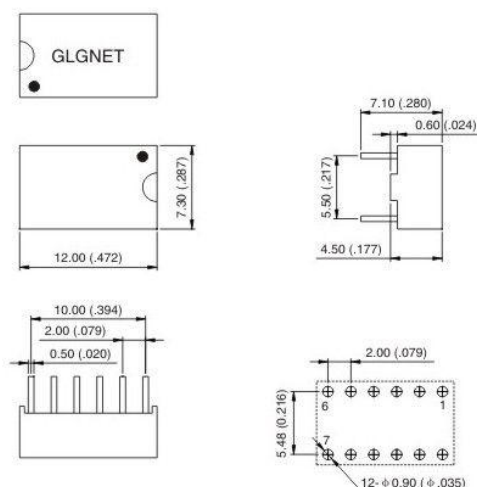
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|                | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|----------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|                | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|                |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| <b>61207-1</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### 61207-1



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

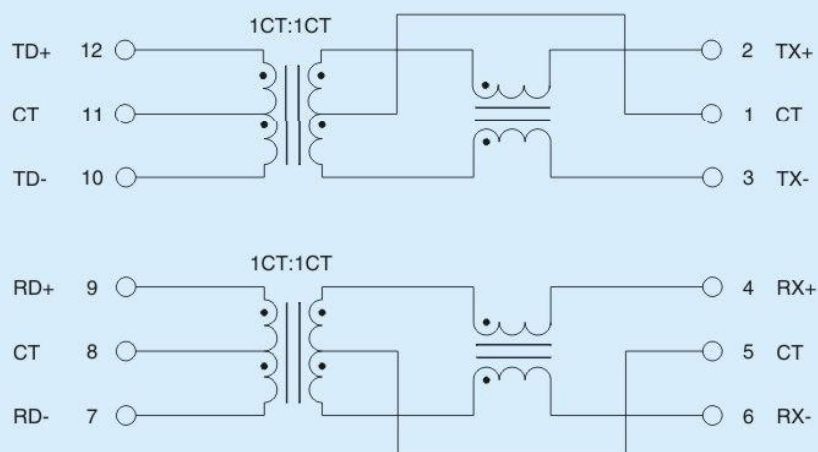


## LAN-Transformer SERIES

网络变压器电路图(DIP系列)

### Schematic

#### 61207-1

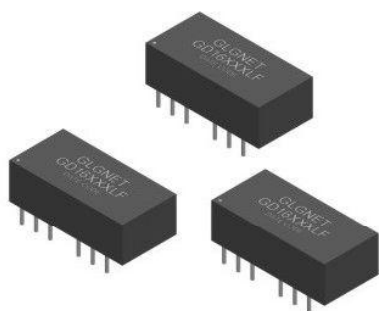




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/16PIN/100 BASE-T ETHERNET ISOLATION TRANSFORMER



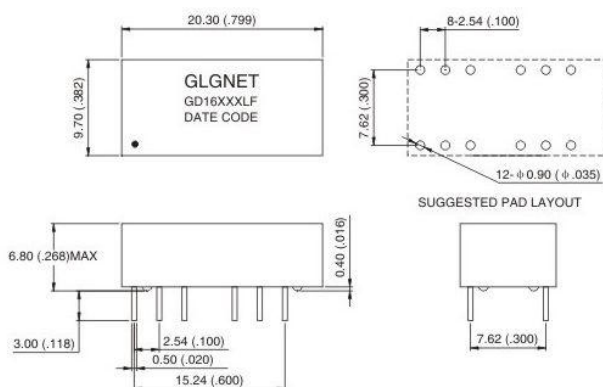
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GD16003LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD16003DLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD16007LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD16011LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD16XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

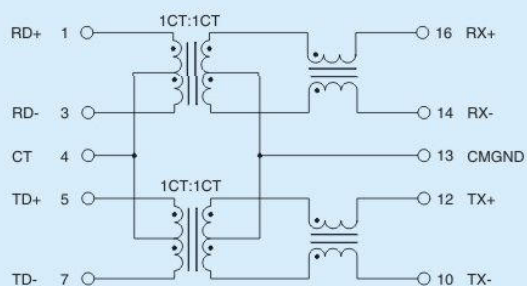


## LAN-Transformer SERIES

网络变压器电路图(DIP系列)

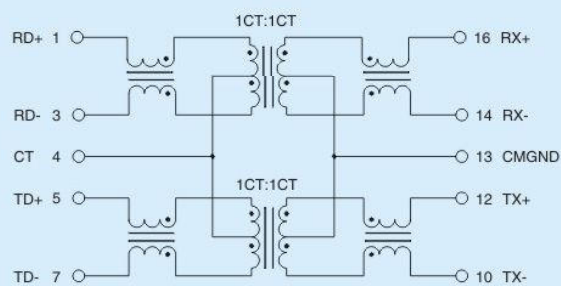
### Schematic

#### GD16003LF



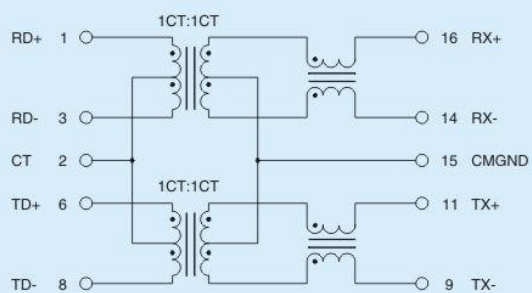
PIN 2,6,8,9,11,15 CUT OFF

#### GD16003DLF



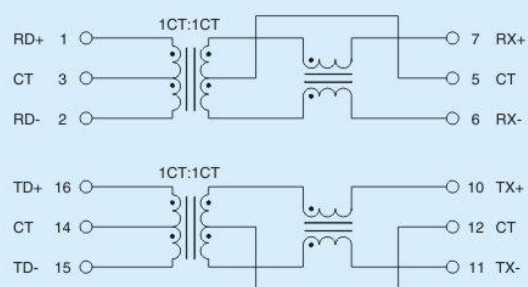
PIN 2,6,8,9,11,15 CUT OFF

#### GD16007LF



PIN 4,5,7,10,12,13 CUT OFF

#### GD16011LF



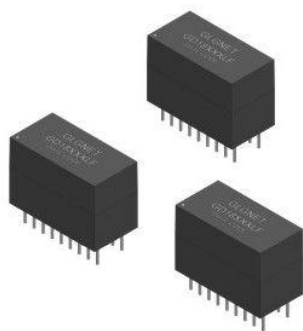
PIN 4,8,9,13 CUT OFF



## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/18PIN/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



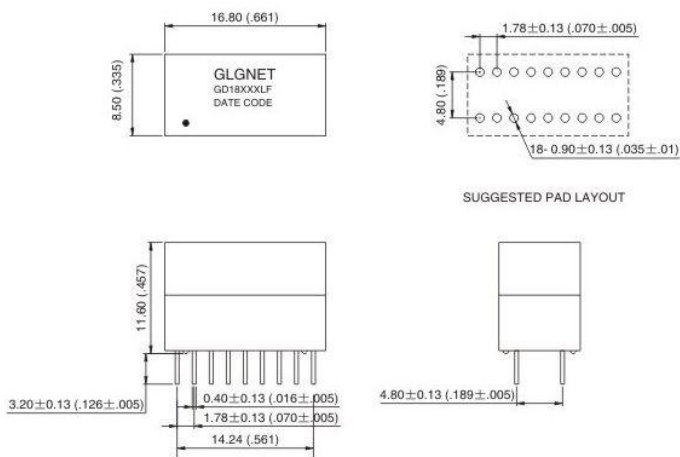
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GD18101LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD18101ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD18XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

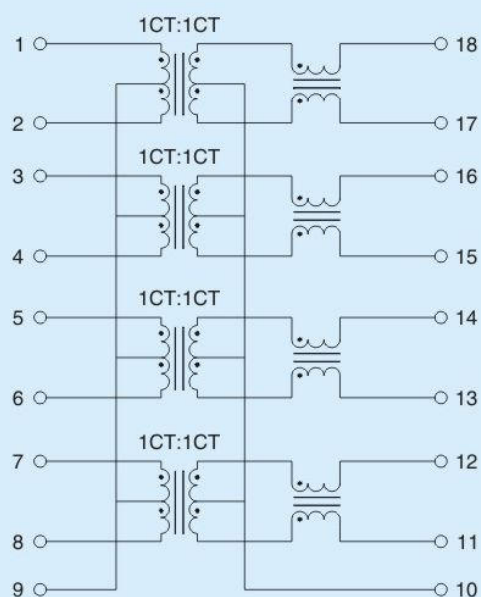


## LAN-Transformer SERIES

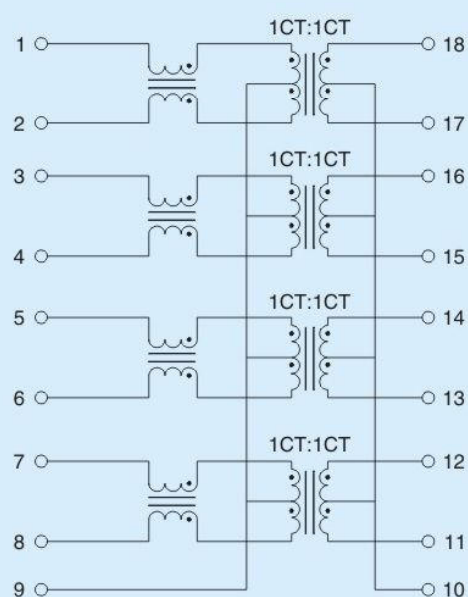
网络变压器电路图(DIP系列)

### Schematic

**GD18101LF**



**GD18101ALF**

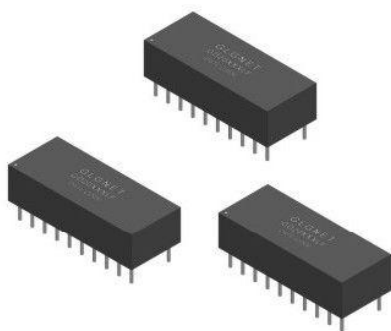




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/20PIN(A)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



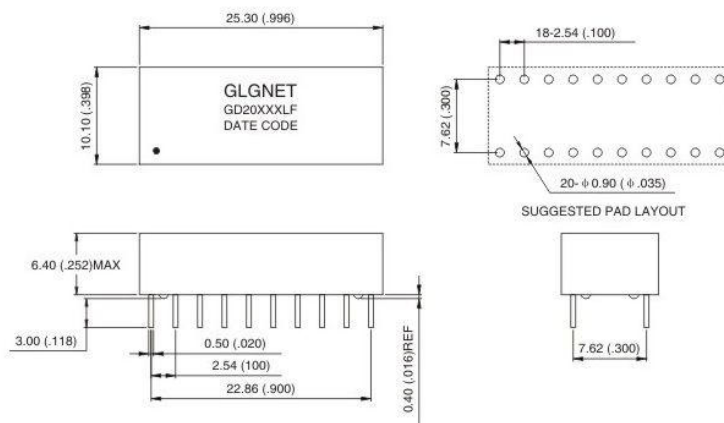
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |           |           |              |            | Cross talk<br>(dB Min) |           |            | DCMR<br>(dB Min) |           |            | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-----------|-----------|--------------|------------|------------------------|-----------|------------|------------------|-----------|------------|------------------|
|            | TX          | RX      | 0.3-100<br>MHz             | 1-30<br>MHz             | 40<br>MHz | 50<br>MHz | 60-80<br>MHz | 100<br>MHz | 30<br>MHz              | 60<br>MHz | 100<br>MHz | 30<br>MHz        | 60<br>MHz | 100<br>MHz | 1500             |
| GD20004LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |
| GD20004DLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |

### Mechanical (DIP Series)

#### GD20XXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

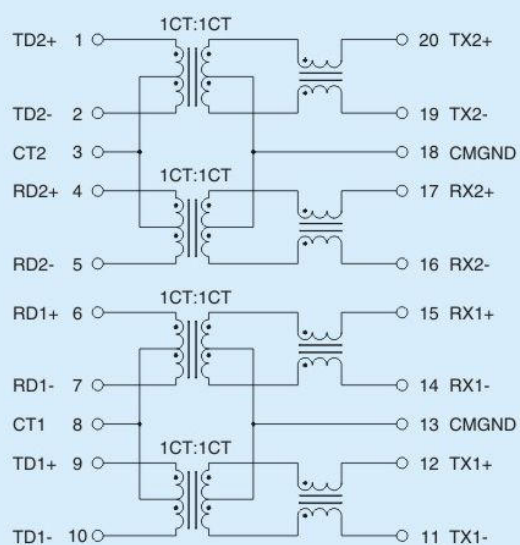


## LAN-Transformer SERIES

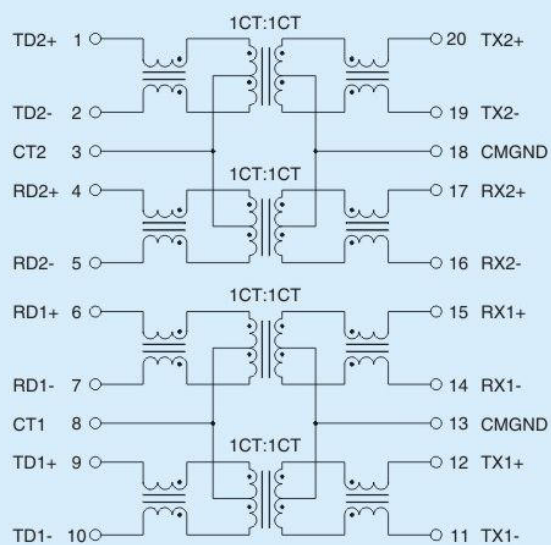
网络变压器电路图(DIP系列)

### Schematic

#### GD20004LF



#### GD20004DLF

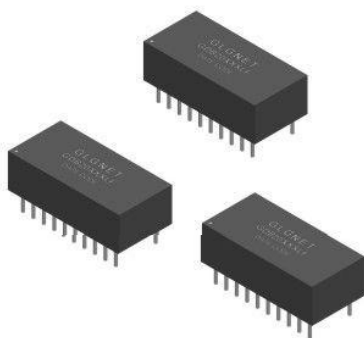




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/20PIN(B)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



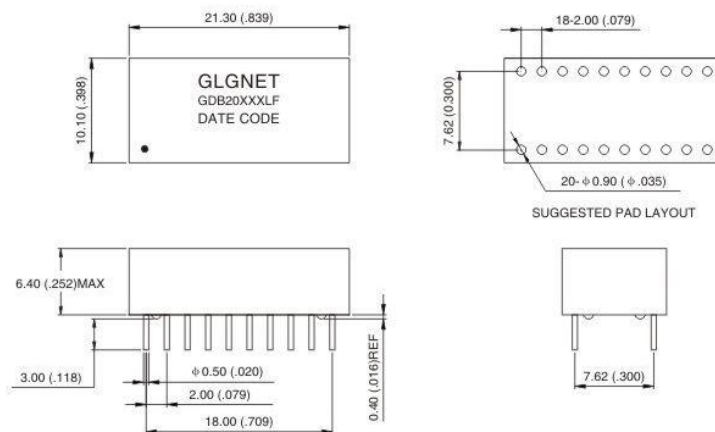
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C.
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GDB20004LF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GDB20012LF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GDB20XXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

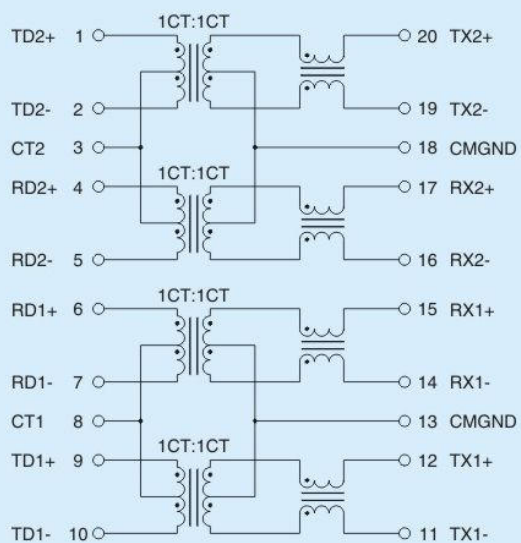


## LAN-Transformer SERIES

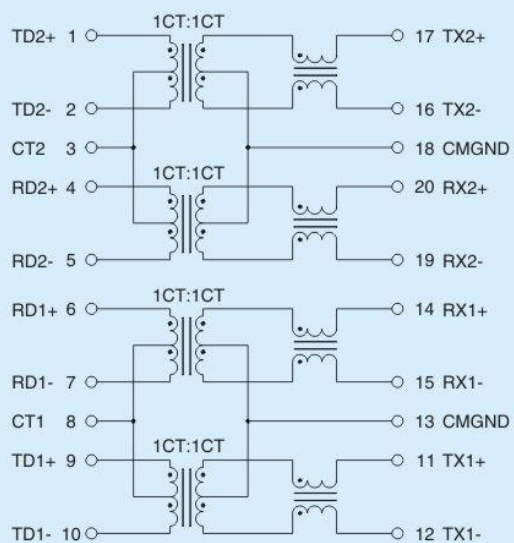
网络变压器电路图(DIP系列)

### Schematic

#### GDB20004LF



#### GDB20012LF

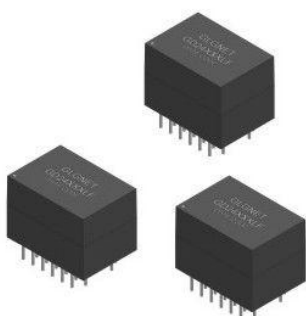




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/24PIN/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



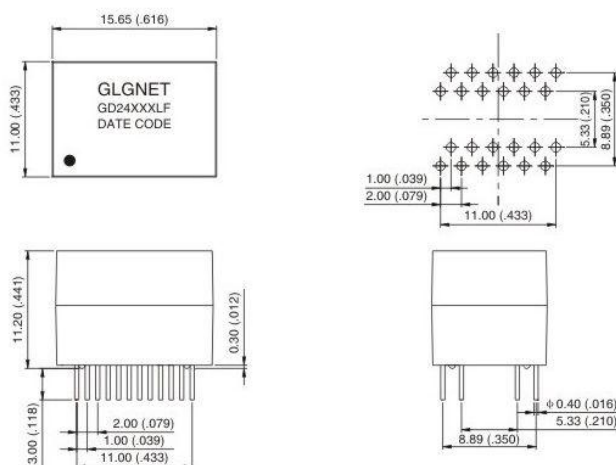
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |     |       | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-----|-------|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      |                            | 0.3-100                 | 1-30  | 40    | 50  | 60-80 | 100                    | 30  | 60  | 100              | 30  | 60  |                  |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz | MHz   | MHz                    | MHz | MHz | MHz              | MHz | MHz | MHz              |
| GD24103LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD24103ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD24103DLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD24XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

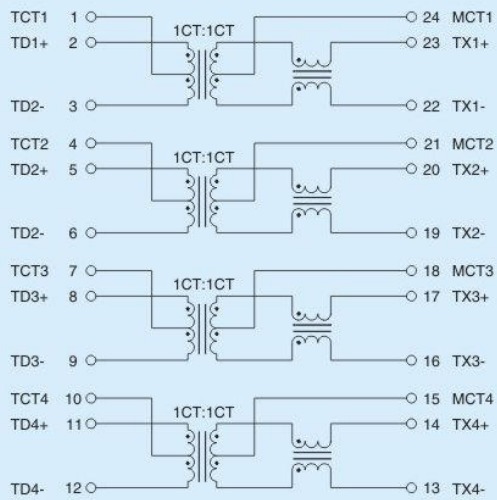


## LAN-Transformer SERIES

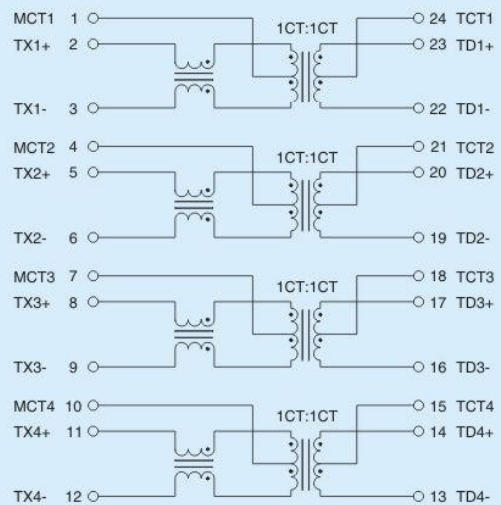
网络变压器电路图(DIP系列)

### Schematic

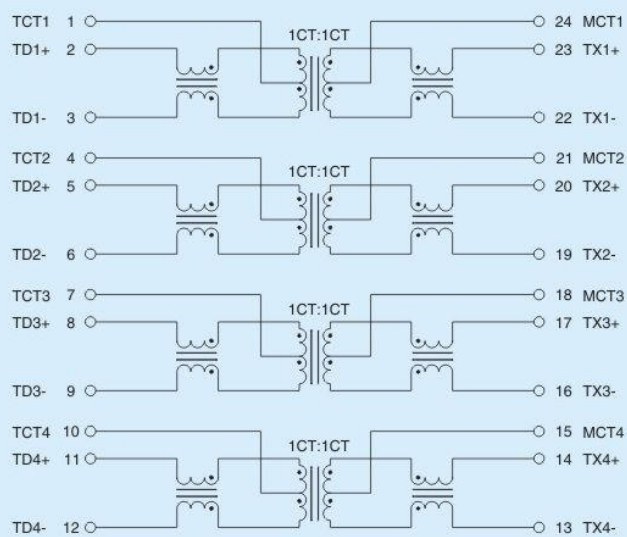
#### GD24103LF



#### GD24103ALF



#### GD24103DLF

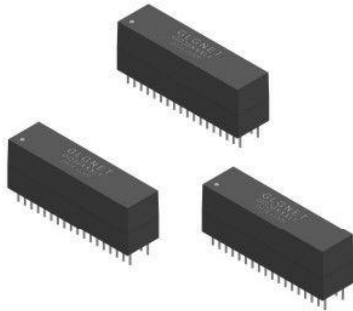




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/36PIN/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



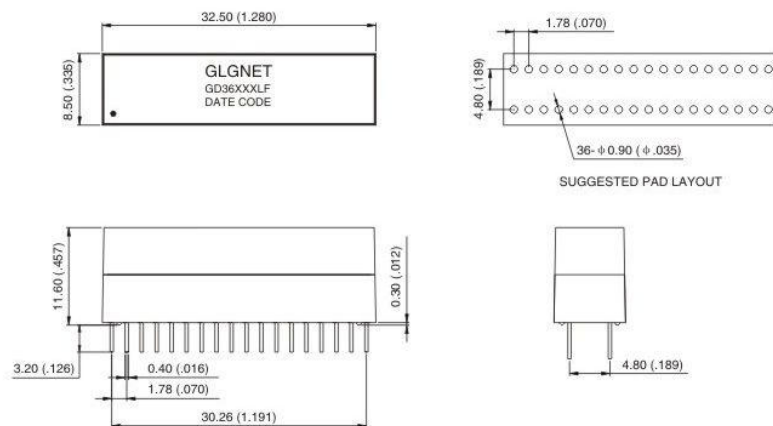
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|                   | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |           |           |              |            | Cross talk<br>(dB Min) |           |            | DCMR<br>(dB Min) |           |            | HI-POT<br>(Vrms) |
|-------------------|-------------|---------|----------------------------|-------------------------|-----------|-----------|--------------|------------|------------------------|-----------|------------|------------------|-----------|------------|------------------|
|                   | TX          | RX      | 0.3-100<br>MHz             | 1-30<br>MHz             | 40<br>MHz | 50<br>MHz | 60-80<br>MHz | 100<br>MHz | 30<br>MHz              | 60<br>MHz | 100<br>MHz | 30<br>MHz        | 60<br>MHz | 100<br>MHz | 1500             |
| <b>GD36102LF</b>  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |
| <b>GD36102ALF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |

### Mechanical (DIP Series)

#### GD36XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

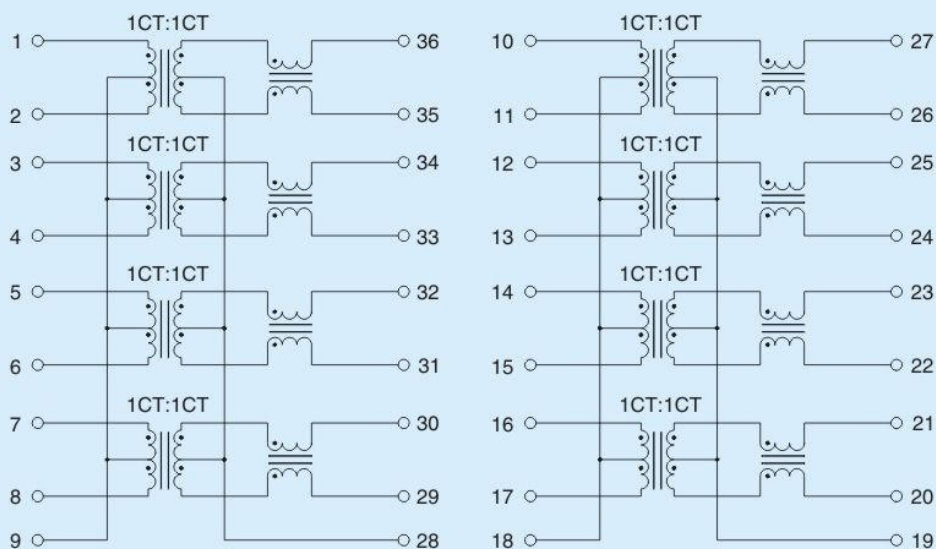


## LAN-Transformer SERIES

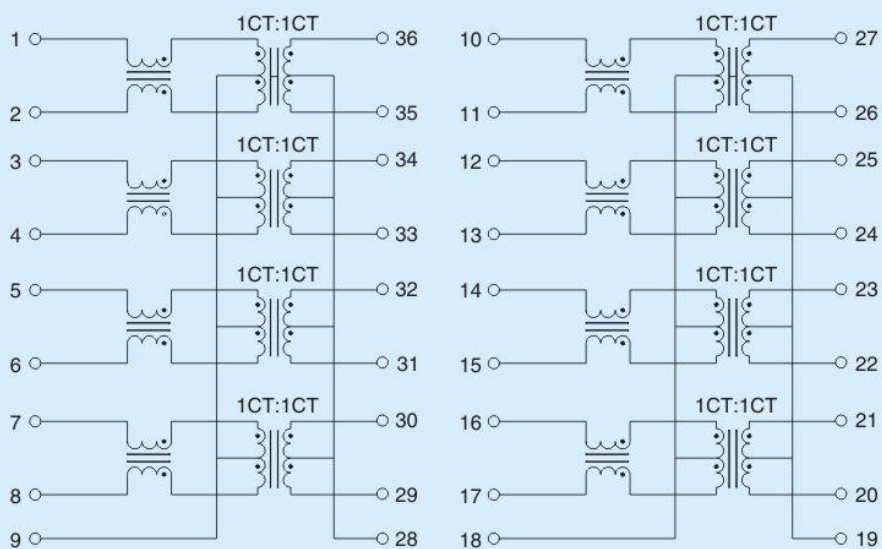
网络变压器电路图(DIP系列)

### Schematic

#### GD36102LF



#### GD36102ALF

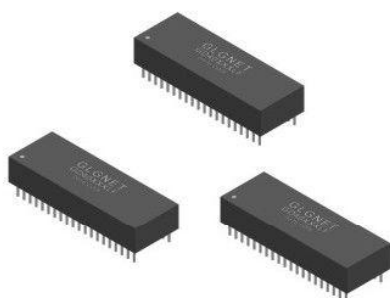




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/40PIN(A)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



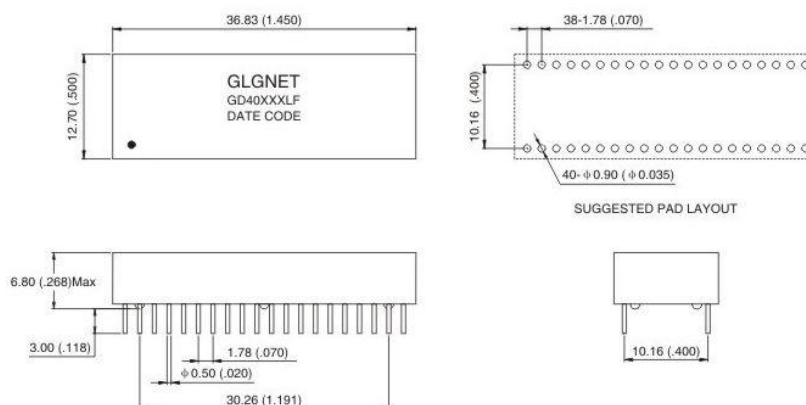
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GD40005LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD40005DLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD40XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

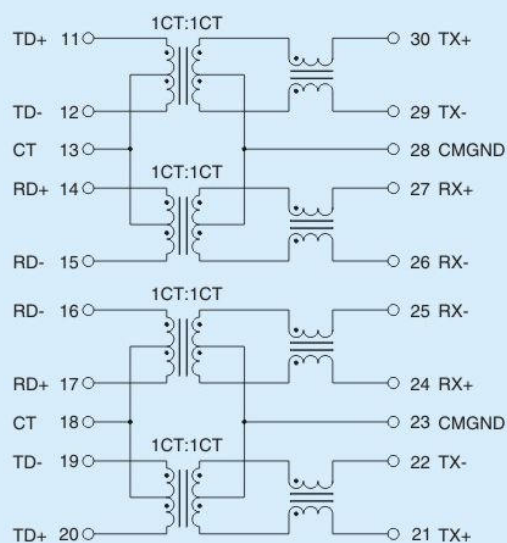
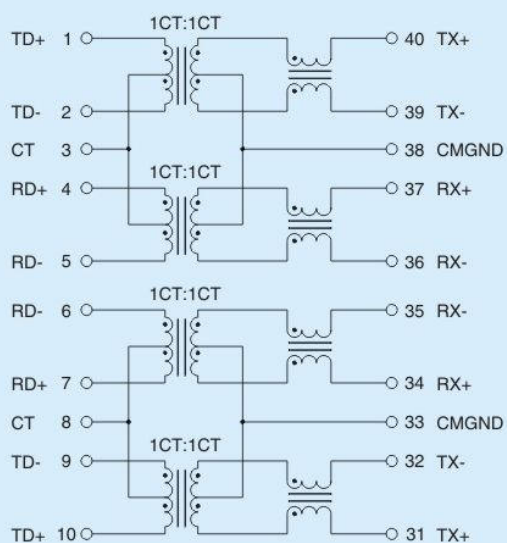


## LAN-Transformer SERIES

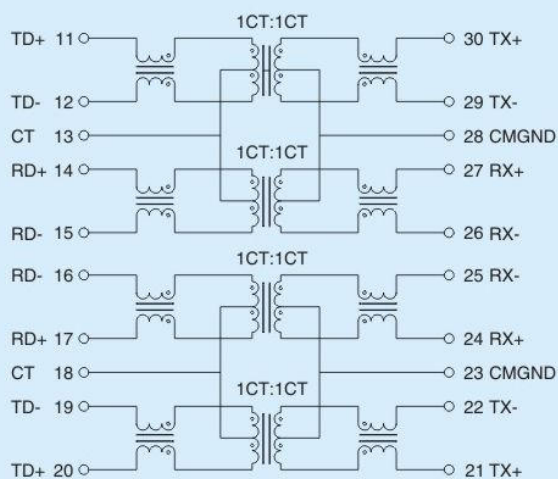
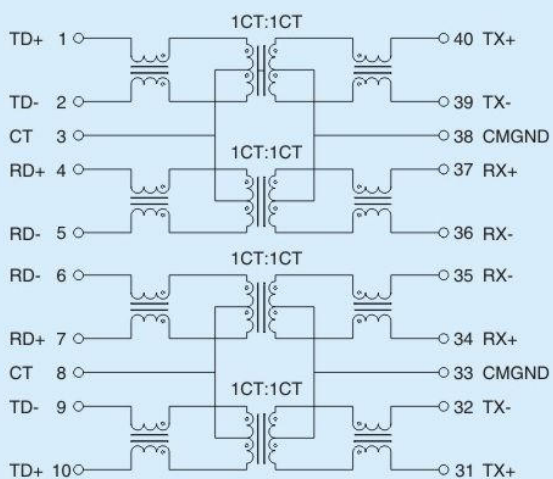
网络变压器电路图(DIP系列)

### Schematic

#### GD40005LF



#### GD40005DLF

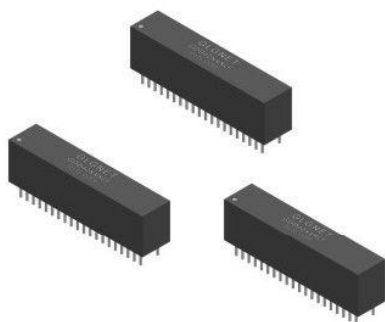




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/40PIN(B)/100 BASE-T ETHERNET ISOLATION TRANSFORMER



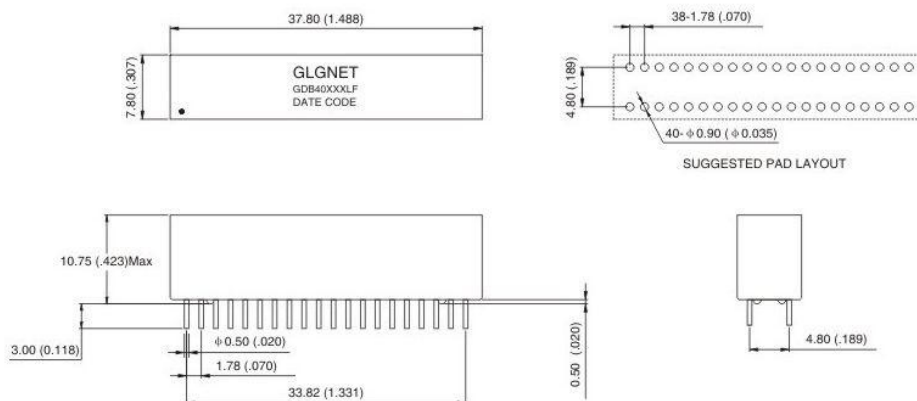
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|                    | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|--------------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|                    | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|                    |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| <b>GDB40005LF</b>  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| <b>GDB40005CLF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GDB40XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

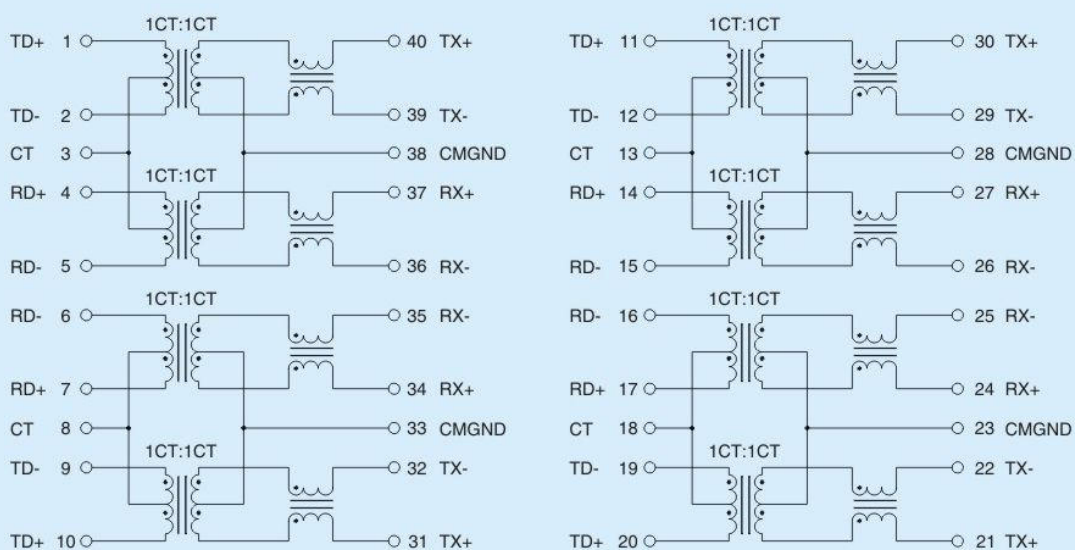


## LAN-Transformer SERIES

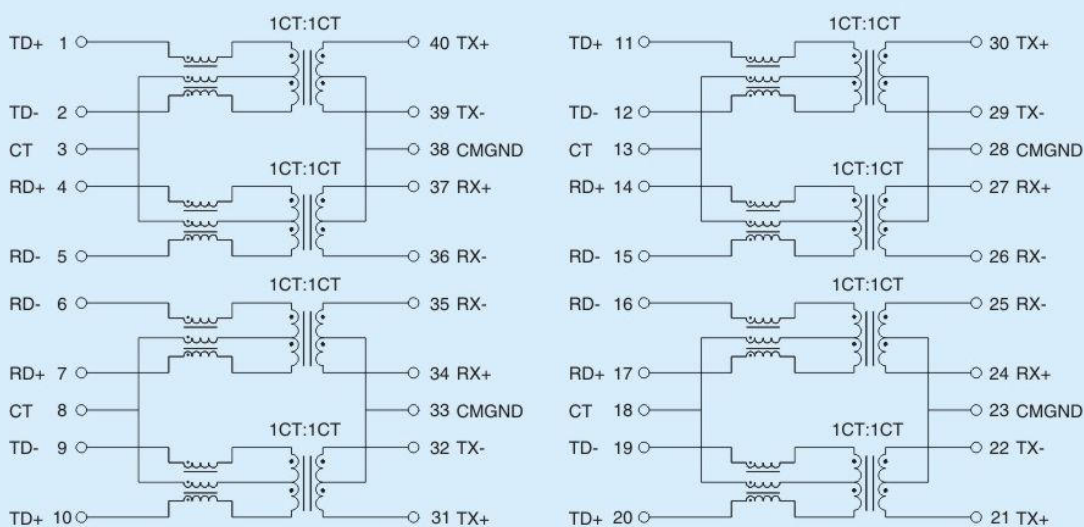
网络变压器电路图(DIP系列)

### Schematic

#### GDB40005LF



#### GDB40005CLF

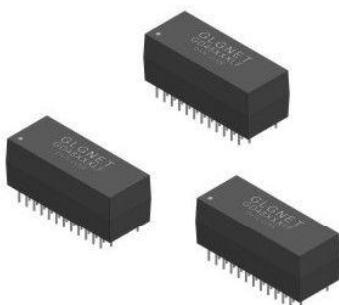




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/48PIN(A)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



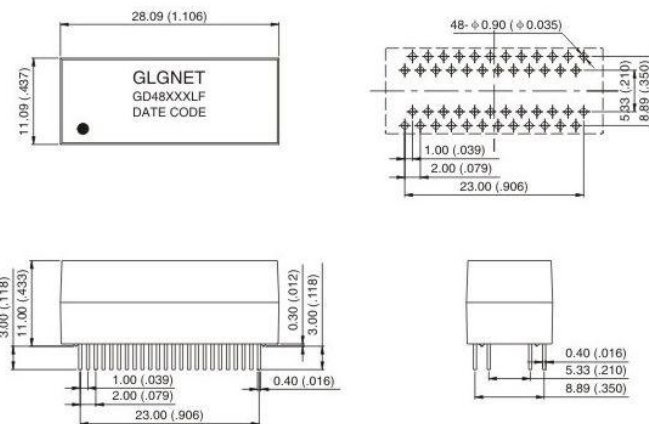
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|            | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |     |       | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------|-------------|---------|----------------------------|-------------------------|-------|-------|-----|-------|------------------------|-----|-----|------------------|-----|-----|------------------|
|            | TX          | RX      |                            | 0.3-100                 | 1-30  | 40    | 50  | 60-80 | 100                    | 30  | 60  | 100              | 30  | 60  |                  |
|            |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz | MHz   | MHz                    | MHz | MHz | MHz              | MHz | MHz | MHz              |
| GD48104LF  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD48104ALF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD48104DLF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12 | -10   | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD48XXXLF



Units: mm(Inches) Tolerances: xx.x0 $\pm$ 0.25(.010)  
0.xx $\pm$ 0.10(.004)

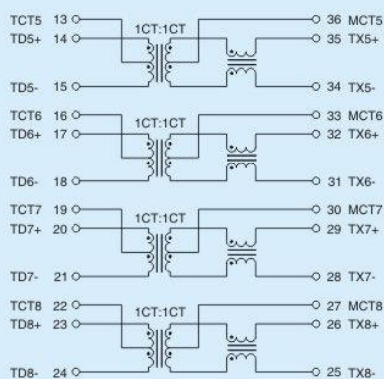
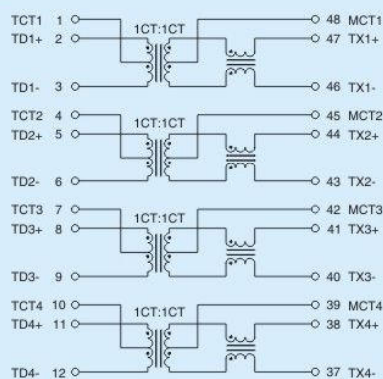


## LAN-Transformer SERIES

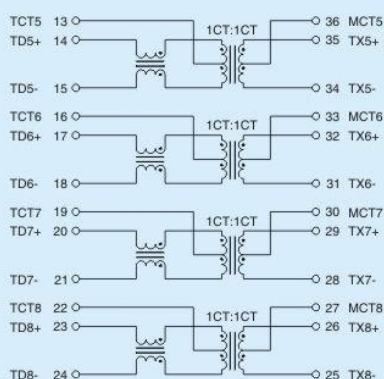
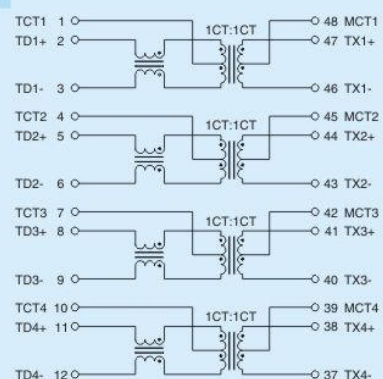
网络变压器电路图(DIP系列)

### Schematic

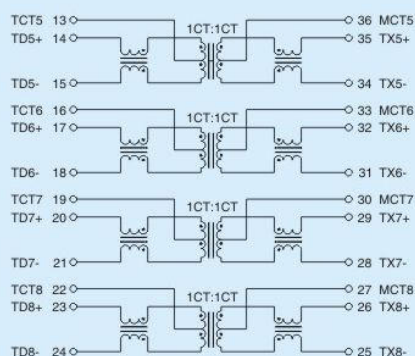
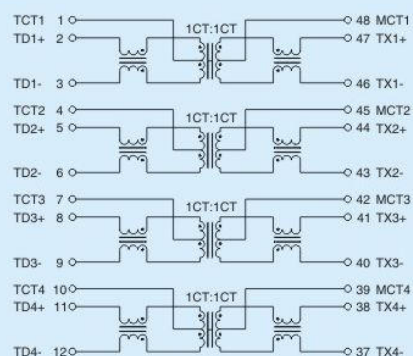
#### GD48104LF



#### GD48104ALF



#### GD48104DLF

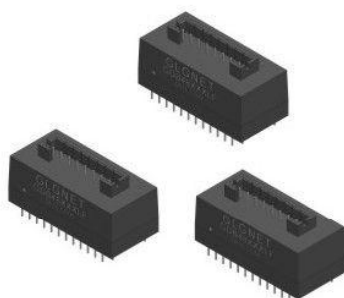




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/48PIN(B)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



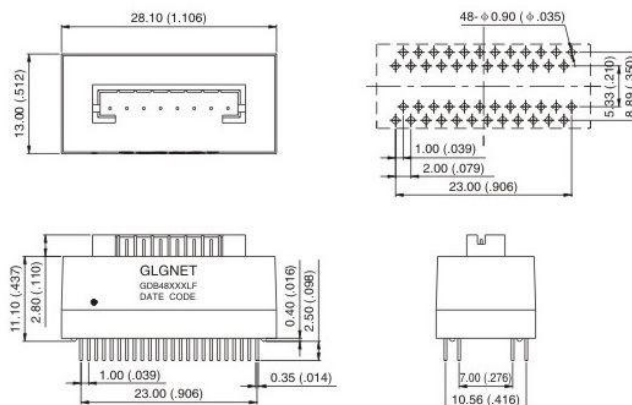
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|                    | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|--------------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|                    | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|                    |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| <b>GDB48114LF</b>  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| <b>GDB48114PLF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| <b>GDB48115LF</b>  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GDB48XXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

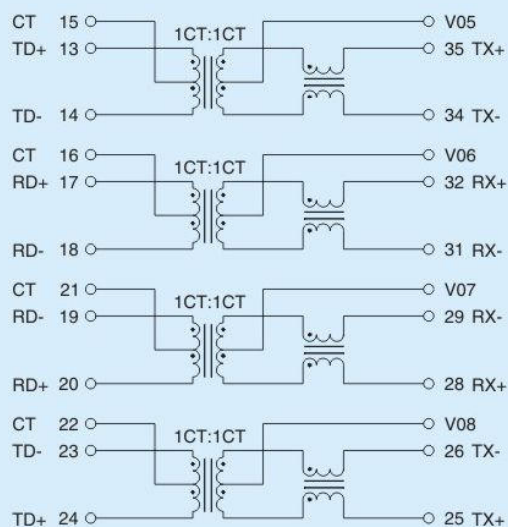
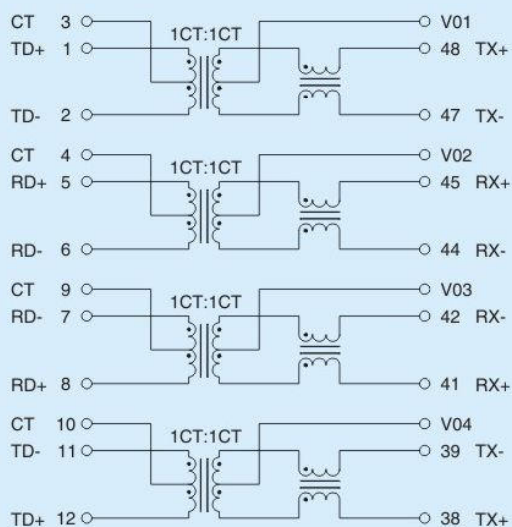


## LAN-Transformer SERIES

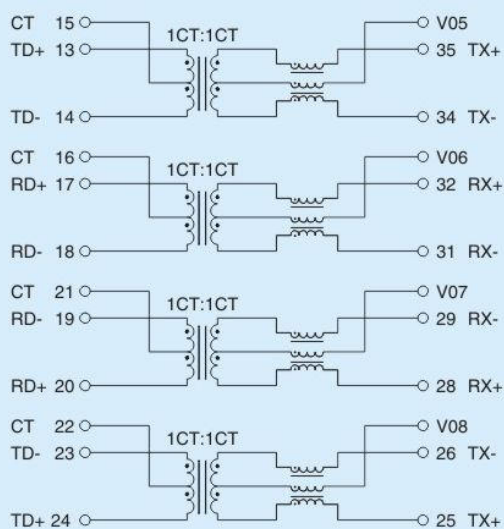
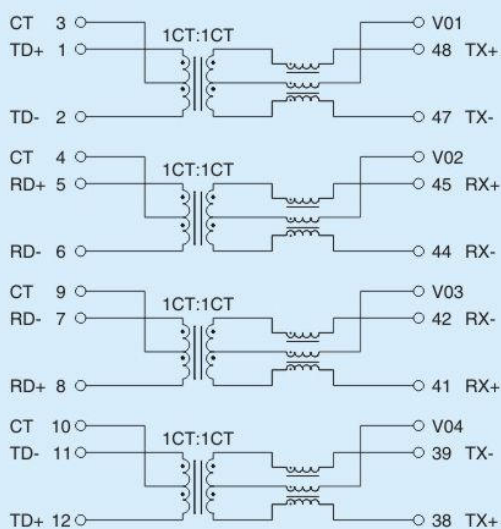
网络变压器电路图(DIP系列)

### Schematic

#### GDB48114LF/GDB48114PLF



#### GDB48115LF

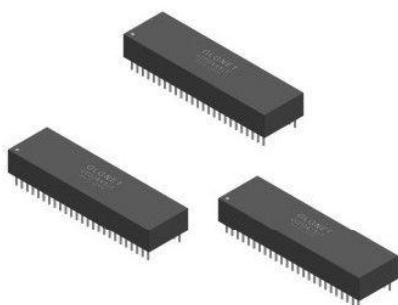




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/50PIN/100 BASE-T ETHERNET ISOLATION TRANSFORMER



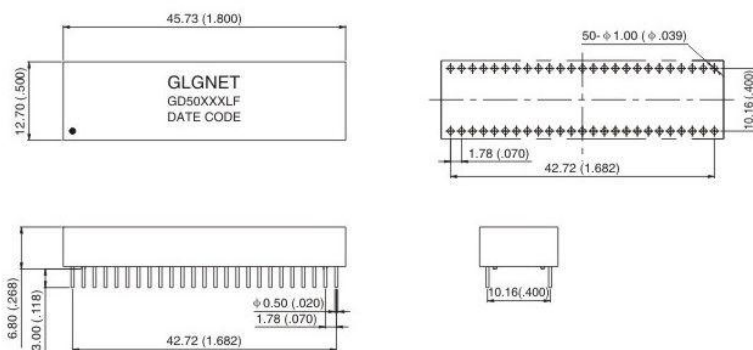
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|                  | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|------------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|                  | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|                  |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| <b>GD50006LF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD50XXXLF



Units: mm(Inches) Tolerances: xxx0±0.25(.010)  
0.xx±0.10(.004)

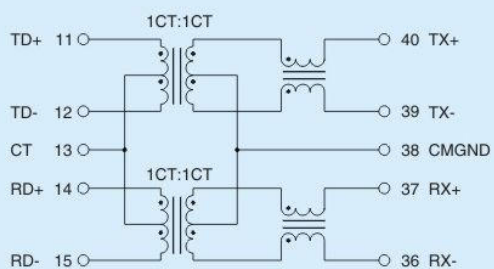
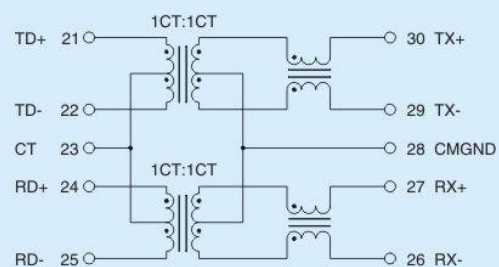
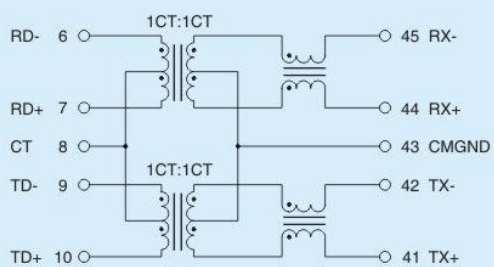
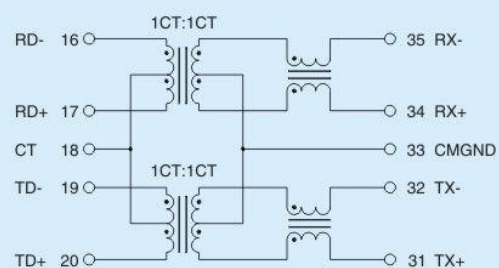
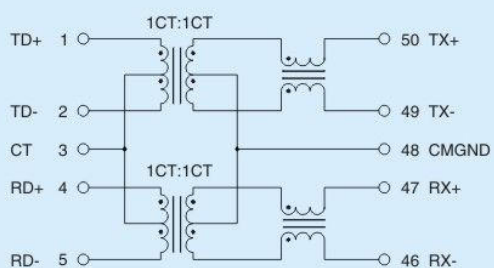


## LAN-Transformer SERIES

网络变压器电路图(DIP系列)

### Schematic

#### GD50006LF

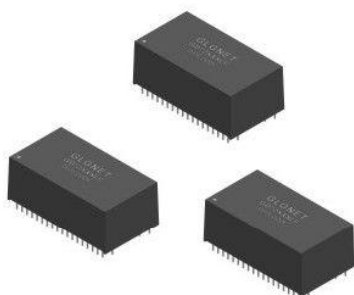




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/72PIN(A)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



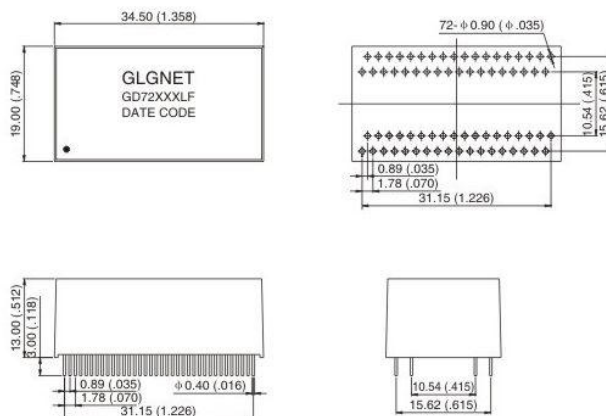
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|           | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|-----------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|           | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|           |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| GD72105LF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| GD72113LF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GD72XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

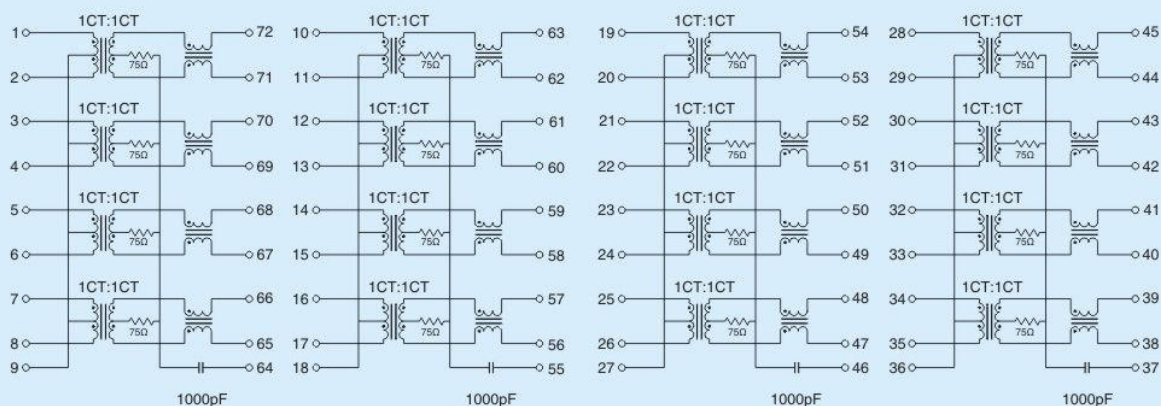


## LAN-Transformer SERIES

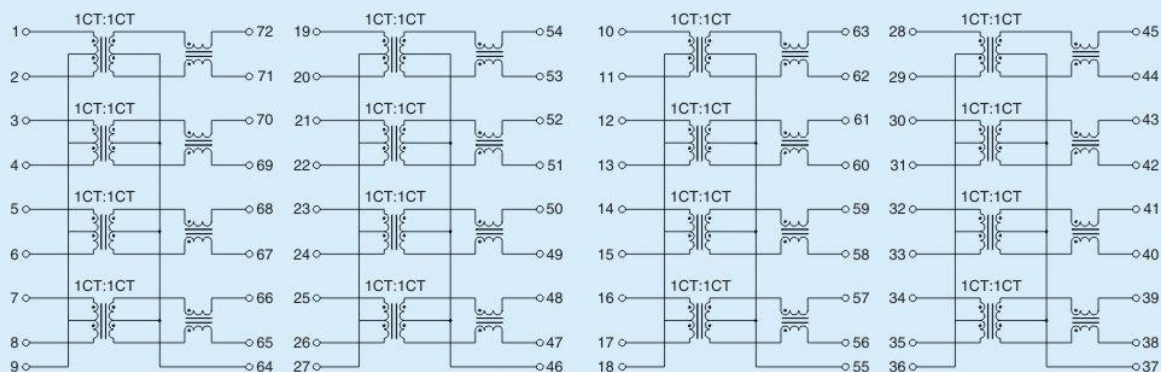
网络变压器电路图(DIP系列)

### Schematic

#### GD72105LF



#### GD72113LF

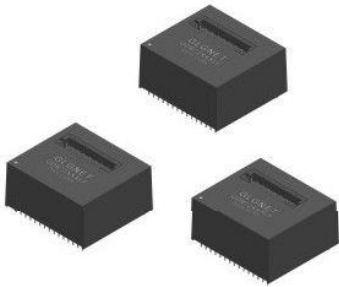




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/72PIN(B)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



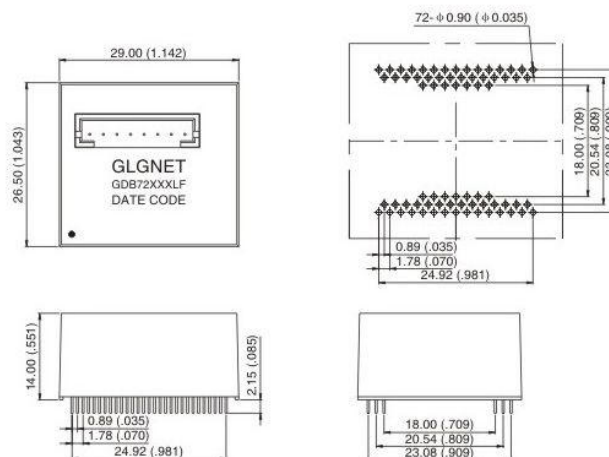
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|                    | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |       |       |       |     | Cross talk<br>(dB Min) |     |     | DCMR<br>(dB Min) |     |     | HI-POT<br>(Vrms) |
|--------------------|-------------|---------|----------------------------|-------------------------|-------|-------|-------|-----|------------------------|-----|-----|------------------|-----|-----|------------------|
|                    | TX          | RX      | 0.3-100                    | 1-30                    | 40    | 50    | 60-80 | 100 | 30                     | 60  | 100 | 30               | 60  | 100 | 1500             |
|                    |             |         | MHz                        | MHz                     | MHz   | MHz   | MHz   | MHz | MHz                    | MHz | MHz | MHz              | MHz | MHz |                  |
| <b>GDB72116LF</b>  | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |
| <b>GDB72116CLF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4 | -13.1 | -12   | -10 | -40                    | -35 | -30 | -40              | -35 | -30 | 1500             |

### Mechanical (DIP Series)

#### GDB72XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

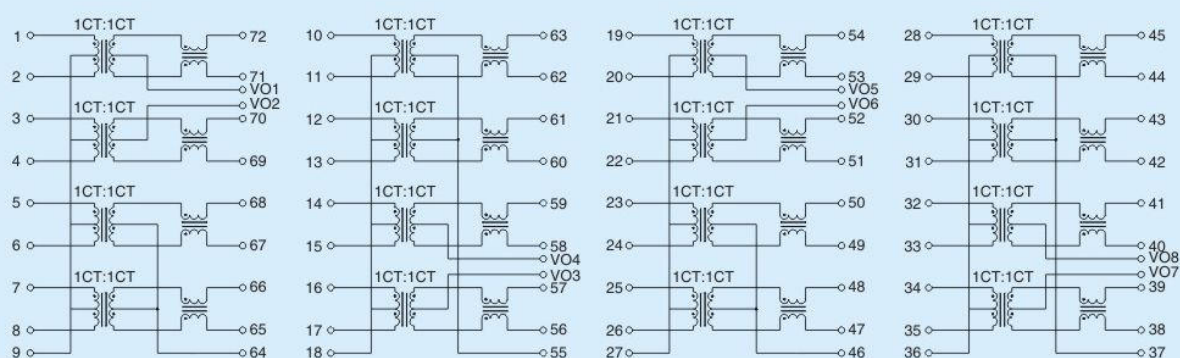


## LAN-Transformer SERIES

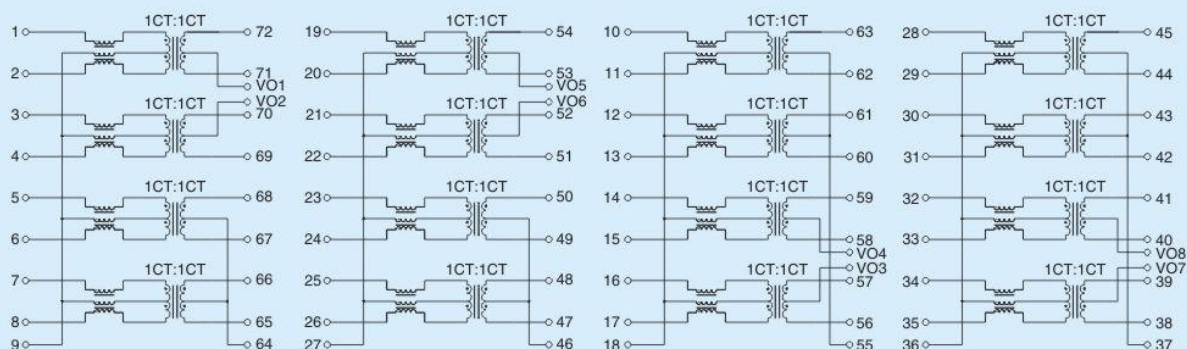
网络变压器电路图(DIP系列)

### Schematic

#### GDB72116LF



#### GDB72116CLF

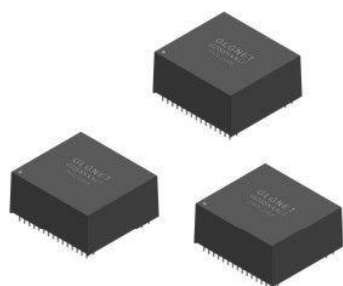




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/88PIN(A)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



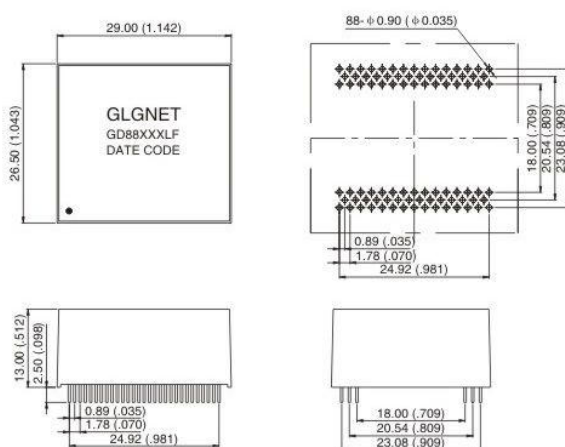
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|           | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |           |           |              |            | Cross talk<br>(dB Min) |           |            | DCMR<br>(dB Min) |           |            | HI-POT<br>(Vrms) |
|-----------|-------------|---------|----------------------------|-------------------------|-----------|-----------|--------------|------------|------------------------|-----------|------------|------------------|-----------|------------|------------------|
|           | TX          | RX      | 0.3-100<br>MHz             | 1-30<br>MHz             | 40<br>MHz | 50<br>MHz | 60-80<br>MHz | 100<br>MHz | 30<br>MHz              | 60<br>MHz | 100<br>MHz | 30<br>MHz        | 60<br>MHz | 100<br>MHz | 1500             |
| GD88117LF | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |

### Mechanical (DIP Series)

#### GD88XXXLF



Units: mm(Inches) Tolerances: xx.x0 $\pm$ 0.25(.010)  
0.xx $\pm$ 0.10(.004)

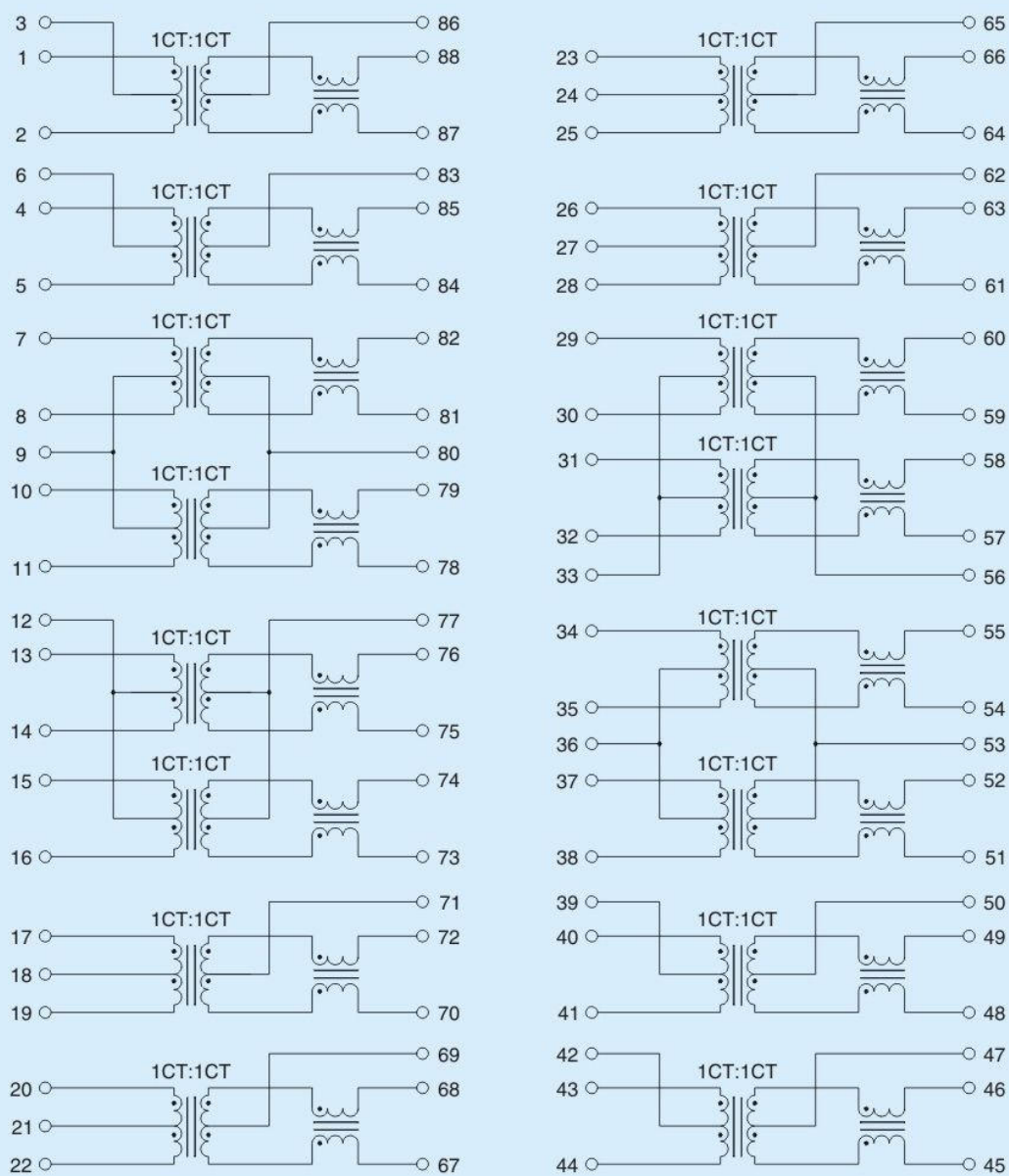


## LAN-Transformer SERIES

网络变压器电路图(DIP系列)

### Schematic

#### GD88117LF

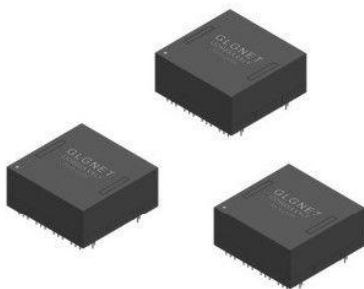




## LAN-Transformer SERIES

10/100/1000 BASE-T ETHERNET ISOLATION TRANSFORMER

### DIP/88PIN(B)/1000 BASE-T ETHERNET ISOLATION TRANSFORMER



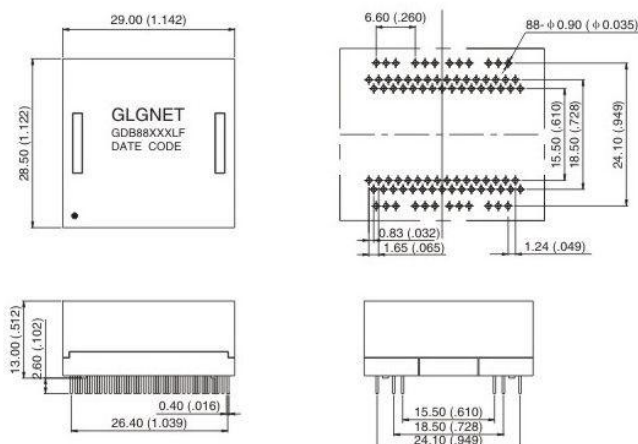
- Complies with requirement of IEEE 802.3 standards, including 350uH OCL with 8mA bias.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|                   | Turns Ratio |         | Insertion Loss<br>(dB Max) | Return Loss<br>(dB Min) |           |           |              |            | Cross talk<br>(dB Min) |           |            | DCMR<br>(dB Min) |           |            | HI-POT<br>(Vrms) |
|-------------------|-------------|---------|----------------------------|-------------------------|-----------|-----------|--------------|------------|------------------------|-----------|------------|------------------|-----------|------------|------------------|
|                   | TX          | RX      | 0.3-100<br>MHz             | 1-30<br>MHz             | 40<br>MHz | 50<br>MHz | 60-80<br>MHz | 100<br>MHz | 30<br>MHz              | 60<br>MHz | 100<br>MHz | 30<br>MHz        | 60<br>MHz | 100<br>MHz | 1500             |
| <b>GDB88118LF</b> | 1CT:1CT     | 1CT:1CT | -1.0                       | -18                     | -14.4     | -13.1     | -12          | -10        | -40                    | -35       | -30        | -40              | -35       | -30        | 1500             |

### Mechanical (DIP Series)

#### GDB88XXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

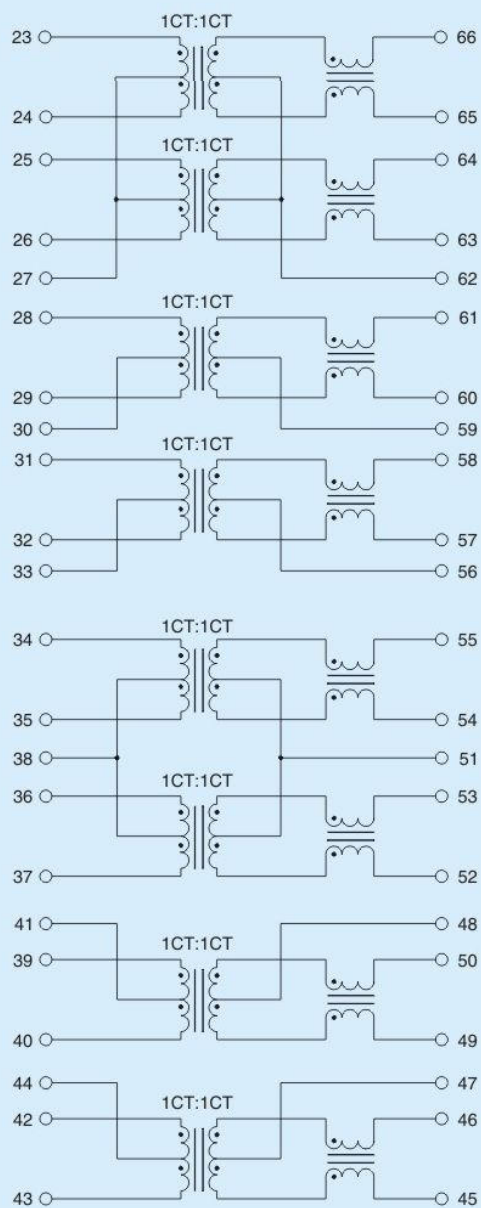
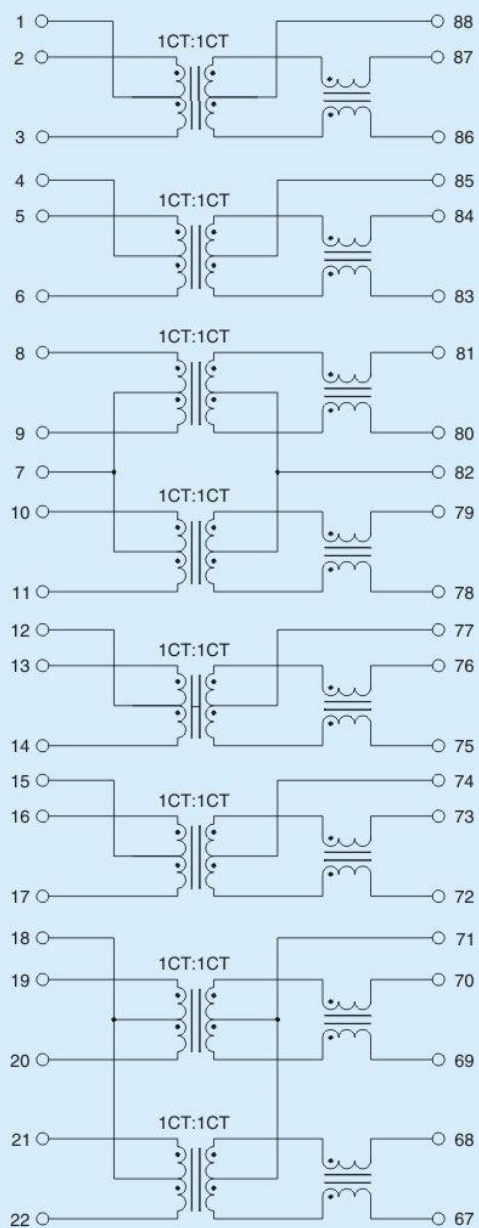


## LAN-Transformer SERIES

网络变压器电路图(DIP系列)

### Schematic

#### GD88118LF

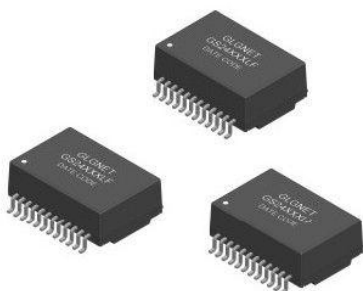




## LAN-Transformer SERIES

10/100/1000/10G BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/24PIN/10G BASE-T ETHERNET ISOLATION TRANSFORMER



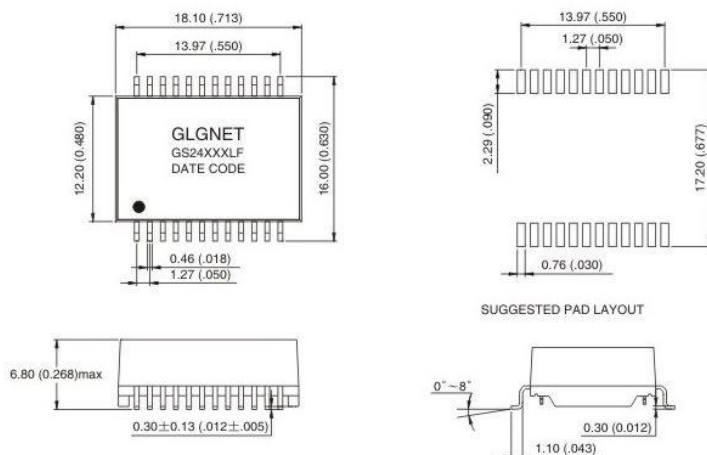
- Complies with requirement of IEEE 802.3 standards,
- Qualifide with top 10Gig PHY Manufacturers.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to+70°C

|            | Turns Ratio |         | Insertion Loss (dB Max) |        | Return Loss (dB Min) |         |     |     | Cross talk (dB Min) |         | DCMR (dB Min) |         | HI-POT (Vrms) |
|------------|-------------|---------|-------------------------|--------|----------------------|---------|-----|-----|---------------------|---------|---------------|---------|---------------|
|            | TX          | RX      | 300KHz-10               | 10-500 | 1-100                | 200-300 | 400 | 500 | 1-100               | 100-500 | 1-250         | 250-500 |               |
|            |             |         | MHz                     | MHz    | MHz                  | MHz     | MHz | MHz | MHz                 | MHz     | MHz           | MHz     |               |
| GS24103GLF | 1CT:1CT     | 1CT:1CT | -1.0                    | -2.0   | -18                  | -12     | -11 | -10 | -40                 | -30     | -30           | -22     | 1500          |

### Mechanical (10G BASE网络变压器结构图)

#### GS24XXXLF



Units: mm(Inches) Tolerances: xx.x0±0.25(.010)  
0.xx±0.10(.004)

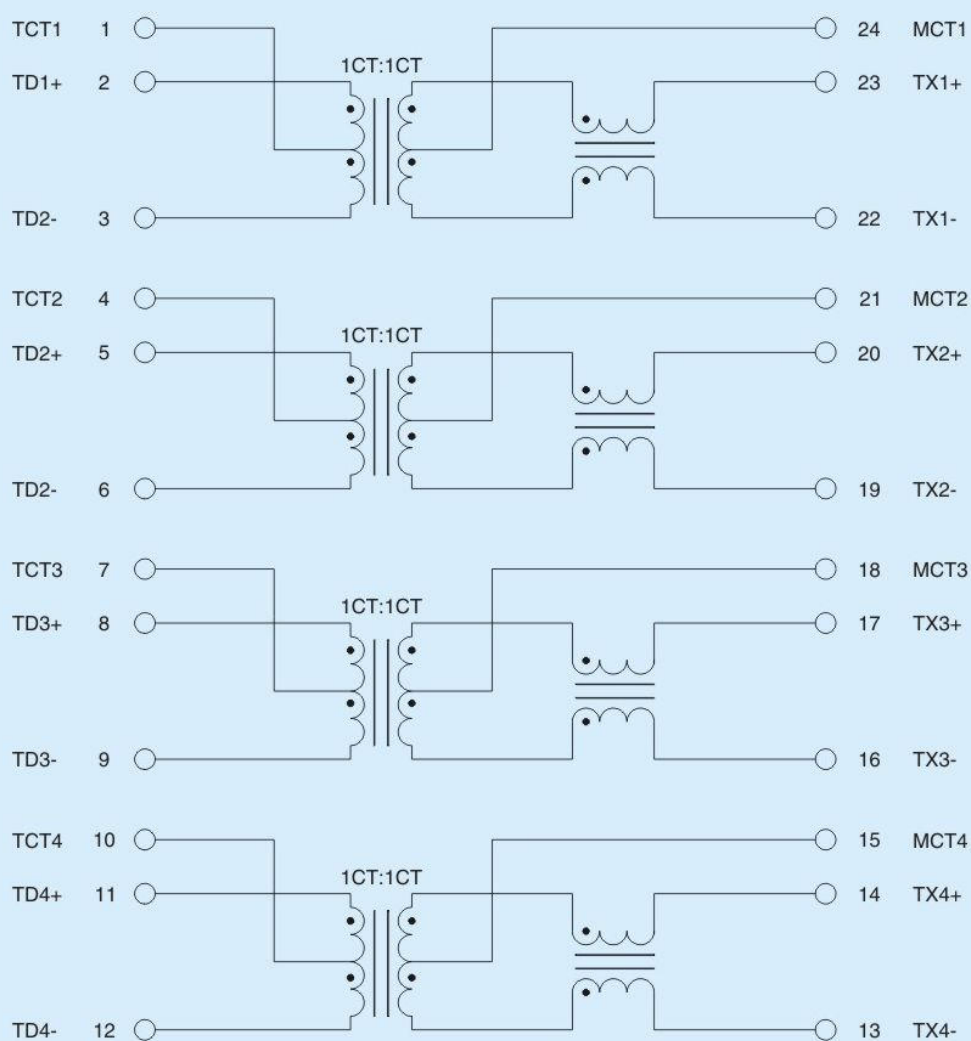


## LAN-Transformer SERIES

10G BASE网络变压器电路图

### Schematic

#### GS24103GLF





## LAN-Transformer SERIES

10/100/1000/10G BASE-T ETHERNET ISOLATION TRANSFORMER

### SMT/48PIN/10G BASE-T ETHERNET ISOLATION TRANSFORMER



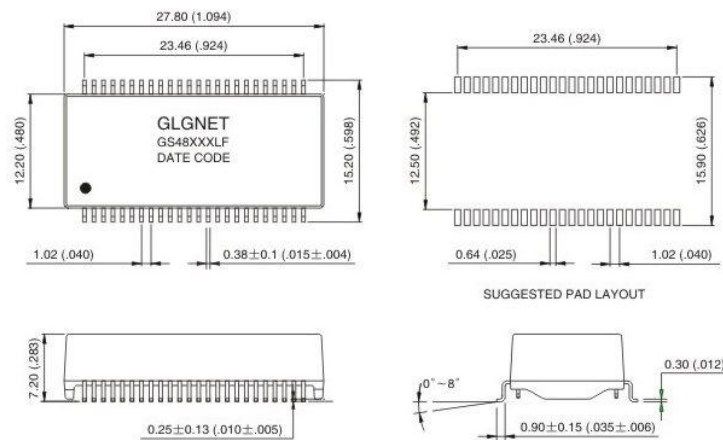
- Complies with requirement of IEEE 802.3 standards,
- Qualifide with top 10Gig PHY Manufacturers.
- Operating temperature range: 0°C to +70°C.
- Storage temperature range: -25°C to +125°C
- Complies with ROHS requirements

### Electrical Specifications @ 25°C -- Operating Temperature 0°C to +70°C

|            | Turns Ratio |         | Insertion Loss (dB Max) |        | Return Loss (dB Min) |         |     |     | Cross talk (dB Min) |         | DCMR (dB Min) |         | HI-POT (Vrms) |
|------------|-------------|---------|-------------------------|--------|----------------------|---------|-----|-----|---------------------|---------|---------------|---------|---------------|
|            | TX          | RX      | 300KHz-10               | 10-500 | 1-100                | 200-300 | 400 | 500 | 1-100               | 100-500 | 1-250         | 250-500 |               |
|            |             |         | MHz                     | MHz    | MHz                  | MHz     | MHz | MHz | MHz                 | MHz     | MHz           | MHz     |               |
| GS48104GLF | 1CT:1CT     | 1CT:1CT | -1.0                    | -2.0   | -18                  | -12     | -11 | -10 | -40                 | -30     | -30           | -22     | 1500          |

### Mechanical (10G BASE网络变压器结构图)

#### GS48XXXLF



Units: mm(Inches) Tolerances: xx.x0 ± 0.25(.010)  
0.xx ± 0.10(.004)



## LAN-Transformer SERIES

10G BASE网络变压器电路图

### Schematic

#### GS48104GLF

