

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T102

##### FEATURES

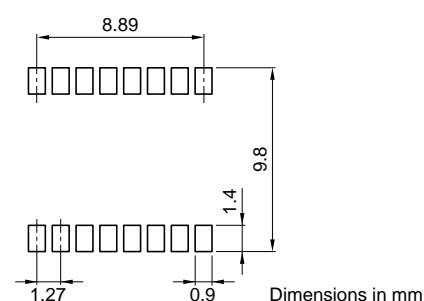
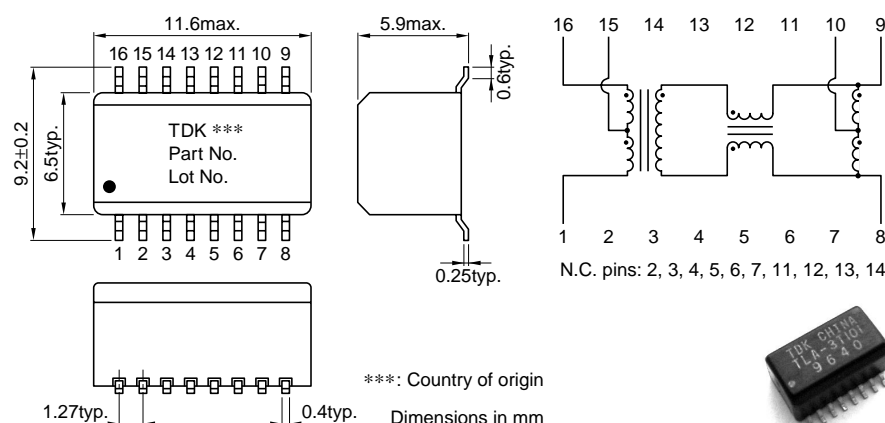
- 16-pin SOP package(1.27mm=50mil pin pitch).
- Excellent common-mode noise suppression.
- Greater than 350 $\mu$ H[100kHz] at DC current bias 8mA.
- Using the high-quality and wide-band ferrite cores for LAN.
- Suitable for use with NS's DP83843, MICRO LINEAR's ML6673, 6674, ICS's ICS1890, TSC's 78Q2120.
- Tape and reell packaging are available(TLA-6T102-T: Tape and reel, TLA-6T102: Bulk).
- ISO9001/QS9000 quality standards certification.

##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 1               |
| Common-mode choke           | 1               |
| Inductor                    | 1               |
| Port                        | 1/2             |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM

##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio      | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | C.M.R.R.(dB)min.<br>[Common to Differential] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|------------------|---|--|--|
|               | 1,15,16 : 8,10,9 | 1,16-8,9                                      | 1,16-8,9                                     | 1,16-8,9   |
| TLA-6T102(-T) | 1CT:1CT          | 1   | 45[0.1 to 60MHz]<br>43[60 to 100MHz]         | 15   |

- Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T103

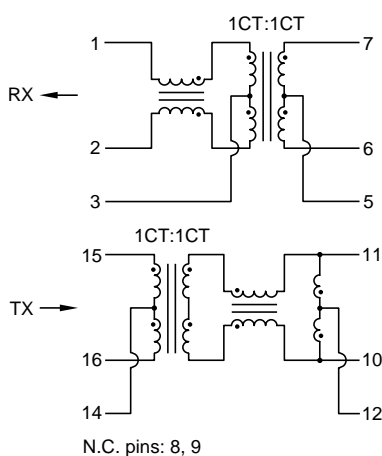
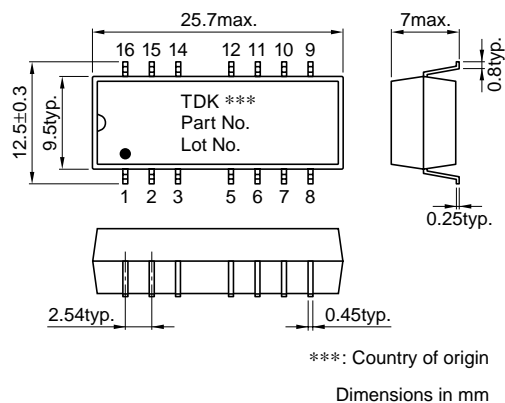
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Greater than 350 $\mu$ H[100kHz] at DC current bias 8mA.
- Using the high-quality and wide-band ferrite cores for LAN.
- Suitable for use with NS's DP83843, LEVEL ONE's LXT970A, MICRO LINEAR's ML6673, 6674, ICS's ICS1890, TSC's 78Q2120.
- Tape and reel packaging are available(TLA-6T103-T: Tape and reel, TLA-6T103: Bulk).
- ISO9001/QS9000 quality standards certification.

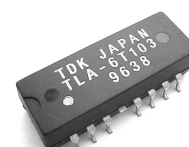
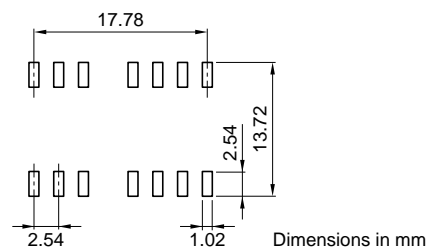
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 2               |
| Inductor                    | 1               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                          | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | C.M.R.R.(dB)min.<br>[Common to Differential]<br>[0.1 to 60/60 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|--------------------------------------|---|--|--|
|               | 15,14,16 : 11,12,10<br>1,3,2 : 7,5,6 | 15,16-11,10<br>7,6-1,2                        | 15,16-11,10<br>7,6-1,2   | 15,16-11,10<br>1,2-7,6                                 |
| TLA-6T103(-T) | 1CT:1CT                              | 1   | 45/43  | 18   |
|               | 1CT:1CT                              | 1   | 40/38  | 18   |

• Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T106/111

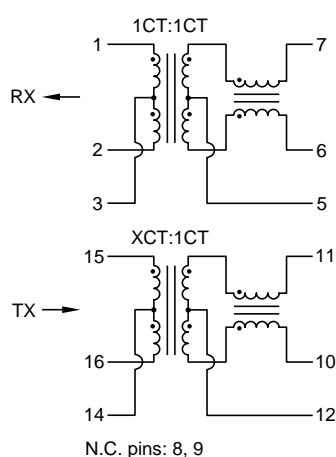
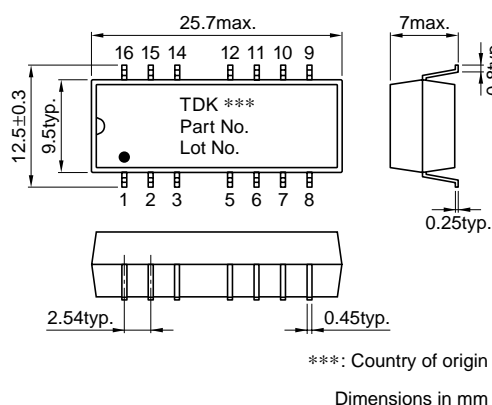
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- TLA-6T106 is suitable for use with QSI's QS6611.
- TLA-6T111 is suitable for use with QSI's QS6612.
- Tape and reel packaging are available(TLA-6T1 □ □ -T: Tape and reel, TLA-6T1 □ □ : Bulk).
- ISO9001/QS9000 quality standards certification.

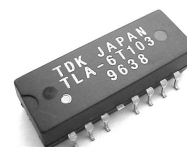
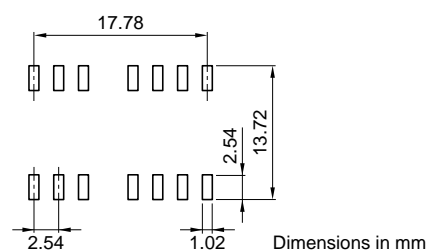
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 2               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                          | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|--------------------------------------|---|---|--|
|               | 16,14,15 : 10,12,11<br>1,3,2 : 7,5,6 | 10-11<br>7-6                                    | 16,15-10,11<br>7,6-1,2                        | 16,15-10,11<br>1,2-7,6                                 |
| TLA-6T106(-T) | 1.41CT:1CT<br>1CT:1CT                | 350<br>350                                      | 2<br>1  | 25<br>25   |
| TLA-6T111(-T) | 1.25CT:1CT<br>1CT:1CT                | 350<br>350                                      | 2<br>1  | 25<br>25   |

- Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T107

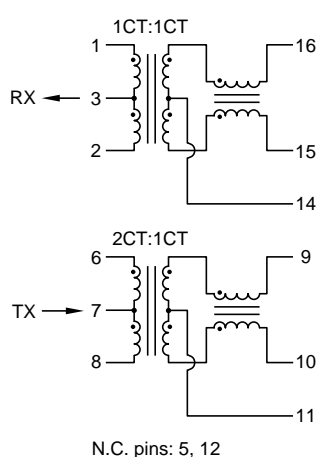
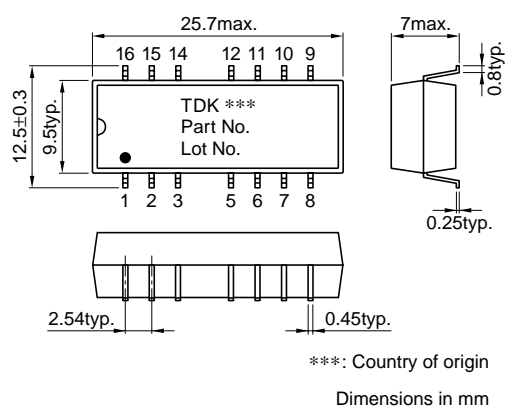
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- Suitable for use with LSI LOGIC's 80220/80221.
- Tape and reel packaging are available(TLA-6T107-T: Tape and reel, TLA-6T107: Bulk).
- ISO9001/QS9000 quality standards certification.

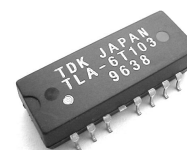
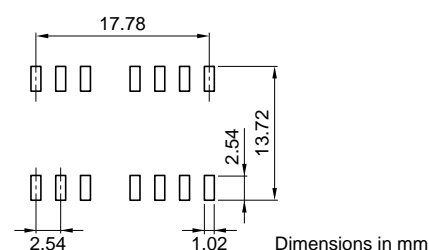
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 2               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                         | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|-------------------------------------|---|---|--|
|               | 6,7,8 : 9,11,10<br>1,3,2 : 16,14,15 | 9-10<br>16-15                                   | 6,8-9,10<br>16,15-1,2                         | 6,8-9,10<br>1,2-16,15                                  |
| TLA-6T107(-T) | 2CT:1CT                             | 350   | 3.5   | 25   |
|               | 1CT:1CT                             | 350   | 1   | 25   |

- Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T109/112

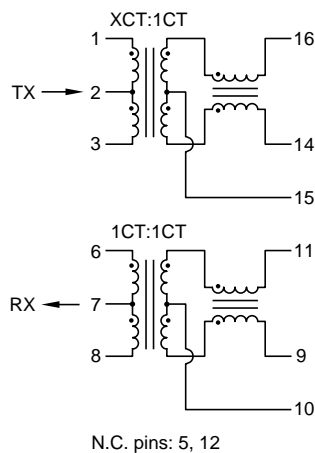
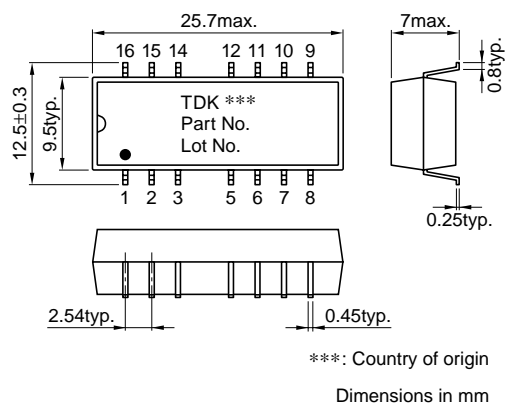
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- TLA-6T109 is suitable for use with QSI's QS6611.
- TLA-6T112 is suitable for use with QSI's QS6612.
- Tape and reel packaging are available(TLA-6T1 □ □ -T: Tape and reel, TLA-6T1 □ □ : Bulk).
- ISO9001/QS9000 quality standards certification.

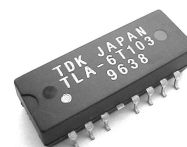
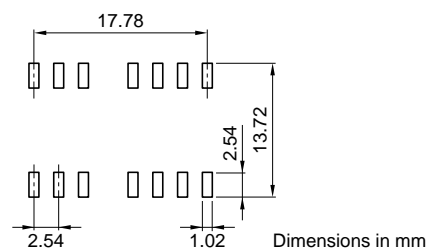
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 2               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                         | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|-------------------------------------|---|---|--|
|               | 1,2,3 : 16,15,14<br>6,7,8 : 11,10,9 | 16-14<br>11-9                                   | 1,3-16,14<br>11,9-6,8                         | 1,3-16,14<br>6,8-11,9                                  |
| TLA-6T109(-T) | 1.41CT:1CT<br>1CT:1CT               | 350<br>350                                      | 2<br>1  | 25<br>25   |
| TLA-6T112(-T) | 1.25CT:1CT<br>1CT:1CT               | 350<br>350                                      | 2<br>1  | 25<br>25   |

• Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T110

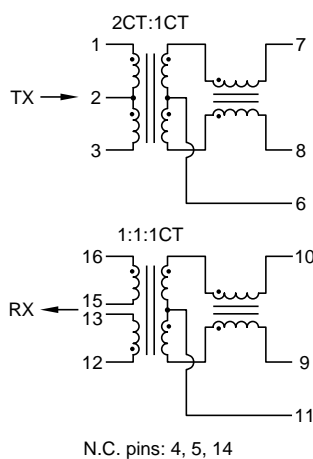
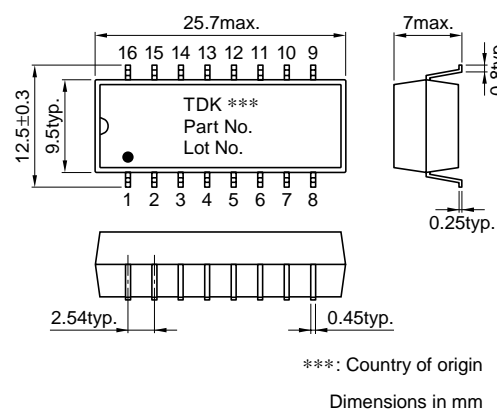
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- Suitable for use with MICRO LINEAR's ML6694(MICRO LINEAR recommends).
- Tape and reel packaging are available(TLA-6T110-T: Tape and reel, TLA-6T110: Bulk).
- ISO9001/QS9000 quality standards certification.

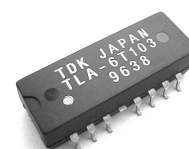
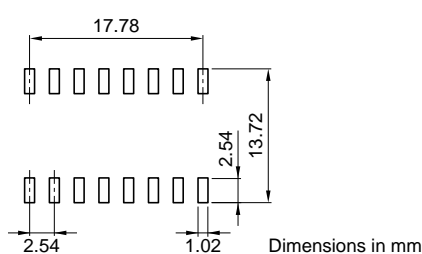
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 2               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                          | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|--------------------------------------|---|---|--|
|               | 1,2,3 : 7,6,8<br>16,15:12,13:10,11,9 | 7-8<br>10-9                                     | 1,3-7,8<br>10,9-16,15[12,13]                  | 1,3-7,8<br>16,15[12,13]-10,9                           |
| TLA-6T110(-T) | 2CT:1CT<br>1:1:1CT                   | 350<br>350                                      | 3.5<br>1                                      | 25<br>20   |

• Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T115/124

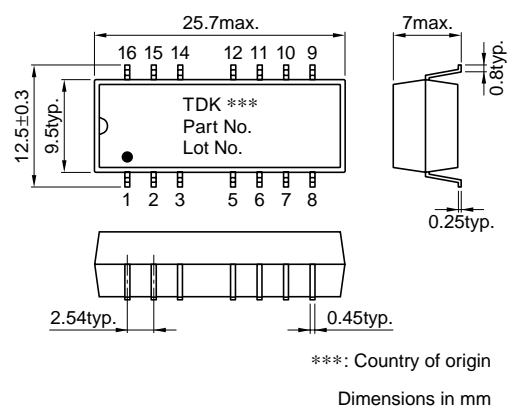
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- TLA-6T115 is suitable for use with NS's DP83843, MICRO LIN-  
EAR's ML6673, 6674, ICS's ICS1890, TSC's 78Q2120.
- TLA-6T124 is suitable for use with AMD's Am79C973, 975.
- Tape and reel packaging are available(TLA-6T1□□-T: Tape  
and reel, TLA-6T1□□: Bulk).
- ISO9001/QS9000 quality standards certification.

##### GENERAL SPECIFICATIONS

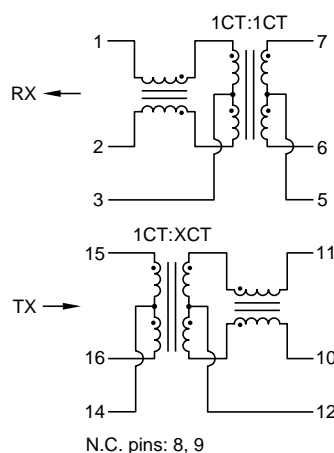
|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 2               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM

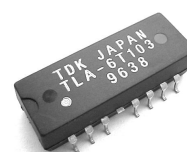
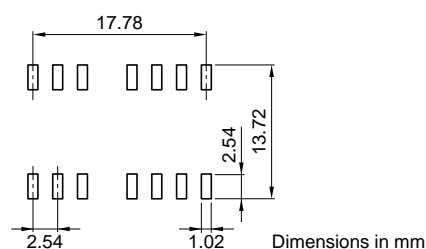


\*\*\*: Country of origin

Dimensions in mm



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                          | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|--------------------------------------|---|---|--|
|               | 15,14,16 : 11,12,10<br>1,3,2 : 7,5,6 | 11-10<br>7-6                                    | 15,16-11,10<br>7,6-1,2                        | 15,16-11,10<br>1,2-7,6                                 |
| TLA-6T115(-T) | 1CT:1CT                              | 350   | 1   | 18   |
|               | 1CT:1CT                              | 350   | 1   | 18   |
| TLA-6T124(-T) | 1CT:1.41CT                           | 350   | 2   | 25   |
|               | 1CT:1CT                              | 350   | 1   | 25   |

• Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T116

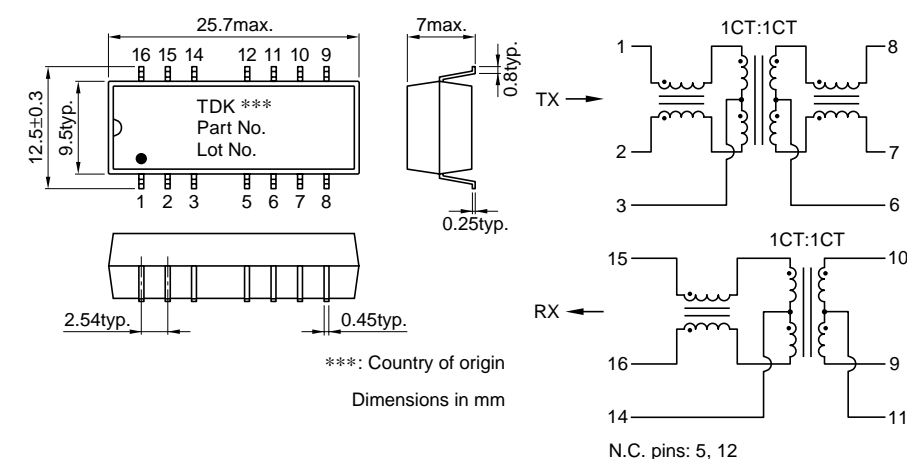
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- Suitable for use with NS's DP83843, MICRO LINEAR's ML6673, 6674, ICS's ICS1890, TSC's 78Q2120.
- Tape and reel packaging are available(TLA-6T116-T: Tape and reel, TLA-6T116: Bulk).
- ISO9001/QS9000 quality standards certification.

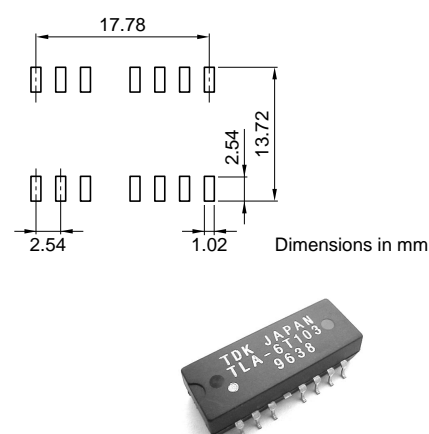
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 3               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                        | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|------------------------------------|---|---|--|
|               | 1,3,2 : 8,6,7<br>16,14,15: 9,11,10 | 7-8<br>9-10                                     | 1,2-8,7<br>9,10-16,15                         | 1,2-8,7<br>16,15-9,10                                  |
| TLA-6T116(-T) | 1CT:1CT                            | 350   | 1   | 25   |
|               | 1CT:1CT                            | 350   | 1   | 25   |

• Ta=25°C



# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T117

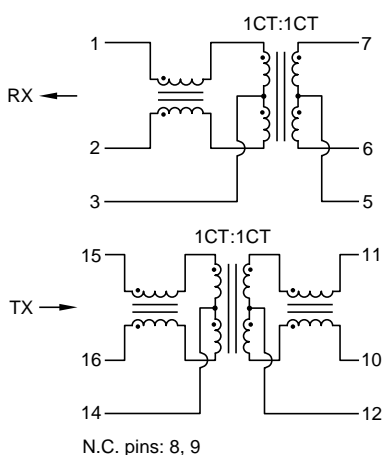
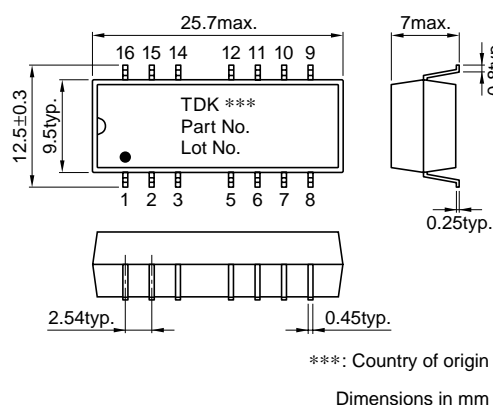
##### FEATURES

- 16-pin SOP package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- Suitable for use with NS's DP83843, MICRO LINEAR's ML6673, 6674, ICS's ICS1890, TSC's 78Q2120.
- Tape and reel packaging are available(TLA-6T117-T: Tape and reel, TLA-6T117: Bulk).
- ISO9001/QS9000 quality standards certification.

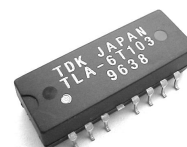
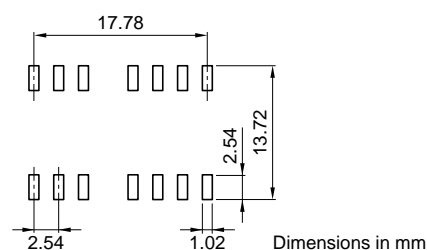
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 3               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                         | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|-------------------------------------|---|---|--|
|               | 15,14,16 : 11,12,10<br>1,3,2: 7,5,6 | 11-10<br>7-6                                    | 15,16-11,10<br>7,6-1,2                        | 15,16-11,10<br>1,2-7,6                                 |
| TLA-6T117(-T) | 1CT:1CT                             | 350   | 1   | 25   |
|               | 1CT:1CT                             | 350   | 1   | 25   |

• Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T118/119/120/121/122

##### FEATURES

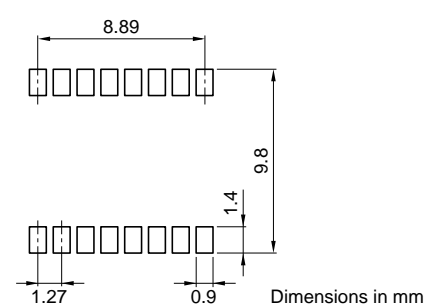
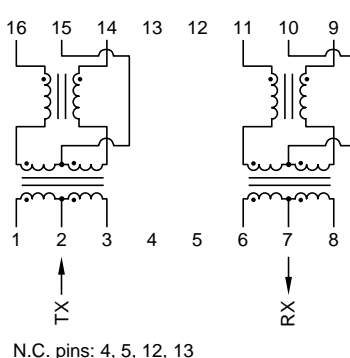
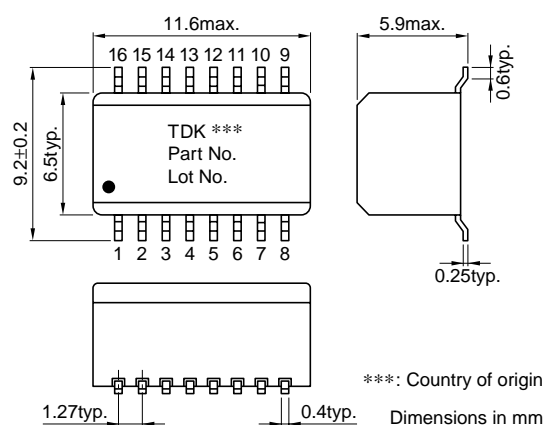
- 16-pin SOP package(1.27mm=50mil pin pitch).
- TLA-6T118 is suitable for use with NS's DP83843, TSC's 78Q2120, MICRO LINEAR's ML6673, 6674, ICS's ICS1890.
- TLA-6T119 is suitable for use with QSI's QS6611.
- TLA-6T120 is suitable for use with LSI LOGIC's 80220, 80221.
- TLA-6T121 is suitable for use with ADM's Am79C973, 975.
- TLA-6T122 is suitable for use with QSI's QS6612.
- Tape and reel packaging are available(TLA-6T1 □ □ -T: Tape and reel, TLA-6T1 □ □ : Bulk).
- ISO9001/QS9000 quality standards certification.

##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 2               |
| Common-mode choke           | 2               |
| Port                        | 1               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM

##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                         | Inductance<br>(μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB)max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF)max.[100kHz] |
|---------------|-------------------------------------|---|---|--|
|               | 1,2,3 : 16,15,14<br>6,7,8 : 11,10,9 | 16-14<br>11-9                                   | 1,3-16,14<br>11,9-6,8                         | 1,3-16,14<br>6,8-11,9                                  |
| TLA-6T118(-T) | 1CT:1CT                             | 350   | 1   | 25   |
| TLA-6T119(-T) | 1.41CT:1CT                          | 350   | 2   | 25   |
| TLA-6T120(-T) | 2CT:1CT                             | 350   | 3.5   | 25   |
| TLA-6T121(-T) | 1CT:1.41CT                          | 350   | 2.5   | 25   |
| TLA-6T122(-T) | 1.25CT:1CT                          | 350   | 2   | 25   |

• Ta=25°C

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T401

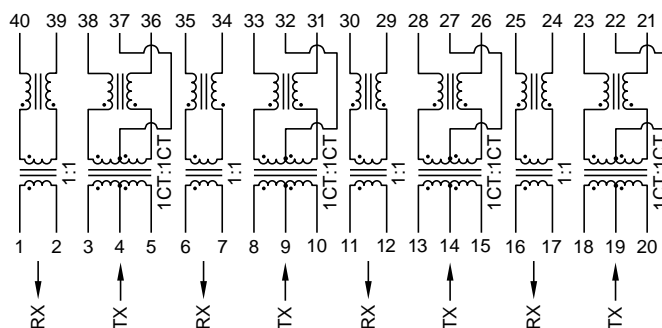
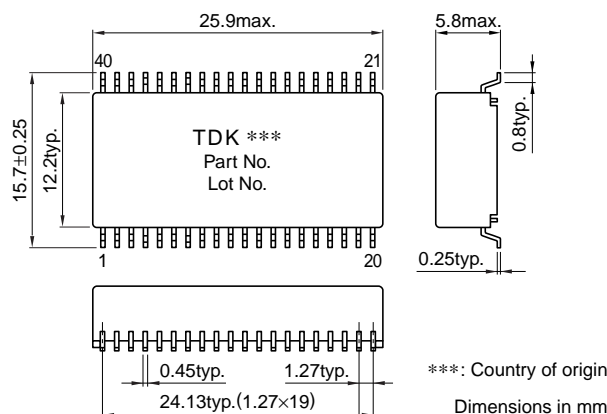
##### FEATURES

- 40-pin SOP package(1.27mm=50mil pin pitch) for Quad port.
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- High reliability for reflow process.
- Excellent pin planarity.
- Tape and reel packaging are available(TLA-6T401-T: Tape and reel, TLA-6T401: Bulk).
- ISO9001/QS9000 quality standards certification.

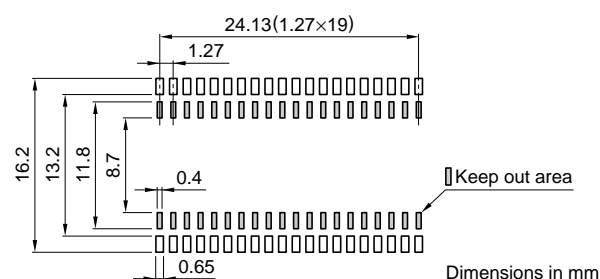
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 8               |
| Common-mode choke           | 8               |
| Port                        | 4               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



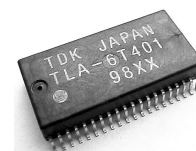
##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                                | Inductance (μH)min.<br>[DC bias 8mA, 100kHz] | Insertion loss (dB)max.<br>[0.1 to 100MHz] | Inter-winding stray capacitance (pF)max.[100kHz] |
|---------------|--|--|--|--|
|               | 3,4,5 : 38,37,36,.....<br>1,2: 40,39,..... | 38-36,.....<br>40-39,.....                   | 3,5-38,36,.....<br>40,39-1,2,.....         | 3,5-38,36,.....<br>1,2-40,39,.....               |
| TLA-6T401(-T) | 1CT:1CT<br>1:1                             | 350<br>350                                   | 1<br>1                                     | 25<br>25   |

- Ta=25°C



# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T402

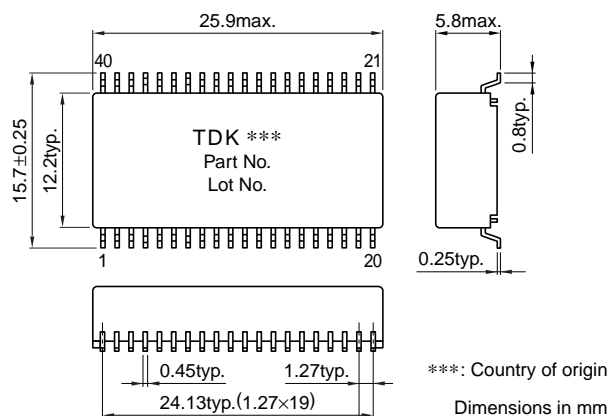
##### FEATURES

- 40-pin SOP package(1.27mm=50mil pin pitch) for Quad port.
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- High reliability for reflow process.
- Excellent pin planarity.
- Suitable for use with LEVEL ONE's LXT974A, 975A, 980, 983.
- Tape and reel packaging are available(TLA-6T402-T: Tape and reel, TLA-6T402: Bulk).
- ISO9001/QS9000 quality standards certification.

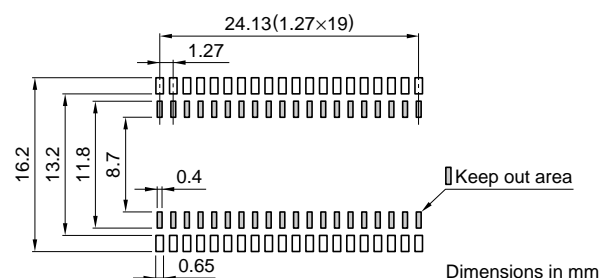
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 8               |
| Common-mode choke           | 8               |
| Port                        | 4               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



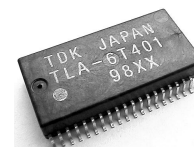
##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                                | Inductance<br>(μH) min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB) max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF) max.[100kHz] |
|---------------|--|--|--|---|
|               | 3,4,5 : 38,37,36,.....<br>1,2: 40,39,..... | 38-36,.....<br>40-39,.....                       | 3.5-38,36,.....<br>40,39-1,2,.....             | 3.5-38,36,.....<br>1,2-40,39,.....                      |
| TLA-6T402(-T) | 2CT:1CT<br>1:1                             | 350<br>350                                       | 3.5<br>1                                       | 25<br>25  |

• Ta=25°C



# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T403

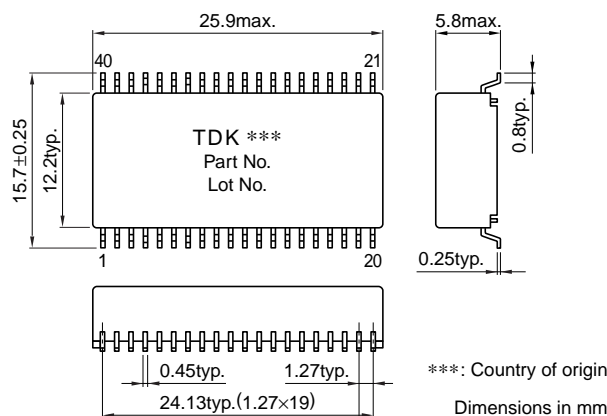
##### FEATURES

- 40-pin SOP package(1.27mm=50mil pin pitch) for Quad port.
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- High reliability for reflow process.
- Excellent pin planarity.
- Suitable for use with LEVEL ONE's LXT974A, 975A, 980, 983.
- Tape and reel packaging are available(TLA-6T403-T: Tape and reel, TLA-6T403: Bulk).
- ISO9001/QS9000 quality standards certification.

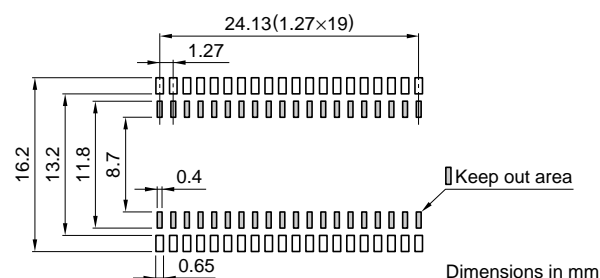
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 8               |
| Common-mode choke           | 8               |
| Port                        | 4               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



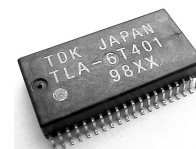
##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                                | Inductance<br>(μH) min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB) max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF) max.[100kHz] |
|---------------|--|--|--|---|
|               | 1,2,3 : 40,39,38,.....<br>4,5: 37,36,..... | 40-38,.....<br>37-36,.....                       | 1,3-40,38,.....<br>37,36-4,5,.....             | 1,3-40,38,.....<br>4,5-37,36,.....                      |
| TLA-6T403(-T) | 2CT:1CT<br>1:1                             | 350<br>350                                       | 3.5<br>1                                       | 25<br>25  |

• Ta=25°C



# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T404

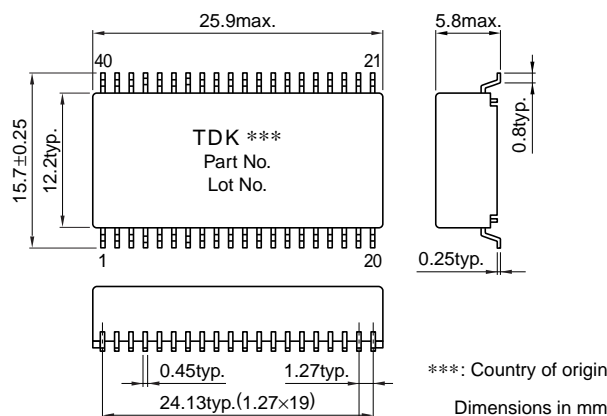
##### FEATURES

- 40-pin SOP package(1.27mm=50mil pin pitch) for Quad port.
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- High reliability for reflow process.
- Excellent pin planarity.
- Suitable for use with BROADCOM's BCM5208, 5203.
- Tape and reel packaging are available(TLA-6T404-T: Tape and reel, TLA-6T404: Bulk).
- ISO9001/QS9000 quality standards certification.

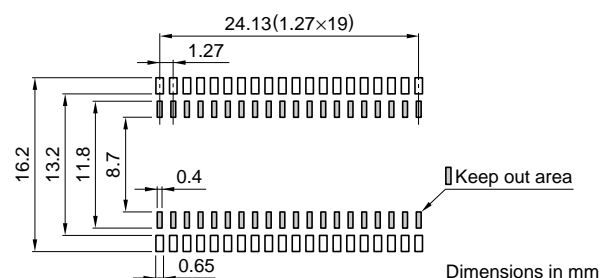
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 8               |
| Common-mode choke           | 8               |
| Port                        | 4               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



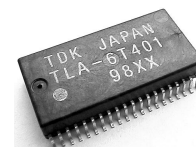
##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio                                | Inductance<br>(μH) min.<br>[DC bias 8mA, 100kHz] | Insertion loss<br>(dB) max.<br>[0.1 to 100MHz] | Inter-winding<br>stray capacitance<br>(pF) max.[100kHz] |
|---------------|--|--|--|---|
|               | 4,3,5 : 37,38,36,.....<br>1,2: 40,39,..... | 37-36,.....<br>40-39,.....                       | 4,5-37,36,.....<br>40,39-1,2,.....             | 4,5-37,36,.....<br>1,2-40,39,.....                      |
| TLA-6T404(-T) | 1CT:1CT<br>1:1                             | 350<br>350                                       | 1<br>1   | 25<br>25  |

• Ta=25°C



# LAN Components

## 10/100BASE-TX

### Pulse Transformers

TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

#### TLA-6T405

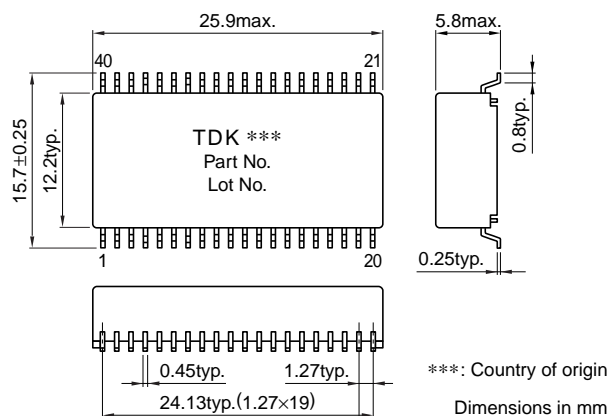
##### FEATURES

- 40-pin SOP package(1.27mm=50mil pin pitch) for Quad port.
- Excellent common-mode noise suppression.
- Using the high-quality and wide-band ferrite cores for LAN.
- High reliability for reflow process.
- Excellent pin planarity.
- Suitable for use with LEVEL ONE's LXT974A, 975A, 980, 983.
- Tape and reel packaging are available(TLA-6T405-T: Tape and reel, TLA-6T405: Bulk).
- ISO9001/QS9000 quality standards certification.

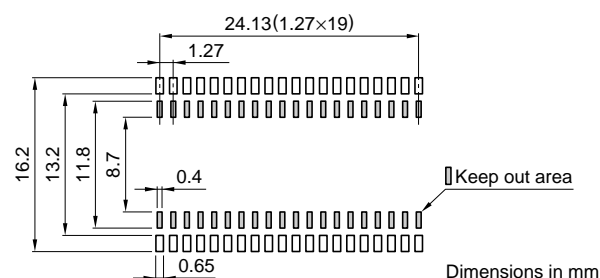
##### GENERAL SPECIFICATIONS

|                             |                 |
|-----------------------------|-----------------|
| Pulse transformer           | 8               |
| Common-mode choke           | 8               |
| Port                        | 4               |
| Operating temperature range | 0 to +70°C      |
| Storage temperature range   | -40 to +85°C    |
| Withstanding voltage        | Erms:1500V[60s] |

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



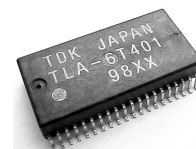
##### RECOMMENDED PC BOARD PATTERN



##### ELECTRICAL CHARACTERISTICS

| Part No.      | Turns ratio            | Inductance (μH) min.  | Insertion loss (dB) max. | Inter-winding stray capacitance (pF) max. |
|---------------|------------------------|-----------------------|--------------------------|---|
|               | 3,4,5 : 38,37,36,..... | [DC bias 8mA, 100kHz] | [0.1 to 100MHz]          | [100kHz]                                  |
|               | 1,2: 40,39,.....       | 38-36,.....           | 3,5-38,36,.....          | 3,5-38,36,.....                           |
|               |                        | 40-39,.....           | 40,39-1,2,.....          | 1,2-40,39,.....                           |
| TLA-6T405(-T) | 2CT:1CT                | 350                   | 3.5                      | 25  |
|               | 1:1                    | 350                   | 1                        | 25  |

• Ta=25°C



# LAN Components

## 10/100BASE-TX

### Pulse Transformers

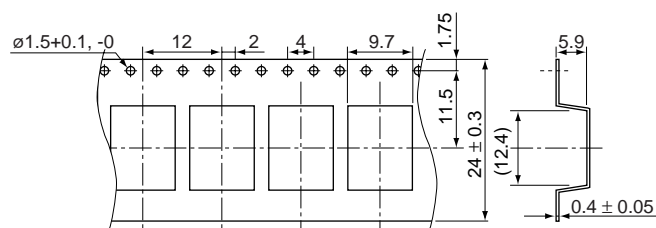
TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

TLA-6T102-T/118-T/119-T/120-T/121-T/122-T

#### PACKAGING STYLES

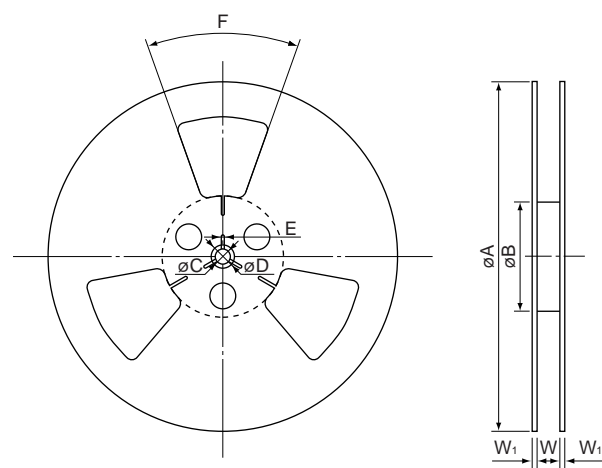
Quantity : 1000pieces/reel

#### TAPE DIMENSIONS



Dimensions in mm

#### REEL DIMENSIONS

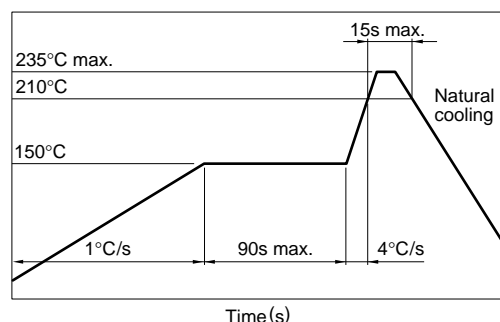


Dimensions in mm

| A      | B     | C         | D       | E     | F     | W          | W <sub>1</sub> |
|--------|-------|-----------|---------|-------|-------|------------|----------------|
| ø330±2 | ø80±1 | ø13.5±0.2 | ø21±0.8 | 2±0.5 | 3-40° | 24.4+2, -0 | 2±0.5          |

#### RECOMMENDED SOLDERING CONDITION

##### REFLOW SOLDERING



- Temperature is measured on the top of products body(Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.



# LAN Components

## 10/100BASE-TX

### Pulse Transformers

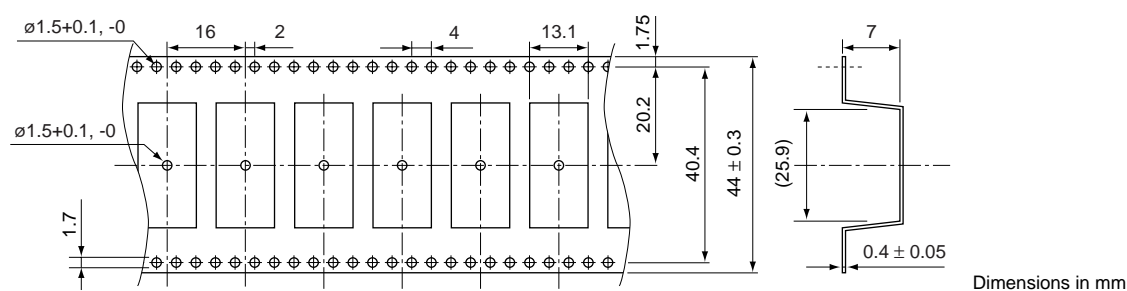
TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

TLA-6T103-T/106-T/107-T/109-T/110-T/111-T/112-T/115-T/116-T/117-T/124-T

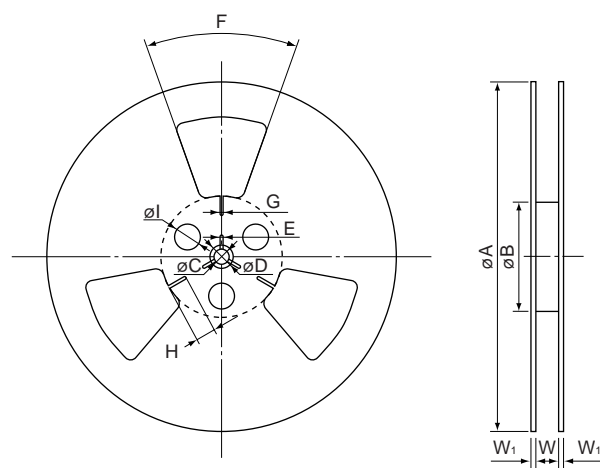
#### PACKAGING STYLES

Quantity : 500pieces/reel

#### TAPE DIMENSIONS



#### REEL DIMENSIONS

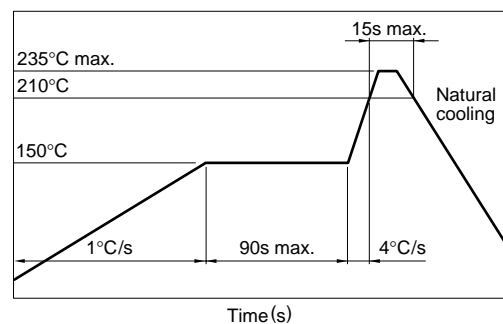


Dimensions in mm

| A                | B                | C                   | D                 | E           | F     | G             | H            | I                   | W              | W <sub>1</sub> |
|------------------|------------------|---------------------|-------------------|-------------|-------|---------------|--------------|---------------------|----------------|----------------|
| $\phi 330+0, -2$ | $\phi 100+1, -0$ | $\phi 13.5 \pm 0.2$ | $\phi 21 \pm 0.8$ | $2 \pm 0.5$ | 3-40° | $2.5 \pm 0.3$ | $12 \pm 0.3$ | $3-\phi 22 \pm 0.3$ | $45.5 \pm 0.5$ | 2              |

#### RECOMMENDED SOLDERING CONDITION

##### REFLOW SOLDERING



- Temperature is measured on the top of products body(Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.

#### LONG TERM STORING CONDITION FOR TRANSFER MOLDED PRODUCTS WITH DRY PACKAGE

Each tape and reel is packaged by Anti-humid Al bag, in order to keep a good solder ability condition and soldering heat-resistant for the products. TLA-6T103-T/106-T/107-T/109-T/110-T/111-T/112-T/115-T/116-T/117-T/124-T are packaged in this way.

- Unless open the bag, the limit of storing is within 2 years.
- After opening the bag, the products should be soldered within 2 weeks.

The products should be stored in the atmosphere of +5 to +30°C and below 60% R.H.

# LAN Components

## 10/100BASE-TX

### Pulse Transformers

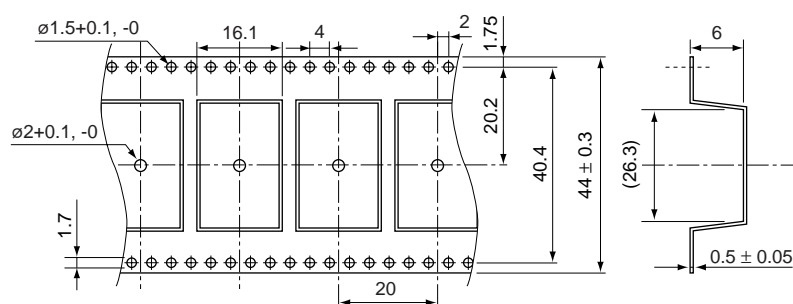
TLA-6T102/103/106/107/109/110/111/112/115/116/117/  
118/119/120/121/122/124/401/402/403/404/405

TLA-6T401-T/402-T/403-T/404-T/405-T

#### PACKAGING STYLES

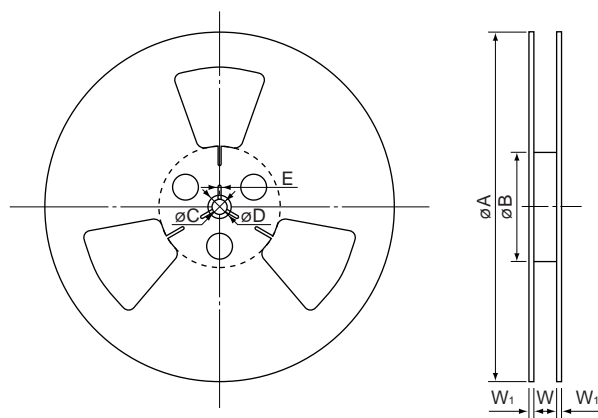
Quantity : 500pieces/reel

#### TAPE DIMENSIONS



Dimensions in mm

#### REEL DIMENSIONS

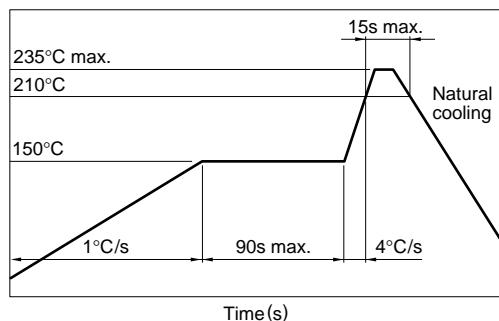


Dimensions in mm

| A      | B      | C       | D       | E     | W            | W <sub>1</sub> |
|--------|--------|---------|---------|-------|--------------|----------------|
| ø330±1 | ø100±1 | ø13±0.2 | ø21±0.8 | 2±0.5 | 45+1.5, -0.5 | 2.4±0.3        |

#### RECOMMENDED SOLDERING CONDITION

##### REFLOW SOLDERING



- Temperature is measured on the top of products body(Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.