
LAN COMPONENTS

TLA SERIES(Conformity to RoHS Directive)

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Precautions	
The TDK products in this data are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.).	
They are neither intend nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury (atomic energy control instruments, airplane or spaceship instruments, transportation instrument, traffic signal instruments, combustion control instrument, medical instruments, all types of safety devices, etc.).	
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.	

LAN Components TLA Series

Conformity to RoHS Directive

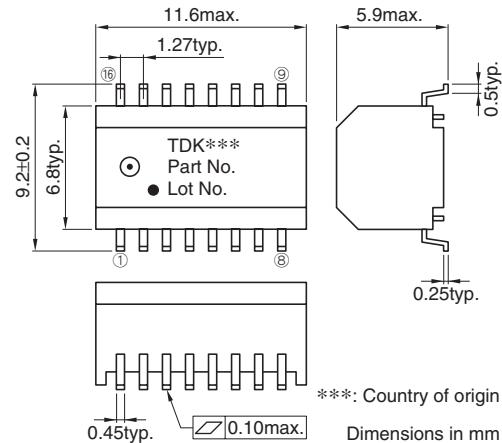
PULSE TRANSFORMERS

TLA-3T101LF(-T)/108LF(-T) ISO8802.3(IEEE802.3) 10BASE2/5/-T

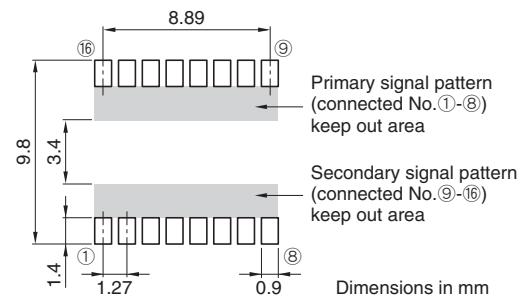
FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-3T10□LF-T: Tape and reel, TLA-3T10 □LF: Bulk).

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

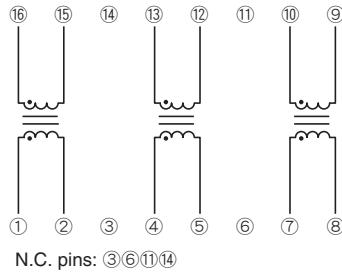
Part No.	Turns ratio ①②:⑯⑯ ④⑤:⑯⑯ ⑦⑧:⑯⑯	Inductance (μ H)typ.[100kHz] ①-② ④-⑤ ⑦-⑧	Leakage inductance (μ H)max.[100kHz] ①-②[⑯-⑯ shorted] ④-⑤[⑯-⑯ shorted] ⑦-⑧[⑯-⑯ shorted]	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑯⑯ ④⑤-⑯⑯ ⑦⑧-⑯⑯	DC resistance (Ω)max. ①-②,⑯-⑯ ④-⑤,⑯-⑯ ⑦-⑧,⑯-⑯
TLA-3T101LF(-T)	1:1	100	0.25	10	0.35, 0.35
TLA-3T108LF(-T)	1:1	75	0.25	10	0.35, 0.35

• $T_a=25^\circ\text{C}$

GENERAL SPECIFICATIONS

Pulse transformer	3
Port	1
Temperature ranges	Operating 0 to $+70^\circ\text{C}$ Storage -40 to $+85^\circ\text{C}$
Withstanding voltage	Erms:2000V[60s]

CIRCUIT DIAGRAM



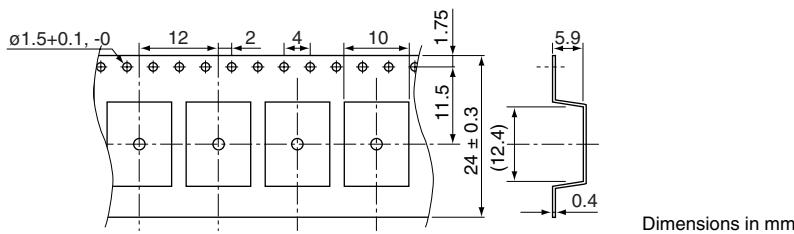
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

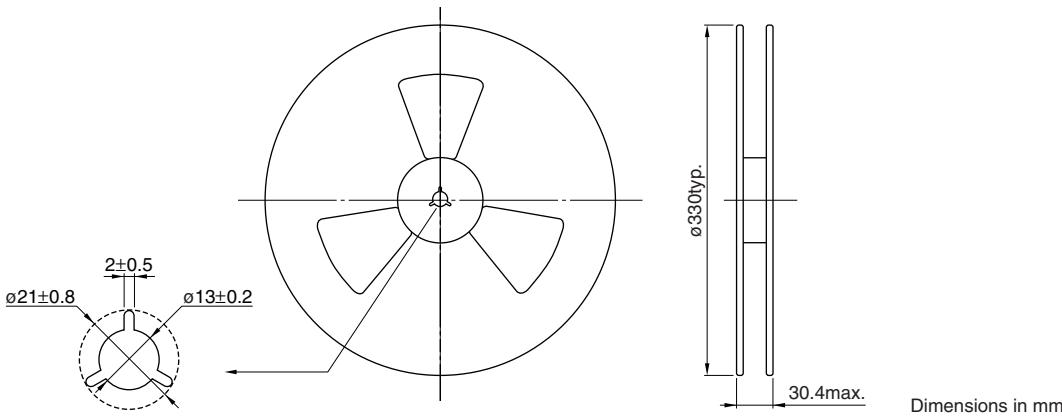
PACKAGING STYLES

Quantity : 1000pieces/reel

TAPE DIMENSIONS

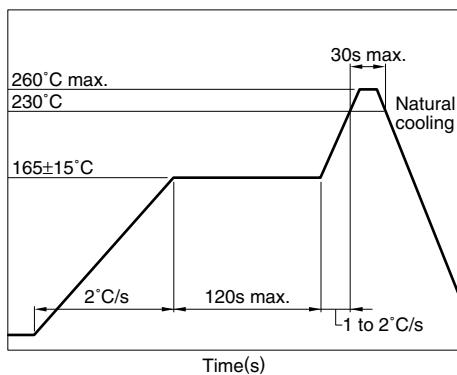


REEL DIMENSIONS



RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

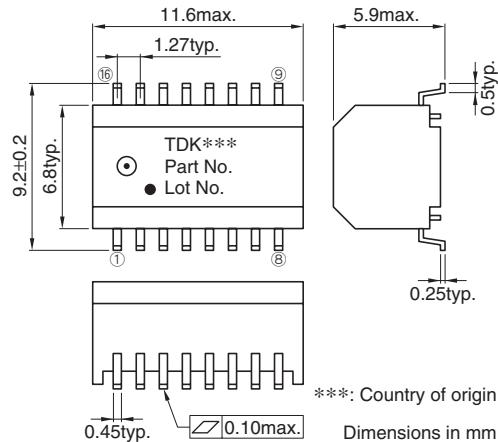
Temperature range: +5 to +30°C
Humidity: 60(%)RH max.

TLA-3T106LF(-T)/107LF(-T) ISO8802.3(IEEE802.3) 10BASE-T

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-3T10□LF-T: Tape and reel, TLA-3T10 □LF: Bulk).

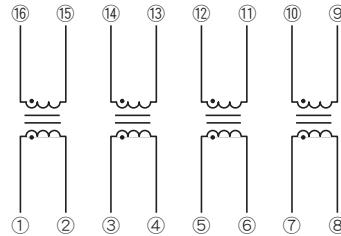
SHAPES AND DIMENSIONS



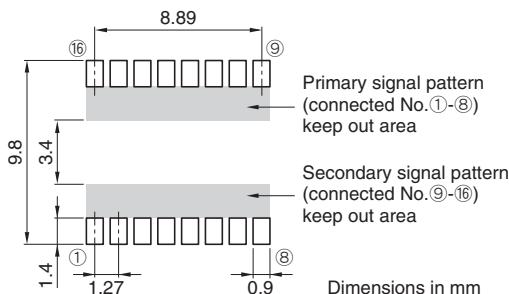
GENERAL SPECIFICATIONS

Pulse transformer	4
Port	4
Temperature ranges	Operating 0 to +70°C Storage -40 to +85°C
Withstanding voltage	Erms: 2000V[60s]

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①②:⑯⑯ ③④:⑯⑯ ⑤⑥:⑯⑯ ⑦⑧:⑯⑯	Inductance (μH)min.[100kHz] ①-② ③-④ ⑤-⑥ ⑦-⑧	Leakage inductance (μH)max.[100kHz] ①-②[⑯-⑯ shorted] ③-④[⑯-⑯ shorted] ⑤-⑥[⑯-⑯ shorted] ⑦-⑧[⑯-⑯ shorted]	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑯⑯ ③④-⑯⑯ ⑤⑥-⑯⑯ ⑦⑧-⑯⑯	DC resistance (Ω)max. ①-②, ⑯⑯ ③-④, ⑯⑯ ⑤-⑥, ⑯⑯ ⑦-⑧, ⑯⑯
TLA-3T106LF(-T)	1:1	130	0.3	12	0.4, 0.4
TLA-3T107LF(-T)	1:1.41	130	0.3	12	0.4, 0.5

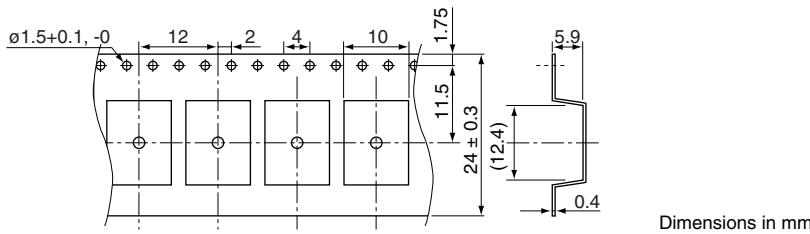
• Ta=25°C

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

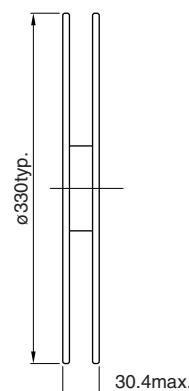
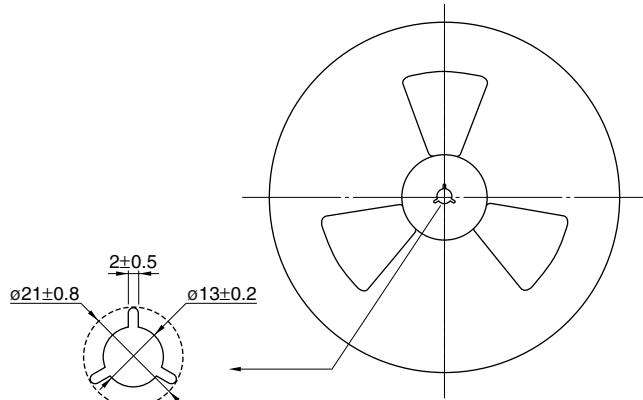
- All specifications are subject to change without notice.

PACKAGING STYLES

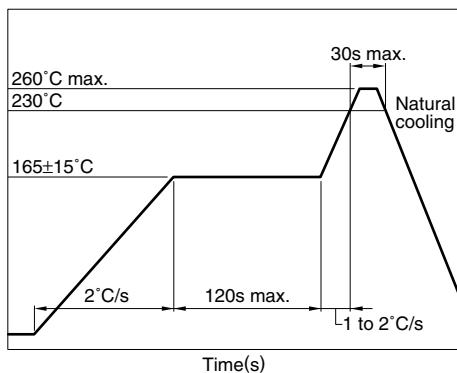
Quantity : 1000pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

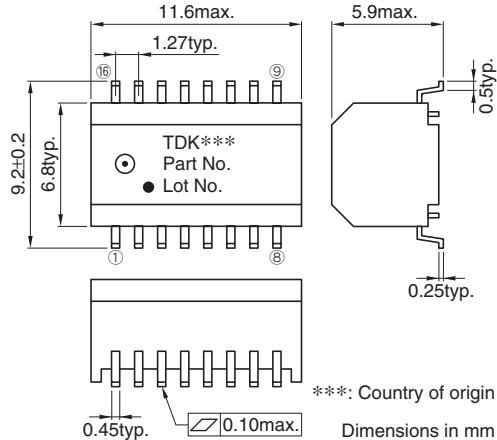
Humidity: 60(%)RH max.

TLA-3T105LF(-T)/109LF(-T)/110LF(-T)/112LF(-T) ISO8802.3(IEEE802.3) 10BASE-T

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-3T1□□LF-T: Tape and reel, TLA-3T1□□LF: Bulk).

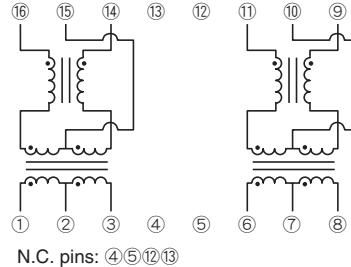
SHAPES AND DIMENSIONS



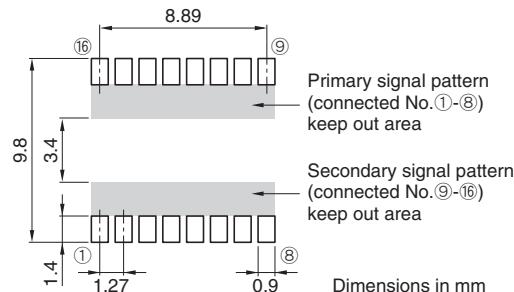
GENERAL SPECIFICATIONS

Pulse transformer	2		
Common-mode choke	2		
Port	1		
Temperature ranges	Operating	0 to +70°C	
	Storage	-40 to +85°C	
Withstanding voltage	Erms: 2000V[60s]		

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①②③:⑯⑯⑯ ⑥⑦⑧:⑪⑩⑨	Inductance (μH)min.[100kHz] ①-③ ⑥-⑧	Leakage inductance (μH)max.[100kHz] ①-③[⑯-⑯⑯] ⑥-⑧[⑯-⑨]	Inter-winding stray capacitance (pF)max.[100kHz] ①③-⑯⑯ ⑥⑧-⑯⑨	DC resistance (Ω)max. ①-③ ⑥-⑧
TLA-3T105LF(-T)	1CT:1CT 1CT:1CT	130 130	0.3 0.3	12 12	0.5 0.5
TLA-3T109LF(-T)	2CT:1CT 1CT:1CT	130 130	0.95 0.35	12 12	0.5 0.5
TLA-3T110LF(-T)	1CT:1CT 1CT:1.41CT	130 130	0.35 0.35	12 12	0.5 0.5
TLA-3T112LF(-T)	1CT:1CT 1CT:2.5CT	130 130	0.35 0.35	12 12	0.85 0.85

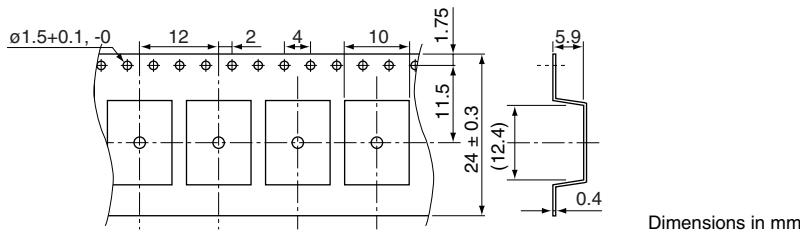
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

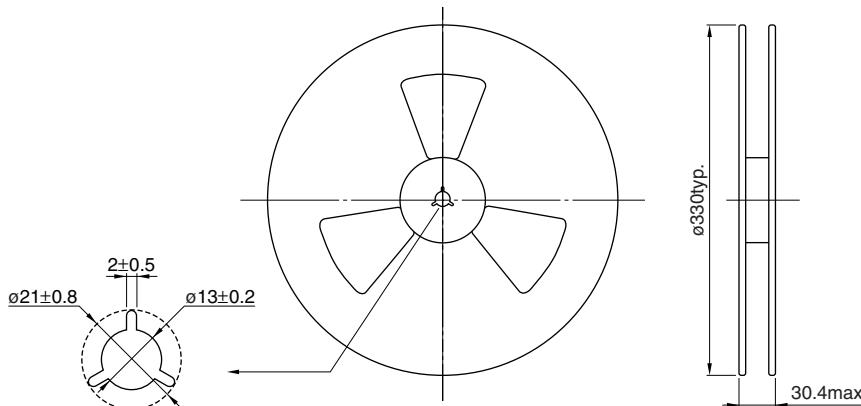
• All specifications are subject to change without notice.

PACKAGING STYLES

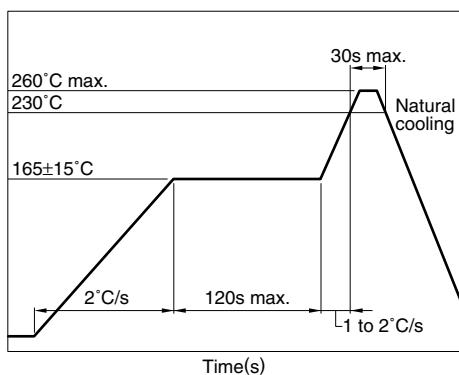
Quantity : 1000pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

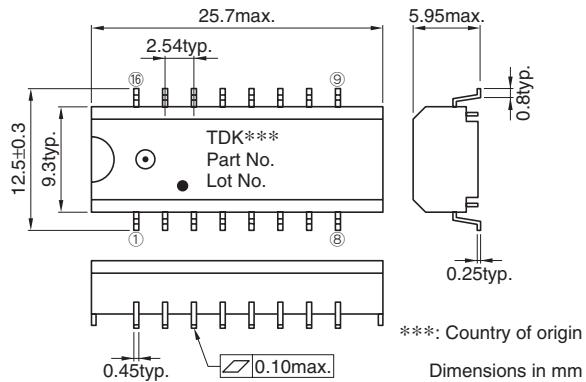
Humidity: 60(%)RH max.

TLA-6T103LF(-T) ISO8802.3(IEEE802.3) 10/100BASE-TX & ATM

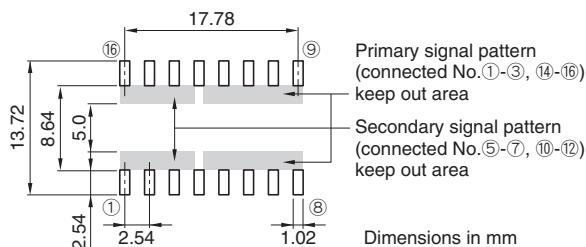
FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(2.54mm=100mil pin pitch).
- Excellent common-mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6T103LF-T: Tape and reel, TLA-6T103LF: Bulk).

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

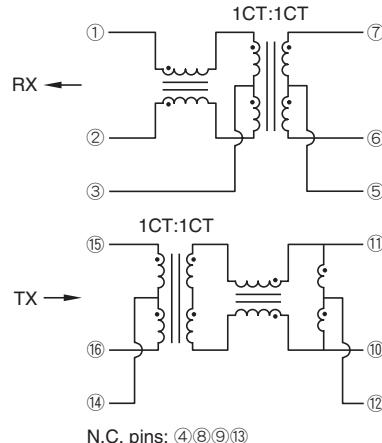
Part No.	Turns ratio ⑯⑯ : ⑮⑮⑯ ①③② : ⑦⑤⑥	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑮-⑯ ⑦-⑥	Insertion loss (dB)max. [0.1 to 100MHz] ⑯⑯-⑮⑮ ⑦⑥-①②	Inter-winding stray capacitance (pF)max.[100kHz] ⑯⑯-⑮⑮ ①②-⑦⑥
TLA-6T103LF(-T)	1CT:1CT 1CT:1CT	350 350	1 1	25 25

• Ta=25°C

GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



N.C. pins: ④⑧⑨⑬

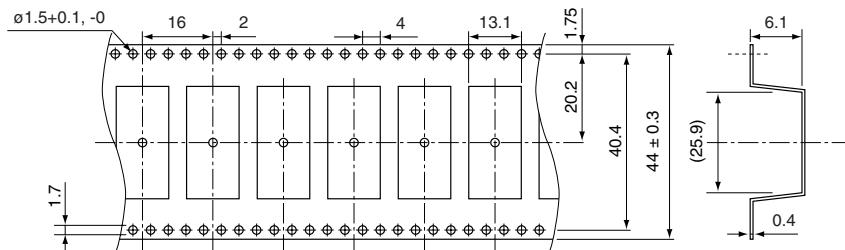
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

PACKAGING STYLES

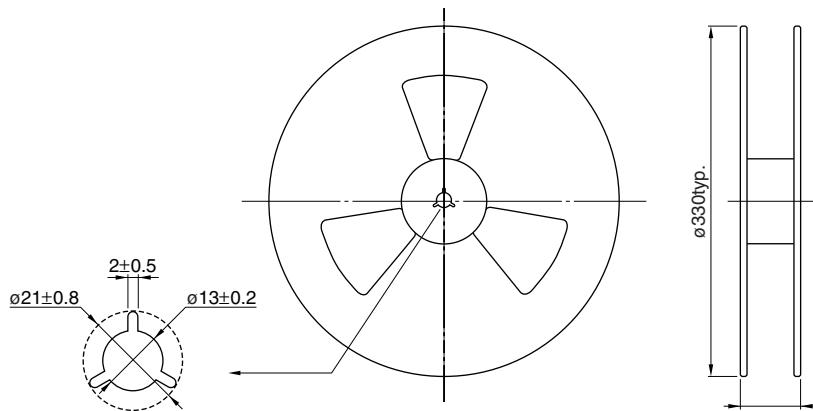
Quantity : 600pieces/reel

TAPE DIMENSIONS



Dimensions in mm

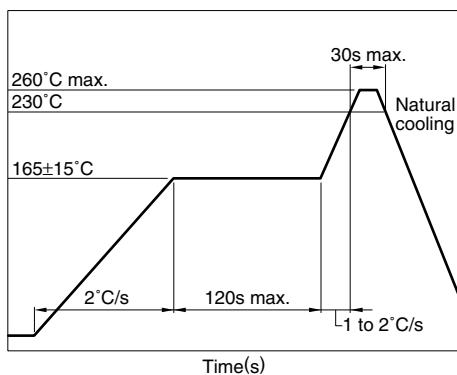
REEL DIMENSIONS



Dimensions in mm

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

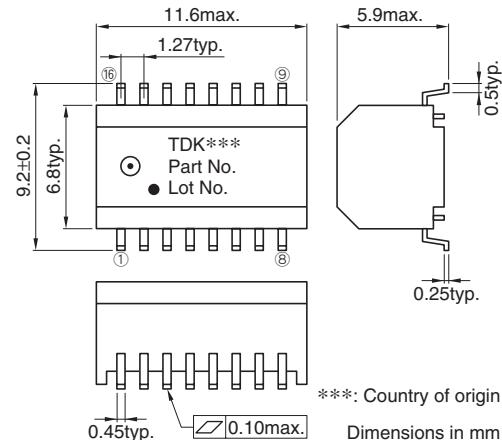
Humidity: 60(%)RH max.

TLA-6T118LF/119LF/120LF/121LF/122LF(-T) ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6T1□□LF-T: Tape and reel, TLA-6T1□□LF: Bulk).

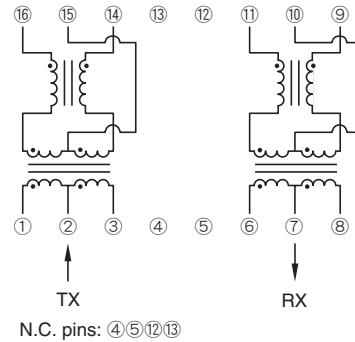
SHAPES AND DIMENSIONS



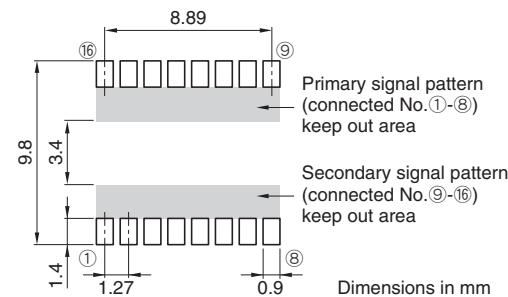
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①②③ : ⑯⑯⑯⑯ ⑥⑦⑧ : ⑪⑩⑨	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑯-⑯ ⑯-⑨	Insertion loss (dB)max. [0.1 to 100MHz] ①③-⑯⑯ ⑯⑨-⑥⑧	Inter-winding stray capacitance (pF)max.[100kHz] ①③-⑯⑯ ⑥⑧-⑯⑨
TLA-6T118LF(-T)	1CT:1CT	350	1	25
	1CT:1CT	350	1	25
TLA-6T119LF(-T)	1.41CT:1CT	350	2	25
	1CT:1CT	350	1	25
TLA-6T120LF(-T)	2CT:1CT	350	3.5	25
	1CT:1CT	350	1	25
TLA-6T121LF(-T)	1CT:1.41CT	350	2.5	25
	1CT:1CT	350	1	25
TLA-6T122LF(-T)	1.25CT:1CT	350	2	25
	1CT:1CT	350	1	25

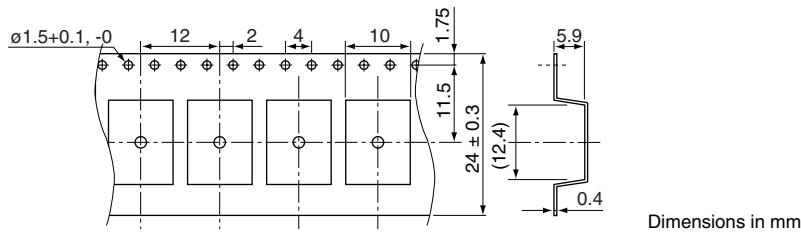
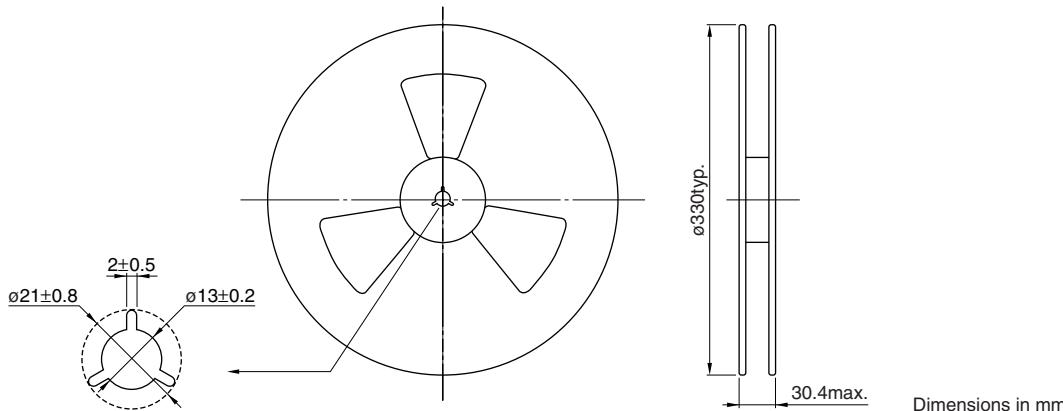
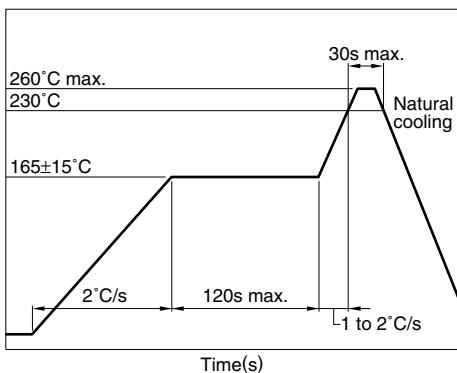
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

PACKAGING STYLES

Quantity : 1000pieces/reel

TAPE DIMENSIONS**REEL DIMENSIONS****RECOMMENDED SOLDERING CONDITION****REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

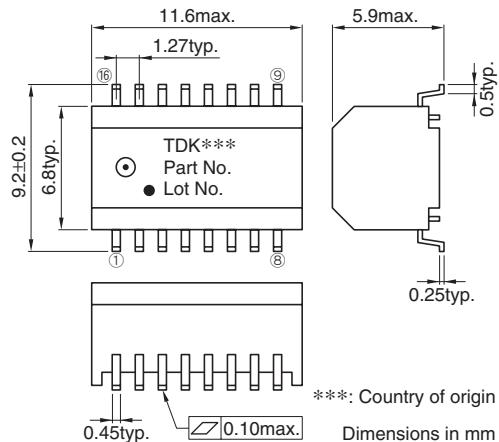
Humidity: 60(%)RH max.

TLA-6T127LF(-T) ISO8802.3(IEEE802.3) 10/100BASE-TX, POWER OVER ETHERNET

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Allowable current is 350mA max.
- Excellent common mode noise suppression under the power transmission.
- Packaging specification is taping and bulk(TLA-6T127LF-T: Tape and reel, TLA-6T127LF: Bulk).

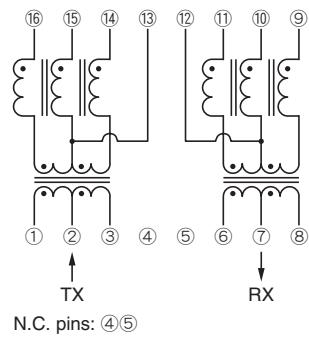
SHAPES AND DIMENSIONS



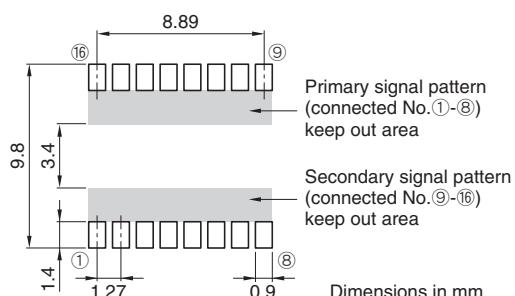
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①②③ : ⑯⑮⑯ ⑥⑦⑧ : ⑪⑩⑨	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑯-⑯ ⑯-⑯ ⑯-⑯	Insertion loss (dB)max. [0.1 to 100MHz] ①③-⑯⑯ ⑯-⑯ ⑯-⑯	Inter-winding stray capacitance (pF)max.[100kHz] ①③-⑯⑯ ⑥⑧-⑯⑨
TLA-6T127LF(-T)	1CT:1CT 1CT:1CT	350 350	1 1	25 25

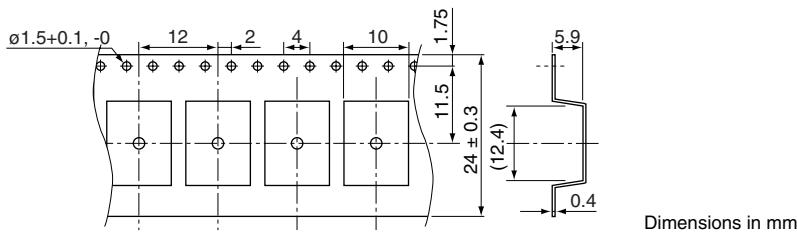
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

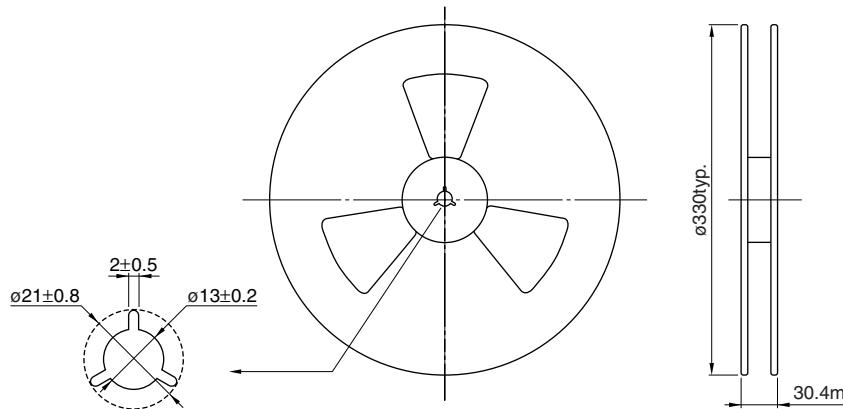
• All specifications are subject to change without notice.

PACKAGING STYLES

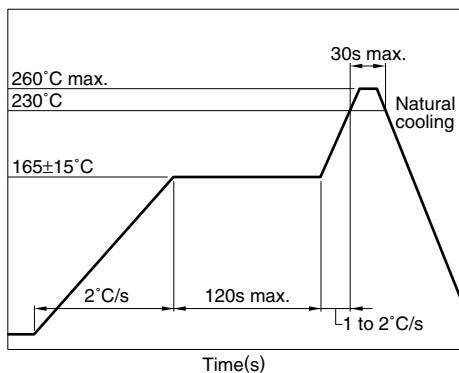
Quantity : 1000pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

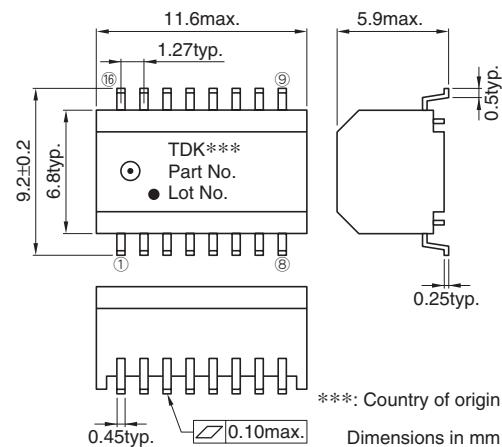
Humidity: 60(%)RH max.

TLA-6T133WLF(-T) ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

- Can be used in the wide range of temperature(-40 to +85°C).
- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6T133WLF-T: Tape and reel, TLA-6T133WLF: Bulk).

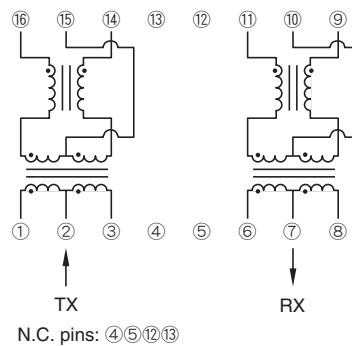
SHAPES AND DIMENSIONS



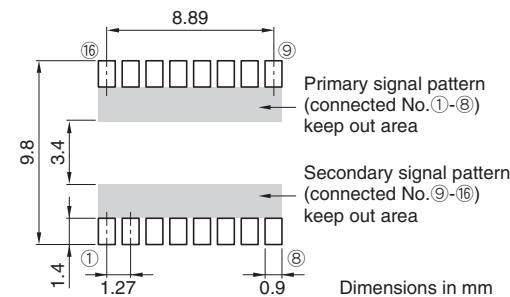
GENERAL SPECIFICATIONS

Pulse transformer	2
Common-mode choke	2
Port	1
Temperature ranges	Operating: -40 to +85°C, Storage: -40 to +85°C
Withstanding voltage	Erms:1500V[60s]

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①②③ : ⑯⑮⑯ ⑥⑦⑧ : ⑪⑩⑨	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑯-⑯ ⑯-⑯	Insertion loss (dB)max. [0.1 to 100MHz] ①③-⑯⑯ ⑯⑯-⑥⑧	Inter-winding stray capacitance (pF)max.[100kHz] ①③-⑯⑯ ⑥⑧-⑯⑨
TLA-6T133WLF(-T)	1CT:1CT 1CT:1CT	350 350	1 1	25 25

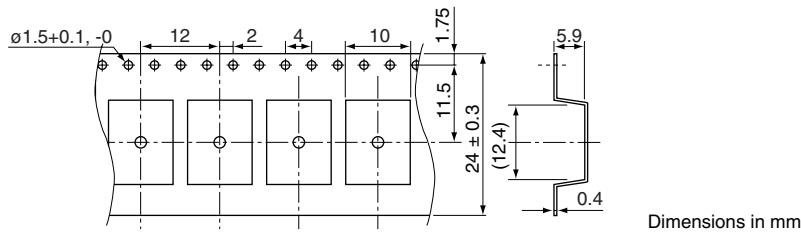
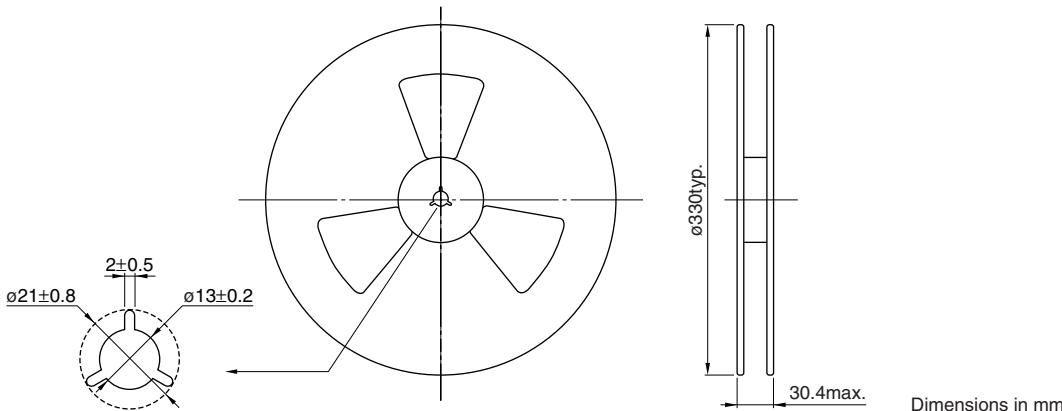
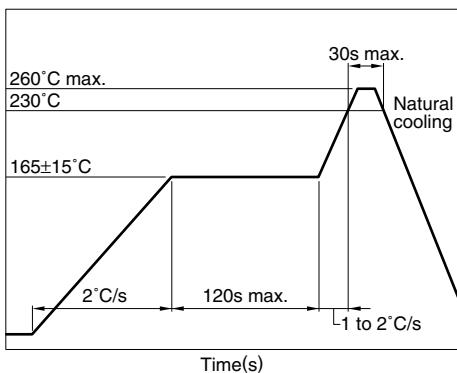
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

PACKAGING STYLES

Quantity : 1000pieces/reel

TAPE DIMENSIONS**REEL DIMENSIONS****RECOMMENDED SOLDERING CONDITION****REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

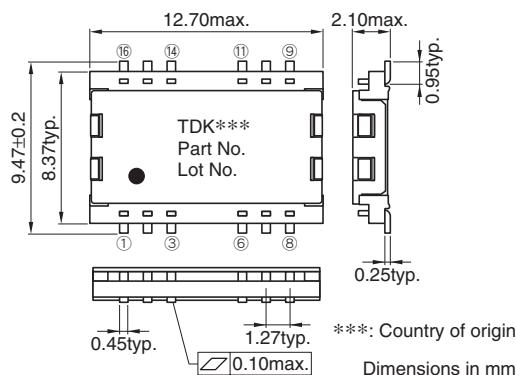
Humidity: 60(%)RH max.

TLA-6T214ALF(-T) ISO8802.3(IEEE802.3) 10/100/1000BASE-T

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Low profile (H)2.1mm max. for note PC application.
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6T214ALF-T: Tape and reel, TLA-6T214ALF: Bulk).

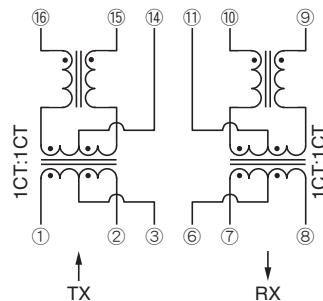
SHAPES AND DIMENSIONS



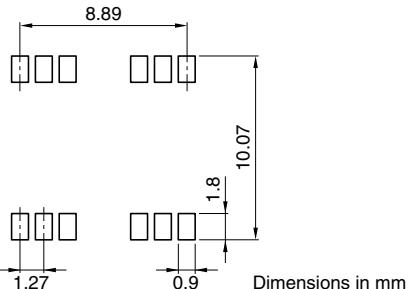
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①③②:⑯⑭⑮ ⑦⑥⑧:⑩⑪⑨	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑯-⑮ ⑩-⑨	Insertion loss (dB)max. [0.1 to 125MHz] ①②-⑯⑮ ⑩⑨-⑦⑧	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑯⑮ ⑩⑨-⑦⑧
TLA-6T214ALF(-T)	1CT:1CT	350	1	25
	1CT:1CT	350	1	25

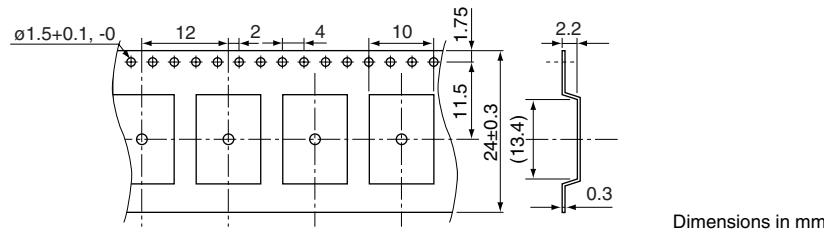
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

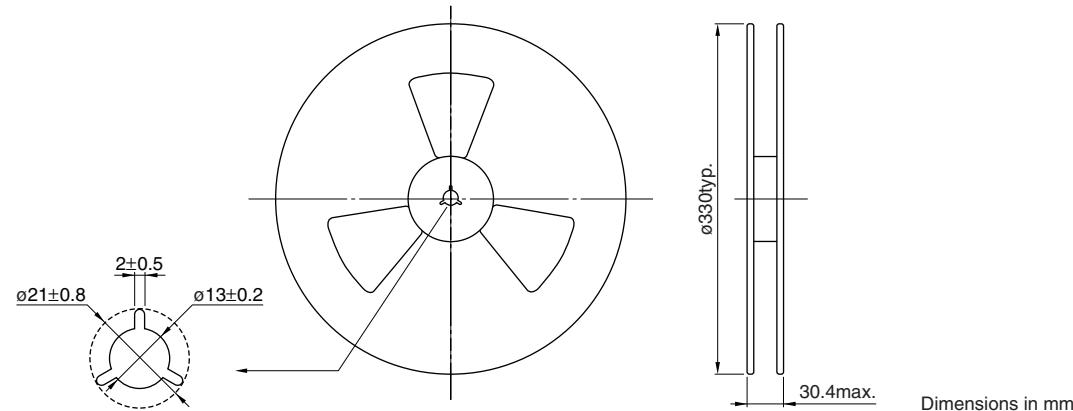
• All specifications are subject to change without notice.

PACKAGING STYLES

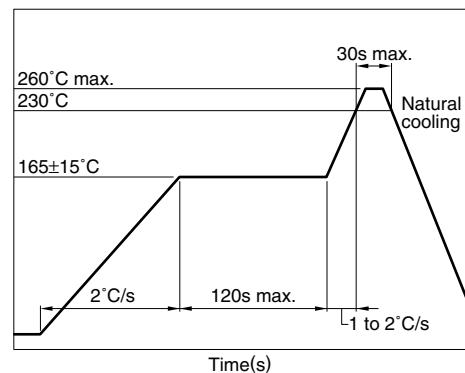
Quantity : 1500pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED STORE CONDITION

The product is packaged by Anti-humid Al bag, in order to keep a good solder ability condition and resistance to soldering heat for products.

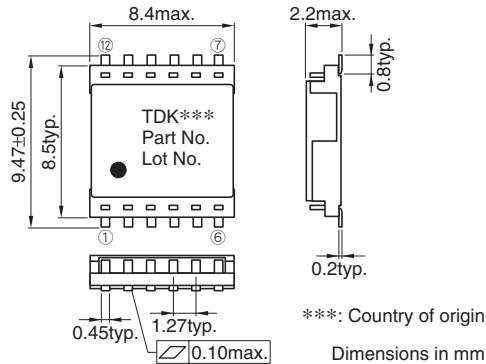
- Before aluminum bag opening
 - Temperature range: +5 to +40°C
 - Humidity: 90(%)RH max.
 - Storage period: 1year
- After aluminum bag opening
 - Temperature range: +5 to +30°C
 - Humidity: 60(%)RH max.
 - Storage period: 1week

TLA-6T213LF(-T) ISO8802.3(IEEE802.3) 10/100/1000BASE-T

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 12-pin SMD package(1.27mm=50mil pin pitch).
- Because it is low profile design of 2.2mm max., space saving is possible and is suitable for notebook PC.
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6T213LF-T: Tape and reel, TLA-6T213LF: Bulk).

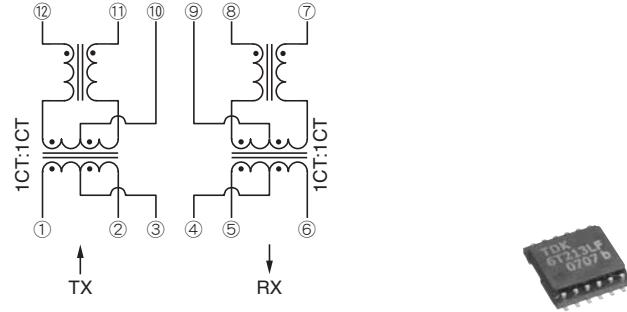
SHAPES AND DIMENSIONS



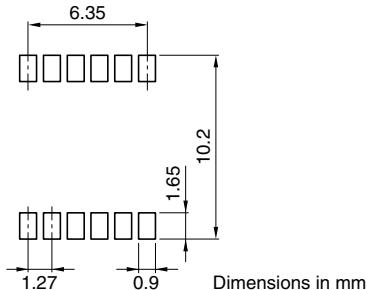
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①③②:⑫⑩⑪ ⑤④⑥:⑧⑨⑦	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑫-⑪ ⑧-⑦	Insertion loss (dB)max. [0.1 to 100MHz] ①②-⑫⑪ ⑧⑦-⑤⑥	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑫⑪ ⑧⑦-⑤⑥
TLA-6T213LF(-T)	1CT:1CT	350	1	25

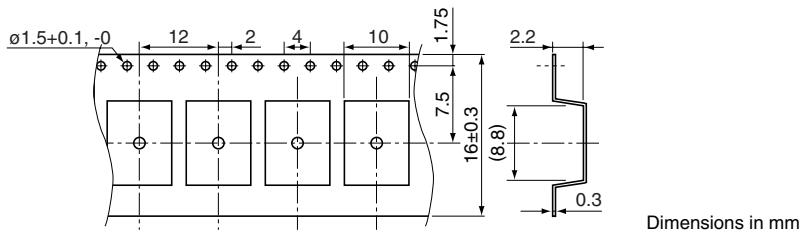
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

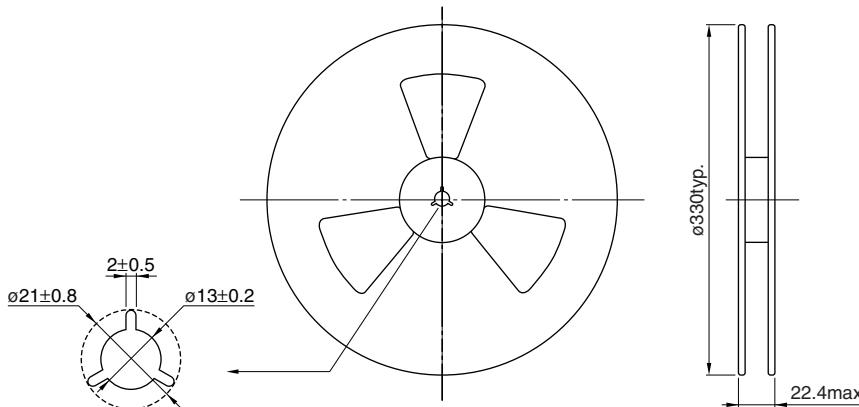
• All specifications are subject to change without notice.

PACKAGING STYLES

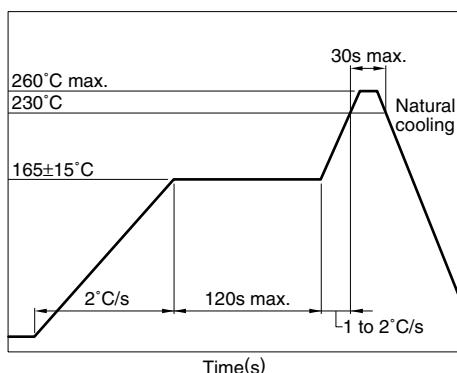
Quantity : 1500pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED STORE CONDITION

The product is packaged by Anti-humid Al bag, in order to keep a good solder ability condition and resistance to soldering heat for products.

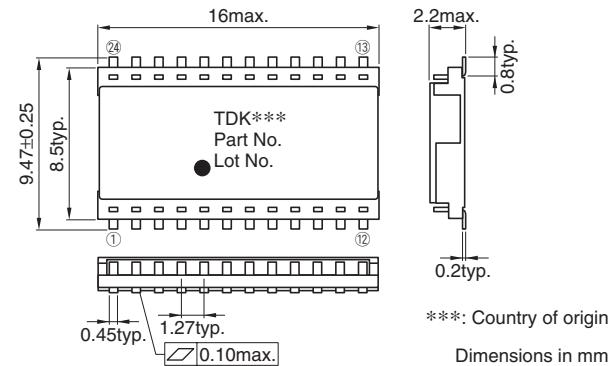
- Before aluminum bag opening
 - Temperature range: +5 to +40°C
 - Humidity: 90(%)RH max.
 - Storage period: 1year
- After aluminum bag opening
 - Temperature range: +5 to +30°C
 - Humidity: 60(%)RH max.
 - Storage period: 1week

TLA-7T201LF(-T) ISO8802.3(IEEE802.3) 10/100/1000BASE-T

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 24-pin SMD package(1.27mm=50mil pin pitch).
- Because it is low profile design of 2.2mm max., space saving is possible and is suitable for notebook PC.
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-7T201LF-T: Tape and reel, TLA-7T201LF: Bulk).

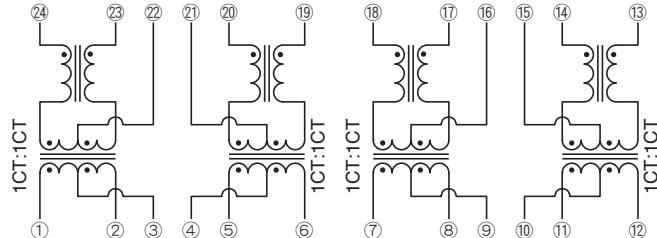
SHAPES AND DIMENSIONS



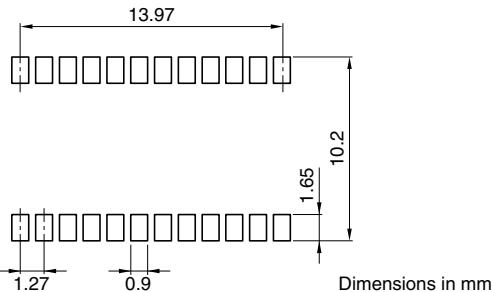
GENERAL SPECIFICATIONS

Pulse transformer	4
Common-mode choke	4
Port	1[1000BASE-T]
Temperature ranges	Operating 0 to +70°C Storage -40 to +85°C
Withstanding voltage	Erms:1500V[60s]

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①③②:②④③ ⑤④⑥:②④③ ⑦⑨⑧:⑧⑩⑨ ⑪⑩⑫:⑫⑪⑬	Inductance (μ H)min. [DC bias 8mA, 100kHz]	Insertion loss (dB)max. [0.1 to 100MHz]	Inter-winding stray capacitance (pF)max.[100kHz]
	②④③:①③② ③②④:④③② ⑨⑧⑦:⑩⑨⑧ ⑪⑫⑩:⑪⑫⑩	②④③ ③②④ ⑧⑦⑨ ⑪⑫⑩	①②-②③ ⑤⑥-②③ ⑦⑧-⑧⑨ ⑪⑫-⑫⑩	①②-②③ ⑤⑥-②③ ⑦⑧-⑧⑨ ⑪⑫-⑫⑩
	⑧⑨⑦:⑩⑪⑨ ⑫⑪⑩:⑫⑪⑩	⑧⑨⑦ ⑫⑪⑩	⑧⑨⑦ ⑫⑪⑩	⑧⑨⑦ ⑫⑪⑩
	⑪⑫⑩:⑪⑫⑩	⑪⑫⑩	⑪⑫⑩	⑪⑫⑩
TLA-7T201LF(-T)	1CT:1CT	350	1	25

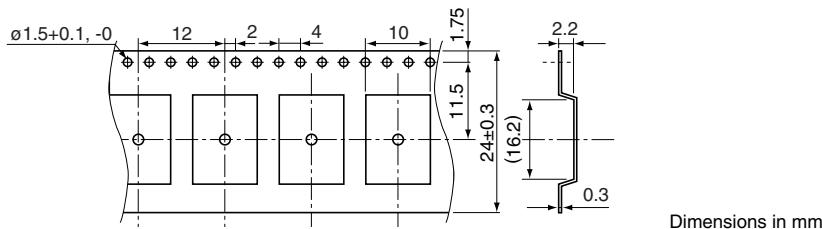
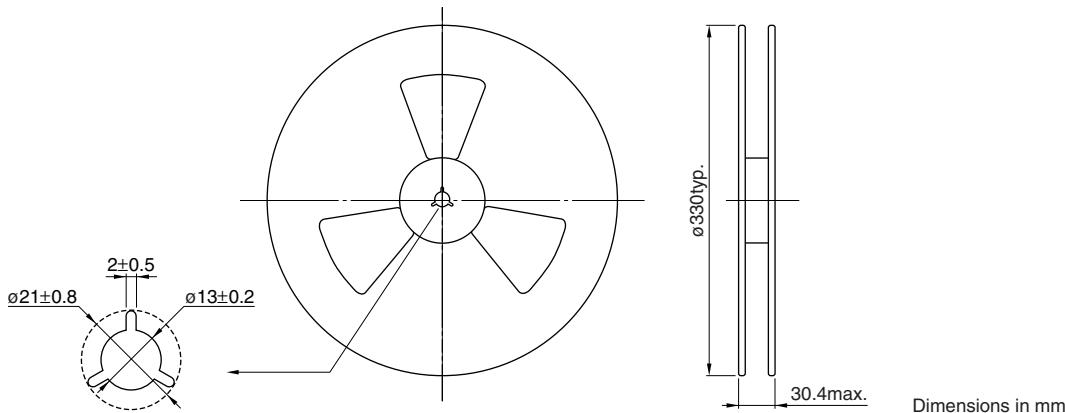
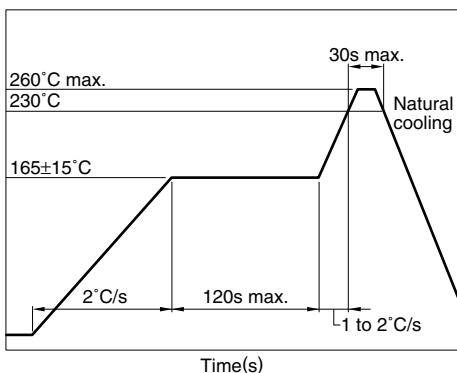
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

PACKAGING STYLES

Quantity : 1500pieces/reel

TAPE DIMENSIONS**REEL DIMENSIONS****RECOMMENDED SOLDERING CONDITION****REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED STORE CONDITION

The product is packaged by Anti-humid Al bag, in order to keep a good solder ability condition and resistance to soldering heat for products.

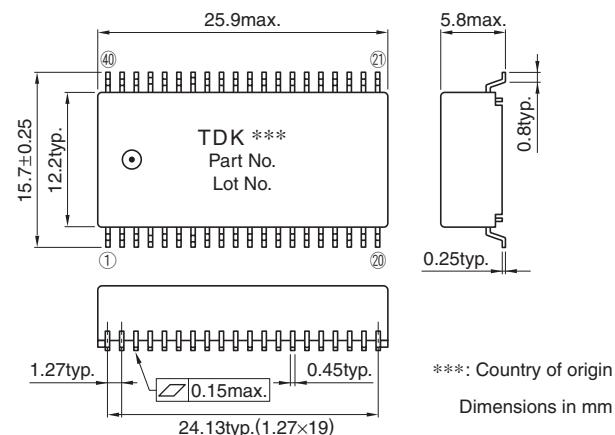
- Before aluminum bag opening
 - Temperature range: +5 to +40°C
 - Humidity: 90(%)RH max.
 - Storage period: 1year
- After aluminum bag opening
 - Temperature range: +5 to +30°C
 - Humidity: 60(%)RH max.
 - Storage period: 1week

TLA-6T404(-T) ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (250°C max.).
- 40-pin SMD package(1.27mm=50mil pin pitch) for Quad port.
- Excellent common-mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6T404-T: Tape and reel, TLA-6T404: Bulk).

SHAPES AND DIMENSIONS

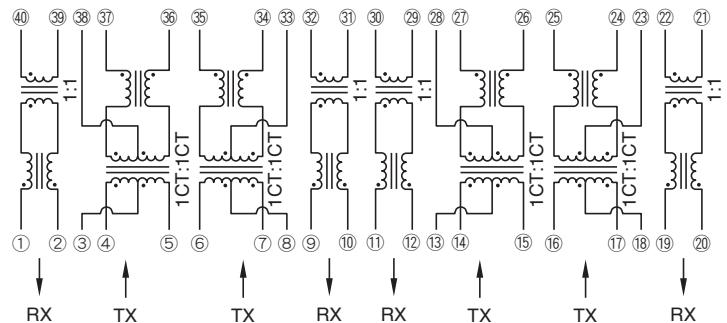


***: Country of origin
Dimensions in mm

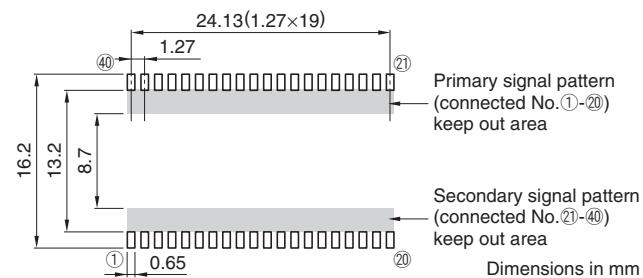
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

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

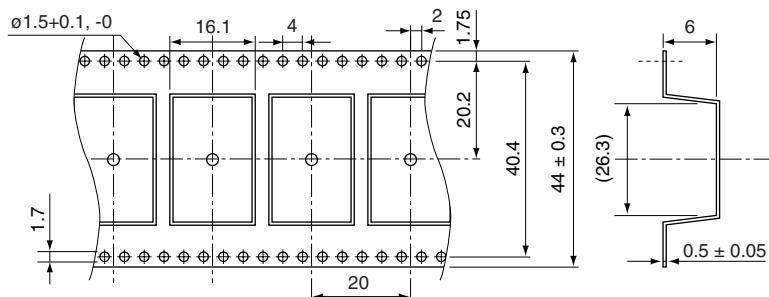
• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

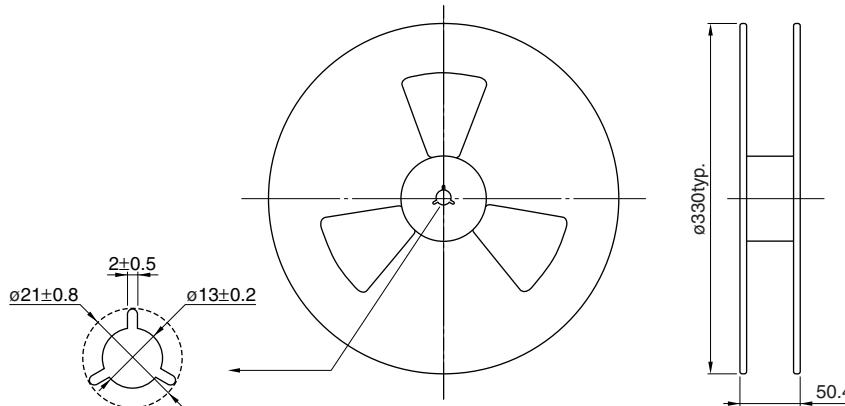
• All specifications are subject to change without notice.

PACKAGING STYLES

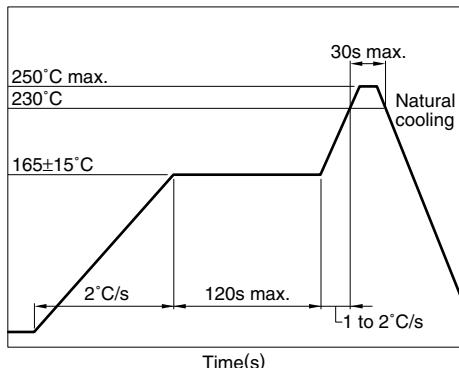
Quantity : 500pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED STORE CONDITION

The product is packaged by Anti-humid Al bag, in order to keep a good solder ability condition and resistance to soldering heat for products.

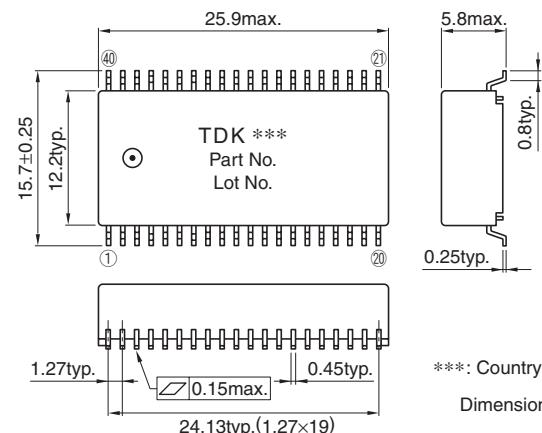
- Before aluminum bag opening
Temperature range: +5 to +40°C
Humidity: 90(%)RH max.
Storage period: 1year
- After aluminum bag opening
Temperature range: +5 to +30°C
Humidity: 60(%)RH max.
Storage period: 1week

TLA-6T406(-T) ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

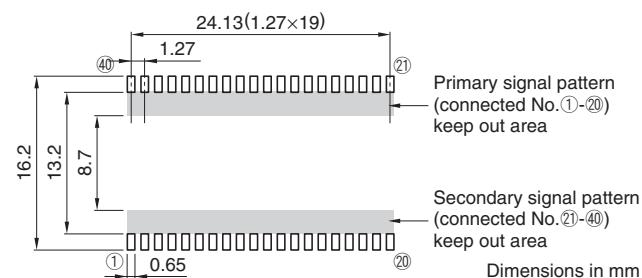
- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (250°C max.).
- 40-pin SMD package(1.27mm=50mil pin pitch) for Quad port.
- Excellent common-mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6T406-T: Tape and reel, TLA-6T406: Bulk).

SHAPES AND DIMENSIONS



***: Country of origin
Dimensions in mm

RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①③②:④⑧⑨..... ④③⑤:⑦⑧⑩.....	Inductance (μ H)min. [DC bias 8mA, 100kHz] ④-⑨..... ⑦-⑩.....	Insertion loss (dB)max. [0.1 to 100MHz] ①②-④⑨..... ④⑤-⑦⑩.....	Inter-winding stray capacitance (pF)max.[100kHz] ①②-④⑨..... ④⑤-⑦⑩.....
TLA-6T406(-T)	1CT:1CT	350	1	40
	1CT:1CT	350	1	40

• Ta=25°C

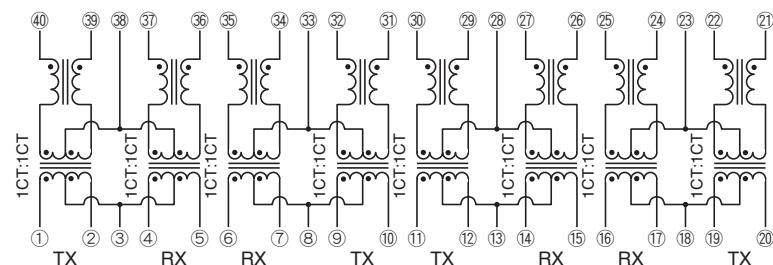
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

GENERAL SPECIFICATIONS

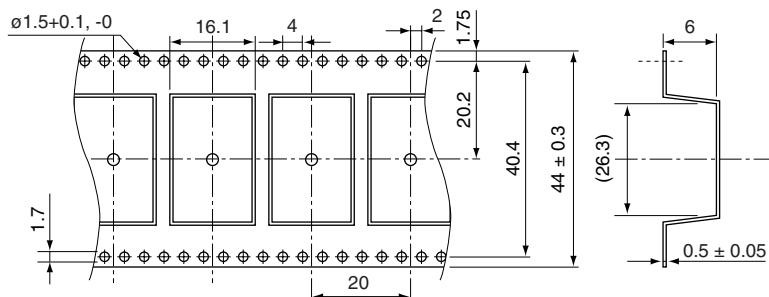
Pulse transformer	8
Common-mode choke	8
Port	4
Temperature ranges	Operating 0 to +70°C Storage -40 to +85°C
Withstanding voltage	Erms:1500V[60s]

CIRCUIT DIAGRAM

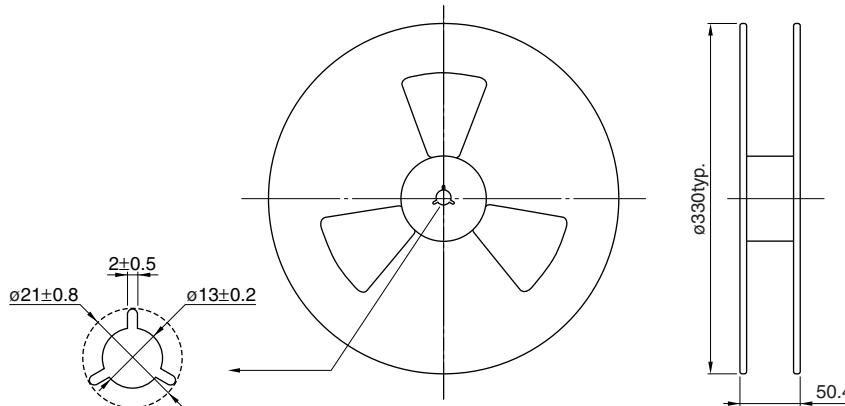


PACKAGING STYLES

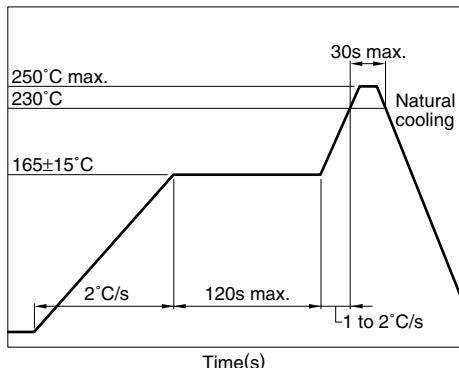
Quantity : 500pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED STORE CONDITION

The product is packaged by Anti-humid Al bag, in order to keep a good solder ability condition and resistance to soldering heat for products.

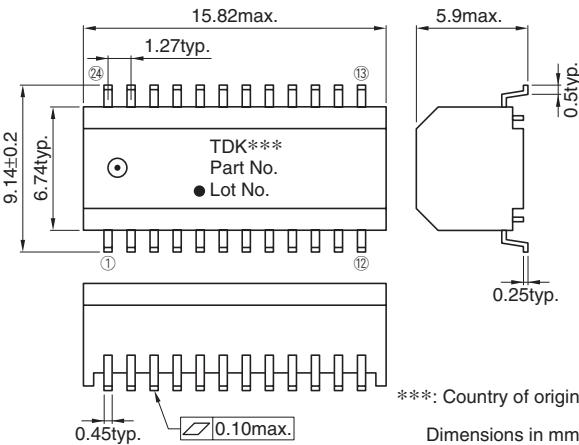
- Before aluminum bag opening
Temperature range: +5 to +40°C
Humidity: 90(%)RH max.
Storage period: 1year
- After aluminum bag opening
Temperature range: +5 to +30°C
Humidity: 60(%)RH max.
Storage period: 1week

TLA-7T101LF(-T) ISO8802.3(IEEE802.3) 10/100/1000BASE-T

FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 24-pin SMD package(1.27mm=50mil pin pitch).
- Excellent common-mode noise suppression.
- Inductance is 350μH or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-7T101LF-T: Tape and reel, TLA-7T101LF: Bulk).

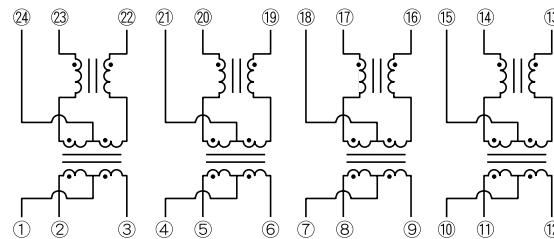
SHAPES AND DIMENSIONS



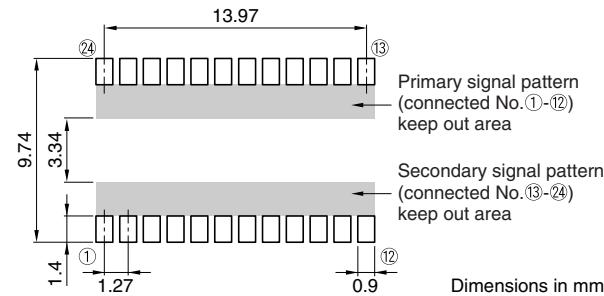
GENERAL SPECIFICATIONS

Pulse transformer	4
Common-mode choke	4
Port	1(1000BASE-T)
Temperature ranges	Operating 0 to +70°C
	Storage -40 to +85°C
Withstanding voltage	Erms:1500V[60s]

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio	Inductance (μH)min. [DC bias 8mA, 100kHz]	Insertion loss (dB)max.	Inter-winding stray capacitance (pF)max.[100kHz]
TLA-7T101LF(-T)	1CT:1CT	350	1	25
• Ta=25°C				
	②①③ : ②③②②	②③-②②	②③-②③②②	②③-②③②②
	⑤④⑥ : ②①⑨	②①⑨	⑤⑥-②①⑨	⑤⑥-②①⑨
	⑧⑦⑨ : ⑦⑧⑨	⑦⑧⑨	⑧⑨-⑦⑧⑨	⑧⑨-⑦⑧⑨
	⑪⑩⑫ : ⑪⑩⑫⑬	⑪⑩⑫-⑪⑩⑫⑬	⑪⑩⑫-⑪⑩⑫⑬	⑪⑩⑫-⑪⑩⑫⑬

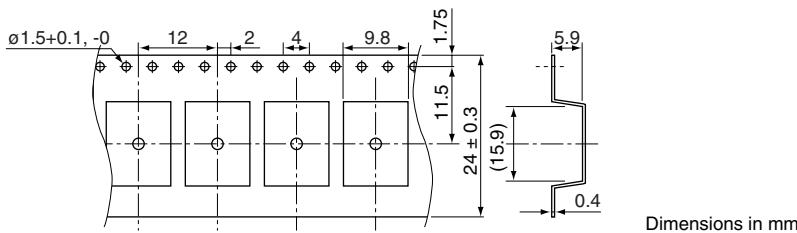
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

PACKAGING STYLES

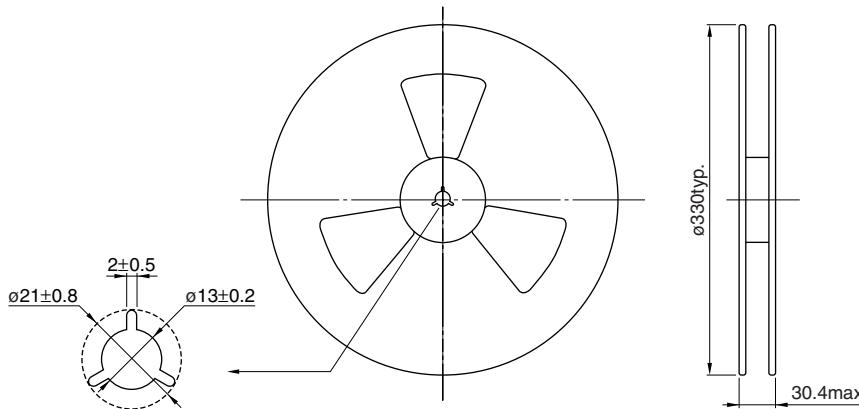
Quantity : 1000pieces/reel

TAPE DIMENSIONS



Dimensions in mm

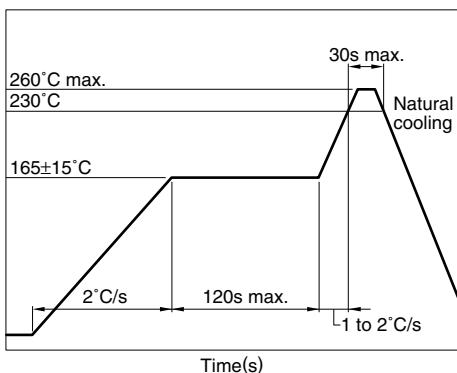
REEL DIMENSIONS



Dimensions in mm

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

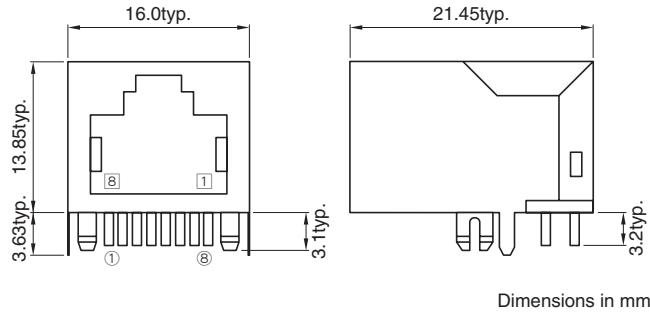
Humidity: 60(%)RH max.

TLA-6T718 ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

- Product conforming to RoHS directive.
- Pulse transformer, common mode choke, resistor and high withstanding voltage capacitor are integrated into RJ-45 modular jack.
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.

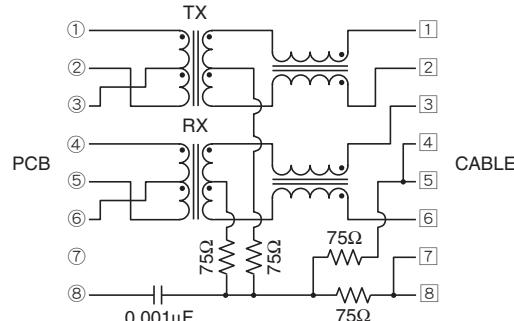
SHAPES AND DIMENSIONS



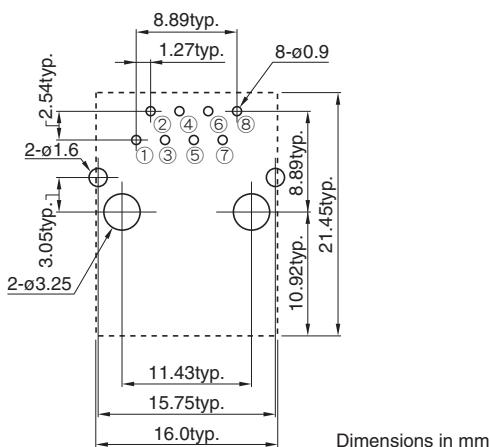
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN[TOP VIEW]



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①③②:①② ④⑥⑤:③⑥	Inductance (μ H)min. [DC bias 8mA, 100kHz] ①-② ③-⑥	Insertion loss (dB)max. [0.1 to 100MHz] ①②-①② ③⑥-④⑤
TLA-6T718	1CT:1 1CT:1	350 350	1 1

• Ta=25°C

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

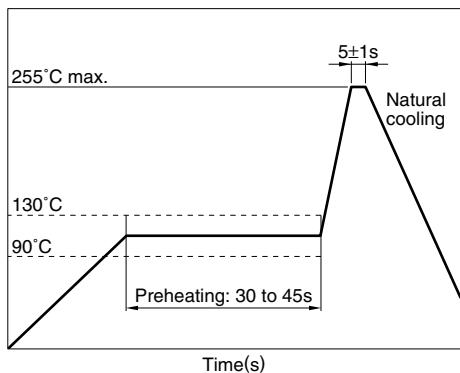
• All specifications are subject to change without notice.

PACKAGING STYLES

Tray : 50pieces/tray

RECOMMENDED SOLDERING CONDITION

FLOW SOLDERING



Preheating: 90 to 130°C for 30 to 45 seconds.

Soldering: 255°C max. 5±1 seconds

- Perform flow soldering from the underside of the board.
- The surface of plastic protrusions inserted into the board may melt, but this causes no problems with regard to electrical properties or mounting.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1 year.

Temperature range: +5 to +30°C

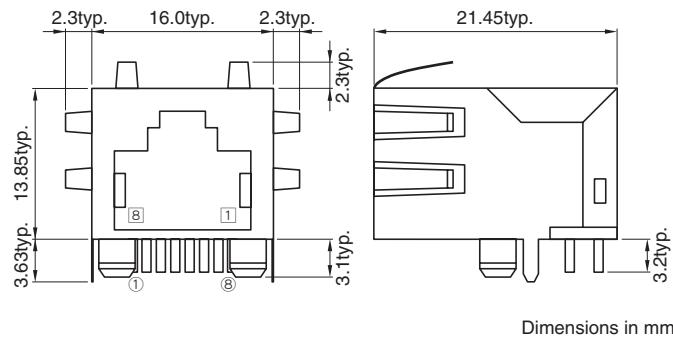
Humidity: 60(%)RH max.

TLA-6T719 ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

- Product conforming to RoHS directive.
- Pulse transformer, common mode choke, resistor and high with-standing voltage capacitor are integrated into RJ-45 modular jack.
- Excellent common mode noise suppression.
- Inductance is $350\mu\text{H}$ or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.

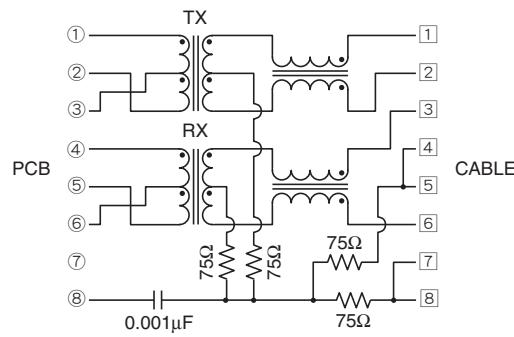
SHAPES AND DIMENSIONS



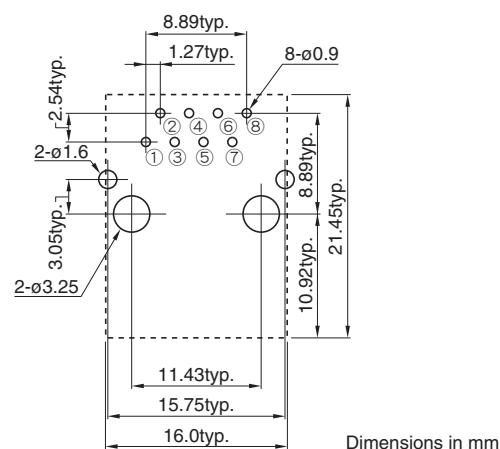
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN [TOP VIEW]



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio	Inductance (μ H)min. [DC bias 8mA, 100kHz]	Insertion loss (dB)max. [0.1 to 100MHz]
	①③②:①② ④⑥⑤:③⑥	①-② ③-⑥	①②-①② ③⑥-④⑤
TLA-6T719	1CT:1	350	1
	1CT:1	350	1

- $T_a=25^\circ\text{C}$

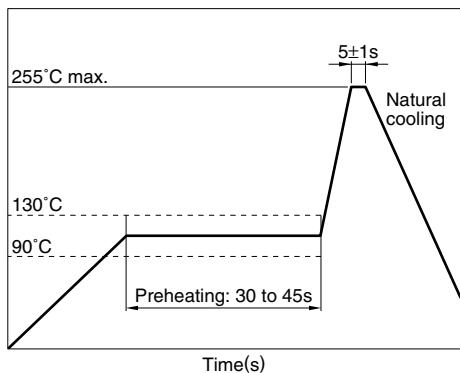
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
- All specifications are subject to change without notice.

PACKAGING STYLES

Tray : 45pieces/tray

RECOMMENDED SOLDERING CONDITION

FLOW SOLDERING



Preheating: 90 to 130°C for 30 to 45 seconds.

Soldering: 255°C max. 5±1 seconds

- Perform flow soldering from the underside of the board.
- The surface of plastic protrusions inserted into the board may melt, but this causes no problems with regard to electrical properties or mounting.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1 year.

Temperature range: +5 to +30°C

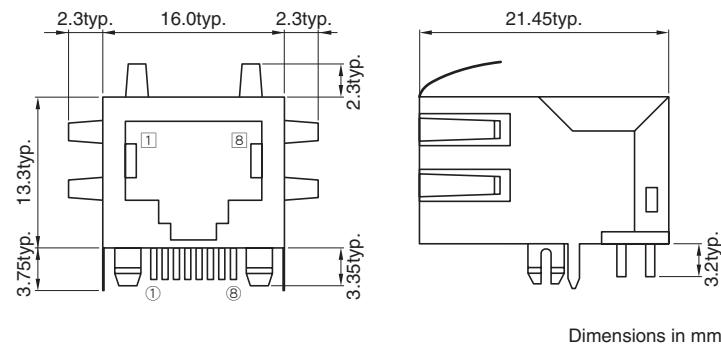
Humidity: 60(%)RH max.

TLA-6T720 ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

- Product conforming to RoHS directive.
- Pulse transformer, common mode choke, resistor and high withstanding voltage capacitor are integrated into RJ-45 modular jack.
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.

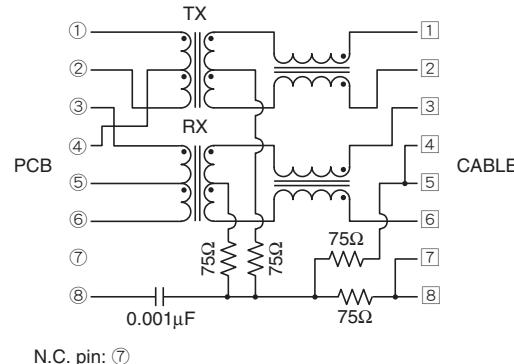
SHAPES AND DIMENSIONS



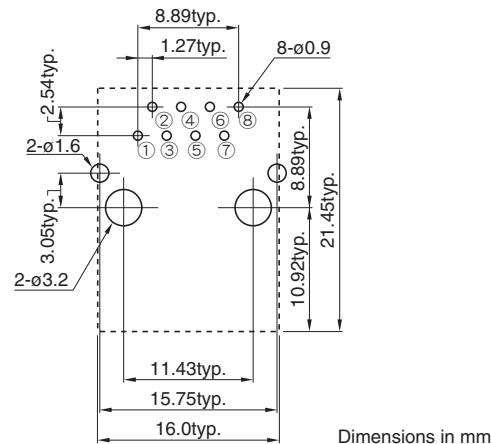
GENERAL SPECIFICATIONS

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

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN[TOP VIEW]



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①④②:①② ④⑤⑥:③⑥	Inductance (μ H)min. [DC bias 8mA, 100kHz] ①-② ③-⑥	Insertion loss (dB)max. [0.1 to 100MHz] ①②-①② ③⑥-③⑥
TLA-6T720	1CT:1 1CT:1	350 350	1 1

• Ta=25°C

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

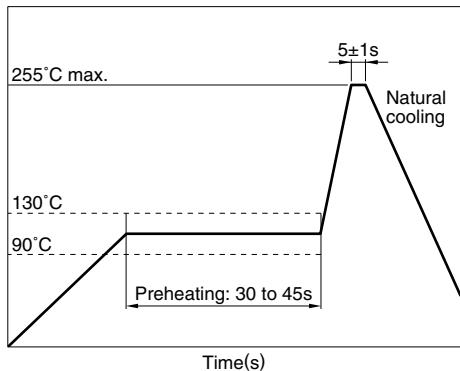
- All specifications are subject to change without notice.

PACKAGING STYLES

Tray : 45pieces/tray

RECOMMENDED SOLDERING CONDITION

FLOW SOLDERING



Preheating: 90 to 130°C for 30 to 45 seconds.

Soldering: 255°C max. 5±1 seconds

- Perform flow soldering from the underside of the board.
- The surface of plastic protrusions inserted into the board may melt, but this causes no problems with regard to electrical properties or mounting.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1 year.

Temperature range: +5 to +30°C

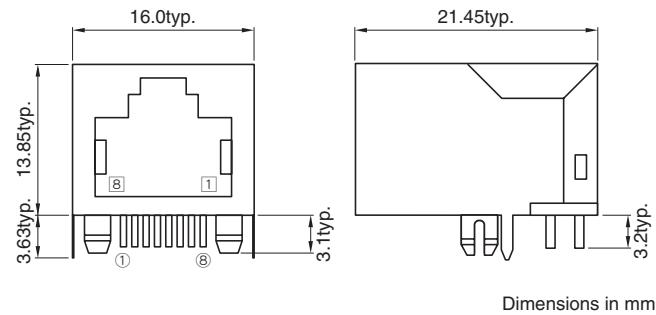
Humidity: 60(%)RH max.

TLA-6T717W ISO8802.3(IEEE802.3) 10/100BASE-TX

FEATURES

- Can be used in the wide range of temperature(-40 to +85°C).
- Product conforming to RoHS directive.
- Pulse transformer, common mode choke, resistor and high withstanding voltage capacitor are integrated into RJ-45 modular jack.
- Excellent common mode noise suppression.
- Inductance is 350 μ H or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.

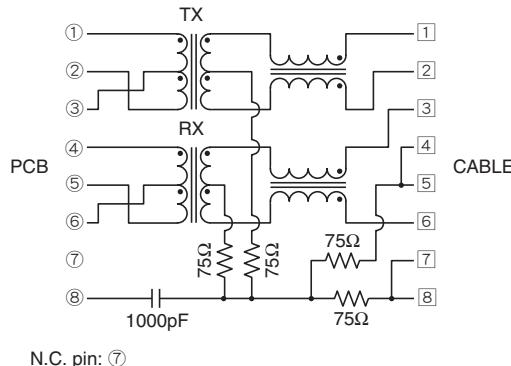
SHAPES AND DIMENSIONS



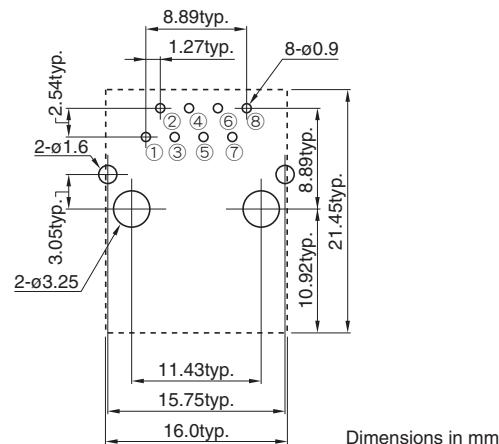
GENERAL SPECIFICATIONS

Pulse transformer	2
Common-mode choke	2
Port	1
Temperature ranges	Operating: -40 to +85°C Storage: -40 to +85°C
Withstanding voltage	Erms:1500V[60s]

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN[TOP VIEW]



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①③②:①② ④⑥⑤:③⑥	Inductance (μ H)min. [DC bias 8mA, 100kHz] ①-② ③-⑥	Insertion loss (dB)max. [0.1 to 100MHz] ①②-①② ③⑥-④⑤
TLA-6T717W	1CT:1 1CT:1	350 350	1 1

• Ta=25°C

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

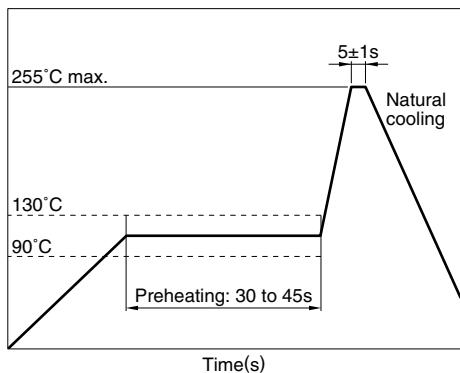
- All specifications are subject to change without notice.

PACKAGING STYLES

Tray : 50pieces/tray

RECOMMENDED SOLDERING CONDITION

FLOW SOLDERING



Preheating: 90 to 130°C for 30 to 45 seconds.

Soldering: 255°C max. 5±1 seconds

- Perform flow soldering from the underside of the board.
- The surface of plastic protrusions inserted into the board may melt, but this causes no problems with regard to electrical properties or mounting.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1 year.

Temperature range: +5 to +30°C

Humidity: 60(%)RH max.

LC MODULES

Conformity to RoHS Directive

TLA-3M103LF(-T) ISO8802.3(IEEE802.3) 10BASE-T

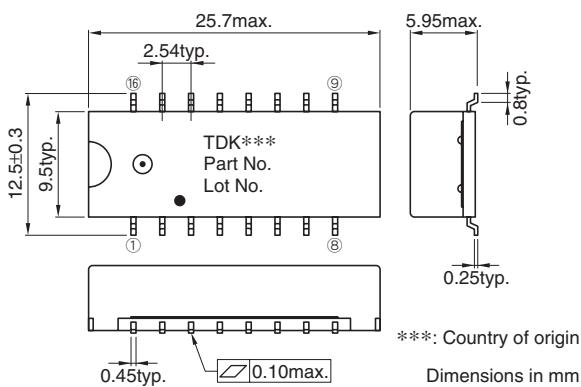
FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package (2.54mm=100mil pin pitch).
- Pulse transformer, common-mode choke and low pass filter are integrated into 16-pin SMD package.
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-3M103LF-T: Tape and reel, TLA-3M103LF: Bulk).

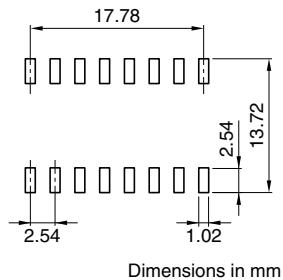
GENERAL SPECIFICATIONS

Low pass filter	2
Pulse transformer	2
Common-mode choke	2
Port	1
Temperature ranges	Operating 0 to +70°C Storage -40 to +85°C
Withstanding voltage	Erms:1500V[60s]

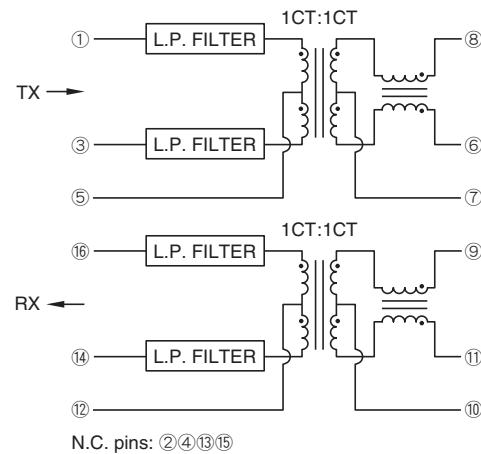
SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS

Part No.	Insertion loss (dB)max.[5 to 10MHz] ①③-⑧⑥ ⑨⑪-⑯⑯	Attenuation (dB)min.[30 to 100MHz] ①③-⑧⑥ ⑨⑪-⑯⑯	Impedance (Ω)typ.[5 to 10MHz] ①-③, ⑧-⑥ ⑯-⑯, ⑨-⑪	C.M.R.R. (dB)min.[1 to 100MHz] ①③-⑧⑥ ⑯⑯-⑨⑪
TLA-3M103LF(-T)	1	25	100, 100	25
	1	25	100, 100	25

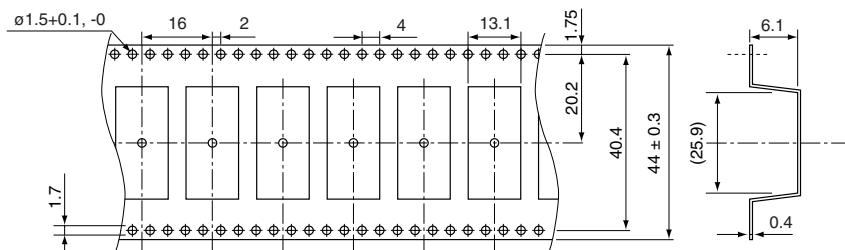
• $T_a=25^\circ\text{C}$

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

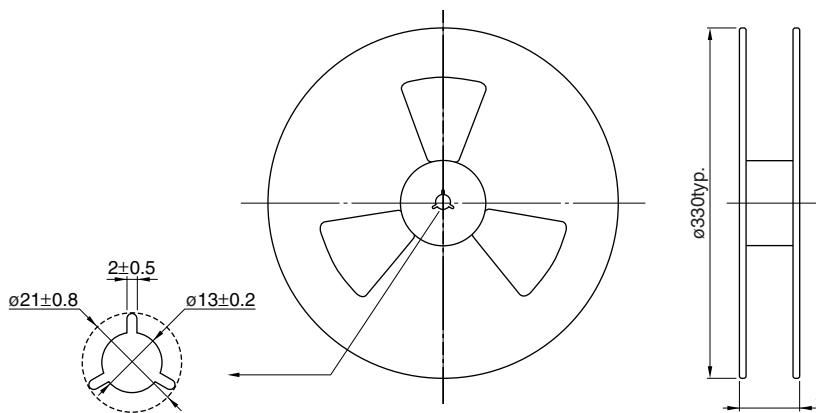
• All specifications are subject to change without notice.

PACKAGING STYLES

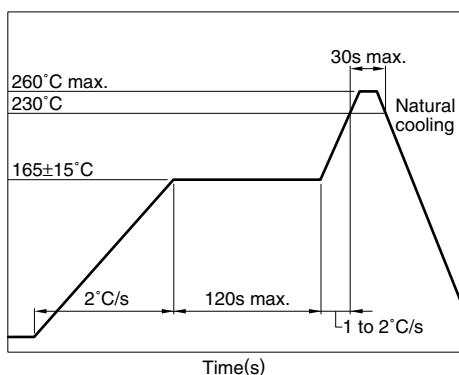
Quantity : 600pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

Humidity: 60(%)RH max.

TLA-3M601-RS ISO8802.3(IEEE802.3) 10BASE-T

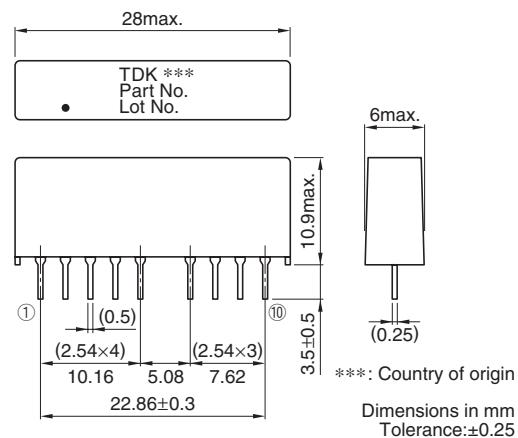
FEATURES

- Product conforming to RoHS directive.
- 10-pin SIP package (2.54mm=100mil pin pitch).
- Pulse transformer, common-mode choke and low pass filter are integrated into 10-pin SIP package.
- Using the high-quality and wide-band ferrite cores for LAN.
- Thin(t=6mm max.) and low profile(H=10.9mm max.).

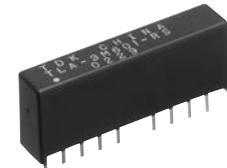
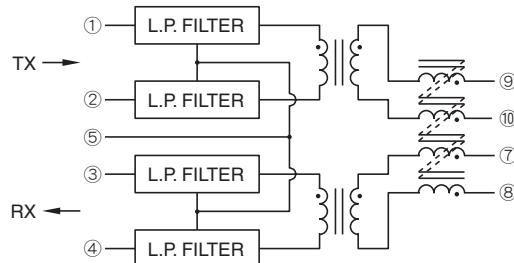
GENERAL SPECIFICATIONS

Low pass filter	2
Pulse transformer	2
Common-mode choke	1
Port	1
Temperature ranges	Operating 0 to +70°C Storage -40 to +85°C
Withstanding voltage	Erms: 1500V[60s]

SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS

Part No.	Insertion loss (dB)max.[5 to 10MHz] ①②-⑨⑩ ⑦⑧-③④	Attenuation (dB)min.[30 to 100MHz] ①②-⑨⑩ ⑦⑧-③④	Impedance (Ω)typ.[5 to 10MHz] ①-②, ⑨-⑩ ③-④, ⑦-⑧	C.M.R.R. (dB)min.[30 to 100MHz] ①②-⑨⑩ ③④-⑦⑧
TLA-3M601-RS	1	25	100, 100	30
	1	25	100, 100	30

• Ta=25°C

PACKAGING STYLES

Quantity : 540pieces/box

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

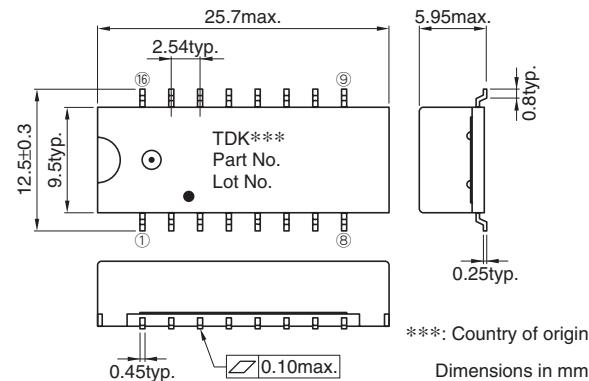
- All specifications are subject to change without notice.

TLA-6M102LF(-T) ATM25

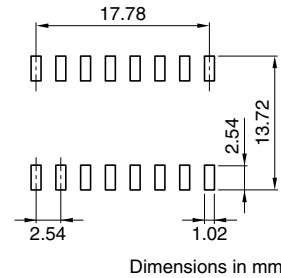
FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package (2.54mm=100mil pin pitch).
- Pulse transformers, common-mode chokes, low pass filter and surge protector are integrated into 16-pin SMD package.
- Supports UTP 100Ω transmission cable.
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6M102LF-T: Tape and reel, TLA-6M102LF: Bulk).

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

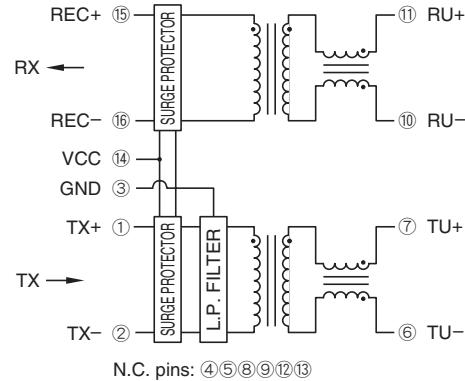
	Insertion loss (dB)max.		Attenuation (dB)min.
Part No.	[0.1 to 17MHz] ①②-⑦⑥ ⑪⑩-⑯	[17 to 25MHz] ①②-⑦⑥ ⑪⑩-⑯	[50 to 100MHz] ①②-⑦⑥ ⑪⑩-⑯
TLA-6M102LF(-T)	1.5	3	18
	1.5	1.5	—

• Ta=25°C

GENERAL SPECIFICATIONS

Low pass filter	1
Pulse transformer	2
Common-mode choke	2
Port	1
Temperature ranges	Operating 0 to +70°C Storage -40 to +85°C
Withstanding voltage	Erms:500V[60s]

CIRCUIT DIAGRAM

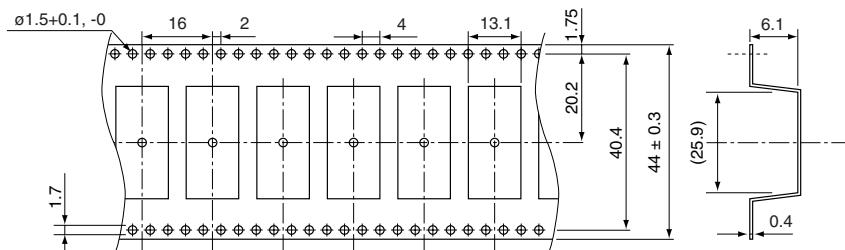


• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

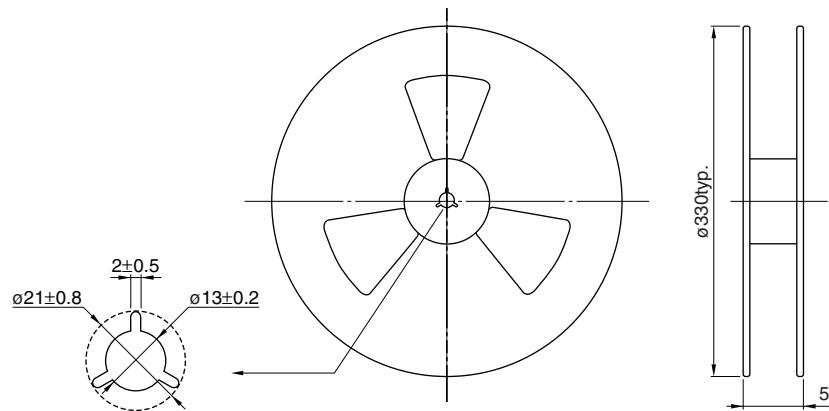
• All specifications are subject to change without notice.

PACKAGING STYLES

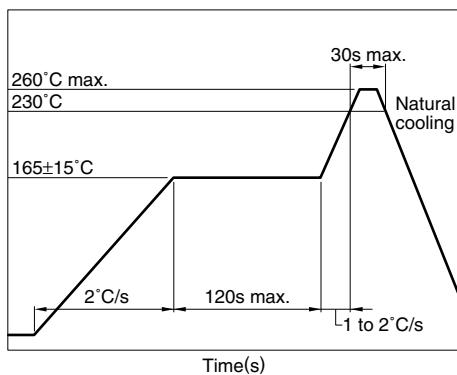
Quantity : 600pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

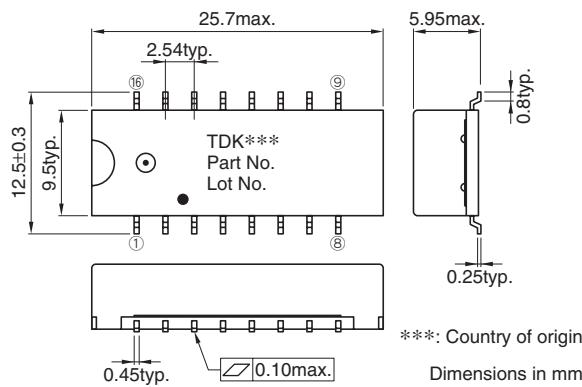
Humidity: 60(%)RH max.

TLA-6M103LF(-T) ATM25

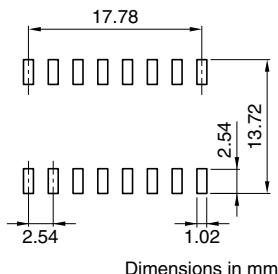
FEATURES

- Product conforming to RoHS directive.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package (2.54mm=100mil pin pitch).
- Pulse transformers, common-mode chokes and low pass filter are integrated into 16-pin SMD package.
- Supports STP 150Ω or UTP 100Ω transmission cable.
- Using the high-quality and wide-band ferrite cores for LAN.
- Packaging specification is taping and bulk(TLA-6M103LF-T: Tape and reel, TLA-6M103LF: Bulk).

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERNS



ELECTRICAL CHARACTERISTICS

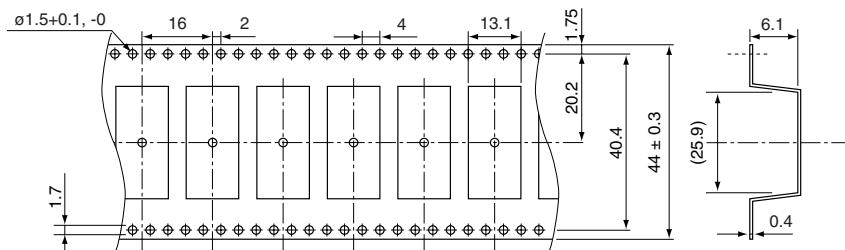
Part No.	Insertion loss (dB)max.			Attenuation (dB)min.
	[12kHz] ①②-⑦⑧ ⑨⑩-⑯⑯	[16MHz] ①②-⑦⑧ ⑨⑩-⑯⑯	[24MHz] ①②-⑦⑧ ⑨⑩-⑯⑯	
TLA-6M103LF(-T)	3	1	1.8	10
	3	1	1.8	10

- $T_a=25^\circ\text{C}$

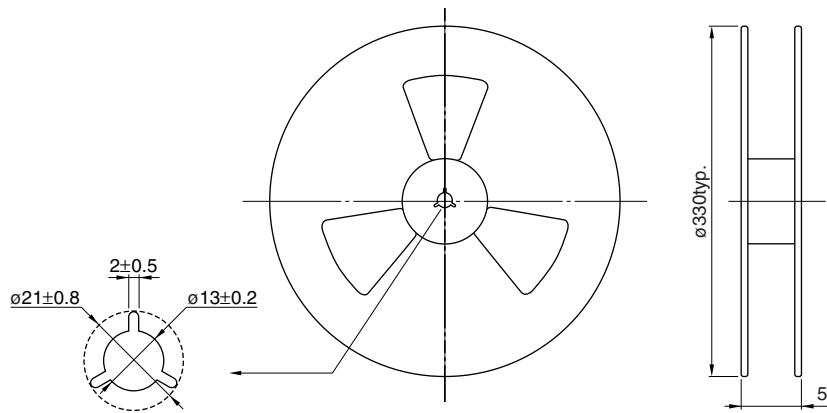
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
- All specifications are subject to change without notice.

PACKAGING STYLES

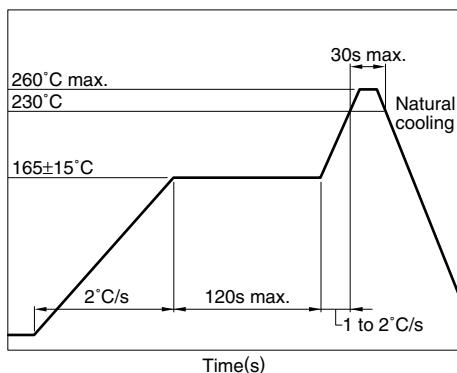
Quantity : 600pieces/reel

TAPE DIMENSIONS

Dimensions in mm

REEL DIMENSIONS

Dimensions in mm

RECOMMENDED SOLDERING CONDITION**REFLOW SOLDERING**

- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planarity.
- The cutted end of terminal has no plating(out of subject of solder ability).

RECOMMENDED CONDITION FOR LONG TERM STORE

When it stores for a long term, please avoid place of high temperature and high humidity. Recommend that it uses after the delivery within 1year.

Temperature range: +5 to +30°C

Humidity: 60(%)RH max.

IC Cross Reference

IC manufacturer	Interface	IC part No.	Ports	Turns ratio		TDK part No.		
				TX	RX	Single	Single (Low profile)	Quad
AMD	10/100BASE-TX	Am79C874	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T404
		Am79C875	4			TLA-6T118LF	TLA-6T213LF	TLA-6T406
				1.25:1	1:1	TLA-6T122LF (For power down application)		TLA-6T718 TLA-6T719 TLA-6T720
		Am79C973/975	1	1:1.41	1:1	TLA-6T121LF		
Broadcom	10/100BASE-TX	AC101L	1					TLA-6T718
		BCM5241	1					TLA-6T719
		BCM5226	6	1:1	1:1	TLA-6T118LF	TLA-6T214ALF	TLA-6T406
		BCM5208R/5228	8			TLA-6T213LF		TLA-6T720
		BCM5238/5248	8					
		BCM5220/5221	1	1:1	1:1	TLA-6T133WLF		TLA-6T717W
		BCM5222	2					
		BCM1101	2					
Broadcom	10/100/1000BASE-T	BCM1112/1113	2	1:1	1:1	TLA-6T127LF		
		BCM1115	1					
		BCM5401	1					
		BCM5421/S	1					
CIRRUS LOGIC	10/100/1000BASE-T	BCM5461/S	1					
		BCM5703	1	1:1	1:1	TLA-7T101LF	TLA-7T201LF	
		BCM5705/M	1					
		BCM5788/M	1					
CIRRUS LOGIC	10BASE-T	CS8900A(5V)	1	1:1.41	1:1	TLA-3T110LF		
		CS8900A(3.3V)	1	1:2.5	1:1	TLA-3T112LF		
CIRRUS LOGIC	10/100BASE-TX	CS8952	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T718
		CS8952T	1			TLA-6T118LF	TLA-6T213LF	TLA-6T719 TLA-6T720
DAVICOM	10BASE-T	DM9008	1	1:1	1:1	TLA-3M103LF		
		DM9081	8			TLA-3M601-RS		
DAVICOM	10/100BASE-TX	DM9010	1	1:1	1:1	TLA-6T118LF	TLA-6T214ALF	TLA-6T718
		DM9000A	1			TLA-6T213LF		TLA-6T719 TLA-6T720
		DM9601	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T718
		DM9102A	1			TLA-6T118LF	TLA-6T213LF	TLA-6T719 TLA-6T720
Fujitsu	10BASE-T	DM9161	1			TLA-6T122LF (For power down application)		
		DM9331	1	1.25:1	1:1			
Fujitsu	10BASE-T	MB86967	1	1:1	1:1	TLA-3M103LF		
ICS	10/100BASE-TX	MB86967				TLA-3M601-RS		
		ICS1892	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T718
		ICS1893AF/AG	1			TLA-6T118LF	TLA-6T213LF	TLA-6T719 TLA-6T720
ICS	10/100BASE-TX	ICS1893BF/BK	1	1:1	1:1	TLA-6T118LF	TLA-6T214ALF	TLA-6T718
						TLA-6T213LF		TLA-6T719 TLA-6T720
IDT	ATM25	IDT77105	1	1:1	1:1	TLA-6M103LF		
Infineon (ADMtek)	10/100BASE-TX	ADM7001	1					
		ADM7008	8					
		ADM6995L/6996L	5	1:1	1:1	TLA-6T118LF	TLA-6T214ALF	TLA-6T718
		ADM6996F	4			TLA-6T213LF		TLA-6T719 TLA-6T720
		ADM6999/U/G	8					
Intel (Level One)	10BASE-T	LXT901A/907A	1	1:1.14	1:1	TLA-3T110LF		
		LXT905/908	1	1:2	1:1	TLA-3T109LF		
Intel (Level One)	10/100BASE-TX	82559/ER	1					
		82562EP/ET/EX/EZ	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T718
		LXT972A/M	1			TLA-6T118LF	TLA-6T213LF	TLA-6T719 TLA-6T720
		LXT970A/971A	1					
		82551QM/ER	1					
		82562GT/GZ/GX	1	1:1	1:1	TLA-6T118LF	TLA-6T214ALF	TLA-6T718
		LXT973	2			TLA-6T213LF		TLA-6T719 TLA-6T720
		82551IT	1	1:1	1:1	TLA-6T133WLF		TLA-6T717W
		LXT974/975	4	2:1	1:1	TLA-6T120LF		
		LXT9785/E	8	1:1	1:1	TLA-6T118LF	TLA-6T214ALF	TLA-6T718
						TLA-6T213LF		TLA-6T719 TLA-6T720
Intel (Level One)	10/100/1000BASE-T	82573E/V/L	1					
		82572EI	1					
		82571EB	2					
		82547GI/EI	1					
		82546EB/GB	2	1:1	1:1	TLA-7T101LF	TLA-7T201LF	
		82545EM/GM	1					
		82544GC/EI	1					
		82541PI/GI/EI/ER	1					
		82540EM/EP	1					

• All specifications are subject to change without notice.

IC manufacturer	Interface	IC part No.	Ports	Turns ratio		TDK part No.				
				TX	RX	Single	Single (Low profile)	Quad		
LSI Logic	10/100BASE-TX	L80223	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF TLA-6T118LF	TLA-6T718 TLA-6T719 TLA-6T720		
		L80225	1			TLA-6T214ALF				
		L80227	1			TLA-6T213LF				
Marvell	10/100/1000BASE-T	88E1000/S	1	1:1	1:1	TLA-7T101LF	TLA-7T201LF			
		88E1010/S	1							
		88E1011/S	1							
		88E1111	1							
MICREL (Kendin)	10/100BASE-TX	KSZ8001L/S	1	1:1	1:1	TLA-6T118LF	TLA-6T214ALF TLA-6T213LF	TLA-6T718 TLA-6T719 TLA-6T720		
		KSZ8721B/BL/BT	1							
		KSZ8721CL/SL	1							
		KSZ8001LI	1	1:1	1:1	TLA-6T133WLF		TLA-6T717W		
		KSZ8721B/BLI/SLI	1							
		KS8993I	1							
		KSZ8993	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF TLA-6T213LF	TLA-6T718 TLA-6T719 TLA-6T720		
		KSZ8995XA	5			TLA-6T118LF				
		KSZ8997	8			TLA-6T118LF				
		KSZ8999	9			TLA-6T118LF	TLA-6T406	TLA-6T718 TLA-6T719 TLA-6T720		
Micro Linear	10/100BASE-TX	ML6652	1	1:1	1:1	TLA-6T118LF	TLA-6T214ALF TLA-6T213LF	TLA-6T406		
National Semiconductor	10/100BASE-TX	DP83847	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T718 TLA-6T719		
		DP83816	1			TLA-6T118LF				
		DP83848C	1	1:1	1:1	TLA-6T118LF	TLA-6T214ALF	TLA-6T718 TLA-6T719		
		DP83848M	1	1:1	1:1	TLA-6T118LF	TLA-6T213LF	TLA-6T720		
NEC	10/100/1000BASE-T	DP83848H/I/T/YB	1	1:1	1:1	TLA-6T133WLF		TLA-6T717W		
		DP83865	1	1:1	1:1	TLA-7T101LF				
		uPD98408	6	1:1.52	1.36:1	TLA-6M102LF				
Realtek	10/100BASE-TX	RTL8019AS	1	1:1	1:1	TLA-3M103LF		TLA-6T718 TLA-6T719 TLA-6T720		
		RTL8029AS	1	1:1	1:1	TLA-3M601-RS				
		RTL8100B/C	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T718 TLA-6T719		
		RTL8139C/D	1							
		RTL8101L	1			TLA-6T118LF	TLA-6T213LF			
		RTL8201BL/CL	1			TLA-6T118LF	TLA-6T213LF			
		RTL8201CP	1			TLA-6T118LF	TLA-6T214ALF	TLA-6T718 TLA-6T719		
		RTL8100E/8101E	1			TLA-6T118LF				
		RTL8208/B	8	1:1	1:1	TLA-6T118LF	TLA-6T214ALF TLA-6T213LF	TLA-6T406		
		RTL8110S/SB/SC	1	1:1	1:1	TLA-7T101LF	TLA-7T201LF	TLA-6T718 TLA-6T719		
		RTL8169S/SB/SC	1							
		RTL8211B	1							
Renesas	10/100BASE-TX	R4S76190B125BGV	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF TLA-6T213LF	TLA-6T718 TLA-6T719		
		R4S76190N125BGV	1	1:1	1:1	TLA-6T118LF				
		R4S76190W125BGV	1							
		R4S76190D125BGV	1							
		TLA-6T213LF				TLA-6T214ALF	TLA-6T718 TLA-6T719	TLA-6T717W		
SMSC	10/100BASE-T	10BASE-T	LAN91C96	1	1:1	1:1	TLA-3M103LF TLA-3M601-RS			
		LAN83C185	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF	TLA-6T718 TLA-6T719		
		LAN91C111	1							
		LAN9118	1			TLA-6T118LF	TLA-6T213LF			
		LAN9117	1			TLA-6T118LF	TLA-6T213LF			
		LAN9116	1			TLA-6T118LF	TLA-6T213LF			
		LAN9115	1			TLA-6T118LF	TLA-6T213LF			
		LAN8700	1	1:1	1:1	TLA-6T118LF	TLA-6T214ALF TLA-6T213LF	TLA-6T718 TLA-6T719		
		LAN8187	1							
		LAN9215	1							
		LAN91C111I	1							
Teridian Semiconductor (TDK)	10/100BASE-TX	78Q2120C	1	1:1	1:1	TLA-6T103LF	TLA-6T214ALF TLA-6T213LF	TLA-6T718 TLA-6T719		
		78Q2123	1	1:1	1:1	TLA-6T118LF				
		78Q2133	1	1:1	1:1	TLA-6T133WLF				
								TLA-6T717W		