

TDK LAN Components

TLA Series(Lead free)

LAN COMPONENTS

TLA SERIES(Lead free)

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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.).

LAN Components TLA Series

PULSE TRANSFORMERS

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

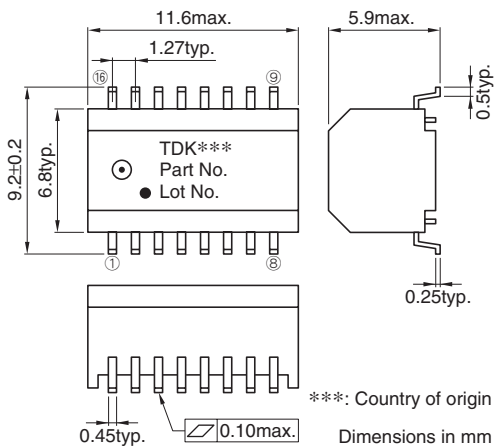
FEATURES

- Lead free product.
- 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).

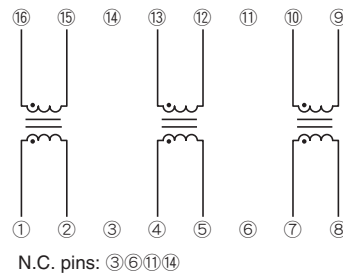
GENERAL SPECIFICATIONS

Pulse transformer	3	
Port	1	
Temperature ranges	Operating	0 to +70°C
	Storage	-40 to +85°C
Withstanding voltage	Erms:2000V[60s]	

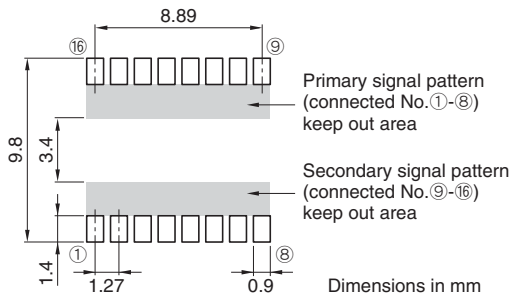
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

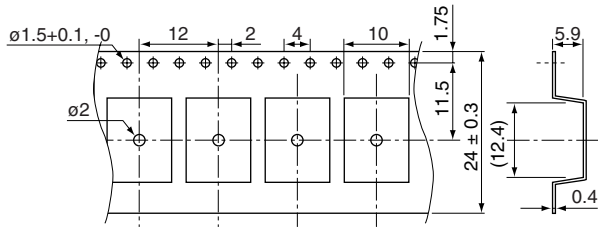
Part No.	Turns ratio ①②:⑯⑰ ④⑤:⑬⑭ ⑦⑧:⑩⑨	Inductance (μH)typ.[100kHz]	Leakage inductance (μH)max.[100kHz] ①-②[⑯-⑰ shorted] ④-⑤[⑬-⑭ shorted] ⑦-⑧[⑩-⑨ shorted]	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑯⑰ ④⑤-⑬⑭ ⑦⑧-⑩⑨	DC resistance (Ω)max. ①-②,⑯-⑰ ④-⑤,⑬-⑭ ⑦-⑧,⑩-⑨
TLA-3T101LF(-T)	1:1	100	0.25	10	0.35, 0.35
TLA-3T108LF(-T)	1:1	75	0.25	10	0.35, 0.35

- Ta=25°C

PACKAGING STYLES

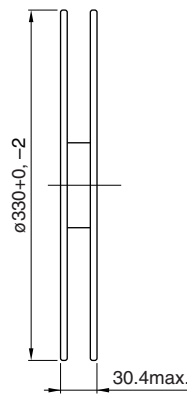
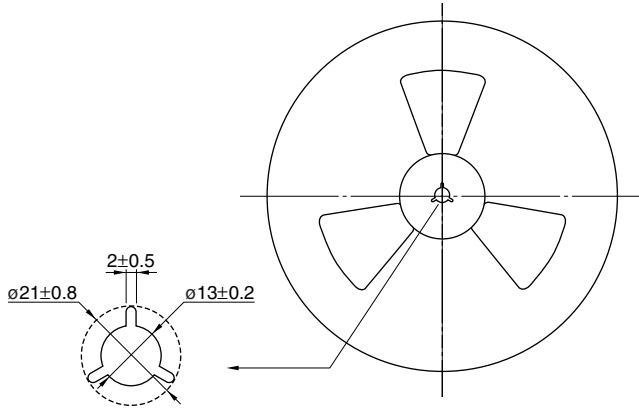
Quantity : 1000pieces/reel

TAPE DIMENSIONS



Dimensions in mm

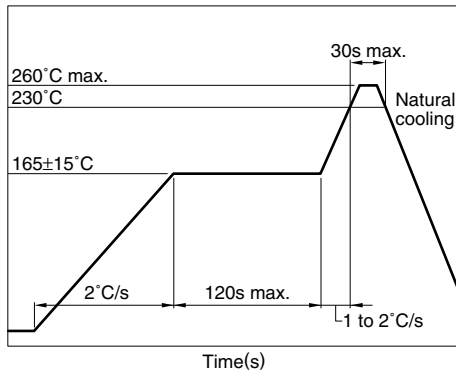
REEL DIMENSIONS



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-planality.
- 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

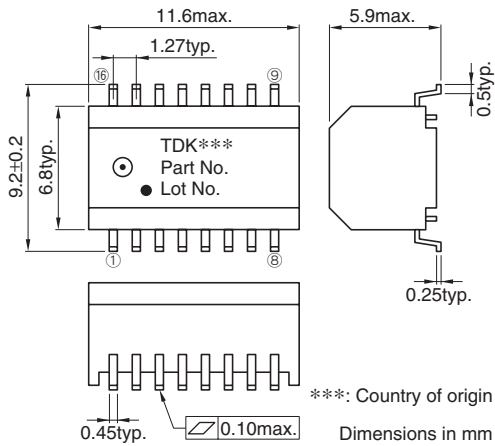
Humidity: 60(%)RH max.

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

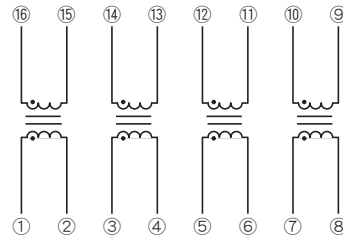
FEATURES

- Lead free product.
- 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).

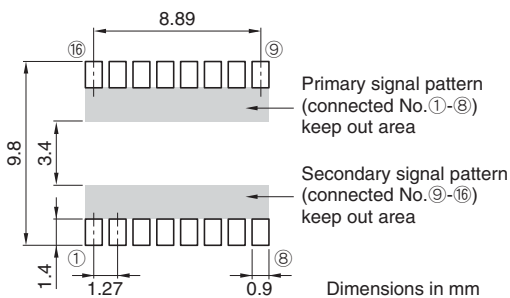
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

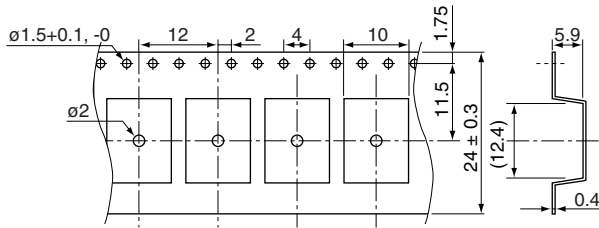
Part No.	Turns ratio ①②:⑯⑰ ③④:⑱⑲ ⑤⑥:⑳⑲ ⑦⑧:㉑⑲	Inductance (μH)min.[100kHz]	Leakage inductance (μH)max.[100kHz] ①-②[⑯-⑰ shorted] ③-④[⑱-⑲ shorted] ⑤-⑥[⑳-⑲ shorted] ⑦-⑧[㉑-⑲ shorted]	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑯⑰ ③④-⑱⑲ ⑤⑥-⑳⑲ ⑦⑧-㉑⑲	DC resistance (Ω)max. ①-②, ⑯-⑰ ③-④, ⑱-⑲ ⑤-⑥, ⑳-⑲ ⑦-⑧, ㉑-⑲
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

PACKAGING STYLES

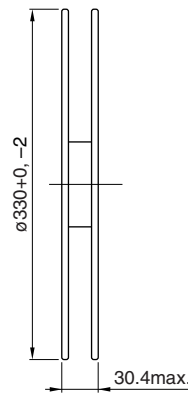
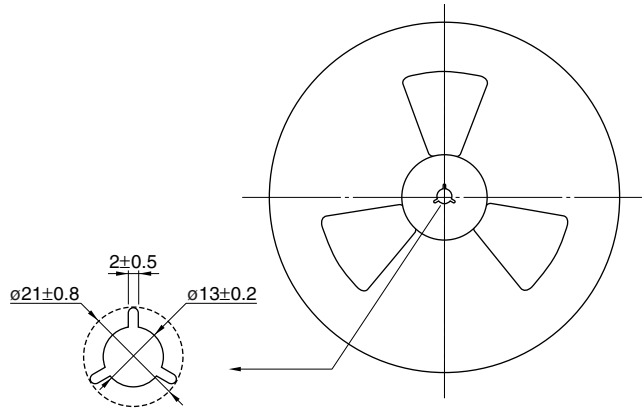
Quantity : 1000pieces/reel

TAPE DIMENSIONS



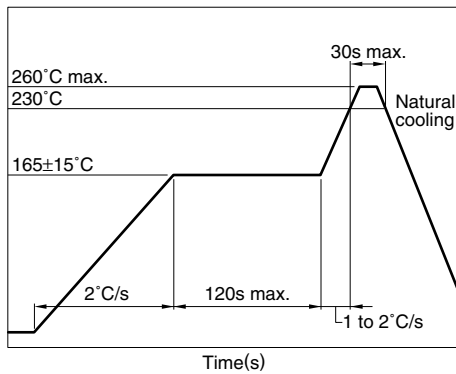
Dimensions in mm

REEL DIMENSIONS



Dimensions in mm

RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



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.

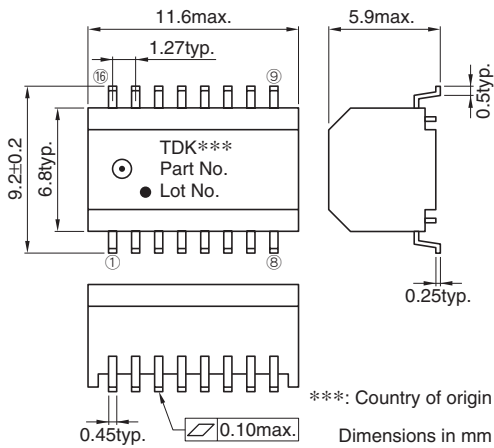
- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planality.
- The cutted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

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

FEATURES

- Lead free product.
- 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).

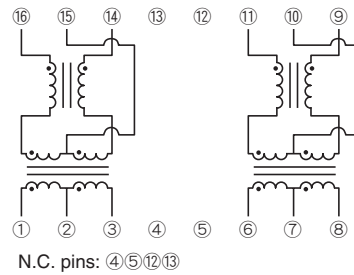
SHAPES AND DIMENSIONS



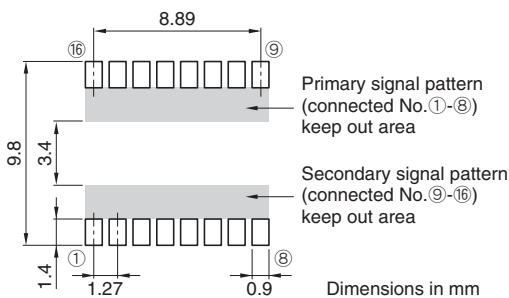
GENERAL SPECIFICATIONS

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

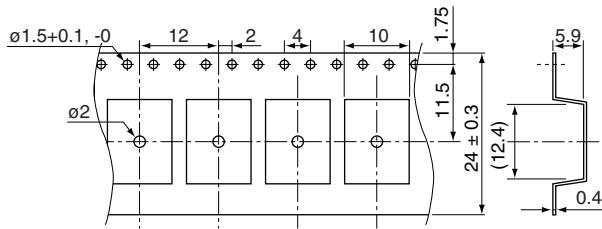
Part No.	Turns ratio ①②③:⑫⑪⑩⑨ ⑥⑦⑧:⑫⑪⑩⑨	Inductance (μH)min.[100kHz] ①-③ ⑥-⑧	Leakage inductance (μH)max.[100kHz] ①-③[⑫-⑩ shorted] ⑥-⑧[⑪-⑨ shorted]	Inter-winding stray capacitance (pF)max.[100kHz] ①③-⑫⑩ ⑥⑧-⑪⑨	DC resistance (Ω)max. ①-③ ⑥-⑧
TLA-3T105LF(-T)	1CT:1CT 1CT:1CT	130	0.3	12	0.5
TLA-3T109LF(-T)	2CT:1CT 1CT:1CT	130	0.95	12	0.5
TLA-3T110LF(-T)	1CT:1CT 1CT:1.41CT	130	0.35	12	0.5
TLA-3T112LF(-T)	1CT:1CT 1CT:2.5CT	130	0.35	12	0.85

- Ta=25°C

PACKAGING STYLES

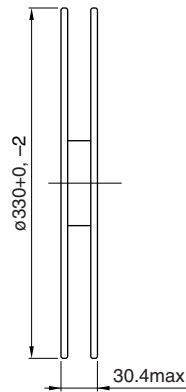
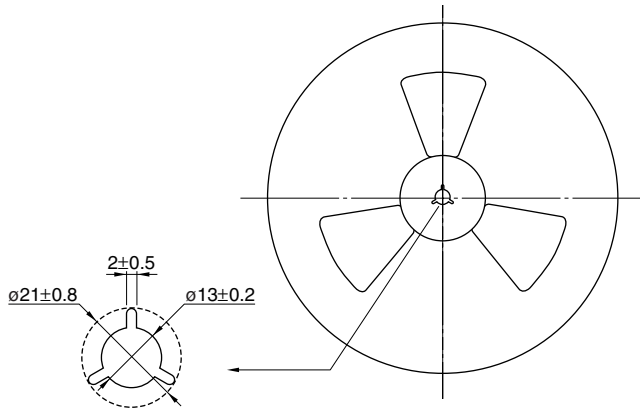
Quantity : 1000pieces/reel

TAPE DIMENSIONS



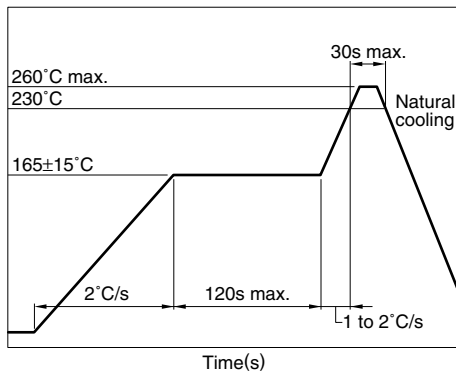
Dimensions in mm

REEL DIMENSIONS



Dimensions in mm

RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



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.

- 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-planality.
- The cutted end of terminal has no plating(out of subject of solder ability).

TLA-6T103LF(-T) TPDDI, 10/100BASE-TX & ATM

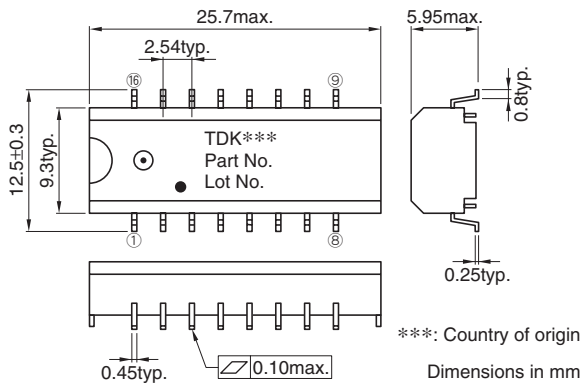
FEATURES

- Lead free product.
- 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).

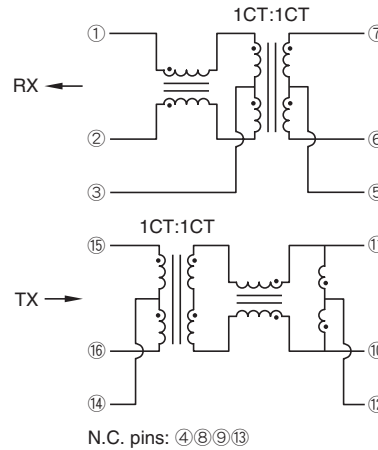
GENERAL SPECIFICATIONS

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]

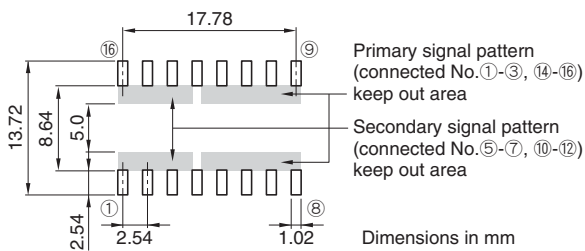
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

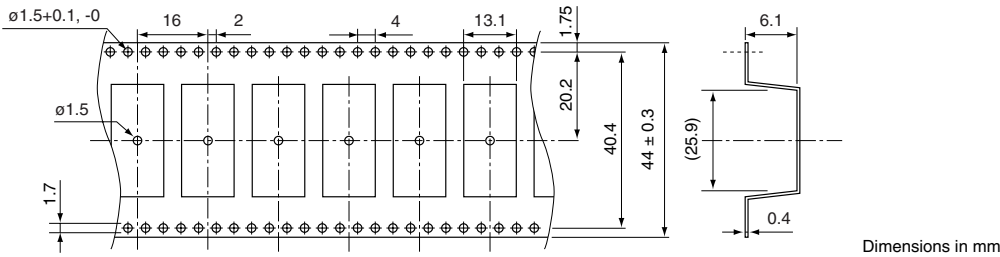
Part No.	Turns ratio ⑮⑭⑯ : ⑪⑫⑩ ①③② : ⑦⑤⑥	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑪-⑩ ⑦-⑥	Insertion loss (dB)max. [0.1 to 100MHz] ⑮⑯-⑪⑩ ⑦⑥-①②	Inter-winding stray capacitance (pF)max.[100kHz] ⑮⑯-⑪⑩ ①②-⑦⑥
TLA-6T103LF(-T)	1CT:1CT	350	1	25
	1CT:1CT	350	1	25

- Ta=25°C

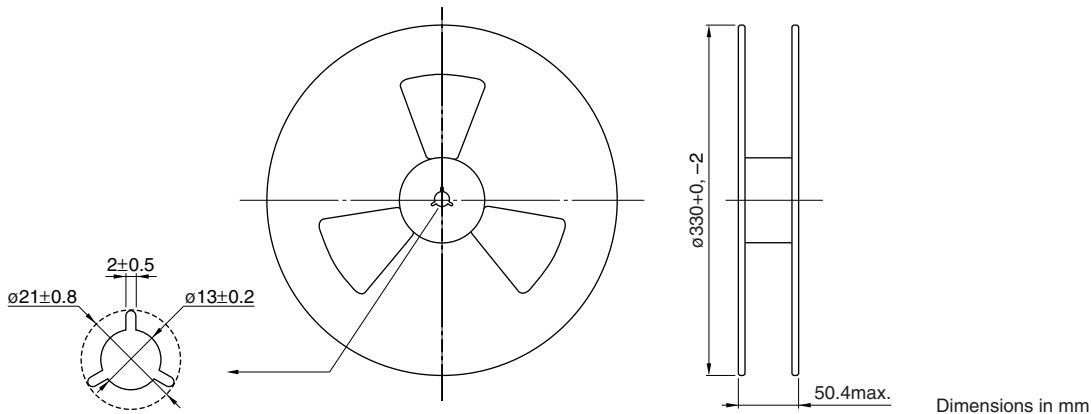
PACKAGING STYLES

Quantity : 600pieces/reel

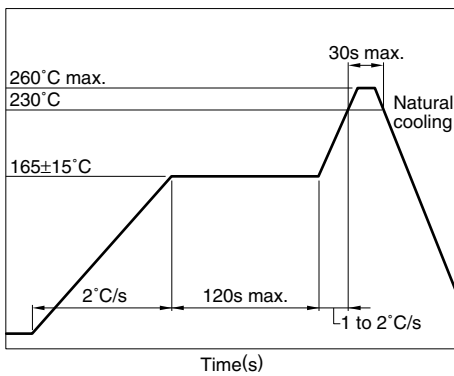
TAPE DIMENSIONS



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-planality.
- 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

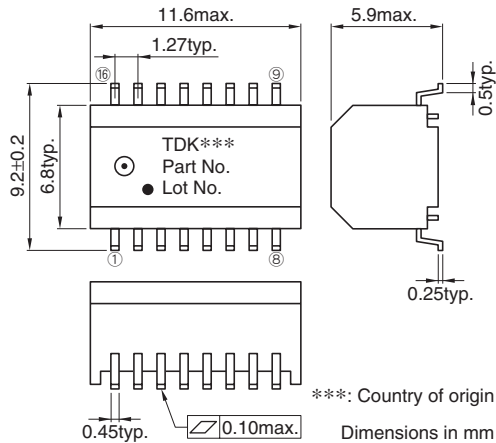
Humidity: 60(%)RH max.

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

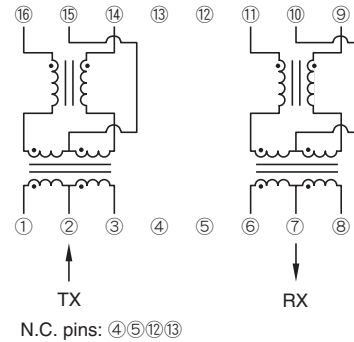
FEATURES

- Lead free product.
- 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 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-6T1□□LF-T: Tape and reel, TLA-6T1 □□LF: Bulk).

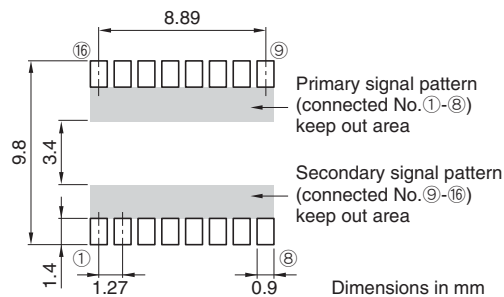
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

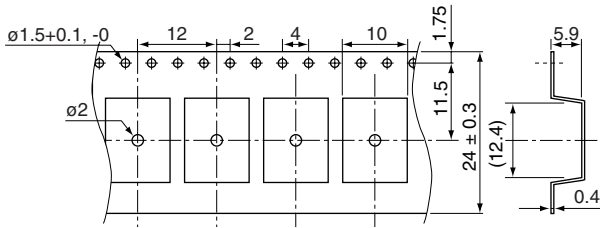
Part No.	Turns ratio ①②③ : ⑯⑮⑭ ⑥⑦⑧ : ⑪⑩⑨	Inductance (μH)min. [DC bias 8mA, 100kHz] ⑯-⑭ ⑪-⑨	Insertion loss (dB)max. [0.1 to 100MHz] ①③-⑯⑭ ⑪⑨-⑥⑧	Inter-winding stray capacitance (pF)max.[100kHz] ①③-⑯⑭ ⑥⑧-⑪⑨
TLA-6T118LF(-T)	1CT:1CT	350	1	25
TLA-6T119LF(-T)	1CT:1CT	350	1	25
TLA-6T120LF(-T)	1.41CT:1CT	350	2	25
TLA-6T121LF(-T)	1CT:1CT	350	1	25
TLA-6T122LF(-T)	2CT:1CT	350	3.5	25
	1CT:1CT	350	1	25
	1CT:1.41CT	350	2.5	25
	1CT:1CT	350	1	25
	1.25CT:1CT	350	2	25
	1CT:1CT	350	1	25

• Ta=25°C

PACKAGING STYLES

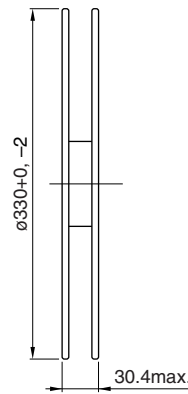
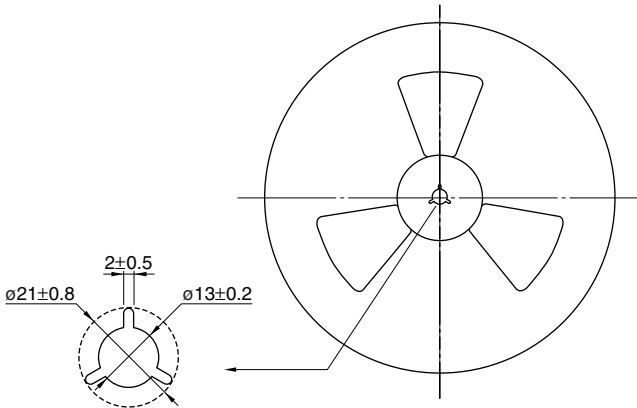
Quantity : 1000pieces/reel

TAPE DIMENSIONS



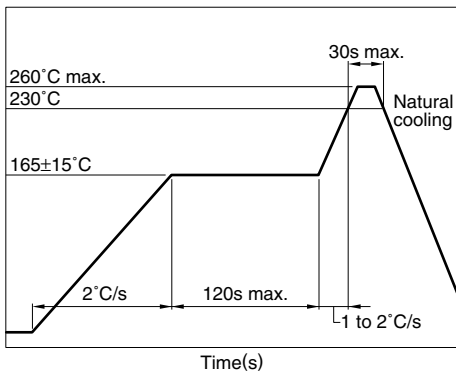
Dimensions in mm

REEL DIMENSIONS



Dimensions in mm

RECOMMENDED SOLDERING CONDITION
REFLOW SOLDERING



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.

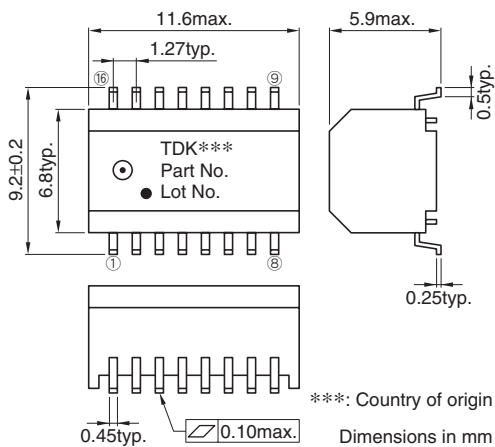
- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planality.
- The cutted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

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

FEATURES

- Lead free product.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin SMD package(1.27mm=50mil pin pitch).
- Inductance is 350μH 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).

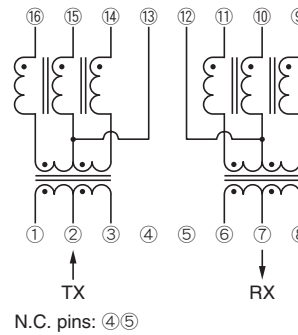
SHAPES AND DIMENSIONS



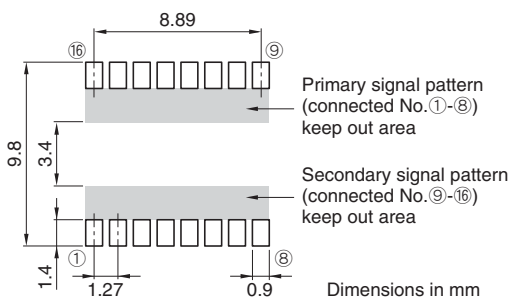
GENERAL SPECIFICATIONS

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 : ⑯⑮⑭ ⑥⑦⑧ : ⑪⑩⑨	Inductance (μH)min. [DC bias 8mA, 100kHz] ⑯-⑭ ⑪-⑨	Insertion loss (dB)max. [0.1 to 100MHz] ①③-⑯⑭ ⑪⑨-⑥⑧	Inter-winding stray capacitance (pF)max.[100kHz] ①③-⑯⑭ ⑥⑧-⑪⑨
TLA-6T127LF(-T)	1CT:1CT 1CT:1CT	350 350	1 1	25 25

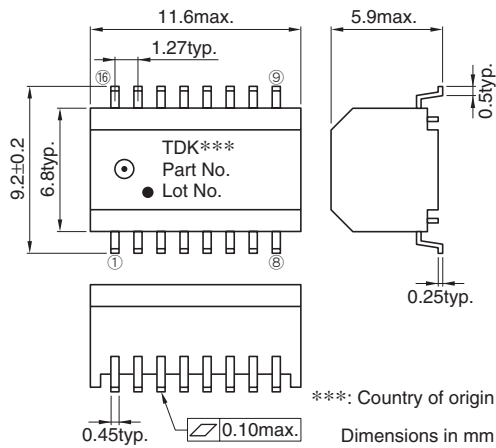
- Ta=25°C

TLA-6T133WLF(-T) 10/100BASE-TX

FEATURES

- Lead free product.
- 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 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-6T133WLF-T: Tape and reel, TLA-6T133WLF: Bulk).
- Can be used in the wide range of temperature(-40 to +85°C).

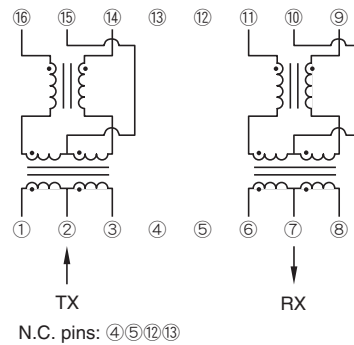
SHAPES AND DIMENSIONS



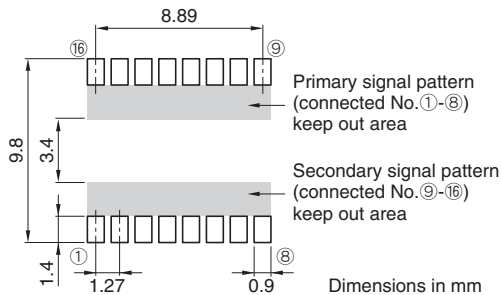
GENERAL SPECIFICATIONS

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

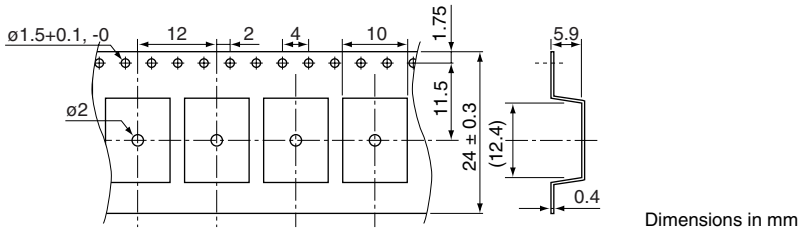
Part No.	Turns ratio ①②③ : ⑬⑭⑮⑯ ⑥⑦⑧ : ⑩⑪⑫⑬	Inductance (μH)min. [DC bias 8mA, 100kHz]	Insertion loss (dB)max. [0.1 to 100MHz]	Inter-winding stray capacitance (pF)max.[100kHz]
TLA-6T133WLF(-T)	1CT:1CT 1CT:1CT	350 350	1 1	25 25

- Ta=25°C

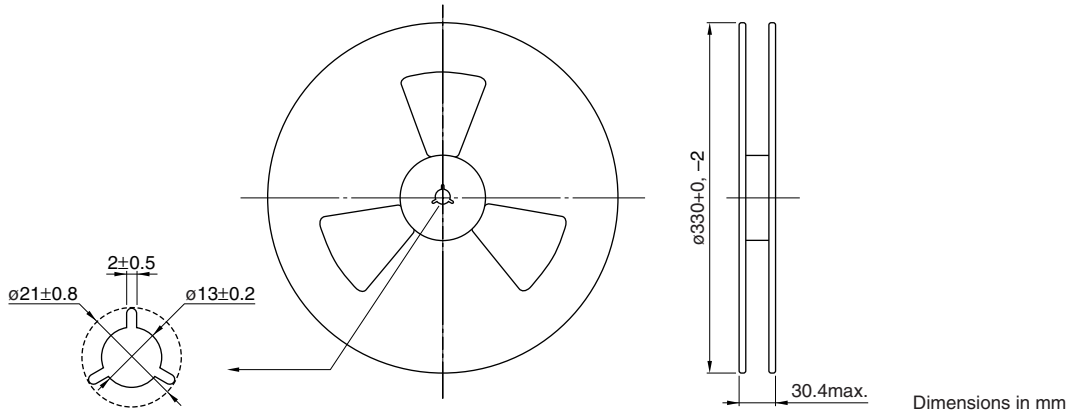
PACKAGING STYLES

Quantity : 1000pieces/reel

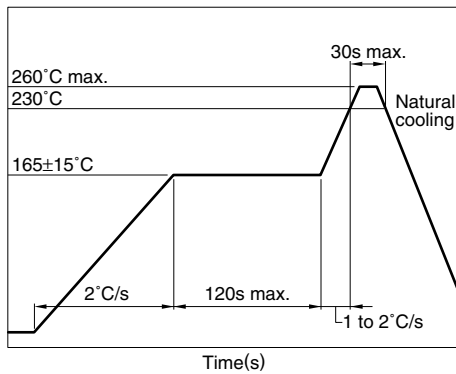
TAPE DIMENSIONS



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-planality.
- 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

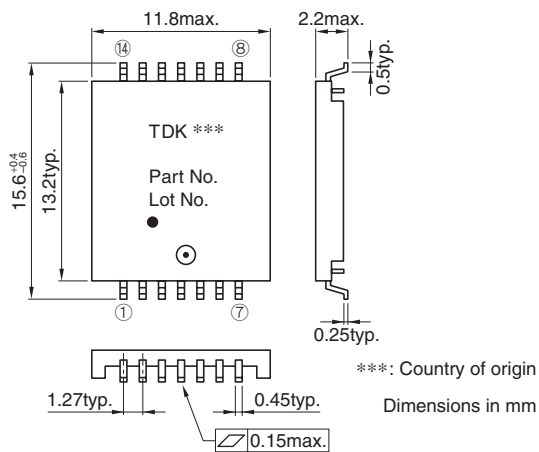
Humidity: 60(%)RH max.

TLA-6T207C(-T) 10/100BASE-TX

FEATURES

- Lead free product.
- Can be mounted with lead-free solder (250°C max.).
- 14-pin(1.27mm pitch) SMD package.
- Low profile (H)2.2mm max. for 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-6T207C-T: Tape and reel, TLA-6T207C: Bulk).

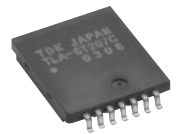
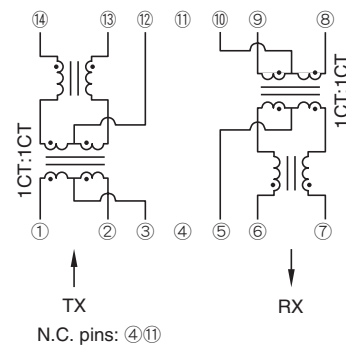
SHAPES AND DIMENSIONS



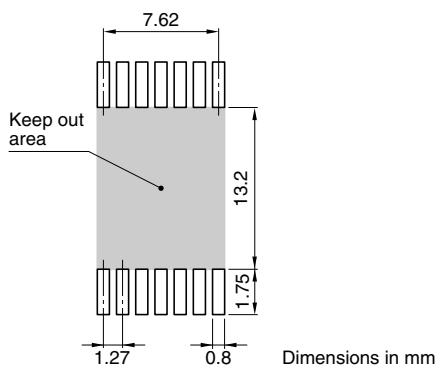
GENERAL SPECIFICATIONS

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

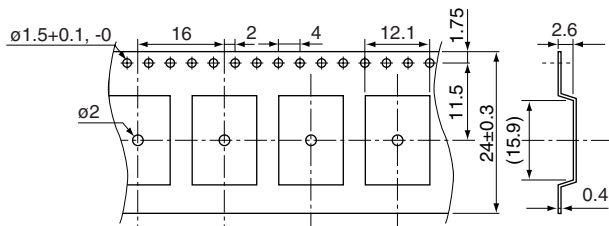
Part No.	Turns ratio ①③②:⑭⑫⑬ ⑥⑤⑦:⑨⑩⑧	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑭-⑬ ⑨-⑧	Insertion loss (dB)max. [0.1 to 100MHz] ①②-⑭⑬ ⑨⑧-⑥⑦	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑭⑬ ⑥⑦-⑨⑧
TLA-6T207C(-T)	1CT:1CT	350	1	25
	1CT:1CT	350	1	25

- Ta=25°C

PACKAGING STYLES

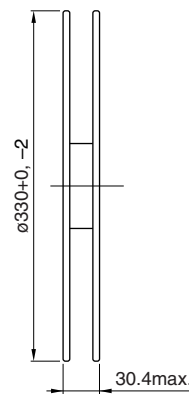
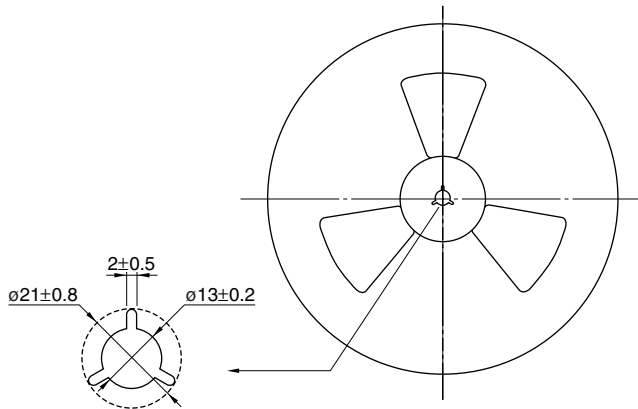
Quantity : 1500pieces/reel

TAPE DIMENSIONS



Dimensions in mm

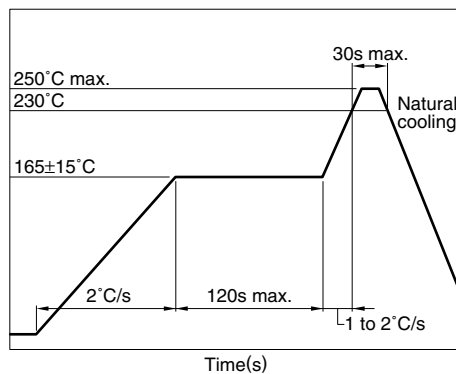
REEL DIMENSIONS



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-planality.
- 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-6T211A(-T) ISO8802.3(IEEE802.3) 10/100/1000BASE-T

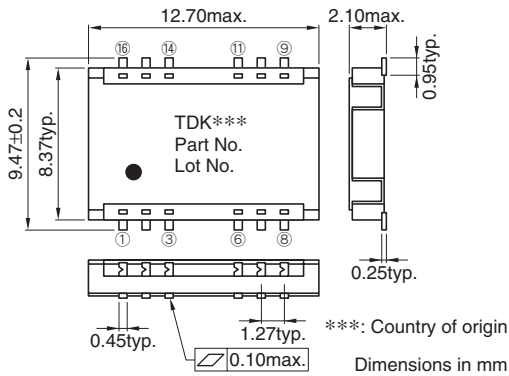
FEATURES

- Lead free product.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin(1.27mm pitch) SMD package.
- Low profile (H)2.1mm max. for PC application.
- 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-6T211A-T: Tape and reel, TLA-6T211A: Bulk).

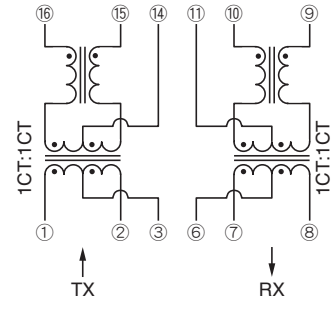
GENERAL SPECIFICATIONS

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]	

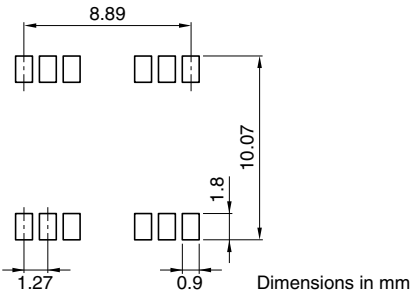
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

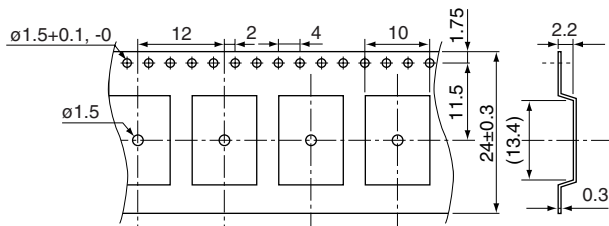
Part No.	Turns ratio ①③②:⑩⑭⑮ ⑦⑥⑧:⑩⑪⑨	Inductance (μH)min. [DC bias 8mA, 100kHz] ⑩-⑮ ⑩-⑨	Insertion loss (dB)max. [0.1 to 125MHz] ①②-⑩⑮ ⑩⑨-⑦⑧	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑩⑮ ⑩⑨-⑦⑧
TLA-6T211A(-T)	1CT:1CT	350	1	25
	1CT:1CT	350	1	25

• Ta=25°C

PACKAGING STYLES

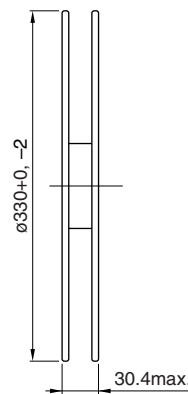
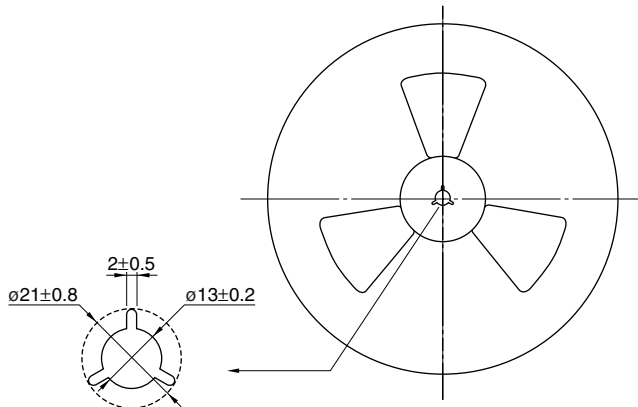
Quantity : 1500pieces/reel

TAPE DIMENSIONS



Dimensions in mm

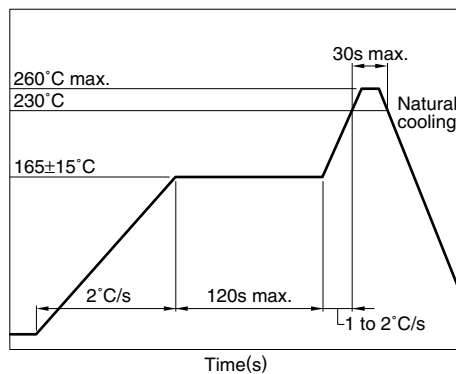
REEL DIMENSIONS



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-planality.
- 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-6T212A(-T) ISO8802.3(IEEE802.3) 10/100BASE-TX

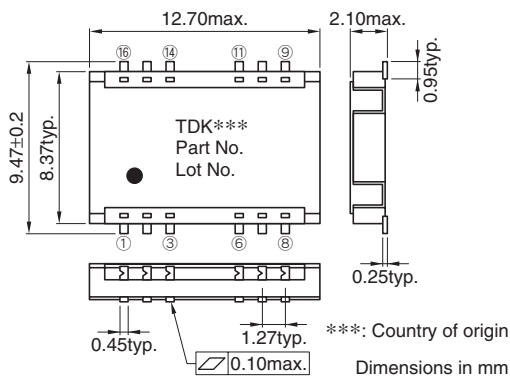
FEATURES

- Lead free product.
- Can be mounted with lead-free solder (260°C max.).
- 16-pin(1.27mm pitch) SMD package.
- Low profile (H)2.1mm max. for 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-6T211A-T: Tape and reel, TLA-6T211A: Bulk).

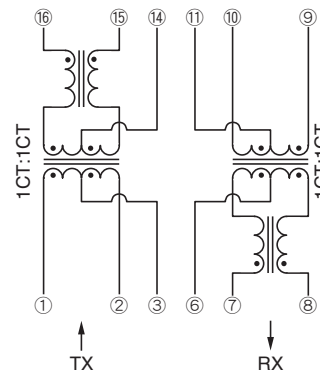
GENERAL SPECIFICATIONS

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]	

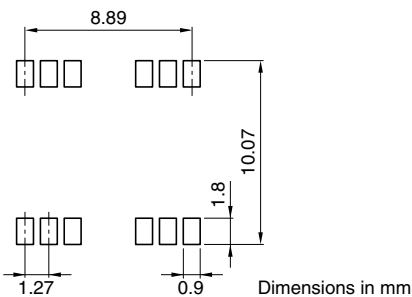
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

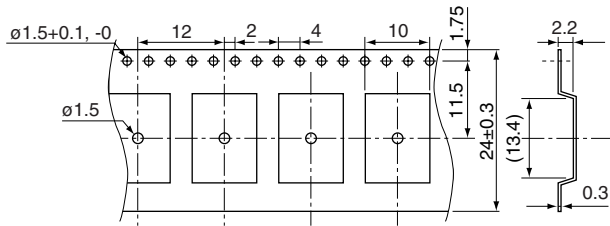
Part No.	Turns ratio ①③②:⑩⑭⑮ ⑦⑥⑧:⑪⑫⑨	Inductance (μ H)min. [DC bias 8mA, 100kHz] ⑩-⑮ ⑪-⑨	Insertion loss (dB)max. [0.1 to 100MHz] ①②-⑩⑮ ⑪⑨-⑦⑧	Inter-winding stray capacitance (pF)max.[100kHz] ①②-⑩⑮ ⑪⑨-⑦⑧
TLA-6T212A(-T)	1CT:1CT	350	1	25
	1CT:1CT	350	1	25

- Ta=25°C

PACKAGING STYLES

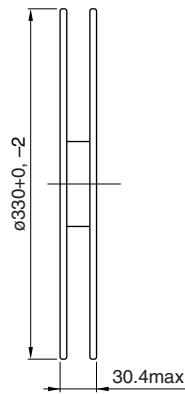
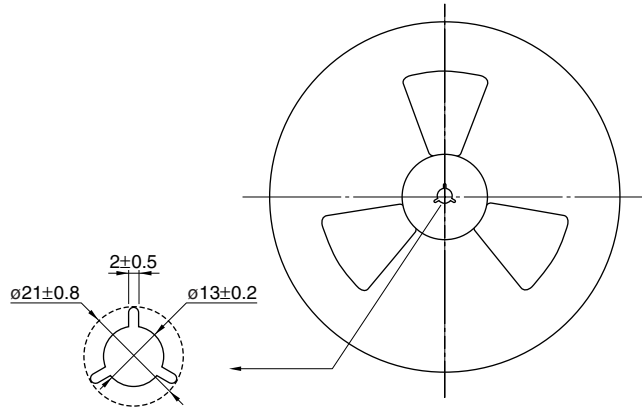
Quantity : 1500pieces/reel

TAPE DIMENSIONS



Dimensions in mm

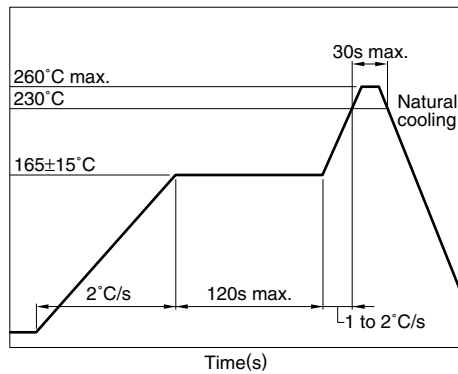
REEL DIMENSIONS



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-planality.
- 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) 10/100BASE-TX

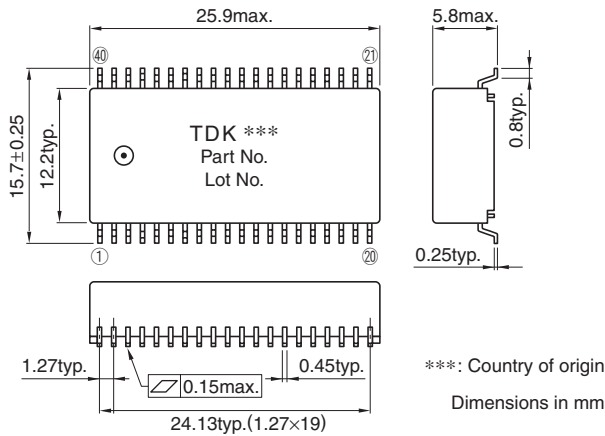
FEATURES

- Lead free product.
- 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 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-6T404-T: Tape and reel, TLA-6T404: Bulk).

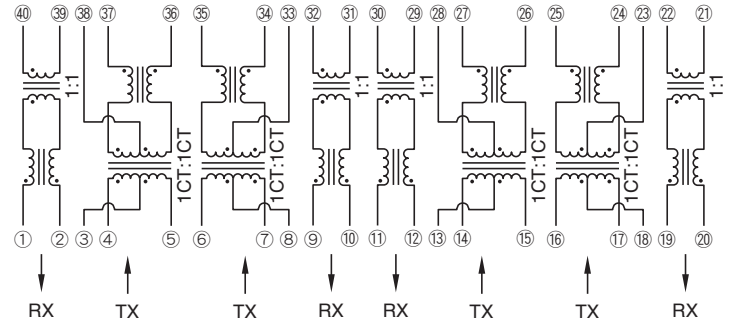
GENERAL SPECIFICATIONS

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]	

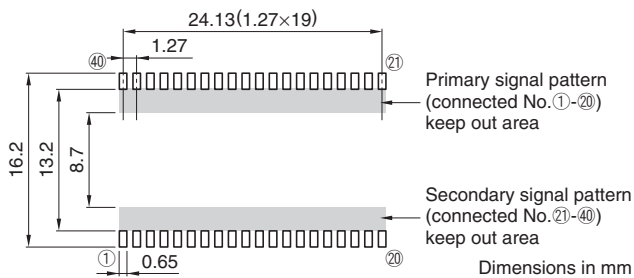
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

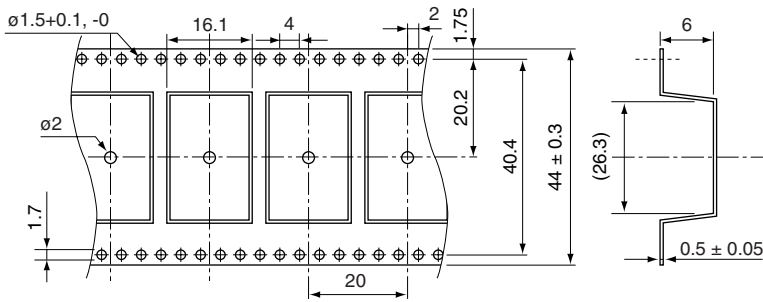
Part No.	Turns ratio ④③⑤:③⑦③③⑥..... ①②:④③.....	Inductance (μH)min. [DC bias 8mA, 100kHz] ③⑦-③⑥..... ④①-③③.....	Insertion loss (dB)max. [0.1 to 100MHz] ④⑤-③⑦③⑥..... ④①③③-①②.....	Inter-winding stray capacitance (pF)max.[100kHz] ④⑤-③⑦③⑥..... ①②-④①③③.....
TLA-6T404(-T)	1CT:1CT	350	1	25
	1:1	350	1	25

- Ta=25°C

PACKAGING STYLES

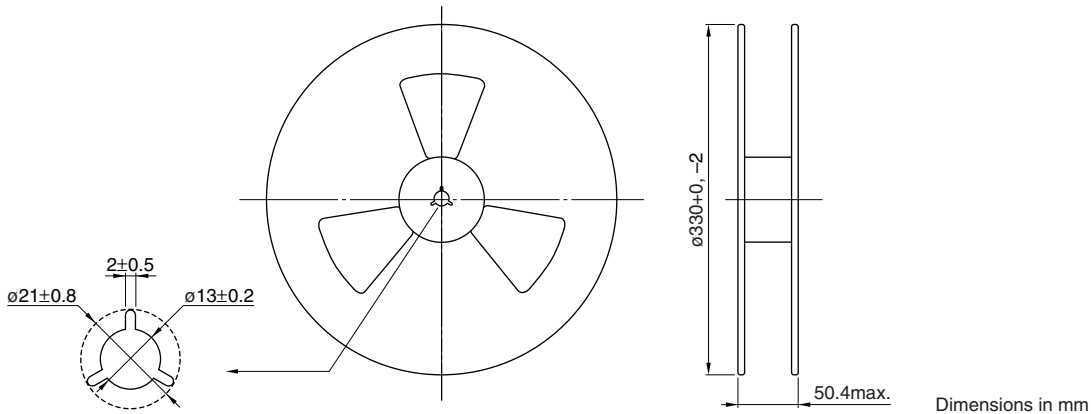
Quantity : 500pieces/reel

TAPE DIMENSIONS



Dimensions in mm

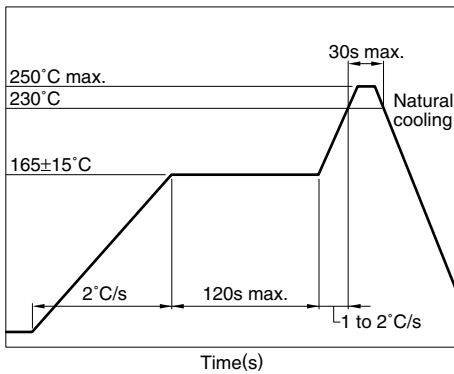
REEL DIMENSIONS



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-planality.
- 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) 10/100BASE-TX

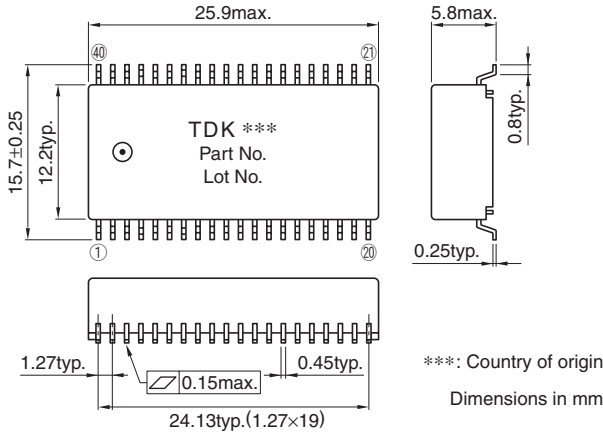
FEATURES

- Lead free product.
- 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 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-6T406-T: Tape and reel, TLA-6T406: Bulk).

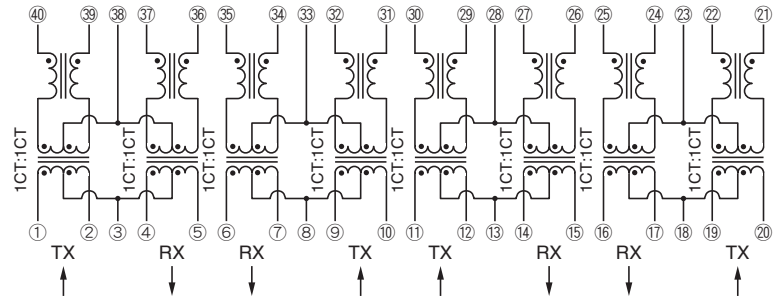
GENERAL SPECIFICATIONS

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]

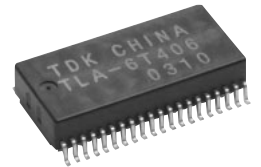
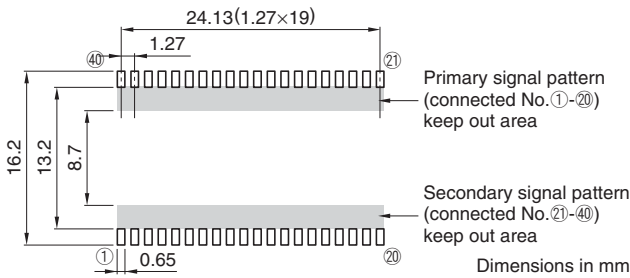
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

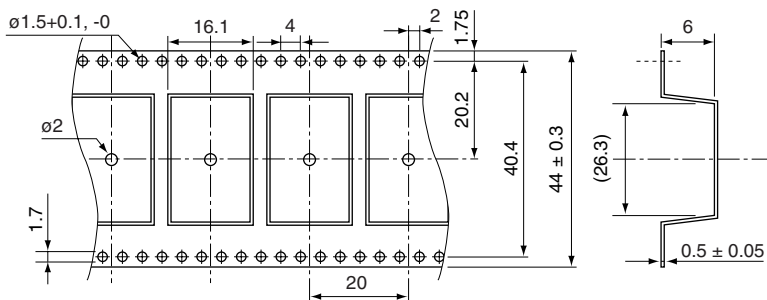
Part No.	Turns ratio	Inductance (μH)min. [DC bias 8mA, 100kHz]	Insertion loss (dB)max. [0.1 to 100MHz]	Inter-winding stray capacitance (pF)max.[100kHz]
	①③②:④③③③..... ④③⑤:⑦③③③.....	④③..... ⑦③.....	①②-④③..... ④⑤-⑦③.....	①②-④③..... ④⑤-⑦③.....
TLA-6T406(-T)	1CT:1CT 1CT:1CT	350 350	1 1	40 40

• Ta=25°C

PACKAGING STYLES

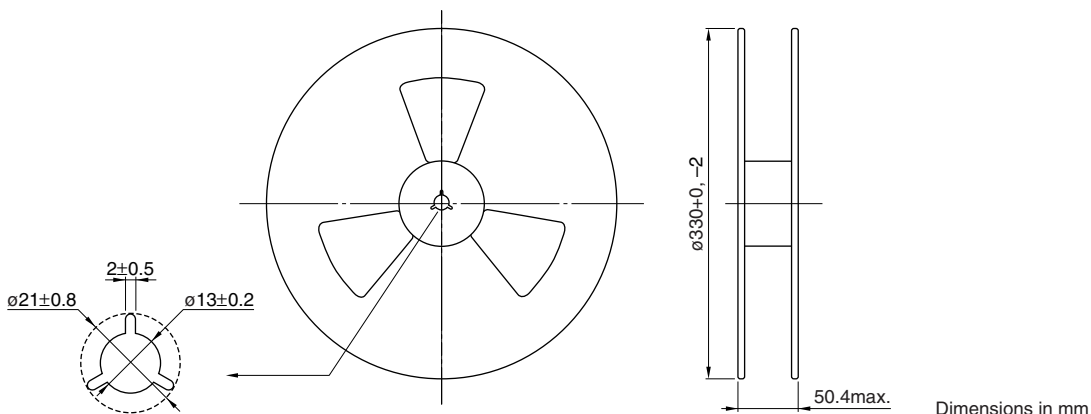
Quantity : 500pieces/reel

TAPE DIMENSIONS



Dimensions in mm

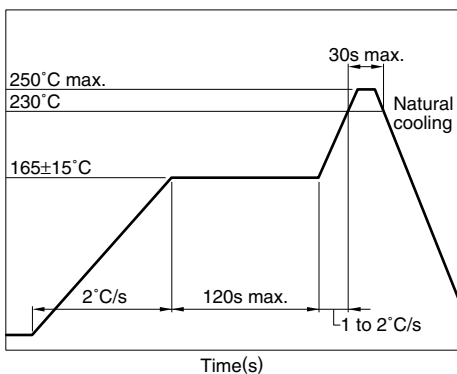
REEL DIMENSIONS



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-planality.
- 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) 10/100/1000BASE-T

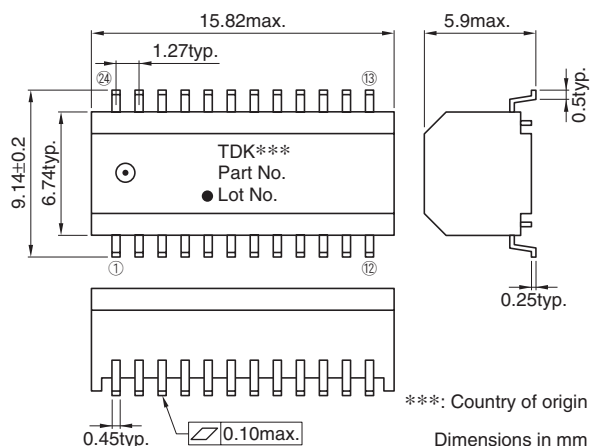
FEATURES

- Lead free product.
- 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).

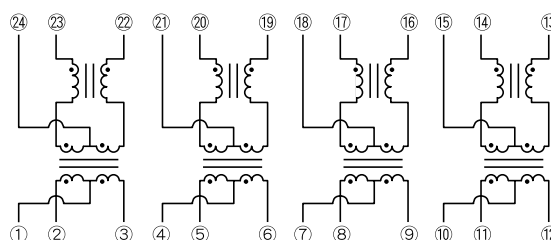
GENERAL SPECIFICATIONS

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]

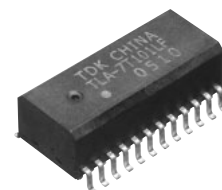
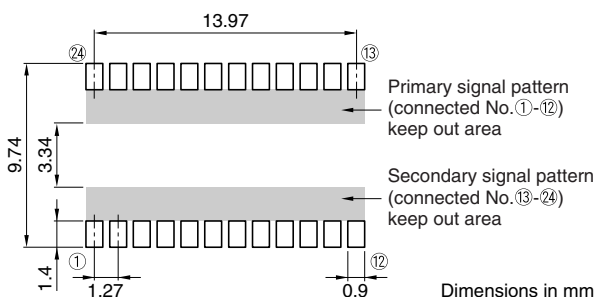
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

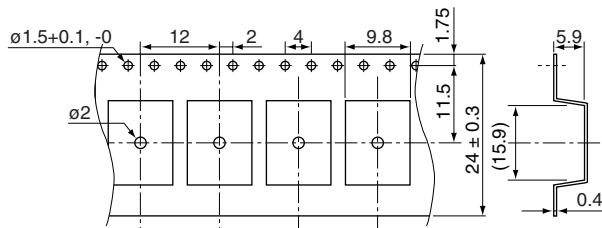
Part No.	Turns ratio	Inductance (μH)min. [DC bias 8mA, 100kHz]	Insertion loss (dB)max. [0.1 to 100MHz]	Inter-winding stray capacitance (pF)max.[100kHz]
	②①③ : ②③④②	②③-②②	②③-②③②	②③-②③②
	⑤④⑥ : ②①⑨	②①-①⑨	⑤⑥-②①⑨	⑤⑥-②①⑨
	⑧⑦⑨ : ①⑦⑧⑥	①⑦-①⑥	⑧⑨-①⑦⑥	⑧⑨-①⑦⑥
	⑪⑩⑫ : ①④⑮⑬	①④-①③	⑪⑫-①④⑬	⑪⑫-①④⑬
TLA-7T101LF(-T)	1CT:1CT	350	1	25

• Ta=25°C

PACKAGING STYLES

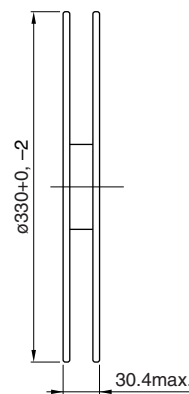
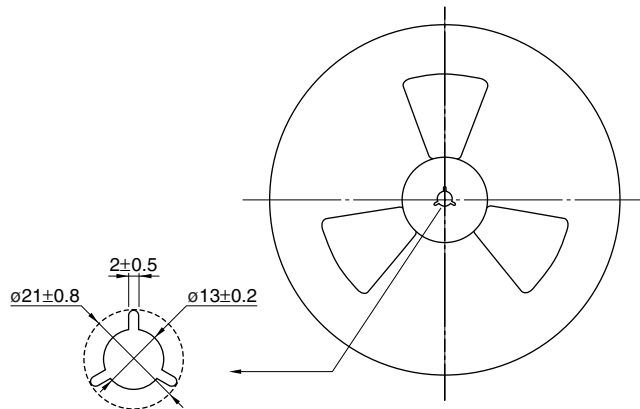
Quantity : 1000pieces/reel

TAPE DIMENSIONS



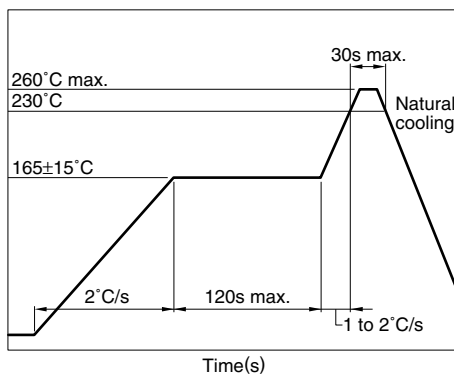
Dimensions in mm

REEL DIMENSIONS



Dimensions in mm

RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



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.

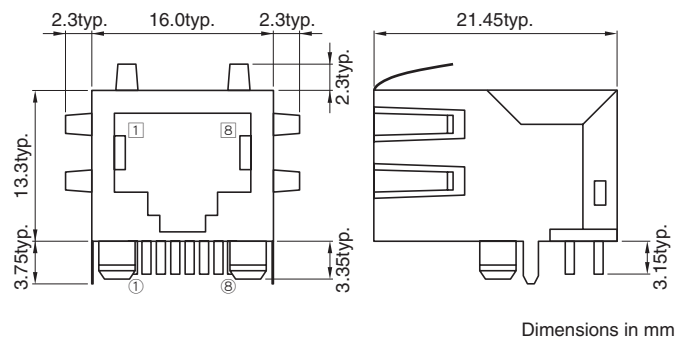
- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planality.
- The cutted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

TLA-6T704 10/100BASE-TX

FEATURES

- Lead free product.
- 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 350μH or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.

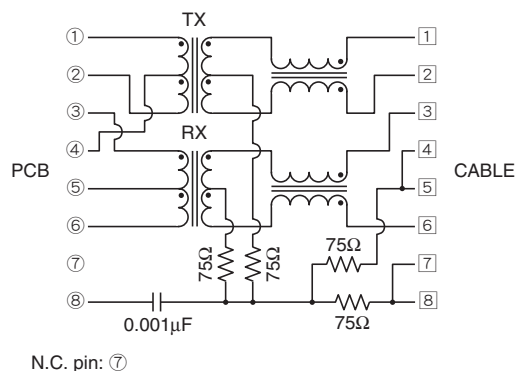
SHAPES AND DIMENSIONS



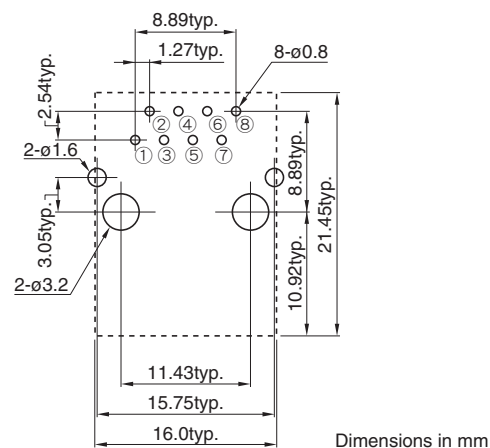
GENERAL SPECIFICATIONS

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 ①④②-①② ③⑤⑥-③⑥	Inductance (μH)min. [DC bias 8mA, 100kHz] ①-② ③-⑥	Insertion loss (dB)max. [0.1 to 100MHz] ①②-①② ③⑥-③⑥
TLA-6T704	1CT:1	350	1
	1CT:1	350	1

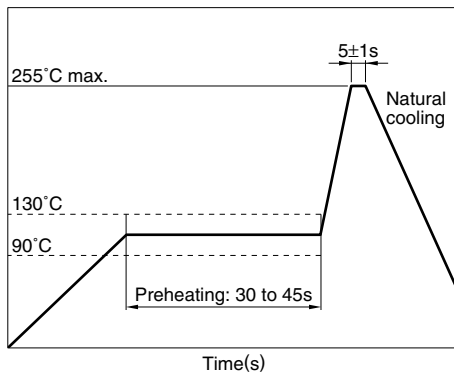
• Ta=25°C

PACKAGING STYLES

Magazine : 24pieces/stick

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-6T707 10/100BASE-TX

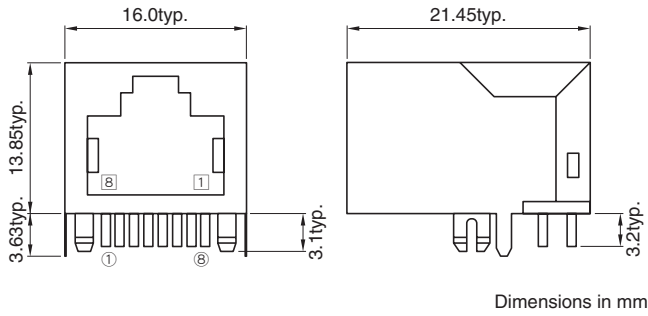
FEATURES

- Lead free product.
- 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 350μH or greater (f=100kHz, DC bias=8mA).
- Using the high-quality and wide-band ferrite cores for LAN.

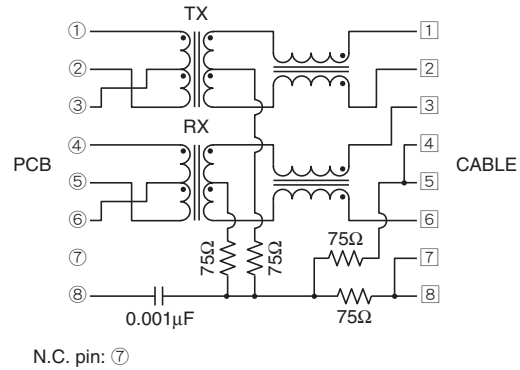
GENERAL SPECIFICATIONS

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]	

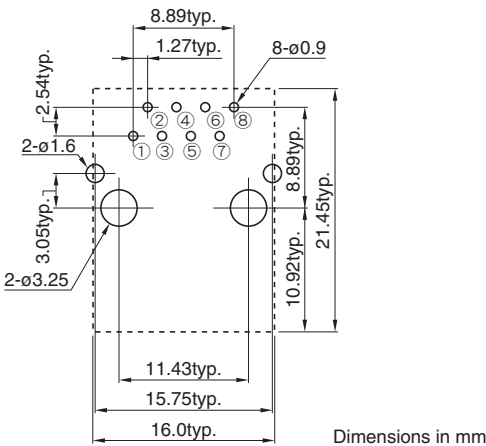
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN[TOP VIEW]



ELECTRICAL CHARACTERISTICS

Part No.	Turns ratio ①③②-①② ④⑥⑤-③⑥	Inductance (μH)min. [DC bias 8mA, 100kHz] ①-② ③-⑥	Insertion loss (dB)max. [0.1 to 100MHz] ①②-①② ③⑥-④⑤
TLA-6T707	1CT:1 1CT:1	350 350	1 1

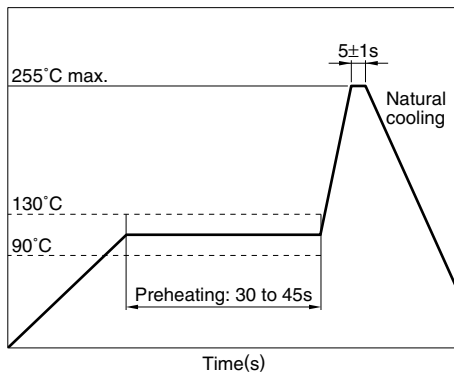
• Ta=25°C

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

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

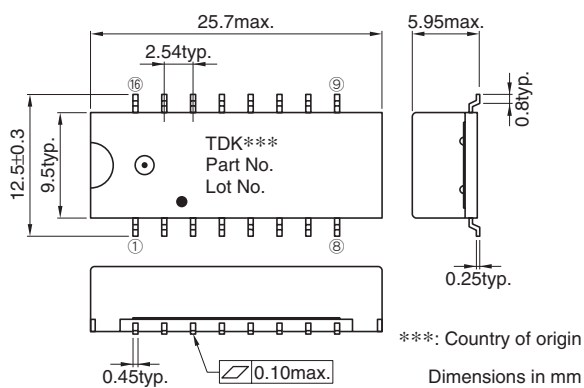
FEATURES

- Lead free product.
- 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).

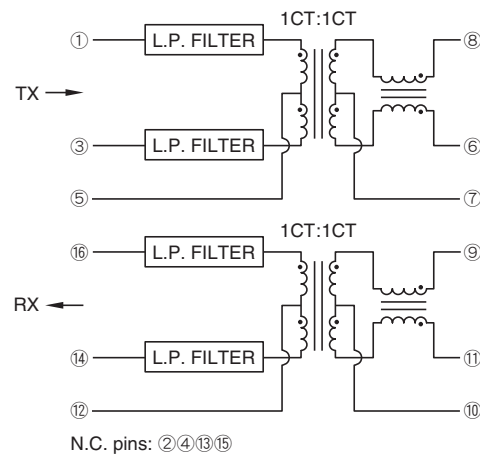
GENERAL SPECIFICATIONS

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]

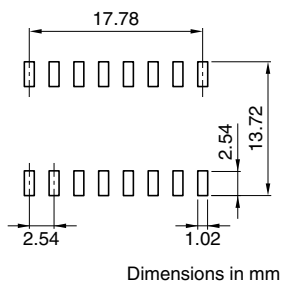
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

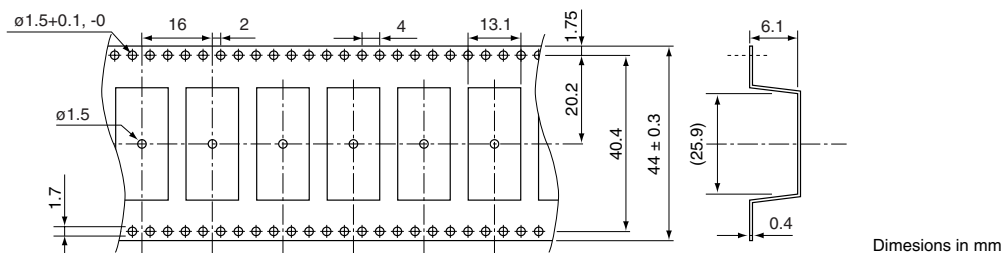
Part No.	Insertion loss (dB)max.[5 to 10MHz]	Attenuation (dB)min.[30 to 100MHz]	Impedance (Ω)typ.[5 to 10MHz]	C.M.R.R. (dB)min.[1 to 100MHz]
	①③-⑧⑥ ⑨⑪-⑯⑭	①③-⑧⑥ ⑨⑪-⑯⑭	①-③, ⑧-⑥ ⑯-⑭, ⑨-⑪	①③-⑧⑥ ⑯⑭-⑨⑪
TLA-3M103LF(-T)	1	25	100, 100	25
	1	25	100, 100	25

- Ta=25°C

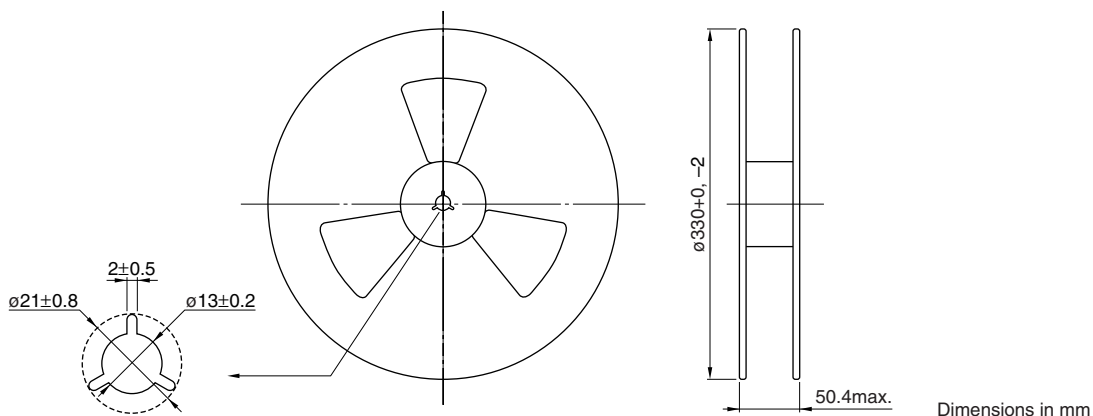
PACKAGING STYLES

Quantity : 600pieces/reel

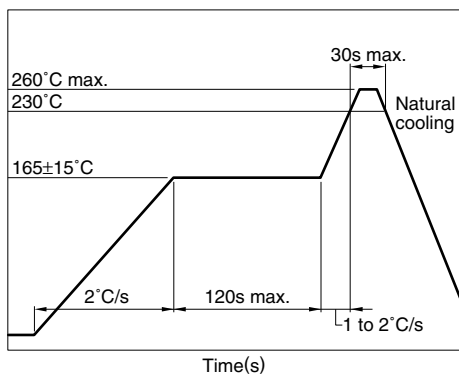
TAPE DIMENSIONS



REEL DIMENSIONS



RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



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 $+30^\circ\text{C}$

Humidity: $60(\%)$ RH max.

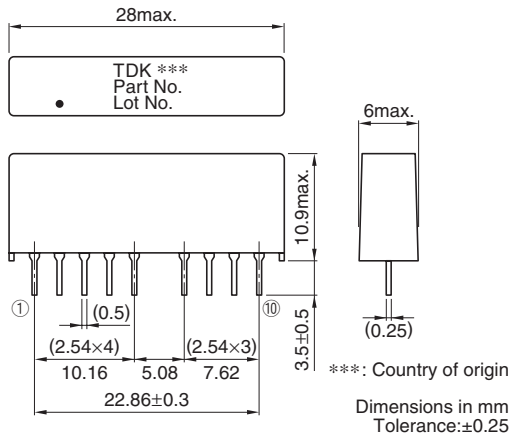
- Temperature is measured at the terminal portion of product (Using thermocoupler for measurement).
- This profile is reference data we recommend. Please check in your actual process.
- For reliable soldering, the thickness of solder paste screen should be over the terminal co-planality.
- The cutted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

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

FEATURES

- Lead free product.
- 10-pin(2.54mm pitch) SIP package.
- 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($t=6\text{mm max.}$) and low profile($H=10.9\text{mm max.}$).

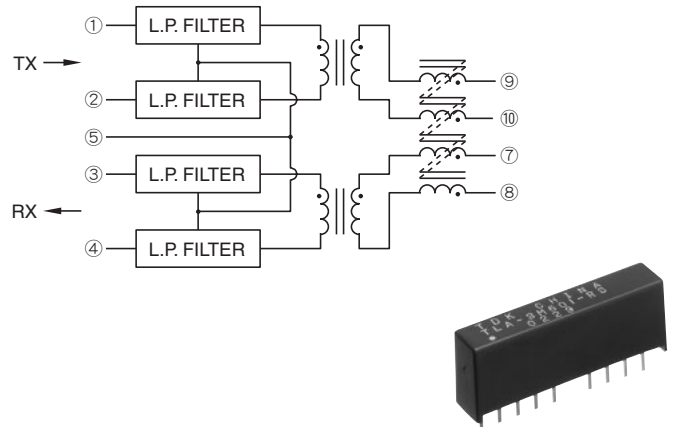
SHAPES AND DIMENSIONS



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]

CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS

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

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

TLA-6M102LF(-T) ATM25

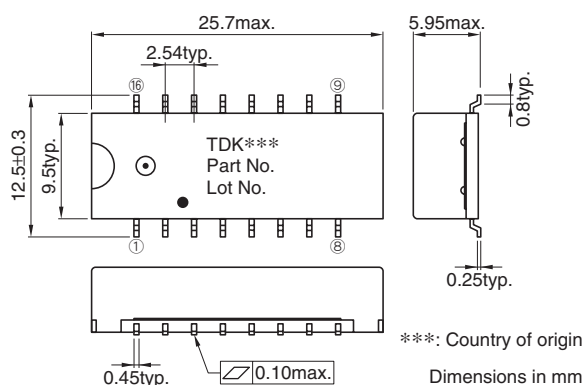
FEATURES

- Lead free product.
- 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).

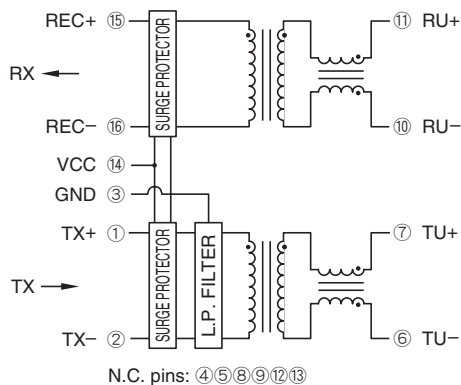
GENERAL SPECIFICATIONS

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]

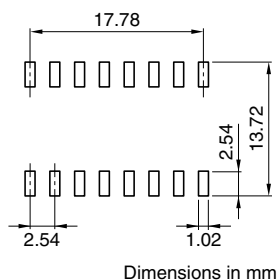
SHAPES AND DIMENSIONS



CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

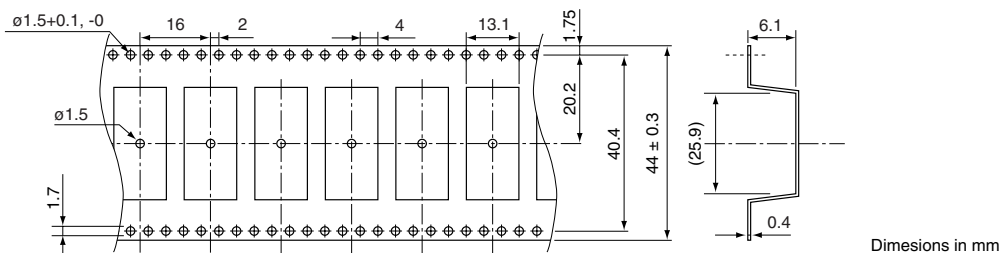
Part No.	Insertion loss (dB)max.		Attenuation (dB)min.
	[0.1 to 17MHz]	[17 to 25MHz]	[50 to 100MHz]
	①②-⑦⑥ ⑪⑩-⑮⑯	①②-⑦⑥ ⑪⑩-⑮⑯	①②-⑦⑥ ⑪⑩-⑮⑯
TLA-6M102LF(-T)	1.5 1.5	3 1.5	18 —

• Ta=25°C

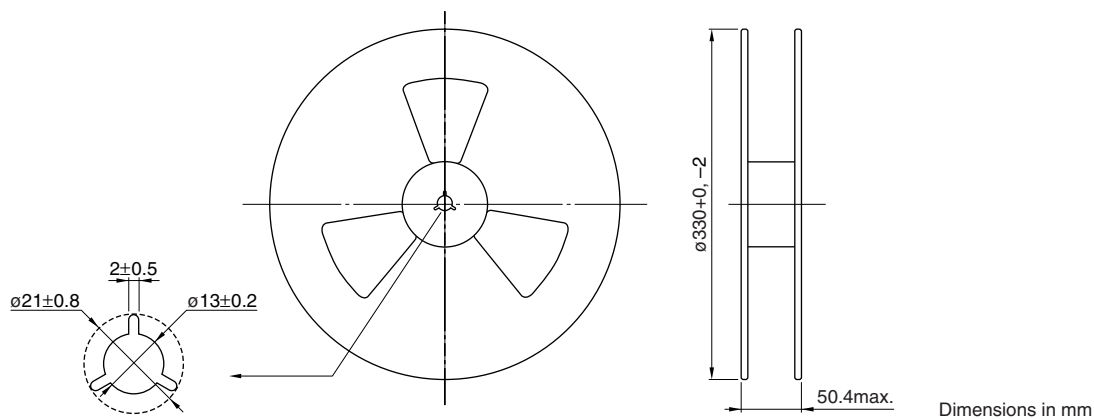
PACKAGING STYLES

Quantity : 600pieces/reel

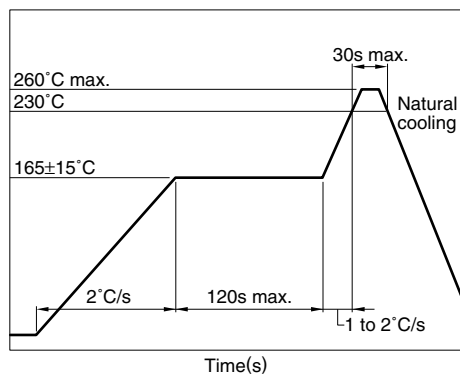
TAPE DIMENSIONS



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-planality.
- 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 $+30^\circ\text{C}$

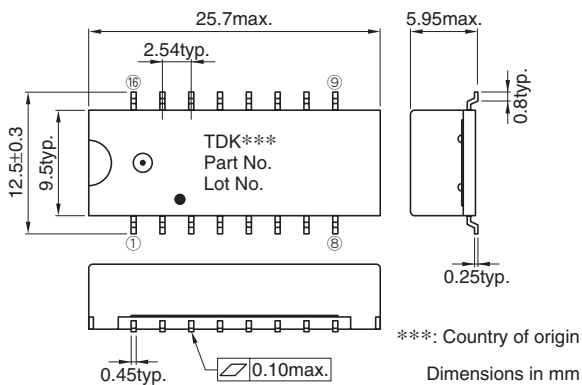
Humidity: 60(%)RH max.

TLA-6M103LF(-T) ATM25

FEATURES

- Lead free product.
- 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).

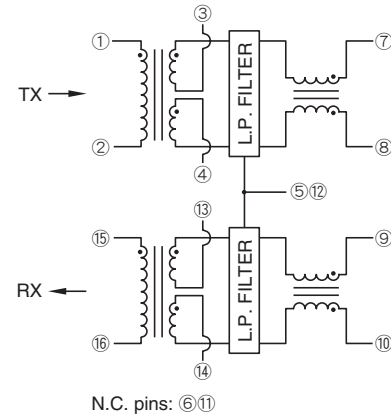
SHAPES AND DIMENSIONS



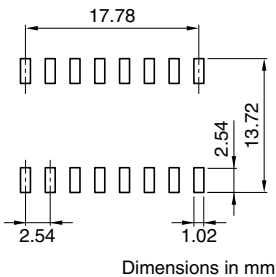
GENERAL SPECIFICATIONS

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:500V[60s]

CIRCUIT DIAGRAM



RECOMMENDED PC BOARD PATTERN



ELECTRICAL CHARACTERISTICS

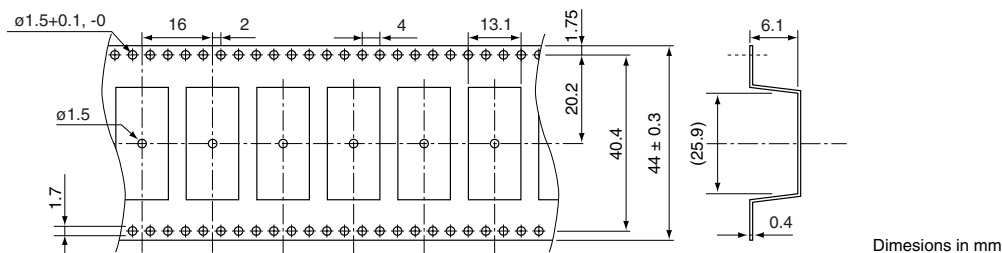
Part No.	Insertion loss (dB)max.			Attenuation (dB)min.
	[12kHz] ①②-⑦⑧ ⑨⑩-⑮⑯	[16MHz] ①②-⑦⑧ ⑨⑩-⑮⑯	[24MHz] ①②-⑦⑧ ⑨⑩-⑮⑯	
TLA-6M103LF(-T)	3	1	1.8	10
	3	1	1.8	10

- Ta=25°C

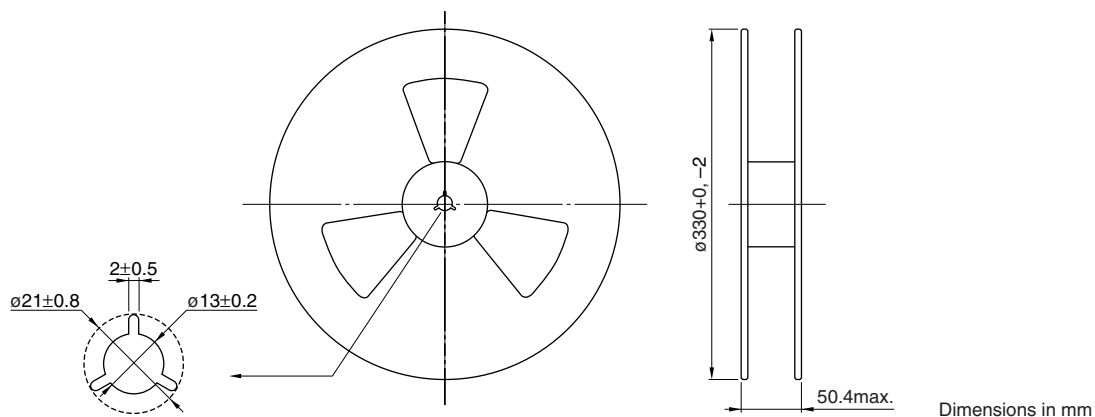
PACKAGING STYLES

Quantity : 600pieces/reel

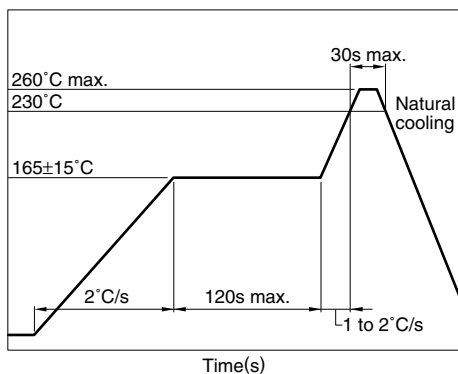
TAPE DIMENSIONS



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-planality.
- 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 $+30^\circ\text{C}$

Humidity: 60(%)RH max.

TDK LAN Related Products

Comparative Information

COMPARATIVE INFORMATION

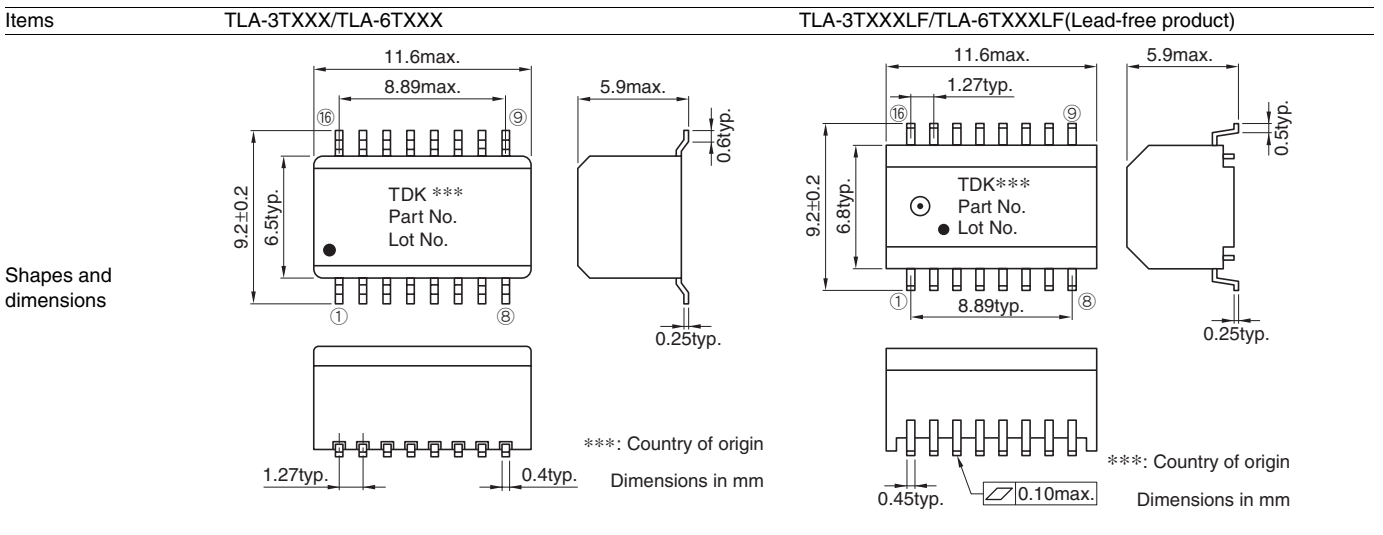
COMPARISON OF SPECIFICATION CHANGES FOR TLA-3TXXX/TLA-3TXXXLF, TLA-6TXXX/TLA-6TXXXLF

These figures show the specifications that have been changed in the new lead-free products listed below.

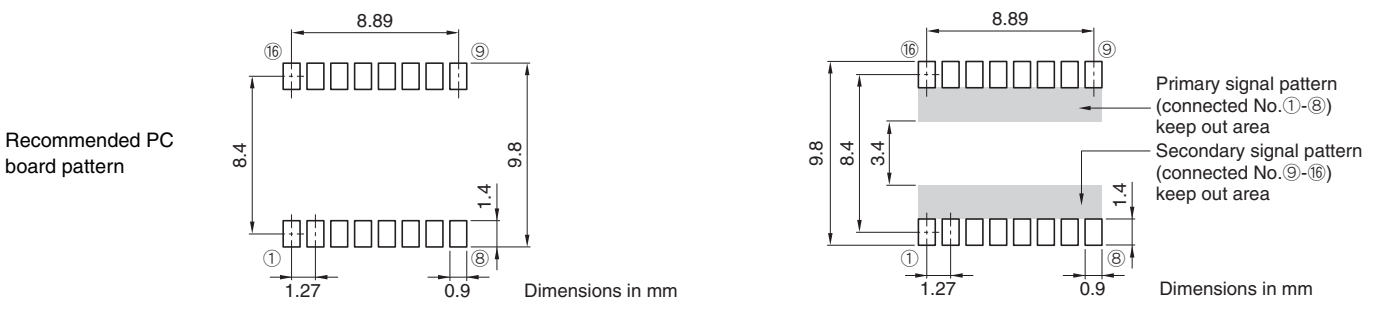
MODELS TO WHICH THESE FIGURES APPLY

TLA-3TXXXLF		TLA-6TXXXLF	
Previous product	Lead-free product	Previous product	Lead-free product
TLA-3T101	TLA-3T101LF	TLA-6T118	TLA-6T118LF
TLA-3T105	TLA-3T105LF	TLA-6T119	TLA-6T119LF
TLA-3T106	TLA-3T106LF	TLA-6T120	TLA-6T120LF
TLA-3T107	TLA-3T107LF	TLA-6T121	TLA-6T120LF
TLA-3T108	TLA-3T108LF	TLA-6T122	TLA-6T12032LF
TLA-3T109	TLA-3T109LF	TLA-6T127	TLA-6T127LF
TLA-3T110	TLA-3T110LF		
TLA-3T112	TLA-3T112LF		

- None of the circuit diagrams or electrical characteristics of these products have been changed.
- Please refer to the product catalog for circuit diagrams or electrical characteristics of these products.



Components	Component name	Specifications	Component name	Specifications
		Core	Ferrite core	Core
	Wire	Copper wire with polyurethane coating	Wire	Copper wire with polyurethane coating
	Case	Plastic	Case	Plastic
	Terminal	Phosphor bronze/solder plated	Terminal	Phosphor bronze/Sn plated
	Casting resin	Epoxy resin	Casting resin	Epoxy resin
	Buffer resin	Silicone resin	Solder	Sn lead-free solder
	Solder	Pb high temperature solder		

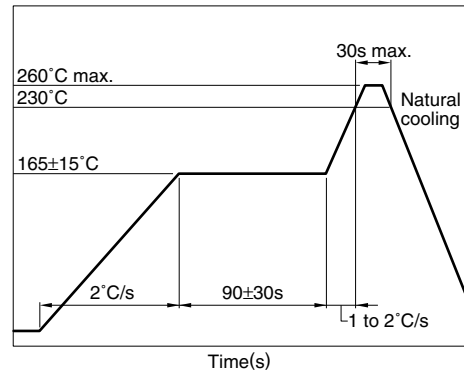
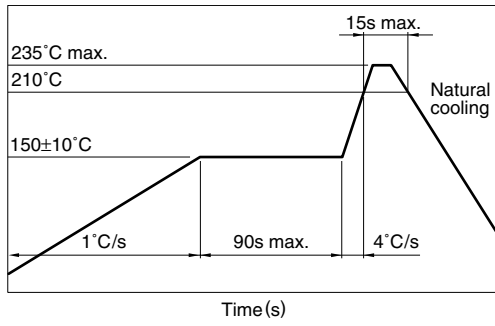


• All specifications are subject to change without notice.

TLA-3TXXX/TLA-6TXXX

TLA-3TXXXLF/TLA-6TXXXLF (Lead-free product)

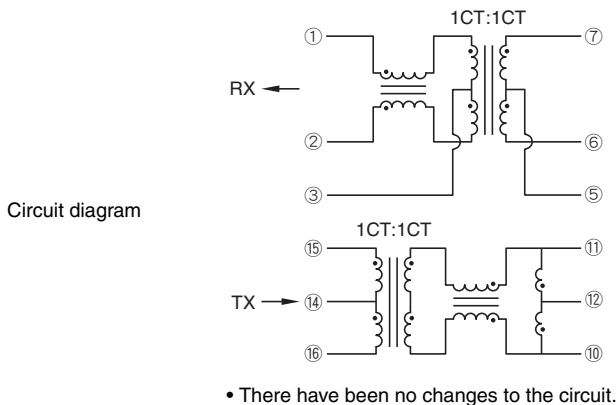
Recommended soldering condition



COMPARISON OF SPECIFICATION CHANGES FOR TLA-6T103/TLA-6T103LF

Items	TLA-6T103	TLA-6T103LF
Shapes and dimensions	<p>Dimensions in mm</p> <p>***: Country of origin</p>	<p>Dimensions in mm</p> <p>***: Country of origin</p>

Components	Component name	Specifications	Component name	Specifications
	Core	Ferrite core	Core	Ferrite core
Wire	Copper wire with polyurethane coating	Wire	Copper wire with polyurethane coating	
Board	Glass epoxy	Terminals	Phosphor bronze/Sn plated	
Terminals	Phosphor bronze/solder plated	Case	Liquid crystal polymer	
Molding resin	Epoxy resin	Casting resin	Soft epoxy	
Buffer material	Silicone resin	Solder	Sn lead-free solder	
Solder	Pb high temperature solder			



Electrical characteristics	Item	Standard	Conditions
	Winding ratio		1CT:1CT(±5%)
		1CT:1CT(±5%)	Rx ⑦⑤⑥:①③②
Inductance		350μH min.	Tx ⑩-⑪
		350μH min.	Rx ⑦-⑥
Insertion loss		1.0dB max.	Tx ⑮⑯-⑪⑩
		1.0dB max.	Rx ⑦⑥-①②
Line capacity		25pF max.	Tx ⑮⑭⑯-⑪⑫⑩
		25pF max.	Rx ⑦⑤⑥-①③②
Withstand voltage Erms	AC.1500V	①②③④⑤⑥-⑤⑥⑦⑩⑪⑫	f=100kHz V=100mV[DC BIAS 8mA] [0.1 to 100MHz] f=100kHz V=100mV

• There have been no changes to the electrical characteristics.

Temperature and humidity ranges	Item	Standard	Conditions
	Operating temperature range	0 to +70°C	
Temperature range for storage	-40 to +85°C		
Operating humidity range	90(%)RH max.		[Maximum wet-bulb temperature38°C]
Humidity range for storage	90(%)RH max.		[Maximum wet-bulb temperature38°C]

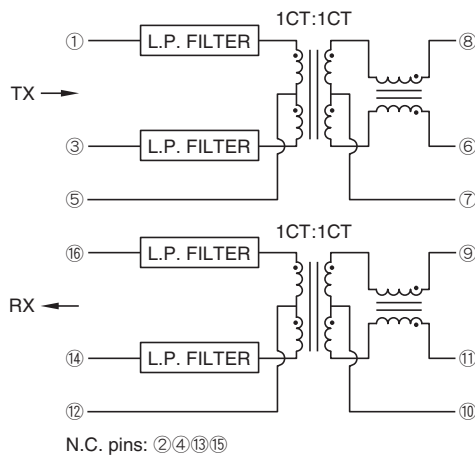
• There have been no changes to the temperature and humidity range.

COMPARISON OF SPECIFICATION CHANGES FOR TLA-3M103/TLA-3M103LF

Items	TLA-3M103	TLA-3M103LF
Shapes and dimensions	<p>25.7max. 12.5±0.3 9.5typ. 5.95max. 0.8typ. 0.25typ. 2.54typ. 0.45typ.</p> <p>TDK *** Part No. Lot No.</p> <p>***: Country of origin Dimensions in mm</p>	<p>25.7max. 12.5±0.3 9.5typ. 5.95max. 0.8typ. 0.25typ. 2.54typ. 0.45typ. 0.10max.</p> <p>TDK *** Part No. Lot No.</p> <p>***: Country of origin Dimensions in mm</p>

Components	Component name	Specifications	Component name	Specifications
	Core	Ferrite core	Core	Ferrite core
Wire	Copper wire with polyurethane coating	Wire	Copper wire with polyurethane coating	
Inductors (coils)	Chip inductors	Inductors (coils)	Chip inductors	
Ceramic capacitors	Ceramic chip capacitors	Ceramic capacitors	Ceramic chip capacitors	
Terminals	Phosphor bronze/solder plated	Lead frame	Phosphor bronze/Sn plated	
Covering resin	Epoxy resin	Base	Plastics	
Buffer material	Silicone resin	Case	Plastics	
Solder	Pb solder	Resin	Epoxy resin	
Board	Glass epoxy	Solder	Lead-free solder	
		Board	Glass epoxy	

Circuit diagram



- There have been no changes to the circuit.

Electrical characteristics	Item	Standard	Conditions
	Insertion loss	1.0dB max.	[5 to 10MHz]
Attenuation	25.0dB min.	[30 to 100MHz]	
C.M.R.R.	25.0dB min.	[1 to 100MHz]	
Impedance	100Ω typ.	[5 to 10MHz]	
Withstanding voltage	AC.1500V	①③⑤⑫⑭⑯-⑥⑦⑧⑨⑩⑪ [50Hz, 1min]	

- There have been no changes to the electrical characteristics.

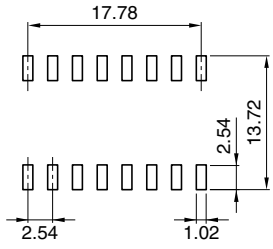
Temperature and humidity ranges	Item	Standard	Conditions
	Operating temperature range	0 to +70°C	
Temperature range for storage	-40 to +85°C		
Operating humidity range	90(%)RH max.	[Maximum wet-bulb temperature38°C]	
Humidity range for storage	90(%)RH max.	[Maximum wet-bulb temperature38°C]	

- There have been no changes to the temperature and humidity range.

TLA-3M103

TLA-3M103LF

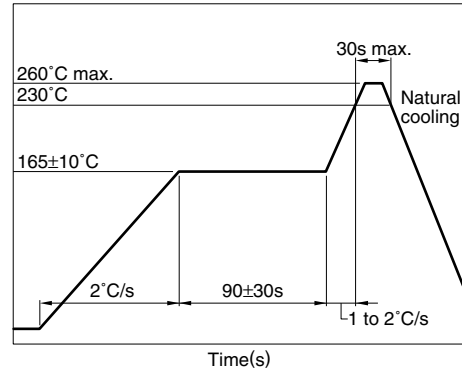
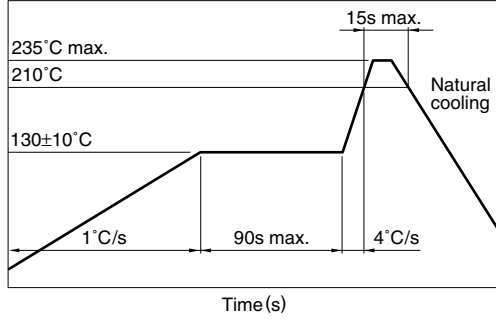
Recommended PC board pattern



Dimensions in mm

- There have been no changes to the recommended PC board pattern.

Recommended soldering condition



IC Cross Reference

IC manufacturer	Interface	IC part No.	Ports	Turns ratio		TDK part No.			
				TX	RX	Single	Single(Low profile)	Quad	RJ45
TDK	10/100BASE-TX	78Q2120	1	1 : 1	1 : 1	TLA-6T103LF TLA-6T118LF	TLA-6T207C TLA-6T211A		TLA-6T704 TLA-6T707
		78Q2123	1	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A		TLA-6T704 TLA-6T707
ADMtek	10/100BASE-TX	ADM7001	1						
		AN983B	1						
		AN985B	1						
		ADM9511	1	1 : 1	1 : 1	TLA-6T103LF TLA-6T118LF	TLA-6T207C TLA-6T211A		TLA-6T704 TLA-6T707
		ADM9513	1						
		ADM8511	1						
		ADM8513	1						
		ADM6995	5						
		ADM6996	5						
		ADM6999	8	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T406	TLA-6T704 TLA-6T707
AMD	10/100BASE-TX	Am79C874	1	1 : 1	1 : 1	TLA-6T103LF TLA-6T118LF	TLA-6T207C TLA-6T211A	TLA-6T404 TLA-6T406	TLA-6T704 TLA-6T707
		Am79C875	4	1.25 : 1	1 : 1	TLA-6T122LF (For Power Down Application)			
		Am79C973	1	1 : 1.41	1 : 1	TLA-6T121LF			
		Am79C975	1						
			1						
Broadcom	10/100BASE-TX	AC101	1						
		BCM5221	1						
		BCM5222	2						
		AC104	4						
		BCM5208	4						
		BCM5208R	4						
		AC205	5	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T406	TLA-6T704 TLA-6T707
		AC206	5						
		BCM5226	6						
		AC207	8						
		AC208	8						
		BCM5238	8						
		BCM5228	8						
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			
	10/100BASE-TX	CS8952	1	1 : 1	1 : 1	TLA-6T103LF TLA-6T118LF	TLA-6T207C TLA-6T211A		TLA-6T704 TLA-6T707
		CS8952T	1						
DAVICOM	10BASE-T	DM9008	1						
		DM9009	1			TLA-3M103LF			
		DM9081	8	1 : 1	1 : 1	TLA-3M601-RS			
		DM9095	1						
	10/100BASE-TX	DM9000	1						
		DM9601	1	1 : 1	1 : 1	TLA-6T103LF TLA-6T118LF	TLA-6T207C TLA-6T211A		TLA-6T704 TLA-6T707
		DM9161E	1						
		DM9331	1						
		DM9301	1	1.25 : 1	1 : 1	TLA-6T122LF (For Power Down Application)			
		DM9102A	1						
Fujitsu	10BASE-T	MB86961A	1	1 : 1.41	1 : 1	TLA-3T110LF			
		MB86967	1	1 : 1	1 : 1	TLA-3M103LF TLA-3M601-RS			
ICS	10/100BASE-TX	ICS1892	1			TLA-6T103LF	TLA-6T207C		TLA-6T704
		ICS1893	1	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A		TLA-6T707
		ICS1893AF	1						
		ICS1893BF	1	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A		TLA-6T704 TLA-6T707
IDT	ATM25	IDT77105	1						
		IDT77V126	1						
		IDT77V107	1						
		IDT77V106	1	1 : 1	1 : 1	TLA-6M103LF			
		IDT77V1264	4						
		IDT77V1253	3						
		IDT77V1254	4						

IC manufacturer	Interface	IC part No.	Ports	Turns ratio		TDK part No.			
				TX	RX	Single	Single(Low profile)	Quad	RJ45
Intel (Level One)	10BASE-T	LXT901	1						
		LXT901A	1						
		LXT907	1	1 : 1.41	1 : 1	TLA-3T110LF			
		LXT907A	1						
			LXT905	1	1 : 2	1 : 1	TLA-3T109LF		
			LXT908	1					
			82550	1					
			82551	1					
			82559	1					
			82562	1	1 : 1	1 : 1	TLA-6T103LF	TLA-6T207C	TLA-6T704
			LXT970A	1			TLA-6T118LF	TLA-6T211A	TLA-6T707
			LXT971A	1					
		10/100BASE-TX	LXT972A	1					
			LXT973	2	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T704 TLA-6T707
		LXT974	4	2 : 1	1 : 1	TLA-6T120LF			
		LXT975	4						
		LXT9785	8	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T406 TLA-6T704 TLA-6T707	
LSI Logic		L80223	1			TLA-6T103LF	TLA-6T207C	TLA-6T704	
		L80225	1	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T707	
		L80227	1						
		L84220	4	1 : 1	1 : 1	TLA-6T103LF	TLA-6T207C	TLA-6T404 TLA-6T704	
		L84225	4	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T406 TLA-6T707	
MICREL (Kendin)	10/100BASE-TX	KS8737	1						
		KS8721B	1						
		KS8993	3	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T406 TLA-6T704	
		KS8995	5						
		KS8997	8						
		KS8999	9						
Micro Linear	10/100BASE-TX	ML6651	1	1 : 1	1 : 1	TLA-6T118LF	TLA-6T211A	TLA-6T704	
		ML6652	1					TLA-6T707	
National Semiconductor	10BASE-T	DP83902A	1						
		DP83905	1						
		DP83907	1	1 : 1	1 : 1	TLA-3M103LF			
		DP83934	1			TLA-3M601-RS			
		DP83936AVUL	1						
		DP83950B	12						
			DP83924B	4	1 : 2	1 : 1	TLA-3T109LF		
			DP83223	1					
			DP83840A	1					
			DP83843	1					
		10/100BASE-TX	DP83846A	1	1 : 1	1 : 1	TLA-6T103LF	TLA-6T207C	TLA-6T704
		DP83847	1			TLA-6T118LF	TLA-6T211A	TLA-6T707	
		DP83815	1						
		DP83816	1						
NEC	ATM25	μPD98408	6	1 : 1.52	1.36 : 1	TLA-6M102LF			
Realtek	10BASE-T	RTL8019AS	1	1 : 1	1 : 1	TLA-3M103LF			
		RTL8029AS	1			TLA-3M601-RS			
			RTL8100B	1					
			RTL8100C	1					
			RTL8101L	1					
			RTL8139C	1	1 : 1	1 : 1	TLA-6T103LF	TLA-6T207C	TLA-6T704
		10/100BASE-TX	RTL8139D	1			TLA-6T118LF	TLA-6T211A	TLA-6T707
			RTL8150L	1					
			RTL8201BL	1					
			RTL8201L	1					
		RTL8204	4	1 : 1	1 : 1	TLA-6T103LF	TLA-6T207C	TLA-6T404 TLA-6T704	
		RTL8208	8			TLA-6T118LF	TLA-6T211A	TLA-6T406 TLA-6T707	
SMSC	10BASE-T	LAN91C96	1	1 : 1	1 : 1	TLA-3M103LF			
		LAN91C961	1			TLA-3M601-RS			
		10/100BASE-TX	LAN83C180	1					
			LAN83C183	1	1 : 1	1 : 1	TLA-6T103LF	TLA-6T207C	TLA-6T704
			LAN91C111	1			TLA-6T118LF	TLA-6T211A	TLA-6T707