

# SMD LAN Inductor

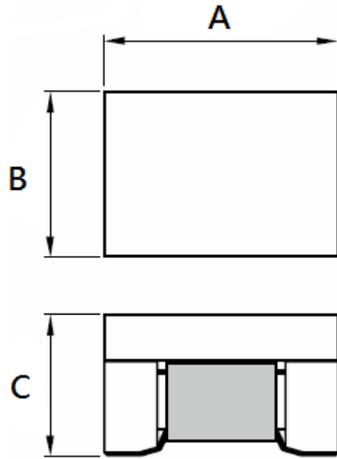
TXF353229NF-SERIES

## 1. Features

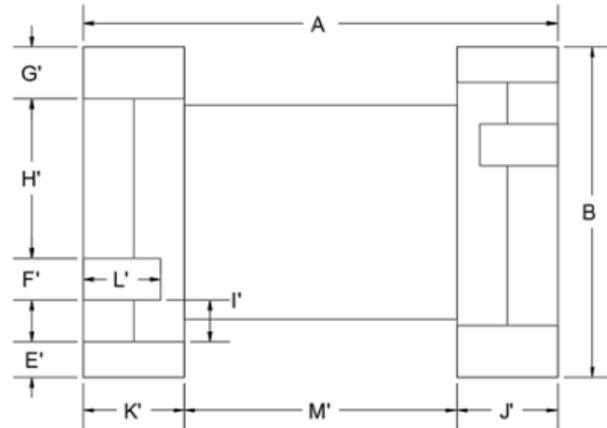
1. SMD type pulse transformers.
2. TXF353229NF is small size and low profile 3.50X3.20X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +85°C (Including self - temperature rise)
5. For 10/100/1G Base-T



## 2. Dimension / Part Dimension



Dimensions in mm

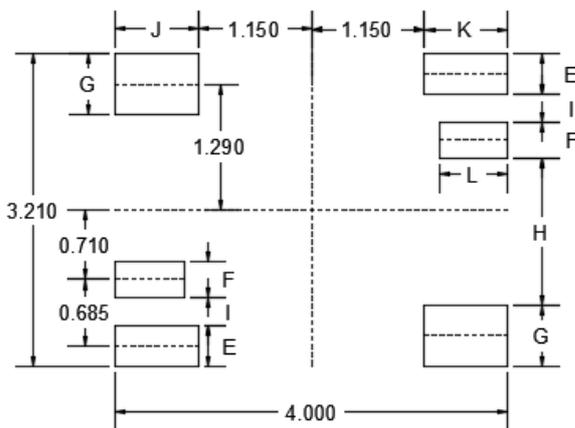


Top View

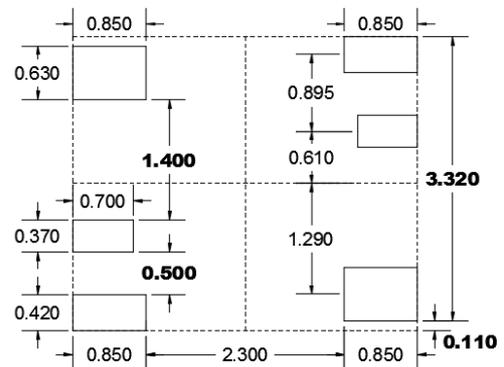
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
353229NF	3.50±0.20	3.20±0.20	2.90 max	0.40±0.06	0.43±0.06	0.61±0.06	1.50±0.10	0.26±0.06	0.72±0.06	0.72±0.06	0.57±0.06	2.06±0.10

Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	L(mm)
353229NF	4.00	0.42	0.37	0.63	1.50	0.29	0.85	0.85	0.70

Units: mm



# SMD LAN Inductor

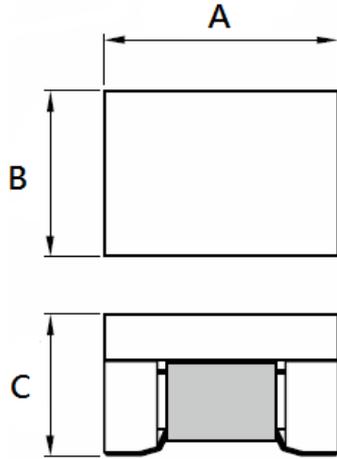
TXF353229NF-SERIES-P0

## 1. Features

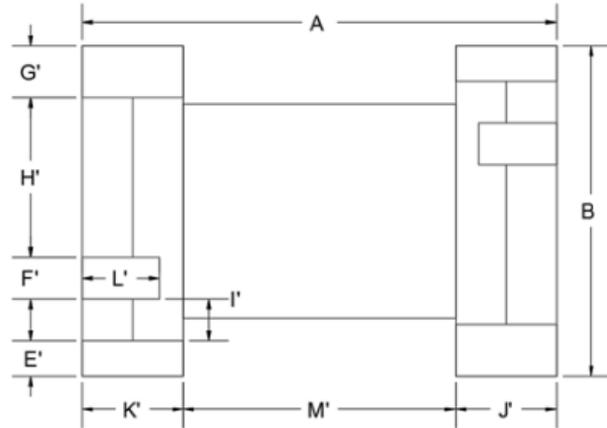
1. SMD type pulse transformers.
2. TXF353229NF is small size and low profile 3.50X3.20X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. TXF353229NF-SERIES-P0-for 10/100/1G Base-T, POE=350mA
5. TXF353229NF-121-P1-for 10/100/1G Base-T, POE+ 600mA



## 2. Dimension / Part Dimension



Dimensions in mm

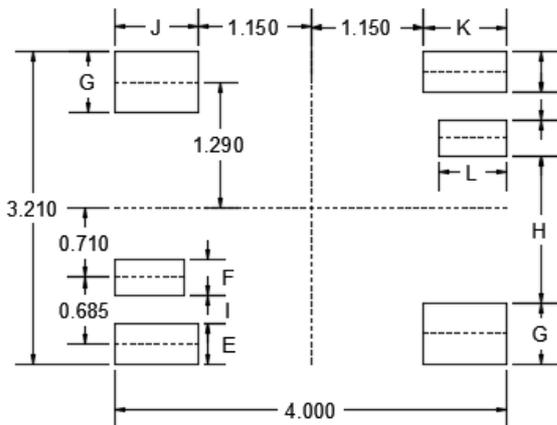


Top View

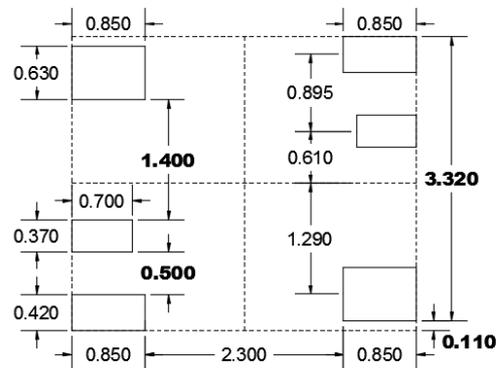
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
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Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	L(mm)
353229NF	4.00	0.42	0.37	0.63	1.50	0.29	0.85	0.85	0.70

Units: mm



**SMD LAN Inductor**

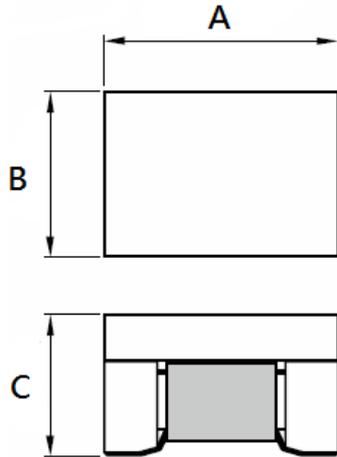
TXF353229NF-SERIES-G

**1. Features**

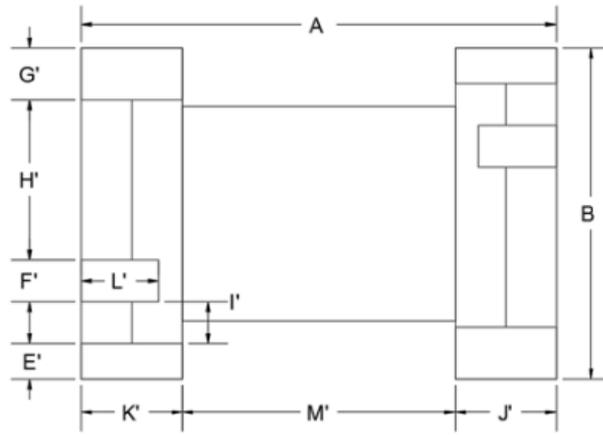
1. SMD type pulse transformers.
2. TXF353229NF is small size and low profile 3.50X3.20X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. For 2.5G/5G BASE-T.



**2. Dimension / Part Dimension**



Dimensions in mm

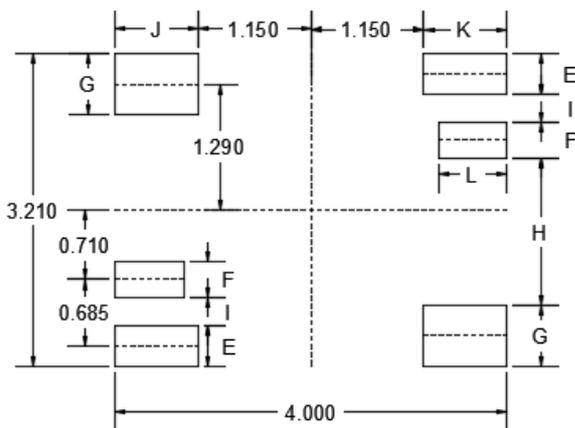


Top View

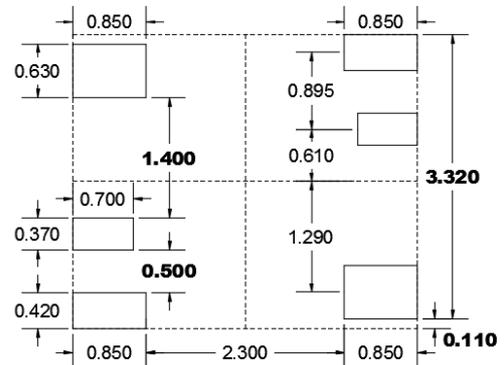
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
353229NF	3.50±0.20	3.20±0.20	2.90 max	0.40±0.06	0.43±0.06	0.61±0.06	1.50±0.10	0.26±0.06	0.72±0.06	0.72±0.06	0.57±0.06	2.06±0.10

Units: mm

**Recommended PC Board Pattern**



**Solder paste stencil aperture recommendation**



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	L(mm)
353229NF	4.00	0.42	0.37	0.63	1.50	0.29	0.85	0.85	0.70

Units: mm



# SMD LAN Inductor

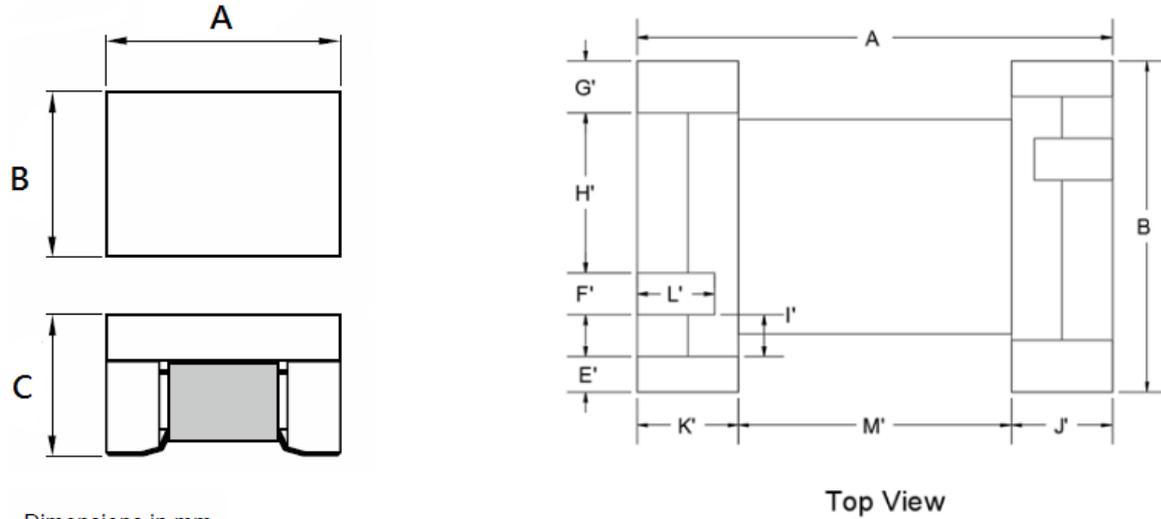
TXF353229NF-SERIES-GP0

## 1. Features

1. SMD type pulse transformers.
2. TXF353229NF is small size and low profile 3.50X3.20X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. TXF353229NF-SERIES-GP0-for 1G, 2.5/5G Base-T, POE 350mA
6. TXF353229NF-121-GP1-for 1G, 2.5/5G Base-T, POE+ 600mA



## 2. Dimension / Part Dimension

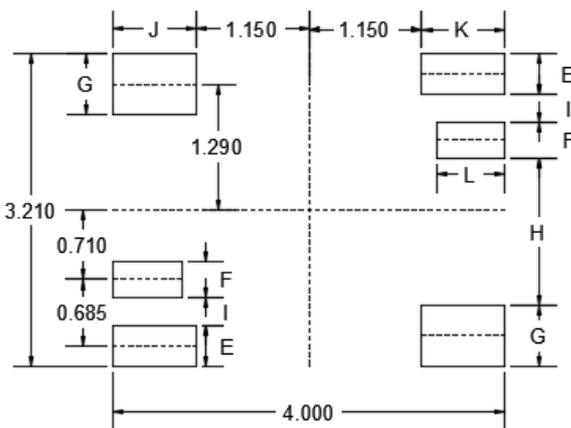


Dimensions in mm

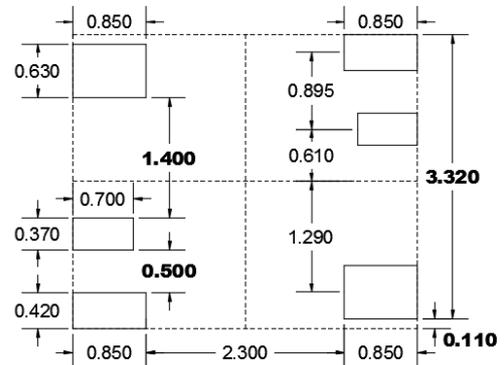
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
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Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	L(mm)
353229NF	4.00	0.42	0.37	0.63	1.50	0.29	0.85	0.85	0.70

Units: mm



**SMD LAN Inductor**

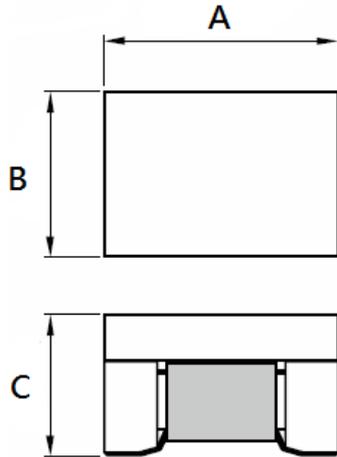
TXF353229NF-121-H

**1. Features**

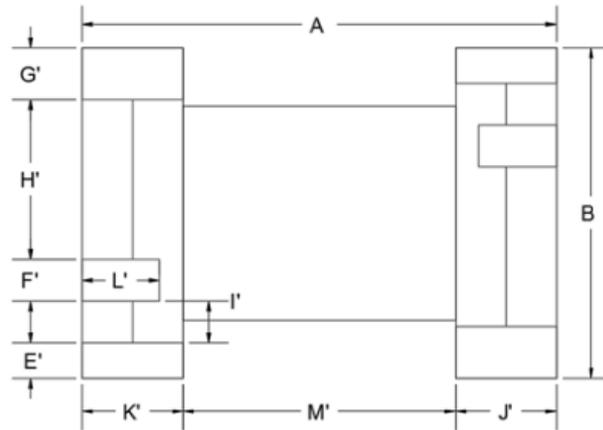
1. SMD type pulse transformers.
2. TXF353229NF is small size and low profile 3.50X3.20X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. For 1G, 2.5/5G, 10G Base-T



**2. Dimension / Part Dimension**



Dimensions in mm

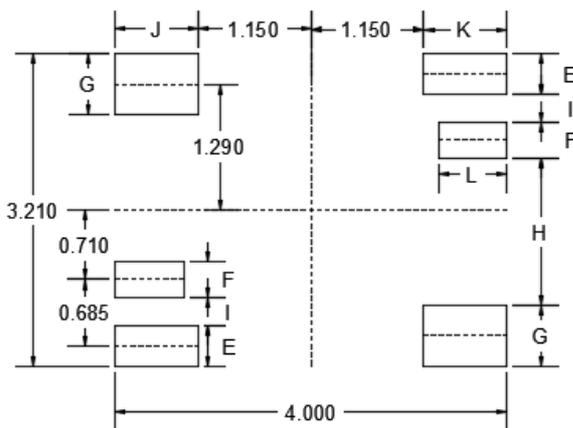


Top View

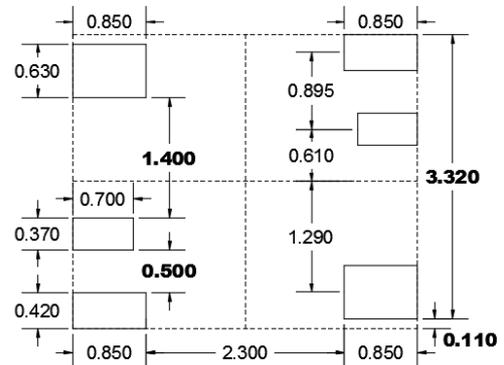
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
353229NF	3.50±0.20	3.20±0.20	2.90 max	0.40±0.06	0.43±0.06	0.61±0.06	1.50±0.10	0.26±0.06	0.72±0.06	0.72±0.06	0.57±0.06	2.06±0.10

Units: mm

**Recommended PC Board Pattern**



**Solder paste stencil aperture recommendation**



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	L(mm)
353229NF	4.00	0.42	0.37	0.63	1.50	0.29	0.85	0.85	0.70

Units: mm



# SMD LAN Inductor

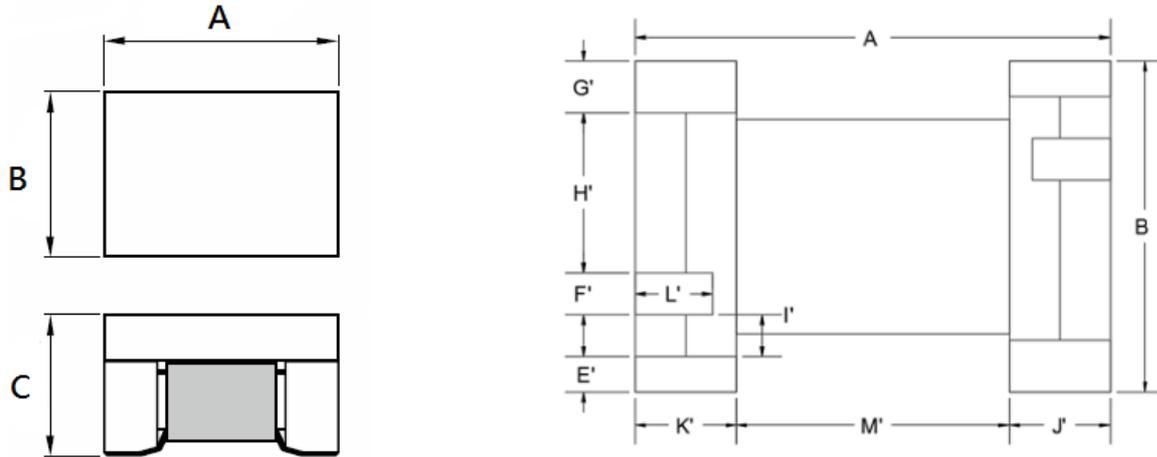
TXF353229NF-121-HP0

## 1. Features

1. SMD type pulse transformers.
2. TXF353229NF is small size and low profile 3.50X3.20X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. TXF353229NF-121-HP0-for 1G, 2.5/5G, 10G Base-T, POE 350mA
6. TXF353229NF-121-HP1- for 1G, 2.5/5G, 10G Base-T, POE+ 600mA



## 2. Dimension / Part Dimension



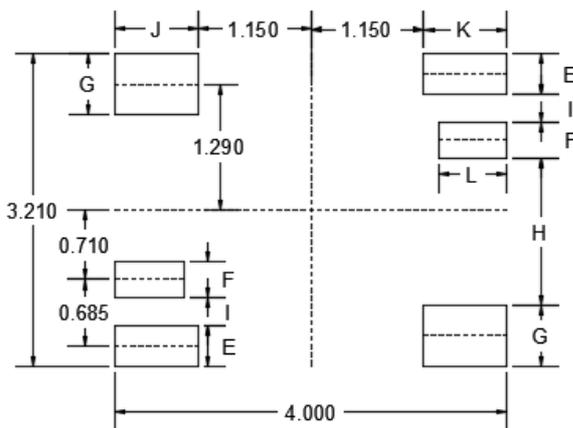
Top View

Dimensions in mm

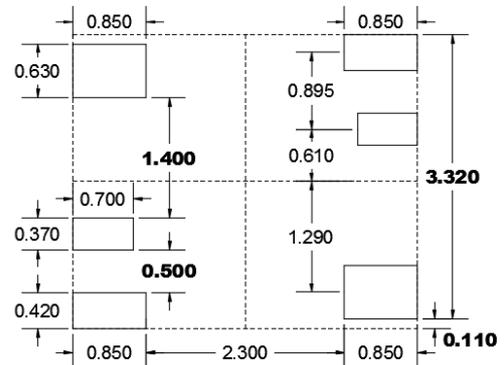
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
353229NF	3.50±0.20	3.20±0.20	2.90 max	0.40±0.06	0.43±0.06	0.61±0.06	1.50±0.10	0.26±0.06	0.72±0.06	0.72±0.06	0.57±0.06	2.06±0.10

Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	L(mm)
353229NF	4.00	0.42	0.37	0.63	1.50	0.29	0.85	0.85	0.70

Units: mm



**SMD LAN Inductor**

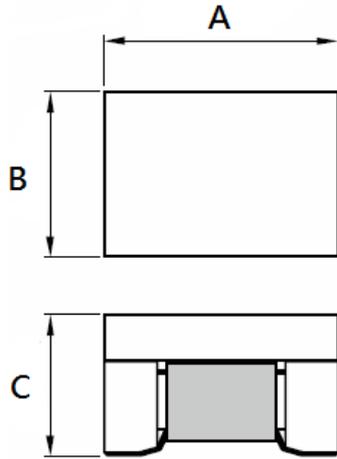
TXF453229NF-SERIES

**1. Features**

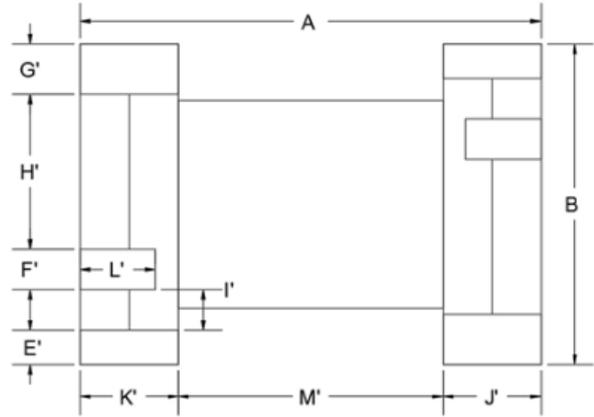
1. SMD type pulse transformers.
2. TXF453229NF is small size and low profile
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. For 10/100/1G Base-T



**2. Dimension / Part Dimension**



Dimensions in mm

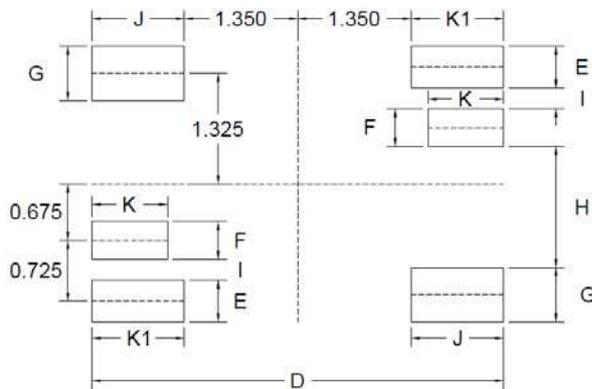


Top View

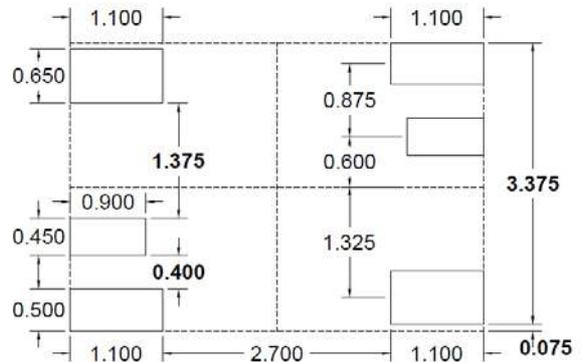
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
453229NF	4.60±0.20	3.25±0.20	2.90 Max	0.45±0.06	0.47±0.06	0.60±0.06	1.43±0.10	0.25±0.10	1.00±0.10	1.00±0.10	0.80±0.06	2.70±0.10

Units: mm

**Recommended PC Board Pattern**



**Solder paste stencil aperture recommendation**



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	K1(mm)
453229NF	4.90	0.50	0.45	0.65	1.45	0.25	1.10	0.90	1.10

Units: mm



# SMD LAN Inductor

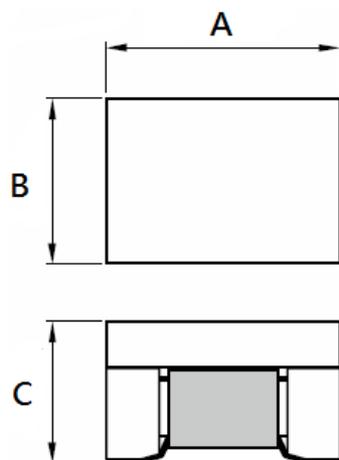
TXF453229NF-SERIES-P0

## 1. Features

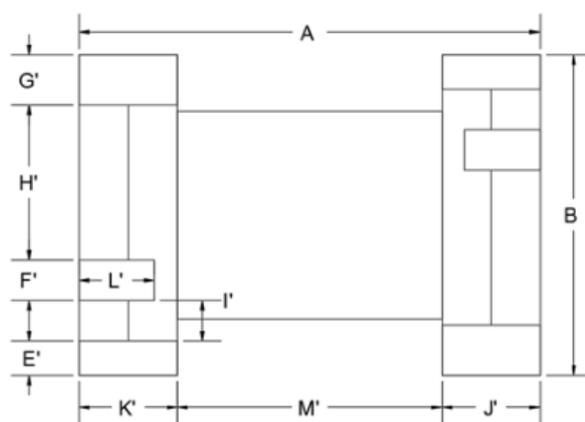
1. SMD type pulse transformers.
2. TXF453229NF is small size and low profile
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. TXF453229NF-SERIES-P0-for 10/100/1G Base-T, POE=350mA
6. TXF453229NF-121-P1-for 10/100/1G Base-T, POE+ 600mA
7. TXF453229NF-181-P1-for 10/100/1G Base-T, POE+ 720mA
8. TXF453229NF-121-P2-for 10/100/1G Base-T, POE++ 1000mA



## 2. Dimension / Part Dimension



Dimensions in mm

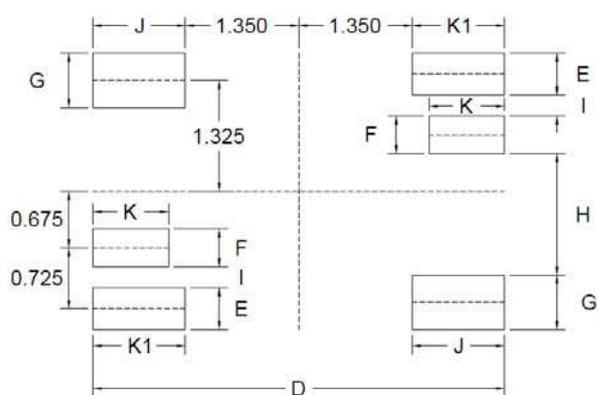


Top View

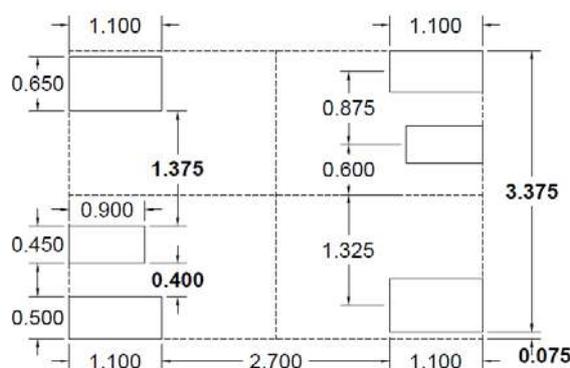
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
453229NF	4.60±0.20	3.25±0.20	2.90 Max	0.45±0.06	0.47±0.06	0.60±0.06	1.43±0.10	0.25±0.10	1.00±0.10	1.00±0.10	0.80±0.06	2.70±0.10

Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	K1(mm)
453229NF	4.90	0.50	0.45	0.65	1.45	0.25	1.10	0.90	1.10

Units: mm



**SMD LAN Inductor**

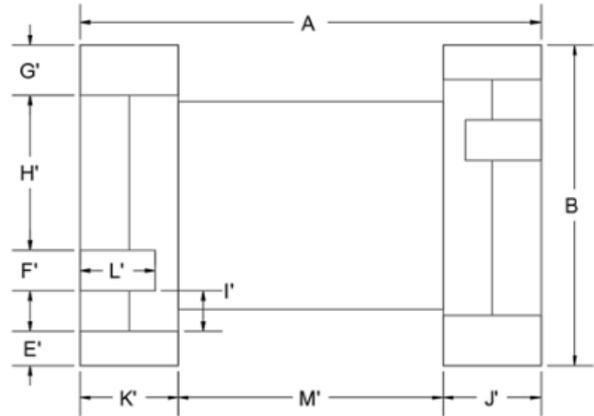
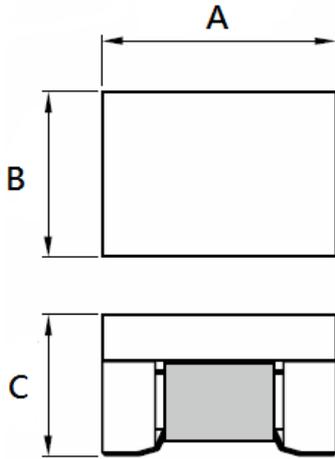
TXF453229NF-SERIES-G

**1. Features**

1. SMD type pulse transformers.
2. TXF453229NF is small size and low profile
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +85°C (Including self - temperature rise)
5. For 1G, 2.5/5G Base-T



**2. Dimension / Part Dimension**



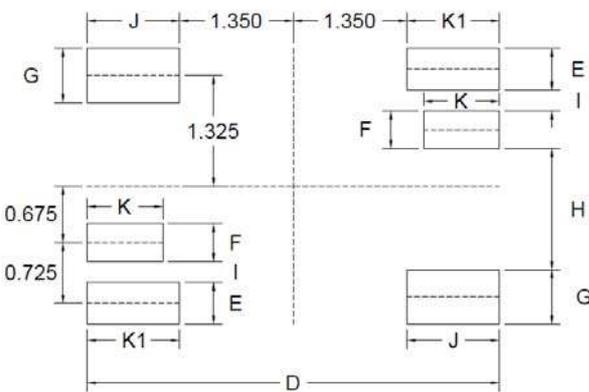
Top View

Dimensions in mm

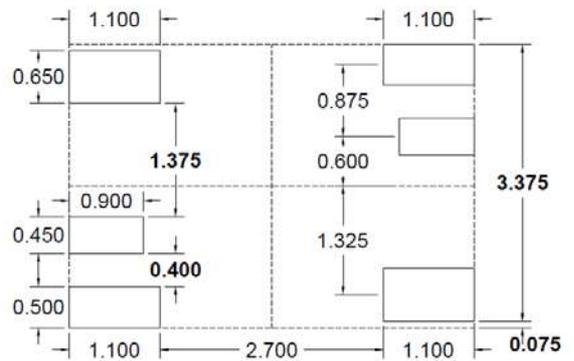
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Units: mm

**Recommended PC Board Pattern**



**Solder paste stencil aperture recommendation**



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	K1(mm)
453229NF	4.90	0.50	0.45	0.65	1.45	0.25	1.10	0.90	1.10

Units: mm



**SMD LAN Inductor**

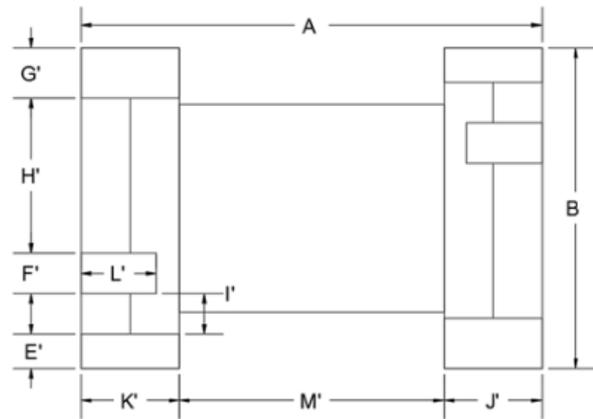
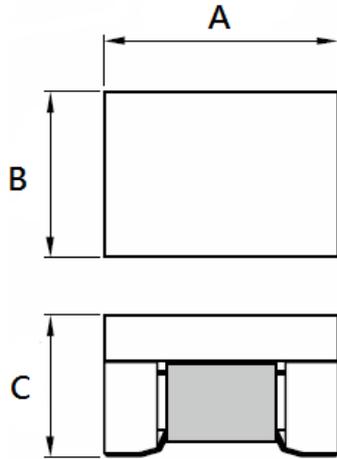
TXF453229NF-SERIES-GP0

**1. Features**

1. SMD type pulse transformers.
2. TXF453229NF is small size and low profile
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +85°C (Including self - temperature rise)
5. TXF453229NF-SERIES-GP0-for 1G, 2.5/5G Base-T, POE=350mA
6. TXF453229NF-121-GP1-for 1G, 2.5/5G Base-T, POE+ 600mA
7. TXF453229NF-181-GP1-for 1G, 2.5/5G Base-T, POE+ 720mA
8. TXF453229NF-121-GP2-for 1G, 2.5/5G Base-T, POE++ 1000mA



**2. Dimension / Part Dimension**



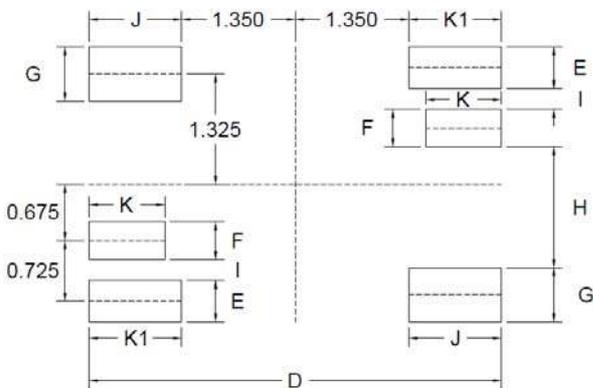
Top View

Dimensions in mm

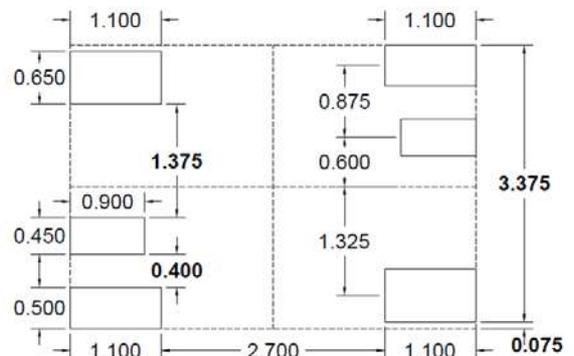
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Units: mm

**Recommended PC Board Pattern**



**Solder paste stencil aperture recommendation**



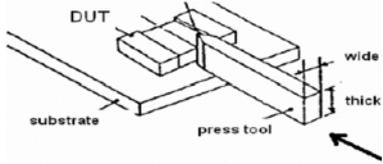
Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	K1(mm)
453229NF	4.90	0.50	0.45	0.65	1.45	0.25	1.10	0.90	1.10

Units: mm



## 7. Reliability and Test Condition (TXF353229, 453229)

Item	Performance	Test Condition
Operating temperature	-40~ +85°C (Including self - temperature rise)	
Storage temperature	-40~ +85°C (on board)	
<b>Electrical Performance Test</b>		
Ls	Refer to standard electrical characteristics list.	Keysight –E4980AL+ Keysight t -16334A
Cp		Keysight –E4980AL+ Keysight t -16334A
Insertion Loss		Agilent E5071C
<b>Reliability Test</b>		
Life Test	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Temperature : 85±2°C Applied current : rated current Duration : 1000±12hrs Measured at room temperature after placing for 24 hrs.
Load Humidity		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Humidity : 85±3% R.H. Temperature : 85°C±2°C Duration : 1000hrs Min. Bead : with 100% rated current Inductance: with 10% rated current Measured at room temperature after placing for 24 hrs.
Moisture Resistance		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles 1. Baked at 50°C for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65±2°C 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs. 3. Raise temperature to 65±2°C 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs,keep at 25°C for 2 hrs then keep at -10°C for 3 hrs 4. Keep at 25°C 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.
Thermal shock		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Condition for 1 cycle Step1 : -40±2°C 30±5min Step2 : 85±2°C ≤0.5min Step3 : 85±2°C 30±5min Number of cycles : 500 Measured at room temperature after placing for 24 hrs.
Vibration		Oscillation Frequency: 10Hz~2KHz~10Hz for 20 minute Equipment : Vibration checker Total Amplitude:10g Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations)

Item	Performance	Test Condition															
Bending	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Shall be mounted on a FR4 substrate of the following dimensions: >=0805 inch(2012mm):40x100x1.2mm <0805 inch(2012mm):40x100x0.8mm Bending depth: >=0805 inch(2012mm):1.2mm <0805 inch(2012mm):0.8mm duration of 10 sec.															
Shock		<table border="1" data-bbox="981 376 1417 510"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (Vj)/ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table> <p>3 shocks in each direction along 3 perpendicular axes. (18 shocks).</p>	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vj)/ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vj)/ft/sec													
SMD	50	11	Half-sine	11.3													
Lead	50	11	Half-sine	11.3													
Solderability	More than 95% of the terminal electrode should be covered with solder.	a. Method B, 4 hrs @155°C dry heat @235°C±5°C Testing Time :5 +0/-0.5 seconds b. Method D category 3. (8hours ± 15 min)@ 260°C±5°C Testing Time :30 +0/-0.5 seconds															
Resistance to Soldering Heat		Depth: completely cover the termination <table border="1" data-bbox="976 683 1406 795"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 ±5 (solder temp)</td> <td>10 ±1</td> <td>25mm/s ±6 mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1							
Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles														
260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1														
Terminal Strength	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force(>0805:1kg , <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 															

**SMD LAN Inductor**

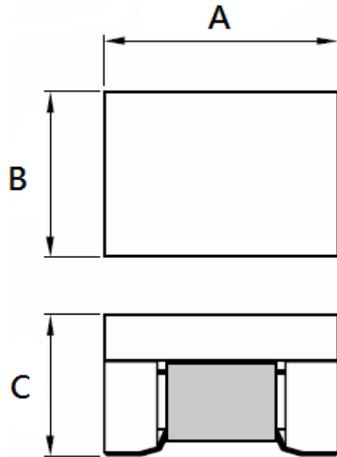
TXF453229NF-SERIES-S

**1. Features**

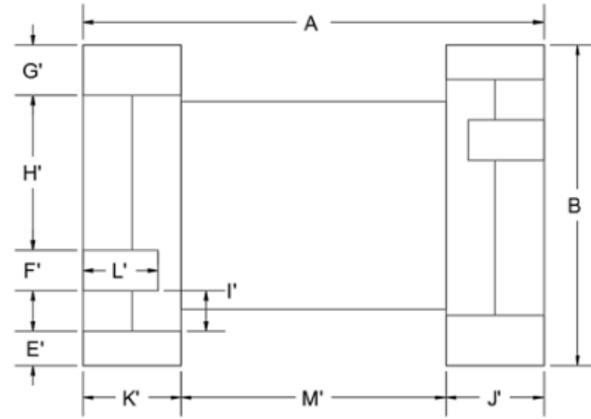
1. SMD type pulse transformers.
2. TXF453229NF is small size and low profile
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +105°C (Including self - temperature rise)
5. For 1G, 2.5/5G, 10G Base-T



**2. Dimension / Part Dimension**



Dimensions in mm

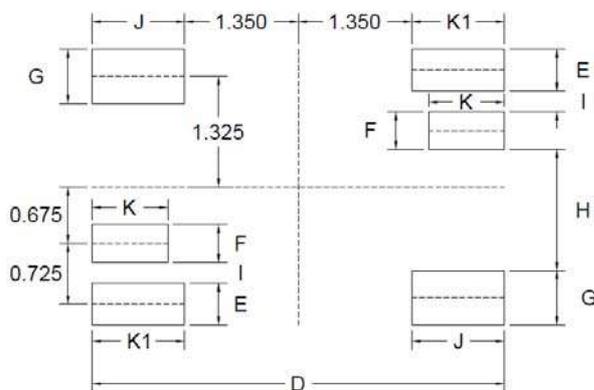


Top View

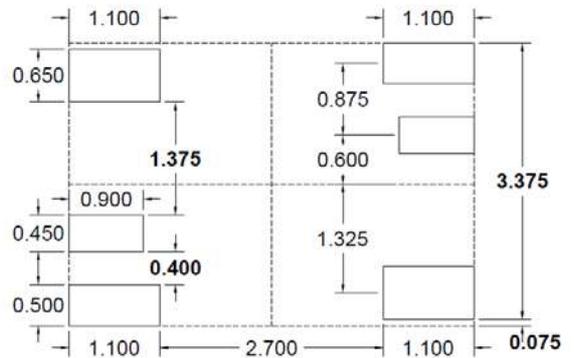
Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
453229NF	4.60±0.20	3.25±0.20	2.90 Max	0.45±0.06	0.47±0.06	0.60±0.06	1.43±0.10	0.25±0.10	1.00±0.10	1.00±0.10	0.80±0.06	2.70±0.10

Units: mm

**Recommended PC Board Pattern**



**Solder paste stencil aperture recommendation**



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	K1(mm)
453229NF	4.90	0.50	0.45	0.65	1.45	0.25	1.10	0.90	1.10

Units: mm



# SMD LAN Inductor

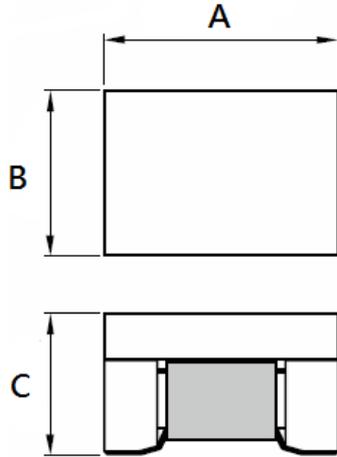
TXF453229NF-SERIES-SP0

## 1. Features

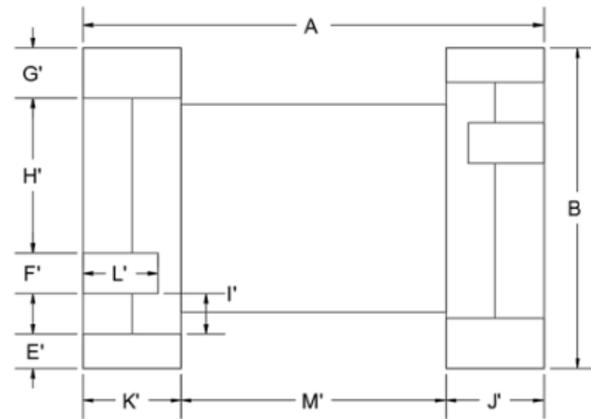
1. SMD type pulse transformers.
2. TXF453229NF is small size and low profile
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature-40~ +105°C (Including self - temperature rise)
5. TXF453229NF-SERIES-SP0-for 1G, 2.5/5G, 10G Base-T POE= 350mA
6. TXF453229NF-SERIES-SP1-for 1G, 2.5/5G, 10G Base-T POE+ 600mA
7. TXF453229NF-SERIES-SP2-for 1G, 2.5/5G, 10G Base-T POE++ 1000mA



## 2. Dimension / Part Dimension



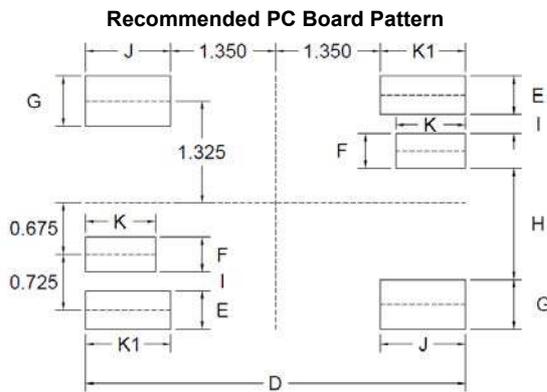
Dimensions in mm



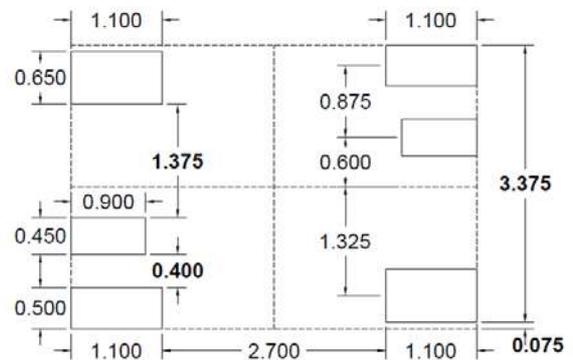
Top View

Series	A(mm)	B(mm)	C(mm)	E'(mm)	F'(mm)	G'(mm)	H'(mm)	I'(mm)	J'(mm)	K'(mm)	L'(mm)	M'(mm)
453229NF	4.60±0.20	3.25±0.20	2.90 Max	0.45±0.06	0.47±0.06	0.60±0.06	1.43±0.10	0.25±0.10	1.00±0.10	1.00±0.10	0.80±0.06	2.70±0.10

Units: mm



### Solder paste stencil aperture recommendation



Series	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)	J(mm)	K(mm)	K1(mm)
453229NF	4.90	0.50	0.45	0.65	1.45	0.25	1.10	0.90	1.10

Units: mm

### 3. Part Numbering

<b>TXF</b>	<b>453229</b>	<b>N</b>	<b>F</b>	-	<b>121</b>	-	<b>SP0</b>
A	B	C	D		E		F

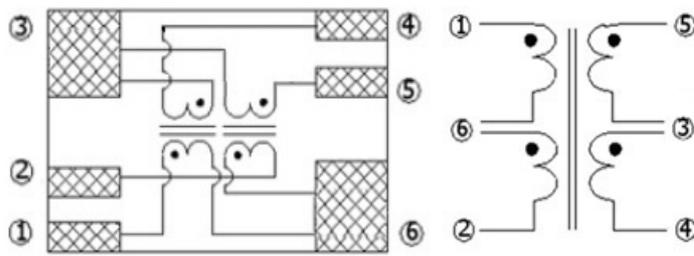
A: Series  
 B: Dimension                      AxBxC  
 C: Material                        Ferrite Core  
 D: RoHs                            F=Lead Free  
 E: Inductance                    121=120 uH  
 F: Control S/N

### 4. Specification

TAI-TECH Part Number	Inductance (uH) ①to② or ④to⑤	Test Frequency (Hz/V)	Insertion loss(dB) 1-500MHZ	Cp Capacitance (pF) ③to⑥	Rated current (mA)max	Turns ratio ①to② or ④to⑤	HI-POT ①②⑥to ④⑤③
TXF453229NF-101-SP0	100 (min.)	100K/0.1	-2.0Typ -2.5B Max	35pF(typ)	350	1:1	AC 1.5KV 60SEC
TXF453229NF-101-SP1	100 (min.)	100K/0.1	-2.0Typ -2.5B Max	35pF(typ)	600	1:1	AC 1.5KV 60SEC
TXF453229NF-101-SP2	100 (min.)	100K/0.1	-2.0Typ -2.5B Max	35pF(typ)	1000	1:1	AC 1.5KV 60SEC

TAI-TECH Part Number	Inductance (uH) ①to② or ④to⑤	Test Frequency (Hz/V)	Insertion loss(dB) 1-500MHz	Return loss(dB) 1-500MHz	CMRR(dB) 1-500MHz	Cross talk(dB) 1-500MHz	Rated current (mA)max	DCR (Ω) max.	Cp Capacitance (pF) ③to⑥	Turns ratio ①to② or ④to⑤	HI-POT ①②⑥ to ④⑤③
TXF453229NF-121-SP0	120 (min.)	100K/0.1	-2.0Typ -3.0 Max	-15Typ -10 Max	-25Typ -20 Max	-40Typ -35 Max	350	2.5	35pF(typ)	1:1	AC 1.5KV 60SEC
TXF453229NF-121-SP1	120 (min.)	100K/0.1	-2.0Typ -3.0 Max	-15Typ -10 Max	-25Typ -20 Max	-40Typ -35 Max	600	2.5	35pF(typ)	1:1	AC 1.5KV 60SEC
TXF453229NF-121-SP2	120 (min.)	100K/0.1	-2.0Typ -3.0 Max	-15Typ -10 Max	-25Typ -20 Max	-40Typ -35 Max	1000	2.5	35pF(typ)	1:1	AC 1.5KV 60SEC

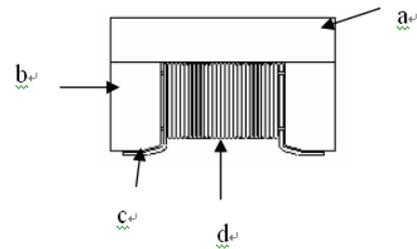
### 5. Schematic Diagram



Top View

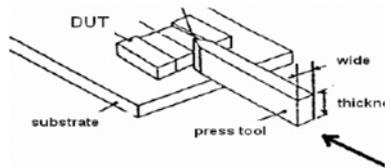
### 6. Materials

No.	Description	Specification
a.	Upper Plate	Ferrite
b.	Core	Ferrite Core
c.	Termination	Ag/Ni/Sn
d.	Wire	Enameled Copper Wire



## 7. Reliability and Test Condition (TXF453229-S)

Item	Performance	Test Condition
Operating temperature	-40~ +105℃ (Including self - temperature rise)	
Storage temperature	-40~ +105℃ (on board)	
<b>Electrical Performance Test</b>		
Ls	Refer to standard electrical characteristics list.	Keysight –E4980AL+ Keysight t -16334A
Cp		Keysight –E4980AL+ Keysight t -16334A
Insertion Loss		Agilent E5071C
Return Loss		Agilent E5071C
<b>Reliability Test</b>		
Life Test	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Temperature : 105±2℃ Applied current : rated current Duration : 1000±12hrs Measured at room temperature after placing for 24 hrs.
Load Humidity		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Humidity : 85±3% R.H, Temperature : 85℃±2℃ Duration : 1000hrs Min. Bead : with 100% rated current · Inductance: with 10% rated current Measured at room temperature after placing for 24 hrs.
Moisture Resistance		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles 1. Baked at50℃ for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65±2℃ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25℃ in 2.5hrs. 3. Raise temperature to 65±2℃ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25℃ in 2.5hrs,keep at 25℃ for 2 hrs then keep at -10℃ for 3 hrs 4. Keep at 25℃ 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.
Thermal shock		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Condition for 1 cycle Step1 : -40±2℃ 30±5min Step2 : 105±2℃ ≤0.5min Step3 : 105±2℃ 30±5min Number of cycles : 500 Measured at room temperature after placing for 24 hrs.
Vibration		Oscillation Frequency: 10Hz~2KHz~10Hz for 20 minute Equipment : Vibration checker Total Amplitude:10g Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations) ·

Item	Performance	Test Condition														
Bending	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Shall be mounted on a FR4 substrate of the following dimensions: >=0805 inch(2012mm):40x100x1.2mm <0805 inch(2012mm):40x100x0.8mm Bending depth: >=0805 inch(2012mm):1.2mm <0805 inch(2012mm):0.8mm duration of 10 sec.														
Shock		<table border="1" data-bbox="970 385 1407 519"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (Vi)/ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table> 3 shocks in each direction along 3 perpendicular axes. (18 shocks).	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)/ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine
Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)/ft/sec												
SMD	50	11	Half-sine	11.3												
Lead	50	11	Half-sine	11.3												
Solderability	More than 95% of the terminal electrode should be covered with solder.	a. Method B, 4 hrs @155°C dry heat @235°C±5°C Testing Time :5 +/-0.5 seconds b. Method D category 3. (8hours ± 15 min)@ 260°C±5°C Testing Time :30 +/-0.5 seconds														
Resistance to Soldering Heat	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Depth: completely cover the termination <table border="1" data-bbox="970 689 1407 806"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 ±5 (solder temp)</td> <td>10 ±1</td> <td>25mm/s ±6 mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1						
Temperature(°C)		Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles												
260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1													
Terminal Strength		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force(>0805:1kg , <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 														

# SMD Pulse Transformer

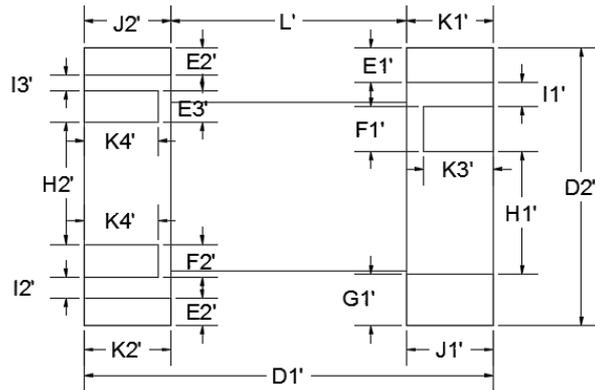
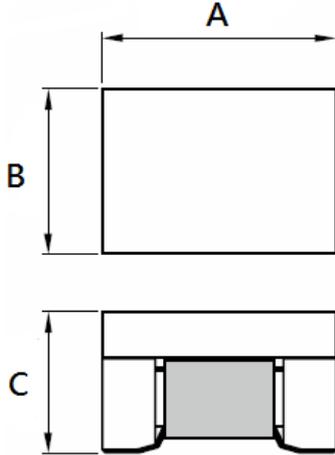
TXF453229NF-SERIES-7P

## 1. Features

1. SMD type pulse transformers.
2. TXF453229NF is small size and low profile 4.50X3.20X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +85°C (Including self - temperature rise)



## 2. Dimension / Part Dimension

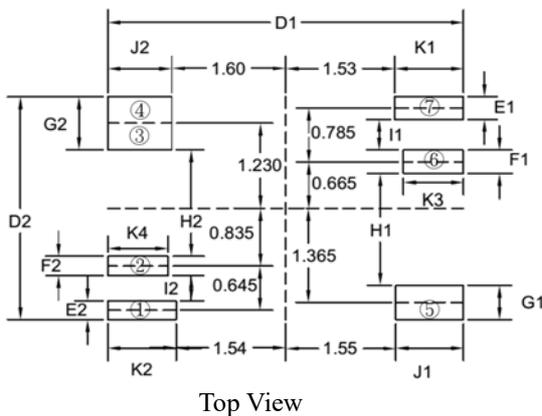


Series	A(mm)	B(mm)	C(mm)	D1'(mm)	D2'(mm)	E1'(mm)	E2'(mm)	E3'(mm)	F1'(mm)	F2'(mm)	G1'(mm)
453229NF-7P	4.70±0.20	3.22±0.20	2.9 Max	4.7±0.20	3.22±0.20	0.40±0.08	0.32±0.06	0.36±0.06	0.52±0.10	0.38±0.06	0.60±0.10

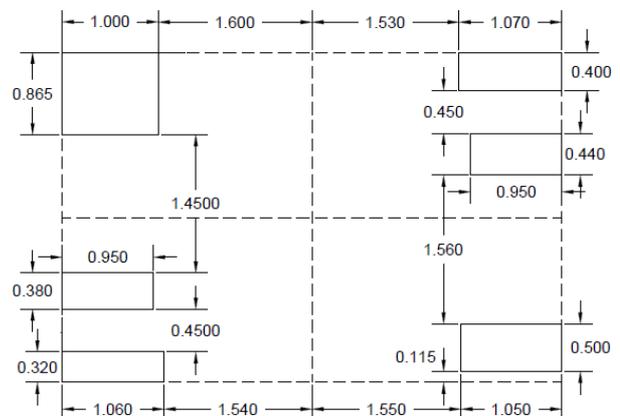
Series	H1'(mm)	H2'(mm)	I1'(mm)	I2'(mm)	I3'(mm)	J1'(mm)	J2'(mm)	K1'(mm)	K2'(mm)	K3'(mm)	K4'(mm)	L'(mm)
453229NF-7P	1.42±0.20	1.42±0.20	0.28±0.05	0.24±0.04	0.18±0.05	1.00±0.20	1.00±0.20	1.00±0.20	1.00±0.20	0.80±0.16	0.85±0.16	2.70±0.20

Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D1(mm)	D2(mm)	E1(mm)	E2(mm)	F1(mm)	F2(mm)	G1(mm)	G2(mm)	H1(mm)	H2(mm)
453229NF-7P	5.0	3.23	0.33	0.27	0.34	0.28	0.50	0.77	1.61	1.54

Series	I1(mm)	I2(mm)	J1(mm)	J2(mm)	K1(mm)	K2(mm)	K3(mm)	K4(mm)
453229NF-7P	0.45	0.37	0.95	0.90	0.97	0.96	0.85	0.85

### 3. Part Numbering



- A: Series
- B: Dimension                      AxBxC
- C: Material                         Ferrite Core
- D: RoHs                              F=Lead Free
- E: Inductance                      181=180 uH
- F: Control S/N

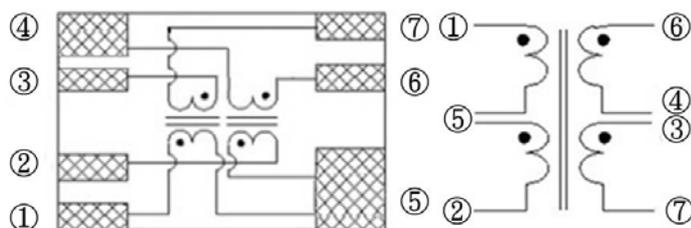
### 4. Specification

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑥to⑦ (③-④short)	Test Frequency (Hz/V)	Insertion loss	Cp Capacitance (pF) (③-④short) and ⑤	Turns ratio ①-② : ③-④ (short ⑥to⑦)	HI-POT ①②⑤to⑥⑦ : ③-④short
TXF453229NF-181-7P	180 uH(min)	100K/0.1	1-100MHZ -1.0dB Max	35pF(typ.)	1:1	AC 1.5KV 60SEC

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑥to⑦ (③-④short)	Inductance (uH) (DC bias 15mA) Measure ①-② Or Measure ⑥to⑦ (③-④short)	Test Frequency (Hz/V)	Insertion loss	Cp Capacitance (pF) (③-④short) and ⑤	Turns ratio ①-② : ③-④ (short ⑥to⑦)	HI-POT ①②⑤to⑥⑦ : ③-④short
TXF453229NF-231-7P	230 uH(min)	200 uH(min)	100K/0.1	1-100MHZ -1.5dB Max	35pF(typ.)	1:1	AC 1.5KV 60SEC

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) ①to② or ③-④short ⑥to⑦	Inductance (uH) (DC bias 8mA) ①to② or ③-④short ⑥to⑦	Test Frequency (Hz/V)	Insertion loss	Cp Capacitance(pF) ③-④short to⑤	Turns ratio ①to② : ③-④short ⑥to⑦	HI-POT
TXF453229NF-381-7P	380 uH(Min)	350 uH(Min)	100K/0.1	1-100MHZ -1.5dB Max	35pF(typ)	1:1	AC 1.5KV 60SEC

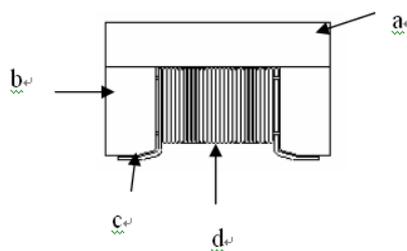
### 5. Schematic Diagram



Top View

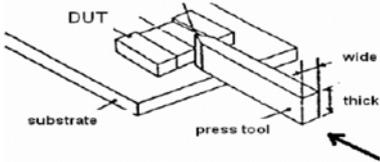
## 6. Materials

No.	Description	Specification
a.	Upper Plate	Ferrite
b.	Core	Ferrite Core
c.	Termination	Ag/Ni/Sn
d.	Wire	Enameled Copper Wire



## 7. Reliability and Test Condition (TXF453229-7P)

Item	Performance	Test Condition
Operating temperature	-40~ +85°C (Including self - temperature rise)	
Storage temperature	-40~ +85°C (on board)	
<b>Electrical Performance Test</b>		
Ls	Refer to standard electrical characteristics list.	Keysight –E4980AL+ Keysight t -16334A
Cp		Keysight –E4980AL+ Keysight t -16334A
Insertion Loss		Agilent E5071C
<b>Reliability Test</b>		
Life Test	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Temperature : 85±2°C Applied current : rated current Duration : 1000±12hrs Measured at room temperature after placing for 24 hrs.
Load Humidity		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Humidity : 85±3% R.H, Temperature : 85°C±2°C Duration : 1000hrs Min. Bead : with 100% rated current · Inductance: with 10% rated current Measured at room temperature after placing for 24 hrs.
Moisture Resistance		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) 1. Baked at50°C for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65±2°C 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs. 3. Raise temperature to 65±2°C 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs,keep at 25°C for 2 hrs then keep at -10°C for 3 hrs 4. Keep at 25°C 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.
Thermal shock		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Condition for 1 cycle Step1 : -40±2°C 30±5min Step2 : 85±2°C ≤0.5min Step3 : 85±2°C 30±5min Number of cycles : 500 Measured at room temperature after placing for 24 hrs.
Vibration		Oscillation Frequency: 10Hz~2KHz~10Hz for 20 minute Equipment : Vibration checker Total Amplitude:10g Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations)

Item	Performance	Test Condition															
Bending		Shall be mounted on a FR4 substrate of the following dimensions: >=0805 inch(2012mm):40x100x1.2mm <0805 inch(2012mm):40x100x0.8mm Bending depth: >=0805 inch(2012mm):1.2mm <0805 inch(2012mm):0.8mm duration of 10 sec.															
Shock	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	<table border="1" data-bbox="970 405 1407 539"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (Vi)ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table> 3 shocks in each direction along 3 perpendicular axes. (18 shocks).	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)ft/sec													
SMD	50	11	Half-sine	11.3													
Lead	50	11	Half-sine	11.3													
Solderability	More than 95% of the terminal electrode should be covered with solder.	a. Method B, 4 hrs @155°C dry heat @235°C±5°C Testing Time :5 +0/-0.5 seconds b. Method D category 3. (8hours ± 15 min)@ 260°C±5°C Testing Time :30 +0/-0.5 seconds															
Resistance to Soldering Heat		Depth: completely cover the termination <table border="1" data-bbox="970 701 1401 813"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 ±5 (solder temp)</td> <td>10 ±1</td> <td>25mm/s ±6 mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1							
Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles														
260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1														
Terminal Strength	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force(>0805:1kg , <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 															

# SMD LAN Inductor

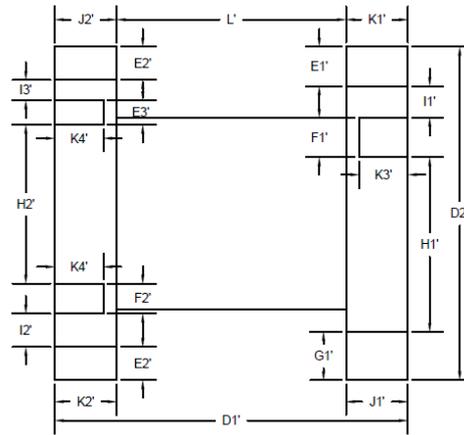
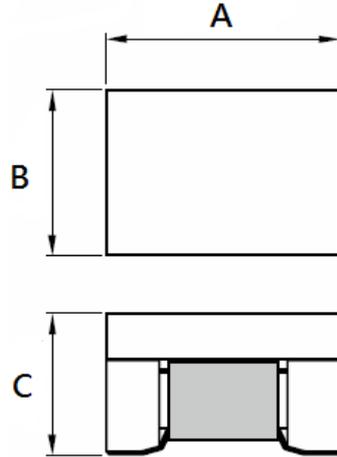
TXF403829NF-SERIES-7P

## 1. Features

1. SMD type pulse transformers.
2. TXF403829NF is small size and low profile 4.00X3.80X2.90 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +105°C (Including self - temperature rise)
5. TXF403829NF-SERIES-7P-for 10/100/1G Base-T
6. TXF403829NF-SERIES-7P-P1-for 10/100/1G Base-T, POE+ 720mA



## 2. Dimension / Part Dimension



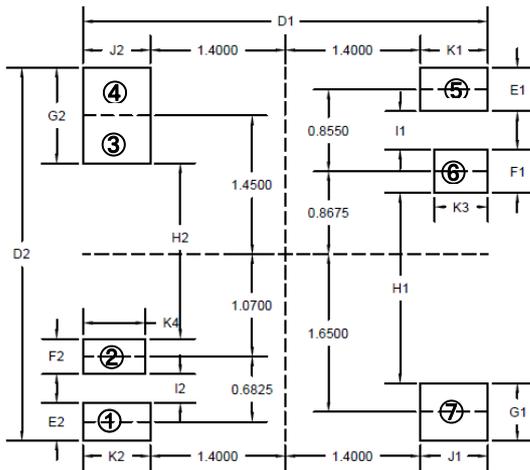
Top View

Series	A(mm)	B(mm)	C(mm)	D1'(mm)	D2'(mm)	E1'(mm)	E2'(mm)	E3'(mm)	F1'(mm)	F2'(mm)	G1'(mm)
403829NF-7P	4.00±0.20	3.80±0.20	2.9 Max	4.08±0.20	3.90±0.20	0.50±0.08	0.45±0.06	0.33±0.06	0.48±0.10	0.34±0.06	0.62±0.10

Series	H1'(mm)	H2'(mm)	I1'(mm)	I2'(mm)	I3'(mm)	J1'(mm)	J2'(mm)	K1'(mm)	K2'(mm)	K3'(mm)	K4'(mm)	L'(mm)
403829NF-7P	2.00±0.20	1.96±0.20	0.30±0.05	0.22±0.04	0.15±0.05	0.76±0.20	0.76±0.20	0.76±0.20	0.76±0.20	0.64±0.16	0.64±0.16	2.56±0.20

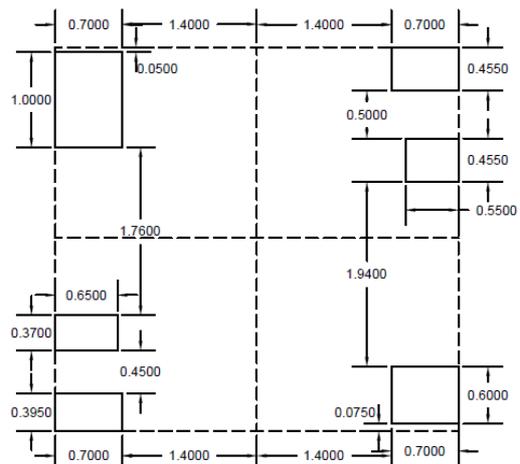
Units: mm

### Recommended PC Board Pattern



Top View

### Solder paste stencil aperture recommendation



Series	D1(mm)	D2(mm)	E1(mm)	E2(mm)	F1(mm)	F2(mm)	G1(mm)	G2(mm)	H1(mm)	H2(mm)
403829NF-7P	4.200	3.900	0.455	0.395	0.455	0.370	0.600	1.000	1.990	1.835

Series	I1(mm)	I2(mm)	J1(mm)	J2(mm)	K1(mm)	K2(mm)	K3(mm)	K4(mm)
403829NF-7P	0.400	0.300	0.700	0.700	0.700	0.700	0.550	0.650



# SMD LAN Inductor

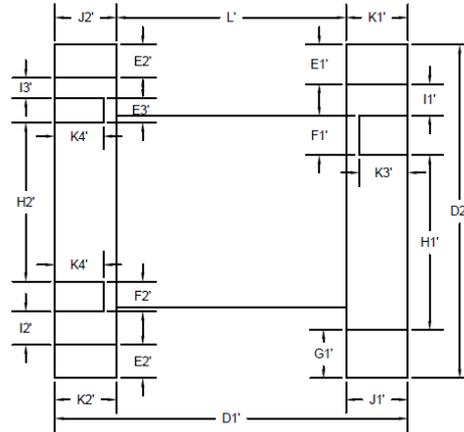
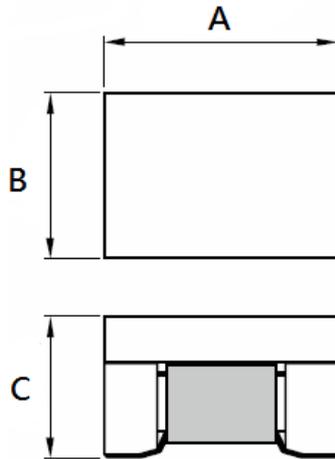
TXF403829NF-SERIES-7P-G

## 1. Features

1. SMD type pulse transformers.
2. TXF403829NF is small size and low profile 4.00X3.80X2.90 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +105°C (Including self - temperature rise)
5. TXF403829NF-SERIES-7P-G-for 1G, 2.5/5G Base-T
6. TXF403829NF-SERIES-7P-G-P0-for 1G, 2.5/5G Base-T, POE 350mA
7. TXF403829NF-SERIES-7P-G-P1-for 1G, 2.5/5G Base-T, POE+ 720mA



## 2. Dimension / Part Dimension



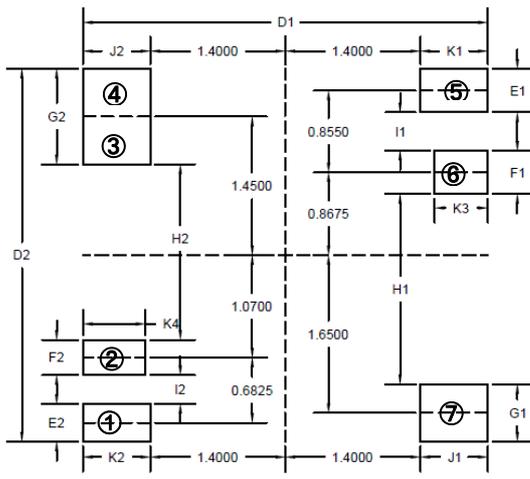
Top View

Series	A(mm)	B(mm)	C(mm)	D1'(mm)	D2'(mm)	E1'(mm)	E2'(mm)	E3'(mm)	F1'(mm)	F2'(mm)	G1'(mm)
403829NF-7P	4.00±0.20	3.80±0.20	2.9 Max	4.08±0.20	3.90±0.20	0.50±0.08	0.45±0.06	0.33±0.06	0.48±0.10	0.34±0.06	0.62±0.10

Series	H1'(mm)	H2'(mm)	I1'(mm)	I2'(mm)	I3'(mm)	J1'(mm)	J2'(mm)	K1'(mm)	K2'(mm)	K3'(mm)	K4'(mm)	L'(mm)
403829NF-7P	2.00±0.20	1.96±0.20	0.30±0.05	0.22±0.04	0.15±0.05	0.76±0.20	0.76±0.20	0.76±0.20	0.76±0.20	0.64±0.16	0.64±0.16	2.56±0.20

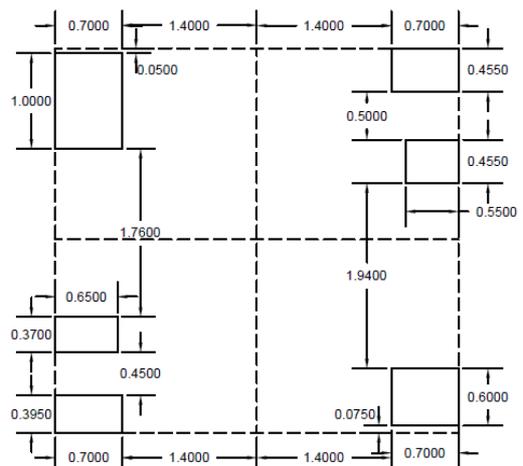
Units: mm

### Recommended PC Board Pattern



Top View

### Solder paste stencil aperture recommendation



Series	D1(mm)	D2(mm)	E1(mm)	E2(mm)	F1(mm)	F2(mm)	G1(mm)	G2(mm)	H1(mm)	H2(mm)
403829NF-7P	4.200	3.900	0.455	0.395	0.455	0.370	0.600	1.000	1.990	1.835

Series	I1(mm)	I2(mm)	J1(mm)	J2(mm)	K1(mm)	K2(mm)	K3(mm)	K4(mm)
403829NF-7P	0.400	0.300	0.700	0.700	0.700	0.700	0.550	0.650



# SMD LAN Inductor

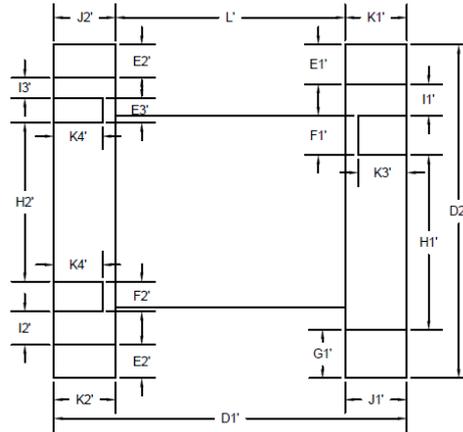
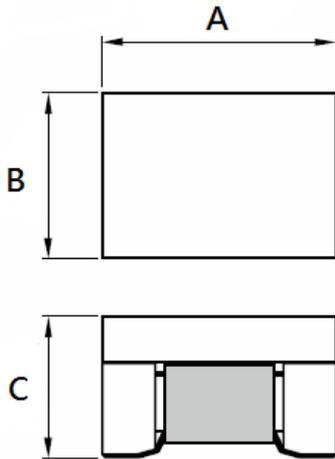
TXF403829NF-121-7P-S

## 1. Features

1. SMD type pulse transformers.
2. TXF403829NF is small size and low profile 4.00X3.80X2.90 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +105°C (Including self - temperature rise)
5. TXF403829NF-121-7P-S-for 1G, 2.5/5G, 10G Base-T
6. TXF403829NF-121-7P-S-P0-for 1G, 2.5/5G, 10G Base-T, POE 350mA
7. TXF403829NF-121-7P-S-P1-for 1G, 2.5/5G, 10G Base-T, POE+ 720mA



## 2. Dimension / Part Dimension



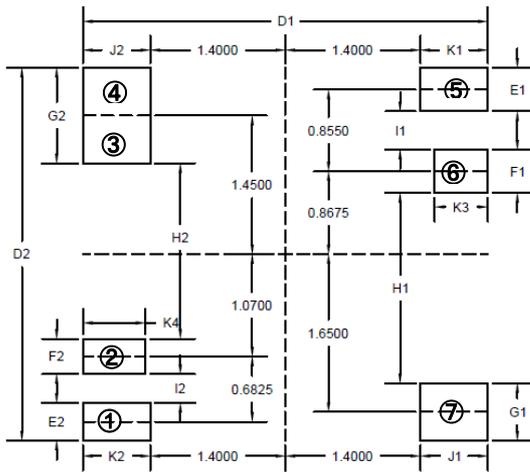
Top View

Series	A(mm)	B(mm)	C(mm)	D1'(mm)	D2'(mm)	E1'(mm)	E2'(mm)	E3'(mm)	F1'(mm)	F2'(mm)	G1'(mm)
403829NF-7P	4.00±0.20	3.80±0.20	2.9 Max	4.08±0.20	3.90±0.20	0.50±0.08	0.45±0.06	0.33±0.06	0.48±0.10	0.34±0.06	0.62±0.10

Series	H1'(mm)	H2'(mm)	I1'(mm)	I2'(mm)	I3'(mm)	J1'(mm)	J2'(mm)	K1'(mm)	K2'(mm)	K3'(mm)	K4'(mm)	L'(mm)
403829NF-7P	2.00±0.20	1.96±0.20	0.30±0.05	0.22±0.04	0.15±0.05	0.76±0.20	0.76±0.20	0.76±0.20	0.76±0.20	0.64±0.16	0.64±0.16	2.56±0.20

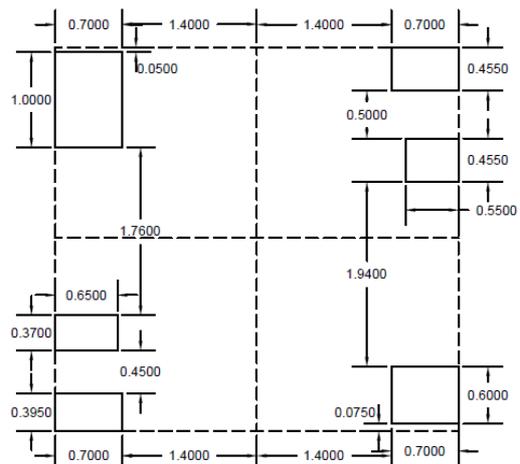
Units: mm

### Recommended PC Board Pattern



Top View

### Solder paste stencil aperture recommendation



Series	D1(mm)	D2(mm)	E1(mm)	E2(mm)	F1(mm)	F2(mm)	G1(mm)	G2(mm)	H1(mm)	H2(mm)
403829NF-7P	4.200	3.900	0.455	0.395	0.455	0.370	0.600	1.000	1.990	1.835

Series	I1(mm)	I2(mm)	J1(mm)	J2(mm)	K1(mm)	K2(mm)	K3(mm)	K4(mm)
403829NF-7P	0.400	0.300	0.700	0.700	0.700	0.700	0.550	0.650

### 3. Part Numbering

TXF 403829 N F - 121 - 7P - S  
 A B C D E F G

A: Series  
 B: Dimension AxBxC  
 C: Material Ferrite Core  
 D: RoHs F=Lead Free  
 E: Inductance 121=120 uH  
 F: Control S/N  
 G: Control S/N

### 4. Specification

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Test Frequency (Hz/V)	Insertion Loss (1-500MHz)	Cp Capacitance (pF) (③-④short) and ⑦	Turns ratio ①-② : ⑤-⑥ (short ③to④)	HI-POT ①②⑦to⑤⑥ (short ③to④)
TXF403829NF-121-7P-S	120 uH(min)	100K/0.1	-3.0dB typ. -4.0dB max.	30pF(typ.)	1:1	AC 1.5KV 60SEC

### 3. Part Numbering

TXF 403829 N F - 121 - 7P - SP0  
 A B C D E F G

A: Series  
 B: Dimension AxBxC  
 C: Material Ferrite Core  
 D: RoHs F=Lead Free  
 E: Inductance 121=120 uH  
 F: Control S/N  
 G: Control S/N

### 4. Specification

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Test Frequency (Hz/V)	Insertion Loss (1-500MHz)	Cp Capacitance (pF) (③-④short) and ⑦	Turns ratio ①-② : ⑤-⑥ (short ③to④)	Rated Current (mA) Max.	HI-POT ①②⑦to⑤⑥ (short ③to④)
TXF403829NF-121-7P-SP0	120 uH(min)	100K/0.1	-3.0dB typ. -4.0dB max.	30pF(typ.)	1:1	350	AC 1.5KV 60SEC
TXF403829NF-121-7P-SP1	120 uH(min)	100K/0.1	-3.0dB typ. -4.0dB max.	30pF(typ.)	1:1	720	AC 1.5KV 60SEC

# SMD LAN Inductor

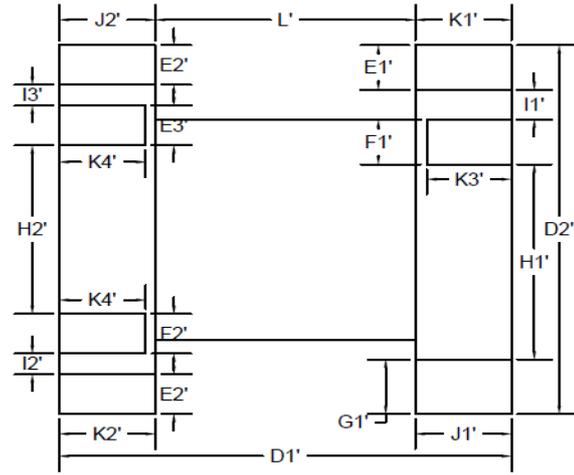
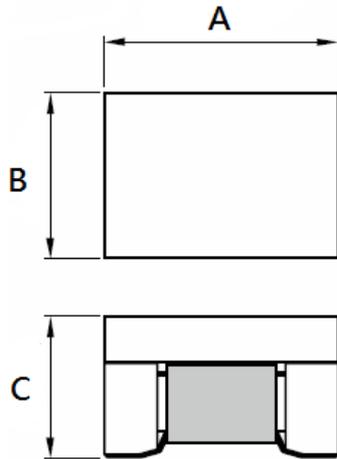
TXF464429NF-381-7P

## 1. Features

1. SMD type pulse transformers.
2. TXF464429NF is small size and low profile 4.60X4.40X2.9 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +105°C (Including self - temperature rise)
5. TXF464429NF-381-7P -for 10/100/1G Base-T
6. TXF464429NF-381-7P-P0-for 10/100/1G Base-T, POE 350mA



## 2. Dimension / Part Dimension



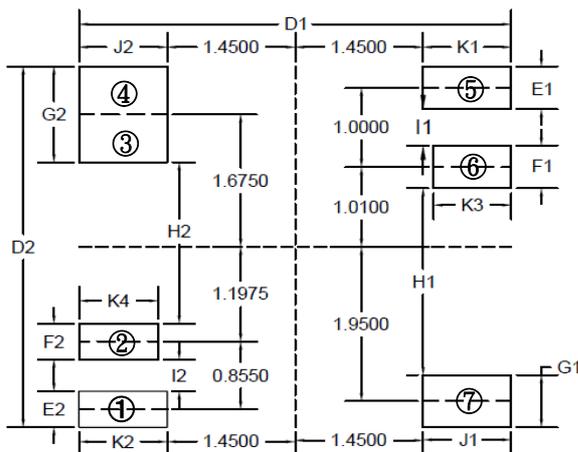
Top View

Series	A(mm)	B(mm)	C(mm)	D1'(mm)	D2'(mm)	E1'(mm)	E2'(mm)	E3'(mm)	F1'(mm)	F2'(mm)	G1'(mm)
464429NF-7P	4.70±0.20	4.40±0.20	2.90Max	4.7±0.20	4.46±0.20	0.56±0.08	0.48±0.06	0.50±0.06	0.56±0.10	0.50±0.06	0.65±0.10

Series	H1'(mm)	H2'(mm)	I1'(mm)	I2'(mm)	I3'(mm)	J1'(mm)	J2'(mm)	K1'(mm)	K2'(mm)	K3'(mm)	K4'(mm)	L'(mm)
464429NF-7P	2.38±0.20	2.04±0.20	0.33±0.05	0.24±0.04	0.24±0.05	1.00±0.20	1.00±0.20	1.00±0.20	1.00±0.20	0.88±0.16	0.90±0.16	2.70±0.20

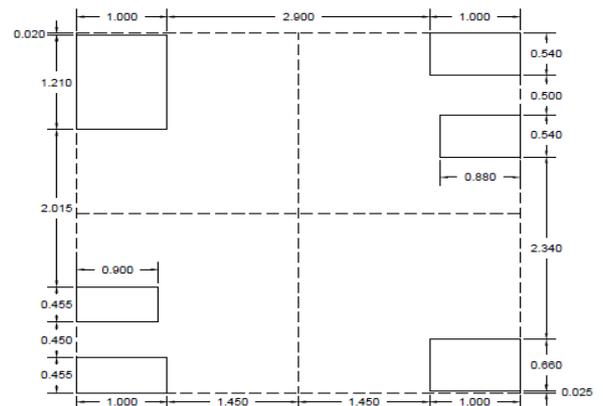
Units: mm

### Recommended PC Board Pattern



Top View

### Solder paste stencil aperture recommendation



Series	D1(mm)	D2(mm)	E1(mm)	E2(mm)	F1(mm)	F2(mm)	G1(mm)	G2(mm)	H1(mm)	H2(mm)
464429NF-7P	4.90	4.56	0.54	0.455	0.54	0.455	0.66	1.21	2.36	2.04

Series	I1(mm)	I2(mm)	J1(mm)	J2(mm)	K1(mm)	K2(mm)	K3(mm)	K4(mm)
464429NF-7P	0.46	0.40	1.00	1.00	1.00	1.00	0.88	0.90

### 3. Part Numbering

TXF 464429 N F - 381 - 7P  
 A B C D E F

- A: Series
- B: Dimension AxBxC
- C: Material Ferrite Core
- D: RoHs F=Lead Free
- E: Inductance 381=380 uH
- F: Control S/N

### 4. Specification

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Inductance (uH) (DC bias 8mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Test Frequency (Hz/V)	Insertion loss	Cp Capacitance(pF) (③-④short) and ⑦	Turns ratio ①-② : ⑤-⑥ (short ③to④)	HI-POT ①②⑦to⑤⑥ (short ③to④)
TXF464429NF-381-7P	380 uH(Min)	350 uH(Min)	100K/0.1	1-100MHZ -1.5dB Max	35pF(typ)	1:1	AC 1.5KV 60SEC

### 3. Part Numbering

TXF 464429 N F - 381 - 7P - P0  
 A B C D E F G

- A: Series
- B: Dimension AxBxC
- C: Material Ferrite Core
- D: RoHs F=Lead Free
- E: Inductance 381=380 uH
- F: Control S/N
- G: Control S/N

### 4. Specification

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Inductance (uH) (DC bias 8mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Test Frequency (Hz/V)	Insertion loss	Cp Capacitance (pF) (③-④short) and ⑦	Turns ratio ①-② : ⑤-⑥ (short ③to④)	Rated Current (mA) Max.	HI-POT ①②⑦to⑤⑥ (short ③to④)
TXF464429NF-381-7P-P0	380 uH(Min)	350 uH(Min)	100K/0.1	1-100MHZ -1.5dB Max	35pF(typ)	1:1	350	AC 1.5KV 60SEC

# SMD LAN Inductor

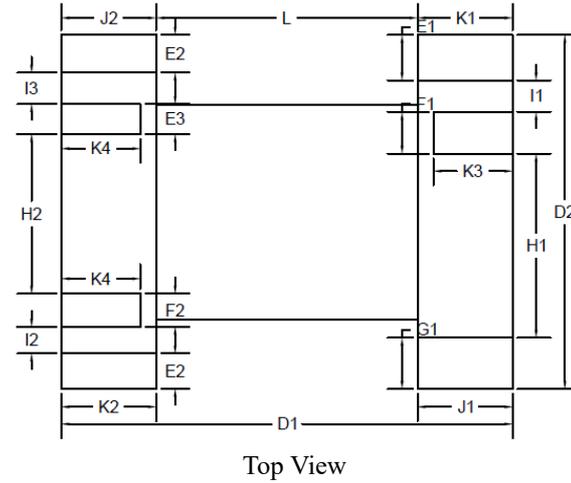
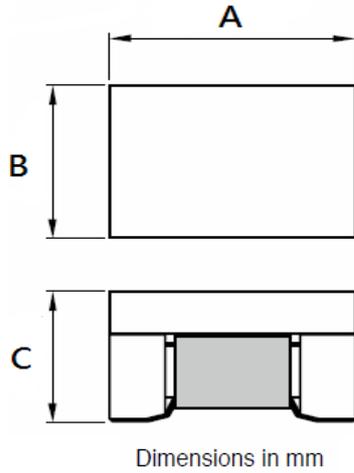
TXF564545NF-151-7P

## 1. Features

1. SMD type pulse transformers.
2. TXF564545NF is small size and low profile 5.60X4.50X4.50 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +105°C (Including self - temperature rise)
5. TXF564545NF-151-7P -for 10/100/1G Base-T
5. TXF564545NF-151-7P-P1-for 10/100/1G Base-T, POE+ 720mA
5. TXF564545NF-151-7P-P2-for 10/100/1G Base-T, POE++ 1000mA



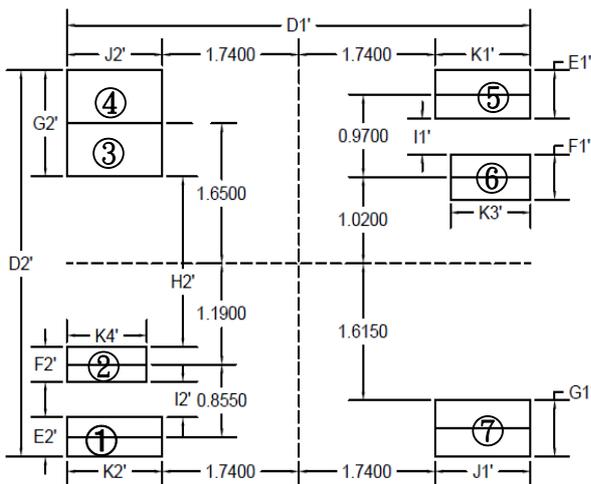
## 2. Dimension / Part Dimension



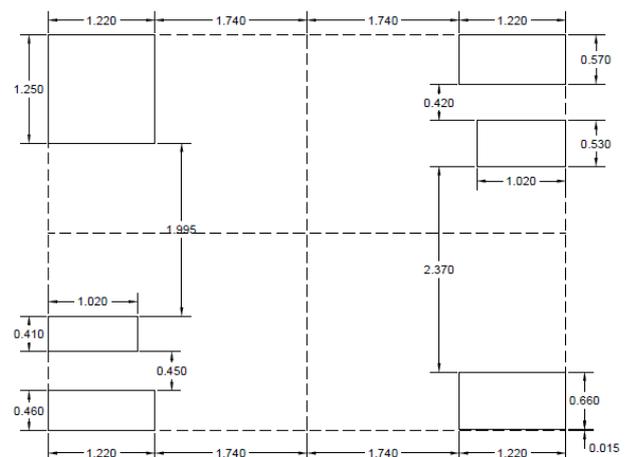
Series	A(mm)	B(mm)	C(mm)	D1(mm)	D2(mm)	E1(mm)	E2(mm)	E3(mm)	F1(mm)	F2(mm)	G1(mm)	H1(mm)
564545NF	5.72±0.20	4.45±0.20	4.50Max	5.72±0.20	4.45±0.20	0.57±0.08	0.46±0.06	0.42±0.06	0.53±0.06	0.41±0.06	0.66±0.10	2.32±0.20
Series	H2(mm)	I1(mm)	I2(mm)	I3(mm)	J1(mm)	J2(mm)	K1(mm)	K2(mm)	K3(mm)	K4(mm)	L(mm)	
564545NF	1.97±0.20	0.37±0.05	0.37±0.05	0.36±0.05	1.22±0.20	1.22±0.20	1.22±0.20	1.22±0.20	1.02±0.16	1.02±0.16	3.28±0.20	

Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D1'(mm)	D2'(mm)	E1'(mm)	E2'(mm)	F1'(mm)	F2'(mm)	G1'(mm)	G2'(mm)	H2'(mm)
564545NF	5.92	4.55	0.57	0.46	0.53	0.41	0.66	1.25	2.01
Series	I1'(mm)	I2'(mm)	J1'(mm)	J2'(mm)	K1'(mm)	K2'(mm)	K3'(mm)	K4'(mm)	
564545NF	0.42	0.42	1.22	1.22	1.22	1.22	1.02	1.02	

Units: mm

### 3. Part Numbering

**TXF** **564545** **N** **F** - **151** - **7P**  
 A B C D E F

- A: Series
- B: Dimension AxBxC
- C: Material Ferrite Core
- D: RoHs F=Lead Free
- E: Inductance 151=150uH
- F: Control S/N

### 4. Specification

TAI-TECH Part Number	Inductance (uH) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Test Frequency (Hz/V)	Insertion loss 1-100MHZ	Return loss 1-100MHZ	Cp Capacitance(pF) (③-④short) and ⑦	Turns ratio ①-② : ⑤-⑥ (short ③to ④)	HI-POT ①②⑦to⑤⑥ (short ③to④)
TXF564545NF-151-7P	150 Min	100K/0.1	-1.0dB typ. -1.2 dB Max	-15dB typ. -12 dB min.	40pF(typ)	1:1	AC 1.5KV 60SEC

### 3. Part Numbering

**TXF** **564545** **N** **F** - **151** - **7P** - **P1**  
 A B C D E F G

- A: Series
- B: Dimension AxBxC
- C: Material Ferrite Core
- D: RoHs F=Lead Free
- E: Inductance 151=150uH
- F: Control S/N
- G: Control S/N

### 4. Specification

TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Inductance (uH) (DC bias 15mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Test Frequency (Hz/V)	Insertion loss 1-100MHZ	Return loss 1-100MHZ	Cp Capacitance (pF) (③-④short) and ⑦	Rated Current (mA)max. ①②short to ⑦ or ③④short to ⑤⑥	Turns ratio ①-② : ⑤-⑥ (short ③to④)	HI-POT ①②⑦to⑤⑥ (short ③to④)
TXF564545NF-151-7P-P1	150 Min	120 Min	100K/0.1	-1.0dB typ. -1.2 dB Max	-15dB typ. -12 dB min.	40pF(typ)	720	1:1	AC 1.5KV 60SEC
TXF564545NF-151-7P-P2	150 Min	120 Min	100K/0.1	-1.0dB typ. -1.2 dB Max	-15dB typ. -12 dB min.	40pF(typ)	1000	1:1	AC 1.5KV 60SEC

# SMD LAN Inductor

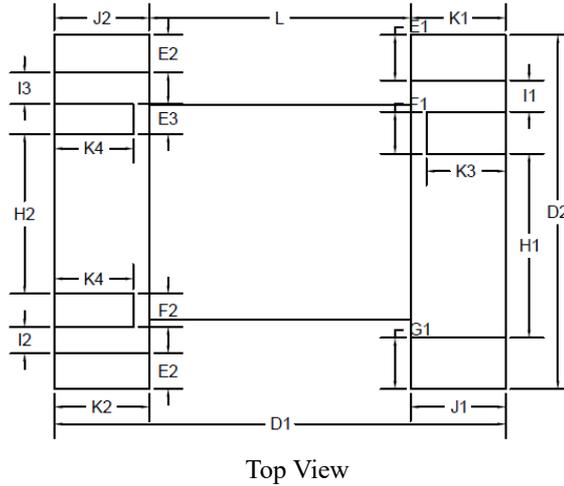
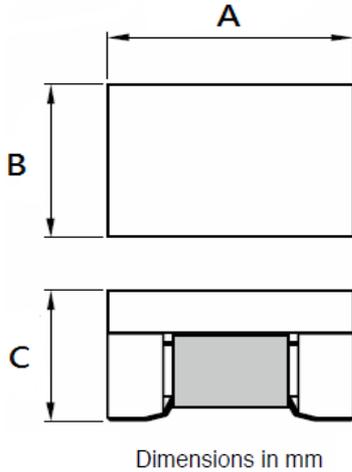
TXF564545NF-151-7P-GP2

## 1. Features

1. SMD type pulse transformers.
2. TXF564545NF is small size and low profile 5.60X4.50X4.50 mm.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
4. Operating temperature -40~ +105°C (Including self - temperature rise)
5. For 1G, 2.5/5G Base-T, POE++ 1000mA



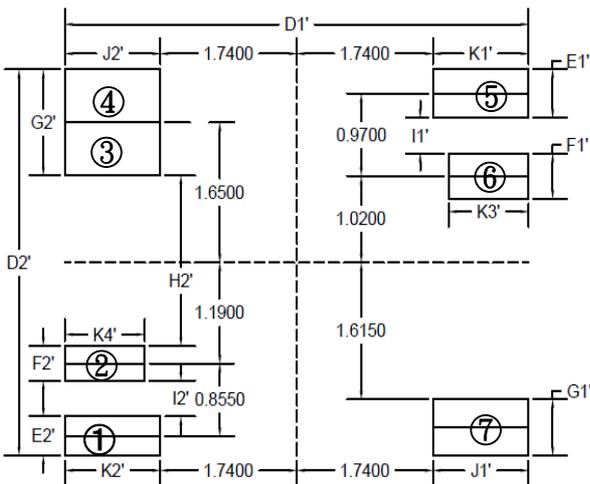
## 2. Dimension / Part Dimension



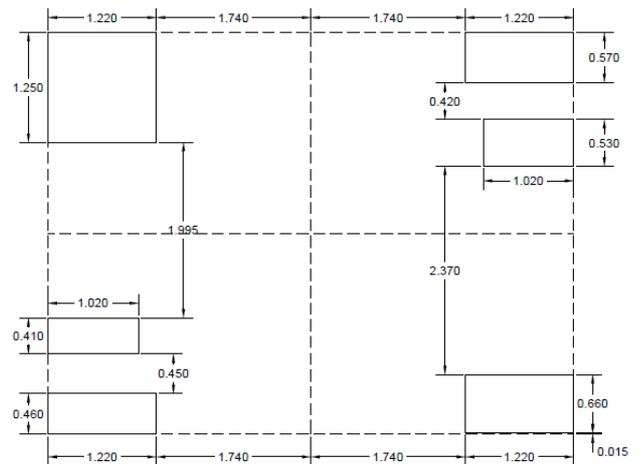
Series	A(mm)	B(mm)	C(mm)	D1(mm)	D2(mm)	E1(mm)	E2(mm)	E3(mm)	F1(mm)	F2(mm)	G1(mm)	H1(mm)
564545NF	5.72±0.20	4.45±0.20	4.50Max	5.72±0.20	4.45±0.20	0.57±0.08	0.46±0.06	0.42±0.06	0.53±0.06	0.41±0.06	0.66±0.10	2.32±0.20
Series	H2(mm)	I1(mm)	I2(mm)	I3(mm)	J1(mm)	J2(mm)	K1(mm)	K2(mm)	K3(mm)	K4(mm)	L(mm)	
564545NF	1.97±0.20	0.37±0.05	0.37±0.05	0.36±0.05	1.22±0.20	1.22±0.20	1.22±0.20	1.22±0.20	1.02±0.16	1.02±0.16	3.28±0.20	

Units: mm

### Recommended PC Board Pattern



### Solder paste stencil aperture recommendation



Series	D1'(mm)	D2'(mm)	E1'(mm)	E2'(mm)	F1'(mm)	F2'(mm)	G1'(mm)	G2'(mm)	H2'(mm)
564545NF	5.92	4.55	0.57	0.46	0.53	0.41	0.66	1.25	2.01
Series	I1'(mm)	I2'(mm)	J1'(mm)	J2'(mm)	K1'(mm)	K2'(mm)	K3'(mm)	K4'(mm)	
564545NF	0.42	0.42	1.22	1.22	1.22	1.22	1.02	1.02	

Units: mm

### 3. Part Numbering

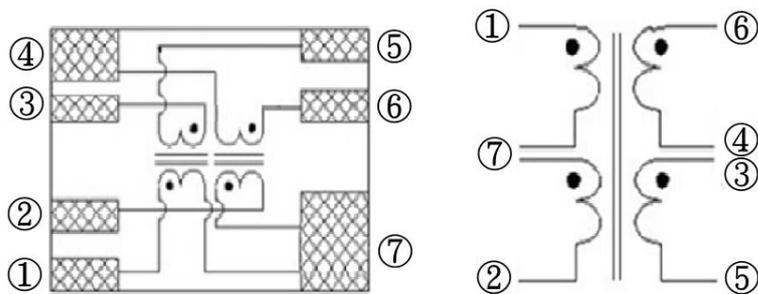


- A: Series
- B: Dimension                      AxBxC
- C: Material                          Ferrite Core
- D: RoHs                              F=Lead Free
- E: Inductance                      151=150uH
- F: Control S/N
- G: Control S/N

### 4. Specification

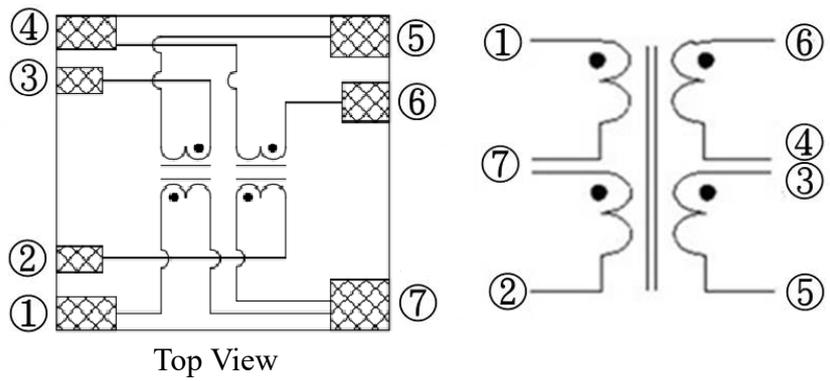
TAI-TECH Part Number	Inductance (uH) (DC bias 0mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Inductance (uH) (DC bias 15mA) Measure ①-② Or Measure ⑤to⑥ (③-④short)	Test Frequency (Hz/V)	Insertion loss 1-250MHZ	Return loss 1-250MHZ	Cp Capacitance (pF) (③-④short) and ⑦	Rated Current (mA)max. ①②short to⑦ or ③④short to⑤ ⑥	Turns ratio ①-② : ⑤-⑥ (short ③to④)	HI-POT ①②⑦to⑤⑥ (short ③to④)
TXF564545NF-151-7P-GP2	150 Min	120 Min	100K/0.1	-1.5dB typ. -2.0 dB Max	-15dB typ. -10 dB min.	40pF(typ)	1000	1:1	AC 1.5KV 60SEC

### 5. Schematic Diagram (TXF564545NF-7P)



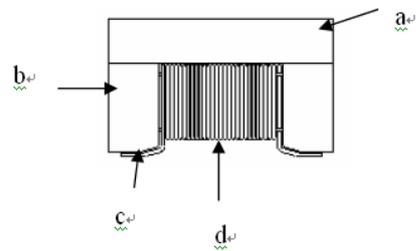
Top View

5. Schematic Diagram (TXF403829NF-7P/TXF464429NF-7P)



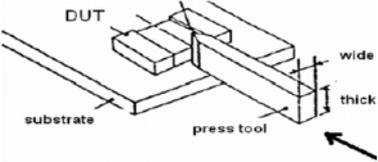
6. Materials

No.	Description	Specification
a.	Upper Plate	Ferrite
b.	Core	Ferrite Core
c.	Termination	Ag/Ni/Sn
d.	Wire	Enameled Copper Wire



## 7. Reliability and Test Condition (TXF403829NF-7P/TXF464429NF-7P/ TXF564545NF-7P)

Item	Performance	Test Condition
Operating temperature	-40~ +105°C (Including self - temperature rise)	
Storage temperature	-40~ +105°C (on board)	
<b>Electrical Performance Test</b>		
Ls	Refer to standard electrical characteristics list.	Keysight –E4980AL+ Keysight t -16334A
Cp		Keysight –E4980AL+ Keysight t -16334A
Insertion Loss		Agilent E5071C
<b>Reliability Test</b>		
Life Test	Appearance : No damage. Inductance : within±10% of initial value Cp: within ±15% of initial value and shall not Insertion Loss : within Specification	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Temperature : 105±2°C Applied current : rated current Duration : 1000±12hrs Measured at room temperature after placing for 24 hrs.
Load Humidity		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles) Humidity : 85±3% R.H, Temperature : 85°C±2°C Duration : 1000hrs Min. Bead : with 100% rated current · Inductance: with 10% rated current Measured at room temperature after placing for 24 hrs.
Moisture Resistance		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles 1. Baked at50°C for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65±2°C 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs. 3. Raise temperature to 65±2°C 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs,keep at 25°C for 2 hrs then keep at -10°C for 3 hrs 4. Keep at 25°C 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.
Thermal shock		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Condition for 1 cycle Step1 : -40±2°C 30±5min Step2 : 105±2°C ≤0.5min Step3 : 105±2°C 30±5min Number of cycles : 500 Measured at room temperature after placing for 24 hrs.
Vibration		Oscillation Frequency: 10Hz~2KHz~10Hz for 20 minute Equipment : Vibration checker Total Amplitude:10g Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations) °

Item	Performance	Test Condition															
Bending		Shall be mounted on a FR4 substrate of the following dimensions: $\geq 0805$ inch(2012mm):40x100x1.2mm $< 0805$ inch(2012mm):40x100x0.8mm Bending depth: $\geq 0805$ inch(2012mm):1.2mm $< 0805$ inch(2012mm):0.8mm duration of 10 sec.															
Shock	Appearance : No damage. Inductance : within $\pm 10\%$ of initial value Cp: within $\pm 15\%$ of initial value and shall not Insertion Loss : within Specification	<table border="1" data-bbox="981 353 1417 490"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (V)/ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table> 3 shocks in each direction along 3 perpendicular axes. (18 shocks).	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (V)/ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (V)/ft/sec													
SMD	50	11	Half-sine	11.3													
Lead	50	11	Half-sine	11.3													
Solderability	More than 95% of the terminal electrode should be covered with solder.	a. Method B, 4 hrs @155°C dry heat @235°C $\pm 5^\circ\text{C}$ Testing Time :5 +/0-0.5 seconds b. Method D category 3. (8hours $\pm 15$ min)@ 260°C $\pm 5^\circ\text{C}$ Testing Time :30 +/0-0.5 seconds															
Resistance to Soldering Heat		Depth: completely cover the termination <table border="1" data-bbox="981 658 1417 772"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 <math>\pm 5</math> (solder temp)</td> <td>10 <math>\pm 1</math></td> <td>25mm/s <math>\pm 6</math> mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 $\pm 5$ (solder temp)	10 $\pm 1$	25mm/s $\pm 6$ mm/s	1							
Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles														
260 $\pm 5$ (solder temp)	10 $\pm 1$	25mm/s $\pm 6$ mm/s	1														
Terminal Strength	Appearance : No damage. Inductance : within $\pm 10\%$ of initial value Cp: within $\pm 15\%$ of initial value and shall not Insertion Loss : within Specification	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force( $>0805:1\text{kg}$ , $\leq 0805:0.5\text{kg}$ )to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 															

## 8. Soldering and Mounting

### 8-1. Soldering

Mildly activated rosin fluxes are preferred. TAI-TECH terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

#### 8-1.1 Soldering Reflow:

Recommended temperature profiles for lead free re-flow soldering in Figure 1. Table 1.1&1.2 (J-STD-020E)

#### 8-1.2 Soldering Iron:

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended. (Figure 2.)

- Preheat circuit and products to 150°C
- Never contact the ceramic with the iron tip
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- 350°C tip temperature (max)
- 1.0mm tip diameter (max)
- Limit soldering time to 4~5sec.

Fig.1 Soldering Reflow

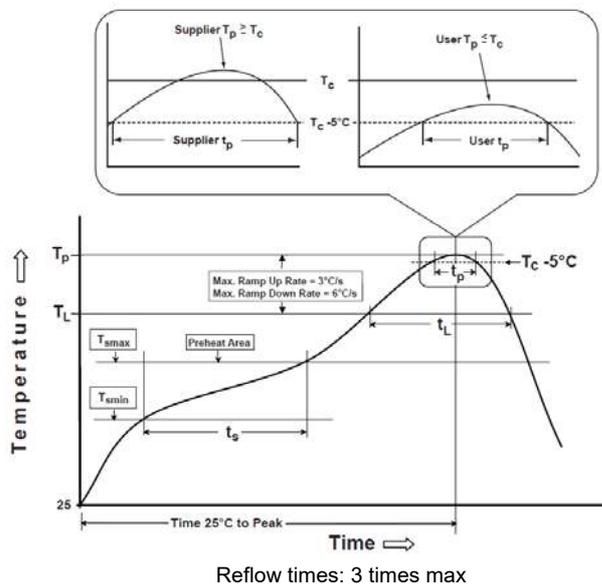
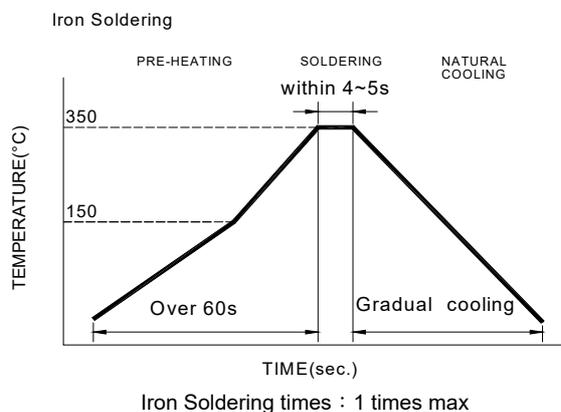


Fig.2 Iron soldering temperature profiles



**Table (1.1): Reflow Profiles**

Profile Type:	Pb-Free Assembly
Preheat -Temperature Min( $T_{smin}$ ) -Temperature Max( $T_{smax}$ ) -Time( $t_s$ )from( $T_{smin}$ to $T_{smax}$ )	150°C 200°C 60-120seconds
Ramp-up rate( $T_L$ to $T_p$ )	3°C/second max.
Liquidus temperature( $T_L$ ) Time( $t_L$ )maintained above $T_L$	217°C 60-150 seconds
Classification temperature( $T_c$ )	See Table (1.2)
Time( $t_p$ ) at $T_c - 5^\circ\text{C}$ ( $T_p$ should be equal to or less than $T_c$ .)	< 30 seconds
Ramp-down rate( $T_p$ to $T_L$ )	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

**T<sub>p</sub>**: maximum peak package body temperature, **T<sub>c</sub>**: the classification temperature.

For user (customer) **T<sub>p</sub>** should be equal to or less than **T<sub>c</sub>**.

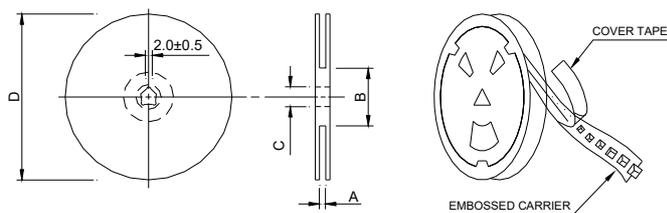
**Table (1.2) Package Thickness/Volume and Classification Temperature (T<sub>c</sub>)**

	Package Thickness	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350-2000	Volume mm <sup>3</sup> >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020E ◦

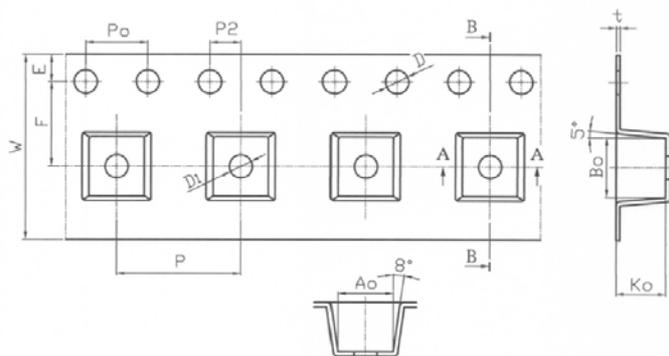
## 9. Packaging Information

### 9-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x12mm	12.5±0.5	100.0±2.0	13.5±0.5	330

### 9-2. Tape Dimension / 12mm

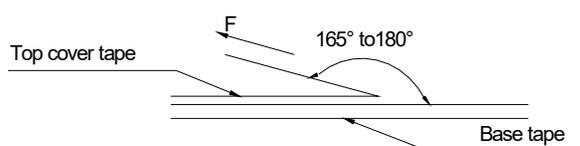


Series	P(mm)	P0(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)	D(mm)	D1(mm)	E(mm)	F(mm)	W(mm)	t(mm)
TXF353229N	8.00±0.10	4.00±0.10	2.00±0.05	3.90±0.10	3.55±0.10	3.20±0.10	1.05+0.10/-0.00	1.50±0.10	1.75±0.10	5.50±0.05	12.00±0.10	0.30±0.05

### 9-3. Packaging Quantity

Chip size	Chip/Reel	Inner Box	Carton
TXF353229N	2000	4000	32000

### 9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

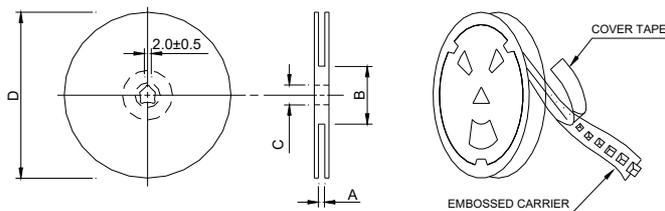
Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

#### Application Notice

- Storage Conditions(component level)
  - To maintain the solderability of terminal electrodes:
    1. TAI-TECH products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
    2. Temperature and humidity conditions: Less than 40°C and 60% RH.
    3. Recommended products should be used within 6 months form the time of delivery.
    4. The packaging material should be kept where no chlorine or sulfur exists in the air.
- Transportation
  1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
  2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
  3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

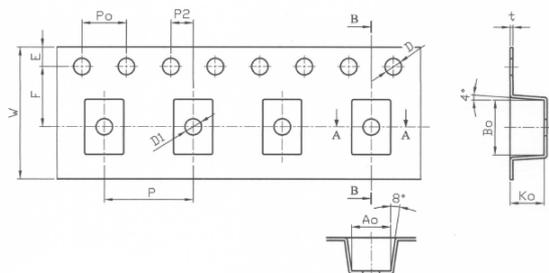
## 9. Packaging Information

### 9-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x12mm	12.5±0.5	100.0±2.0	13.5±0.5	330

### 9-2. Tape Dimension / 12mm

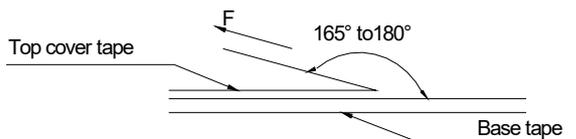


Series	P(mm)	Po(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)	D(mm)	E(mm)	F(mm)	W(mm)	t(mm)	D1(mm)
TXF453229N	8.00±0.10	4.00±0.10	2.00±0.05	4.90±0.10	3.60±0.10	3.00±0.10	1.50+0.10/-0.00	1.75±0.10	5.50±0.05	12.00±0.10	0.26±0.05	1.50±0.10

### 9-3. Packaging Quantity

Chip size	Chip/Reel	Inner Box	Carton
TXF453229N	2000	4000	32000

### 9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

#### Application Notice

• Storage Conditions

To maintain the solderability of terminal electrodes:

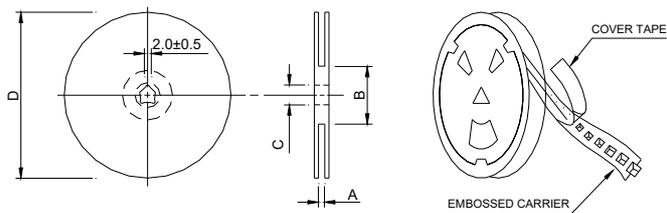
1. TAI-TECH products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

• Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

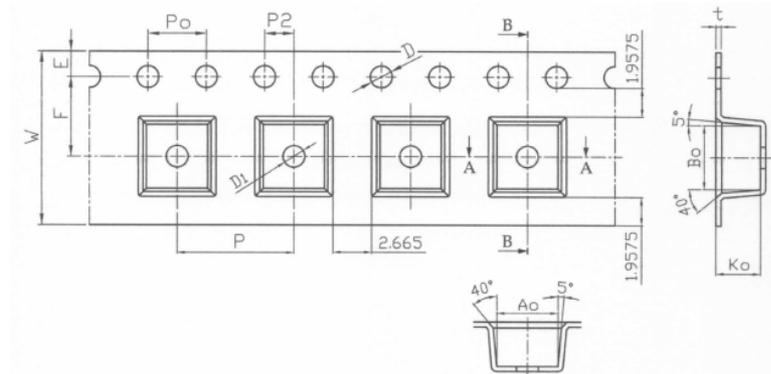
## 9. Packaging Information

### 9-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x12mm	12.5±0.5	100.0±2.0	13.5±0.5	330

### 9-2. Tape Dimension / 12mm

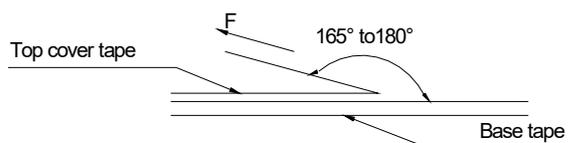


Series	P(mm)	Po(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)	D(mm)	E(mm)	F(mm)	W(mm)	t(mm)	D1(mm)
TXF403829N	8.00±0.10	4.00±0.10	2.00±0.10	4.45±0.10	4.20±0.10	3.05±0.10	1.50+0.10/-0.00	1.75±0.10	5.50±0.10	12.00±0.30	0.35±0.05	1.50±0.10

### 9-3. Packaging Quantity

Chip size	Chip/Reel	Inner Box	Carton
TXF403829N	2000	4000	32000

### 9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

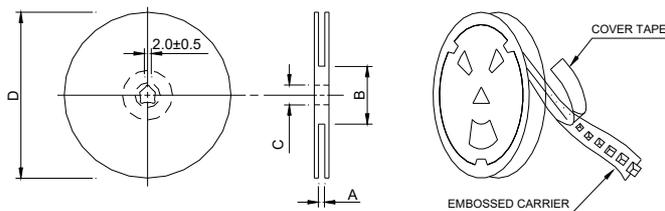
Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

#### Application Notice

- Storage Conditions
  - To maintain the solderability of terminal electrodes:
    1. TAI-TECH products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
    2. Temperature and humidity conditions: Less than 40°C and 60% RH.
    3. Recommended products should be used within 12 months from the time of delivery.
    4. The packaging material should be kept where no chlorine or sulfur exists in the air.
- Transportation
  1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
  2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
  3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

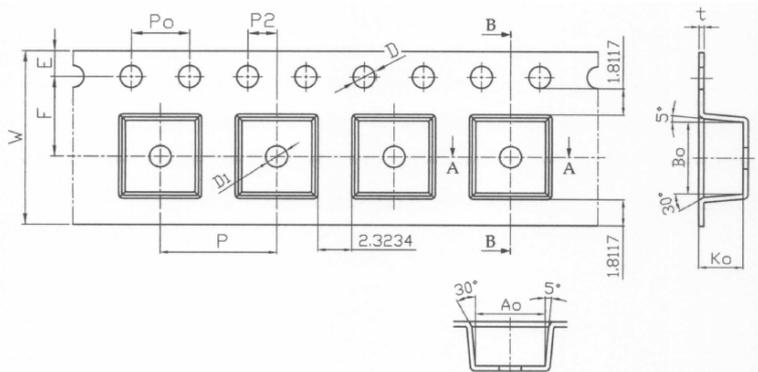
## 9. Packaging Information

### 9-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x12mm	12.5±0.5	100.0±2.0	13.5±0.5	330

### 9-2. Tape Dimension / 12mm

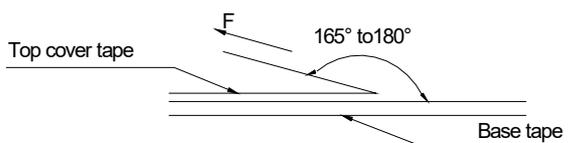


Series	P(mm)	Po(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)	D(mm)	E(mm)	F(mm)	W(mm)	t(mm)	D1(mm)
TXF464429N	8.00±0.10	4.00±0.10	2.00±0.10	5.00±0.10	4.80±0.10	3.05±0.10	1.50+0.10/-0.00	1.75±0.10	5.50±0.10	12.00±0.30	0.35±0.05	1.50±0.10

### 9-3. Packaging Quantity

Chip size	Chip/Reel	Inner Box	Carton
TXF464429N	2000	4000	32000

### 9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

#### Application Notice

• Storage Conditions

To maintain the solderability of terminal electrodes:

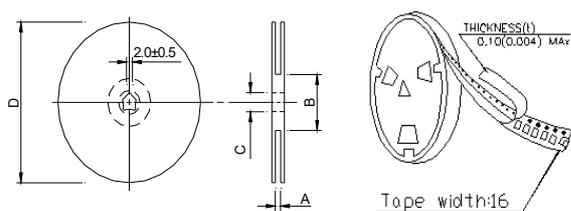
1. TAI-TECH products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

• Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

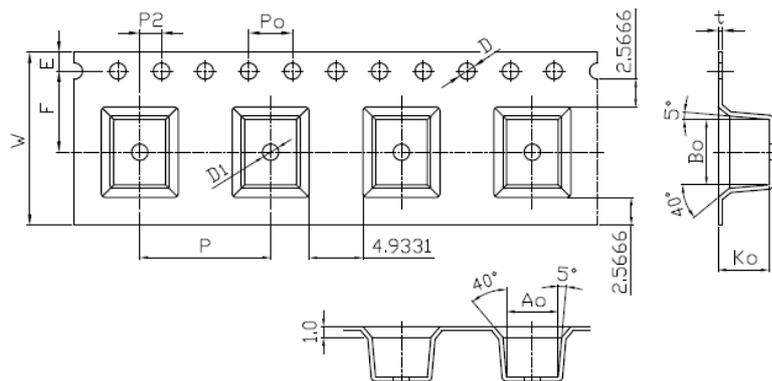
## 9. Packaging Information

### 9-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x16mm	16.0±0.5	100.0±2.0	13.5±0.5	330

### 9-2. Tape Dimension / 16mm

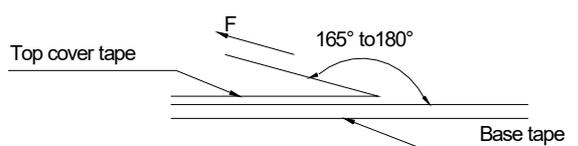


Series	P(mm)	Po(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)	D(mm)	E(mm)	F(mm)	W(mm)	t(mm)	D1(mm)
TXF564545N	12.00±0.10	4.00±0.10	2.00±0.10	6.05±0.10	4.75±0.10	4.65±0.10	1.50+0.10/-0.00	1.75±0.10	7.50±0.10	16.00±0.30	0.40±0.05	1.50±0.10

### 9-3. Packaging Quantity

Chip size	Chip/Reel	Inner Box	Carton
TXF564545N	1000	2000	8000

### 9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

#### Application Notice

##### • Storage Conditions

To maintain the solderability of terminal electrodes:

1. TAI-TECH products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

##### • Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.