

CONTENT (SMD PULSE TRANSFORMER)

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## Ordering Code

**SPT 1207 000 0 A E 1**

### PRODUCT CODE

SPT : SMD Pulse Transformer

### DIMENSION (L X W)

CODE	L x W
1207	12.7 x 8.7 mm
1605	16.5 x 10.3mm
1705	17.5 x 14.6 mm
0302	3.2 x 3.2 mm
0405	4.5 x 3.2 mm

### BASE-T

000=10/100M Base-T

010=1.0G Base-T

025=2.5G Base-T

050=5.0G Base-T

100=10G Base-T

### PRODUCT CATEGORIES

0= Chip Lan Transformer Module

1= Pulse Transformer

### PIN SPACING

A=1.27 mm

B=1.27 mm Reverse

C=1.00 mm

D=1.00 mm Reverse

N=0.00 mm

### PACKAGING CODE

E = Embossed Tape(13")

1 : Version1

2 : Version2

3 : Version3

4 : Version4

: Standard

## Chip Lan Transformer Module

### ■ Feature

Chip LAN helps Ethernet and LAN-based application developers save valuable board space and increase design flexibility while meeting dynamic data line requirements. Chip LAN module can be directly soldered to the motherboard to replace the original traditional transformer and are fully compatible with the traditional transformer performance, fully automated production, stable quality, short delivery time.

### ■ Application

The main covered devices are: 5G small base station, WiFi router, Switch, Set top box, Mother board, NB, Desktop PC, IPC, Digital appliance, Cable modem, Smart/Android TV, VoIP phone.

### ■ Part Numbers & Characteristics (General Purpose)

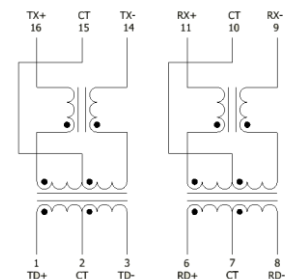
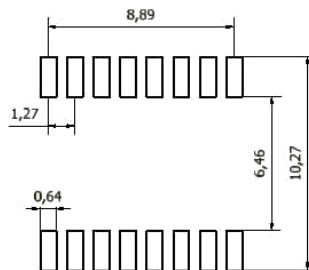
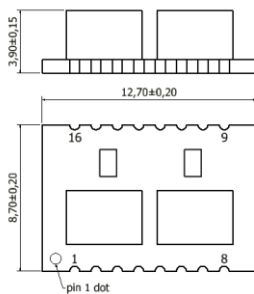
#### ● Chip Lan -10/100 Base-T

DARFON P/N	Inductance 100kHz/ 0.1V @0mA DC bias (μH)Min	Insertion loss [1 to 100MHz] (dB)Max.	Return Loss (dB)Min.@100Ω			Differential to Common Mode Rejection Ratio (dB)Min.		Crosstalk (dB)Min.	Hi-pot (Vrms) 60sec.	Packing
			1-30MHz	30-60MHz	60-100MHz	1-60MHz	60-100MHz			
SPT12070000AE	350	-1.0	-18	-14	-12	-35	-33	-35	1500	800

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C

UNIT: mm



#### ● Chip Lan -1G Base-T

DARFON P/N	Inductance 100kHz/ 0.1V @0mA DC bias (μH)Min	Insertion loss [1 to 100MHz] (dB)Max	Return Loss (dB)Min.@100Ω			Differential to Common Mode Rejection Ratio (dB)Min.		Crosstalk (dB)Min. 1-500 MHz	Hi-pot (Vrms) 60sec.	Packing
			1-30MHz	30-80MHz	80-100MHz	1-60MHz	60-100MHz			
SPT17050100AE	350	-1.0	-18	-12	-10	-35	-30	-35	2400	400
SPT17050100BE										
SPT16050100AE										
SPT16050100BE										
SPT16050100CE										
SPT16050100DE										

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C

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## ● Chip Lan-2.5G Base-T

DARFON P/N	Inductance 100kHz/ 0.1V @0mA DC bias ( $\mu$ H)Min	Insertion loss (dB)Max		Return Loss (dB)Min.@100 $\Omega$			Differential to Common Mode Rejection Ratio (dB)Min.				Crosstalk (dB)Min. 1-500 MHz	Hi-pot (Vrms) 60sec.	Packing
		1-50MHz	50-125 MHz	1-40 MHz	80MHz	125MHz	1-40 MHz	60MHz	100MHz	125MHz			
SPT17050250AE	180	-0.5	-1.0	-16	-13	-11	-48	-42	-38	-36	-35	2400	400
SPT17050250BE													
SPT16050250AE													
SPT16050250BE													
SPT16050250CE													
SPT16050250DE													

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C

## ● Chip Lan -5G Base-T

DARFON P/N	Inductance 100kHz/ 0.1V @0mA DC bias ( $\mu$ H)Min	Insertion loss (dB)Max		Return Loss (dB)Min.@100 $\Omega$		Differential to Common Mode Rejection Ratio (dB)Min.		Crosstalk (dB)Min. 1-250 MHz	Hi-pot (Vrms) 60sec.	Packing
		1-100MHz	100-250MHz	1-40MHz	$40 \leq f \leq 250$ MHz	1-250MHz	$30 \leq f \leq 250$ MHz			
SPT17050500AE	180	-1.0	-2.0	-16	$-16+10\log(f/40)$	-48	$-44+19.2\log(f/50)$	-35	2400	400
SPT17050500BE										
SPT16050500AE										
SPT16050500BE										
SPT16050500CE										
SPT16050500DE										

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C

## ● Chip Lan -10G Base-T

DARFON P/N	Inductance 100kHz/ 0.1V @0mA DC bias ( $\mu$ H)Min	Insertion loss [1 to 100MHz] (dB)Max.		Return Loss (dB)Min.@100 $\Omega$		Differential to Common Mode Rejection Ratio (dB)Min.			Crosstalk (dB)Min. 1-500 MHz	Hi-pot (Vrms) 60sec.
		1-300 MHz	300-500 MHz	1-40MHz	$40 \leq f \leq 500$ MHz	1-250MHz	250-500 MHz	500-1000 MHz		
SPT17051000AE	120	-1.0	-2.0	-18	$-18+10\log(f/40)$	-30	-22	-22	-30	2400
SPT17051000BE										
SPT17051000AE1										
SPT17051000BE1										

Common to Common Mode Rejection Ratio (dB)Min.			Packing
1-250 MHz	250-500 MHz	500-1000 MHz	
-30	-20	-20	

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C

※SPT17051000□E FOR 2.4GHz

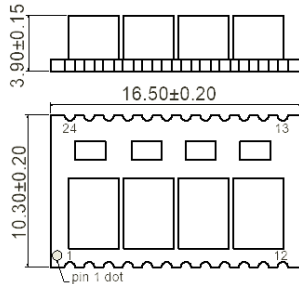
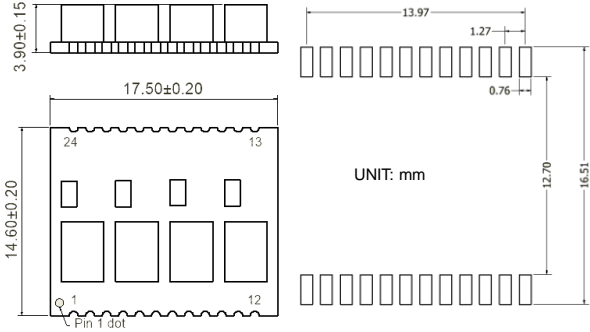
DARFON P/N	Inductance 100kHz/ 0.1V @0mA DC bias ( $\mu$ H)Min	Insertion loss (dB)Max.		Return Loss (dB)Min.@100 $\Omega$		Differential to Common Mode Rejection Ratio (dB)Min.		Crosstalk (dB)Min 1-500MHz	Hi-pot (Vrms) 60sec.	Packing
		1-300MHz	300-500MHz	1-40MHz	$40 \leq f \leq 500$ MHz	1-250MHz	250-500MHz			
SPT16051000AE	120	-1.0	-2.0	-18	$-18+10\log(f/40)$	-30	-22	-30	2400	400
SPT16051000BE										
SPT16051000CE										
SPT16051000DE										

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

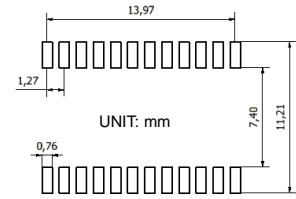
※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C

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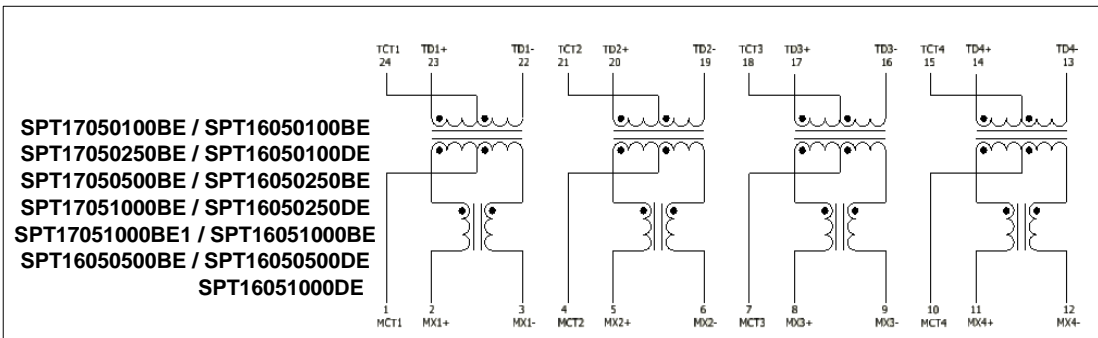
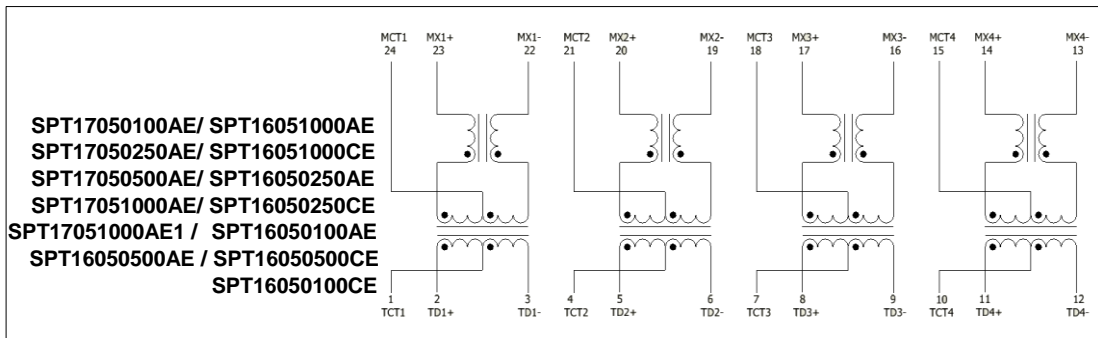
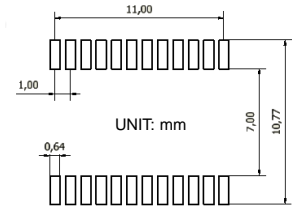
SPT17050100AE/ SPT17050100BE  
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 SPT17050500AE/ SPT17050500BE  
 SPT17051000AE/ SPT17051000BE  
 SPT17051000AE1/SPT17051000BE1



SPT16050100AE / SPT16050100BE  
 SPT16050250AE / SPT16050500BE  
 SPT16051000AE / SPT16051000BE  
 SPT16050500AE / SPT16050500BE



SPT16050100CE / SPT16050100DE  
 SPT16050250CE / SPT16050500DE  
 SPT16051000CE / SPT16051000DE  
 SPT16050500CE / SPT16050500DE



Transformer

# Pulse Transformer

## ■ Feature

Feature: Chip LAN helps Ethernet and LAN-based application developers save valuable board space and increase design flexibility while meeting dynamic data line requirements.

## ■ Application

The main covered devices are: 5G small base station, WiFi router, Switch, Set top box, Mother board, NB, Desktop PC, IPC, Digital appliance, Cable modem, Smart/Android TV, VoIP phone.

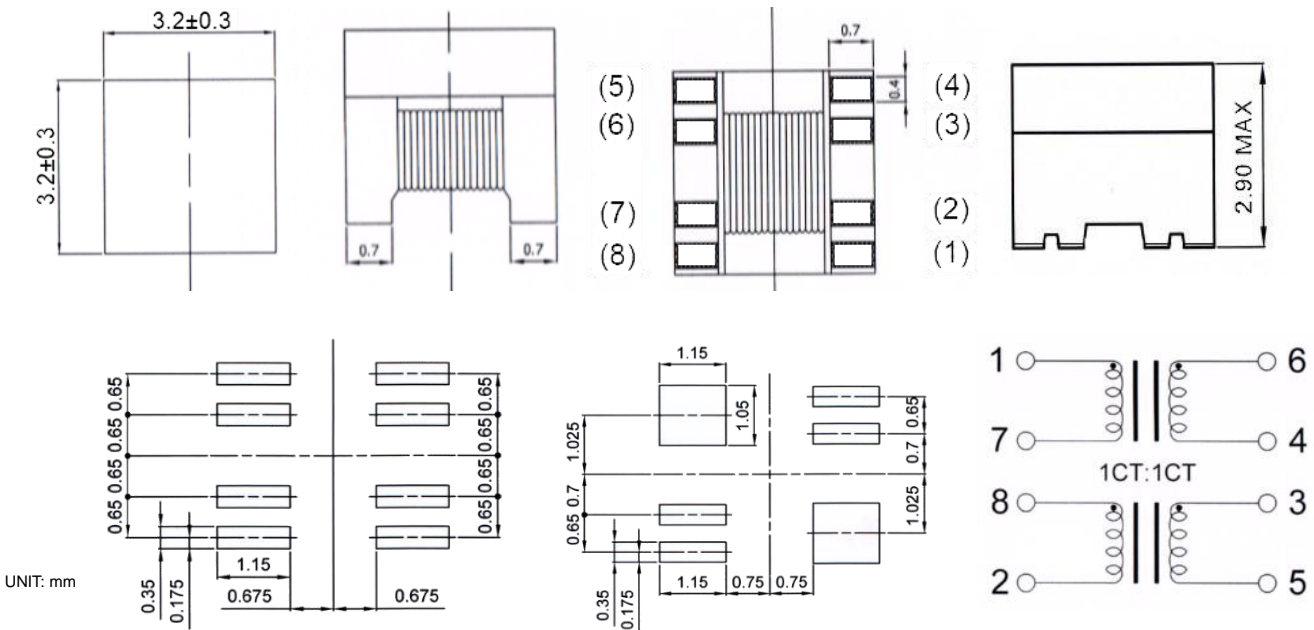
## ■ Part Numbers & Characteristics (General Purpose)

### ● Lan Transformer- 3.2 x 3.2

DARFON P/N	Inductance [DC bias 8mA, 100KHz] Pin(1)(2) · short(7)(8) Pin(5)(6) · short(3)(4) ( $\mu$ H)Min.	Insertion loss [0.1 to 100MHz] (dB)Max.	Inter-winding capacitance [100KHz] (pF)Max.	Turn ratio
SPT03020001NE	150	2.5	25	1CT:1CT
SPT03020101NE				

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C



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## ● Lan Transformer - 4.5 x 3.2

DARFON P/N	Inductance [DC bias 8mA ,100KHz] Pin(1)(2) , short(7)(8) Pin(5)(6) , short(3)(4) ( $\mu$ H)Min.	Insertion loss [0.1 to 100MHz] (dB)Max	Inter-winding capacitance [100KHz] (pF)Max.	Turn ratio	Packing
SPT04050101NE	200	1.5	35	1CT:1CT	2000

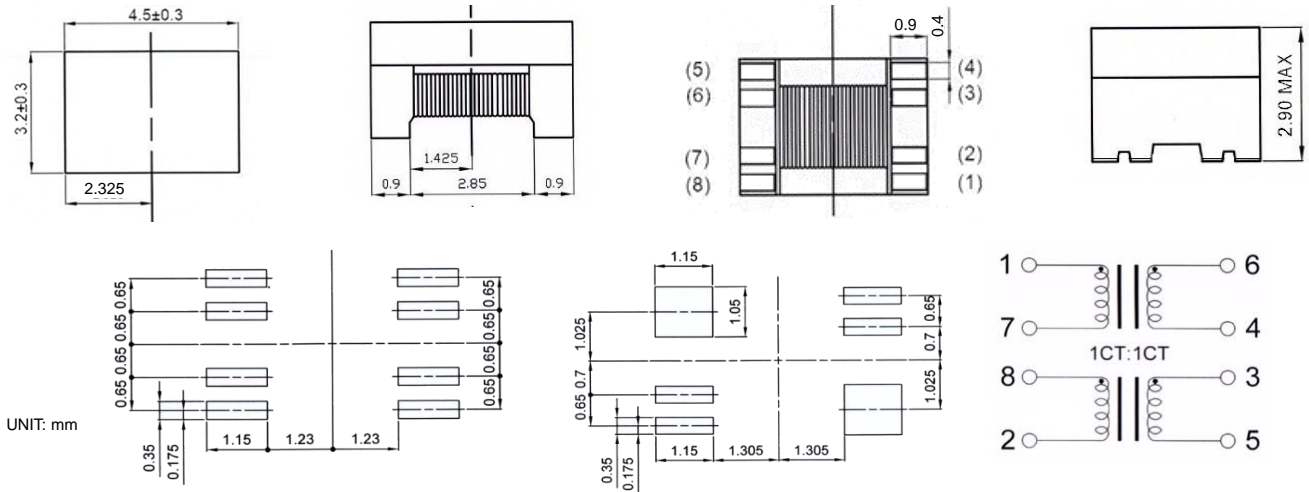
※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C

DARFON P/N	Inductance [DC bias 8mA ,100KHz] Pin(1)(2) , short(7)(8) Pin(5)(6) , short(3)(4) ( $\mu$ H)Min.	Insertion loss [1 to 200MHz] (dB)Max	Inter-winding capacitance [100KHz] (pF)Max.	Turn ratio	Packing
SPT04050251NE	180	1.5	35	1CT:1CT	2000
SPT04050501NE					

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

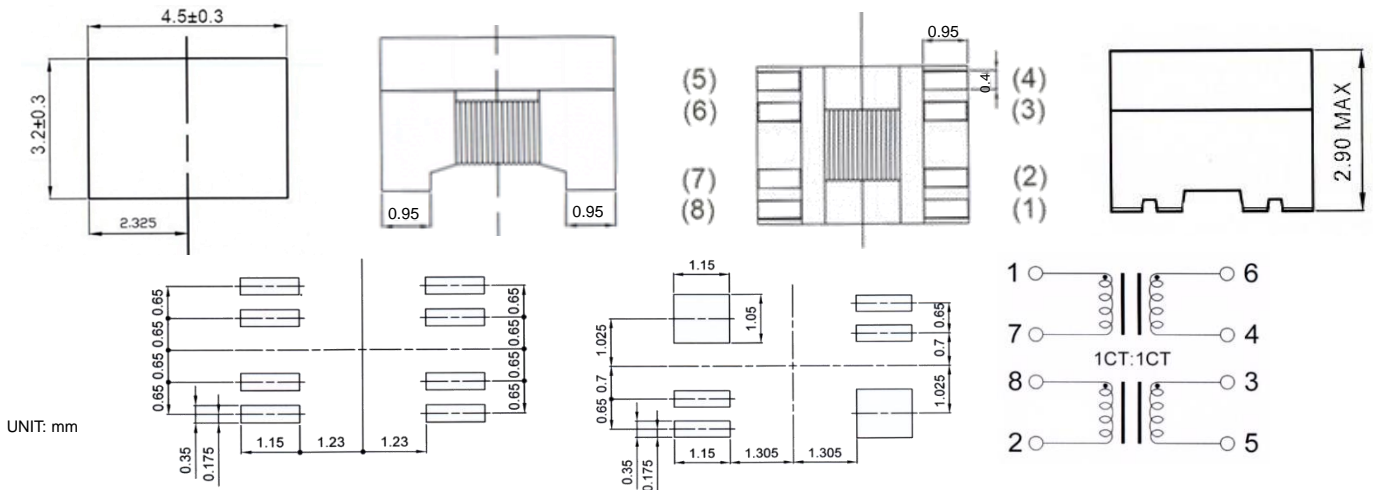
※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C



DARFON P/N	Inductance [DC bias,100KHz] Pin(1)(2) , short(7)(8) Pin(5)(6) , short(3)(4) ( $\mu$ H)Min.	Insertion loss [0.1 to 150MHz] (dB)Max.	Insertion loss [150 to 500MHz] (dB)Max.	Inter-winding capacitance [100KHz] (pF)Max.	Turn ratio	Hi-pot (Vrms) 60sec.	Packing
SPT04051001NE	120	0.5	1.5	35	1CT:1CT	2400	2000

※OPERATING TEMPERATURE RANGE: -40 °C TO +85 °C

※STORAGE TEMPERATURE RANGE: +20 °C TO +25 °C



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