

# RJ45 10/100 Base-T Jack with Magnetic Module

ARJ11B

**RoHS**  
Compliant



16.26 x 13.84 x 21.59mm

## FEATURES:

- Excellent EMI suppression
- Meet IEEE 802.3 standards and FCC mechanical requirements
- Low Cost, RoHS Compliant Reflow-able device

## APPLICATIONS:

- LAN-on-Motherboard (LOM)
- SOHO (ADSL modems), Hubs.
- Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP

## STANDARD SPECIFICATIONS:

**Operating Temperature:** - 0°C to + 70°C  
**Storage Temperature:** - 40°C to +85°C

| Part Number                          | Turns Ratio $\pm 5\%$ |            | EMI Fingers | LED (L/R) | Insertion Loss (dB max) |
|--------------------------------------|-----------------------|------------|-------------|-----------|-------------------------|
|                                      | TX                    | RX         |             |           | 0.3-100 MHz             |
| ARJ11B-MASAA-MU2 to ARJ11B-MASAI-MU2 | 1CT:1CT               | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MASAJ-MU2 to ARJ11B-MASAM-MU2 | 1CT:1CT               | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MASAN-LU2 to ARJ11B-MASBF-LU2 | 1CT:1                 | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MESCB-A-B-ELT2                | 1CT:1                 | 1CT:1      | NO          | G/Y       | -1                      |
| ARJ11B-MASCB-LT2                     | 1CT:1                 | 1CT:1      | YES         | ---       | -1                      |
| ARJ11B-MBSCB-A-B-ELT2                | 1CT:1                 | 1CT:1      | YES         | G/Y       | -1                      |
| ARJ11B-MDSBQ-MU2                     | 1CT:1CT               | 1CT:1CT    | NO          | ---       | -1                      |
| ARJ11B-MESBQ-A-B-EMU2                | 1CT:1CT               | 1CT:1CT    | NO          | G/Y       | -1                      |
| ARJ11B-MASBQ-MU2                     | 1CT:1CT               | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MBSBQ-A-B-EMU2                | 1CT:1CT               | 1CT:1CT    | YES         | G/Y       | -1                      |
| ARJ11B-MFSBQ-A-A-EMU2                | 1CT:1CT               | 1CT:1CT    | YES         | G/G       | -1                      |
| ARJ11B-MASAJ-MU2                     | 1CT:1CT               | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MASBR-QU2                     | 1CT:1.414CT           | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MFSBR-A-A-EQU2                | 1CT:1.414CT           | 1CT:1CT    | YES         | G/G       | -1                      |
| ARJ11B-MDSAO-LU2                     | 1CT:1                 | 1CT:1CT    | NO          | ---       | -1                      |
| ARJ11B-MESAO-A-B-ELU2                | 1CT:1                 | 1CT:1CT    | NO          | G/Y       | -1                      |
| ARJ11B-MESAO-A-A-ELU2                | 1CT:1                 | 1CT:1CT    | NO          | G/G       | -1                      |
| ARJ11B-MASAO-LU2                     | 1CT:1                 | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MBSAO-A-B-ELU2                | 1CT:1                 | 1CT:1CT    | YES         | G/Y       | -1                      |
| ARJ11B-MFSAO-A-A-ELU2                | 1CT:1                 | 1CT:1CT    | YES         | G/G       | -1                      |
| ARJ11B-MFSAO-BA-A-GLU2               | 1CT:1                 | 1CT:1CT    | YES         | YG/G      | -1                      |
| ARJ11B-MBSAP-A-B-ELU2                | 1CT:1                 | 1CT:1CT    | YES         | G/Y       | -1                      |
| ARJ11B-MASAC-MU2                     | 1CT:1CT               | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MASAD-OW2                     | 1CT:1.41CT            | 1CT:1.41CT | YES         | ---       | ---                     |
| ARJ11B-MBSAI-A-B-EMU2                | 1CT:1CT               | 1CT:1CT    | YES         | G/Y       | -1                      |
| ARJ11B-MASCC-MU2                     | 1CT:1CT               | 1CT:1CT    | YES         | ---       | -1                      |
| ARJ11B-MESBW-B-A-EMU2                | 1CT:1CT               | 1CT:1CT    | NO          | Y/G       | -1                      |



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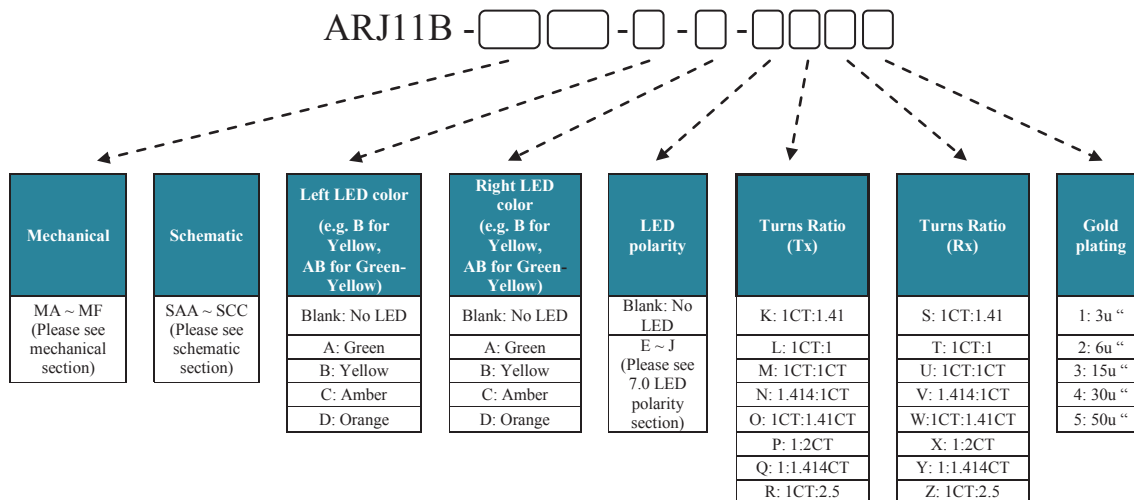
16.26 x 13.84 x 21.59mm

## STANDARD SPECIFICATIONS: 25°C (contd)

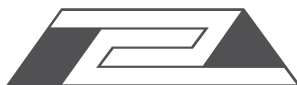
| Part Number                                | Return Loss (dB min @ 100Ω±15Ω) |        |        |           | Crosstalk (dB min) |        |         | Common Mode Rejection (dB min) |        |         | Hipot (Vrms) |
|--------------------------------------------|---------------------------------|--------|--------|-----------|--------------------|--------|---------|--------------------------------|--------|---------|--------------|
|                                            | 1- 30 MHz                       | 40 MHz | 50 MHz | 60-80 MHz | 30 MHz             | 60 MHz | 100 MHz | 30 MHz                         | 60 MHz | 100 MHz |              |
| ARJ11B-MASAA-MU2<br>to<br>ARJ11B-MASAI-MU2 | -18                             | -16    | -14    | -12       | -45                | -40    | -35     | -35                            | -30    | -25     | 1500         |
| ARJ11B-MASAJ-MU2<br>to<br>ARJ11B-MASAM-MU2 | -18                             | -16    | -14    | -12       | -45                | -40    | -35     | -35                            | -30    | -25     | 1500         |
| ARJ11B-MASAN-LU2<br>to<br>ARJ11B-MASBF-LU2 | -18                             | -16    | -14    | -12       | -45                | -40    | -35     | -35                            | -30    | -25     | 1500         |
| ARJ11B-MESCB-A-B-ELT2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASCB-LT2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MBSCB-A-B-ELT2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MDSBQ-MU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MESBQ-A-B-EMU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASBQ-MU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MBSBQ-A-B-EMU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MFSBQ-A-A-EMU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASAJ-MU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASBR-QU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MFSBR-A-A-EQU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MDSAO-LU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MESAO-A-B-ELU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MESAO-A-A-ELU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASAO-LU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MBSAO-A-B-ELU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MFSAO-A-A-ELU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MFSAO-BA-A-GLU2                     | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MBSAP-A-B-ELU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASAC-MU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASAD-OW2                           | --                              | --     | --     | --        | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MBSAI-A-B-EMU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MASCC-MU2                           | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |
| ARJ11B-MESBW-B-A-EMU2                      | -18                             | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500         |

Contact Abracon for more custom configurations. See options to build a custom configuration.

## OPTIONS & PART IDENTIFICATION:



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Revised: 04.21.11

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## ▶ OUTLINE DRAWING:

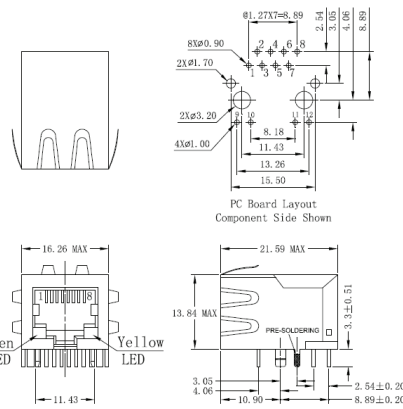


Figure 1: PC Board Layout Component Side Shown. This technical drawing shows the component side of a PC board layout. It includes dimensions for the overall board size (16.26 MAX, 11.43), component placement (2XØ1.70, 2XØ3.20), and specific features like the PRE-GOLDING area and dimensions for the component side (21.59 MAX, 13.84 MAX, 3.05, 10.90, 2.54 ± 0.20, 8.89 ± 0.20).

Figure 1: PCB layout of the component side. The figure includes three diagrams: a top view of the component, a detailed PCB layout of the component side, and a detailed PCB layout of the LED side. The top view shows a rectangular component with four pins. The component side layout shows dimensions for the component footprint, including a central area of 1.27x7=8.89, pin spacing of 8xø0.90, and various distances like 2xø1.70, 2xø3.20, 4xø1.00, 10, 11.43, 13.26, 15.50, 2.54, 3.05, 4.06, and 8.89. The LED side layout shows dimensions for the LED footprint, including a central area of 16.26 MAX, LED spacing of 11.43, and various distances like 21.59 MAX, 13.84 MAX, 3.3±0.51, 3.05, 4.06, 10.90, 2.54±0.20, and 8.89±0.20. The text "LED pins are parallel" is at the bottom.

LED pins are parallel

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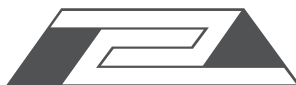
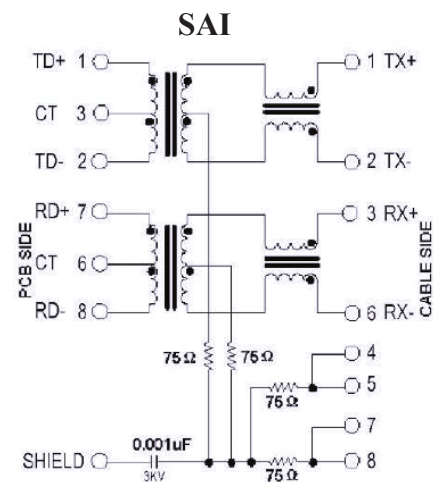
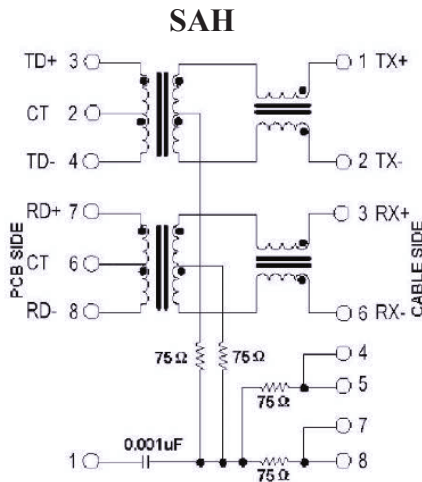
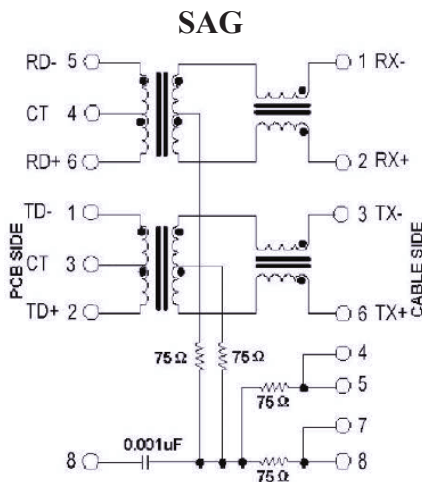
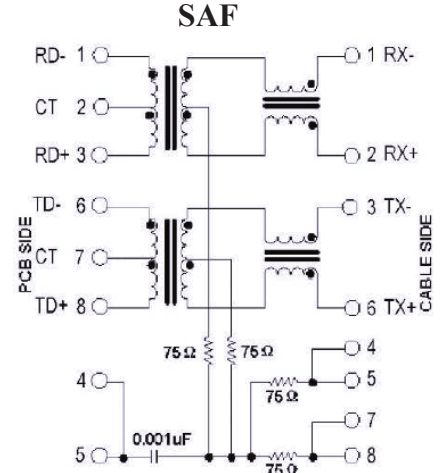
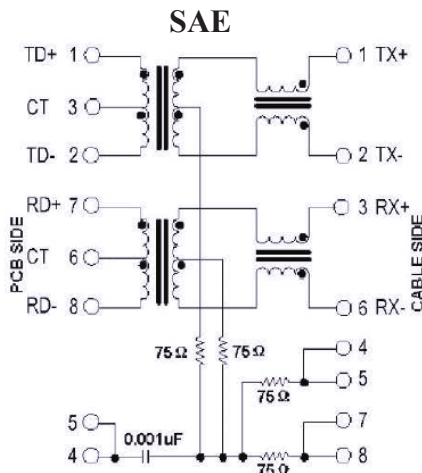
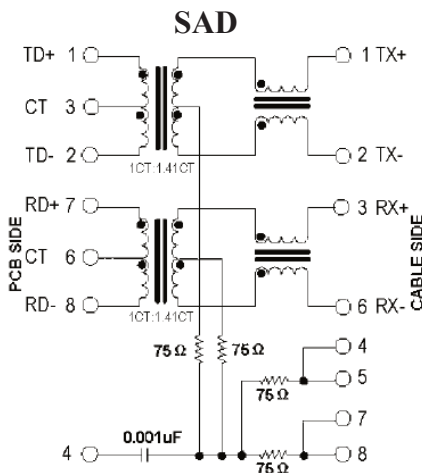
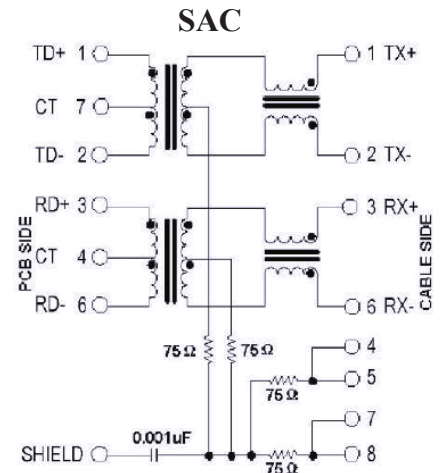
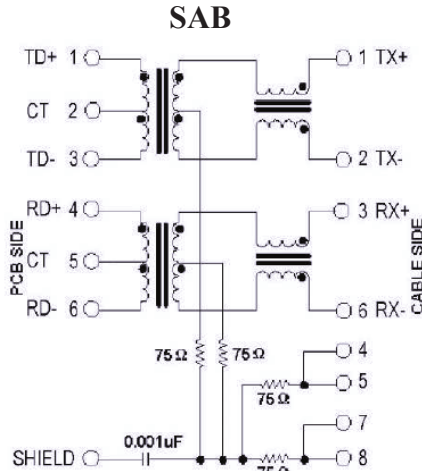
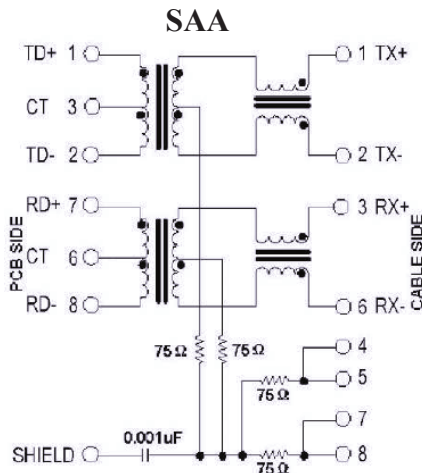
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16.26 x 13.84 x 21.59mm

## SCHEMATICS





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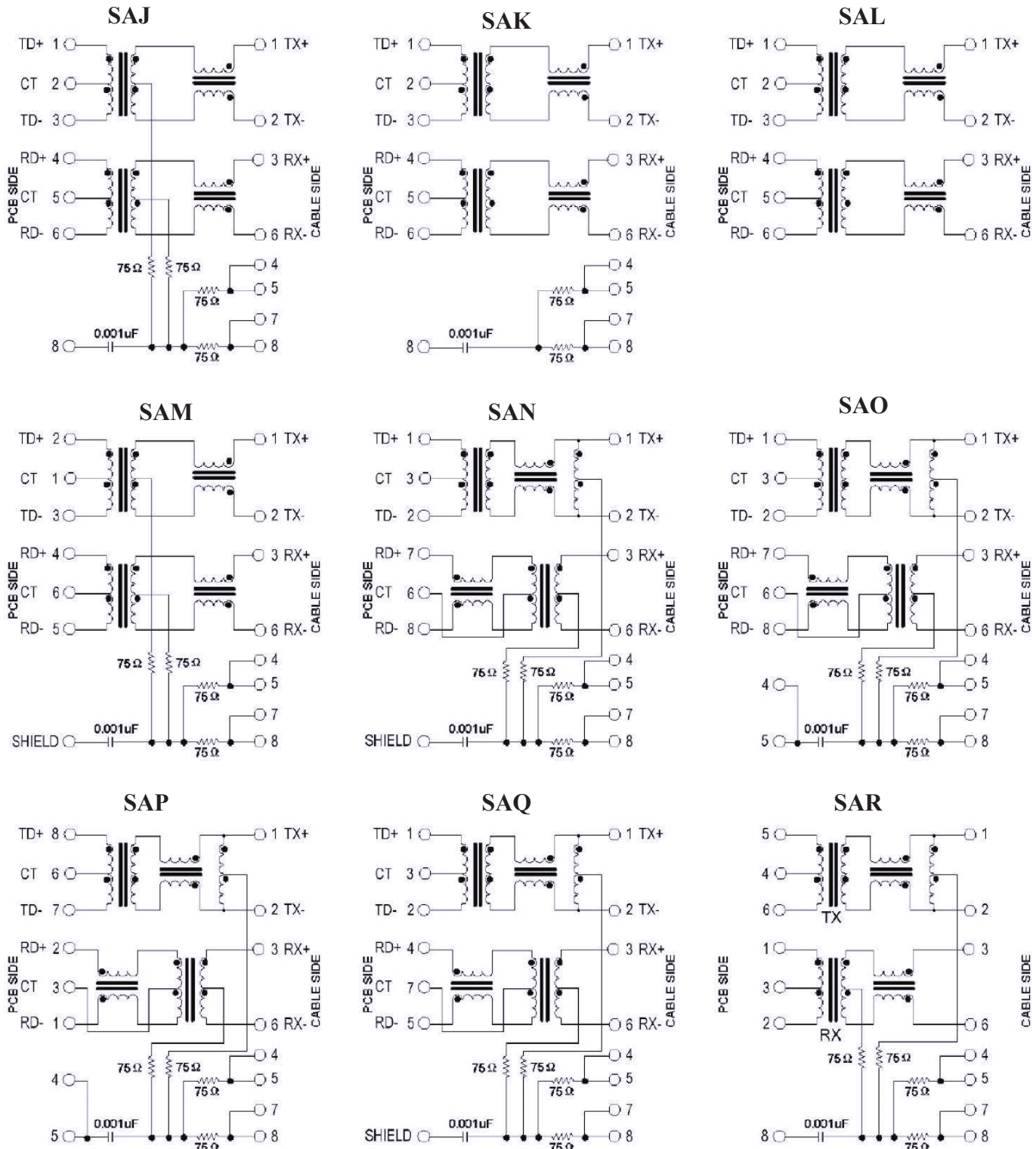
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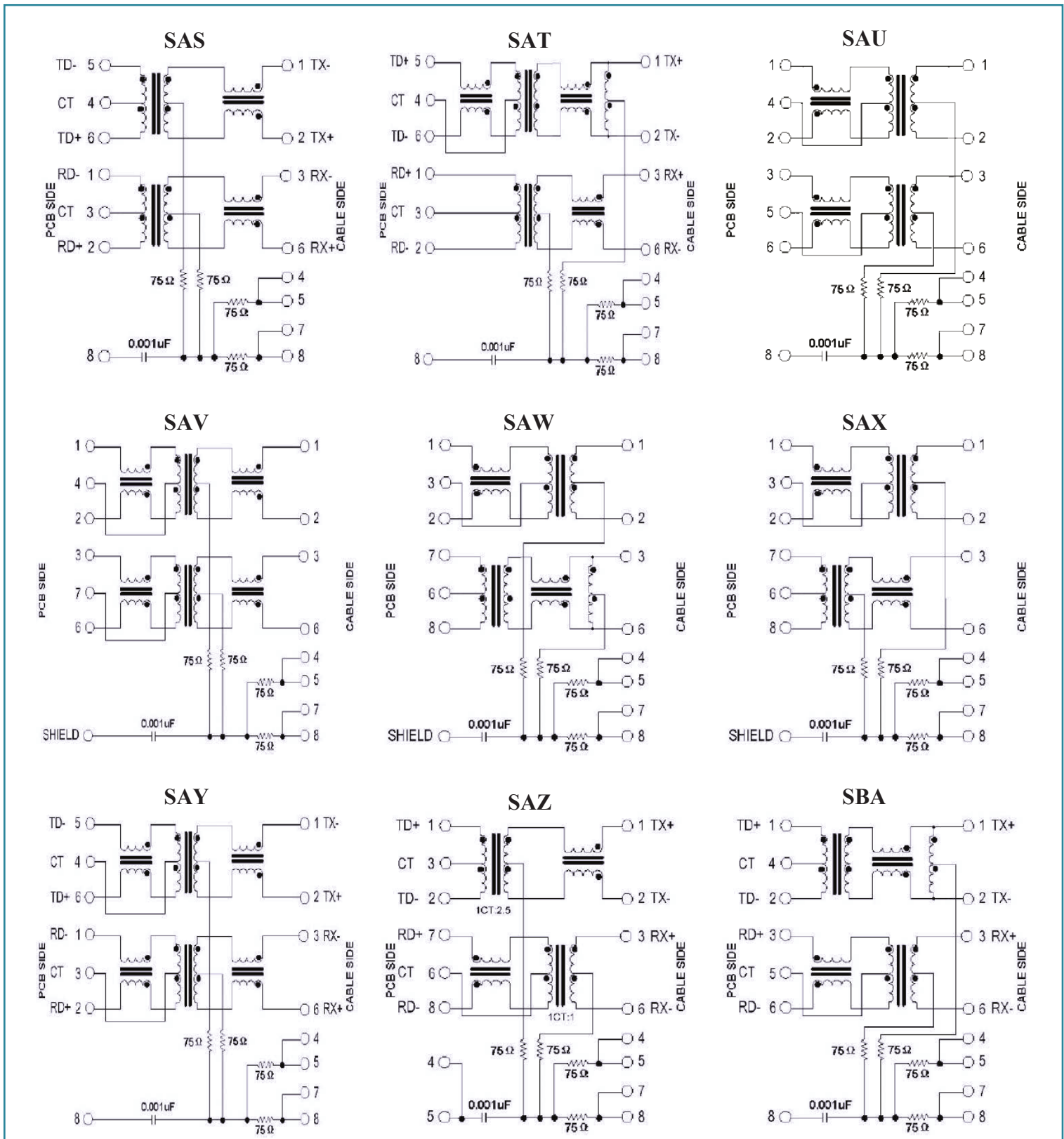
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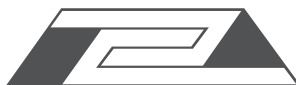
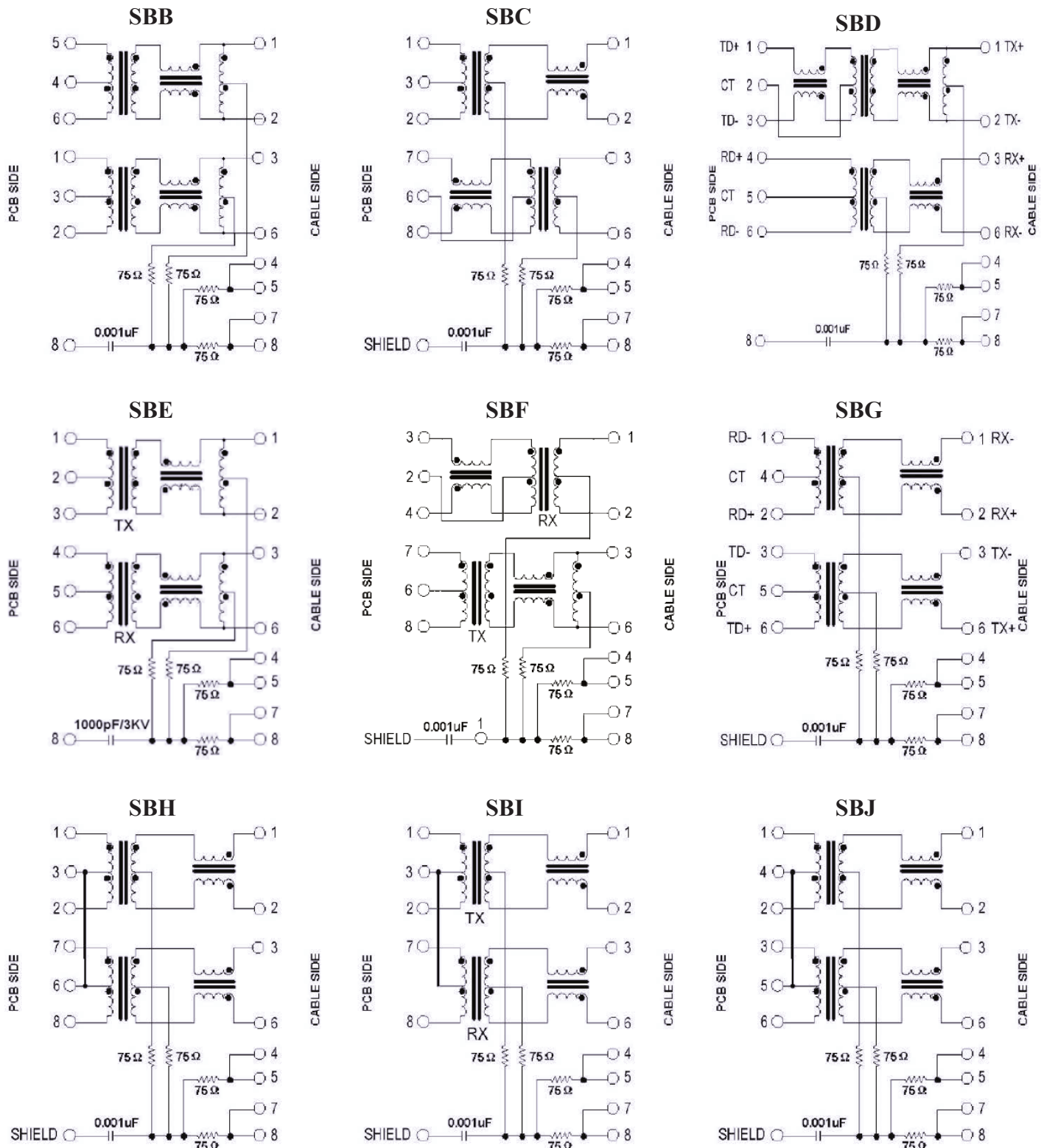
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## SCHEMATICS





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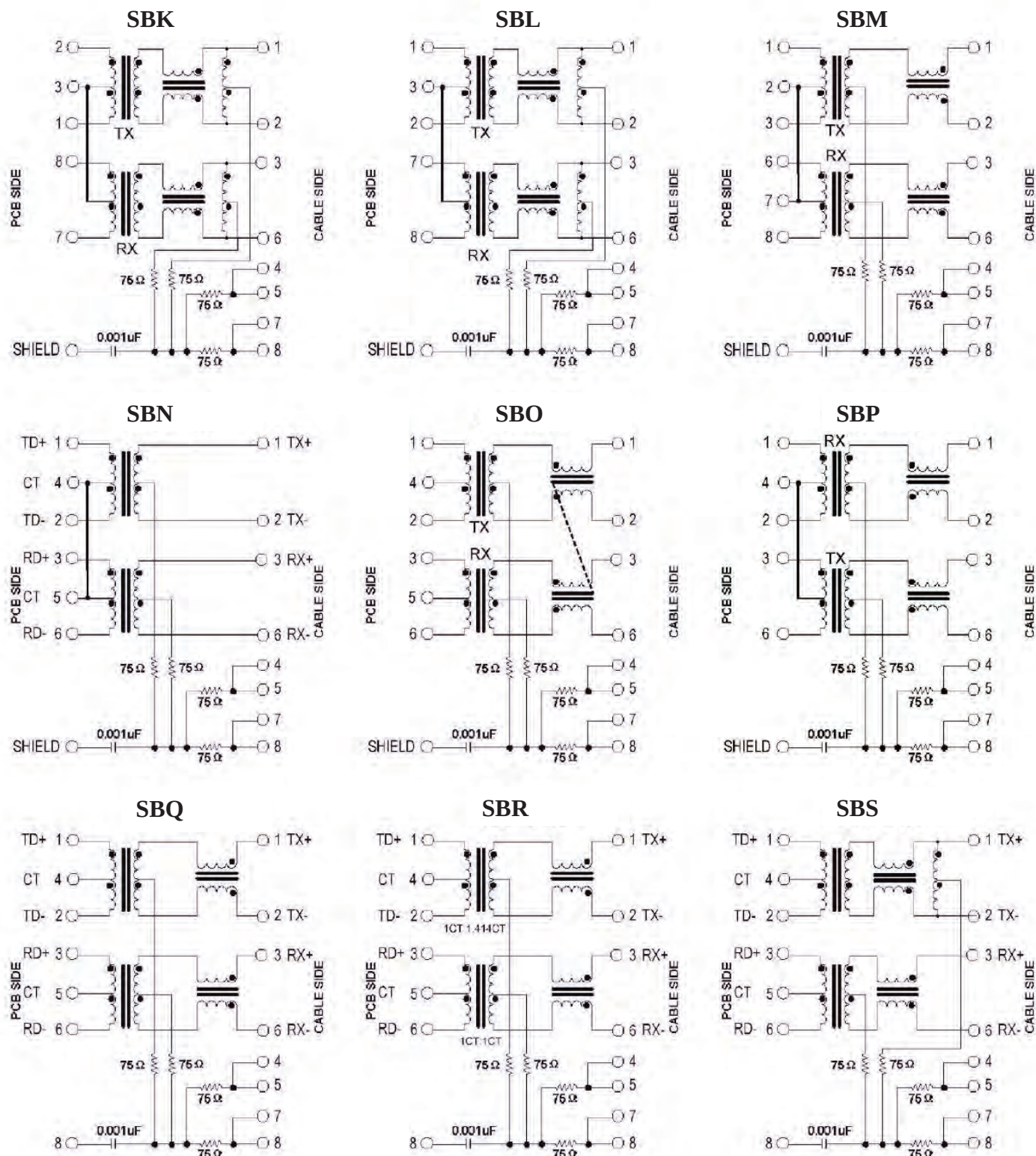
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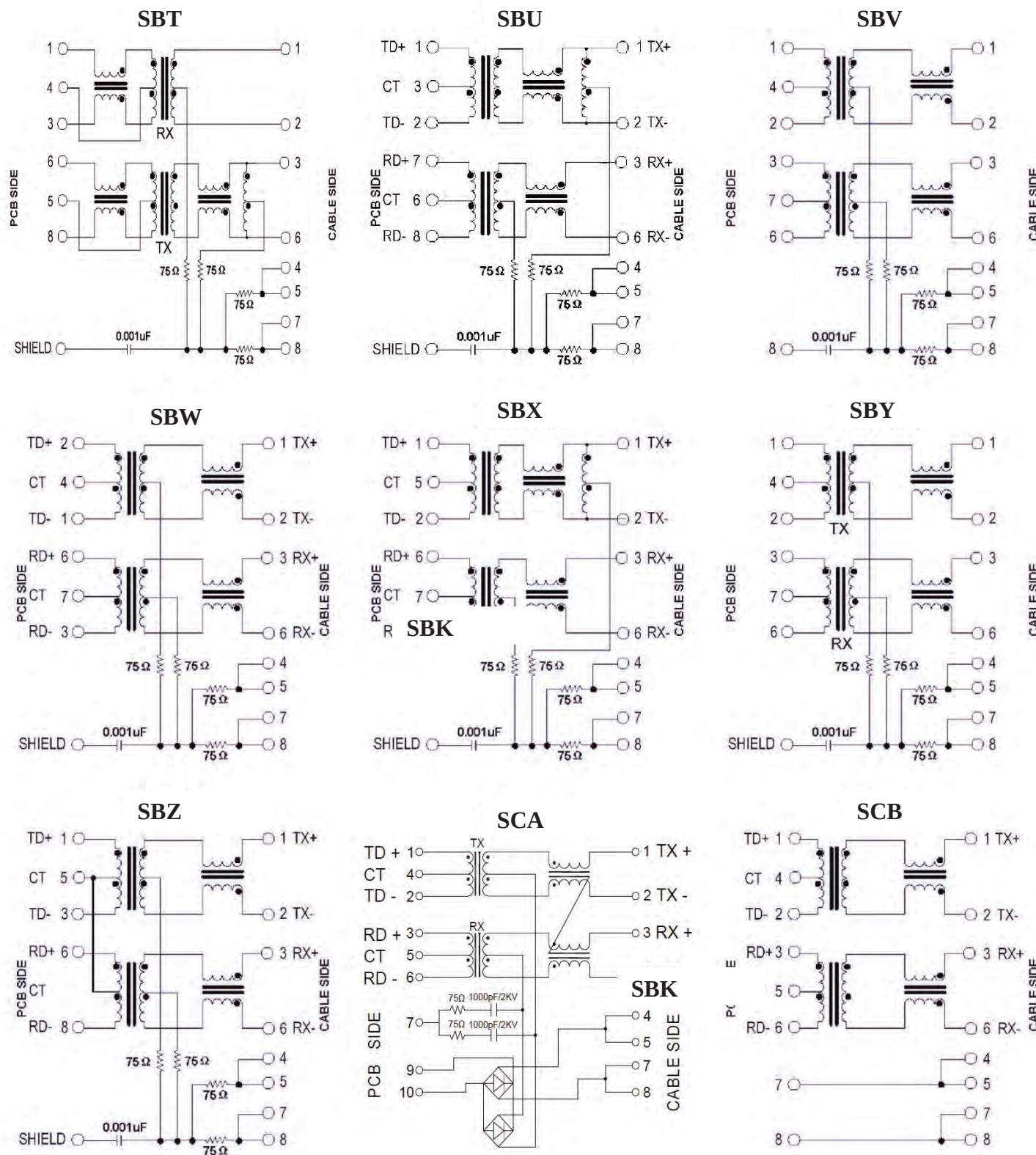
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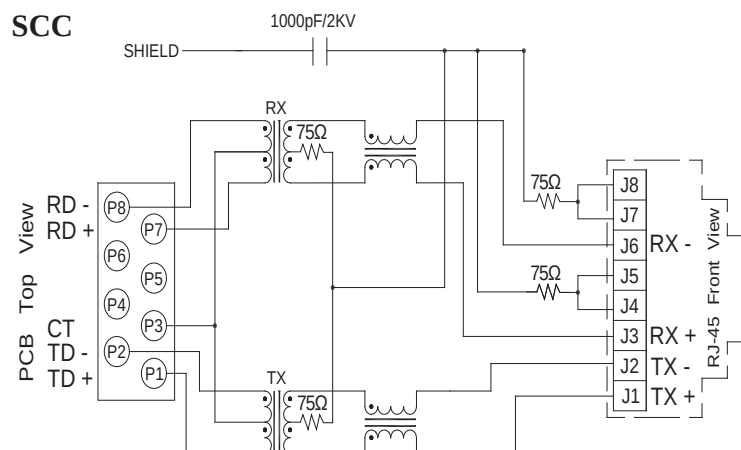
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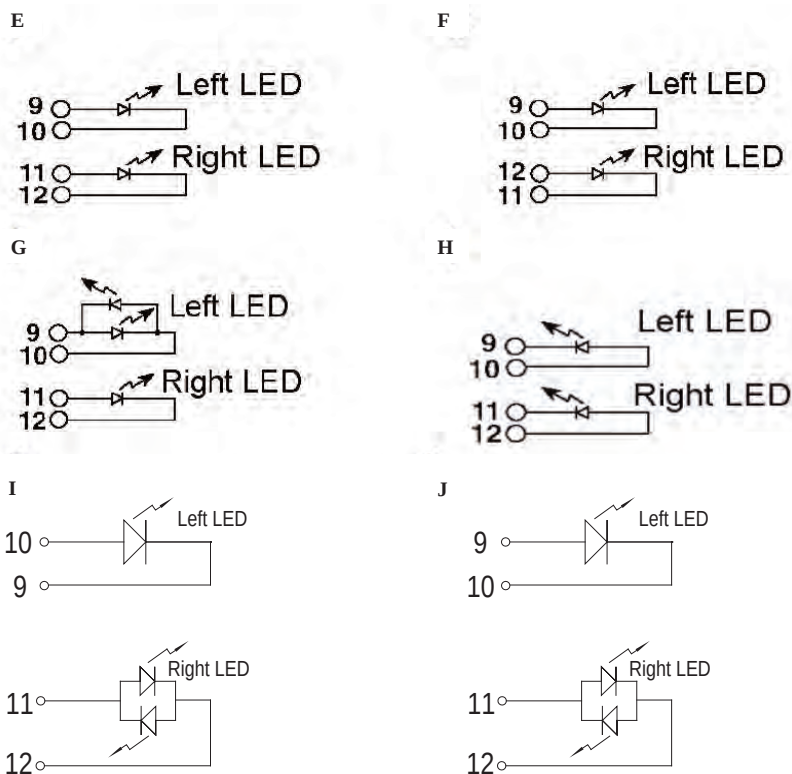


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## SCHEMATICS



## LED POLARITY



Vin=2.1Vdc TYP. 2.5Vdc MAX.

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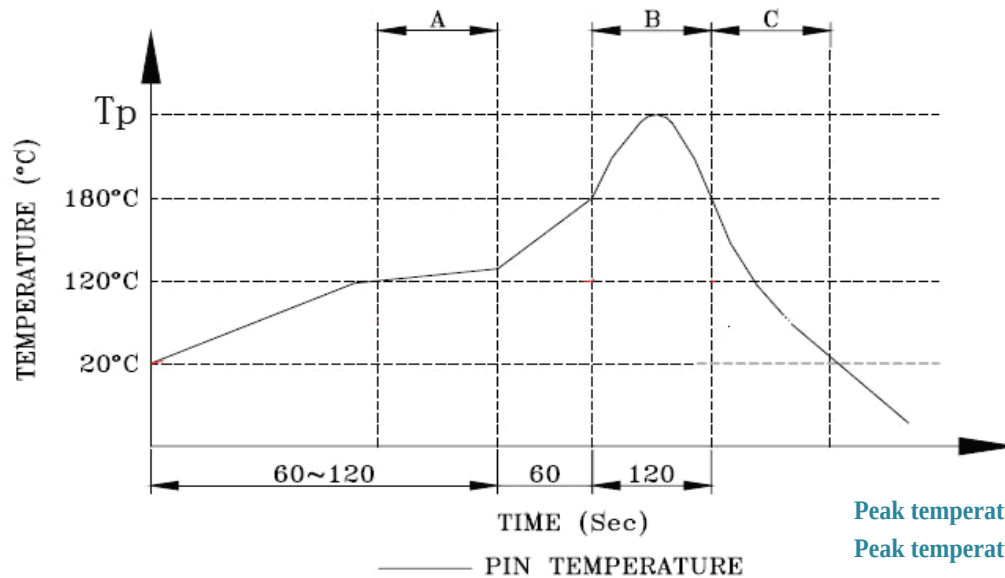
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## REFLOW PROFILE

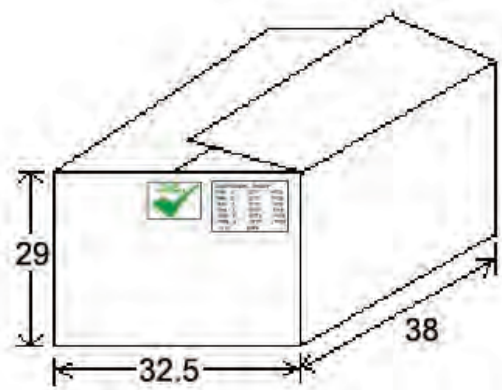
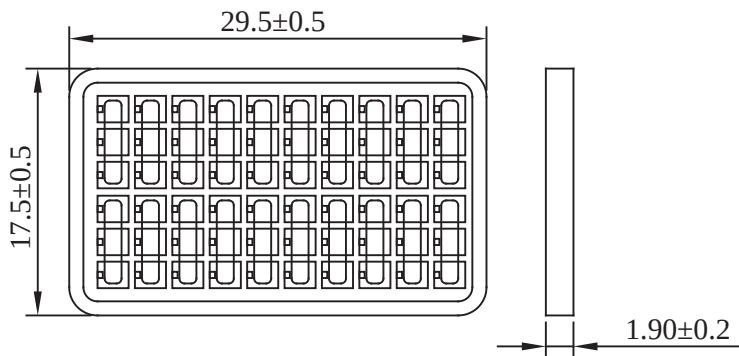


A. Preheating B. Soldering C. Gradual Cooling

## TAPE & REEL:

Packing 60pcs/tray  
Packaging material: PET

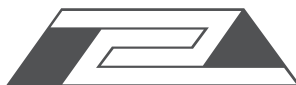
Outer carton unit 1320 pcs/ 22 Trays/box



Dimensions: cm

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