

RJ45 10/100 Base-T Jack with Magnetic Module



ARJ11B Series

Request Samples



Check Inventory



16.26 x 13.84 x 21.59mm
ROHS/ROHS II COMPLIANT
MSL Level = N/A

Features

- Excellent EMI suppression
- Meets IEEE 802.3 standards and FCC mechanical requirements
- Low cost, RoHS compliant Reflowable device

Applications

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

Electrical Specifications

Part Number	Turns Ratio		EMI Fingers	LED (L/R)	Insertion Loss (dB max) 0.3-100 MHz	Return Loss (dB min @100Ω±15Ω)			
	TX	RX				1- 30 MHz	40 MHz	50 MHz	60 - 100 MHz
ARJ11B-MASAA-MU2 to ARJ11B-MASAI-MU2	1CT:1CT	1CT:1CT	YES	---	-1.0	-18	-16	-14	-12
ARJ11B-MASAJ-MU2 to ARJ11B-MASAM-MU2	1CT:1CT	1CT:1CT	YES	---	-1.0	-18	-16	-14	-12
ARJ11B-MASAN-LU2 to ARJ11B-MASBF-LU2	1CT:1	1CT:1CT	YES	---	-1.0	-18	-16	-14	-12
ARJ11B-MESCB-A-B-ELT2	1CT:1	1CT:1	NO	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MASCB-LT2	1CT:1	1CT:1	YES	---	-1.0	-18	-16	-12	-10
ARJ11B-MBSCB-A-B-ELT2	1CT:1	1CT:1	YES	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MDSBQ-MU2	1CT:1CT	1CT:1CT	NO	---	-1.0	-18	-16	-12	-10
ARJ11B-MESBQ-A-B-EMU2	1CT:1CT	1CT:1CT	NO	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MASBQ-MU2	1CT:1CT	1CT:1CT	YES	---	-1.0	-18	-16	-12	-10
ARJ11B-MBSBQ-A-B-EMU2	1CT:1CT	1CT:1CT	YES	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MFSBQ-A-A-EMU2	1CT:1CT	1CT:1CT	YES	G/G	-1.0	-18	-16	-12	-10
ARJ11B-MASAJ-MU2	1CT:1CT	1CT:1CT	YES	---	-1.0	-18	-16	-12	-10
ARJ11B-MASBR-QU2	1CT:1.414CT	1CT:1CT	YES	---	-1.0	-18	-16	-12	-10
ARJ11B-MFSBR-A-A-EQU2	1CT:1.414CT	1CT:1CT	YES	G/G	-1.0	-18	-16	-12	-10
ARJ11B-MDSAO-LU2	1CT:1	1CT:1CT	NO	---	-1.0	-18	-16	-12	-10
ARJ11B-MESAO-A-B-ELU2	1CT:1	1CT:1CT	NO	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MESAO-A-A-ELU2	1CT:1	1CT:1CT	NO	G/G	-1.0	-18	-16	-12	-10
ARJ11B-MASAO-LU2	1CT:1	1CT:1CT	YES	---	-1.0	-18	-16	-12	-10
ARJ11B-MBSAO-A-B-ELU2	1CT:1	1CT:1CT	YES	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MFSAO-A-A-ELU2	1CT:1	1CT:1CT	YES	G/G	-1.0	-18	-16	-12	-10
ARJ11B-MFSAO-BA-A-GLU2	1CT:1	1CT:1CT	YES	YG/G	-1.0	-18	-16	-12	-10
ARJ11B-MBSAP-A-B-ELU2	1CT:1	1CT:1CT	YES	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MASAC-MU2	1CT:1CT	1CT:1CT	YES	---	-1.0	-18	-16	-12	-10
ARJ11B-MASAD-OW2	1CT;1.41CT	1CT:1.41CT	YES	---	---	--	--	--	--
ARJ11B-MBSAI-A-B-EMU2	1CT:1CT	1CT:1CT	YES	G/Y	-1.0	-18	-16	-12	-10
ARJ11B-MASCC-MU2	1CT:1CT	1CT:1CT	YES	---	-1.0	-18	-16	-12	-10
ARJ11B-MESBW-B-A-EMU2	1CT:1CT	1CT:1CT	NO	Y/G	-1.0	-18	-16	-12	-10
ARJ11B-MDSCD-MU2	1CT:1CT	1CT:1CT	NO	---	-1.0	-20 min (30M Hz)	--	--	-15 typ (80MHz)



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Electrical Specifications

Part Number	Crosstalk (dB min)			DCMR (dB min)			Hipot (Vrms)
	30 MHz	60 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
ARJ11B-MASAA-MU2 to ARJ11B-MASAI-MU2	-45	-40	-35	-35	-30	-25	1500
ARJ11B-MASAJ-MU2 to ARJ11B-MASAM-MU2	-45	-40	-35	-35	-30	-25	1500
ARJ11B-MASAN-LU2 to ARJ11B-MASBF-LU2	-45	-40	-35	-35	-30	-25	1500
ARJ11B-MESCB-A-B-ELT2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASCB-LT2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MBSCB-A-B-ELT2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MDSBQ-MU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MESBQ-A-B-EMU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASBQ-MU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MBSBQ-A-B-EMU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MFSBQ-A-A-EMU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASAJ-MU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASBR-QU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MFSBR-A-A-EQU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MDSAO-LU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MESAO-A-B-ELU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MESAO-A-A-ELU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASAO-LU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MBSAO-A-B-ELU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MFSAO-A-A-ELU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MFSAO-BA-A-GLU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MBSAP-A-B-ELU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASAC-MU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASAD-OW2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MBSAI-A-B-EMU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MASCC-MU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MESBW-B-A-EMU2	-40	-35	-30	-30	-20	-20	1500
ARJ11B-MDSCD-MU2	--	--	--	--	--	--	1500

DCMR: Differential to Common Mode Rejection

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

Operating Temperature: 0°C to +70°C

Storage Temperature: -40°C to +85°C

ARJ11C Series is RoHS Compliant.

Operating life: 750 Cycles min.



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Part Identification

ARJ11B - - - -

Mechanical	Schematic	Left LED color (e.g. B for Yellow, AB for Green-Yellow)	Right LED color (e.g. B for Yellow, AB for Green-Yellow)	LED polarity	Turns Ratio (Tx)	Turns Ratio (Rx)	Gold plating
MA, MB, MD, ME and MF (Please see mechanical section)	SAA ~ SCC (Please see schematic section)	Blank: No LED A: Green B: Yellow C: Amber D: Orange	Blank: No LED A: Green B: Yellow C: Amber D: Orange	Blank: No LED E ~ J (Please see LED polarity section)	K: 1CT:1.41 L: 1CT:1 M: 1CT:1CT N: 1.414:1CT O: 1CT:1.41CT P: 1:2CT Q: 1:1.414CT R: 1CT:2.5	S: 1CT:1.41 T: 1CT:1 U: 1CT:1CT V: 1.414:1CT W:1CT:1.41CT X: 1:2CT Y: 1:1.414CT Z: 1CT:2.5	1: 3u " 2: 6u " 3: 15u " 4: 30u " 5: 50u "

Materials

Housing Material:

MATERIAL: NYLON GF (Fr50) UL94V-0
STANDARD COLOR: BLACK

Insert Material:

MATERIAL: Phos-Bronze C5210 EH---0.35mm Thickness
Insert -PBT GF UL94V-0
1.PLATING (1) NICKEL
2.PLATING (2) 100%Sn
3.PLATING (3) GOLD (3u " ~50u ") (see options)

Plate Material:

PBT GF UL 94V-0

Contact pin Material:

MATERIAL: Phos-Bronze C5191---0.35mm Thickness
1.PLATING (1) NICKEL
2.PLATING (2) 100%Sn

Shielding Material:

BRASS C2680 PLATING NICKEL

Note: No material substitutions allowed without prior approval by customers in writing



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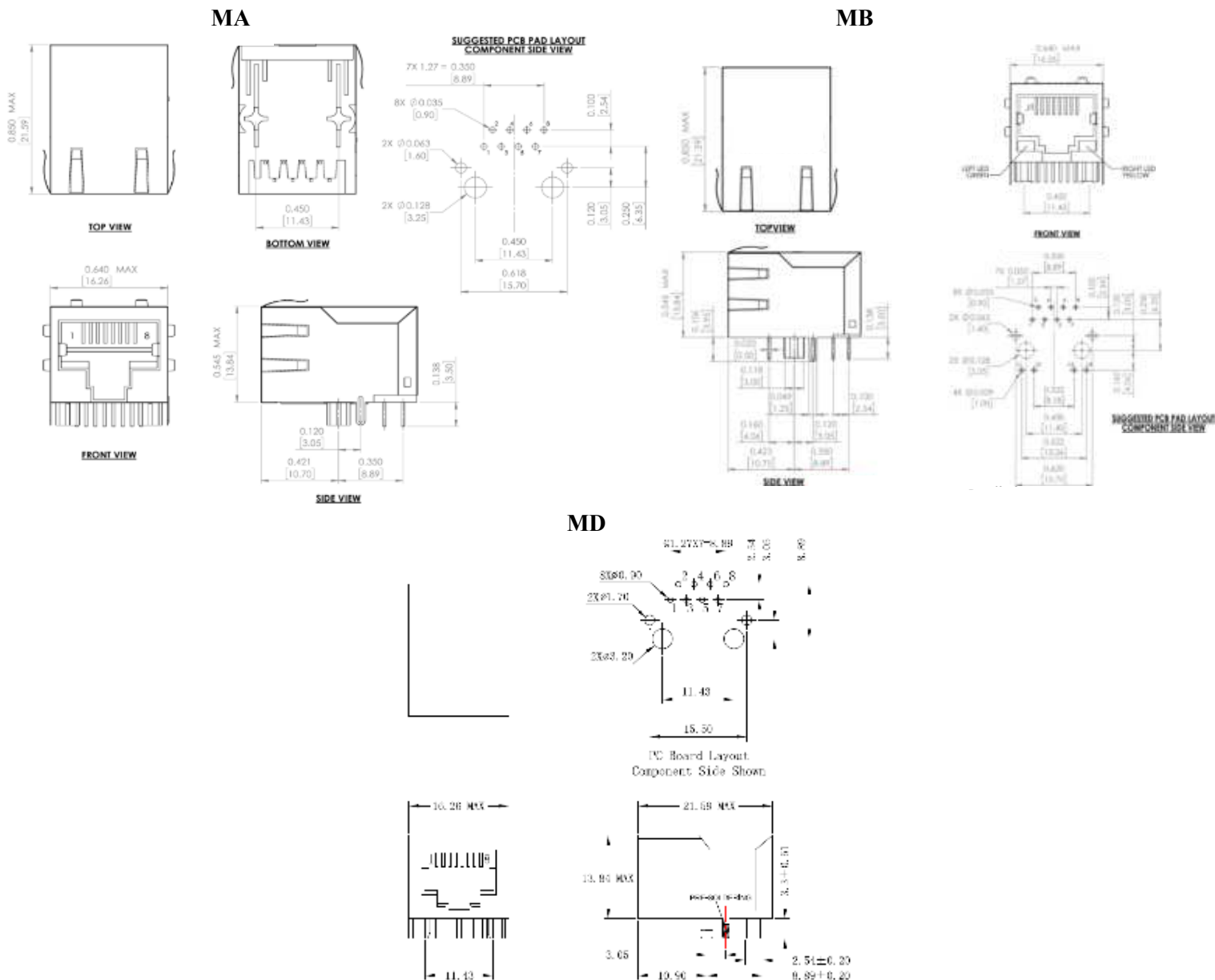


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16.26 x 13.84 x 21.59mm
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MSL Level = N/A

Mechanical Specifications



Dimensions: mm (Unless otherwise specified, tolerances are ± 0.25 mm)



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Mechanical Specifications

Figure 1 consists of three sub-diagrams labeled (a), (b), and (c), showing the PCB layout of the proposed system.

(a) Top view: Shows the overall dimensions of the PCB. The width is 10.26 MAX. The length is 21.39 MAX. The dimensions are given in mm. The layout includes a central component labeled 'microcontroller' and several other components labeled 'LED', 'resistor', and 'capacitor'. The dimensions are given in mm.

(b) Bottom view: Shows the component placement and dimensions. The width is 10.26 MAX. The length is 21.39 MAX. The dimensions are given in mm. The layout includes a central component labeled 'microcontroller' and several other components labeled 'LED', 'resistor', and 'capacitor'. The dimensions are given in mm.

(c) Side view: Shows the component placement and dimensions. The width is 10.26 MAX. The length is 21.39 MAX. The dimensions are given in mm. The layout includes a central component labeled 'microcontroller' and several other components labeled 'LED', 'resistor', and 'capacitor'. The dimensions are given in mm.

LED pins are parallel

Dimensions: mm (Unless otherwise specified, tolerances are $\pm 0.25\text{mm}$)



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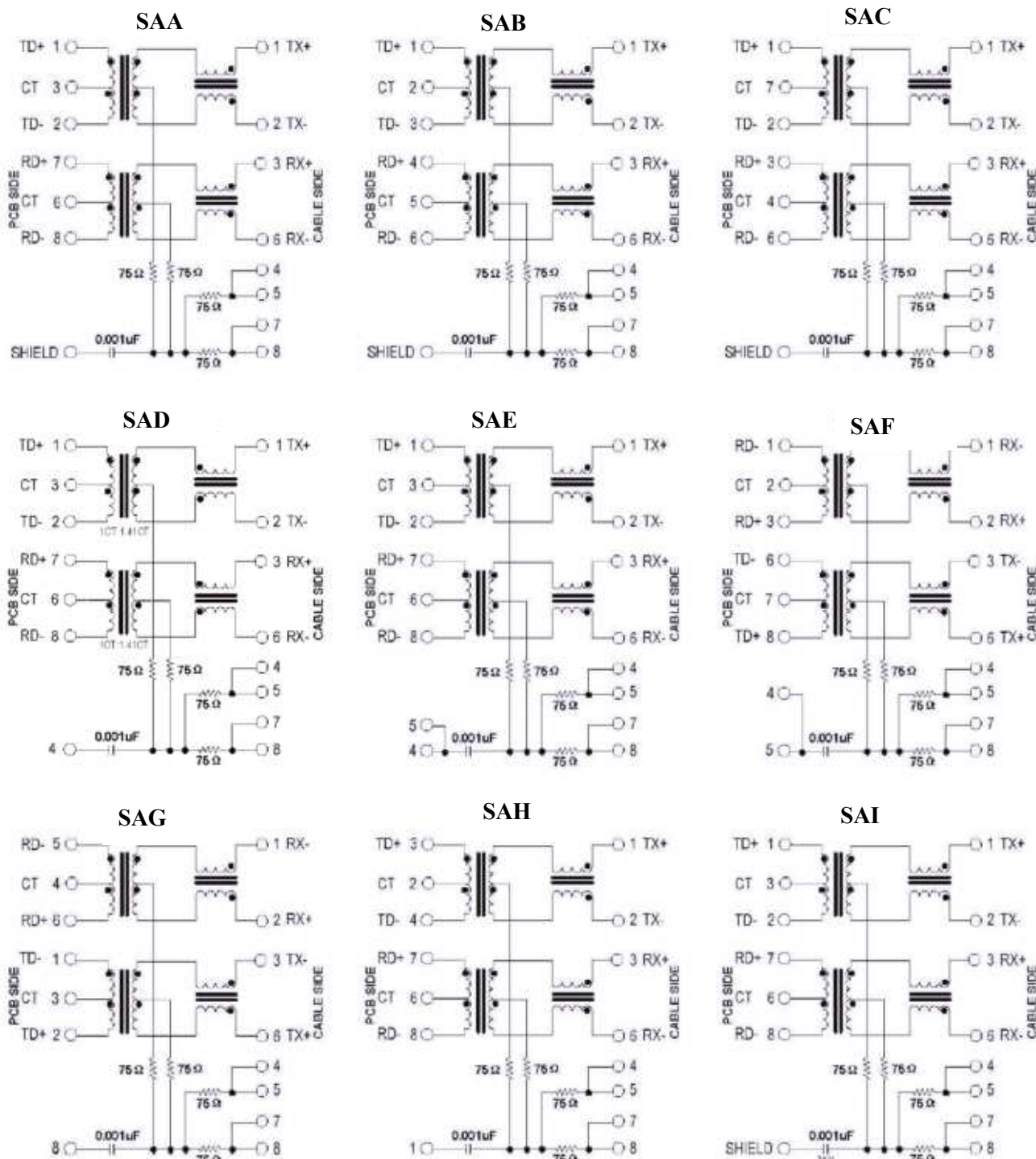


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Schematics



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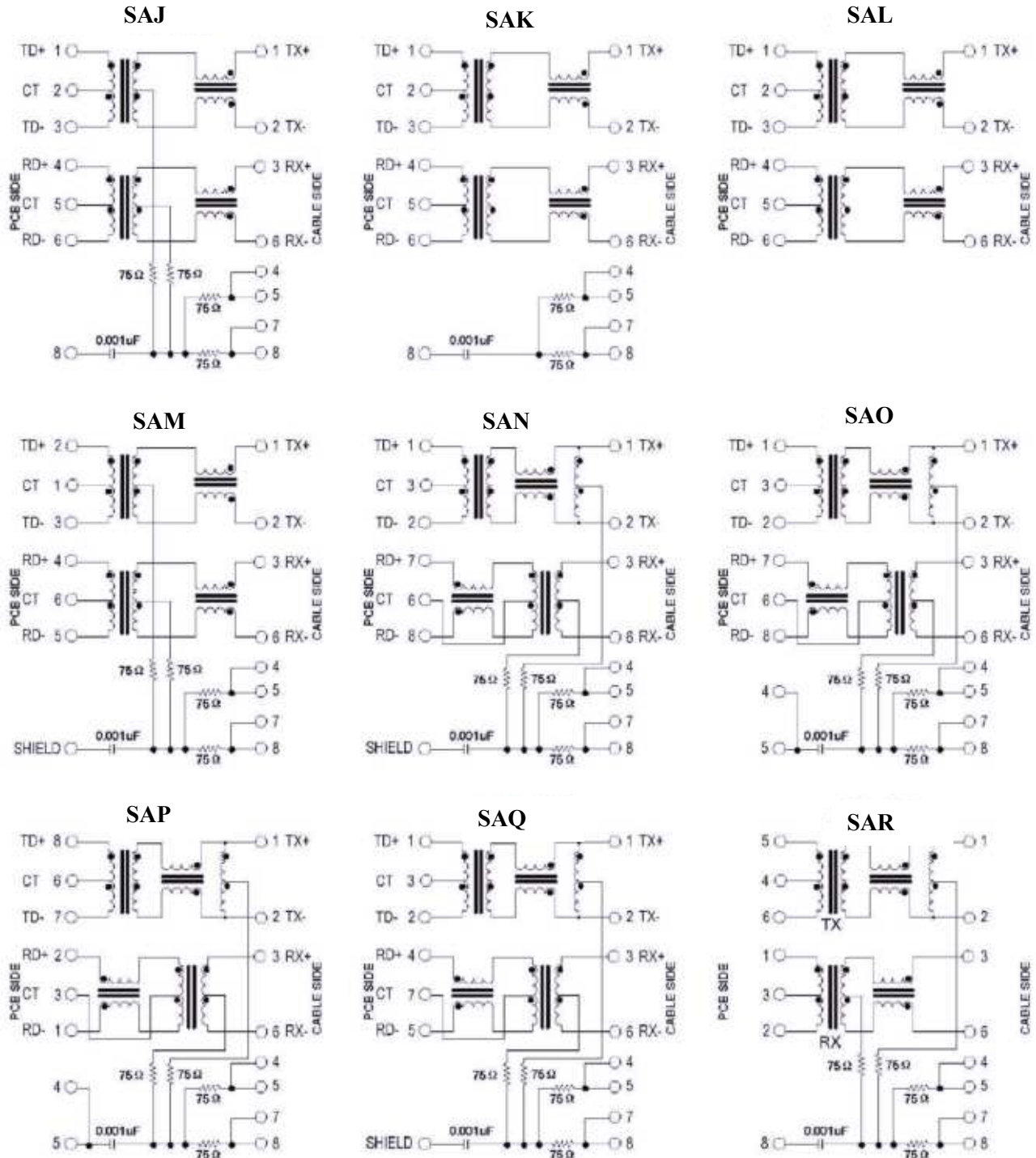


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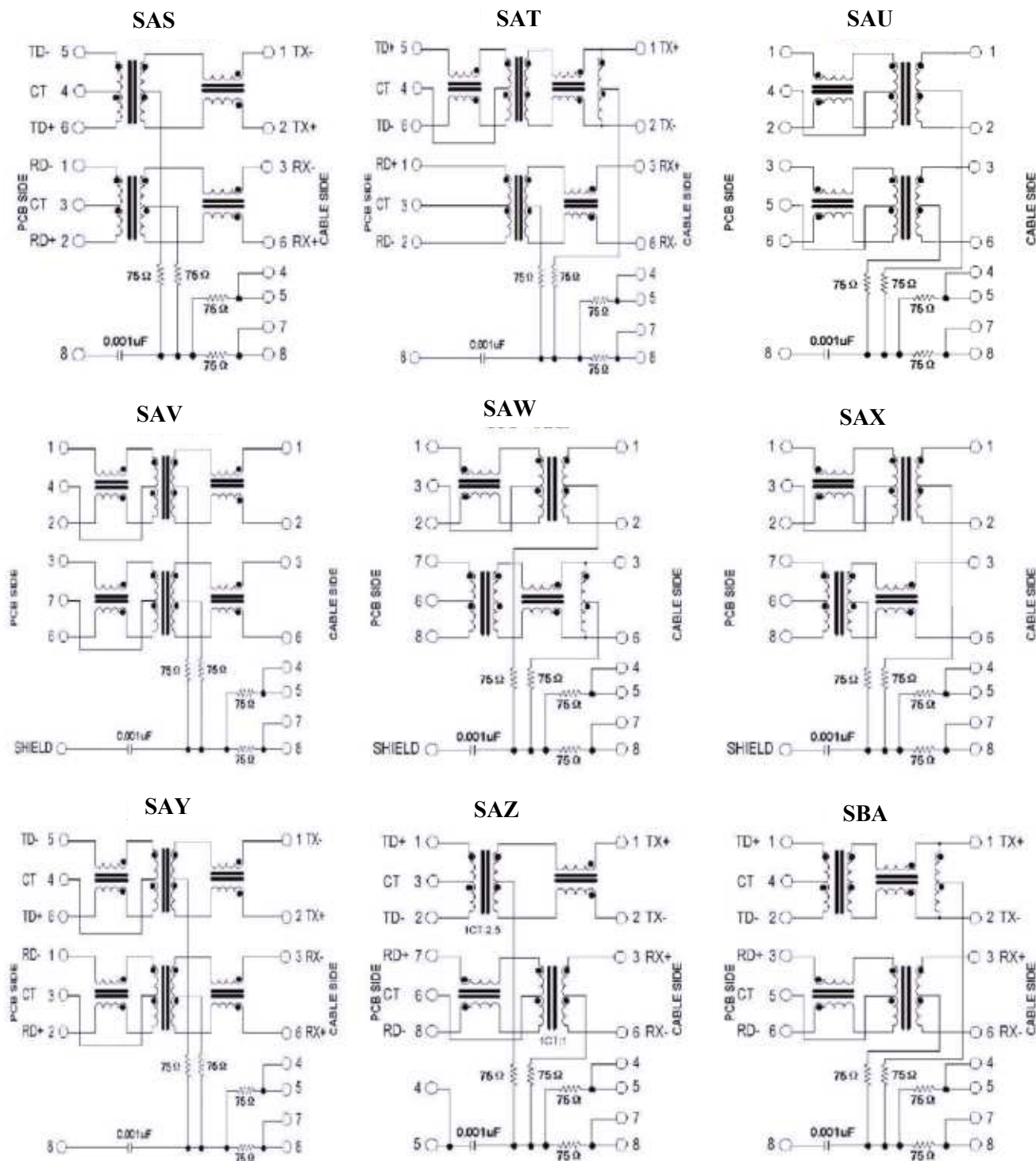


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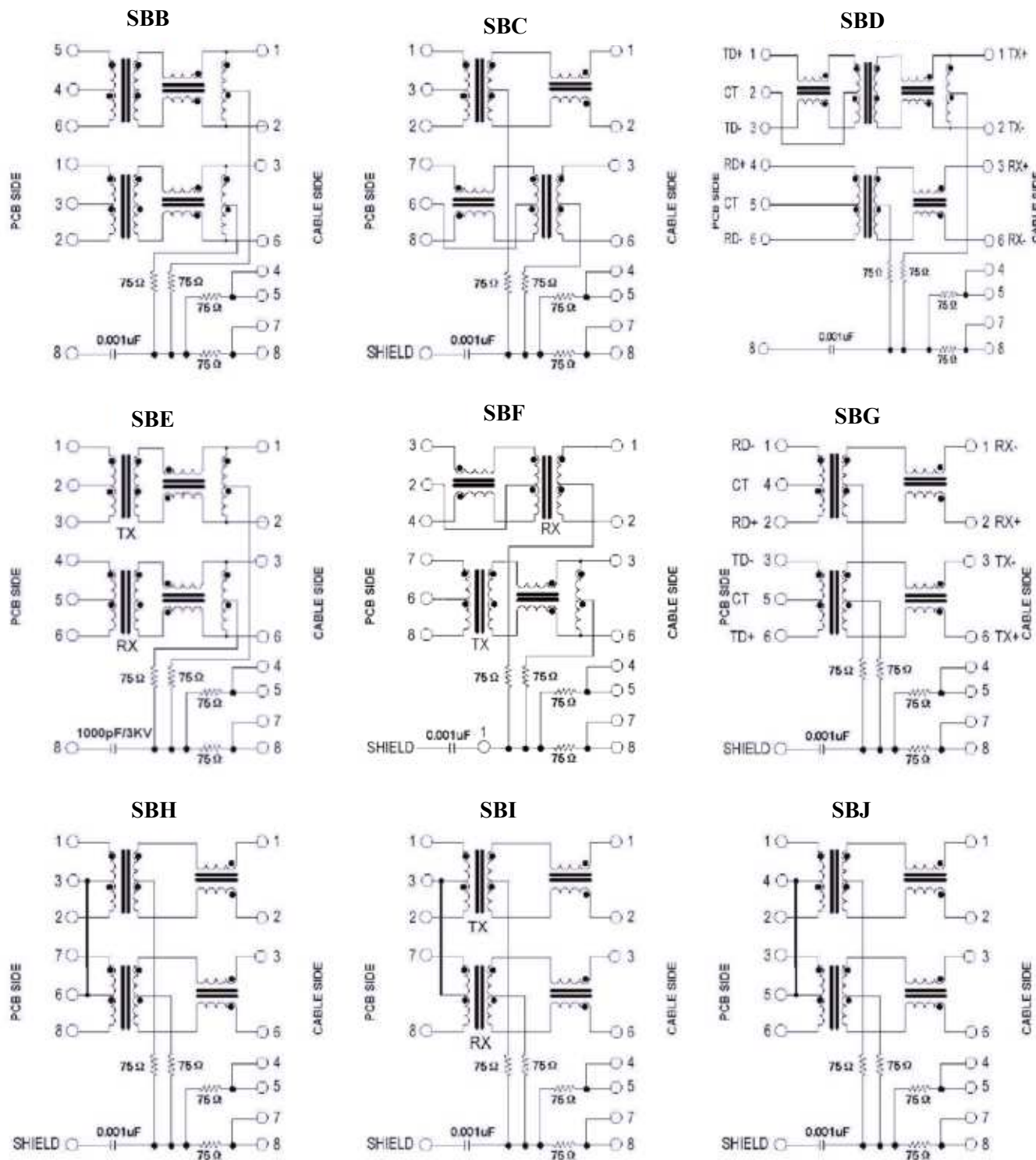


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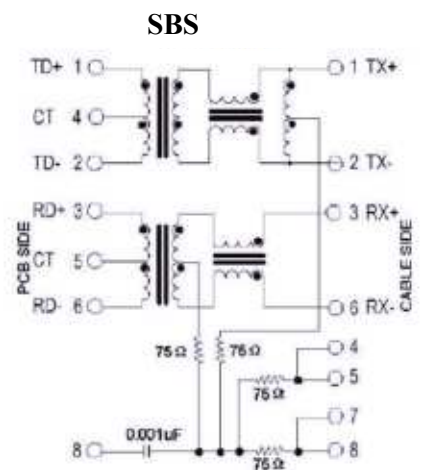
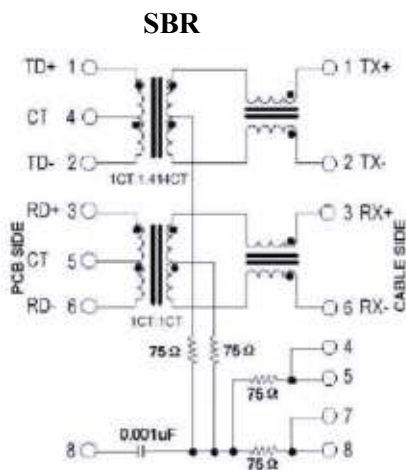
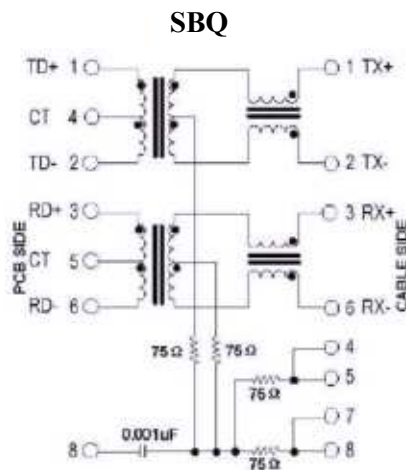
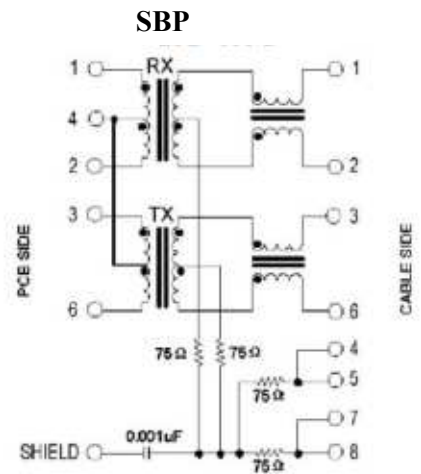
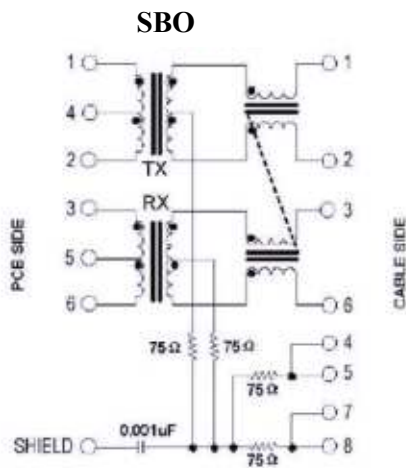
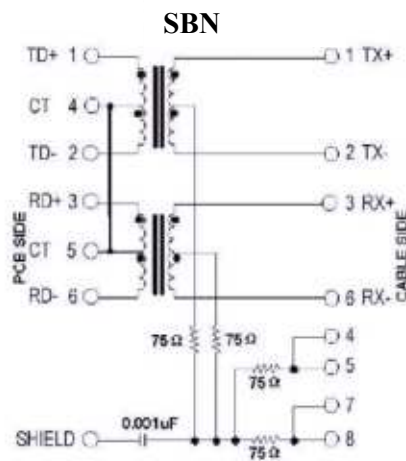
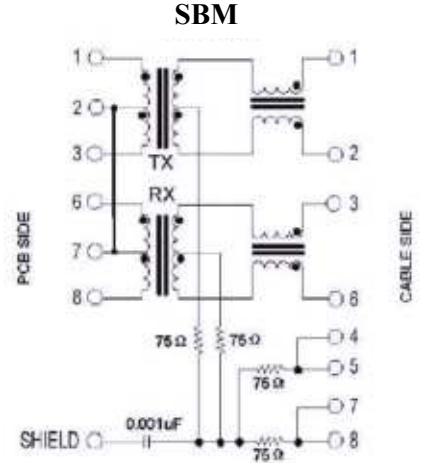
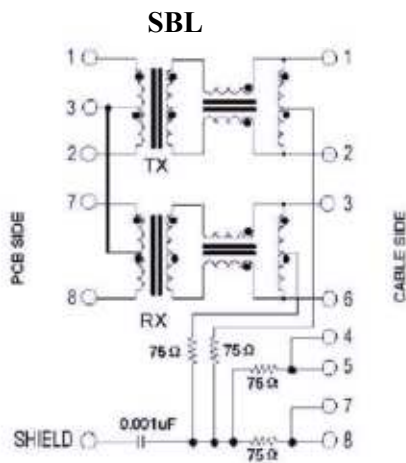
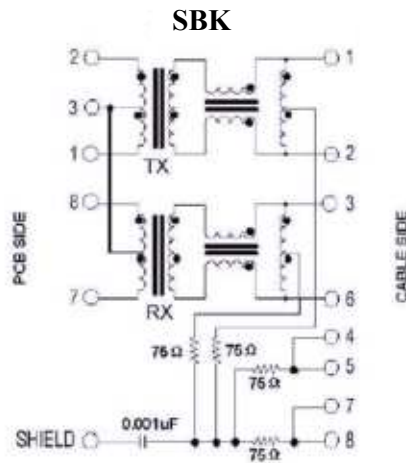


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Schematics



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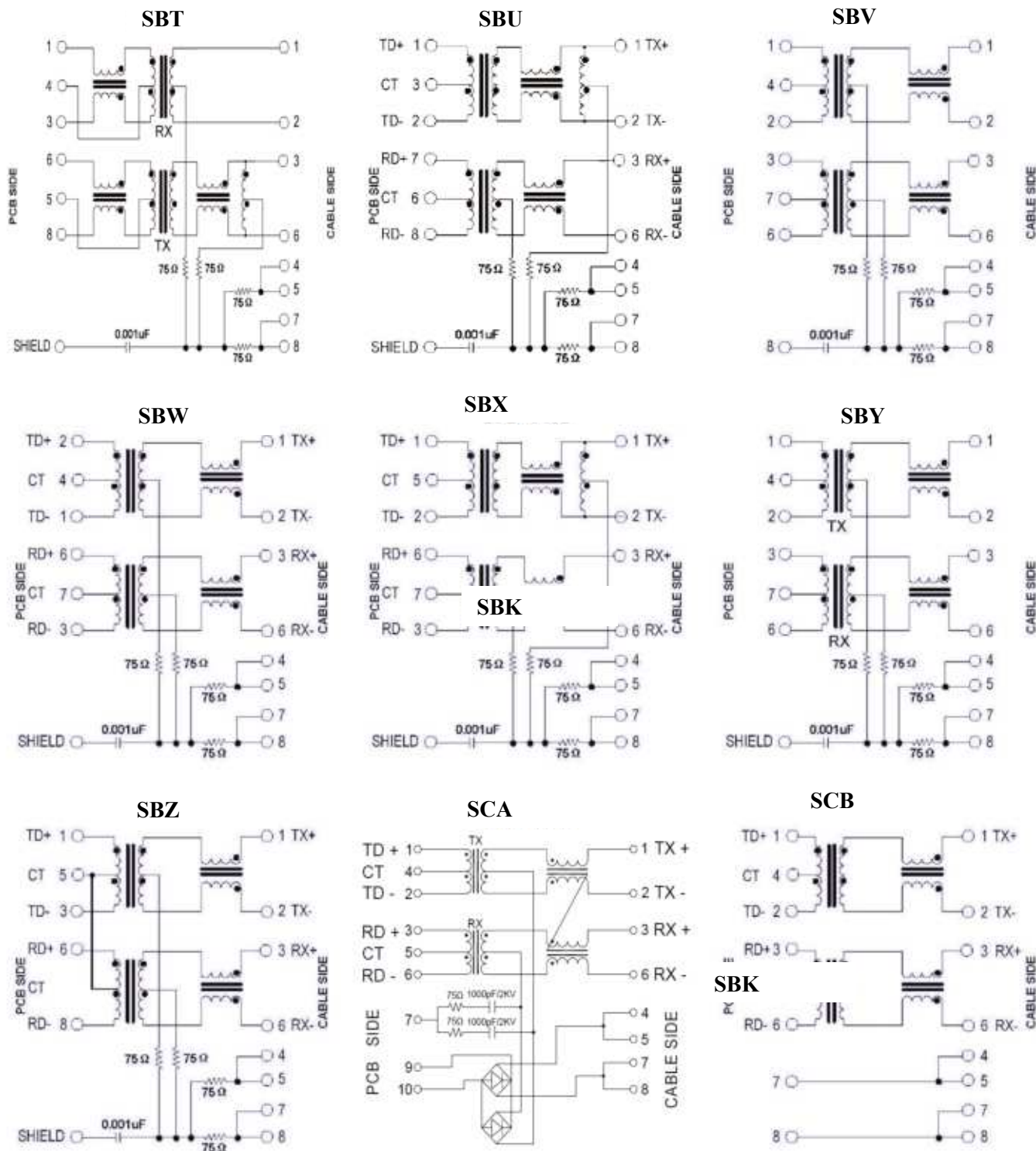


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Schematics



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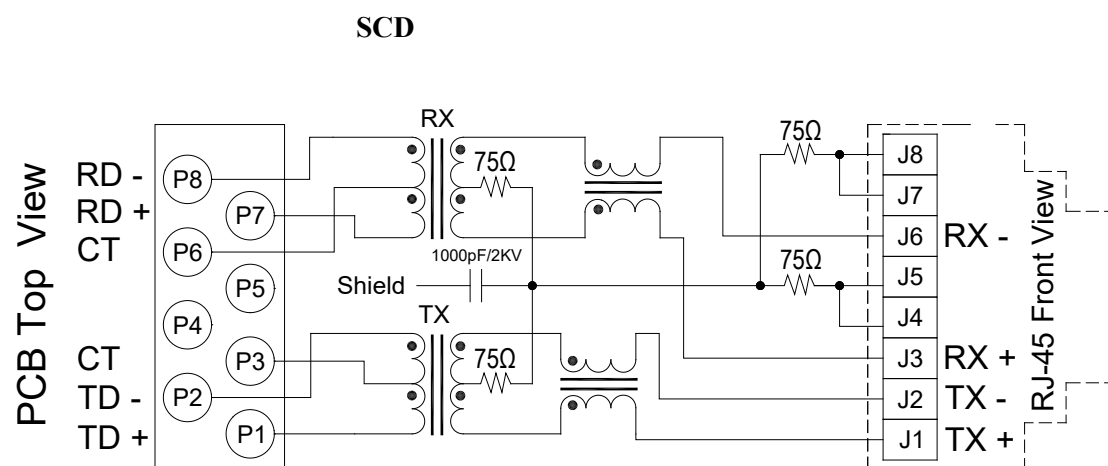
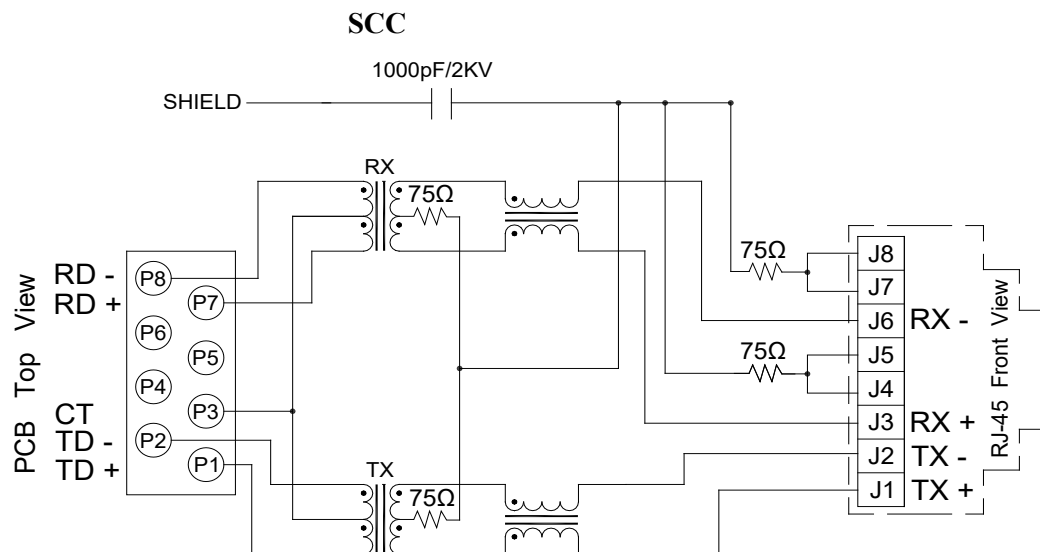


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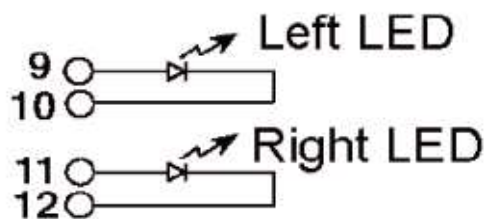
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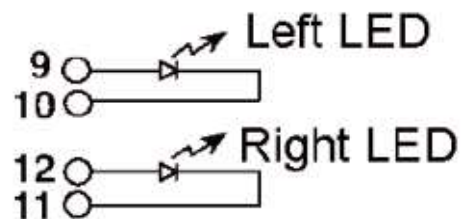
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LED polarity

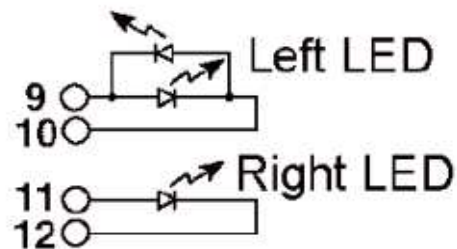
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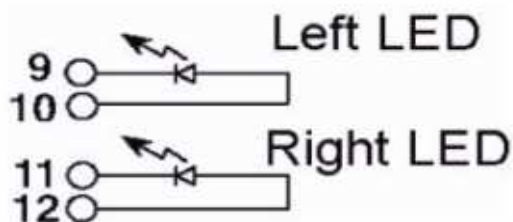
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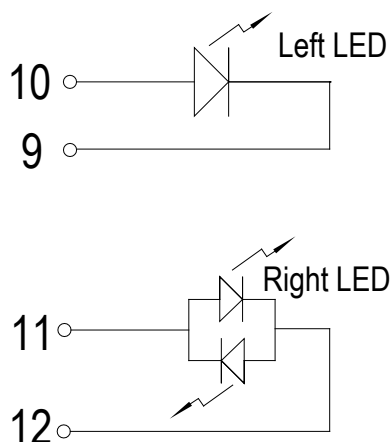
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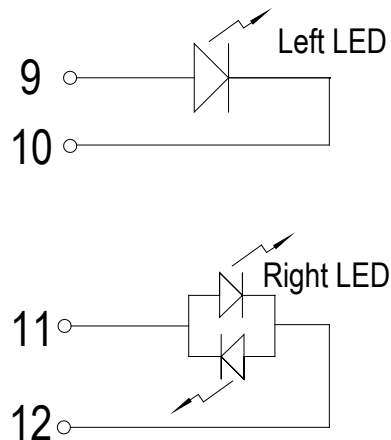
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I



J



$V_{in}=2.1Vdc$ TYP.

2.5Vdc MAX.

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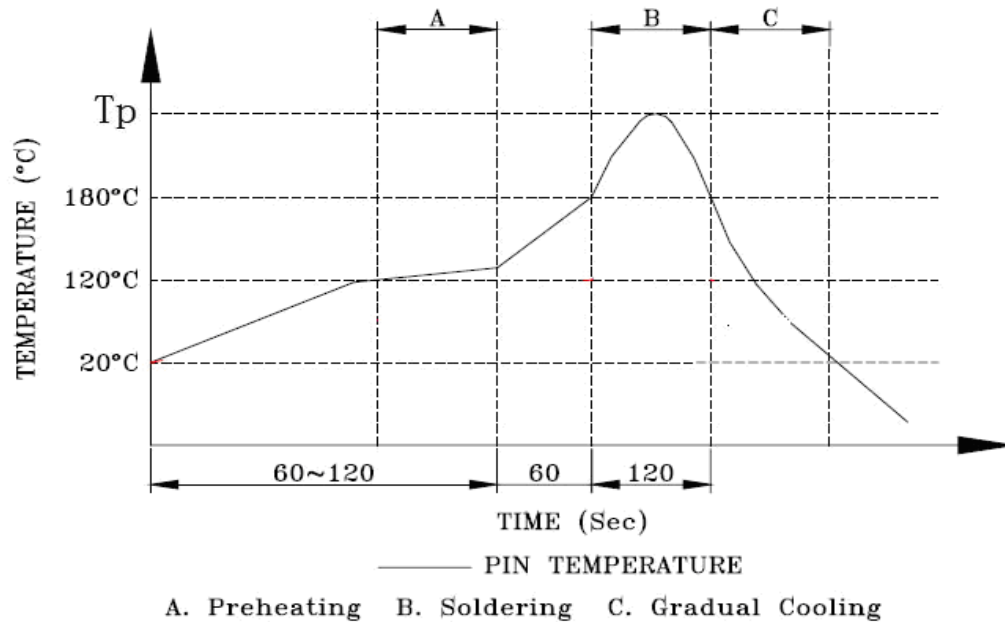


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Reflow Profile



Peak temperature (Tp): $250 \pm 10^{\circ}\text{C}$

Peak temperature (Tp) time: 5sec max

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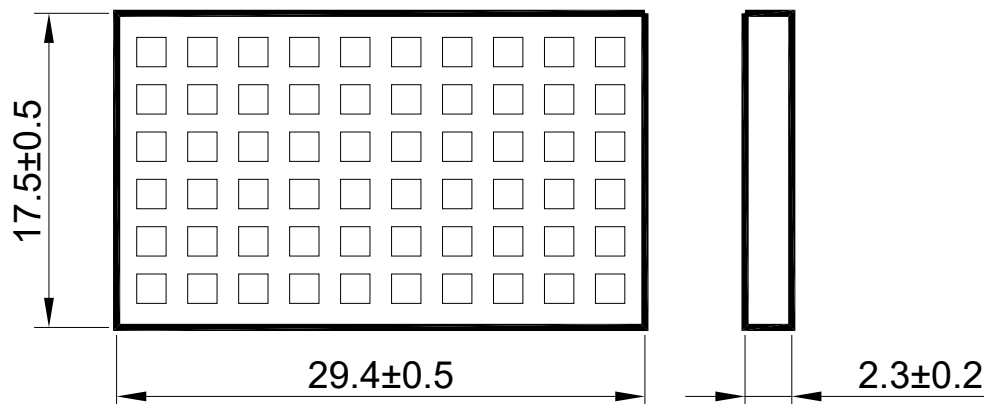
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Packaging

60 pcs/tray

Packaging material: PET



Dimensions: mm

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