

# CUC-IB4M-J1ST-AT/R4T - Filtered RJ45 PCB connectors



1663964

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Filtered RJ45 PCB connectors, 1x1 single-port, connection direction of the connector to the PCB: 90 °, Tab up, Shielded, number of positions: 8, 10/100 Mbps, THT, Wave, type of packaging: Tray

## Your advantages

- Simplified Ethernet design process thanks to integrated filtering
- Reduced PCB complexity and reduced EMC risks
- Tray packing
- Space-saving due to the compact design
- Outstanding EMI performance
- Enables space-saving PCB design while simultaneously reducing the BOM thanks to integrated filters and transformers
- Ideal for demanding industrial applications due to the high shock and vibration resistance as well as the extended temperature range

## Commercial data

Item number	1663964
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AB12
Product key	ABNAFA
GTIN	4067923204102
Weight per piece (including packing)	8.8 g
Weight per piece (excluding packing)	6.1 g
Customs tariff number	85366930
Country of origin	CN

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## Technical data

### Product properties

Product type	Data connector (device side)
Slots	1x1 single-port
Orientation to PCB	90.00 °
Type	THD
Number of positions	8 (8P8C)
Type of locking	Snap-in locking Tab up
Shielding	Shielded
application range	Wave
Type of packaging	Tray
Transmission speed	10/100 Mbps (100BASE-TX)

### Electrical properties

Rated surge voltage	1.5 kV DC (IEC 60664-1)
Rated current	0.5 A
Test voltage	1.5 kV DC IEC 60603-7 (Contact - shield)
Insulation resistance	> 500 MΩ (IEC 60603-7)
Transmission speed	100 Mbps
Transmission speed	10/100 Mbps

### Connection data

#### Connection technology

Connection method	Female
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### Signaling

Status display present	no
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### Dimensions

Width	15.75 mm
Height	17.4 mm
Length	21.5 mm
Installed height	13.80 mm
Orientation to PCB	90.00 °
Data pin length	3.20 mm

### Material specifications

Material Plug contact coating (top layer/selective)	Au (0.762 µm/30 µ")
Material Plug contact coating (intermediate layer)	Ni (1,270 µm min / 50 µ" min)
Material Solder contact coating (top layer/selective)	Sn (3,048 µm min / 120 µ" min)
Material Solder contact coating (intermediate layer)	Ni (1,016 µm min / 40 µ" min)
Material Housing	Ni (0.762 µm min / 30 µ" min)

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Material Contact	Phosphor bronze
Material Housing pin coating (top layer/selective)	Sn (3,048 µm min / 120 µ" min)
Material Contact carrier	LCP

## Cable/line

Shielding	Shielded
Halogen-free	yes
Flame resistance	UL 94 V0

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 750 (IEC 60603-7)
Insertion force	< 20 N (IEC 60603-7)
Withdrawal force	< 20 N (IEC 60603-7)

## Environmental and real-life conditions

### Test specification

Specification	IEC 60603-7
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### Ambient conditions

Degree of protection (when plugged in)	IP20 (IEC 60603-7)
Degree of protection	IP20 (IEC 60603-7)
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Standards and regulations

Flame resistance	UL 94 V0
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## Mounting

Mounting type	THT
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### Processing notes

Classification temperature $T_c$	260 °C
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## Packaging specifications

Type of packaging	Tray
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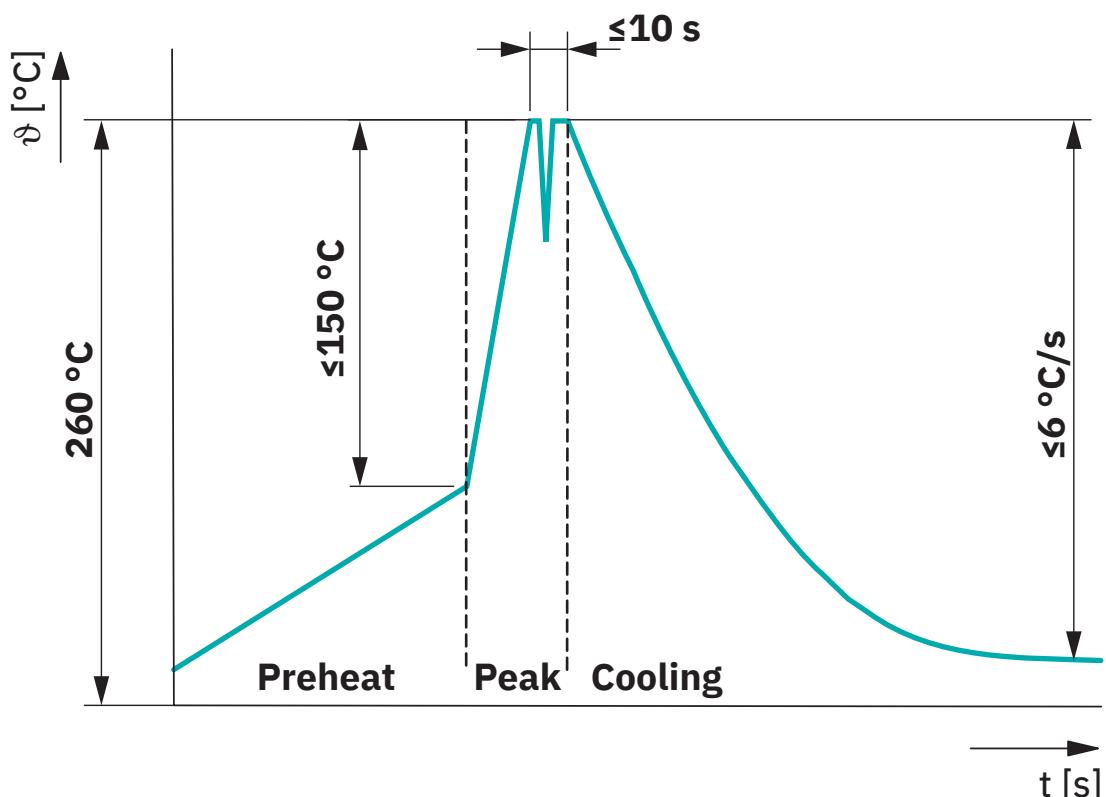


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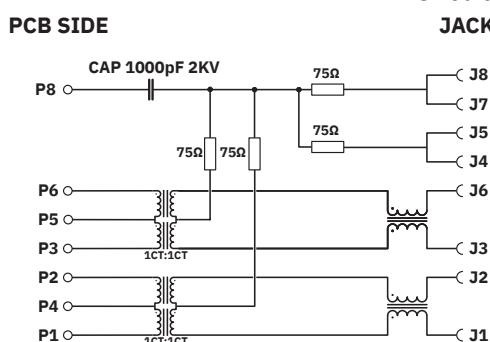
## Drawings

Diagram



Classification wave soldering profile

Circuit diagram



### ELECTRONICAL SPECIFICATIONS

1. ACCORDING TO IEEE 802.3
2. TURN RATIO @100KHz:  $(\text{P1-P2}:(\text{J1-J2}) = 1:1 \pm 5\%$   
 $(\text{P3-P6}:(\text{J3-J6}) = 1:1 \pm 5\%$
3. PRIMARY INDUCTANCE:  $350\mu\text{H MIN @100KHz}$   
 $0,1\text{V } 8\text{mA DC BIAS}$
4. DC RESISTANCE:  $1,2\text{ OHMS MAX}$
5. INSERTION LOSS:  $1-100\text{MHz} \quad -1,2\text{dB MAX}$
6. RETURN LOSS:  $1-30\text{MHz} \quad -16\text{dB MIN}$   
 $30-60\text{MHz} \quad -12\text{dB MIN}$   
 $60-80\text{MHz} \quad -10\text{dB MIN}$
7. CROSS TALK:  $1-100\text{MHz} \quad -30\text{dB MIN}$
8. COMMON TO COMMON MODE ATTENUATION:  $1-100\text{MHz} \quad -30\text{dB MIN}$
9. ISOLATION: PHY SIDE TO LINE SIDE:  $1500\text{VAC or } 2250\text{VDC}$

Circuit diagram

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## Classifications

### ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

### ETIM

ETIM 9.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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