CUC-IB7G-J1ST-AT/R4T - Filtered RJ45 PCB connectors

1664024
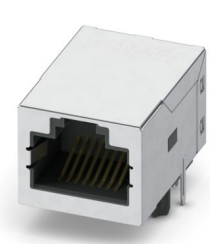
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Filtered RJ45 PCB connectors, 1x1 single-port, connection direction of the connector to the PCB: 90 °, Tab up, Shielded, number of positions: 8, 1 Gbps, THT, Wave, type of packaging: Tray

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	1664024
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AB12
Product key	ABNAFA
GTIN	4067923204317
Weight per piece (including packing)	8.91 g
Weight per piece (excluding packing)	6.3 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	1 Gbps (1000BASE-T)

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	1 Gbps
Transmission speed	1 Gbps

Connection data

Connection technology

Connection method	Female

Signaling

Status display present	no

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 (Housing (female/insert))

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

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

Mounting

Mounting type	THT

Processing notes

Classification temperature T_c	260 °C

Packaging specifications

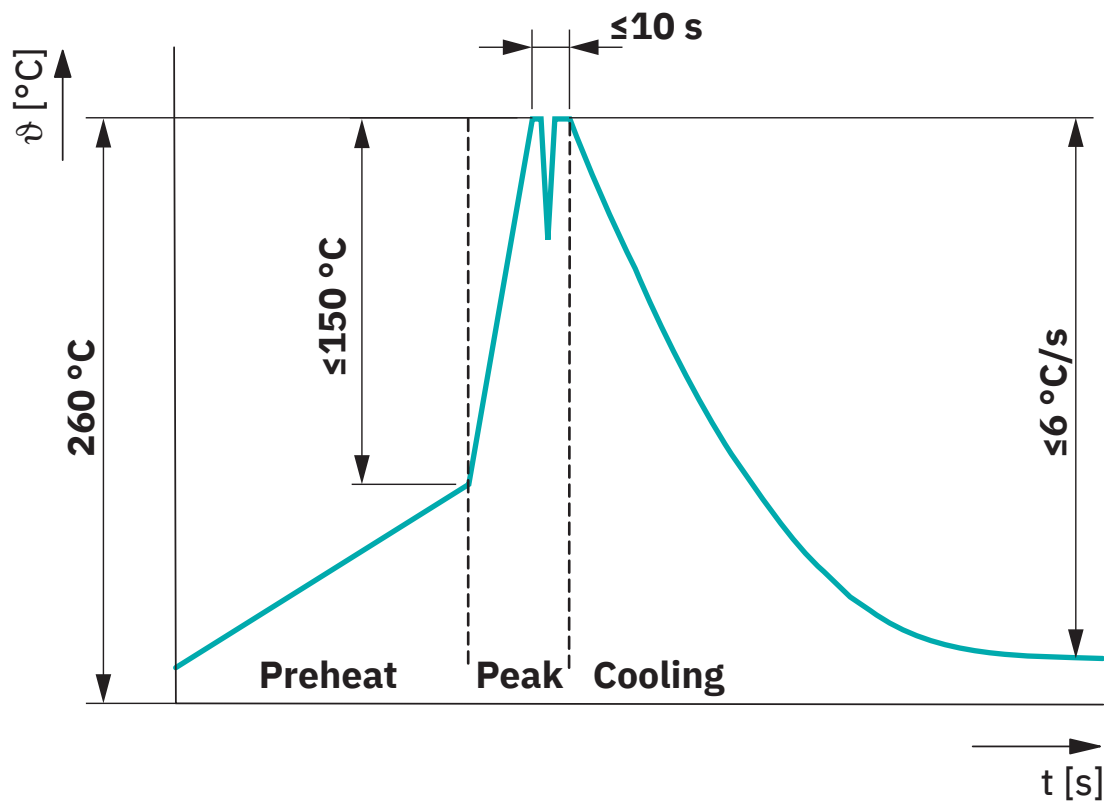| Type of packaging	Tray

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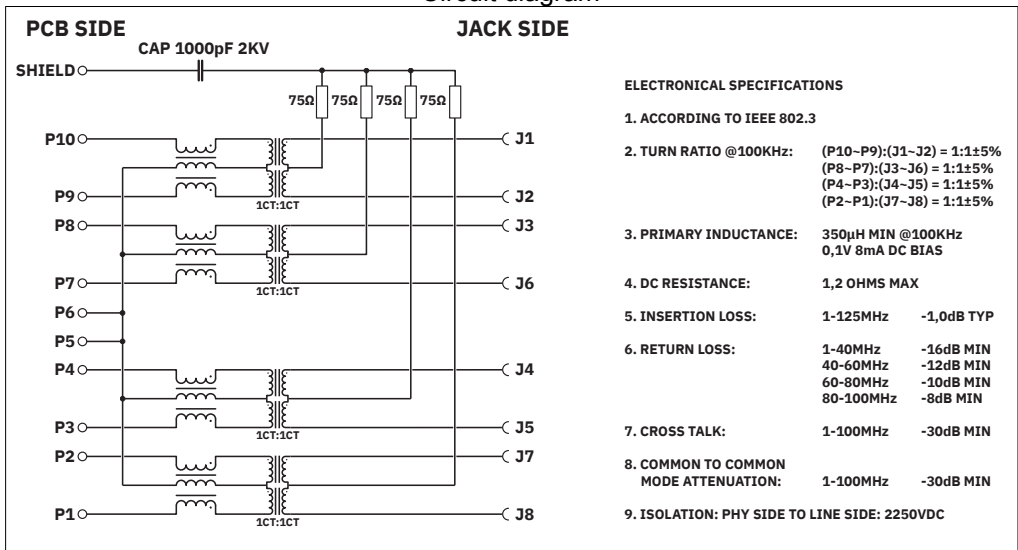1664024

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Drawings

Diagram

Classification wave soldering profile

Circuit diagram

PCB SIDE ... **JACK SIDE**

CAP 1000pF 2KV
SHIELD

75Ω 75Ω 75Ω 75Ω

P10 — J1
P9 — J2
P8 — J3
P7 — J6
P6
P5
P4 — J4
P3 — J5
P2 — J7
P1 — J8

1CT:1CT

ELECTRONICAL SPECIFICATIONS

1. ACCORDING TO IEEE 802.3

2. TURN RATIO @100KHz: (P10~P9):(J1~J2) = 1:1±5%
   (P8~P7):(J3~J6) = 1:1±5%
   (P4~P3):(J4~J5) = 1:1±5%
   (P2~P1):(J7~J8) = 1:1±5%

3. PRIMARY INDUCTANCE: 350µH MIN @100KHz
   0,1V 8mA DC BIAS

4. DC RESISTANCE: 1,2 OHMS MAX

5. INSERTION LOSS: 1-125MHz   -1,0dB TYP

6. RETURN LOSS: 1-40MHz   -16dB MIN
   40-60MHz   -12dB MIN
   60-80MHz   -10dB MIN
   80-100MHz   -8dB MIN

7. CROSS TALK: 1-100MHz   -30dB MIN

8. COMMON TO COMMON
   MODE ATTENUATION: 1-100MHz   -30dB MIN

9. ISOLATION: PHY SIDE TO LINE SIDE: 2250VDC

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Classifications

ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

ETIM

ETIM 9.0	EC002637

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

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%