TDK

April 2018

3-terminal filters

For power line

ACH series

ACH32C type

ACH32C	[1206 inch]*

* Dimensions Code JIS[EIA]

⚠ Caution

> **The products in this catalog will be or have been stopped production**

Discontinue Issue Date	Nov 15, 2017
Last Purchase Order Date	Mar. 29, 2019
Last Shipment Date	Oct. 31, 2019

Please refer to our Web site about replacement information.

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

⚠ REMINDERS

○ The storage period is less than 12 months. Be sure to follow the storage conditions (Temperature: 5 to 40°C, Humidity: 10 to 75% RH or less).
   If the storage period elapses, the soldering of the terminal electrodes may deteriorate.

○ Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).

○ Before soldering, be sure to preheat components.
   The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.

○ Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
   If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.

○ When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.

○ Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.

○ Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
   A malfunction may occur due to magnetic interference.

○ Use a wrist band to discharge static electricity in your body through the grounding wire.

○ Do not expose the products to magnets or magnetic fields.

○ Do not use for a purpose outside of the contents regulated in the delivery specifications.

○ The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.
   The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.
   If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

(1) Aerospace/Aviation equipment
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(4) Power-generation control equipment
(5) Atomic energy-related equipment
(6) Seabed equipment
(7) Transportation control equipment

(8) Public information-processing equipment
(9) Military equipment
(10) Electric heating apparatus, burning equipment
(11) Disaster prevention/crime prevention equipment
(12) Safety equipment
(13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

EMC Components

公TDK

3-terminal filters

For power line

Overview of ACH32C type

■ FEATURES

○ T-type EMC filter that can be used for high-current circuits.

○ Achieve excellent attenuation characteristics by using it for circuits with stable grounds.

○ Does not require mounting space due to vertical mounting design, making it perfect for high-density circuits.

○ Guaranteed temperature range is –40 to +125°C, so it can be used under severe environmental conditions.

○ Use this product under reflow soldering conditions.

■ APPLICATION

○ HE devices (TVs, VTRs, CD players, electronic musical instruments, PCs, etc.)

○ OA equipment (Computers, terminals, facsimiles, etc.)

○ FA equipment (Robots, NC machine tools, process controllers, etc.)

○ AE equipment (Car navigation systems, etc.)

■ PART NUMBER CONSTRUCTION

ACH	32C	–	100	–	T	001

Series name	L×W×T Dimensions (mm)		Capacitance (pF)		Packaging style		Internal code
	32C	3.2×1.6×2.1	100	10	T	Taping	001
			103	10000			

■ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

Type	Temperature range		Package quantity	Individual weight
	Operating temperature (°C)	Storage temperature* (°C)	(pieces/reel)	(mg)
ACH32C	–40 to +125	–40 to +125	2,000	70

* The Storage temperature range is for after the circuit board is mounted.

⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use.
Please note that the contents may change without any prior notice due to reasons such as upgrading.

EMC Components

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ACH32C type

■ RECOMMENDED REFLOW PROFILE
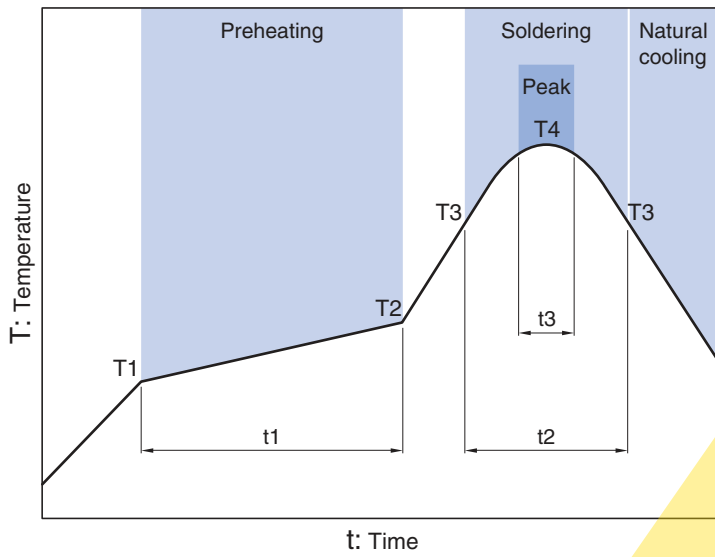
Preheating			Soldering		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	60 to 120s	230°C	30 to 60s	250 to 260°C	10s max.

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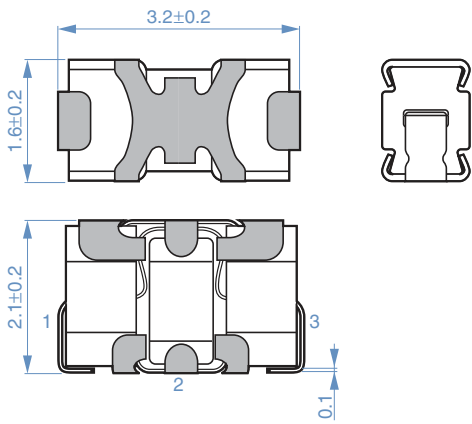Please note that the contents may change without any prior notice due to reasons such as upgrading.

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ACH32C type

■ SHAPE & DIMENSIONS

3.2±0.2

1.6±0.2

2.1±0.2

1

2

3

0.1

Dimensions in mm

■ RECOMMENDED LAND PATTERN

4.2

1.0   0.6   1.0

2.6

0.5
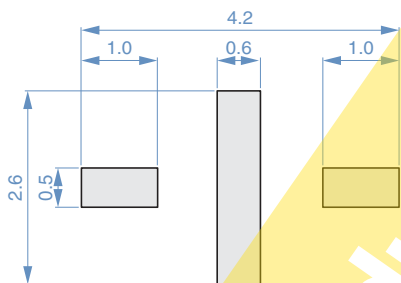
Dimensions in mm

■ CIRCUIT DIAGRAM

1   3

GND
2

• No polarity

EMC Components

⚡TDK
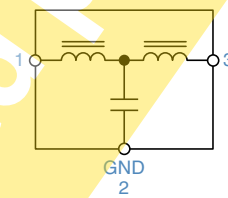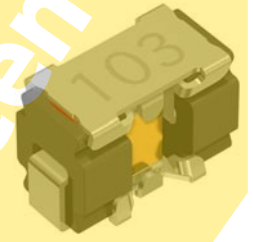
ACH32C type

◼ ELECTRICAL CHARACTERISTICS

### ☐ CHARACTERISTICS SPECIFICATION TABLE

Rated voltage (V)max.	Rated current (A)max.	Insulation resistance (MΩ)min.	DC resistance (mΩ)max.	Insertion loss (dB)min.	Frequency bandwidth (MHz)		Part No.
50	6	100	2	15	2000	to 6000	ACH32C-100-T001
50	6	100	2	15	1300	to 2500	ACH32C-220-T001
50	6	100	2	15	650	to 2500	ACH32C-470-T001
50	6	100	2	20	450	to 1300	ACH32C-101-T001
50	6	100	2	20	200	to 800	ACH32C-331-T001
50	6	100	2	25	100	to 350	ACH32C-102-T001
50	6	100	2	25	55	to 300	ACH32C-222-T001
50	6	100	2	25	30	to 200	ACH32C-103-T001
50	6	100	2	25	10	to 300	ACH32C-333-T001
50	6	100	2	25	3.5 to	200	ACH32C-104-T001

○ Measurement equipment

Measurement item	Product No.	Manufacturer
Insertion loss	E5071B	Keysight Technologies
DC resistance	4338A	Keysight Technologies
Insulation resistance	4339A	Keysight Technologies

＊ Equivalent measurement equipment may be used.

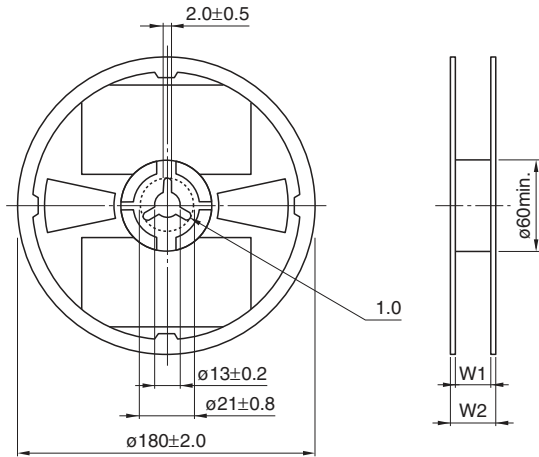## ☐ INSERTION LOSS VS. FREQUENCY CHARACTERISTICS
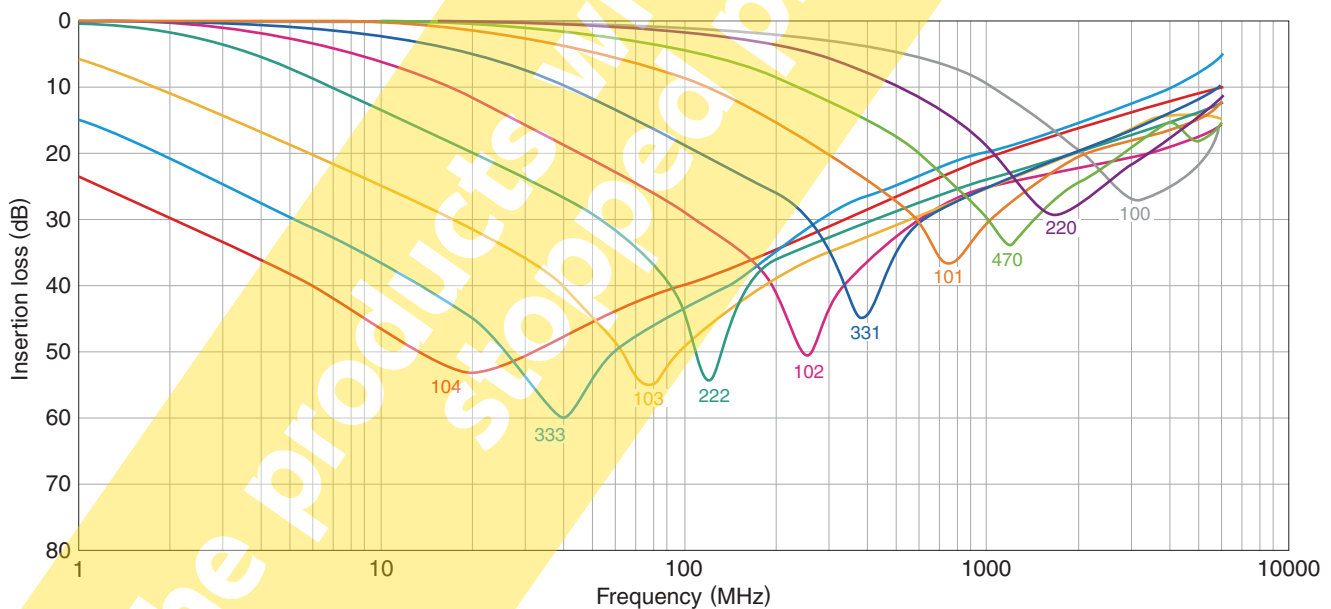
○ Measurement equipment

Product No.	Manufacturer
E5071B	Keysight Technologies

＊ Equivalent measurement equipment may be used.

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EMC Components

ACH32C type

■ PACKAGING STYLE

□ REEL DIMENSIONS

2.0±0.5

ø60min.

1.0

ø13±0.2
ø21±0.8
ø180±2.0

W1
W2

Dimensions in mm

Type	W1	W2
ACH32C	9±0.3	13+1.4

□ TAPE DIMENSIONS

1.5 +0.1/0   2.0±0.05   4.0±0.1   1.75±0.1

B

A

4.0±0.1

F   W

K
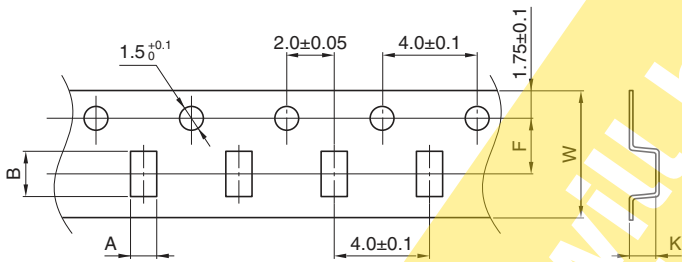
Dimensions in mm

Type	A	B	F	W	K
ACH32C	1.9±0.1	3.5±0.1	3.5±0.05	8.0±0.2	2.3±0.1

160min.   Taping   500 to 560min.
440min.

Drawing direction

Dimensions in mm

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