



## 3-terminal Filters

For Large-current Power Line

# YFF-HC Series

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**YFF31HC     3216 [1206 inch]\*   Feed through filter**

\* Dimensions Code JIS[EIA]

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## 3-terminal Filters

### For Large-current Power Line

Conformity to RoHS Directive  
Lead-free Compatible

# Overview of YFF-HC Series

#### FEATURES

- Small and high-performance EMC components.
- Good attenuation characteristic in a wide band range.
- For large current (6A to 10A) applications.

#### APPLICATIONS

Power line of AV (LCD, PDP) products and information products (PC, server).  
Countermeasures against power-supply noise of communications infrastructure PA.

#### PART NUMBER IDENTIFICATION

| YFF         | 31             | HC      | 2A                    | 105           | M             | T   | □□          | 0                 | N         |      |        |                   |           |      |                       |
|-------------|----------------|---------|-----------------------|---------------|---------------|-----|-------------|-------------------|-----------|------|--------|-------------------|-----------|------|-----------------------|
| Series name | L×W dimensions |         | Product internal code |               | Rated voltage |     | Capacitance |                   | Tolerance |      | Taping | TDK internal code | Reel size |      | Internal electrode Ni |
|             | Code           | mm      |                       |               | Code          | V   | Code        | pF                |           |      |        |                   | Code      | mm   |                       |
|             | 31             | 3.2×1.6 | HC                    | Large current | 1H            | 50  | 103         | 10,000            | M         | ±20% |        |                   | 0         | ø178 |                       |
|             |                |         |                       |               | 2A            | 100 | 153         | 15,000            |           |      |        |                   | 9         | ø330 |                       |
|             |                |         |                       |               |               |     | 105         | 1,000,000 (1.0μF) |           |      |        |                   |           |      |                       |

#### PACKAGING STYLE AND SPECIFICATIONS

| Type    | Package quantity (piece/reel) |        | Single weight (g) |
|---------|-------------------------------|--------|-------------------|
|         | ø178                          | ø330   |                   |
| YFF31HC | 2,000                         | 10,000 | 0.0342            |

○ Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

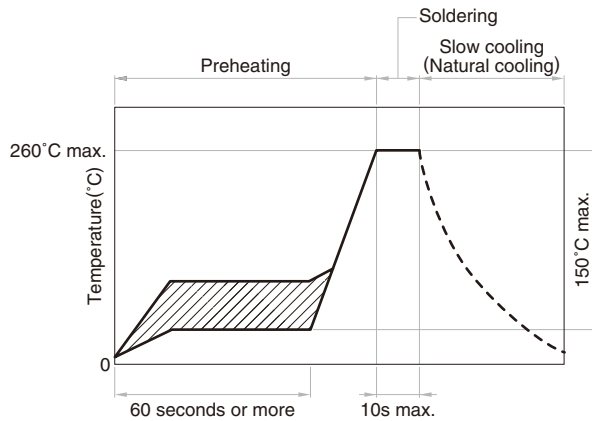
○ Please contact our Sales office when your application is considered the following:  
The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

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.

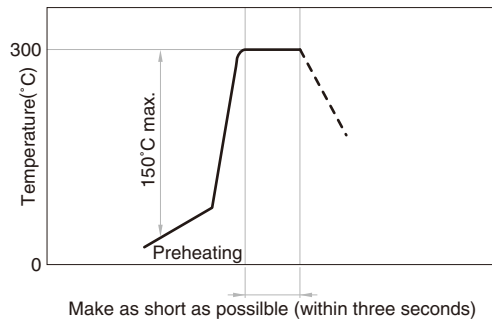
# Overview of YFF-HC Series

## RECOMMENDED SOLDERING CONDITION

### REFLOW SOLDERING



### HAND SOLDERING

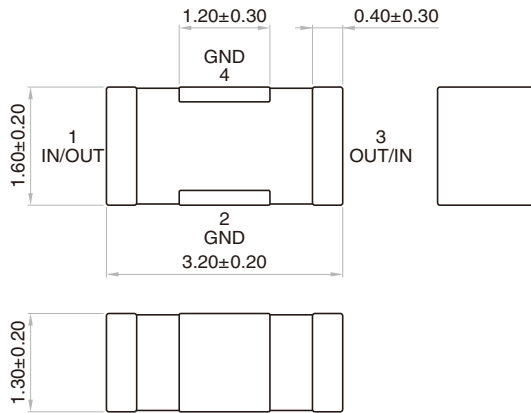


## PRECAUTIONS FOR USE

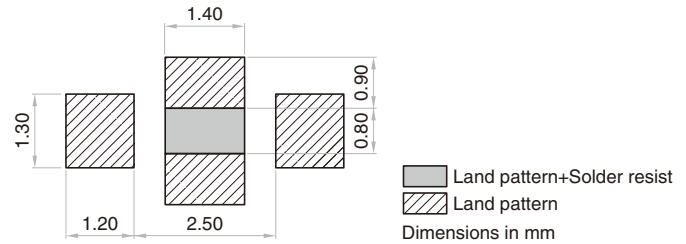
- Before soldering, be sure to preheat components. The  $\Delta T$  preheating temperature must be 150°C max. with attention paid to thermal shock.
- Natural cooling of components in the air is recommended. On the other hand, when dipping them in a solvent for purposes, such as cleaning, make sure that the temperature difference ( $\Delta T$ ) is 100°.
- When performing hand soldering for circuit modification, apply the soldering iron to the copper foil area of the printed circuit board for 3 seconds or less. The temperature of the iron tip should not exceed 300°C.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- When incorporating the printed circuit board on which this product is mounted into a frame, etc., do not apply stress to the product through local bending of the board by tightening of screws, etc.

# YFF-HC Series YFF31HC Type(Feed Through Filter)

## SHAPES AND DIMENSIONS



## RECOMMENDED LAND PATTERN



\* Make sure to connect the GND terminal of this product and the GND of the mounting circuit board by using through holes so that the distance between them is the shortest.

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

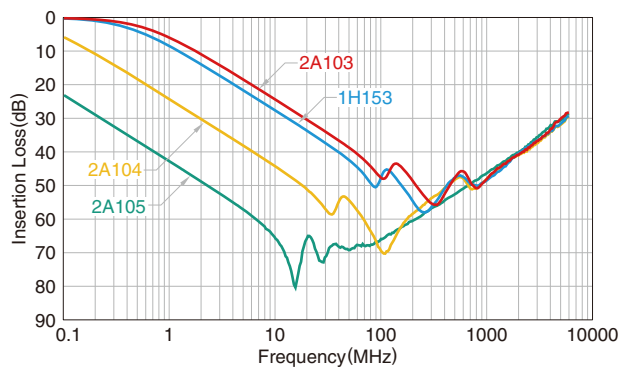
| Insertion loss<br>40dB bandwidth<br>(MHz) | Rated voltage<br>Edc<br>(V) | Rated current<br>Idc<br>(A) | Operating<br>temperature range<br>(°C) | Storage temperature<br>range(After mount)<br>(°C) | Part No.*            |
|-------------------------------------------|-----------------------------|-----------------------------|----------------------------------------|---------------------------------------------------|----------------------|
| 0.8 to 2000                               | 100                         | 6                           | -55 to 125                             | -55 to 125                                        | YFF31HC2A105MT00 □ N |
| 7 to 2000                                 | 100                         | 10                          | -55 to 125                             | -55 to 125                                        | YFF31HC2A104MT00 □ N |
| 40 to 2000                                | 50                          | 10                          | -55 to 125                             | -55 to 125                                        | YFF31HC1H153MT00 □ N |
| 60 to 2000                                | 100                         | 10                          | -55 to 125                             | -55 to 125                                        | YFF31HC2A103MT00 □ N |

\* The part numbers are TDK's standard specification products.

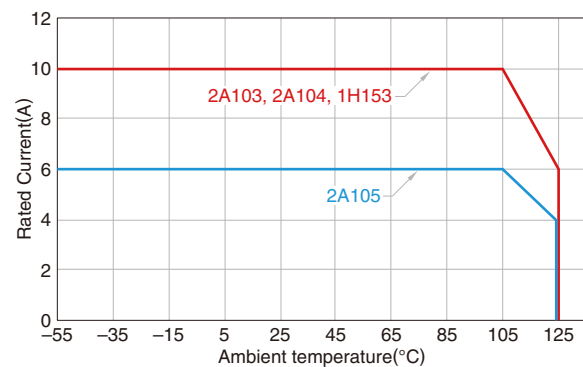
\* □: Please specify reel size code, 0 (ø178) or 9 (ø330)

## ELECTRICAL CHARACTERISTICS GRAPH (EXAMPLE)

### INSERTION LOSS vs. FREQUENCY CHARACTERISTICS

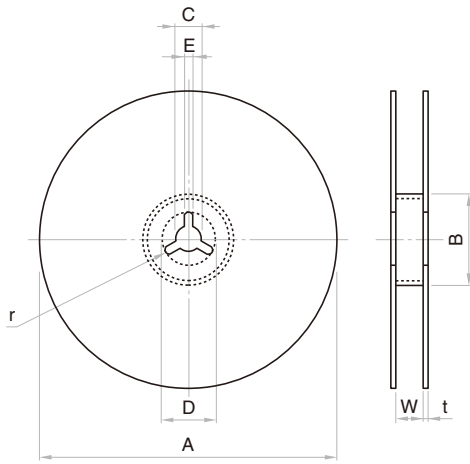


### RATED CURRENT vs. TEMPERATURE CHARACTERISTICS (DERATING)



# YFF-HC Series      Packing Style

## REEL DIMENSIONS

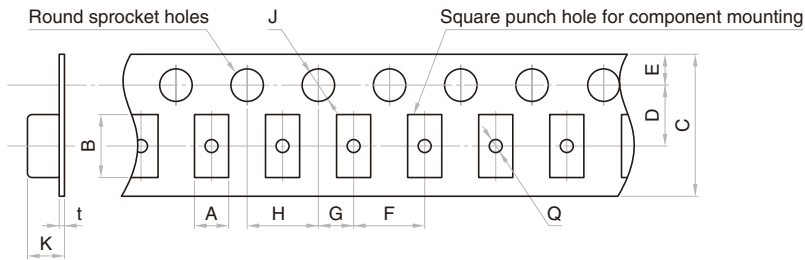


Dimensions in mm

| Reel | A                    | B        | C       | D       | E       | W        | t       | r   |
|------|----------------------|----------|---------|---------|---------|----------|---------|-----|
| ø178 | ø178±2.0             | ø60±2.0  | ø13±0.5 | ø21±0.8 | 2.0±0.5 | 9.0±0.3  | 2.0±0.5 | 1.0 |
| ø330 | ø382 max.(ø330 nom.) | ø50 min. | ø13±0.5 | ø21±0.8 | 2.0±0.5 | 10.0±1.5 | 2.0±0.5 | 1.0 |

## TAPE DIMENSIONS

### Plastic tape



Dimensions in mm

| Type    | A         | B         | C         | D        | E         | F         | G        | H         | J            | K         | t         | Q          |
|---------|-----------|-----------|-----------|----------|-----------|-----------|----------|-----------|--------------|-----------|-----------|------------|
| YFF31HC | 1.90 typ. | 3.50 typ. | 8.00±0.30 | 3.5±0.05 | 1.75±0.10 | 4.00±0.10 | 2.0±0.05 | 4.00±0.10 | ø1.5+0.10/-0 | 2.50 max. | 0.30 max. | ø0.50 min. |

# Mouser Electronics

Authorized Distributor

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TDK:

[YFF31HC1H153M](#) [YFF31HC2A103M](#) [YFF31HC2A104M](#) [YFF31HC2A105M](#) [YFF31HC2A105MT000N](#)  
[YFF31HC2A103MT000N](#) [YFF31HC1H153MT000N](#) [YFF31HC2A104MT000N](#)